MAgPIE run analysis

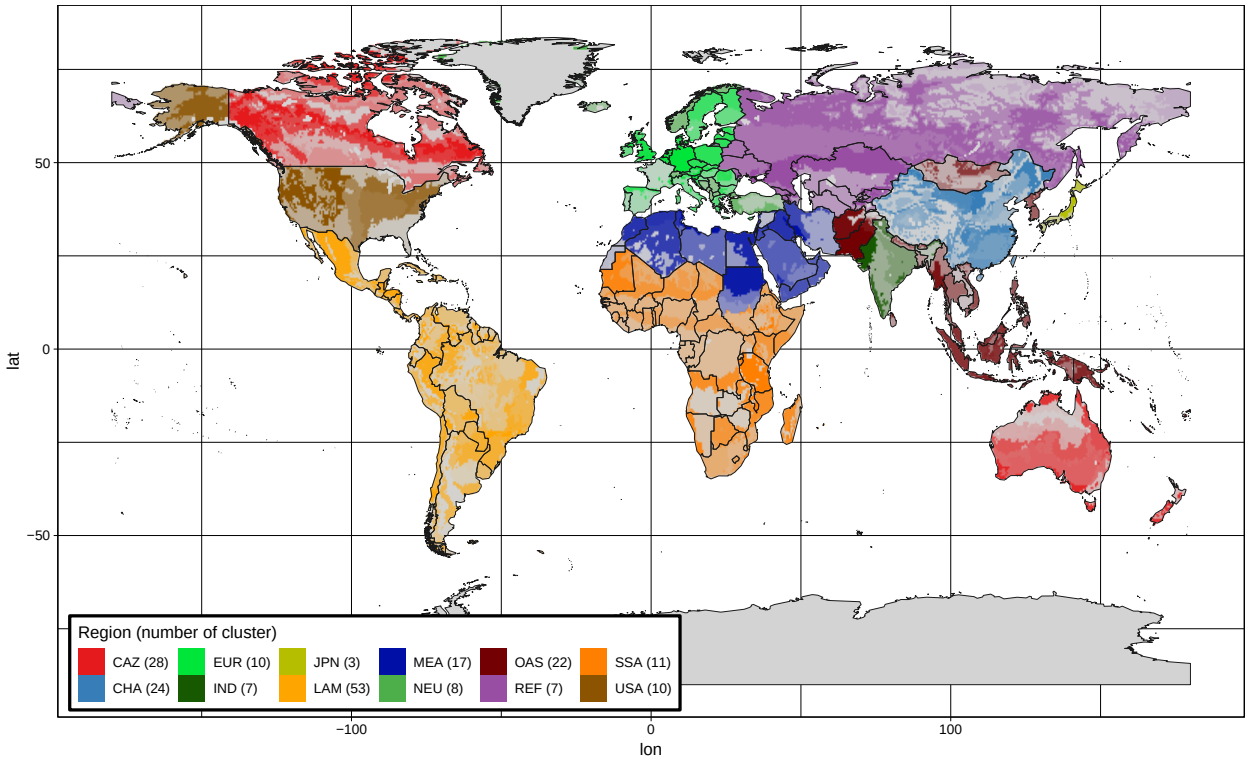
Aperture Science Enrichment Center

October 16, 2018

Contents

Part I
Basics

0.1 World regions



0.2 Modelstat

Table 1: main

	GLO
y1995	2.00
y2000	2.00
y2005	2.00
y2010	2.00
y2015	2.00
y2020	2.00
y2025	2.00
y2030	2.00
y2035	2.00
y2040	2.00
y2045	2.00
y2050	2.00
y2055	2.00
y2060	2.00
y2070	2.00
y2080	2.00
y2090	2.00
y2100	2.00

0.3 Food Modelstat

Table 2: main

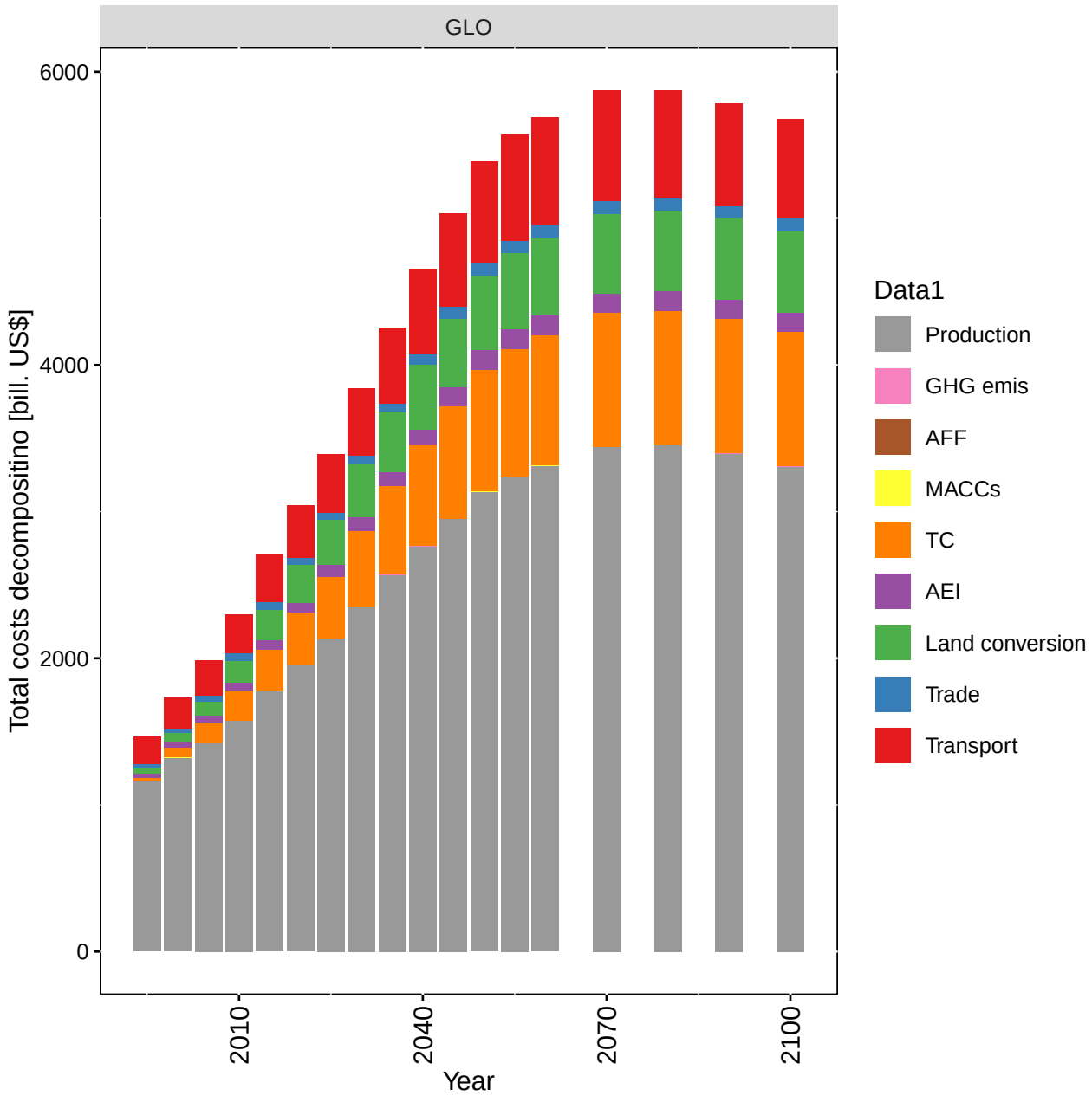
	convergence (limit = 0.005)	iterations (limit = 5)
y1995	0.24	1.00
y2000	0.28	1.00
y2005	0.05	1.00
y2010	0.03	1.00
y2015	0.00	3.00
y2020	0.00	2.00
y2025	0.00	2.00
y2030	0.00	2.00
y2035	0.00	3.00
y2040	0.00	2.00
y2045	0.00	2.00
y2050	0.00	2.00
y2055	0.00	2.00
y2060	0.00	1.00
y2070	0.00	2.00
y2080	0.00	1.00
y2090	0.00	1.00
y2100	0.00	1.00

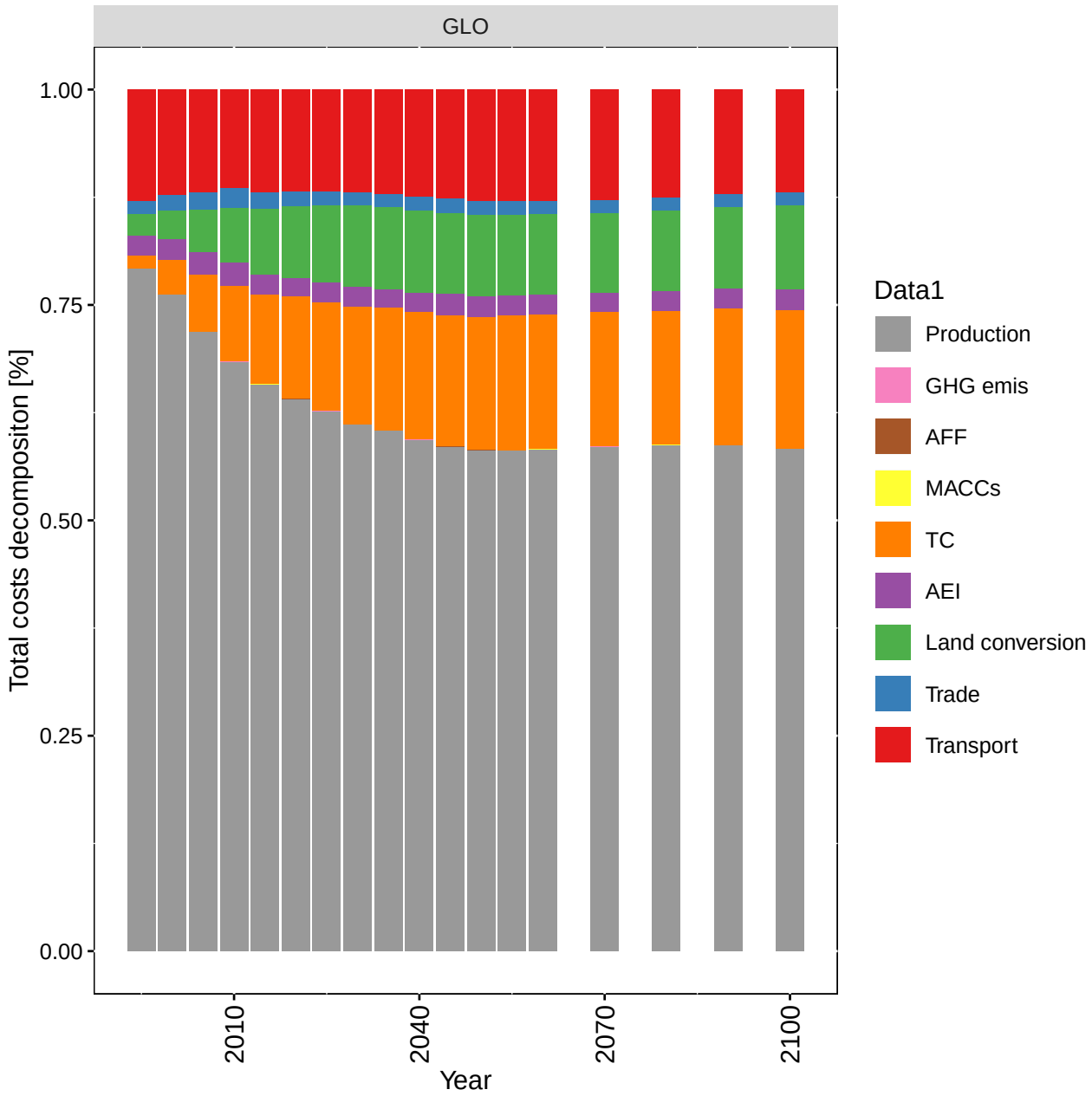
0.4 Goal function value

Table 3: Global costs (billion USD)

	GLO
y1995	1766.16
y2000	2063.26
y2005	2365.80
y2010	2740.46
y2015	3264.26
y2020	3696.61
y2025	4107.89
y2030	4608.53
y2035	5075.35
y2040	5517.81
y2045	5930.41
y2050	6306.14
y2055	6484.68
y2060	6590.98
y2070	6725.84
y2080	6671.06
y2090	6515.95
y2100	6340.15

0.4.1 Total costs decomposition



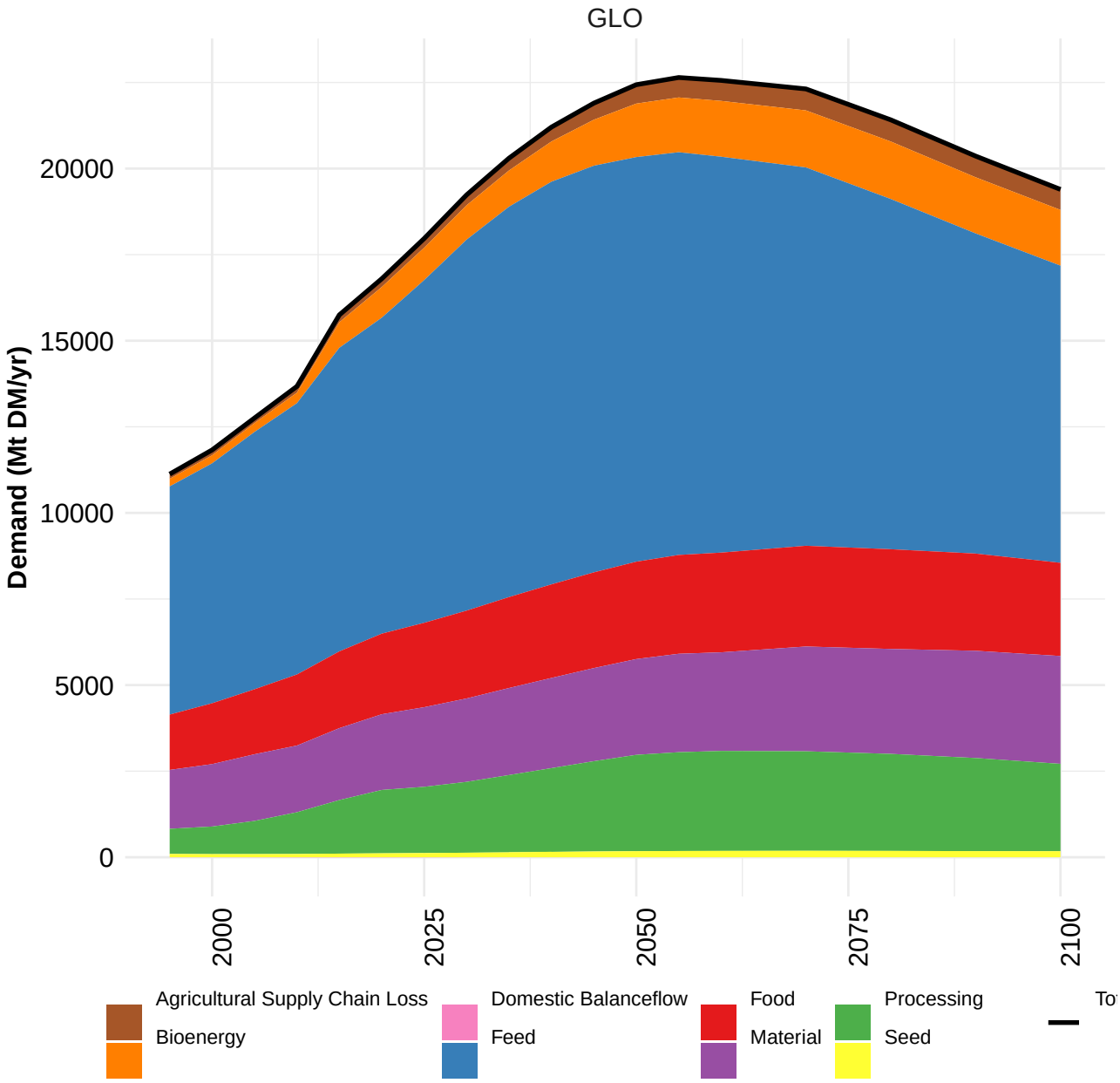

GLO
1.00
0.75
0.50
0.25
0.00
Total costs decompositon [%]
2010
2040
2070
2100
Year
Data1
Production
GHG emis
AFF
MACCs
TC
AEI
Land conversion
Trade
Transport

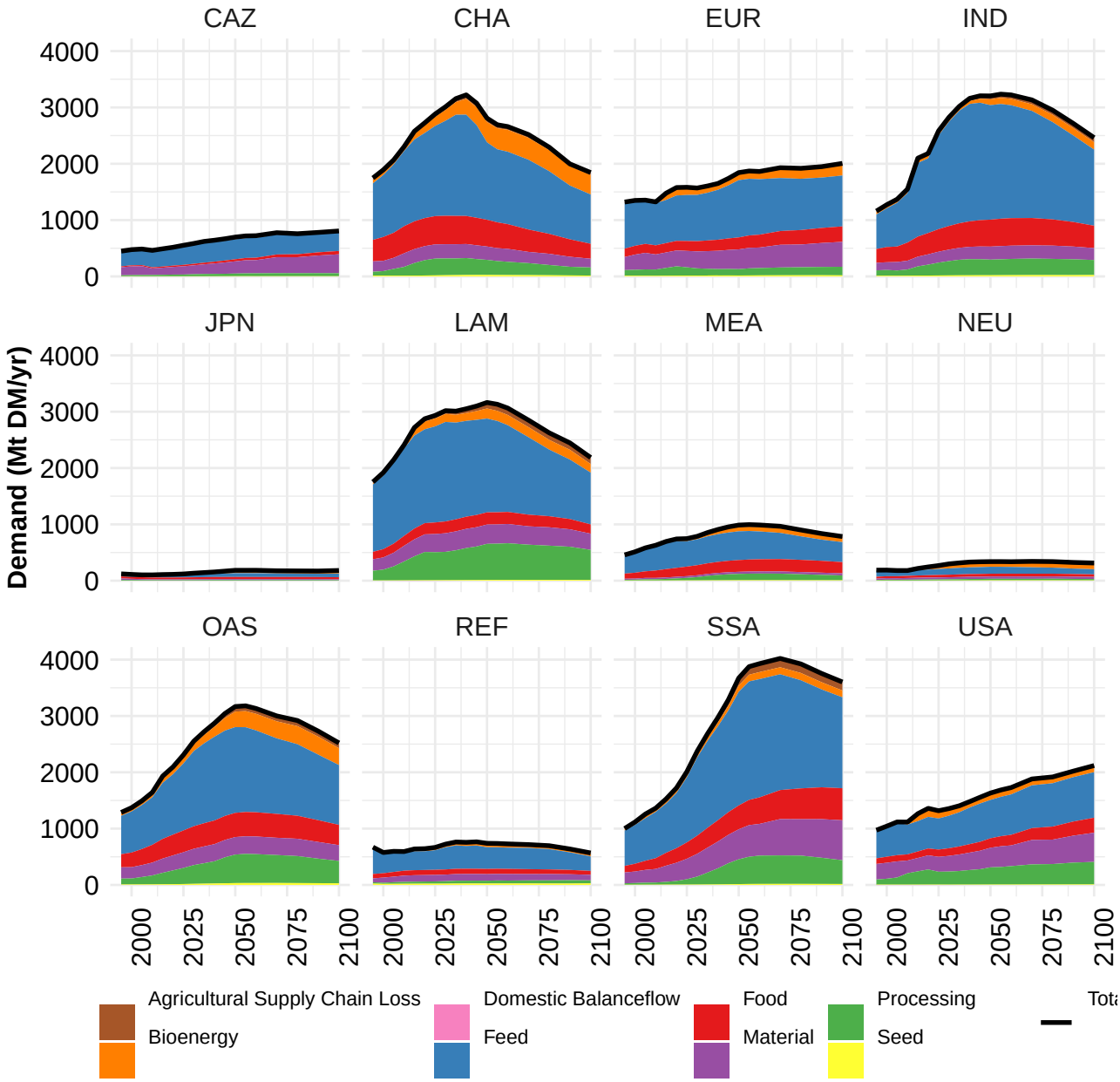
Part II
Costs

1 MainSolve

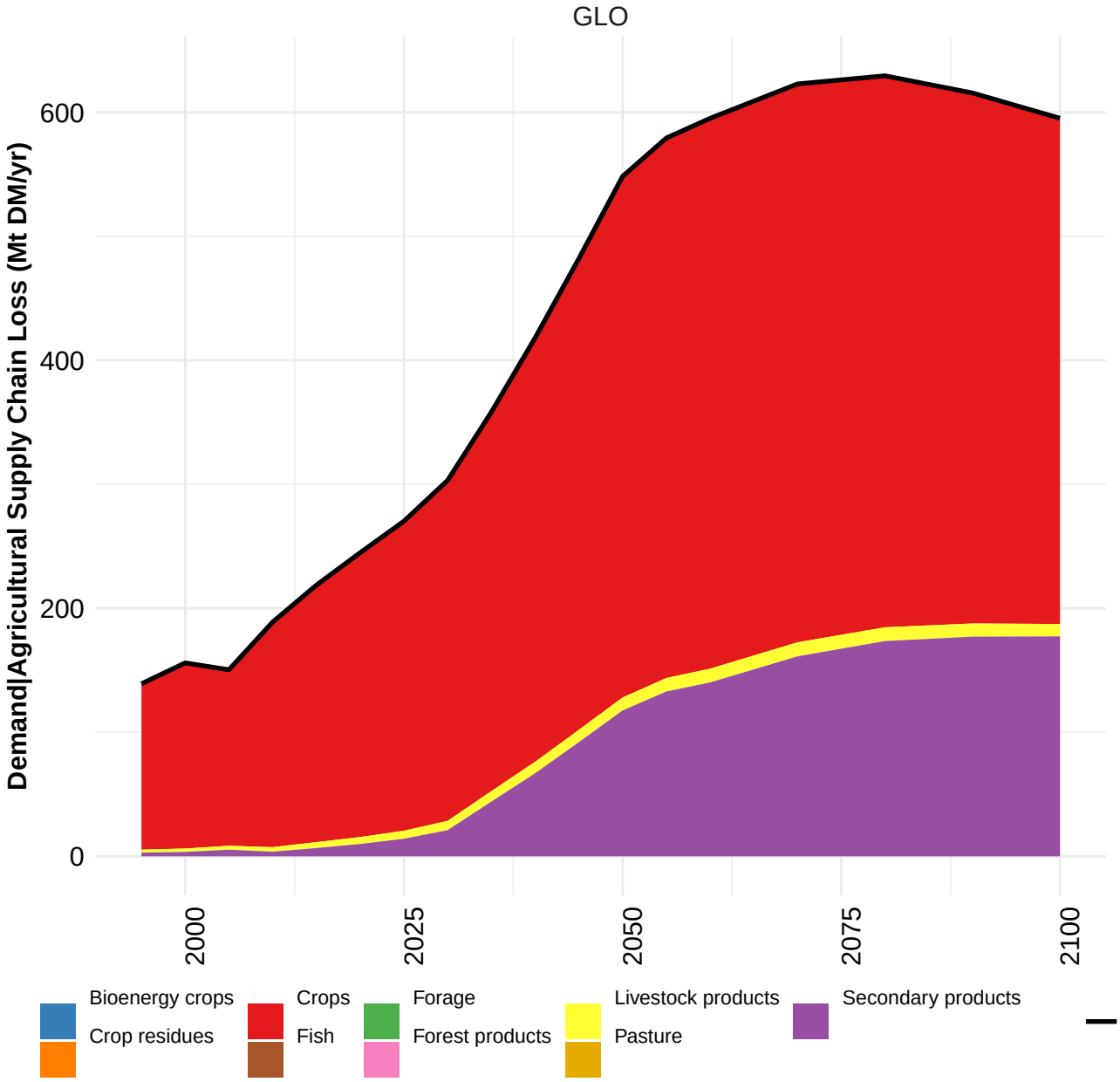
2 MainSolve w/o GHG Emissions

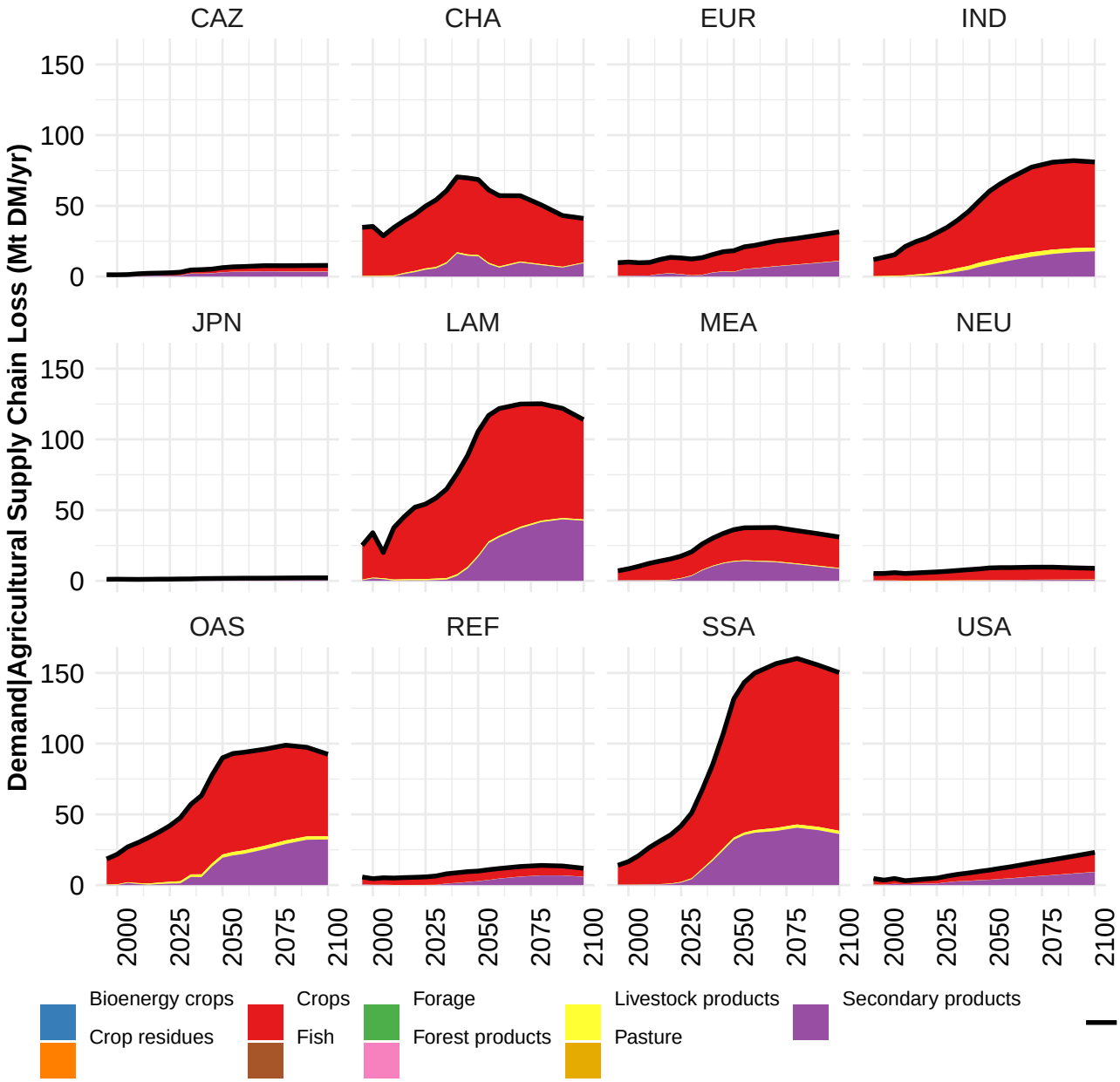
Part III
Demand

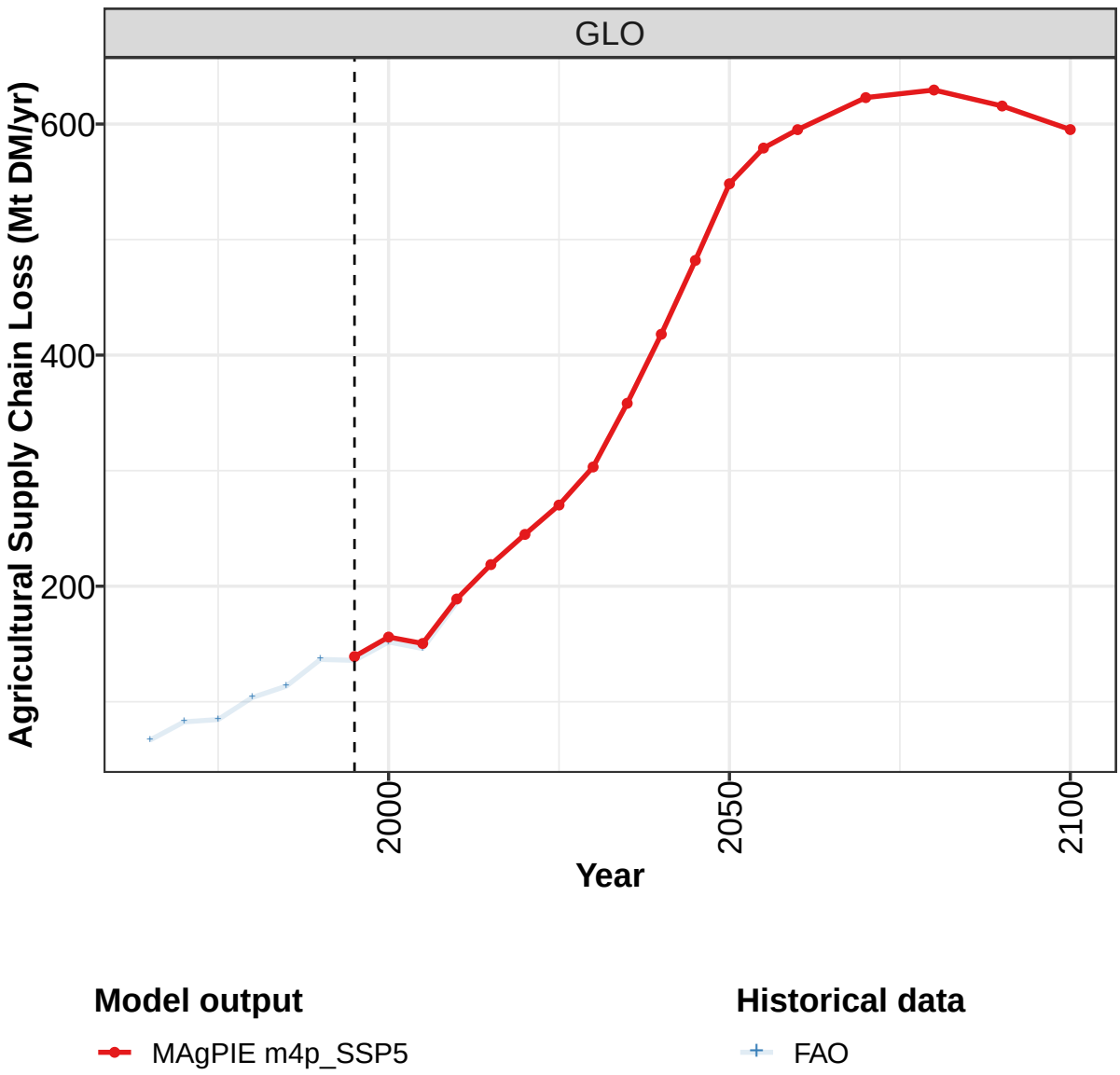


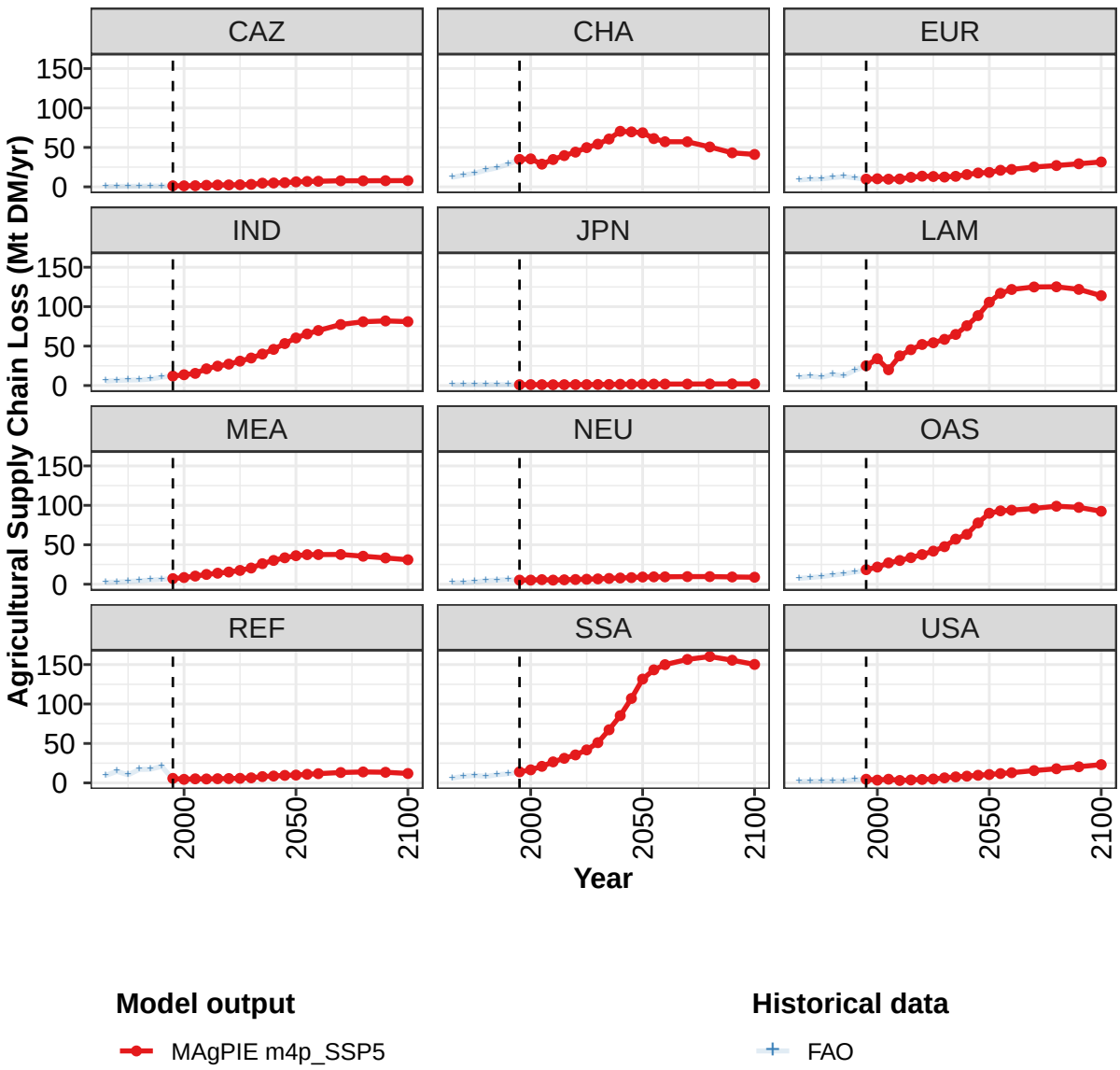

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand (Mt DM/yr)
4000
3000
2000
1000
0
2000
2025
2050
2075
2100
Agricultural Supply Chain Loss
Bioenergy
Domestic Balanceflow
Feed
Food
Material
Processing
Seed
Tota

3 Agricultural Supply Chain Loss




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Agricultural Supply Chain Loss (Mt DM/yr)
150
100
50
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
Agricultural Supply Chain Loss (Mt DM/yr)
600
400
200
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



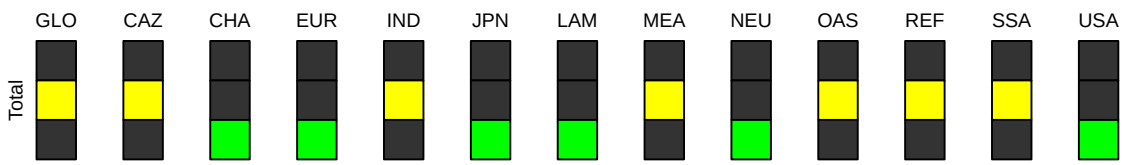


Figure 1: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	139	156	150	189	219	245	270	303	358	418	482
CAZ	1	1	1	2	2	2	3	3	5	5	5
CHA	35	35	29	35	40	44	50	54	61	70	70
EUR	10	10	10	10	12	14	13	12	13	16	18
IND	12	14	15	21	25	27	31	35	40	46	53
JPN	1	1	1	1	1	1	1	1	1	2	2
LAM	25	34	20	38	45	52	54	59	65	76	89
MEA	7	8	10	12	14	15	17	21	26	30	34
NEU	5	5	6	5	6	6	6	7	7	8	8
OAS	18	22	27	30	34	38	42	48	57	63	78
REF	6	5	5	5	5	6	6	6	8	9	10
SSA	14	17	21	27	31	35	42	51	67	85	107
USA	5	4	5	3	4	4	5	6	8	9	10

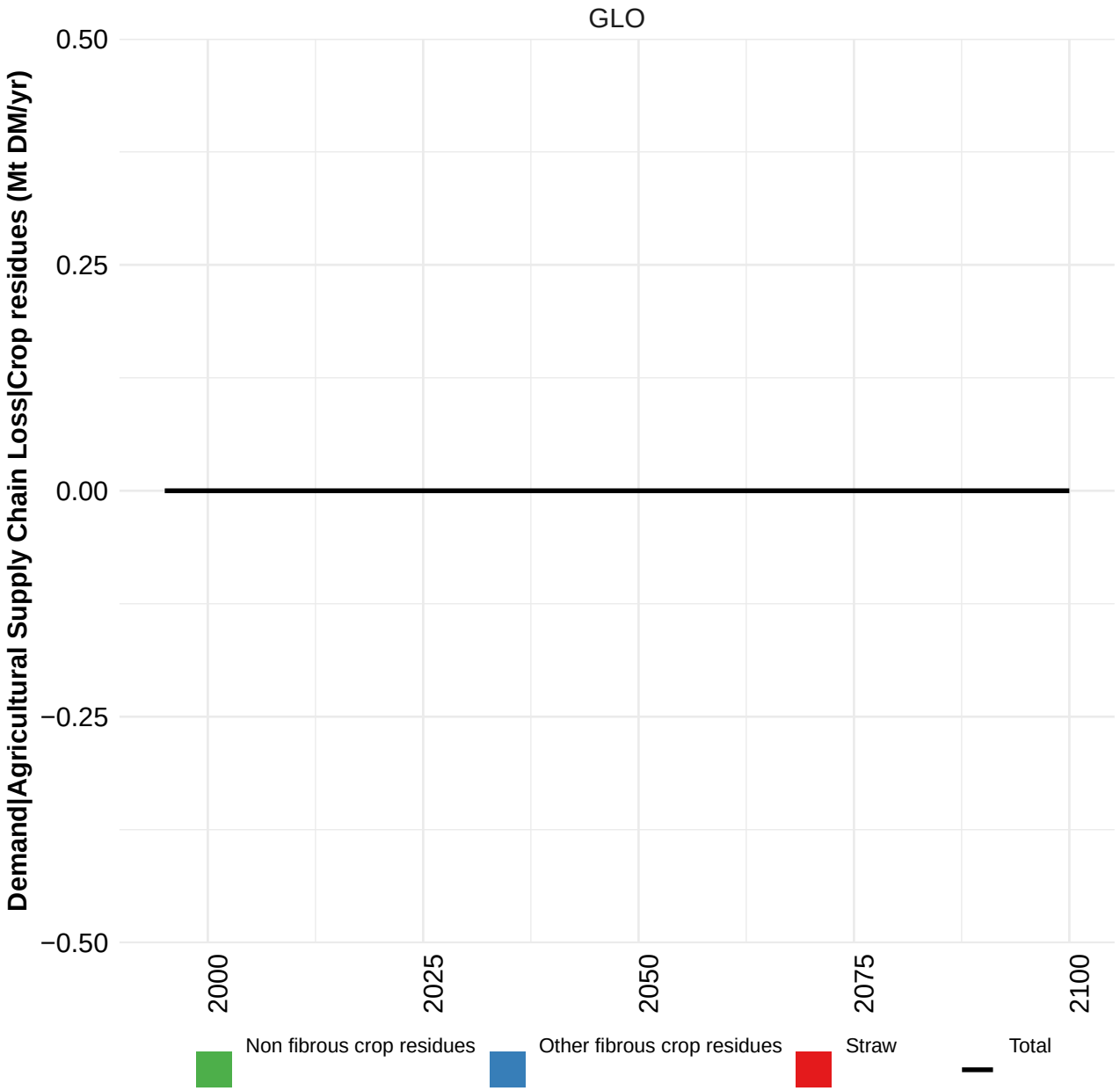
Table 4: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss (Mt DM/yr) [PART 1/2]

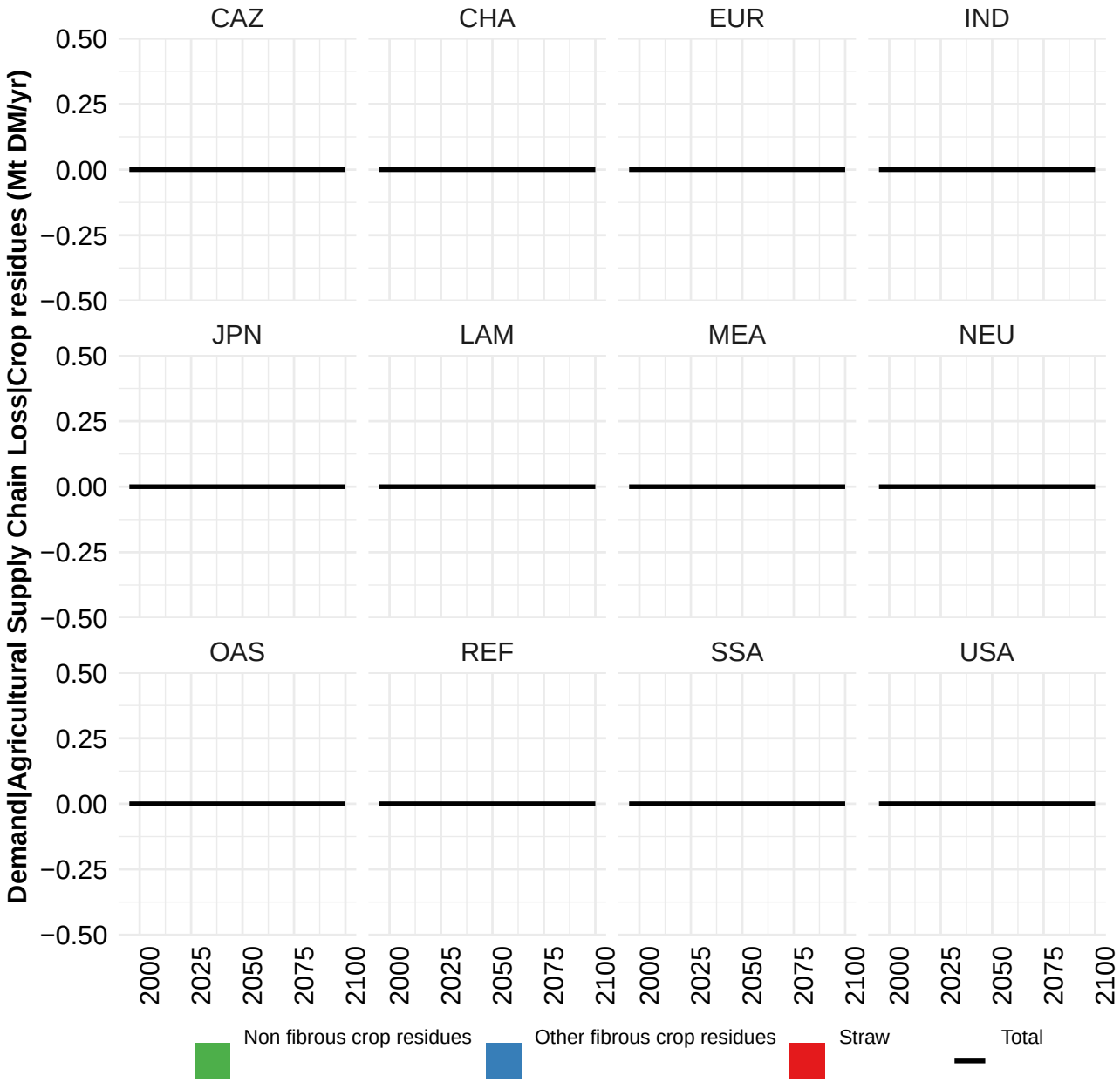
	2050	2055	2060	2070	2080	2090	2100
GLO	548	579	595	623	629	616	595
CAZ	6	7	7	8	8	8	8
CHA	69	61	57	57	51	43	41
EUR	18	21	22	25	27	29	32
IND	60	65	70	77	81	82	81
JPN	2	2	2	2	2	2	2
LAM	106	117	122	125	125	122	114
MEA	36	38	38	38	35	33	31
NEU	9	9	9	10	10	9	9
OAS	90	93	94	96	99	97	92
REF	10	11	12	13	14	14	12
SSA	132	143	150	157	160	156	150
USA	11	12	13	16	18	20	23

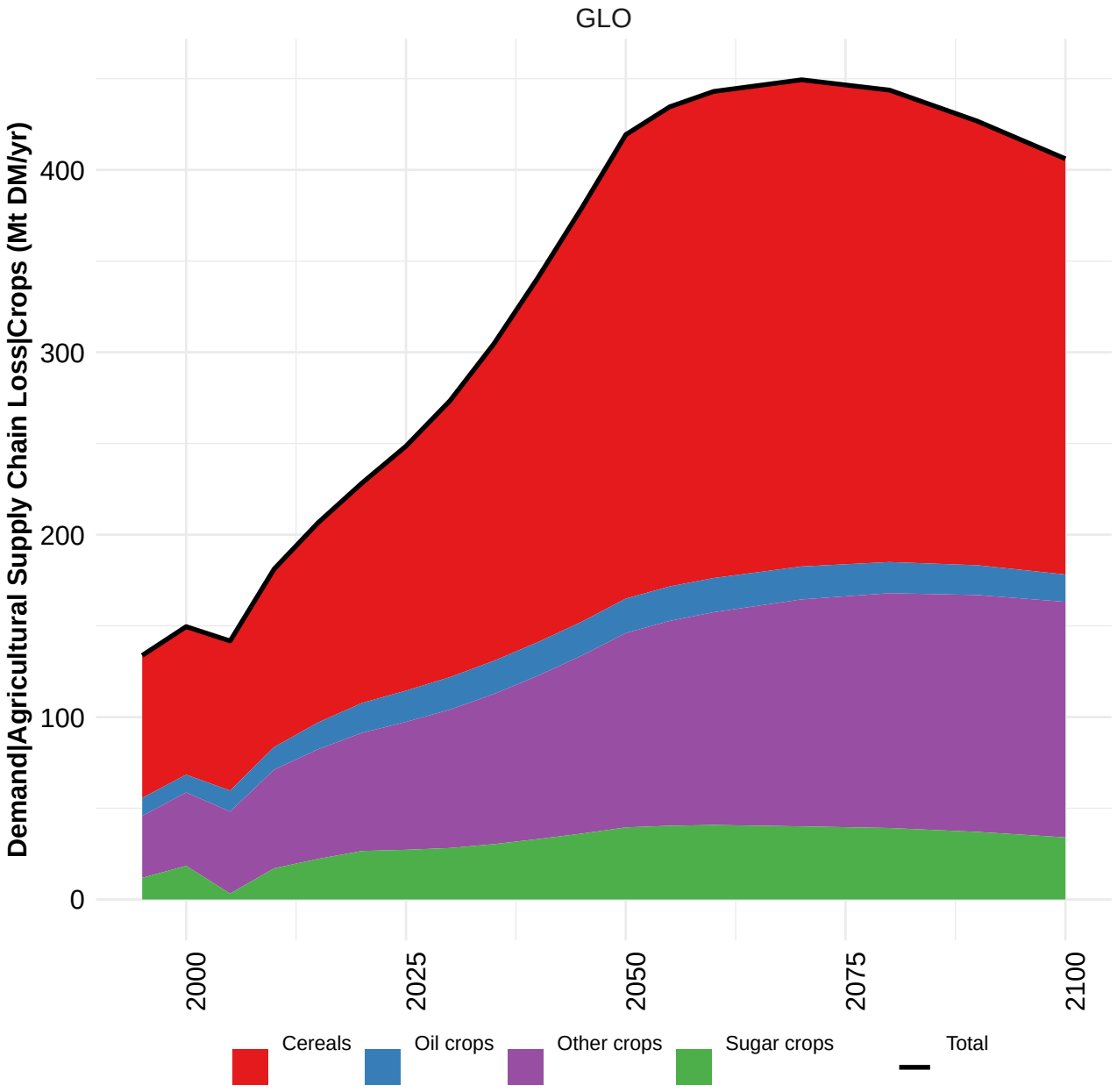
Table 5: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss (Mt DM/yr) [PART 2/2]

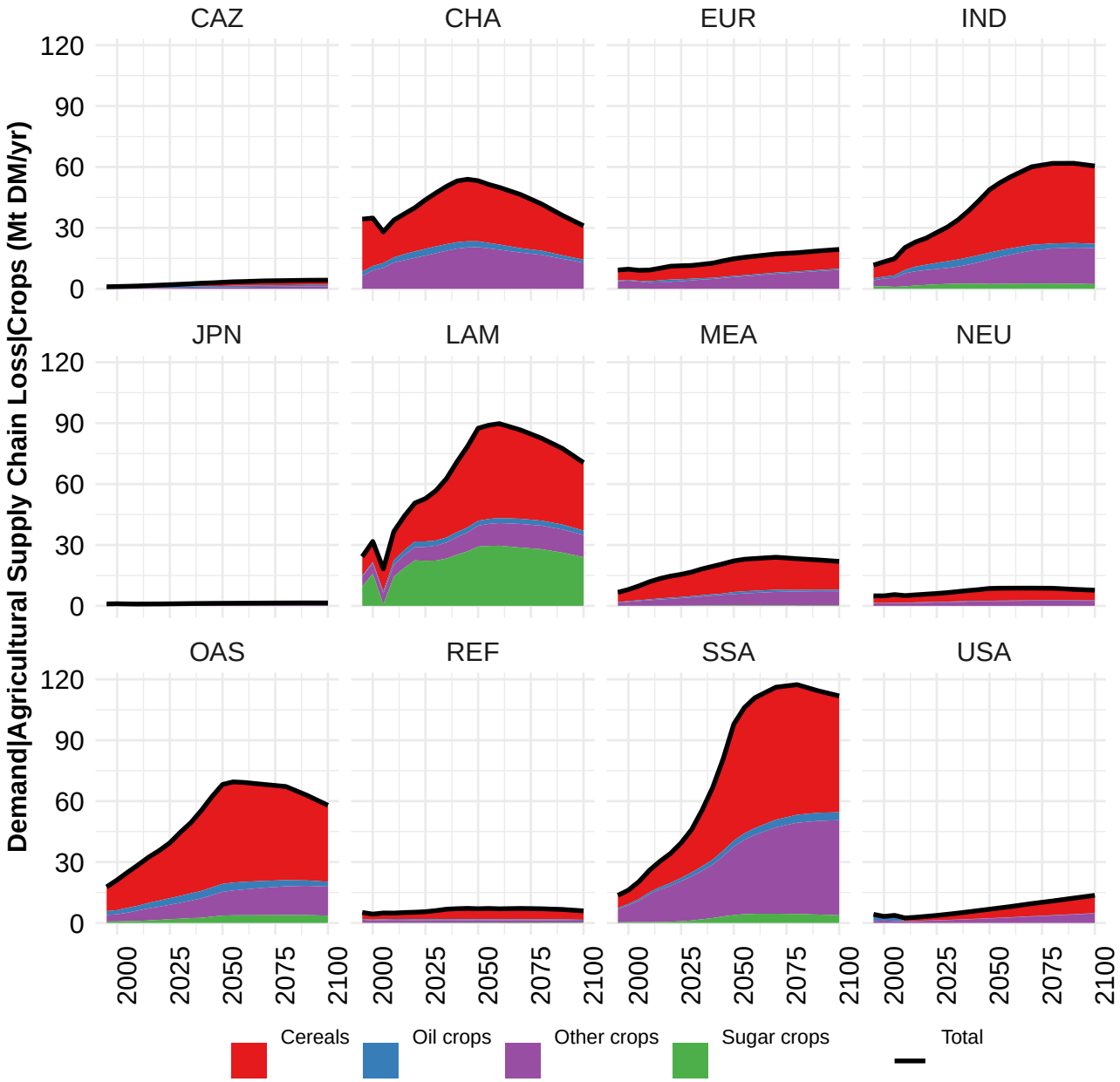
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	67	83	85	104	113	137	136	152	146	186
CAZ	0	1	1	1	1	1	1	1	1	2
CHA	12	15	17	21	24	29	35	35	29	35
EUR	9	10	10	12	13	11	9	10	9	9
IND	6	6	7	7	8	11	12	14	15	21
JPN	1	1	1	1	1	1	1	1	1	1
LAM	11	12	10	14	12	19	25	32	19	37
MEA	2	3	4	4	5	6	7	8	10	12
NEU	2	2	3	4	5	6	5	5	6	5
OAS	7	9	10	11	13	16	18	21	25	29
REF	9	15	10	17	17	21	5	4	5	5
SSA	6	8	9	8	10	12	14	16	21	26
USA	2	2	2	2	2	4	5	3	5	3

Table 6: FAO — Demand—Agricultural Supply Chain Loss (Mt DM/yr)

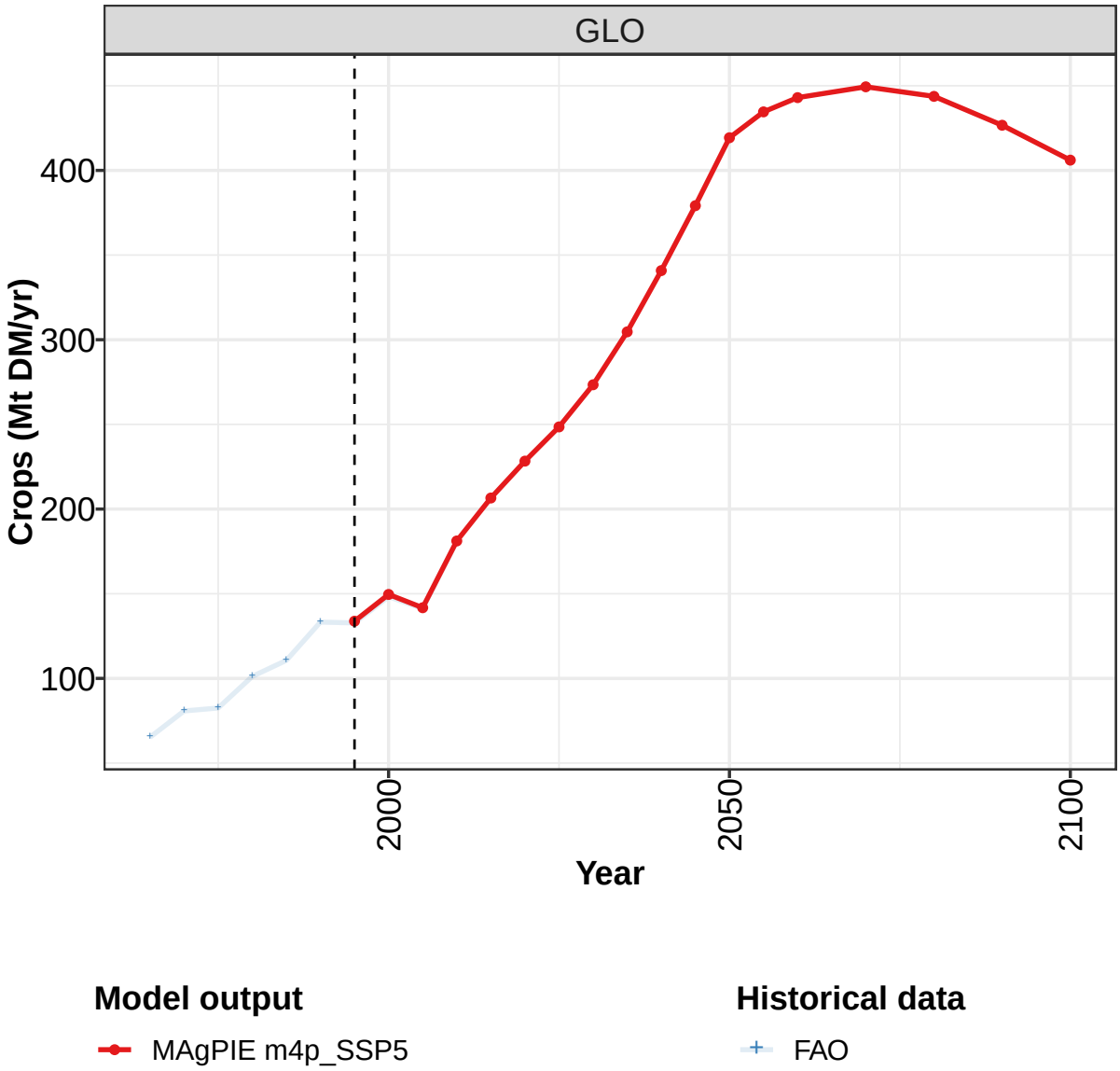

GLO
Demand|Agricultural Supply Chain Loss|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

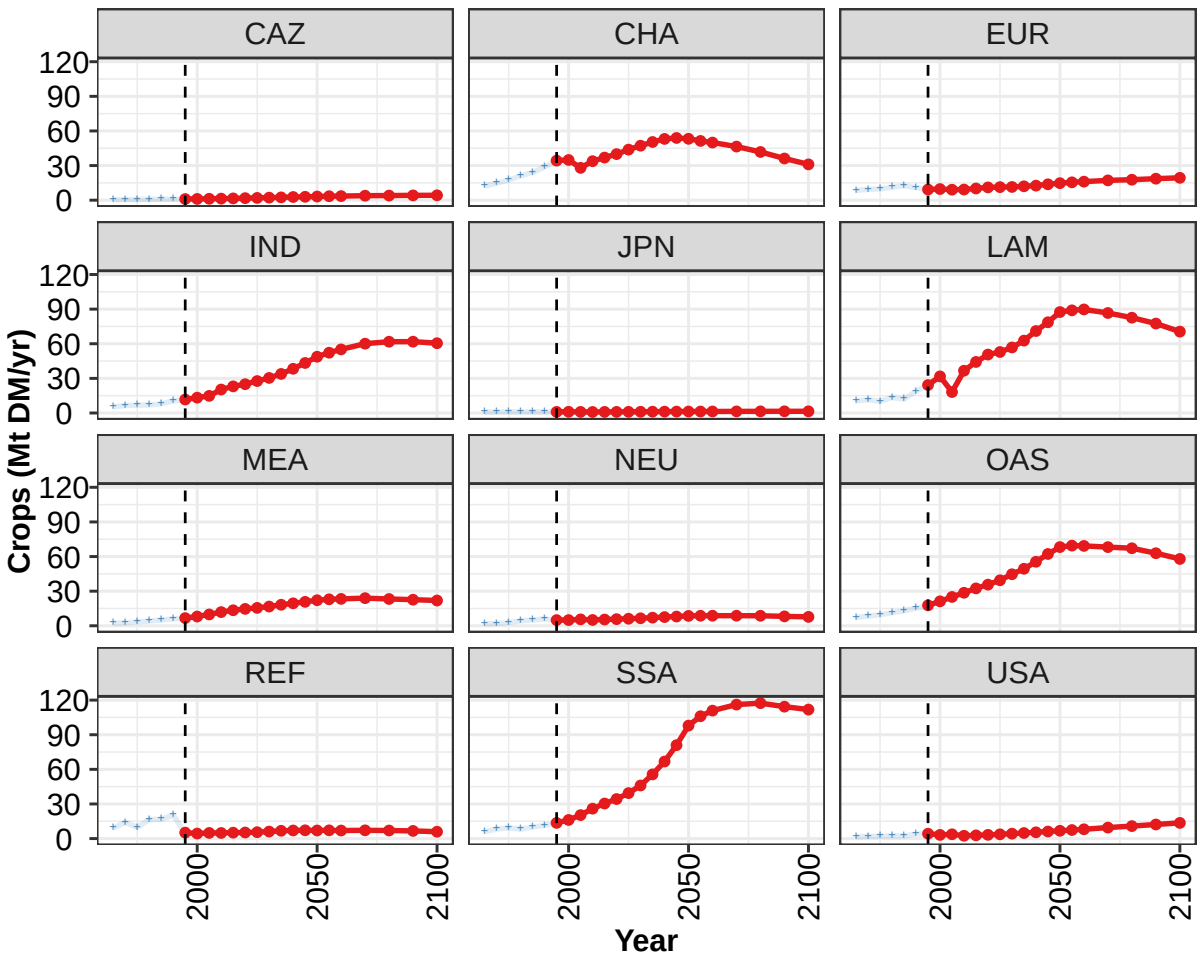

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Agricultural Supply Chain Loss|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


GLO
Demand|Agricultural Supply Chain Loss|Crops (Mt DM/yr)
400
300
200
100
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Agricultural Supply Chain Loss|Crops (Mt DM/yr)
0
30
60
90
120
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

3.1 Crops


GLO
Crops (Mt DM/yr)
400
300
200
100
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

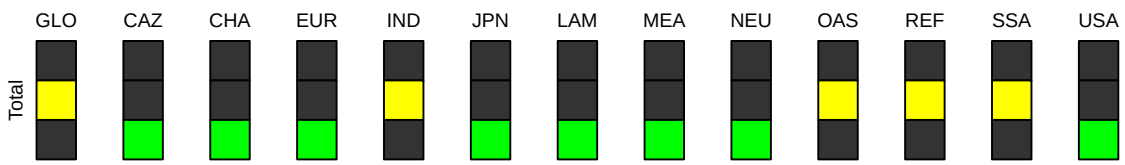


Figure 2: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	134	150	142	181	207	228	249	273	305	341	379
CAZ	1	1	1	1	2	2	2	2	2	3	3
CHA	34	35	28	34	37	40	44	47	50	53	54
EUR	9	10	9	9	10	11	11	11	12	13	14
IND	12	13	15	20	23	25	28	30	34	38	43
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	24	32	18	37	44	51	53	57	63	71	79
MEA	7	8	10	12	13	15	16	17	18	19	21
NEU	5	5	6	5	5	6	6	7	7	8	8
OAS	18	21	25	29	32	36	39	45	49	55	62
REF	5	4	5	5	5	5	6	6	7	7	7
SSA	14	16	20	26	30	34	39	46	56	67	81
USA	4	3	4	2	3	3	4	4	5	5	6

Table 7: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops (Mt DM/yr) [PART 1/2]

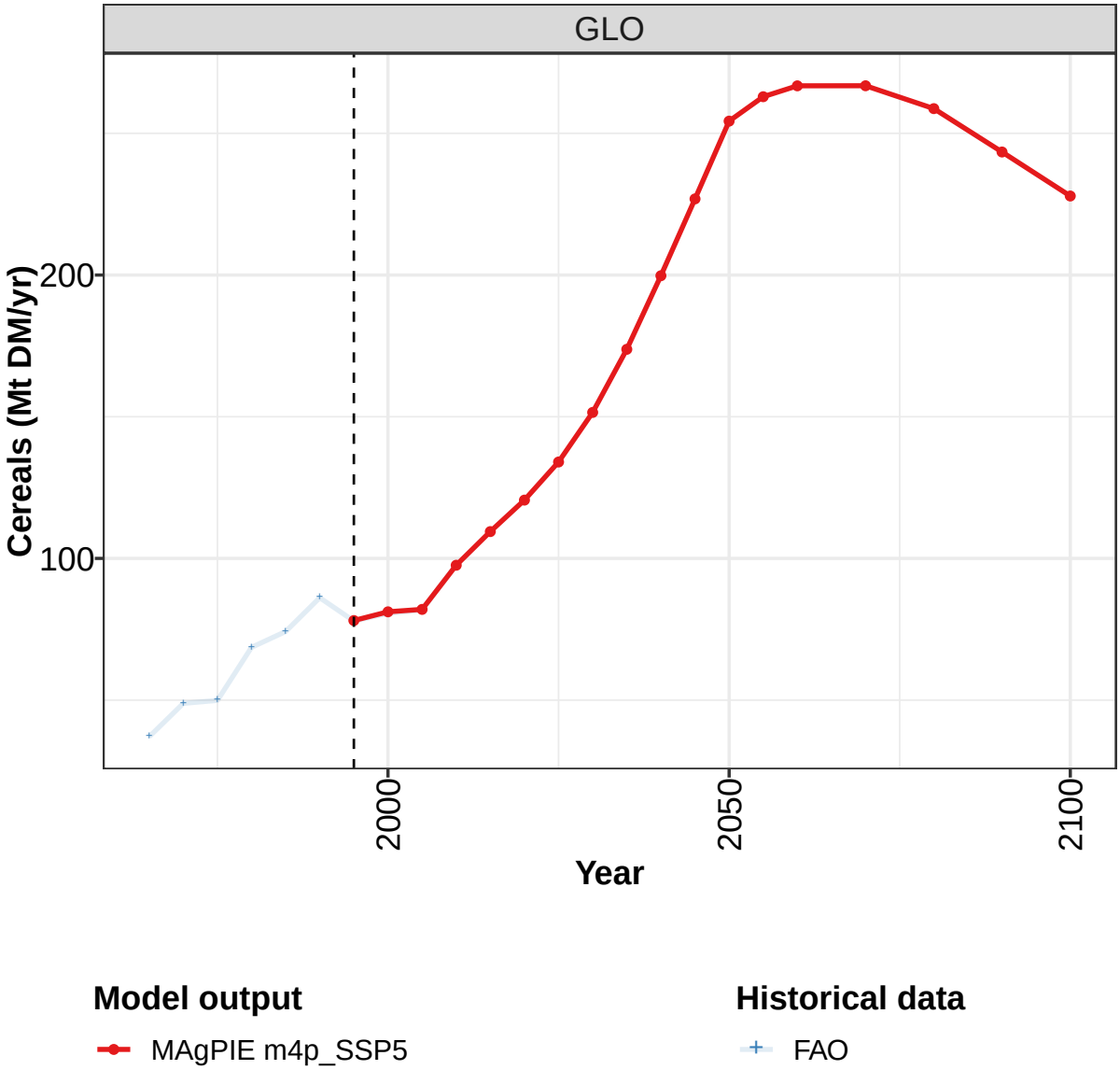
	2050	2055	2060	2070	2080	2090	2100
GLO	419	435	443	449	444	427	406
CAZ	3	3	4	4	4	4	4
CHA	53	51	50	46	42	36	31
EUR	15	16	16	17	18	19	19
IND	49	52	55	60	62	62	60
JPN	1	1	1	1	1	1	1
LAM	87	89	90	87	83	78	71
MEA	22	23	23	24	23	23	22
NEU	9	9	9	9	9	8	8
OAS	68	69	69	68	67	63	58
REF	7	7	7	7	7	7	6
SSA	98	106	111	116	117	114	112
USA	7	7	8	10	11	12	14

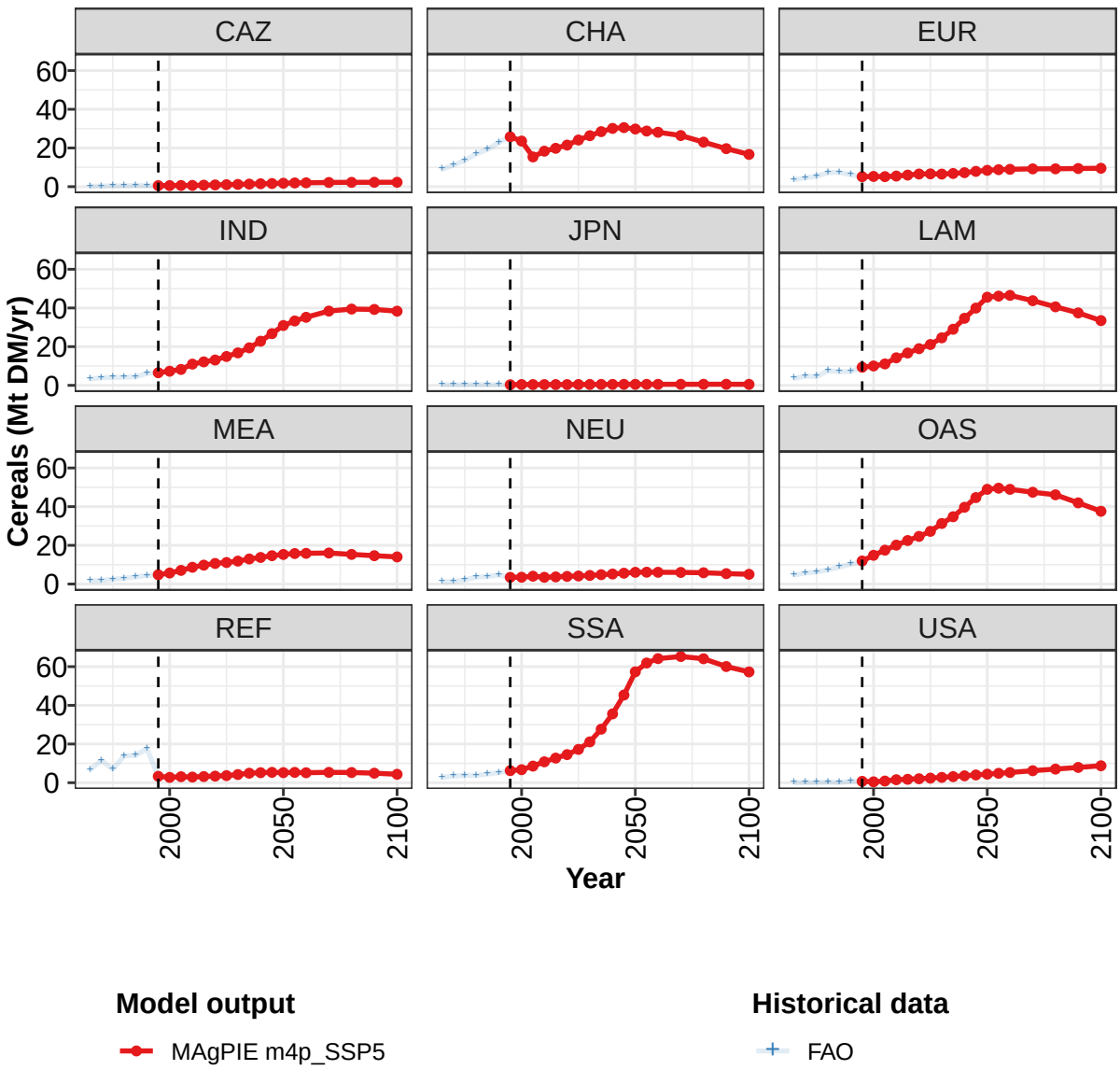
Table 8: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	65	81	83	101	111	133	133	148	141	181
CAZ	0	0	1	1	1	1	1	1	1	1
CHA	12	15	17	21	24	29	34	35	28	34
EUR	8	9	10	11	12	11	9	9	9	9
IND	5	6	7	7	8	10	12	13	15	20
JPN	1	1	1	1	1	1	1	1	1	1
LAM	10	12	10	13	12	19	24	32	18	36
MEA	2	3	3	4	5	6	7	8	10	12
NEU	2	2	3	4	5	6	5	5	5	5
OAS	7	8	10	11	13	15	17	21	25	29
REF	9	14	10	16	17	20	5	4	5	5
SSA	6	8	9	8	10	11	14	16	20	26
USA	2	2	2	2	2	4	4	3	4	2

Table 9: FAO — Demand—Agricultural Supply Chain Loss—Crops (Mt DM/yr)

3.1.1 Cereals


GLO
Cereals (Mt DM/yr)
200
100
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



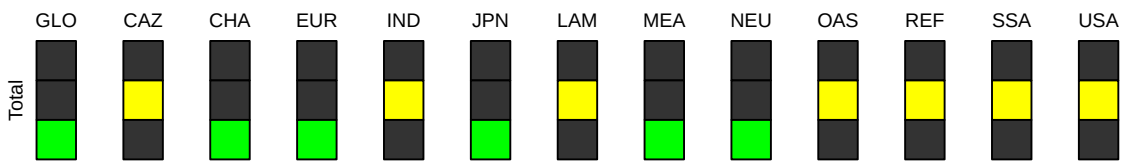


Figure 3: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	78	81	82	98	109	121	134	152	174	200	227
CAZ	1	1	1	1	1	1	1	1	1	2	2
CHA	26	24	15	18	20	22	24	26	28	30	31
EUR	5	5	5	5	6	7	7	7	7	7	8
IND	7	7	8	11	12	13	15	17	19	23	27
JPN	0	0	0	0	0	0	0	0	0	1	1
LAM	9	10	11	14	17	19	21	25	29	35	40
MEA	5	6	7	9	10	11	11	12	13	14	15
NEU	3	4	4	3	4	4	4	4	5	5	6
OAS	12	15	18	20	22	25	27	31	35	40	45
REF	3	3	3	3	3	3	4	4	5	5	5
SSA	6	7	9	11	13	15	17	21	28	36	45
USA	1	0	1	2	2	2	2	3	3	4	4

Table 10: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals (Mt DM/yr) [PART 1/2]

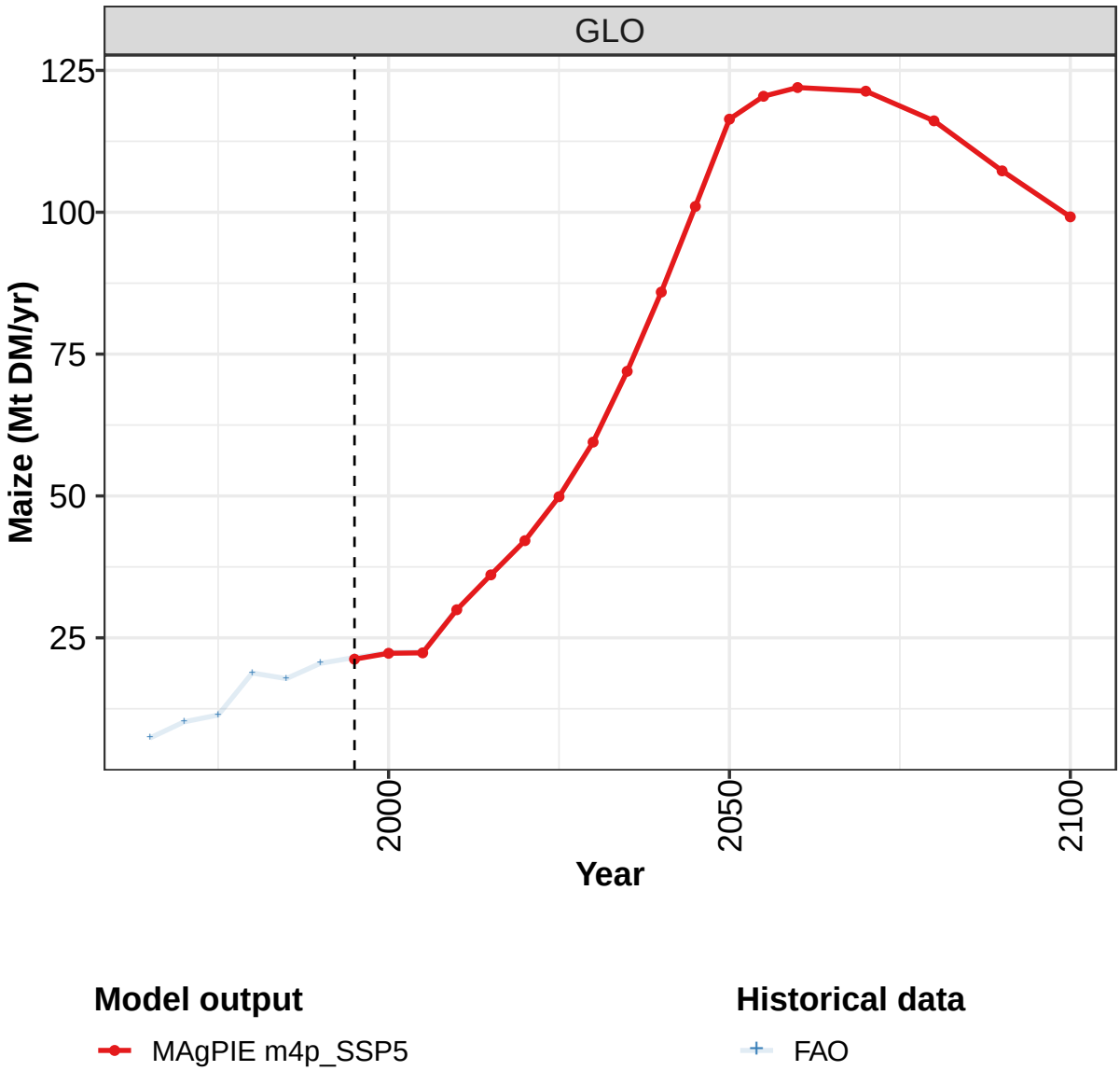
	2050	2055	2060	2070	2080	2090	2100
GLO	254	263	267	267	259	243	228
CAZ	2	2	2	2	2	2	2
CHA	30	29	28	26	23	20	17
EUR	8	9	9	9	9	9	10
IND	31	33	35	38	39	39	38
JPN	1	1	1	1	1	1	1
LAM	46	46	47	44	41	37	33
MEA	15	16	16	16	15	15	14
NEU	6	6	6	6	6	5	5
OAS	49	50	49	47	46	42	38
REF	5	5	5	5	5	5	4
SSA	57	62	64	65	64	60	57
USA	4	5	5	6	7	8	9

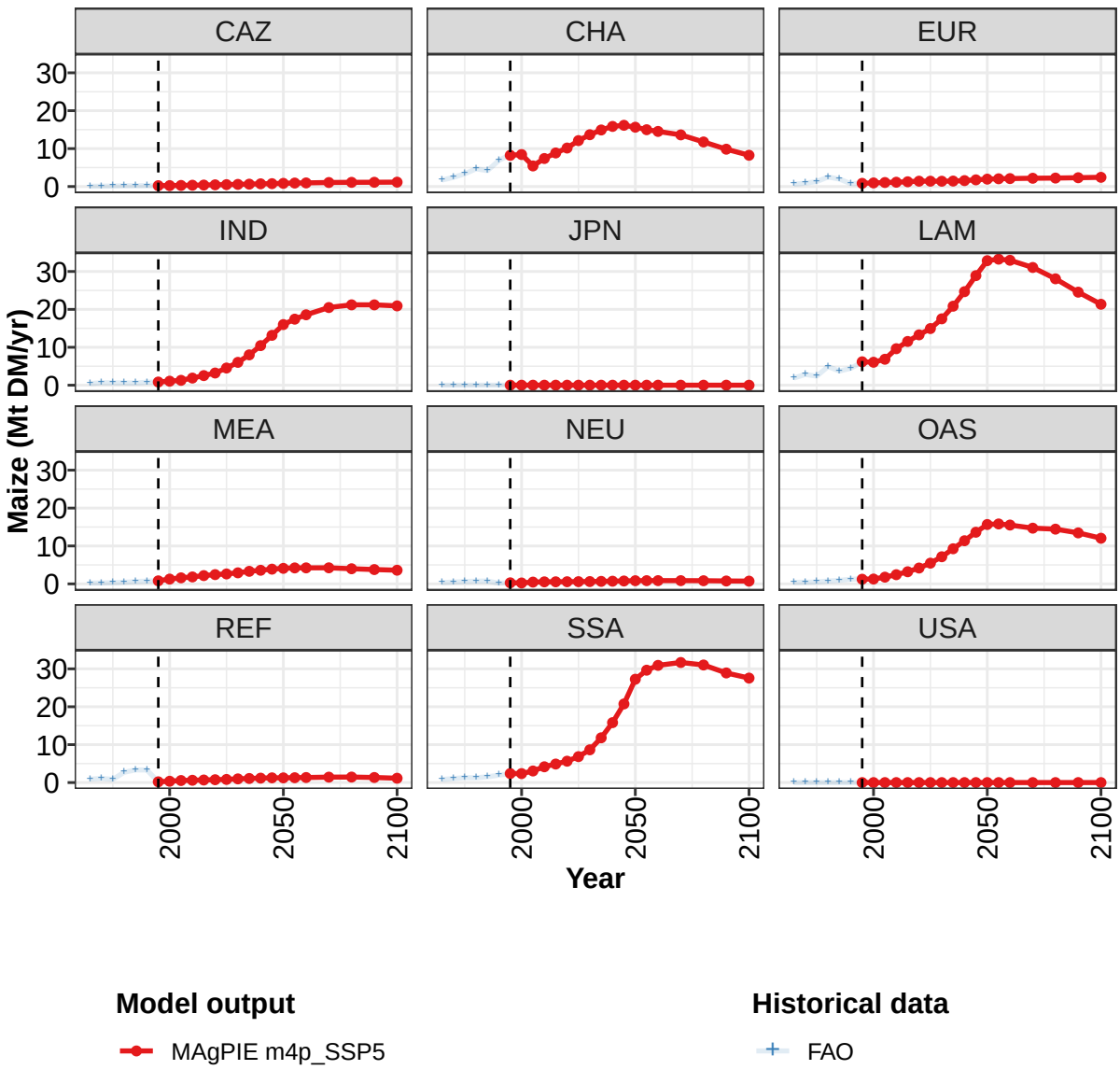
Table 11: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	37.1	48.8	49.9	68.6	74.2	86.1	77.9	80.6	81.9	97.7
CAZ	0.2	0.3	0.4	0.4	0.6	0.5	0.5	0.6	0.7	0.7
CHA	9.0	11.1	13.5	16.9	19.3	22.9	26.0	23.7	15.5	18.5
EUR	3.6	4.6	5.3	7.3	7.4	6.2	5.0	5.1	5.0	5.3
IND	3.3	4.0	4.1	4.2	4.4	6.2	6.5	7.3	8.3	11.0
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
LAM	3.6	4.8	4.6	7.6	7.0	7.1	9.3	10.0	11.2	14.2
MEA	1.6	1.9	2.4	3.0	3.7	4.4	4.9	5.7	7.0	8.7
NEU	1.1	1.3	2.1	3.5	3.9	4.7	3.4	3.4	4.0	3.5
OAS	4.7	5.7	6.3	7.3	8.8	10.3	11.6	14.5	17.3	20.2
REF	6.8	11.4	7.0	14.0	14.1	17.6	3.4	2.8	3.1	2.9
SSA	2.8	3.4	3.8	3.8	4.5	5.3	6.2	6.7	8.6	10.8
USA	0.1	0.1	0.1	0.3	0.1	0.7	0.7	0.5	0.9	1.6

Table 12: FAO — Demand—Agricultural Supply Chain Loss—Crops—Cereals (Mt DM/yr)

3.1.2 Cereals—Maize





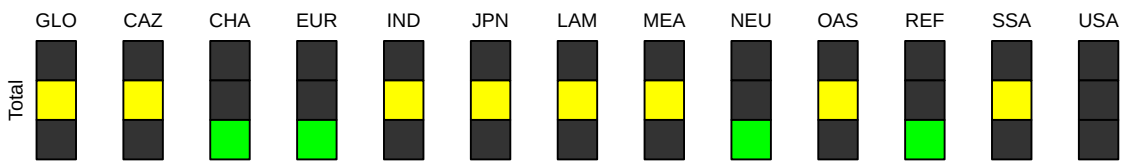


Figure 4: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21	22	22	30	36	42	50	59	72	86	101
CAZ	0	0	0	0	0	0	1	1	1	1	1
CHA	8	8	5	7	9	10	12	14	15	16	16
EUR	1	1	1	1	1	1	1	1	1	2	2
IND	1	1	1	2	3	3	5	6	8	10	13
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	6	7	10	12	13	15	18	21	25	29
MEA	1	1	2	2	2	2	3	3	3	4	4
NEU	0	0	0	1	1	1	1	1	1	1	1
OAS	1	1	2	2	3	4	5	7	9	11	14
REF	0	0	1	1	1	1	1	1	1	1	1
SSA	2	2	3	4	5	6	7	9	12	16	21
USA	0	0	0	0	0	0	0	0	0	0	0

Table 13: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

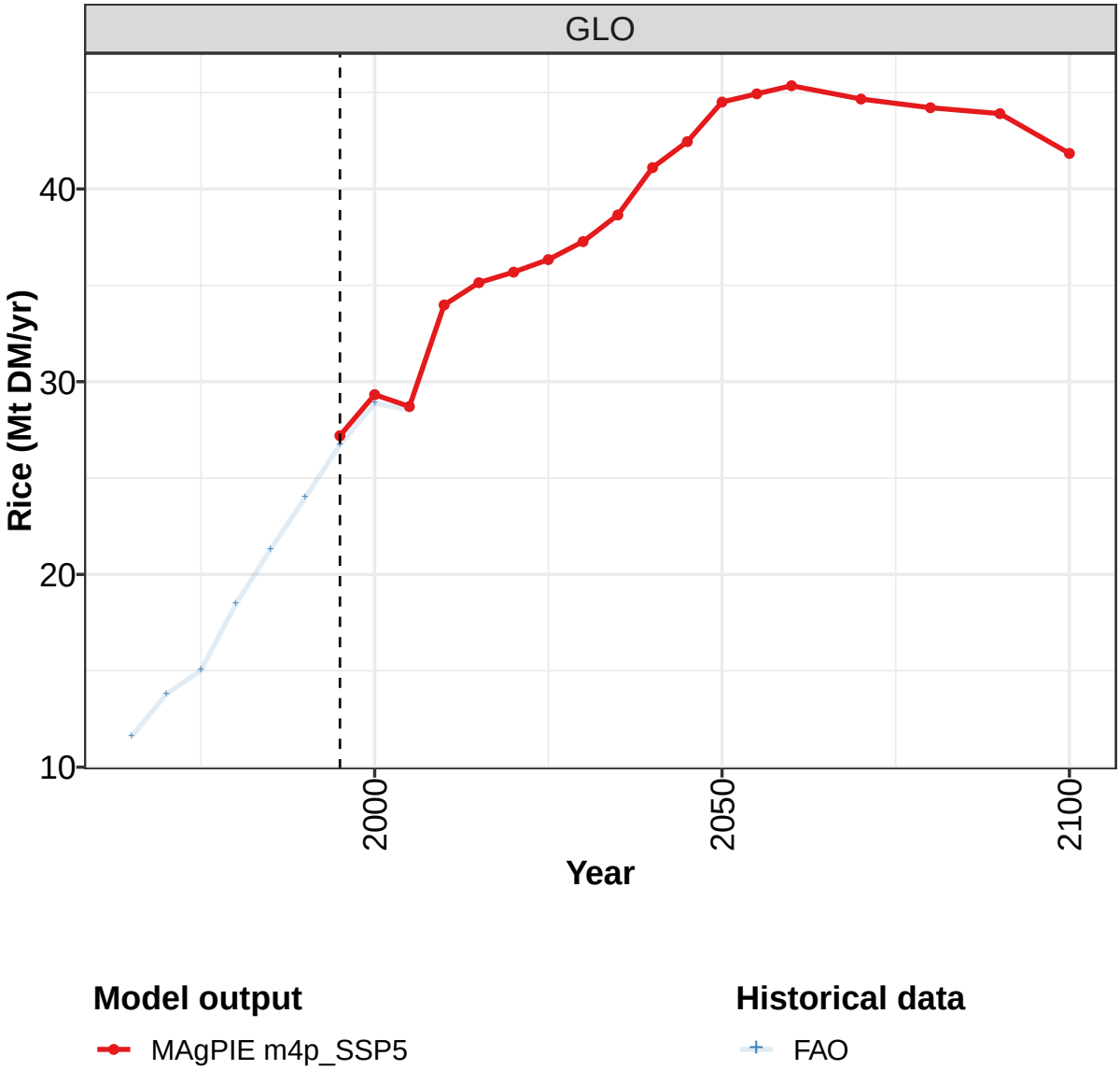
	2050	2055	2060	2070	2080	2090	2100
GLO	116	120	122	121	116	107	99
CAZ	1	1	1	1	1	1	1
CHA	16	15	15	14	12	10	8
EUR	2	2	2	2	2	2	2
IND	16	17	19	20	21	21	21
JPN	0	0	0	0	0	0	0
LAM	33	33	33	31	28	25	21
MEA	4	4	4	4	4	4	4
NEU	1	1	1	1	1	1	1
OAS	16	16	16	15	14	13	12
REF	1	1	1	1	1	1	1
SSA	27	30	31	32	31	29	28
USA	0	0	0	0	0	0	0

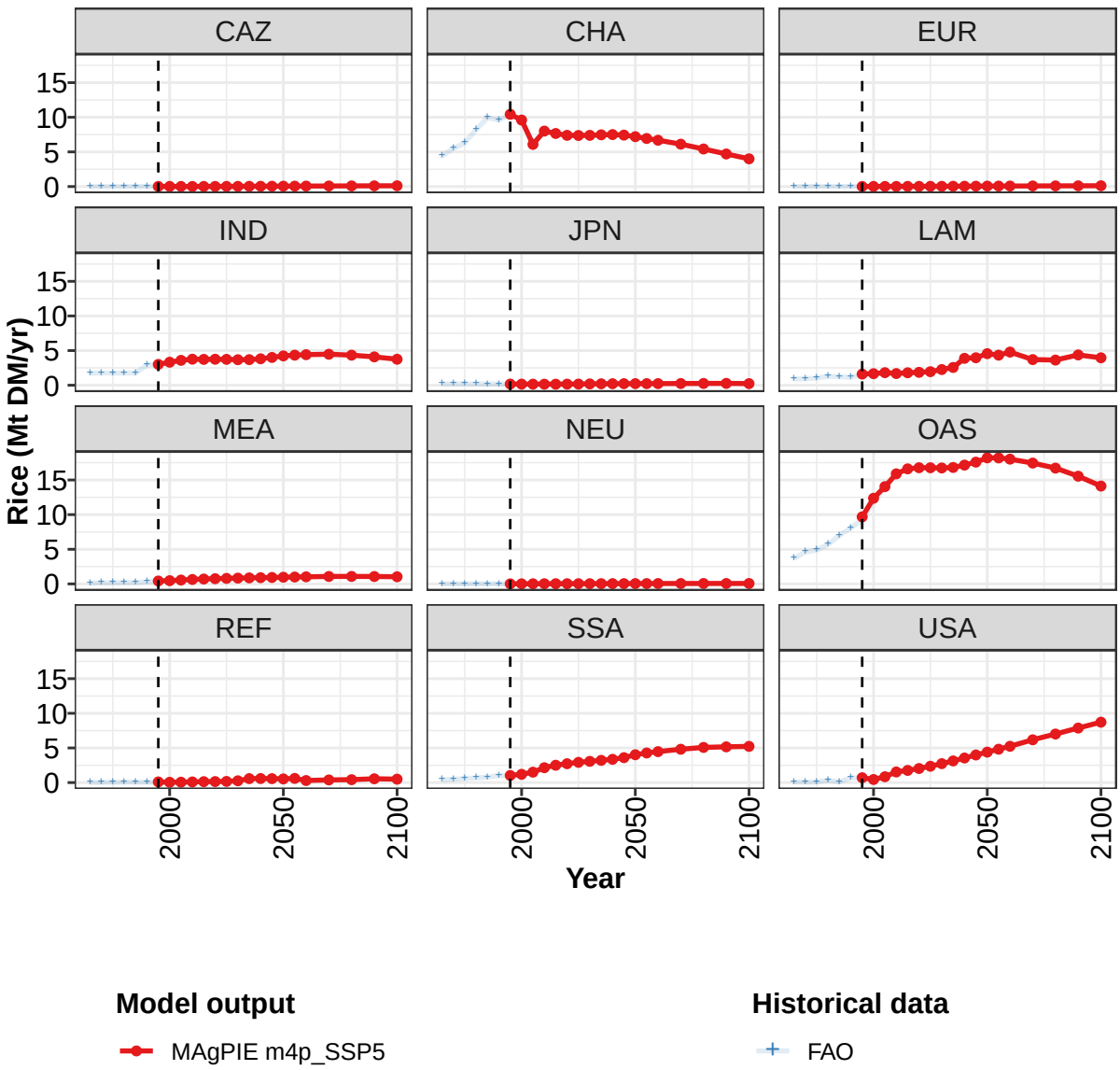
Table 14: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7.3	10.2	11.4	18.8	17.8	20.5	21.5	22.4	22.5	30.1
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4
CHA	1.7	2.4	3.4	4.7	4.2	6.9	8.4	8.6	5.5	7.5
EUR	0.6	0.9	1.3	2.5	2.0	0.7	0.8	0.9	1.0	1.1
IND	0.4	0.7	0.6	0.6	0.6	0.8	0.8	1.1	1.3	1.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.9	2.8	2.4	4.9	3.7	4.5	6.1	6.0	6.9	9.6
MEA	0.2	0.2	0.3	0.4	0.6	0.7	0.8	1.2	1.5	1.9
NEU	0.3	0.5	0.6	0.7	0.7	0.2	0.4	0.3	0.5	0.5
OAS	0.4	0.4	0.5	0.7	0.9	1.2	1.3	1.4	1.8	2.5
REF	0.9	1.1	0.8	2.7	3.3	3.3	0.2	0.4	0.6	0.6
SSA	0.8	1.1	1.3	1.3	1.5	1.9	2.4	2.4	3.1	4.2
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 15: FAO — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Maize (Mt DM/yr)

3.1.3 Cereals—Rice





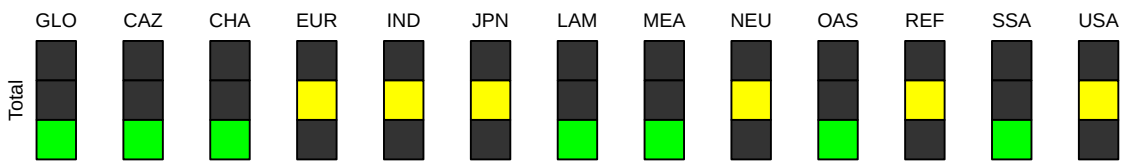


Figure 5: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	27.2	29.3	28.7	34.0	35.1	35.7	36.3	37.3	38.7	41.1	42.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	10.4	9.6	6.1	8.0	7.7	7.4	7.4	7.4	7.5	7.5	7.4
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
IND	3.0	3.3	3.6	3.8	3.7	3.8	3.7	3.7	3.7	3.8	4.0
JPN	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	1.6	1.7	1.8	1.7	1.8	1.9	2.0	2.3	2.6	3.9	4.0
MEA	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	9.7	12.4	14.0	15.9	16.6	16.8	16.8	16.7	16.8	17.2	17.6
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.6	0.6
SSA	1.0	1.2	1.5	2.1	2.5	2.7	2.9	3.1	3.2	3.4	3.6
USA	0.7	0.4	0.8	1.5	1.8	2.0	2.4	2.7	3.1	3.6	4.0

Table 16: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

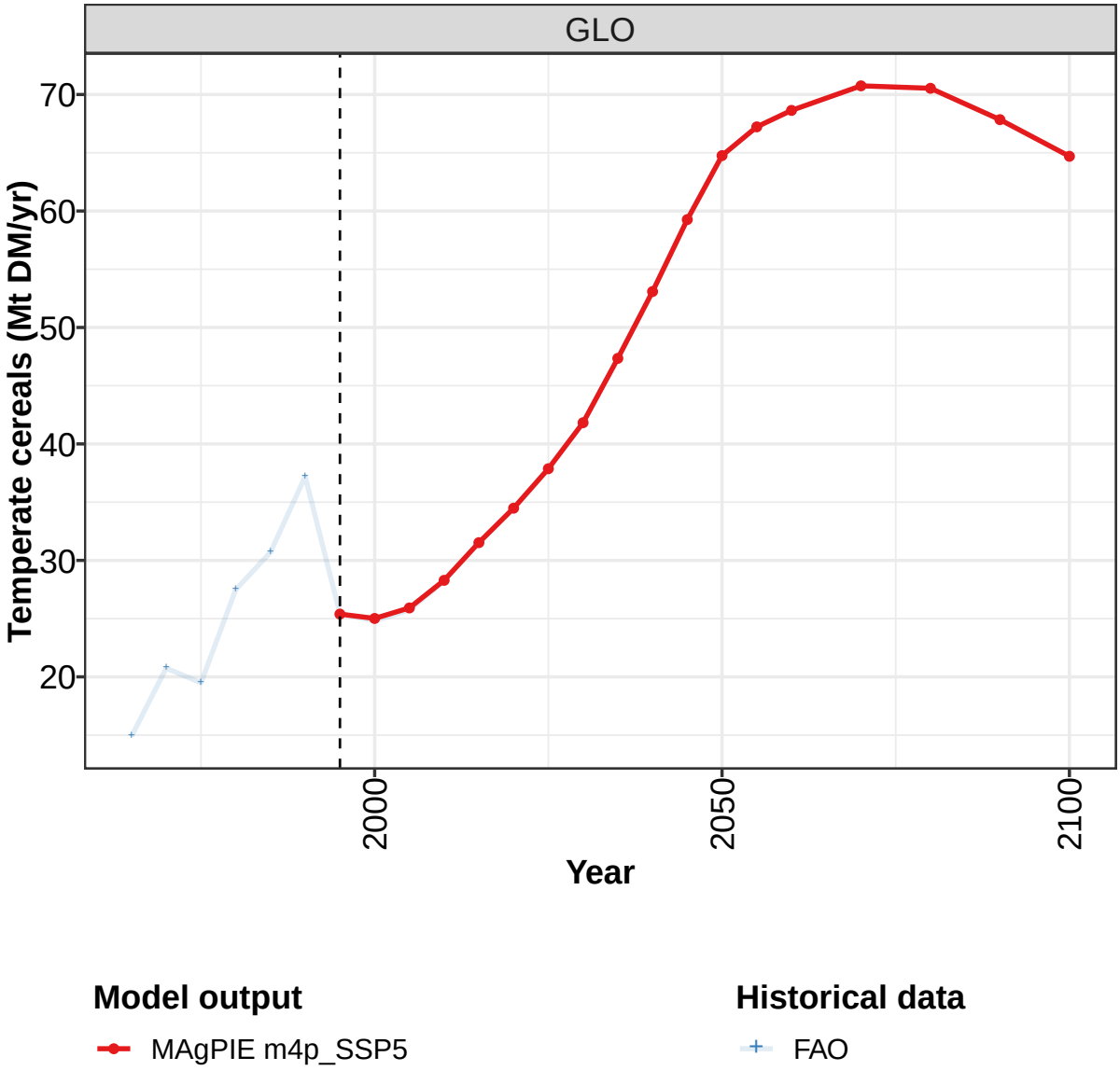
	2050	2055	2060	2070	2080	2090	2100
GLO	44.5	44.9	45.4	44.7	44.2	43.9	41.8
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	7.2	6.9	6.7	6.1	5.4	4.7	4.0
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	4.2	4.3	4.4	4.5	4.3	4.1	3.8
JPN	0.2	0.2	0.2	0.2	0.3	0.3	0.2
LAM	4.6	4.3	4.8	3.7	3.6	4.4	4.0
MEA	1.0	1.0	1.0	1.1	1.1	1.1	1.0
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	18.2	18.2	18.0	17.4	16.7	15.5	14.1
REF	0.5	0.6	0.3	0.4	0.4	0.6	0.5
SSA	4.0	4.3	4.5	4.8	5.1	5.2	5.2
USA	4.4	4.8	5.2	6.2	7.0	7.9	8.7

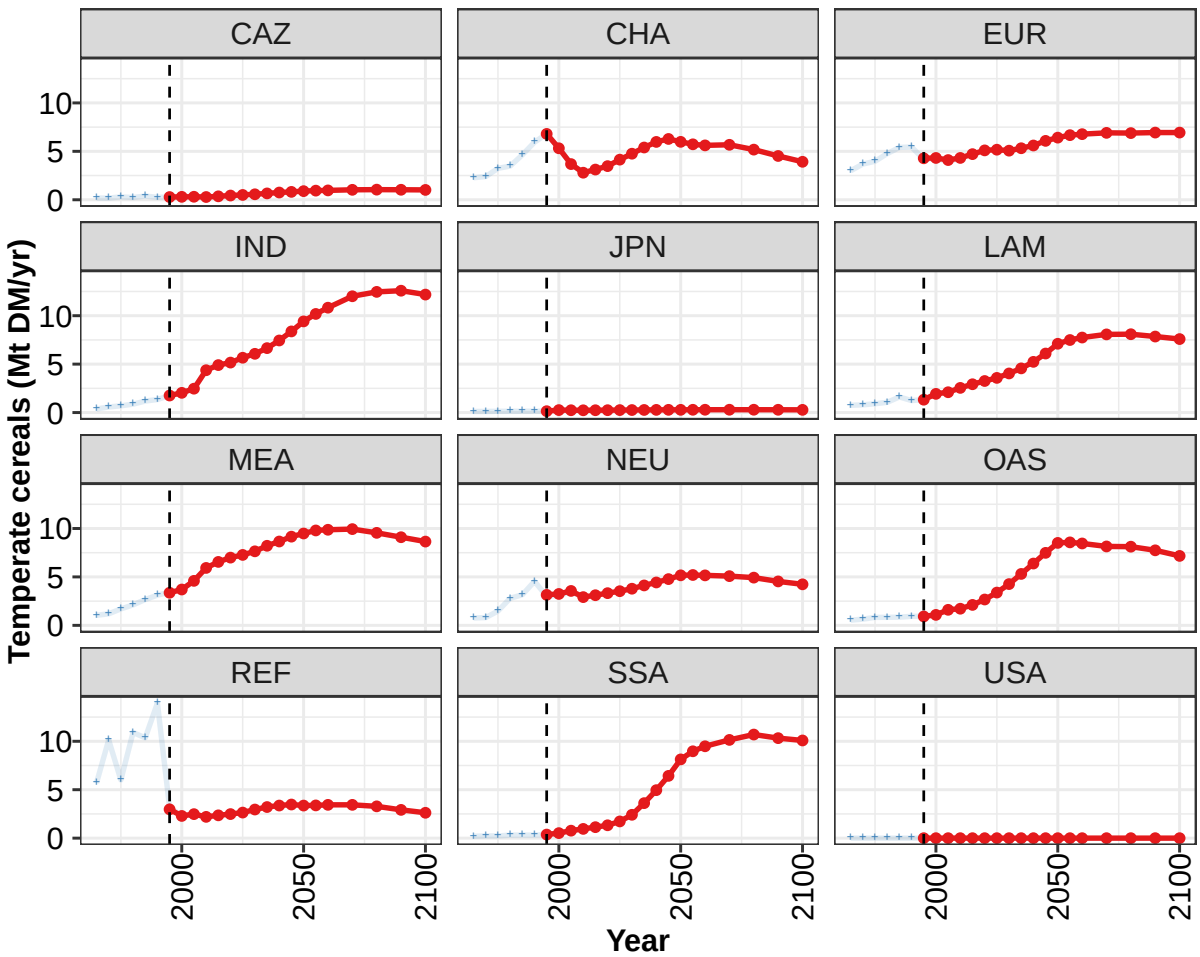
Table 17: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.6	13.8	15.0	18.4	21.3	24.0	26.7	28.9	28.5	34.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.4	5.5	6.3	8.2	9.9	9.6	10.4	9.6	6.1	8.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.7	1.7	1.7	1.7	1.7	2.9	3.0	3.3	3.6	3.8
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
LAM	0.9	0.9	1.0	1.3	1.2	1.1	1.6	1.7	1.8	1.7
MEA	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.6
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	3.7	4.6	4.9	5.7	7.0	8.1	9.3	11.9	13.8	15.9
REF	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
SSA	0.4	0.5	0.6	0.7	0.8	1.0	1.0	1.2	1.5	2.2
USA	0.1	0.1	0.1	0.3	0.1	0.7	0.7	0.4	0.8	1.5

Table 18: FAO — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Rice (Mt DM/yr)

3.1.4 Cereals—Temperate cereals





Model output

MAgPIE m4p_SSP5

Historical data

FAO

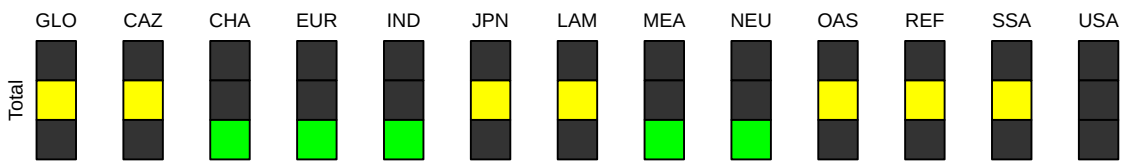


Figure 6: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	25.4	25.0	25.9	28.3	31.5	34.5	37.9	41.8	47.3	53.1	59.3
CAZ	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.7	0.8
CHA	6.8	5.3	3.7	2.8	3.1	3.5	4.1	4.8	5.4	6.0	6.3
EUR	4.3	4.3	4.1	4.3	4.7	5.1	5.2	5.1	5.3	5.6	6.1
IND	1.8	2.0	2.5	4.4	4.9	5.2	5.7	6.1	6.7	7.4	8.4
JPN	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
LAM	1.3	1.9	2.1	2.5	2.9	3.3	3.6	4.0	4.6	5.2	6.1
MEA	3.4	3.7	4.6	5.9	6.6	7.0	7.3	7.6	8.2	8.7	9.2
NEU	3.1	3.2	3.6	2.9	3.1	3.3	3.5	3.8	4.1	4.4	4.8
OAS	0.9	1.1	1.6	1.7	2.1	2.7	3.4	4.3	5.3	6.4	7.5
REF	3.0	2.3	2.5	2.2	2.4	2.5	2.6	3.0	3.2	3.4	3.5
SSA	0.4	0.5	0.8	1.0	1.1	1.3	1.7	2.4	3.6	5.0	6.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 19: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

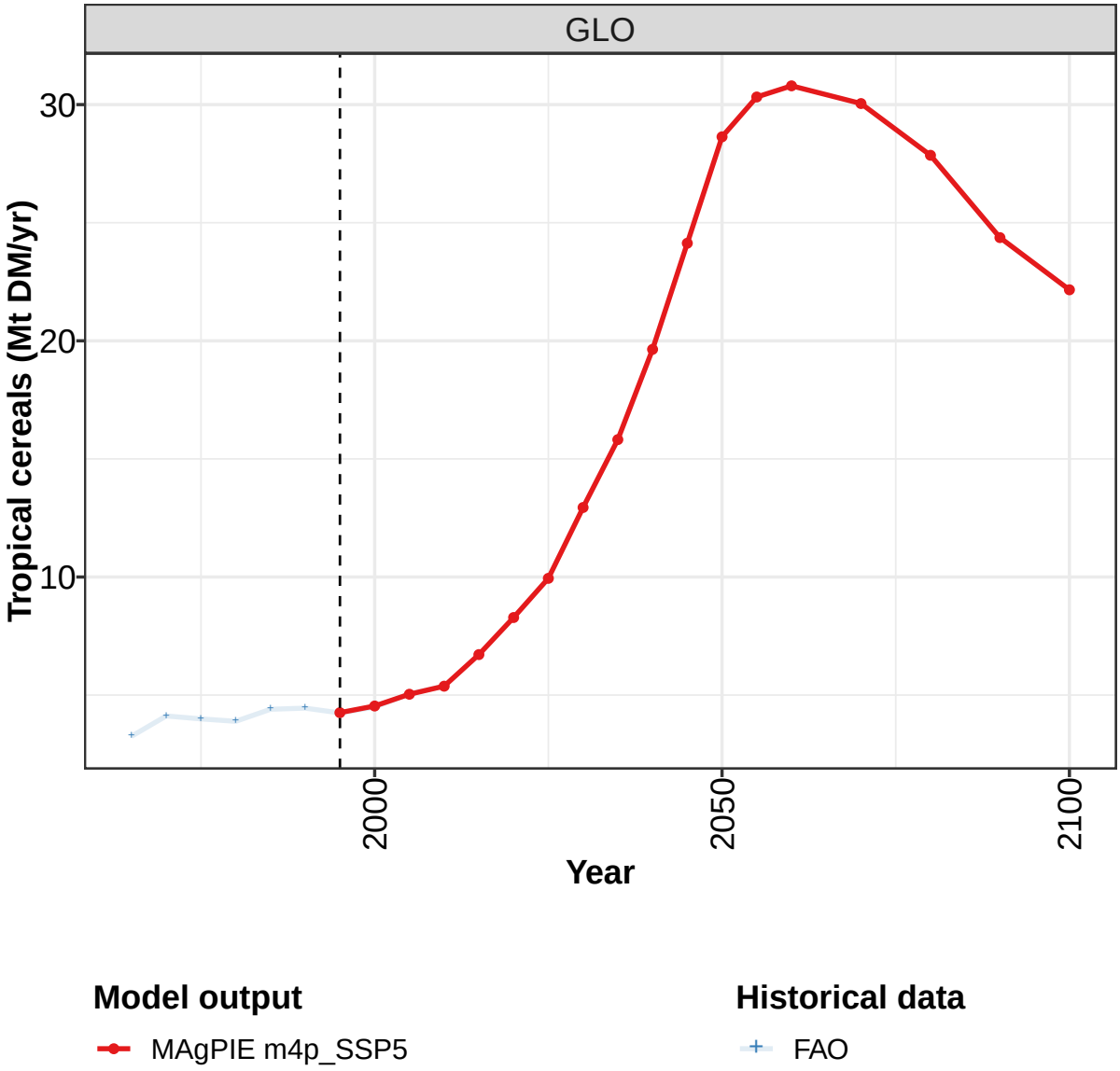
	2050	2055	2060	2070	2080	2090	2100
GLO	64.8	67.2	68.6	70.7	70.5	67.8	64.7
CAZ	0.9	0.9	1.0	1.0	1.0	1.0	1.0
CHA	6.0	5.7	5.6	5.7	5.2	4.5	3.9
EUR	6.4	6.7	6.8	6.9	6.9	6.9	6.9
IND	9.4	10.2	10.8	12.0	12.5	12.6	12.2
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	7.1	7.5	7.7	8.1	8.1	7.8	7.6
MEA	9.5	9.8	9.9	9.9	9.6	9.1	8.7
NEU	5.2	5.2	5.2	5.1	4.9	4.5	4.2
OAS	8.5	8.6	8.5	8.1	8.1	7.7	7.2
REF	3.4	3.4	3.4	3.4	3.3	2.9	2.6
SSA	8.1	9.0	9.5	10.1	10.7	10.3	10.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

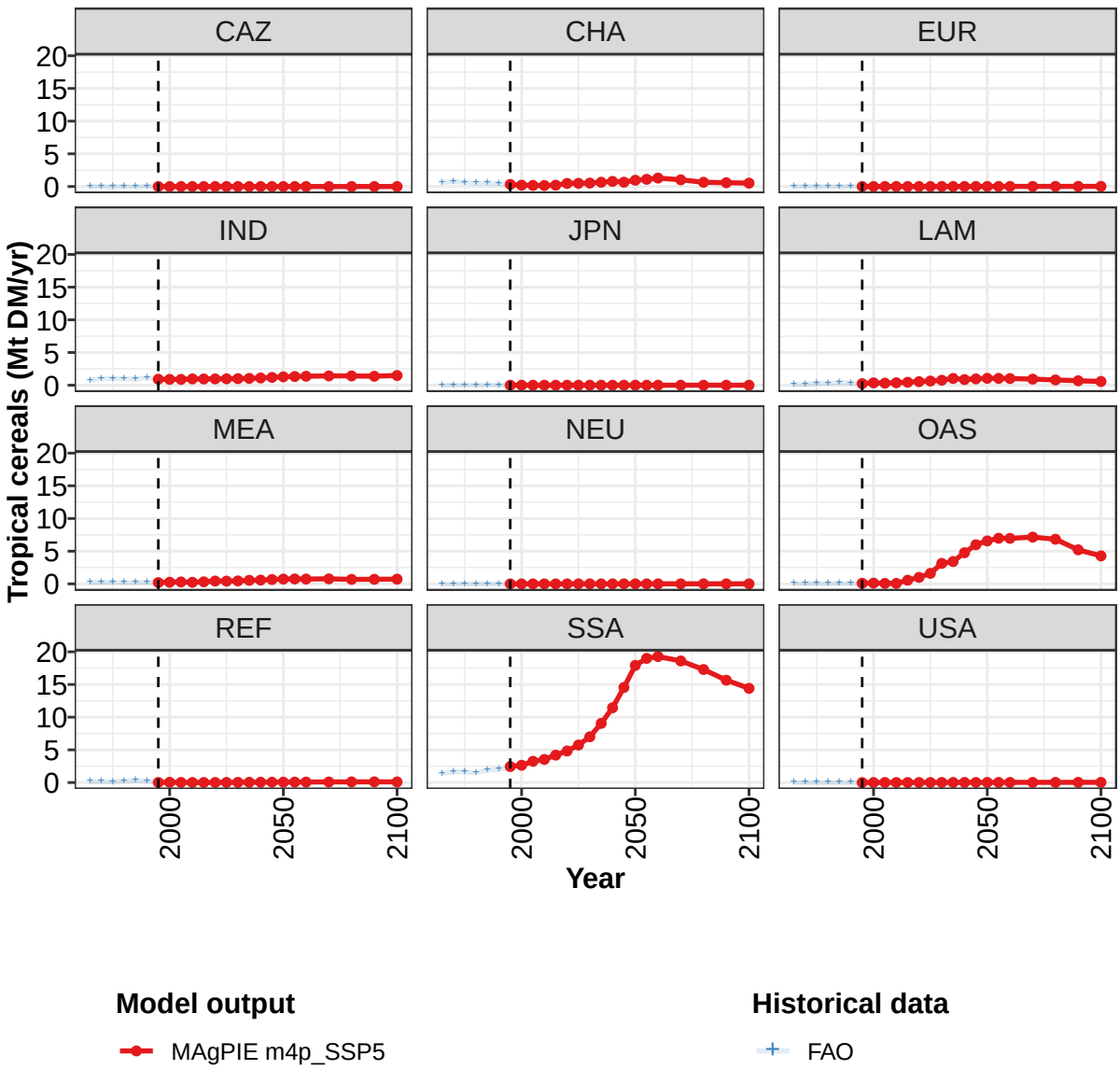
Table 20: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	14.9	20.7	19.5	27.5	30.7	37.2	25.4	24.8	25.7	28.2
CAZ	0.2	0.2	0.3	0.2	0.4	0.3	0.3	0.3	0.4	0.3
CHA	2.3	2.4	3.2	3.5	4.6	5.9	6.8	5.3	3.7	2.8
EUR	3.0	3.7	4.0	4.8	5.4	5.4	4.2	4.2	4.0	4.2
IND	0.4	0.6	0.7	0.9	1.2	1.3	1.8	2.0	2.5	4.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2
LAM	0.8	0.8	0.9	1.1	1.6	1.2	1.3	1.9	2.1	2.6
MEA	1.0	1.2	1.7	2.1	2.7	3.1	3.4	3.7	4.6	6.0
NEU	0.8	0.8	1.5	2.8	3.2	4.5	3.0	3.1	3.4	2.9
OAS	0.5	0.6	0.8	0.8	0.8	0.9	0.9	1.1	1.6	1.7
REF	5.7	10.1	6.0	10.9	10.4	13.9	3.1	2.3	2.5	2.2
SSA	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.8	1.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 21: FAO — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Temperate cereals (Mt DM/yr)

3.1.5 Cereals—Tropical cereals





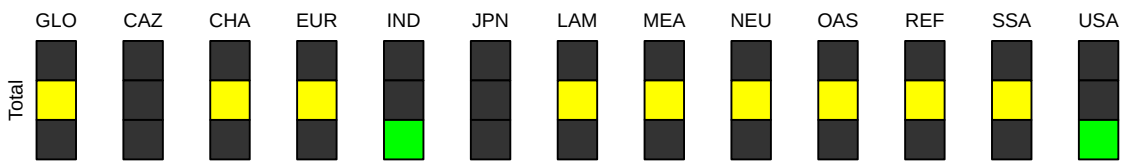


Figure 7: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.3	4.5	5.0	5.4	6.7	8.3	9.9	12.9	15.8	19.6	24.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.3	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.7	0.8	0.7
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.4	0.3	0.4	0.4	0.5	0.6	0.8	1.0	0.9	1.0
MEA	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.7
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.1	0.1	0.1	0.1	0.6	1.0	1.6	3.1	3.4	4.8	6.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
SSA	2.4	2.6	3.3	3.5	4.2	4.8	5.7	7.0	9.0	11.4	14.6
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 22: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

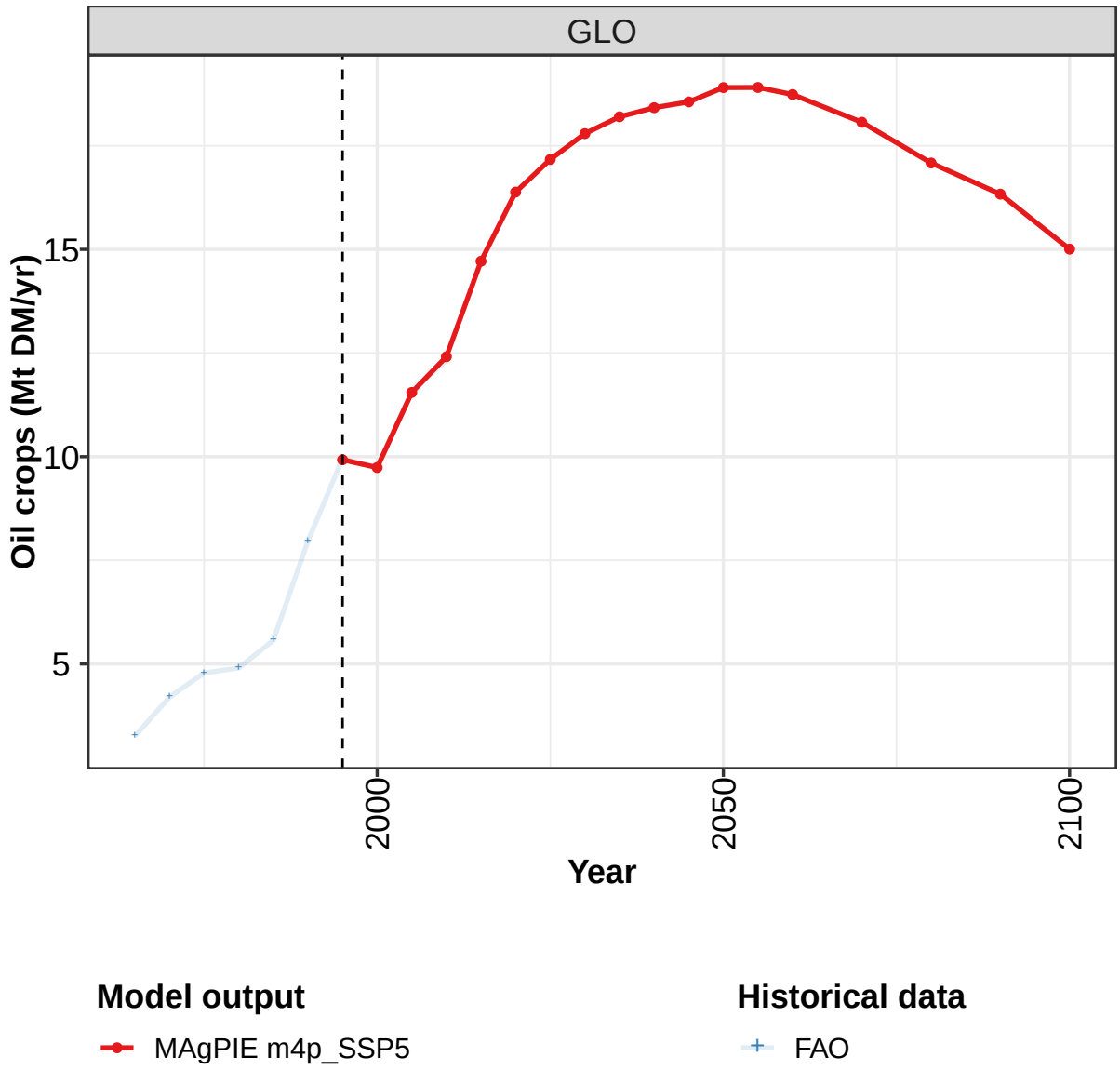
	2050	2055	2060	2070	2080	2090	2100
GLO	28.6	30.3	30.8	30.0	27.9	24.4	22.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.0	1.1	1.3	1.0	0.7	0.6	0.5
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.3	1.3	1.4	1.4	1.4	1.4	1.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.1	1.0	1.0	0.9	0.8	0.7	0.6
MEA	0.7	0.8	0.7	0.8	0.7	0.7	0.7
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	6.6	7.0	7.0	7.2	6.8	5.2	4.3
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	17.9	19.0	19.3	18.6	17.3	15.7	14.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

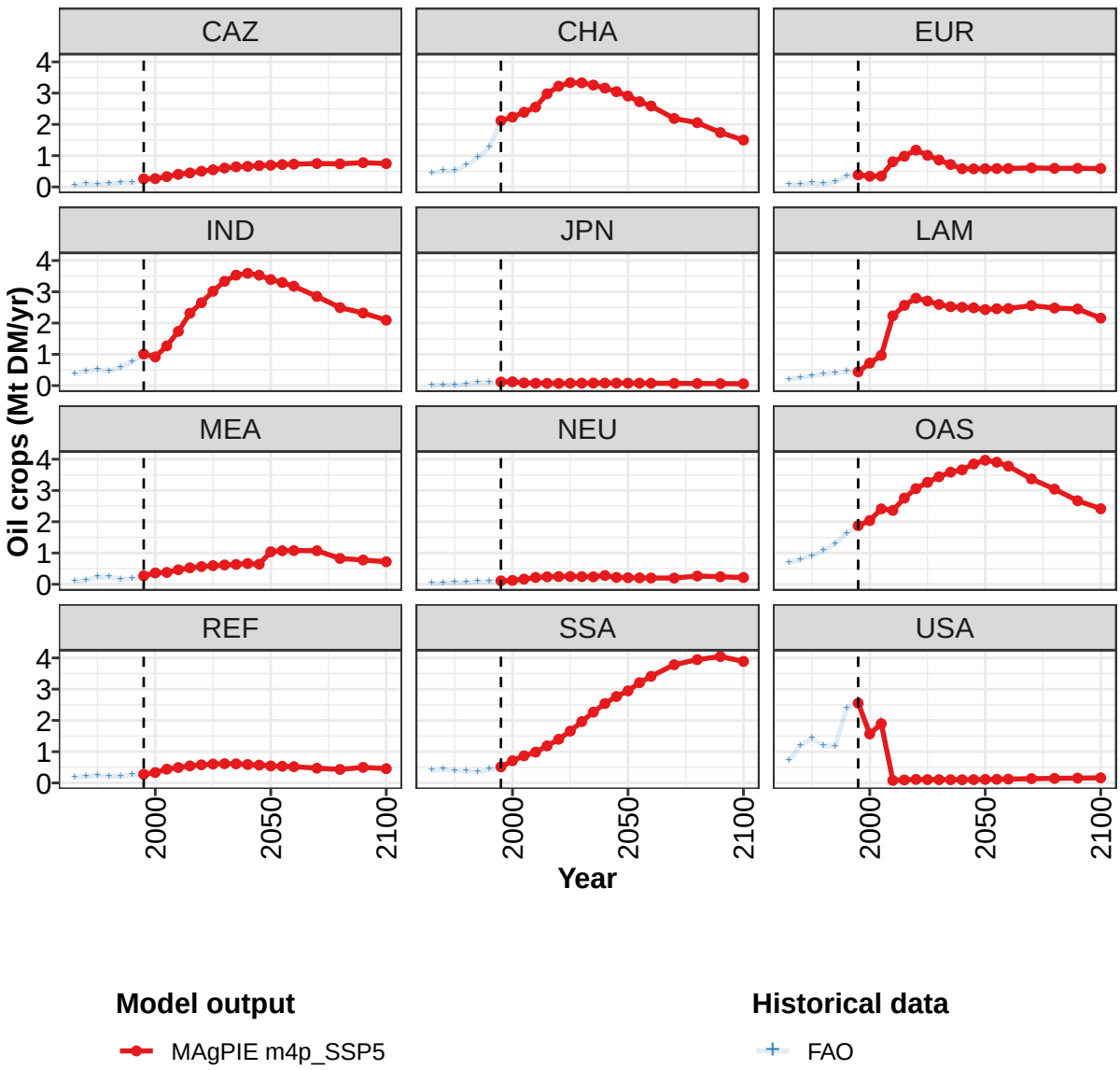
Table 23: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.26	4.12	3.99	3.89	4.40	4.45	4.25	4.49	5.05	5.39
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.61	0.78	0.63	0.53	0.52	0.42	0.32	0.20	0.17	0.16
EUR	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00
IND	0.72	1.02	0.99	1.01	0.93	1.15	0.92	0.89	0.89	0.97
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.07	0.17	0.27	0.30	0.42	0.31	0.27	0.39	0.32	0.37
MEA	0.25	0.27	0.27	0.25	0.23	0.26	0.20	0.23	0.30	0.25
NEU	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.05	0.06	0.06	0.05	0.07	0.06	0.06	0.07	0.07	0.08
REF	0.16	0.15	0.10	0.26	0.33	0.25	0.02	0.03	0.02	0.01
SSA	1.39	1.66	1.66	1.49	1.90	1.99	2.44	2.65	3.27	3.54
USA	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Table 24: FAO — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Tropical cereals (Mt DM/yr)

3.1.6 Oil crops





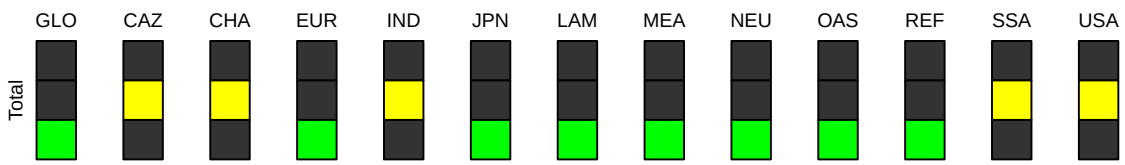


Figure 8: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.9	9.7	11.5	12.4	14.7	16.4	17.2	17.8	18.2	18.4	18.6
CAZ	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7
CHA	2.1	2.2	2.4	2.6	3.0	3.2	3.3	3.3	3.3	3.2	3.0
EUR	0.4	0.3	0.3	0.8	1.0	1.2	1.0	0.9	0.7	0.6	0.6
IND	1.0	0.9	1.3	1.7	2.3	2.7	3.0	3.3	3.5	3.6	3.5
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.4	0.7	1.0	2.2	2.6	2.8	2.7	2.6	2.5	2.5	2.5
MEA	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.6
NEU	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
OAS	1.9	2.0	2.4	2.4	2.8	3.1	3.3	3.4	3.6	3.7	3.8
REF	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
SSA	0.5	0.7	0.9	1.0	1.2	1.4	1.7	2.0	2.3	2.5	2.8
USA	2.6	1.6	1.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 25: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops (Mt DM/yr) [PART 1/2]

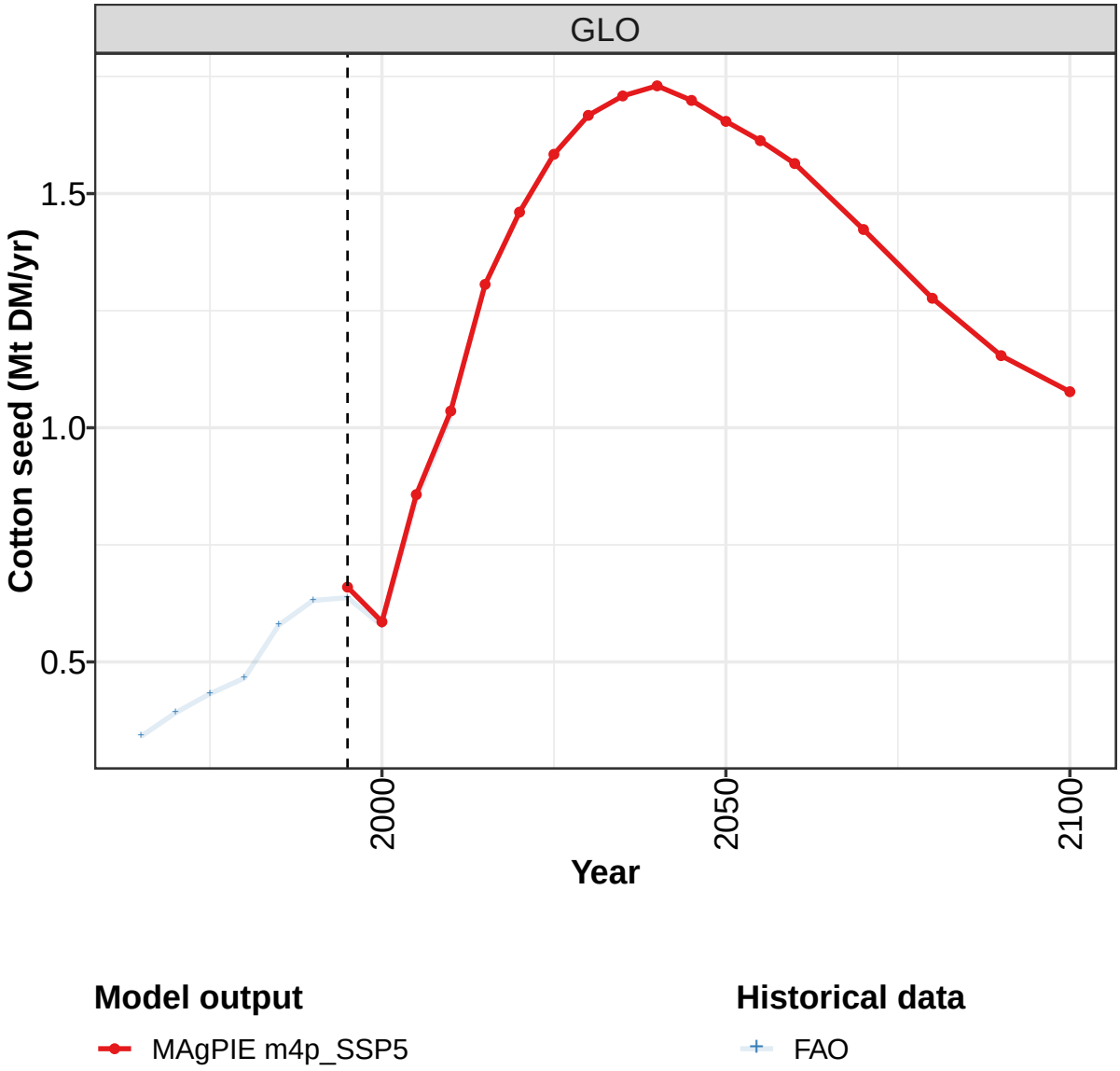
	2050	2055	2060	2070	2080	2090	2100
GLO	18.9	18.9	18.7	18.1	17.1	16.3	15.0
CAZ	0.7	0.7	0.7	0.7	0.7	0.8	0.7
CHA	2.9	2.7	2.6	2.2	2.1	1.7	1.5
EUR	0.6	0.6	0.6	0.6	0.6	0.6	0.6
IND	3.4	3.3	3.2	2.9	2.5	2.3	2.1
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.4	2.5	2.5	2.6	2.5	2.5	2.2
MEA	1.0	1.1	1.1	1.1	0.8	0.8	0.7
NEU	0.2	0.2	0.2	0.2	0.3	0.2	0.2
OAS	4.0	3.9	3.8	3.4	3.0	2.7	2.4
REF	0.5	0.5	0.5	0.5	0.4	0.5	0.5
SSA	2.9	3.2	3.4	3.8	3.9	4.0	3.9
USA	0.1	0.1	0.1	0.1	0.1	0.2	0.2

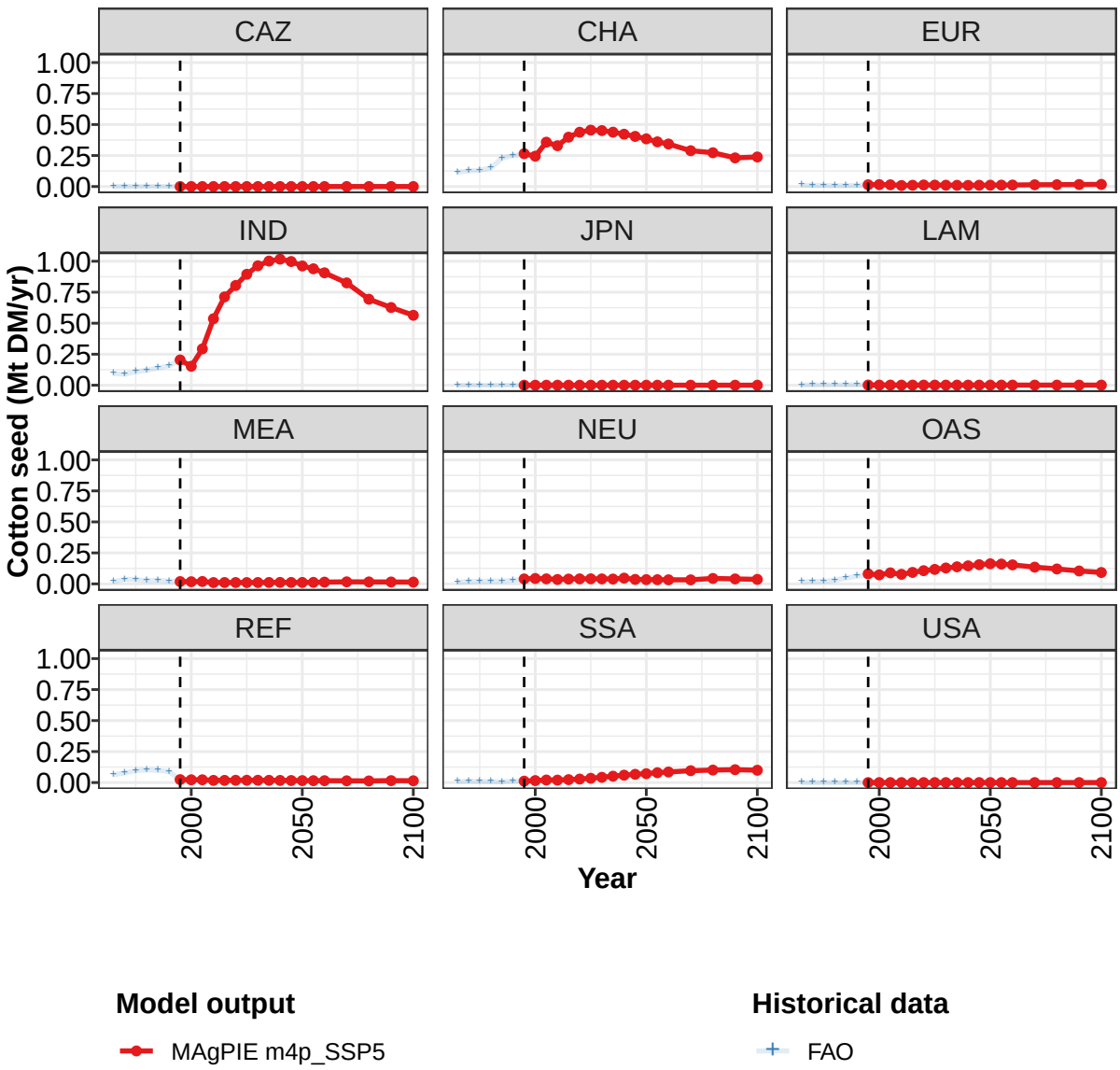
Table 26: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.3	4.2	4.8	4.9	5.6	8.0	10.0	9.7	11.6	12.3
CAZ	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
CHA	0.4	0.5	0.5	0.7	0.9	1.3	2.1	2.2	2.4	2.6
EUR	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.8
IND	0.4	0.5	0.5	0.5	0.6	0.8	1.0	0.9	1.3	1.7
JPN	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.7	1.0	2.1
MEA	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5
NEU	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2
OAS	0.7	0.8	0.9	1.1	1.3	1.6	1.9	2.0	2.4	2.4
REF	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5
SSA	0.4	0.4	0.4	0.4	0.3	0.4	0.5	0.7	0.9	1.0
USA	0.7	1.2	1.4	1.2	1.2	2.4	2.7	1.7	2.0	0.1

Table 27: FAO — Demand—Agricultural Supply Chain Loss—Crops—Oil crops (Mt DM/yr)

3.1.7 Oil crops—Cotton seed





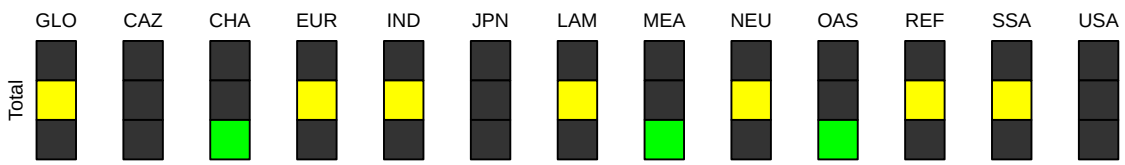


Figure 9: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.66	0.59	0.86	1.04	1.31	1.46	1.58	1.67	1.71	1.73	1.70
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.27	0.24	0.36	0.33	0.40	0.44	0.46	0.45	0.44	0.42	0.40
EUR	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.20	0.15	0.29	0.54	0.71	0.80	0.89	0.96	1.00	1.02	1.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04
OAS	0.08	0.07	0.09	0.08	0.09	0.11	0.12	0.13	0.14	0.15	0.15
REF	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SSA	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.05	0.06	0.07
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 28: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

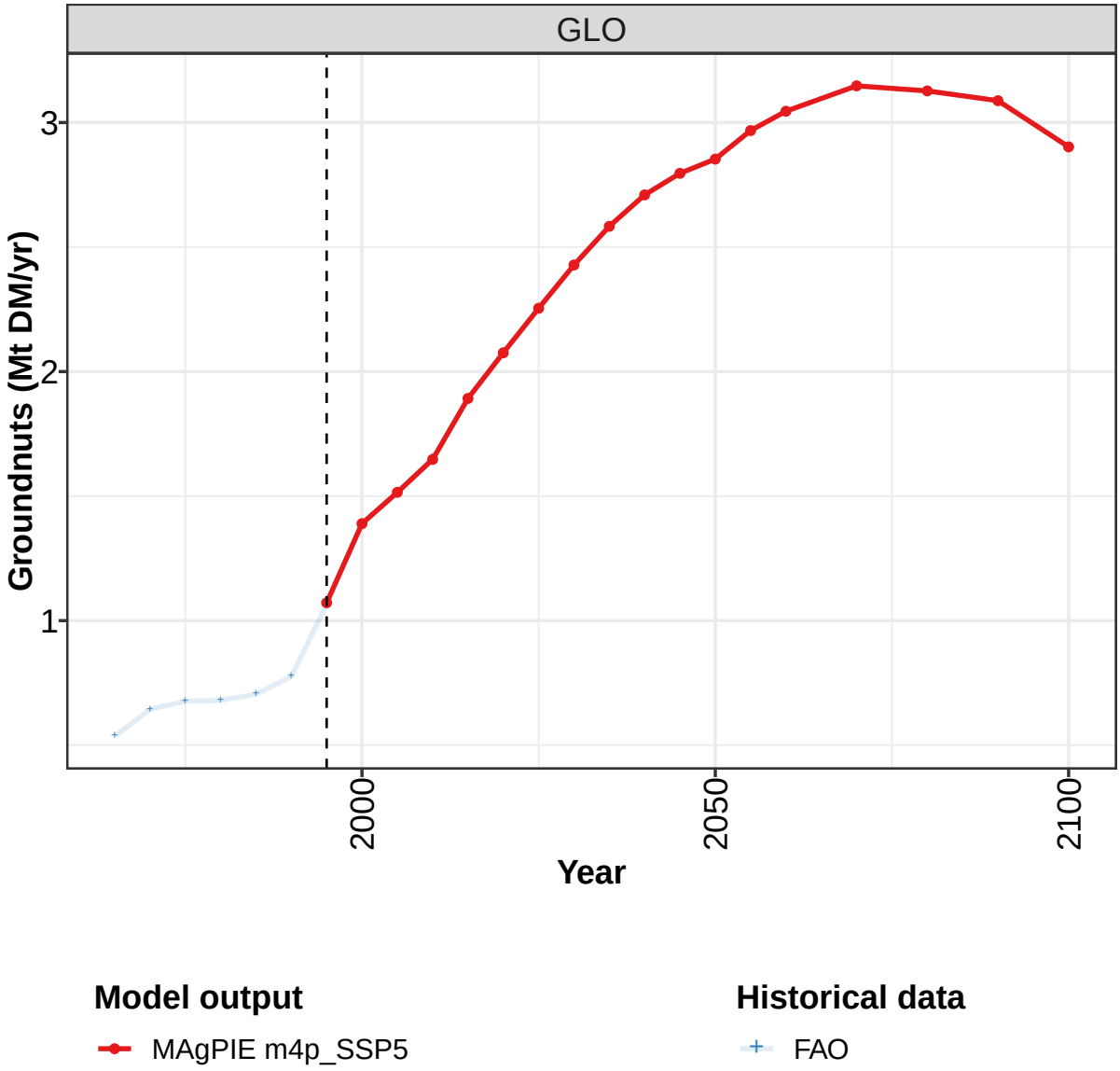
	2050	2055	2060	2070	2080	2090	2100
GLO	1.65	1.61	1.56	1.42	1.28	1.15	1.08
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.38	0.36	0.34	0.29	0.27	0.23	0.24
EUR	0.01	0.01	0.01	0.01	0.01	0.02	0.02
IND	0.96	0.94	0.91	0.83	0.69	0.63	0.56
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.01	0.01	0.01	0.02	0.02	0.02	0.01
NEU	0.03	0.03	0.03	0.03	0.04	0.04	0.04
OAS	0.16	0.16	0.15	0.14	0.12	0.10	0.09
REF	0.02	0.02	0.02	0.01	0.01	0.02	0.01
SSA	0.07	0.08	0.09	0.10	0.10	0.10	0.10
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

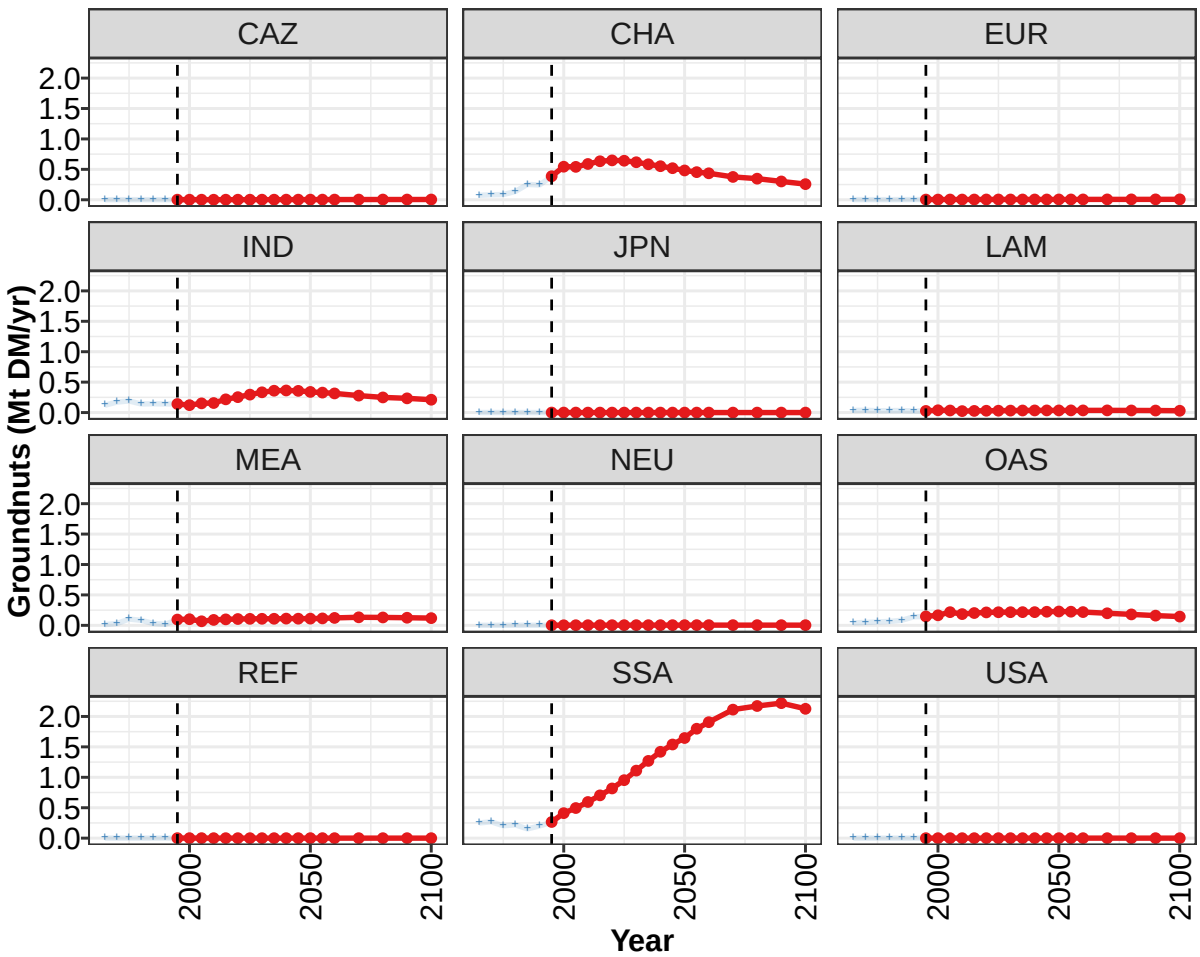
Table 29: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.34	0.39	0.43	0.47	0.58	0.63	0.64	0.58	0.85	1.02
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.12	0.13	0.13	0.15	0.23	0.25	0.26	0.24	0.36	0.33
EUR	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01
IND	0.09	0.09	0.11	0.12	0.14	0.16	0.20	0.15	0.29	0.53
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.02	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.01
NEU	0.01	0.02	0.02	0.02	0.02	0.03	0.04	0.04	0.04	0.04
OAS	0.02	0.02	0.02	0.03	0.05	0.06	0.07	0.07	0.09	0.08
REF	0.06	0.08	0.10	0.10	0.10	0.09	0.02	0.02	0.02	0.02
SSA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 30: FAO — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Cotton seed (Mt DM/yr)

3.1.8 Oil crops—Groundnuts





Model output

MAgPIE m4p_SSP5

Historical data

FAO

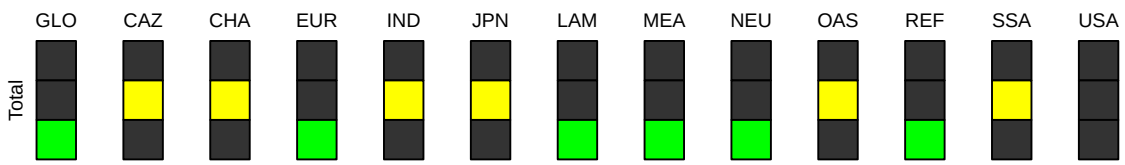


Figure 10: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.07	1.39	1.52	1.65	1.89	2.08	2.25	2.43	2.58	2.71	2.80
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.39	0.54	0.54	0.59	0.63	0.65	0.64	0.62	0.58	0.55	0.52
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.14	0.12	0.15	0.16	0.22	0.25	0.29	0.33	0.36	0.36	0.36
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.03	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04
MEA	0.10	0.10	0.07	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.15	0.17	0.22	0.19	0.20	0.21	0.22	0.22	0.22	0.22	0.22
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.27	0.41	0.49	0.59	0.70	0.82	0.95	1.11	1.27	1.42	1.54
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 31: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

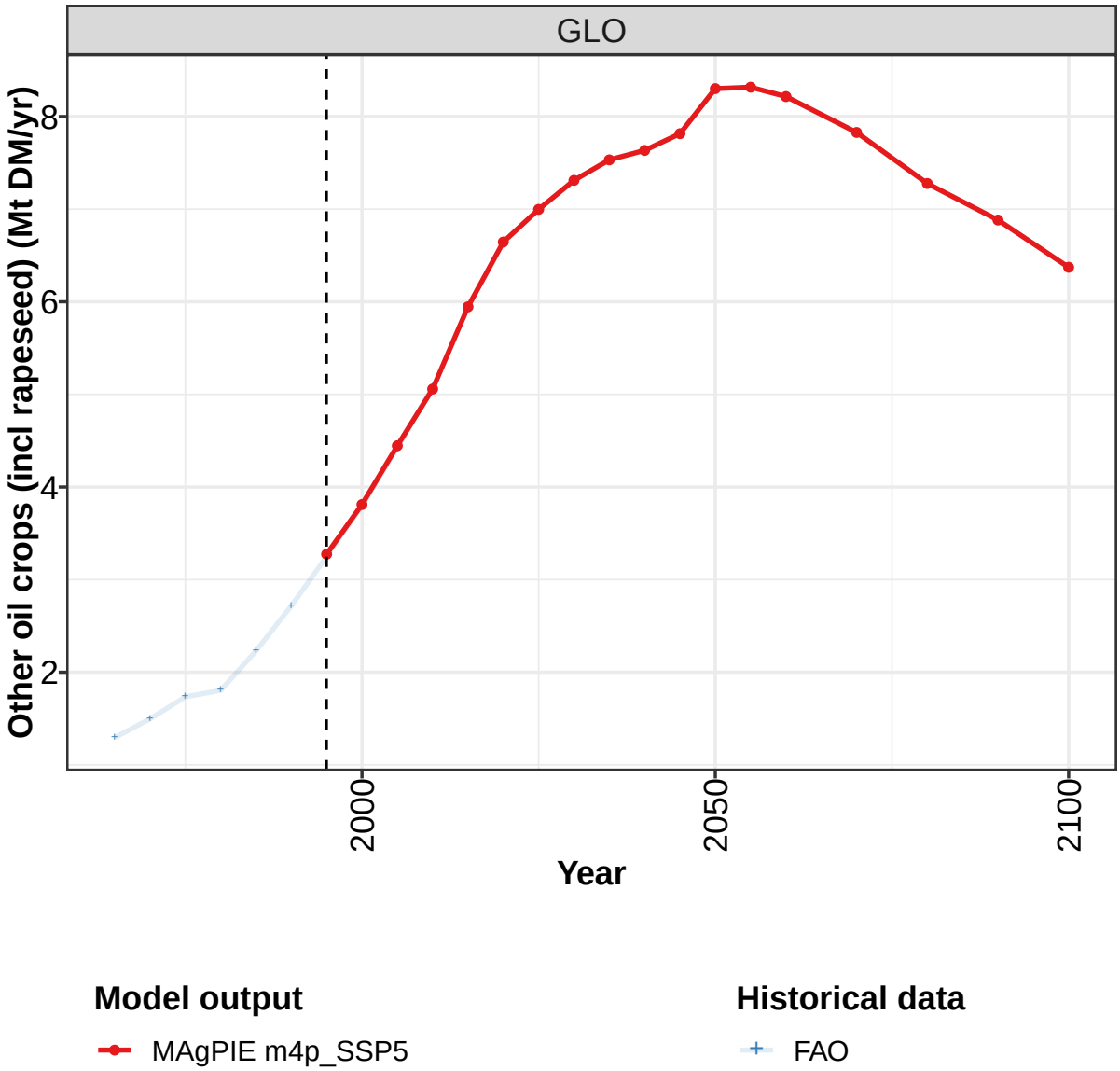
	2050	2055	2060	2070	2080	2090	2100
GLO	2.85	2.97	3.05	3.15	3.13	3.09	2.90
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.48	0.45	0.44	0.38	0.35	0.30	0.26
EUR	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.34	0.33	0.31	0.28	0.25	0.23	0.21
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.04	0.04	0.04	0.04	0.03	0.03	0.03
MEA	0.11	0.11	0.12	0.13	0.13	0.13	0.12
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.23	0.22	0.22	0.20	0.18	0.16	0.14
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.65	1.80	1.91	2.11	2.17	2.22	2.13
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

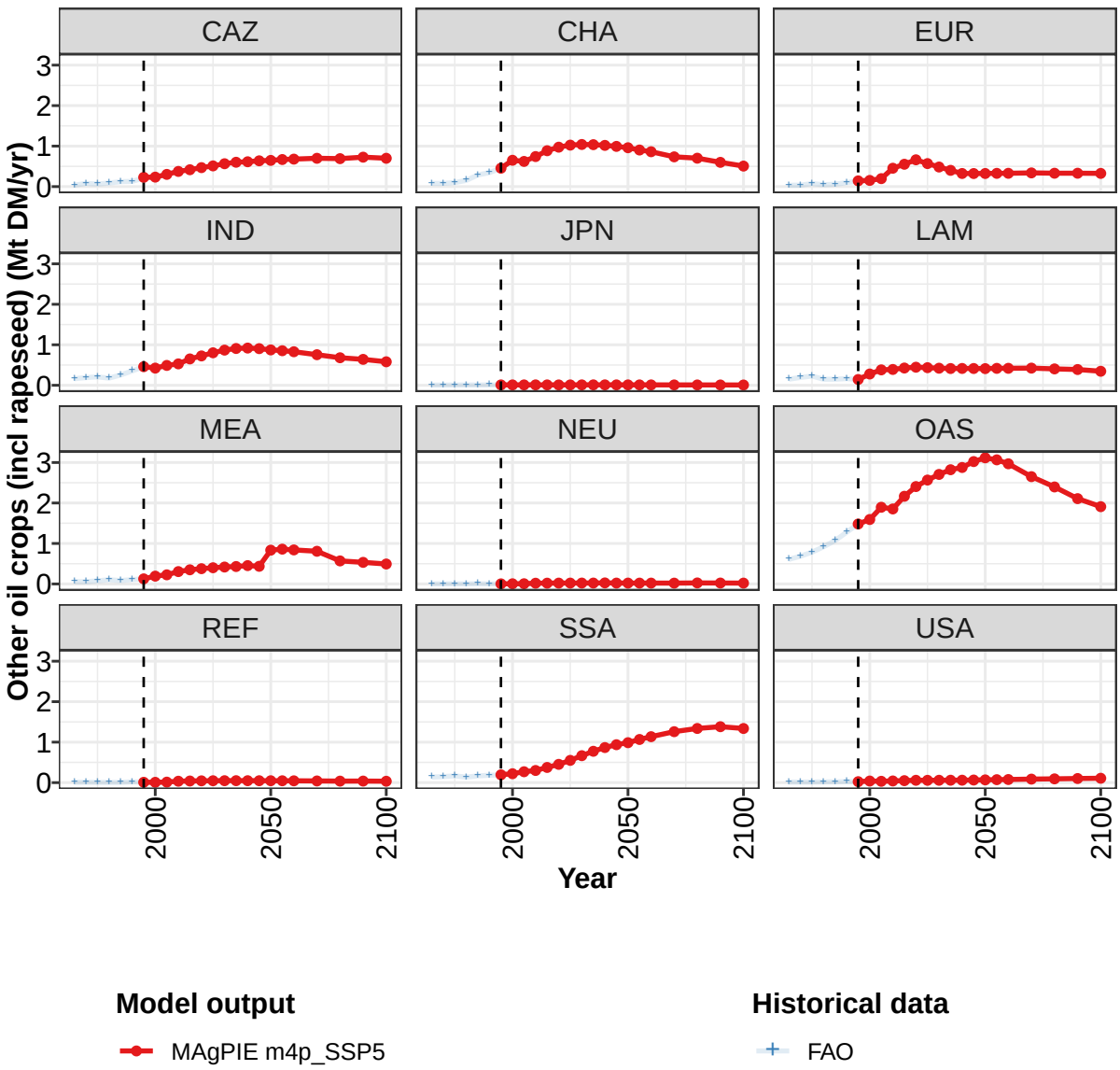
Table 32: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.54	0.64	0.68	0.68	0.70	0.78	1.07	1.39	1.51	1.66
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.07	0.08	0.09	0.14	0.25	0.24	0.39	0.54	0.54	0.59
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.12	0.17	0.19	0.14	0.14	0.14	0.14	0.12	0.15	0.16
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04
MEA	0.01	0.03	0.10	0.08	0.03	0.02	0.09	0.10	0.07	0.09
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.04	0.05	0.06	0.06	0.08	0.14	0.15	0.17	0.22	0.19
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.25	0.27	0.20	0.22	0.15	0.20	0.26	0.41	0.49	0.59
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 33: FAO — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Groundnuts (Mt DM/yr)

3.1.9 Oil crops—Other oil crops (incl rapeseed)





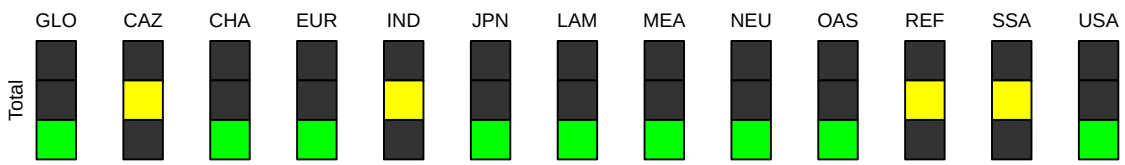


Figure 11: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.27	3.81	4.45	5.06	5.95	6.65	7.00	7.31	7.53	7.63	7.82
CAZ	0.23	0.23	0.30	0.38	0.42	0.47	0.51	0.57	0.60	0.61	0.64
CHA	0.45	0.65	0.62	0.74	0.89	0.97	1.02	1.04	1.04	1.02	0.99
EUR	0.14	0.15	0.20	0.45	0.55	0.66	0.57	0.48	0.40	0.32	0.32
IND	0.46	0.42	0.49	0.53	0.65	0.73	0.80	0.87	0.91	0.92	0.91
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.14	0.28	0.38	0.39	0.43	0.45	0.44	0.42	0.41	0.42	0.41
MEA	0.13	0.19	0.23	0.31	0.35	0.38	0.40	0.42	0.43	0.45	0.44
NEU	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02
OAS	1.48	1.59	1.89	1.85	2.17	2.41	2.57	2.71	2.82	2.88	3.02
REF	0.01	0.01	0.01	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05
SSA	0.19	0.22	0.27	0.30	0.38	0.45	0.55	0.67	0.78	0.87	0.94
USA	0.02	0.04	0.03	0.04	0.05	0.06	0.06	0.06	0.06	0.06	0.06

Table 34: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

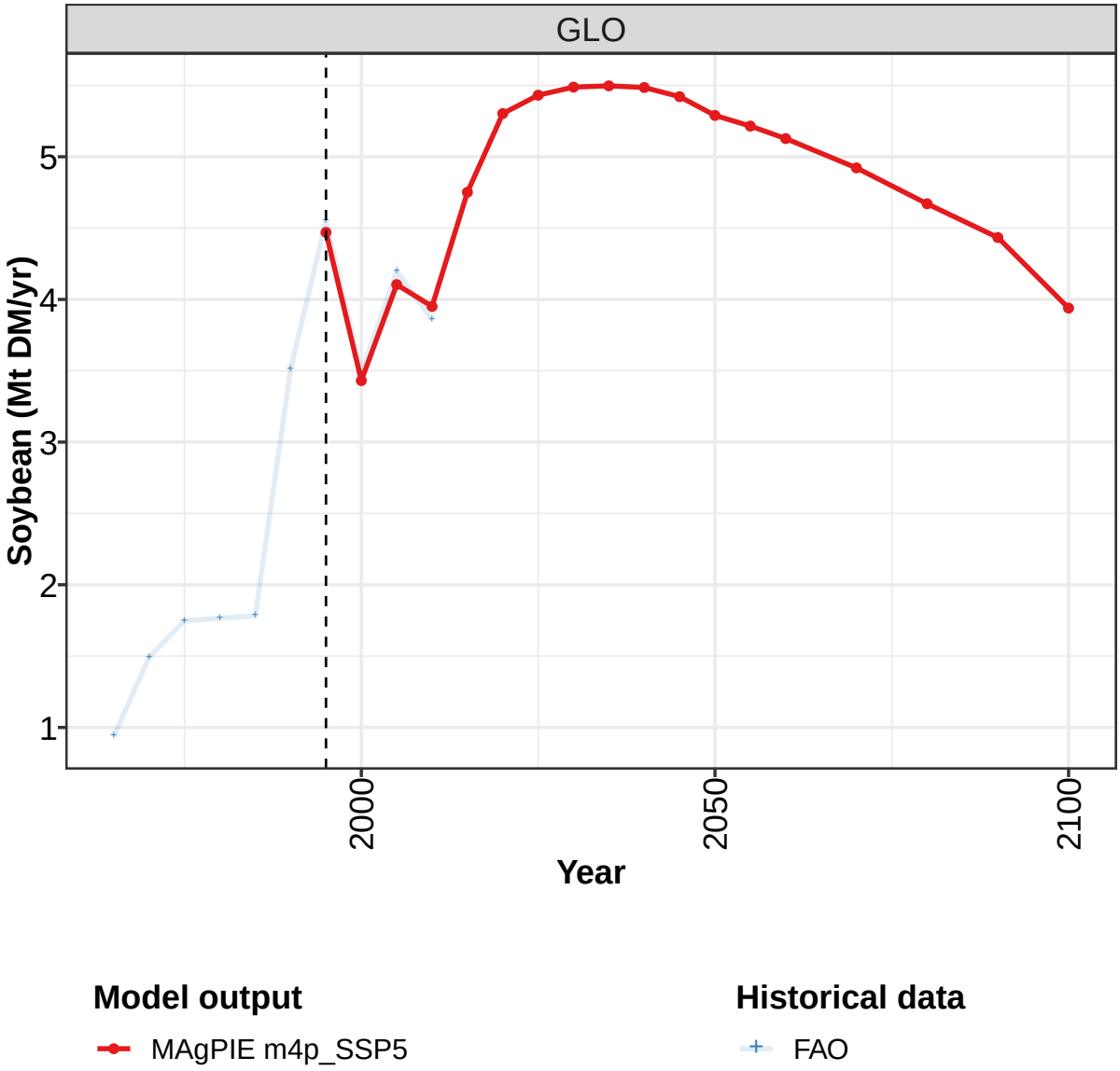
	2050	2055	2060	2070	2080	2090	2100
GLO	8.30	8.32	8.22	7.83	7.28	6.88	6.37
CAZ	0.65	0.67	0.68	0.70	0.69	0.73	0.70
CHA	0.96	0.90	0.86	0.74	0.70	0.60	0.51
EUR	0.32	0.33	0.33	0.34	0.33	0.33	0.33
IND	0.87	0.85	0.83	0.76	0.68	0.64	0.58
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.41	0.42	0.42	0.42	0.40	0.39	0.35
MEA	0.83	0.86	0.84	0.81	0.57	0.53	0.49
NEU	0.02	0.02	0.02	0.02	0.03	0.02	0.02
OAS	3.12	3.07	2.97	2.65	2.40	2.11	1.91
REF	0.05	0.05	0.05	0.04	0.04	0.04	0.03
SSA	0.99	1.07	1.14	1.26	1.34	1.38	1.34
USA	0.07	0.07	0.08	0.09	0.09	0.10	0.11

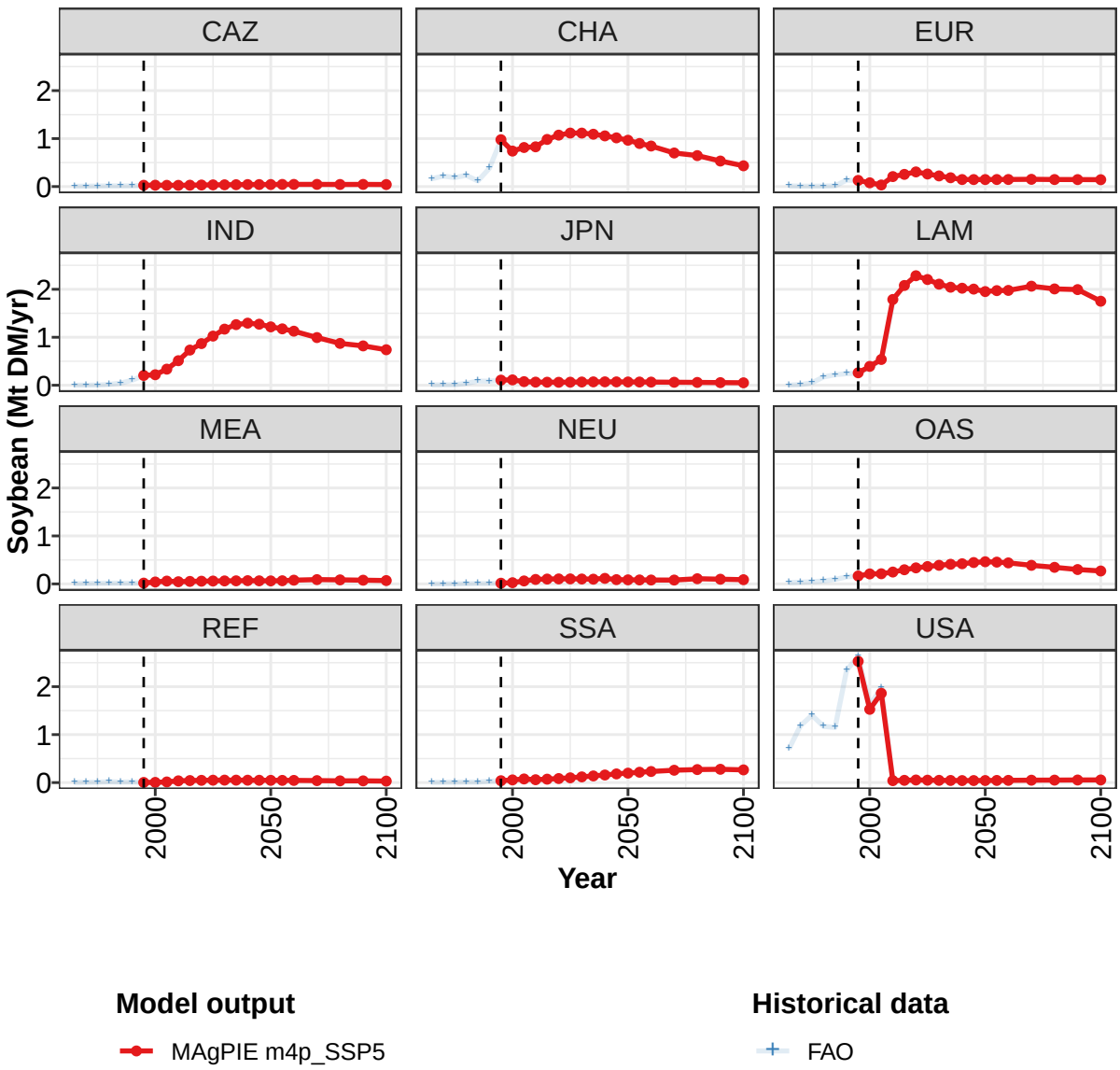
Table 35: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.29	1.50	1.73	1.80	2.23	2.72	3.25	3.79	4.42	5.08
CAZ	0.03	0.08	0.06	0.09	0.12	0.13	0.21	0.23	0.29	0.40
CHA	0.08	0.08	0.10	0.15	0.29	0.35	0.45	0.65	0.62	0.74
EUR	0.03	0.04	0.08	0.04	0.06	0.10	0.14	0.15	0.19	0.45
IND	0.16	0.19	0.21	0.18	0.25	0.35	0.46	0.42	0.49	0.53
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.15	0.19	0.23	0.15	0.15	0.17	0.14	0.27	0.38	0.38
MEA	0.06	0.05	0.08	0.10	0.08	0.11	0.13	0.19	0.22	0.31
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
OAS	0.61	0.69	0.79	0.92	1.07	1.28	1.48	1.59	1.89	1.87
REF	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.04
SSA	0.14	0.15	0.17	0.14	0.17	0.18	0.19	0.22	0.27	0.30
USA	0.01	0.01	0.02	0.02	0.02	0.03	0.02	0.04	0.04	0.04

Table 36: FAO — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

3.1.10 Oil crops—Soybean





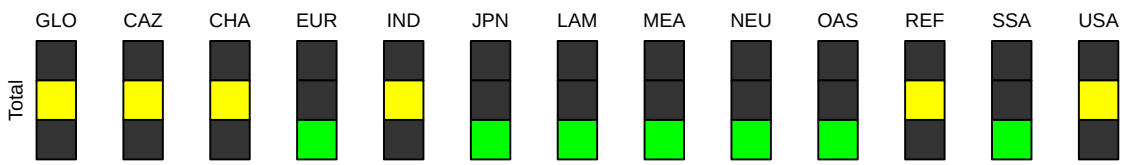


Figure 12: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.47	3.43	4.10	3.95	4.75	5.30	5.43	5.49	5.50	5.49	5.42
CAZ	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
CHA	0.98	0.74	0.81	0.83	0.98	1.07	1.11	1.11	1.09	1.06	1.02
EUR	0.13	0.08	0.03	0.21	0.25	0.31	0.26	0.22	0.18	0.15	0.15
IND	0.20	0.22	0.34	0.51	0.73	0.87	1.02	1.17	1.26	1.29	1.27
JPN	0.11	0.11	0.07	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.07
LAM	0.26	0.39	0.54	1.79	2.08	2.28	2.20	2.11	2.04	2.02	2.00
MEA	0.02	0.04	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.06
NEU	0.01	0.03	0.06	0.09	0.10	0.10	0.10	0.10	0.10	0.12	0.09
OAS	0.17	0.21	0.21	0.25	0.30	0.33	0.36	0.39	0.41	0.42	0.45
REF	0.00	0.00	0.01	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
SSA	0.04	0.06	0.08	0.06	0.07	0.08	0.10	0.12	0.14	0.16	0.18
USA	2.53	1.53	1.86	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.04

Table 37: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

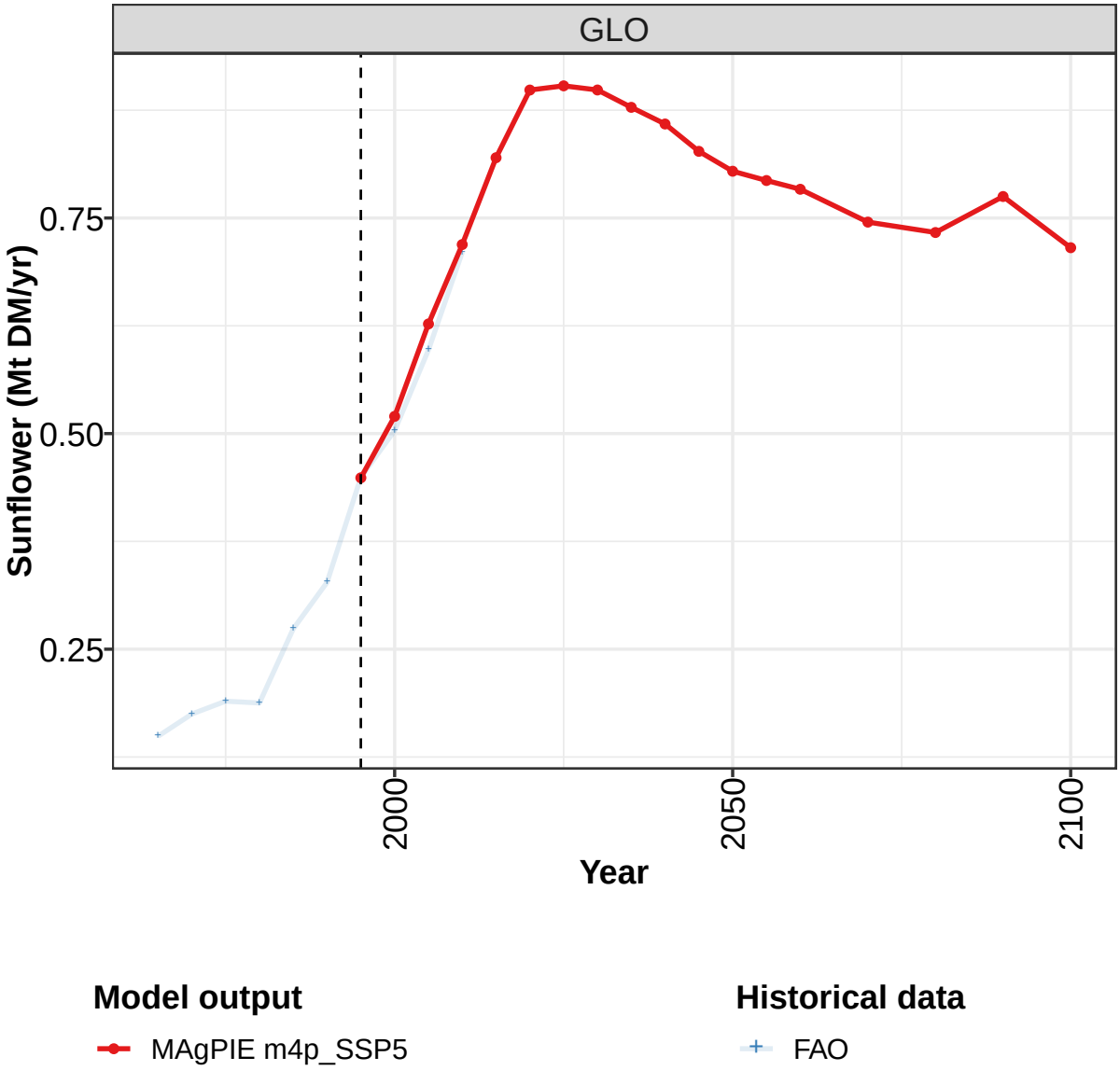
	2050	2055	2060	2070	2080	2090	2100
GLO	5.29	5.22	5.13	4.92	4.67	4.43	3.94
CAZ	0.04	0.04	0.04	0.05	0.04	0.04	0.04
CHA	0.97	0.90	0.84	0.70	0.65	0.53	0.43
EUR	0.15	0.15	0.15	0.15	0.15	0.15	0.14
IND	1.22	1.18	1.13	0.99	0.87	0.82	0.74
JPN	0.07	0.07	0.07	0.06	0.06	0.05	0.05
LAM	1.95	1.97	1.98	2.06	2.01	1.99	1.75
MEA	0.06	0.07	0.08	0.09	0.08	0.08	0.07
NEU	0.09	0.08	0.08	0.08	0.11	0.10	0.09
OAS	0.46	0.45	0.44	0.39	0.35	0.30	0.27
REF	0.05	0.05	0.05	0.04	0.04	0.04	0.03
SSA	0.20	0.22	0.23	0.26	0.27	0.28	0.26
USA	0.04	0.05	0.05	0.05	0.05	0.05	0.06

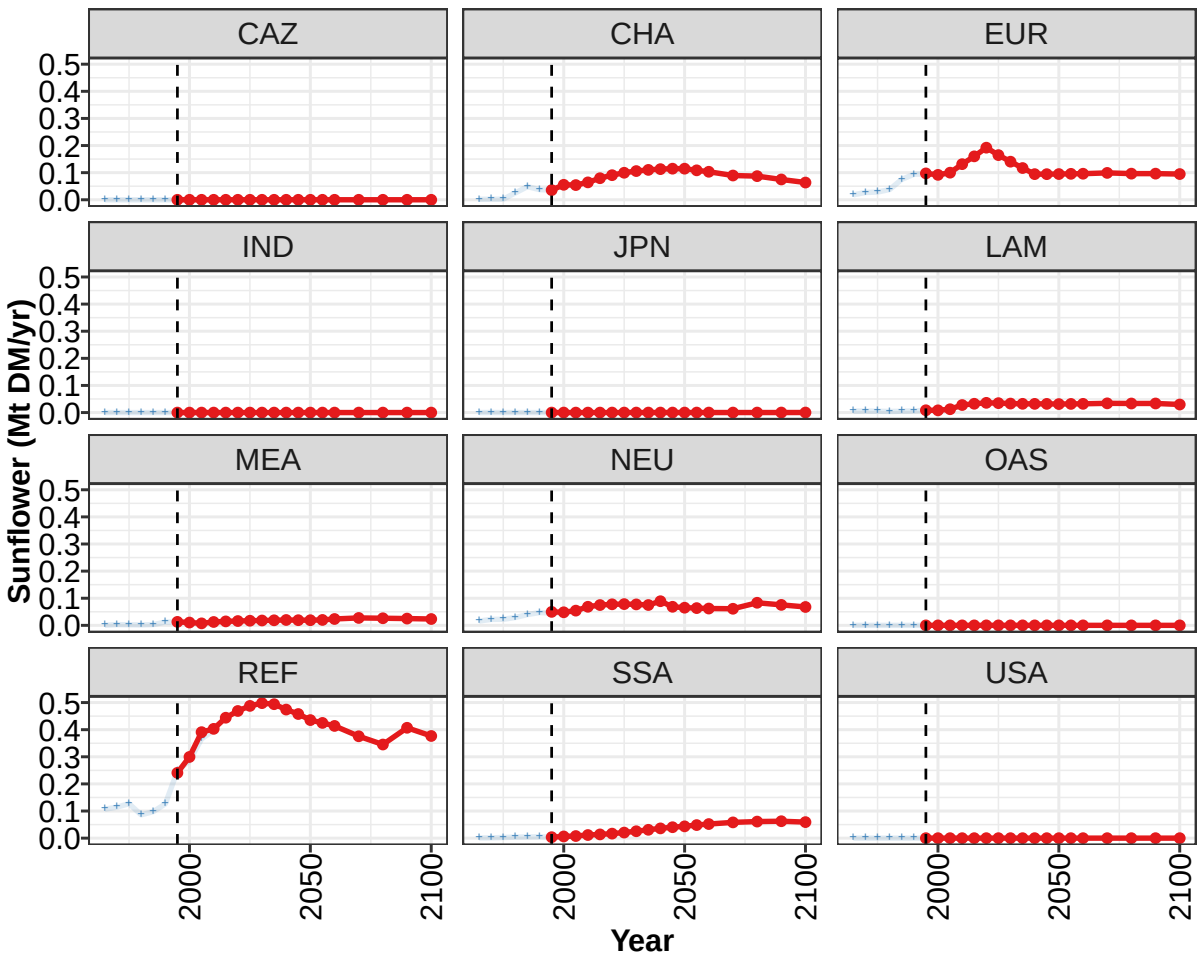
Table 38: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.94	1.49	1.75	1.77	1.78	3.51	4.55	3.49	4.20	3.86
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03	0.03	0.03
CHA	0.16	0.22	0.19	0.23	0.12	0.38	0.97	0.74	0.81	0.83
EUR	0.01	0.01	0.01	0.01	0.01	0.13	0.13	0.08	0.03	0.20
IND	0.00	0.00	0.00	0.02	0.04	0.10	0.20	0.22	0.33	0.51
JPN	0.01	0.01	0.01	0.04	0.09	0.08	0.11	0.11	0.07	0.06
LAM	0.00	0.01	0.05	0.17	0.22	0.24	0.25	0.37	0.53	1.70
MEA	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.04	0.06	0.05
NEU	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.06	0.09
OAS	0.03	0.04	0.04	0.06	0.09	0.15	0.17	0.21	0.21	0.25
REF	0.00	0.01	0.01	0.02	0.01	0.01	0.00	0.00	0.01	0.04
SSA	0.01	0.01	0.01	0.01	0.01	0.03	0.04	0.06	0.08	0.06
USA	0.70	1.18	1.40	1.17	1.15	2.34	2.63	1.61	1.97	0.04

Table 39: FAO — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Soybean (Mt DM/yr)

3.1.11 Oil crops—Sunflower





Model output

MAgPIE m4p_SSP5

Historical data

FAO

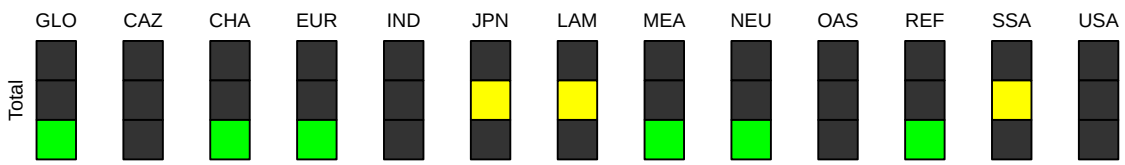


Figure 13: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.449	0.520	0.627	0.719	0.820	0.898	0.903	0.898	0.878	0.859	0.827
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.036	0.055	0.054	0.064	0.080	0.091	0.100	0.106	0.110	0.113	0.115
EUR	0.097	0.092	0.100	0.131	0.160	0.192	0.165	0.140	0.117	0.095	0.094
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.009	0.008	0.012	0.028	0.033	0.036	0.035	0.033	0.032	0.032	0.032
MEA	0.013	0.010	0.007	0.013	0.015	0.016	0.017	0.018	0.019	0.020	0.019
NEU	0.050	0.048	0.054	0.069	0.075	0.078	0.078	0.077	0.075	0.089	0.069
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.241	0.300	0.391	0.403	0.444	0.469	0.488	0.498	0.494	0.474	0.458
SSA	0.004	0.006	0.008	0.012	0.014	0.017	0.021	0.026	0.031	0.036	0.040
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 40: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

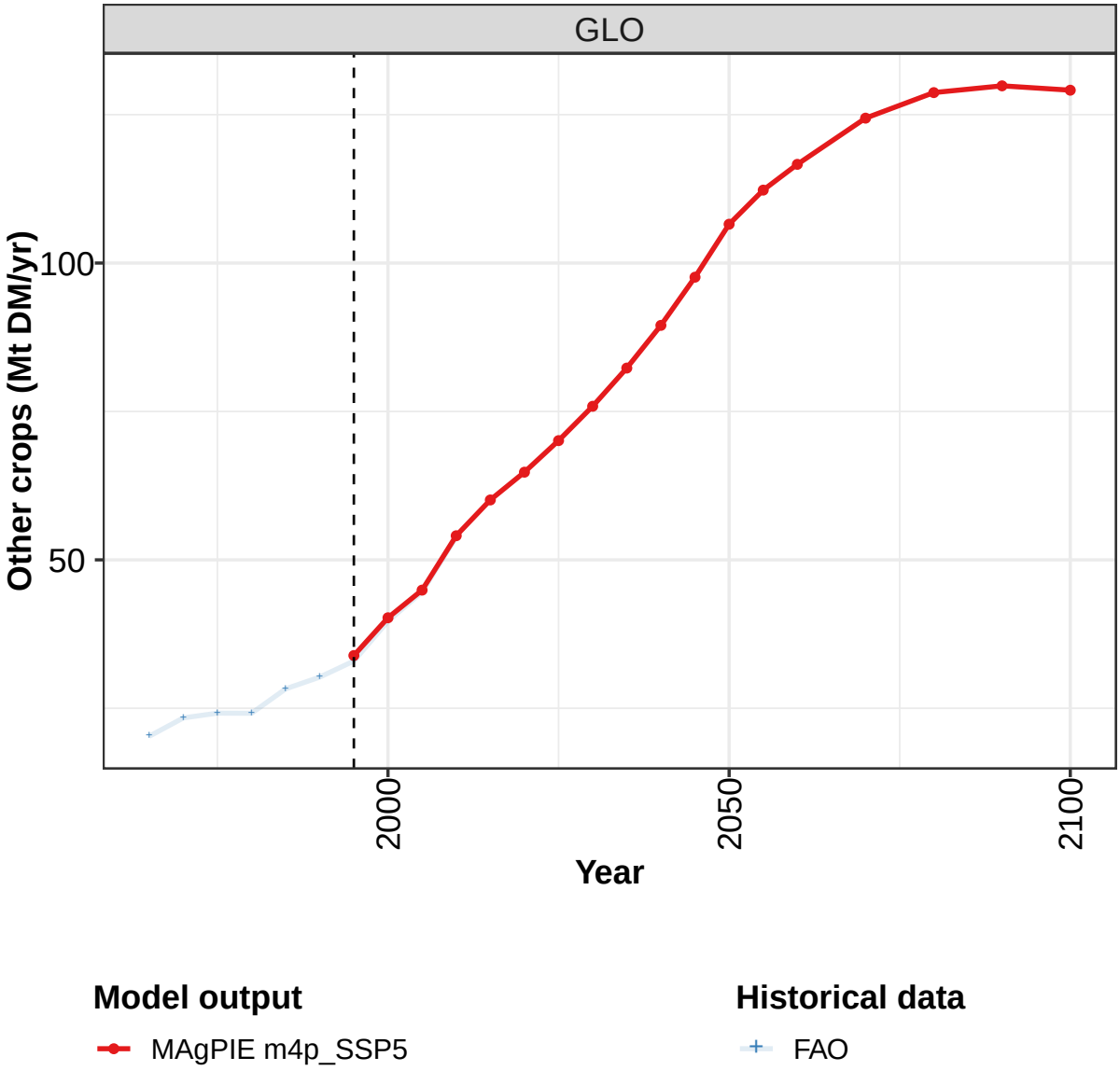
	2050	2055	2060	2070	2080	2090	2100
GLO	0.804	0.793	0.783	0.745	0.733	0.775	0.716
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.115	0.109	0.103	0.089	0.087	0.075	0.064
EUR	0.095	0.096	0.096	0.099	0.096	0.096	0.095
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.031	0.032	0.032	0.034	0.033	0.034	0.030
MEA	0.019	0.020	0.023	0.027	0.026	0.025	0.023
NEU	0.065	0.064	0.062	0.061	0.083	0.076	0.068
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.435	0.425	0.414	0.376	0.345	0.407	0.377
SSA	0.044	0.048	0.052	0.058	0.061	0.062	0.059
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

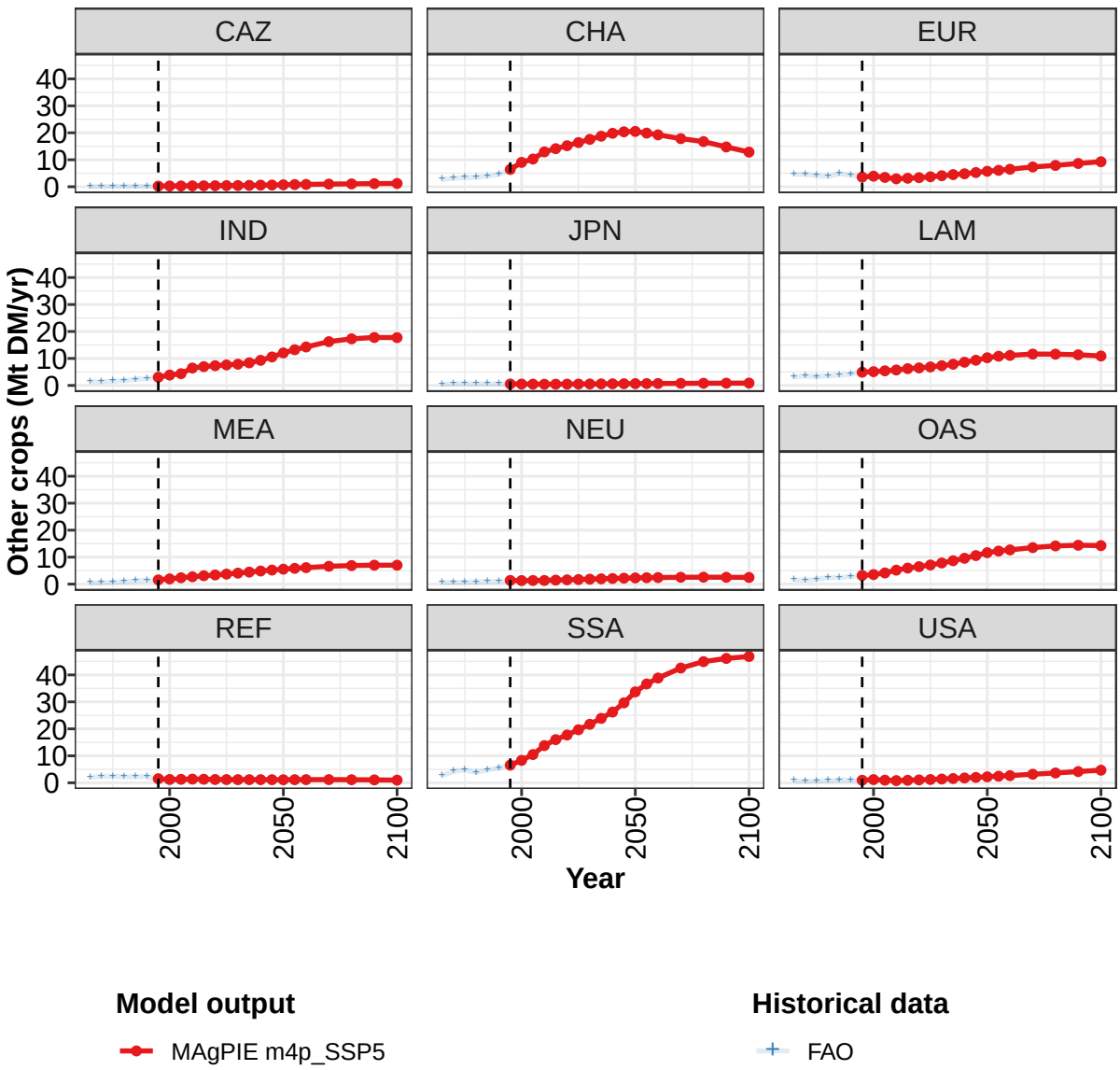
Table 41: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.149	0.175	0.190	0.188	0.274	0.328	0.449	0.503	0.597	0.710
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.002	0.002	0.002	0.025	0.048	0.037	0.035	0.055	0.054	0.064
EUR	0.018	0.027	0.028	0.038	0.075	0.094	0.096	0.092	0.098	0.129
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.005	0.006	0.005	0.004	0.005	0.006	0.008	0.008	0.012	0.026
MEA	0.000	0.003	0.002	0.002	0.003	0.012	0.013	0.010	0.007	0.013
NEU	0.016	0.022	0.022	0.029	0.040	0.047	0.045	0.047	0.052	0.068
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.107	0.114	0.127	0.086	0.098	0.126	0.248	0.285	0.366	0.398
SSA	0.001	0.001	0.002	0.004	0.004	0.005	0.004	0.006	0.008	0.011
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 42: FAO — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Sunflower (Mt DM/yr)

3.1.12 Other crops





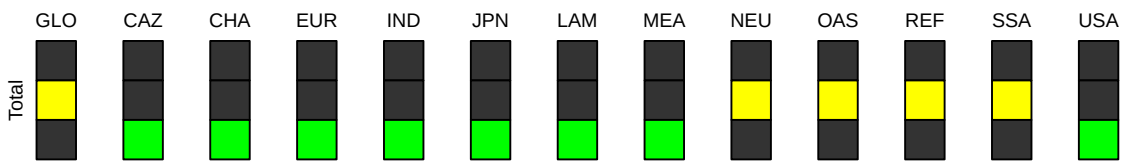


Figure 14: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34	40	45	54	60	65	70	76	82	90	98
CAZ	0	0	0	0	0	0	0	0	1	1	1
CHA	6	9	10	13	14	15	16	18	19	20	20
EUR	4	4	3	3	3	3	4	4	5	5	5
IND	3	4	4	6	7	7	8	8	8	9	11
JPN	1	1	0	0	0	0	1	1	1	1	1
LAM	5	5	5	6	6	7	7	7	8	9	9
MEA	2	2	2	3	3	3	4	4	4	5	5
NEU	1	1	1	1	1	2	2	2	2	2	2
OAS	3	4	4	5	6	6	7	8	9	10	11
REF	2	1	1	1	1	1	1	1	1	1	1
SSA	7	8	10	14	16	18	20	22	24	26	30
USA	1	1	1	1	1	1	1	1	2	2	2

Table 43: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops (Mt DM/yr) [PART 1/2]

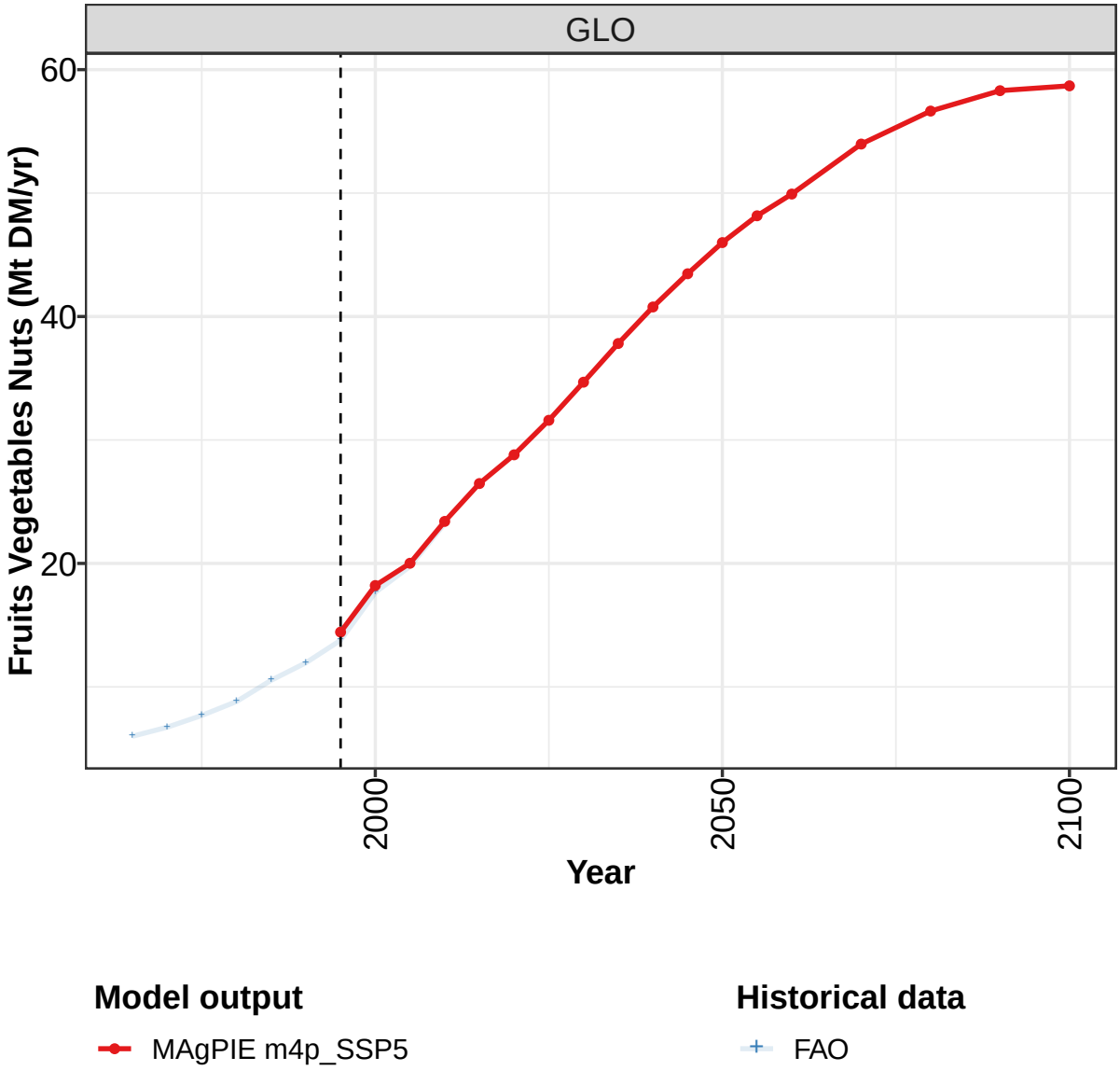
	2050	2055	2060	2070	2080	2090	2100
GLO	107	112	117	124	129	130	129
CAZ	1	1	1	1	1	1	1
CHA	21	20	19	18	17	15	13
EUR	6	6	6	7	8	9	9
IND	12	13	14	16	17	18	18
JPN	1	1	1	1	1	1	1
LAM	10	11	11	12	12	11	11
MEA	6	6	6	7	7	7	7
NEU	2	2	2	3	3	3	2
OAS	12	12	13	14	14	14	14
REF	1	1	1	1	1	1	1
SSA	34	37	39	43	45	46	47
USA	2	2	3	3	4	4	5

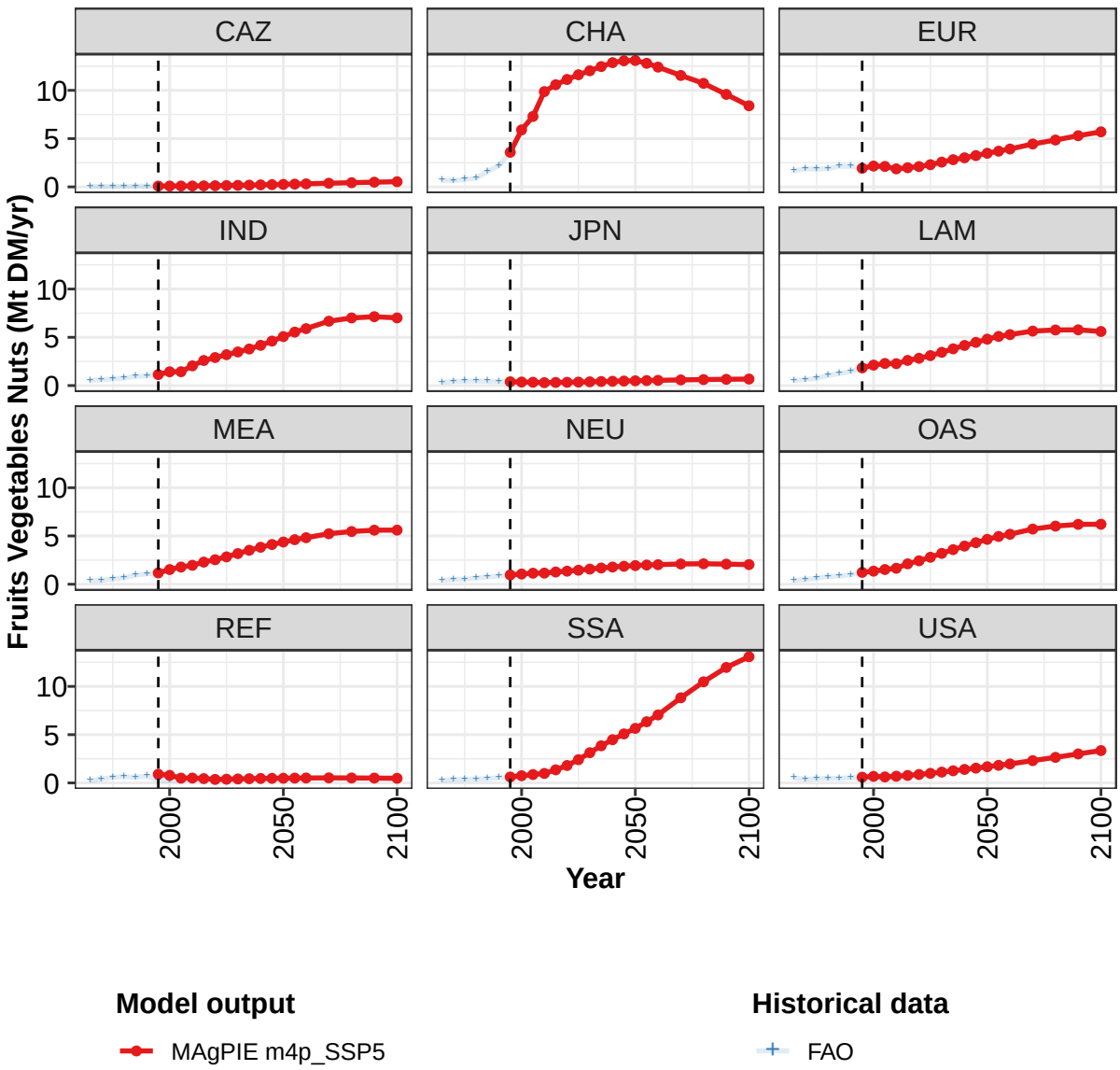
Table 44: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	20.3	23.4	24.2	24.2	28.3	30.2	33.0	39.7	44.6	53.8
CAZ	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3
CHA	2.7	3.2	3.4	3.5	3.9	4.6	6.4	9.0	10.3	12.9
EUR	4.6	4.7	4.1	3.7	4.8	4.3	3.6	3.9	3.4	2.9
IND	1.3	1.4	1.6	1.8	2.3	2.6	3.0	3.9	4.4	6.5
JPN	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4
LAM	3.1	3.6	3.3	3.6	3.8	4.2	4.8	5.1	5.4	5.7
MEA	0.5	0.5	0.7	0.9	1.2	1.4	1.6	1.9	2.4	2.7
NEU	0.6	0.6	0.7	0.8	1.0	1.1	1.2	1.3	1.3	1.4
OAS	1.6	1.5	1.8	2.4	2.4	2.8	3.2	3.5	4.1	5.2
REF	2.1	2.4	2.4	2.2	2.3	2.3	0.9	0.7	1.1	1.2
SSA	2.6	4.2	4.8	3.8	4.8	5.4	6.5	8.3	10.5	13.8
USA	0.7	0.6	0.7	0.7	1.1	0.9	1.0	1.2	1.0	0.8

Table 45: FAO — Demand—Agricultural Supply Chain Loss—Crops—Other crops (Mt DM/yr)

3.1.13 Other crops—Fruits Vegetables Nuts





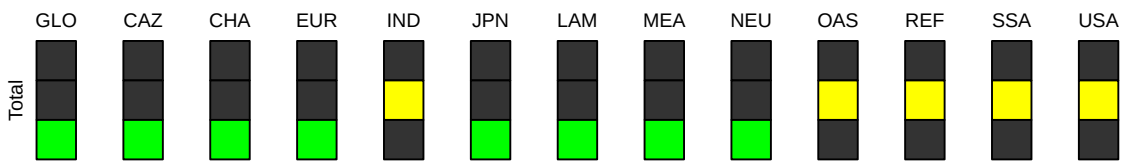


Figure 15: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.4	18.2	20.0	23.4	26.5	28.8	31.6	34.7	37.8	40.8	43.5
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CHA	3.6	5.9	7.3	9.9	10.6	11.1	11.6	12.0	12.5	12.9	13.1
EUR	1.9	2.2	2.1	1.9	2.0	2.1	2.3	2.6	2.8	3.0	3.2
IND	1.1	1.4	1.4	2.0	2.6	2.9	3.2	3.5	3.8	4.2	4.6
JPN	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5
LAM	1.8	2.1	2.3	2.3	2.6	2.8	3.1	3.4	3.8	4.2	4.5
MEA	1.2	1.5	1.8	2.0	2.3	2.5	2.8	3.2	3.5	3.8	4.1
NEU	1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
OAS	1.2	1.4	1.5	1.7	2.1	2.4	2.8	3.2	3.6	4.0	4.3
REF	0.9	0.8	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5
SSA	0.6	0.7	0.9	1.0	1.4	1.8	2.4	3.1	3.8	4.5	5.1
USA	0.6	0.7	0.6	0.7	0.8	0.9	1.0	1.1	1.3	1.4	1.5

Table 46: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

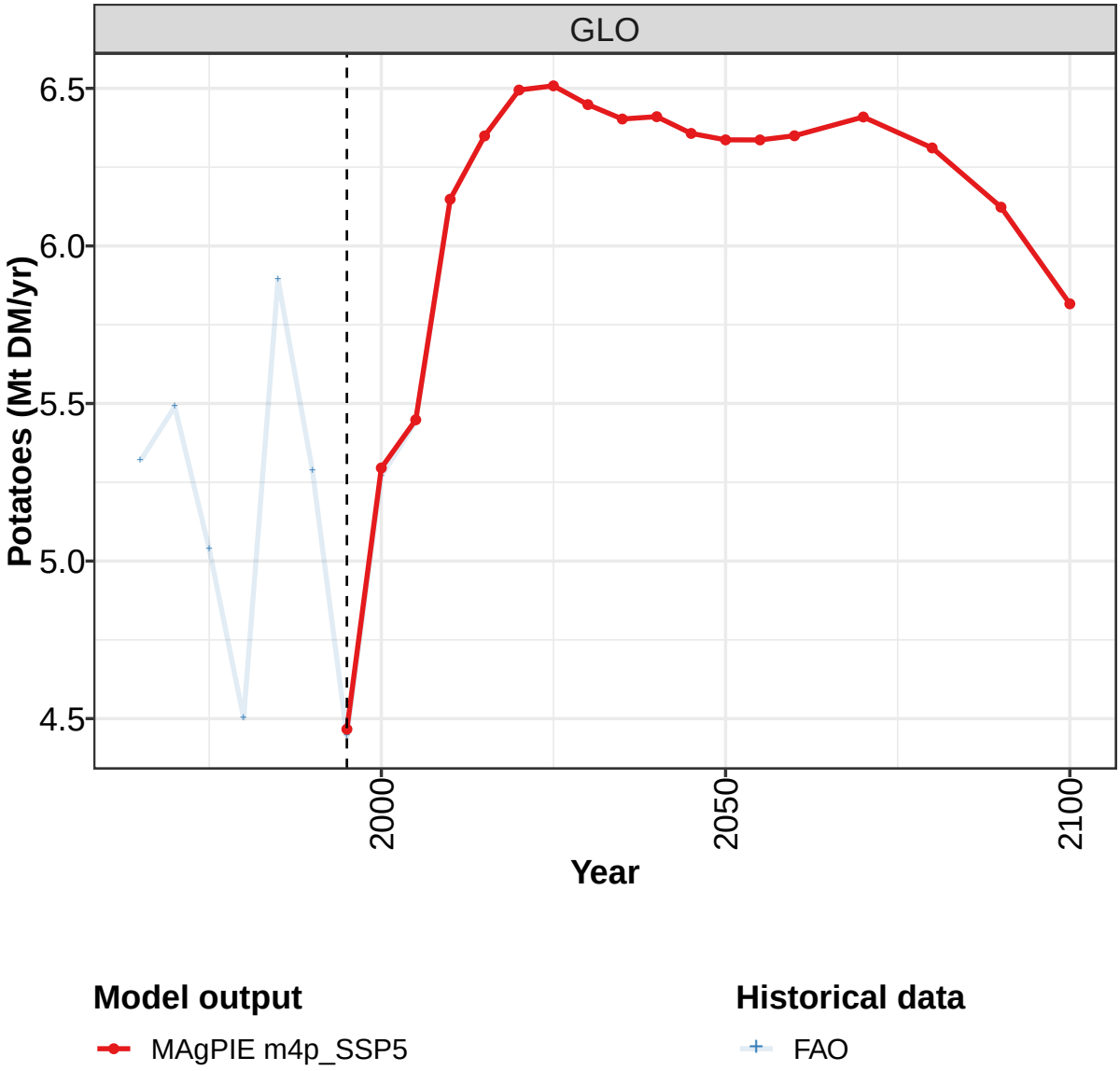
	2050	2055	2060	2070	2080	2090	2100
GLO	46.0	48.2	49.9	54.0	56.6	58.3	58.7
CAZ	0.3	0.3	0.3	0.4	0.4	0.5	0.5
CHA	13.1	12.8	12.4	11.5	10.7	9.6	8.4
EUR	3.5	3.7	3.9	4.4	4.9	5.3	5.7
IND	5.1	5.5	5.9	6.7	7.0	7.1	7.0
JPN	0.5	0.5	0.5	0.6	0.6	0.6	0.7
LAM	4.8	5.1	5.3	5.6	5.8	5.8	5.6
MEA	4.4	4.6	4.8	5.2	5.5	5.6	5.6
NEU	1.9	2.0	2.0	2.1	2.1	2.1	2.0
OAS	4.7	4.9	5.2	5.7	6.0	6.2	6.2
REF	0.5	0.5	0.5	0.5	0.5	0.5	0.5
SSA	5.7	6.3	7.0	8.8	10.5	12.0	13.1
USA	1.7	1.8	2.0	2.3	2.6	3.0	3.4

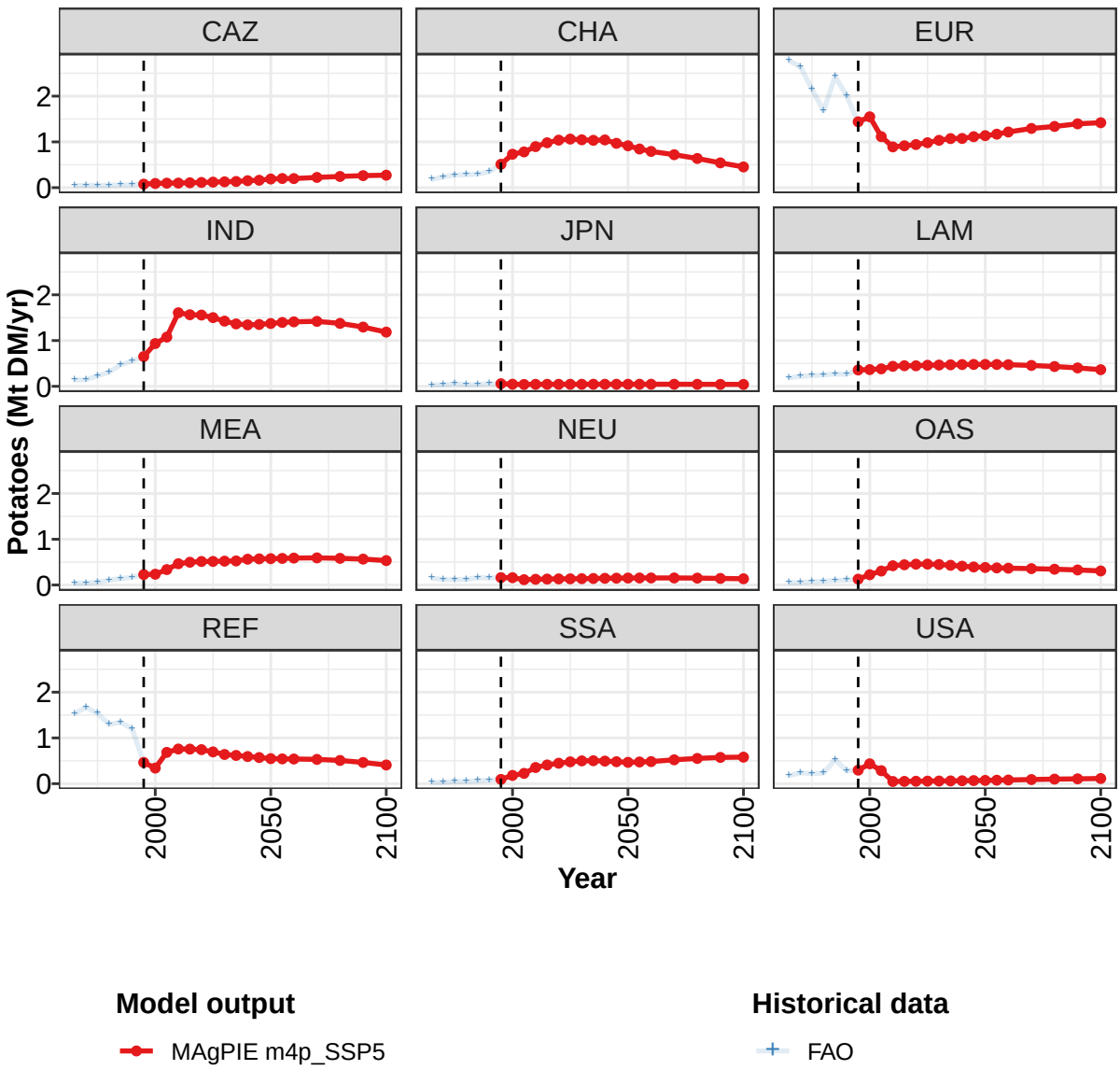
Table 47: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	6.0	6.7	7.7	8.8	10.5	11.9	13.8	17.6	19.8	23.2
CAZ	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.7	0.7	0.8	0.9	1.6	2.2	3.6	5.9	7.3	9.9
EUR	1.6	1.9	1.8	1.9	2.1	2.1	1.9	2.2	2.1	1.9
IND	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.4	1.4	2.0
JPN	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3
LAM	0.5	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.3	2.3
MEA	0.4	0.4	0.6	0.7	0.9	1.1	1.2	1.5	1.8	2.0
NEU	0.4	0.5	0.5	0.6	0.8	0.8	0.9	1.1	1.1	1.2
OAS	0.4	0.5	0.6	0.8	0.9	1.0	1.2	1.4	1.5	1.7
REF	0.2	0.4	0.6	0.6	0.6	0.7	0.3	0.2	0.3	0.3
SSA	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.9	1.0
USA	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.7

Table 48: FAO — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

3.1.14 Other crops—Potatoes





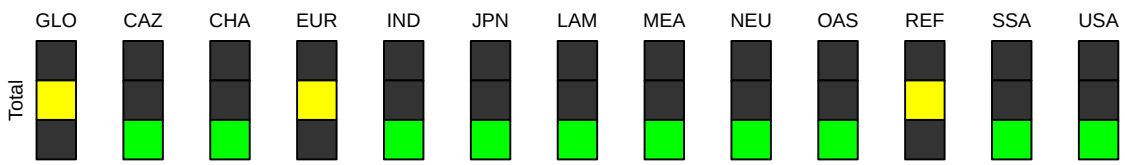


Figure 16: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.47	5.30	5.45	6.15	6.35	6.49	6.51	6.45	6.40	6.41	6.36
CAZ	0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.13	0.13	0.15	0.16
CHA	0.51	0.73	0.78	0.90	0.98	1.04	1.06	1.05	1.03	1.04	0.97
EUR	1.44	1.55	1.12	0.89	0.92	0.94	0.98	1.03	1.07	1.07	1.11
IND	0.65	0.94	1.08	1.61	1.56	1.56	1.50	1.43	1.36	1.34	1.35
JPN	0.06	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
LAM	0.36	0.37	0.38	0.44	0.45	0.45	0.46	0.47	0.47	0.48	0.48
MEA	0.23	0.24	0.34	0.47	0.50	0.51	0.52	0.52	0.53	0.56	0.57
NEU	0.16	0.16	0.12	0.12	0.13	0.13	0.14	0.14	0.14	0.15	0.15
OAS	0.13	0.23	0.31	0.42	0.44	0.46	0.46	0.45	0.43	0.41	0.39
REF	0.47	0.34	0.68	0.76	0.76	0.74	0.69	0.64	0.62	0.59	0.57
SSA	0.09	0.18	0.23	0.35	0.41	0.45	0.48	0.50	0.50	0.49	0.48
USA	0.30	0.43	0.28	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07

Table 49: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

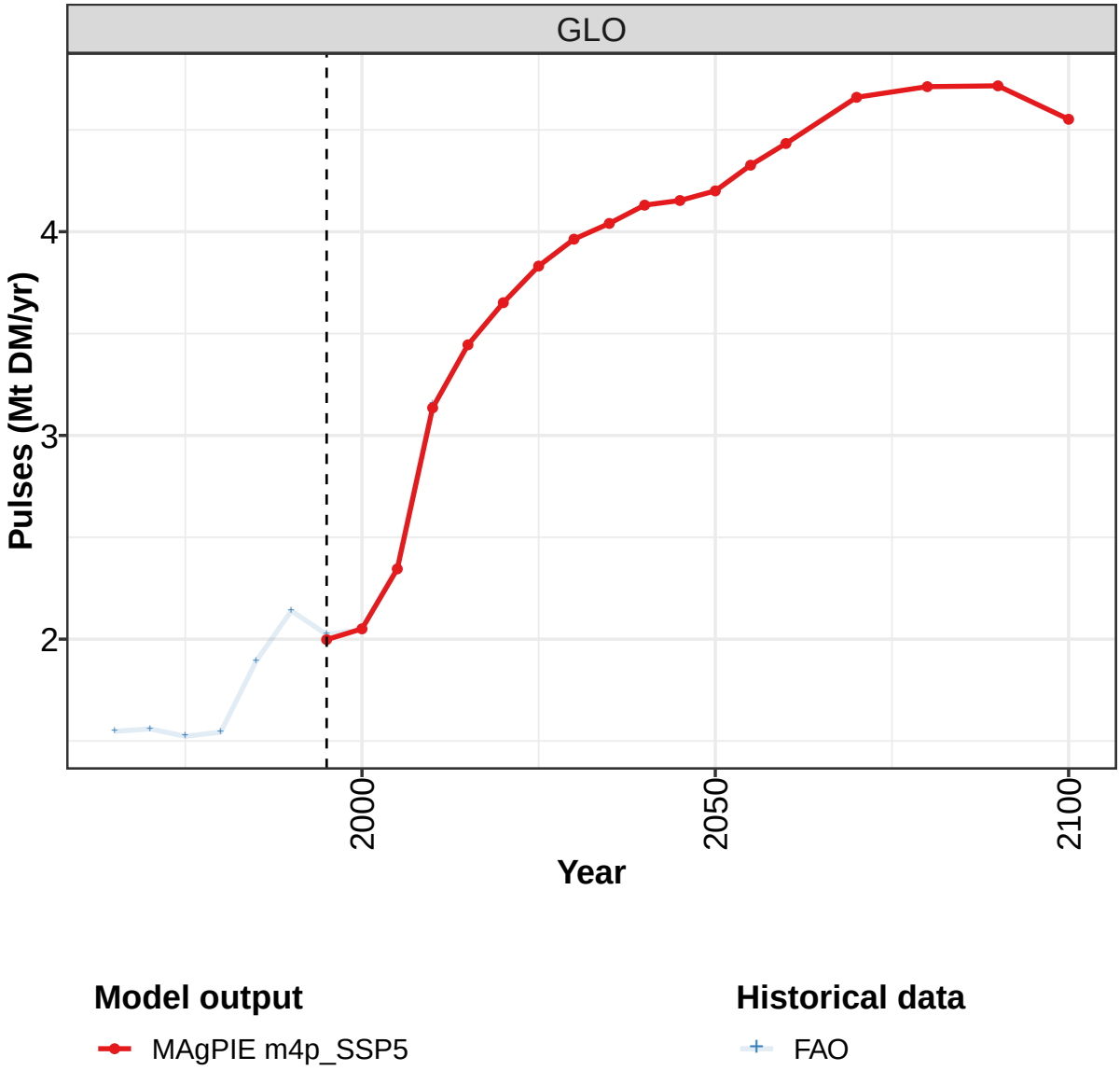
	2050	2055	2060	2070	2080	2090	2100
GLO	6.34	6.34	6.35	6.41	6.31	6.12	5.82
CAZ	0.19	0.20	0.20	0.22	0.24	0.26	0.27
CHA	0.91	0.84	0.79	0.72	0.64	0.54	0.45
EUR	1.14	1.17	1.22	1.29	1.34	1.40	1.42
IND	1.37	1.40	1.41	1.42	1.38	1.30	1.19
JPN	0.05	0.05	0.05	0.05	0.04	0.04	0.04
LAM	0.48	0.48	0.47	0.46	0.43	0.40	0.36
MEA	0.58	0.58	0.59	0.59	0.58	0.57	0.53
NEU	0.15	0.15	0.15	0.15	0.15	0.14	0.14
OAS	0.38	0.37	0.37	0.36	0.35	0.33	0.31
REF	0.55	0.54	0.54	0.53	0.51	0.46	0.41
SSA	0.47	0.48	0.48	0.52	0.55	0.57	0.58
USA	0.07	0.08	0.08	0.09	0.10	0.11	0.11

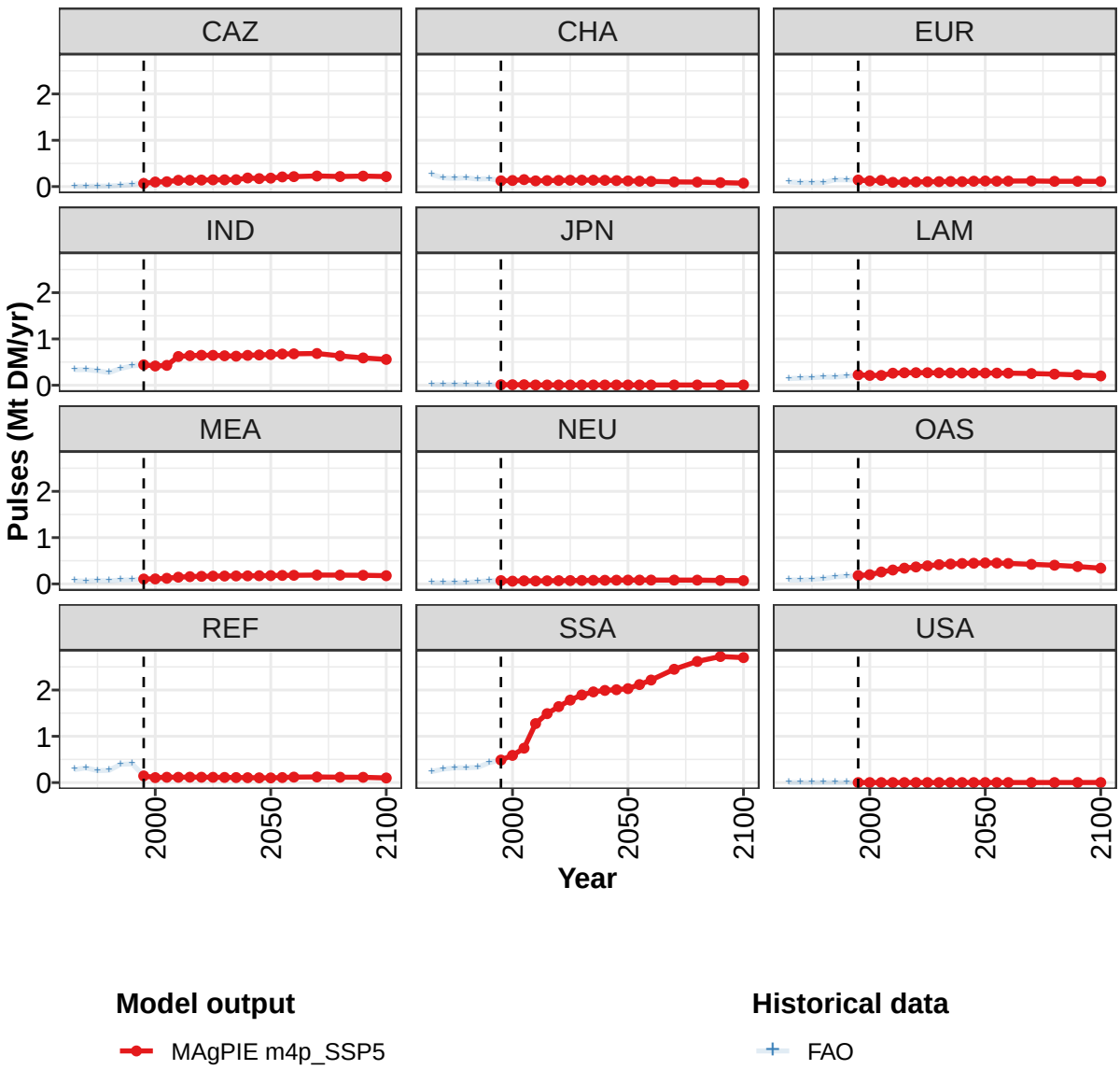
Table 50: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.32	5.49	5.04	4.50	5.89	5.29	4.44	5.27	5.44	6.14
CAZ	0.04	0.05	0.05	0.05	0.06	0.06	0.08	0.09	0.10	0.10
CHA	0.18	0.24	0.28	0.29	0.30	0.35	0.51	0.73	0.78	0.90
EUR	2.78	2.64	2.15	1.68	2.43	2.01	1.42	1.52	1.11	0.89
IND	0.14	0.15	0.23	0.31	0.47	0.55	0.65	0.94	1.08	1.61
JPN	0.03	0.03	0.05	0.04	0.04	0.05	0.06	0.05	0.04	0.04
LAM	0.19	0.22	0.24	0.25	0.27	0.26	0.36	0.36	0.38	0.44
MEA	0.04	0.04	0.06	0.11	0.14	0.17	0.23	0.24	0.34	0.46
NEU	0.15	0.12	0.12	0.12	0.16	0.15	0.16	0.16	0.12	0.12
OAS	0.05	0.06	0.07	0.08	0.10	0.11	0.13	0.23	0.31	0.42
REF	1.53	1.67	1.53	1.30	1.34	1.20	0.46	0.34	0.68	0.76
SSA	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.18	0.22	0.35
USA	0.17	0.24	0.22	0.23	0.53	0.28	0.30	0.44	0.29	0.05

Table 51: FAO — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Potatoes (Mt DM/yr)

3.1.15 Other crops—Pulses





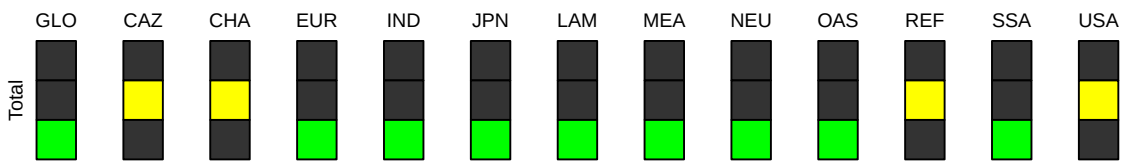


Figure 17: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.00	2.05	2.34	3.14	3.44	3.65	3.83	3.96	4.04	4.13	4.15
CAZ	0.07	0.10	0.10	0.14	0.14	0.14	0.14	0.15	0.15	0.18	0.17
CHA	0.12	0.13	0.15	0.12	0.13	0.13	0.14	0.14	0.14	0.13	0.13
EUR	0.14	0.12	0.13	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.12
IND	0.44	0.42	0.43	0.62	0.64	0.65	0.65	0.64	0.63	0.64	0.65
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.22	0.21	0.21	0.26	0.27	0.27	0.27	0.27	0.26	0.26	0.26
MEA	0.11	0.11	0.12	0.15	0.16	0.16	0.17	0.17	0.17	0.17	0.18
NEU	0.07	0.06	0.07	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08
OAS	0.18	0.20	0.26	0.30	0.34	0.37	0.39	0.42	0.43	0.44	0.45
REF	0.14	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.11	0.10
SSA	0.49	0.59	0.74	1.28	1.49	1.64	1.78	1.89	1.96	1.99	2.01
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 52: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

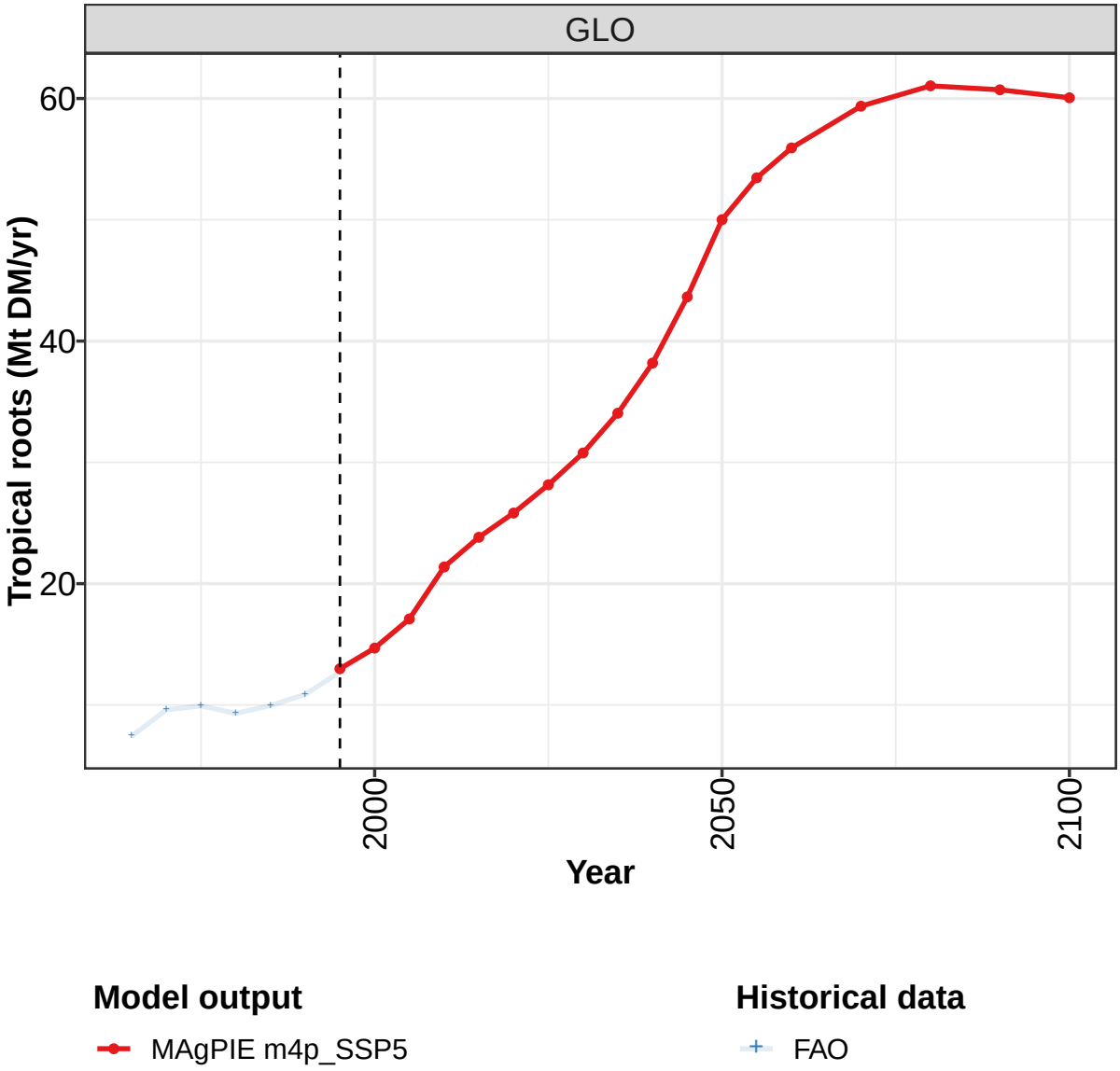
	2050	2055	2060	2070	2080	2090	2100
GLO	4.20	4.33	4.43	4.66	4.71	4.72	4.55
CAZ	0.18	0.21	0.21	0.23	0.22	0.23	0.22
CHA	0.12	0.12	0.11	0.10	0.10	0.08	0.07
EUR	0.12	0.12	0.12	0.12	0.11	0.11	0.11
IND	0.66	0.67	0.68	0.69	0.63	0.59	0.56
JPN	0.01	0.01	0.01	0.01	0.00	0.00	0.00
LAM	0.26	0.26	0.26	0.25	0.24	0.22	0.20
MEA	0.18	0.18	0.19	0.19	0.19	0.19	0.18
NEU	0.08	0.08	0.08	0.08	0.08	0.07	0.07
OAS	0.45	0.45	0.44	0.42	0.40	0.37	0.34
REF	0.10	0.11	0.12	0.12	0.12	0.11	0.10
SSA	2.03	2.12	2.22	2.45	2.62	2.72	2.70
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

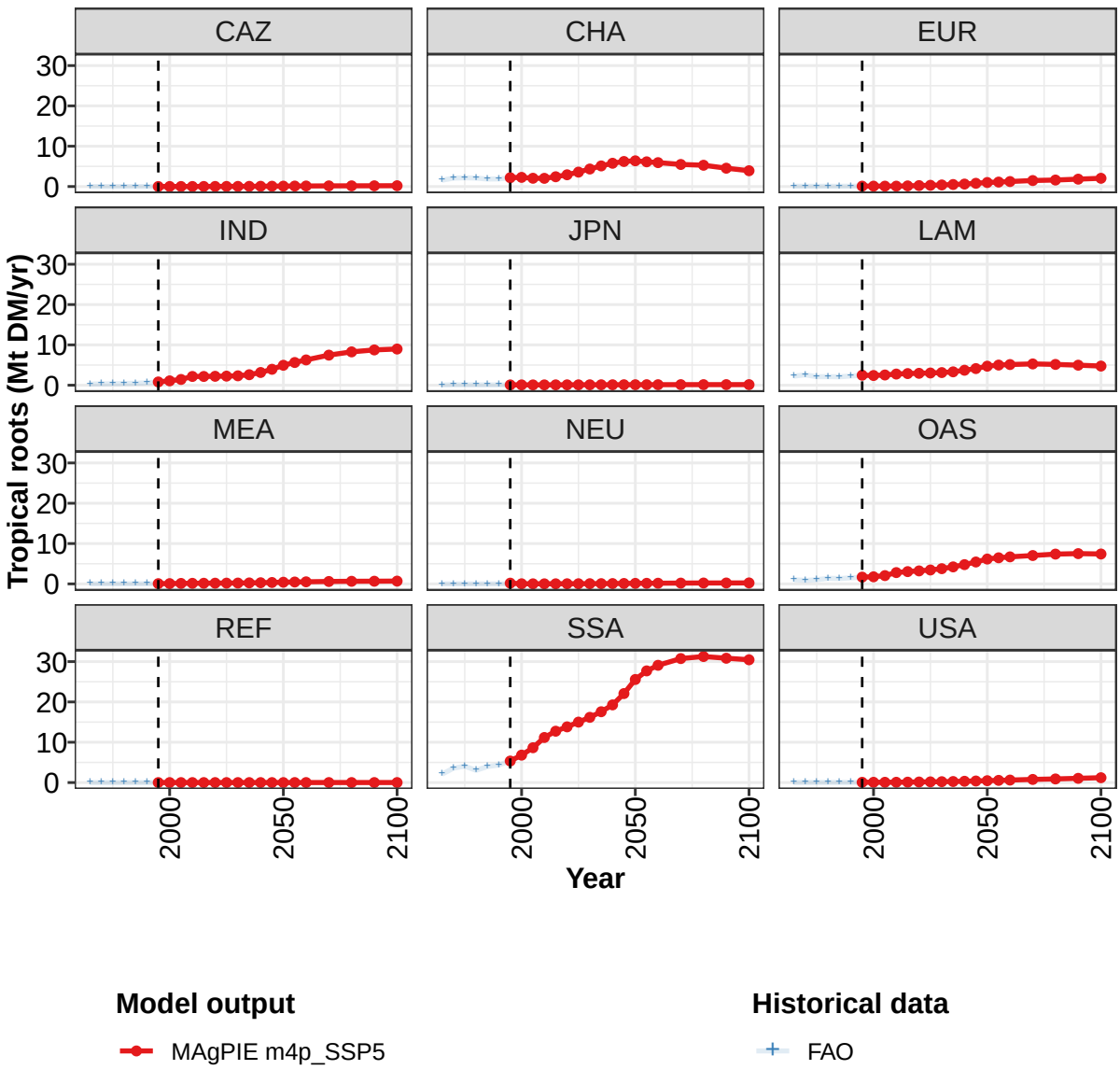
Table 53: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.55	1.56	1.52	1.54	1.89	2.14	2.02	2.05	2.36	3.15
CAZ	0.00	0.00	0.01	0.01	0.02	0.04	0.09	0.12	0.13	0.14
CHA	0.26	0.19	0.17	0.19	0.16	0.17	0.12	0.13	0.15	0.12
EUR	0.10	0.09	0.09	0.09	0.15	0.14	0.14	0.12	0.13	0.09
IND	0.33	0.34	0.31	0.27	0.36	0.42	0.44	0.42	0.43	0.62
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.14	0.15	0.16	0.18	0.18	0.19	0.22	0.21	0.21	0.26
MEA	0.07	0.06	0.07	0.06	0.08	0.09	0.11	0.11	0.12	0.15
NEU	0.02	0.02	0.02	0.03	0.05	0.07	0.07	0.06	0.07	0.06
OAS	0.08	0.08	0.10	0.11	0.15	0.17	0.17	0.17	0.23	0.30
REF	0.28	0.32	0.26	0.26	0.39	0.41	0.15	0.11	0.12	0.12
SSA	0.24	0.29	0.32	0.32	0.33	0.43	0.49	0.59	0.76	1.29
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 54: FAO — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Pulses (Mt DM/yr)

3.1.16 Other crops—Tropical roots





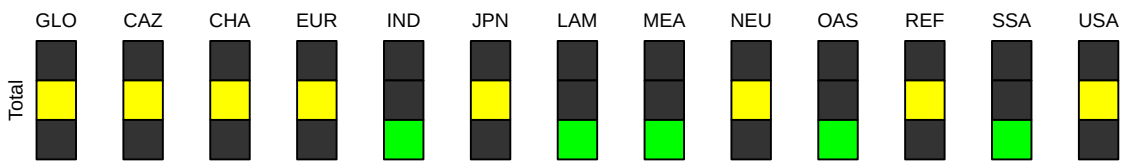


Figure 18: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.0	14.7	17.1	21.4	23.8	25.8	28.2	30.8	34.1	38.2	43.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
CHA	2.2	2.3	2.1	2.0	2.4	2.9	3.6	4.3	5.1	5.8	6.2
EUR	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.8
IND	0.8	1.1	1.4	2.2	2.2	2.2	2.3	2.3	2.6	3.2	4.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.5	2.4	2.5	2.8	2.9	3.0	3.0	3.1	3.3	3.7	4.1
MEA	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3
NEU	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
OAS	1.7	1.8	2.1	2.8	3.0	3.2	3.5	3.8	4.2	4.8	5.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	5.3	6.8	8.6	11.2	12.7	13.8	15.0	16.2	17.6	19.3	22.1
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4

Table 55: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

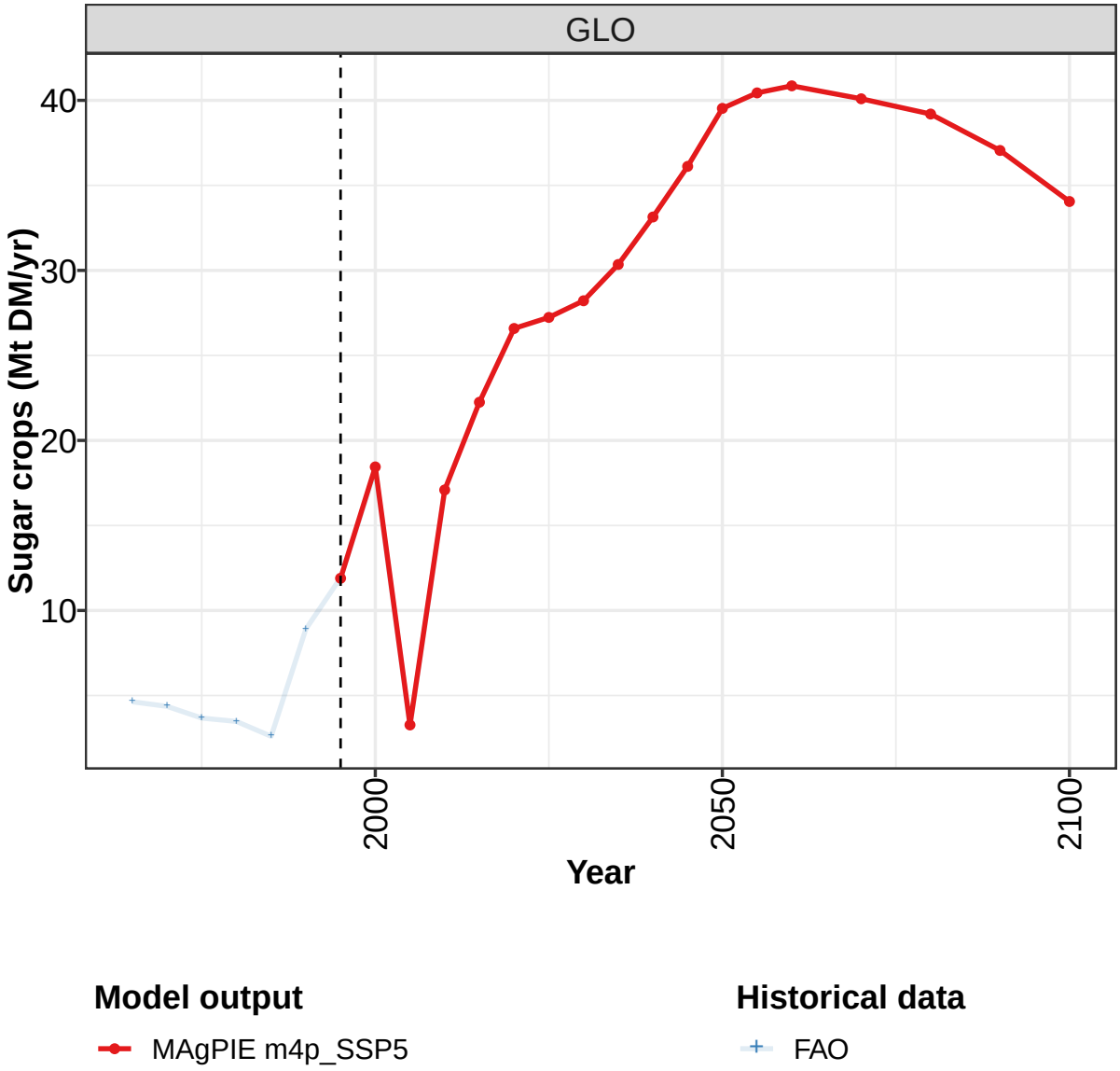
	2050	2055	2060	2070	2080	2090	2100
GLO	50.0	53.5	55.9	59.4	61.0	60.7	60.1
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CHA	6.4	6.1	5.9	5.5	5.3	4.5	3.9
EUR	1.0	1.1	1.2	1.5	1.6	1.8	2.0
IND	4.9	5.6	6.3	7.5	8.3	8.8	9.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	4.7	5.0	5.1	5.3	5.2	5.0	4.8
MEA	0.4	0.5	0.5	0.6	0.6	0.7	0.7
NEU	0.1	0.1	0.2	0.2	0.2	0.2	0.2
OAS	6.2	6.5	6.7	7.0	7.4	7.5	7.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	25.6	27.7	29.1	30.8	31.3	30.8	30.5
USA	0.5	0.5	0.6	0.8	0.9	1.1	1.2

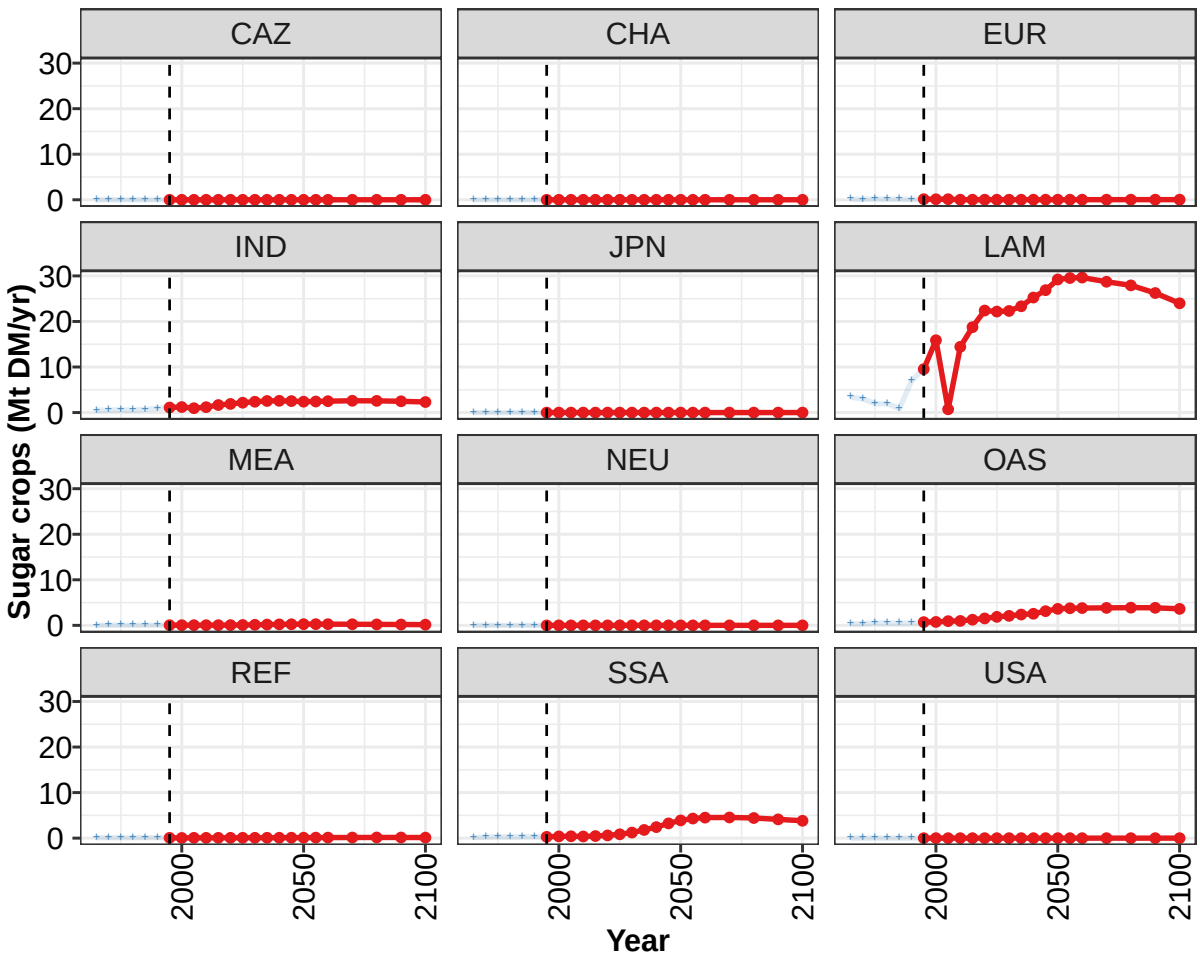
Table 56: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7.4	9.6	9.9	9.3	9.9	10.9	12.7	14.7	17.0	21.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.6	2.1	2.2	2.1	1.9	1.9	2.2	2.3	2.0	2.0
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	0.3	0.3	0.4	0.4	0.5	0.6	0.8	1.1	1.4	2.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.3	2.6	2.1	2.1	2.1	2.3	2.4	2.4	2.5	2.7
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.0	0.8	1.0	1.4	1.3	1.5	1.7	1.7	2.0	2.8
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.1	3.6	4.1	3.0	4.0	4.4	5.3	6.8	8.6	11.2
USA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1

Table 57: FAO — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Tropical roots (Mt DM/yr)

3.1.17 Sugar crops





Model output

MAgPIE m4p_SSP5

Historical data

FAO

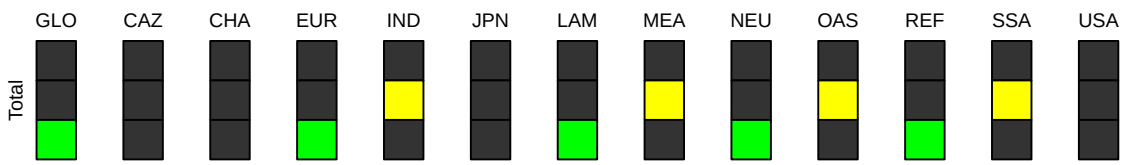


Figure 19: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.9	18.4	3.3	17.1	22.2	26.6	27.2	28.2	30.3	33.1	36.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.1	1.2	1.0	1.2	1.7	1.9	2.2	2.4	2.5	2.6	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	9.5	15.9	0.7	14.4	18.8	22.4	22.2	22.3	23.3	25.3	26.9
MEA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.7	0.8	0.9	1.0	1.2	1.5	1.9	2.1	2.4	2.5	3.1
REF	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	0.3	0.4	0.4	0.4	0.5	0.6	0.9	1.2	1.8	2.4	3.2
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 58: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

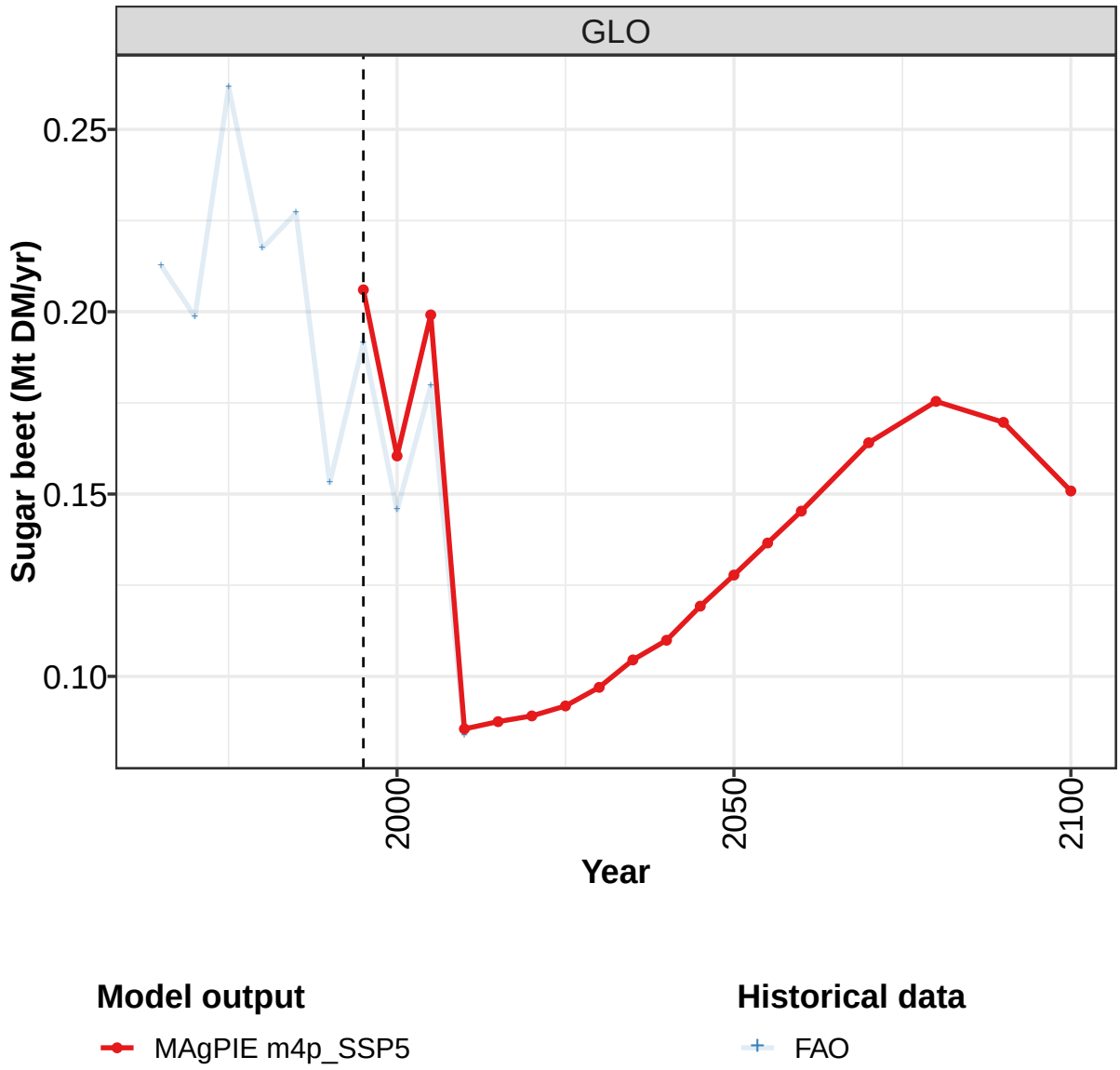
	2050	2055	2060	2070	2080	2090	2100
GLO	39.5	40.4	40.9	40.1	39.2	37.1	34.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.4	2.4	2.5	2.6	2.6	2.5	2.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	29.2	29.5	29.6	28.7	27.9	26.2	24.0
MEA	0.3	0.3	0.3	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	3.6	3.8	3.8	3.8	3.9	3.9	3.6
REF	0.1	0.1	0.1	0.1	0.2	0.1	0.1
SSA	3.9	4.3	4.5	4.5	4.4	4.1	3.8
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

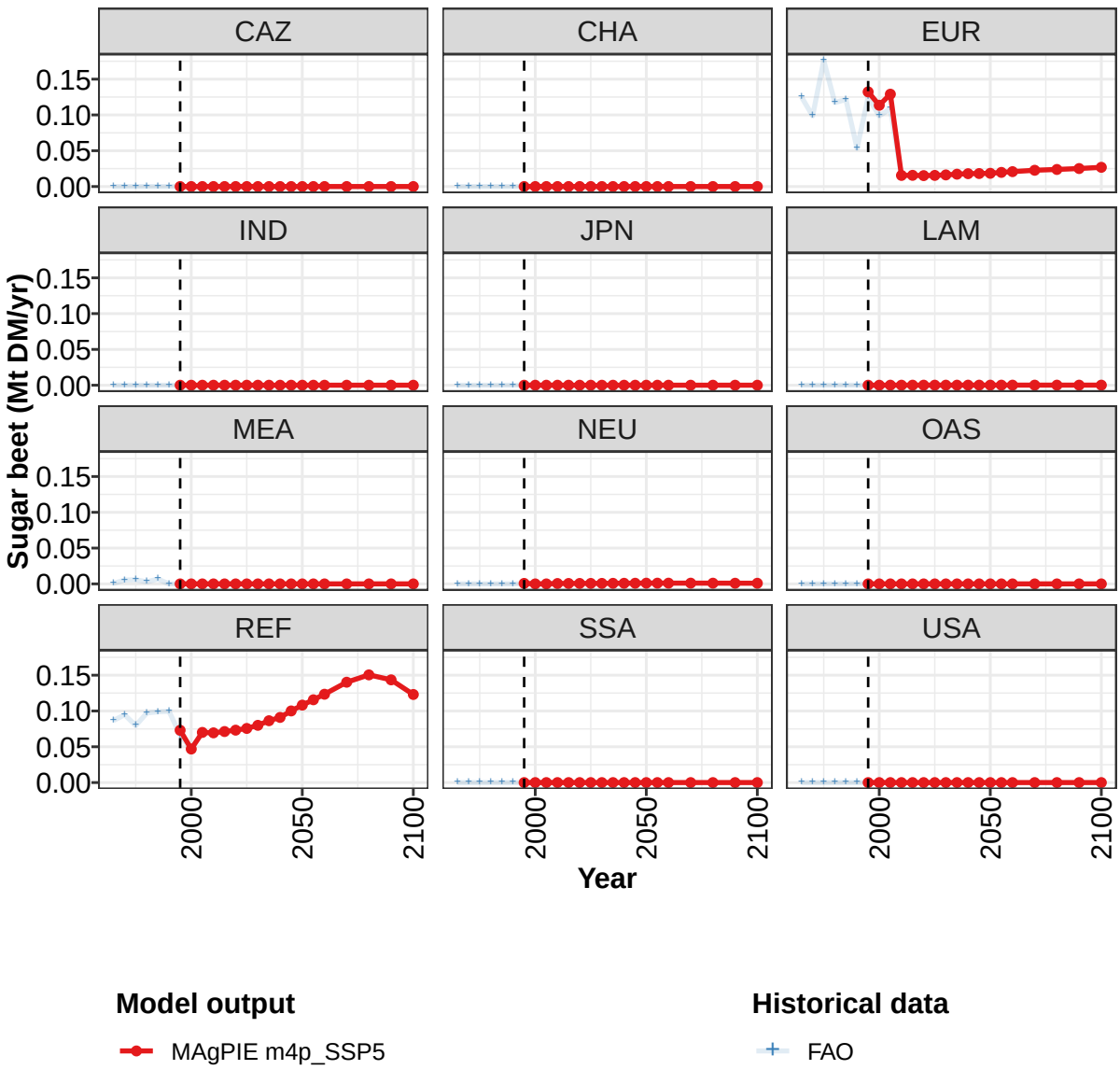
Table 59: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.6	4.4	3.7	3.5	2.6	8.9	11.9	18.2	3.2	17.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0
IND	0.5	0.5	0.6	0.5	0.7	0.9	1.1	1.2	1.0	1.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.4	3.0	2.0	2.0	0.9	7.0	9.7	15.7	0.7	14.4
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.8	0.8	0.9
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
SSA	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 60: FAO — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops (Mt DM/yr)

3.1.18 Sugar crops—Sugar beet





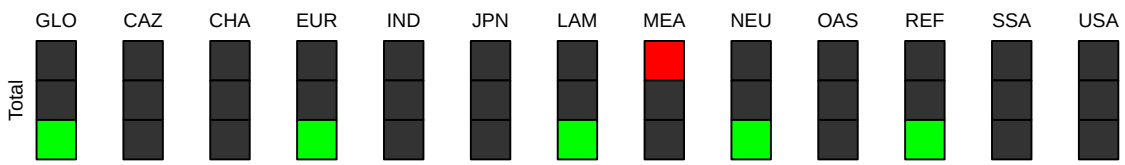


Figure 20: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.206	0.160	0.199	0.086	0.088	0.089	0.092	0.097	0.105	0.110	0.119
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.132	0.114	0.129	0.016	0.016	0.015	0.016	0.016	0.017	0.018	0.018
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.073	0.047	0.070	0.069	0.071	0.073	0.076	0.080	0.086	0.091	0.100
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 61: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

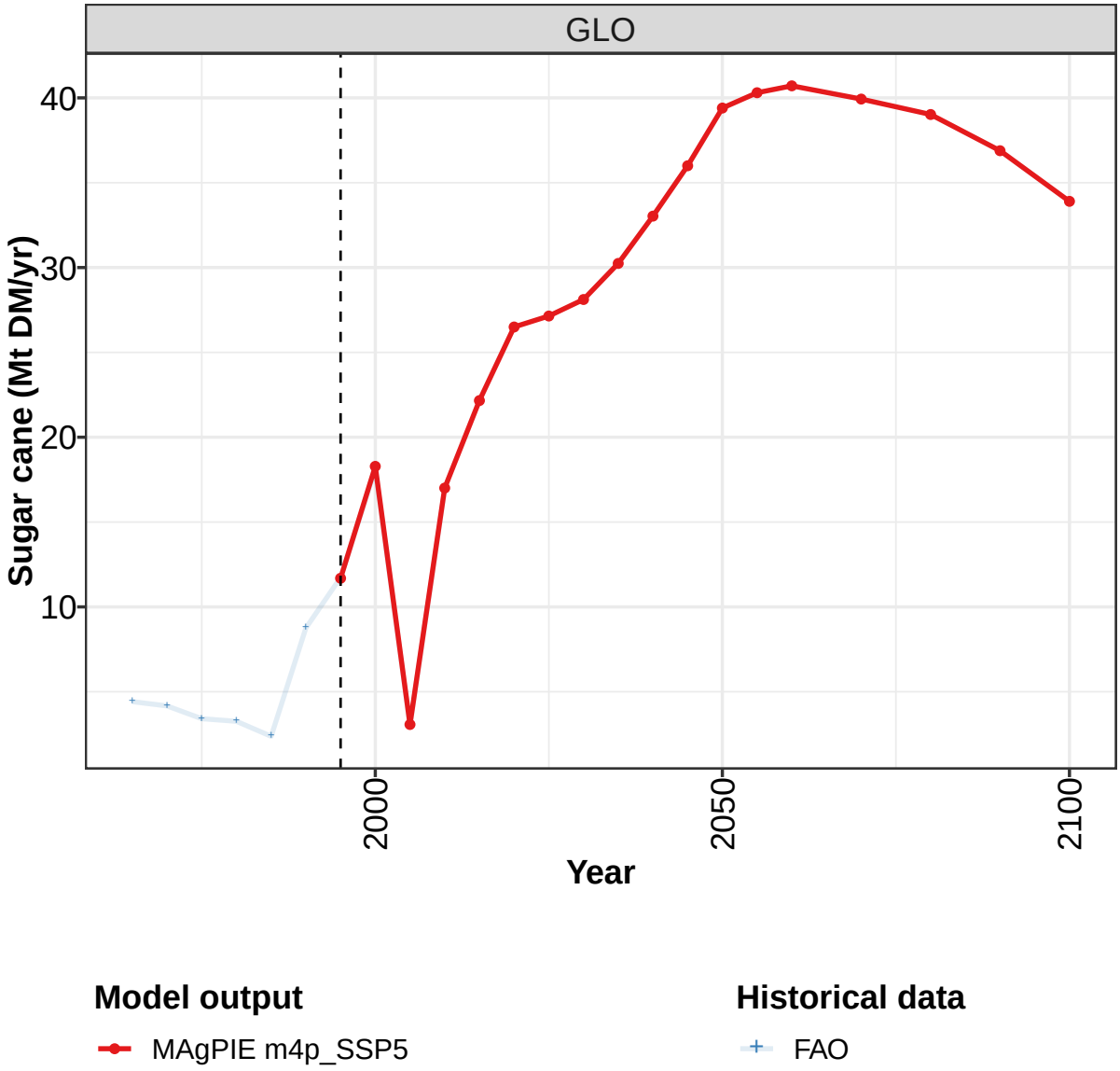
	2050	2055	2060	2070	2080	2090	2100
GLO	0.128	0.137	0.145	0.164	0.175	0.170	0.151
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.018	0.020	0.021	0.023	0.024	0.025	0.027
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.001	0.001	0.001	0.001	0.001	0.001	0.001
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.108	0.116	0.123	0.140	0.150	0.144	0.123
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

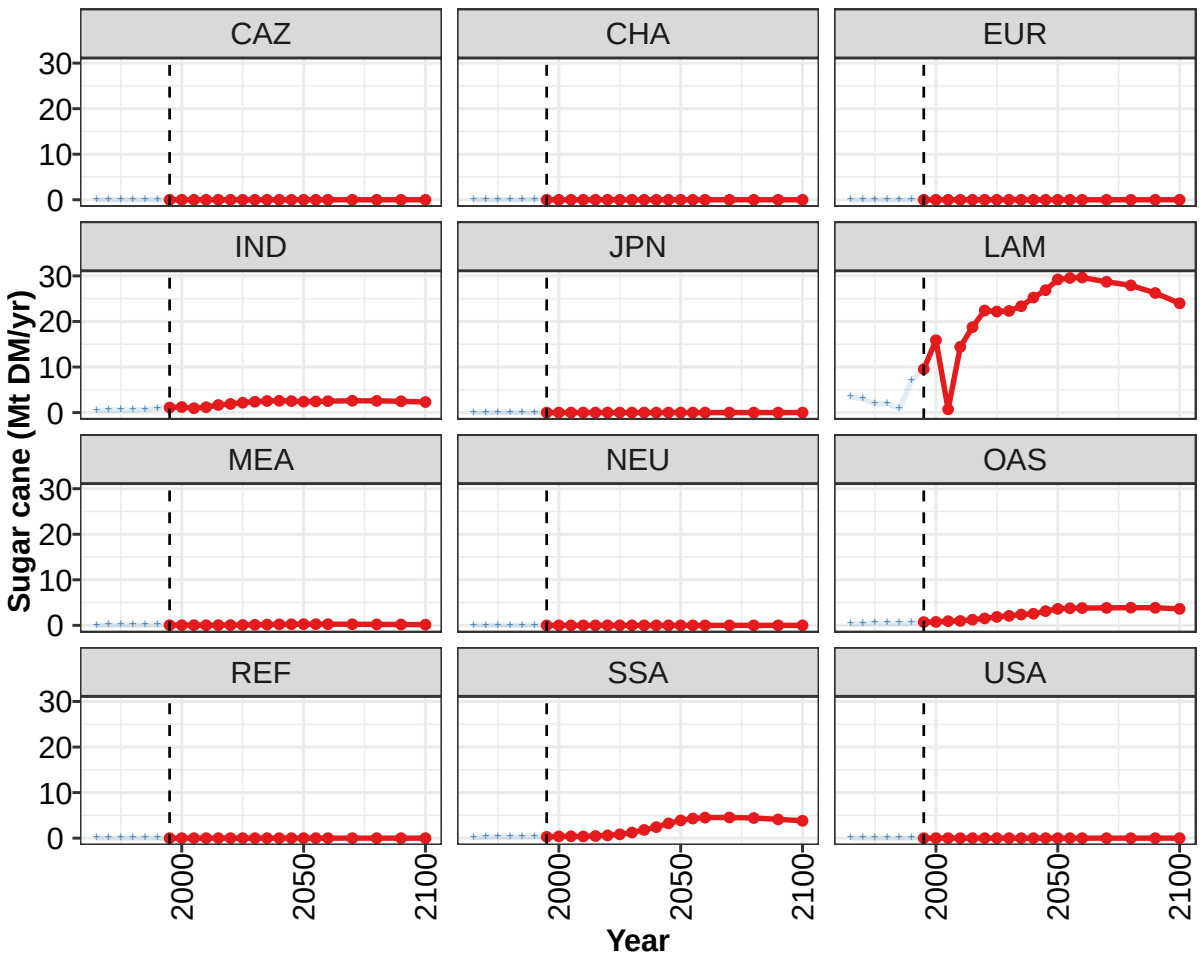
Table 62: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.213	0.199	0.262	0.217	0.227	0.153	0.192	0.146	0.180	0.084
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.125	0.099	0.176	0.117	0.121	0.053	0.125	0.099	0.109	0.015
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.001	0.005	0.006	0.003	0.007	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.087	0.095	0.080	0.097	0.099	0.100	0.066	0.047	0.071	0.069
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 63: FAO — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar beet (Mt DM/yr)

3.1.19 Sugar crops—Sugar cane





Model output

MAgPIE m4p_SSP5

Historical data

FAO

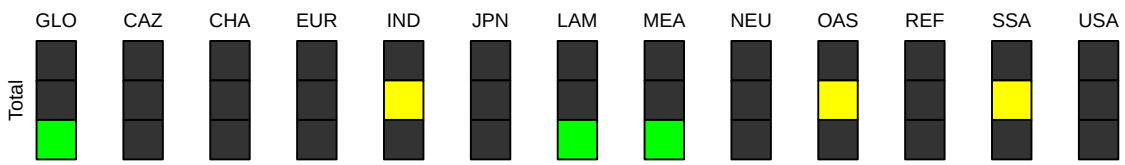


Figure 21: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.7	18.3	3.1	17.0	22.2	26.5	27.1	28.1	30.2	33.0	36.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.1	1.2	1.0	1.2	1.7	1.9	2.2	2.4	2.5	2.6	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	9.5	15.9	0.7	14.4	18.8	22.4	22.2	22.3	23.3	25.3	26.9
MEA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.7	0.8	0.9	1.0	1.2	1.5	1.9	2.1	2.4	2.5	3.1
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.3	0.4	0.4	0.4	0.5	0.6	0.9	1.2	1.8	2.4	3.2
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

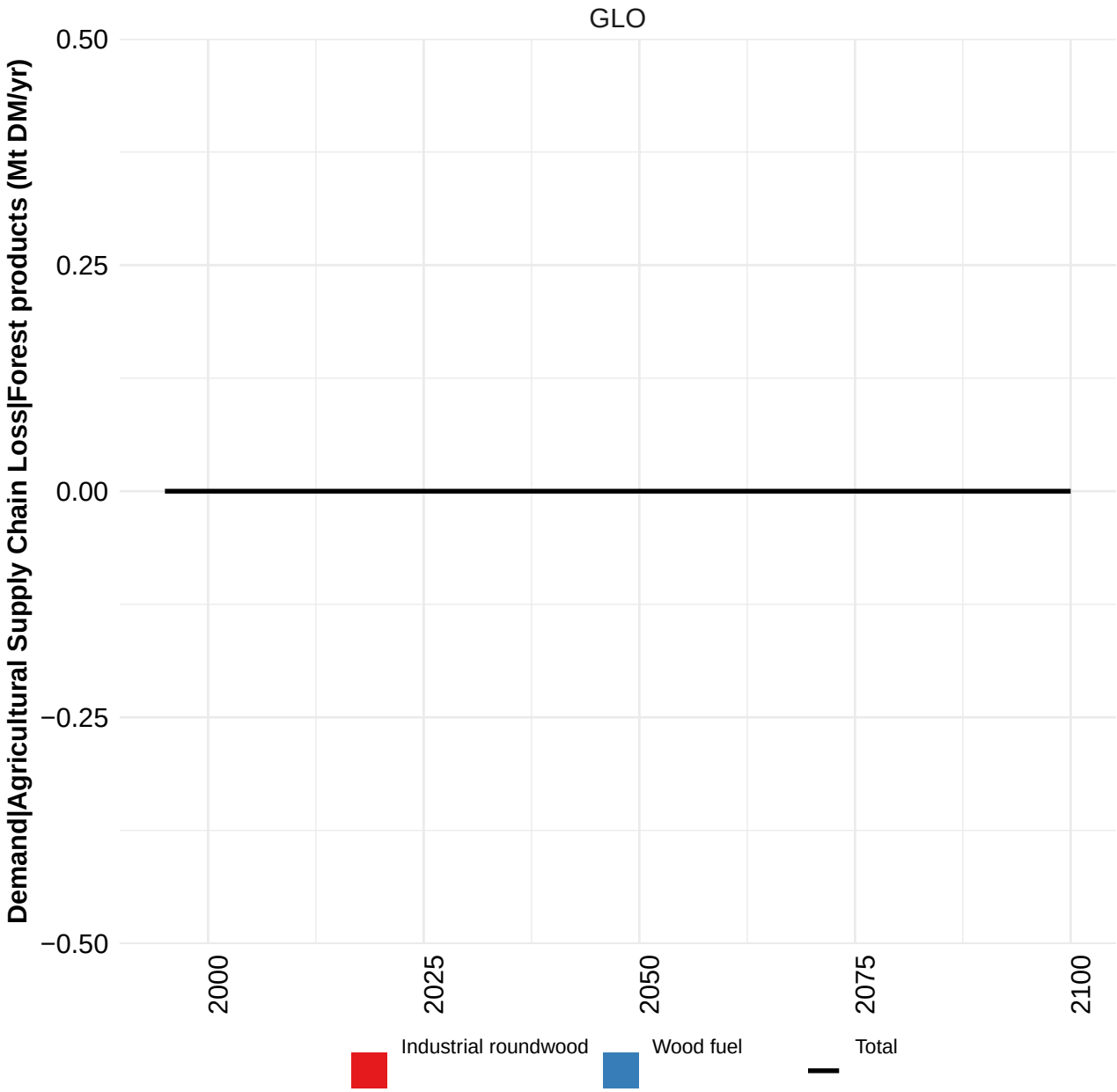
Table 64: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

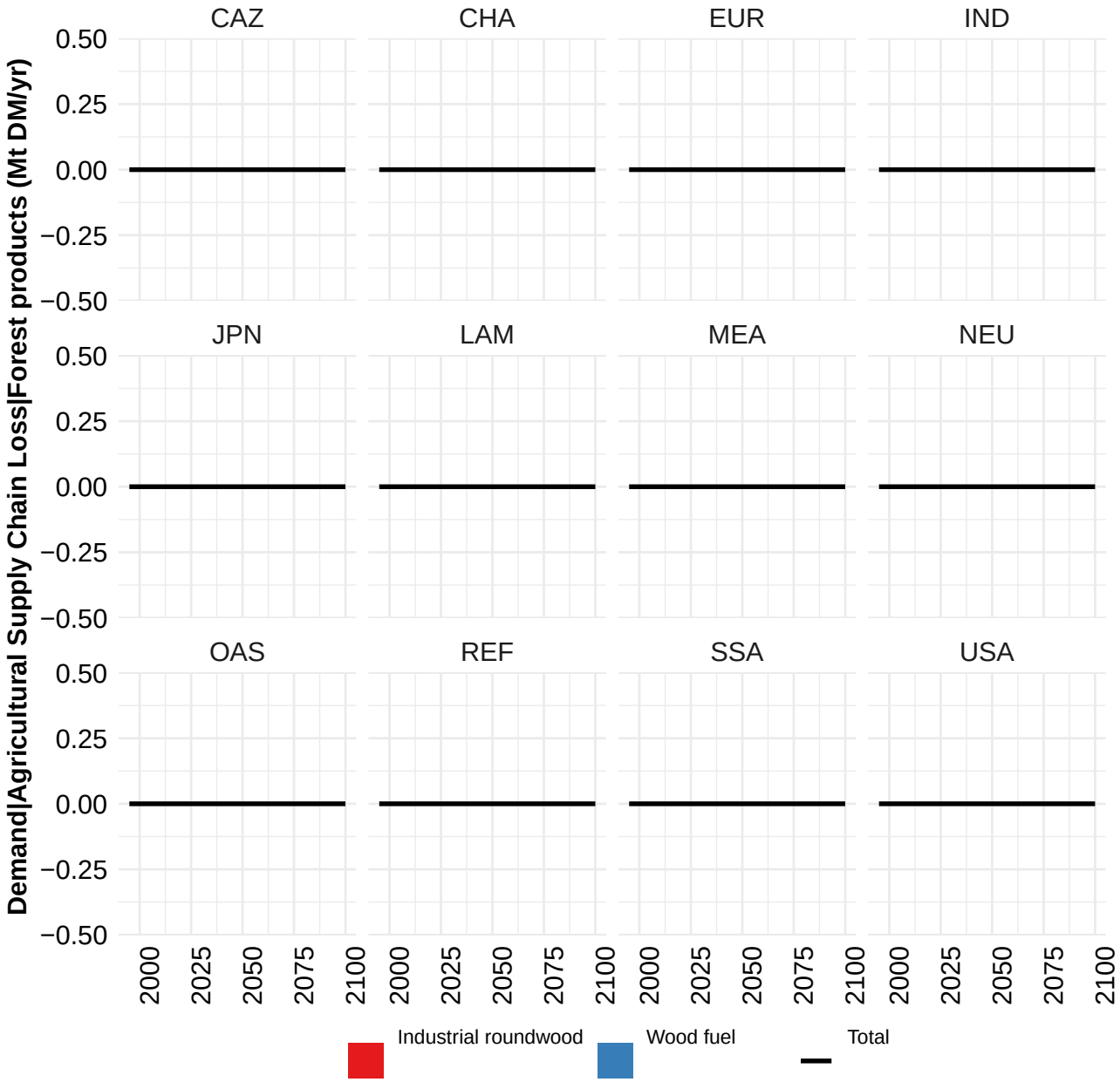
	2050	2055	2060	2070	2080	2090	2100
GLO	39.4	40.3	40.7	39.9	39.0	36.9	33.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.4	2.4	2.5	2.6	2.6	2.5	2.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	29.2	29.5	29.6	28.7	27.9	26.2	24.0
MEA	0.3	0.3	0.3	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	3.6	3.8	3.8	3.8	3.9	3.9	3.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	3.9	4.3	4.5	4.5	4.4	4.1	3.8
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

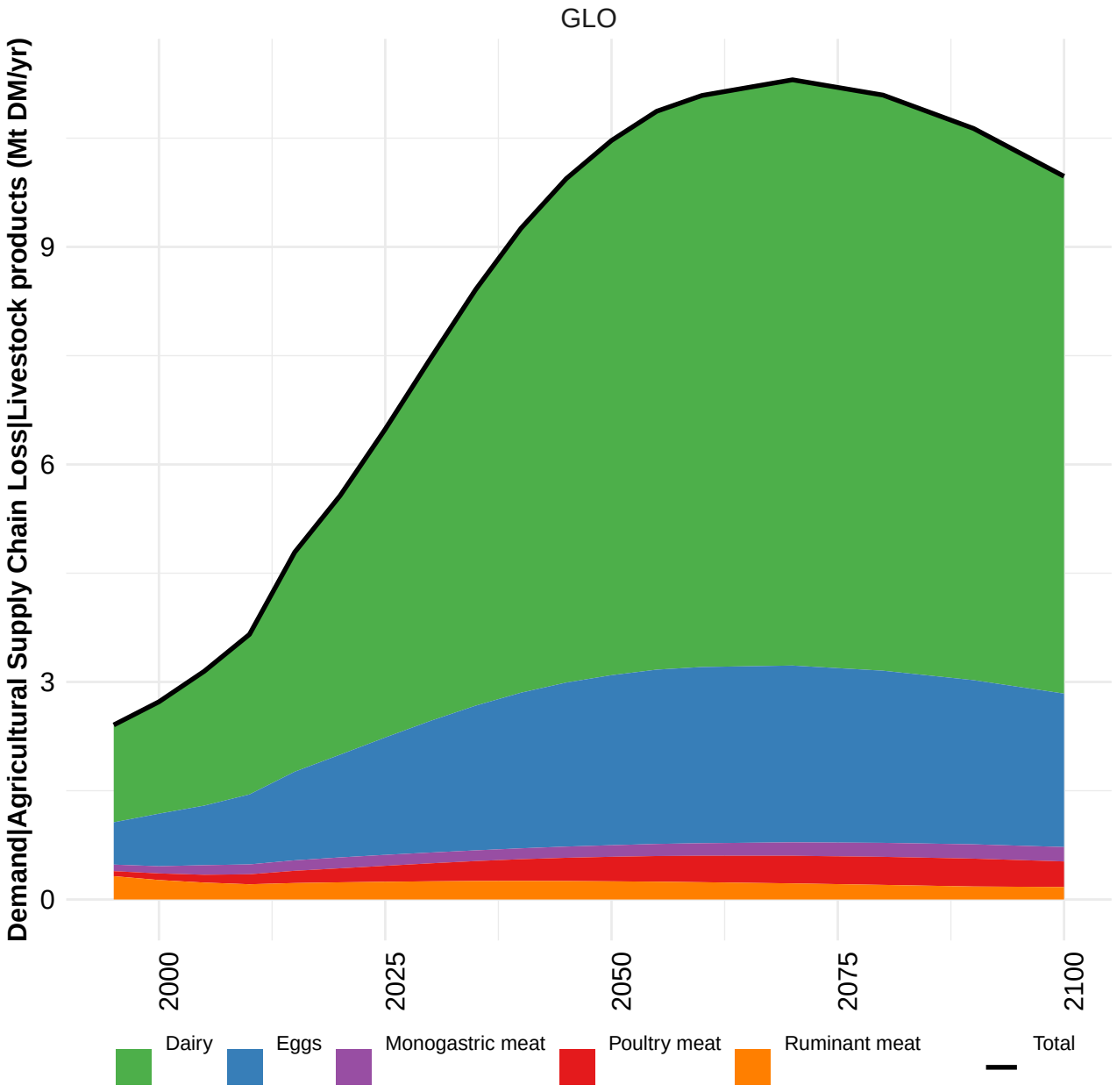
Table 65: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

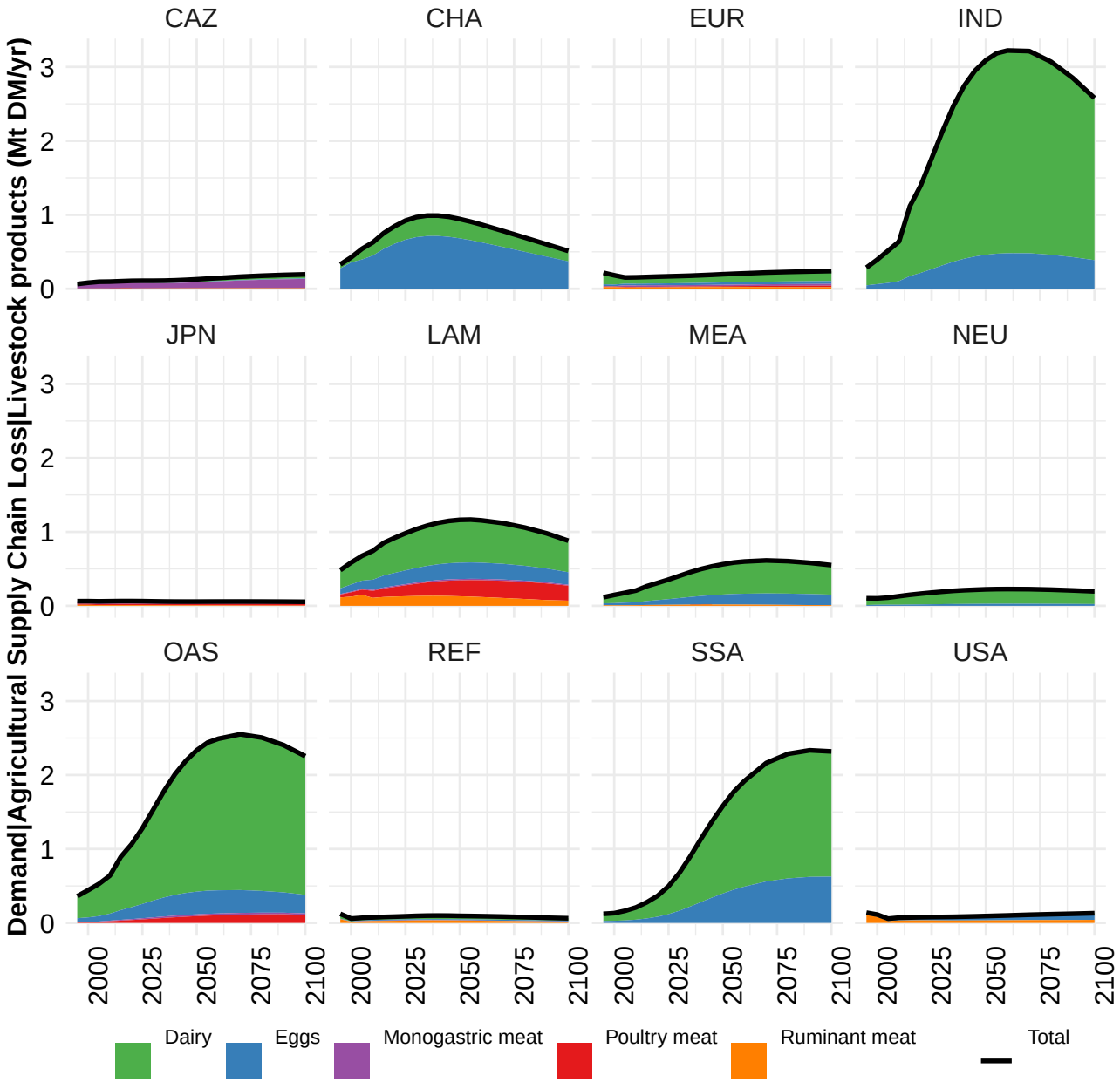
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.4	4.2	3.4	3.3	2.4	8.8	11.7	18.1	3.0	16.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.5	0.5	0.6	0.5	0.7	0.9	1.1	1.2	1.0	1.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.4	3.0	2.0	2.0	0.9	7.0	9.7	15.7	0.7	14.4
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.8	0.8	0.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 66: FAO — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr)

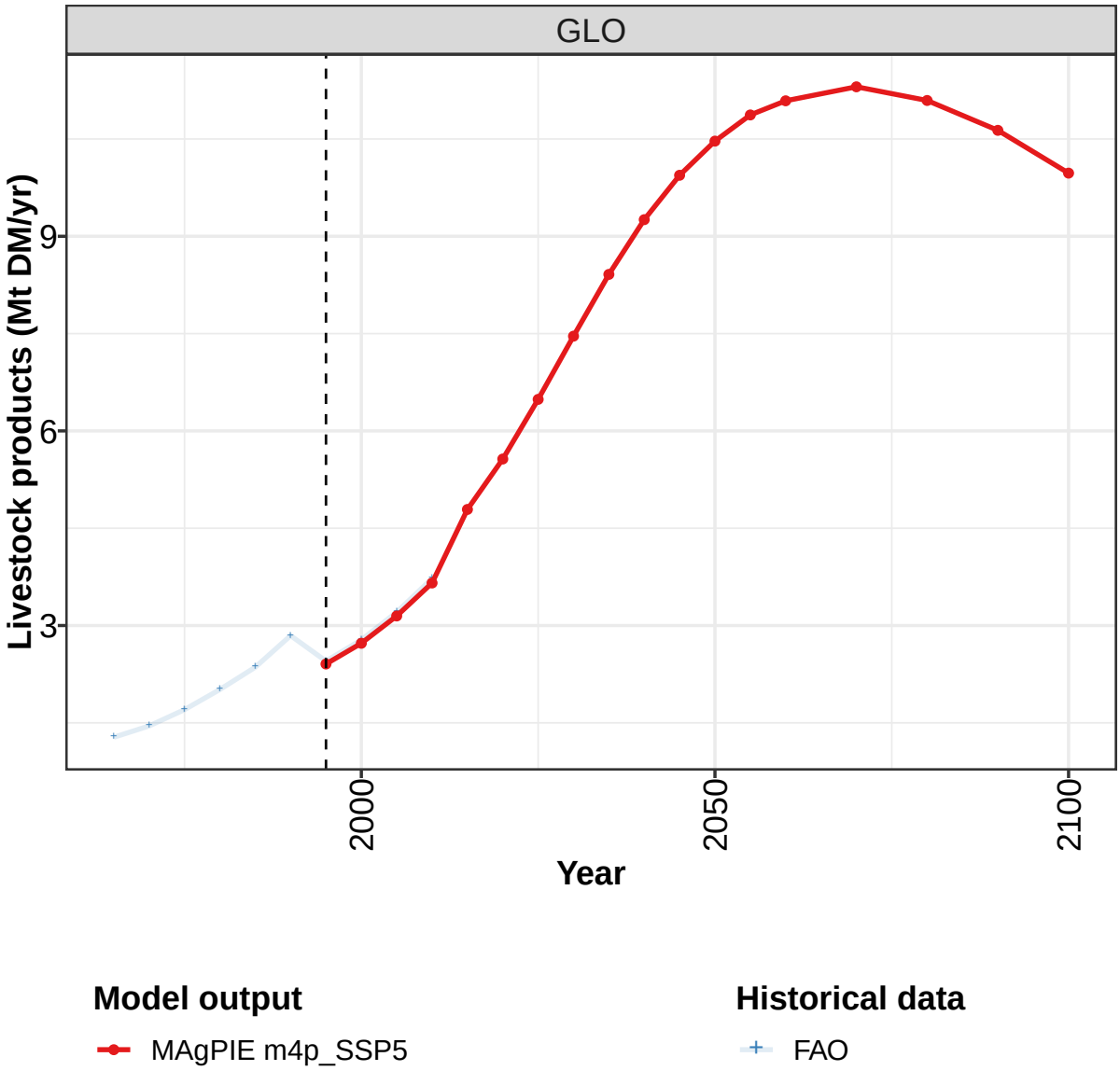

GLO
Demand|Agricultural Supply Chain Loss|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

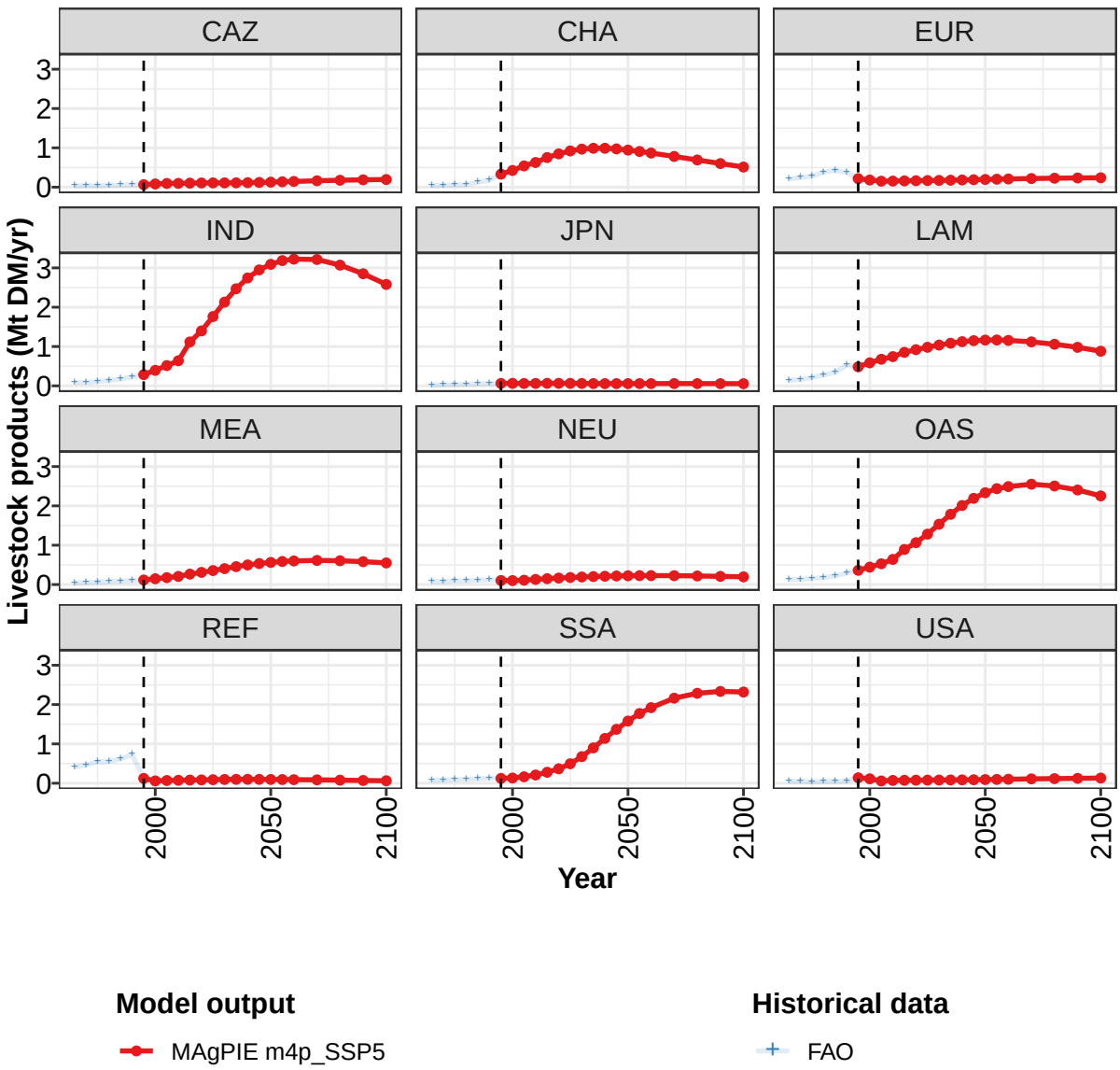

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Agricultural Supply Chain Loss|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


GLO
Demand|Agricultural Supply Chain Loss|Livestock products (Mt DM/yr)
0
3
6
9
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Agricultural Supply Chain Loss|Livestock products (Mt DM/yr)
0
1
2
3
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

3.2 Livestock products





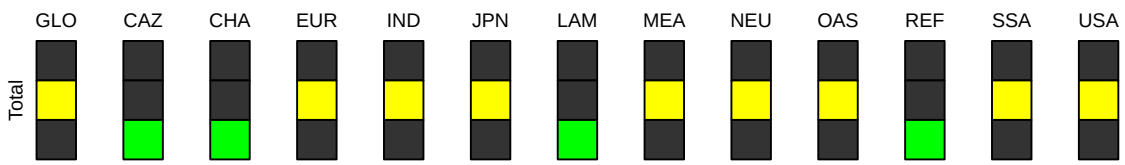


Figure 22: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.4	2.7	3.1	3.7	4.8	5.6	6.5	7.5	8.4	9.3	9.9
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.3	0.4	0.5	0.6	0.8	0.8	0.9	1.0	1.0	1.0	1.0
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.3	0.4	0.5	0.6	1.1	1.4	1.8	2.1	2.5	2.7	2.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.5	0.6	0.7	0.7	0.9	0.9	1.0	1.0	1.1	1.1	1.1
MEA	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5
NEU	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.4	0.4	0.5	0.6	0.9	1.1	1.3	1.5	1.8	2.0	2.2
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.7	0.9	1.1	1.4
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 67: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products (Mt DM/yr) [PART 1/2]

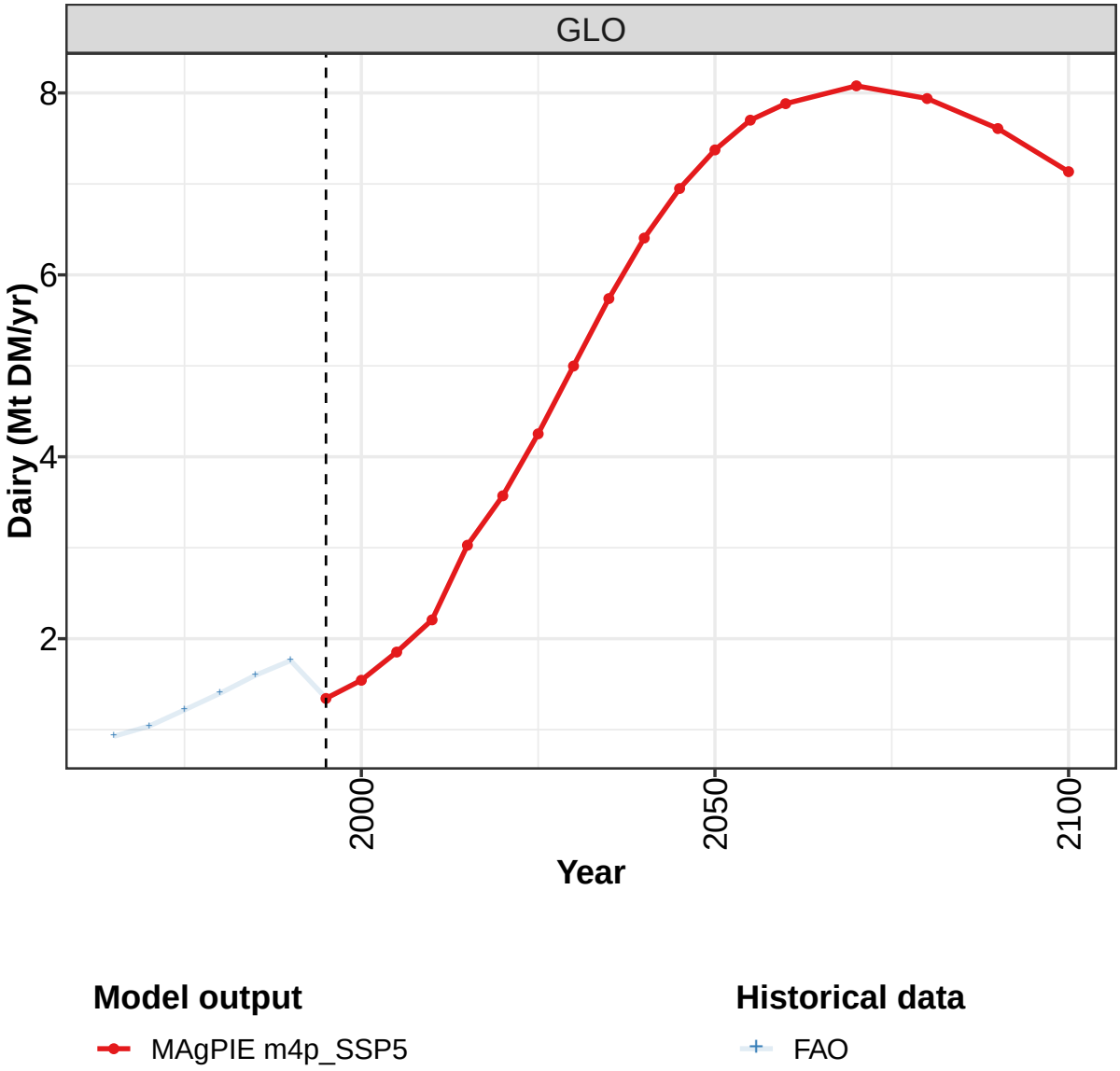
	2050	2055	2060	2070	2080	2090	2100
GLO	10.5	10.9	11.1	11.3	11.1	10.6	10.0
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CHA	0.9	0.9	0.9	0.8	0.7	0.6	0.5
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	3.1	3.2	3.2	3.2	3.1	2.9	2.6
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.2	1.2	1.2	1.1	1.1	1.0	0.9
MEA	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	2.3	2.4	2.5	2.6	2.5	2.4	2.3
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	1.6	1.8	1.9	2.2	2.3	2.3	2.3
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

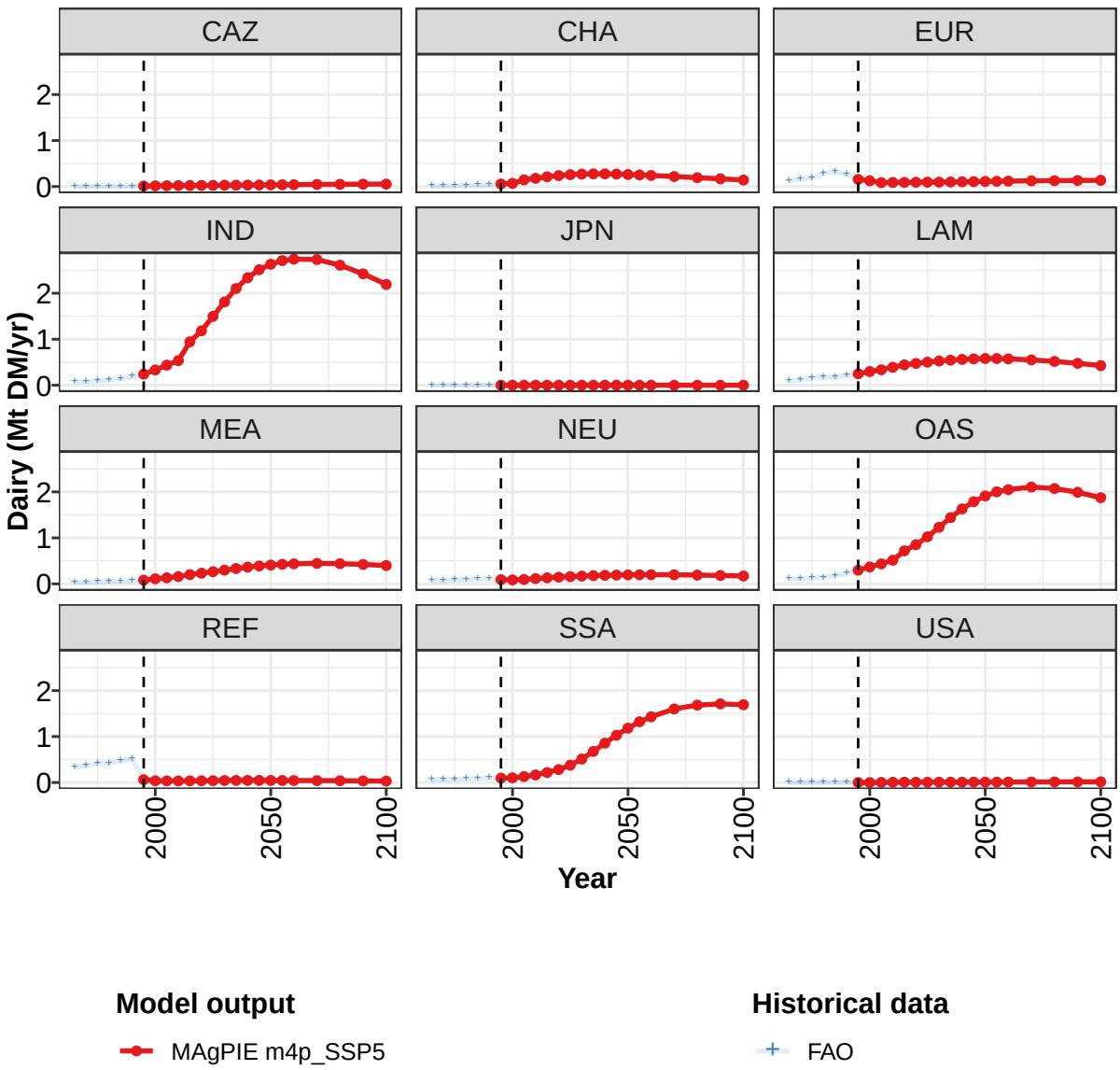
Table 68: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.28	1.45	1.70	2.01	2.36	2.84	2.45	2.78	3.21	3.72
CAZ	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.08	0.10	0.10
CHA	0.04	0.04	0.05	0.07	0.13	0.18	0.34	0.44	0.55	0.64
EUR	0.21	0.24	0.28	0.38	0.42	0.38	0.22	0.18	0.15	0.16
IND	0.08	0.09	0.11	0.14	0.17	0.23	0.29	0.40	0.52	0.64
JPN	0.02	0.03	0.03	0.04	0.05	0.06	0.06	0.06	0.06	0.06
LAM	0.14	0.16	0.21	0.28	0.34	0.52	0.49	0.60	0.69	0.76
MEA	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.15	0.18	0.21
NEU	0.08	0.07	0.10	0.10	0.11	0.12	0.10	0.10	0.11	0.13
OAS	0.12	0.13	0.15	0.18	0.22	0.29	0.37	0.45	0.54	0.65
REF	0.41	0.46	0.54	0.56	0.62	0.73	0.13	0.06	0.07	0.08
SSA	0.07	0.08	0.09	0.10	0.11	0.13	0.13	0.14	0.17	0.21
USA	0.05	0.05	0.04	0.04	0.05	0.06	0.14	0.12	0.06	0.08

Table 69: FAO — Demand—Agricultural Supply Chain Loss—Livestock products (Mt DM/yr)

3.2.1 Dairy


GLO
Dairy (Mt DM/yr)
8
6
4
2
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



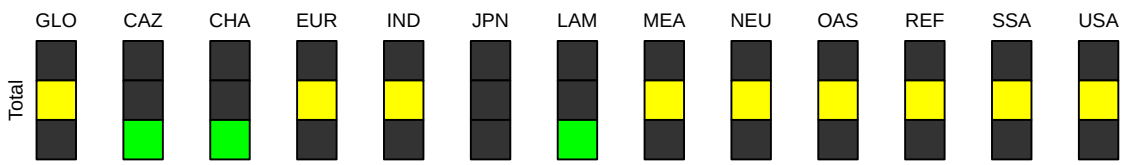


Figure 23: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.34	1.54	1.85	2.21	3.03	3.57	4.25	5.00	5.74	6.40	6.95
CAZ	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
CHA	0.06	0.07	0.14	0.18	0.21	0.24	0.26	0.27	0.28	0.28	0.27
EUR	0.16	0.13	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
IND	0.24	0.33	0.44	0.53	0.94	1.18	1.50	1.81	2.10	2.34	2.51
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.25	0.30	0.34	0.39	0.44	0.47	0.50	0.53	0.54	0.56	0.57
MEA	0.08	0.11	0.13	0.16	0.20	0.23	0.26	0.30	0.33	0.36	0.39
NEU	0.09	0.09	0.10	0.12	0.13	0.15	0.16	0.17	0.18	0.19	0.19
OAS	0.30	0.37	0.44	0.52	0.72	0.85	1.02	1.23	1.44	1.63	1.79
REF	0.06	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05
SSA	0.10	0.10	0.13	0.17	0.22	0.28	0.38	0.51	0.68	0.86	1.03
USA	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Table 70: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

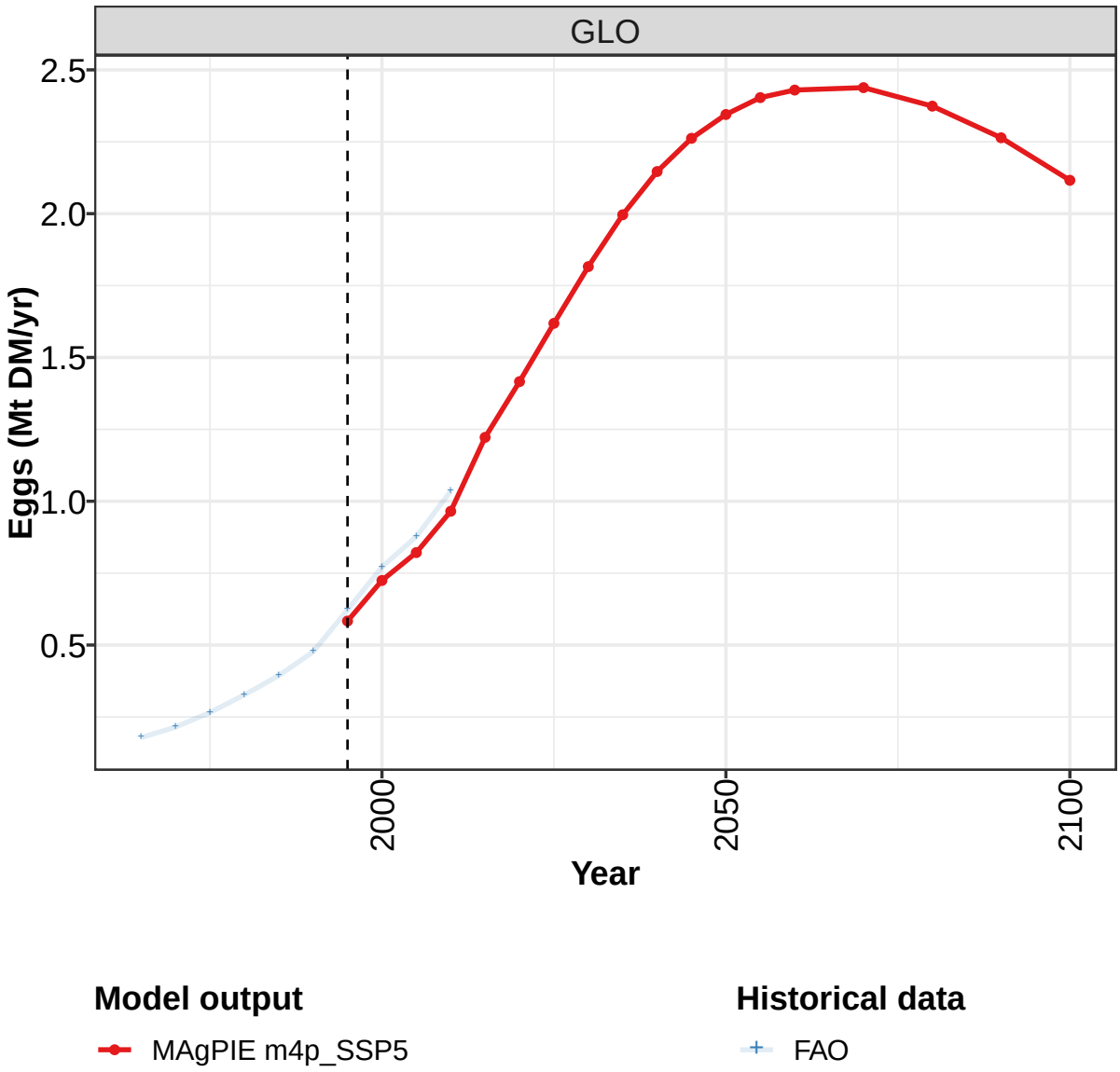
	2050	2055	2060	2070	2080	2090	2100
GLO	7.37	7.70	7.88	8.08	7.94	7.61	7.13
CAZ	0.04	0.04	0.04	0.05	0.05	0.05	0.05
CHA	0.26	0.25	0.24	0.22	0.19	0.17	0.14
EUR	0.11	0.11	0.12	0.12	0.13	0.13	0.14
IND	2.63	2.71	2.74	2.73	2.61	2.42	2.19
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.58	0.58	0.57	0.55	0.52	0.48	0.43
MEA	0.41	0.43	0.44	0.45	0.44	0.42	0.40
NEU	0.20	0.20	0.20	0.20	0.19	0.18	0.17
OAS	1.91	2.00	2.05	2.11	2.07	1.99	1.87
REF	0.05	0.04	0.04	0.04	0.04	0.04	0.03
SSA	1.18	1.32	1.43	1.60	1.68	1.71	1.69
USA	0.01	0.01	0.01	0.01	0.01	0.02	0.02

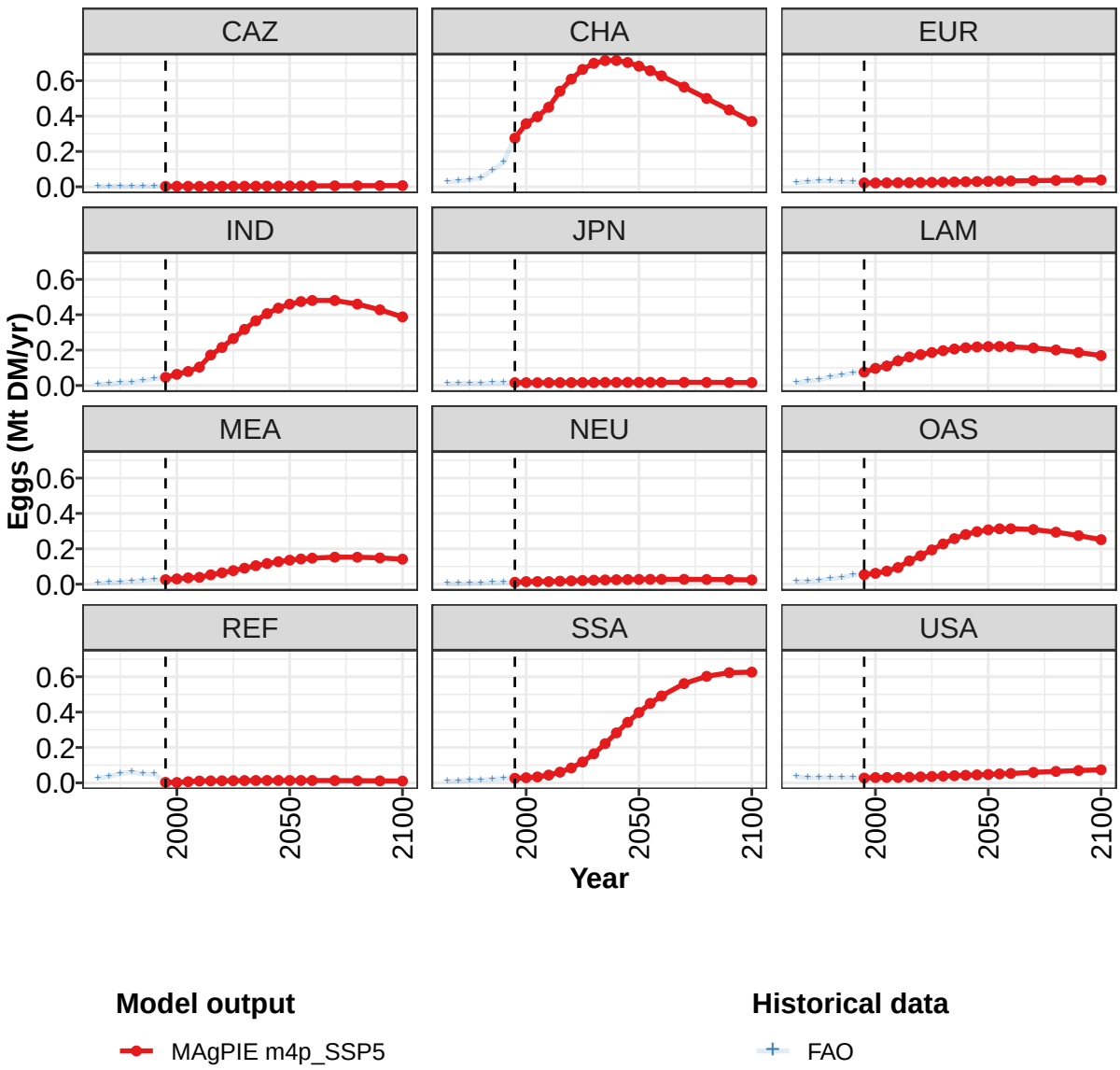
Table 71: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Dairy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.93	1.04	1.22	1.40	1.60	1.76	1.35	1.55	1.86	2.21
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
CHA	0.01	0.01	0.02	0.02	0.03	0.04	0.06	0.07	0.14	0.18
EUR	0.13	0.16	0.19	0.28	0.32	0.27	0.15	0.12	0.08	0.09
IND	0.08	0.08	0.10	0.12	0.14	0.19	0.24	0.33	0.44	0.53
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.10	0.12	0.15	0.17	0.19	0.21	0.25	0.30	0.34	0.39
MEA	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.11	0.14	0.16
NEU	0.08	0.07	0.09	0.09	0.10	0.11	0.09	0.09	0.10	0.12
OAS	0.10	0.11	0.13	0.14	0.17	0.23	0.30	0.37	0.44	0.52
REF	0.33	0.36	0.41	0.42	0.47	0.52	0.07	0.04	0.04	0.03
SSA	0.06	0.07	0.07	0.08	0.09	0.10	0.10	0.10	0.13	0.17
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Table 72: FAO — Demand—Agricultural Supply Chain Loss—Livestock products—Dairy (Mt DM/yr)

3.2.2 Eggs


GLO
Eggs (Mt DM/yr)
2.5
2.0
1.5
1.0
0.5
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



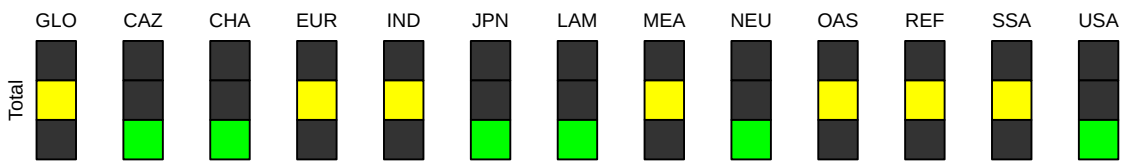


Figure 24: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.58	0.72	0.82	0.97	1.22	1.42	1.62	1.82	2.00	2.15	2.26
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.28	0.36	0.40	0.45	0.54	0.61	0.66	0.70	0.71	0.71	0.70
EUR	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
IND	0.05	0.06	0.08	0.10	0.17	0.21	0.27	0.32	0.37	0.41	0.44
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.08	0.10	0.11	0.14	0.16	0.17	0.19	0.20	0.21	0.21	0.22
MEA	0.03	0.03	0.04	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.13
NEU	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03
OAS	0.05	0.06	0.07	0.09	0.13	0.16	0.19	0.23	0.26	0.28	0.30
REF	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SSA	0.03	0.03	0.03	0.04	0.06	0.08	0.12	0.16	0.22	0.28	0.34
USA	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05

Table 73: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

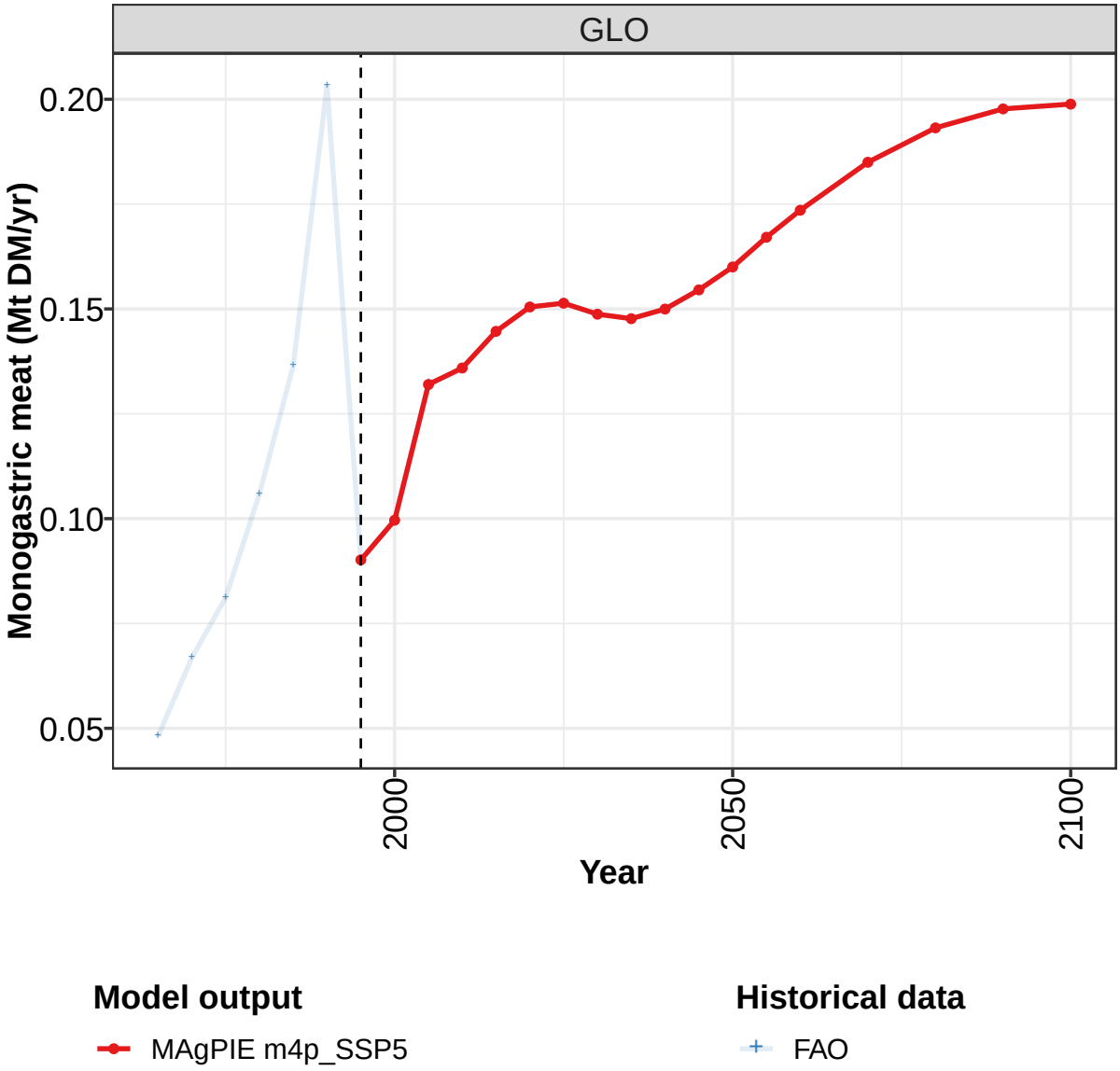
	2050	2055	2060	2070	2080	2090	2100
GLO	2.34	2.40	2.43	2.44	2.37	2.26	2.12
CAZ	0.00	0.00	0.01	0.01	0.01	0.01	0.01
CHA	0.68	0.66	0.63	0.56	0.50	0.43	0.37
EUR	0.03	0.03	0.03	0.04	0.04	0.04	0.04
IND	0.46	0.47	0.48	0.48	0.46	0.43	0.39
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.22	0.22	0.22	0.21	0.20	0.19	0.17
MEA	0.14	0.14	0.15	0.15	0.15	0.15	0.14
NEU	0.03	0.03	0.03	0.03	0.03	0.03	0.02
OAS	0.31	0.31	0.31	0.31	0.29	0.27	0.25
REF	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SSA	0.40	0.45	0.49	0.56	0.60	0.62	0.63
USA	0.05	0.05	0.05	0.06	0.06	0.07	0.07

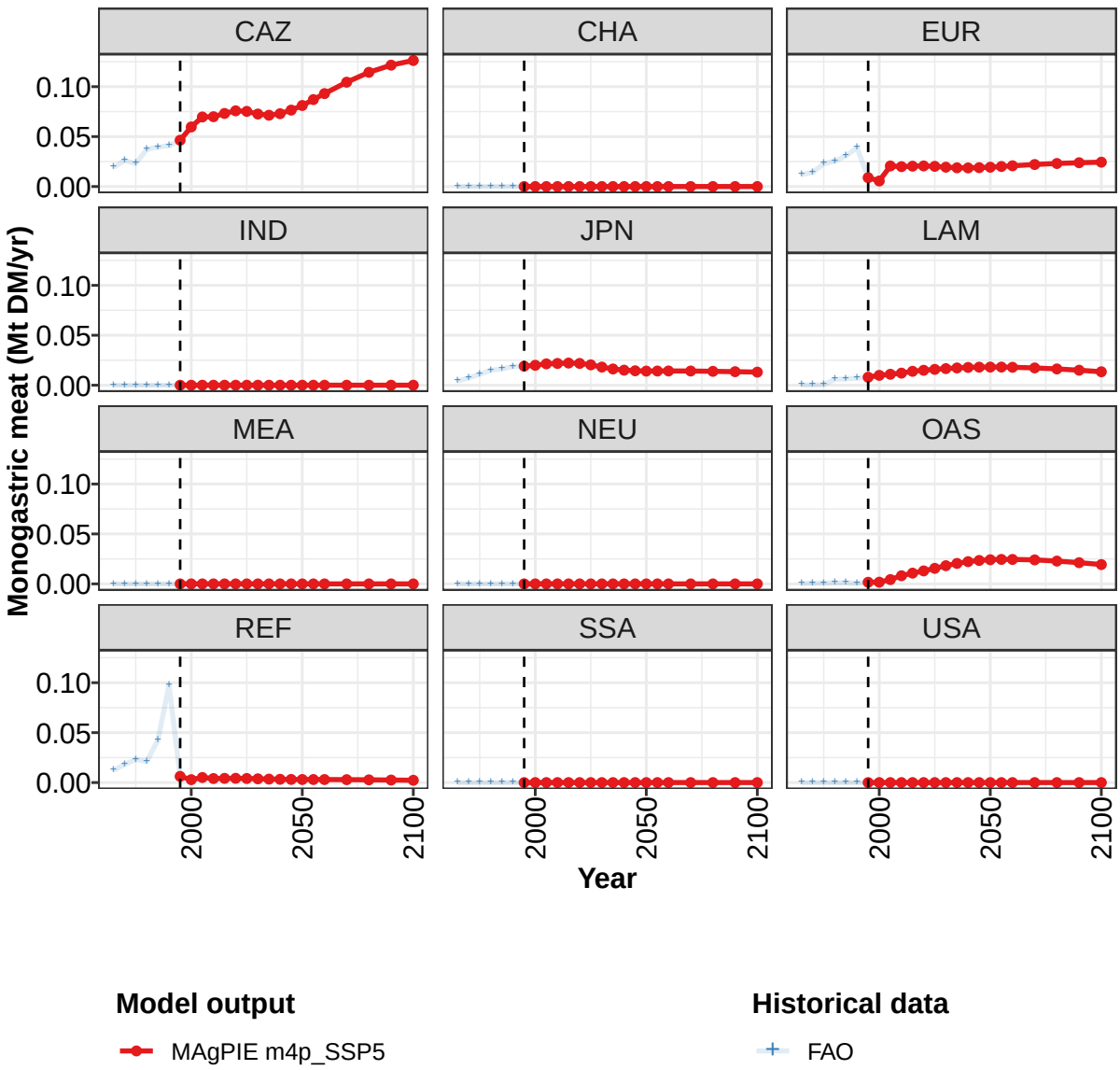
Table 74: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.18	0.21	0.27	0.33	0.39	0.48	0.62	0.77	0.88	1.04
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.03	0.03	0.04	0.05	0.09	0.14	0.28	0.37	0.41	0.46
EUR	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
IND	0.01	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.11
JPN	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
LAM	0.02	0.02	0.03	0.05	0.06	0.07	0.08	0.11	0.12	0.16
MEA	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.05
NEU	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
OAS	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.11
REF	0.03	0.04	0.05	0.06	0.05	0.05	0.00	0.00	0.01	0.01
SSA	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.05
USA	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

Table 75: FAO — Demand—Agricultural Supply Chain Loss—Livestock products—Eggs (Mt DM/yr)

3.2.3 Monogastric meat





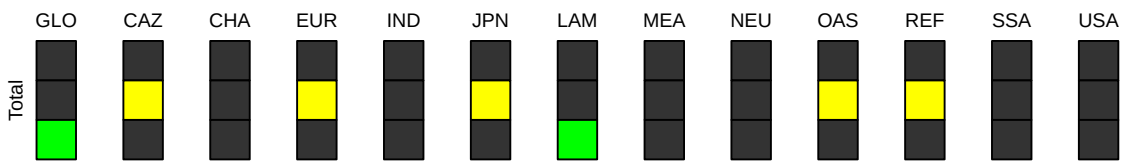


Figure 25: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.090	0.100	0.132	0.136	0.145	0.150	0.151	0.149	0.148	0.150	0.155
CAZ	0.046	0.060	0.070	0.070	0.073	0.076	0.075	0.073	0.071	0.073	0.077
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.009	0.006	0.021	0.020	0.020	0.021	0.020	0.019	0.019	0.019	0.019
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.019	0.020	0.021	0.022	0.022	0.022	0.020	0.018	0.016	0.015	0.014
LAM	0.008	0.010	0.011	0.012	0.014	0.015	0.016	0.017	0.017	0.018	0.018
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.002	0.002	0.004	0.008	0.011	0.013	0.016	0.018	0.021	0.022	0.023
REF	0.006	0.003	0.005	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 76: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

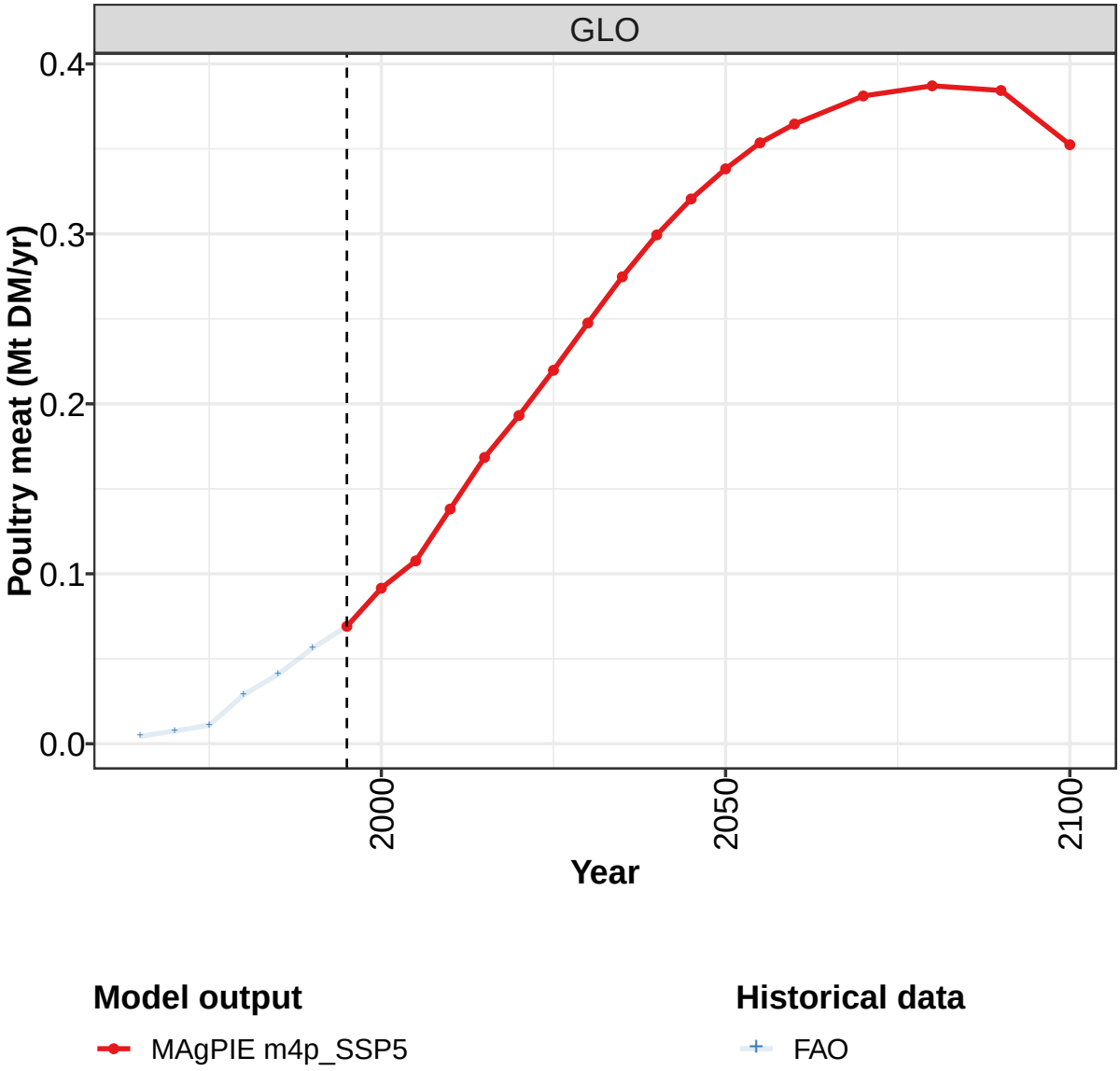
	2050	2055	2060	2070	2080	2090	2100
GLO	0.160	0.167	0.174	0.185	0.193	0.198	0.199
CAZ	0.081	0.087	0.093	0.104	0.114	0.122	0.126
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.019	0.020	0.021	0.022	0.023	0.024	0.024
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.014	0.014	0.014	0.014	0.014	0.014	0.013
LAM	0.018	0.018	0.018	0.017	0.016	0.015	0.013
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.024	0.025	0.024	0.024	0.023	0.021	0.019
REF	0.003	0.003	0.003	0.003	0.003	0.003	0.002
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

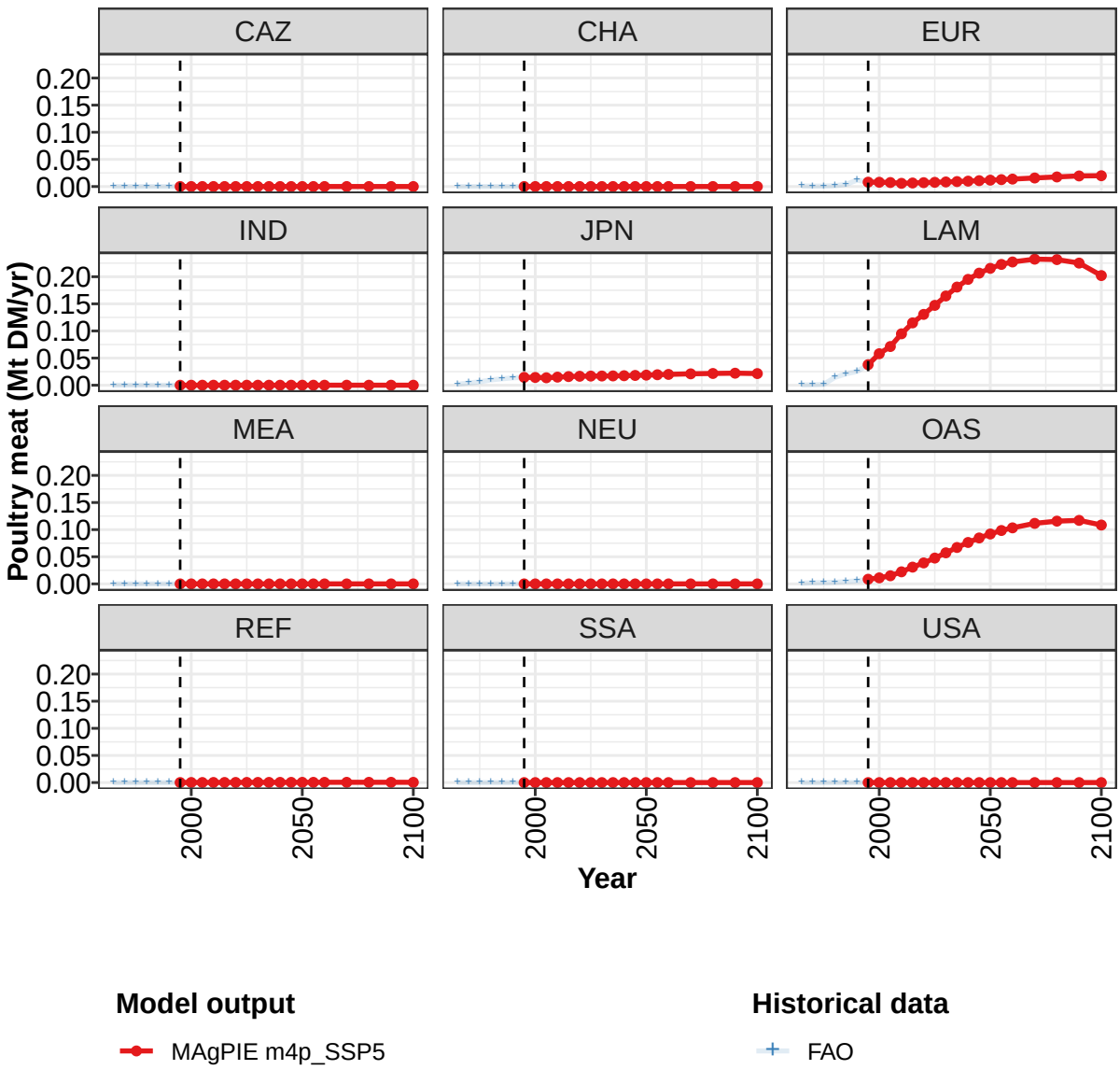
Table 77: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Monogastric meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.048	0.067	0.081	0.106	0.137	0.203	0.090	0.100	0.132	0.135
CAZ	0.019	0.026	0.023	0.037	0.040	0.041	0.046	0.060	0.070	0.070
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.012	0.014	0.023	0.025	0.031	0.039	0.009	0.005	0.021	0.020
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.004	0.007	0.011	0.015	0.016	0.019	0.019	0.020	0.021	0.022
LAM	0.000	0.000	0.001	0.006	0.006	0.007	0.008	0.010	0.011	0.012
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.004	0.008
REF	0.012	0.018	0.023	0.021	0.043	0.097	0.006	0.003	0.005	0.004
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 78: FAO — Demand—Agricultural Supply Chain Loss—Livestock products—Monogastric meat (Mt DM/yr)

3.2.4 Poultry meat





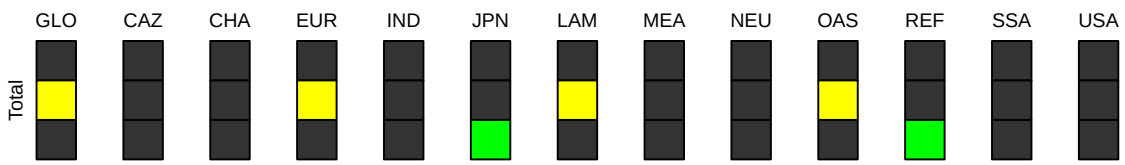


Figure 26: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.069	0.092	0.108	0.138	0.168	0.193	0.220	0.248	0.275	0.299	0.321
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.008	0.008	0.007	0.006	0.007	0.007	0.008	0.008	0.009	0.010	0.011
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.014	0.014	0.014	0.015	0.016	0.016	0.017	0.017	0.017	0.018	0.018
LAM	0.038	0.058	0.071	0.095	0.115	0.131	0.147	0.165	0.181	0.195	0.207
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.009	0.011	0.015	0.022	0.031	0.039	0.048	0.057	0.067	0.076	0.085
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 79: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

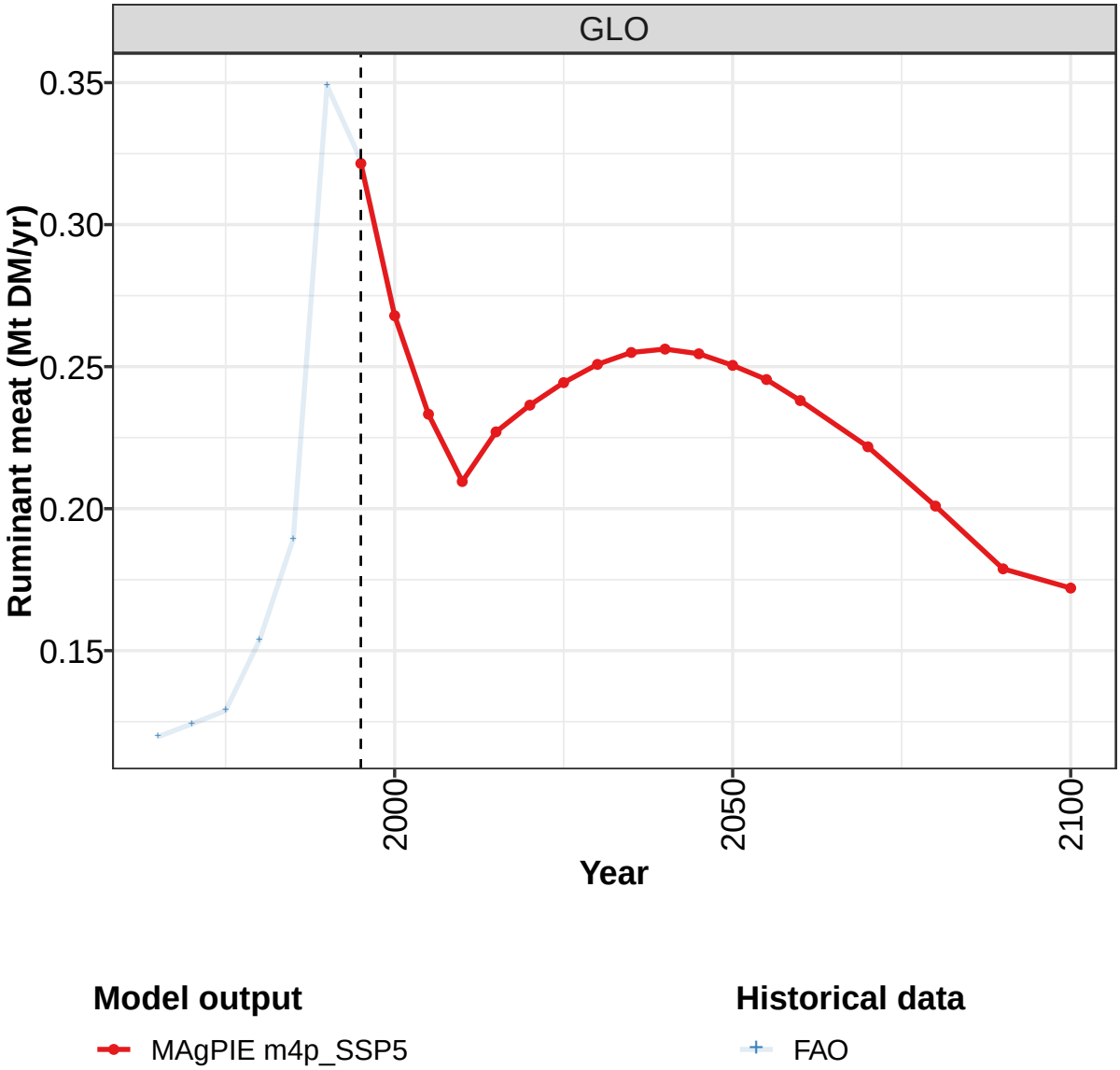
	2050	2055	2060	2070	2080	2090	2100
GLO	0.338	0.354	0.365	0.381	0.387	0.384	0.352
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.012	0.013	0.014	0.016	0.018	0.020	0.020
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.019	0.019	0.020	0.021	0.022	0.022	0.021
LAM	0.216	0.223	0.227	0.232	0.232	0.225	0.202
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.092	0.098	0.103	0.112	0.116	0.117	0.109
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

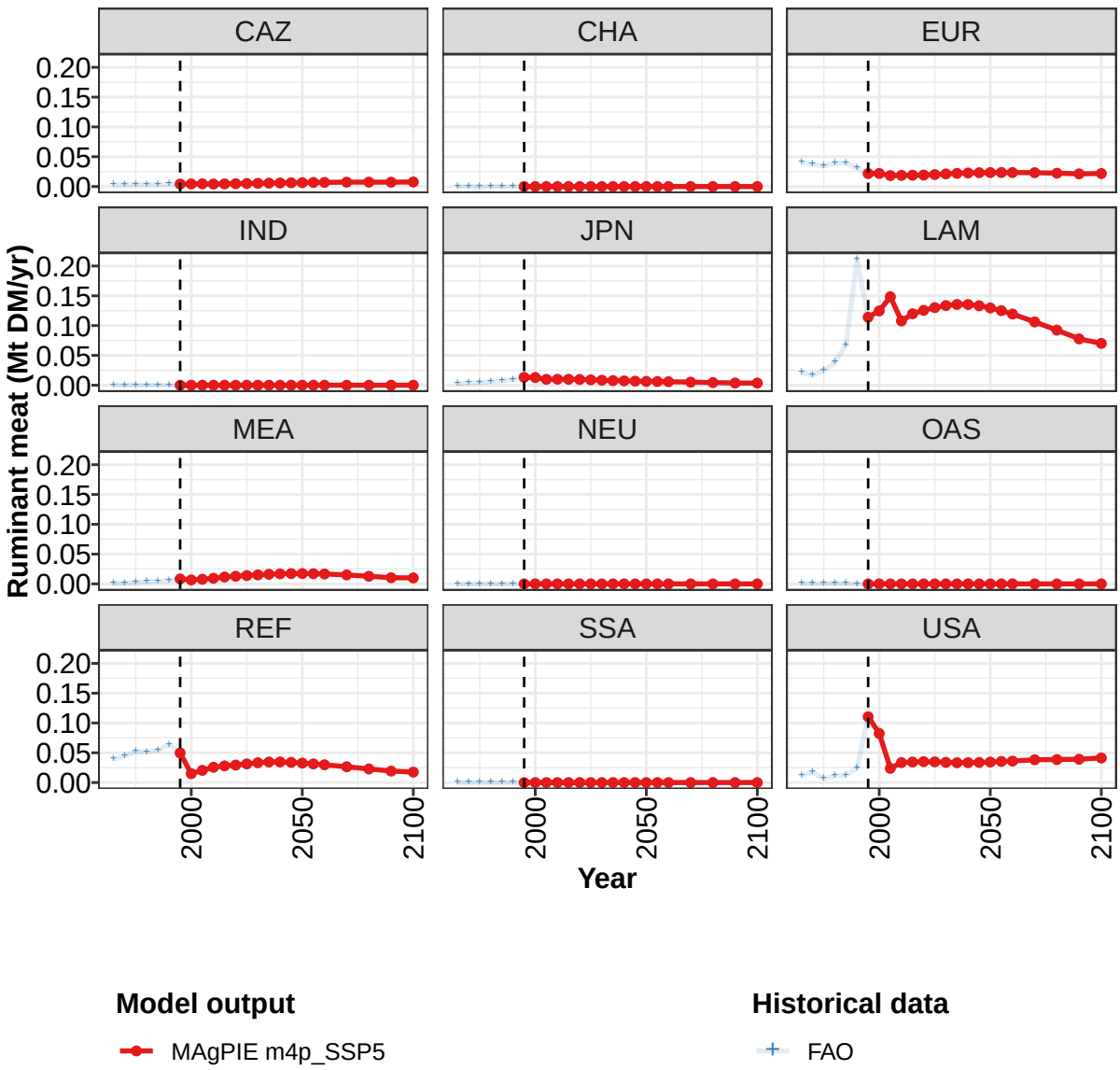
Table 80: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Poultry meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.004	0.007	0.011	0.029	0.041	0.056	0.069	0.091	0.108	0.138
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.001	0.001	0.001	0.002	0.004	0.012	0.008	0.008	0.007	0.006
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.002	0.004	0.006	0.010	0.012	0.014	0.015	0.014	0.014	0.015
LAM	0.001	0.001	0.002	0.014	0.021	0.025	0.038	0.058	0.071	0.095
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.001	0.002	0.003	0.003	0.004	0.005	0.009	0.011	0.015	0.022
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 81: FAO — Demand—Agricultural Supply Chain Loss—Livestock products—Poultry meat (Mt DM/yr)

3.2.5 Ruminant meat





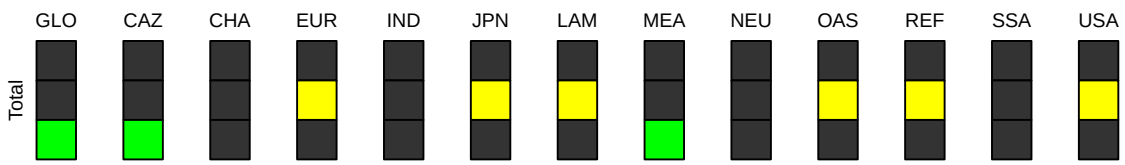


Figure 27: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.322	0.268	0.233	0.210	0.227	0.236	0.244	0.251	0.255	0.256	0.255
CAZ	0.004	0.004	0.005	0.004	0.004	0.005	0.005	0.005	0.006	0.006	0.006
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.022	0.022	0.018	0.019	0.019	0.019	0.020	0.021	0.022	0.023	0.023
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.013	0.013	0.010	0.010	0.010	0.010	0.009	0.008	0.008	0.007	0.007
LAM	0.114	0.125	0.148	0.108	0.120	0.126	0.130	0.134	0.136	0.135	0.133
MEA	0.008	0.007	0.008	0.009	0.012	0.013	0.014	0.015	0.016	0.017	0.017
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.050	0.015	0.021	0.026	0.028	0.029	0.031	0.033	0.034	0.035	0.034
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.110	0.082	0.024	0.034	0.034	0.035	0.035	0.034	0.033	0.033	0.034

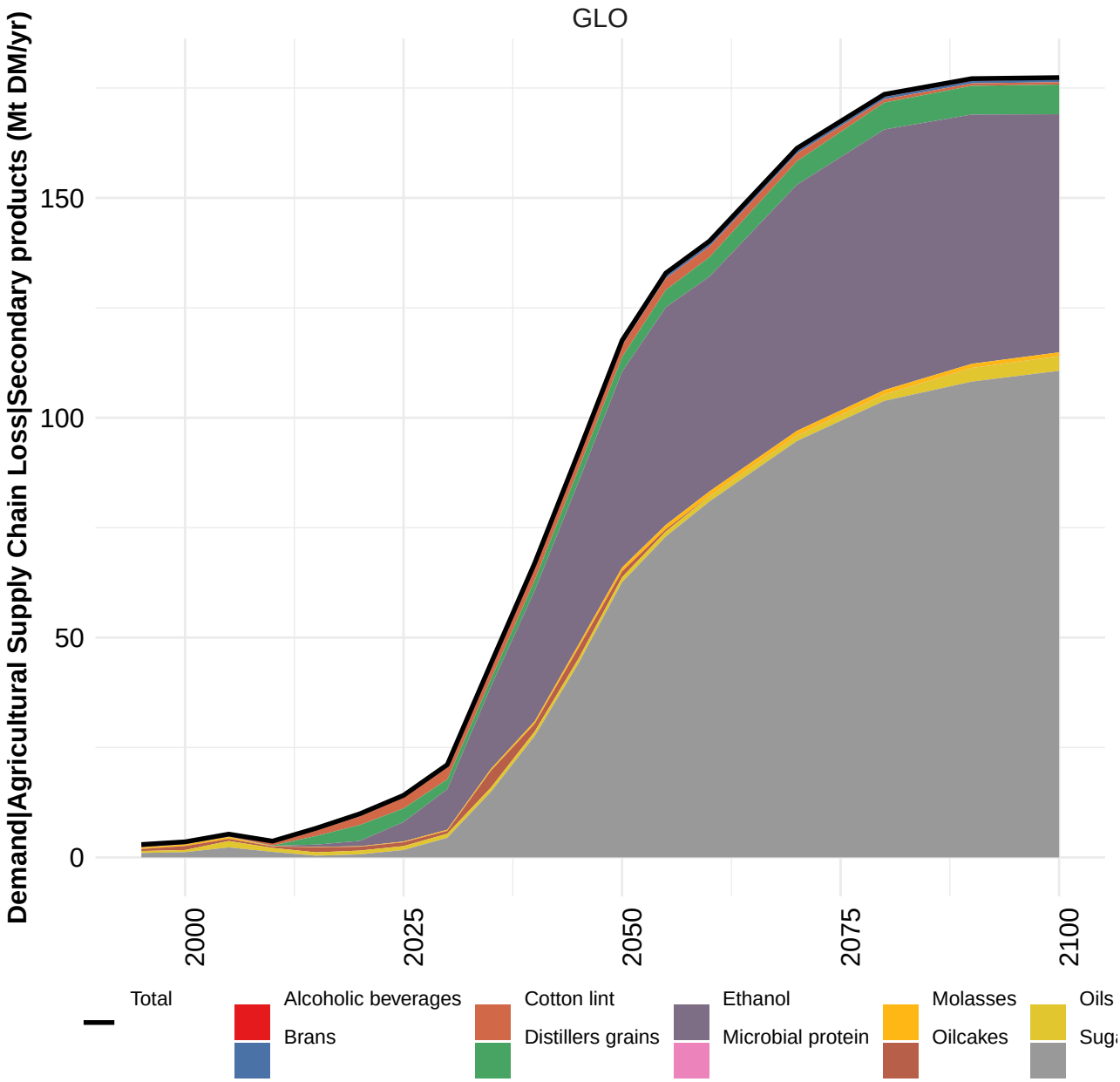
Table 82: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

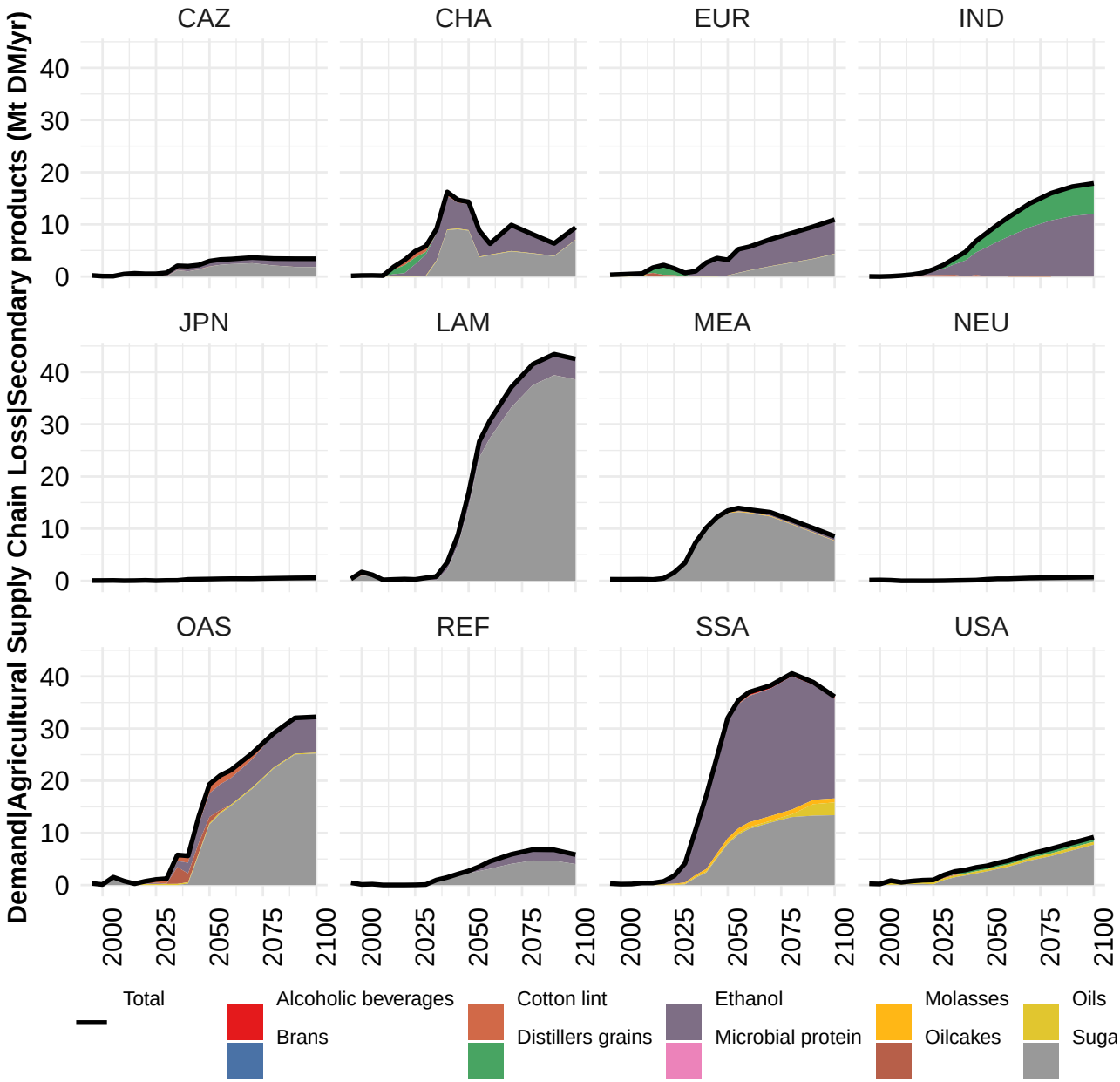
	2050	2055	2060	2070	2080	2090	2100
GLO	0.250	0.245	0.238	0.222	0.201	0.179	0.172
CAZ	0.007	0.007	0.007	0.007	0.007	0.007	0.008
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.023	0.024	0.023	0.023	0.022	0.021	0.022
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.006	0.006	0.006	0.005	0.004	0.004	0.004
LAM	0.130	0.125	0.119	0.106	0.092	0.078	0.070
MEA	0.017	0.017	0.017	0.015	0.013	0.010	0.010
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.033	0.031	0.030	0.026	0.023	0.019	0.018
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.034	0.035	0.036	0.038	0.039	0.039	0.041

Table 83: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

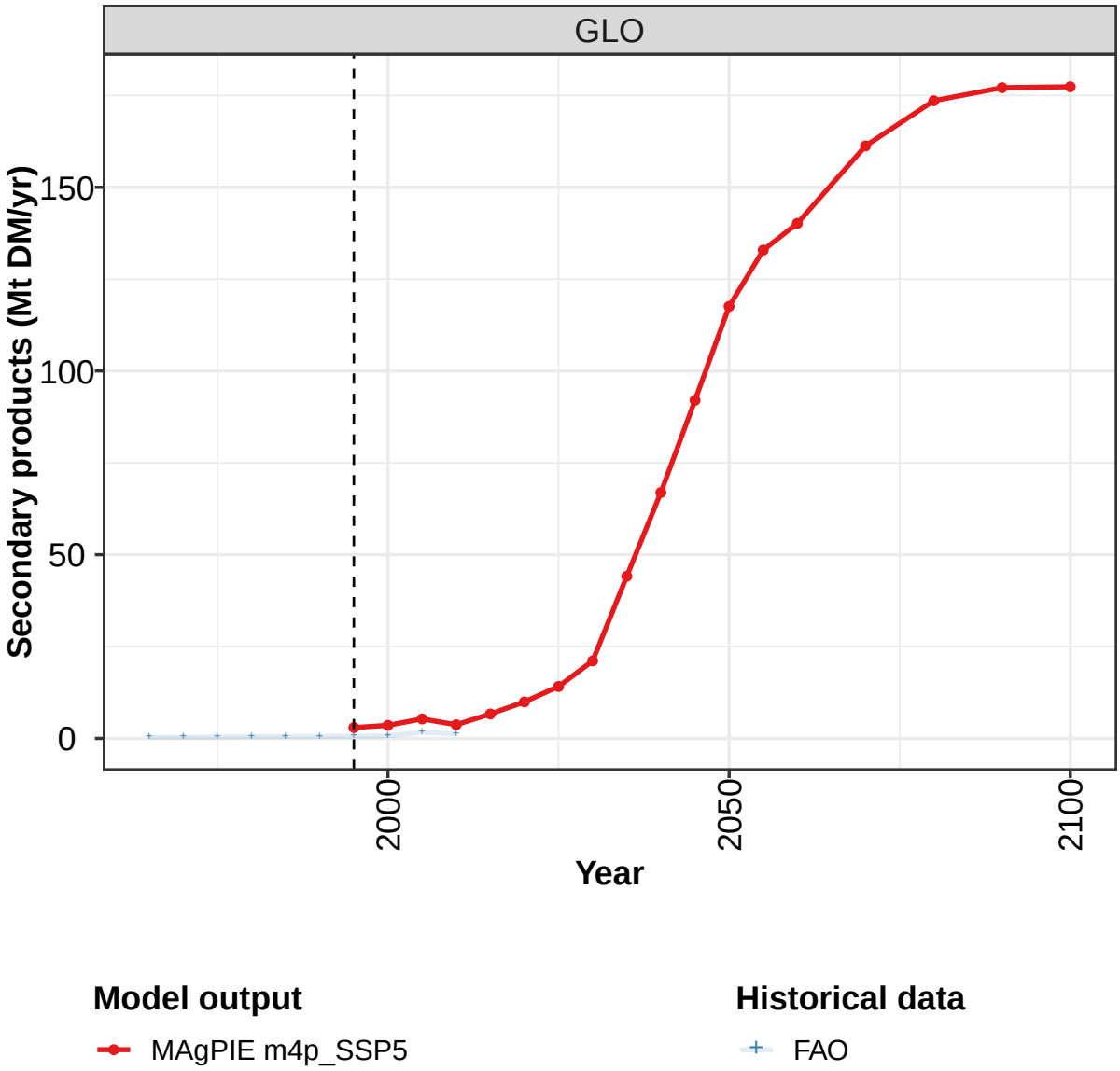
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.120	0.124	0.129	0.154	0.189	0.349	0.323	0.269	0.233	0.210
CAZ	0.003	0.003	0.004	0.004	0.003	0.004	0.004	0.004	0.005	0.004
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.040	0.037	0.035	0.039	0.039	0.031	0.022	0.022	0.018	0.019
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.002	0.004	0.005	0.006	0.007	0.010	0.013	0.013	0.010	0.010
LAM	0.021	0.017	0.024	0.038	0.068	0.211	0.115	0.125	0.148	0.108
MEA	0.001	0.001	0.003	0.003	0.005	0.005	0.008	0.007	0.008	0.009
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000
REF	0.039	0.044	0.052	0.051	0.055	0.064	0.050	0.015	0.021	0.026
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.012	0.017	0.006	0.011	0.012	0.024	0.111	0.083	0.024	0.034

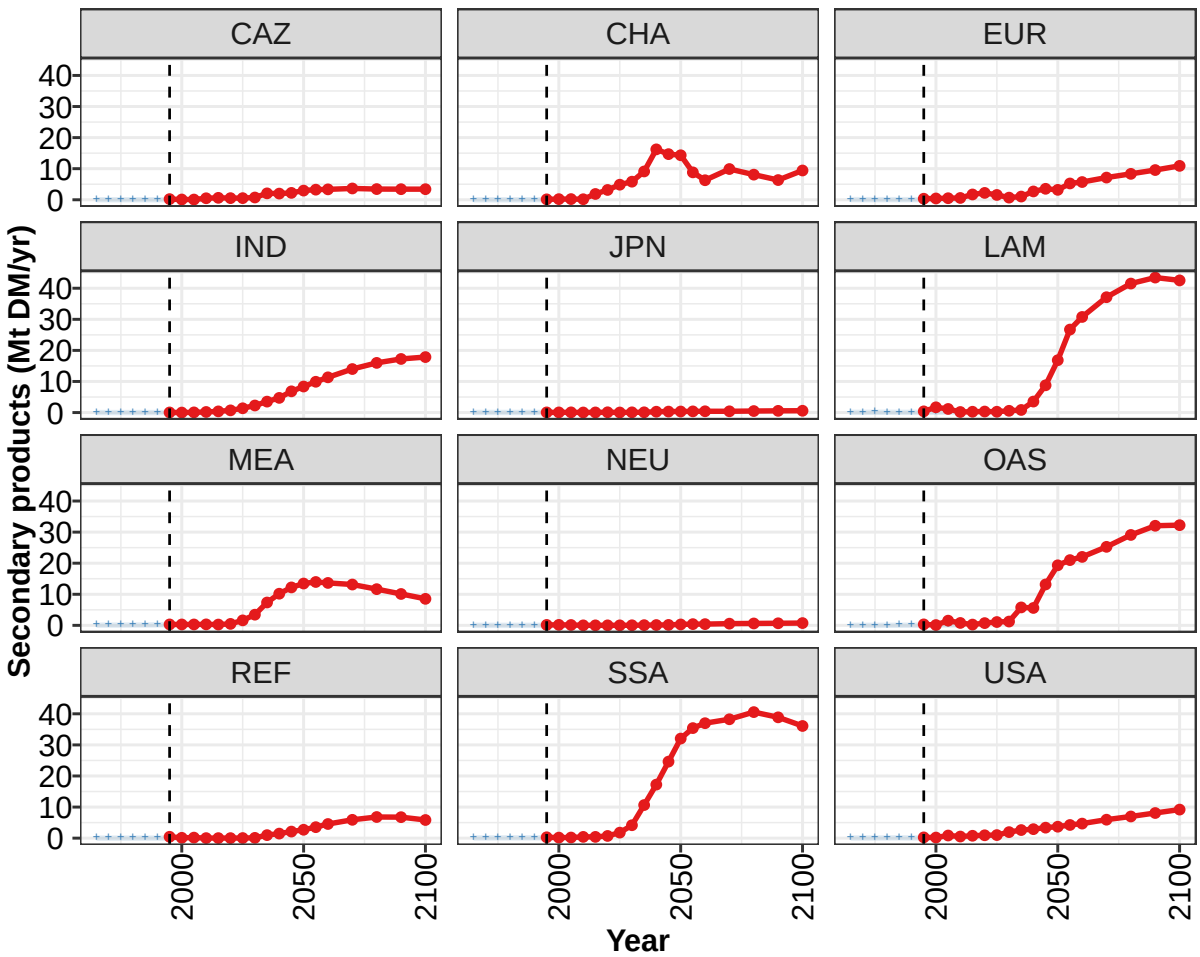
Table 84: FAO — Demand—Agricultural Supply Chain Loss—Livestock products—Ruminant meat (Mt DM/yr)


GLO
Demand|Agricultural Supply Chain Loss|Secondary products (Mt DM/yr)
150
100
50
0
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils


Demand|Agricultural Supply Chain Loss|Secondary products (Mt DM/yr)
CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
0
10
20
30
40
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Suga

3.3 Secondary products





Model output

MAgPIE m4p_SSP5

Historical data

FAO

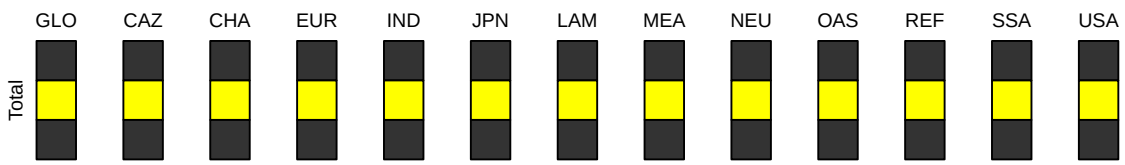


Figure 28: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3	4	5	4	7	10	14	21	44	67	92
CAZ	0	0	0	0	1	1	1	1	2	2	2
CHA	0	0	0	0	2	3	5	6	9	16	15
EUR	0	0	1	1	2	2	2	1	1	3	4
IND	0	0	0	0	0	1	1	2	4	5	7
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	2	1	0	0	0	0	1	1	4	9
MEA	0	0	0	0	0	0	2	3	7	10	12
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	2	1	0	1	1	1	6	6	13
REF	0	0	0	0	0	0	0	0	1	1	2
SSA	0	0	0	0	0	1	2	4	11	17	25
USA	0	0	1	1	1	1	1	2	3	3	3

Table 85: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products (Mt DM/yr) [PART 1/2]

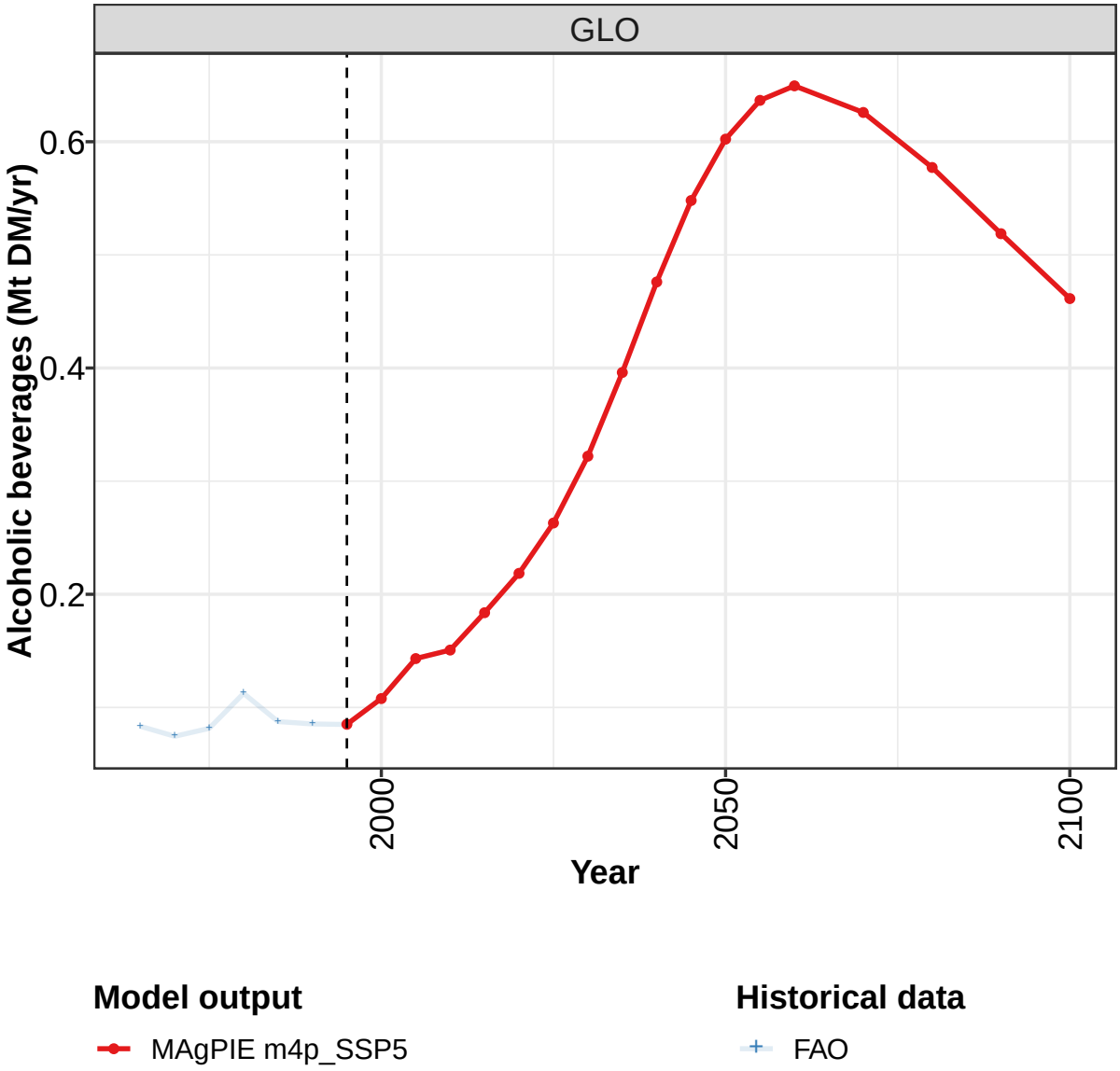
	2050	2055	2060	2070	2080	2090	2100
GLO	118	133	140	161	174	177	177
CAZ	3	3	3	4	3	3	3
CHA	14	9	6	10	8	6	9
EUR	3	5	6	7	8	10	11
IND	8	10	11	14	16	17	18
JPN	0	0	0	0	0	1	1
LAM	17	27	31	37	42	43	43
MEA	13	14	14	13	12	10	9
NEU	0	0	0	1	1	1	1
OAS	19	21	22	25	29	32	32
REF	3	4	5	6	7	7	6
SSA	32	35	37	38	41	39	36
USA	4	4	5	6	7	8	9

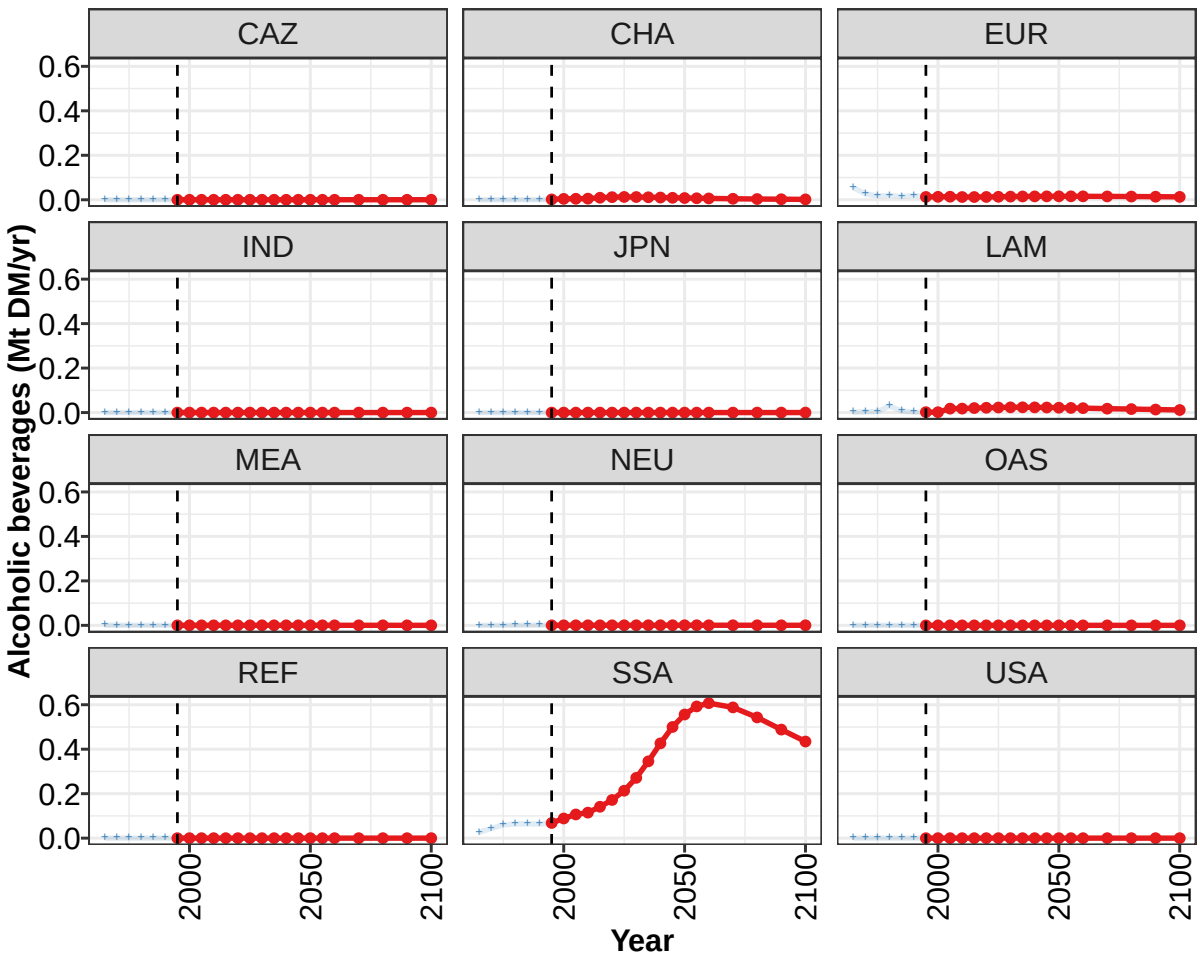
Table 86: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.31	0.35	0.38	0.48	0.50	0.53	0.63	0.71	1.63	1.28
CAZ	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.04
CHA	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.04	0.10	0.12
EUR	0.07	0.04	0.03	0.05	0.04	0.05	0.03	0.03	0.04	0.03
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.06	0.07	0.09	0.09	0.07	0.06	0.07	0.09	0.11	0.14
MEA	0.05	0.06	0.08	0.10	0.11	0.16	0.20	0.22	0.21	0.22
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.10	0.13
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01
SSA	0.06	0.07	0.08	0.10	0.10	0.10	0.11	0.13	0.19	0.23
USA	0.04	0.05	0.03	0.07	0.11	0.05	0.06	0.06	0.81	0.34

Table 87: FAO — Demand—Agricultural Supply Chain Loss—Secondary products (Mt DM/yr)

3.3.1 Alcoholic beverages





Model output

MAgPIE m4p_SSP5

Historical data

FAO

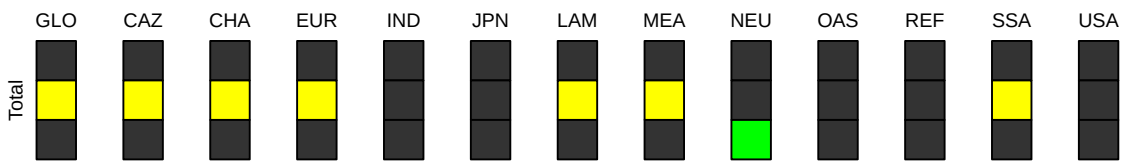


Figure 29: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.085	0.108	0.143	0.151	0.184	0.219	0.263	0.322	0.396	0.476	0.548
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.002	0.004	0.005	0.005	0.009	0.012	0.013	0.012	0.011	0.010	0.009
EUR	0.013	0.013	0.014	0.012	0.012	0.013	0.013	0.014	0.015	0.015	0.015
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.002	0.002	0.018	0.018	0.020	0.022	0.023	0.023	0.024	0.023	0.023
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.068	0.088	0.107	0.115	0.141	0.172	0.213	0.271	0.345	0.426	0.500
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 88: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

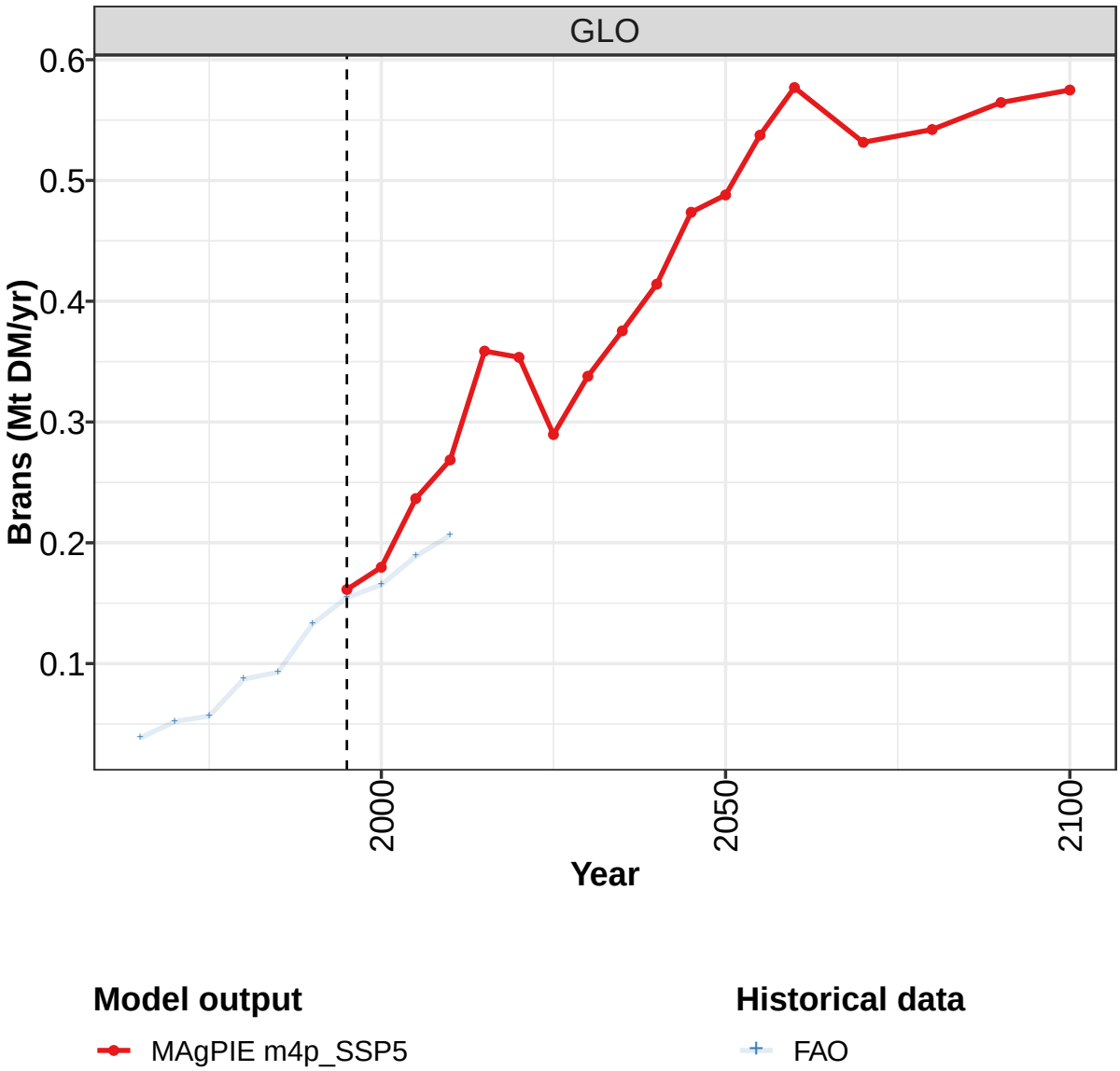
	2050	2055	2060	2070	2080	2090	2100
GLO	0.602	0.637	0.649	0.626	0.577	0.519	0.461
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.008	0.007	0.006	0.005	0.003	0.002	0.002
EUR	0.016	0.016	0.015	0.015	0.015	0.014	0.013
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.022	0.021	0.020	0.017	0.016	0.014	0.012
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.001	0.001	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.556	0.592	0.607	0.588	0.543	0.488	0.435
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 89: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.083	0.074	0.082	0.112	0.087	0.085	0.085	0.108	0.143	0.150
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.004	0.005	0.005
EUR	0.054	0.027	0.017	0.019	0.015	0.019	0.013	0.014	0.014	0.013
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.002	0.003	0.004	0.029	0.007	0.001	0.002	0.002	0.018	0.018
MEA	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.026	0.044	0.060	0.064	0.065	0.063	0.068	0.088	0.107	0.115
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 90: FAO — Demand—Agricultural Supply Chain Loss—Secondary products—Alcoholic beverages (Mt DM/yr)

3.3.2 Brans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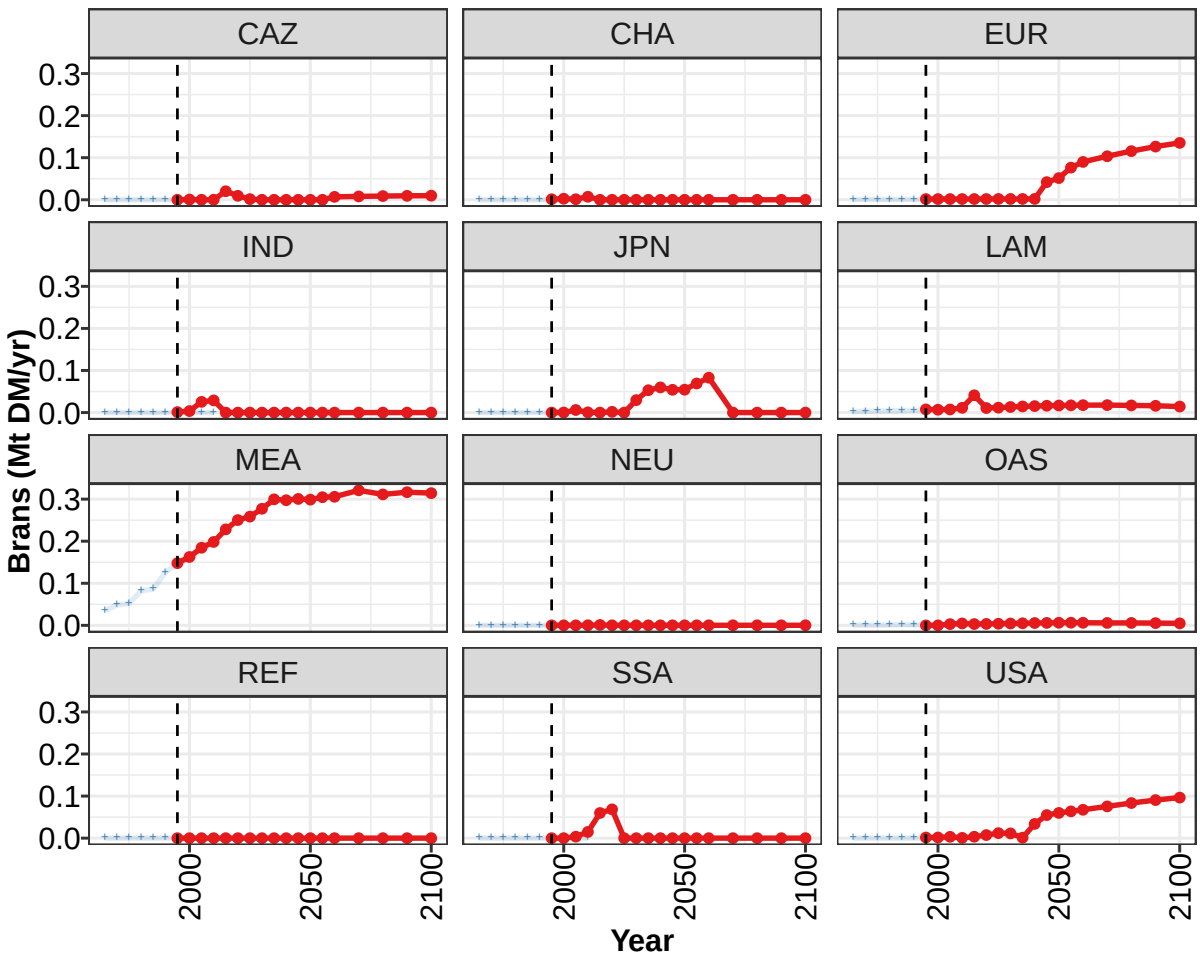
0.4
0.3
0.2
0.1
Brans (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

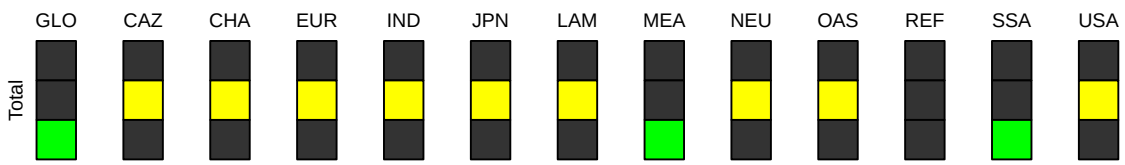


Figure 30: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.161	0.180	0.237	0.269	0.359	0.354	0.290	0.338	0.375	0.414	0.474
CAZ	0.000	0.001	0.000	0.000	0.020	0.009	0.002	0.000	0.000	0.000	0.000
CHA	0.001	0.003	0.001	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.042
IND	0.001	0.004	0.026	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.006	0.001	0.000	0.002	0.000	0.030	0.053	0.060	0.054
LAM	0.008	0.007	0.007	0.011	0.041	0.011	0.012	0.013	0.015	0.015	0.016
MEA	0.148	0.163	0.185	0.198	0.228	0.250	0.258	0.277	0.300	0.297	0.301
NEU	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.003	0.005	0.003	0.003	0.004	0.004	0.005	0.006	0.006
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.004	0.015	0.060	0.068	0.000	0.000	0.000	0.000	0.000
USA	0.002	0.002	0.003	0.001	0.003	0.007	0.012	0.011	0.001	0.034	0.055

Table 91: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Brans (Mt DM/yr) [PART 1/2]

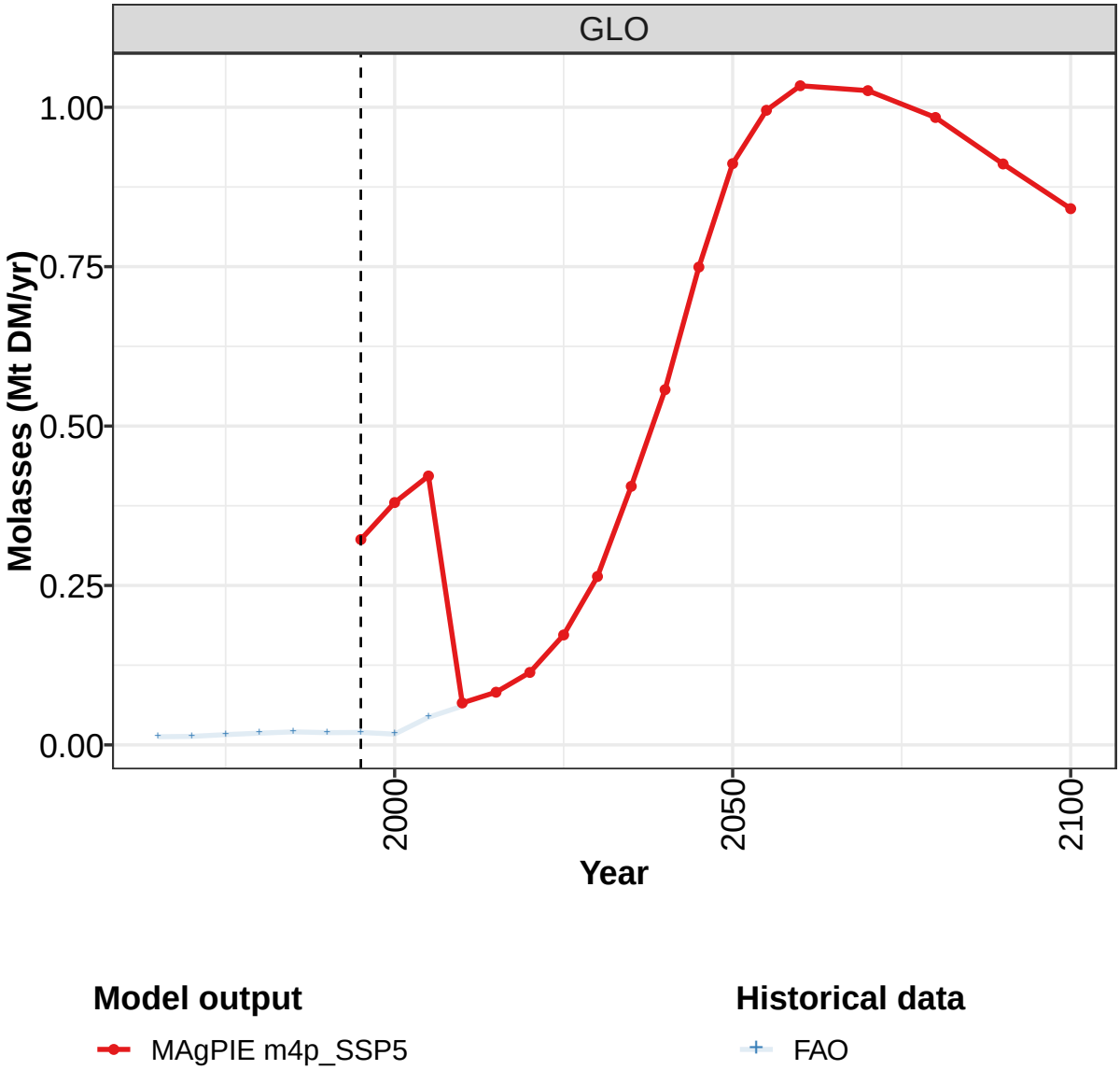
	2050	2055	2060	2070	2080	2090	2100
GLO	0.488	0.538	0.577	0.532	0.542	0.565	0.575
CAZ	0.000	0.000	0.007	0.008	0.009	0.009	0.010
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.052	0.076	0.090	0.103	0.116	0.126	0.135
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.054	0.069	0.083	0.000	0.000	0.000	0.000
LAM	0.017	0.017	0.018	0.018	0.017	0.016	0.014
MEA	0.299	0.305	0.306	0.321	0.311	0.317	0.314
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.006	0.006	0.006	0.006	0.006	0.005	0.005
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.060	0.064	0.067	0.075	0.083	0.090	0.096

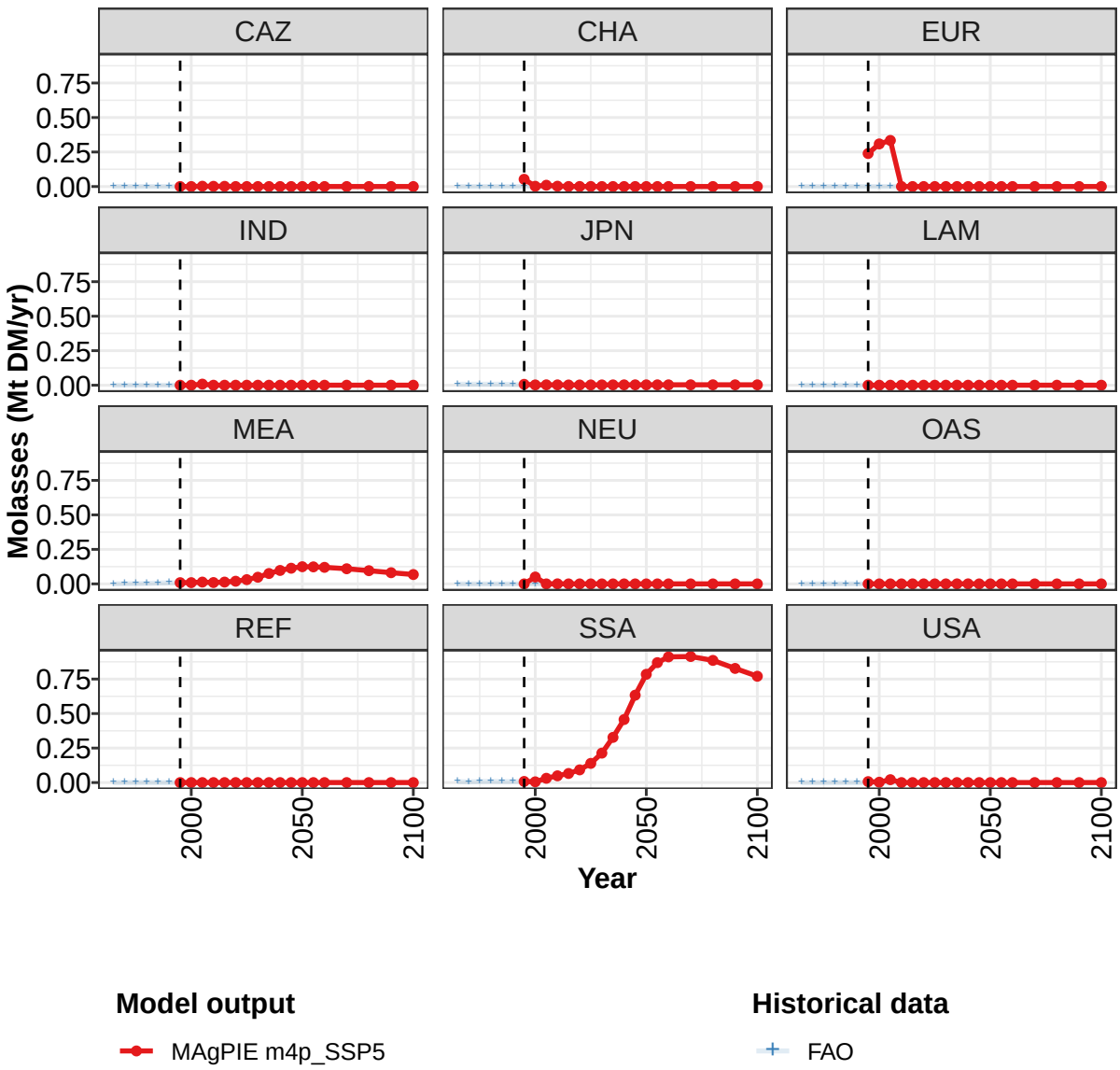
Table 92: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.038	0.052	0.057	0.087	0.093	0.133	0.155	0.165	0.189	0.206
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.002	0.003	0.004	0.004	0.004	0.005	0.006	0.007	0.007	0.009
MEA	0.035	0.048	0.052	0.082	0.086	0.126	0.147	0.157	0.178	0.194
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.001	0.000	0.001	0.001	0.002	0.001	0.001	0.001	0.002	0.003
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 93: FAO — Demand—Agricultural Supply Chain Loss—Secondary products—Brans (Mt DM/yr)

3.3.3 Molasses





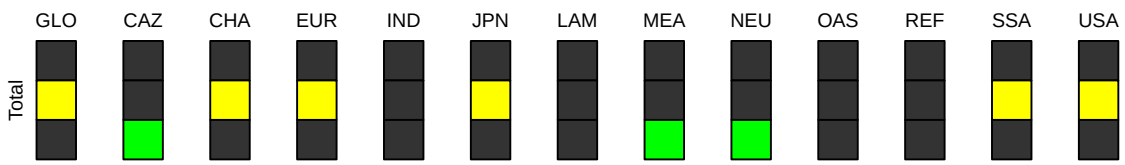


Figure 31: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.32	0.38	0.42	0.07	0.08	0.11	0.17	0.26	0.41	0.56	0.75
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.24	0.31	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.05	0.08	0.10	0.11
NEU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.01	0.01	0.03	0.05	0.07	0.09	0.14	0.21	0.33	0.46	0.63
USA	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 94: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

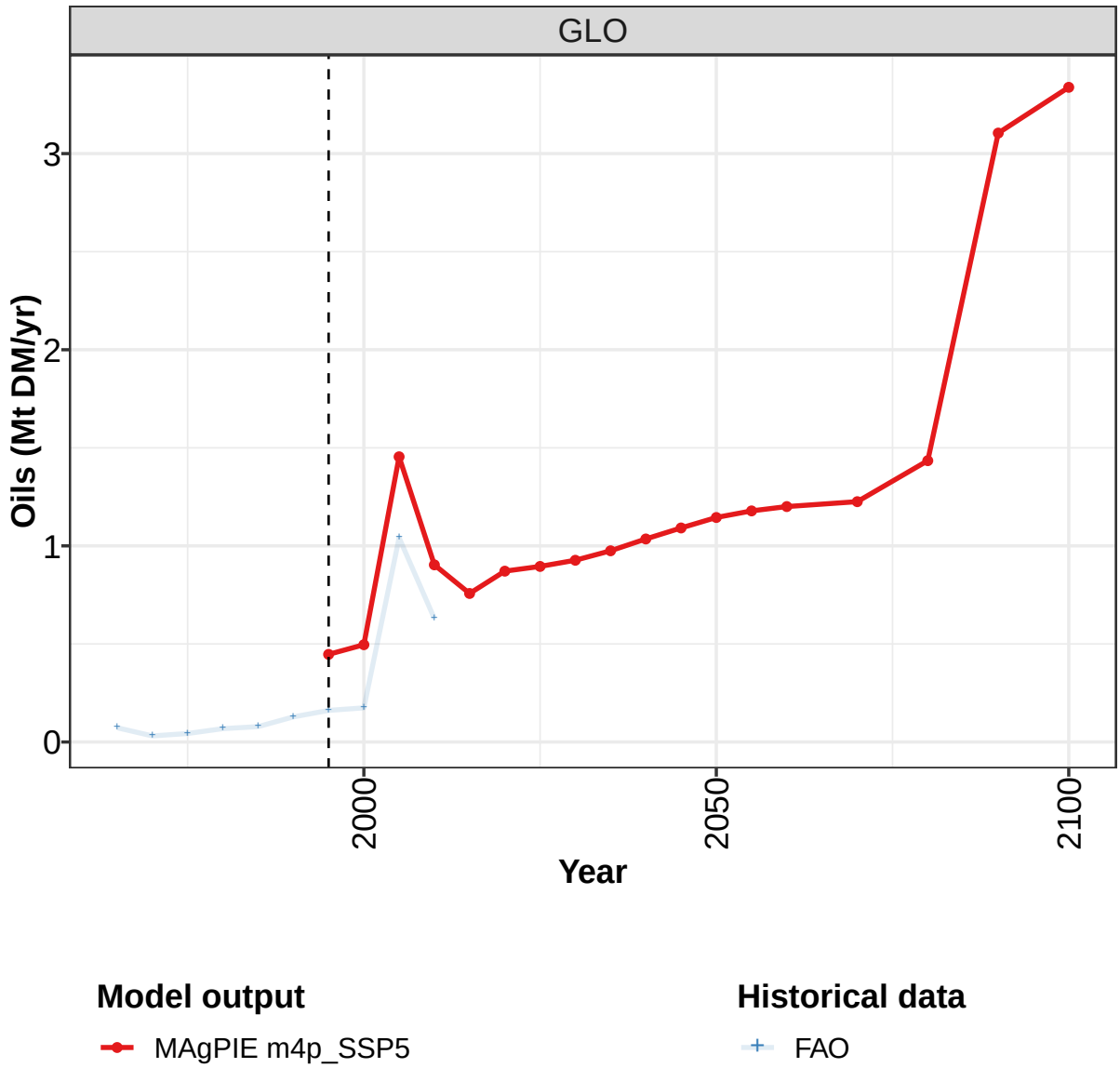
	2050	2055	2060	2070	2080	2090	2100
GLO	0.91	1.00	1.03	1.03	0.98	0.91	0.84
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.12	0.12	0.12	0.11	0.10	0.08	0.07
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.78	0.87	0.91	0.91	0.89	0.83	0.77
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

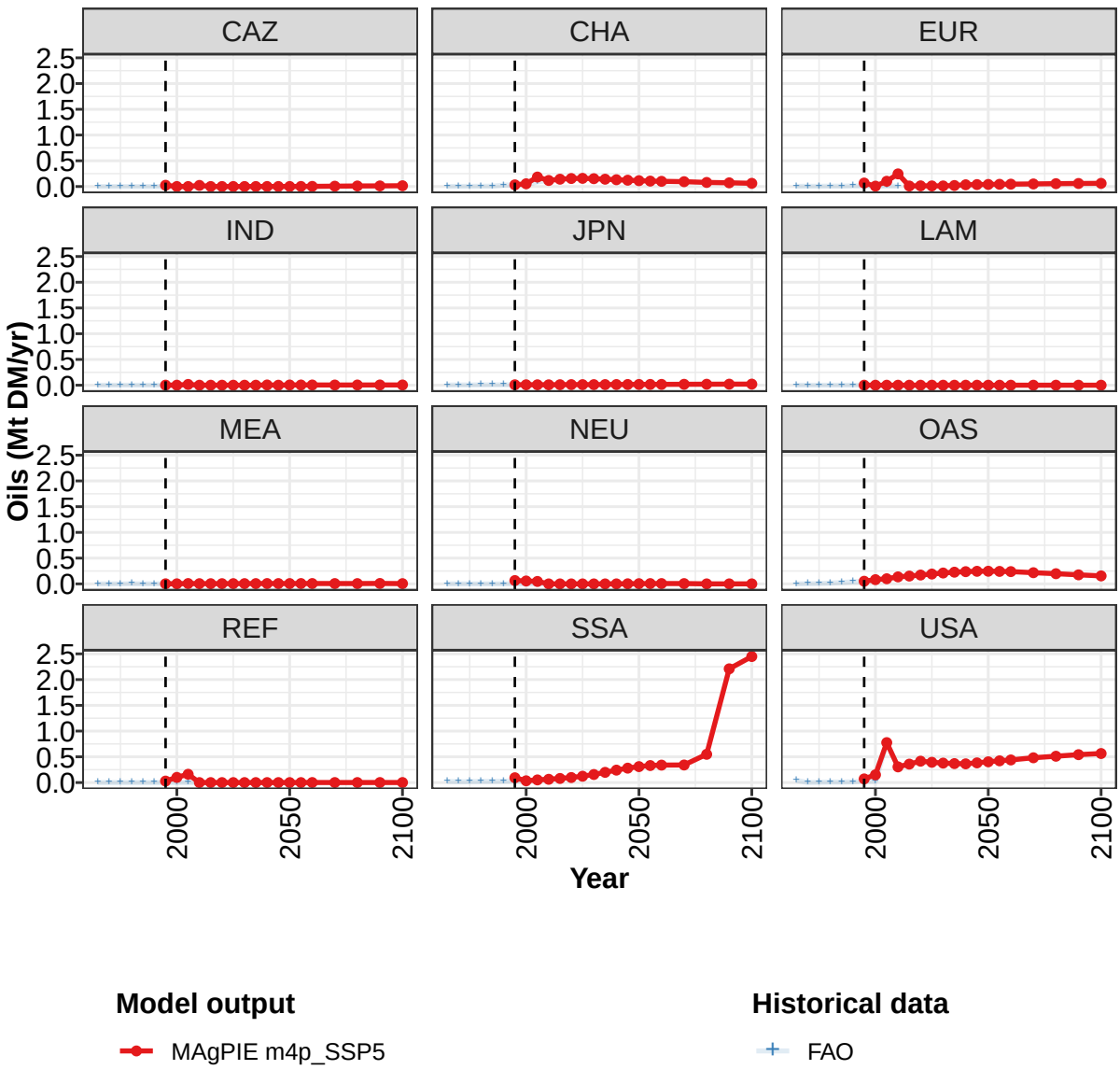
Table 95: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Molasses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0128	0.0133	0.0161	0.0184	0.0204	0.0192	0.0195	0.0169	0.0433	0.0608
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0063	0.0071	0.0073	0.0069	0.0069	0.0045	0.0037	0.0022	0.0020	0.0016
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0002	0.0010	0.0017	0.0028	0.0066	0.0075	0.0087	0.0094	0.0107	0.0098
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0062	0.0051	0.0072	0.0087	0.0069	0.0071	0.0071	0.0054	0.0306	0.0494
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 96: FAO — Demand—Agricultural Supply Chain Loss—Secondary products—Molasses (Mt DM/yr)

3.3.4 Oils


GLO
Oils (Mt DM/yr)
0
1
2
3
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



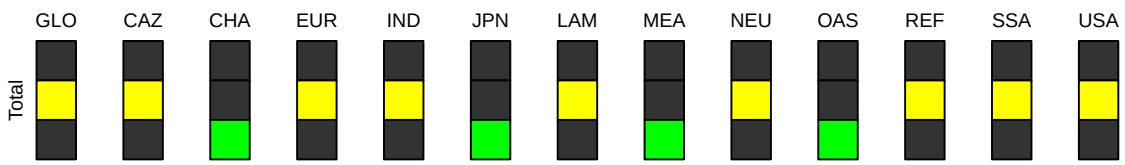


Figure 32: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.45	0.50	1.45	0.90	0.76	0.87	0.90	0.93	0.98	1.04	1.09
CAZ	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.03	0.05	0.18	0.12	0.14	0.16	0.16	0.15	0.14	0.13	0.12
EUR	0.07	0.01	0.10	0.25	0.01	0.01	0.01	0.01	0.02	0.03	0.04
IND	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
NEU	0.06	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.05	0.08	0.10	0.14	0.15	0.17	0.19	0.21	0.23	0.24	0.24
REF	0.03	0.10	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.09	0.03	0.05	0.06	0.08	0.10	0.12	0.16	0.20	0.24	0.28
USA	0.07	0.15	0.78	0.30	0.36	0.42	0.39	0.38	0.37	0.36	0.38

Table 97: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Oils (Mt DM/yr) [PART 1/2]

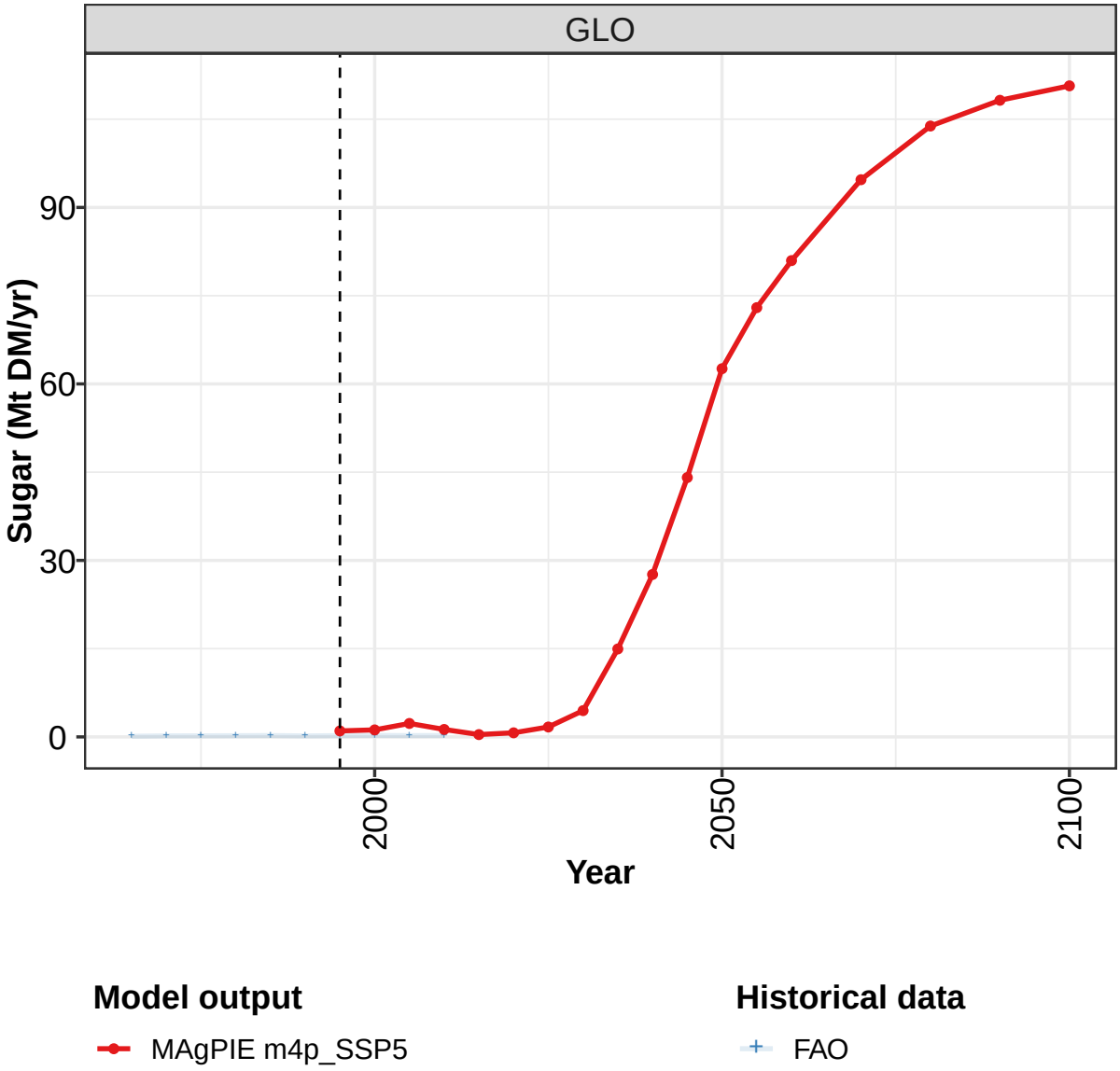
	2050	2055	2060	2070	2080	2090	2100
GLO	1.14	1.18	1.20	1.23	1.43	3.10	3.34
CAZ	0.00	0.00	0.00	0.01	0.01	0.01	0.02
CHA	0.11	0.11	0.10	0.09	0.08	0.07	0.06
EUR	0.04	0.04	0.05	0.05	0.06	0.06	0.06
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.01	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.00	0.01	0.01	0.01	0.00	0.00	0.00
OAS	0.25	0.24	0.24	0.22	0.20	0.18	0.16
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.31	0.33	0.34	0.34	0.55	2.21	2.45
USA	0.40	0.42	0.44	0.48	0.51	0.54	0.56

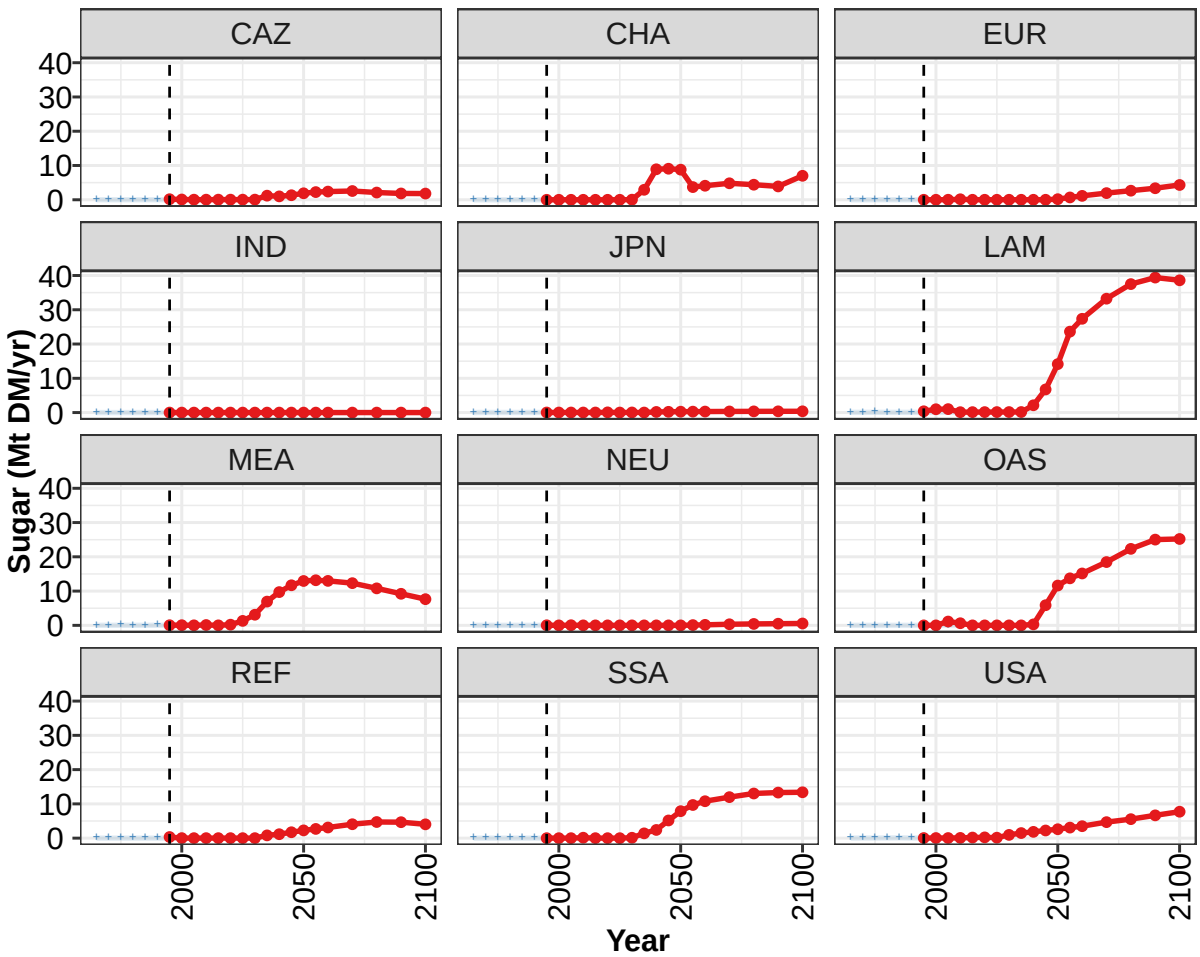
Table 98: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Oils (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.07	0.03	0.04	0.07	0.08	0.13	0.16	0.17	1.04	0.63
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.03	0.09	0.12
EUR	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.10	0.12
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.05	0.06
USA	0.04	0.00	0.01	0.01	0.01	0.01	0.03	0.02	0.77	0.30

Table 99: FAO — Demand—Agricultural Supply Chain Loss—Secondary products—Oils (Mt DM/yr)

3.3.5 Sugar


GLO
Sugar (Mt DM/yr)
0
30
60
90
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

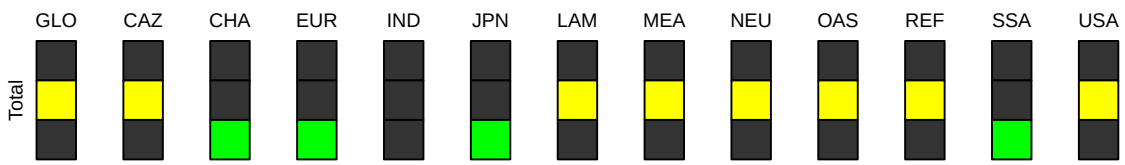


Figure 33: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1	1	2	1	0	1	2	4	15	28	44
CAZ	0	0	0	0	0	0	0	0	1	1	1
CHA	0	0	0	0	0	0	0	0	3	9	9
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	1	1	0	0	0	0	0	0	2	7
MEA	0	0	0	0	0	0	1	3	7	10	12
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	1	1	0	0	0	0	0	0	6
REF	0	0	0	0	0	0	0	0	1	1	2
SSA	0	0	0	0	0	0	0	0	1	2	5
USA	0	0	0	0	0	0	0	1	1	2	2

Table 100: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

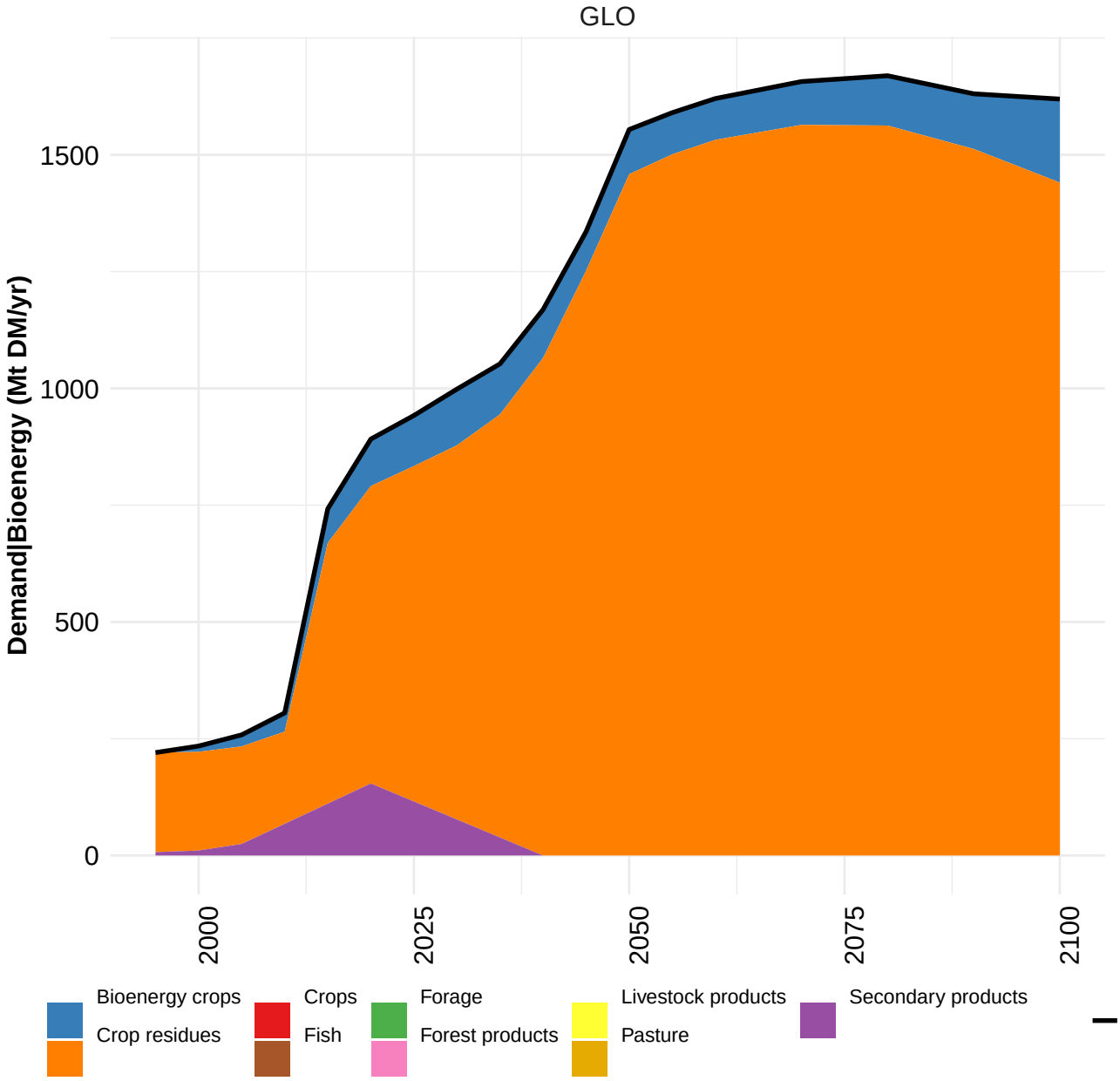
	2050	2055	2060	2070	2080	2090	2100
GLO	63	73	81	95	104	108	111
CAZ	2	2	2	3	2	2	2
CHA	9	4	4	5	4	4	7
EUR	0	1	1	2	3	3	4
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	14	24	27	33	37	39	39
MEA	13	13	13	12	11	9	8
NEU	0	0	0	0	0	0	1
OAS	12	14	15	18	22	25	25
REF	2	3	3	4	5	5	4
SSA	8	10	11	12	13	13	13
USA	3	3	3	5	6	7	8

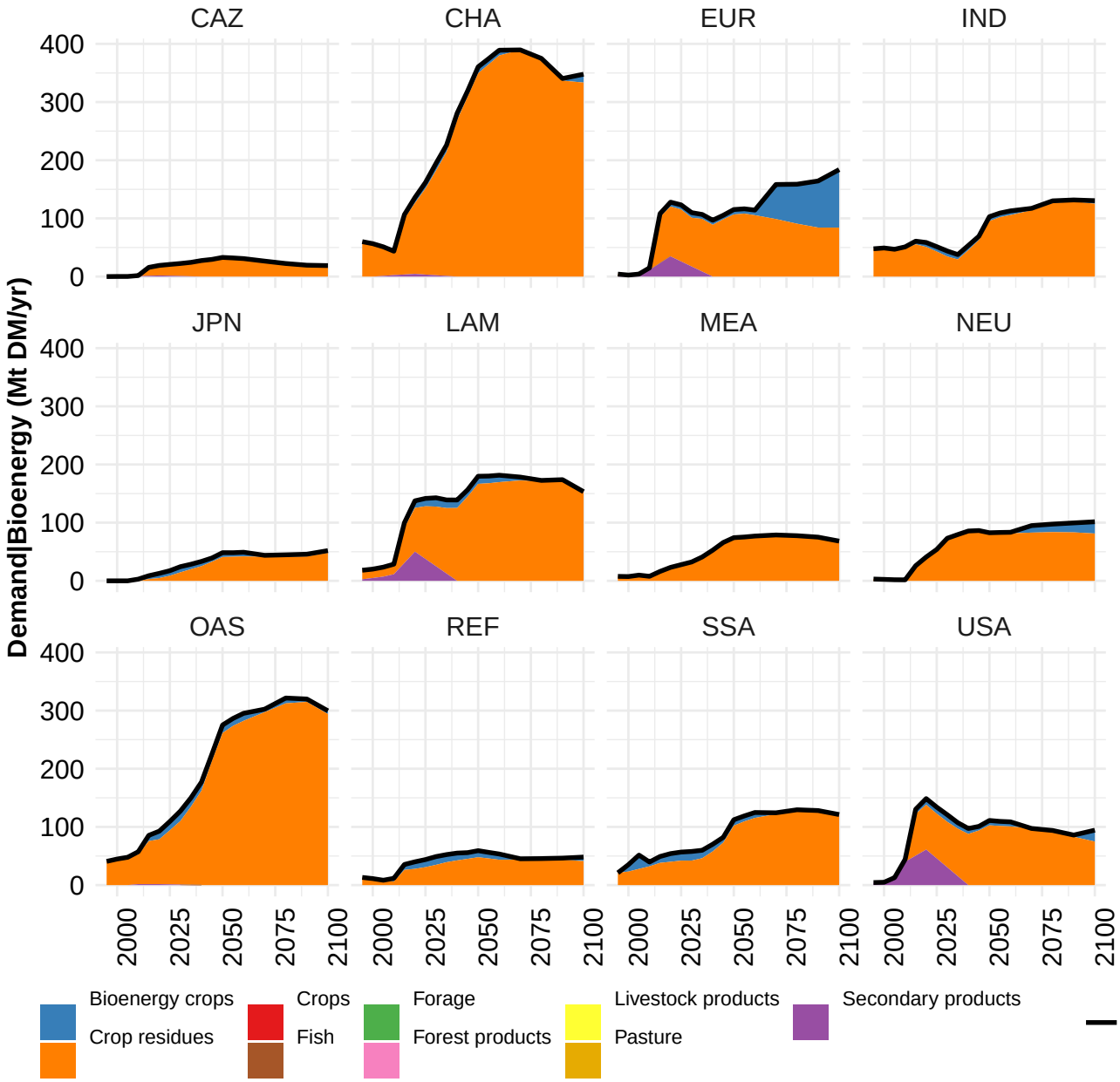
Table 101: MAgPIE m4p_SSP5 — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

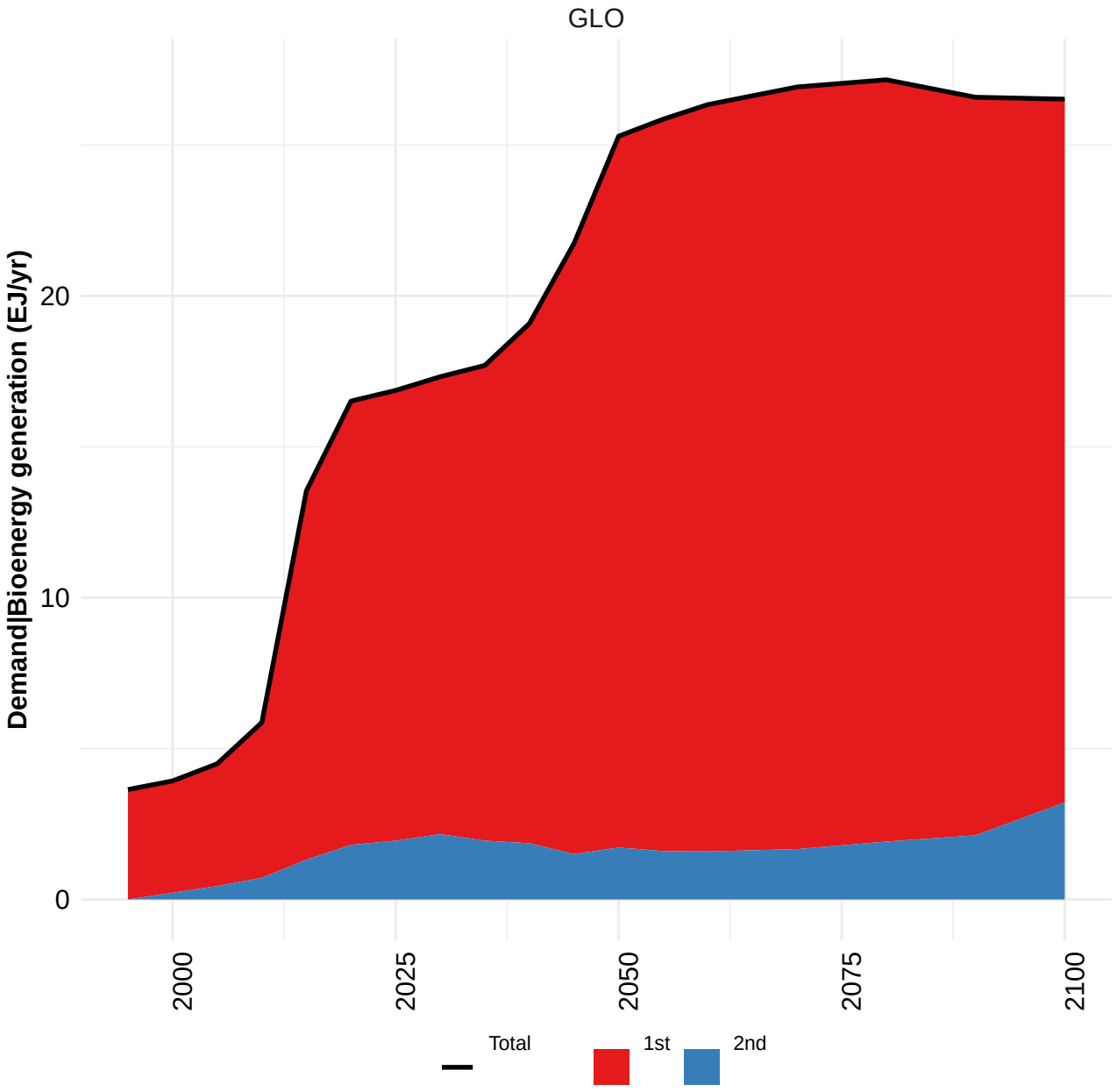
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.104	0.174	0.180	0.196	0.225	0.164	0.208	0.244	0.214	0.230
CAZ	0.014	0.021	0.016	0.021	0.017	0.017	0.020	0.033	0.035	0.038
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
EUR	0.007	0.008	0.011	0.022	0.018	0.014	0.008	0.009	0.010	0.007
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.014	0.022	0.021	0.020	0.020	0.020	0.018	0.019	0.019	0.018
LAM	0.057	0.060	0.083	0.054	0.056	0.055	0.064	0.085	0.089	0.110
MEA	0.011	0.014	0.021	0.015	0.016	0.021	0.042	0.049	0.012	0.008
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.008	0.010	0.008
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.049	0.029	0.064	0.100	0.038	0.035	0.040	0.040	0.040

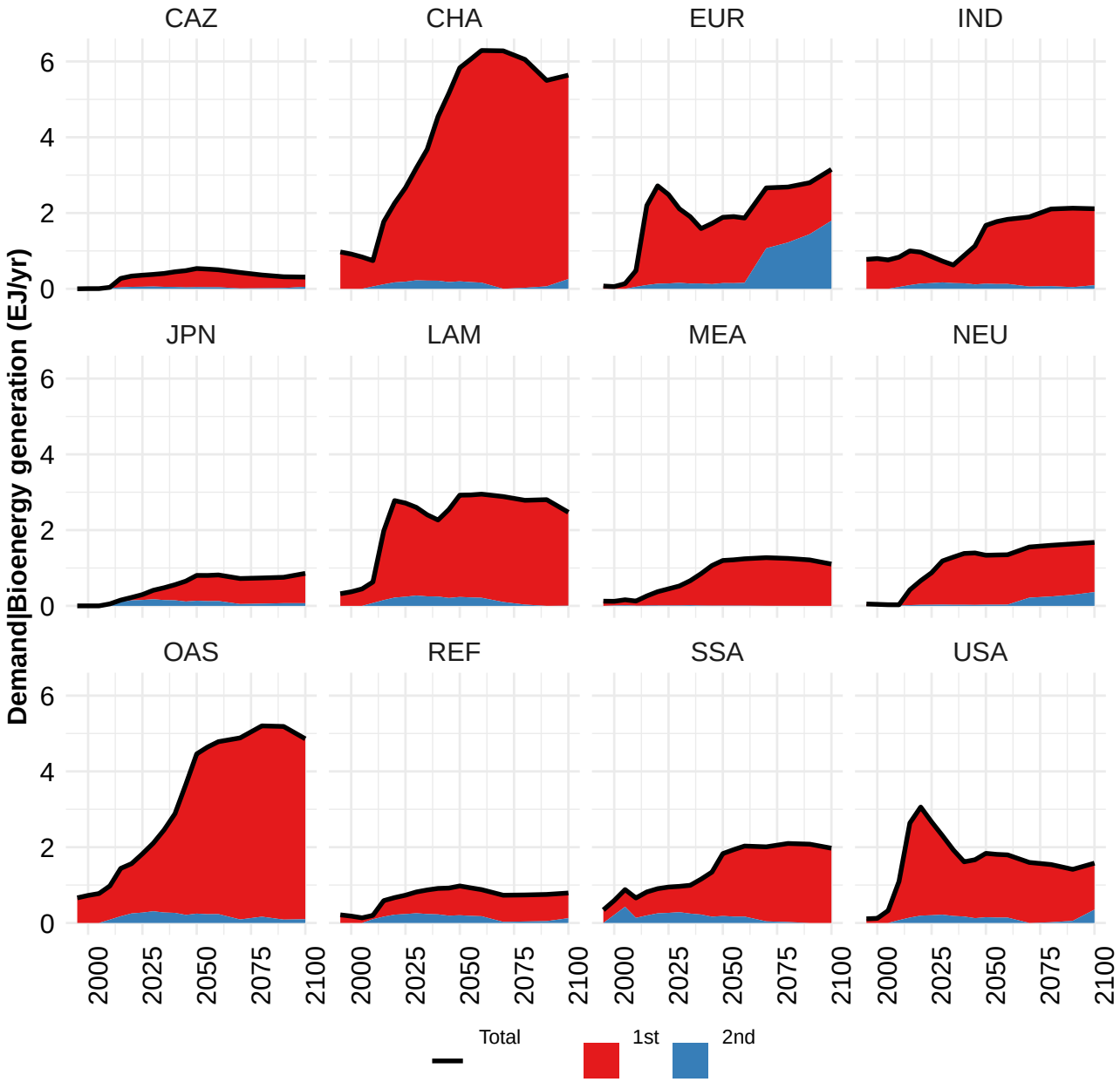
Table 102: FAO — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr)

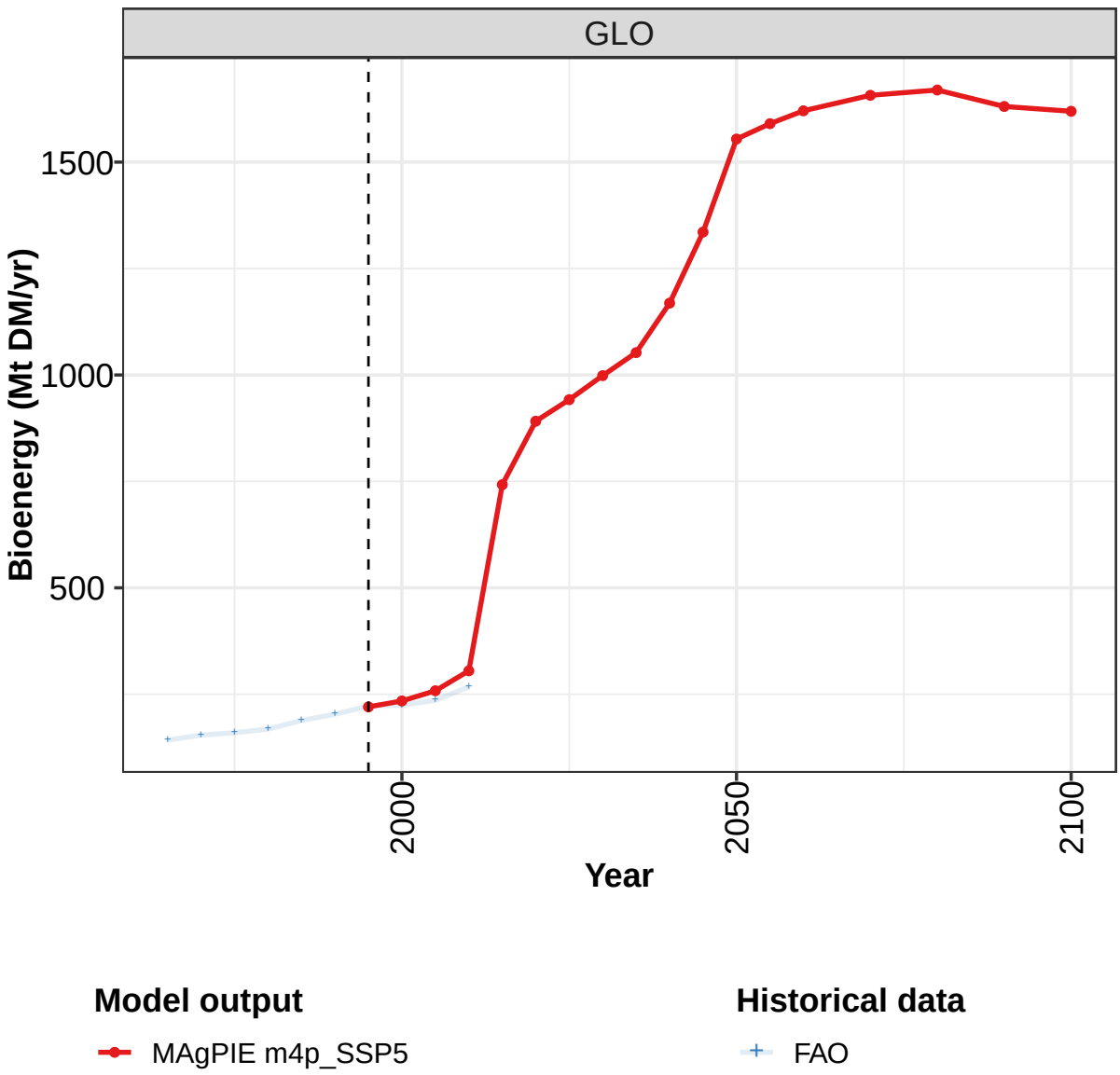
4 Bioenergy

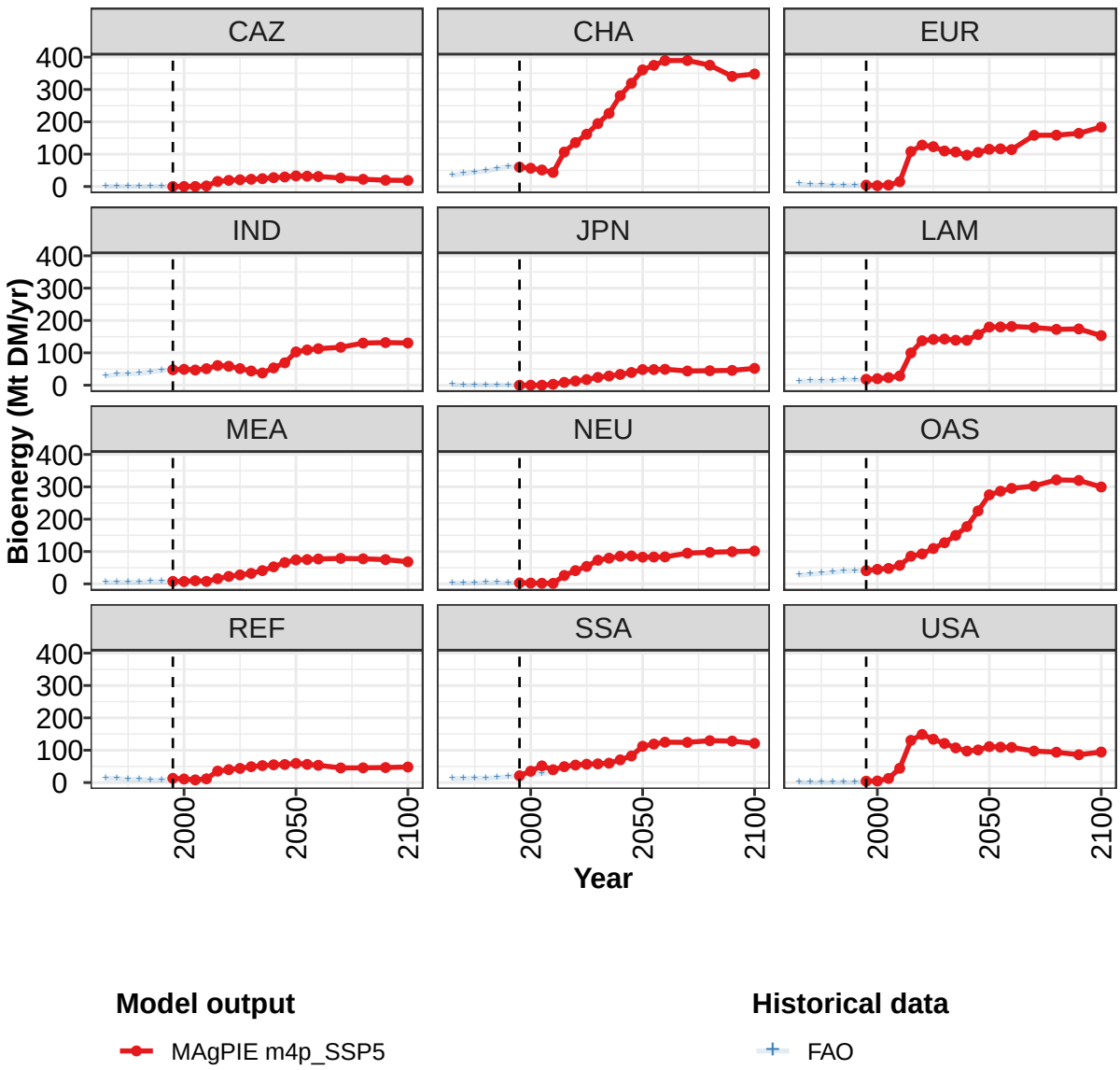

GLO
Demand|Bioenergy (Mt DM/yr)
1500
1000
500
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Bioenergy (Mt DM/yr)
400
300
200
100
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
Demand|Bioenergy generation (EJ/yr)
0
10
20
2000
2025
2050
2075
2100
Total
1st
2nd


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Bioenergy generation (EJ/yr)
0
2
4
6
2000
2025
2050
2075
2100
Total
1st
2nd


GLO
Bioenergy (Mt DM/yr)
1500
1000
500
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



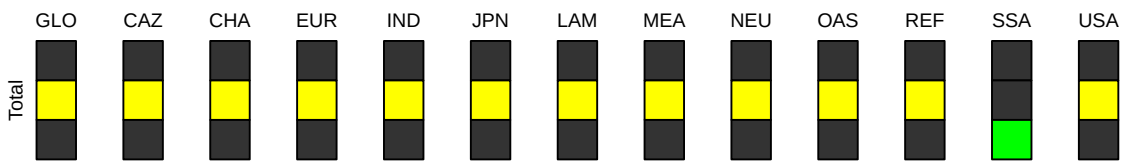


Figure 34: MAgPIE m4p_SSP5 — Demand—Bioenergy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	220	234	258	305	742	891	942	998	1053	1169	1336
CAZ	0	0	0	2	16	19	21	22	24	28	30
CHA	60	57	51	44	106	136	162	195	226	281	319
EUR	4	3	4	15	108	128	123	110	107	97	105
IND	48	49	47	51	61	59	51	44	38	53	69
JPN	0	0	0	3	9	13	17	24	28	33	39
LAM	18	20	24	29	100	138	142	143	139	139	156
MEA	8	7	10	8	16	23	28	32	41	53	66
NEU	3	2	2	2	26	41	54	73	80	86	86
OAS	41	45	48	57	85	93	109	127	150	177	226
REF	13	11	8	12	35	40	44	49	52	55	56
SSA	21	35	52	40	49	54	57	58	60	70	82
USA	4	5	13	44	130	149	134	121	107	97	101

Table 103: MAgPIE m4p_SSP5 — Demand—Bioenergy (Mt DM/yr) [PART 1/2]

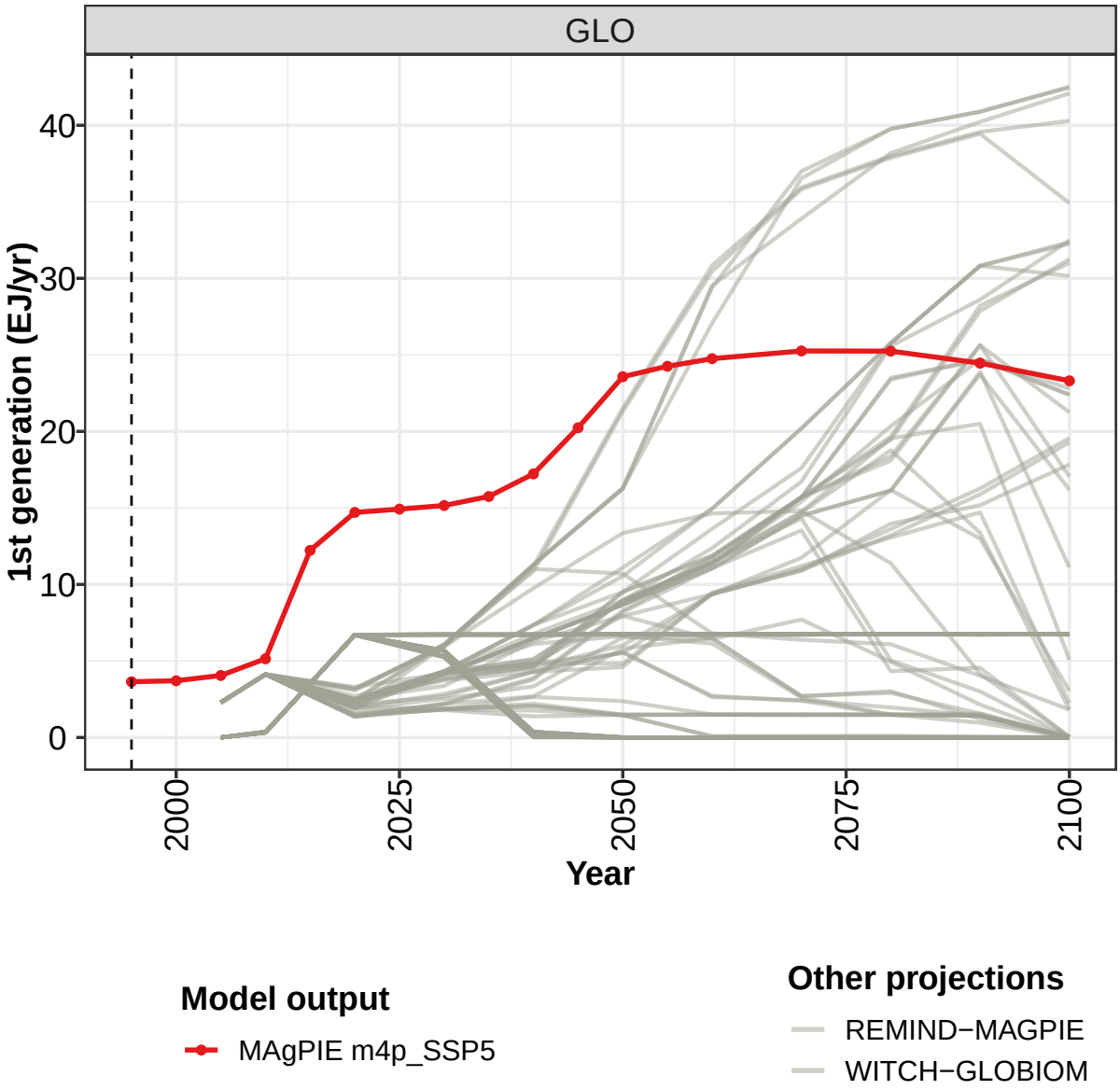
	2050	2055	2060	2070	2080	2090	2100
GLO	1554	1590	1621	1657	1669	1631	1619
CAZ	33	32	31	27	22	20	19
CHA	361	375	389	390	375	340	348
EUR	115	116	114	158	159	164	184
IND	103	109	113	117	130	132	130
JPN	48	48	49	44	45	46	52
LAM	180	180	182	178	173	174	153
MEA	74	75	77	79	78	75	68
NEU	83	83	83	95	98	100	102
OAS	275	287	295	302	322	320	300
REF	59	56	53	45	46	46	48
SSA	112	119	125	124	129	128	121
USA	111	110	109	97	94	86	94

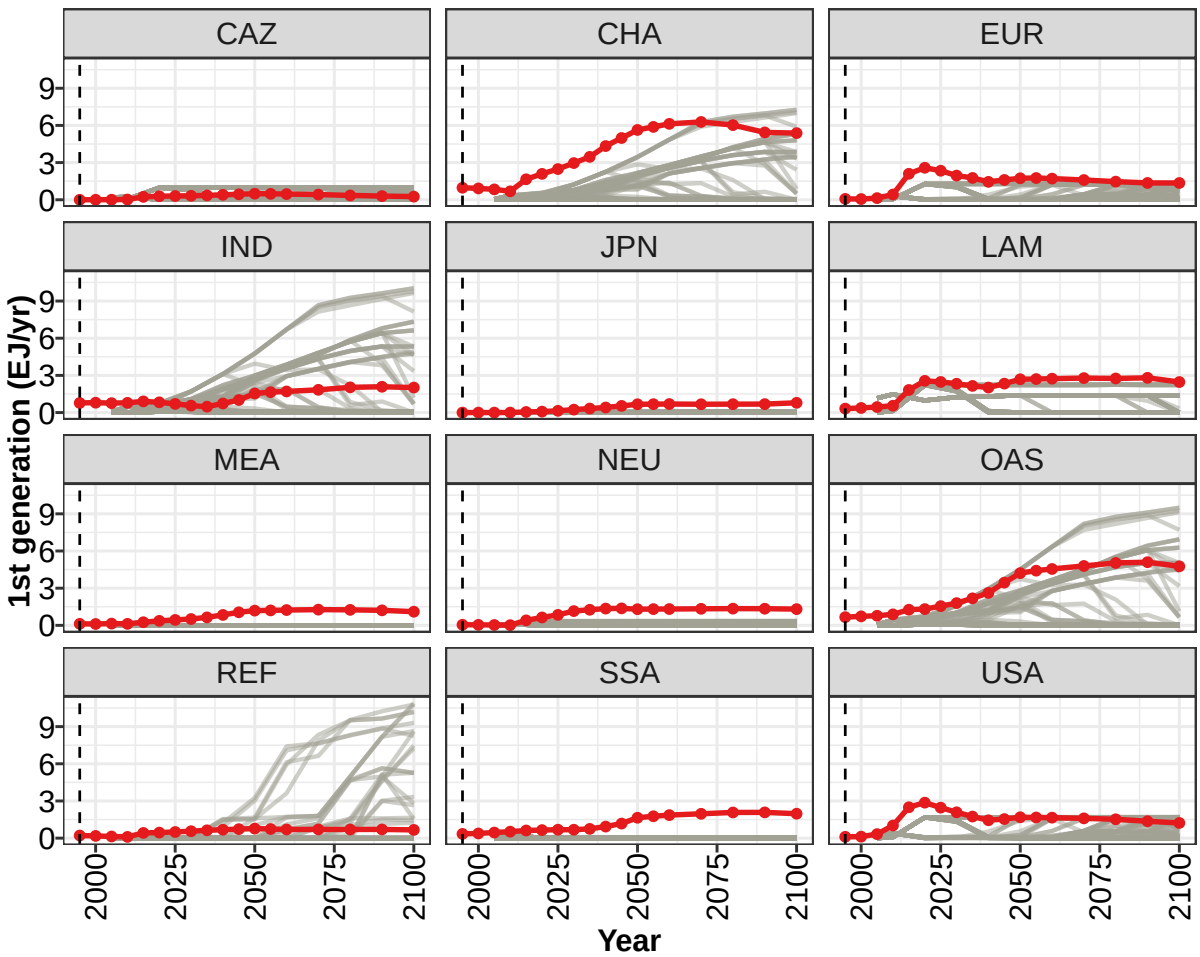
Table 104: MAgPIE m4p_SSP5 — Demand—Bioenergy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	142	154	160	168	188	203	222	224	236	268
CAZ	0	0	0	0	0	0	0	0	0	1
CHA	35	39	44	48	55	62	61	57	52	40
EUR	7	5	4	4	3	4	4	3	4	12
IND	29	33	35	36	41	45	49	50	48	49
JPN	1	0	0	0	0	0	0	0	0	0
LAM	12	13	13	13	18	16	18	20	23	24
MEA	5	5	5	6	6	7	8	7	9	7
NEU	3	3	3	3	3	3	3	2	2	1
OAS	27	30	32	35	39	40	42	46	50	54
REF	13	13	9	10	8	8	13	11	8	6
SSA	12	13	13	13	15	18	21	23	28	32
USA	0	0	0	0	0	0	4	5	13	40

Table 105: FAO — Demand—Bioenergy (Mt DM/yr)

4.1 1st generation





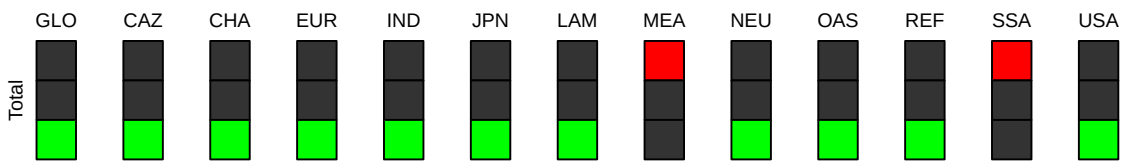


Figure 35: MAgPIE m4p_SSP5 — Demand—Bioenergy—1st generation (EJ/yr)

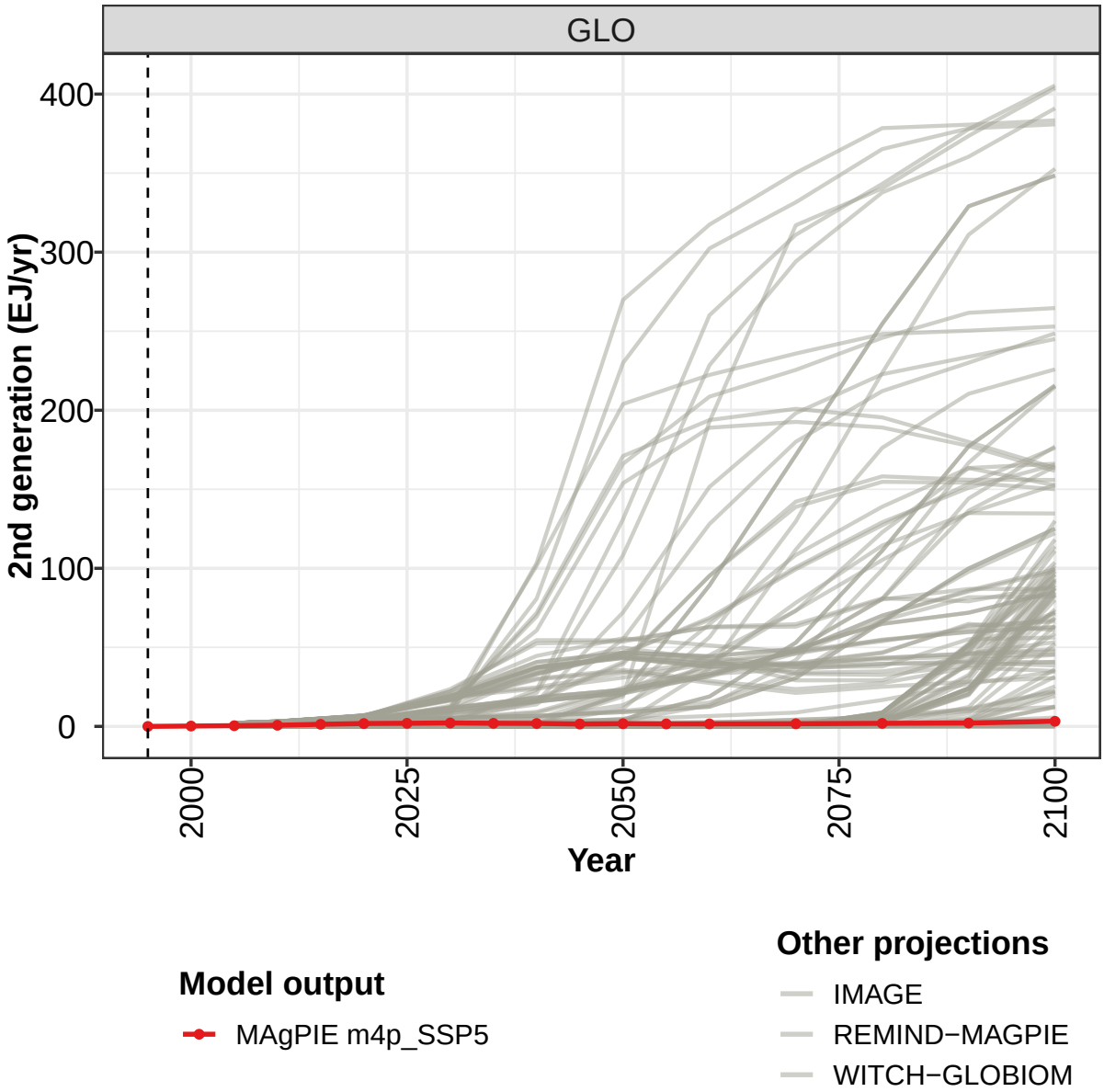
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.6	3.7	4.1	5.1	12.2	14.7	14.9	15.2	15.7	17.2	20.2
CAZ	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.4	0.4	0.4
CHA	1.0	0.9	0.8	0.7	1.7	2.1	2.5	3.0	3.5	4.3	5.0
EUR	0.1	0.1	0.1	0.4	2.1	2.6	2.3	2.0	1.8	1.4	1.6
IND	0.8	0.8	0.8	0.8	0.9	0.8	0.7	0.6	0.5	0.7	1.0
JPN	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5
LAM	0.3	0.4	0.4	0.6	1.8	2.6	2.5	2.3	2.2	2.0	2.3
MEA	0.1	0.1	0.1	0.1	0.3	0.4	0.4	0.5	0.6	0.8	1.1
NEU	0.0	0.0	0.0	0.0	0.4	0.6	0.8	1.2	1.3	1.4	1.4
OAS	0.7	0.7	0.8	0.9	1.3	1.3	1.6	1.8	2.2	2.6	3.4
REF	0.2	0.2	0.1	0.1	0.4	0.5	0.5	0.6	0.6	0.7	0.7
SSA	0.3	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.9	1.2
USA	0.1	0.1	0.3	1.0	2.5	2.9	2.5	2.1	1.7	1.4	1.5

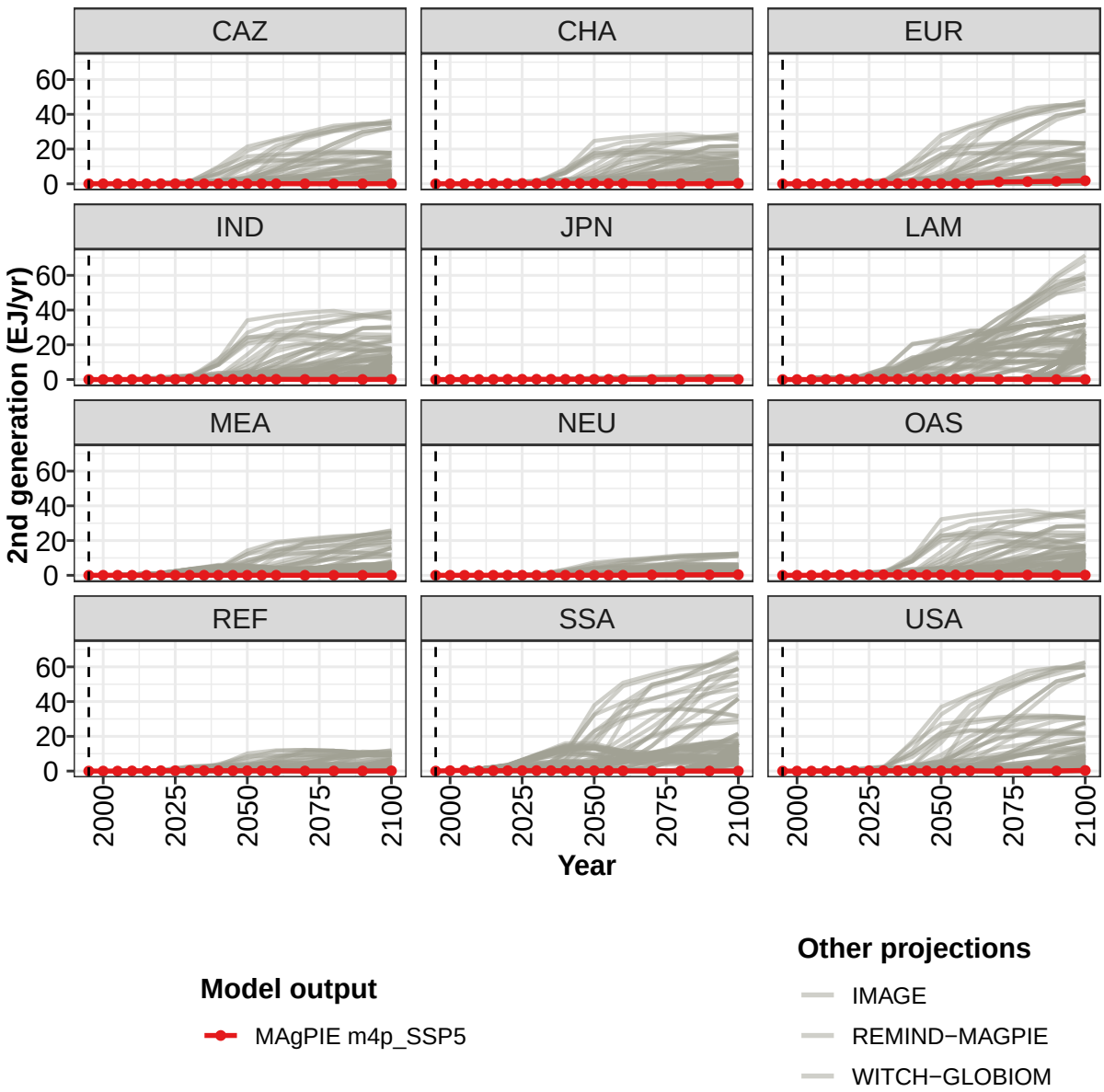
Table 106: MAgPIE m4p_SSP5 — Demand—Bioenergy—1st generation (EJ/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	23.6	24.3	24.8	25.3	25.2	24.5	23.3
CAZ	0.5	0.5	0.5	0.4	0.3	0.3	0.3
CHA	5.6	5.9	6.1	6.3	6.0	5.4	5.4
EUR	1.7	1.8	1.7	1.6	1.5	1.4	1.4
IND	1.5	1.6	1.7	1.8	2.0	2.1	2.0
JPN	0.7	0.7	0.7	0.7	0.7	0.7	0.8
LAM	2.7	2.7	2.7	2.8	2.8	2.8	2.5
MEA	1.2	1.2	1.2	1.3	1.3	1.2	1.1
NEU	1.3	1.3	1.3	1.3	1.4	1.3	1.3
OAS	4.2	4.4	4.6	4.8	5.0	5.1	4.8
REF	0.8	0.7	0.7	0.7	0.7	0.7	0.7
SSA	1.6	1.8	1.9	2.0	2.1	2.1	2.0
USA	1.7	1.7	1.7	1.6	1.5	1.4	1.2

Table 107: MAgPIE m4p_SSP5 — Demand—Bioenergy—1st generation (EJ/yr) [PART 2/2]

4.2 2nd generation





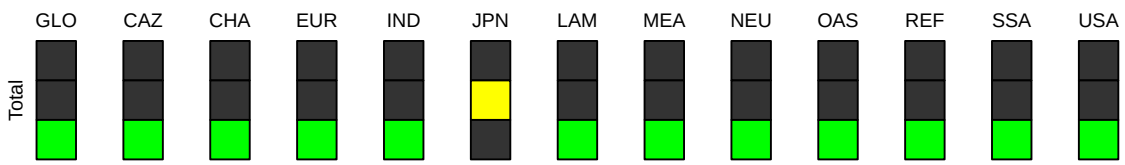


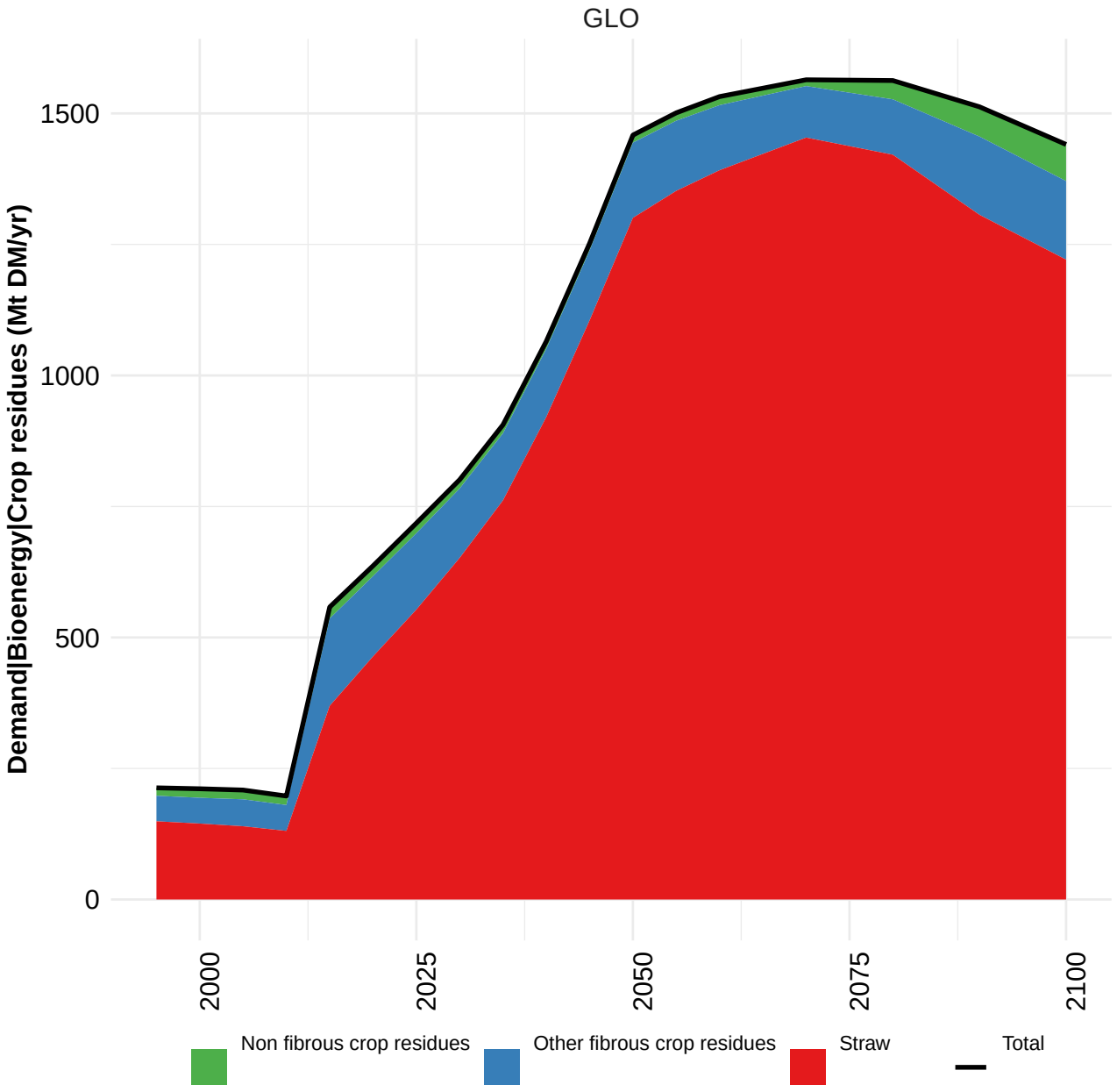
Figure 36: MAgPIE m4p_SSP5 — Demand—Bioenergy—2nd generation (EJ/yr)

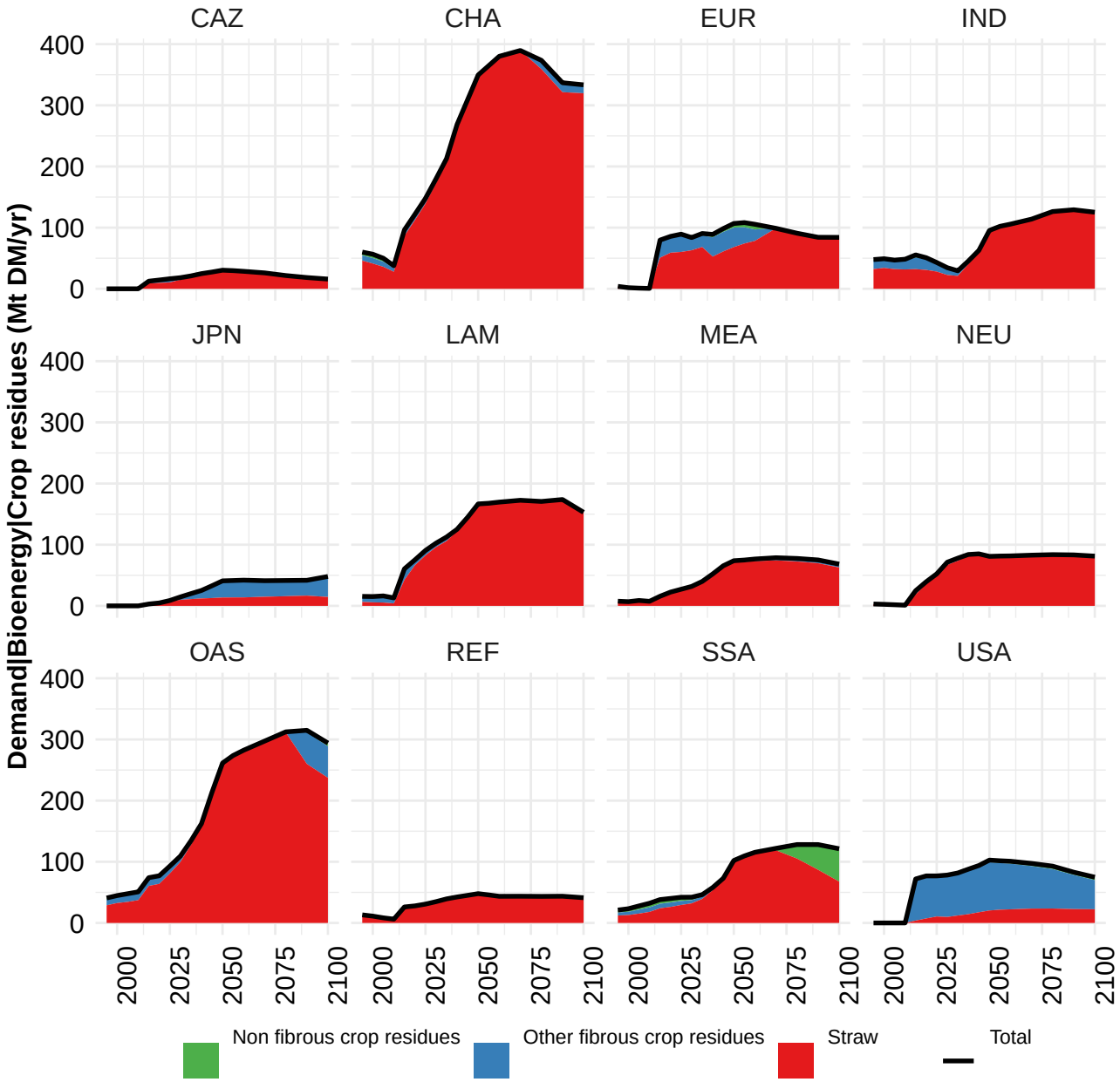
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00	0.22	0.45	0.72	1.32	1.81	1.95	2.17	1.95	1.86	1.51
CAZ	0.00	0.00	0.00	0.02	0.04	0.05	0.05	0.06	0.05	0.05	0.04
CHA	0.00	0.00	0.00	0.06	0.12	0.17	0.19	0.22	0.22	0.21	0.18
EUR	0.00	0.00	0.00	0.05	0.10	0.14	0.14	0.16	0.14	0.14	0.12
IND	0.00	0.00	0.00	0.05	0.10	0.14	0.15	0.17	0.15	0.15	0.12
JPN	0.00	0.00	0.00	0.05	0.10	0.15	0.16	0.17	0.15	0.15	0.12
LAM	0.00	0.00	0.00	0.08	0.15	0.22	0.24	0.27	0.25	0.25	0.21
MEA	0.00	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01
NEU	0.00	0.00	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.03
OAS	0.00	0.00	0.00	0.09	0.18	0.25	0.27	0.31	0.28	0.27	0.21
REF	0.00	0.00	0.00	0.10	0.17	0.22	0.23	0.26	0.24	0.23	0.19
SSA	0.00	0.21	0.43	0.13	0.20	0.25	0.27	0.28	0.25	0.22	0.17
USA	0.00	0.00	0.00	0.07	0.14	0.19	0.20	0.22	0.18	0.17	0.13

Table 108: MAgPIE m4p_SSP5 — Demand—Bioenergy—2nd generation (EJ/yr) [PART 1/2]

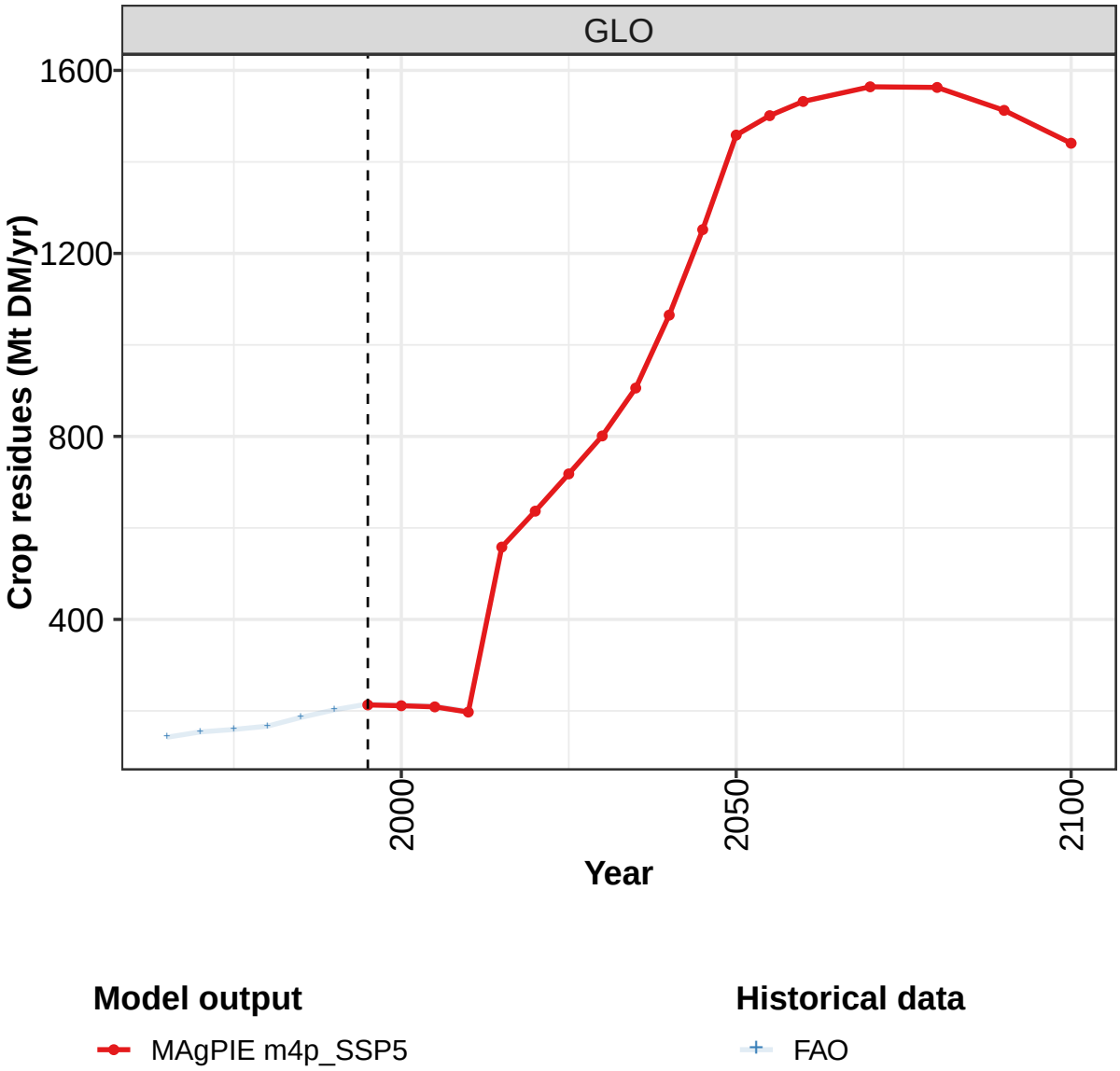
	2050	2055	2060	2070	2080	2090	2100
GLO	1.72	1.61	1.59	1.67	1.92	2.13	3.22
CAZ	0.04	0.04	0.04	0.01	0.01	0.02	0.05
CHA	0.20	0.18	0.16	0.00	0.03	0.06	0.26
EUR	0.15	0.15	0.16	1.07	1.22	1.44	1.80
IND	0.14	0.13	0.13	0.06	0.07	0.04	0.10
JPN	0.13	0.12	0.13	0.05	0.06	0.07	0.07
LAM	0.24	0.22	0.21	0.10	0.03	0.00	0.00
MEA	0.01	0.01	0.01	0.00	0.00	0.00	0.00
NEU	0.03	0.03	0.03	0.22	0.25	0.29	0.36
OAS	0.25	0.23	0.23	0.09	0.16	0.09	0.10
REF	0.20	0.19	0.18	0.03	0.04	0.05	0.12
SSA	0.18	0.17	0.17	0.04	0.02	0.00	0.00
USA	0.15	0.14	0.14	0.00	0.02	0.05	0.35

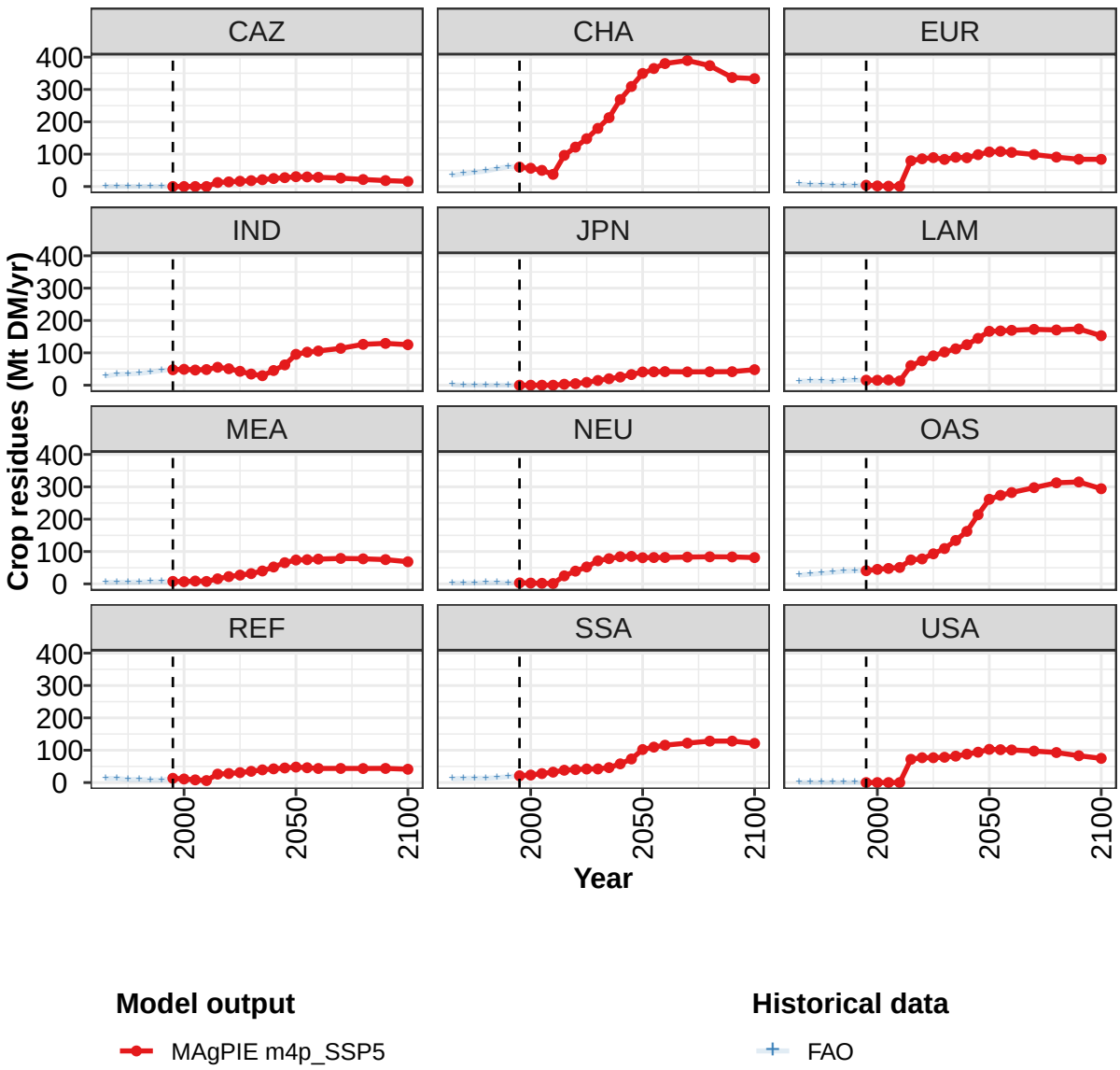
Table 109: MAgPIE m4p_SSP5 — Demand—Bioenergy—2nd generation (EJ/yr) [PART 2/2]


GLO
Demand|Bioenergy|Crop residues (Mt DM/yr)
1500
1000
500
0
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Bioenergy|Crop residues (Mt DM/yr)
0
100
200
300
400
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

4.3 Crop residues





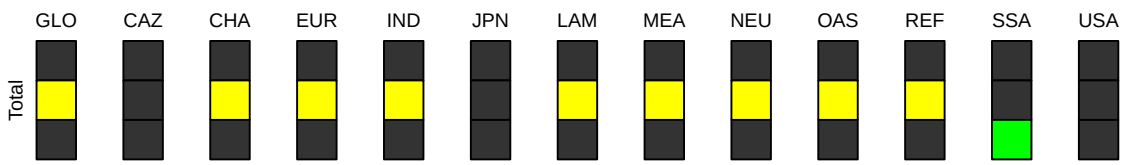


Figure 37: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	213	211	209	197	558	637	718	801	906	1065	1252
CAZ	0	0	0	0	12	14	16	18	21	25	27
CHA	60	57	50	38	96	122	148	180	213	269	309
EUR	4	2	1	1	80	86	89	84	90	89	98
IND	48	49	47	48	55	51	43	34	29	45	63
JPN	0	0	0	0	3	5	9	15	20	25	33
LAM	16	15	16	13	61	75	91	103	113	125	145
MEA	8	7	9	7	16	23	27	32	40	52	66
NEU	3	2	2	1	25	39	52	71	78	84	85
OAS	41	45	48	51	74	77	93	109	134	162	214
REF	13	11	8	6	26	28	31	35	39	42	45
SSA	21	23	28	32	38	40	42	42	46	58	73
USA	0	0	0	0	72	77	77	78	82	88	94

Table 110: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues (Mt DM/yr) [PART 1/2]

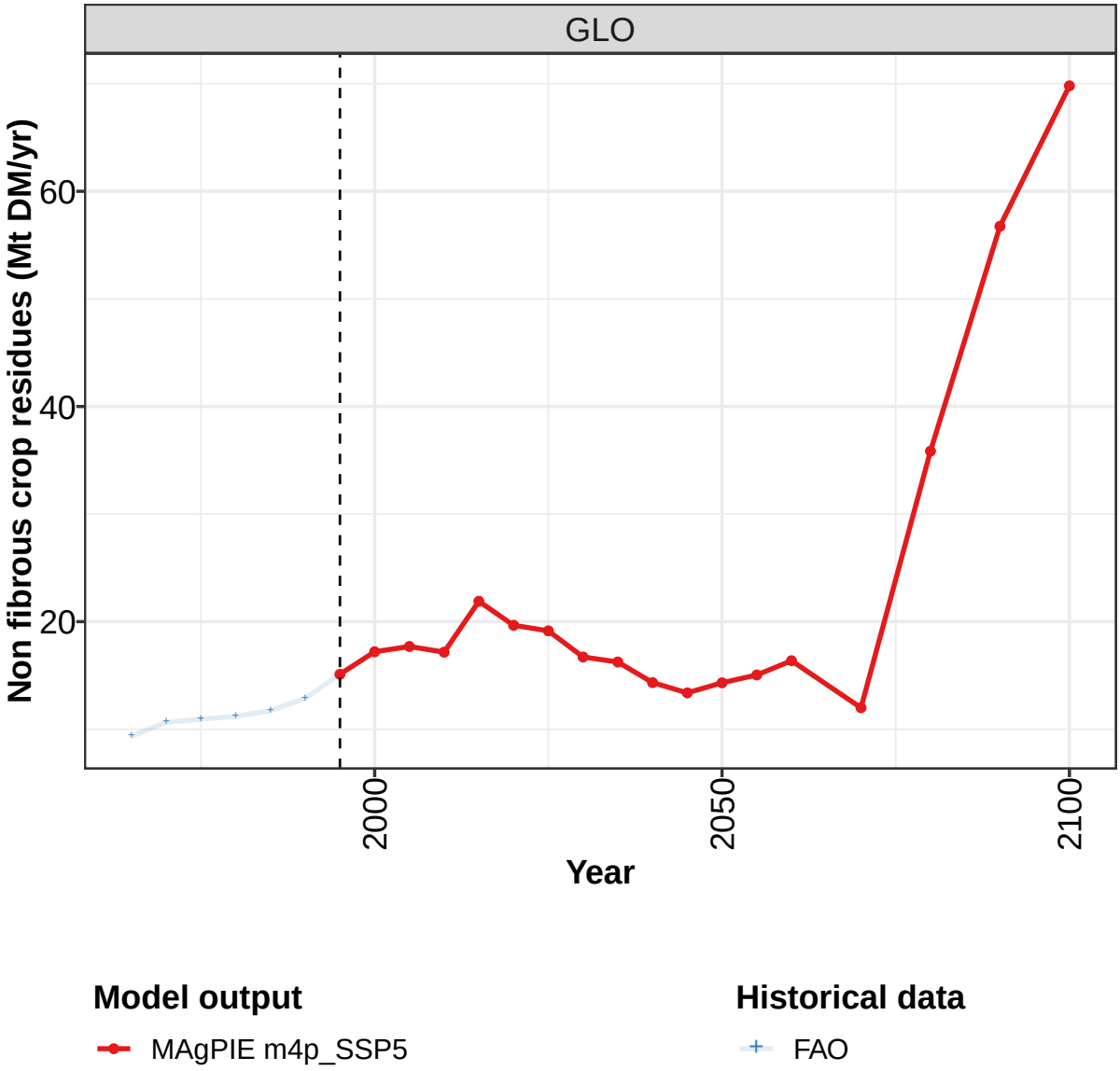
	2050	2055	2060	2070	2080	2090	2100
GLO	1459	1501	1532	1564	1563	1513	1441
CAZ	30	30	29	26	22	18	16
CHA	350	365	380	390	374	337	333
EUR	107	108	105	99	91	84	84
IND	95	102	106	114	126	129	125
JPN	41	41	42	41	41	42	48
LAM	167	168	170	173	171	174	153
MEA	74	75	77	79	78	75	68
NEU	81	81	82	83	84	83	81
OAS	261	274	282	297	312	315	294
REF	48	46	44	44	43	44	41
SSA	102	110	115	122	128	128	121
USA	103	102	101	97	93	83	75

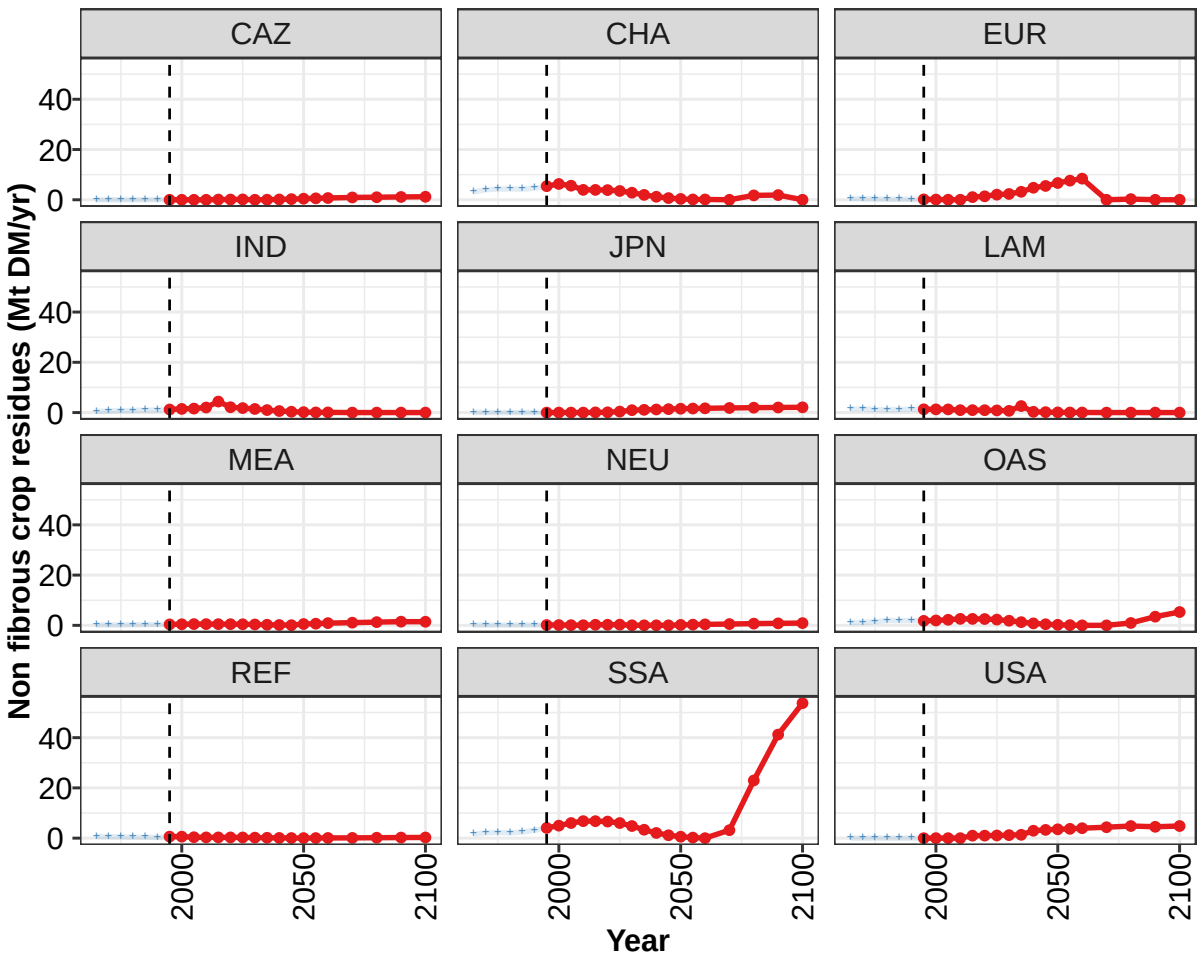
Table 111: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	142	154	159	167	186	202	215	214	211	200
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	35	39	44	48	55	62	61	57	50	38
EUR	7	5	4	4	3	4	4	2	1	1
IND	29	33	35	36	41	45	49	50	48	49
JPN	1	0	0	0	0	0	0	0	0	0
LAM	12	13	12	12	15	16	15	15	16	13
MEA	5	5	5	6	6	7	8	7	9	7
NEU	3	3	3	3	3	3	3	2	2	1
OAS	27	30	32	35	39	40	42	46	49	53
REF	13	13	9	10	8	8	13	11	8	6
SSA	12	13	13	13	15	18	21	23	28	32
USA	0	0	0	0	0	0	0	0	0	0

Table 112: FAO — Demand—Bioenergy—Crop residues (Mt DM/yr)

4.3.1 Non fibrous crop residues





Model output

MAgPIE m4p_SSP5

Historical data

FAO

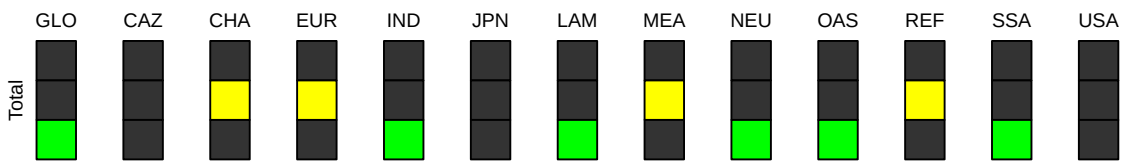


Figure 38: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Non fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.1	17.2	17.7	17.2	21.9	19.7	19.1	16.7	16.3	14.3	13.4
CAZ	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.3
CHA	5.4	6.3	5.6	3.9	3.9	3.9	3.5	2.8	2.0	1.2	0.7
EUR	0.2	0.1	0.0	0.0	1.1	1.4	2.0	2.3	3.2	4.8	5.5
IND	1.2	1.5	1.6	2.0	4.4	2.1	1.8	1.4	1.0	0.6	0.3
JPN	0.0	0.0	0.0	0.0	0.1	0.1	0.4	1.0	1.1	1.2	1.4
LAM	1.3	1.3	1.3	1.0	1.0	0.9	0.9	0.7	2.6	0.3	0.2
MEA	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.2	0.2	0.1
NEU	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.0	0.0	0.0	0.0
OAS	1.8	1.9	2.2	2.6	2.6	2.5	2.3	1.8	1.3	0.8	0.4
REF	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1
SSA	4.1	5.0	6.0	6.8	6.8	6.6	6.0	4.8	3.4	2.1	1.2
USA	0.0	0.0	0.0	0.0	1.0	1.0	1.1	1.2	1.3	2.9	3.3

Table 113: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Non fibrous crop residues (Mt DM/yr) [PART 1/2]

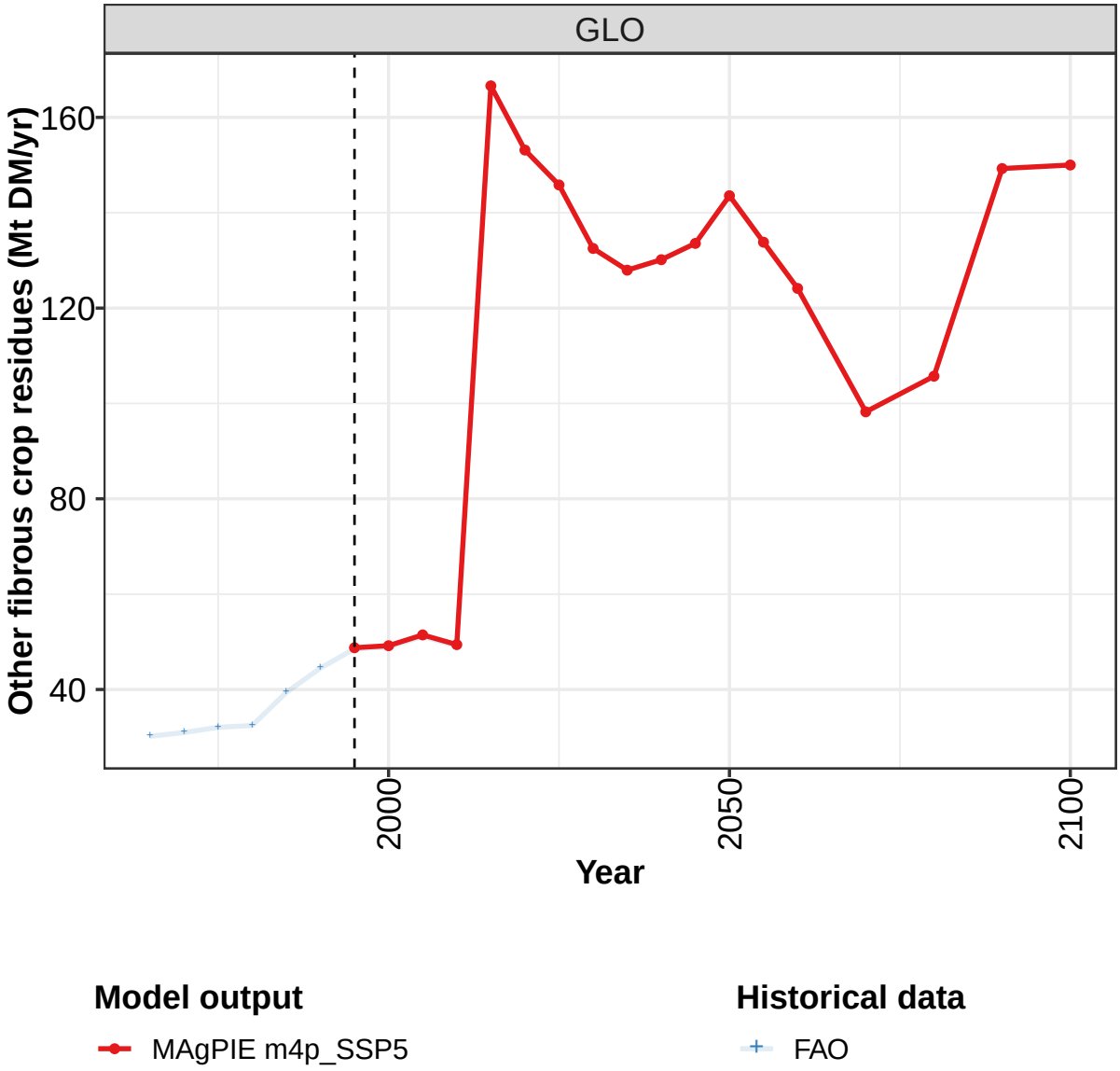
	2050	2055	2060	2070	2080	2090	2100
GLO	14.3	15.0	16.4	12.0	35.8	56.7	69.8
CAZ	0.4	0.6	0.7	0.9	1.0	1.1	1.2
CHA	0.3	0.1	0.1	0.0	1.7	1.9	0.0
EUR	6.7	7.6	8.4	0.0	0.3	0.0	0.0
IND	0.2	0.1	0.1	0.0	0.0	0.0	0.0
JPN	1.5	1.6	1.7	1.8	1.9	2.0	2.1
LAM	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.5	0.7	0.9	1.1	1.3	1.5	1.4
NEU	0.2	0.3	0.4	0.5	0.7	0.8	0.9
OAS	0.2	0.1	0.0	0.0	1.0	3.5	5.3
REF	0.0	0.0	0.1	0.1	0.2	0.2	0.3
SSA	0.6	0.2	0.0	3.2	23.0	41.2	53.7
USA	3.5	3.7	4.0	4.3	4.8	4.5	4.8

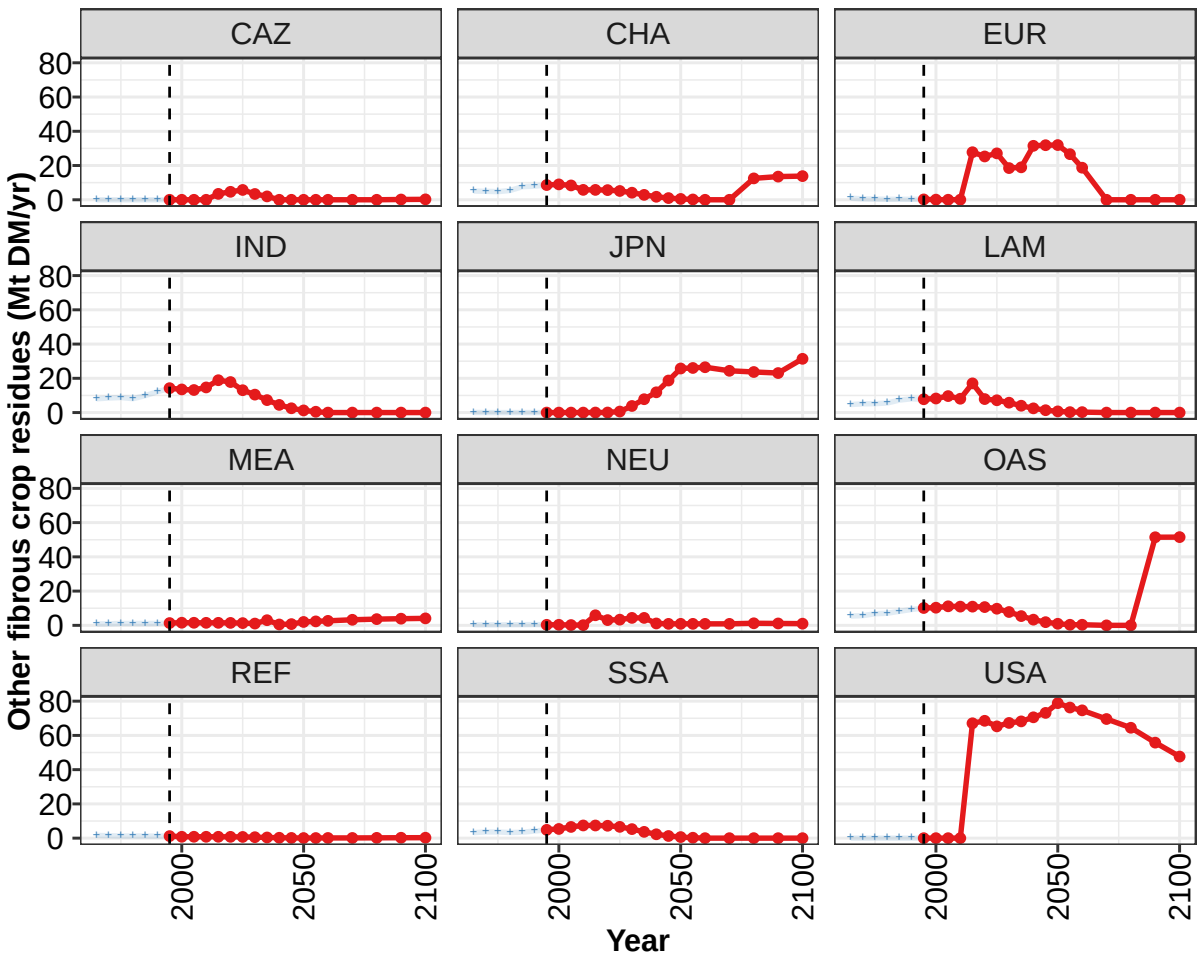
Table 114: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Non fibrous crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.3	10.6	10.9	11.2	11.7	12.9	15.1	17.2	17.7	17.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.1	4.0	4.3	4.3	4.2	4.6	5.4	6.3	5.6	3.9
EUR	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0
IND	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	1.6	2.0
JPN	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	1.5	1.2	1.1	1.2	1.3	1.3	1.3	1.3	1.0
MEA	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.1	1.2	1.4	1.9	1.9	1.9	1.8	2.0	2.2	2.6
REF	0.7	0.6	0.5	0.4	0.4	0.3	0.6	0.6	0.4	0.3
SSA	1.6	2.1	2.3	2.1	2.4	3.1	4.1	5.0	6.0	6.8
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 115: FAO — Demand—Bioenergy—Crop residues—Non fibrous crop residues (Mt DM/yr)

4.3.2 Other fibrous crop residues





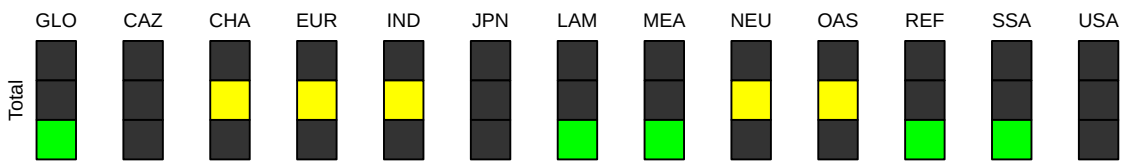


Figure 39: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Other fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	49	49	51	49	167	153	146	133	128	130	134
CAZ	0	0	0	0	3	5	6	3	2	0	0
CHA	9	9	8	6	6	6	5	4	3	2	1
EUR	0	0	0	0	28	25	27	19	19	32	32
IND	14	14	13	15	19	18	13	10	7	4	3
JPN	0	0	0	0	0	0	1	4	8	12	19
LAM	8	8	10	8	17	8	7	6	4	2	1
MEA	1	2	2	1	1	1	1	1	3	1	1
NEU	0	0	0	0	6	3	3	4	4	1	1
OAS	10	10	11	11	11	11	10	8	5	3	2
REF	1	1	1	1	1	1	1	1	0	0	0
SSA	5	5	7	7	7	7	7	5	4	2	1
USA	0	0	0	0	67	69	65	67	68	71	73

Table 116: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Other fibrous crop residues (Mt DM/yr) [PART 1/2]

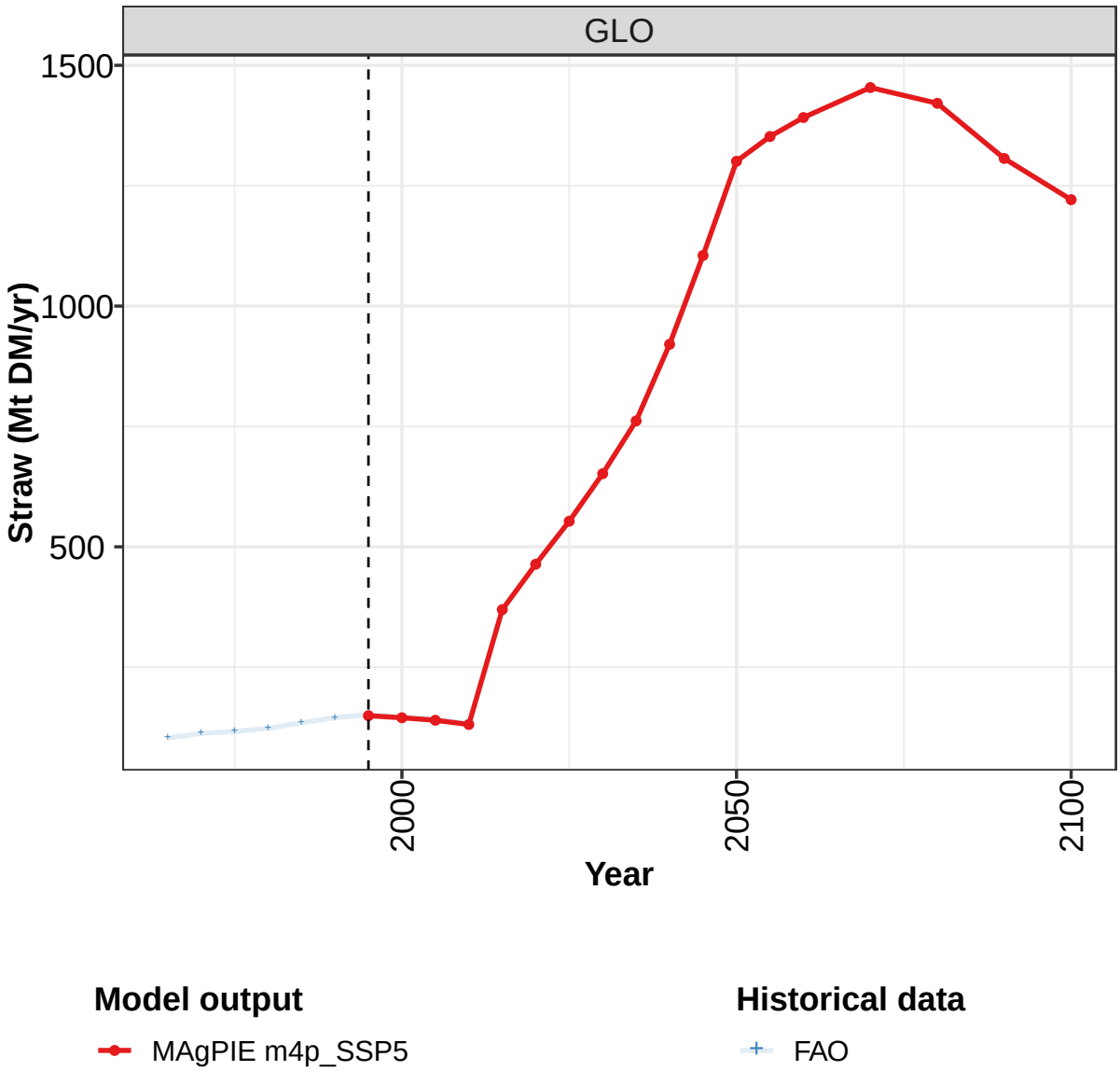
	2050	2055	2060	2070	2080	2090	2100
GLO	144	134	124	98	106	149	150
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	12	14	14
EUR	32	27	19	0	0	0	0
IND	1	0	0	0	0	0	0
JPN	26	26	26	24	24	23	31
LAM	1	0	0	0	0	0	0
MEA	2	2	3	3	4	4	4
NEU	1	1	1	1	1	1	1
OAS	1	0	0	0	0	51	52
REF	0	0	0	0	0	0	0
SSA	1	0	0	0	0	0	0
USA	79	76	75	70	64	56	48

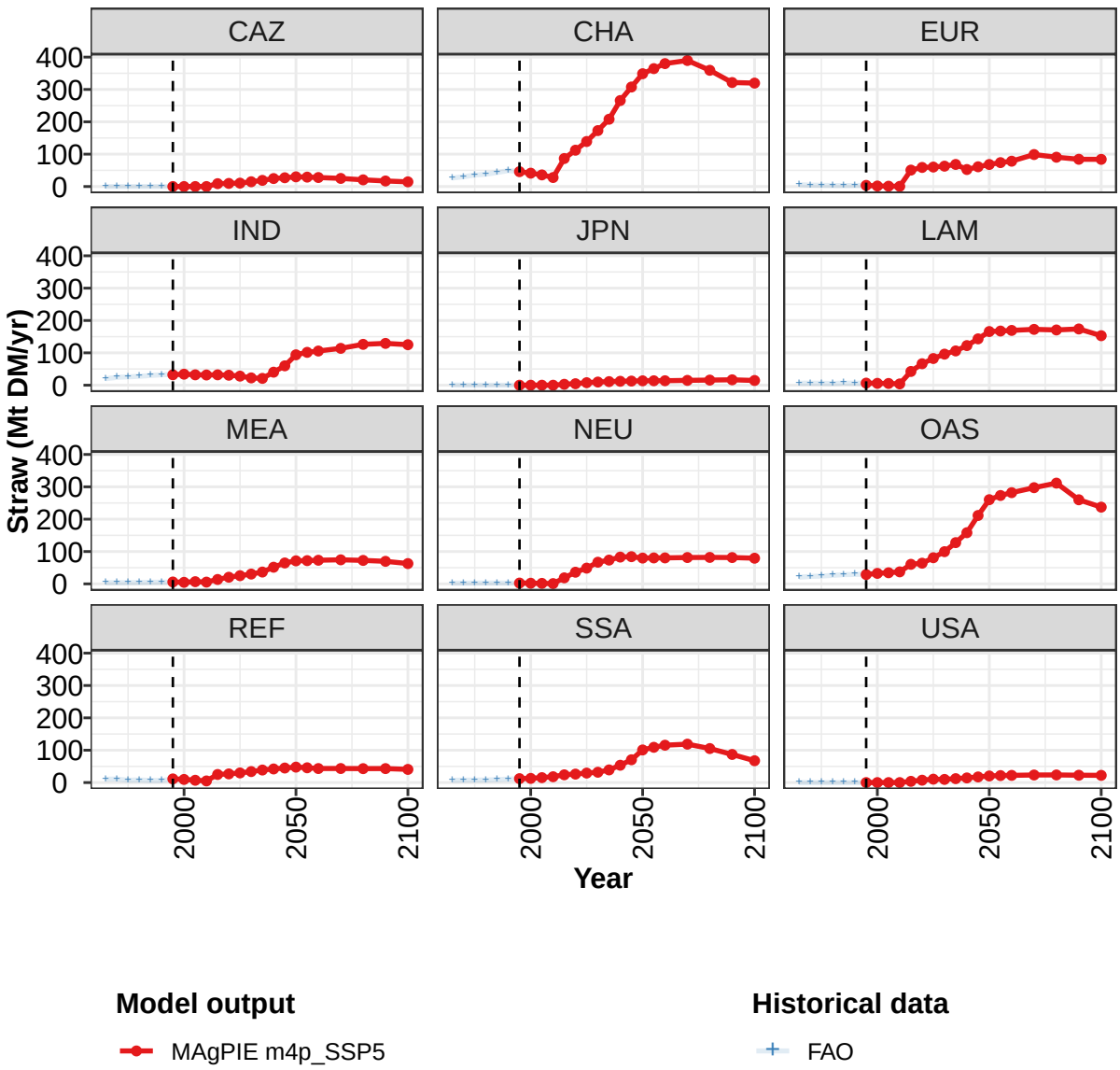
Table 117: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Other fibrous crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	30.2	31.0	32.1	32.4	39.4	44.5	48.5	48.9	51.1	49.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.1	4.9	4.7	5.4	7.6	7.9	8.6	9.0	8.4	5.8
EUR	0.9	0.5	0.4	0.3	0.3	0.3	0.2	0.1	0.0	0.1
IND	8.0	8.5	8.8	8.1	9.9	12.2	14.1	13.4	13.1	14.6
JPN	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	4.7	5.1	5.2	5.6	7.3	8.0	7.7	8.1	9.5	8.0
MEA	0.8	0.9	1.1	1.1	1.1	1.1	1.4	1.6	1.5	1.5
NEU	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.2	0.1
OAS	5.4	5.7	6.8	7.1	8.2	9.3	10.1	10.2	11.1	10.9
REF	1.6	1.4	1.2	1.3	1.2	1.1	1.3	0.9	0.9	0.8
SSA	3.2	3.6	3.6	3.3	3.5	4.1	4.8	5.4	6.5	7.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 118: FAO — Demand—Bioenergy—Crop residues—Other fibrous crop residues (Mt DM/yr)

4.3.3 Straw


GLO
1500
1000
500
Straw (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



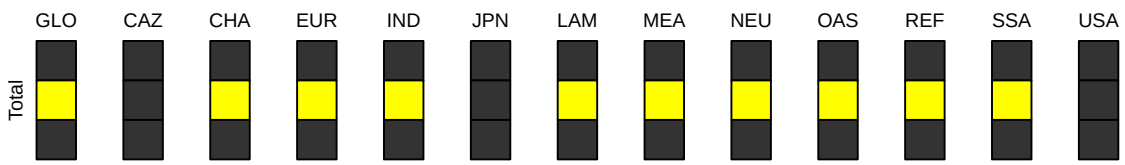


Figure 40: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	149	145	140	131	370	464	553	652	762	921	1105
CAZ	0	0	0	0	9	10	10	15	19	25	27
CHA	46	41	36	28	87	112	139	173	208	266	308
EUR	4	2	1	1	51	59	60	63	68	53	61
IND	32	34	32	32	32	31	28	23	21	40	60
JPN	0	0	0	0	3	5	8	10	11	12	13
LAM	6	6	5	4	43	66	83	96	106	122	143
MEA	6	5	7	5	14	21	25	30	37	52	65
NEU	3	2	2	1	19	36	49	67	74	83	84
OAS	29	33	34	37	61	64	81	100	128	158	211
REF	11	10	7	5	25	27	30	34	39	42	45
SSA	12	13	15	18	24	26	29	32	39	54	71
USA	0	0	0	0	4	7	11	10	12	14	17

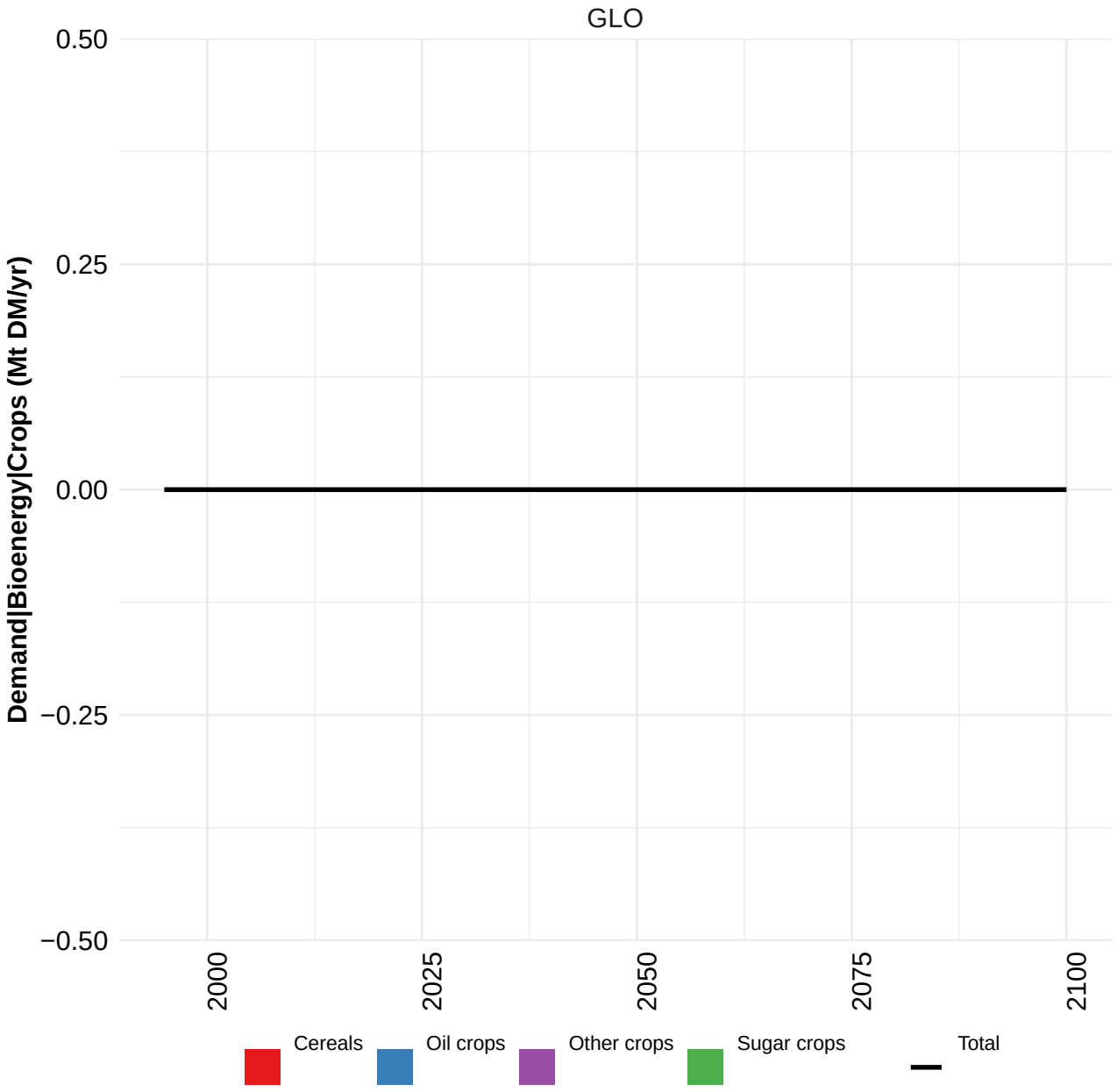
Table 119: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr) [PART 1/2]

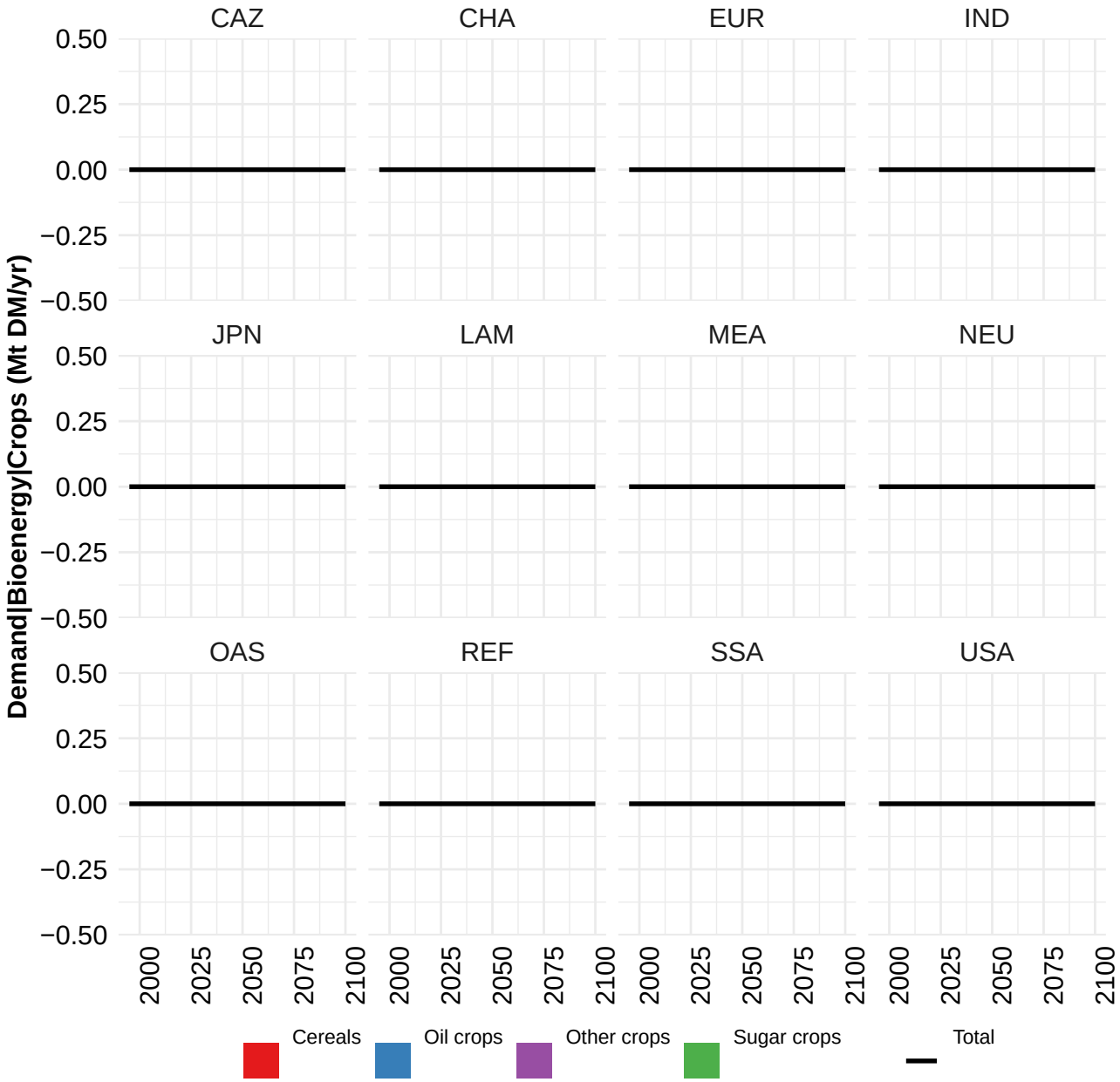
	2050	2055	2060	2070	2080	2090	2100
GLO	1301	1352	1392	1454	1421	1307	1221
CAZ	30	29	28	25	21	17	14
CHA	349	364	380	390	359	321	320
EUR	68	74	78	99	91	84	84
IND	94	102	106	114	126	129	125
JPN	14	14	14	15	16	17	15
LAM	166	167	169	173	171	174	153
MEA	71	72	73	74	73	70	63
NEU	80	80	80	82	82	81	79
OAS	260	273	282	297	311	260	237
REF	48	46	43	43	43	43	41
SSA	101	109	115	119	105	87	68
USA	20	22	22	23	24	23	22

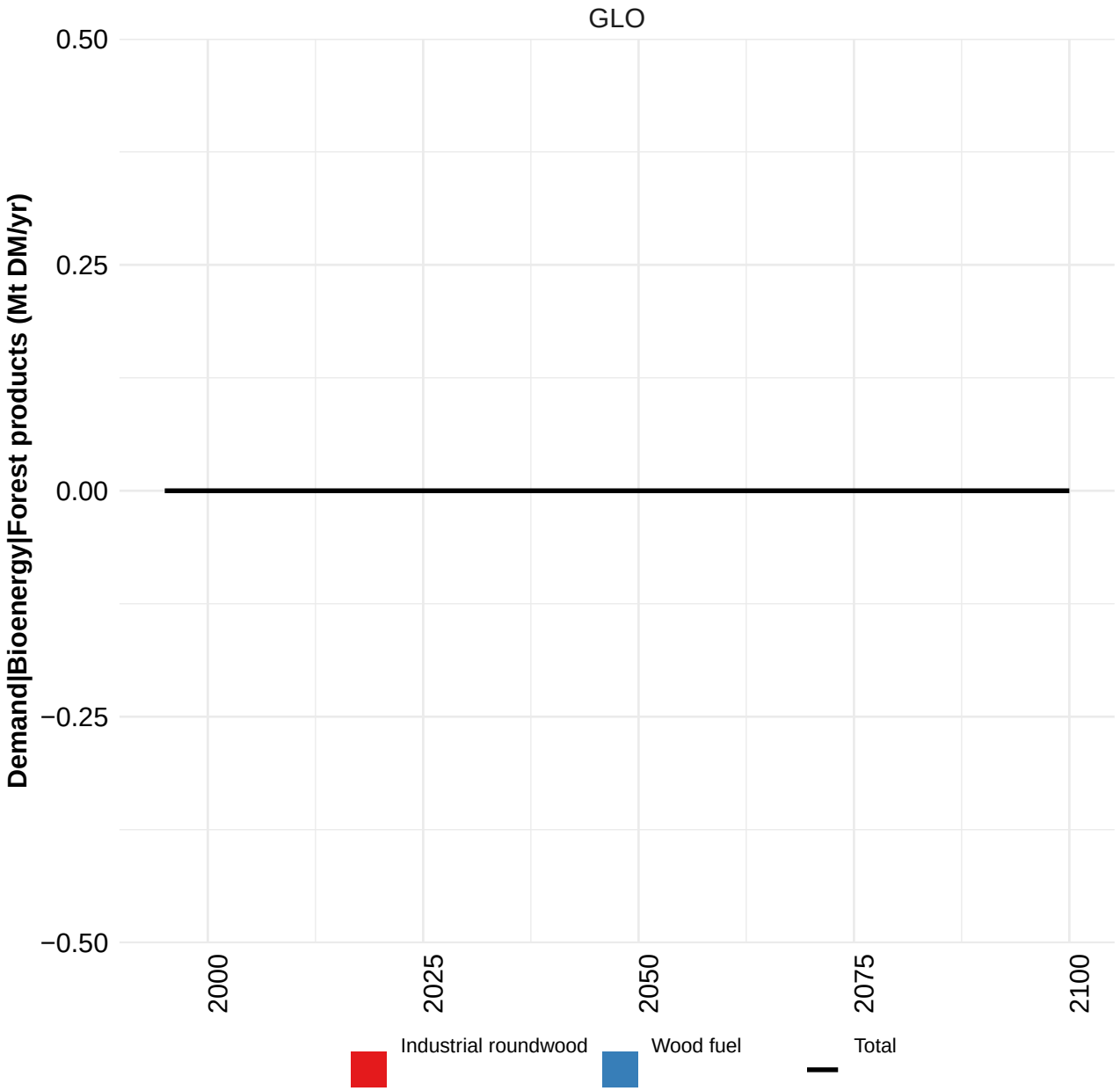
Table 120: MAgPIE m4p_SSP5 — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr) [PART 2/2]

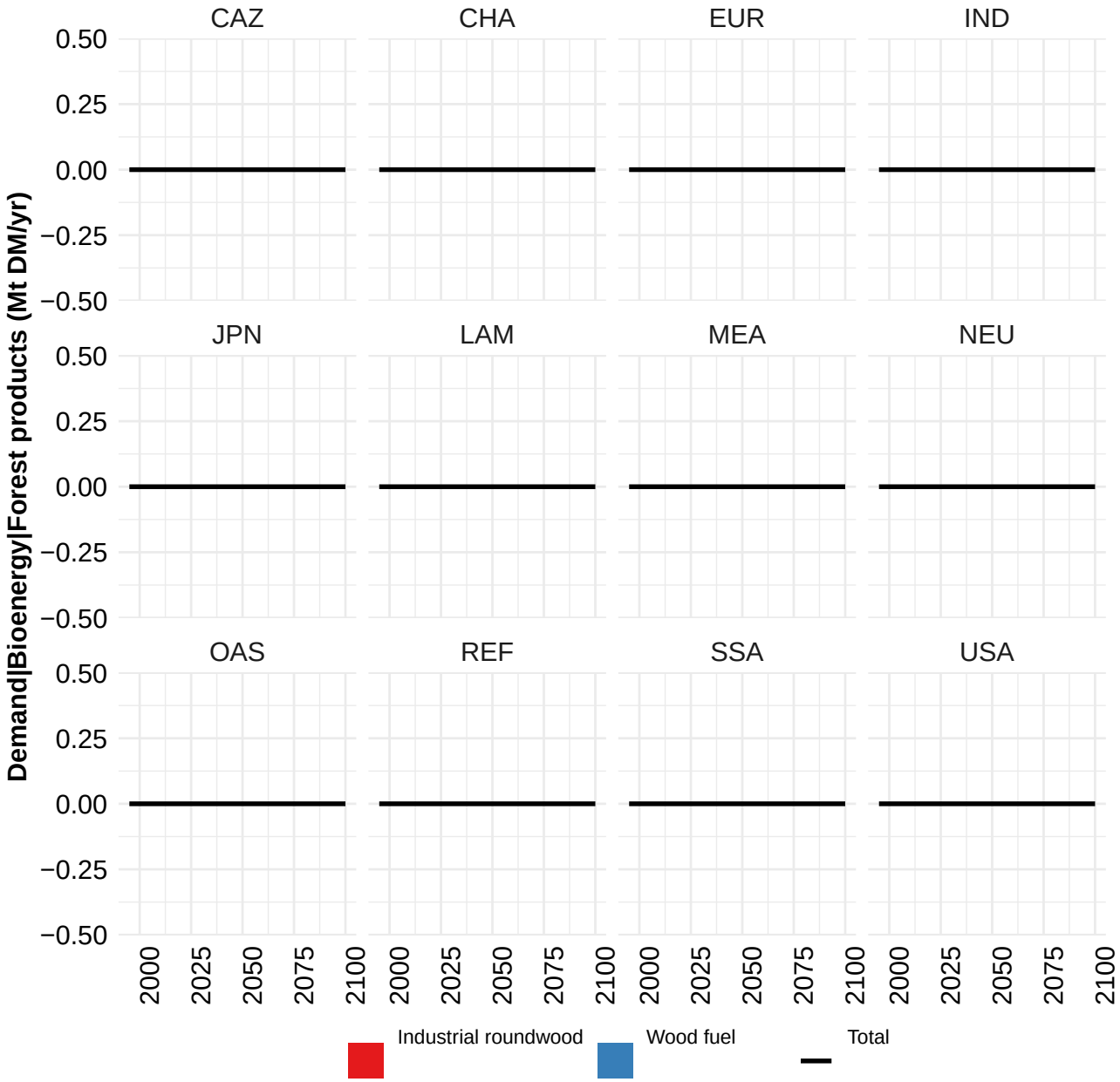
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	103	112	116	123	135	145	151	148	142	133
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	26	30	35	38	43	49	47	42	36	28
EUR	6	4	4	3	3	3	3	2	1	1
IND	20	24	26	27	30	32	33	35	33	32
JPN	1	0	0	0	0	0	0	0	0	0
LAM	6	6	6	5	7	6	6	6	5	4
MEA	4	4	4	4	5	5	6	5	7	5
NEU	2	2	3	3	3	2	3	2	2	1
OAS	21	23	24	26	29	29	30	34	36	39
REF	10	11	7	8	6	6	11	9	7	5
SSA	7	8	8	8	9	11	12	13	15	18
USA	0	0	0	0	0	0	0	0	0	0

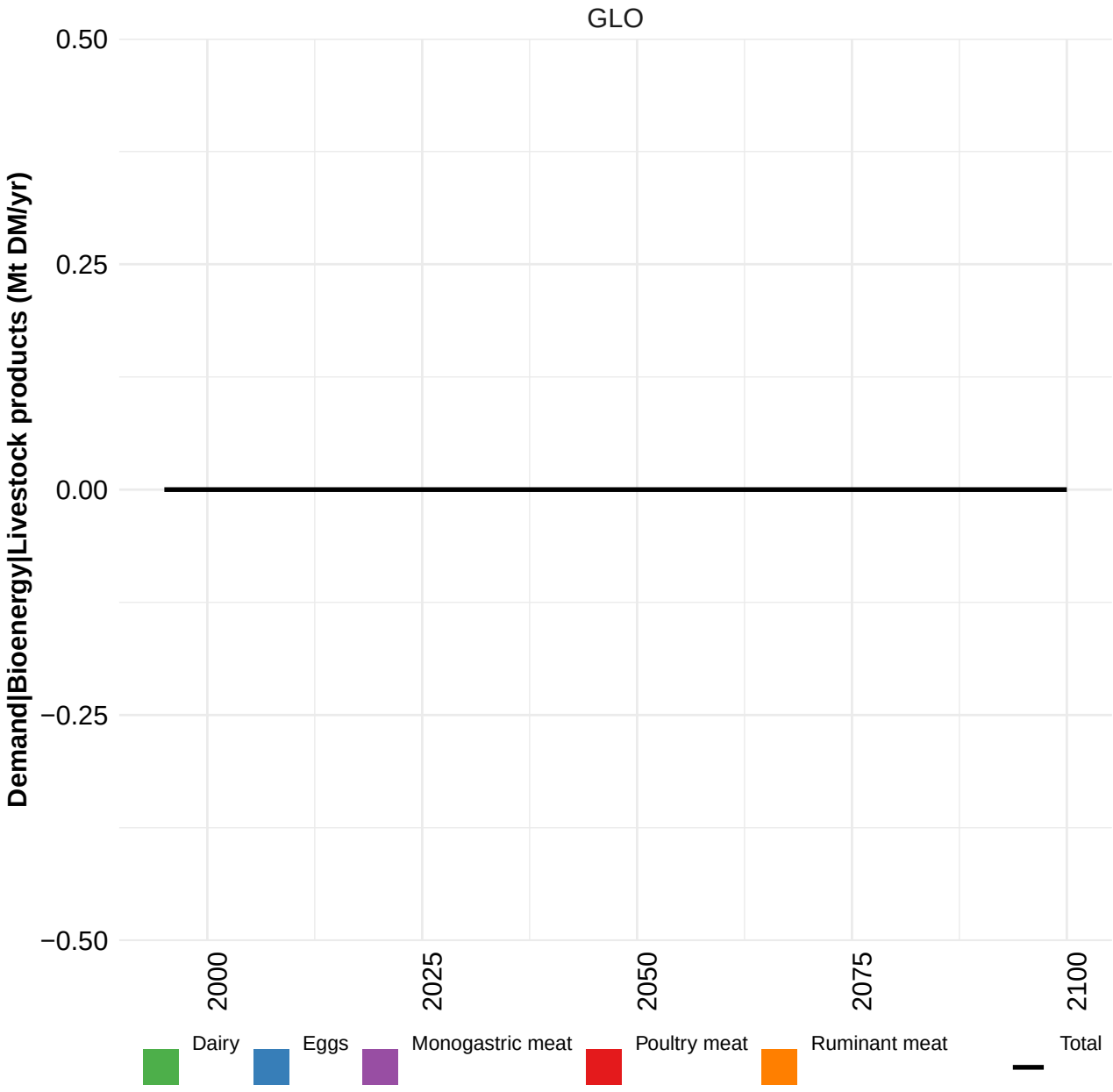
Table 121: FAO — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr)

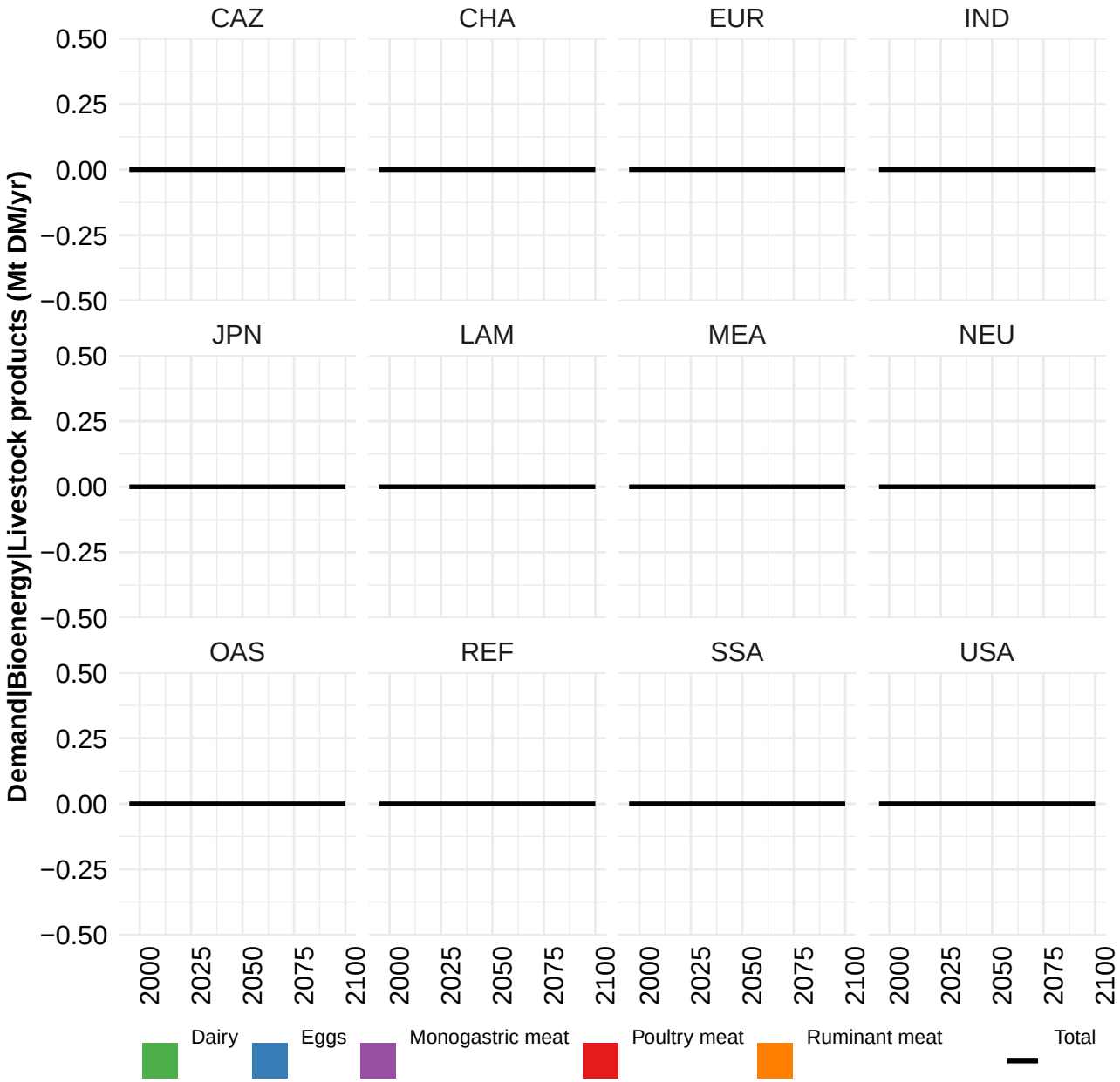

GLO
Demand|Bioenergy|Crops (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

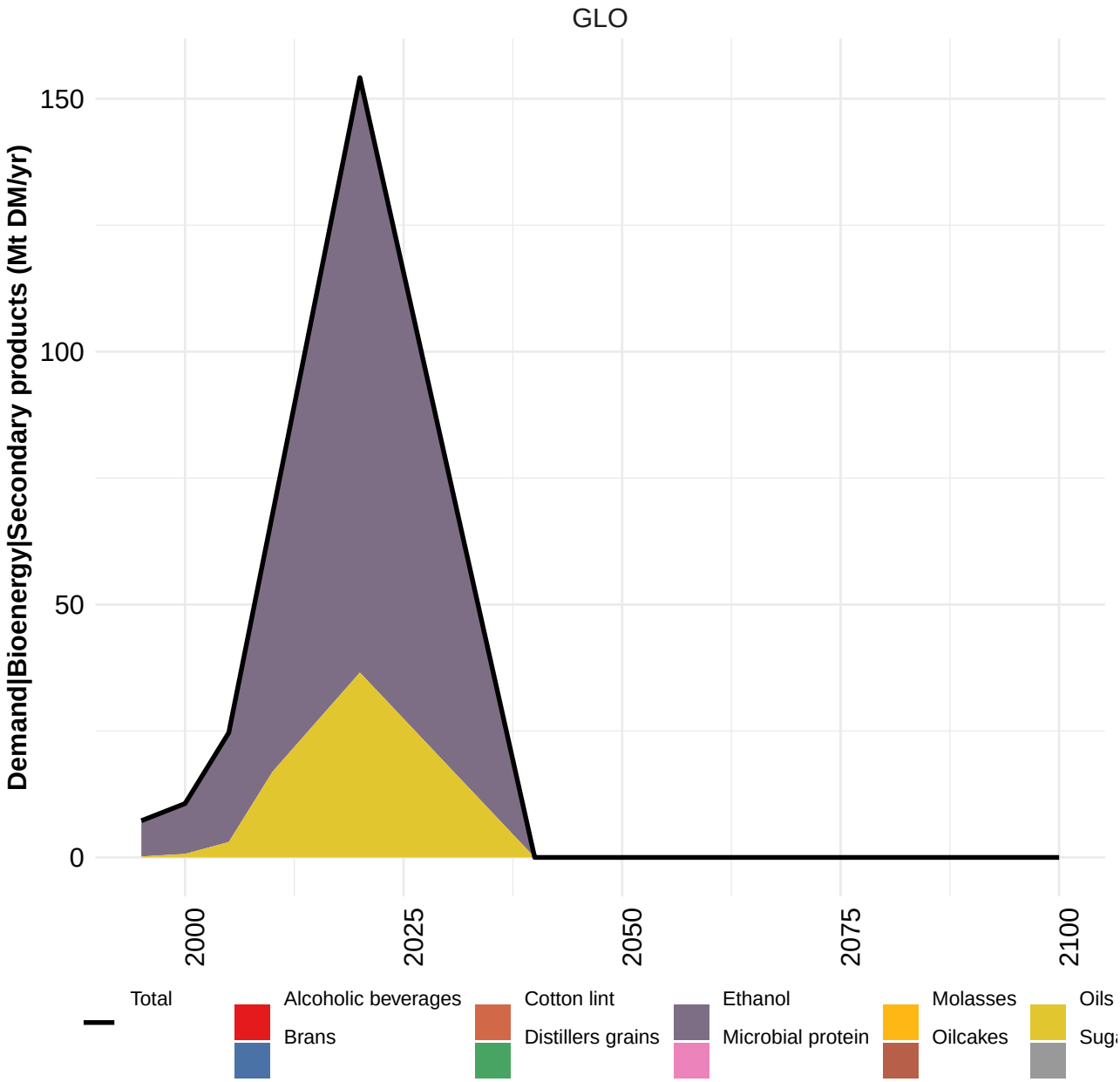

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Bioenergy|Crops (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

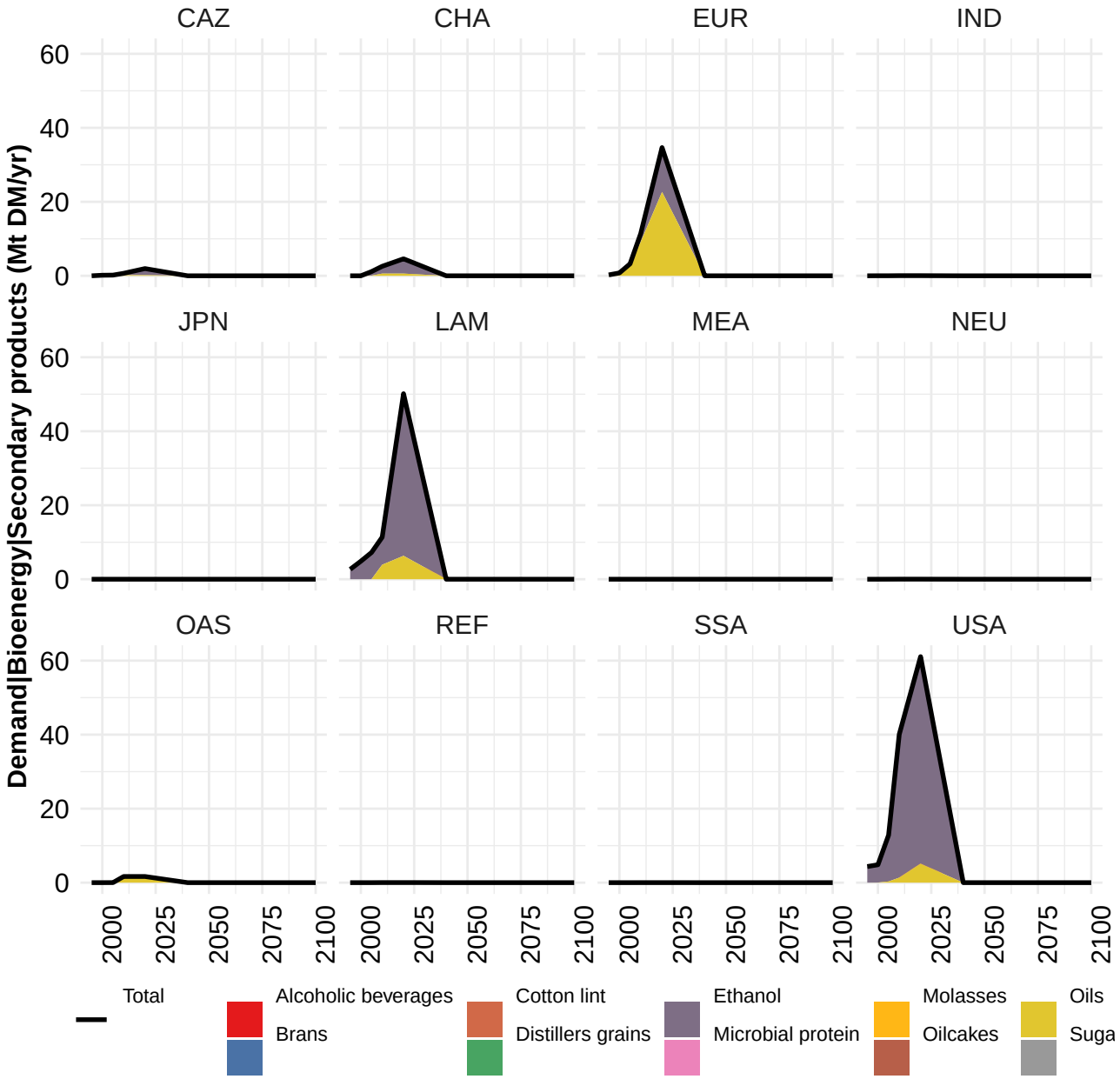

GLO
Demand|Bioenergy|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Bioenergy|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

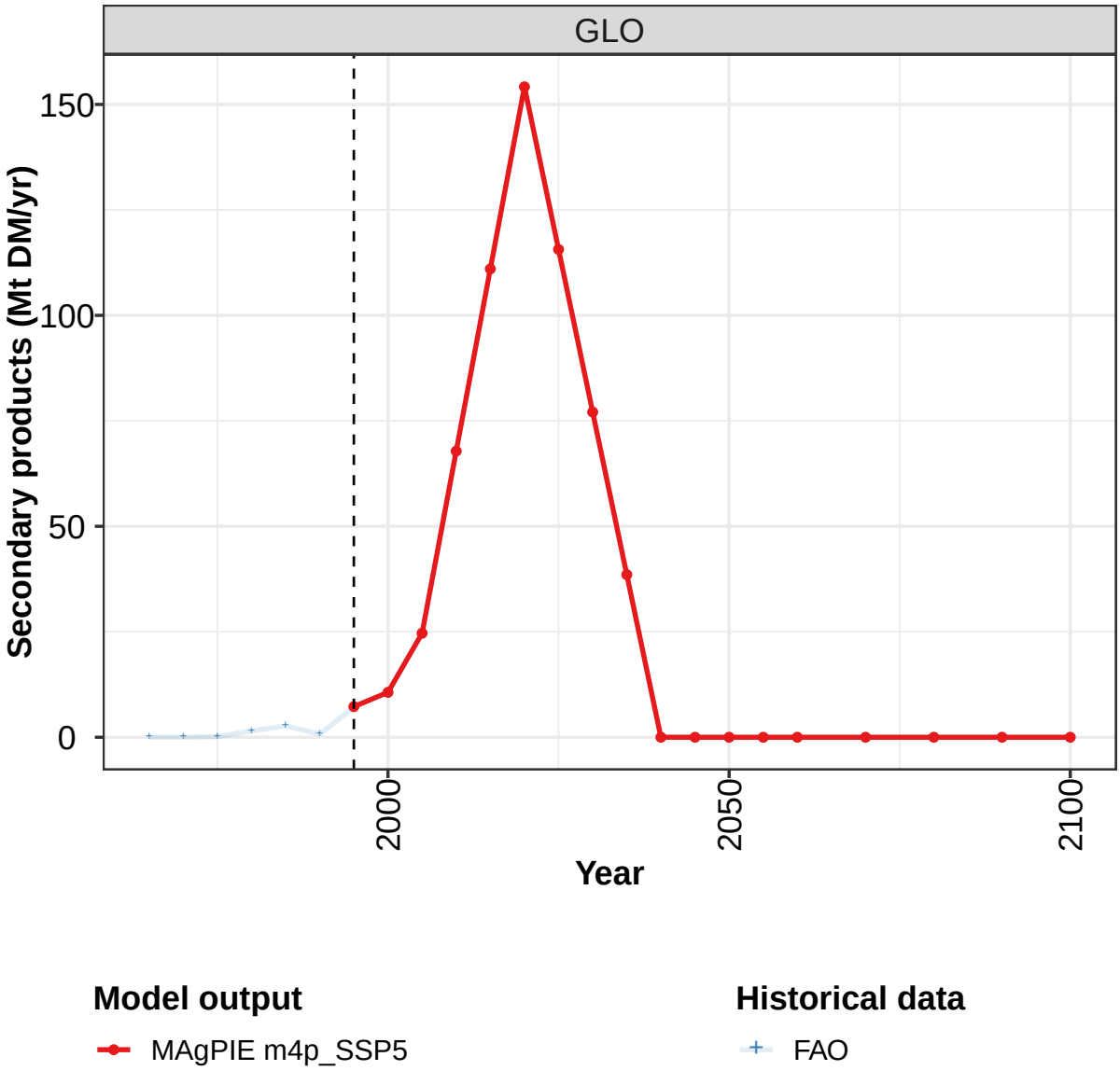

GLO
Demand|Bioenergy|Livestock products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

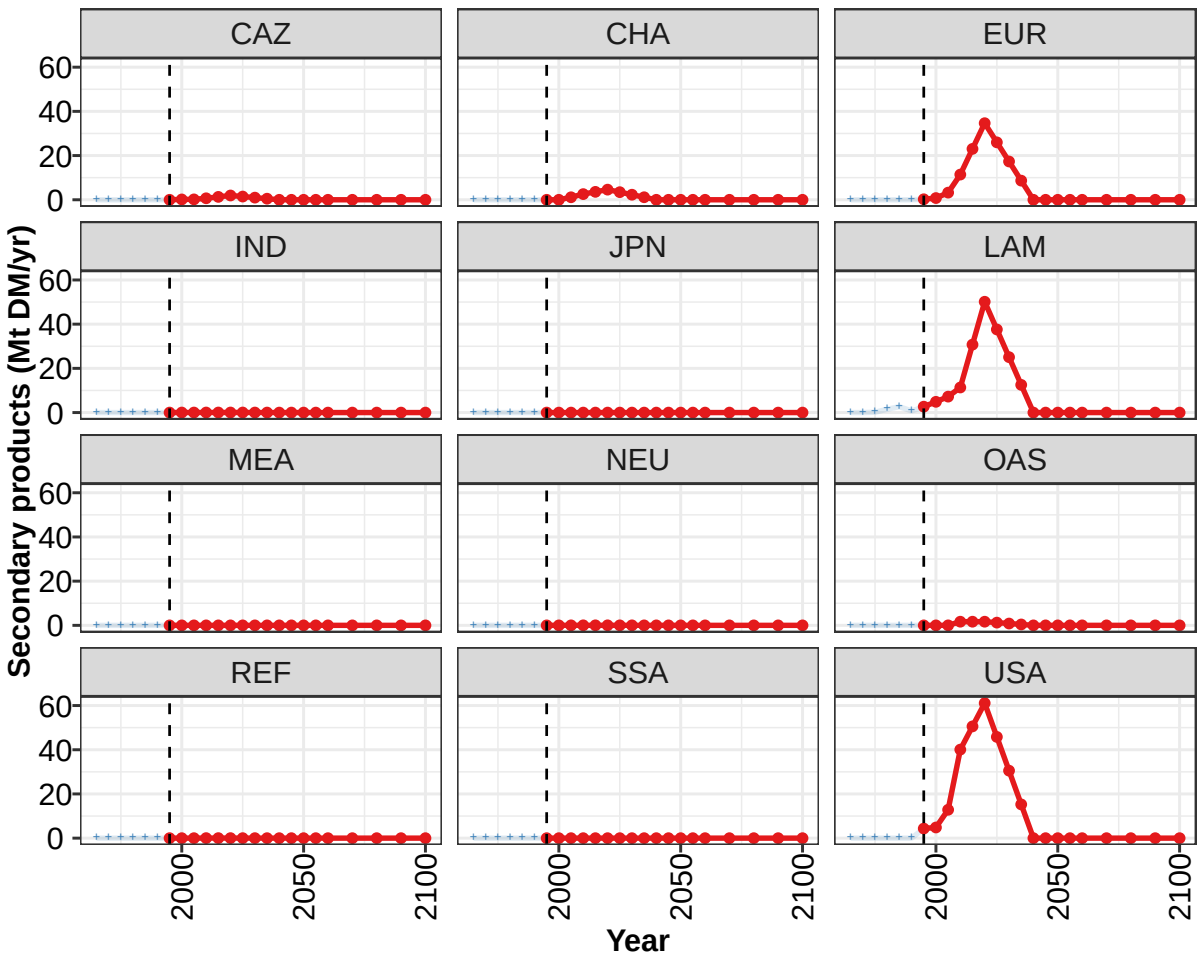

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Bioenergy|Livestock products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


GLO
Demand|Bioenergy|Secondary products (Mt DM/yr)
150
100
50
0
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Bioenergy|Secondary products (Mt DM/yr)
0
20
40
60
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Suga

4.4 Secondary products





Model output

MAgPIE m4p_SSP5

Historical data

FAO

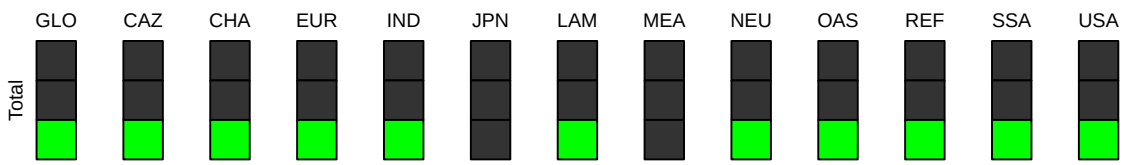


Figure 41: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7	11	25	68	111	154	116	77	39	0	0
CAZ	0	0	0	1	1	2	1	1	0	0	0
CHA	0	0	1	3	4	5	3	2	1	0	0
EUR	0	1	3	11	23	35	26	17	9	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	5	7	11	31	50	38	25	13	0	0
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	2	2	2	1	1	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	4	5	13	40	51	61	46	31	15	0	0

Table 122: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products (Mt DM/yr) [PART 1/2]

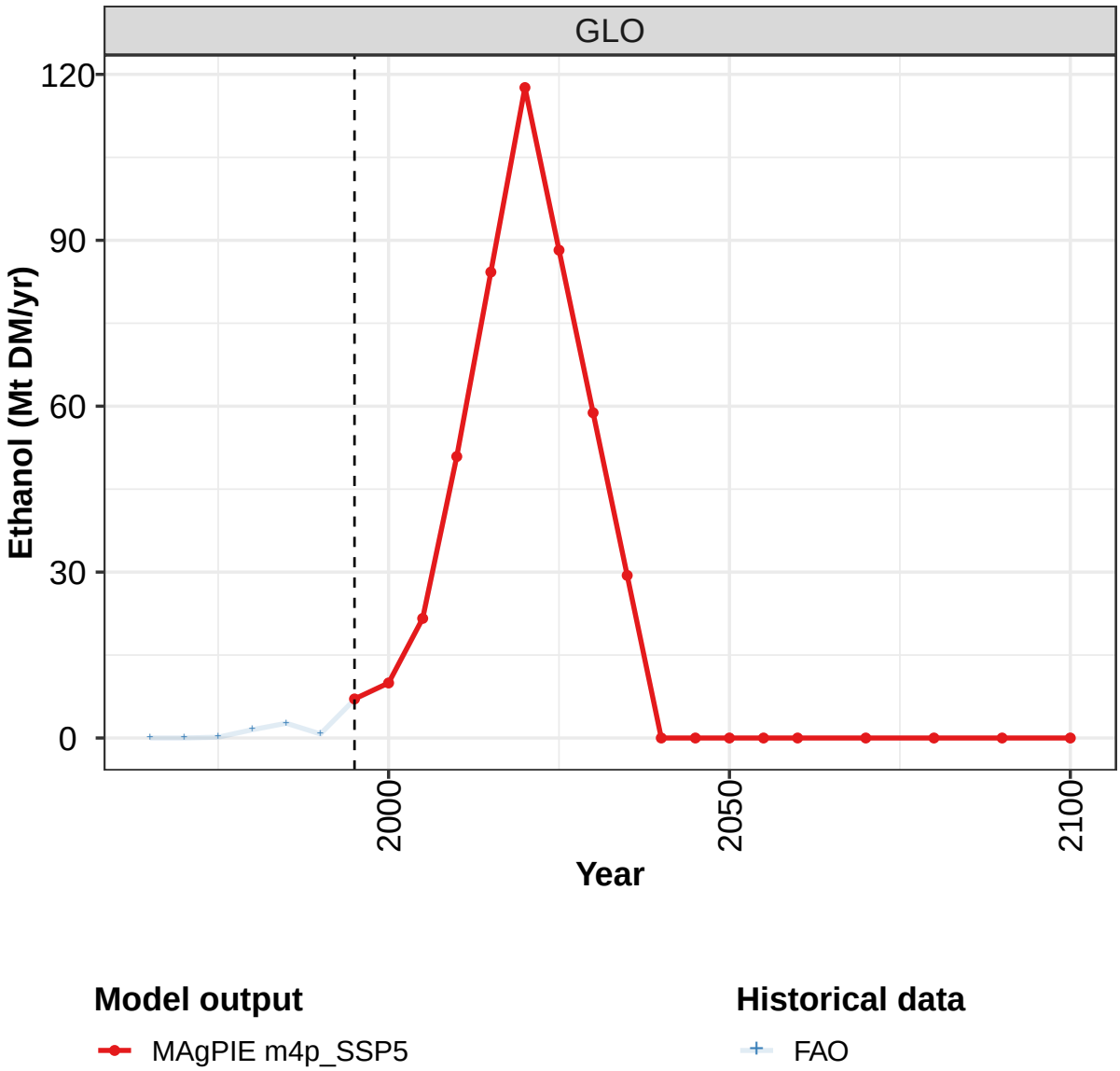
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

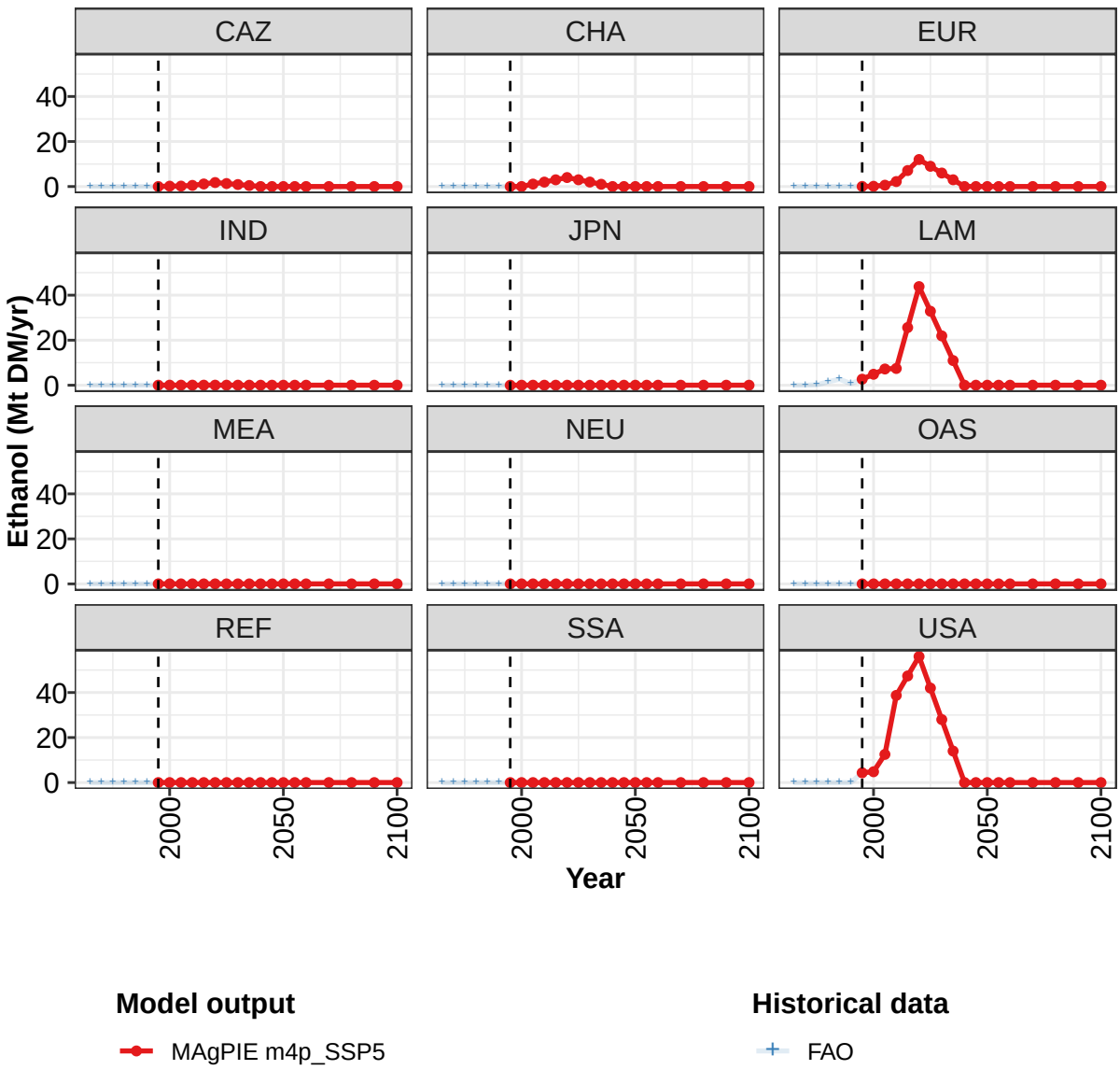
Table 123: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.1	1.5	2.7	0.7	7.2	10.6	24.6	67.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.7
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	3.2	11.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.1	1.5	2.7	0.7	2.6	4.8	7.2	11.4
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.8	12.8	40.1

Table 124: FAO — Demand—Bioenergy—Secondary products (Mt DM/yr)

4.4.1 Ethanol


GLO
120
90
60
30
0
Ethanol (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



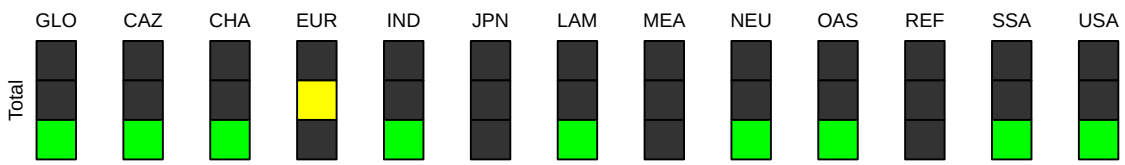


Figure 42: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products—Ethanol (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7	10	22	51	84	118	88	59	29	0	0
CAZ	0	0	0	1	1	2	1	1	0	0	0
CHA	0	0	1	2	3	4	3	2	1	0	0
EUR	0	0	1	2	7	12	9	6	3	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	5	7	7	26	44	33	22	11	0	0
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	4	5	13	39	47	56	42	28	14	0	0

Table 125: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products—Ethanol (Mt DM/yr) [PART 1/2]

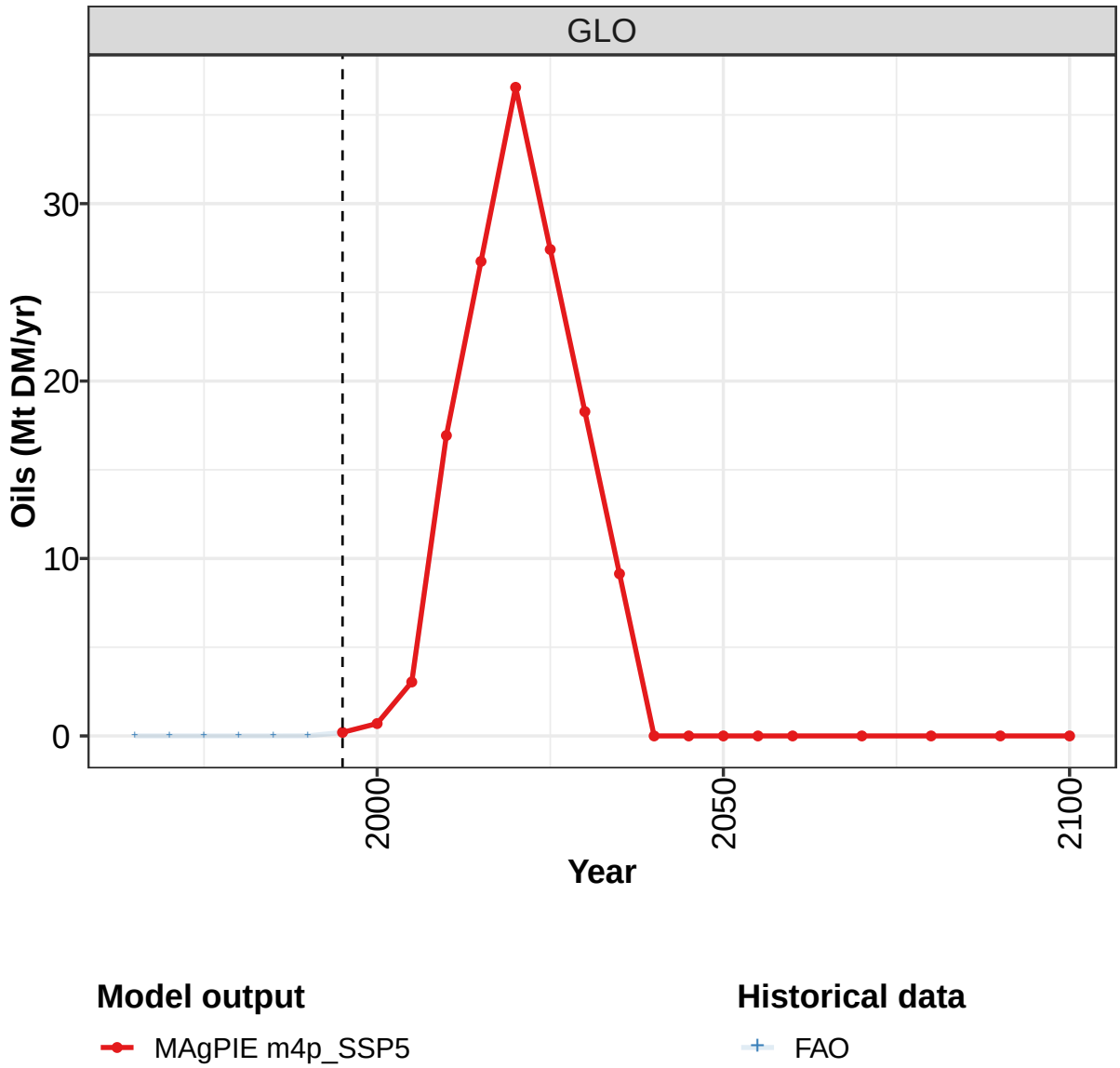
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

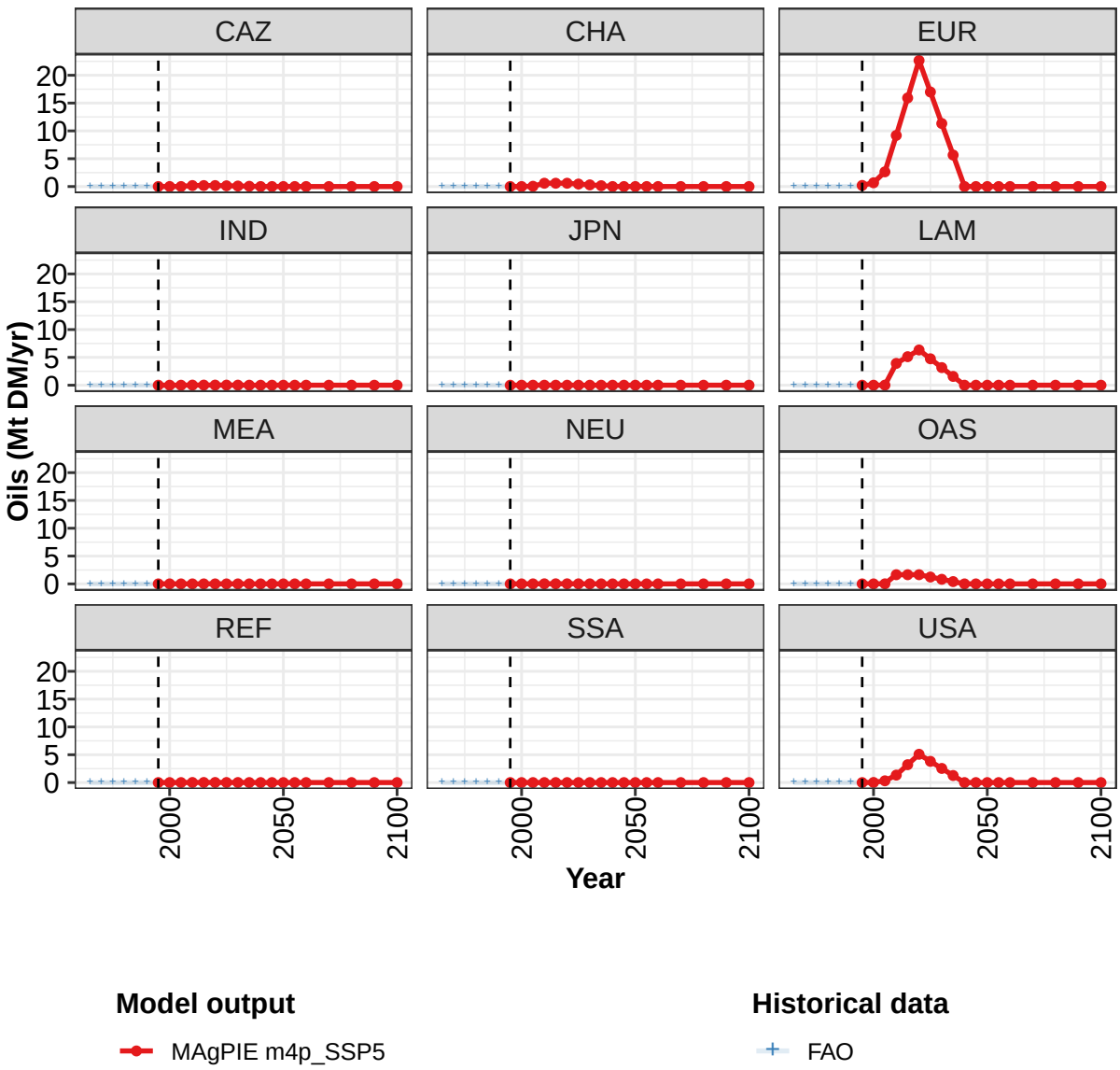
Table 126: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products—Ethanol (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.1	1.5	2.7	0.7	7.0	9.9	21.6	50.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.5
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	2.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.1	1.5	2.7	0.7	2.6	4.8	7.2	7.4
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.8	12.5	38.7

Table 127: FAO — Demand—Bioenergy—Secondary products—Ethanol (Mt DM/yr)

4.4.2 Oils


GLO
Oils (Mt DM/yr)
30
20
10
0
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



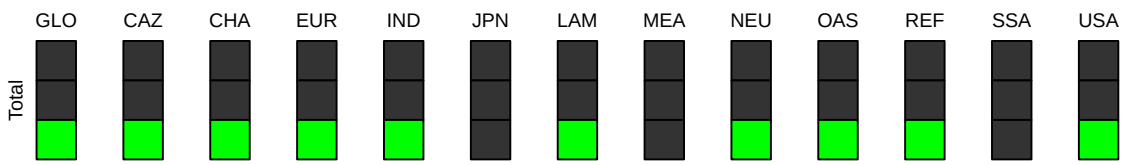


Figure 43: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.2	0.7	3.0	16.9	26.7	36.6	27.4	18.3	9.1	0.0	0.0
CAZ	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.6	0.6	0.6	0.4	0.3	0.1	0.0	0.0
EUR	0.2	0.7	2.6	9.2	15.9	22.7	17.0	11.3	5.7	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	3.9	5.1	6.3	4.8	3.2	1.6	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.0	0.0	0.0	1.7	1.7	1.7	1.2	0.8	0.4	0.0	0.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.3	1.3	3.2	5.1	3.8	2.5	1.3	0.0	0.0

Table 128: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products—Oils (Mt DM/yr) [PART 1/2]

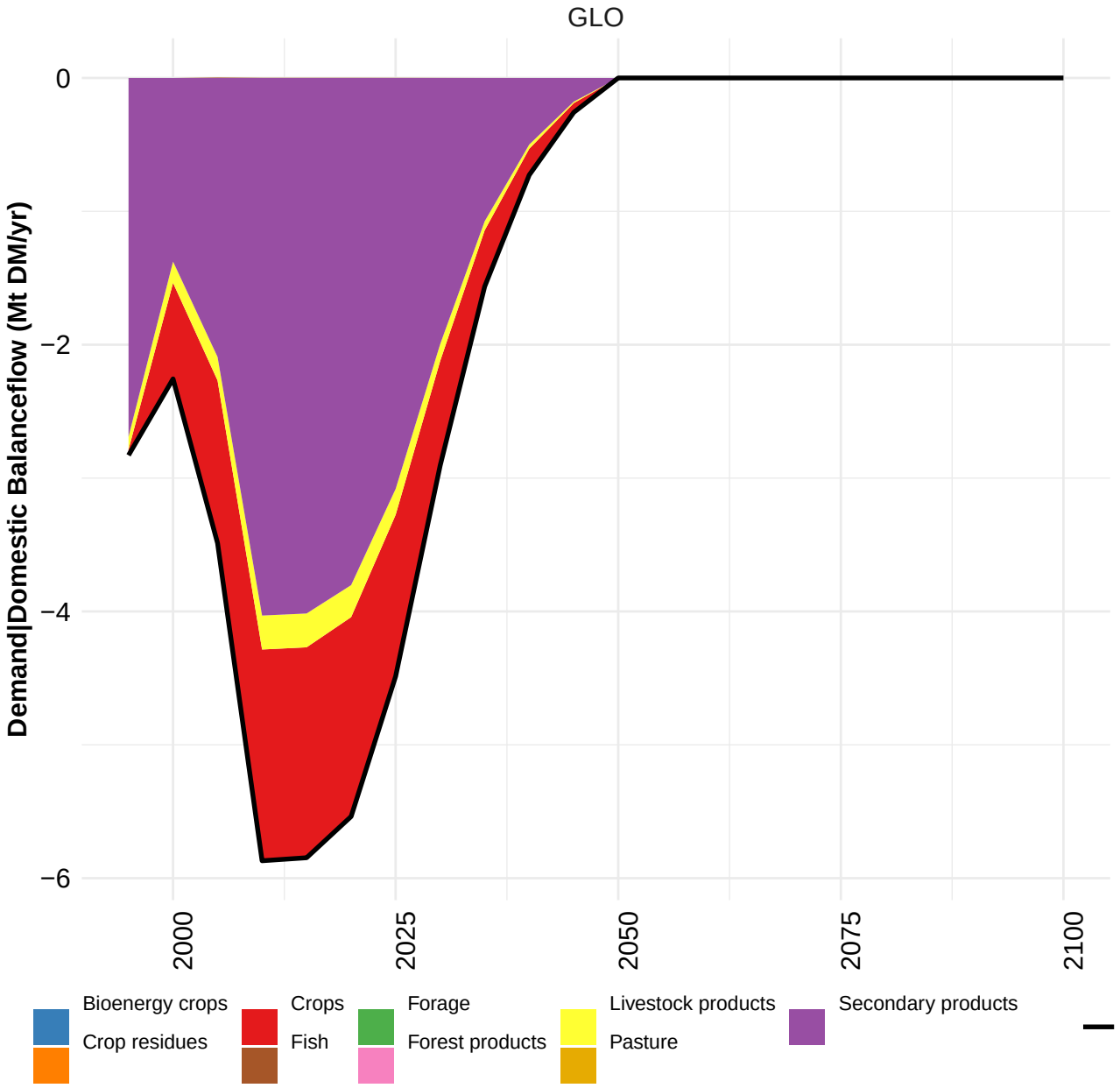
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

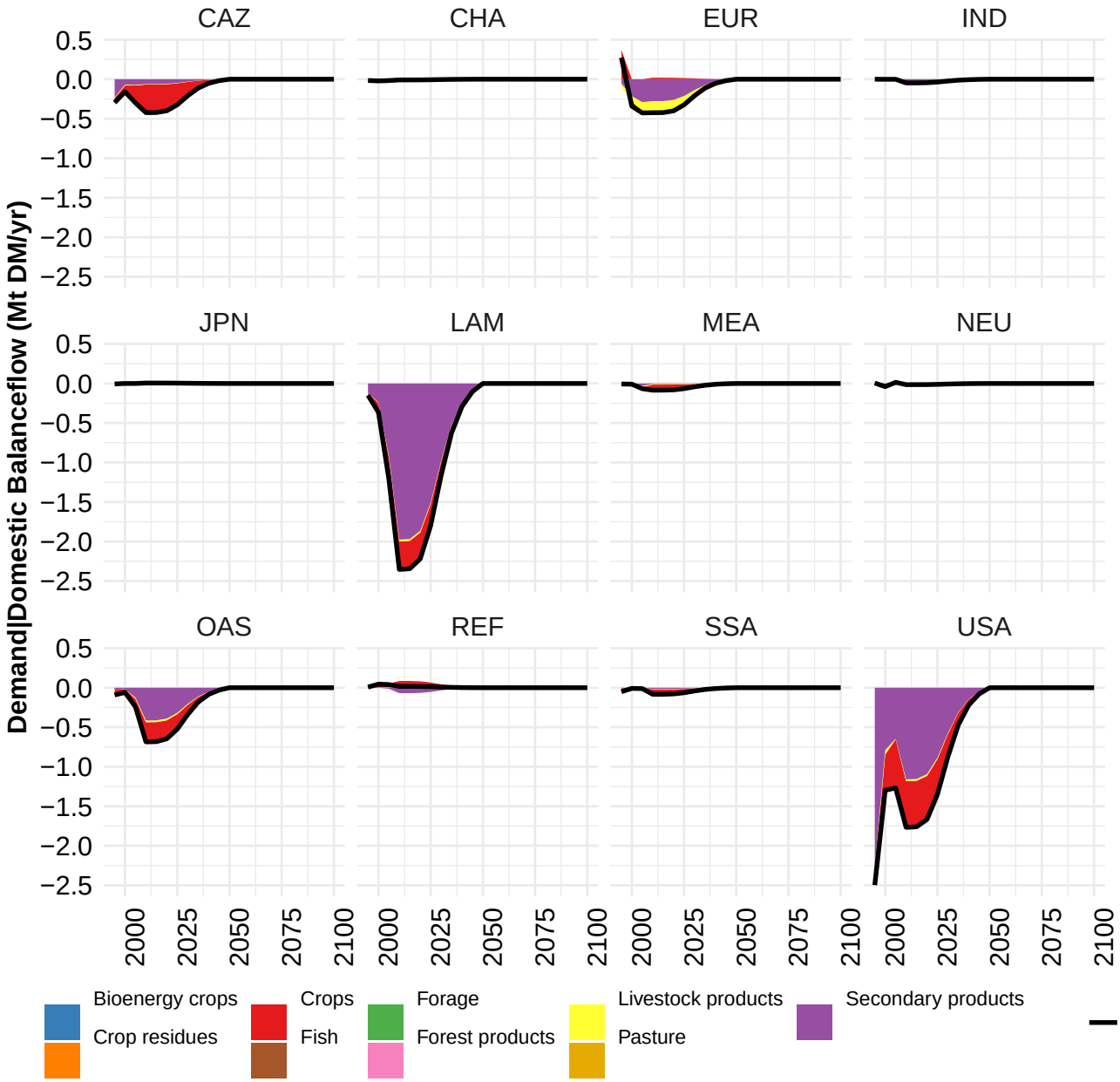
Table 129: MAgPIE m4p_SSP5 — Demand—Bioenergy—Secondary products—Oils (Mt DM/yr) [PART 2/2]

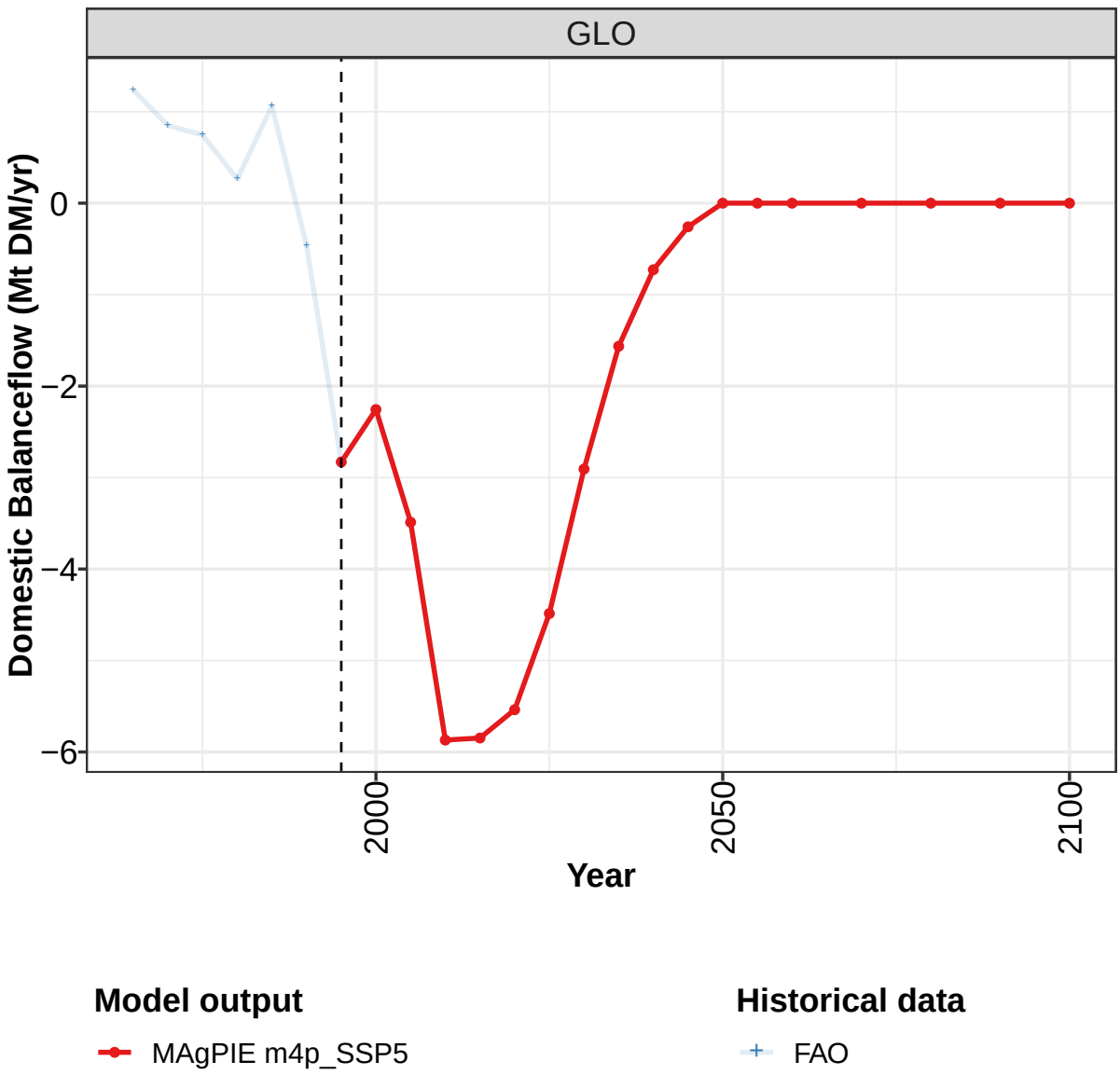
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	3.0	16.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	2.6	9.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3

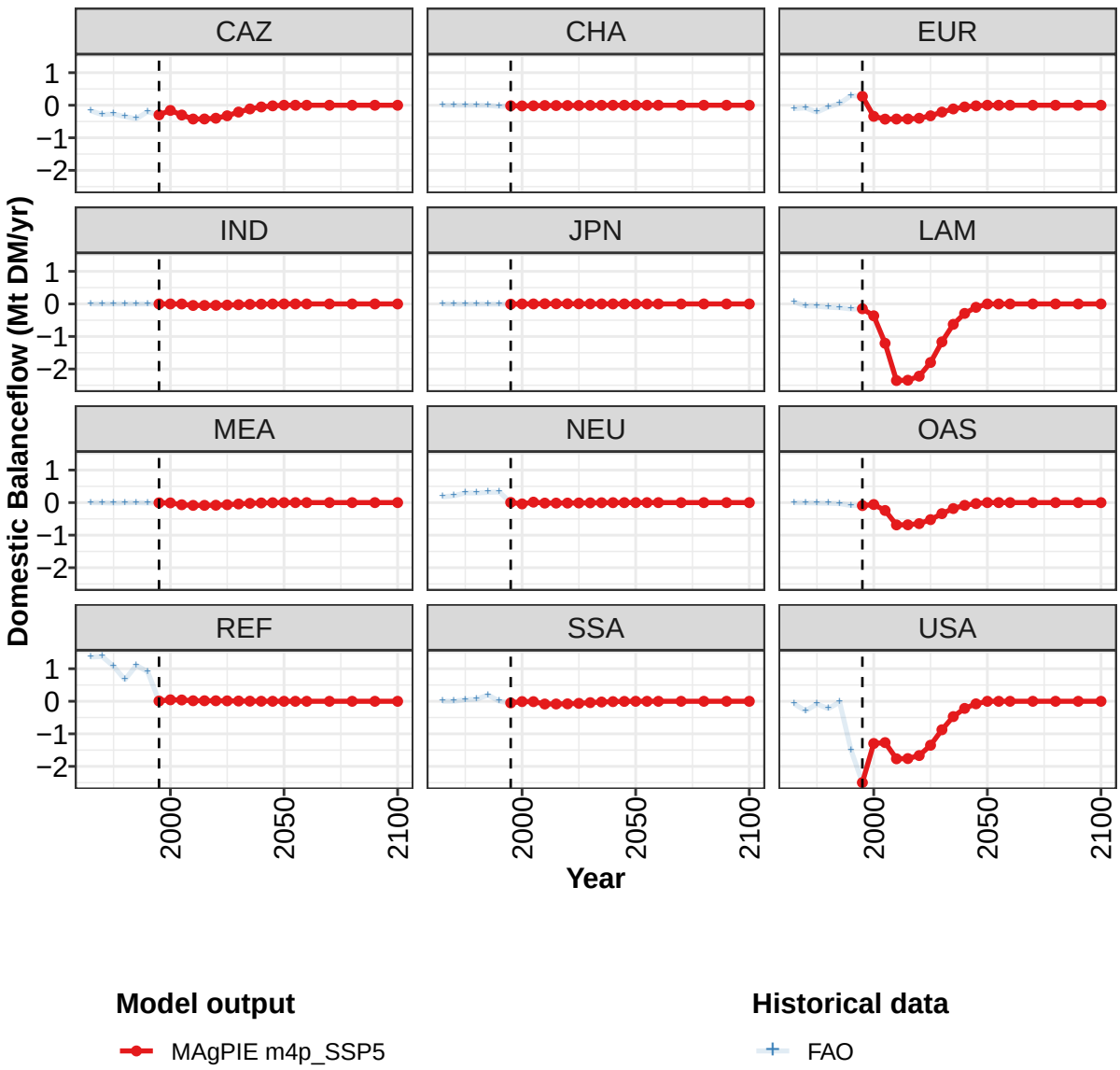
Table 130: FAO — Demand—Bioenergy—Secondary products—Oils (Mt DM/yr)

5 Domestic Balanceflow




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Domestic Balanceflow (Mt DM/yr)
0.5
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
Domestic Balanceflow (Mt DM/yr)
0
−2
−4
−6
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



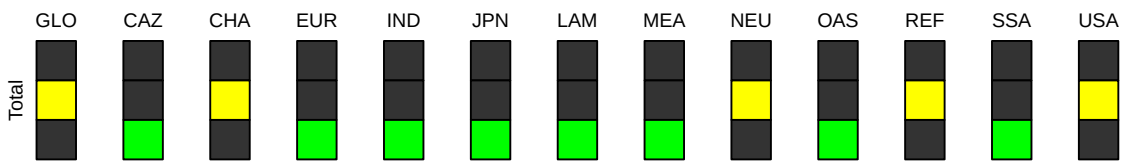


Figure 44: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-2.829	-2.256	-3.488	-5.870	-5.847	-5.538	-4.486	-2.907	-1.564	-0.728	-0.258
CAZ	-0.296	-0.159	-0.300	-0.423	-0.421	-0.399	-0.324	-0.210	-0.113	-0.052	-0.019
CHA	-0.017	-0.021	-0.018	-0.009	-0.009	-0.009	-0.007	-0.004	-0.002	-0.001	-0.000
EUR	0.272	-0.341	-0.427	-0.424	-0.423	-0.400	-0.324	-0.210	-0.113	-0.053	-0.019
IND	0.000	-0.001	-0.001	-0.047	-0.047	-0.044	-0.036	-0.023	-0.013	-0.006	-0.002
JPN	-0.006	-0.000	-0.000	0.005	0.005	0.005	0.004	0.003	0.002	0.001	0.000
LAM	-0.150	-0.365	-1.209	-2.354	-2.345	-2.220	-1.799	-1.166	-0.627	-0.291	-0.104
MEA	-0.006	-0.009	-0.066	-0.085	-0.085	-0.081	-0.065	-0.042	-0.023	-0.011	-0.004
NEU	0.005	-0.040	0.014	-0.015	-0.015	-0.014	-0.011	-0.007	-0.004	-0.002	-0.001
OAS	-0.092	-0.059	-0.242	-0.685	-0.682	-0.646	-0.524	-0.339	-0.183	-0.085	-0.030
REF	0.008	0.045	0.040	0.017	0.017	0.016	0.013	0.009	0.005	0.002	0.001
SSA	-0.050	-0.009	-0.011	-0.083	-0.083	-0.078	-0.064	-0.041	-0.022	-0.010	-0.004
USA	-2.498	-1.297	-1.269	-1.767	-1.760	-1.667	-1.350	-0.875	-0.471	-0.219	-0.078

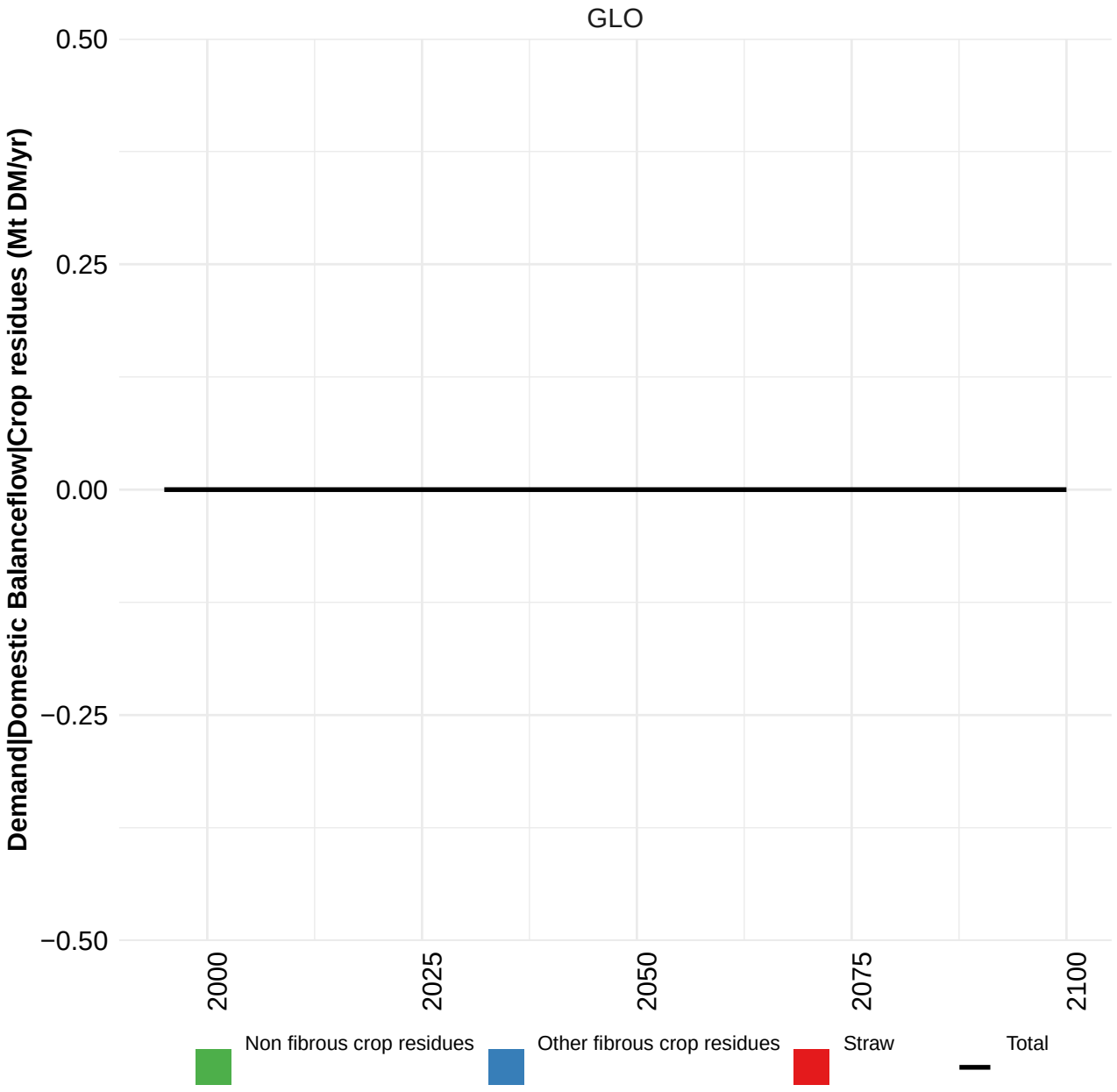
Table 131: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow (Mt DM/yr) [PART 1/2]

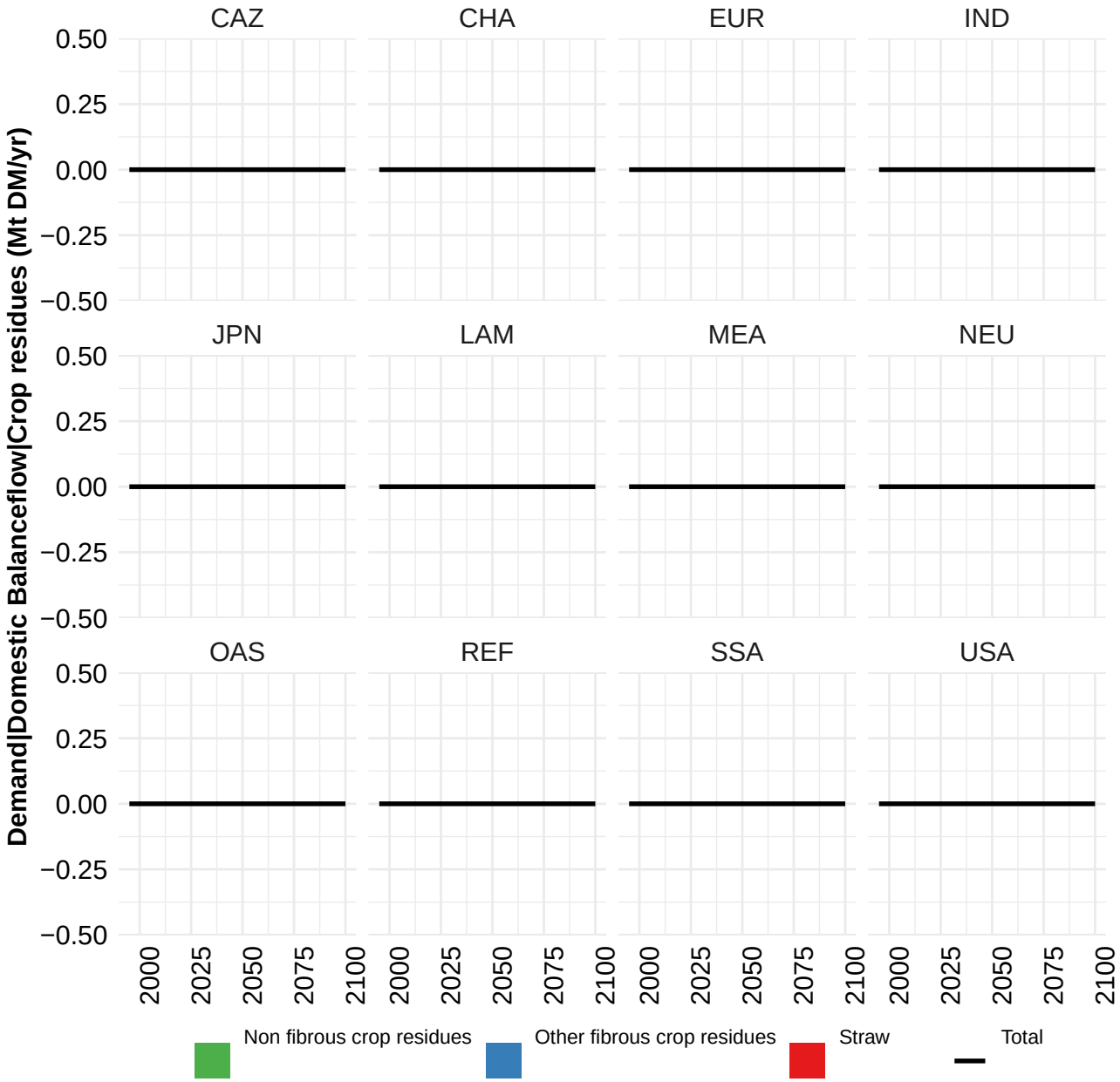
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

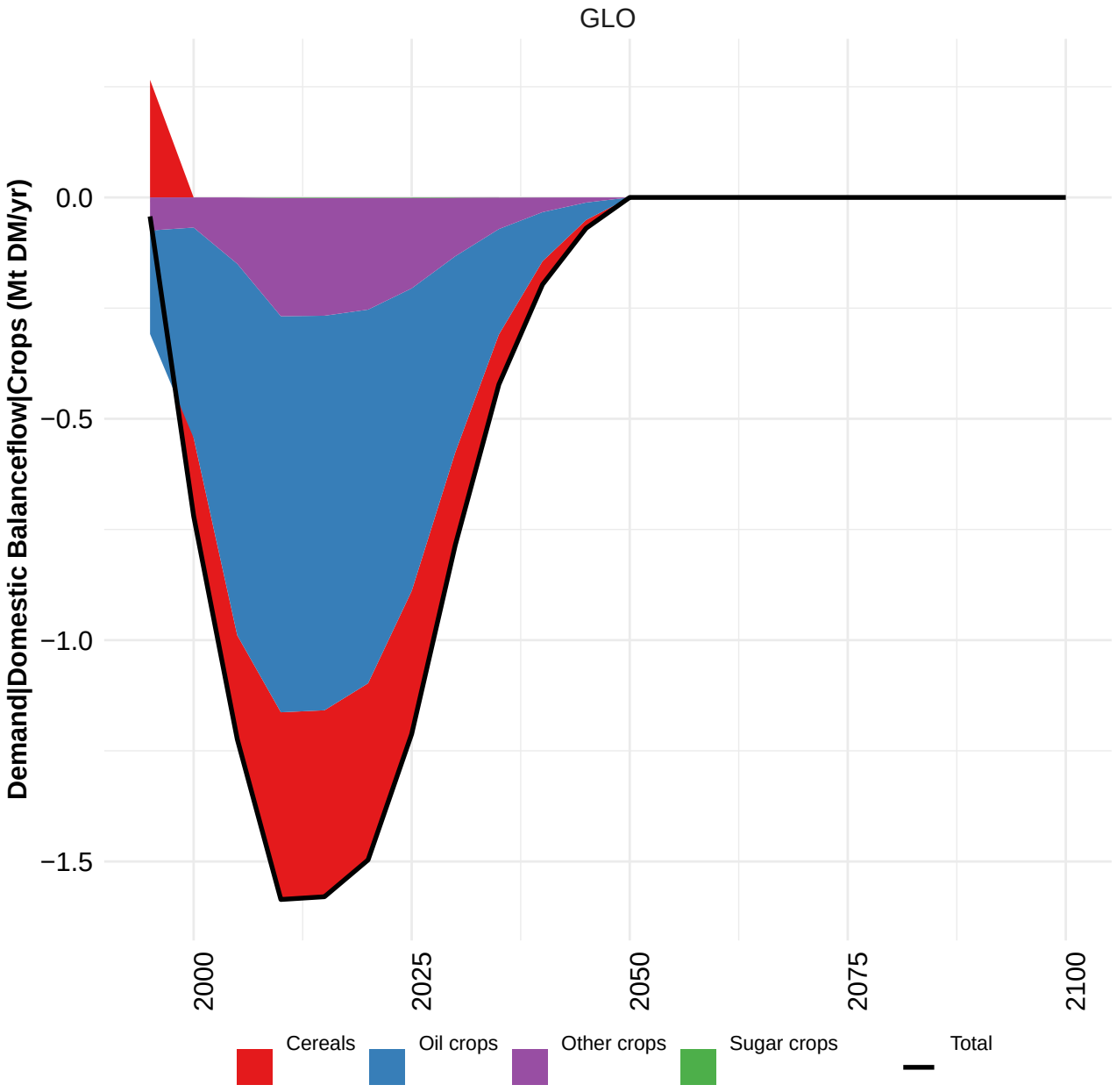
Table 132: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow (Mt DM/yr) [PART 2/2]

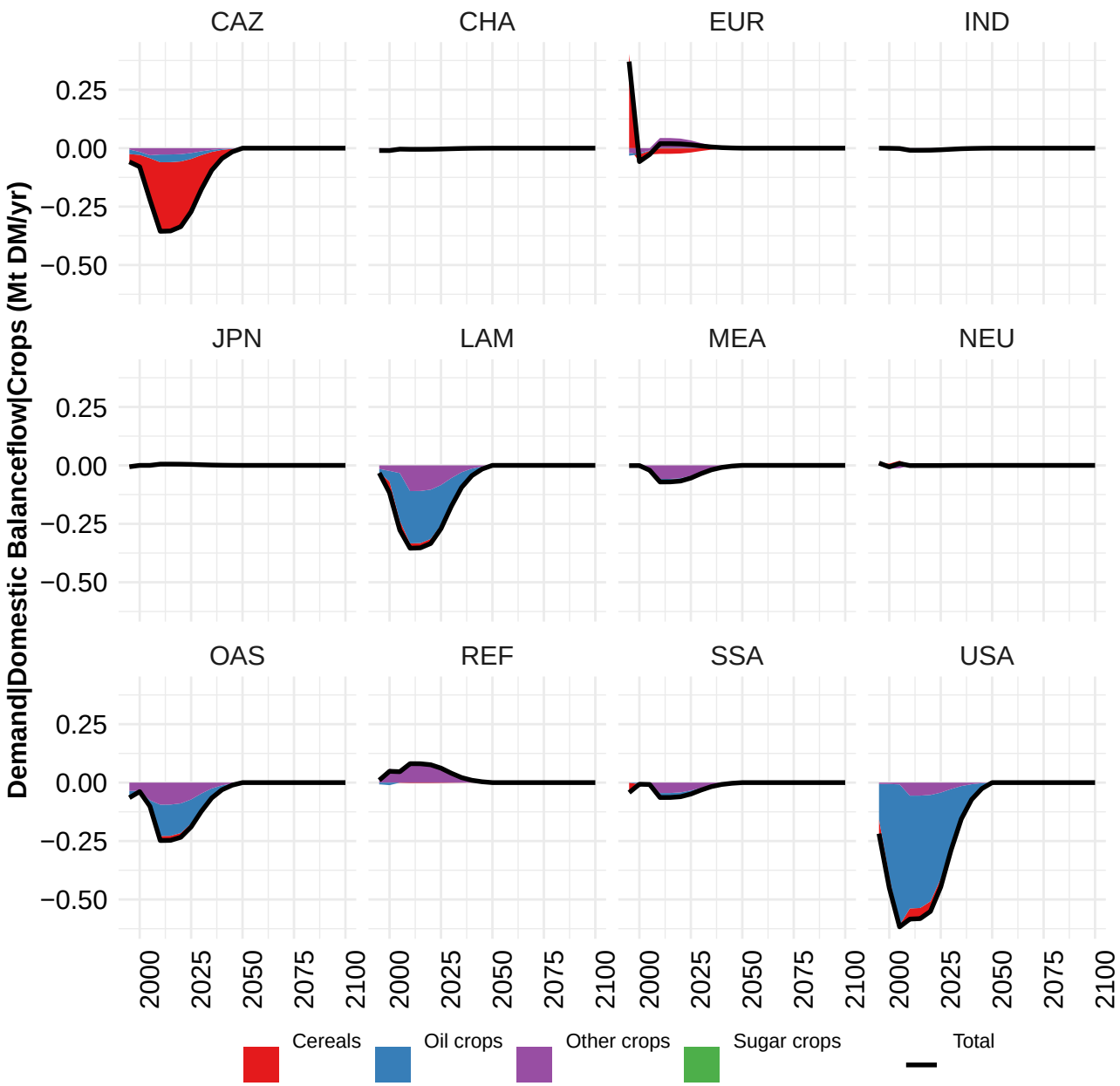
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.24	0.85	0.75	0.26	1.06	-0.47	-2.83	-2.26	-3.49	-5.87
CAZ	-0.17	-0.29	-0.27	-0.35	-0.42	-0.20	-0.30	-0.16	-0.30	-0.42
CHA	-0.00	-0.00	-0.00	-0.00	-0.00	-0.04	-0.02	-0.02	-0.02	-0.01
EUR	-0.10	-0.08	-0.21	-0.06	0.05	0.30	0.27	-0.34	-0.43	-0.42
IND	0.00	0.00	-0.00	-0.00	-0.00	0.00	0.00	-0.00	-0.00	-0.05
JPN	-0.00	-0.01	-0.01	-0.00	-0.01	-0.01	-0.01	-0.00	-0.00	0.01
LAM	0.06	-0.06	-0.07	-0.10	-0.12	-0.15	-0.15	-0.36	-1.21	-2.35
MEA	-0.00	-0.00	-0.02	-0.01	-0.00	-0.01	-0.01	-0.01	-0.07	-0.09
NEU	0.18	0.21	0.30	0.29	0.32	0.32	0.01	-0.04	0.01	-0.01
OAS	-0.00	-0.00	-0.01	-0.02	-0.03	-0.09	-0.09	-0.06	-0.24	-0.69
REF	1.36	1.38	1.07	0.67	1.10	0.91	0.01	0.04	0.04	0.02
SSA	0.00	0.00	0.05	0.06	0.19	0.00	-0.05	-0.01	-0.01	-0.08
USA	-0.08	-0.29	-0.09	-0.22	-0.03	-1.50	-2.50	-1.30	-1.27	-1.77

Table 133: FAO — Demand—Domestic Balanceflow (Mt DM/yr)

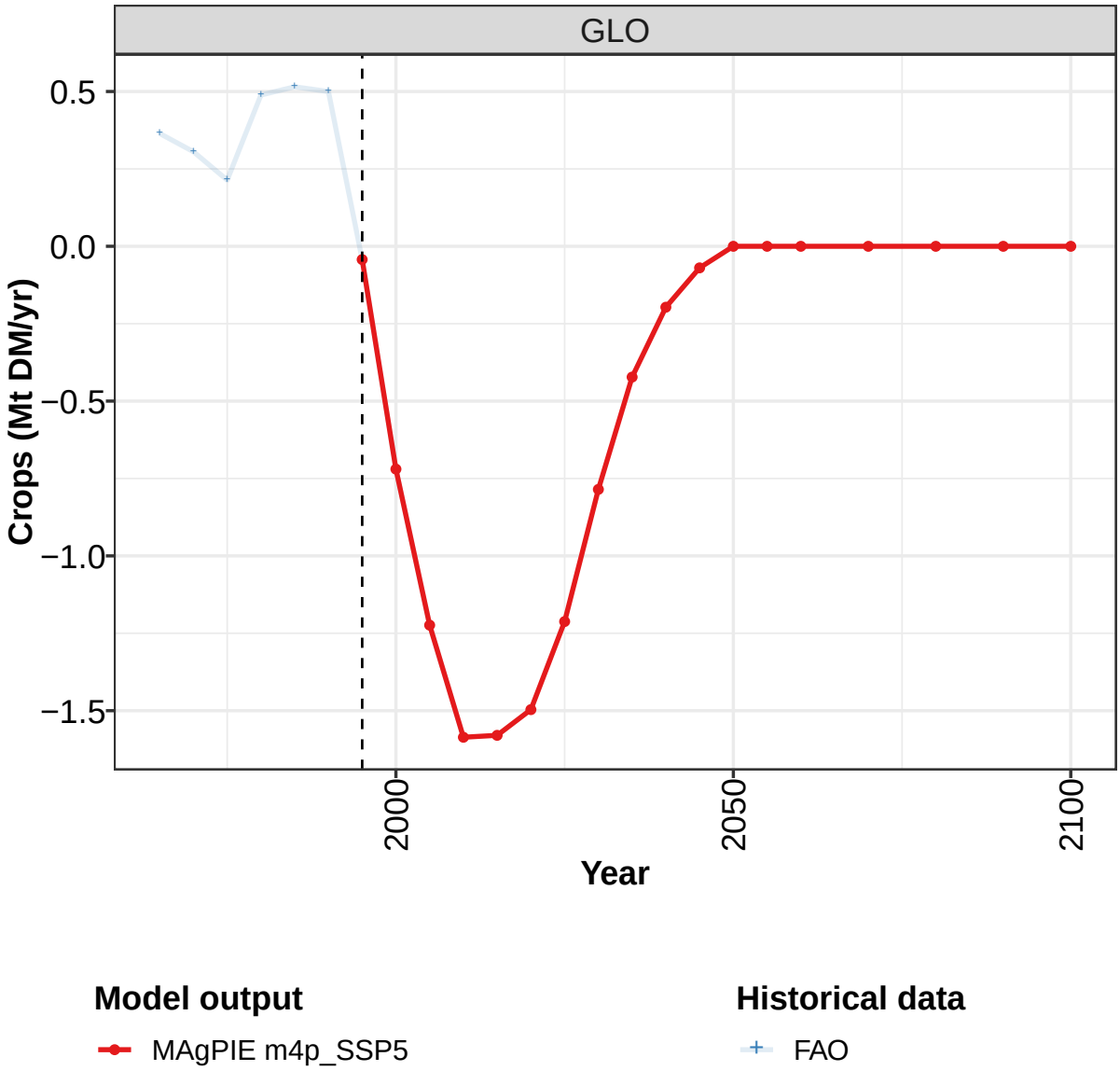

GLO
Demand|Domestic Balanceflow|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

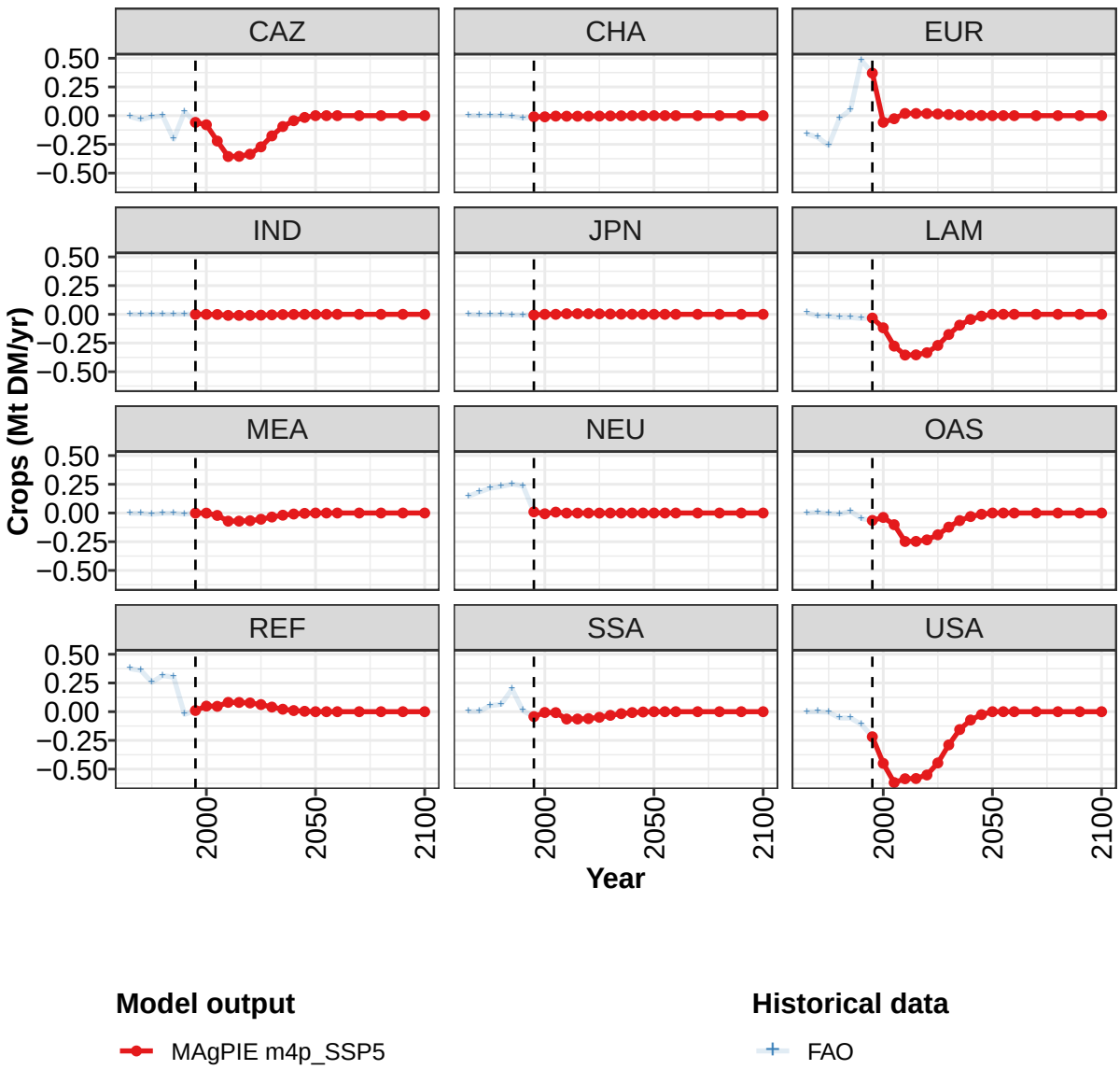

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Domestic Balanceflow|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


GLO
Demand|Domestic Balanceflow|Crops (Mt DM/yr)
0.0
−0.5
−1.0
−1.5
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Domestic Balanceflow|Crops (Mt DM/yr)
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

5.1 Crops


GLO
0.5
0.0
−0.5
−1.0
−1.5
Crops (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



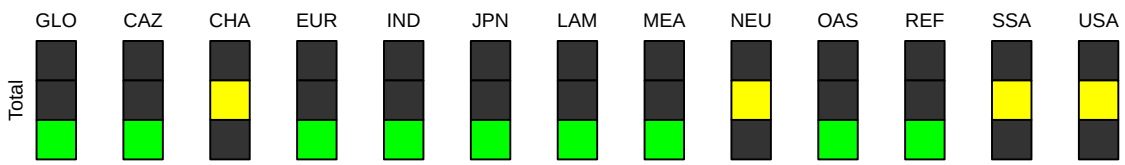


Figure 45: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.043	-0.720	-1.224	-1.586	-1.580	-1.496	-1.212	-0.785	-0.422	-0.197	-0.070
CAZ	-0.059	-0.080	-0.221	-0.356	-0.354	-0.336	-0.272	-0.176	-0.095	-0.044	-0.016
CHA	-0.010	-0.010	-0.004	-0.005	-0.005	-0.005	-0.004	-0.002	-0.001	-0.001	-0.000
EUR	0.370	-0.058	-0.027	0.019	0.019	0.018	0.015	0.010	0.005	0.002	0.001
IND	-0.000	-0.001	-0.002	-0.009	-0.009	-0.009	-0.007	-0.005	-0.002	-0.001	-0.000
JPN	-0.006	0.000	0.000	0.005	0.005	0.005	0.004	0.003	0.002	0.001	0.000
LAM	-0.032	-0.117	-0.277	-0.354	-0.353	-0.334	-0.271	-0.176	-0.094	-0.044	-0.016
MEA	-0.001	-0.001	-0.021	-0.071	-0.071	-0.067	-0.054	-0.035	-0.019	-0.009	-0.003
NEU	0.010	-0.006	0.008	-0.001	-0.001	-0.001	-0.001	-0.000	-0.000	-0.000	0.000
OAS	-0.065	-0.038	-0.102	-0.248	-0.247	-0.234	-0.190	-0.123	-0.066	-0.031	-0.011
REF	0.010	0.048	0.047	0.081	0.081	0.076	0.062	0.040	0.021	0.010	0.004
SSA	-0.043	-0.007	-0.008	-0.064	-0.064	-0.060	-0.049	-0.032	-0.017	-0.008	-0.003
USA	-0.218	-0.450	-0.617	-0.584	-0.582	-0.551	-0.446	-0.289	-0.156	-0.072	-0.026

Table 134: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops (Mt DM/yr) [PART 1/2]

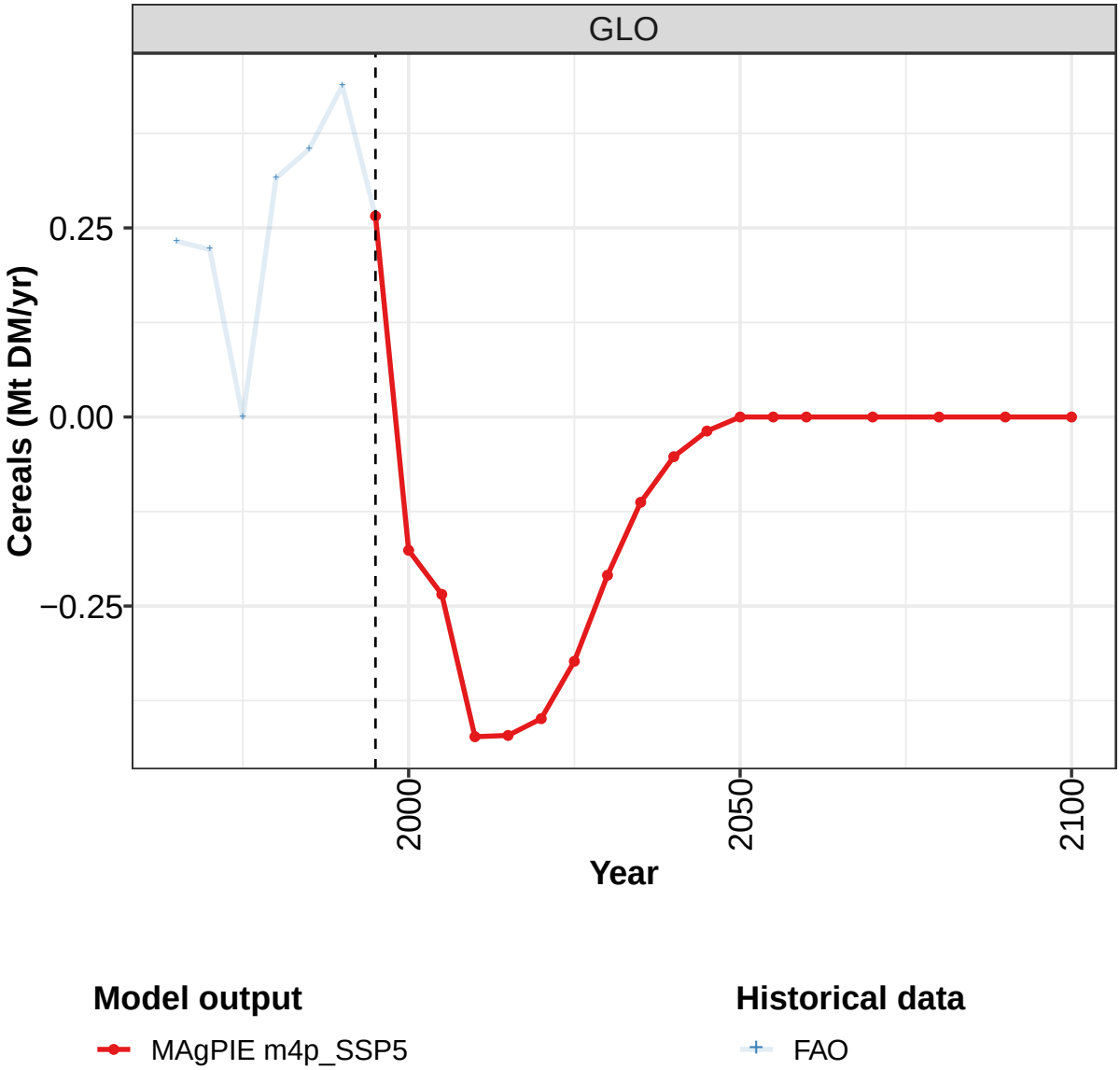
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

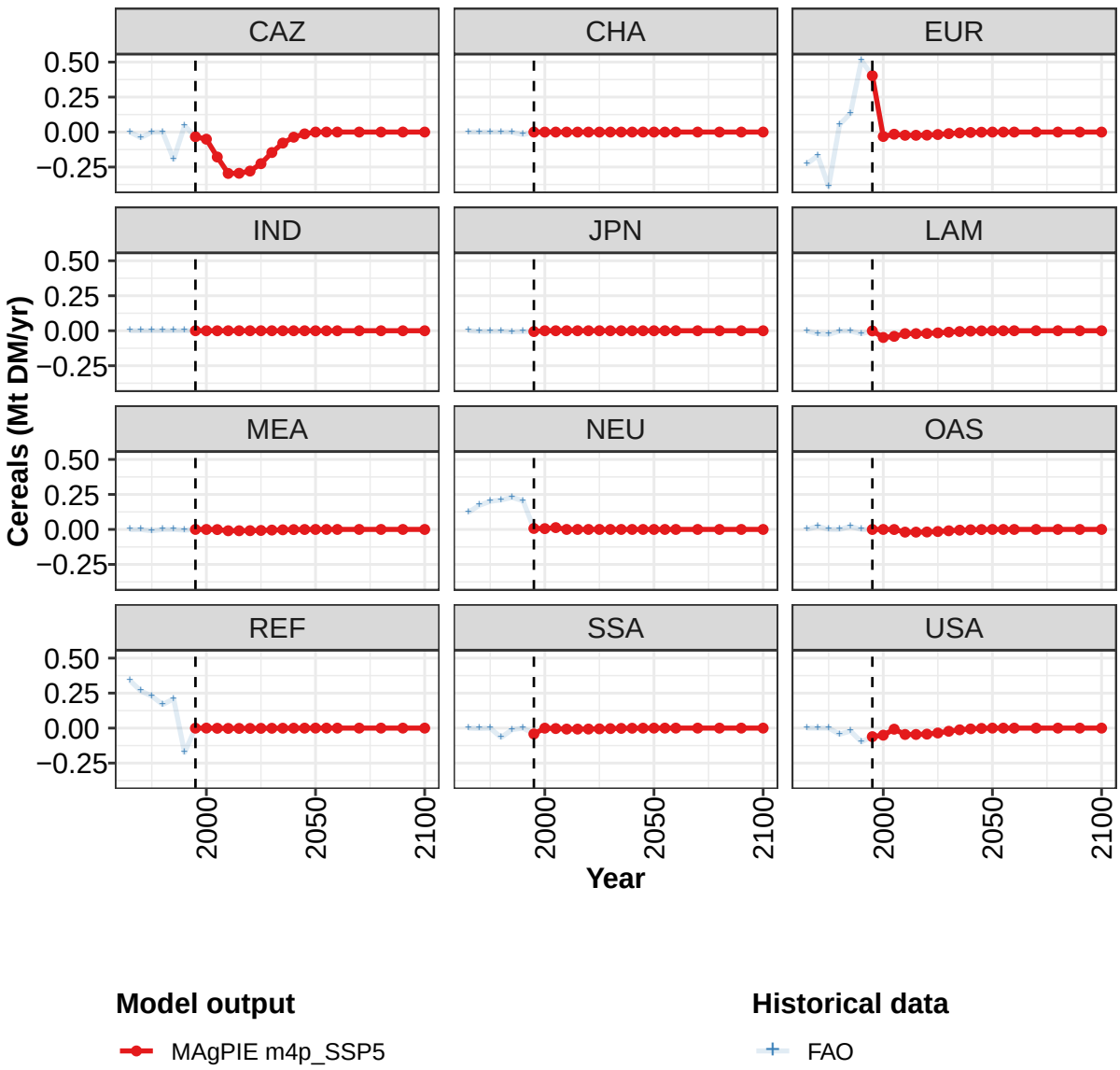
Table 135: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.364	0.305	0.214	0.489	0.515	0.500	-0.043	-0.720	-1.224	-1.586
CAZ	-0.007	-0.035	-0.010	-0.001	-0.206	0.033	-0.059	-0.079	-0.221	-0.356
CHA	-0.001	0.000	-0.000	-0.000	-0.004	-0.022	-0.010	-0.010	-0.004	-0.005
EUR	-0.158	-0.189	-0.260	-0.022	0.050	0.480	0.370	-0.058	-0.027	0.019
IND	0.000	0.000	-0.000	0.000	0.000	0.001	-0.000	-0.001	-0.002	-0.009
JPN	0.000	-0.004	-0.004	-0.003	-0.005	-0.006	-0.006	0.000	0.000	0.005
LAM	0.012	-0.014	-0.017	-0.028	-0.028	-0.036	-0.032	-0.117	-0.277	-0.354
MEA	-0.004	-0.003	-0.011	-0.003	-0.001	-0.011	-0.001	-0.001	-0.021	-0.071
NEU	0.146	0.183	0.216	0.230	0.252	0.236	0.010	-0.006	0.008	-0.001
OAS	-0.001	0.006	-0.004	-0.008	0.015	-0.048	-0.065	-0.039	-0.102	-0.248
REF	0.375	0.359	0.256	0.315	0.301	-0.024	0.010	0.048	0.047	0.081
SSA	0.003	0.002	0.052	0.065	0.197	0.008	-0.043	-0.007	-0.008	-0.064
USA	-0.001	-0.000	-0.004	-0.055	-0.055	-0.111	-0.218	-0.450	-0.617	-0.584

Table 136: FAO — Demand—Domestic Balanceflow—Crops (Mt DM/yr)

5.1.1 Cereals


GLO
Cereals (Mt DM/yr)
0.25
0.00
−0.25
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



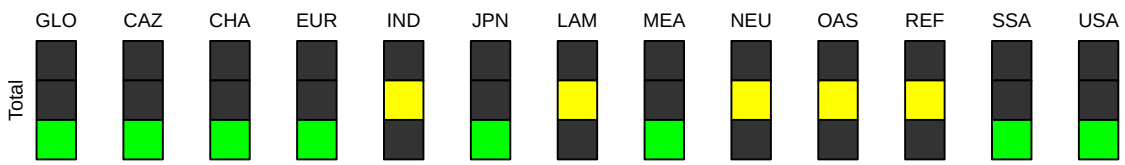


Figure 46: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.266	-0.176	-0.234	-0.423	-0.421	-0.399	-0.323	-0.209	-0.113	-0.052	-0.019
CAZ	-0.033	-0.051	-0.178	-0.295	-0.294	-0.279	-0.226	-0.146	-0.079	-0.037	-0.013
CHA	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000
EUR	0.403	-0.032	-0.015	-0.023	-0.023	-0.022	-0.018	-0.011	-0.006	-0.003	-0.001
IND	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000
JPN	-0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	-0.001	-0.048	-0.040	-0.021	-0.020	-0.019	-0.016	-0.010	-0.005	-0.003	-0.001
MEA	0.000	-0.000	-0.001	-0.009	-0.009	-0.009	-0.007	-0.005	-0.003	-0.001	-0.000
NEU	0.007	0.006	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	-0.000	0.000	-0.001	-0.019	-0.019	-0.018	-0.015	-0.010	-0.005	-0.002	-0.001
REF	-0.001	0.000	-0.001	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.000	-0.000
SSA	-0.042	-0.001	-0.003	-0.007	-0.007	-0.007	-0.005	-0.003	-0.002	-0.001	-0.000
USA	-0.061	-0.051	-0.008	-0.045	-0.045	-0.043	-0.035	-0.023	-0.012	-0.006	-0.002

Table 137: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals (Mt DM/yr) [PART 1/2]

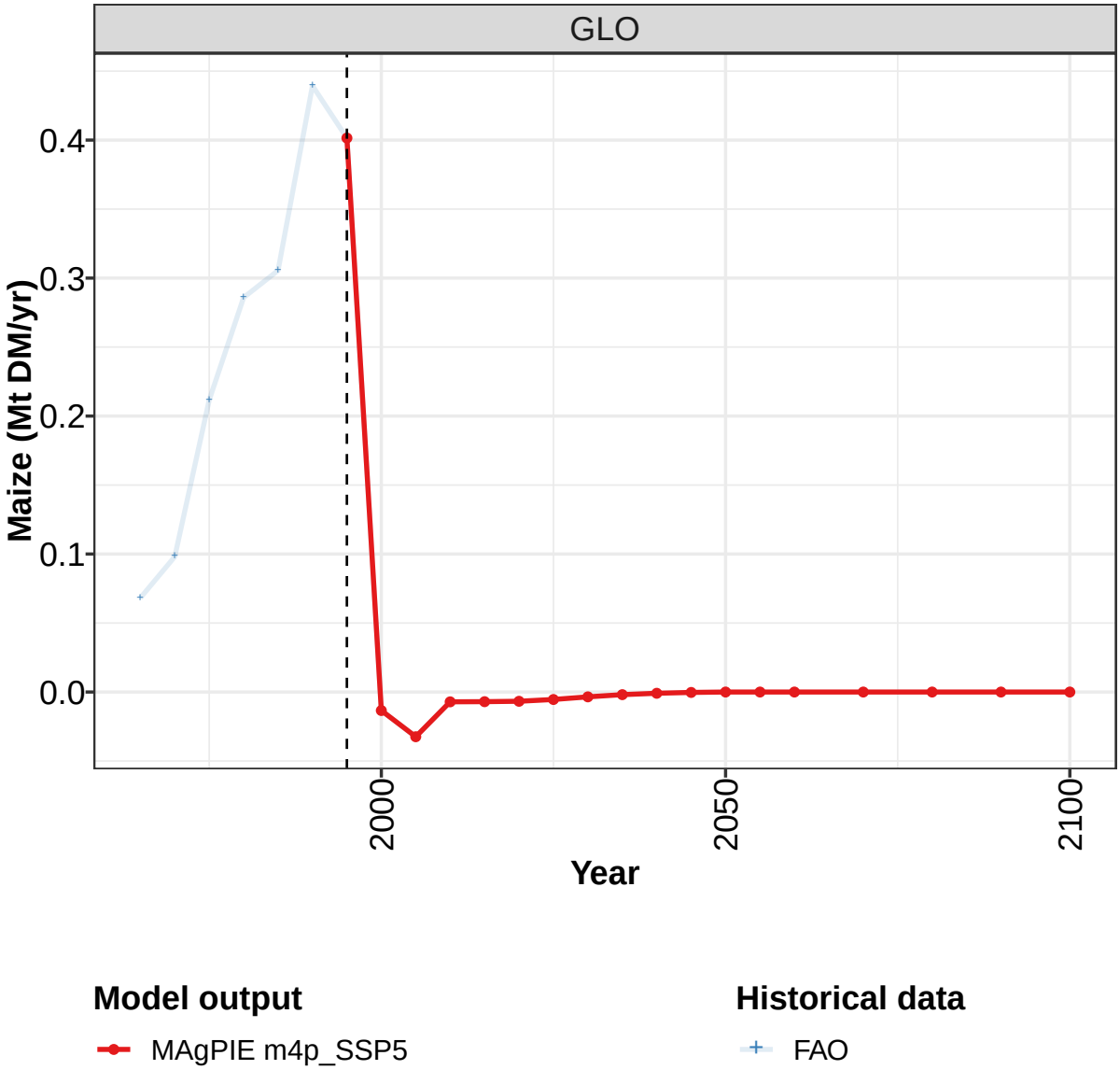
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

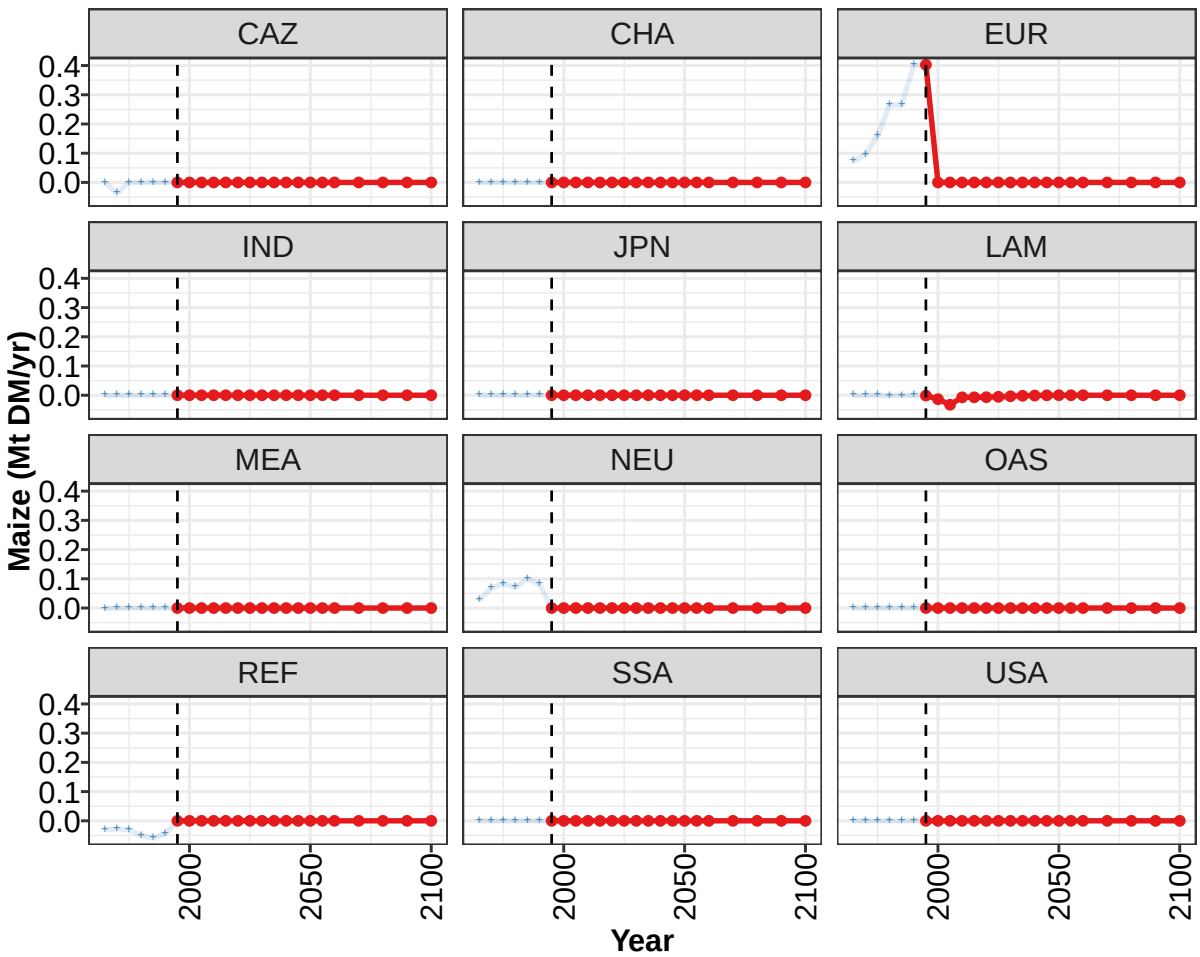
Table 138: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.232	0.221	-0.001	0.316	0.354	0.438	0.266	-0.176	-0.234	-0.423
CAZ	0.000	-0.040	-0.001	-0.000	-0.195	0.045	-0.033	-0.051	-0.178	-0.295
CHA	0.000	0.000	0.000	0.000	-0.001	-0.018	0.000	-0.000	0.000	-0.000
EUR	-0.227	-0.169	-0.389	0.054	0.134	0.511	0.403	-0.031	-0.015	-0.023
IND	0.000	0.000	0.000	0.000	0.000	0.001	0.000	-0.000	-0.000	-0.000
JPN	0.000	-0.004	-0.005	-0.003	-0.007	-0.006	-0.006	0.000	0.000	0.000
LAM	-0.000	-0.021	-0.026	-0.003	-0.002	-0.021	-0.001	-0.048	-0.040	-0.021
MEA	-0.002	-0.000	-0.010	-0.001	-0.000	-0.005	0.000	-0.000	-0.001	-0.009
NEU	0.122	0.172	0.201	0.211	0.229	0.205	0.007	0.006	0.013	0.000
OAS	0.000	0.022	0.001	0.000	0.021	-0.000	-0.000	0.000	-0.001	-0.019
REF	0.340	0.265	0.229	0.168	0.209	-0.175	-0.001	0.000	-0.001	-0.002
SSA	-0.000	-0.003	-0.000	-0.067	-0.011	0.000	-0.042	-0.001	-0.003	-0.007
USA	0.000	0.000	0.000	-0.043	-0.021	-0.098	-0.061	-0.051	-0.008	-0.045

Table 139: FAO — Demand—Domestic Balanceflow—Crops—Cereals (Mt DM/yr)

5.1.2 Cereals—Maize





Model output

MAgPIE m4p_SSP5

Historical data

FAO

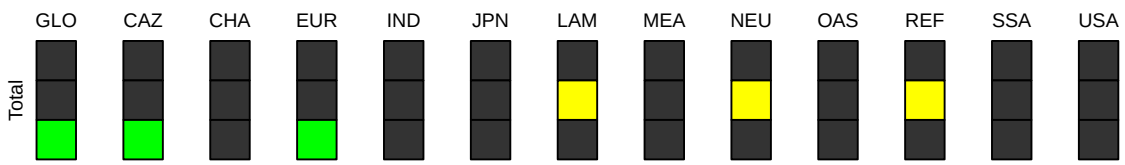


Figure 47: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.402	-0.013	-0.032	-0.007	-0.007	-0.007	-0.005	-0.004	-0.002	-0.001	-0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.403	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	-0.001	-0.013	-0.032	-0.007	-0.007	-0.007	-0.005	-0.004	-0.002	-0.001	-0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 140: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

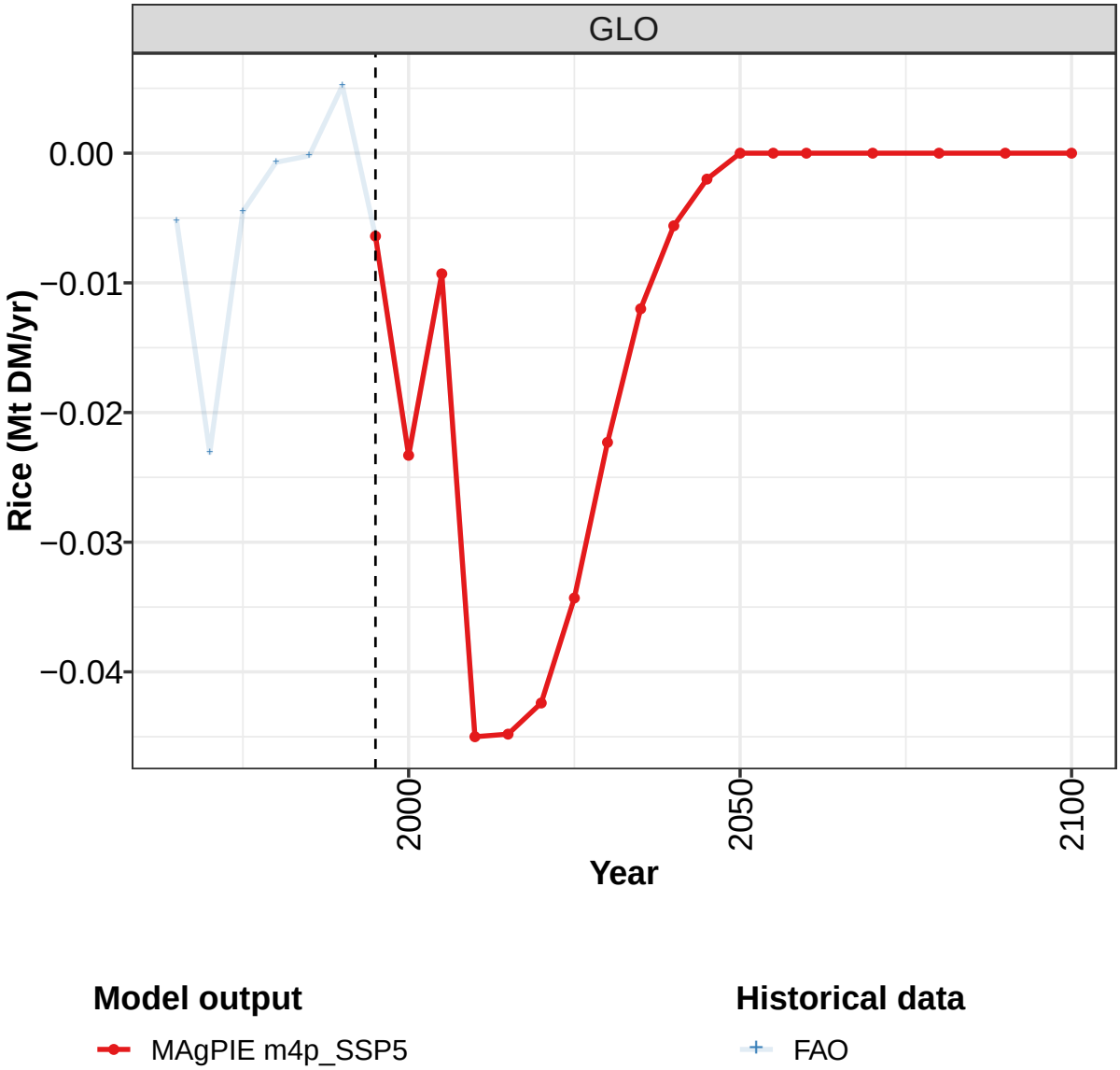
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 141: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.068	0.098	0.212	0.286	0.305	0.439	0.402	-0.013	-0.032	-0.007
CAZ	0.000	-0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.073	0.095	0.159	0.265	0.266	0.401	0.403	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	-0.000	0.000	-0.001	-0.001	0.000	-0.001	-0.013	-0.032	-0.007
MEA	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.027	0.068	0.083	0.072	0.100	0.081	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	-0.030	-0.028	-0.031	-0.050	-0.059	-0.043	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 142: FAO — Demand—Domestic Balanceflow—Crops—Cereals—Maize (Mt DM/yr)

5.1.3 Cereals—Rice



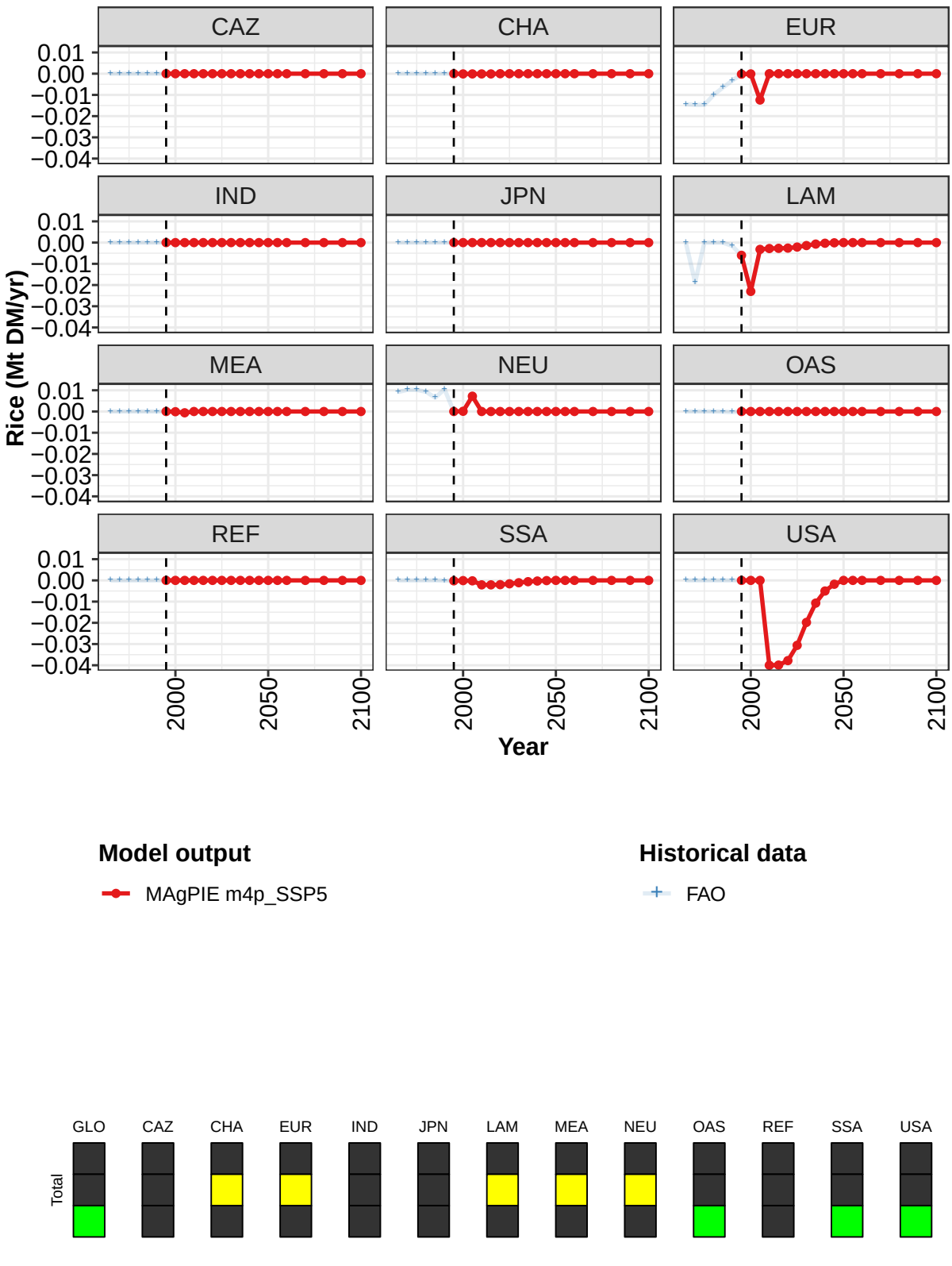


Figure 48: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.00640	-0.02330	-0.00930	-0.04500	-0.04480	-0.04240	-0.03430	-0.02230	-0.01200	-0.00560	-0.00
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
CHA	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
EUR	-0.00020	-0.00010	-0.01240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	-0.00600	-0.02300	-0.00320	-0.00280	-0.00270	-0.00260	-0.00210	-0.00140	-0.00070	-0.00030	-0.00
MEA	0.00000	-0.00010	-0.00060	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
NEU	0.00000	0.00010	0.00720	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
SSA	-0.00020	-0.00010	-0.00020	-0.00210	-0.00210	-0.00200	-0.00160	-0.00110	-0.00060	-0.00030	-0.00
USA	0.00000	0.00000	0.00000	-0.04000	-0.03990	-0.03780	-0.03060	-0.01980	-0.01070	-0.00500	-0.00

Table 143: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

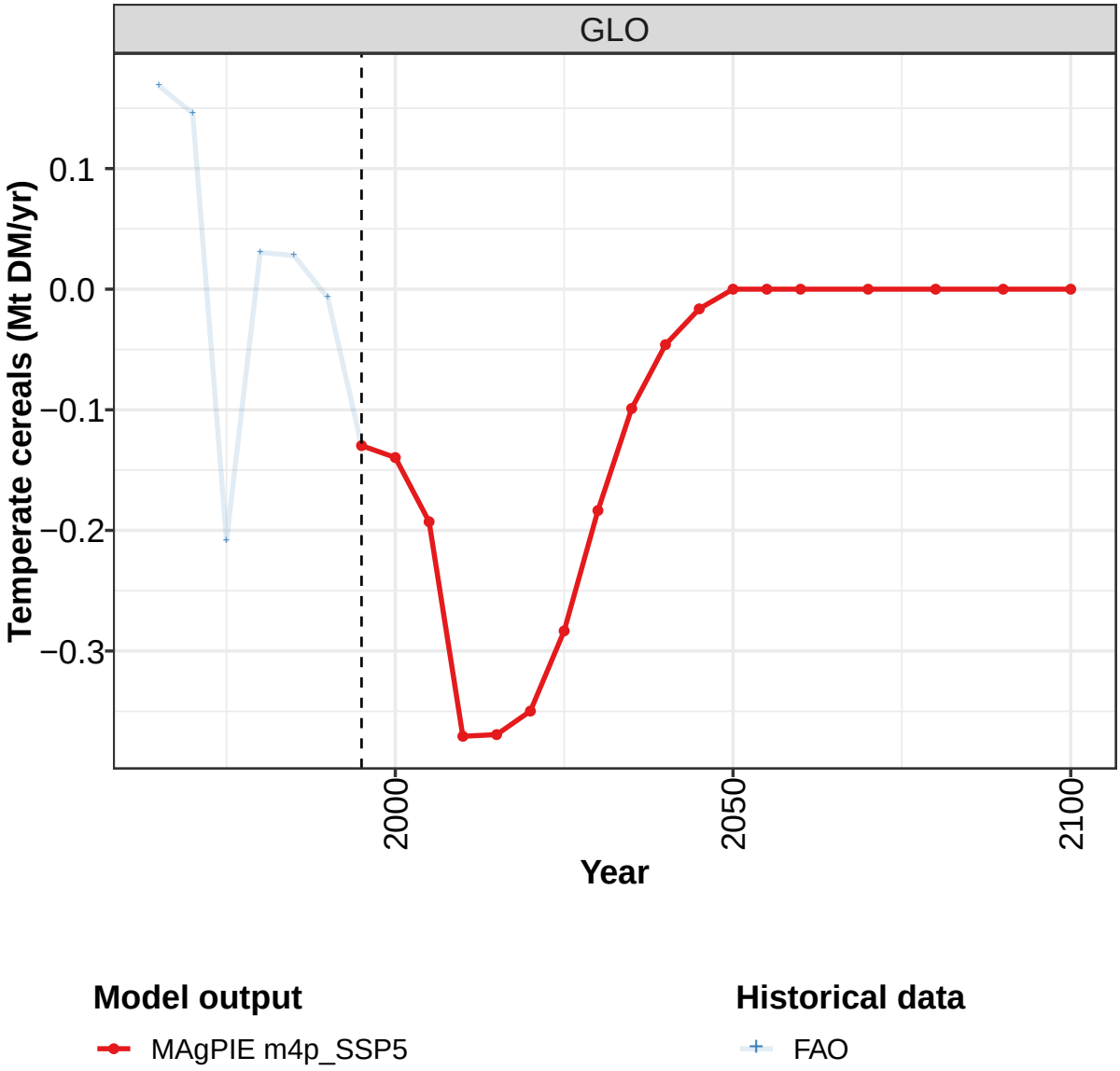
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

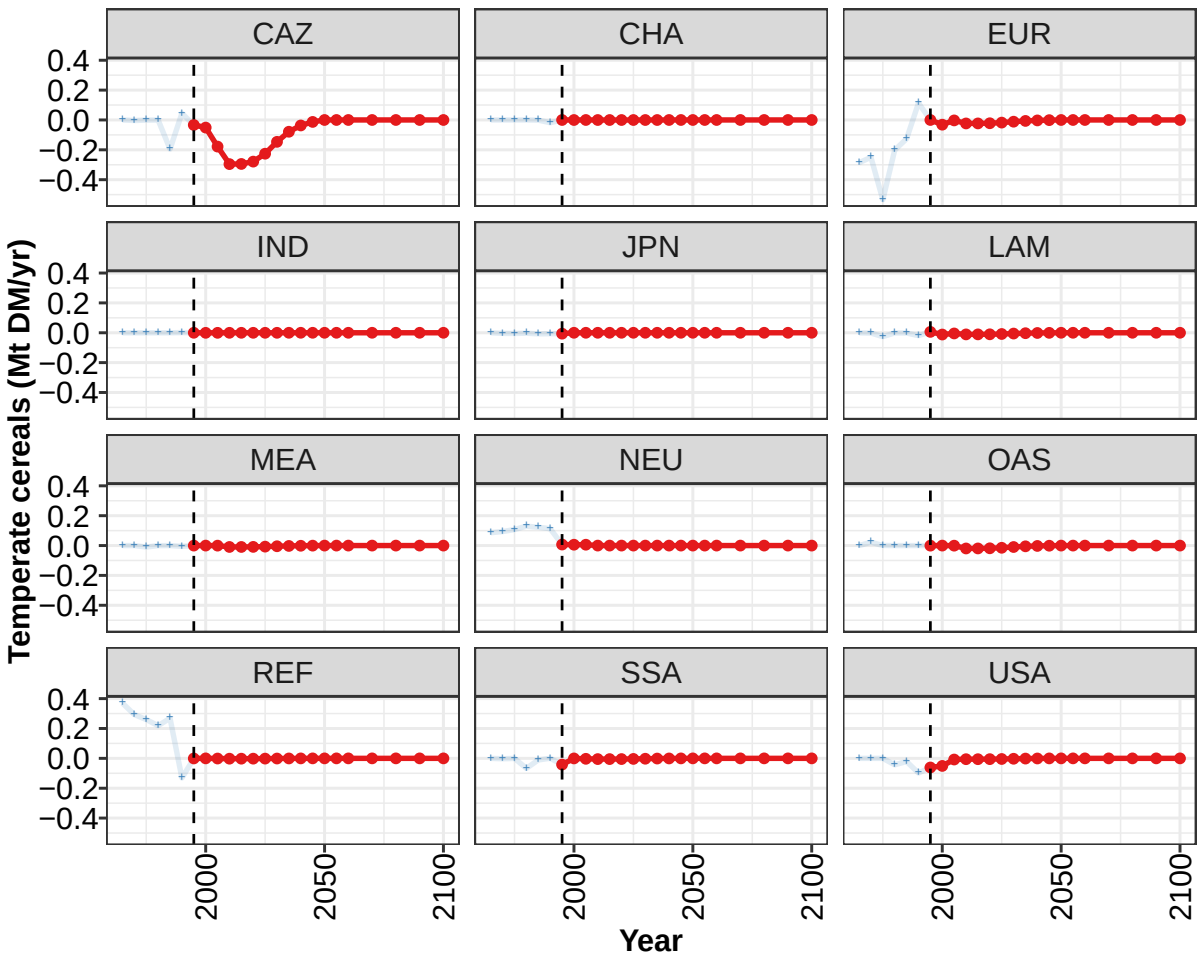
Table 144: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.0052	-0.0231	-0.0045	-0.0007	-0.0002	0.0052	-0.0064	-0.0234	-0.0093	-0.0450
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0001	-0.0001
EUR	-0.0144	-0.0147	-0.0147	-0.0100	-0.0065	-0.0033	-0.0002	-0.0001	-0.0124	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	-0.0187	0.0000	0.0000	0.0000	-0.0016	-0.0060	-0.0230	-0.0032	-0.0028
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0006	0.0000
NEU	0.0092	0.0102	0.0102	0.0093	0.0065	0.0105	0.0000	0.0001	0.0072	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0003	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0002	-0.0001	-0.0002	-0.0021
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0400

Table 145: FAO — Demand—Domestic Balanceflow—Crops—Cereals—Rice (Mt DM/yr)

5.1.4 Cereals—Temperate cereals





Model output

MAgPIE m4p_SSP5

Historical data

FAO

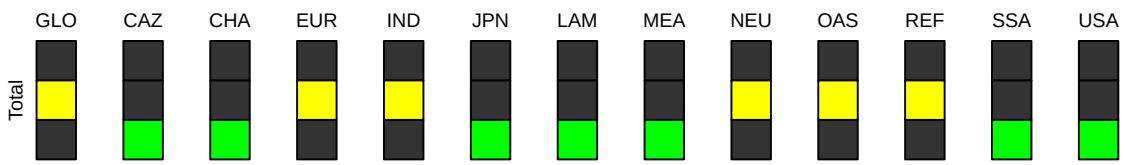


Figure 49: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.12970	-0.13960	-0.19280	-0.37070	-0.36930	-0.34980	-0.28330	-0.18350	-0.09890	-0.04600	-0.01
CAZ	-0.03320	-0.05090	-0.17820	-0.29550	-0.29440	-0.27880	-0.22580	-0.14630	-0.07870	-0.03660	-0.01
CHA	0.00000	-0.00010	0.00000	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.00
EUR	0.00000	-0.03140	-0.00290	-0.02310	-0.02300	-0.02180	-0.01760	-0.01140	-0.00620	-0.00290	-0.00
IND	0.00000	-0.00020	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00
JPN	-0.00590	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	0.00610	-0.01170	-0.00450	-0.01080	-0.01070	-0.01010	-0.00820	-0.00530	-0.00290	-0.00130	-0.00
MEA	0.00000	0.00000	-0.00040	-0.00930	-0.00930	-0.00880	-0.00710	-0.00460	-0.00250	-0.00120	-0.00
NEU	0.00690	0.00570	0.00570	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
OAS	-0.00040	0.00000	-0.00060	-0.01930	-0.01920	-0.01820	-0.01480	-0.00960	-0.00510	-0.00240	-0.00
REF	-0.00050	0.00000	-0.00110	-0.00210	-0.00210	-0.00200	-0.00160	-0.00100	-0.00060	-0.00030	-0.00
SSA	-0.04160	-0.00040	-0.00290	-0.00480	-0.00480	-0.00460	-0.00370	-0.00240	-0.00130	-0.00060	-0.00
USA	-0.06110	-0.05060	-0.00770	-0.00550	-0.00550	-0.00520	-0.00420	-0.00270	-0.00150	-0.00070	-0.00

Table 146: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

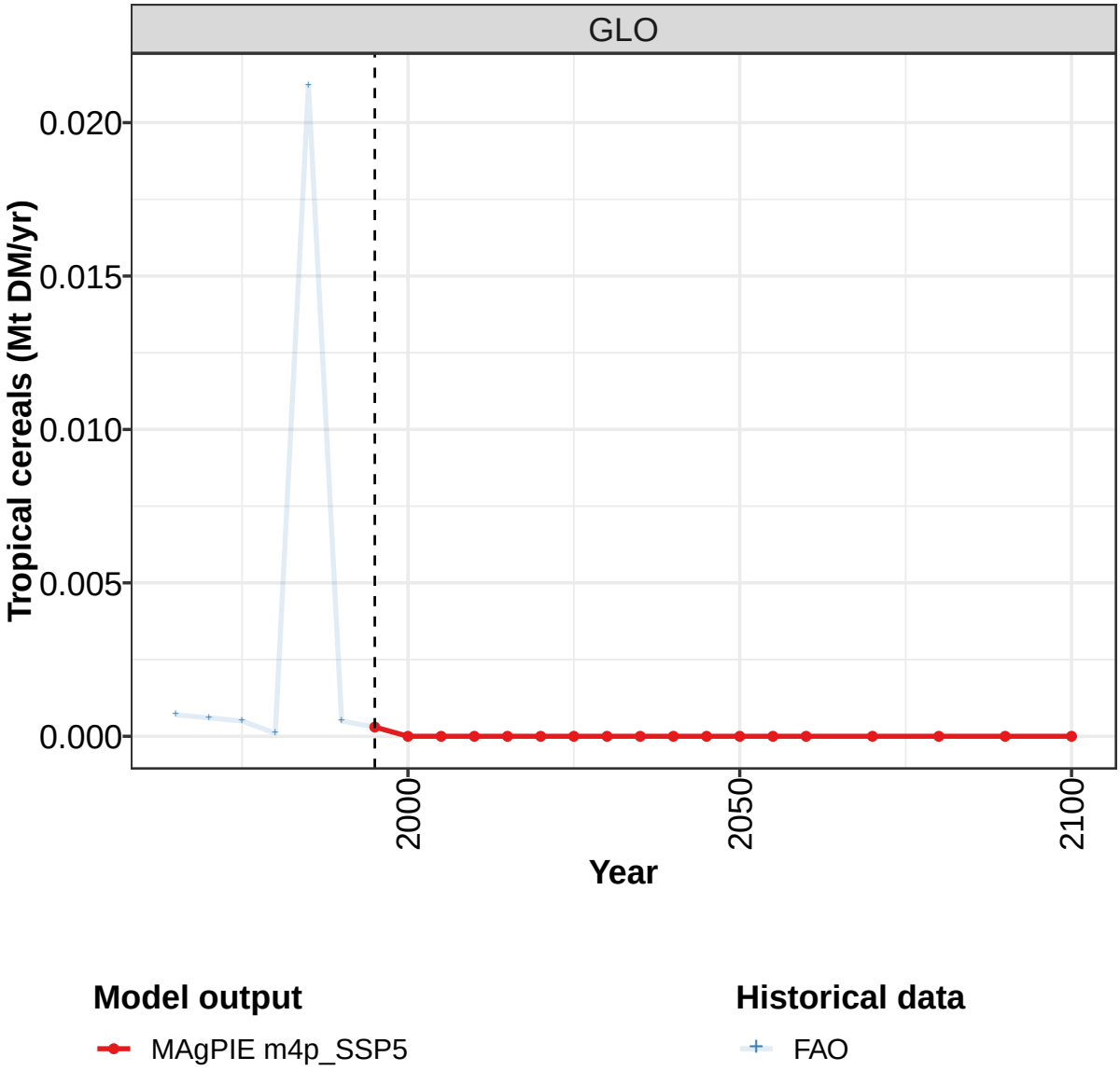
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

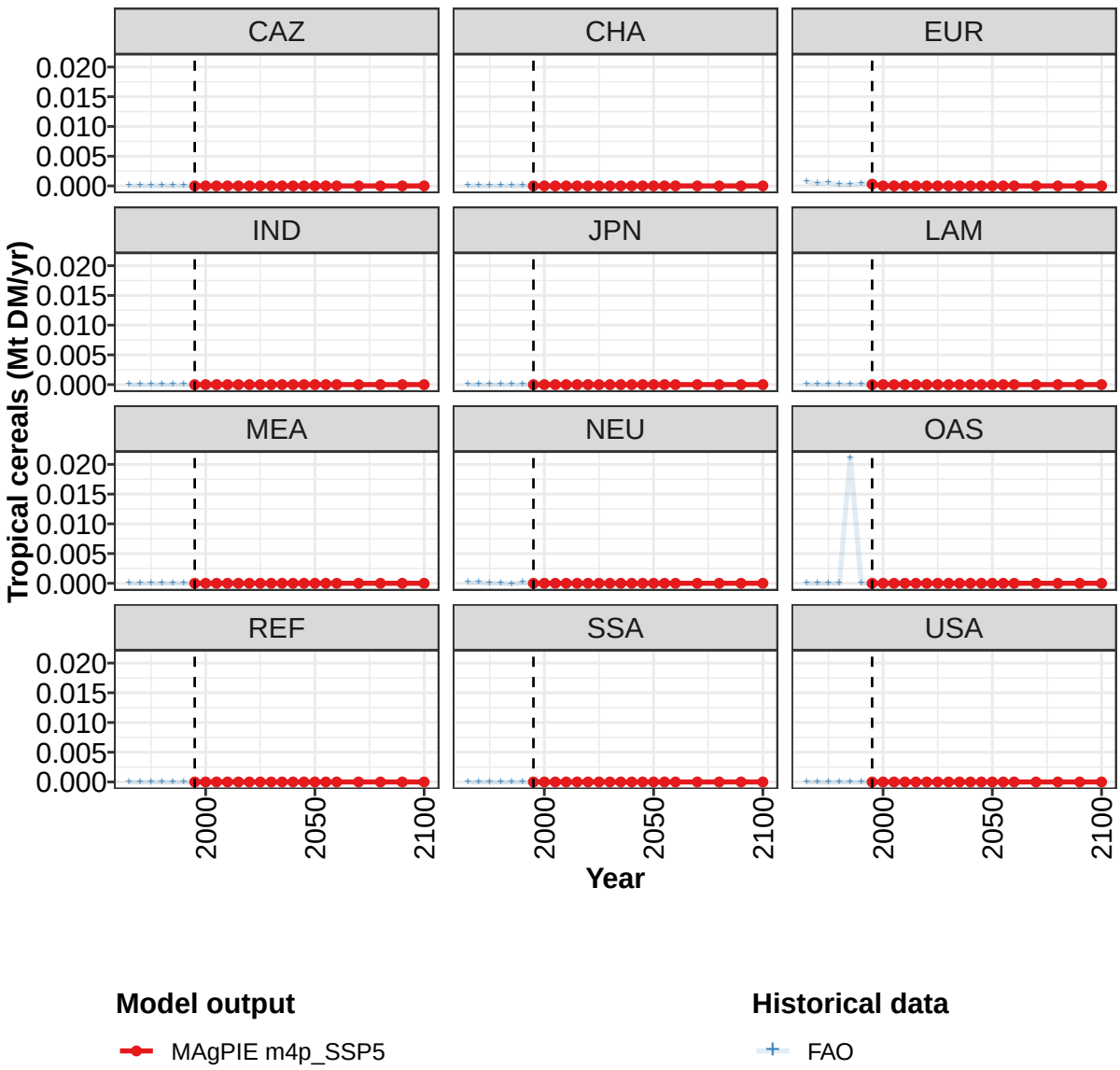
Table 147: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.169	0.146	-0.208	0.030	0.028	-0.007	-0.130	-0.140	-0.193	-0.371
CAZ	0.000	-0.004	-0.001	-0.000	-0.195	0.045	-0.033	-0.051	-0.178	-0.295
CHA	0.000	0.000	0.000	0.000	-0.001	-0.018	0.000	-0.000	0.000	-0.000
EUR	-0.286	-0.250	-0.534	-0.202	-0.126	0.113	0.000	-0.031	-0.003	-0.023
IND	0.000	0.000	0.000	0.000	0.000	0.001	0.000	-0.000	-0.000	-0.000
JPN	0.000	-0.004	-0.005	-0.003	-0.007	-0.006	-0.006	0.000	0.000	0.000
LAM	-0.001	-0.002	-0.026	-0.001	-0.002	-0.019	0.006	-0.012	-0.004	-0.011
MEA	-0.000	-0.000	-0.010	-0.001	-0.000	-0.005	0.000	0.000	-0.000	-0.009
NEU	0.086	0.094	0.107	0.130	0.122	0.113	0.007	0.006	0.006	0.000
OAS	0.000	0.022	0.001	0.000	-0.000	0.000	-0.000	0.000	-0.001	-0.019
REF	0.370	0.293	0.260	0.218	0.269	-0.132	-0.001	0.000	-0.001	-0.002
SSA	-0.000	-0.003	-0.000	-0.067	-0.011	0.000	-0.042	-0.000	-0.003	-0.005
USA	0.000	0.000	0.000	-0.043	-0.021	-0.098	-0.061	-0.051	-0.008	-0.005

Table 148: FAO — Demand—Domestic Balanceflow—Crops—Cereals—Temperate cereals (Mt DM/yr)

5.1.5 Cereals—Tropical cereals





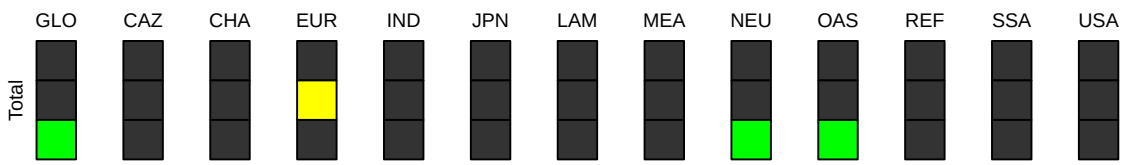


Figure 50: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
GLO	0.000300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CAZ	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
EUR	0.000300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
IND	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
JPN	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
LAM	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
MEA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
NEU	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
OAS	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
REF	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
SSA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
USA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 149: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

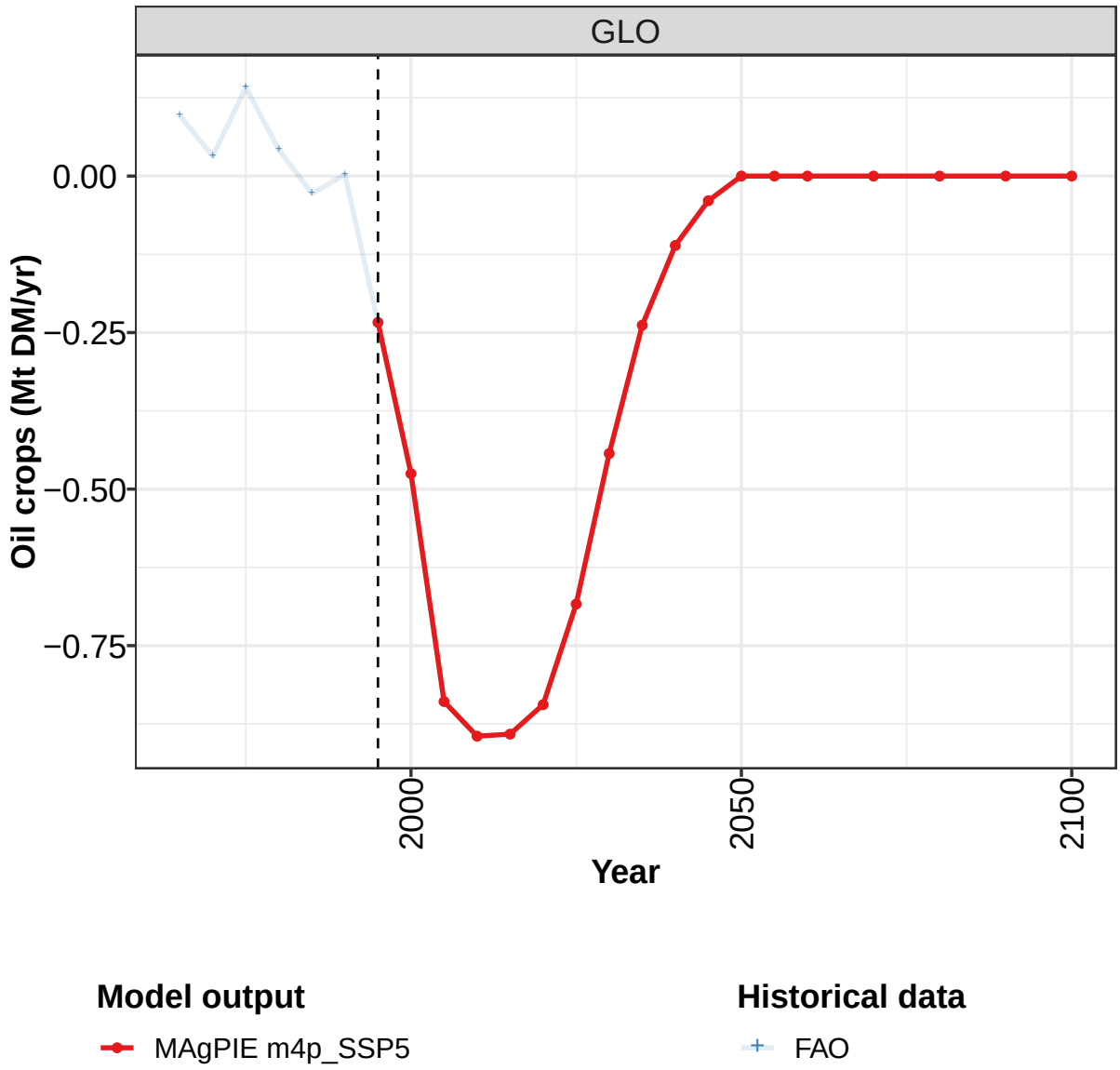
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CAZ	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
EUR	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
IND	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
JPN	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
LAM	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
MEA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
NEU	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
OAS	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
REF	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
SSA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
USA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 150: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0007	0.0006	0.0005	0.0001	0.0212	0.0005	0.0003	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0007	0.0004	0.0005	0.0002	0.0002	0.0004	0.0003	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0001	0.0002	0.0000	0.0000	-0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0211	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 151: FAO — Demand—Domestic Balanceflow—Crops—Cereals—Tropical cereals (Mt DM/yr)

5.1.6 Oil crops



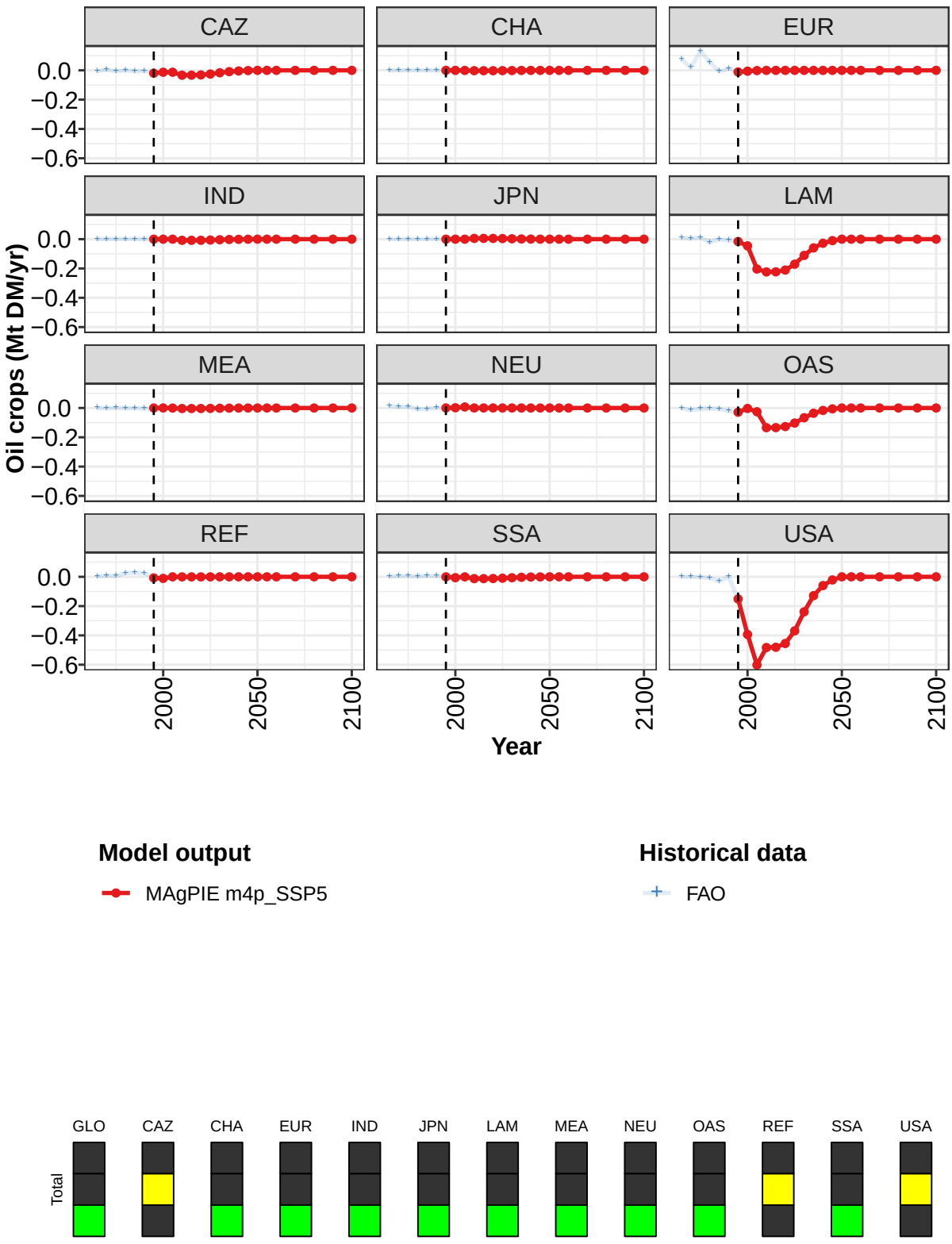


Figure 51: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.23380	-0.47530	-0.83930	-0.89460	-0.89130	-0.84420	-0.68360	-0.44310	-0.23820	-0.11090	-0.03
CAZ	-0.01950	-0.01280	-0.01270	-0.03300	-0.03290	-0.03120	-0.02530	-0.01640	-0.00880	-0.00410	-0.00
CHA	0.00000	-0.00010	-0.00040	-0.00240	-0.00240	-0.00230	-0.00180	-0.00120	-0.00060	-0.00030	-0.00
EUR	-0.01110	-0.00550	-0.00160	-0.00010	-0.00010	-0.00010	0.00000	-0.00000	-0.00000	-0.00010	0.00
IND	0.00000	0.00000	0.00000	-0.00780	-0.00780	-0.00740	-0.00600	-0.00390	-0.00210	-0.00100	-0.00
JPN	0.00000	0.00000	0.00000	0.00540	0.00540	0.00510	0.00420	0.00270	0.00150	0.00070	0.00
LAM	-0.01590	-0.04570	-0.20370	-0.22370	-0.22290	-0.21100	-0.17090	-0.11090	-0.05960	-0.02780	-0.00
MEA	-0.00010	0.00030	-0.00040	-0.00360	-0.00360	-0.00350	-0.00280	-0.00180	-0.00090	-0.00040	-0.00
NEU	0.00040	0.00170	0.00700	0.00030	0.00030	0.00030	0.00020	0.00020	0.00010	0.00000	0.00
OAS	-0.02880	-0.00300	-0.02550	-0.13430	-0.13380	-0.12670	-0.10270	-0.06650	-0.03580	-0.01660	-0.00
REF	-0.00730	-0.01080	-0.00010	-0.00040	-0.00040	-0.00040	-0.00030	-0.00010	-0.00010	0.00000	0.00
SSA	-0.00020	-0.00580	-0.00020	-0.01240	-0.01230	-0.01170	-0.00940	-0.00620	-0.00330	-0.00150	-0.00
USA	-0.15130	-0.39360	-0.60170	-0.48260	-0.48080	-0.45530	-0.36880	-0.23900	-0.12860	-0.05980	-0.02

Table 152: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops (Mt DM/yr) [PART 1/2]

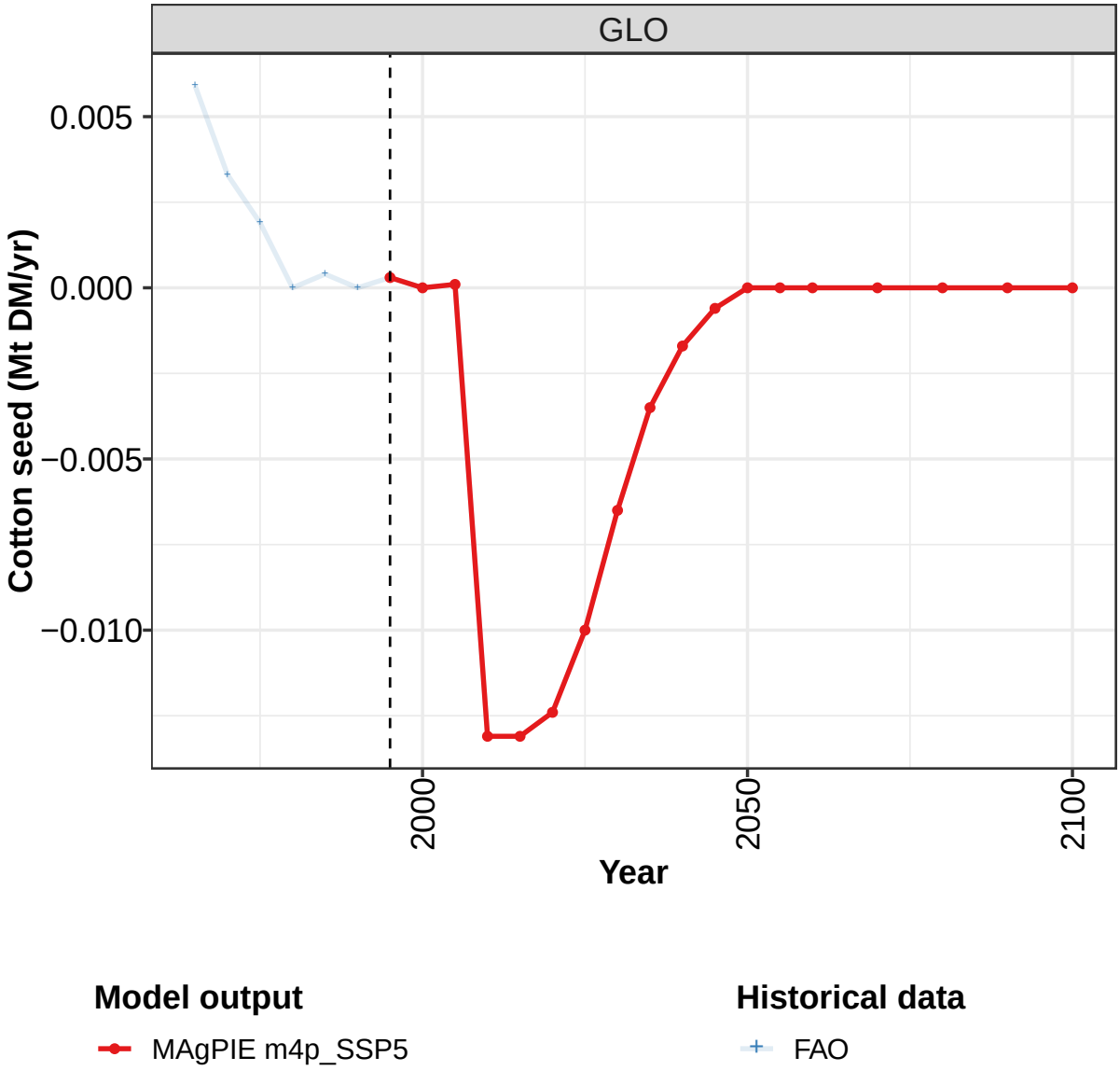
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

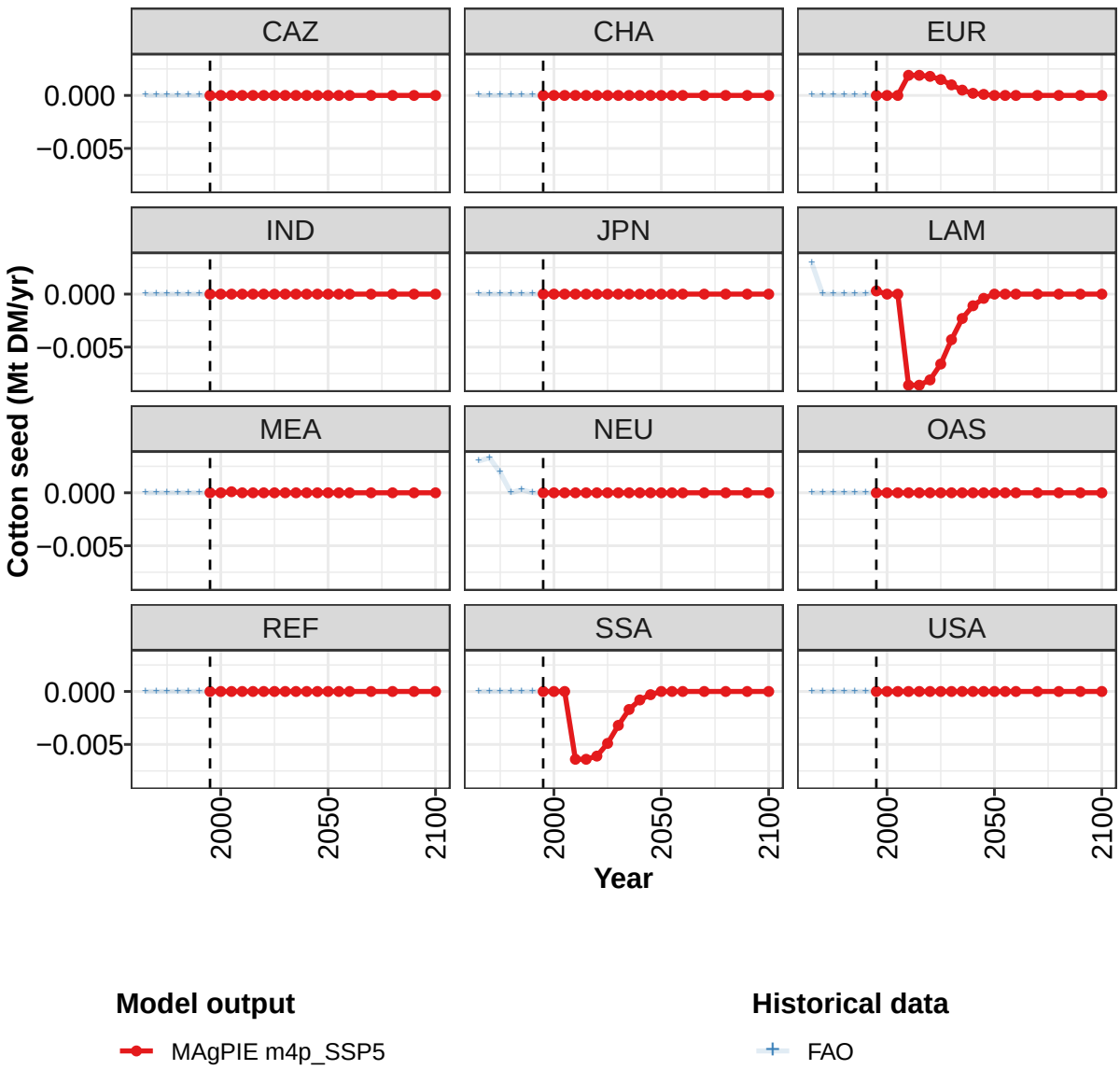
Table 153: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.097	0.032	0.141	0.042	-0.028	0.003	-0.234	-0.475	-0.840	-0.895
CAZ	-0.007	0.005	-0.008	0.000	-0.007	-0.005	-0.019	-0.013	-0.013	-0.033
CHA	-0.001	0.000	0.000	0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.002
EUR	0.074	0.019	0.129	0.056	-0.009	0.013	-0.011	-0.005	-0.002	-0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.008
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
LAM	0.010	0.006	0.009	-0.021	-0.002	-0.009	-0.016	-0.046	-0.204	-0.224
MEA	0.000	-0.002	-0.000	-0.002	-0.000	-0.004	-0.000	0.000	-0.000	-0.004
NEU	0.015	0.007	0.009	-0.009	-0.008	0.000	0.000	0.002	0.007	0.000
OAS	-0.001	-0.016	-0.005	-0.004	-0.006	-0.021	-0.029	-0.003	-0.025	-0.134
REF	0.003	0.008	0.004	0.025	0.028	0.024	-0.007	-0.011	-0.000	-0.000
SSA	0.003	0.005	0.005	0.004	0.007	0.005	-0.000	-0.006	-0.000	-0.012
USA	0.000	0.000	-0.003	-0.007	-0.030	0.000	-0.151	-0.394	-0.602	-0.483

Table 154: FAO — Demand—Domestic Balanceflow—Crops—Oil crops (Mt DM/yr)

5.1.7 Oil crops—Cotton seed





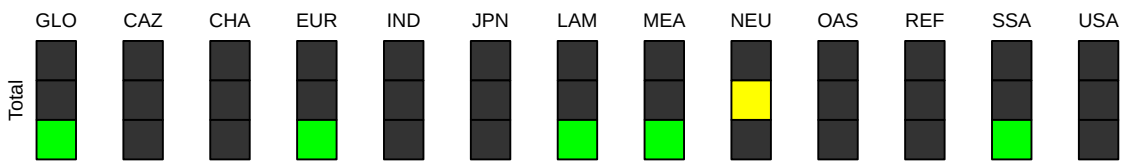


Figure 52: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	204
GLO	0.00030	0.00000	0.00010	-0.01310	-0.01310	-0.01240	-0.01000	-0.00650	-0.00350	-0.00170	-0.0006
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
EUR	0.00000	0.00000	0.00000	0.00190	0.00190	0.00180	0.00150	0.00100	0.00050	0.00020	0.0001
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
LAM	0.00030	0.00000	0.00000	-0.00860	-0.00860	-0.00810	-0.00660	-0.00430	-0.00230	-0.00110	-0.0004
MEA	0.00000	0.00000	0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
SSA	0.00000	0.00000	0.00000	-0.00640	-0.00640	-0.00610	-0.00490	-0.00320	-0.00170	-0.00080	-0.0003
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000

Table 155: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

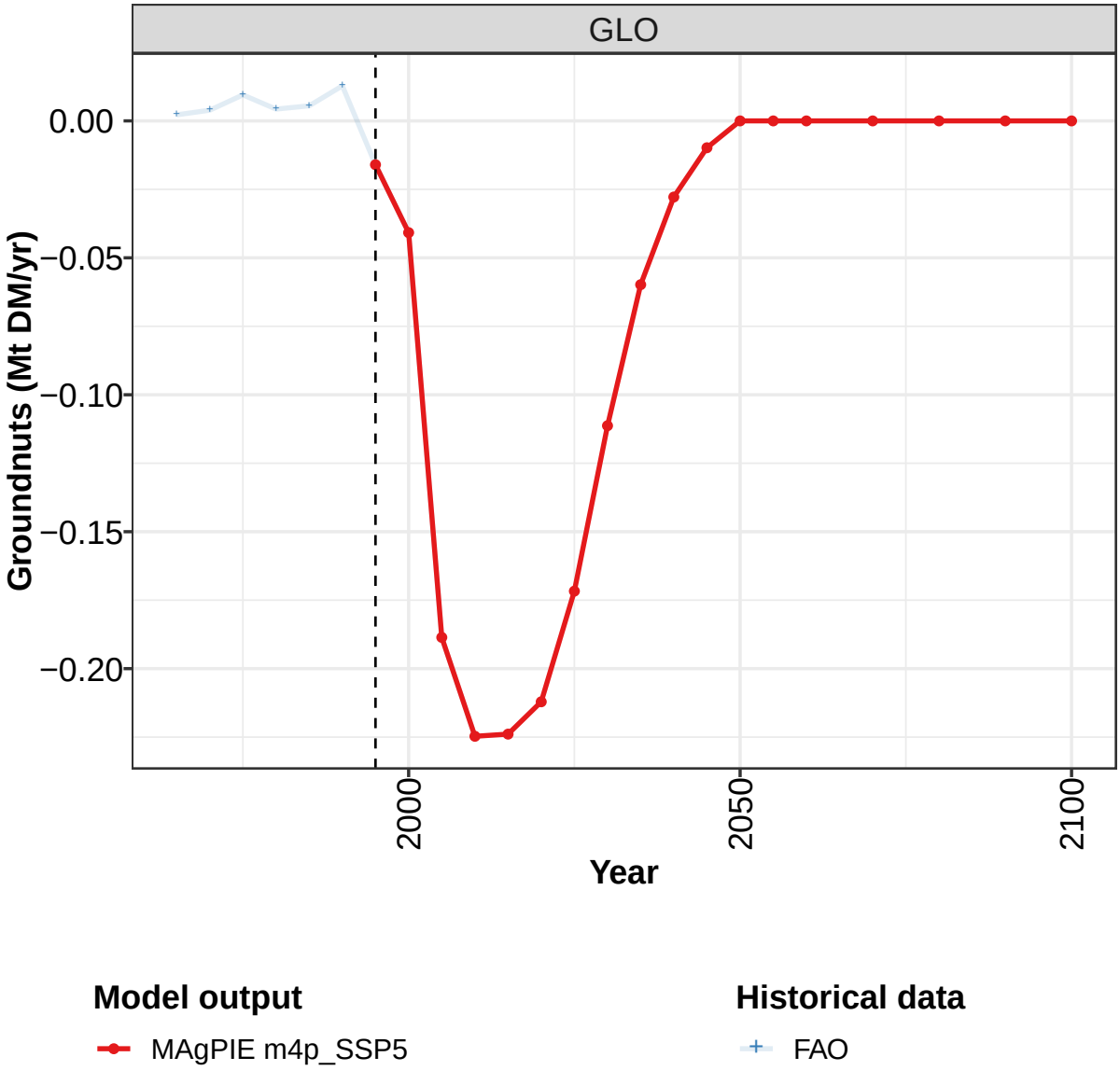
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

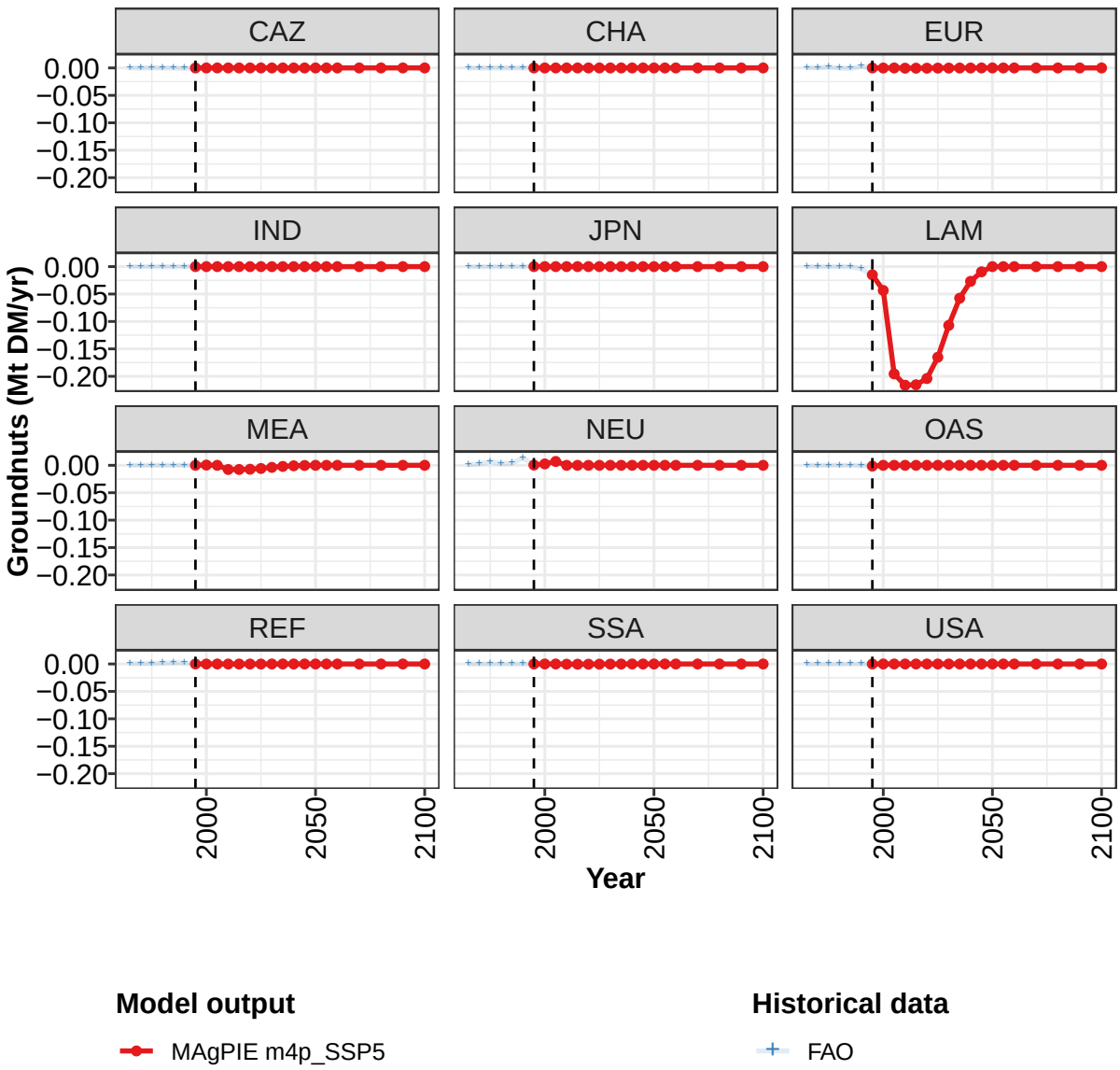
Table 156: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00590	0.00330	0.00190	0.00000	0.00040	0.00000	0.00030	0.00000	0.00010	-0.01310
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00190
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00290	0.00000	0.00000	0.00000	0.00000	0.00000	0.00030	0.00000	0.00000	-0.00860
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00010	0.00000
NEU	0.00300	0.00330	0.00190	0.00000	0.00030	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.00640
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Table 157: FAO — Demand—Domestic Balanceflow—Crops—Oil crops—Cotton seed (Mt DM/yr)

5.1.8 Oil crops—Groundnuts





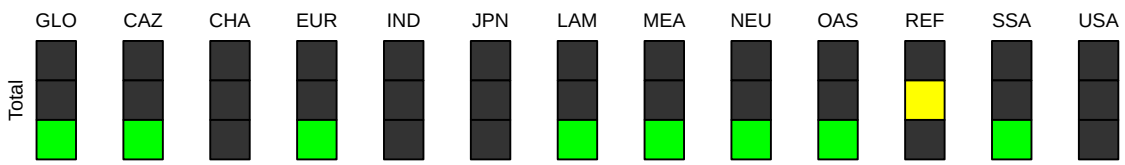


Figure 53: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.01600	-0.04080	-0.18860	-0.22470	-0.22390	-0.21210	-0.17170	-0.11130	-0.05980	-0.02780	-0.0
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0
EUR	0.00000	-0.00010	0.00000	-0.00040	-0.00040	-0.00040	-0.00030	-0.00020	-0.00010	-0.00010	0.0
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0
LAM	-0.01490	-0.04350	-0.19560	-0.21620	-0.21540	-0.20400	-0.16520	-0.10710	-0.05760	-0.02680	-0.0
MEA	0.00000	0.00040	0.00000	-0.00760	-0.00760	-0.00720	-0.00580	-0.00380	-0.00200	-0.00090	-0.0
NEU	0.00040	0.00250	0.00700	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0
OAS	-0.00150	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0
REF	0.00000	-0.00010	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.0
SSA	0.00000	0.00000	0.00000	-0.00040	-0.00040	-0.00040	-0.00030	-0.00020	-0.00010	0.00000	0.0
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0

Table 158: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

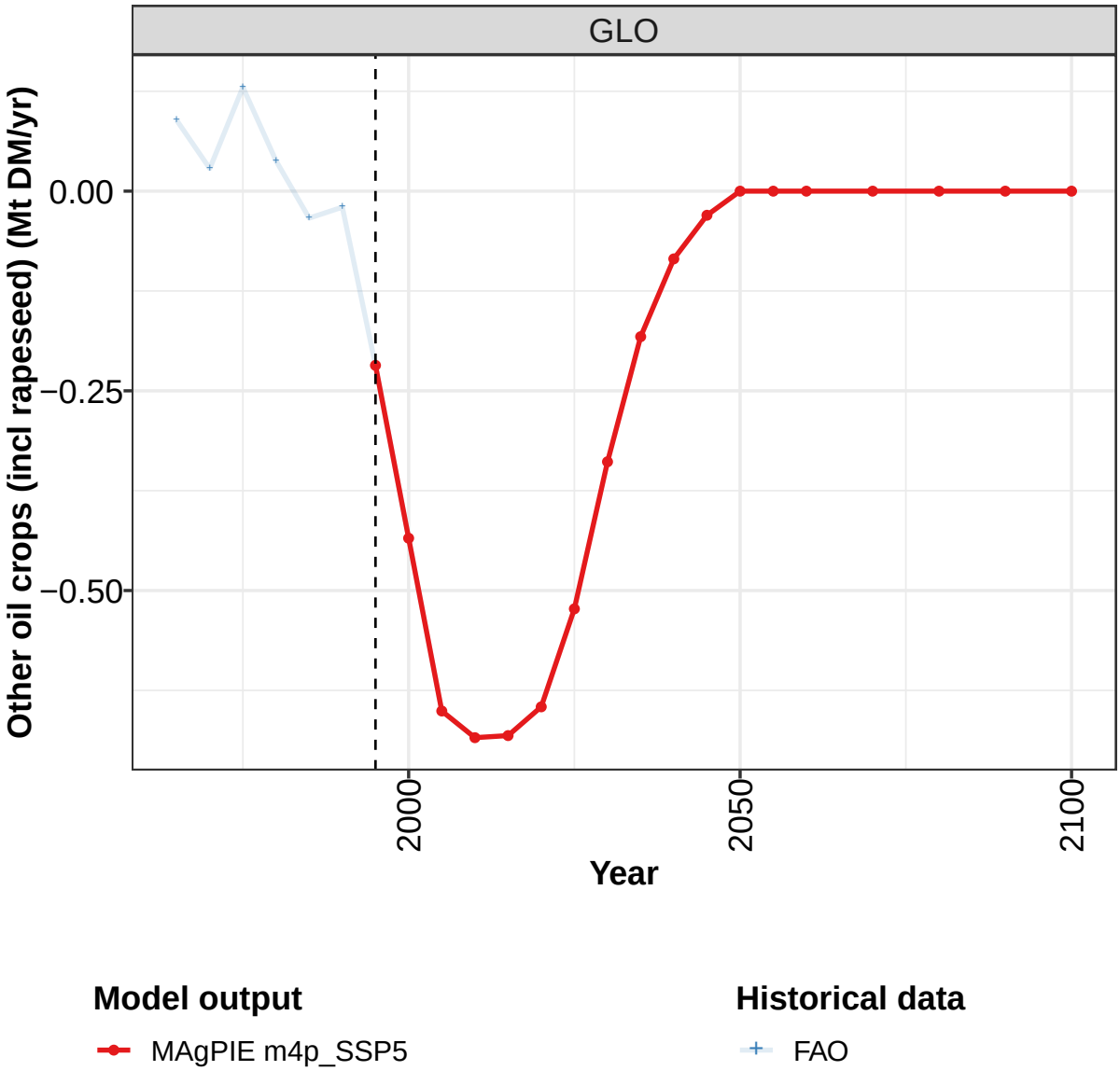
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

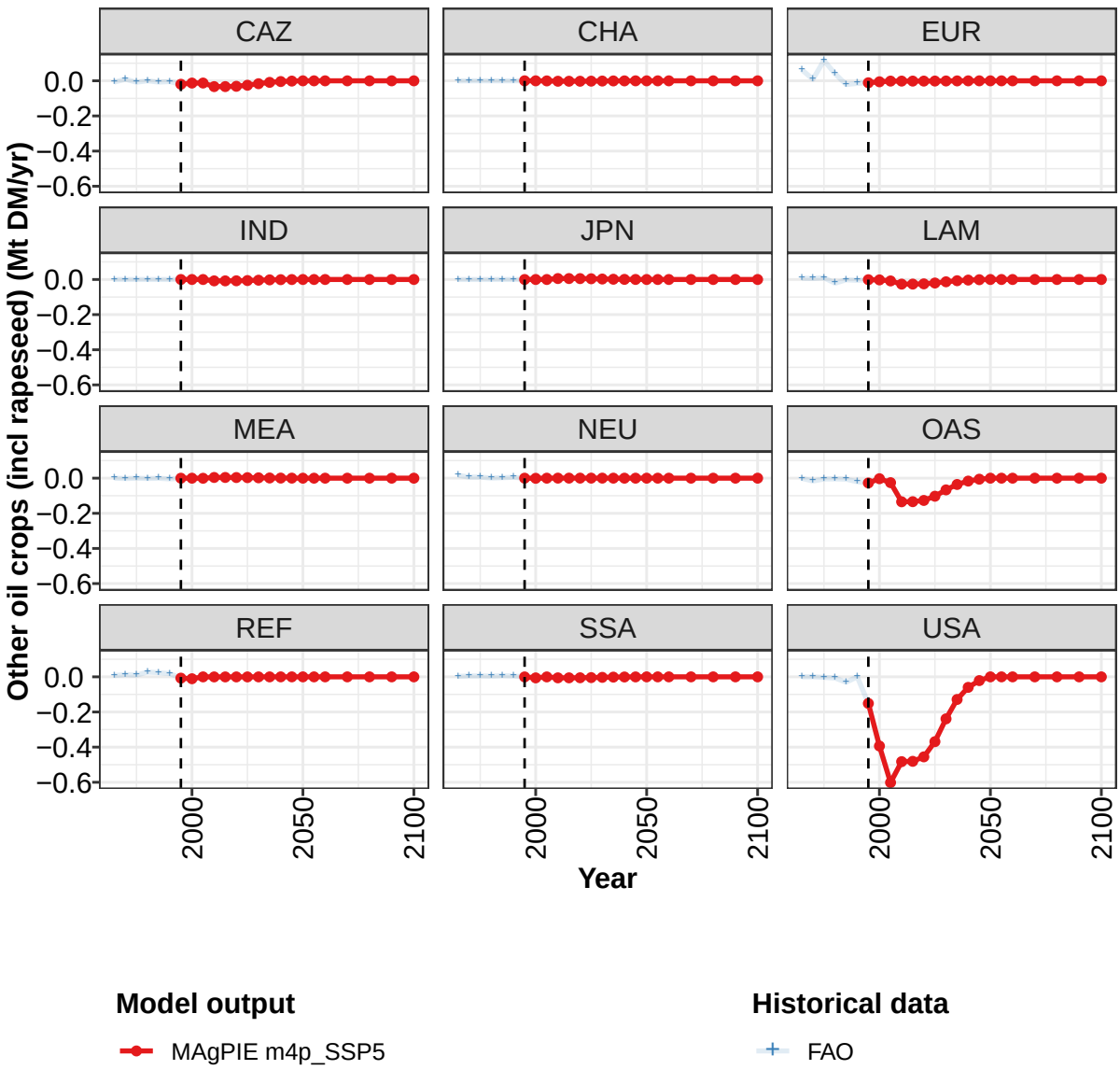
Table 159: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0022	0.0039	0.0095	0.0043	0.0055	0.0128	-0.0160	-0.0408	-0.1887	-0.2247
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0008	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0003	0.0005	0.0018	-0.0003	-0.0008	0.0030	0.0000	-0.0001	0.0000	-0.0004
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0044	-0.0149	-0.0435	-0.1956	-0.2162
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0004	0.0000	-0.0076
NEU	0.0012	0.0028	0.0068	0.0031	0.0039	0.0136	0.0004	0.0025	0.0070	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0010	-0.0015	0.0000	0.0000	0.0000
REF	0.0007	0.0006	0.0009	0.0015	0.0024	0.0023	0.0000	-0.0001	0.0000	-0.0001
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0004
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 160: FAO — Demand—Domestic Balanceflow—Crops—Oil crops—Groundnuts (Mt DM/yr)

5.1.9 Oil crops—Other oil crops (incl rapeseed)





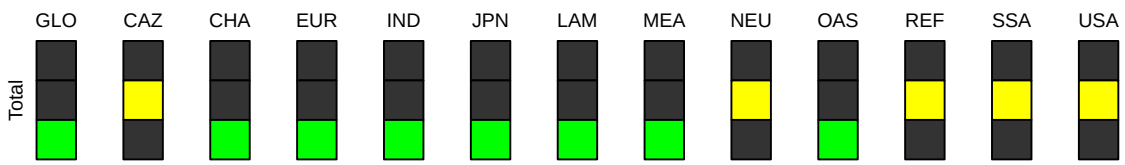


Figure 54: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.21810	-0.43450	-0.65080	-0.68420	-0.68160	-0.64560	-0.52290	-0.33880	-0.18220	-0.08480	-0.03
CAZ	-0.01950	-0.01280	-0.01270	-0.03300	-0.03290	-0.03120	-0.02530	-0.01640	-0.00880	-0.00410	-0.00
CHA	0.00000	-0.00010	-0.00040	-0.00240	-0.00240	-0.00230	-0.00180	-0.00120	-0.00060	-0.00030	-0.00
EUR	-0.01110	-0.00540	-0.00160	-0.00160	-0.00160	-0.00150	-0.00120	-0.00080	-0.00040	-0.00020	-0.00
IND	0.00000	0.00000	0.00000	-0.00780	-0.00780	-0.00740	-0.00600	-0.00390	-0.00210	-0.00100	-0.00
JPN	0.00000	0.00000	0.00000	0.00540	0.00540	0.00510	0.00420	0.00270	0.00150	0.00070	0.00
LAM	-0.00130	-0.00220	-0.00810	-0.02630	-0.02620	-0.02480	-0.02010	-0.01300	-0.00700	-0.00330	-0.00
MEA	-0.00010	-0.00010	-0.00050	0.00400	0.00400	0.00370	0.00300	0.00200	0.00110	0.00050	0.00
NEU	0.00000	-0.00080	0.00000	0.00030	0.00030	0.00030	0.00020	0.00020	0.00010	0.00000	0.00
OAS	-0.02730	-0.00300	-0.02550	-0.13430	-0.13380	-0.12670	-0.10270	-0.06650	-0.03580	-0.01660	-0.00
REF	-0.00730	-0.01070	-0.00010	-0.00030	-0.00030	-0.00030	-0.00020	-0.00010	-0.00010	0.00000	0.00
SSA	-0.00020	-0.00580	-0.00020	-0.00560	-0.00550	-0.00520	-0.00420	-0.00280	-0.00150	-0.00070	-0.00
USA	-0.15130	-0.39360	-0.60170	-0.48260	-0.48080	-0.45530	-0.36880	-0.23900	-0.12860	-0.05980	-0.02

Table 161: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

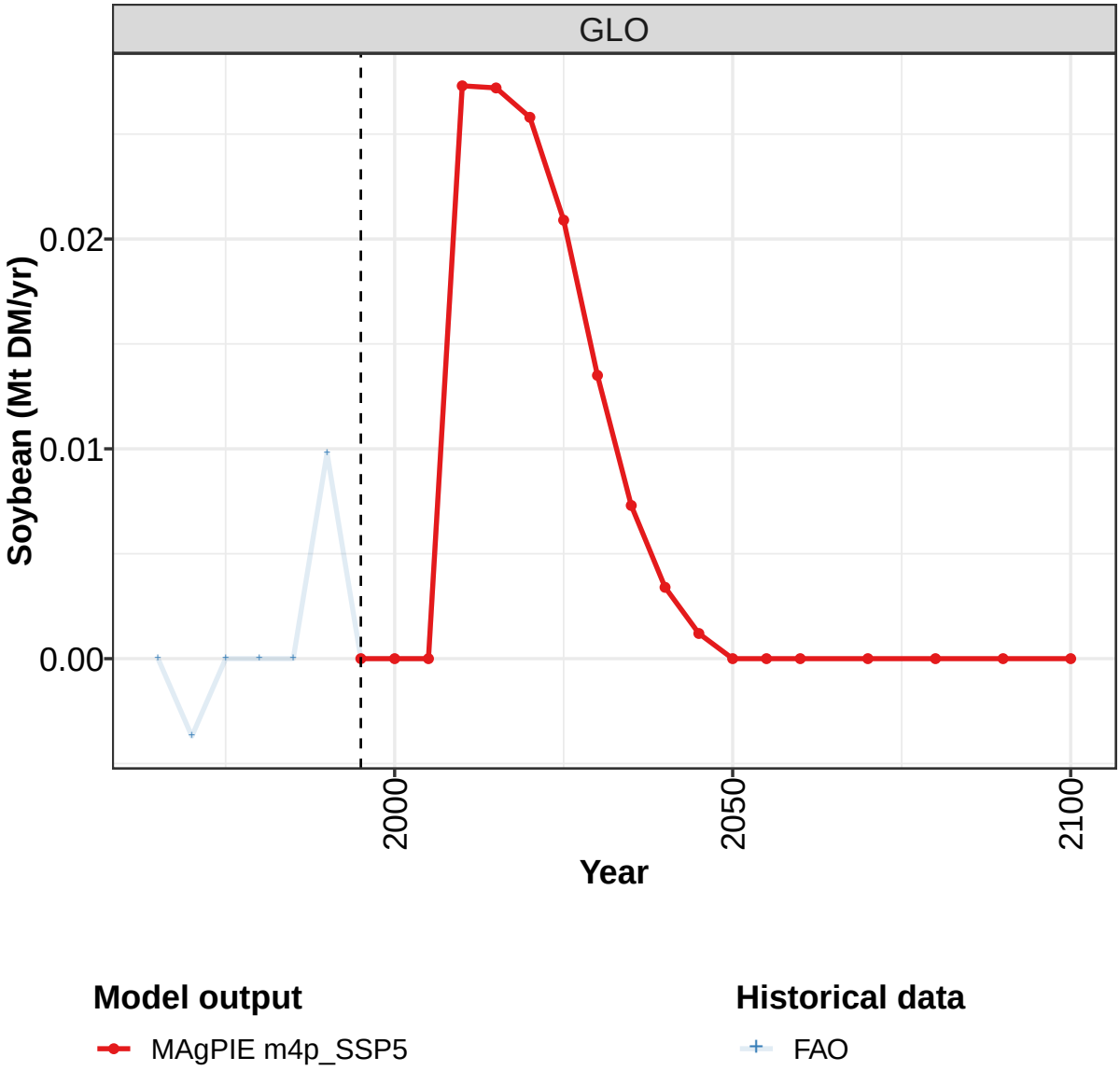
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

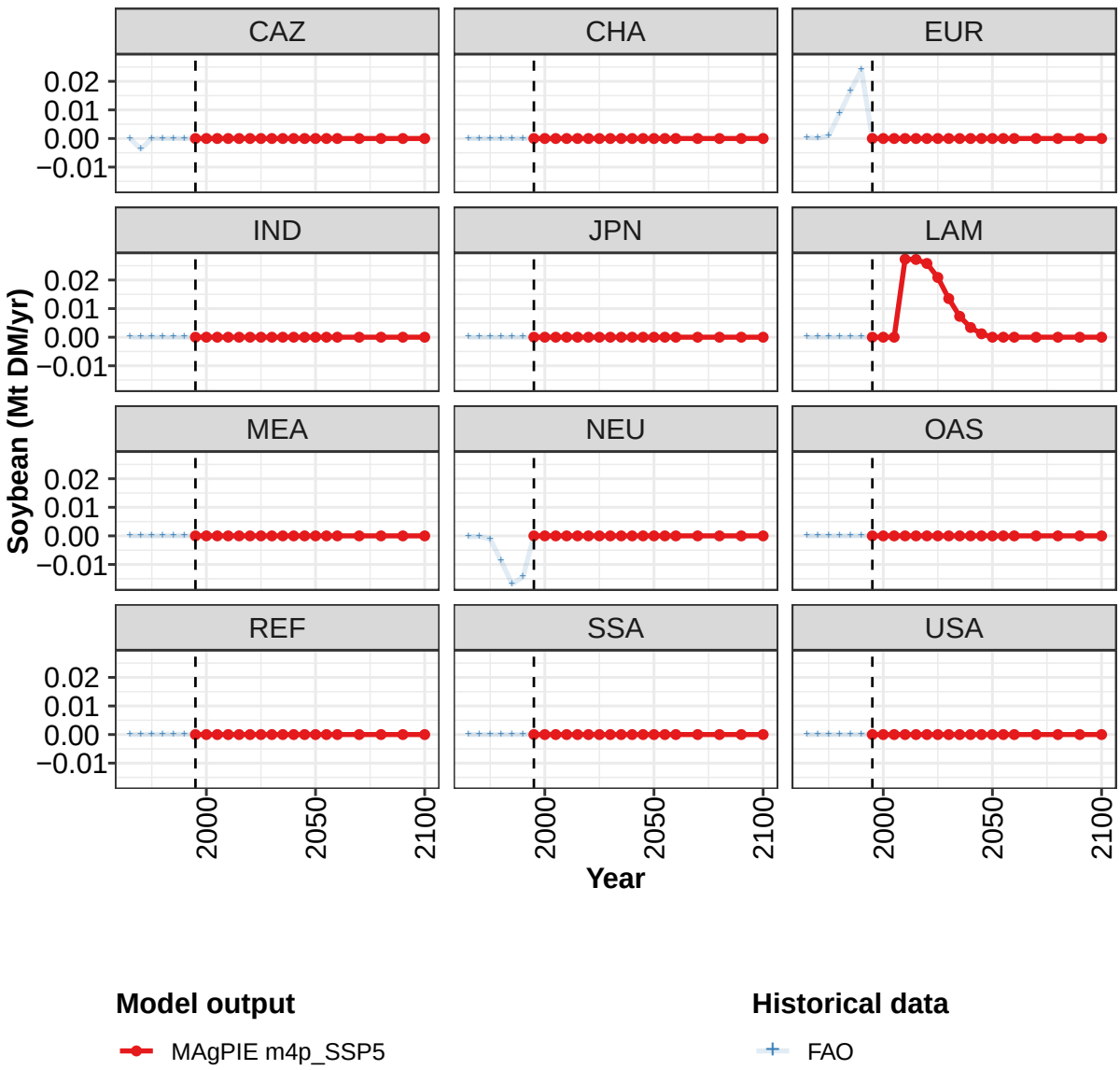
Table 162: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.089	0.028	0.130	0.038	-0.034	-0.020	-0.218	-0.434	-0.651	-0.684
CAZ	-0.007	0.009	-0.008	0.000	-0.007	-0.004	-0.019	-0.013	-0.013	-0.033
CHA	-0.001	0.000	0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.002
EUR	0.063	0.009	0.116	0.040	-0.021	-0.015	-0.011	-0.005	-0.002	-0.002
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.008
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
LAM	0.007	0.006	0.009	-0.021	-0.002	-0.005	-0.001	-0.002	-0.008	-0.026
MEA	0.000	-0.002	-0.000	-0.002	-0.000	-0.004	-0.000	-0.000	-0.001	0.004
NEU	0.017	0.006	0.006	0.001	0.003	0.005	0.000	-0.001	0.000	0.000
OAS	-0.001	-0.016	-0.005	-0.004	-0.006	-0.020	-0.027	-0.003	-0.025	-0.134
REF	0.007	0.013	0.010	0.028	0.024	0.018	-0.007	-0.011	-0.000	-0.000
SSA	0.003	0.005	0.005	0.004	0.007	0.005	-0.000	-0.006	-0.000	-0.006
USA	0.000	0.000	-0.003	-0.007	-0.030	0.000	-0.151	-0.394	-0.602	-0.483

Table 163: FAO — Demand—Domestic Balanceflow—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

5.1.10 Oil crops—Soybean





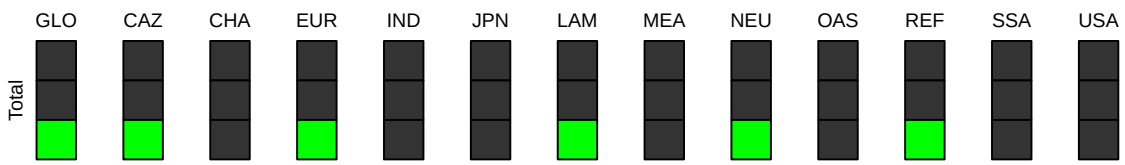


Figure 55: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0000	0.0000	0.0000	0.0273	0.0272	0.0258	0.0209	0.0135	0.0073	0.0034	0.0012
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0273	0.0272	0.0258	0.0209	0.0135	0.0073	0.0034	0.0012
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 164: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

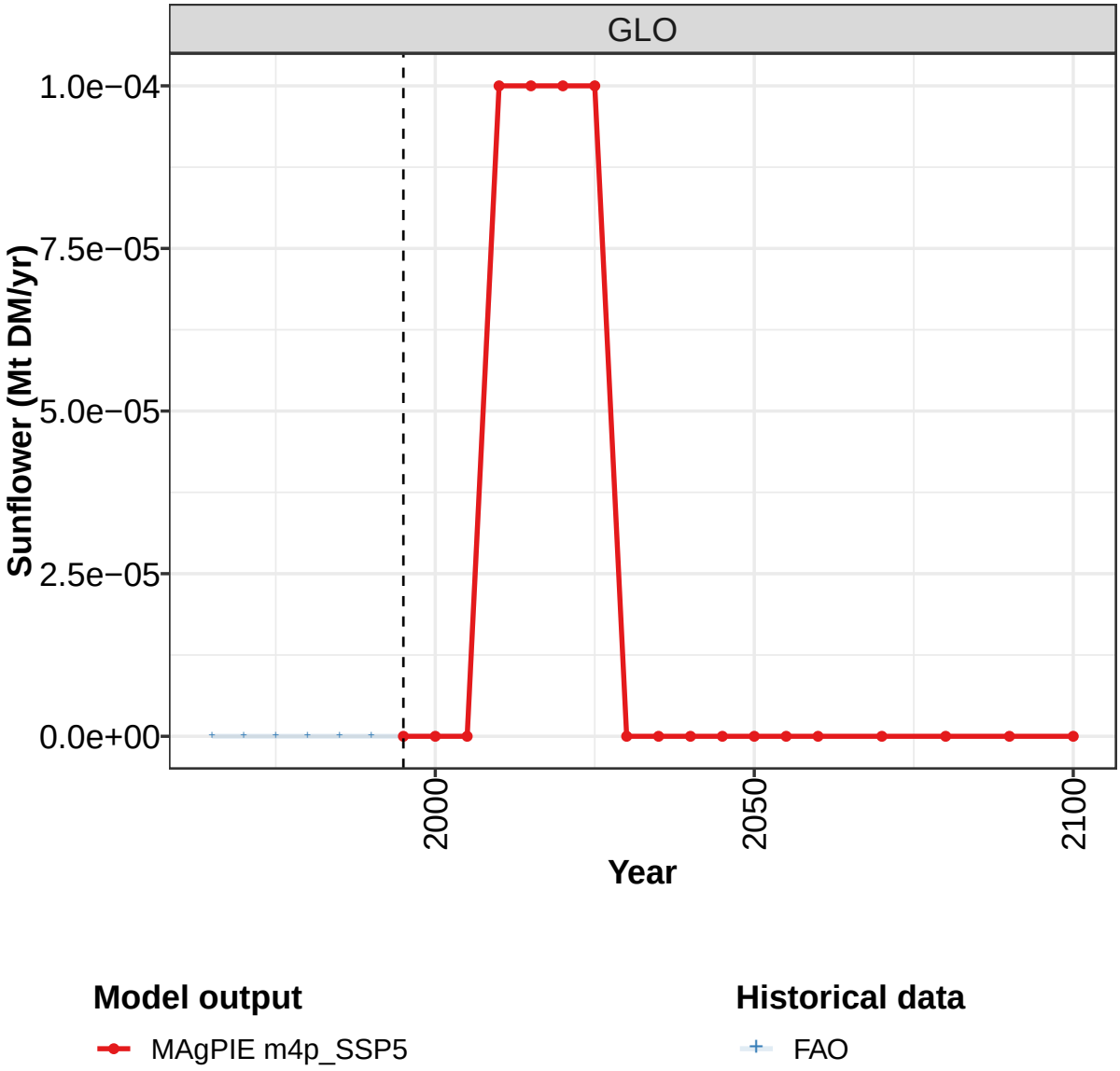
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

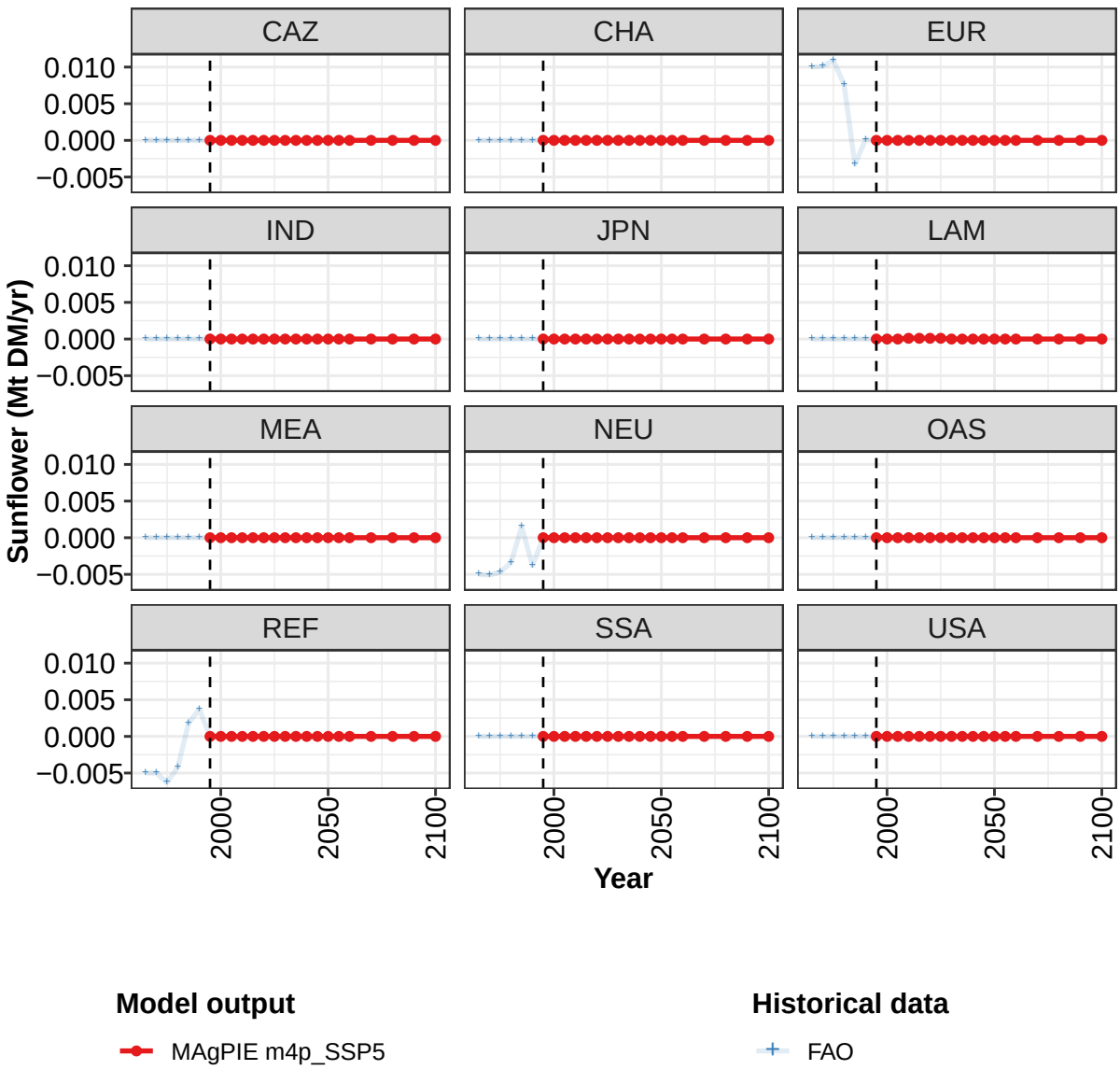
Table 165: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0000	-0.0037	0.0000	0.0000	0.0000	0.0098	0.0000	0.0000	0.0000	0.0273
CAZ	0.0000	-0.0037	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0003	0.0001	0.0010	0.0087	0.0166	0.0241	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0273
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	-0.0003	-0.0002	-0.0011	-0.0088	-0.0168	-0.0144	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 166: FAO — Demand—Domestic Balanceflow—Crops—Oil crops—Soybean (Mt DM/yr)

5.1.11 Oil crops—Sunflower





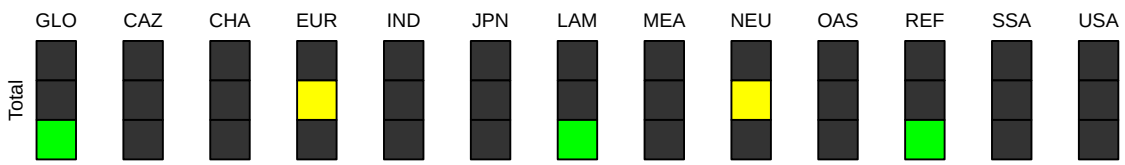


Figure 56: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	
GLO	0.0000000	0.0000000	0.0000000	0.0001000	0.0001000	0.0001000	0.0001000	0.0000000	0.0000000	0.
CAZ	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
CHA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
EUR	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
IND	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
JPN	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
LAM	0.0000000	0.0000000	0.0000000	0.0001000	0.0001000	0.0001000	0.0001000	0.0000000	0.0000000	0.
MEA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
NEU	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
OAS	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
REF	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
SSA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.
USA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.

Table 167: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

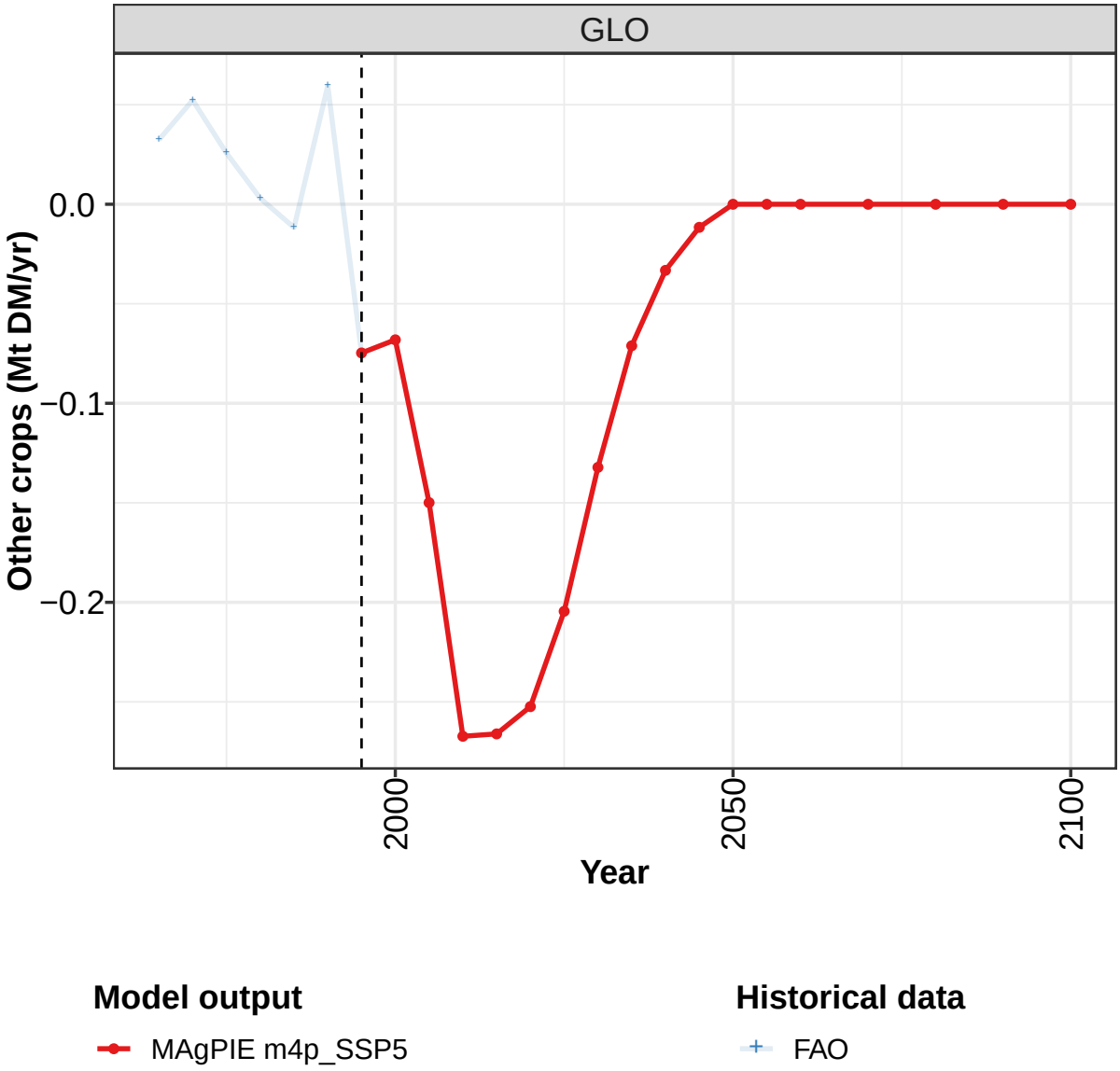
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
CAZ	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
CHA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
EUR	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
IND	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
JPN	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
LAM	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
MEA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
NEU	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
OAS	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
REF	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
SSA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
USA	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

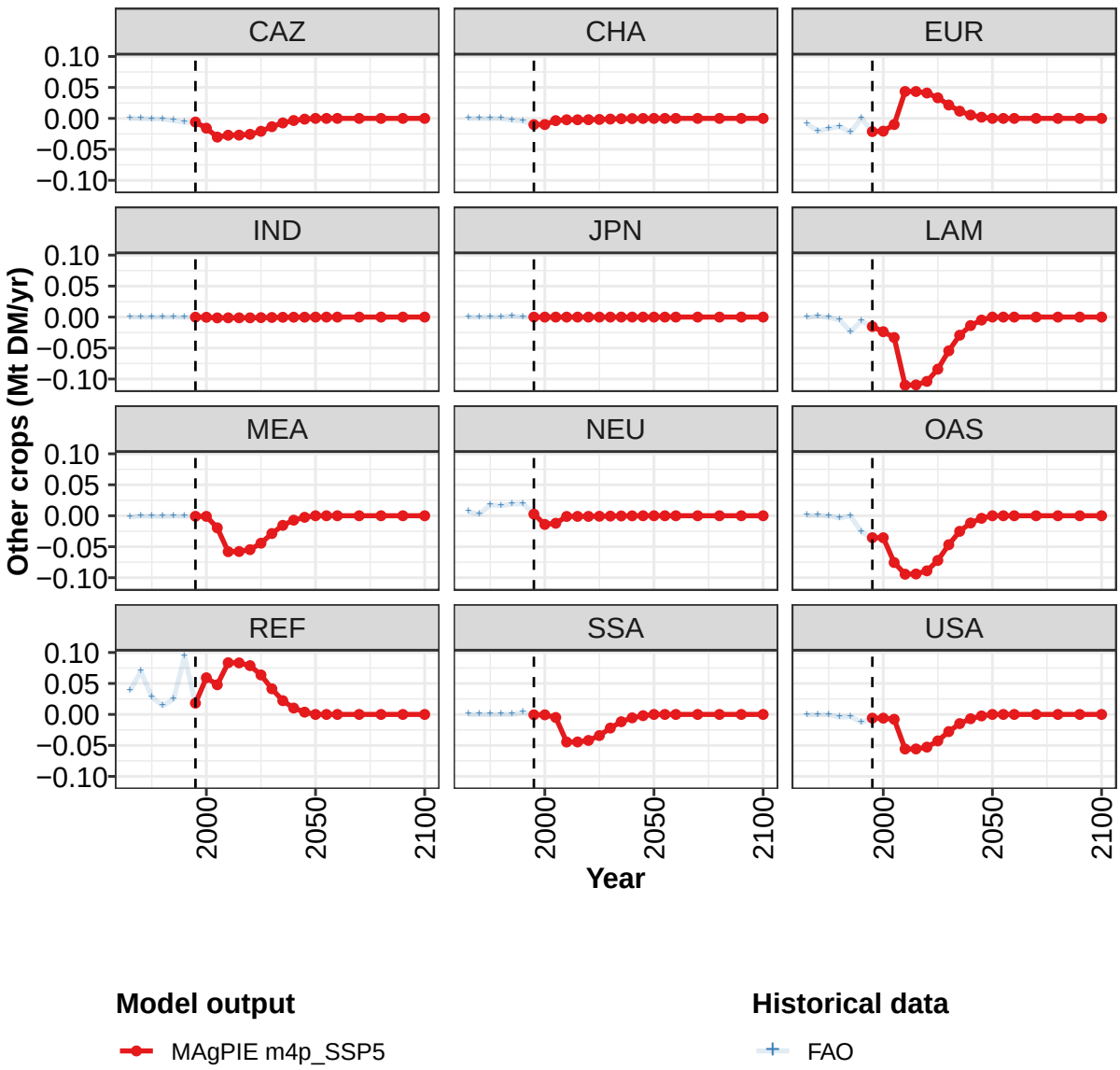
Table 168: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0100	0.0101	0.0109	0.0076	-0.0033	0.0001	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	-0.0050	-0.0051	-0.0047	-0.0034	0.0015	-0.0038	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	-0.0050	-0.0050	-0.0063	-0.0042	0.0018	0.0037	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 169: FAO — Demand—Domestic Balanceflow—Crops—Oil crops—Sunflower (Mt DM/yr)

5.1.12 Other crops





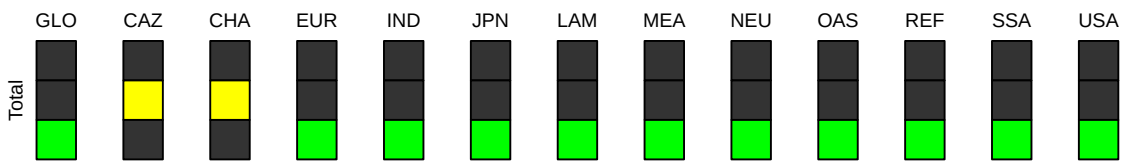


Figure 57: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.0747	-0.0681	-0.1499	-0.2673	-0.2661	-0.2524	-0.2045	-0.1322	-0.0711	-0.0332	-0.0116
CAZ	-0.0059	-0.0158	-0.0302	-0.0272	-0.0270	-0.0257	-0.0208	-0.0134	-0.0073	-0.0034	-0.0012
CHA	-0.0100	-0.0099	-0.0036	-0.0022	-0.0022	-0.0021	-0.0017	-0.0011	-0.0006	-0.0003	-0.0001
EUR	-0.0213	-0.0206	-0.0099	0.0435	0.0434	0.0410	0.0332	0.0216	0.0117	0.0054	0.0019
IND	-0.0001	-0.0003	-0.0013	-0.0012	-0.0012	-0.0012	-0.0009	-0.0006	-0.0003	-0.0002	-0.0001
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	-0.0153	-0.0236	-0.0330	-0.1100	-0.1095	-0.1038	-0.0841	-0.0545	-0.0293	-0.0137	-0.0048
MEA	-0.0009	-0.0010	-0.0195	-0.0580	-0.0577	-0.0547	-0.0443	-0.0287	-0.0155	-0.0071	-0.0025
NEU	0.0026	-0.0140	-0.0121	-0.0011	-0.0010	-0.0010	-0.0008	-0.0005	-0.0003	-0.0001	0.0000
OAS	-0.0354	-0.0355	-0.0755	-0.0943	-0.0940	-0.0889	-0.0721	-0.0467	-0.0251	-0.0117	-0.0041
REF	0.0182	0.0592	0.0479	0.0835	0.0832	0.0788	0.0638	0.0414	0.0222	0.0103	0.0037
SSA	-0.0006	-0.0006	-0.0049	-0.0445	-0.0444	-0.0420	-0.0341	-0.0220	-0.0118	-0.0055	-0.0020
USA	-0.0060	-0.0060	-0.0078	-0.0558	-0.0557	-0.0528	-0.0427	-0.0277	-0.0148	-0.0069	-0.0024

Table 170: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops (Mt DM/yr) [PART 1/2]

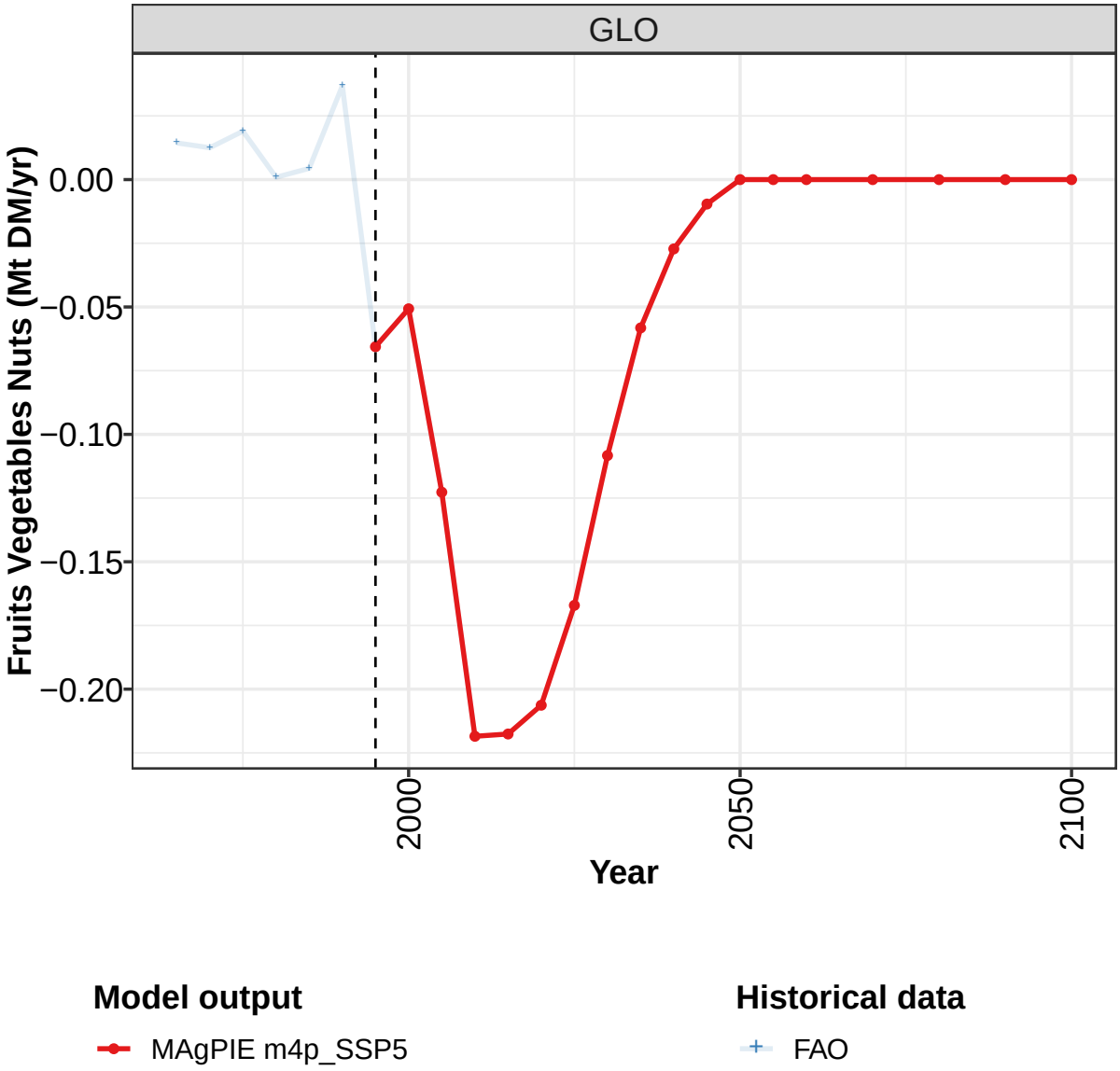
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

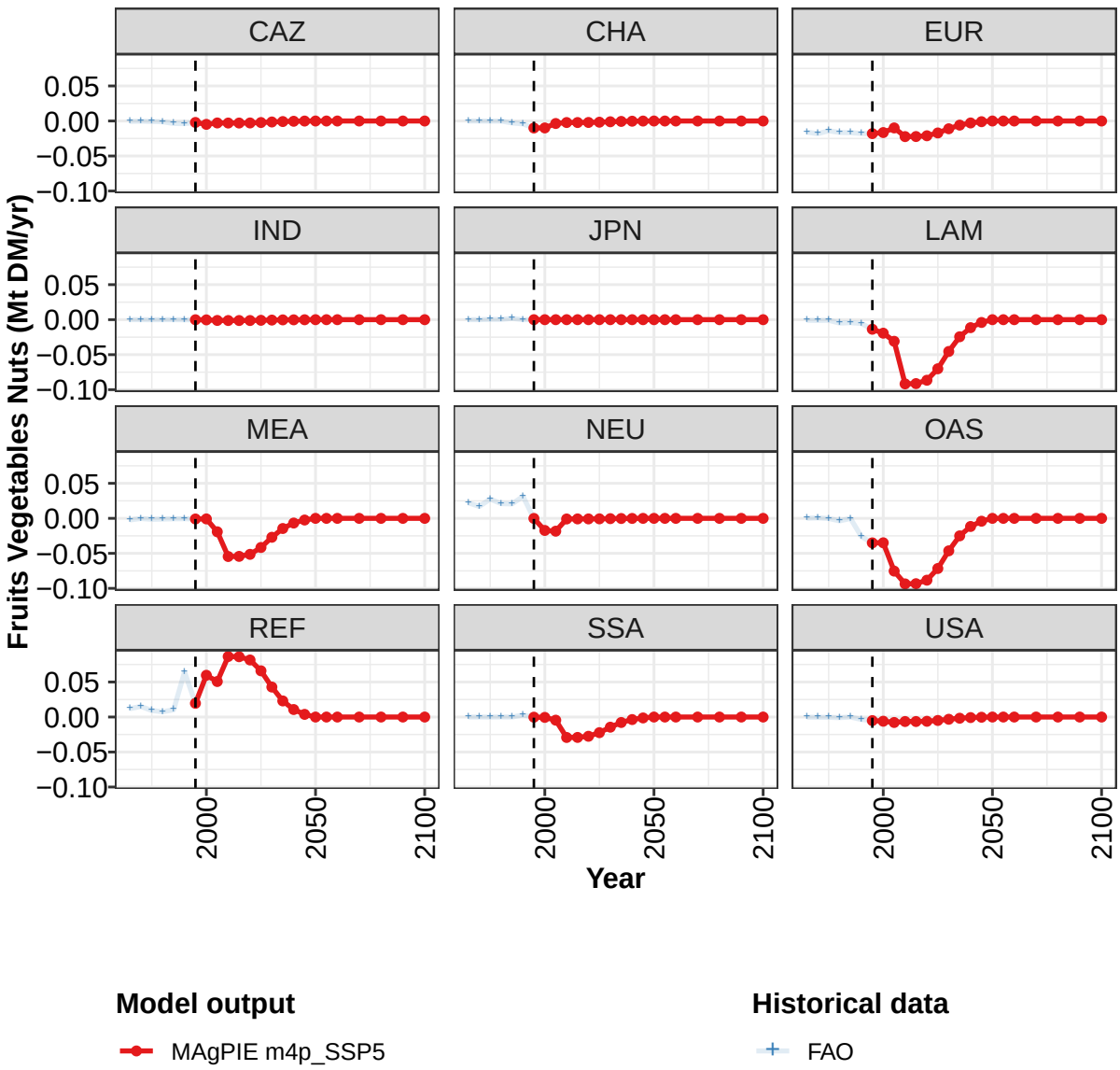
Table 171: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0324	0.0523	0.0257	0.0030	-0.0117	0.0595	-0.0748	-0.0681	-0.1500	-0.2672
CAZ	0.0000	-0.0003	-0.0008	-0.0011	-0.0037	-0.0064	-0.0060	-0.0157	-0.0303	-0.0272
CHA	0.0000	0.0000	-0.0002	-0.0001	-0.0029	-0.0042	-0.0100	-0.0099	-0.0036	-0.0022
EUR	-0.0086	-0.0206	-0.0163	-0.0130	-0.0226	0.0004	-0.0213	-0.0205	-0.0099	0.0435
IND	0.0000	0.0000	-0.0001	0.0003	0.0000	-0.0002	-0.0001	-0.0003	-0.0013	-0.0012
JPN	0.0000	0.0000	0.0004	0.0004	0.0018	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	-0.0008	0.0012	-0.0005	-0.0046	-0.0237	-0.0062	-0.0153	-0.0236	-0.0330	-0.1099
MEA	-0.0023	-0.0002	-0.0013	-0.0011	-0.0006	-0.0008	-0.0009	-0.0010	-0.0196	-0.0580
NEU	0.0064	0.0026	0.0173	0.0164	0.0189	0.0196	0.0025	-0.0140	-0.0122	-0.0010
OAS	0.0002	0.0007	-0.0002	-0.0036	-0.0002	-0.0263	-0.0355	-0.0355	-0.0754	-0.0943
REF	0.0380	0.0693	0.0281	0.0138	0.0247	0.0935	0.0182	0.0591	0.0479	0.0835
SSA	0.0000	0.0000	-0.0001	0.0001	0.0000	0.0029	-0.0005	-0.0007	-0.0049	-0.0445
USA	-0.0006	-0.0004	-0.0004	-0.0045	-0.0034	-0.0129	-0.0060	-0.0060	-0.0078	-0.0559

Table 172: FAO — Demand—Domestic Balanceflow—Crops—Other crops (Mt DM/yr)

5.1.13 Other crops—Fruits Vegetables Nuts





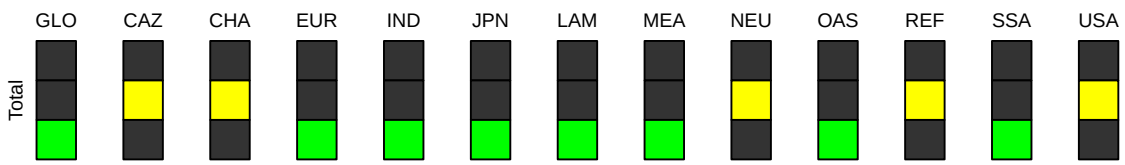


Figure 58: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.0656	-0.0507	-0.1227	-0.2185	-0.2176	-0.2063	-0.1671	-0.1083	-0.0582	-0.0272	-0.0096
CAZ	-0.0021	-0.0048	-0.0028	-0.0029	-0.0029	-0.0028	-0.0022	-0.0014	-0.0008	-0.0004	-0.0001
CHA	-0.0100	-0.0099	-0.0036	-0.0022	-0.0022	-0.0021	-0.0017	-0.0011	-0.0006	-0.0003	-0.0001
EUR	-0.0180	-0.0165	-0.0099	-0.0223	-0.0222	-0.0211	-0.0171	-0.0111	-0.0059	-0.0028	-0.0010
IND	-0.0001	-0.0003	-0.0011	-0.0012	-0.0012	-0.0012	-0.0009	-0.0006	-0.0003	-0.0002	-0.0001
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	-0.0137	-0.0193	-0.0309	-0.0917	-0.0913	-0.0865	-0.0701	-0.0454	-0.0244	-0.0114	-0.0040
MEA	-0.0009	-0.0008	-0.0192	-0.0545	-0.0543	-0.0514	-0.0416	-0.0270	-0.0145	-0.0067	-0.0024
NEU	-0.0001	-0.0173	-0.0183	-0.0009	-0.0008	-0.0008	-0.0007	-0.0004	-0.0002	-0.0001	0.0000
OAS	-0.0350	-0.0349	-0.0753	-0.0936	-0.0933	-0.0883	-0.0716	-0.0464	-0.0250	-0.0116	-0.0041
REF	0.0196	0.0596	0.0507	0.0864	0.0861	0.0815	0.0660	0.0428	0.0230	0.0107	0.0038
SSA	-0.0002	-0.0005	-0.0045	-0.0292	-0.0291	-0.0275	-0.0223	-0.0145	-0.0078	-0.0036	-0.0013
USA	-0.0051	-0.0060	-0.0078	-0.0064	-0.0064	-0.0061	-0.0049	-0.0032	-0.0017	-0.0008	-0.0003

Table 173: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

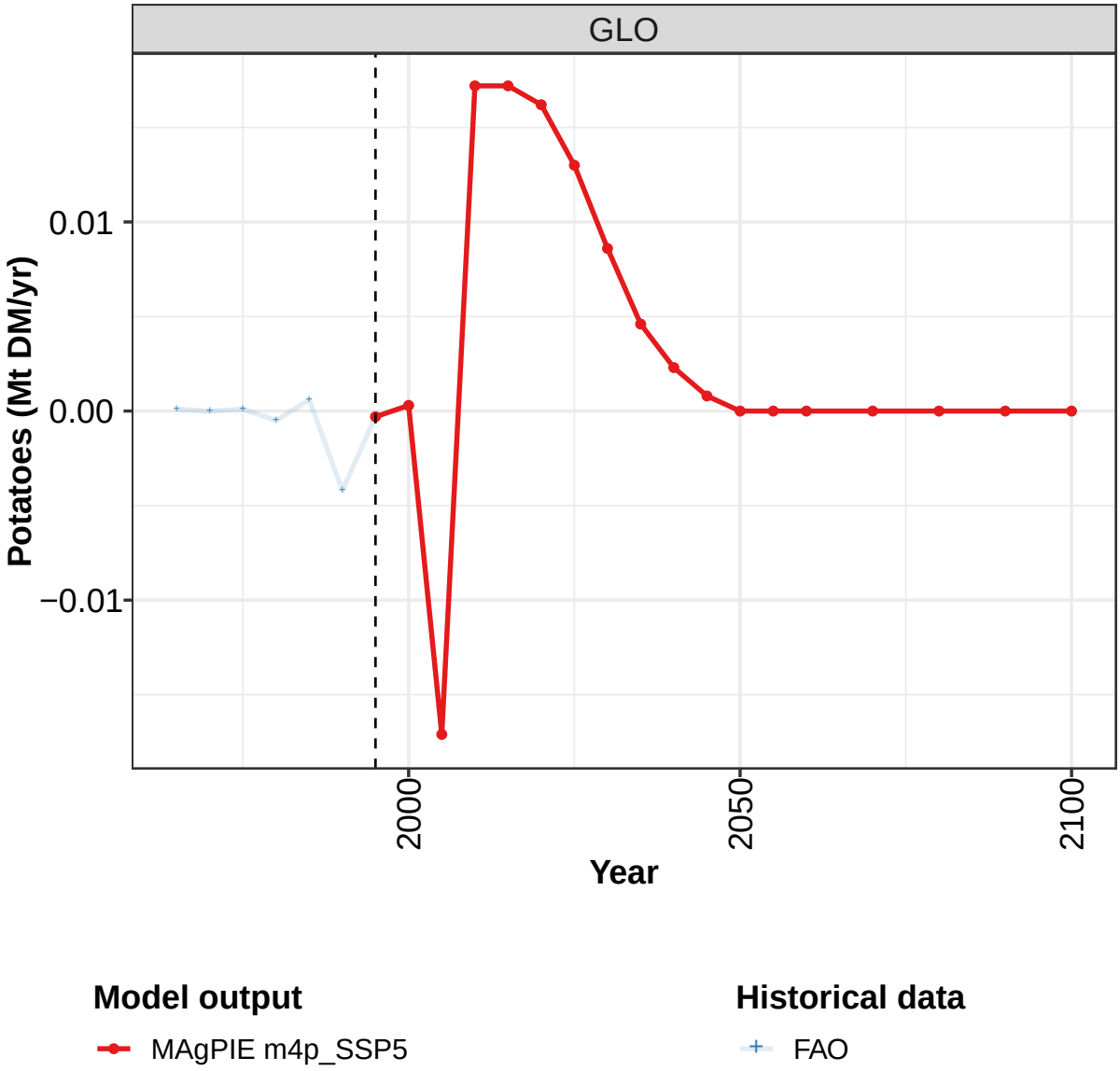
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

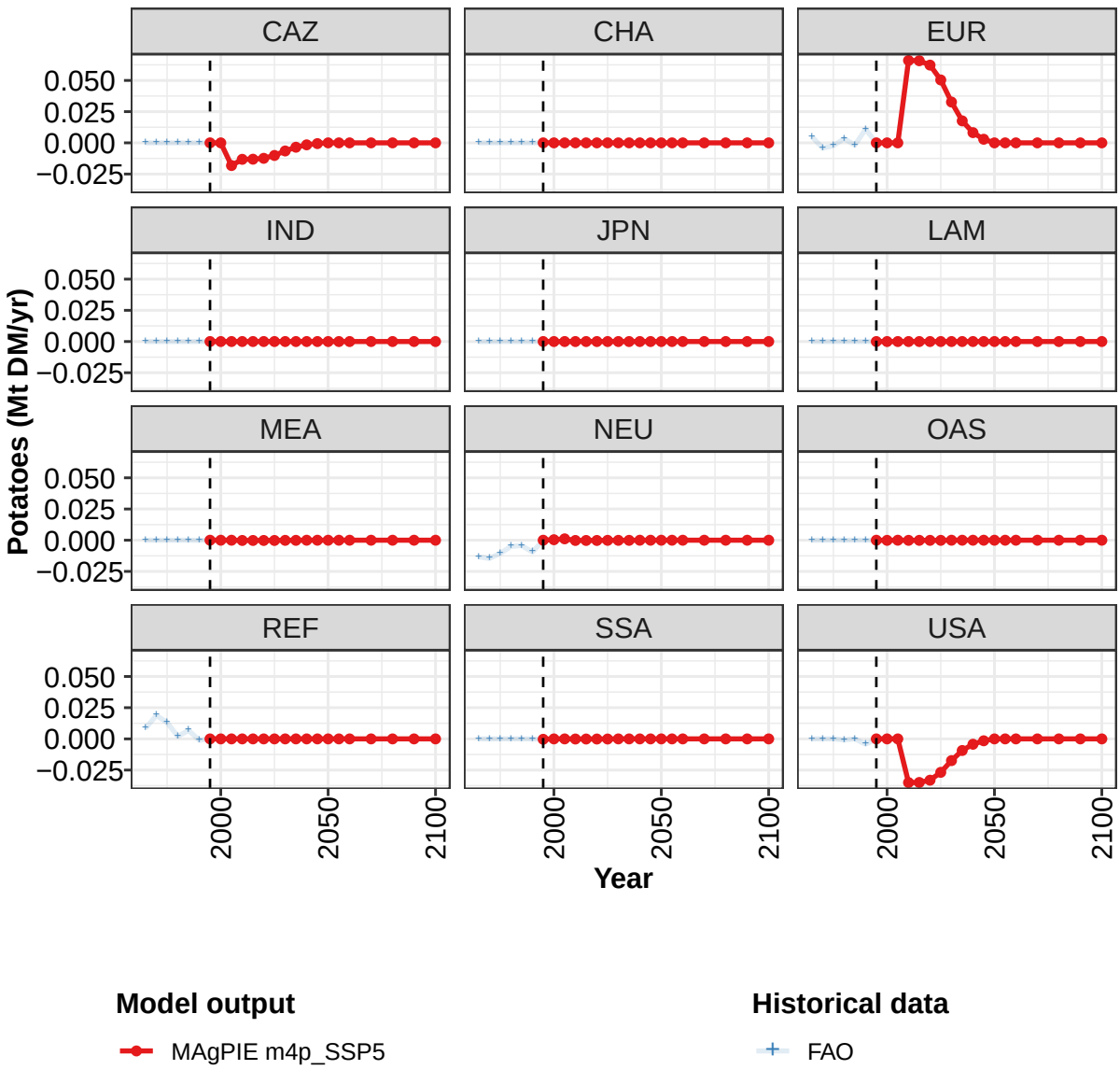
Table 174: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0144	0.0125	0.0190	0.0009	0.0044	0.0368	-0.0656	-0.0508	-0.1227	-0.2185
CAZ	-0.0006	-0.0003	-0.0008	-0.0011	-0.0036	-0.0038	-0.0021	-0.0048	-0.0028	-0.0029
CHA	0.0000	0.0000	-0.0002	-0.0001	-0.0028	-0.0042	-0.0100	-0.0099	-0.0036	-0.0022
EUR	-0.0159	-0.0182	-0.0140	-0.0164	-0.0167	-0.0178	-0.0180	-0.0165	-0.0099	-0.0223
IND	0.0000	0.0000	-0.0001	0.0000	0.0000	-0.0002	-0.0001	-0.0003	-0.0011	-0.0012
JPN	0.0000	0.0000	0.0004	0.0004	0.0018	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	-0.0009	-0.0012	-0.0009	-0.0049	-0.0043	-0.0055	-0.0137	-0.0193	-0.0309	-0.0917
MEA	-0.0023	-0.0002	-0.0014	-0.0011	-0.0006	-0.0005	-0.0009	-0.0008	-0.0192	-0.0545
NEU	0.0222	0.0170	0.0275	0.0210	0.0206	0.0313	-0.0001	-0.0173	-0.0183	-0.0009
OAS	0.0002	0.0007	-0.0002	-0.0036	-0.0002	-0.0262	-0.0350	-0.0349	-0.0753	-0.0936
REF	0.0119	0.0151	0.0093	0.0075	0.0103	0.0642	0.0196	0.0596	0.0507	0.0864
SSA	0.0000	0.0000	-0.0001	0.0001	0.0000	0.0029	-0.0002	-0.0005	-0.0045	-0.0292
USA	-0.0002	-0.0004	-0.0004	-0.0009	0.0000	-0.0035	-0.0051	-0.0060	-0.0078	-0.0064

Table 175: FAO — Demand—Domestic Balanceflow—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

5.1.14 Other crops—Potatoes





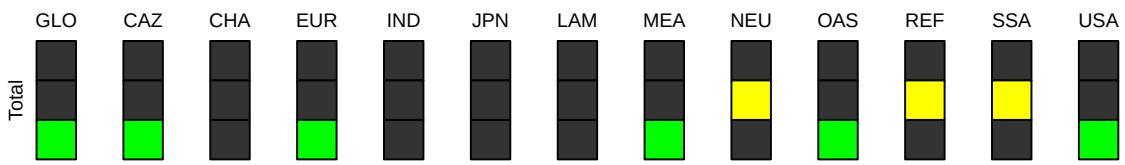


Figure 59: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.0003	0.0003	-0.0171	0.0172	0.0172	0.0162	0.0130	0.0086	0.0046	0.0023	0.0008
CAZ	0.0000	0.0000	-0.0182	-0.0132	-0.0131	-0.0124	-0.0101	-0.0065	-0.0035	-0.0016	-0.0006
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0660	0.0658	0.0623	0.0504	0.0327	0.0176	0.0082	0.0029
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	-0.0002	-0.0002	-0.0002	-0.0002	-0.0001	-0.0001	0.0000	0.0000
NEU	0.0000	0.0004	0.0011	-0.0002	-0.0002	-0.0002	-0.0001	-0.0001	-0.0001	0.0000	0.0000
OAS	0.0000	-0.0001	0.0000	-0.0001	-0.0001	-0.0001	-0.0001	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	-0.0003	0.0000	0.0000	-0.0001	-0.0001	-0.0001	-0.0001	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	-0.0350	-0.0349	-0.0331	-0.0268	-0.0174	-0.0093	-0.0043	-0.0015

Table 176: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

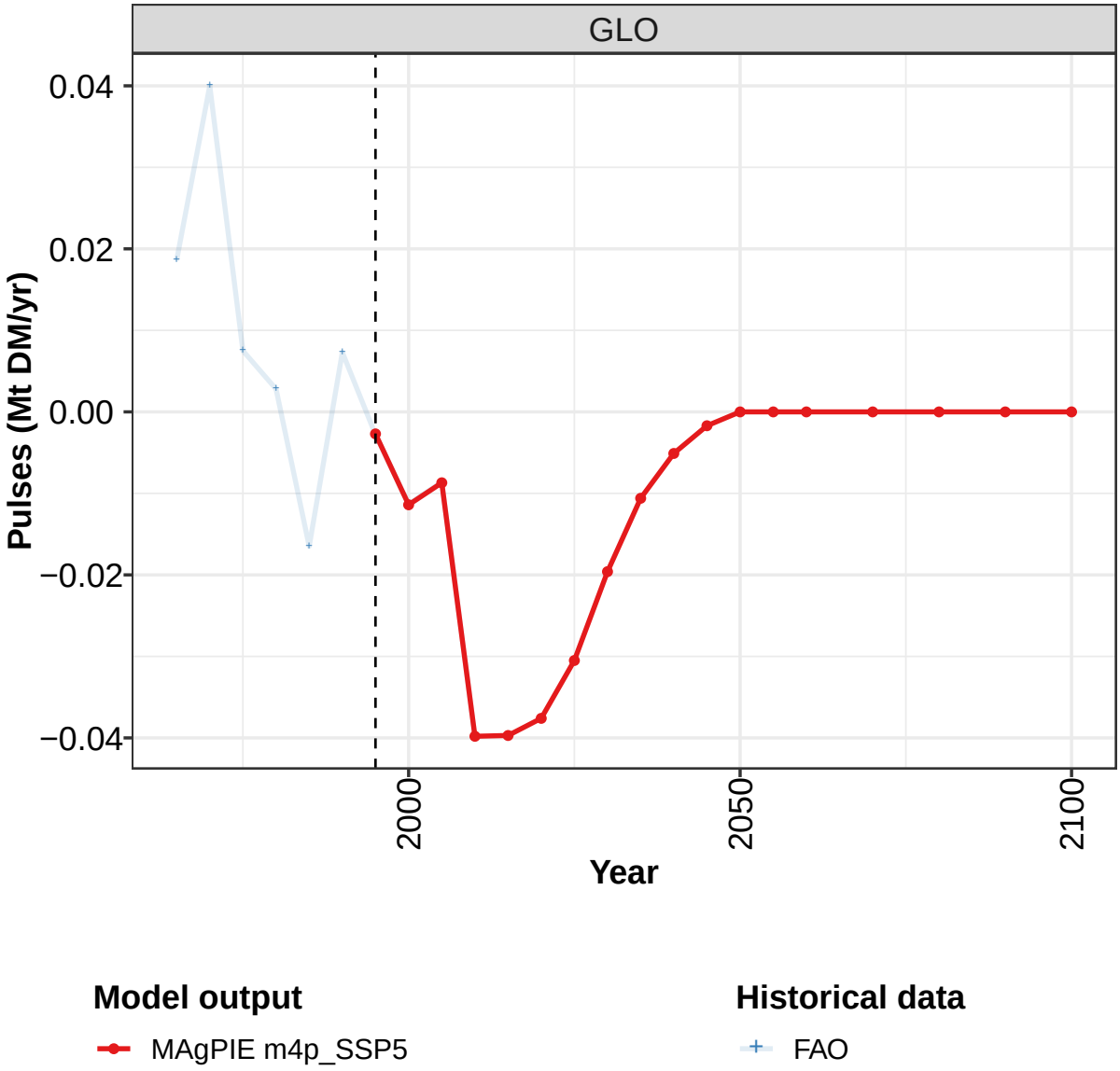
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

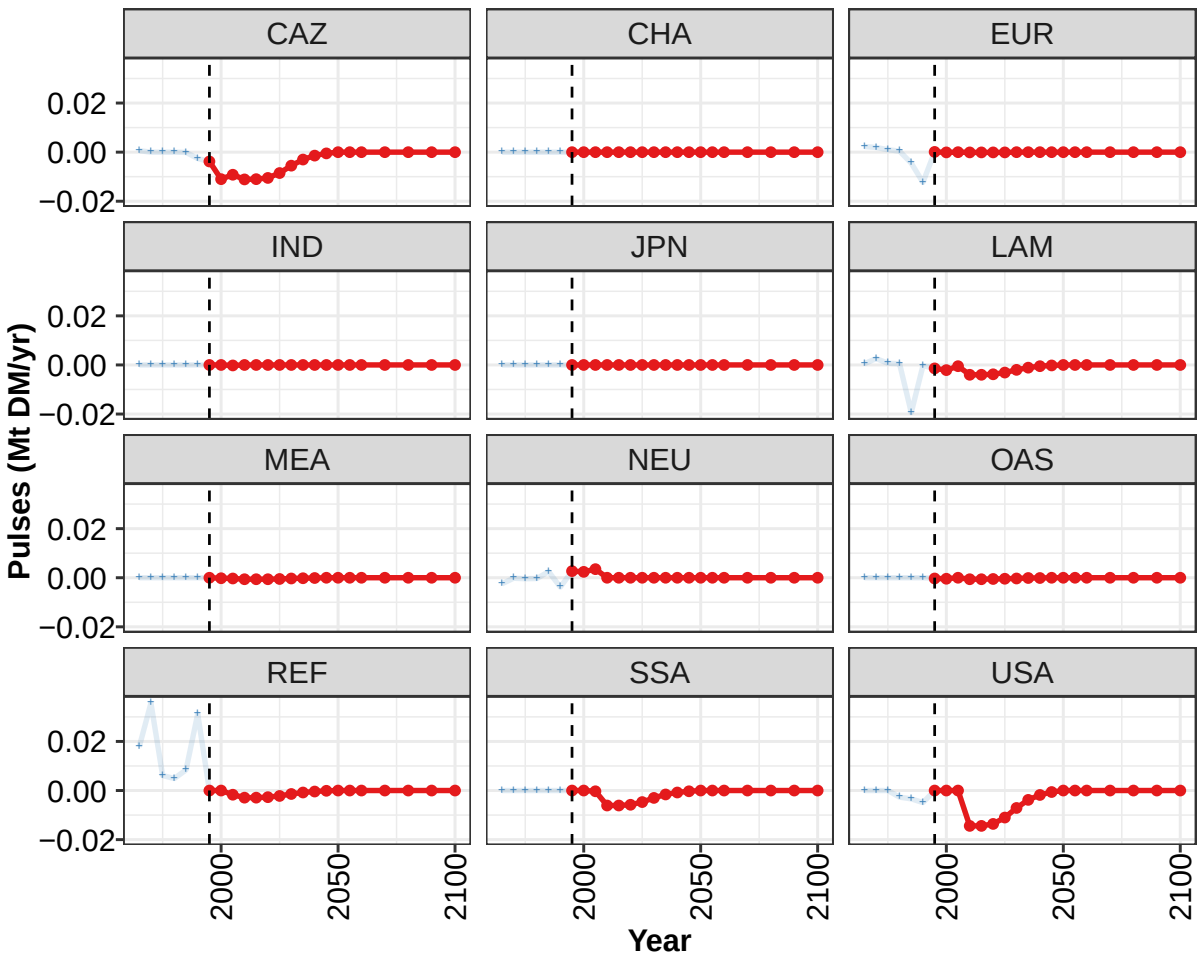
Table 177: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0001	0.0000	0.0001	-0.0005	0.0006	-0.0042	-0.0003	0.0002	-0.0172	0.0172
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0182	-0.0132
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0049	-0.0042	-0.0024	0.0034	-0.0018	0.0109	0.0000	0.0000	0.0000	0.0660
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	0.0000	0.0000	0.0000	-0.0002
NEU	-0.0133	-0.0146	-0.0106	-0.0050	-0.0043	-0.0095	0.0000	0.0004	0.0011	-0.0002
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	0.0000	-0.0001
REF	0.0085	0.0188	0.0131	0.0020	0.0068	-0.0011	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0003	0.0000	0.0000	-0.0001
USA	0.0000	0.0000	0.0000	-0.0009	0.0000	-0.0043	0.0000	0.0000	0.0000	-0.0350

Table 178: FAO — Demand—Domestic Balanceflow—Crops—Other crops—Potatoes (Mt DM/yr)

5.1.15 Other crops—Pulses





Model output

MAgPIE m4p_SSP5

Historical data

FAO

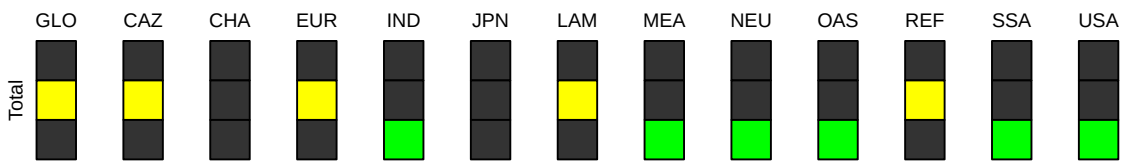


Figure 60: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.00270	-0.01140	-0.00870	-0.03980	-0.03970	-0.03760	-0.03050	-0.01960	-0.01060	-0.00510	-0.00
CAZ	-0.00380	-0.01100	-0.00920	-0.01110	-0.01100	-0.01050	-0.00850	-0.00550	-0.00300	-0.00140	-0.00
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
EUR	0.00010	-0.00010	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00
IND	0.00000	0.00000	-0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	-0.00140	-0.00210	-0.00050	-0.00400	-0.00400	-0.00380	-0.00310	-0.00200	-0.00110	-0.00050	-0.00
MEA	0.00000	-0.00020	-0.00030	-0.00060	-0.00060	-0.00060	-0.00050	-0.00030	-0.00020	-0.00010	0.00
NEU	0.00270	0.00240	0.00350	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
OAS	-0.00030	-0.00040	0.00000	-0.00060	-0.00060	-0.00050	-0.00040	-0.00030	-0.00010	-0.00010	0.00
REF	0.00000	0.00000	-0.00170	-0.00290	-0.00290	-0.00270	-0.00220	-0.00140	-0.00080	-0.00040	-0.00
SSA	0.00000	0.00000	-0.00030	-0.00610	-0.00610	-0.00580	-0.00470	-0.00300	-0.00160	-0.00080	-0.00
USA	0.00000	0.00000	0.00000	-0.01440	-0.01440	-0.01360	-0.01100	-0.00710	-0.00380	-0.00180	-0.00

Table 179: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

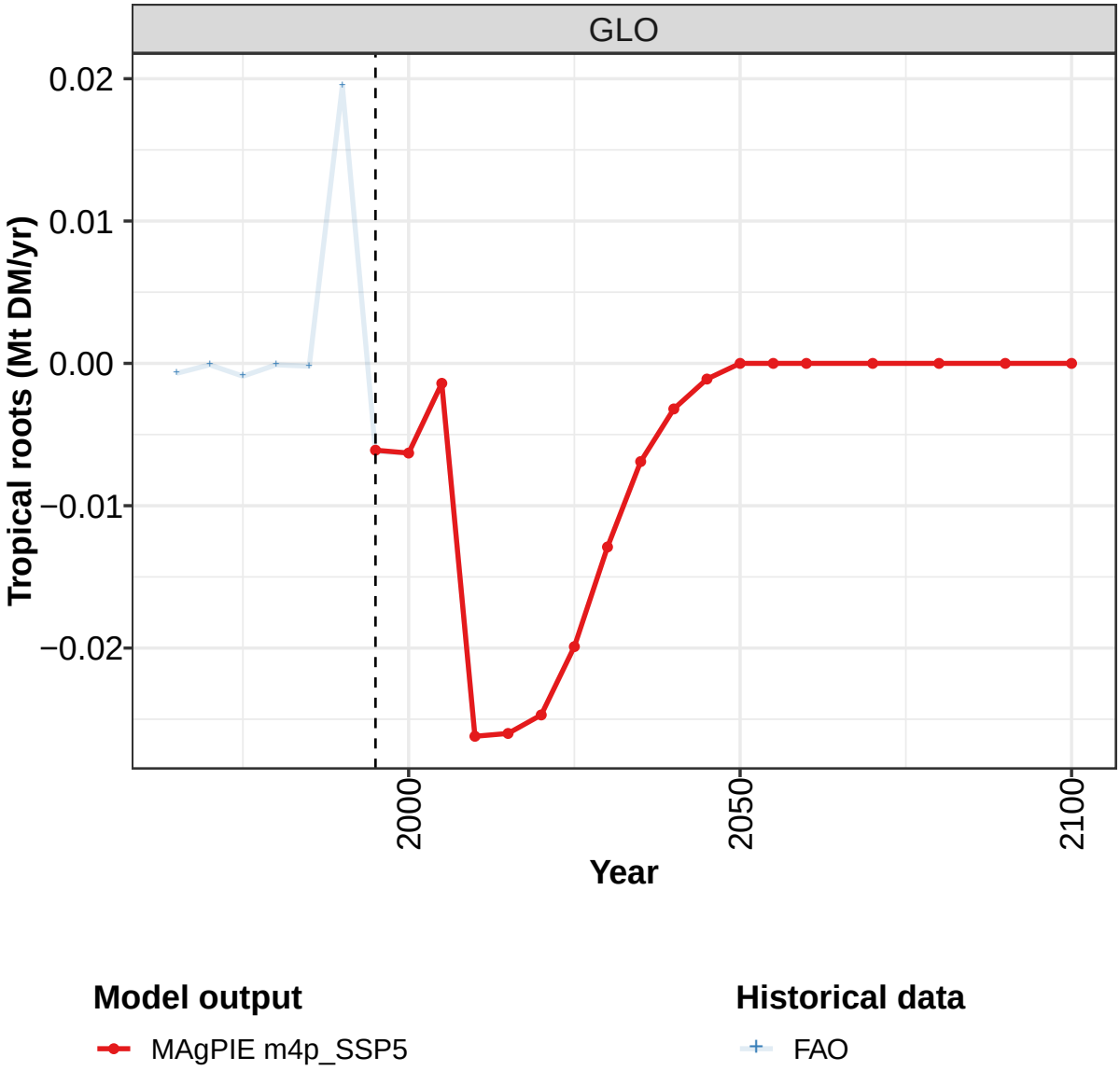
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

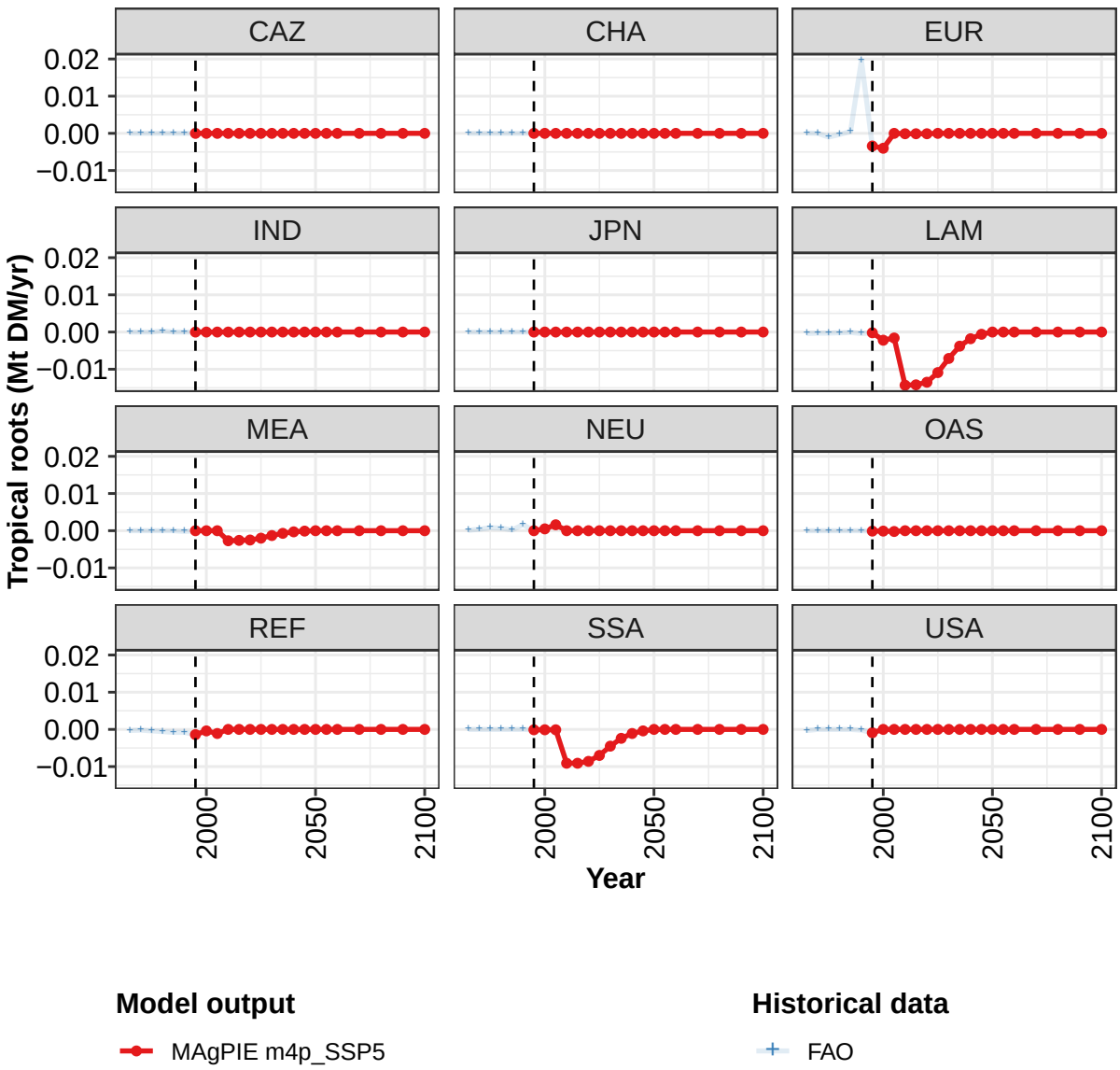
Table 180: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0186	0.0400	0.0075	0.0028	-0.0165	0.0073	-0.0028	-0.0113	-0.0086	-0.0398
CAZ	0.0006	0.0000	0.0000	0.0000	-0.0001	-0.0026	-0.0038	-0.0110	-0.0092	-0.0111
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0023	0.0019	0.0010	0.0004	-0.0045	-0.0123	0.0001	-0.0001	0.0000	-0.0001
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0002	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0005	0.0026	0.0007	0.0005	-0.0194	-0.0003	-0.0014	-0.0021	-0.0005	-0.0040
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0002	-0.0003	-0.0006
NEU	-0.0025	-0.0002	-0.0004	-0.0003	0.0025	-0.0038	0.0027	0.0024	0.0035	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0003	-0.0004	0.0000	-0.0006
REF	0.0178	0.0356	0.0061	0.0049	0.0084	0.0312	0.0000	0.0000	-0.0017	-0.0029
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0003	-0.0061
USA	0.0000	0.0000	0.0000	-0.0027	-0.0034	-0.0049	0.0000	0.0000	0.0000	-0.0144

Table 181: FAO — Demand—Domestic Balanceflow—Crops—Other crops—Pulses (Mt DM/yr)

5.1.16 Other crops—Tropical roots





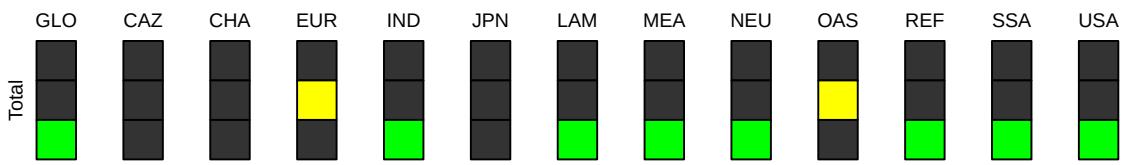


Figure 61: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.00610	-0.00630	-0.00140	-0.02620	-0.02600	-0.02470	-0.01990	-0.01290	-0.00690	-0.00320	-0.00
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
EUR	-0.00340	-0.00400	0.00000	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000	0.00
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	-0.00020	-0.00220	-0.00160	-0.01430	-0.01420	-0.01350	-0.01090	-0.00710	-0.00380	-0.00180	-0.00
MEA	0.00000	0.00000	0.00000	-0.00270	-0.00260	-0.00250	-0.00200	-0.00130	-0.00070	-0.00030	-0.00
NEU	0.00000	0.00050	0.00160	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
OAS	-0.00010	-0.00010	-0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
REF	-0.00140	-0.00040	-0.00110	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
SSA	-0.00010	-0.00010	-0.00010	-0.00910	-0.00910	-0.00860	-0.00700	-0.00450	-0.00240	-0.00110	-0.00
USA	-0.00090	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00

Table 182: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

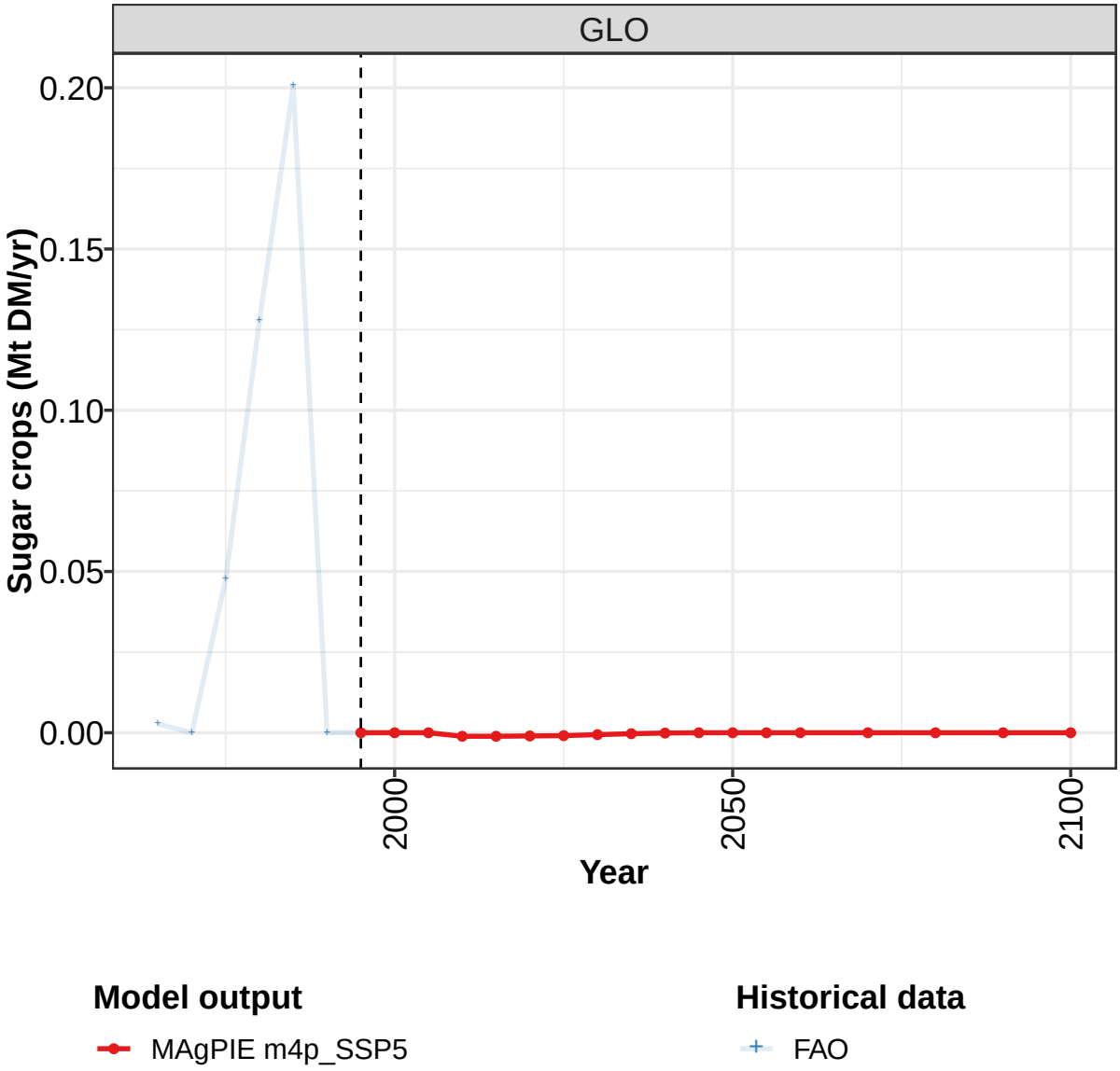
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

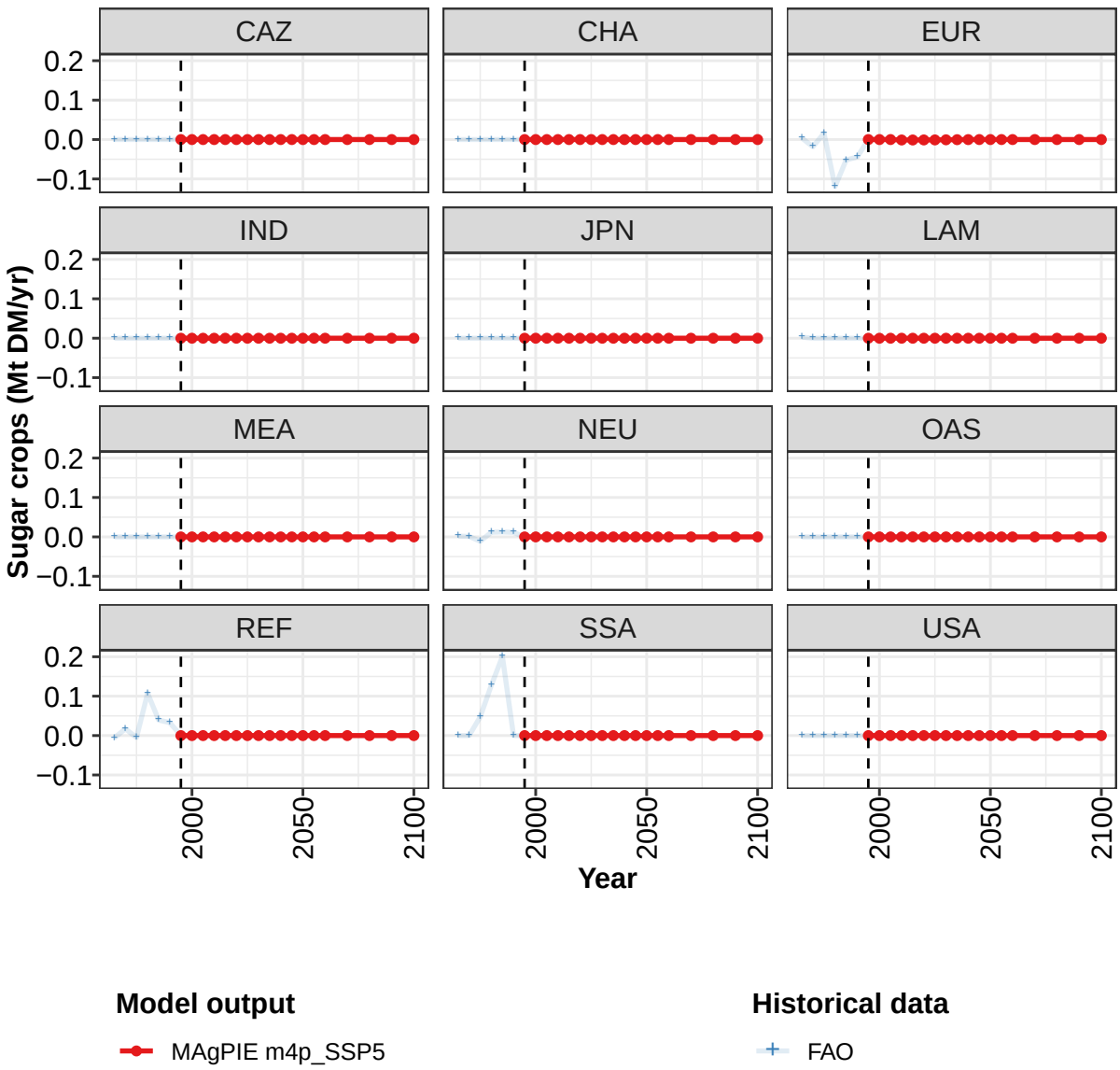
Table 183: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.0007	-0.0001	-0.0009	-0.0001	-0.0002	0.0195	-0.0062	-0.0063	-0.0014	-0.0261
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0001	0.0000	-0.0010	-0.0003	0.0005	0.0196	-0.0034	-0.0040	0.0000	-0.0001
IND	0.0000	0.0000	0.0000	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	-0.0004	-0.0003	-0.0003	-0.0002	-0.0001	-0.0004	-0.0002	-0.0022	-0.0016	-0.0143
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0002	0.0000	0.0000	0.0000	-0.0027
NEU	0.0001	0.0004	0.0008	0.0007	0.0002	0.0016	0.0000	0.0005	0.0016	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0001	-0.0002	0.0000
REF	-0.0003	-0.0002	-0.0004	-0.0006	-0.0008	-0.0008	-0.0014	-0.0004	-0.0011	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0001	-0.0001	-0.0091
USA	-0.0003	0.0000	0.0000	0.0000	0.0000	-0.0002	-0.0009	0.0000	0.0000	0.0000

Table 184: FAO — Demand—Domestic Balanceflow—Crops—Other crops—Tropical roots (Mt DM/yr)

5.1.17 Sugar crops





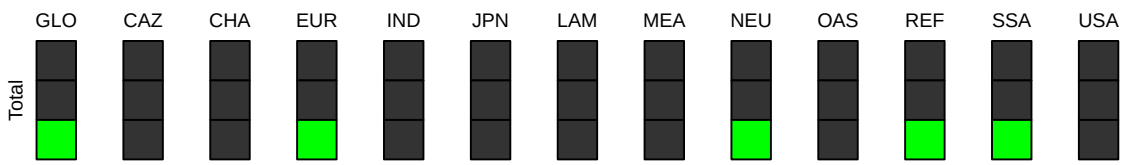


Figure 62: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	0	0	-0	-0	-0	-0	-0	-0	-0	0
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	-0	-0	-0	-0	-0	-0	-0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 185: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

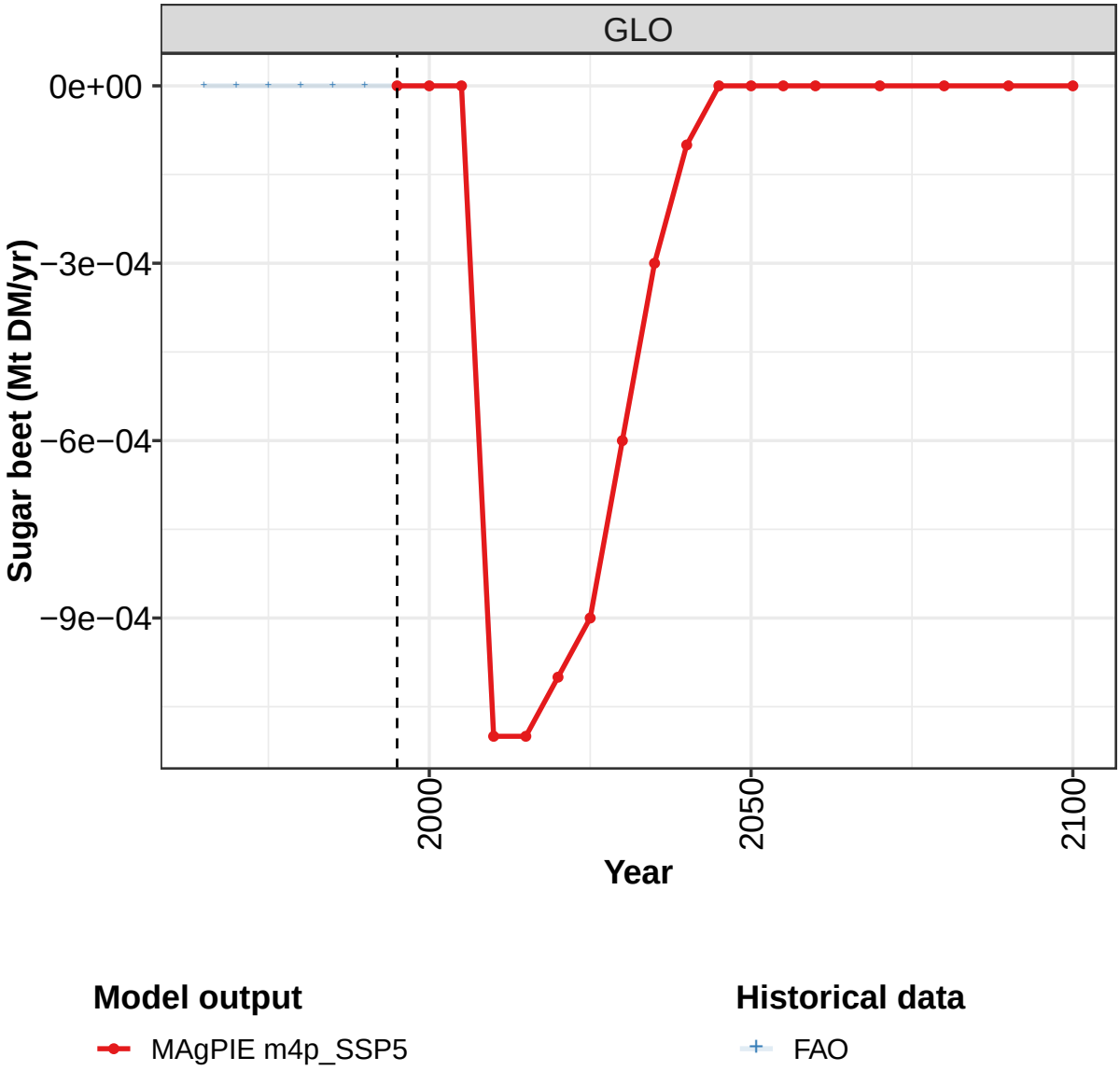
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

Table 186: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.003	0.000	0.048	0.128	0.201	0.000	0.000	0.000	0.000	-0.001
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.004	-0.018	0.016	-0.119	-0.052	-0.044	0.000	0.000	0.000	-0.001
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.002	0.001	-0.011	0.012	0.013	0.011	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	-0.006	0.017	-0.005	0.107	0.039	0.033	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.048	0.128	0.201	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 187: FAO — Demand—Domestic Balanceflow—Crops—Sugar crops (Mt DM/yr)

5.1.18 Sugar crops—Sugar beet



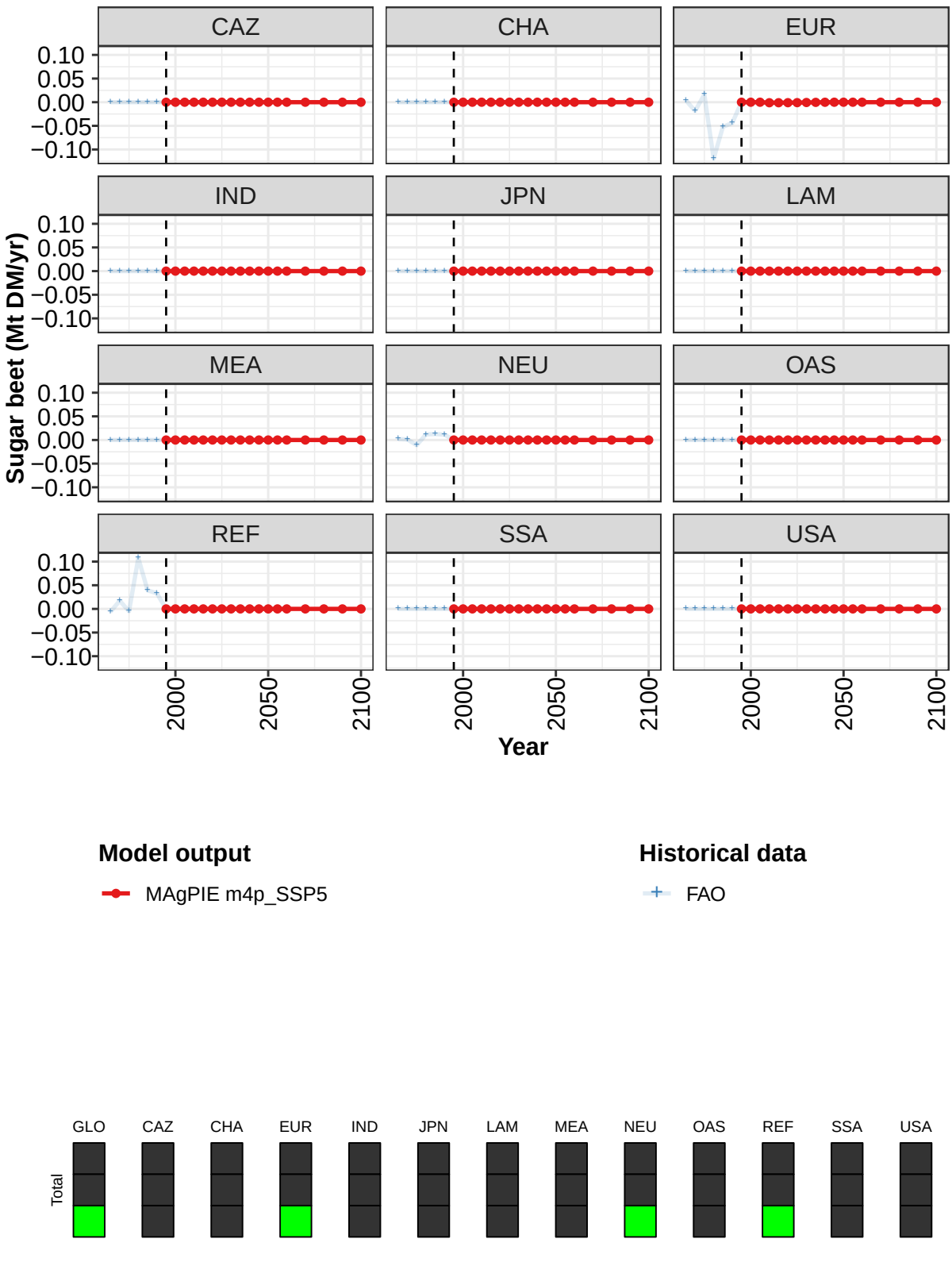


Figure 63: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	0	0	-0	-0	-0	-0	-0	-0	-0	0
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	-0	-0	-0	-0	-0	-0	-0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 188: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

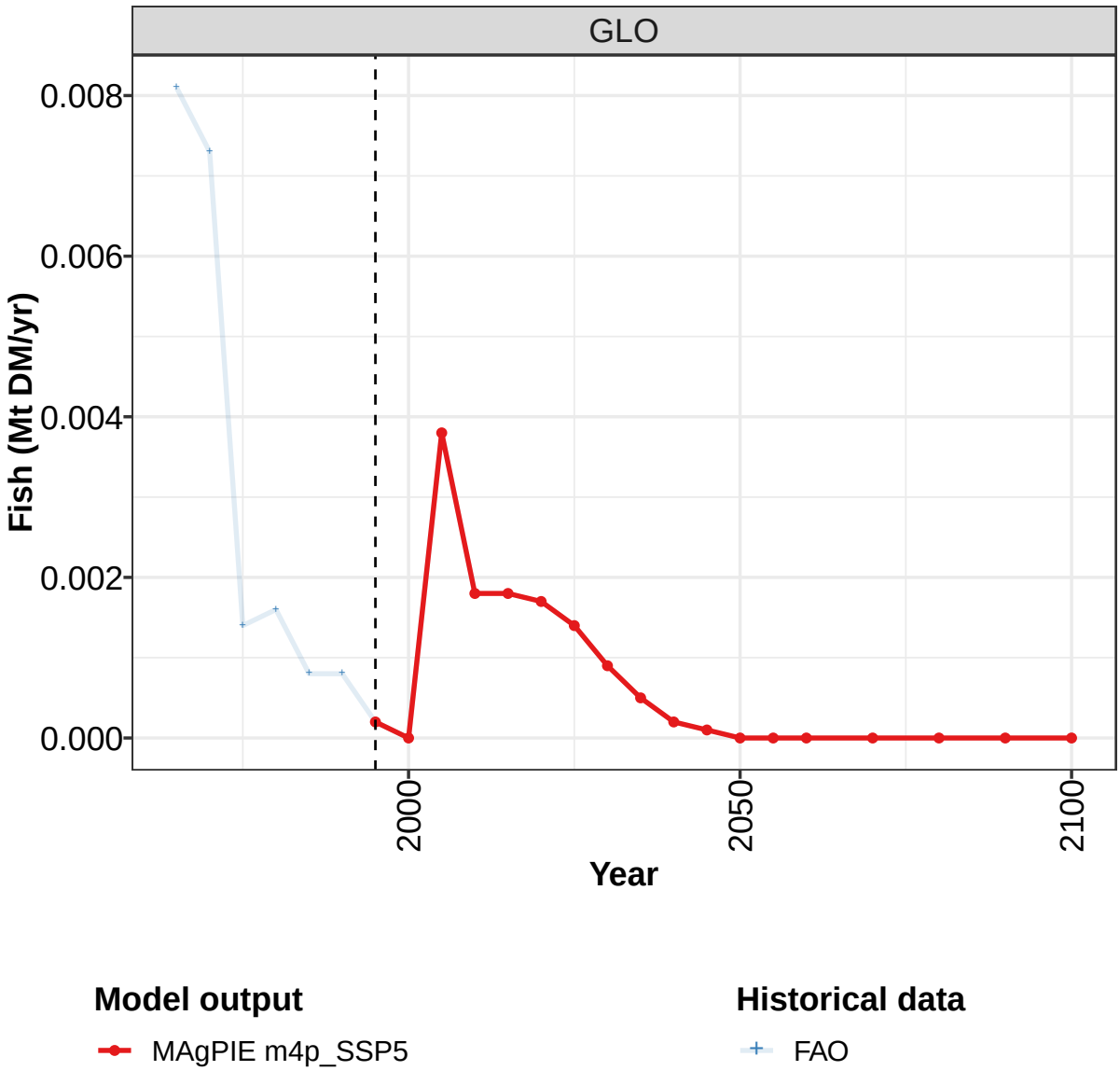
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

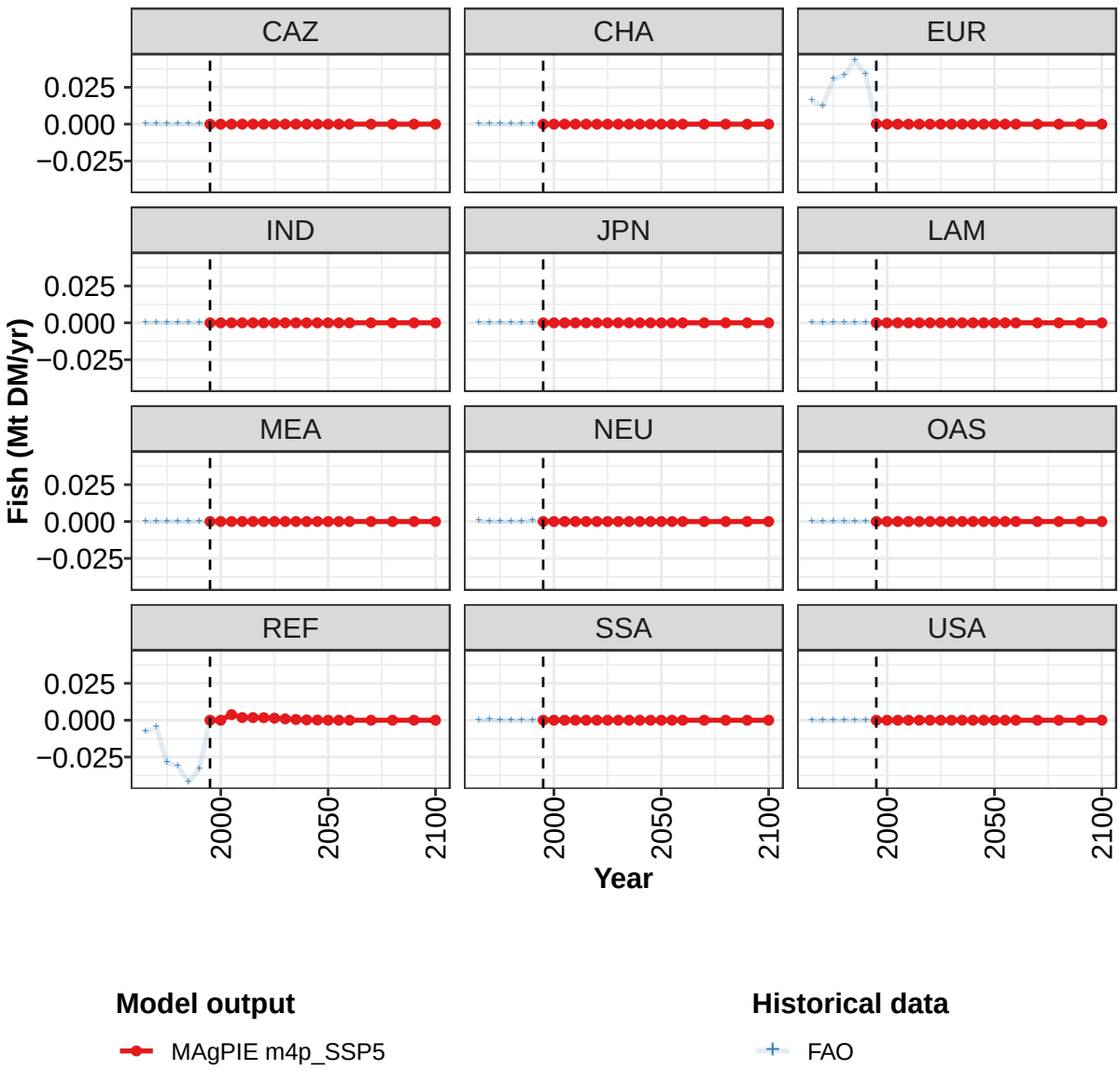
Table 189: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.001
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.004	-0.018	0.016	-0.119	-0.052	-0.044	0.000	0.000	0.000	-0.001
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.002	0.001	-0.011	0.012	0.013	0.011	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	-0.006	0.017	-0.005	0.107	0.039	0.033	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 190: FAO — Demand—Domestic Balanceflow—Crops—Sugar crops—Sugar beet (Mt DM/yr)

5.2 Fish


GLO
0.008
0.006
0.004
0.002
0.000
Fish (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



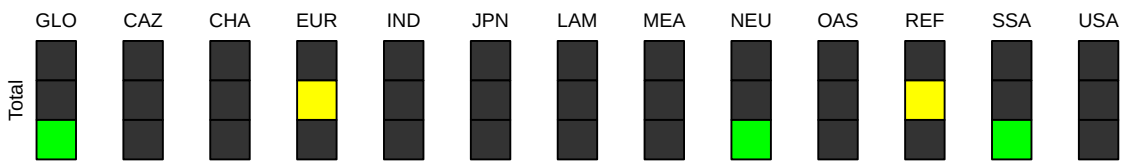


Figure 64: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00020	0.00000	0.00380	0.00180	0.00180	0.00170	0.00140	0.00090	0.00050	0.00020	0.00010
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00380	0.00180	0.00180	0.00170	0.00140	0.00090	0.00050	0.00020	0.00010
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

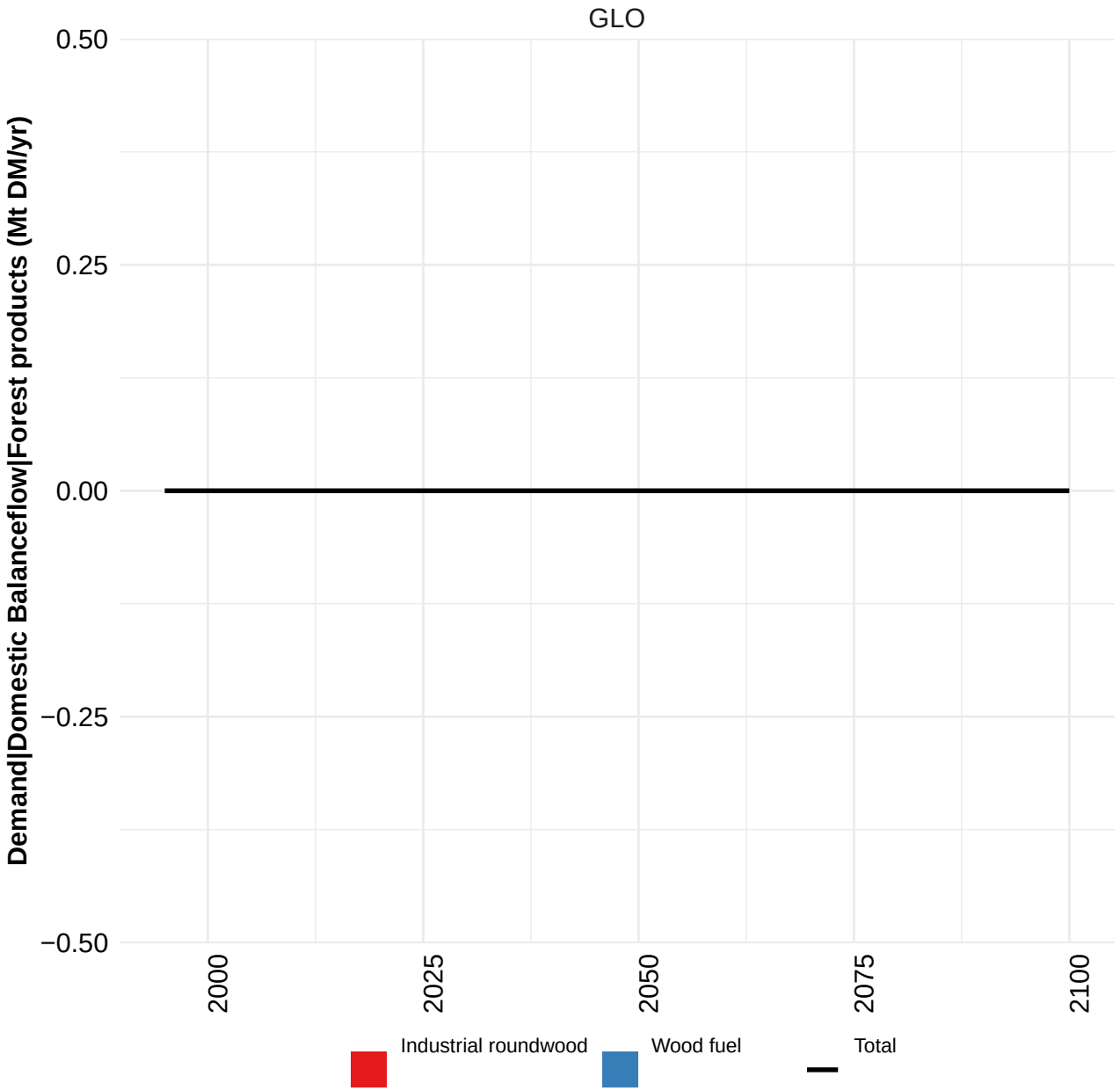
Table 191: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Fish (Mt DM/yr) [PART 1/2]

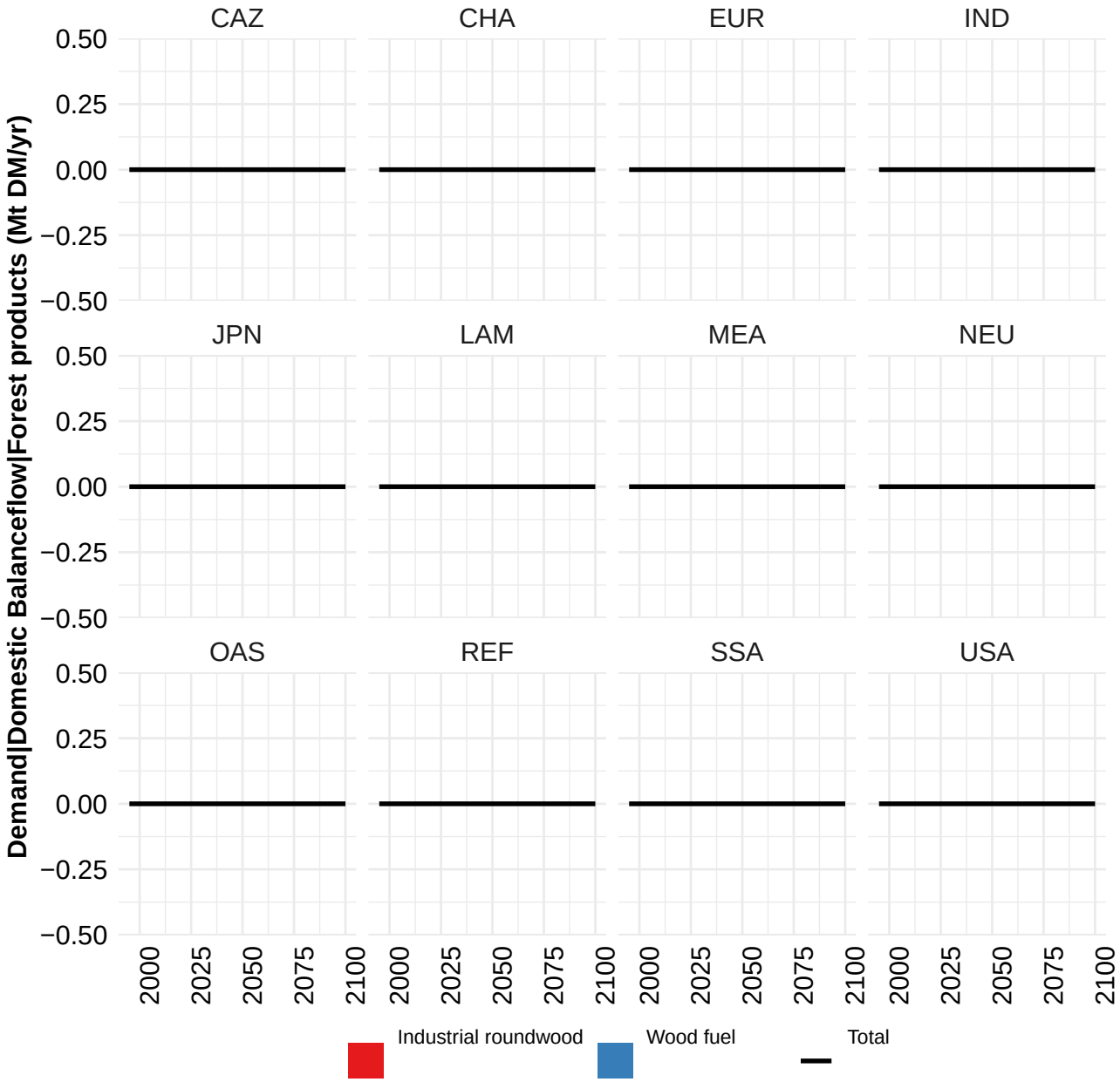
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

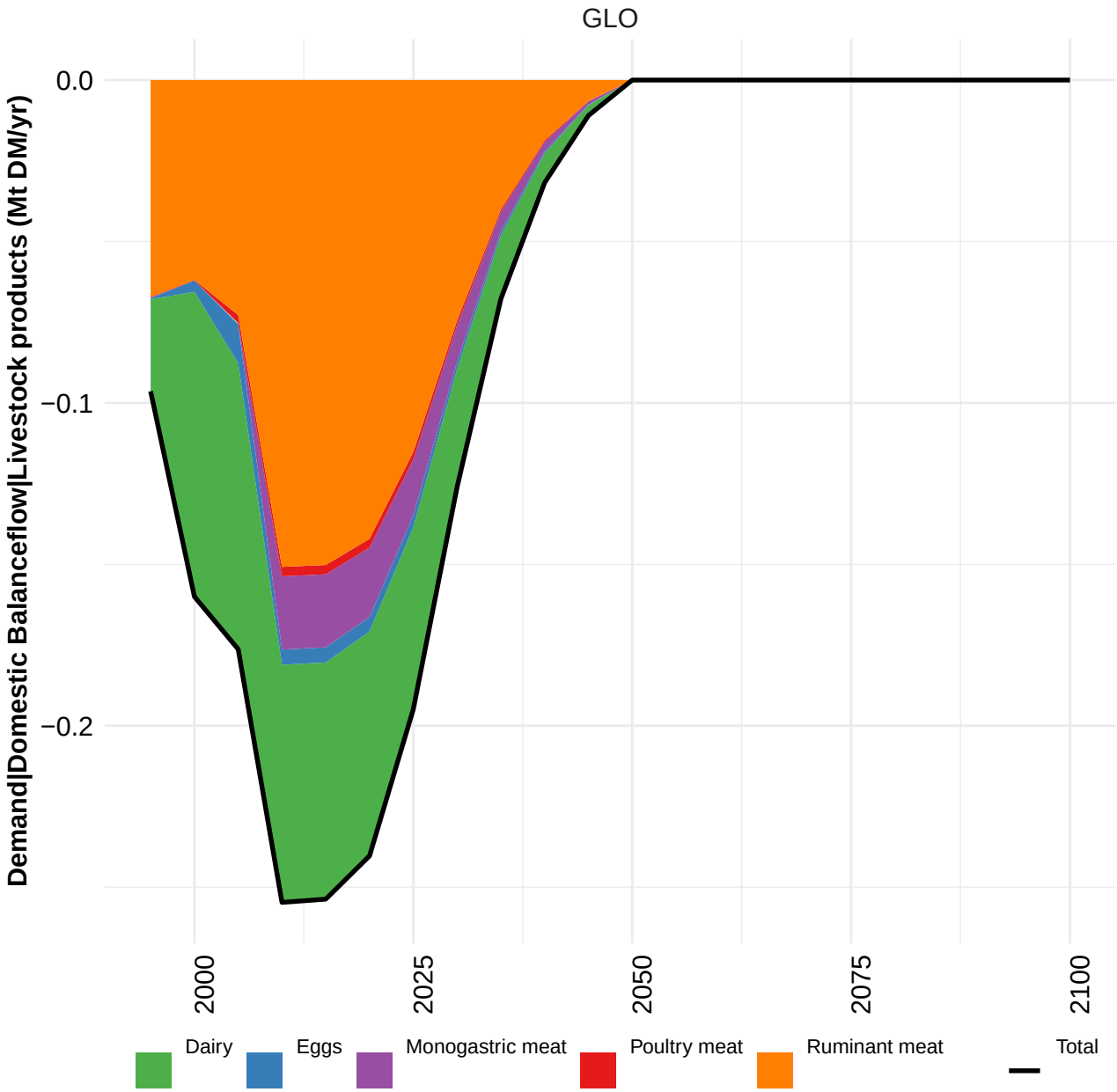
Table 192: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Fish (Mt DM/yr) [PART 2/2]

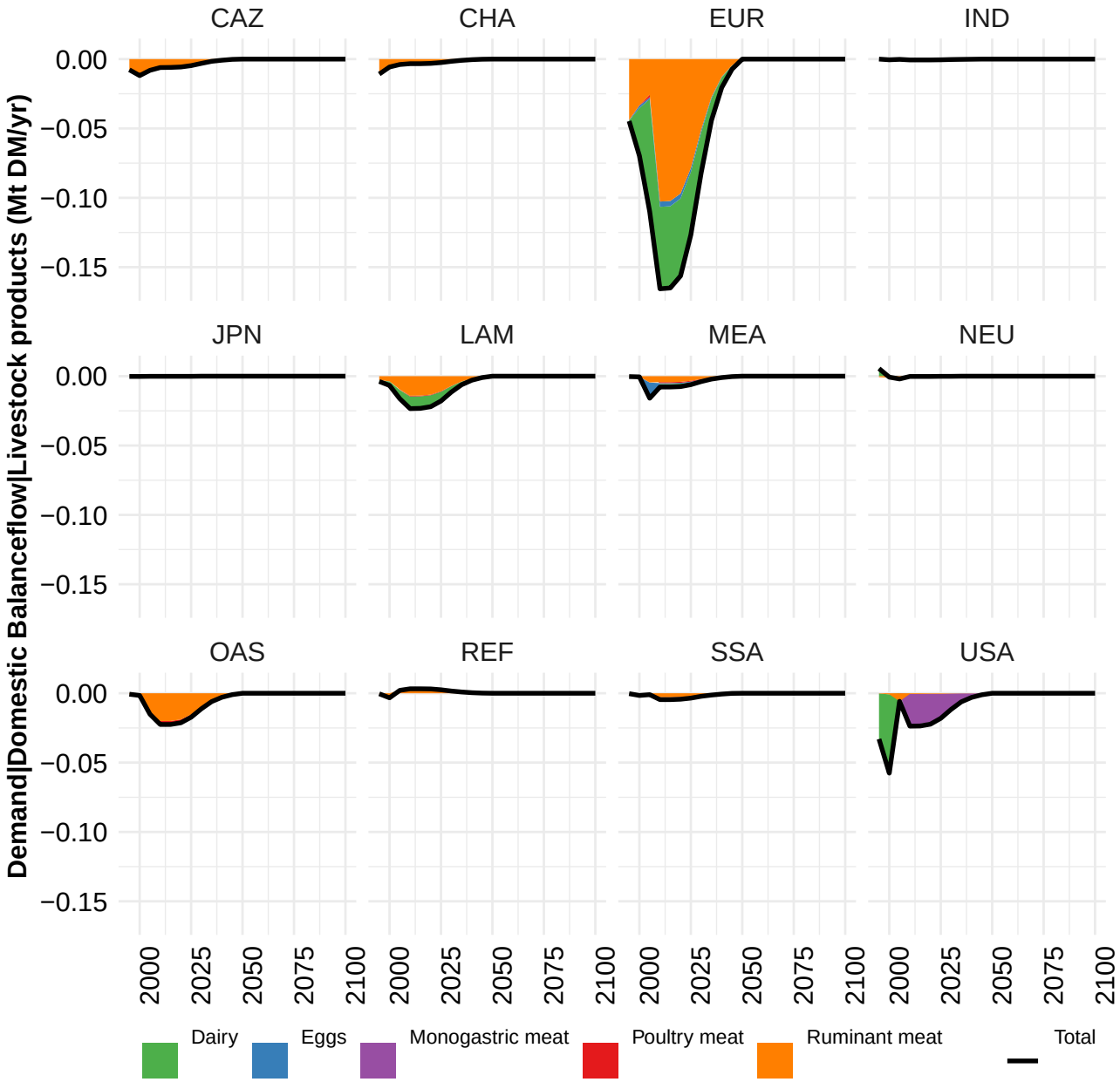
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0081	0.0073	0.0014	0.0016	0.0008	0.0008	0.0002	0.0000	0.0038	0.0018
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0157	0.0120	0.0303	0.0328	0.0432	0.0334	0.0002	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0002	0.0001	0.0000	-0.0001	-0.0001	0.0005	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	-0.0078	-0.0050	-0.0288	-0.0311	-0.0423	-0.0331	0.0000	0.0000	0.0038	0.0018
SSA	0.0000	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 193: FAO — Demand—Domestic Balanceflow—Fish (Mt DM/yr)

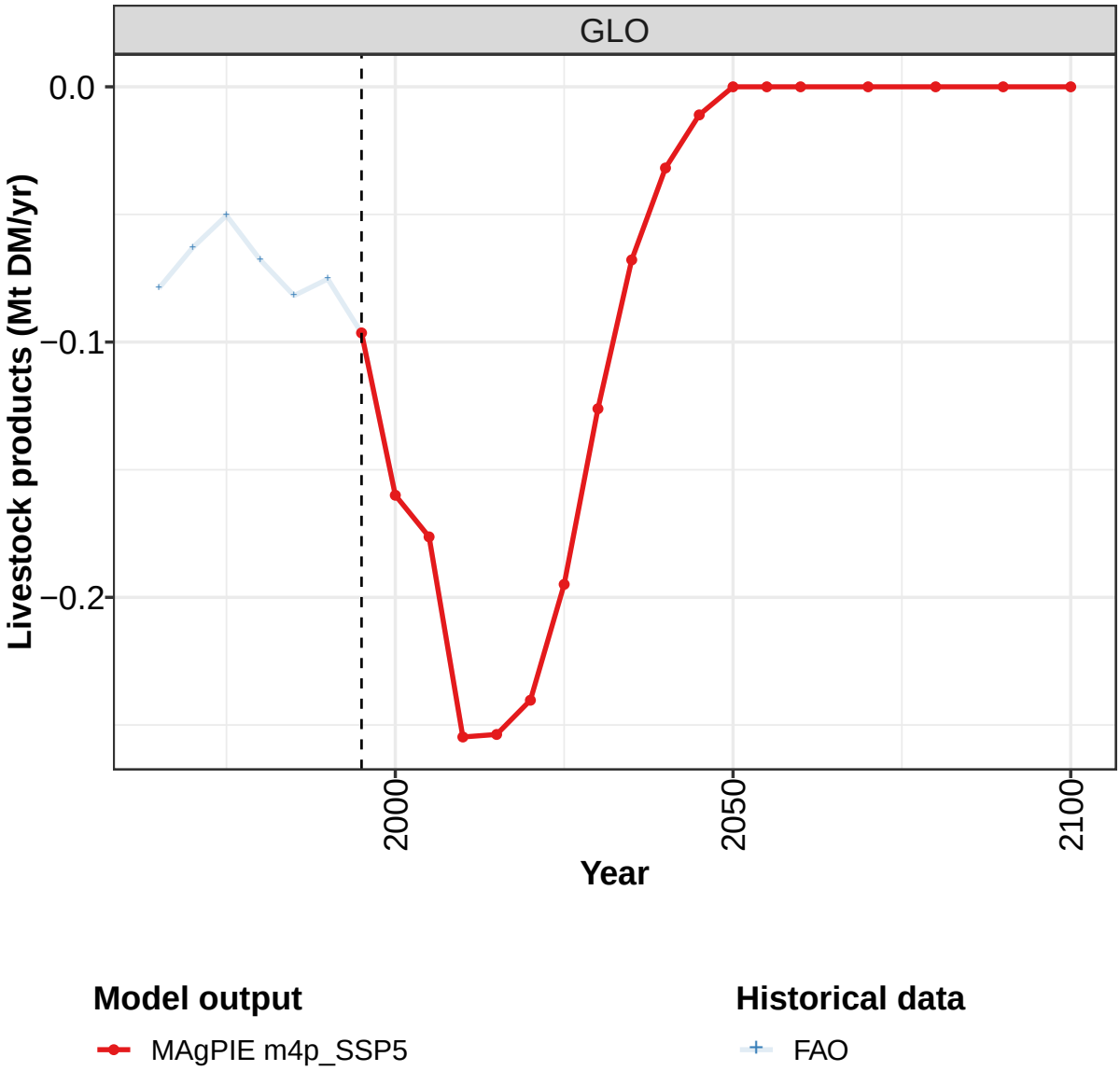

GLO
Demand|Domestic Balanceflow|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

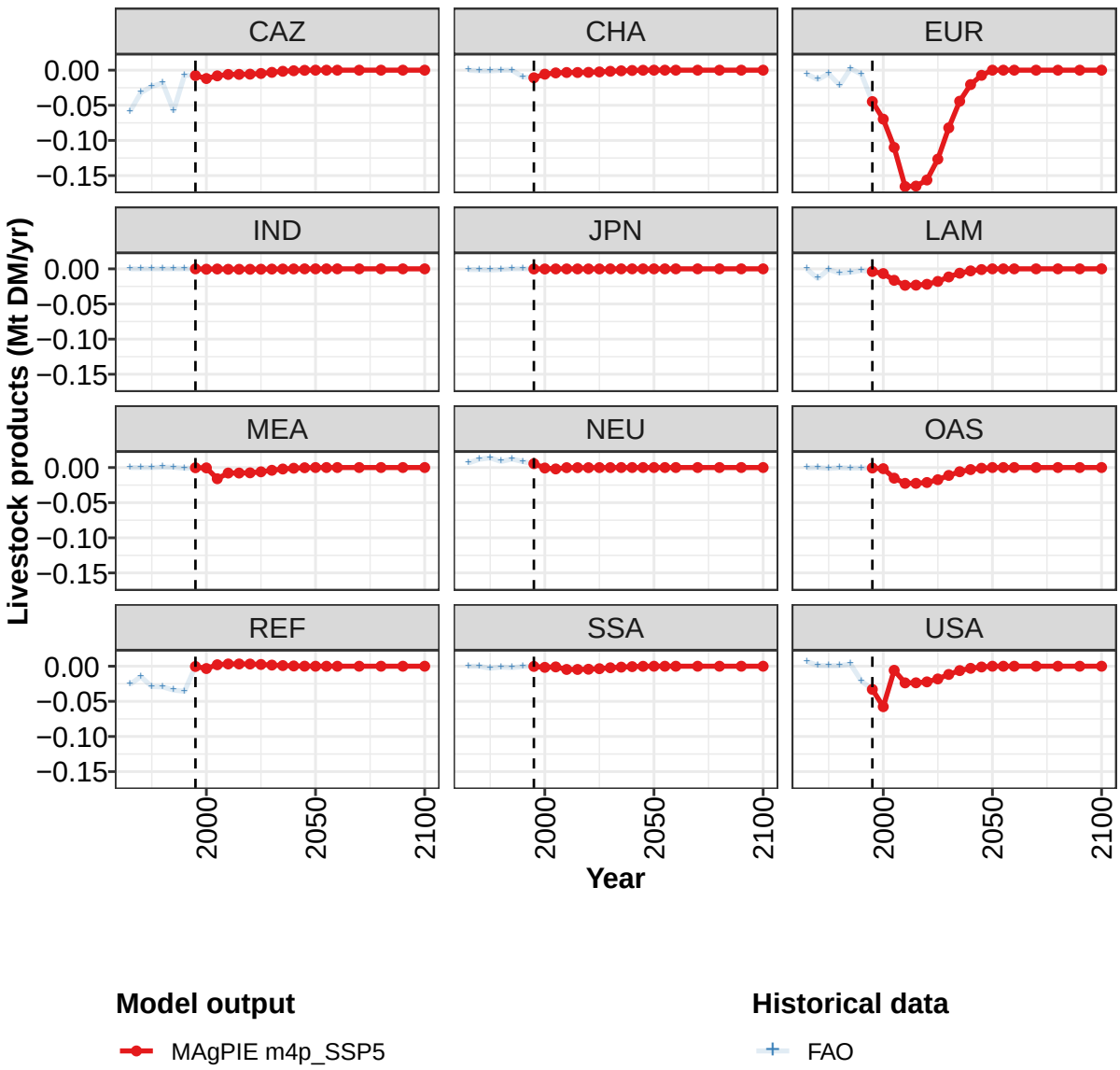

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Domestic Balanceflow|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


GLO
Demand|Domestic Balanceflow|Livestock products (Mt DM/yr)
0.0
−0.1
−0.2
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Domestic Balanceflow|Livestock products (Mt DM/yr)
0.00
−0.05
−0.10
−0.15
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

5.3 Livestock products





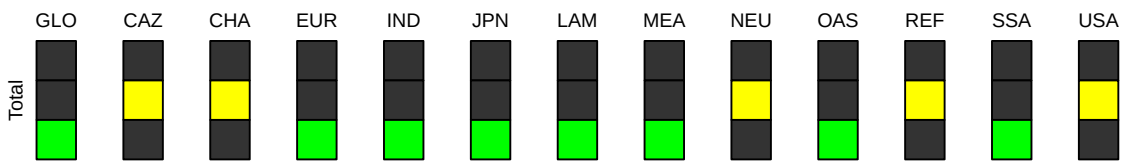


Figure 65: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.09640	-0.16000	-0.17630	-0.25470	-0.25370	-0.24030	-0.19490	-0.12610	-0.06780	-0.03180	-0.01
CAZ	-0.00770	-0.01190	-0.00810	-0.00610	-0.00600	-0.00570	-0.00470	-0.00310	-0.00160	-0.00080	-0.00
CHA	-0.01080	-0.00570	-0.00390	-0.00330	-0.00330	-0.00310	-0.00250	-0.00160	-0.00090	-0.00040	-0.00
EUR	-0.04470	-0.06970	-0.11000	-0.16560	-0.16500	-0.15630	-0.12660	-0.08210	-0.04420	-0.02050	-0.00
IND	0.00000	-0.00050	-0.00020	-0.00060	-0.00060	-0.00060	-0.00050	-0.00030	-0.00020	-0.00010	0.00
JPN	-0.00020	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00
LAM	-0.00380	-0.00670	-0.01630	-0.02340	-0.02320	-0.02200	-0.01790	-0.01150	-0.00620	-0.00290	-0.00
MEA	-0.00030	-0.00050	-0.01590	-0.00780	-0.00780	-0.00750	-0.00610	-0.00390	-0.00210	-0.00100	-0.00
NEU	0.00550	-0.00070	-0.00200	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.00000	0.00
OAS	-0.00070	-0.00160	-0.01510	-0.02250	-0.02250	-0.02130	-0.01730	-0.01120	-0.00600	-0.00290	-0.00
REF	-0.00040	-0.00330	0.00210	0.00320	0.00320	0.00310	0.00250	0.00160	0.00090	0.00040	0.00
SSA	-0.00030	-0.00160	-0.00100	-0.00460	-0.00460	-0.00430	-0.00350	-0.00220	-0.00130	-0.00060	-0.00
USA	-0.03300	-0.05760	-0.00580	-0.02370	-0.02360	-0.02230	-0.01810	-0.01170	-0.00620	-0.00300	-0.00

Table 194: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products (Mt DM/yr) [PART 1/2]

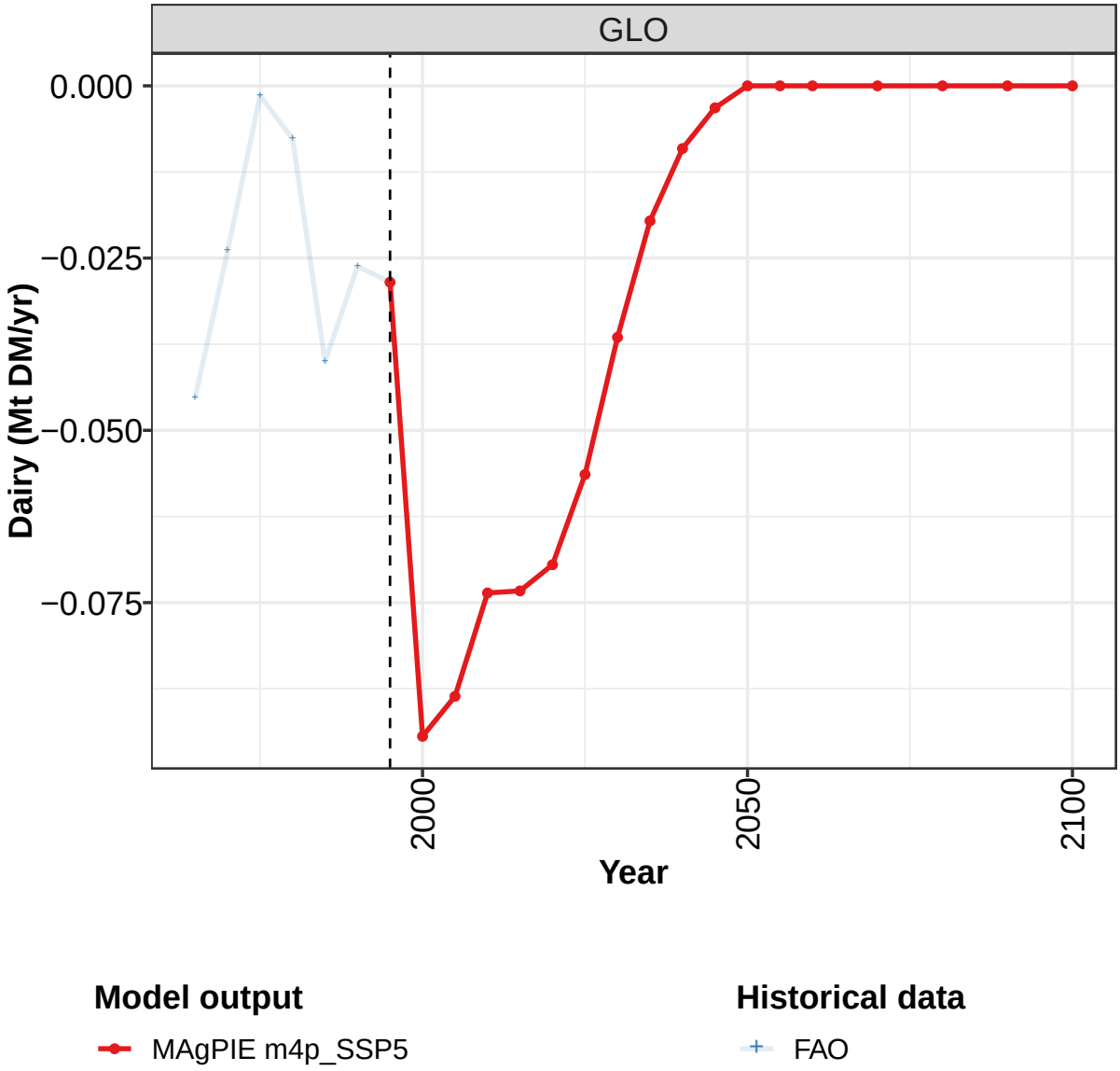
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

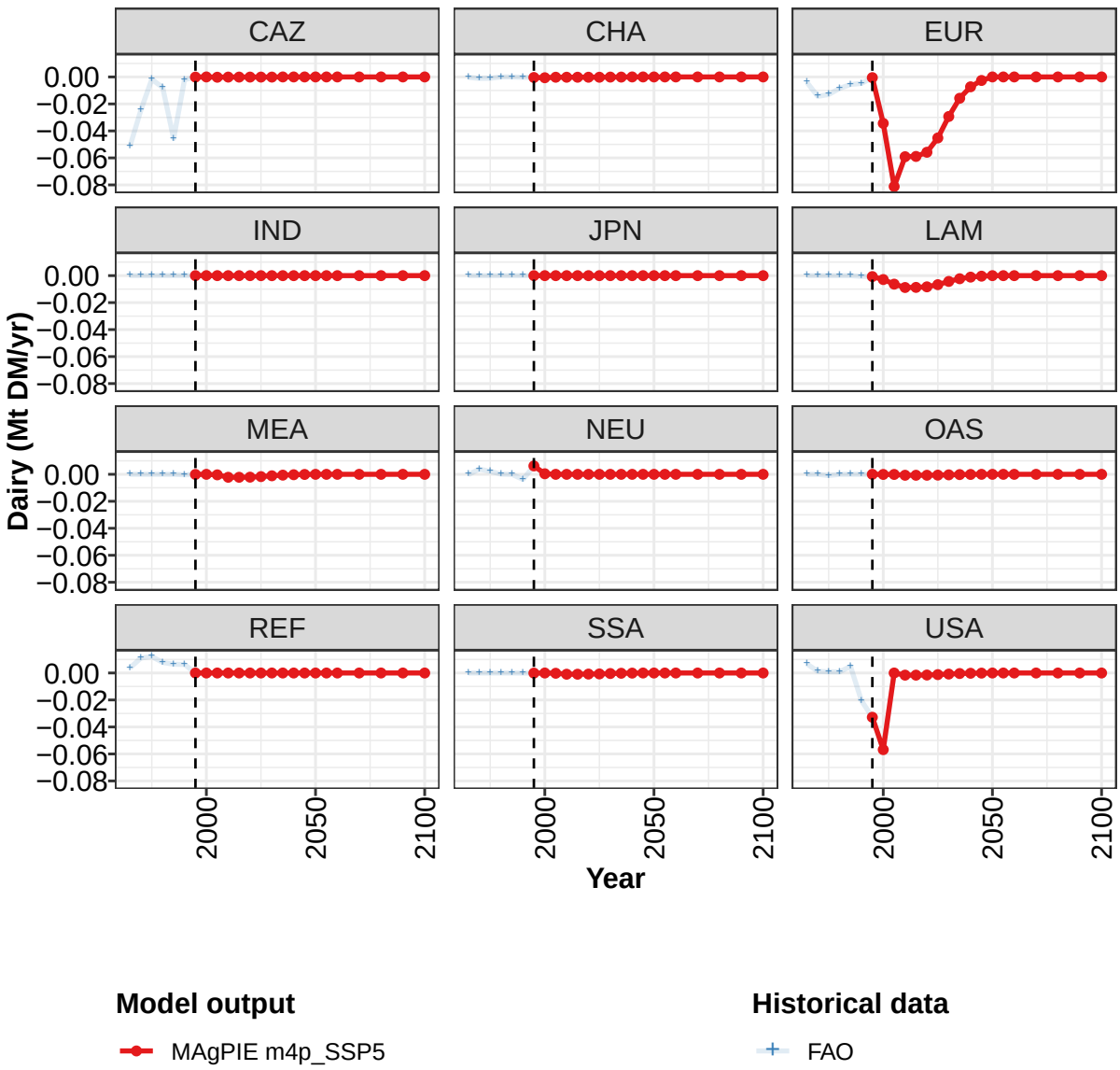
Table 195: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.0789	-0.0630	-0.0504	-0.0678	-0.0818	-0.0753	-0.0965	-0.1599	-0.1763	-0.2548
CAZ	-0.0588	-0.0320	-0.0230	-0.0183	-0.0577	-0.0069	-0.0077	-0.0119	-0.0080	-0.0061
CHA	0.0000	-0.0009	-0.0011	-0.0002	-0.0002	-0.0096	-0.0108	-0.0057	-0.0038	-0.0033
EUR	-0.0055	-0.0133	-0.0051	-0.0215	0.0023	-0.0058	-0.0448	-0.0696	-0.1100	-0.1656
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0005	-0.0001	-0.0006
JPN	-0.0010	-0.0010	-0.0017	-0.0009	0.0000	0.0001	-0.0002	-0.0002	-0.0001	-0.0001
LAM	-0.0003	-0.0137	-0.0008	-0.0060	-0.0050	-0.0023	-0.0038	-0.0067	-0.0163	-0.0234
MEA	0.0000	0.0000	0.0000	0.0006	0.0004	-0.0012	-0.0002	-0.0005	-0.0160	-0.0079
NEU	0.0065	0.0117	0.0138	0.0086	0.0122	0.0084	0.0055	-0.0007	-0.0020	-0.0002
OAS	-0.0007	0.0000	-0.0013	-0.0004	-0.0008	-0.0008	-0.0008	-0.0015	-0.0151	-0.0226
REF	-0.0258	-0.0149	-0.0290	-0.0294	-0.0340	-0.0356	-0.0005	-0.0033	0.0021	0.0032
SSA	-0.0001	-0.0001	-0.0029	-0.0012	-0.0020	-0.0005	-0.0003	-0.0016	-0.0009	-0.0046
USA	0.0068	0.0011	0.0007	0.0008	0.0030	-0.0211	-0.0330	-0.0575	-0.0058	-0.0236

Table 196: FAO — Demand—Domestic Balanceflow—Livestock products (Mt DM/yr)

5.3.1 Dairy


GLO
0.000
−0.025
−0.050
−0.075
Dairy (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



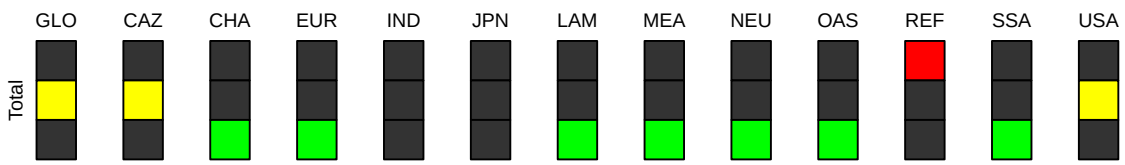


Figure 66: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.02850	-0.09440	-0.08860	-0.07360	-0.07330	-0.06950	-0.05640	-0.03650	-0.01960	-0.00910	-0.00
CAZ	-0.00010	0.00000	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00
CHA	-0.00040	-0.00060	-0.00020	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.00
EUR	-0.00050	-0.03440	-0.08120	-0.05910	-0.05890	-0.05580	-0.04520	-0.02930	-0.01580	-0.00730	-0.00
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	-0.00070	-0.00290	-0.00630	-0.00880	-0.00870	-0.00830	-0.00670	-0.00430	-0.00230	-0.00110	-0.00
MEA	-0.00010	0.00000	-0.00040	-0.00220	-0.00220	-0.00210	-0.00170	-0.00110	-0.00060	-0.00030	-0.00
NEU	0.00620	0.00040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
OAS	0.00000	-0.00010	-0.00010	-0.00070	-0.00070	-0.00070	-0.00060	-0.00040	-0.00020	-0.00010	0.00
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
SSA	-0.00010	0.00000	-0.00020	-0.00090	-0.00090	-0.00080	-0.00070	-0.00040	-0.00020	-0.00010	0.00
USA	-0.03280	-0.05680	0.00000	-0.00160	-0.00160	-0.00150	-0.00120	-0.00080	-0.00040	-0.00020	-0.00

Table 197: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

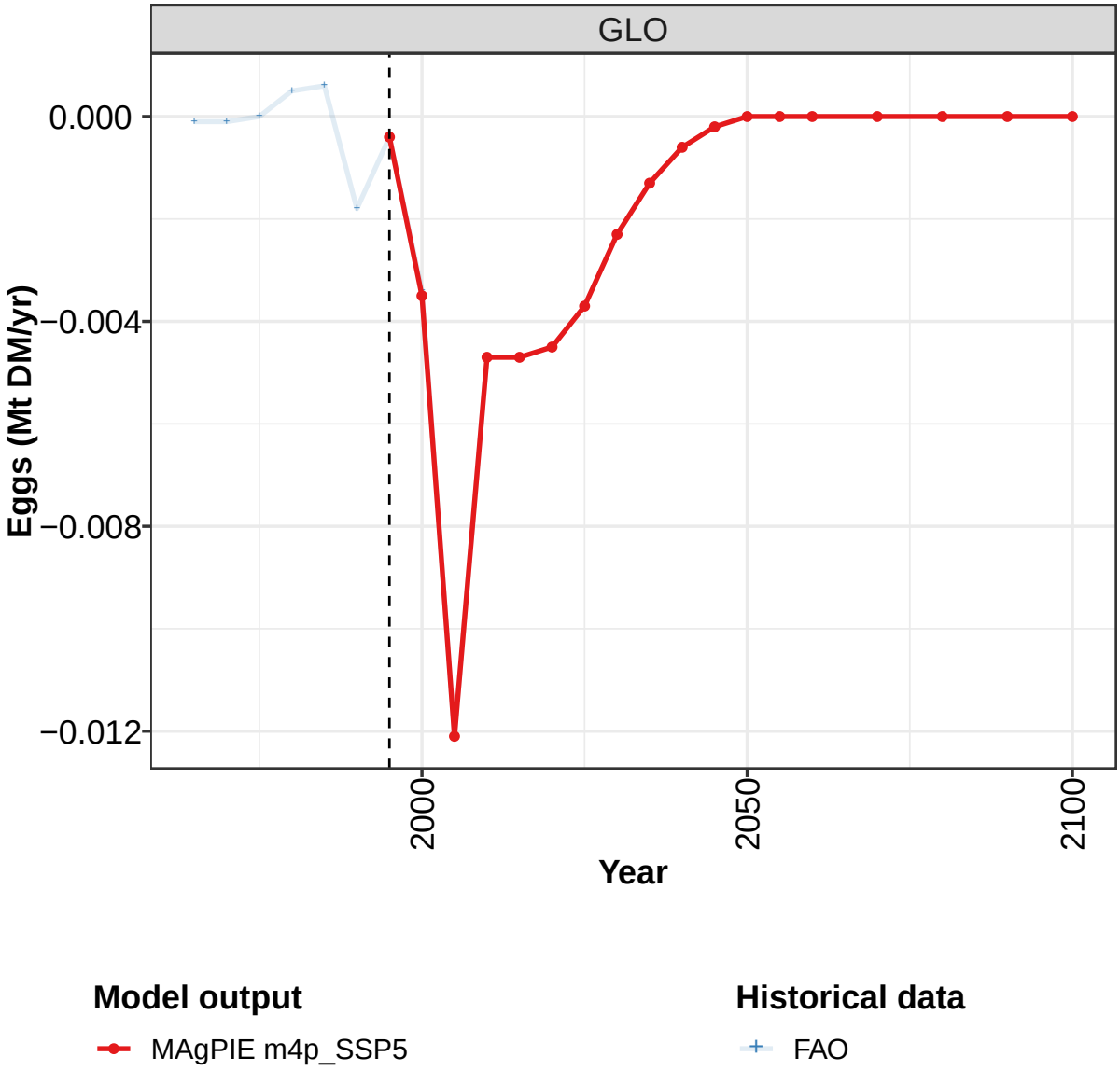
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

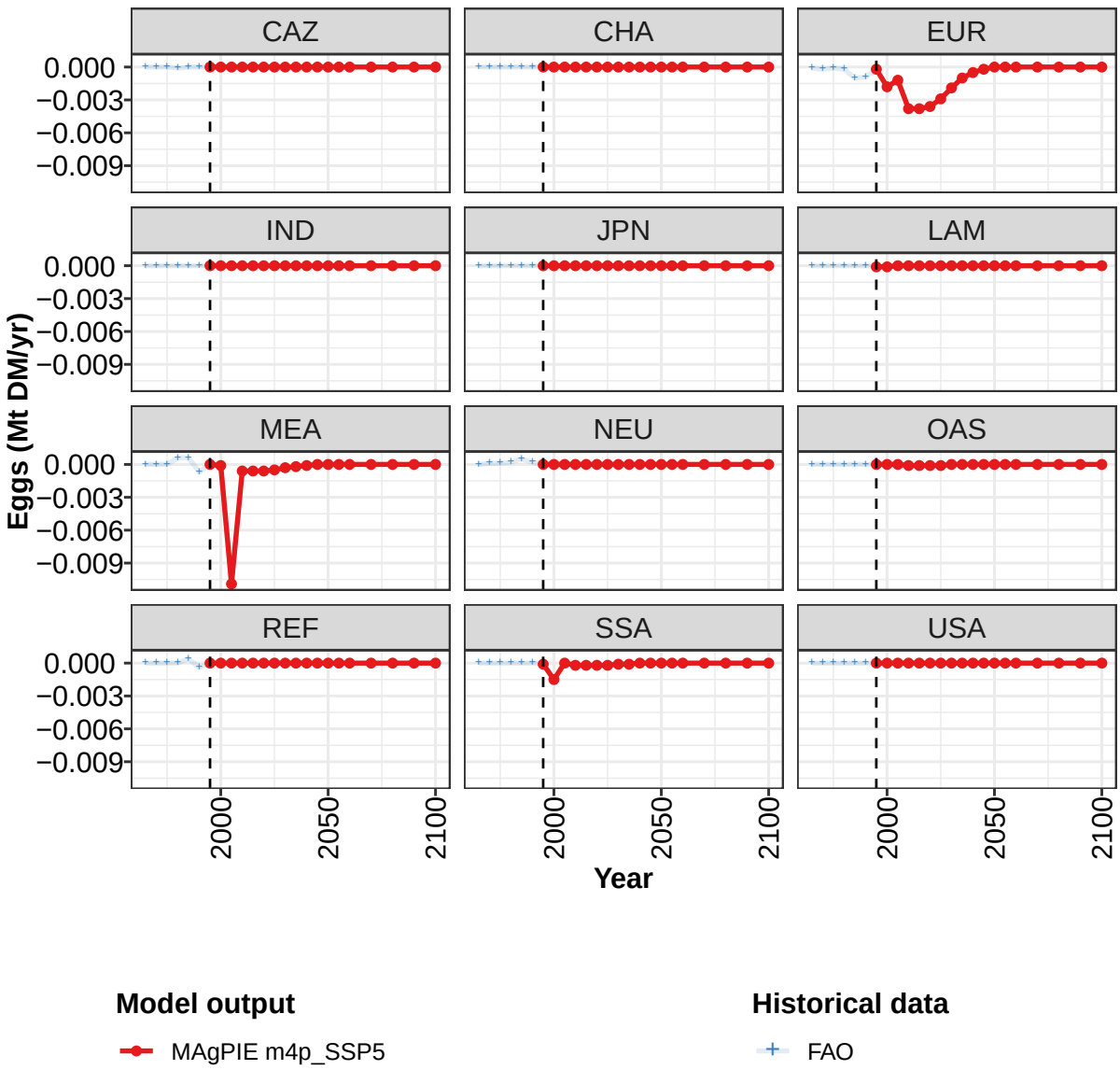
Table 198: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Dairy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.0453	-0.0240	-0.0014	-0.0077	-0.0400	-0.0262	-0.0285	-0.0944	-0.0885	-0.0737
CAZ	-0.0514	-0.0246	-0.0017	-0.0079	-0.0457	-0.0020	-0.0001	0.0000	-0.0002	-0.0001
CHA	-0.0003	-0.0011	-0.0010	0.0000	0.0000	-0.0003	-0.0004	-0.0006	-0.0002	-0.0002
EUR	-0.0039	-0.0144	-0.0130	-0.0085	-0.0056	-0.0048	-0.0005	-0.0344	-0.0812	-0.0591
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0006	-0.0007	-0.0029	-0.0063	-0.0088
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0004	-0.0001	0.0000	-0.0004	-0.0022
NEU	-0.0002	0.0038	0.0022	0.0001	-0.0001	-0.0038	0.0062	0.0004	0.0000	0.0000
OAS	0.0000	0.0000	-0.0009	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0001	-0.0007
REF	0.0037	0.0111	0.0122	0.0078	0.0065	0.0063	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0001	0.0000	-0.0002	-0.0009
USA	0.0068	0.0012	0.0009	0.0008	0.0049	-0.0205	-0.0328	-0.0568	0.0000	-0.0016

Table 199: FAO — Demand—Domestic Balanceflow—Livestock products—Dairy (Mt DM/yr)

5.3.2 Eggs


GLO
0.000
−0.004
−0.008
−0.012
Eggs (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



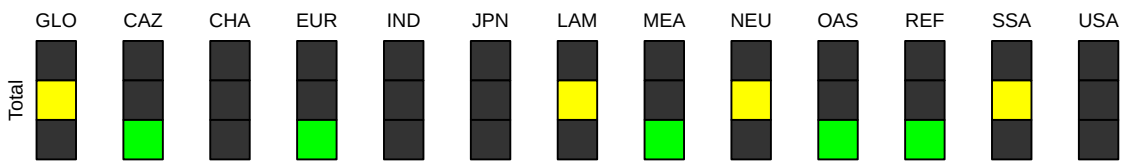


Figure 67: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	-0	-0	0	0	0	0	0	0	0	0	0
MEA	0	-0	-0	-0	-0	-0	-0	-0	-0	-0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	-0	-0	-0	-0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	-0	-0	0	-0	-0	-0	-0	-0	-0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 200: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

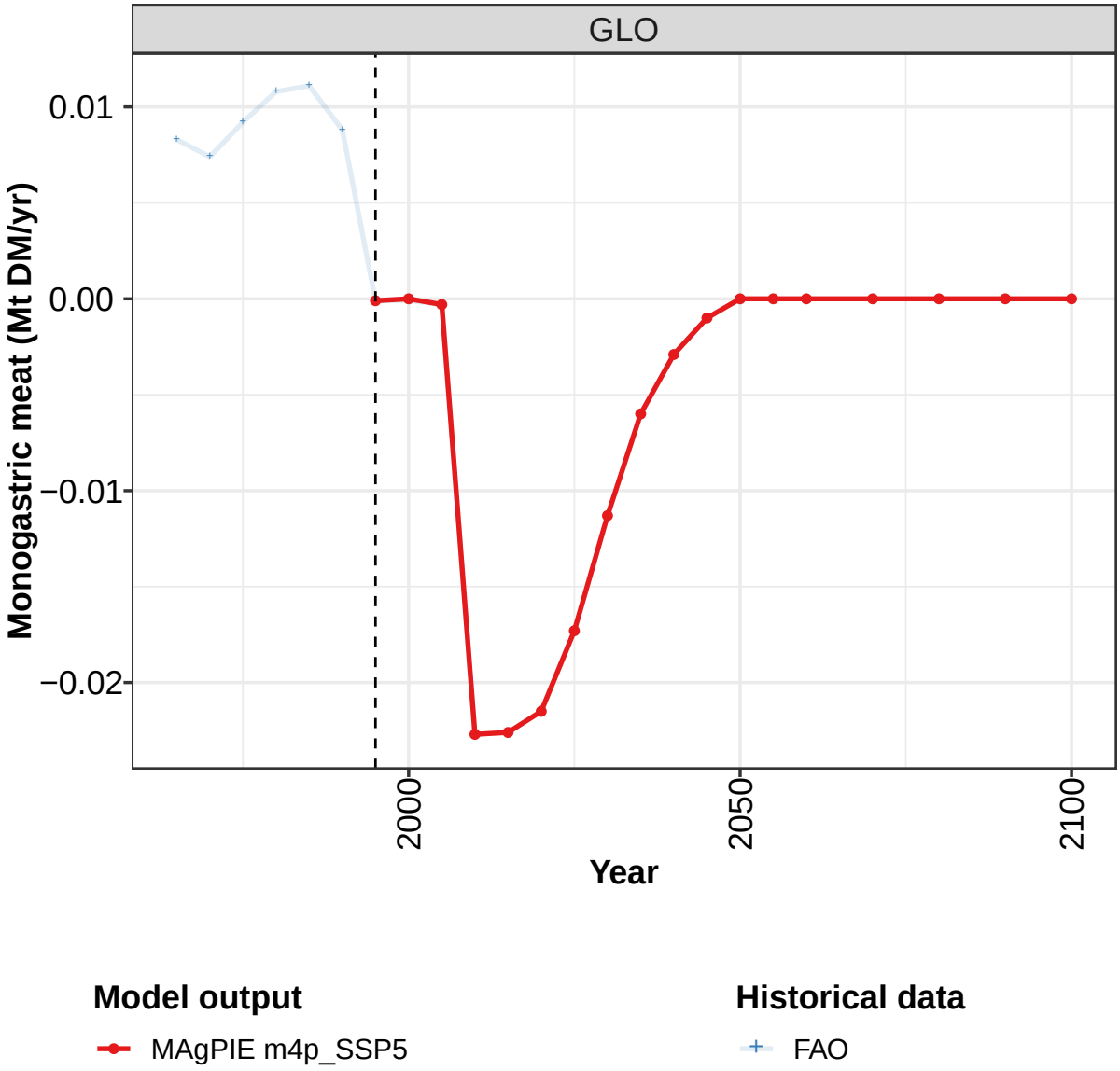
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

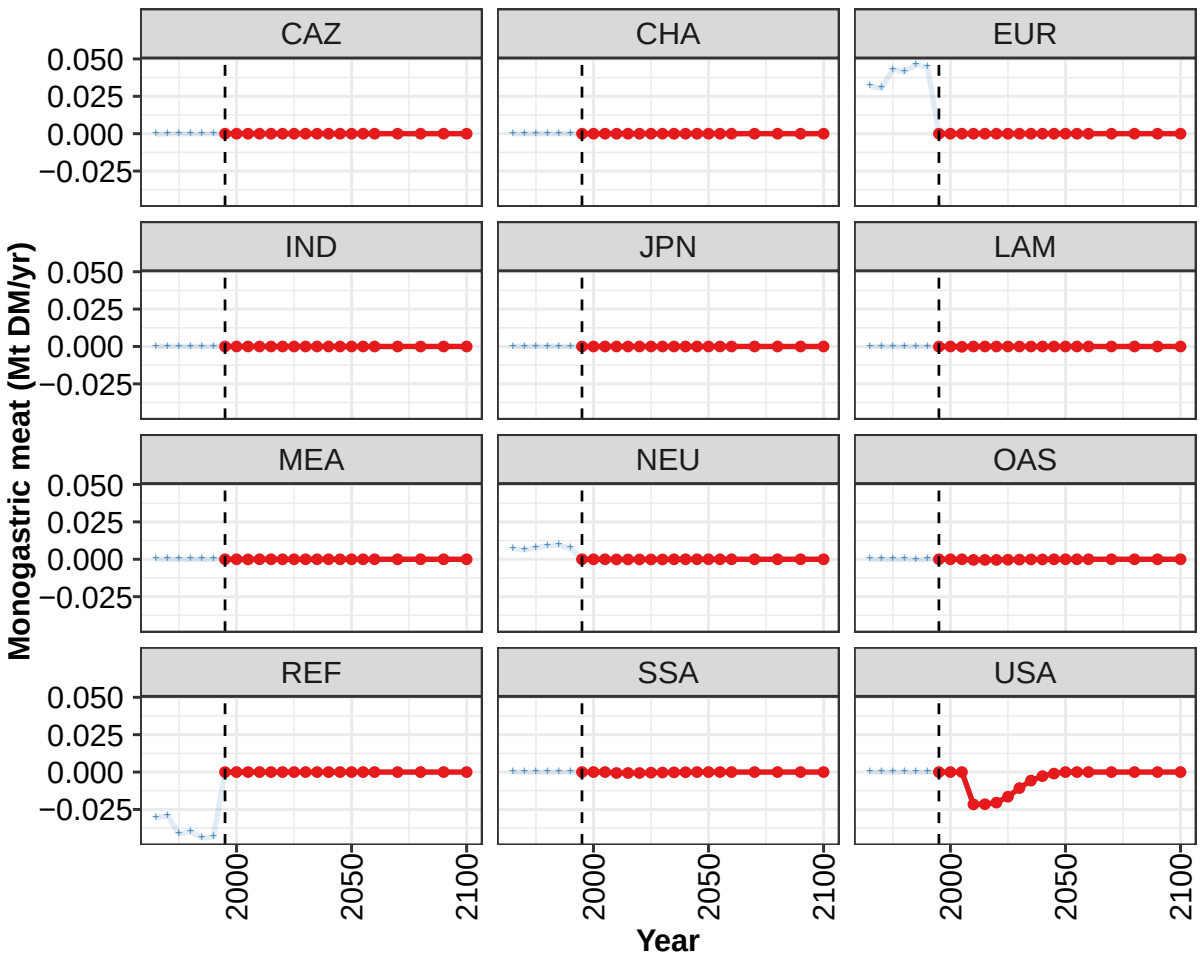
Table 201: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	
GLO	-0.000100	-0.000100	0.000000	0.000500	0.000600	-0.001800	-0.000400	-0.003400	-0.012100	-0.00
CAZ	0.000000	0.000000	0.000000	-0.000100	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
EUR	-0.000100	-0.000200	-0.000100	-0.000200	-0.001000	-0.000900	-0.000200	-0.001800	-0.001200	-0.00
IND	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
JPN	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
LAM	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.000100	-0.000100	0.000000	0.00
MEA	0.000000	0.000000	0.000000	0.000600	0.000600	-0.000700	0.000000	-0.000100	-0.010900	-0.00
NEU	0.000000	0.000100	0.000100	0.000200	0.000500	0.000200	0.000000	0.000000	0.000000	0.00
OAS	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.00
REF	0.000000	0.000000	0.000000	0.000000	0.000400	-0.000400	0.000000	0.000000	0.000000	0.00
SSA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.000100	-0.001500	0.000000	-0.00
USA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00

Table 202: FAO — Demand—Domestic Balanceflow—Livestock products—Eggs (Mt DM/yr)

5.3.3 Monogastric meat





Model output

MAgPIE m4p_SSP5

Historical data

FAO

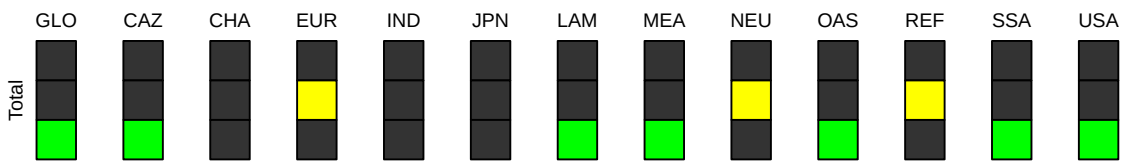


Figure 68: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	-0	0	-0	0	0	0	0	0	0	0	0
MEA	0	0	-0	0	0	0	0	0	0	0	0
NEU	0	0	0	-0	-0	-0	-0	-0	0	0	0
OAS	0	0	0	-0	-0	-0	-0	-0	-0	-0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	-0	-0	-0	-0	-0	-0	-0	0
USA	0	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Table 203: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

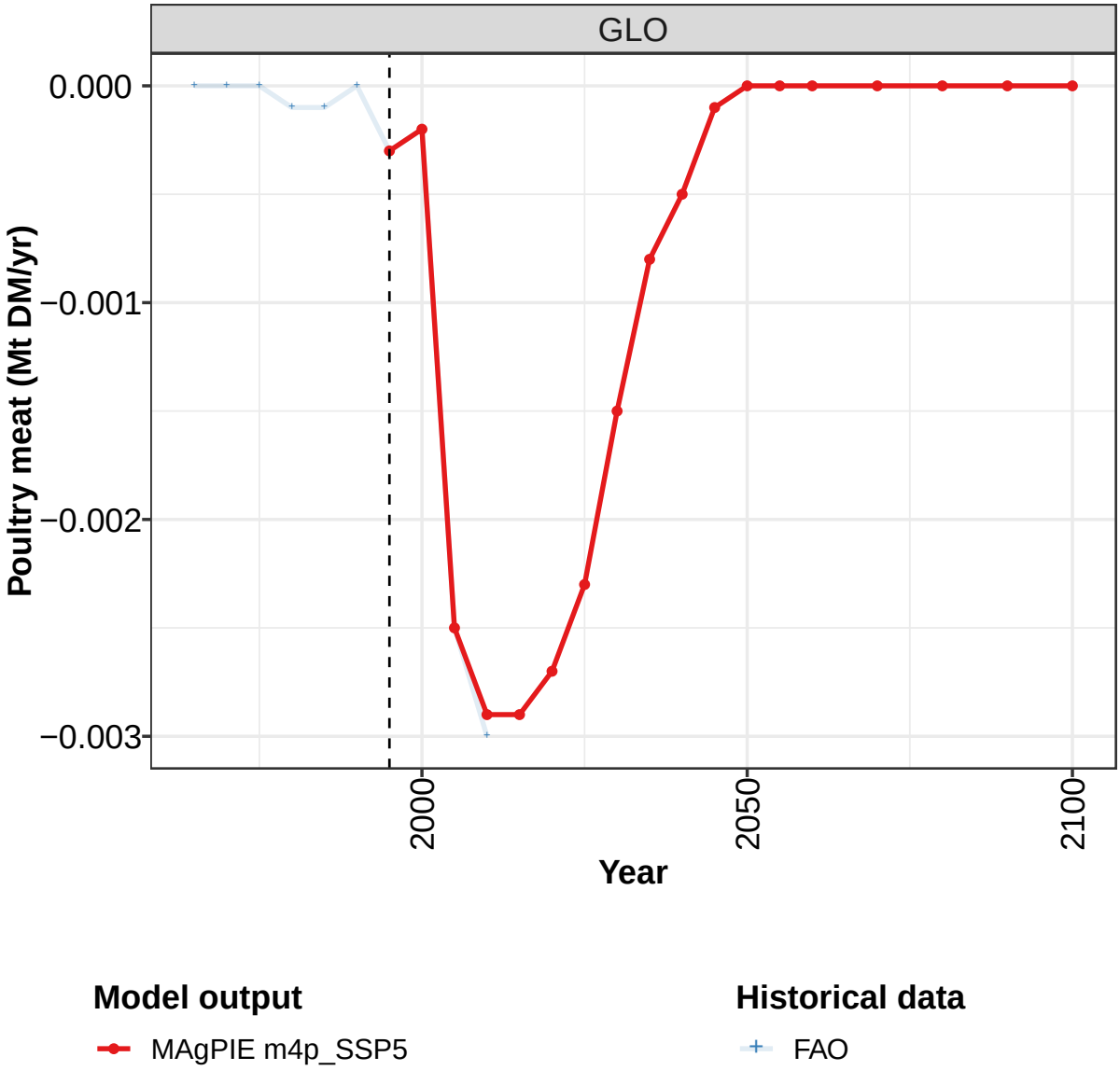
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

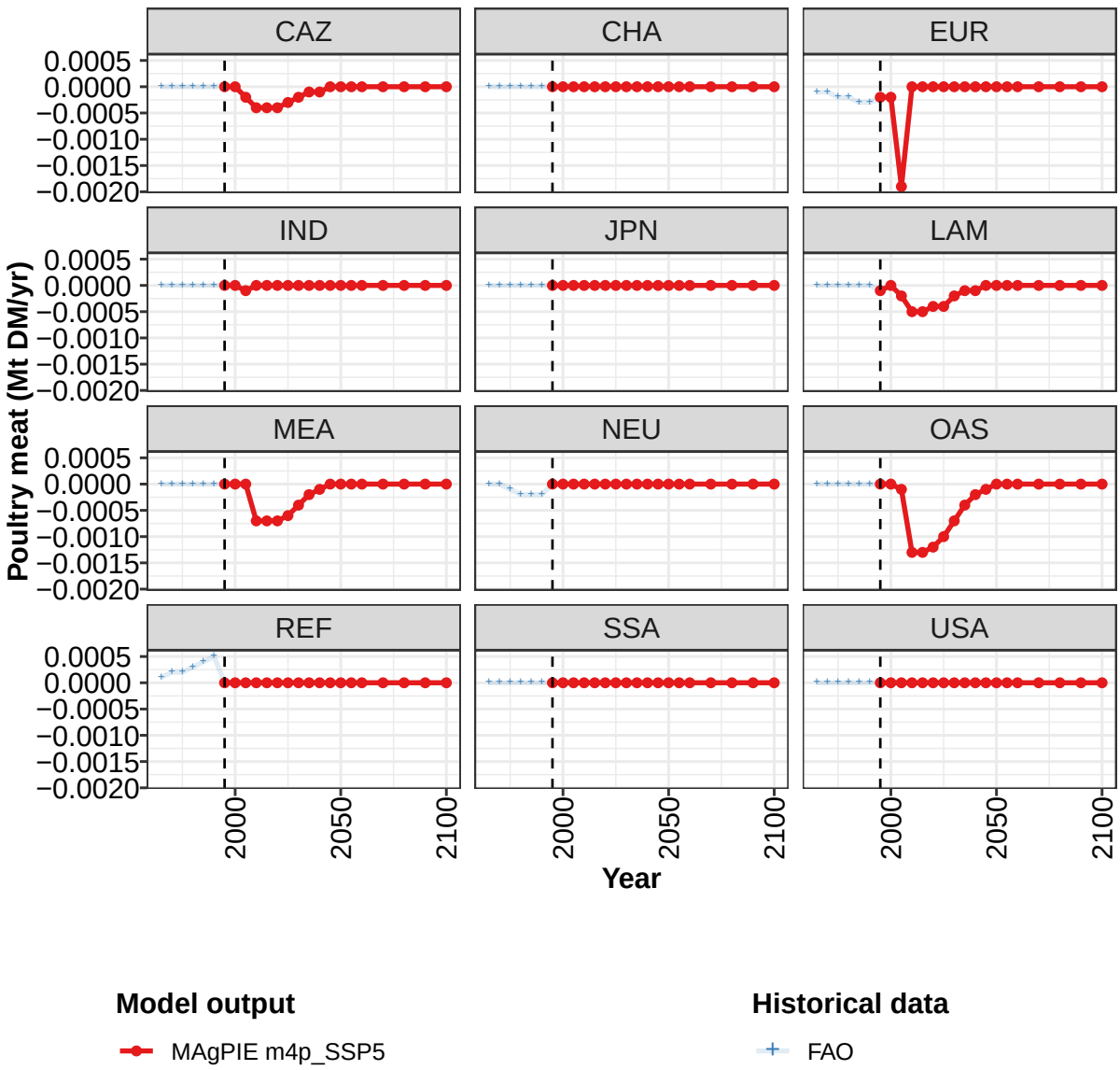
Table 204: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Monogastric meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0083	0.0074	0.0092	0.0108	0.0111	0.0088	-0.0001	-0.0001	-0.0003	-0.0228
CAZ	-0.0003	-0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0318	0.0305	0.0430	0.0417	0.0461	0.0446	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	-0.0001	-0.0001	0.0000	-0.0001	-0.0002	-0.0001	0.0000	-0.0002	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	0.0000
NEU	0.0071	0.0063	0.0078	0.0090	0.0094	0.0075	0.0000	0.0000	0.0000	-0.0001
OAS	0.0000	0.0000	0.0000	0.0000	-0.0001	0.0000	0.0000	0.0000	0.0000	-0.0004
REF	-0.0303	-0.0292	-0.0414	-0.0398	-0.0442	-0.0430	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0006
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0216

Table 205: FAO — Demand—Domestic Balanceflow—Livestock products—Monogastric meat (Mt DM/yr)

5.3.4 Poultry meat





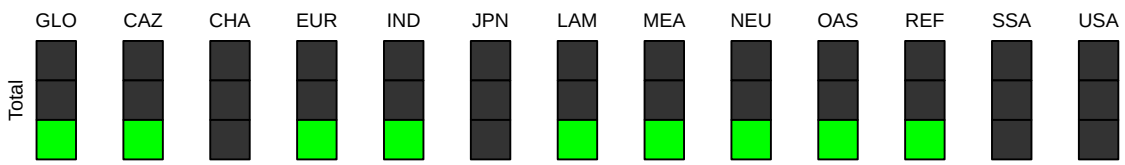


Figure 69: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
CAZ	0	0	-0	-0	-0	-0	-0	-0	-0	-0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	-0	-0	-0	0	0	0	0	0	0	0	0
IND	0	0	-0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	-0	0	-0	-0	-0	-0	-0	-0	-0	-0	0
MEA	0	0	0	-0	-0	-0	-0	-0	-0	-0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 206: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

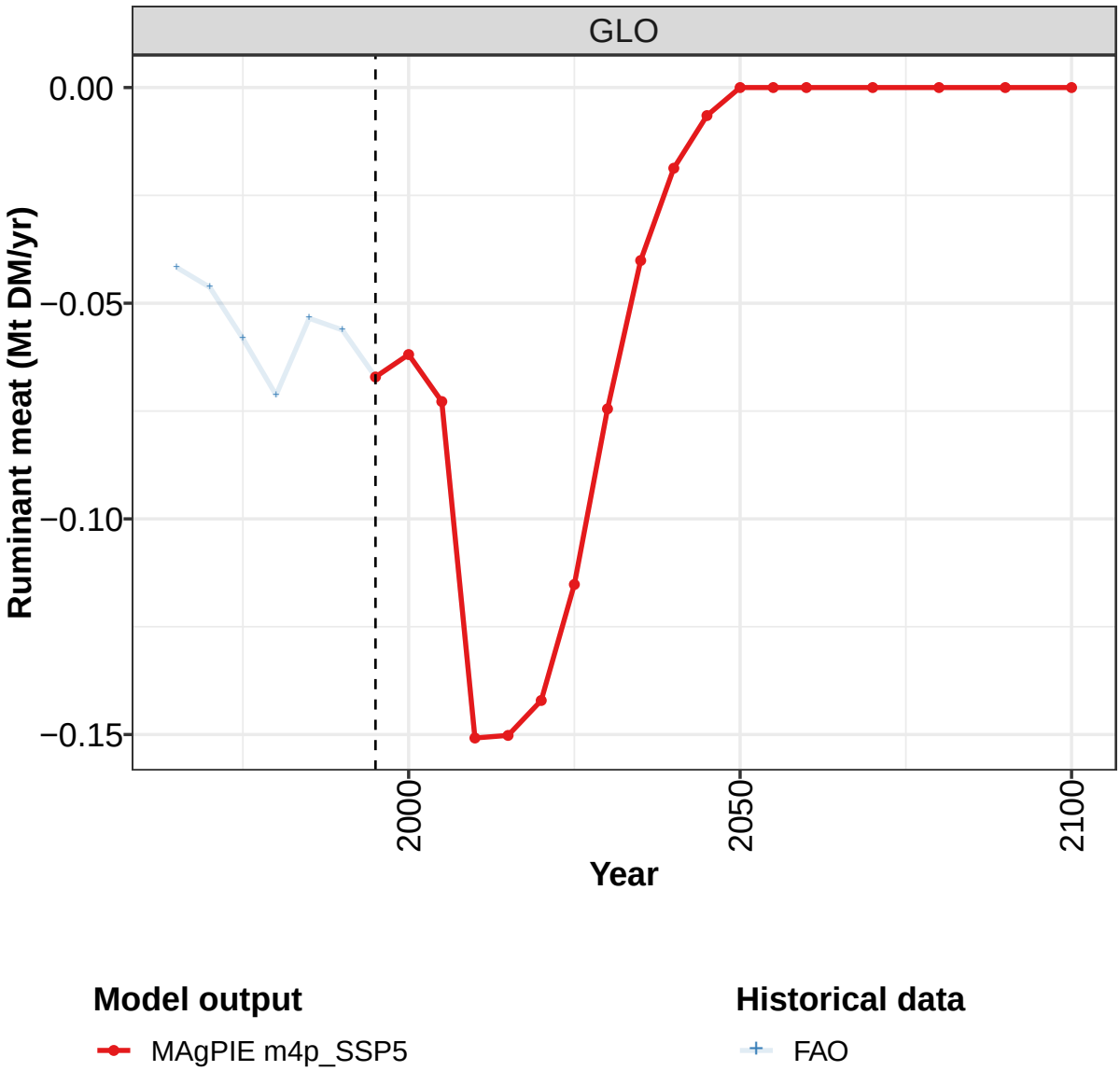
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

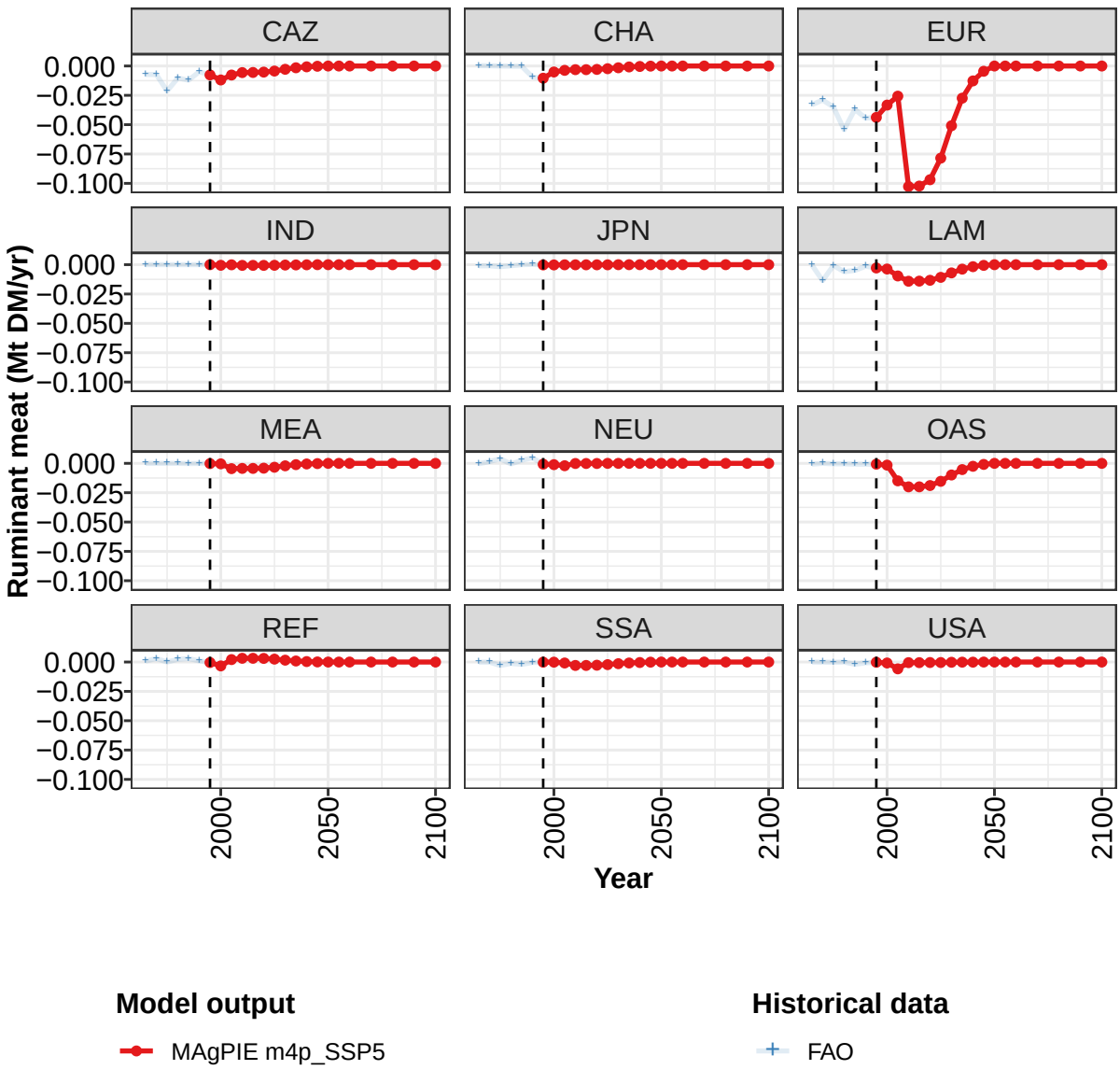
Table 207: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Poultry meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	
GLO	0.000000	0.000000	0.000000	-0.000100	-0.000100	0.000000	-0.000300	-0.000200	-0.002500	-0.00
CAZ	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.000200	-0.00
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
EUR	-0.000100	-0.000100	-0.000200	-0.000200	-0.000300	-0.000300	-0.000200	-0.000200	-0.001900	0.00
IND	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.000100	0.00
JPN	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
LAM	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.000100	0.000000	-0.000200	-0.00
MEA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.00
NEU	0.000000	0.000000	-0.000100	-0.000200	-0.000200	-0.000200	0.000000	0.000000	0.000000	0.00
OAS	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.000100	-0.00
REF	0.000100	0.000200	0.000200	0.000300	0.000400	0.000500	0.000000	0.000000	0.000000	0.00
SSA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
USA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00

Table 208: FAO — Demand—Domestic Balanceflow—Livestock products—Poultry meat (Mt DM/yr)

5.3.5 Ruminant meat





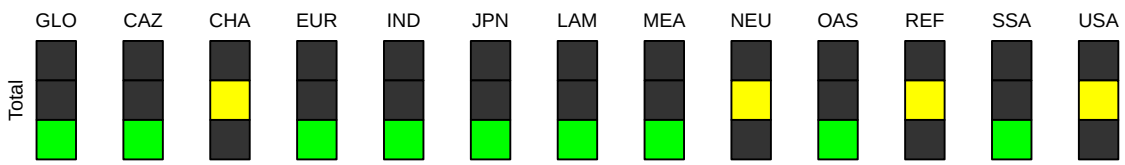


Figure 70: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.06710	-0.06190	-0.07280	-0.15080	-0.15020	-0.14210	-0.11520	-0.07450	-0.04010	-0.01870	-0.0
CAZ	-0.00760	-0.01190	-0.00770	-0.00560	-0.00550	-0.00520	-0.00430	-0.00280	-0.00150	-0.00070	-0.0
CHA	-0.01040	-0.00510	-0.00370	-0.00310	-0.00310	-0.00290	-0.00230	-0.00150	-0.00080	-0.00040	-0.0
EUR	-0.04380	-0.03330	-0.02570	-0.10270	-0.10230	-0.09690	-0.07850	-0.05090	-0.02740	-0.01270	-0.0
IND	0.00000	-0.00050	-0.00010	-0.00060	-0.00060	-0.00060	-0.00050	-0.00030	-0.00020	-0.00010	0.0
JPN	-0.00020	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.0
LAM	-0.00280	-0.00370	-0.00960	-0.01410	-0.01400	-0.01330	-0.01080	-0.00700	-0.00380	-0.00170	-0.0
MEA	-0.00020	-0.00040	-0.00450	-0.00430	-0.00430	-0.00410	-0.00330	-0.00210	-0.00110	-0.00050	-0.0
NEU	-0.00070	-0.00110	-0.00200	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000	0.0
OAS	-0.00070	-0.00150	-0.01490	-0.02000	-0.02000	-0.01890	-0.01530	-0.00990	-0.00530	-0.00250	-0.0
REF	-0.00040	-0.00330	0.00210	0.00320	0.00320	0.00310	0.00250	0.00160	0.00090	0.00040	0.0
SSA	-0.00010	-0.00010	-0.00080	-0.00290	-0.00290	-0.00270	-0.00220	-0.00140	-0.00080	-0.00040	-0.0
USA	-0.00020	-0.00080	-0.00580	-0.00050	-0.00050	-0.00040	-0.00040	-0.00020	-0.00010	-0.00010	0.0

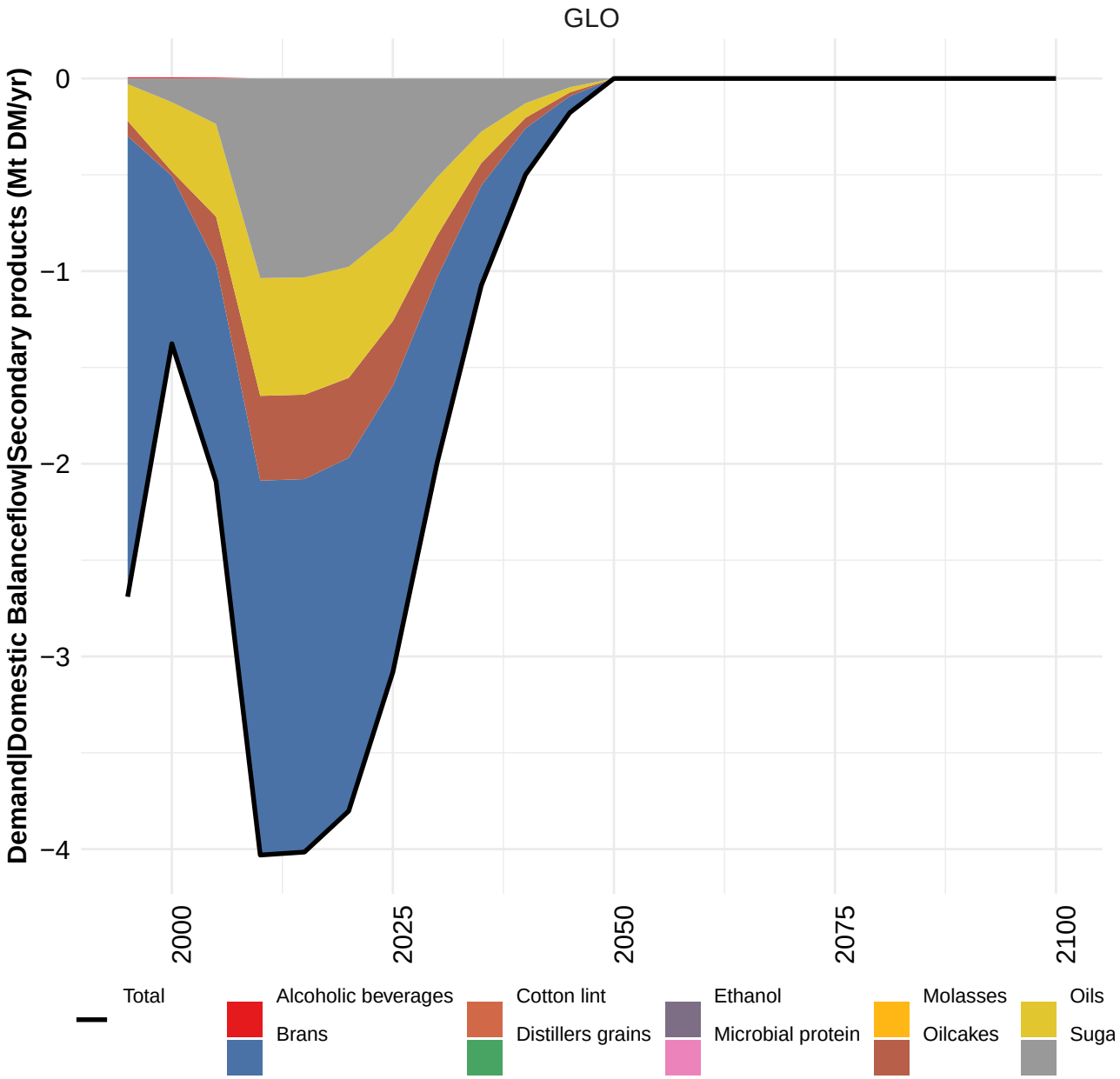
Table 209: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

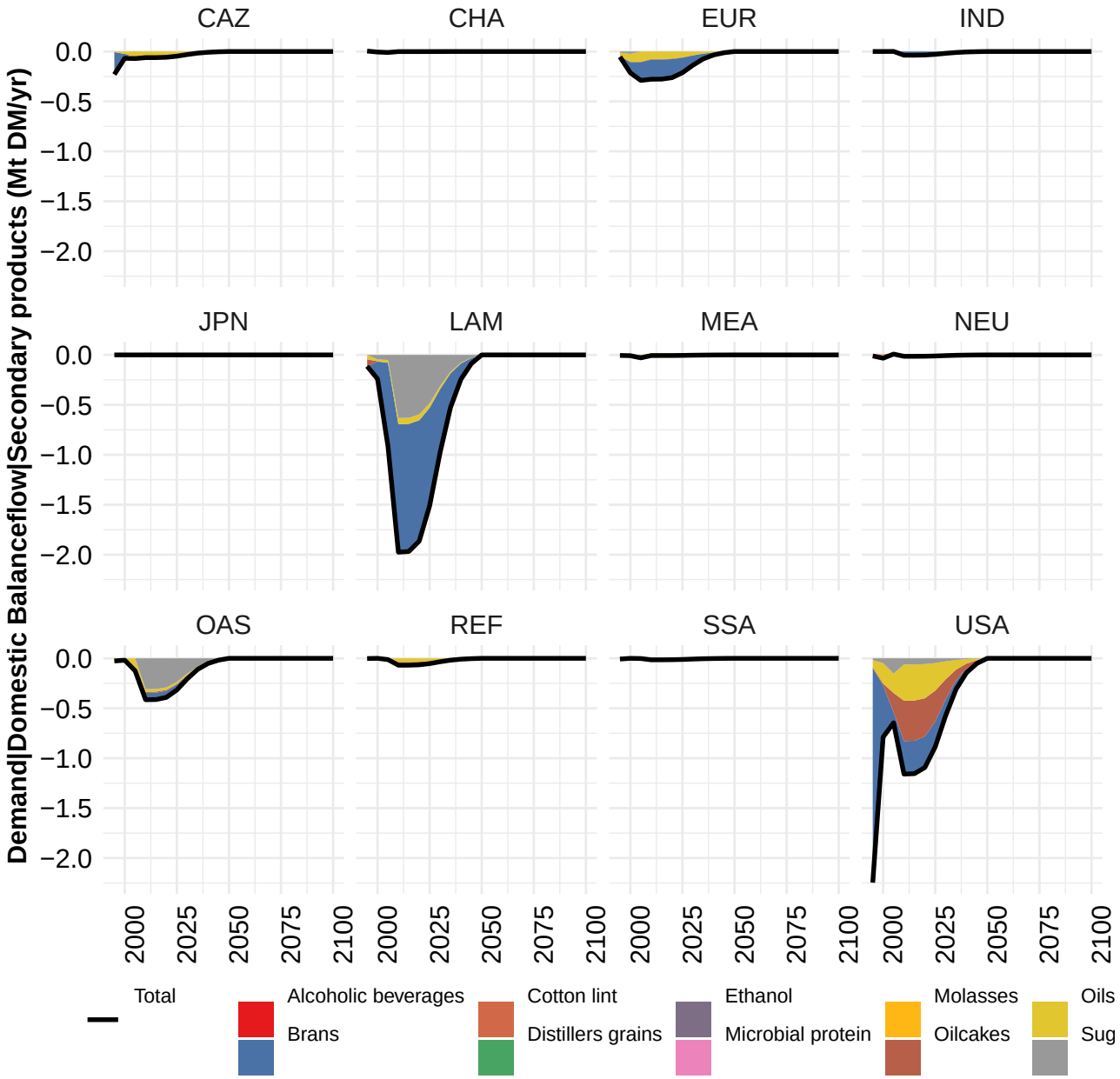
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Table 210: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

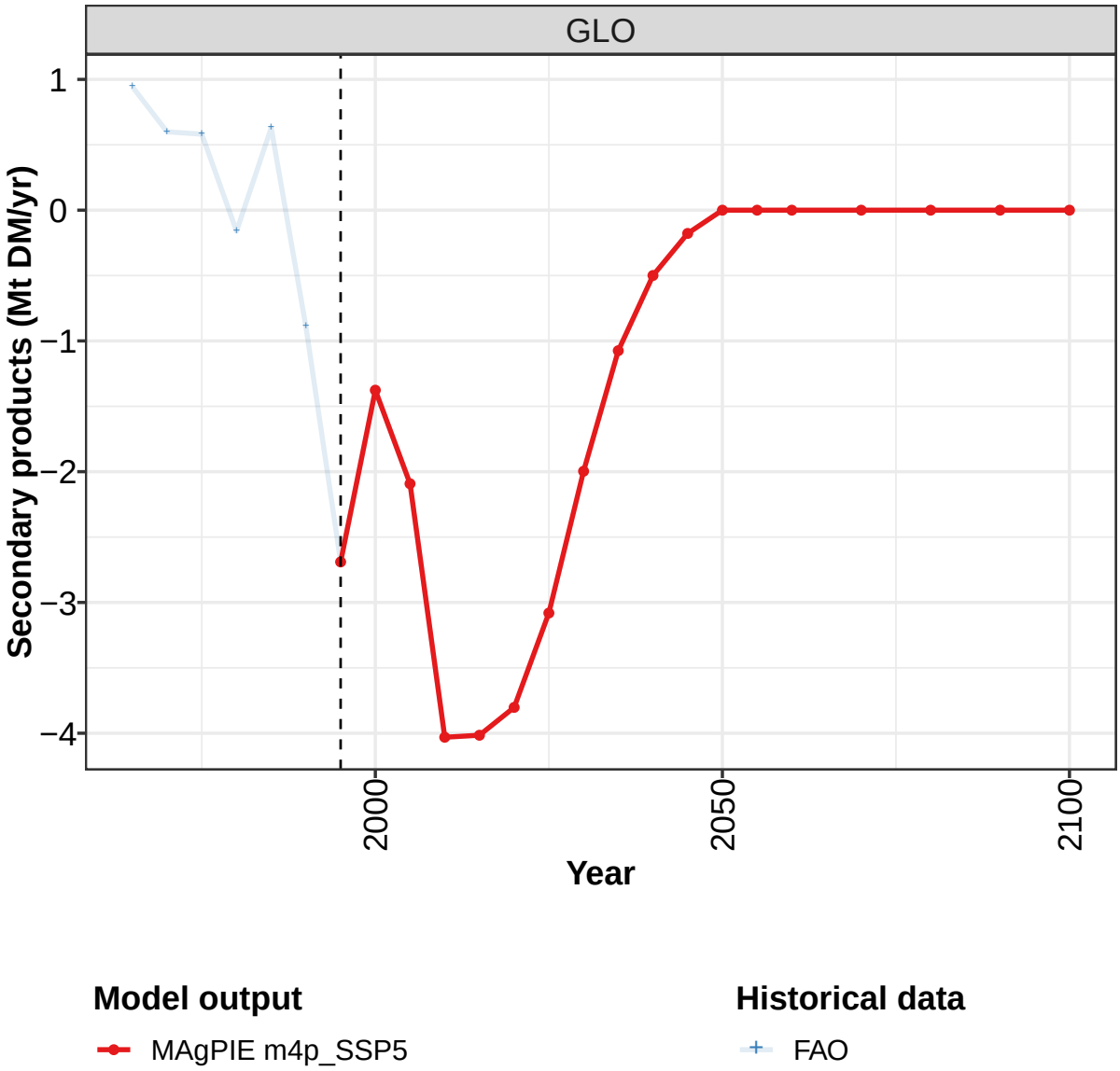
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.04170	-0.04630	-0.05820	-0.07130	-0.05350	-0.05620	-0.06710	-0.06190	-0.07280	-0.15060
CAZ	-0.00720	-0.00730	-0.02130	-0.01030	-0.01210	-0.00490	-0.00760	-0.01190	-0.00770	-0.00560
CHA	0.00030	0.00020	0.00000	-0.00020	-0.00020	-0.00940	-0.01040	-0.00510	-0.00370	-0.00310
EUR	-0.03310	-0.02900	-0.03490	-0.05430	-0.03700	-0.04440	-0.04380	-0.03330	-0.02570	-0.10270
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.00050	-0.00010	-0.00060
JPN	-0.00100	-0.00100	-0.00170	-0.00090	0.00000	0.00020	-0.00020	-0.00020	-0.00010	-0.00010
LAM	-0.00030	-0.01360	-0.00070	-0.00600	-0.00490	-0.00140	-0.00280	-0.00370	-0.00960	-0.01410
MEA	0.00000	0.00000	0.00000	0.00000	-0.00020	-0.00010	-0.00020	-0.00040	-0.00450	-0.00430
NEU	-0.00040	0.00150	0.00390	-0.00050	0.00260	0.00470	-0.00070	-0.00110	-0.00200	-0.00010
OAS	-0.00070	0.00000	-0.00040	-0.00040	-0.00070	-0.00080	-0.00070	-0.00150	-0.01490	-0.02000
REF	0.00080	0.00300	0.00000	0.00230	0.00290	0.00100	-0.00040	-0.00330	0.00210	0.00320
SSA	-0.00010	-0.00010	-0.00290	-0.00120	-0.00200	-0.00040	-0.00010	-0.00010	-0.00080	-0.00290
USA	0.00000	-0.00010	-0.00020	0.00000	-0.00190	-0.00070	-0.00020	-0.00080	-0.00580	-0.00050

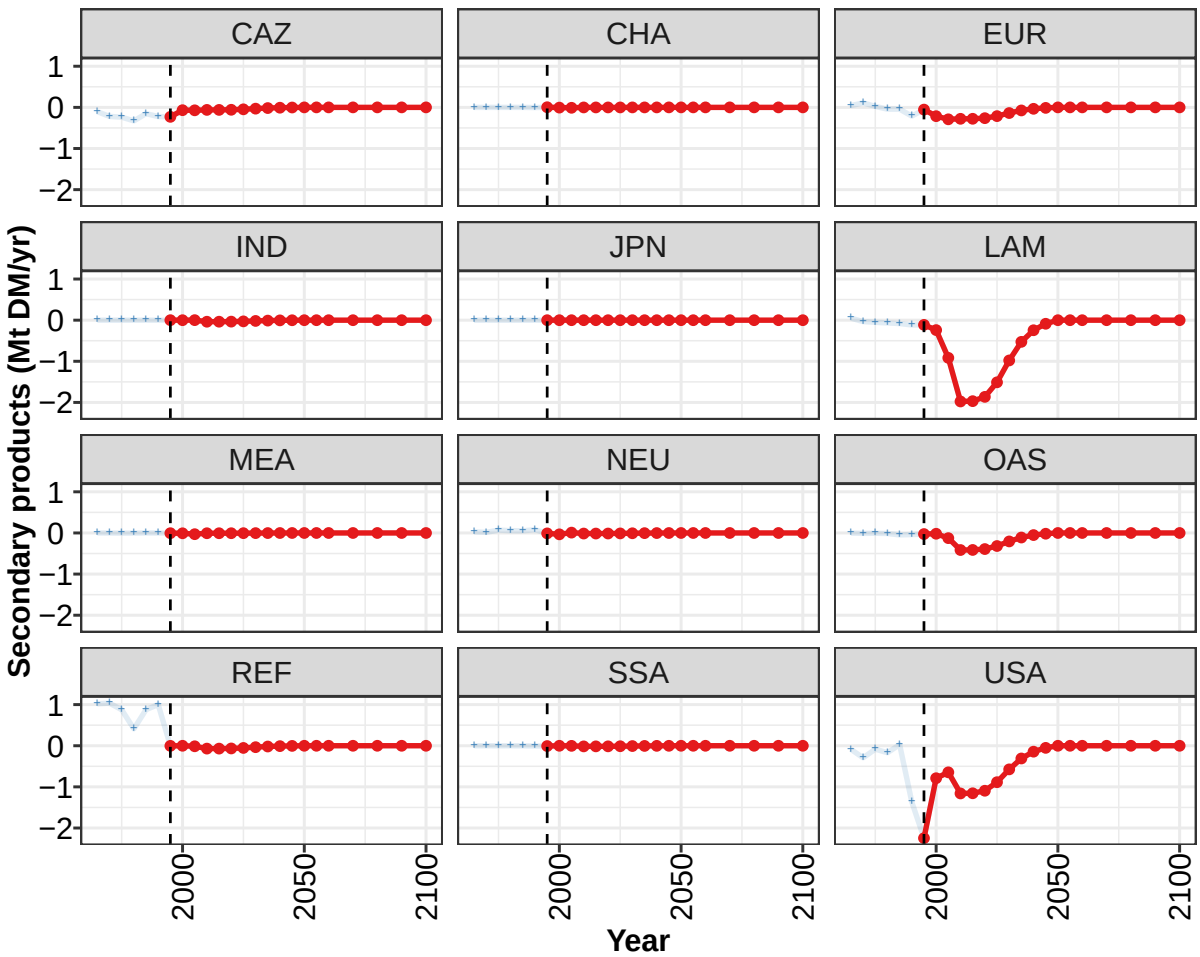
Table 211: FAO — Demand—Domestic Balanceflow—Livestock products—Ruminant meat (Mt DM/yr)


GLO
Demand|Domestic Balanceflow|Secondary products (Mt DM/yr)
0
−1
−2
−3
−4
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Suga


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Domestic Balanceflow|Secondary products (Mt DM/yr)
0.0
−0.5
−1.0
−1.5
−2.0
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Sug

5.4 Secondary products





Model output

MAgPIE m4p_SSP5

Historical data

FAO

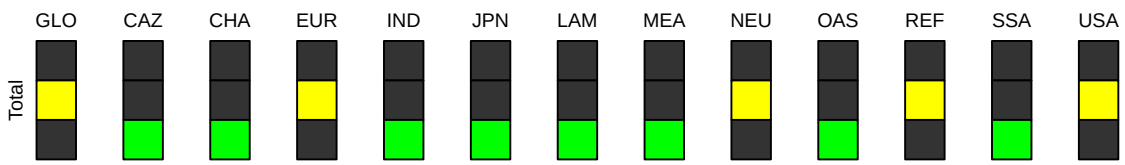


Figure 71: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-2.69000	-1.37650	-2.09200	-4.03080	-4.01540	-3.80250	-3.08080	-1.99630	-1.07450	-0.49940	-0.17
CAZ	-0.23000	-0.06780	-0.07080	-0.06140	-0.06120	-0.05790	-0.04700	-0.03050	-0.01640	-0.00760	-0.00
CHA	0.00420	-0.00550	-0.00960	-0.00090	-0.00090	-0.00090	-0.00070	-0.00050	-0.00020	-0.00020	0.00
EUR	-0.05380	-0.21390	-0.28980	-0.27780	-0.27670	-0.26200	-0.21240	-0.13760	-0.07410	-0.03440	-0.01
IND	0.00010	-0.00020	0.00090	-0.03720	-0.03710	-0.03510	-0.02850	-0.01850	-0.00990	-0.00460	-0.00
JPN	0.00000	0.00000	-0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	-0.11360	-0.24080	-0.91570	-1.97580	-1.96850	-1.86410	-1.51020	-0.97860	-0.52670	-0.24460	-0.08
MEA	-0.00520	-0.00770	-0.02940	-0.00630	-0.00620	-0.00600	-0.00480	-0.00310	-0.00180	-0.00080	-0.00
NEU	-0.01010	-0.03280	0.00840	-0.01400	-0.01390	-0.01320	-0.01070	-0.00690	-0.00370	-0.00180	-0.00
OAS	-0.02640	-0.01880	-0.12560	-0.41450	-0.41280	-0.39090	-0.31680	-0.20530	-0.11060	-0.05130	-0.01
REF	-0.00200	0.00000	-0.01260	-0.06900	-0.06870	-0.06510	-0.05280	-0.03410	-0.01830	-0.00860	-0.00
SSA	-0.00700	-0.00010	-0.00200	-0.01480	-0.01460	-0.01380	-0.01120	-0.00720	-0.00390	-0.00190	-0.00
USA	-2.24620	-0.78890	-0.64570	-1.15910	-1.15480	-1.09350	-0.88570	-0.57400	-0.30890	-0.14360	-0.05

Table 212: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products (Mt DM/yr) [PART 1/2]

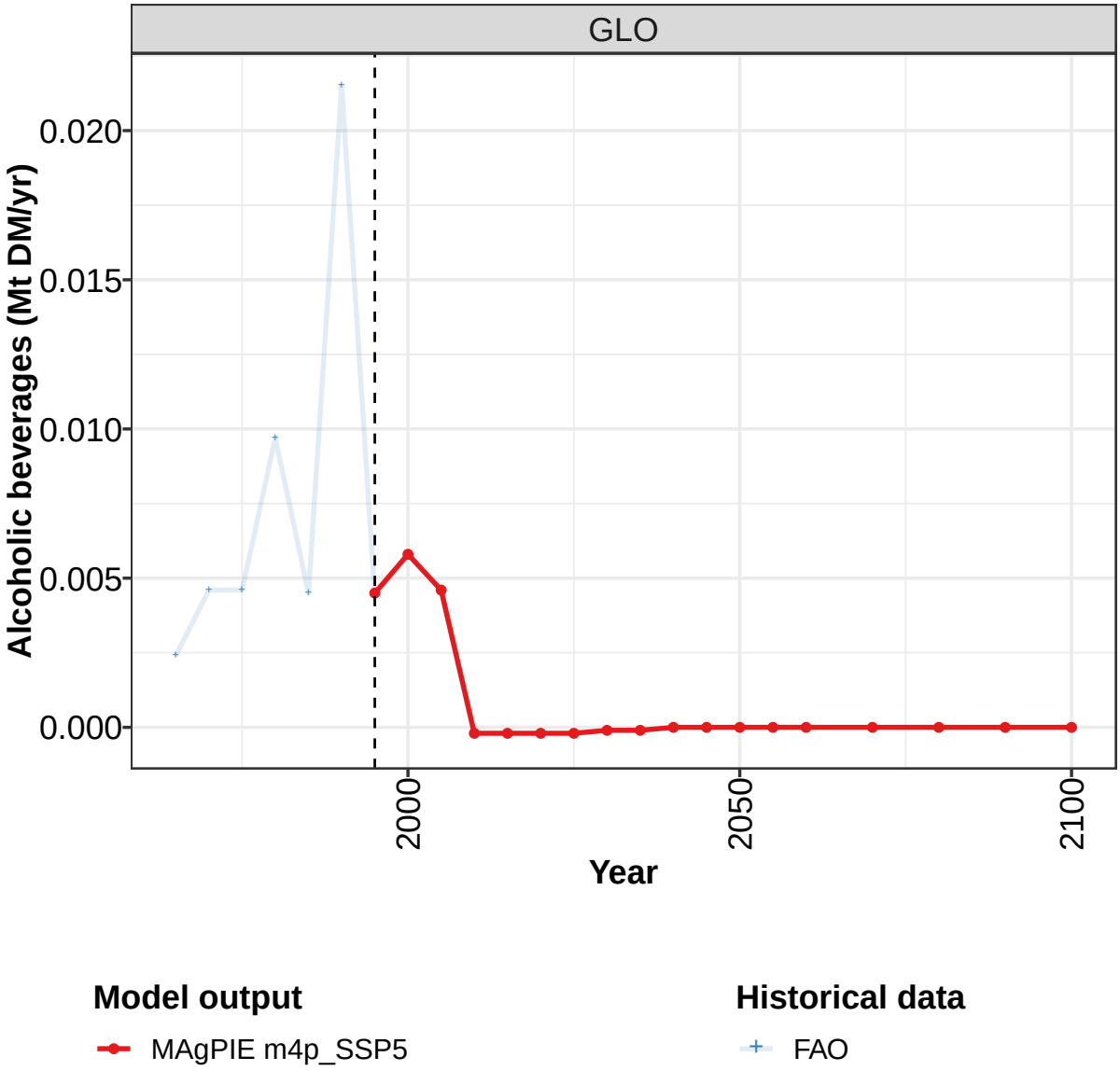
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

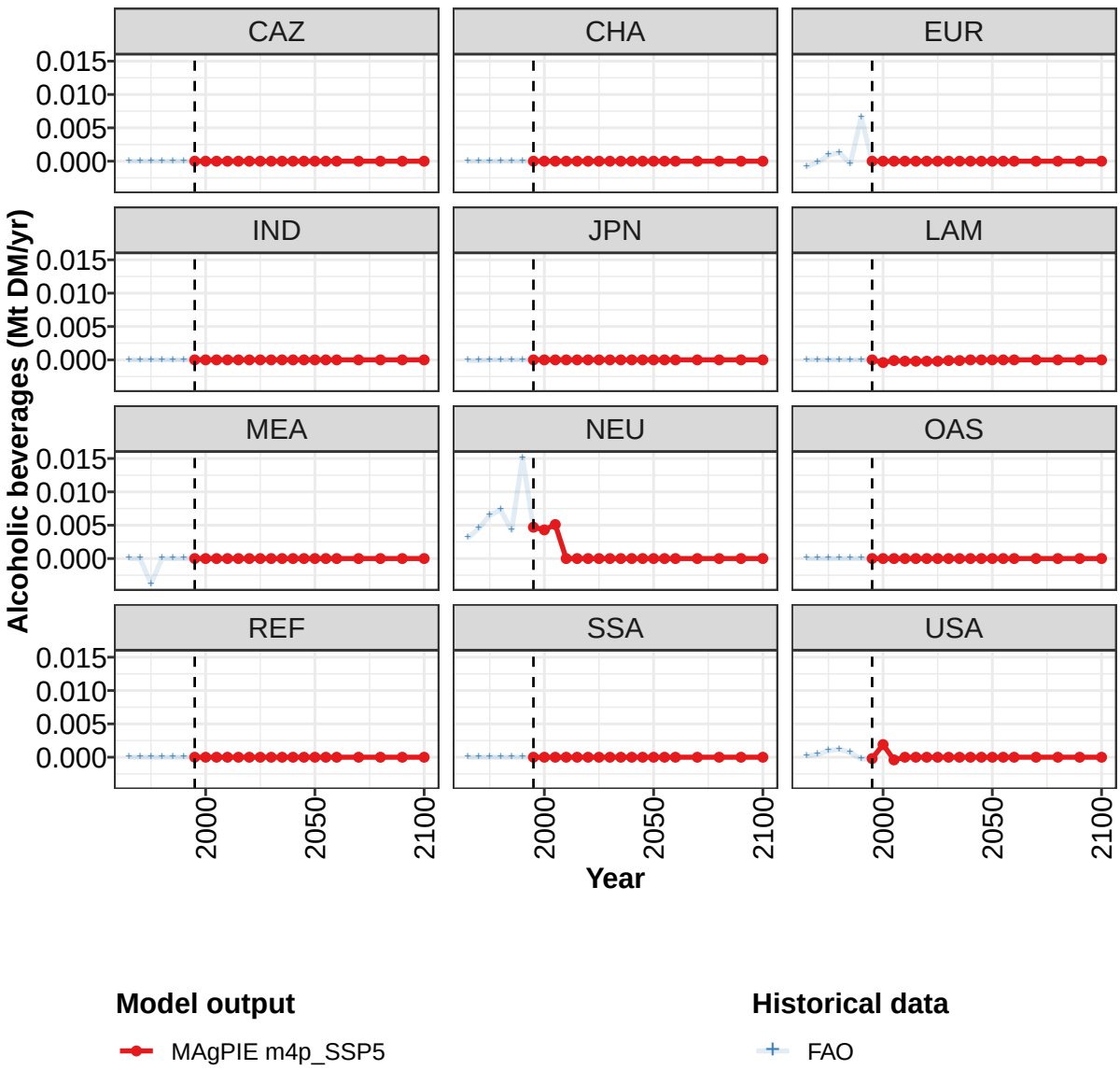
Table 213: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.94	0.60	0.58	-0.16	0.63	-0.89	-2.69	-1.38	-2.09	-4.03
CAZ	-0.10	-0.22	-0.24	-0.33	-0.15	-0.22	-0.23	-0.07	-0.07	-0.06
CHA	0.00	0.00	0.00	0.00	0.00	-0.00	0.00	-0.01	-0.01	-0.00
EUR	0.04	0.11	0.02	-0.04	-0.04	-0.21	-0.05	-0.21	-0.29	-0.28
IND	0.00	0.00	-0.00	-0.00	-0.00	-0.00	0.00	-0.00	0.00	-0.04
JPN	-0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.00	-0.00	0.00
LAM	0.05	-0.04	-0.05	-0.07	-0.08	-0.12	-0.11	-0.24	-0.92	-1.98
MEA	0.00	-0.00	-0.00	-0.00	0.00	-0.00	-0.01	-0.01	-0.03	-0.01
NEU	0.03	0.01	0.07	0.06	0.05	0.08	-0.01	-0.03	0.01	-0.01
OAS	-0.00	-0.01	-0.01	-0.01	-0.05	-0.04	-0.03	-0.02	-0.13	-0.41
REF	1.02	1.04	0.88	0.41	0.88	1.00	-0.00	-0.00	-0.01	-0.07
SSA	0.00	0.00	-0.00	-0.00	-0.00	-0.01	-0.01	-0.00	-0.00	-0.01
USA	-0.09	-0.29	-0.08	-0.17	0.03	-1.37	-2.25	-0.79	-0.65	-1.16

Table 214: FAO — Demand—Domestic Balanceflow—Secondary products (Mt DM/yr)

5.4.1 Alcoholic beverages





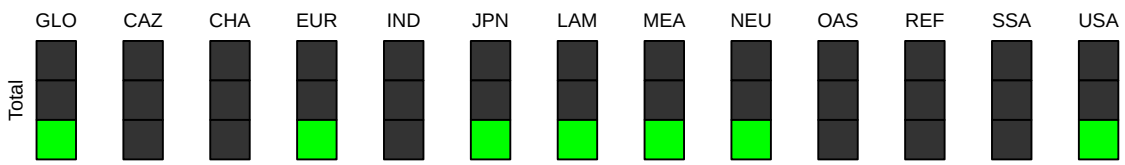


Figure 72: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	20
GLO	0.00450	0.00580	0.00460	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
LAM	0.00000	-0.00040	-0.00010	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
NEU	0.00470	0.00430	0.00510	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000
USA	-0.00020	0.00190	-0.00040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000

Table 215: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

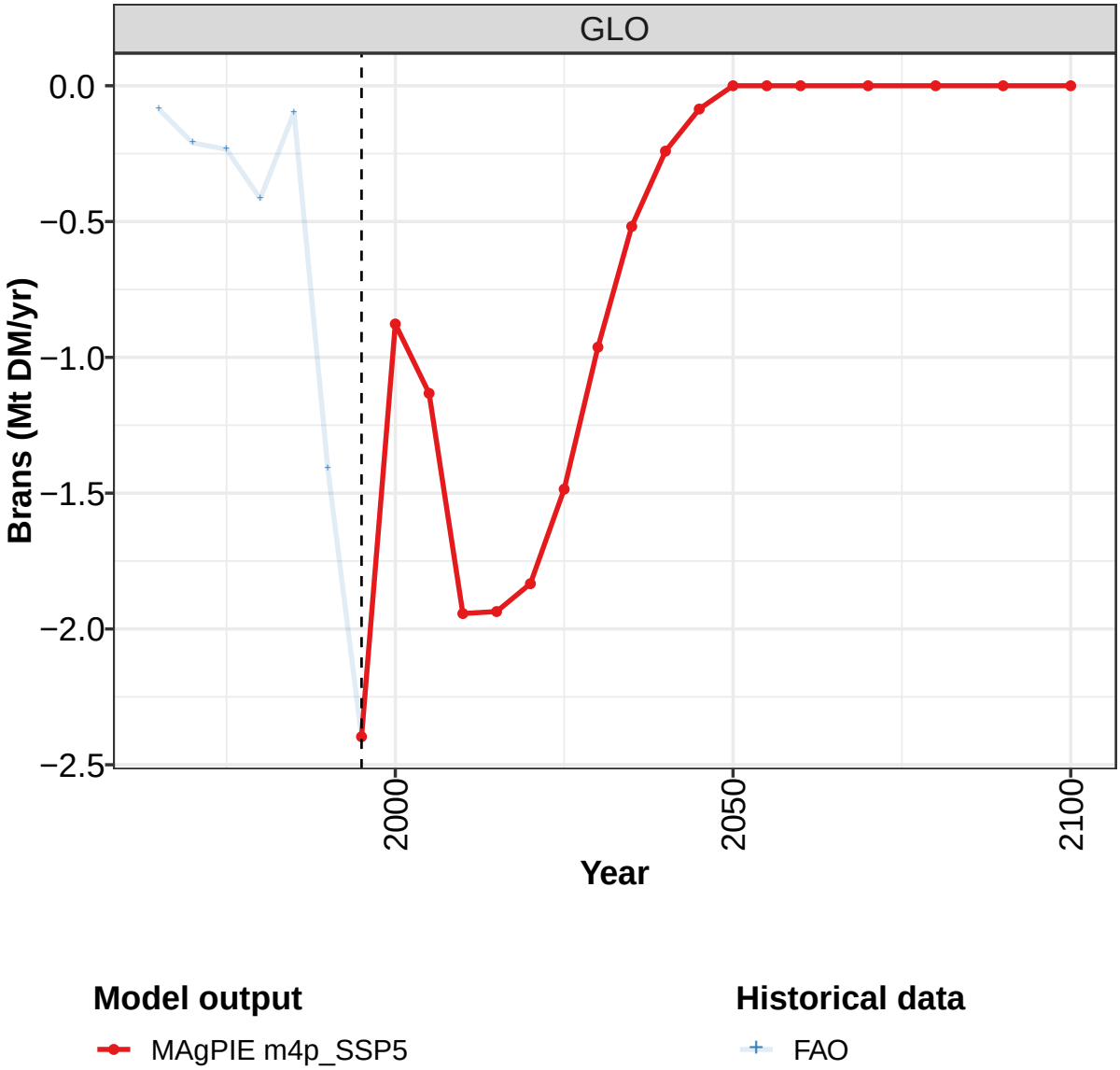
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

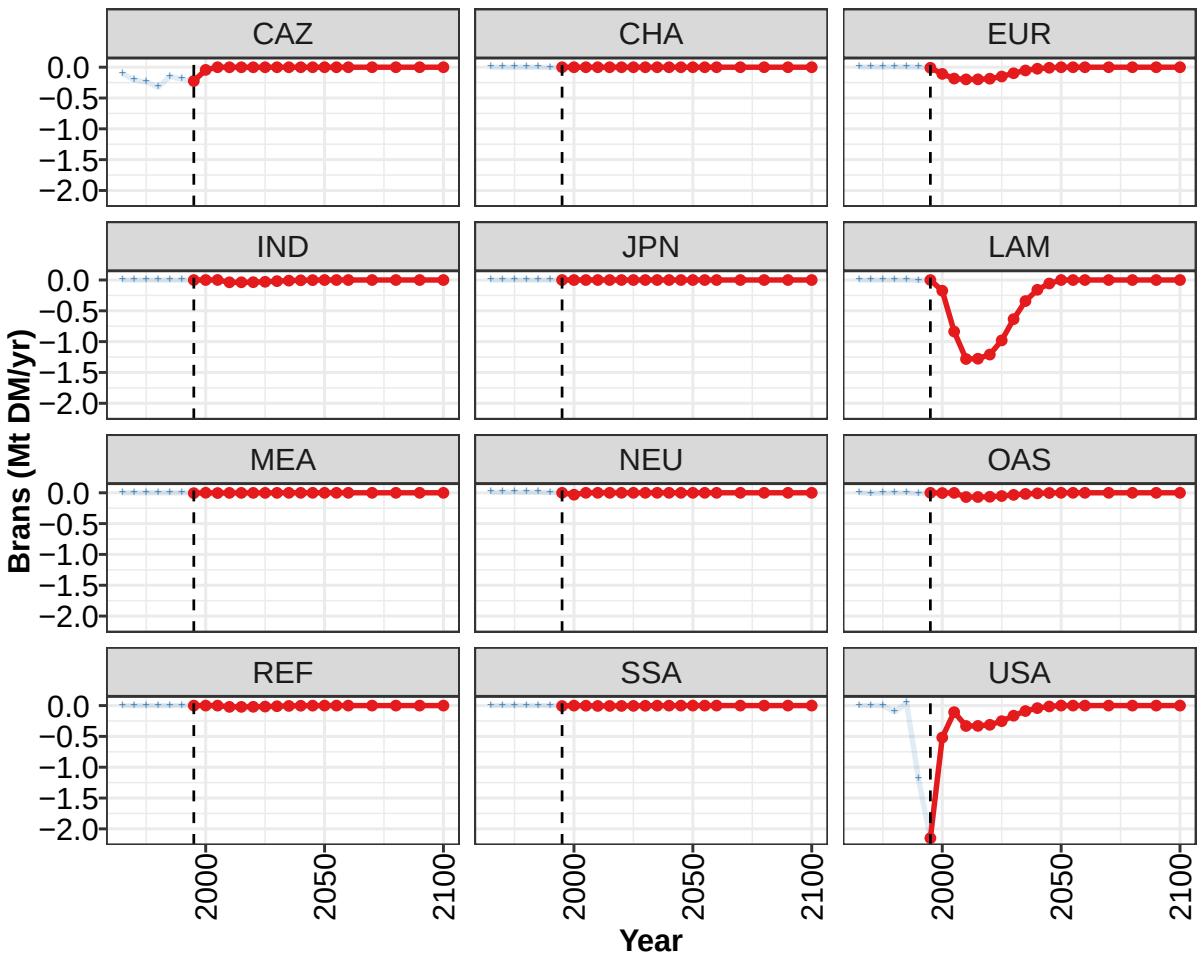
Table 216: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0024	0.0046	0.0046	0.0097	0.0045	0.0215	0.0044	0.0058	0.0046	-0.0003
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	-0.0008	-0.0002	0.0009	0.0013	-0.0004	0.0066	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	-0.0001	-0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0004	-0.0001	-0.0002
MEA	0.0000	0.0000	-0.0038	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0031	0.0045	0.0065	0.0073	0.0042	0.0151	0.0047	0.0043	0.0051	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0002	0.0004	0.0010	0.0012	0.0007	-0.0003	-0.0002	0.0019	-0.0004	0.0000

Table 217: FAO — Demand—Domestic Balanceflow—Secondary products—Alcoholic beverages (Mt DM/yr)

5.4.2 Brans


GLO
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
Brans (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

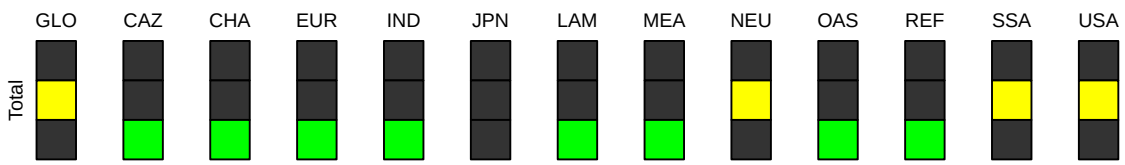


Figure 73: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-2.39680	-0.87720	-1.13240	-1.94330	-1.93590	-1.83330	-1.48540	-0.96250	-0.51800	-0.24070	-0.08
CAZ	-0.22410	-0.04330	0.00000	-0.00030	-0.00030	-0.00030	-0.00030	-0.00020	-0.00010	0.00000	0.00
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
EUR	-0.00900	-0.10850	-0.18400	-0.19730	-0.19650	-0.18610	-0.15080	-0.09770	-0.05260	-0.02440	-0.00
IND	0.00010	0.00010	0.00100	-0.03710	-0.03700	-0.03500	-0.02840	-0.01840	-0.00990	-0.00460	-0.00
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	-0.00040	-0.17390	-0.83620	-1.28170	-1.27690	-1.20920	-0.97960	-0.63480	-0.34160	-0.15870	-0.05
MEA	-0.00580	0.00130	-0.00360	-0.00140	-0.00140	-0.00140	-0.00110	-0.00070	-0.00040	-0.00020	-0.00
NEU	0.00000	-0.03080	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
OAS	0.00000	-0.00380	-0.00120	-0.06850	-0.06820	-0.06460	-0.05240	-0.03390	-0.01830	-0.00850	-0.00
REF	0.00000	0.00000	-0.00020	-0.02060	-0.02050	-0.01940	-0.01580	-0.01020	-0.00550	-0.00260	-0.00
SSA	-0.00690	0.00000	-0.00180	-0.00570	-0.00560	-0.00530	-0.00430	-0.00280	-0.00150	-0.00070	-0.00
USA	-2.15070	-0.51830	-0.10640	-0.33070	-0.32950	-0.31200	-0.25270	-0.16380	-0.08810	-0.04100	-0.01

Table 218: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Brans (Mt DM/yr) [PART 1/2]

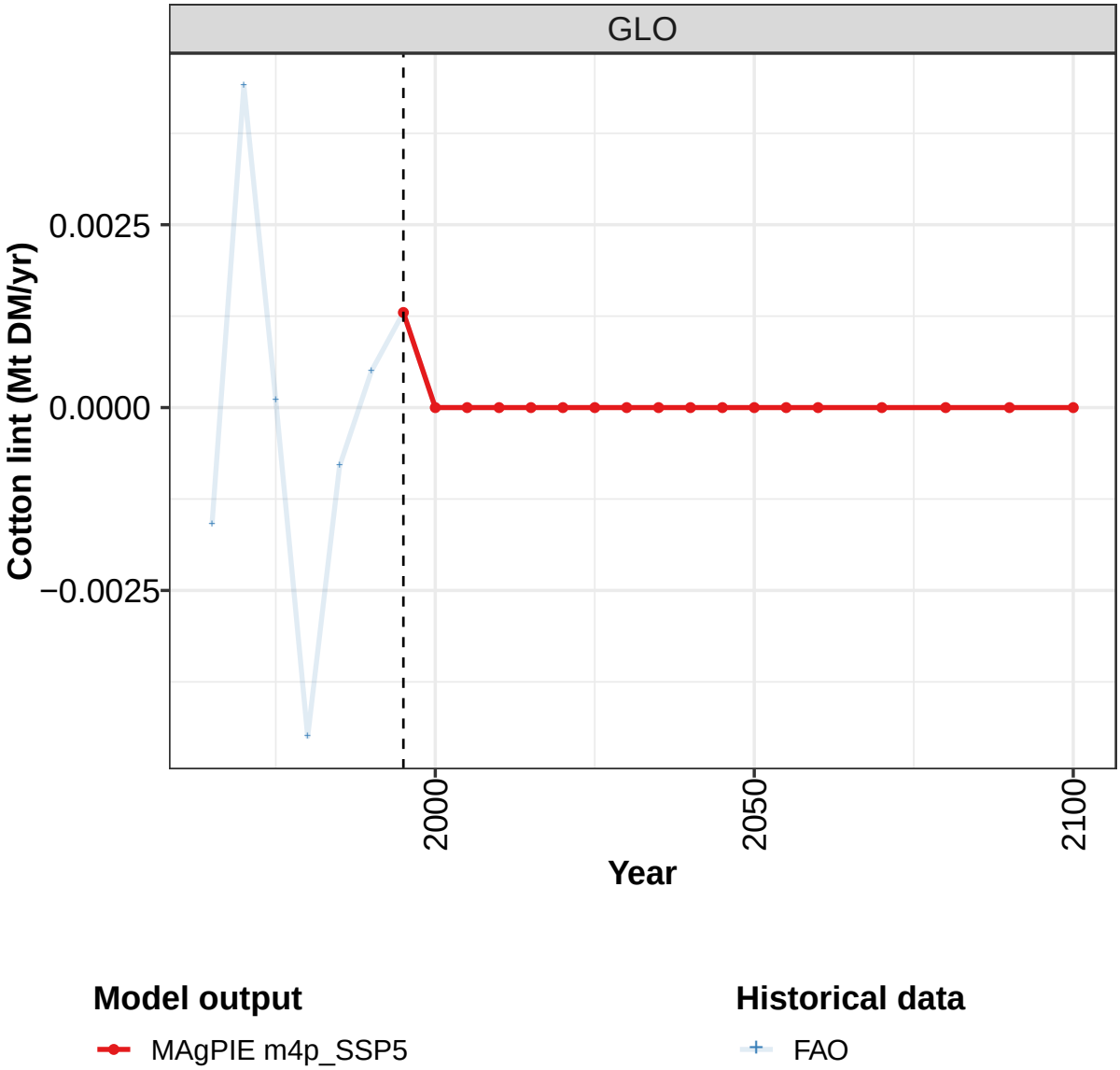
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

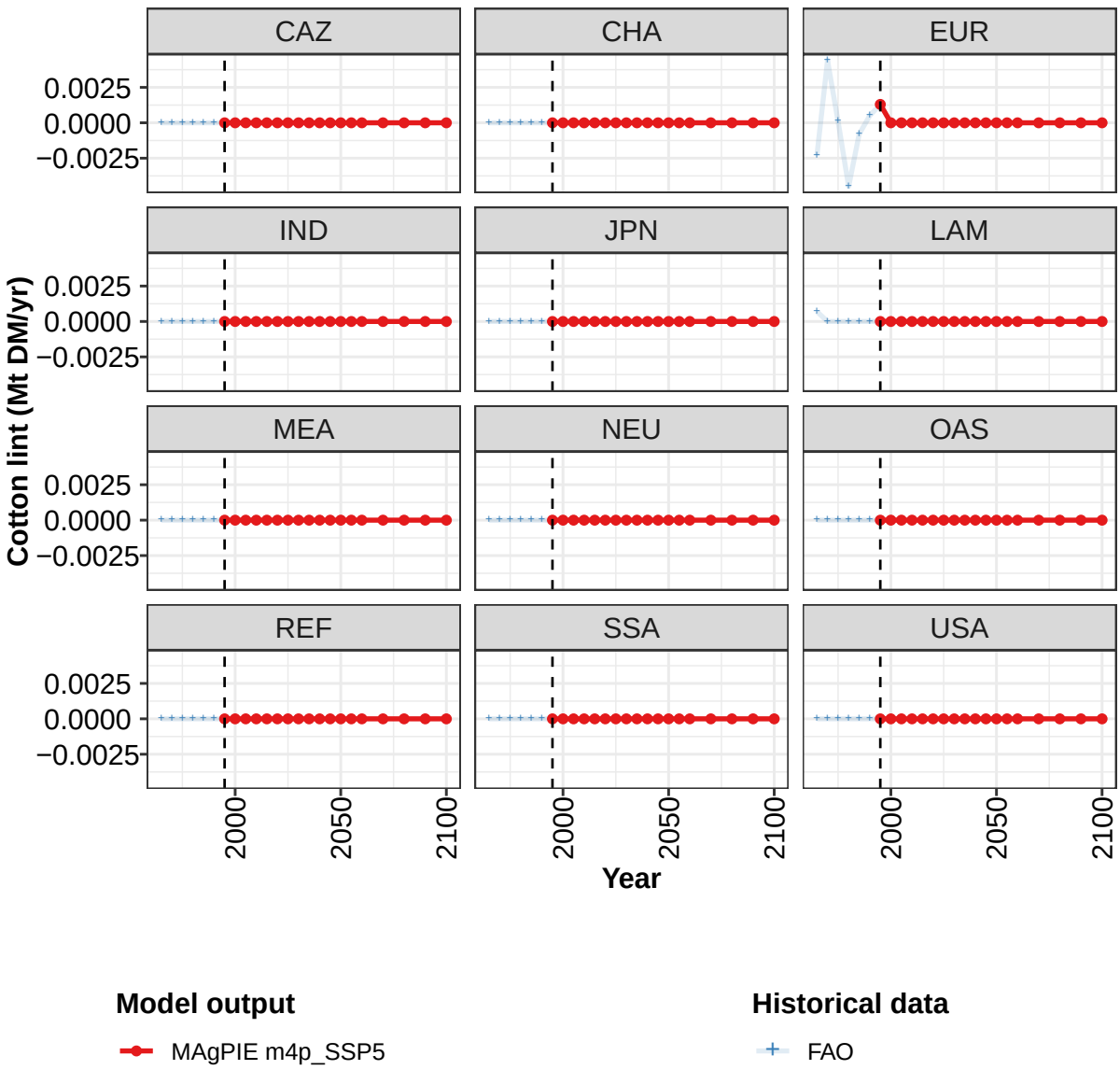
Table 219: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.0867	-0.2104	-0.2342	-0.4157	-0.0979	-1.4087	-2.3967	-0.8771	-1.1324	-1.9433
CAZ	-0.0994	-0.2118	-0.2376	-0.3255	-0.1498	-0.1954	-0.2241	-0.0433	0.0000	-0.0003
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0044	0.0000	0.0000	0.0000	0.0000
EUR	0.0050	0.0047	0.0022	0.0044	0.0042	0.0026	-0.0090	-0.1085	-0.1840	-0.1973
IND	0.0000	0.0000	0.0000	0.0008	-0.0003	-0.0011	0.0001	0.0001	0.0010	-0.0371
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0050	-0.0004	-0.1739	-0.8362	-1.2817
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0058	0.0013	-0.0036	-0.0014
NEU	0.0095	0.0085	0.0087	0.0106	0.0114	0.0036	0.0000	-0.0308	0.0000	0.0000
OAS	0.0000	-0.0098	-0.0059	-0.0018	-0.0014	-0.0136	0.0000	-0.0038	-0.0012	-0.0685
REF	-0.0019	-0.0019	-0.0016	-0.0015	-0.0016	-0.0019	0.0000	0.0000	-0.0002	-0.0206
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0069	0.0000	-0.0018	-0.0057
USA	0.0000	0.0000	0.0000	-0.1026	0.0396	-1.1936	-2.1507	-0.5183	-0.1064	-0.3307

Table 220: FAO — Demand—Domestic Balanceflow—Secondary products—Brans (Mt DM/yr)

5.4.3 Cotton lint





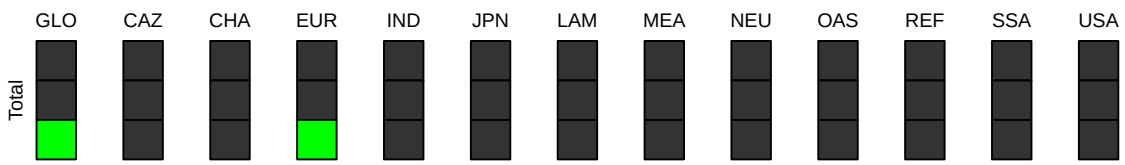


Figure 74: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Cotton lint (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00130	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00130	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Table 221: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

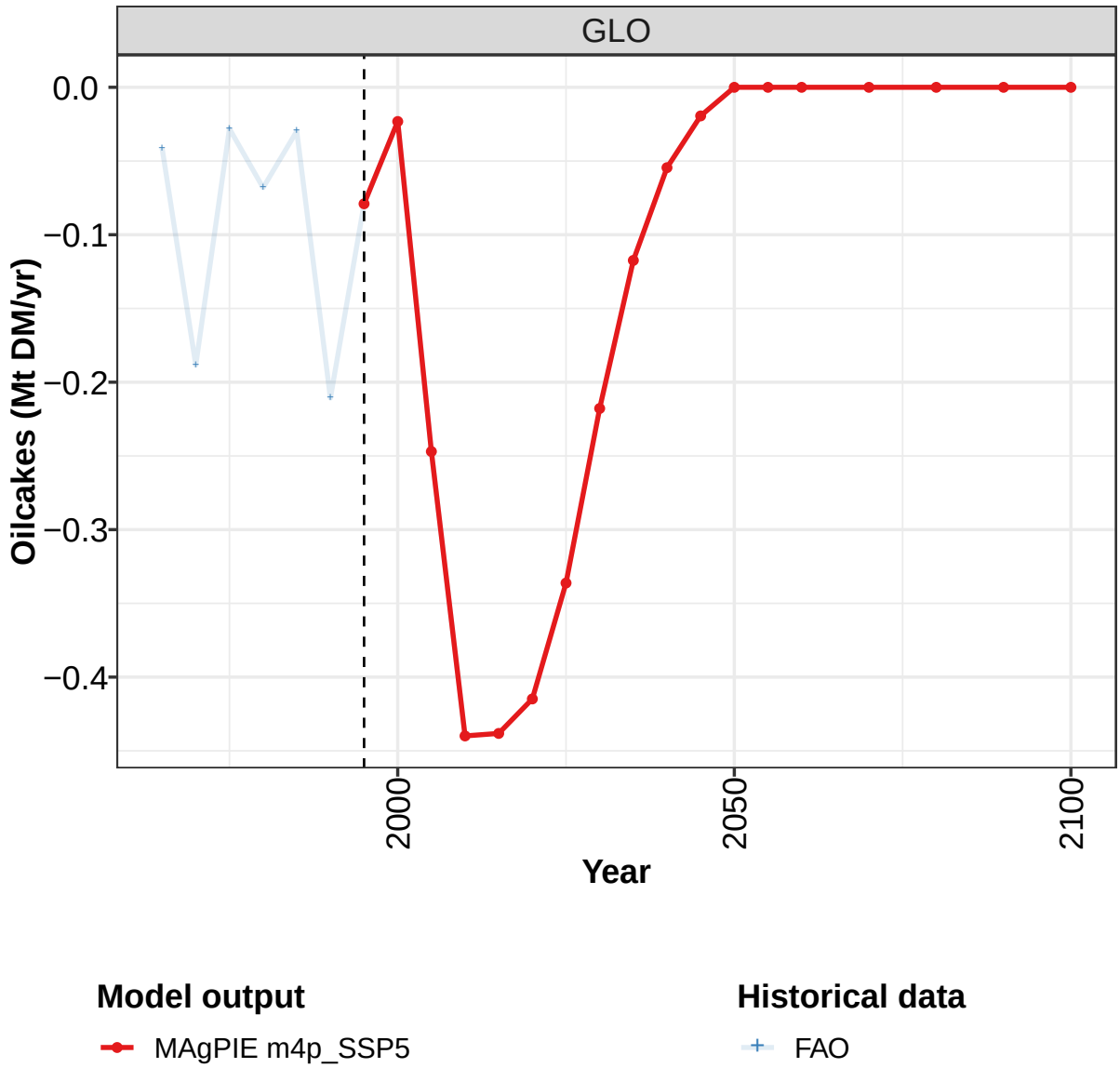
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

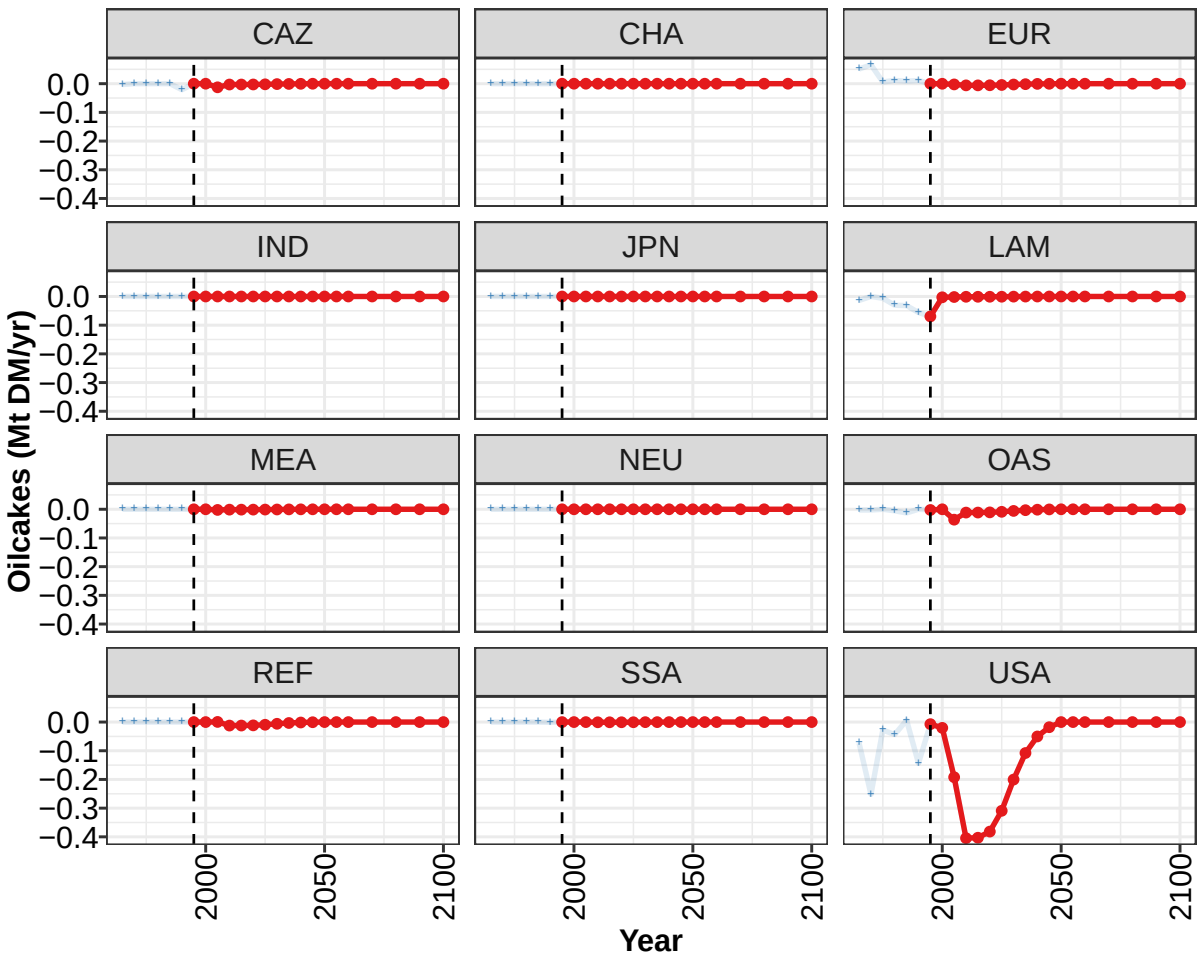
Table 222: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Cotton lint (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.00160	0.00440	0.00010	-0.00450	-0.00080	0.00050	0.00130	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	-0.00230	0.00440	0.00010	-0.00450	-0.00080	0.00050	0.00130	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00070	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Table 223: FAO — Demand—Domestic Balanceflow—Secondary products—Cotton lint (Mt DM/yr)

5.4.4 Oilcakes





Model output

MAgPIE m4p_SSP5

Historical data

FAO

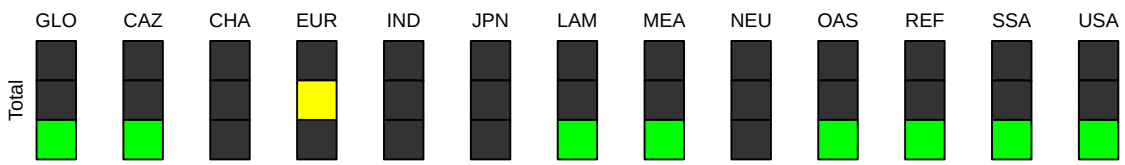


Figure 75: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	
GLO	-0.079000	-0.023200	-0.247000	-0.439900	-0.438200	-0.414800	-0.336200	-0.217800	-0.117400	-0.05
CAZ	0.000000	0.000000	-0.012600	-0.002900	-0.002900	-0.002700	-0.002200	-0.001400	-0.000800	-0.00
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
EUR	0.000000	-0.000200	-0.002500	-0.005800	-0.005800	-0.005500	-0.004500	-0.002900	-0.001600	-0.00
IND	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
JPN	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
LAM	-0.069400	-0.002800	-0.001800	-0.001000	-0.001000	-0.000900	-0.000800	-0.000500	-0.000300	-0.00
MEA	0.000000	0.000000	-0.002200	-0.001300	-0.001300	-0.001200	-0.001000	-0.000700	-0.000400	-0.00
NEU	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
OAS	-0.002400	0.000000	-0.036200	-0.011500	-0.011400	-0.010800	-0.008800	-0.005700	-0.003100	-0.00
REF	0.000000	0.000000	0.000500	-0.012200	-0.012100	-0.011500	-0.009300	-0.006000	-0.003200	-0.00
SSA	0.000000	0.000000	-0.000100	-0.000700	-0.000700	-0.000600	-0.000500	-0.000300	-0.000200	-0.00
USA	-0.007200	-0.020200	-0.192100	-0.404500	-0.403000	-0.381600	-0.309100	-0.200300	-0.107800	-0.05

Table 224: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

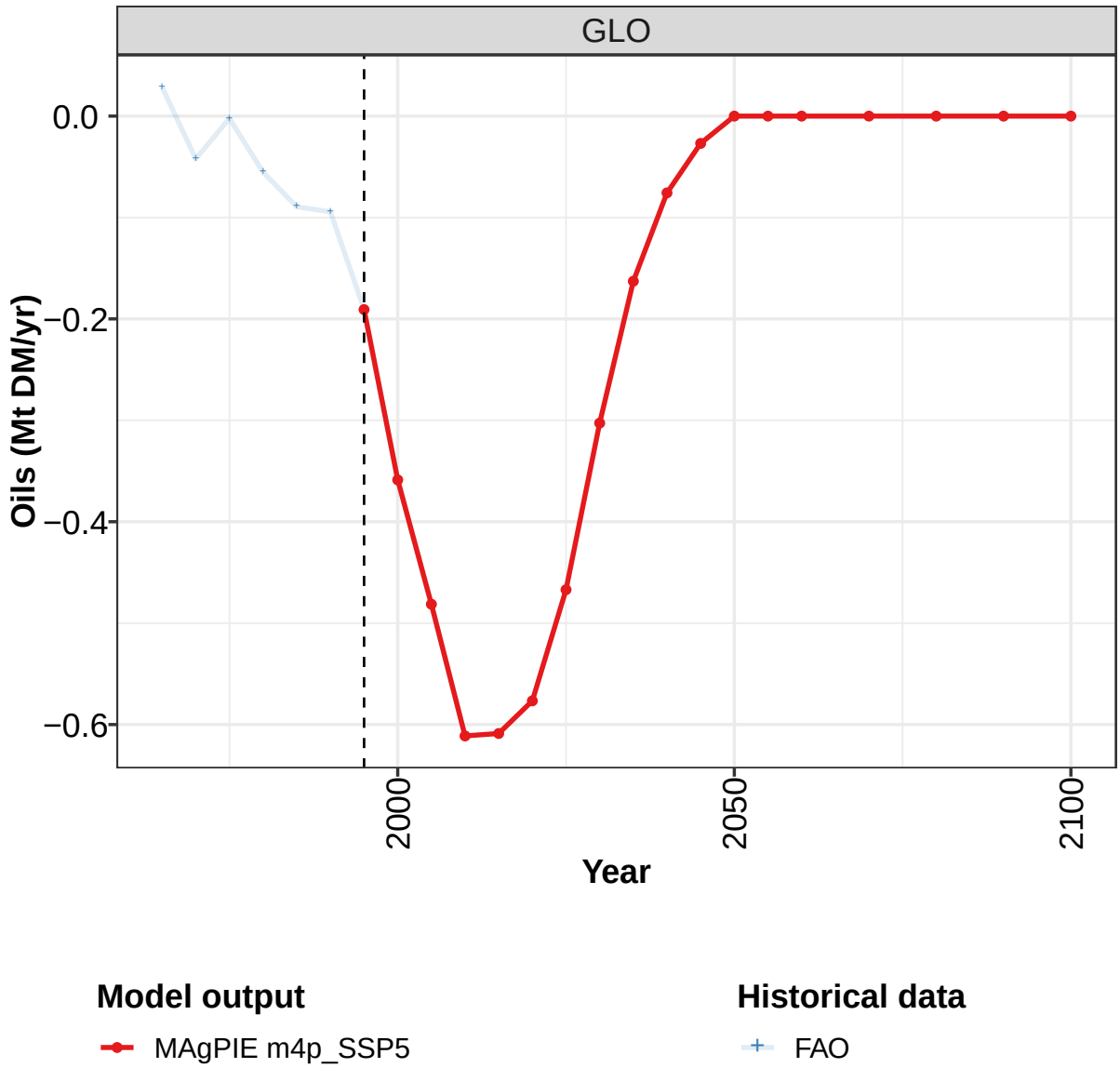
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CAZ	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
EUR	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
IND	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
JPN	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
LAM	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
MEA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
NEU	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
OAS	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
REF	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
SSA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
USA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

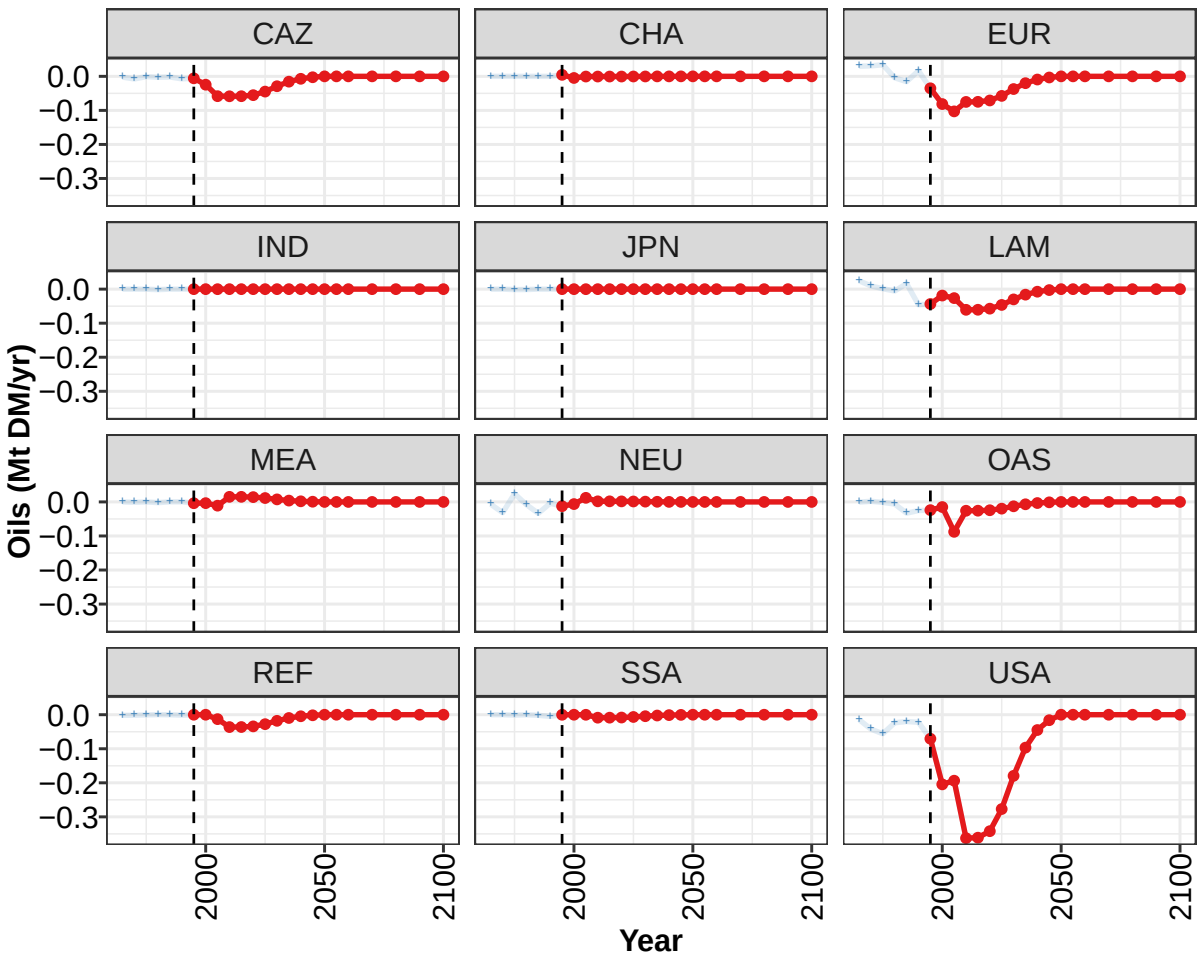
Table 225: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Oilcakes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-0.0413	-0.1884	-0.0281	-0.0681	-0.0298	-0.2108	-0.0790	-0.0231	-0.2469	-0.4398
CAZ	-0.0030	0.0000	0.0000	0.0000	0.0000	-0.0211	0.0000	0.0000	-0.0126	-0.0029
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0509	0.0659	0.0060	0.0112	0.0088	0.0110	0.0000	-0.0002	-0.0025	-0.0058
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	-0.0138	0.0000	-0.0062	-0.0305	-0.0318	-0.0558	-0.0694	-0.0028	-0.0018	-0.0010
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0022	-0.0013
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	-0.0026	-0.0026	0.0000	-0.0054	-0.0127	0.0000	-0.0024	0.0000	-0.0362	-0.0115
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0005	-0.0122
SSA	0.0000	0.0000	0.0000	0.0000	-0.0001	-0.0011	0.0000	0.0000	-0.0001	-0.0007
USA	-0.0729	-0.2518	-0.0279	-0.0434	0.0061	-0.1438	-0.0072	-0.0202	-0.1921	-0.4045

Table 226: FAO — Demand—Domestic Balanceflow—Secondary products—Oilcakes (Mt DM/yr)

5.4.5 Oils


GLO
0.0
−0.2
−0.4
−0.6
Oils (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

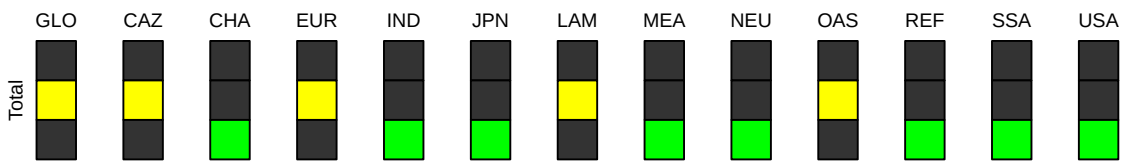


Figure 76: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.1908	-0.3587	-0.4813	-0.6112	-0.6088	-0.5766	-0.4670	-0.3027	-0.1628	-0.0757	-0.0269
CAZ	-0.0058	-0.0245	-0.0582	-0.0585	-0.0583	-0.0552	-0.0447	-0.0290	-0.0156	-0.0072	-0.0026
CHA	0.0044	-0.0047	-0.0005	-0.0005	-0.0005	-0.0005	-0.0004	-0.0003	-0.0001	-0.0001	0.0000
EUR	-0.0351	-0.0814	-0.1029	-0.0751	-0.0748	-0.0708	-0.0574	-0.0372	-0.0200	-0.0093	-0.0033
IND	0.0000	0.0000	-0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	-0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	-0.0436	-0.0188	-0.0263	-0.0607	-0.0605	-0.0573	-0.0464	-0.0301	-0.0162	-0.0075	-0.0027
MEA	-0.0037	-0.0035	-0.0109	0.0150	0.0150	0.0142	0.0115	0.0075	0.0040	0.0019	0.0007
NEU	-0.0124	-0.0063	0.0121	0.0018	0.0018	0.0017	0.0014	0.0009	0.0005	0.0002	0.0001
OAS	-0.0240	-0.0150	-0.0877	-0.0258	-0.0257	-0.0243	-0.0197	-0.0128	-0.0069	-0.0032	-0.0011
REF	0.0000	0.0000	-0.0129	-0.0362	-0.0361	-0.0342	-0.0277	-0.0179	-0.0096	-0.0045	-0.0016
SSA	-0.0001	0.0000	-0.0001	-0.0087	-0.0086	-0.0082	-0.0066	-0.0043	-0.0023	-0.0011	-0.0004
USA	-0.0705	-0.2045	-0.1937	-0.3625	-0.3611	-0.3420	-0.2770	-0.1795	-0.0966	-0.0449	-0.0160

Table 227: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Oils (Mt DM/yr) [PART 1/2]

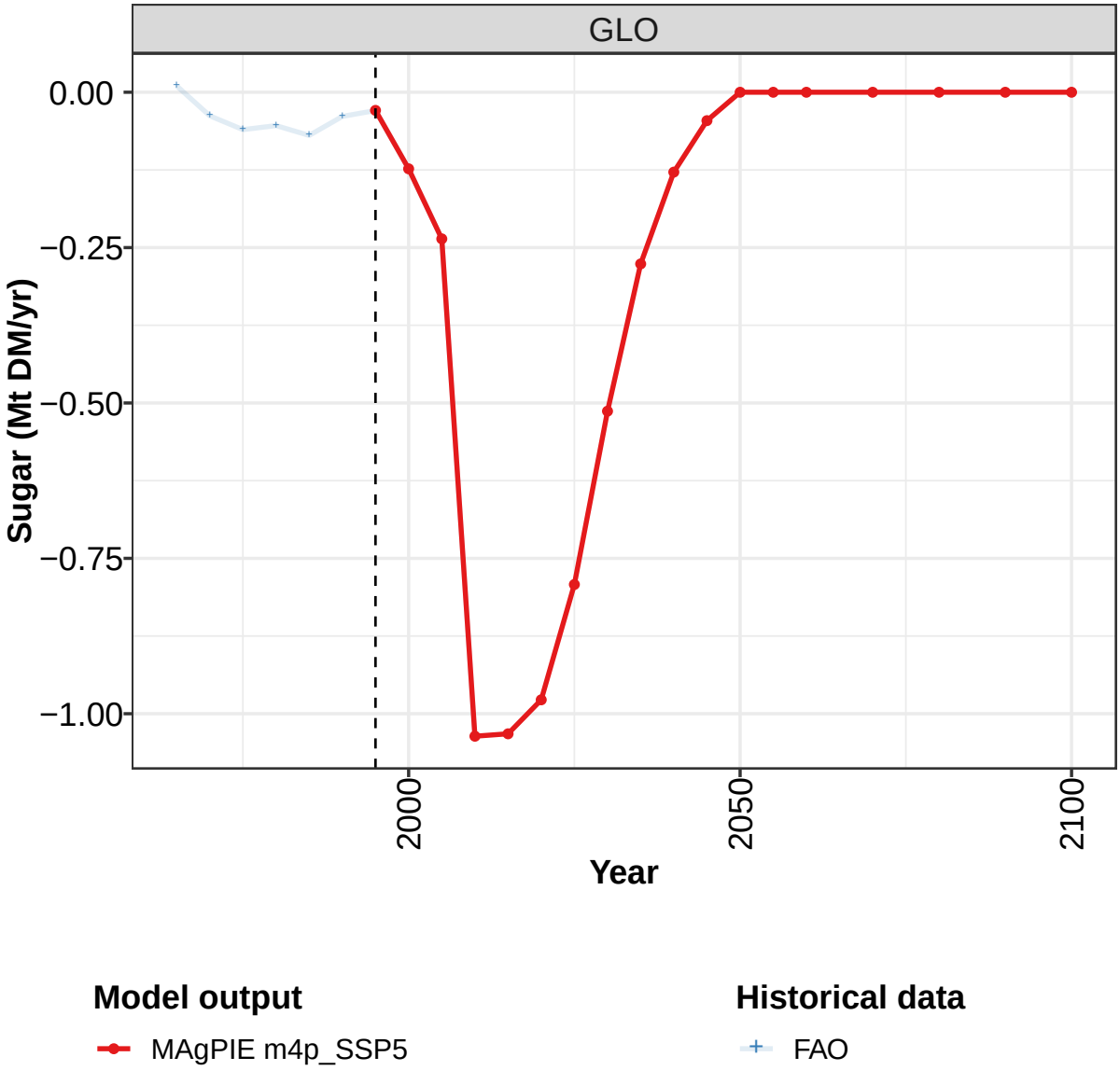
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

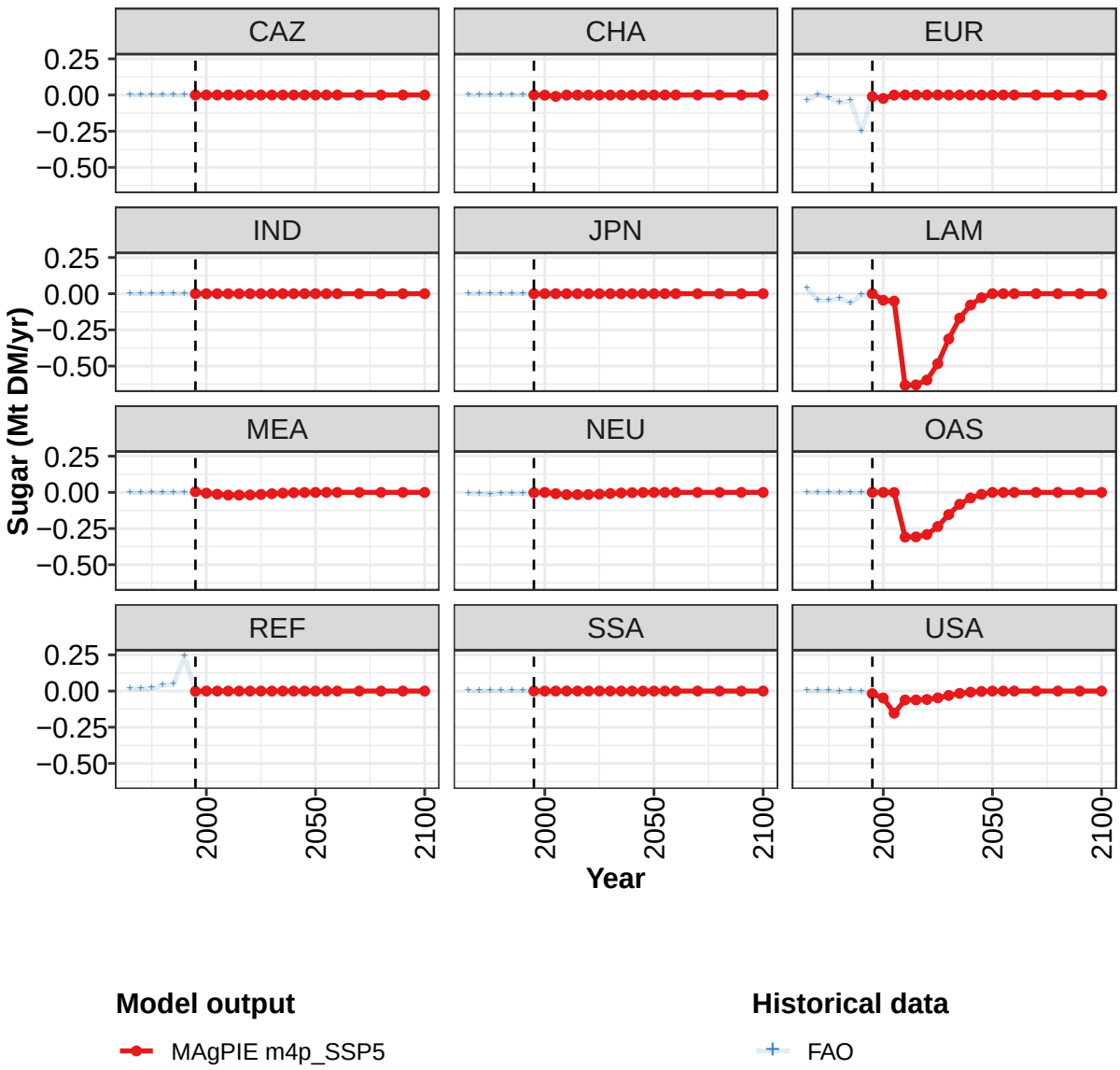
Table 228: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Oils (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0284	-0.0421	-0.0023	-0.0553	-0.0894	-0.0944	-0.1906	-0.3589	-0.4814	-0.6111
CAZ	-0.0023	-0.0076	-0.0009	-0.0028	-0.0020	-0.0074	-0.0058	-0.0245	-0.0582	-0.0585
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0001	0.0044	-0.0047	-0.0005	-0.0005
EUR	0.0296	0.0307	0.0340	-0.0043	-0.0156	0.0163	-0.0351	-0.0814	-0.1029	-0.0751
IND	0.0000	0.0000	-0.0002	-0.0015	0.0000	0.0000	0.0000	0.0000	-0.0001	0.0000
JPN	0.0000	0.0000	-0.0013	-0.0012	0.0000	0.0000	0.0000	0.0000	-0.0001	0.0000
LAM	0.0245	0.0095	0.0012	-0.0055	0.0163	-0.0459	-0.0436	-0.0188	-0.0263	-0.0607
MEA	0.0001	-0.0010	0.0000	-0.0021	0.0003	0.0004	-0.0037	-0.0035	-0.0109	0.0150
NEU	-0.0067	-0.0316	0.0241	-0.0081	-0.0336	-0.0039	-0.0124	-0.0063	0.0121	0.0018
OAS	-0.0006	0.0018	-0.0014	-0.0063	-0.0330	-0.0253	-0.0240	-0.0150	-0.0877	-0.0258
REF	-0.0018	-0.0016	-0.0006	0.0002	-0.0001	-0.0014	0.0000	0.0000	-0.0129	-0.0362
SSA	0.0000	0.0000	-0.0013	-0.0001	-0.0017	-0.0049	-0.0001	0.0000	-0.0001	-0.0087
USA	-0.0143	-0.0423	-0.0559	-0.0236	-0.0199	-0.0223	-0.0705	-0.2045	-0.1937	-0.3625

Table 229: FAO — Demand—Domestic Balanceflow—Secondary products—Oils (Mt DM/yr)

5.4.6 Sugar


GLO
0.00
−0.25
−0.50
−0.75
−1.00
Sugar (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



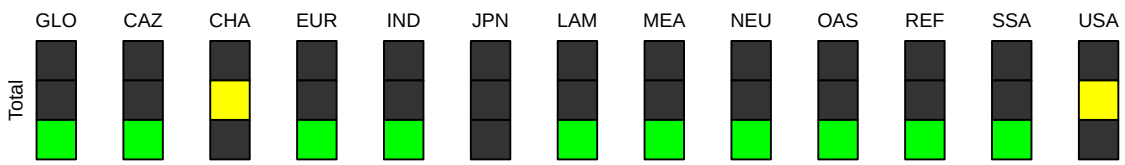


Figure 77: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2
GLO	-0.02920	-0.12320	-0.23590	-1.03620	-1.03230	-0.97760	-0.79200	-0.51320	-0.27620	-0.12850	-0.04
CAZ	-0.00010	0.00000	0.00000	0.00030	0.00030	0.00030	0.00020	0.00010	0.00010	0.00000	0.00
CHA	-0.00020	-0.00080	-0.00910	-0.00040	-0.00040	-0.00040	-0.00030	-0.00020	-0.00010	-0.00010	0.00
EUR	-0.01100	-0.02380	-0.00040	0.00040	0.00040	0.00040	0.00030	0.00020	0.00010	0.00000	0.00
IND	0.00000	-0.00030	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
LAM	-0.00020	-0.04490	-0.05130	-0.63220	-0.62990	-0.59650	-0.48320	-0.31310	-0.16850	-0.07830	-0.02
MEA	0.00430	-0.00550	-0.01270	-0.01860	-0.01850	-0.01760	-0.01420	-0.00920	-0.00500	-0.00230	-0.00
NEU	-0.00240	0.00000	-0.00880	-0.01580	-0.01570	-0.01490	-0.01210	-0.00780	-0.00420	-0.00200	-0.00
OAS	0.00000	0.00000	-0.00050	-0.30870	-0.30750	-0.29120	-0.23590	-0.15290	-0.08230	-0.03820	-0.01
REF	-0.00200	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
SSA	0.00000	-0.00010	0.00000	0.00030	0.00030	0.00030	0.00020	0.00020	0.00010	0.00000	0.00
USA	-0.01760	-0.04780	-0.15310	-0.06140	-0.06120	-0.05790	-0.04690	-0.03040	-0.01640	-0.00760	-0.00

Table 230: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

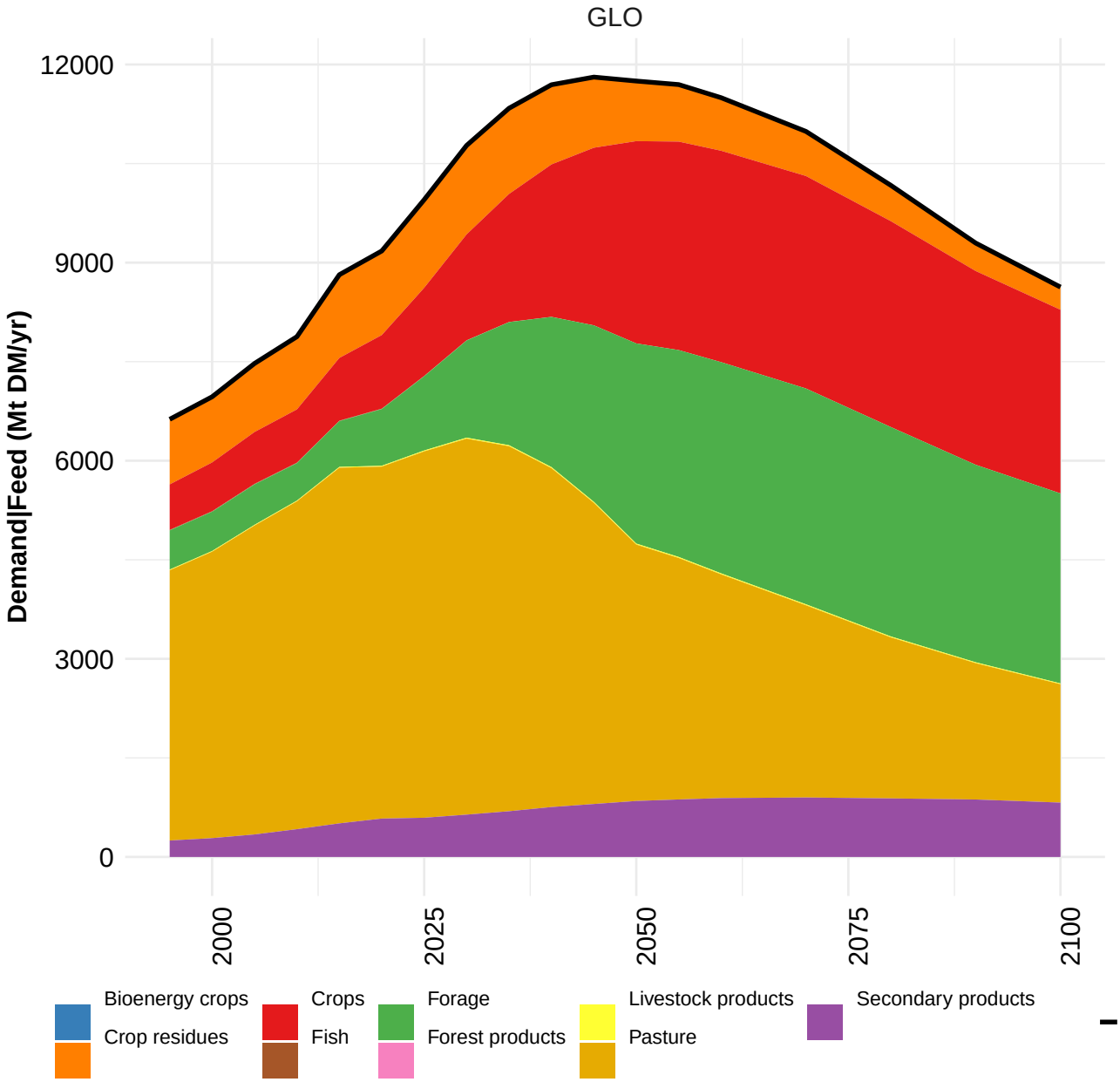
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

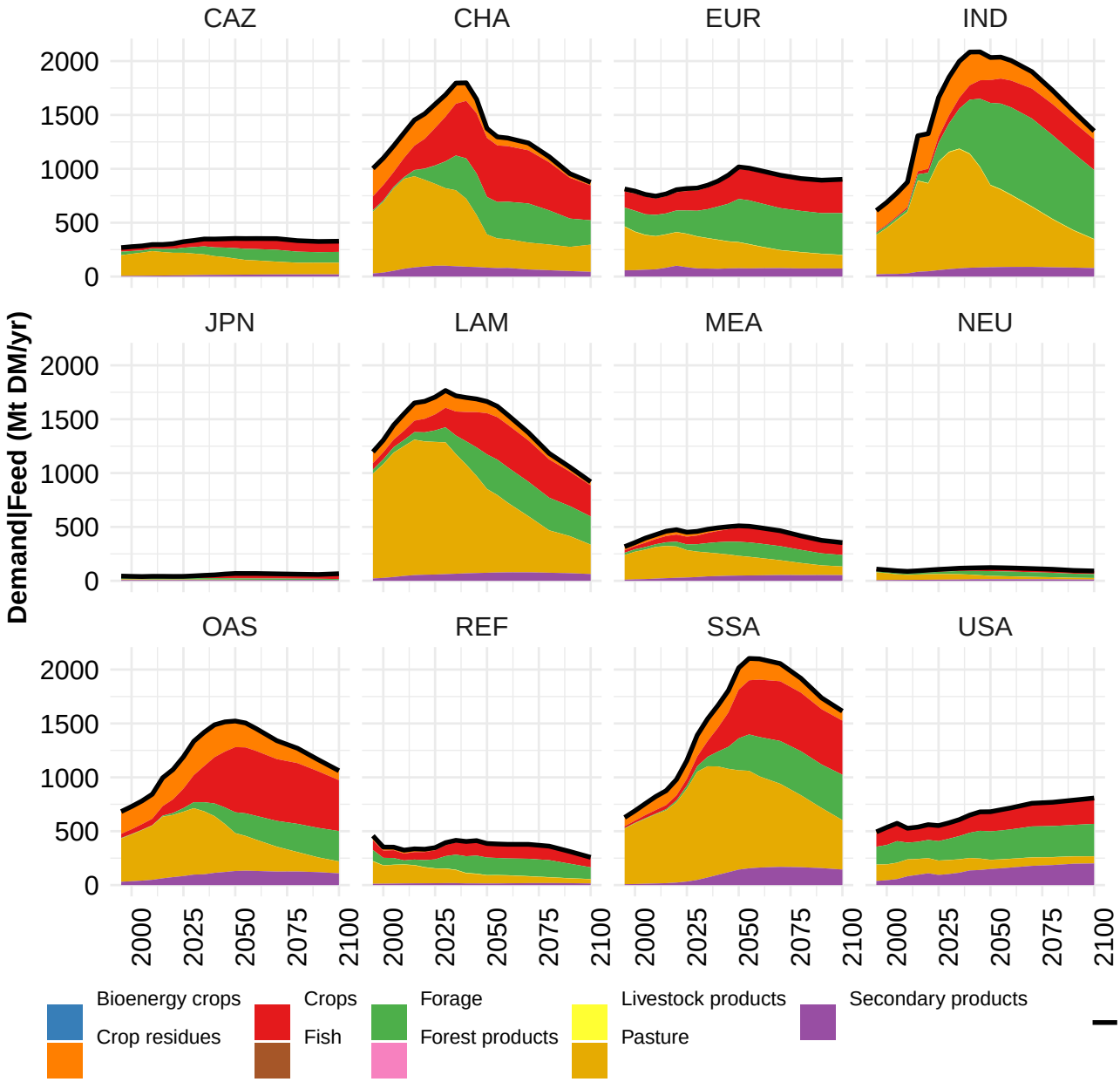
Table 231: MAgPIE m4p_SSP5 — Demand—Domestic Balanceflow—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

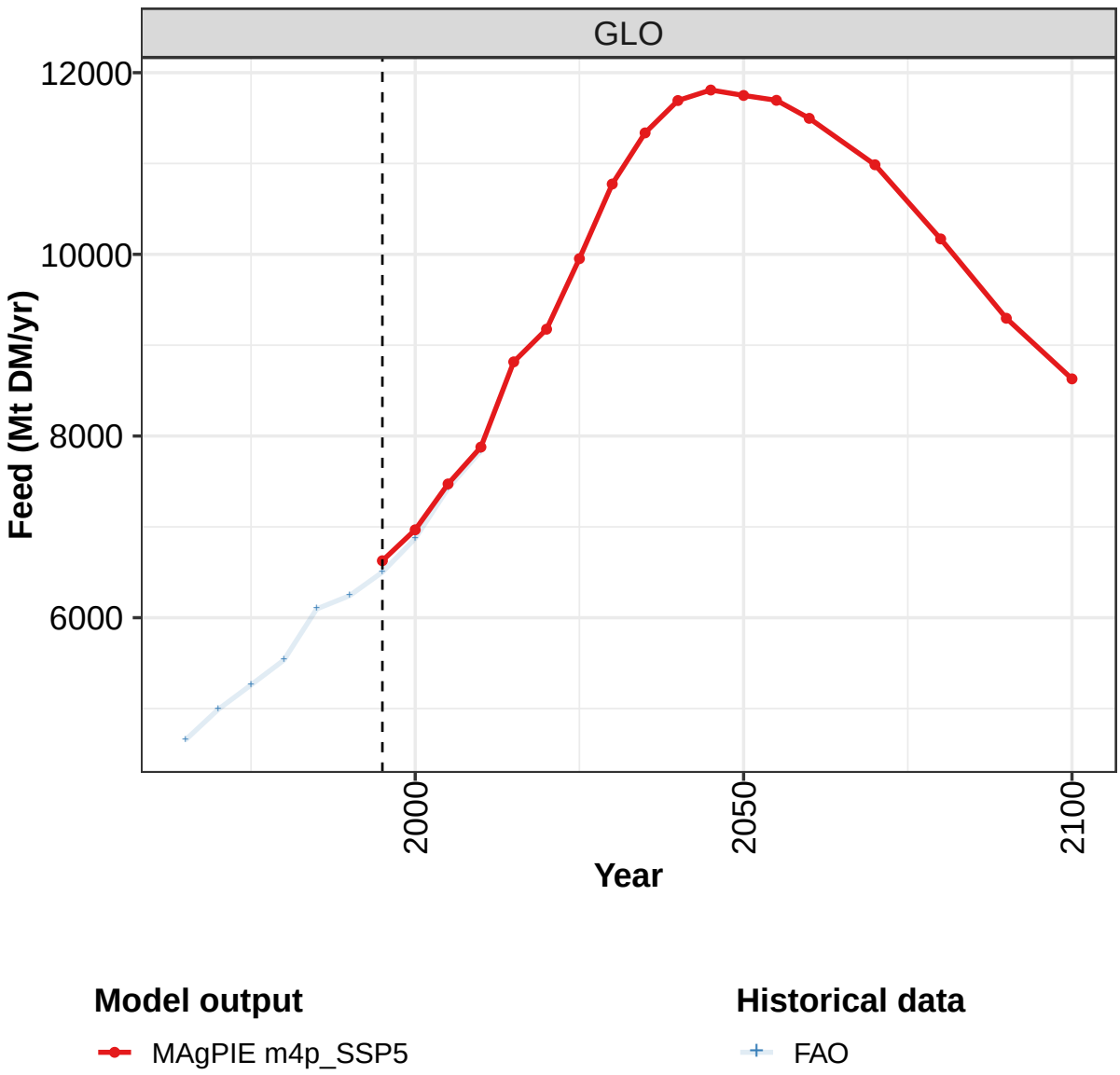
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.010	-0.038	-0.060	-0.054	-0.070	-0.039	-0.029	-0.123	-0.236	-1.036
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.001	-0.009	-0.000
EUR	-0.038	0.003	-0.018	-0.051	-0.042	-0.249	-0.011	-0.024	-0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	0.000	-0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.038	-0.045	-0.047	-0.032	-0.067	-0.010	-0.000	-0.045	-0.051	-0.632
MEA	0.000	-0.000	-0.001	-0.001	0.000	-0.002	0.004	-0.005	-0.013	-0.019
NEU	-0.006	-0.011	-0.013	-0.007	-0.007	-0.010	-0.002	0.000	-0.009	-0.016
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.001	-0.309
REF	0.017	0.016	0.018	0.038	0.046	0.239	-0.002	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	0.000	0.000
USA	0.000	0.000	0.000	-0.001	0.000	-0.007	-0.018	-0.048	-0.153	-0.061

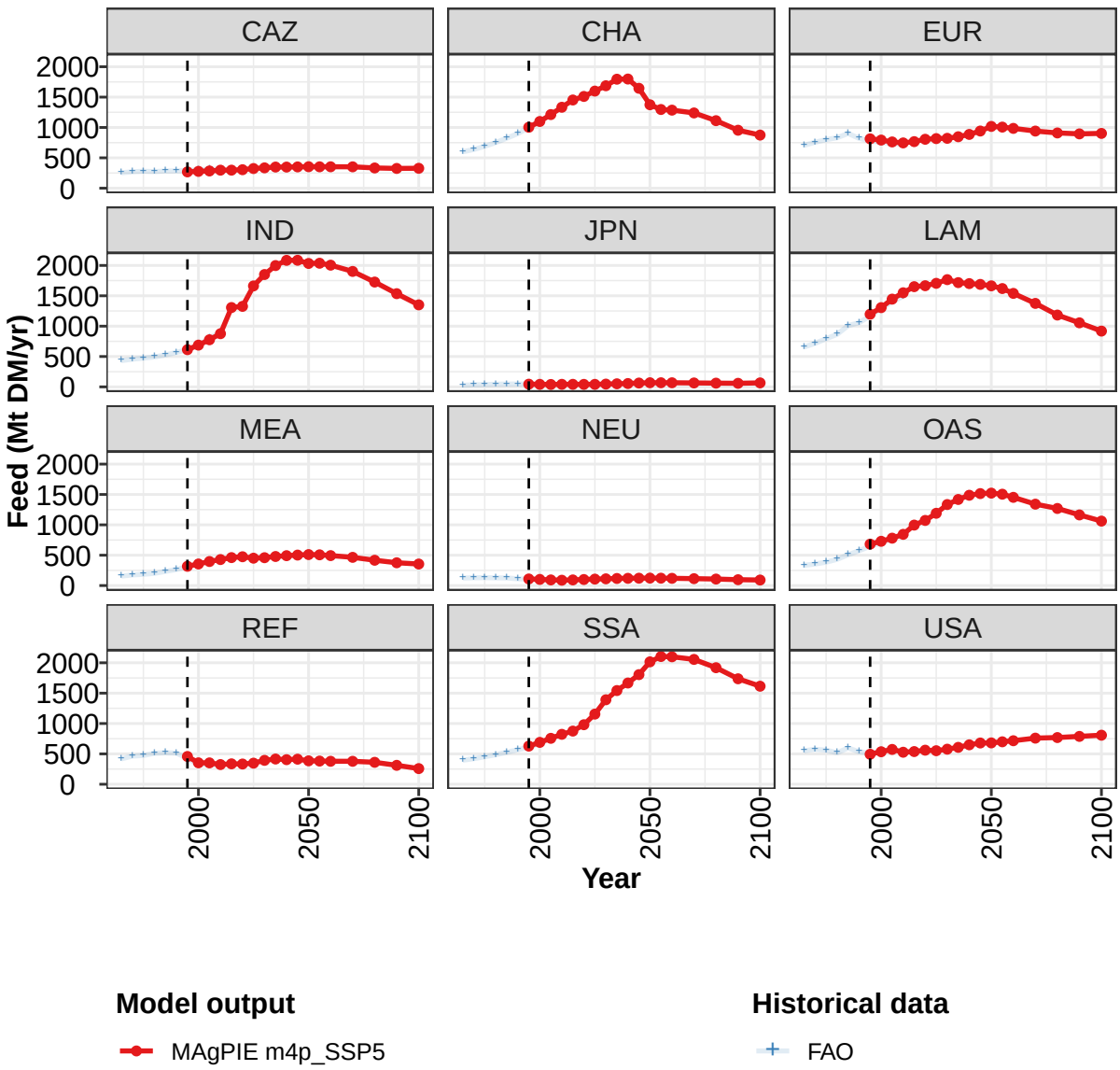
Table 232: FAO — Demand—Domestic Balanceflow—Secondary products—Sugar (Mt DM/yr)

6 Feed


GLO
Demand|Feed (Mt DM/yr)
12000
9000
6000
3000
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Feed (Mt DM/yr)
0
500
1000
1500
2000
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
12000
10000
8000
6000
Feed (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



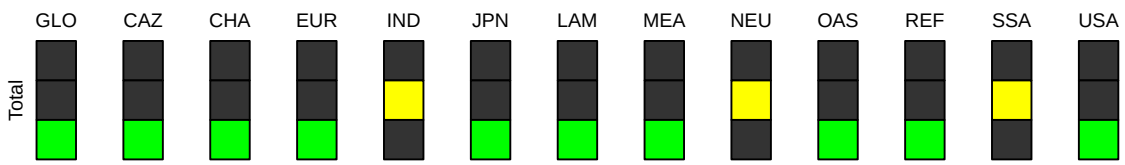


Figure 78: MAgPIE m4p_SSP5 — Demand—Feed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6627	6968	7473	7879	8816	9176	9953	10774	11337	11693	11809
CAZ	269	277	284	297	297	305	324	335	349	348	351
CHA	1004	1099	1213	1333	1453	1511	1599	1687	1795	1798	1645
EUR	813	793	762	746	767	806	817	822	848	886	942
IND	613	688	776	876	1307	1326	1662	1851	1998	2084	2085
JPN	44	42	40	42	42	41	42	46	51	55	63
LAM	1197	1305	1445	1550	1651	1666	1705	1766	1717	1701	1688
MEA	317	355	396	428	461	475	451	459	479	492	502
NEU	109	101	93	88	93	100	106	111	117	119	121
OAS	682	729	781	844	996	1073	1190	1335	1418	1487	1515
REF	457	353	352	324	336	333	347	393	415	405	413
SSA	628	690	756	822	876	980	1156	1391	1543	1667	1805
USA	494	535	573	527	538	561	552	578	608	649	680

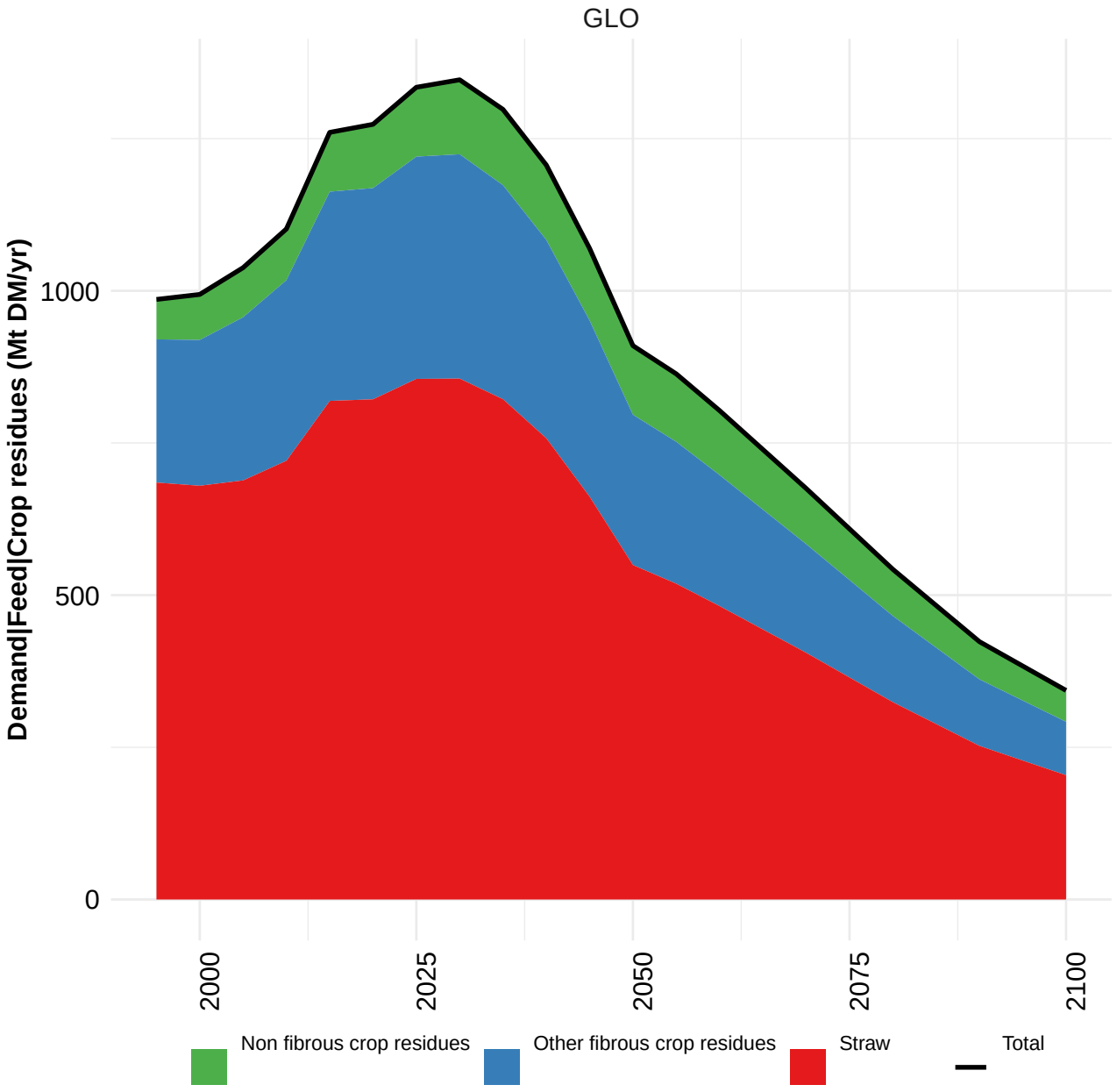
Table 233: MAgPIE m4p_SSP5 — Demand—Feed (Mt DM/yr) [PART 1/2]

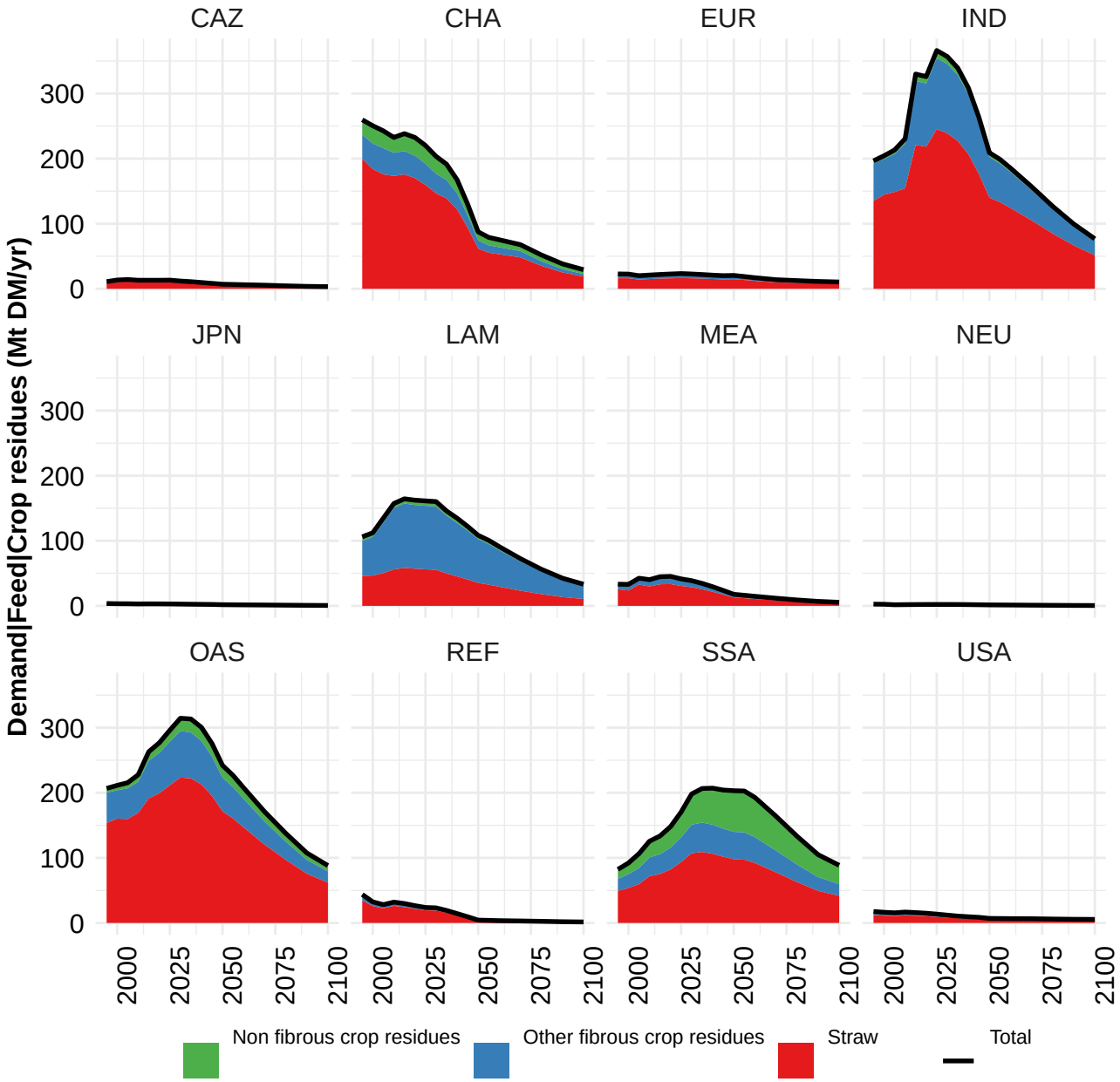
	2050	2055	2060	2070	2080	2090	2100
GLO	11750	11696	11497	10987	10170	9297	8629
CAZ	354	353	353	352	334	326	328
CHA	1374	1296	1286	1239	1112	955	875
EUR	1018	1006	985	941	910	895	903
IND	2033	2036	2005	1902	1727	1535	1351
JPN	68	68	68	65	62	59	66
LAM	1664	1620	1540	1375	1183	1055	919
MEA	510	506	494	465	417	376	355
NEU	123	122	120	114	107	97	91
OAS	1522	1504	1453	1341	1270	1164	1062
REF	386	382	378	378	361	312	258
SSA	2016	2103	2099	2056	1919	1737	1614
USA	681	699	717	759	769	788	808

Table 234: MAgPIE m4p_SSP5 — Demand—Feed (Mt DM/yr) [PART 2/2]

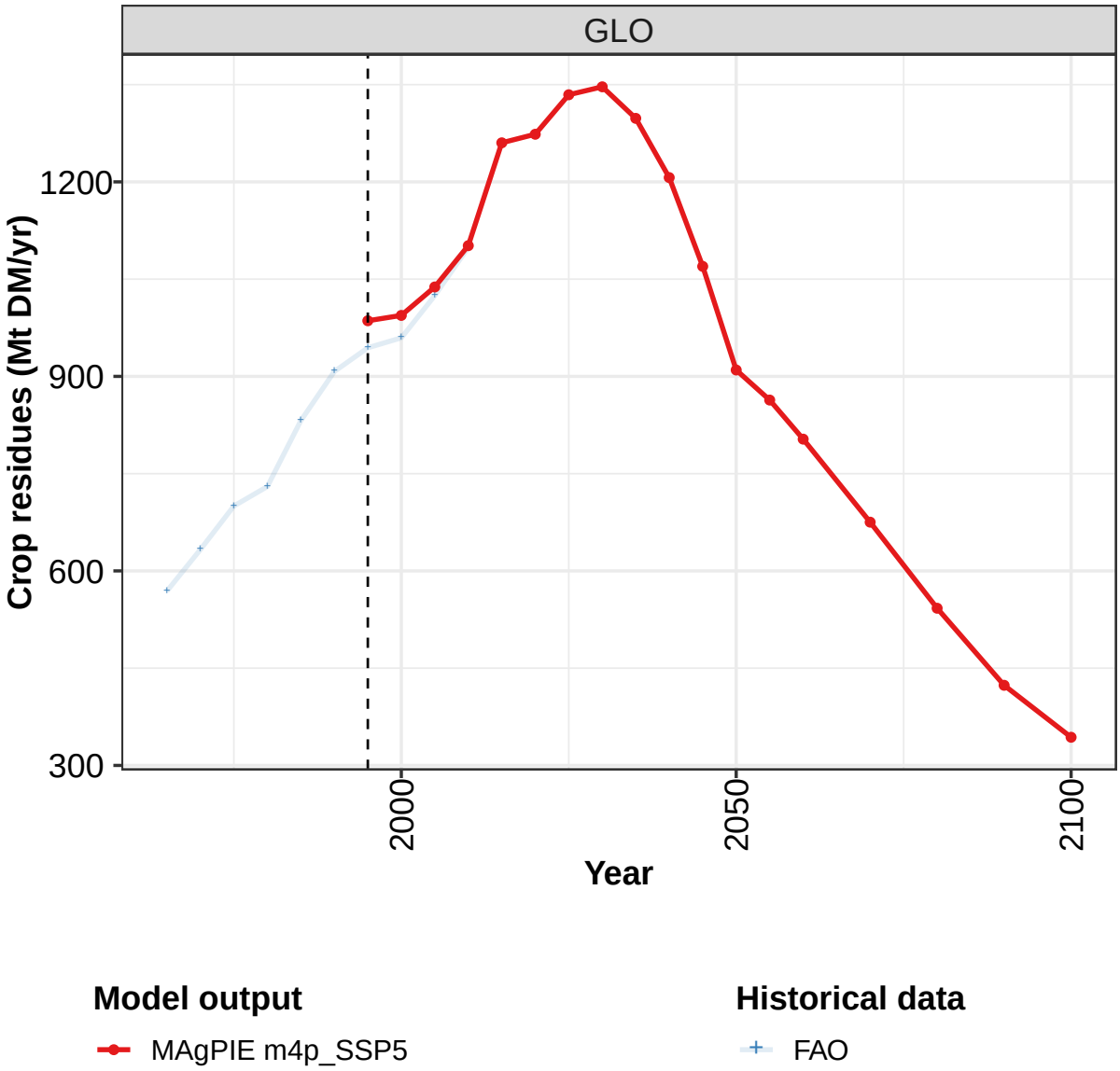
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4653	4990	5260	5533	6096	6242	6502	6872	7424	7836
CAZ	254	270	279	273	283	285	292	304	313	312
CHA	600	638	690	751	824	899	997	1101	1210	1332
EUR	706	757	800	831	902	821	779	756	733	723
IND	432	457	473	493	526	567	615	691	802	903
JPN	28	34	37	44	47	47	45	42	40	42
LAM	657	717	793	865	1008	1057	1168	1288	1402	1490
MEA	156	175	185	201	233	265	312	357	404	428
NEU	124	128	131	126	125	112	103	94	92	87
OAS	333	355	385	432	508	574	648	698	773	845
REF	417	464	473	510	518	513	425	321	322	311
SSA	396	421	453	487	527	568	610	669	753	820
USA	550	576	561	519	597	535	509	549	579	544

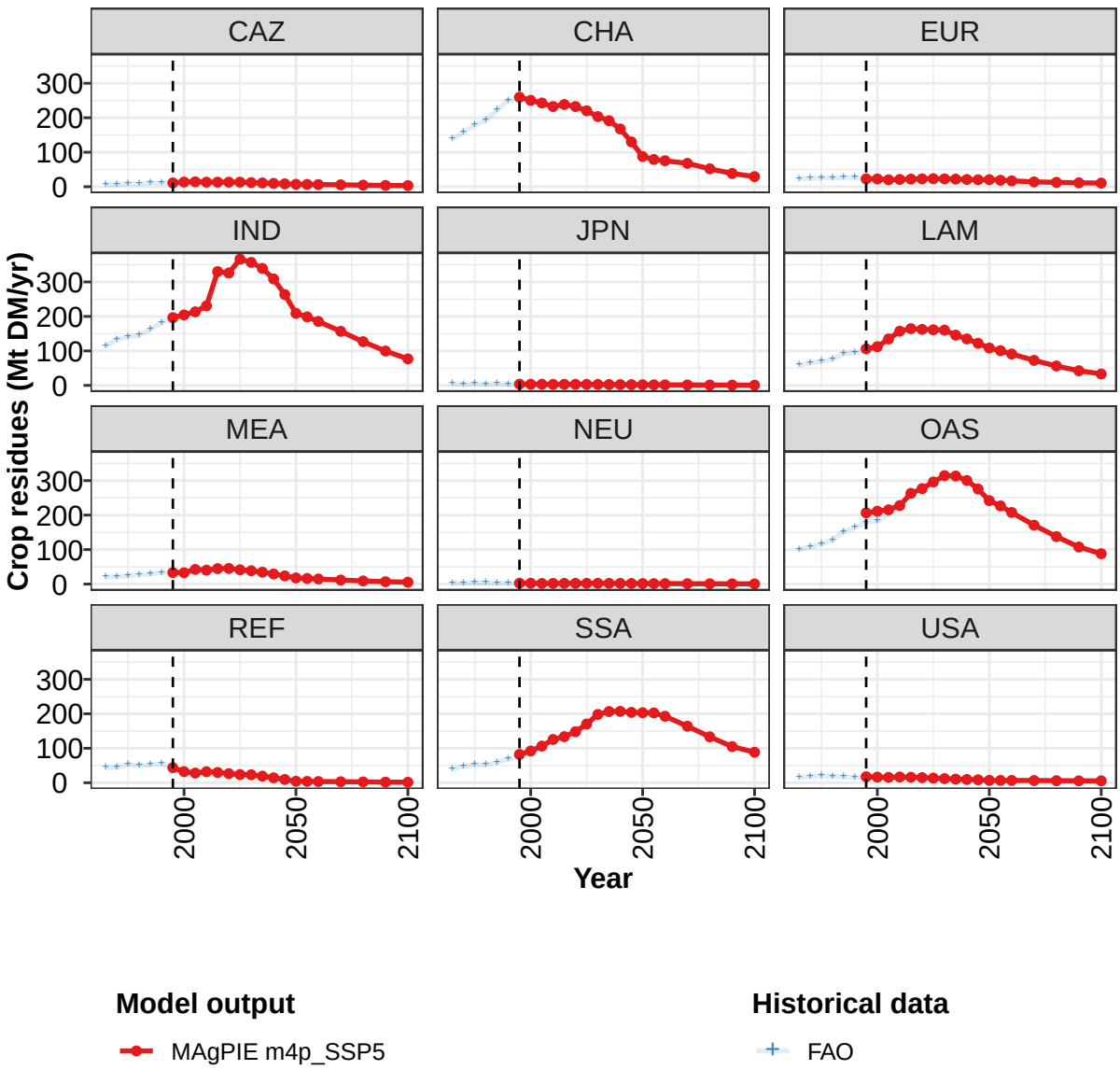
Table 235: FAO — Demand—Feed (Mt DM/yr)


GLO
Demand|Feed|Crop residues (Mt DM/yr)
1000
500
0
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Feed|Crop residues (Mt DM/yr)
0
100
200
300
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

6.1 Crop residues





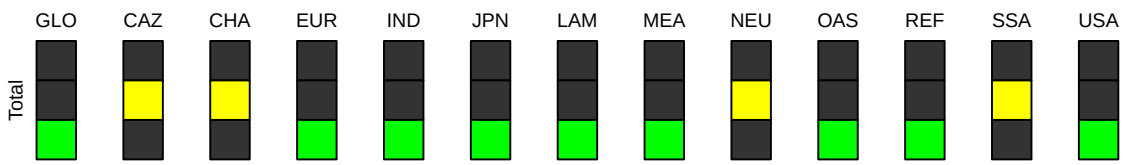


Figure 79: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	986	994	1038	1102	1260	1274	1334	1347	1298	1207	1070
CAZ	11	13	14	13	13	13	13	12	11	10	8
CHA	260	251	243	233	238	233	220	204	191	168	130
EUR	23	23	20	21	22	23	23	23	22	21	20
IND	197	204	213	231	330	326	366	357	339	309	264
JPN	4	3	3	3	3	3	3	3	3	2	2
LAM	106	112	135	157	164	162	161	160	146	135	122
MEA	33	33	42	40	45	45	41	39	35	29	24
NEU	3	2	2	2	2	2	2	2	2	2	2
OAS	207	211	215	228	263	277	296	314	313	300	276
REF	44	32	28	32	30	27	24	23	19	14	9
SSA	82	92	106	126	134	148	170	198	207	207	204
USA	18	16	16	17	16	15	14	12	11	10	9

Table 236: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues (Mt DM/yr) [PART 1/2]

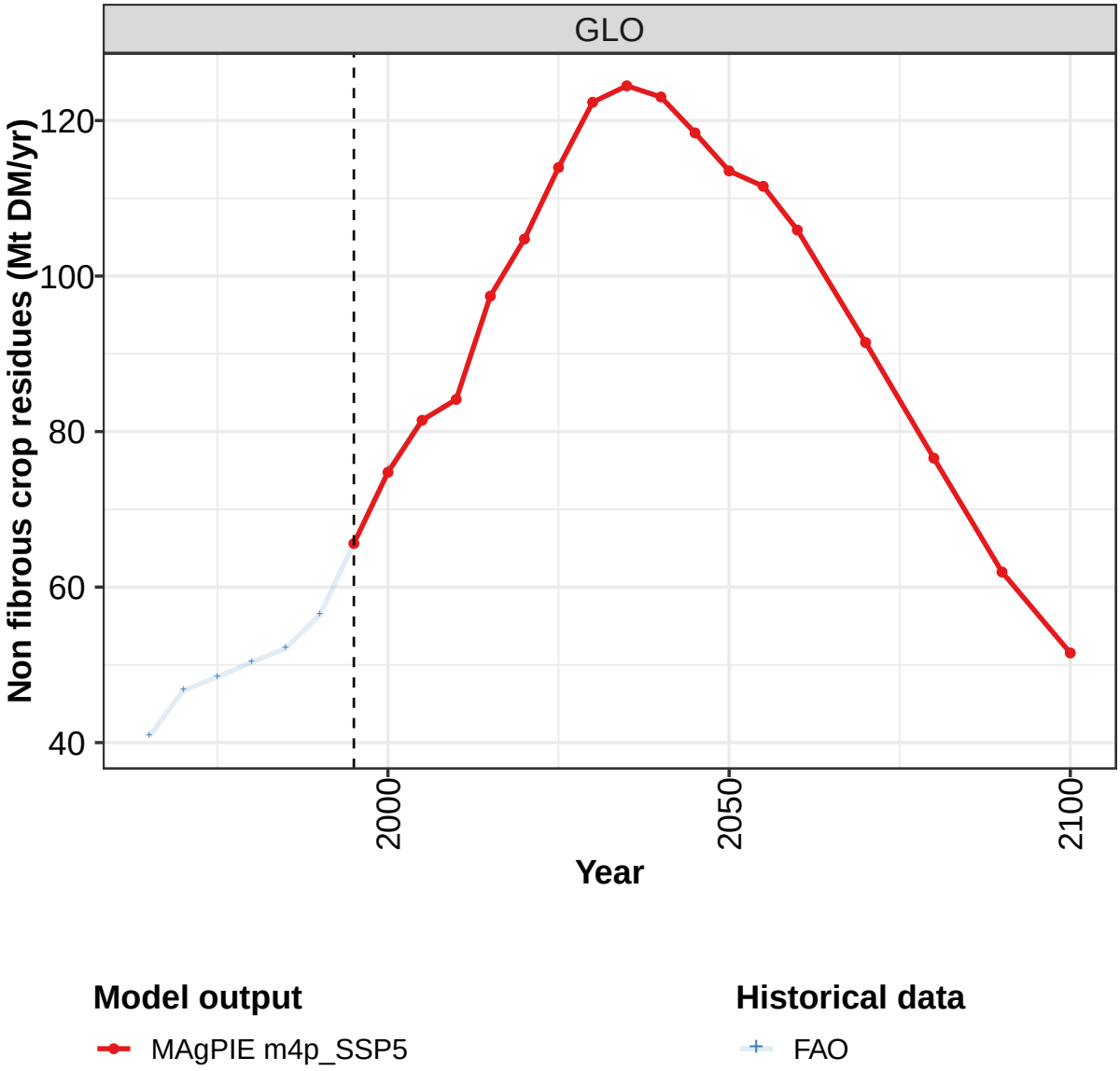
	2050	2055	2060	2070	2080	2090	2100
GLO	910	864	803	675	542	424	343
CAZ	7	7	6	6	5	4	3
CHA	87	79	75	68	52	38	29
EUR	20	19	17	14	13	11	10
IND	209	199	185	157	127	100	77
JPN	2	2	2	1	1	1	1
LAM	108	101	91	73	56	42	33
MEA	18	16	15	12	9	7	6
NEU	2	1	1	1	1	1	1
OAS	242	227	208	171	138	107	88
REF	4	4	4	3	2	2	1
SSA	203	203	193	164	133	105	89
USA	7	7	7	6	6	6	5

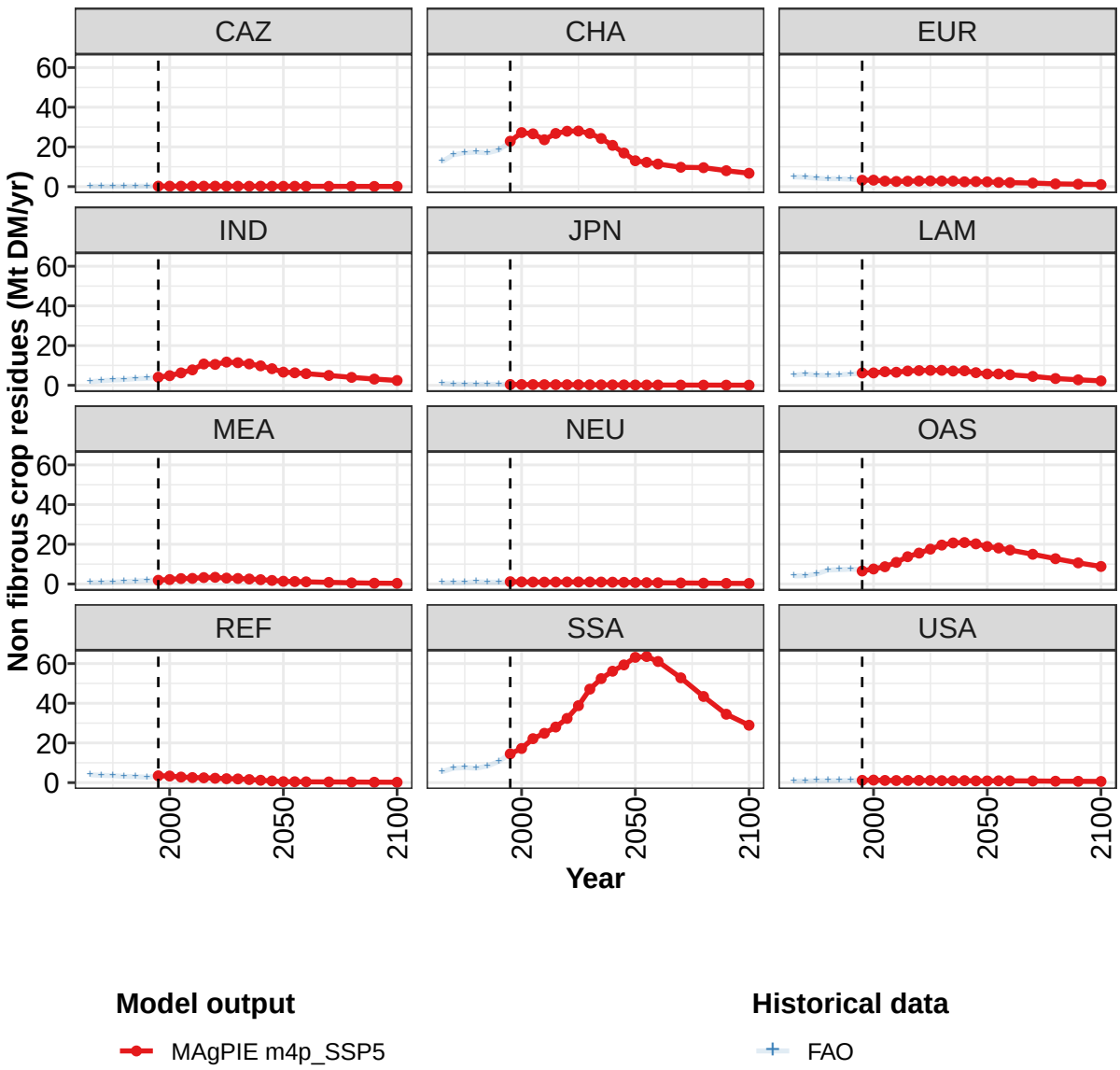
Table 237: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	569	633	700	730	832	907	944	959	1025	1099
CAZ	6	7	9	9	11	10	12	16	17	15
CHA	139	157	178	193	222	250	255	249	241	232
EUR	23	24	26	26	26	26	22	21	19	20
IND	115	133	141	145	163	183	197	205	216	233
JPN	4	4	4	4	4	4	4	3	3	3
LAM	58	66	70	76	93	95	102	110	131	152
MEA	21	21	25	26	30	33	35	33	43	40
NEU	3	3	4	3	3	3	3	2	2	2
OAS	100	108	117	128	152	164	179	182	203	227
REF	44	44	53	50	52	55	42	31	27	32
SSA	40	47	52	52	58	69	77	89	106	125
USA	16	18	20	19	17	15	18	17	16	17

Table 238: FAO — Demand—Feed—Crop residues (Mt DM/yr)

6.1.1 Non fibrous crop residues





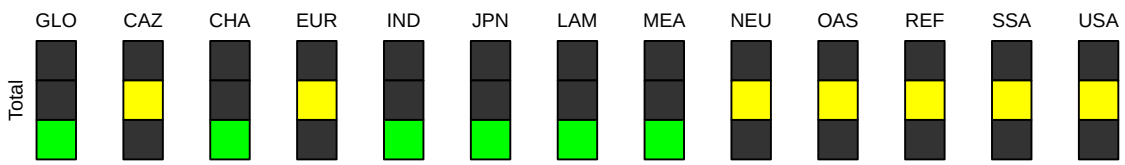


Figure 80: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Non fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	66	75	81	84	97	105	114	122	124	123	118
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	23	27	27	24	27	28	28	27	24	21	17
EUR	3	3	3	3	3	3	3	3	3	2	3
IND	4	5	6	8	11	11	12	11	11	10	8
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	6	7	7	7	7	8	8	7	7	6
MEA	2	2	3	3	3	3	3	3	3	2	2
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	7	8	9	11	14	16	18	20	21	21	20
REF	3	3	3	3	2	2	2	2	2	1	1
SSA	15	17	22	25	28	32	39	47	52	56	59
USA	1	1	1	1	1	1	1	1	1	1	1

Table 239: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Non fibrous crop residues (Mt DM/yr) [PART 1/2]

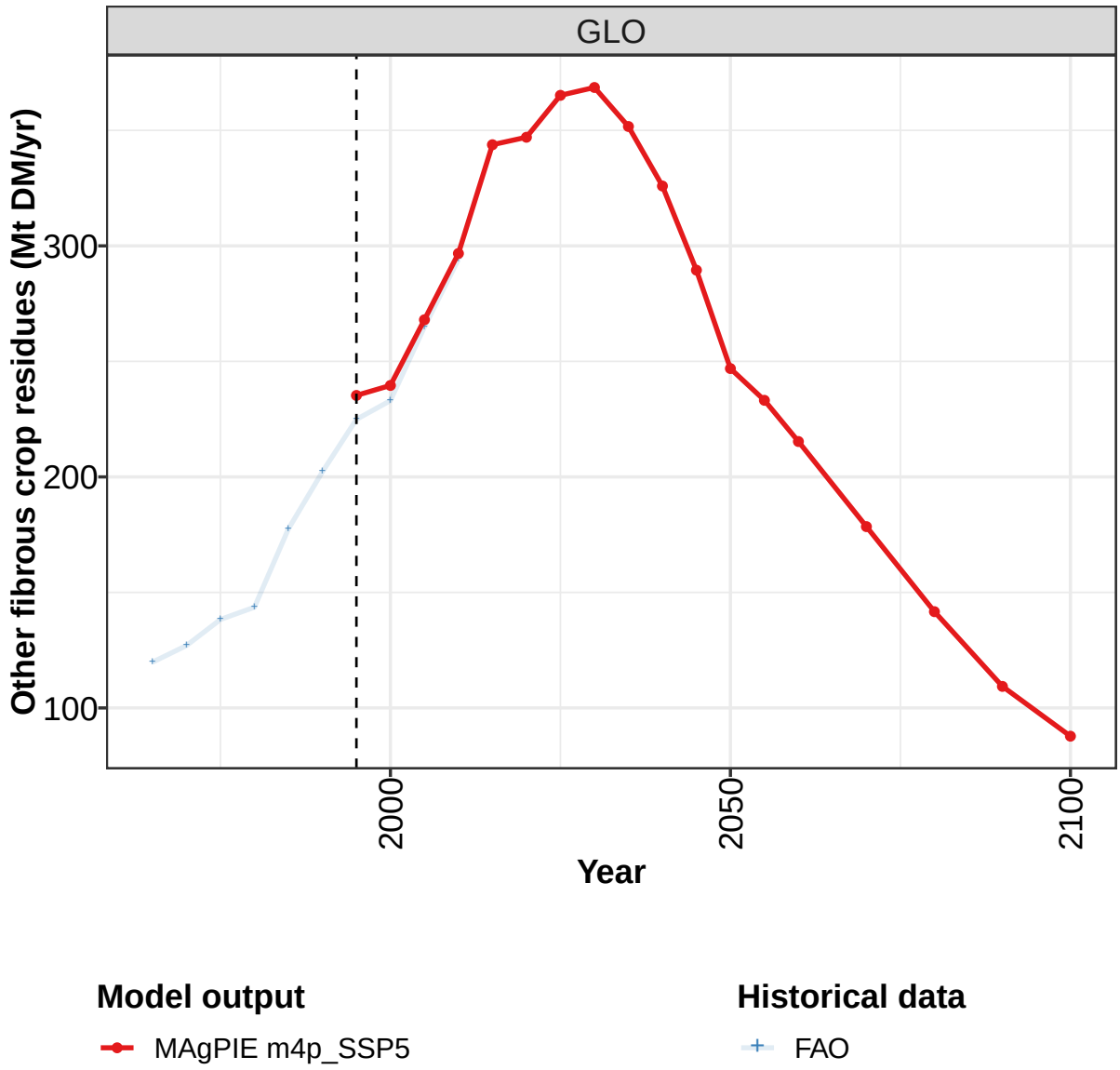
	2050	2055	2060	2070	2080	2090	2100
GLO	114	112	106	91	77	62	52
CAZ	0	0	0	0	0	0	0
CHA	13	12	11	10	10	8	7
EUR	2	2	2	2	1	1	1
IND	7	6	6	5	4	3	2
JPN	0	0	0	0	0	0	0
LAM	6	6	5	4	3	3	2
MEA	1	1	1	1	1	0	0
NEU	1	1	1	0	0	0	0
OAS	19	18	17	15	13	11	9
REF	0	0	0	0	0	0	0
SSA	63	64	61	53	43	34	29
USA	1	1	1	1	1	1	1

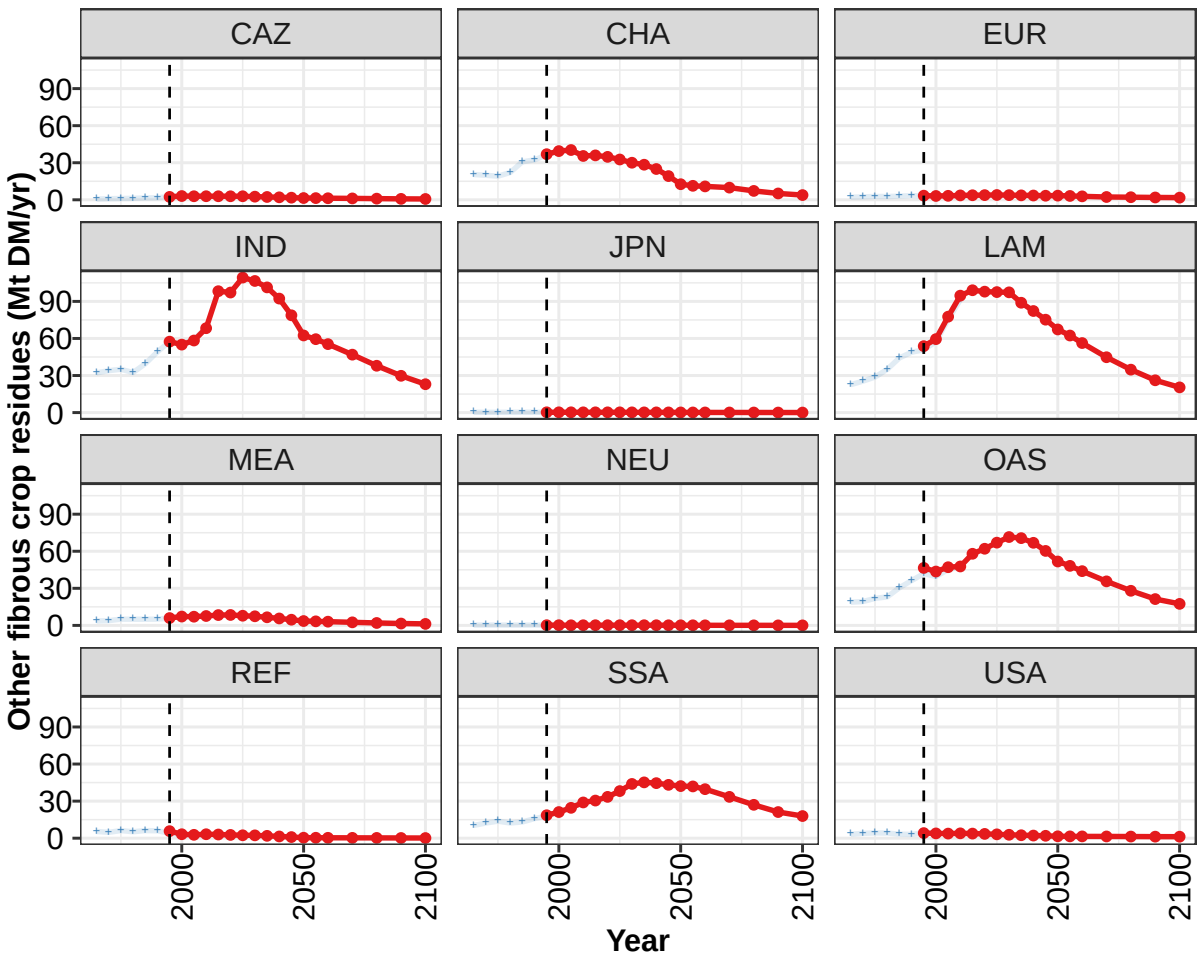
Table 240: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Non fibrous crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	40.8	46.7	48.5	50.3	52.1	56.4	65.6	75.2	81.6	83.9
CAZ	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
CHA	12.5	16.0	17.1	17.4	17.0	18.4	22.5	27.1	26.5	23.6
EUR	4.9	4.7	4.2	3.9	4.0	3.7	3.3	3.3	2.7	2.5
IND	1.8	2.3	2.6	2.9	3.3	3.5	4.1	4.9	6.3	7.9
JPN	0.8	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3
LAM	5.1	5.7	5.2	4.9	5.3	5.7	6.0	6.1	6.6	6.2
MEA	0.7	0.7	0.9	1.2	1.5	1.7	1.9	2.3	2.7	2.8
NEU	0.6	0.7	0.7	1.0	0.9	0.9	0.9	0.9	0.9	0.9
OAS	4.1	4.1	5.1	7.0	7.2	7.5	7.2	7.9	9.0	10.9
REF	3.9	3.7	3.5	3.2	3.0	2.7	3.3	3.3	3.0	2.6
SSA	5.5	7.3	7.6	7.3	8.4	10.7	14.6	17.7	22.2	24.8
USA	0.8	0.8	0.9	1.0	1.0	1.0	1.2	1.3	1.1	1.1

Table 241: FAO — Demand—Feed—Crop residues—Non fibrous crop residues (Mt DM/yr)

6.1.2 Other fibrous crop residues





Model output

MAgPIE m4p_SSP5

Historical data

FAO

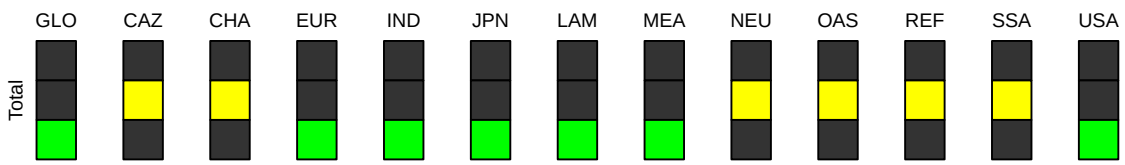


Figure 81: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Other fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	235	240	268	297	344	347	365	369	352	326	289
CAZ	2	3	3	3	3	3	3	3	2	2	2
CHA	37	39	40	35	36	35	33	30	28	25	19
EUR	3	3	3	4	4	4	4	4	4	3	3
IND	57	55	58	68	98	97	109	107	101	92	79
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	54	59	78	95	99	98	98	97	89	82	75
MEA	6	7	7	8	8	8	8	7	7	6	5
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	47	44	47	48	58	62	67	72	71	67	60
REF	6	3	3	3	3	3	2	2	2	1	1
SSA	19	21	25	29	30	33	38	44	45	45	43
USA	4	4	4	4	4	3	3	3	2	2	2

Table 242: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Other fibrous crop residues (Mt DM/yr) [PART 1/2]

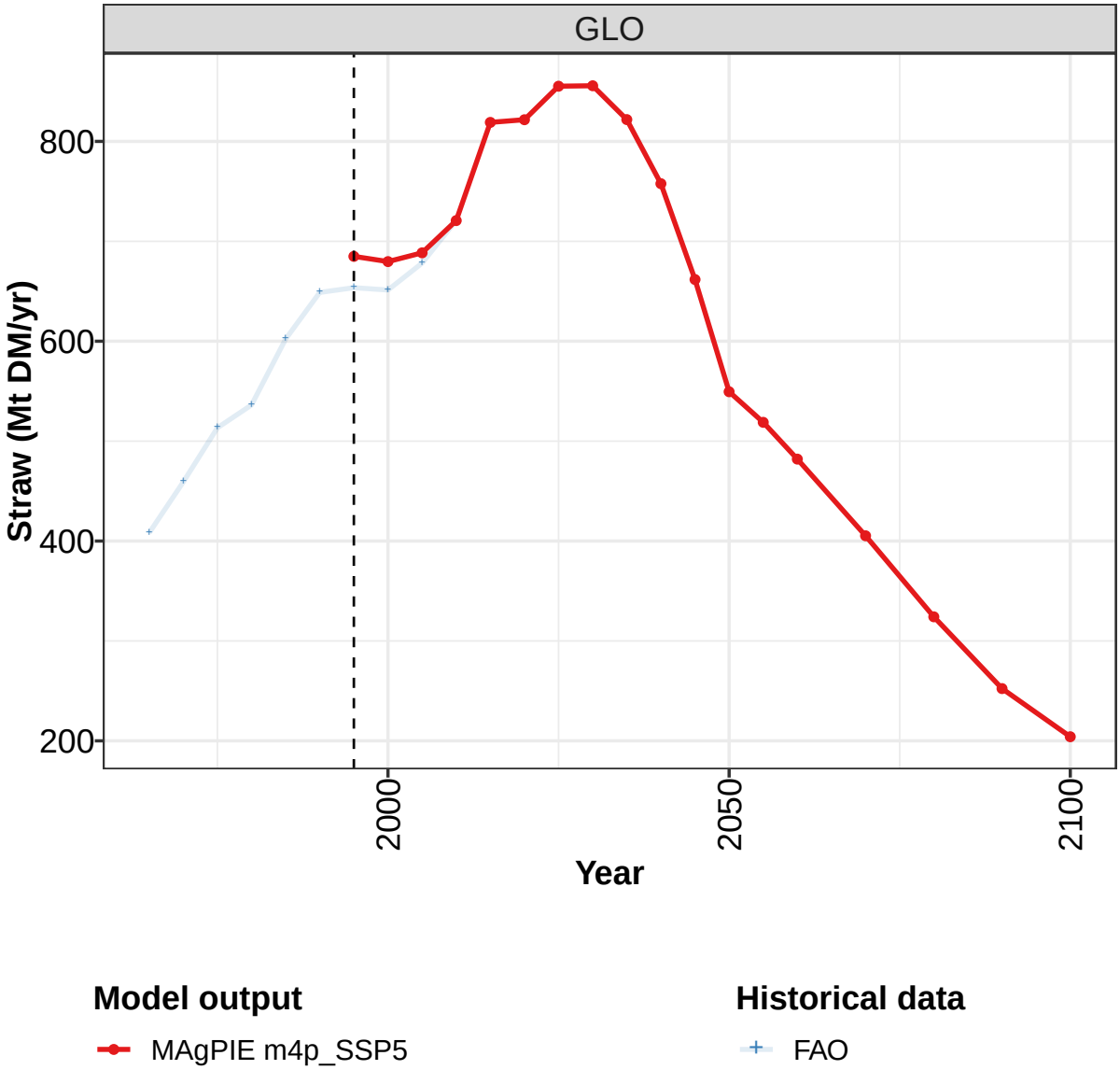
	2050	2055	2060	2070	2080	2090	2100
GLO	247	233	215	178	142	109	88
CAZ	1	1	1	1	1	1	1
CHA	13	11	11	10	7	5	4
EUR	3	3	3	2	2	2	2
IND	62	59	55	47	38	30	23
JPN	0	0	0	0	0	0	0
LAM	67	62	56	45	35	26	20
MEA	4	3	3	2	2	2	1
NEU	0	0	0	0	0	0	0
OAS	52	48	44	36	28	21	17
REF	0	0	0	0	0	0	0
SSA	42	42	40	33	27	21	18
USA	2	1	1	1	1	1	1

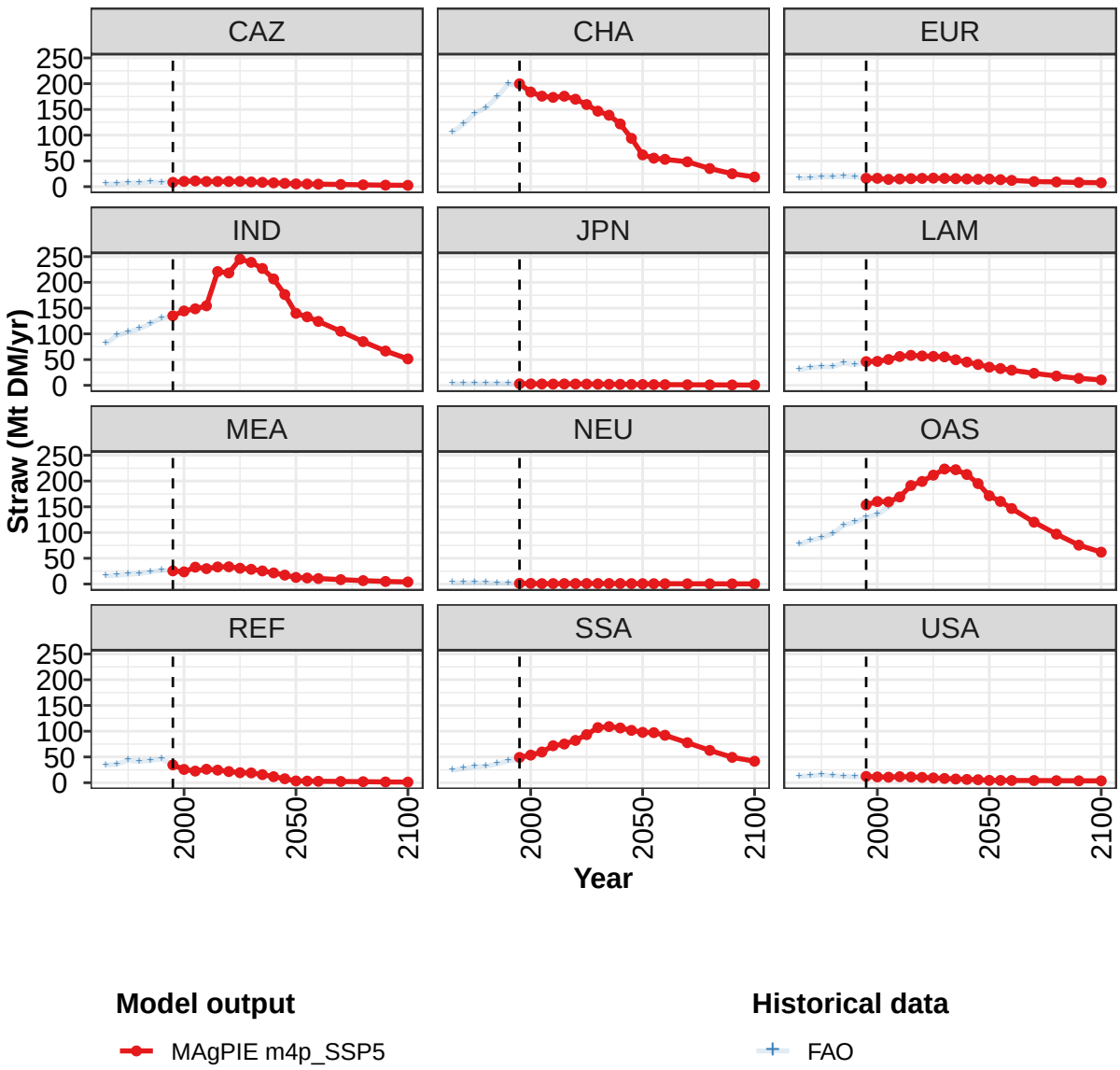
Table 243: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Other fibrous crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	120	127	138	144	177	202	225	233	265	294
CAZ	1	1	1	1	2	2	3	4	4	3
CHA	20	20	19	22	31	32	36	39	40	35
EUR	2	2	3	3	3	3	3	3	3	3
IND	32	34	35	32	39	49	57	55	59	69
JPN	0	0	0	0	0	0	0	0	0	0
LAM	23	25	29	35	44	49	51	57	75	91
MEA	4	4	5	5	5	5	6	7	7	8
NEU	0	0	0	0	0	0	0	0	0	0
OAS	19	19	22	23	30	36	42	40	45	48
REF	5	5	6	5	6	6	4	3	2	3
SSA	10	12	14	12	13	16	18	21	25	29
USA	3	4	4	4	3	3	4	4	4	4

Table 244: FAO — Demand—Feed—Crop residues—Other fibrous crop residues (Mt DM/yr)

6.1.3 Straw


GLO
Straw (Mt DM/yr)
800
600
400
200
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



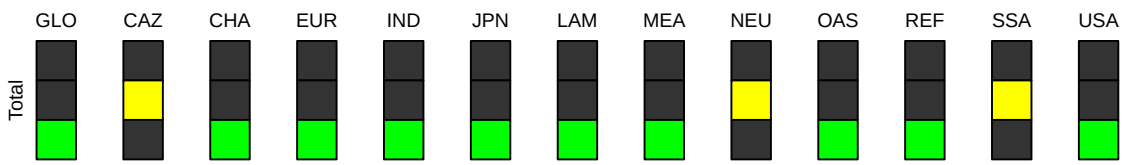


Figure 82: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	685	680	688	721	819	822	855	856	822	758	662
CAZ	8	10	11	10	10	10	10	9	8	7	6
CHA	200	184	176	173	176	170	159	147	139	122	94
EUR	16	16	14	15	16	16	17	16	15	15	14
IND	135	144	149	154	221	218	245	239	227	207	176
JPN	3	3	3	2	3	3	2	2	2	2	2
LAM	46	47	50	56	58	57	56	55	50	45	40
MEA	26	24	33	30	33	33	31	29	25	22	17
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	154	160	160	169	191	199	212	223	222	213	195
REF	35	26	23	26	24	22	19	19	16	12	8
SSA	49	54	60	72	75	82	93	107	109	106	102
USA	12	11	11	12	11	10	9	8	7	6	6

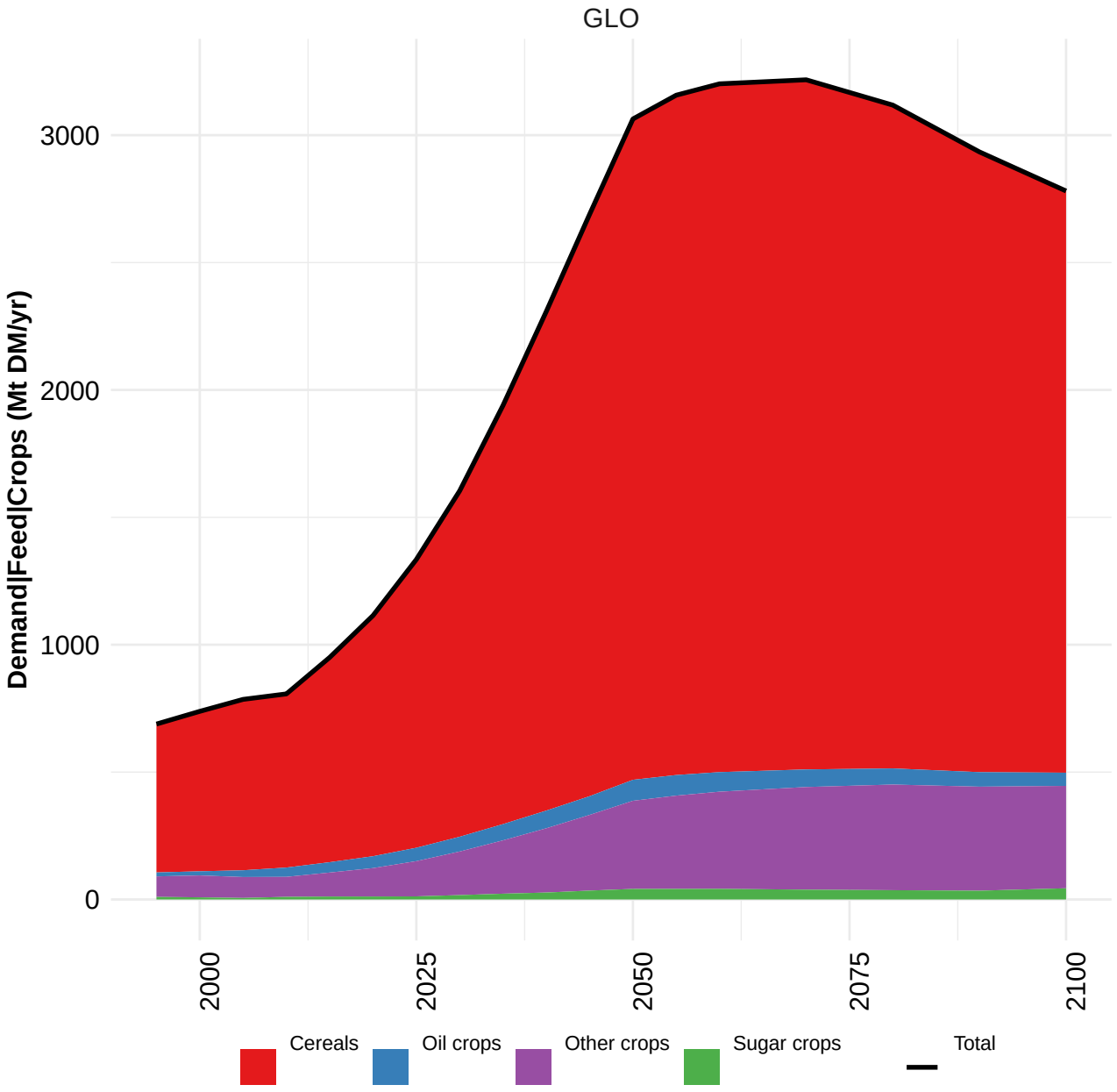
Table 245: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Straw (Mt DM/yr) [PART 1/2]

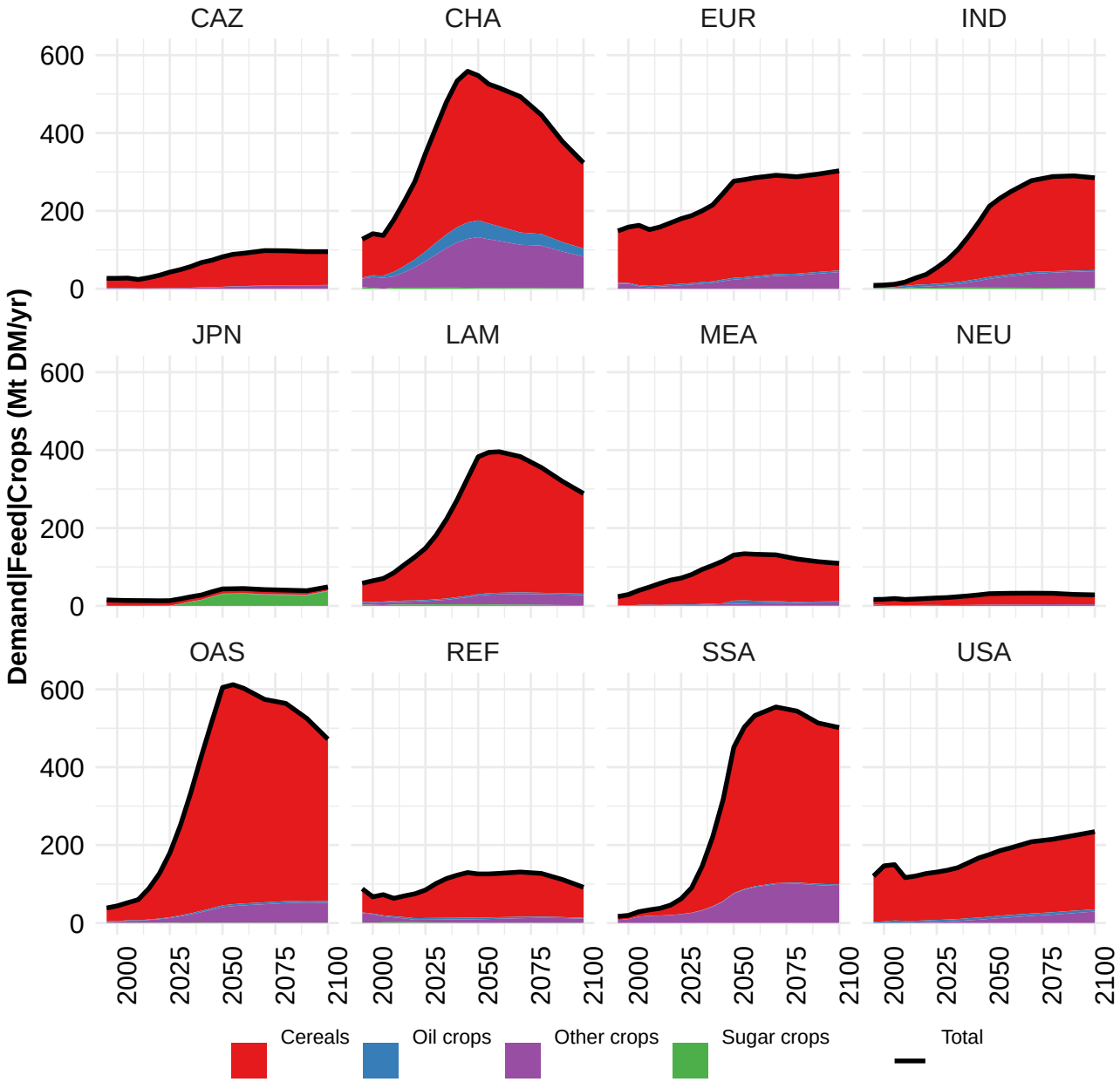
	2050	2055	2060	2070	2080	2090	2100
GLO	549	519	482	405	324	252	204
CAZ	5	5	5	4	4	3	3
CHA	62	55	53	48	35	25	19
EUR	15	14	12	10	9	8	8
IND	140	133	124	105	85	67	51
JPN	2	1	1	1	1	1	1
LAM	35	33	29	23	18	14	11
MEA	13	12	11	8	7	5	4
NEU	1	1	1	0	0	0	0
OAS	171	160	147	120	97	76	62
REF	3	3	3	2	2	1	1
SSA	98	97	92	78	63	49	42
USA	5	4	4	4	4	4	4

Table 246: MAgPIE m4p_SSP5 — Demand—Feed—Crop residues—Straw (Mt DM/yr) [PART 2/2]

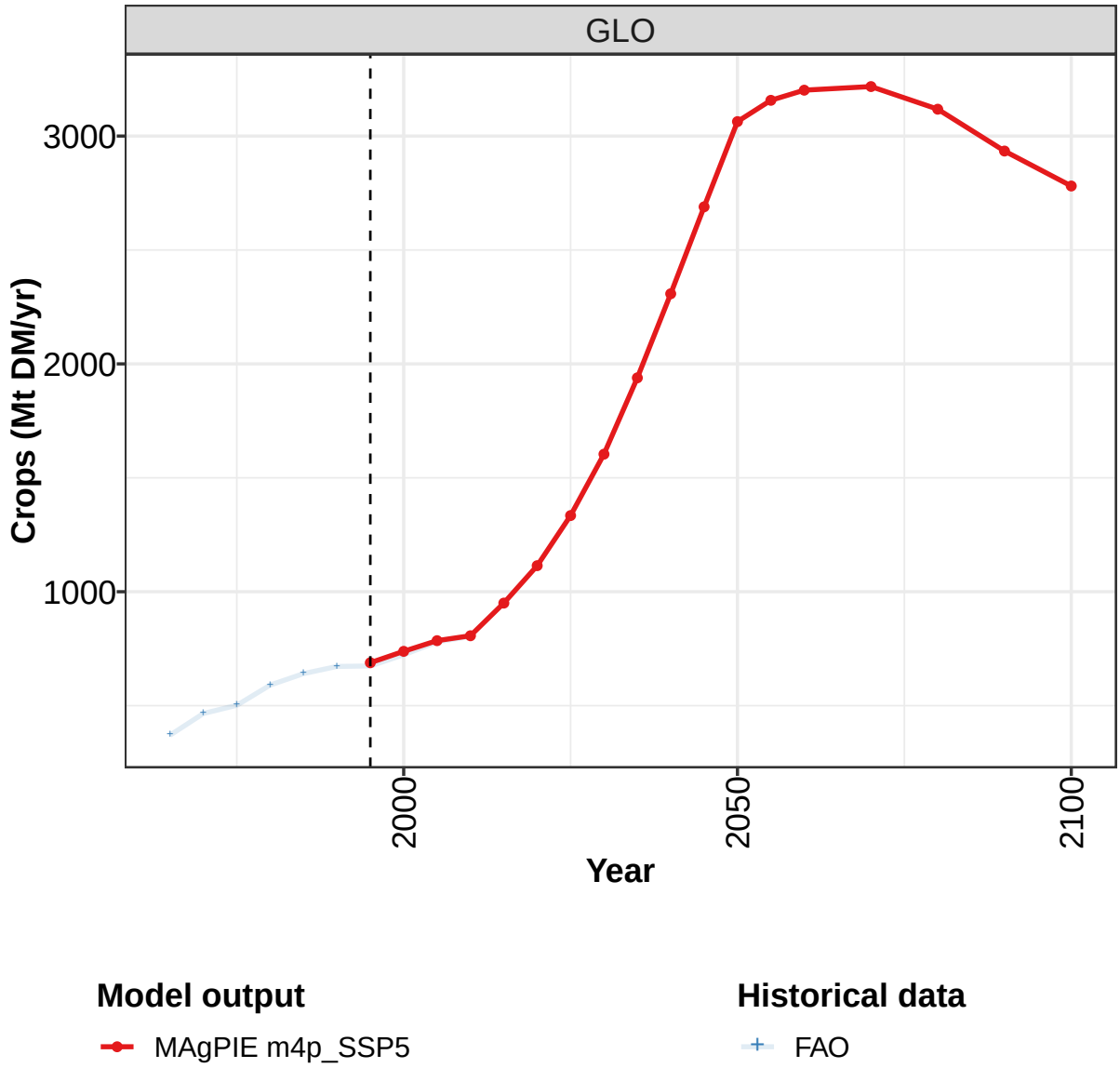
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	408	459	513	536	602	649	654	651	678	721
CAZ	5	6	7	7	9	8	9	12	14	12
CHA	106	121	142	153	174	199	196	183	175	173
EUR	16	17	19	19	19	19	15	15	14	15
IND	81	97	104	110	120	130	135	145	151	156
JPN	3	3	4	3	3	3	3	3	3	2
LAM	31	34	36	36	43	40	45	47	49	54
MEA	16	17	19	20	24	26	27	24	33	30
NEU	2	2	3	2	2	2	1	1	1	1
OAS	78	85	90	98	114	120	130	135	149	169
REF	34	36	44	41	43	46	34	25	22	26
SSA	24	27	31	32	36	43	45	51	59	72
USA	12	13	15	14	13	11	13	12	11	12

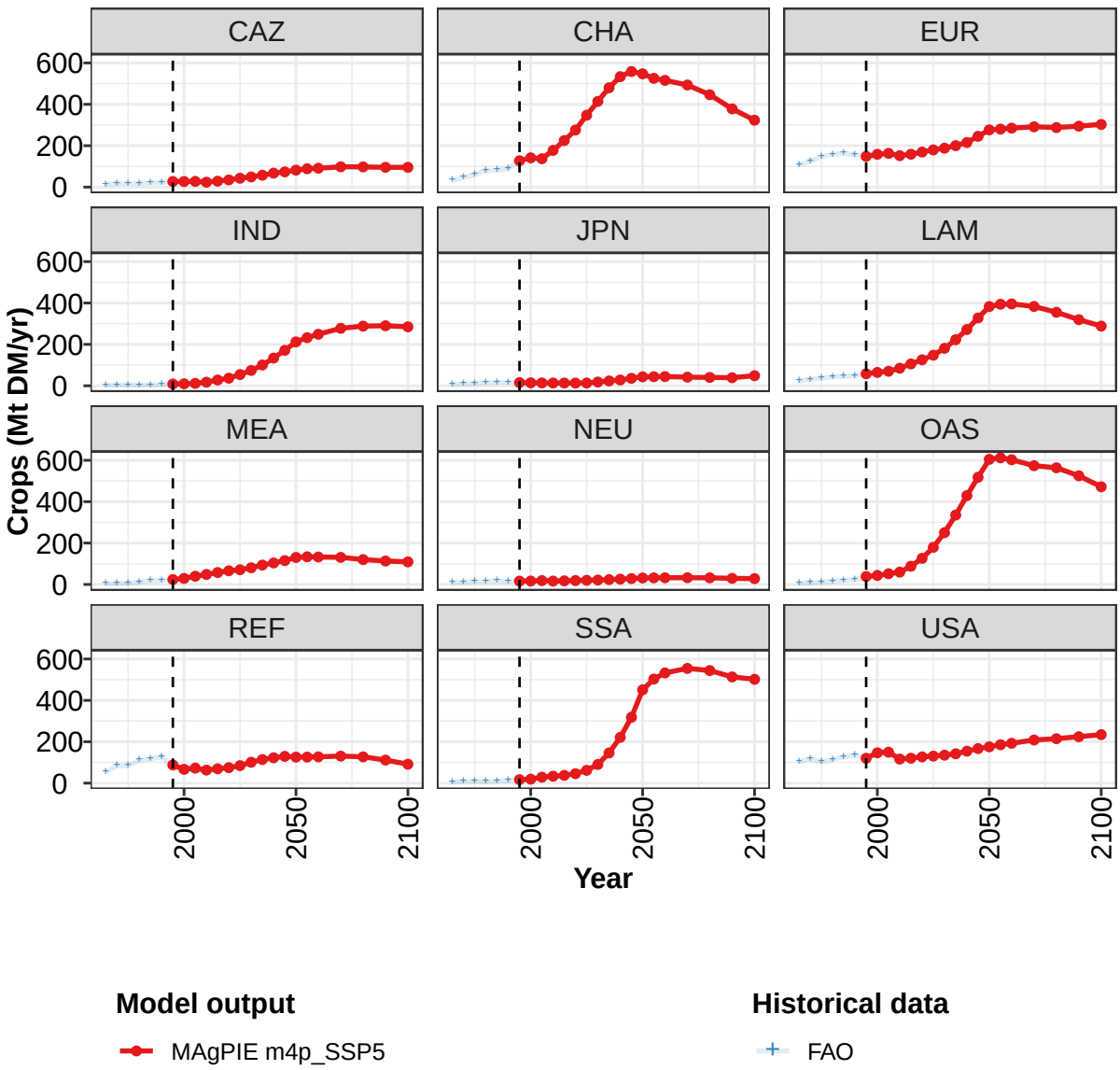
Table 247: FAO — Demand—Feed—Crop residues—Straw (Mt DM/yr)


GLO
Demand|Feed|Crops (Mt DM/yr)
3000
2000
1000
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Feed|Crops (Mt DM/yr)
600
400
200
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

6.2 Crops


GLO
Crops (Mt DM/yr)
3000
2000
1000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



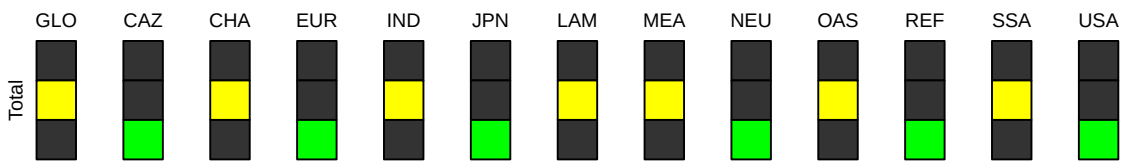


Figure 83: MAgPIE m4p_SSP5 — Demand—Feed—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	689	738	785	807	950	1115	1335	1604	1939	2308	2689
CAZ	27	27	28	24	29	35	43	49	57	68	74
CHA	127	141	137	177	225	276	347	414	480	534	559
EUR	149	158	163	152	159	169	180	188	200	215	245
IND	9	10	12	17	28	37	54	74	100	134	171
JPN	15	14	14	14	13	13	13	18	23	28	36
LAM	58	65	70	85	106	126	148	181	223	272	328
MEA	24	29	40	48	58	66	71	81	94	104	115
NEU	16	17	19	16	18	19	20	21	24	26	28
OAS	38	44	52	60	88	126	180	251	336	429	518
REF	88	67	73	63	69	75	85	101	114	123	129
SSA	17	19	29	34	38	46	62	90	146	221	318
USA	120	147	150	116	120	127	131	135	142	154	167

Table 248: MAgPIE m4p_SSP5 — Demand—Feed—Crops (Mt DM/yr) [PART 1/2]

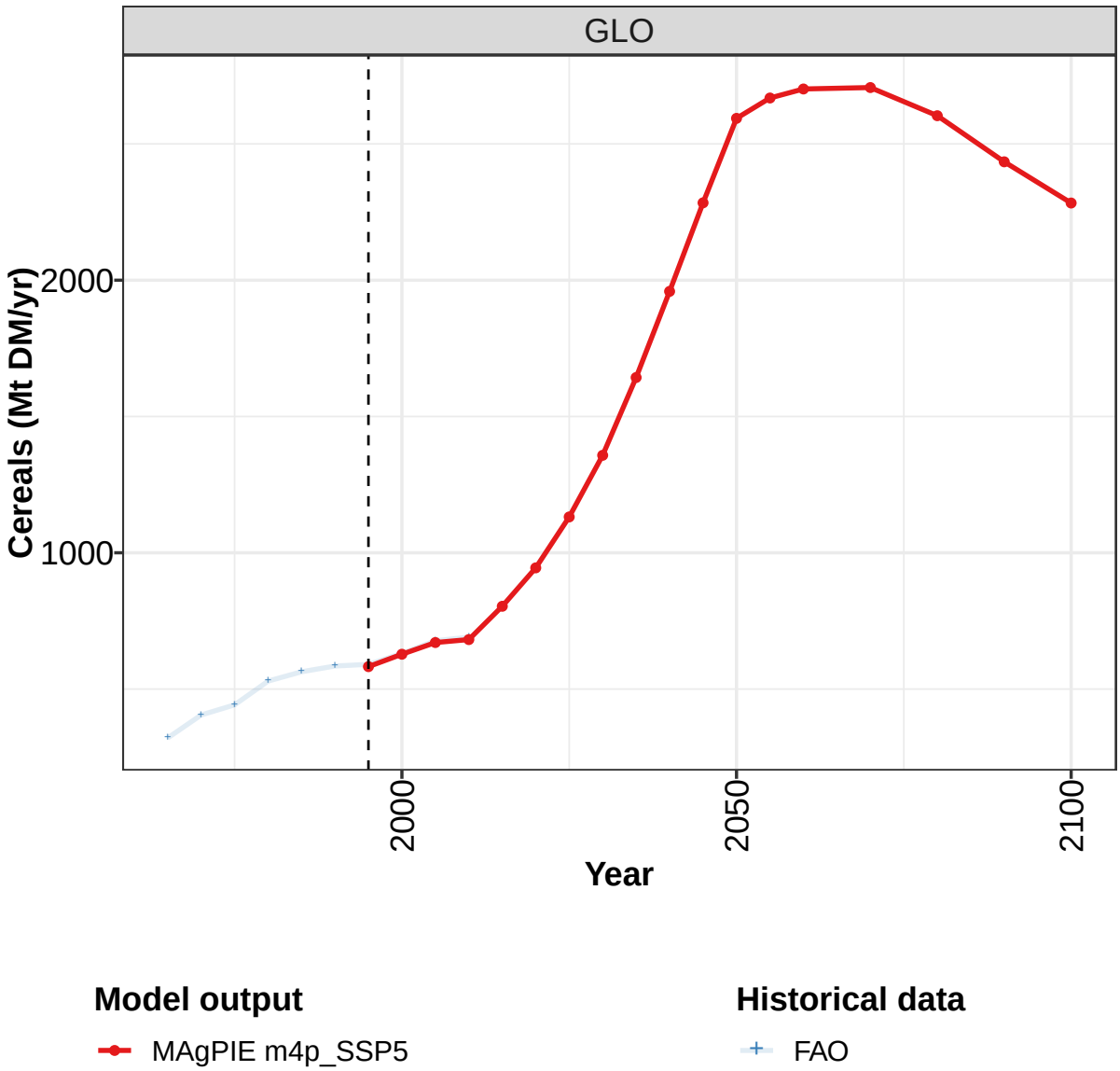
	2050	2055	2060	2070	2080	2090	2100
GLO	3064	3157	3201	3217	3118	2934	2781
CAZ	82	89	91	98	98	95	95
CHA	548	526	516	493	446	378	323
EUR	277	280	285	292	288	295	303
IND	212	232	249	278	288	290	285
JPN	44	44	45	42	40	39	49
LAM	383	394	396	383	355	320	288
MEA	130	134	133	131	120	114	109
NEU	31	32	32	33	32	29	28
OAS	605	612	603	574	564	525	472
REF	126	126	127	131	127	111	92
SSA	451	503	533	555	544	513	502
USA	176	186	193	209	215	224	234

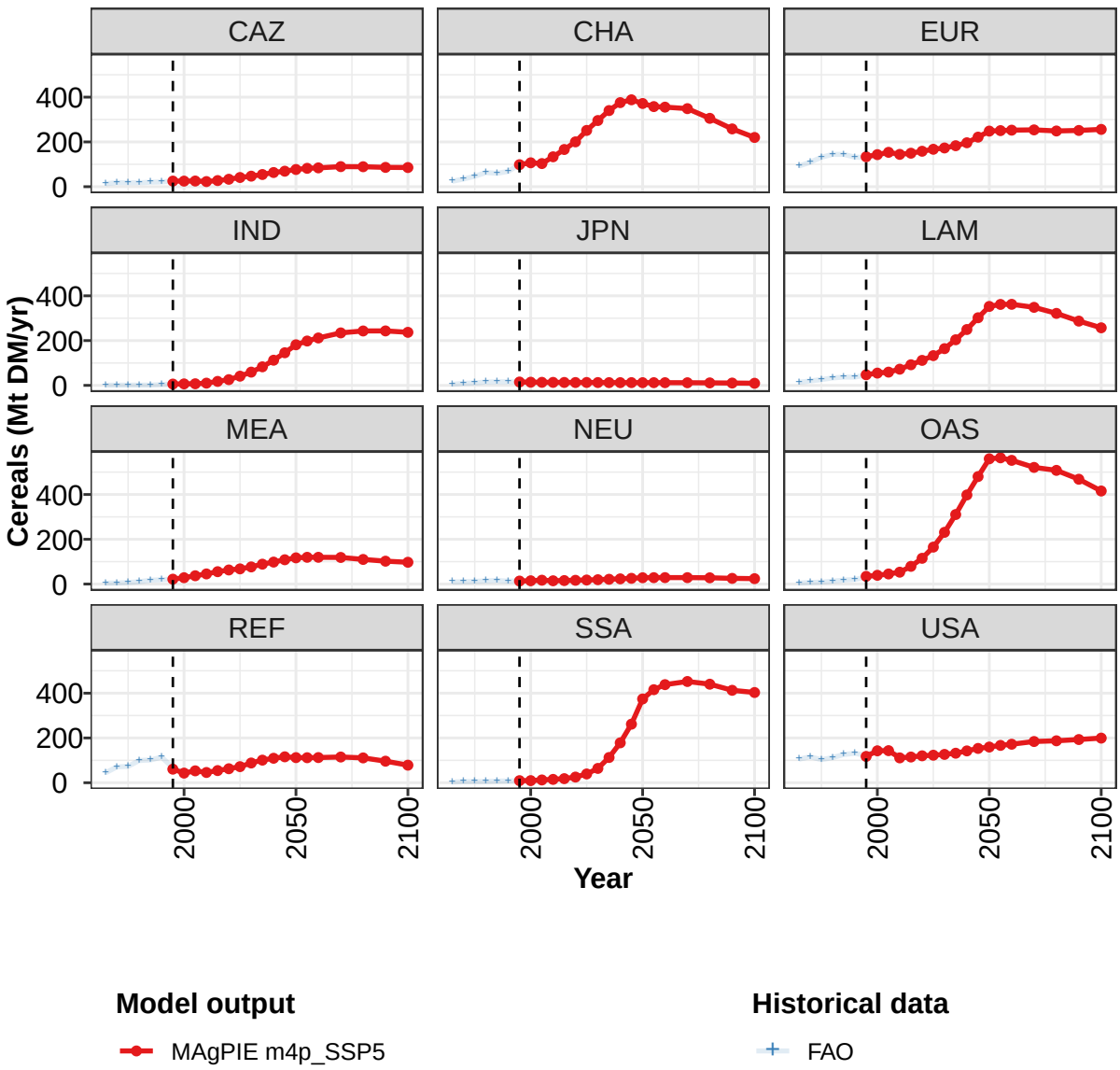
Table 249: MAgPIE m4p_SSP5 — Demand—Feed—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	370	466	502	590	641	672	674	723	780	804
CAZ	13	18	18	18	20	22	28	30	33	27
CHA	32	46	60	80	82	90	129	143	139	179
EUR	108	125	146	158	164	155	146	154	159	148
IND	3	3	3	3	3	6	9	10	12	18
JPN	6	9	11	15	16	17	15	14	14	14
LAM	23	30	37	43	45	49	58	65	71	84
MEA	4	5	7	11	18	20	24	29	37	47
NEU	10	12	13	15	17	14	15	16	19	16
OAS	6	8	11	16	20	24	34	40	50	61
REF	54	84	84	111	116	128	76	53	64	56
SSA	5	9	9	8	10	13	17	20	29	34
USA	105	116	103	113	128	134	124	151	153	120

Table 250: FAO — Demand—Feed—Crops (Mt DM/yr)

6.2.1 Cereals


GLO
Cereals (Mt DM/yr)
2000
1000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



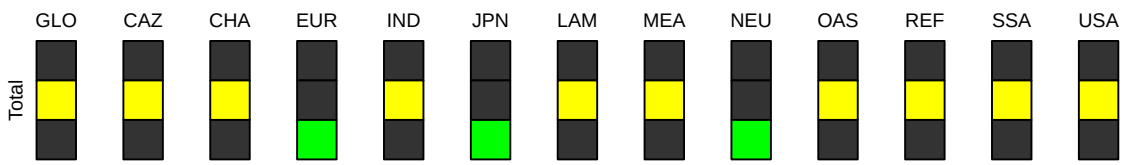


Figure 84: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	582	628	671	682	804	945	1132	1358	1643	1959	2284
CAZ	25	25	25	23	27	33	41	47	54	63	69
CHA	98	107	103	134	166	200	251	296	340	376	388
EUR	134	143	154	144	150	158	167	173	183	196	221
IND	6	7	7	10	18	26	41	59	83	112	146
JPN	15	14	14	13	13	13	13	13	12	12	12
LAM	47	55	59	72	92	112	133	164	204	250	302
MEA	22	28	37	45	55	63	68	77	89	98	109
NEU	13	15	17	15	16	17	18	19	21	23	26
OAS	34	39	45	53	79	115	165	231	311	398	480
REF	61	43	53	46	54	63	72	88	101	109	116
SSA	9	9	12	15	18	25	39	64	113	178	262
USA	118	143	143	111	115	120	123	127	132	142	153

Table 251: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals (Mt DM/yr) [PART 1/2]

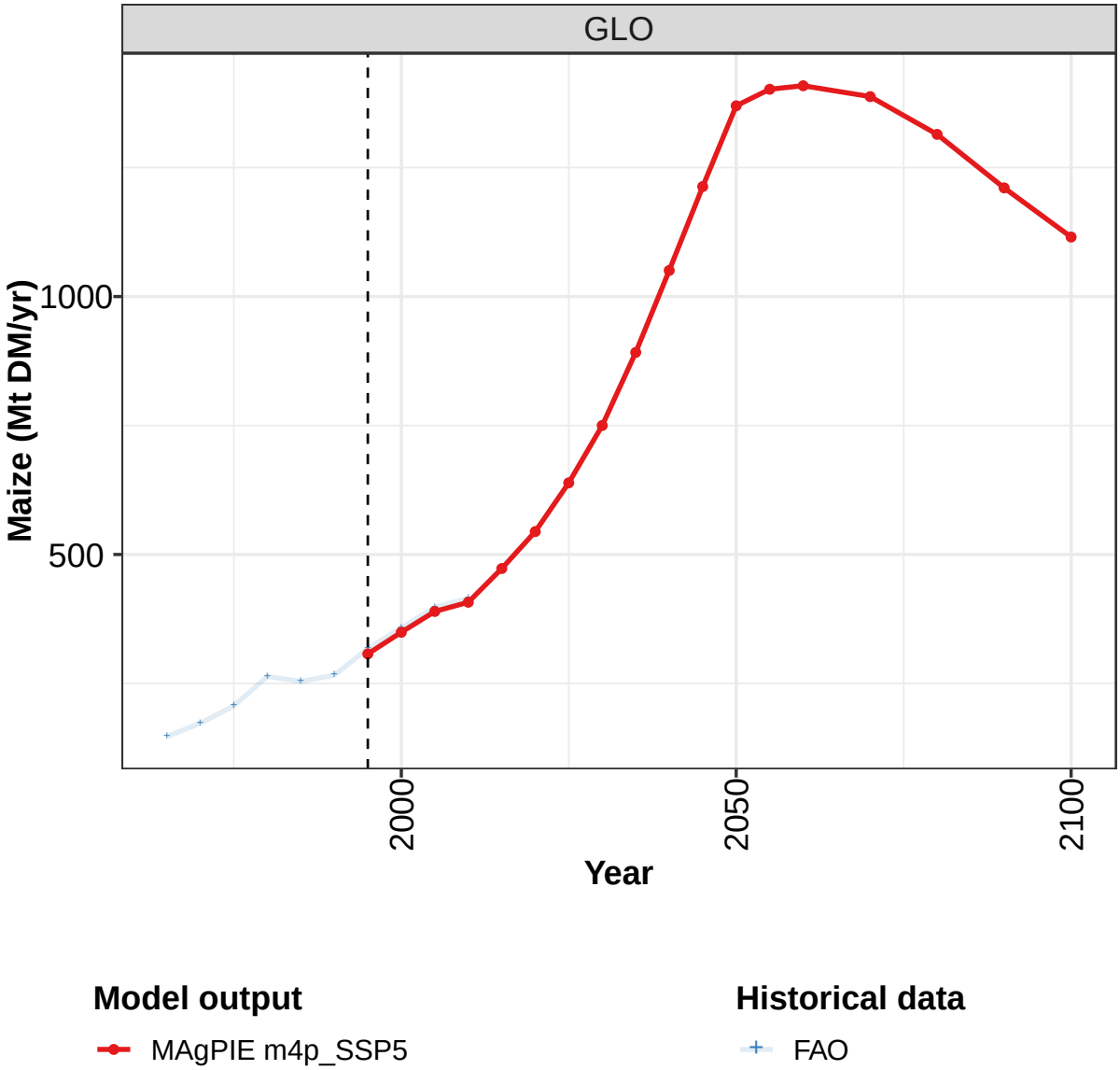
	2050	2055	2060	2070	2080	2090	2100
GLO	2594	2668	2702	2707	2604	2434	2283
CAZ	77	82	84	90	89	86	86
CHA	372	358	355	349	305	258	220
EUR	248	250	253	254	249	251	256
IND	181	198	212	234	243	243	237
JPN	12	12	12	12	11	10	9
LAM	353	362	362	349	322	287	257
MEA	117	120	120	119	110	102	97
NEU	28	29	29	29	28	25	24
OAS	559	564	553	521	508	468	416
REF	112	112	112	115	111	96	78
SSA	374	416	438	452	440	413	403
USA	159	167	172	184	187	193	199

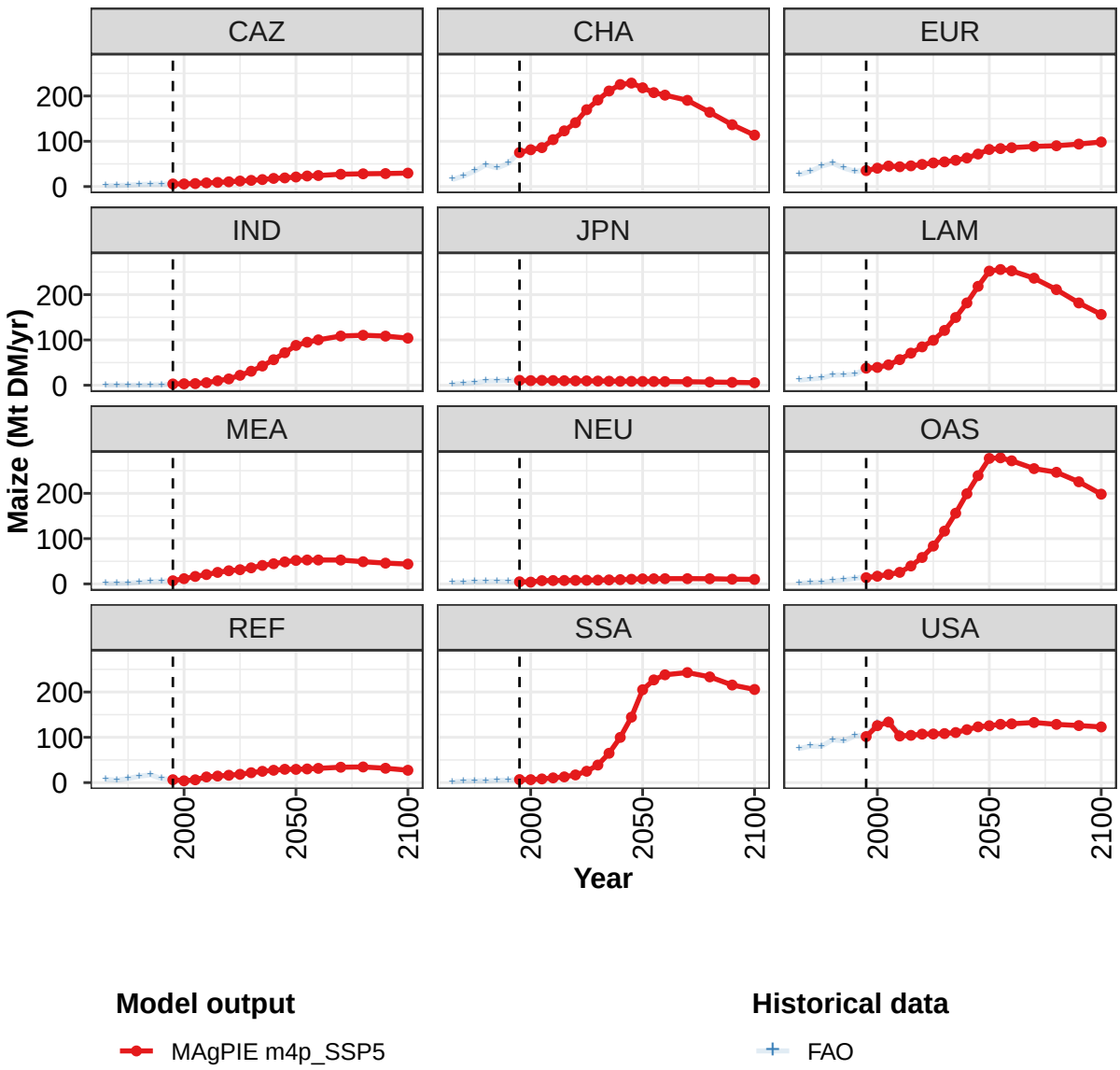
Table 252: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	321	405	442	529	563	585	591	631	677	690
CAZ	13	18	17	18	20	21	25	27	30	26
CHA	24	34	47	63	60	68	100	108	105	136
EUR	93	109	131	144	144	132	131	139	150	141
IND	1	1	1	1	1	3	6	7	7	10
JPN	5	9	11	15	16	16	15	14	14	13
LAM	14	20	26	33	37	37	48	56	61	72
MEA	4	5	7	11	17	19	23	28	37	46
NEU	9	11	12	14	16	13	14	14	17	15
OAS	5	7	9	13	18	21	31	36	44	54
REF	45	71	73	99	102	114	67	45	53	46
SSA	3	5	5	5	7	8	9	10	13	15
USA	105	116	103	112	126	132	121	147	147	116

Table 253: FAO — Demand—Feed—Crops—Cereals (Mt DM/yr)

6.2.2 Cereals—Maize





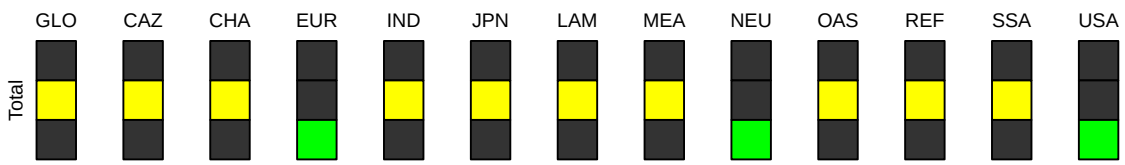


Figure 85: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	307	349	390	407	473	544	639	750	892	1051	1213
CAZ	6	6	7	8	9	10	12	14	15	18	19
CHA	75	81	86	104	123	141	170	191	211	225	228
EUR	35	41	45	44	46	49	52	54	58	63	72
IND	3	3	4	6	10	14	22	31	42	56	72
JPN	11	10	11	10	10	10	10	9	9	9	9
LAM	38	39	45	57	71	85	99	121	150	182	218
MEA	7	12	17	21	25	29	31	36	41	45	49
NEU	5	4	7	7	8	8	8	8	9	9	10
OAS	14	17	21	26	40	58	84	117	156	199	239
REF	6	4	6	13	14	16	18	22	25	27	29
SSA	7	6	8	10	13	17	25	39	65	100	145
USA	102	126	134	103	104	107	107	108	111	117	123

Table 254: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

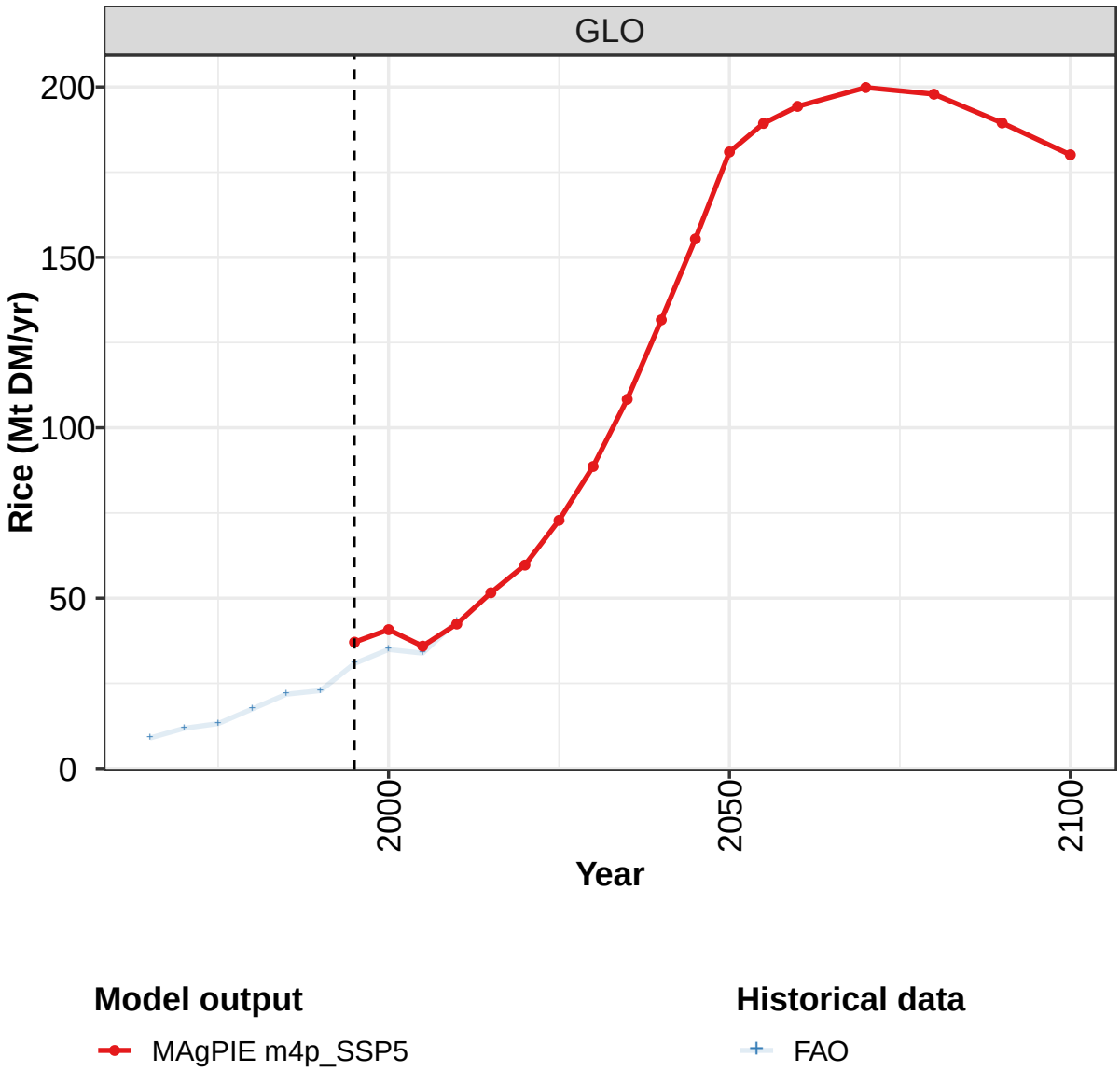
	2050	2055	2060	2070	2080	2090	2100
GLO	1370	1402	1409	1388	1314	1211	1115
CAZ	21	23	24	27	28	29	30
CHA	218	207	202	190	164	137	114
EUR	82	84	86	89	90	94	98
IND	88	95	100	109	110	109	104
JPN	8	8	8	8	7	6	6
LAM	252	256	253	236	211	182	156
MEA	52	53	53	53	49	46	44
NEU	11	11	12	12	11	10	10
OAS	277	278	272	255	247	226	198
REF	29	30	31	34	35	32	27
SSA	205	227	238	243	233	215	206
USA	126	129	130	133	129	126	123

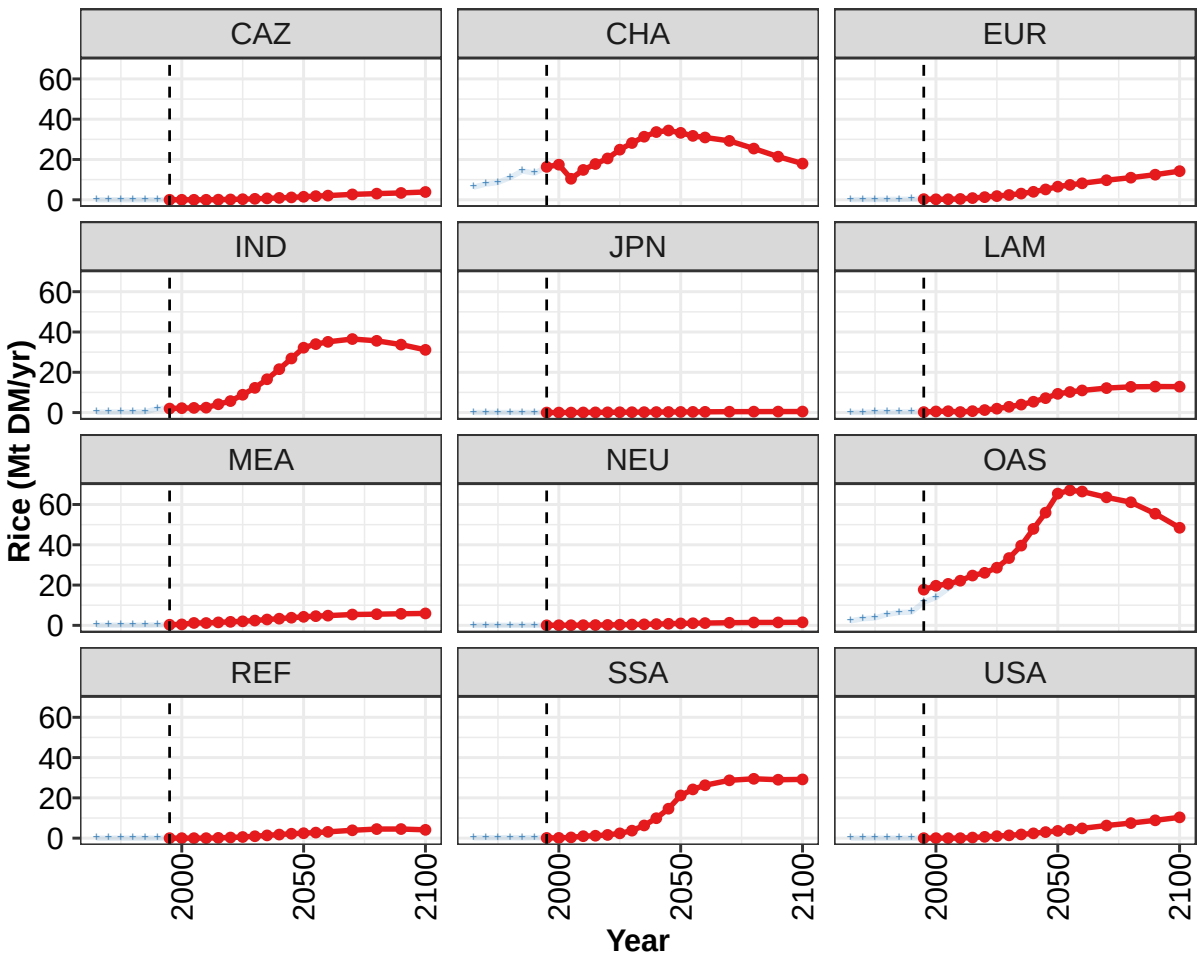
Table 255: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	147	173	206	264	254	266	318	358	398	415
CAZ	1	2	3	5	5	5	6	6	8	9
CHA	16	23	34	48	41	51	77	83	88	105
EUR	26	34	45	52	41	34	36	40	45	43
IND	0	0	0	0	0	1	3	3	4	6
JPN	3	4	6	9	10	11	11	10	11	10
LAM	11	14	16	22	23	24	37	39	46	57
MEA	1	1	1	4	5	6	7	11	16	21
NEU	3	4	5	5	6	5	6	4	8	8
OAS	2	3	4	6	9	12	16	19	22	26
REF	7	5	9	14	17	9	7	4	6	13
SSA	2	3	4	4	5	6	7	6	8	11
USA	75	80	80	95	92	103	105	130	137	107

Table 256: FAO — Demand—Feed—Crops—Cereals—Maize (Mt DM/yr)

6.2.3 Cereals—Rice





Model output

MAgPIE m4p_SSP5

Historical data

FAO

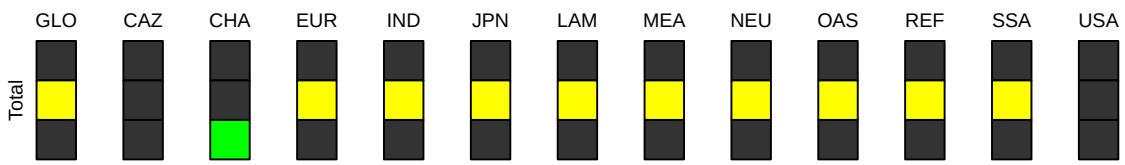


Figure 86: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	37	41	36	42	52	60	73	89	108	132	155
CAZ	0	0	0	0	0	0	0	0	1	1	1
CHA	16	17	10	15	18	21	25	28	31	34	34
EUR	0	0	0	0	1	1	2	2	3	4	5
IND	2	2	2	2	4	6	9	12	17	22	27
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	1	1	0	1	1	2	3	4	5	7
MEA	0	0	1	1	1	2	2	2	3	3	4
NEU	0	0	0	0	0	0	0	0	1	1	1
OAS	18	20	21	22	25	26	29	33	40	48	56
REF	0	0	0	0	0	0	1	1	1	2	2
SSA	0	0	0	1	1	2	2	4	6	10	15
USA	0	0	0	0	0	1	1	1	2	2	3

Table 257: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

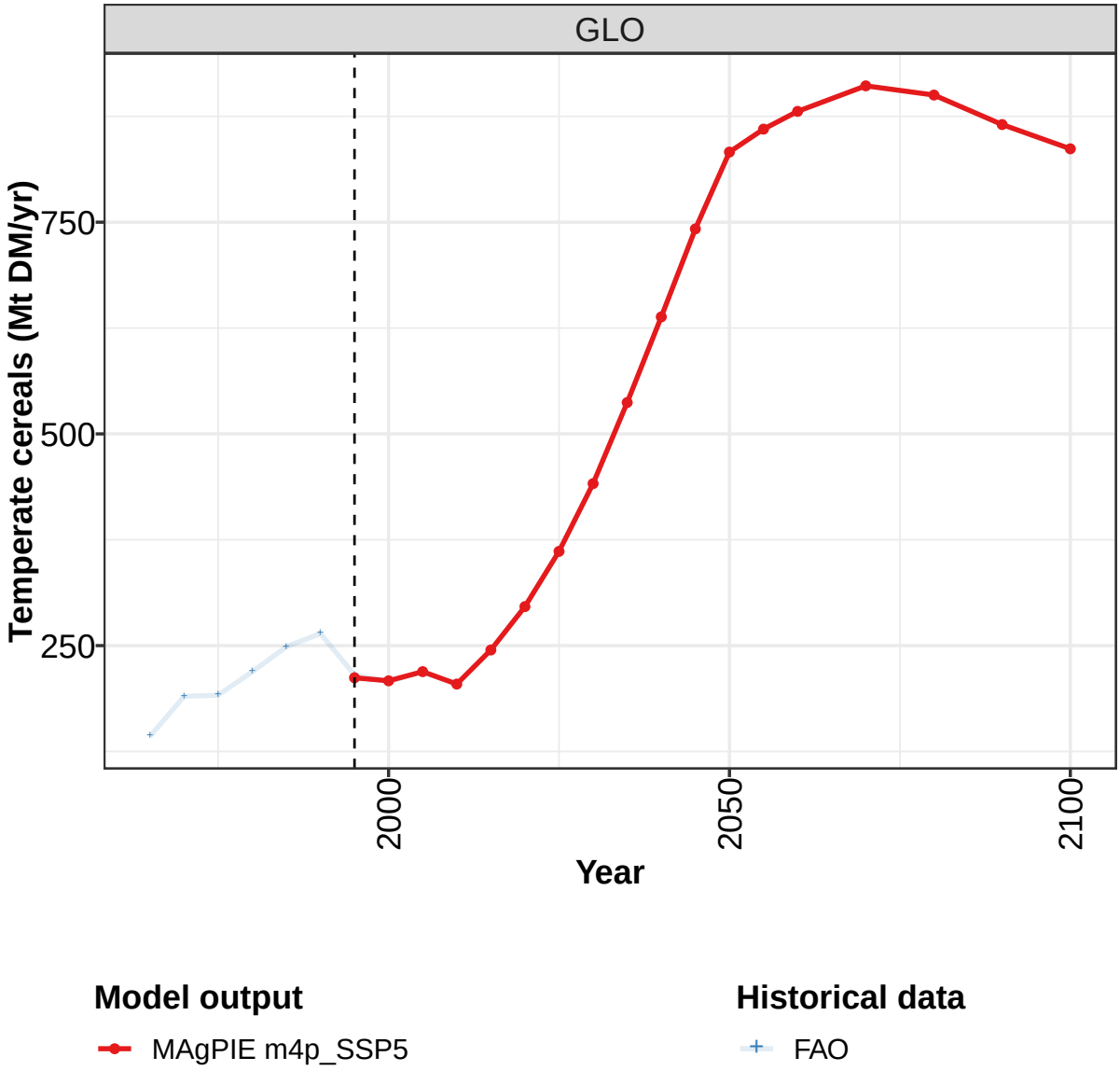
	2050	2055	2060	2070	2080	2090	2100
GLO	181	189	194	200	198	189	180
CAZ	1	2	2	3	3	3	4
CHA	33	32	31	29	25	21	18
EUR	7	7	8	10	11	12	14
IND	32	34	35	37	36	34	31
JPN	0	0	0	0	0	0	1
LAM	9	10	11	12	13	13	13
MEA	4	5	5	5	6	6	6
NEU	1	1	1	1	1	1	2
OAS	65	67	66	64	61	55	48
REF	2	3	3	4	5	5	4
SSA	21	24	26	29	29	29	29
USA	4	4	5	6	7	9	10

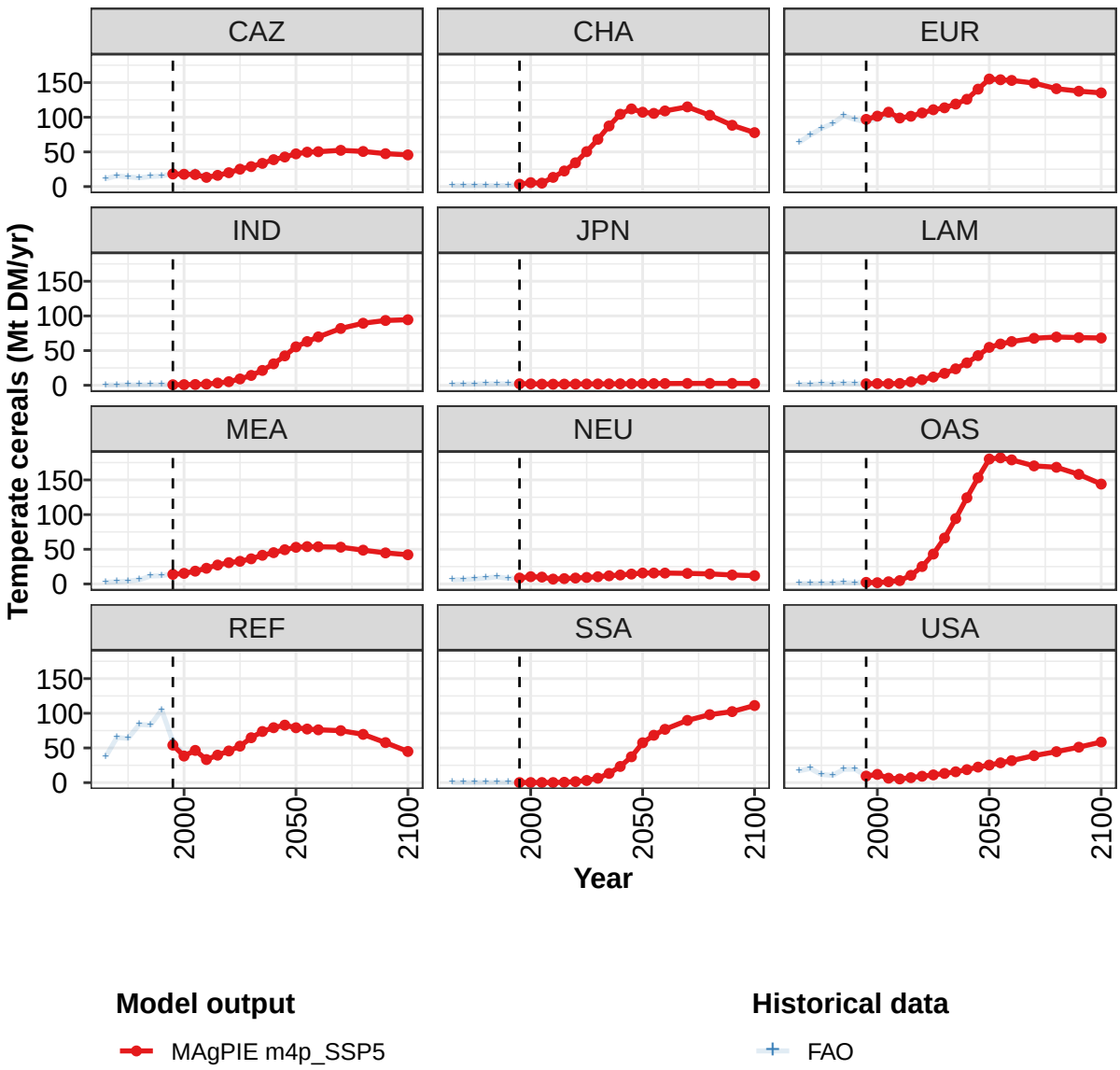
Table 258: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.0	11.8	13.2	17.5	21.8	22.9	30.8	34.9	33.9	43.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.3	7.8	8.6	11.0	14.3	13.3	16.2	17.4	10.5	15.1
EUR	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4
IND	0.2	0.2	0.3	0.3	0.3	1.9	2.0	2.2	2.4	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
LAM	0.0	0.1	0.3	0.2	0.3	0.3	0.3	0.5	0.6	0.3
MEA	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.5	1.2	1.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
OAS	2.2	3.3	3.7	5.5	6.4	6.6	11.5	13.8	18.3	22.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.4	1.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 259: FAO — Demand—Feed—Crops—Cereals—Rice (Mt DM/yr)

6.2.4 Cereals—Temperate cereals





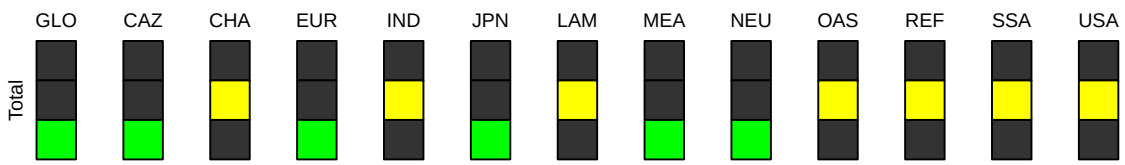


Figure 87: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	212	208	219	205	245	296	361	441	537	638	742
CAZ	18	18	17	13	16	20	25	29	33	39	43
CHA	3	6	5	13	23	34	50	68	87	104	112
EUR	97	102	107	99	101	106	111	114	119	126	141
IND	1	1	1	2	3	5	9	14	21	31	42
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	2	2	2	3	5	8	12	17	24	32	43
MEA	14	15	18	23	27	31	33	36	41	45	49
NEU	9	11	10	7	8	8	9	10	12	13	14
OAS	2	2	3	5	12	25	43	66	94	124	153
REF	54	38	46	33	40	46	53	65	74	79	83
SSA	0	0	0	0	1	1	3	6	13	23	37
USA	9	12	6	5	7	9	11	13	16	19	22

Table 260: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

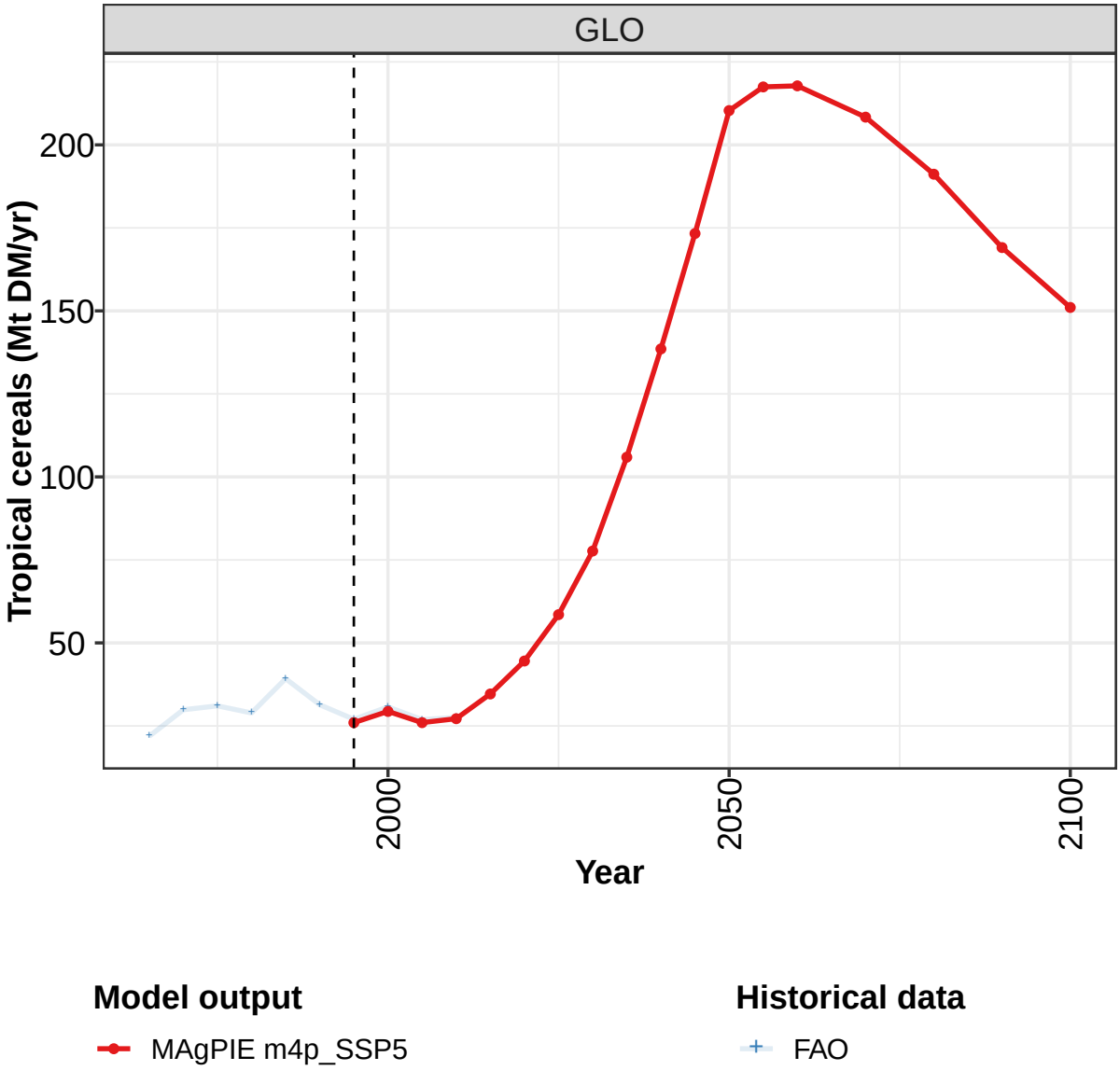
	2050	2055	2060	2070	2080	2090	2100
GLO	833	860	881	911	900	865	837
CAZ	47	50	50	52	51	47	46
CHA	107	106	109	115	103	88	78
EUR	155	154	153	149	141	138	135
IND	55	63	70	82	89	93	94
JPN	2	2	2	3	3	3	3
LAM	55	59	63	68	70	69	68
MEA	53	54	54	53	49	45	42
NEU	16	16	16	15	14	13	12
OAS	180	182	179	170	168	158	144
REF	79	77	76	75	70	58	45
SSA	57	68	77	90	98	102	111
USA	25	29	32	39	45	51	59

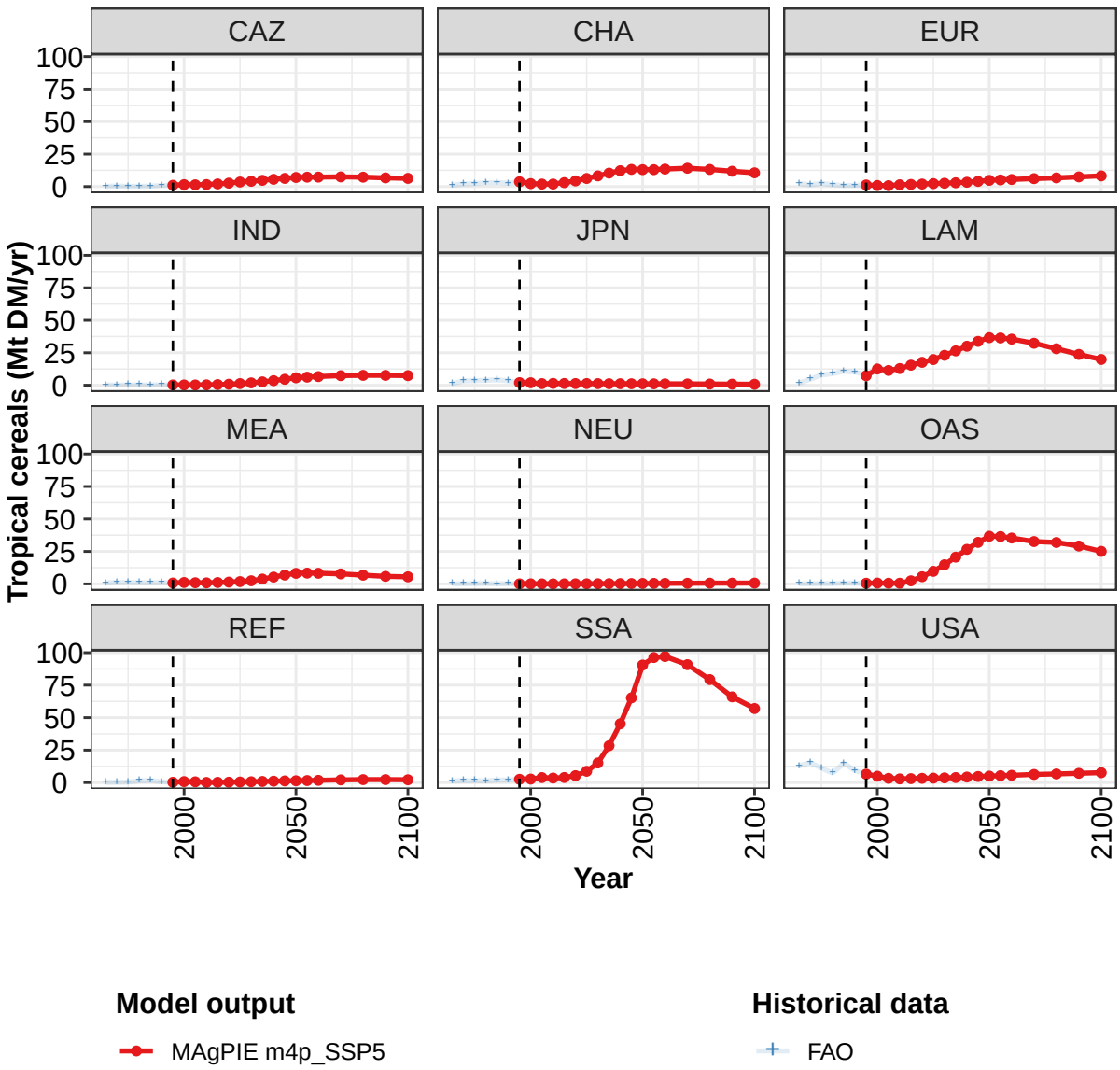
Table 261: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	143	190	191	219	249	264	215	207	219	205
CAZ	11	16	14	13	14	15	19	19	21	15
CHA	1	1	1	1	1	2	3	6	5	14
EUR	64	74	84	91	102	97	93	97	104	96
IND	0	0	1	0	1	1	1	1	1	2
JPN	1	2	2	2	2	2	2	2	2	2
LAM	1	1	2	2	3	2	2	3	2	3
MEA	2	3	4	6	11	12	15	15	18	23
NEU	6	6	7	9	10	8	8	10	9	7
OAS	1	1	1	1	2	1	3	2	3	5
REF	37	65	64	84	83	105	59	40	46	33
SSA	0	0	0	0	0	0	0	0	0	0
USA	17	20	12	10	19	19	10	12	7	6

Table 262: FAO — Demand—Feed—Crops—Cereals—Temperate cereals (Mt DM/yr)

6.2.5 Cereals—Tropical cereals





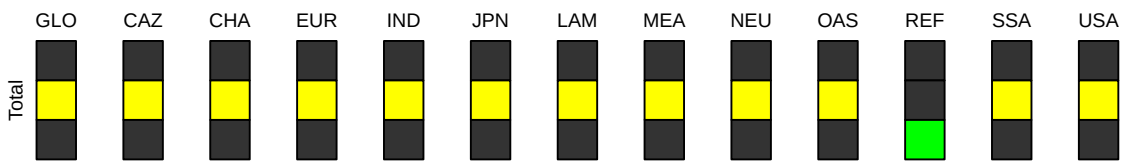


Figure 88: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26	29	26	27	35	45	59	78	106	139	173
CAZ	1	1	1	2	2	3	4	4	5	6	6
CHA	4	2	2	2	3	4	6	8	10	12	13
EUR	1	1	1	1	2	2	2	3	3	3	4
IND	0	0	0	0	1	1	1	2	3	4	5
JPN	2	2	1	1	1	1	1	1	1	1	1
LAM	7	12	11	13	15	18	20	23	26	30	34
MEA	1	1	1	1	1	1	2	2	4	5	7
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	1	1	1	1	2	6	10	15	21	27	32
REF	0	1	1	0	0	0	0	1	1	1	1
SSA	3	3	4	3	4	5	9	15	28	45	65
USA	6	5	3	3	3	3	3	4	4	4	5

Table 263: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

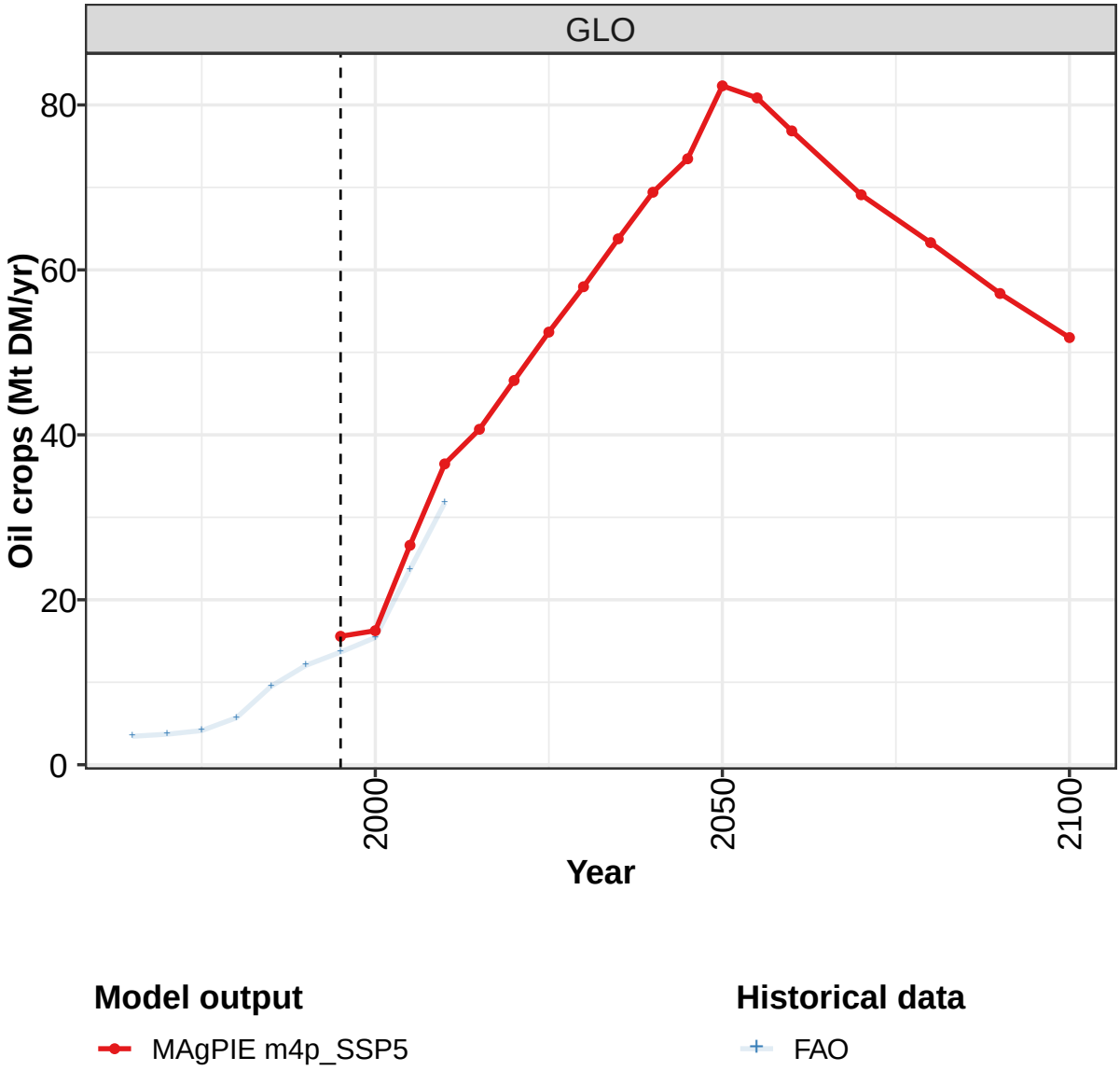
	2050	2055	2060	2070	2080	2090	2100
GLO	210	217	218	208	191	169	151
CAZ	7	7	7	7	7	7	6
CHA	13	13	13	14	13	12	11
EUR	5	5	5	6	7	7	8
IND	6	6	7	7	8	8	7
JPN	1	1	1	1	1	1	1
LAM	37	36	36	32	28	24	20
MEA	8	8	8	8	7	6	5
NEU	0	0	0	1	1	1	1
OAS	37	36	35	33	32	29	25
REF	1	2	2	2	2	2	2
SSA	91	96	97	91	79	66	57
USA	5	5	6	6	7	7	8

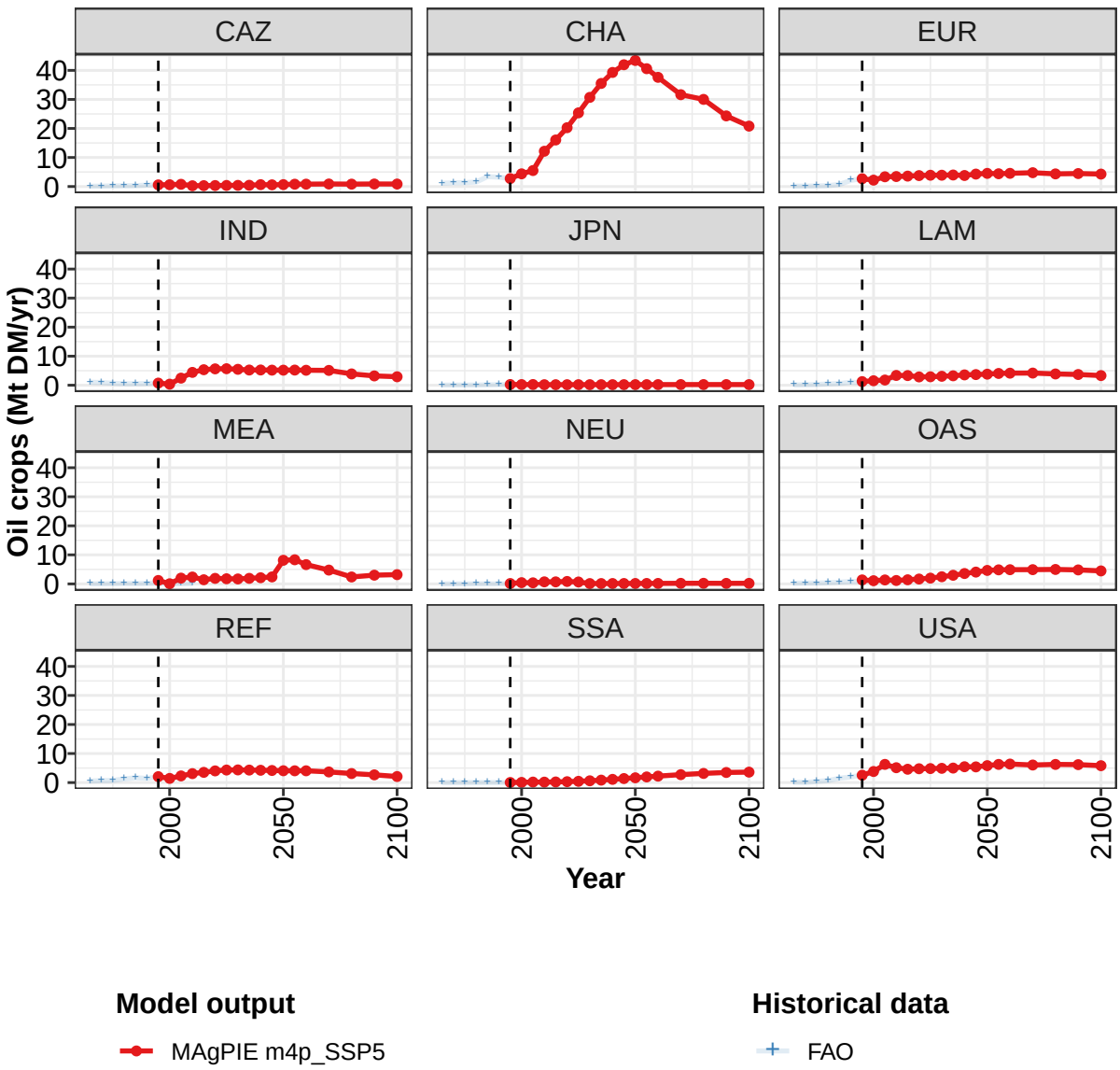
Table 264: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	21.9	29.9	31.0	28.9	39.2	31.4	27.0	30.7	26.9	27.6
CAZ	0.1	0.4	0.2	0.2	0.3	0.8	1.1	1.6	1.6	1.7
CHA	1.1	1.9	2.4	2.9	3.1	2.5	3.7	2.3	2.0	2.0
EUR	2.3	1.3	2.4	1.4	0.8	1.0	1.1	0.8	0.7	1.3
IND	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3
JPN	1.3	3.3	3.5	3.7	4.2	3.3	2.0	1.9	1.2	1.4
LAM	1.7	4.6	7.9	9.0	10.8	10.1	8.2	13.6	11.9	12.8
MEA	0.8	1.0	1.1	0.9	0.8	1.0	0.7	1.1	0.9	0.8
NEU	0.1	0.1	0.2	0.3	0.1	0.1	0.0	0.1	0.0	0.0
OAS	0.1	0.1	0.2	0.2	0.6	0.4	0.4	0.5	0.5	0.5
REF	0.2	0.2	0.3	1.4	1.5	0.6	0.3	0.8	0.6	0.1
SSA	1.2	1.4	1.4	1.3	1.9	2.0	2.5	2.8	4.0	3.5
USA	12.8	15.4	11.1	7.3	14.9	9.3	6.7	5.1	3.3	3.0

Table 265: FAO — Demand—Feed—Crops—Cereals—Tropical cereals (Mt DM/yr)

6.2.6 Oil crops





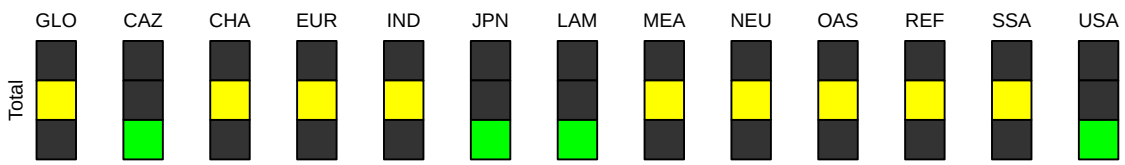


Figure 89: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.6	16.2	26.6	36.5	40.7	46.6	52.5	58.0	63.8	69.4	73.5
CAZ	0.6	0.6	0.8	0.3	0.3	0.3	0.4	0.4	0.4	0.6	0.6
CHA	2.8	4.4	5.5	12.2	16.0	20.3	25.4	30.7	35.5	39.3	41.9
EUR	2.7	2.2	3.4	3.4	3.6	3.8	3.9	3.9	4.0	3.8	4.3
IND	0.7	0.4	2.4	4.4	5.3	5.6	5.7	5.5	5.2	5.3	5.2
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	1.2	1.5	1.8	3.4	3.3	2.9	2.9	3.1	3.3	3.6	3.7
MEA	1.2	0.1	2.0	2.4	1.4	1.9	1.8	1.7	1.9	2.1	2.4
NEU	0.1	0.4	0.4	0.7	0.7	0.8	0.7	0.1	0.1	0.1	0.1
OAS	1.4	1.1	1.4	1.2	1.4	1.7	2.0	2.5	3.0	3.6	4.1
REF	2.0	1.4	2.3	3.1	3.5	4.0	4.3	4.4	4.3	4.2	4.2
SSA	0.0	0.1	0.2	0.2	0.2	0.3	0.4	0.6	0.9	1.1	1.4
USA	2.5	3.8	6.3	5.1	4.6	4.8	4.8	4.9	5.0	5.5	5.4

Table 266: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops (Mt DM/yr) [PART 1/2]

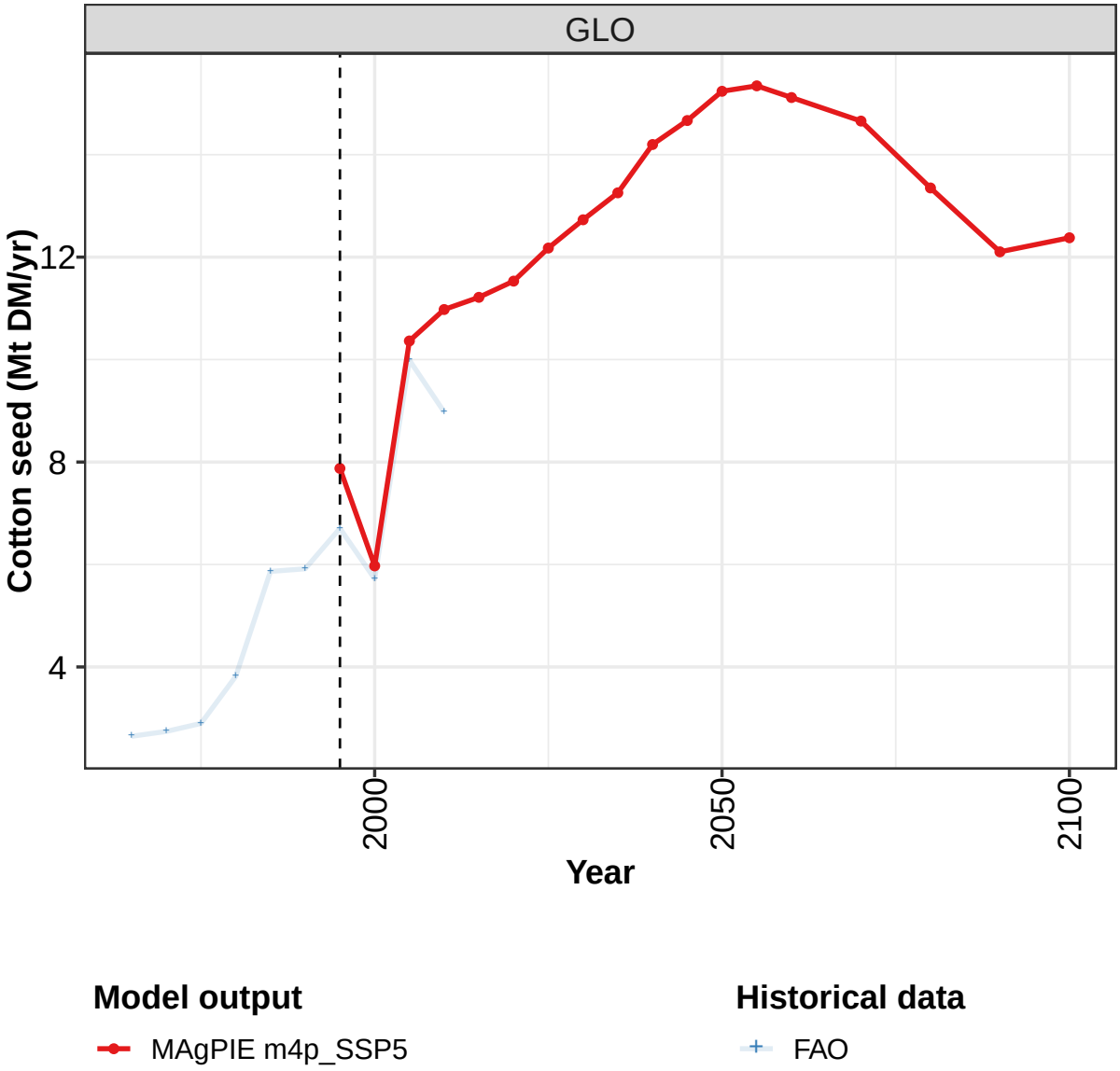
	2050	2055	2060	2070	2080	2090	2100
GLO	82.3	80.9	76.9	69.1	63.3	57.1	51.8
CAZ	0.7	0.8	0.8	0.9	0.8	0.9	0.9
CHA	43.4	40.6	37.6	31.6	30.0	24.3	20.8
EUR	4.5	4.4	4.5	4.8	4.4	4.5	4.3
IND	5.2	5.2	5.2	5.1	3.9	3.2	2.9
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	3.8	4.0	4.2	4.2	3.9	3.7	3.3
MEA	8.1	8.3	6.6	4.8	2.4	3.0	3.2
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	4.6	4.8	4.9	4.9	5.0	4.8	4.5
REF	4.1	4.1	4.1	3.7	3.1	2.7	2.1
SSA	1.7	1.9	2.2	2.7	3.2	3.5	3.6
USA	5.8	6.3	6.4	6.0	6.3	6.2	5.8

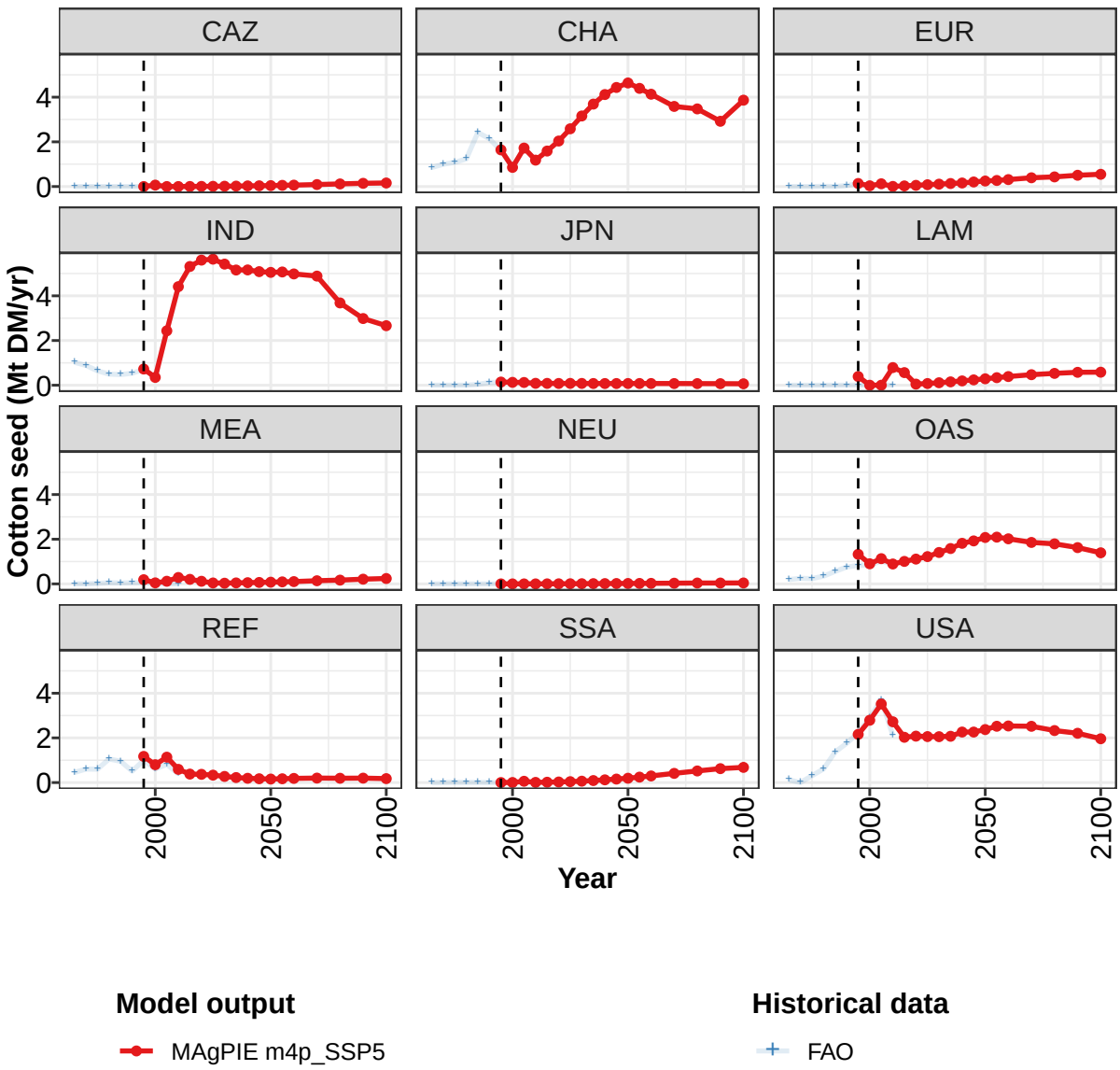
Table 267: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.4	3.7	4.1	5.7	9.5	12.0	13.7	15.4	23.7	31.8
CAZ	0.1	0.1	0.2	0.3	0.3	0.5	0.6	0.6	0.9	0.3
CHA	1.1	1.3	1.3	1.5	3.4	3.2	2.7	4.4	5.5	12.2
EUR	0.1	0.2	0.2	0.3	0.7	2.1	2.7	2.2	3.3	3.4
IND	1.0	0.9	0.7	0.5	0.5	0.6	0.7	0.4	2.5	4.3
JPN	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
LAM	0.1	0.1	0.2	0.4	0.6	1.0	0.9	1.6	1.9	2.5
MEA	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
OAS	0.2	0.3	0.3	0.4	0.6	0.8	0.9	1.0	1.3	1.1
REF	0.5	0.7	0.7	1.3	1.6	1.4	2.0	1.3	1.9	2.9
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2
USA	0.1	0.0	0.4	0.7	1.5	1.9	2.6	3.4	5.9	4.4

Table 268: FAO — Demand—Feed—Crops—Oil crops (Mt DM/yr)

6.2.7 Oil crops—Cotton seed





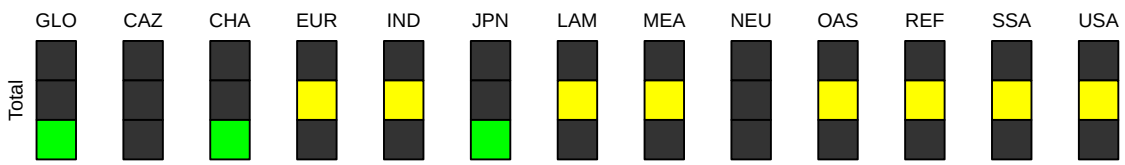


Figure 90: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.9	6.0	10.4	11.0	11.2	11.5	12.2	12.7	13.3	14.2	14.7
CAZ	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.6	0.9	1.7	1.2	1.6	2.0	2.6	3.2	3.7	4.1	4.4
EUR	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
IND	0.7	0.3	2.4	4.4	5.3	5.6	5.6	5.4	5.2	5.2	5.1
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.4	0.0	0.0	0.8	0.6	0.0	0.1	0.1	0.2	0.2	0.2
MEA	0.2	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.3	0.9	1.1	0.9	1.0	1.1	1.2	1.4	1.6	1.8	1.9
REF	1.2	0.8	1.1	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.2
SSA	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
USA	2.2	2.8	3.5	2.7	2.0	2.1	2.1	2.1	2.1	2.3	2.3

Table 269: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

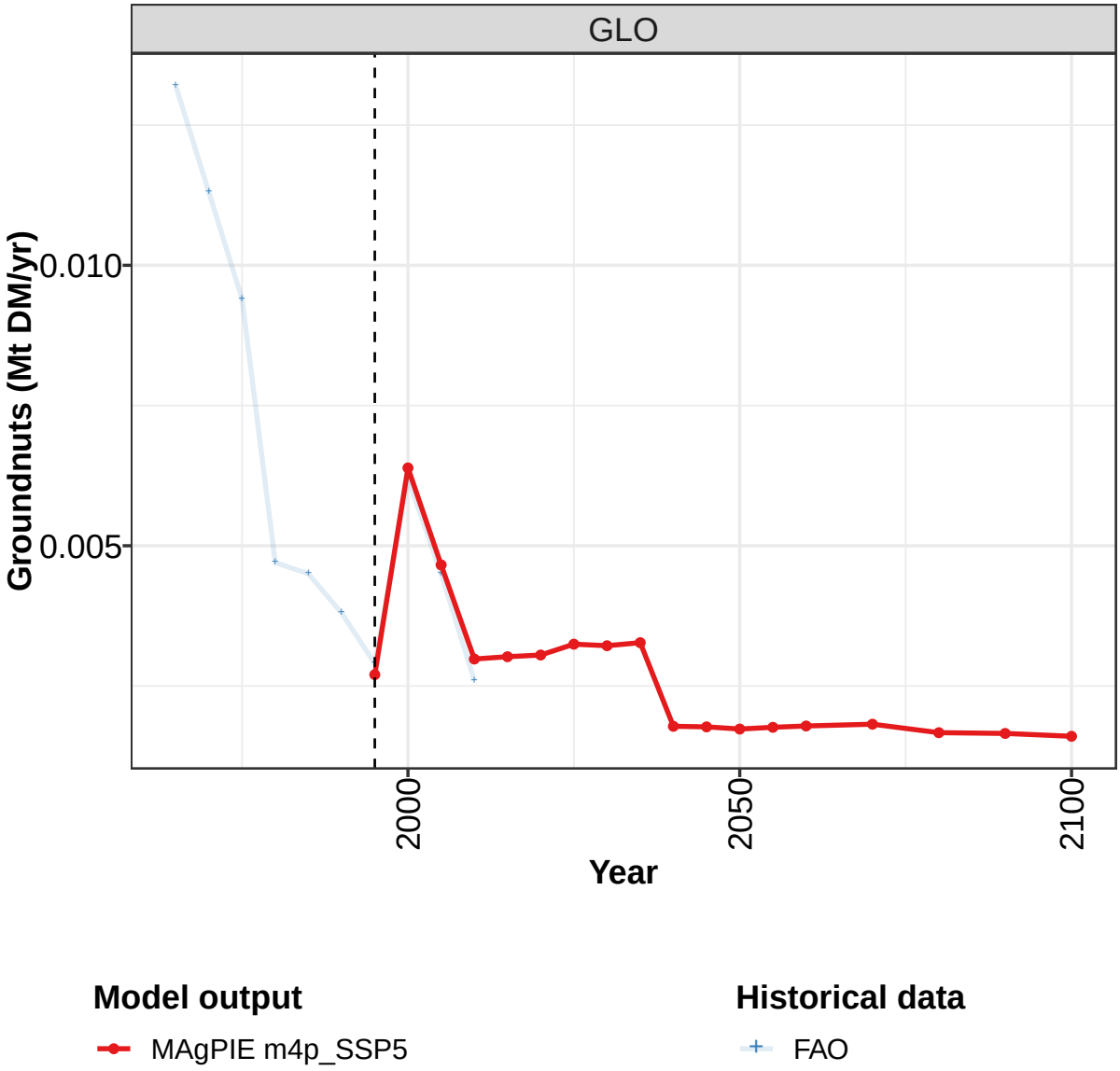
	2050	2055	2060	2070	2080	2090	2100
GLO	15.2	15.3	15.1	14.7	13.4	12.1	12.4
CAZ	0.0	0.1	0.1	0.1	0.1	0.1	0.2
CHA	4.6	4.4	4.1	3.6	3.5	2.9	3.9
EUR	0.2	0.3	0.3	0.4	0.4	0.5	0.5
IND	5.1	5.1	5.0	4.9	3.7	3.0	2.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.3	0.3	0.4	0.5	0.5	0.6	0.6
MEA	0.1	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.1	2.1	2.0	1.9	1.8	1.6	1.4
REF	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SSA	0.2	0.2	0.3	0.4	0.5	0.6	0.7
USA	2.4	2.5	2.5	2.5	2.3	2.2	2.0

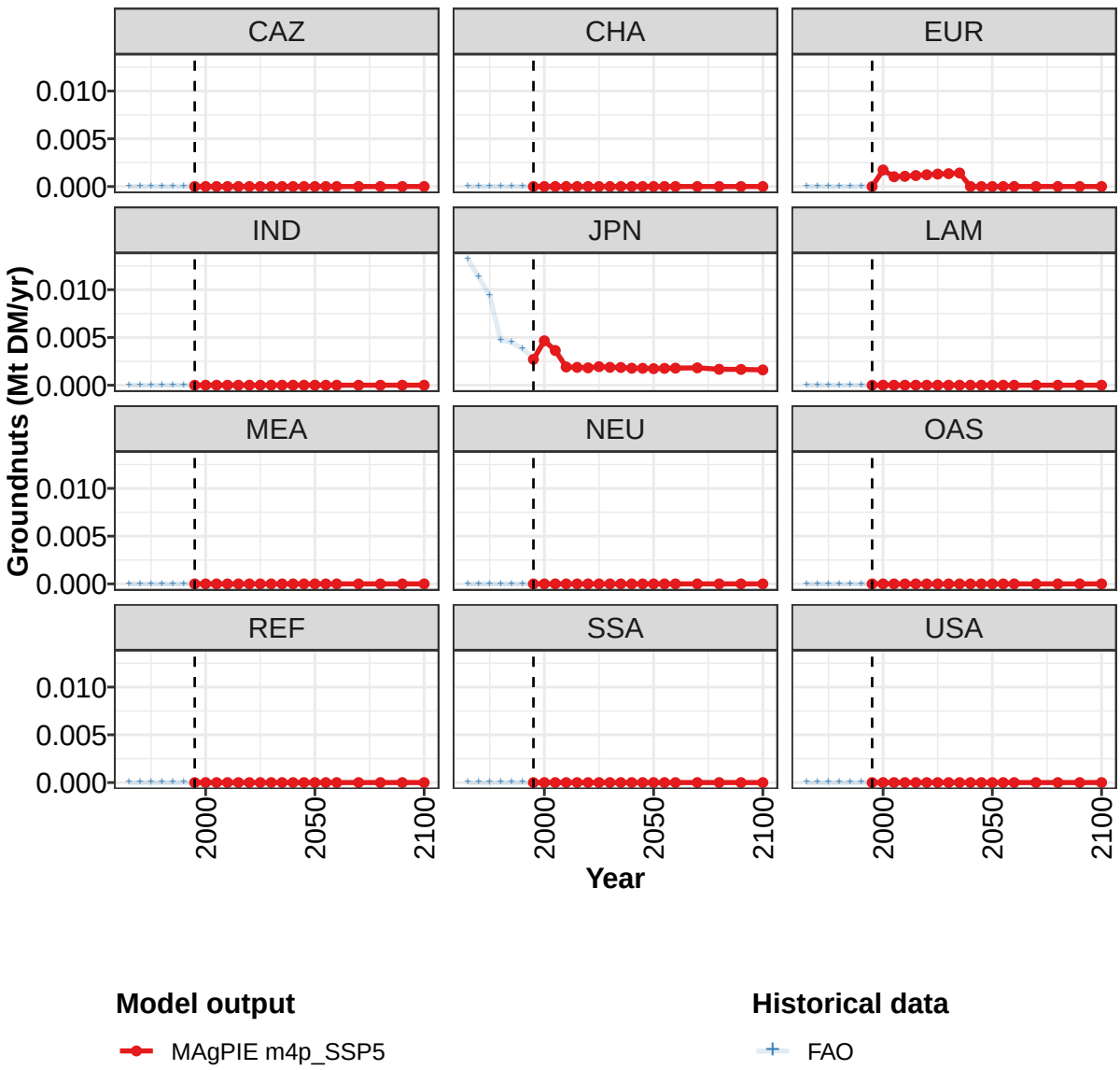
Table 270: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.65	2.74	2.90	3.82	5.87	5.92	6.71	5.72	9.99	8.98
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.85	1.00	1.08	1.23	2.42	2.14	1.61	0.85	1.71	1.18
EUR	0.00	0.00	0.00	0.01	0.00	0.04	0.12	0.02	0.12	0.01
IND	1.03	0.89	0.64	0.50	0.47	0.53	0.71	0.35	2.47	4.33
JPN	0.00	0.00	0.00	0.00	0.04	0.12	0.14	0.13	0.12	0.09
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.02	0.05	0.04	0.05	0.06	0.01	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.19	0.25	0.24	0.35	0.56	0.75	0.83	0.84	1.02	0.86
REF	0.45	0.60	0.60	1.06	0.95	0.51	1.00	0.60	0.81	0.38
SSA	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.01
USA	0.12	0.00	0.31	0.61	1.37	1.76	2.23	2.91	3.71	2.11

Table 271: FAO — Demand—Feed—Crops—Oil crops—Cotton seed (Mt DM/yr)

6.2.8 Oil crops—Groundnuts





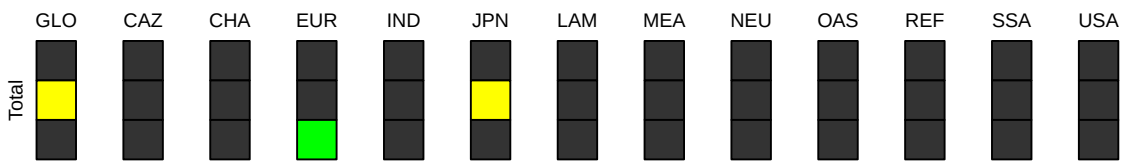


Figure 91: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00270	0.00639	0.00466	0.00298	0.00302	0.00305	0.00325	0.00322	0.00327	0.00178	0.00177
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00174	0.00103	0.00107	0.00115	0.00123	0.00130	0.00135	0.00141	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00270	0.00465	0.00363	0.00191	0.00187	0.00182	0.00194	0.00187	0.00186	0.00178	0.00177
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Table 272: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

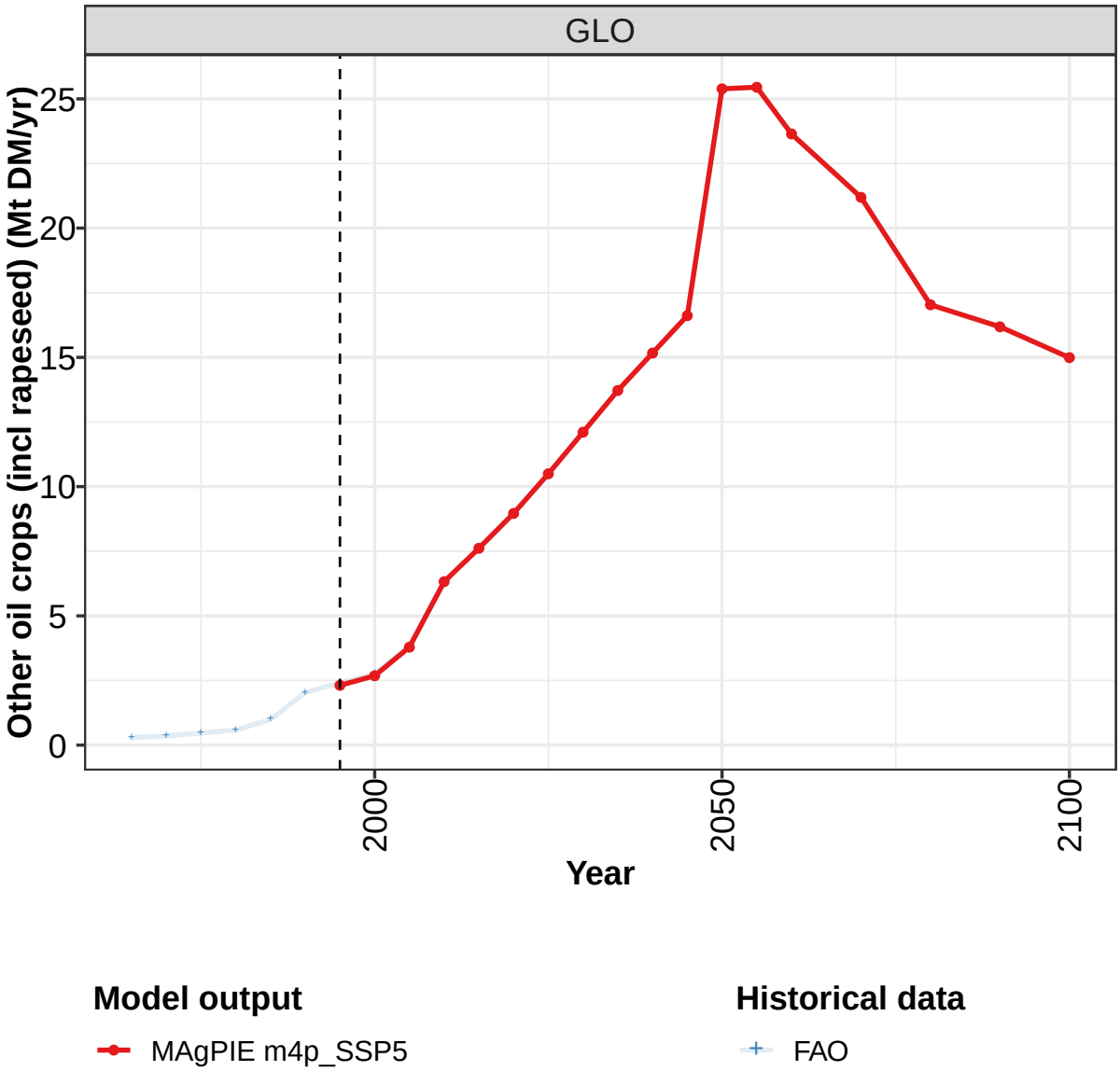
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00173	0.00176	0.00179	0.00182	0.00167	0.00165	0.00160
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00173	0.00176	0.00179	0.00182	0.00167	0.00165	0.00160
LAM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
MEA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
USA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

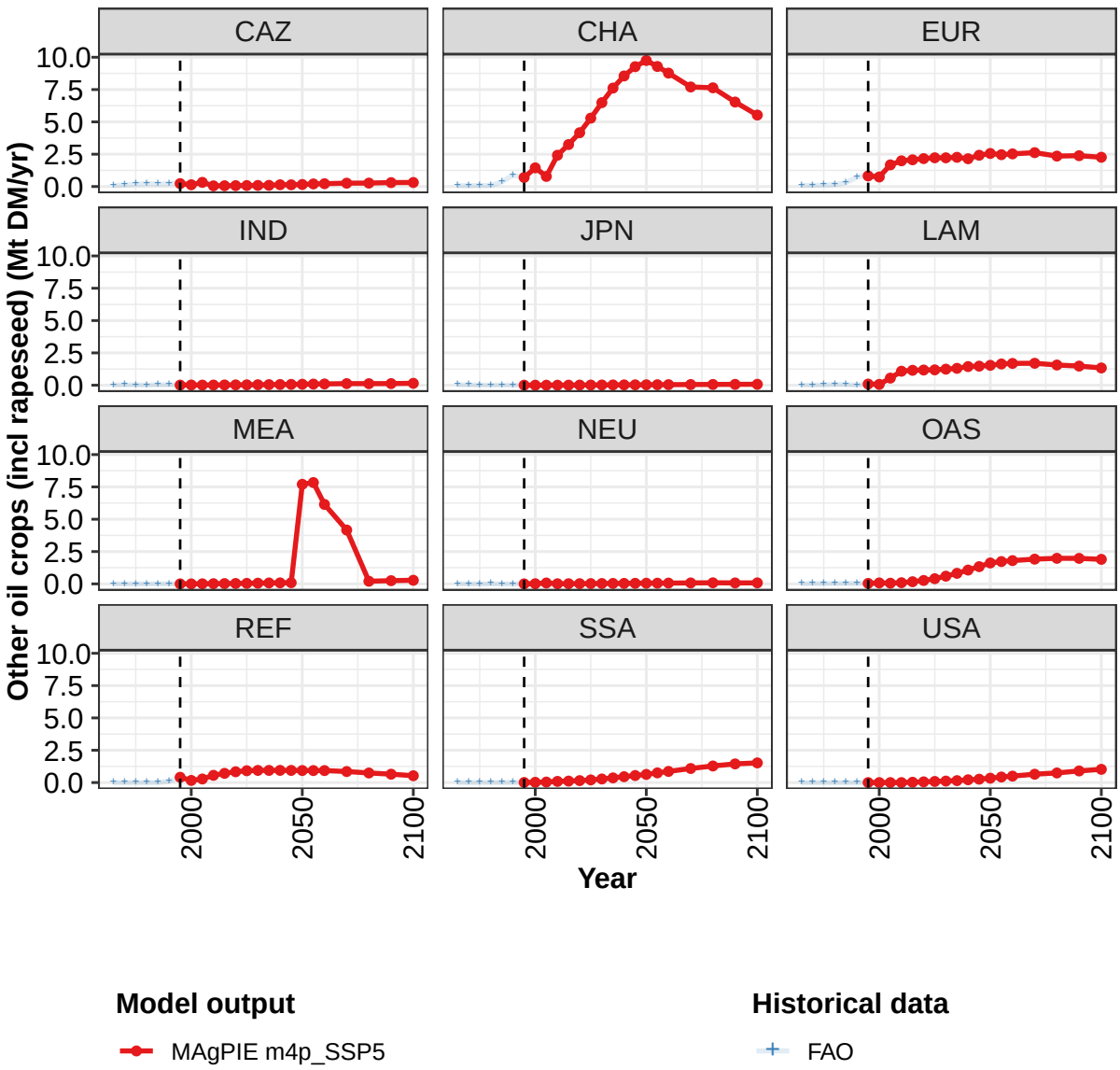
Table 273: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0132	0.0113	0.0094	0.0047	0.0045	0.0038	0.0029	0.0062	0.0045	0.0026
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0015	0.0008	0.0007
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0132	0.0113	0.0094	0.0047	0.0045	0.0038	0.0028	0.0047	0.0038	0.0019
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 274: FAO — Demand—Feed—Crops—Oil crops—Groundnuts (Mt DM/yr)

6.2.9 Oil crops—Other oil crops (incl rapeseed)





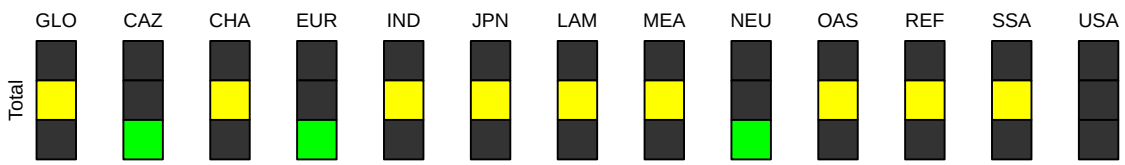


Figure 92: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.3	2.7	3.8	6.3	7.6	9.0	10.5	12.1	13.7	15.2	16.6
CAZ	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.7	1.4	0.8	2.4	3.2	4.2	5.3	6.5	7.6	8.6	9.3
EUR	0.8	0.7	1.7	2.0	2.1	2.2	2.2	2.2	2.3	2.2	2.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.6	1.1	1.2	1.2	1.2	1.2	1.3	1.4	1.5
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
NEU	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.6	0.8	1.1	1.3
REF	0.4	0.2	0.3	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9
SSA	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.5
USA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3

Table 275: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

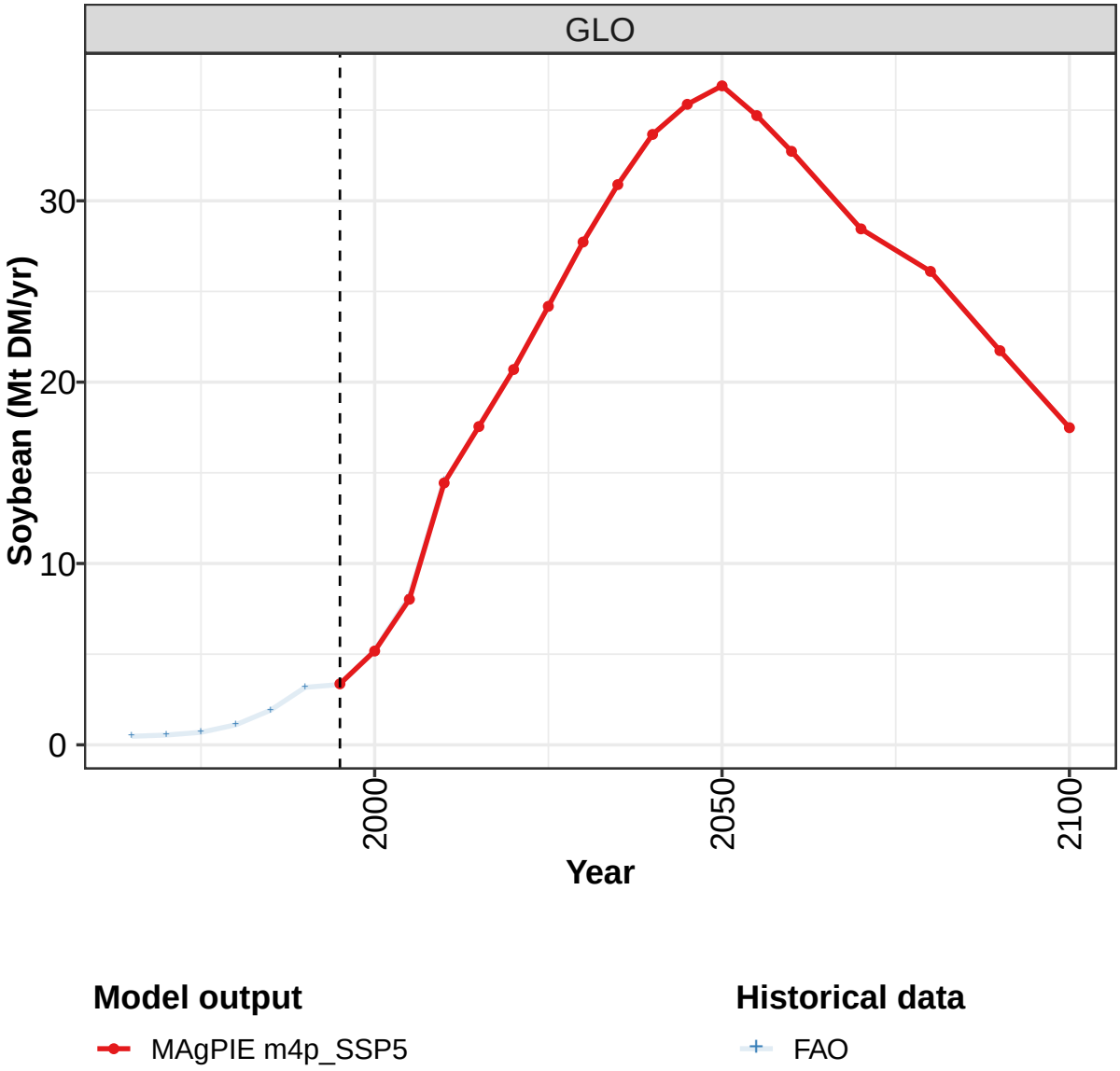
	2050	2055	2060	2070	2080	2090	2100
GLO	25.4	25.5	23.6	21.2	17.0	16.2	15.0
CAZ	0.2	0.2	0.2	0.3	0.3	0.3	0.3
CHA	9.7	9.3	8.8	7.7	7.6	6.5	5.5
EUR	2.6	2.5	2.5	2.6	2.4	2.4	2.3
IND	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.0	0.0	0.0	0.1	0.1	0.1	0.1
LAM	1.5	1.6	1.7	1.7	1.6	1.5	1.3
MEA	7.7	7.8	6.1	4.2	0.2	0.2	0.3
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.6	1.7	1.8	1.9	2.0	2.0	1.9
REF	0.9	0.9	0.9	0.9	0.7	0.6	0.5
SSA	0.6	0.8	0.9	1.1	1.3	1.4	1.5
USA	0.3	0.4	0.5	0.6	0.7	0.9	1.0

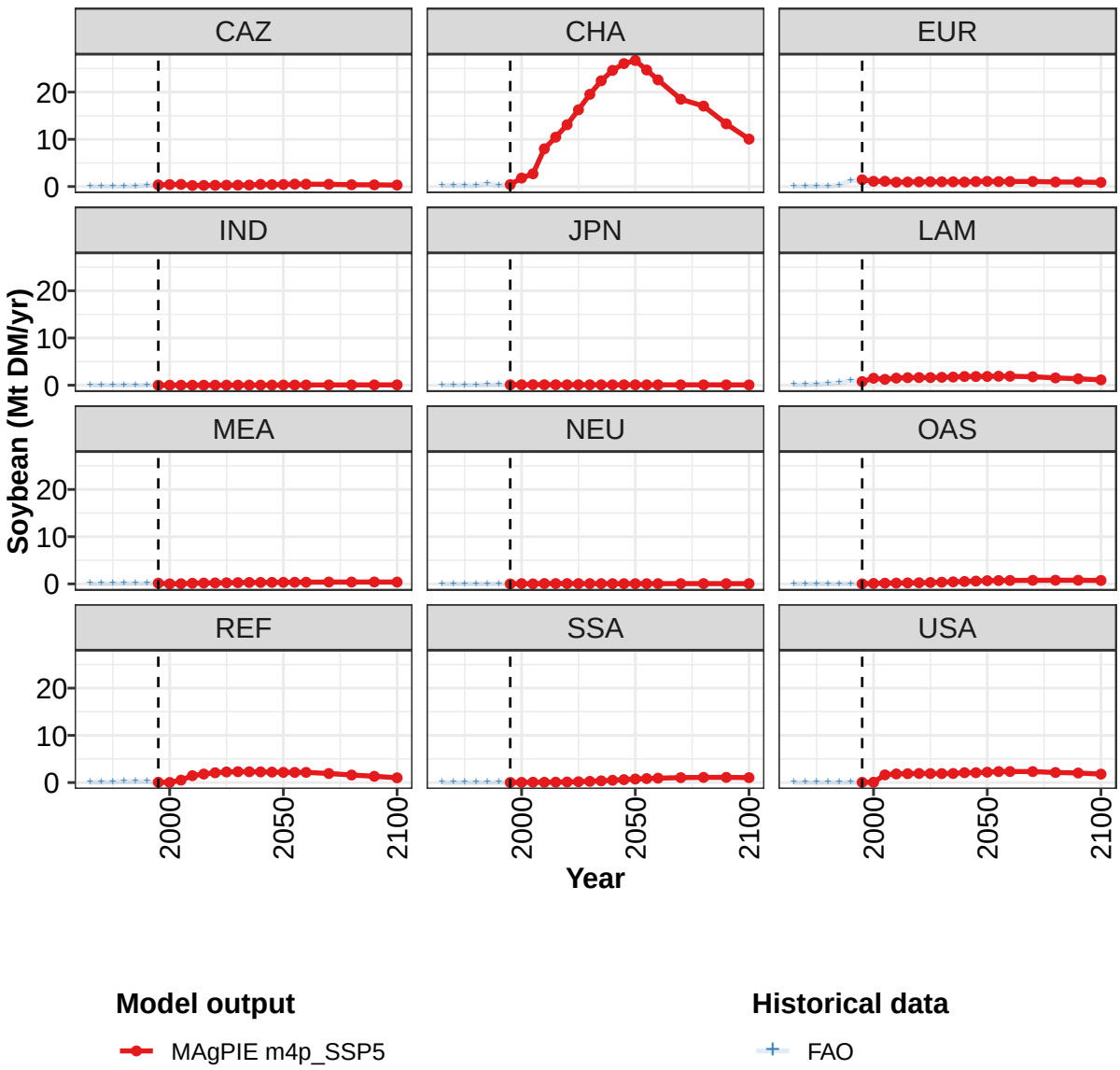
Table 276: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.29	0.36	0.47	0.58	0.99	2.03	2.42	2.77	3.84	6.27
CAZ	0.08	0.12	0.18	0.22	0.20	0.22	0.24	0.16	0.38	0.06
CHA	0.06	0.06	0.08	0.08	0.36	0.87	0.70	1.44	0.78	2.42
EUR	0.08	0.09	0.11	0.15	0.30	0.71	0.93	0.81	1.69	1.95
IND	0.01	0.02	0.02	0.01	0.03	0.03	0.01	0.02	0.01	0.01
JPN	0.03	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.01	0.03	0.07	0.05	0.01	0.09	0.06	0.54	1.04
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
NEU	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.05	0.01
OAS	0.02	0.03	0.04	0.04	0.04	0.05	0.04	0.08	0.06	0.09
REF	0.00	0.00	0.00	0.00	0.00	0.11	0.39	0.16	0.28	0.57
SSA	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.02	0.05	0.09
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 277: FAO — Demand—Feed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

6.2.10 Oil crops—Soybean





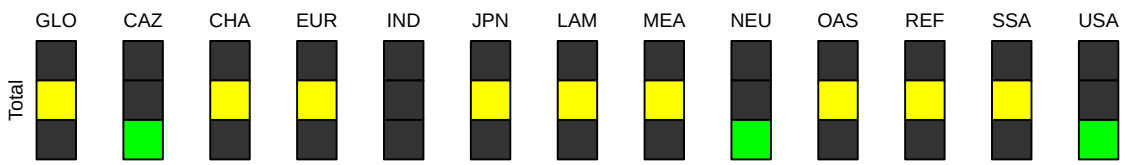


Figure 93: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.4	5.2	8.0	14.4	17.6	20.7	24.2	27.7	30.9	33.7	35.3
CAZ	0.3	0.4	0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.5	0.4
CHA	0.4	1.8	2.7	8.0	10.4	13.1	16.3	19.5	22.4	24.6	26.0
EUR	1.4	1.1	1.1	0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.8	1.5	1.2	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.8
MEA	0.2	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3
NEU	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
OAS	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.6
REF	0.1	0.0	0.5	1.5	1.8	2.1	2.2	2.3	2.3	2.3	2.2
SSA	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.6
USA	0.1	0.1	1.6	1.8	1.9	1.9	1.9	1.9	1.9	2.1	2.1

Table 278: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

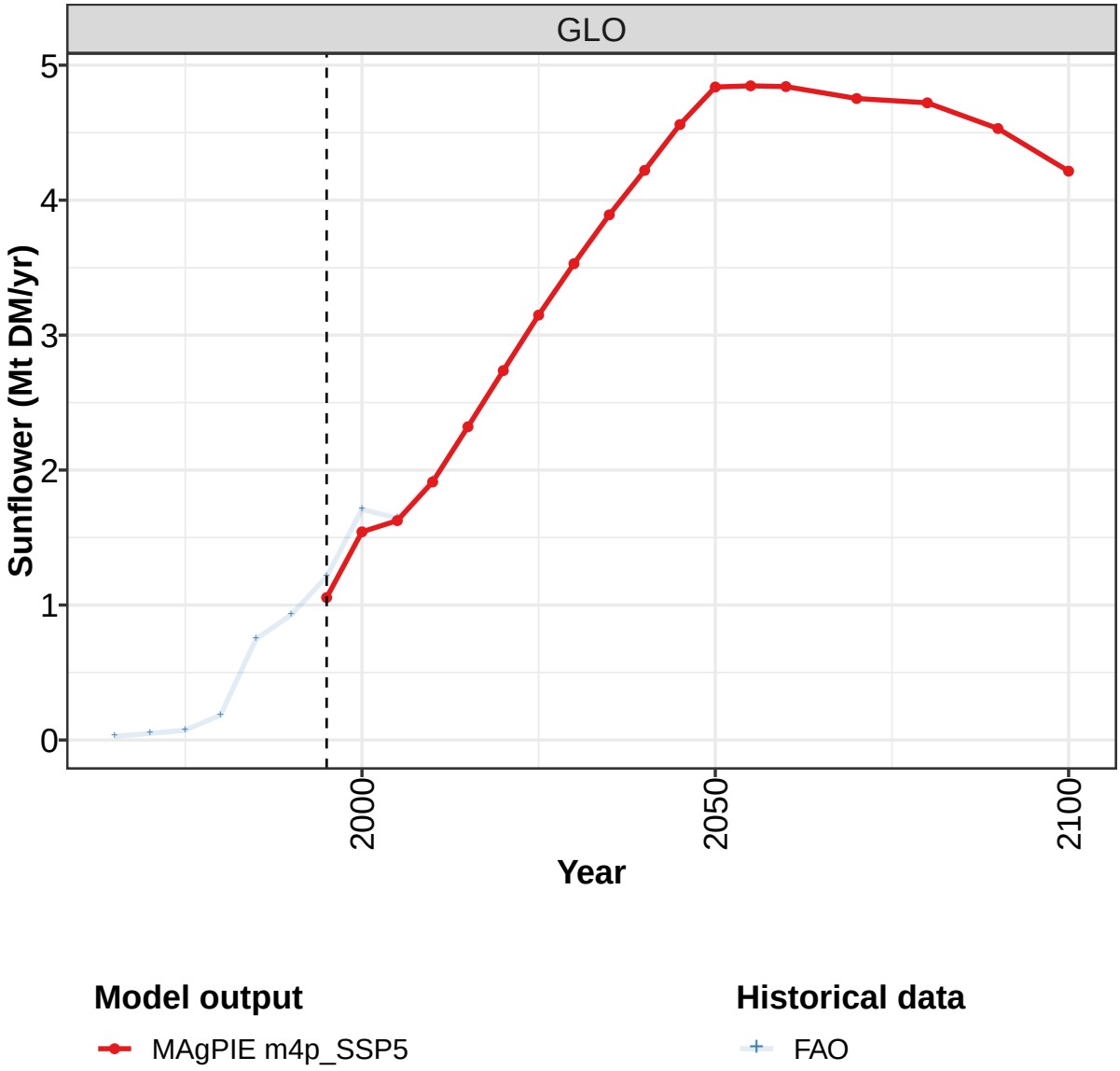
	2050	2055	2060	2070	2080	2090	2100
GLO	36.3	34.7	32.7	28.5	26.1	21.7	17.5
CAZ	0.4	0.5	0.5	0.5	0.4	0.4	0.3
CHA	26.7	24.7	22.6	18.5	17.0	13.3	10.0
EUR	1.1	1.0	1.1	1.1	1.0	0.9	0.9
IND	0.0	0.0	0.0	0.1	0.1	0.1	0.1
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.8	1.9	1.9	1.8	1.5	1.4	1.1
MEA	0.3	0.3	0.4	0.4	0.4	0.4	0.4
NEU	0.0	0.0	0.0	0.1	0.1	0.0	0.0
OAS	0.7	0.7	0.7	0.8	0.8	0.8	0.7
REF	2.2	2.2	2.2	1.9	1.6	1.3	1.0
SSA	0.8	0.8	0.9	1.0	1.1	1.1	1.0
USA	2.2	2.3	2.3	2.3	2.1	2.0	1.8

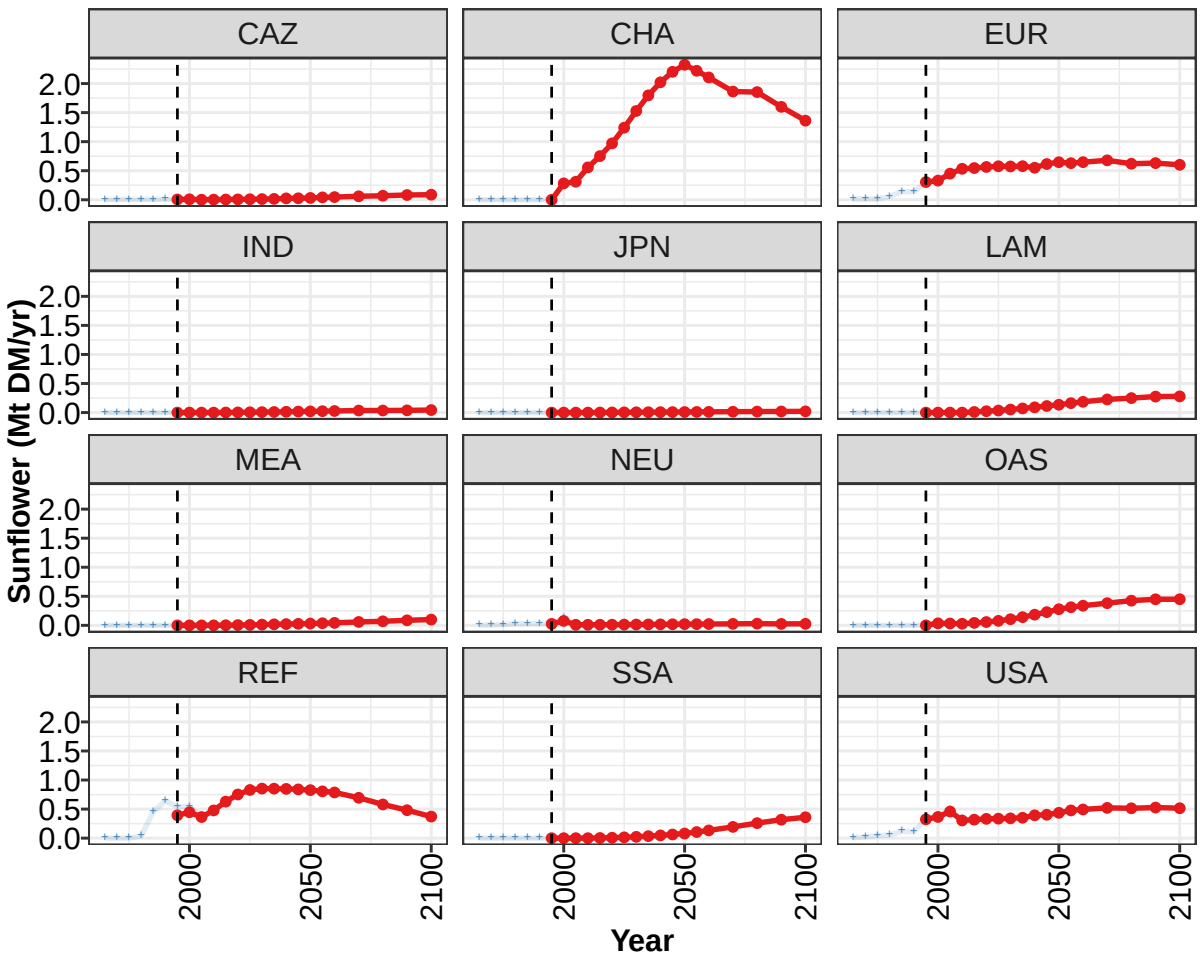
Table 279: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.5	0.5	0.7	1.1	1.9	3.2	3.3	5.2	8.2	14.6
CAZ	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.5	0.5	0.2
CHA	0.2	0.2	0.2	0.2	0.6	0.2	0.4	1.8	2.7	8.0
EUR	0.0	0.1	0.1	0.1	0.3	1.2	1.4	1.1	1.1	0.9
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.1	0.1	0.2	0.4	0.5	1.0	0.8	1.5	1.4	1.5
MEA	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
REF	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.5	1.5
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.7	2.0

Table 280: FAO — Demand—Feed—Crops—Oil crops—Soybean (Mt DM/yr)

6.2.11 Oil crops—Sunflower





Model output

MAgPIE m4p_SSP5

Historical data

FAO

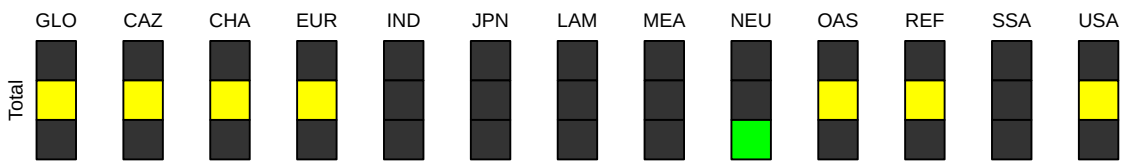


Figure 94: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.06	1.54	1.63	1.91	2.32	2.74	3.15	3.53	3.89	4.22	4.56
CAZ	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03
CHA	0.00	0.28	0.31	0.56	0.75	0.97	1.24	1.53	1.80	2.02	2.20
EUR	0.31	0.33	0.45	0.53	0.55	0.57	0.58	0.57	0.58	0.55	0.62
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
LAM	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.05	0.07	0.09	0.11
MEA	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03
NEU	0.03	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
OAS	0.00	0.03	0.03	0.03	0.04	0.06	0.08	0.11	0.14	0.18	0.23
REF	0.39	0.45	0.36	0.48	0.63	0.75	0.83	0.85	0.85	0.85	0.84
SSA	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.05	0.06
USA	0.32	0.36	0.46	0.30	0.32	0.33	0.34	0.34	0.35	0.39	0.40

Table 281: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

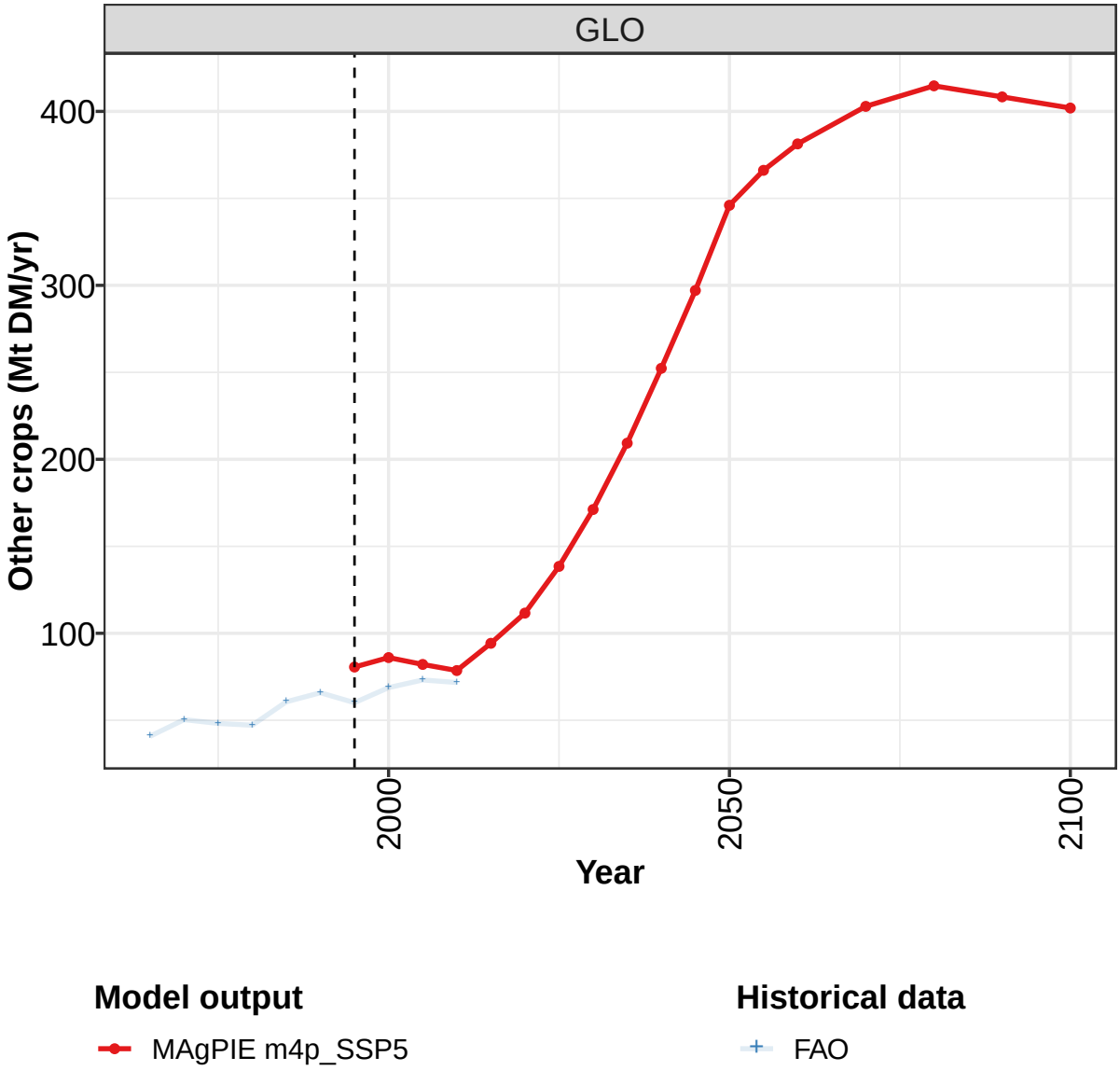
	2050	2055	2060	2070	2080	2090	2100
GLO	4.84	4.85	4.84	4.75	4.72	4.53	4.21
CAZ	0.03	0.04	0.05	0.06	0.07	0.08	0.09
CHA	2.32	2.22	2.11	1.86	1.85	1.60	1.36
EUR	0.65	0.63	0.65	0.68	0.62	0.63	0.60
IND	0.02	0.02	0.03	0.03	0.04	0.04	0.04
JPN	0.01	0.01	0.01	0.01	0.02	0.02	0.02
LAM	0.13	0.16	0.18	0.23	0.25	0.28	0.28
MEA	0.03	0.04	0.04	0.06	0.07	0.09	0.10
NEU	0.02	0.02	0.02	0.03	0.03	0.02	0.03
OAS	0.28	0.31	0.34	0.38	0.43	0.45	0.45
REF	0.83	0.81	0.79	0.69	0.58	0.48	0.37
SSA	0.08	0.11	0.13	0.19	0.26	0.32	0.36
USA	0.44	0.48	0.49	0.52	0.51	0.53	0.52

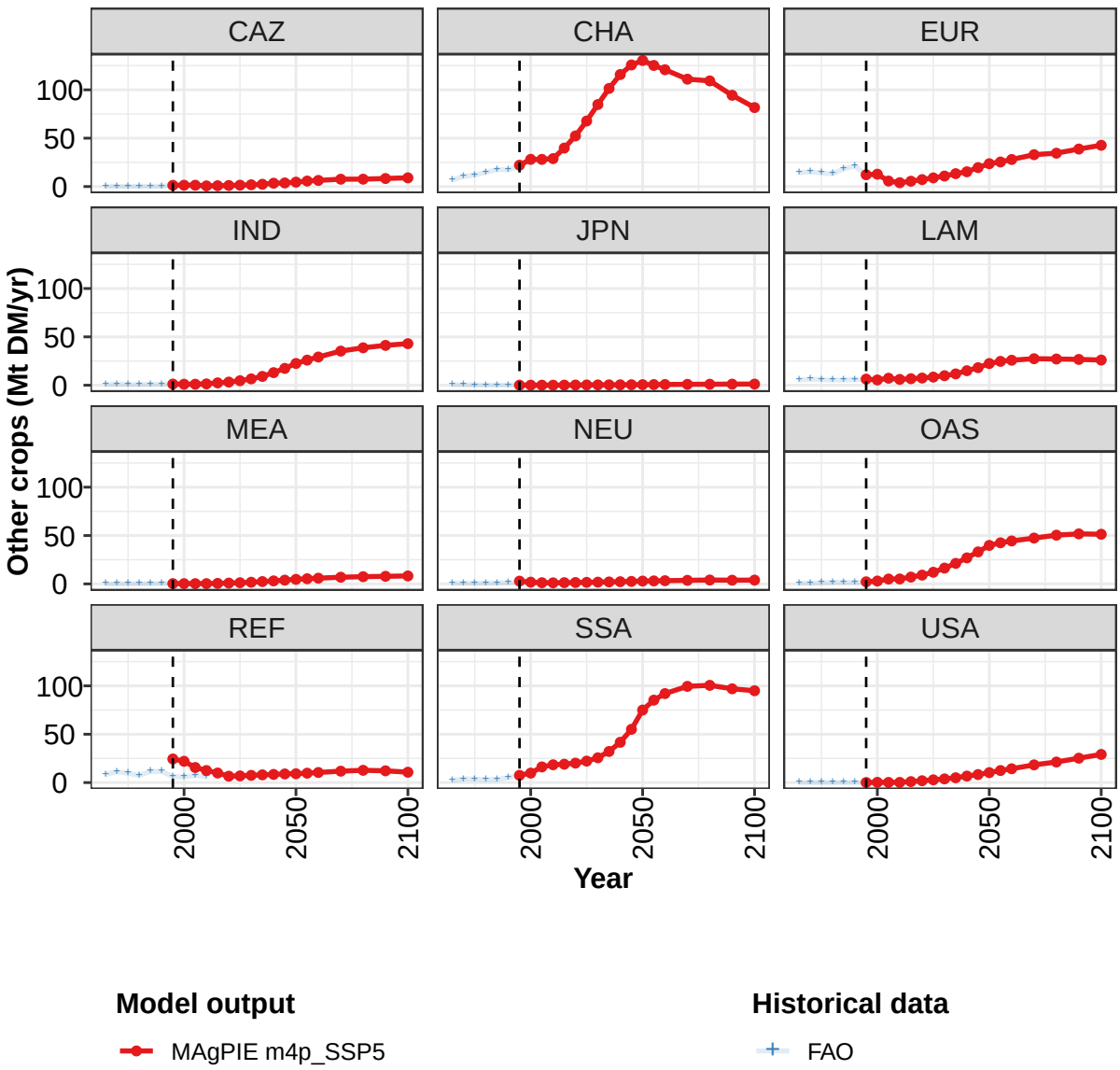
Table 282: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.03	0.05	0.07	0.19	0.75	0.93	1.21	1.71	1.64	1.93
CAZ	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.31	0.56
EUR	0.02	0.01	0.01	0.06	0.14	0.14	0.29	0.32	0.43	0.52
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.01	0.01	0.03	0.03	0.03	0.03	0.12	0.02	0.01
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.03
REF	0.00	0.00	0.00	0.04	0.45	0.64	0.54	0.54	0.37	0.48
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.01	0.02	0.04	0.05	0.12	0.11	0.33	0.38	0.48	0.33

Table 283: FAO — Demand—Feed—Crops—Oil crops—Sunflower (Mt DM/yr)

6.2.12 Other crops





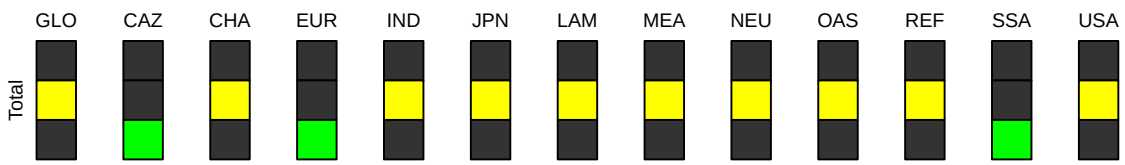


Figure 95: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	86	82	79	94	112	138	171	209	252	297
CAZ	1	1	1	1	1	1	1	2	2	3	4
CHA	22	28	28	29	40	52	68	85	101	116	126
EUR	12	13	6	4	5	7	9	11	13	15	20
IND	1	1	1	1	2	3	5	7	9	13	17
JPN	0	0	0	0	0	0	0	0	0	0	1
LAM	6	5	7	6	7	7	8	10	12	15	18
MEA	0	0	0	0	1	1	1	2	2	3	4
NEU	3	2	1	1	1	1	2	2	2	2	3
OAS	2	3	5	5	7	9	12	16	21	27	33
REF	24	22	16	12	10	7	7	7	8	8	9
SSA	8	10	16	18	19	20	22	26	32	42	55
USA	0	0	0	0	1	2	3	4	5	7	8

Table 284: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops (Mt DM/yr) [PART 1/2]

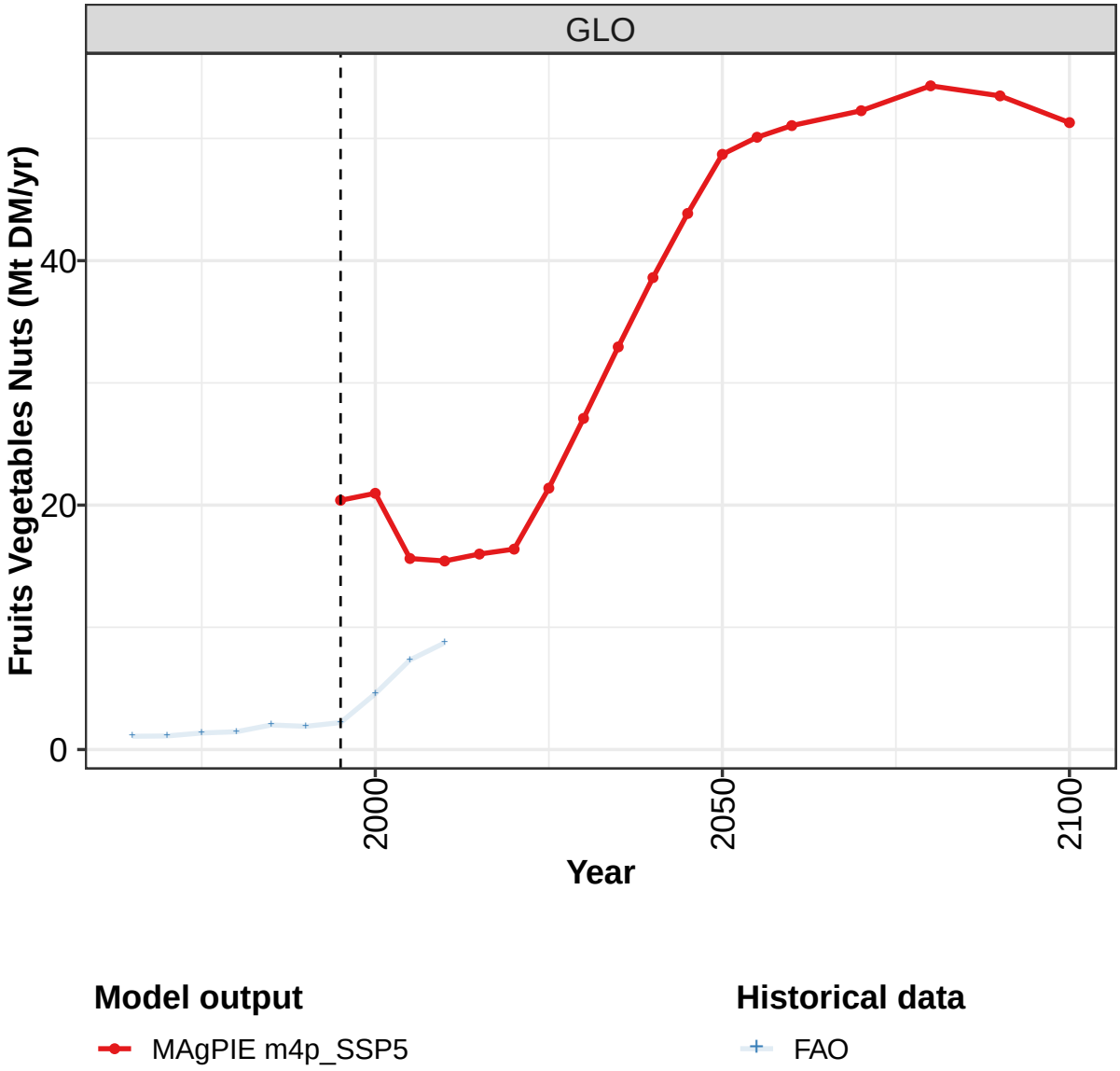
	2050	2055	2060	2070	2080	2090	2100
GLO	346	366	381	403	415	408	402
CAZ	5	6	6	8	8	8	9
CHA	130	125	121	111	109	94	82
EUR	24	25	28	33	34	39	43
IND	22	26	29	35	39	41	43
JPN	1	1	1	1	1	1	1
LAM	22	25	26	27	27	27	26
MEA	5	5	6	7	7	8	8
NEU	3	3	3	4	4	4	4
OAS	40	43	44	47	50	52	51
REF	9	10	10	12	13	12	11
SSA	75	85	92	100	101	97	95
USA	10	12	14	18	21	25	29

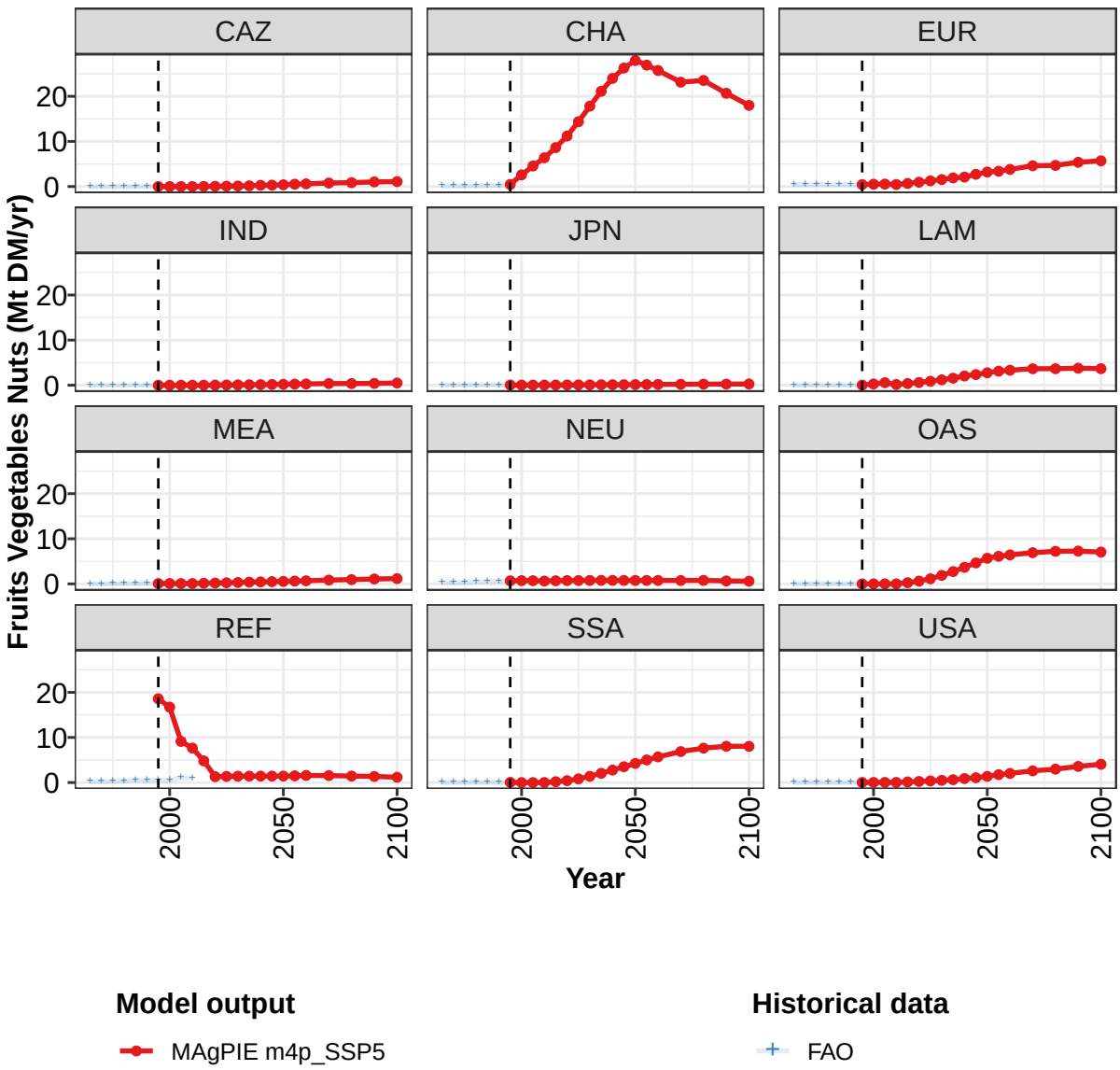
Table 285: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	40.8	50.4	48.2	47.2	60.6	65.8	60.1	68.8	73.2	71.7
CAZ	0.0	0.0	0.0	0.1	0.2	0.3	1.8	1.7	1.8	0.7
CHA	6.8	10.4	11.9	14.7	17.6	17.1	21.6	27.9	27.9	28.9
EUR	14.4	15.2	14.1	13.1	18.5	20.9	12.1	12.6	5.6	3.9
IND	1.0	1.0	0.8	0.7	0.9	1.0	1.2	1.1	1.1	1.4
JPN	0.6	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0
LAM	5.4	6.4	5.7	5.3	5.4	6.0	6.0	5.5	6.9	5.7
MEA	0.1	0.1	0.3	0.2	0.4	0.5	0.3	0.3	0.3	0.3
NEU	0.8	0.8	0.7	0.8	1.0	1.4	1.1	1.2	1.2	1.1
OAS	0.8	0.7	1.1	1.7	1.6	1.7	1.9	2.4	4.4	5.2
REF	8.2	11.4	9.6	7.4	11.6	11.5	6.3	5.7	7.6	5.8
SSA	2.3	3.8	3.6	3.0	3.2	5.1	7.6	9.9	16.2	18.4
USA	0.3	0.1	0.1	0.1	0.1	0.3	0.1	0.3	0.2	0.2

Table 286: FAO — Demand—Feed—Crops—Other crops (Mt DM/yr)

6.2.13 Other crops—Fruits Vegetables Nuts





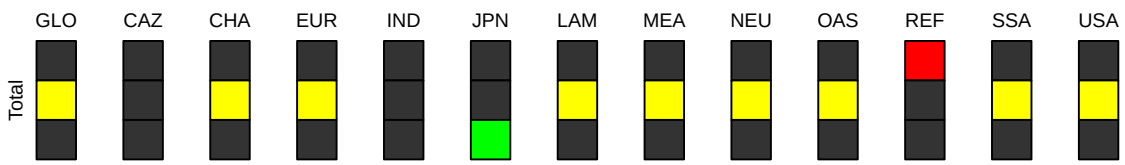


Figure 96: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	20.4	21.0	15.6	15.4	16.0	16.4	21.4	27.1	32.9	38.6	43.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3
CHA	0.5	2.6	4.6	6.4	8.6	11.2	14.4	17.8	21.1	24.0	26.3
EUR	0.4	0.5	0.5	0.5	0.7	1.0	1.3	1.6	1.9	2.1	2.7
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
JPN	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.0	0.3	0.6	0.2	0.4	0.6	0.9	1.2	1.6	2.0	2.4
MEA	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.5
NEU	0.7	0.7	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8
OAS	0.0	0.0	0.0	0.0	0.3	0.6	1.1	1.9	2.7	3.7	4.6
REF	18.6	16.7	9.1	7.7	4.8	1.3	1.4	1.4	1.4	1.4	1.4
SSA	0.1	0.0	0.0	0.0	0.2	0.4	0.8	1.4	2.1	2.8	3.5
USA	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.6	0.9	1.1

Table 287: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

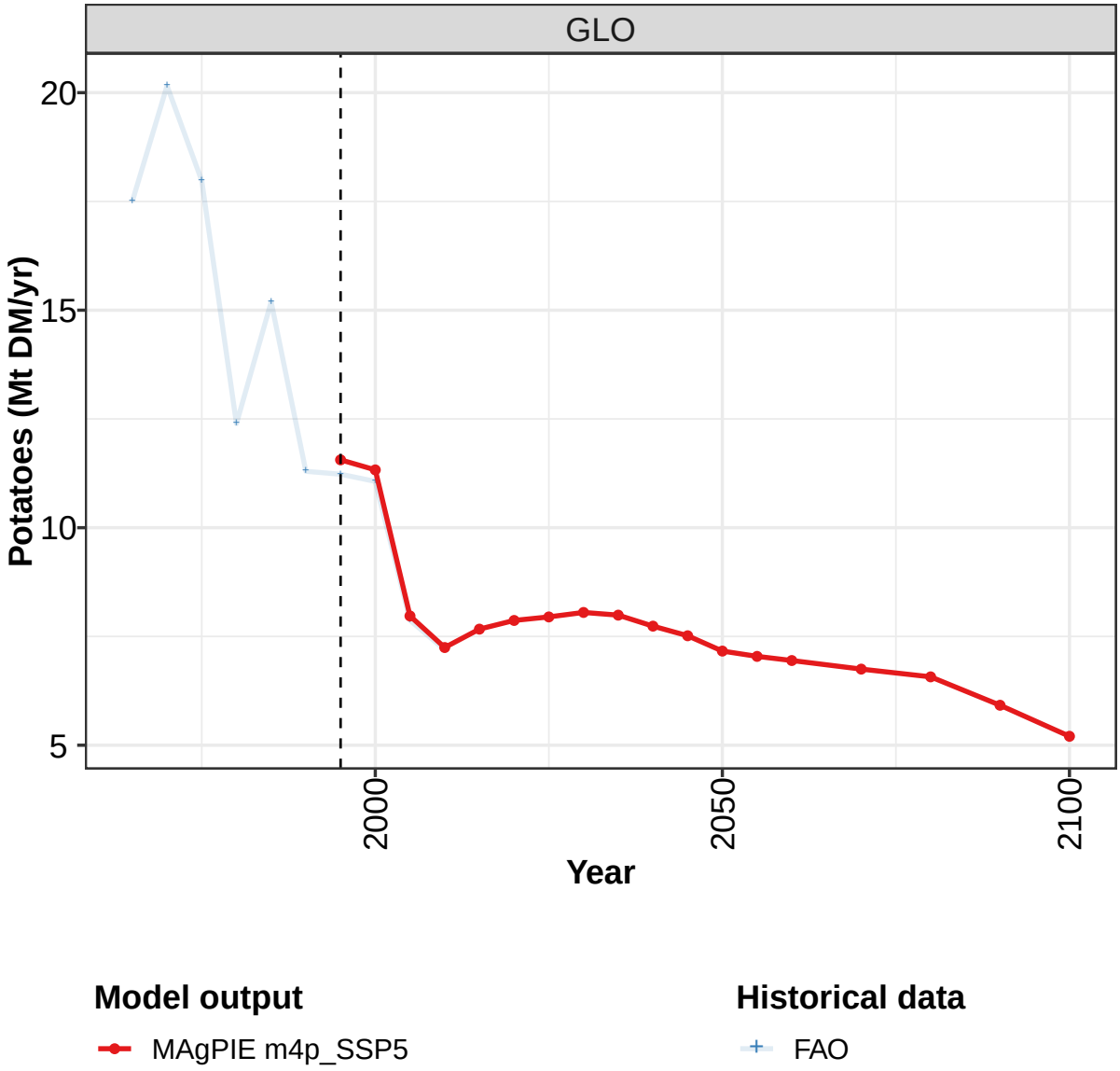
	2050	2055	2060	2070	2080	2090	2100
GLO	48.7	50.1	51.1	52.3	54.3	53.5	51.3
CAZ	0.4	0.5	0.6	0.8	0.9	1.0	1.1
CHA	27.9	26.9	25.7	23.1	23.5	20.7	18.0
EUR	3.2	3.4	3.8	4.6	4.7	5.4	5.7
IND	0.2	0.2	0.3	0.4	0.4	0.4	0.5
JPN	0.1	0.2	0.2	0.2	0.2	0.2	0.3
LAM	2.8	3.1	3.3	3.6	3.7	3.8	3.7
MEA	0.5	0.6	0.7	0.8	0.9	1.1	1.2
NEU	0.8	0.8	0.8	0.8	0.8	0.7	0.6
OAS	5.7	6.1	6.4	6.9	7.2	7.3	7.1
REF	1.4	1.5	1.6	1.6	1.4	1.4	1.2
SSA	4.2	5.0	5.7	6.9	7.6	8.0	8.0
USA	1.4	1.8	2.0	2.6	3.0	3.6	4.1

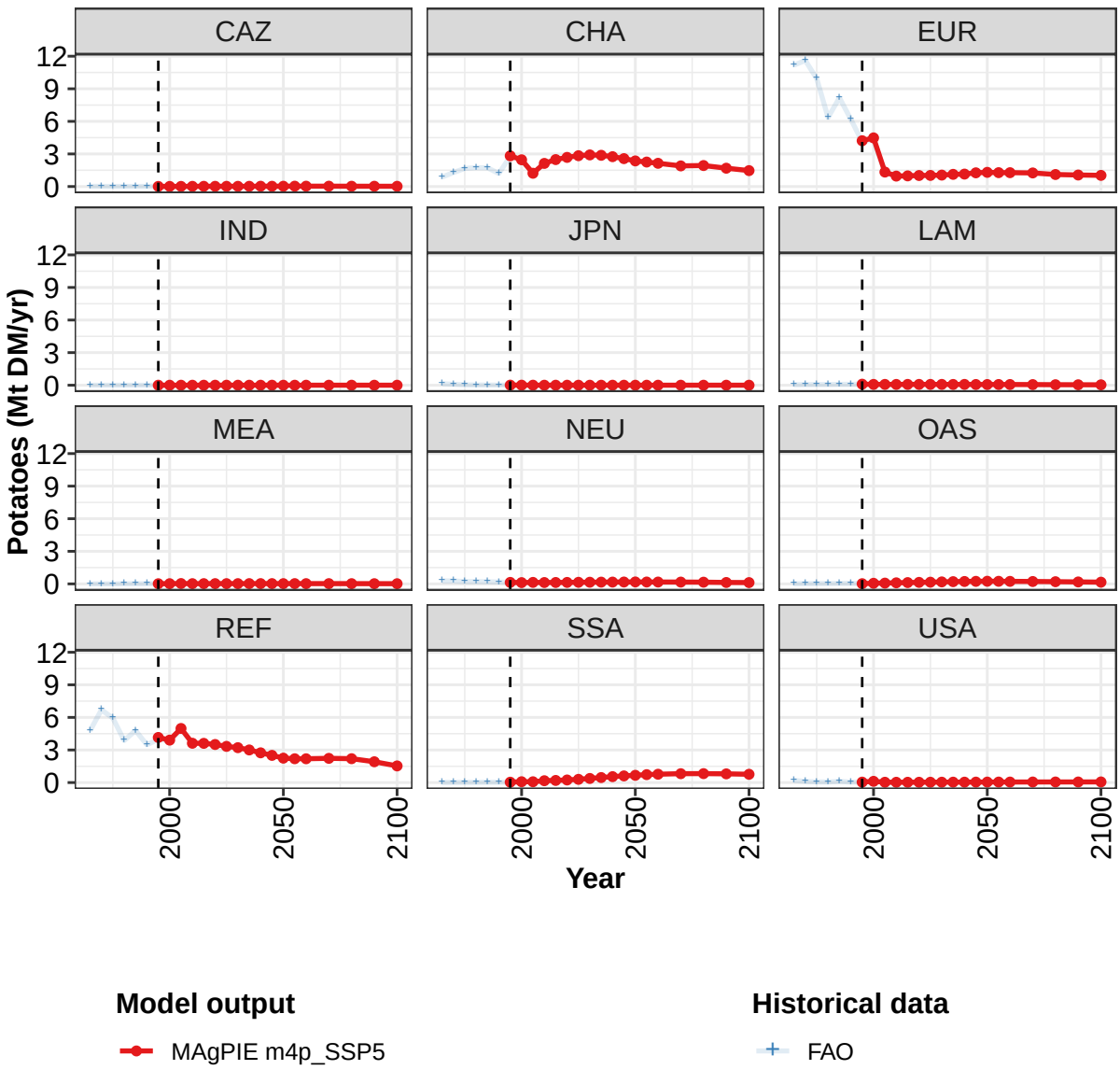
Table 288: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.08	1.11	1.36	1.46	2.01	1.90	2.21	4.57	7.33	8.74
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.13	0.11	0.13	0.14	0.24	0.26	0.45	2.56	4.52	6.38
EUR	0.44	0.43	0.49	0.41	0.51	0.40	0.44	0.52	0.53	0.44
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.01	0.01	0.02	0.02	0.04	0.05	0.04	0.03	0.03	0.03
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.16	0.35	0.14
MEA	0.01	0.01	0.03	0.04	0.05	0.09	0.11	0.10	0.08	0.09
NEU	0.28	0.32	0.36	0.44	0.54	0.55	0.59	0.66	0.69	0.64
OAS	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
REF	0.18	0.20	0.29	0.35	0.58	0.50	0.50	0.47	1.08	0.97
SSA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
USA	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04

Table 289: FAO — Demand—Feed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

6.2.14 Other crops—Potatoes





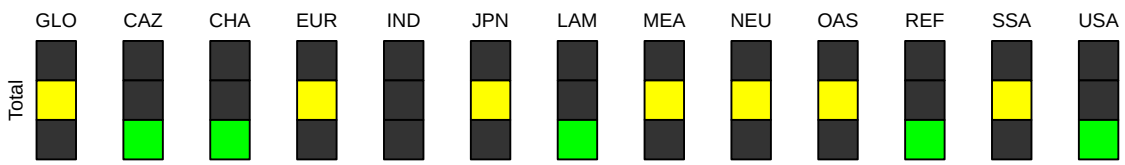


Figure 97: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.6	11.3	8.0	7.2	7.7	7.9	7.9	8.1	8.0	7.7	7.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.8	2.5	1.2	2.1	2.5	2.7	2.8	2.9	2.9	2.7	2.6
EUR	4.2	4.5	1.3	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
OAS	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
REF	4.2	3.9	5.0	3.6	3.6	3.5	3.3	3.2	3.0	2.7	2.5
SSA	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.6
USA	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 290: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

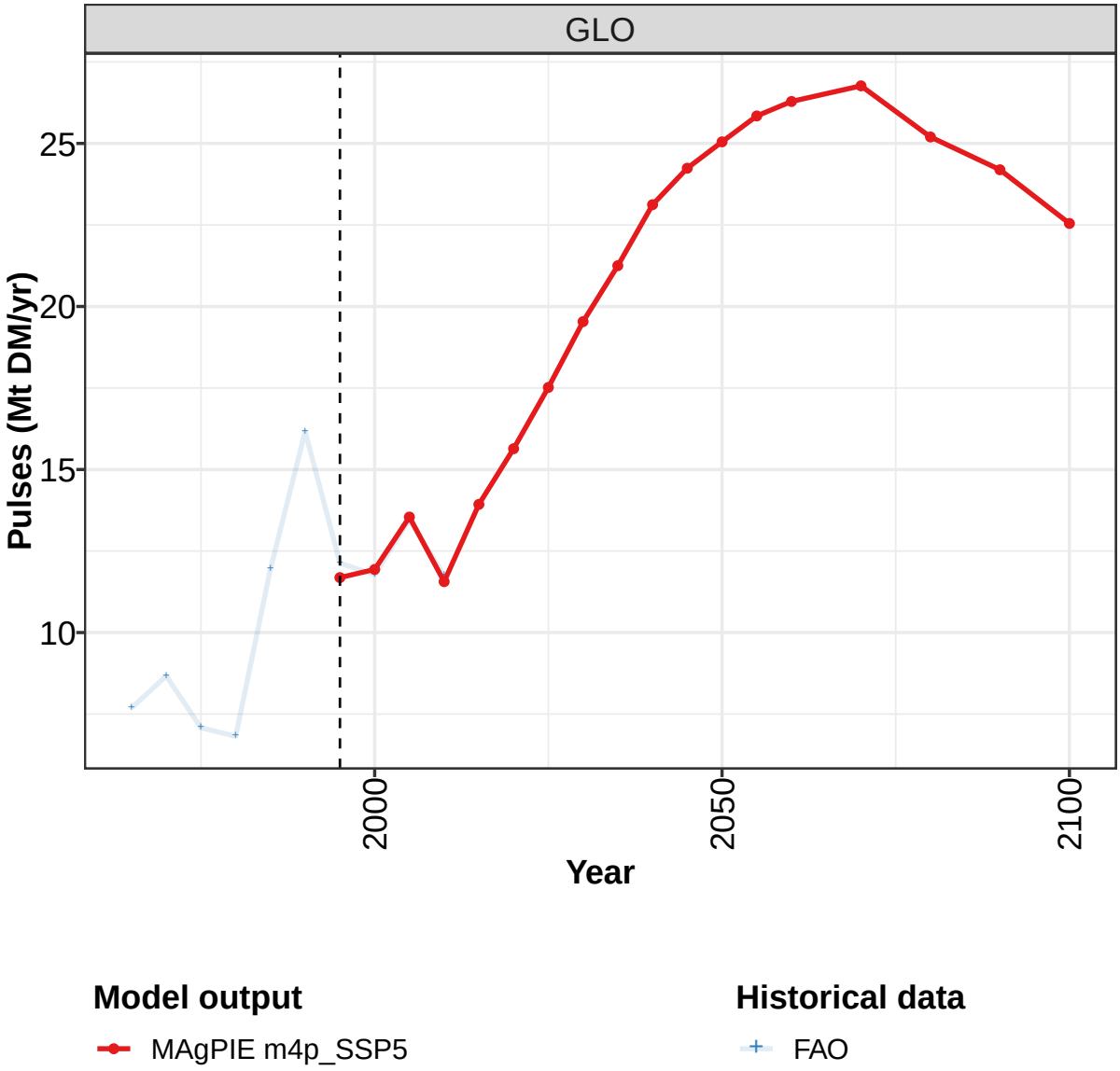
	2050	2055	2060	2070	2080	2090	2100
GLO	7.2	7.0	6.9	6.7	6.6	5.9	5.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.4	2.3	2.1	1.9	1.9	1.7	1.5
EUR	1.3	1.3	1.3	1.3	1.1	1.1	1.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.1	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.2	0.2	0.2	0.2	0.2	0.1	0.1
OAS	0.2	0.2	0.2	0.2	0.2	0.2	0.2
REF	2.3	2.2	2.2	2.2	2.2	1.9	1.5
SSA	0.7	0.7	0.8	0.8	0.8	0.8	0.8
USA	0.0	0.0	0.0	0.1	0.1	0.1	0.1

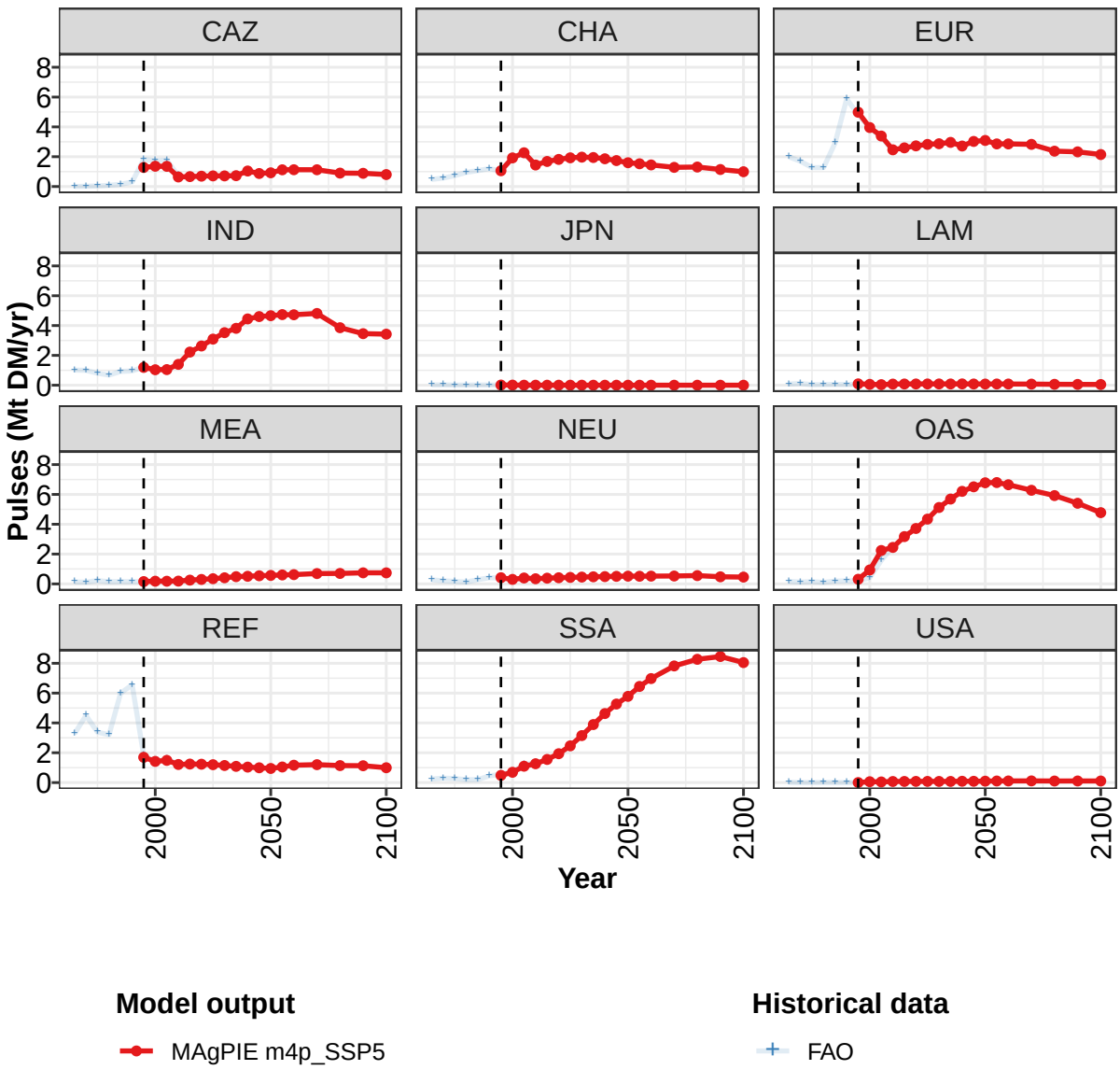
Table 291: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	17.5	20.2	18.0	12.4	15.2	11.3	11.2	11.1	7.9	7.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.9	1.3	1.7	1.7	1.7	1.2	2.8	2.4	1.2	2.1
EUR	11.2	11.6	9.9	6.4	8.2	6.2	4.1	4.3	1.3	0.9
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
REF	4.8	6.7	5.9	3.9	4.8	3.5	4.0	3.8	4.9	3.6
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
USA	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0

Table 292: FAO — Demand—Feed—Crops—Other crops—Potatoes (Mt DM/yr)

6.2.15 Other crops—Pulses





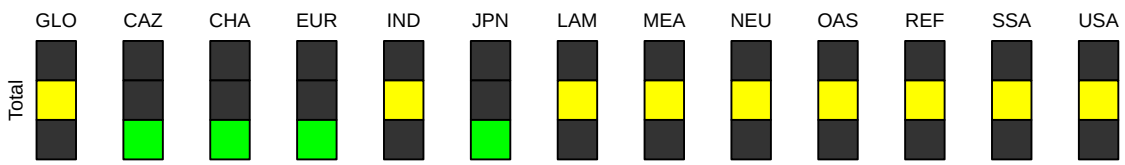


Figure 98: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.7	11.9	13.5	11.6	13.9	15.6	17.5	19.5	21.3	23.1	24.2
CAZ	1.3	1.4	1.4	0.6	0.7	0.7	0.7	0.7	0.7	1.0	0.9
CHA	1.1	1.9	2.3	1.4	1.7	1.8	1.9	2.0	1.9	1.9	1.7
EUR	5.0	4.0	3.4	2.5	2.6	2.7	2.8	2.9	3.0	2.7	3.0
IND	1.2	1.0	1.0	1.4	2.2	2.6	3.1	3.5	3.8	4.4	4.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MEA	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.5
NEU	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5
OAS	0.3	0.9	2.2	2.4	3.2	3.7	4.3	5.1	5.7	6.2	6.5
REF	1.7	1.4	1.5	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.0
SSA	0.5	0.7	1.1	1.3	1.6	1.9	2.5	3.2	3.9	4.6	5.3
USA	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 293: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

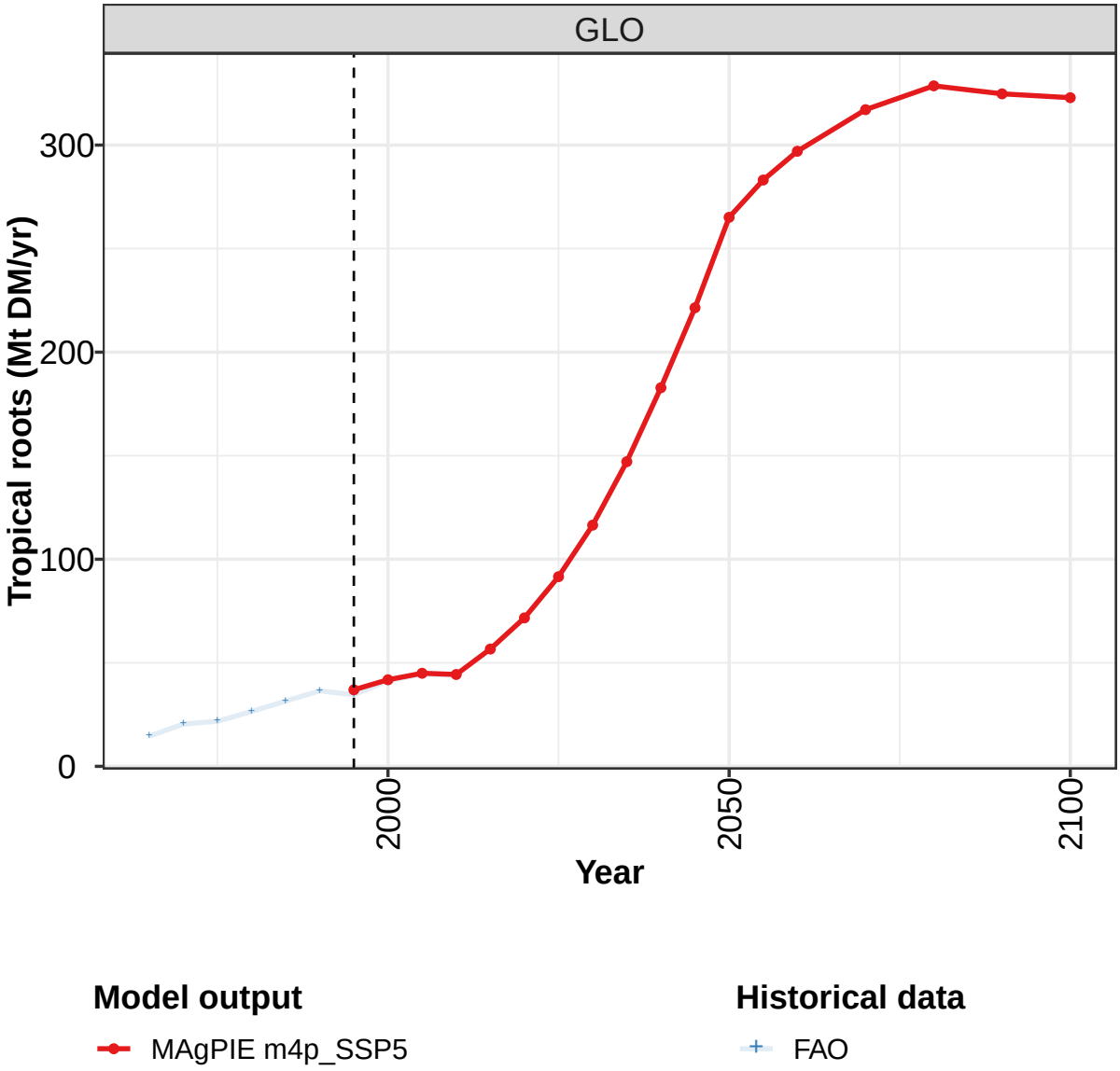
	2050	2055	2060	2070	2080	2090	2100
GLO	25.0	25.8	26.3	26.8	25.2	24.2	22.5
CAZ	0.9	1.1	1.1	1.1	0.9	0.9	0.8
CHA	1.6	1.5	1.5	1.3	1.3	1.1	1.0
EUR	3.1	2.9	2.9	2.8	2.4	2.3	2.1
IND	4.7	4.7	4.7	4.8	3.9	3.5	3.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.1	0.1	0.1	0.0
MEA	0.6	0.6	0.6	0.7	0.7	0.7	0.7
NEU	0.5	0.5	0.5	0.5	0.6	0.5	0.5
OAS	6.8	6.8	6.6	6.3	5.9	5.4	4.8
REF	0.9	1.0	1.2	1.2	1.1	1.1	1.0
SSA	5.8	6.4	7.0	7.8	8.3	8.5	8.0
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

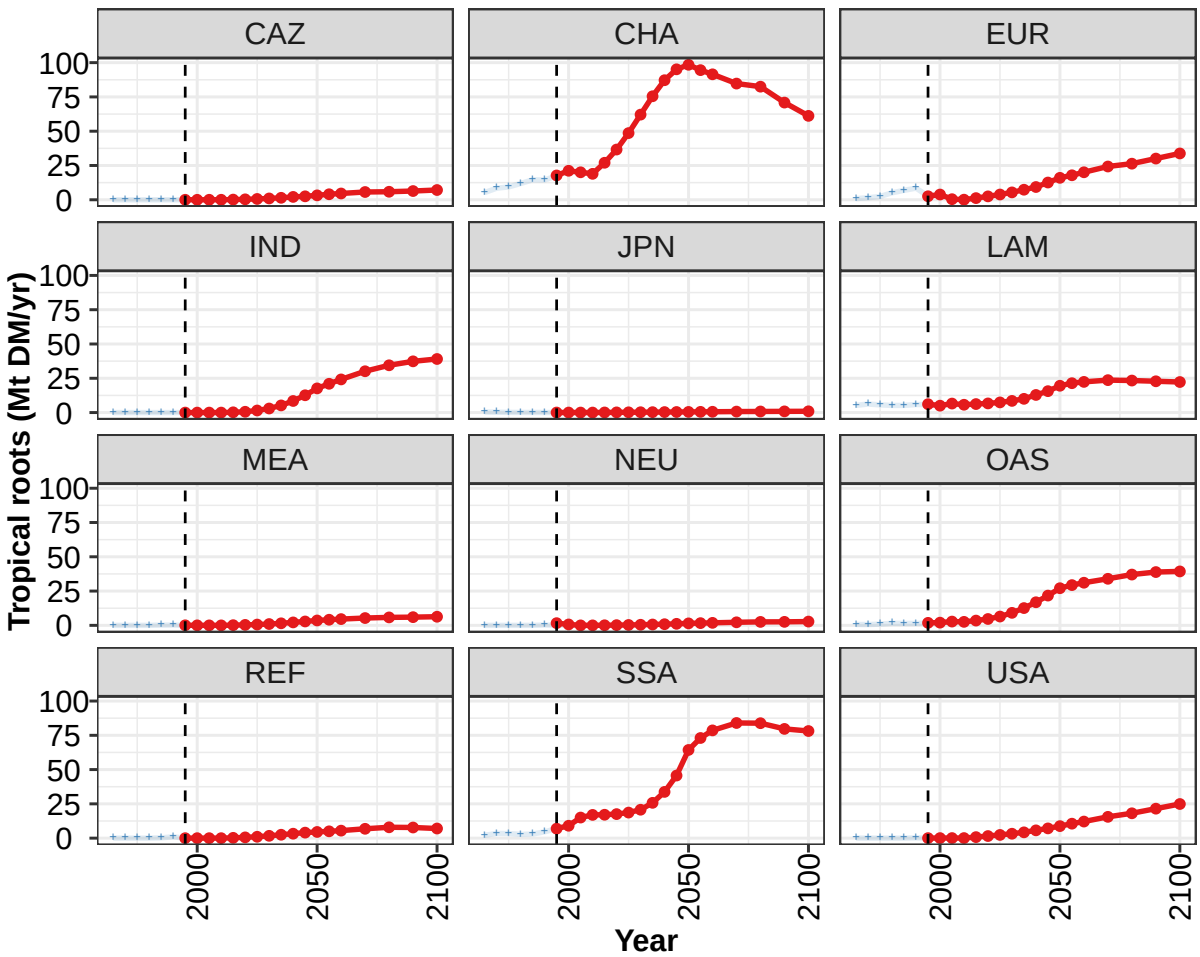
Table 294: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7.7	8.7	7.1	6.8	12.0	16.2	12.1	11.8	13.5	11.7
CAZ	0.0	0.0	0.0	0.1	0.1	0.3	1.8	1.7	1.8	0.7
CHA	0.5	0.6	0.7	1.0	1.1	1.2	1.0	1.9	2.3	1.4
EUR	2.0	1.7	1.3	1.3	2.9	5.9	4.8	3.9	3.3	2.4
IND	1.0	1.0	0.8	0.7	0.9	1.0	1.2	1.1	1.1	1.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1
MEA	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.3	0.2	0.2	0.1	0.3	0.4	0.4	0.3	0.4	0.3
OAS	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.4	1.6	2.5
REF	3.3	4.5	3.4	3.2	6.0	6.6	1.8	1.4	1.6	1.2
SSA	0.2	0.3	0.3	0.2	0.2	0.4	0.6	0.7	1.2	1.3
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1

Table 295: FAO — Demand—Feed—Crops—Other crops—Pulses (Mt DM/yr)

6.2.16 Other crops—Tropical roots





Model output

MAgPIE m4p_SSP5

Historical data

FAO

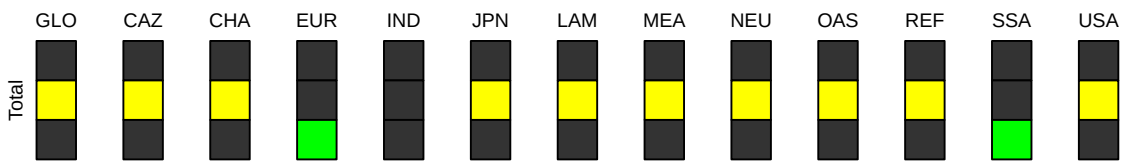


Figure 99: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	37	42	45	44	57	72	92	116	147	183	221
CAZ	0	0	0	0	0	0	1	1	1	2	3
CHA	18	21	20	19	27	37	49	62	76	87	95
EUR	3	4	0	0	1	2	4	5	7	9	13
IND	0	0	0	0	0	1	2	3	5	8	13
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	5	7	6	6	7	7	9	10	13	16
MEA	0	0	0	0	0	0	1	1	2	2	3
NEU	2	1	0	0	0	0	0	0	1	1	1
OAS	2	2	3	3	3	5	6	9	13	17	22
REF	0	0	0	0	0	1	1	2	2	3	4
SSA	7	9	15	17	17	18	19	21	26	34	46
USA	0	0	0	0	1	2	2	3	4	6	7

Table 296: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

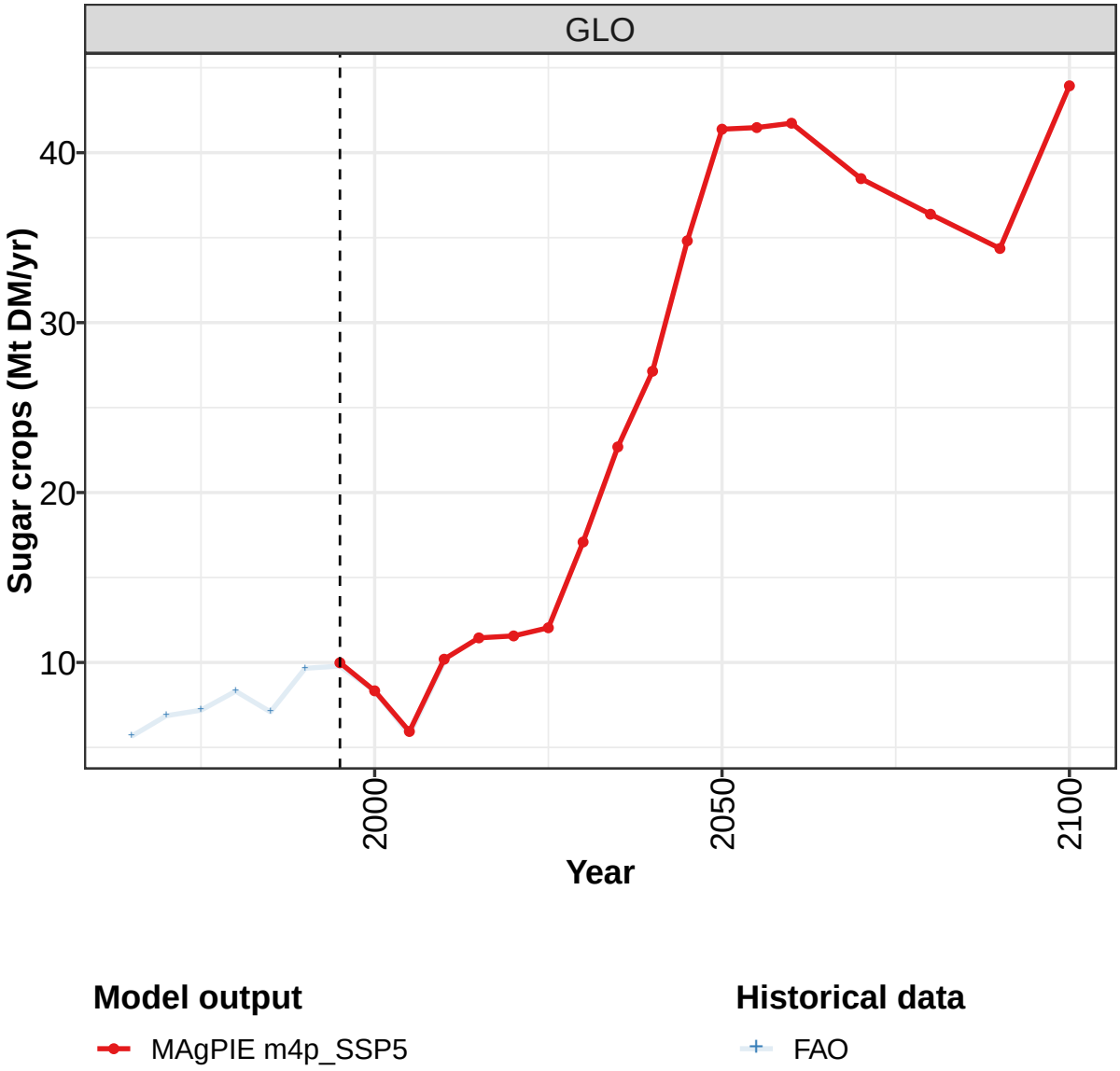
	2050	2055	2060	2070	2080	2090	2100
GLO	265	283	297	317	329	325	323
CAZ	3	4	5	6	6	6	7
CHA	98	95	91	85	83	71	61
EUR	16	18	20	24	26	30	34
IND	18	21	24	30	34	37	39
JPN	0	1	1	1	1	1	1
LAM	20	21	22	24	23	23	22
MEA	4	4	5	5	6	6	6
NEU	1	2	2	2	3	3	3
OAS	27	29	31	34	37	39	39
REF	5	5	5	7	8	8	7
SSA	64	73	79	84	84	80	78
USA	9	11	12	16	18	22	25

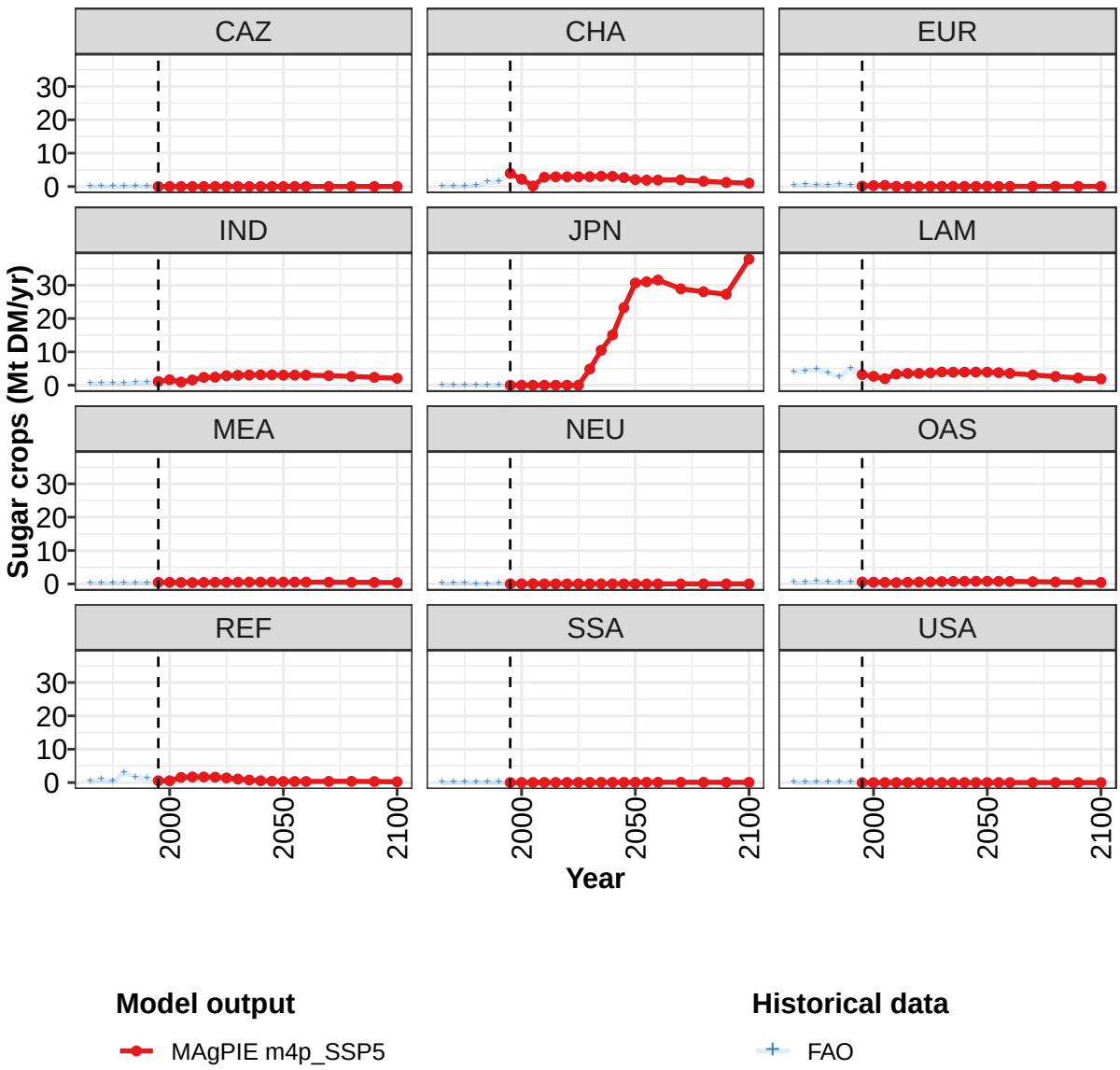
Table 297: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	14.5	20.4	21.8	26.5	31.5	36.5	34.5	41.4	44.5	44.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.3	8.4	9.4	11.8	14.6	14.4	17.4	21.0	19.9	19.0
EUR	0.8	1.5	2.4	5.1	6.9	8.5	2.7	3.9	0.4	0.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
LAM	5.2	6.2	5.6	5.2	5.2	5.9	5.8	5.3	6.5	5.4
MEA	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0
OAS	0.6	0.6	0.9	1.5	1.4	1.4	1.6	1.9	2.7	2.6
REF	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.0	0.0
SSA	2.0	3.4	3.3	2.8	3.0	4.6	7.0	9.1	14.9	16.9
USA	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.1

Table 298: FAO — Demand—Feed—Crops—Other crops—Tropical roots (Mt DM/yr)

6.2.17 Sugar crops





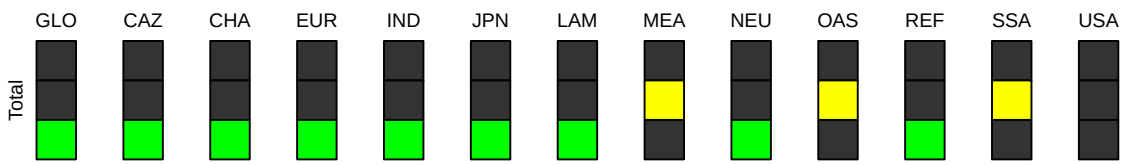


Figure 100: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.0	8.3	5.9	10.2	11.4	11.6	12.0	17.1	22.7	27.1	34.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.0	2.2	0.2	2.8	2.9	2.9	2.9	3.0	3.1	3.0	2.7
EUR	0.1	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.1	1.6	1.0	1.6	2.3	2.4	2.9	3.0	3.1	3.1	3.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	10.5	15.1	23.2
LAM	3.2	2.7	2.0	3.3	3.5	3.5	3.7	4.0	3.9	3.9	3.9
MEA	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
NEU	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8
REF	0.5	0.5	1.6	1.7	1.7	1.6	1.4	1.1	0.8	0.6	0.4
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 299: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

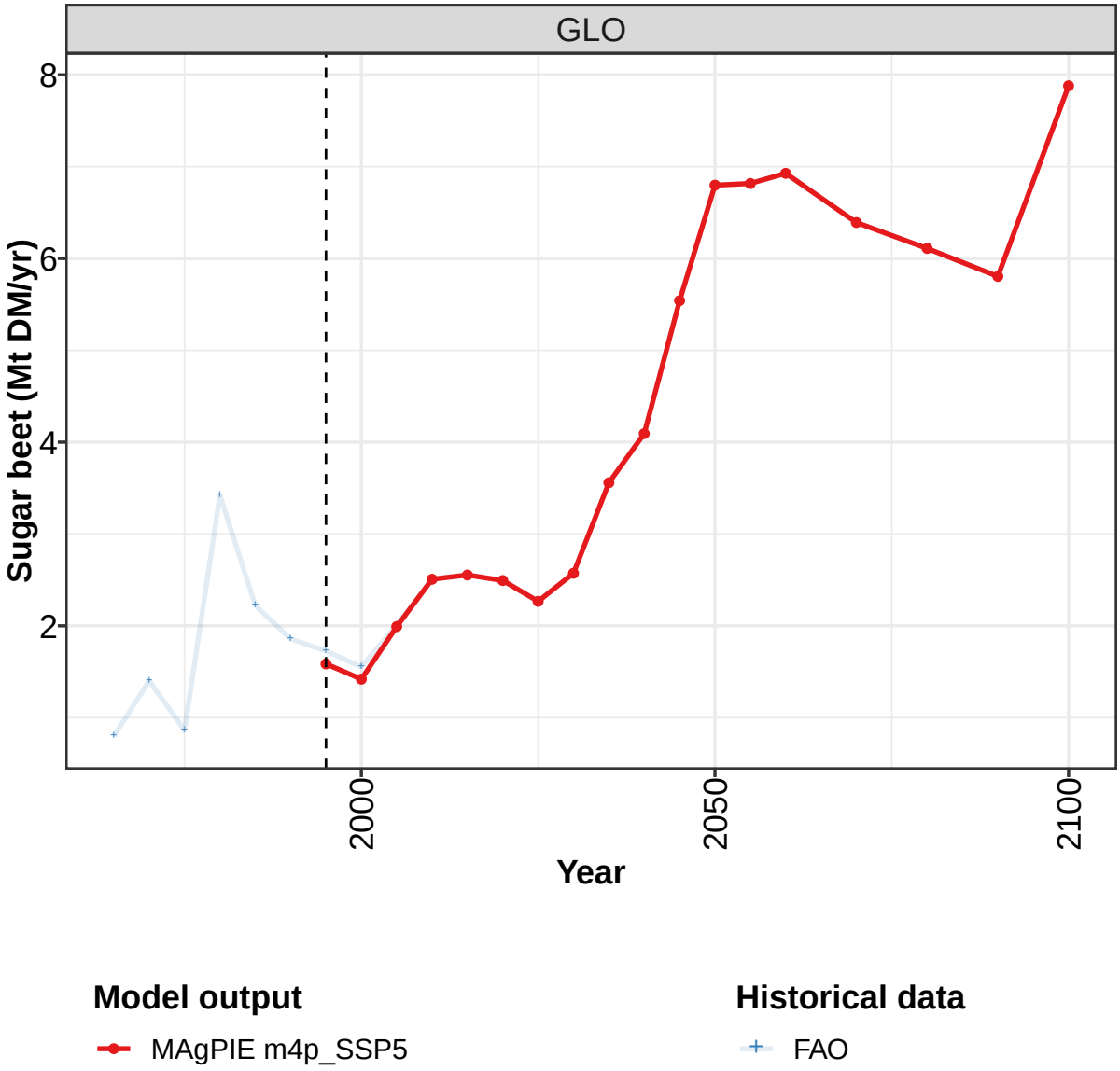
	2050	2055	2060	2070	2080	2090	2100
GLO	41.4	41.5	41.7	38.5	36.4	34.4	43.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.1	1.9	1.9	2.0	1.6	1.2	1.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.0	3.0	3.0	2.9	2.6	2.4	2.1
JPN	30.6	31.0	31.5	28.9	28.0	27.3	37.8
LAM	3.9	3.8	3.5	3.1	2.6	2.2	1.9
MEA	0.5	0.5	0.5	0.5	0.5	0.4	0.4
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.8	0.8	0.7	0.7	0.6	0.5	0.4
REF	0.3	0.3	0.3	0.3	0.4	0.3	0.2
SSA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

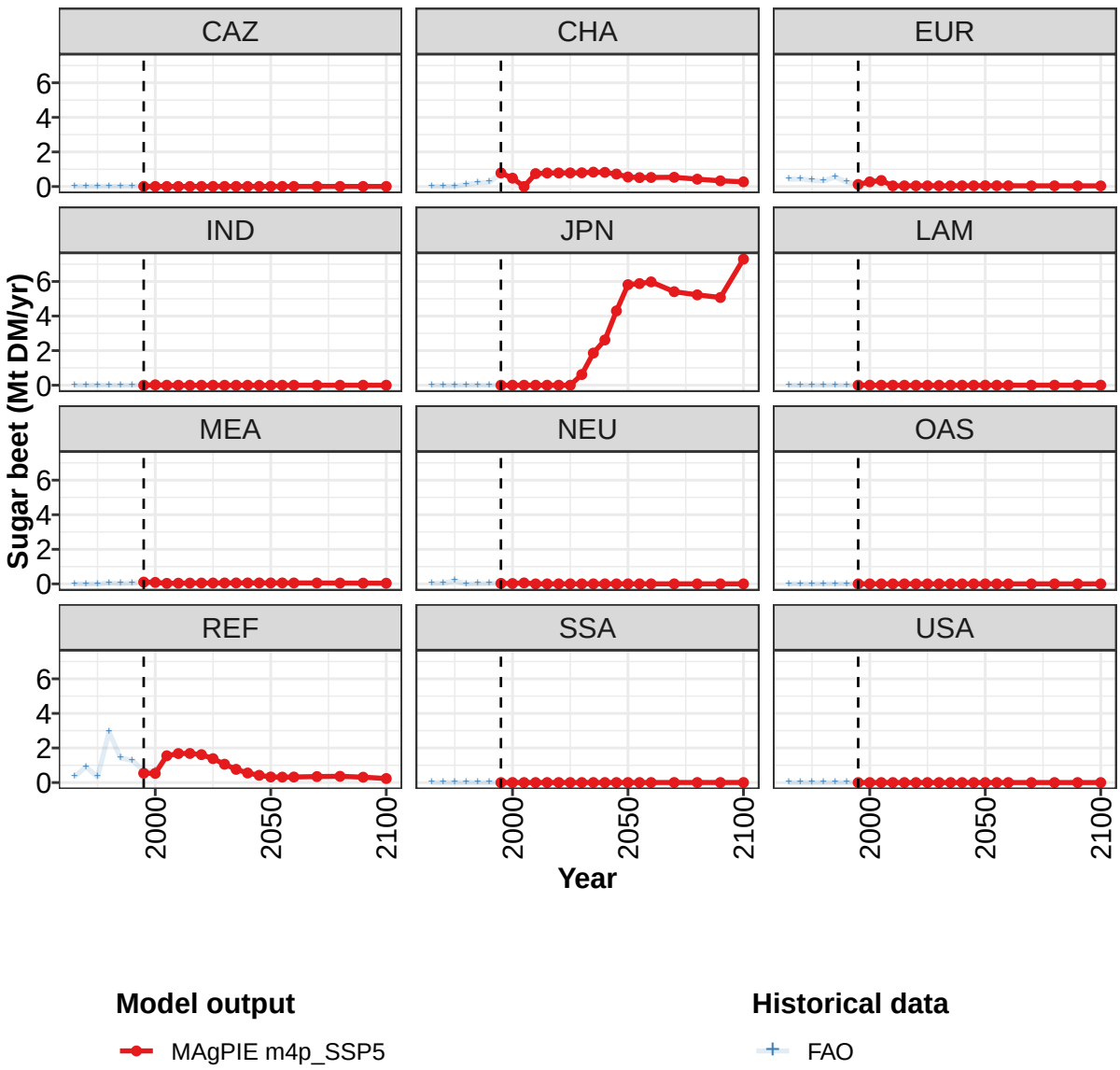
Table 300: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.7	6.9	7.2	8.3	7.1	9.7	9.8	8.3	5.7	10.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.0	0.1	0.2	1.3	1.5	3.9	2.2	0.2	2.8
EUR	0.4	0.4	0.4	0.3	0.6	0.3	0.1	0.3	0.4	0.0
IND	0.5	0.5	0.6	0.5	0.7	0.9	1.1	1.6	1.0	1.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.8	4.2	4.8	3.6	2.5	4.9	3.1	2.6	1.8	3.2
MEA	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4
NEU	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0
OAS	0.3	0.4	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.4
REF	0.3	0.9	0.3	2.9	1.4	1.3	0.7	0.7	1.6	1.7
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 301: FAO — Demand—Feed—Crops—Sugar crops (Mt DM/yr)

6.2.18 Sugar crops—Sugar beet





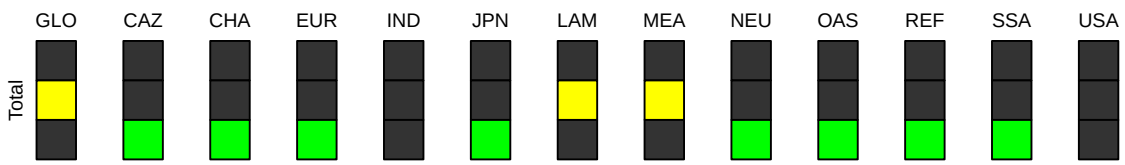


Figure 101: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.59	1.42	1.99	2.51	2.55	2.49	2.27	2.57	3.56	4.09	5.54
CAZ	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
CHA	0.78	0.48	0.00	0.75	0.78	0.78	0.79	0.79	0.83	0.82	0.72
EUR	0.12	0.27	0.35	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
IND	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.86	2.62	4.30
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.10	0.09	0.03	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06
NEU	0.03	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.54	0.53	1.55	1.68	1.68	1.62	1.38	1.06	0.76	0.55	0.42
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 302: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

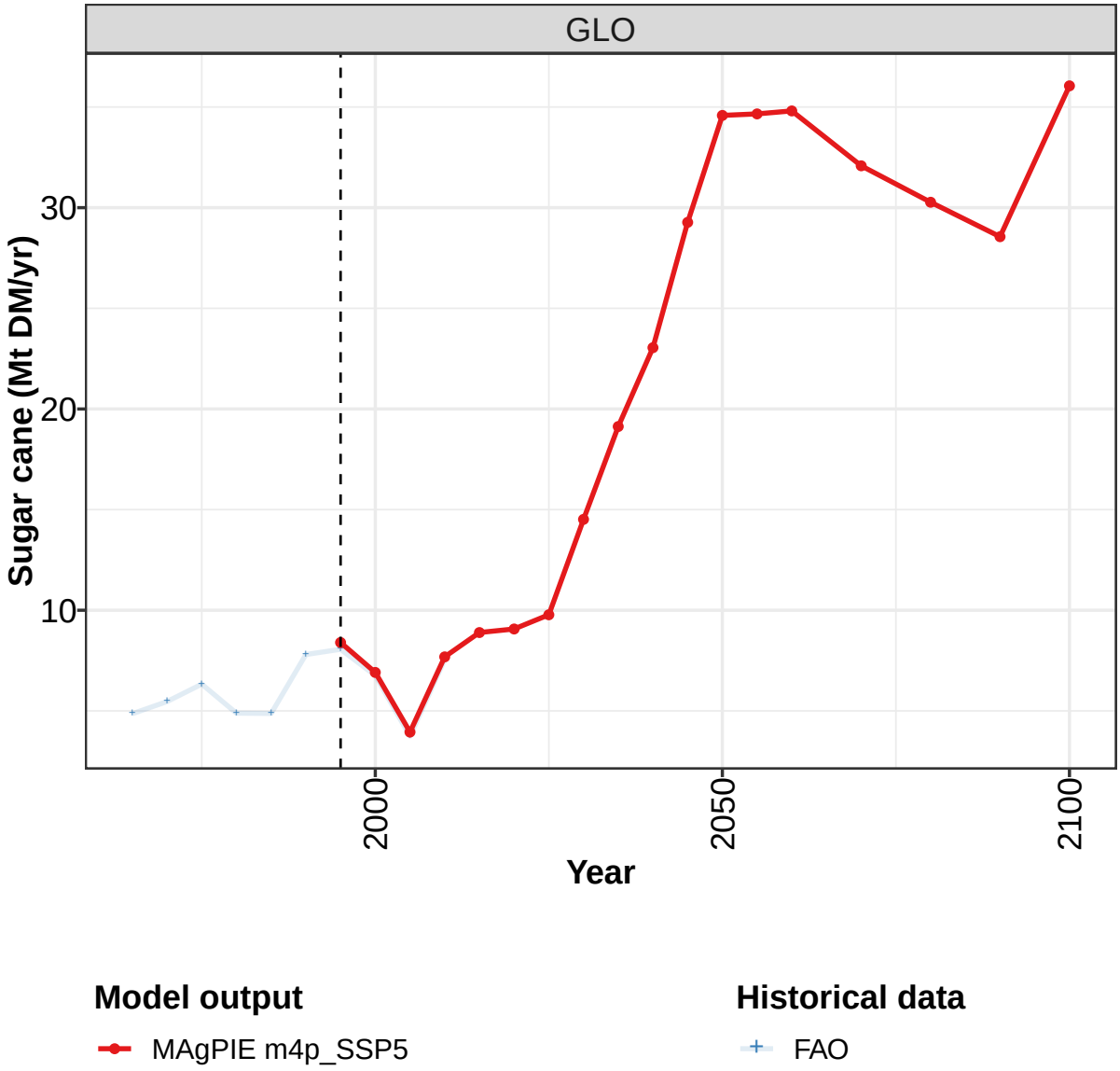
	2050	2055	2060	2070	2080	2090	2100
GLO	6.80	6.82	6.93	6.39	6.11	5.81	7.88
CAZ	0.00	0.00	0.01	0.01	0.00	0.00	0.00
CHA	0.55	0.52	0.52	0.53	0.43	0.33	0.27
EUR	0.04	0.04	0.04	0.04	0.04	0.04	0.04
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	5.81	5.88	5.98	5.41	5.22	5.07	7.29
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.05	0.05	0.05	0.05	0.05	0.04	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.32	0.31	0.32	0.35	0.36	0.31	0.23
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

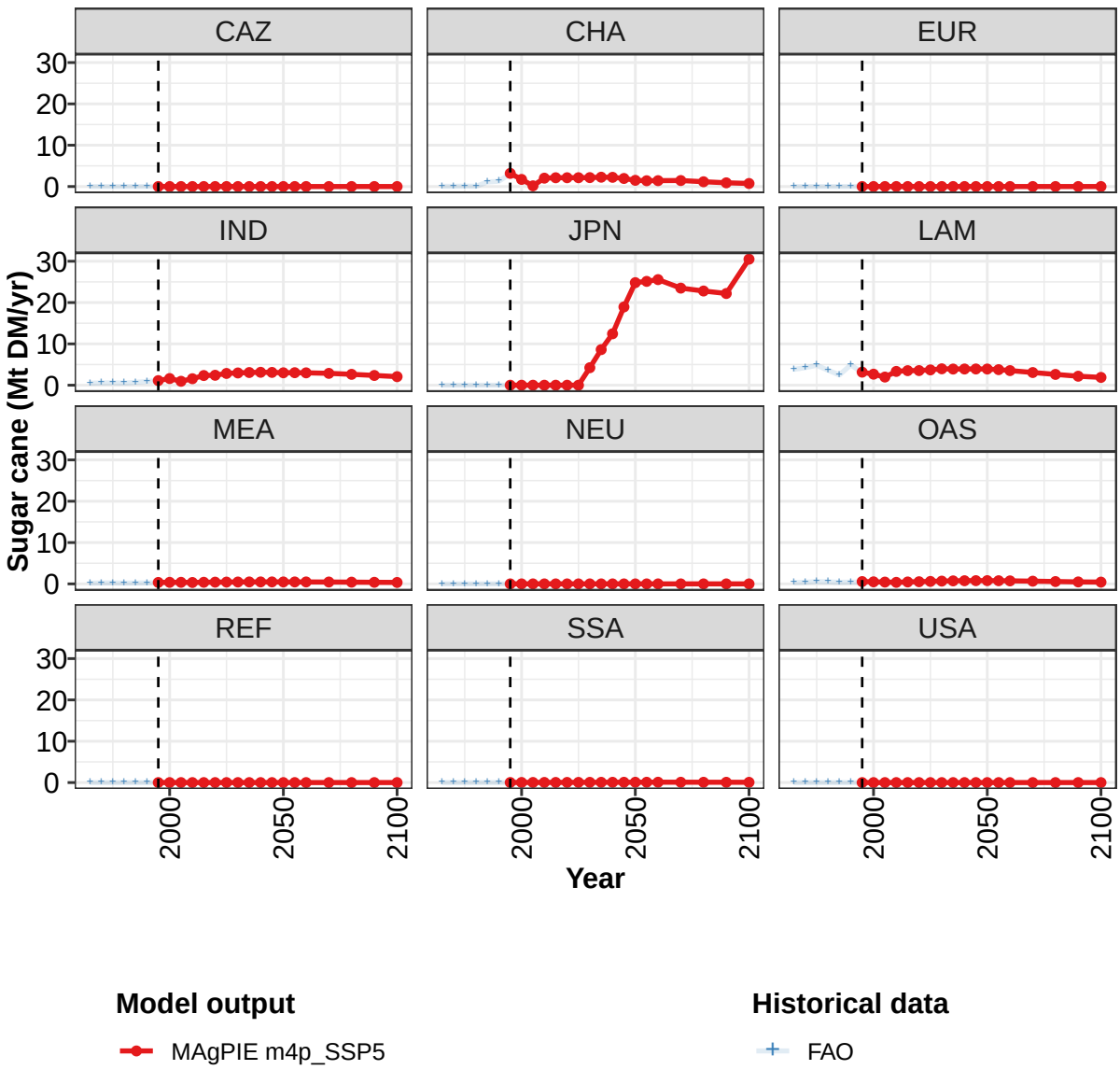
Table 303: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.80	1.40	0.86	3.42	2.22	1.86	1.73	1.55	2.01	2.50
CAZ	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.12	0.22	0.24	0.76	0.48	0.00	0.74
EUR	0.41	0.44	0.36	0.31	0.56	0.25	0.12	0.28	0.35	0.04
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.06	0.01	0.05	0.12	0.09	0.03	0.04
NEU	0.03	0.05	0.17	0.00	0.02	0.02	0.04	0.03	0.07	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.34	0.90	0.33	2.92	1.42	1.28	0.67	0.67	1.55	1.67
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 304: FAO — Demand—Feed—Crops—Sugar crops—Sugar beet (Mt DM/yr)

6.2.19 Sugar crops—Sugar cane





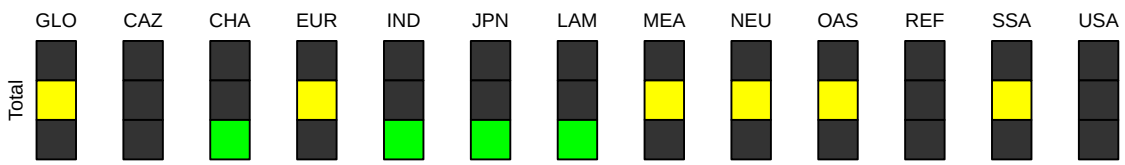


Figure 102: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8.4	6.9	3.9	7.7	8.9	9.1	9.8	14.5	19.1	23.0	29.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.2	1.7	0.2	2.0	2.1	2.1	2.1	2.2	2.3	2.2	2.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.1	1.6	1.0	1.6	2.3	2.4	2.9	3.0	3.1	3.1	3.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.6	12.4	18.9
LAM	3.2	2.7	2.0	3.3	3.5	3.5	3.7	4.0	3.9	3.9	3.9
MEA	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 305: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

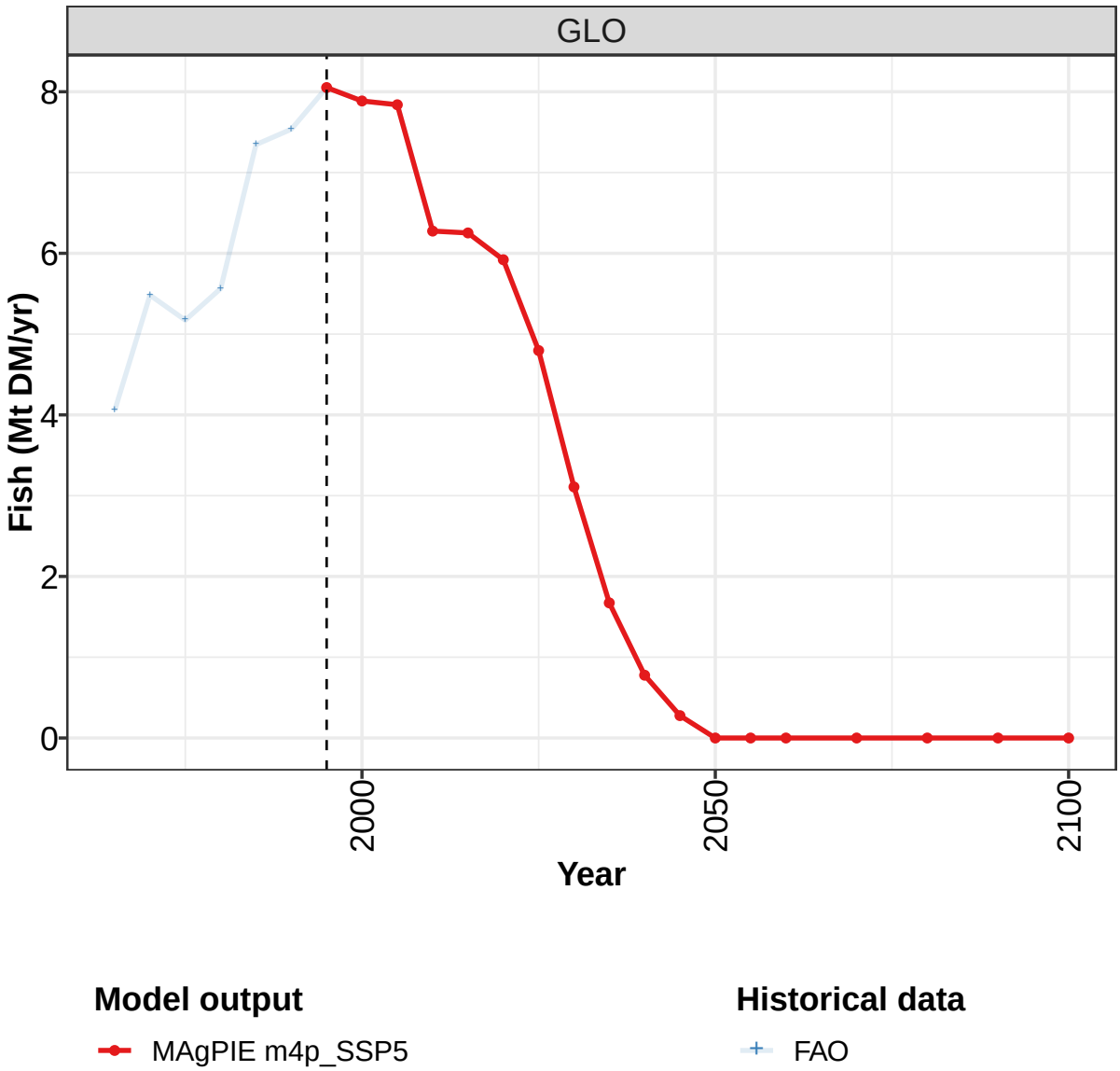
	2050	2055	2060	2070	2080	2090	2100
GLO	34.6	34.7	34.8	32.1	30.3	28.6	36.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.5	1.4	1.4	1.4	1.2	0.9	0.7
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.0	3.0	3.0	2.9	2.6	2.4	2.1
JPN	24.8	25.1	25.6	23.5	22.8	22.2	30.5
LAM	3.9	3.8	3.5	3.1	2.6	2.2	1.9
MEA	0.5	0.5	0.5	0.5	0.4	0.4	0.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.8	0.8	0.7	0.7	0.6	0.5	0.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

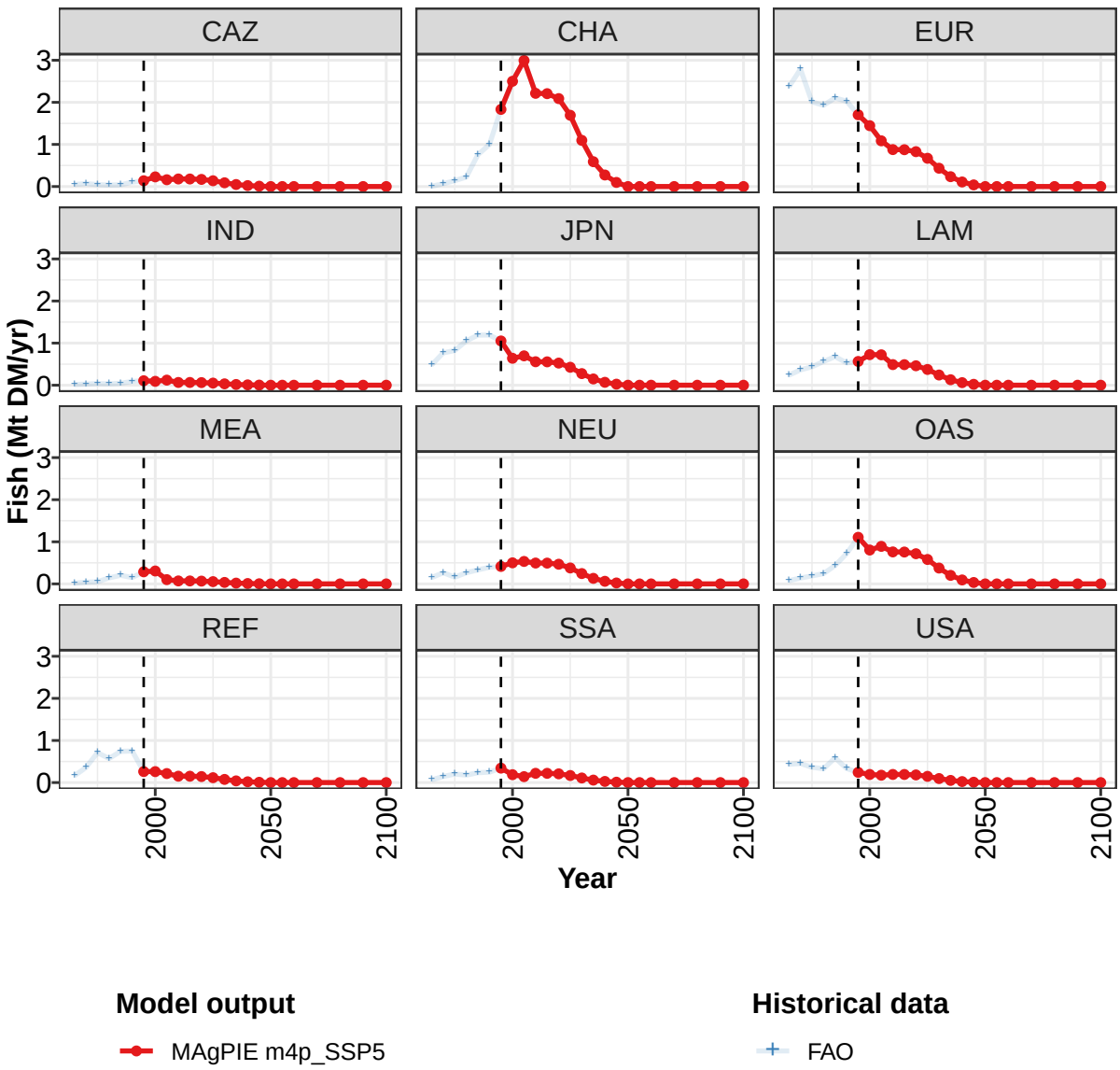
Table 306: MAgPIE m4p_SSP5 — Demand—Feed—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.86	5.46	6.33	4.89	4.87	7.80	8.06	6.75	3.74	7.55
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.05	0.04	0.10	0.06	1.09	1.28	3.11	1.71	0.17	2.02
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.49	0.55	0.58	0.52	0.69	0.91	1.12	1.62	0.96	1.58
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	3.83	4.25	4.82	3.62	2.48	4.92	3.06	2.56	1.77	3.20
MEA	0.17	0.22	0.23	0.19	0.21	0.24	0.30	0.34	0.35	0.34
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.30	0.39	0.58	0.49	0.38	0.43	0.46	0.49	0.45	0.37
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 307: FAO — Demand—Feed—Crops—Sugar crops—Sugar cane (Mt DM/yr)

6.3 Fish


GLO
Fish (Mt DM/yr)
0
2
4
6
8
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



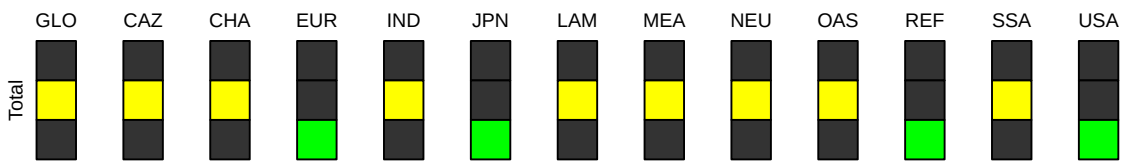


Figure 103: MAgPIE m4p_SSP5 — Demand—Feed—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8.05	7.89	7.84	6.28	6.25	5.92	4.80	3.11	1.67	0.78	0.28
CAZ	0.14	0.23	0.16	0.18	0.18	0.17	0.14	0.09	0.05	0.02	0.01
CHA	1.83	2.50	2.99	2.21	2.21	2.09	1.69	1.10	0.59	0.27	0.10
EUR	1.70	1.45	1.09	0.88	0.87	0.83	0.67	0.43	0.23	0.11	0.04
IND	0.11	0.09	0.12	0.07	0.07	0.06	0.05	0.03	0.02	0.01	0.00
JPN	1.05	0.64	0.70	0.56	0.56	0.53	0.43	0.28	0.15	0.07	0.02
LAM	0.56	0.73	0.72	0.49	0.49	0.46	0.37	0.24	0.13	0.06	0.02
MEA	0.29	0.31	0.10	0.07	0.07	0.07	0.05	0.03	0.02	0.01	0.00
NEU	0.41	0.50	0.53	0.50	0.49	0.47	0.38	0.25	0.13	0.06	0.02
OAS	1.11	0.80	0.89	0.76	0.76	0.72	0.58	0.38	0.20	0.09	0.03
REF	0.26	0.26	0.21	0.15	0.15	0.14	0.12	0.07	0.04	0.02	0.01
SSA	0.34	0.19	0.14	0.22	0.22	0.21	0.17	0.11	0.06	0.03	0.01
USA	0.24	0.19	0.18	0.19	0.19	0.18	0.15	0.10	0.05	0.02	0.01

Table 308: MAgPIE m4p_SSP5 — Demand—Feed—Fish (Mt DM/yr) [PART 1/2]

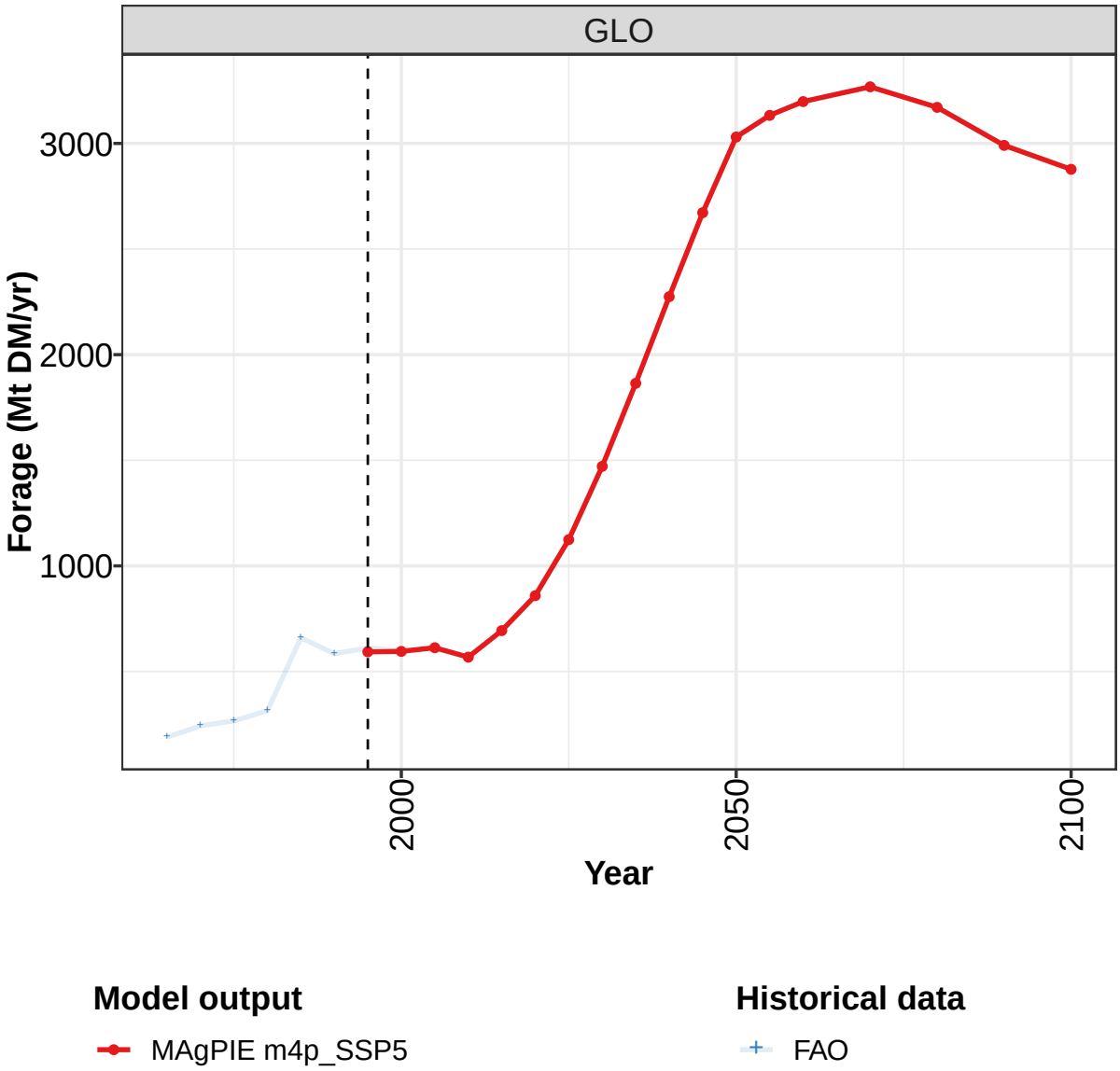
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

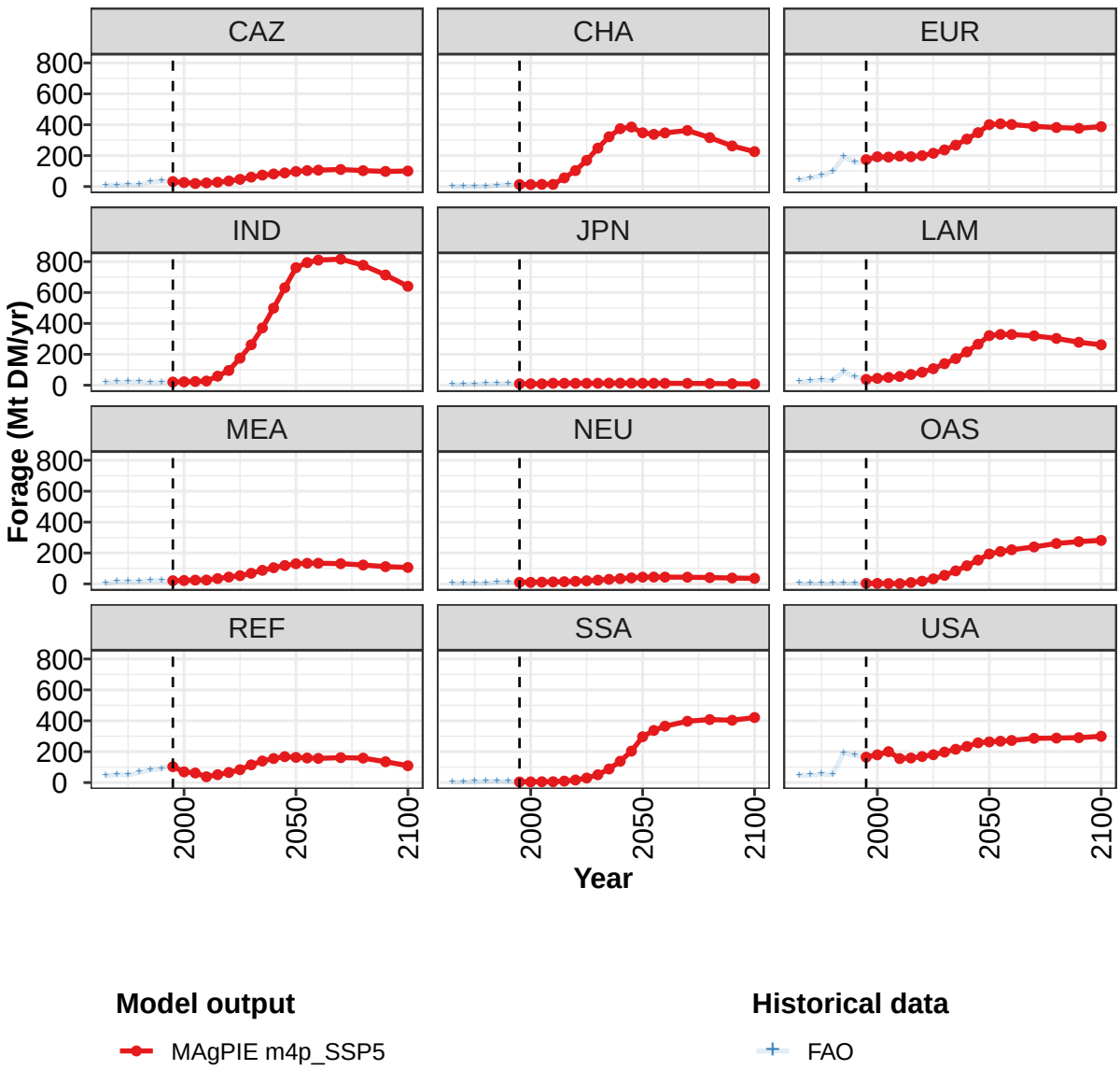
Table 309: MAgPIE m4p_SSP5 — Demand—Feed—Fish (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.05	5.48	5.17	5.56	7.35	7.54	8.05	7.89	7.84	6.28
CAZ	0.05	0.07	0.05	0.03	0.04	0.10	0.14	0.23	0.16	0.18
CHA	0.01	0.07	0.14	0.22	0.75	1.00	1.83	2.50	2.99	2.21
EUR	2.37	2.79	2.01	1.93	2.10	2.03	1.70	1.45	1.09	0.88
IND	0.01	0.03	0.04	0.03	0.05	0.09	0.11	0.09	0.12	0.07
JPN	0.48	0.77	0.82	1.05	1.19	1.19	1.05	0.64	0.70	0.56
LAM	0.24	0.36	0.44	0.56	0.68	0.53	0.56	0.73	0.72	0.49
MEA	0.02	0.04	0.05	0.14	0.20	0.15	0.29	0.31	0.10	0.07
NEU	0.15	0.27	0.16	0.26	0.33	0.39	0.41	0.50	0.53	0.50
OAS	0.08	0.14	0.19	0.24	0.44	0.72	1.11	0.80	0.89	0.76
REF	0.16	0.36	0.71	0.57	0.74	0.75	0.26	0.26	0.21	0.15
SSA	0.06	0.14	0.20	0.18	0.23	0.25	0.34	0.19	0.14	0.22
USA	0.43	0.45	0.36	0.33	0.59	0.33	0.24	0.19	0.18	0.19

Table 310: FAO — Demand—Feed—Fish (Mt DM/yr)

6.4 Forage


GLO
Forage (Mt DM/yr)
3000
2000
1000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



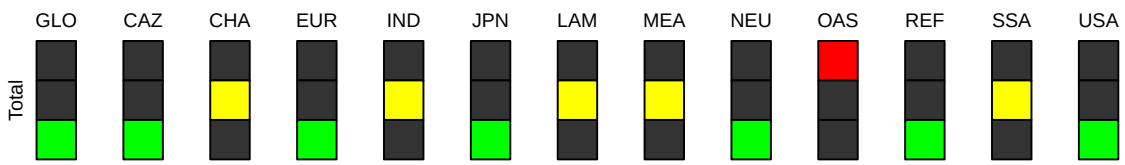


Figure 104: MAgPIE m4p_SSP5 — Demand—Feed—Forage (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	593	595	613	568	694	859	1124	1471	1864	2275	2672
CAZ	32	26	20	23	28	36	47	61	74	81	88
CHA	13	12	14	14	56	103	169	249	322	374	385
EUR	174	193	191	197	193	200	215	237	268	307	349
IND	20	22	24	27	58	95	175	262	371	499	631
JPN	10	10	9	13	12	12	12	13	13	13	13
LAM	37	44	50	56	70	84	107	139	172	216	265
MEA	21	22	24	25	34	44	53	69	88	105	119
NEU	10	10	11	13	14	17	20	24	29	34	39
OAS	4	3	2	2	9	18	33	55	84	118	154
REF	103	69	62	38	51	65	83	115	140	156	168
SSA	4	4	5	5	10	17	29	51	88	138	204
USA	165	180	200	155	159	169	180	197	215	234	257

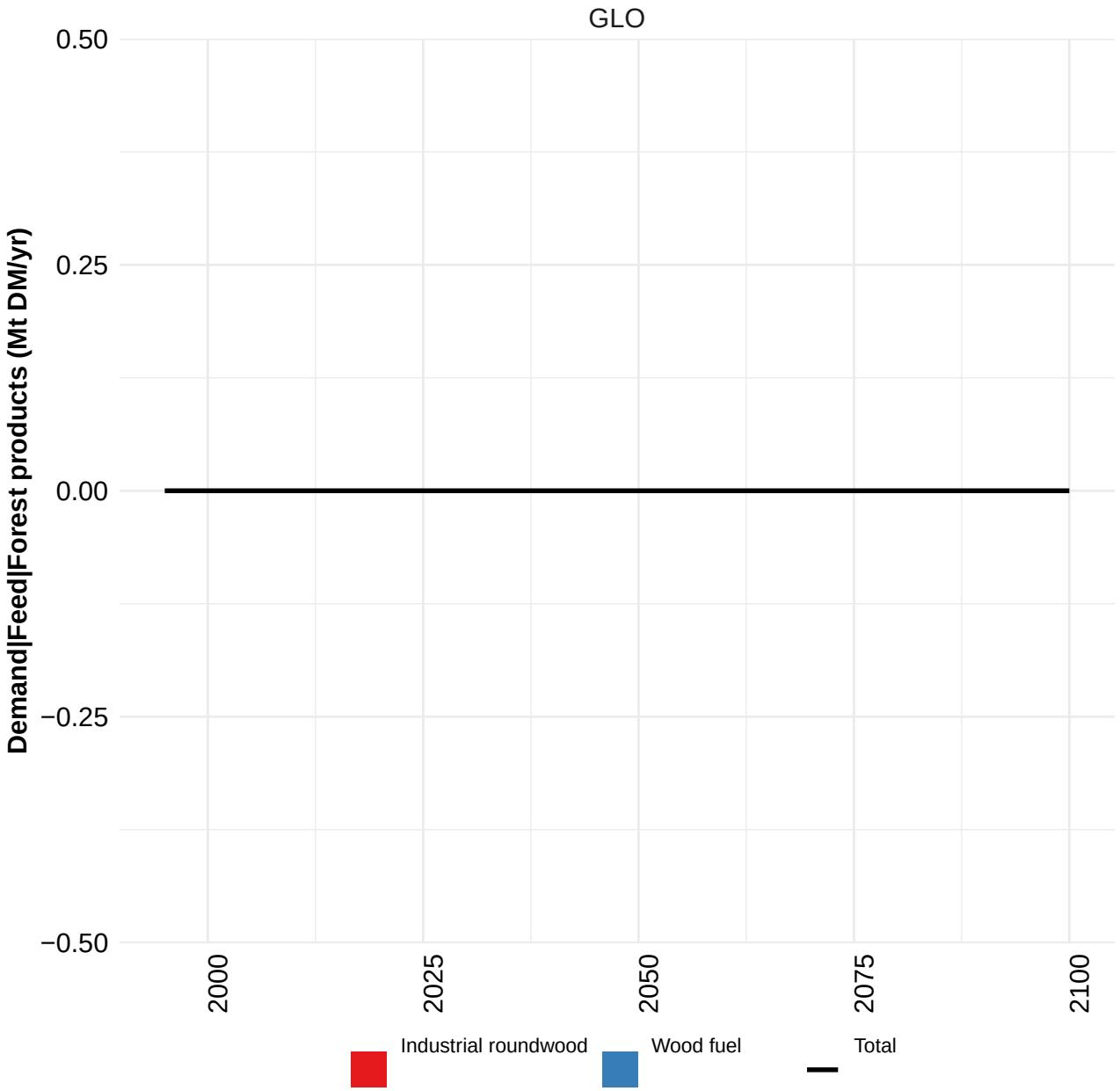
Table 311: MAgPIE m4p_SSP5 — Demand—Feed—Forage (Mt DM/yr) [PART 1/2]

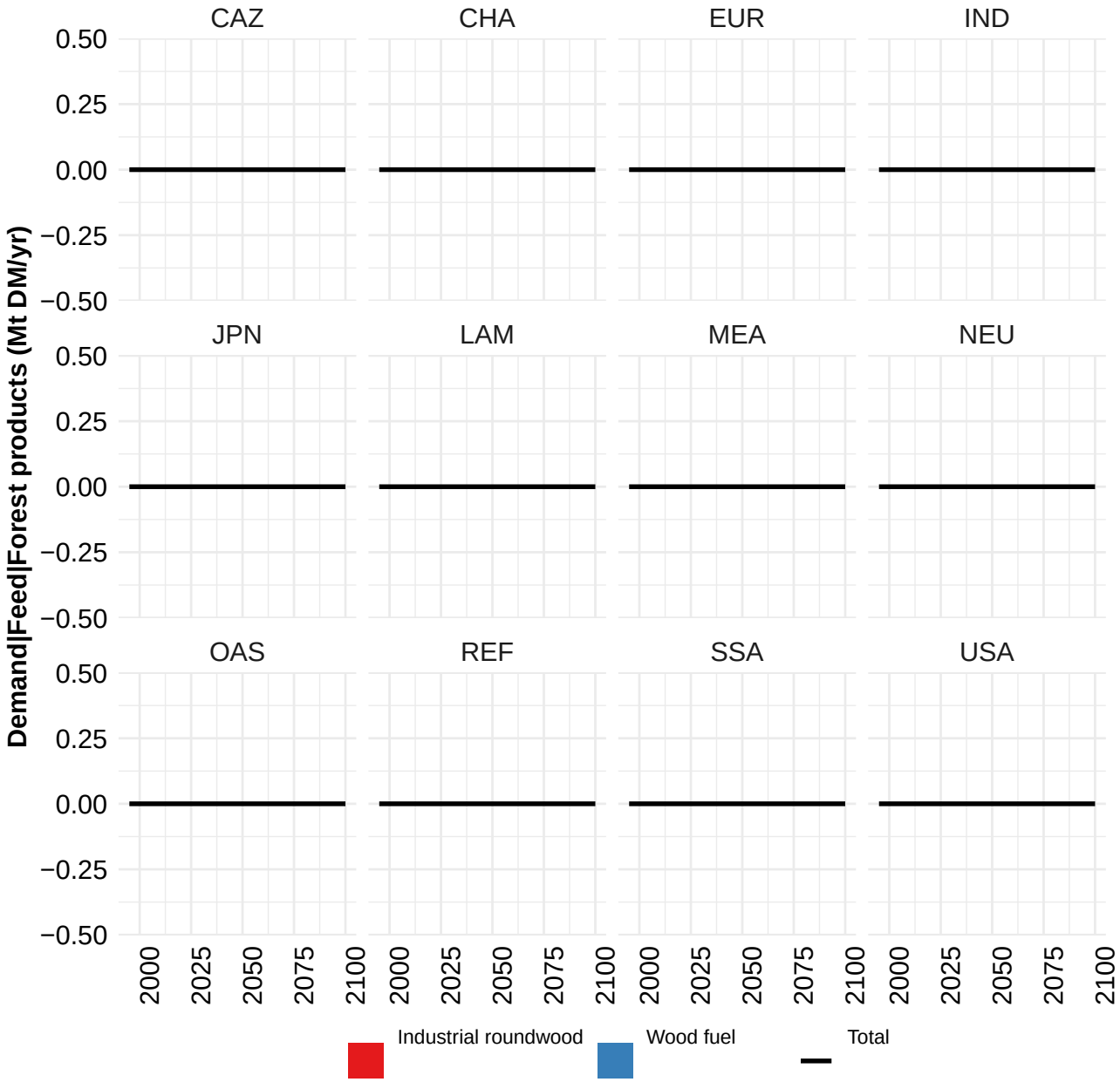
	2050	2055	2060	2070	2080	2090	2100
GLO	3030	3133	3198	3268	3171	2991	2878
CAZ	97	103	106	110	103	98	101
CHA	348	338	347	363	317	263	226
EUR	401	406	402	389	382	377	388
IND	761	794	810	816	777	714	640
JPN	12	12	12	12	11	10	8
LAM	321	329	328	320	303	278	261
MEA	130	133	134	131	122	112	107
NEU	44	44	44	43	41	38	36
OAS	193	210	221	239	262	274	281
REF	163	159	156	161	158	135	109
SSA	297	338	365	397	408	403	421
USA	263	268	273	287	288	291	300

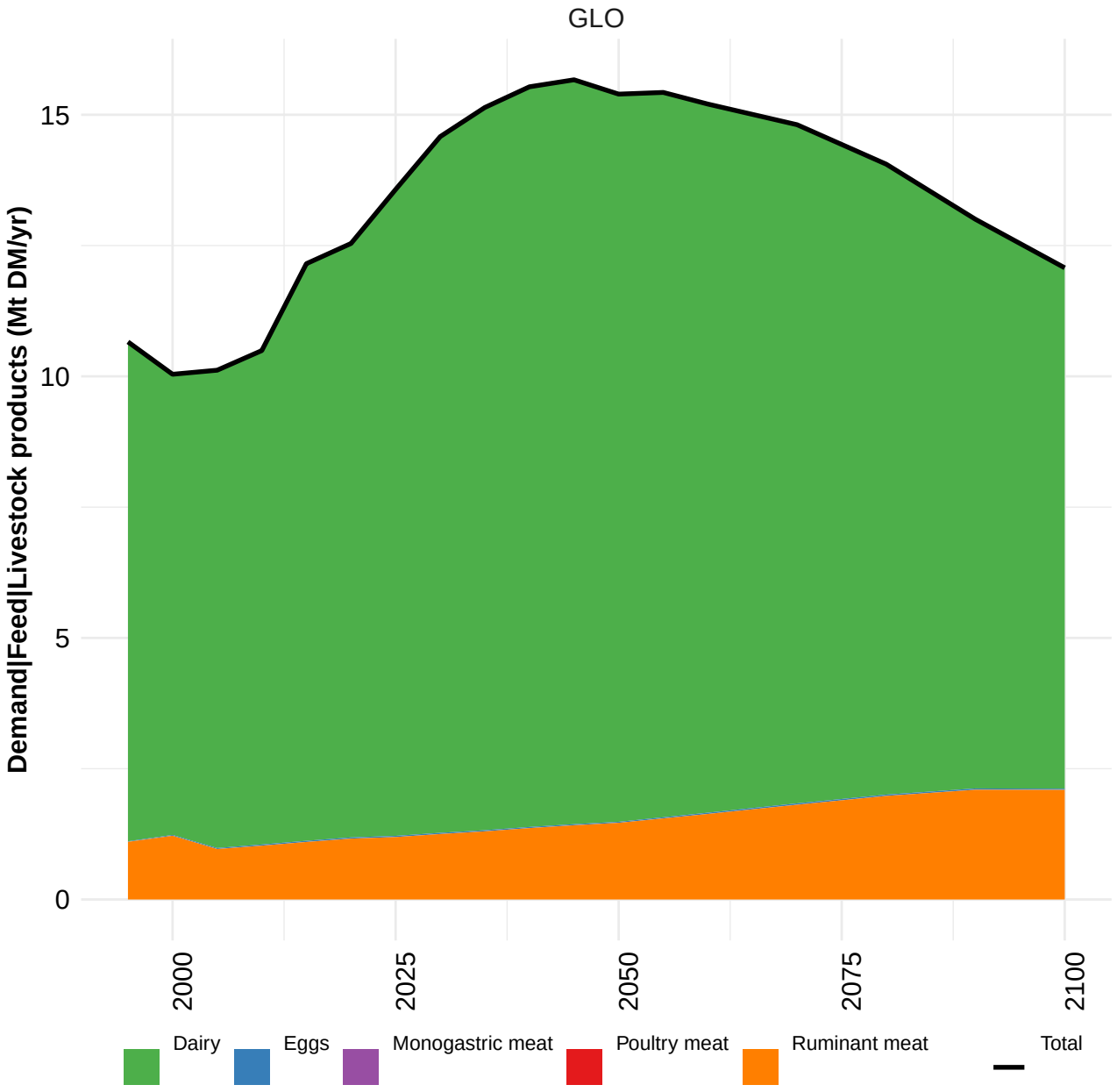
Table 312: MAgPIE m4p_SSP5 — Demand—Feed—Forage (Mt DM/yr) [PART 2/2]

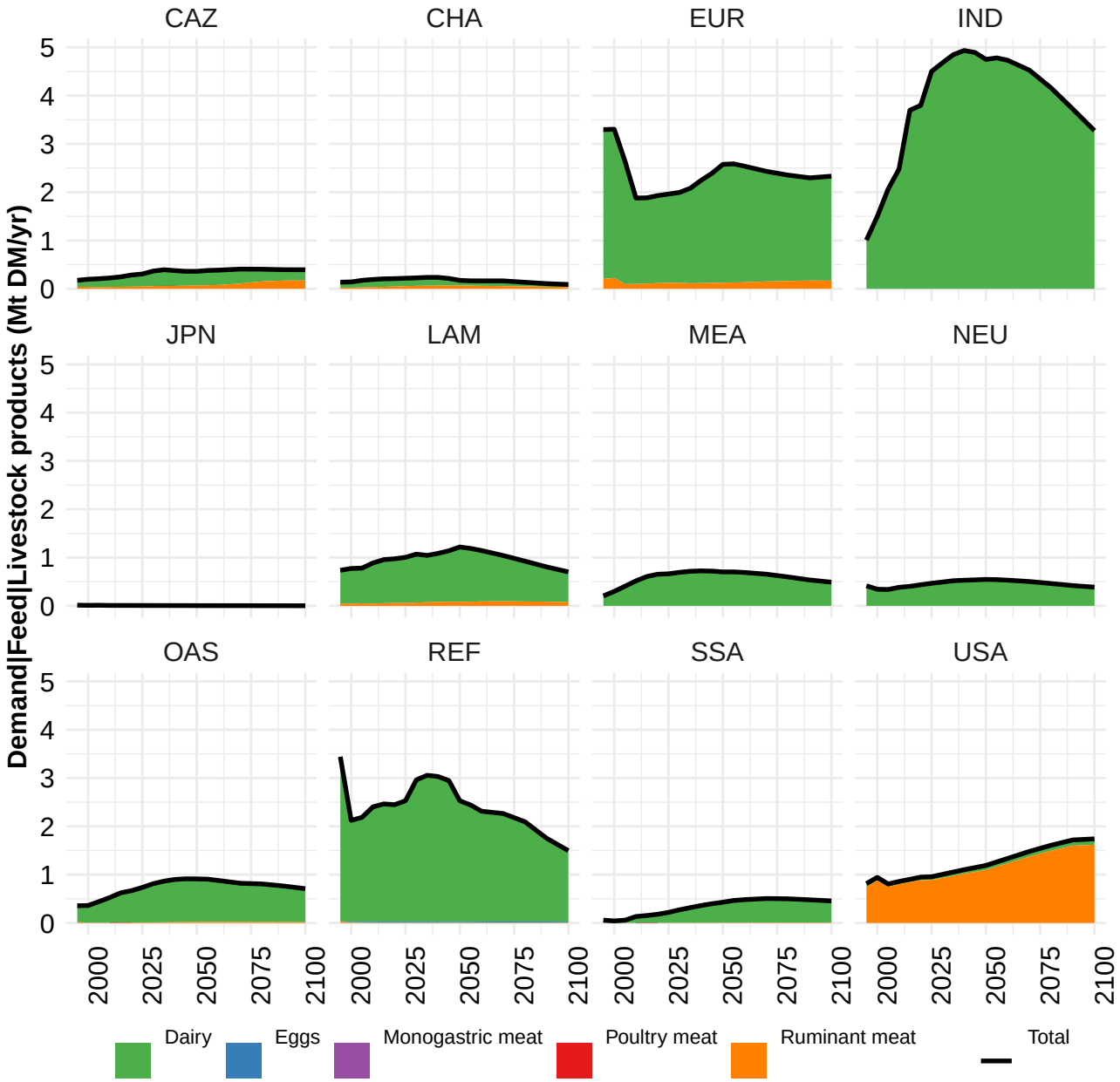
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	189	242	266	314	660	584	611	598	609	570
CAZ	7	9	10	10	28	36	32	30	26	29
CHA	0	0	0	0	8	10	11	12	13	14
EUR	39	56	70	96	192	155	167	178	179	189
IND	19	21	21	22	15	18	20	22	25	28
JPN	3	6	7	9	10	10	10	9	9	13
LAM	21	27	33	31	88	51	46	50	51	54
MEA	2	14	13	15	21	19	20	21	23	25
NEU	2	2	3	3	10	11	11	10	12	13
OAS	1	1	1	1	3	2	2	2	2	2
REF	44	53	49	66	83	90	119	75	63	37
SSA	4	5	6	9	9	7	5	5	5	5
USA	47	48	54	53	192	175	170	185	201	162

Table 313: FAO — Demand—Feed—Forage (Mt DM/yr)

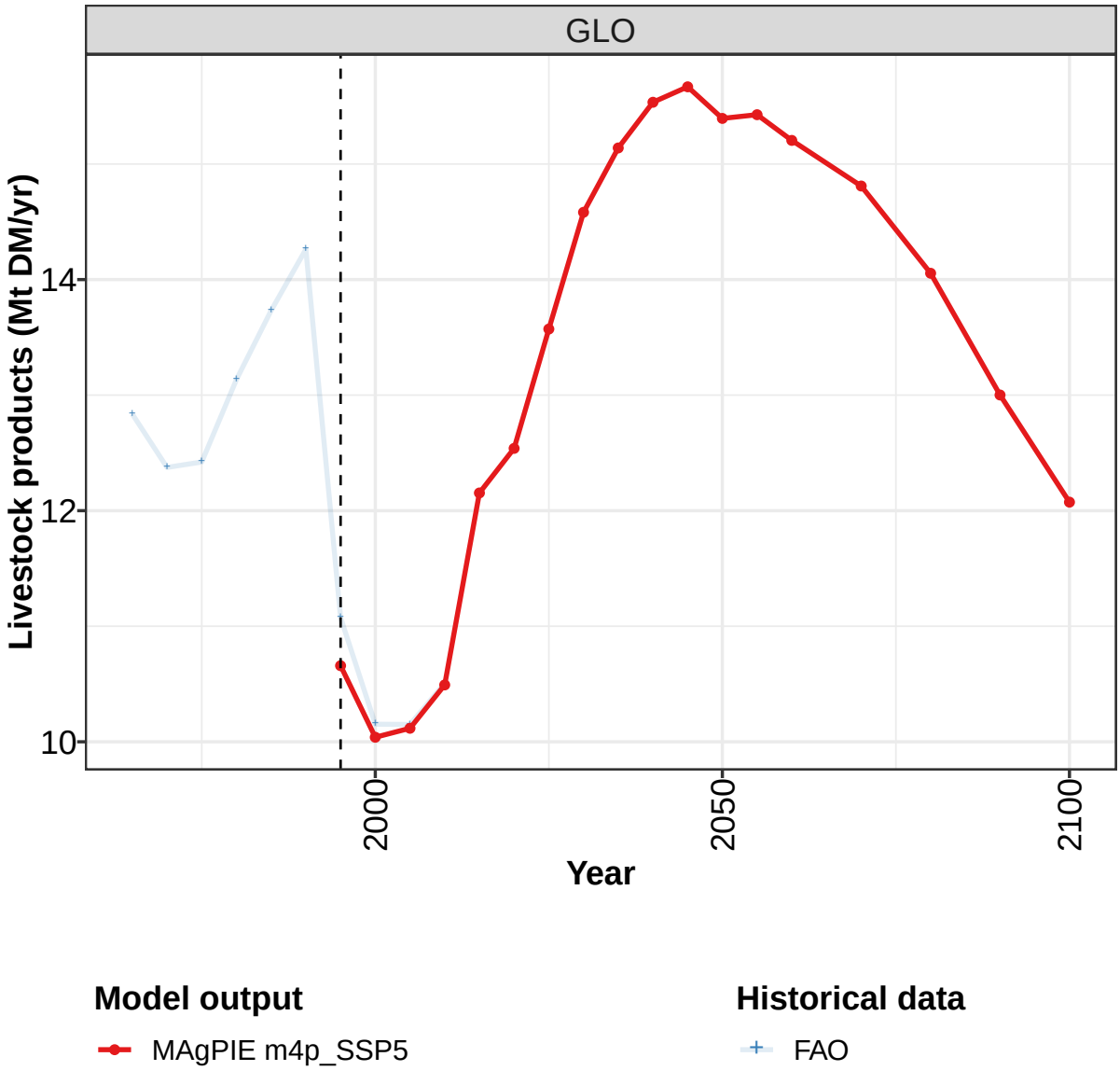

GLO
0.50
0.25
0.00
−0.25
−0.50
Demand|Feed|Forest products (Mt DM/yr)
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

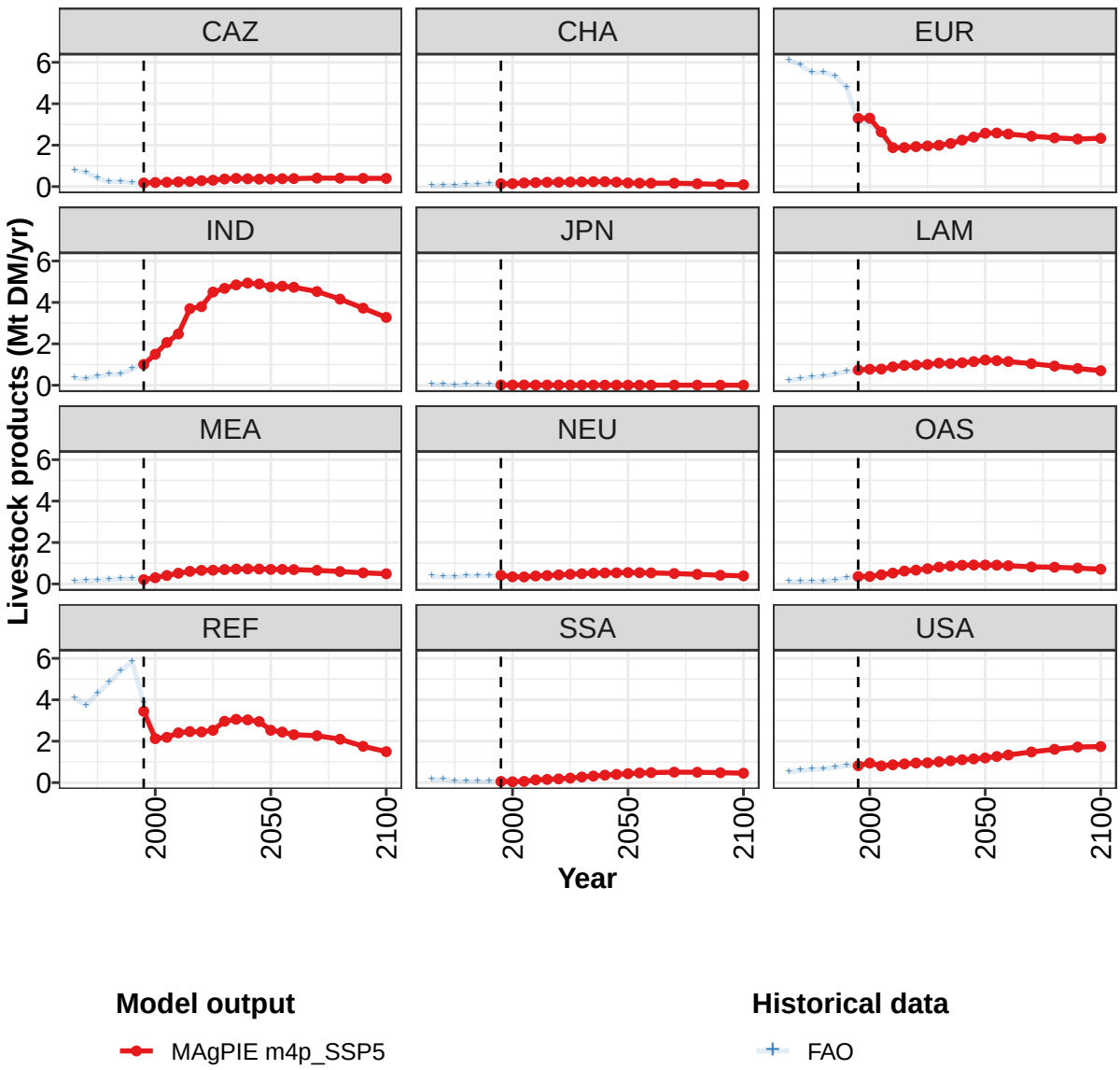

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Feed|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


GLO
Demand|Feed|Livestock products (Mt DM/yr)
15
10
5
0
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Feed|Livestock products (Mt DM/yr)
0
1
2
3
4
5
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

6.5 Livestock products





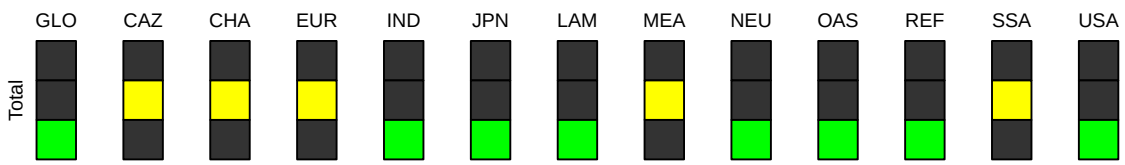


Figure 105: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.7	10.0	10.1	10.5	12.2	12.5	13.6	14.6	15.1	15.5	15.7
CAZ	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4
CHA	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
EUR	3.3	3.3	2.6	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.4
IND	1.0	1.5	2.1	2.5	3.7	3.8	4.5	4.7	4.8	4.9	4.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.0	1.1	1.1
MEA	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7
NEU	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
OAS	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.9	0.9	0.9
REF	3.4	2.1	2.2	2.4	2.5	2.4	2.5	3.0	3.1	3.0	2.9
SSA	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4
USA	0.8	0.9	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1

Table 314: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products (Mt DM/yr) [PART 1/2]

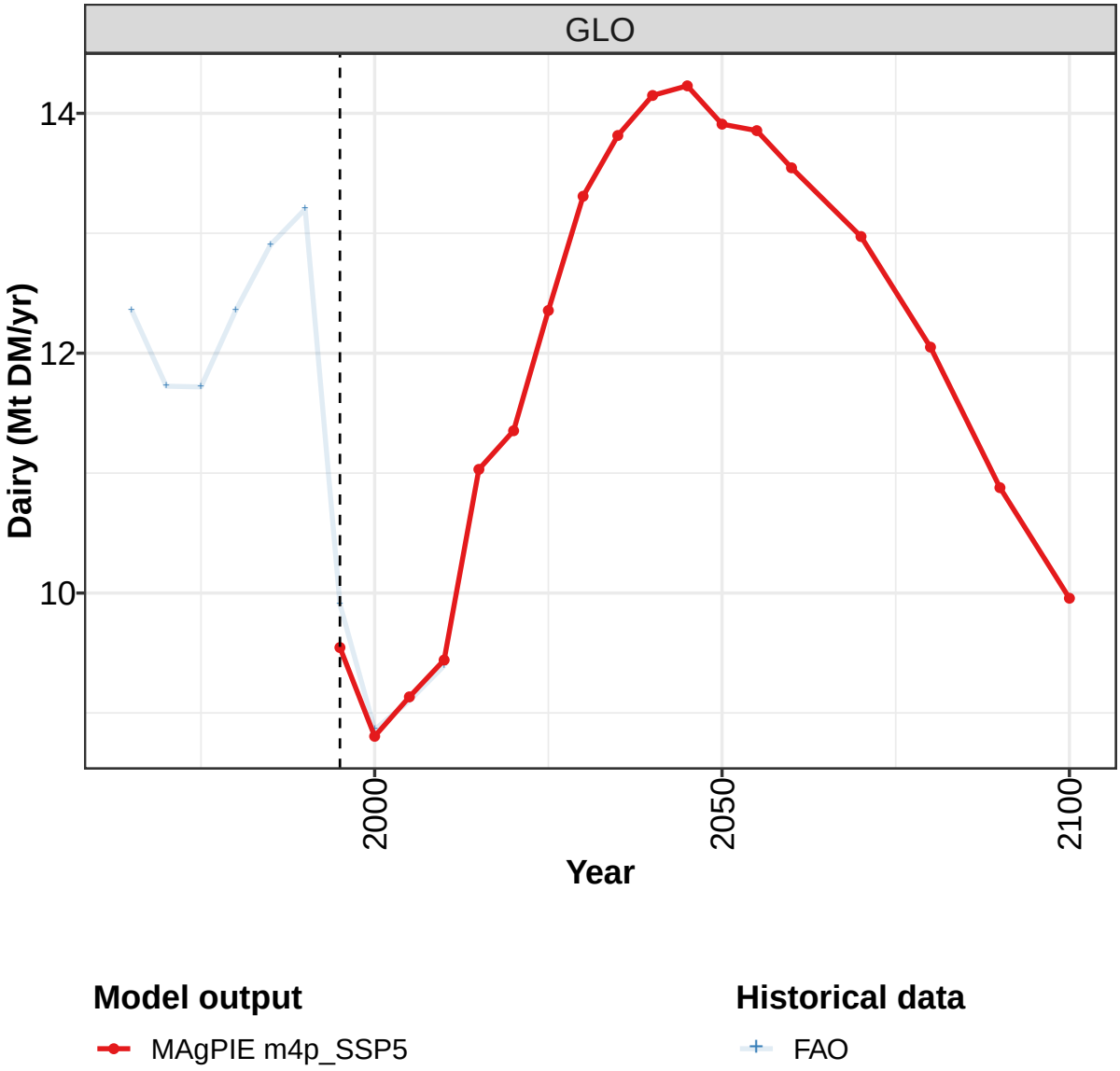
	2050	2055	2060	2070	2080	2090	2100
GLO	15.4	15.4	15.2	14.8	14.1	13.0	12.1
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CHA	0.2	0.2	0.2	0.2	0.1	0.1	0.1
EUR	2.6	2.6	2.5	2.4	2.4	2.3	2.3
IND	4.7	4.8	4.7	4.5	4.2	3.7	3.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.2	1.2	1.1	1.0	0.9	0.8	0.7
MEA	0.7	0.7	0.7	0.7	0.6	0.5	0.5
NEU	0.5	0.5	0.5	0.5	0.5	0.4	0.4
OAS	0.9	0.9	0.9	0.8	0.8	0.8	0.7
REF	2.5	2.4	2.3	2.3	2.1	1.8	1.5
SSA	0.4	0.5	0.5	0.5	0.5	0.5	0.5
USA	1.2	1.3	1.3	1.5	1.6	1.7	1.7

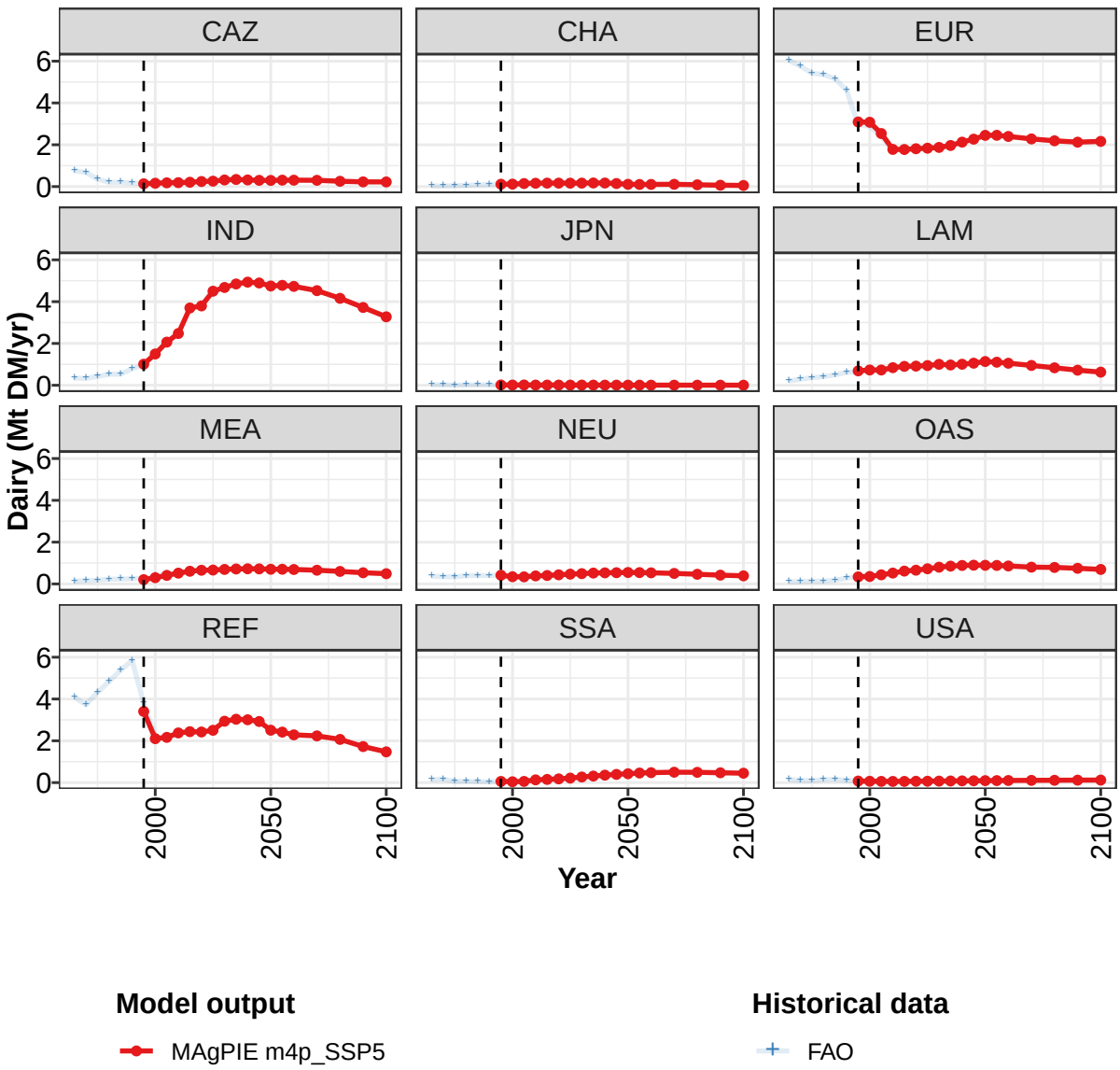
Table 315: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12.8	12.4	12.4	13.1	13.7	14.3	11.1	10.2	10.1	10.5
CAZ	0.8	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3
CHA	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
EUR	6.1	5.9	5.5	5.5	5.3	4.8	3.1	3.1	2.5	1.8
IND	0.3	0.3	0.4	0.5	0.5	0.8	1.0	1.5	2.1	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.3	0.4	0.4	0.5	0.7	0.7	0.8	0.8	0.9
MEA	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5
NEU	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4
OAS	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.5	0.5
REF	4.1	3.7	4.3	4.8	5.4	5.8	3.8	2.2	2.2	2.4
SSA	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
USA	0.5	0.6	0.6	0.7	0.7	0.8	0.9	1.0	0.9	0.9

Table 316: FAO — Demand—Feed—Livestock products (Mt DM/yr)

6.5.1 Dairy


GLO
Dairy (Mt DM/yr)
14
12
10
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



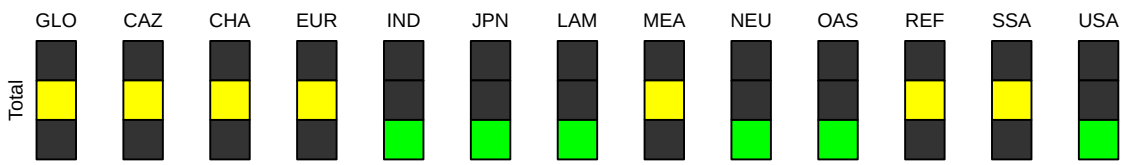


Figure 106: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.5	8.8	9.1	9.4	11.0	11.4	12.4	13.3	13.8	14.1	14.2
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
CHA	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
EUR	3.1	3.1	2.5	1.8	1.8	1.8	1.8	1.9	2.0	2.1	2.3
IND	1.0	1.5	2.1	2.5	3.7	3.8	4.5	4.7	4.8	4.9	4.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1
MEA	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7
NEU	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
OAS	0.3	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.9	0.9	0.9
REF	3.4	2.1	2.2	2.4	2.4	2.4	2.5	2.9	3.0	3.0	2.9
SSA	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 317: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

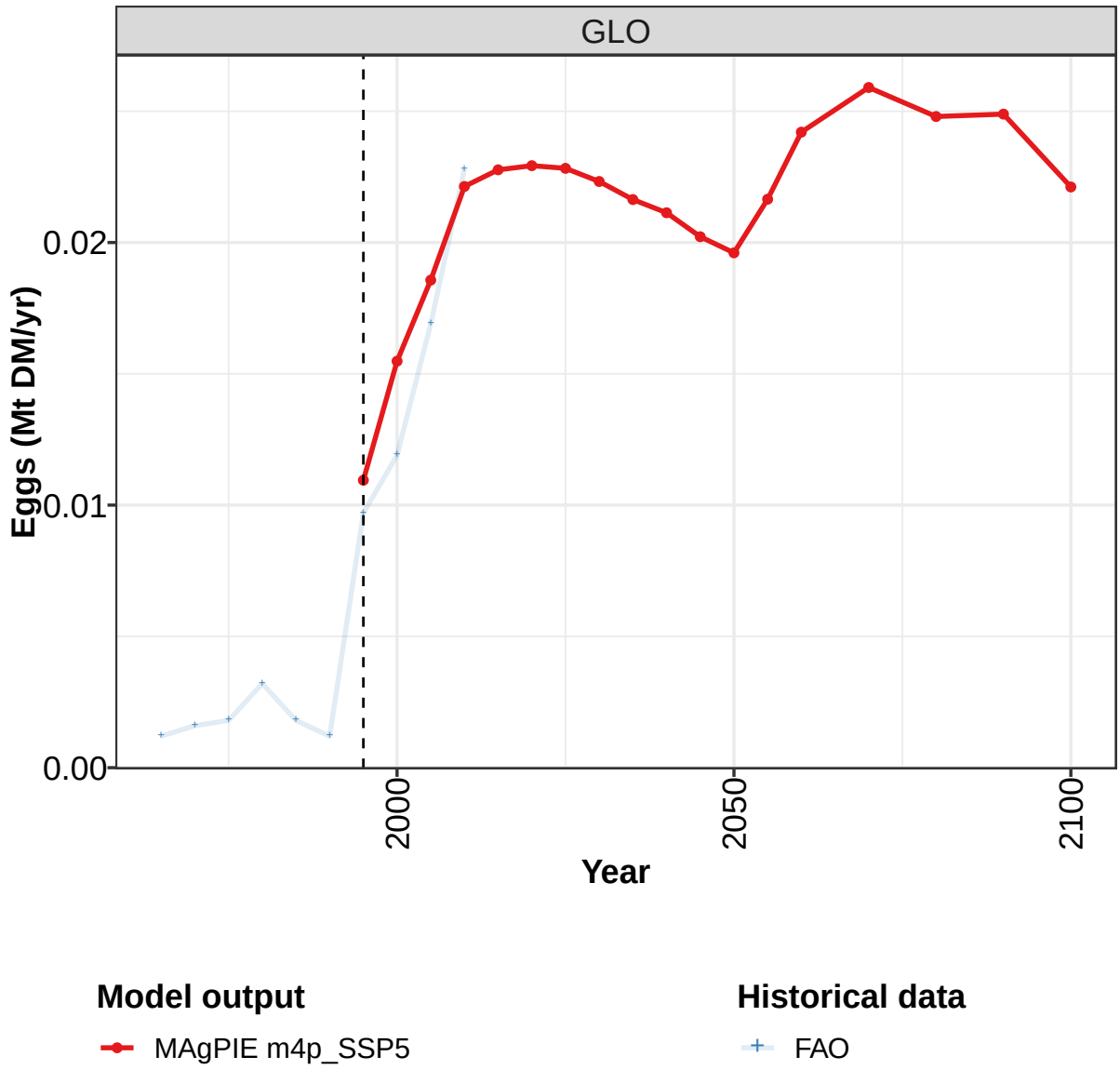
	2050	2055	2060	2070	2080	2090	2100
GLO	13.9	13.9	13.5	13.0	12.1	10.9	10.0
CAZ	0.3	0.3	0.3	0.3	0.3	0.2	0.2
CHA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EUR	2.5	2.5	2.4	2.3	2.2	2.1	2.2
IND	4.7	4.8	4.7	4.5	4.2	3.7	3.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.1	1.1	1.1	0.9	0.8	0.7	0.6
MEA	0.7	0.7	0.7	0.7	0.6	0.5	0.5
NEU	0.5	0.5	0.5	0.5	0.5	0.4	0.4
OAS	0.9	0.9	0.9	0.8	0.8	0.7	0.7
REF	2.5	2.4	2.3	2.2	2.1	1.7	1.5
SSA	0.4	0.5	0.5	0.5	0.5	0.5	0.4
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

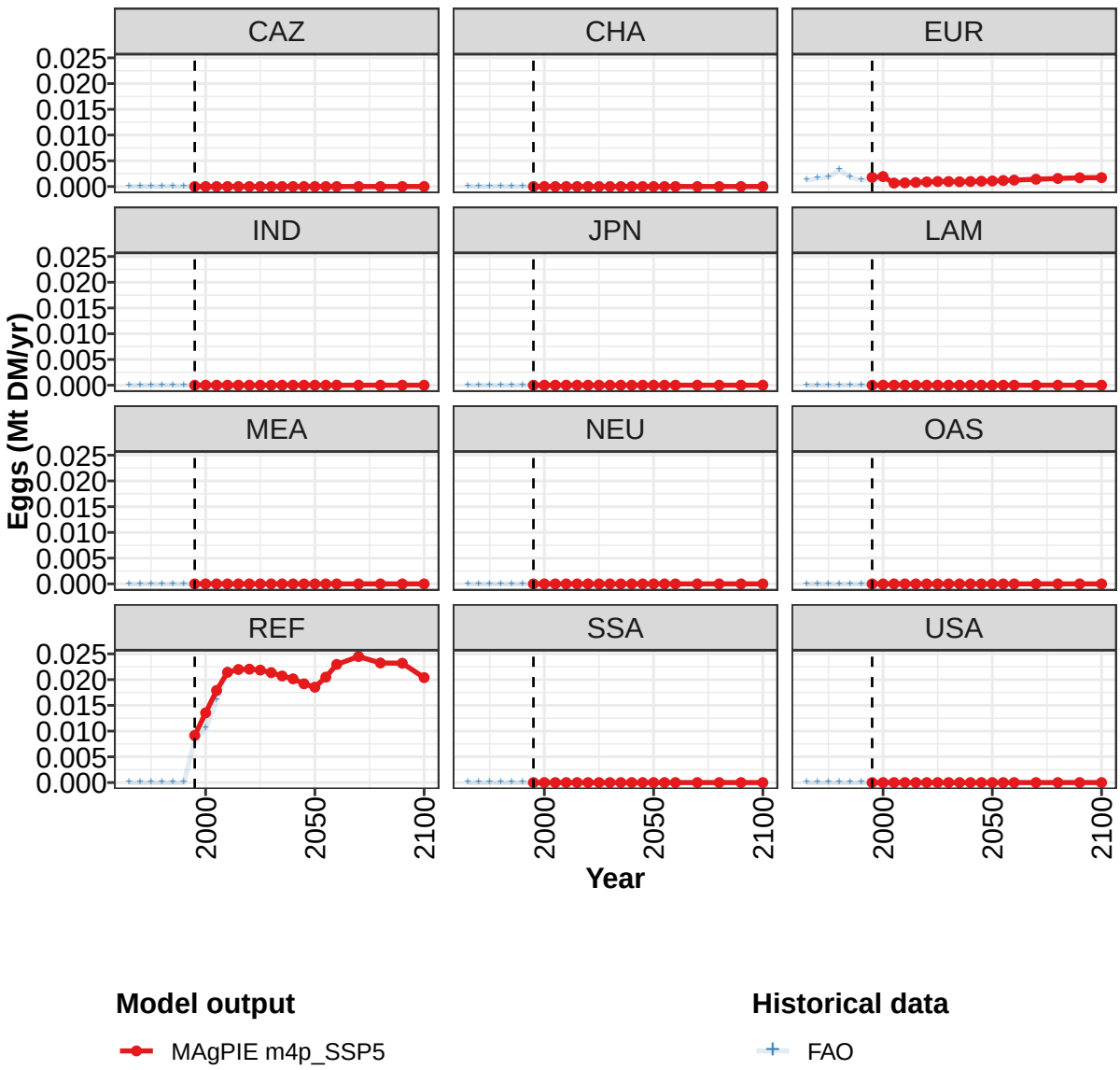
Table 318: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Dairy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12.4	11.7	11.7	12.4	12.9	13.2	9.9	8.9	9.1	9.4
CAZ	0.8	0.7	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.2
CHA	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
EUR	6.0	5.8	5.4	5.4	5.2	4.6	3.0	2.9	2.4	1.7
IND	0.3	0.3	0.4	0.5	0.5	0.8	1.0	1.5	2.1	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.3	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.8
MEA	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5
NEU	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4
OAS	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.5
REF	4.1	3.7	4.3	4.8	5.4	5.8	3.8	2.2	2.2	2.4
SSA	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
USA	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1

Table 319: FAO — Demand—Feed—Livestock products—Dairy (Mt DM/yr)

6.5.2 Eggs


GLO
Eggs (Mt DM/yr)
0.00
0.01
0.02
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



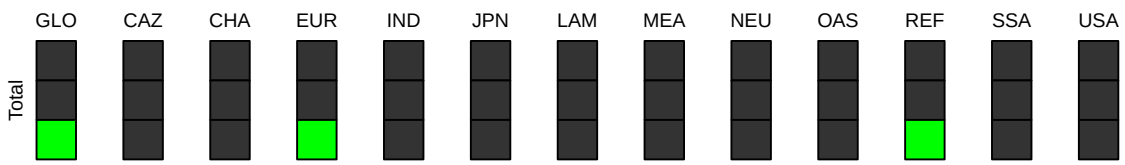


Figure 107: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0109	0.0155	0.0186	0.0221	0.0228	0.0229	0.0228	0.0223	0.0216	0.0211	0.0202
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0018	0.0019	0.0007	0.0007	0.0008	0.0009	0.0010	0.0010	0.0009	0.0010	0.0010
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0092	0.0135	0.0179	0.0214	0.0220	0.0220	0.0219	0.0214	0.0207	0.0202	0.0192
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 320: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

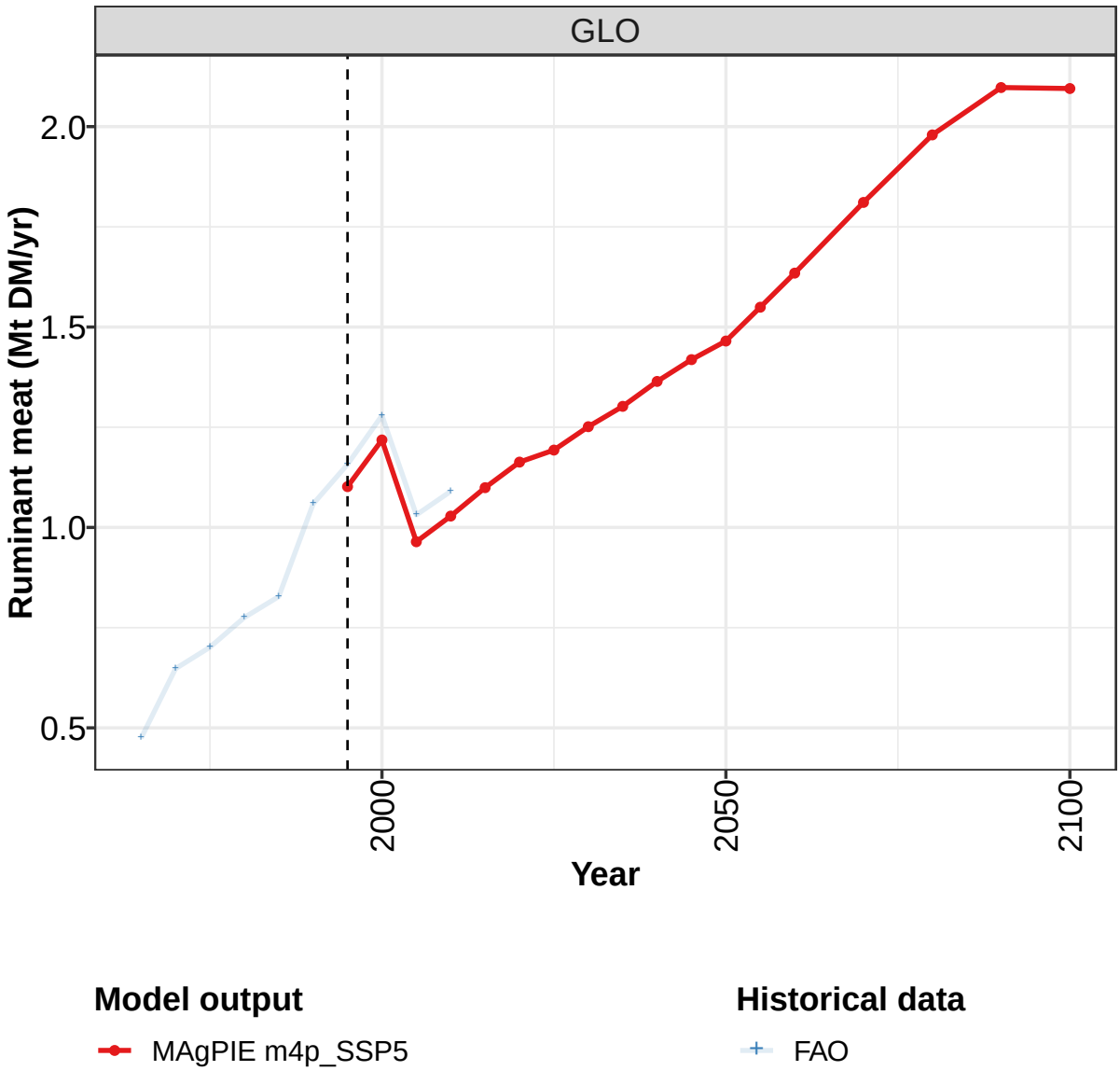
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0196	0.0216	0.0242	0.0259	0.0248	0.0249	0.0221
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0011	0.0012	0.0012	0.0014	0.0016	0.0017	0.0017
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0185	0.0205	0.0230	0.0245	0.0232	0.0232	0.0204
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

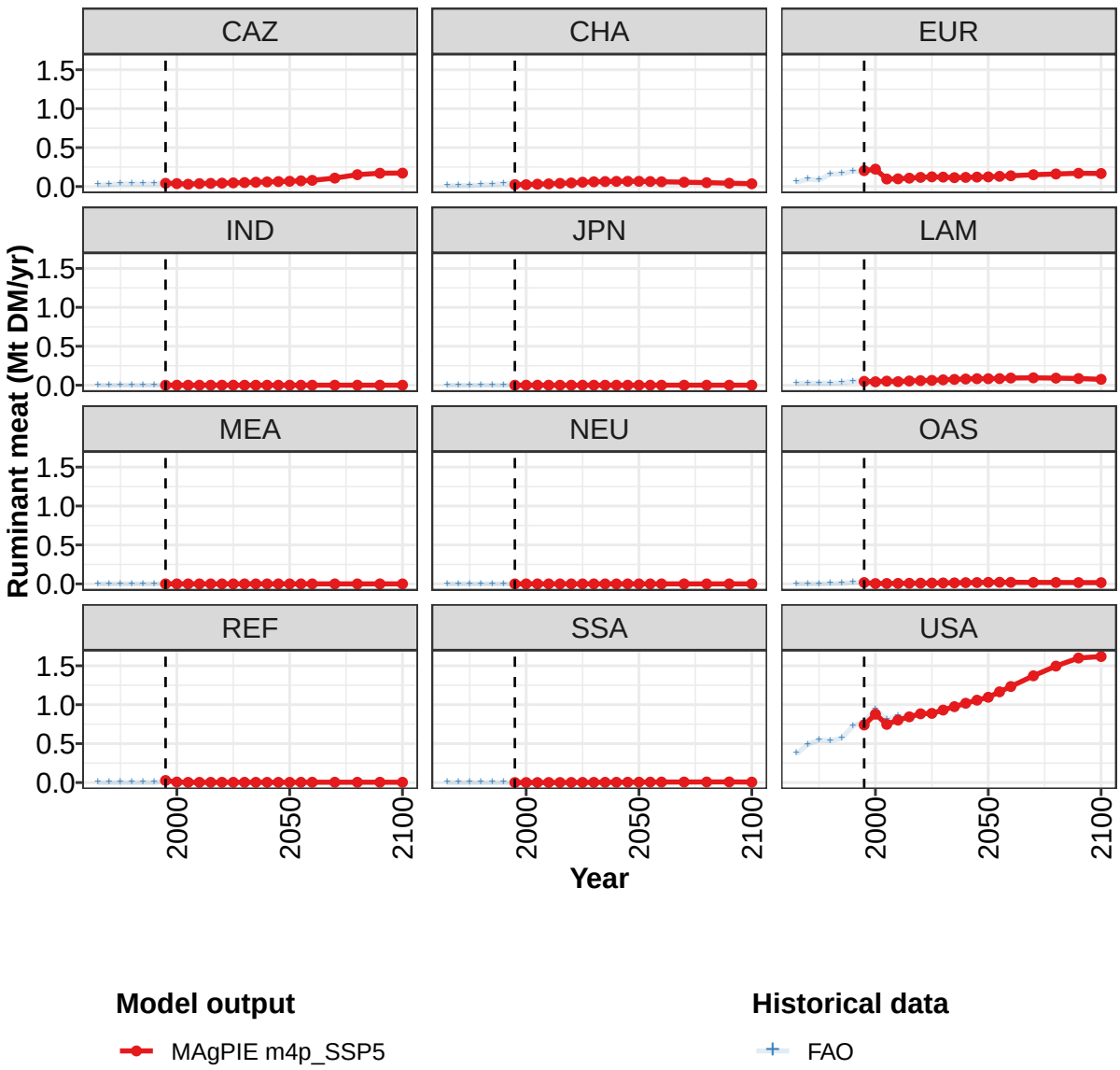
Table 321: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0012	0.0016	0.0018	0.0032	0.0018	0.0012	0.0097	0.0119	0.0169	0.0228
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0012	0.0016	0.0018	0.0032	0.0018	0.0012	0.0016	0.0014	0.0009	0.0008
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0081	0.0105	0.0160	0.0219
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 322: FAO — Demand—Feed—Livestock products—Eggs (Mt DM/yr)

6.5.3 Ruminant meat





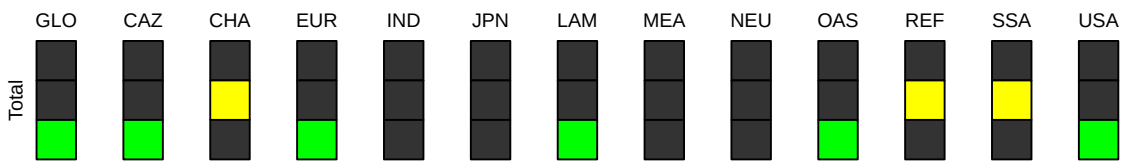


Figure 108: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.10	1.22	0.96	1.03	1.10	1.16	1.19	1.25	1.30	1.36	1.42
CAZ	0.04	0.04	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.06
CHA	0.02	0.02	0.03	0.03	0.04	0.05	0.06	0.06	0.06	0.07	0.07
EUR	0.20	0.22	0.10	0.10	0.11	0.12	0.12	0.12	0.11	0.12	0.12
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.05	0.04	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.08
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.02	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
REF	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.74	0.88	0.75	0.80	0.84	0.88	0.89	0.93	0.97	1.02	1.06

Table 323: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

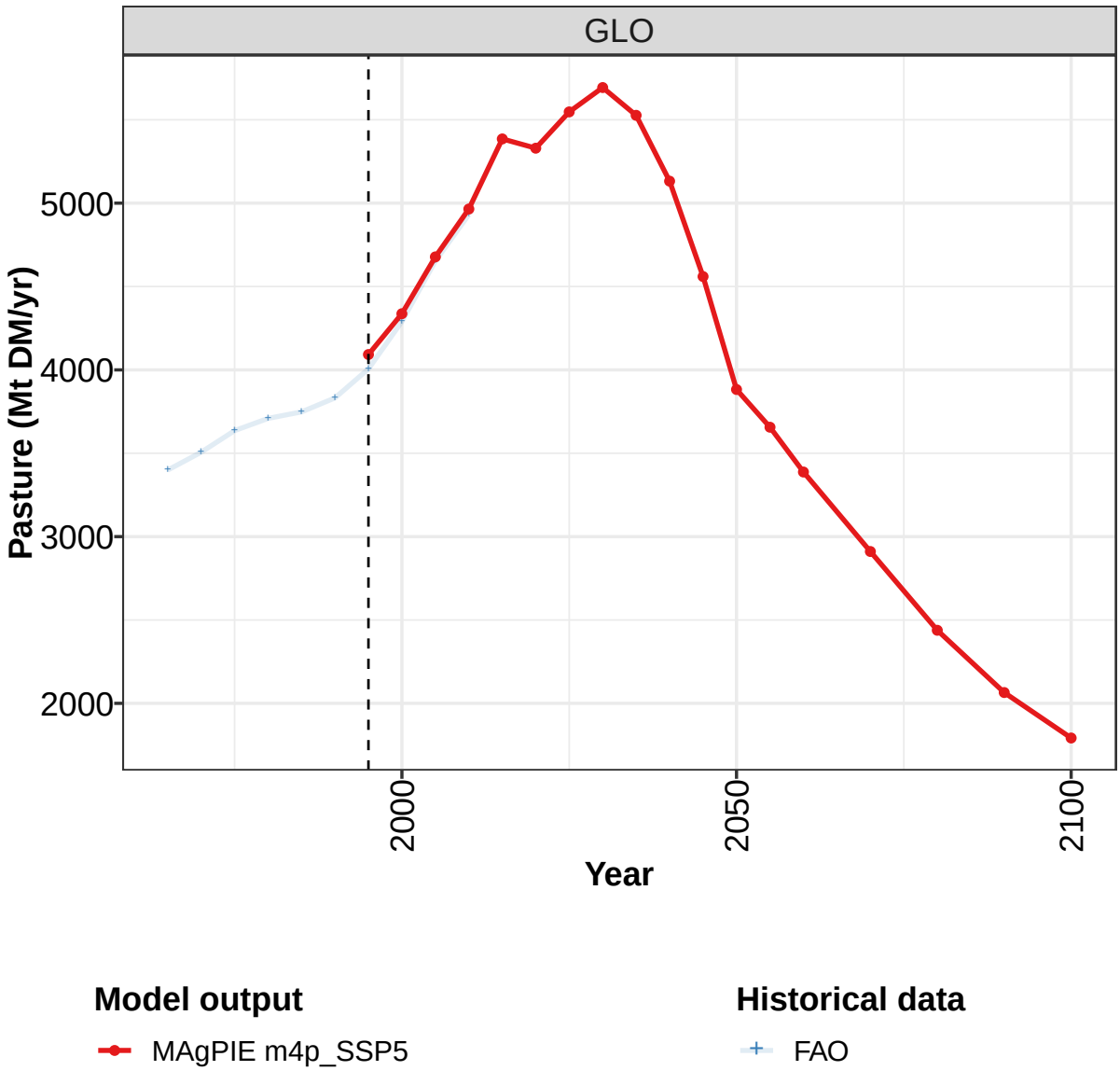
	2050	2055	2060	2070	2080	2090	2100
GLO	1.47	1.55	1.63	1.81	1.98	2.10	2.10
CAZ	0.07	0.07	0.08	0.11	0.15	0.17	0.17
CHA	0.07	0.06	0.06	0.06	0.05	0.04	0.04
EUR	0.12	0.13	0.14	0.15	0.16	0.17	0.17
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.08	0.09	0.09	0.09	0.09	0.09	0.08
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.02	0.02	0.02	0.02	0.02	0.02	0.02
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
USA	1.10	1.17	1.23	1.37	1.50	1.60	1.62

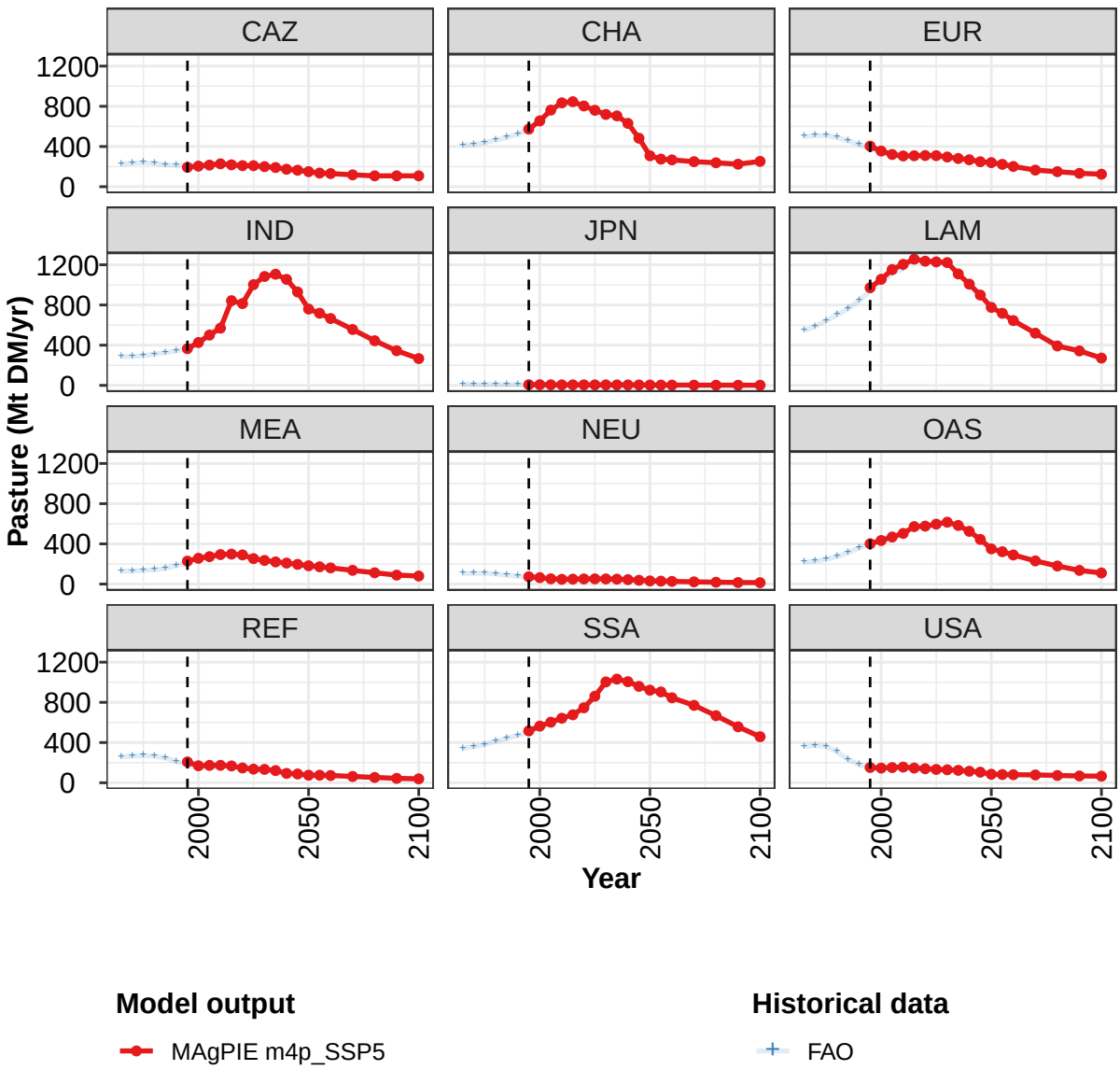
Table 324: MAgPIE m4p_SSP5 — Demand—Feed—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.47	0.65	0.70	0.78	0.83	1.06	1.16	1.28	1.03	1.09
CAZ	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
CHA	0.01	0.01	0.01	0.02	0.03	0.03	0.04	0.03	0.04	0.03
EUR	0.05	0.09	0.08	0.16	0.16	0.20	0.19	0.20	0.10	0.10
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.02	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.05	0.05
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.01	0.01	0.01
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.37	0.49	0.55	0.54	0.57	0.73	0.79	0.94	0.80	0.86

Table 325: FAO — Demand—Feed—Livestock products—Ruminant meat (Mt DM/yr)

6.6 Pasture


GLO
Pasture (Mt DM/yr)
5000
4000
3000
2000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



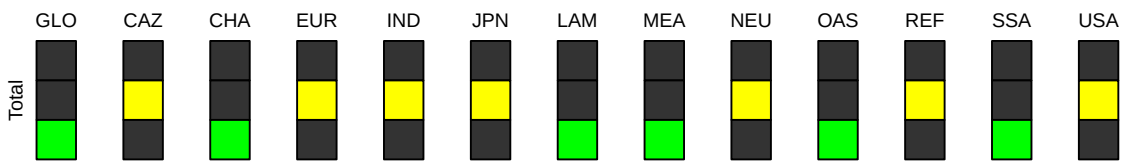


Figure 109: MAgPIE m4p_SSP5 — Demand—Feed—Pasture (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4092	4337	4678	4965	5385	5330	5547	5693	5527	5132	4560
CAZ	193	205	215	228	218	210	209	200	191	174	164
CHA	573	655	762	835	846	803	761	719	705	630	483
EUR	404	355	321	306	308	310	309	296	281	268	249
IND	365	427	501	570	843	815	1003	1084	1106	1055	930
JPN	7	7	6	5	5	5	5	5	5	5	4
LAM	972	1056	1153	1204	1256	1236	1230	1222	1109	1008	899
MEA	228	257	273	294	298	290	254	235	221	209	196
NEU	73	64	52	47	49	51	52	51	49	44	38
OAS	401	434	468	504	572	576	597	616	584	525	444
REF	207	169	173	174	167	147	136	133	121	93	87
SSA	516	564	603	642	676	746	861	1004	1031	1006	959
USA	152	146	151	156	146	140	133	129	124	115	105

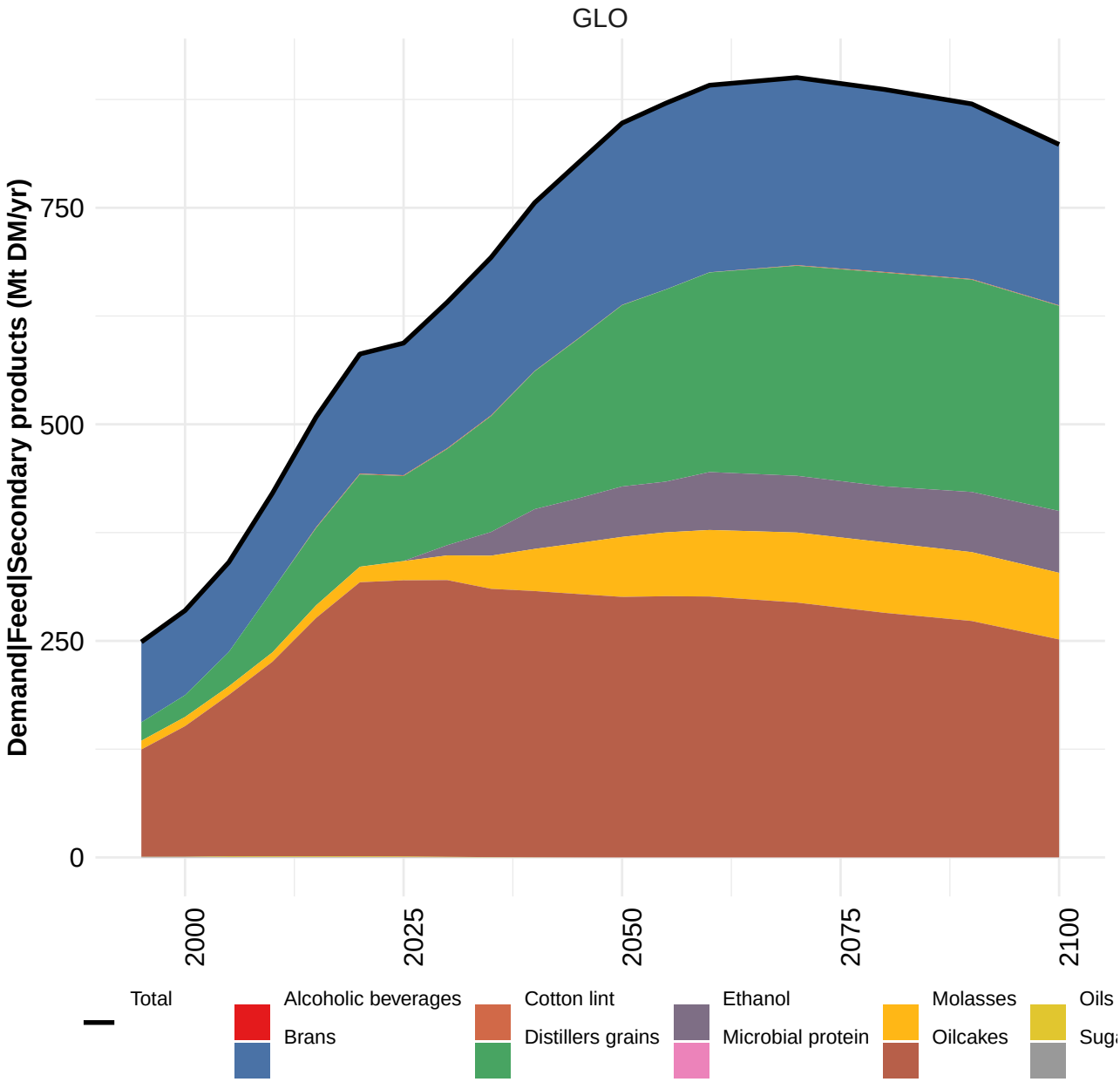
Table 326: MAgPIE m4p_SSP5 — Demand—Feed—Pasture (Mt DM/yr) [PART 1/2]

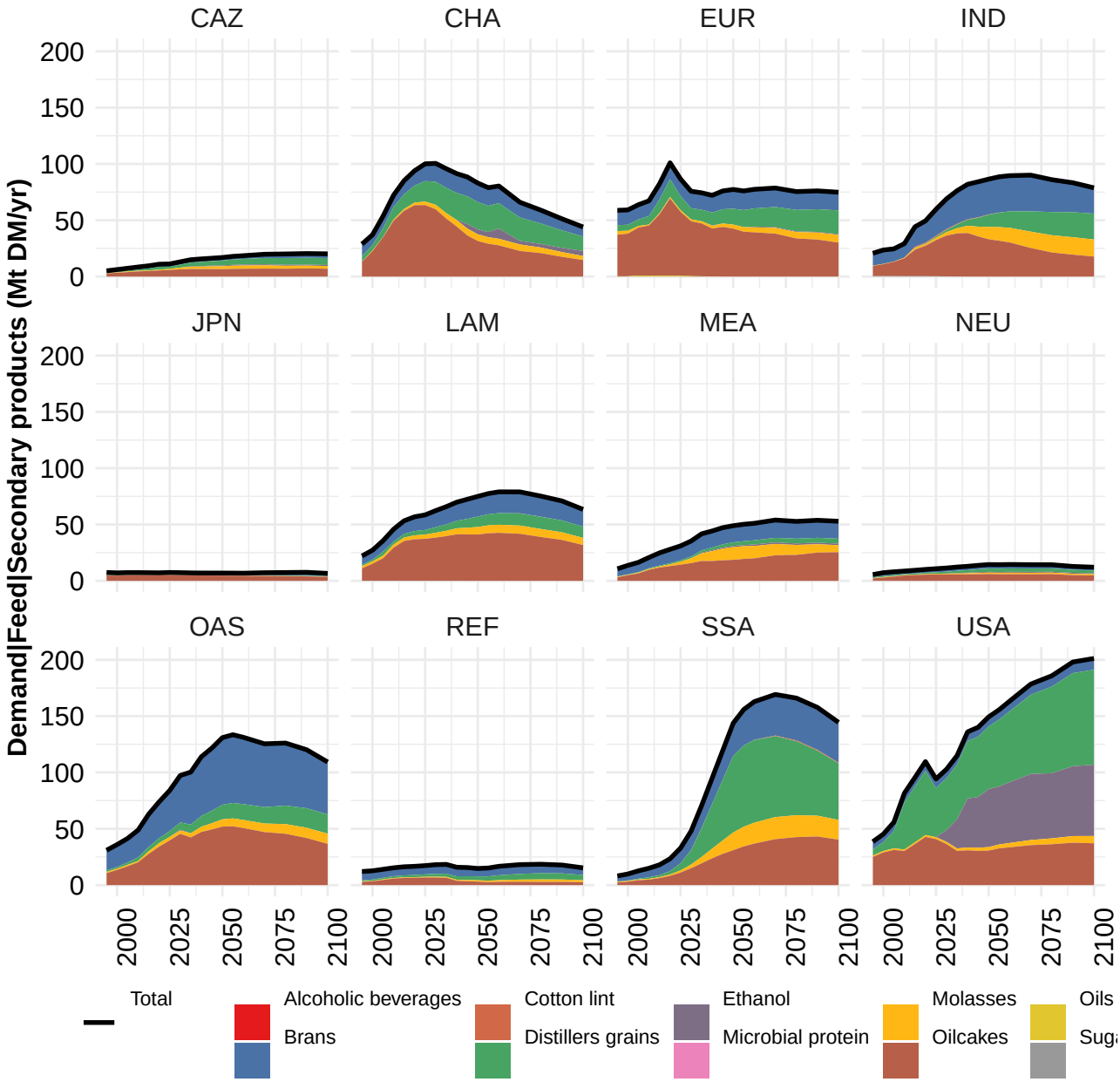
	2050	2055	2060	2070	2080	2090	2100
GLO	3882	3656	3388	2911	2438	2065	1792
CAZ	150	136	131	118	108	108	108
CHA	308	275	267	249	238	224	252
EUR	240	223	201	165	150	133	124
IND	760	718	665	556	444	345	267
JPN	4	3	3	3	2	2	2
LAM	776	717	645	520	392	343	272
MEA	182	172	161	137	112	89	80
NEU	32	29	27	22	19	15	14
OAS	350	322	290	230	180	136	110
REF	75	75	72	62	53	44	39
SSA	921	904	846	770	668	557	458
USA	84	82	80	78	72	68	66

Table 327: MAgPIE m4p_SSP5 — Demand—Feed—Pasture (Mt DM/yr) [PART 2/2]

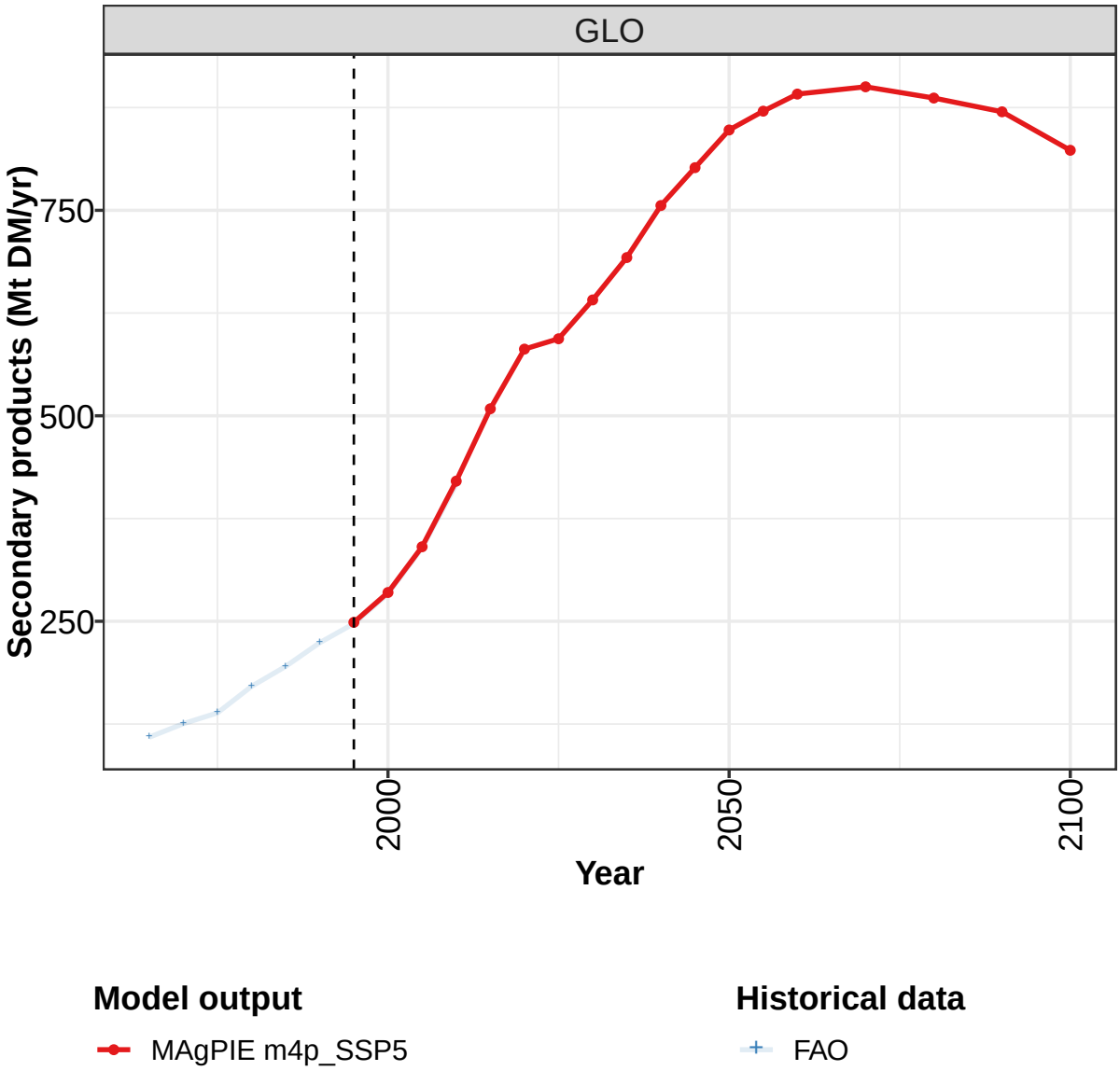
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3399	3506	3636	3709	3748	3832	4006	4290	4653	4931
CAZ	225	234	239	233	220	212	215	223	229	231
CHA	414	422	438	463	490	521	572	657	760	832
EUR	499	509	510	491	457	421	381	339	309	296
IND	287	288	295	311	328	342	367	429	522	594
JPN	10	10	9	9	8	8	7	7	6	5
LAM	548	586	643	702	765	845	939	1034	1113	1157
MEA	127	130	136	142	156	183	222	260	284	294
NEU	105	107	107	101	89	78	68	59	51	47
OAS	218	228	246	273	313	360	402	438	475	503
REF	260	266	270	265	246	213	173	148	152	168
SSA	344	357	381	412	443	471	502	546	600	640
USA	362	371	361	307	230	177	157	149	152	162

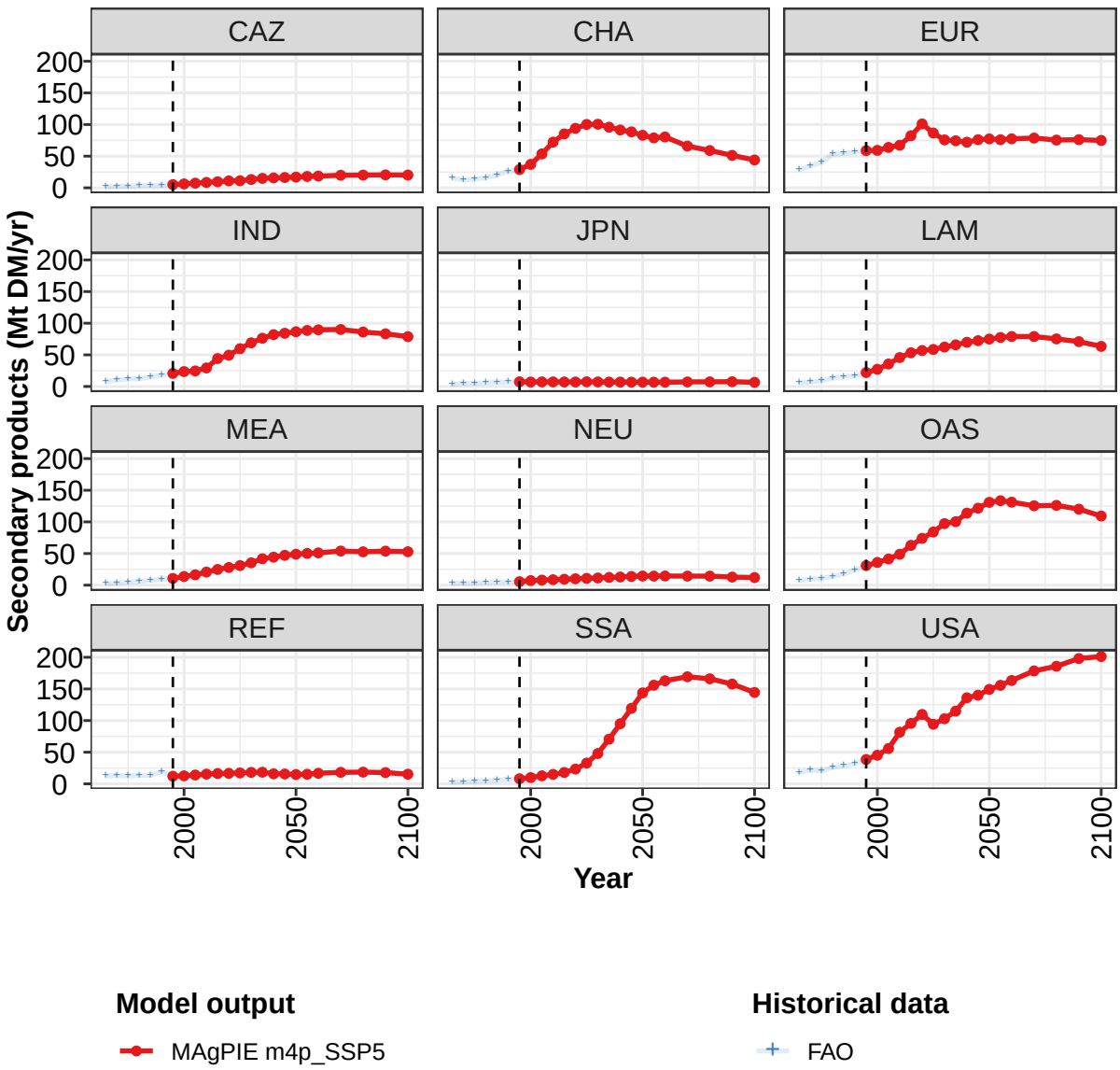
Table 328: FAO — Demand—Feed—Pasture (Mt DM/yr)


GLO
Demand|Feed|Secondary products (Mt DM/yr)
750
500
250
0
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Feed|Secondary products (Mt DM/yr)
200
150
100
50
0
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils

6.7 Secondary products





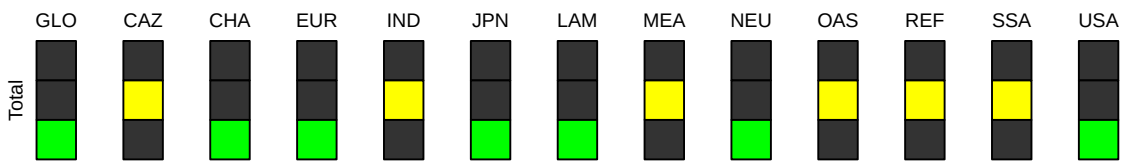


Figure 110: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	249	285	341	421	509	581	594	641	693	756	802
CAZ	5	6	7	9	10	11	11	13	15	16	16
CHA	29	37	54	72	85	94	100	100	96	91	88
EUR	59	59	64	67	82	101	87	76	74	72	76
IND	21	24	25	29	44	49	60	69	76	82	84
JPN	7	7	7	7	7	7	7	7	7	7	7
LAM	22	27	36	46	53	57	59	62	66	70	72
MEA	11	14	16	21	25	28	31	35	42	44	47
NEU	6	7	8	9	9	10	11	11	12	13	14
OAS	31	36	41	49	63	74	84	97	100	114	122
REF	12	13	14	15	16	17	17	18	18	16	16
SSA	8	10	13	15	18	23	33	48	71	95	119
USA	39	45	56	82	96	110	94	103	115	136	140

Table 329: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products (Mt DM/yr) [PART 1/2]

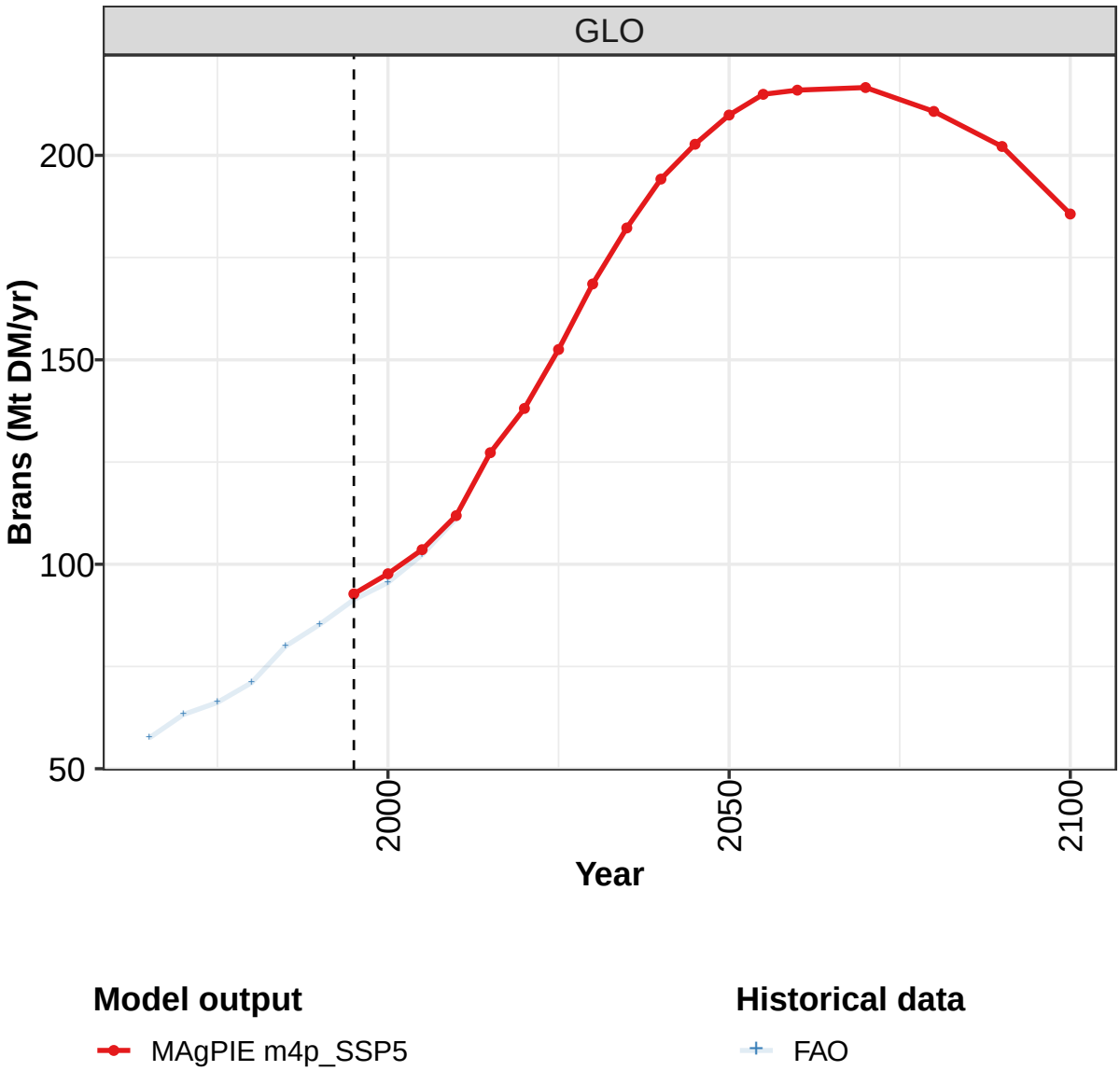
	2050	2055	2060	2070	2080	2090	2100
GLO	848	871	891	900	887	870	823
CAZ	17	18	19	20	20	20	20
CHA	83	79	80	66	59	51	44
EUR	77	76	77	79	75	76	75
IND	87	89	90	90	86	83	79
JPN	7	7	7	7	7	8	7
LAM	75	77	79	79	75	71	63
MEA	49	50	51	54	53	54	53
NEU	14	14	15	14	14	13	12
OAS	131	133	131	125	126	120	109
REF	15	15	17	18	19	18	15
SSA	144	156	163	169	166	158	144
USA	149	156	163	178	186	198	201

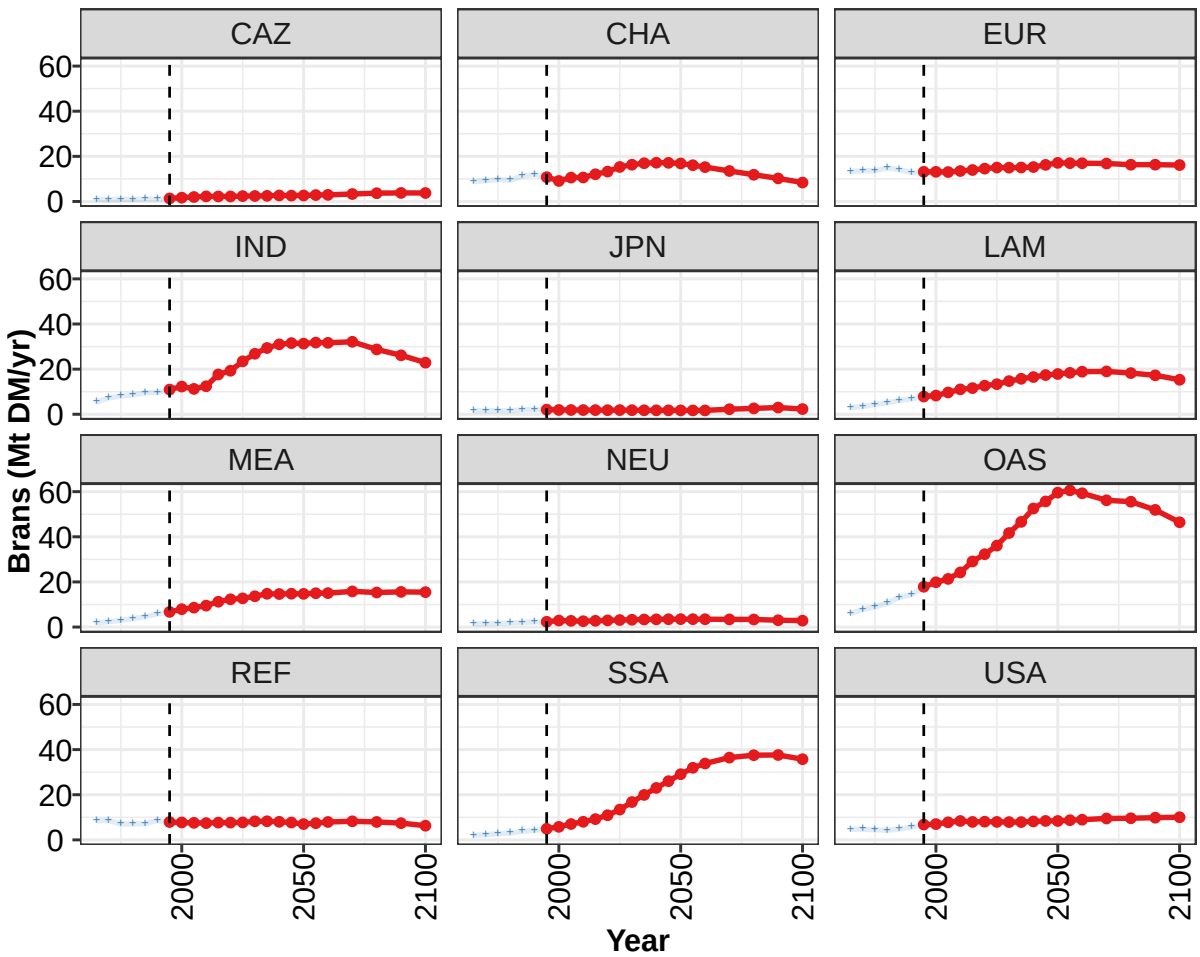
Table 330: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	109	125	139	171	195	224	247	283	339	416
CAZ	2	2	3	3	4	4	5	6	7	9
CHA	15	13	14	16	20	26	29	38	54	72
EUR	28	34	40	53	55	57	58	59	62	66
IND	8	10	12	12	15	18	20	23	25	29
JPN	4	5	5	6	7	7	7	7	7	7
LAM	6	7	10	13	16	17	22	27	35	43
MEA	3	3	5	6	8	9	11	14	16	21
NEU	3	3	3	4	4	5	5	7	8	9
OAS	7	9	11	14	18	24	31	35	42	50
REF	12	13	12	13	14	19	11	12	14	15
SSA	3	3	4	5	6	7	8	10	13	15
USA	18	22	20	26	29	32	39	46	57	81

Table 331: FAO — Demand—Feed—Secondary products (Mt DM/yr)

6.7.1 Brans


GLO
Brans (Mt DM/yr)
200
150
100
50
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

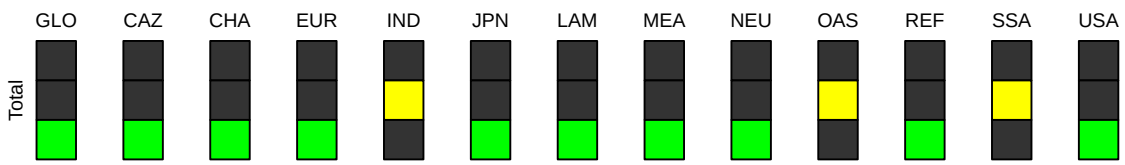


Figure 111: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	93	98	104	112	127	138	153	169	182	194	203
CAZ	1	2	2	2	2	2	2	2	3	3	3
CHA	11	9	11	11	12	13	15	16	17	17	17
EUR	13	13	13	14	14	15	15	15	15	15	16
IND	11	12	11	12	18	19	23	27	29	31	32
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	8	8	10	11	12	13	13	15	16	17	17
MEA	7	8	9	10	11	12	13	14	15	15	15
NEU	2	3	3	3	3	3	3	3	3	3	3
OAS	18	20	21	24	29	32	36	42	47	53	56
REF	8	8	8	7	8	8	8	8	8	8	8
SSA	5	6	7	8	9	11	13	17	20	23	26
USA	7	7	8	8	8	8	8	8	8	8	8

Table 332: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Brans (Mt DM/yr) [PART 1/2]

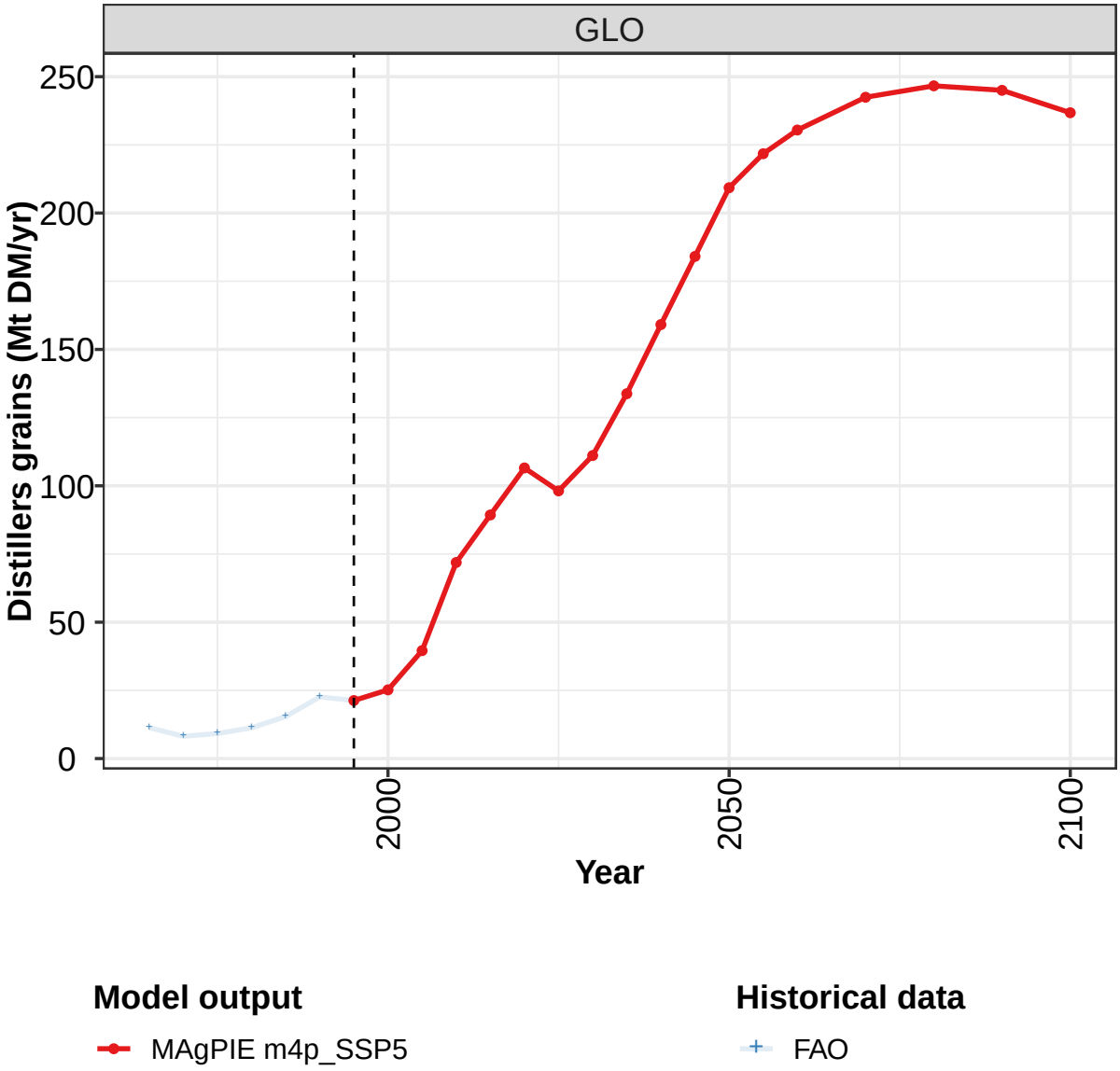
	2050	2055	2060	2070	2080	2090	2100
GLO	210	215	216	217	211	202	186
CAZ	3	3	3	3	4	4	4
CHA	17	16	15	14	12	10	8
EUR	17	17	17	17	16	16	16
IND	31	32	32	32	29	26	23
JPN	2	2	2	2	3	3	2
LAM	18	18	19	19	18	17	15
MEA	15	15	15	16	15	16	15
NEU	4	4	3	3	3	3	3
OAS	60	61	59	56	56	52	46
REF	7	7	8	8	8	7	6
SSA	29	32	34	36	38	38	36
USA	8	9	9	9	10	10	10

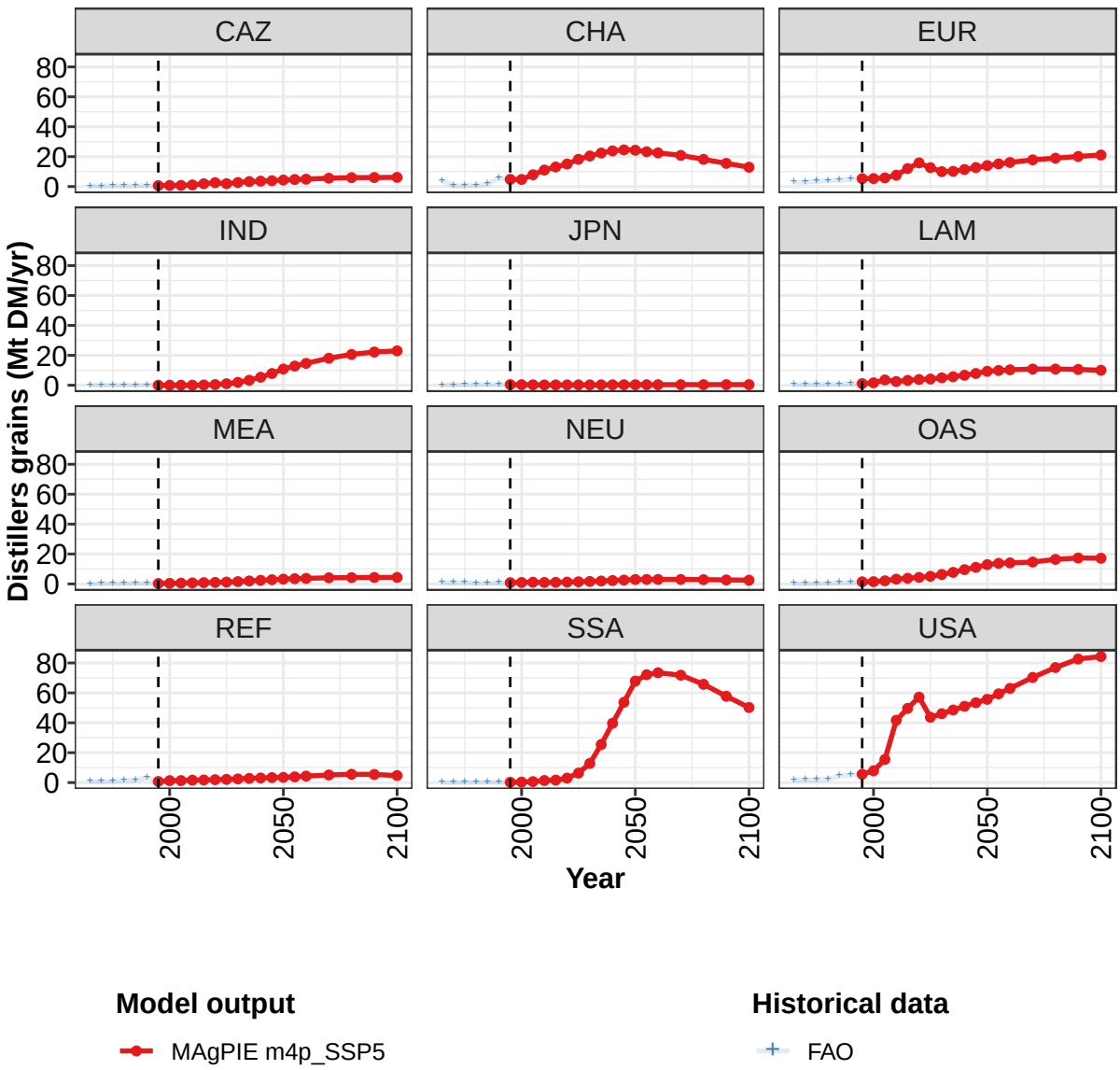
Table 333: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	58	63	66	71	80	85	91	96	102	111
CAZ	1	1	1	1	1	1	1	2	2	2
CHA	9	9	10	9	11	12	11	9	11	11
EUR	13	14	14	15	14	13	13	13	13	13
IND	5	7	8	9	10	10	11	12	11	12
JPN	2	2	2	2	2	2	2	2	2	2
LAM	3	3	4	5	6	7	8	8	10	10
MEA	2	2	3	4	5	6	7	8	8	10
NEU	1	1	2	2	2	2	2	3	3	3
OAS	6	8	9	11	13	14	17	19	21	25
REF	9	9	7	7	7	9	7	7	7	7
SSA	2	2	3	3	4	4	5	6	7	8
USA	5	5	4	4	5	6	7	6	7	8

Table 334: FAO — Demand—Feed—Secondary products—Brans (Mt DM/yr)

6.7.2 Distillers grains





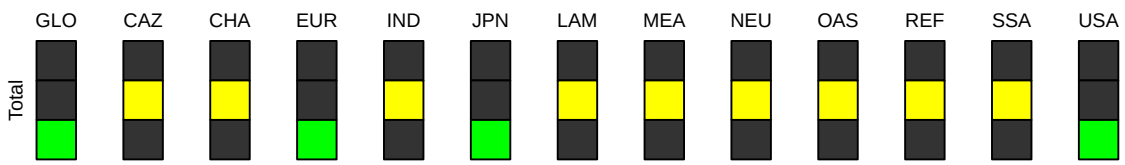


Figure 112: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Distillers grains (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21	25	40	72	89	107	98	111	134	159	184
CAZ	1	1	1	1	2	3	2	3	3	4	4
CHA	5	5	8	11	13	15	18	20	22	24	25
EUR	5	5	6	8	12	16	13	10	10	11	13
IND	0	0	0	0	0	0	1	2	3	5	8
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	4	2	3	4	4	5	6	7	8
MEA	0	0	1	1	1	1	1	2	2	2	3
NEU	1	1	1	1	1	1	1	2	2	2	3
OAS	1	2	2	3	4	4	5	6	8	10	11
REF	1	1	1	2	2	2	2	2	3	3	3
SSA	0	0	1	1	2	3	6	13	25	40	54
USA	6	8	15	42	50	57	44	46	49	51	53

Table 335: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Distillers grains (Mt DM/yr) [PART 1/2]

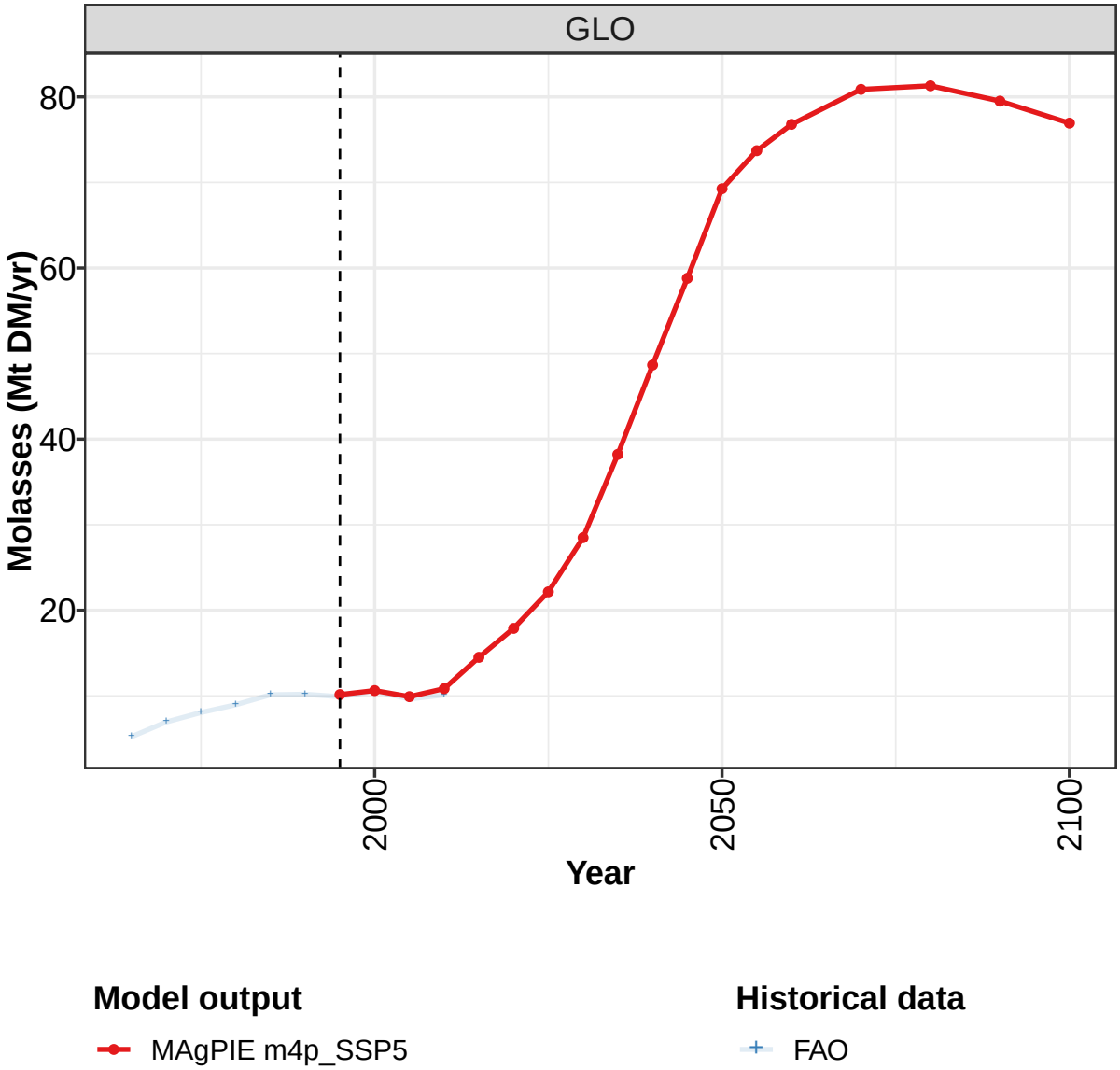
	2050	2055	2060	2070	2080	2090	2100
GLO	209	222	230	242	247	245	237
CAZ	4	5	5	6	6	6	6
CHA	24	23	23	21	18	16	13
EUR	14	15	16	18	19	20	21
IND	11	13	15	18	21	22	23
JPN	0	0	0	0	0	0	0
LAM	9	10	10	11	11	11	10
MEA	3	3	4	4	4	4	4
NEU	3	3	3	3	3	3	2
OAS	13	14	14	15	16	17	17
REF	3	4	4	5	6	5	5
SSA	68	72	73	72	66	58	50
USA	56	59	63	70	77	83	84

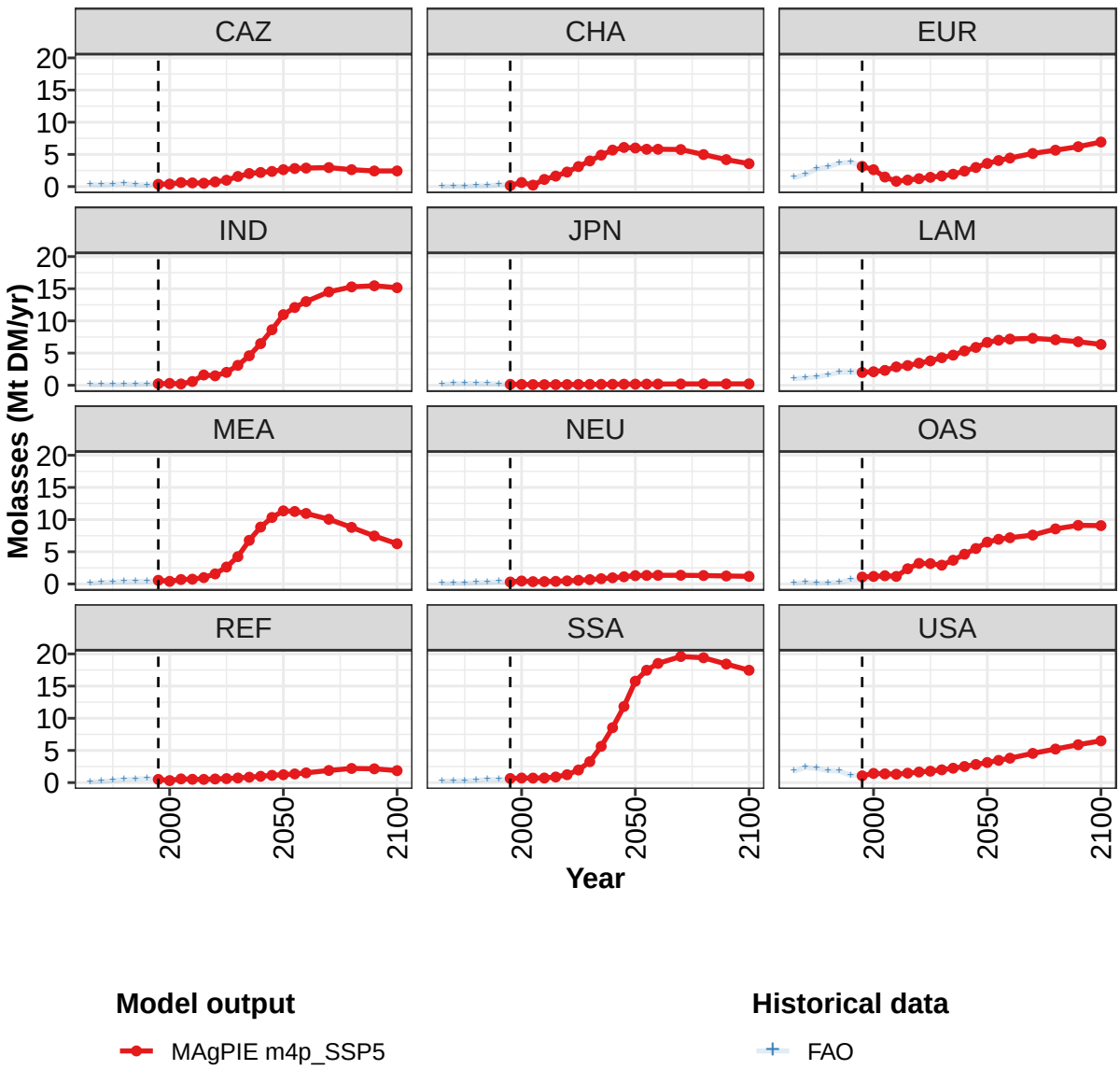
Table 336: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Distillers grains (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.3	8.2	9.2	11.3	15.4	22.6	21.3	25.0	39.3	71.8
CAZ	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.8	0.7	1.1
CHA	4.0	0.4	0.6	0.8	1.6	5.7	4.8	4.7	7.9	11.1
EUR	2.8	3.0	3.5	4.0	4.3	4.7	5.3	5.2	5.7	7.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.2
LAM	0.3	0.3	0.4	0.5	0.6	0.9	1.1	1.7	3.6	2.5
MEA	0.0	0.1	0.1	0.2	0.3	0.2	0.3	0.4	0.5	0.7
NEU	0.9	0.8	0.9	0.6	0.6	0.7	0.8	0.9	1.1	1.0
OAS	0.1	0.2	0.2	0.4	0.8	1.0	1.4	1.5	2.1	3.2
REF	0.8	0.8	0.9	1.3	1.7	3.2	0.7	1.3	1.3	1.6
SSA	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.6	1.4
USA	1.8	1.8	1.9	2.3	4.3	5.0	5.6	7.9	15.5	41.7

Table 337: FAO — Demand—Feed—Secondary products—Distillers grains (Mt DM/yr)

6.7.3 Molasses





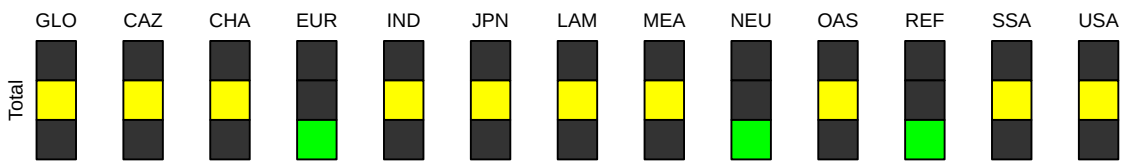


Figure 113: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.1	10.6	9.9	10.8	14.5	17.9	22.2	28.5	38.2	48.7	58.8
CAZ	0.3	0.4	0.6	0.6	0.5	0.7	1.0	1.6	2.0	2.2	2.4
CHA	0.2	0.6	0.2	1.1	1.6	2.3	3.1	4.0	4.9	5.7	6.1
EUR	3.1	2.6	1.5	0.8	1.0	1.2	1.4	1.6	1.9	2.4	3.0
IND	0.2	0.3	0.2	0.6	1.6	1.5	2.0	3.1	4.6	6.5	8.6
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
LAM	2.0	2.1	2.3	2.9	3.1	3.4	3.8	4.3	4.7	5.3	5.9
MEA	0.6	0.4	0.7	0.7	1.0	1.6	2.6	4.2	6.8	8.8	10.3
NEU	0.3	0.5	0.4	0.4	0.4	0.5	0.6	0.7	0.8	1.0	1.1
OAS	1.1	1.2	1.3	1.2	2.4	3.2	3.2	2.9	3.7	4.6	5.5
REF	0.5	0.3	0.6	0.5	0.5	0.6	0.6	0.7	0.8	1.0	1.1
SSA	0.6	0.7	0.7	0.7	0.9	1.2	2.0	3.3	5.6	8.5	11.8
USA	1.1	1.4	1.4	1.3	1.5	1.6	1.8	2.0	2.2	2.5	2.8

Table 338: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

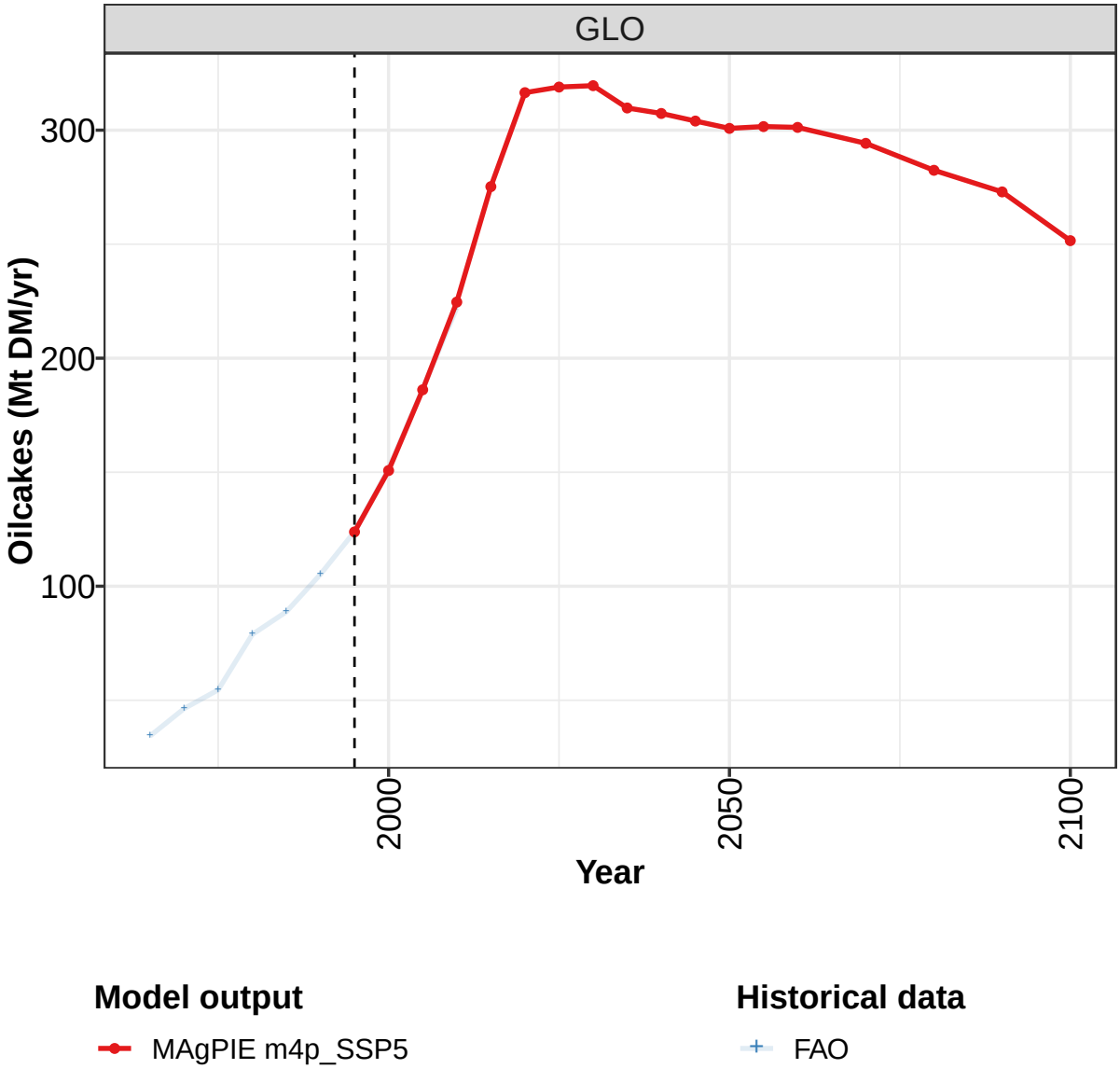
	2050	2055	2060	2070	2080	2090	2100
GLO	69.3	73.7	76.8	80.9	81.3	79.5	76.9
CAZ	2.6	2.8	2.9	3.0	2.6	2.4	2.4
CHA	6.0	5.8	5.8	5.8	5.0	4.2	3.6
EUR	3.6	4.0	4.4	5.1	5.7	6.2	6.9
IND	11.0	12.1	13.0	14.5	15.3	15.5	15.2
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	6.7	7.0	7.2	7.3	7.1	6.8	6.3
MEA	11.4	11.3	11.0	10.1	8.8	7.5	6.2
NEU	1.3	1.3	1.3	1.3	1.3	1.2	1.2
OAS	6.5	6.9	7.2	7.6	8.6	9.1	9.1
REF	1.2	1.4	1.5	1.9	2.2	2.1	1.9
SSA	15.8	17.5	18.5	19.6	19.4	18.4	17.5
USA	3.1	3.5	3.8	4.5	5.2	5.9	6.5

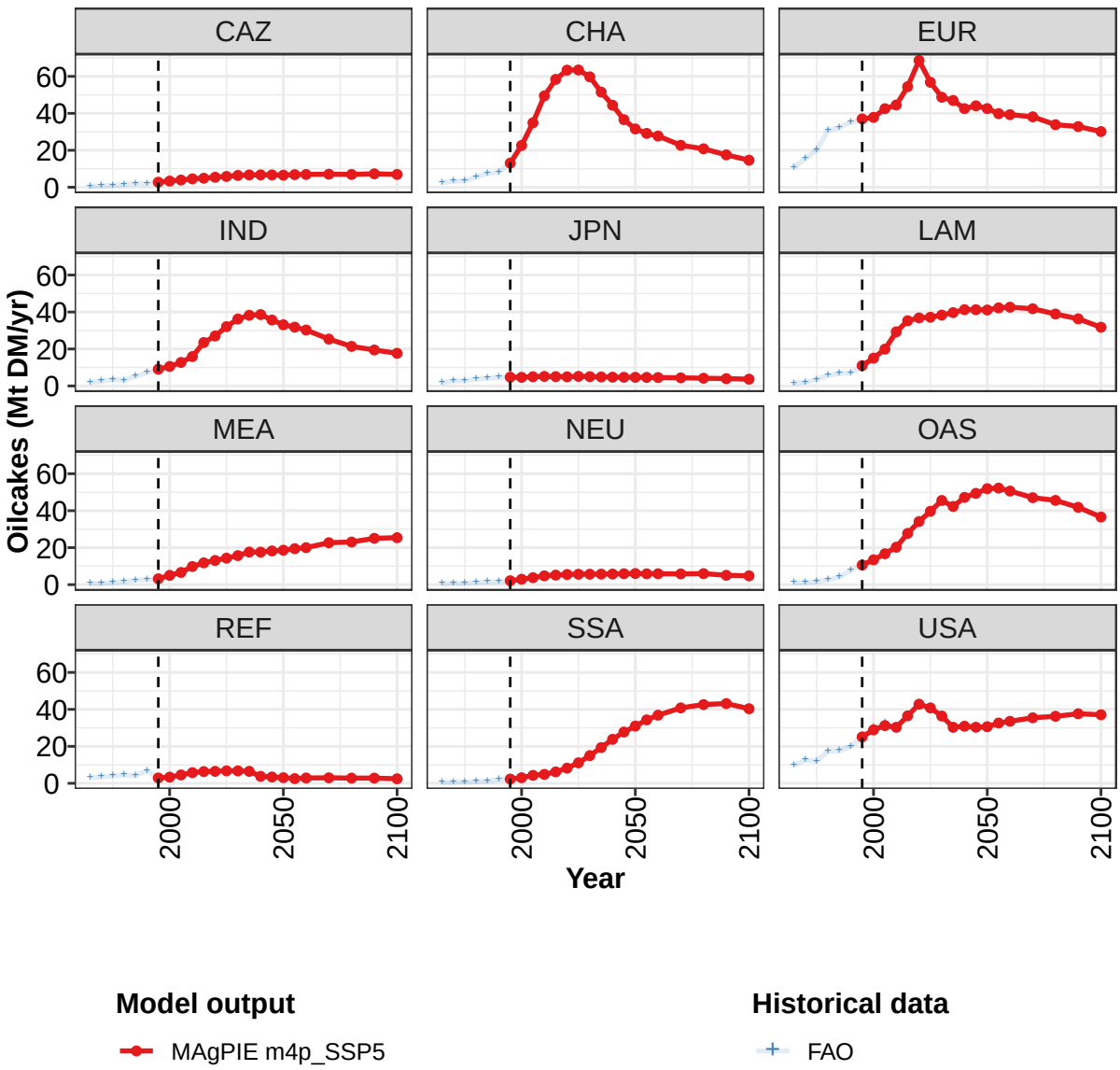
Table 339: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Molasses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.2	7.0	8.1	9.0	10.1	10.2	9.9	10.6	9.6	10.1
CAZ	0.3	0.3	0.4	0.5	0.3	0.2	0.4	0.5	0.5	0.4
CHA	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.7	0.3	1.1
EUR	1.4	1.9	2.8	3.1	3.7	3.8	3.2	2.6	1.4	0.8
IND	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3
JPN	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
LAM	1.0	1.2	1.3	1.6	2.0	2.0	2.1	2.2	2.4	2.5
MEA	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.4	0.5	0.7
NEU	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.3	0.4
OAS	0.1	0.2	0.1	0.2	0.3	0.6	0.6	0.9	1.3	1.2
REF	0.1	0.2	0.3	0.5	0.6	0.6	0.5	0.4	0.5	0.4
SSA	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.7	0.7	0.7
USA	1.8	2.4	2.2	1.9	1.8	1.1	1.1	1.4	1.4	1.4

Table 340: FAO — Demand—Feed—Secondary products—Molasses (Mt DM/yr)

6.7.4 Oilcakes





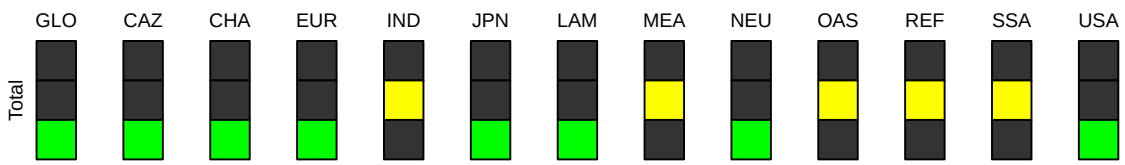


Figure 114: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	124	151	186	225	275	316	319	320	310	307	304
CAZ	3	3	4	5	5	5	6	6	7	7	7
CHA	13	23	35	49	58	63	63	60	51	44	37
EUR	37	38	43	45	54	69	57	49	47	43	44
IND	9	11	13	16	24	27	32	36	38	39	36
JPN	5	5	5	5	5	5	5	5	5	5	5
LAM	11	15	20	29	35	37	37	38	40	41	41
MEA	3	5	7	10	12	13	14	16	18	18	18
NEU	2	3	4	5	5	5	6	6	6	6	6
OAS	11	13	17	20	28	34	40	46	42	47	49
REF	3	3	5	6	6	6	7	7	6	4	3
SSA	2	3	4	5	6	8	11	15	19	24	28
USA	25	29	31	30	37	43	41	36	30	31	30

Table 341: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

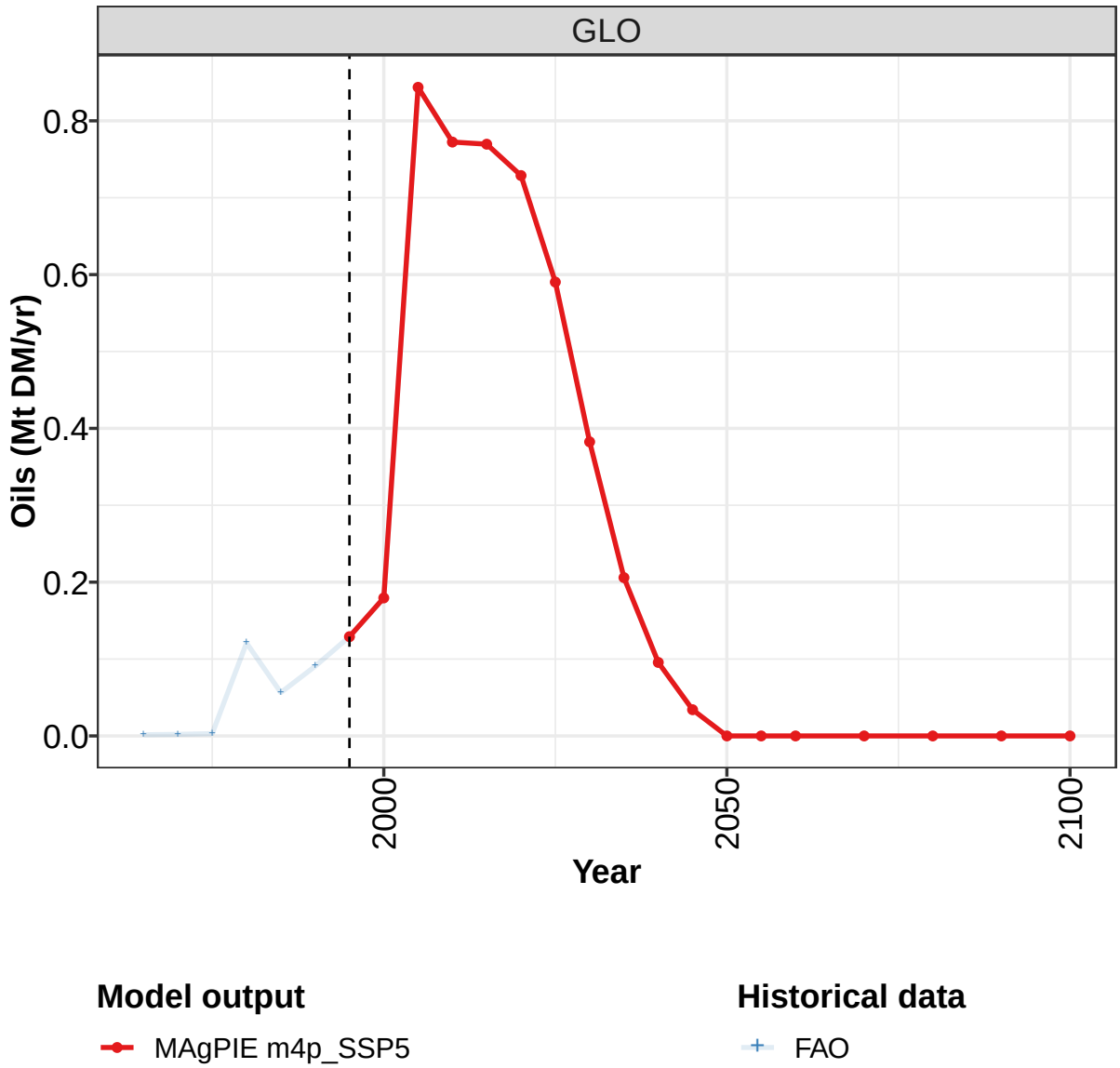
	2050	2055	2060	2070	2080	2090	2100
GLO	301	302	301	294	282	273	252
CAZ	7	7	7	7	7	7	7
CHA	32	29	28	23	21	18	15
EUR	43	40	39	38	34	33	30
IND	33	32	30	25	21	19	18
JPN	5	5	5	4	4	4	4
LAM	41	42	43	42	39	36	32
MEA	19	19	20	23	23	25	25
NEU	6	6	6	6	6	5	5
OAS	52	52	51	47	46	42	37
REF	3	3	3	3	3	3	2
SSA	31	34	37	41	43	43	40
USA	31	33	34	35	36	38	37

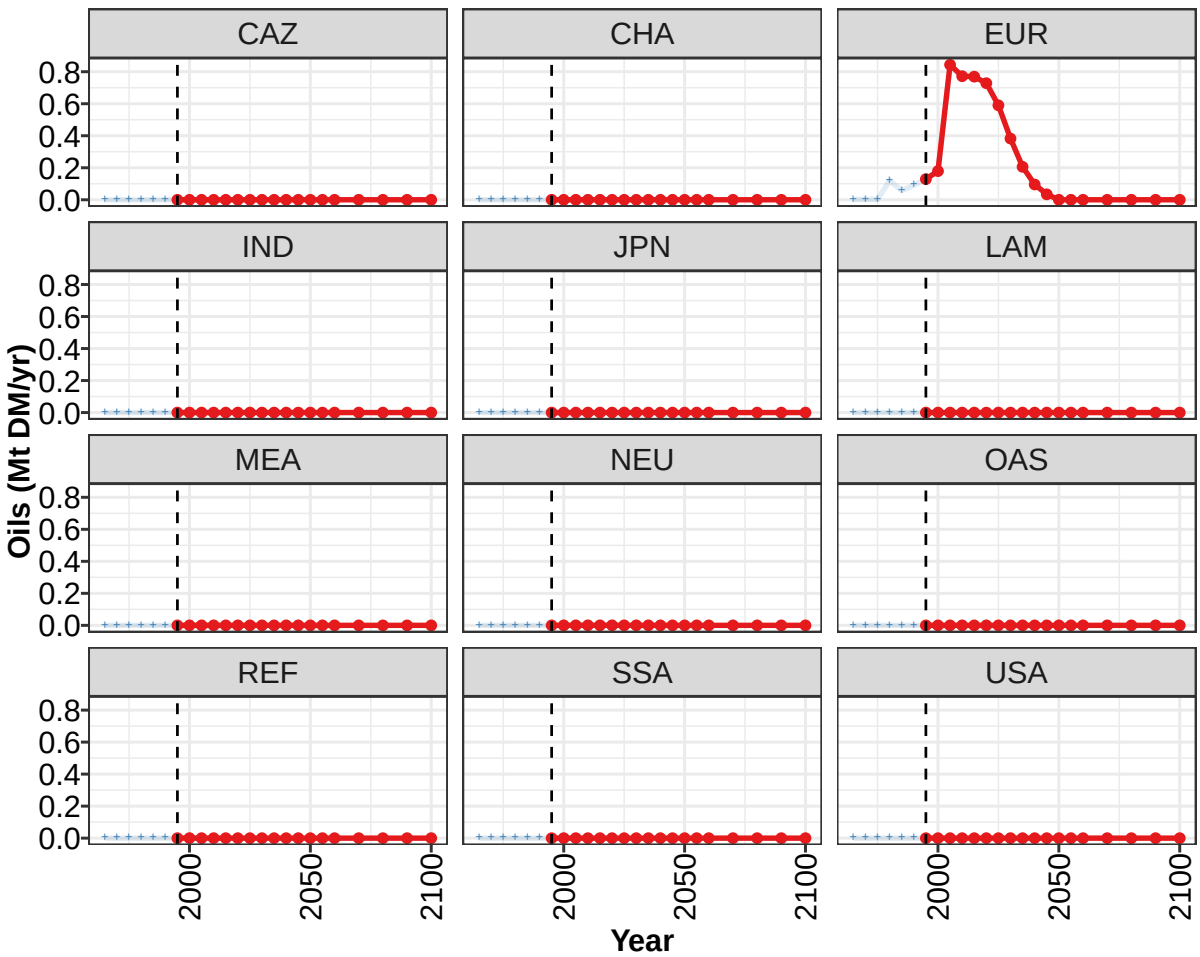
Table 342: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Oilcakes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	34	46	55	79	89	105	124	151	187	222
CAZ	0	1	1	1	2	2	3	3	4	5
CHA	2	3	3	6	7	8	13	23	35	49
EUR	11	15	20	31	32	35	37	38	42	44
IND	2	3	3	3	5	7	9	10	13	16
JPN	2	3	3	4	4	5	5	5	5	5
LAM	1	2	3	6	7	7	10	15	19	27
MEA	1	1	1	2	2	3	3	5	7	10
NEU	1	1	1	1	1	2	2	3	4	5
OAS	1	1	2	3	4	8	11	13	17	21
REF	3	3	4	4	4	7	3	3	4	6
SSA	0	1	1	1	1	2	2	3	4	5
USA	10	13	12	17	18	20	26	30	33	30

Table 343: FAO — Demand—Feed—Secondary products—Oilcakes (Mt DM/yr)

6.7.5 Oils


GLO
Oils (Mt DM/yr)
0.0
0.2
0.4
0.6
0.8
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

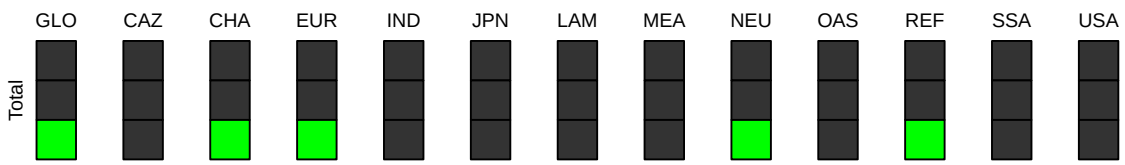


Figure 115: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.129	0.179	0.844	0.772	0.770	0.729	0.590	0.383	0.206	0.096	0.034
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.129	0.179	0.844	0.772	0.769	0.729	0.590	0.382	0.206	0.096	0.034
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 344: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Oils (Mt DM/yr) [PART 1/2]

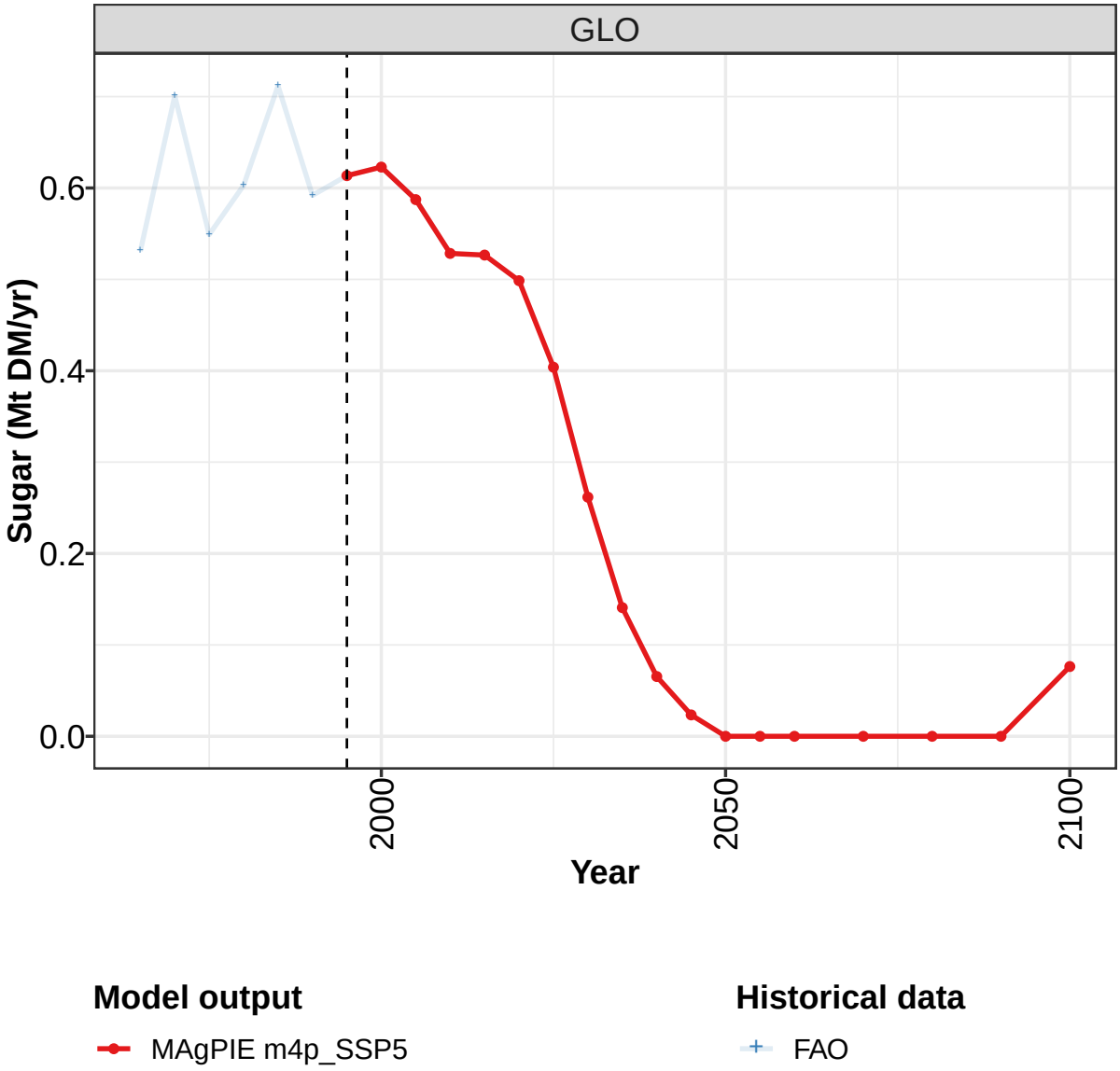
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

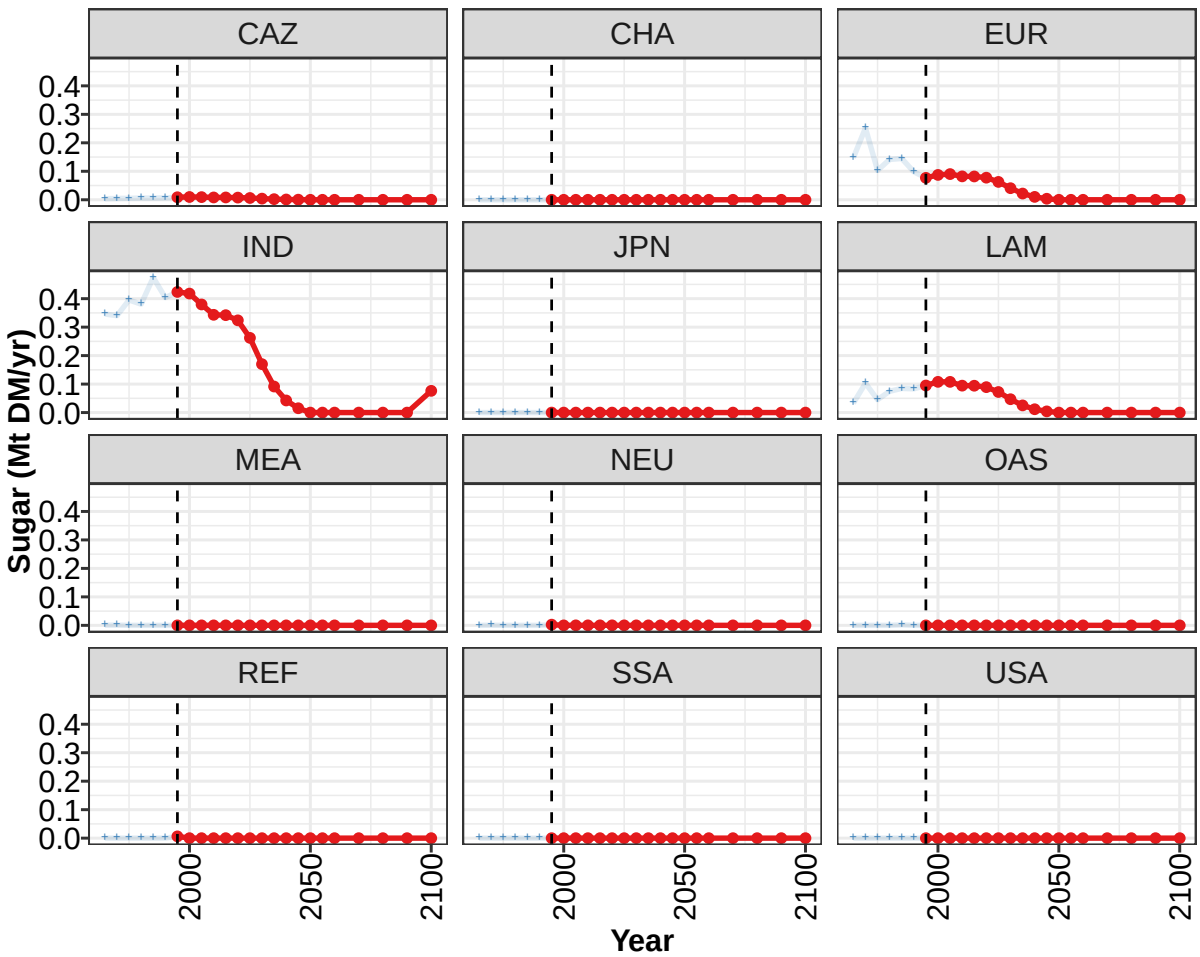
Table 345: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Oils (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.002	0.002	0.003	0.121	0.056	0.091	0.129	0.179	0.844	0.772
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.002	0.002	0.003	0.120	0.056	0.091	0.129	0.179	0.844	0.772
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 346: FAO — Demand—Feed—Secondary products—Oils (Mt DM/yr)

6.7.6 Sugar


GLO
Sugar (Mt DM/yr)
0.0
0.2
0.4
0.6
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

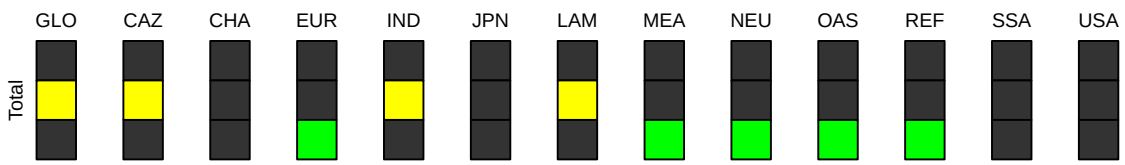


Figure 116: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.613	0.623	0.587	0.528	0.527	0.499	0.404	0.262	0.141	0.065	0.023
CAZ	0.009	0.010	0.009	0.008	0.008	0.008	0.006	0.004	0.002	0.001	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.077	0.087	0.090	0.082	0.082	0.078	0.063	0.041	0.022	0.010	0.004
IND	0.424	0.418	0.380	0.343	0.342	0.324	0.262	0.170	0.091	0.043	0.015
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.095	0.108	0.108	0.095	0.094	0.089	0.072	0.047	0.025	0.012	0.004
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 347: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

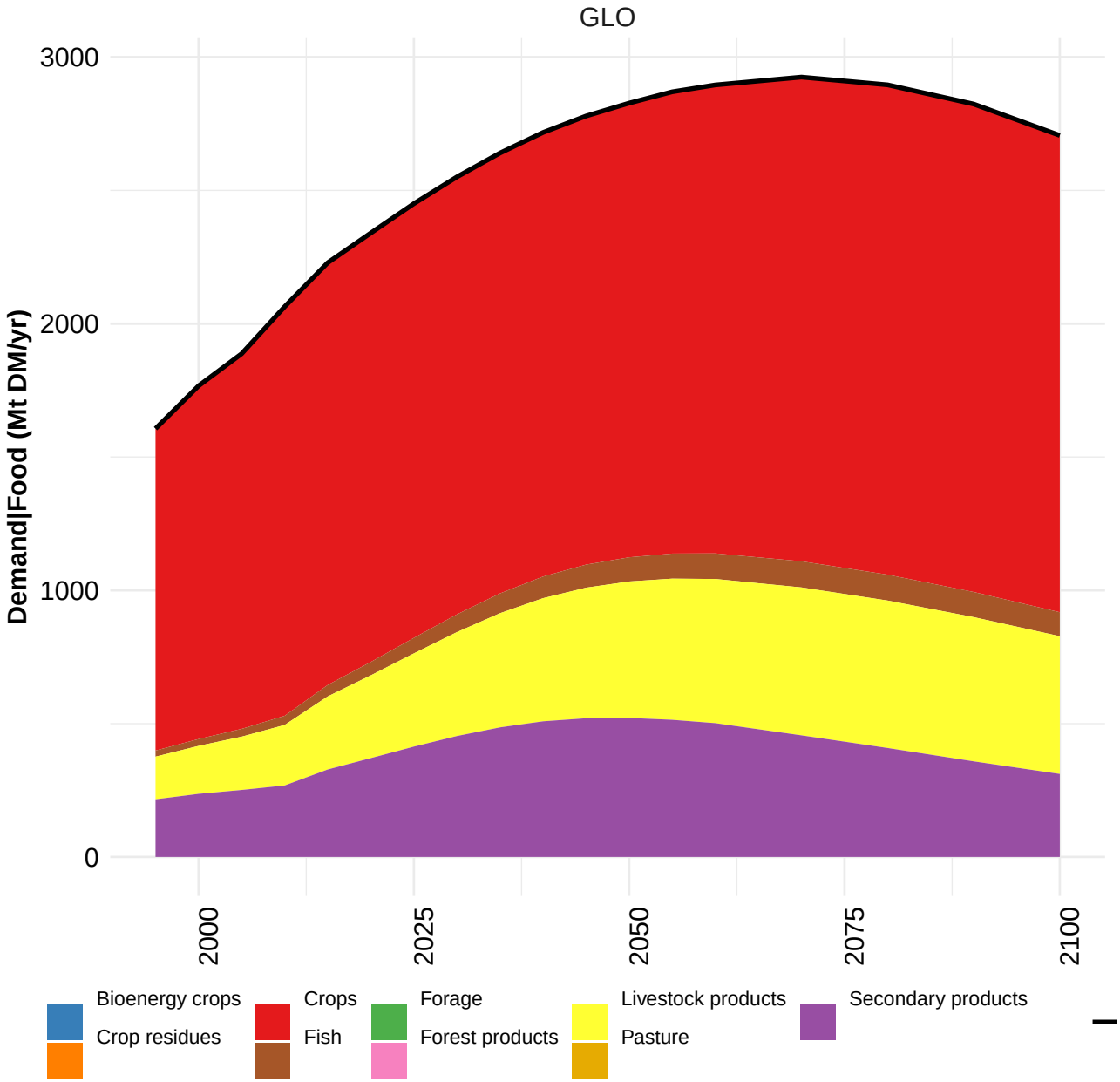
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.076
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.076
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

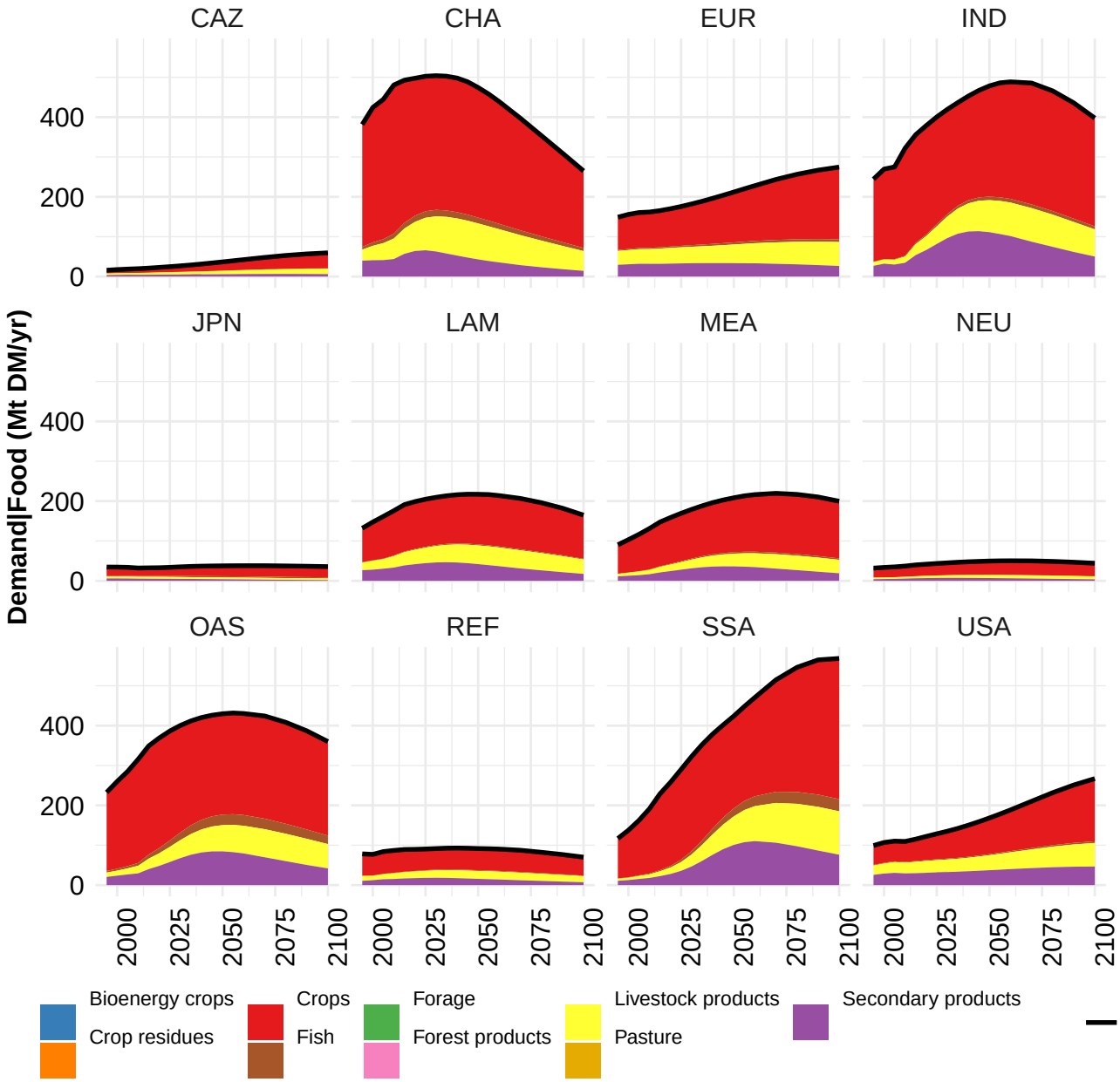
Table 348: MAgPIE m4p_SSP5 — Demand—Feed—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

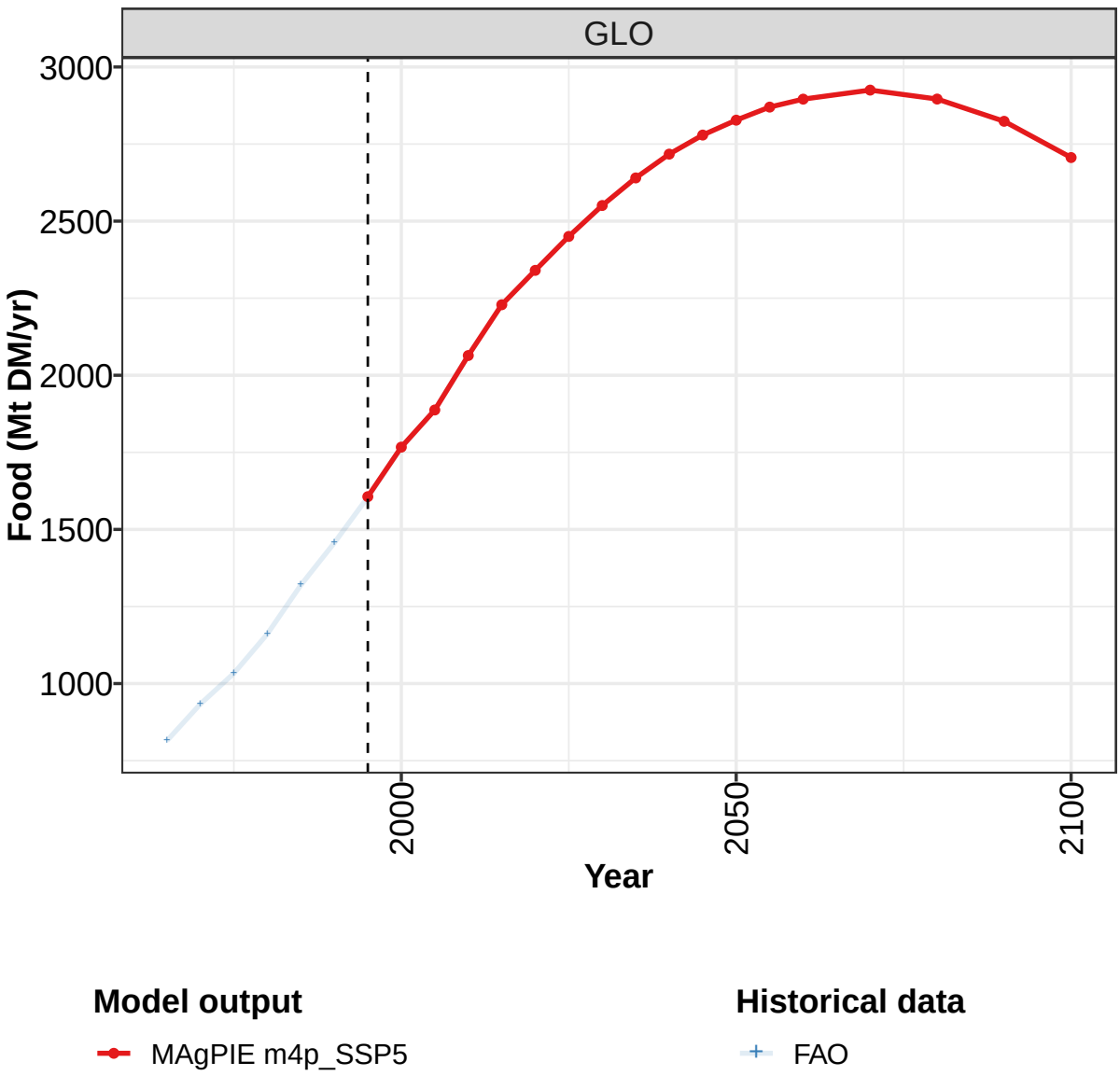
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.531	0.701	0.549	0.603	0.712	0.592	0.614	0.623	0.587	0.528
CAZ	0.004	0.005	0.005	0.006	0.006	0.007	0.009	0.010	0.009	0.008
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.147	0.252	0.103	0.141	0.145	0.098	0.077	0.087	0.090	0.082
IND	0.346	0.340	0.395	0.381	0.474	0.404	0.424	0.418	0.380	0.343
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.033	0.103	0.045	0.075	0.085	0.083	0.095	0.108	0.108	0.095
MEA	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

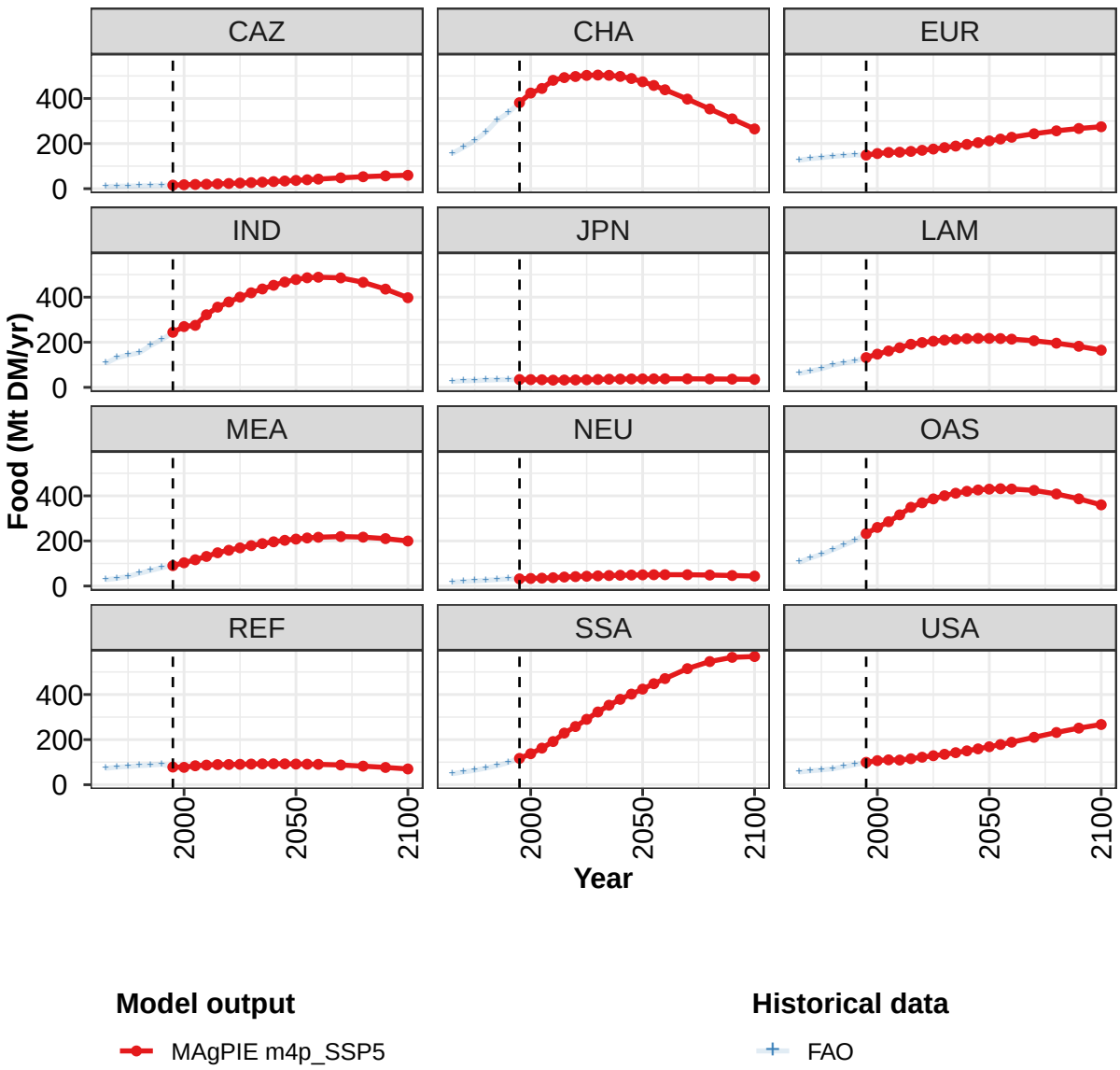
Table 349: FAO — Demand—Feed—Secondary products—Sugar (Mt DM/yr)

7 Food


GLO
Demand|Food (Mt DM/yr)
3000
2000
1000
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Food (Mt DM/yr)
0
200
400
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
3000
2500
2000
1500
1000
Food (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



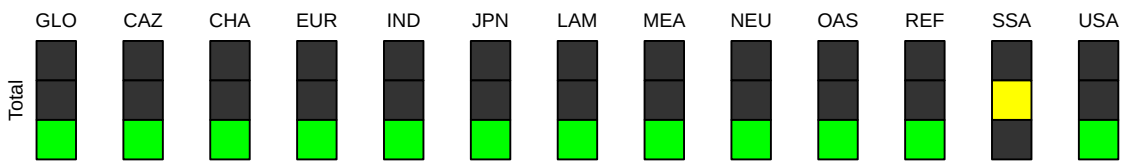


Figure 117: MAgPIE m4p_SSP5 — Demand—Food (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1606	1767	1888	2064	2229	2340	2450	2551	2640	2717	2779
CAZ	16	18	19	20	21	23	25	27	29	31	34
CHA	382	424	444	481	493	498	502	504	503	498	489
EUR	149	156	161	162	165	170	176	182	189	196	204
IND	244	270	275	322	356	379	400	419	436	453	467
JPN	35	34	34	32	33	33	34	35	36	37	37
LAM	132	147	162	176	191	199	205	209	213	216	217
MEA	90	103	117	131	148	159	169	179	188	196	203
NEU	32	34	35	37	40	42	43	45	47	48	49
OAS	233	260	285	316	349	369	386	400	412	420	426
REF	78	77	84	87	89	90	90	92	93	93	92
SSA	117	138	162	192	229	258	290	323	353	379	402
USA	99	107	110	109	115	122	129	135	142	150	159

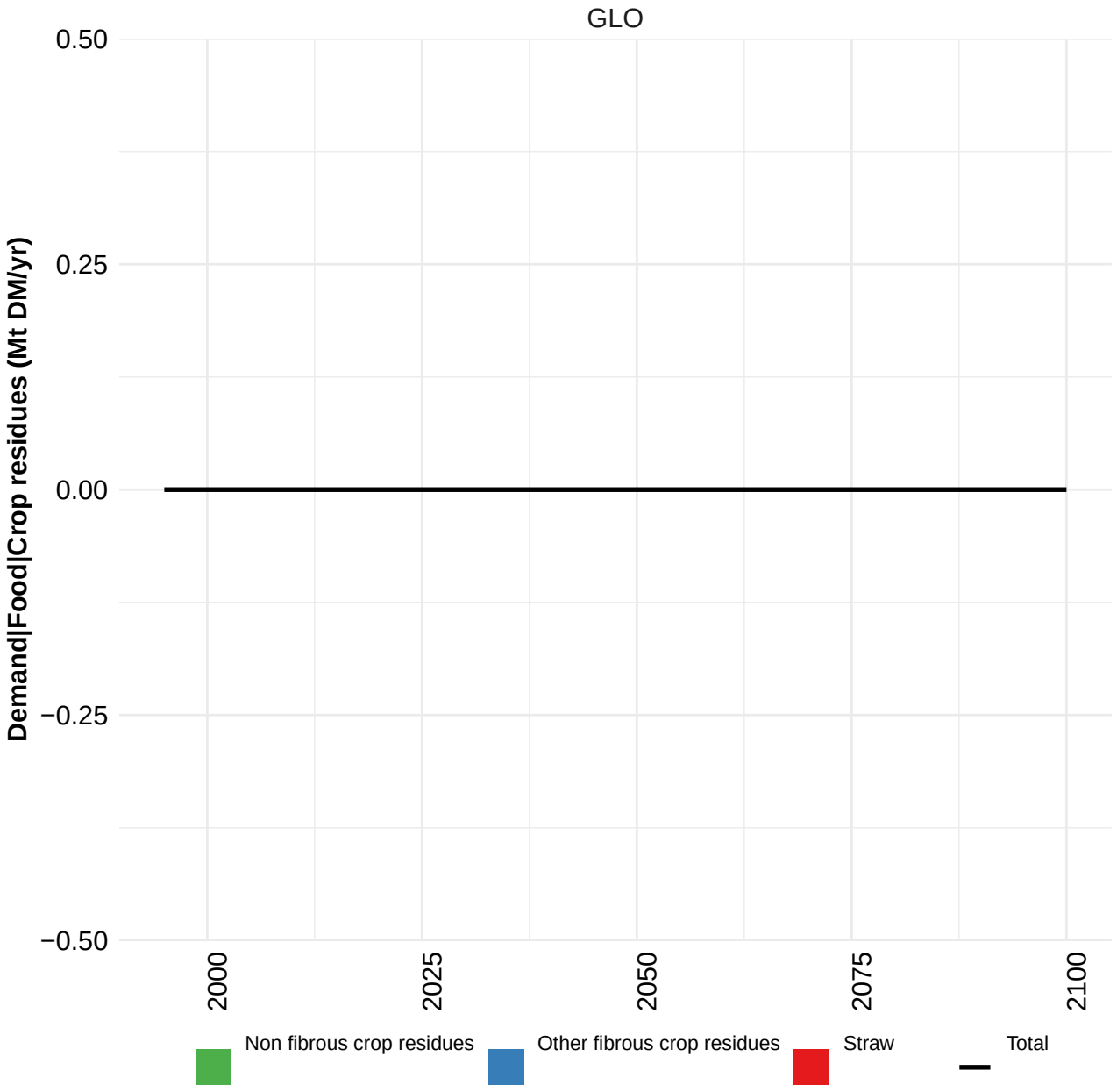
Table 350: MAgPIE m4p_SSP5 — Demand—Food (Mt DM/yr) [PART 1/2]

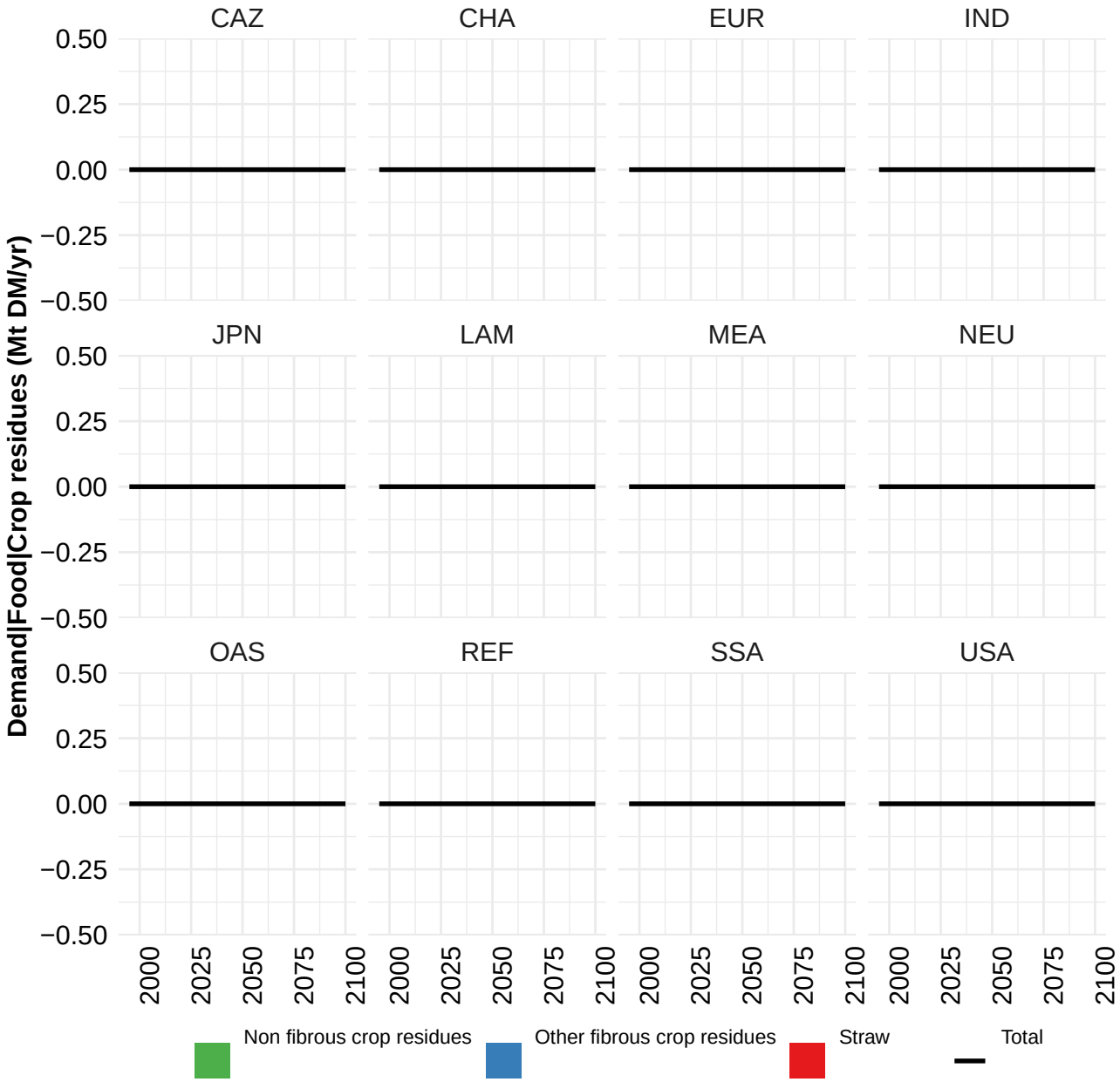
	2050	2055	2060	2070	2080	2090	2100
GLO	2828	2870	2896	2925	2896	2824	2706
CAZ	37	40	42	48	53	57	59
CHA	474	458	439	397	353	310	265
EUR	212	220	228	244	257	267	275
IND	478	486	488	485	466	436	397
JPN	38	38	38	38	37	37	36
LAM	217	216	214	207	196	182	165
MEA	208	213	216	219	217	210	200
NEU	50	50	50	50	49	47	44
OAS	430	432	430	424	408	387	360
REF	92	91	90	87	82	77	70
SSA	424	448	471	515	546	565	569
USA	168	178	189	210	232	251	267

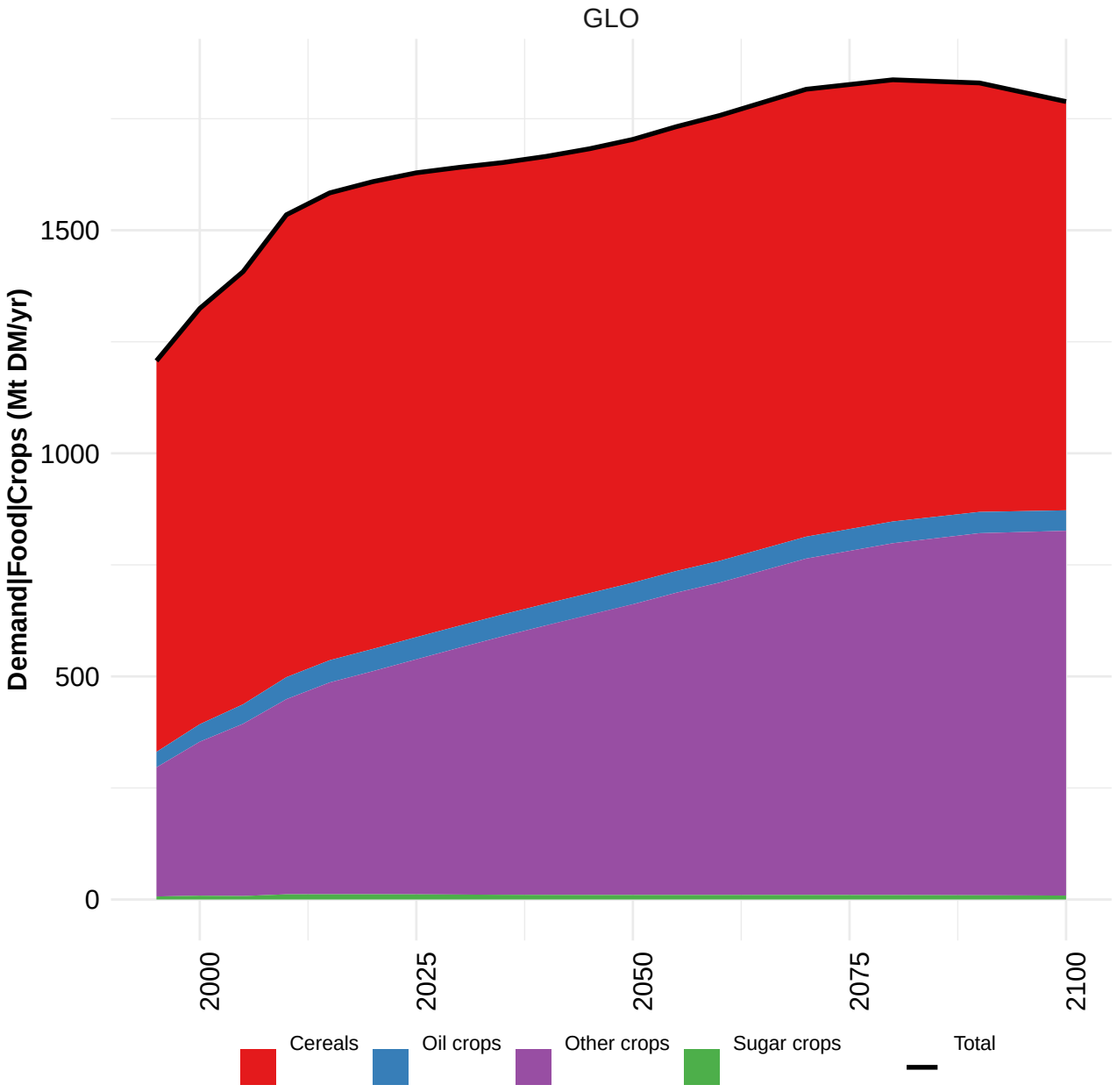
Table 351: MAgPIE m4p_SSP5 — Demand—Food (Mt DM/yr) [PART 2/2]

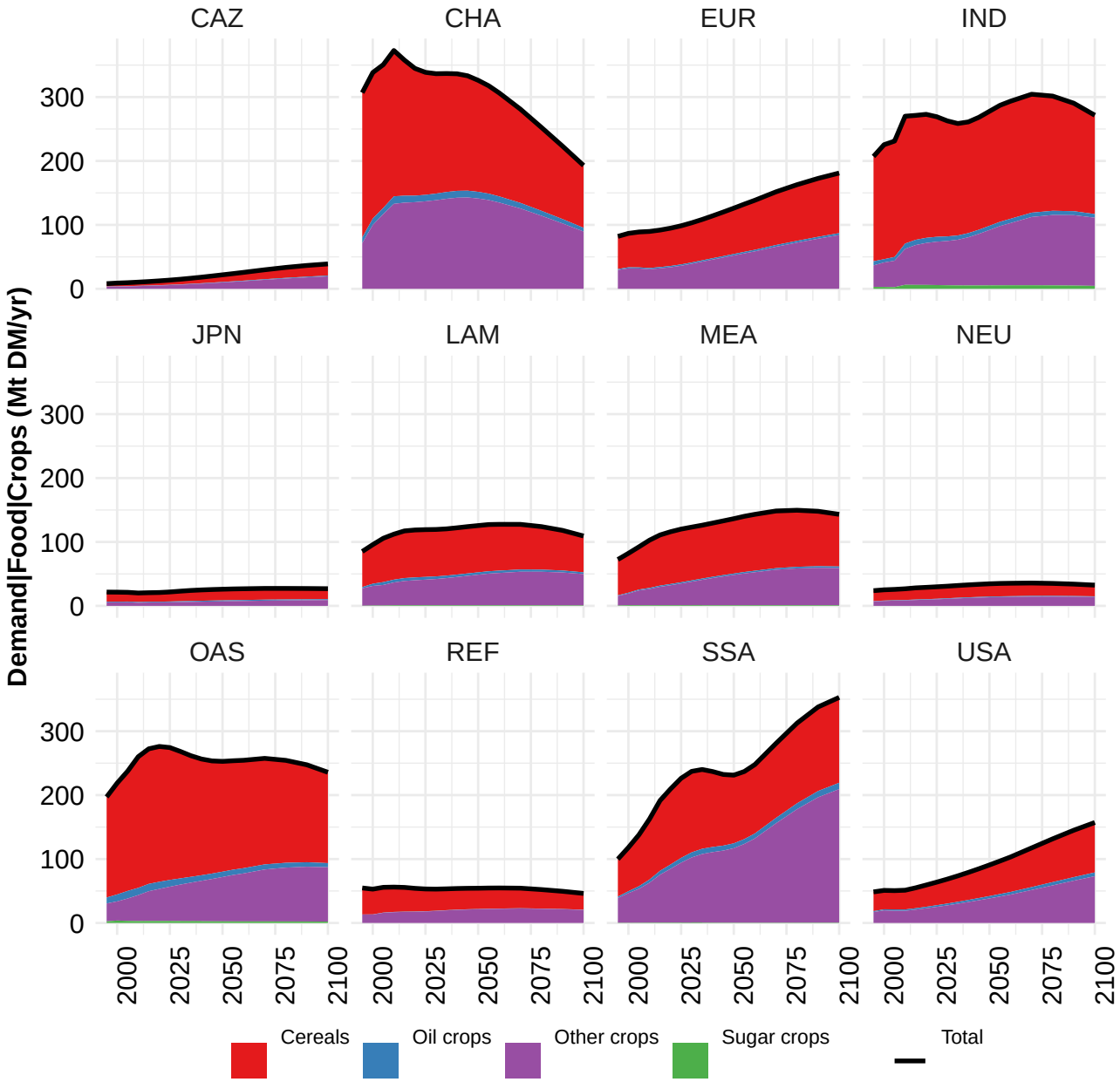
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	815	934	1033	1161	1319	1456	1605	1765	1888	2064
CAZ	10	11	12	12	13	14	16	17	19	20
CHA	156	183	212	251	303	336	381	424	444	481
EUR	126	133	137	143	147	149	149	156	161	162
IND	107	131	143	154	185	211	243	268	275	322
JPN	26	29	30	32	34	35	35	34	34	32
LAM	61	72	83	98	108	117	132	147	162	176
MEA	28	34	43	56	69	81	90	103	117	131
NEU	18	20	22	26	29	32	32	34	35	37
OAS	105	124	141	160	181	202	232	260	285	316
REF	73	78	81	84	87	91	78	77	84	87
SSA	49	57	64	74	84	99	117	138	162	191
USA	56	62	65	71	80	89	99	107	110	110

Table 352: FAO — Demand—Food (Mt DM/yr)

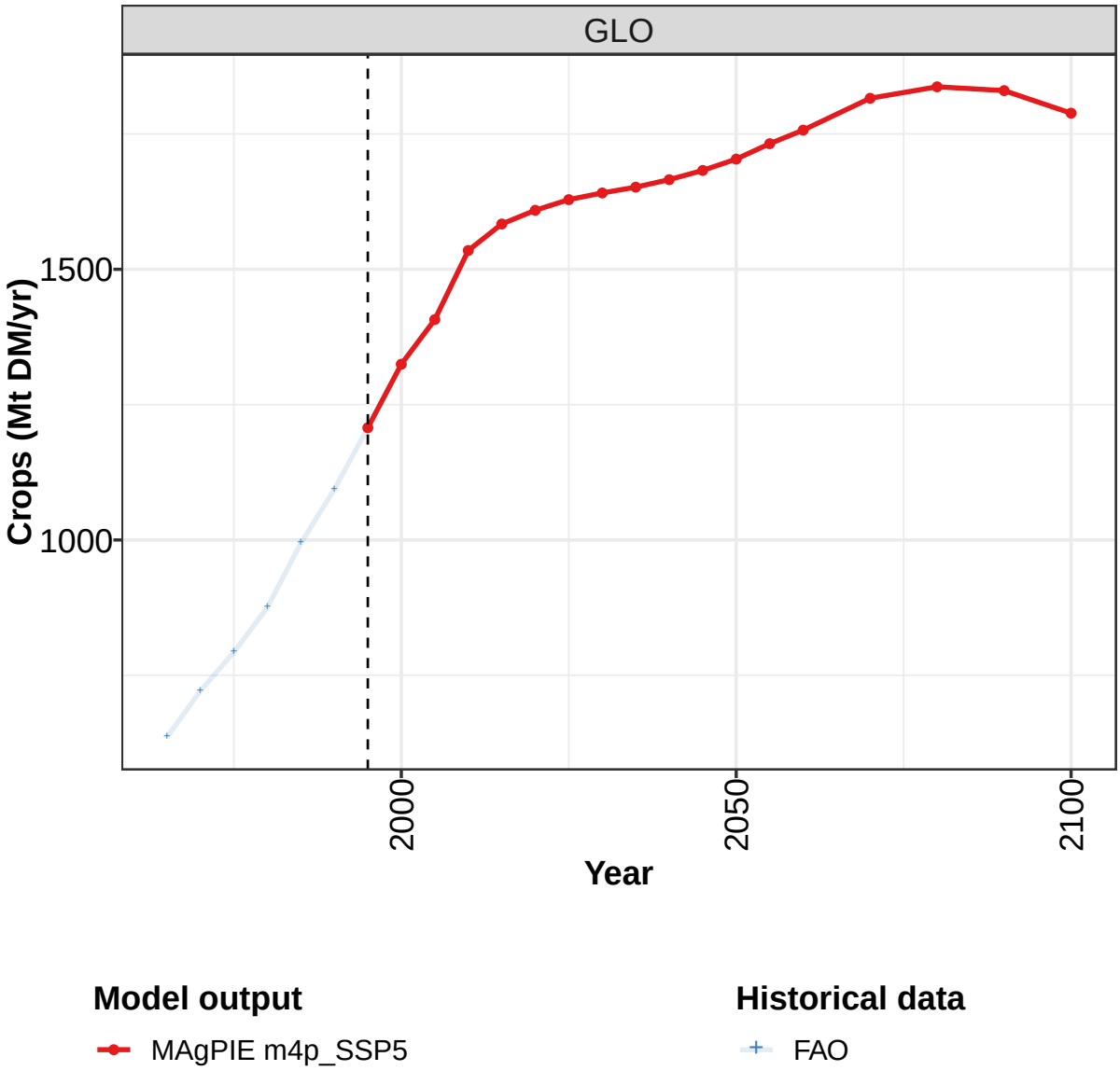

GLO
Demand|Food|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

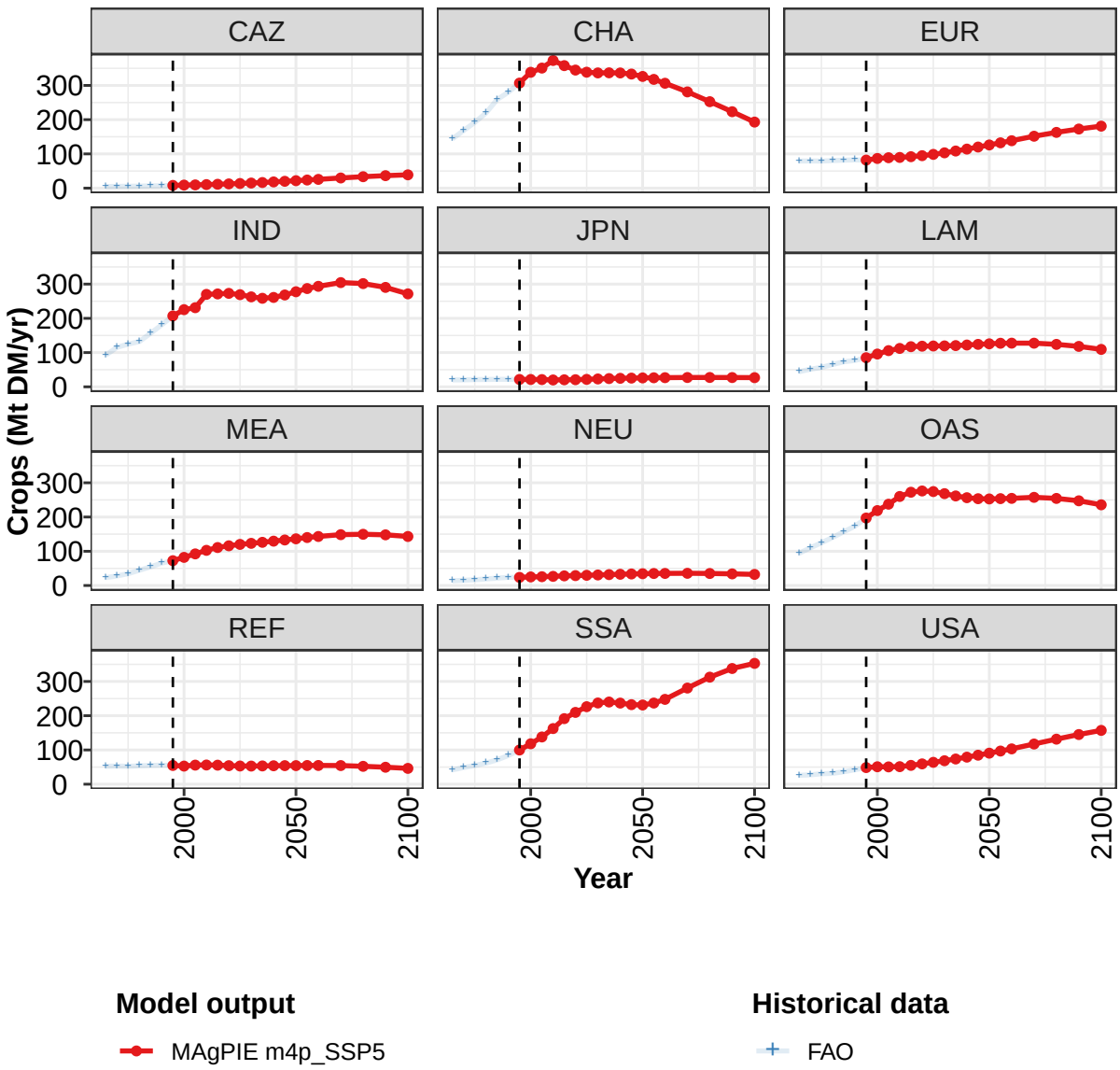

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Food|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


GLO
Demand|Food|Crops (Mt DM/yr)
1500
1000
500
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Food|Crops (Mt DM/yr)
0
100
200
300
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

7.1 Crops


GLO
Crops (Mt DM/yr)
1500
1000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



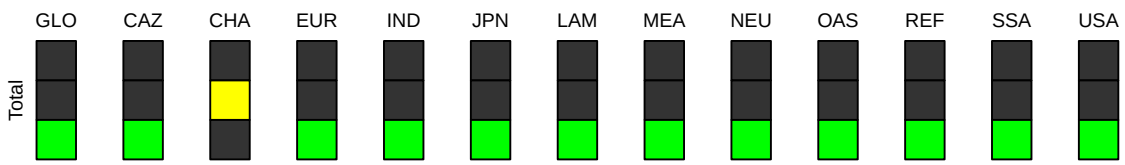


Figure 118: MAgPIE m4p_SSP5 — Demand—Food—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1207	1325	1407	1535	1584	1609	1629	1641	1652	1666	1683
CAZ	8	9	10	10	11	12	14	15	17	18	20
CHA	307	338	351	373	358	345	339	337	337	336	333
EUR	82	87	89	90	92	95	99	103	108	114	120
IND	207	225	231	270	271	273	269	263	259	261	268
JPN	22	21	21	20	21	21	22	23	24	25	26
LAM	85	96	106	112	117	119	119	120	121	122	124
MEA	73	82	92	103	111	116	120	123	126	130	133
NEU	24	25	26	27	28	29	30	31	32	33	34
OAS	197	219	238	260	272	276	274	268	262	256	254
REF	55	53	56	56	56	54	53	53	53	54	54
SSA	100	118	138	163	191	210	226	237	240	237	232
USA	49	51	51	51	55	59	64	69	74	79	85

Table 353: MAgPIE m4p_SSP5 — Demand—Food—Crops (Mt DM/yr) [PART 1/2]

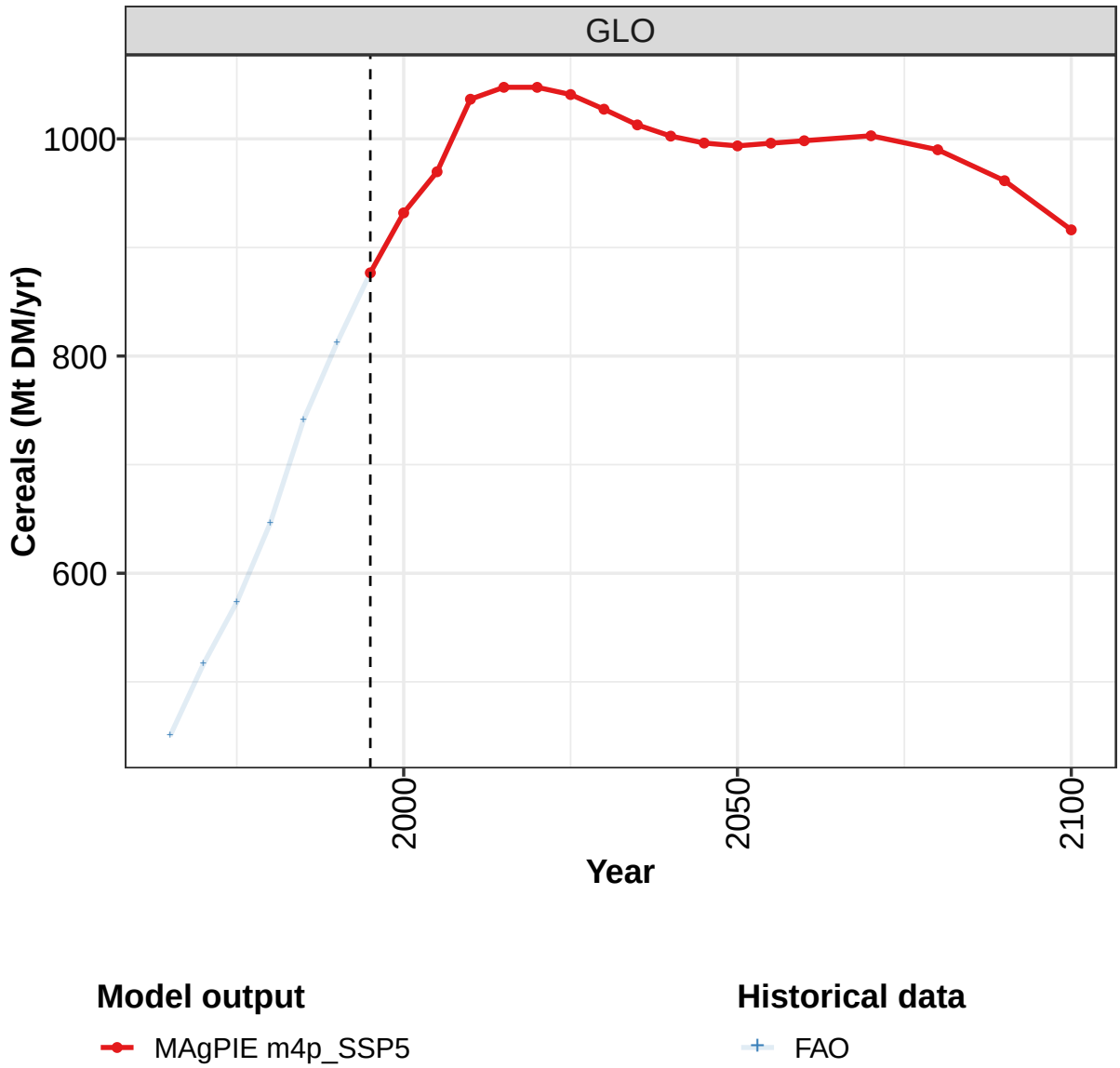
	2050	2055	2060	2070	2080	2090	2100
GLO	1704	1732	1757	1816	1837	1830	1788
CAZ	22	24	26	30	33	37	39
CHA	326	318	306	281	253	223	193
EUR	126	132	139	152	163	173	181
IND	278	287	293	304	302	290	272
JPN	26	26	27	27	27	27	27
LAM	126	127	128	128	124	118	109
MEA	136	140	143	148	150	148	143
NEU	35	35	35	36	35	34	32
OAS	253	254	254	257	254	247	236
REF	54	55	55	54	52	50	46
SSA	231	237	248	281	313	338	353
USA	91	97	103	117	132	145	157

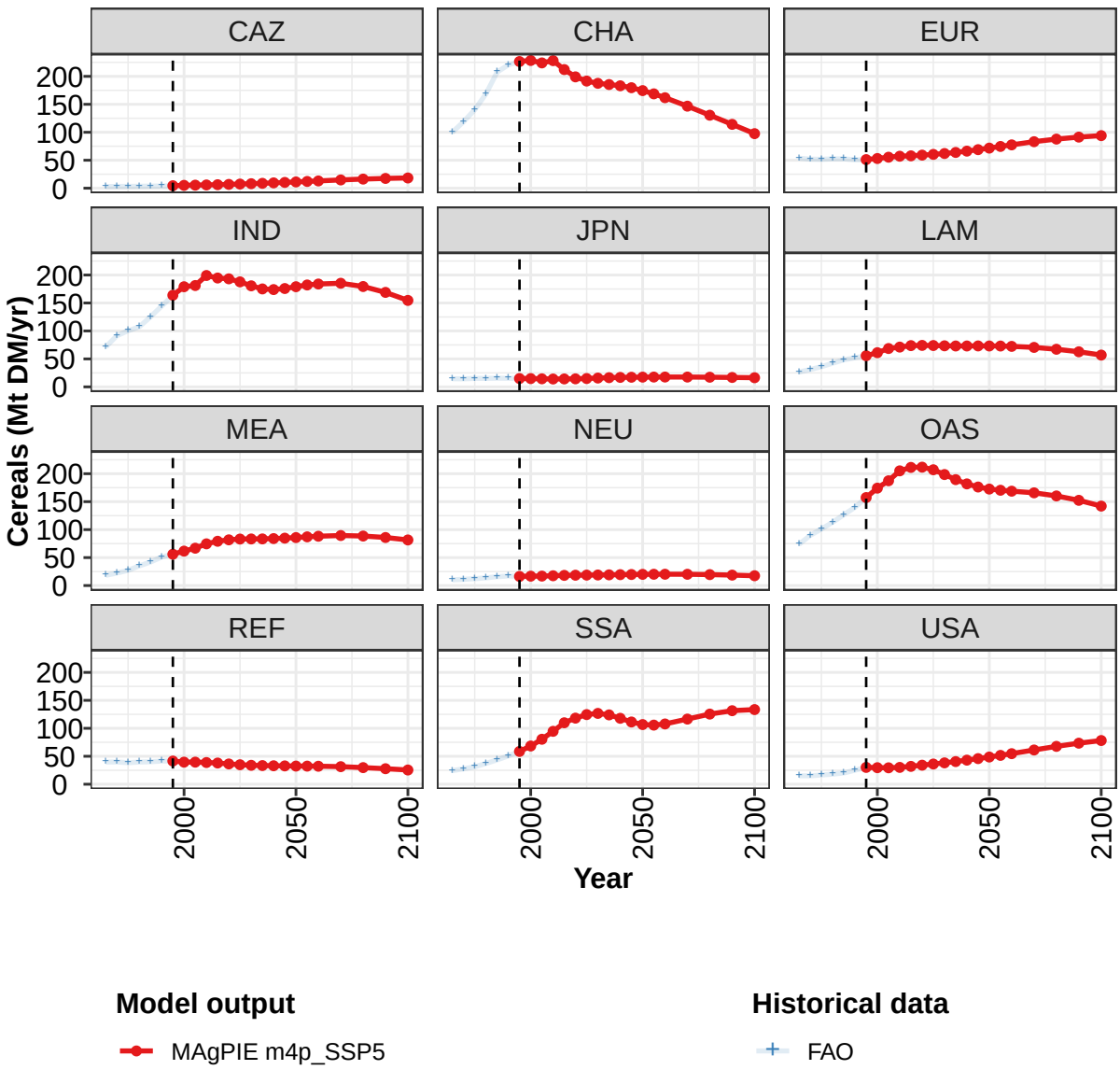
Table 354: MAgPIE m4p_SSP5 — Demand—Food—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	635	721	793	875	994	1093	1207	1325	1407	1535
CAZ	5	5	5	6	7	7	8	9	10	10
CHA	144	168	192	219	259	280	307	338	351	373
EUR	79	79	79	80	82	82	82	87	89	90
IND	92	115	125	132	156	181	207	225	231	270
JPN	20	20	21	21	22	22	22	21	21	20
LAM	44	51	57	65	73	77	85	96	106	112
MEA	23	28	35	45	55	65	73	82	92	103
NEU	14	15	17	19	22	24	24	25	26	27
OAS	94	110	125	140	157	173	197	219	238	260
REF	52	53	52	54	55	55	55	53	56	56
SSA	42	49	54	62	71	84	100	118	138	162
USA	26	27	30	32	36	42	49	51	51	51

Table 355: FAO — Demand—Food—Crops (Mt DM/yr)

7.1.1 Cereals


GLO
1000
800
600
Cereals (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



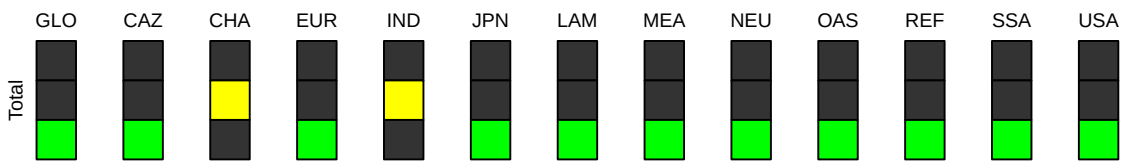


Figure 119: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	877	932	970	1036	1047	1047	1041	1027	1013	1003	996
CAZ	4	5	5	6	6	7	7	8	9	9	10
CHA	227	228	224	228	212	199	192	188	185	183	180
EUR	51	53	55	57	58	59	60	62	64	66	69
IND	164	179	181	199	195	193	188	181	175	174	176
JPN	15	15	14	14	14	14	15	16	16	17	17
LAM	56	61	69	71	74	74	74	73	73	73	73
MEA	56	62	67	75	79	82	83	83	83	84	85
NEU	16	17	17	18	18	19	19	19	19	19	20
OAS	157	174	187	205	211	212	207	199	189	182	176
REF	41	40	40	39	38	36	35	34	33	33	33
SSA	59	68	80	95	110	118	125	127	124	118	111
USA	30	30	29	30	32	34	36	38	41	43	46

Table 356: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals (Mt DM/yr) [PART 1/2]

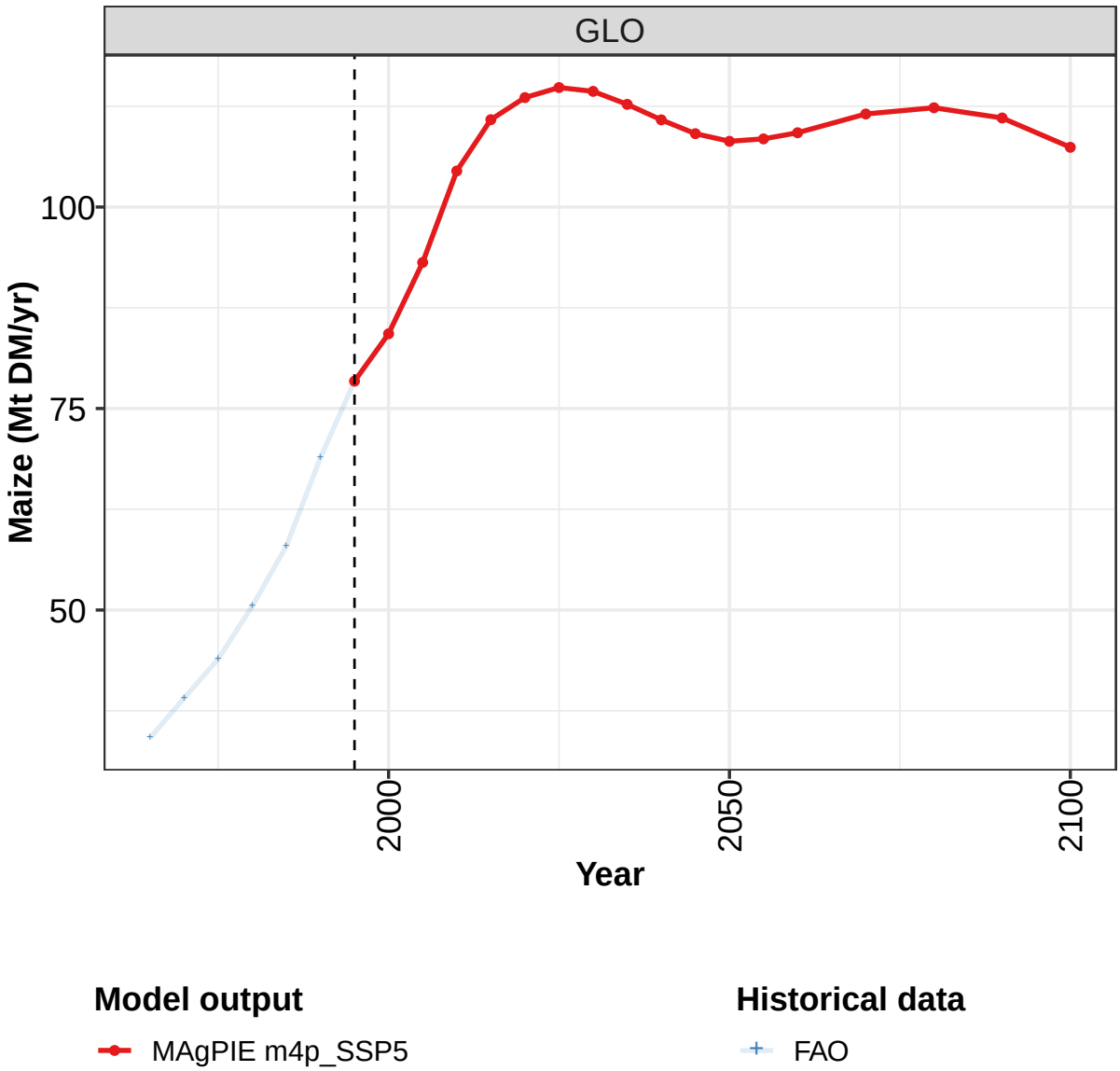
	2050	2055	2060	2070	2080	2090	2100
GLO	994	996	998	1003	990	961	916
CAZ	11	12	13	15	16	17	18
CHA	175	169	162	147	131	114	98
EUR	72	75	77	83	88	91	94
IND	179	182	184	185	179	169	155
JPN	17	18	18	18	17	17	16
LAM	73	73	72	71	67	63	57
MEA	86	87	88	89	89	86	82
NEU	20	20	20	20	20	19	18
OAS	173	170	169	166	160	152	142
REF	33	32	32	31	30	28	25
SSA	107	106	108	117	125	132	134
USA	49	52	55	61	68	73	78

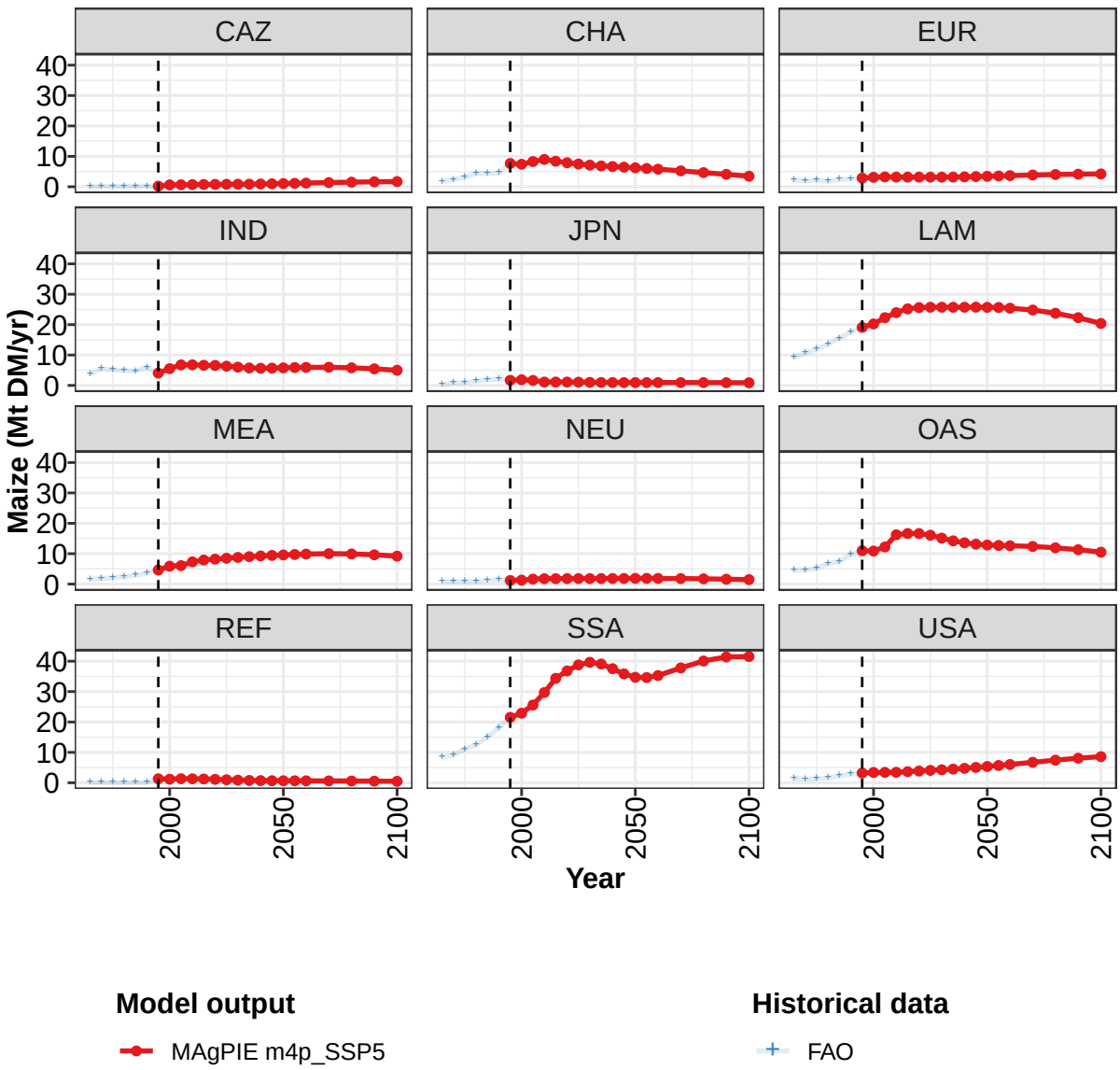
Table 357: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	450	516	573	646	741	812	877	932	970	1037
CAZ	3	3	3	3	4	4	4	5	5	6
CHA	100	119	140	169	208	220	227	228	224	228
EUR	54	52	52	52	52	51	51	53	55	57
IND	71	91	100	107	125	144	164	179	181	199
JPN	15	14	15	15	15	15	15	15	14	14
LAM	26	31	36	42	48	52	56	61	69	71
MEA	18	22	27	35	42	51	56	62	67	75
NEU	10	11	12	14	16	17	16	17	17	18
OAS	74	90	101	113	127	140	157	174	187	205
REF	40	40	38	40	40	41	41	40	39	39
SSA	24	28	31	37	44	51	59	68	80	95
USA	15	15	17	18	20	25	30	30	29	30

Table 358: FAO — Demand—Food—Crops—Cereals (Mt DM/yr)

7.1.2 Cereals—Maize





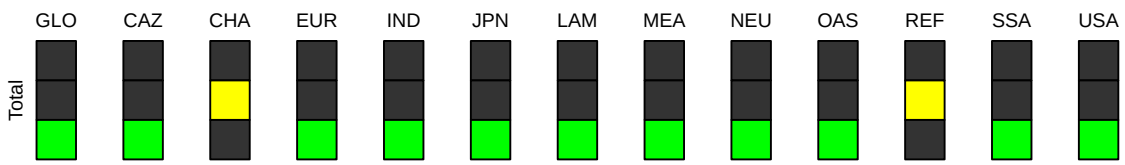


Figure 120: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	78	84	93	104	111	114	115	114	113	111	109
CAZ	0	1	1	1	1	1	1	1	1	1	1
CHA	8	7	8	9	8	8	7	7	7	7	6
EUR	3	3	3	3	3	3	3	3	3	3	3
IND	4	6	7	7	7	7	6	6	6	6	6
JPN	2	2	2	1	1	1	1	1	1	1	1
LAM	19	20	22	24	25	26	26	26	26	26	26
MEA	5	6	6	7	8	8	9	9	9	9	9
NEU	1	1	2	2	2	2	2	2	2	2	2
OAS	11	11	12	16	17	17	16	15	14	14	13
REF	1	1	1	1	1	1	1	1	1	1	1
SSA	22	23	26	30	34	37	39	40	39	38	36
USA	3	3	3	3	4	4	4	4	4	5	5

Table 359: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

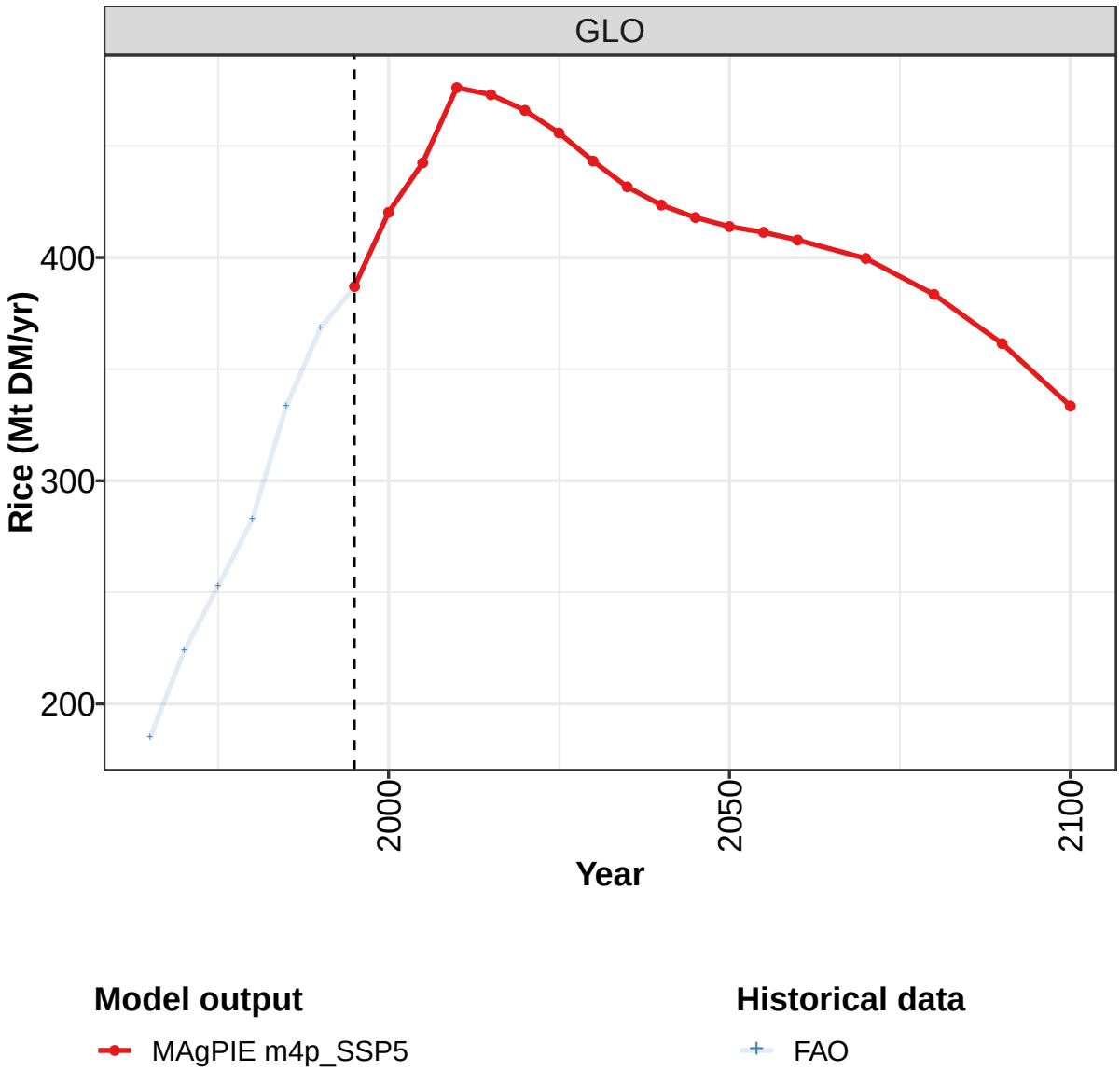
	2050	2055	2060	2070	2080	2090	2100
GLO	108	108	109	112	112	111	107
CAZ	1	1	1	1	2	2	2
CHA	6	6	6	5	5	4	3
EUR	3	4	4	4	4	4	4
IND	6	6	6	6	6	5	5
JPN	1	1	1	1	1	1	1
LAM	26	26	25	25	24	22	20
MEA	10	10	10	10	10	10	9
NEU	2	2	2	2	2	2	1
OAS	13	13	13	12	12	11	10
REF	1	1	1	1	1	1	0
SSA	35	35	35	38	40	41	42
USA	5	6	6	7	7	8	9

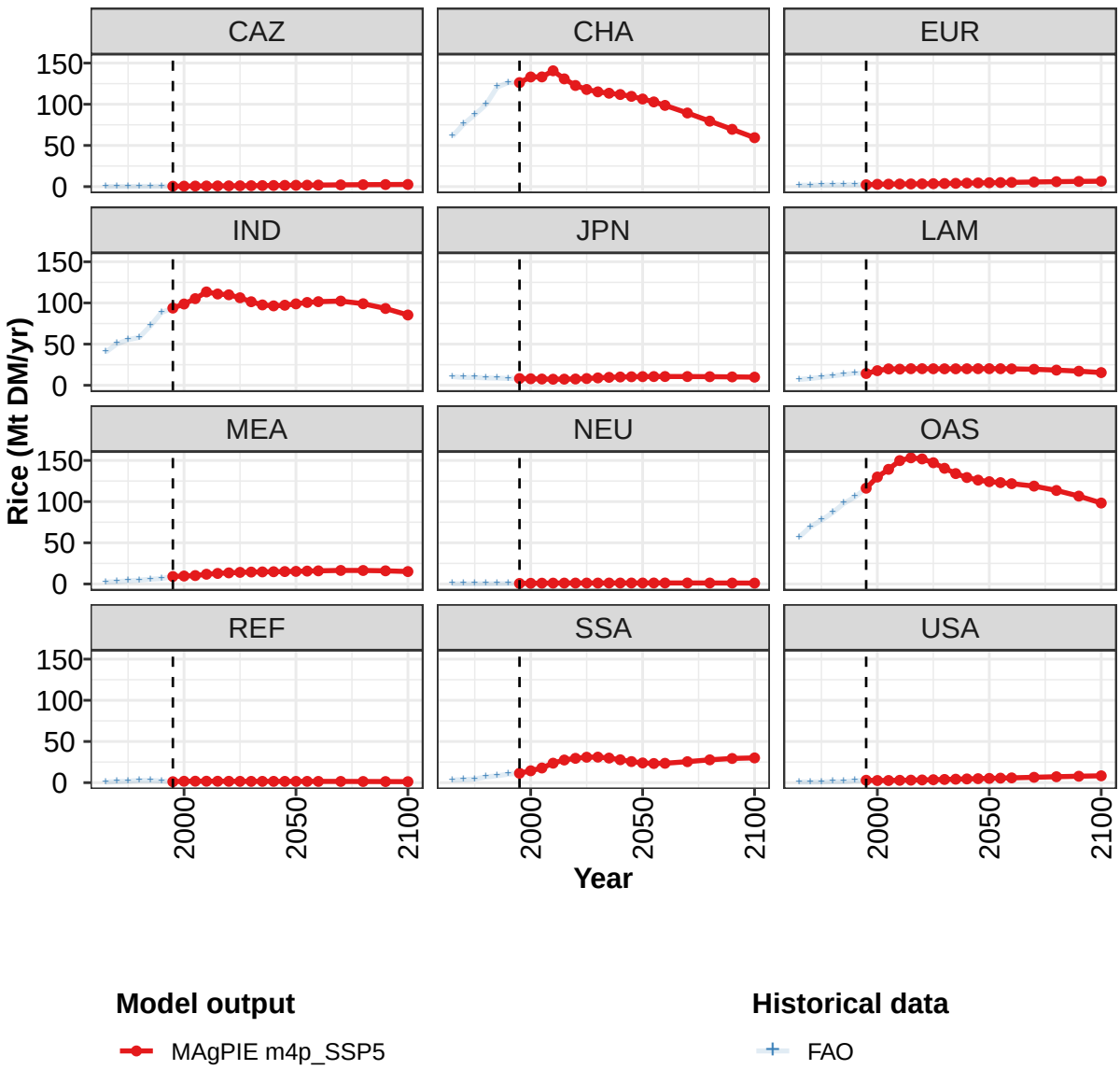
Table 360: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	34	39	44	50	58	69	78	84	93	104
CAZ	0	0	0	0	0	0	0	1	1	1
CHA	2	2	3	4	4	5	8	7	8	9
EUR	2	2	2	2	2	3	3	3	3	3
IND	4	5	5	5	5	6	4	6	7	7
JPN	0	1	1	1	2	2	2	2	2	1
LAM	9	11	12	14	16	18	19	20	22	24
MEA	2	2	2	2	3	4	5	6	6	7
NEU	1	1	1	1	1	1	1	1	2	2
OAS	5	5	5	7	7	10	11	11	12	16
REF	0	0	0	0	0	0	1	1	1	1
SSA	8	9	11	13	15	18	22	23	26	30
USA	1	1	1	2	2	3	3	3	3	3

Table 361: FAO — Demand—Food—Crops—Cereals—Maize (Mt DM/yr)

7.1.3 Cereals—Rice





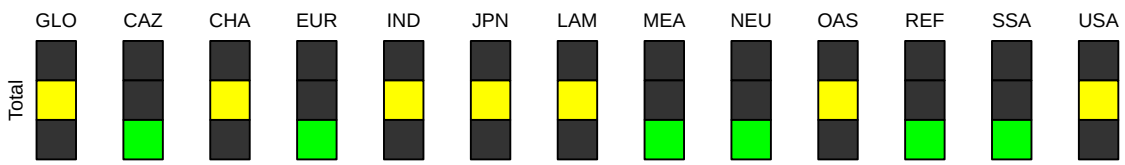


Figure 121: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	387	420	442	476	473	466	456	443	432	424	418
CAZ	0	1	1	1	1	1	1	1	1	1	1
CHA	126	133	133	141	131	123	118	115	113	112	110
EUR	2	3	3	3	3	3	4	4	4	4	4
IND	94	99	105	113	111	110	106	101	98	96	97
JPN	8	8	8	7	8	8	8	9	10	10	10
LAM	14	18	20	20	20	20	20	20	20	20	20
MEA	9	10	10	12	13	14	14	14	15	15	15
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	116	130	139	150	153	152	147	140	134	129	126
REF	1	2	2	2	2	2	2	2	2	2	2
SSA	11	14	18	24	28	30	31	31	30	28	26
USA	3	3	3	3	3	3	4	4	4	5	5

Table 362: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

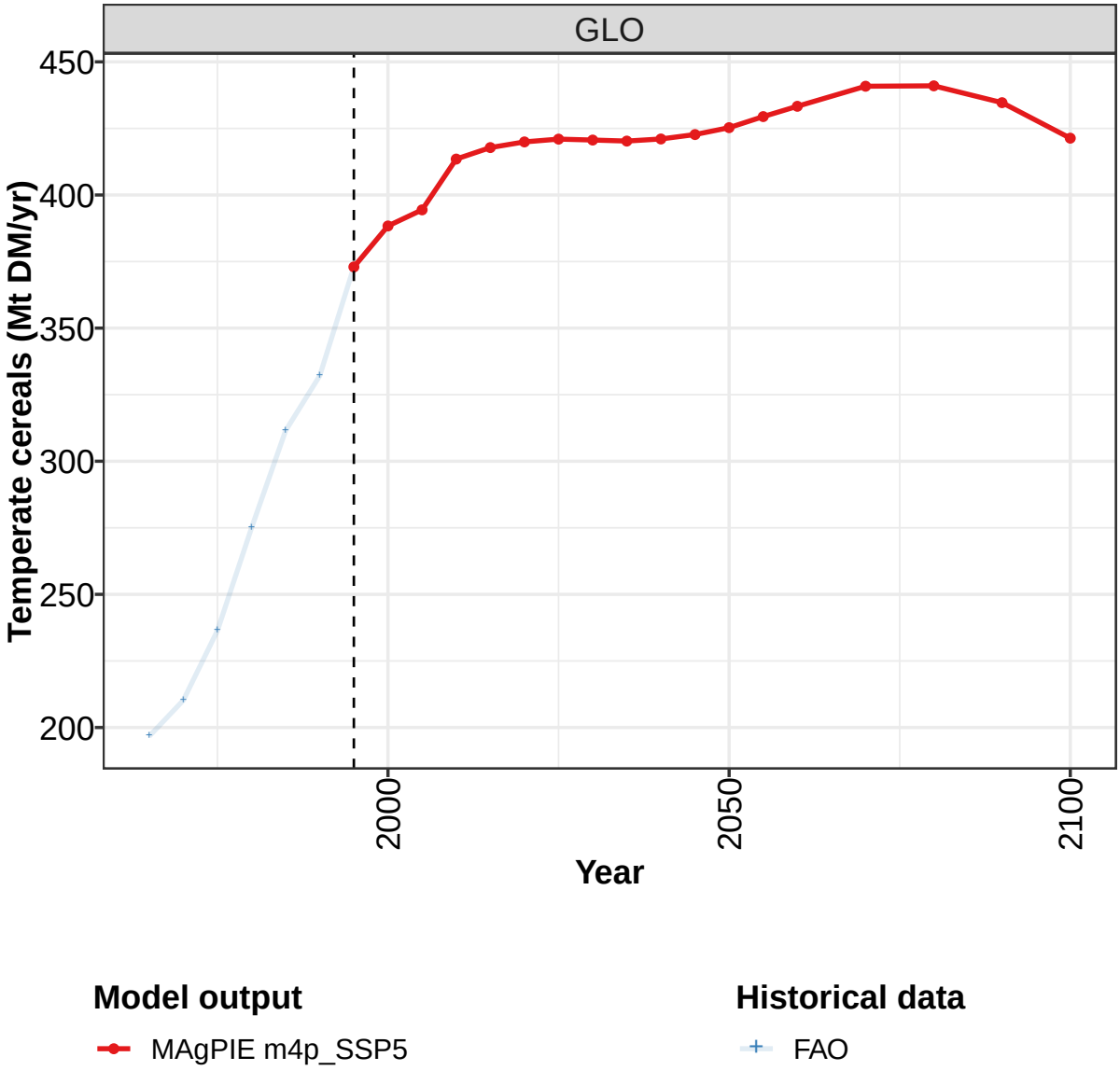
	2050	2055	2060	2070	2080	2090	2100
GLO	414	411	408	400	383	361	333
CAZ	2	2	2	2	2	3	3
CHA	106	103	99	89	80	70	59
EUR	5	5	5	6	6	6	7
IND	99	101	102	102	99	93	85
JPN	11	11	11	11	10	10	10
LAM	20	20	20	19	18	17	15
MEA	15	16	16	16	16	16	15
NEU	1	1	1	1	1	1	1
OAS	124	123	122	119	114	107	98
REF	2	2	2	2	1	1	1
SSA	24	23	24	25	28	29	30
USA	5	5	6	7	7	8	8

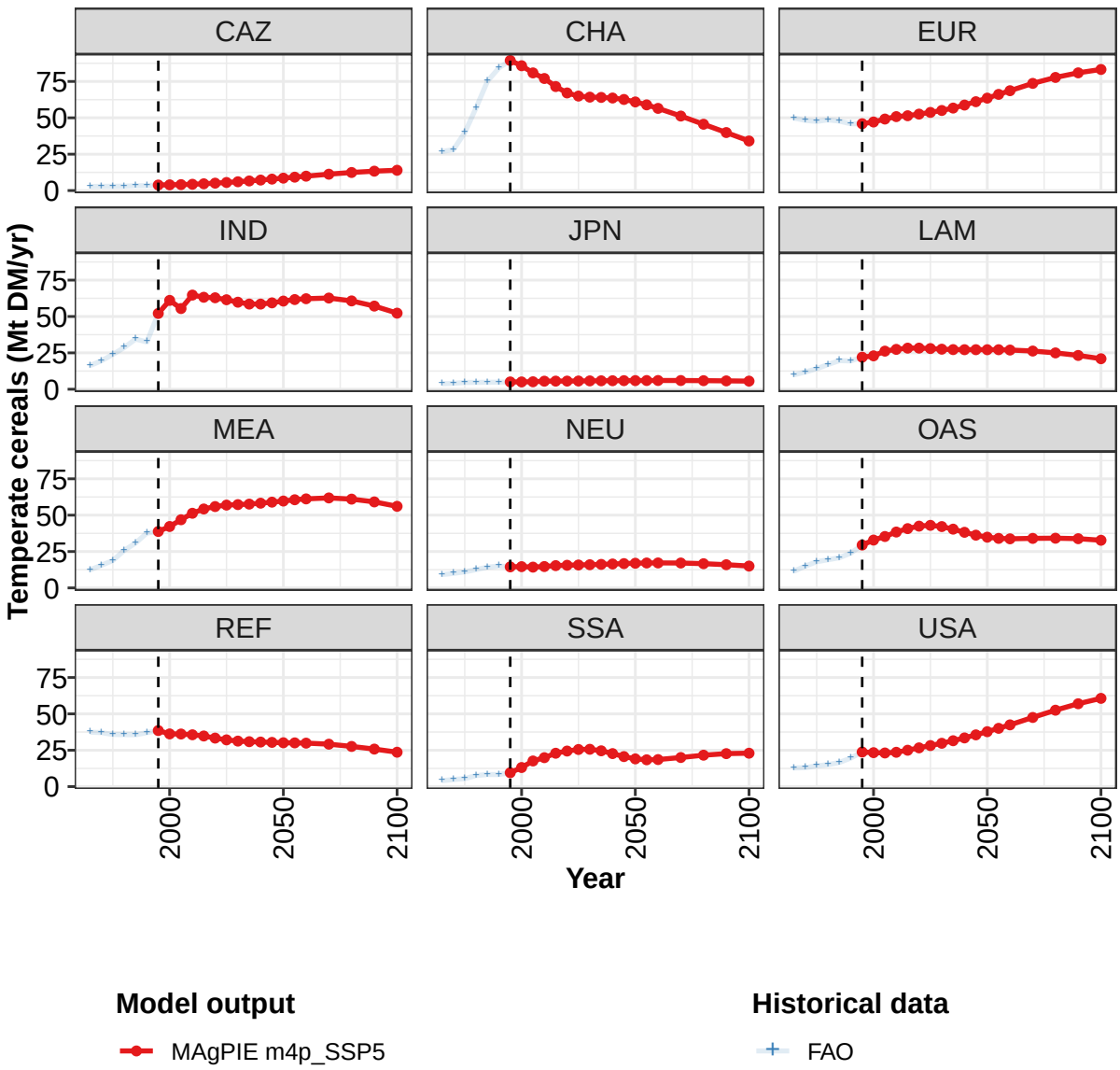
Table 363: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	185	224	253	283	333	368	387	420	442	476
CAZ	0	0	0	0	0	0	0	1	1	1
CHA	61	76	87	99	121	126	126	133	133	141
EUR	2	2	2	2	2	2	2	3	3	3
IND	40	50	55	58	72	89	94	99	105	113
JPN	11	10	10	9	9	8	8	8	8	7
LAM	7	8	10	11	13	15	14	18	20	20
MEA	2	3	4	5	6	7	9	10	10	12
NEU	0	0	0	0	0	1	1	1	1	1
OAS	57	69	77	87	98	106	116	130	139	150
REF	1	1	2	3	3	2	1	2	2	2
SSA	3	4	4	7	8	10	11	14	18	24
USA	1	1	1	1	1	2	3	3	3	3

Table 364: FAO — Demand—Food—Crops—Cereals—Rice (Mt DM/yr)

7.1.4 Cereals—Temperate cereals





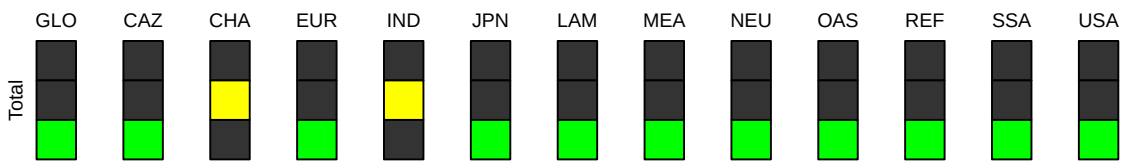


Figure 122: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	373	388	394	413	418	420	421	421	420	421	423
CAZ	4	4	4	4	5	5	6	6	7	7	8
CHA	89	86	81	77	72	67	65	64	64	64	63
EUR	46	47	49	51	51	53	54	55	57	59	61
IND	52	61	55	65	63	63	62	60	59	59	59
JPN	5	5	5	6	6	6	6	6	6	6	6
LAM	22	23	26	27	28	28	28	28	27	27	27
MEA	39	42	47	51	54	56	57	57	58	58	59
NEU	14	15	14	15	15	16	16	16	16	16	17
OAS	29	33	35	38	41	42	43	42	40	38	36
REF	39	36	36	36	35	33	32	31	31	31	30
SSA	10	13	18	20	23	24	26	26	25	23	21
USA	24	23	23	24	25	27	28	30	32	33	36

Table 365: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

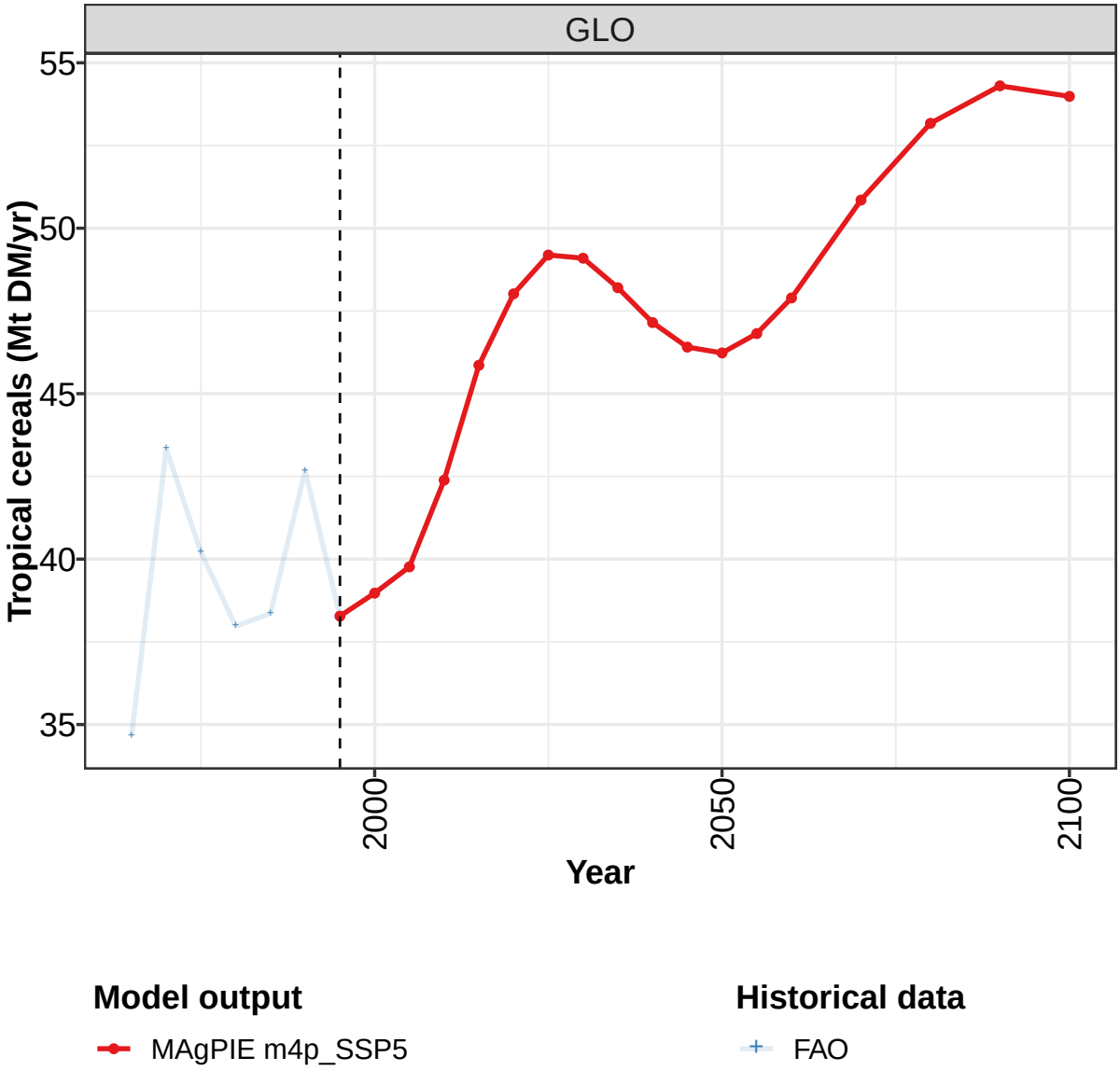
	2050	2055	2060	2070	2080	2090	2100
GLO	425	429	433	441	441	435	421
CAZ	9	9	10	11	12	13	14
CHA	61	59	57	51	46	40	34
EUR	64	66	69	74	78	81	83
IND	61	62	62	63	61	57	52
JPN	6	6	6	6	6	6	6
LAM	27	27	27	26	25	23	21
MEA	60	61	61	62	61	59	56
NEU	17	17	17	17	17	16	15
OAS	35	34	34	34	34	34	33
REF	30	30	30	29	28	26	24
SSA	19	18	19	20	22	23	23
USA	38	40	42	48	53	57	61

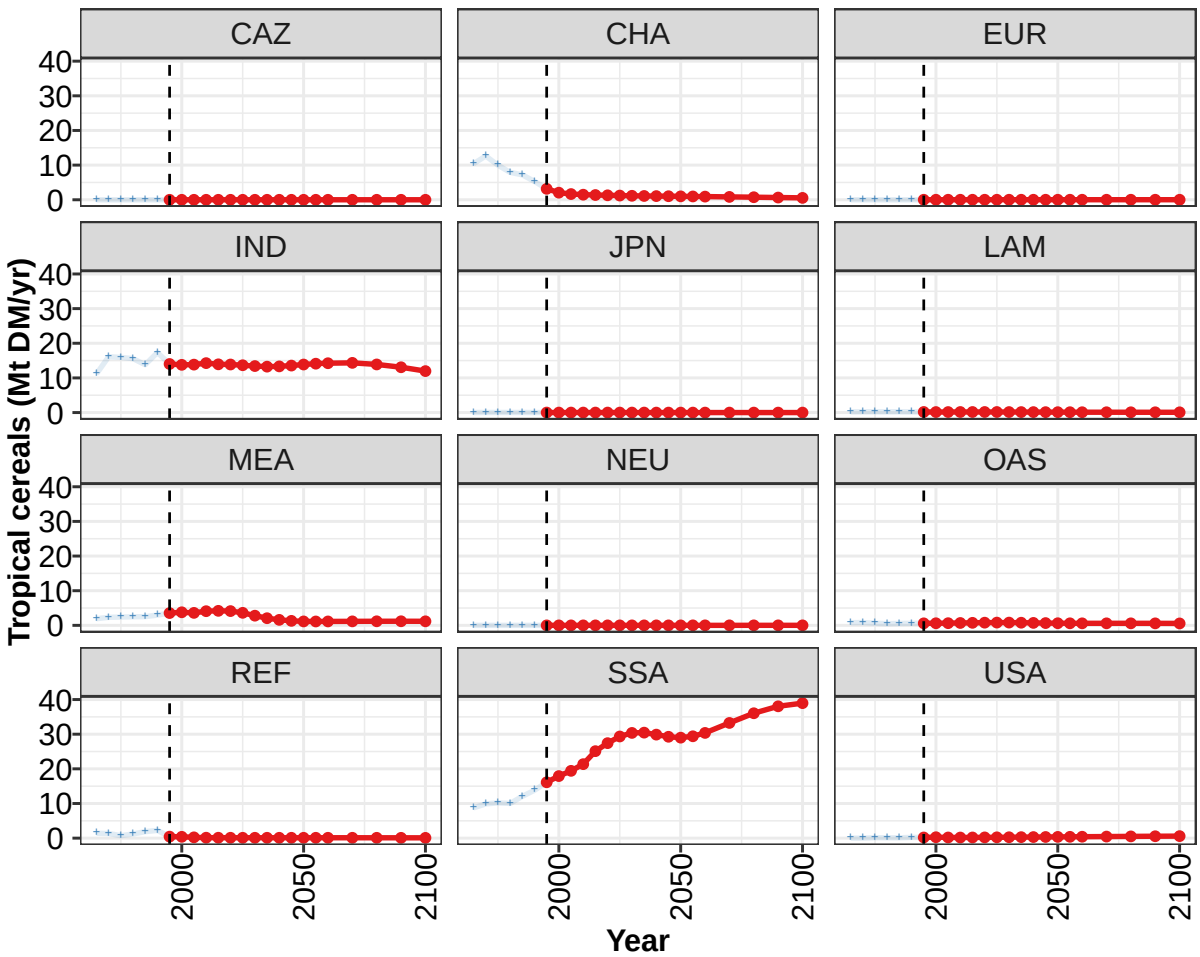
Table 366: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	197	210	236	275	312	332	373	388	394	414
CAZ	3	3	3	3	3	3	4	4	4	4
CHA	27	28	40	57	75	84	89	86	81	77
EUR	50	48	48	49	48	46	46	47	49	51
IND	16	20	24	29	34	33	52	61	55	65
JPN	4	4	5	5	5	5	5	5	5	6
LAM	10	12	14	17	20	19	22	23	26	27
MEA	12	16	19	26	31	38	39	42	47	51
NEU	9	10	11	13	14	15	14	15	14	15
OAS	11	15	18	19	21	24	29	33	35	38
REF	37	37	36	36	36	37	39	36	36	36
SSA	4	5	5	8	8	8	10	13	18	20
USA	13	13	14	15	17	20	24	23	23	24

Table 367: FAO — Demand—Food—Crops—Cereals—Temperate cereals (Mt DM/yr)

7.1.5 Cereals—Tropical cereals





Model output

MAgPIE m4p_SSP5

Historical data

FAO

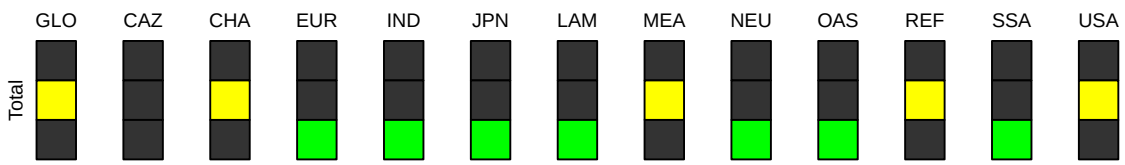


Figure 123: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	38.3	39.0	39.8	42.4	45.9	48.0	49.2	49.1	48.2	47.1	46.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.2	2.0	1.7	1.5	1.4	1.3	1.2	1.1	1.1	1.1	1.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	14.0	13.8	13.8	14.3	13.9	13.9	13.7	13.4	13.3	13.3	13.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
MEA	3.6	3.8	3.6	4.1	4.2	4.1	3.6	2.8	2.1	1.6	1.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7
REF	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	16.1	17.9	19.4	21.4	25.1	27.4	29.3	30.4	30.5	29.9	29.3
USA	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3

Table 368: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

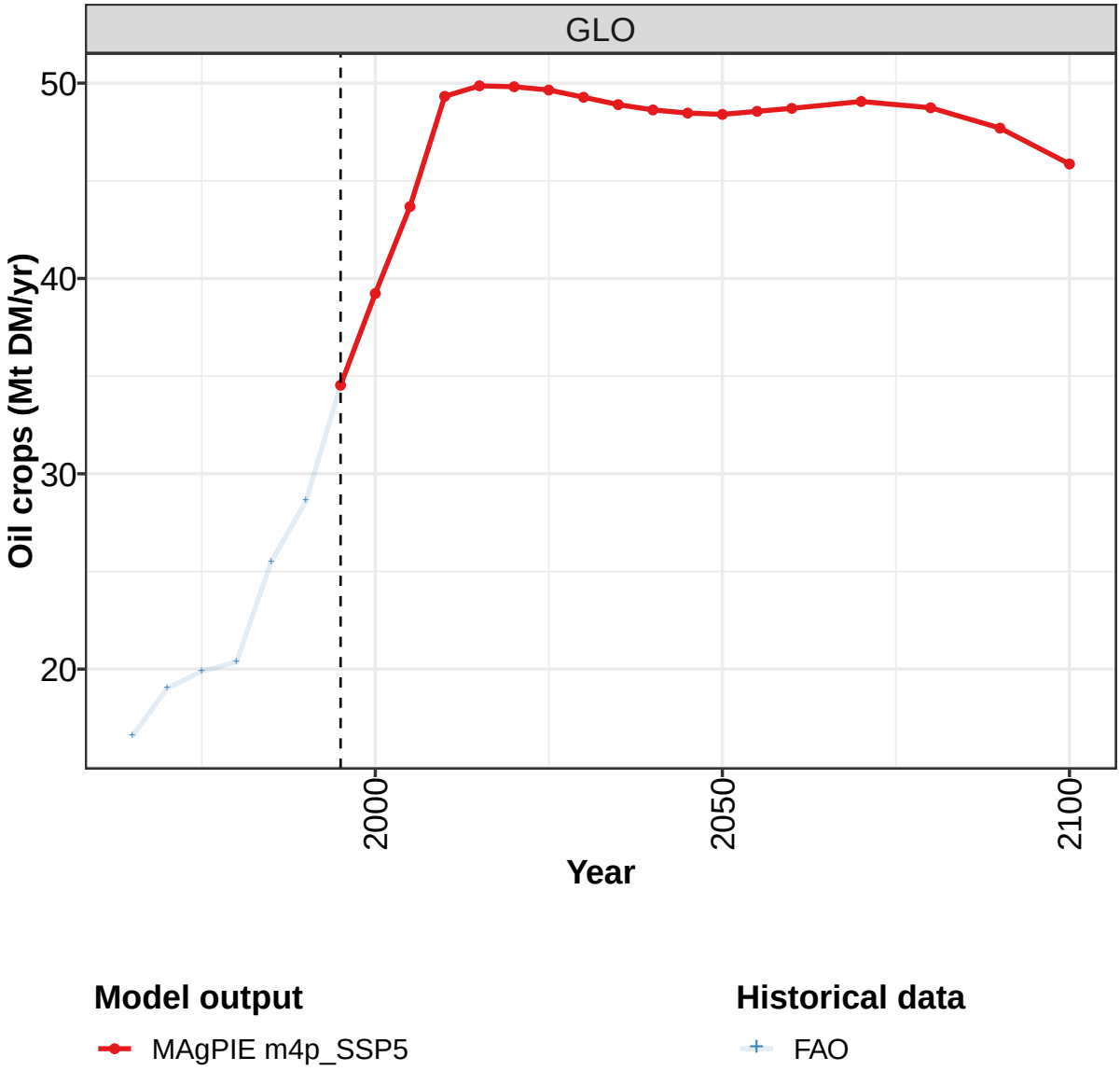
	2050	2055	2060	2070	2080	2090	2100
GLO	46.2	46.8	47.9	50.9	53.2	54.3	54.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.0	1.0	0.9	0.8	0.7	0.6	0.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	13.9	14.1	14.2	14.3	13.9	13.1	12.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MEA	1.1	1.1	1.1	1.2	1.2	1.2	1.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.6	0.6	0.6	0.6	0.6	0.6	0.6
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	29.0	29.4	30.4	33.3	36.1	38.1	39.0
USA	0.4	0.4	0.4	0.5	0.5	0.6	0.6

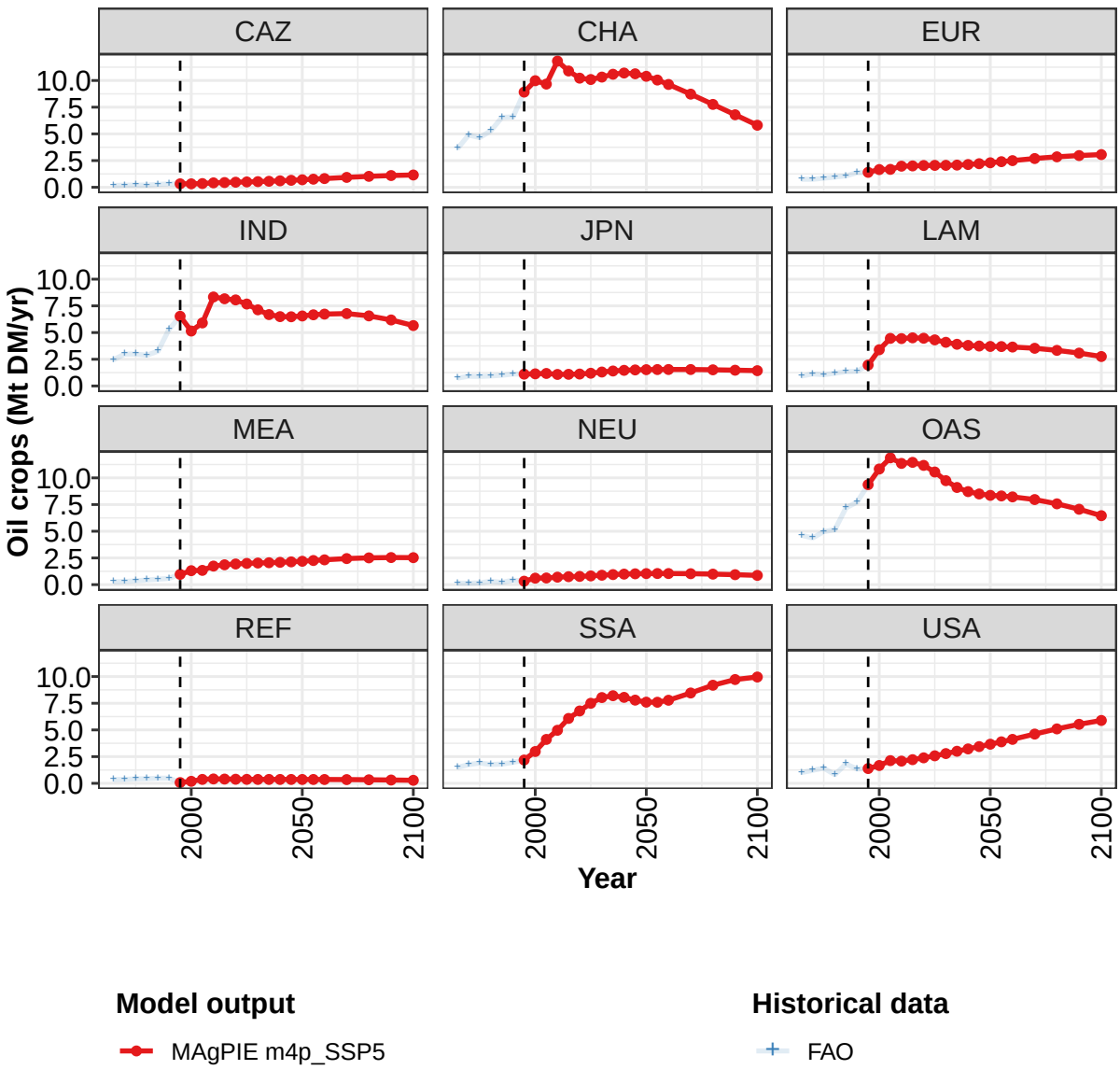
Table 369: MAgPIE m4p_SSP5 — Demand—Food—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	34.6	43.3	40.2	38.0	38.4	42.7	38.3	39.0	39.8	42.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	10.4	12.6	10.0	7.9	7.2	5.3	3.2	2.0	1.7	1.5
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	11.2	16.1	15.9	15.6	13.8	17.3	14.0	13.8	13.8	14.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
MEA	1.9	2.3	2.4	2.5	2.5	3.0	3.6	3.8	3.6	4.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.8	0.8	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7
REF	1.4	1.3	0.7	1.2	1.9	2.2	0.4	0.4	0.2	0.1
SSA	8.7	9.9	10.2	10.0	12.1	13.8	16.1	17.9	19.4	21.4
USA	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2

Table 370: FAO — Demand—Food—Crops—Cereals—Tropical cereals (Mt DM/yr)

7.1.6 Oil crops





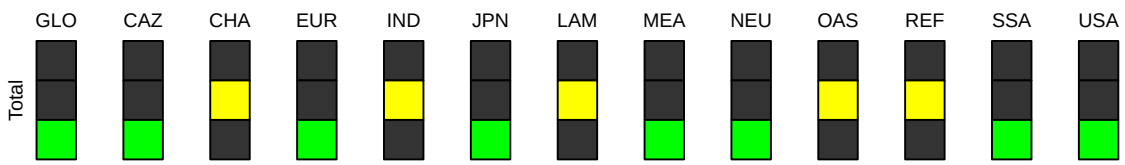


Figure 124: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.5	39.2	43.7	49.3	49.9	49.8	49.6	49.3	48.9	48.6	48.5
CAZ	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7
CHA	8.9	10.0	9.7	11.8	10.9	10.2	10.1	10.3	10.6	10.7	10.6
EUR	1.4	1.7	1.7	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2
IND	6.5	5.1	5.9	8.3	8.2	8.1	7.7	7.1	6.7	6.5	6.5
JPN	1.1	1.1	1.2	1.1	1.1	1.1	1.2	1.3	1.4	1.5	1.5
LAM	2.0	3.4	4.5	4.4	4.5	4.5	4.3	4.1	3.9	3.8	3.7
MEA	1.0	1.3	1.3	1.7	1.9	1.9	2.0	2.0	2.1	2.1	2.1
NEU	0.3	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0
OAS	9.4	10.8	11.9	11.4	11.5	11.2	10.6	9.7	9.1	8.7	8.5
REF	0.1	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
SSA	2.2	3.0	4.1	5.0	6.1	6.8	7.5	8.0	8.2	8.1	7.8
USA	1.4	1.7	2.1	2.1	2.2	2.4	2.6	2.8	3.0	3.2	3.4

Table 371: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops (Mt DM/yr) [PART 1/2]

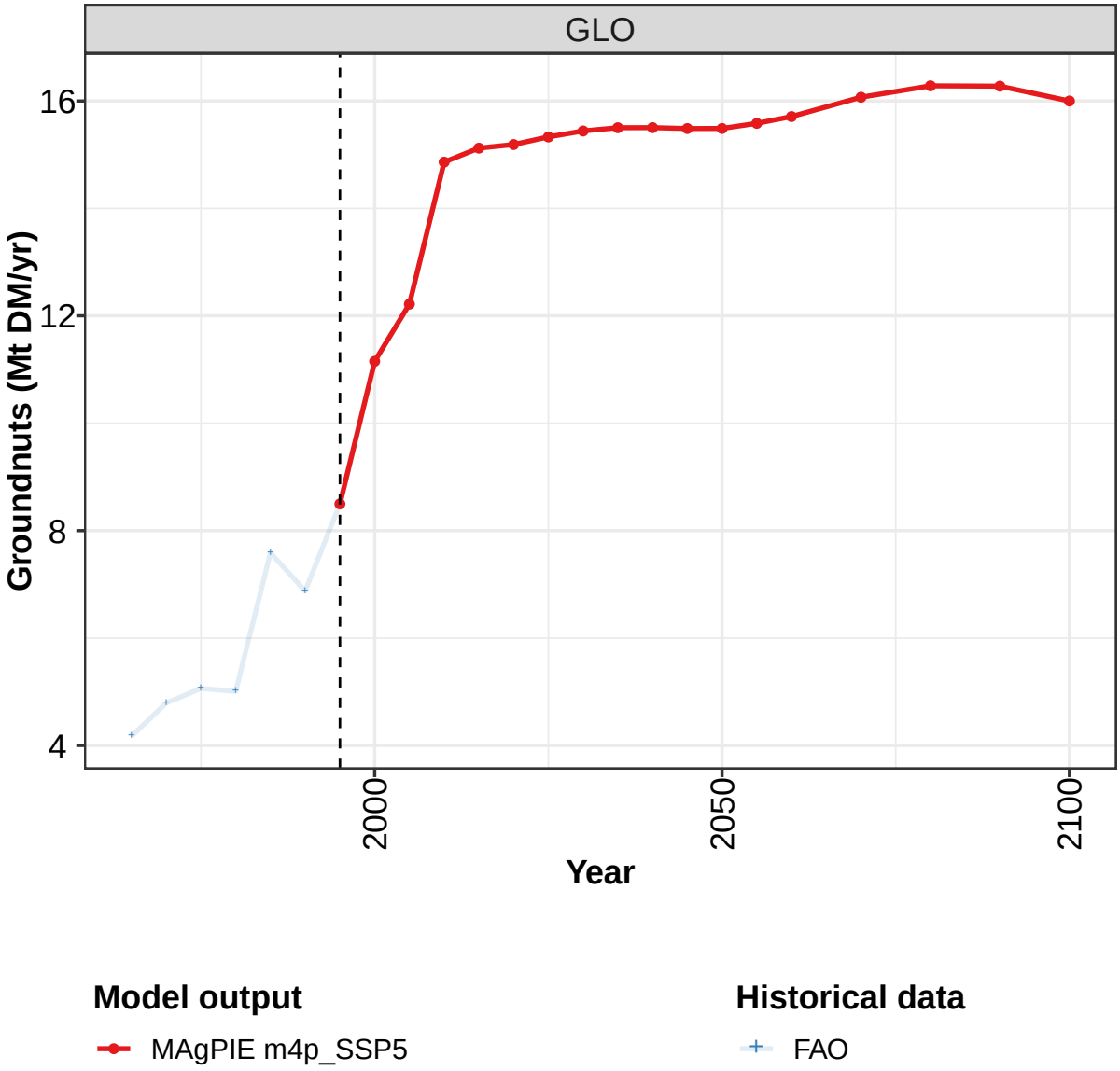
	2050	2055	2060	2070	2080	2090	2100
GLO	48.4	48.6	48.7	49.1	48.7	47.7	45.9
CAZ	0.7	0.8	0.8	0.9	1.0	1.1	1.2
CHA	10.4	10.0	9.6	8.7	7.8	6.8	5.8
EUR	2.3	2.4	2.5	2.7	2.9	3.0	3.1
IND	6.6	6.7	6.7	6.8	6.6	6.2	5.7
JPN	1.5	1.5	1.5	1.5	1.5	1.5	1.4
LAM	3.7	3.7	3.6	3.5	3.3	3.1	2.8
MEA	2.2	2.3	2.3	2.4	2.5	2.5	2.5
NEU	1.0	1.0	1.0	1.0	1.0	0.9	0.9
OAS	8.4	8.3	8.2	8.0	7.6	7.1	6.5
REF	0.4	0.4	0.4	0.4	0.3	0.3	0.3
SSA	7.6	7.6	7.8	8.5	9.2	9.7	10.0
USA	3.7	3.9	4.1	4.6	5.1	5.5	5.9

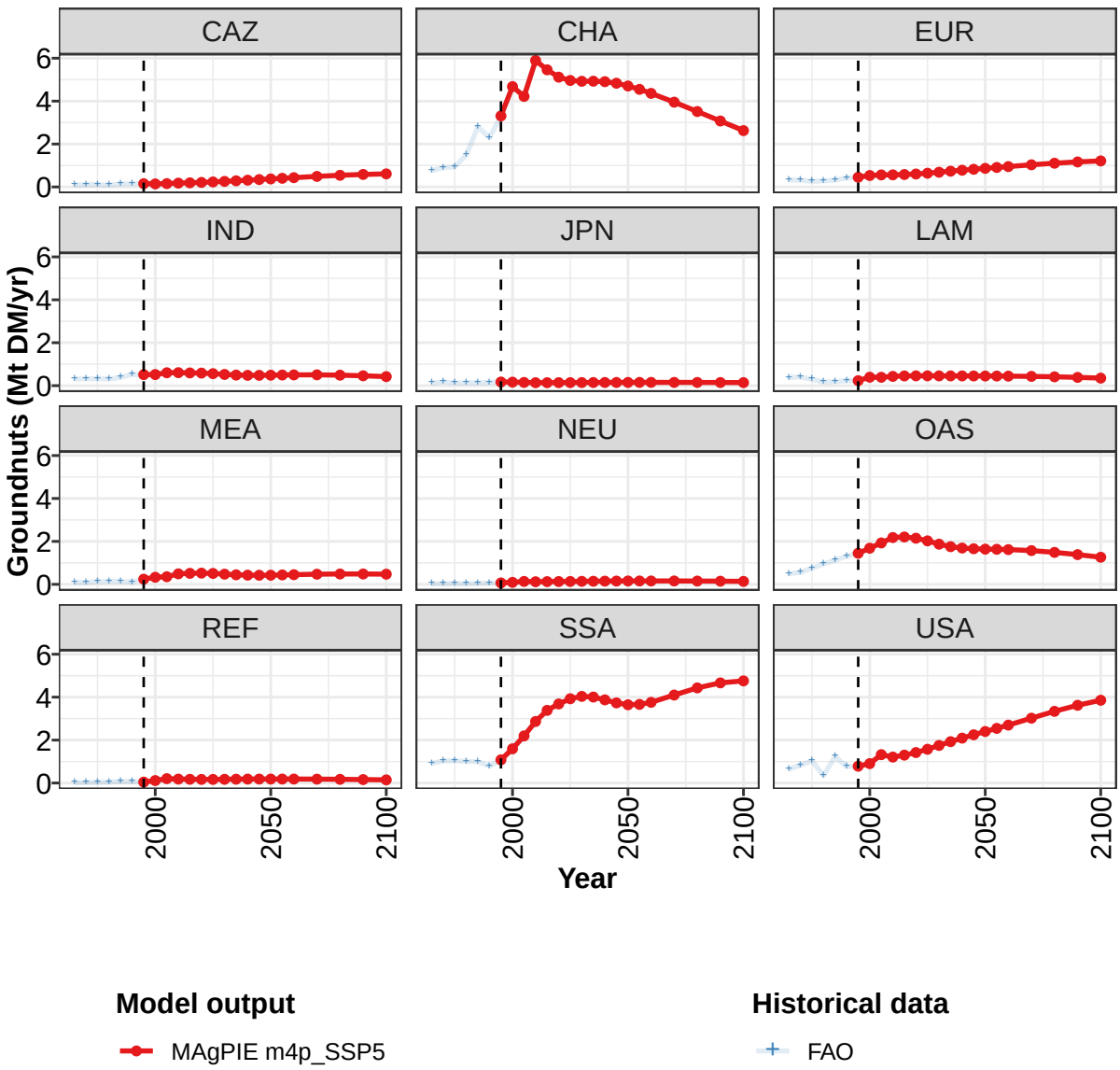
Table 372: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	16.6	19.0	19.9	20.4	25.5	28.6	34.5	39.2	43.7	49.3
CAZ	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4
CHA	3.6	4.9	4.7	5.3	6.5	6.6	8.9	10.0	9.7	11.8
EUR	0.8	0.8	0.9	1.0	1.1	1.4	1.4	1.7	1.7	2.0
IND	2.5	3.0	3.0	2.9	3.2	5.3	6.5	5.1	5.9	8.3
JPN	0.7	0.9	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.1
LAM	0.9	1.1	1.1	1.2	1.3	1.4	2.0	3.4	4.5	4.4
MEA	0.3	0.3	0.4	0.4	0.5	0.6	1.0	1.3	1.3	1.7
NEU	0.1	0.1	0.2	0.3	0.2	0.4	0.3	0.6	0.6	0.7
OAS	4.6	4.4	5.0	5.1	7.2	7.7	9.3	10.8	11.9	11.4
REF	0.4	0.4	0.4	0.4	0.5	0.5	0.1	0.2	0.4	0.4
SSA	1.5	1.8	1.9	1.8	1.8	2.0	2.2	3.0	4.1	5.0
USA	1.0	1.2	1.4	0.8	1.8	1.3	1.4	1.7	2.1	2.1

Table 373: FAO — Demand—Food—Crops—Oil crops (Mt DM/yr)

7.1.7 Oil crops—Groundnuts





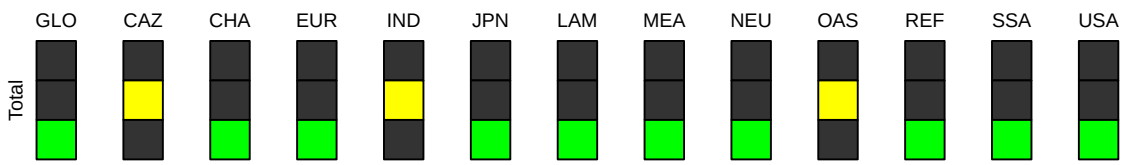


Figure 125: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8.5	11.2	12.2	14.9	15.1	15.2	15.3	15.4	15.5	15.5	15.5
CAZ	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
CHA	3.3	4.7	4.2	5.9	5.5	5.1	5.0	4.9	4.9	4.9	4.8
EUR	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8
IND	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
JPN	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.2	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
MEA	0.2	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
OAS	1.4	1.7	1.9	2.2	2.2	2.1	2.0	1.9	1.8	1.7	1.7
REF	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SSA	1.1	1.6	2.2	2.9	3.4	3.7	3.9	4.0	4.0	3.9	3.7
USA	0.8	0.9	1.3	1.2	1.3	1.4	1.6	1.8	1.9	2.1	2.2

Table 374: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

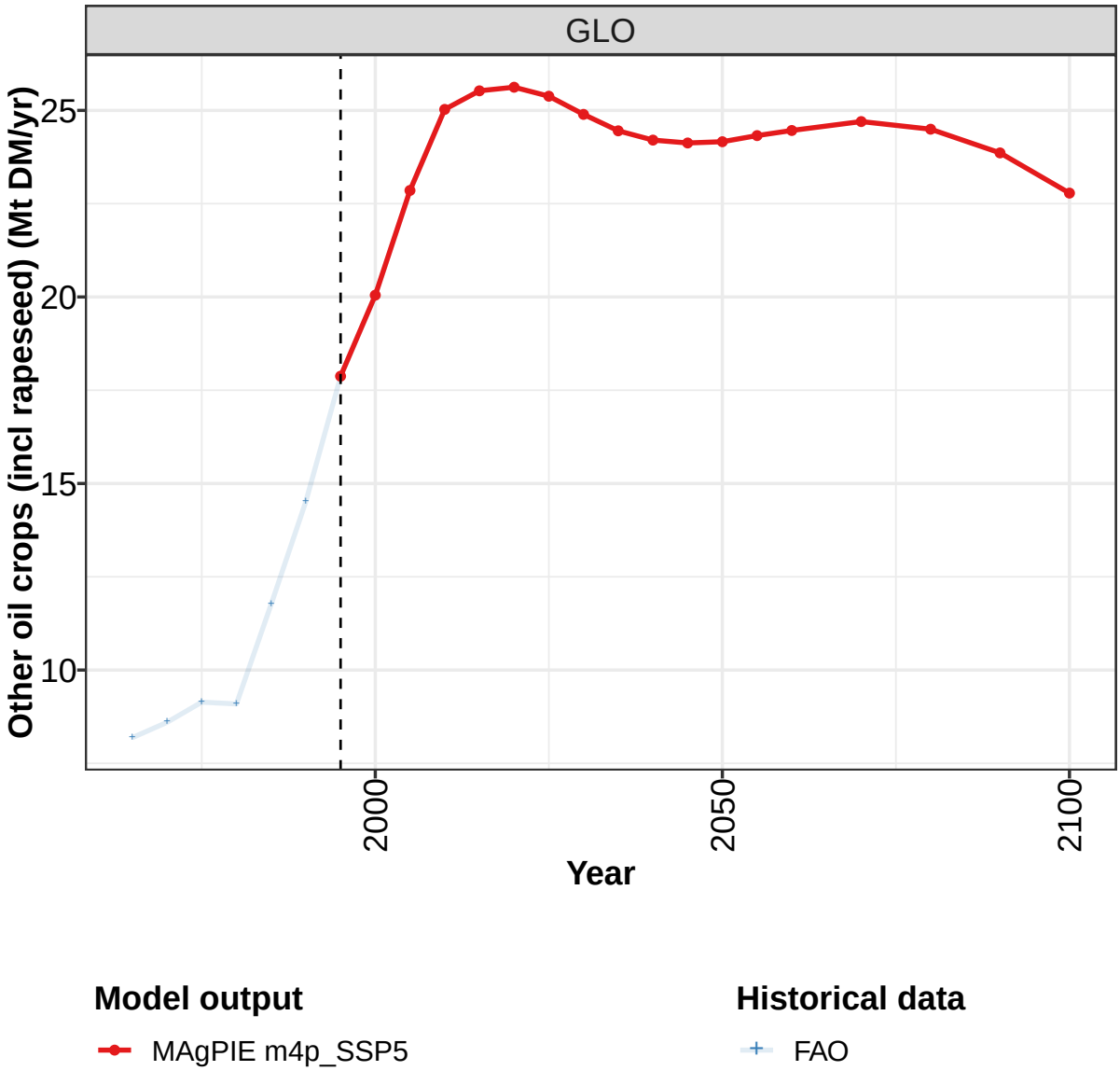
	2050	2055	2060	2070	2080	2090	2100
GLO	15.5	15.6	15.7	16.1	16.3	16.3	16.0
CAZ	0.4	0.4	0.4	0.5	0.5	0.6	0.6
CHA	4.7	4.5	4.4	4.0	3.5	3.1	2.6
EUR	0.9	0.9	0.9	1.0	1.1	1.2	1.2
IND	0.5	0.5	0.5	0.5	0.5	0.5	0.4
JPN	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	0.4	0.4	0.4	0.4	0.4	0.4	0.4
MEA	0.4	0.4	0.5	0.5	0.5	0.5	0.5
NEU	0.2	0.2	0.2	0.2	0.2	0.1	0.1
OAS	1.6	1.6	1.6	1.6	1.5	1.4	1.3
REF	0.2	0.2	0.2	0.2	0.2	0.2	0.1
SSA	3.6	3.7	3.8	4.1	4.4	4.7	4.8
USA	2.4	2.5	2.7	3.0	3.3	3.6	3.9

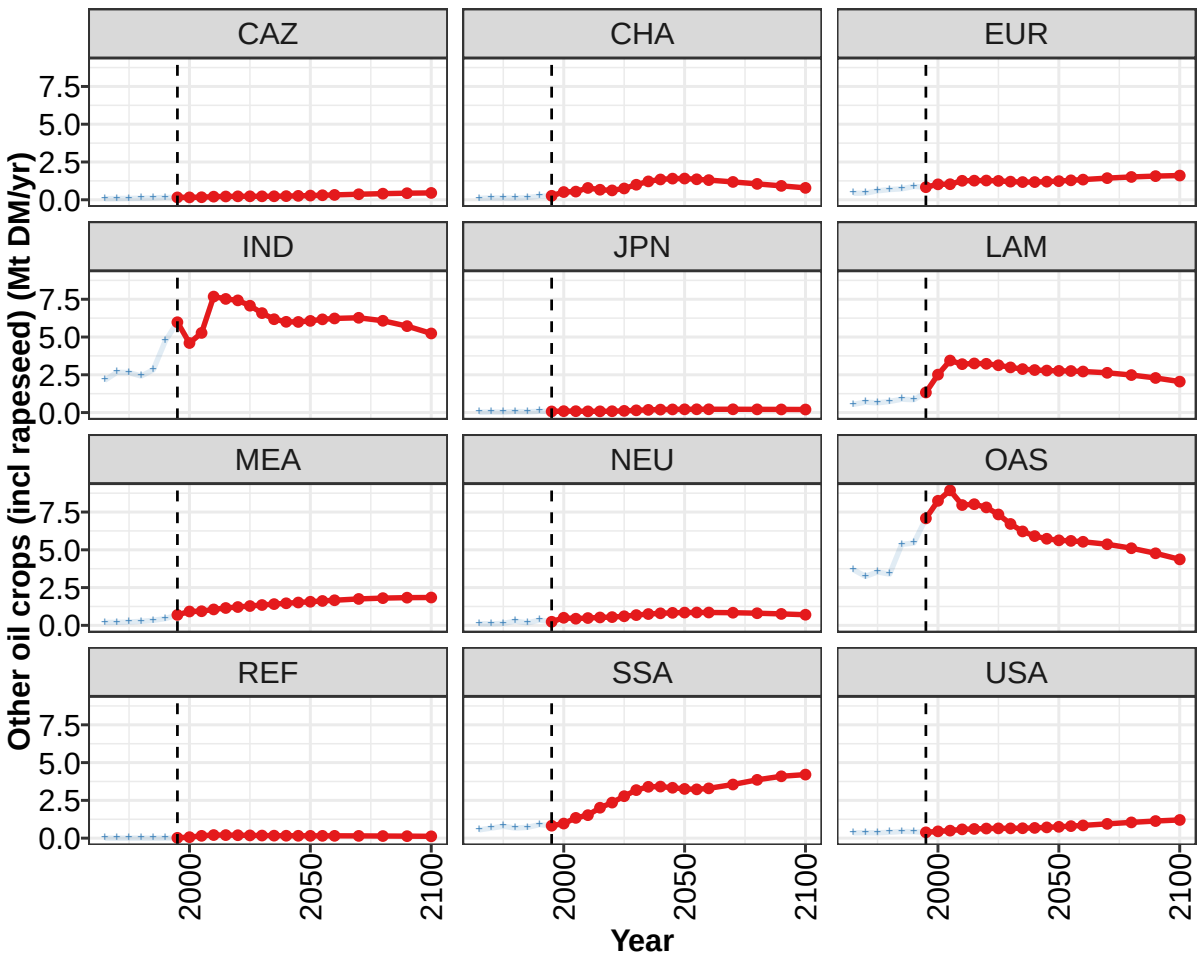
Table 375: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.2	4.8	5.1	5.0	7.6	6.9	8.5	11.2	12.2	14.9
CAZ	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2
CHA	0.8	0.9	0.9	1.5	2.8	2.3	3.3	4.7	4.2	5.9
EUR	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.6
IND	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.6
JPN	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1
LAM	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.4
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
OAS	0.5	0.6	0.8	0.9	1.1	1.3	1.4	1.7	1.9	2.2
REF	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.2
SSA	0.9	1.0	1.0	1.0	1.0	0.8	1.1	1.6	2.2	2.9
USA	0.6	0.8	1.0	0.4	1.2	0.8	0.8	0.9	1.3	1.2

Table 376: FAO — Demand—Food—Crops—Oil crops—Groundnuts (Mt DM/yr)

7.1.8 Oil crops—Other oil crops (incl rapeseed)





Model output

MAgPIE m4p_SSP5

Historical data

FAO

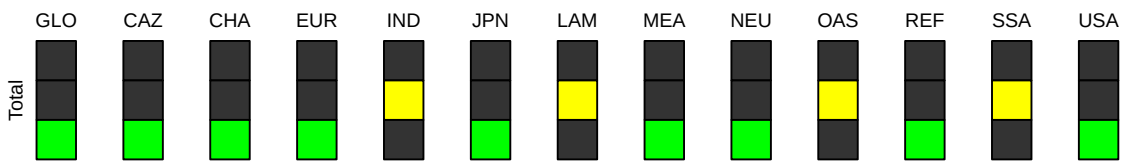


Figure 126: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.9	20.0	22.9	25.0	25.5	25.6	25.4	24.9	24.5	24.2	24.1
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
CHA	0.3	0.5	0.5	0.8	0.7	0.6	0.7	1.0	1.2	1.3	1.4
EUR	0.8	1.0	1.0	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2
IND	6.0	4.6	5.3	7.7	7.5	7.4	7.1	6.6	6.2	6.0	6.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
LAM	1.3	2.5	3.4	3.2	3.3	3.2	3.1	3.0	2.9	2.8	2.8
MEA	0.7	0.9	0.9	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.5
NEU	0.2	0.5	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.8	0.8
OAS	7.1	8.2	8.9	8.0	8.0	7.8	7.3	6.7	6.2	5.9	5.7
REF	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SSA	0.8	1.0	1.3	1.5	2.0	2.4	2.8	3.2	3.4	3.4	3.3
USA	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7

Table 377: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

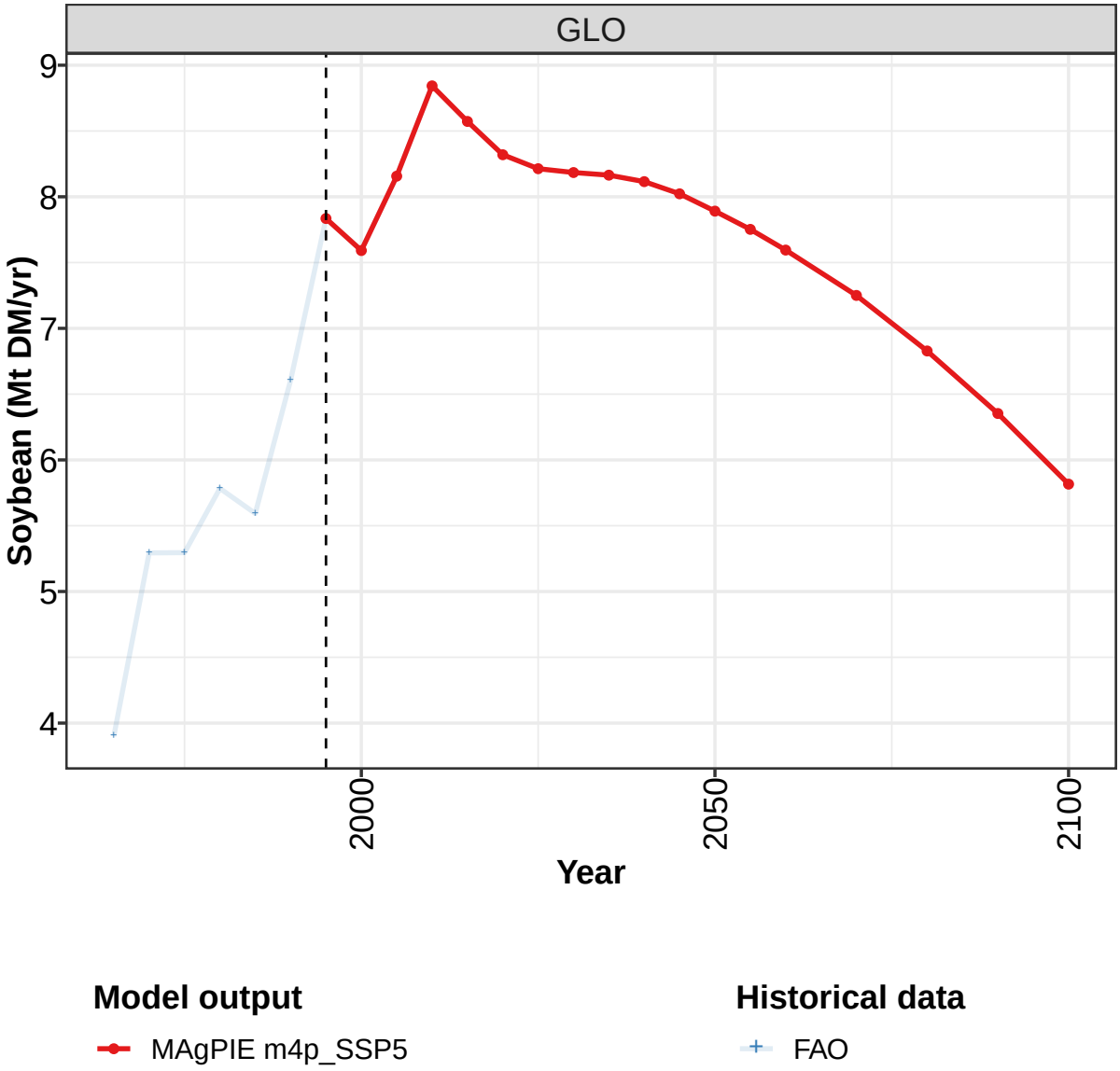
	2050	2055	2060	2070	2080	2090	2100
GLO	24.2	24.3	24.5	24.7	24.5	23.9	22.8
CAZ	0.3	0.3	0.3	0.4	0.4	0.4	0.5
CHA	1.4	1.4	1.3	1.2	1.1	0.9	0.8
EUR	1.2	1.3	1.3	1.4	1.5	1.6	1.6
IND	6.1	6.2	6.2	6.3	6.1	5.7	5.2
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	2.8	2.8	2.7	2.6	2.5	2.3	2.0
MEA	1.6	1.6	1.7	1.7	1.8	1.8	1.8
NEU	0.8	0.9	0.9	0.8	0.8	0.8	0.7
OAS	5.6	5.6	5.5	5.4	5.1	4.8	4.4
REF	0.2	0.2	0.2	0.1	0.1	0.1	0.1
SSA	3.3	3.2	3.3	3.6	3.9	4.1	4.2
USA	0.8	0.8	0.8	0.9	1.0	1.1	1.2

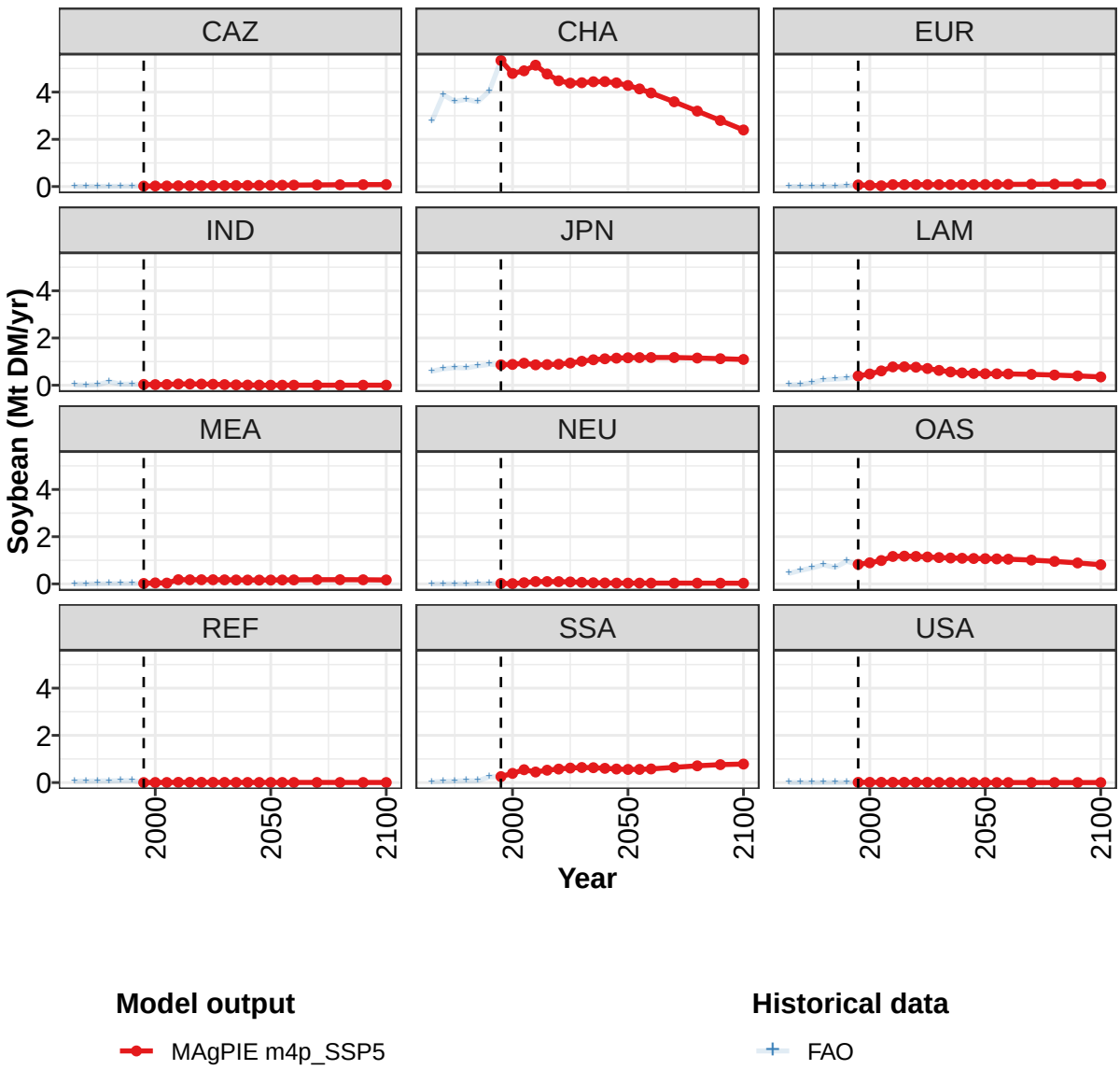
Table 378: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.2	8.6	9.1	9.1	11.8	14.5	17.9	20.0	22.9	25.0
CAZ	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
CHA	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.5	0.8
EUR	0.4	0.4	0.6	0.7	0.7	0.9	0.8	1.0	1.0	1.3
IND	2.1	2.7	2.6	2.4	2.8	4.7	6.0	4.6	5.3	7.7
JPN	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.5	0.7	0.6	0.7	0.9	0.8	1.3	2.5	3.4	3.2
MEA	0.2	0.2	0.2	0.3	0.3	0.4	0.7	0.9	0.9	1.1
NEU	0.1	0.1	0.1	0.3	0.2	0.3	0.2	0.5	0.4	0.5
OAS	3.7	3.2	3.5	3.4	5.4	5.5	7.1	8.2	8.9	8.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2
SSA	0.5	0.7	0.8	0.7	0.7	0.9	0.8	1.0	1.3	1.5
USA	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6

Table 379: FAO — Demand—Food—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

7.1.9 Oil crops—Soybean





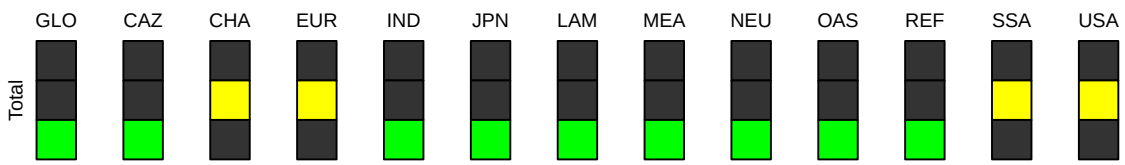


Figure 127: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.83	7.59	8.16	8.84	8.57	8.32	8.21	8.18	8.16	8.12	8.02
CAZ	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05
CHA	5.34	4.79	4.90	5.14	4.77	4.48	4.38	4.40	4.44	4.44	4.39
EUR	0.07	0.05	0.03	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
IND	0.03	0.02	0.03	0.05	0.05	0.05	0.04	0.03	0.01	0.01	0.00
JPN	0.86	0.88	0.93	0.86	0.87	0.89	0.94	1.01	1.08	1.12	1.15
LAM	0.39	0.47	0.61	0.78	0.78	0.76	0.71	0.63	0.56	0.52	0.50
MEA	0.02	0.04	0.03	0.18	0.17	0.18	0.18	0.17	0.17	0.16	0.16
NEU	0.02	0.01	0.05	0.10	0.10	0.09	0.08	0.06	0.05	0.04	0.03
OAS	0.83	0.89	0.99	1.16	1.18	1.16	1.14	1.12	1.10	1.09	1.08
REF	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
SSA	0.25	0.39	0.54	0.45	0.52	0.57	0.62	0.64	0.63	0.60	0.57
USA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Table 380: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

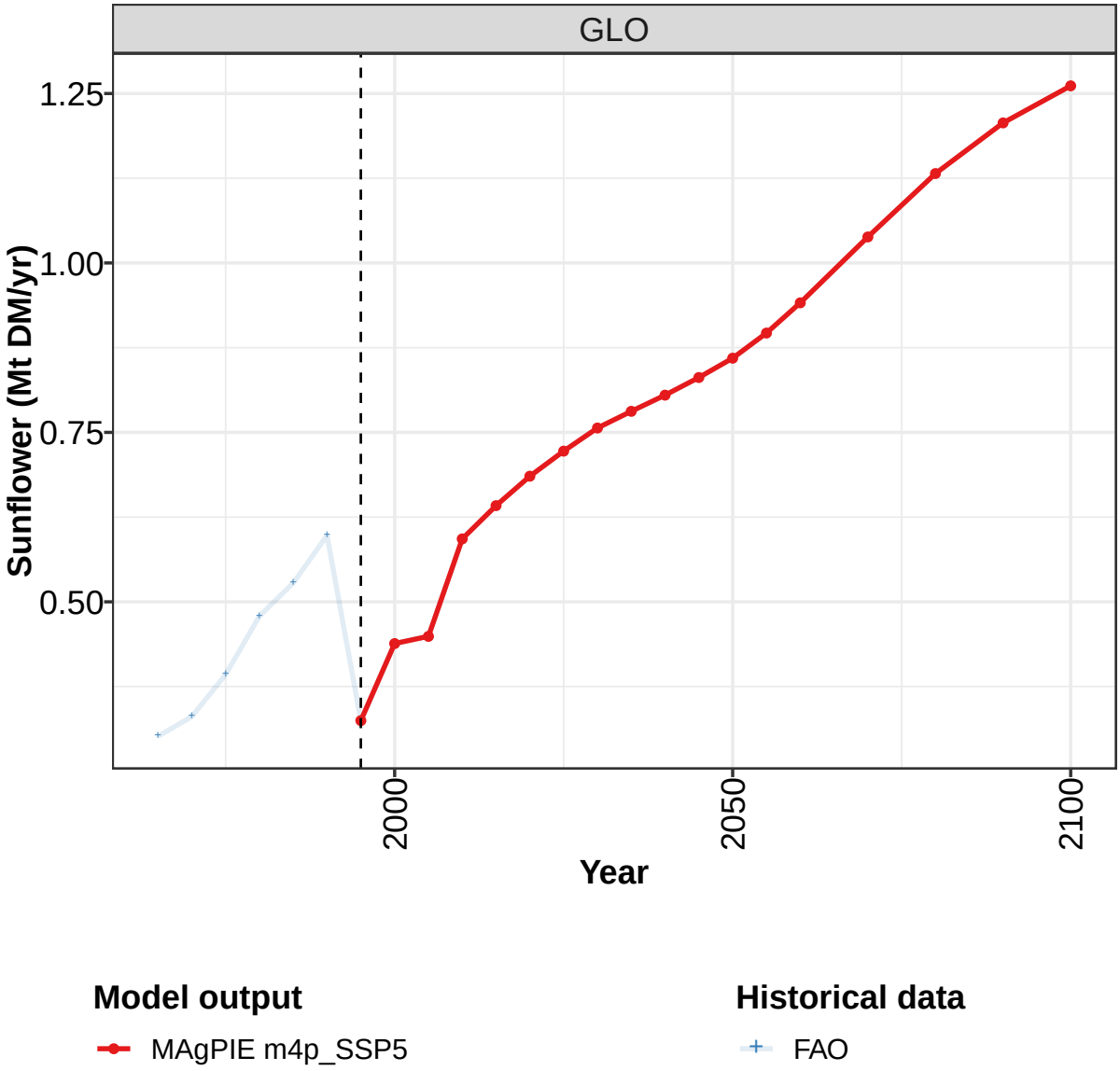
	2050	2055	2060	2070	2080	2090	2100
GLO	7.89	7.75	7.59	7.25	6.83	6.35	5.82
CAZ	0.05	0.06	0.06	0.07	0.07	0.08	0.08
CHA	4.28	4.14	3.96	3.59	3.20	2.80	2.40
EUR	0.09	0.09	0.09	0.10	0.10	0.10	0.10
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	1.16	1.17	1.17	1.17	1.15	1.12	1.09
LAM	0.49	0.48	0.48	0.46	0.43	0.39	0.35
MEA	0.16	0.17	0.17	0.18	0.18	0.17	0.17
NEU	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OAS	1.07	1.06	1.05	1.01	0.95	0.89	0.81
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.56	0.56	0.58	0.64	0.71	0.76	0.78
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

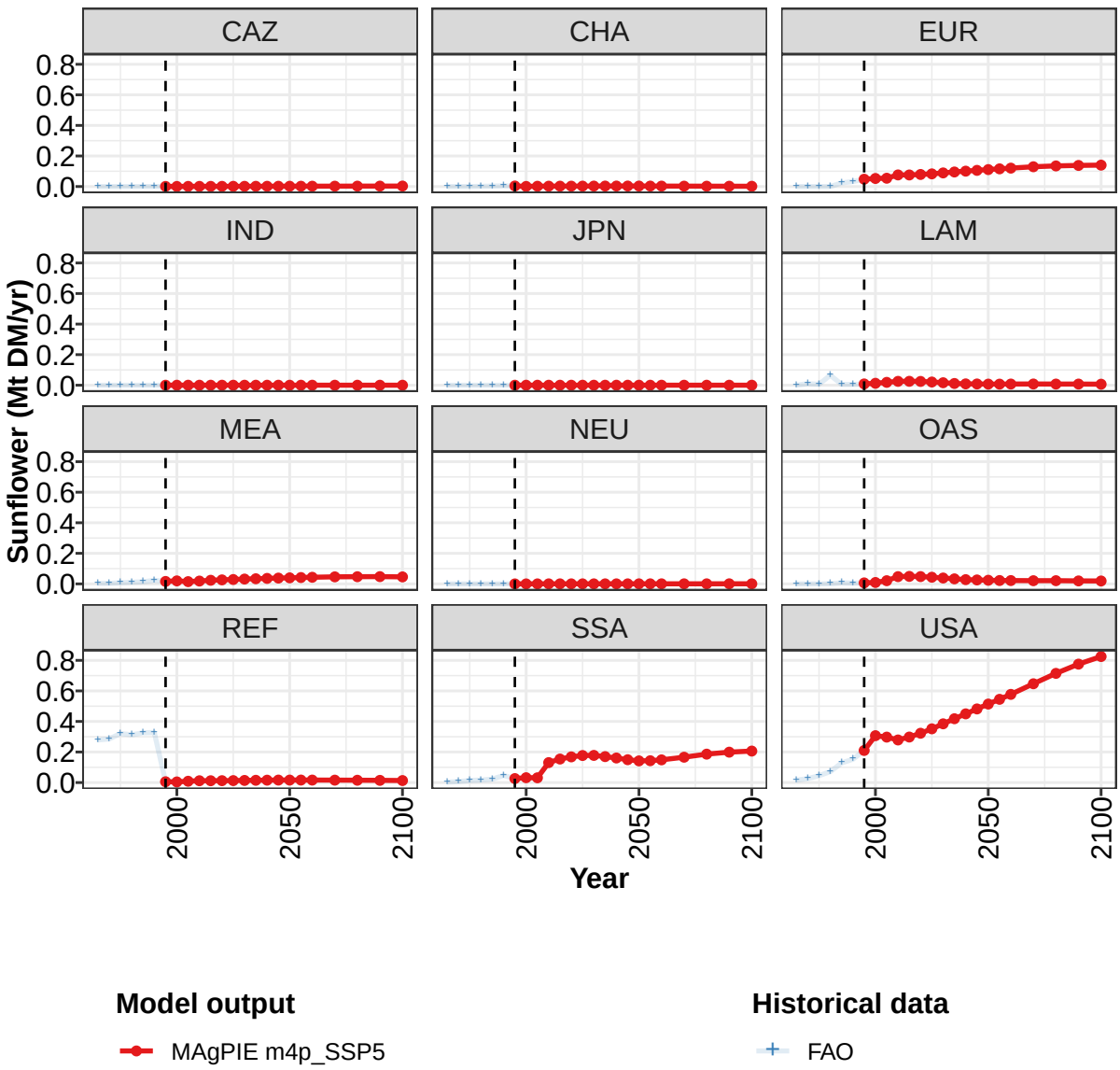
Table 381: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.90	5.29	5.30	5.78	5.59	6.61	7.83	7.59	8.16	8.84
CAZ	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03
CHA	2.75	3.89	3.61	3.70	3.59	4.05	5.34	4.79	4.90	5.14
EUR	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.05	0.03	0.08
IND	0.01	0.00	0.01	0.15	0.04	0.04	0.03	0.02	0.03	0.05
JPN	0.59	0.69	0.74	0.73	0.82	0.89	0.86	0.88	0.93	0.86
LAM	0.01	0.03	0.11	0.23	0.26	0.29	0.39	0.47	0.61	0.78
MEA	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.04	0.03	0.18
NEU	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.05	0.10
OAS	0.44	0.57	0.68	0.81	0.70	0.96	0.83	0.89	0.99	1.16
REF	0.05	0.06	0.07	0.07	0.08	0.08	0.00	0.00	0.00	0.01
SSA	0.03	0.05	0.07	0.07	0.07	0.24	0.25	0.39	0.54	0.45
USA	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01

Table 382: FAO — Demand—Food—Crops—Oil crops—Soybean (Mt DM/yr)

7.1.10 Oil crops—Sunflower





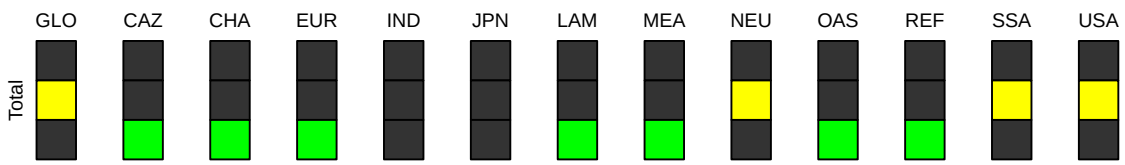


Figure 128: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.32	0.44	0.45	0.59	0.64	0.69	0.72	0.76	0.78	0.80	0.83
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.05	0.05	0.05	0.08	0.08	0.08	0.08	0.09	0.10	0.10	0.11
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.02	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
MEA	0.02	0.02	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.01	0.01	0.02	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.03
REF	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
SSA	0.03	0.03	0.03	0.13	0.15	0.17	0.18	0.18	0.17	0.16	0.15
USA	0.21	0.31	0.30	0.28	0.30	0.32	0.35	0.38	0.42	0.45	0.48

Table 383: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

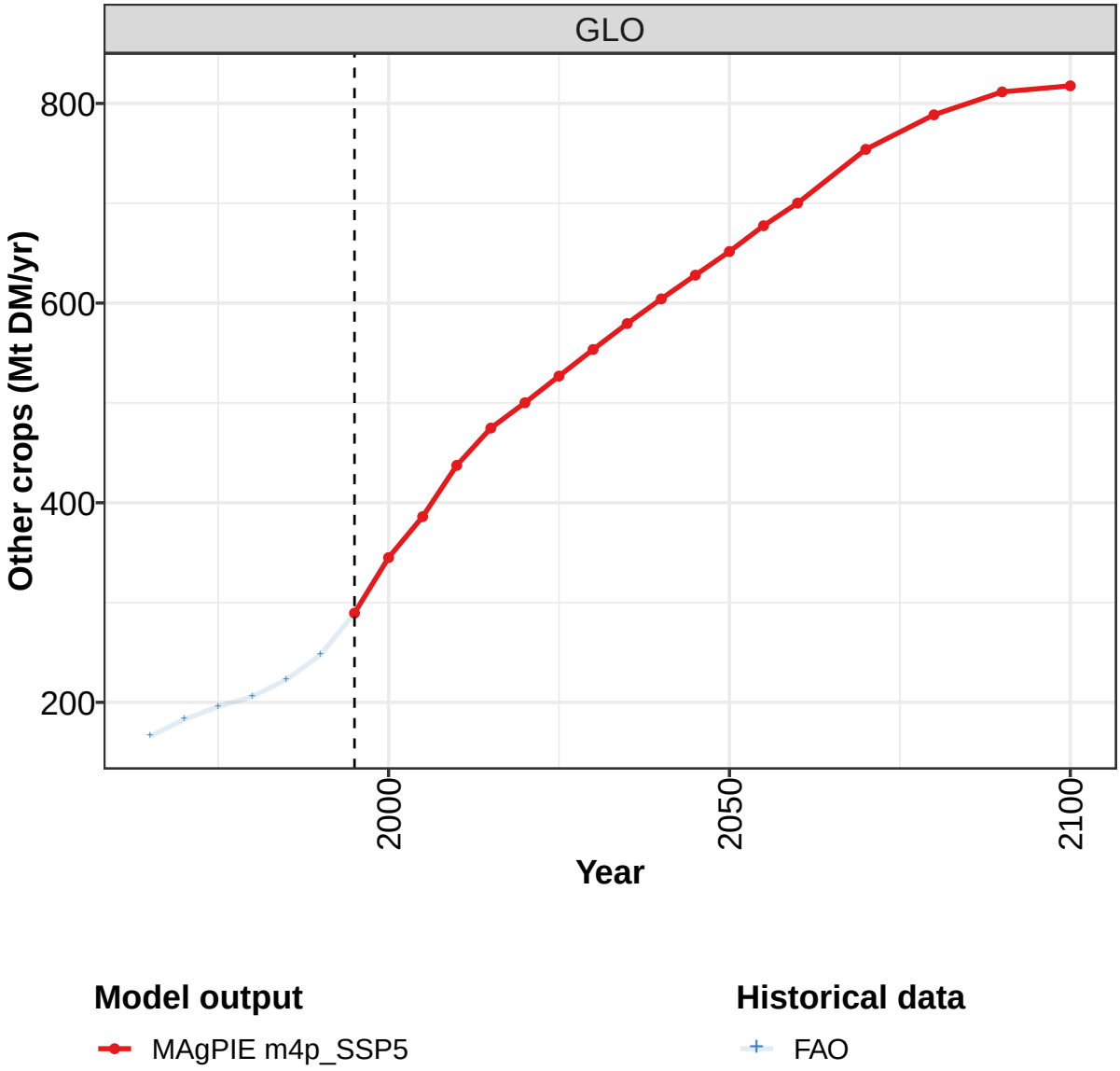
	2050	2055	2060	2070	2080	2090	2100
GLO	0.86	0.90	0.94	1.04	1.13	1.21	1.26
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.11	0.12	0.12	0.13	0.13	0.14	0.14
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.04	0.04	0.04	0.05	0.05	0.05	0.05
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.02	0.02	0.02	0.02	0.02	0.02	0.02
REF	0.02	0.02	0.02	0.02	0.02	0.01	0.01
SSA	0.14	0.14	0.15	0.17	0.19	0.20	0.21
USA	0.51	0.55	0.58	0.65	0.71	0.78	0.83

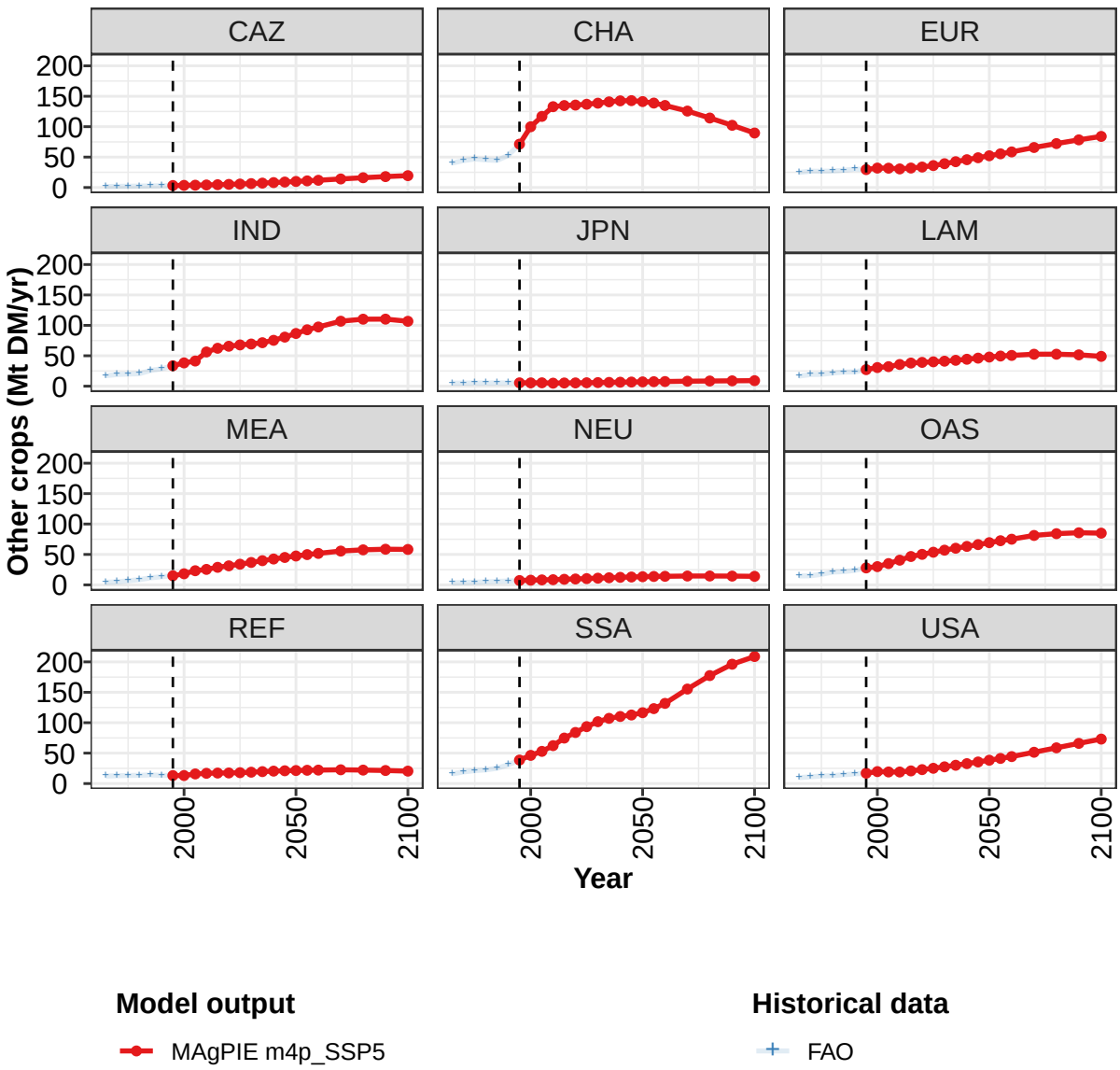
Table 384: MAgPIE m4p_SSP5 — Demand—Food—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.302	0.331	0.393	0.479	0.528	0.598	0.325	0.438	0.450	0.592
CAZ	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001
CHA	0.000	0.000	0.000	0.001	0.003	0.004	0.003	0.001	0.001	0.002
EUR	0.000	0.000	0.000	0.000	0.023	0.033	0.048	0.053	0.054	0.076
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.009	0.006	0.065	0.005	0.005	0.008	0.013	0.019	0.025
MEA	0.004	0.004	0.007	0.011	0.013	0.023	0.016	0.020	0.015	0.019
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.001	0.007	0.005	0.007	0.009	0.021	0.047
REF	0.279	0.285	0.321	0.312	0.326	0.328	0.005	0.004	0.009	0.012
SSA	0.003	0.006	0.013	0.017	0.022	0.047	0.026	0.032	0.032	0.131
USA	0.016	0.026	0.045	0.072	0.128	0.152	0.210	0.307	0.298	0.279

Table 385: FAO — Demand—Food—Crops—Oil crops—Sunflower (Mt DM/yr)

7.1.11 Other crops





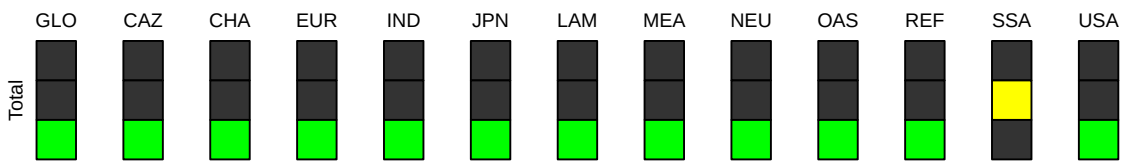


Figure 129: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	289	345	386	437	475	500	527	553	579	604	628
CAZ	3	4	4	4	5	5	6	6	7	8	9
CHA	71	100	117	133	135	136	137	139	141	142	143
EUR	29	32	32	31	32	34	36	39	42	46	49
IND	34	38	41	56	62	66	68	69	71	75	81
JPN	6	5	6	5	5	5	6	6	6	7	7
LAM	27	31	32	36	38	39	40	41	43	44	46
MEA	15	18	23	25	29	31	34	37	40	43	45
NEU	7	8	8	9	9	10	10	11	12	12	13
OAS	28	30	35	41	47	50	54	57	60	63	66
REF	13	13	16	17	17	17	18	19	20	20	21
SSA	39	46	53	62	75	84	94	102	107	110	113
USA	17	20	19	19	21	23	25	28	30	33	36

Table 386: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops (Mt DM/yr) [PART 1/2]

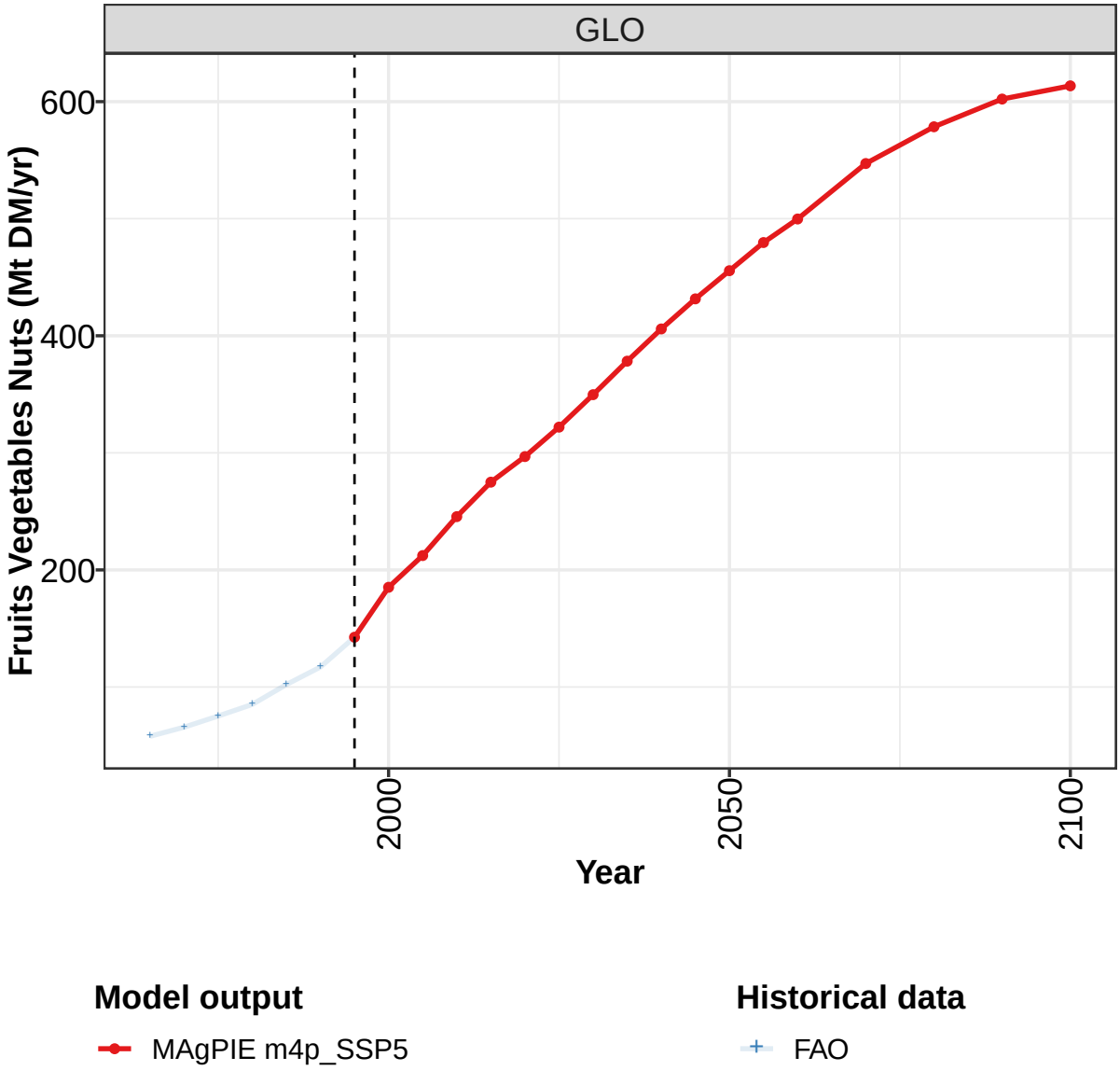
	2050	2055	2060	2070	2080	2090	2100
GLO	652	677	700	754	789	812	818
CAZ	10	11	12	14	16	18	19
CHA	141	139	135	126	114	102	90
EUR	52	55	59	66	72	78	84
IND	87	93	97	107	110	110	107
JPN	7	7	8	8	9	9	9
LAM	48	50	51	53	53	52	49
MEA	47	50	52	56	58	59	58
NEU	13	14	14	15	15	14	14
OAS	69	73	75	81	84	86	85
REF	21	22	22	23	22	21	20
SSA	116	123	132	155	177	196	209
USA	38	41	44	51	59	66	73

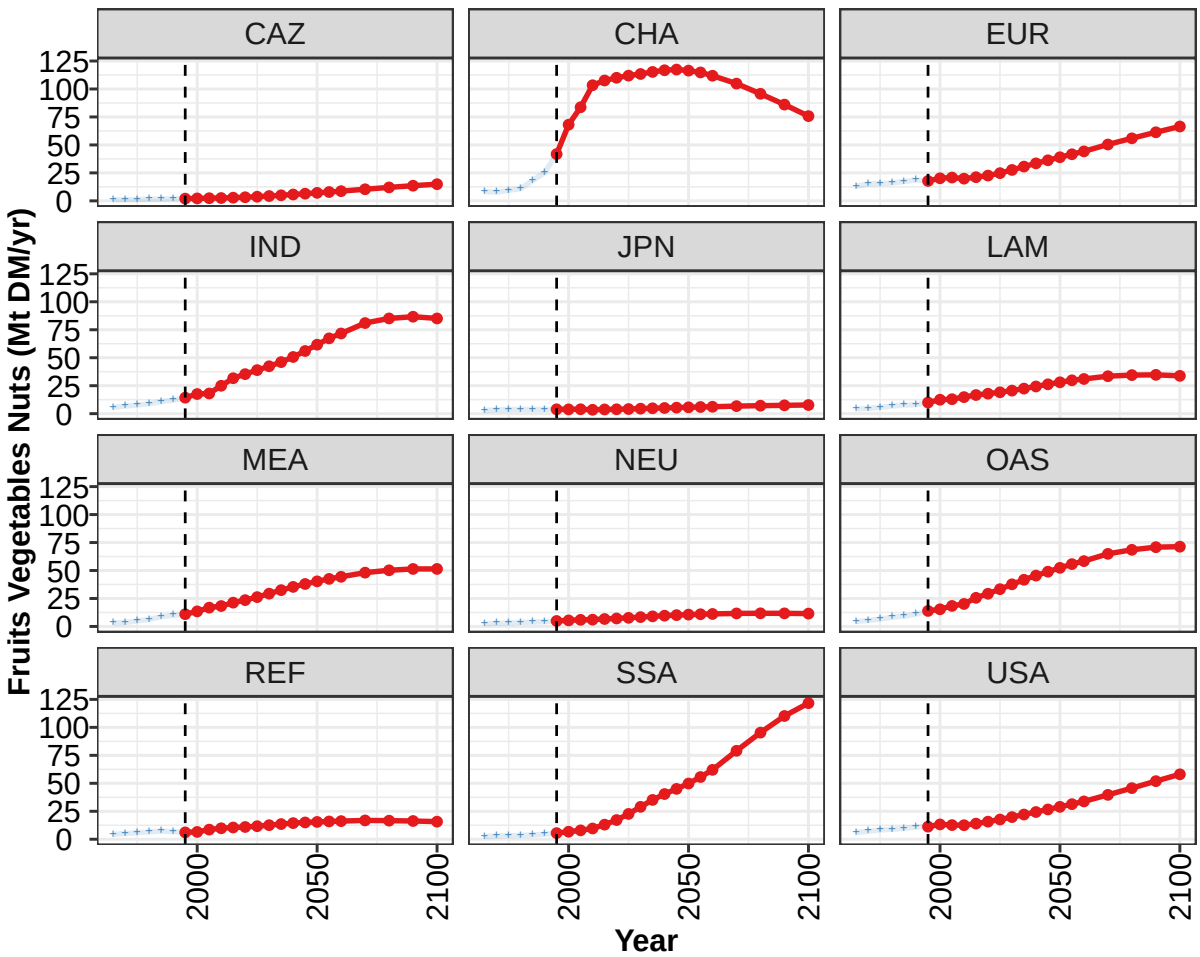
Table 387: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	166	183	196	206	223	247	289	345	386	437
CAZ	2	2	2	2	3	3	3	4	4	4
CHA	40	44	47	45	45	53	71	100	117	133
EUR	25	27	27	27	28	30	30	32	32	31
IND	17	19	20	20	26	29	34	38	41	56
JPN	5	5	5	5	5	5	6	5	6	5
LAM	17	19	19	22	23	23	27	31	32	36
MEA	4	5	7	9	12	13	15	18	23	25
NEU	3	4	4	5	6	6	7	8	8	9
OAS	15	15	17	21	22	24	28	30	35	41
REF	12	13	13	14	14	13	13	13	16	17
SSA	16	19	21	23	25	31	39	46	53	62
USA	10	11	12	13	14	16	17	20	19	19

Table 388: FAO — Demand—Food—Crops—Other crops (Mt DM/yr)

7.1.12 Other crops—Fruits Vegetables Nuts





Model output

MAgPIE m4p_SSP5

Historical data

FAO

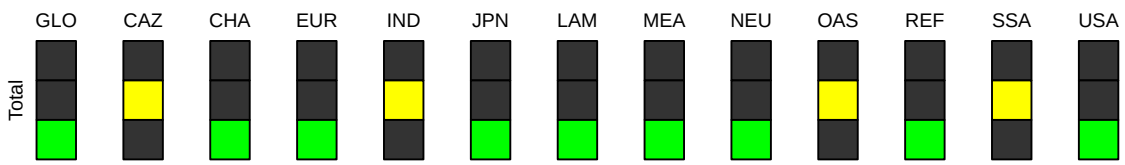


Figure 130: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	143	185	212	246	275	297	322	350	378	406	432
CAZ	2	2	2	3	3	3	4	4	5	6	6
CHA	42	68	84	103	108	110	112	113	115	117	117
EUR	18	20	21	20	21	23	25	28	31	34	36
IND	14	18	18	25	32	35	39	42	46	51	56
JPN	4	4	4	3	4	4	4	4	5	5	5
LAM	10	12	13	15	17	18	19	21	22	24	26
MEA	11	13	17	18	21	24	26	29	32	35	38
NEU	5	5	6	6	7	7	8	8	9	10	10
OAS	14	15	18	20	26	29	33	38	42	45	49
REF	6	7	9	10	11	11	12	13	14	14	15
SSA	6	7	8	10	13	17	23	29	35	40	45
USA	11	13	13	13	14	16	18	20	22	24	27

Table 389: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

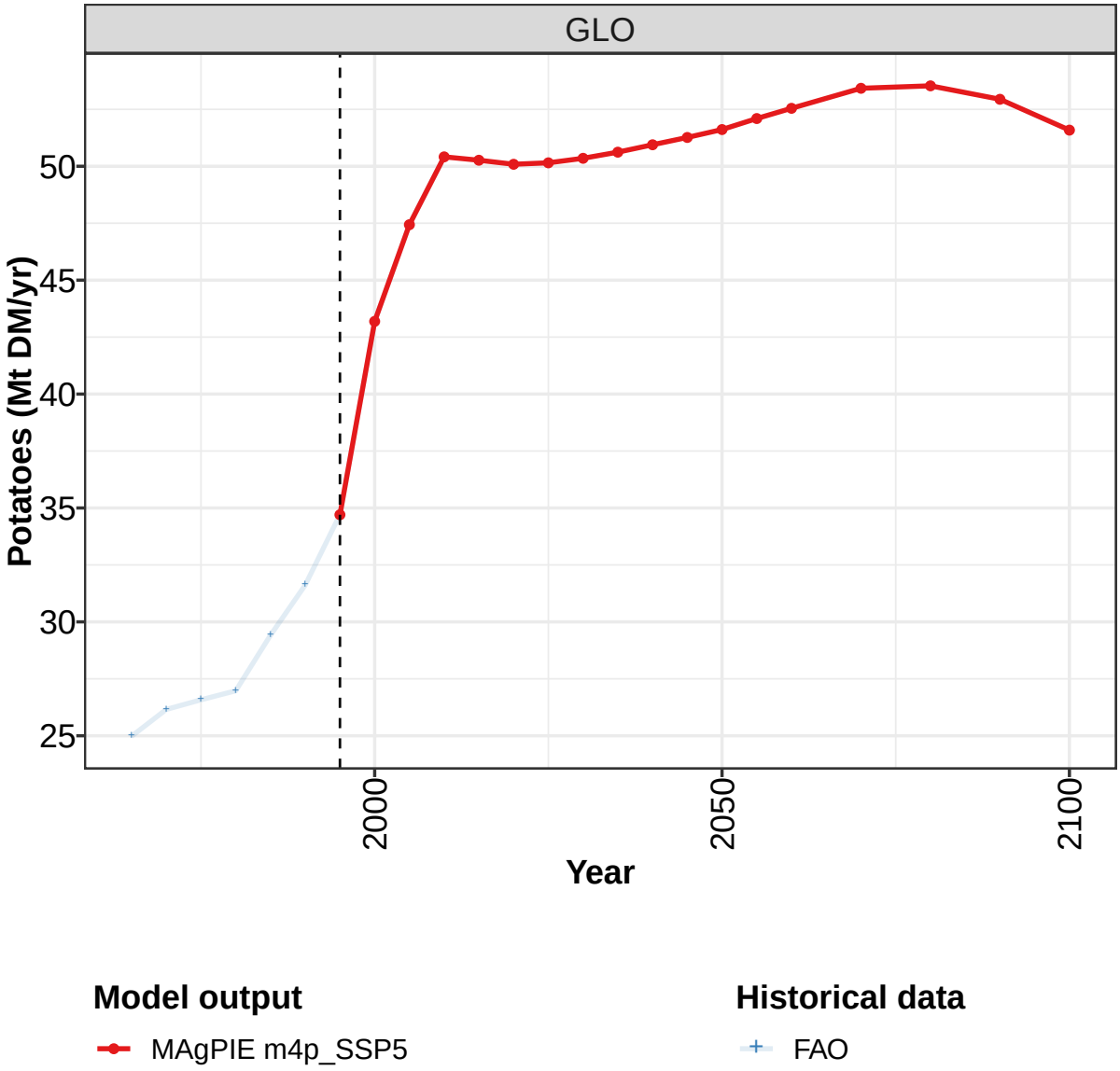
	2050	2055	2060	2070	2080	2090	2100
GLO	456	480	500	547	579	602	613
CAZ	7	8	9	10	12	14	15
CHA	116	115	112	105	96	86	76
EUR	39	42	44	50	56	61	66
IND	62	67	72	81	85	87	85
JPN	6	6	6	7	7	7	8
LAM	28	30	31	33	34	35	34
MEA	40	43	44	48	50	51	51
NEU	11	11	11	12	12	12	11
OAS	52	56	58	65	69	71	71
REF	15	16	16	17	17	16	16
SSA	50	56	62	79	95	110	122
USA	29	31	34	40	46	52	58

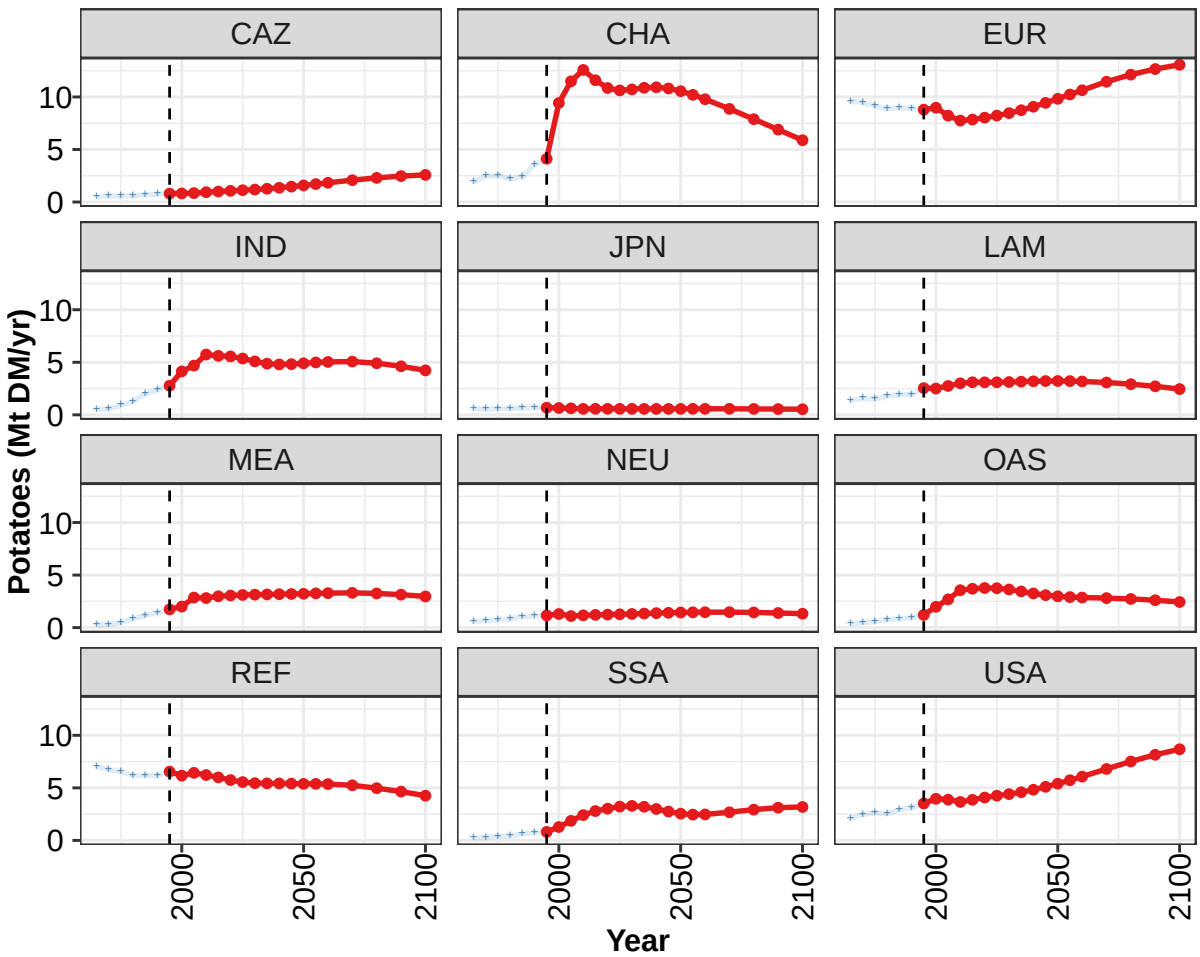
Table 390: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	58	66	75	85	102	117	143	185	212	246
CAZ	1	1	1	1	2	2	2	2	2	3
CHA	8	8	9	11	18	25	42	68	84	103
EUR	13	15	15	16	17	19	18	20	21	20
IND	6	7	8	9	11	12	14	18	18	25
JPN	3	3	4	4	4	4	4	4	4	3
LAM	4	5	6	7	8	8	10	12	13	15
MEA	3	4	5	6	9	10	11	13	17	18
NEU	2	3	3	4	4	4	5	5	6	6
OAS	5	5	7	8	9	11	14	15	18	20
REF	4	5	6	7	7	7	6	7	9	10
SSA	2	3	3	3	4	5	6	7	8	10
USA	6	7	8	9	10	11	11	13	13	13

Table 391: FAO — Demand—Food—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

7.1.13 Other crops—Potatoes





Model output

MAgPIE m4p_SSP5

Historical data

FAO

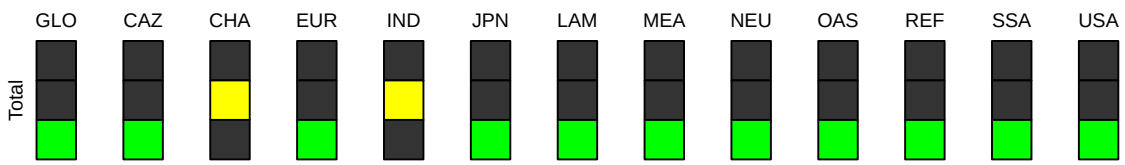


Figure 131: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.7	43.2	47.4	50.4	50.3	50.1	50.2	50.4	50.6	50.9	51.3
CAZ	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.5
CHA	4.1	9.4	11.5	12.6	11.6	10.9	10.6	10.7	10.9	10.9	10.8
EUR	8.8	9.0	8.2	7.8	7.8	8.0	8.2	8.5	8.7	9.1	9.4
IND	2.8	4.1	4.7	5.7	5.6	5.6	5.4	5.1	4.9	4.8	4.8
JPN	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
LAM	2.5	2.5	2.7	3.0	3.1	3.1	3.1	3.1	3.2	3.2	3.2
MEA	1.7	2.0	2.9	2.8	3.0	3.1	3.1	3.1	3.2	3.2	3.2
NEU	1.2	1.3	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4
OAS	1.2	2.0	2.7	3.6	3.7	3.8	3.8	3.6	3.4	3.3	3.1
REF	6.5	6.2	6.4	6.2	6.0	5.7	5.5	5.4	5.4	5.4	5.4
SSA	0.8	1.3	1.9	2.4	2.8	3.0	3.2	3.3	3.2	3.0	2.7
USA	3.5	4.0	3.9	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5.1

Table 392: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

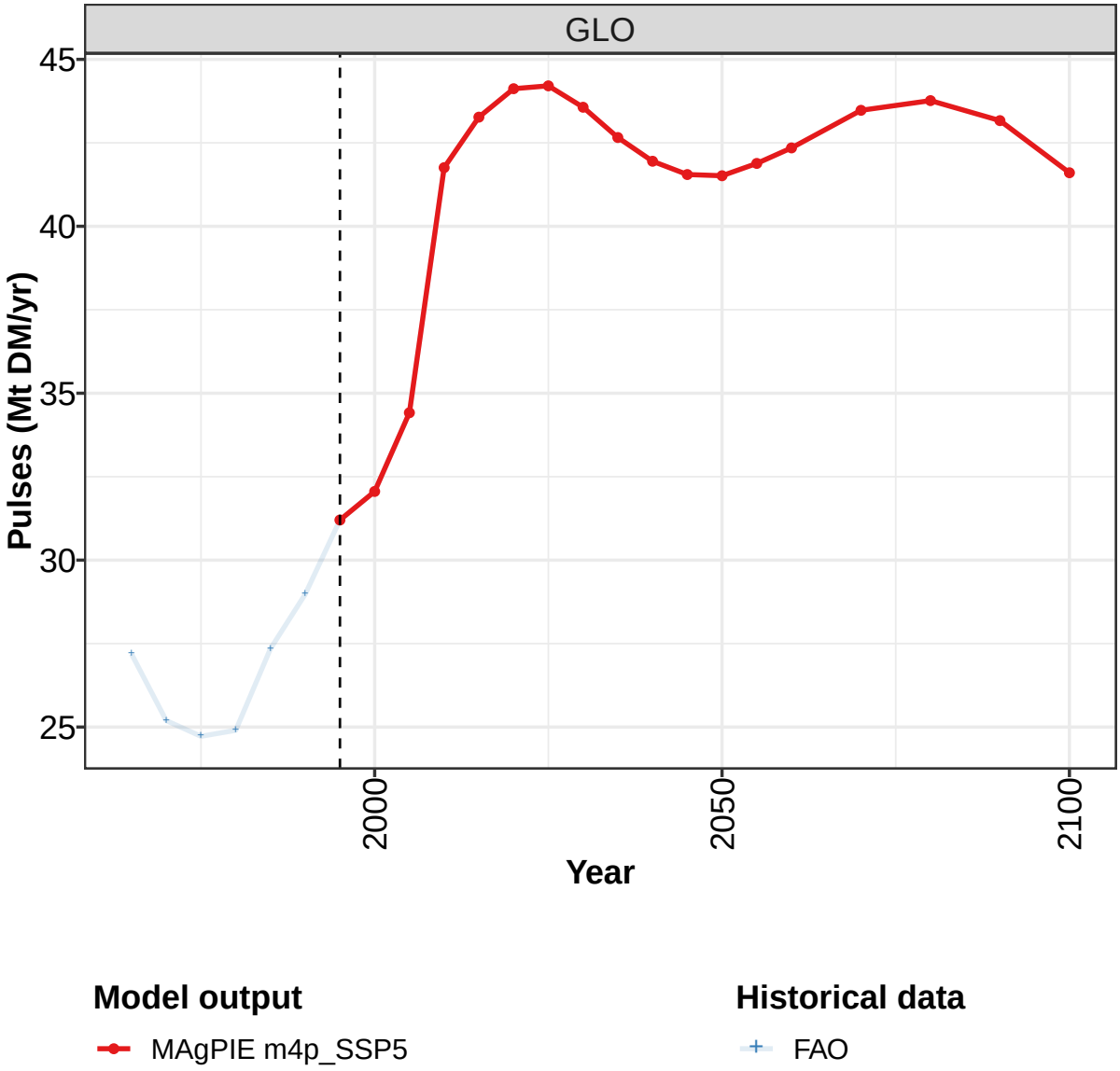
	2050	2055	2060	2070	2080	2090	2100
GLO	51.6	52.1	52.5	53.4	53.5	52.9	51.6
CAZ	1.6	1.7	1.8	2.1	2.3	2.5	2.6
CHA	10.6	10.2	9.8	8.9	7.9	6.9	5.9
EUR	9.8	10.2	10.6	11.4	12.1	12.7	13.1
IND	4.9	5.0	5.0	5.1	4.9	4.6	4.2
JPN	0.6	0.6	0.6	0.6	0.6	0.5	0.5
LAM	3.2	3.2	3.2	3.1	2.9	2.7	2.4
MEA	3.2	3.3	3.3	3.3	3.3	3.1	3.0
NEU	1.4	1.5	1.5	1.5	1.4	1.4	1.3
OAS	3.0	2.9	2.9	2.8	2.7	2.6	2.4
REF	5.4	5.4	5.4	5.2	5.0	4.6	4.3
SSA	2.5	2.5	2.5	2.7	2.9	3.1	3.2
USA	5.4	5.7	6.1	6.8	7.5	8.1	8.7

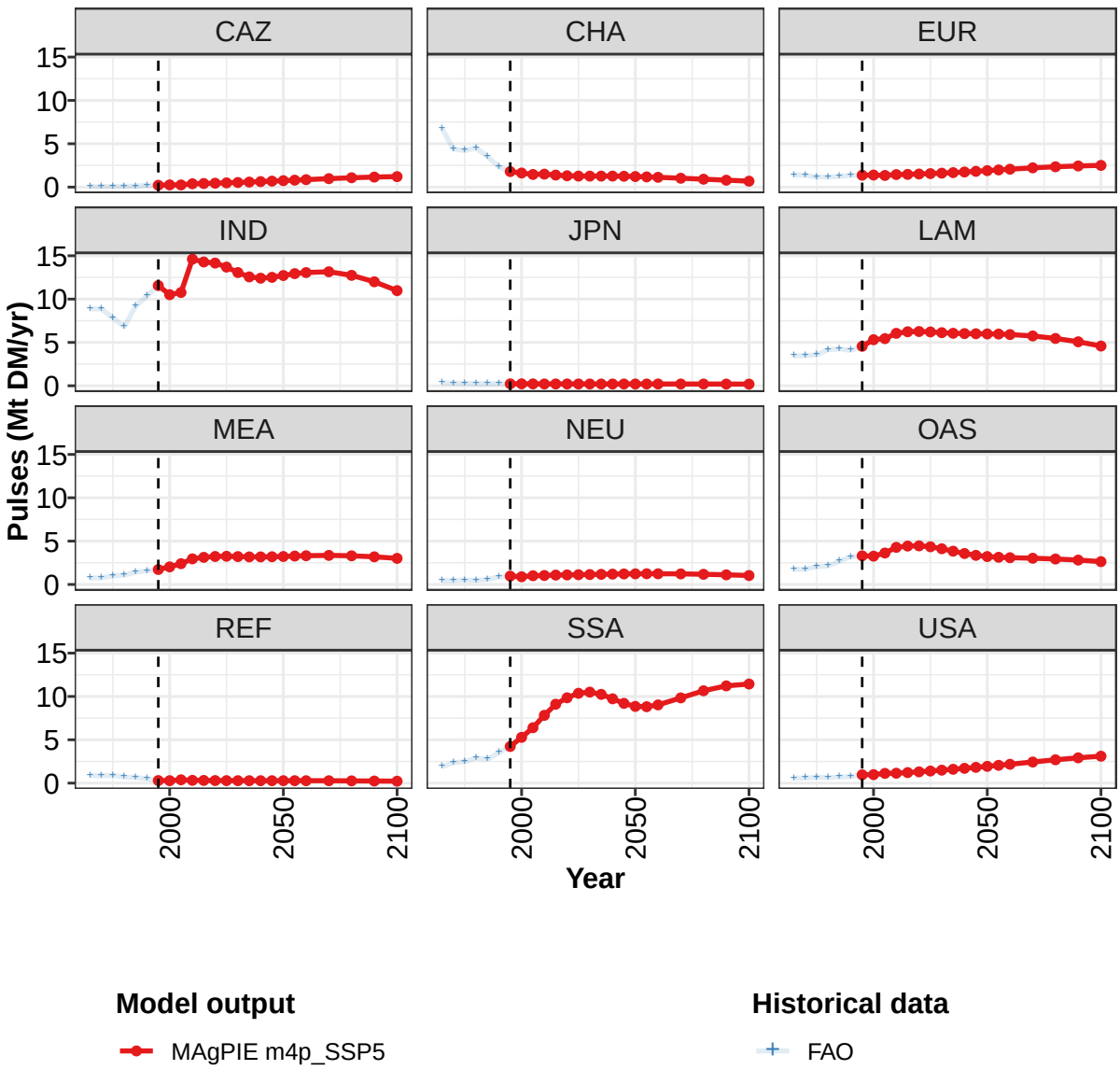
Table 393: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	25.0	26.2	26.6	27.0	29.4	31.6	34.7	43.2	47.4	50.4
CAZ	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9
CHA	1.9	2.5	2.5	2.2	2.4	3.6	4.1	9.4	11.5	12.6
EUR	9.6	9.5	9.1	8.9	9.0	8.9	8.8	9.0	8.2	7.8
IND	0.5	0.6	0.9	1.3	2.0	2.4	2.8	4.1	4.7	5.7
JPN	0.6	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6
LAM	1.4	1.6	1.5	1.8	1.9	1.9	2.5	2.5	2.7	3.0
MEA	0.3	0.3	0.5	0.9	1.2	1.4	1.7	2.0	2.9	2.8
NEU	0.6	0.6	0.8	0.8	1.0	1.1	1.2	1.3	1.1	1.2
OAS	0.4	0.5	0.6	0.8	0.8	1.0	1.2	2.0	2.7	3.6
REF	7.0	6.7	6.5	6.2	6.2	6.2	6.5	6.2	6.4	6.2
SSA	0.2	0.3	0.4	0.4	0.6	0.7	0.8	1.3	1.9	2.4
USA	2.1	2.5	2.6	2.5	2.9	3.1	3.5	4.0	3.9	3.7

Table 394: FAO — Demand—Food—Crops—Other crops—Potatoes (Mt DM/yr)

7.1.14 Other crops—Pulses





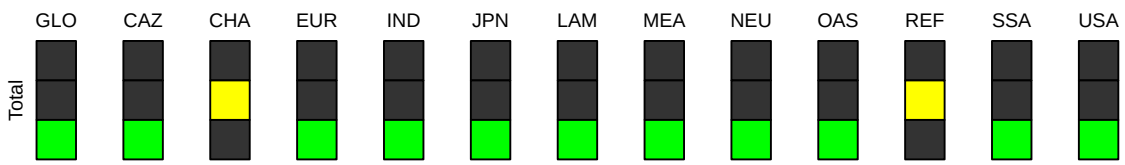


Figure 132: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	31.2	32.1	34.4	41.8	43.3	44.1	44.2	43.6	42.7	41.9	41.6
CAZ	0.2	0.3	0.2	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7
CHA	1.8	1.6	1.5	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3
EUR	1.4	1.4	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8
IND	11.6	10.5	10.8	14.6	14.3	14.2	13.7	13.1	12.6	12.4	12.5
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	4.6	5.3	5.4	6.1	6.2	6.3	6.2	6.1	6.1	6.0	6.0
MEA	1.7	2.0	2.4	3.0	3.1	3.2	3.3	3.2	3.2	3.2	3.2
NEU	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2
OAS	3.3	3.3	3.6	4.3	4.4	4.5	4.3	4.1	3.8	3.6	3.4
REF	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SSA	4.2	5.3	6.4	7.8	9.1	9.8	10.4	10.5	10.2	9.7	9.2
USA	1.0	1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8

Table 395: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

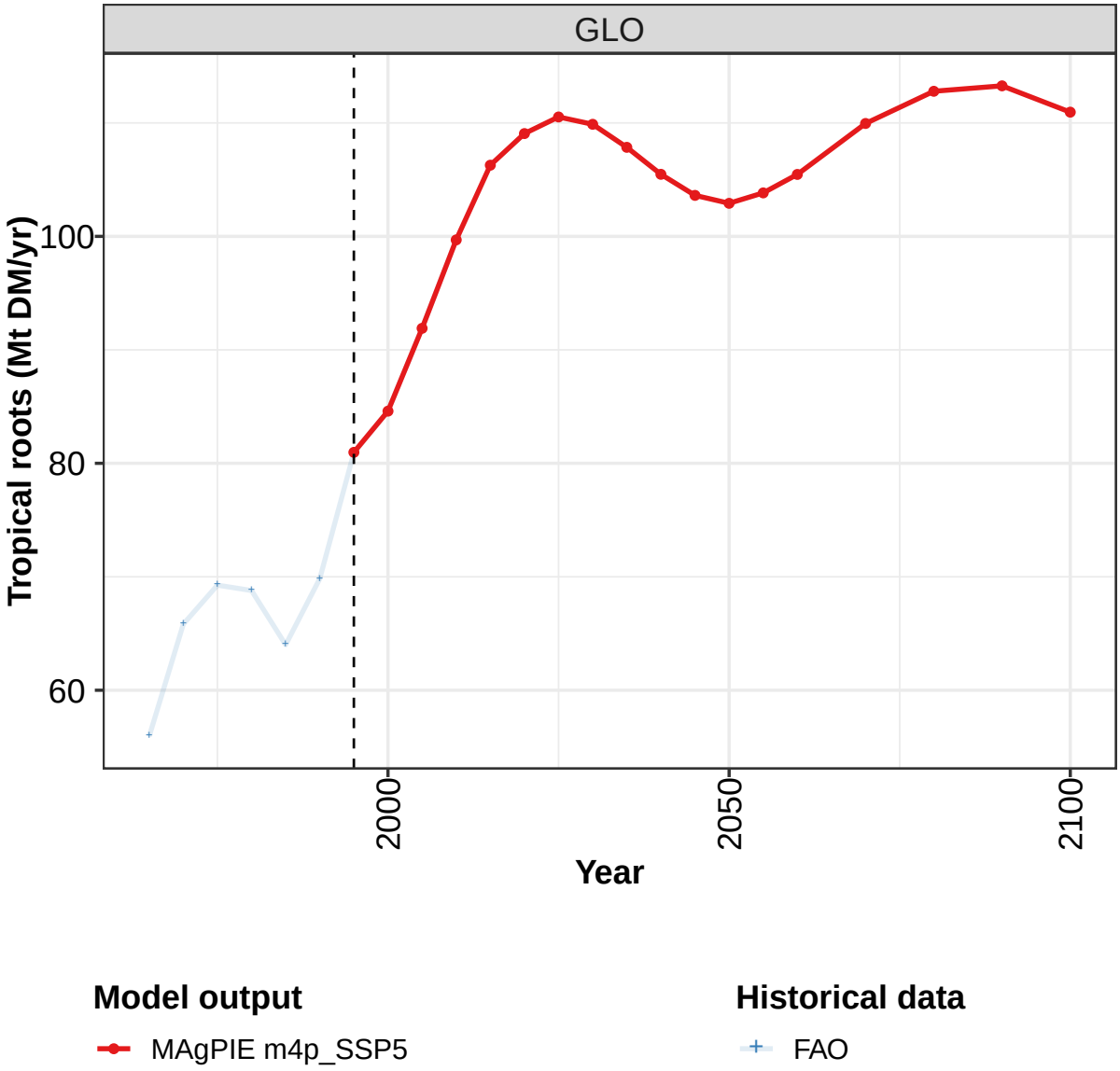
	2050	2055	2060	2070	2080	2090	2100
GLO	41.5	41.9	42.3	43.5	43.8	43.2	41.6
CAZ	0.7	0.8	0.9	1.0	1.1	1.2	1.2
CHA	1.2	1.2	1.1	1.0	0.9	0.8	0.7
EUR	1.9	2.0	2.1	2.2	2.3	2.4	2.5
IND	12.7	12.9	13.1	13.2	12.7	12.0	11.0
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	6.0	6.0	5.9	5.7	5.5	5.1	4.6
MEA	3.2	3.3	3.3	3.4	3.3	3.2	3.0
NEU	1.2	1.2	1.2	1.2	1.2	1.1	1.0
OAS	3.2	3.1	3.1	3.0	2.9	2.8	2.6
REF	0.3	0.3	0.3	0.3	0.3	0.2	0.2
SSA	8.9	8.8	9.0	9.8	10.7	11.2	11.4
USA	1.9	2.1	2.2	2.4	2.7	2.9	3.1

Table 396: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	27.2	25.2	24.7	24.9	27.3	29.0	31.2	32.1	34.4	41.8
CAZ	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.4
CHA	6.8	4.4	4.2	4.5	3.5	2.3	1.8	1.6	1.5	1.5
EUR	1.4	1.4	1.2	1.2	1.2	1.4	1.4	1.4	1.3	1.4
IND	8.9	8.9	7.8	6.8	9.1	10.3	11.6	10.5	10.8	14.6
JPN	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2
LAM	3.4	3.5	3.6	4.2	4.3	4.1	4.6	5.3	5.4	6.1
MEA	0.7	0.8	1.0	1.1	1.4	1.6	1.7	2.0	2.4	3.0
NEU	0.4	0.4	0.5	0.5	0.6	0.9	1.0	0.9	1.0	1.0
OAS	1.7	1.8	2.0	2.1	2.7	3.2	3.3	3.3	3.6	4.3
REF	0.9	0.8	0.9	0.7	0.7	0.5	0.3	0.3	0.4	0.3
SSA	1.9	2.3	2.5	2.9	2.8	3.5	4.2	5.3	6.4	7.8
USA	0.6	0.6	0.7	0.6	0.7	0.8	1.0	1.0	1.1	1.1

Table 397: FAO — Demand—Food—Crops—Other crops—Pulses (Mt DM/yr)

7.1.15 Other crops—Tropical roots



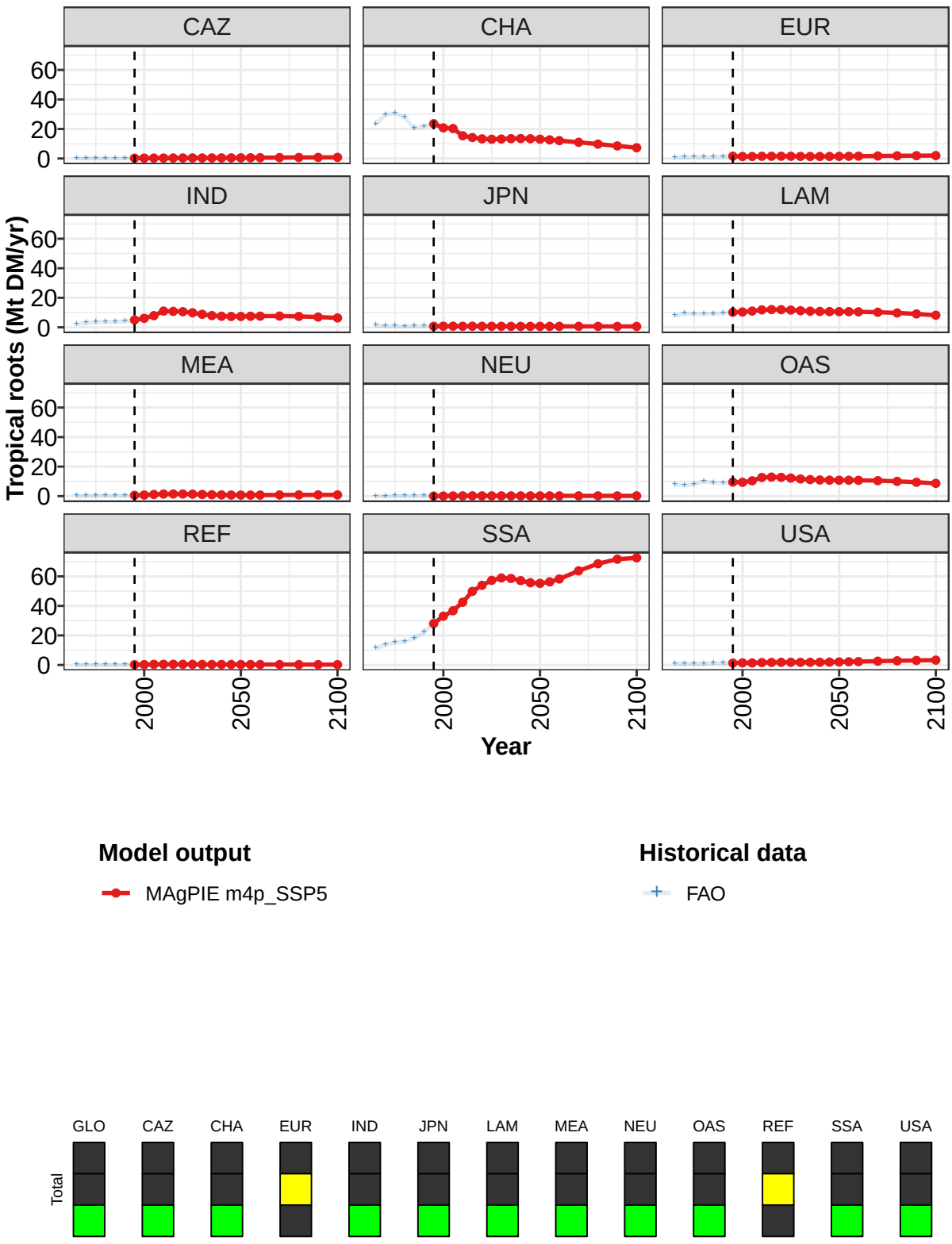


Figure 133: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	85	92	100	106	109	111	110	108	105	104
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	24	21	20	15	14	13	13	13	13	14	13
EUR	2	1	1	2	2	2	1	1	1	1	1
IND	5	6	8	11	11	11	10	9	8	8	7
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	10	10	11	12	12	12	12	11	11	11	11
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	10	9	10	13	13	13	12	12	11	11	11
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	28	33	37	42	50	54	57	59	59	57	56
USA	1	1	1	2	2	2	2	2	2	2	2

Table 398: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

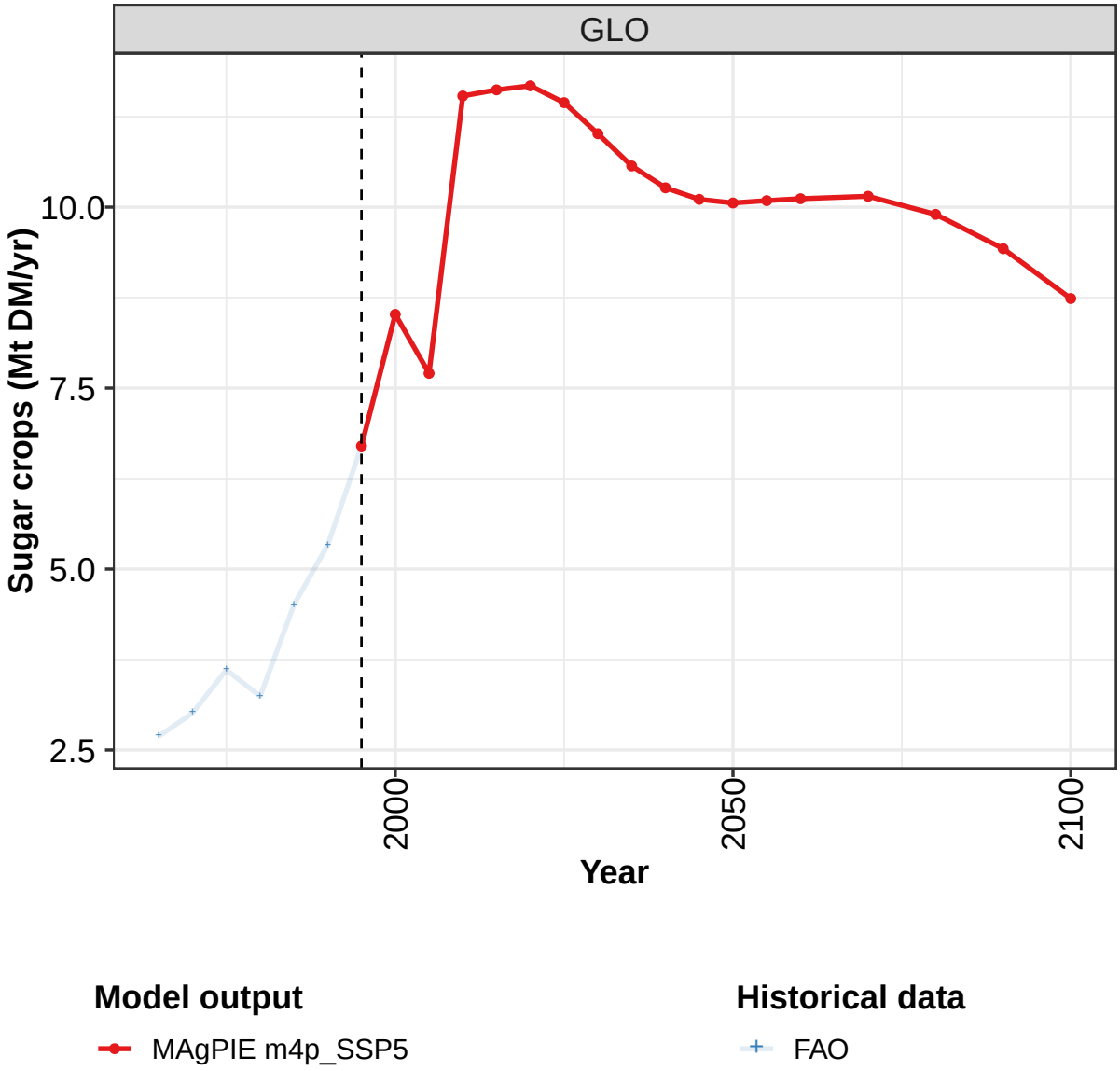
	2050	2055	2060	2070	2080	2090	2100
GLO	103	104	105	110	113	113	111
CAZ	0	1	1	1	1	1	1
CHA	13	13	12	11	10	9	7
EUR	1	2	2	2	2	2	2
IND	7	7	8	8	7	7	6
JPN	1	1	1	1	1	1	1
LAM	11	11	10	10	10	9	8
MEA	1	1	1	1	1	1	1
NEU	0	0	0	0	0	0	0
OAS	11	11	11	10	10	9	9
REF	0	0	0	0	0	0	0
SSA	55	56	58	64	69	72	73
USA	2	2	2	3	3	3	3

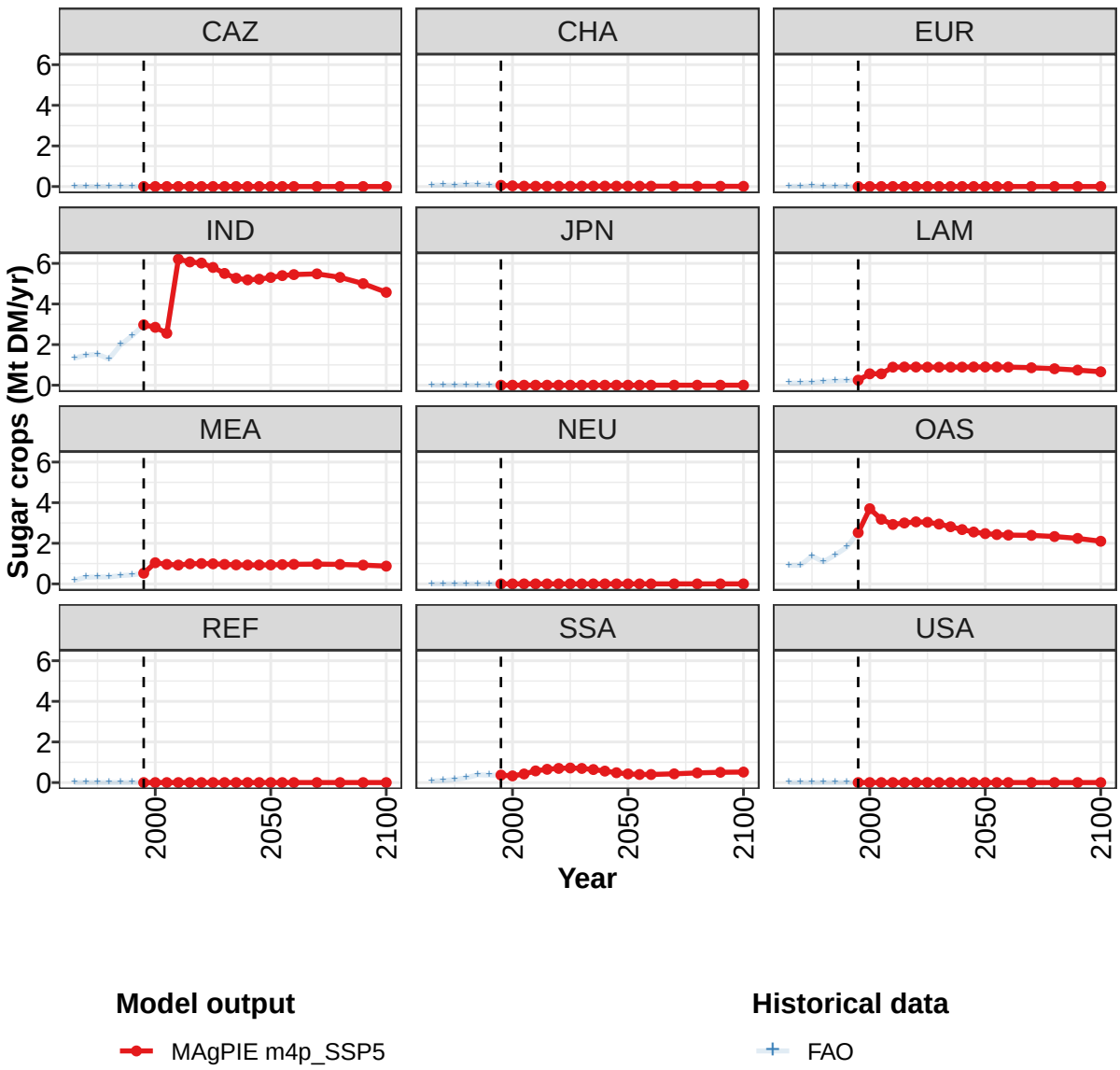
Table 399: MAgPIE m4p_SSP5 — Demand—Food—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	55.9	65.8	69.3	68.8	64.0	69.8	80.9	84.6	91.9	99.7
CAZ	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3
CHA	23.2	29.7	30.7	27.7	20.5	21.7	23.6	20.8	20.3	15.4
EUR	0.8	0.8	0.9	0.9	0.9	1.3	1.6	1.4	1.4	1.5
IND	2.2	3.0	3.5	3.5	3.8	3.9	5.0	6.1	7.9	11.0
JPN	1.3	0.9	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7
LAM	7.7	9.4	8.8	8.9	9.3	9.5	10.2	10.4	11.0	11.8
MEA	0.2	0.2	0.3	0.3	0.3	0.4	0.6	0.8	1.2	1.4
NEU	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2
OAS	8.1	7.3	8.0	9.9	9.1	8.8	9.5	9.4	10.4	12.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.4	0.5
SSA	11.4	13.7	15.3	15.8	18.0	22.1	28.1	33.0	36.7	42.5
USA	0.9	0.8	0.8	0.9	1.2	1.1	1.3	1.4	1.4	1.6

Table 400: FAO — Demand—Food—Crops—Other crops—Tropical roots (Mt DM/yr)

7.1.16 Sugar crops





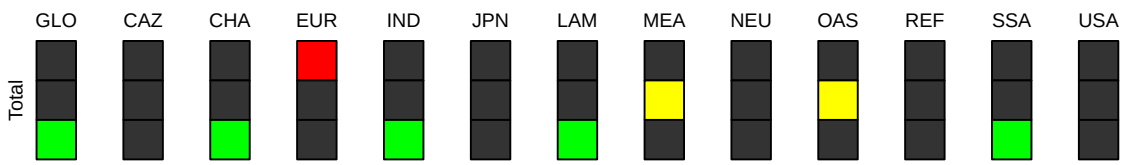


Figure 134: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.7	8.5	7.7	11.5	11.6	11.7	11.4	11.0	10.6	10.3	10.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.0	2.9	2.6	6.2	6.1	6.0	5.8	5.5	5.3	5.2	5.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.6	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
MEA	0.5	1.0	1.0	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	3.7	3.2	2.9	3.0	3.1	3.0	2.9	2.8	2.7	2.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.4	0.3	0.4	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 401: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

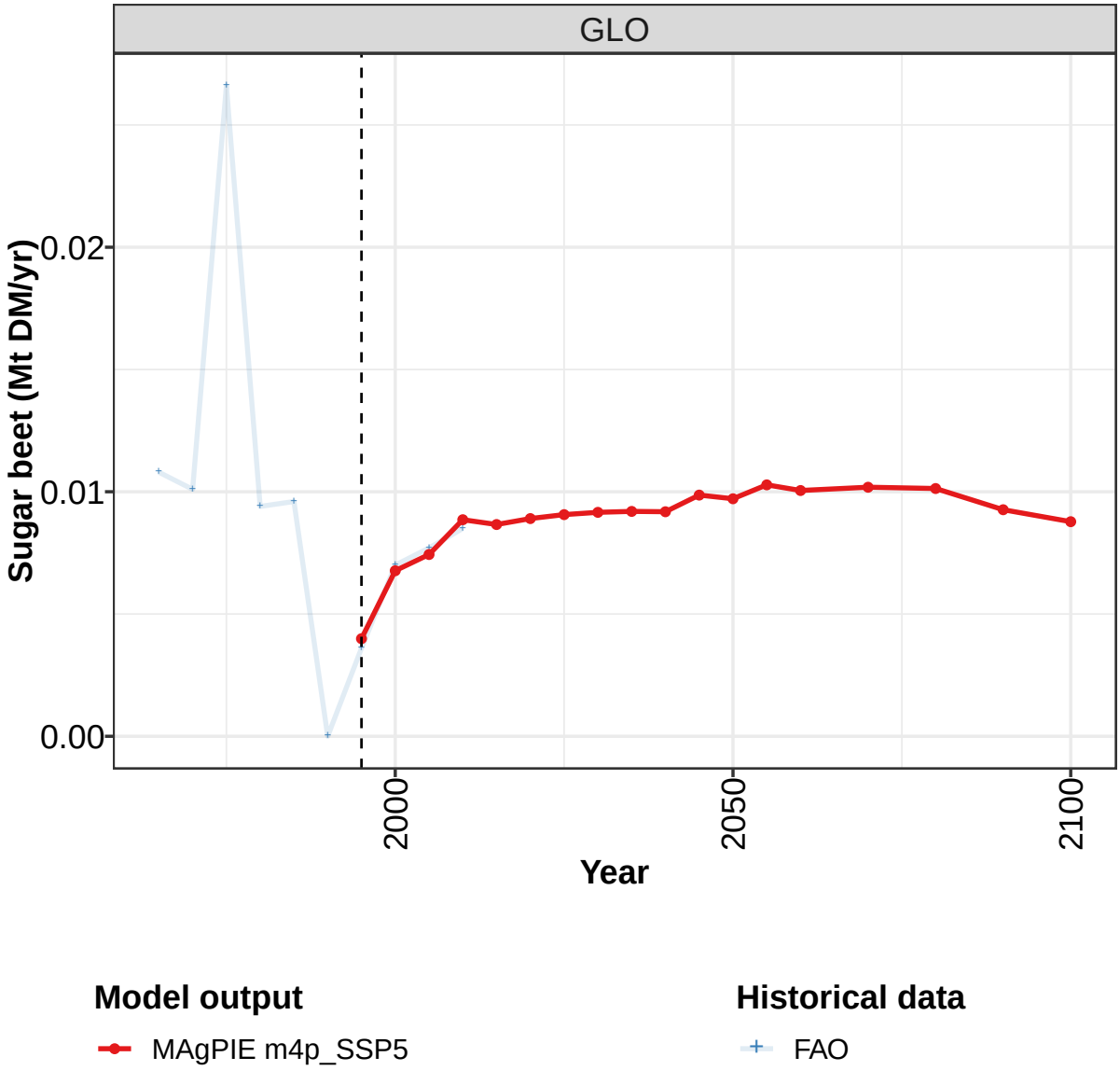
	2050	2055	2060	2070	2080	2090	2100
GLO	10.1	10.1	10.1	10.1	9.9	9.4	8.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	5.3	5.4	5.4	5.5	5.3	5.0	4.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.9	0.9	0.8	0.7	0.7
MEA	0.9	1.0	1.0	1.0	1.0	0.9	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	2.4	2.4	2.4	2.3	2.2	2.1
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.4	0.4	0.4	0.4	0.5	0.5	0.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

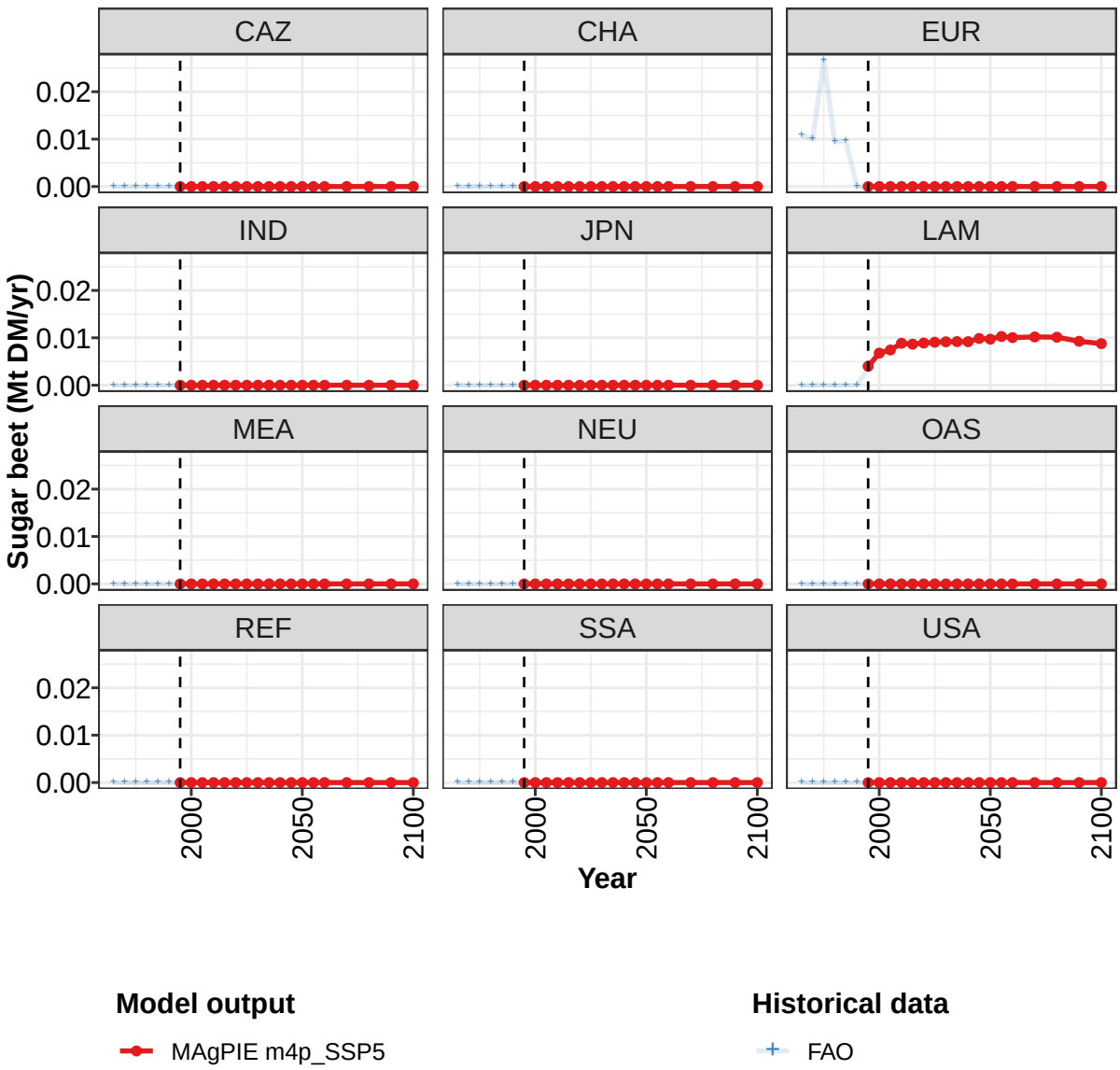
Table 402: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.7	3.0	3.6	3.2	4.5	5.3	6.7	8.5	7.7	11.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.3	1.5	1.5	1.3	2.0	2.4	3.0	2.9	2.6	6.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.6	0.9
MEA	0.2	0.3	0.3	0.3	0.4	0.4	0.5	1.0	1.0	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.9	0.9	1.4	1.1	1.4	1.8	2.5	3.7	3.2	2.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.2	0.2	0.4	0.4	0.4	0.3	0.4	0.6
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 403: FAO — Demand—Food—Crops—Sugar crops (Mt DM/yr)

7.1.17 Sugar crops—Sugar beet





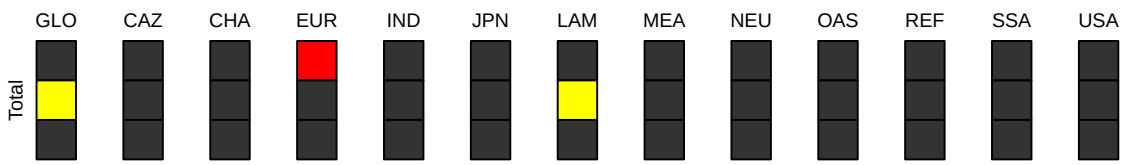


Figure 135: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0040	0.0068	0.0074	0.0089	0.0087	0.0089	0.0091	0.0092	0.0092	0.0092	0.0099
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0040	0.0068	0.0074	0.0089	0.0087	0.0089	0.0091	0.0092	0.0092	0.0092	0.0099
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 404: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

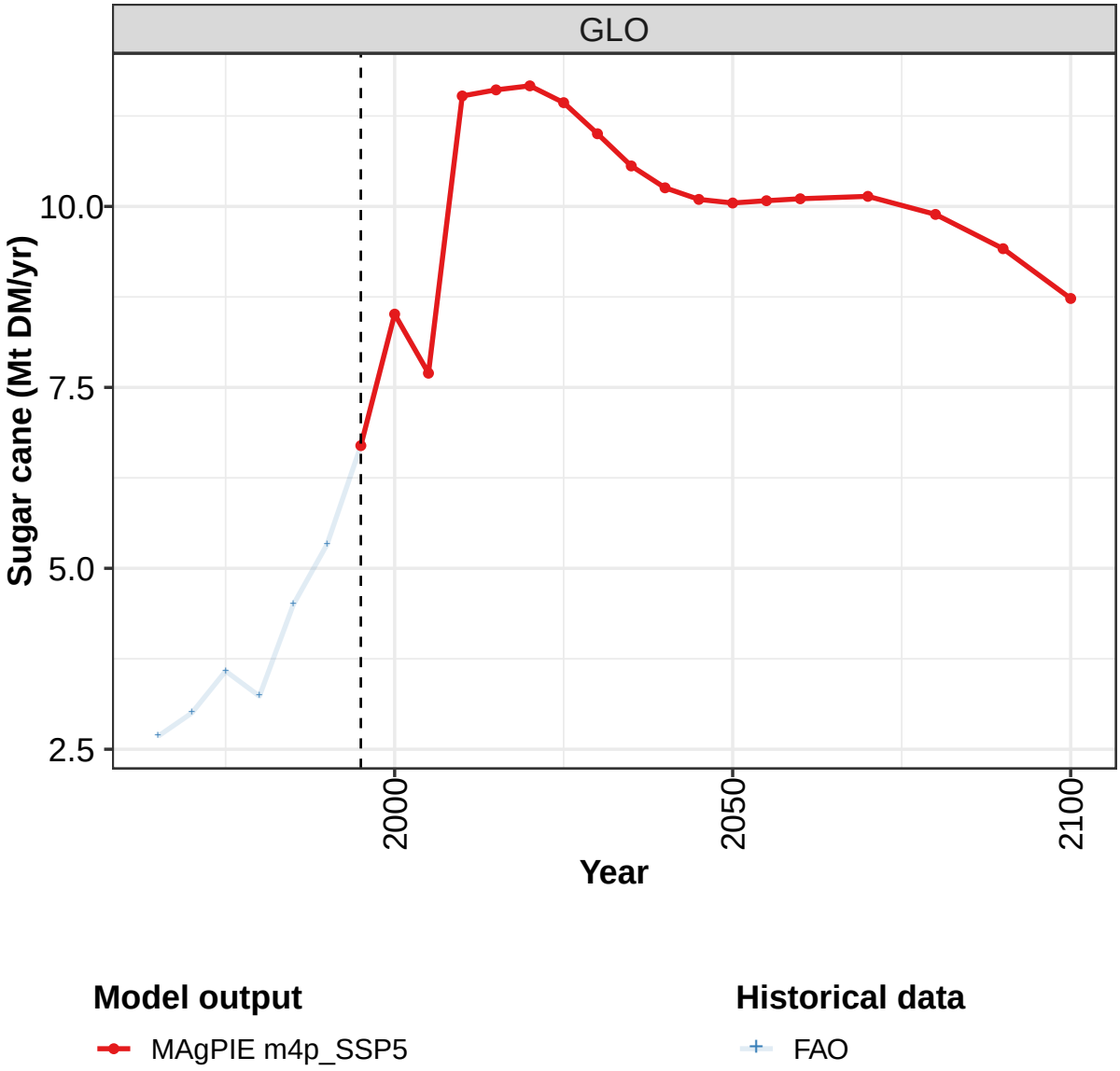
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0097	0.0103	0.0101	0.0102	0.0101	0.0093	0.0088
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0097	0.0103	0.0101	0.0102	0.0101	0.0093	0.0088
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

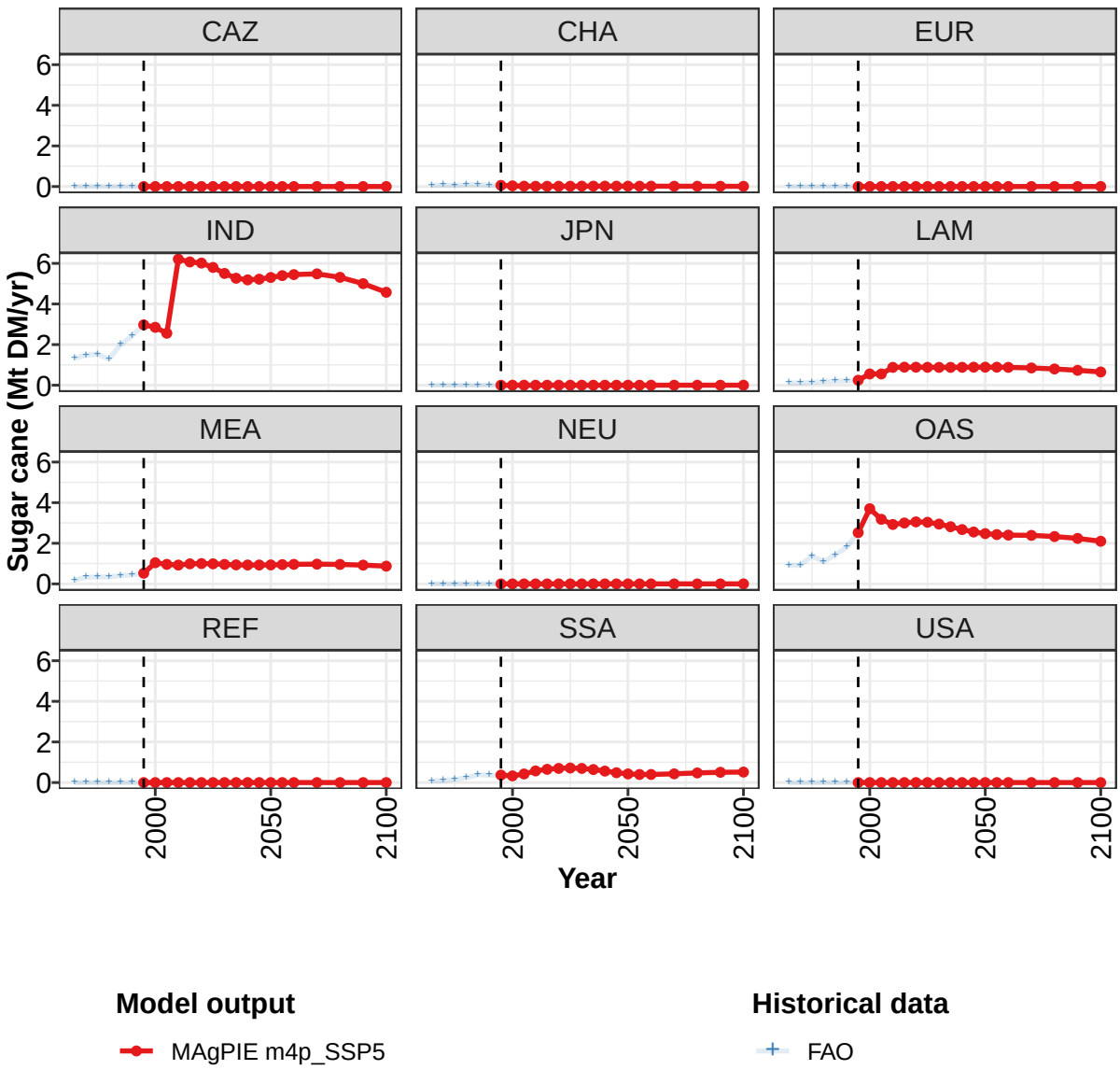
Table 405: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0108	0.0101	0.0266	0.0094	0.0096	0.0000	0.0036	0.0070	0.0077	0.0085
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0108	0.0101	0.0266	0.0094	0.0096	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0036	0.0069	0.0077	0.0085
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 406: FAO — Demand—Food—Crops—Sugar crops—Sugar beet (Mt DM/yr)

7.1.18 Sugar crops—Sugar cane





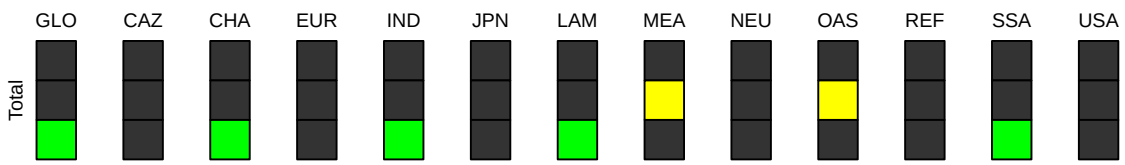


Figure 136: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.7	8.5	7.7	11.5	11.6	11.7	11.4	11.0	10.6	10.3	10.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.0	2.9	2.6	6.2	6.1	6.0	5.8	5.5	5.3	5.2	5.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.6	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
MEA	0.5	1.0	1.0	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	3.7	3.2	2.9	3.0	3.1	3.0	2.9	2.8	2.7	2.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.4	0.3	0.4	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 407: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

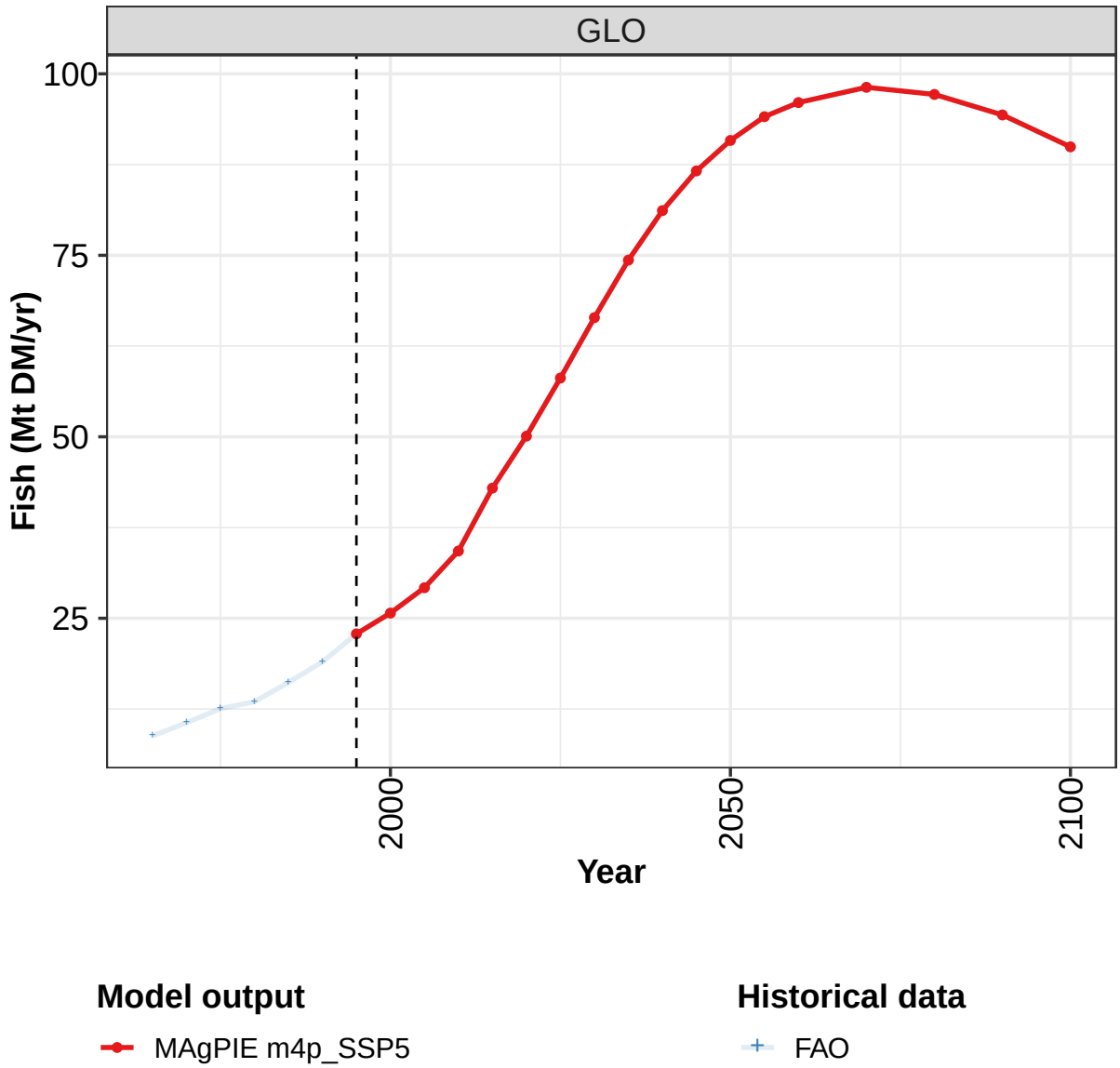
	2050	2055	2060	2070	2080	2090	2100
GLO	10.0	10.1	10.1	10.1	9.9	9.4	8.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	5.3	5.4	5.4	5.5	5.3	5.0	4.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.9	0.8	0.8	0.7	0.7
MEA	0.9	1.0	1.0	1.0	1.0	0.9	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	2.4	2.4	2.4	2.3	2.2	2.1
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.4	0.4	0.4	0.4	0.5	0.5	0.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

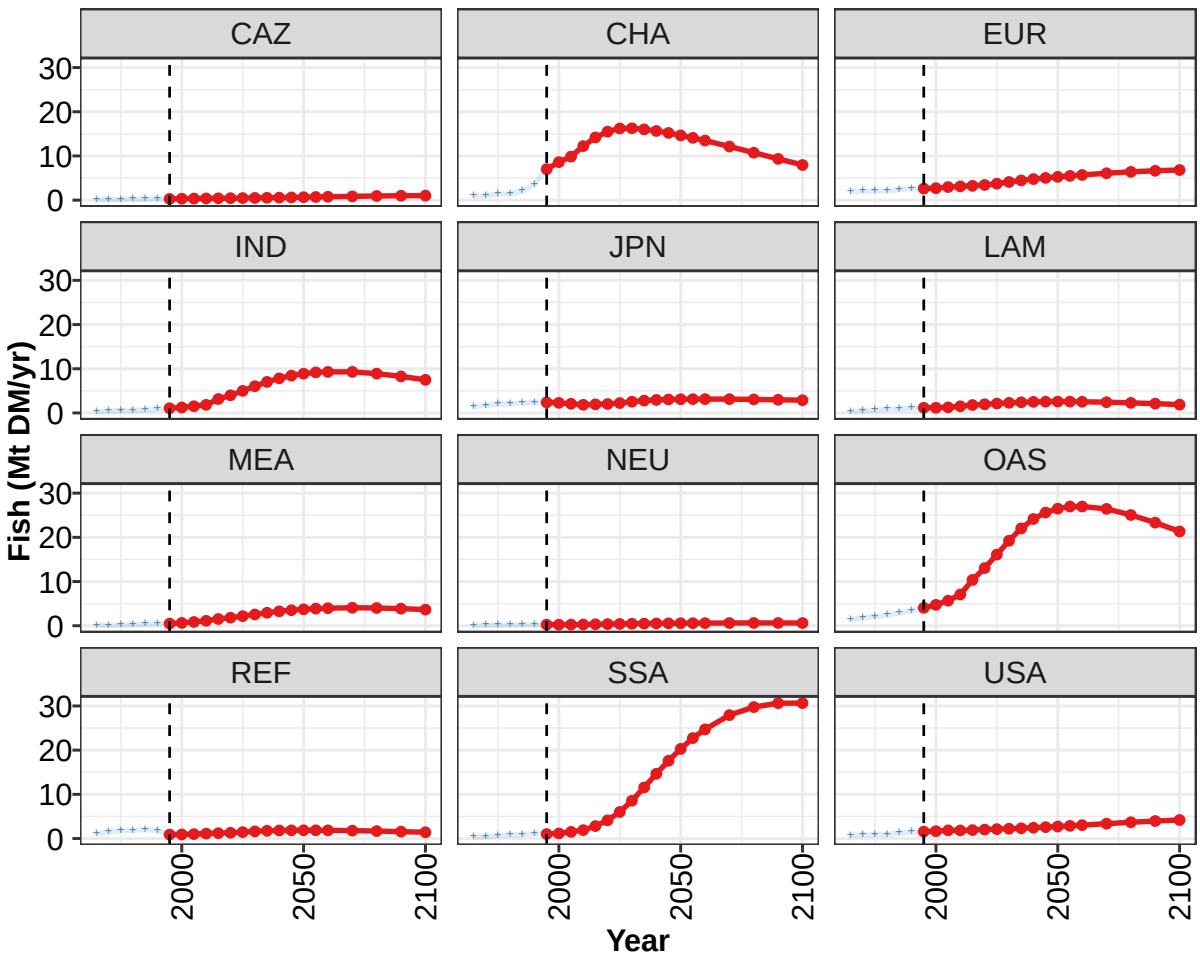
Table 408: MAgPIE m4p_SSP5 — Demand—Food—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.7	3.0	3.6	3.2	4.5	5.3	6.7	8.5	7.7	11.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.3	1.5	1.5	1.3	2.0	2.4	3.0	2.9	2.6	6.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.6	0.9
MEA	0.2	0.3	0.3	0.3	0.4	0.4	0.5	1.0	1.0	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.9	0.9	1.4	1.1	1.4	1.8	2.5	3.7	3.2	2.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.2	0.2	0.4	0.4	0.4	0.3	0.4	0.6
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 409: FAO — Demand—Food—Crops—Sugar crops—Sugar cane (Mt DM/yr)

7.2 Fish


GLO
100
75
50
25
Fish (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

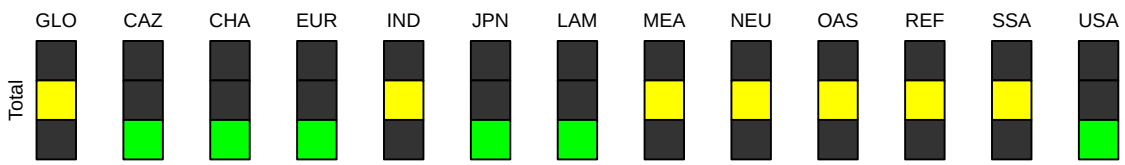


Figure 137: MAgPIE m4p_SSP5 — Demand—Food—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22.9	25.7	29.2	34.3	42.9	50.1	58.1	66.4	74.3	81.2	86.6
CAZ	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
CHA	7.0	8.6	9.9	12.2	14.2	15.5	16.2	16.3	16.0	15.7	15.2
EUR	2.6	2.7	3.0	3.1	3.2	3.4	3.7	4.1	4.5	4.8	5.0
IND	1.1	1.2	1.5	1.8	3.2	4.0	5.0	6.1	7.0	7.8	8.5
JPN	2.4	2.3	2.1	1.9	1.9	2.0	2.2	2.5	2.8	3.0	3.0
LAM	1.2	1.2	1.3	1.5	1.8	2.0	2.1	2.3	2.4	2.5	2.6
MEA	0.5	0.6	0.9	1.1	1.5	1.8	2.2	2.6	2.9	3.3	3.5
NEU	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5
OAS	4.0	4.7	5.7	7.1	10.4	13.1	16.1	19.2	22.0	24.2	25.6
REF	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.6	1.8	1.8	1.9
SSA	1.0	1.2	1.5	1.9	2.8	4.1	6.0	8.6	11.6	14.7	17.6
USA	1.6	1.7	1.9	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.6

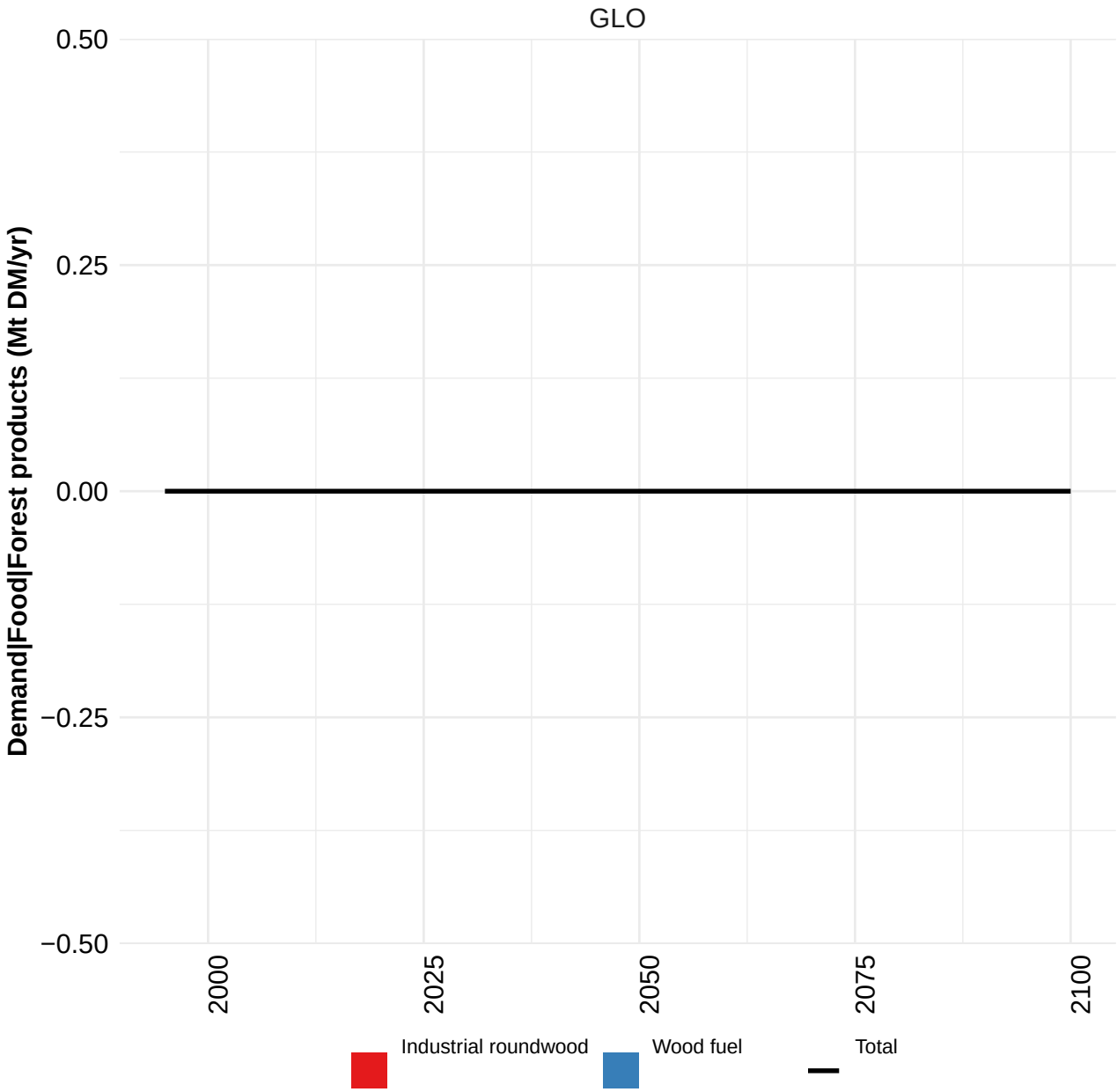
Table 410: MAgPIE m4p_SSP5 — Demand—Food—Fish (Mt DM/yr) [PART 1/2]

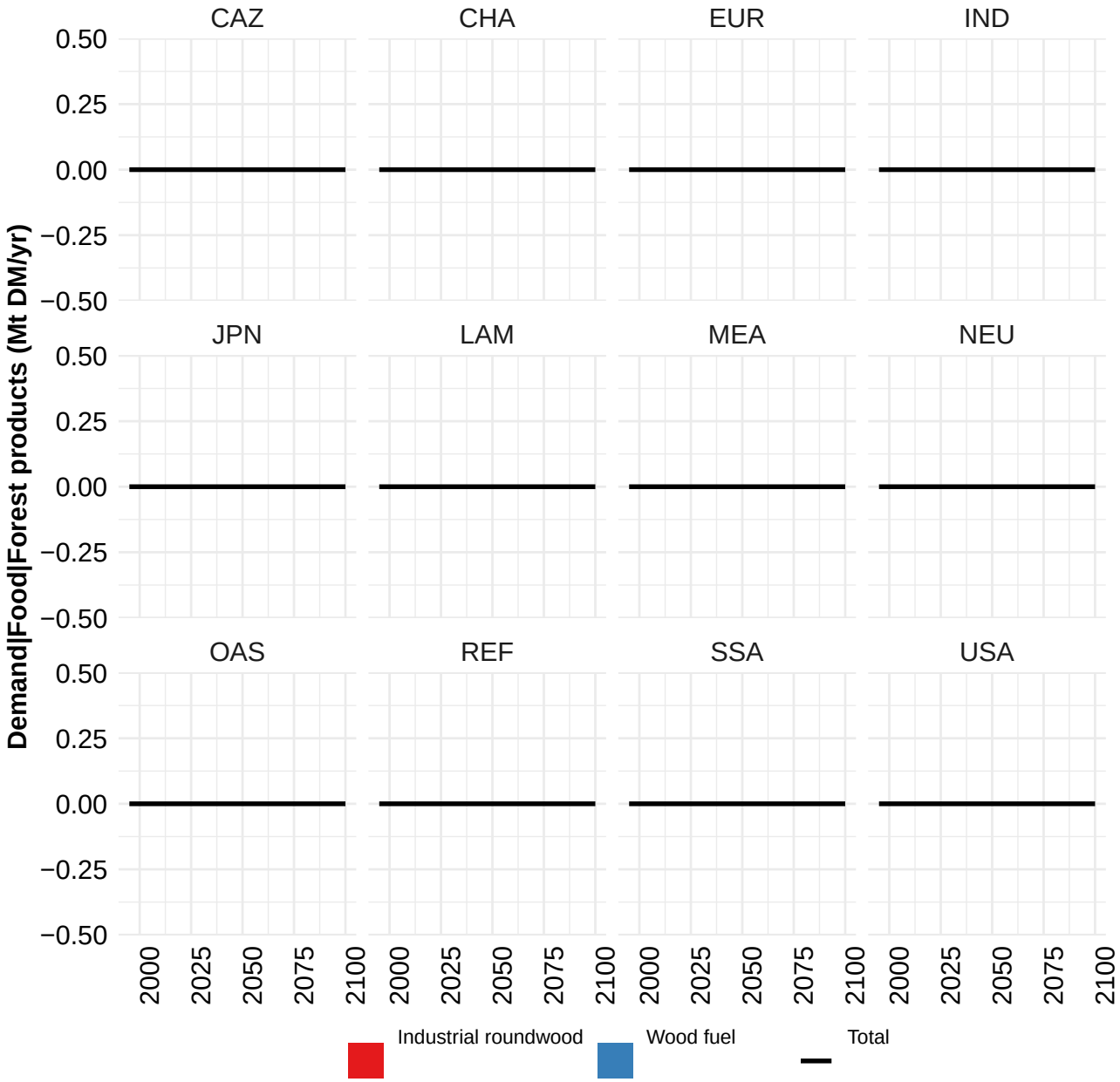
	2050	2055	2060	2070	2080	2090	2100
GLO	90.8	94.1	96.0	98.1	97.2	94.3	89.9
CAZ	0.7	0.7	0.8	0.9	0.9	1.0	1.0
CHA	14.7	14.1	13.5	12.1	10.7	9.4	8.0
EUR	5.3	5.5	5.7	6.1	6.4	6.6	6.8
IND	8.9	9.2	9.3	9.3	8.9	8.3	7.5
JPN	3.1	3.1	3.1	3.1	3.1	3.0	2.9
LAM	2.6	2.6	2.5	2.4	2.3	2.1	1.9
MEA	3.7	3.9	4.0	4.1	4.0	3.9	3.7
NEU	0.6	0.6	0.6	0.6	0.6	0.6	0.6
OAS	26.5	27.0	27.0	26.4	25.1	23.3	21.3
REF	1.9	1.9	1.9	1.8	1.7	1.6	1.4
SSA	20.3	22.7	24.7	27.9	29.7	30.6	30.6
USA	2.7	2.9	3.0	3.4	3.7	4.0	4.2

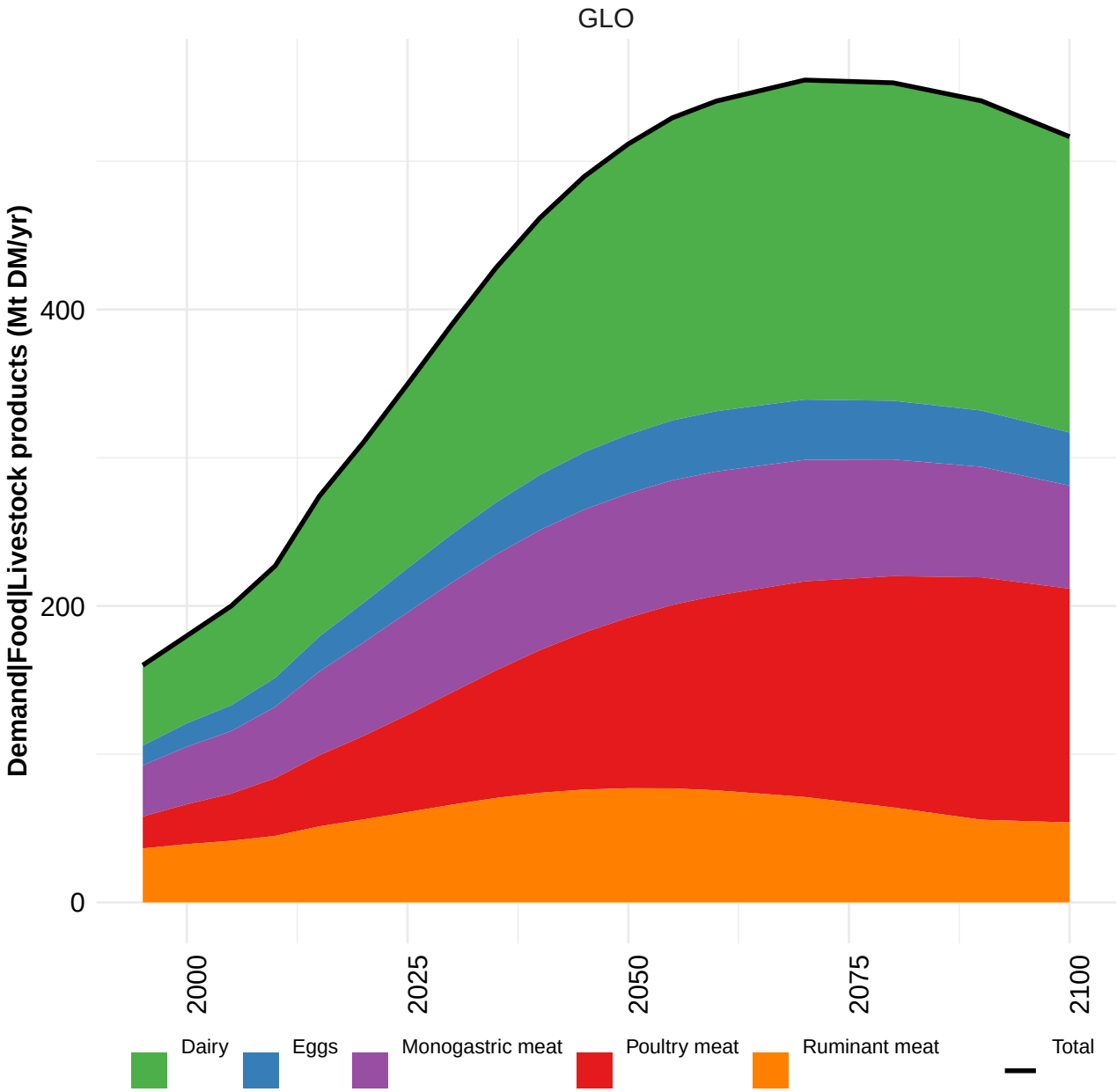
Table 411: MAgPIE m4p_SSP5 — Demand—Food—Fish (Mt DM/yr) [PART 2/2]

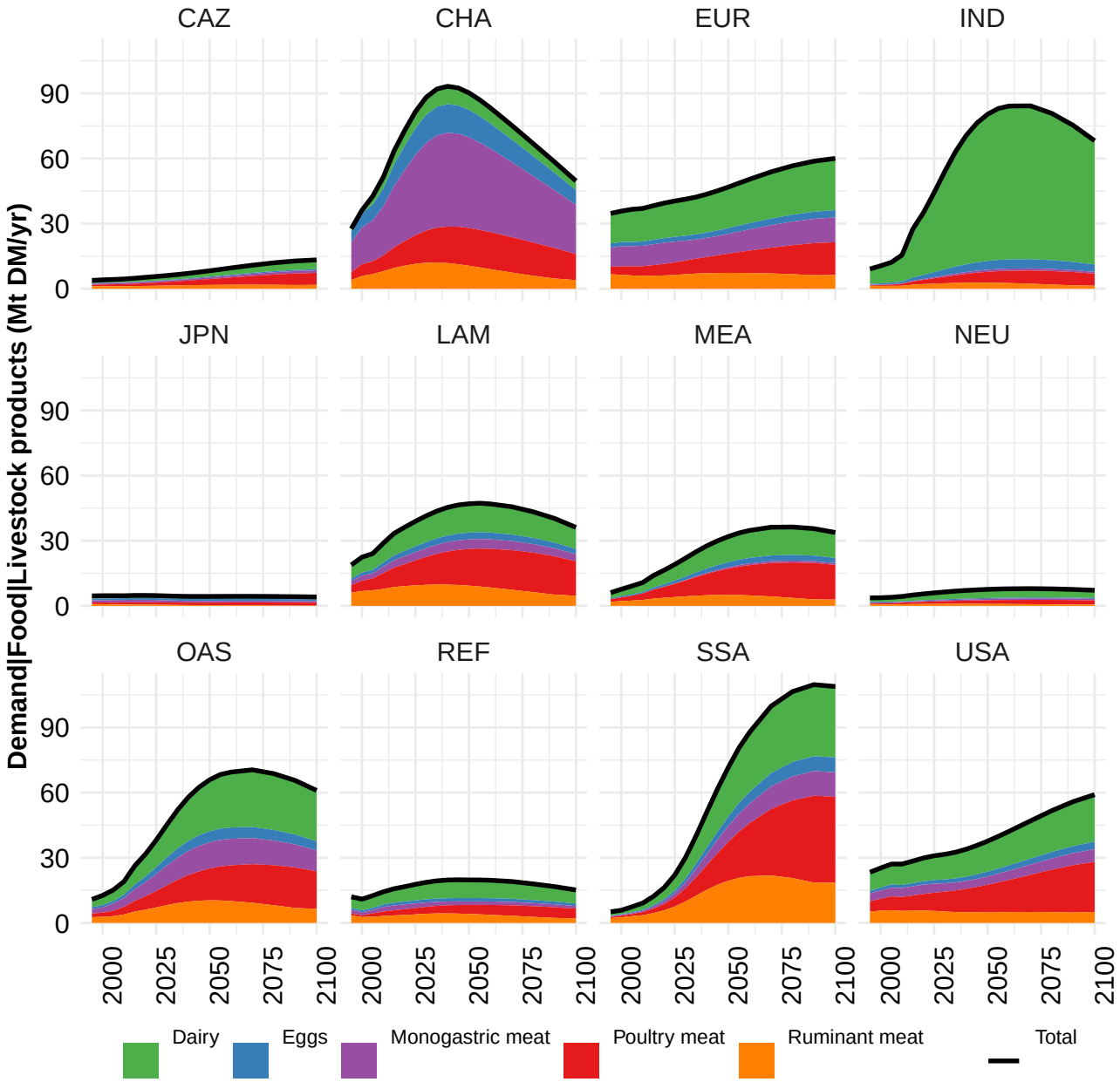
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.8	10.6	12.6	13.5	16.2	19.0	22.9	25.7	29.2	34.3
CAZ	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4
CHA	1.0	1.0	1.4	1.4	2.1	3.6	7.0	8.6	9.9	12.2
EUR	1.9	2.0	2.1	2.1	2.4	2.6	2.6	2.7	3.0	3.1
IND	0.3	0.4	0.5	0.6	0.7	0.9	1.1	1.2	1.5	1.8
JPN	1.4	1.7	2.0	2.1	2.3	2.4	2.4	2.3	2.1	1.8
LAM	0.4	0.5	0.6	0.9	0.9	1.1	1.2	1.2	1.3	1.5
MEA	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.9	1.1
NEU	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3
OAS	1.4	1.7	2.1	2.4	3.0	3.3	4.0	4.7	5.7	7.1
REF	1.1	1.5	1.8	1.8	2.1	1.8	0.9	0.9	1.0	1.1
SSA	0.4	0.5	0.7	0.8	0.8	1.1	1.0	1.2	1.5	1.9
USA	0.7	0.8	0.8	0.9	1.2	1.4	1.6	1.7	1.9	1.8

Table 412: FAO — Demand—Food—Fish (Mt DM/yr)

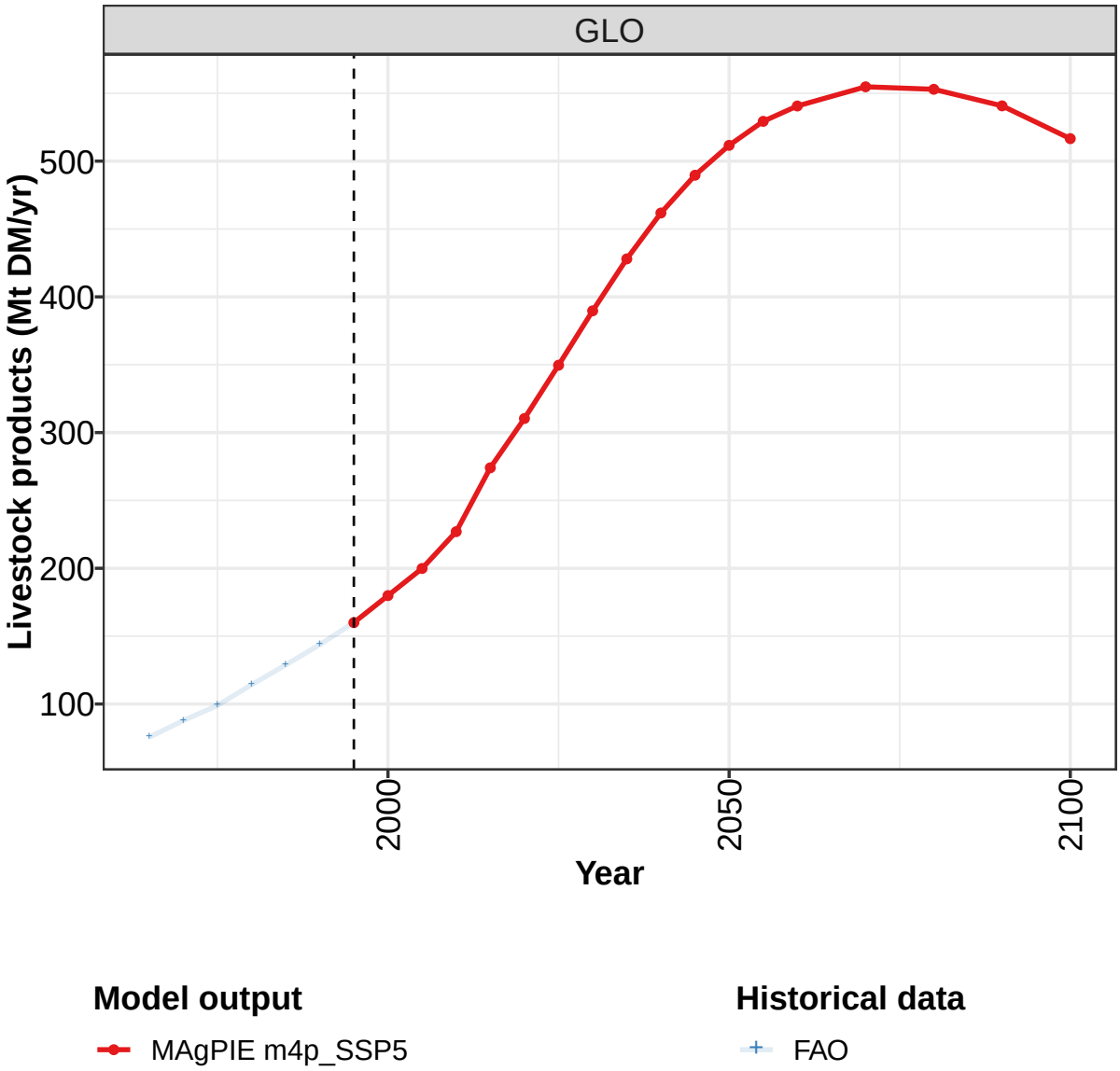

GLO
Demand|Food|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

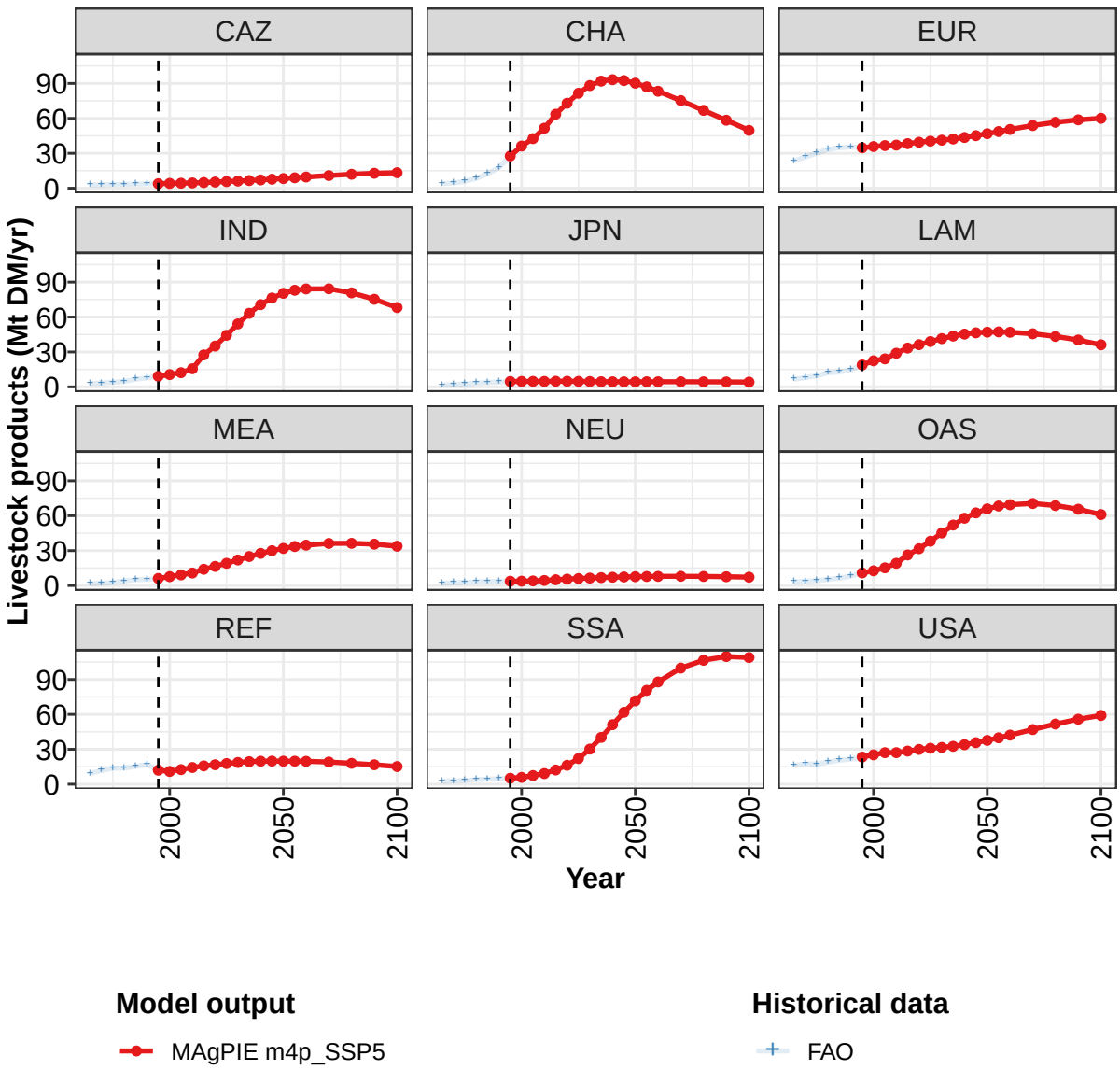

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Food|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


GLO
Demand|Food|Livestock products (Mt DM/yr)
400
200
0
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Food|Livestock products (Mt DM/yr)
0
30
60
90
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

7.3 Livestock products





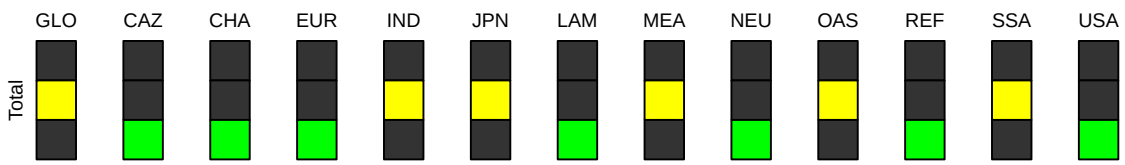


Figure 138: MAgPIE m4p_SSP5 — Demand—Food—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	160	180	200	227	274	310	350	390	428	462	490
CAZ	4	4	4	5	5	5	6	6	7	7	8
CHA	28	36	43	52	64	73	82	88	92	93	92
EUR	35	36	37	37	38	39	40	41	42	44	45
IND	9	11	12	16	27	35	44	54	63	71	76
JPN	5	5	5	5	5	5	5	5	4	4	4
LAM	19	22	24	29	33	36	39	41	44	45	46
MEA	6	8	9	11	14	16	19	22	25	28	30
NEU	4	4	4	4	5	6	6	6	7	7	7
OAS	11	13	15	19	26	32	38	45	52	58	62
REF	12	11	13	14	16	17	18	19	19	20	20
SSA	5	6	7	9	12	16	22	30	40	51	62
USA	23	25	27	27	28	30	31	32	33	34	36

Table 413: MAgPIE m4p_SSP5 — Demand—Food—Livestock products (Mt DM/yr) [PART 1/2]

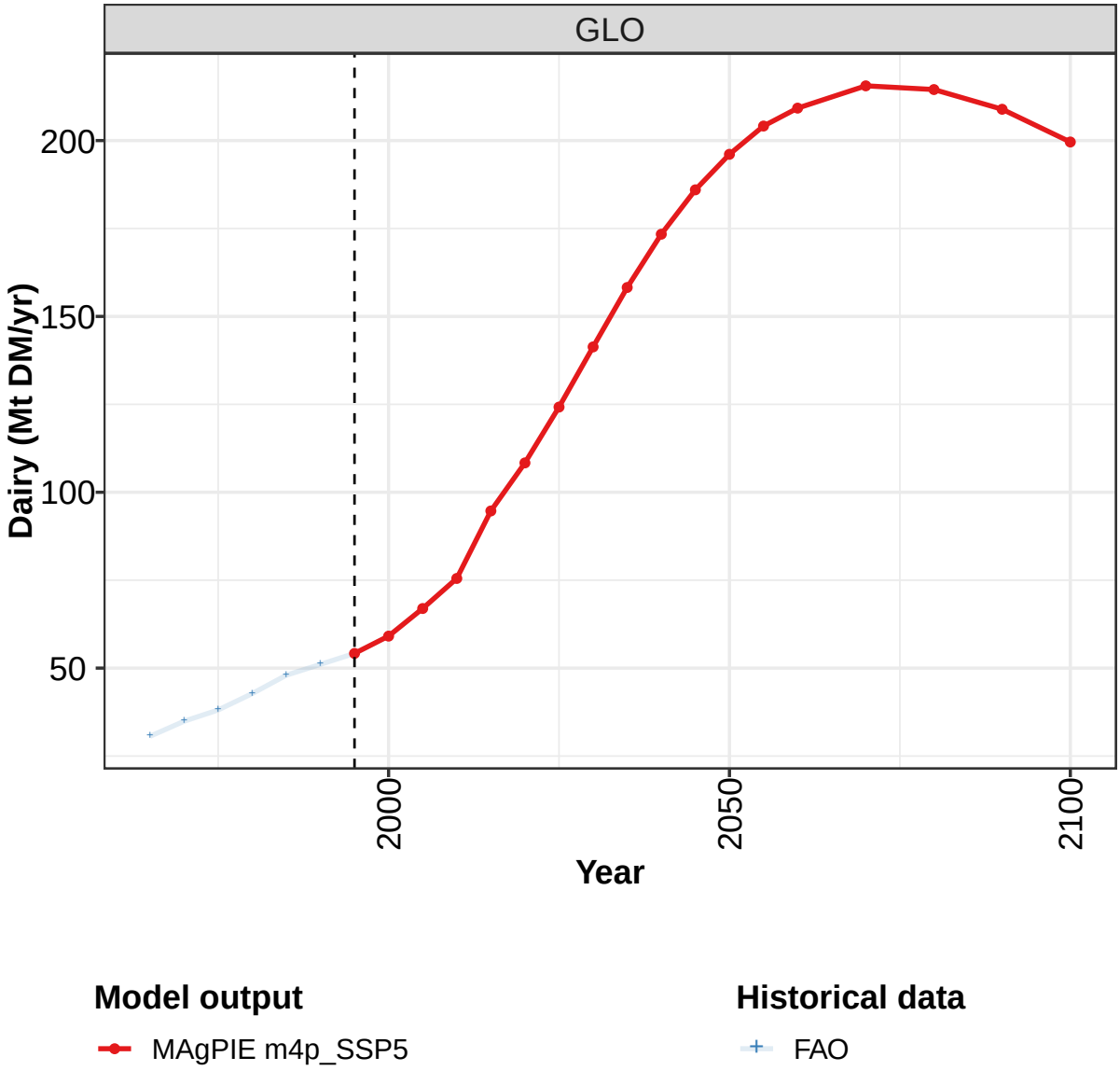
	2050	2055	2060	2070	2080	2090	2100
GLO	512	529	541	555	553	541	517
CAZ	8	9	10	11	12	13	13
CHA	90	87	83	75	67	58	50
EUR	47	49	50	54	57	59	60
IND	80	83	84	84	81	75	68
JPN	4	4	4	4	4	4	4
LAM	47	47	47	46	43	40	36
MEA	32	34	35	36	36	36	34
NEU	8	8	8	8	8	8	7
OAS	66	68	69	71	69	66	61
REF	20	20	20	19	18	17	15
SSA	72	81	88	100	107	110	109
USA	38	40	42	47	52	56	59

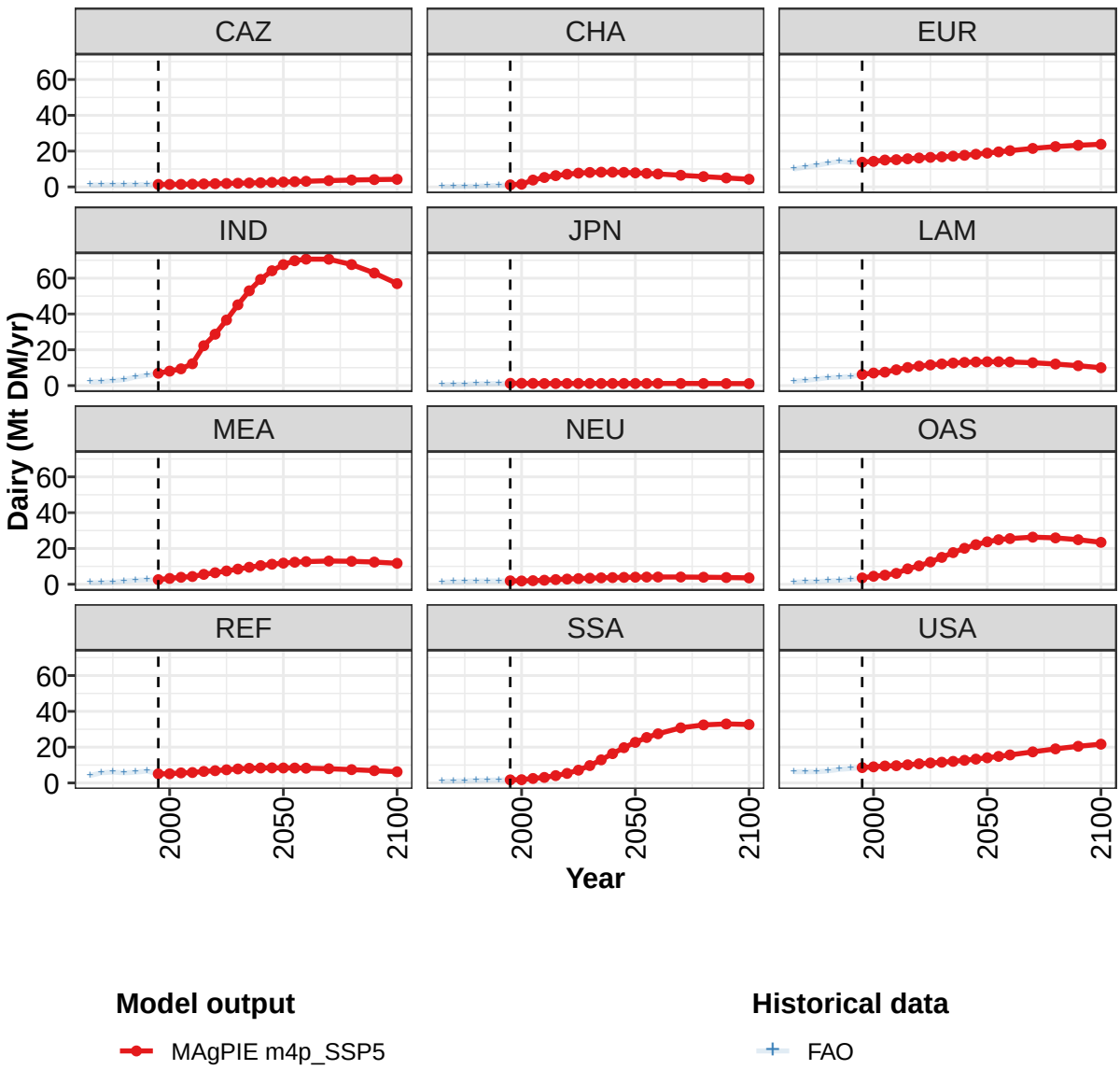
Table 414: MAgPIE m4p_SSP5 — Demand—Food—Livestock products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	76	88	99	114	129	144	160	180	200	227
CAZ	3	3	3	3	3	4	4	4	4	5
CHA	4	4	6	8	12	18	28	36	43	52
EUR	23	27	30	33	35	35	35	36	37	37
IND	3	3	4	5	7	8	9	11	12	16
JPN	1	2	3	3	4	4	5	5	5	5
LAM	6	8	10	12	13	15	19	22	24	29
MEA	2	2	3	4	5	5	6	8	9	11
NEU	2	2	3	3	3	4	4	4	4	4
OAS	3	4	4	5	6	8	11	13	15	19
REF	9	12	14	14	15	17	12	11	13	14
SSA	2	3	3	4	4	5	5	6	7	9
USA	16	17	17	19	21	22	23	25	27	27

Table 415: FAO — Demand—Food—Livestock products (Mt DM/yr)

7.3.1 Dairy


GLO
Dairy (Mt DM/yr)
200
150
100
50
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



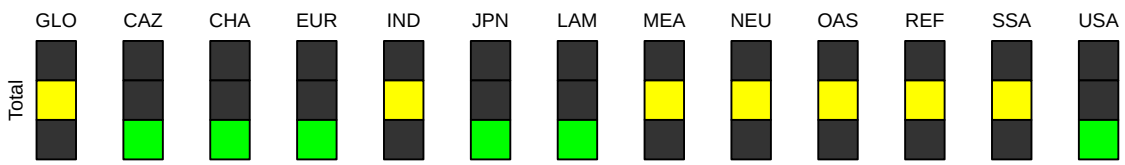


Figure 139: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	54	59	67	75	95	108	124	141	158	173	186
CAZ	1	1	1	2	2	2	2	2	2	2	3
CHA	1	2	4	5	6	7	8	8	8	8	8
EUR	14	14	15	15	16	16	17	17	17	18	18
IND	7	8	9	12	22	29	37	45	53	59	64
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	6	7	8	9	10	11	12	12	13	13	13
MEA	3	3	4	4	6	6	7	8	10	10	11
NEU	2	2	2	2	3	3	3	3	4	4	4
OAS	4	4	5	6	9	10	12	15	18	20	22
REF	5	5	6	6	6	7	7	8	8	8	8
SSA	2	2	3	3	4	5	7	10	13	16	20
USA	9	9	9	10	10	11	11	12	12	13	13

Table 416: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

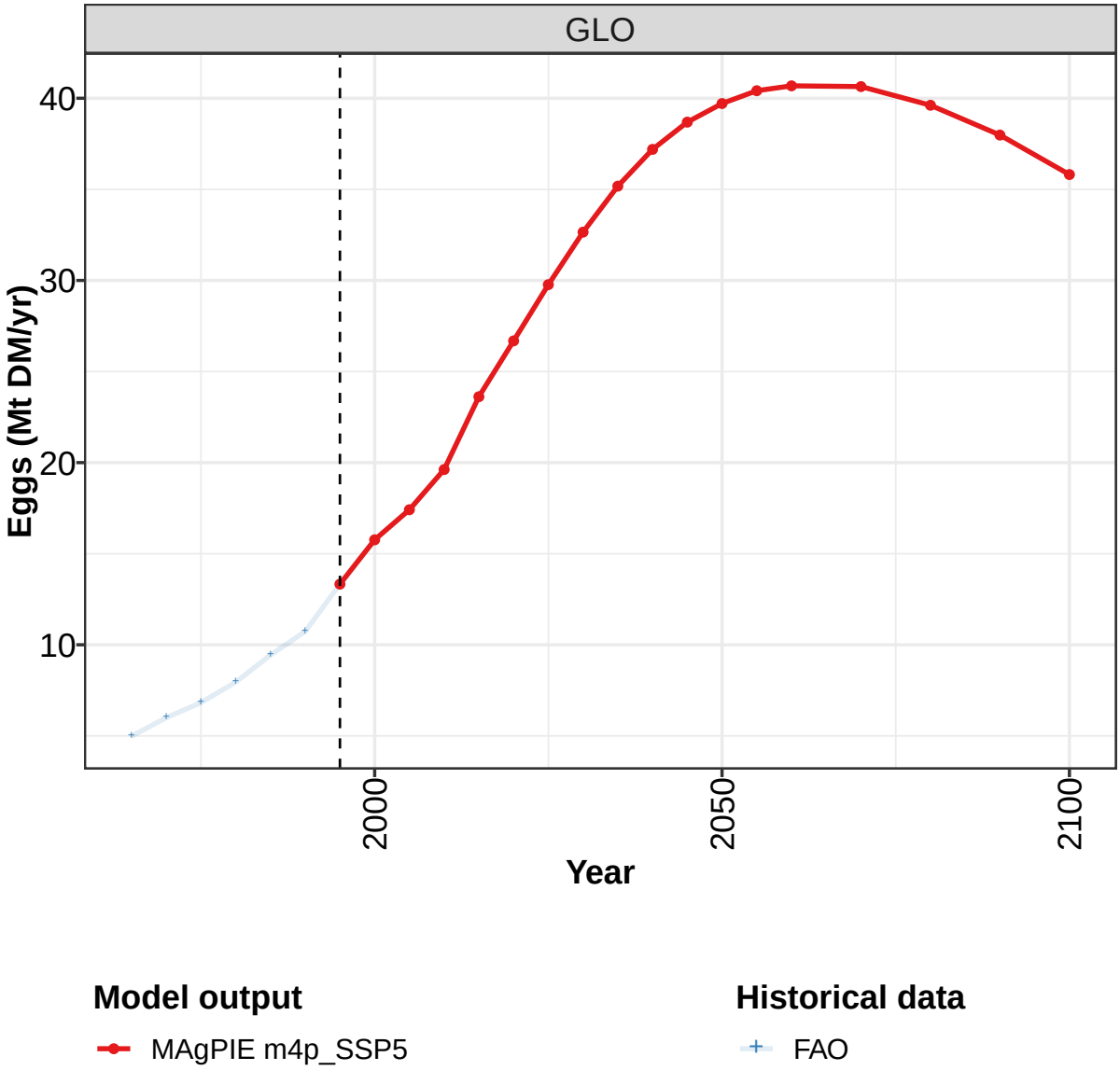
	2050	2055	2060	2070	2080	2090	2100
GLO	196	204	209	216	215	209	200
CAZ	3	3	3	4	4	4	4
CHA	8	8	7	7	6	5	4
EUR	19	20	20	22	23	23	24
IND	68	70	71	71	68	63	57
JPN	1	1	1	1	1	1	1
LAM	13	13	13	13	12	11	10
MEA	12	12	13	13	13	12	12
NEU	4	4	4	4	4	4	4
OAS	24	25	26	26	26	25	23
REF	8	8	8	8	7	7	6
SSA	23	25	27	31	32	33	33
USA	14	15	16	17	19	20	22

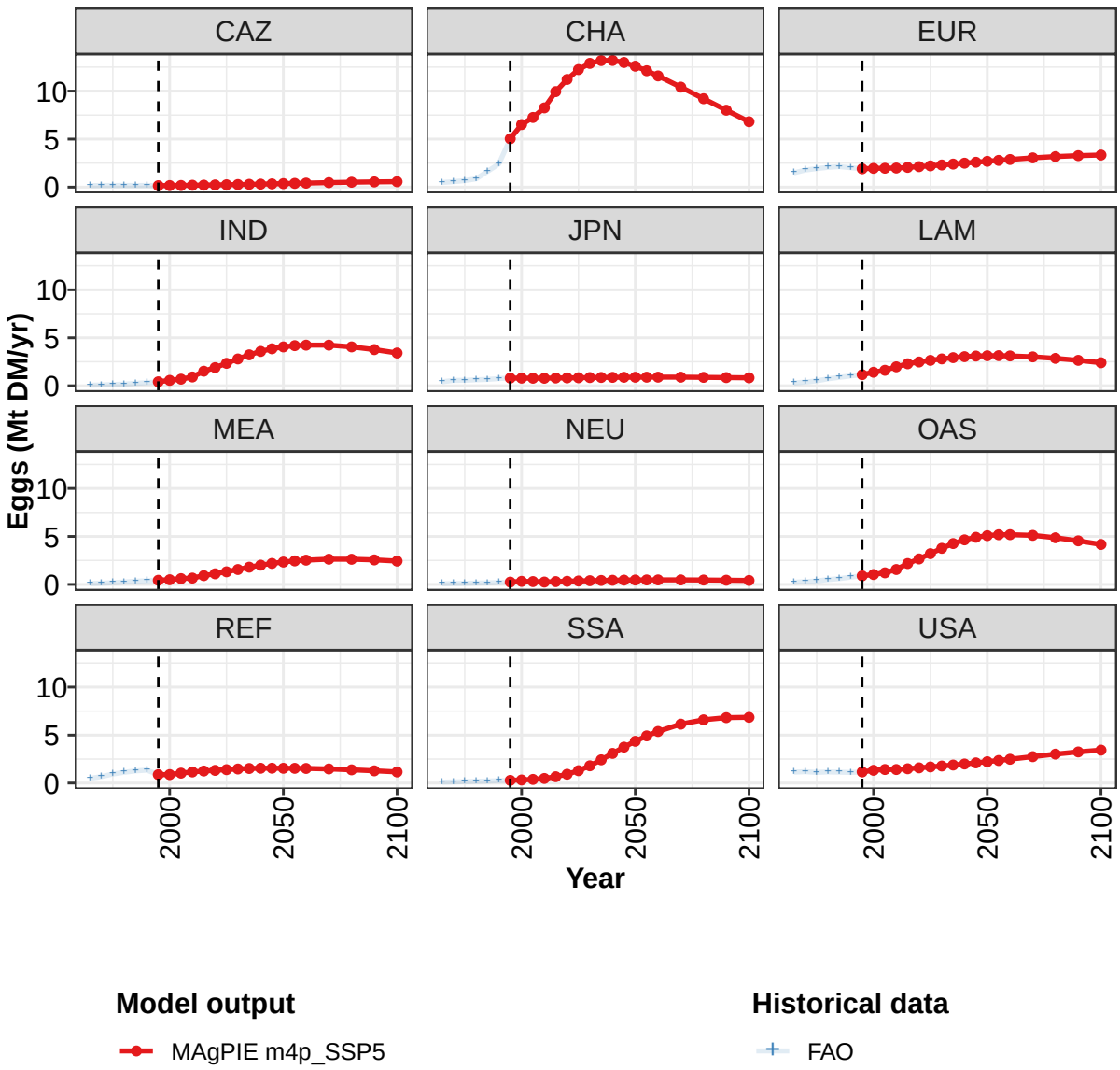
Table 417: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Dairy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	30.6	34.9	38.1	42.8	48.0	51.1	54.2	59.1	67.0	75.5
CAZ	1.0	1.1	1.1	1.1	1.2	1.4	1.4	1.4	1.4	1.6
CHA	0.2	0.2	0.3	0.4	0.6	0.9	1.2	1.5	3.8	5.3
EUR	10.0	11.1	12.0	13.2	14.3	13.7	13.8	14.3	15.0	15.2
IND	2.0	2.2	2.7	3.3	4.8	5.7	6.9	8.1	9.4	12.2
JPN	0.5	0.7	0.7	1.0	1.1	1.2	1.3	1.3	1.2	1.1
LAM	2.4	2.9	3.6	4.5	4.6	5.0	6.2	7.0	7.5	8.8
MEA	0.8	0.9	1.2	1.8	2.3	2.4	2.6	3.3	3.9	4.3
NEU	1.2	1.3	1.5	1.8	1.8	1.8	1.9	1.8	2.0	2.3
OAS	1.2	1.4	1.5	1.9	2.1	2.7	3.5	4.5	5.1	6.1
REF	4.1	5.7	6.1	5.7	6.0	6.7	5.1	5.1	5.6	5.8
SSA	0.9	1.0	1.2	1.4	1.5	1.6	1.7	1.8	2.5	3.1
USA	6.3	6.3	6.3	6.8	7.6	8.0	8.6	9.0	9.5	9.6

Table 418: FAO — Demand—Food—Livestock products—Dairy (Mt DM/yr)

7.3.2 Eggs


GLO
Eggs (Mt DM/yr)
40
30
20
10
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



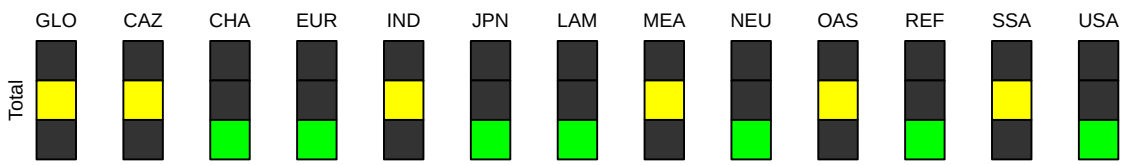


Figure 140: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.3	15.8	17.4	19.6	23.6	26.7	29.8	32.7	35.2	37.2	38.7
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
CHA	5.0	6.5	7.3	8.3	9.9	11.2	12.2	12.9	13.2	13.2	13.0
EUR	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.6
IND	0.4	0.6	0.7	0.9	1.5	1.9	2.3	2.8	3.2	3.6	3.9
JPN	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
LAM	1.2	1.4	1.6	2.0	2.3	2.5	2.6	2.8	2.9	3.0	3.1
MEA	0.4	0.5	0.6	0.7	0.9	1.1	1.3	1.6	1.8	2.0	2.2
NEU	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4
OAS	0.9	1.0	1.2	1.6	2.2	2.7	3.2	3.8	4.3	4.6	4.9
REF	0.9	0.9	1.0	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.6
SSA	0.3	0.3	0.4	0.5	0.7	0.9	1.3	1.8	2.4	3.1	3.7
USA	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1

Table 419: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

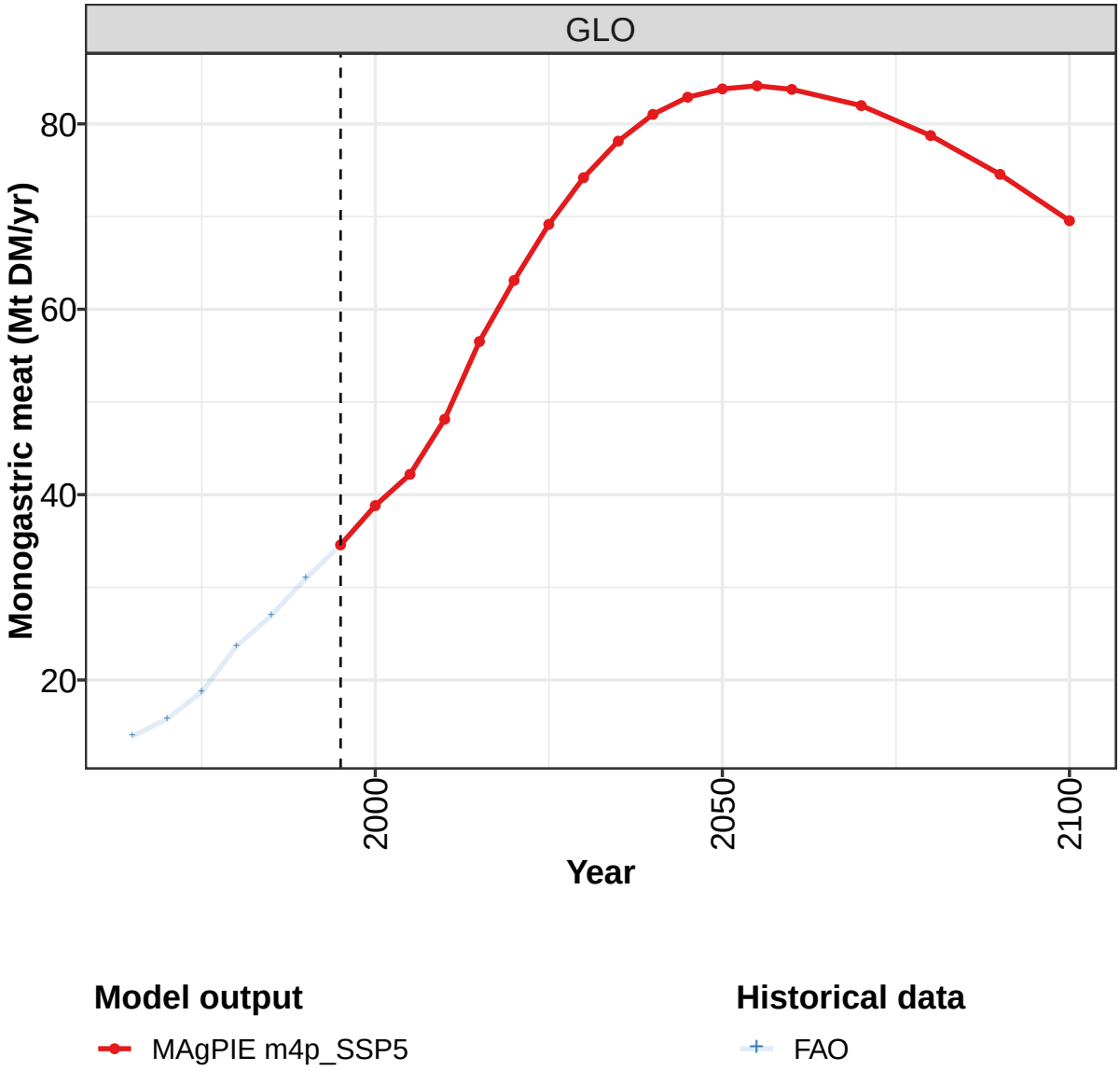
	2050	2055	2060	2070	2080	2090	2100
GLO	39.7	40.4	40.7	40.6	39.6	38.0	35.8
CAZ	0.4	0.4	0.4	0.5	0.5	0.5	0.6
CHA	12.6	12.1	11.6	10.4	9.2	8.0	6.8
EUR	2.7	2.8	2.9	3.0	3.2	3.3	3.3
IND	4.0	4.2	4.2	4.2	4.1	3.8	3.4
JPN	0.9	0.9	0.9	0.9	0.9	0.9	0.8
LAM	3.1	3.1	3.1	3.0	2.9	2.6	2.4
MEA	2.3	2.5	2.5	2.6	2.6	2.6	2.4
NEU	0.5	0.5	0.5	0.5	0.5	0.4	0.4
OAS	5.1	5.2	5.2	5.1	4.9	4.5	4.2
REF	1.5	1.5	1.5	1.5	1.4	1.3	1.2
SSA	4.4	4.9	5.4	6.1	6.6	6.8	6.9
USA	2.2	2.4	2.5	2.8	3.0	3.2	3.4

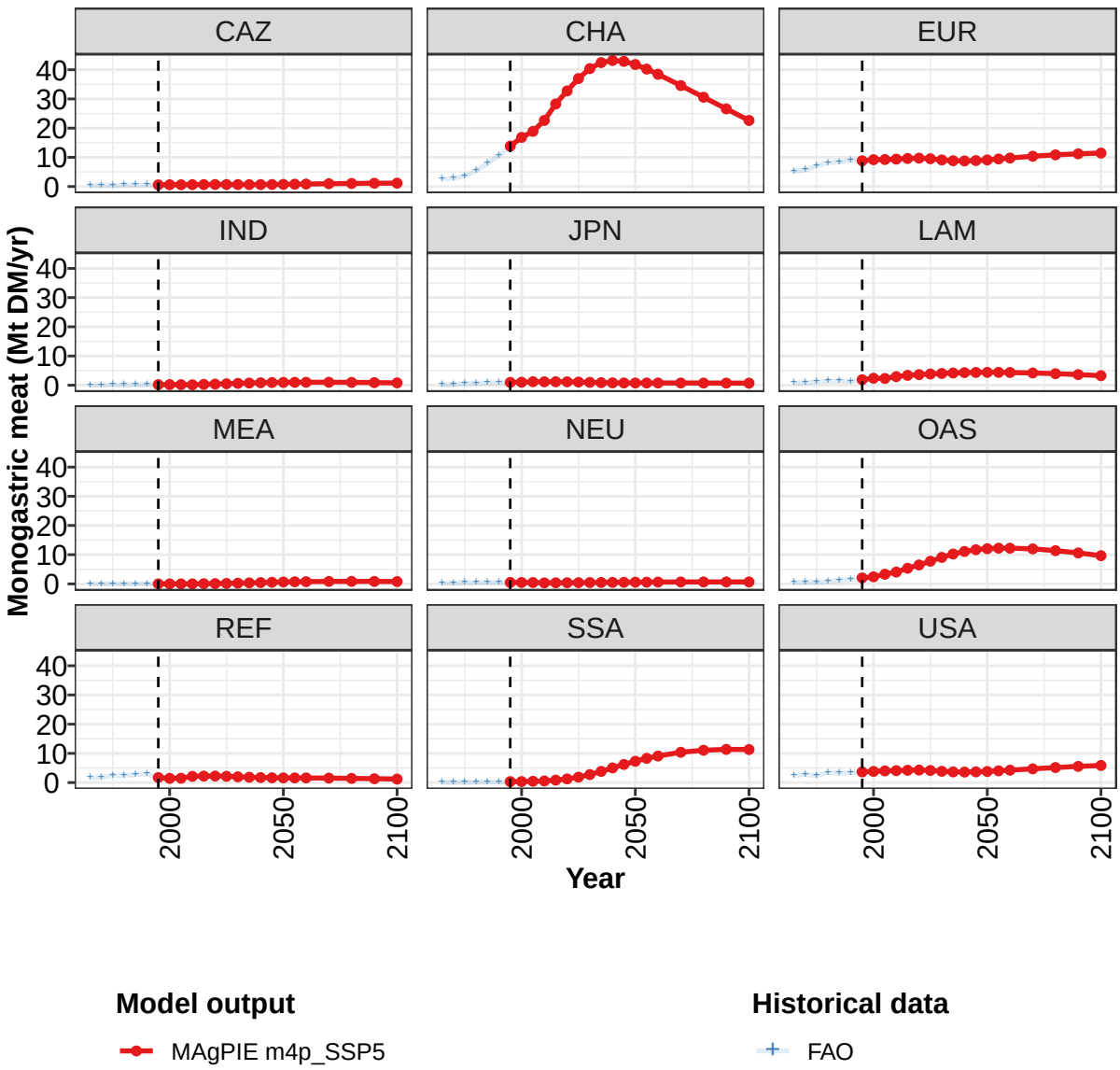
Table 420: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.0	6.0	6.8	8.0	9.4	10.7	13.3	15.8	17.4	19.6
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2
CHA	0.5	0.6	0.7	0.9	1.6	2.4	5.0	6.5	7.3	8.3
EUR	1.5	1.8	1.9	2.1	2.1	2.0	1.9	2.0	2.0	2.0
IND	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.7	0.9
JPN	0.4	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8
LAM	0.3	0.4	0.5	0.7	0.9	1.0	1.2	1.4	1.6	2.0
MEA	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.7
NEU	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2
OAS	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.0	1.2	1.6
REF	0.5	0.7	0.9	1.1	1.3	1.3	0.9	0.9	1.0	1.2
SSA	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5
USA	1.1	1.2	1.1	1.2	1.1	1.1	1.2	1.3	1.4	1.4

Table 421: FAO — Demand—Food—Livestock products—Eggs (Mt DM/yr)

7.3.3 Monogastric meat





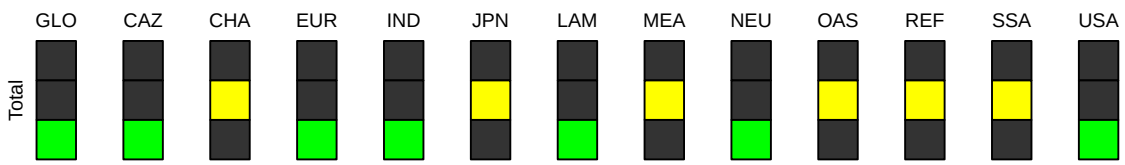


Figure 141: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.6	38.8	42.2	48.1	56.5	63.1	69.2	74.2	78.1	81.0	82.9
CAZ	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
CHA	13.8	16.8	18.9	22.7	28.3	32.7	37.0	40.4	42.5	43.2	42.9
EUR	8.8	9.2	9.3	9.4	9.6	9.7	9.5	9.1	8.8	8.8	8.9
IND	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
JPN	1.0	1.0	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.8	0.8
LAM	1.9	2.4	2.3	2.9	3.4	3.6	3.8	4.0	4.2	4.3	4.4
MEA	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.6
NEU	0.5	0.5	0.5	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5
OAS	2.1	2.4	3.3	4.1	5.4	6.5	7.8	9.1	10.2	11.1	11.7
REF	1.7	1.5	1.5	2.1	2.2	2.2	2.2	2.0	1.8	1.7	1.7
SSA	0.3	0.3	0.4	0.6	0.9	1.3	1.9	2.7	3.8	5.0	6.2
USA	3.7	3.8	4.0	4.1	4.2	4.3	4.1	3.9	3.7	3.6	3.7

Table 422: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

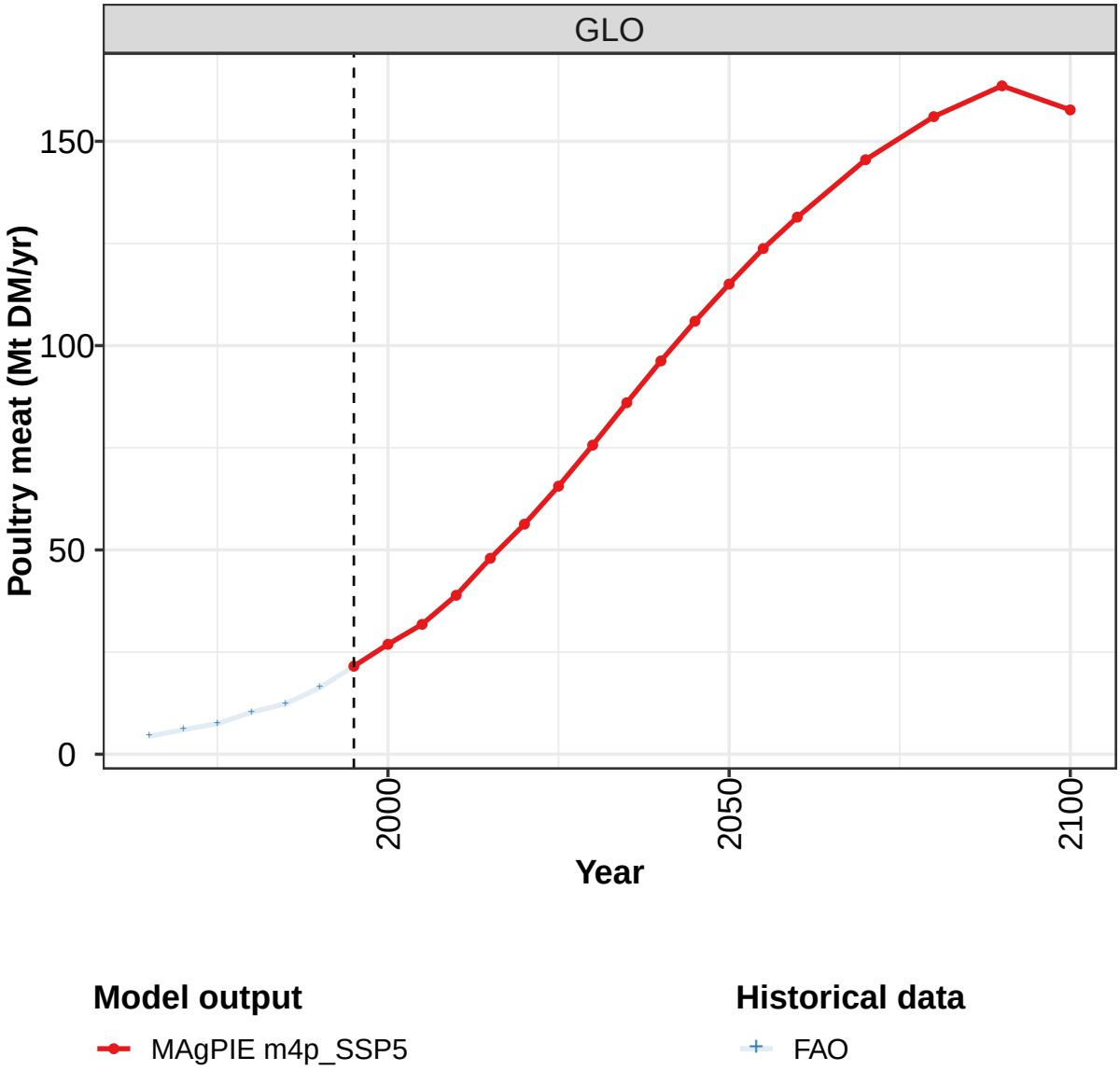
	2050	2055	2060	2070	2080	2090	2100
GLO	83.8	84.1	83.7	82.0	78.7	74.6	69.6
CAZ	0.7	0.8	0.9	1.0	1.1	1.1	1.2
CHA	41.8	40.2	38.4	34.6	30.6	26.6	22.6
EUR	9.1	9.4	9.8	10.4	10.9	11.2	11.5
IND	1.0	1.0	1.0	1.0	1.0	0.9	0.8
JPN	0.8	0.8	0.8	0.8	0.7	0.7	0.7
LAM	4.4	4.4	4.4	4.2	3.9	3.6	3.3
MEA	0.6	0.7	0.8	0.8	0.9	0.8	0.8
NEU	0.6	0.6	0.6	0.7	0.7	0.7	0.7
OAS	12.1	12.2	12.2	12.0	11.4	10.6	9.7
REF	1.6	1.6	1.6	1.5	1.4	1.3	1.2
SSA	7.3	8.3	9.1	10.4	11.1	11.4	11.3
USA	3.8	4.0	4.2	4.7	5.2	5.5	5.9

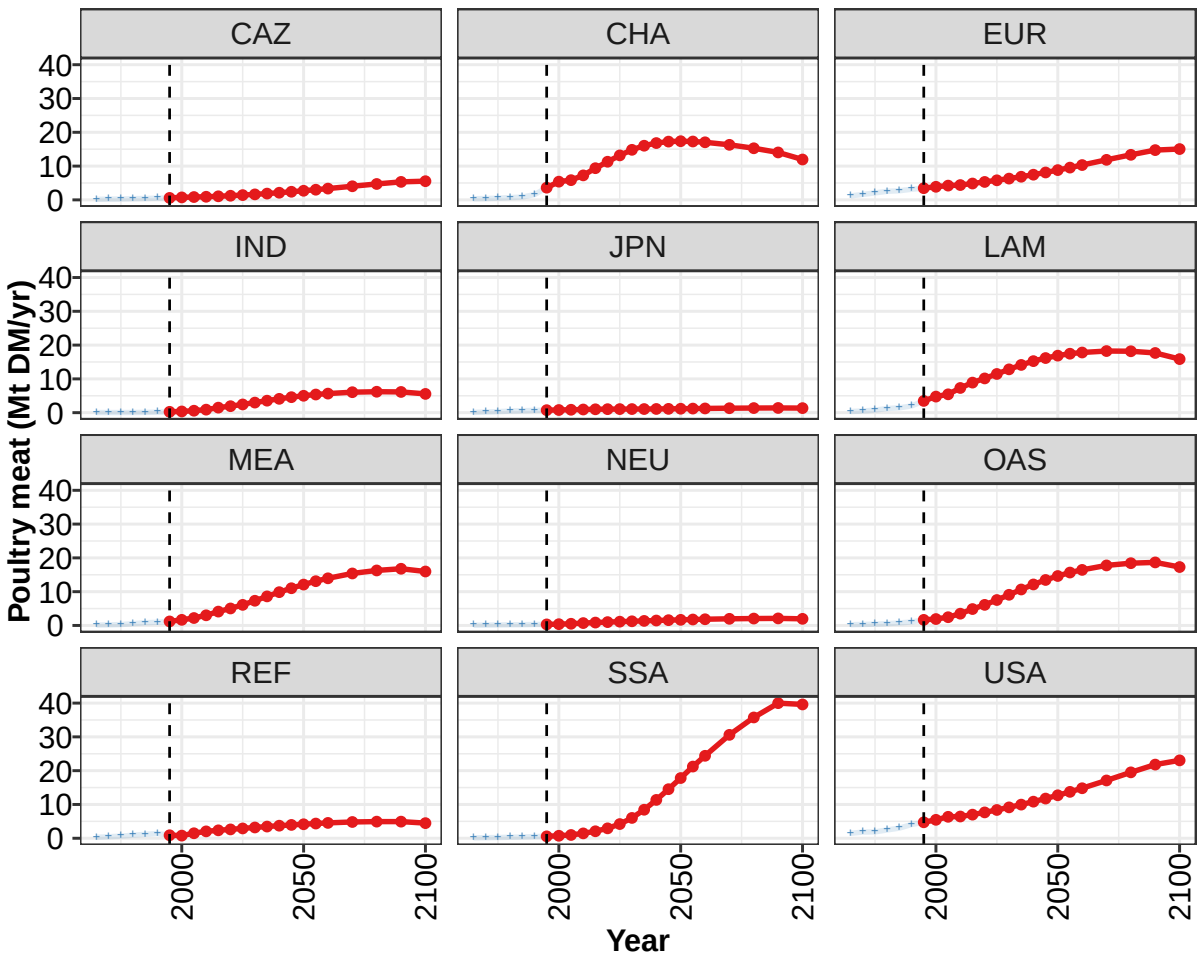
Table 423: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Monogastric meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	13.9	15.8	18.7	23.6	26.9	31.0	34.6	38.8	42.2	48.1
CAZ	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6
CHA	2.5	2.7	3.6	5.5	7.9	10.6	13.8	16.8	18.9	22.7
EUR	5.1	5.7	7.0	8.1	8.4	8.9	8.8	9.2	9.2	9.4
IND	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
JPN	0.2	0.3	0.5	0.7	0.8	0.9	1.0	1.0	1.2	1.2
LAM	0.7	0.9	1.1	1.4	1.4	1.3	1.9	2.4	2.3	2.9
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.3
OAS	0.5	0.6	0.6	0.8	1.2	1.6	2.1	2.4	3.3	4.1
REF	1.8	1.8	2.5	2.4	2.8	3.0	1.7	1.5	1.5	2.1
SSA	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.6
USA	2.4	2.8	2.4	3.4	3.2	3.3	3.7	3.8	4.0	4.1

Table 424: FAO — Demand—Food—Livestock products—Monogastric meat (Mt DM/yr)

7.3.4 Poultry meat





Model output

MAgPIE m4p_SSP5

Historical data

FAO

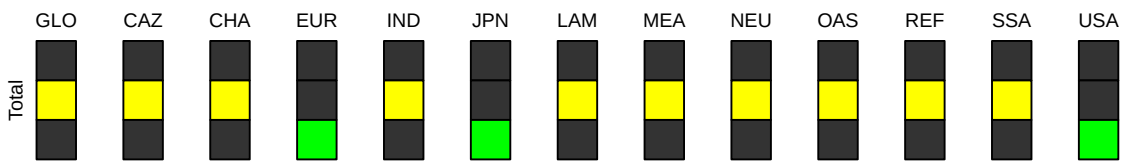


Figure 142: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	27	32	39	48	56	66	76	86	96	106
CAZ	1	1	1	1	1	1	1	2	2	2	2
CHA	4	5	6	7	9	11	13	15	16	17	17
EUR	3	4	4	4	5	5	6	6	7	7	8
IND	0	0	1	1	1	2	2	3	4	4	5
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	3	5	5	7	9	10	11	13	14	15	16
MEA	1	2	2	3	4	5	6	7	9	10	11
NEU	0	0	1	1	1	1	1	1	1	1	2
OAS	2	2	2	3	5	6	8	9	11	12	13
REF	1	1	1	2	2	3	3	3	3	4	4
SSA	1	1	1	1	2	3	4	6	8	11	15
USA	5	5	6	6	7	8	8	9	10	11	12

Table 425: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

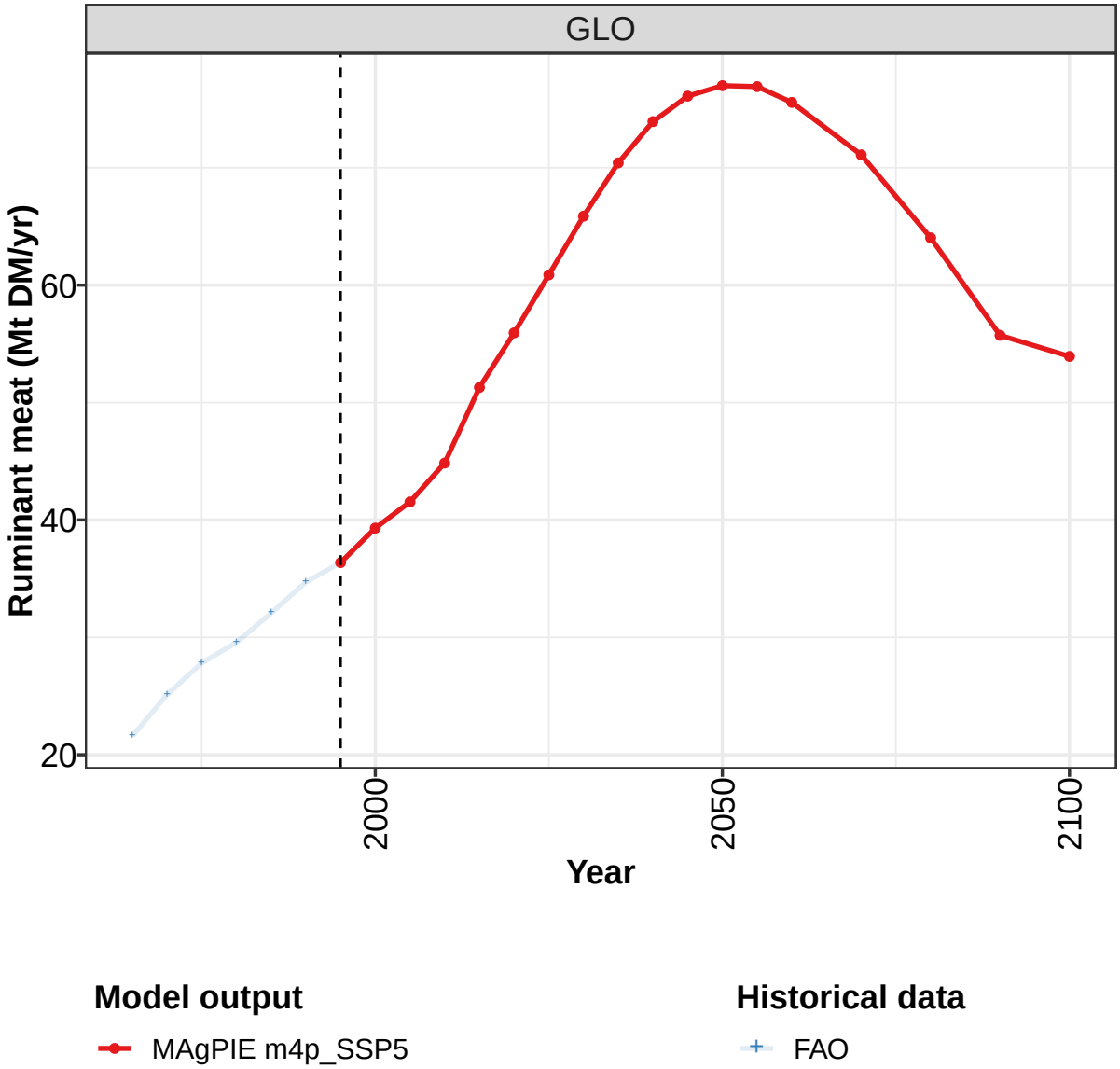
	2050	2055	2060	2070	2080	2090	2100
GLO	115	124	131	145	156	164	158
CAZ	3	3	3	4	5	5	6
CHA	17	17	17	16	15	14	12
EUR	9	10	10	12	13	15	15
IND	5	5	6	6	6	6	6
JPN	1	1	1	1	1	1	1
LAM	17	17	18	18	18	18	16
MEA	12	13	14	15	16	17	16
NEU	2	2	2	2	2	2	2
OAS	15	16	16	18	18	19	17
REF	4	4	5	5	5	5	4
SSA	18	21	24	31	36	40	40
USA	13	14	15	17	20	22	23

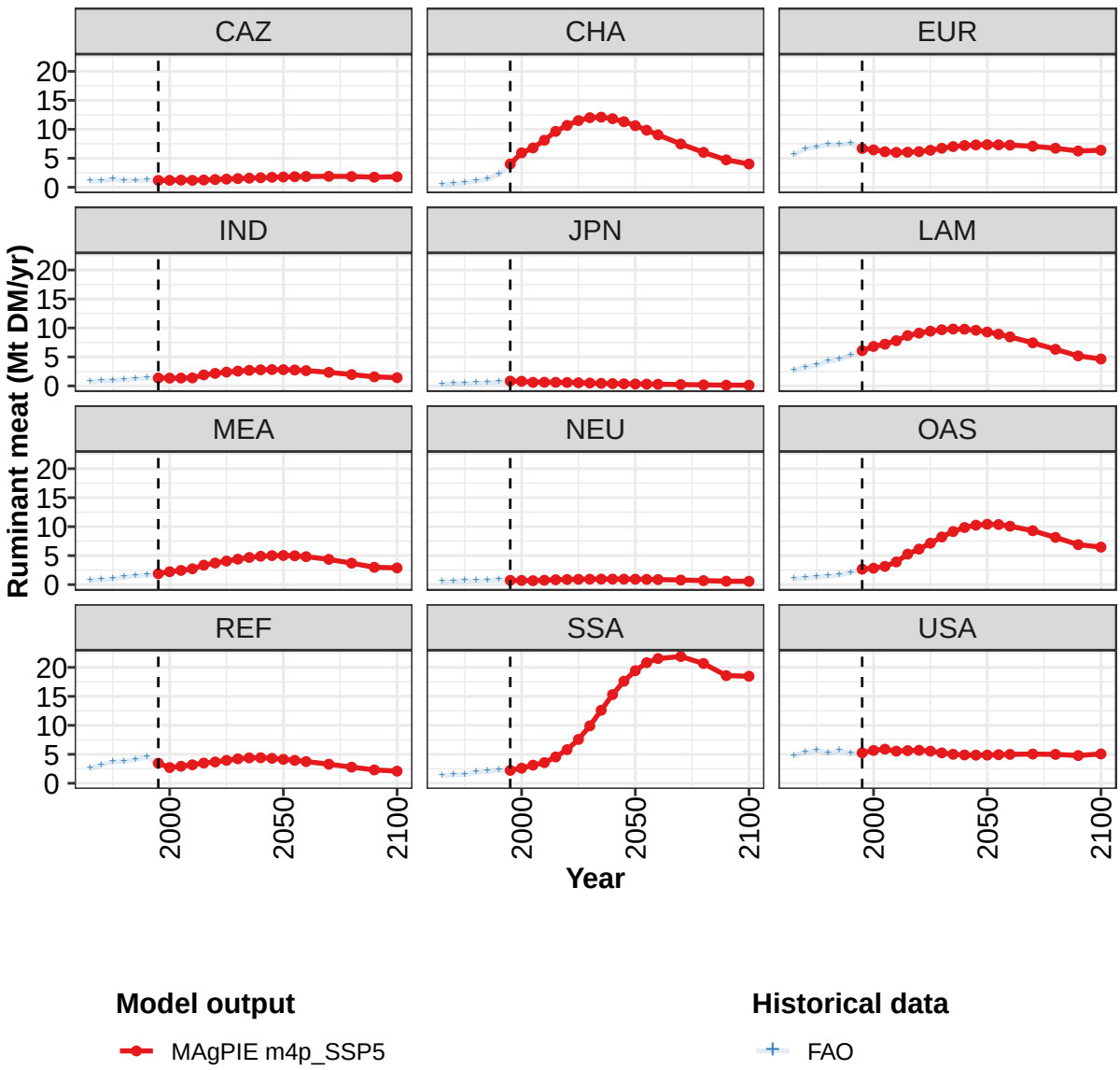
Table 426: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Poultry meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.4	6.0	7.5	10.3	12.3	16.3	21.5	26.9	31.8	38.9
CAZ	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9
CHA	0.3	0.4	0.5	0.7	0.8	1.6	3.6	5.4	5.8	7.3
EUR	1.2	1.6	2.1	2.5	2.7	3.1	3.5	3.9	4.2	4.4
IND	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9
JPN	0.1	0.2	0.3	0.5	0.6	0.7	0.7	0.8	0.9	0.9
LAM	0.3	0.5	0.8	1.2	1.4	2.0	3.5	4.8	5.4	7.3
MEA	0.1	0.2	0.3	0.5	0.8	0.9	1.2	1.7	2.2	3.0
NEU	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.7
OAS	0.2	0.3	0.4	0.5	0.7	1.0	1.7	1.9	2.4	3.5
REF	0.3	0.4	0.6	0.9	1.2	1.4	0.9	0.8	1.5	2.0
SSA	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	1.0	1.4
USA	1.5	1.8	1.9	2.5	3.0	4.1	4.7	5.5	6.4	6.4

Table 427: FAO — Demand—Food—Livestock products—Poultry meat (Mt DM/yr)

7.3.5 Ruminant meat





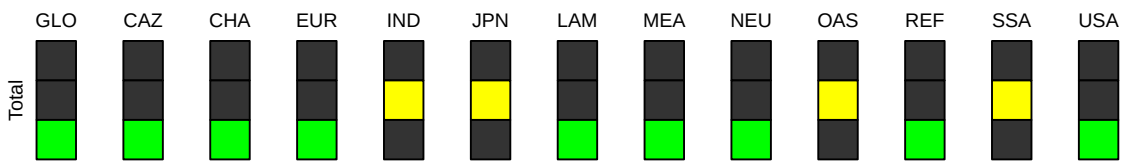


Figure 143: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	36.4	39.3	41.5	44.8	51.3	55.9	60.9	65.9	70.4	73.9	76.1
CAZ	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7
CHA	4.0	5.9	6.8	8.1	9.6	10.7	11.5	12.0	12.1	11.8	11.3
EUR	6.7	6.5	6.1	6.0	6.1	6.1	6.4	6.7	7.0	7.2	7.3
IND	1.4	1.3	1.4	1.4	1.9	2.2	2.4	2.6	2.7	2.8	2.8
JPN	0.8	0.8	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4
LAM	6.1	6.8	7.2	7.8	8.7	9.1	9.4	9.7	9.8	9.8	9.6
MEA	1.9	2.2	2.4	2.7	3.3	3.7	4.1	4.4	4.7	4.9	5.0
NEU	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.0	0.9
OAS	2.7	2.8	3.1	3.9	5.3	6.1	7.1	8.2	9.2	9.9	10.3
REF	3.5	2.7	2.9	3.2	3.5	3.7	4.0	4.2	4.4	4.4	4.3
SSA	2.2	2.6	3.1	3.6	4.5	5.8	7.6	9.9	12.6	15.3	17.6
USA	5.3	5.7	5.9	5.5	5.6	5.7	5.5	5.2	5.0	4.9	4.9

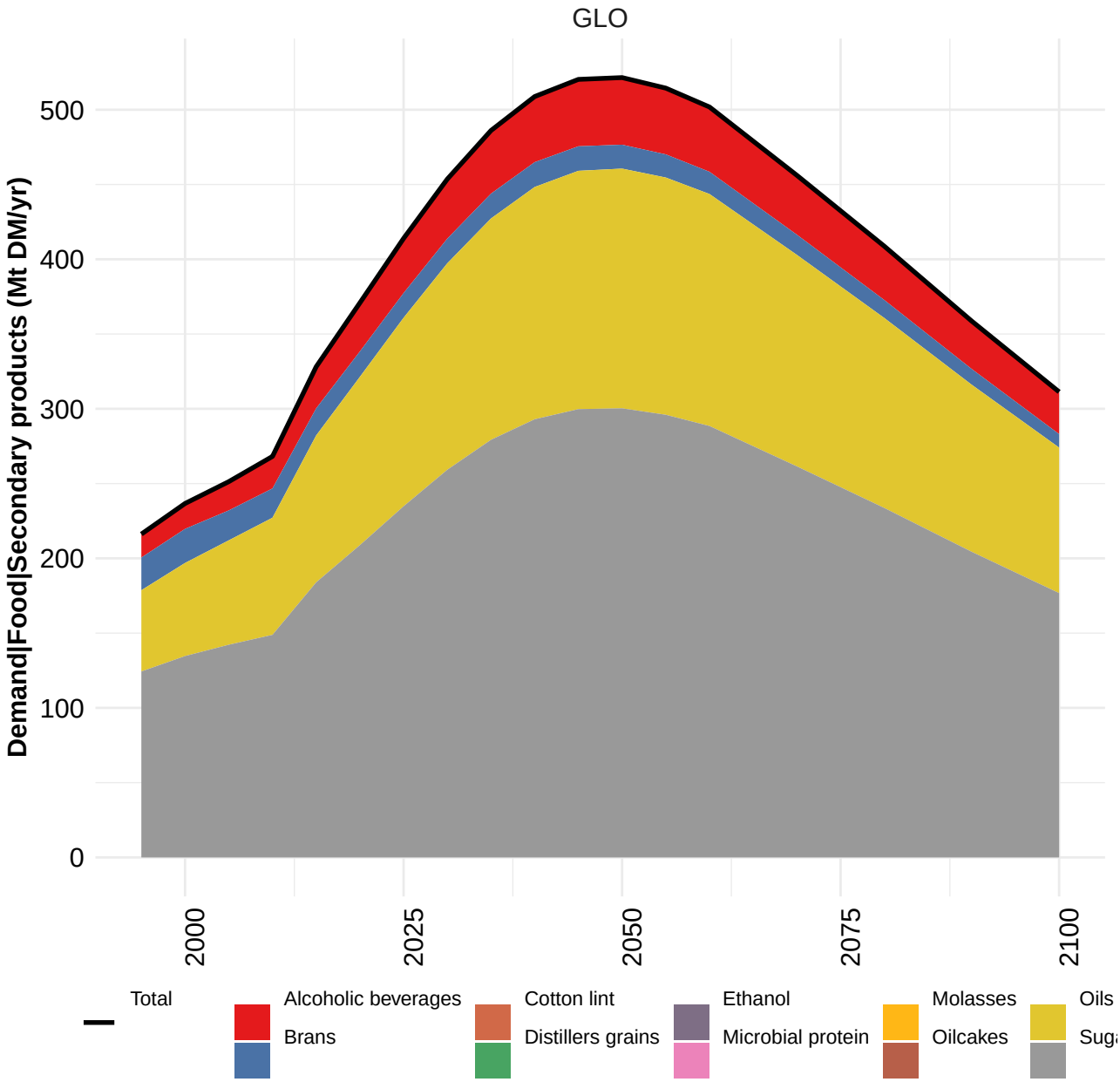
Table 428: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

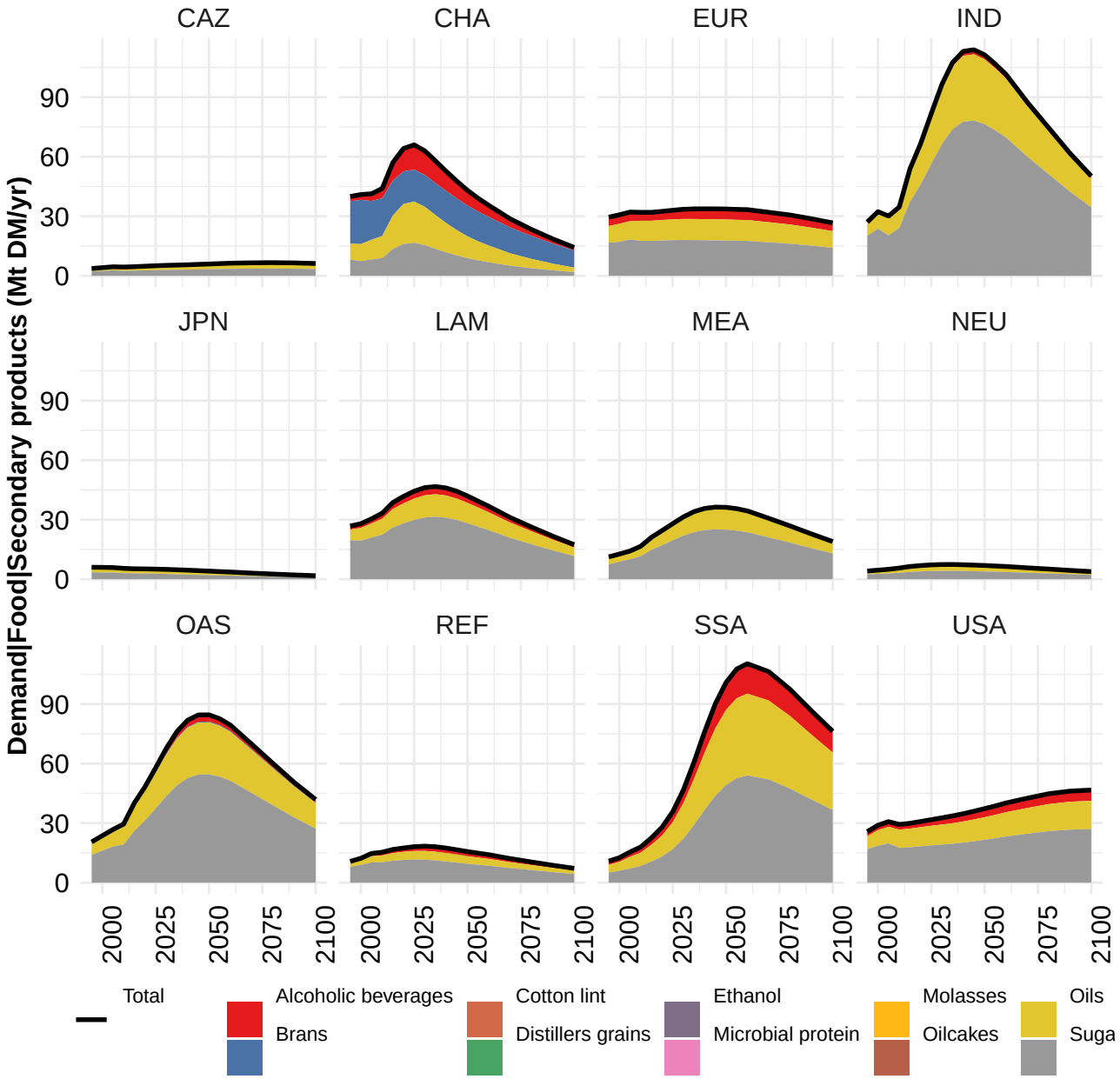
	2050	2055	2060	2070	2080	2090	2100
GLO	77.0	76.9	75.6	71.1	64.0	55.7	53.9
CAZ	1.8	1.8	1.9	1.9	1.8	1.7	1.8
CHA	10.6	9.8	9.0	7.5	6.0	4.7	4.0
EUR	7.3	7.3	7.3	7.1	6.7	6.3	6.4
IND	2.8	2.8	2.6	2.3	2.0	1.6	1.4
JPN	0.3	0.3	0.3	0.2	0.2	0.1	0.1
LAM	9.3	8.9	8.5	7.4	6.3	5.2	4.6
MEA	5.0	5.0	4.8	4.4	3.7	3.0	2.9
NEU	0.9	0.9	0.9	0.8	0.7	0.6	0.6
OAS	10.4	10.4	10.1	9.3	8.1	6.9	6.5
REF	4.1	4.0	3.7	3.3	2.8	2.3	2.1
SSA	19.4	20.8	21.5	21.9	20.7	18.6	18.5
USA	4.9	4.9	5.0	5.0	5.0	4.8	5.1

Table 429: MAgPIE m4p_SSP5 — Demand—Food—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

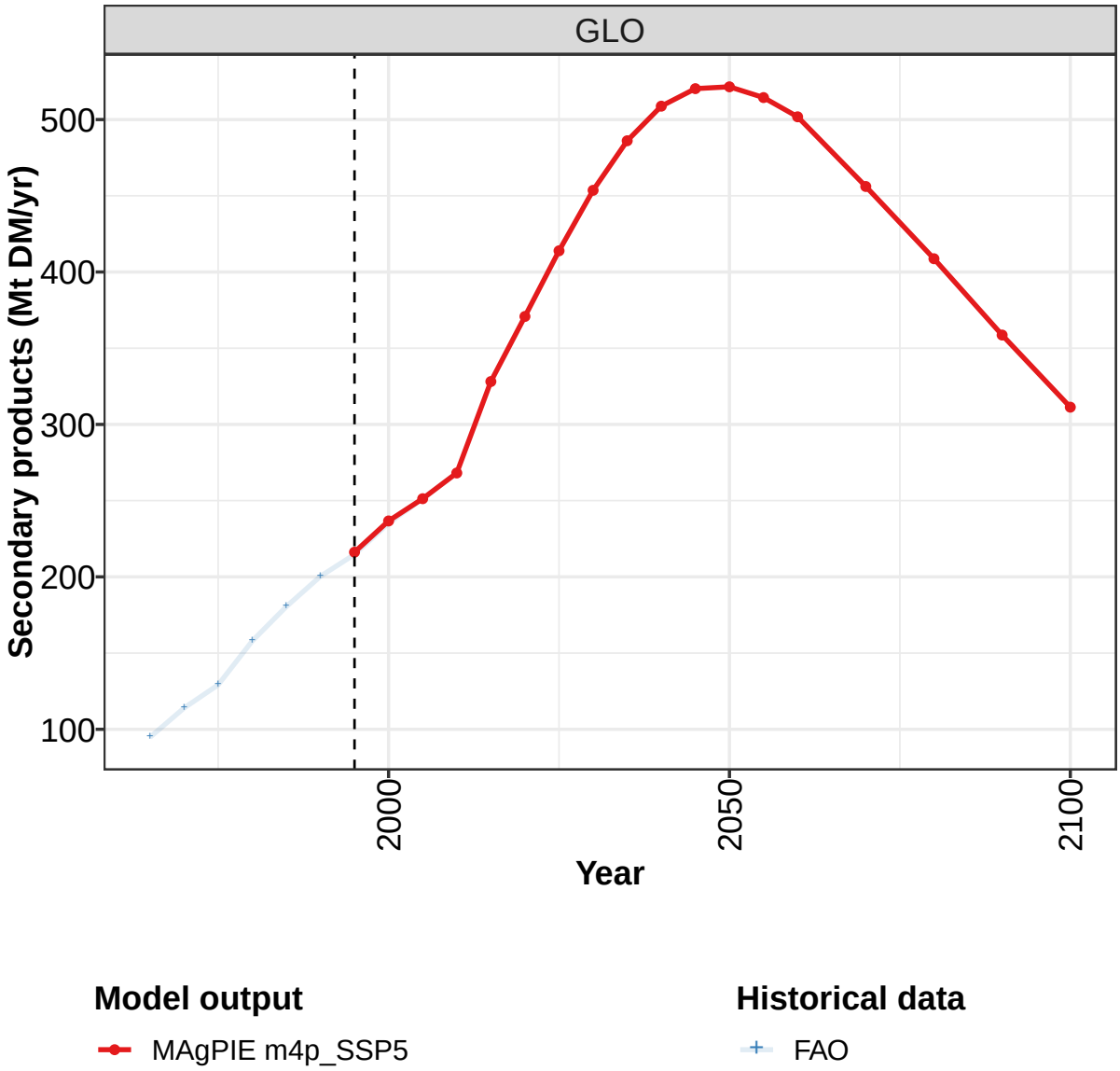
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	21.6	25.1	27.8	29.6	32.1	34.7	36.4	39.3	41.5	44.8
CAZ	1.0	1.1	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2
CHA	0.5	0.6	0.8	1.0	1.4	2.2	4.0	5.9	6.8	8.1
EUR	5.6	6.6	7.0	7.4	7.3	7.6	6.7	6.5	6.1	6.0
IND	0.8	0.8	0.9	1.0	1.2	1.3	1.4	1.3	1.4	1.4
JPN	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.8	0.6	0.6
LAM	2.7	3.2	3.6	4.2	4.6	5.3	6.1	6.8	7.2	7.8
MEA	0.7	0.8	1.0	1.3	1.5	1.6	1.9	2.2	2.4	2.7
NEU	0.5	0.5	0.6	0.6	0.8	0.8	0.7	0.7	0.7	0.8
OAS	1.0	1.1	1.3	1.4	1.7	2.1	2.7	2.8	3.1	3.9
REF	2.6	3.2	3.7	3.8	4.1	4.5	3.5	2.7	2.9	3.2
SSA	1.3	1.5	1.5	1.9	2.1	2.2	2.2	2.6	3.1	3.6
USA	4.7	5.3	5.6	5.2	5.6	5.1	5.3	5.7	5.9	5.5

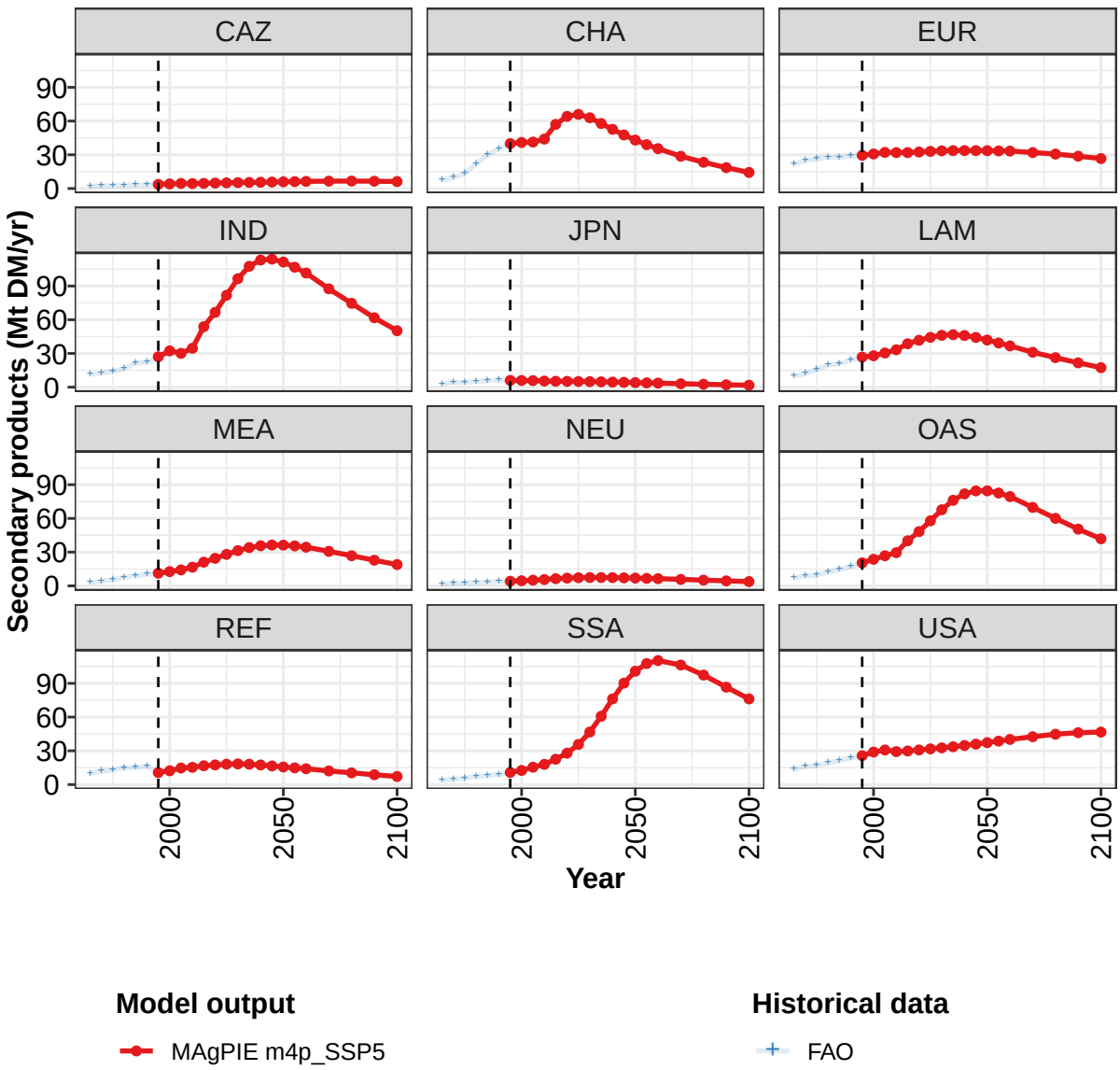
Table 430: FAO — Demand—Food—Livestock products—Ruminant meat (Mt DM/yr)


GLO
Demand|Food|Secondary products (Mt DM/yr)
500
400
300
200
100
0
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Food|Secondary products (Mt DM/yr)
0
30
60
90
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Suga

7.4 Secondary products





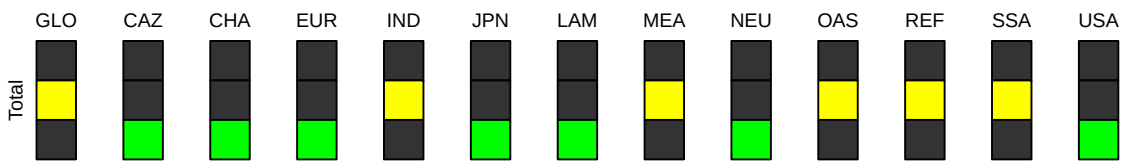


Figure 144: MAgPIE m4p_SSP5 — Demand—Food—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	216	237	251	268	328	371	414	454	486	509	520
CAZ	4	4	5	4	5	5	5	5	5	6	6
CHA	40	41	41	44	57	64	66	63	58	53	48
EUR	30	31	32	32	32	32	33	34	34	34	34
IND	27	32	30	35	54	67	82	96	108	113	114
JPN	6	6	6	5	5	5	5	5	5	5	4
LAM	27	28	30	33	39	42	44	46	47	46	44
MEA	11	13	14	17	21	25	28	31	34	36	36
NEU	4	5	5	6	6	7	7	7	7	7	7
OAS	21	24	27	30	40	48	58	68	76	82	84
REF	11	12	15	15	17	17	18	18	18	17	17
SSA	11	13	15	18	23	28	36	47	61	76	90
USA	26	29	31	29	30	31	32	33	34	35	36

Table 431: MAgPIE m4p_SSP5 — Demand—Food—Secondary products (Mt DM/yr) [PART 1/2]

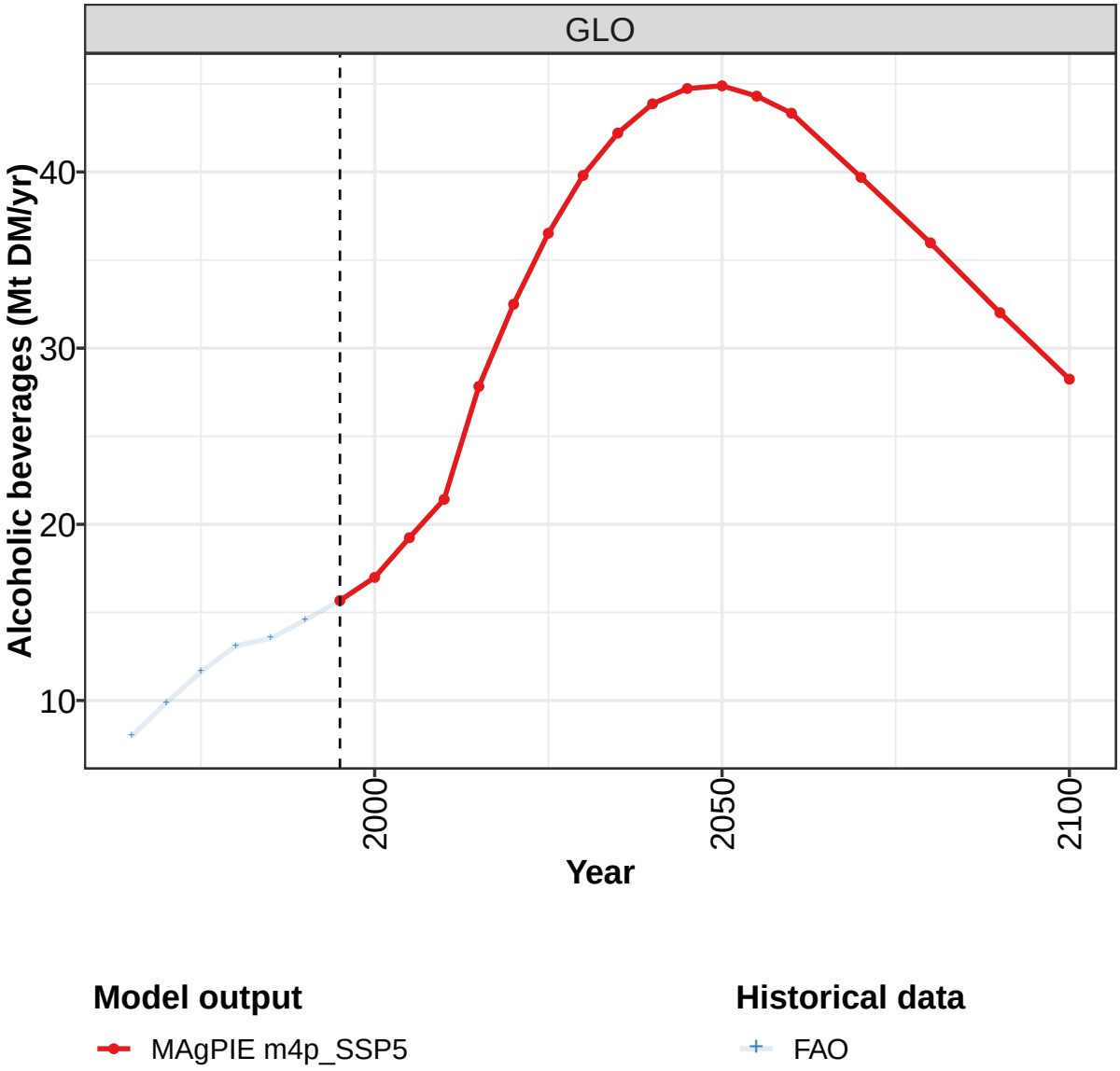
	2050	2055	2060	2070	2080	2090	2100
GLO	521	514	502	456	409	359	311
CAZ	6	6	6	7	7	6	6
CHA	43	39	35	29	23	19	14
EUR	34	33	33	32	31	29	27
IND	111	107	102	87	75	62	50
JPN	4	4	4	3	3	2	2
LAM	42	39	37	31	26	22	17
MEA	36	36	34	31	27	23	19
NEU	7	7	6	6	5	4	4
OAS	85	83	79	70	60	50	42
REF	16	15	14	12	10	9	7
SSA	101	108	110	106	97	87	76
USA	37	39	40	43	45	46	47

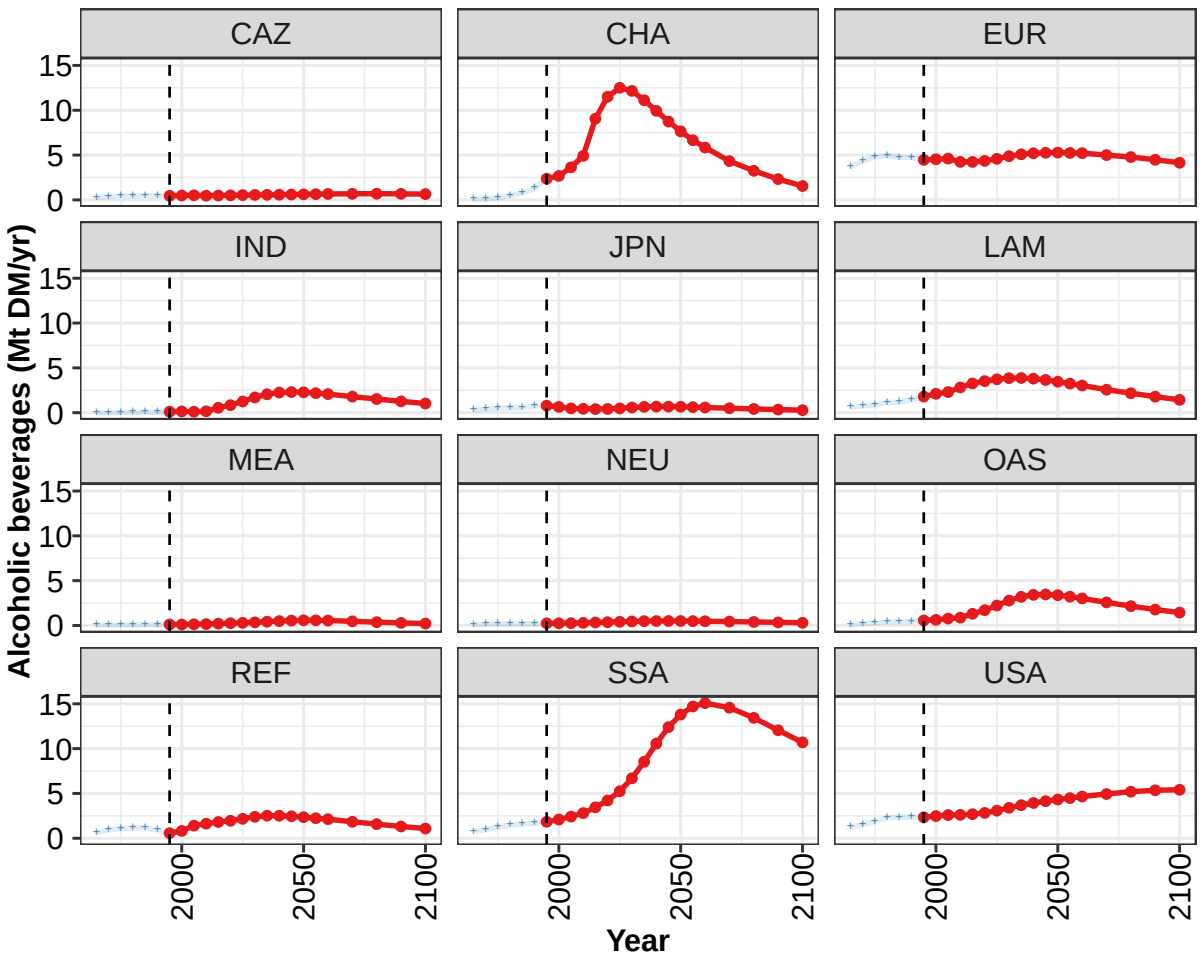
Table 432: MAgPIE m4p_SSP5 — Demand—Food—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	95	114	129	158	180	200	215	235	251	268
CAZ	2	2	3	3	3	3	4	4	5	4
CHA	7	10	13	22	30	35	40	41	41	44
EUR	22	25	26	28	28	29	30	31	32	32
IND	11	13	14	16	22	22	26	31	30	35
JPN	3	4	4	5	6	6	6	6	6	5
LAM	10	12	16	20	21	24	27	28	30	33
MEA	3	4	5	8	9	10	11	13	14	17
NEU	2	2	3	3	3	4	4	5	5	6
OAS	7	9	9	12	15	17	21	24	27	30
REF	10	12	13	15	15	16	11	12	15	15
SSA	4	5	6	7	8	9	11	13	15	18
USA	14	16	17	19	21	24	26	29	31	29

Table 433: FAO — Demand—Food—Secondary products (Mt DM/yr)

7.4.1 Alcoholic beverages





Model output

MAgPIE m4p_SSP5

Historical data

FAO

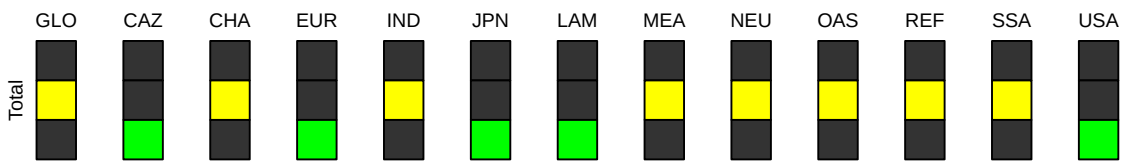


Figure 145: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.7	17.0	19.2	21.4	27.8	32.5	36.5	39.8	42.2	43.9	44.7
CAZ	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6
CHA	2.4	2.7	3.6	4.9	9.1	11.5	12.5	12.2	11.1	9.9	8.7
EUR	4.5	4.5	4.6	4.2	4.2	4.4	4.6	4.9	5.1	5.2	5.3
IND	0.1	0.1	0.1	0.2	0.6	0.8	1.3	1.7	2.1	2.2	2.3
JPN	0.8	0.6	0.5	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7
LAM	1.8	2.1	2.3	2.8	3.3	3.5	3.7	3.9	3.9	3.8	3.7
MEA	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
NEU	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5
OAS	0.6	0.6	0.8	0.9	1.3	1.7	2.2	2.8	3.2	3.4	3.5
REF	0.6	0.8	1.4	1.6	1.8	2.0	2.2	2.4	2.5	2.5	2.5
SSA	1.8	2.1	2.4	2.8	3.5	4.2	5.2	6.7	8.5	10.6	12.4
USA	2.3	2.5	2.6	2.6	2.7	2.8	3.1	3.4	3.7	3.9	4.1

Table 434: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

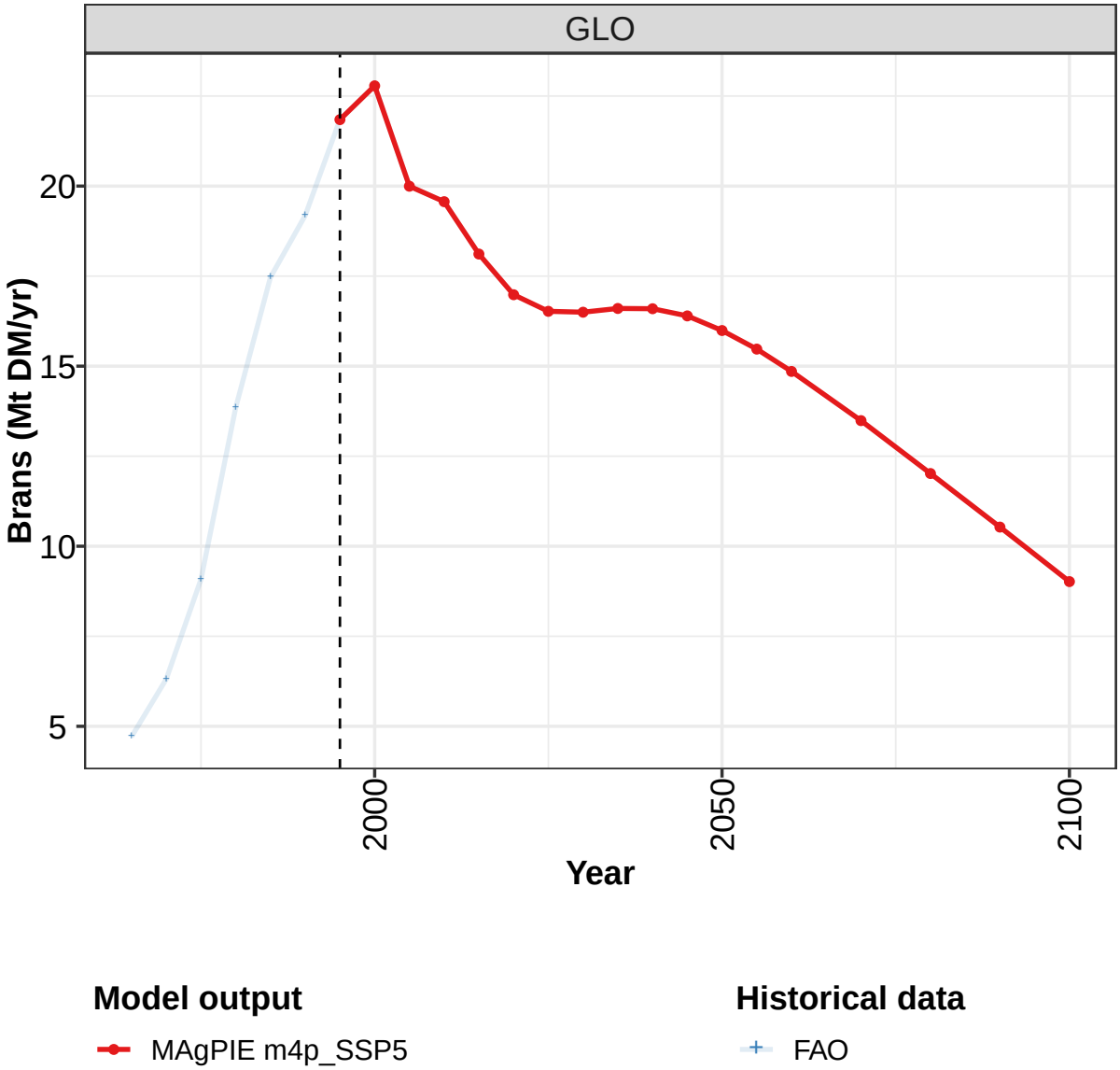
	2050	2055	2060	2070	2080	2090	2100
GLO	44.9	44.3	43.3	39.7	36.0	32.0	28.2
CAZ	0.6	0.6	0.7	0.7	0.7	0.7	0.6
CHA	7.6	6.7	5.8	4.3	3.2	2.3	1.5
EUR	5.3	5.2	5.2	5.0	4.8	4.5	4.1
IND	2.3	2.2	2.1	1.8	1.5	1.3	1.0
JPN	0.7	0.6	0.6	0.5	0.4	0.3	0.3
LAM	3.5	3.2	3.0	2.6	2.2	1.8	1.4
MEA	0.6	0.6	0.6	0.5	0.4	0.3	0.2
NEU	0.5	0.5	0.5	0.4	0.4	0.3	0.3
OAS	3.4	3.2	3.0	2.6	2.2	1.8	1.4
REF	2.4	2.2	2.1	1.8	1.6	1.3	1.1
SSA	13.8	14.7	15.1	14.6	13.4	12.1	10.7
USA	4.3	4.5	4.7	4.9	5.2	5.4	5.4

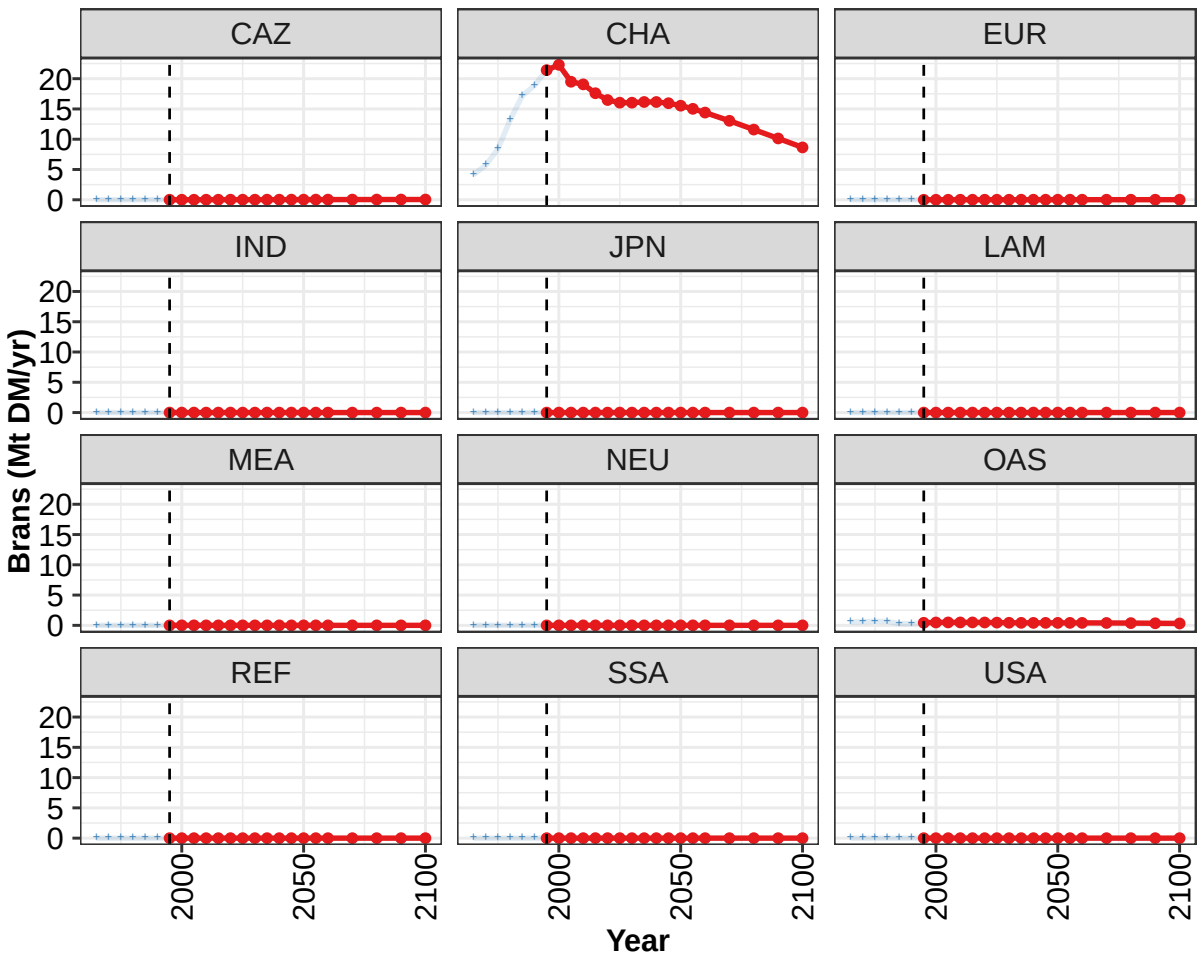
Table 435: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.0	9.9	11.6	13.1	13.5	14.6	15.7	17.0	19.2	21.4
CAZ	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
CHA	0.1	0.1	0.2	0.4	0.8	1.3	2.4	2.7	3.6	4.9
EUR	3.7	4.3	4.8	4.9	4.7	4.7	4.5	4.5	4.6	4.2
IND	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
JPN	0.3	0.4	0.5	0.6	0.6	0.8	0.8	0.7	0.5	0.4
LAM	0.6	0.7	0.9	1.1	1.2	1.5	1.8	2.1	2.3	2.8
MEA	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
NEU	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
OAS	0.1	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.8	0.9
REF	0.7	0.9	1.1	1.2	1.1	0.9	0.6	0.8	1.4	1.6
SSA	0.8	1.0	1.2	1.5	1.6	1.7	1.8	2.1	2.4	2.8
USA	1.2	1.6	1.8	2.3	2.3	2.4	2.3	2.5	2.6	2.6

Table 436: FAO — Demand—Food—Secondary products—Alcoholic beverages (Mt DM/yr)

7.4.2 Brans


GLO
Brans (Mt DM/yr)
20
15
10
5
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

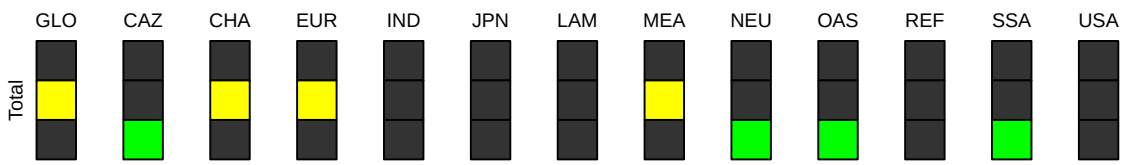


Figure 146: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21.8	22.8	20.0	19.6	18.1	17.0	16.5	16.5	16.6	16.6	16.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	21.4	22.3	19.5	19.1	17.6	16.5	16.0	16.0	16.2	16.1	15.9
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 437: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Brans (Mt DM/yr) [PART 1/2]

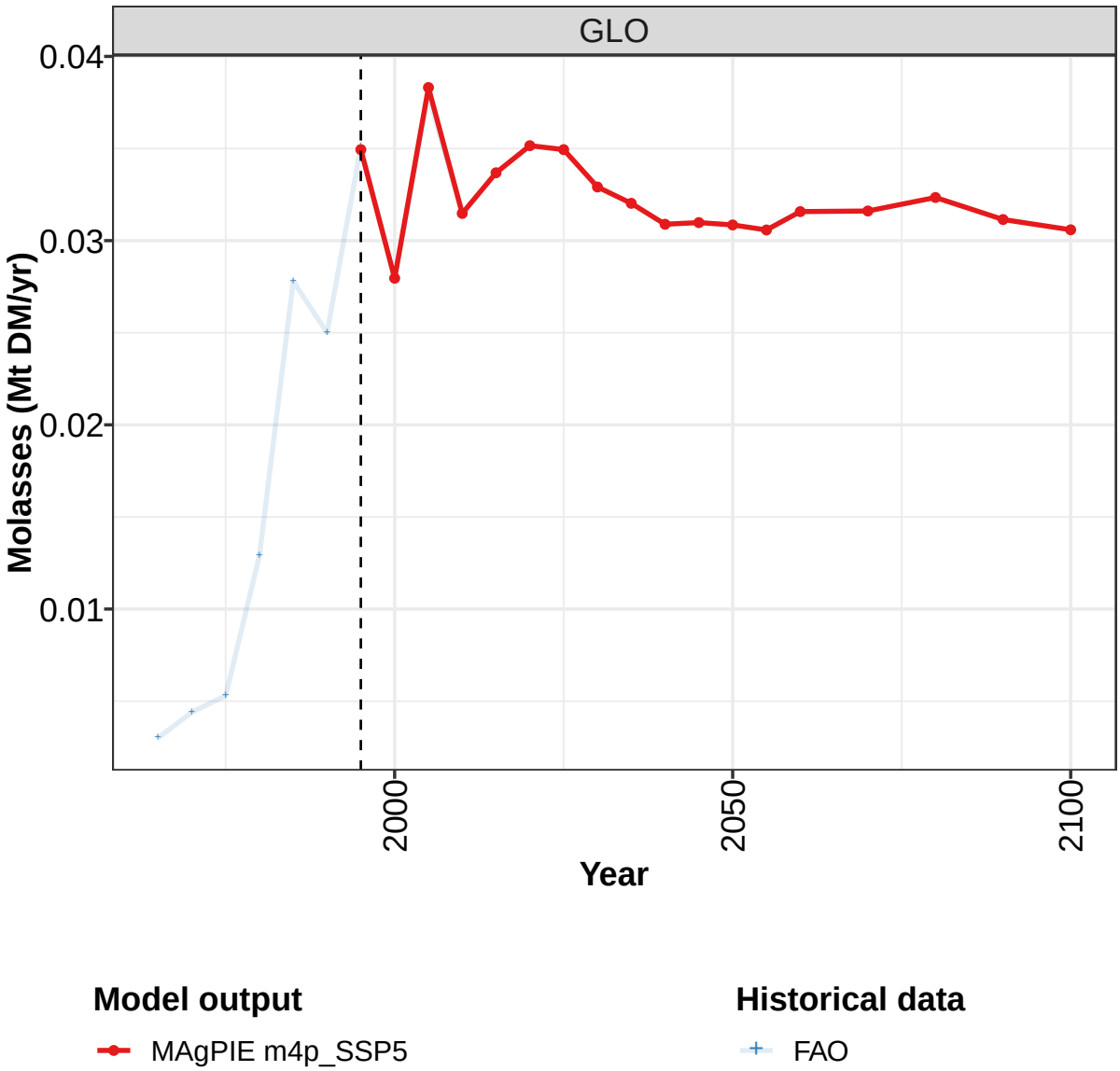
	2050	2055	2060	2070	2080	2090	2100
GLO	16.0	15.5	14.9	13.5	12.0	10.5	9.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	15.5	15.0	14.4	13.0	11.6	10.1	8.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.4	0.4	0.4	0.4	0.4	0.3	0.3
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

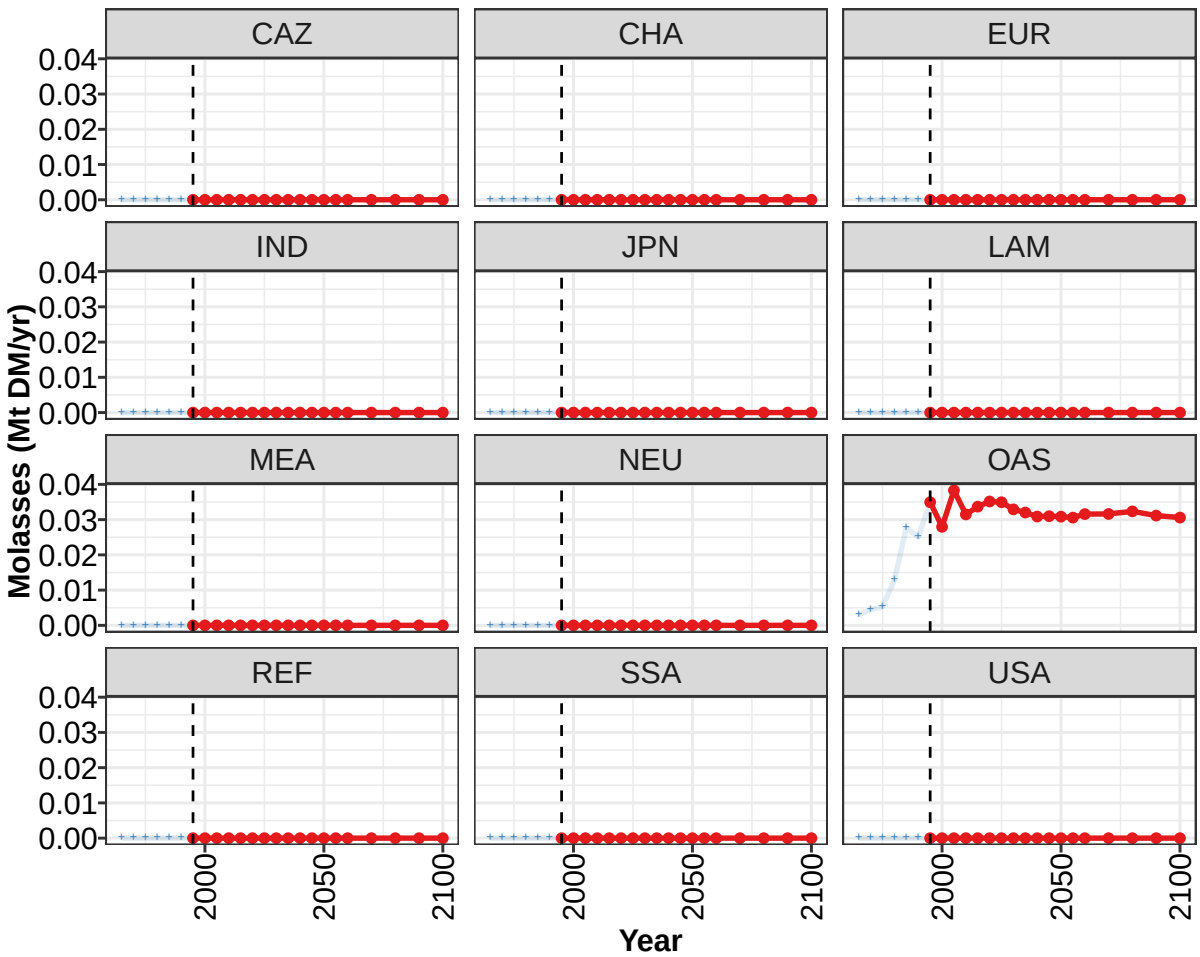
Table 438: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.7	6.3	9.1	13.9	17.5	19.2	21.8	22.8	20.0	19.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.2	5.7	8.4	13.2	17.2	18.9	21.4	22.3	19.5	19.1
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.5	0.6	0.7	0.6	0.3	0.3	0.4	0.5	0.5	0.5
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 439: FAO — Demand—Food—Secondary products—Brans (Mt DM/yr)

7.4.3 Molasses





Model output

MAgPIE m4p_SSP5

Historical data

FAO

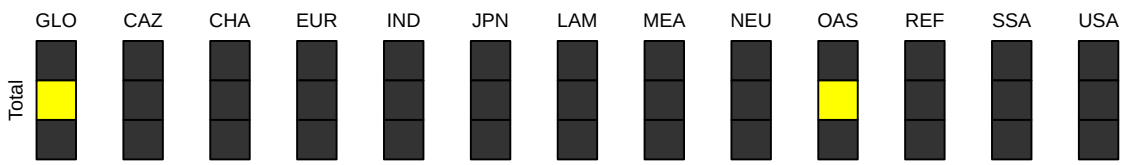


Figure 147: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0349	0.0280	0.0383	0.0315	0.0337	0.0352	0.0349	0.0329	0.0320	0.0309	0.0310
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0349	0.0280	0.0383	0.0315	0.0337	0.0352	0.0349	0.0329	0.0320	0.0309	0.0310
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 440: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

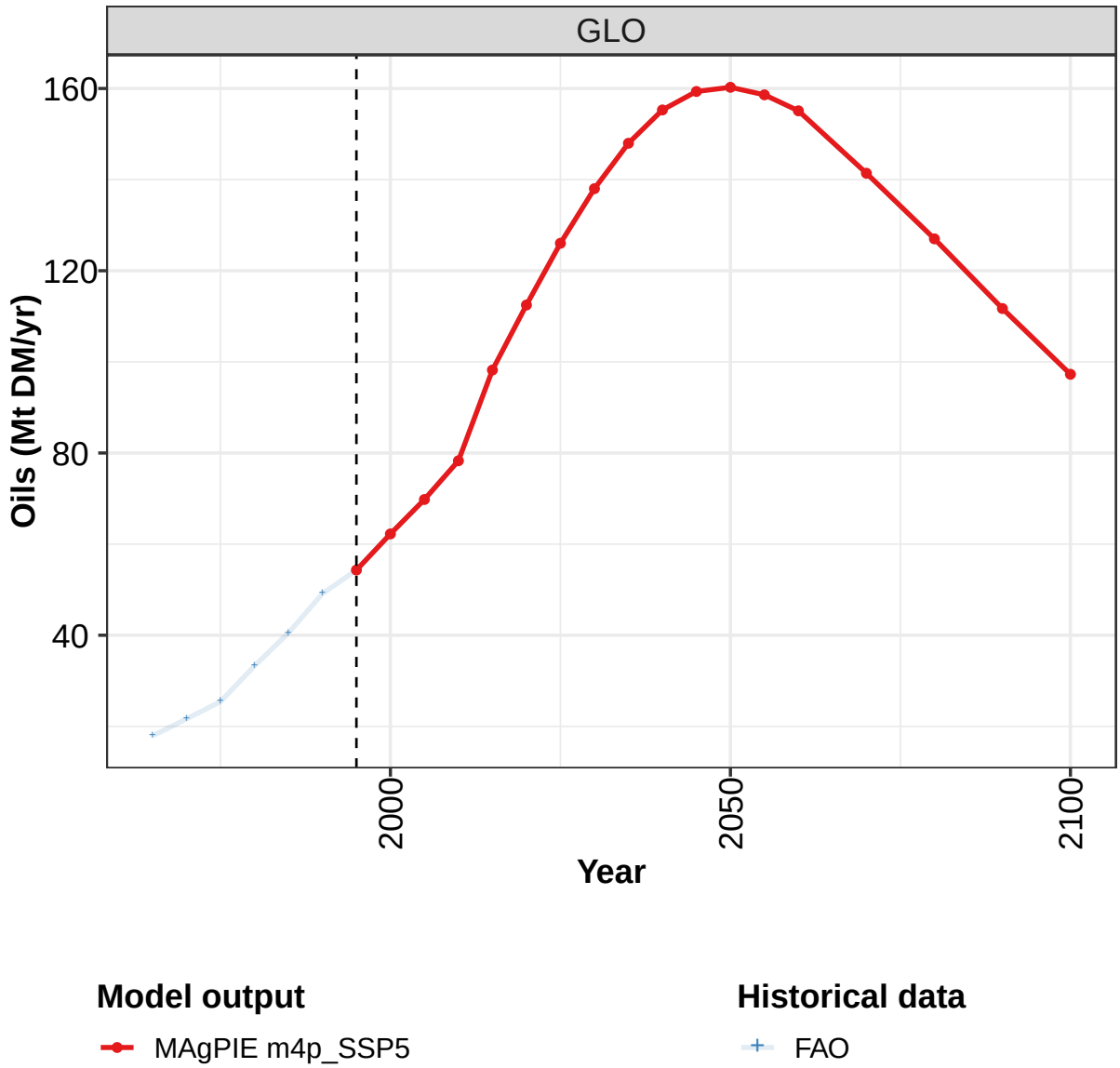
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0309	0.0306	0.0316	0.0316	0.0323	0.0311	0.0306
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0309	0.0306	0.0316	0.0316	0.0323	0.0311	0.0306
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

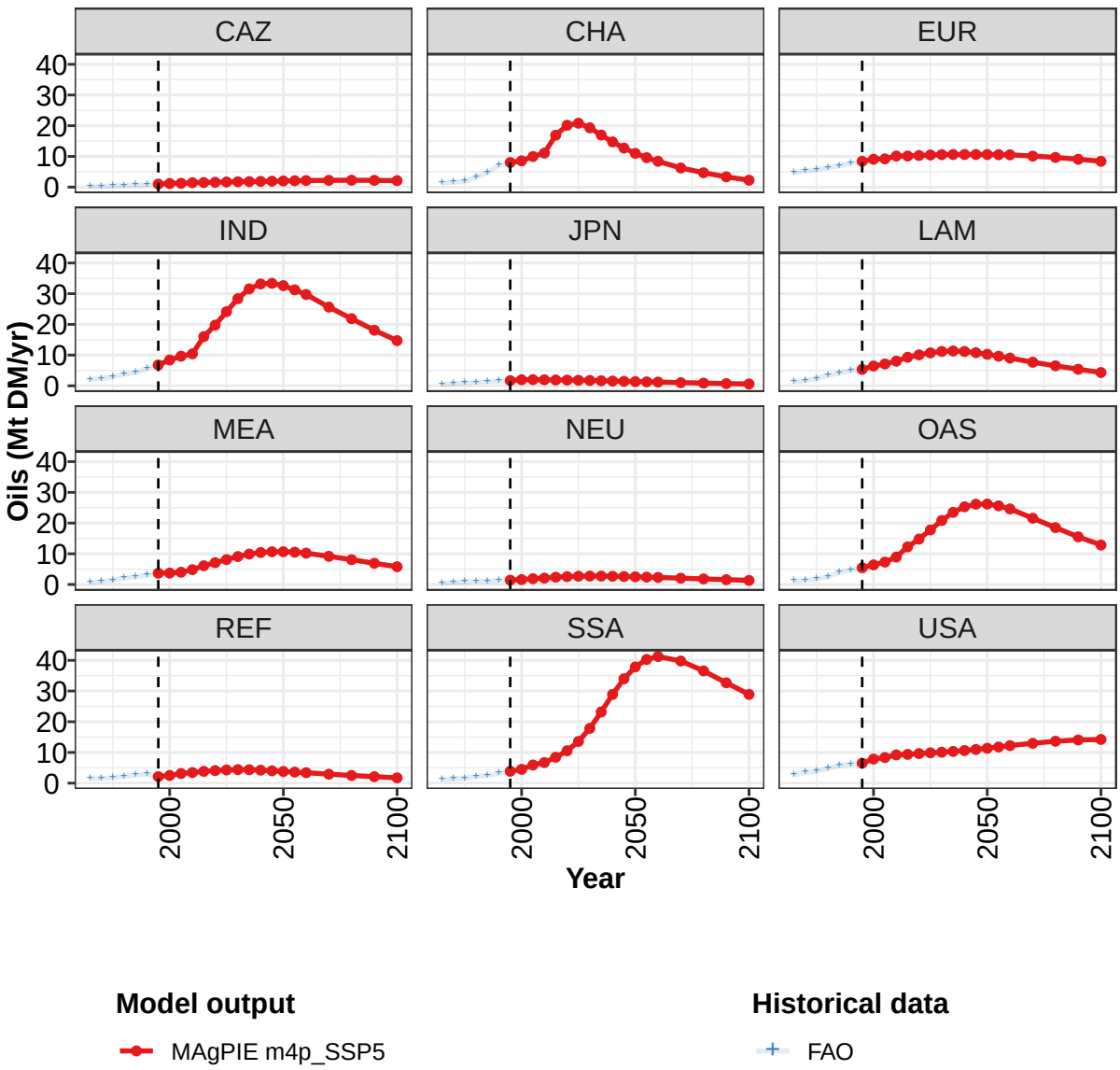
Table 441: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Molasses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0030	0.0044	0.0053	0.0129	0.0278	0.0250	0.0351	0.0279	0.0379	0.0314
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0030	0.0044	0.0053	0.0129	0.0278	0.0250	0.0351	0.0279	0.0379	0.0314
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 442: FAO — Demand—Food—Secondary products—Molasses (Mt DM/yr)

7.4.4 Oils


GLO
160
120
80
40
Oils (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



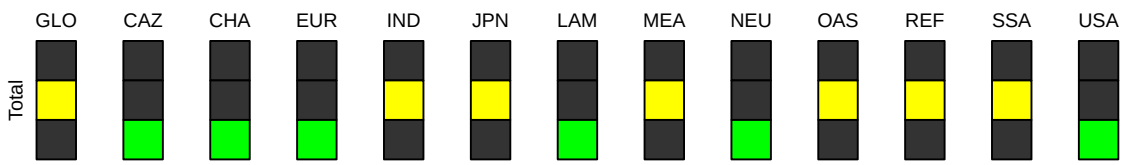


Figure 148: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	54	62	70	78	98	112	126	138	148	155	159
CAZ	1	1	1	1	2	2	2	2	2	2	2
CHA	8	9	10	11	17	20	21	19	17	15	13
EUR	8	9	9	10	10	10	10	11	11	11	11
IND	7	8	10	10	16	20	24	28	32	33	33
JPN	2	2	2	2	2	2	2	2	2	2	1
LAM	5	6	7	8	9	10	11	11	11	11	11
MEA	4	4	4	5	6	7	8	9	10	10	11
NEU	1	2	2	2	2	3	3	3	3	3	3
OAS	5	6	7	9	12	15	18	21	23	25	26
REF	2	3	3	3	4	4	4	4	4	4	4
SSA	4	5	6	7	8	11	14	18	23	29	34
USA	7	8	8	9	9	10	10	10	10	11	11

Table 443: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Oils (Mt DM/yr) [PART 1/2]

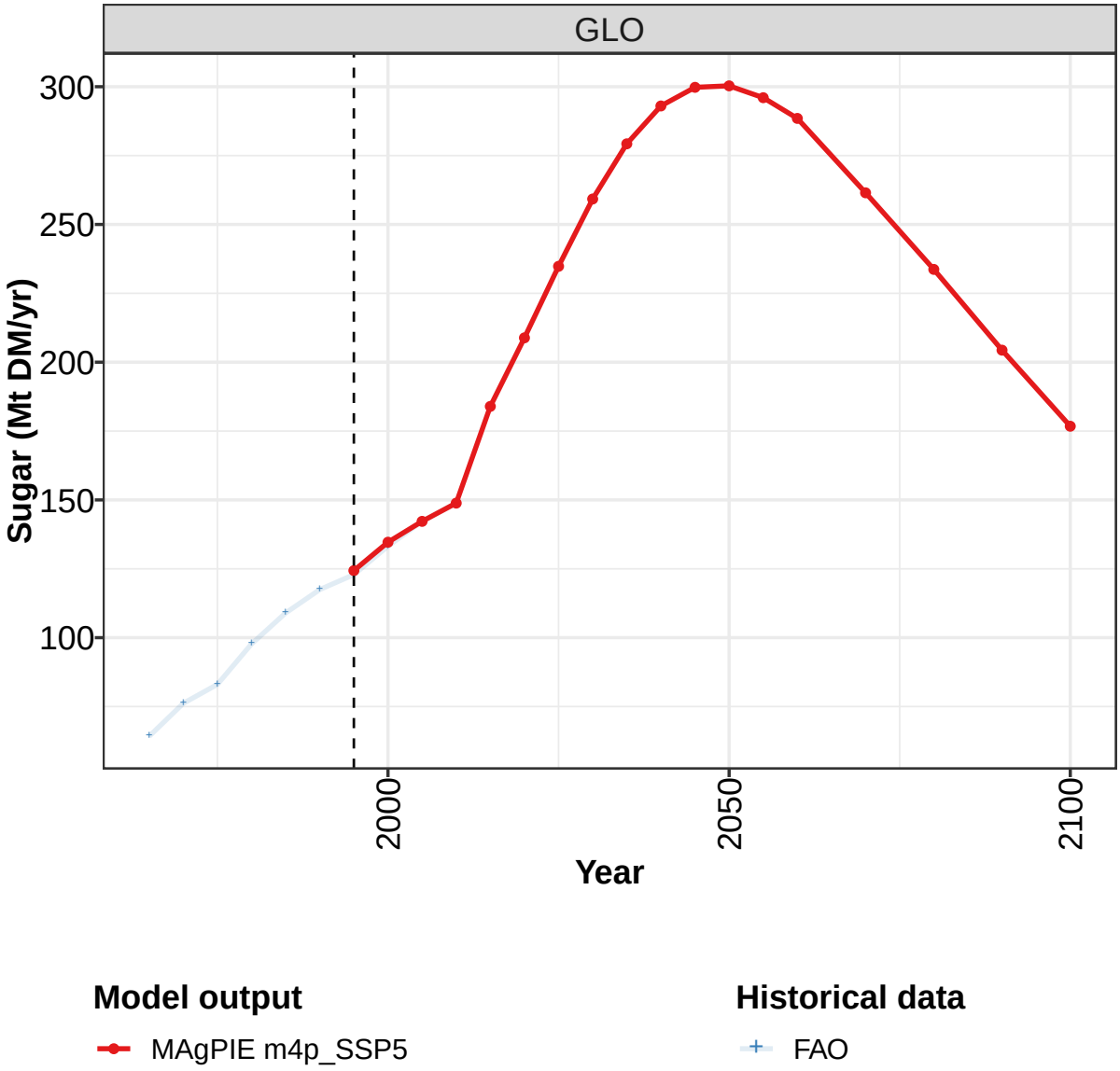
	2050	2055	2060	2070	2080	2090	2100
GLO	160	159	155	141	127	112	97
CAZ	2	2	2	2	2	2	2
CHA	11	10	8	6	5	3	2
EUR	11	11	11	10	10	9	8
IND	33	31	30	26	22	18	15
JPN	1	1	1	1	1	1	1
LAM	10	10	9	8	7	5	4
MEA	11	11	10	9	8	7	6
NEU	3	2	2	2	2	2	1
OAS	26	26	25	22	19	16	13
REF	4	4	3	3	3	2	2
SSA	38	40	41	40	37	33	29
USA	11	12	12	13	14	14	14

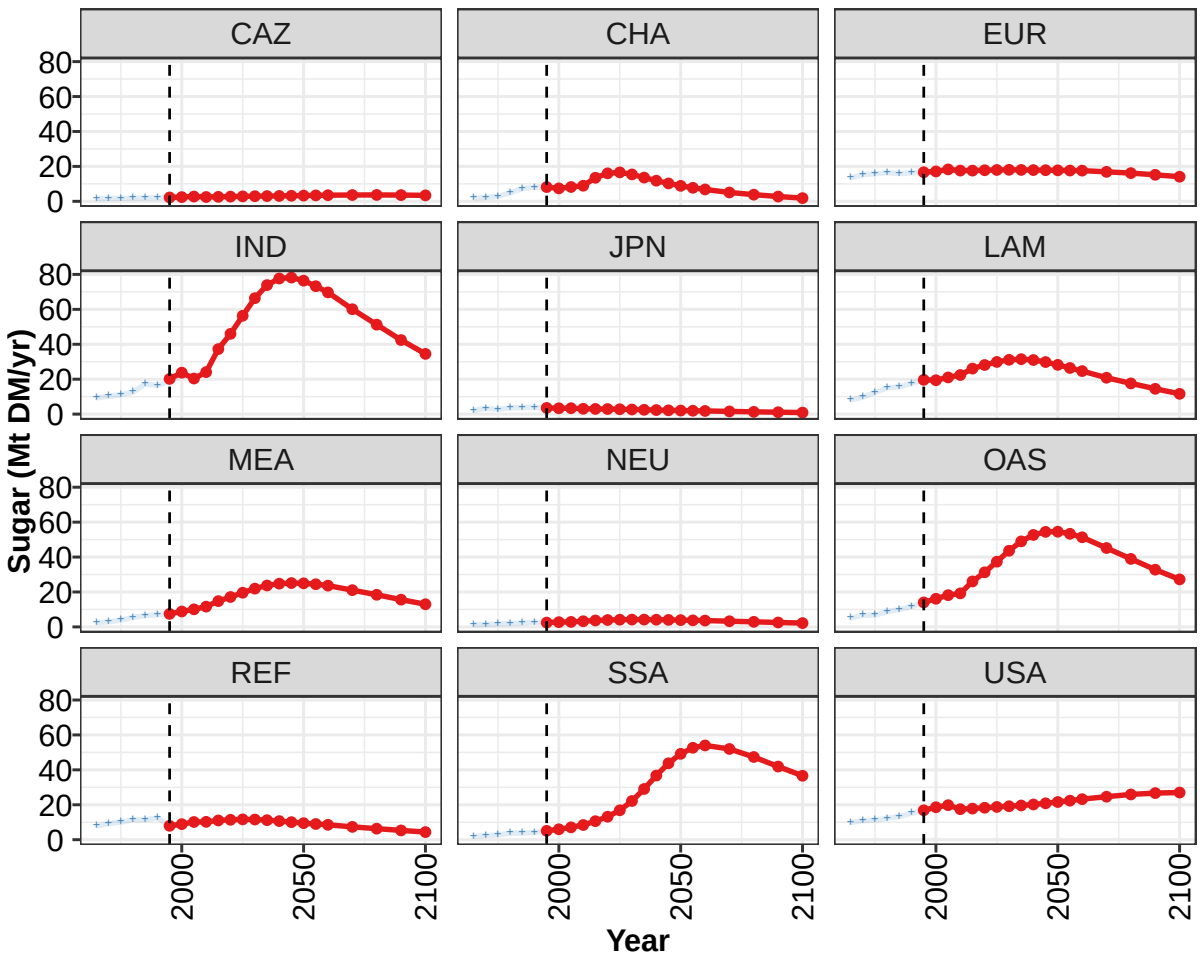
Table 444: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Oils (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	17.9	21.6	25.4	33.2	40.5	49.1	54.3	62.2	69.8	78.3
CAZ	0.2	0.3	0.4	0.5	0.7	0.8	1.0	1.2	1.3	1.4
CHA	1.3	1.6	1.9	3.2	4.7	7.1	8.0	8.6	10.0	11.1
EUR	4.6	5.3	5.6	6.3	7.0	7.8	8.4	9.1	9.2	10.1
IND	2.1	2.3	3.0	3.8	4.3	5.6	6.8	8.4	9.6	10.4
JPN	0.5	0.7	1.0	1.2	1.4	1.6	1.7	2.0	2.0	2.0
LAM	1.3	1.7	2.4	3.4	4.2	5.0	5.3	6.4	7.1	8.0
MEA	0.8	1.0	1.4	2.1	2.4	3.1	3.7	3.7	4.0	4.8
NEU	0.5	0.7	0.8	1.0	1.1	1.3	1.4	1.6	1.9	2.1
OAS	1.2	1.4	1.8	2.6	3.9	4.7	5.4	6.3	7.3	8.9
REF	1.6	1.6	1.7	2.2	2.7	2.9	2.1	2.5	3.1	3.5
SSA	1.3	1.4	1.6	2.2	2.5	3.2	3.9	4.5	5.9	6.7
USA	2.7	3.5	3.9	4.7	5.7	6.1	6.5	7.9	8.4	9.2

Table 445: FAO — Demand—Food—Secondary products—Oils (Mt DM/yr)

7.4.5 Sugar


GLO
Sugar (Mt DM/yr)
300
250
200
150
100
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

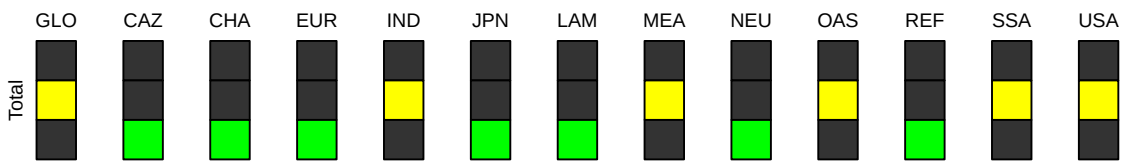


Figure 149: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	124	135	142	149	184	209	235	259	279	293	300
CAZ	2	2	3	2	3	3	3	3	3	3	3
CHA	8	7	8	9	14	16	17	15	14	12	10
EUR	17	17	18	18	18	18	18	18	18	18	18
IND	20	24	20	24	37	46	56	66	74	78	78
JPN	4	3	3	3	3	3	3	3	2	2	2
LAM	20	19	21	22	26	28	30	31	31	31	30
MEA	7	9	10	12	15	17	20	22	24	25	25
NEU	2	3	3	3	4	4	4	4	4	4	4
OAS	14	16	18	19	26	31	37	44	49	53	54
REF	8	9	10	10	11	11	12	12	11	11	10
SSA	5	6	7	8	11	13	17	22	29	37	44
USA	17	19	20	17	18	18	19	19	20	20	21

Table 446: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

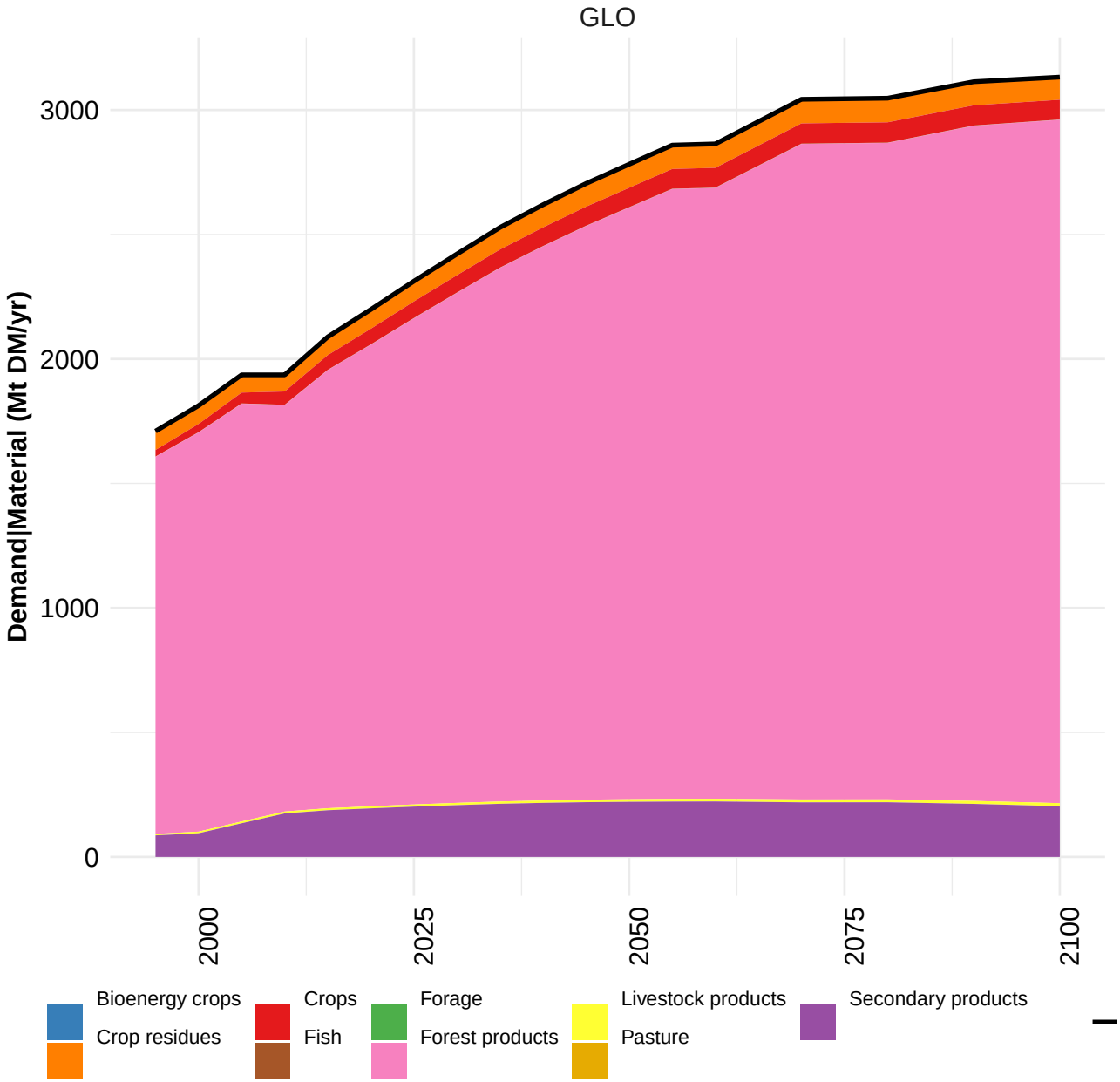
	2050	2055	2060	2070	2080	2090	2100
GLO	300	296	289	261	234	204	177
CAZ	3	3	4	4	4	4	3
CHA	9	8	7	5	4	3	2
EUR	18	18	18	17	16	15	14
IND	76	73	70	60	51	42	34
JPN	2	2	2	2	1	1	1
LAM	28	26	25	21	18	14	12
MEA	25	24	24	21	18	16	13
NEU	4	4	4	3	3	3	2
OAS	55	53	51	45	39	33	27
REF	9	9	9	7	6	5	4
SSA	49	53	54	52	47	42	37
USA	22	22	23	25	26	27	27

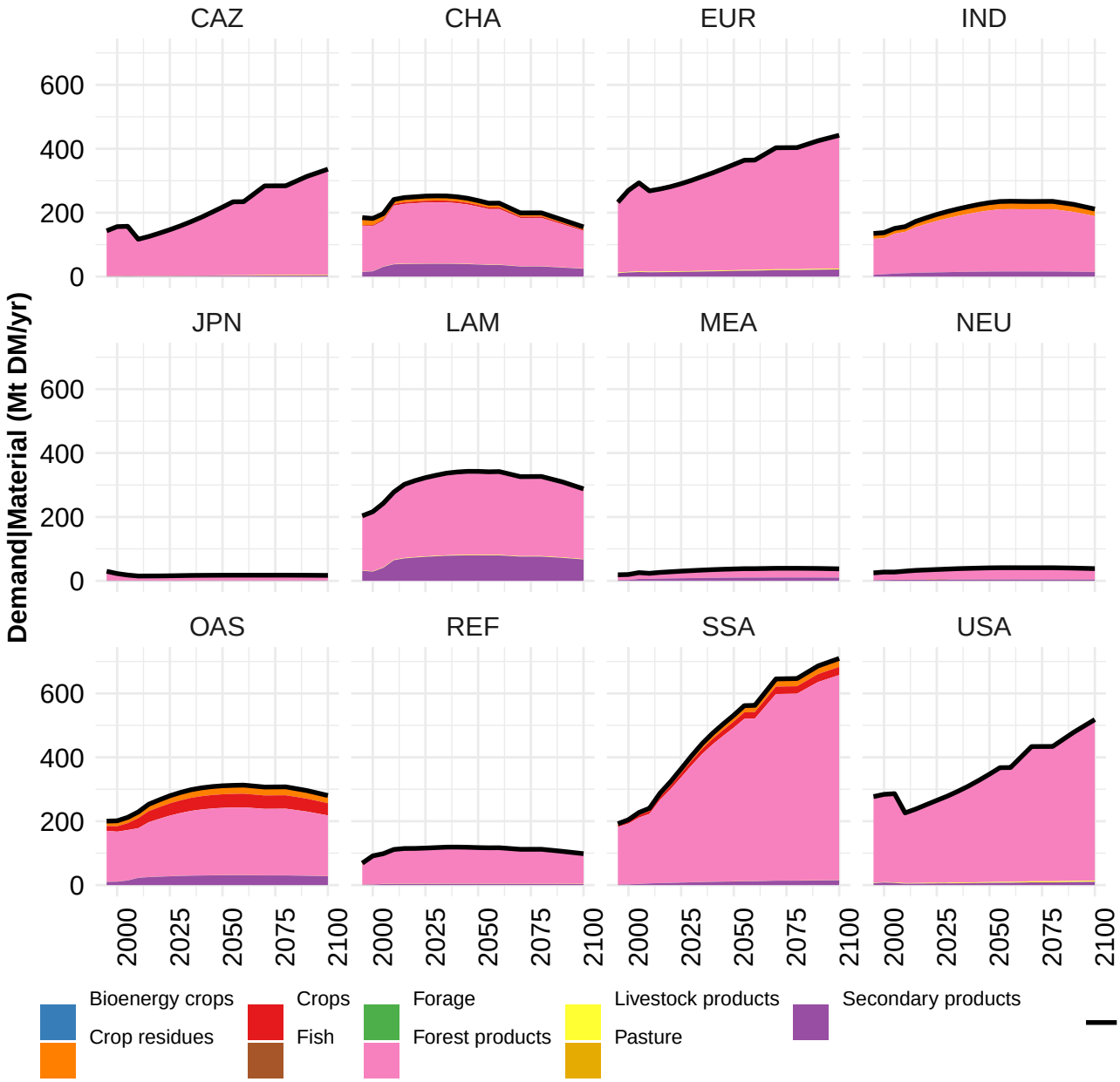
Table 447: MAgPIE m4p_SSP5 — Demand—Food—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

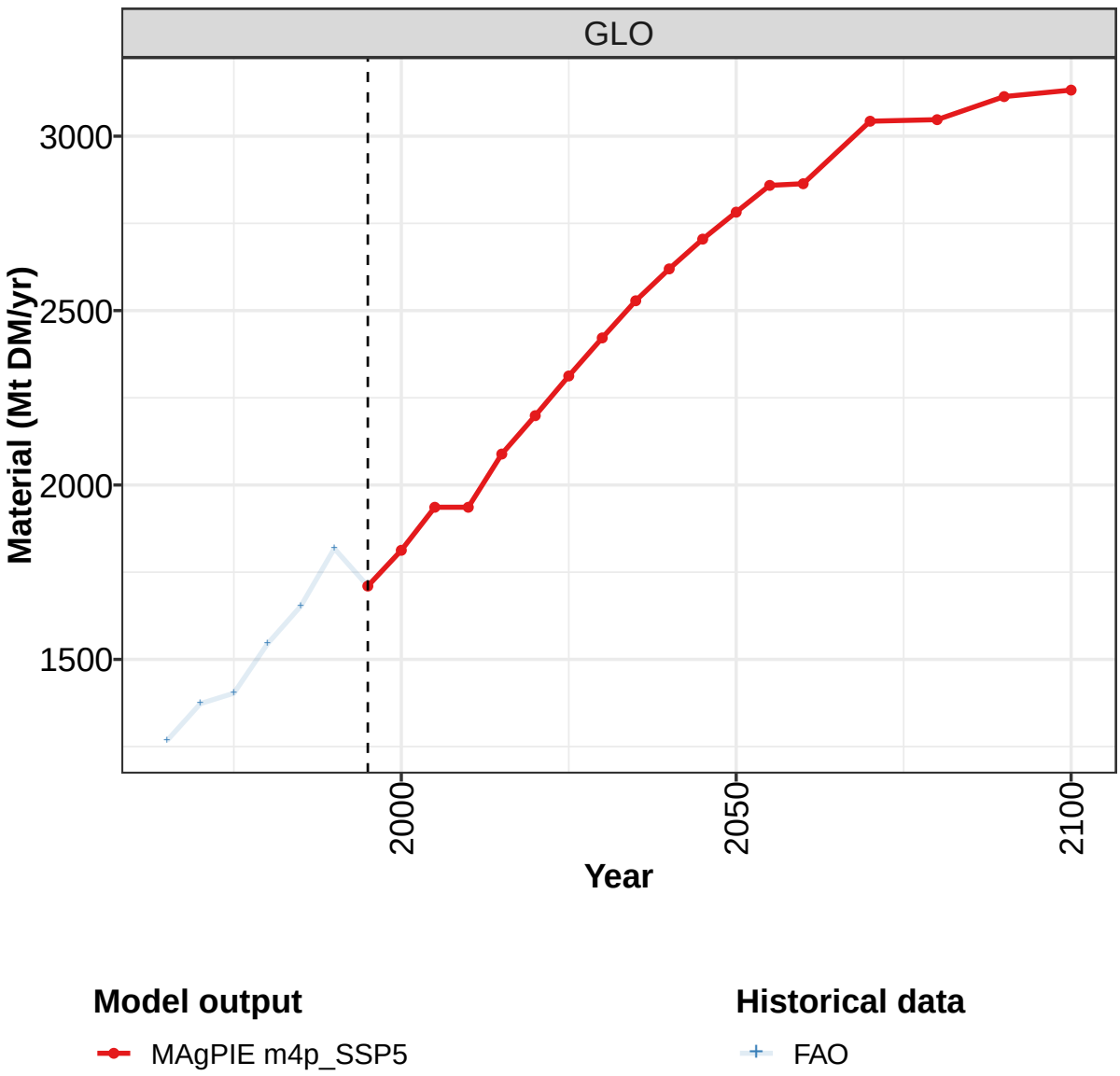
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	64	76	83	98	109	117	123	133	142	149
CAZ	2	2	2	2	2	2	2	2	3	2
CHA	2	2	3	5	7	8	8	7	8	9
EUR	13	15	16	16	16	16	17	17	18	18
IND	9	10	11	13	17	16	19	22	20	24
JPN	2	3	3	4	4	4	4	3	3	3
LAM	8	10	12	15	16	18	20	19	21	22
MEA	2	3	4	5	6	7	7	9	10	12
NEU	1	1	2	2	2	3	2	3	3	3
OAS	5	7	7	9	10	12	14	16	18	19
REF	8	9	10	11	11	13	8	9	10	10
SSA	2	2	3	4	4	4	5	6	7	8
USA	10	11	11	12	13	15	17	19	20	17

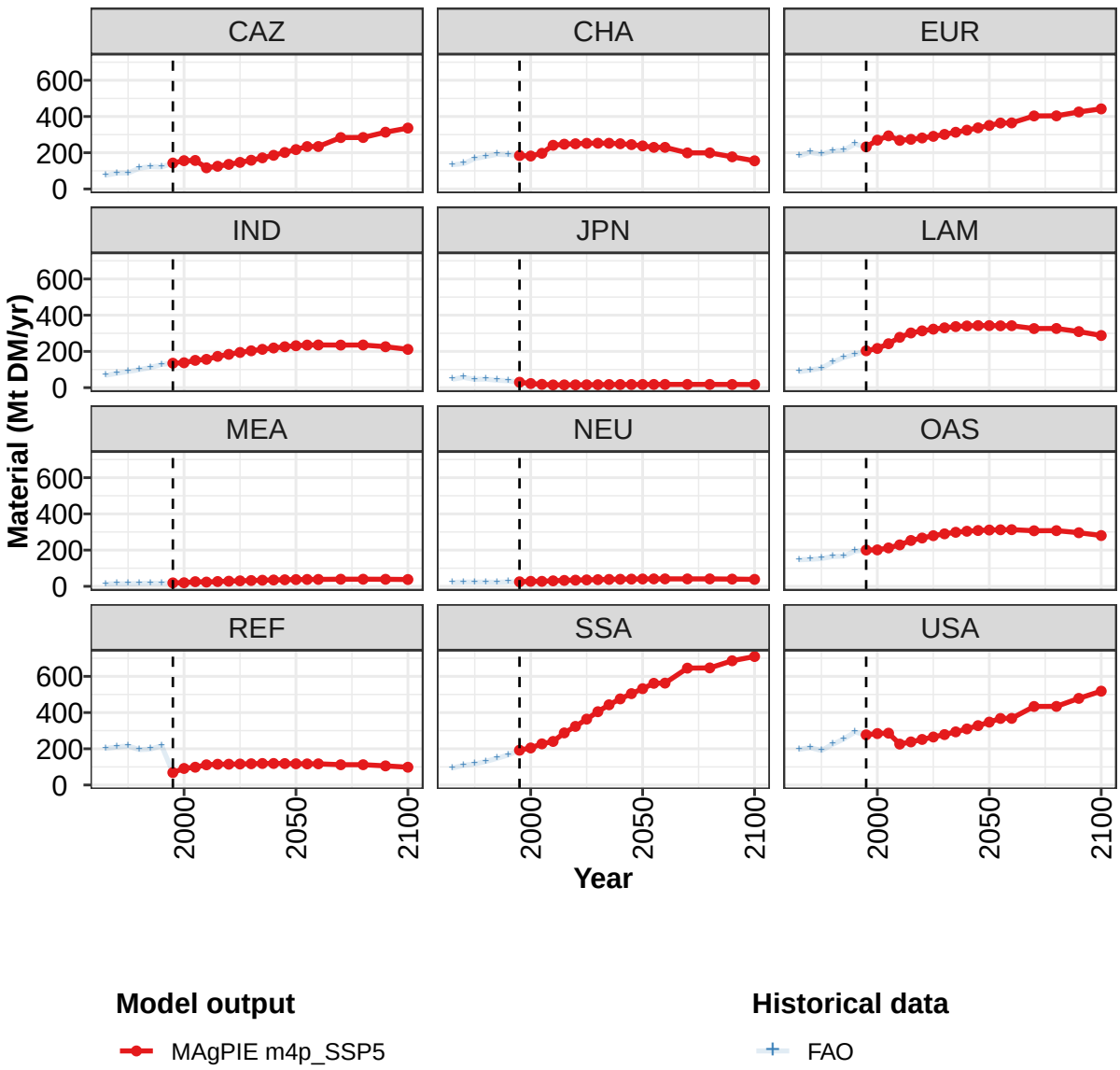
Table 448: FAO — Demand—Food—Secondary products—Sugar (Mt DM/yr)

8 Material


GLO
Demand|Material (Mt DM/yr)
3000
2000
1000
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Material (Mt DM/yr)
0
200
400
600
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
Material (Mt DM/yr)
3000
2500
2000
1500
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



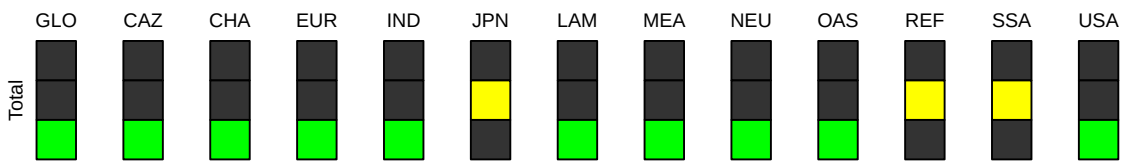


Figure 150: MAgPIE m4p_SSP5 — Demand—Material (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1710	1813	1936	1936	2089	2199	2313	2422	2528	2620	2705
CAZ	143	156	157	117	125	136	147	159	172	186	201
CHA	184	182	197	241	247	250	252	253	252	250	245
EUR	233	270	293	268	274	281	291	301	313	325	337
IND	135	137	151	156	173	184	194	203	212	219	226
JPN	30	23	18	15	15	15	16	16	17	17	17
LAM	203	216	243	278	302	314	323	330	337	341	343
MEA	19	20	26	23	26	28	30	32	34	35	36
NEU	25	27	28	30	33	34	36	37	38	39	40
OAS	200	201	212	229	253	267	280	290	298	304	308
REF	69	91	98	112	115	115	116	117	119	119	118
SSA	192	204	227	241	288	324	364	405	443	476	504
USA	277	284	286	226	238	252	265	278	293	310	328

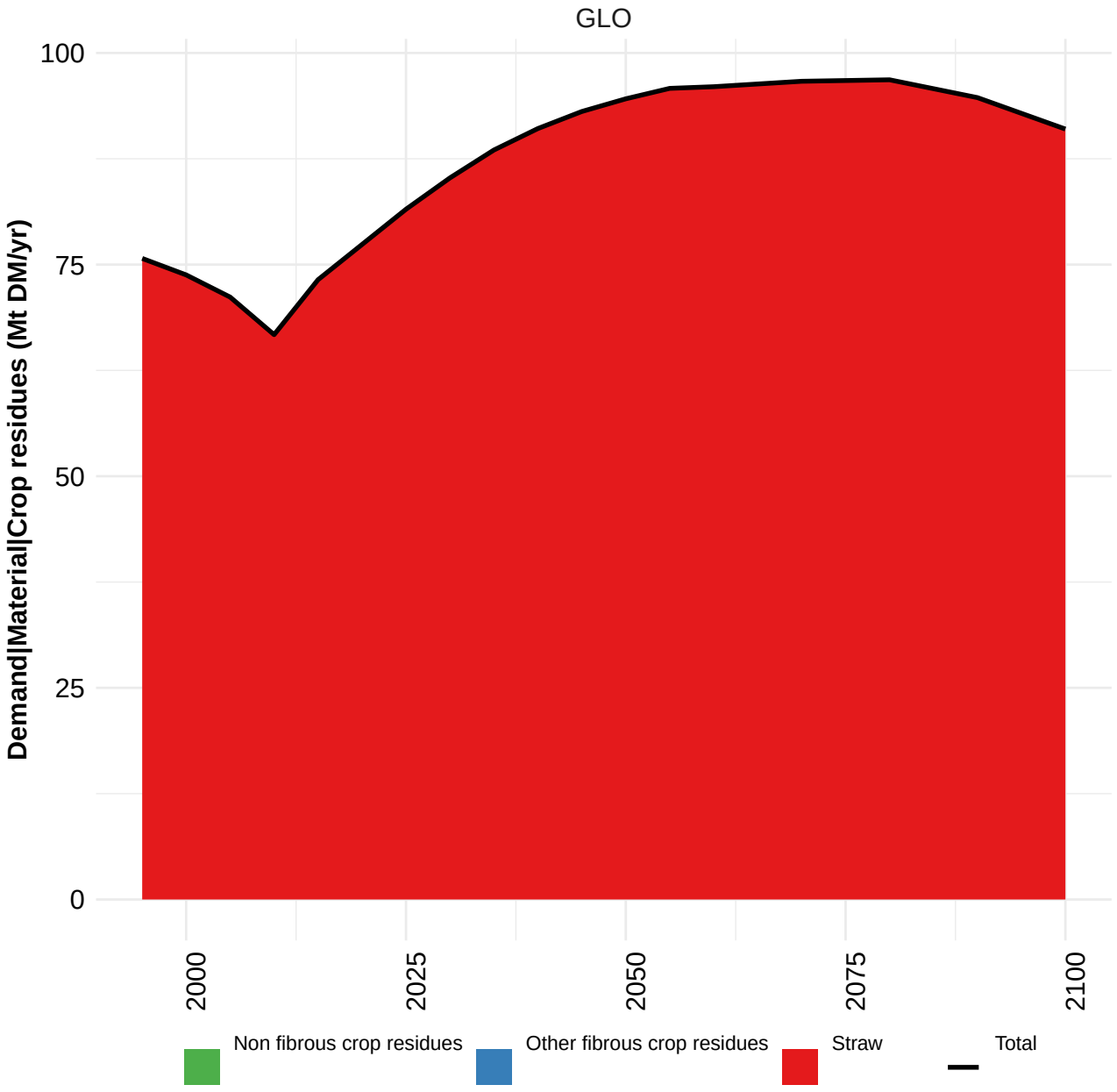
Table 449: MAgPIE m4p_SSP5 — Demand—Material (Mt DM/yr) [PART 1/2]

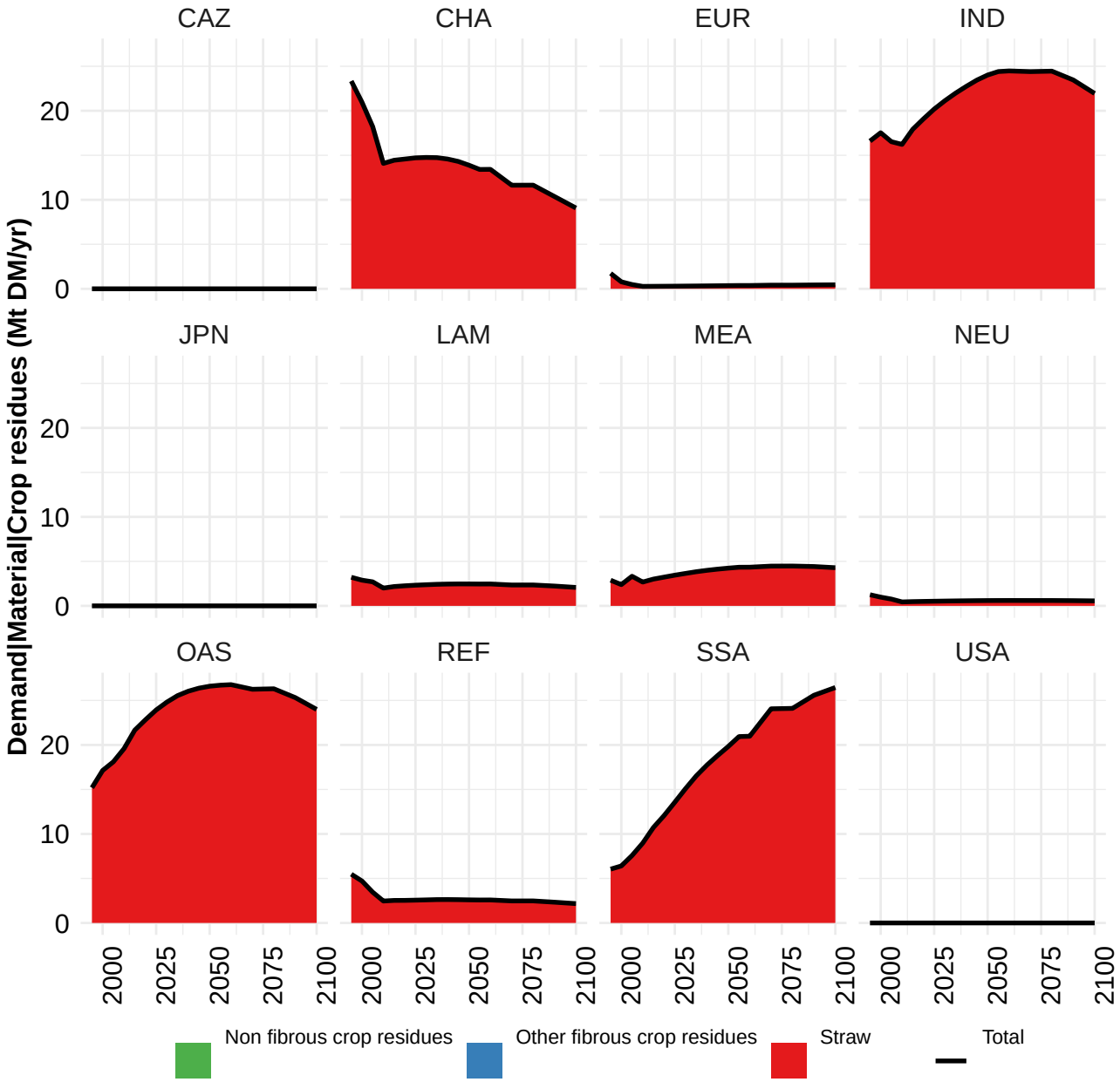
	2050	2055	2060	2070	2080	2090	2100
GLO	2782	2859	2864	3043	3047	3113	3132
CAZ	217	234	234	284	284	313	336
CHA	238	230	230	199	199	177	155
EUR	351	364	365	403	404	425	442
IND	231	235	236	235	235	226	211
JPN	18	18	18	18	18	17	17
LAM	343	341	342	326	327	310	288
MEA	37	38	38	39	39	39	38
NEU	41	41	41	41	41	40	38
OAS	311	312	313	307	307	296	280
REF	117	117	117	112	112	106	98
SSA	532	562	563	645	647	686	709
USA	347	368	368	434	434	478	518

Table 450: MAgPIE m4p_SSP5 — Demand—Material (Mt DM/yr) [PART 2/2]

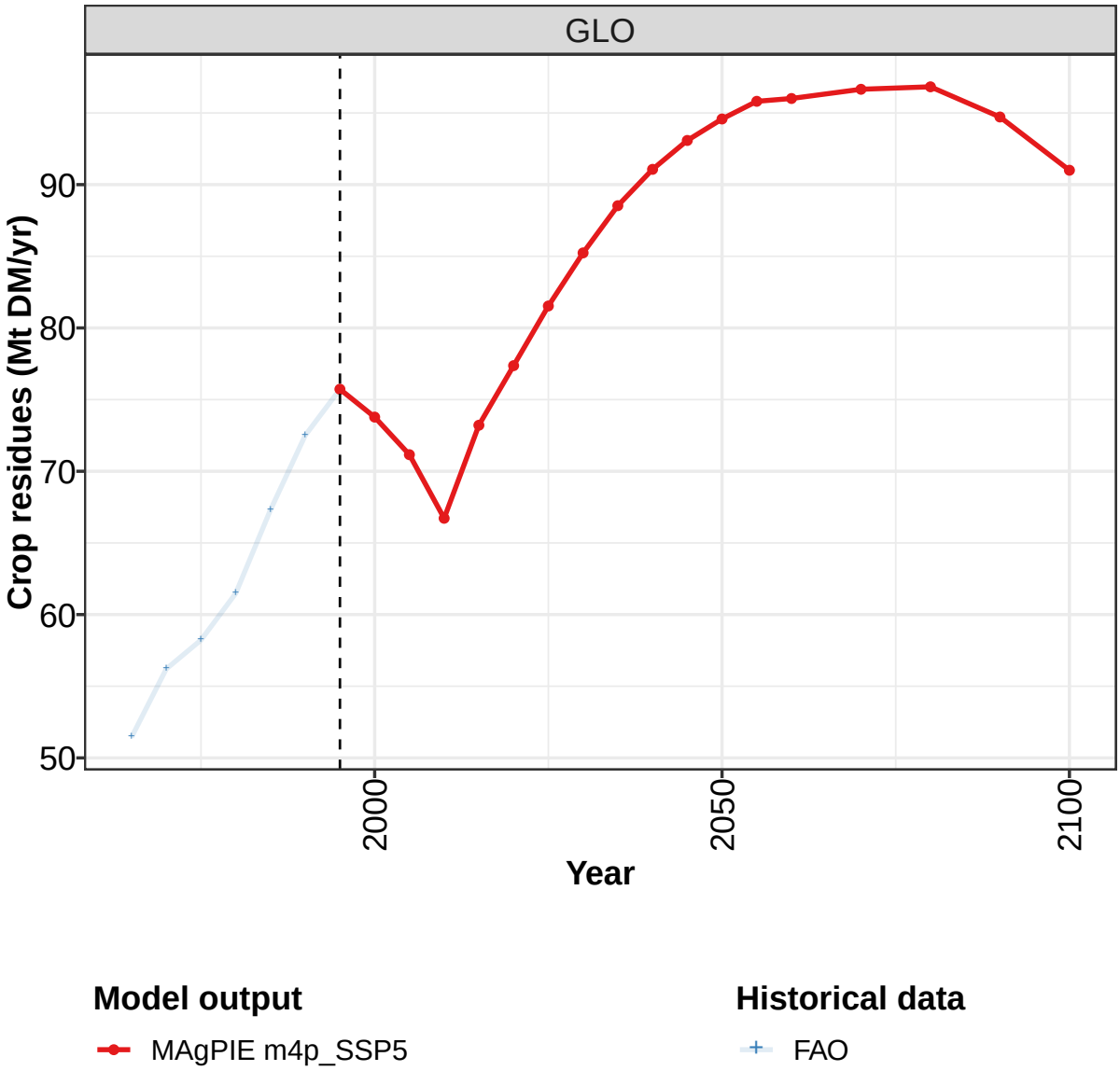
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1267	1373	1403	1544	1653	1818	1710	1813	1936	1936
CAZ	75	87	88	115	124	121	143	156	157	117
CHA	134	140	168	179	191	189	184	182	197	241
EUR	182	202	192	210	213	248	233	270	293	268
IND	68	79	89	99	111	128	135	137	151	156
JPN	46	57	46	47	41	38	30	23	18	15
LAM	88	97	107	141	166	184	203	216	243	278
MEA	13	14	14	16	17	16	19	20	26	23
NEU	21	24	23	23	22	24	25	27	28	30
OAS	147	149	153	164	167	194	200	201	212	229
REF	202	210	216	195	198	216	69	91	98	112
SSA	94	108	116	130	147	166	192	204	227	241
USA	196	207	190	224	254	292	277	284	286	226

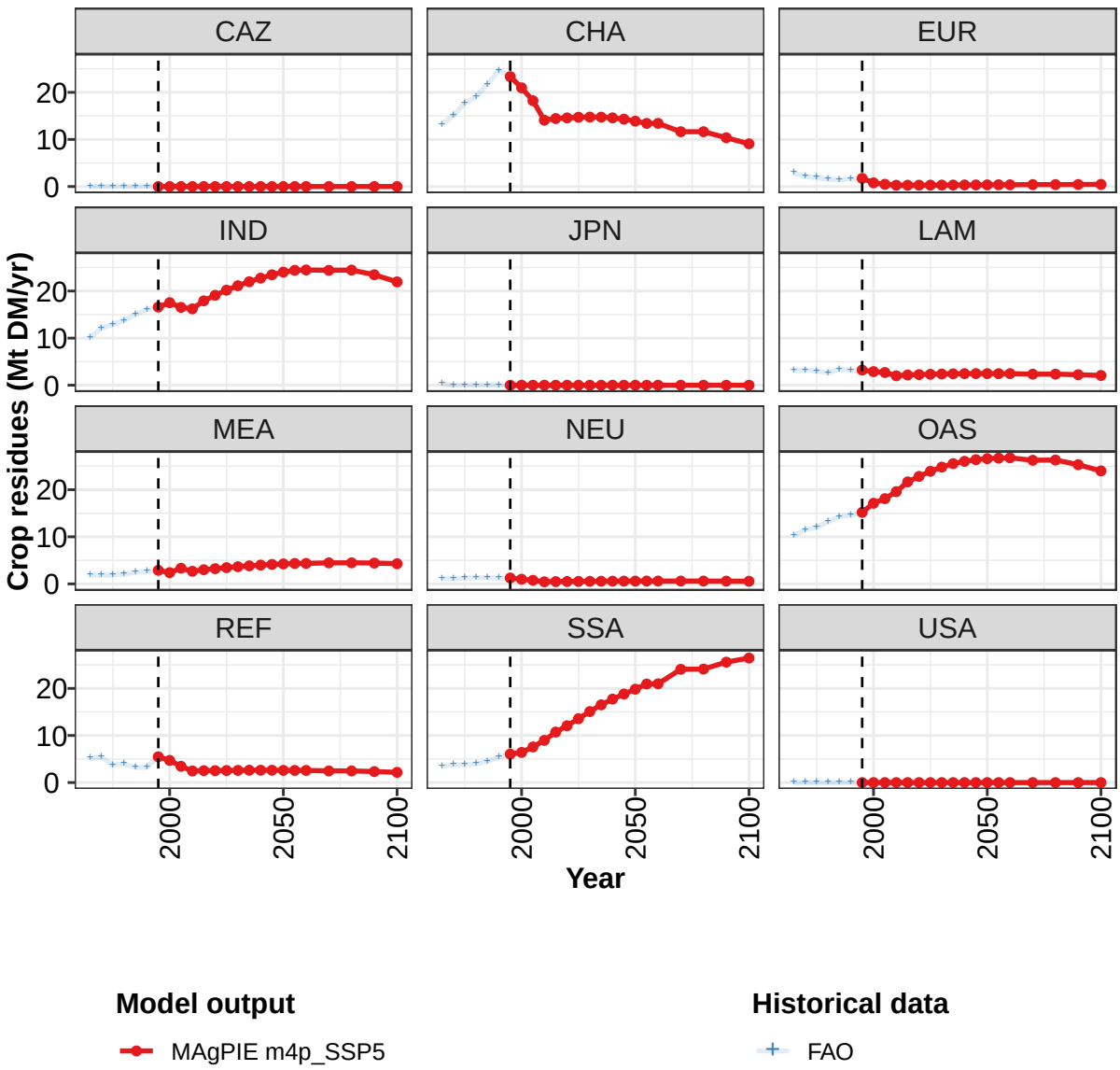
Table 451: FAO — Demand—Material (Mt DM/yr)


GLO
Demand|Material|Crop residues (Mt DM/yr)
100
75
50
25
0
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Material|Crop residues (Mt DM/yr)
0
10
20
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

8.1 Crop residues





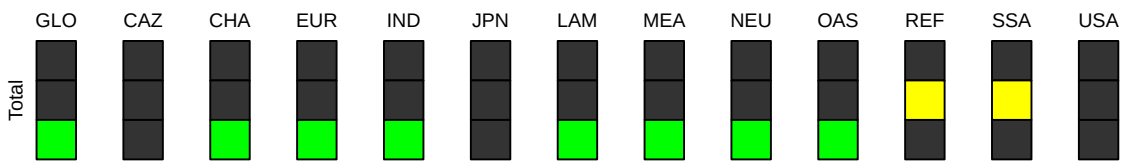


Figure 151: MAgPIE m4p_SSP5 — Demand—Material—Crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	75.7	73.8	71.2	66.7	73.2	77.4	81.5	85.2	88.5	91.1	93.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	23.3	21.0	18.2	14.1	14.4	14.6	14.7	14.8	14.7	14.6	14.3
EUR	1.7	0.8	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IND	16.6	17.5	16.5	16.2	17.9	19.1	20.2	21.1	22.0	22.7	23.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.2	2.9	2.7	2.0	2.2	2.3	2.3	2.4	2.4	2.5	2.5
MEA	2.9	2.4	3.3	2.7	3.0	3.2	3.4	3.6	3.8	4.0	4.1
NEU	1.3	1.0	0.8	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6
OAS	15.2	17.1	18.1	19.6	21.7	22.8	23.9	24.8	25.5	26.0	26.4
REF	5.5	4.7	3.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6
SSA	6.0	6.4	7.6	9.0	10.7	12.1	13.6	15.1	16.5	17.7	18.8
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 452: MAgPIE m4p_SSP5 — Demand—Material—Crop residues (Mt DM/yr) [PART 1/2]

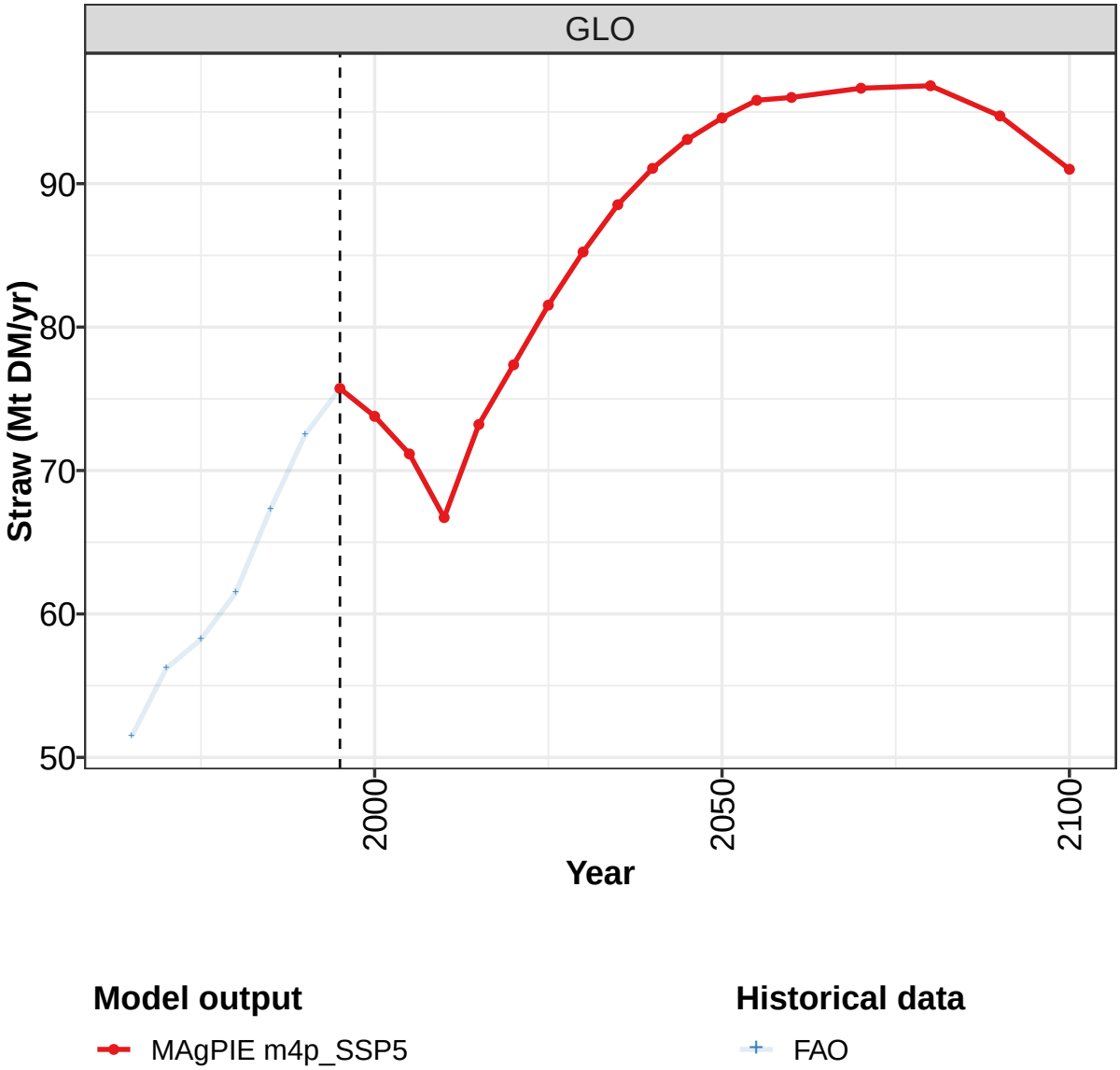
	2050	2055	2060	2070	2080	2090	2100
GLO	94.6	95.8	96.0	96.7	96.8	94.7	91.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	13.9	13.4	13.4	11.6	11.6	10.4	9.1
EUR	0.4	0.4	0.4	0.4	0.4	0.4	0.4
IND	24.0	24.4	24.5	24.4	24.5	23.5	21.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.5	2.5	2.5	2.3	2.3	2.2	2.1
MEA	4.2	4.3	4.3	4.5	4.5	4.4	4.3
NEU	0.6	0.6	0.6	0.6	0.6	0.6	0.6
OAS	26.6	26.7	26.8	26.3	26.3	25.3	24.0
REF	2.6	2.6	2.6	2.5	2.5	2.3	2.2
SSA	19.8	20.9	21.0	24.1	24.1	25.6	26.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

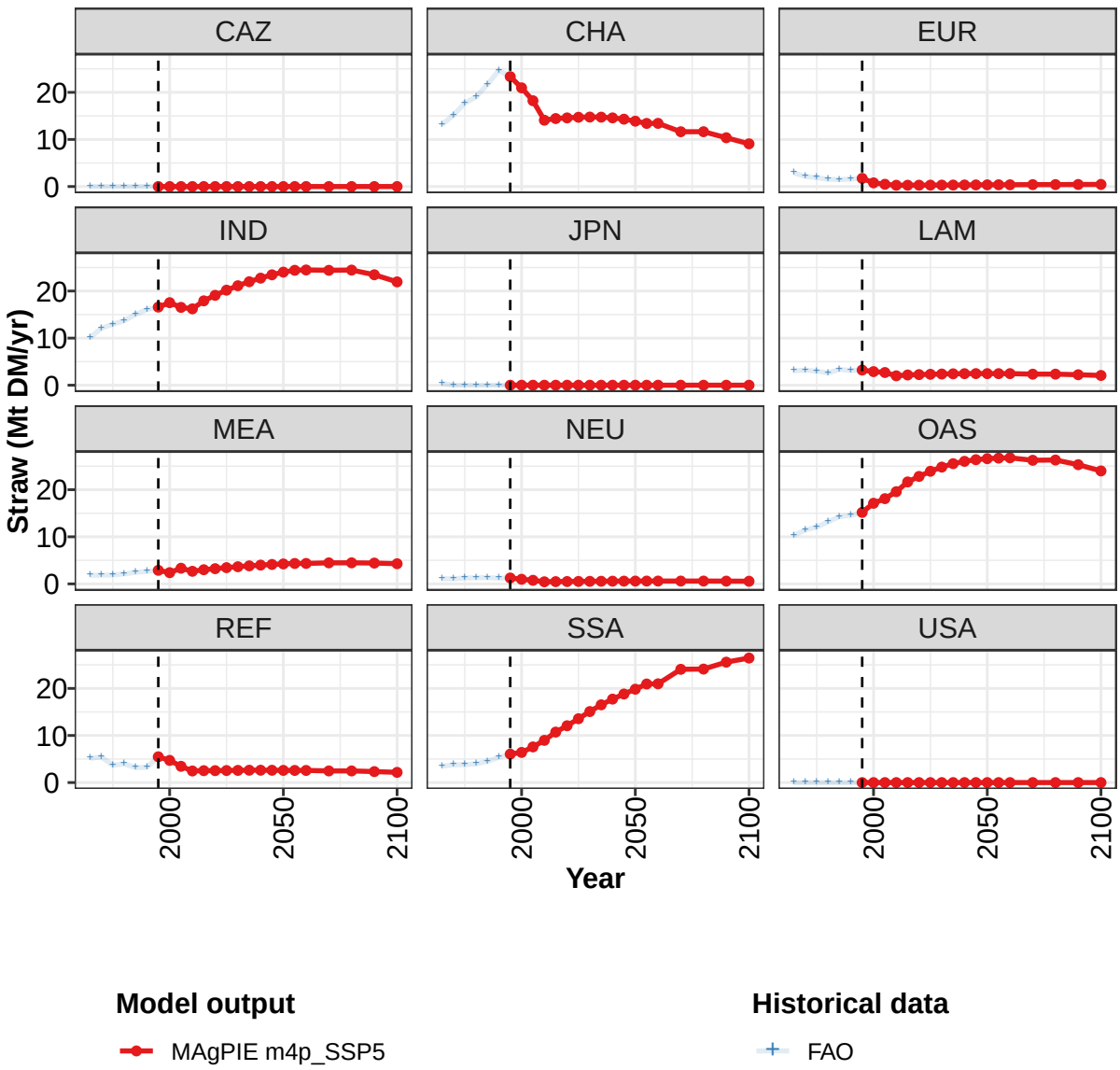
Table 453: MAgPIE m4p_SSP5 — Demand—Material—Crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	51.4	56.2	58.2	61.5	67.3	72.5	75.7	73.8	71.2	66.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	13.2	15.1	17.7	19.1	21.7	24.7	23.3	21.0	18.2	14.1
EUR	2.9	2.1	1.9	1.5	1.5	1.6	1.7	0.8	0.5	0.3
IND	10.1	12.1	12.9	13.7	15.0	16.1	16.6	17.5	16.5	16.2
JPN	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.1	3.2	3.0	2.6	3.4	3.1	3.2	2.9	2.7	2.0
MEA	1.8	1.8	1.9	2.1	2.5	2.6	2.9	2.4	3.3	2.7
NEU	1.1	1.1	1.3	1.3	1.3	1.2	1.3	1.0	0.8	0.4
OAS	10.3	11.5	12.1	13.2	14.3	14.6	15.2	17.1	18.1	19.6
REF	5.2	5.4	3.7	4.0	3.2	3.2	5.5	4.7	3.5	2.5
SSA	3.5	3.8	3.8	4.0	4.5	5.4	6.0	6.4	7.6	9.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 454: FAO — Demand—Material—Crop residues (Mt DM/yr)

8.1.1 Straw


GLO
Straw (Mt DM/yr)
90
80
70
60
50
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



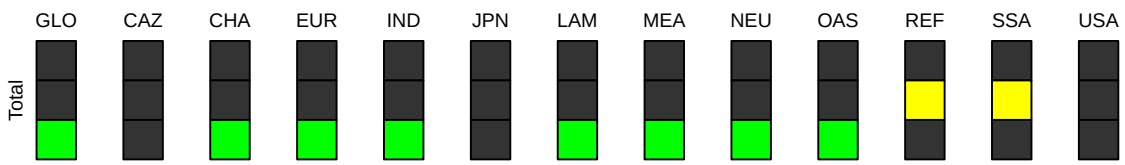


Figure 152: MAgPIE m4p_SSP5 — Demand—Material—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	75.7	73.8	71.2	66.7	73.2	77.4	81.5	85.2	88.5	91.1	93.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	23.3	21.0	18.2	14.1	14.4	14.6	14.7	14.8	14.7	14.6	14.3
EUR	1.7	0.8	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IND	16.6	17.5	16.5	16.2	17.9	19.1	20.2	21.1	22.0	22.7	23.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.2	2.9	2.7	2.0	2.2	2.3	2.3	2.4	2.4	2.5	2.5
MEA	2.9	2.4	3.3	2.7	3.0	3.2	3.4	3.6	3.8	4.0	4.1
NEU	1.3	1.0	0.8	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6
OAS	15.2	17.1	18.1	19.6	21.7	22.8	23.9	24.8	25.5	26.0	26.4
REF	5.5	4.7	3.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6
SSA	6.0	6.4	7.6	9.0	10.7	12.1	13.6	15.1	16.5	17.7	18.8
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

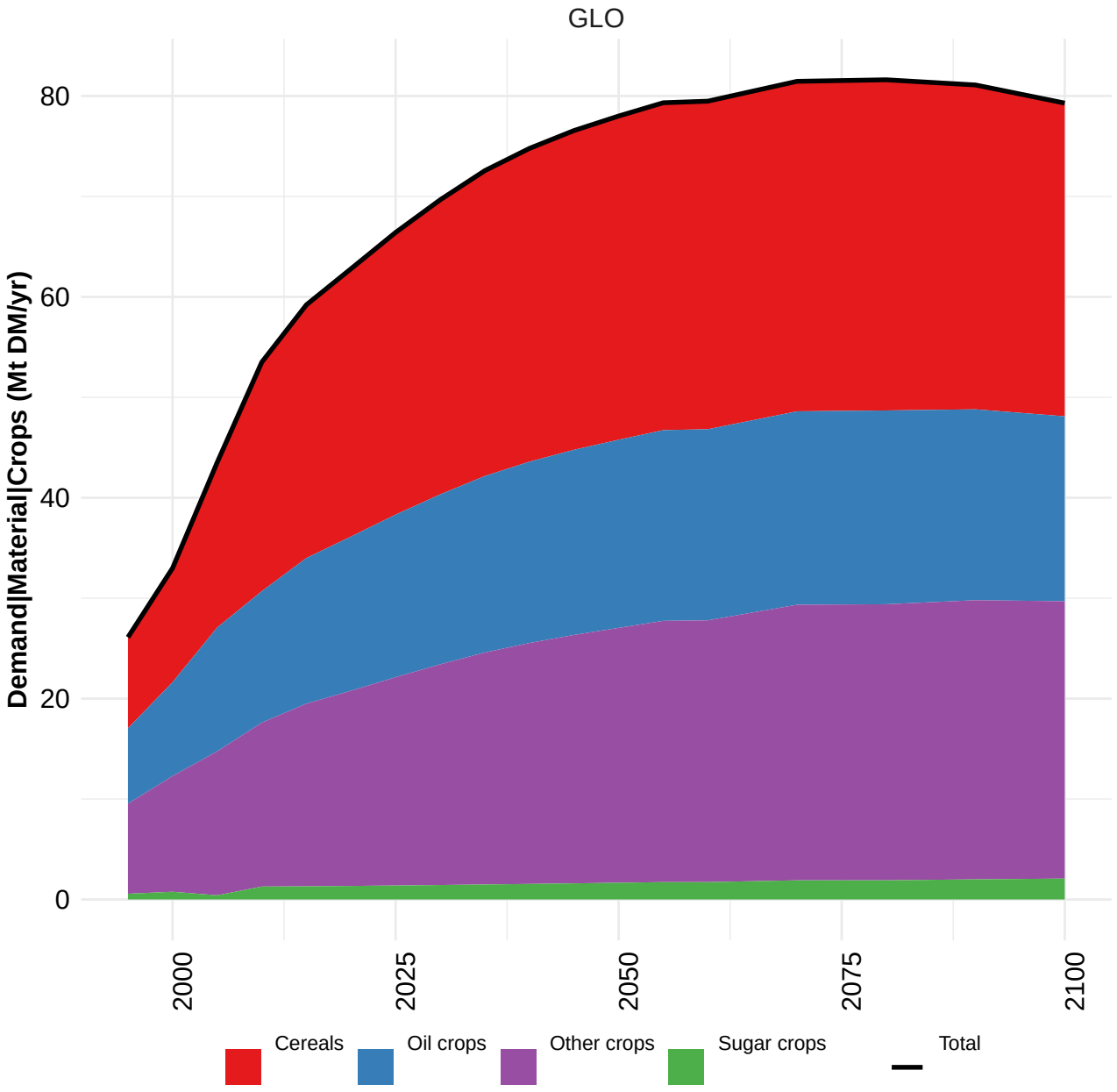
Table 455: MAgPIE m4p_SSP5 — Demand—Material—Crop residues—Straw (Mt DM/yr) [PART 1/2]

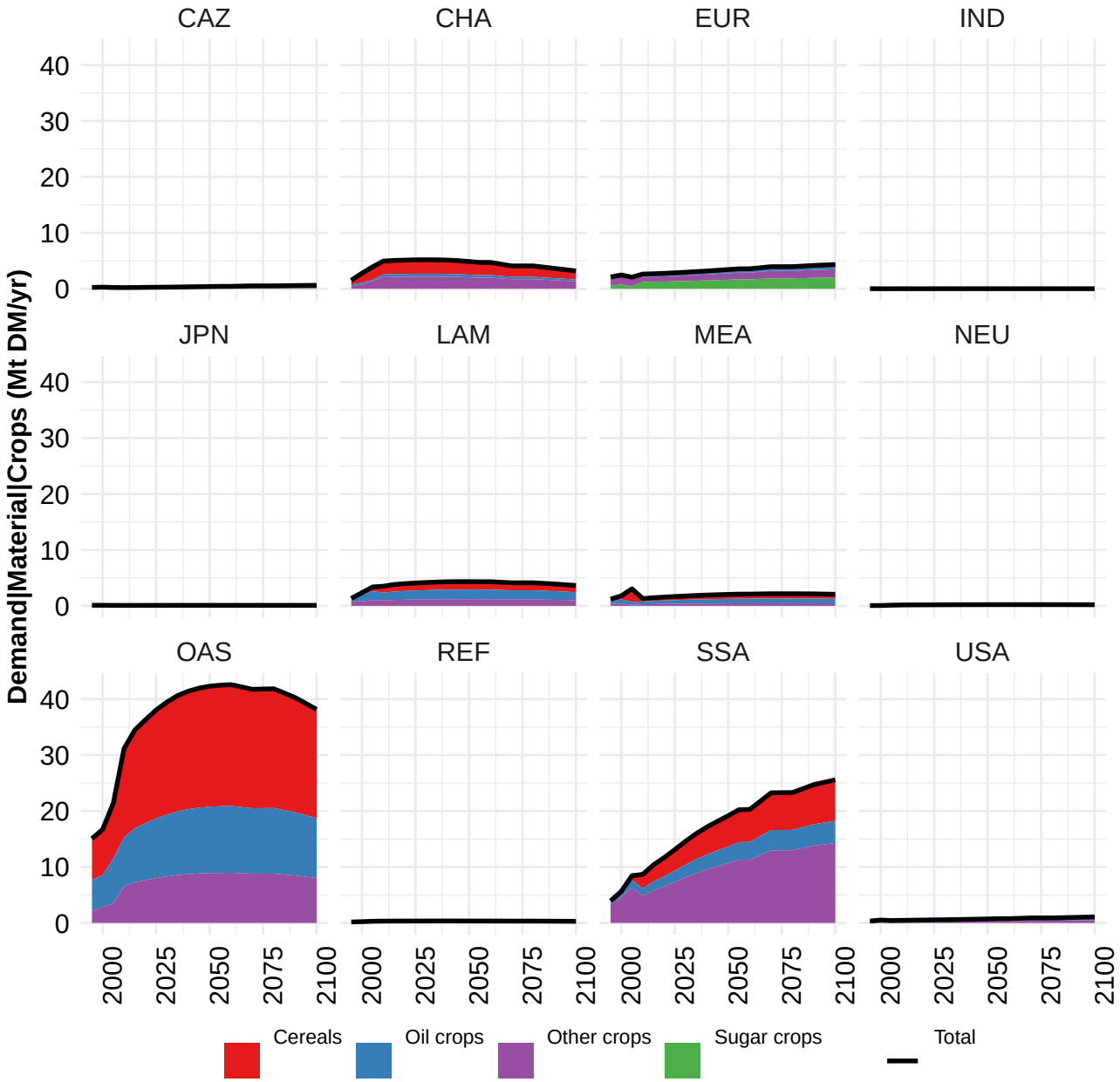
	2050	2055	2060	2070	2080	2090	2100
GLO	94.6	95.8	96.0	96.7	96.8	94.7	91.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	13.9	13.4	13.4	11.6	11.6	10.4	9.1
EUR	0.4	0.4	0.4	0.4	0.4	0.4	0.4
IND	24.0	24.4	24.5	24.4	24.5	23.5	21.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.5	2.5	2.5	2.3	2.3	2.2	2.1
MEA	4.2	4.3	4.3	4.5	4.5	4.4	4.3
NEU	0.6	0.6	0.6	0.6	0.6	0.6	0.6
OAS	26.6	26.7	26.8	26.3	26.3	25.3	24.0
REF	2.6	2.6	2.6	2.5	2.5	2.3	2.2
SSA	19.8	20.9	21.0	24.1	24.1	25.6	26.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 456: MAgPIE m4p_SSP5 — Demand—Material—Crop residues—Straw (Mt DM/yr) [PART 2/2]

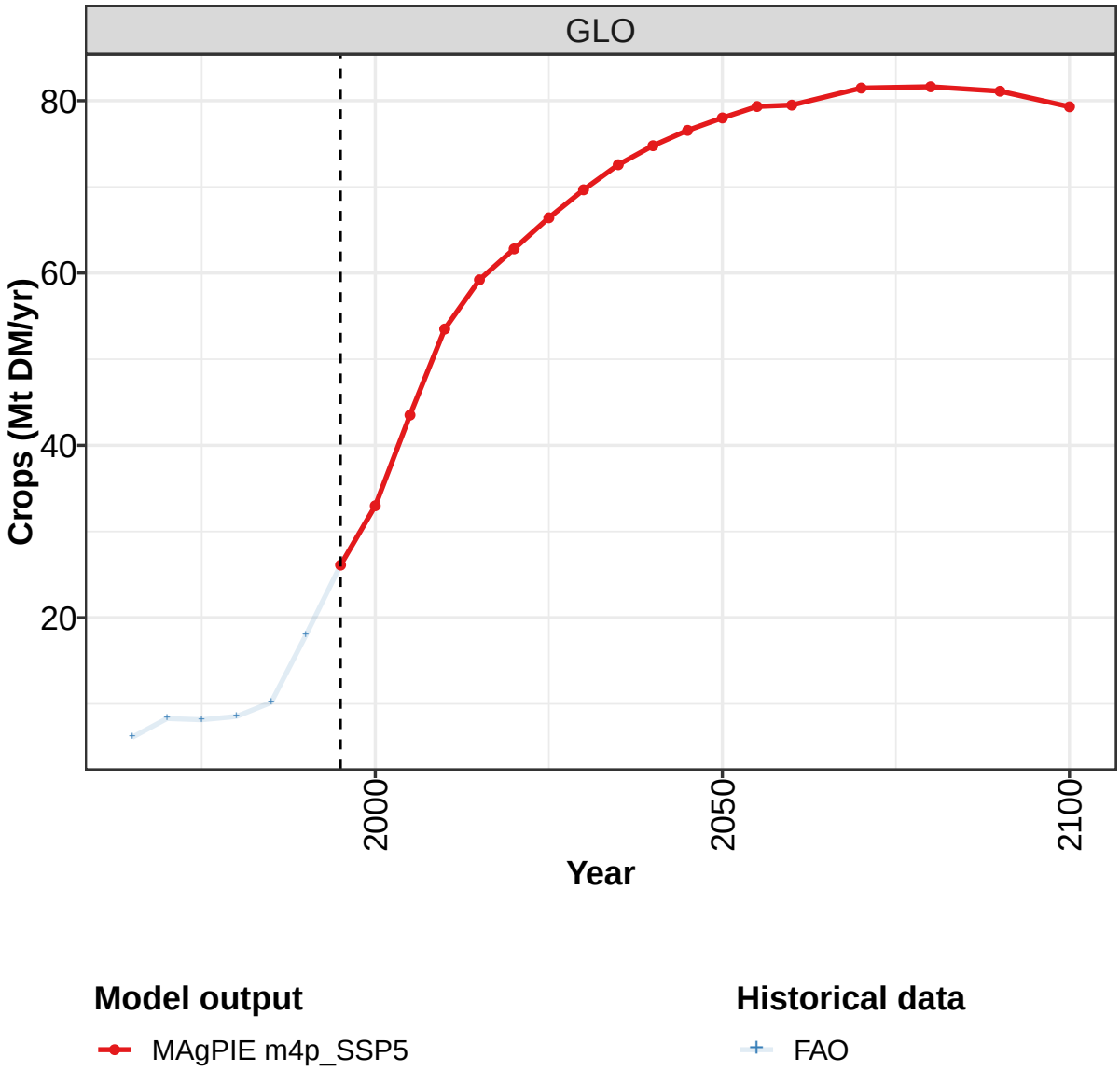
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	51.4	56.2	58.2	61.5	67.3	72.5	75.7	73.8	71.2	66.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	13.2	15.1	17.7	19.1	21.7	24.7	23.3	21.0	18.2	14.1
EUR	2.9	2.1	1.9	1.5	1.5	1.6	1.7	0.8	0.5	0.3
IND	10.1	12.1	12.9	13.7	15.0	16.1	16.6	17.5	16.5	16.2
JPN	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.1	3.2	3.0	2.6	3.4	3.1	3.2	2.9	2.7	2.0
MEA	1.8	1.8	1.9	2.1	2.5	2.6	2.9	2.4	3.3	2.7
NEU	1.1	1.1	1.3	1.3	1.3	1.2	1.3	1.0	0.8	0.4
OAS	10.3	11.5	12.1	13.2	14.3	14.6	15.2	17.1	18.1	19.6
REF	5.2	5.4	3.7	4.0	3.2	3.2	5.5	4.7	3.5	2.5
SSA	3.5	3.8	3.8	4.0	4.5	5.4	6.0	6.4	7.6	9.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

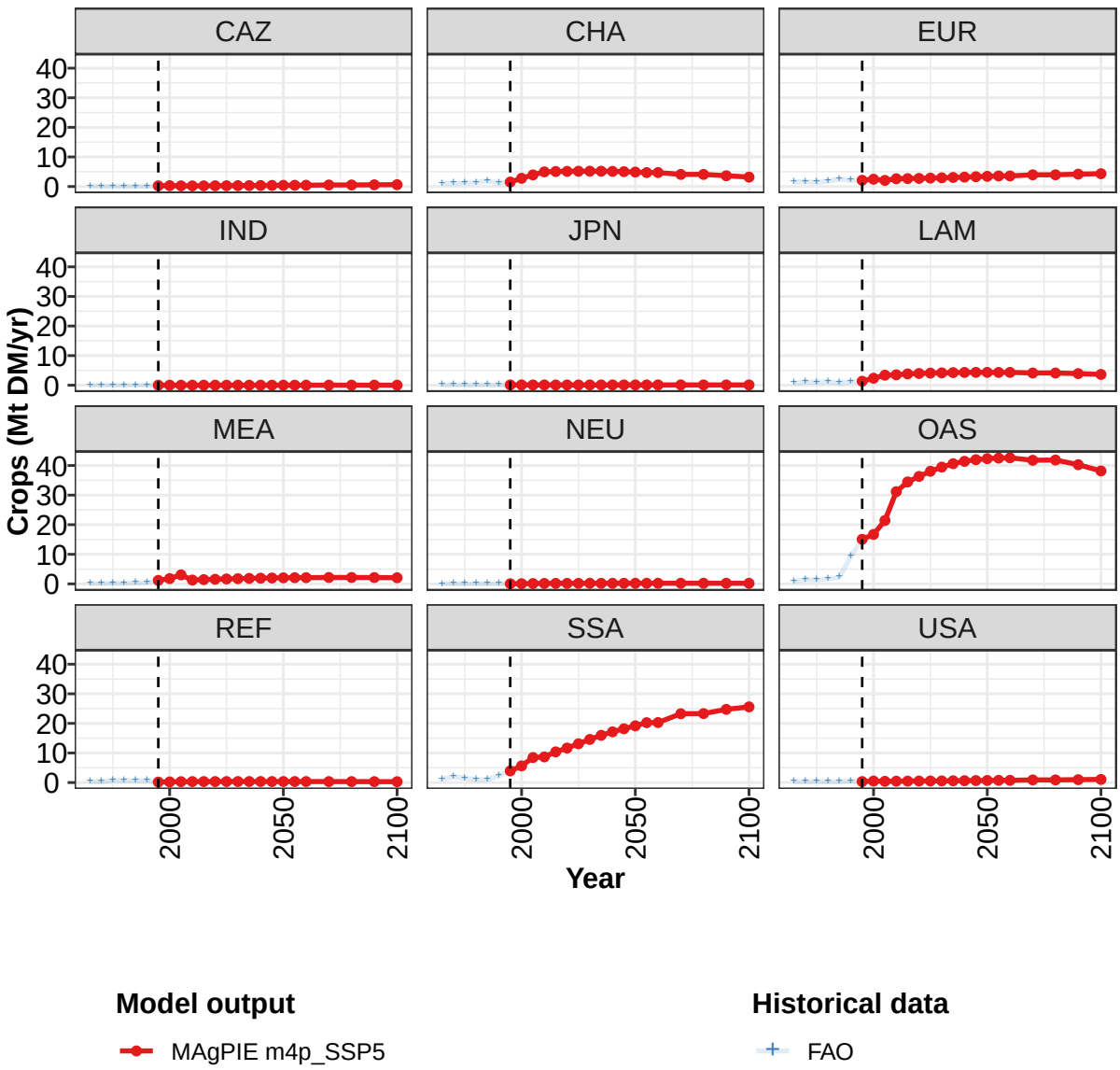
Table 457: FAO — Demand—Material—Crop residues—Straw (Mt DM/yr)


GLO
Demand|Material|Crops (Mt DM/yr)
80
60
40
20
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Material|Crops (Mt DM/yr)
0
10
20
30
40
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

8.2 Crops


GLO
Crops (Mt DM/yr)
80
60
40
20
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



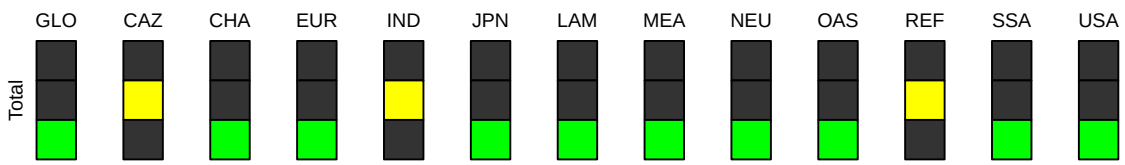


Figure 153: MAgPIE m4p_SSP5 — Demand—Material—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26.1	33.0	43.5	53.5	59.2	62.8	66.4	69.7	72.6	74.8	76.6
CAZ	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4
CHA	1.5	2.8	3.9	5.0	5.1	5.1	5.2	5.2	5.2	5.1	5.0
EUR	2.1	2.5	2.1	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.3	2.4	3.4	3.5	3.8	4.0	4.1	4.2	4.3	4.3	4.3
MEA	1.2	1.8	3.1	1.3	1.5	1.6	1.7	1.8	1.9	1.9	2.0
NEU	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	15.1	16.7	21.4	31.2	34.5	36.3	38.1	39.5	40.6	41.4	42.0
REF	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3
SSA	3.9	5.6	8.5	8.7	10.4	11.7	13.1	14.6	16.0	17.1	18.2
USA	0.3	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7

Table 458: MAgPIE m4p_SSP5 — Demand—Material—Crops (Mt DM/yr) [PART 1/2]

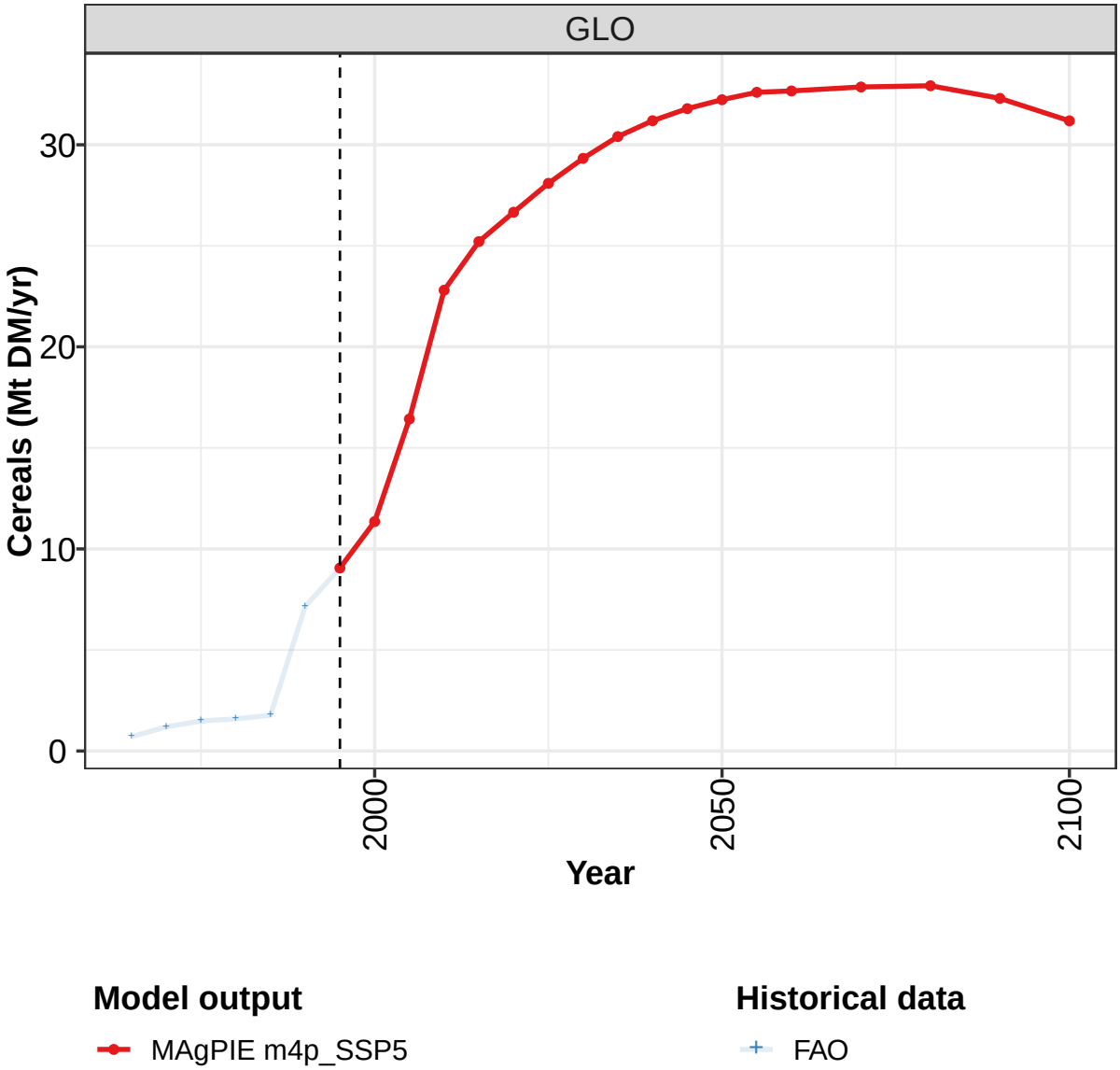
	2050	2055	2060	2070	2080	2090	2100
GLO	78.0	79.3	79.5	81.5	81.6	81.1	79.3
CAZ	0.4	0.4	0.4	0.5	0.5	0.6	0.6
CHA	4.9	4.7	4.7	4.1	4.1	3.6	3.2
EUR	3.4	3.6	3.6	4.0	4.0	4.2	4.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	4.3	4.3	4.3	4.1	4.1	3.9	3.6
MEA	2.1	2.1	2.1	2.2	2.2	2.1	2.1
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	42.3	42.5	42.6	41.8	41.9	40.3	38.2
REF	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SSA	19.2	20.2	20.3	23.3	23.3	24.7	25.6
USA	0.7	0.8	0.8	0.9	0.9	1.0	1.1

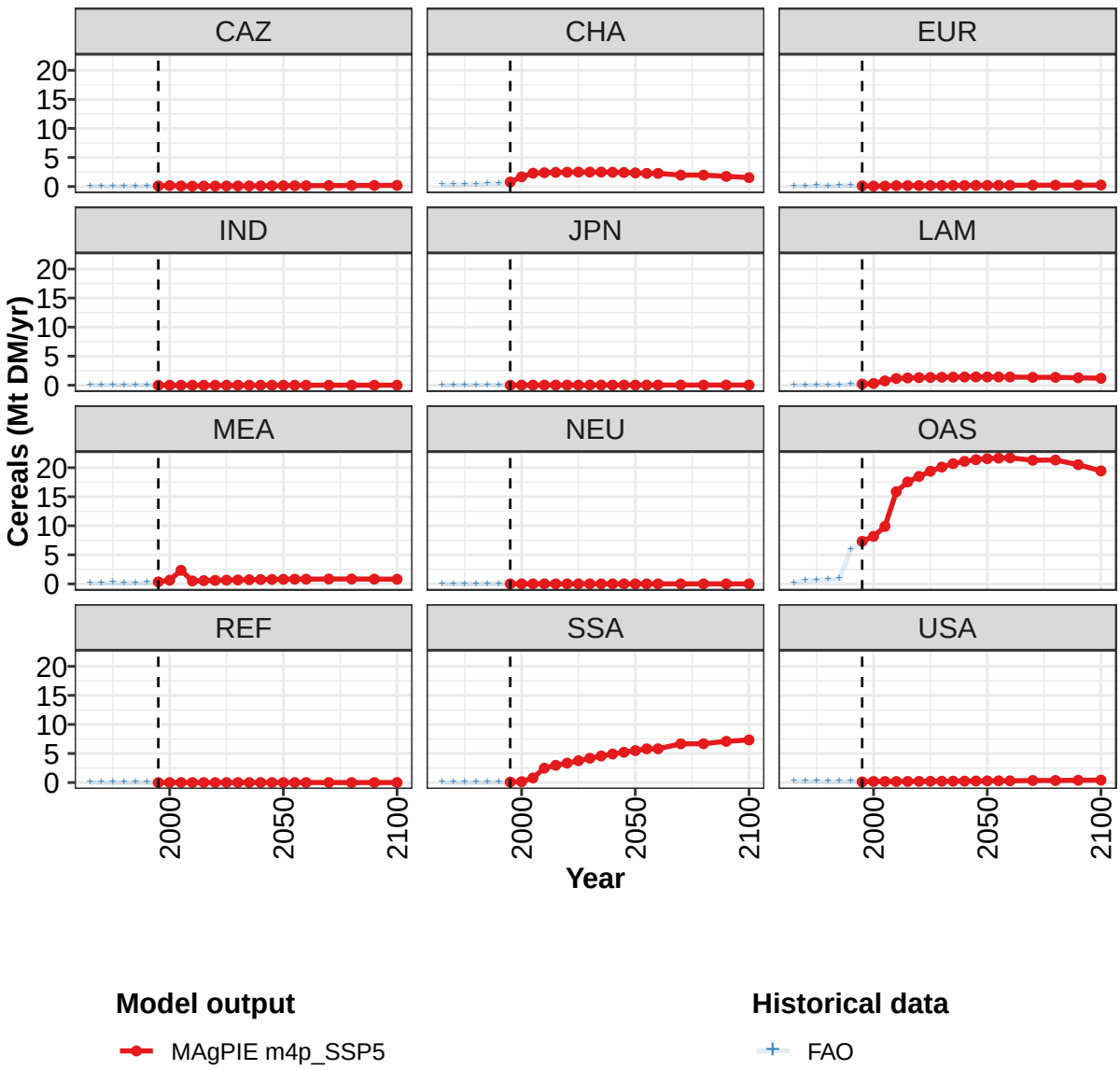
Table 459: MAgPIE m4p_SSP5 — Demand—Material—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	6.1	8.3	8.2	8.5	10.2	18.0	26.1	33.0	43.5	53.5
CAZ	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.2
CHA	1.0	1.1	1.3	1.4	1.9	1.1	1.5	2.8	3.9	5.0
EUR	1.5	1.6	1.5	1.8	2.5	2.1	2.1	2.5	2.1	2.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.7	1.1	1.0	1.2	0.8	1.2	1.3	2.4	3.4	3.5
MEA	0.1	0.1	0.3	0.3	0.4	0.5	1.2	1.8	3.1	1.3
NEU	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2
OAS	0.8	1.6	1.3	1.7	2.2	9.3	15.1	16.7	21.4	31.2
REF	0.3	0.3	0.7	0.7	0.7	0.7	0.2	0.2	0.3	0.3
SSA	1.2	2.0	1.5	1.0	1.0	2.3	3.9	5.6	8.5	8.7
USA	0.3	0.3	0.4	0.3	0.3	0.6	0.3	0.5	0.4	0.5

Table 460: FAO — Demand—Material—Crops (Mt DM/yr)

8.2.1 Cereals


GLO
Cereals (Mt DM/yr)
0
10
20
30
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



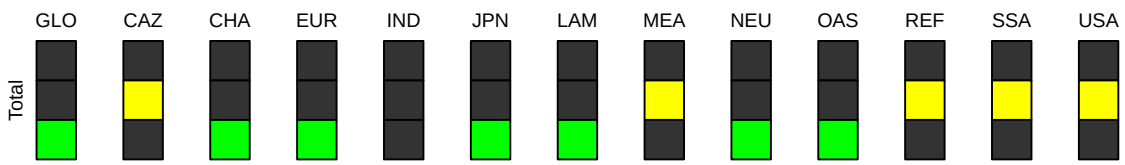


Figure 154: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.1	11.4	16.4	22.8	25.2	26.7	28.1	29.3	30.4	31.2	31.8
CAZ	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.8	1.7	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.4
EUR	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.3	0.7	1.1	1.2	1.3	1.3	1.4	1.4	1.4	1.4
MEA	0.3	0.6	2.3	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	7.3	8.2	9.9	15.9	17.5	18.5	19.4	20.1	20.7	21.1	21.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.8	2.5	3.0	3.3	3.8	4.2	4.6	4.9	5.2
USA	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3

Table 461: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals (Mt DM/yr) [PART 1/2]

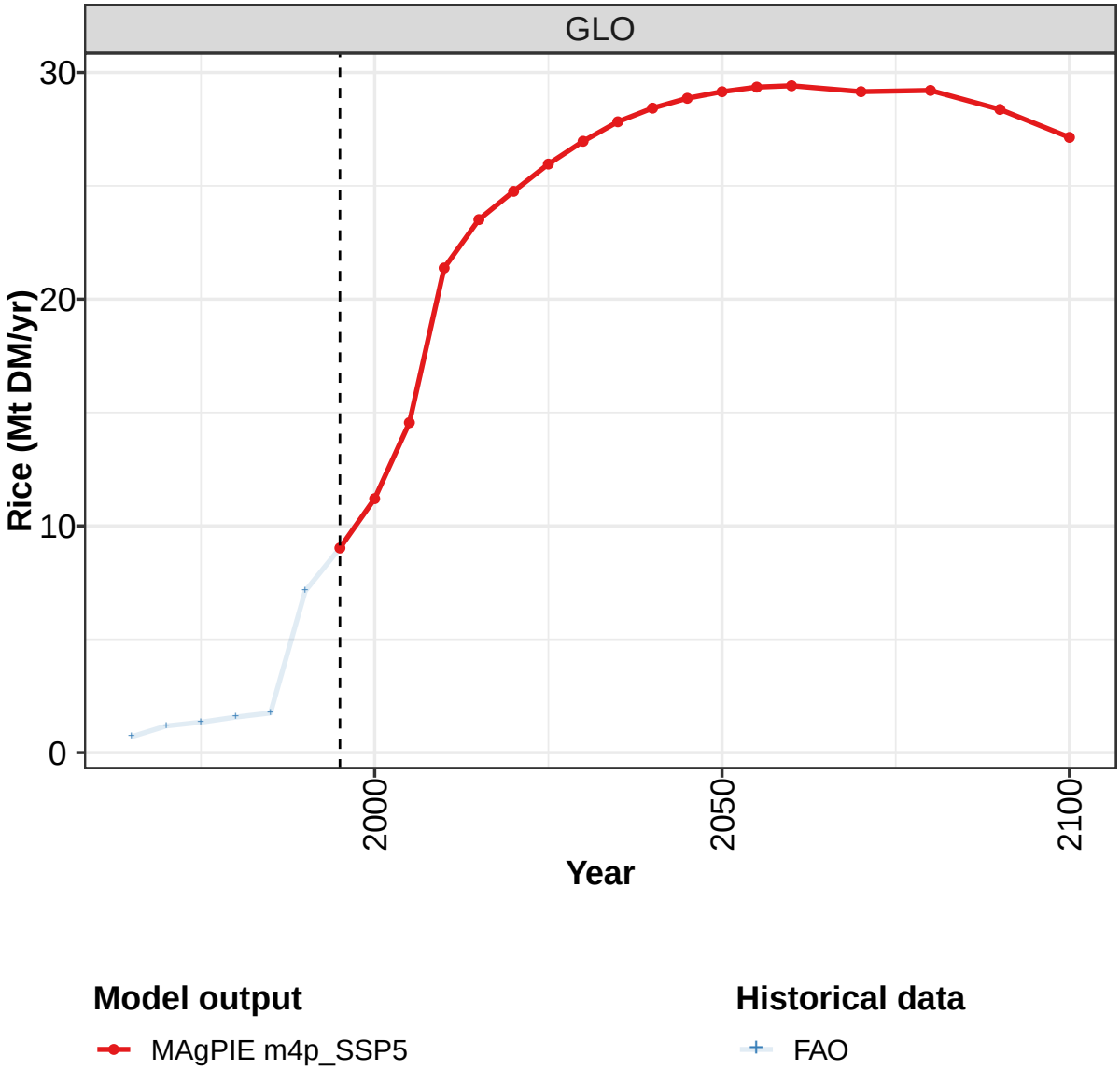
	2050	2055	2060	2070	2080	2090	2100
GLO	32.2	32.6	32.7	32.9	32.9	32.3	31.2
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CHA	2.3	2.3	2.3	2.0	2.0	1.7	1.5
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	1.4	1.4	1.3	1.4	1.3	1.2
MEA	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	21.5	21.6	21.7	21.3	21.3	20.5	19.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	5.5	5.8	5.8	6.7	6.7	7.1	7.3
USA	0.3	0.3	0.3	0.4	0.4	0.4	0.4

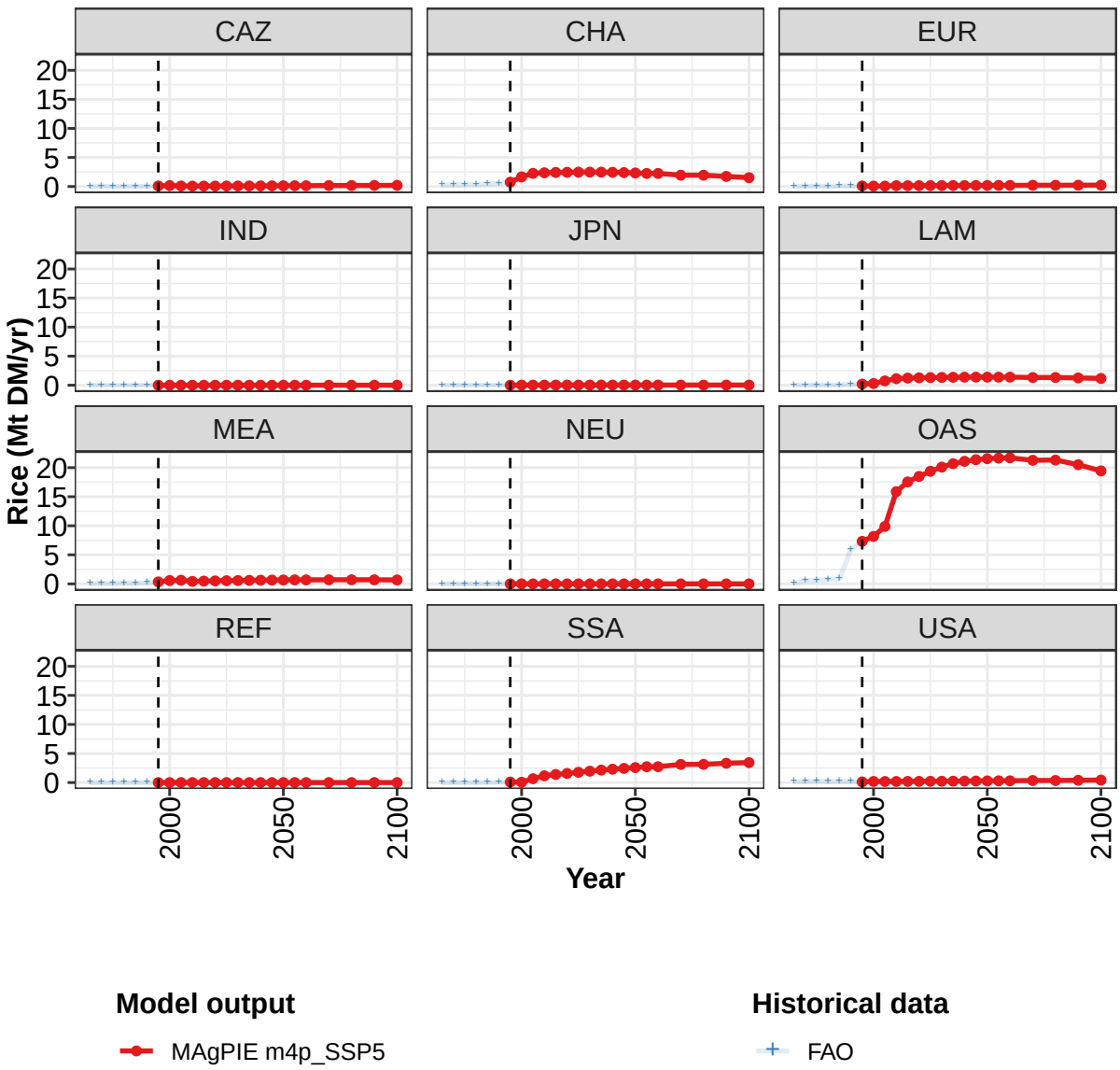
Table 462: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.7	1.2	1.5	1.6	1.8	7.2	9.1	11.4	16.4	22.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1
CHA	0.3	0.3	0.4	0.4	0.5	0.5	0.8	1.7	2.3	2.4
EUR	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.7	1.1
MEA	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.6	2.3	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.2	0.5	0.6	0.8	0.8	5.9	7.3	8.2	9.9	15.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.8	2.5
USA	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2

Table 463: FAO — Demand—Material—Crops—Cereals (Mt DM/yr)

8.2.2 Cereals—Rice





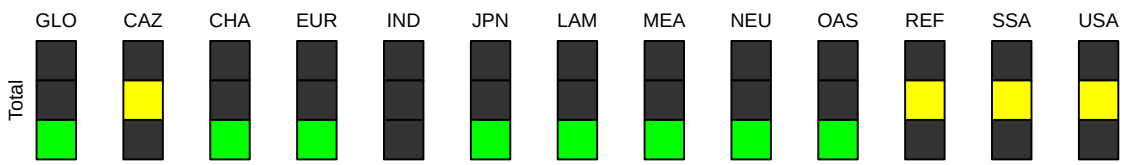


Figure 155: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.0	11.2	14.6	21.4	23.5	24.8	26.0	27.0	27.8	28.4	28.9
CAZ	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.8	1.7	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.4	2.4
EUR	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.3	0.7	1.1	1.2	1.3	1.3	1.3	1.4	1.4	1.4
MEA	0.3	0.6	0.6	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	7.3	8.2	9.9	15.9	17.5	18.5	19.4	20.1	20.7	21.1	21.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.7	1.2	1.4	1.6	1.8	2.0	2.1	2.3	2.4
USA	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3

Table 464: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

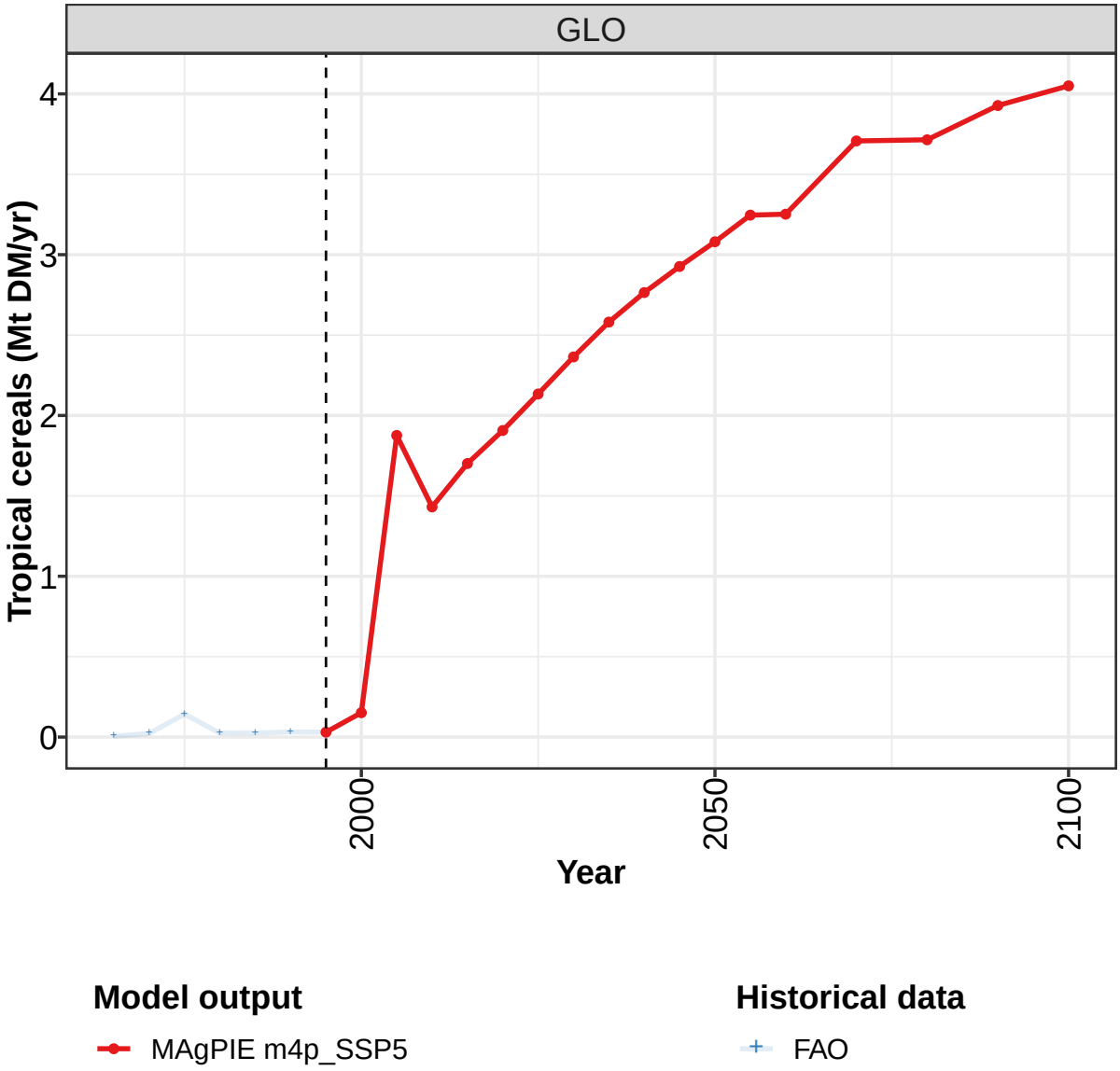
	2050	2055	2060	2070	2080	2090	2100
GLO	29.2	29.4	29.4	29.2	29.2	28.4	27.1
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CHA	2.3	2.3	2.3	2.0	2.0	1.7	1.5
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	1.4	1.4	1.3	1.3	1.3	1.2
MEA	0.7	0.7	0.7	0.7	0.7	0.7	0.7
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	21.5	21.6	21.7	21.3	21.3	20.5	19.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.6	2.7	2.7	3.1	3.1	3.3	3.4
USA	0.3	0.3	0.3	0.4	0.4	0.4	0.4

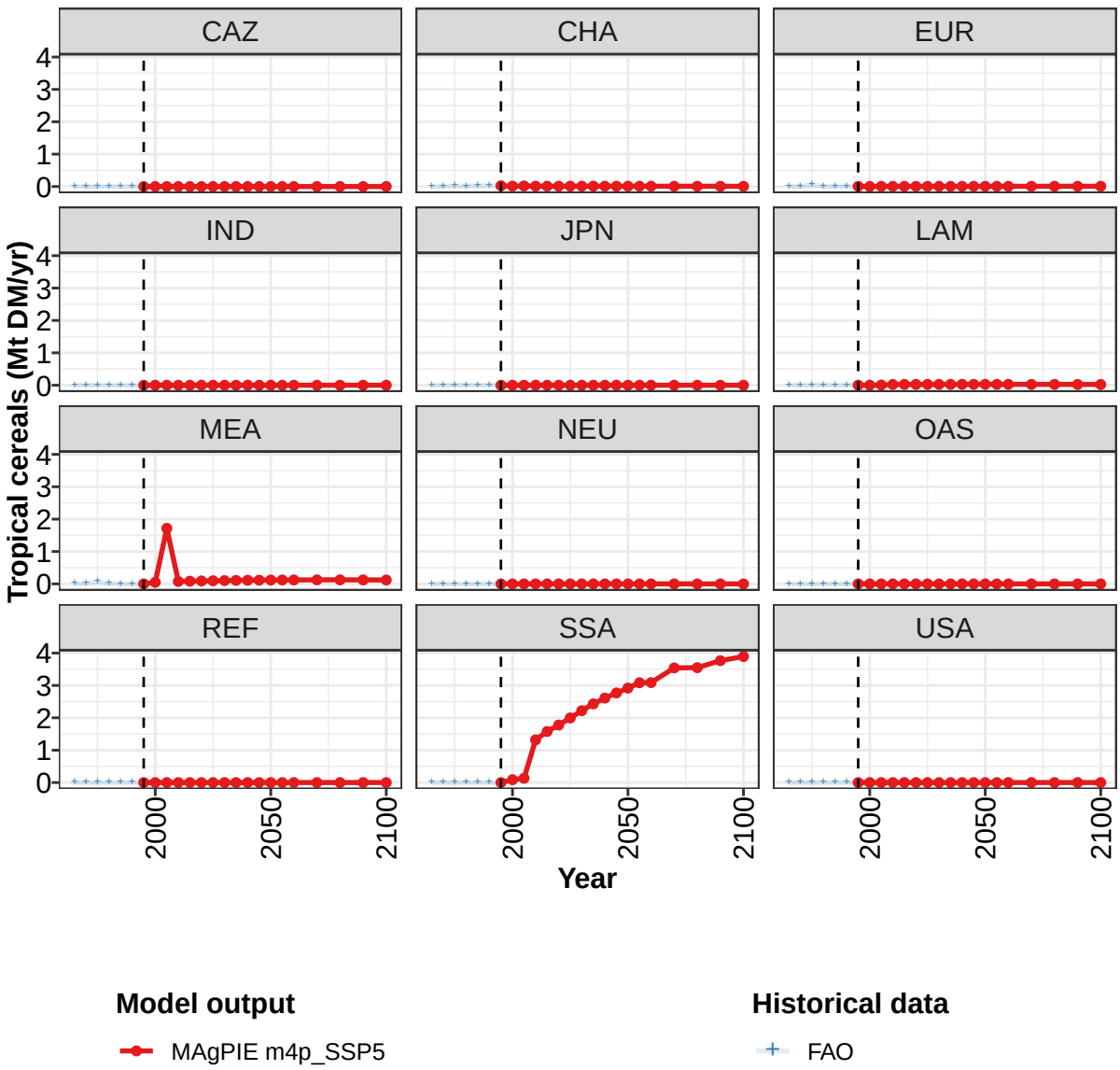
Table 465: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.7	1.2	1.3	1.6	1.7	7.1	9.0	11.2	14.6	21.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1
CHA	0.3	0.3	0.3	0.4	0.5	0.5	0.8	1.7	2.3	2.4
EUR	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.7	1.1
MEA	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.6	0.4
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.2	0.5	0.6	0.8	0.8	5.9	7.3	8.2	9.9	15.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.7	1.2
USA	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2

Table 466: FAO — Demand—Material—Crops—Cereals—Rice (Mt DM/yr)

8.2.3 Cereals—Tropical cereals





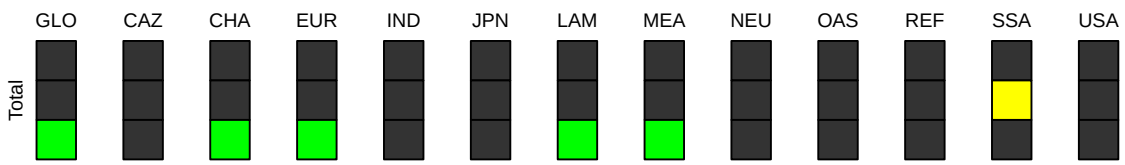


Figure 156: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.03	0.15	1.88	1.43	1.70	1.91	2.13	2.36	2.58	2.76	2.93
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
EUR	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
MEA	0.00	0.05	1.72	0.07	0.08	0.09	0.10	0.10	0.11	0.11	0.12
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.09	0.13	1.32	1.58	1.78	2.00	2.22	2.43	2.61	2.77
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 467: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

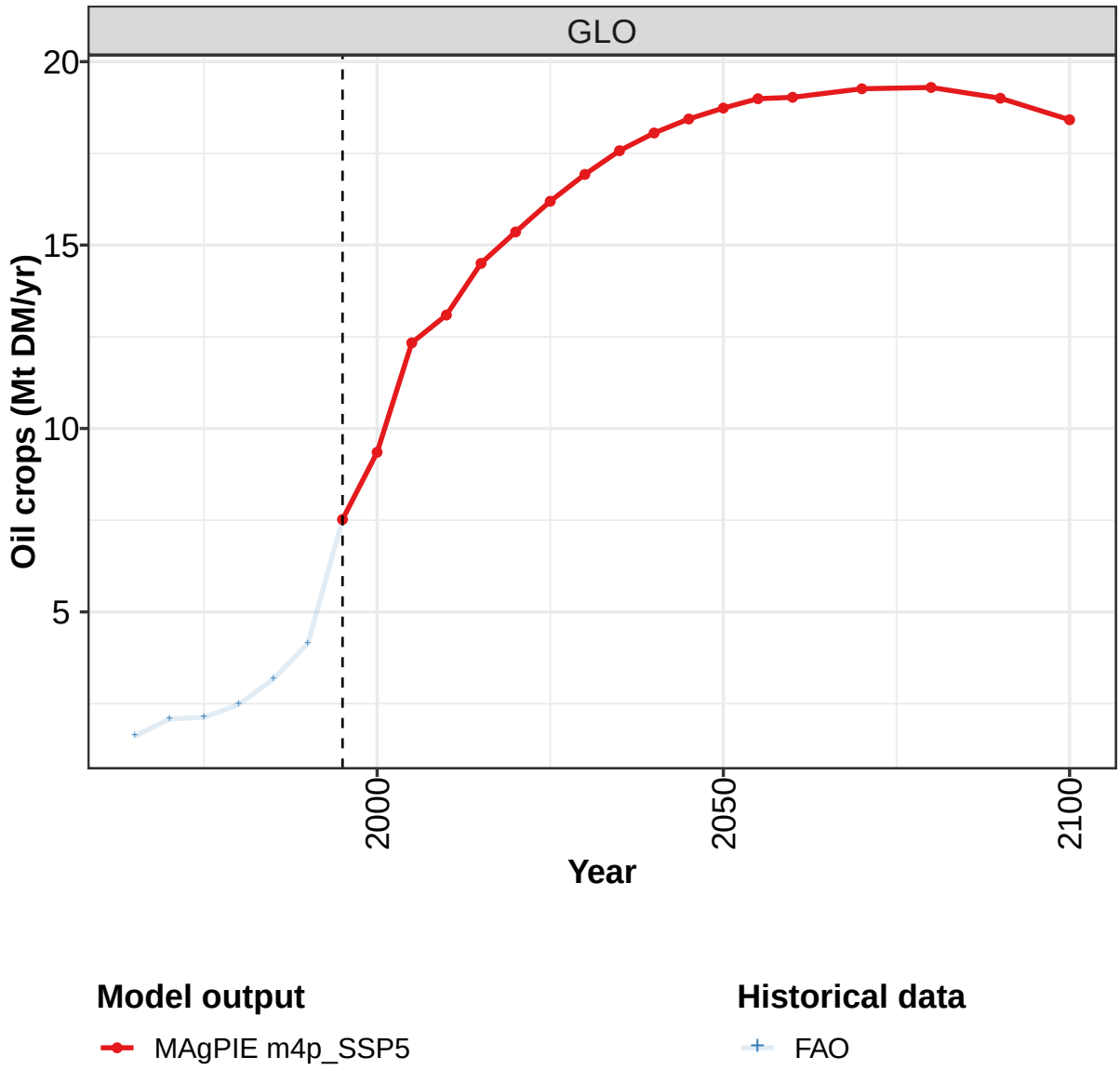
	2050	2055	2060	2070	2080	2090	2100
GLO	3.08	3.25	3.25	3.71	3.71	3.93	4.05
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
EUR	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.03	0.03	0.03	0.03	0.03	0.02	0.02
MEA	0.12	0.12	0.12	0.12	0.13	0.12	0.12
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	2.92	3.08	3.09	3.54	3.55	3.76	3.89
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

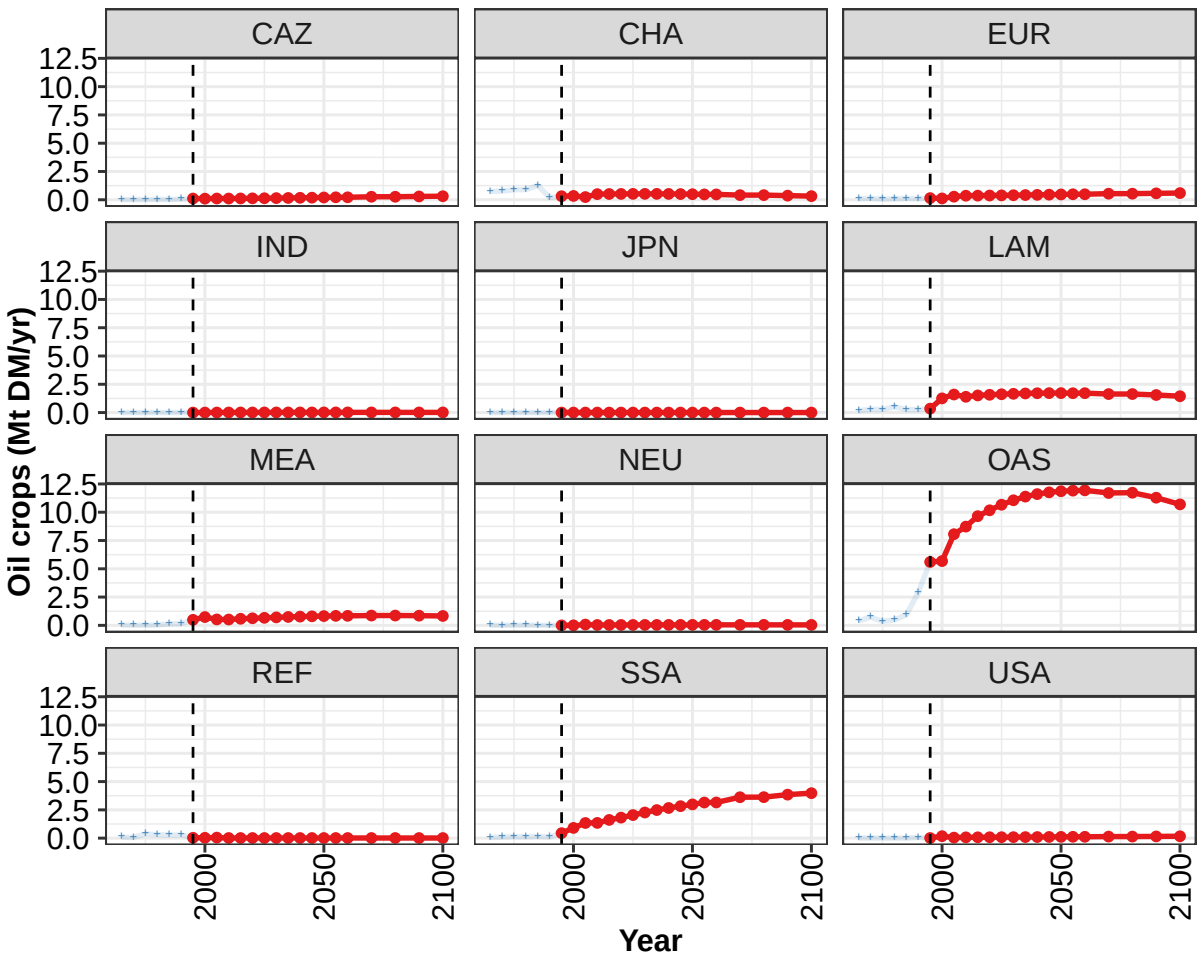
Table 468: MAgPIE m4p_SSP5 — Demand—Material—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.02	0.14	0.02	0.02	0.03	0.03	0.15	1.88	1.43
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.02	0.01	0.02	0.03	0.02	0.01	0.02	0.01
EUR	0.00	0.00	0.06	0.00	0.00	0.01	0.01	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
MEA	0.00	0.02	0.07	0.01	0.00	0.00	0.00	0.05	1.72	0.07
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.13	1.32
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 469: FAO — Demand—Material—Crops—Cereals—Tropical cereals (Mt DM/yr)

8.2.4 Oil crops





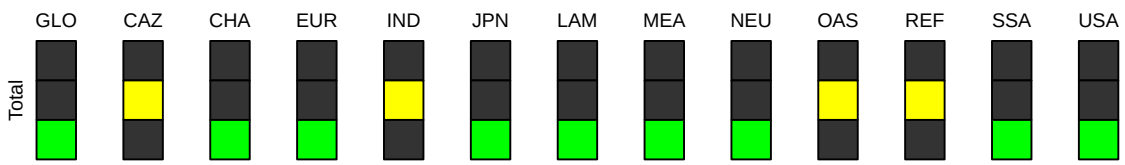


Figure 157: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.5	9.4	12.3	13.1	14.5	15.4	16.2	16.9	17.6	18.1	18.4
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
CHA	0.3	0.3	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EUR	0.2	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.4	1.3	1.6	1.4	1.5	1.6	1.6	1.7	1.7	1.7	1.7
MEA	0.5	0.7	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8
NEU	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	5.6	5.7	8.1	8.7	9.7	10.2	10.7	11.1	11.4	11.6	11.8
REF	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.4	0.9	1.3	1.3	1.6	1.8	2.0	2.3	2.5	2.7	2.8
USA	0.0	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 470: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops (Mt DM/yr) [PART 1/2]

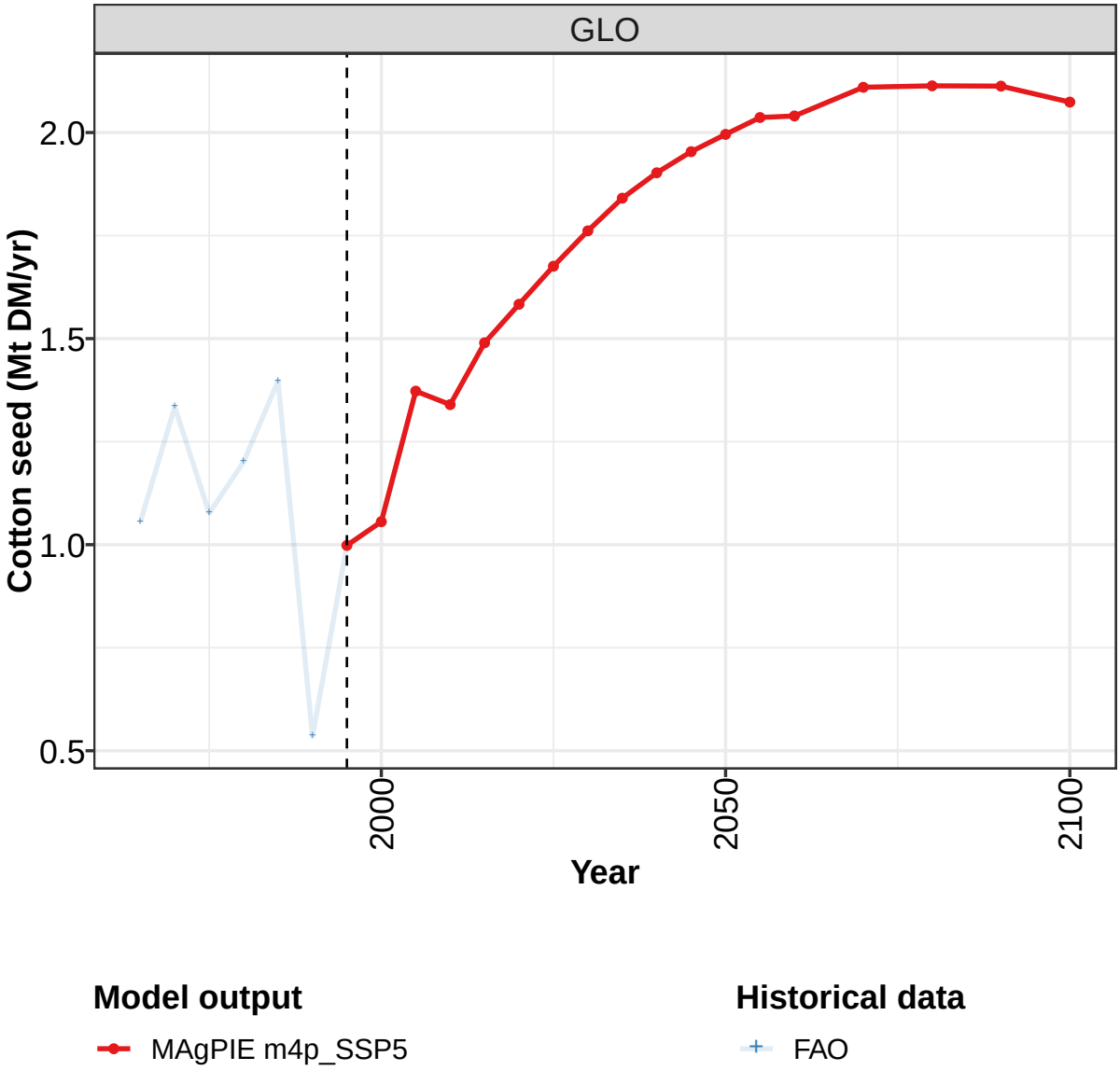
	2050	2055	2060	2070	2080	2090	2100
GLO	18.7	19.0	19.0	19.3	19.3	19.0	18.4
CAZ	0.2	0.2	0.2	0.3	0.3	0.3	0.3
CHA	0.5	0.5	0.5	0.4	0.4	0.4	0.3
EUR	0.5	0.5	0.5	0.5	0.5	0.6	0.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.7	1.7	1.7	1.6	1.6	1.6	1.4
MEA	0.8	0.8	0.8	0.9	0.9	0.9	0.8
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	11.9	11.9	11.9	11.7	11.7	11.3	10.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	3.0	3.1	3.2	3.6	3.6	3.8	4.0
USA	0.1	0.1	0.1	0.1	0.1	0.2	0.2

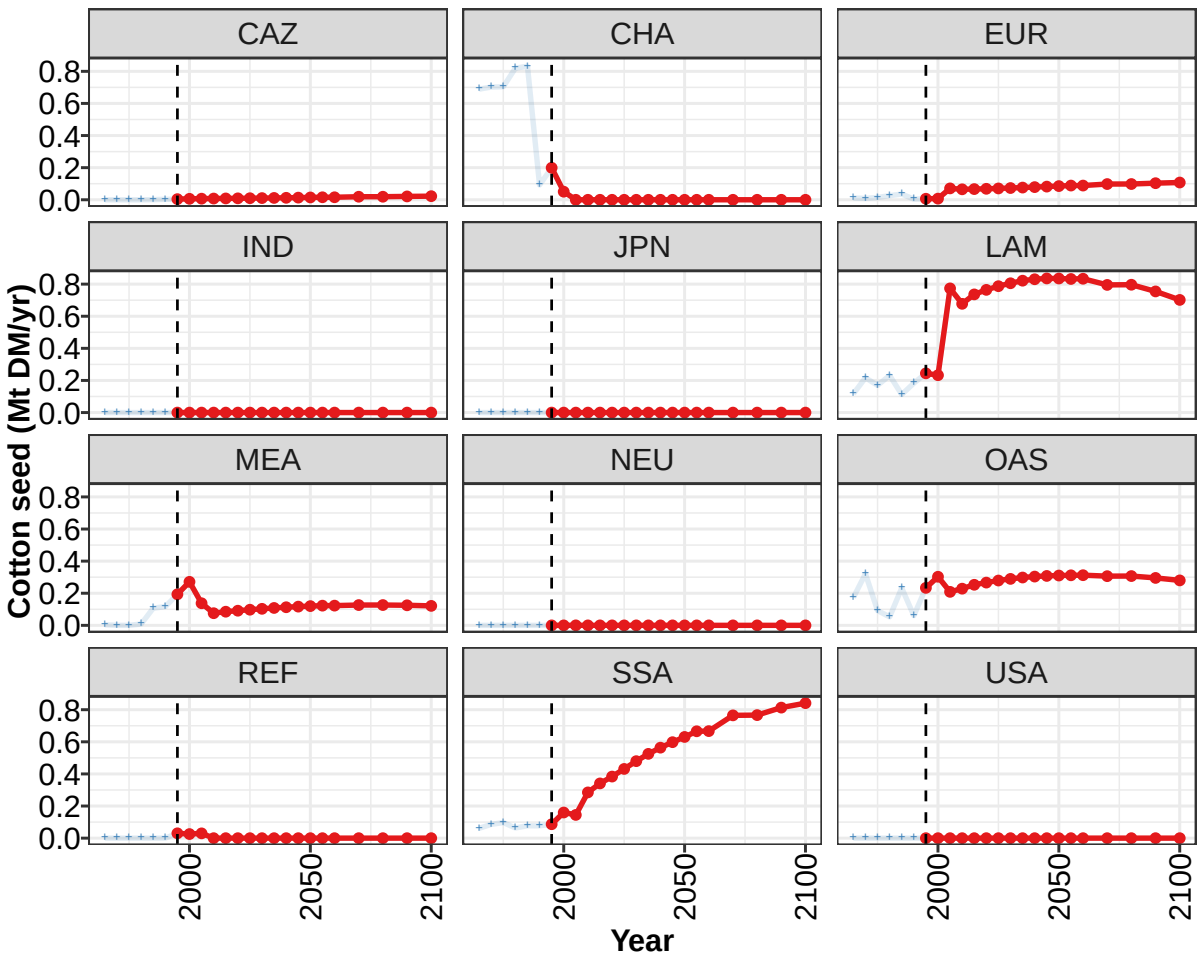
Table 471: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.6	2.1	2.1	2.5	3.2	4.1	7.5	9.4	12.3	13.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
CHA	0.7	0.8	0.9	0.9	1.3	0.2	0.3	0.3	0.2	0.5
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.3	0.3	0.5	0.3	0.3	0.4	1.3	1.6	1.4
MEA	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.7	0.5	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
OAS	0.4	0.7	0.4	0.5	0.9	2.9	5.6	5.7	8.1	8.7
REF	0.1	0.1	0.4	0.3	0.3	0.3	0.0	0.0	0.1	0.0
SSA	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.9	1.3	1.3
USA	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.1

Table 472: FAO — Demand—Material—Crops—Oil crops (Mt DM/yr)

8.2.5 Oil crops—Cotton seed





Model output

MAgPIE m4p_SSP5

Historical data

FAO

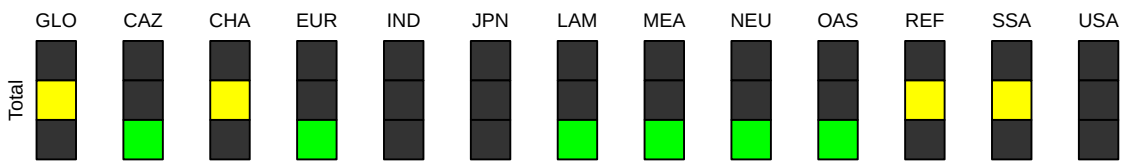


Figure 158: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.06	1.37	1.34	1.49	1.58	1.68	1.76	1.84	1.90	1.95
CAZ	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	0.20	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.01	0.01	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.24	0.23	0.77	0.68	0.74	0.76	0.79	0.81	0.82	0.83	0.84
MEA	0.19	0.27	0.14	0.08	0.09	0.09	0.10	0.10	0.11	0.11	0.12
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.23	0.30	0.21	0.23	0.25	0.27	0.28	0.29	0.30	0.30	0.31
REF	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.09	0.16	0.14	0.29	0.34	0.38	0.43	0.48	0.53	0.56	0.60
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 473: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

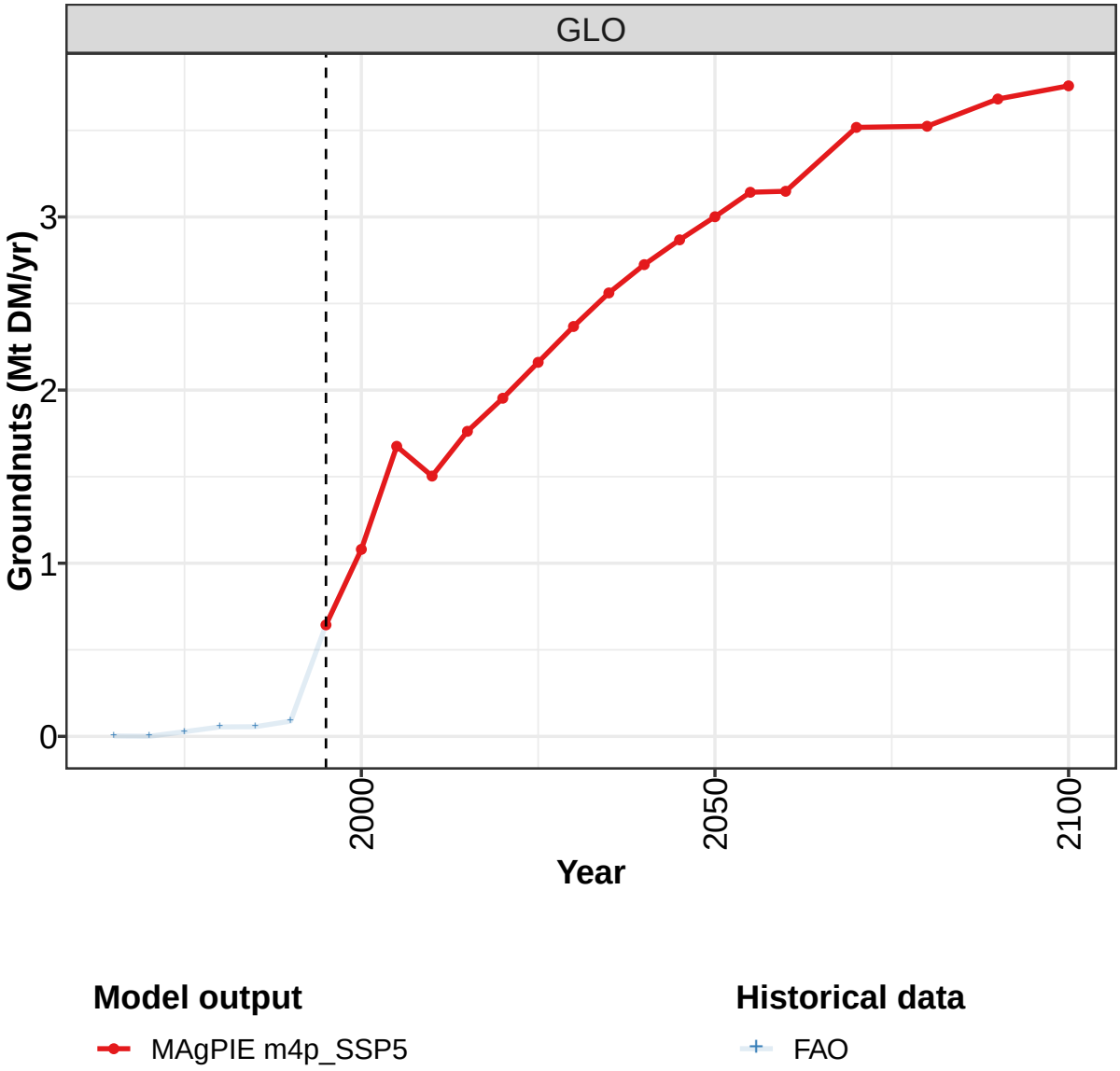
	2050	2055	2060	2070	2080	2090	2100
GLO	2.00	2.04	2.04	2.11	2.11	2.11	2.07
CAZ	0.01	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.09	0.09	0.09	0.10	0.10	0.10	0.11
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.84	0.83	0.83	0.80	0.80	0.75	0.70
MEA	0.12	0.12	0.12	0.13	0.13	0.13	0.12
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.31	0.31	0.31	0.31	0.31	0.30	0.28
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.63	0.67	0.67	0.76	0.77	0.81	0.84
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

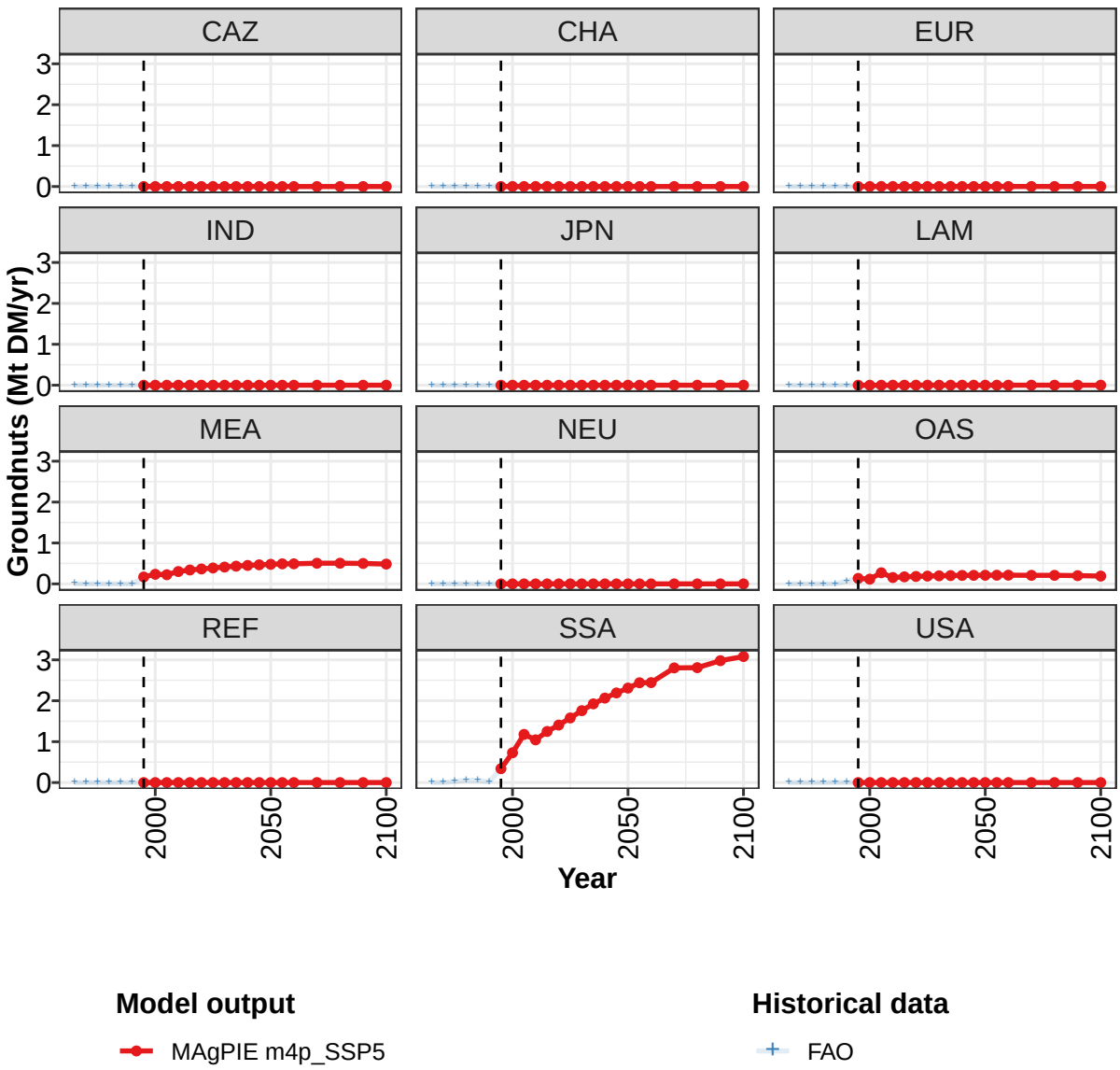
Table 474: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.05	1.33	1.08	1.20	1.40	0.54	1.00	1.06	1.37	1.34
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
CHA	0.69	0.70	0.70	0.82	0.83	0.09	0.20	0.05	0.00	0.00
EUR	0.01	0.01	0.01	0.03	0.04	0.00	0.01	0.01	0.07	0.07
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.12	0.22	0.17	0.23	0.11	0.18	0.24	0.23	0.77	0.68
MEA	0.00	0.00	0.00	0.01	0.11	0.12	0.19	0.27	0.14	0.08
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.17	0.32	0.09	0.05	0.23	0.06	0.23	0.30	0.21	0.23
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.00
SSA	0.06	0.09	0.10	0.06	0.08	0.08	0.09	0.16	0.14	0.29
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 475: FAO — Demand—Material—Crops—Oil crops—Cotton seed (Mt DM/yr)

8.2.6 Oil crops—Groundnuts





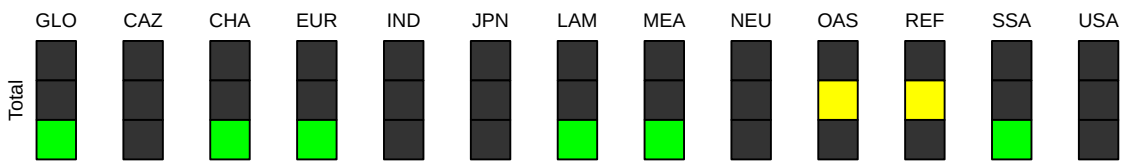


Figure 159: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.64	1.08	1.68	1.50	1.76	1.95	2.16	2.37	2.56	2.72	2.87
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.17	0.24	0.22	0.30	0.34	0.36	0.39	0.41	0.43	0.45	0.47
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.13	0.12	0.27	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.21
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.34	0.73	1.18	1.04	1.25	1.41	1.58	1.76	1.92	2.07	2.19
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 476: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

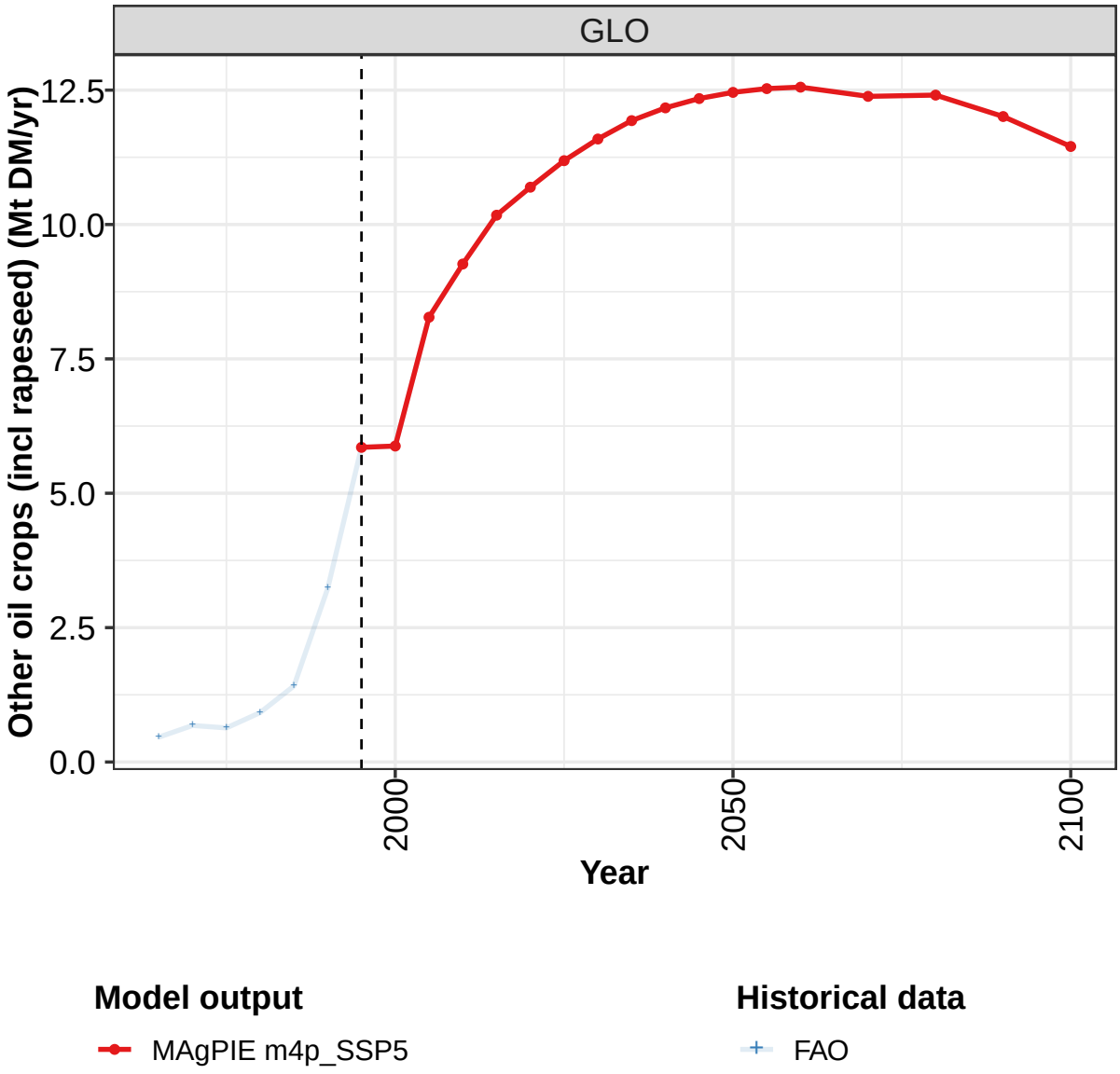
	2050	2055	2060	2070	2080	2090	2100
GLO	3.00	3.14	3.15	3.52	3.52	3.68	3.76
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.48	0.49	0.49	0.50	0.51	0.50	0.48
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.21	0.21	0.21	0.21	0.21	0.20	0.19
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	2.31	2.44	2.44	2.80	2.81	2.98	3.08
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

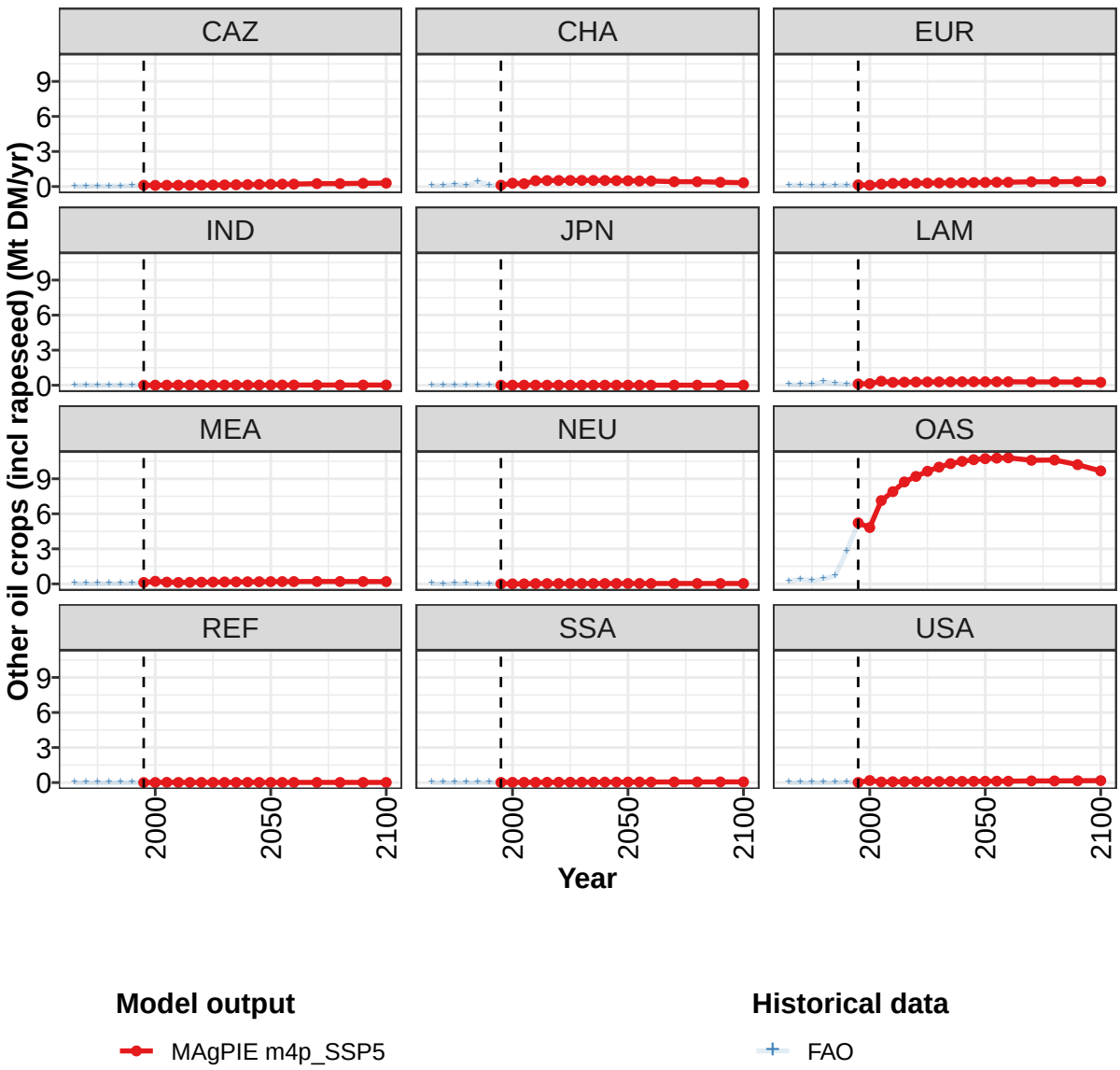
Table 477: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.03	0.05	0.06	0.09	0.64	1.08	1.68	1.50
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.24	0.22	0.30
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.07	0.13	0.12	0.27	0.16
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.03	0.05	0.05	0.02	0.34	0.73	1.18	1.04
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 478: FAO — Demand—Material—Crops—Oil crops—Groundnuts (Mt DM/yr)

8.2.7 Oil crops—Other oil crops (incl rapeseed)





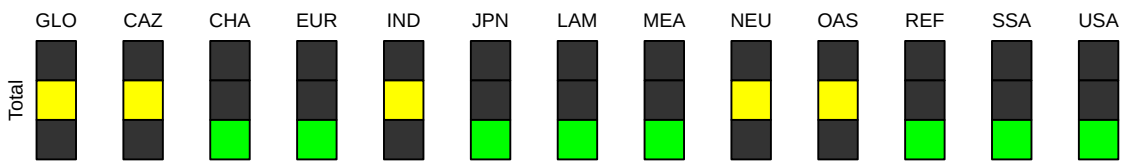


Figure 160: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.9	5.9	8.3	9.3	10.2	10.7	11.2	11.6	11.9	12.2	12.3
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
CHA	0.1	0.3	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EUR	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MEA	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	5.2	4.8	7.1	7.9	8.7	9.2	9.6	10.0	10.3	10.5	10.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 479: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

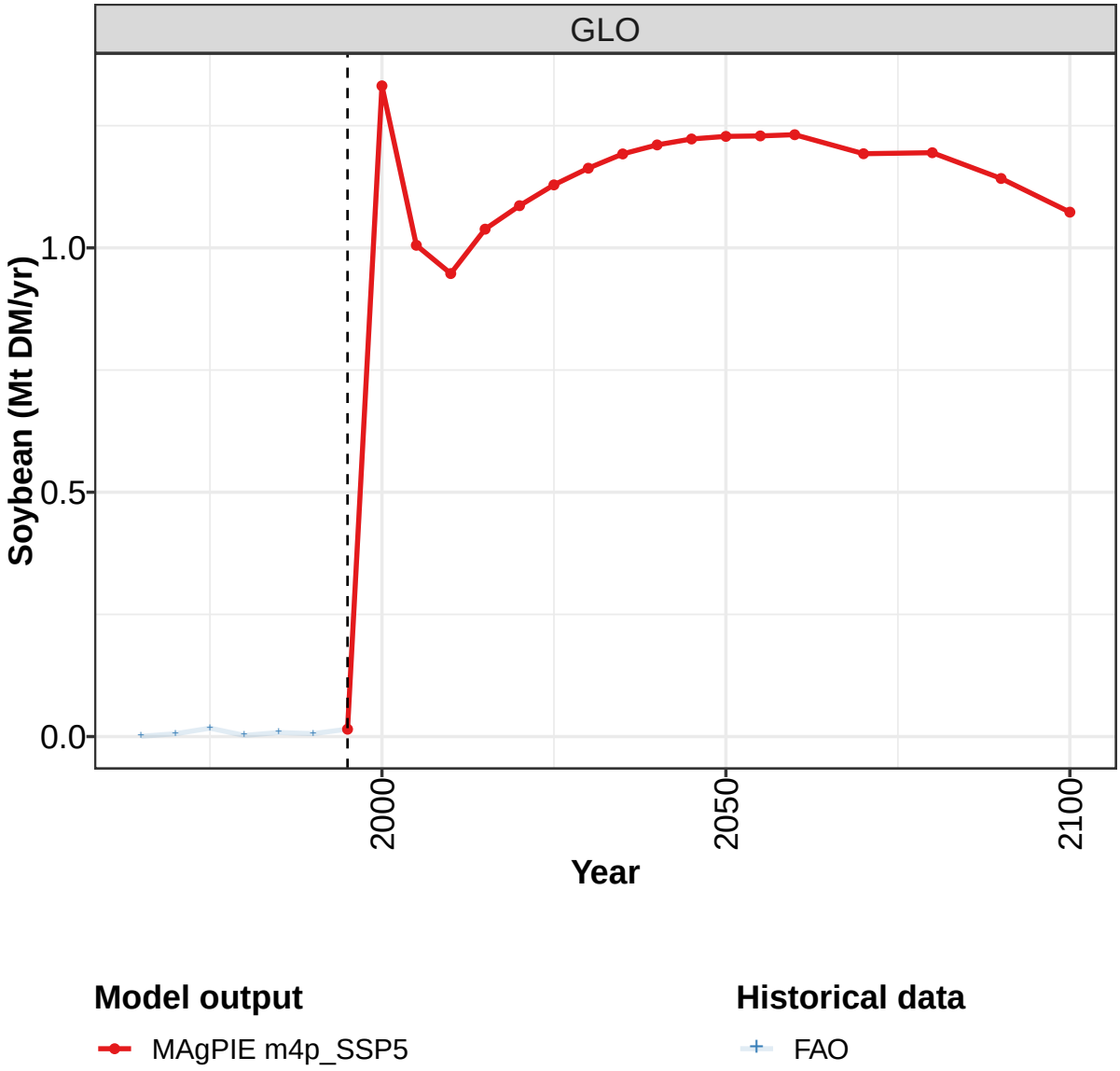
	2050	2055	2060	2070	2080	2090	2100
GLO	12.5	12.5	12.6	12.4	12.4	12.0	11.5
CAZ	0.2	0.2	0.2	0.2	0.2	0.3	0.3
CHA	0.5	0.5	0.5	0.4	0.4	0.4	0.3
EUR	0.4	0.4	0.4	0.4	0.4	0.4	0.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.3	0.3	0.3	0.3	0.3	0.2
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	10.7	10.8	10.8	10.6	10.6	10.2	9.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.1	0.1	0.1	0.1
USA	0.1	0.1	0.1	0.1	0.1	0.2	0.2

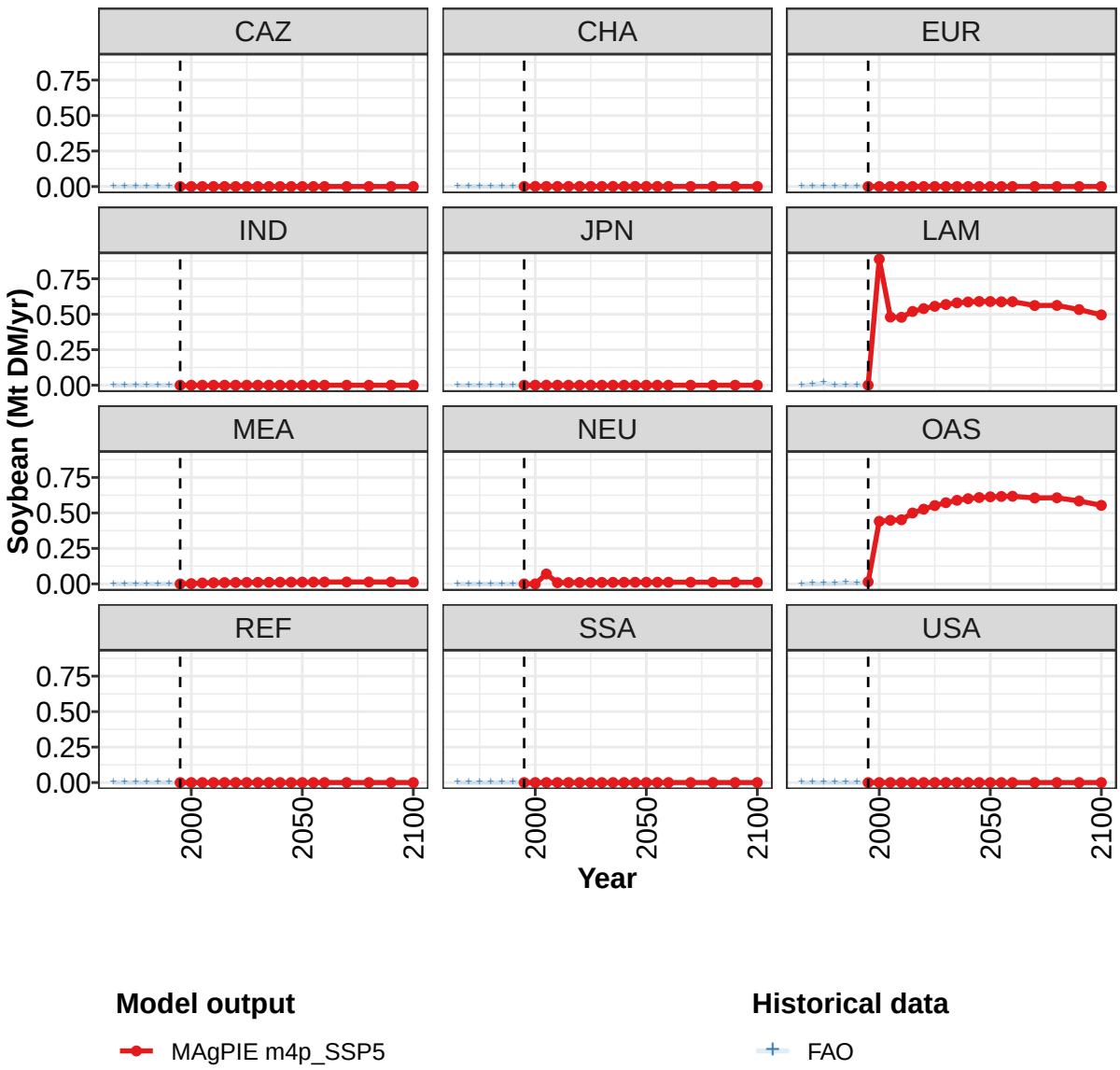
Table 480: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.46	0.68	0.63	0.92	1.42	3.23	5.85	5.88	8.28	9.26
CAZ	0.01	0.01	0.02	0.03	0.03	0.05	0.11	0.10	0.10	0.10
CHA	0.05	0.06	0.18	0.08	0.42	0.10	0.11	0.29	0.24	0.50
EUR	0.09	0.12	0.04	0.06	0.09	0.10	0.14	0.11	0.20	0.27
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.04	0.06	0.09	0.28	0.15	0.08	0.11	0.13	0.34	0.24
MEA	0.02	0.01	0.01	0.02	0.02	0.03	0.12	0.22	0.15	0.12
NEU	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.02
OAS	0.22	0.40	0.26	0.43	0.68	2.78	5.22	4.82	7.13	7.89
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01
SSA	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
USA	0.00	0.00	0.00	0.00	0.00	0.06	0.01	0.18	0.05	0.07

Table 481: FAO — Demand—Material—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

8.2.8 Oil crops—Soybean





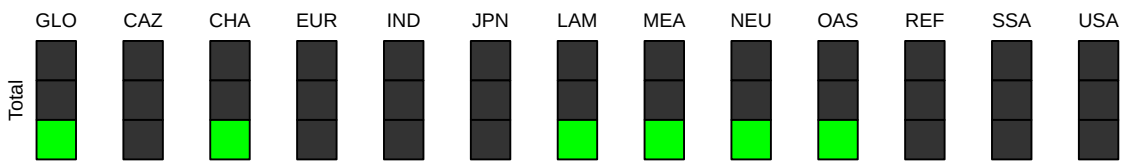


Figure 161: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.02	1.33	1.01	0.95	1.04	1.09	1.13	1.16	1.19	1.21	1.22
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.89	0.48	0.48	0.52	0.54	0.56	0.57	0.58	0.59	0.59
MEA	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.00	0.00	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.01	0.44	0.45	0.45	0.50	0.53	0.55	0.57	0.59	0.60	0.61
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 482: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

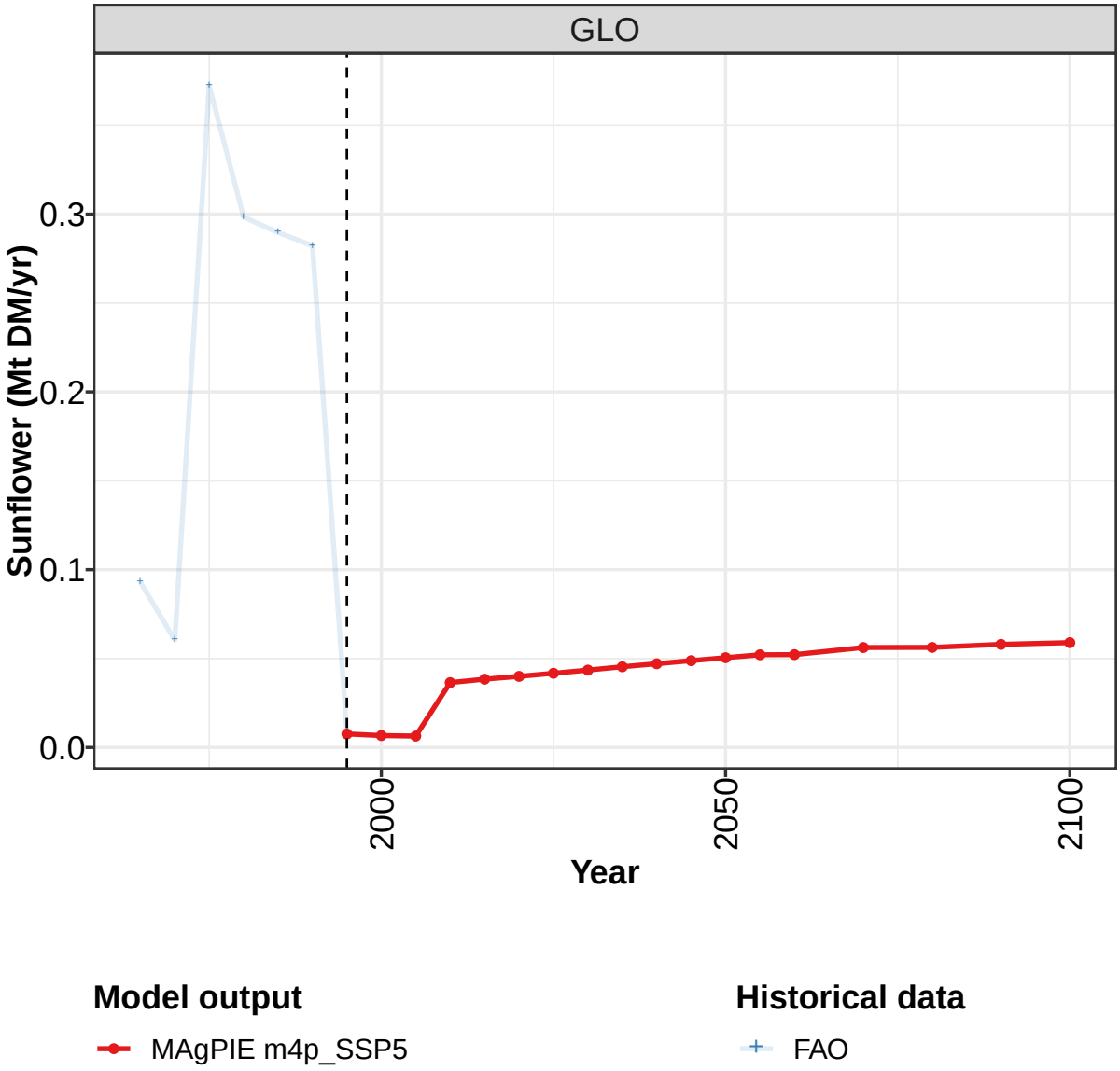
	2050	2055	2060	2070	2080	2090	2100
GLO	1.23	1.23	1.23	1.19	1.19	1.14	1.07
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.59	0.59	0.59	0.56	0.56	0.53	0.50
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.61	0.62	0.62	0.61	0.61	0.58	0.55
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

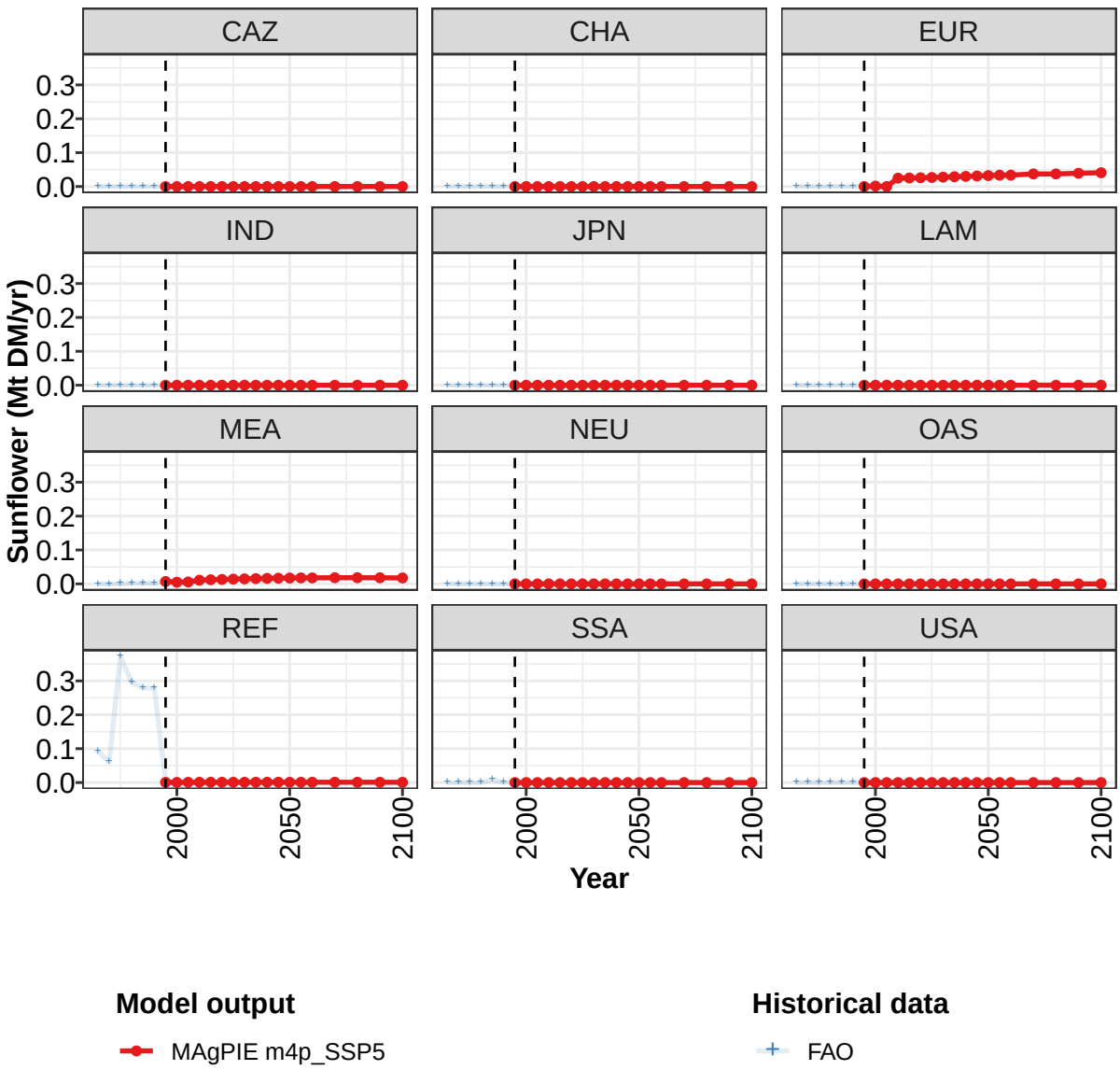
Table 483: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.01	0.02	0.00	0.01	0.01	0.02	1.33	1.01	0.95
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.89	0.48	0.48
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01
OAS	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.44	0.45	0.45
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 484: FAO — Demand—Material—Crops—Oil crops—Soybean (Mt DM/yr)

8.2.9 Oil crops—Sunflower





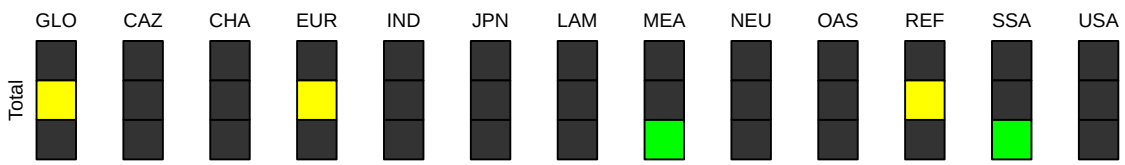


Figure 162: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0076	0.0067	0.0064	0.0365	0.0384	0.0400	0.0418	0.0435	0.0454	0.0471	0.0489
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0013	0.0000	0.0247	0.0252	0.0259	0.0268	0.0277	0.0288	0.0299	0.0311
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0070	0.0050	0.0056	0.0109	0.0123	0.0132	0.0140	0.0149	0.0156	0.0163	0.0168
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0006	0.0004	0.0007	0.0009	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	0.0010
SSA	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 485: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

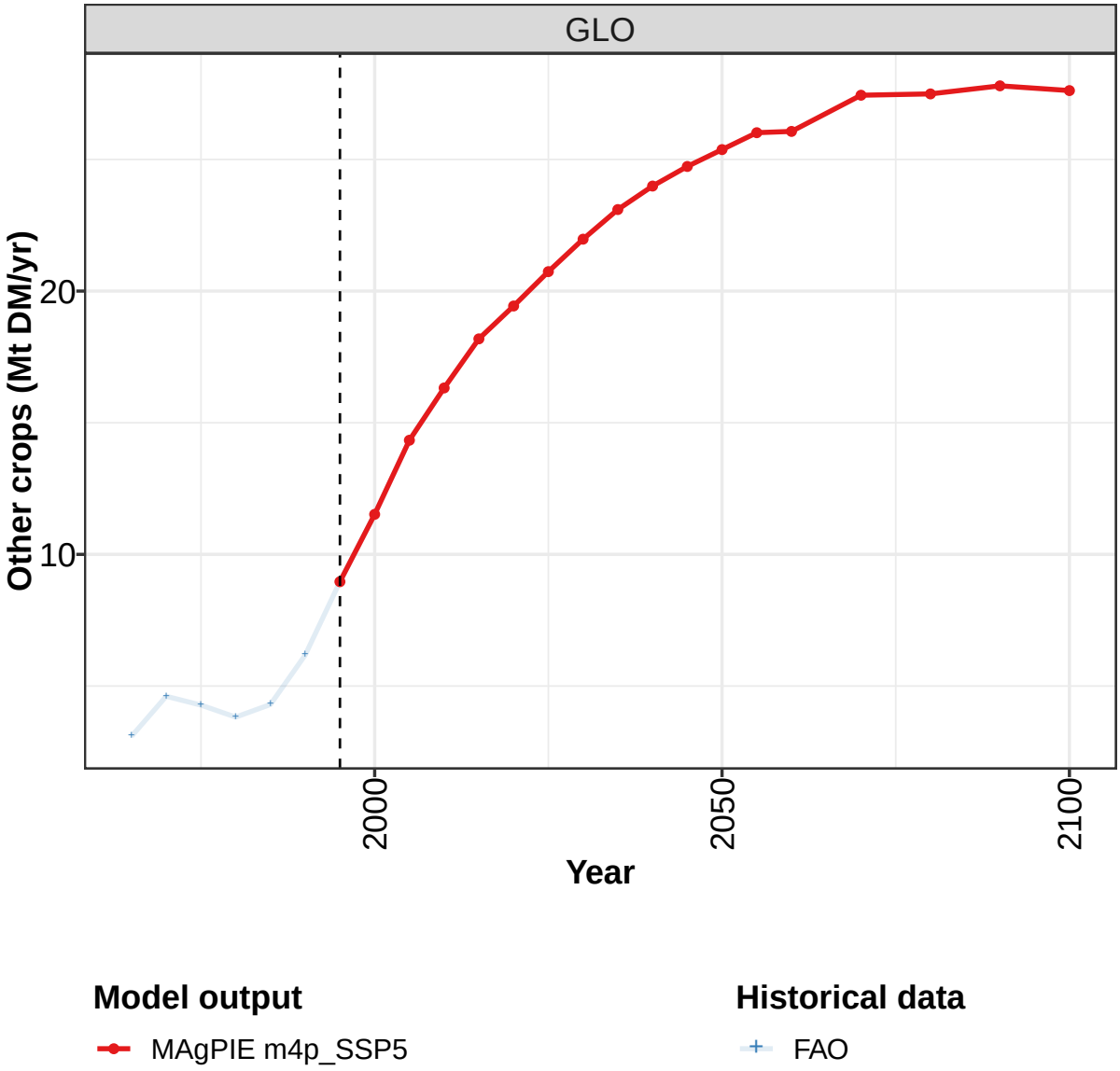
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0505	0.0522	0.0522	0.0562	0.0563	0.0580	0.0590
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0323	0.0335	0.0336	0.0371	0.0372	0.0392	0.0407
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MEA	0.0173	0.0177	0.0177	0.0182	0.0182	0.0180	0.0175
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
REF	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0008
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

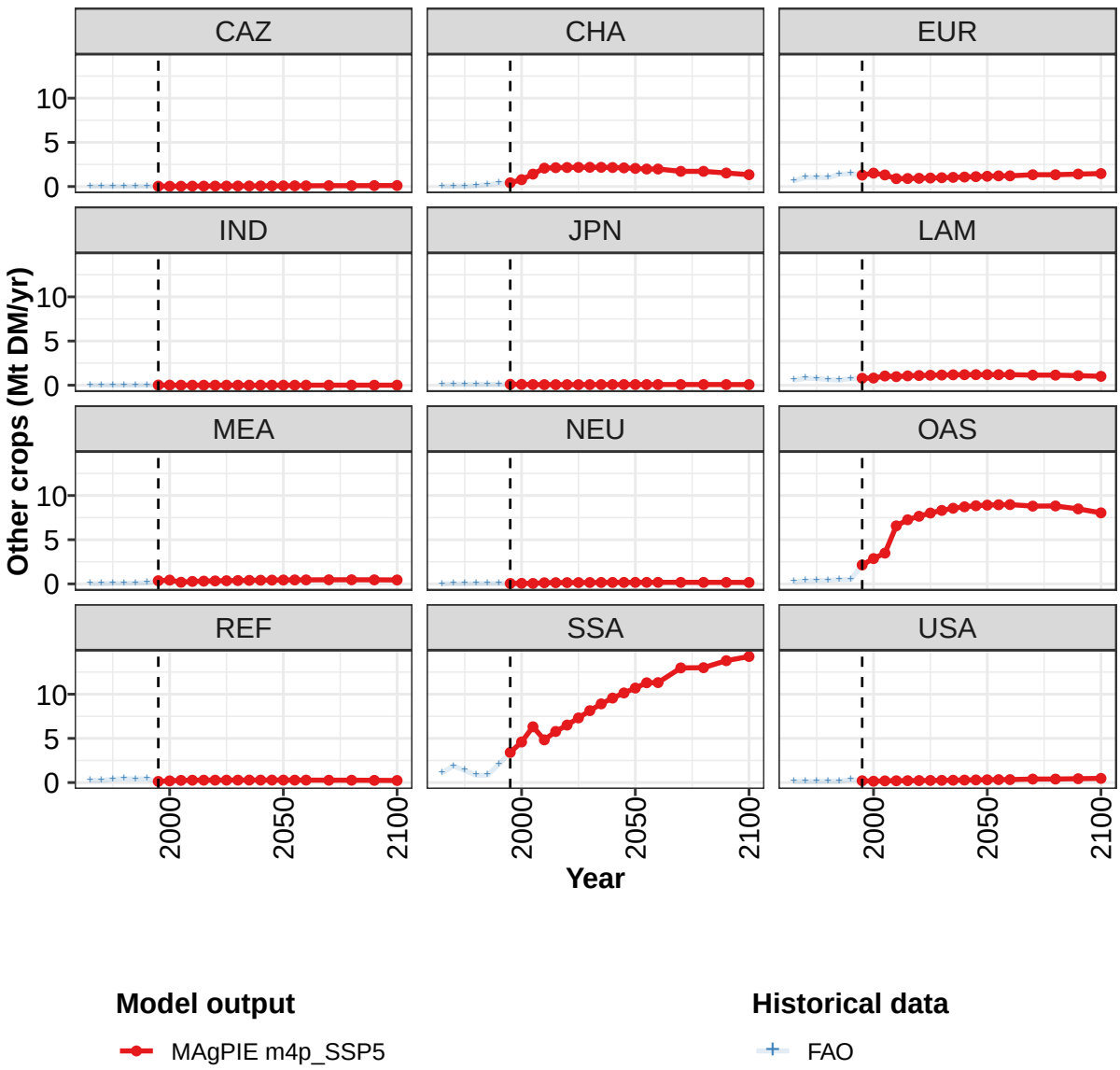
Table 486: MAgPIE m4p_SSP5 — Demand—Material—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.093	0.060	0.372	0.298	0.290	0.282	0.008	0.007	0.006	0.037
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.025
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.003	0.003	0.003	0.007	0.005	0.006	0.011
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.093	0.060	0.372	0.296	0.279	0.279	0.001	0.000	0.001	0.001
SSA	0.000	0.000	0.000	0.000	0.008	0.001	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 487: FAO — Demand—Material—Crops—Oil crops—Sunflower (Mt DM/yr)

8.2.10 Other crops





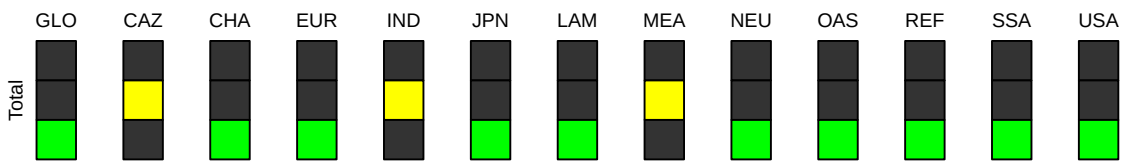


Figure 163: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.0	11.5	14.3	16.3	18.2	19.4	20.7	22.0	23.1	24.0	24.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
CHA	0.4	0.8	1.4	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1
EUR	1.3	1.5	1.3	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.8	0.8	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2
MEA	0.4	0.4	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
OAS	2.1	2.9	3.5	6.6	7.3	7.7	8.0	8.3	8.6	8.7	8.8
REF	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SSA	3.4	4.6	6.3	4.8	5.8	6.5	7.3	8.1	8.9	9.6	10.1
USA	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3

Table 488: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops (Mt DM/yr) [PART 1/2]

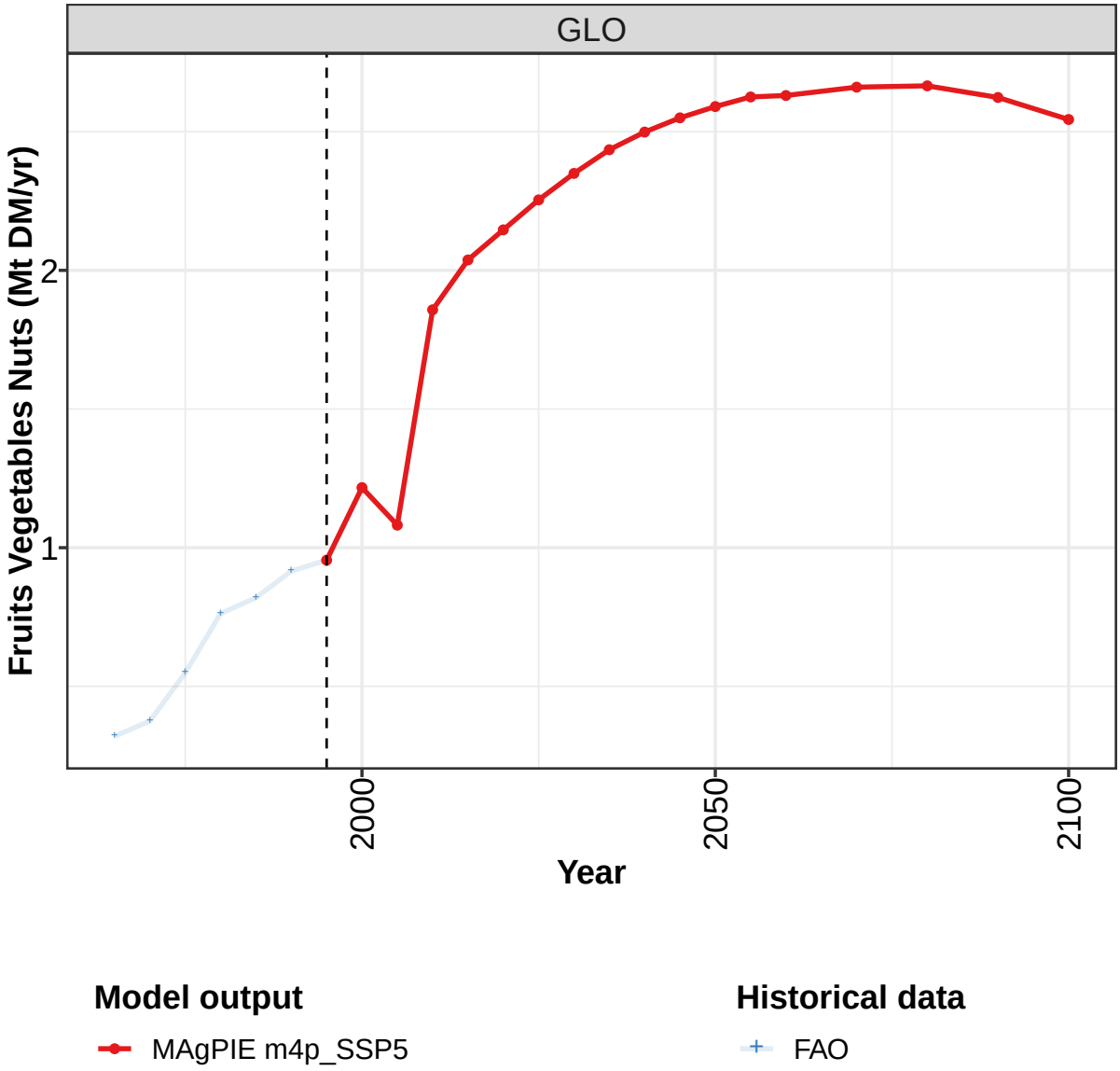
	2050	2055	2060	2070	2080	2090	2100
GLO	25.4	26.0	26.1	27.4	27.5	27.8	27.6
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	2.0	2.0	2.0	1.7	1.7	1.5	1.3
EUR	1.2	1.2	1.2	1.3	1.3	1.4	1.5
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.2	1.2	1.2	1.1	1.1	1.1	1.0
MEA	0.4	0.5	0.5	0.5	0.5	0.5	0.4
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	8.9	9.0	9.0	8.8	8.8	8.5	8.0
REF	0.3	0.3	0.3	0.3	0.3	0.3	0.2
SSA	10.7	11.3	11.3	13.0	13.0	13.8	14.3
USA	0.3	0.3	0.3	0.4	0.4	0.4	0.5

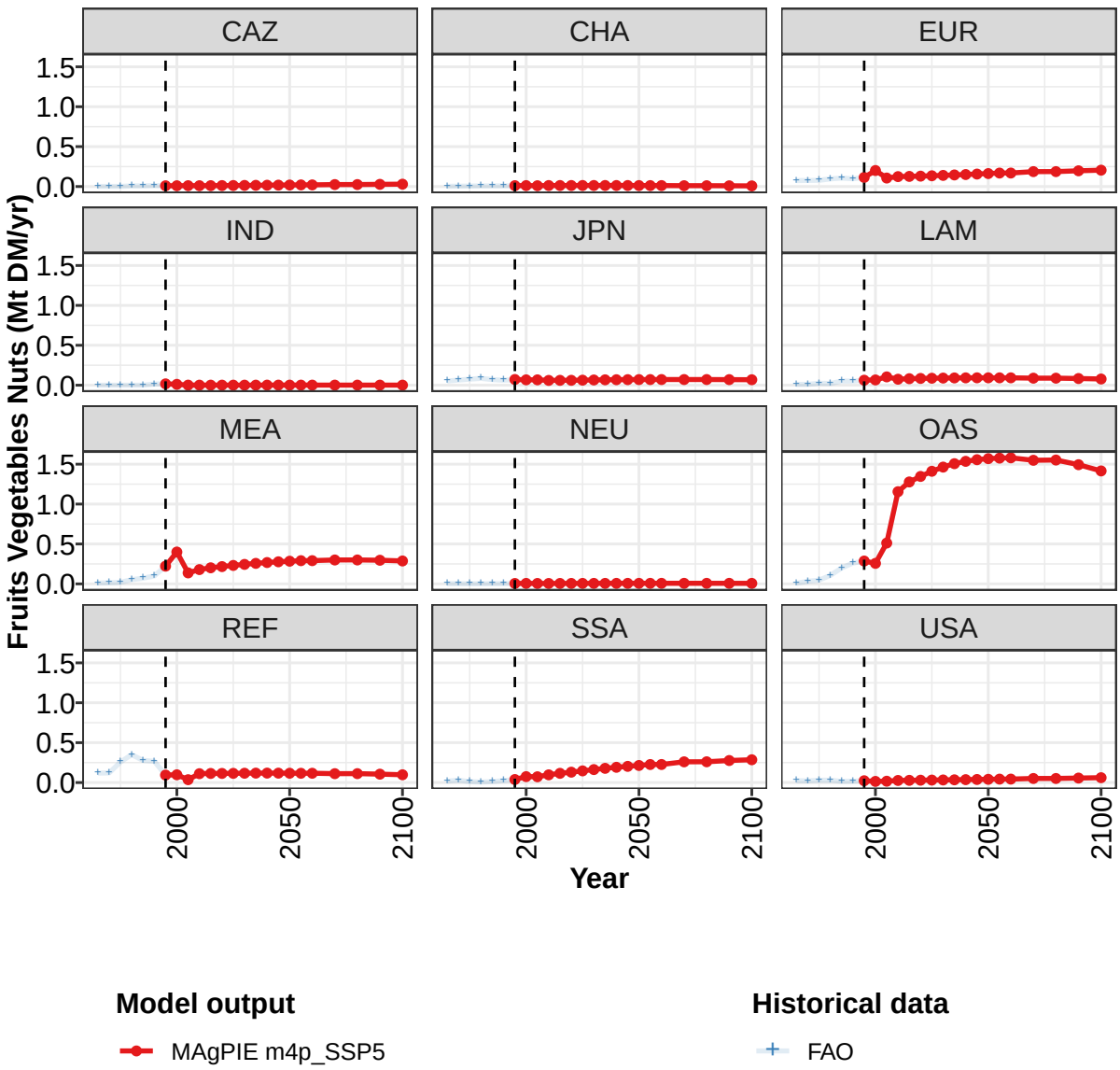
Table 489: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.1	4.6	4.3	3.8	4.3	6.2	9.0	11.5	14.3	16.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.1	0.2	0.4	0.4	0.8	1.4	2.1
EUR	0.7	1.0	1.0	1.0	1.4	1.4	1.3	1.5	1.3	0.9
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.6	0.8	0.8	0.6	0.6	0.8	0.8	0.8	1.0	1.0
MEA	0.0	0.0	0.1	0.1	0.1	0.1	0.4	0.4	0.2	0.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
OAS	0.2	0.3	0.4	0.4	0.5	0.5	2.1	2.9	3.5	6.6
REF	0.2	0.2	0.4	0.4	0.4	0.4	0.1	0.2	0.2	0.3
SSA	1.1	1.9	1.4	0.8	0.8	2.1	3.4	4.6	6.3	4.8
USA	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.1	0.2	0.2

Table 490: FAO — Demand—Material—Crops—Other crops (Mt DM/yr)

8.2.11 Other crops—Fruits Vegetables Nuts





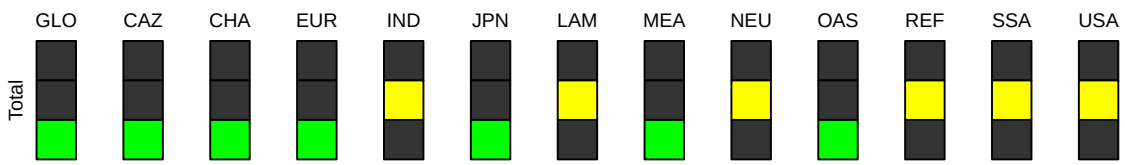


Figure 164: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.95	1.22	1.08	1.86	2.04	2.15	2.25	2.35	2.44	2.50	2.55
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
CHA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
EUR	0.11	0.20	0.11	0.12	0.13	0.13	0.13	0.14	0.15	0.15	0.16
IND	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
LAM	0.06	0.07	0.10	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09
MEA	0.22	0.40	0.14	0.18	0.20	0.22	0.23	0.24	0.26	0.27	0.28
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.29	0.26	0.51	1.16	1.28	1.35	1.41	1.46	1.51	1.54	1.56
REF	0.09	0.10	0.04	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12
SSA	0.04	0.07	0.07	0.10	0.12	0.13	0.15	0.16	0.18	0.19	0.20
USA	0.02	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04

Table 491: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

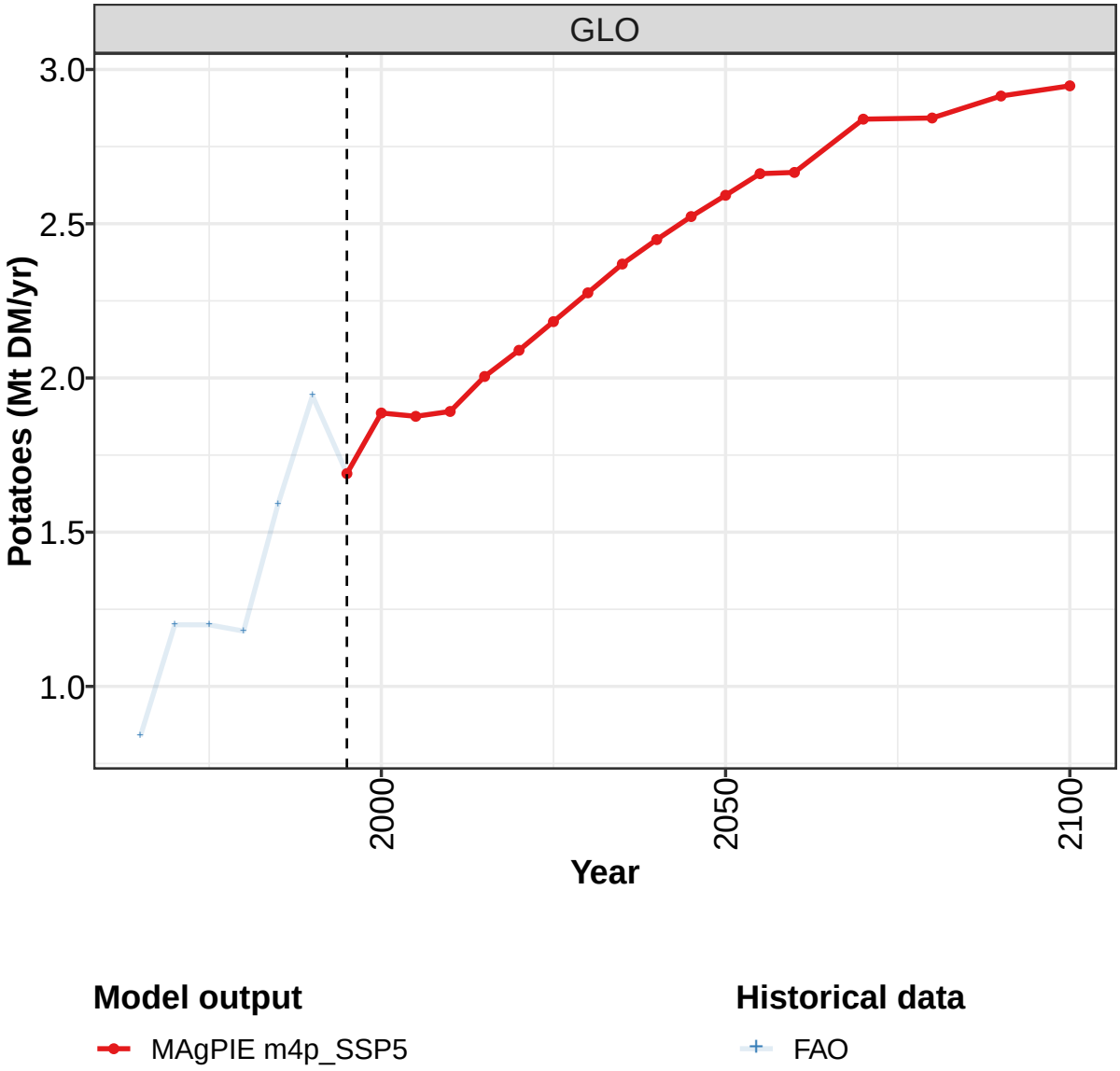
	2050	2055	2060	2070	2080	2090	2100
GLO	2.59	2.63	2.63	2.66	2.67	2.62	2.54
CAZ	0.02	0.02	0.02	0.02	0.02	0.03	0.03
CHA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
EUR	0.16	0.17	0.17	0.19	0.19	0.20	0.20
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.07	0.07	0.07	0.07	0.07	0.07	0.07
LAM	0.09	0.09	0.09	0.09	0.09	0.08	0.08
MEA	0.28	0.29	0.29	0.30	0.30	0.30	0.29
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	1.57	1.58	1.58	1.55	1.55	1.49	1.42
REF	0.12	0.12	0.12	0.11	0.11	0.11	0.10
SSA	0.21	0.23	0.23	0.26	0.26	0.28	0.29
USA	0.04	0.04	0.04	0.05	0.05	0.06	0.06

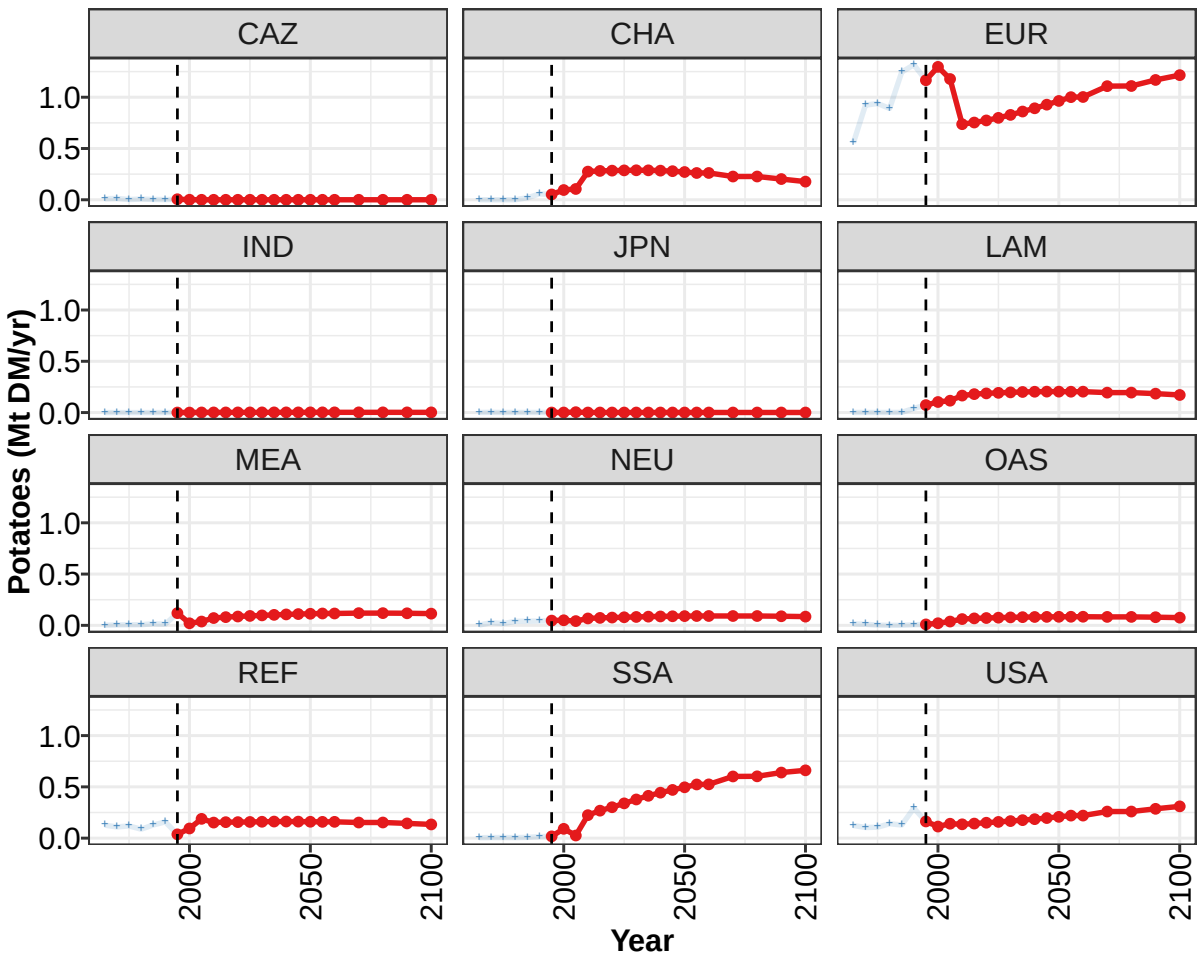
Table 492: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.32	0.38	0.55	0.76	0.82	0.92	0.96	1.22	1.08	1.86
CAZ	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
EUR	0.07	0.08	0.08	0.10	0.11	0.10	0.11	0.20	0.11	0.12
IND	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00
JPN	0.05	0.06	0.08	0.09	0.07	0.06	0.07	0.07	0.07	0.06
LAM	0.01	0.01	0.02	0.02	0.05	0.05	0.06	0.07	0.10	0.08
MEA	0.01	0.01	0.02	0.05	0.07	0.10	0.22	0.40	0.14	0.18
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
OAS	0.01	0.03	0.05	0.11	0.20	0.26	0.29	0.26	0.51	1.16
REF	0.12	0.12	0.26	0.35	0.28	0.27	0.09	0.10	0.04	0.11
SSA	0.02	0.03	0.01	0.01	0.01	0.02	0.04	0.07	0.07	0.10
USA	0.02	0.02	0.03	0.03	0.01	0.02	0.02	0.01	0.02	0.03

Table 493: FAO — Demand—Material—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

8.2.12 Other crops—Potatoes





Model output

MAgPIE m4p_SSP5

Historical data

FAO

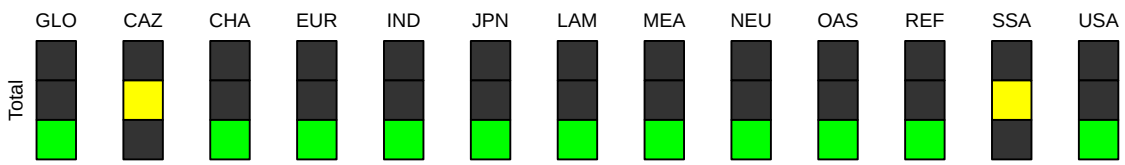


Figure 165: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.69	1.89	1.88	1.89	2.00	2.09	2.18	2.28	2.37	2.45	2.52
CAZ	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.05	0.10	0.11	0.27	0.28	0.28	0.29	0.29	0.29	0.28	0.28
EUR	1.17	1.30	1.18	0.74	0.75	0.77	0.80	0.83	0.86	0.89	0.93
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.07	0.10	0.12	0.17	0.18	0.19	0.19	0.20	0.20	0.20	0.20
MEA	0.12	0.02	0.04	0.07	0.08	0.09	0.09	0.10	0.10	0.11	0.11
NEU	0.05	0.05	0.04	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.09
OAS	0.01	0.02	0.04	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.08
REF	0.04	0.09	0.19	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16
SSA	0.02	0.09	0.03	0.22	0.27	0.30	0.34	0.38	0.41	0.44	0.47
USA	0.16	0.11	0.14	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20

Table 494: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

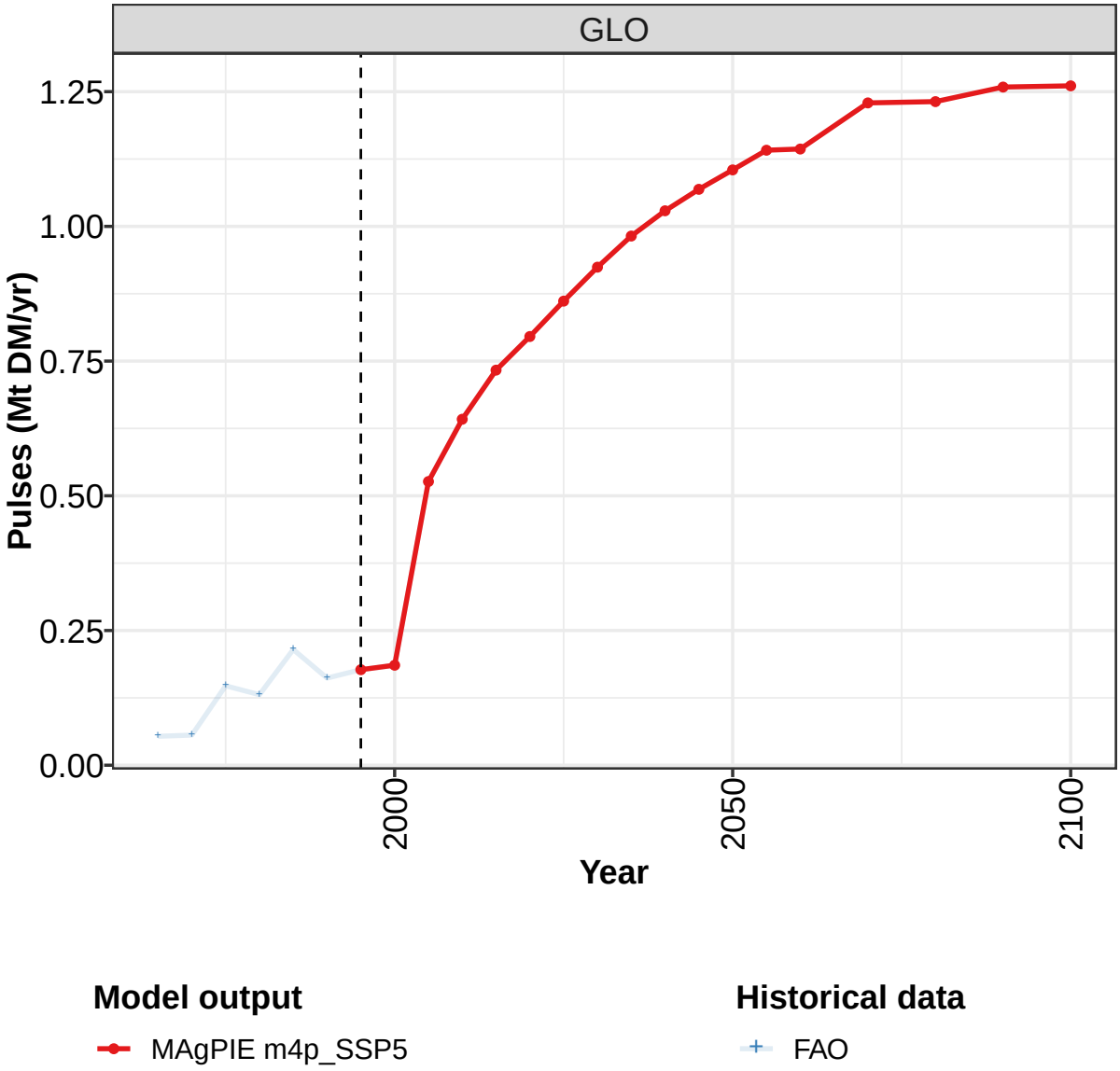
	2050	2055	2060	2070	2080	2090	2100
GLO	2.59	2.66	2.67	2.84	2.84	2.91	2.95
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.27	0.26	0.26	0.23	0.23	0.20	0.18
EUR	0.96	1.00	1.00	1.11	1.11	1.17	1.22
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.20	0.20	0.20	0.19	0.19	0.18	0.17
MEA	0.11	0.12	0.12	0.12	0.12	0.12	0.11
NEU	0.09	0.09	0.09	0.09	0.09	0.09	0.09
OAS	0.08	0.08	0.08	0.08	0.08	0.08	0.08
REF	0.16	0.16	0.16	0.15	0.15	0.14	0.13
SSA	0.50	0.52	0.52	0.60	0.60	0.64	0.66
USA	0.21	0.22	0.22	0.26	0.26	0.29	0.31

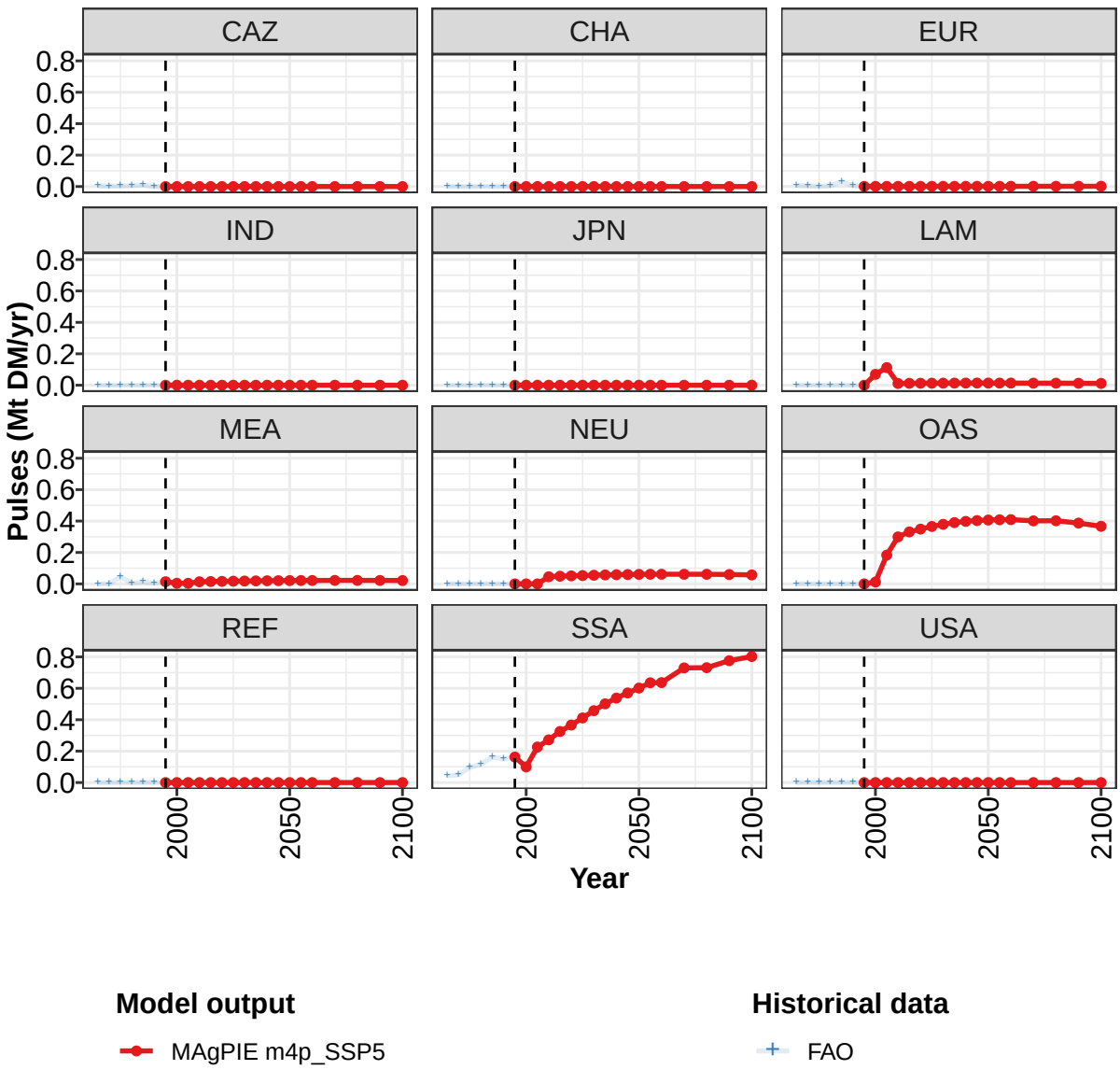
Table 495: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.84	1.20	1.20	1.18	1.59	1.94	1.69	1.89	1.88	1.89
CAZ	0.01	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.02	0.06	0.05	0.10	0.11	0.27
EUR	0.55	0.92	0.94	0.89	1.25	1.32	1.17	1.30	1.18	0.74
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.10	0.12	0.17
MEA	0.00	0.00	0.01	0.01	0.02	0.01	0.12	0.02	0.04	0.07
NEU	0.00	0.03	0.02	0.04	0.04	0.04	0.05	0.05	0.04	0.07
OAS	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.02	0.04	0.06
REF	0.13	0.11	0.12	0.09	0.13	0.16	0.04	0.09	0.19	0.15
SSA	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.09	0.03	0.22
USA	0.12	0.10	0.11	0.14	0.13	0.29	0.16	0.11	0.14	0.14

Table 496: FAO — Demand—Material—Crops—Other crops—Potatoes (Mt DM/yr)

8.2.13 Other crops—Pulses





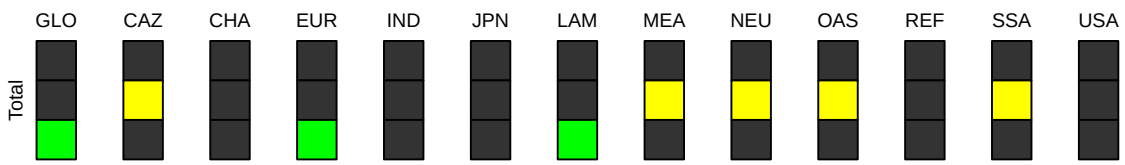


Figure 166: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.18	0.19	0.53	0.64	0.73	0.80	0.86	0.92	0.98	1.03	1.07
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.07	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.01	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
NEU	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
OAS	0.00	0.01	0.18	0.30	0.33	0.35	0.37	0.38	0.39	0.40	0.40
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.16	0.10	0.23	0.27	0.33	0.37	0.41	0.46	0.50	0.54	0.57
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 497: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

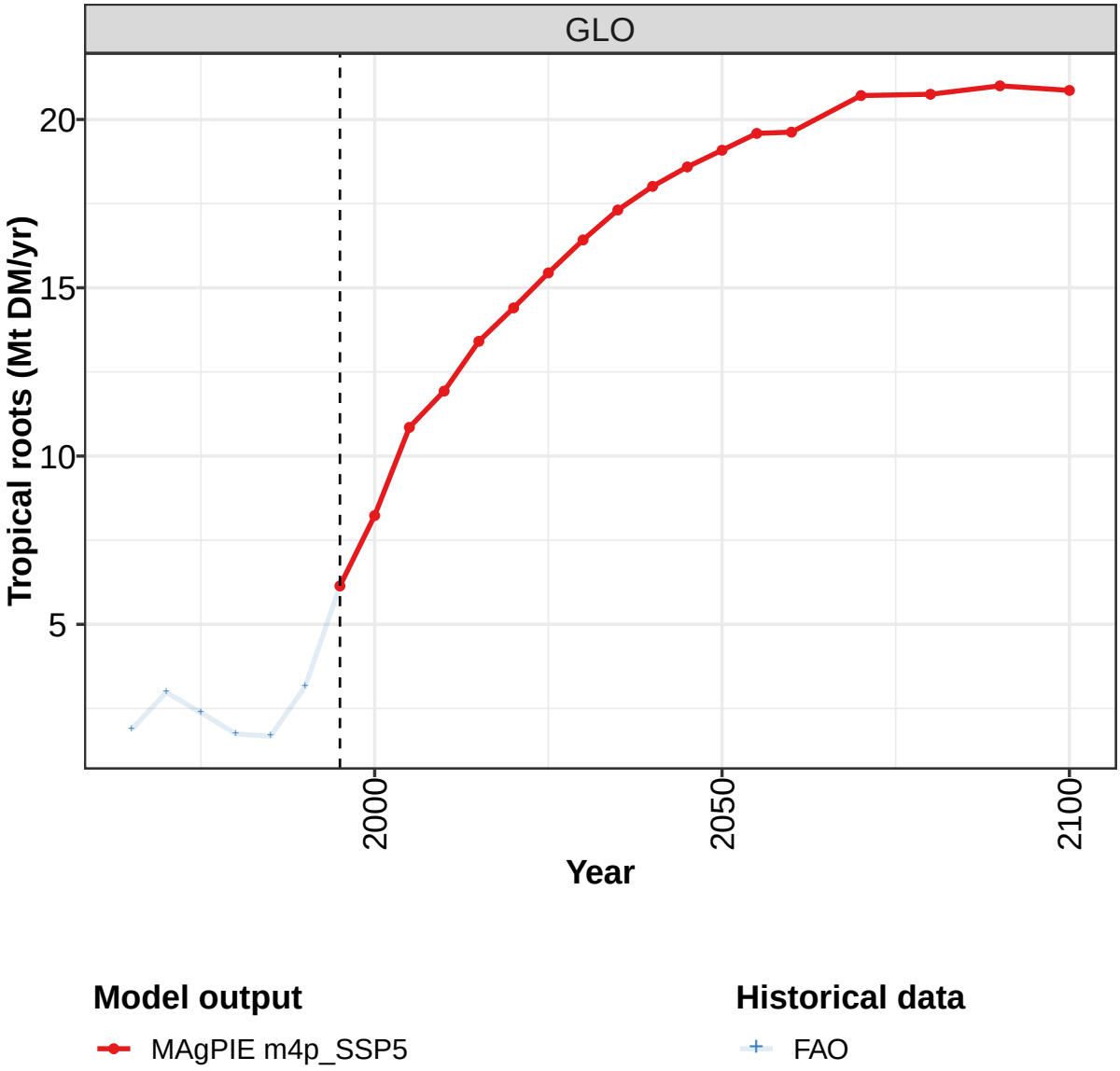
	2050	2055	2060	2070	2080	2090	2100
GLO	1.10	1.14	1.14	1.23	1.23	1.26	1.26
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.02	0.02	0.02	0.02	0.02	0.02	0.02
NEU	0.06	0.06	0.06	0.06	0.06	0.06	0.06
OAS	0.41	0.41	0.41	0.40	0.40	0.39	0.37
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.60	0.64	0.64	0.73	0.73	0.78	0.80
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

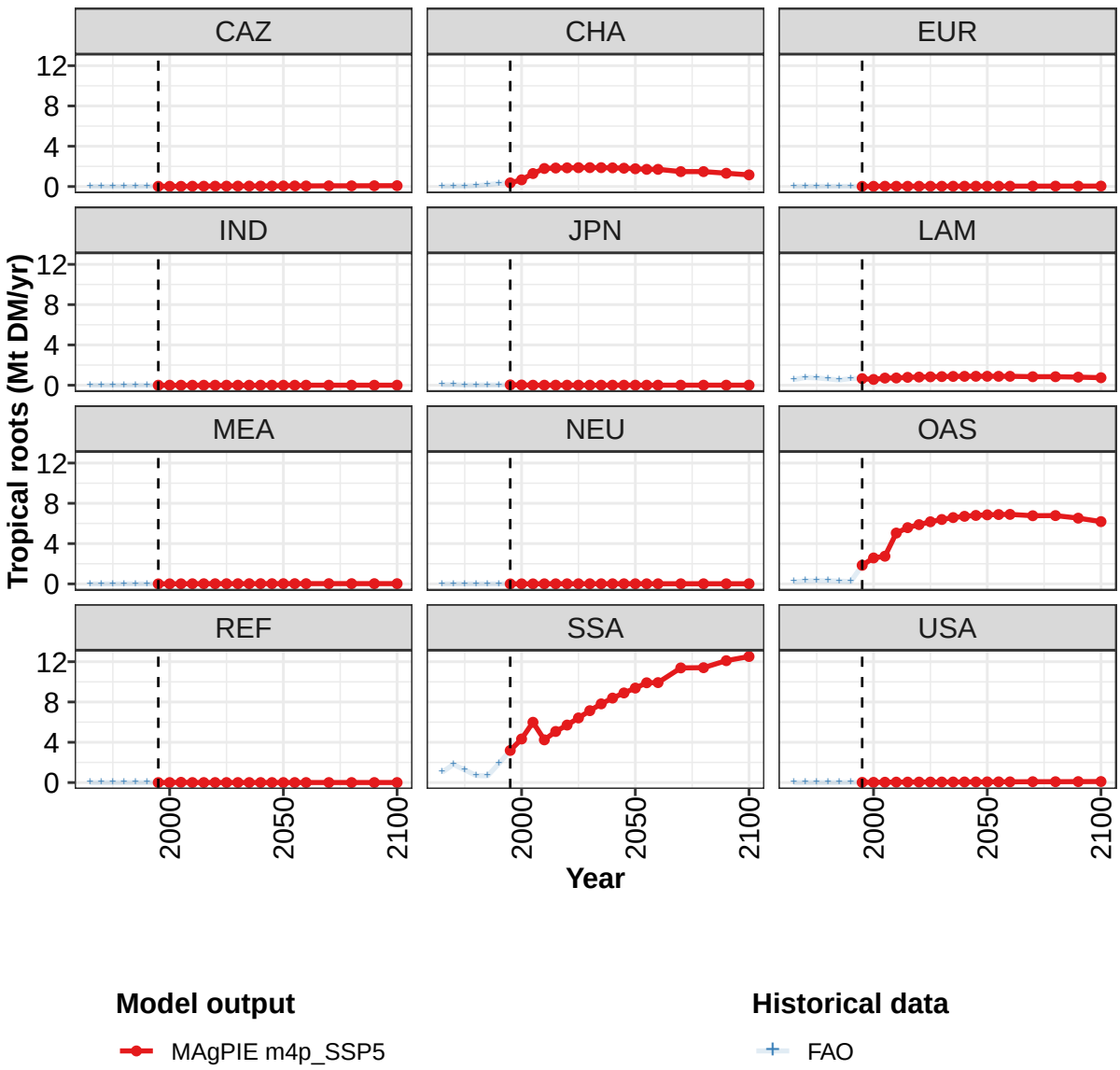
Table 498: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.054	0.056	0.147	0.131	0.215	0.162	0.177	0.186	0.526	0.642
CAZ	0.004	0.003	0.004	0.006	0.009	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.007	0.004	0.002	0.005	0.031	0.006	0.001	0.001	0.001	0.001
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.069	0.112	0.011
MEA	0.000	0.000	0.046	0.003	0.012	0.004	0.014	0.004	0.004	0.013
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.183	0.299
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.043	0.049	0.096	0.117	0.162	0.150	0.163	0.100	0.226	0.272
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 499: FAO — Demand—Material—Crops—Other crops—Pulses (Mt DM/yr)

8.2.14 Other crops—Tropical roots





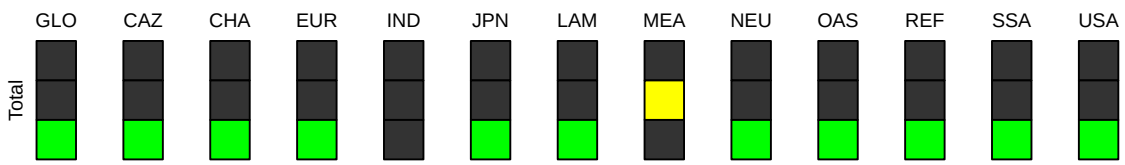


Figure 167: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.1	8.2	10.9	11.9	13.4	14.4	15.4	16.4	17.3	18.0	18.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.4	0.7	1.3	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.8	2.6	2.7	5.0	5.6	5.9	6.2	6.4	6.6	6.7	6.8
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	3.2	4.3	6.0	4.2	5.1	5.7	6.4	7.1	7.8	8.4	8.9
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1

Table 500: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

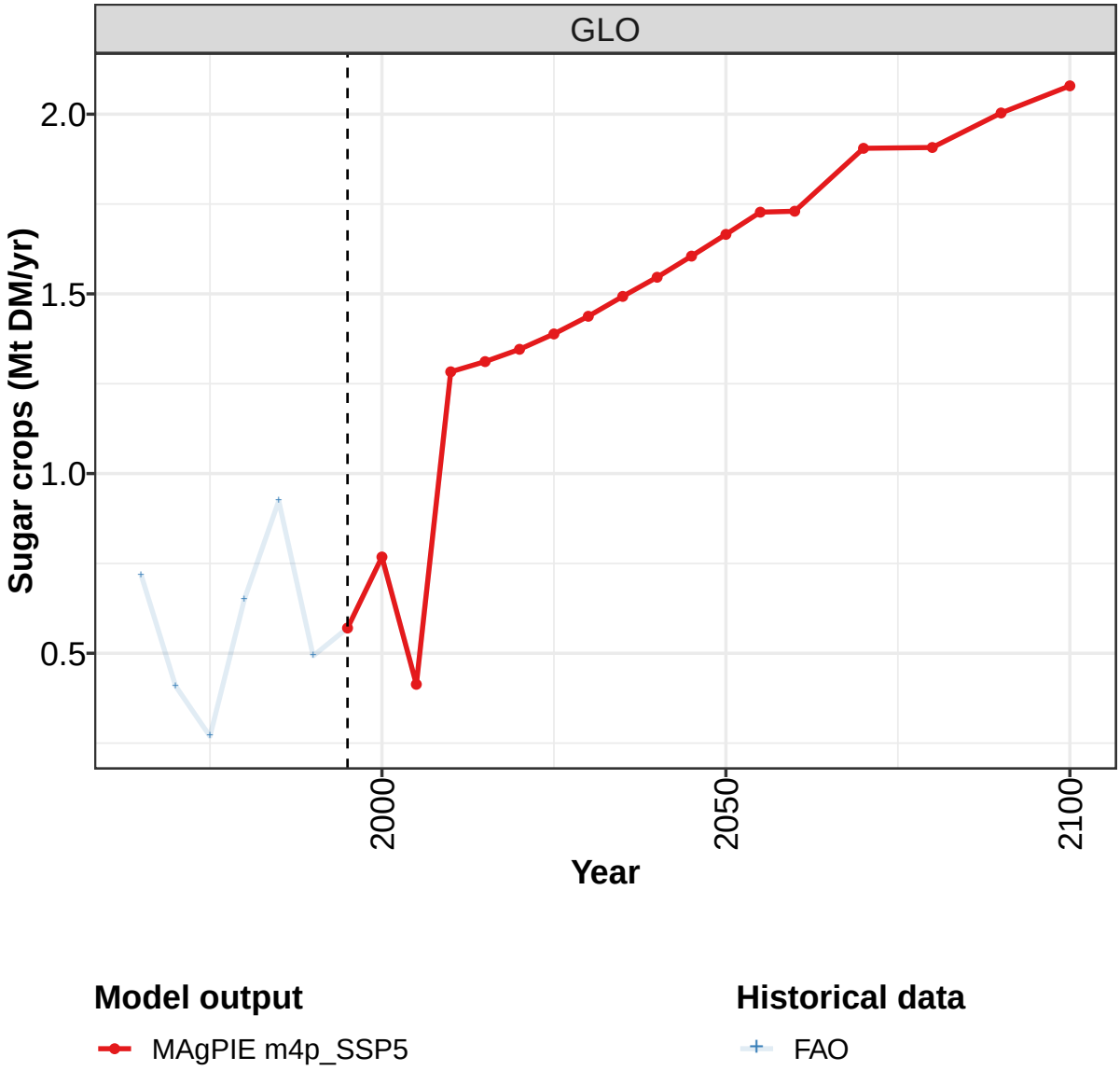
	2050	2055	2060	2070	2080	2090	2100
GLO	19.1	19.6	19.6	20.7	20.7	21.0	20.9
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	1.8	1.7	1.7	1.5	1.5	1.3	1.2
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.9	0.8	0.8	0.8	0.7
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	6.9	6.9	6.9	6.8	6.8	6.5	6.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	9.4	9.9	9.9	11.4	11.4	12.1	12.5
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

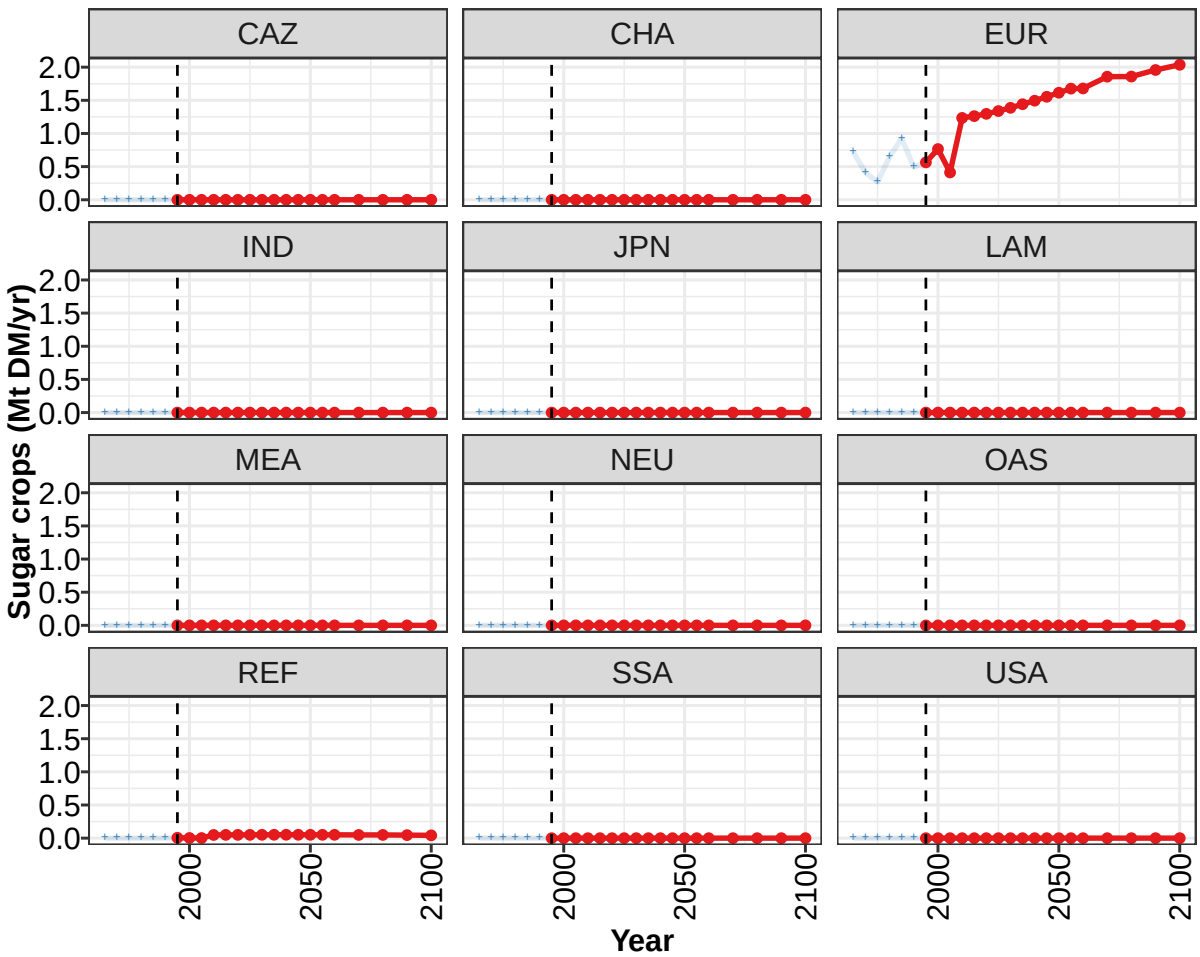
Table 501: MAgPIE m4p_SSP5 — Demand—Material—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.9	3.0	2.4	1.7	1.7	3.2	6.1	8.2	10.9	11.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.7	1.3	1.8
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.6	0.8	0.7	0.6	0.5	0.7	0.7	0.6	0.7	0.7
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.2	0.3	0.3	0.3	0.3	0.2	1.8	2.6	2.7	5.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.0	1.8	1.3	0.7	0.7	1.9	3.2	4.3	6.0	4.2
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 502: FAO — Demand—Material—Crops—Other crops—Tropical roots (Mt DM/yr)

8.2.15 Sugar crops





Model output

MAgPIE m4p_SSP5

Historical data

FAO

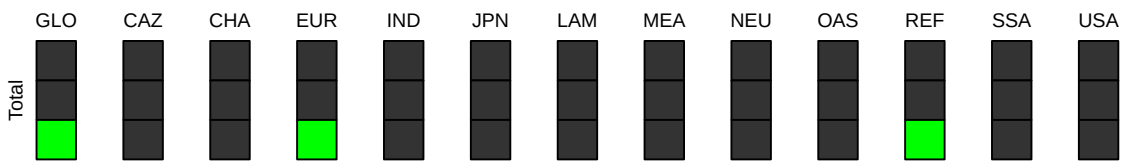


Figure 168: MAgPIE m4p_SSP5 — Demand—Material—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.57	0.77	0.41	1.28	1.31	1.35	1.39	1.44	1.49	1.55	1.61
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.56	0.77	0.41	1.24	1.26	1.30	1.34	1.39	1.44	1.49	1.55
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.01	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 503: MAgPIE m4p_SSP5 — Demand—Material—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

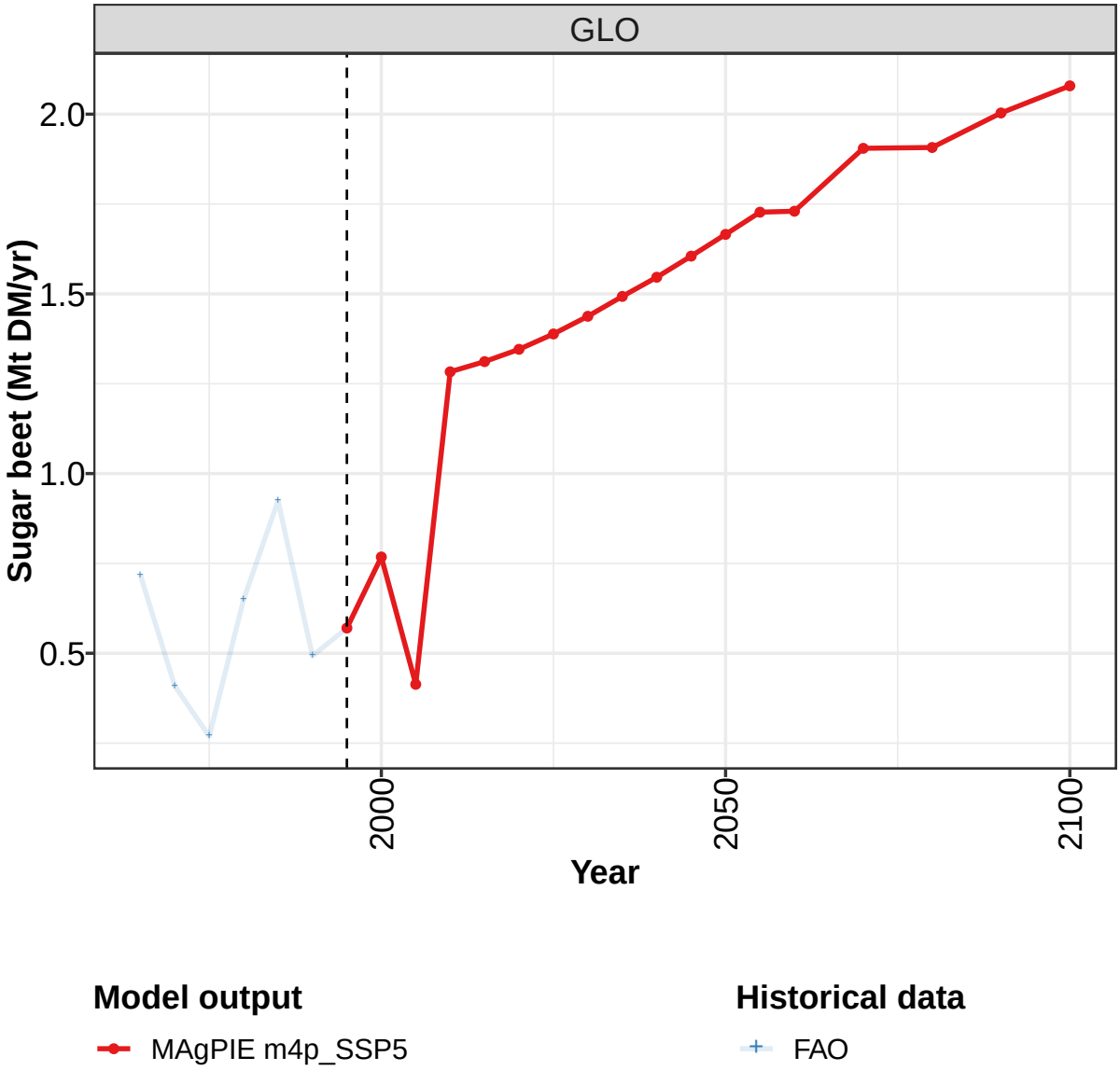
	2050	2055	2060	2070	2080	2090	2100
GLO	1.67	1.73	1.73	1.91	1.91	2.00	2.08
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	1.61	1.68	1.68	1.86	1.86	1.96	2.04
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.05	0.05	0.05	0.05	0.05	0.05	0.04
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

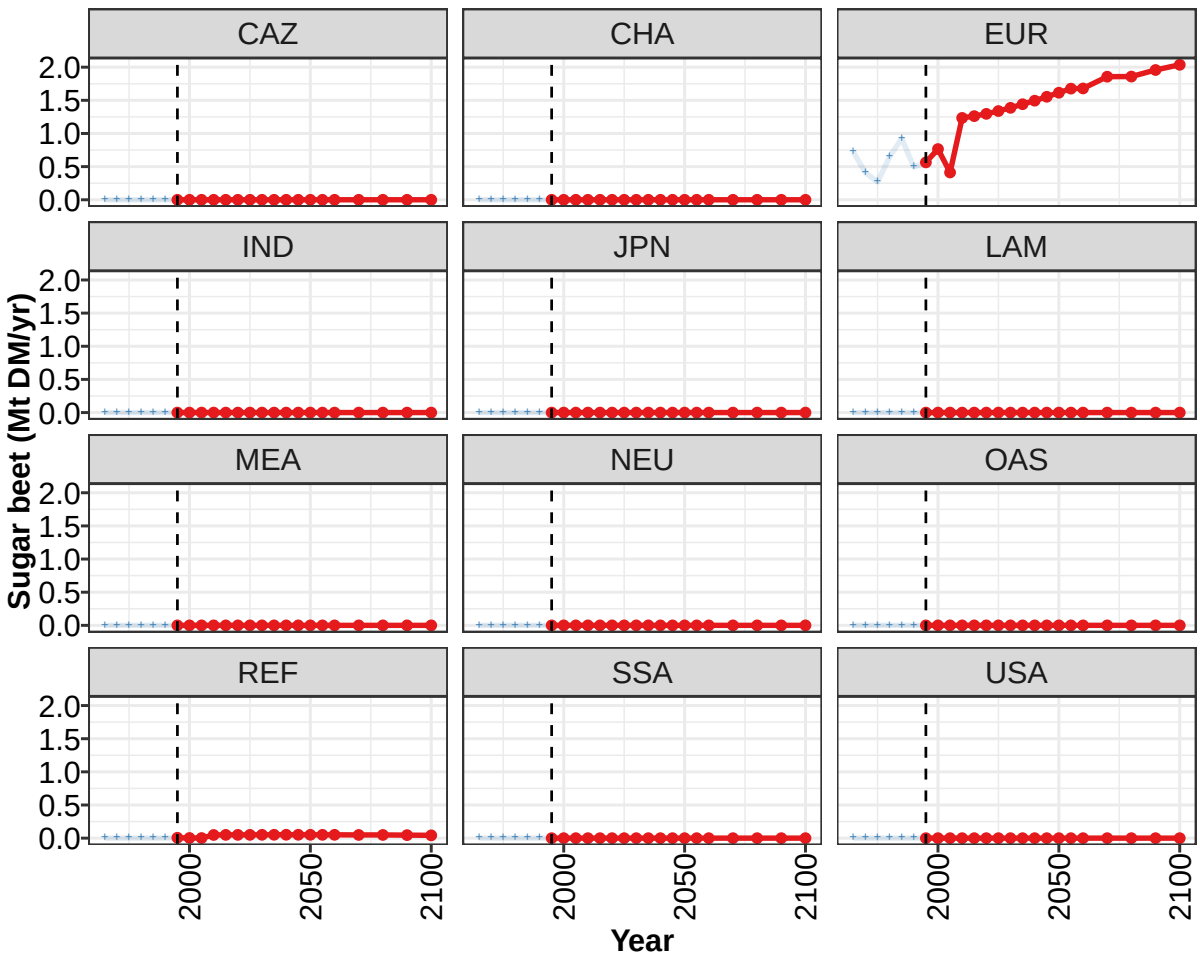
Table 504: MAgPIE m4p_SSP5 — Demand—Material—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.72	0.41	0.27	0.65	0.92	0.49	0.57	0.77	0.41	1.28
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.72	0.41	0.27	0.65	0.92	0.49	0.56	0.77	0.41	1.24
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 505: FAO — Demand—Material—Crops—Sugar crops (Mt DM/yr)

8.2.16 Sugar crops—Sugar beet





Model output

MAgPIE m4p_SSP5

Historical data

FAO

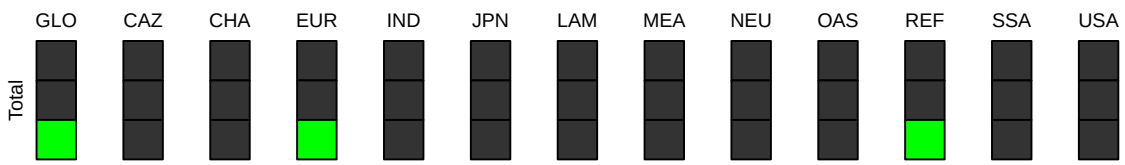


Figure 169: MAgPIE m4p_SSP5 — Demand—Material—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.57	0.77	0.41	1.28	1.31	1.35	1.39	1.44	1.49	1.55	1.61
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.56	0.77	0.41	1.24	1.26	1.30	1.34	1.39	1.44	1.49	1.55
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.01	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 506: MAgPIE m4p_SSP5 — Demand—Material—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

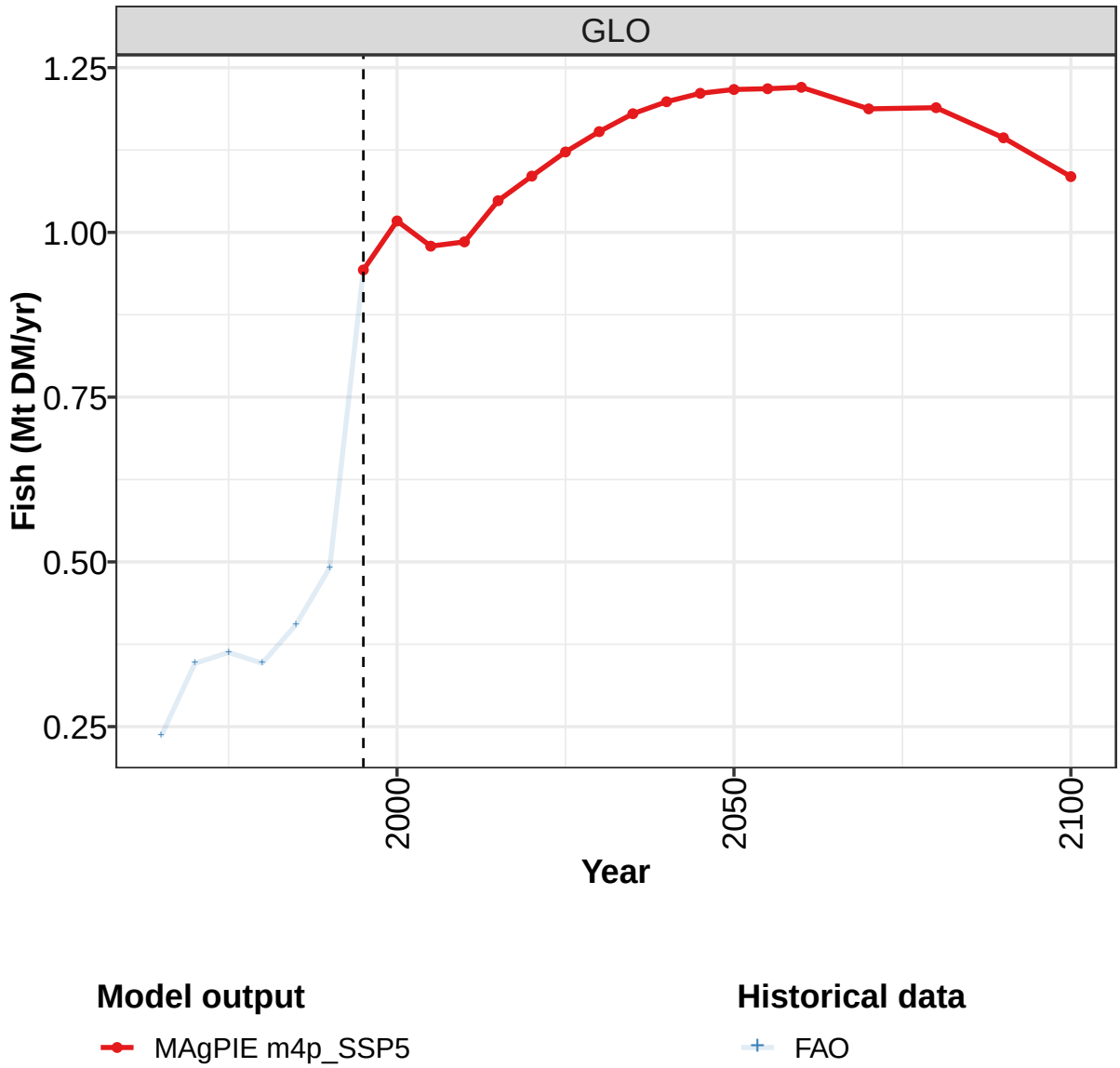
	2050	2055	2060	2070	2080	2090	2100
GLO	1.67	1.73	1.73	1.91	1.91	2.00	2.08
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	1.61	1.68	1.68	1.86	1.86	1.96	2.04
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.05	0.05	0.05	0.05	0.05	0.05	0.04
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

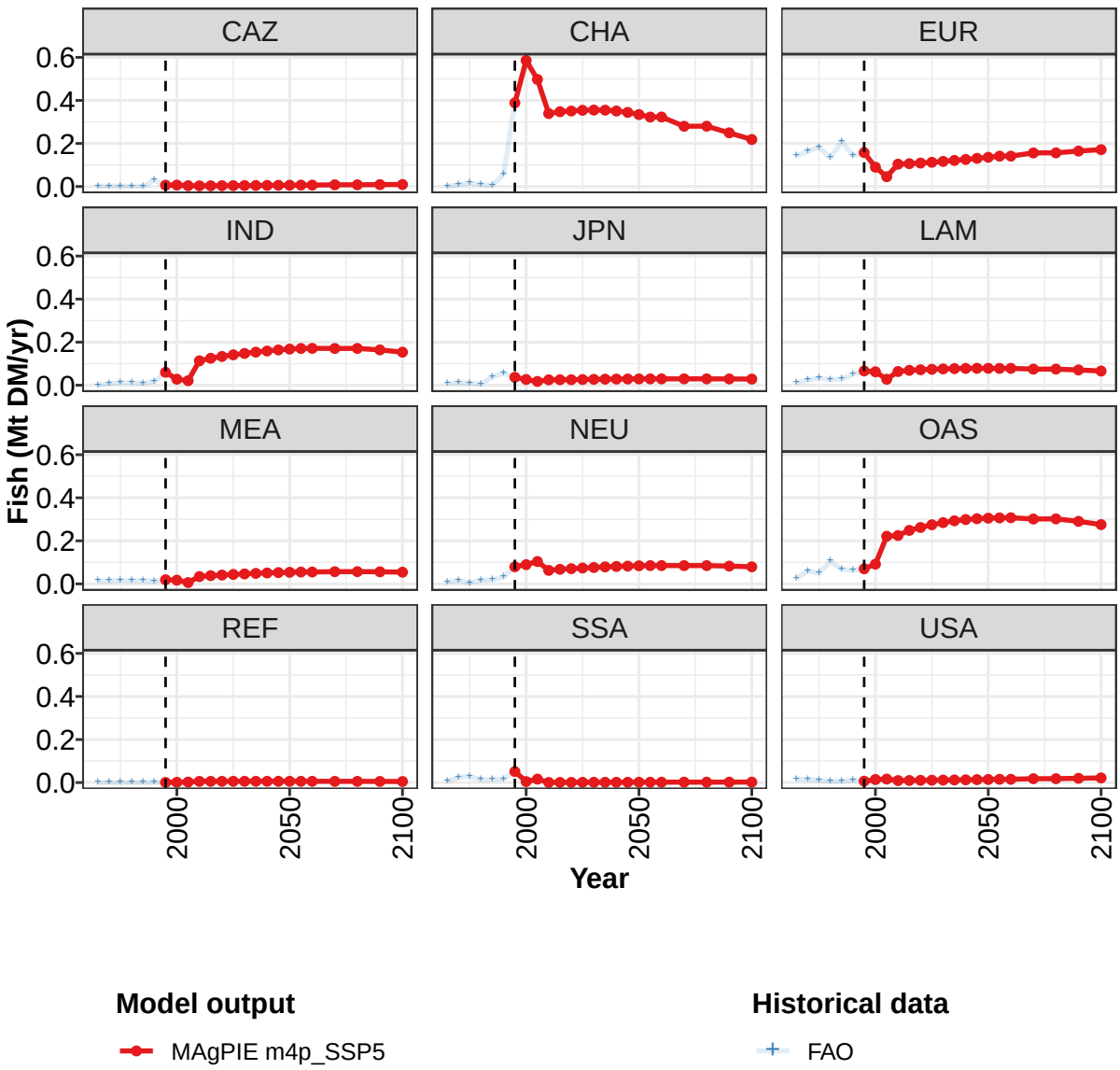
Table 507: MAgPIE m4p_SSP5 — Demand—Material—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.72	0.41	0.27	0.65	0.92	0.49	0.57	0.77	0.41	1.28
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.72	0.41	0.27	0.65	0.92	0.49	0.56	0.77	0.41	1.24
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 508: FAO — Demand—Material—Crops—Sugar crops—Sugar beet (Mt DM/yr)

8.3 Fish


GLO
1.25
1.00
0.75
0.50
0.25
Fish (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



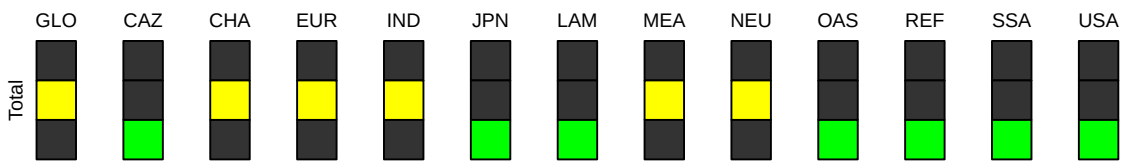


Figure 170: MAgPIE m4p_SSP5 — Demand—Material—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.94	1.02	0.98	0.99	1.05	1.09	1.12	1.15	1.18	1.20	1.21
CAZ	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
CHA	0.39	0.59	0.50	0.34	0.35	0.35	0.35	0.36	0.35	0.35	0.34
EUR	0.16	0.09	0.05	0.10	0.11	0.11	0.11	0.12	0.12	0.13	0.13
IND	0.06	0.03	0.02	0.11	0.13	0.13	0.14	0.15	0.15	0.16	0.16
JPN	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.07	0.06	0.03	0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.08
MEA	0.02	0.02	0.01	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05
NEU	0.08	0.09	0.10	0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.08
OAS	0.07	0.09	0.22	0.22	0.25	0.26	0.27	0.28	0.29	0.30	0.30
REF	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SSA	0.05	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

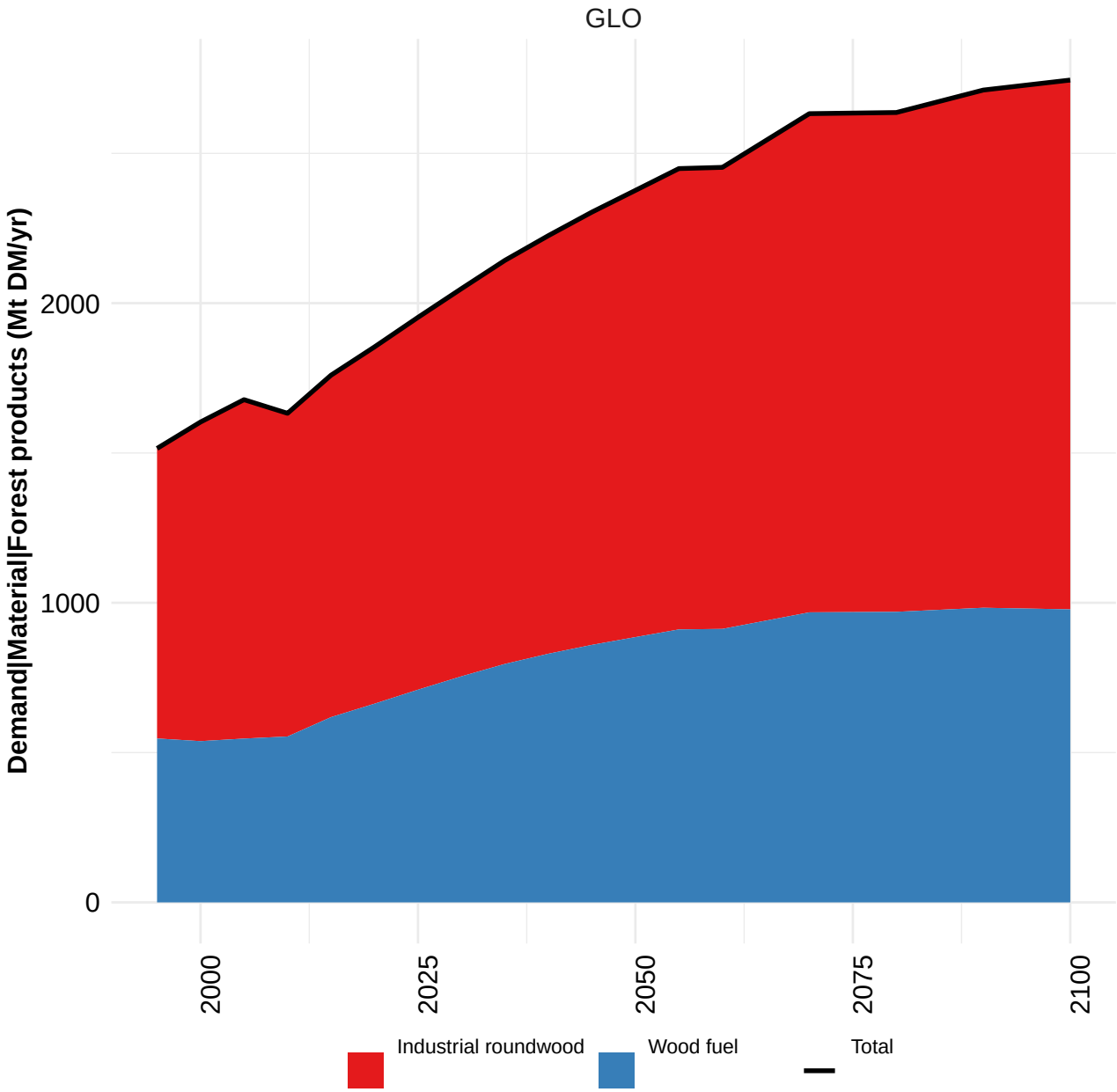
Table 509: MAgPIE m4p_SSP5 — Demand—Material—Fish (Mt DM/yr) [PART 1/2]

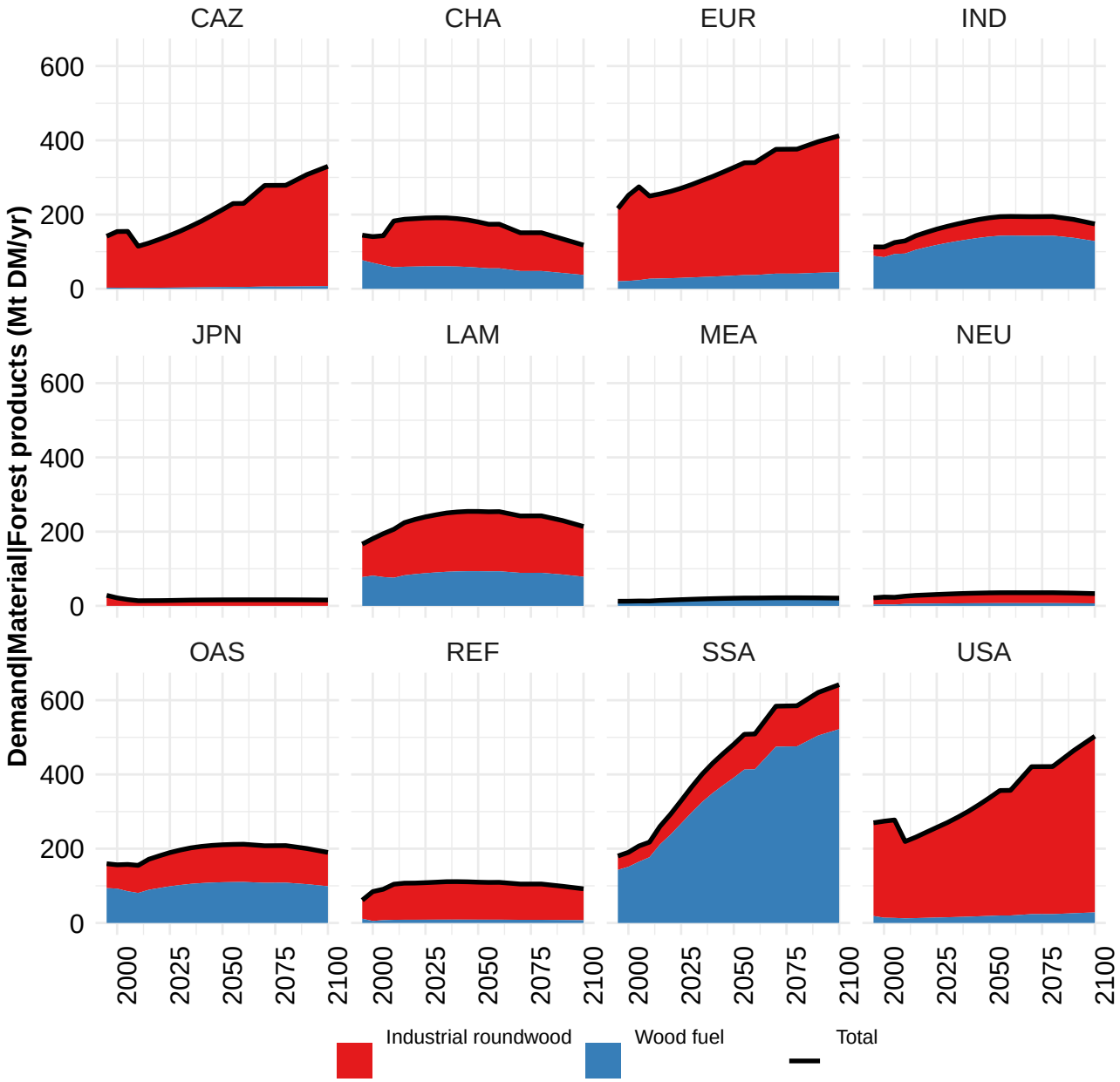
	2050	2055	2060	2070	2080	2090	2100
GLO	1.22	1.22	1.22	1.19	1.19	1.14	1.08
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	0.33	0.32	0.32	0.28	0.28	0.25	0.22
EUR	0.14	0.14	0.14	0.16	0.16	0.16	0.17
IND	0.17	0.17	0.17	0.17	0.17	0.16	0.15
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.08	0.08	0.08	0.07	0.07	0.07	0.07
MEA	0.05	0.06	0.06	0.06	0.06	0.06	0.05
NEU	0.08	0.08	0.09	0.08	0.08	0.08	0.08
OAS	0.31	0.31	0.31	0.30	0.30	0.29	0.28
REF	0.01	0.01	0.01	0.01	0.01	0.01	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.01	0.02	0.02	0.02	0.02	0.02	0.02

Table 510: MAgPIE m4p_SSP5 — Demand—Material—Fish (Mt DM/yr) [PART 2/2]

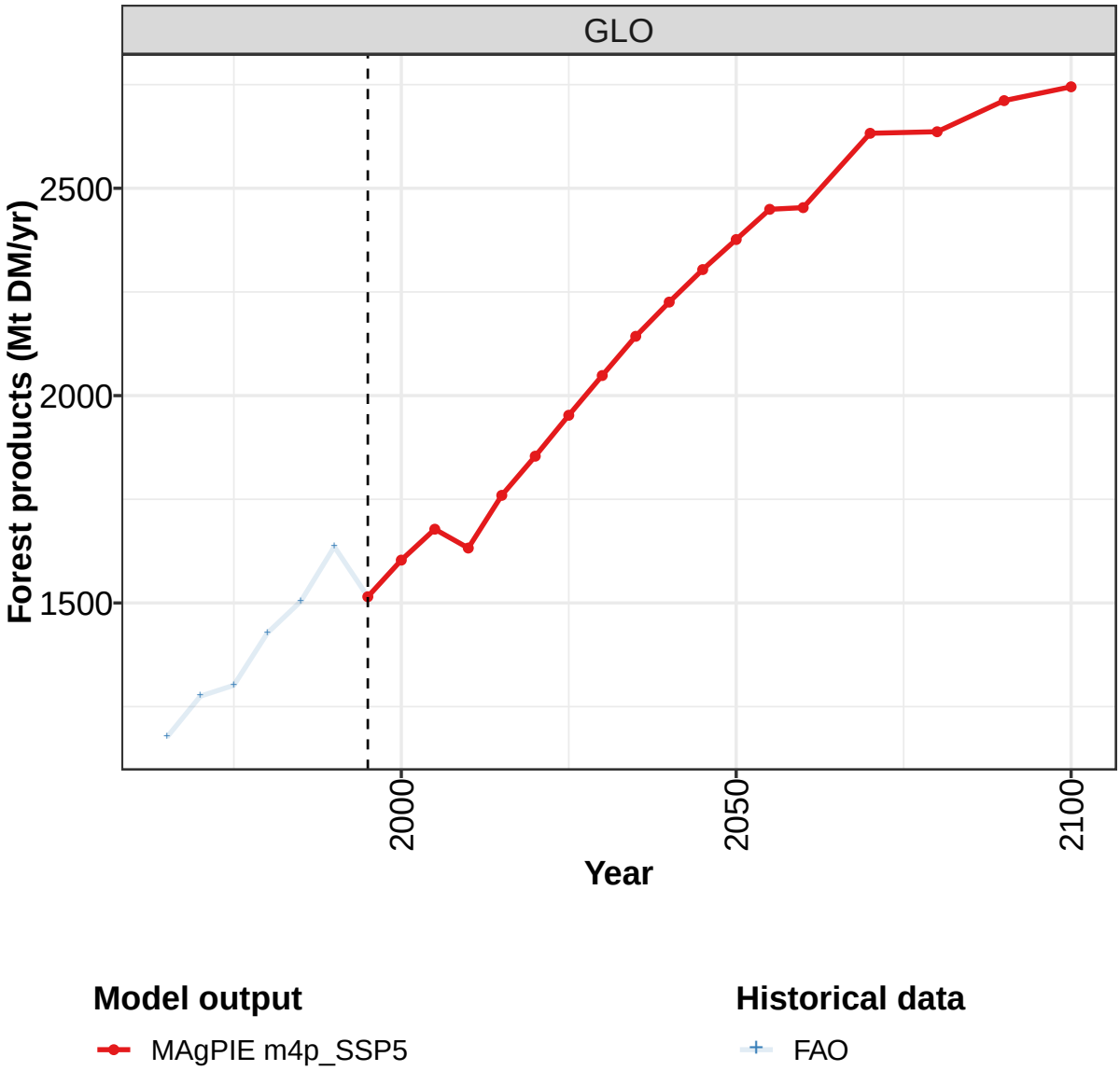
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.24	0.35	0.36	0.35	0.40	0.49	0.94	1.02	0.98	0.99
CAZ	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.01	0.00	0.00
CHA	0.00	0.01	0.02	0.01	0.00	0.06	0.39	0.59	0.50	0.34
EUR	0.14	0.16	0.18	0.13	0.21	0.14	0.16	0.09	0.05	0.10
IND	0.00	0.01	0.01	0.01	0.01	0.02	0.06	0.03	0.02	0.11
JPN	0.01	0.01	0.01	0.01	0.04	0.06	0.04	0.03	0.02	0.03
LAM	0.01	0.02	0.03	0.03	0.03	0.05	0.07	0.06	0.03	0.06
MEA	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.03
NEU	0.01	0.02	0.00	0.02	0.02	0.03	0.08	0.09	0.10	0.06
OAS	0.02	0.06	0.05	0.11	0.07	0.06	0.07	0.09	0.22	0.22
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
SSA	0.01	0.02	0.03	0.01	0.01	0.02	0.05	0.00	0.02	0.00
USA	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01

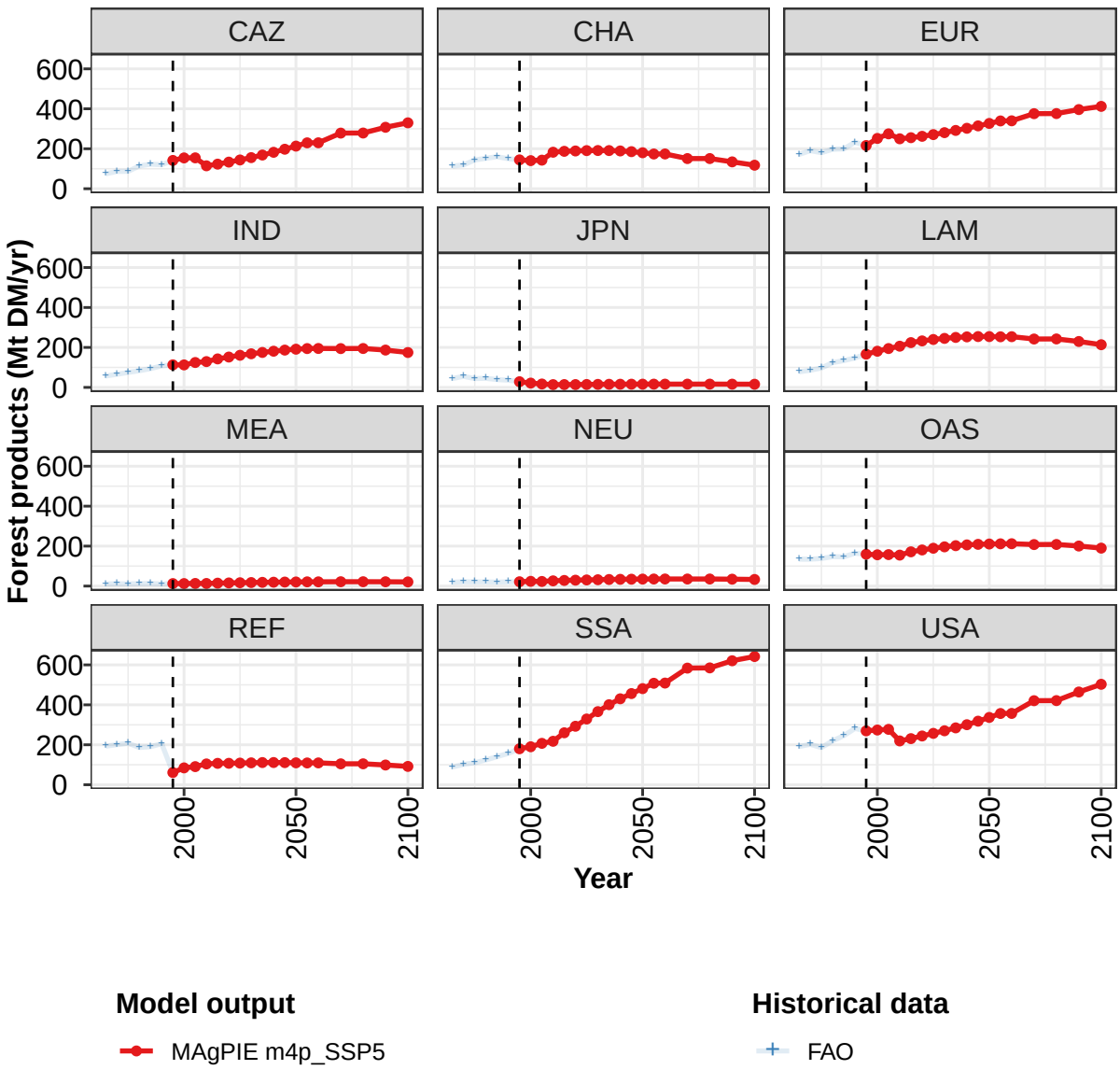
Table 511: FAO — Demand—Material—Fish (Mt DM/yr)


GLO
Demand|Material|Forest products (Mt DM/yr)
2000
1000
0
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Material|Forest products (Mt DM/yr)
600
400
200
0
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

8.4 Forest products





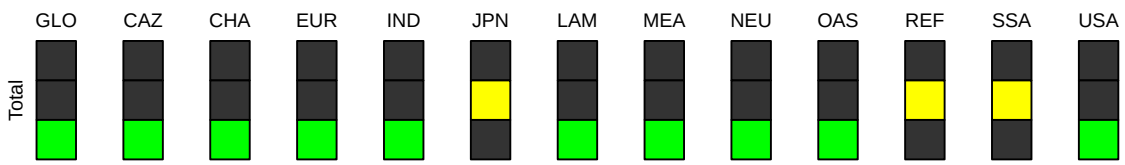


Figure 171: MAgPIE m4p_SSP5 — Demand—Material—Forest products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1515	1603	1678	1632	1760	1854	1953	2049	2143	2226	2304
CAZ	142	154	155	115	123	133	144	156	169	182	198
CHA	144	141	143	183	187	189	191	191	191	189	186
EUR	216	252	275	250	255	262	271	281	292	303	315
IND	113	113	125	129	143	152	161	168	175	181	187
JPN	28	22	17	14	14	14	15	15	16	16	16
LAM	166	181	194	206	224	233	240	245	250	253	254
MEA	13	13	13	13	15	16	17	18	19	19	20
NEU	22	24	23	26	28	29	31	32	33	34	34
OAS	160	157	158	155	172	181	189	196	202	206	209
REF	61	84	91	104	107	107	108	110	111	111	111
SSA	180	190	207	218	260	293	329	366	401	430	456
USA	270	274	277	219	231	244	257	270	285	301	318

Table 512: MAgPIE m4p_SSP5 — Demand—Material—Forest products (Mt DM/yr) [PART 1/2]

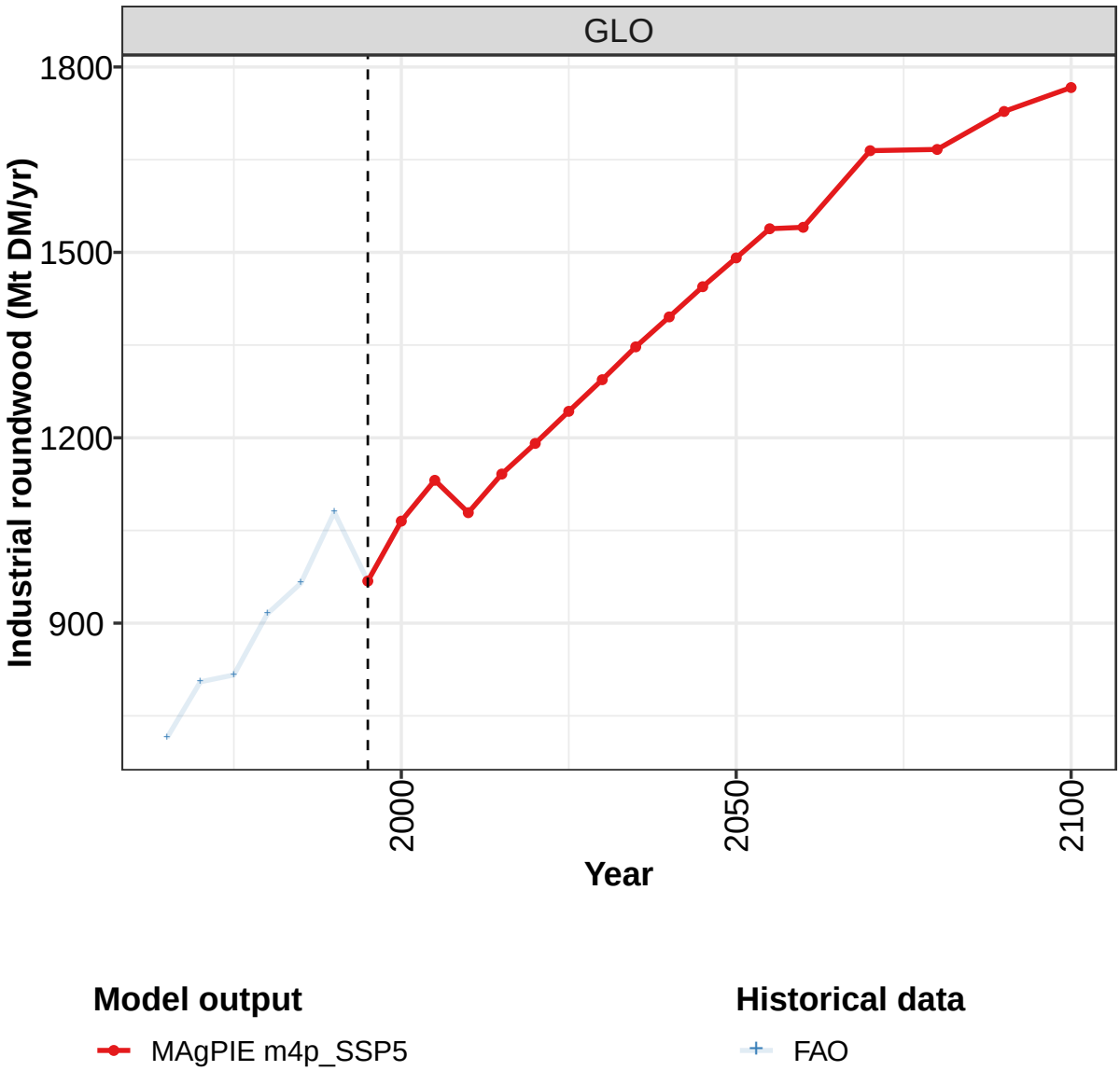
	2050	2055	2060	2070	2080	2090	2100
GLO	2376	2449	2453	2633	2636	2711	2745
CAZ	213	230	230	278	279	308	330
CHA	180	174	174	151	151	134	118
EUR	327	339	340	376	376	396	412
IND	191	194	195	194	195	187	175
JPN	16	16	16	16	16	16	16
LAM	254	253	254	242	243	230	214
MEA	21	21	21	22	22	22	21
NEU	35	35	35	35	35	34	33
OAS	211	212	212	208	208	201	190
REF	110	109	109	105	105	99	92
SSA	481	508	509	584	585	621	642
USA	337	357	357	421	421	464	503

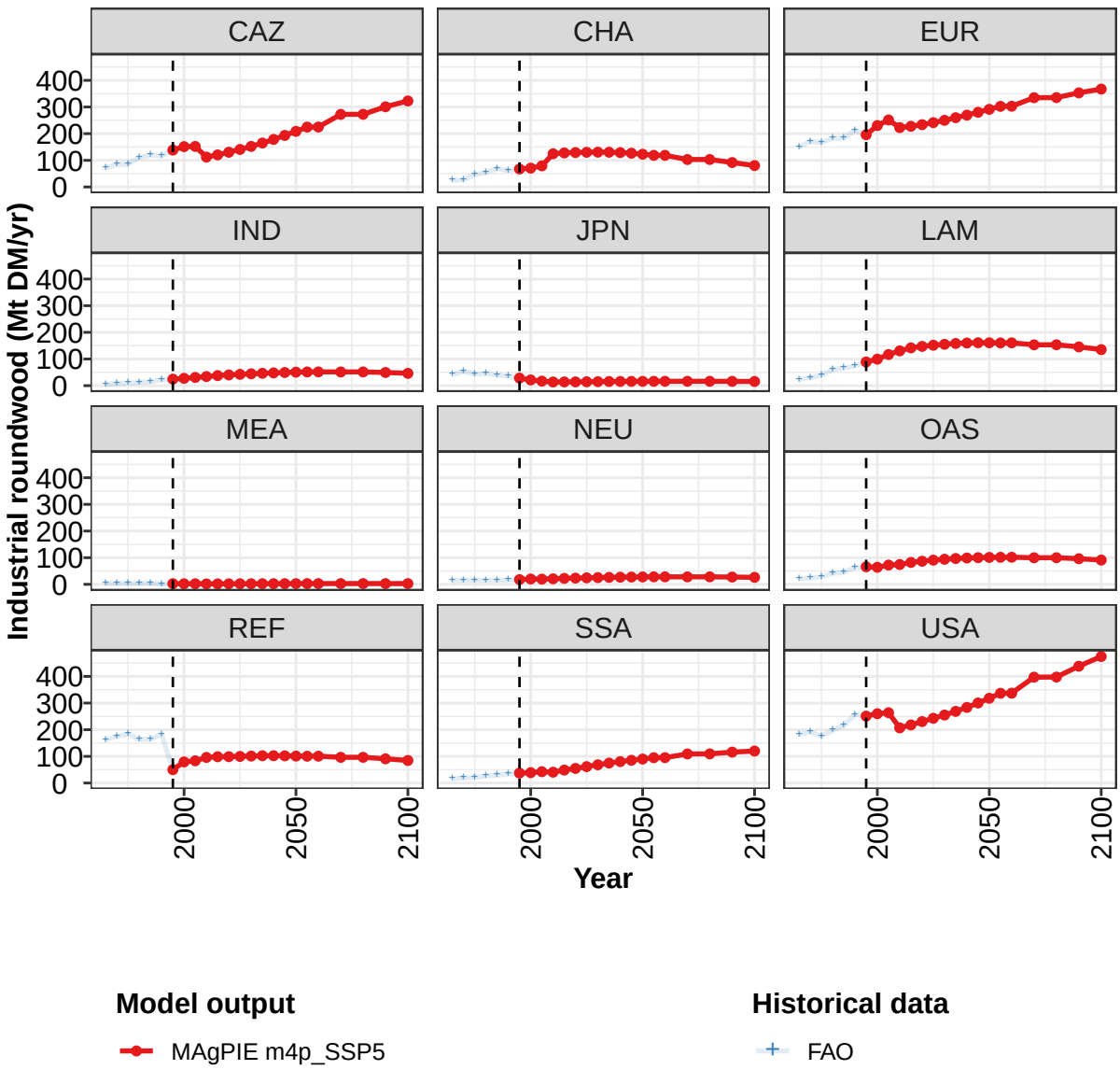
Table 513: MAgPIE m4p_SSP5 — Demand—Material—Forest products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1176	1275	1301	1427	1504	1636	1515	1603	1678	1632
CAZ	74	86	87	114	123	120	142	154	155	115
CHA	113	119	144	152	160	150	144	141	143	183
EUR	171	191	180	197	199	233	216	252	275	250
IND	57	66	75	84	94	108	113	113	125	129
JPN	44	55	44	45	39	36	28	22	17	14
LAM	78	86	97	124	134	148	166	181	194	206
MEA	11	11	11	12	13	11	13	13	13	13
NEU	19	22	21	21	20	21	22	24	23	26
OAS	135	135	138	147	146	164	160	157	158	155
REF	193	201	208	187	190	206	61	84	91	104
SSA	89	102	110	124	141	157	180	190	207	218
USA	191	202	186	220	245	282	270	274	277	219

Table 514: FAO — Demand—Material—Forest products (Mt DM/yr)

8.4.1 Industrial roundwood





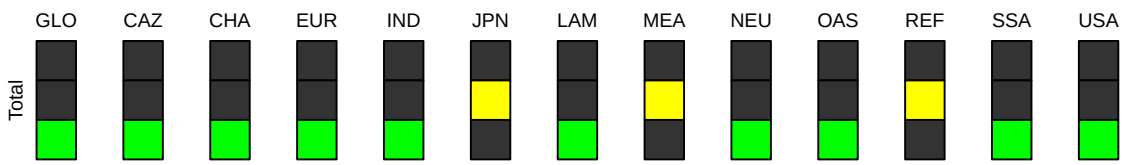


Figure 172: MAgPIE m4p_SSP5 — Demand—Material—Forest products—Industrial roundwood (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	968	1065	1131	1079	1141	1191	1243	1294	1347	1396	1444
CAZ	138	151	152	112	120	130	141	152	165	178	193
CHA	67	71	79	125	128	129	130	131	130	129	127
EUR	196	230	251	223	228	234	241	250	260	270	280
IND	24	27	31	34	38	40	43	45	46	48	49
JPN	28	21	17	14	14	14	15	15	16	16	16
LAM	89	99	117	131	142	147	152	155	158	160	161
MEA	3	2	2	2	2	2	2	2	2	3	3
NEU	18	20	20	21	22	23	24	25	26	27	27
OAS	66	64	72	74	82	87	91	94	97	99	100
REF	50	79	83	96	99	99	100	101	102	102	102
SSA	37	39	42	41	49	55	62	68	75	80	85
USA	251	260	264	207	218	230	243	255	269	284	300

Table 515: MAgPIE m4p_SSP5 — Demand—Material—Forest products—Industrial roundwood (Mt DM/yr) [PART 1/2]

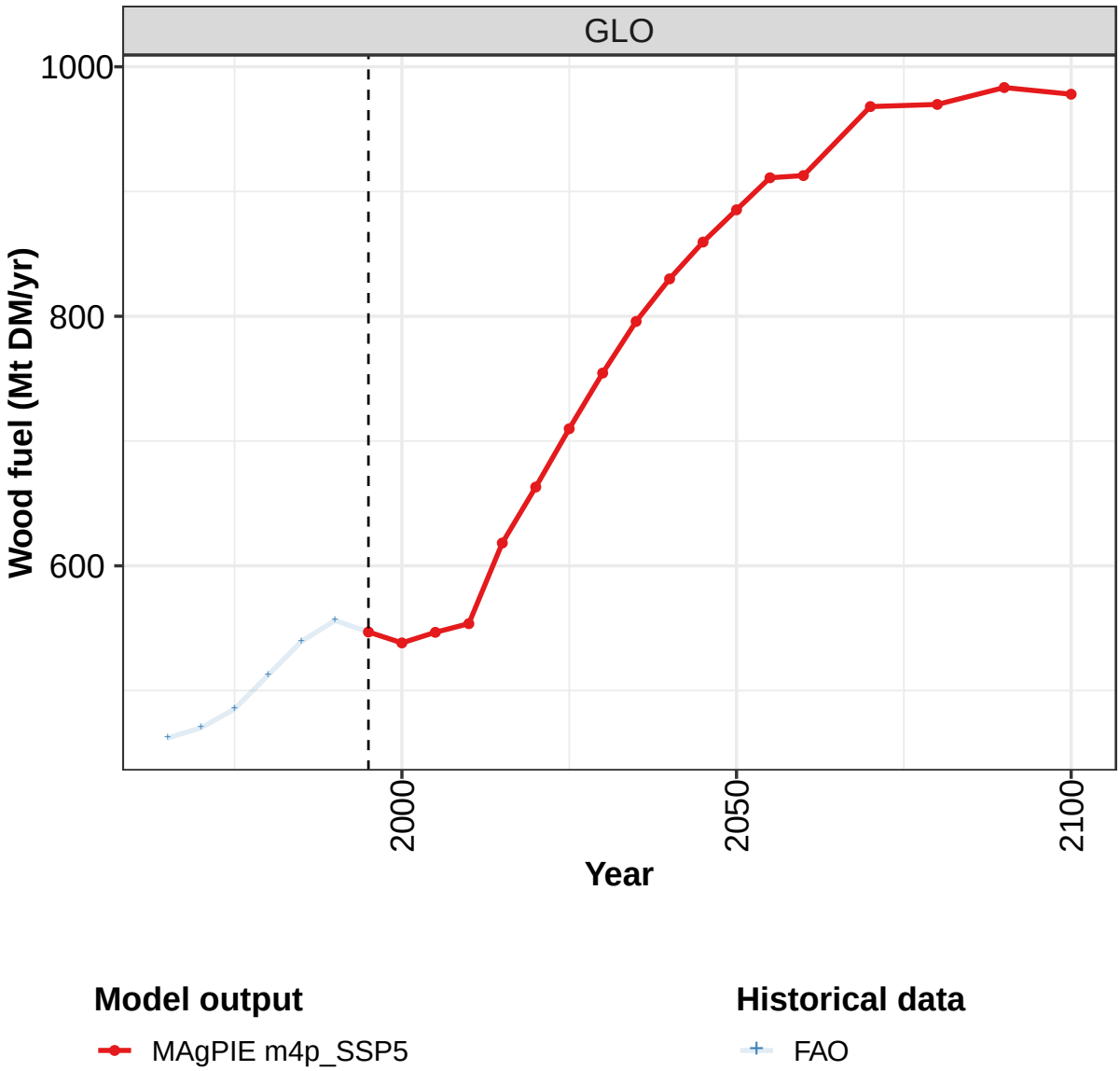
	2050	2055	2060	2070	2080	2090	2100
GLO	1491	1538	1541	1665	1667	1728	1767
CAZ	209	225	225	272	273	301	323
CHA	123	119	119	103	103	92	80
EUR	291	302	303	335	335	353	367
IND	51	51	52	51	52	49	46
JPN	16	16	16	16	16	16	16
LAM	161	160	161	153	153	145	135
MEA	3	3	3	3	3	3	3
NEU	28	28	28	28	28	27	26
OAS	101	101	102	100	100	96	91
REF	101	101	101	96	97	91	85
SSA	90	95	95	109	109	116	120
USA	318	337	337	397	398	438	475

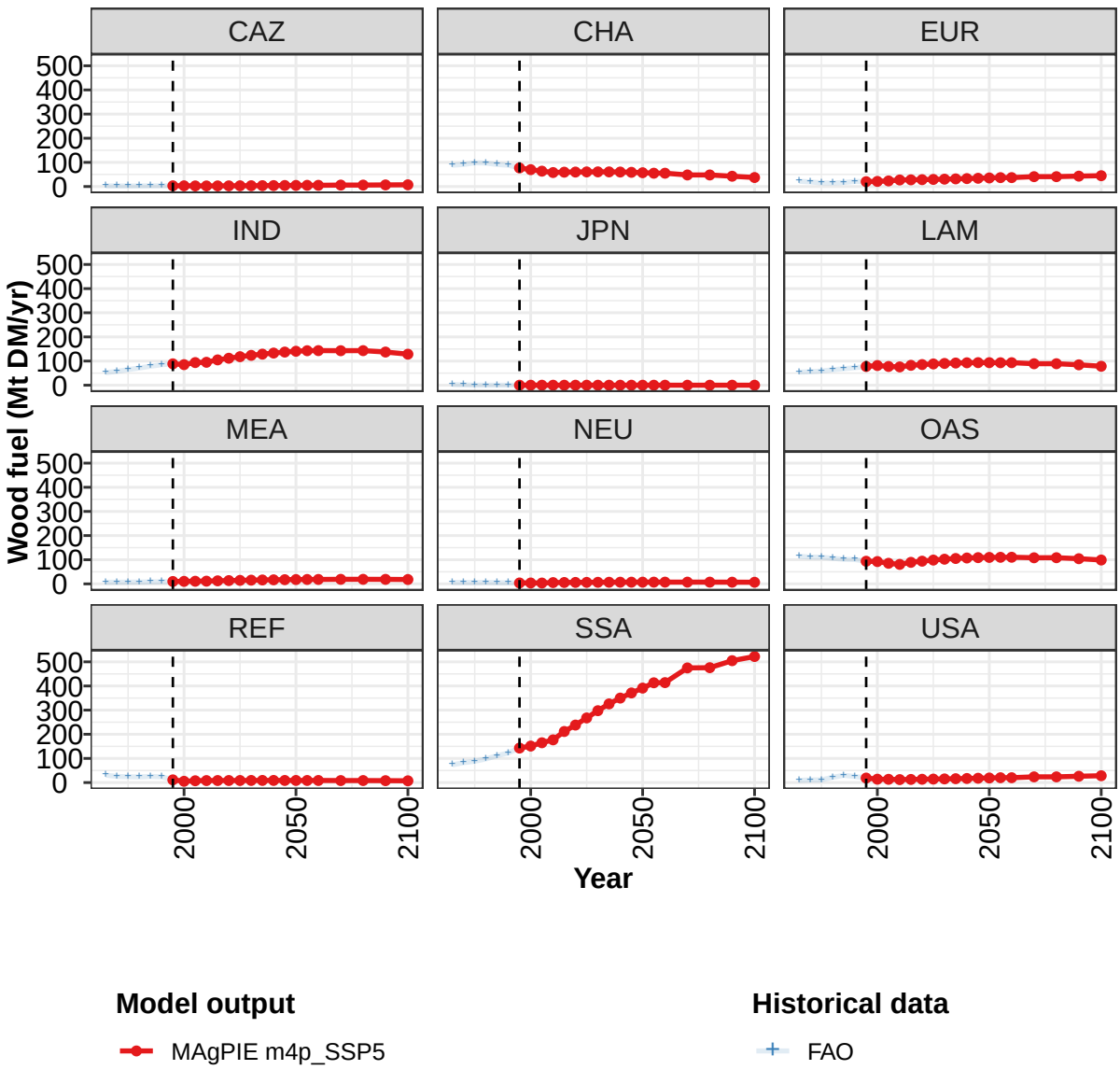
Table 516: MAgPIE m4p_SSP5 — Demand—Material—Forest products—Industrial roundwood (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	714	805	816	915	965	1079	968	1065	1131	1079
CAZ	72	84	85	111	120	117	138	151	152	112
CHA	25	28	46	55	69	62	67	71	79	125
EUR	150	171	166	183	183	212	196	230	251	223
IND	5	8	10	12	15	23	24	27	31	34
JPN	41	54	44	45	39	36	28	21	17	14
LAM	24	31	38	60	66	75	89	99	117	131
MEA	4	4	4	4	5	2	3	2	2	2
NEU	13	15	16	14	15	17	18	20	20	21
OAS	21	24	28	41	45	63	66	64	72	74
REF	162	175	184	163	165	182	50	79	83	96
SSA	15	19	22	26	30	34	37	39	42	41
USA	182	191	175	198	215	257	251	260	264	207

Table 517: FAO — Demand—Material—Forest products—Industrial roundwood (Mt DM/yr)

8.4.2 Wood fuel





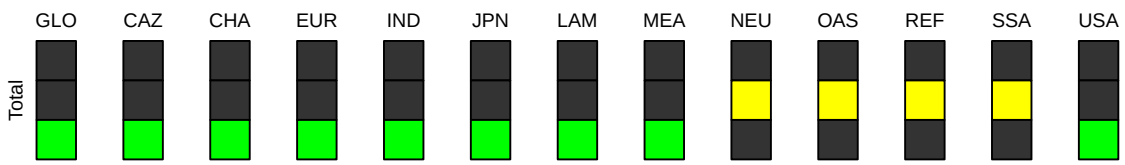


Figure 173: MAgPIE m4p_SSP5 — Demand—Material—Forest products—Wood fuel (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	547	538	547	554	618	663	710	755	796	830	860
CAZ	3	3	3	2	3	3	3	3	4	4	4
CHA	77	70	64	58	59	60	61	61	61	60	59
EUR	20	21	23	27	28	29	29	31	32	33	34
IND	89	85	94	95	105	112	118	124	129	133	137
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	77	82	78	76	82	86	88	90	92	93	93
MEA	10	10	11	11	13	14	15	15	16	17	17
NEU	4	4	4	5	6	6	6	7	7	7	7
OAS	94	92	85	81	89	94	99	102	105	107	109
REF	11	5	7	8	9	9	9	9	9	9	9
SSA	143	151	165	177	212	238	268	298	326	350	371
USA	19	14	13	12	13	14	15	15	16	17	18

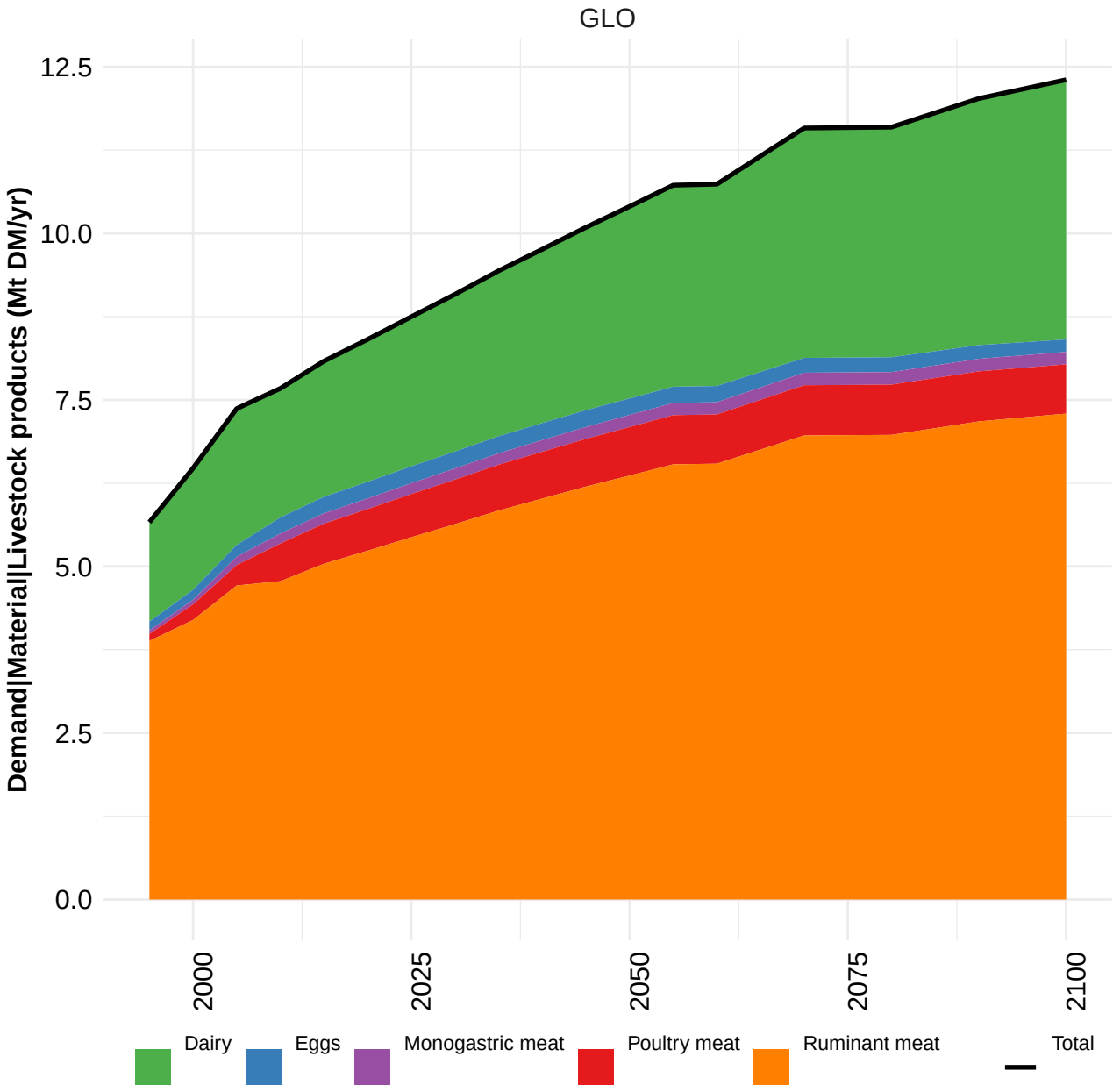
Table 518: MAgPIE m4p_SSP5 — Demand—Material—Forest products—Wood fuel (Mt DM/yr) [PART 1/2]

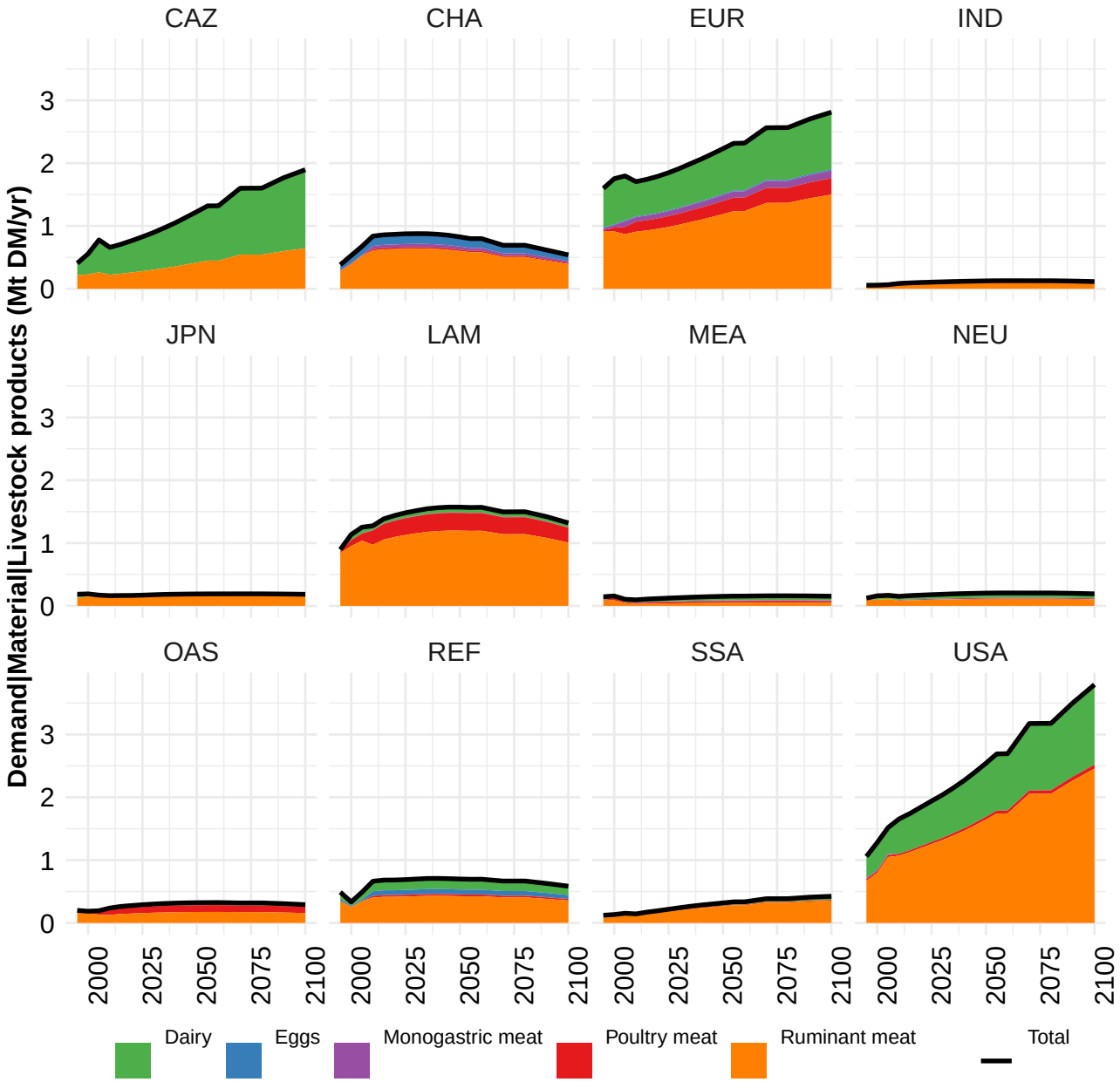
	2050	2055	2060	2070	2080	2090	2100
GLO	885	911	913	968	970	983	978
CAZ	5	5	5	6	6	7	7
CHA	57	55	55	48	48	43	37
EUR	36	37	37	41	41	43	45
IND	141	143	143	143	143	137	129
JPN	0	0	0	0	0	0	0
LAM	93	93	93	89	89	84	79
MEA	18	18	18	19	19	19	18
NEU	7	7	7	7	7	7	7
OAS	110	110	110	108	108	104	99
REF	9	9	9	8	8	8	7
SSA	391	413	414	475	476	505	522
USA	19	20	20	24	24	26	28

Table 519: MAgPIE m4p_SSP5 — Demand—Material—Forest products—Wood fuel (Mt DM/yr) [PART 2/2]

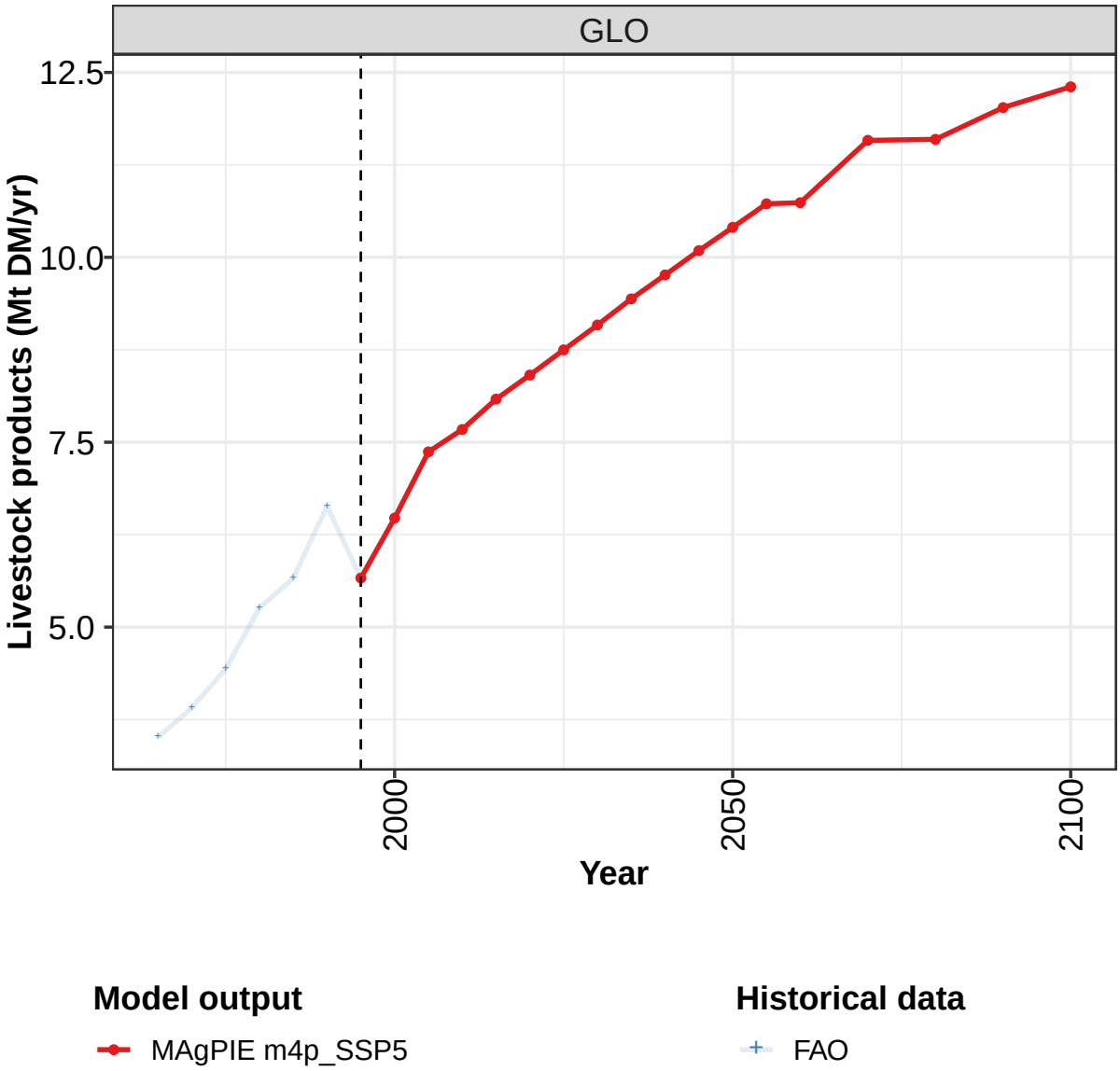
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	462	470	485	512	539	556	547	538	547	554
CAZ	3	2	2	2	3	3	3	3	3	2
CHA	88	91	98	97	91	88	77	70	64	58
EUR	22	19	15	15	17	21	20	21	23	27
IND	52	58	64	71	79	85	89	85	94	95
JPN	3	1	0	0	0	0	0	0	0	0
LAM	54	55	59	64	68	72	77	82	78	76
MEA	7	7	7	8	8	9	10	10	11	11
NEU	6	6	5	7	5	5	4	4	4	5
OAS	114	111	111	106	102	101	94	92	85	81
REF	31	25	24	23	26	24	11	5	7	8
SSA	73	82	88	98	111	123	143	151	165	177
USA	9	11	11	22	30	25	19	14	13	12

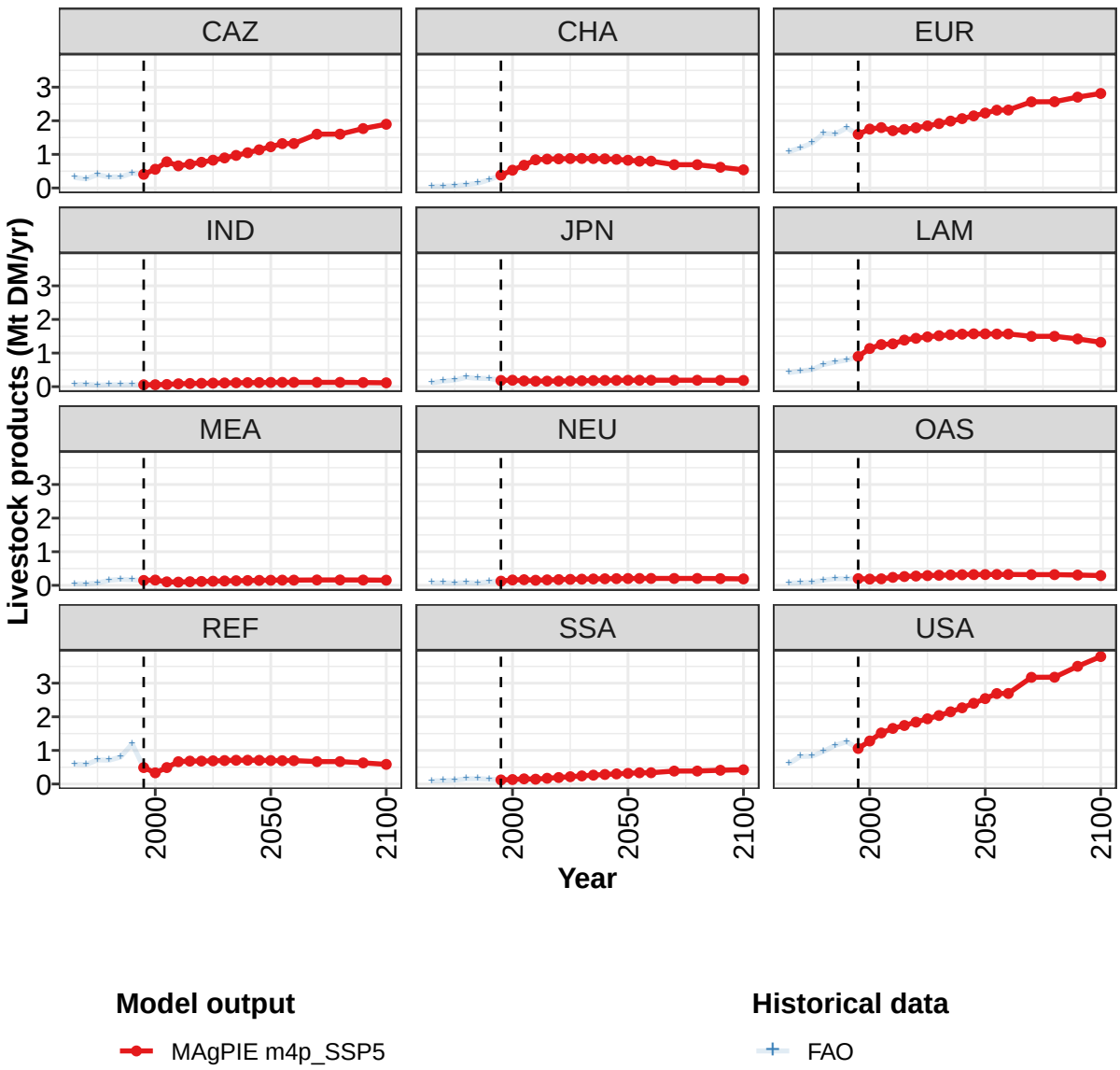
Table 520: FAO — Demand—Material—Forest products—Wood fuel (Mt DM/yr)


GLO
Demand|Material|Livestock products (Mt DM/yr)
12.5
10.0
7.5
5.0
2.5
0.0
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Material|Livestock products (Mt DM/yr)
0
1
2
3
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

8.5 Livestock products





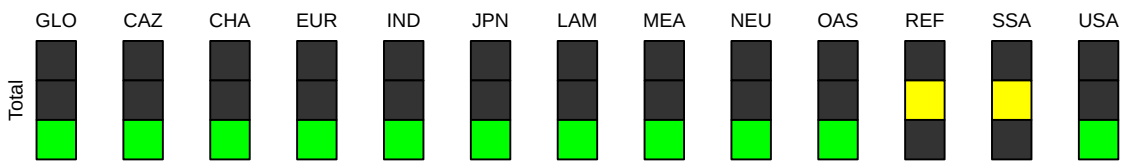


Figure 174: MAgPIE m4p_SSP5 — Demand—Material—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.7	6.5	7.4	7.7	8.1	8.4	8.7	9.1	9.4	9.8	10.1
CAZ	0.4	0.6	0.8	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.1
CHA	0.4	0.5	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9
EUR	1.6	1.8	1.8	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.1
IND	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	0.9	1.1	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.6
MEA	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
REF	0.5	0.3	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
SSA	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3
USA	1.1	1.3	1.5	1.7	1.7	1.8	1.9	2.0	2.1	2.3	2.4

Table 521: MAgPIE m4p_SSP5 — Demand—Material—Livestock products (Mt DM/yr) [PART 1/2]

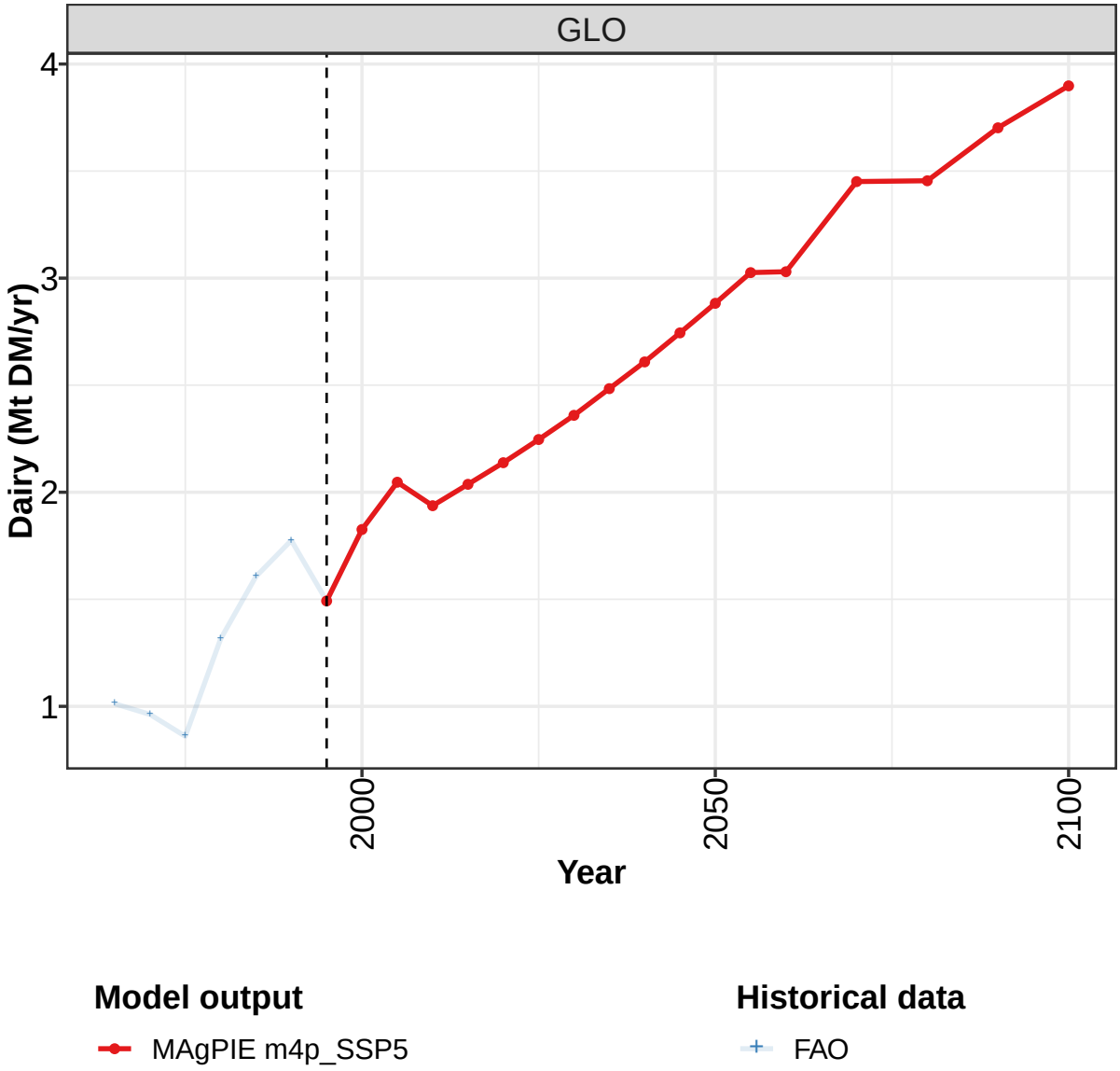
	2050	2055	2060	2070	2080	2090	2100
GLO	10.4	10.7	10.7	11.6	11.6	12.0	12.3
CAZ	1.2	1.3	1.3	1.6	1.6	1.8	1.9
CHA	0.8	0.8	0.8	0.7	0.7	0.6	0.5
EUR	2.2	2.3	2.3	2.6	2.6	2.7	2.8
IND	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	1.6	1.6	1.6	1.5	1.5	1.4	1.3
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.3	0.3	0.3	0.3	0.3	0.3	0.3
REF	0.7	0.7	0.7	0.7	0.7	0.6	0.6
SSA	0.3	0.3	0.3	0.4	0.4	0.4	0.4
USA	2.5	2.7	2.7	3.2	3.2	3.5	3.8

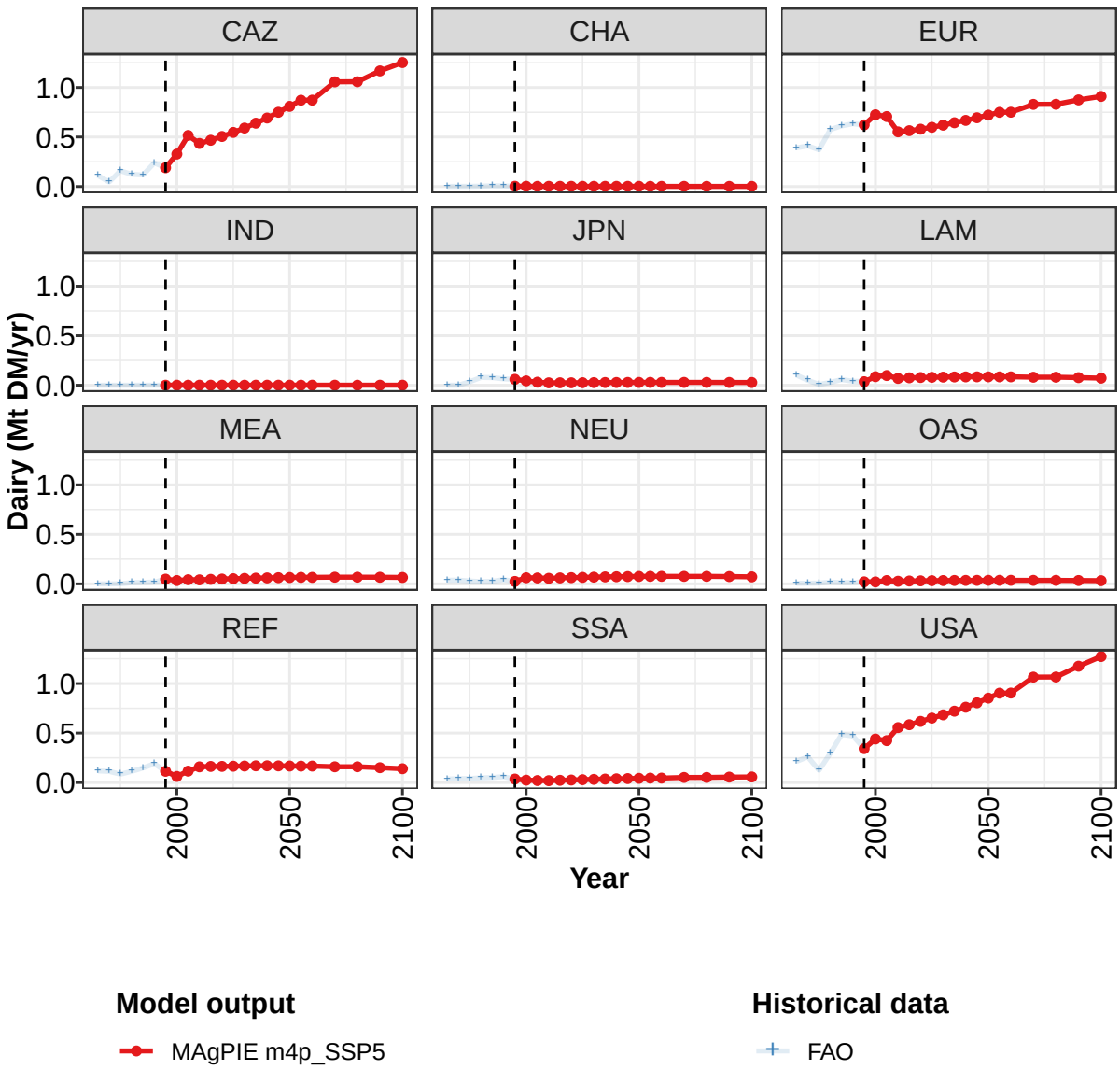
Table 522: MAgPIE m4p_SSP5 — Demand—Material—Livestock products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.51	3.91	4.44	5.26	5.66	6.63	5.66	6.47	7.37	7.67
CAZ	0.31	0.27	0.40	0.33	0.33	0.44	0.41	0.56	0.78	0.66
CHA	0.05	0.05	0.06	0.10	0.14	0.25	0.38	0.53	0.68	0.84
EUR	1.08	1.19	1.34	1.62	1.60	1.79	1.60	1.75	1.80	1.71
IND	0.06	0.07	0.04	0.06	0.05	0.06	0.06	0.06	0.07	0.09
JPN	0.11	0.16	0.20	0.28	0.25	0.24	0.19	0.19	0.17	0.16
LAM	0.42	0.47	0.50	0.66	0.73	0.79	0.90	1.14	1.25	1.27
MEA	0.04	0.04	0.07	0.15	0.18	0.16	0.15	0.16	0.10	0.10
NEU	0.08	0.07	0.07	0.08	0.07	0.11	0.12	0.16	0.17	0.15
OAS	0.07	0.07	0.10	0.16	0.20	0.20	0.20	0.19	0.19	0.24
REF	0.59	0.58	0.72	0.71	0.80	1.20	0.49	0.33	0.49	0.66
SSA	0.09	0.10	0.11	0.16	0.16	0.14	0.12	0.13	0.15	0.14
USA	0.61	0.82	0.83	0.97	1.15	1.26	1.06	1.28	1.52	1.65

Table 523: FAO — Demand—Material—Livestock products (Mt DM/yr)

8.5.1 Dairy


GLO
Dairy (Mt DM/yr)
4
3
2
1
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



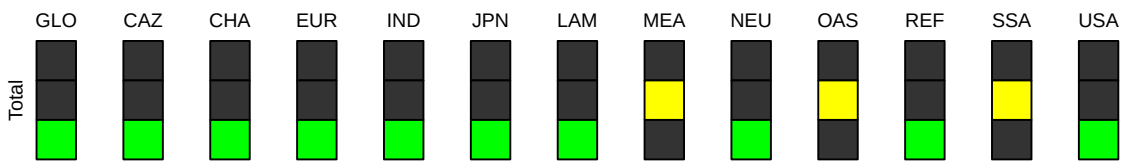


Figure 175: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.49	1.83	2.05	1.94	2.04	2.14	2.25	2.36	2.48	2.61	2.74
CAZ	0.19	0.33	0.52	0.44	0.47	0.51	0.55	0.59	0.64	0.69	0.75
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.62	0.73	0.71	0.55	0.56	0.58	0.60	0.62	0.64	0.67	0.69
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.06	0.04	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
LAM	0.04	0.09	0.10	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08
MEA	0.05	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06
NEU	0.02	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
OAS	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
REF	0.11	0.06	0.12	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17
SSA	0.04	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04
USA	0.34	0.44	0.42	0.56	0.58	0.62	0.65	0.68	0.72	0.76	0.81

Table 524: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

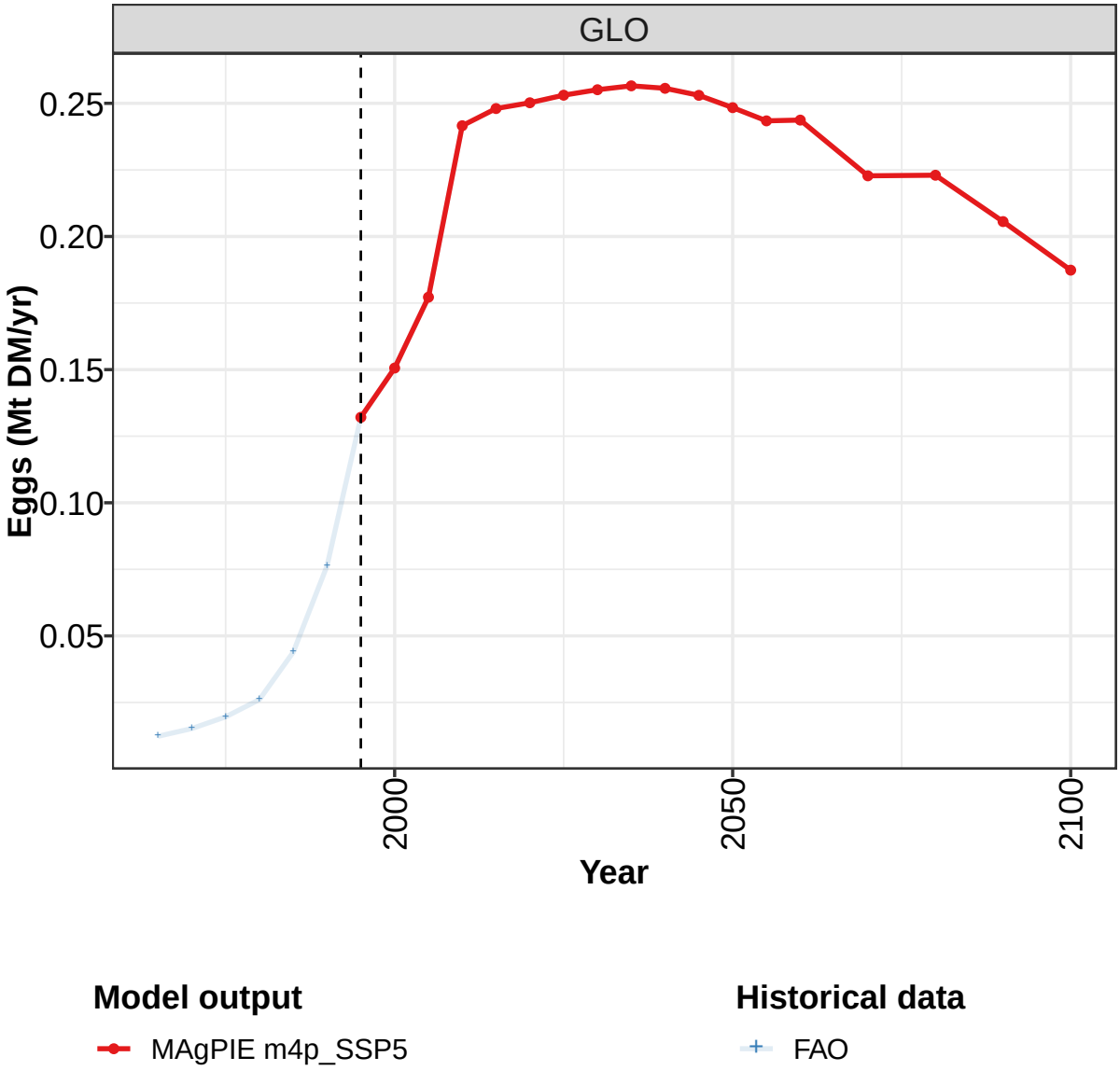
	2050	2055	2060	2070	2080	2090	2100
GLO	2.88	3.03	3.03	3.45	3.45	3.70	3.90
CAZ	0.81	0.87	0.87	1.06	1.06	1.17	1.25
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.72	0.75	0.75	0.83	0.83	0.88	0.91
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.08	0.08	0.08	0.08	0.08	0.08	0.07
MEA	0.06	0.07	0.07	0.07	0.07	0.07	0.06
NEU	0.07	0.08	0.08	0.08	0.08	0.07	0.07
OAS	0.04	0.04	0.04	0.03	0.04	0.03	0.03
REF	0.17	0.17	0.17	0.16	0.16	0.15	0.14
SSA	0.04	0.04	0.04	0.05	0.05	0.05	0.06
USA	0.85	0.90	0.90	1.07	1.07	1.18	1.27

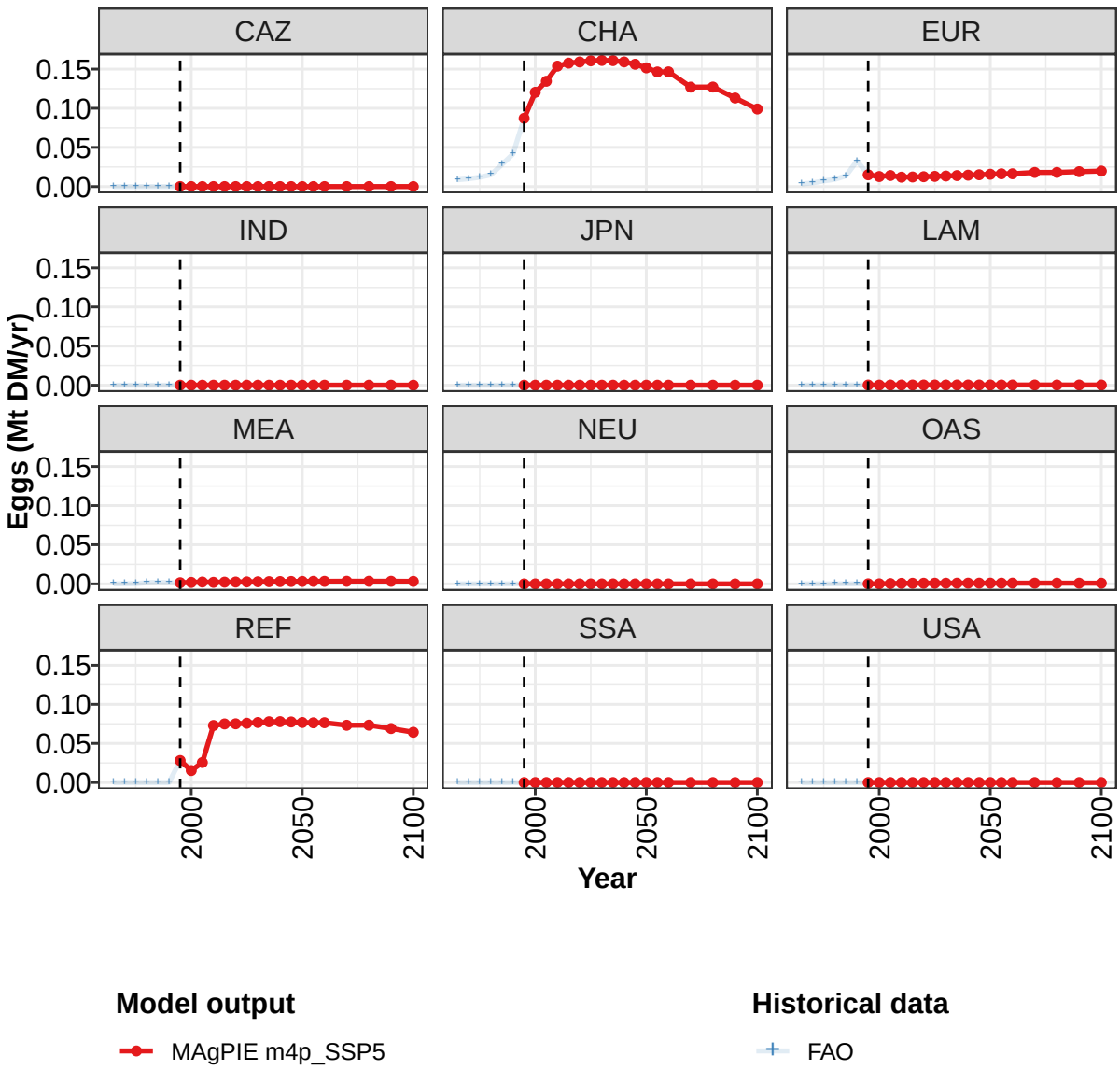
Table 525: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Dairy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.01	0.96	0.86	1.32	1.61	1.77	1.49	1.83	2.05	1.94
CAZ	0.11	0.05	0.16	0.12	0.12	0.24	0.19	0.33	0.52	0.44
CHA	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
EUR	0.39	0.41	0.37	0.58	0.61	0.63	0.62	0.73	0.71	0.55
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.03	0.08	0.08	0.06	0.06	0.04	0.03	0.02
LAM	0.10	0.05	0.01	0.03	0.06	0.04	0.04	0.09	0.10	0.07
MEA	0.00	0.00	0.00	0.01	0.01	0.02	0.05	0.03	0.04	0.04
NEU	0.04	0.04	0.03	0.02	0.03	0.04	0.02	0.06	0.06	0.06
OAS	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.02	0.03	0.03
REF	0.12	0.11	0.08	0.11	0.15	0.19	0.11	0.06	0.12	0.16
SSA	0.04	0.04	0.04	0.05	0.05	0.06	0.04	0.02	0.02	0.02
USA	0.21	0.26	0.12	0.30	0.49	0.47	0.34	0.44	0.42	0.56

Table 526: FAO — Demand—Material—Livestock products—Dairy (Mt DM/yr)

8.5.2 Eggs


GLO
0.25
0.20
0.15
0.10
0.05
Eggs (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



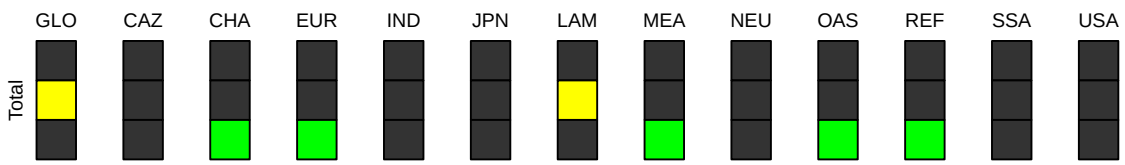


Figure 176: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.132	0.151	0.177	0.242	0.248	0.250	0.253	0.255	0.257	0.256	0.253
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.087	0.120	0.135	0.154	0.158	0.159	0.161	0.161	0.161	0.159	0.156
EUR	0.015	0.013	0.014	0.012	0.012	0.013	0.013	0.013	0.014	0.015	0.015
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
REF	0.028	0.015	0.026	0.073	0.075	0.075	0.076	0.077	0.078	0.078	0.077
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 527: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

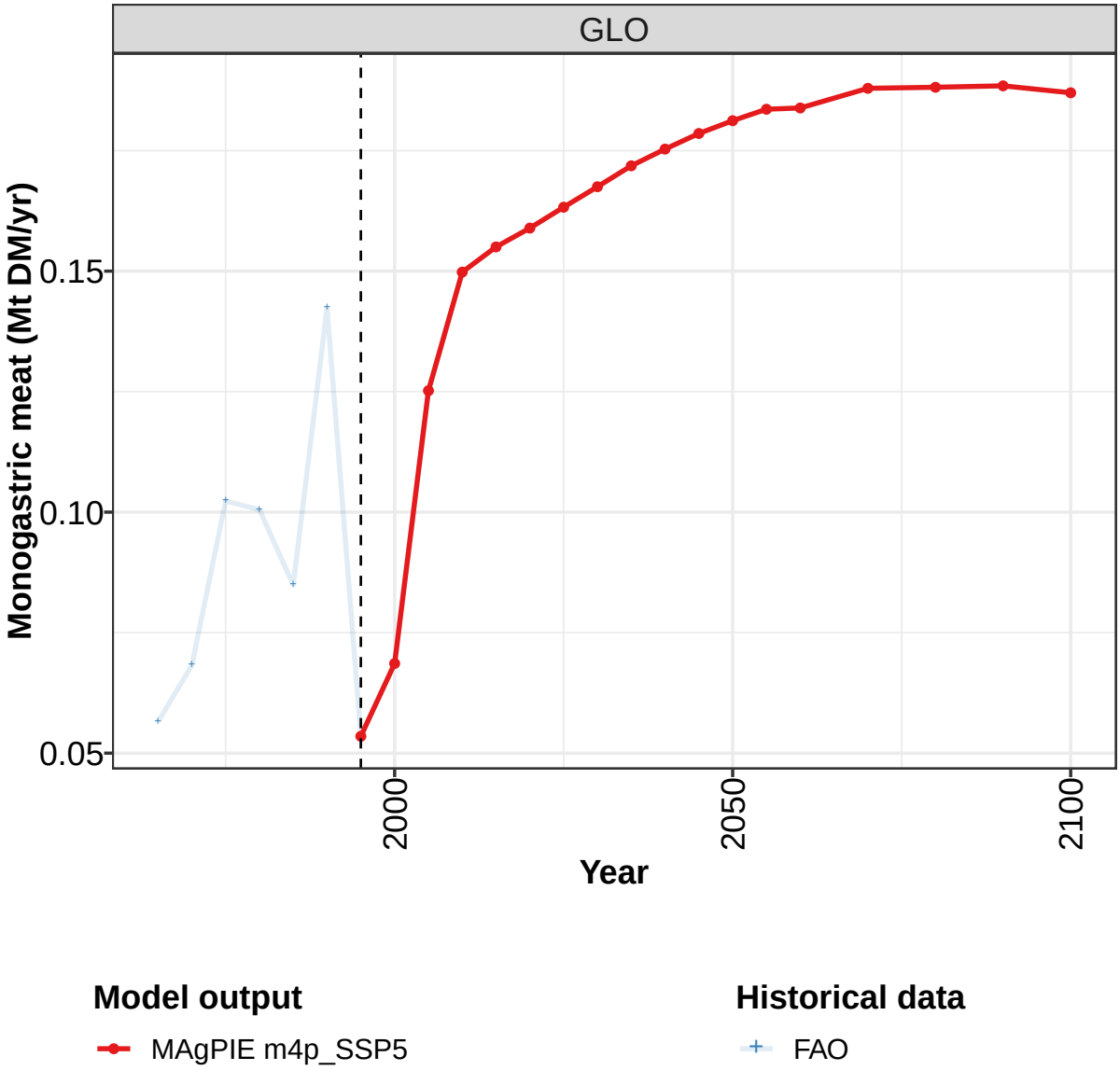
	2050	2055	2060	2070	2080	2090	2100
GLO	0.248	0.243	0.244	0.223	0.223	0.206	0.187
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.152	0.146	0.147	0.127	0.127	0.113	0.099
EUR	0.016	0.016	0.016	0.018	0.018	0.019	0.020
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.003	0.003	0.003	0.003	0.003	0.003	0.003
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.001	0.001	0.001	0.001	0.001	0.001	0.001
REF	0.077	0.076	0.076	0.073	0.073	0.069	0.064
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

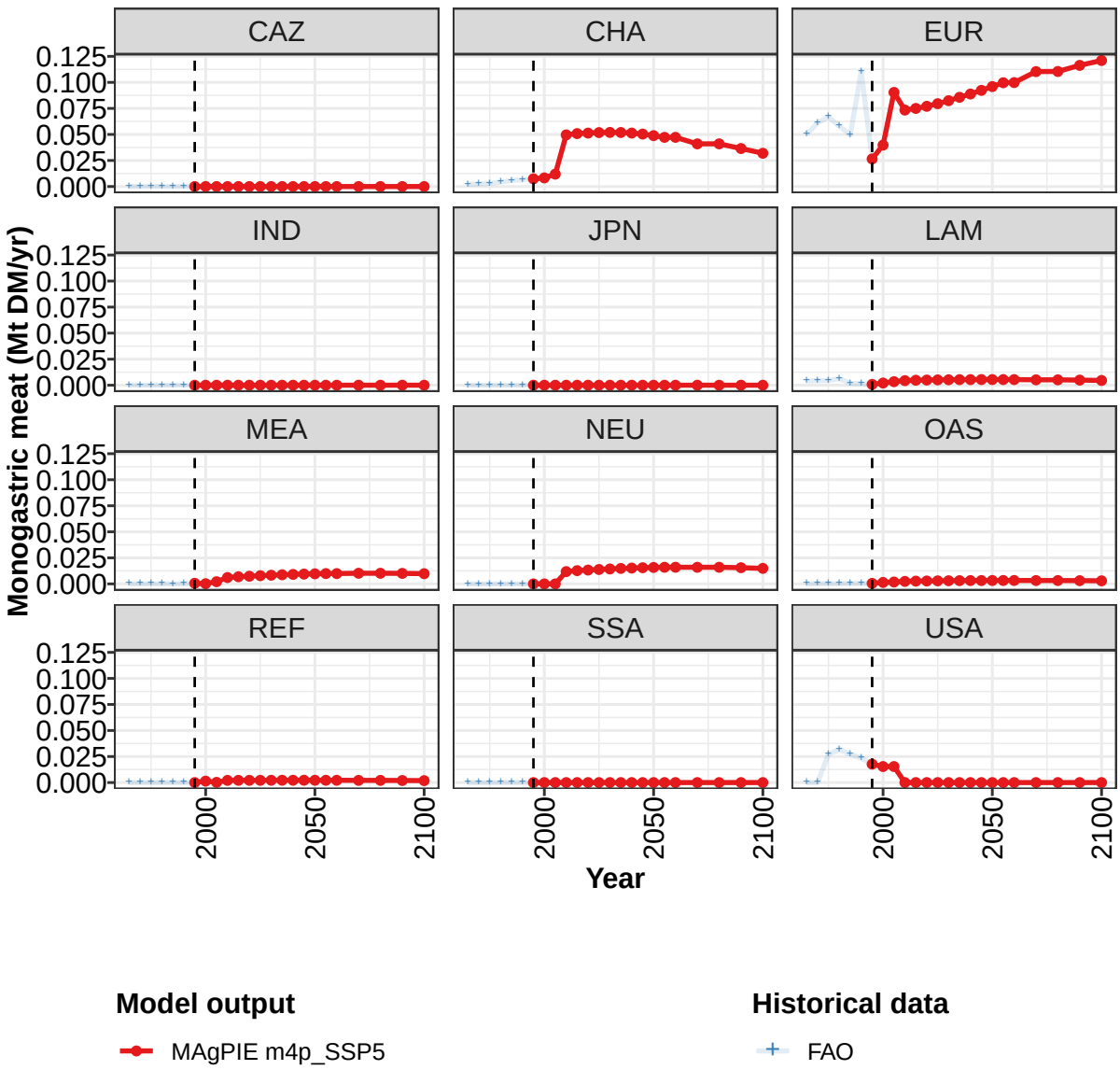
Table 528: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.012	0.015	0.020	0.026	0.044	0.076	0.132	0.151	0.177	0.242
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.009	0.010	0.012	0.015	0.028	0.042	0.087	0.120	0.135	0.154
EUR	0.003	0.005	0.007	0.009	0.014	0.033	0.015	0.013	0.014	0.012
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEA	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.015	0.026	0.073
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 529: FAO — Demand—Material—Livestock products—Eggs (Mt DM/yr)

8.5.3 Monogastric meat





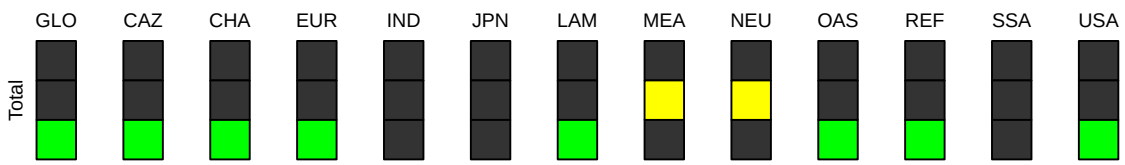


Figure 177: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.053	0.069	0.125	0.150	0.155	0.159	0.163	0.168	0.172	0.175	0.179
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.007	0.008	0.012	0.050	0.051	0.051	0.052	0.052	0.052	0.051	0.050
EUR	0.026	0.040	0.090	0.073	0.075	0.077	0.080	0.082	0.086	0.089	0.092
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.001	0.002	0.003	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005
MEA	0.001	0.000	0.002	0.006	0.007	0.007	0.008	0.008	0.009	0.009	0.009
NEU	0.000	0.000	0.000	0.012	0.013	0.013	0.014	0.014	0.015	0.015	0.016
OAS	0.001	0.001	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003
REF	0.000	0.001	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.018	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 530: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

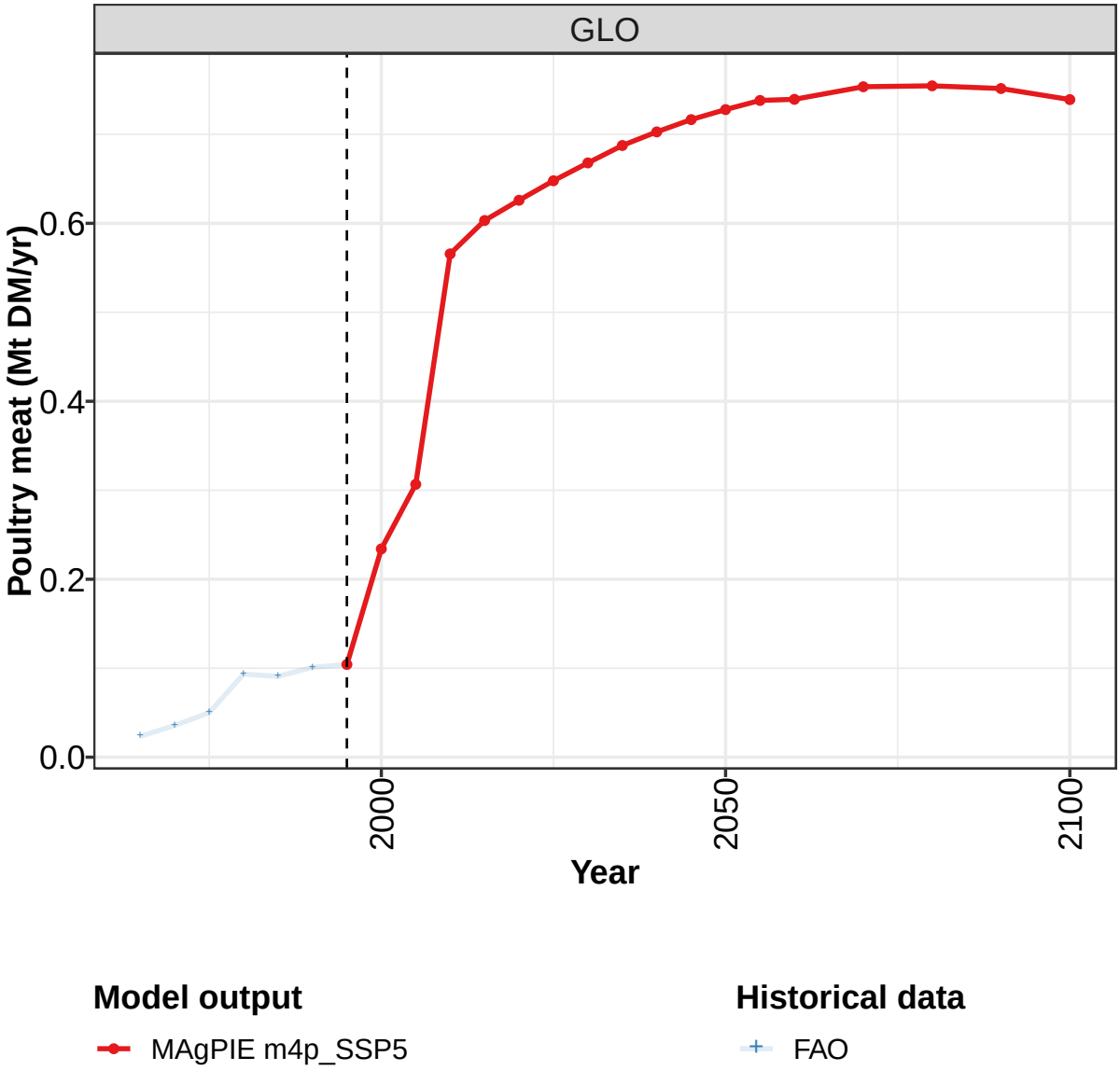
	2050	2055	2060	2070	2080	2090	2100
GLO	0.181	0.184	0.184	0.188	0.188	0.188	0.187
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.049	0.047	0.047	0.041	0.041	0.036	0.032
EUR	0.096	0.100	0.100	0.110	0.110	0.116	0.121
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.005	0.005	0.005	0.005	0.005	0.005	0.005
MEA	0.010	0.010	0.010	0.010	0.010	0.010	0.010
NEU	0.016	0.016	0.016	0.016	0.016	0.016	0.015
OAS	0.003	0.003	0.003	0.003	0.003	0.003	0.003
REF	0.002	0.002	0.002	0.002	0.002	0.002	0.002
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

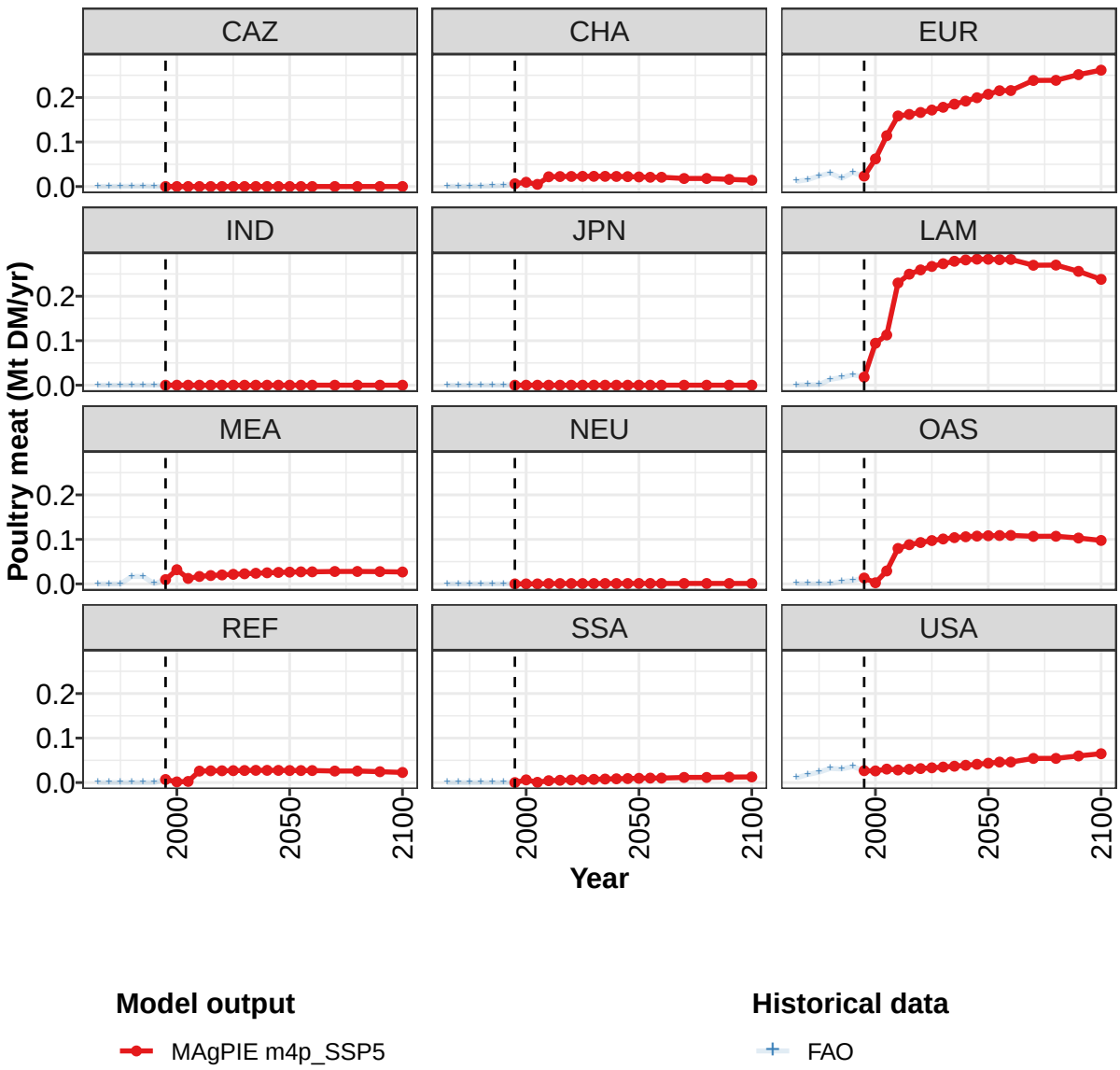
Table 531: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Monogastric meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.057	0.068	0.102	0.101	0.085	0.142	0.053	0.069	0.125	0.150
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.002	0.003	0.003	0.004	0.006	0.007	0.007	0.008	0.012	0.050
EUR	0.050	0.061	0.067	0.058	0.050	0.110	0.026	0.040	0.090	0.073
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.004	0.004	0.004	0.006	0.002	0.002	0.001	0.002	0.003	0.004
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.002	0.006
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
OAS	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002	0.002
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.002
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.027	0.032	0.027	0.023	0.018	0.015	0.015	0.000

Table 532: FAO — Demand—Material—Livestock products—Monogastric meat (Mt DM/yr)

8.5.4 Poultry meat





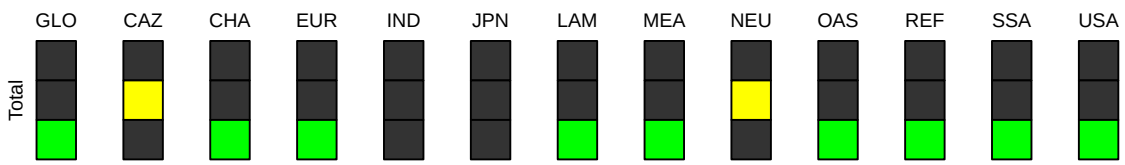


Figure 178: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.104	0.234	0.307	0.566	0.603	0.626	0.648	0.668	0.687	0.703	0.717
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.006	0.010	0.005	0.022	0.022	0.023	0.023	0.023	0.023	0.023	0.022
EUR	0.023	0.062	0.114	0.159	0.162	0.166	0.172	0.178	0.185	0.192	0.200
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.018	0.094	0.113	0.230	0.250	0.259	0.267	0.273	0.279	0.282	0.283
MEA	0.010	0.032	0.012	0.017	0.019	0.020	0.022	0.023	0.024	0.025	0.026
NEU	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
OAS	0.013	0.003	0.029	0.080	0.088	0.093	0.097	0.101	0.104	0.106	0.107
REF	0.007	0.001	0.003	0.026	0.027	0.027	0.027	0.027	0.027	0.028	0.027
SSA	0.000	0.006	0.001	0.004	0.005	0.006	0.007	0.007	0.008	0.009	0.009
USA	0.027	0.026	0.030	0.028	0.030	0.031	0.033	0.035	0.037	0.039	0.041

Table 533: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

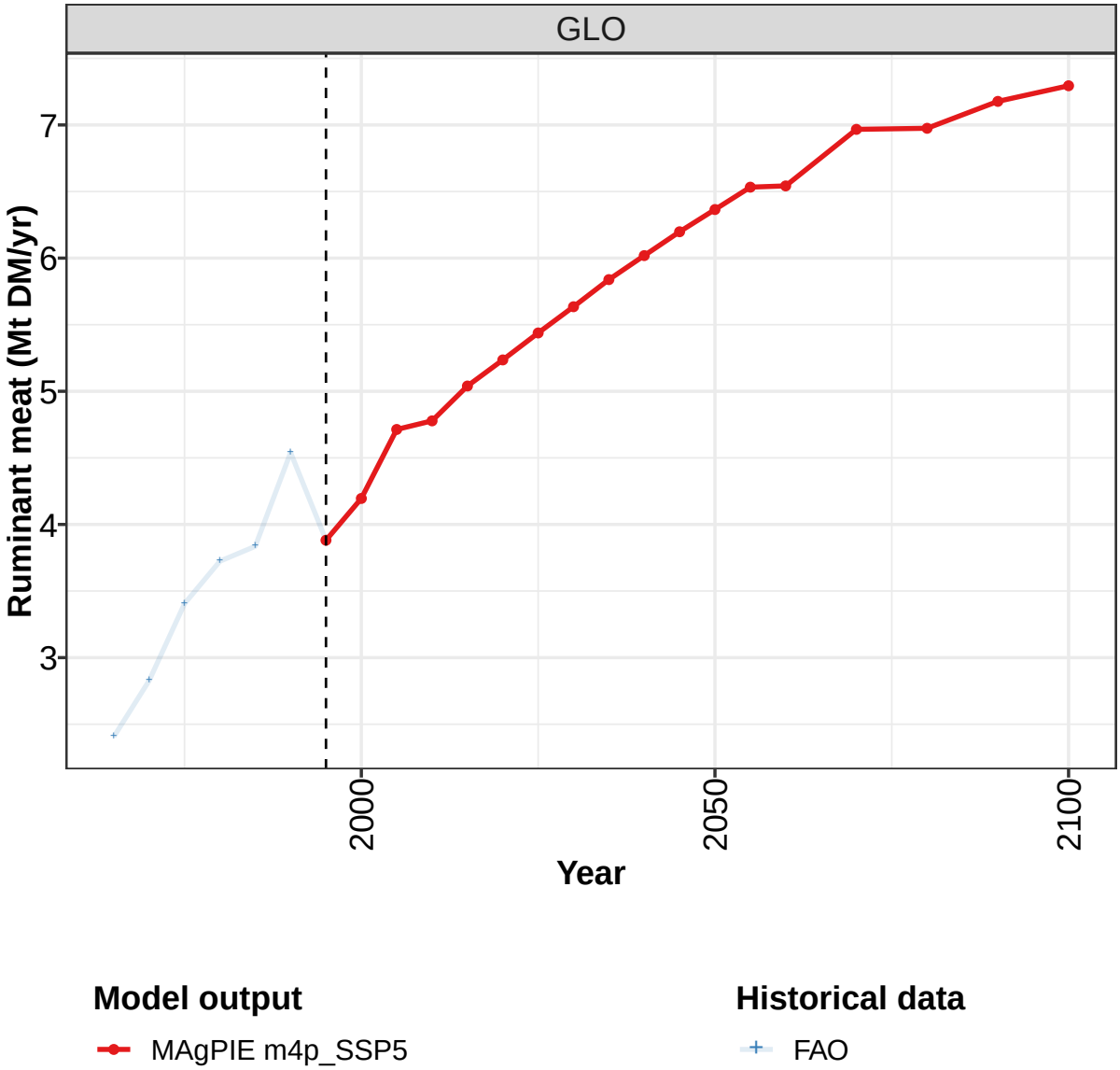
	2050	2055	2060	2070	2080	2090	2100
GLO	0.728	0.738	0.739	0.754	0.755	0.752	0.739
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.022	0.021	0.021	0.018	0.018	0.016	0.014
EUR	0.207	0.215	0.216	0.238	0.239	0.251	0.262
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.283	0.282	0.283	0.270	0.270	0.256	0.238
MEA	0.026	0.027	0.027	0.028	0.028	0.028	0.027
NEU	0.001	0.001	0.001	0.001	0.001	0.001	0.001
OAS	0.108	0.109	0.109	0.107	0.107	0.103	0.098
REF	0.027	0.027	0.027	0.026	0.026	0.024	0.023
SSA	0.010	0.010	0.010	0.012	0.012	0.012	0.013
USA	0.043	0.046	0.046	0.054	0.054	0.060	0.065

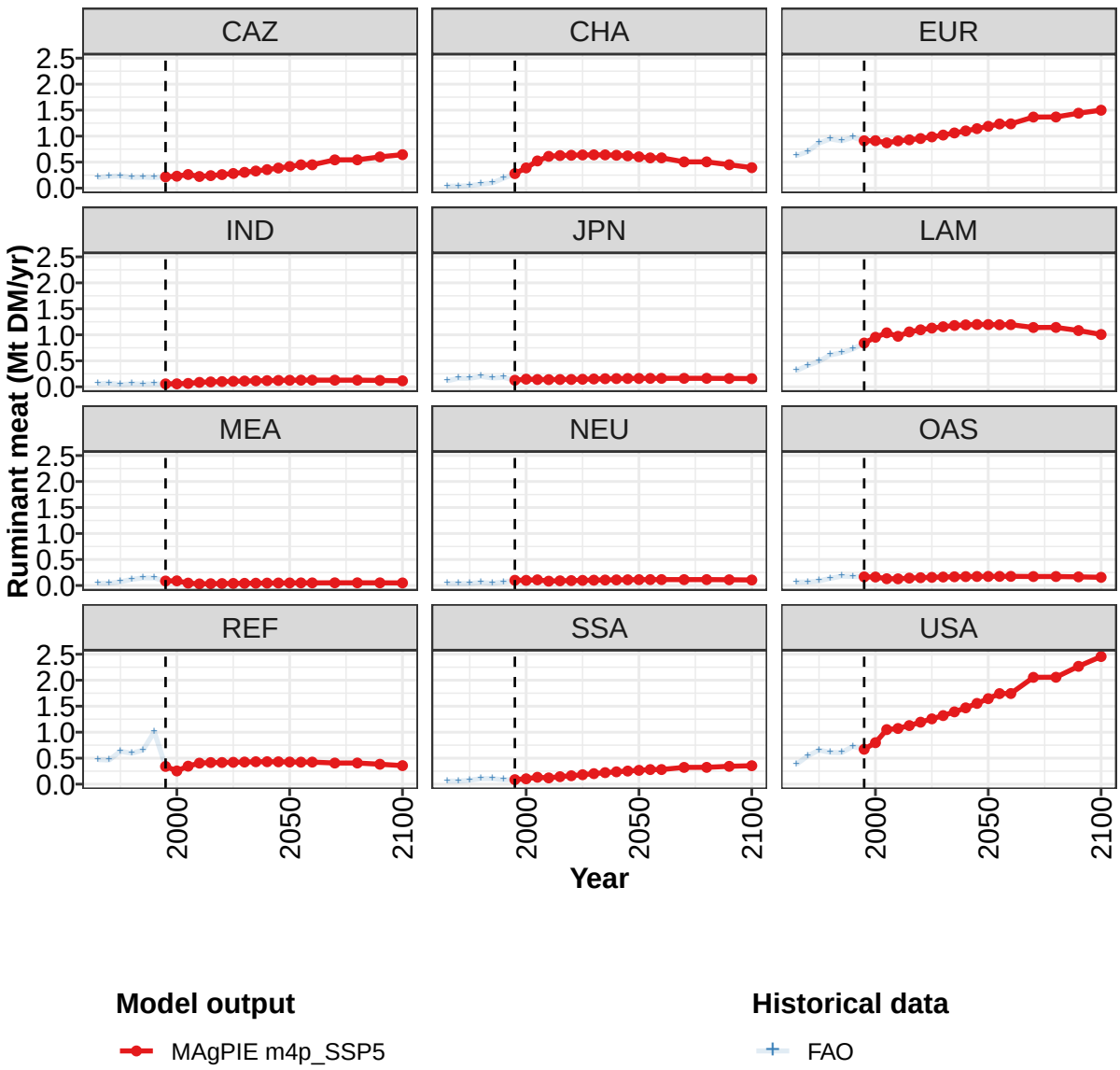
Table 534: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Poultry meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.024	0.036	0.050	0.093	0.091	0.101	0.104	0.234	0.307	0.566
CAZ	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.001	0.001	0.001	0.001	0.002	0.006	0.010	0.005	0.022
EUR	0.012	0.015	0.024	0.030	0.019	0.031	0.023	0.062	0.114	0.159
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.001	0.001	0.001	0.013	0.017	0.024	0.018	0.094	0.113	0.230
MEA	0.000	0.000	0.000	0.017	0.017	0.001	0.010	0.032	0.012	0.017
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
OAS	0.000	0.000	0.000	0.000	0.005	0.007	0.013	0.003	0.029	0.080
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.002	0.003	0.026
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.001	0.004
USA	0.011	0.018	0.023	0.032	0.031	0.036	0.027	0.026	0.030	0.028

Table 535: FAO — Demand—Material—Livestock products—Poultry meat (Mt DM/yr)

8.5.5 Ruminant meat





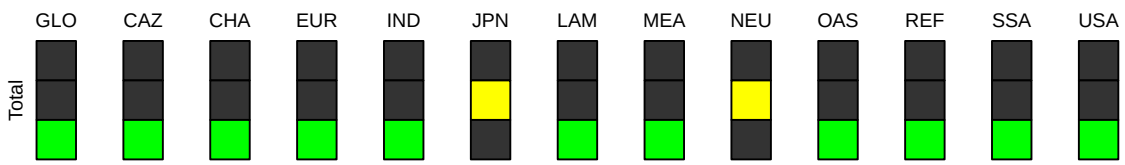


Figure 179: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.88	4.20	4.71	4.78	5.04	5.24	5.44	5.64	5.84	6.02	6.20
CAZ	0.22	0.23	0.26	0.22	0.24	0.26	0.28	0.30	0.33	0.36	0.39
CHA	0.28	0.39	0.52	0.61	0.63	0.63	0.64	0.64	0.64	0.63	0.62
EUR	0.91	0.91	0.87	0.91	0.93	0.95	0.99	1.02	1.06	1.10	1.14
IND	0.06	0.06	0.07	0.08	0.09	0.10	0.11	0.11	0.12	0.12	0.12
JPN	0.13	0.15	0.14	0.14	0.14	0.14	0.15	0.15	0.16	0.16	0.16
LAM	0.84	0.95	1.04	0.97	1.06	1.10	1.13	1.16	1.18	1.19	1.20
MEA	0.09	0.09	0.05	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05
NEU	0.10	0.10	0.11	0.08	0.09	0.09	0.10	0.10	0.11	0.11	0.11
OAS	0.17	0.16	0.13	0.13	0.14	0.15	0.16	0.16	0.17	0.17	0.17
REF	0.34	0.25	0.35	0.40	0.42	0.42	0.42	0.43	0.43	0.43	0.43
SSA	0.09	0.10	0.13	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.25
USA	0.67	0.80	1.05	1.07	1.13	1.19	1.26	1.32	1.39	1.47	1.55

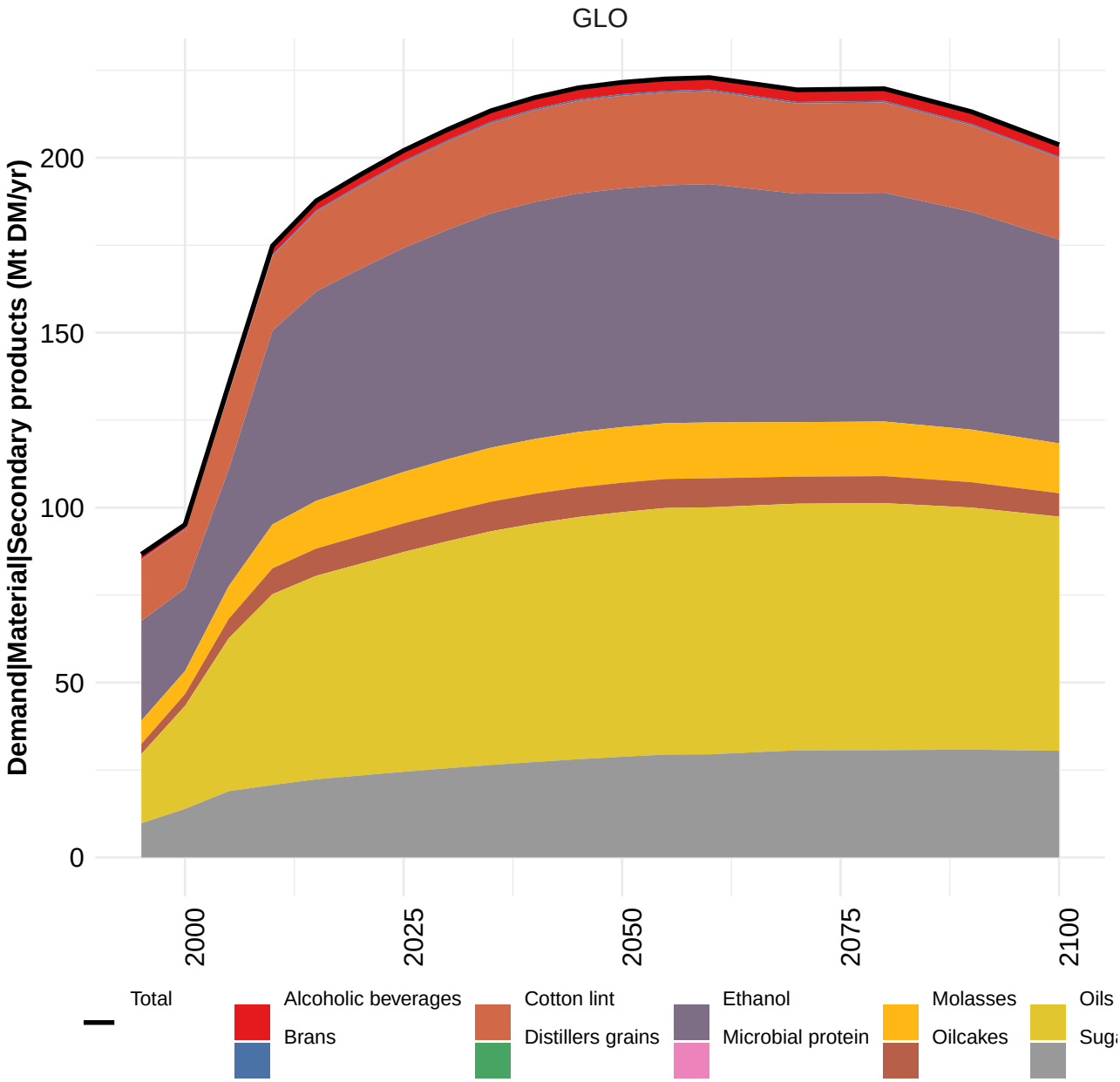
Table 536: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

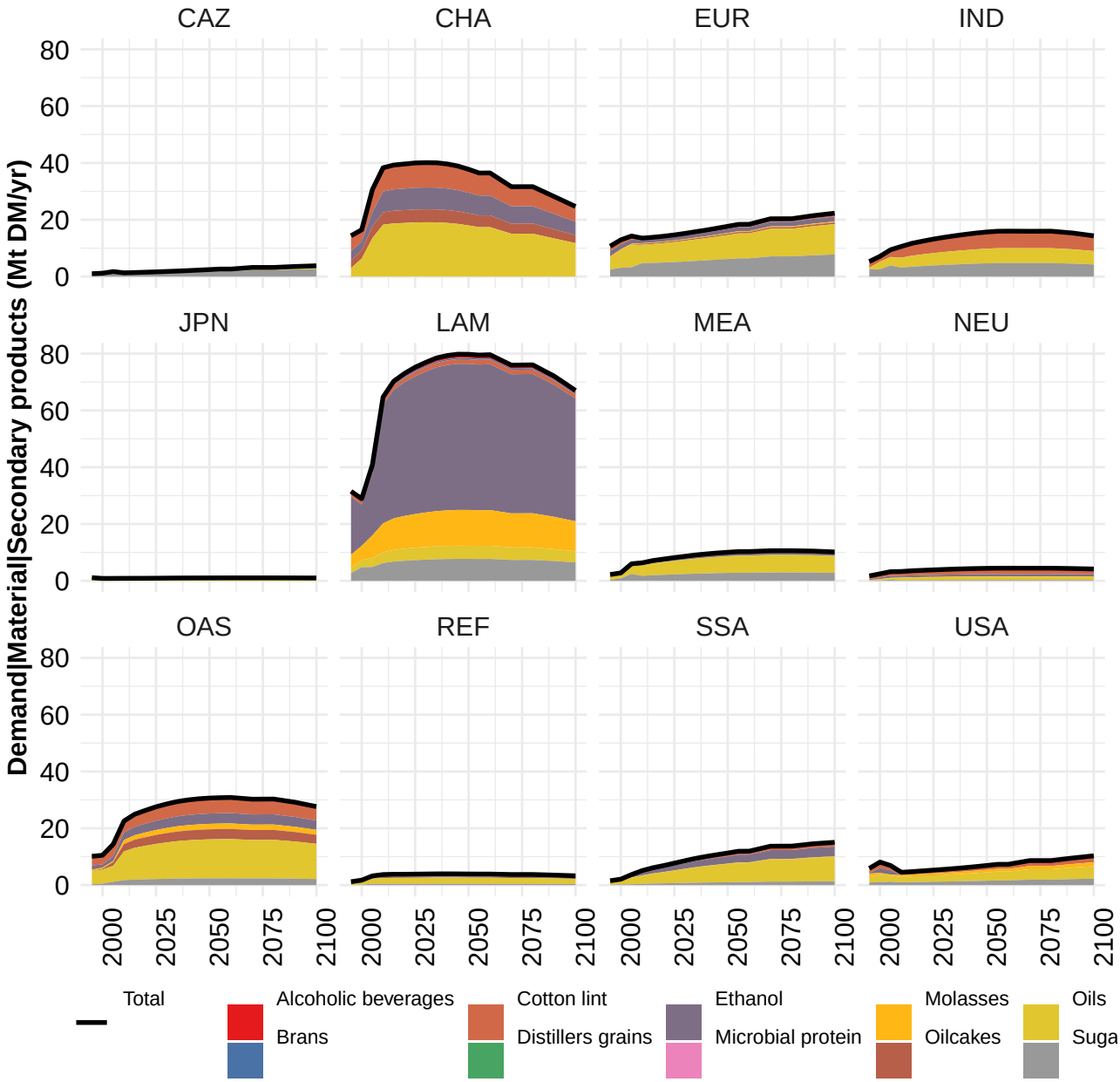
	2050	2055	2060	2070	2080	2090	2100
GLO	6.36	6.53	6.54	6.97	6.98	7.18	7.29
CAZ	0.42	0.45	0.45	0.54	0.54	0.60	0.64
CHA	0.60	0.58	0.58	0.50	0.51	0.45	0.39
EUR	1.19	1.23	1.24	1.37	1.37	1.44	1.50
IND	0.13	0.13	0.13	0.13	0.13	0.12	0.11
JPN	0.16	0.16	0.16	0.16	0.16	0.16	0.16
LAM	1.20	1.19	1.20	1.14	1.14	1.08	1.01
MEA	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NEU	0.11	0.11	0.11	0.11	0.11	0.11	0.11
OAS	0.17	0.18	0.18	0.17	0.17	0.17	0.16
REF	0.43	0.42	0.42	0.41	0.41	0.38	0.36
SSA	0.27	0.28	0.28	0.32	0.32	0.34	0.35
USA	1.65	1.74	1.74	2.06	2.06	2.27	2.46

Table 537: MAgPIE m4p_SSP5 — Demand—Material—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

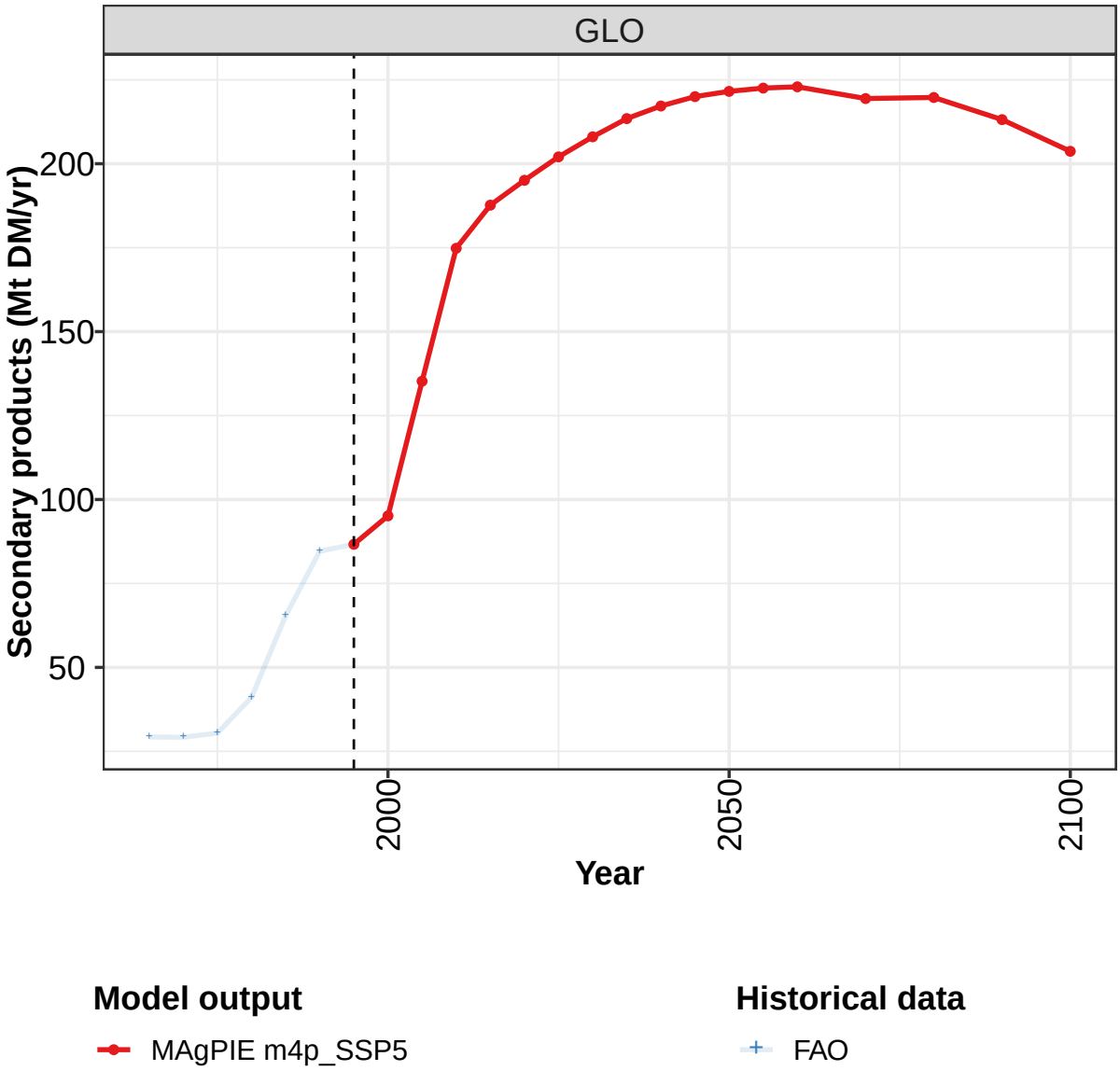
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.41	2.83	3.41	3.72	3.84	4.54	3.88	4.20	4.71	4.78
CAZ	0.20	0.23	0.24	0.20	0.21	0.20	0.22	0.23	0.26	0.22
CHA	0.04	0.04	0.05	0.08	0.10	0.19	0.28	0.39	0.52	0.61
EUR	0.63	0.70	0.87	0.95	0.91	0.98	0.91	0.91	0.87	0.91
IND	0.06	0.07	0.04	0.06	0.05	0.06	0.06	0.06	0.07	0.08
JPN	0.11	0.16	0.16	0.20	0.17	0.18	0.13	0.15	0.14	0.14
LAM	0.31	0.41	0.49	0.61	0.66	0.73	0.84	0.95	1.04	0.97
MEA	0.04	0.04	0.07	0.12	0.15	0.14	0.09	0.09	0.05	0.03
NEU	0.04	0.04	0.04	0.06	0.04	0.07	0.10	0.10	0.11	0.08
OAS	0.06	0.07	0.09	0.14	0.18	0.17	0.17	0.16	0.13	0.13
REF	0.47	0.46	0.63	0.60	0.66	1.01	0.34	0.25	0.35	0.40
SSA	0.06	0.06	0.07	0.11	0.11	0.09	0.09	0.10	0.13	0.12
USA	0.38	0.54	0.66	0.61	0.61	0.73	0.67	0.80	1.05	1.07

Table 538: FAO — Demand—Material—Livestock products—Ruminant meat (Mt DM/yr)


GLO
Demand|Material|Secondary products (Mt DM/yr)
200
150
100
50
0
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Material|Secondary products (Mt DM/yr)
0
20
40
60
80
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Suga

8.6 Secondary products



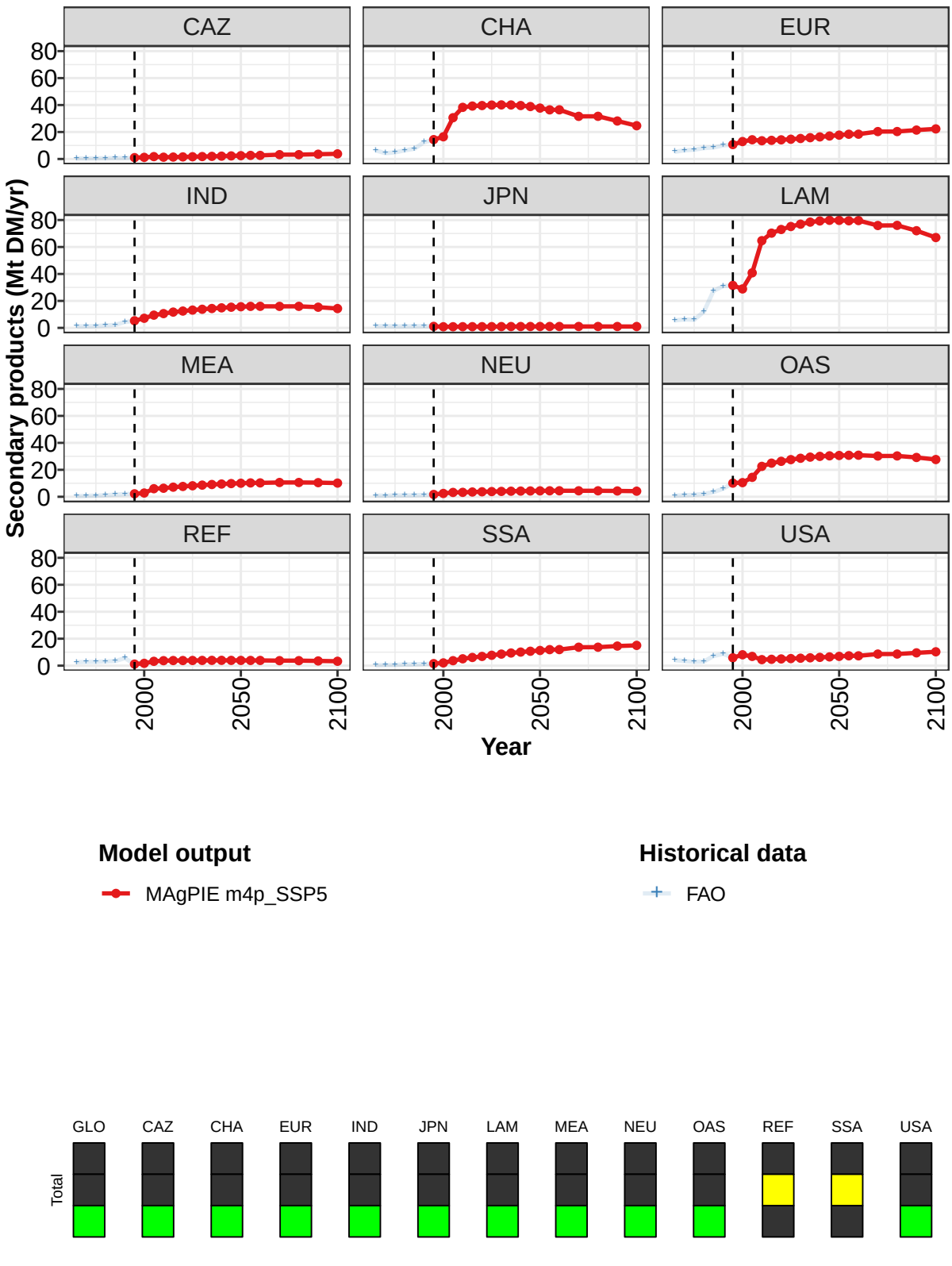


Figure 180: MAgPIE m4p_SSP5 — Demand—Material—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	87	95	135	175	188	195	202	208	213	217	220
CAZ	1	1	2	1	1	2	2	2	2	2	2
CHA	14	16	31	38	39	40	40	40	40	40	39
EUR	11	13	14	14	14	14	15	15	16	16	17
IND	5	7	9	11	12	12	13	14	14	15	15
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	32	29	41	65	70	73	75	77	78	79	80
MEA	2	3	6	6	7	8	8	9	9	9	10
NEU	2	2	3	3	4	4	4	4	4	4	4
OAS	10	11	14	23	25	26	28	29	29	30	30
REF	1	2	3	4	4	4	4	4	4	4	4
SSA	2	2	4	5	6	7	8	9	9	10	11
USA	6	8	7	4	5	5	5	6	6	6	7

Table 539: MAgPIE m4p_SSP5 — Demand—Material—Secondary products (Mt DM/yr) [PART 1/2]

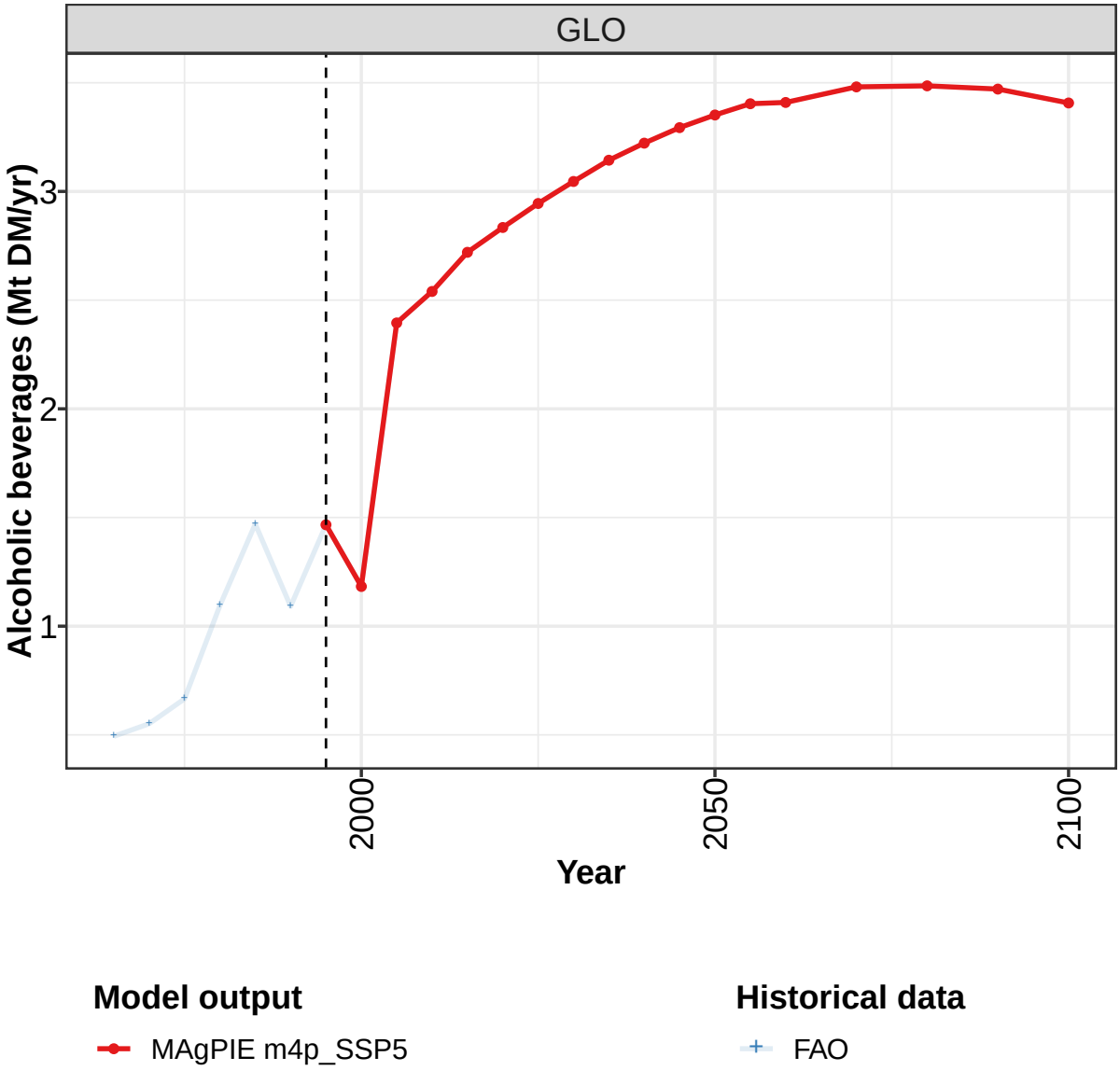
	2050	2055	2060	2070	2080	2090	2100
GLO	222	223	223	219	220	213	204
CAZ	2	3	3	3	3	4	4
CHA	38	36	36	32	32	28	25
EUR	18	18	18	20	20	21	22
IND	16	16	16	16	16	15	14
JPN	1	1	1	1	1	1	1
LAM	80	79	80	76	76	72	67
MEA	10	10	10	11	11	10	10
NEU	4	4	4	4	4	4	4
OAS	31	31	31	30	30	29	28
REF	4	4	4	4	4	4	3
SSA	11	12	12	14	14	15	15
USA	7	7	7	9	9	10	10

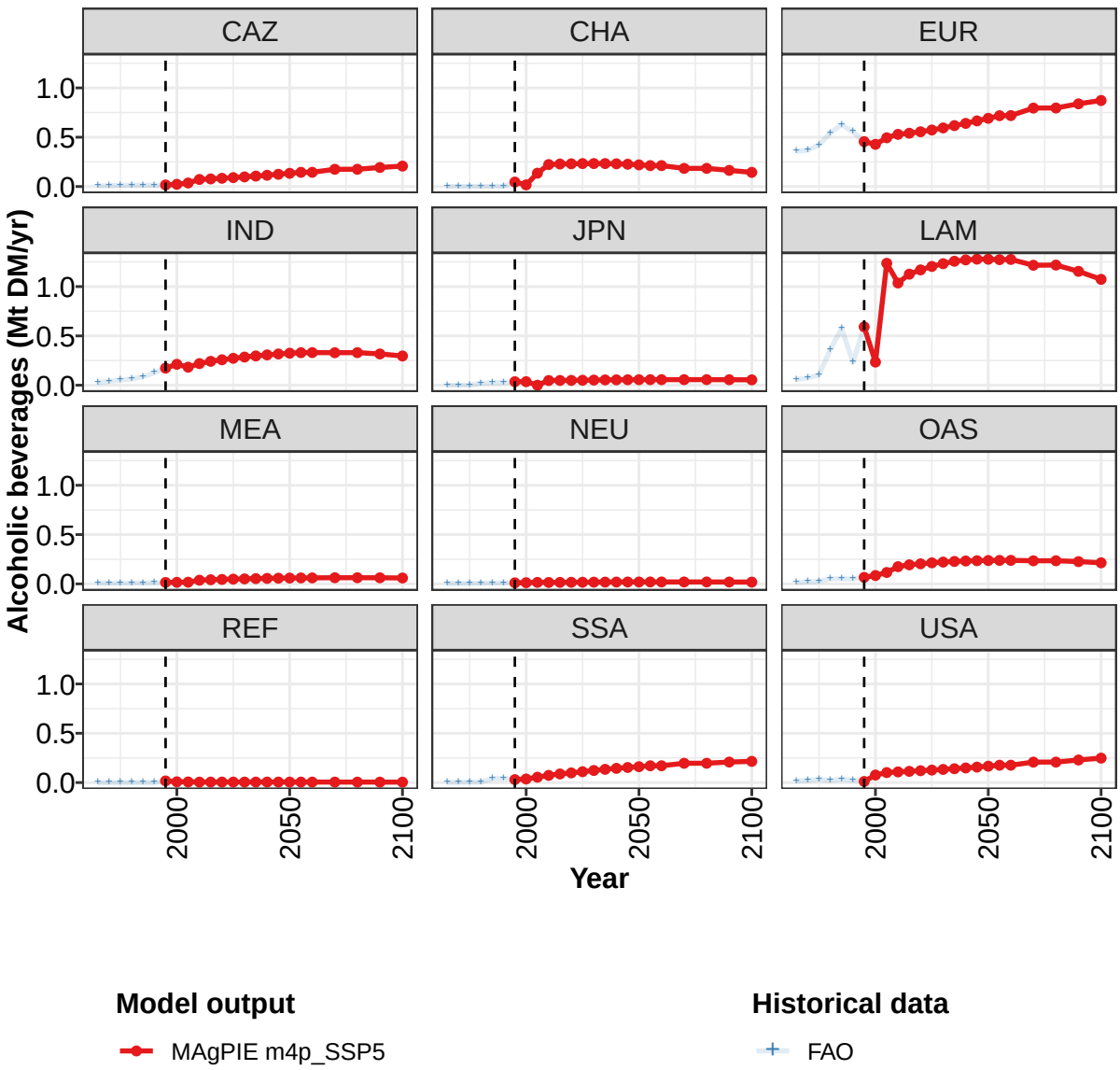
Table 540: MAgPIE m4p_SSP5 — Demand—Material—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	29	29	30	41	65	85	87	95	135	175
CAZ	0	0	0	1	1	1	1	1	2	1
CHA	6	4	5	6	8	12	14	16	31	38
EUR	5	6	7	8	9	10	11	13	14	14
IND	1	1	1	2	2	4	5	7	9	11
JPN	1	1	1	1	1	1	1	1	1	1
LAM	6	6	6	12	27	31	32	29	41	65
MEA	1	1	1	1	2	2	2	3	6	6
NEU	1	1	1	1	1	1	2	2	3	3
OAS	1	1	1	2	4	6	10	11	14	23
REF	3	3	3	3	3	6	1	2	3	4
SSA	0	1	1	1	1	1	2	2	4	5
USA	4	3	3	3	7	9	6	8	7	4

Table 541: FAO — Demand—Material—Secondary products (Mt DM/yr)

8.6.1 Alcoholic beverages





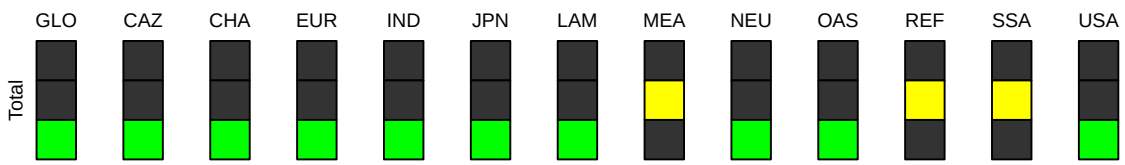


Figure 181: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.47	1.18	2.40	2.54	2.72	2.83	2.94	3.05	3.14	3.22	3.29
CAZ	0.02	0.02	0.04	0.07	0.08	0.08	0.09	0.10	0.11	0.11	0.12
CHA	0.05	0.02	0.14	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23
EUR	0.46	0.43	0.49	0.53	0.54	0.56	0.57	0.59	0.62	0.64	0.67
IND	0.17	0.21	0.18	0.22	0.24	0.26	0.27	0.29	0.30	0.31	0.32
JPN	0.04	0.04	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
LAM	0.59	0.23	1.24	1.04	1.13	1.17	1.20	1.23	1.26	1.27	1.28
MEA	0.01	0.02	0.02	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06
NEU	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.07	0.08	0.12	0.17	0.19	0.20	0.21	0.22	0.23	0.23	0.24
REF	0.02	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SSA	0.03	0.04	0.05	0.07	0.09	0.10	0.11	0.12	0.13	0.14	0.15
USA	0.01	0.08	0.10	0.11	0.11	0.12	0.13	0.13	0.14	0.15	0.16

Table 542: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

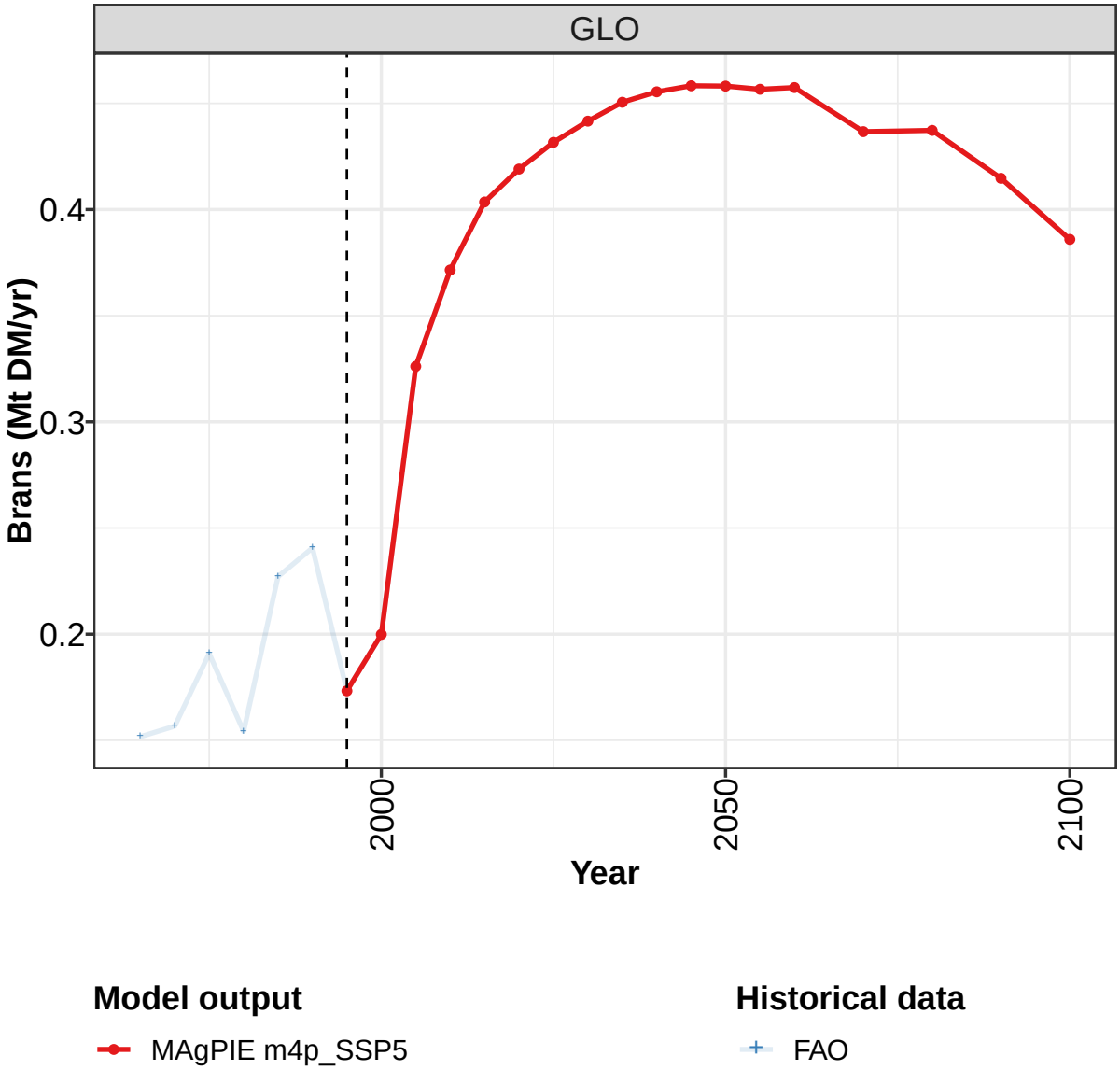
	2050	2055	2060	2070	2080	2090	2100
GLO	3.35	3.40	3.41	3.48	3.49	3.47	3.41
CAZ	0.13	0.14	0.14	0.17	0.17	0.19	0.21
CHA	0.22	0.21	0.21	0.18	0.18	0.16	0.14
EUR	0.69	0.72	0.72	0.80	0.80	0.84	0.87
IND	0.32	0.33	0.33	0.33	0.33	0.32	0.30
JPN	0.06	0.06	0.06	0.06	0.06	0.06	0.05
LAM	1.28	1.27	1.28	1.22	1.22	1.15	1.07
MEA	0.06	0.06	0.06	0.06	0.06	0.06	0.06
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.24	0.24	0.24	0.23	0.23	0.23	0.21
REF	0.01	0.01	0.01	0.00	0.00	0.00	0.00
SSA	0.16	0.17	0.17	0.20	0.20	0.21	0.22
USA	0.17	0.18	0.18	0.21	0.21	0.23	0.25

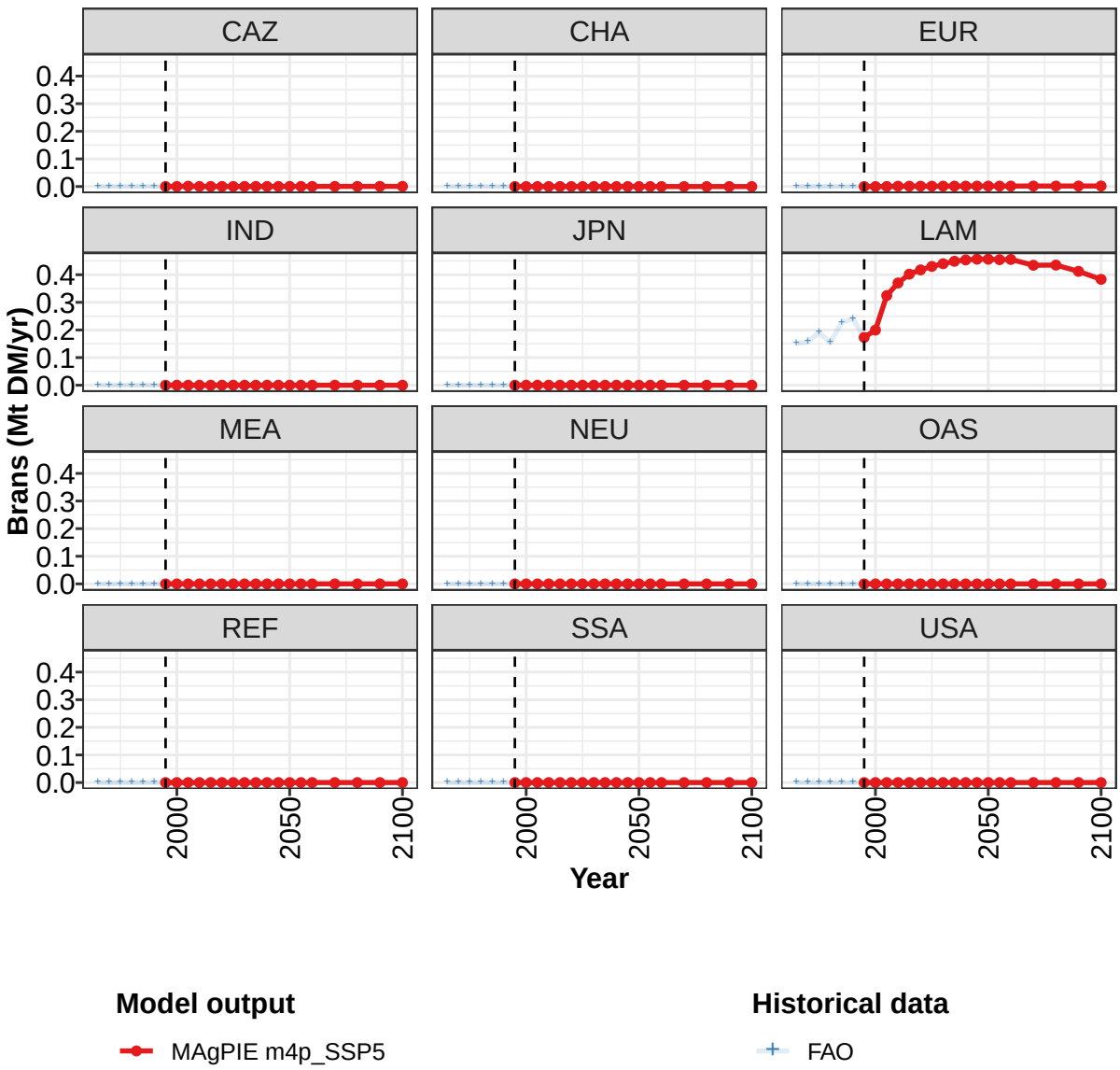
Table 543: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.49	0.55	0.67	1.09	1.47	1.09	1.47	1.18	2.40	2.54
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.04	0.07
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.14	0.22
EUR	0.36	0.37	0.42	0.54	0.63	0.56	0.46	0.43	0.49	0.53
IND	0.03	0.04	0.05	0.06	0.08	0.13	0.17	0.21	0.18	0.22
JPN	0.00	0.00	0.00	0.02	0.02	0.03	0.04	0.04	0.00	0.05
LAM	0.06	0.07	0.10	0.36	0.57	0.23	0.59	0.23	1.24	1.04
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.04
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
OAS	0.01	0.02	0.03	0.05	0.05	0.05	0.07	0.08	0.12	0.17
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00
SSA	0.00	0.00	0.00	0.01	0.04	0.04	0.03	0.04	0.05	0.07
USA	0.02	0.02	0.03	0.02	0.03	0.02	0.01	0.08	0.10	0.11

Table 544: FAO — Demand—Material—Secondary products—Alcoholic beverages (Mt DM/yr)

8.6.2 Brans


GLO
Brans (Mt DM/yr)
0.4
0.3
0.2
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



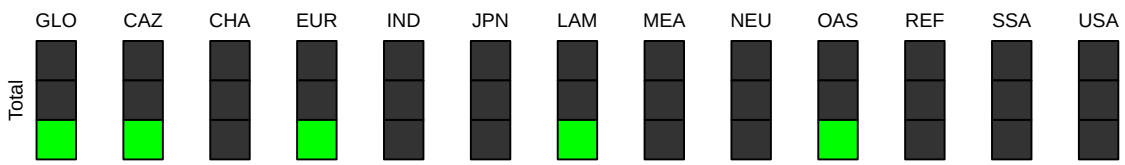


Figure 182: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.173	0.200	0.326	0.371	0.404	0.419	0.432	0.442	0.451	0.455	0.458
CAZ	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.173	0.200	0.325	0.370	0.402	0.418	0.430	0.440	0.449	0.454	0.456
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 545: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Brans (Mt DM/yr) [PART 1/2]

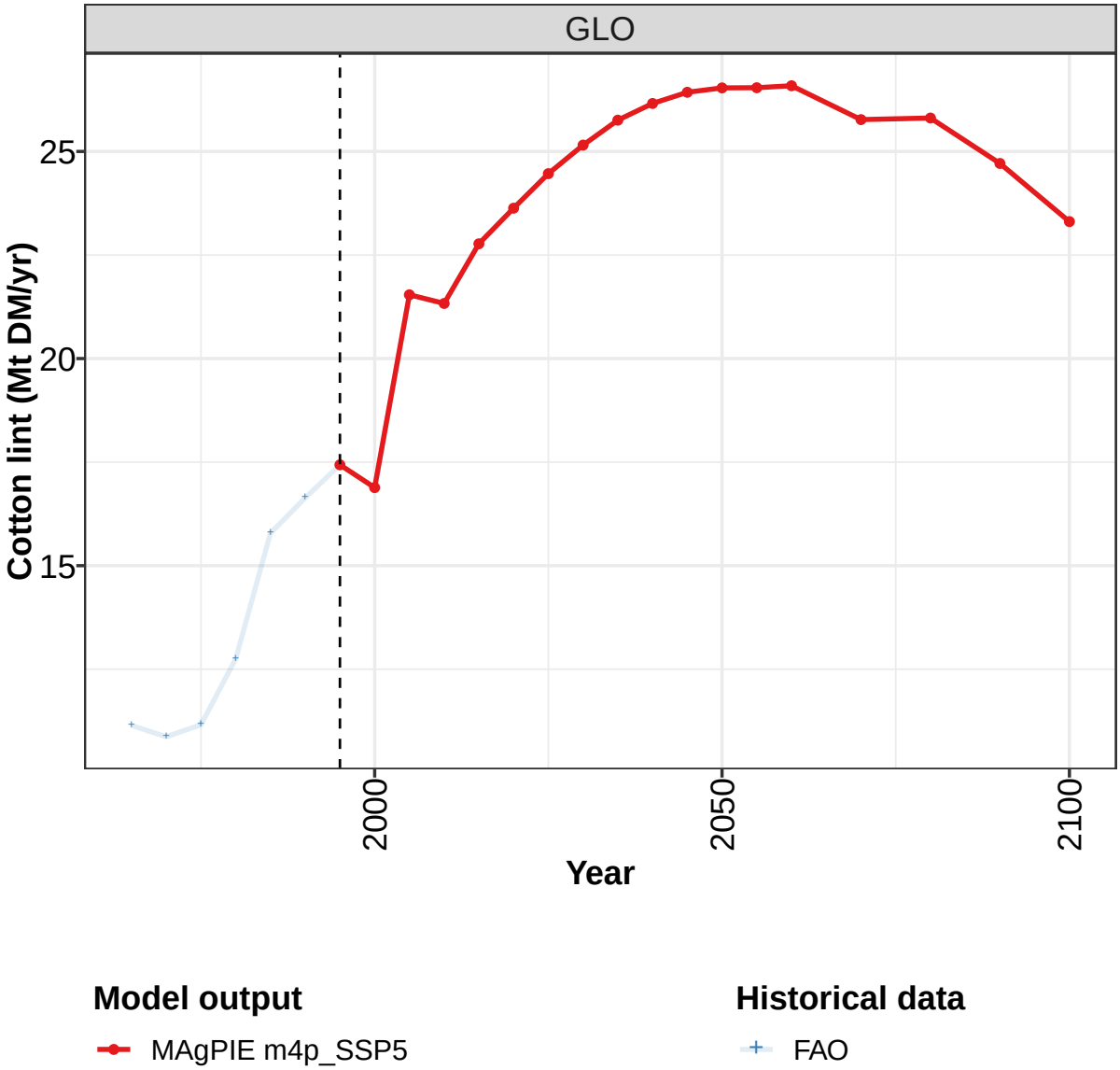
	2050	2055	2060	2070	2080	2090	2100
GLO	0.458	0.457	0.457	0.437	0.437	0.415	0.386
CAZ	0.000	0.000	0.000	0.000	0.000	0.001	0.001
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.002	0.002	0.002	0.002	0.002	0.002	0.002
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.456	0.455	0.455	0.434	0.435	0.412	0.383
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

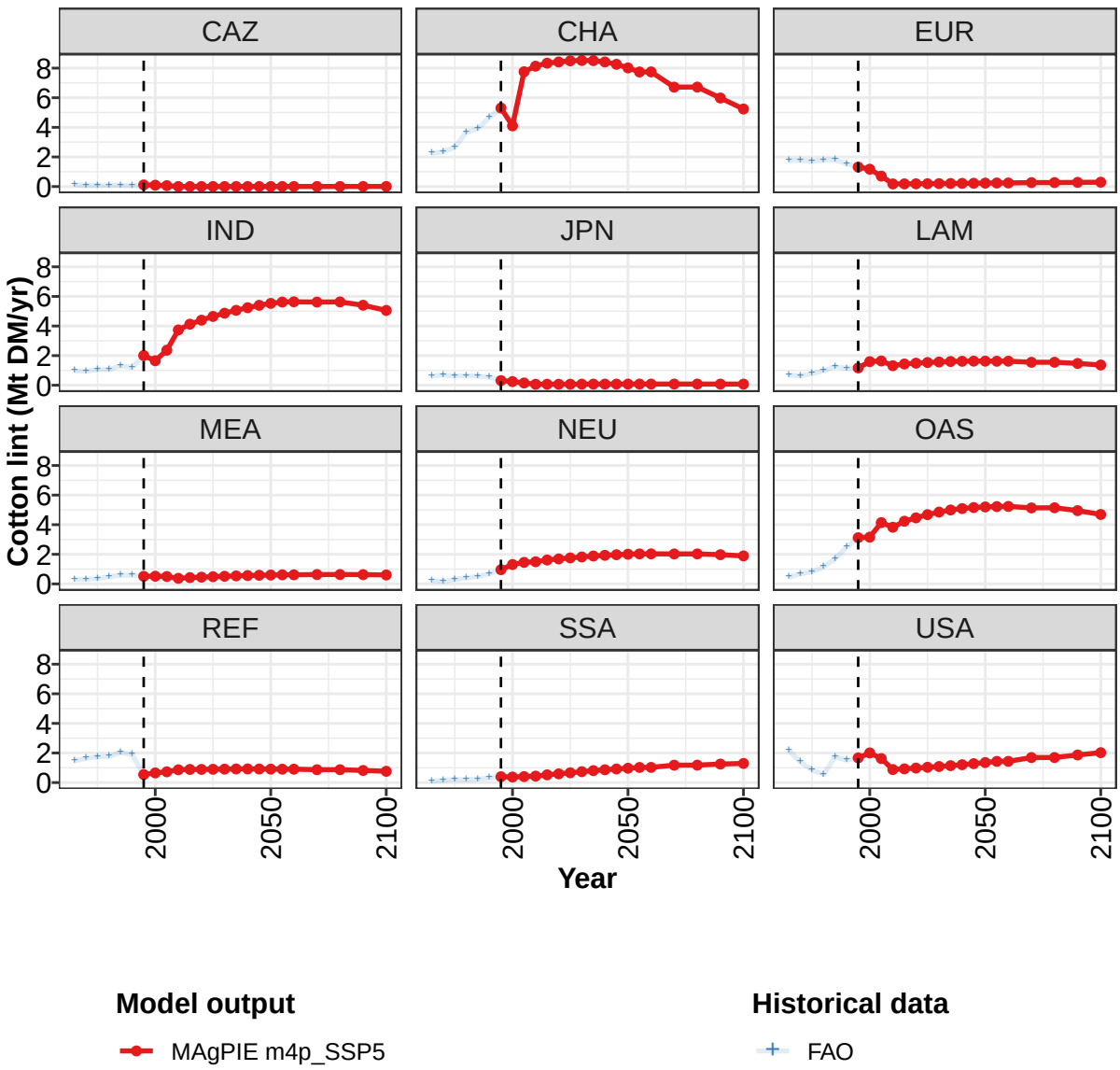
Table 546: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.152	0.157	0.191	0.154	0.227	0.241	0.173	0.200	0.326	0.371
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.152	0.157	0.191	0.154	0.227	0.240	0.173	0.200	0.325	0.370
MEA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 547: FAO — Demand—Material—Secondary products—Brans (Mt DM/yr)

8.6.3 Cotton lint





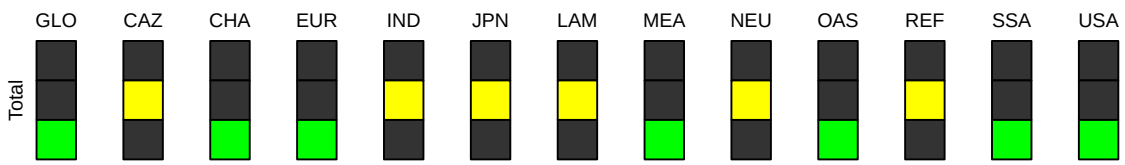


Figure 183: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Cotton lint (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.4	16.9	21.5	21.3	22.8	23.6	24.5	25.2	25.8	26.2	26.4
CAZ	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.3	4.1	7.8	8.1	8.3	8.4	8.5	8.5	8.5	8.4	8.3
EUR	1.3	1.2	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	2.0	1.7	2.4	3.7	4.1	4.4	4.6	4.9	5.1	5.2	5.4
JPN	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.2	1.6	1.6	1.3	1.4	1.5	1.5	1.6	1.6	1.6	1.6
MEA	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
NEU	1.0	1.3	1.5	1.5	1.6	1.7	1.8	1.8	1.9	1.9	2.0
OAS	3.1	3.2	4.1	3.8	4.2	4.5	4.7	4.9	5.0	5.1	5.2
REF	0.5	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
SSA	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.9	0.9
USA	1.7	2.0	1.6	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.3

Table 548: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

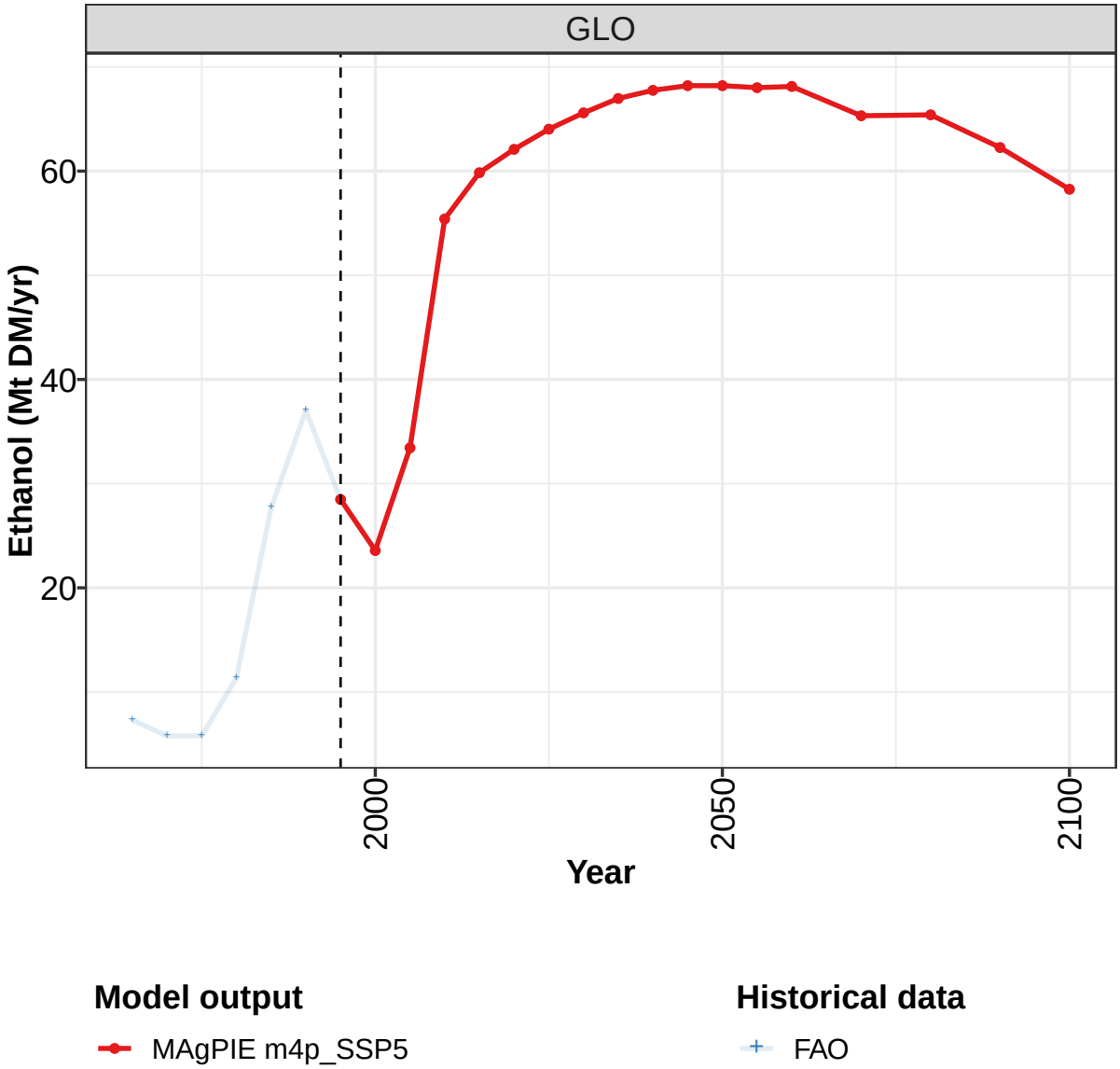
	2050	2055	2060	2070	2080	2090	2100
GLO	26.5	26.5	26.6	25.8	25.8	24.7	23.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	8.0	7.7	7.7	6.7	6.7	6.0	5.2
EUR	0.2	0.2	0.2	0.3	0.3	0.3	0.3
IND	5.5	5.6	5.6	5.6	5.6	5.4	5.1
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.6	1.6	1.6	1.6	1.6	1.5	1.4
MEA	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NEU	2.0	2.0	2.0	2.0	2.0	2.0	1.9
OAS	5.2	5.2	5.2	5.1	5.1	5.0	4.7
REF	0.9	0.9	0.9	0.9	0.9	0.8	0.8
SSA	1.0	1.0	1.0	1.2	1.2	1.3	1.3
USA	1.4	1.4	1.4	1.7	1.7	1.9	2.0

Table 549: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Cotton lint (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.1	10.9	11.2	12.8	15.8	16.6	17.4	16.9	21.5	21.3
CAZ	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0
CHA	2.2	2.4	2.6	3.7	3.9	4.7	5.3	4.1	7.8	8.1
EUR	1.8	1.8	1.7	1.8	1.8	1.5	1.3	1.2	0.7	0.2
IND	1.0	0.9	1.1	1.1	1.3	1.2	2.0	1.7	2.4	3.7
JPN	0.6	0.7	0.6	0.6	0.6	0.6	0.3	0.2	0.2	0.1
LAM	0.7	0.6	0.8	1.0	1.3	1.1	1.2	1.6	1.6	1.3
MEA	0.3	0.3	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.4
NEU	0.2	0.2	0.3	0.4	0.5	0.7	1.0	1.3	1.5	1.5
OAS	0.5	0.7	0.8	1.1	1.7	2.5	3.1	3.2	4.1	3.8
REF	1.5	1.6	1.7	1.8	2.0	1.9	0.5	0.7	0.7	0.9
SSA	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4
USA	2.2	1.4	0.9	0.5	1.7	1.5	1.7	2.0	1.6	0.9

Table 550: FAO — Demand—Material—Secondary products—Cotton lint (Mt DM/yr)

8.6.4 Ethanol


GLO
Ethanol (Mt DM/yr)
60
40
20
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO

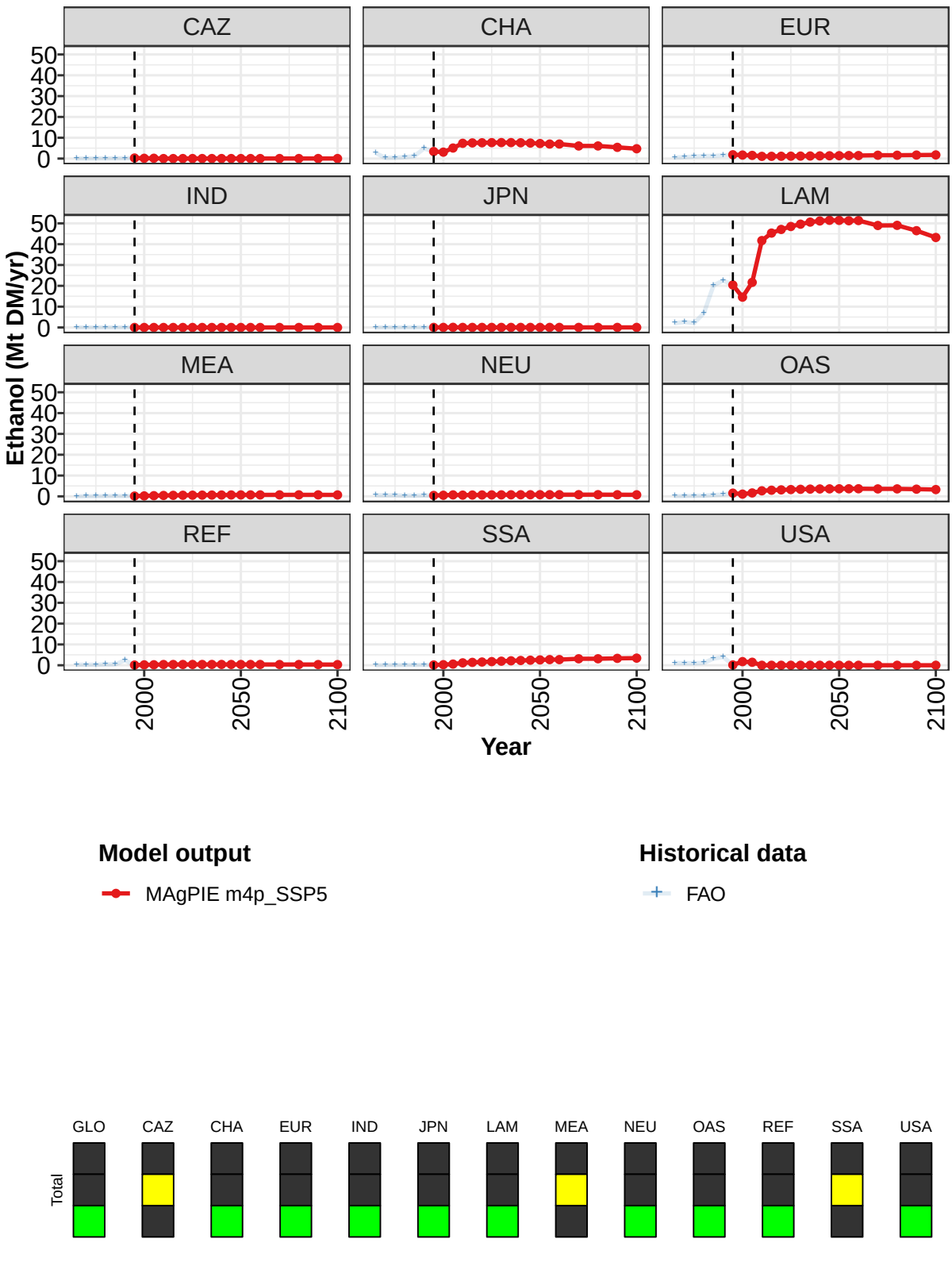


Figure 184: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Ethanol (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	28.5	23.6	33.4	55.4	59.8	62.1	64.0	65.6	67.0	67.8	68.2
CAZ	0.3	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.4	3.1	5.1	7.3	7.5	7.6	7.7	7.7	7.7	7.6	7.5
EUR	1.8	1.7	1.5	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	20.4	14.6	21.7	41.7	45.3	47.1	48.5	49.6	50.6	51.2	51.5
MEA	0.2	0.2	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7
NEU	0.5	0.5	0.7	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8
OAS	1.6	1.1	1.7	2.7	3.0	3.1	3.3	3.4	3.5	3.6	3.6
REF	0.1	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
SSA	0.1	0.3	0.6	1.2	1.4	1.6	1.8	2.0	2.1	2.3	2.4
USA	0.2	1.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 551: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Ethanol (Mt DM/yr) [PART 1/2]

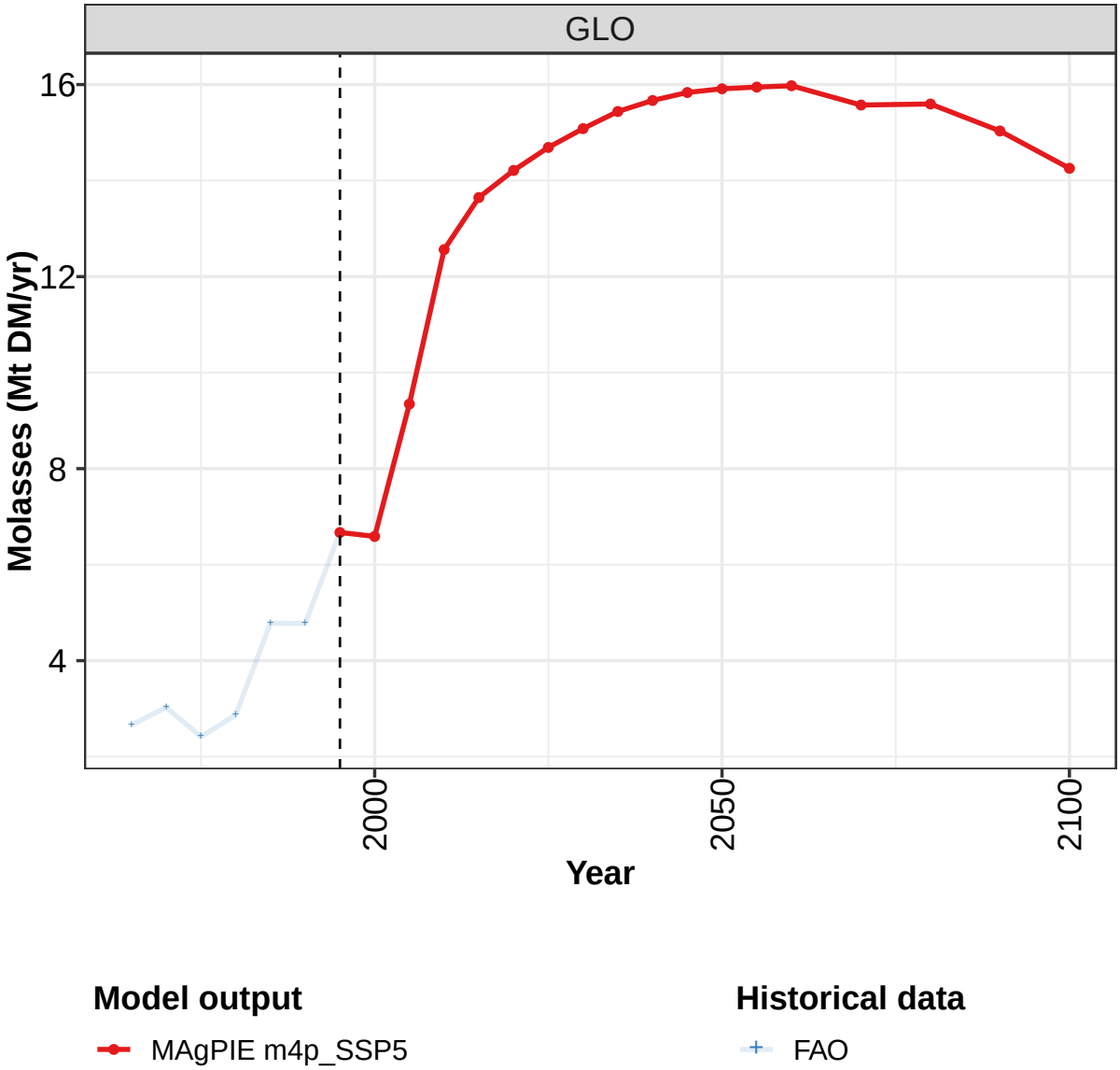
	2050	2055	2060	2070	2080	2090	2100
GLO	68.2	68.0	68.1	65.3	65.4	62.3	58.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	7.2	7.0	7.0	6.1	6.1	5.4	4.7
EUR	1.4	1.4	1.4	1.6	1.6	1.7	1.8
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	51.4	51.3	51.4	49.0	49.0	46.5	43.2
MEA	0.7	0.7	0.7	0.7	0.7	0.7	0.7
NEU	0.8	0.8	0.8	0.8	0.8	0.8	0.8
OAS	3.6	3.7	3.7	3.6	3.6	3.5	3.3
REF	0.4	0.4	0.4	0.4	0.4	0.3	0.3
SSA	2.6	2.7	2.7	3.1	3.1	3.3	3.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

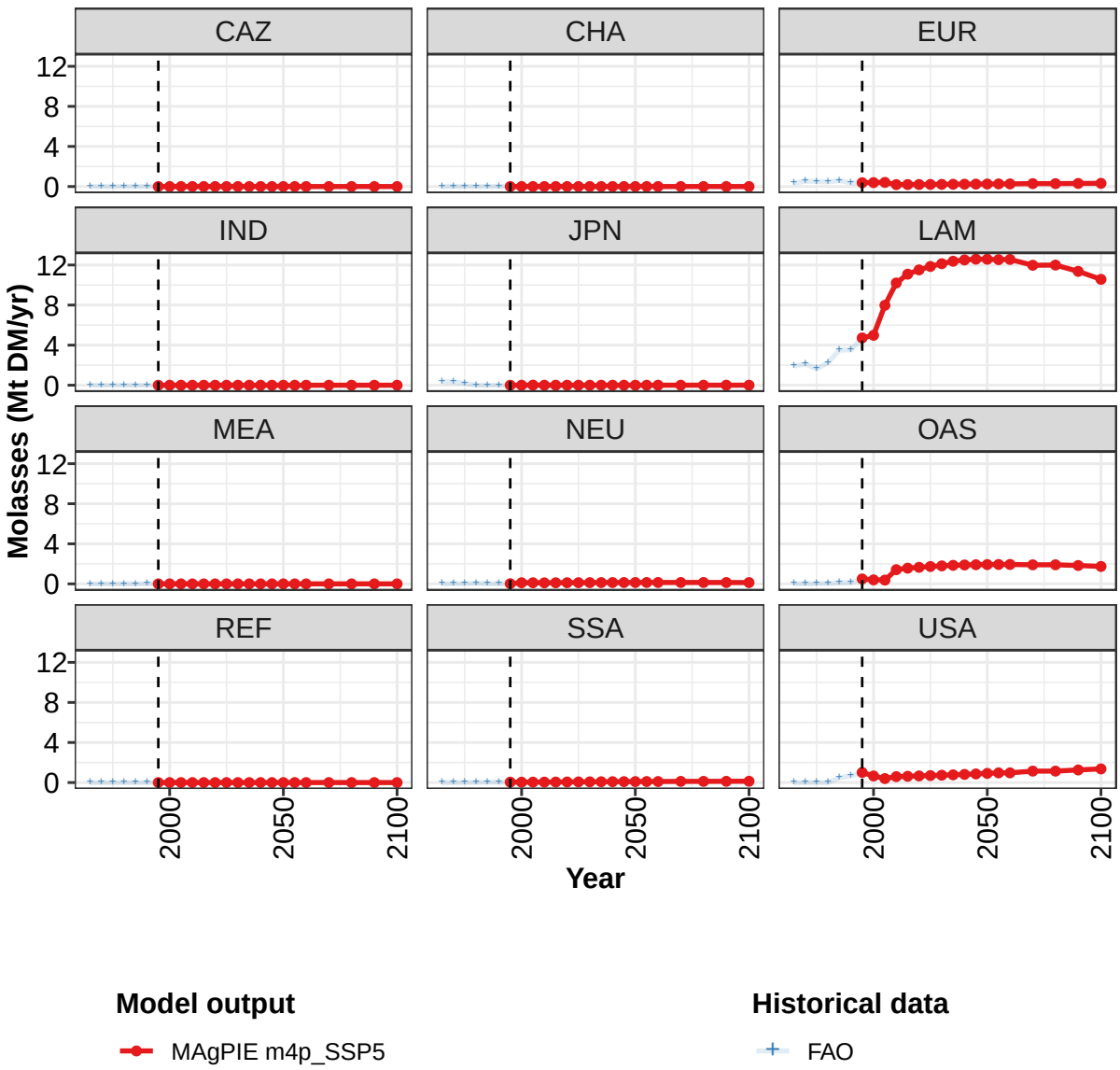
Table 552: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Ethanol (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7.3	5.8	5.8	11.4	27.7	37.0	28.5	23.6	33.4	55.4
CAZ	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.0
CHA	2.6	0.3	0.5	0.7	1.2	4.8	3.4	3.1	5.1	7.3
EUR	0.5	0.7	1.0	1.2	1.2	1.5	1.8	1.7	1.5	1.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
LAM	2.1	2.6	2.2	6.8	20.2	22.6	20.4	14.6	21.7	41.7
MEA	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.4
NEU	0.6	0.5	0.5	0.3	0.4	0.4	0.5	0.5	0.7	0.6
OAS	0.1	0.2	0.2	0.3	0.6	0.9	1.6	1.1	1.7	2.7
REF	0.3	0.3	0.3	0.4	0.5	2.4	0.1	0.2	0.2	0.4
SSA	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.6	1.2
USA	1.0	1.0	1.0	1.2	3.2	4.0	0.2	1.8	1.4	0.0

Table 553: FAO — Demand—Material—Secondary products—Ethanol (Mt DM/yr)

8.6.5 Molasses





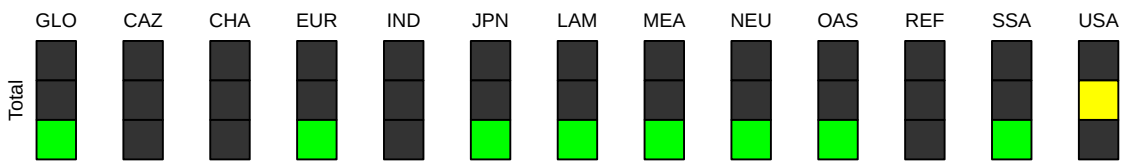


Figure 185: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.7	6.6	9.3	12.6	13.6	14.2	14.7	15.1	15.4	15.7	15.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	4.7	5.0	8.0	10.2	11.1	11.5	11.9	12.1	12.4	12.5	12.6
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.5	0.4	0.4	1.4	1.6	1.7	1.7	1.8	1.9	1.9	1.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
USA	1.0	0.7	0.4	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.9

Table 554: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

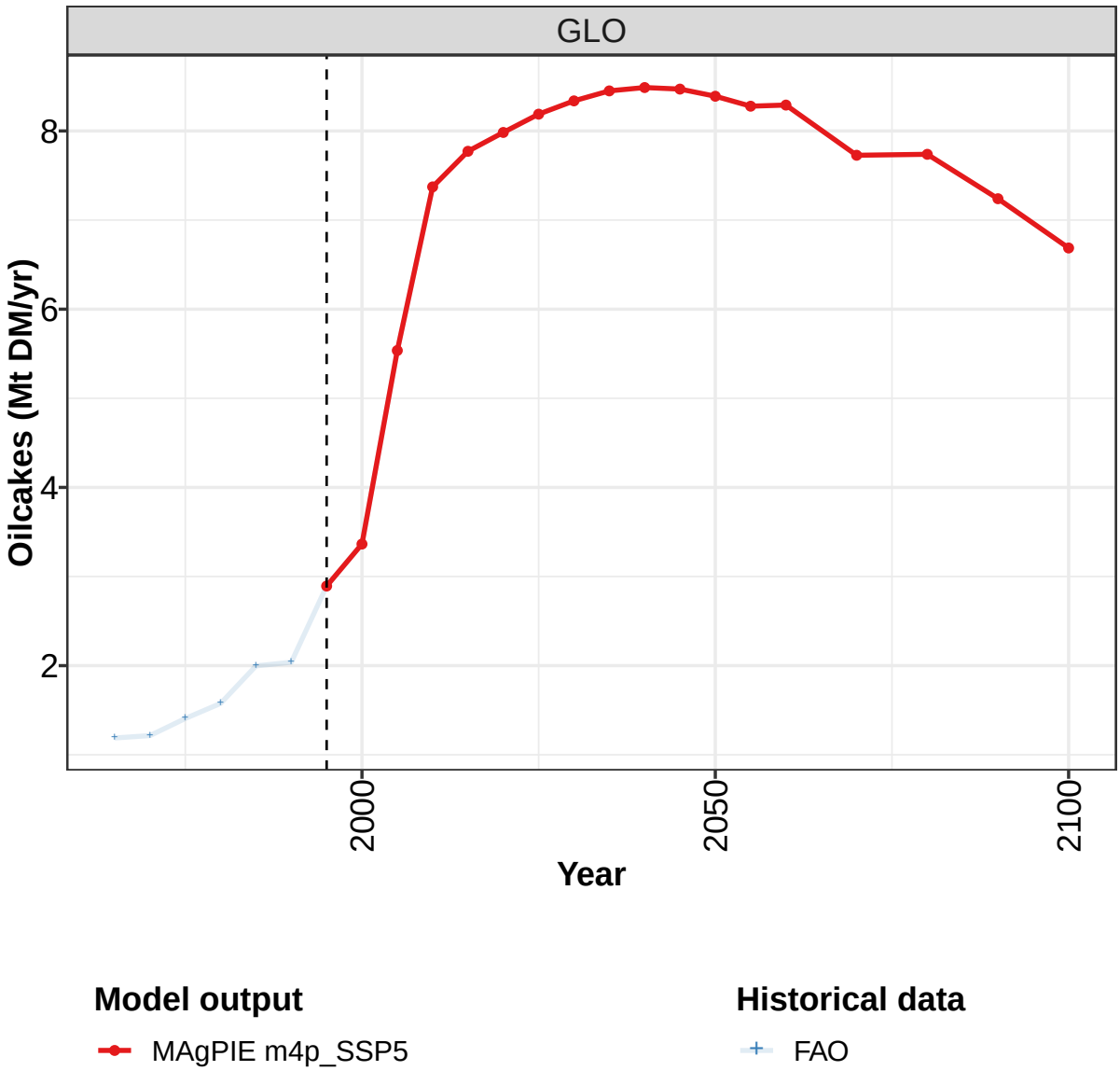
	2050	2055	2060	2070	2080	2090	2100
GLO	15.9	15.9	16.0	15.6	15.6	15.0	14.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	12.6	12.5	12.6	12.0	12.0	11.4	10.6
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.9	1.9	1.9	1.9	1.9	1.8	1.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
USA	0.9	1.0	1.0	1.1	1.1	1.3	1.4

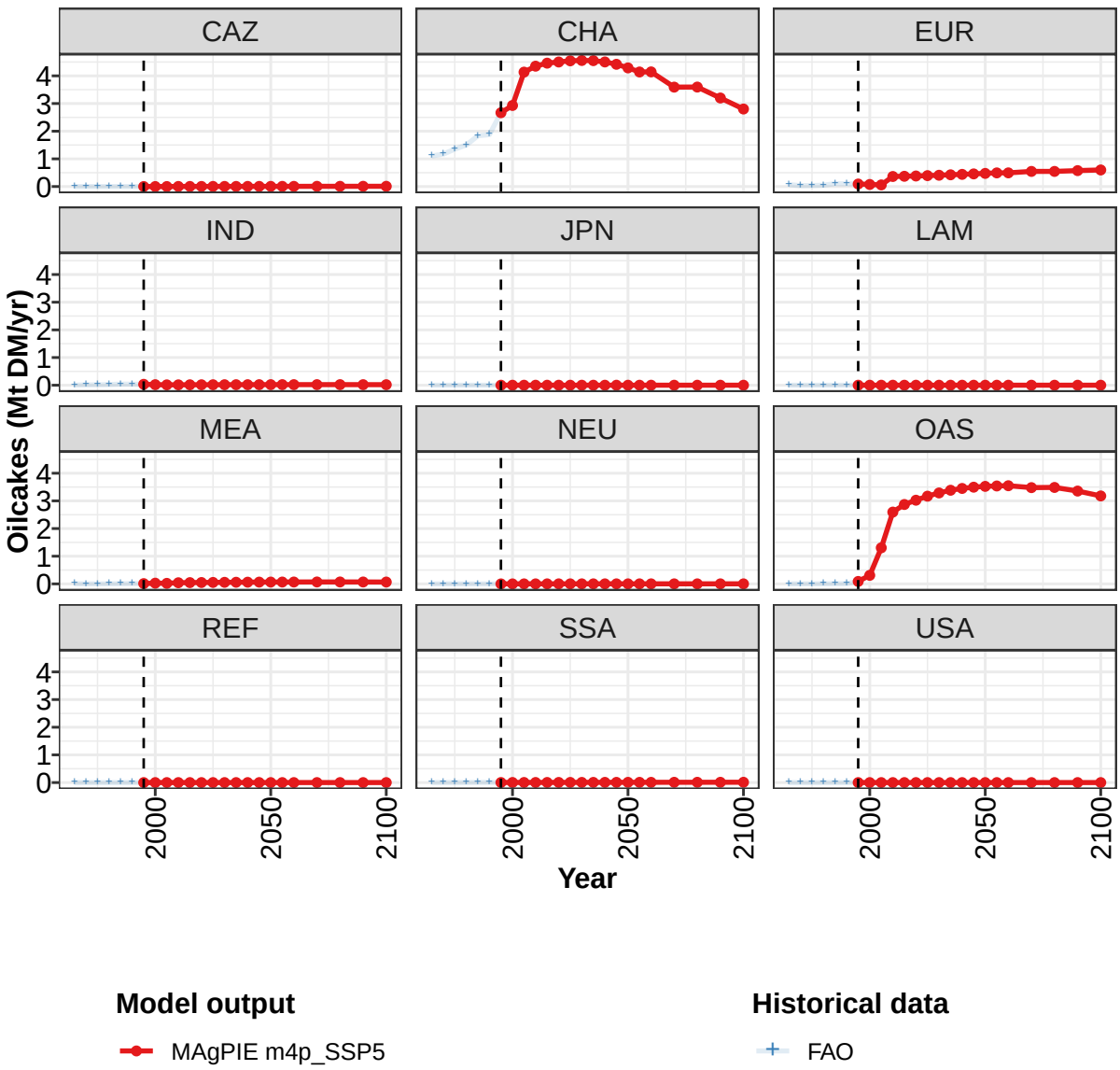
Table 555: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Molasses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.7	3.0	2.4	2.9	4.8	4.8	6.7	6.6	9.3	12.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.3	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.9	2.1	1.6	2.3	3.5	3.5	4.7	5.0	8.0	10.2
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1
OAS	0.0	0.0	0.0	0.1	0.1	0.2	0.5	0.4	0.4	1.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.5	0.7	1.0	0.7	0.4	0.6

Table 556: FAO — Demand—Material—Secondary products—Molasses (Mt DM/yr)

8.6.6 Oilcakes





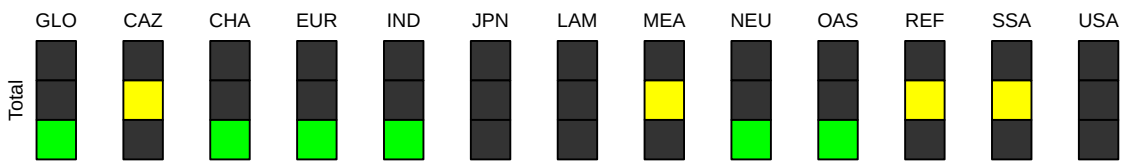


Figure 186: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.89	3.36	5.54	7.37	7.77	7.98	8.19	8.34	8.45	8.49	8.47
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
CHA	2.67	2.93	4.14	4.35	4.46	4.50	4.54	4.56	4.55	4.50	4.42
EUR	0.09	0.07	0.06	0.36	0.37	0.38	0.39	0.41	0.42	0.44	0.46
IND	0.03	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.01	0.03	0.02	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.09	0.31	1.30	2.60	2.87	3.02	3.17	3.29	3.38	3.45	3.50
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 557: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

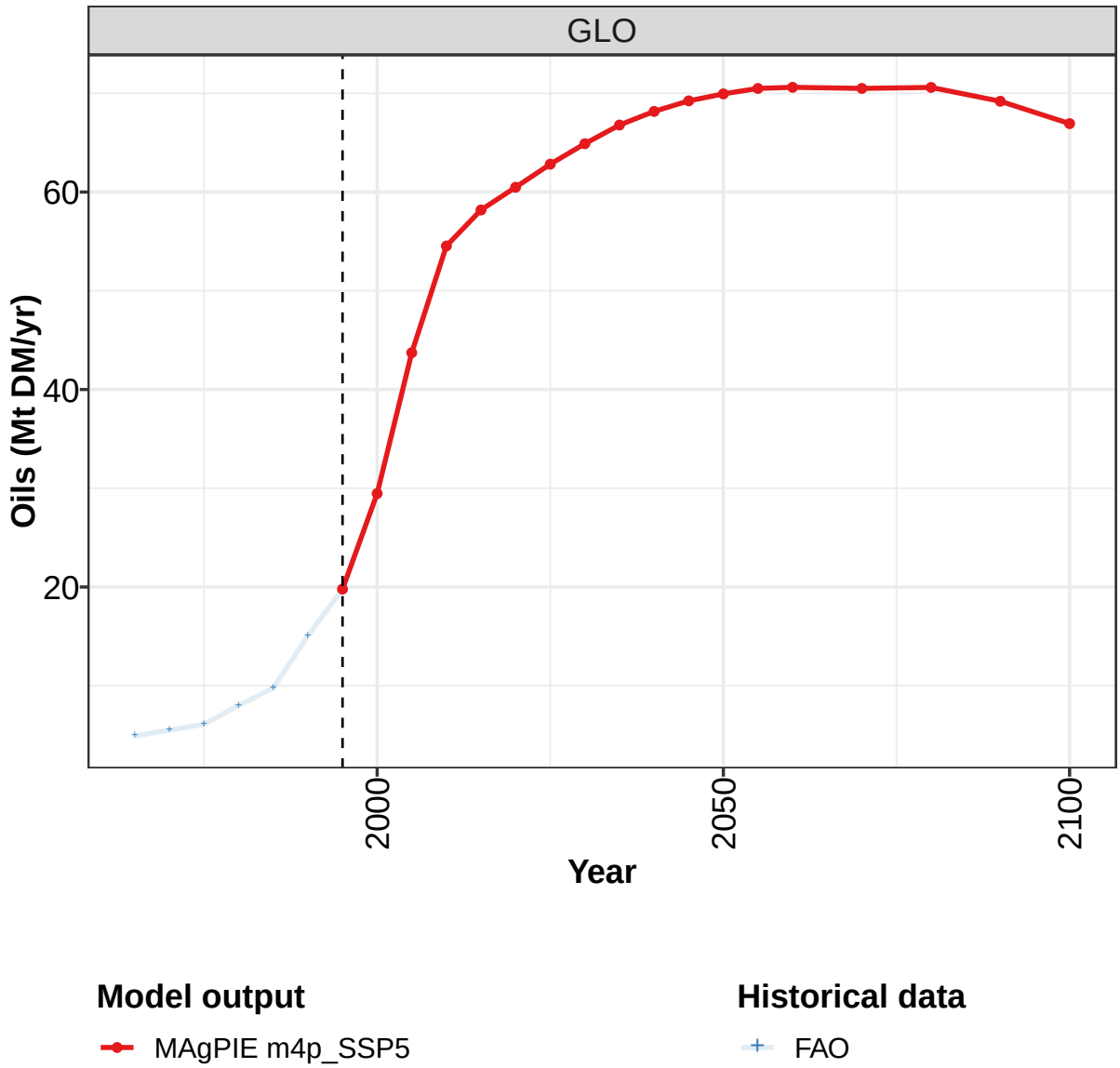
	2050	2055	2060	2070	2080	2090	2100
GLO	8.39	8.28	8.29	7.73	7.74	7.24	6.69
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	4.29	4.14	4.14	3.59	3.60	3.20	2.80
EUR	0.47	0.49	0.49	0.55	0.55	0.58	0.60
IND	0.02	0.02	0.02	0.02	0.02	0.02	0.02
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.07	0.07	0.07	0.07	0.07	0.07	0.07
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	3.53	3.54	3.55	3.48	3.49	3.36	3.18
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

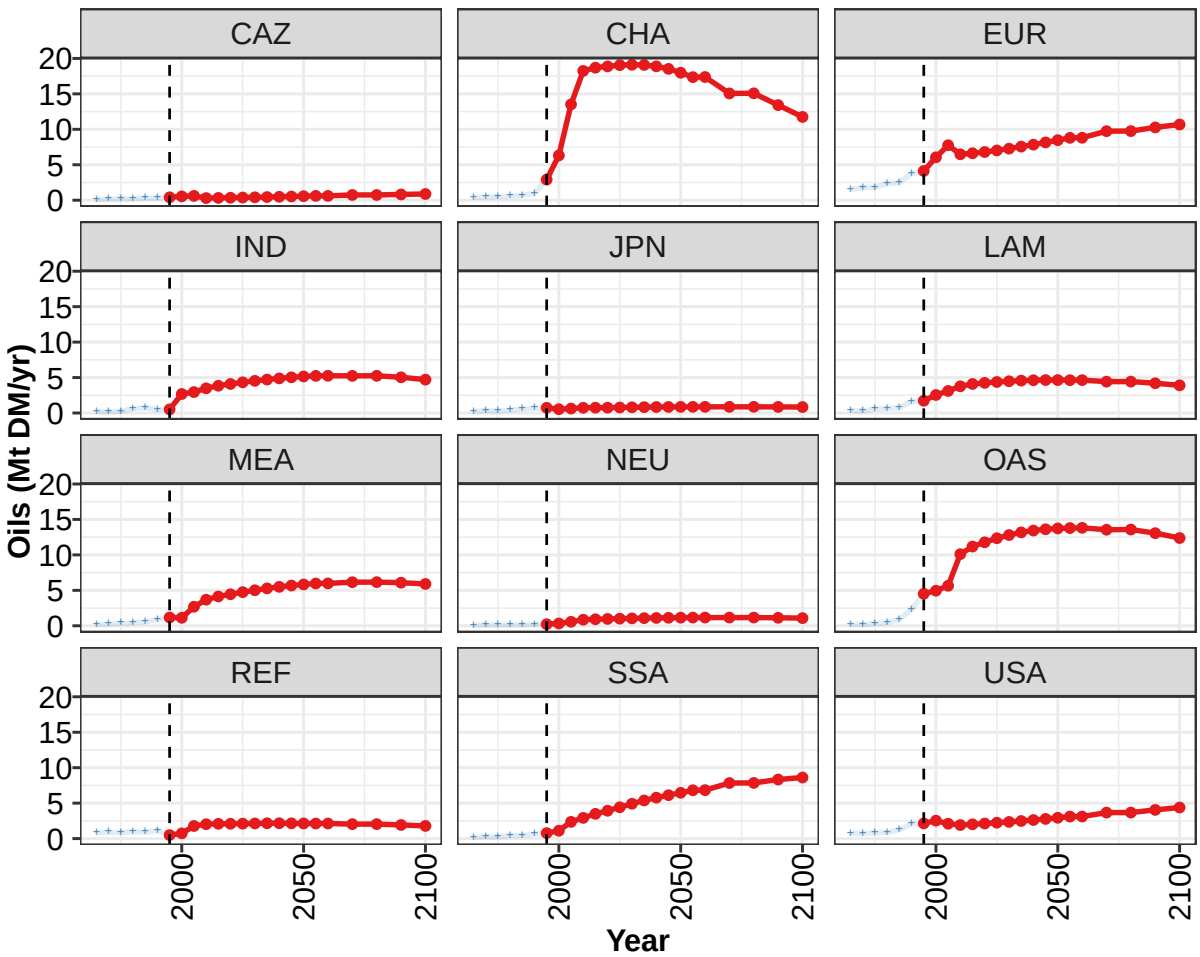
Table 558: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Oilcakes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.19	1.22	1.41	1.58	2.00	2.04	2.89	3.36	5.54	7.37
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	1.11	1.17	1.35	1.50	1.83	1.88	2.67	2.93	4.14	4.35
EUR	0.07	0.03	0.04	0.05	0.10	0.10	0.09	0.07	0.06	0.36
IND	0.00	0.01	0.02	0.02	0.04	0.04	0.03	0.02	0.01	0.01
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.02	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.01	0.01	0.09	0.31	1.30	2.60
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 559: FAO — Demand—Material—Secondary products—Oilcakes (Mt DM/yr)

8.6.7 Oils


GLO
Oils (Mt DM/yr)
60
40
20
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

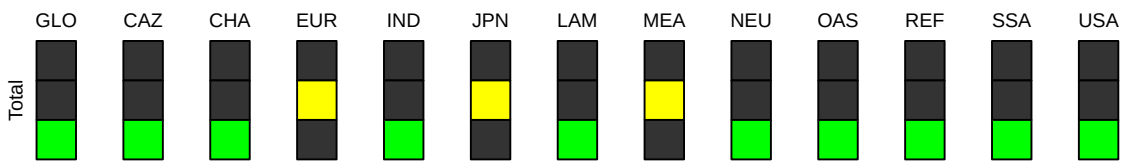


Figure 187: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	19.8	29.5	43.7	54.5	58.2	60.5	62.8	64.9	66.8	68.2	69.2
CAZ	0.4	0.5	0.6	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5
CHA	2.9	6.3	13.5	18.2	18.7	18.9	19.1	19.1	19.1	18.9	18.5
EUR	4.1	6.1	7.8	6.5	6.6	6.8	7.0	7.3	7.6	7.8	8.2
IND	0.5	2.7	3.0	3.5	3.8	4.1	4.3	4.5	4.7	4.9	5.0
JPN	0.7	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9
LAM	1.7	2.5	3.1	3.8	4.1	4.3	4.4	4.5	4.6	4.6	4.6
MEA	1.2	1.1	2.7	3.7	4.1	4.4	4.7	5.0	5.3	5.5	5.7
NEU	0.2	0.3	0.6	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1
OAS	4.5	5.0	5.6	10.1	11.2	11.8	12.3	12.8	13.2	13.4	13.6
REF	0.5	0.7	1.8	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2
SSA	0.8	1.1	2.4	2.9	3.5	3.9	4.4	4.9	5.4	5.8	6.1
USA	2.1	2.5	2.1	1.9	2.0	2.1	2.2	2.4	2.5	2.6	2.8

Table 560: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Oils (Mt DM/yr) [PART 1/2]

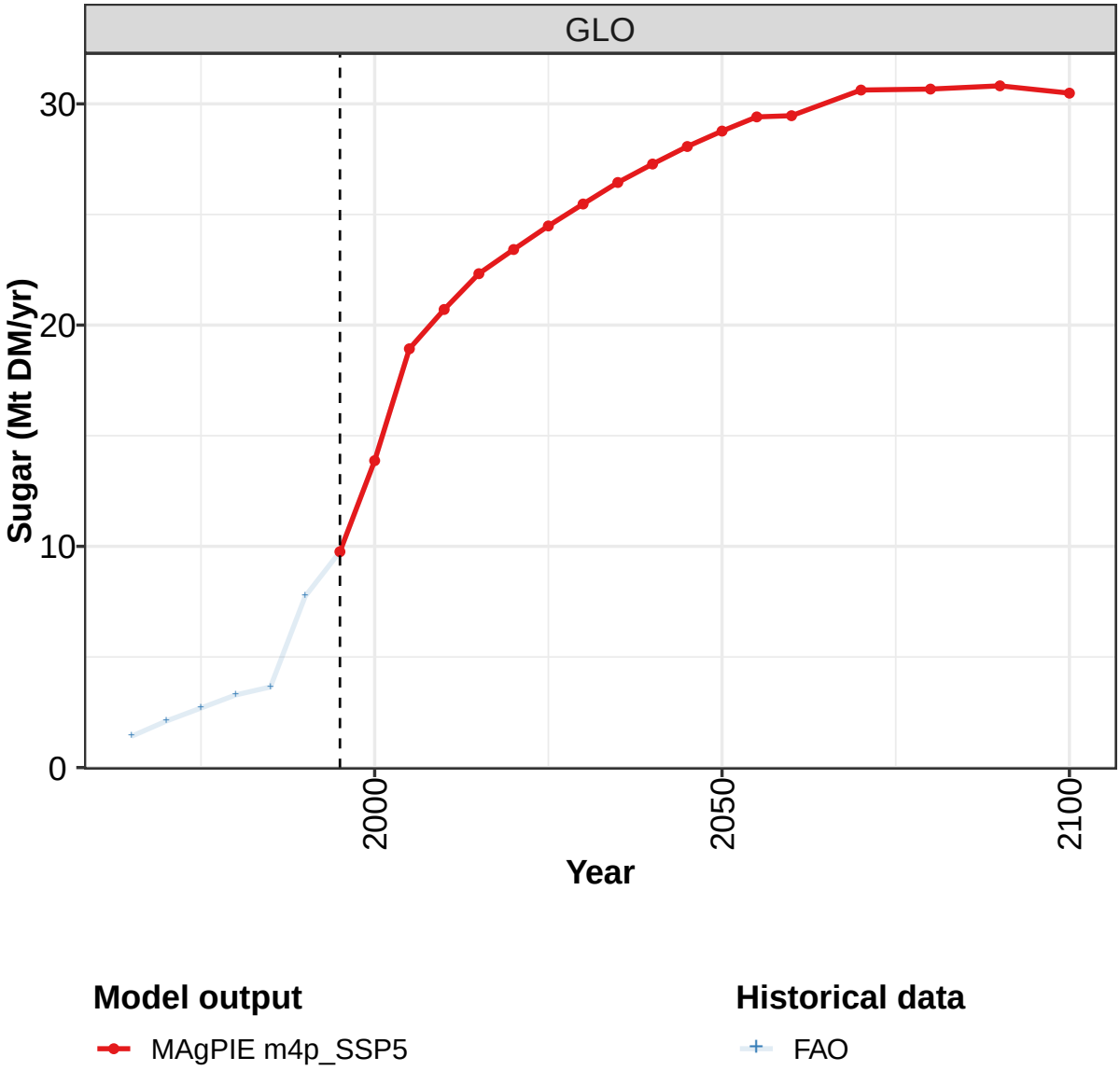
	2050	2055	2060	2070	2080	2090	2100
GLO	69.9	70.5	70.6	70.5	70.6	69.2	66.9
CAZ	0.6	0.6	0.6	0.7	0.7	0.8	0.9
CHA	18.0	17.4	17.4	15.1	15.1	13.4	11.8
EUR	8.5	8.8	8.8	9.7	9.8	10.3	10.7
IND	5.2	5.2	5.3	5.2	5.2	5.0	4.7
JPN	0.9	0.9	0.9	0.9	0.9	0.9	0.8
LAM	4.6	4.6	4.6	4.4	4.4	4.2	3.9
MEA	5.8	6.0	6.0	6.2	6.2	6.1	5.9
NEU	1.2	1.2	1.2	1.2	1.2	1.1	1.1
OAS	13.7	13.8	13.8	13.6	13.6	13.1	12.4
REF	2.1	2.1	2.1	2.0	2.0	1.9	1.8
SSA	6.5	6.8	6.8	7.8	7.9	8.3	8.6
USA	2.9	3.1	3.1	3.7	3.7	4.0	4.4

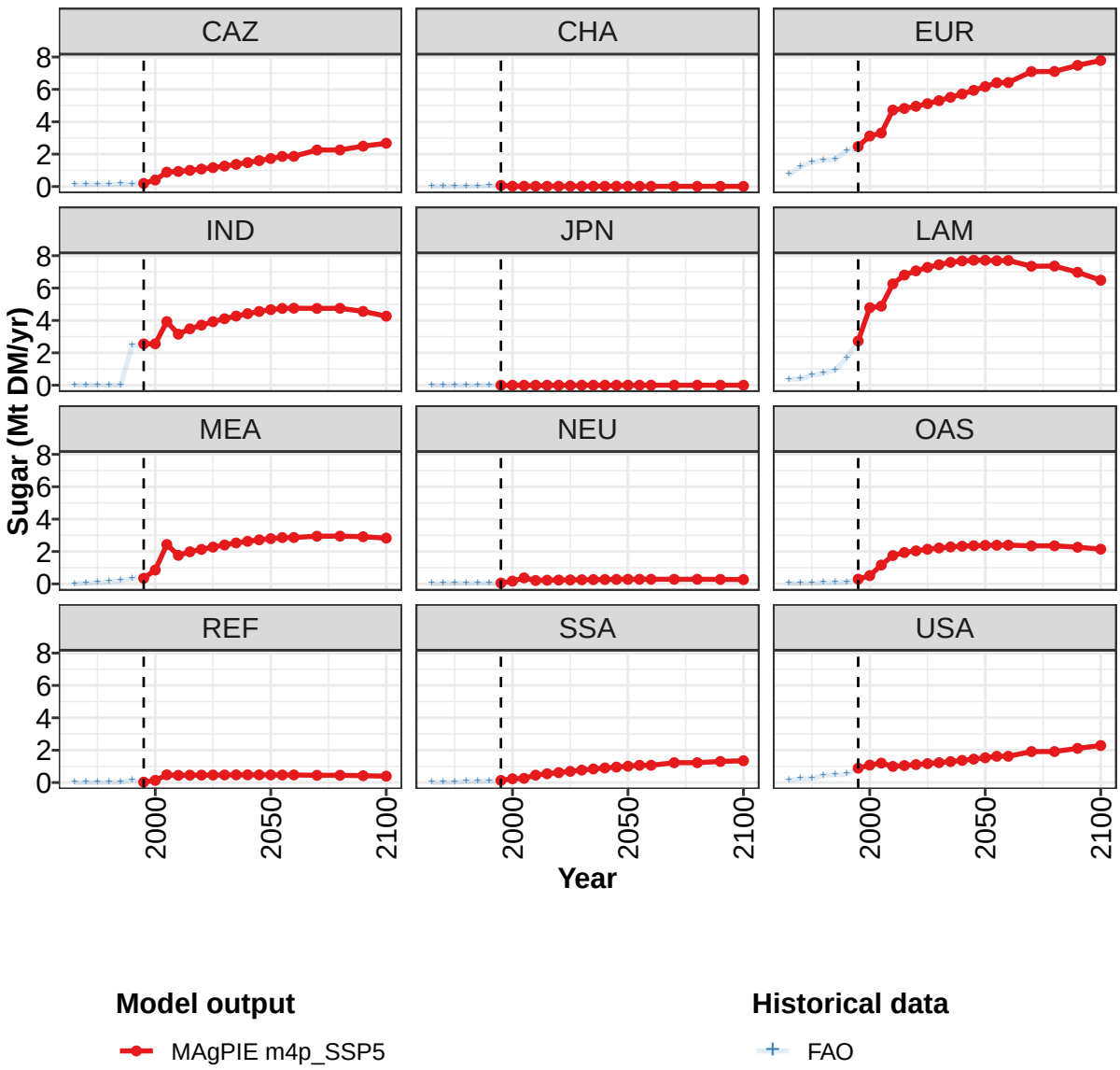
Table 561: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Oils (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.9	5.5	6.1	8.0	9.8	15.0	19.8	29.5	43.7	54.5
CAZ	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.3
CHA	0.4	0.4	0.5	0.6	0.7	1.0	2.9	6.3	13.5	18.2
EUR	1.5	1.8	1.8	2.3	2.5	3.7	4.1	6.1	7.8	6.5
IND	0.2	0.2	0.2	0.6	0.8	0.5	0.5	2.7	3.0	3.5
JPN	0.2	0.3	0.3	0.4	0.6	0.7	0.7	0.5	0.6	0.7
LAM	0.3	0.3	0.5	0.7	0.7	1.6	1.7	2.5	3.1	3.8
MEA	0.2	0.2	0.4	0.4	0.6	0.9	1.2	1.1	2.7	3.7
NEU	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.9
OAS	0.2	0.2	0.3	0.4	0.9	2.3	4.5	5.0	5.6	10.1
REF	0.8	0.9	0.8	1.0	0.9	1.2	0.5	0.7	1.8	2.0
SSA	0.2	0.3	0.2	0.4	0.4	0.6	0.8	1.1	2.4	2.9
USA	0.7	0.7	0.8	0.8	1.3	2.1	2.1	2.5	2.1	1.9

Table 562: FAO — Demand—Material—Secondary products—Oils (Mt DM/yr)

8.6.8 Sugar


GLO
Sugar (Mt DM/yr)
30
20
10
0
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



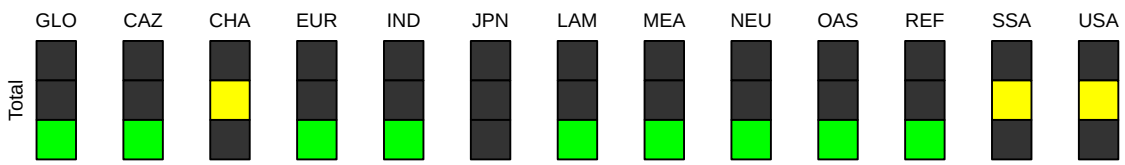


Figure 188: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.8	13.9	18.9	20.7	22.3	23.4	24.5	25.5	26.4	27.3	28.1
CAZ	0.2	0.4	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6
CHA	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	2.5	3.1	3.3	4.7	4.8	5.0	5.1	5.3	5.5	5.7	5.9
IND	2.6	2.6	3.9	3.2	3.5	3.7	3.9	4.1	4.3	4.4	4.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.7	4.8	4.9	6.3	6.8	7.1	7.3	7.4	7.6	7.7	7.7
MEA	0.3	0.9	2.4	1.8	2.0	2.1	2.3	2.4	2.5	2.6	2.7
NEU	0.1	0.2	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
OAS	0.3	0.5	1.2	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.4
REF	0.0	0.1	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
SSA	0.1	0.2	0.3	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0
USA	0.9	1.1	1.2	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.4

Table 563: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

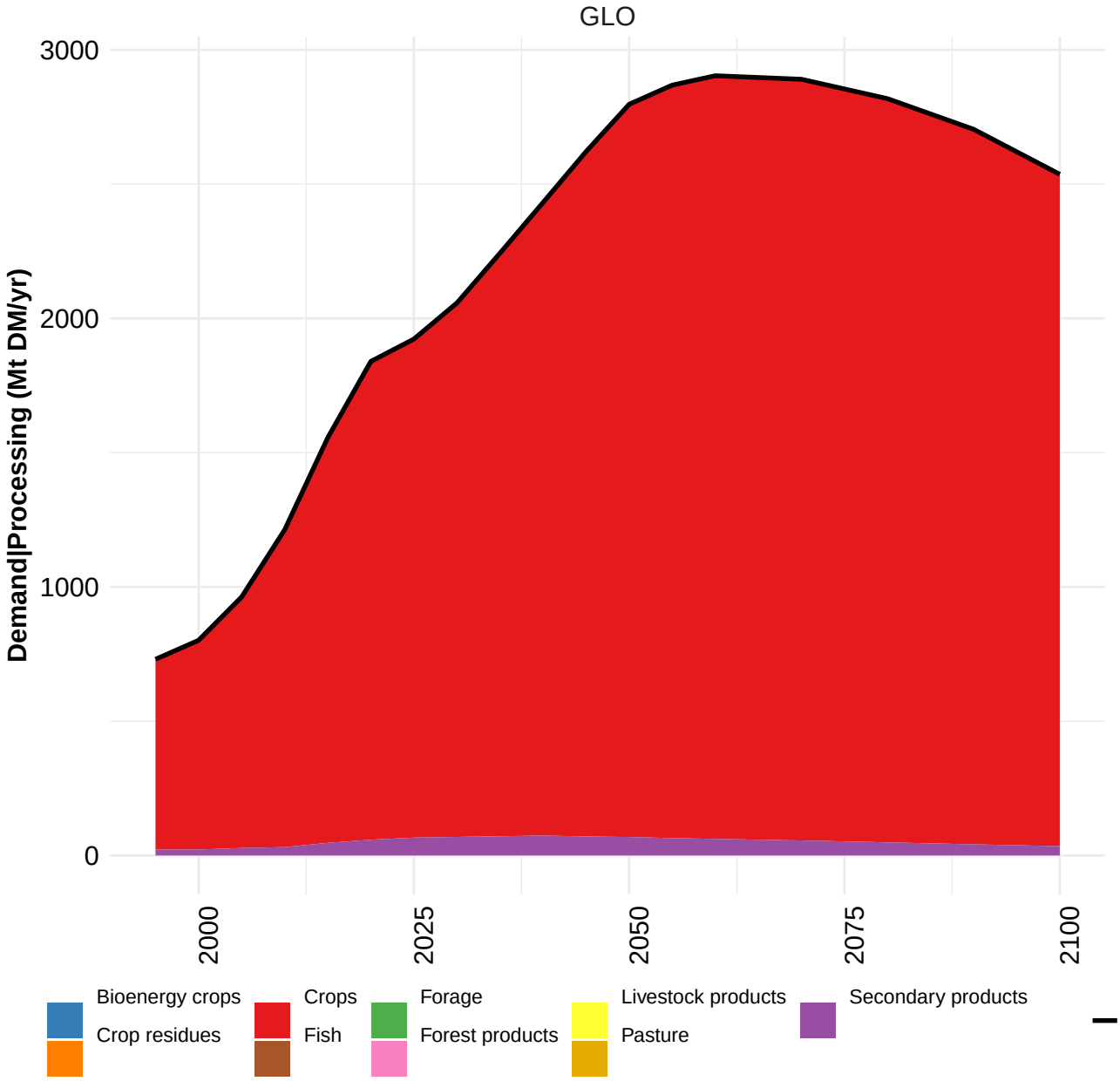
	2050	2055	2060	2070	2080	2090	2100
GLO	28.8	29.4	29.5	30.6	30.7	30.8	30.5
CAZ	1.7	1.9	1.9	2.3	2.3	2.5	2.7
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	6.2	6.4	6.4	7.1	7.1	7.5	7.8
IND	4.7	4.7	4.8	4.7	4.8	4.6	4.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	7.7	7.7	7.7	7.3	7.4	7.0	6.5
MEA	2.8	2.9	2.9	2.9	2.9	2.9	2.8
NEU	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OAS	2.4	2.4	2.4	2.3	2.4	2.3	2.1
REF	0.5	0.5	0.5	0.4	0.4	0.4	0.4
SSA	1.0	1.1	1.1	1.2	1.2	1.3	1.3
USA	1.5	1.6	1.6	1.9	1.9	2.1	2.3

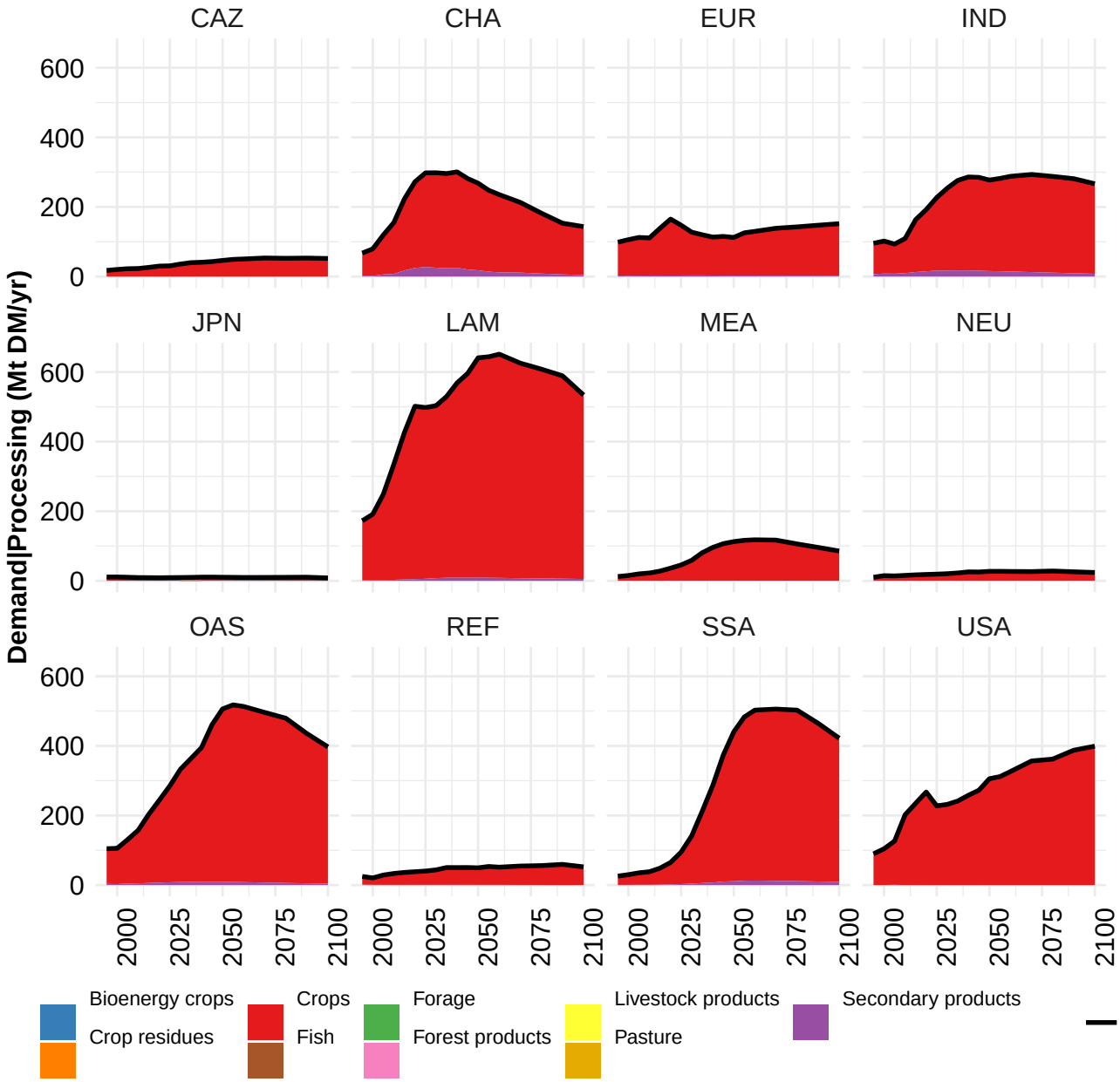
Table 564: MAgPIE m4p_SSP5 — Demand—Material—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

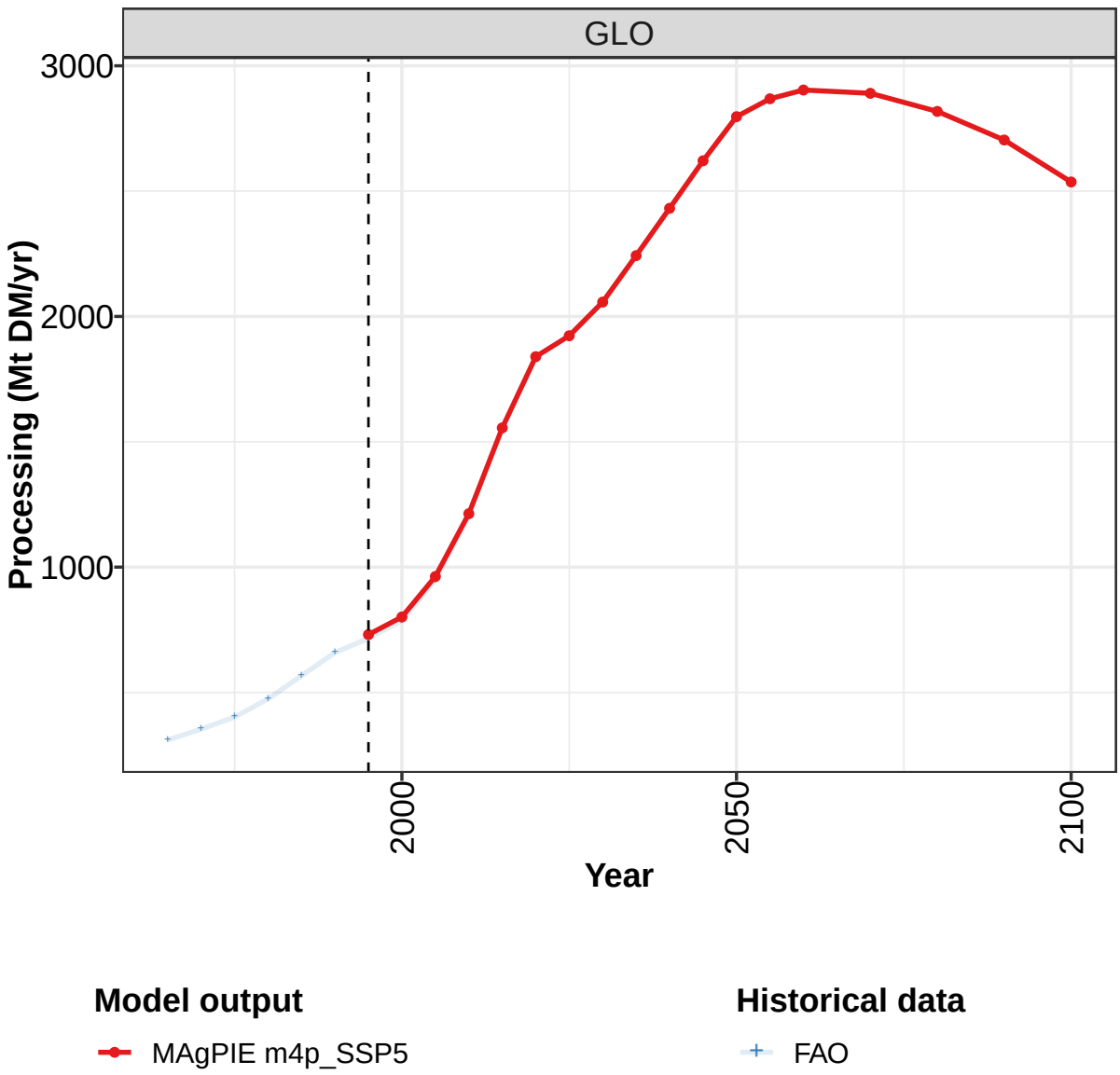
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.4	2.1	2.7	3.3	3.6	7.7	9.8	13.9	18.9	20.7
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.9	0.9
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
EUR	0.7	1.2	1.5	1.6	1.7	2.2	2.5	3.1	3.3	4.7
IND	0.0	0.0	0.0	0.0	0.0	2.5	2.6	2.6	3.9	3.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.4	0.4	0.6	0.8	0.9	1.7	2.7	4.8	4.9	6.3
MEA	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.9	2.4	1.8
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.2
OAS	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.5	1.2	1.8
REF	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.5	0.4
SSA	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.5
USA	0.1	0.2	0.2	0.4	0.5	0.5	0.9	1.1	1.2	1.0

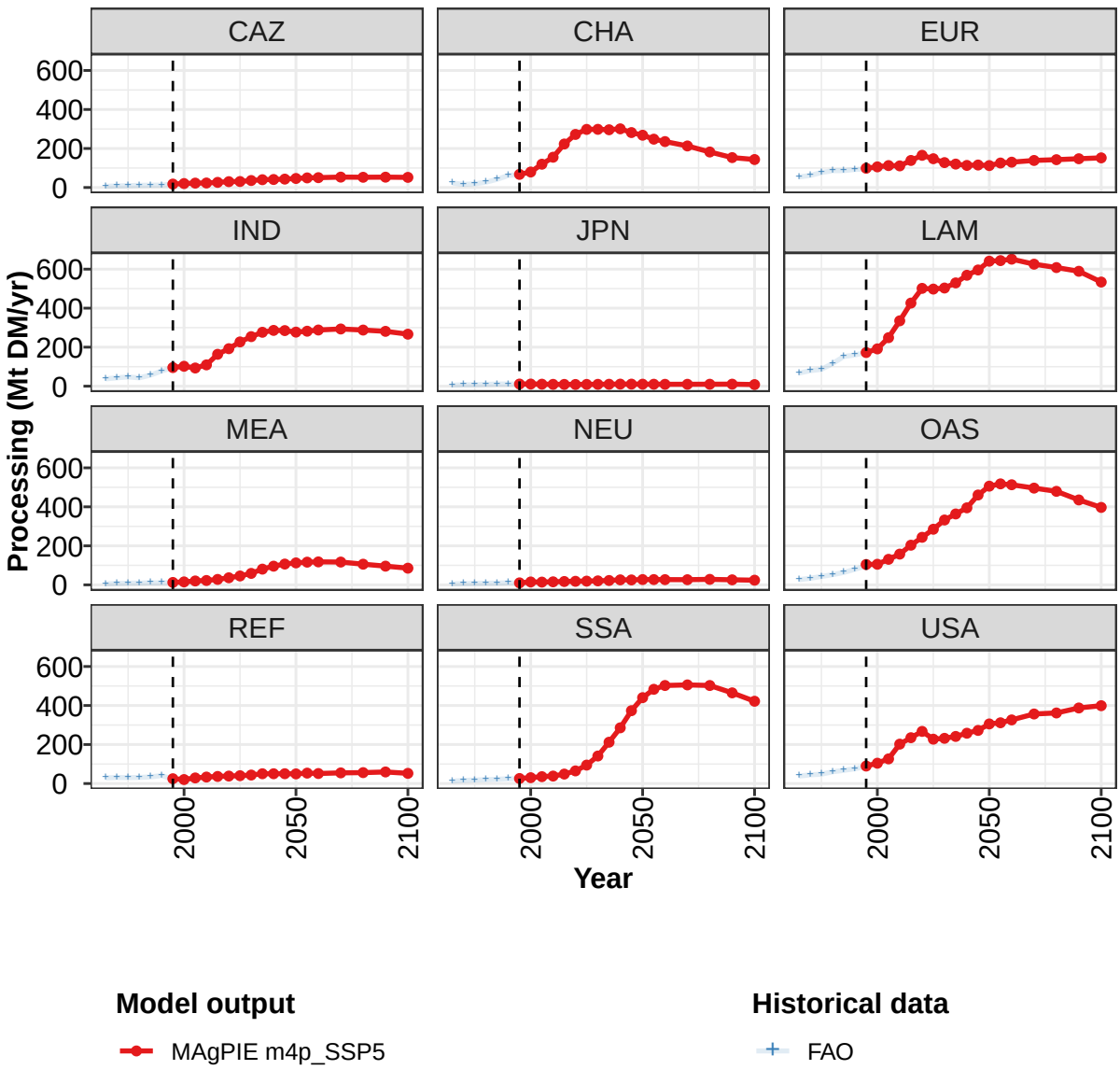
Table 565: FAO — Demand—Material—Secondary products—Sugar (Mt DM/yr)

9 Processing




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Processing (Mt DM/yr)
0
200
400
600
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
3000
2000
1000
Processing (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



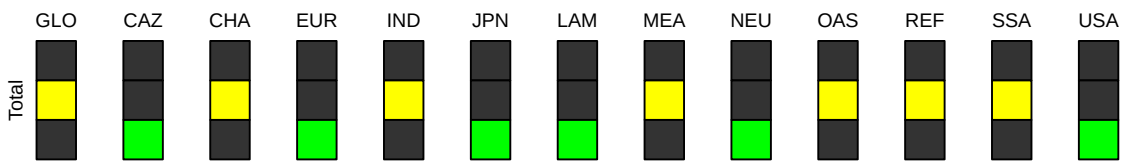


Figure 189: MAgPIE m4p_SSP5 — Demand—Processing (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	731	801	963	1213	1556	1840	1923	2057	2243	2431	2621
CAZ	18	20	23	23	26	30	31	36	40	41	43
CHA	67	79	120	155	223	272	298	298	296	301	282
EUR	99	106	112	111	139	165	148	128	120	113	115
IND	95	102	93	109	164	192	227	254	276	286	285
JPN	11	11	10	9	9	9	9	10	10	11	11
LAM	173	191	249	335	426	502	498	503	530	569	596
MEA	12	15	20	23	28	36	46	59	81	96	107
NEU	10	15	14	16	17	18	19	21	23	26	25
OAS	105	106	131	158	203	244	285	333	364	395	461
REF	25	21	29	33	36	38	40	44	50	50	50
SSA	26	30	35	38	49	65	95	141	212	286	374
USA	90	104	127	202	235	267	228	232	242	258	272

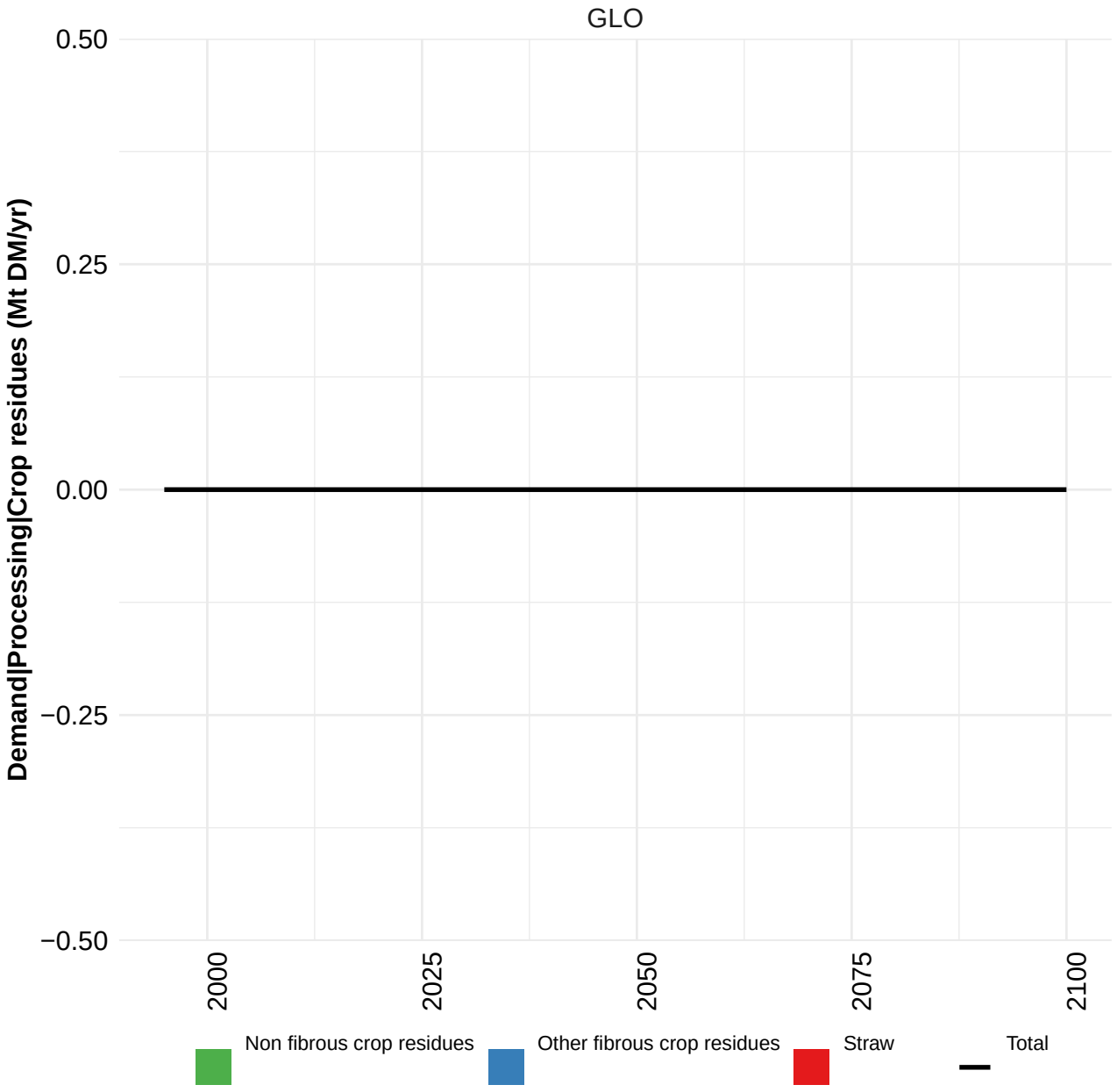
Table 566: MAgPIE m4p_SSP5 — Demand—Processing (Mt DM/yr) [PART 1/2]

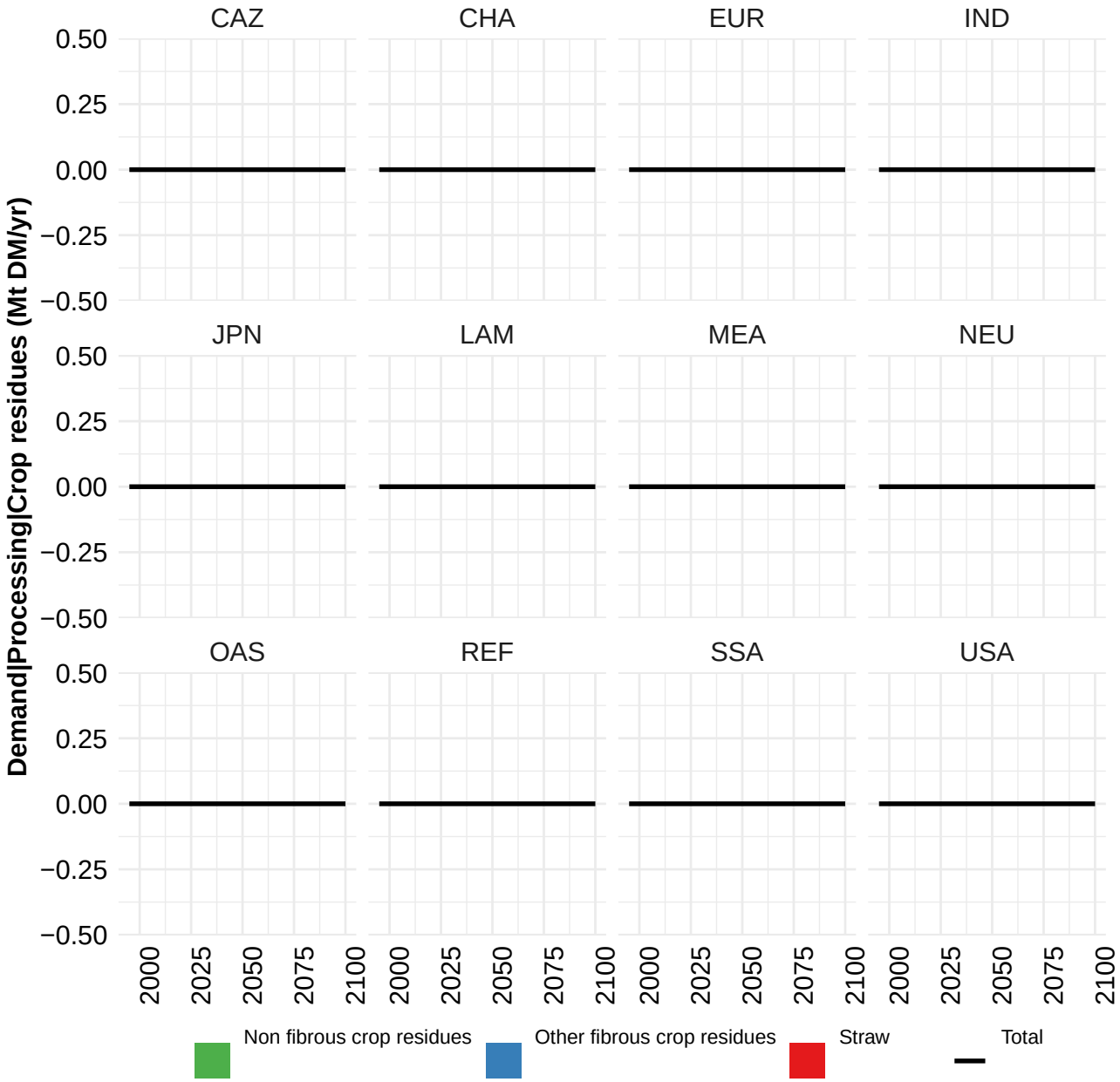
	2050	2055	2060	2070	2080	2090	2100
GLO	2797	2868	2903	2890	2818	2704	2536
CAZ	46	49	51	53	52	53	52
CHA	268	248	235	213	182	153	143
EUR	112	126	130	139	143	147	152
IND	277	282	288	293	288	281	267
JPN	10	10	10	10	10	10	8
LAM	641	644	651	625	608	589	534
MEA	113	116	118	117	106	96	86
NEU	27	27	27	26	28	26	24
OAS	506	518	513	496	480	435	397
REF	50	53	51	55	56	59	52
SSA	440	483	503	506	503	465	422
USA	306	312	326	357	362	387	399

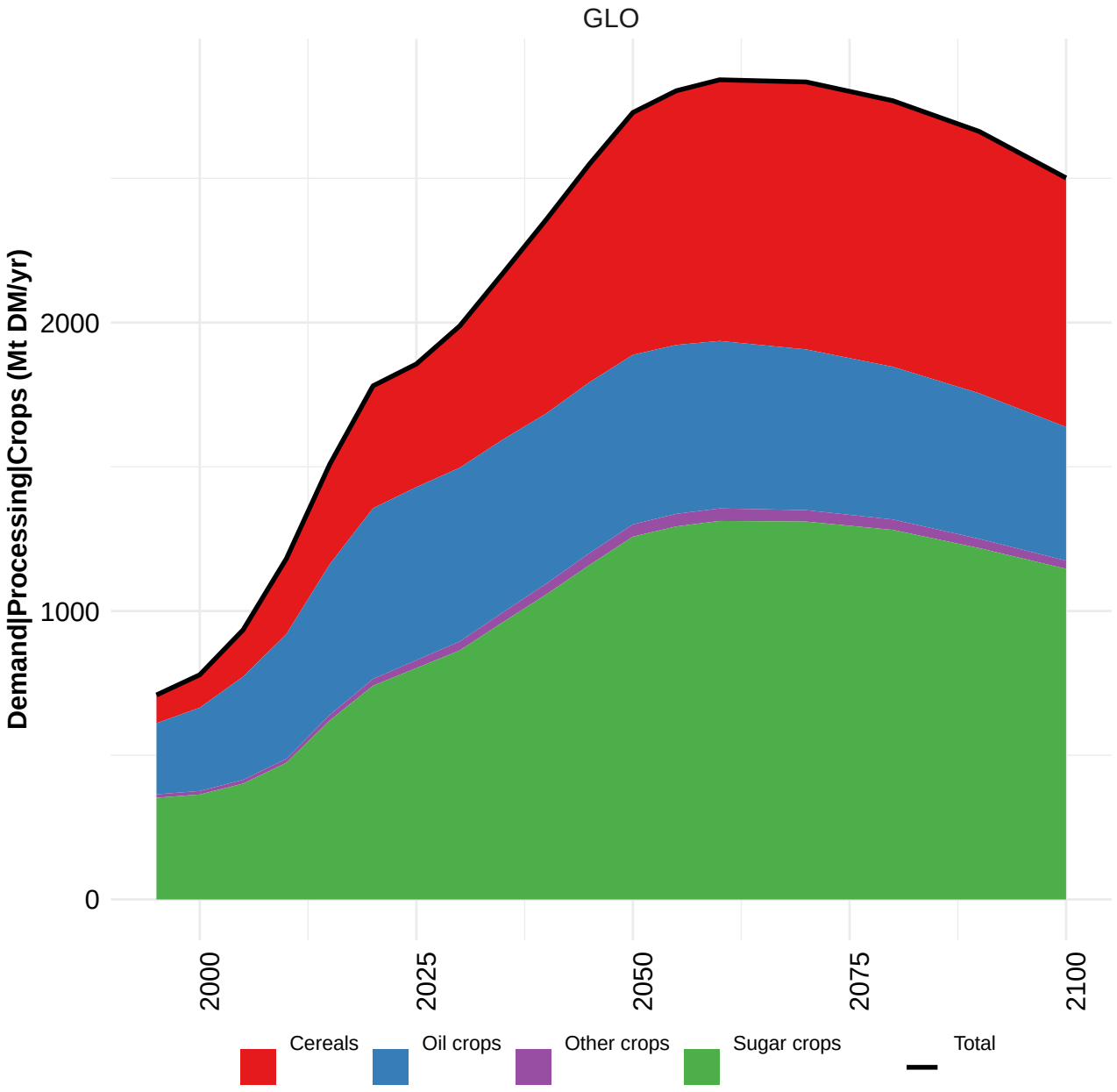
Table 567: MAgPIE m4p_SSP5 — Demand—Processing (Mt DM/yr) [PART 2/2]

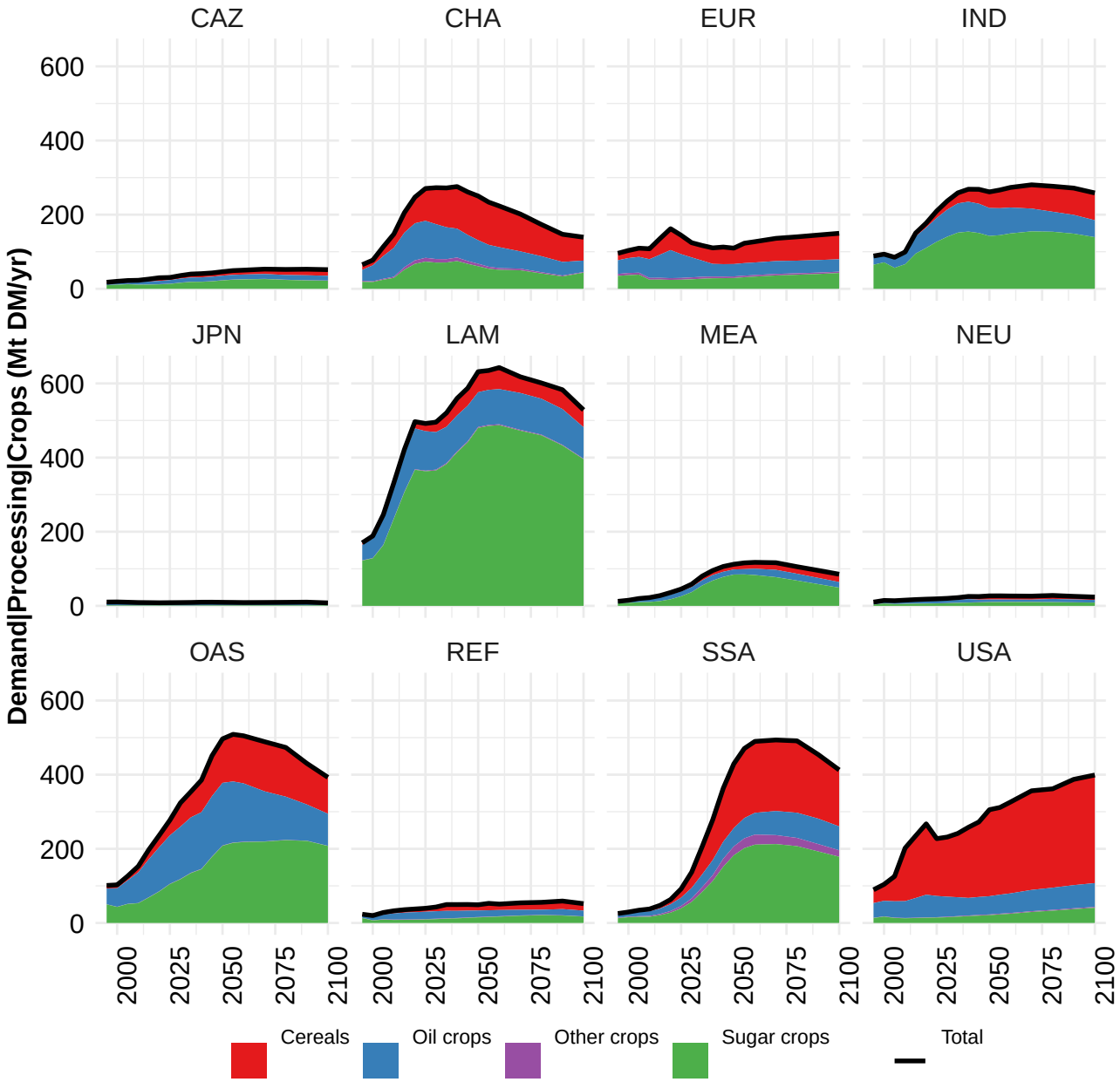
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	310	354	402	474	567	659	716	786	948	1201
CAZ	6	8	10	11	12	12	17	20	20	21
CHA	23	16	19	27	42	62	67	79	119	156
EUR	54	62	77	86	87	93	95	99	103	108
IND	38	43	47	43	57	78	96	102	93	109
JPN	5	7	7	9	11	11	11	11	10	9
LAM	67	80	86	116	152	160	173	186	253	331
MEA	5	7	9	9	11	11	12	15	19	22
NEU	5	6	7	8	9	11	9	13	13	16
OAS	27	34	43	52	64	80	98	105	126	156
REF	29	31	30	31	34	41	22	19	28	33
SSA	12	16	18	20	22	25	25	30	35	38
USA	38	45	48	60	68	76	89	107	129	204

Table 568: FAO — Demand—Processing (Mt DM/yr)

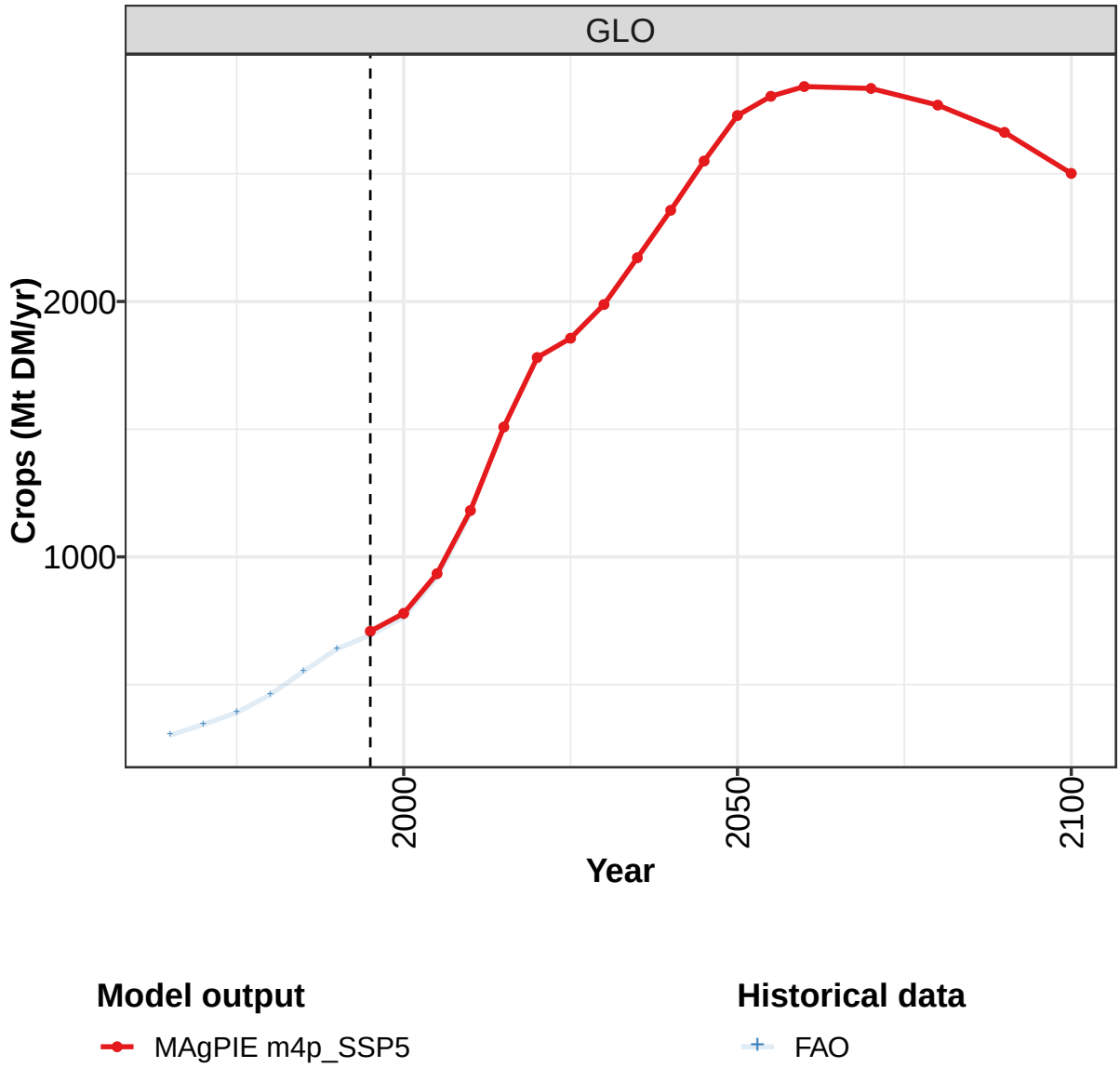

GLO
Demand|Processing|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

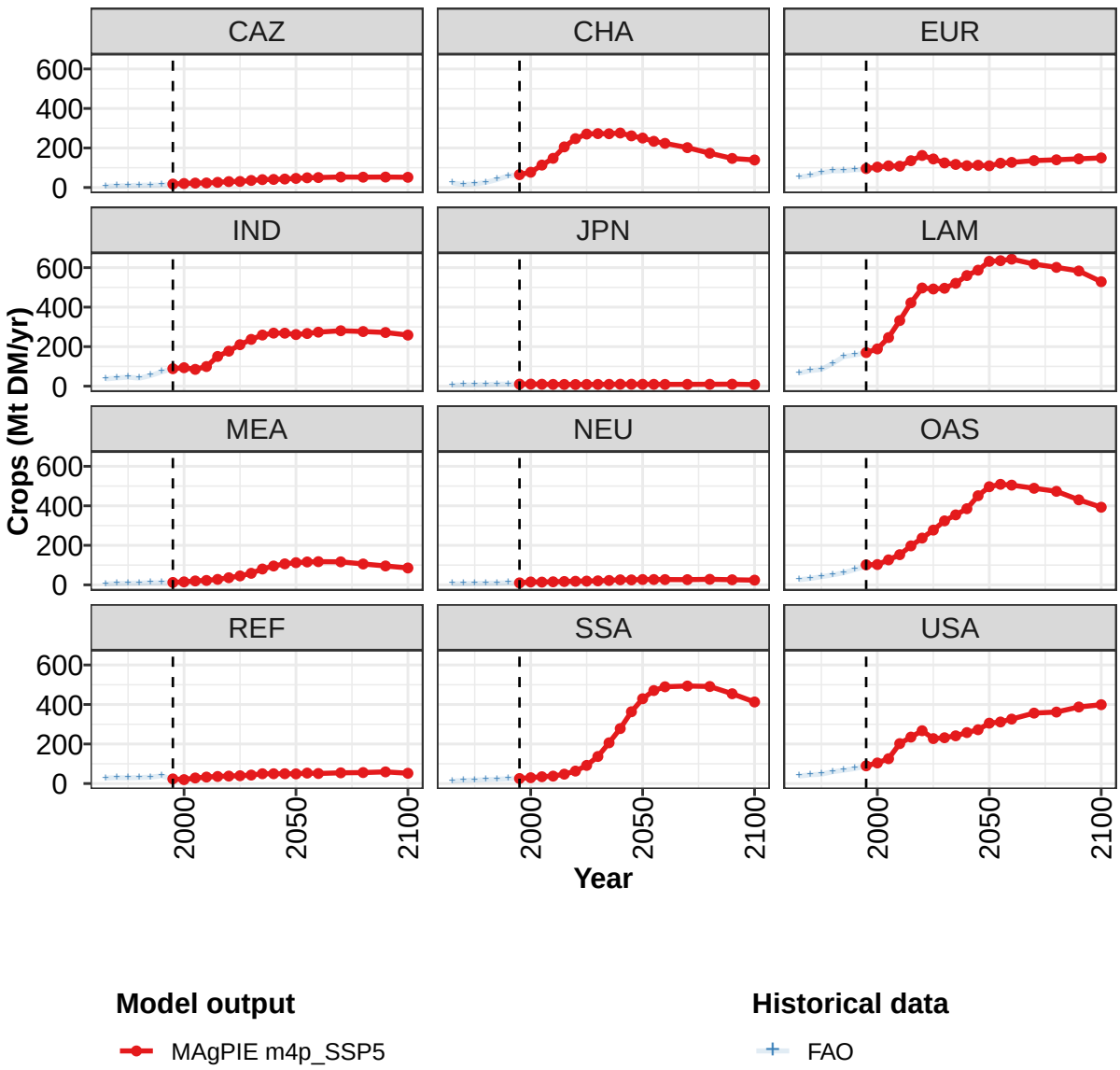

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Processing|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


GLO
Demand|Processing|Crops (Mt DM/yr)
2000
1000
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Processing|Crops (Mt DM/yr)
0
200
400
600
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

9.1 Crops


GLO
Crops (Mt DM/yr)
2000
1000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



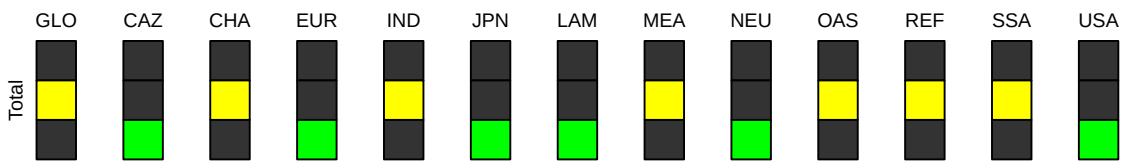


Figure 190: MAgPIE m4p_SSP5 — Demand—Processing—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	709	779	935	1182	1509	1781	1856	1988	2171	2357	2550
CAZ	18	20	22	23	26	30	31	36	40	41	43
CHA	65	77	113	148	205	247	271	273	272	276	261
EUR	96	103	110	108	136	162	144	124	117	110	113
IND	88	93	85	99	150	177	210	237	259	269	268
JPN	10	11	10	9	9	8	9	9	9	10	10
LAM	170	189	246	332	422	497	492	496	521	560	587
MEA	12	15	20	22	28	36	45	58	80	95	106
NEU	10	15	14	15	17	18	19	20	22	25	25
OAS	101	103	126	153	197	237	277	324	354	385	451
REF	23	20	28	33	36	38	40	43	50	50	50
SSA	25	29	34	38	47	63	92	137	206	278	363
USA	90	104	126	202	235	267	227	232	241	258	272

Table 569: MAgPIE m4p_SSP5 — Demand—Processing—Crops (Mt DM/yr) [PART 1/2]

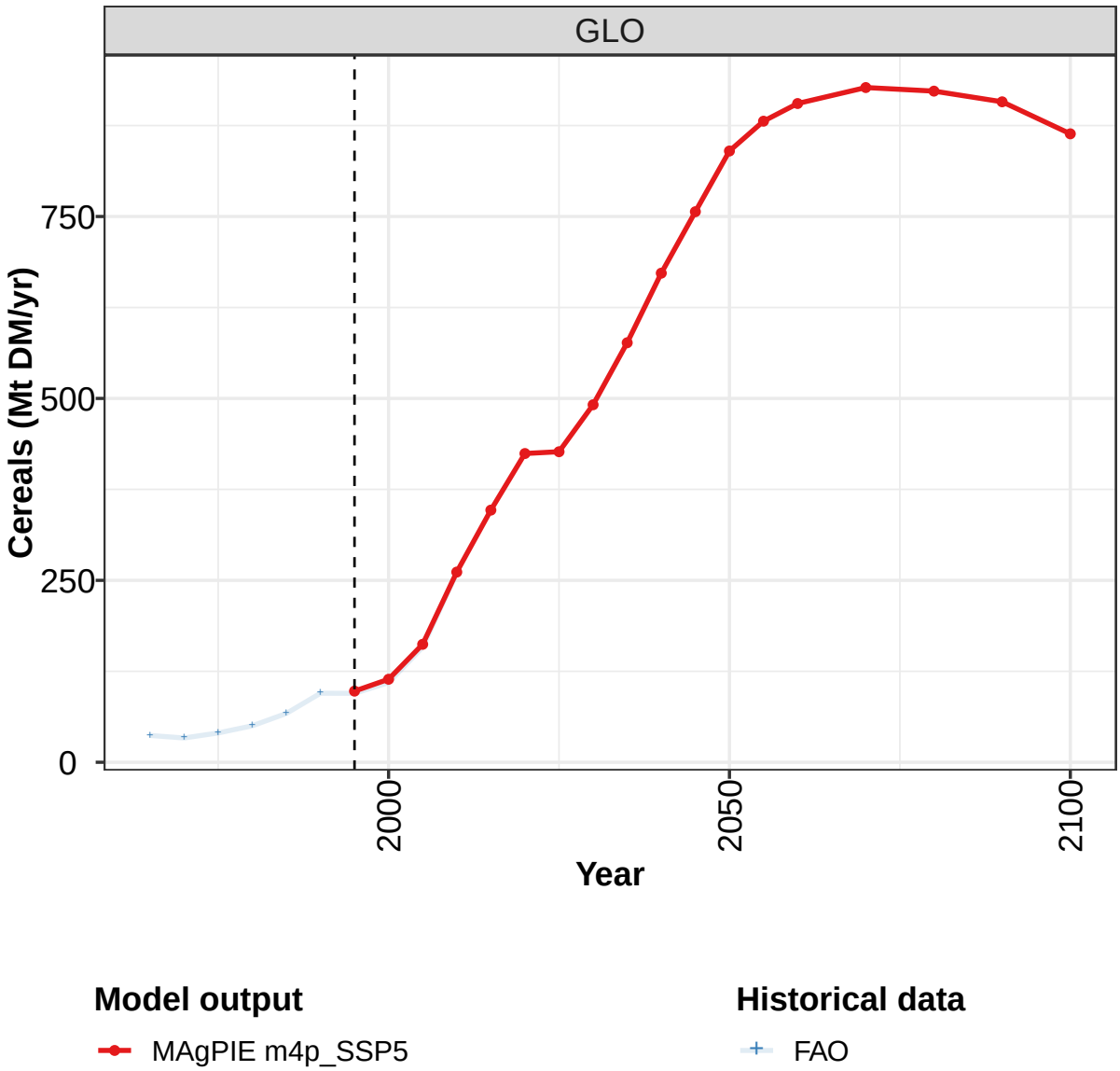
	2050	2055	2060	2070	2080	2090	2100
GLO	2728	2804	2842	2834	2769	2662	2502
CAZ	46	49	50	53	52	53	52
CHA	250	234	223	202	174	147	139
EUR	110	123	127	136	140	145	150
IND	261	267	273	280	277	272	259
JPN	10	9	9	9	10	10	8
LAM	632	635	643	618	601	583	529
MEA	112	116	117	116	106	96	85
NEU	27	27	27	26	28	26	24
OAS	497	509	505	489	473	430	393
REF	49	53	51	54	56	59	52
SSA	429	471	490	494	491	455	413
USA	305	312	326	356	362	387	399

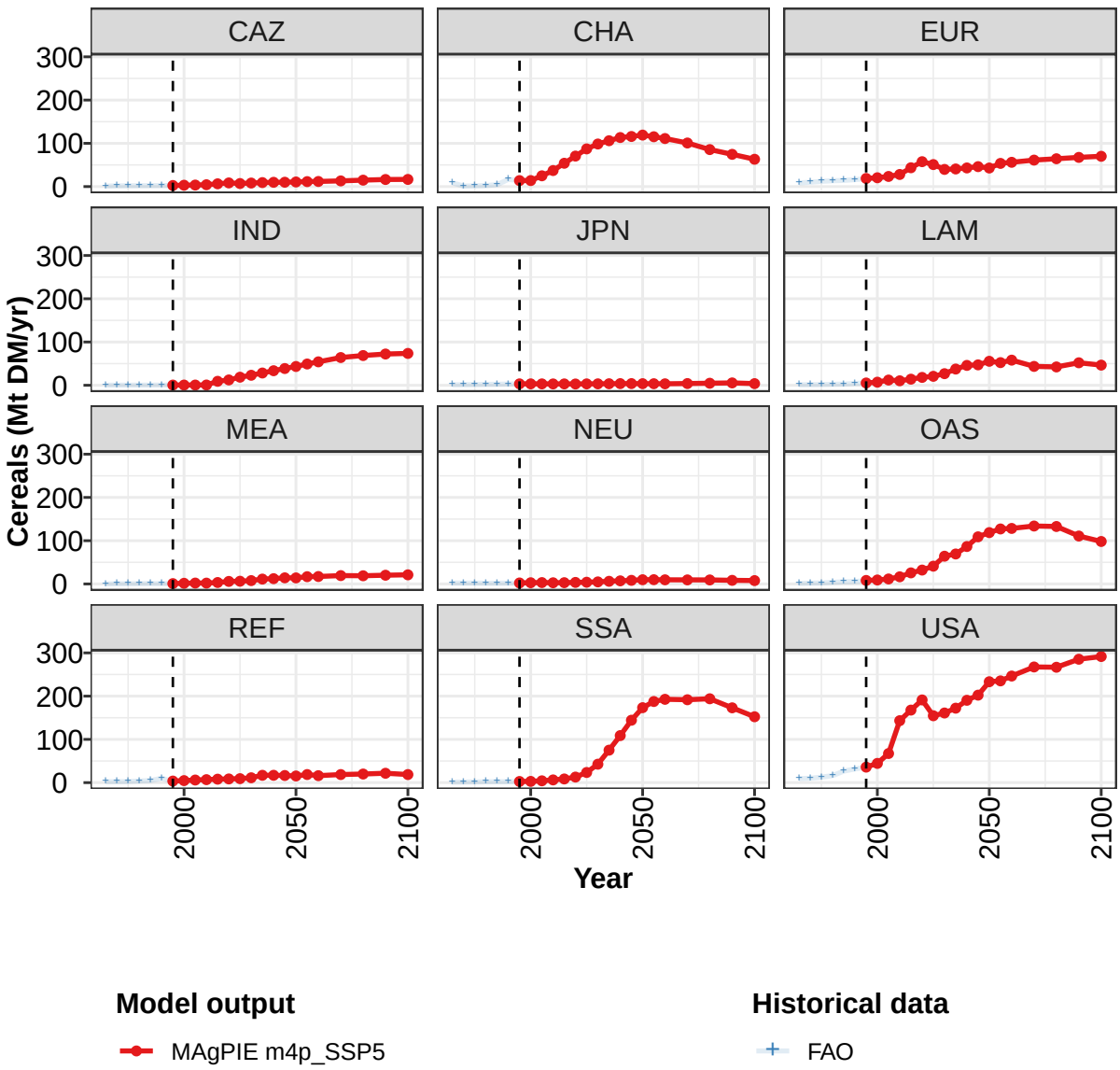
Table 570: MAgPIE m4p_SSP5 — Demand—Processing—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	302	344	390	460	552	640	694	764	920	1170
CAZ	6	8	9	11	12	12	17	19	20	21
CHA	23	15	18	26	40	59	65	77	113	148
EUR	52	60	75	84	84	90	92	97	100	105
IND	37	42	46	41	53	72	89	93	85	99
JPN	5	6	6	8	10	10	10	11	10	9
LAM	66	79	85	114	150	158	170	184	250	328
MEA	5	7	9	9	10	11	12	14	19	22
NEU	5	6	7	8	9	11	9	13	13	15
OAS	25	32	41	50	62	78	95	102	121	151
REF	28	30	29	30	32	39	21	19	27	32
SSA	12	16	18	19	21	24	25	29	34	37
USA	38	44	47	60	68	76	89	106	128	204

Table 571: FAO — Demand—Processing—Crops (Mt DM/yr)

9.1.1 Cereals


GLO
Cereals (Mt DM/yr)
0
250
500
750
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



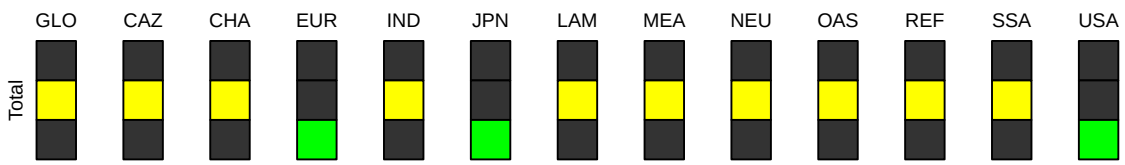


Figure 191: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	98	114	162	261	347	424	427	491	577	672	757
CAZ	3	3	4	4	6	9	7	8	9	10	10
CHA	14	14	25	37	54	71	87	98	106	113	116
EUR	19	20	23	28	44	58	51	40	41	43	46
IND	0	1	1	1	9	12	19	23	28	34	39
JPN	3	3	3	3	3	3	3	3	4	4	4
LAM	5	7	12	10	14	18	21	27	38	46	47
MEA	1	2	2	2	3	6	6	8	11	12	14
NEU	2	3	3	3	3	4	4	5	6	7	8
OAS	8	9	12	17	26	32	41	64	69	87	109
REF	4	5	6	7	8	9	9	11	17	17	16
SSA	3	3	4	6	8	13	24	43	75	109	144
USA	36	44	67	143	168	191	155	161	172	190	202

Table 572: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals (Mt DM/yr) [PART 1/2]

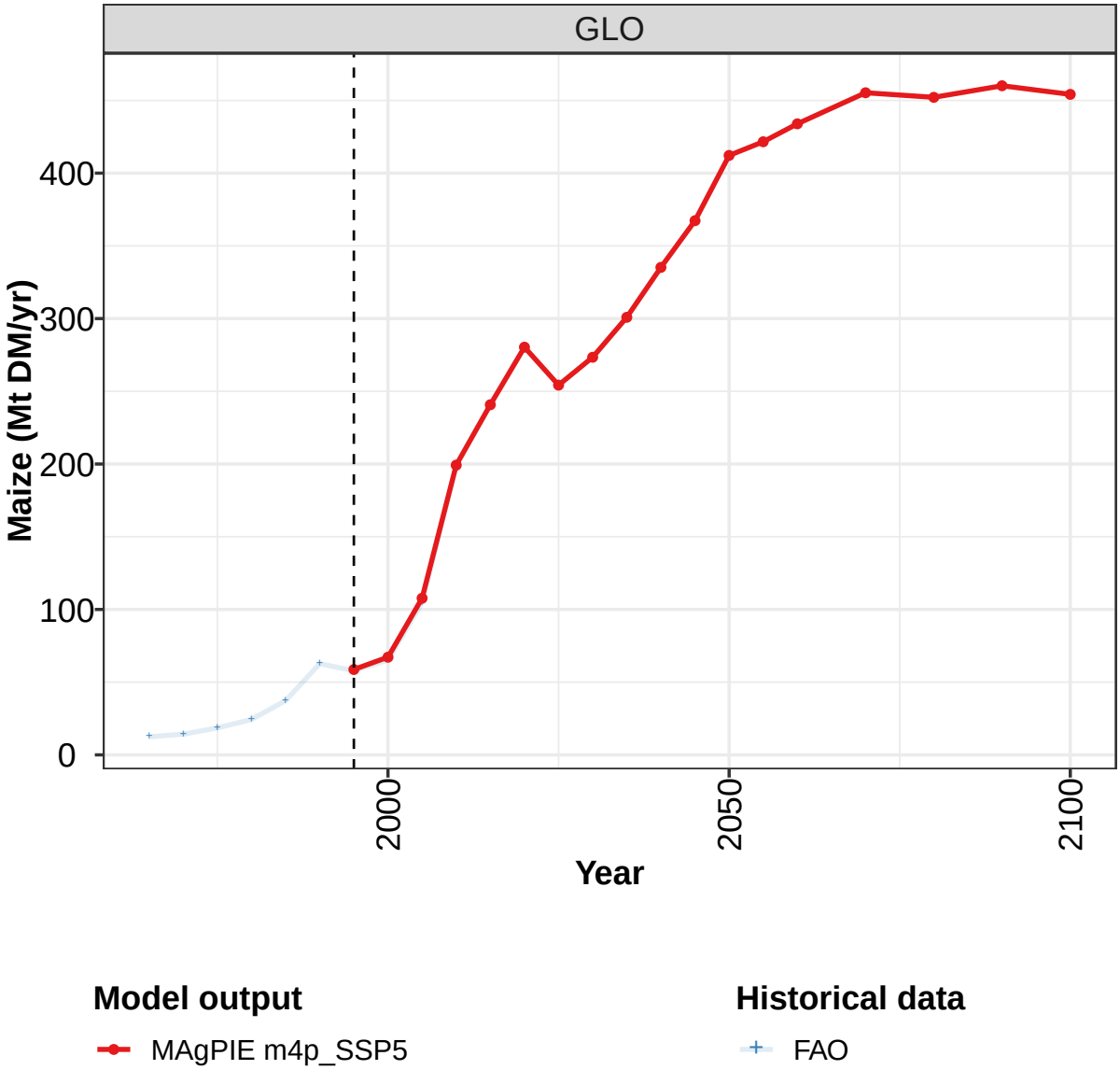
	2050	2055	2060	2070	2080	2090	2100
GLO	840	881	905	927	922	908	864
CAZ	11	12	12	13	15	16	17
CHA	119	115	111	101	86	75	63
EUR	43	54	56	61	64	68	70
IND	43	49	54	64	69	72	74
JPN	4	4	3	4	5	5	4
LAM	55	52	58	44	42	52	47
MEA	14	17	17	19	19	20	21
NEU	10	10	10	9	9	8	8
OAS	119	127	128	134	133	111	98
REF	15	19	16	19	20	22	19
SSA	173	188	193	192	194	173	152
USA	233	235	246	267	267	285	292

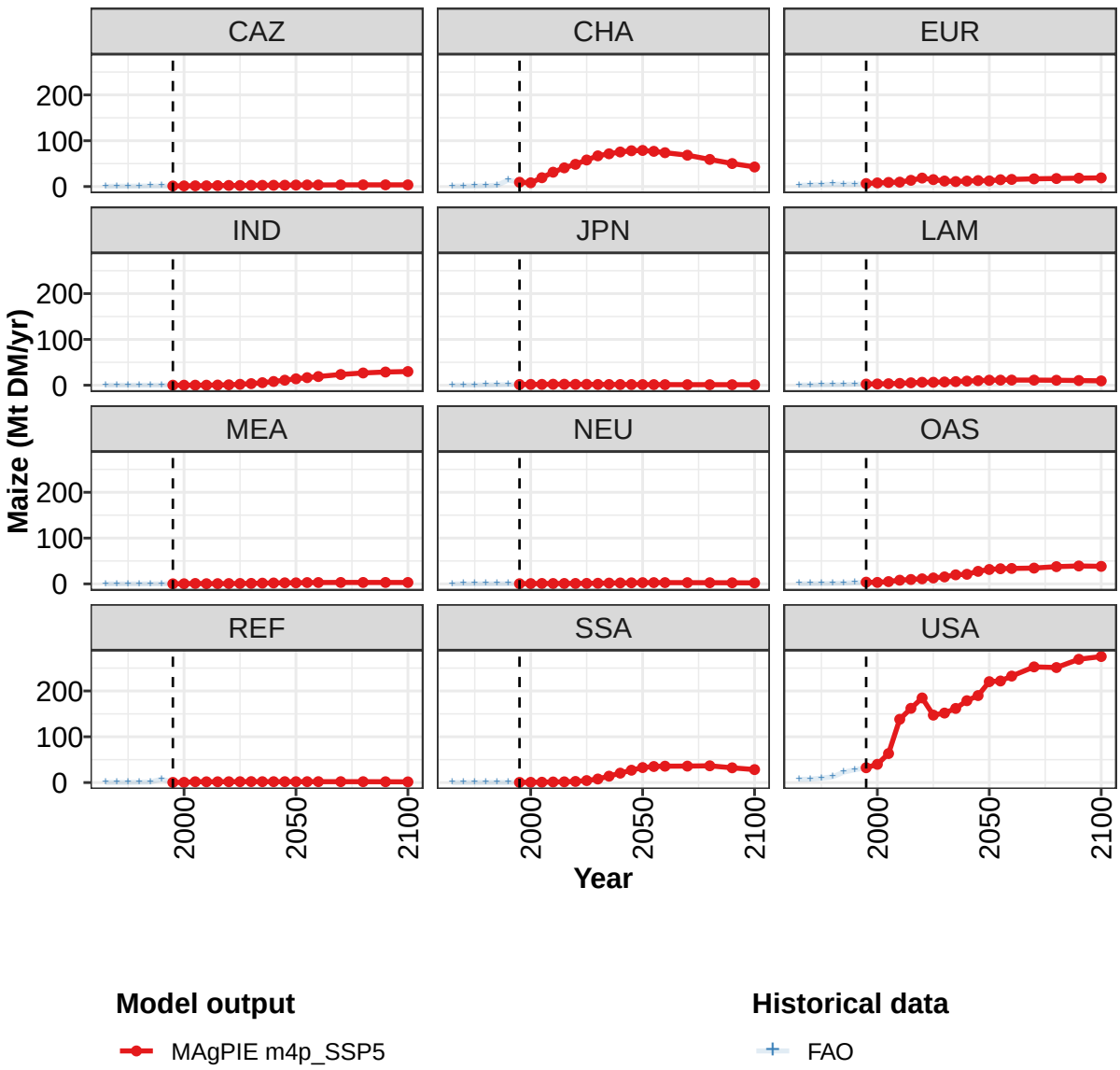
Table 573: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	37	33	40	50	67	95	95	109	158	260
CAZ	1	2	2	2	2	2	3	3	3	4
CHA	9	1	2	2	4	17	14	14	25	37
EUR	8	10	12	13	14	16	18	18	21	26
IND	0	0	0	0	0	0	0	1	1	1
JPN	1	1	1	2	2	3	3	3	3	3
LAM	1	1	2	2	3	4	5	7	12	11
MEA	0	0	0	1	1	1	1	1	2	2
NEU	2	2	2	1	2	2	2	2	3	3
OAS	1	2	2	4	5	6	7	8	11	16
REF	2	2	2	4	5	10	2	4	6	7
SSA	1	1	2	2	2	2	3	3	4	6
USA	9	10	13	16	27	32	36	44	67	144

Table 574: FAO — Demand—Processing—Crops—Cereals (Mt DM/yr)

9.1.2 Cereals—Maize





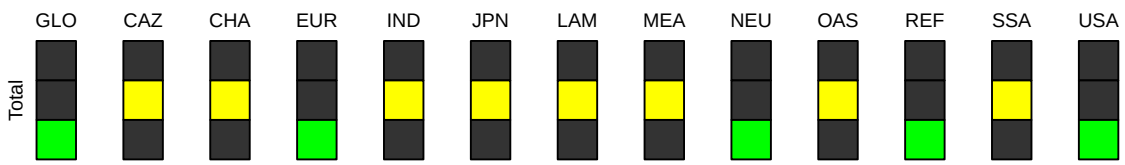


Figure 192: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	59	67	108	199	241	280	254	273	301	335	367
CAZ	1	1	2	2	2	2	2	3	3	3	3
CHA	9	8	19	31	41	48	58	67	72	75	78
EUR	7	8	9	10	14	19	15	12	11	12	13
IND	0	0	0	0	0	1	2	3	6	8	11
JPN	2	2	2	2	2	2	2	2	2	2	1
LAM	2	3	3	4	5	6	6	7	8	9	10
MEA	0	0	1	0	1	1	1	1	2	2	2
NEU	0	1	1	1	1	1	1	1	2	2	2
OAS	4	3	5	8	10	11	13	15	20	21	27
REF	0	0	2	2	2	2	2	2	2	2	2
SSA	0	1	1	1	2	2	4	8	14	21	27
USA	32	40	63	138	162	185	147	152	162	179	190

Table 575: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

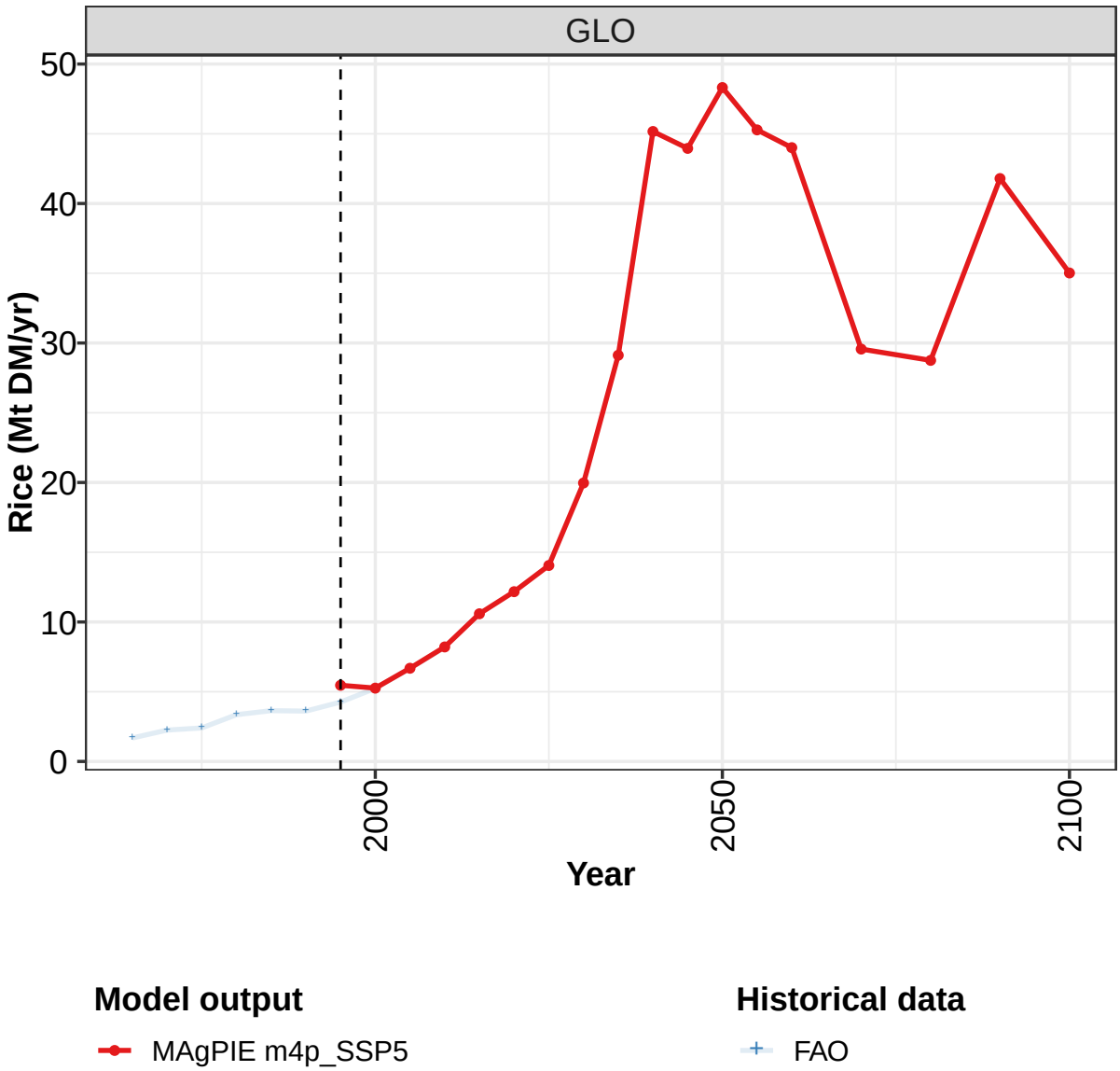
	2050	2055	2060	2070	2080	2090	2100
GLO	412	422	434	455	452	460	454
CAZ	3	3	3	4	4	4	4
CHA	79	77	74	68	59	50	43
EUR	12	15	16	17	18	18	19
IND	14	17	19	23	27	29	30
JPN	1	1	1	1	1	1	1
LAM	11	11	11	11	11	10	9
MEA	2	3	3	3	3	3	3
NEU	3	3	3	3	3	2	2
OAS	31	33	34	34	38	39	38
REF	2	2	2	2	2	2	2
SSA	33	35	36	36	37	32	28
USA	220	222	232	253	251	269	275

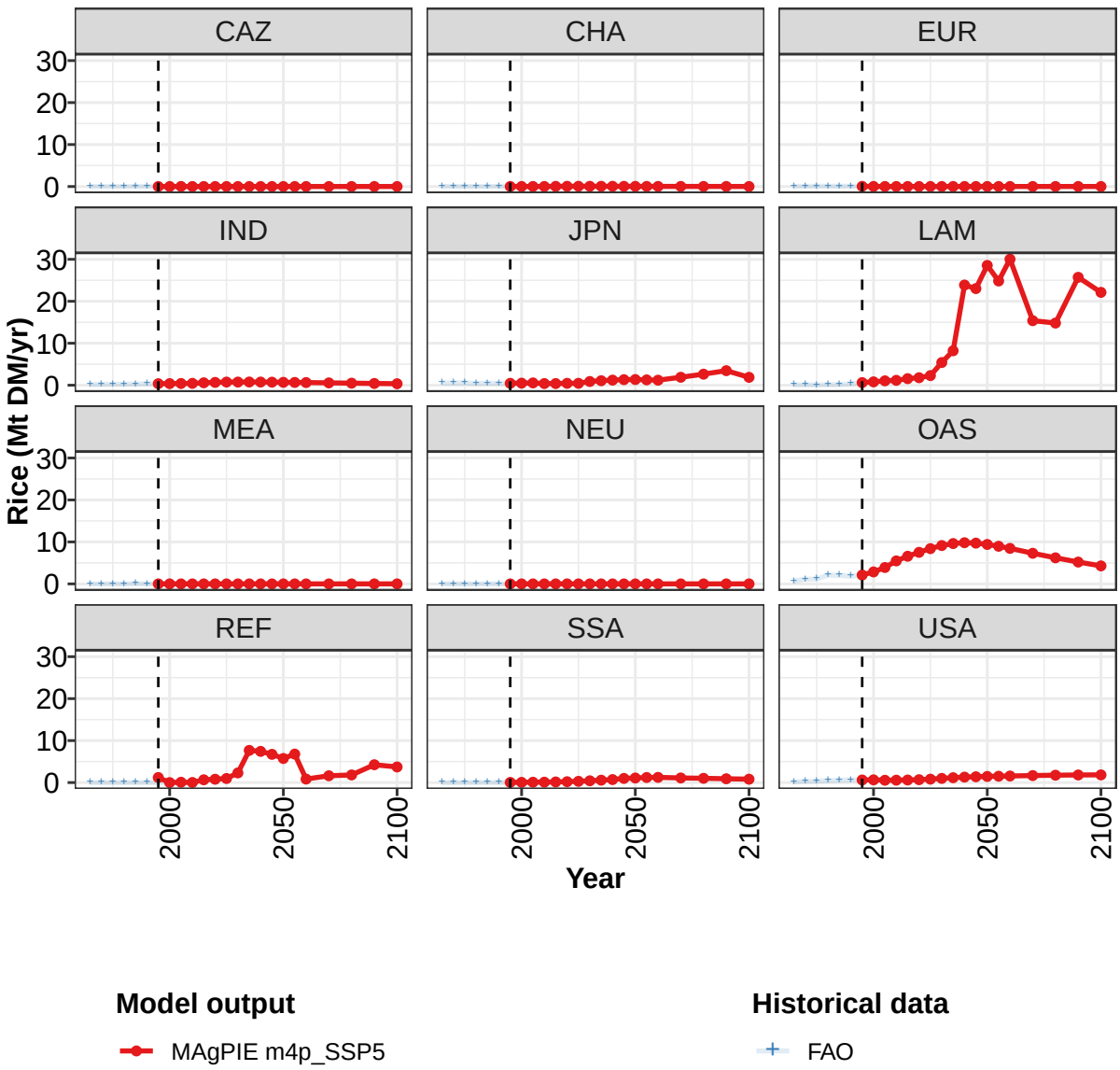
Table 576: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12	14	19	24	37	63	58	65	105	198
CAZ	0	1	1	1	1	1	1	1	1	1
CHA	1	1	1	2	3	14	9	8	19	31
EUR	2	3	4	5	5	5	6	6	7	8
IND	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	1	1	1	2	2	2	2
LAM	0	0	1	1	1	2	3	3	3	4
MEA	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	1	1	1
OAS	0	1	1	1	2	3	4	3	5	8
REF	0	0	0	1	1	8	0	0	2	2
SSA	0	0	0	0	0	0	0	1	1	1
USA	7	7	10	12	23	28	32	40	63	139

Table 577: FAO — Demand—Processing—Crops—Cereals—Maize (Mt DM/yr)

9.1.3 Cereals—Rice





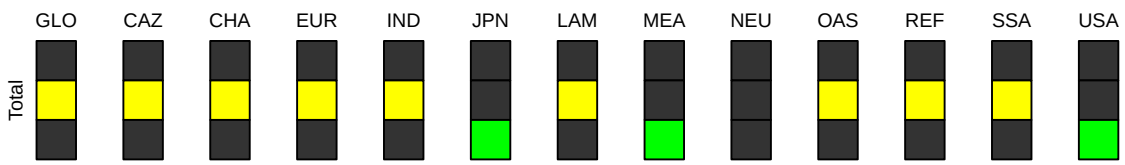


Figure 193: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.5	5.3	6.7	8.2	10.6	12.2	14.1	20.0	29.1	45.2	44.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.4	0.4	0.4	0.4	0.6	0.7	0.7	0.7	0.8	0.8	0.7
JPN	0.4	0.5	0.6	0.4	0.4	0.5	0.4	0.9	1.1	1.2	1.3
LAM	0.6	0.8	1.0	1.2	1.6	1.8	2.3	5.4	8.2	23.9	23.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.1	2.9	3.9	5.5	6.6	7.5	8.4	9.1	9.6	9.8	9.7
REF	1.2	0.0	0.1	0.0	0.7	0.8	1.0	2.3	7.7	7.4	6.7
SSA	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.6	0.7	1.0
USA	0.6	0.6	0.6	0.6	0.6	0.7	0.8	1.0	1.2	1.3	1.4

Table 578: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

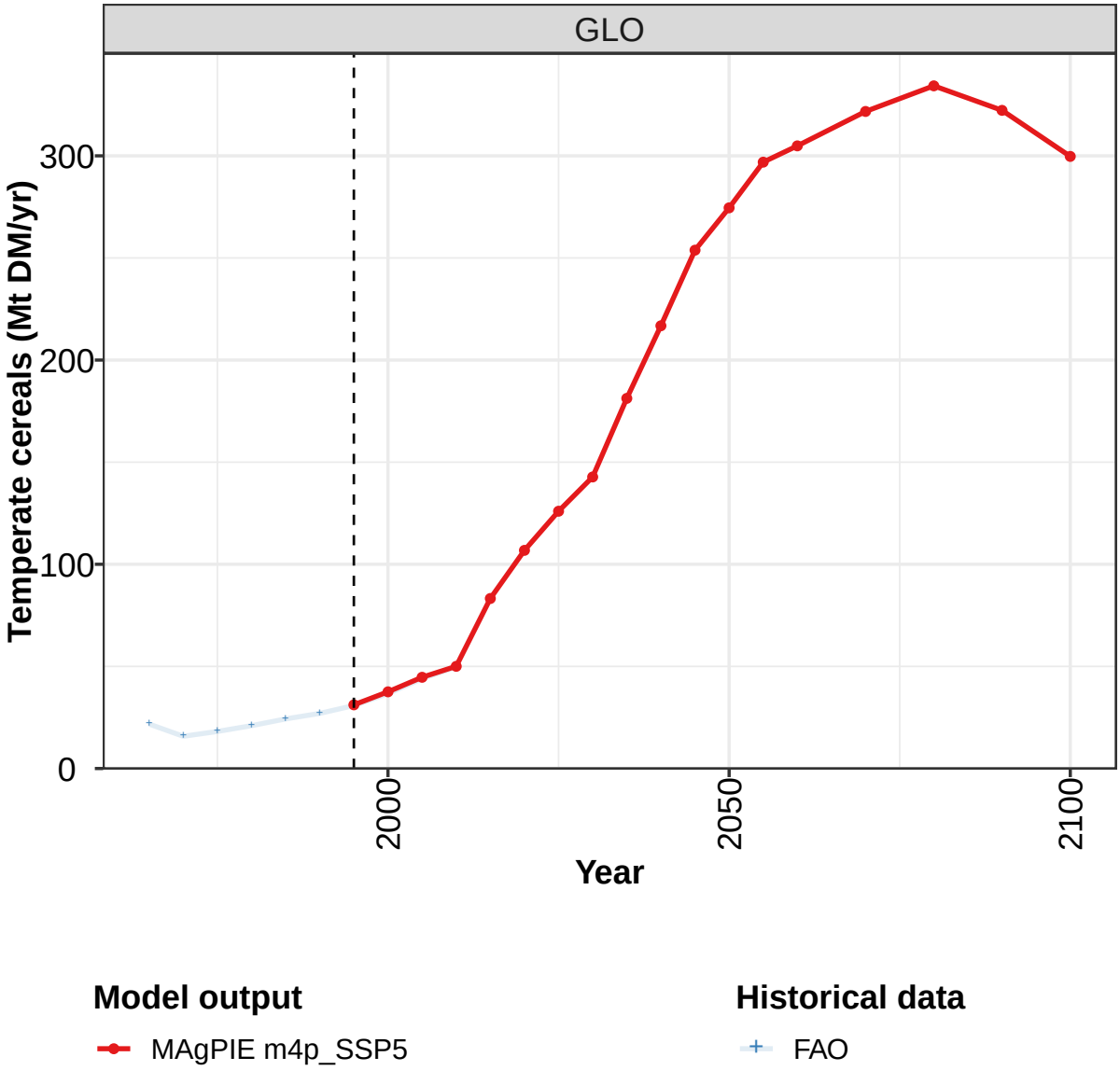
	2050	2055	2060	2070	2080	2090	2100
GLO	48.3	45.3	44.0	29.6	28.8	41.8	35.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.7	0.7	0.6	0.6	0.5	0.4	0.3
JPN	1.3	1.3	1.2	1.9	2.6	3.5	1.9
LAM	28.5	24.8	30.0	15.4	14.8	25.7	22.1
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	9.4	9.0	8.5	7.3	6.2	5.2	4.3
REF	5.7	6.8	0.8	1.6	1.8	4.3	3.7
SSA	1.1	1.2	1.2	1.1	1.0	0.9	0.8
USA	1.5	1.5	1.6	1.7	1.8	1.8	1.8

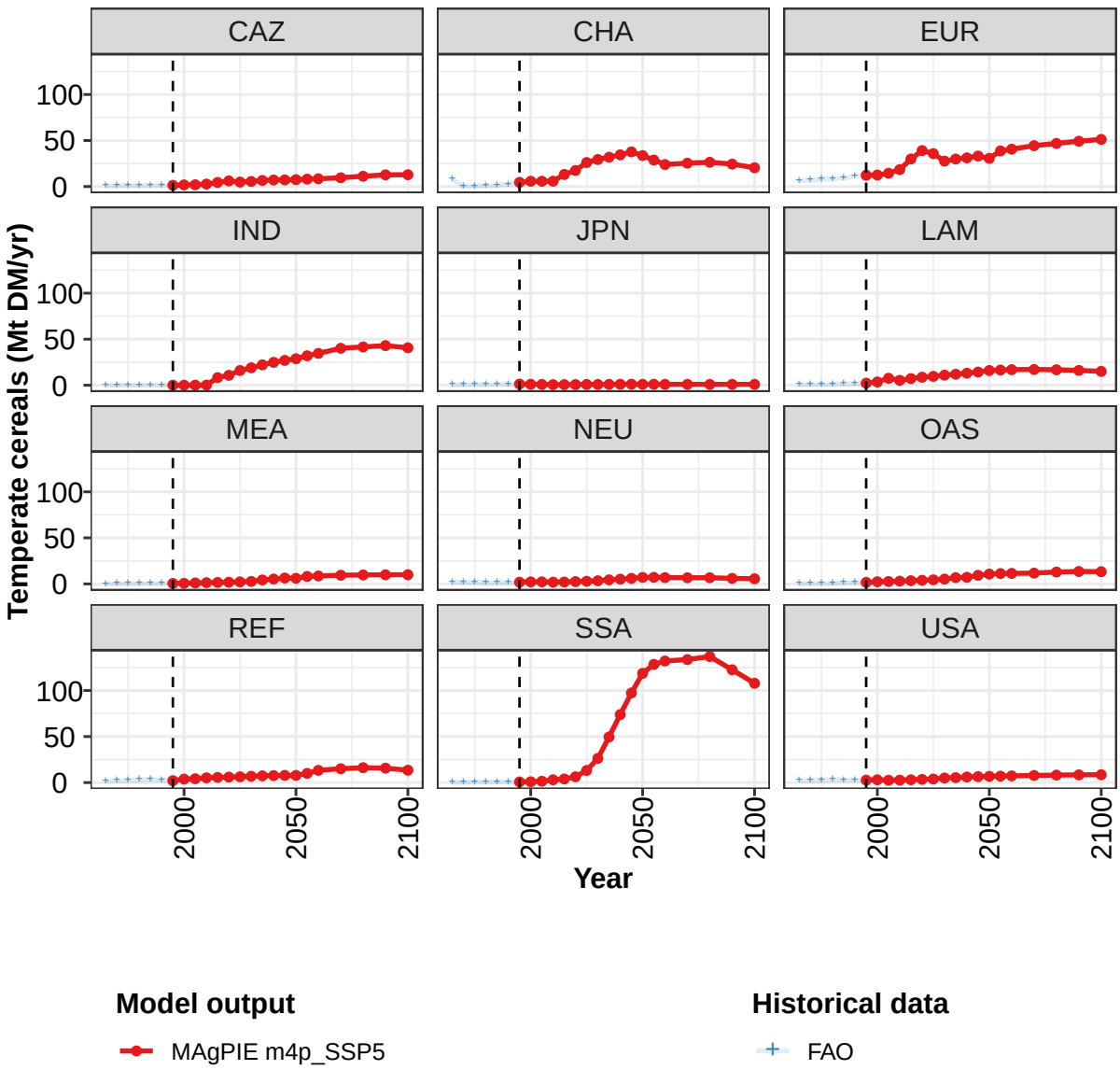
Table 579: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.68	2.25	2.40	3.35	3.64	3.61	4.26	5.24	6.68	8.17
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
CHA	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
EUR	0.05	0.06	0.06	0.06	0.07	0.05	0.04	0.02	0.01	0.01
IND	0.15	0.19	0.23	0.24	0.29	0.34	0.36	0.38	0.41	0.45
JPN	0.54	0.52	0.55	0.41	0.49	0.44	0.44	0.49	0.55	0.39
LAM	0.08	0.09	0.06	0.10	0.16	0.31	0.63	0.78	1.09	1.22
MEA	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.68	1.11	1.16	2.08	2.02	1.82	2.11	2.85	3.93	5.40
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.02	0.01	0.03	0.04	0.05	0.08	0.10
USA	0.17	0.28	0.33	0.44	0.56	0.62	0.62	0.65	0.55	0.57

Table 580: FAO — Demand—Processing—Crops—Cereals—Rice (Mt DM/yr)

9.1.4 Cereals—Temperate cereals





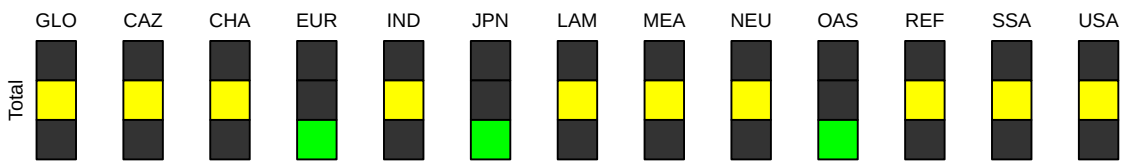


Figure 194: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	31	38	45	50	83	107	126	143	181	217	254
CAZ	1	2	2	3	4	6	5	6	7	7	7
CHA	5	6	6	6	13	17	26	29	32	34	38
EUR	12	13	14	18	30	39	36	28	30	31	33
IND	0	0	0	0	8	11	16	19	22	25	27
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	2	4	8	5	7	9	10	11	12	13	14
MEA	1	1	1	1	2	2	2	3	4	5	6
NEU	2	2	2	2	2	3	3	3	4	5	6
OAS	2	2	3	3	4	4	4	5	7	7	9
REF	2	4	4	5	6	6	6	7	7	8	8
SSA	1	1	1	3	4	6	13	26	50	74	97
USA	3	3	3	3	3	3	4	5	5	6	6

Table 581: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

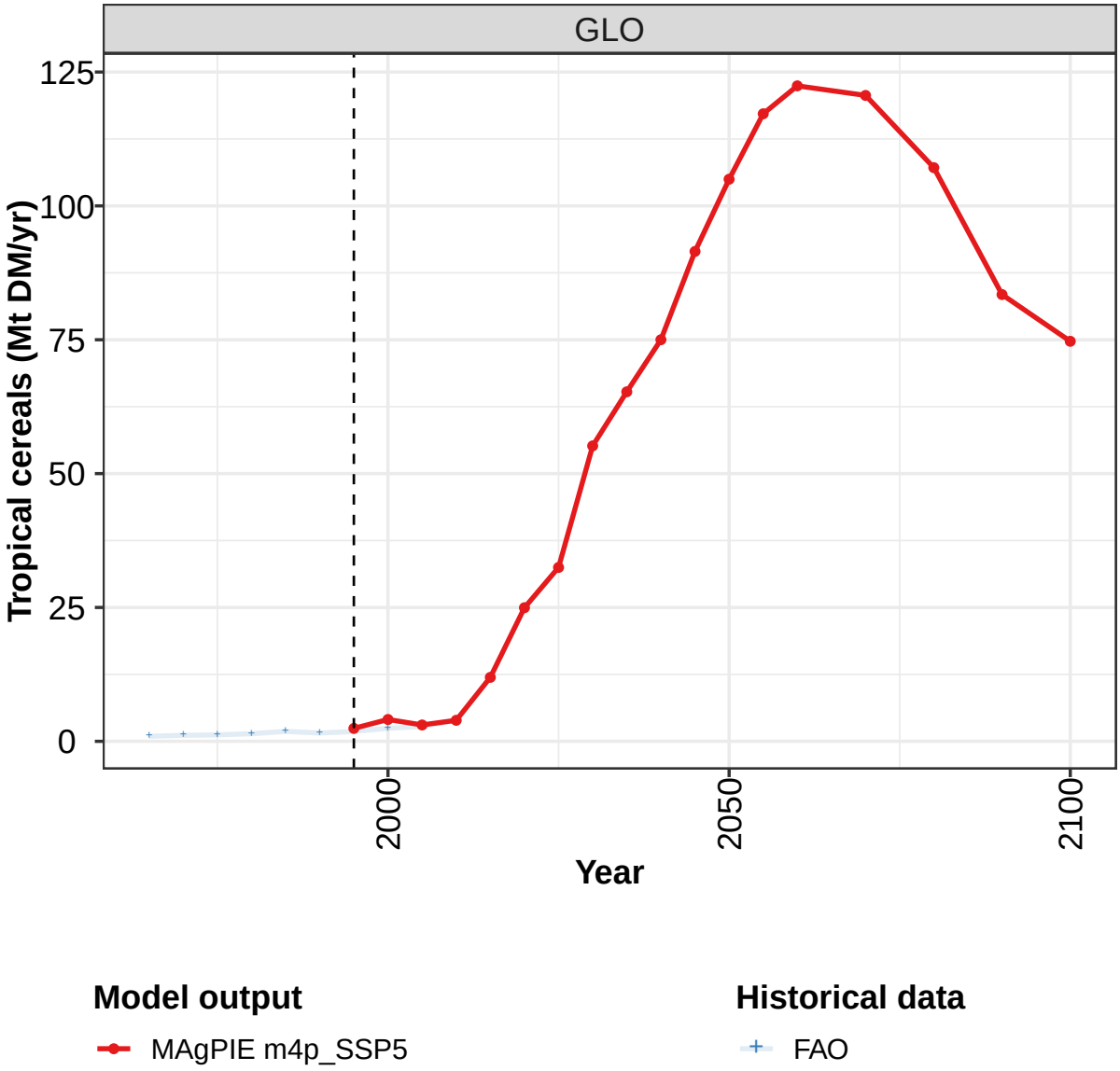
	2050	2055	2060	2070	2080	2090	2100
GLO	275	297	305	322	334	322	300
CAZ	7	8	8	10	11	13	13
CHA	34	29	24	25	26	24	20
EUR	31	39	41	44	47	49	51
IND	29	32	35	40	42	43	41
JPN	1	1	1	1	1	1	1
LAM	16	17	17	17	17	16	15
MEA	6	8	9	9	10	10	10
NEU	7	7	7	7	7	6	6
OAS	11	11	11	12	13	13	13
REF	8	10	13	15	16	16	13
SSA	119	128	132	134	137	123	108
USA	7	7	7	8	8	8	9

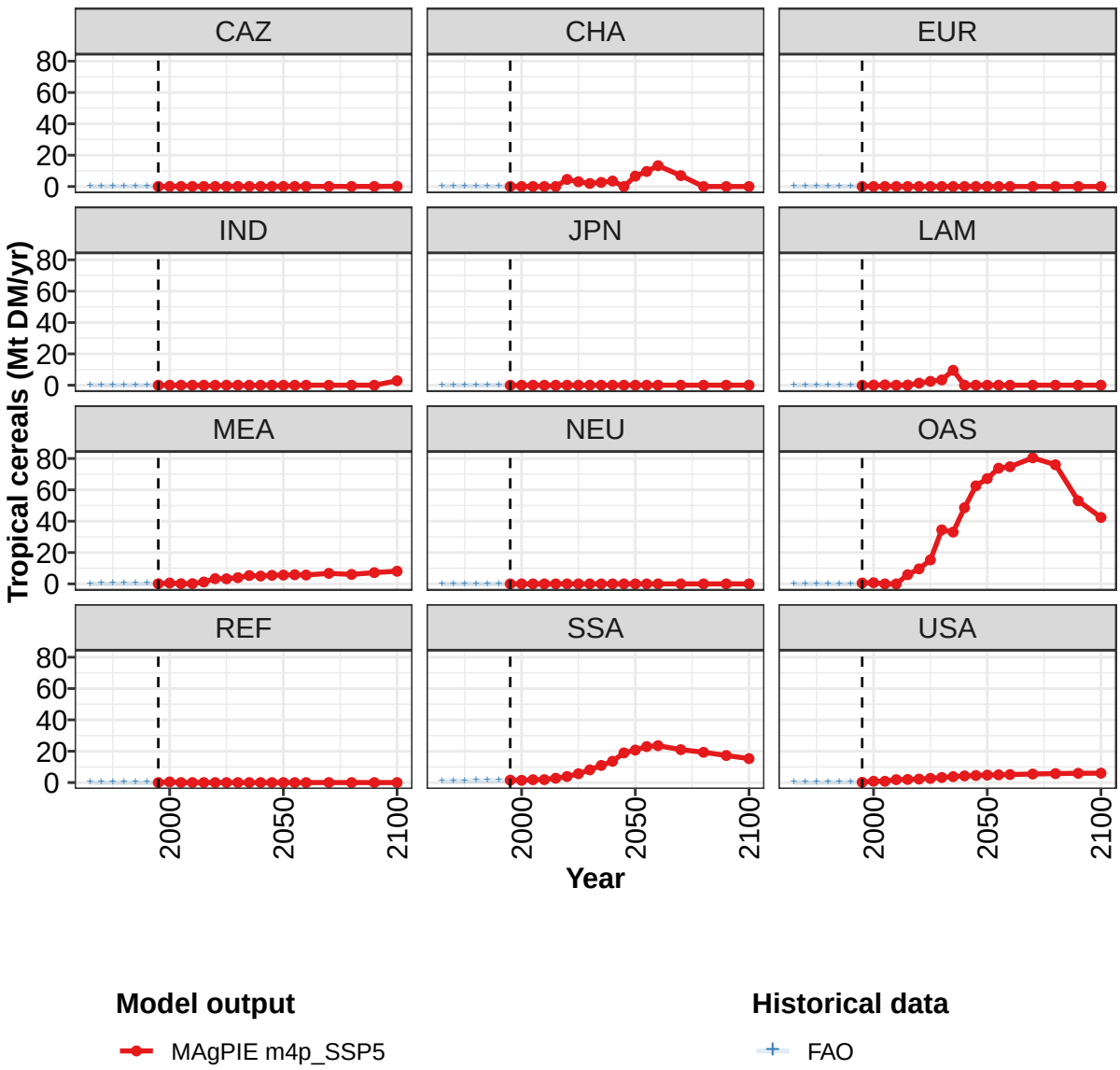
Table 582: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	21.8	15.8	18.1	21.0	24.3	27.0	30.8	36.6	44.0	49.8
CAZ	0.7	0.9	1.1	1.0	1.0	1.2	1.4	1.8	1.8	2.7
CHA	8.0	0.3	0.4	0.7	1.5	2.5	4.5	5.7	5.7	5.8
EUR	6.0	6.7	7.8	8.3	9.2	11.2	12.3	12.3	14.2	18.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
JPN	0.4	0.5	0.7	1.0	1.0	1.1	1.2	1.0	0.9	0.6
LAM	0.7	0.9	0.9	1.3	1.4	1.9	2.2	3.5	7.7	5.3
MEA	0.1	0.2	0.3	0.5	0.7	0.4	0.5	0.6	1.0	1.3
NEU	2.0	1.8	1.8	1.2	1.2	1.4	1.6	1.7	2.0	1.9
OAS	0.1	0.2	0.2	0.5	1.1	1.3	1.7	2.3	2.6	3.0
REF	1.7	1.9	2.0	2.9	3.6	2.6	2.1	3.8	4.1	5.2
SSA	0.2	0.3	0.4	0.6	0.7	0.6	0.6	0.8	1.4	3.0
USA	1.9	2.2	2.5	3.1	2.7	2.7	2.7	3.1	2.5	2.7

Table 583: FAO — Demand—Processing—Crops—Cereals—Temperate cereals (Mt DM/yr)

9.1.5 Cereals—Tropical cereals





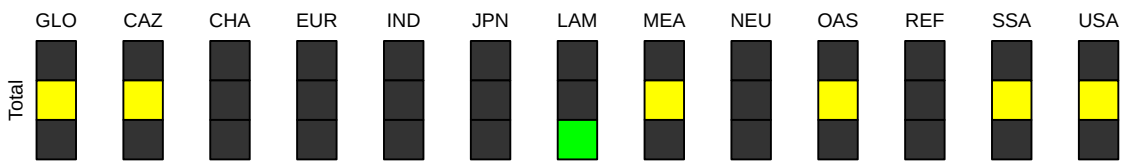


Figure 195: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2	4	3	4	12	25	32	55	65	75	91
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	5	3	2	3	4	0
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	1	2	3	10	0	0
MEA	0	1	0	0	1	3	3	4	5	5	5
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	1	1	0	0	6	10	15	34	33	49	63
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	2	1	2	2	3	4	6	8	11	14	19
USA	0	1	1	2	2	2	3	3	4	4	5

Table 584: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

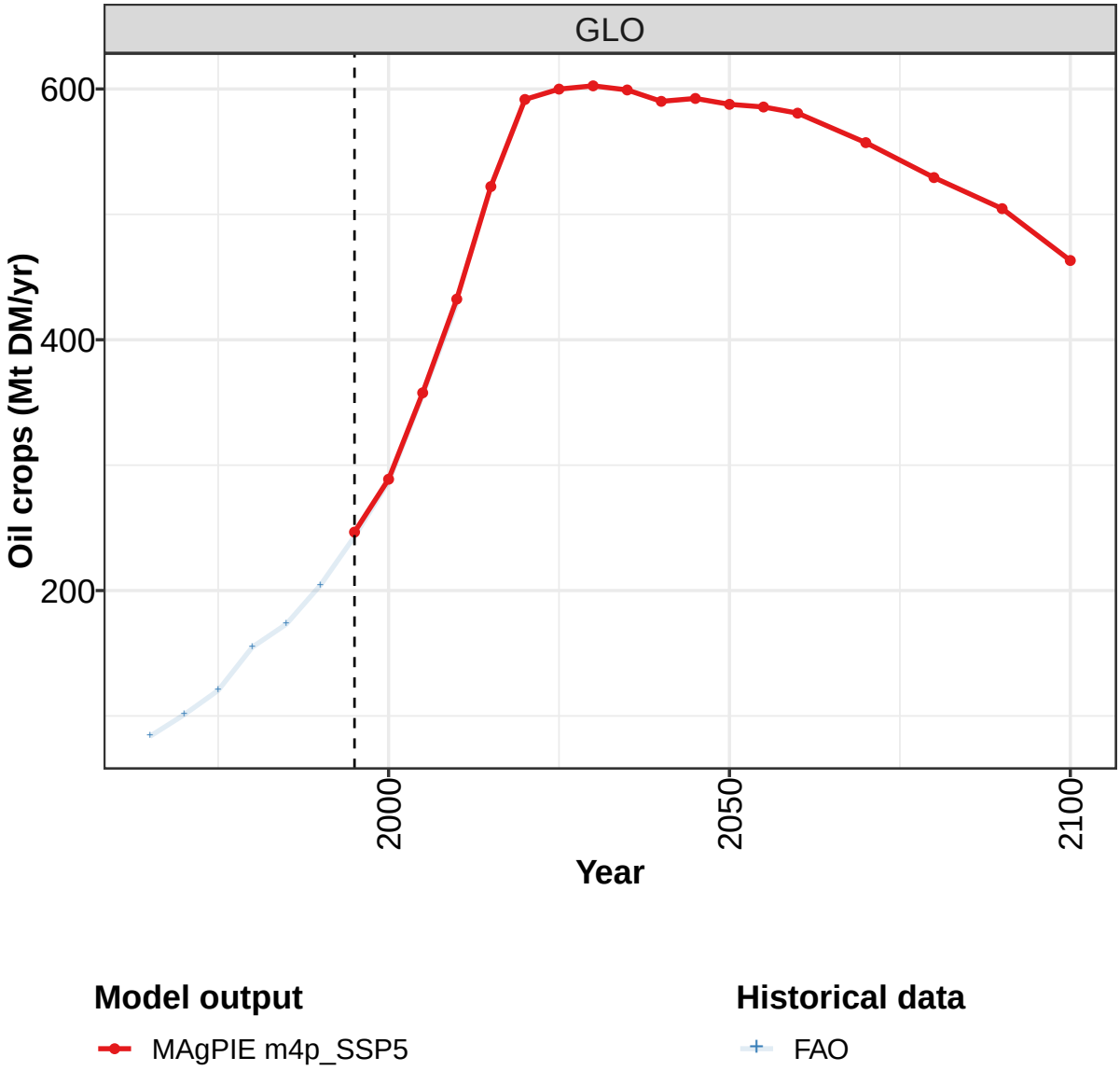
	2050	2055	2060	2070	2080	2090	2100
GLO	105	117	122	121	107	83	75
CAZ	0	0	0	0	0	0	0
CHA	7	10	13	7	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	3
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	6	6	6	7	6	7	8
NEU	0	0	0	0	0	0	0
OAS	67	74	75	80	76	53	42
REF	0	0	0	0	0	0	0
SSA	21	23	24	21	19	17	15
USA	5	5	5	5	6	6	6

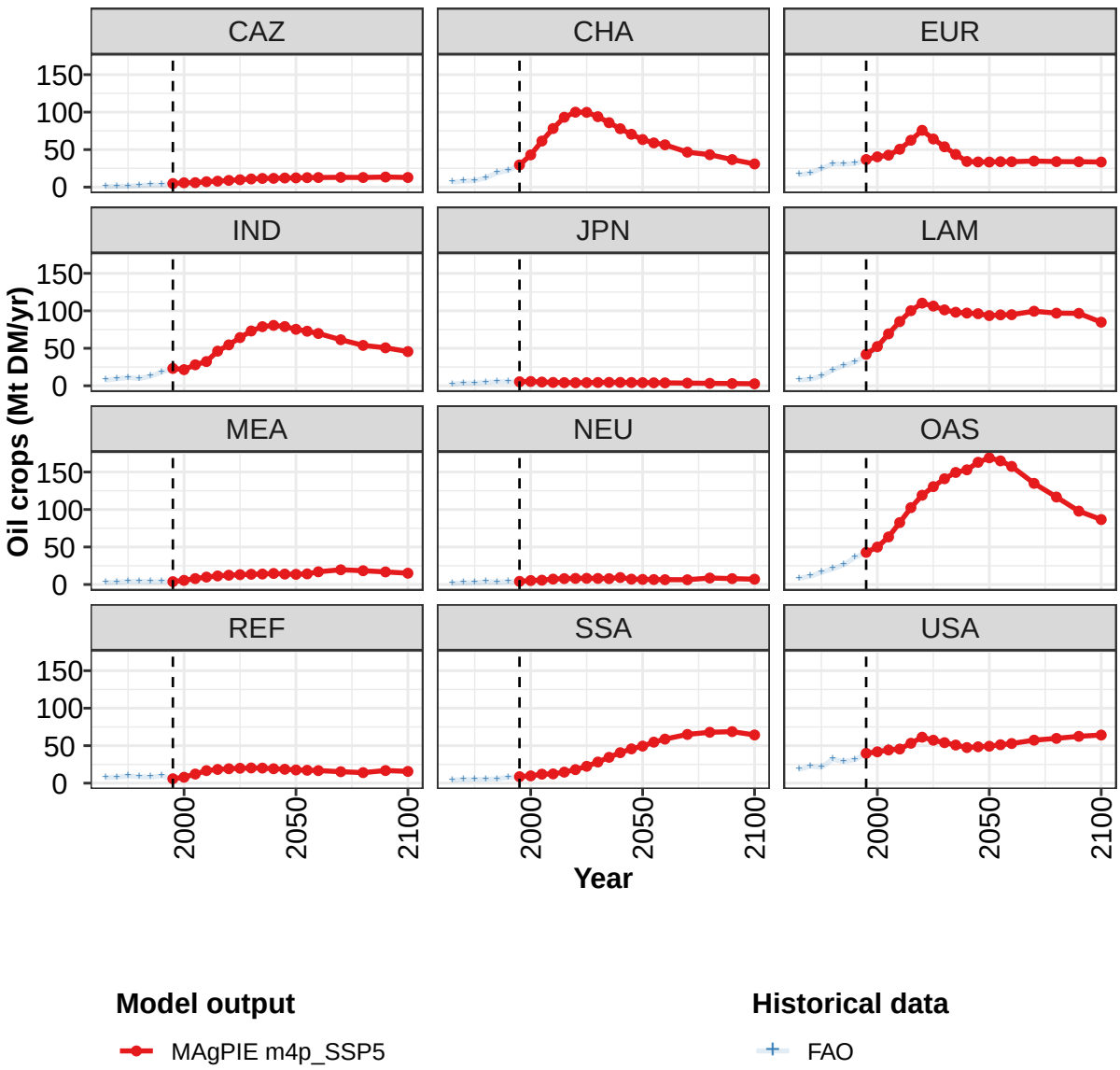
Table 585: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.94	1.13	1.21	1.42	1.86	1.55	1.84	2.44	2.76	3.94
CAZ	0.03	0.05	0.06	0.11	0.05	0.07	0.03	0.04	0.04	0.04
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.03	0.05	0.06	0.07	0.09	0.10	0.13	0.13	0.12	0.15
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.81	0.94	1.02	1.14	1.23	1.25	1.49	1.44	1.77	1.88
USA	0.07	0.08	0.06	0.09	0.48	0.12	0.19	0.83	0.83	1.88

Table 586: FAO — Demand—Processing—Crops—Cereals—Tropical cereals (Mt DM/yr)

9.1.6 Oil crops





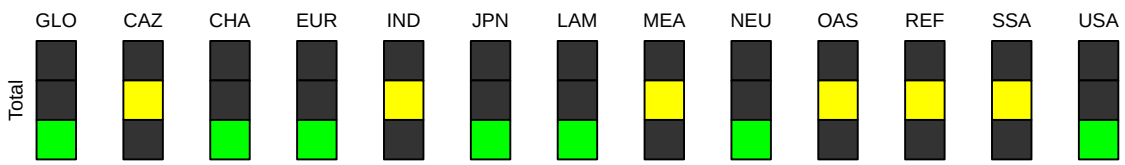


Figure 196: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	247	289	358	432	522	592	600	603	599	590	592
CAZ	5	6	6	7	8	9	10	11	12	12	12
CHA	30	43	61	78	93	100	100	94	86	78	70
EUR	37	40	43	51	62	76	64	54	44	34	34
IND	23	22	28	32	46	55	64	73	79	81	79
JPN	5	6	5	4	4	4	4	4	5	5	4
LAM	42	52	69	86	100	110	106	101	98	97	96
MEA	4	5	8	10	11	12	13	14	14	15	14
NEU	4	5	6	7	8	8	8	8	8	9	7
OAS	43	50	63	83	102	119	131	141	149	153	163
REF	6	8	12	17	18	19	20	20	20	19	19
SSA	9	10	12	12	15	18	22	28	34	41	46
USA	40	42	44	45	53	61	57	54	51	47	48

Table 587: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops (Mt DM/yr) [PART 1/2]

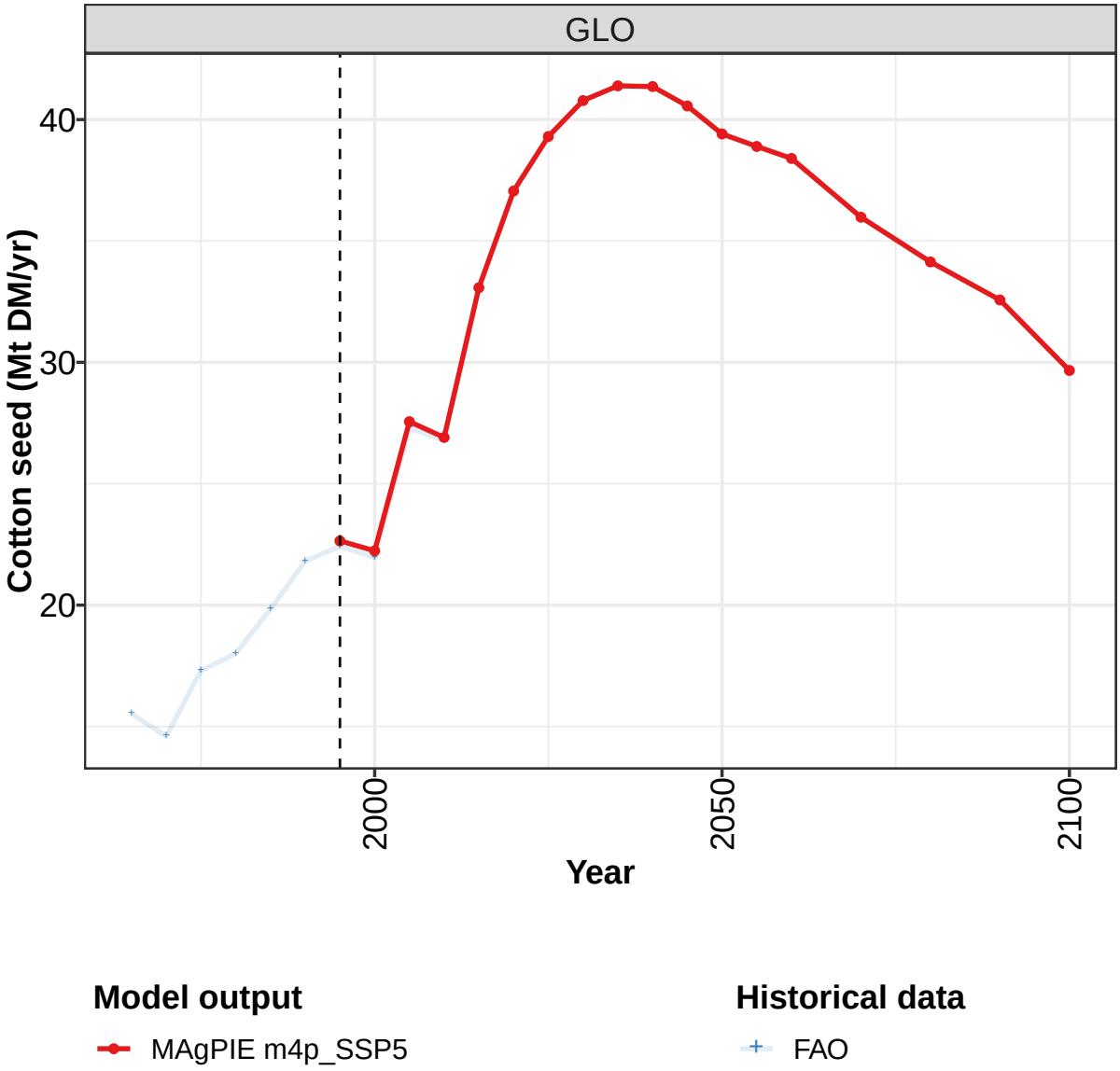
	2050	2055	2060	2070	2080	2090	2100
GLO	588	586	581	557	529	505	463
CAZ	12	13	13	13	13	13	13
CHA	63	59	56	47	43	37	31
EUR	33	34	34	35	34	34	33
IND	75	73	70	61	54	51	46
JPN	4	4	4	4	3	3	3
LAM	94	95	95	99	97	97	85
MEA	14	14	17	20	18	17	15
NEU	7	7	6	6	9	8	7
OAS	169	165	157	135	117	98	87
REF	18	17	17	15	14	17	16
SSA	49	55	59	65	68	69	64
USA	49	51	53	57	60	62	64

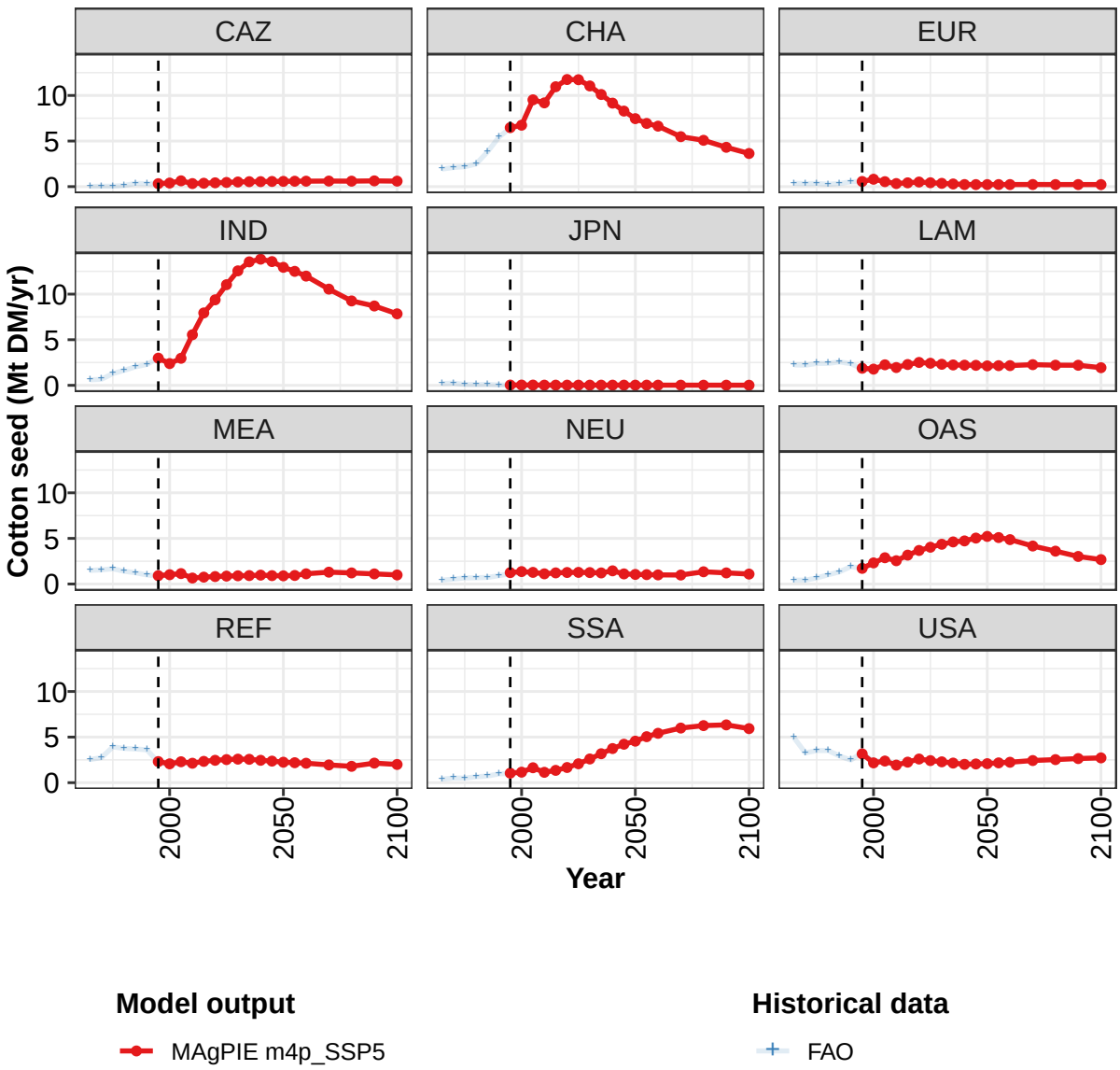
Table 588: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	84	101	120	155	173	204	243	287	356	428
CAZ	1	1	1	2	3	3	4	5	6	8
CHA	7	8	9	12	19	22	29	43	61	78
EUR	16	19	25	31	31	31	36	41	42	50
IND	8	9	11	10	13	18	23	22	28	32
JPN	2	4	4	5	5	5	5	6	5	4
LAM	8	9	13	21	27	32	41	49	68	81
MEA	3	3	4	4	3	4	4	5	8	10
NEU	2	2	2	3	3	4	4	5	6	7
OAS	8	11	16	21	26	36	43	50	63	84
REF	7	8	9	9	8	10	6	7	11	16
SSA	4	5	5	5	6	8	8	10	12	12
USA	18	23	21	32	29	31	40	44	47	46

Table 589: FAO — Demand—Processing—Crops—Oil crops (Mt DM/yr)

9.1.7 Oil crops—Cotton seed





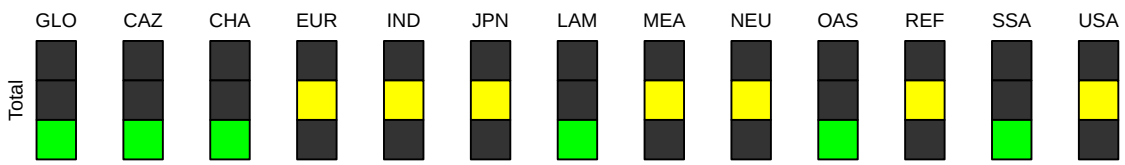


Figure 197: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22.6	22.2	27.6	26.9	33.1	37.1	39.3	40.8	41.4	41.4	40.6
CAZ	0.3	0.4	0.6	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6
CHA	6.5	6.7	9.5	9.2	11.0	11.7	11.7	11.0	10.1	9.2	8.3
EUR	0.6	0.8	0.5	0.3	0.4	0.5	0.4	0.4	0.3	0.2	0.2
IND	3.0	2.4	3.0	5.5	7.9	9.4	11.0	12.6	13.5	13.8	13.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.9	1.8	2.3	2.0	2.3	2.5	2.4	2.3	2.2	2.2	2.2
MEA	0.9	1.0	1.1	0.7	0.8	0.8	0.9	0.9	0.9	1.0	0.9
NEU	1.2	1.4	1.3	1.1	1.2	1.3	1.3	1.3	1.2	1.4	1.1
OAS	1.7	2.3	2.9	2.6	3.2	3.7	4.0	4.4	4.6	4.7	5.0
REF	2.3	2.1	2.3	2.1	2.3	2.5	2.5	2.6	2.6	2.5	2.4
SSA	1.0	1.2	1.6	1.1	1.4	1.7	2.1	2.6	3.2	3.7	4.2
USA	3.2	2.2	2.4	1.9	2.3	2.6	2.4	2.3	2.2	2.0	2.1

Table 590: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

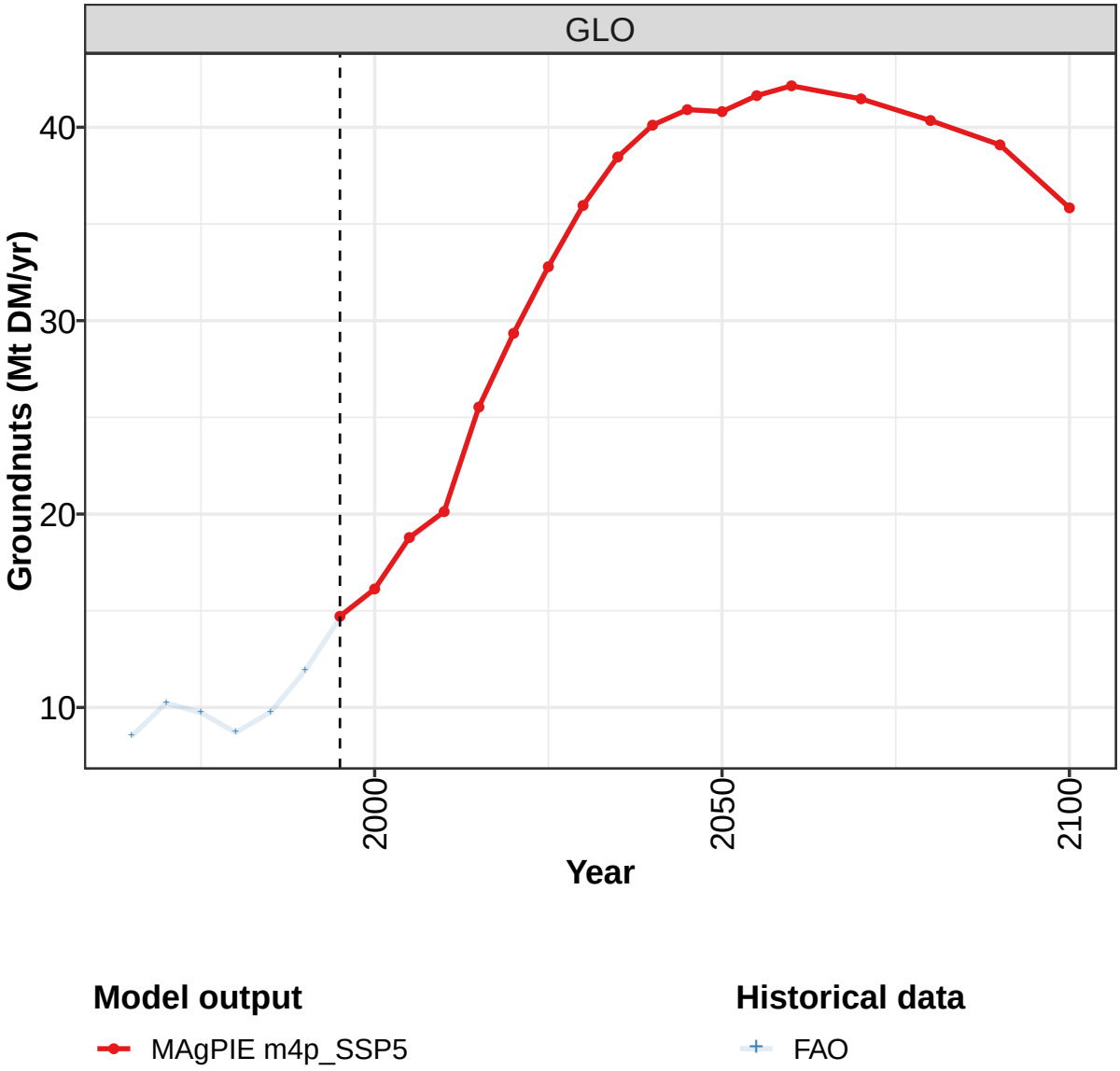
	2050	2055	2060	2070	2080	2090	2100
GLO	39.4	38.9	38.4	36.0	34.1	32.6	29.7
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	7.5	6.9	6.6	5.5	5.1	4.3	3.6
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	12.9	12.5	12.0	10.6	9.3	8.7	7.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.1	2.2	2.2	2.3	2.2	2.2	1.9
MEA	0.9	0.9	1.1	1.3	1.2	1.1	1.0
NEU	1.1	1.0	1.0	1.0	1.3	1.2	1.1
OAS	5.2	5.1	4.9	4.2	3.6	3.0	2.7
REF	2.2	2.2	2.1	1.9	1.8	2.1	2.0
SSA	4.6	5.0	5.4	6.0	6.3	6.3	5.9
USA	2.1	2.2	2.2	2.4	2.5	2.6	2.7

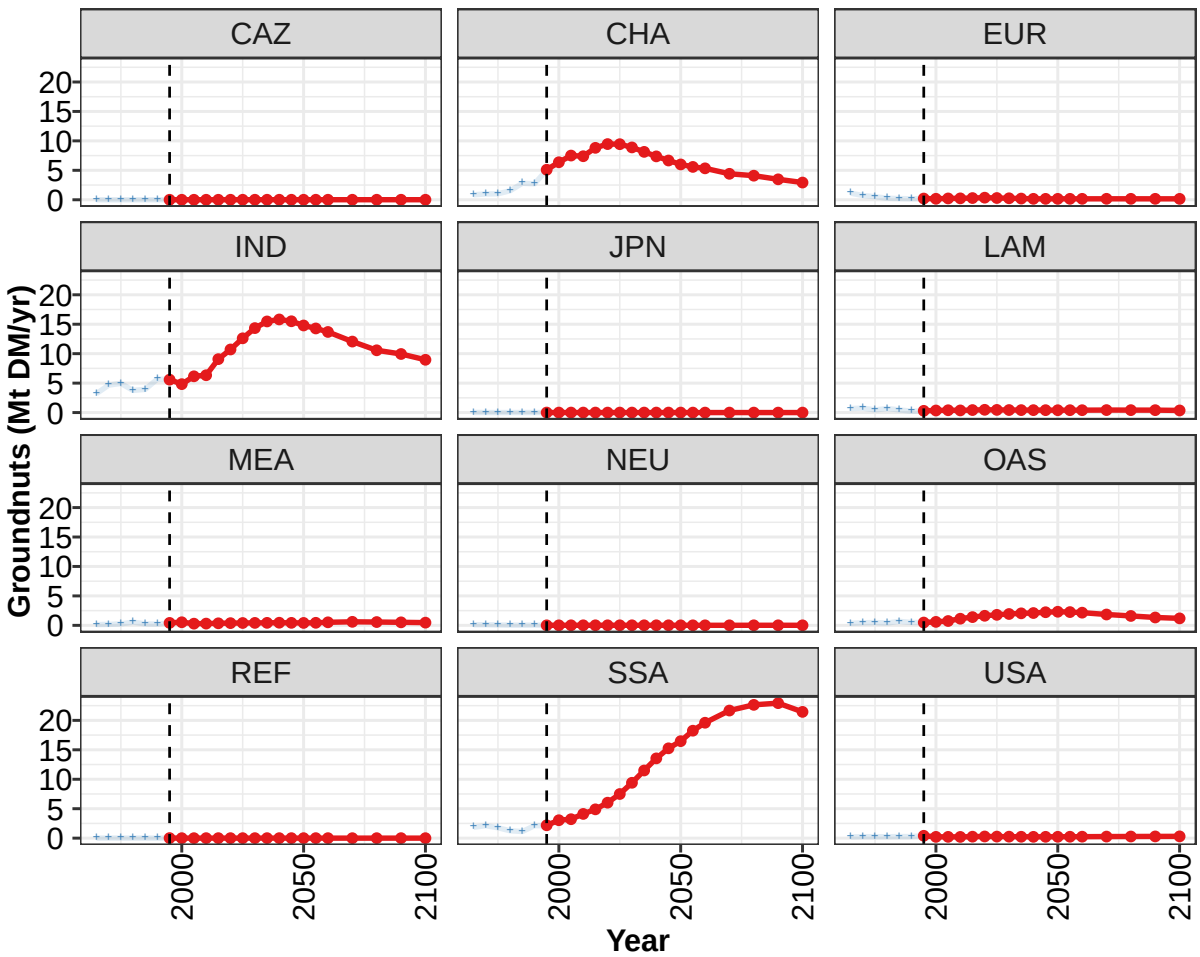
Table 591: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	15.5	14.6	17.3	18.0	19.8	21.8	22.4	22.0	27.3	26.8
CAZ	0.0	0.0	0.0	0.1	0.4	0.3	0.3	0.4	0.6	0.4
CHA	1.9	2.1	2.2	2.5	3.8	5.4	6.4	6.7	9.5	9.2
EUR	0.4	0.3	0.4	0.3	0.3	0.5	0.6	0.8	0.5	0.3
IND	0.6	0.7	1.3	1.6	2.0	2.3	3.0	2.4	2.9	5.5
JPN	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
LAM	2.2	2.2	2.4	2.4	2.6	2.4	1.8	1.7	2.2	1.8
MEA	1.5	1.6	1.7	1.4	1.2	1.0	0.9	1.0	1.1	0.7
NEU	0.4	0.5	0.7	0.7	0.7	0.9	1.1	1.3	1.2	1.1
OAS	0.4	0.4	0.7	1.0	1.3	1.9	1.7	2.3	2.9	2.6
REF	2.5	2.7	3.9	3.8	3.7	3.6	2.2	1.9	2.1	2.1
SSA	0.4	0.5	0.5	0.6	0.7	1.0	1.0	1.1	1.6	1.1
USA	4.9	3.3	3.5	3.5	2.9	2.5	3.3	2.3	2.5	1.9

Table 592: FAO — Demand—Processing—Crops—Oil crops—Cotton seed (Mt DM/yr)

9.1.8 Oil crops—Groundnuts





Model output

MAgPIE m4p_SSP5

Historical data

FAO

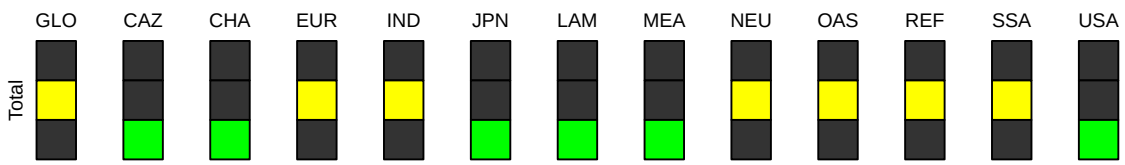


Figure 198: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.7	16.1	18.8	20.1	25.5	29.3	32.8	36.0	38.5	40.1	40.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.1	6.4	7.5	7.4	8.8	9.5	9.4	8.9	8.1	7.4	6.7
EUR	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2
IND	5.6	4.8	6.2	6.3	9.1	10.7	12.6	14.3	15.5	15.8	15.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4
MEA	0.4	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.4
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.5	0.6	0.7	1.1	1.4	1.6	1.8	1.9	2.0	2.1	2.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.2	3.0	3.2	4.1	4.9	6.0	7.5	9.4	11.5	13.6	15.3
USA	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2

Table 593: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

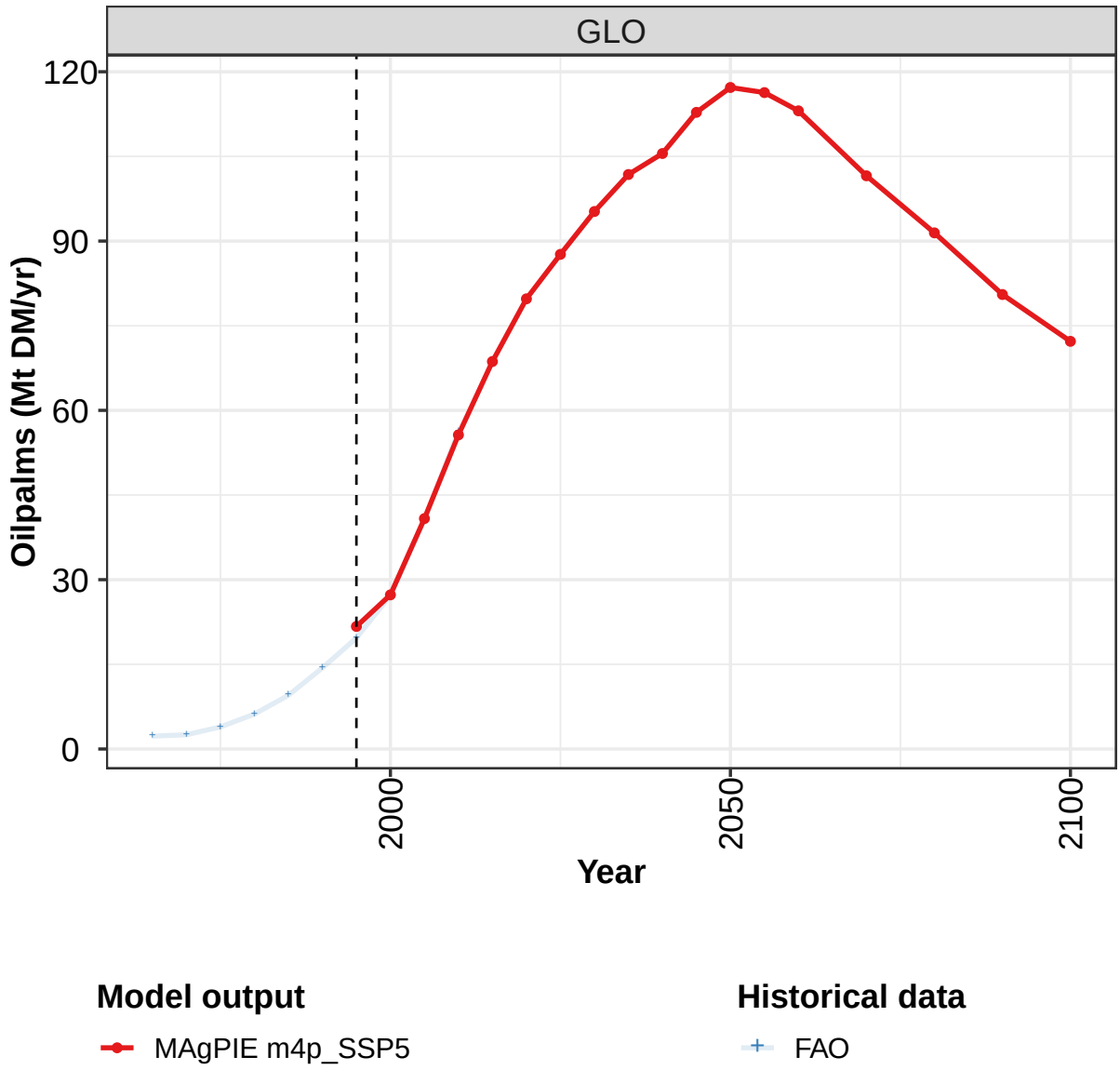
	2050	2055	2060	2070	2080	2090	2100
GLO	40.8	41.6	42.1	41.5	40.3	39.1	35.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.0	5.6	5.3	4.4	4.1	3.5	2.9
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	14.8	14.3	13.7	12.1	10.6	9.9	9.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.4	0.4	0.4	0.4	0.4	0.4	0.4
MEA	0.4	0.4	0.5	0.6	0.6	0.5	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.3	2.3	2.2	1.8	1.6	1.3	1.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	16.5	18.3	19.6	21.7	22.6	22.9	21.4
USA	0.2	0.2	0.2	0.3	0.3	0.3	0.3

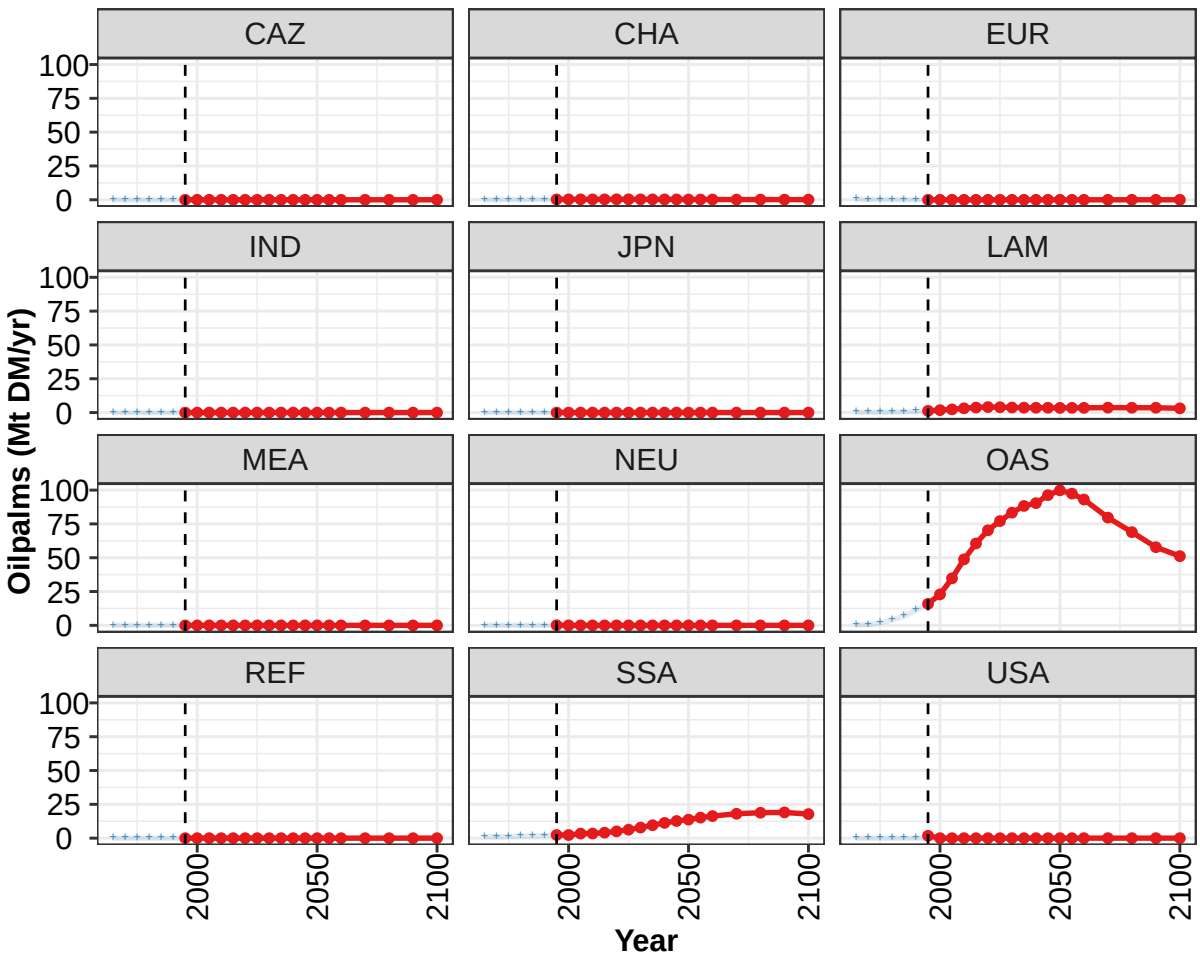
Table 594: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.5	10.2	9.7	8.7	9.8	11.9	14.6	16.1	18.7	20.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.8	1.0	1.0	1.5	2.8	2.7	5.1	6.3	7.5	7.4
EUR	1.1	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2
IND	3.2	4.7	4.9	3.8	3.9	5.7	5.6	4.8	6.1	6.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.8	0.4	0.7	0.5	0.2	0.3	0.3	0.4	0.3
MEA	0.1	0.2	0.2	0.5	0.2	0.2	0.4	0.5	0.3	0.3
NEU	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.3	0.4	0.5	0.4	0.7	0.5	0.5	0.6	0.7	1.1
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.8	2.1	1.8	1.3	1.1	2.1	2.1	3.0	3.2	4.1
USA	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.2	0.2	0.2

Table 595: FAO — Demand—Processing—Crops—Oil crops—Groundnuts (Mt DM/yr)

9.1.9 Oil crops—Oilpalms





Model output

MAgPIE m4p_SSP5

Historical data

FAO

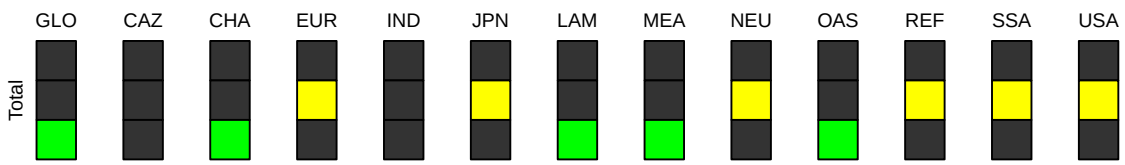


Figure 199: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Oilpalms (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	27	41	56	69	80	88	95	102	106	113
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	2	3	4	4	4	4	4	4	4
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	16	23	35	49	61	70	77	83	88	90	96
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	2	2	3	3	4	5	6	8	10	11	13
USA	2	0	0	0	0	0	0	0	0	0	0

Table 596: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Oilpalms (Mt DM/yr) [PART 1/2]

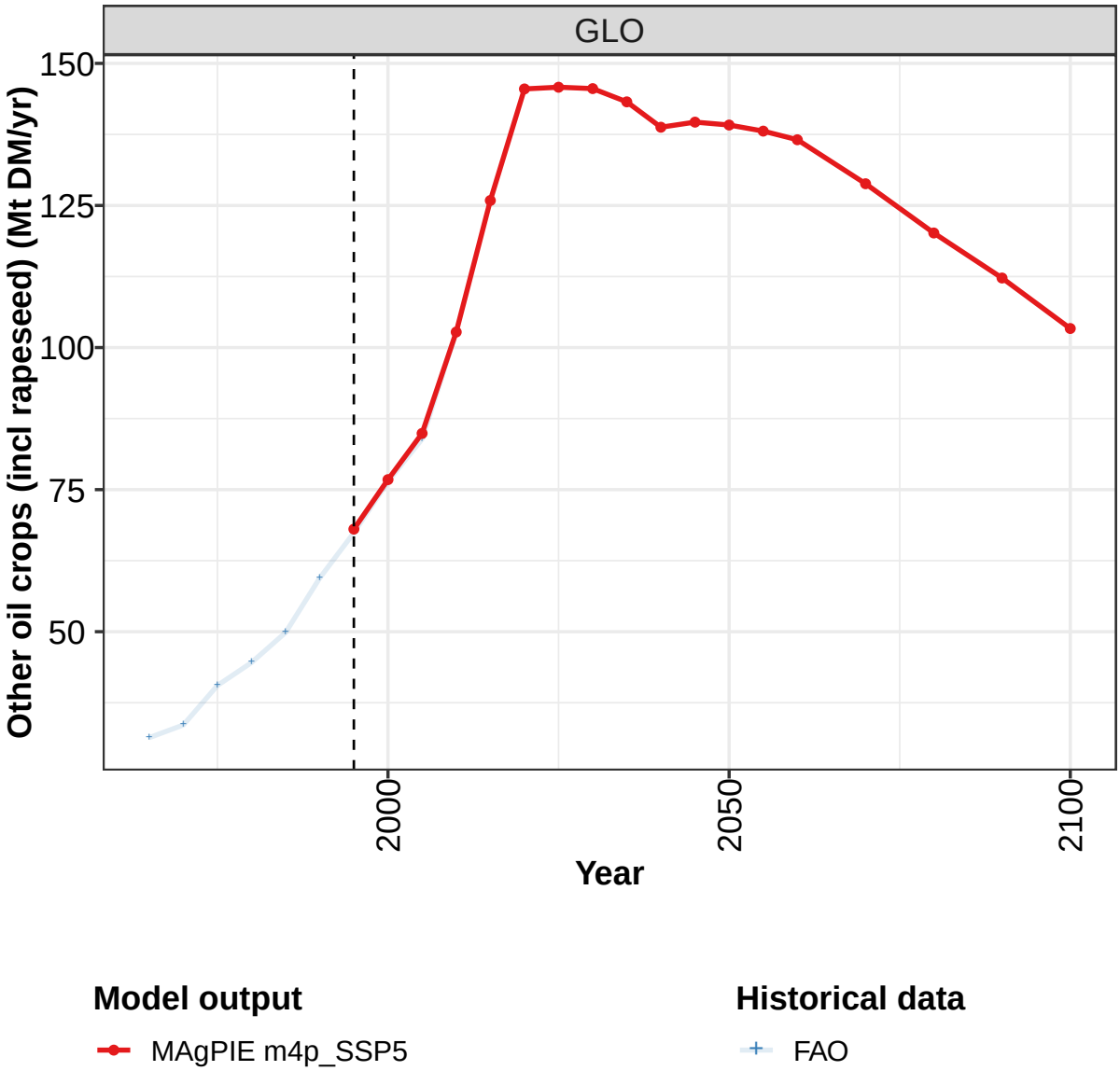
	2050	2055	2060	2070	2080	2090	2100
GLO	117	116	113	102	91	81	72
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	3	3	4	4	4	4	3
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	100	97	93	80	69	58	51
REF	0	0	0	0	0	0	0
SSA	14	15	16	18	19	19	18
USA	0	0	0	0	0	0	0

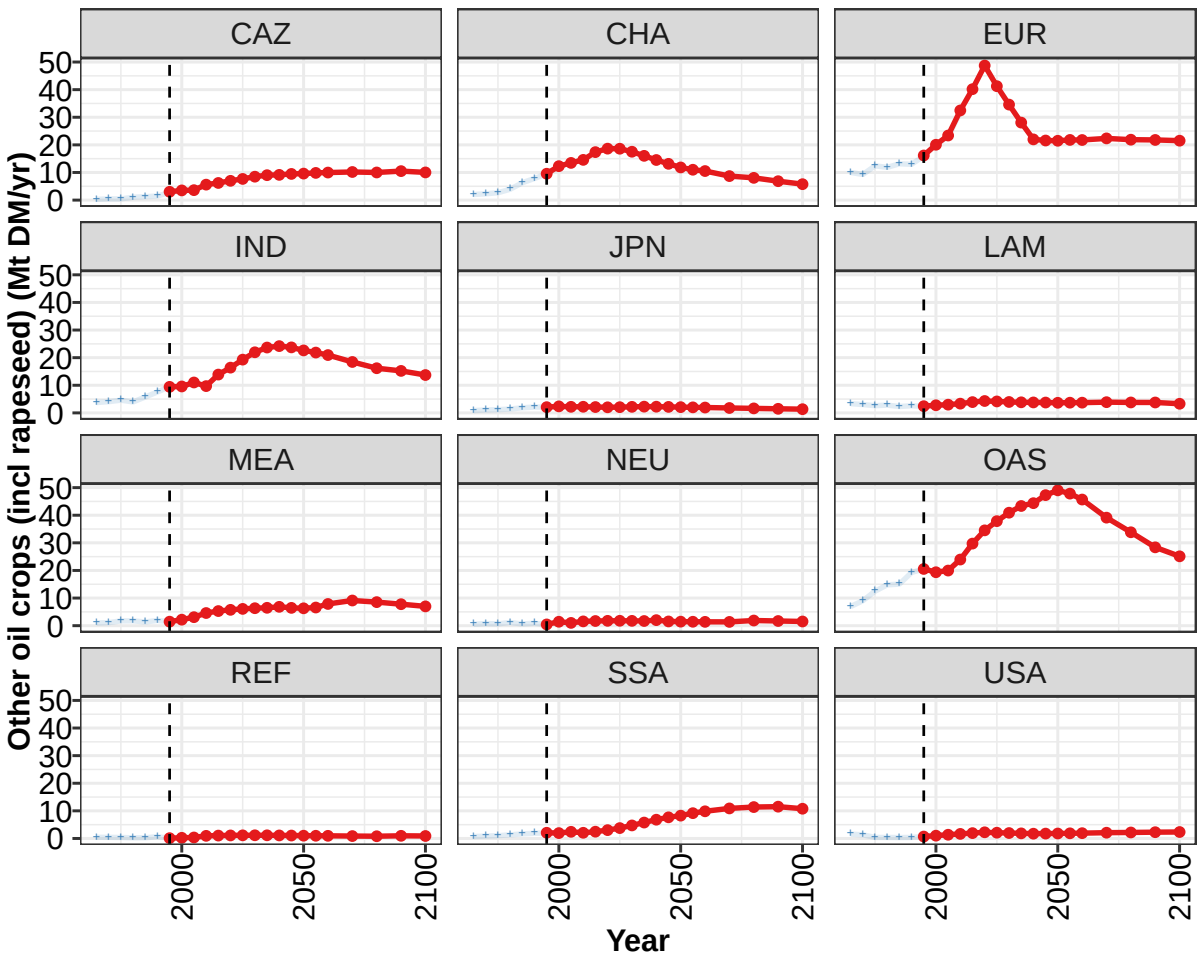
Table 597: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Oilpalms (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.3	2.5	3.9	6.2	9.5	14.4	19.7	27.2	40.6	56.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3
EUR	0.6	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.3	0.3	0.4	0.7	1.0	1.2	1.7	2.3	3.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.3	0.7	1.9	3.9	6.9	11.2	15.9	23.0	34.6	49.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.1	1.0	1.2	1.5	1.6	1.9	2.3	2.3	3.4	3.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 598: FAO — Demand—Processing—Crops—Oil crops—Oilpalms (Mt DM/yr)

9.1.10 Oil crops—Other oil crops (incl rapeseed)





Model output

MAgPIE m4p_SSP5

Historical data

FAO

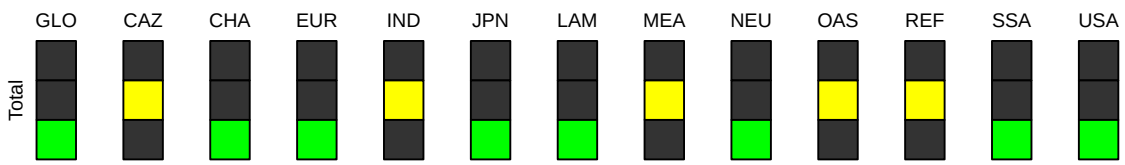


Figure 200: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	68	77	85	103	126	146	146	146	143	139	140
CAZ	3	4	4	6	6	7	8	8	9	9	9
CHA	10	12	13	15	17	19	19	18	16	15	13
EUR	16	20	23	32	40	49	41	35	28	22	22
IND	9	10	11	10	14	16	19	22	24	24	24
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	2	3	3	3	4	4	4	4	4	4	4
MEA	1	2	3	5	5	6	6	6	6	7	6
NEU	0	1	1	2	2	2	2	2	2	2	2
OAS	21	19	20	24	30	35	38	41	43	44	47
REF	0	0	0	1	1	1	1	1	1	1	1
SSA	2	2	2	2	2	3	4	5	6	7	8
USA	1	1	1	2	2	2	2	2	2	2	2

Table 599: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

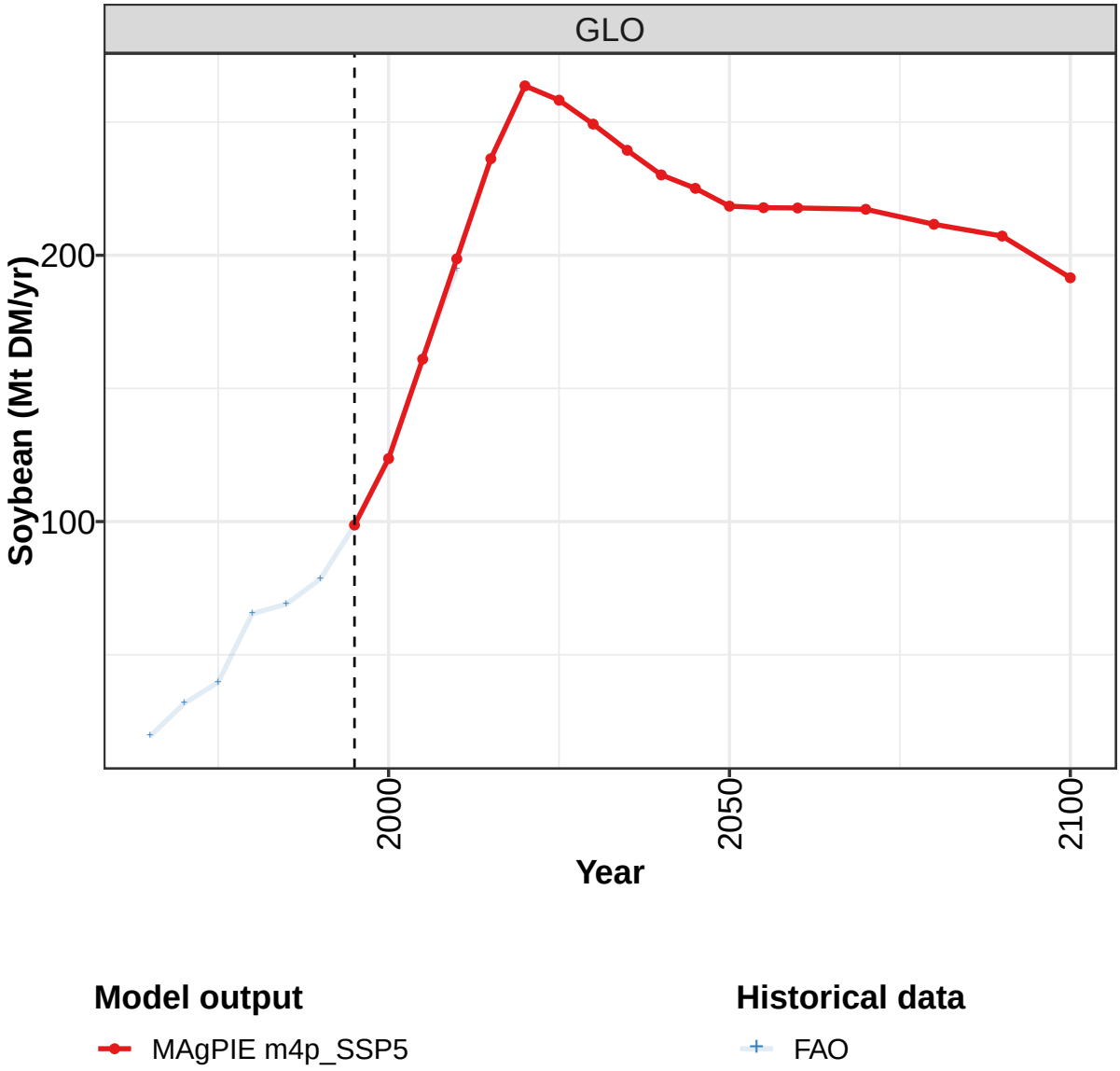
	2050	2055	2060	2070	2080	2090	2100
GLO	139	138	137	129	120	112	103
CAZ	10	10	10	10	10	11	10
CHA	12	11	11	9	8	7	6
EUR	21	22	22	22	22	22	22
IND	23	22	21	18	16	15	14
JPN	2	2	2	2	2	1	1
LAM	4	4	4	4	4	4	3
MEA	6	7	8	9	9	8	7
NEU	1	1	1	1	2	2	2
OAS	49	48	46	39	34	28	25
REF	1	1	1	1	1	1	1
SSA	8	9	10	11	11	12	11
USA	2	2	2	2	2	2	2

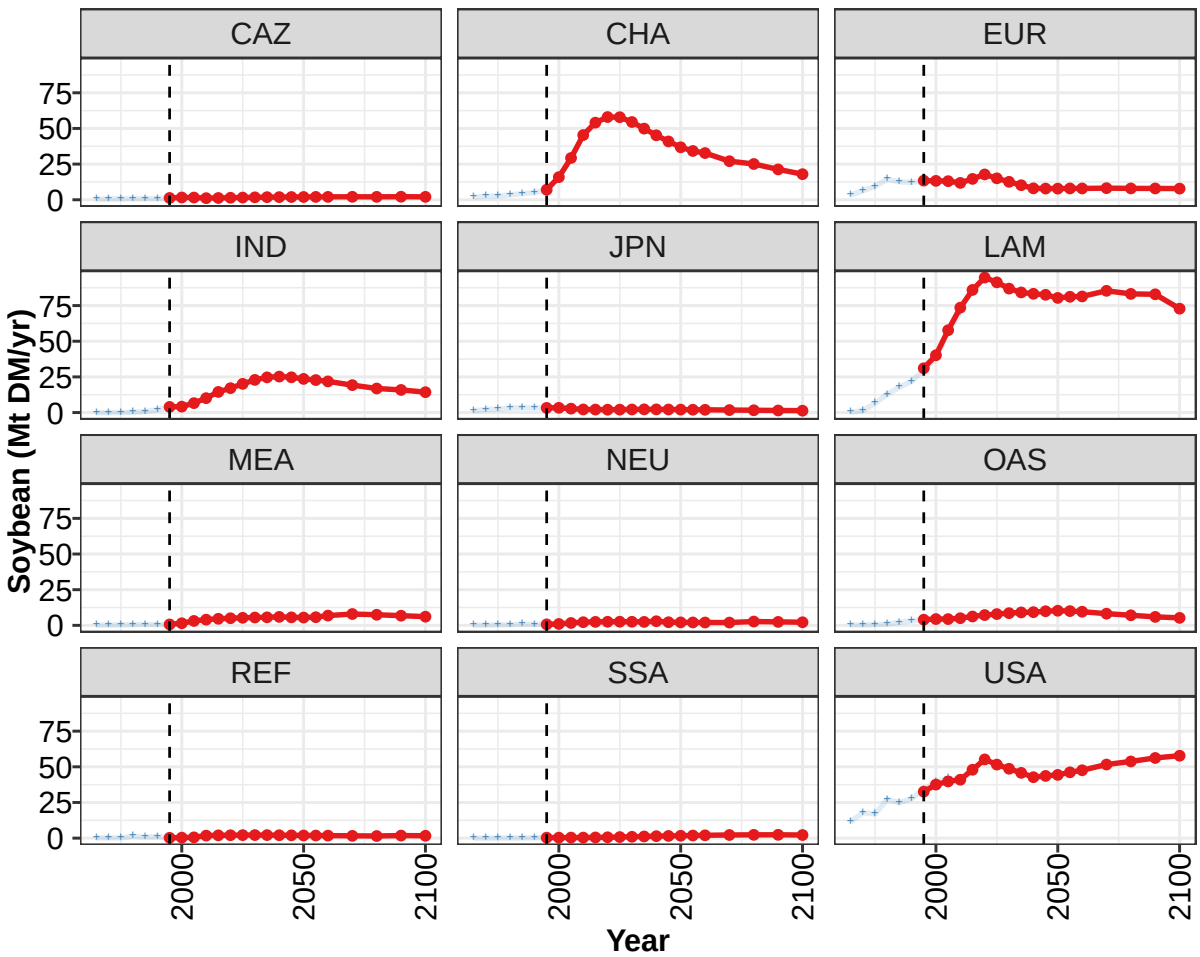
Table 600: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	31	34	41	45	50	59	67	76	84	103
CAZ	0	0	0	1	1	1	3	3	3	6
CHA	2	2	3	4	6	8	9	12	13	15
EUR	10	9	12	12	13	13	16	20	23	32
IND	4	4	5	4	6	8	9	10	11	10
JPN	1	1	1	1	2	2	2	2	2	2
LAM	3	3	3	3	2	3	2	3	3	3
MEA	1	1	2	2	1	2	1	2	3	5
NEU	1	1	1	1	1	1	0	1	1	2
OAS	7	9	12	15	15	19	21	19	20	24
REF	0	0	0	0	0	1	0	0	0	1
SSA	1	1	1	1	2	2	2	2	2	2
USA	2	1	0	0	0	0	1	1	1	2

Table 601: FAO — Demand—Processing—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

9.1.11 Oil crops—Soybean





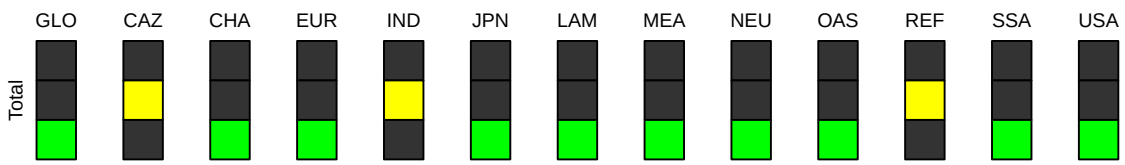


Figure 201: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	99	124	161	199	236	264	258	249	239	230	225
CAZ	1	2	2	1	1	1	2	2	2	2	2
CHA	7	16	29	45	54	58	58	55	50	45	41
EUR	13	13	13	12	15	18	15	13	10	8	8
IND	4	4	7	10	14	17	20	23	25	25	25
JPN	3	3	3	2	2	2	2	2	2	2	2
LAM	31	40	58	74	86	95	91	87	84	83	83
MEA	1	1	3	4	5	5	5	6	6	6	6
NEU	1	1	2	2	2	3	3	3	2	3	2
OAS	4	4	4	5	6	7	8	9	9	9	10
REF	0	0	1	2	2	2	2	2	2	2	2
SSA	0	0	0	0	1	1	1	1	1	1	2
USA	33	38	40	41	48	55	52	49	46	43	44

Table 602: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

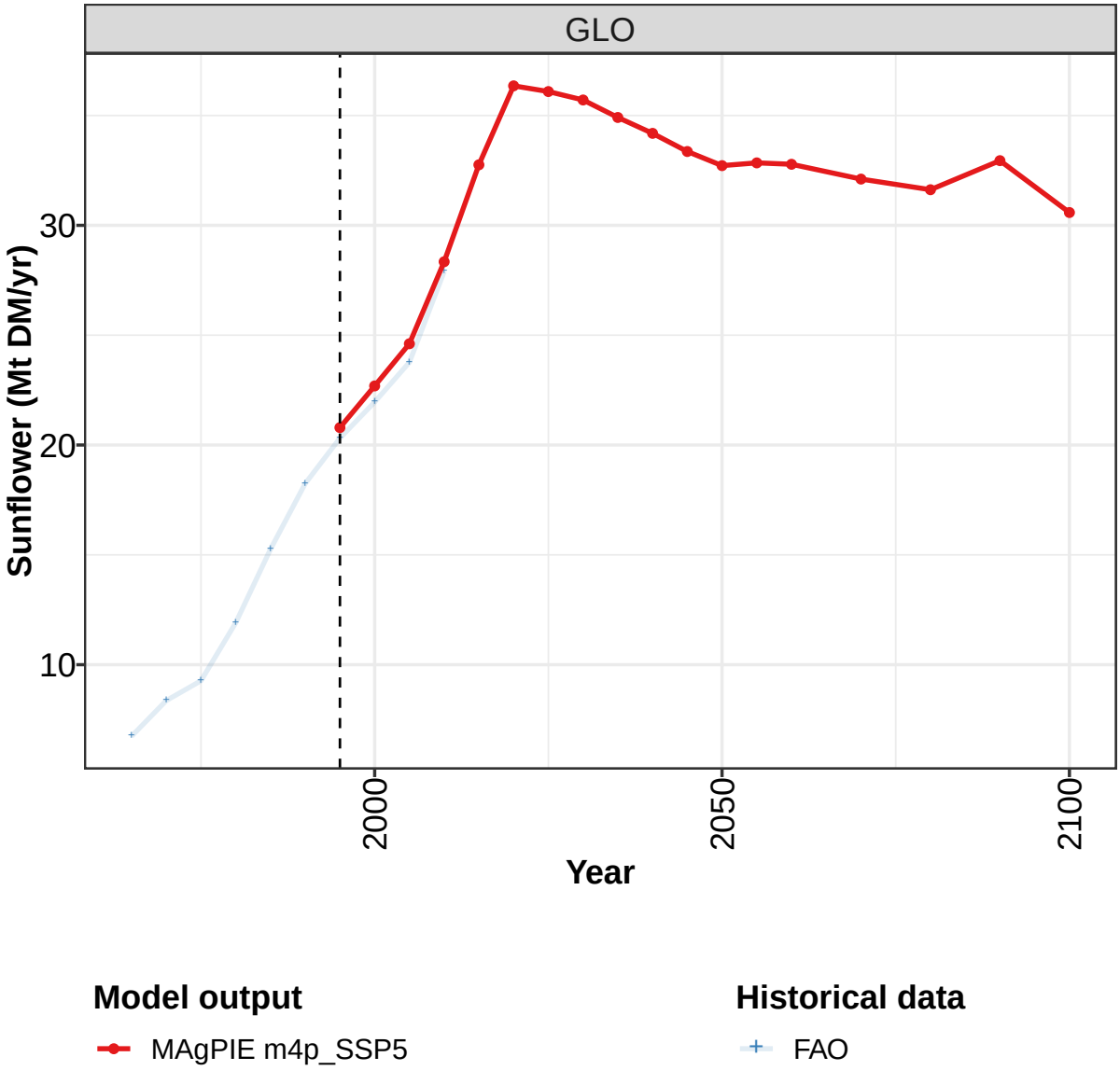
	2050	2055	2060	2070	2080	2090	2100
GLO	218	218	218	217	212	207	192
CAZ	2	2	2	2	2	2	2
CHA	37	34	33	27	25	21	18
EUR	8	8	8	8	8	8	8
IND	24	23	22	19	17	16	14
JPN	2	2	2	2	2	1	1
LAM	80	81	81	85	83	83	73
MEA	5	6	7	8	7	7	6
NEU	2	2	2	2	3	2	2
OAS	10	10	10	8	7	6	5
REF	2	2	2	2	2	2	2
SSA	2	2	2	2	2	2	2
USA	44	46	48	52	54	56	58

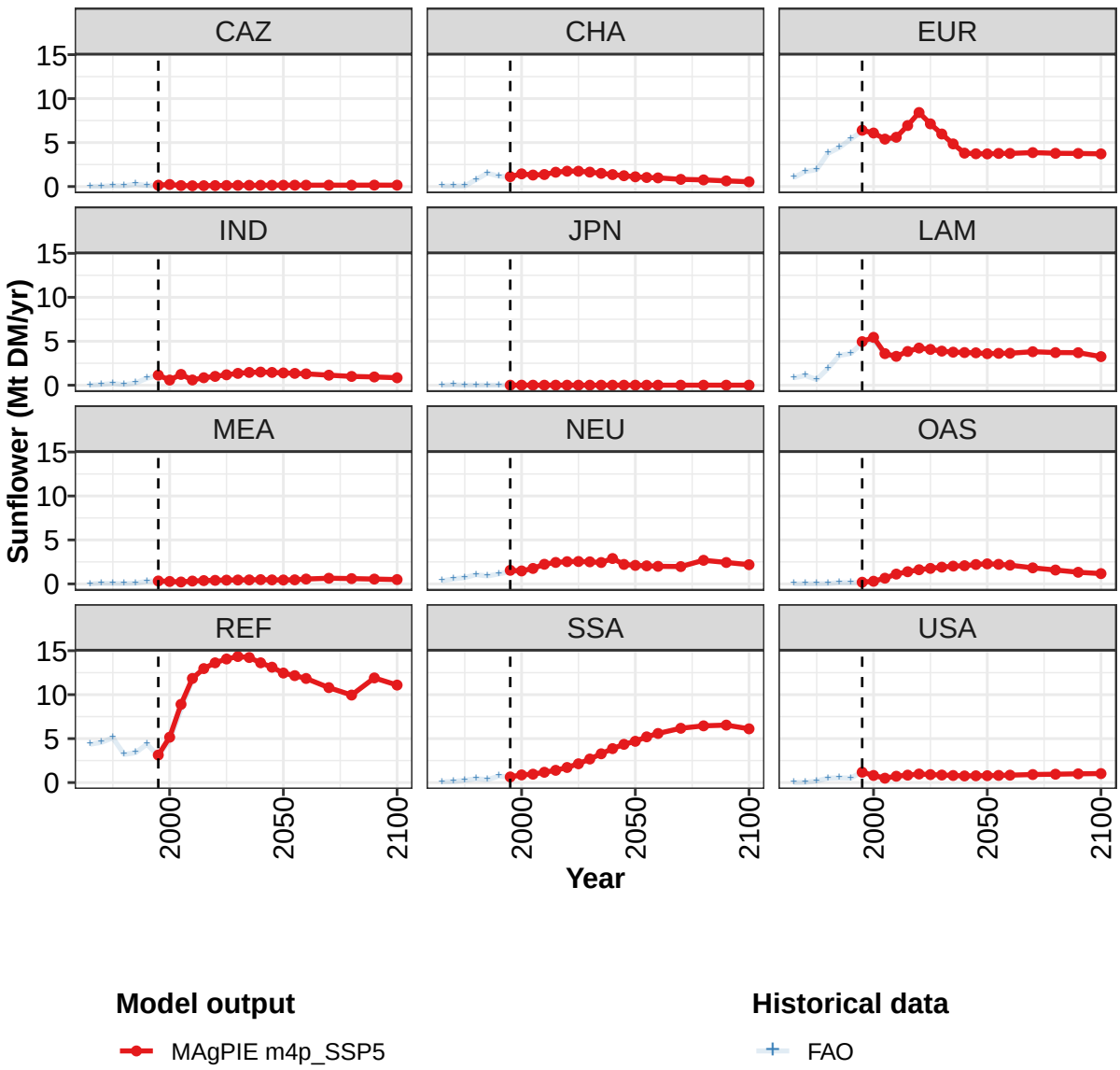
Table 603: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	19	32	40	65	69	78	99	123	162	195
CAZ	0	1	1	1	1	1	1	2	2	1
CHA	2	2	3	3	4	5	7	16	29	45
EUR	3	6	9	14	13	12	13	13	13	12
IND	0	0	0	0	1	2	4	4	7	10
JPN	1	2	2	3	3	3	3	3	3	2
LAM	0	1	7	13	18	22	30	38	57	70
MEA	0	0	0	0	1	0	1	1	3	4
NEU	0	0	0	1	1	1	1	1	2	2
OAS	0	0	0	1	2	3	4	4	4	5
REF	0	0	0	1	1	1	0	0	1	2
SSA	0	0	0	0	0	0	0	0	0	0
USA	12	18	17	27	25	28	34	40	42	41

Table 604: FAO — Demand—Processing—Crops—Oil crops—Soybean (Mt DM/yr)

9.1.12 Oil crops—Sunflower





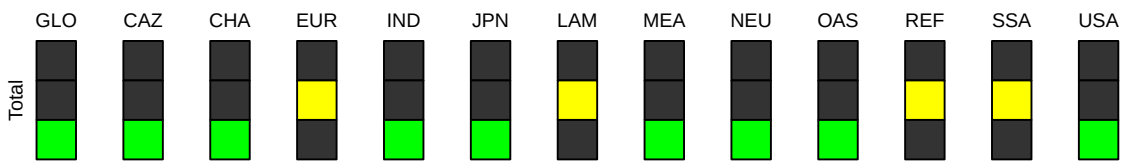


Figure 202: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	20.8	22.7	24.6	28.3	32.8	36.4	36.1	35.7	34.9	34.2	33.4
CAZ	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	1.1	1.4	1.3	1.4	1.6	1.7	1.7	1.6	1.5	1.4	1.2
EUR	6.4	6.1	5.4	5.6	6.9	8.4	7.1	6.0	4.8	3.8	3.7
IND	1.1	0.6	1.2	0.6	0.9	1.0	1.2	1.3	1.5	1.5	1.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	5.0	5.4	3.6	3.3	3.8	4.2	4.1	3.9	3.8	3.7	3.7
MEA	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5
NEU	1.5	1.5	1.8	2.2	2.4	2.5	2.6	2.5	2.4	2.9	2.2
OAS	0.2	0.3	0.6	1.1	1.4	1.6	1.8	1.9	2.0	2.1	2.2
REF	3.1	5.2	8.9	11.8	13.0	13.6	14.1	14.3	14.2	13.6	13.1
SSA	0.6	0.9	1.0	1.2	1.4	1.7	2.1	2.7	3.3	3.9	4.3
USA	1.2	0.8	0.5	0.7	0.8	1.0	0.9	0.9	0.8	0.8	0.8

Table 605: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

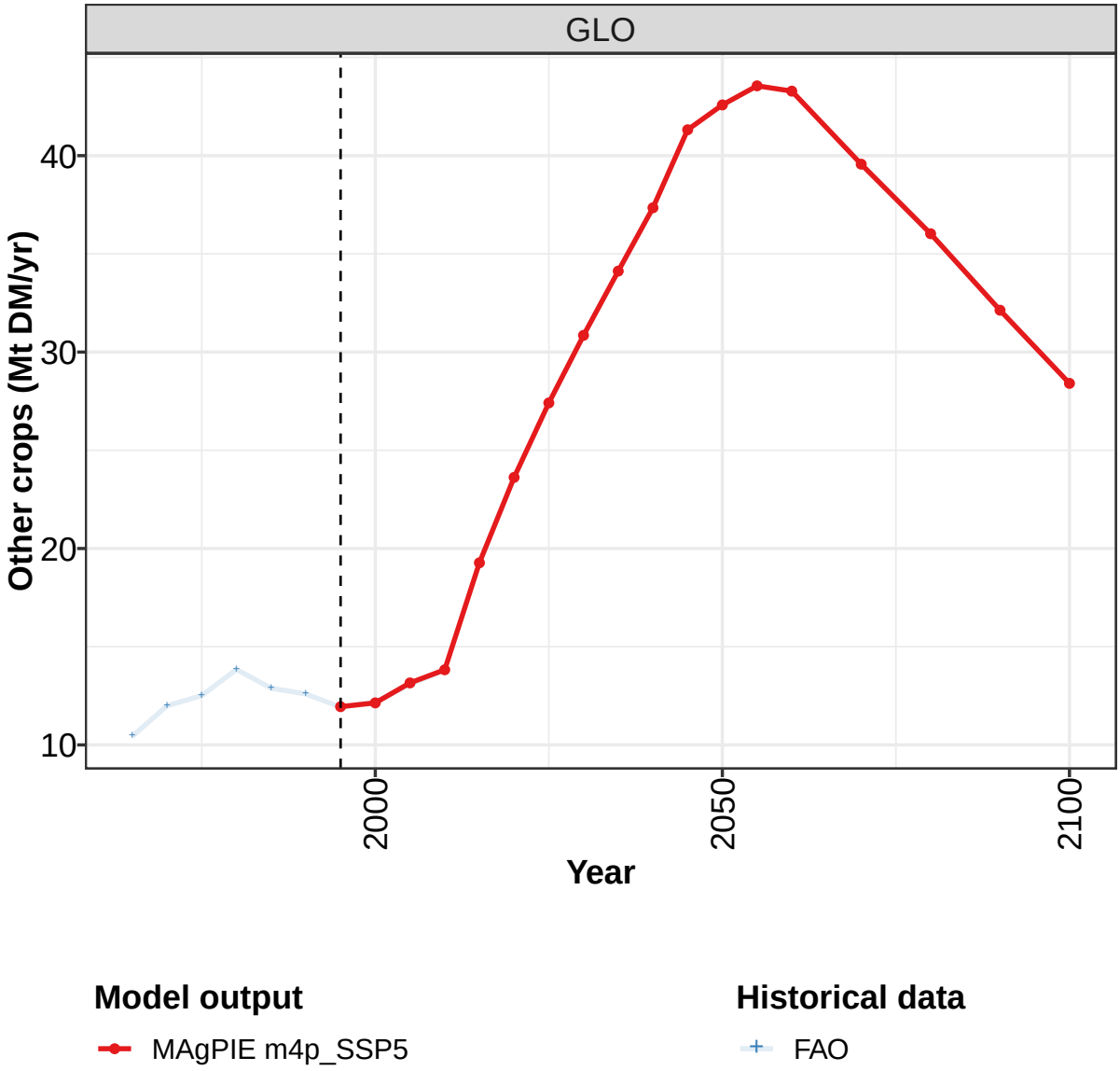
	2050	2055	2060	2070	2080	2090	2100
GLO	32.7	32.8	32.8	32.1	31.6	32.9	30.6
CAZ	0.1	0.1	0.2	0.2	0.2	0.2	0.2
CHA	1.1	1.0	1.0	0.8	0.8	0.6	0.5
EUR	3.7	3.8	3.8	3.9	3.8	3.8	3.7
IND	1.4	1.3	1.3	1.1	1.0	0.9	0.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.6	3.6	3.6	3.8	3.7	3.7	3.3
MEA	0.4	0.5	0.6	0.6	0.6	0.5	0.5
NEU	2.1	2.1	2.0	2.0	2.7	2.4	2.2
OAS	2.3	2.2	2.1	1.8	1.6	1.3	1.2
REF	12.5	12.2	11.8	10.8	10.0	11.9	11.1
SSA	4.7	5.2	5.6	6.2	6.5	6.5	6.1
USA	0.8	0.8	0.8	0.9	1.0	1.0	1.0

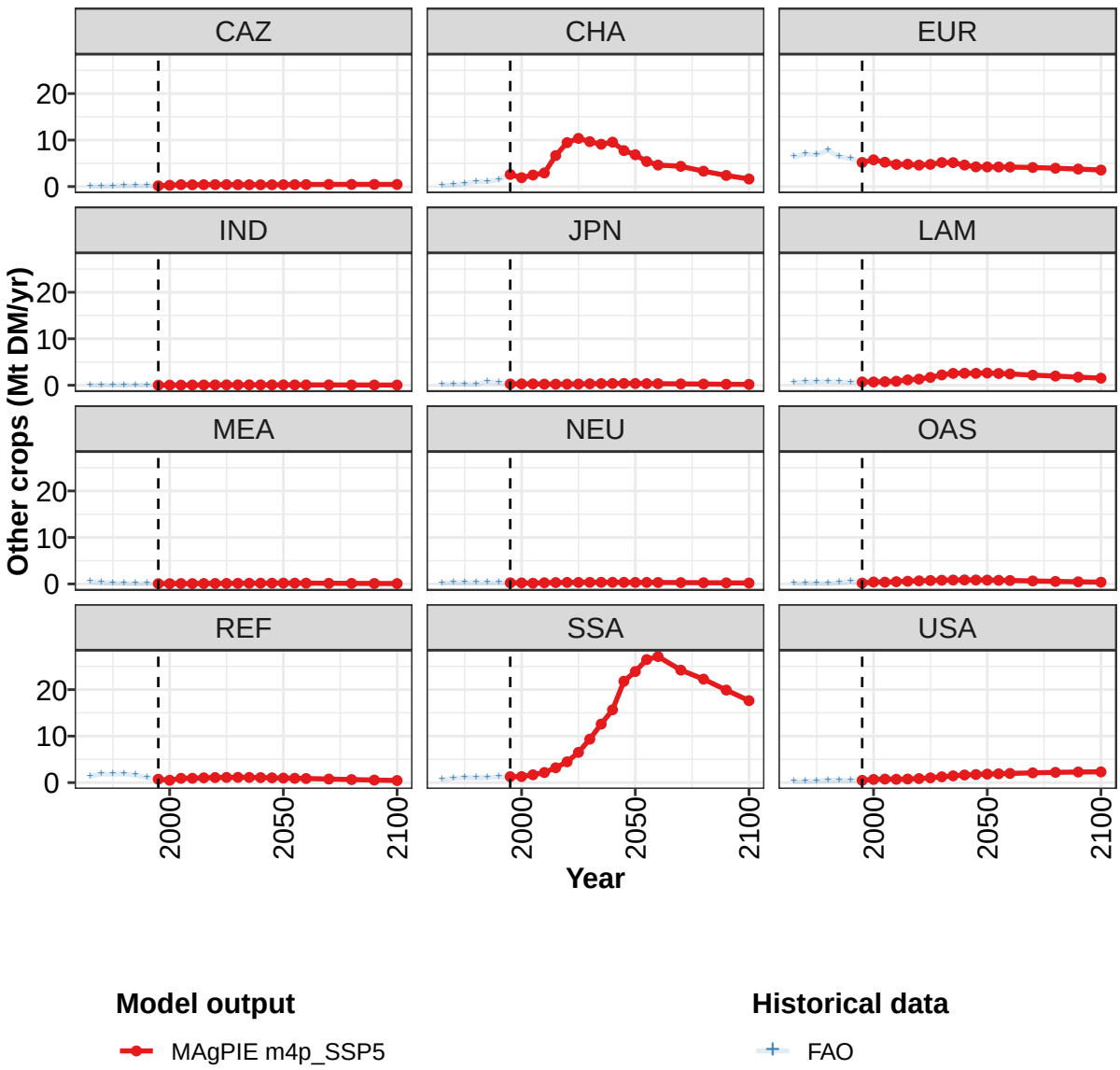
Table 606: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	6.7	8.4	9.3	11.9	15.3	18.2	20.3	22.0	23.8	27.9
CAZ	0.0	0.0	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.1
CHA	0.1	0.1	0.1	0.8	1.5	1.2	1.1	1.4	1.3	1.4
EUR	1.0	1.7	1.9	3.8	4.4	5.4	6.3	6.1	5.3	5.5
IND	0.0	0.1	0.2	0.1	0.2	0.8	1.1	0.6	1.2	0.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.8	1.1	0.7	1.9	3.4	3.6	4.8	5.1	3.5	3.1
MEA	0.0	0.1	0.1	0.0	0.1	0.3	0.3	0.3	0.2	0.3
NEU	0.3	0.6	0.7	1.1	0.9	1.1	1.4	1.4	1.7	2.2
OAS	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.3	0.6	1.1
REF	4.4	4.6	5.1	3.2	3.4	4.4	3.0	4.8	8.3	11.7
SSA	0.1	0.1	0.3	0.4	0.3	0.7	0.6	0.9	1.0	1.2
USA	0.0	0.0	0.2	0.5	0.5	0.5	1.2	0.9	0.5	0.7

Table 607: FAO — Demand—Processing—Crops—Oil crops—Sunflower (Mt DM/yr)

9.1.13 Other crops





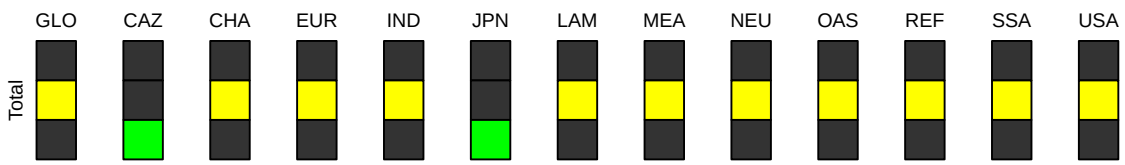


Figure 203: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.9	12.1	13.2	13.8	19.3	23.6	27.4	30.9	34.1	37.3	41.3
CAZ	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CHA	2.6	1.9	2.5	2.9	6.7	9.5	10.4	9.7	9.1	9.6	7.7
EUR	5.2	5.7	5.2	4.8	4.8	4.6	4.8	5.2	5.1	4.6	4.2
IND	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4
LAM	0.7	0.7	0.8	0.9	1.2	1.3	1.7	2.2	2.6	2.6	2.6
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
NEU	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OAS	0.2	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.9	0.8
REF	0.7	0.5	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.0
SSA	1.3	1.3	1.7	2.2	3.2	4.5	6.5	9.4	12.6	15.7	21.8
USA	0.5	0.7	0.8	0.7	0.8	0.9	1.0	1.2	1.5	1.6	1.7

Table 608: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops (Mt DM/yr) [PART 1/2]

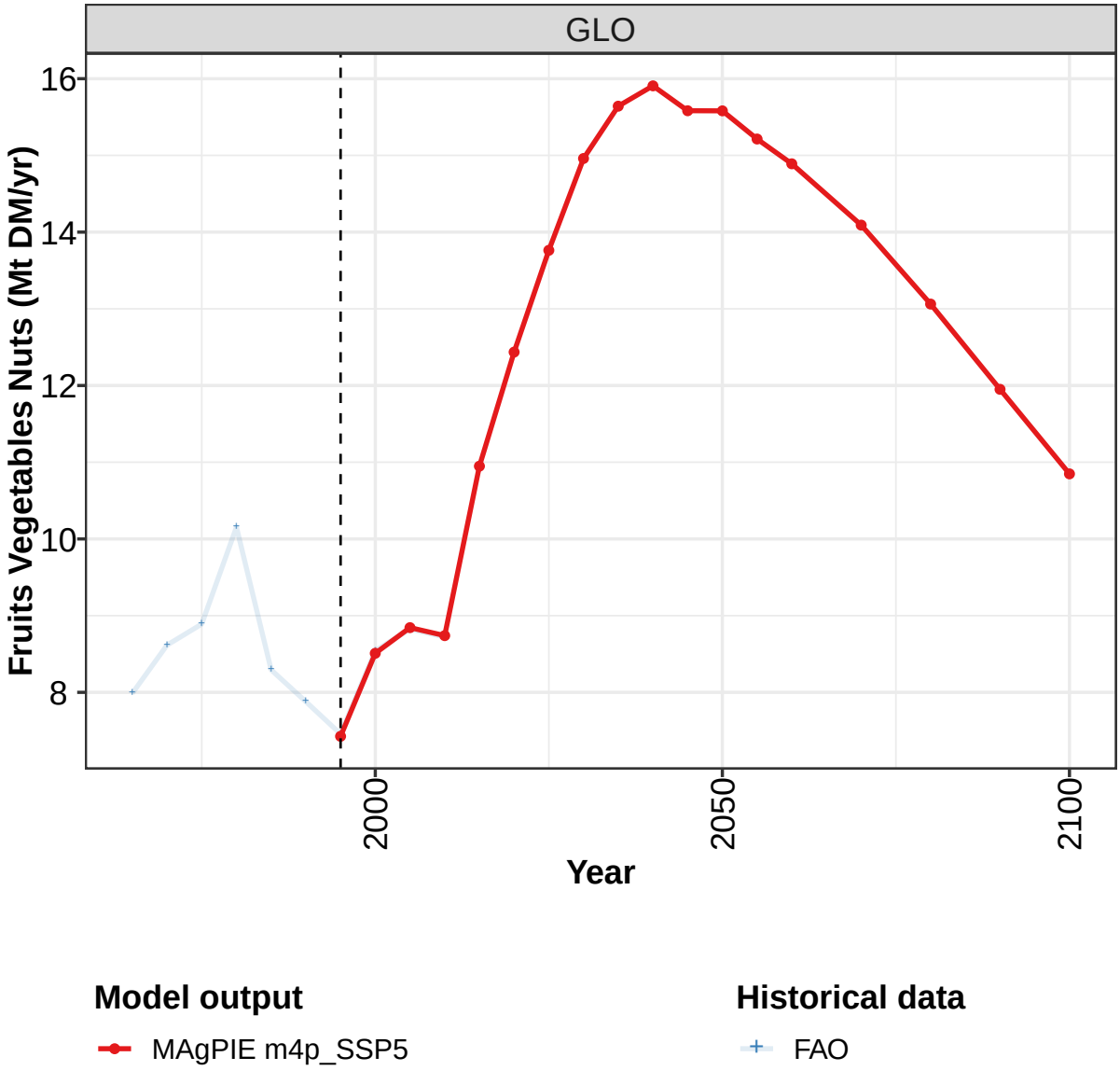
	2050	2055	2060	2070	2080	2090	2100
GLO	42.6	43.6	43.3	39.6	36.0	32.1	28.4
CAZ	0.4	0.4	0.4	0.5	0.5	0.5	0.5
CHA	6.8	5.4	4.6	4.4	3.3	2.4	1.6
EUR	4.2	4.2	4.2	4.1	3.9	3.8	3.5
IND	0.1	0.1	0.1	0.1	0.1	0.0	0.0
JPN	0.4	0.4	0.3	0.3	0.2	0.2	0.2
LAM	2.6	2.5	2.4	2.2	2.0	1.7	1.5
MEA	0.2	0.2	0.2	0.1	0.1	0.1	0.1
NEU	0.3	0.3	0.3	0.3	0.3	0.2	0.2
OAS	0.8	0.8	0.7	0.6	0.5	0.5	0.4
REF	1.0	0.9	0.9	0.8	0.7	0.5	0.4
SSA	23.9	26.5	27.1	24.2	22.3	19.9	17.6
USA	1.8	1.9	2.0	2.1	2.2	2.3	2.3

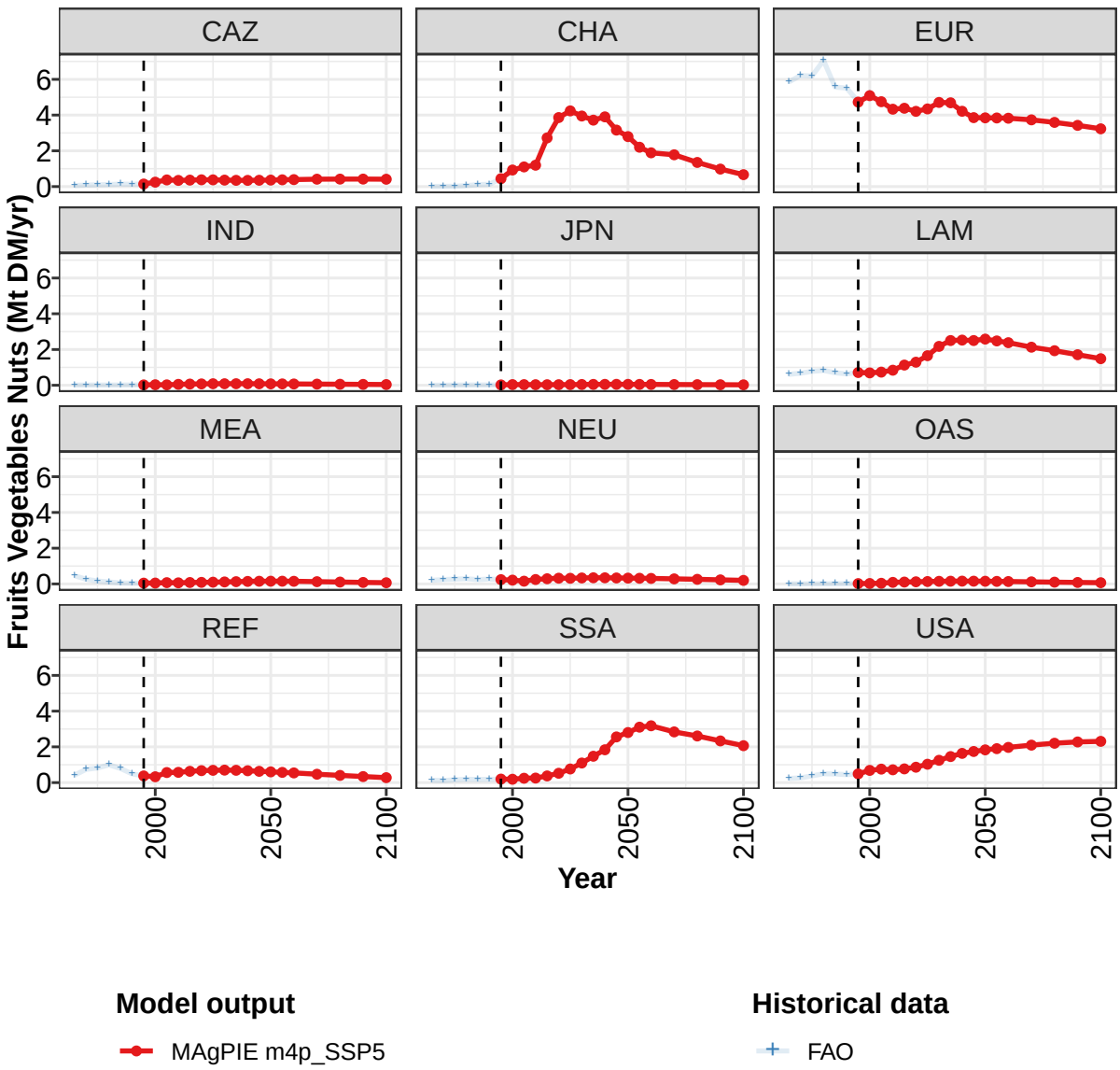
Table 609: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	10.4	12.0	12.5	13.8	12.9	12.6	11.9	12.2	13.1	13.8
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.4
CHA	0.2	0.3	0.6	1.0	1.1	1.5	2.6	1.9	2.5	3.0
EUR	6.4	6.9	6.8	7.8	6.4	6.1	5.2	5.8	5.2	4.7
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
JPN	0.2	0.2	0.2	0.2	0.8	0.5	0.3	0.3	0.3	0.2
LAM	0.6	0.7	0.8	0.8	0.7	0.6	0.7	0.7	0.8	0.9
MEA	0.5	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1
NEU	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3
OAS	0.1	0.1	0.1	0.1	0.3	0.6	0.2	0.4	0.4	0.5
REF	1.4	1.9	1.8	1.9	1.6	1.1	0.7	0.5	0.9	0.9
SSA	0.6	1.0	1.1	1.0	1.1	1.2	1.2	1.3	1.6	2.2
USA	0.2	0.3	0.4	0.5	0.5	0.4	0.5	0.7	0.8	0.7

Table 610: FAO — Demand—Processing—Crops—Other crops (Mt DM/yr)

9.1.14 Other crops—Fruits Vegetables Nuts





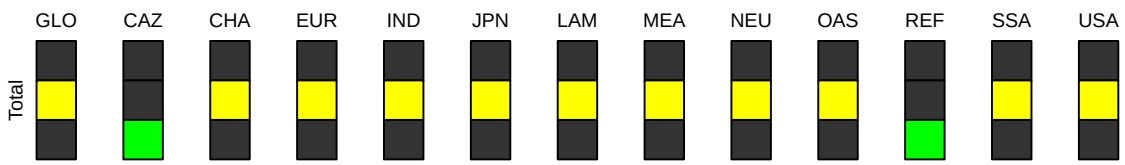


Figure 204: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.4	8.5	8.8	8.7	10.9	12.4	13.8	15.0	15.6	15.9	15.6
CAZ	0.1	0.2	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4
CHA	0.4	0.9	1.1	1.2	2.7	3.9	4.2	3.9	3.7	3.9	3.2
EUR	4.7	5.1	4.7	4.3	4.4	4.2	4.3	4.7	4.7	4.2	3.9
IND	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
LAM	0.7	0.7	0.7	0.8	1.1	1.3	1.7	2.2	2.5	2.5	2.5
MEA	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
NEU	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OAS	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
REF	0.4	0.3	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6
SSA	0.2	0.2	0.2	0.3	0.4	0.5	0.8	1.1	1.5	1.8	2.6
USA	0.5	0.7	0.8	0.7	0.8	0.9	1.0	1.2	1.5	1.6	1.7

Table 611: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

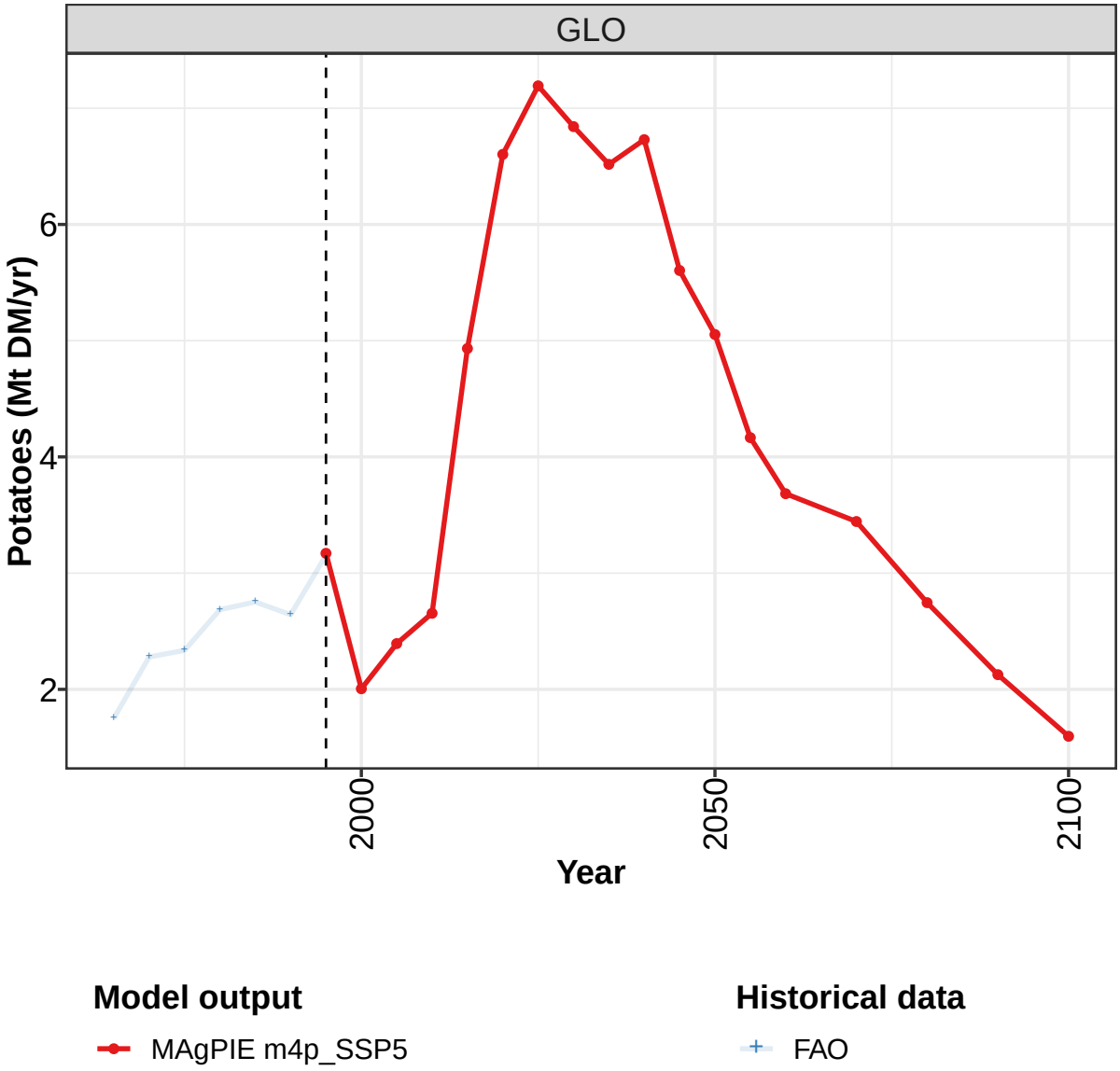
	2050	2055	2060	2070	2080	2090	2100
GLO	15.6	15.2	14.9	14.1	13.1	12.0	10.8
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CHA	2.8	2.2	1.9	1.8	1.4	1.0	0.7
EUR	3.8	3.8	3.8	3.7	3.6	3.4	3.2
IND	0.1	0.1	0.1	0.1	0.1	0.0	0.0
JPN	0.1	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.6	2.5	2.4	2.1	1.9	1.7	1.5
MEA	0.2	0.2	0.1	0.1	0.1	0.1	0.1
NEU	0.3	0.3	0.3	0.3	0.3	0.2	0.2
OAS	0.1	0.1	0.1	0.1	0.1	0.1	0.1
REF	0.6	0.6	0.5	0.5	0.4	0.3	0.3
SSA	2.8	3.1	3.2	2.8	2.6	2.3	2.1
USA	1.8	1.9	2.0	2.1	2.2	2.3	2.3

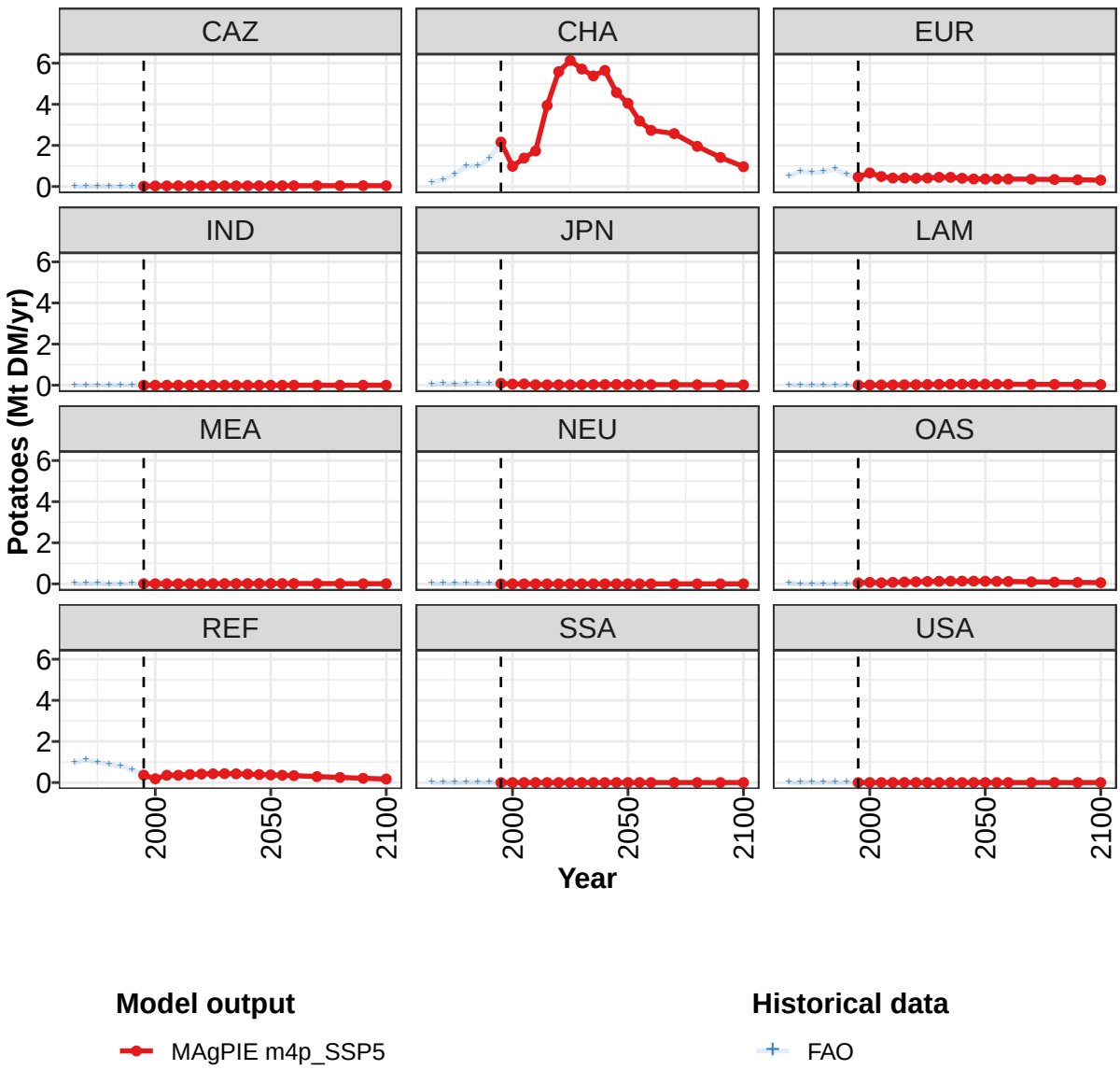
Table 612: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.0	8.6	8.9	10.2	8.3	7.9	7.5	8.5	8.8	8.7
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3
CHA	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.9	1.1	1.2
EUR	5.9	6.2	6.2	7.1	5.6	5.5	4.8	5.2	4.7	4.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.6	0.7	0.8	0.8	0.7	0.6	0.7	0.7	0.8	0.9
MEA	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1
NEU	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
REF	0.4	0.7	0.8	1.0	0.8	0.5	0.4	0.3	0.6	0.6
SSA	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
USA	0.2	0.3	0.4	0.5	0.5	0.4	0.5	0.7	0.8	0.7

Table 613: FAO — Demand—Processing—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

9.1.15 Other crops—Potatoes





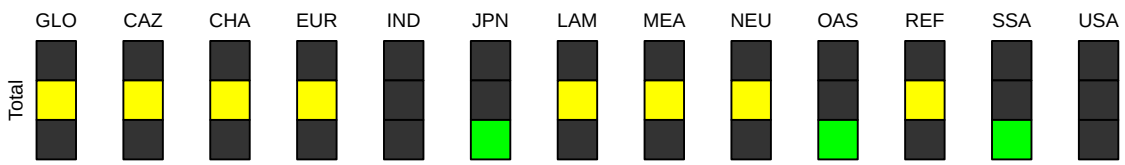


Figure 205: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.17	2.01	2.39	2.65	4.93	6.60	7.19	6.84	6.52	6.73	5.60
CAZ	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.03
CHA	2.16	0.98	1.38	1.73	3.94	5.59	6.13	5.72	5.38	5.65	4.58
EUR	0.46	0.66	0.49	0.41	0.42	0.40	0.41	0.45	0.45	0.40	0.37
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.09	0.05	0.06	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
LAM	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.05
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.05	0.07	0.05	0.08	0.09	0.10	0.12	0.13	0.13	0.14	0.13
REF	0.36	0.19	0.36	0.36	0.39	0.41	0.43	0.43	0.43	0.41	0.39
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 614: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

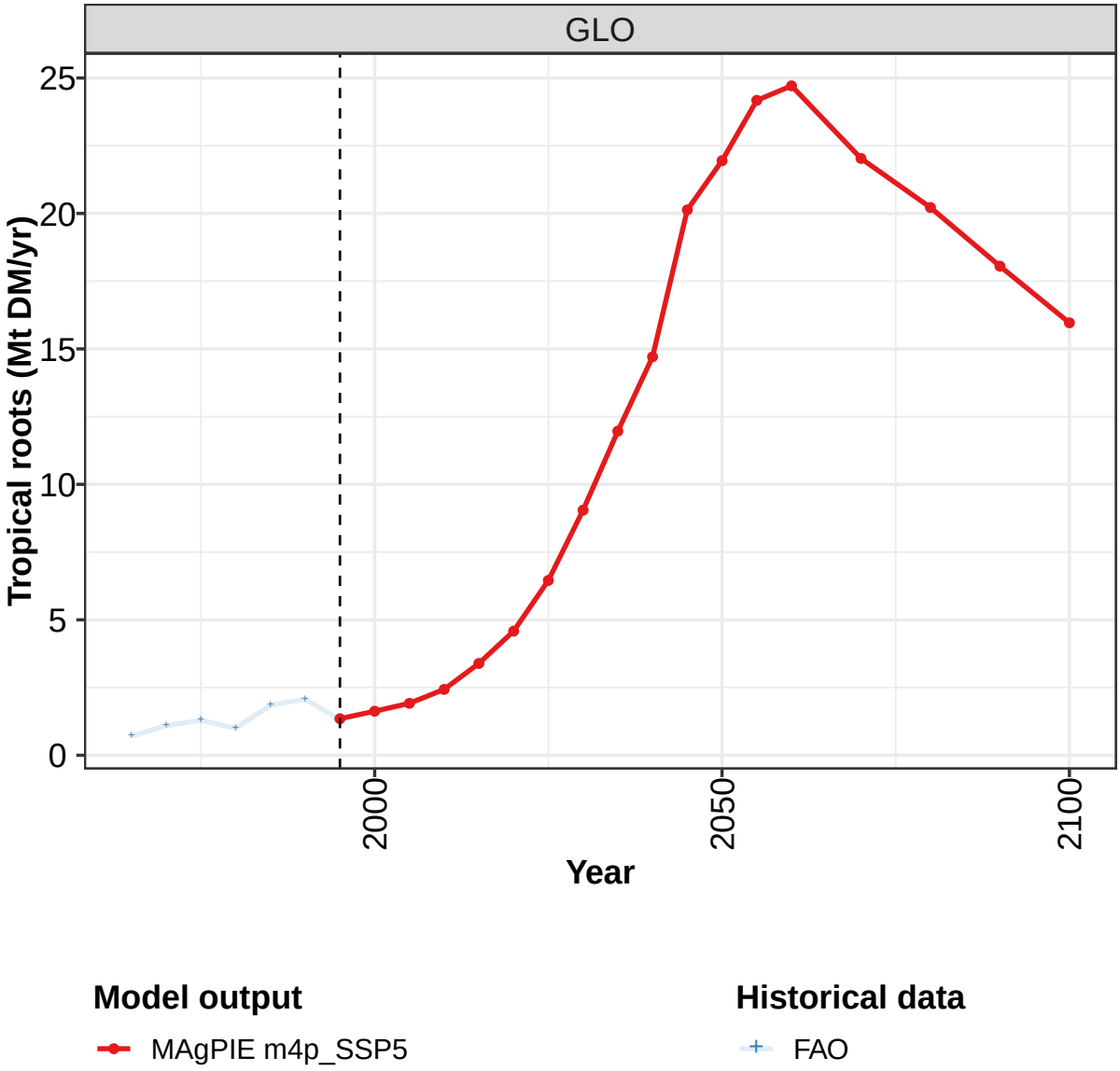
	2050	2055	2060	2070	2080	2090	2100
GLO	5.05	4.17	3.68	3.44	2.75	2.13	1.60
CAZ	0.03	0.04	0.04	0.04	0.04	0.04	0.04
CHA	4.05	3.19	2.73	2.57	1.96	1.42	0.96
EUR	0.37	0.37	0.36	0.36	0.34	0.33	0.31
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.03	0.03	0.03	0.03	0.02	0.02	0.02
LAM	0.05	0.05	0.05	0.04	0.04	0.03	0.03
MEA	0.02	0.02	0.02	0.01	0.01	0.01	0.01
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.13	0.12	0.12	0.10	0.09	0.07	0.06
REF	0.37	0.35	0.34	0.29	0.25	0.21	0.17
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

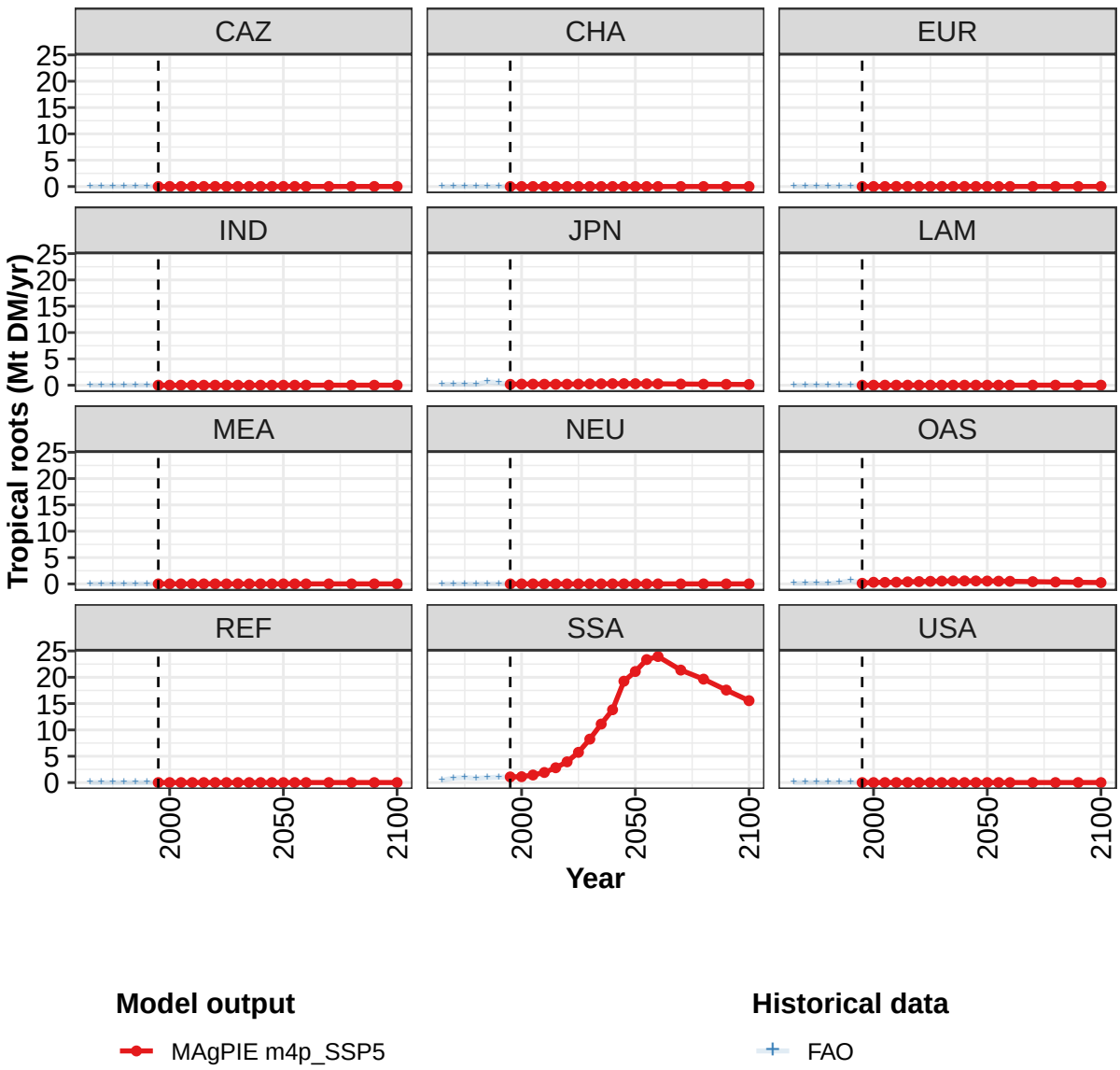
Table 615: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.75	2.28	2.34	2.69	2.75	2.64	3.15	2.00	2.38	2.66
CAZ	0.01	0.01	0.00	0.00	0.01	0.00	0.02	0.02	0.03	0.03
CHA	0.20	0.33	0.60	0.99	0.99	1.34	2.14	0.97	1.37	1.74
EUR	0.51	0.73	0.66	0.72	0.85	0.58	0.47	0.67	0.48	0.41
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.04	0.07	0.05	0.07	0.09	0.07	0.09	0.05	0.06	0.02
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02
MEA	0.01	0.01	0.02	0.00	0.00	0.00	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
OAS	0.02	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.05	0.07
REF	0.95	1.12	0.99	0.88	0.81	0.63	0.36	0.19	0.36	0.36
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 616: FAO — Demand—Processing—Crops—Other crops—Potatoes (Mt DM/yr)

9.1.16 Other crops—Tropical roots





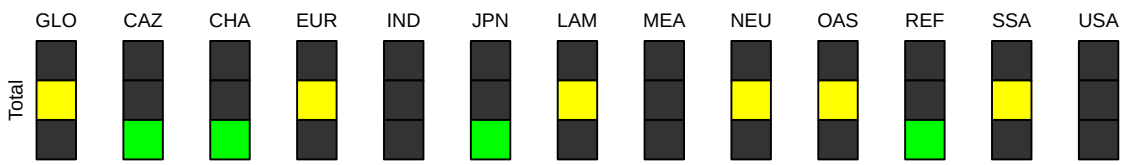


Figure 206: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.4	1.6	1.9	2.4	3.4	4.6	6.5	9.0	12.0	14.7	20.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.1	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.1	1.1	1.4	1.9	2.8	3.9	5.7	8.3	11.1	13.8	19.3
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 617: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

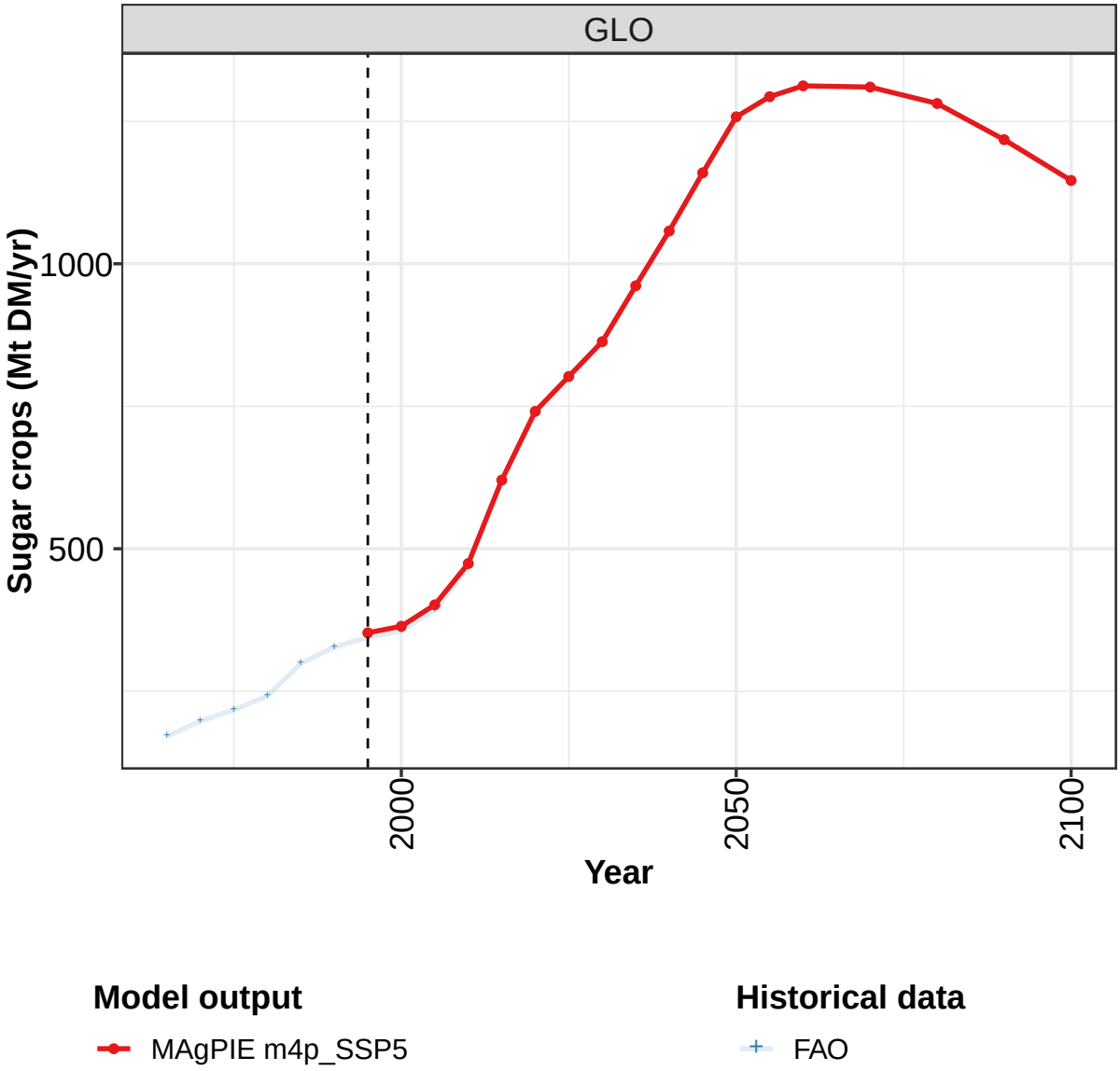
	2050	2055	2060	2070	2080	2090	2100
GLO	21.9	24.2	24.7	22.0	20.2	18.1	16.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.3	0.3	0.3	0.2	0.2	0.2	0.1
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.5	0.5	0.5	0.4	0.4	0.3	0.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	21.1	23.4	23.9	21.4	19.6	17.6	15.6
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

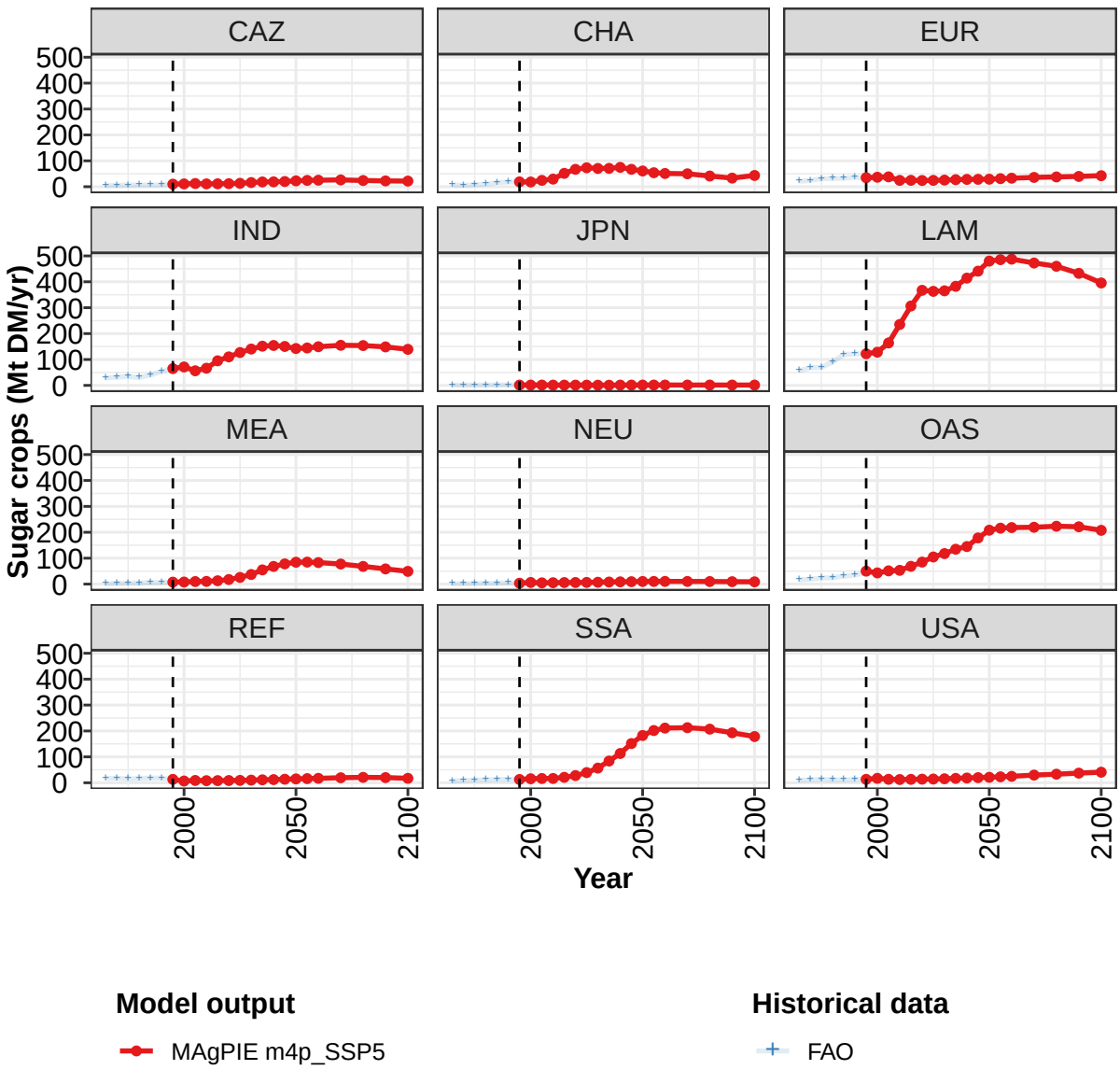
Table 618: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.70	1.10	1.29	1.00	1.84	2.07	1.32	1.63	1.87	2.43
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.15	0.16	0.18	0.13	0.66	0.43	0.16	0.20	0.19	0.18
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.10	0.09	0.14	0.06	0.25	0.60	0.11	0.31	0.28	0.31
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.46	0.85	0.97	0.81	0.93	1.04	1.04	1.12	1.39	1.91
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 619: FAO — Demand—Processing—Crops—Other crops—Tropical roots (Mt DM/yr)

9.1.17 Sugar crops





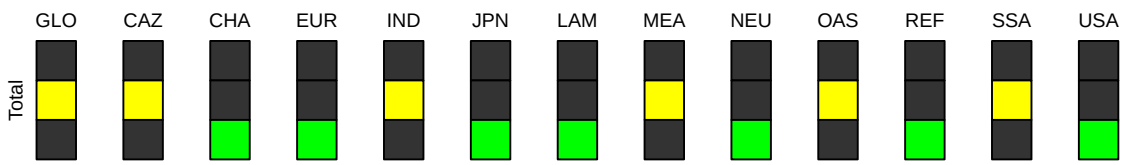


Figure 207: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	353	364	402	474	621	741	802	863	961	1058	1160
CAZ	10	11	12	11	11	12	13	16	19	19	20
CHA	19	18	25	29	52	67	73	71	71	75	67
EUR	35	37	38	25	25	24	25	26	27	28	29
IND	65	71	56	66	95	110	127	140	151	154	150
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	122	128	164	235	307	367	363	365	383	414	441
MEA	8	8	10	10	13	18	26	37	55	68	78
NEU	3	6	5	5	6	6	7	7	8	9	9
OAS	50	43	51	53	69	85	105	118	135	145	178
REF	13	7	9	8	8	9	9	10	11	12	14
SSA	13	16	17	17	21	28	39	57	84	113	152
USA	13	17	13	13	13	14	14	15	17	18	20

Table 620: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

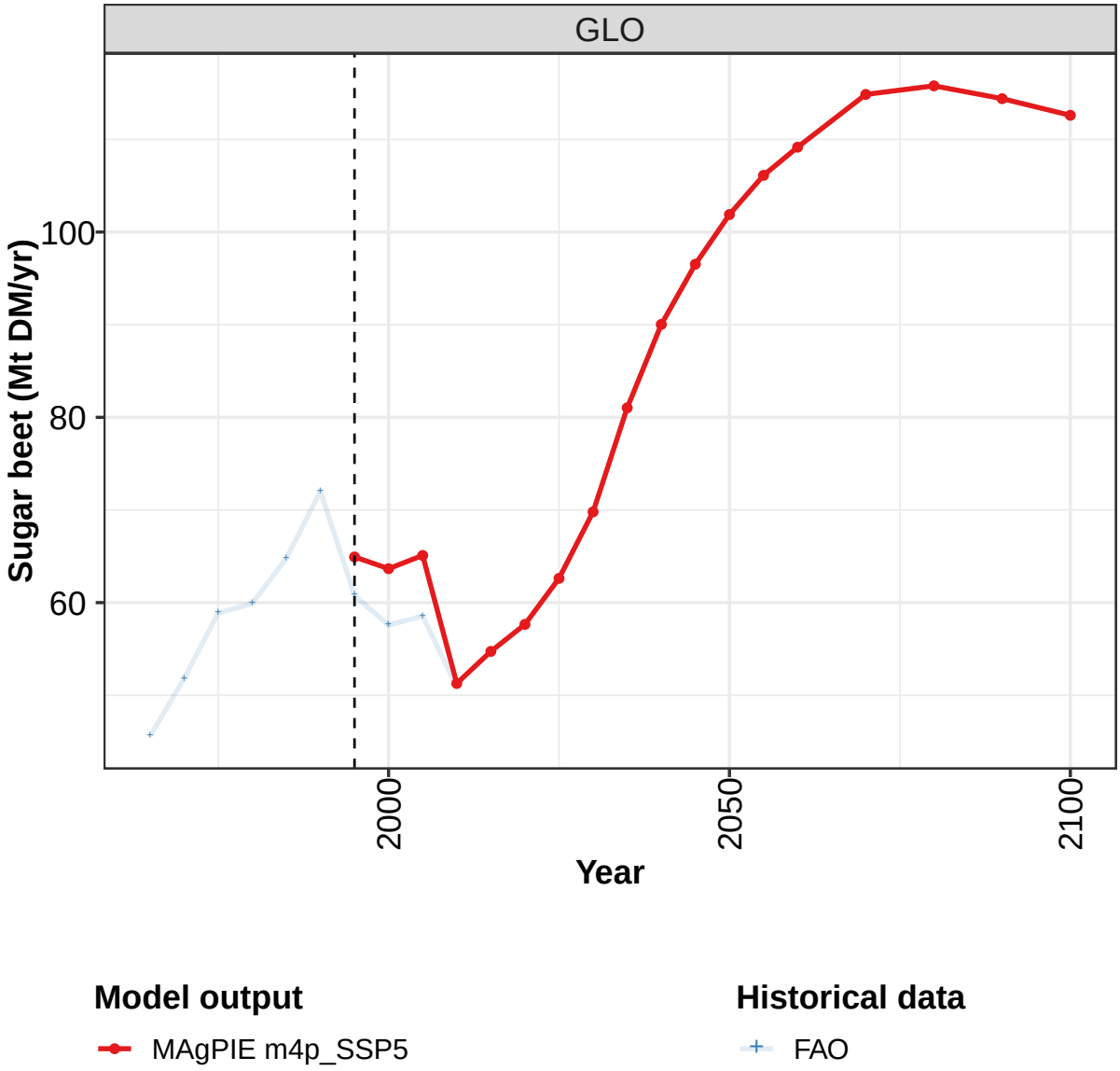
	2050	2055	2060	2070	2080	2090	2100
GLO	1258	1293	1312	1310	1281	1218	1146
CAZ	23	25	25	26	24	22	22
CHA	61	54	51	50	41	33	43
EUR	29	31	33	36	38	40	43
IND	142	145	149	155	154	149	139
JPN	1	1	1	1	1	1	1
LAM	480	486	487	473	460	433	396
MEA	84	85	83	77	68	59	49
NEU	10	10	10	10	10	9	9
OAS	208	216	218	219	223	221	208
REF	15	16	17	19	21	20	17
SSA	183	202	211	213	207	193	179
USA	21	23	25	30	33	37	41

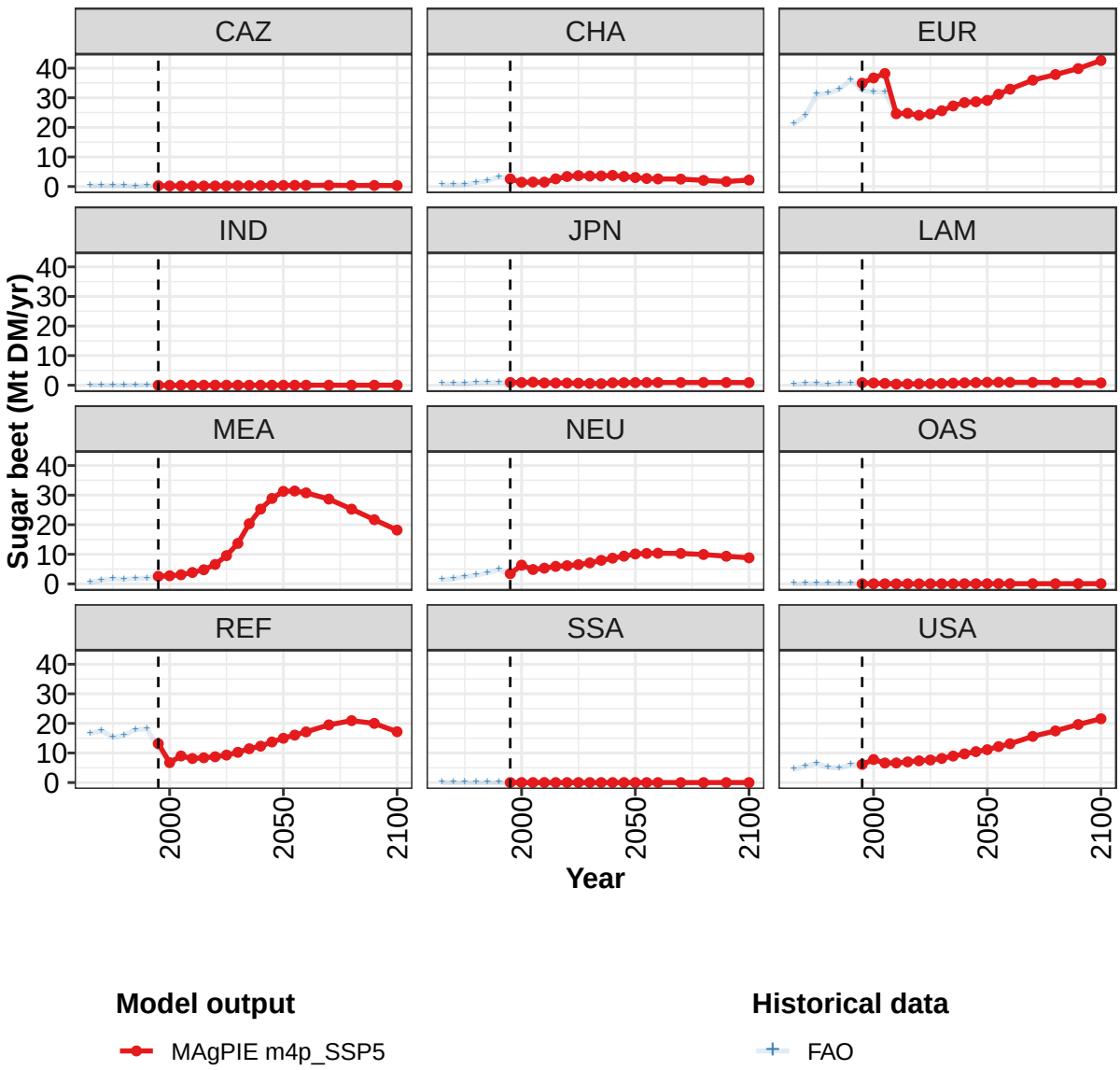
Table 621: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	171	197	217	242	299	328	345	356	393	467
CAZ	4	5	6	7	7	7	10	10	10	9
CHA	7	6	7	10	16	19	19	18	25	30
EUR	21	24	31	32	33	36	32	32	32	24
IND	29	32	34	31	40	54	65	71	56	66
JPN	1	1	1	1	2	1	1	1	1	1
LAM	57	68	70	90	119	121	124	127	169	235
MEA	2	3	4	4	6	6	8	8	10	10
NEU	1	2	2	3	4	5	3	5	5	5
OAS	16	19	23	25	30	35	44	43	46	50
REF	17	18	15	16	18	18	12	7	9	8
SSA	6	9	10	11	13	13	13	16	17	16
USA	10	11	13	11	11	12	13	17	13	13

Table 622: FAO — Demand—Processing—Crops—Sugar crops (Mt DM/yr)

9.1.18 Sugar crops—Sugar beet





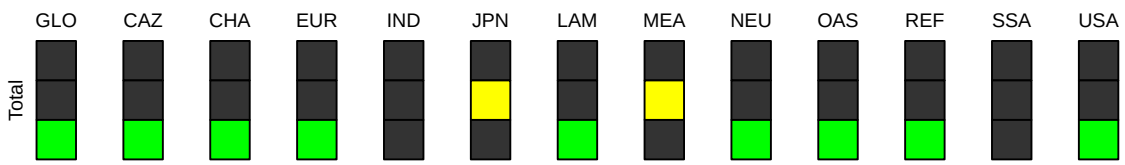


Figure 208: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	65	64	65	51	55	58	63	70	81	90	97
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	3	1	2	1	3	3	4	4	4	4	3
EUR	35	37	38	25	25	24	25	26	27	28	29
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	1	1	1	0	0	0	1	1	1	1	1
MEA	3	3	3	4	5	7	10	14	20	25	29
NEU	3	6	5	5	6	6	7	7	8	9	9
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	13	7	9	8	8	9	9	10	11	12	14
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	6	8	7	7	7	7	8	8	9	10	10

Table 623: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

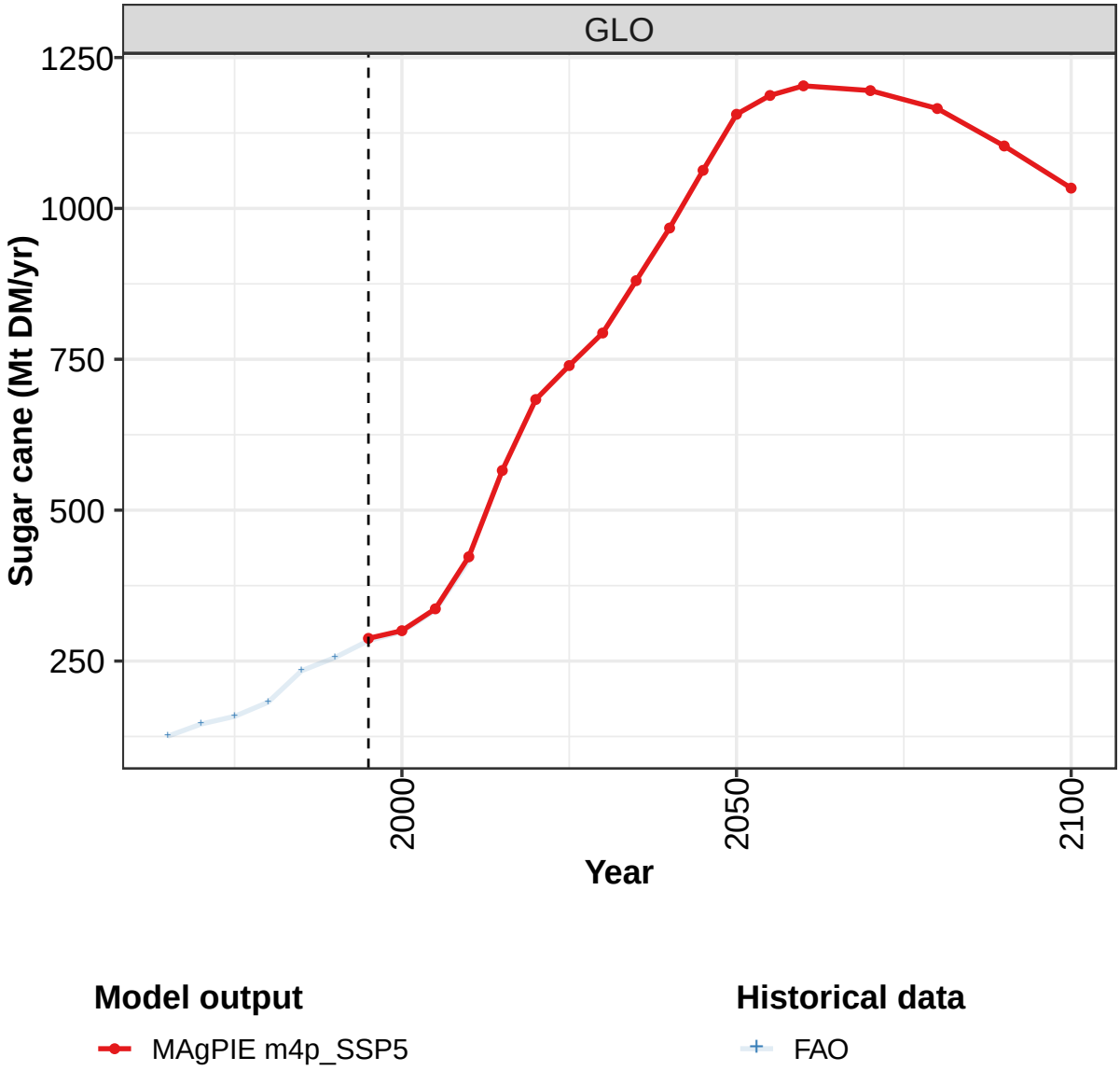
	2050	2055	2060	2070	2080	2090	2100
GLO	102	106	109	115	116	114	113
CAZ	0	0	0	0	0	0	0
CHA	3	3	3	3	2	2	2
EUR	29	31	33	36	38	40	43
IND	0	0	0	0	0	0	0
JPN	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1
MEA	31	31	31	29	25	22	18
NEU	10	10	10	10	10	9	9
OAS	0	0	0	0	0	0	0
REF	15	16	17	19	21	20	17
SSA	0	0	0	0	0	0	0
USA	11	12	13	16	17	20	22

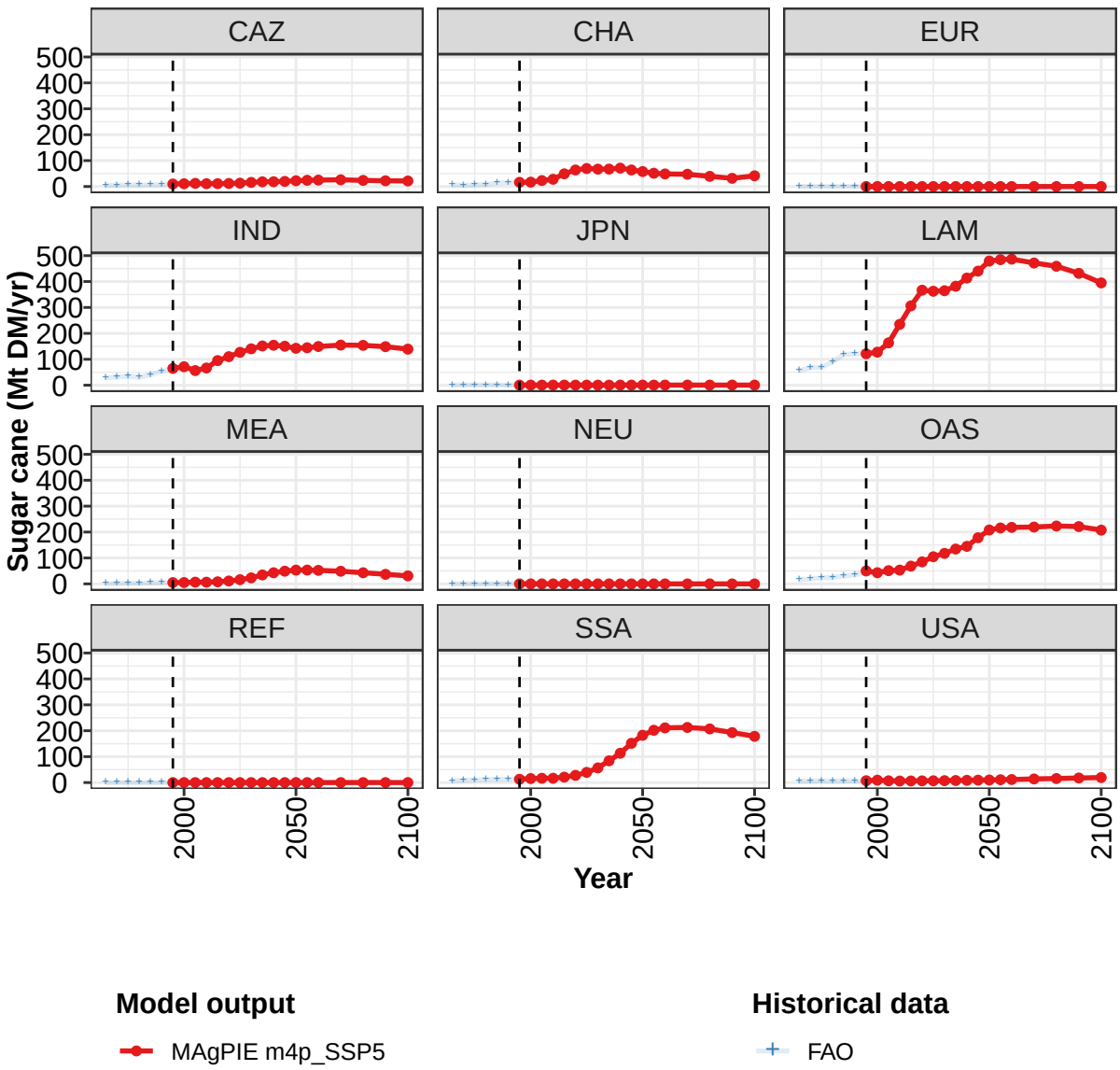
Table 624: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	45.6	51.8	58.9	59.9	64.8	72.0	60.8	57.6	58.5	50.9
CAZ	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1
CHA	0.5	0.5	0.6	1.4	1.9	3.2	2.6	1.5	1.5	1.5
EUR	21.1	24.0	31.1	31.7	32.8	36.1	32.4	32.0	31.9	24.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.4	0.6	0.4	0.9	0.9	1.0	0.9	0.9	1.0	0.7
LAM	0.3	0.5	0.5	0.2	0.6	0.6	0.9	0.7	0.6	0.3
MEA	0.5	1.3	1.7	1.5	1.8	1.9	2.5	2.7	3.0	3.8
NEU	1.4	1.7	2.5	2.9	3.8	4.8	3.3	5.1	4.7	5.4
OAS	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
REF	16.6	17.6	15.2	16.0	17.9	18.2	11.7	6.6	9.1	8.1
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	4.5	5.5	6.5	5.1	4.9	6.0	6.1	7.8	6.6	7.0

Table 625: FAO — Demand—Processing—Crops—Sugar crops—Sugar beet (Mt DM/yr)

9.1.19 Sugar crops—Sugar cane





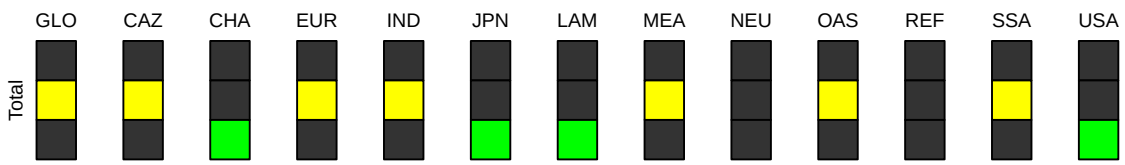


Figure 209: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	288	300	337	423	566	683	740	794	880	968	1063
CAZ	10	11	12	11	11	12	13	16	18	19	20
CHA	16	17	23	28	49	64	70	67	67	71	64
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	65	71	56	66	95	110	127	140	151	154	150
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	121	128	163	235	306	367	363	365	382	413	440
MEA	5	5	7	7	8	11	16	23	35	43	49
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	50	43	51	53	69	85	105	118	135	145	178
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	13	16	17	17	21	28	39	57	84	113	152
USA	7	9	7	6	6	7	7	7	8	9	9

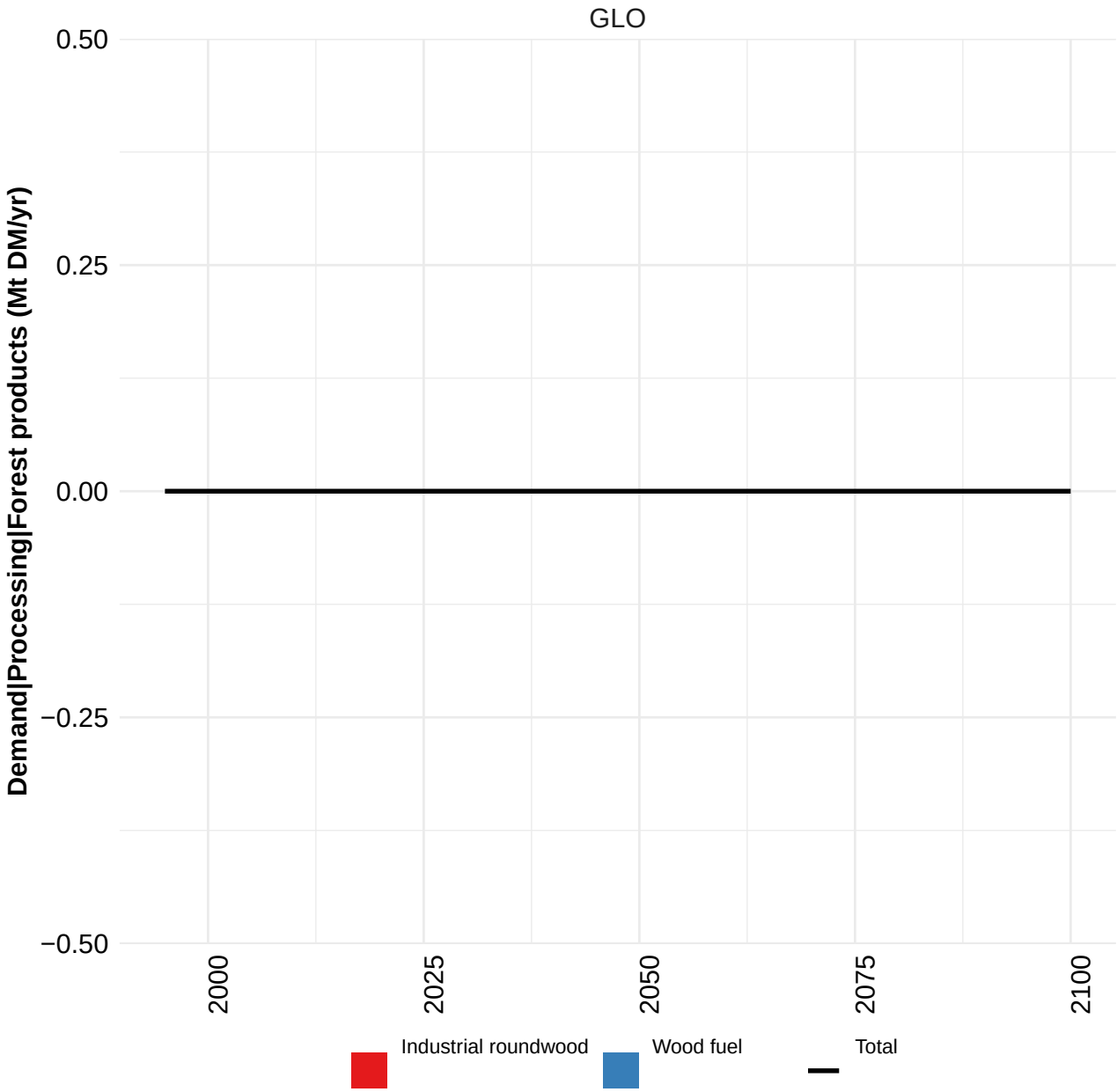
Table 626: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

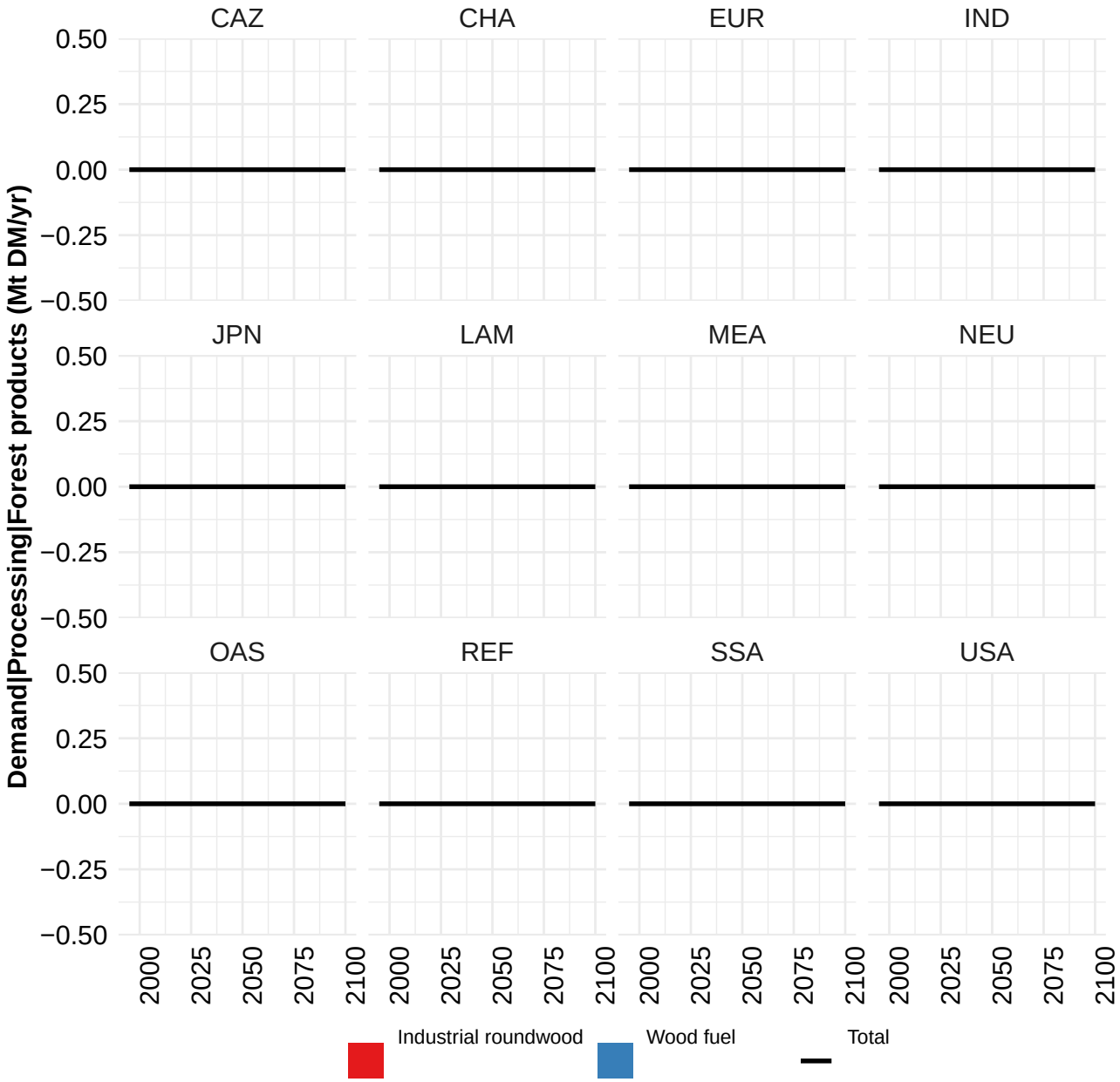
	2050	2055	2060	2070	2080	2090	2100
GLO	1156	1187	1203	1195	1166	1103	1034
CAZ	22	24	25	26	24	22	21
CHA	58	51	49	47	39	32	41
EUR	0	0	0	0	0	0	0
IND	142	145	149	155	154	149	139
JPN	0	0	0	0	0	0	0
LAM	479	485	486	472	459	432	395
MEA	53	53	52	49	43	37	31
NEU	0	0	0	0	0	0	0
OAS	208	216	218	219	223	221	208
REF	0	0	0	0	0	0	0
SSA	183	202	211	213	207	193	179
USA	10	11	12	14	16	18	19

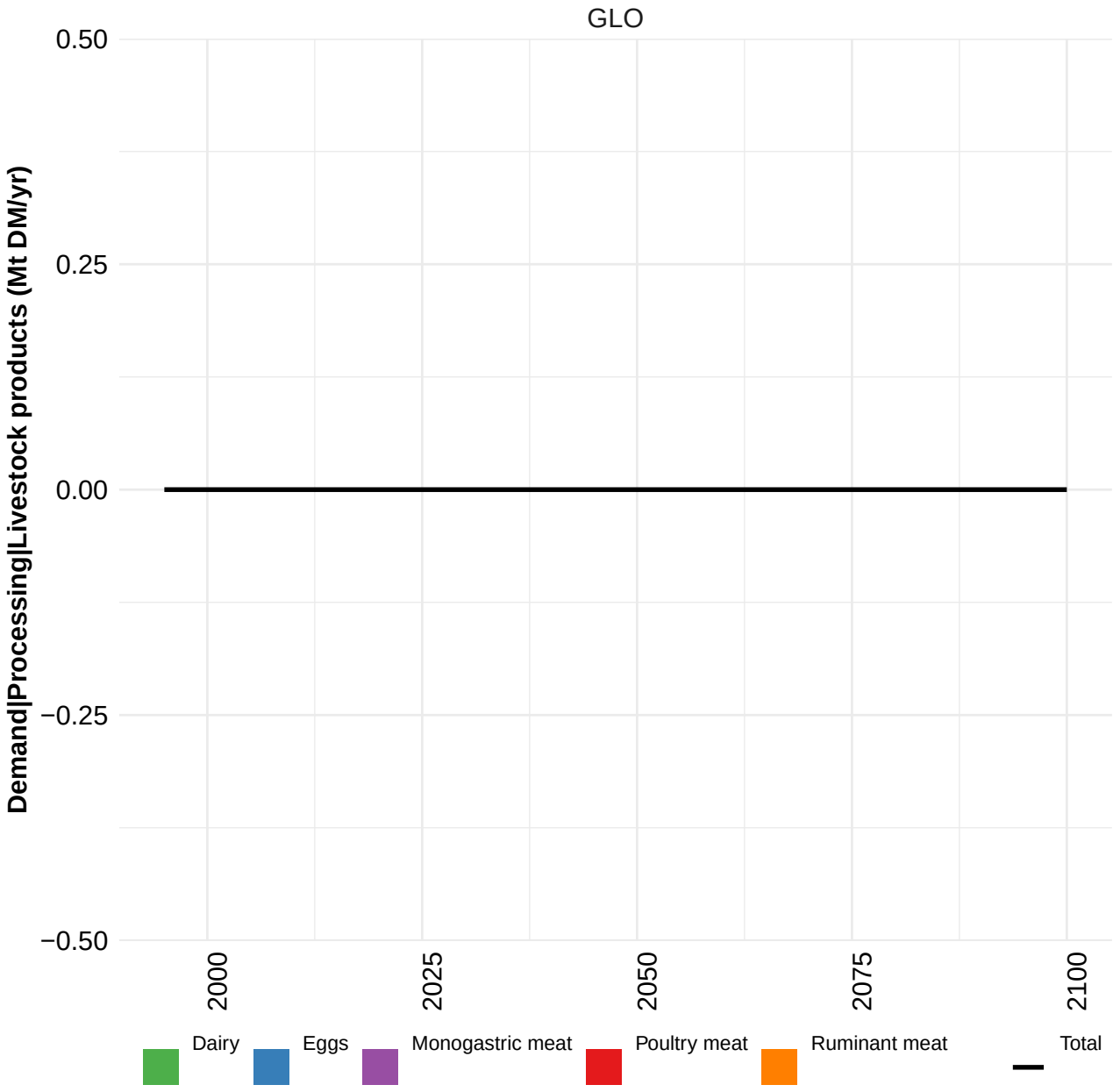
Table 627: MAgPIE m4p_SSP5 — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

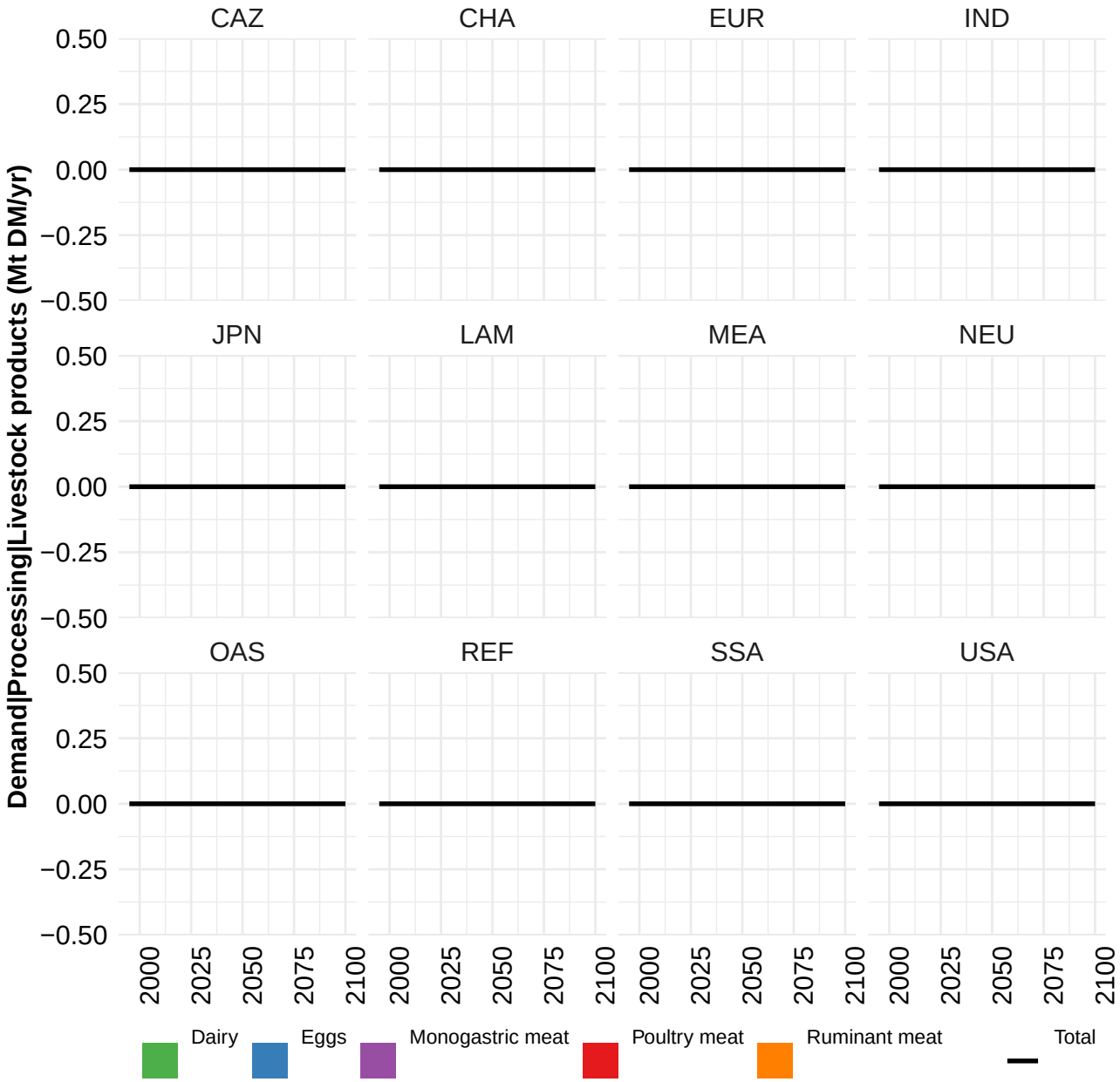
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	125	146	158	182	234	256	284	298	334	417
CAZ	4	5	6	6	7	7	9	10	10	8
CHA	6	5	6	8	14	15	16	17	23	28
EUR	0	0	0	0	0	0	0	0	0	0
IND	29	32	34	31	40	54	65	71	56	66
JPN	1	1	1	1	1	1	0	0	0	0
LAM	56	68	69	90	119	121	123	126	168	235
MEA	1	2	2	3	4	4	5	5	7	6
NEU	0	0	0	0	0	0	0	0	0	0
OAS	16	19	23	25	30	35	44	43	46	50
REF	0	0	0	0	0	0	0	0	0	0
SSA	6	9	10	11	13	13	13	16	17	16
USA	6	6	7	6	7	6	7	9	7	6

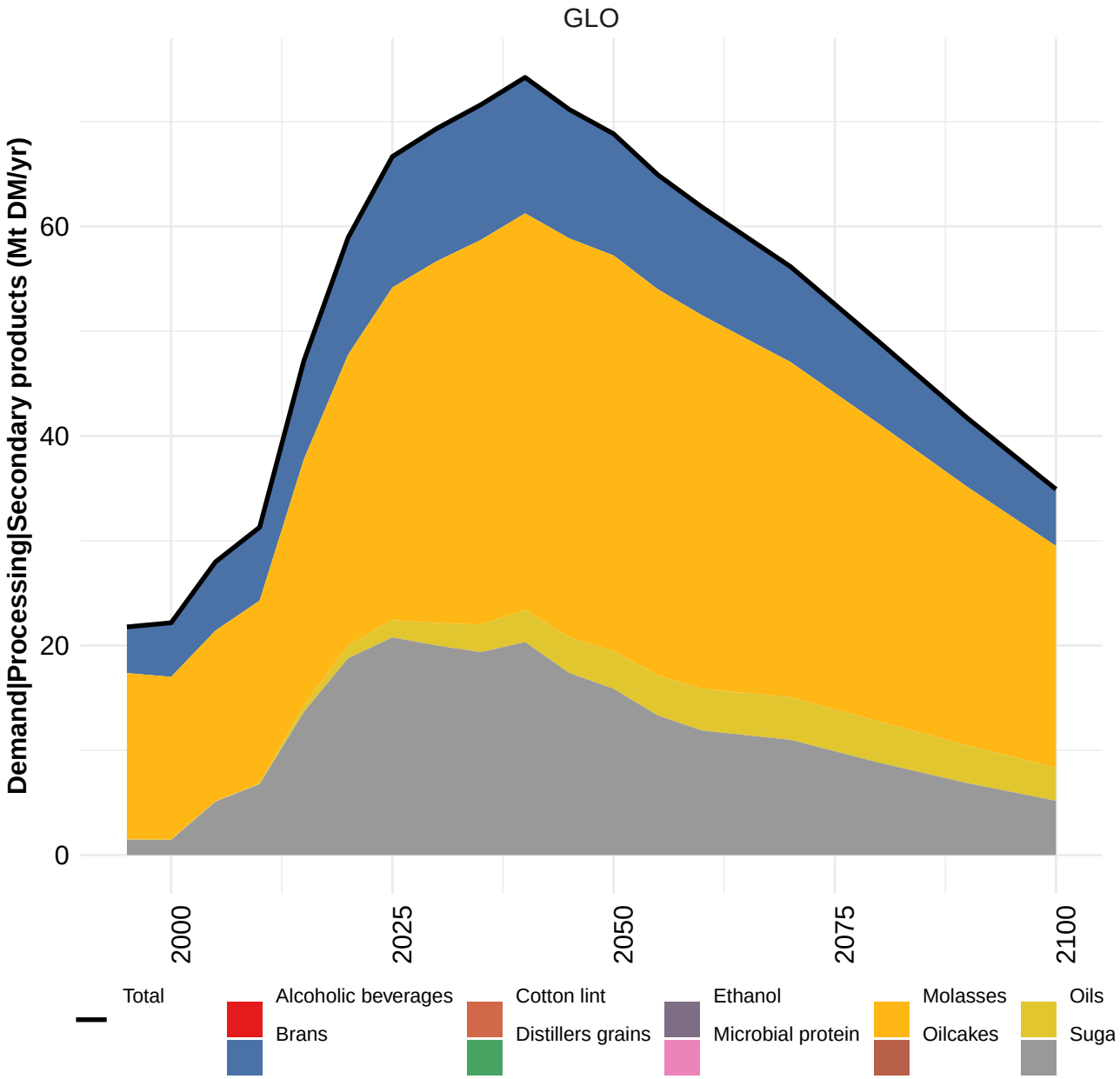
Table 628: FAO — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr)

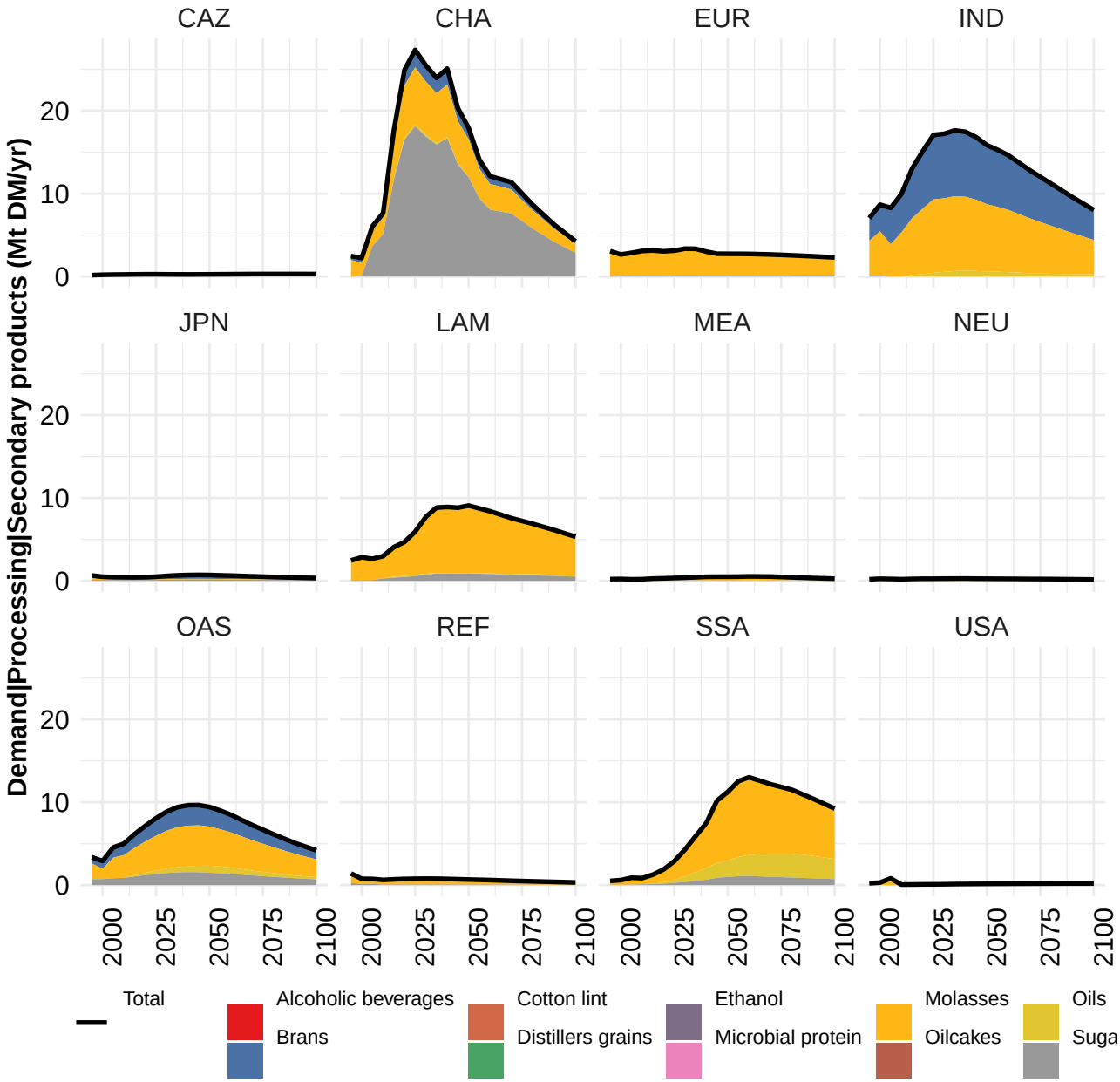

GLO
Demand|Processing|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Processing|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

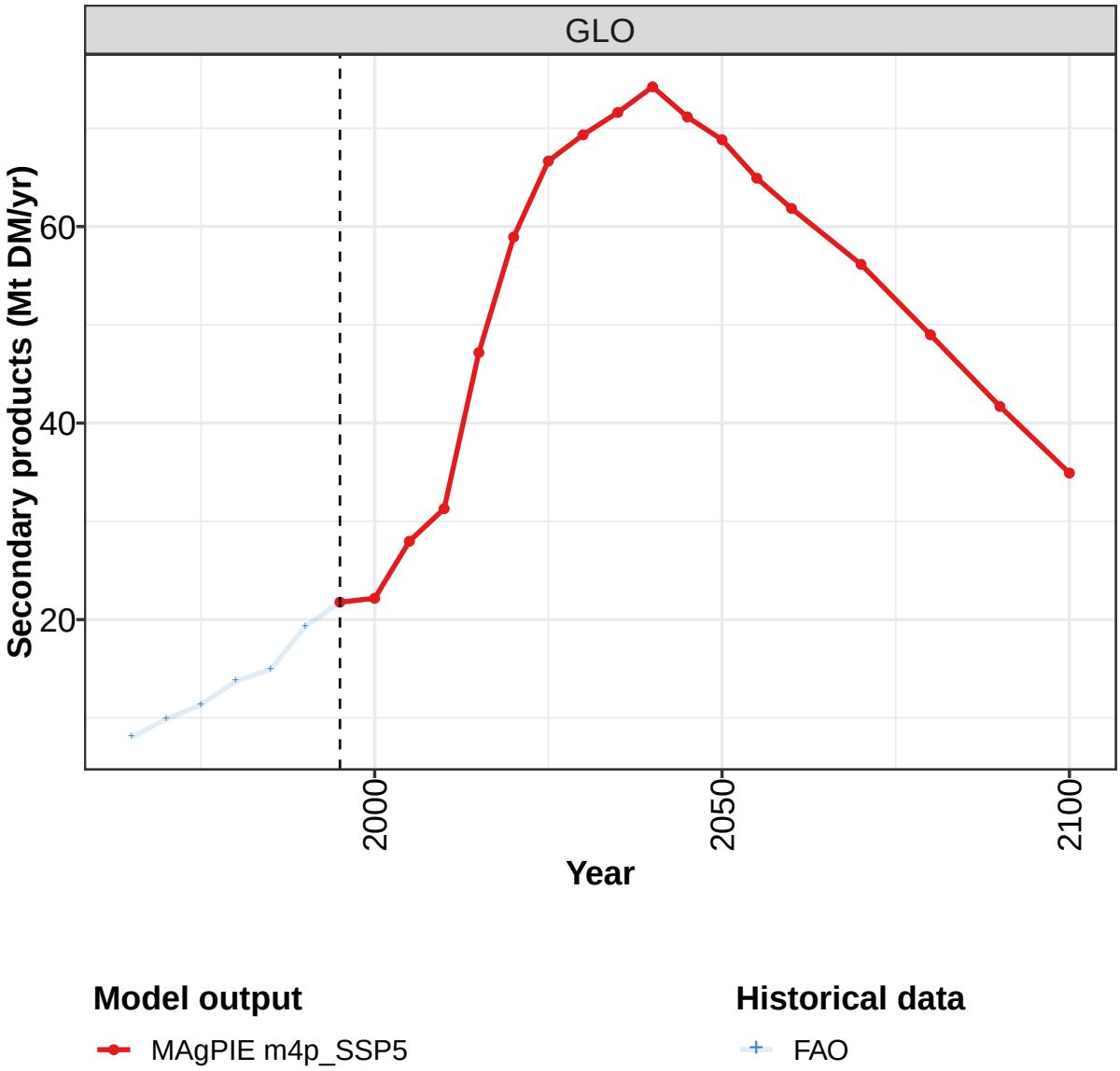

GLO
Demand|Processing|Livestock products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

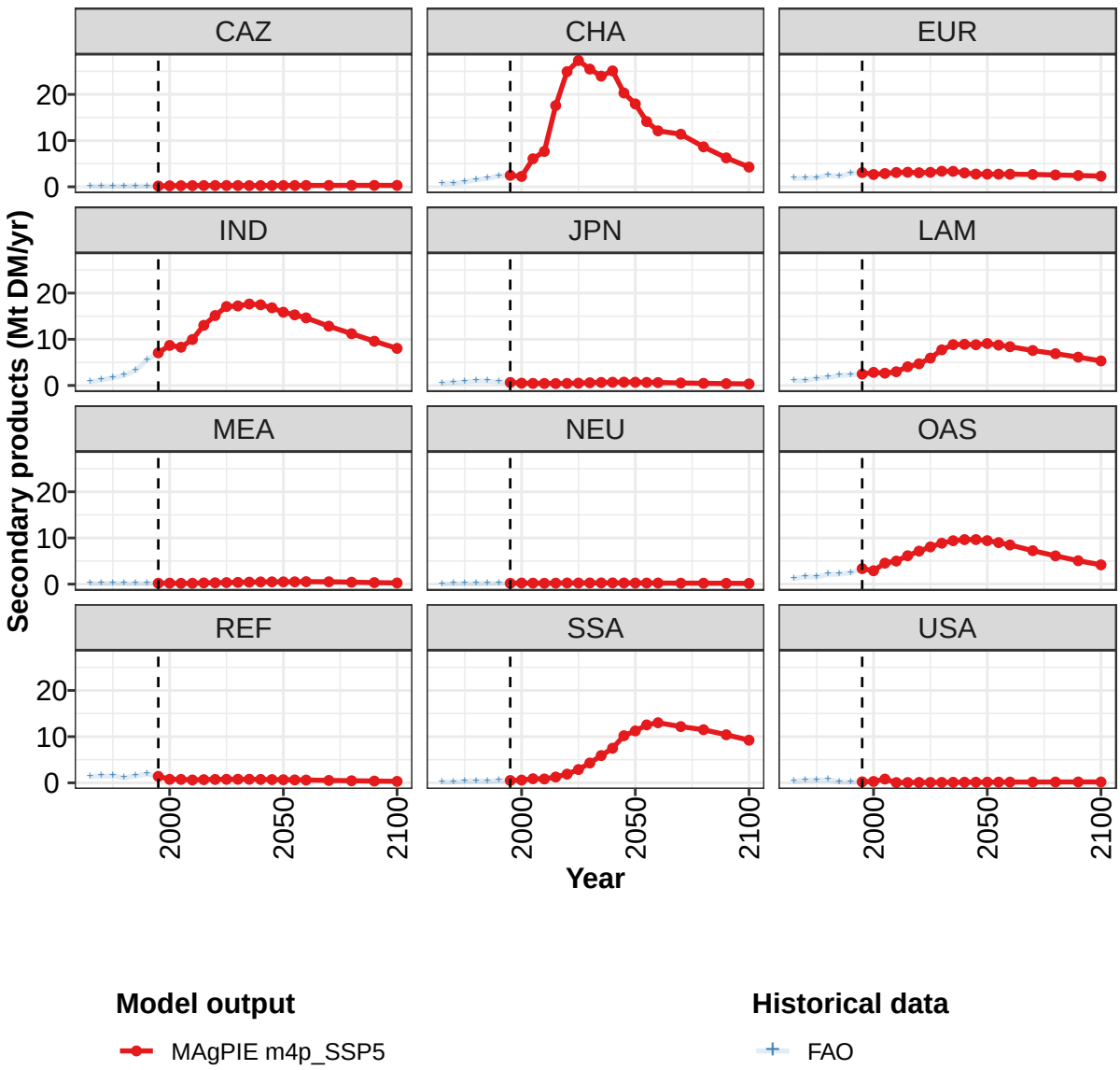

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Processing|Livestock products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


GLO
Demand|Processing|Secondary products (Mt DM/yr)
0
20
40
60
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Suga


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Processing|Secondary products (Mt DM/yr)
0
10
20
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils
Suga

9.2 Secondary products





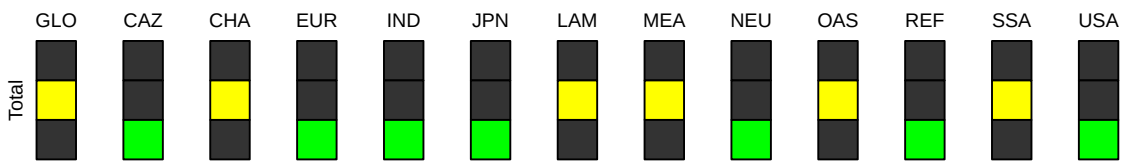


Figure 210: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21.8	22.2	28.0	31.3	47.2	58.9	66.7	69.3	71.6	74.2	71.2
CAZ	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	2.5	2.2	6.1	7.7	17.6	24.9	27.3	25.5	24.0	25.1	20.3
EUR	3.1	2.7	2.9	3.1	3.1	3.0	3.1	3.4	3.3	3.0	2.8
IND	7.1	8.7	8.3	9.9	13.0	15.1	17.1	17.2	17.6	17.5	16.8
JPN	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7
LAM	2.5	2.8	2.7	3.0	4.1	4.7	5.9	7.7	8.8	8.9	8.8
MEA	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5
NEU	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3
OAS	3.4	2.9	4.5	5.0	6.2	7.1	8.1	8.9	9.4	9.6	9.7
REF	1.4	0.8	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.7	0.7
SSA	0.5	0.6	0.9	0.8	1.3	1.9	2.9	4.3	5.9	7.5	10.2
USA	0.2	0.3	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 629: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products (Mt DM/yr) [PART 1/2]

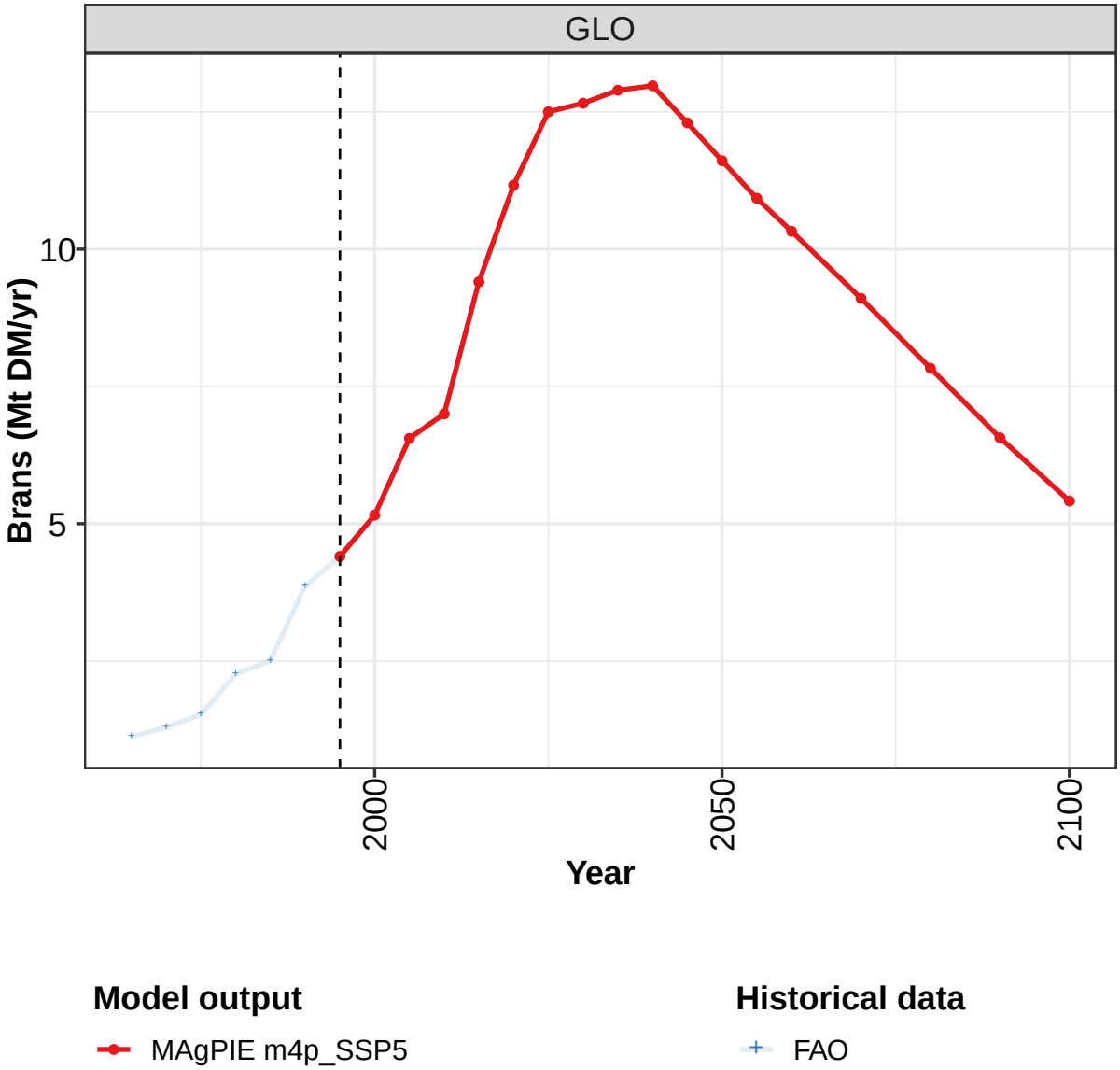
	2050	2055	2060	2070	2080	2090	2100
GLO	68.8	64.9	61.8	56.2	49.0	41.7	34.9
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	17.9	14.1	12.1	11.4	8.7	6.3	4.3
EUR	2.7	2.7	2.7	2.7	2.6	2.4	2.3
IND	15.9	15.3	14.6	12.8	11.2	9.6	8.0
JPN	0.7	0.7	0.6	0.5	0.5	0.4	0.3
LAM	9.1	8.7	8.4	7.6	6.9	6.1	5.3
MEA	0.5	0.5	0.5	0.5	0.4	0.3	0.3
NEU	0.3	0.2	0.2	0.2	0.2	0.2	0.2
OAS	9.4	9.0	8.5	7.2	6.1	5.1	4.2
REF	0.7	0.6	0.6	0.5	0.5	0.4	0.3
SSA	11.2	12.5	13.0	12.2	11.5	10.4	9.2
USA	0.2	0.2	0.2	0.2	0.2	0.2	0.2

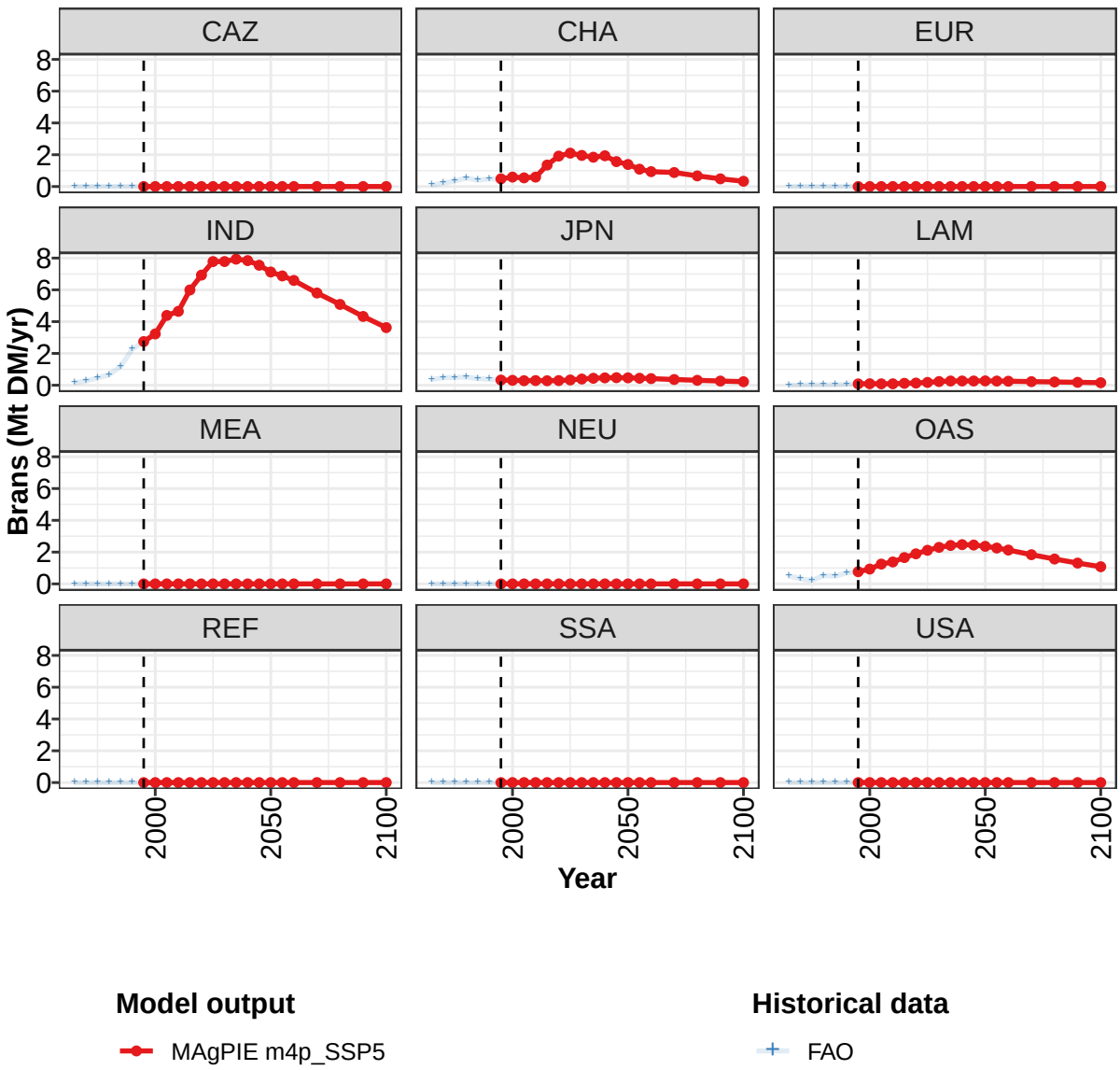
Table 630: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.0	9.9	11.3	13.7	14.9	19.3	21.7	22.1	28.0	31.3
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
CHA	0.6	0.7	1.0	1.5	1.8	2.3	2.4	2.2	6.0	7.7
EUR	1.8	1.9	1.9	2.6	2.2	3.0	3.1	2.7	2.8	3.0
IND	0.8	1.2	1.7	2.2	3.2	5.5	7.1	8.7	8.3	9.9
JPN	0.5	0.6	0.8	1.0	0.9	0.8	0.6	0.5	0.4	0.4
LAM	1.0	1.1	1.5	1.7	2.2	2.3	2.4	2.7	2.8	3.1
MEA	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
OAS	1.2	1.6	1.6	2.1	2.2	2.5	3.4	2.9	4.6	4.9
REF	1.3	1.5	1.5	1.1	1.5	1.9	1.4	0.8	0.7	0.6
SSA	0.2	0.2	0.4	0.4	0.3	0.5	0.5	0.6	0.9	0.8
USA	0.3	0.6	0.6	0.7	0.2	0.2	0.2	0.3	0.8	0.1

Table 631: FAO — Demand—Processing—Secondary products (Mt DM/yr)

9.2.1 Brans


GLO
Brans (Mt DM/yr)
10
5
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



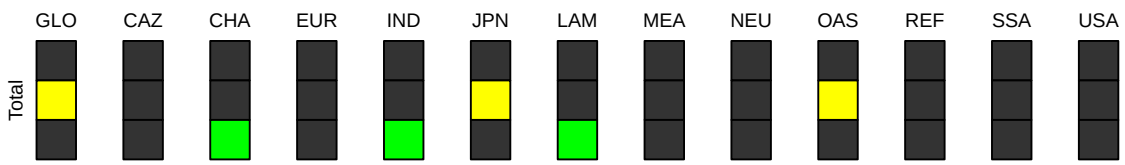


Figure 211: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.4	5.2	6.6	7.0	9.4	11.2	12.5	12.7	12.9	13.0	12.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.5	0.6	0.5	0.6	1.4	1.9	2.1	2.0	1.8	1.9	1.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.7	3.2	4.4	4.6	6.0	6.9	7.8	7.8	7.9	7.8	7.6
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5
LAM	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.8	0.9	1.2	1.4	1.7	1.9	2.1	2.3	2.4	2.5	2.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 632: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Brans (Mt DM/yr) [PART 1/2]

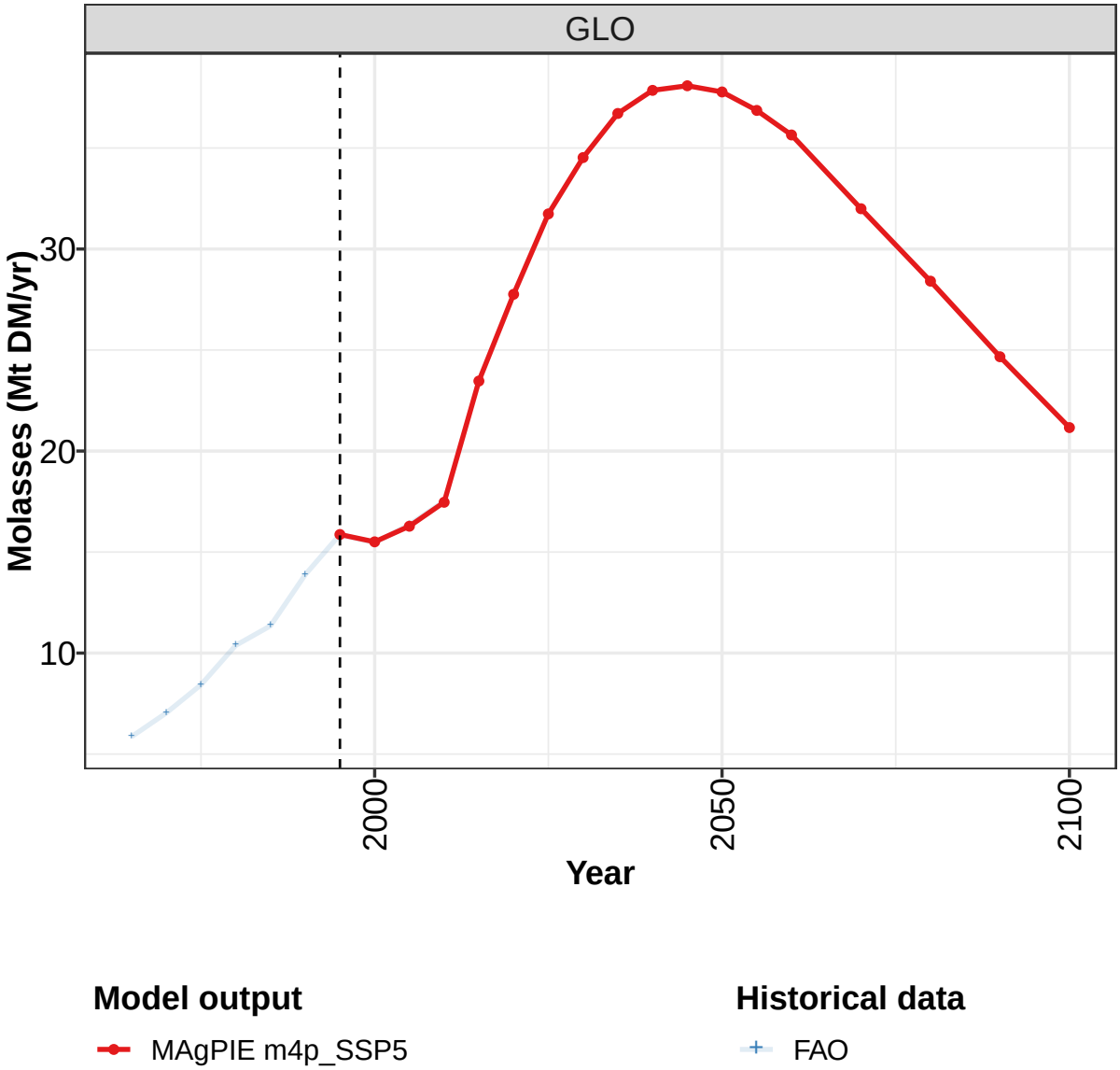
	2050	2055	2060	2070	2080	2090	2100
GLO	11.6	10.9	10.3	9.1	7.8	6.6	5.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.4	1.1	0.9	0.9	0.7	0.5	0.3
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	7.1	6.9	6.6	5.8	5.1	4.3	3.6
JPN	0.5	0.4	0.4	0.4	0.3	0.3	0.2
LAM	0.3	0.3	0.3	0.2	0.2	0.2	0.2
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.4	2.3	2.1	1.8	1.6	1.3	1.1
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

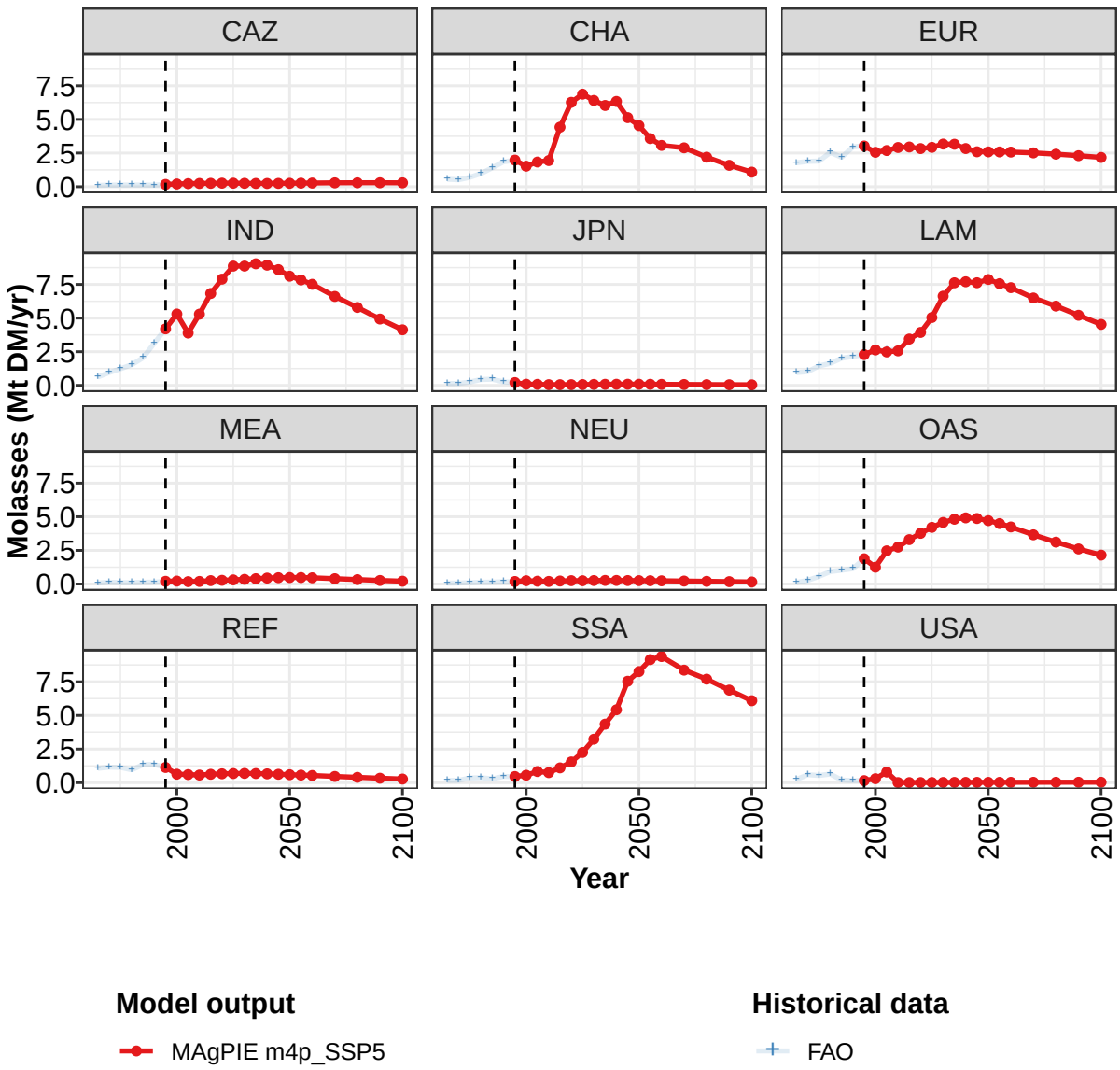
Table 633: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.12	1.29	1.53	2.26	2.50	3.87	4.40	5.15	6.57	6.99
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.09	0.21	0.34	0.54	0.40	0.48	0.48	0.59	0.54	0.60
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.16	0.27	0.46	0.66	1.17	2.26	2.75	3.23	4.39	4.65
JPN	0.37	0.47	0.48	0.51	0.42	0.38	0.32	0.31	0.29	0.29
LAM	0.00	0.02	0.02	0.02	0.03	0.06	0.08	0.09	0.09	0.09
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.51	0.32	0.22	0.53	0.49	0.69	0.77	0.93	1.25	1.36
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 634: FAO — Demand—Processing—Secondary products—Brans (Mt DM/yr)

9.2.2 Molasses





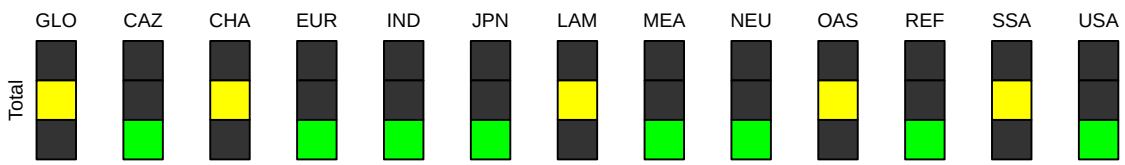


Figure 212: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.9	15.5	16.3	17.5	23.5	27.8	31.7	34.5	36.7	37.9	38.1
CAZ	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2
CHA	2.0	1.5	1.8	1.9	4.4	6.3	6.9	6.4	6.0	6.3	5.1
EUR	3.0	2.6	2.7	2.9	2.9	2.8	2.9	3.2	3.2	2.8	2.6
IND	4.2	5.3	3.9	5.3	6.8	7.9	8.9	8.9	9.0	8.9	8.6
JPN	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.3	2.6	2.5	2.6	3.4	3.9	5.0	6.6	7.6	7.7	7.6
MEA	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
OAS	1.9	1.2	2.5	2.7	3.3	3.8	4.2	4.6	4.8	4.9	4.9
REF	1.1	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6
SSA	0.5	0.6	0.8	0.8	1.1	1.5	2.2	3.2	4.4	5.4	7.5
USA	0.2	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 635: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

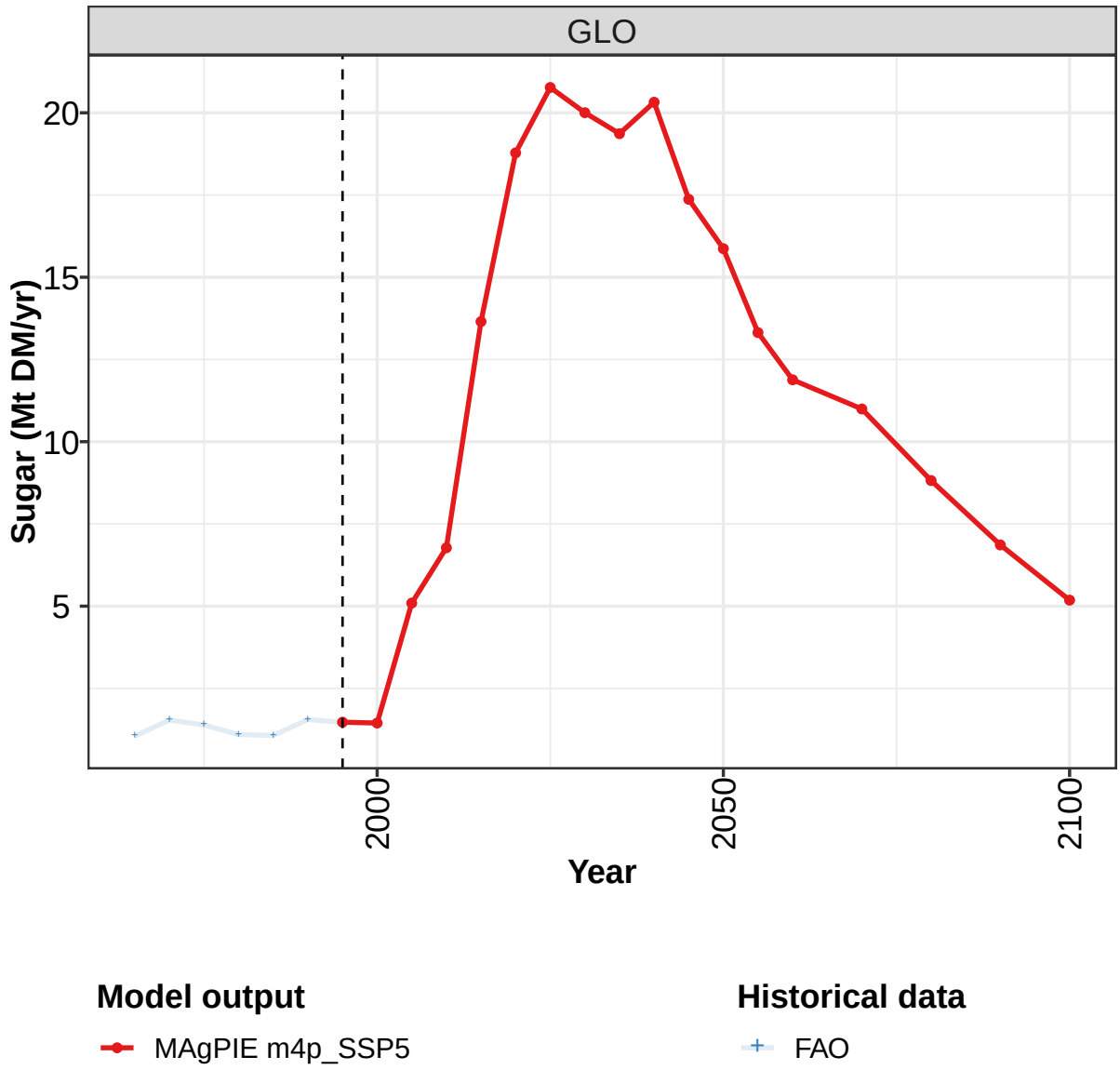
	2050	2055	2060	2070	2080	2090	2100
GLO	37.8	36.9	35.6	32.0	28.4	24.7	21.2
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	4.5	3.6	3.1	2.9	2.2	1.6	1.1
EUR	2.6	2.6	2.6	2.5	2.4	2.3	2.2
IND	8.1	7.8	7.5	6.6	5.8	4.9	4.1
JPN	0.1	0.1	0.1	0.1	0.1	0.0	0.0
LAM	7.9	7.6	7.3	6.5	5.9	5.2	4.5
MEA	0.5	0.5	0.5	0.4	0.3	0.3	0.2
NEU	0.3	0.2	0.2	0.2	0.2	0.2	0.2
OAS	4.7	4.5	4.2	3.7	3.1	2.6	2.2
REF	0.6	0.6	0.5	0.5	0.4	0.3	0.3
SSA	8.3	9.2	9.4	8.4	7.7	6.9	6.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

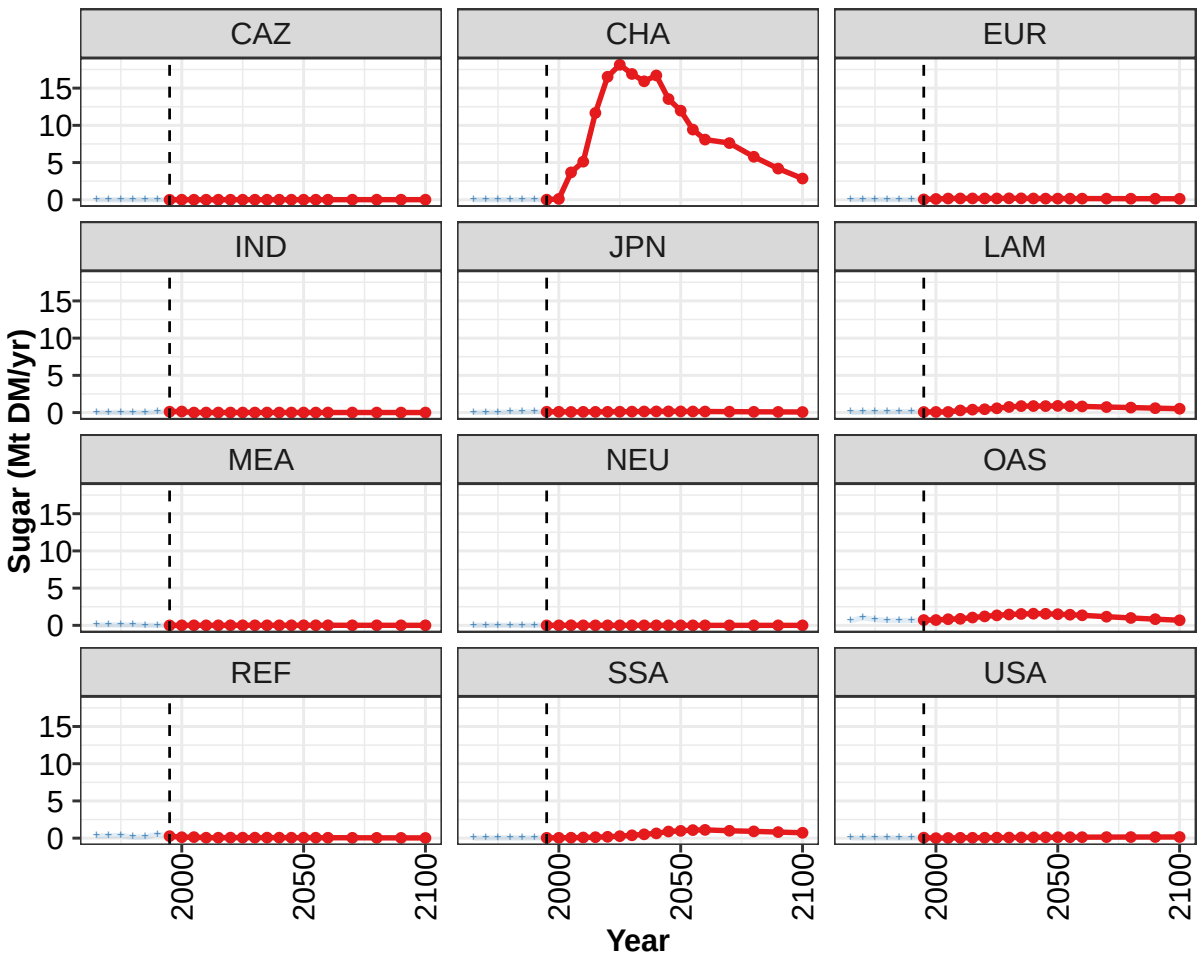
Table 636: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Molasses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.9	7.0	8.4	10.4	11.3	13.9	15.9	15.5	16.4	17.5
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CHA	0.6	0.5	0.7	1.0	1.4	1.9	2.0	1.5	1.8	2.0
EUR	1.8	1.9	1.9	2.5	2.2	2.9	3.0	2.6	2.7	2.9
IND	0.6	1.0	1.2	1.5	2.0	3.1	4.2	5.3	3.9	5.3
JPN	0.1	0.1	0.2	0.4	0.5	0.3	0.2	0.1	0.1	0.1
LAM	0.9	1.0	1.4	1.6	2.0	2.1	2.3	2.6	2.6	2.7
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
OAS	0.1	0.3	0.6	0.9	1.0	1.1	1.9	1.2	2.5	2.7
REF	1.1	1.2	1.1	1.0	1.3	1.4	1.1	0.6	0.6	0.6
SSA	0.2	0.2	0.3	0.4	0.3	0.5	0.4	0.6	0.8	0.7
USA	0.2	0.6	0.5	0.6	0.2	0.1	0.2	0.3	0.8	0.0

Table 637: FAO — Demand—Processing—Secondary products—Molasses (Mt DM/yr)

9.2.3 Sugar


GLO
Sugar (Mt DM/yr)
20
15
10
5
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

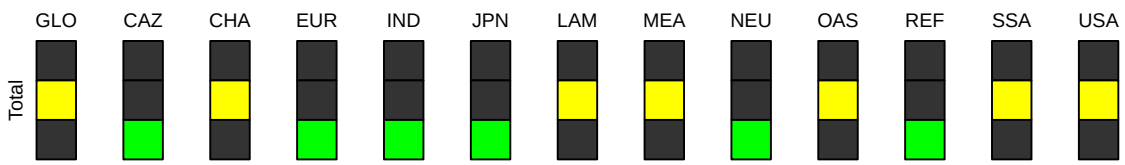


Figure 213: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.5	1.4	5.1	6.8	13.7	18.8	20.8	20.0	19.4	20.3	17.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.1	3.7	5.1	11.7	16.5	18.1	16.9	15.9	16.7	13.5
EUR	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
LAM	0.1	0.1	0.1	0.3	0.4	0.4	0.6	0.8	0.9	0.9	0.9
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.7	0.7	0.8	0.9	1.1	1.2	1.3	1.5	1.5	1.6	1.6
REF	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.9
USA	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 638: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

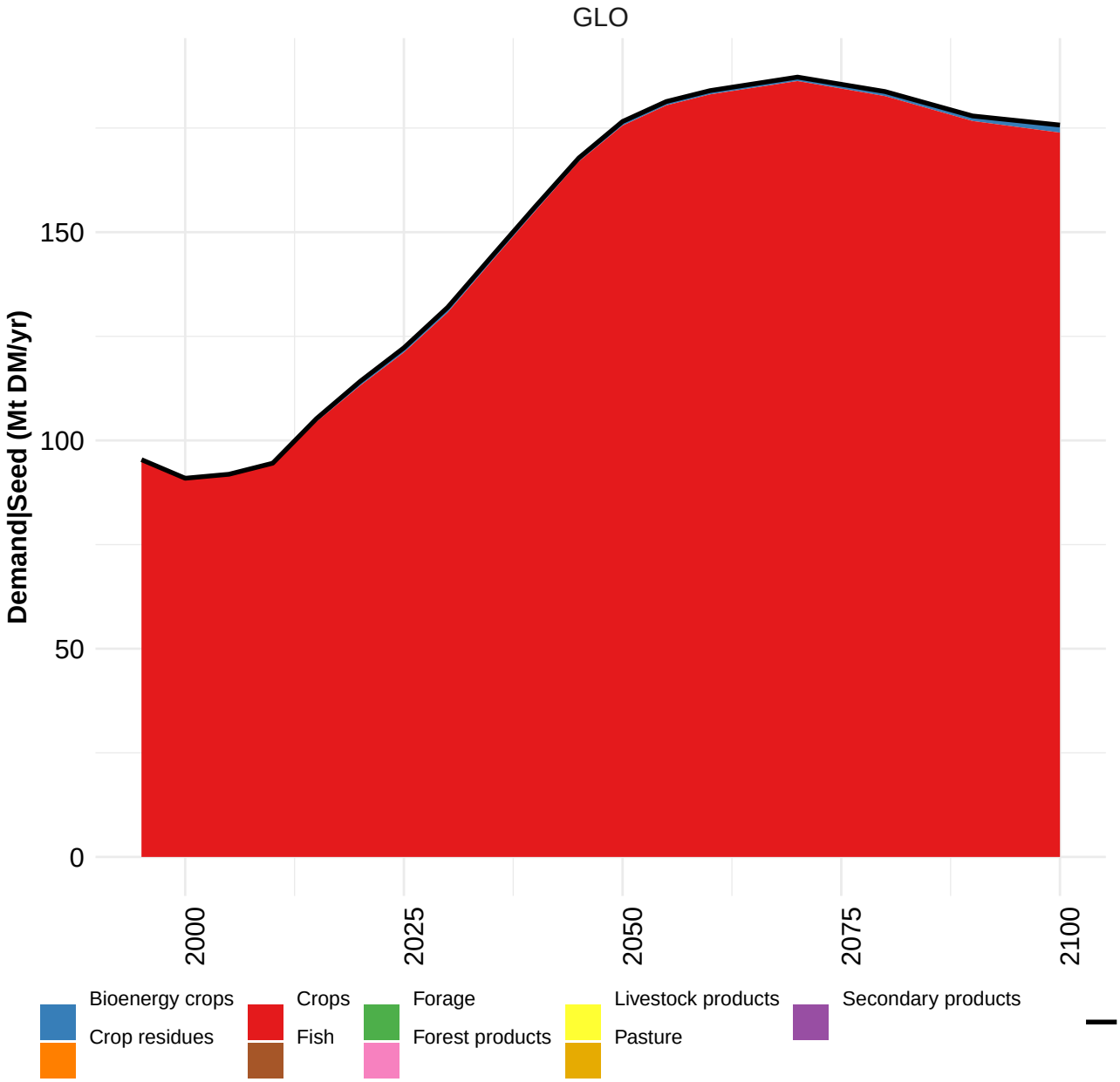
	2050	2055	2060	2070	2080	2090	2100
GLO	15.9	13.3	11.9	11.0	8.8	6.9	5.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	12.0	9.4	8.1	7.6	5.8	4.2	2.9
EUR	0.2	0.2	0.2	0.2	0.1	0.1	0.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.2	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.9	0.9	0.8	0.7	0.7	0.6	0.5
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.5	1.4	1.4	1.2	1.0	0.8	0.7
REF	0.1	0.1	0.1	0.0	0.0	0.0	0.0
SSA	1.0	1.1	1.1	1.0	0.9	0.8	0.7
USA	0.1	0.1	0.1	0.1	0.1	0.2	0.2

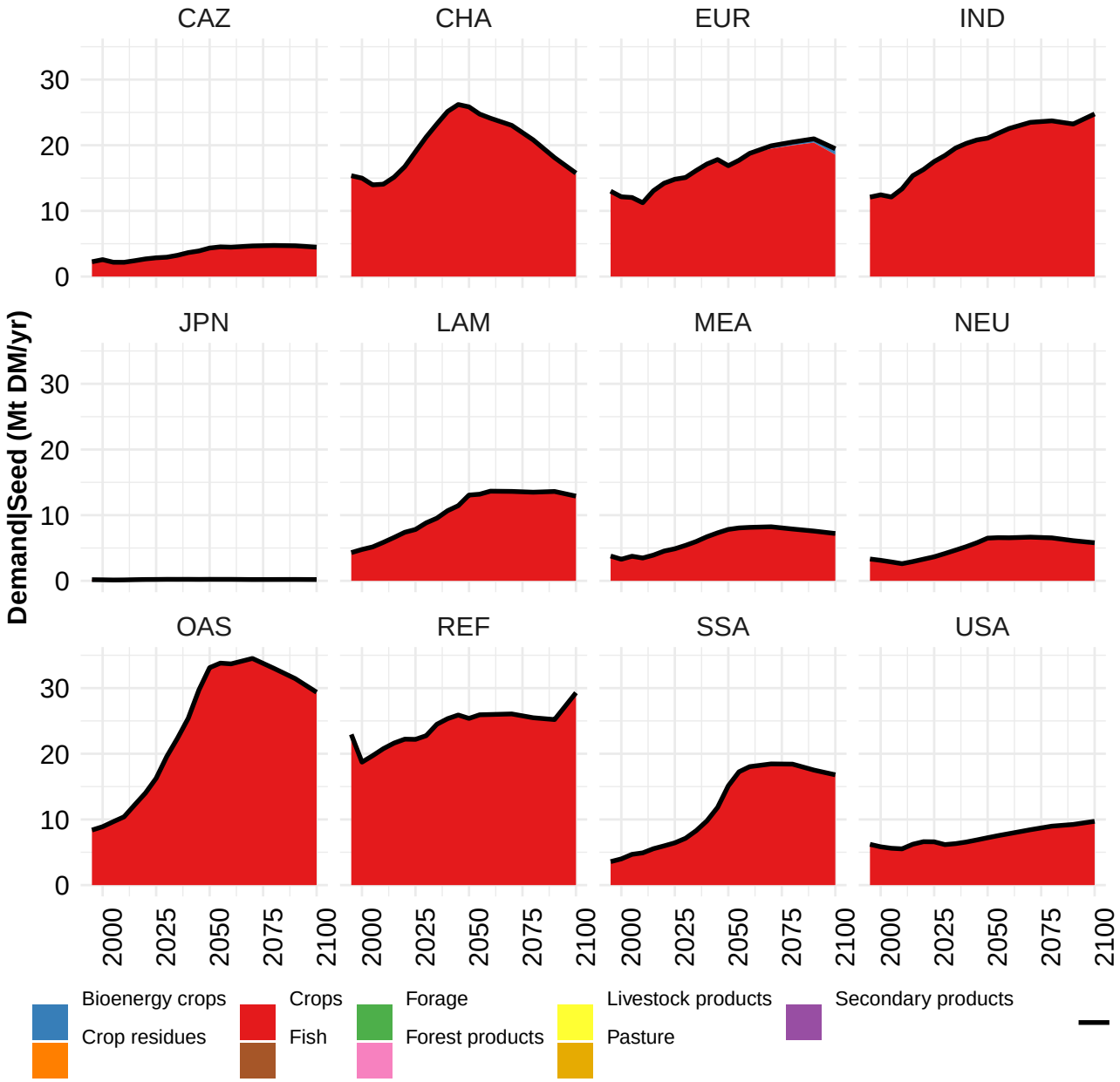
Table 639: MAgPIE m4p_SSP5 — Demand—Processing—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

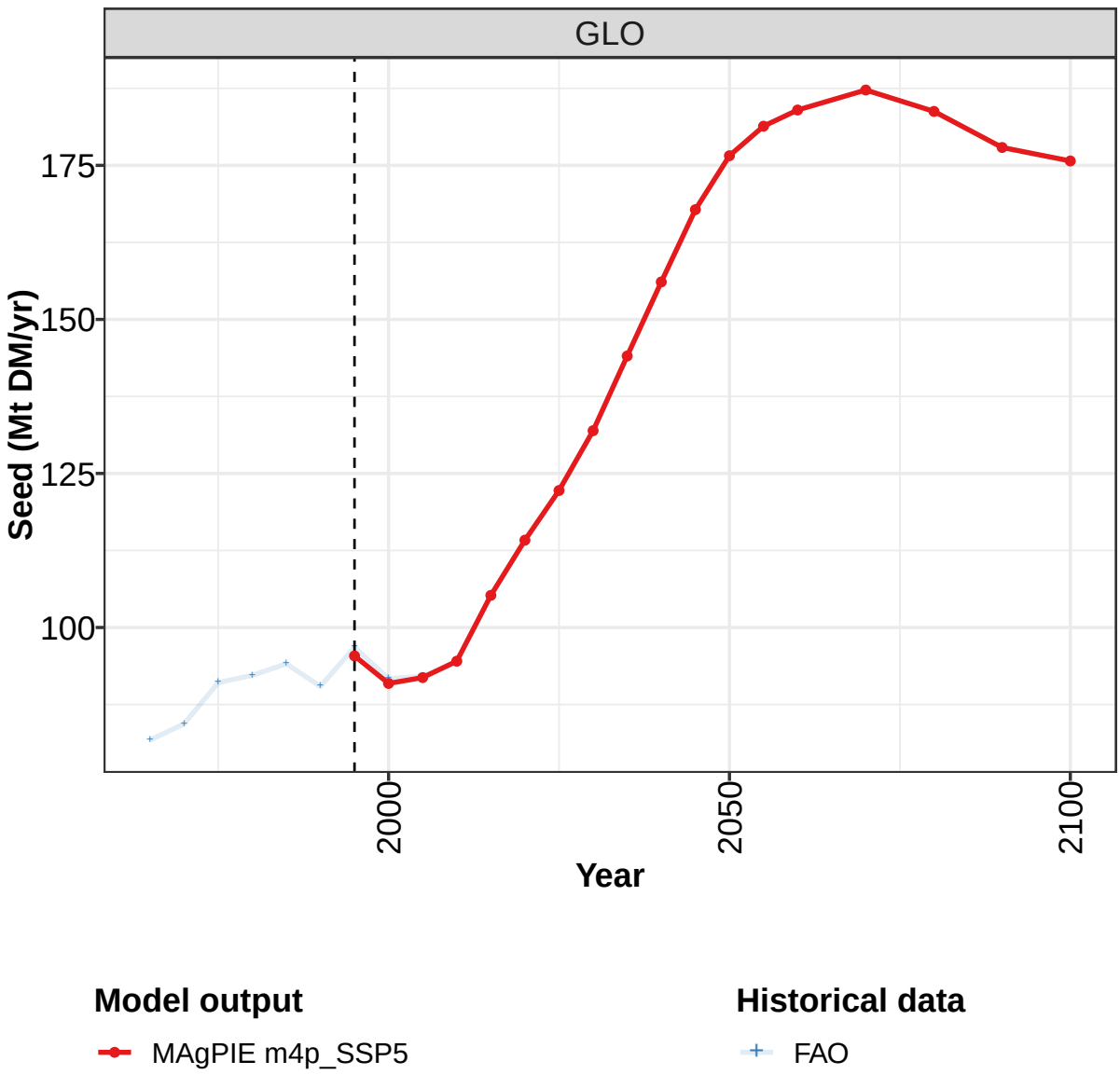
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.05	1.54	1.39	1.09	1.07	1.55	1.47	1.44	5.07	6.81
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
CHA	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.12	3.65	5.16
EUR	0.01	0.04	0.03	0.02	0.03	0.02	0.05	0.11	0.16	0.17
IND	0.00	0.00	0.00	0.00	0.00	0.08	0.12	0.14	0.00	0.00
JPN	0.02	0.03	0.03	0.06	0.06	0.12	0.11	0.10	0.09	0.10
LAM	0.04	0.04	0.06	0.08	0.11	0.11	0.08	0.08	0.09	0.31
MEA	0.03	0.05	0.06	0.07	0.01	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
OAS	0.62	1.03	0.78	0.66	0.65	0.65	0.72	0.71	0.83	0.86
REF	0.27	0.32	0.37	0.14	0.16	0.51	0.27	0.12	0.14	0.06
SSA	0.01	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.06	0.09
USA	0.05	0.02	0.02	0.02	0.01	0.01	0.07	0.00	0.02	0.05

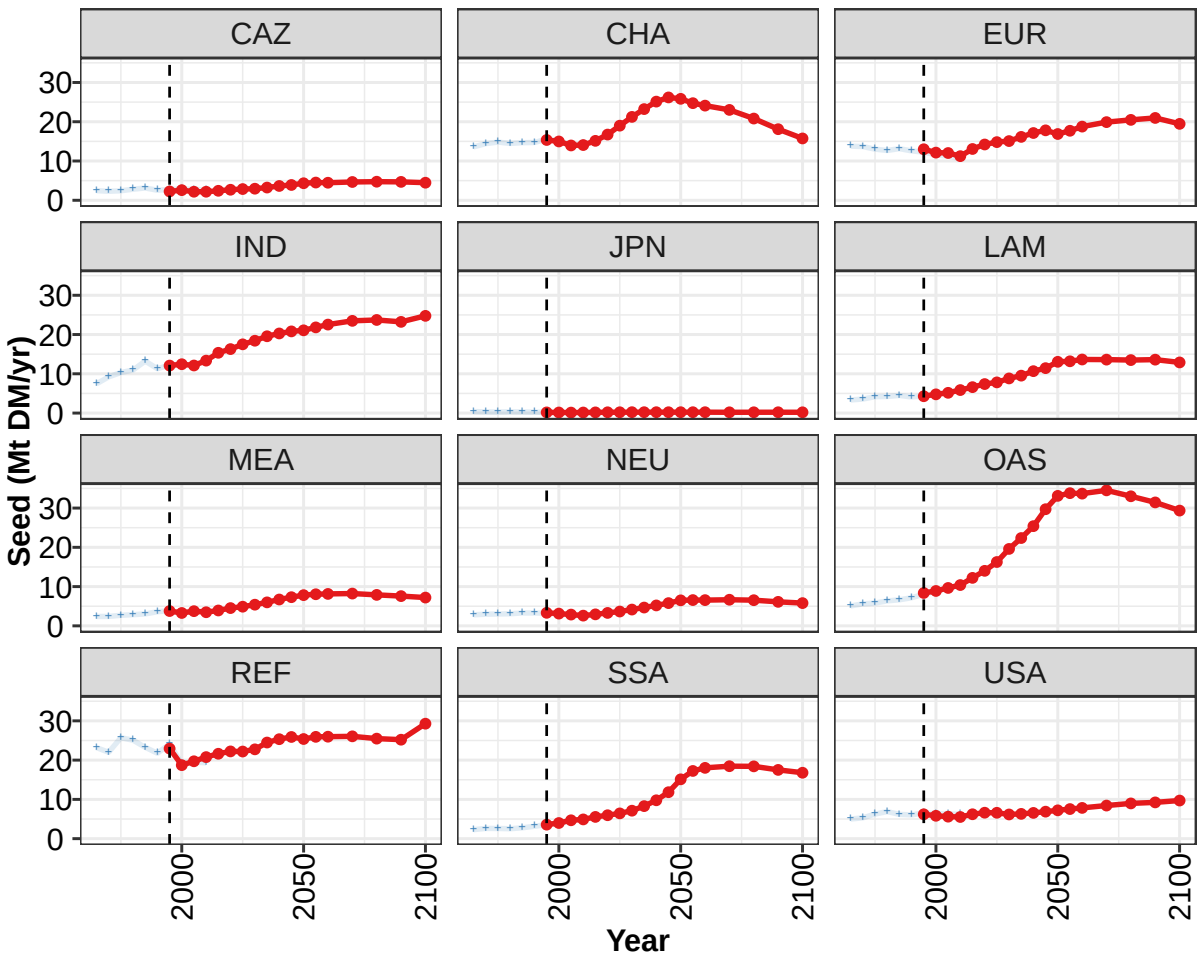
Table 640: FAO — Demand—Processing—Secondary products—Sugar (Mt DM/yr)

10 Seed


GLO
Demand|Seed (Mt DM/yr)
150
100
50
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Seed (Mt DM/yr)
0
10
20
30
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
Seed (Mt DM/yr)
175
150
125
100
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

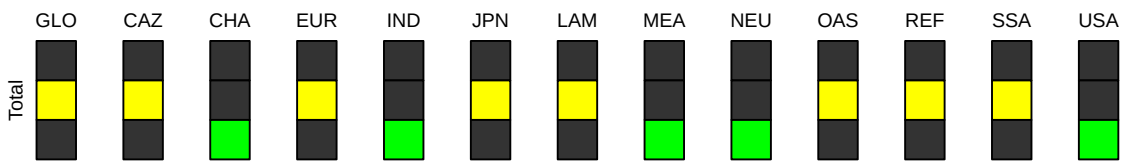


Figure 214: MAgPIE m4p_SSP5 — Demand—Seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	95	91	92	95	105	114	122	132	144	156	168
CAZ	2	3	2	2	2	3	3	3	3	4	4
CHA	15	15	14	14	15	17	19	21	23	25	26
EUR	13	12	12	11	13	14	15	15	16	17	18
IND	12	12	12	13	15	16	18	18	20	20	21
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	4	5	5	6	7	7	8	9	10	11	11
MEA	4	3	4	3	4	5	5	5	6	7	7
NEU	3	3	3	3	3	3	4	4	5	5	6
OAS	8	9	10	10	12	14	16	20	22	25	30
REF	23	19	20	21	22	22	22	23	24	25	26
SSA	4	4	5	5	6	6	6	7	8	10	12
USA	6	6	6	6	6	7	7	6	6	7	7

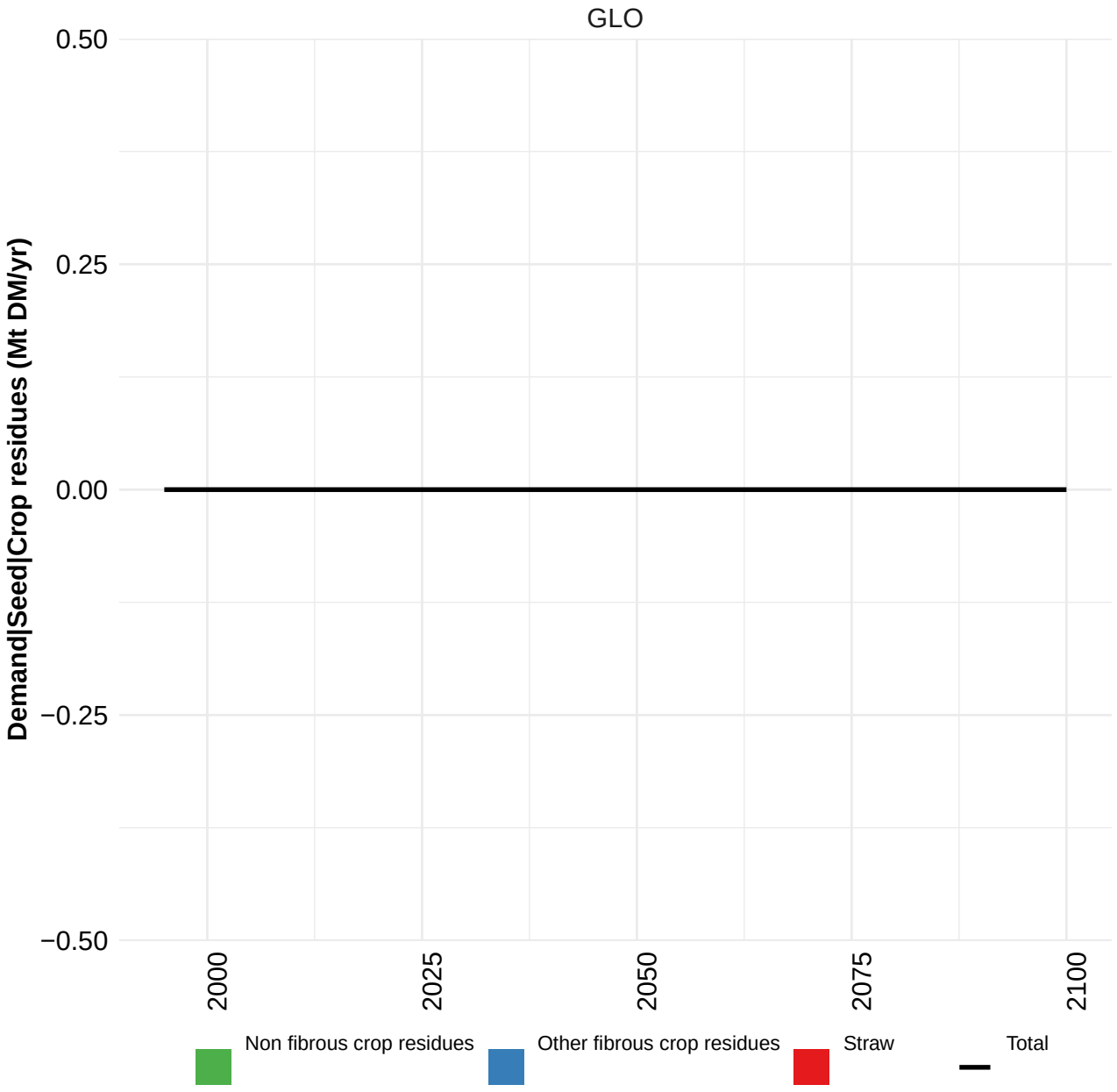
Table 641: MAgPIE m4p_SSP5 — Demand—Seed (Mt DM/yr) [PART 1/2]

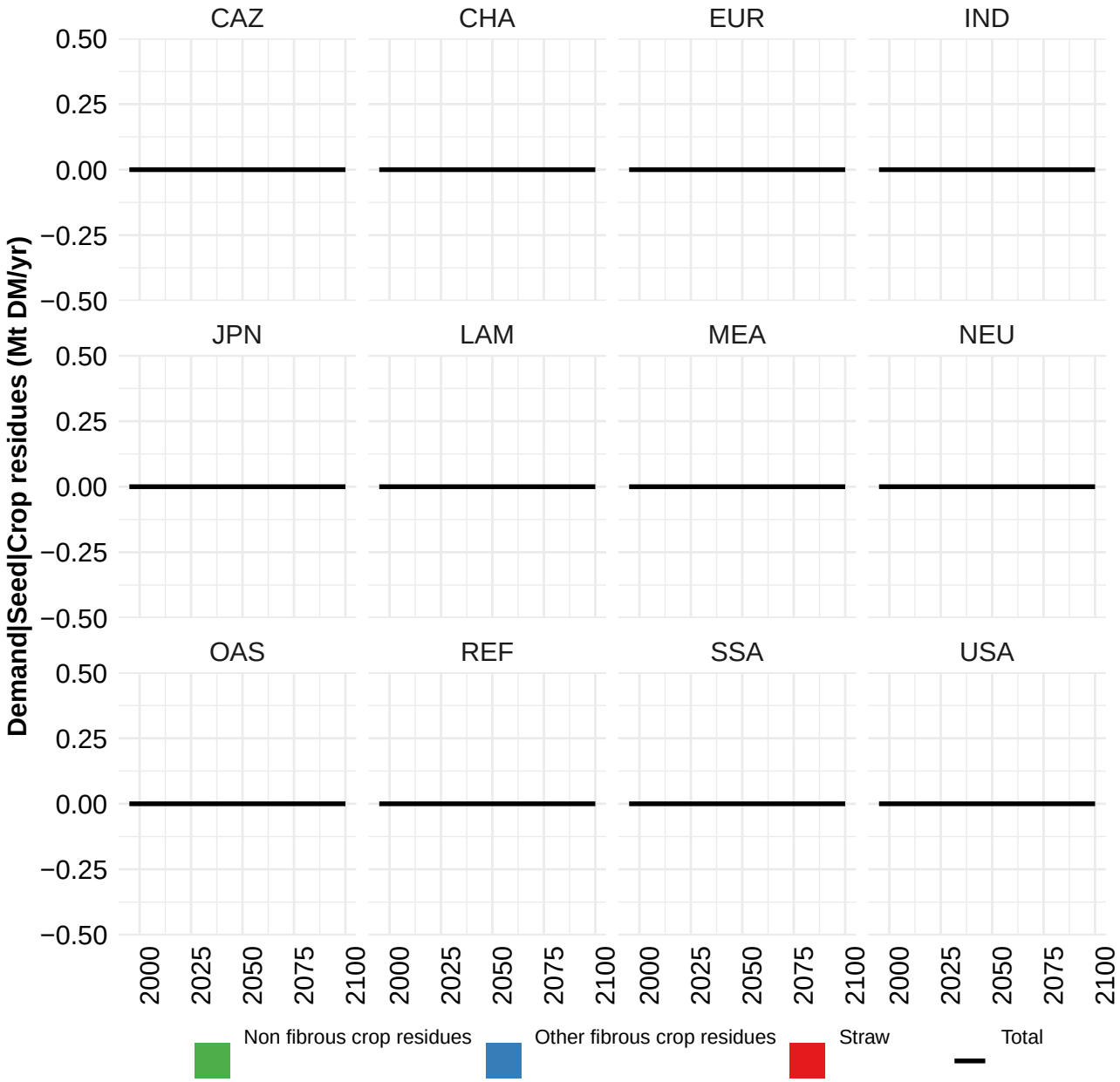
	2050	2055	2060	2070	2080	2090	2100
GLO	177	181	184	187	184	178	176
CAZ	4	5	4	5	5	5	4
CHA	26	25	24	23	21	18	16
EUR	17	18	19	20	20	21	19
IND	21	22	23	23	24	23	25
JPN	0	0	0	0	0	0	0
LAM	13	13	14	14	13	14	13
MEA	8	8	8	8	8	8	7
NEU	7	7	7	7	7	6	6
OAS	33	34	34	35	33	31	29
REF	25	26	26	26	25	25	29
SSA	15	17	18	18	18	18	17
USA	7	8	8	8	9	9	10

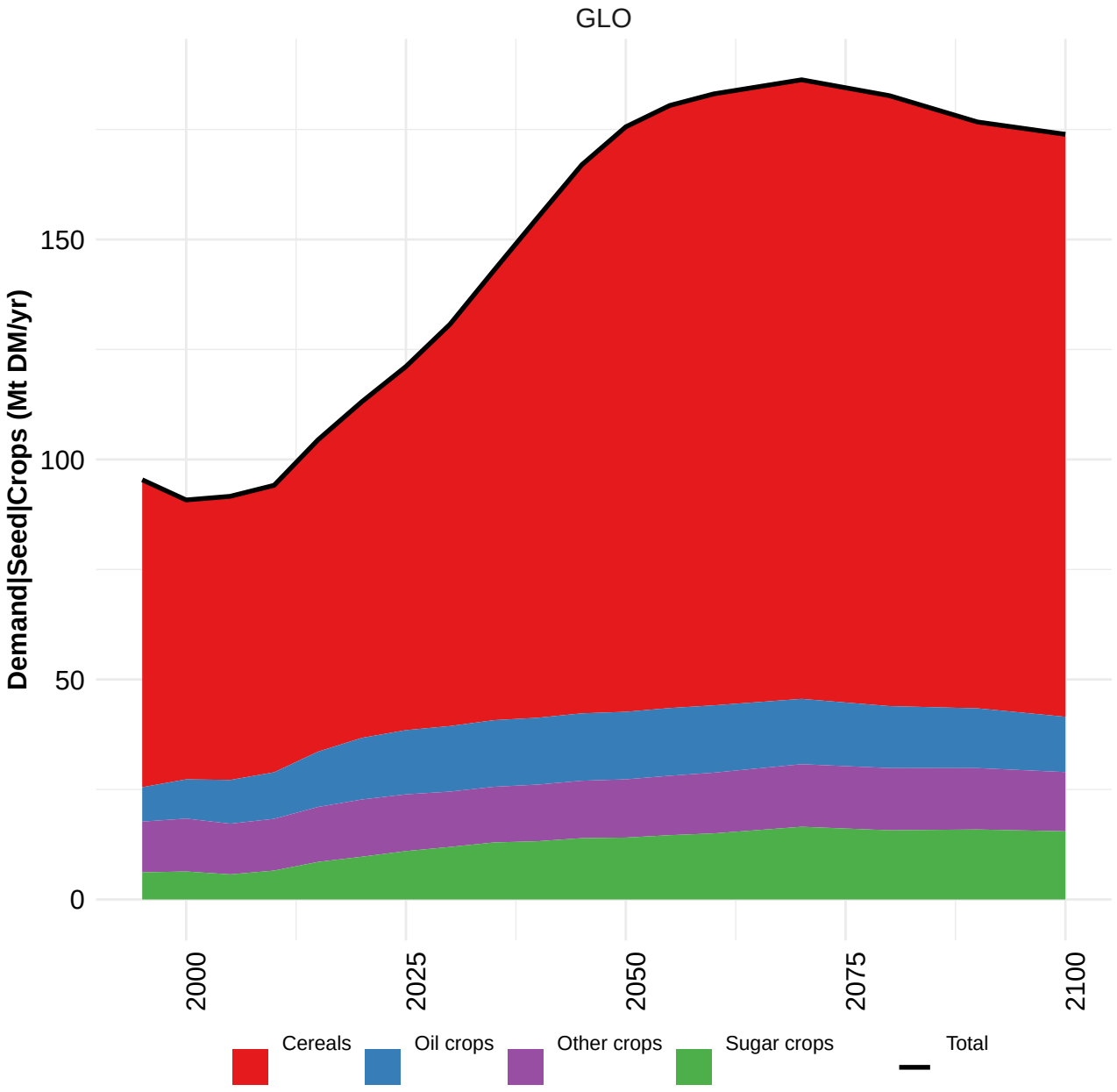
Table 642: MAgPIE m4p_SSP5 — Demand—Seed (Mt DM/yr) [PART 2/2]

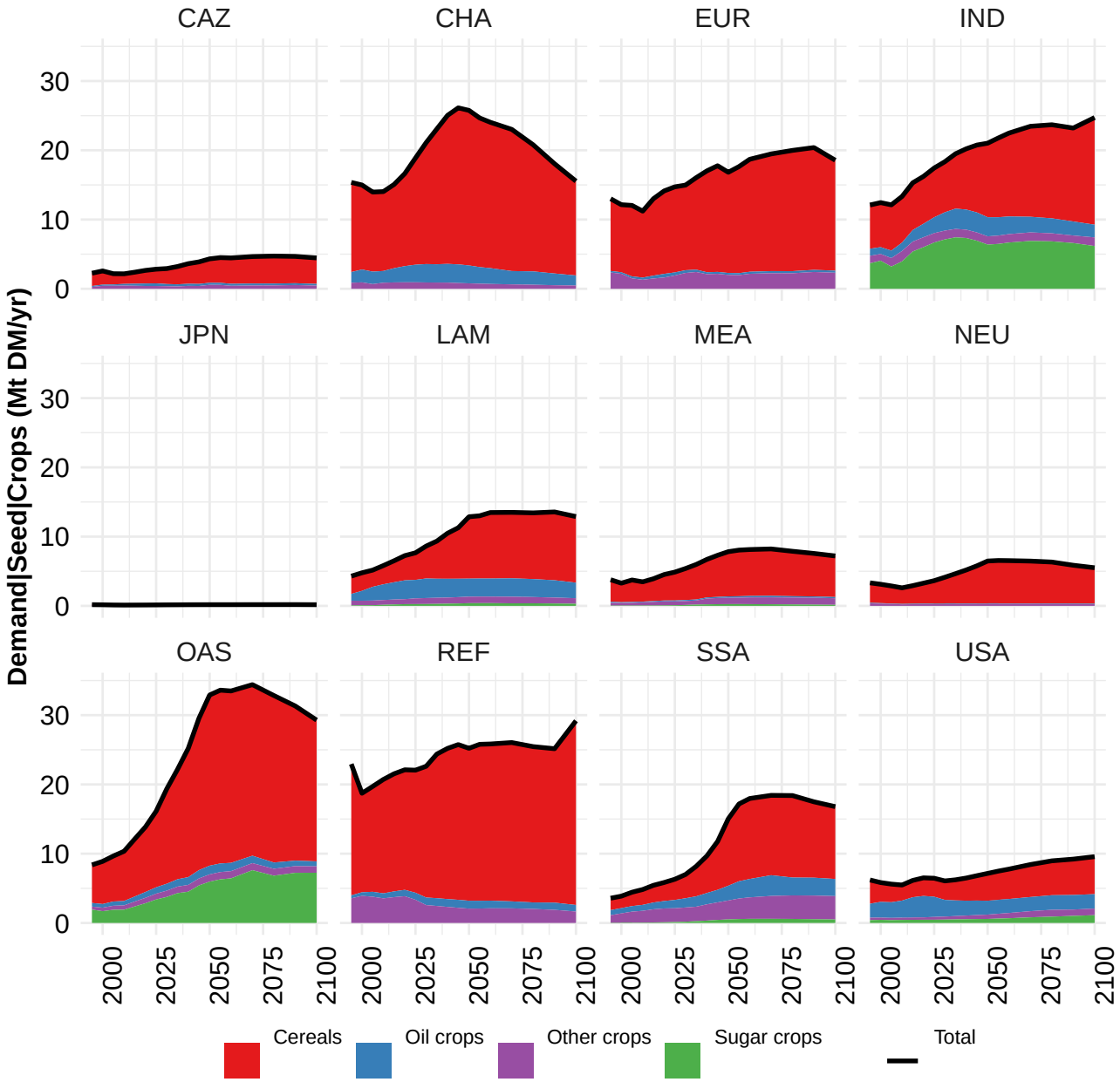
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	81.7	84.4	91.1	92.2	94.1	90.4	96.8	91.7	92.1	94.3
CAZ	2.5	2.3	2.4	2.8	3.1	2.6	2.8	2.9	2.8	2.6
CHA	13.6	14.4	14.8	14.5	14.7	14.7	15.6	15.3	14.1	14.4
EUR	13.8	13.7	13.0	12.7	13.1	12.6	12.2	11.6	11.2	10.6
IND	7.4	9.2	10.3	11.0	13.2	11.3	12.2	12.5	12.1	13.5
JPN	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1
LAM	3.3	3.6	4.2	4.2	4.5	4.1	4.3	4.8	5.3	5.9
MEA	2.4	2.4	2.7	2.8	3.0	3.6	3.9	3.4	3.8	3.6
NEU	2.8	3.0	3.0	3.1	3.3	3.3	3.2	3.0	2.8	2.5
OAS	5.1	5.6	5.8	6.4	6.6	7.2	8.1	8.8	9.5	10.5
REF	23.2	22.0	25.7	25.1	23.3	21.8	24.1	19.1	19.5	19.3
SSA	2.3	2.6	2.6	2.5	2.8	3.2	3.6	3.9	4.5	5.0
USA	5.0	5.3	6.3	6.9	6.2	6.0	6.6	6.4	6.3	6.2

Table 643: FAO — Demand—Seed (Mt DM/yr)

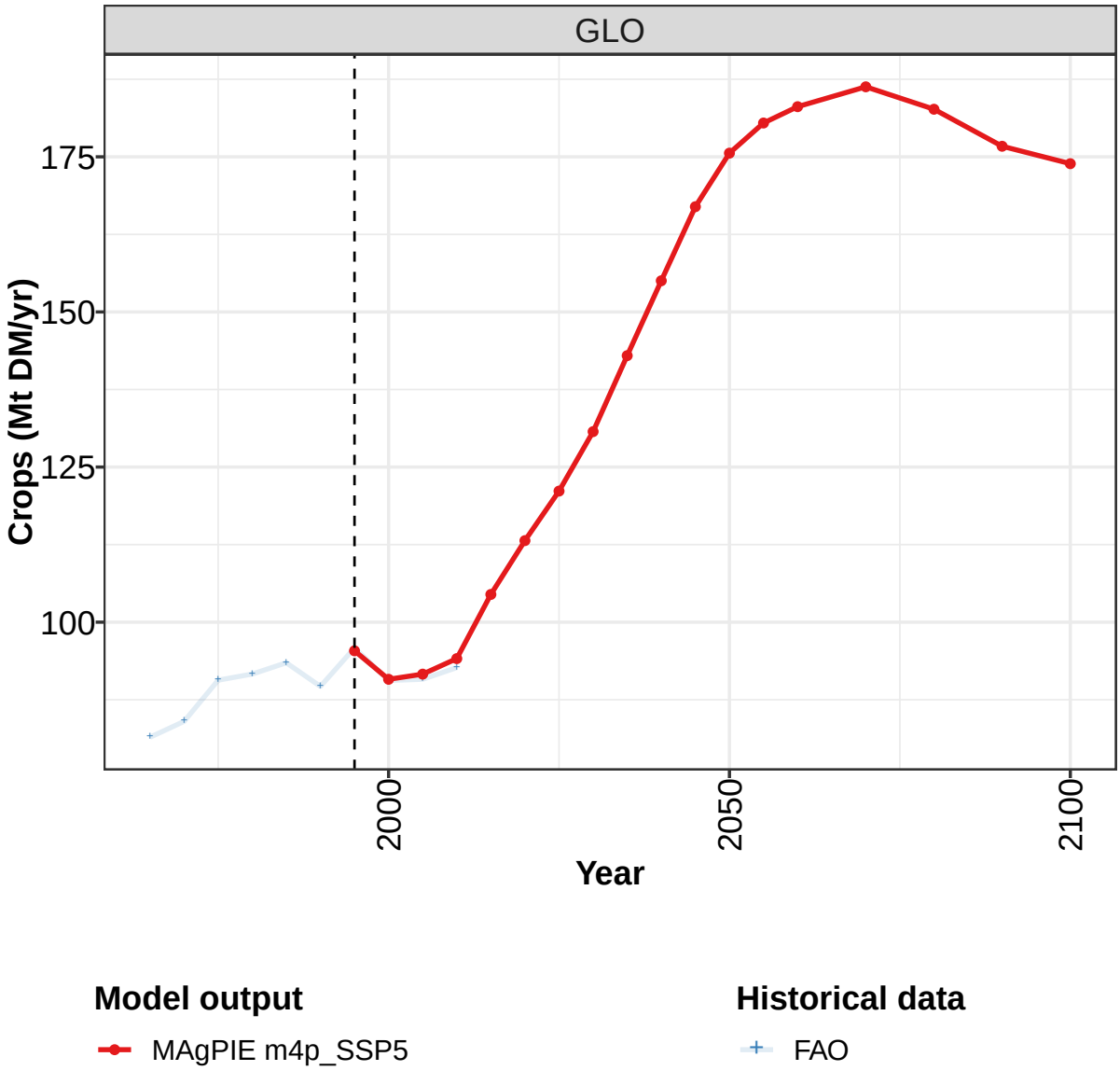

GLO
Demand|Seed|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total

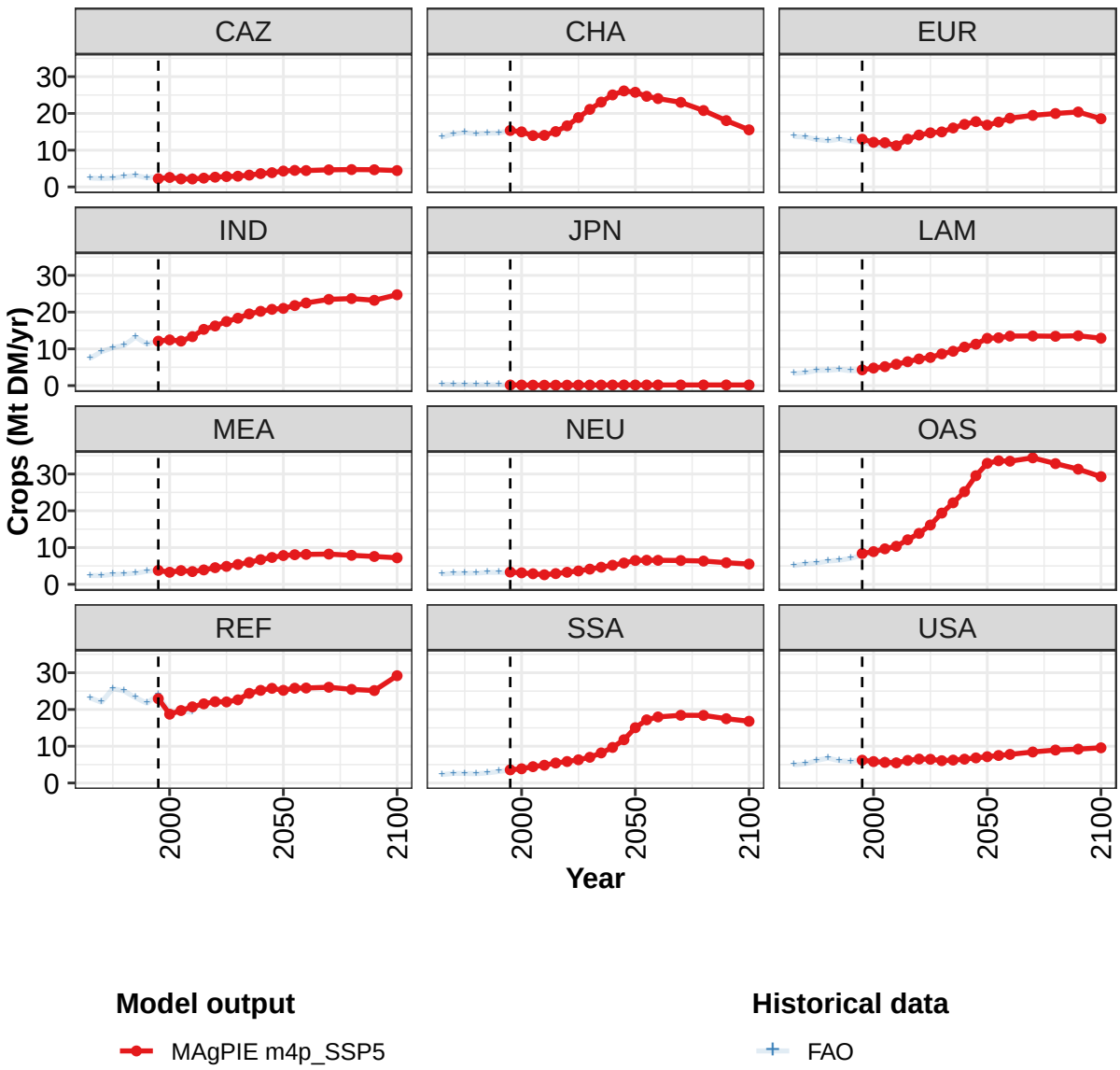

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Seed|Crop residues (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


GLO
Demand|Seed|Crops (Mt DM/yr)
150
100
50
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Seed|Crops (Mt DM/yr)
0
10
20
30
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

10.1 Crops


GLO
Crops (Mt DM/yr)
175
150
125
100
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



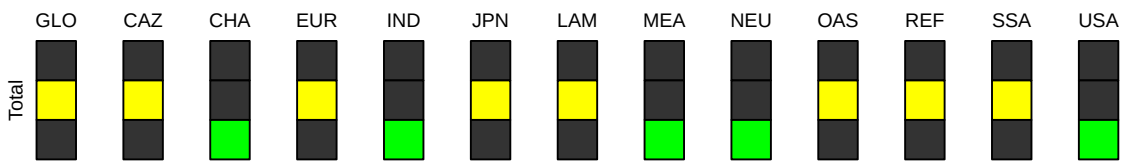


Figure 215: MAgPIE m4p_SSP5 — Demand—Seed—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	95	91	92	94	104	113	121	131	143	155	167
CAZ	2	3	2	2	2	3	3	3	3	4	4
CHA	15	15	14	14	15	17	19	21	23	25	26
EUR	13	12	12	11	13	14	15	15	16	17	18
IND	12	12	12	13	15	16	17	18	19	20	21
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	4	5	5	6	7	7	8	9	9	10	11
MEA	4	3	4	3	4	5	5	5	6	7	7
NEU	3	3	3	3	3	3	4	4	5	5	6
OAS	8	9	10	10	12	14	16	19	22	25	30
REF	23	19	20	21	22	22	22	23	24	25	26
SSA	4	4	4	5	5	6	6	7	8	10	12
USA	6	6	6	5	6	7	6	6	6	6	7

Table 644: MAgPIE m4p_SSP5 — Demand—Seed—Crops (Mt DM/yr) [PART 1/2]

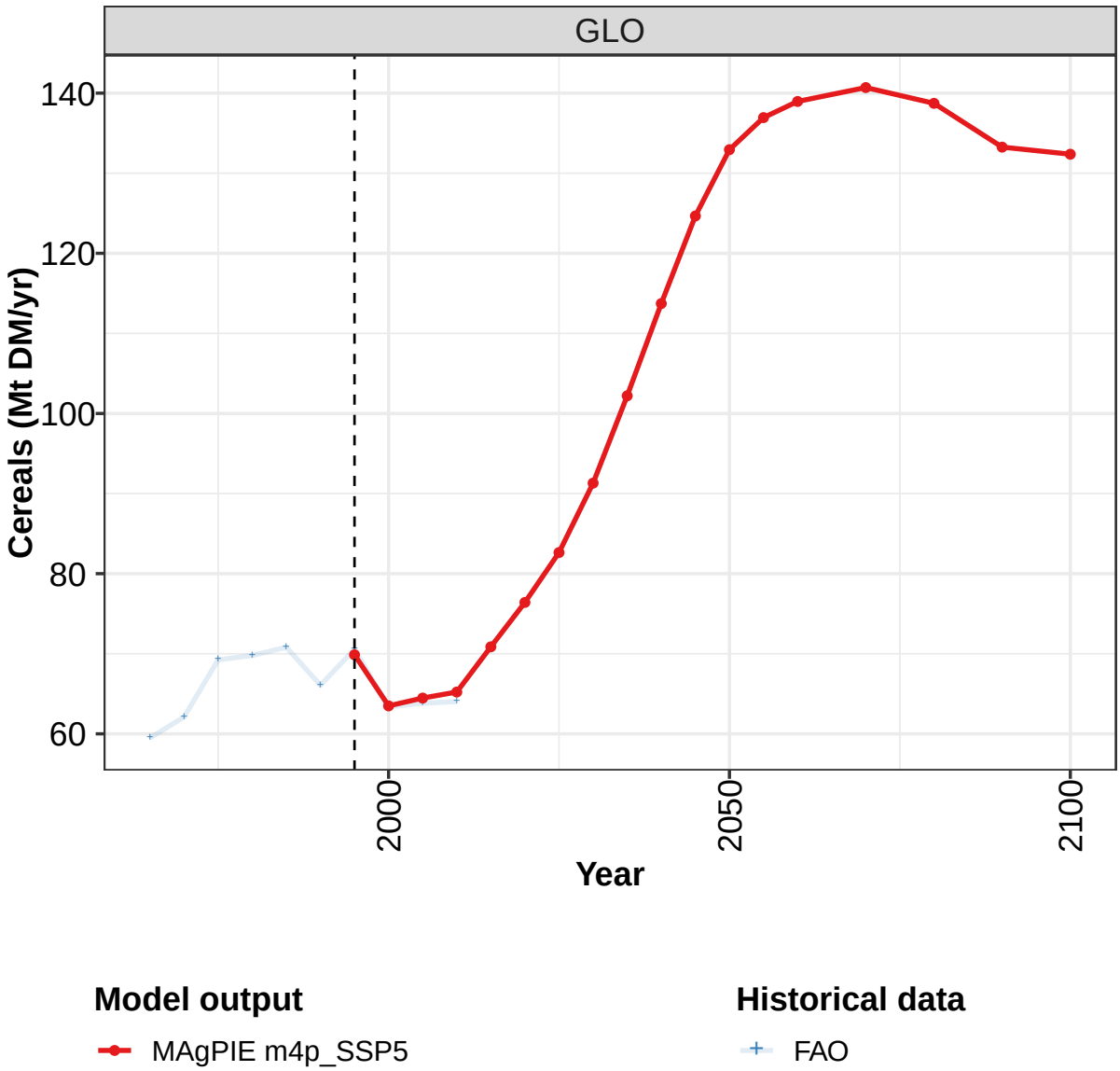
	2050	2055	2060	2070	2080	2090	2100
GLO	176	180	183	186	183	177	174
CAZ	4	5	4	5	5	5	4
CHA	26	25	24	23	21	18	16
EUR	17	18	19	19	20	20	19
IND	21	22	22	23	24	23	25
JPN	0	0	0	0	0	0	0
LAM	13	13	13	13	13	14	13
MEA	8	8	8	8	8	8	7
NEU	6	7	7	6	6	6	6
OAS	33	34	33	34	33	31	29
REF	25	26	26	26	25	25	29
SSA	15	17	18	18	18	17	17
USA	7	7	8	8	9	9	10

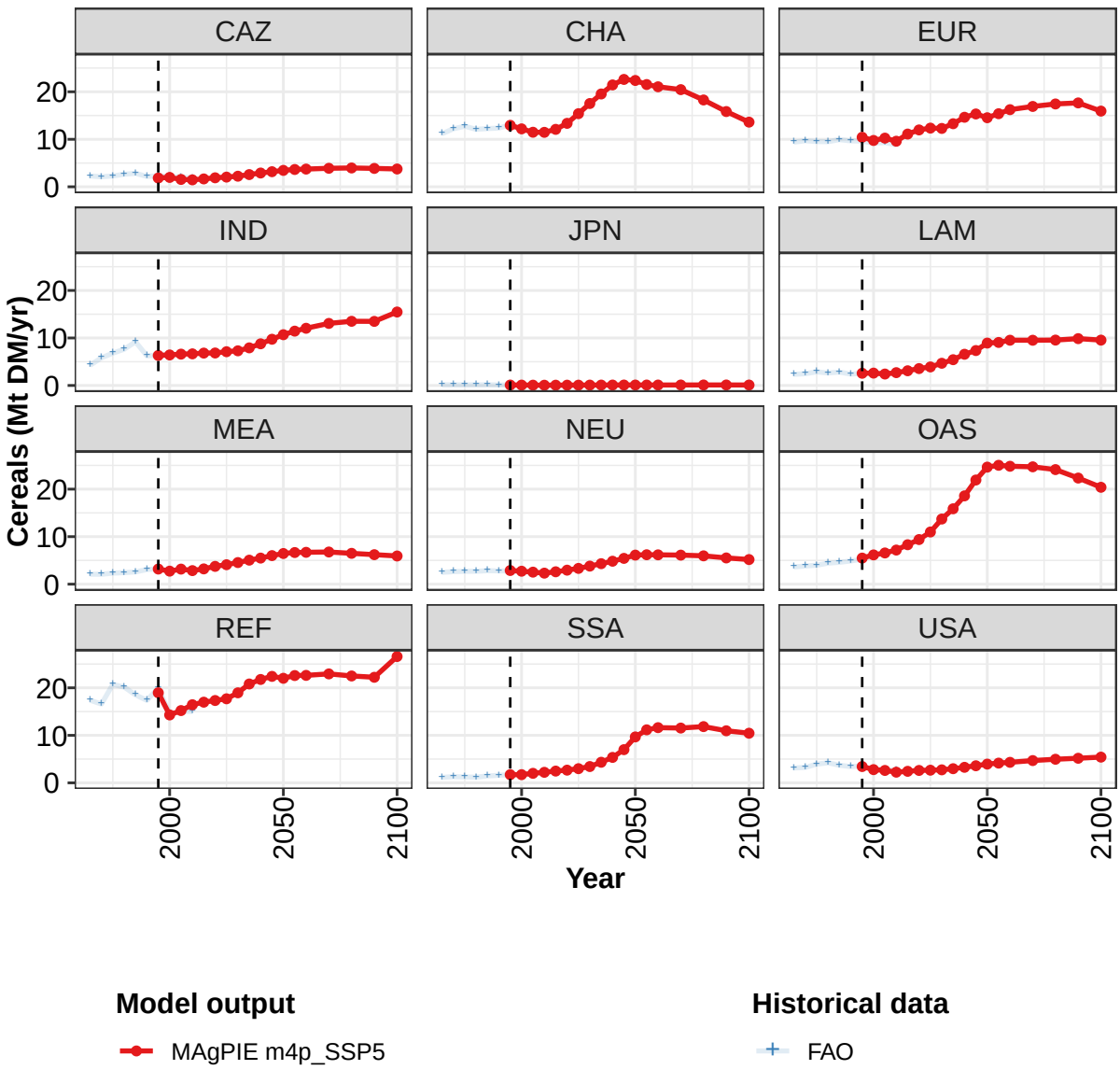
Table 645: MAgPIE m4p_SSP5 — Demand—Seed—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	81.5	84.0	90.6	91.6	93.5	89.6	95.8	90.6	90.8	92.7
CAZ	2.4	2.3	2.4	2.8	3.1	2.5	2.8	2.8	2.8	2.5
CHA	13.6	14.4	14.8	14.4	14.6	14.7	15.5	15.1	13.9	14.1
EUR	13.7	13.6	12.9	12.6	13.0	12.4	12.1	11.4	11.1	10.4
IND	7.4	9.2	10.3	11.0	13.2	11.3	12.2	12.5	12.1	13.5
JPN	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
LAM	3.3	3.5	4.1	4.2	4.4	4.0	4.2	4.6	5.0	5.7
MEA	2.4	2.4	2.7	2.8	3.0	3.5	3.8	3.3	3.7	3.5
NEU	2.8	3.0	3.0	3.0	3.3	3.2	3.2	3.0	2.7	2.5
OAS	5.1	5.6	5.8	6.3	6.6	7.1	7.9	8.7	9.4	10.3
REF	23.2	22.0	25.7	25.0	23.2	21.7	24.1	19.0	19.5	19.2
SSA	2.3	2.6	2.6	2.5	2.7	3.1	3.5	3.9	4.5	5.0
USA	4.9	5.2	6.2	6.8	6.0	5.9	6.3	6.1	6.0	5.9

Table 646: FAO — Demand—Seed—Crops (Mt DM/yr)

10.1.1 Cereals





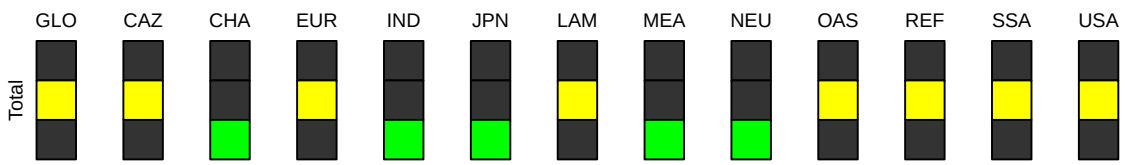


Figure 216: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	70	63	64	65	71	76	83	91	102	114	125
CAZ	2	2	2	1	2	2	2	2	3	3	3
CHA	13	12	11	11	12	13	15	18	20	21	23
EUR	10	10	10	10	11	12	12	12	13	15	15
IND	6	6	7	7	7	7	7	7	8	9	10
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	3	2	3	3	4	4	5	5	7	7
MEA	3	3	3	3	3	4	4	5	5	5	6
NEU	3	3	3	2	3	3	3	4	4	5	5
OAS	5	6	7	7	8	9	11	14	16	19	22
REF	19	14	15	16	17	17	18	19	21	22	22
SSA	2	2	2	2	2	3	3	3	4	5	7
USA	3	3	3	2	2	3	3	3	3	3	4

Table 647: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals (Mt DM/yr) [PART 1/2]

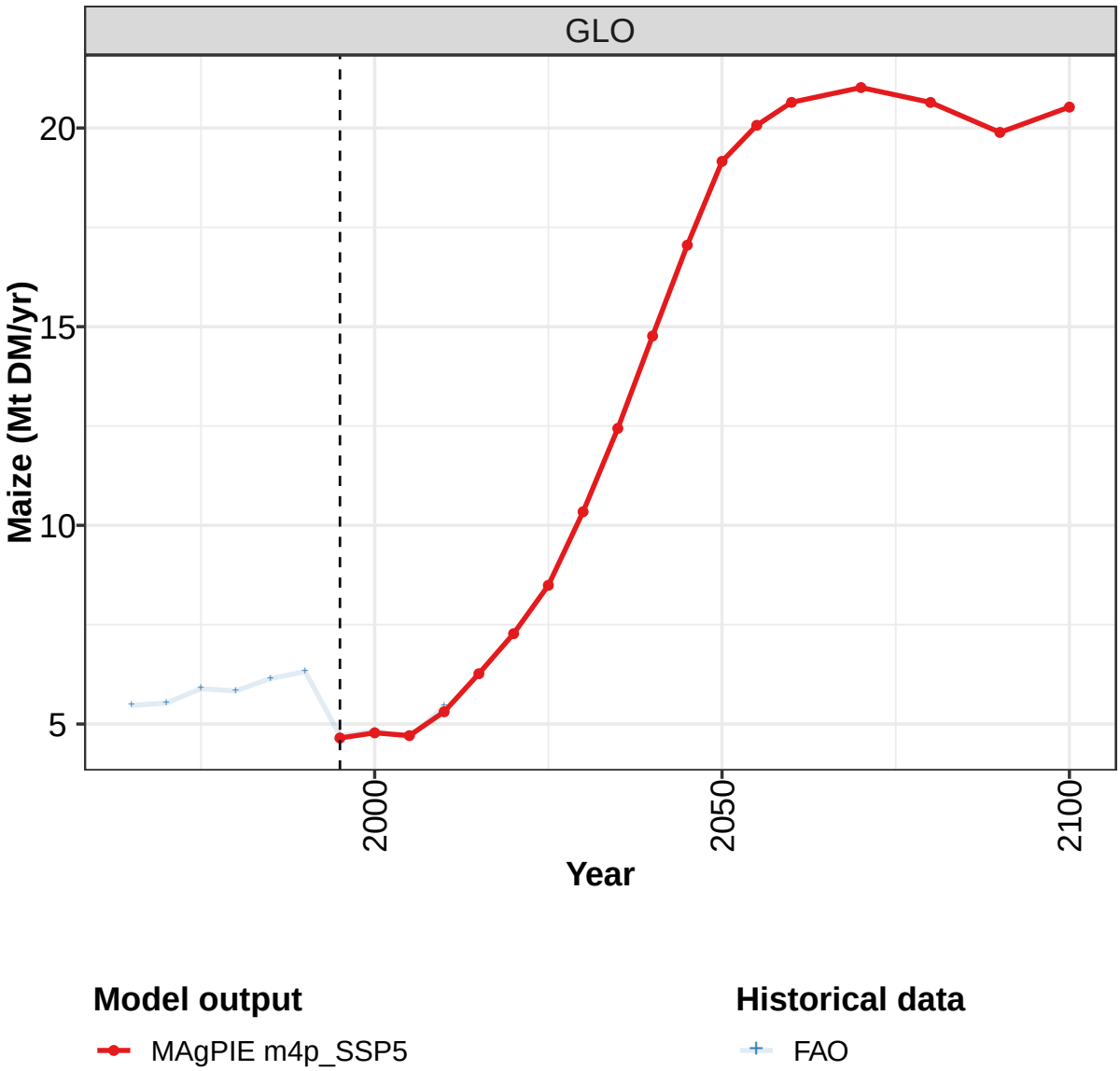
	2050	2055	2060	2070	2080	2090	2100
GLO	133	137	139	141	139	133	132
CAZ	3	4	4	4	4	4	4
CHA	22	22	21	20	18	16	14
EUR	15	15	16	17	17	18	16
IND	11	11	12	13	14	13	15
JPN	0	0	0	0	0	0	0
LAM	9	9	10	10	10	10	10
MEA	6	7	7	7	6	6	6
NEU	6	6	6	6	6	6	5
OAS	25	25	25	25	24	22	20
REF	22	23	23	23	22	22	27
SSA	10	11	12	12	12	11	10
USA	4	4	4	5	5	5	5

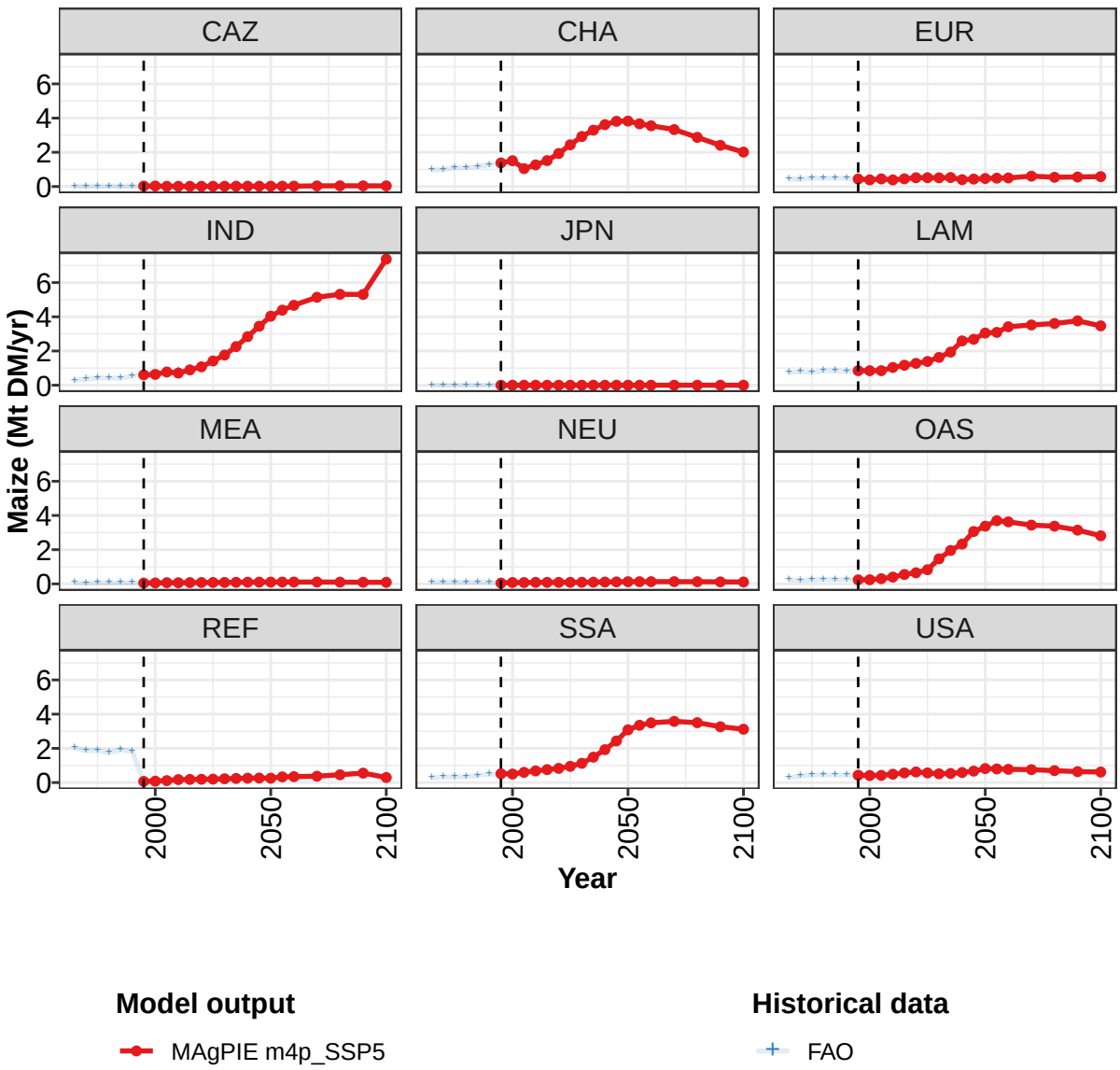
Table 648: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	59.5	62.1	69.2	69.8	70.8	66.1	70.6	63.4	63.8	64.0
CAZ	2.3	2.1	2.3	2.6	2.8	2.2	2.3	2.2	2.1	1.9
CHA	11.2	12.2	12.7	12.1	12.2	12.4	13.0	12.3	11.5	11.6
EUR	9.4	9.7	9.5	9.5	9.9	9.7	9.6	9.2	9.3	8.8
IND	4.2	5.8	6.8	7.6	9.2	6.2	6.4	6.5	6.6	6.8
JPN	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.3	2.5	2.9	2.6	2.8	2.4	2.6	2.6	2.4	2.6
MEA	2.1	2.1	2.3	2.4	2.6	3.1	3.2	2.8	3.2	2.9
NEU	2.5	2.6	2.7	2.7	2.8	2.8	2.8	2.6	2.4	2.2
OAS	3.6	3.8	4.0	4.4	4.6	4.9	5.3	6.0	6.5	7.2
REF	17.4	16.6	20.7	20.2	18.5	17.4	20.0	14.6	15.0	15.0
SSA	1.1	1.3	1.2	1.2	1.4	1.6	1.7	1.7	2.0	2.3
USA	3.1	3.2	3.9	4.2	3.7	3.4	3.5	2.9	2.8	2.7

Table 649: FAO — Demand—Seed—Crops—Cereals (Mt DM/yr)

10.1.2 Cereals—Maize





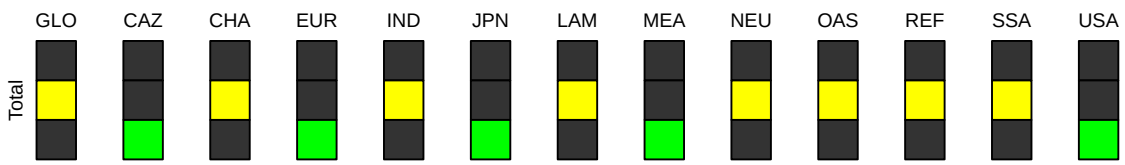


Figure 217: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.6	4.8	4.7	5.3	6.3	7.3	8.5	10.3	12.4	14.8	17.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.4	1.5	1.0	1.3	1.5	1.9	2.4	2.9	3.3	3.6	3.8
EUR	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4
IND	0.6	0.6	0.8	0.7	0.9	1.1	1.4	1.8	2.3	2.8	3.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.8	0.8	0.8	1.0	1.2	1.3	1.4	1.6	1.9	2.6	2.7
MEA	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.2	0.2	0.3	0.4	0.6	0.6	0.8	1.5	2.0	2.3	3.1
REF	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
SSA	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.1	1.5	1.9	2.4
USA	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.7

Table 650: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

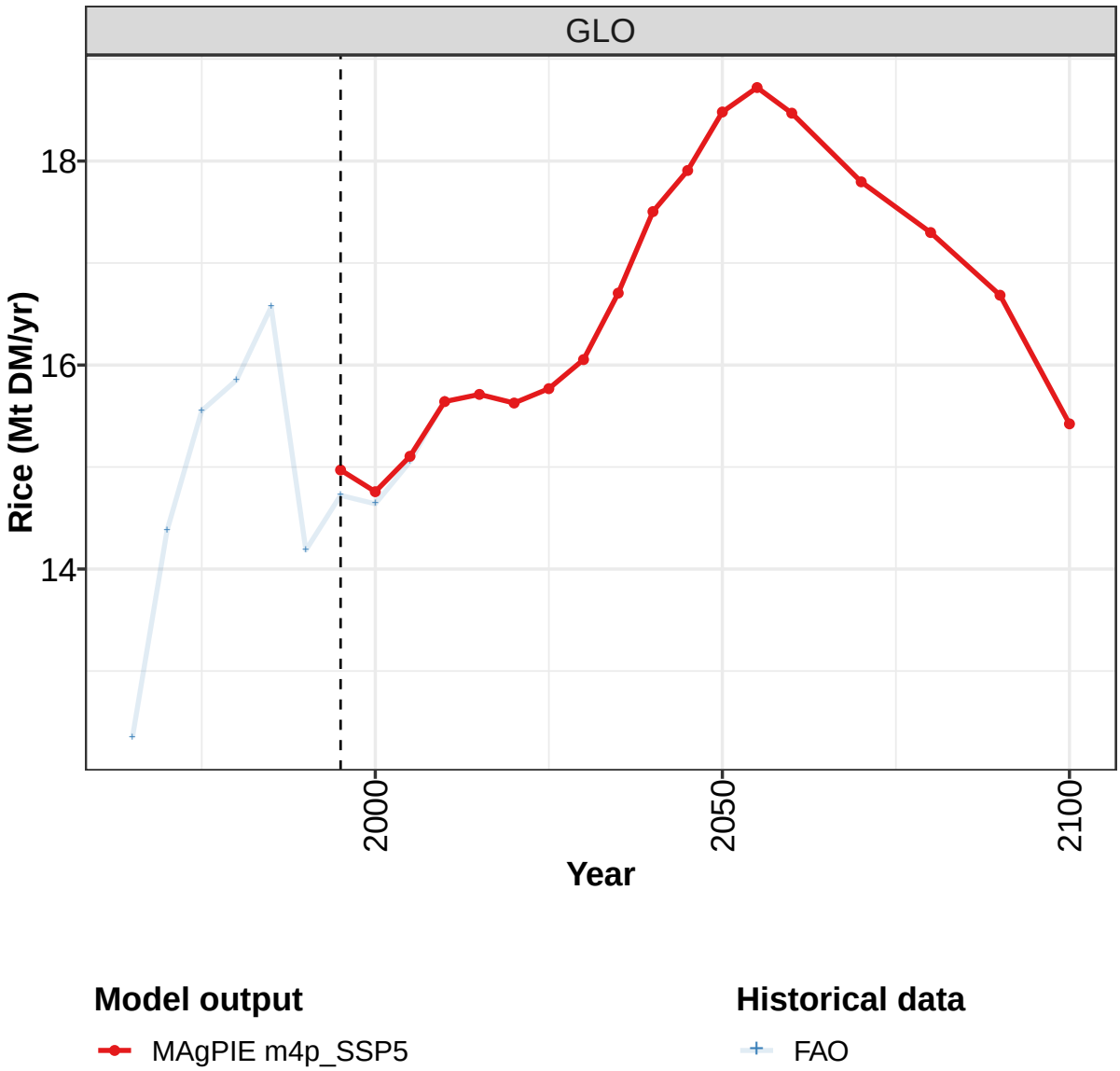
	2050	2055	2060	2070	2080	2090	2100
GLO	19.2	20.1	20.6	21.0	20.6	19.9	20.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.8	3.7	3.6	3.3	2.9	2.4	2.0
EUR	0.5	0.5	0.5	0.6	0.5	0.6	0.6
IND	4.0	4.4	4.7	5.1	5.3	5.3	7.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.1	3.1	3.4	3.5	3.6	3.8	3.5
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	3.4	3.7	3.6	3.4	3.4	3.1	2.8
REF	0.3	0.3	0.3	0.4	0.5	0.6	0.3
SSA	3.1	3.4	3.5	3.6	3.5	3.3	3.1
USA	0.8	0.8	0.8	0.8	0.7	0.6	0.6

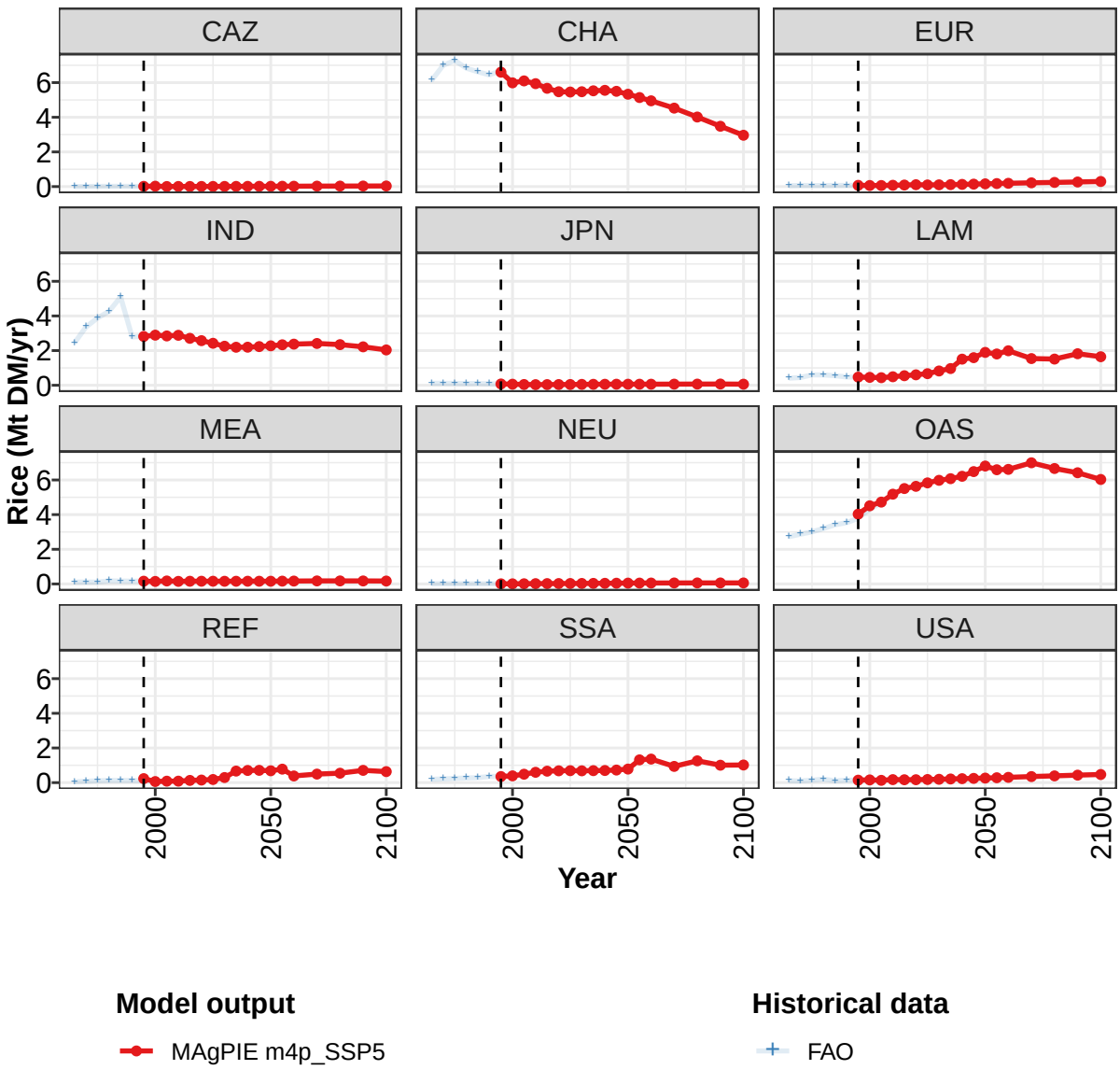
Table 651: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.47	5.53	5.89	5.83	6.15	6.32	4.71	4.83	4.65	5.44
CAZ	0.01	0.01	0.02	0.03	0.02	0.02	0.03	0.03	0.01	0.01
CHA	0.97	1.00	1.11	1.11	1.17	1.28	1.41	1.53	1.01	1.29
EUR	0.44	0.43	0.50	0.48	0.51	0.49	0.44	0.38	0.39	0.37
IND	0.28	0.34	0.44	0.42	0.40	0.54	0.61	0.64	0.76	0.84
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.74	0.80	0.75	0.84	0.84	0.81	0.82	0.84	0.87	0.97
MEA	0.07	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.07	0.07
NEU	0.11	0.11	0.11	0.10	0.11	0.10	0.06	0.08	0.08	0.09
OAS	0.23	0.21	0.24	0.27	0.26	0.27	0.25	0.26	0.31	0.40
REF	2.03	1.86	1.88	1.74	1.91	1.83	0.07	0.09	0.12	0.16
SSA	0.29	0.32	0.33	0.33	0.42	0.48	0.51	0.49	0.60	0.73
USA	0.29	0.38	0.45	0.45	0.44	0.43	0.45	0.43	0.44	0.51

Table 652: FAO — Demand—Seed—Crops—Cereals—Maize (Mt DM/yr)

10.1.3 Cereals—Rice





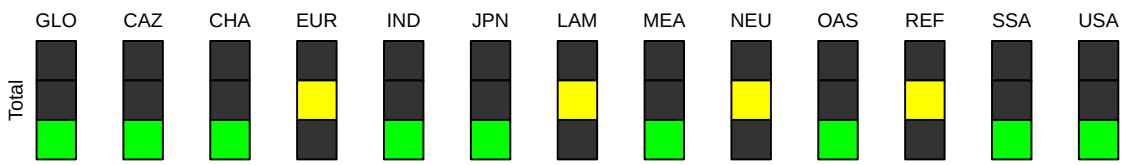


Figure 218: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.0	14.8	15.1	15.6	15.7	15.6	15.8	16.1	16.7	17.5	17.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.6	6.0	6.1	5.9	5.7	5.5	5.5	5.5	5.5	5.6	5.5
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	2.8	2.9	2.8	2.9	2.7	2.6	2.4	2.3	2.2	2.2	2.2
JPN	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
LAM	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.8	1.0	1.5	1.6
MEA	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	4.0	4.5	4.7	5.2	5.5	5.6	5.8	6.0	6.1	6.2	6.5
REF	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.7	0.7	0.7
SSA	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
USA	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 653: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

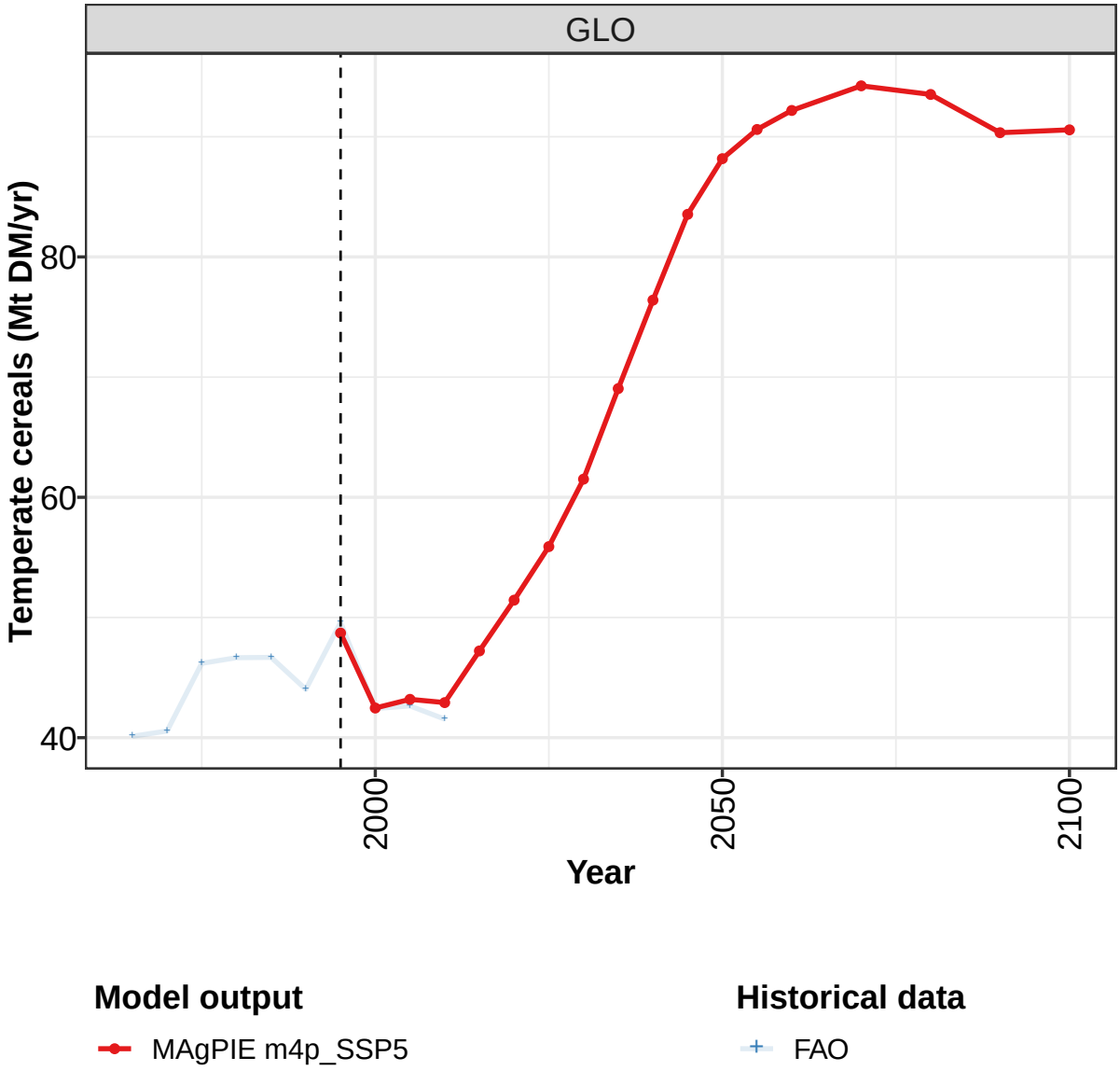
	2050	2055	2060	2070	2080	2090	2100
GLO	18.5	18.7	18.5	17.8	17.3	16.7	15.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.3	5.1	5.0	4.5	4.0	3.5	3.0
EUR	0.2	0.2	0.2	0.2	0.2	0.3	0.3
IND	2.3	2.3	2.4	2.4	2.3	2.2	2.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.9	1.8	2.0	1.5	1.5	1.8	1.6
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.1	0.1	0.1	0.1	0.1	0.1
OAS	6.8	6.6	6.6	7.0	6.7	6.4	6.0
REF	0.7	0.8	0.4	0.5	0.5	0.7	0.6
SSA	0.8	1.3	1.4	0.9	1.3	1.0	1.0
USA	0.3	0.3	0.3	0.3	0.4	0.4	0.5

Table 654: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12.3	14.4	15.6	15.9	16.6	14.2	14.7	14.6	15.1	15.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.1	7.0	7.3	6.8	6.6	6.4	6.7	6.0	6.1	5.9
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	2.4	3.4	3.9	4.3	5.1	2.8	2.8	2.9	2.9	2.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
LAM	0.4	0.4	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.5
MEA	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.7	2.9	3.0	3.2	3.4	3.5	3.8	4.3	4.7	5.2
REF	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.6
USA	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2

Table 655: FAO — Demand—Seed—Crops—Cereals—Rice (Mt DM/yr)

10.1.4 Cereals—Temperate cereals



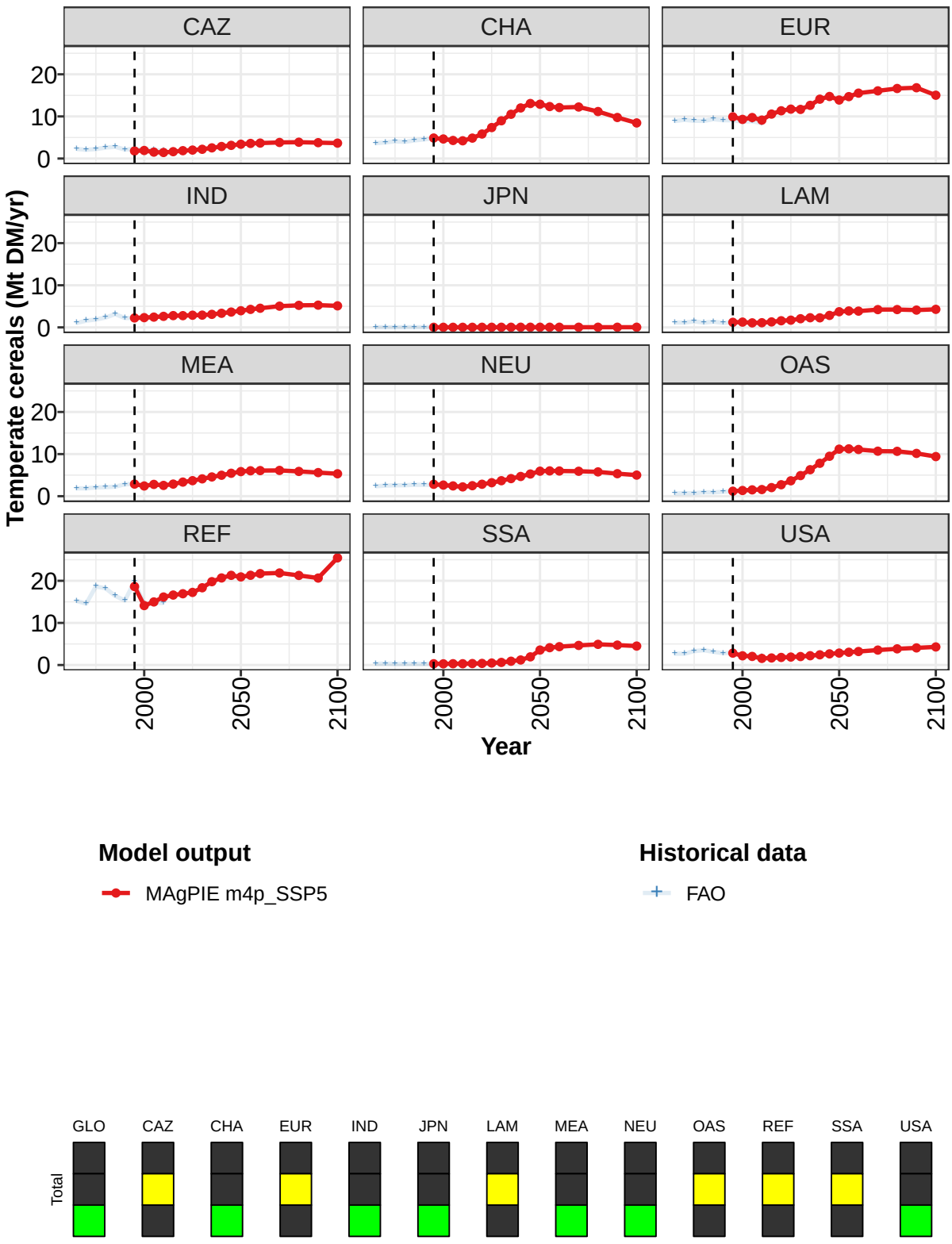


Figure 219: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	48.7	42.5	43.2	42.9	47.2	51.4	55.9	61.5	69.0	76.4	83.5
CAZ	1.8	1.9	1.5	1.4	1.6	1.9	2.0	2.2	2.5	2.9	3.1
CHA	4.9	4.6	4.3	4.2	4.9	5.8	7.4	9.0	10.5	12.0	13.1
EUR	9.9	9.3	9.7	9.1	10.6	11.3	11.7	11.7	12.6	14.1	14.7
IND	2.2	2.3	2.4	2.6	2.8	2.8	2.9	2.9	3.1	3.3	3.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.2	1.2	1.1	1.1	1.3	1.6	1.7	2.1	2.3	2.3	2.8
MEA	2.9	2.4	2.8	2.6	2.9	3.4	3.7	4.1	4.6	5.0	5.4
NEU	2.8	2.6	2.4	2.2	2.5	2.8	3.2	3.7	4.2	4.7	5.3
OAS	1.2	1.4	1.5	1.6	2.0	2.7	3.7	4.9	6.3	7.8	9.5
REF	18.6	14.1	15.0	16.1	16.6	16.9	17.2	18.3	19.8	20.7	21.3
SSA	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.9	1.2	1.9
USA	2.8	2.2	2.0	1.6	1.7	1.8	1.9	2.0	2.2	2.4	2.7

Table 656: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

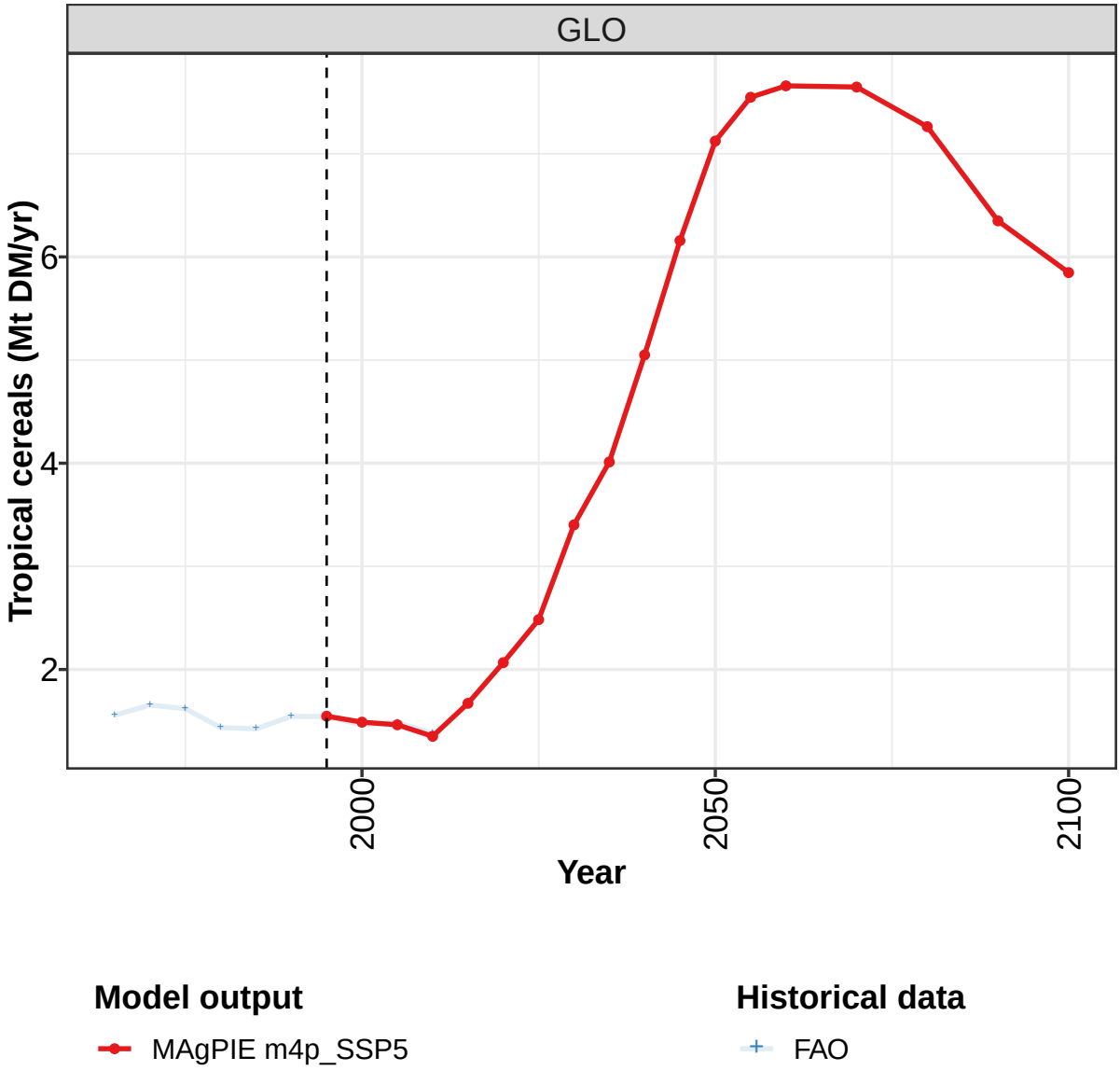
	2050	2055	2060	2070	2080	2090	2100
GLO	88.2	90.6	92.2	94.2	93.5	90.3	90.6
CAZ	3.4	3.6	3.7	3.8	3.9	3.8	3.7
CHA	12.9	12.3	12.1	12.2	11.2	9.8	8.5
EUR	13.9	14.7	15.5	16.1	16.6	16.8	15.0
IND	4.0	4.3	4.5	5.0	5.2	5.3	5.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.7	3.9	3.9	4.2	4.2	4.1	4.3
MEA	5.8	6.0	6.1	6.1	5.9	5.6	5.3
NEU	5.9	6.0	6.0	5.9	5.8	5.3	5.0
OAS	11.2	11.2	11.1	10.7	10.7	10.2	9.4
REF	20.9	21.3	21.7	21.9	21.3	20.7	25.4
SSA	3.6	4.1	4.4	4.7	4.9	4.7	4.5
USA	2.8	3.0	3.2	3.5	3.8	4.1	4.3

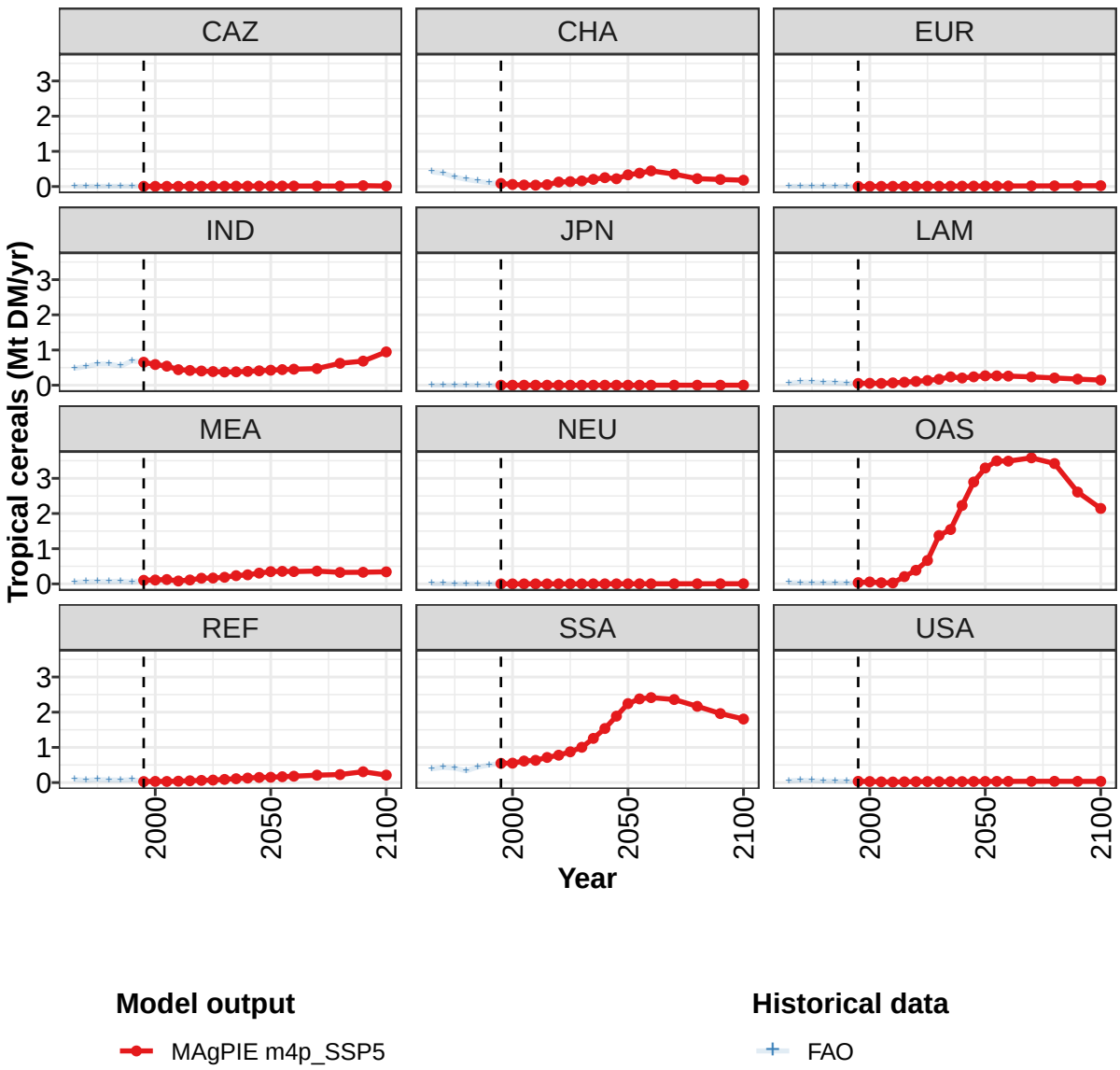
Table 657: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	40.1	40.6	46.2	46.7	46.7	44.0	49.6	42.4	42.6	41.5
CAZ	2.3	2.1	2.2	2.6	2.8	2.1	2.3	2.1	2.1	1.8
CHA	3.6	3.8	4.1	4.0	4.3	4.5	4.9	4.7	4.3	4.3
EUR	8.9	9.2	9.0	8.9	9.3	9.1	9.1	8.7	8.9	8.4
IND	1.0	1.6	1.9	2.3	3.1	2.2	2.3	2.3	2.4	2.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.2	1.1	1.4	1.1	1.4	1.1	1.2	1.2	1.1	1.1
MEA	1.9	1.9	2.1	2.1	2.3	2.8	2.9	2.4	2.8	2.6
NEU	2.4	2.5	2.6	2.6	2.7	2.7	2.7	2.5	2.3	2.1
OAS	0.6	0.7	0.7	0.9	0.9	1.1	1.2	1.4	1.5	1.6
REF	15.2	14.6	18.6	18.2	16.4	15.3	19.8	14.4	14.8	14.7
SSA	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3
USA	2.7	2.7	3.3	3.5	3.1	2.8	2.9	2.3	2.2	2.0

Table 658: FAO — Demand—Seed—Crops—Cereals—Temperate cereals (Mt DM/yr)

10.1.5 Cereals—Tropical cereals





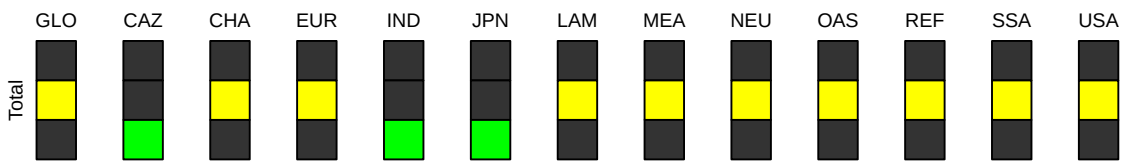


Figure 220: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.55	1.49	1.46	1.35	1.67	2.07	2.48	3.40	4.01	5.05	6.16
CAZ	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	0.09	0.06	0.04	0.04	0.05	0.13	0.14	0.16	0.20	0.25	0.22
EUR	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.65	0.59	0.54	0.44	0.42	0.40	0.39	0.38	0.38	0.39	0.41
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.05	0.05	0.05	0.07	0.08	0.11	0.13	0.17	0.24	0.20	0.24
MEA	0.10	0.11	0.12	0.08	0.11	0.16	0.17	0.19	0.23	0.26	0.31
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.04	0.05	0.03	0.03	0.21	0.39	0.67	1.38	1.55	2.23	2.89
REF	0.03	0.03	0.03	0.04	0.05	0.06	0.07	0.09	0.11	0.13	0.15
SSA	0.55	0.55	0.61	0.63	0.71	0.78	0.87	1.00	1.26	1.54	1.89
USA	0.04	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03

Table 659: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

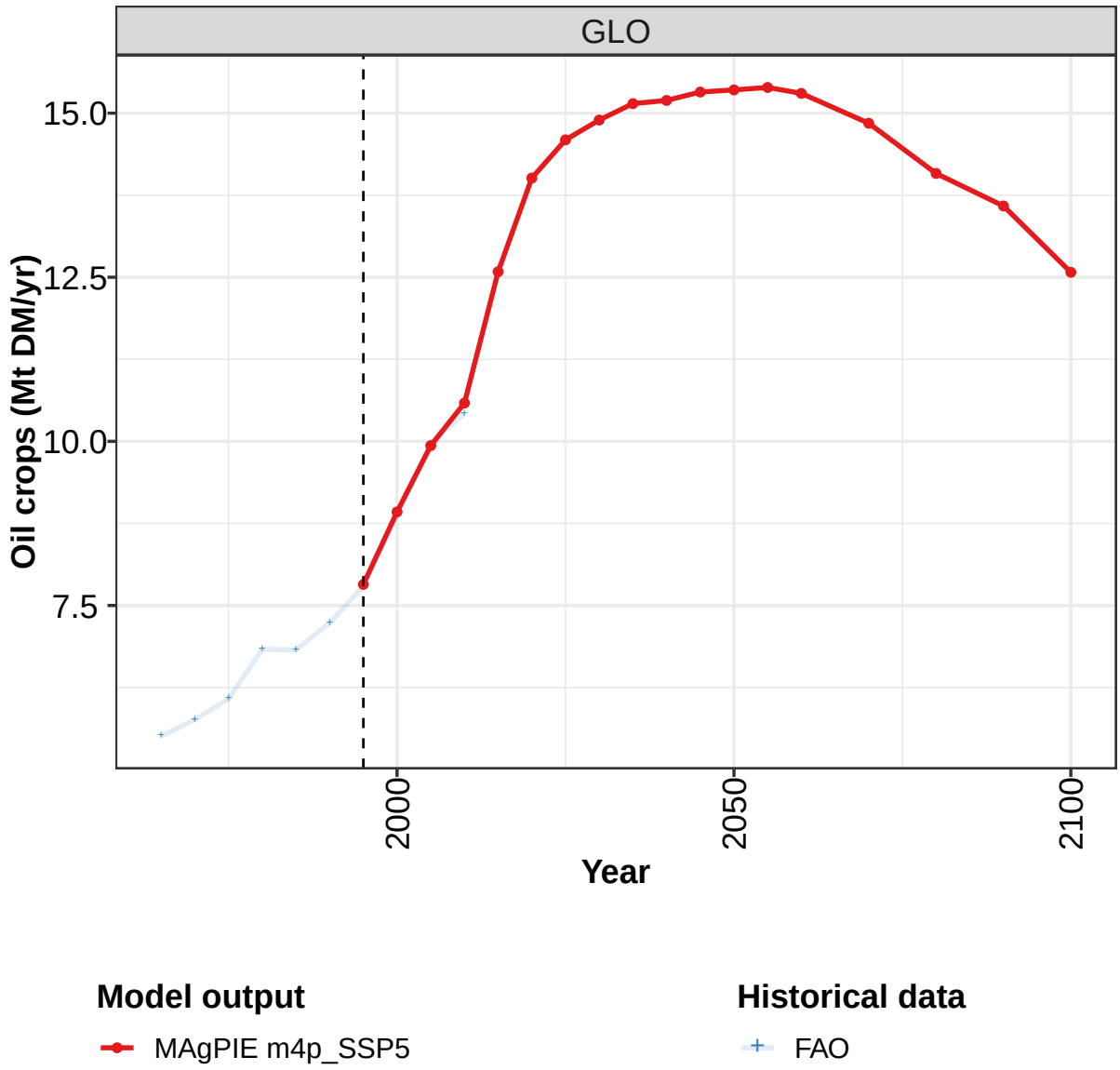
	2050	2055	2060	2070	2080	2090	2100
GLO	7.12	7.55	7.66	7.65	7.26	6.35	5.85
CAZ	0.01	0.01	0.01	0.01	0.01	0.02	0.01
CHA	0.33	0.38	0.44	0.35	0.22	0.20	0.18
EUR	0.01	0.01	0.02	0.02	0.02	0.02	0.02
IND	0.43	0.44	0.46	0.47	0.62	0.68	0.95
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.27	0.27	0.26	0.24	0.21	0.17	0.15
MEA	0.35	0.36	0.35	0.36	0.33	0.33	0.34
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	3.29	3.50	3.49	3.58	3.42	2.61	2.14
REF	0.15	0.17	0.18	0.21	0.23	0.31	0.21
SSA	2.24	2.38	2.41	2.36	2.17	1.96	1.81
USA	0.03	0.03	0.03	0.04	0.04	0.03	0.03

Table 660: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.56	1.66	1.62	1.44	1.42	1.54	1.54	1.46	1.49	1.38
CAZ	0.00	0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00
CHA	0.42	0.38	0.27	0.20	0.15	0.11	0.09	0.06	0.04	0.04
EUR	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
IND	0.48	0.53	0.60	0.60	0.54	0.69	0.65	0.59	0.54	0.48
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.05	0.09	0.09	0.08	0.07	0.05	0.06	0.06	0.05	0.07
MEA	0.05	0.06	0.07	0.07	0.08	0.05	0.10	0.10	0.12	0.08
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.03	0.03	0.03
REF	0.09	0.06	0.08	0.07	0.07	0.08	0.03	0.03	0.03	0.04
SSA	0.39	0.43	0.41	0.34	0.44	0.50	0.55	0.56	0.64	0.63
USA	0.04	0.07	0.05	0.04	0.04	0.03	0.04	0.03	0.02	0.01

Table 661: FAO — Demand—Seed—Crops—Cereals—Tropical cereals (Mt DM/yr)

10.1.6 Oil crops



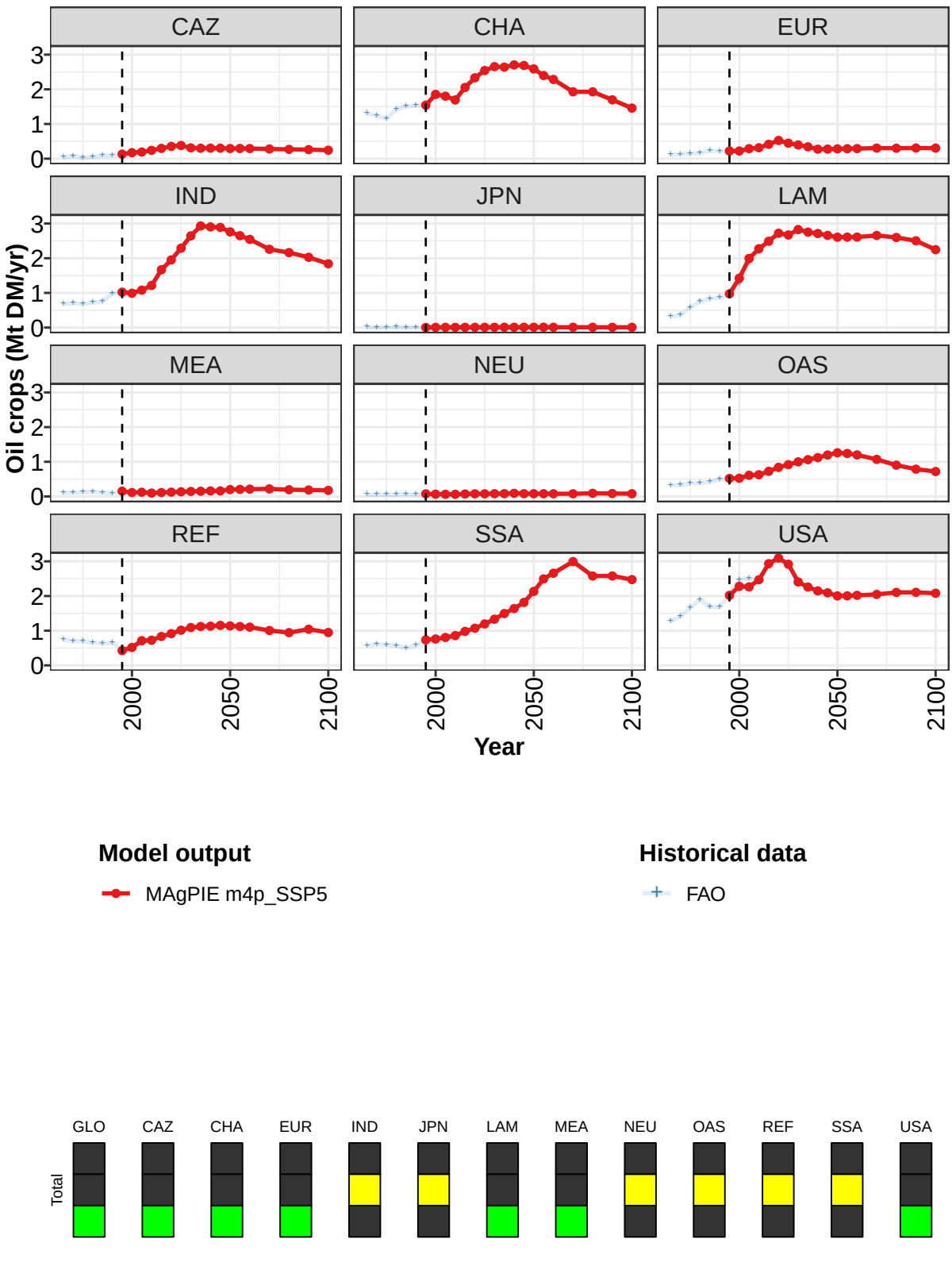


Figure 221: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.8	8.9	9.9	10.6	12.6	14.0	14.6	14.9	15.1	15.2	15.3
CAZ	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3
CHA	1.5	1.9	1.8	1.7	2.1	2.3	2.5	2.7	2.6	2.7	2.7
EUR	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.3
IND	1.0	1.0	1.1	1.2	1.7	2.0	2.3	2.6	2.9	2.9	2.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.0	1.4	2.0	2.3	2.5	2.7	2.7	2.8	2.8	2.7	2.7
MEA	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2
REF	0.4	0.5	0.7	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.2
SSA	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.5	1.6	1.8
USA	2.0	2.3	2.3	2.5	2.9	3.1	2.9	2.4	2.3	2.1	2.1

Table 662: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops (Mt DM/yr) [PART 1/2]

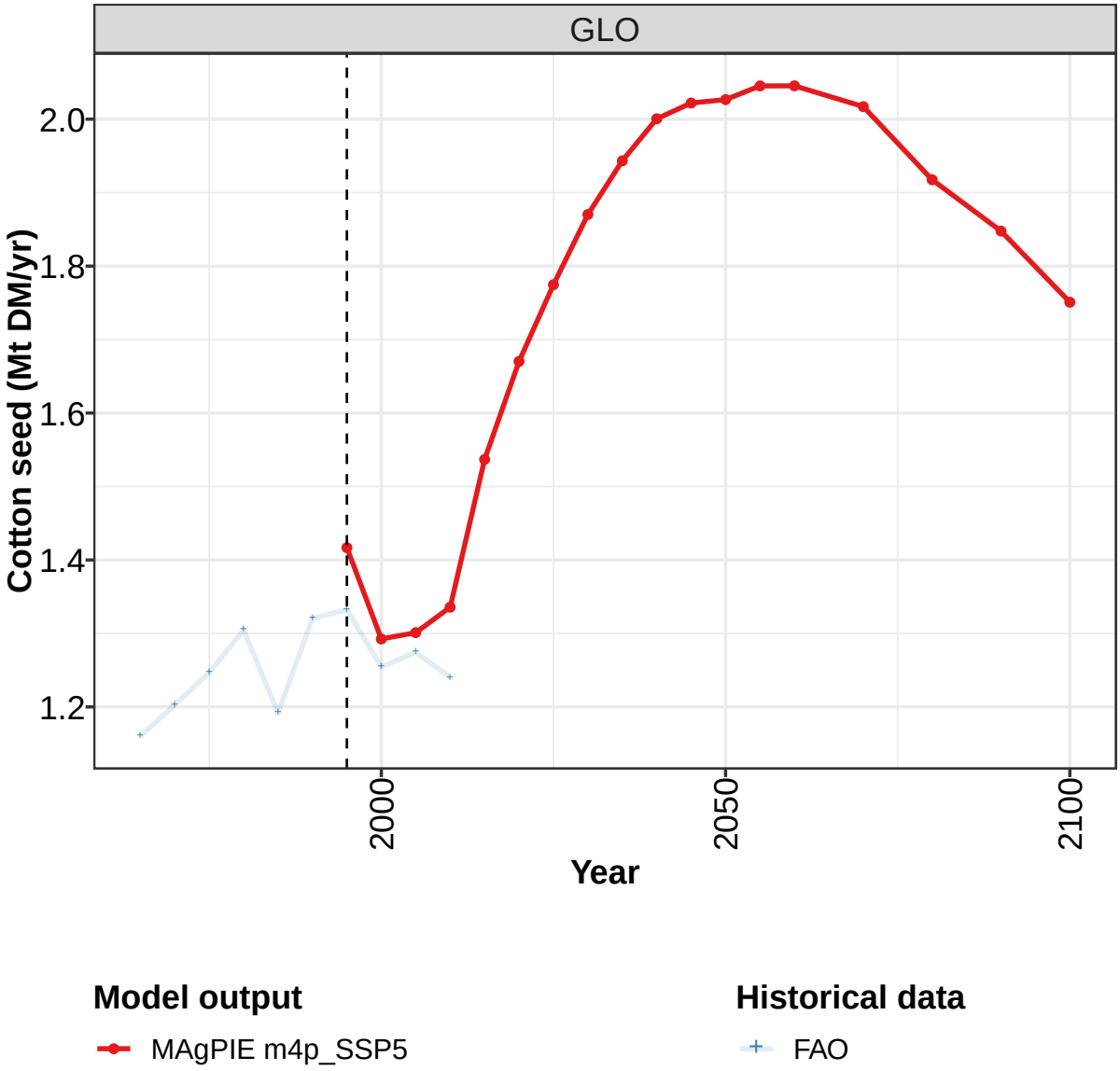
	2050	2055	2060	2070	2080	2090	2100
GLO	15.4	15.4	15.3	14.8	14.1	13.6	12.6
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.2
CHA	2.6	2.4	2.3	1.9	1.9	1.7	1.5
EUR	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IND	2.8	2.6	2.5	2.3	2.2	2.0	1.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.6	2.6	2.6	2.7	2.6	2.5	2.2
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.3	1.2	1.2	1.1	0.9	0.8	0.7
REF	1.1	1.1	1.1	1.0	0.9	1.0	0.9
SSA	2.1	2.5	2.7	3.0	2.6	2.6	2.5
USA	2.0	2.0	2.0	2.0	2.1	2.1	2.1

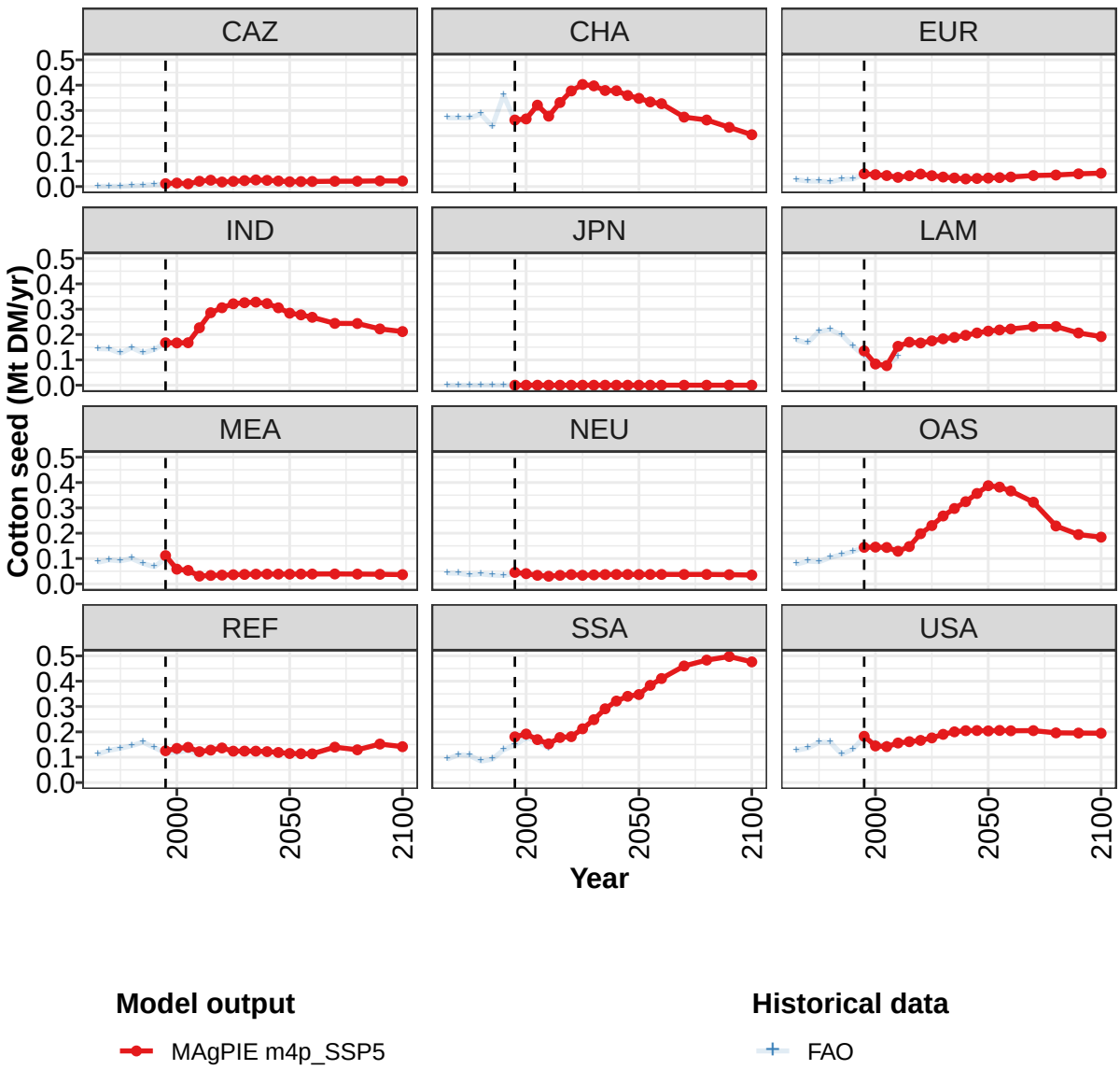
Table 663: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.5	5.8	6.1	6.8	6.8	7.2	7.8	8.9	10.0	10.4
CAZ	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
CHA	1.3	1.2	1.2	1.4	1.5	1.5	1.6	1.9	1.8	1.7
EUR	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3
IND	0.7	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.1	1.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.4	0.6	0.7	0.8	0.9	0.9	1.3	1.9	2.2
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6
REF	0.7	0.7	0.7	0.7	0.6	0.7	0.5	0.4	0.7	0.7
SSA	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.8	0.8	0.9
USA	1.3	1.4	1.7	1.9	1.7	1.7	2.0	2.5	2.5	2.4

Table 664: FAO — Demand—Seed—Crops—Oil crops (Mt DM/yr)

10.1.7 Oil crops—Cotton seed





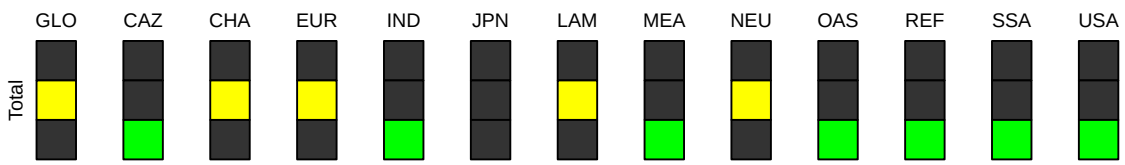


Figure 222: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.42	1.29	1.30	1.34	1.54	1.67	1.77	1.87	1.94	2.00	2.02
CAZ	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02
CHA	0.26	0.27	0.32	0.28	0.33	0.38	0.40	0.40	0.38	0.38	0.36
EUR	0.05	0.05	0.04	0.04	0.04	0.05	0.04	0.04	0.03	0.03	0.03
IND	0.17	0.17	0.17	0.23	0.29	0.31	0.32	0.33	0.33	0.32	0.31
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.14	0.08	0.08	0.15	0.17	0.17	0.17	0.18	0.19	0.20	0.21
MEA	0.11	0.06	0.05	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
NEU	0.05	0.04	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.04	0.04
OAS	0.14	0.15	0.14	0.13	0.15	0.20	0.23	0.27	0.30	0.32	0.36
REF	0.13	0.13	0.14	0.12	0.13	0.14	0.12	0.12	0.12	0.12	0.12
SSA	0.18	0.19	0.17	0.15	0.18	0.18	0.21	0.25	0.29	0.32	0.34
USA	0.18	0.14	0.14	0.16	0.16	0.17	0.18	0.19	0.20	0.20	0.21

Table 665: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

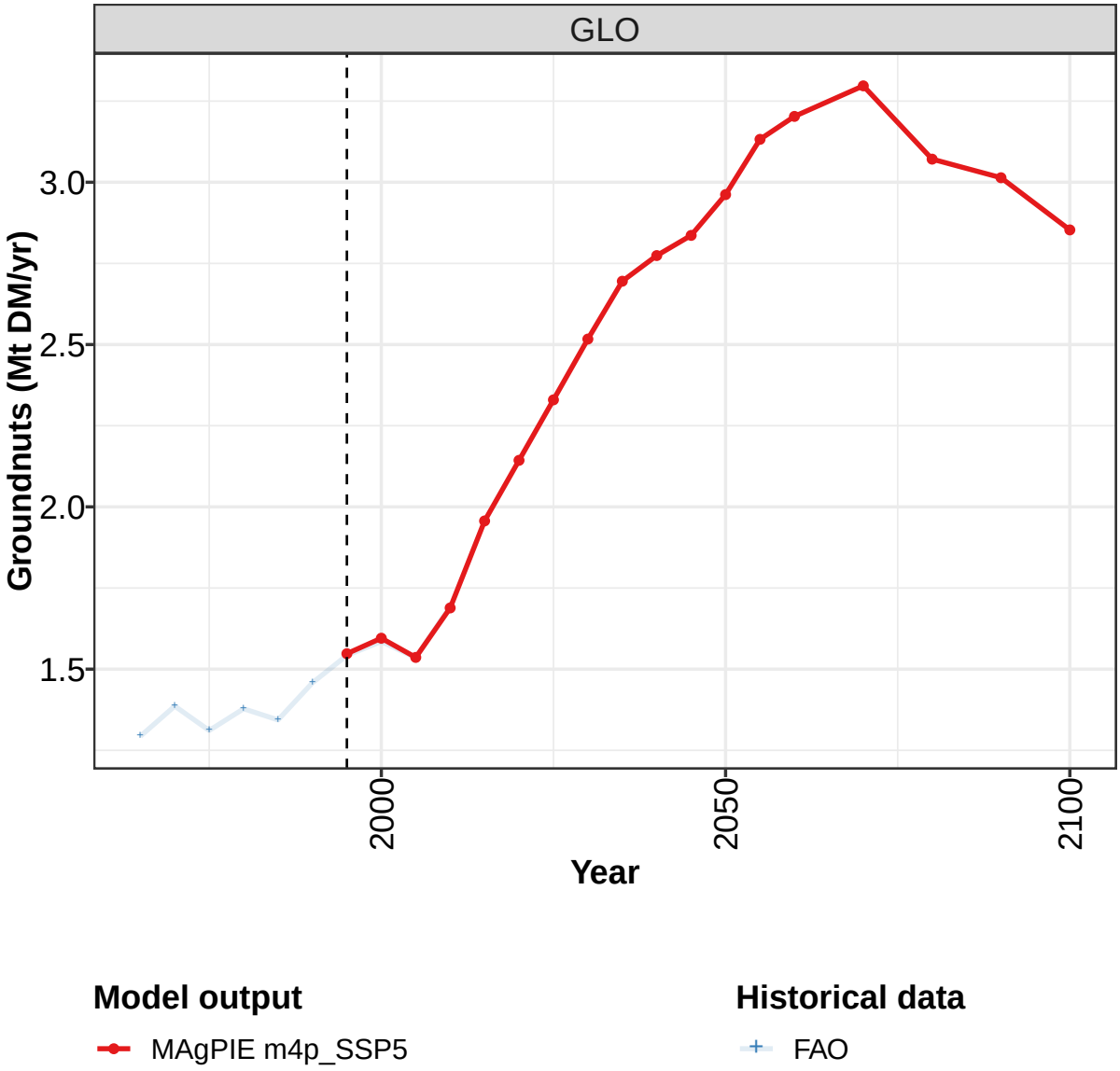
	2050	2055	2060	2070	2080	2090	2100
GLO	2.03	2.05	2.05	2.02	1.92	1.85	1.75
CAZ	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.35	0.33	0.33	0.27	0.26	0.23	0.20
EUR	0.03	0.04	0.04	0.04	0.05	0.05	0.05
IND	0.28	0.28	0.27	0.24	0.24	0.22	0.21
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.21	0.22	0.22	0.23	0.23	0.21	0.19
MEA	0.04	0.04	0.04	0.04	0.04	0.04	0.04
NEU	0.04	0.04	0.04	0.04	0.04	0.04	0.03
OAS	0.39	0.38	0.37	0.32	0.23	0.19	0.18
REF	0.11	0.11	0.11	0.14	0.13	0.15	0.14
SSA	0.35	0.38	0.41	0.46	0.48	0.50	0.48
USA	0.20	0.21	0.20	0.20	0.20	0.20	0.19

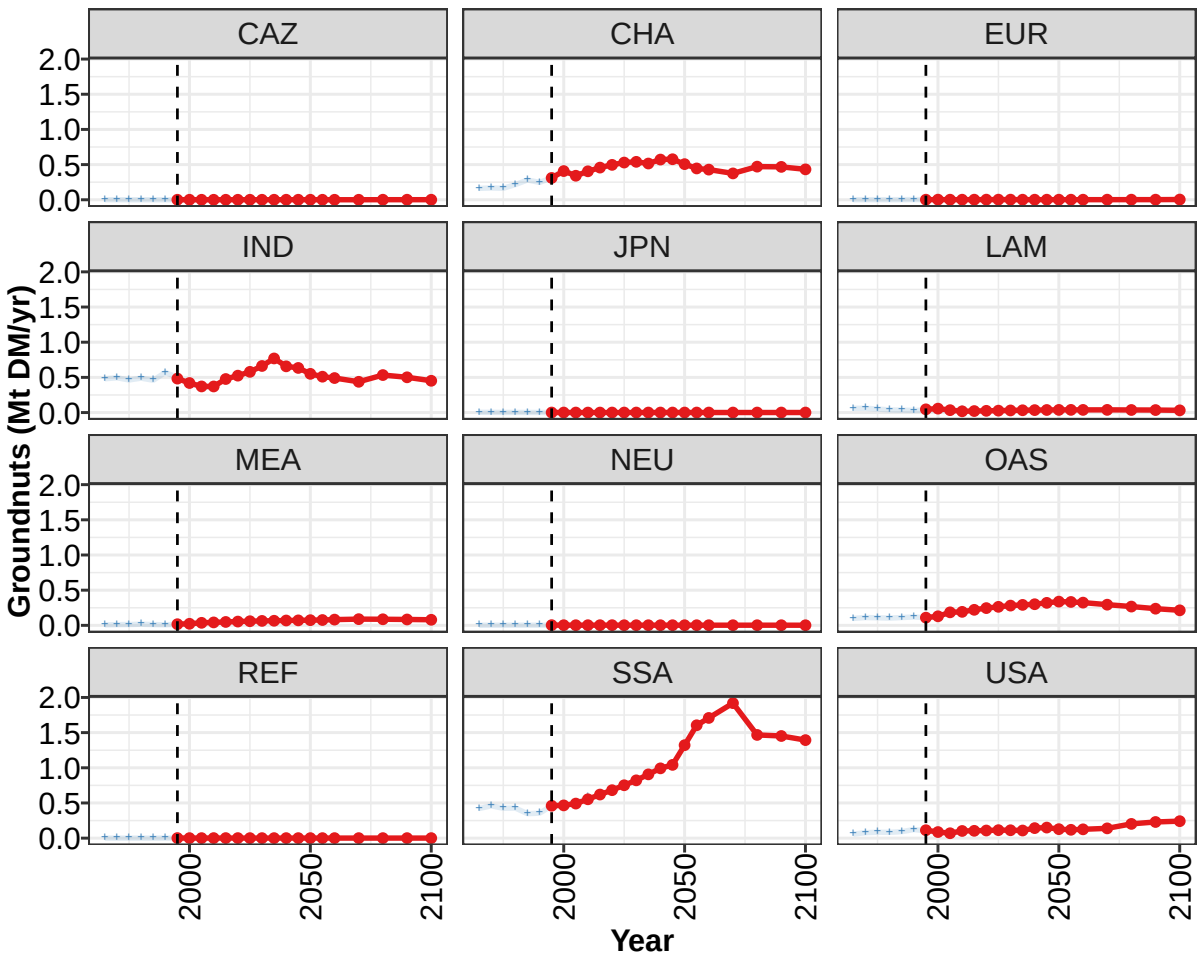
Table 666: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.16	1.20	1.25	1.30	1.19	1.32	1.33	1.25	1.27	1.24
CAZ	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02
CHA	0.27	0.27	0.27	0.29	0.24	0.36	0.26	0.27	0.32	0.28
EUR	0.03	0.02	0.02	0.02	0.03	0.03	0.05	0.05	0.04	0.04
IND	0.14	0.14	0.13	0.15	0.13	0.14	0.17	0.17	0.17	0.22
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.18	0.17	0.21	0.22	0.20	0.15	0.12	0.08	0.08	0.11
MEA	0.09	0.09	0.09	0.10	0.08	0.07	0.10	0.06	0.05	0.02
NEU	0.04	0.04	0.04	0.04	0.03	0.03	0.04	0.04	0.03	0.03
OAS	0.08	0.09	0.09	0.10	0.12	0.13	0.15	0.14	0.14	0.13
REF	0.11	0.13	0.14	0.15	0.16	0.14	0.12	0.12	0.13	0.11
SSA	0.09	0.11	0.11	0.08	0.09	0.13	0.15	0.18	0.16	0.13
USA	0.13	0.14	0.16	0.16	0.11	0.13	0.18	0.15	0.15	0.15

Table 667: FAO — Demand—Seed—Crops—Oil crops—Cotton seed (Mt DM/yr)

10.1.8 Oil crops—Groundnuts





Model output

MAgPIE m4p_SSP5

Historical data

FAO

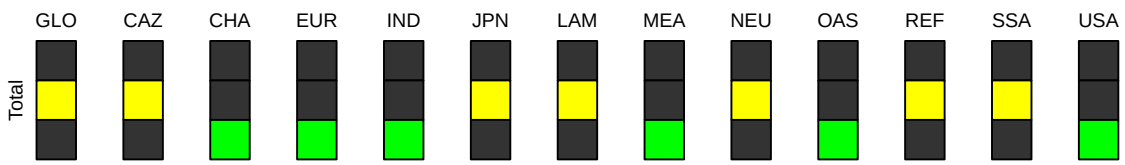


Figure 223: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.55	1.60	1.54	1.69	1.96	2.14	2.33	2.52	2.70	2.77	2.84
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.31	0.41	0.34	0.40	0.46	0.50	0.53	0.54	0.52	0.57	0.58
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.48	0.42	0.37	0.37	0.48	0.53	0.58	0.66	0.77	0.66	0.63
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.05	0.06	0.03	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04
MEA	0.02	0.02	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.07
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.11	0.13	0.19	0.19	0.22	0.25	0.26	0.28	0.29	0.30	0.32
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.46	0.47	0.49	0.55	0.62	0.68	0.75	0.82	0.91	0.99	1.04
USA	0.11	0.09	0.07	0.10	0.10	0.11	0.11	0.11	0.11	0.14	0.15

Table 668: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

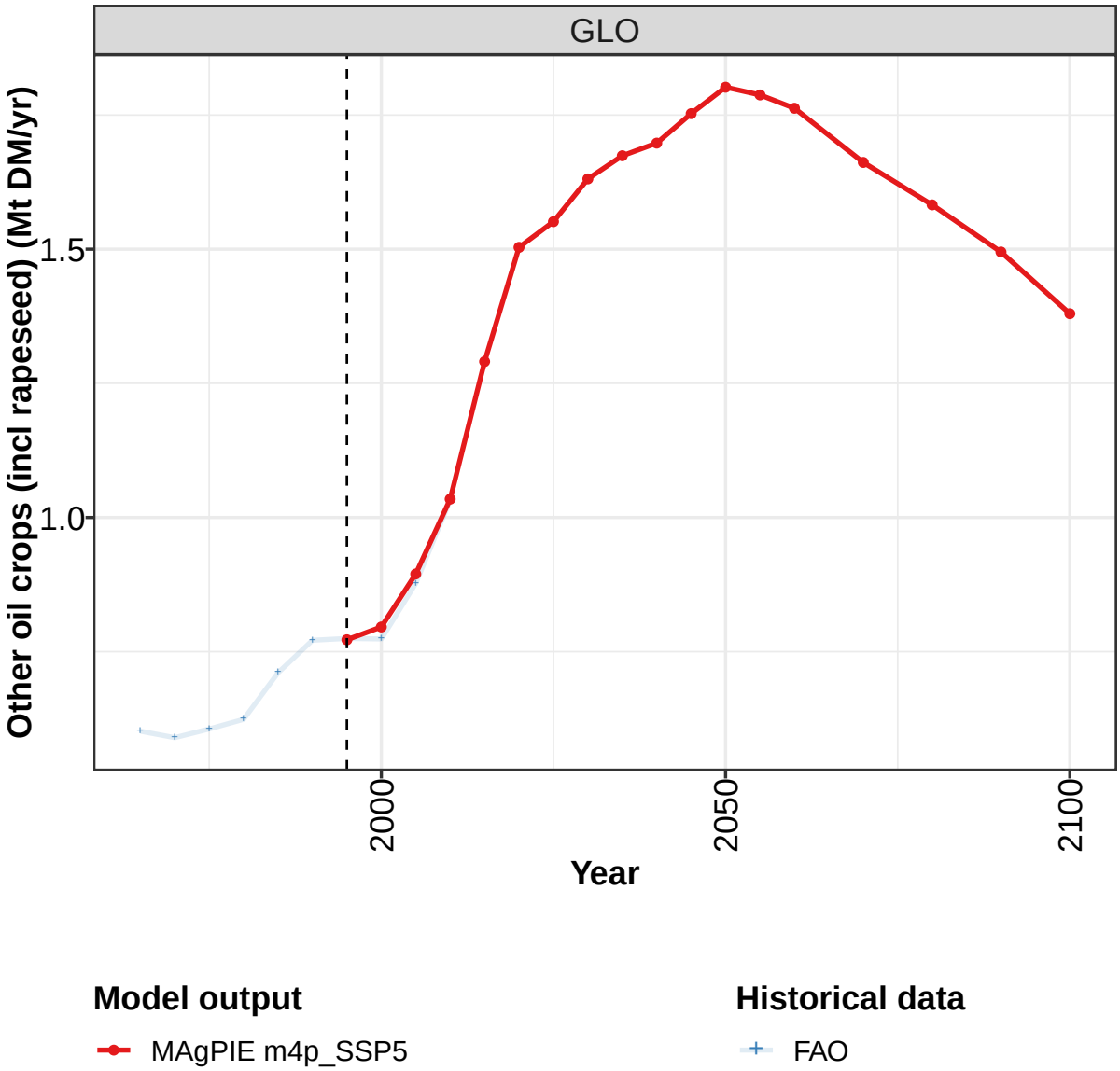
	2050	2055	2060	2070	2080	2090	2100
GLO	2.96	3.13	3.20	3.30	3.07	3.01	2.85
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.51	0.45	0.43	0.37	0.47	0.47	0.43
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.55	0.51	0.49	0.44	0.53	0.50	0.45
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.04	0.04	0.04	0.04	0.04	0.04	0.03
MEA	0.07	0.08	0.08	0.09	0.09	0.08	0.08
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.34	0.33	0.32	0.29	0.27	0.24	0.21
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.32	1.60	1.71	1.92	1.47	1.45	1.39
USA	0.13	0.12	0.13	0.14	0.20	0.23	0.24

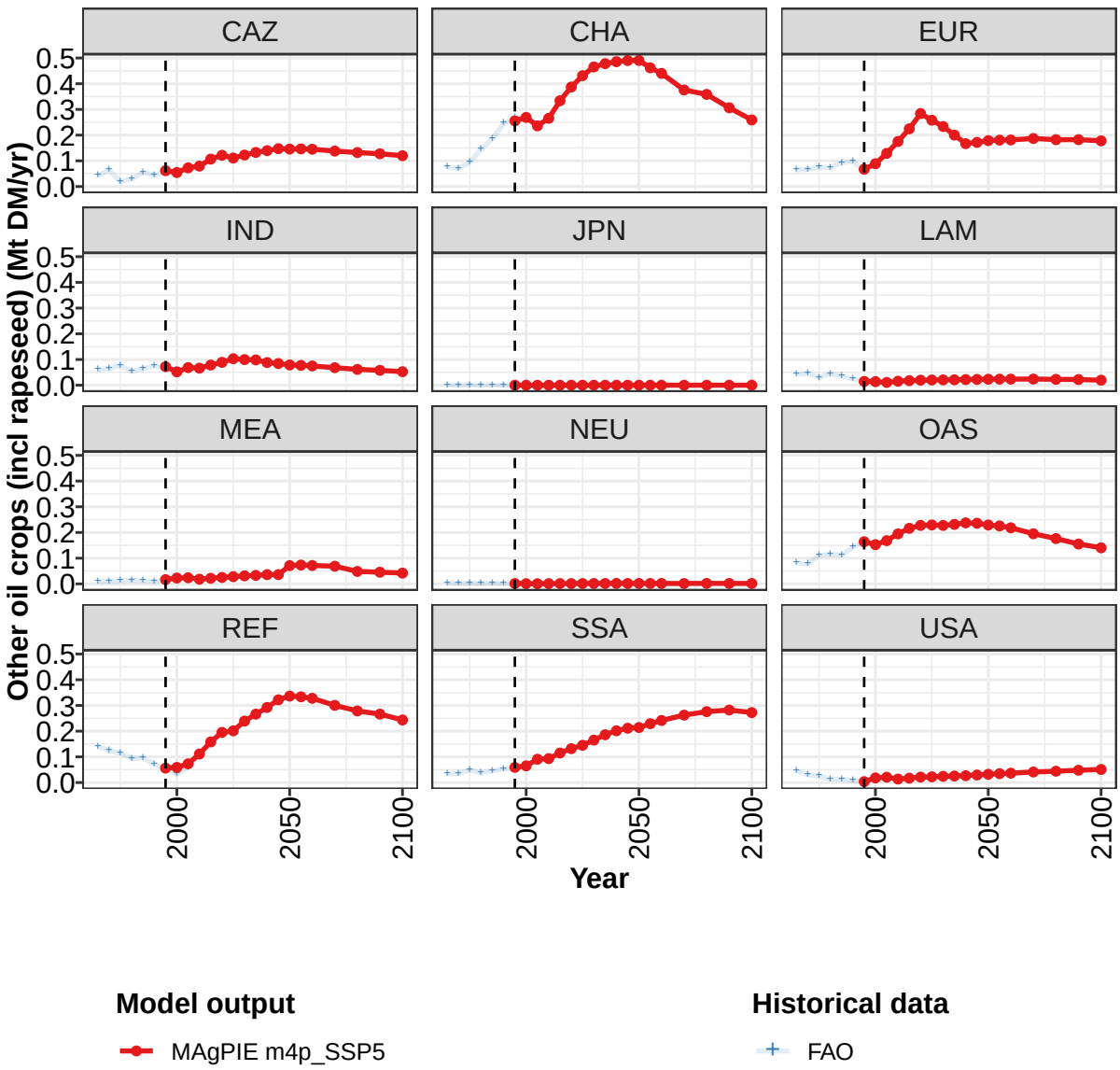
Table 669: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.29	1.39	1.31	1.38	1.34	1.46	1.54	1.59	1.53	1.69
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.16	0.17	0.16	0.22	0.28	0.25	0.31	0.43	0.34	0.39
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.48	0.49	0.46	0.49	0.46	0.57	0.50	0.41	0.37	0.35
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.06	0.06	0.05	0.04	0.03	0.03	0.03	0.04	0.03	0.04
MEA	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.02	0.04	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.10	0.11	0.11	0.10	0.11	0.12	0.11	0.13	0.19	0.19
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.42	0.46	0.42	0.43	0.35	0.35	0.46	0.47	0.49	0.58
USA	0.06	0.08	0.08	0.08	0.09	0.12	0.10	0.08	0.08	0.09

Table 670: FAO — Demand—Seed—Crops—Oil crops—Groundnuts (Mt DM/yr)

10.1.9 Oil crops—Other oil crops (incl rapeseed)





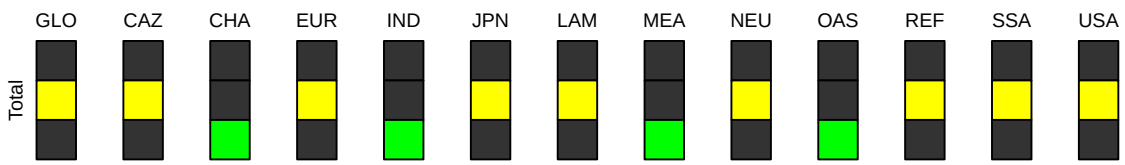


Figure 224: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.77	0.80	0.89	1.03	1.29	1.50	1.55	1.63	1.67	1.70	1.75
CAZ	0.06	0.05	0.07	0.08	0.11	0.12	0.11	0.12	0.13	0.14	0.15
CHA	0.26	0.27	0.24	0.27	0.33	0.39	0.43	0.47	0.48	0.49	0.49
EUR	0.07	0.09	0.13	0.18	0.22	0.28	0.26	0.23	0.20	0.17	0.17
IND	0.07	0.05	0.07	0.07	0.08	0.09	0.10	0.10	0.10	0.09	0.08
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MEA	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.16	0.15	0.17	0.19	0.22	0.23	0.23	0.23	0.23	0.24	0.24
REF	0.06	0.06	0.07	0.11	0.16	0.20	0.20	0.24	0.27	0.29	0.32
SSA	0.06	0.07	0.09	0.09	0.11	0.13	0.15	0.17	0.19	0.20	0.21
USA	0.00	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03

Table 671: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

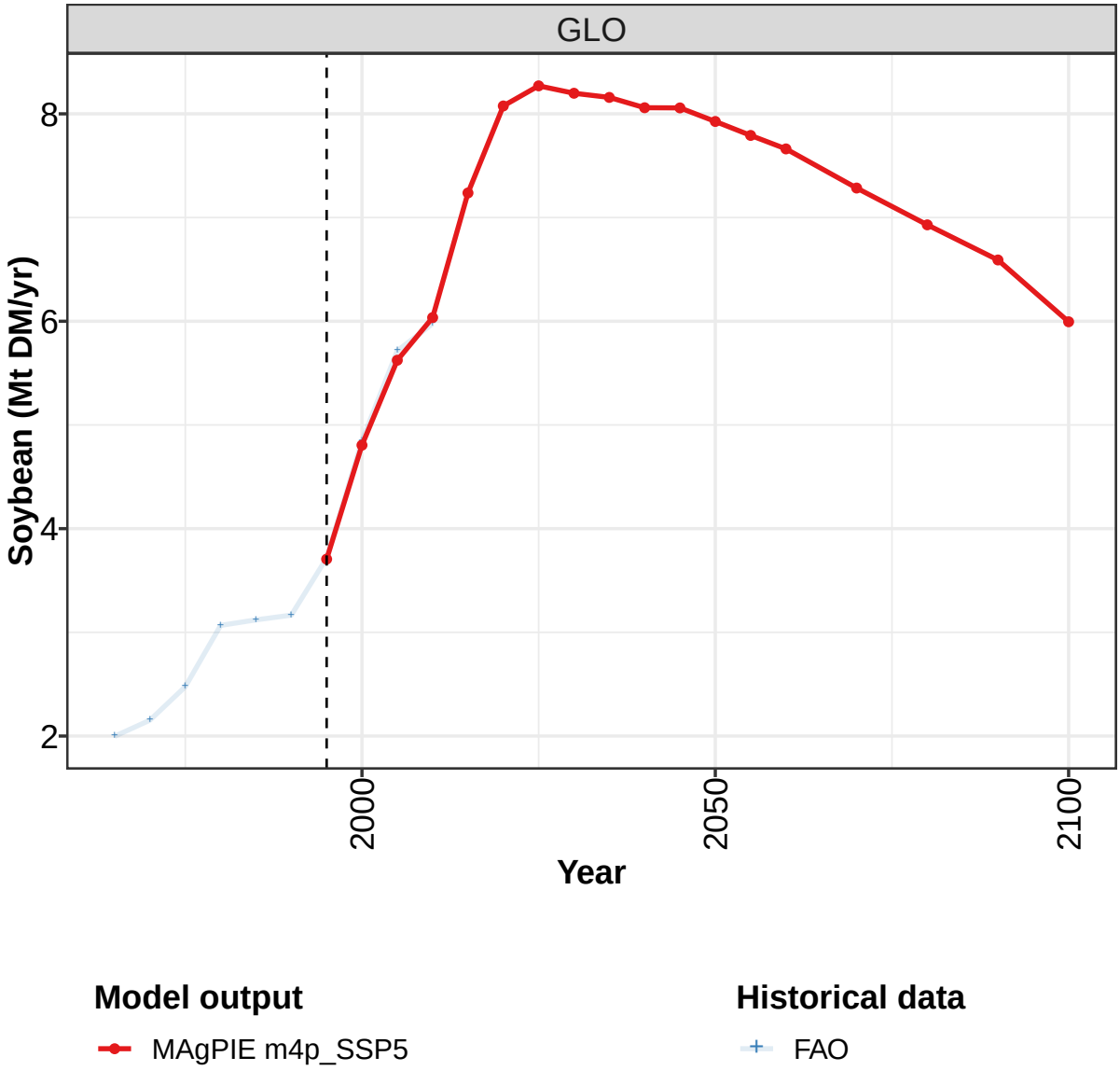
	2050	2055	2060	2070	2080	2090	2100
GLO	1.80	1.79	1.76	1.66	1.58	1.49	1.38
CAZ	0.15	0.15	0.15	0.14	0.13	0.13	0.12
CHA	0.49	0.46	0.44	0.38	0.36	0.31	0.26
EUR	0.18	0.18	0.18	0.19	0.18	0.18	0.18
IND	0.08	0.08	0.07	0.07	0.06	0.06	0.05
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MEA	0.07	0.07	0.07	0.07	0.05	0.05	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.23	0.23	0.22	0.19	0.18	0.16	0.14
REF	0.34	0.33	0.33	0.30	0.28	0.27	0.24
SSA	0.21	0.23	0.24	0.26	0.28	0.28	0.27
USA	0.03	0.03	0.04	0.04	0.04	0.05	0.05

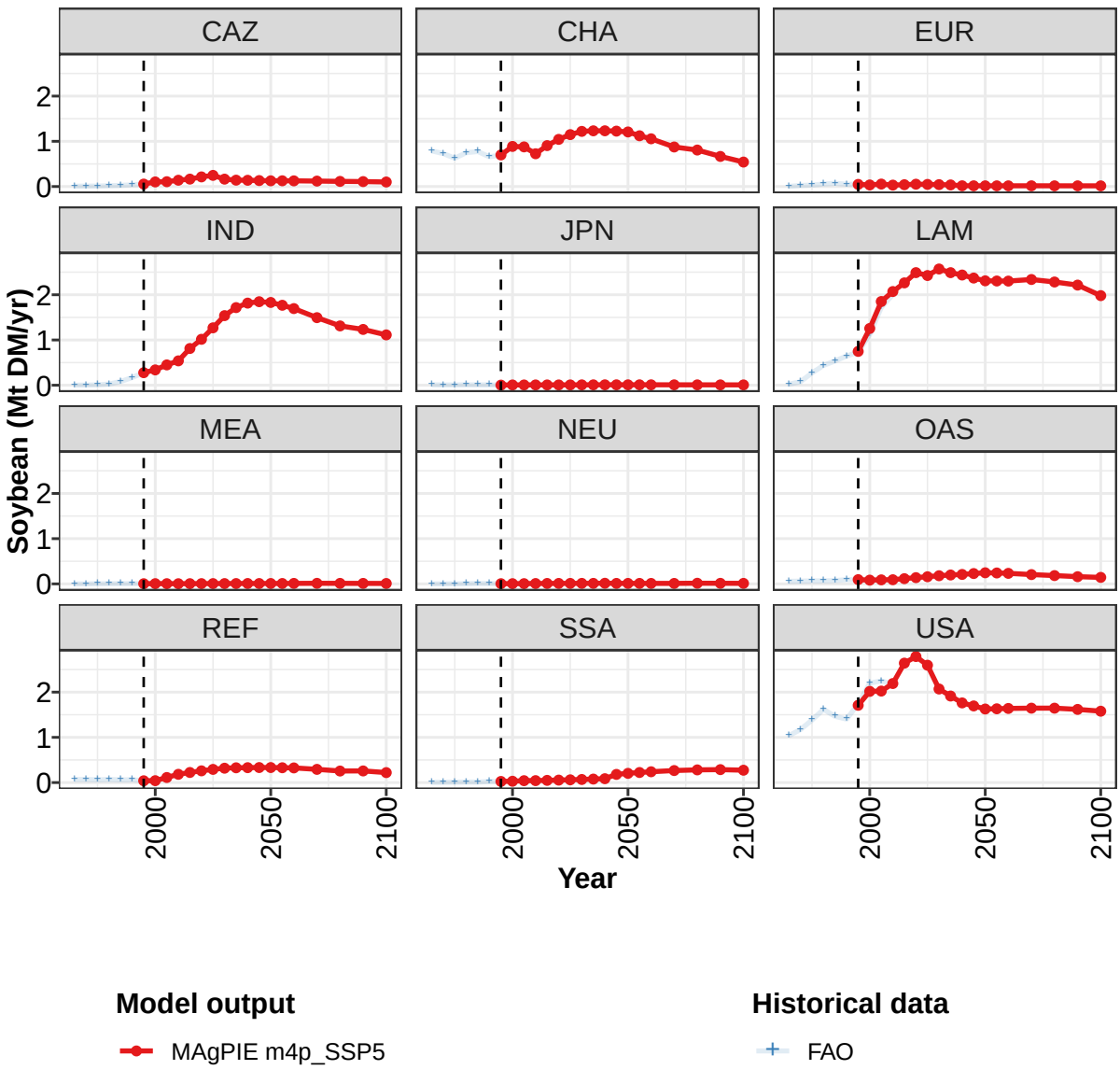
Table 672: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.60	0.59	0.61	0.62	0.71	0.77	0.77	0.77	0.88	1.03
CAZ	0.04	0.06	0.02	0.03	0.05	0.05	0.05	0.06	0.08	0.08
CHA	0.08	0.07	0.09	0.14	0.19	0.25	0.27	0.27	0.23	0.27
EUR	0.06	0.07	0.08	0.07	0.09	0.10	0.07	0.09	0.13	0.17
IND	0.06	0.07	0.08	0.05	0.07	0.07	0.07	0.05	0.07	0.07
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.04	0.04	0.03	0.04	0.04	0.02	0.01	0.01	0.01	0.02
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.08	0.08	0.11	0.12	0.11	0.14	0.17	0.15	0.17	0.20
REF	0.14	0.12	0.11	0.09	0.10	0.07	0.05	0.03	0.06	0.11
SSA	0.03	0.04	0.05	0.04	0.04	0.05	0.06	0.07	0.09	0.09
USA	0.05	0.03	0.03	0.01	0.01	0.01	0.00	0.02	0.02	0.01

Table 673: FAO — Demand—Seed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

10.1.10 Oil crops—Soybean





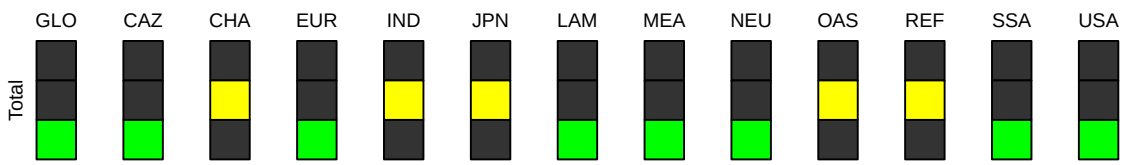


Figure 225: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.71	4.81	5.62	6.04	7.24	8.08	8.27	8.20	8.16	8.06	8.06
CAZ	0.05	0.10	0.11	0.14	0.16	0.21	0.25	0.16	0.14	0.14	0.13
CHA	0.70	0.89	0.88	0.73	0.91	1.04	1.15	1.22	1.23	1.23	1.23
EUR	0.05	0.04	0.05	0.03	0.04	0.05	0.05	0.04	0.04	0.02	0.02
IND	0.28	0.34	0.45	0.54	0.81	1.02	1.27	1.54	1.72	1.82	1.85
JPN	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.75	1.25	1.85	2.07	2.26	2.49	2.43	2.57	2.49	2.44	2.37
MEA	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.09	0.08	0.09	0.09	0.12	0.14	0.16	0.18	0.20	0.21	0.23
REF	0.04	0.04	0.11	0.18	0.22	0.26	0.29	0.32	0.33	0.33	0.33
SSA	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.18
USA	1.71	2.02	2.02	2.19	2.64	2.79	2.60	2.07	1.91	1.76	1.69

Table 674: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

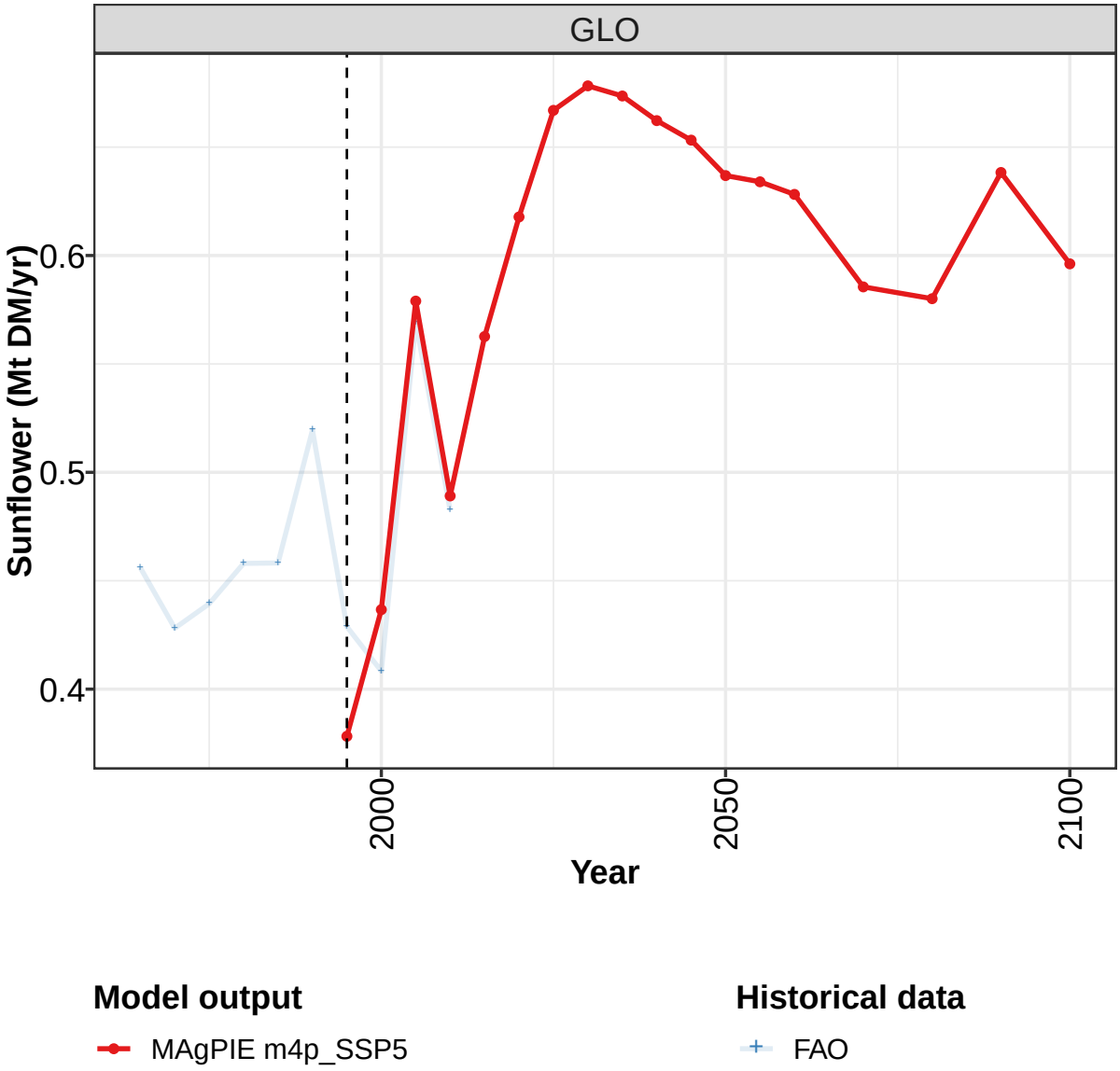
	2050	2055	2060	2070	2080	2090	2100
GLO	7.93	7.79	7.66	7.28	6.93	6.59	6.00
CAZ	0.13	0.13	0.13	0.12	0.11	0.11	0.10
CHA	1.21	1.12	1.06	0.87	0.81	0.67	0.54
EUR	0.02	0.02	0.02	0.02	0.02	0.02	0.02
IND	1.83	1.77	1.69	1.49	1.31	1.23	1.11
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	2.31	2.30	2.30	2.34	2.28	2.21	1.98
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.25	0.24	0.23	0.21	0.18	0.16	0.14
REF	0.33	0.33	0.32	0.29	0.26	0.26	0.22
SSA	0.20	0.22	0.24	0.27	0.28	0.29	0.27
USA	1.63	1.63	1.64	1.65	1.65	1.62	1.58

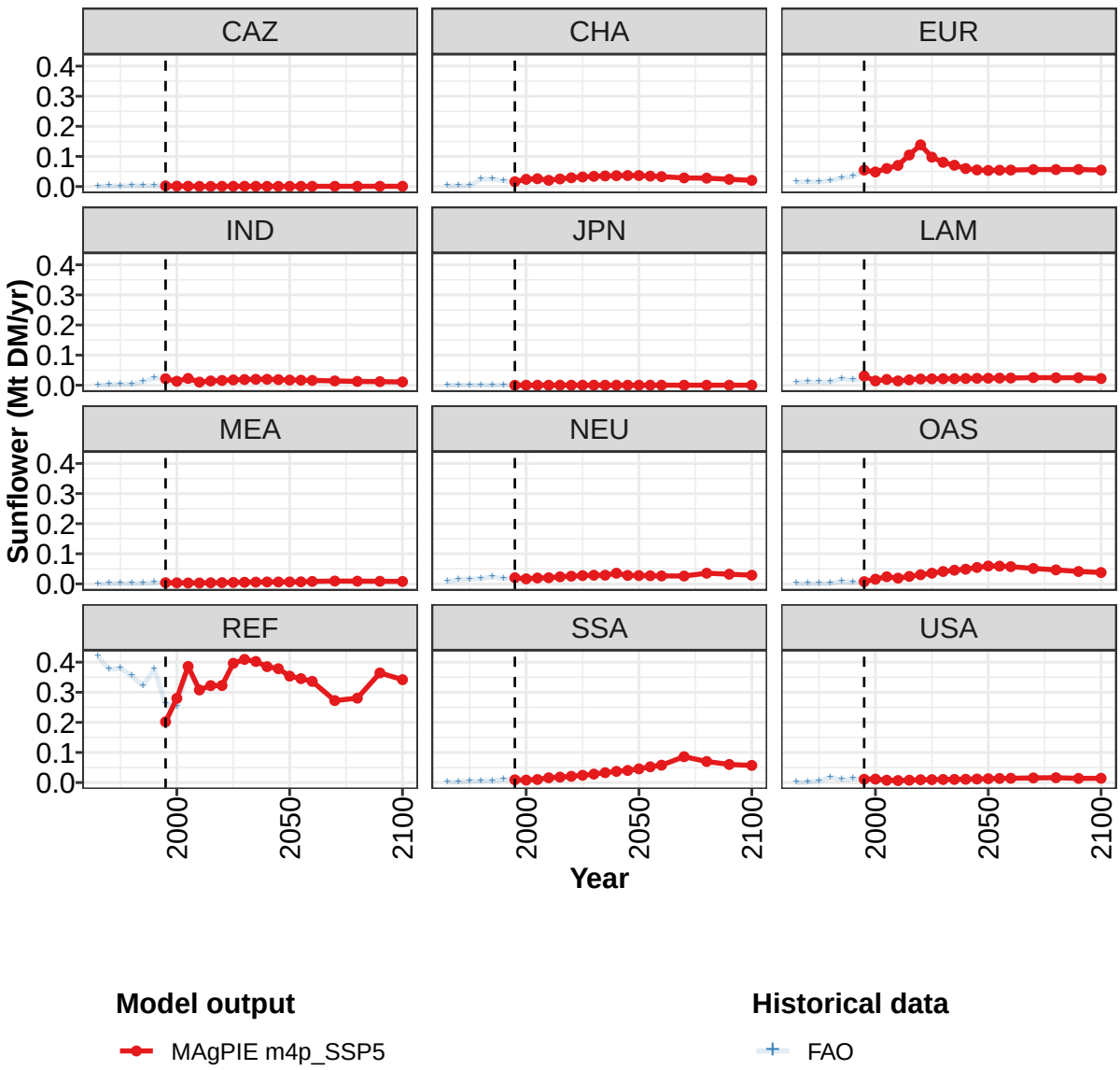
Table 675: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.00	2.15	2.48	3.07	3.12	3.17	3.72	4.85	5.72	5.98
CAZ	0.01	0.01	0.01	0.02	0.03	0.04	0.05	0.10	0.11	0.14
CHA	0.79	0.73	0.63	0.75	0.77	0.66	0.70	0.88	0.87	0.74
EUR	0.00	0.02	0.03	0.06	0.07	0.05	0.05	0.04	0.06	0.03
IND	0.00	0.00	0.01	0.03	0.08	0.17	0.28	0.34	0.44	0.54
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01
LAM	0.02	0.08	0.27	0.44	0.54	0.65	0.73	1.12	1.72	2.00
MEA	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
NEU	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01
OAS	0.06	0.06	0.07	0.07	0.07	0.09	0.09	0.08	0.09	0.09
REF	0.07	0.07	0.06	0.07	0.06	0.06	0.04	0.04	0.12	0.18
SSA	0.01	0.01	0.01	0.01	0.01	0.03	0.03	0.03	0.04	0.05
USA	1.04	1.17	1.38	1.62	1.46	1.40	1.74	2.20	2.25	2.18

Table 676: FAO — Demand—Seed—Crops—Oil crops—Soybean (Mt DM/yr)

10.1.11 Oil crops—Sunflower





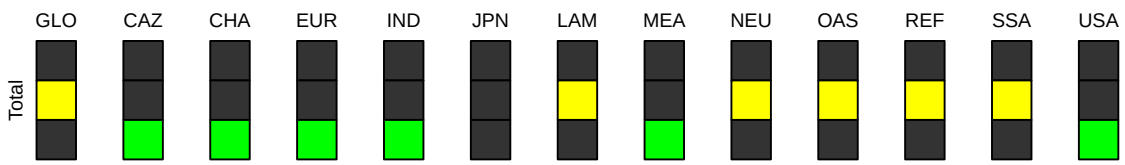


Figure 226: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.378	0.437	0.579	0.489	0.563	0.618	0.667	0.678	0.674	0.662	0.653
CAZ	0.002	0.001	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001
CHA	0.016	0.024	0.026	0.021	0.025	0.029	0.032	0.034	0.035	0.036	0.037
EUR	0.054	0.048	0.060	0.070	0.105	0.139	0.098	0.080	0.071	0.060	0.055
IND	0.021	0.013	0.023	0.010	0.014	0.016	0.018	0.019	0.020	0.020	0.018
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.031	0.014	0.019	0.014	0.018	0.021	0.021	0.022	0.022	0.022	0.023
MEA	0.004	0.004	0.003	0.003	0.004	0.004	0.005	0.005	0.006	0.006	0.006
NEU	0.020	0.017	0.020	0.020	0.024	0.026	0.028	0.029	0.029	0.035	0.028
OAS	0.007	0.016	0.024	0.019	0.025	0.030	0.036	0.041	0.045	0.049	0.054
REF	0.202	0.280	0.386	0.308	0.322	0.322	0.396	0.409	0.402	0.385	0.378
SSA	0.009	0.008	0.010	0.016	0.018	0.021	0.024	0.028	0.033	0.037	0.040
USA	0.011	0.011	0.008	0.007	0.008	0.009	0.010	0.010	0.011	0.011	0.012

Table 677: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

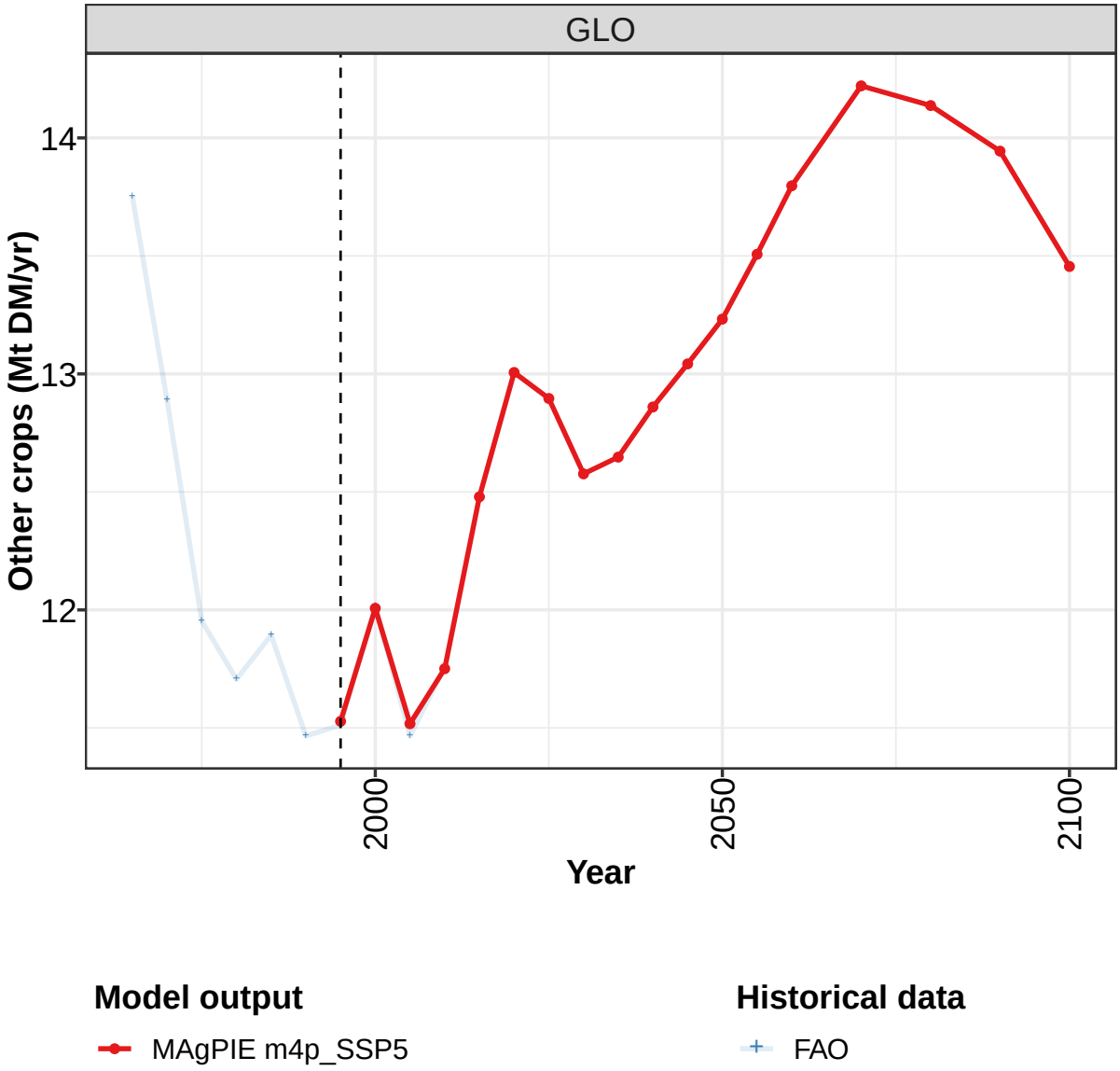
	2050	2055	2060	2070	2080	2090	2100
GLO	0.637	0.634	0.628	0.586	0.580	0.638	0.596
CAZ	0.001	0.001	0.001	0.001	0.001	0.001	0.001
CHA	0.037	0.035	0.033	0.029	0.028	0.024	0.020
EUR	0.053	0.054	0.055	0.056	0.056	0.057	0.054
IND	0.017	0.017	0.016	0.014	0.013	0.012	0.011
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.023	0.024	0.024	0.025	0.025	0.025	0.022
MEA	0.007	0.007	0.008	0.009	0.009	0.009	0.008
NEU	0.028	0.027	0.026	0.026	0.035	0.032	0.029
OAS	0.059	0.059	0.057	0.051	0.047	0.041	0.038
REF	0.354	0.345	0.336	0.272	0.281	0.364	0.342
SSA	0.046	0.052	0.058	0.086	0.070	0.060	0.057
USA	0.013	0.014	0.014	0.015	0.016	0.014	0.014

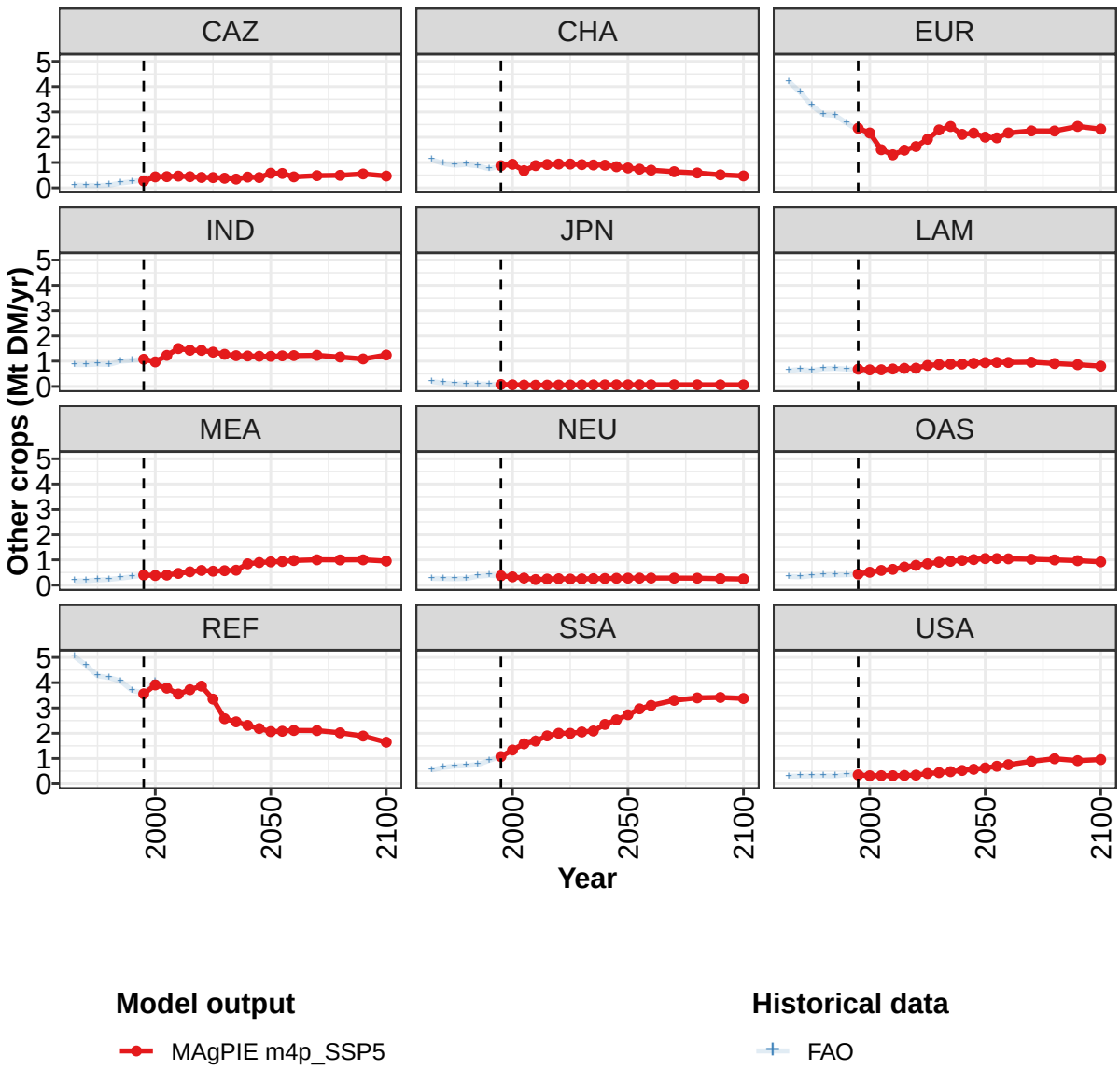
Table 678: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.456	0.428	0.439	0.458	0.458	0.519	0.429	0.408	0.569	0.482
CAZ	0.000	0.002	0.001	0.003	0.002	0.002	0.001	0.001	0.001	0.000
CHA	0.002	0.002	0.003	0.024	0.026	0.018	0.016	0.024	0.023	0.022
EUR	0.015	0.016	0.016	0.020	0.029	0.033	0.053	0.048	0.059	0.068
IND	0.000	0.001	0.003	0.003	0.011	0.024	0.021	0.013	0.024	0.010
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.010	0.012	0.011	0.010	0.022	0.017	0.024	0.015	0.017	0.014
MEA	0.000	0.001	0.002	0.001	0.002	0.004	0.004	0.004	0.003	0.003
NEU	0.008	0.014	0.015	0.017	0.022	0.018	0.018	0.016	0.019	0.020
OAS	0.000	0.000	0.000	0.002	0.007	0.005	0.007	0.016	0.024	0.019
REF	0.419	0.377	0.380	0.354	0.322	0.376	0.263	0.251	0.381	0.302
SSA	0.002	0.002	0.004	0.005	0.006	0.010	0.009	0.008	0.010	0.016
USA	0.000	0.002	0.005	0.018	0.009	0.012	0.011	0.012	0.009	0.007

Table 679: FAO — Demand—Seed—Crops—Oil crops—Sunflower (Mt DM/yr)

10.1.12 Other crops





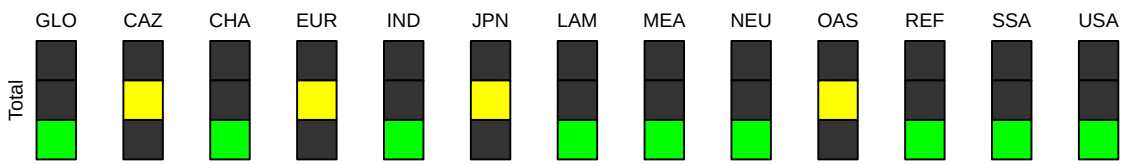


Figure 227: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.5	12.0	11.5	11.8	12.5	13.0	12.9	12.6	12.6	12.9	13.0
CAZ	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.4
CHA	0.9	0.9	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8
EUR	2.4	2.2	1.5	1.3	1.5	1.6	1.9	2.3	2.4	2.1	2.2
IND	1.1	1.0	1.2	1.5	1.4	1.4	1.4	1.3	1.2	1.2	1.2
JPN	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0.9
MEA	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.8	0.9
NEU	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3
OAS	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0	1.0
REF	3.6	3.9	3.8	3.5	3.7	3.9	3.3	2.6	2.5	2.3	2.2
SSA	1.1	1.3	1.6	1.7	1.9	2.0	2.0	2.1	2.1	2.3	2.5
USA	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6

Table 680: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops (Mt DM/yr) [PART 1/2]

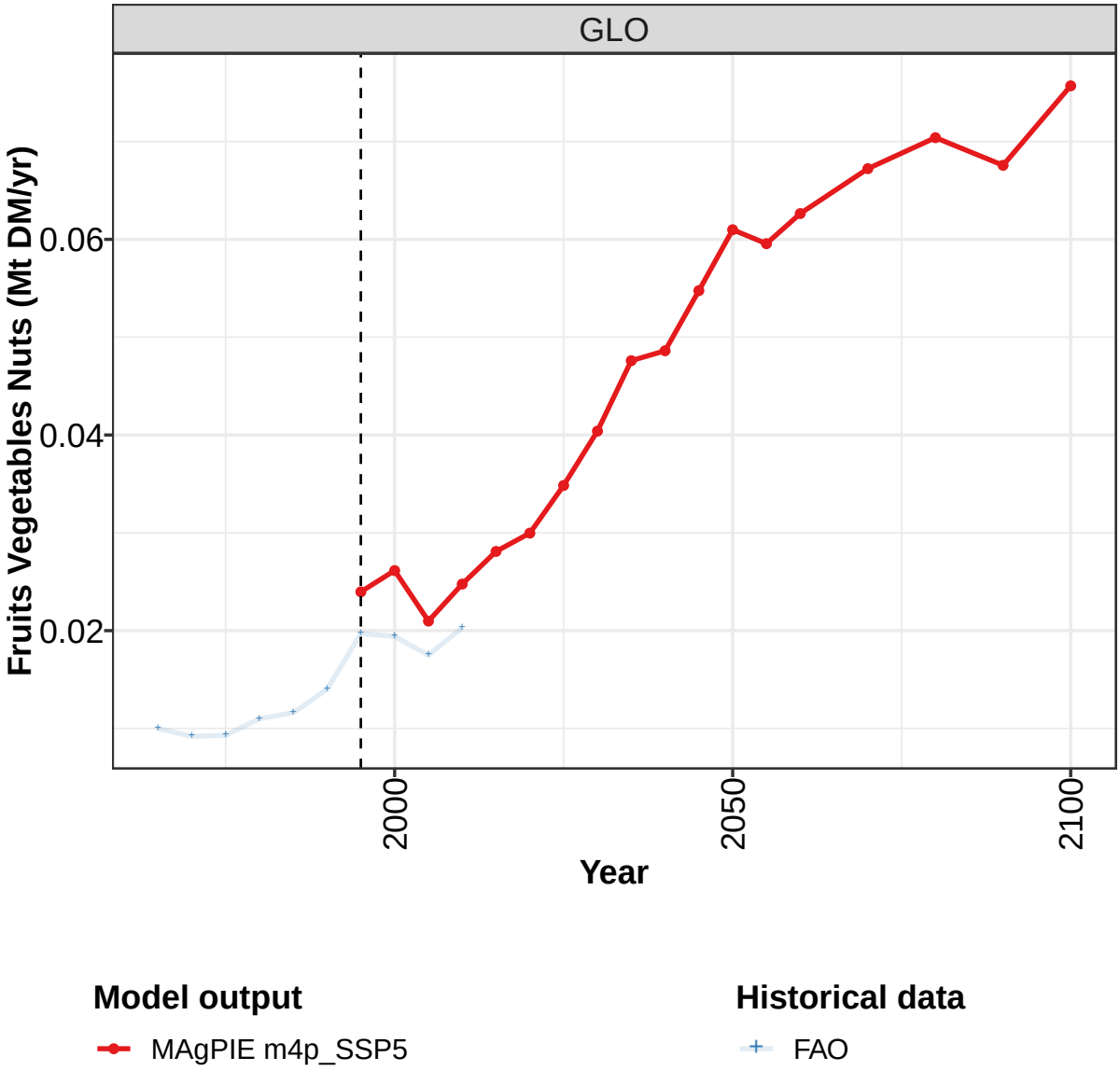
	2050	2055	2060	2070	2080	2090	2100
GLO	13.2	13.5	13.8	14.2	14.1	13.9	13.5
CAZ	0.6	0.6	0.4	0.5	0.5	0.5	0.5
CHA	0.8	0.7	0.7	0.6	0.6	0.5	0.5
EUR	2.0	2.0	2.2	2.2	2.2	2.4	2.3
IND	1.2	1.2	1.2	1.2	1.2	1.1	1.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.9	1.0	0.9	1.0	0.9	0.9	0.8
MEA	0.9	0.9	1.0	1.0	1.0	1.0	1.0
NEU	0.3	0.3	0.3	0.3	0.3	0.3	0.2
OAS	1.1	1.1	1.0	1.0	1.0	1.0	0.9
REF	2.1	2.1	2.1	2.1	2.0	1.9	1.6
SSA	2.7	3.0	3.1	3.3	3.4	3.4	3.4
USA	0.6	0.7	0.8	0.9	1.0	0.9	1.0

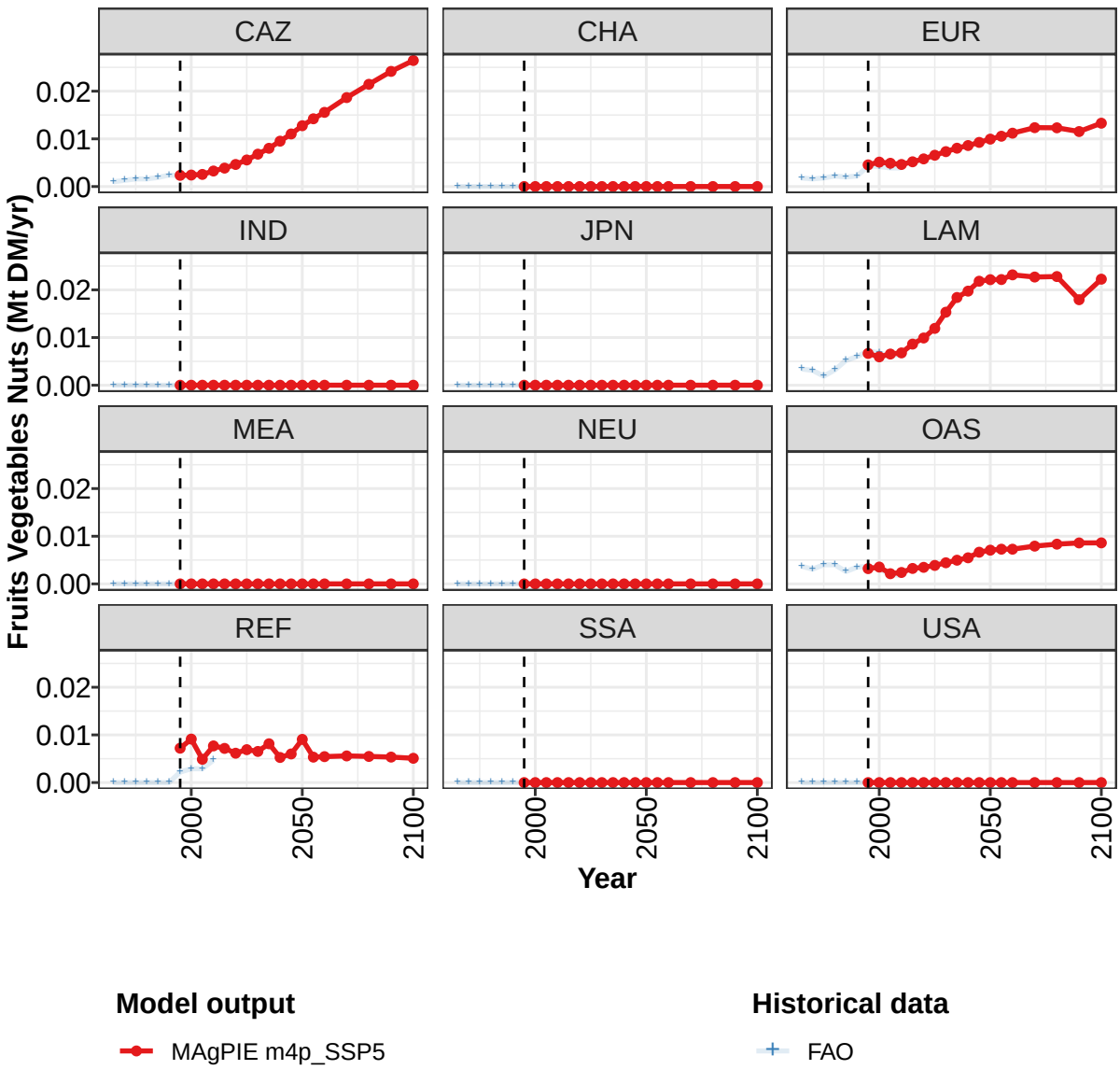
Table 681: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	13.8	12.9	12.0	11.7	11.9	11.5	11.5	12.0	11.5	11.8
CAZ	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.5	0.4
CHA	1.1	1.0	0.9	0.9	0.9	0.8	0.9	0.9	0.7	0.9
EUR	4.2	3.8	3.2	2.9	2.9	2.6	2.3	2.0	1.5	1.3
IND	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.0	1.2	1.5
JPN	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
LAM	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
MEA	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5
NEU	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2
OAS	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6
REF	5.0	4.7	4.3	4.2	4.1	3.7	3.6	4.0	3.8	3.5
SSA	0.5	0.6	0.7	0.7	0.8	0.9	1.1	1.3	1.6	1.8
USA	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3

Table 682: FAO — Demand—Seed—Crops—Other crops (Mt DM/yr)

10.1.13 Other crops—Fruits Vegetables Nuts





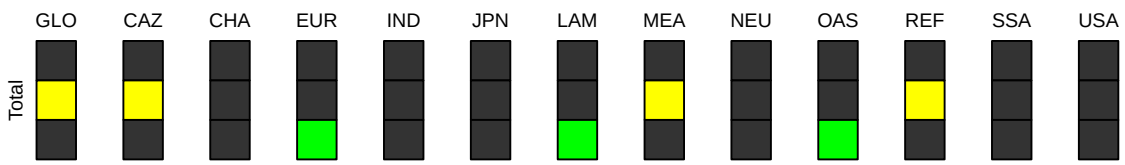


Figure 228: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0240	0.0261	0.0210	0.0248	0.0281	0.0300	0.0348	0.0404	0.0476	0.0486	0.0548
CAZ	0.0023	0.0024	0.0025	0.0033	0.0039	0.0046	0.0056	0.0068	0.0080	0.0095	0.0110
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0045	0.0051	0.0049	0.0046	0.0052	0.0058	0.0066	0.0073	0.0080	0.0086	0.0093
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0067	0.0059	0.0065	0.0068	0.0086	0.0099	0.0119	0.0153	0.0184	0.0197	0.0218
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0032	0.0035	0.0021	0.0024	0.0032	0.0035	0.0039	0.0044	0.0050	0.0055	0.0066
REF	0.0072	0.0091	0.0049	0.0077	0.0072	0.0062	0.0069	0.0065	0.0081	0.0053	0.0060
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 683: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

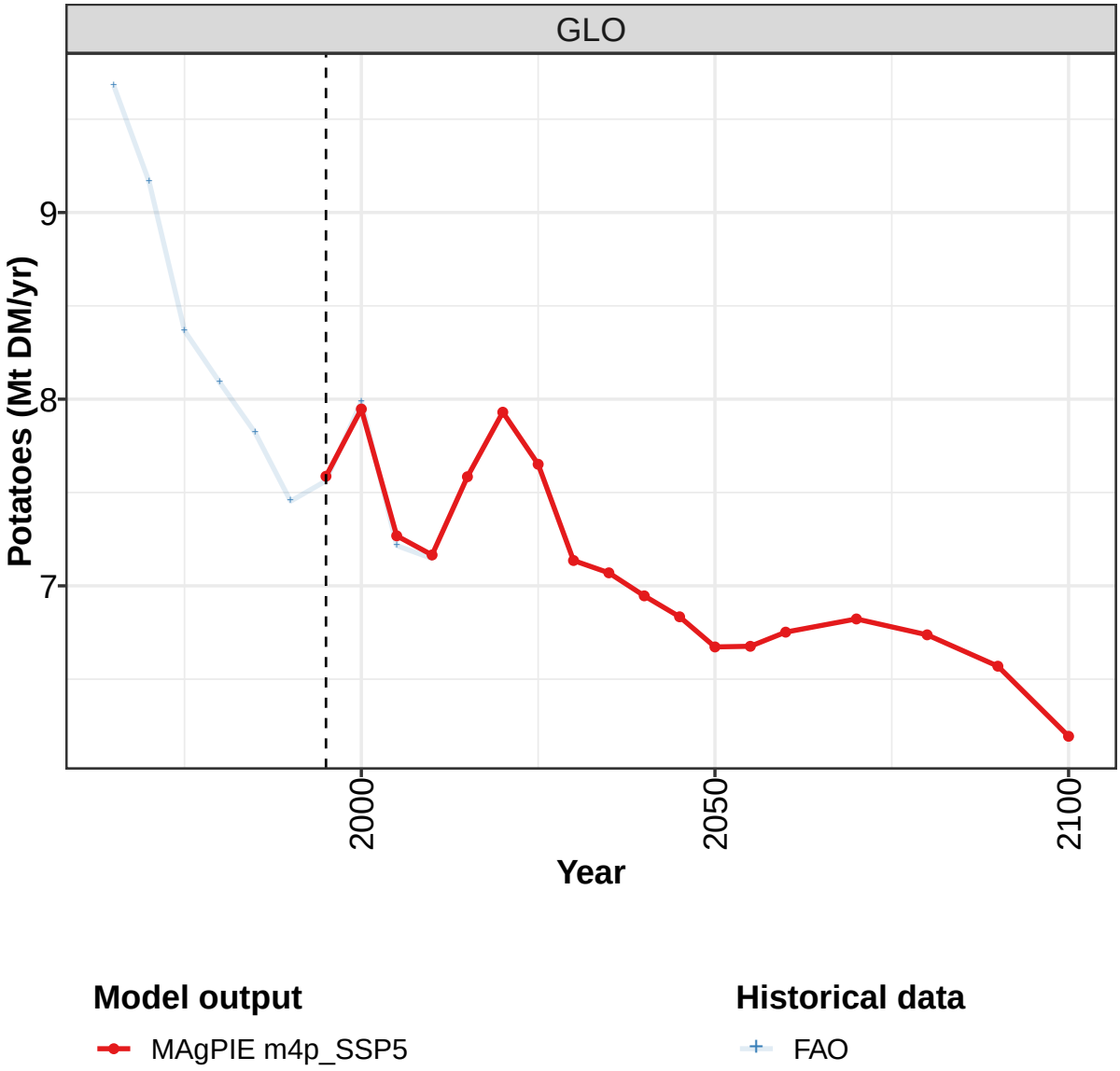
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0610	0.0596	0.0626	0.0672	0.0704	0.0676	0.0757
CAZ	0.0128	0.0142	0.0156	0.0187	0.0214	0.0242	0.0264
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0099	0.0106	0.0112	0.0124	0.0123	0.0115	0.0133
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0221	0.0222	0.0232	0.0227	0.0228	0.0179	0.0223
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0071	0.0073	0.0073	0.0079	0.0083	0.0086	0.0086
REF	0.0091	0.0053	0.0054	0.0056	0.0055	0.0053	0.0051
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

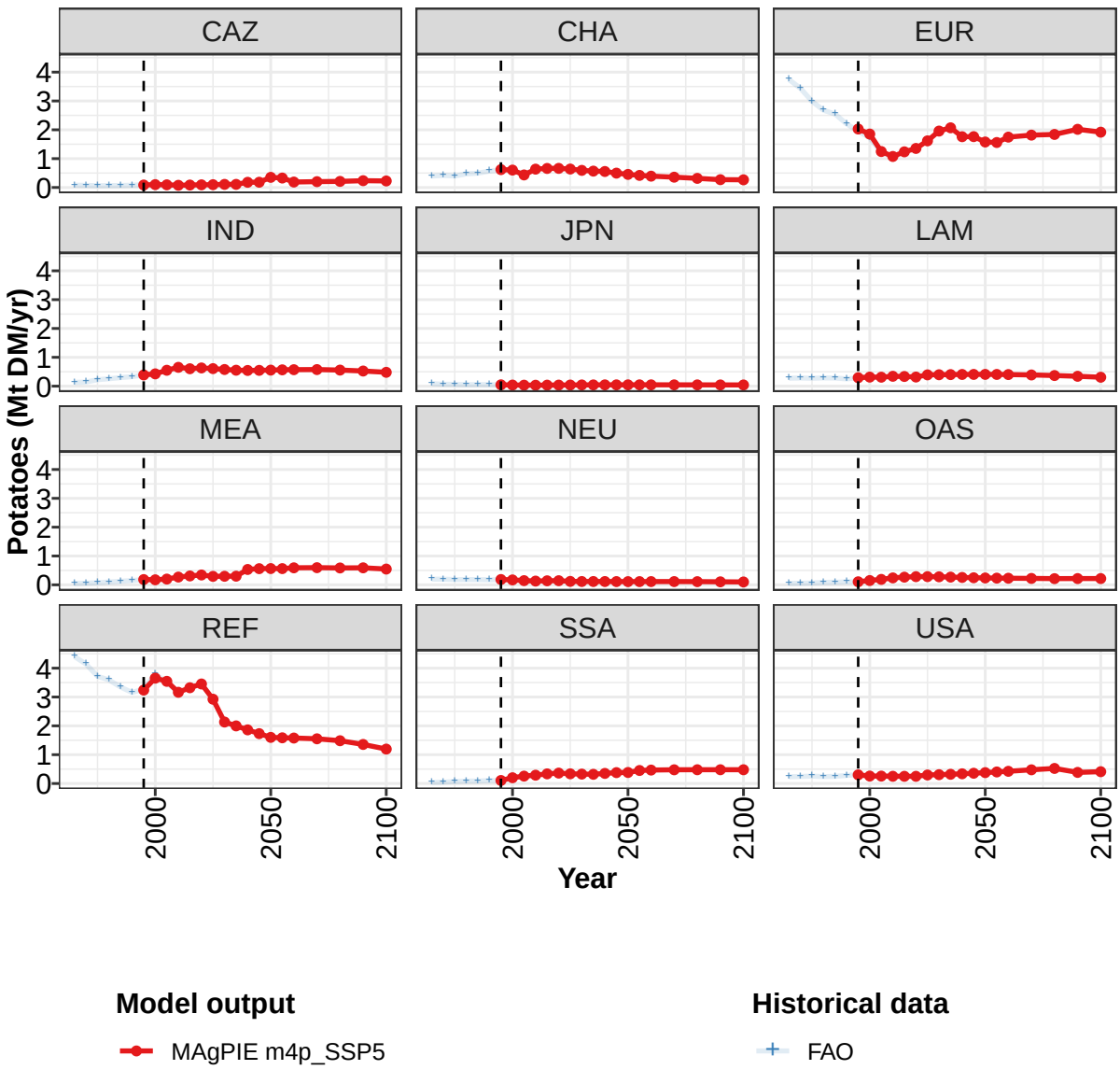
Table 684: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0100	0.0092	0.0093	0.0110	0.0116	0.0140	0.0197	0.0194	0.0175	0.0203
CAZ	0.0010	0.0013	0.0016	0.0016	0.0019	0.0024	0.0023	0.0024	0.0025	0.0033
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0018	0.0016	0.0018	0.0022	0.0020	0.0022	0.0043	0.0042	0.0039	0.0039
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAM	0.0034	0.0031	0.0019	0.0032	0.0052	0.0060	0.0072	0.0068	0.0060	0.0066
MEA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001
NEU	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OAS	0.0037	0.0031	0.0040	0.0040	0.0026	0.0035	0.0037	0.0031	0.0020	0.0017
REF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0022	0.0029	0.0029	0.0047
SSA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
USA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 685: FAO — Demand—Seed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

10.1.14 Other crops—Potatoes





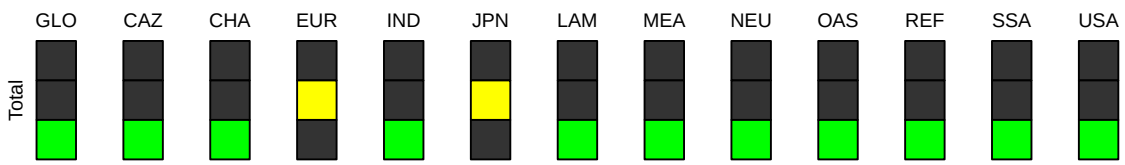


Figure 229: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.59	7.95	7.27	7.17	7.58	7.93	7.65	7.14	7.07	6.95	6.83
CAZ	0.09	0.10	0.09	0.08	0.09	0.09	0.10	0.11	0.11	0.18	0.18
CHA	0.62	0.60	0.43	0.64	0.66	0.66	0.64	0.59	0.57	0.55	0.50
EUR	2.03	1.85	1.25	1.08	1.24	1.35	1.62	1.96	2.07	1.76	1.76
IND	0.39	0.43	0.55	0.65	0.60	0.63	0.61	0.58	0.55	0.54	0.55
JPN	0.05	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05
LAM	0.29	0.31	0.31	0.34	0.34	0.32	0.39	0.40	0.40	0.41	0.41
MEA	0.18	0.18	0.20	0.27	0.31	0.34	0.29	0.30	0.30	0.53	0.56
NEU	0.18	0.17	0.15	0.13	0.14	0.14	0.12	0.12	0.12	0.11	0.11
OAS	0.11	0.15	0.19	0.24	0.27	0.28	0.29	0.28	0.27	0.26	0.25
REF	3.24	3.65	3.54	3.16	3.32	3.45	2.92	2.13	2.00	1.86	1.73
SSA	0.11	0.20	0.26	0.29	0.34	0.36	0.34	0.33	0.32	0.35	0.38
USA	0.30	0.26	0.26	0.25	0.25	0.25	0.30	0.31	0.32	0.34	0.36

Table 686: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

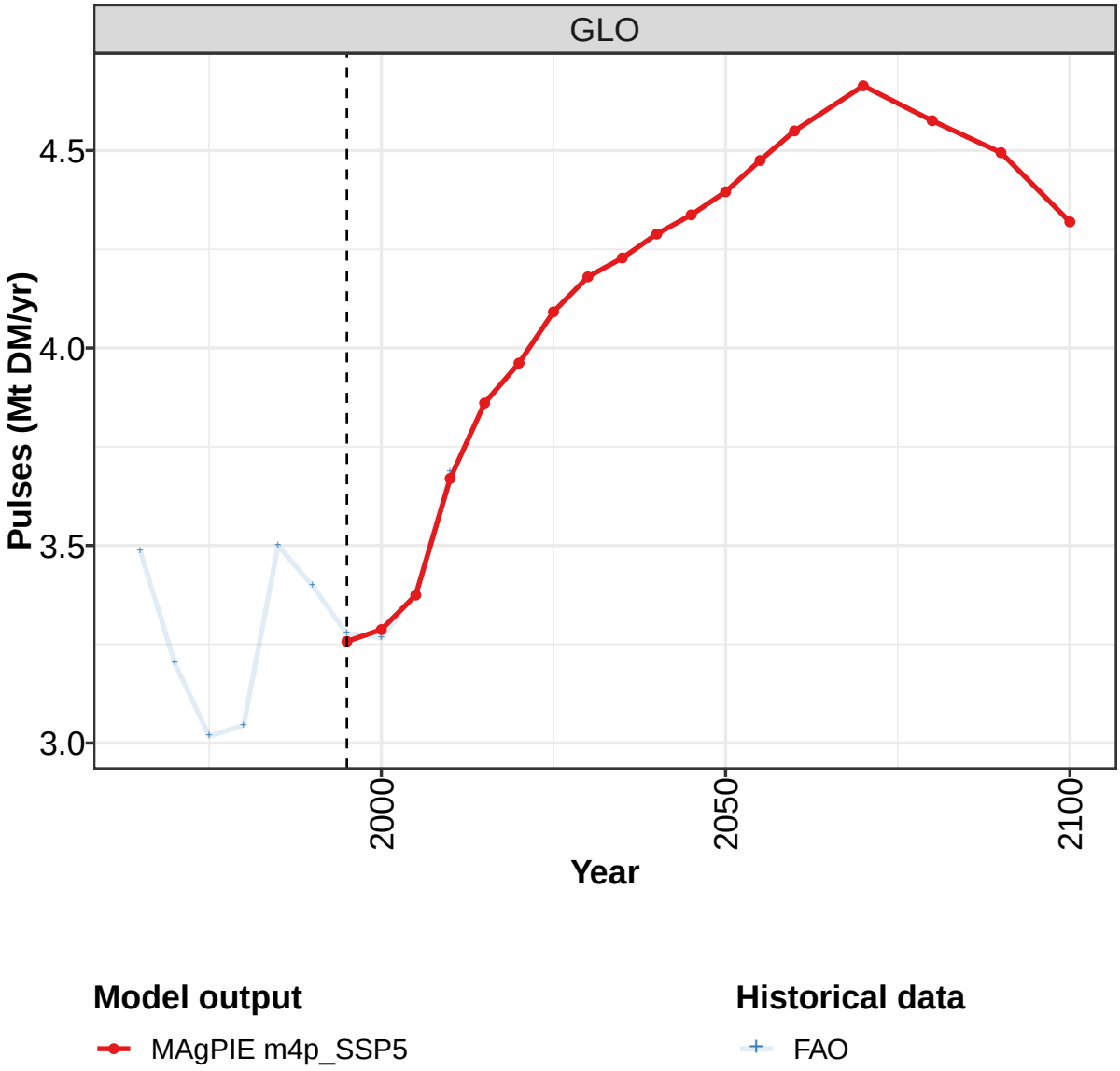
	2050	2055	2060	2070	2080	2090	2100
GLO	6.67	6.68	6.75	6.82	6.74	6.57	6.19
CAZ	0.35	0.33	0.19	0.20	0.21	0.24	0.23
CHA	0.45	0.42	0.39	0.36	0.32	0.27	0.27
EUR	1.58	1.56	1.75	1.82	1.84	2.02	1.92
IND	0.56	0.57	0.57	0.58	0.56	0.53	0.48
JPN	0.05	0.05	0.05	0.05	0.04	0.04	0.04
LAM	0.41	0.41	0.40	0.39	0.37	0.34	0.31
MEA	0.57	0.56	0.59	0.60	0.59	0.59	0.55
NEU	0.11	0.11	0.11	0.11	0.11	0.11	0.10
OAS	0.24	0.23	0.23	0.22	0.22	0.22	0.22
REF	1.60	1.59	1.58	1.55	1.48	1.36	1.19
SSA	0.38	0.45	0.47	0.48	0.48	0.48	0.48
USA	0.38	0.40	0.42	0.48	0.52	0.39	0.41

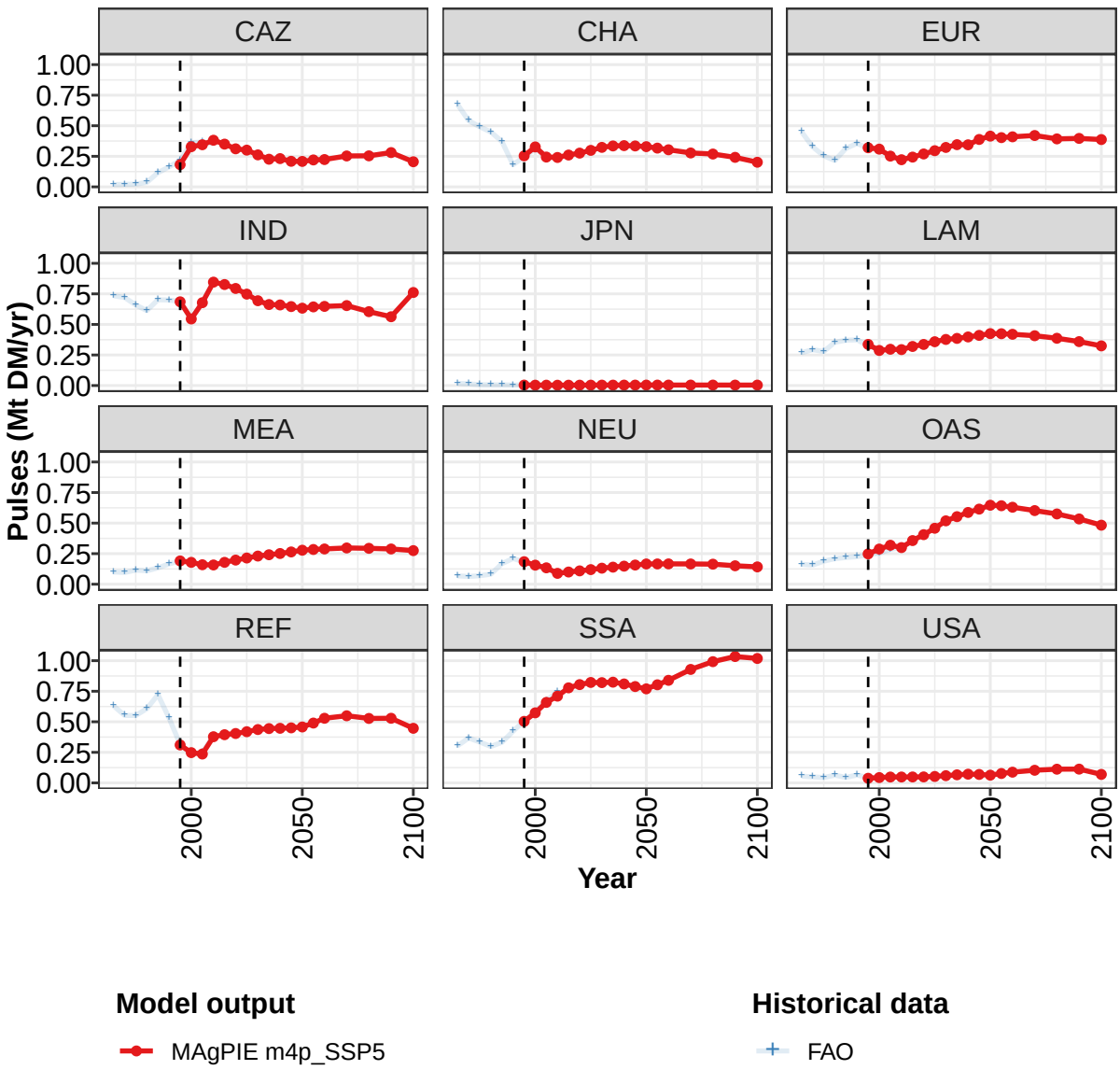
Table 687: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.68	9.16	8.37	8.09	7.82	7.45	7.56	7.99	7.22	7.15
CAZ	0.08	0.07	0.06	0.07	0.07	0.08	0.10	0.11	0.10	0.08
CHA	0.40	0.42	0.40	0.47	0.50	0.57	0.62	0.62	0.44	0.64
EUR	3.74	3.44	2.99	2.68	2.55	2.20	1.96	1.72	1.22	1.07
IND	0.13	0.14	0.22	0.26	0.30	0.33	0.39	0.43	0.55	0.66
JPN	0.09	0.07	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.03
LAM	0.27	0.28	0.27	0.29	0.28	0.25	0.29	0.31	0.31	0.34
MEA	0.04	0.06	0.07	0.10	0.12	0.15	0.18	0.17	0.20	0.26
NEU	0.20	0.20	0.18	0.18	0.18	0.18	0.18	0.17	0.15	0.13
OAS	0.05	0.06	0.06	0.09	0.09	0.10	0.11	0.15	0.19	0.24
REF	4.40	4.14	3.72	3.59	3.34	3.16	3.28	3.80	3.50	3.15
SSA	0.04	0.05	0.07	0.08	0.08	0.10	0.11	0.20	0.26	0.29
USA	0.23	0.24	0.26	0.24	0.25	0.28	0.31	0.27	0.26	0.25

Table 688: FAO — Demand—Seed—Crops—Other crops—Potatoes (Mt DM/yr)

10.1.15 Other crops—Pulses





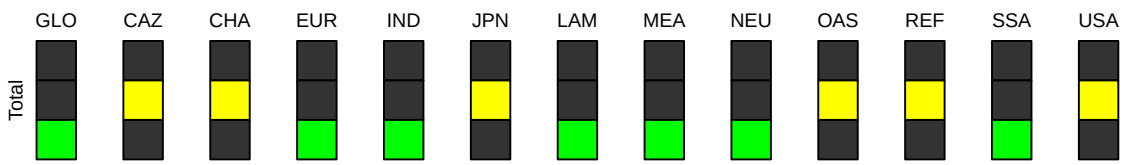


Figure 230: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.26	3.29	3.37	3.67	3.86	3.96	4.09	4.18	4.23	4.29	4.34
CAZ	0.18	0.33	0.34	0.38	0.35	0.31	0.30	0.26	0.23	0.23	0.21
CHA	0.25	0.33	0.24	0.24	0.26	0.28	0.30	0.32	0.33	0.34	0.34
EUR	0.32	0.31	0.25	0.22	0.24	0.27	0.30	0.32	0.35	0.34	0.39
IND	0.69	0.54	0.68	0.85	0.83	0.79	0.75	0.69	0.66	0.66	0.65
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.34	0.29	0.30	0.29	0.32	0.34	0.36	0.38	0.39	0.40	0.41
MEA	0.19	0.18	0.16	0.16	0.18	0.20	0.21	0.23	0.24	0.25	0.26
NEU	0.18	0.16	0.13	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16
OAS	0.25	0.29	0.32	0.30	0.36	0.41	0.46	0.52	0.55	0.59	0.61
REF	0.31	0.25	0.24	0.38	0.39	0.40	0.42	0.44	0.44	0.45	0.45
SSA	0.50	0.57	0.66	0.71	0.78	0.80	0.82	0.82	0.82	0.81	0.79
USA	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.07	0.07	0.07

Table 689: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

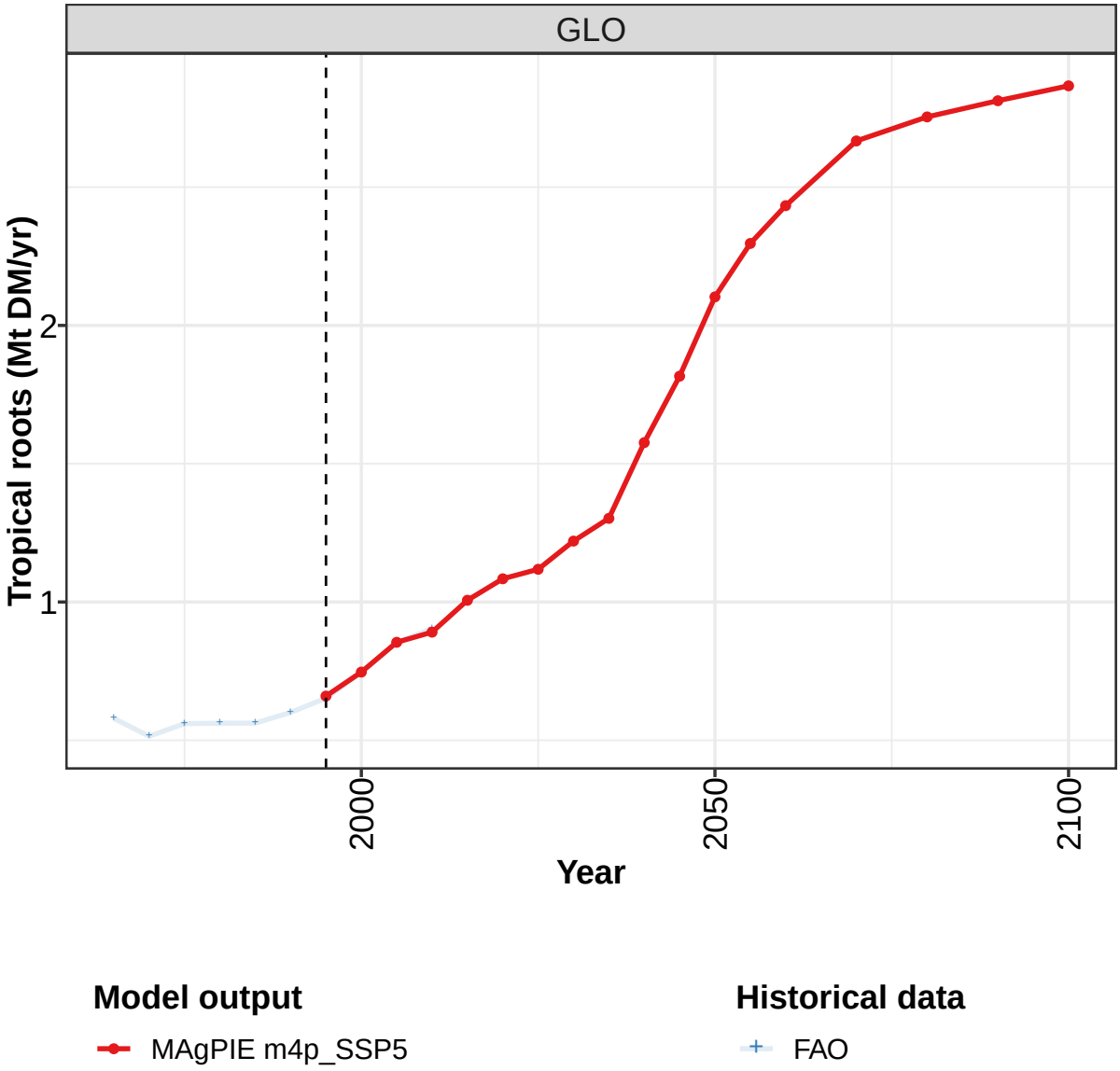
	2050	2055	2060	2070	2080	2090	2100
GLO	4.40	4.47	4.55	4.66	4.58	4.49	4.32
CAZ	0.21	0.22	0.22	0.25	0.25	0.28	0.21
CHA	0.33	0.32	0.30	0.28	0.27	0.24	0.20
EUR	0.42	0.40	0.41	0.42	0.39	0.40	0.39
IND	0.63	0.64	0.65	0.65	0.60	0.56	0.76
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.42	0.42	0.42	0.41	0.39	0.36	0.32
MEA	0.28	0.28	0.29	0.30	0.29	0.29	0.28
NEU	0.17	0.17	0.17	0.17	0.16	0.15	0.14
OAS	0.65	0.64	0.63	0.60	0.58	0.53	0.48
REF	0.46	0.49	0.53	0.55	0.53	0.53	0.45
SSA	0.77	0.80	0.84	0.93	0.99	1.03	1.02
USA	0.06	0.08	0.09	0.10	0.11	0.11	0.07

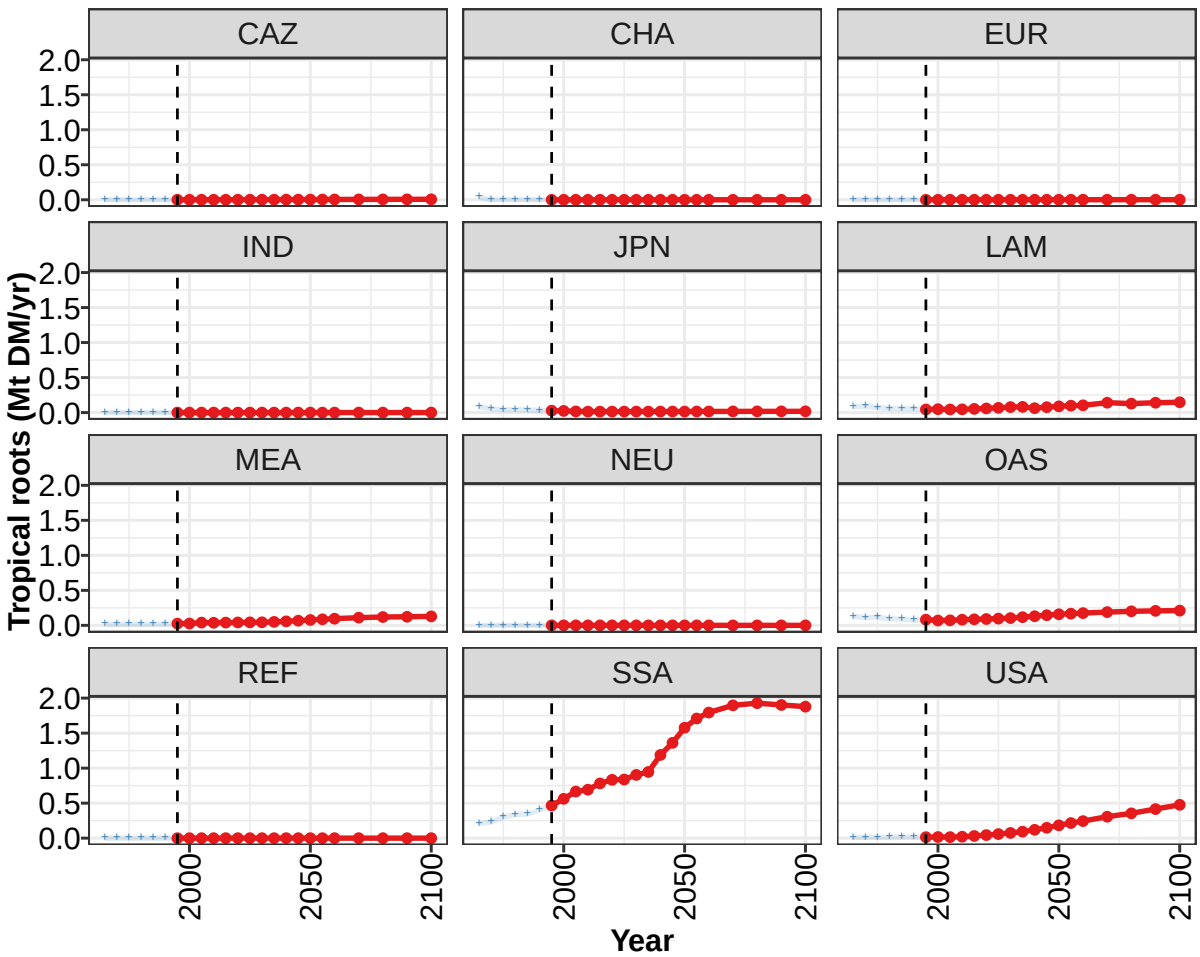
Table 690: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.49	3.20	3.02	3.04	3.50	3.40	3.28	3.27	3.38	3.69
CAZ	0.02	0.02	0.02	0.04	0.12	0.16	0.22	0.36	0.37	0.35
CHA	0.67	0.54	0.49	0.45	0.37	0.18	0.25	0.31	0.24	0.24
EUR	0.45	0.33	0.25	0.22	0.32	0.36	0.31	0.30	0.25	0.22
IND	0.73	0.72	0.66	0.61	0.70	0.70	0.69	0.55	0.68	0.85
JPN	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
LAM	0.27	0.29	0.28	0.35	0.37	0.37	0.33	0.29	0.30	0.29
MEA	0.10	0.10	0.12	0.11	0.13	0.17	0.19	0.18	0.16	0.16
NEU	0.07	0.06	0.07	0.08	0.17	0.21	0.18	0.15	0.12	0.09
OAS	0.16	0.16	0.19	0.21	0.22	0.23	0.24	0.25	0.28	0.30
REF	0.63	0.55	0.55	0.61	0.72	0.53	0.32	0.24	0.25	0.38
SSA	0.30	0.37	0.33	0.30	0.33	0.42	0.51	0.58	0.67	0.75
USA	0.06	0.05	0.04	0.06	0.04	0.06	0.04	0.04	0.05	0.05

Table 691: FAO — Demand—Seed—Crops—Other crops—Pulses (Mt DM/yr)

10.1.16 Other crops—Tropical roots





Model output

MAgPIE m4p_SSP5

Historical data

FAO

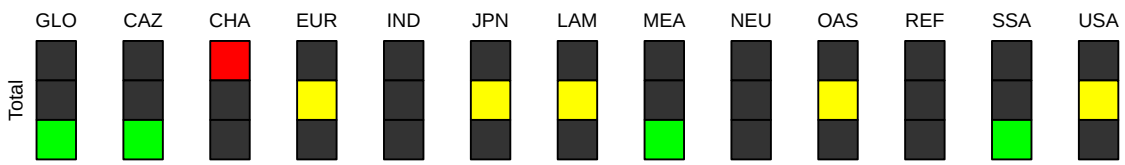


Figure 231: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.66	0.75	0.85	0.89	1.01	1.08	1.12	1.22	1.30	1.58	1.82
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.04	0.05	0.04	0.05	0.05	0.06	0.07	0.08	0.08	0.06	0.08
MEA	0.02	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.06	0.07
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.08	0.07	0.07	0.08	0.09	0.09	0.10	0.10	0.12	0.13	0.14
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.47	0.56	0.67	0.69	0.78	0.83	0.84	0.90	0.95	1.19	1.36
USA	0.01	0.02	0.02	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.15

Table 692: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

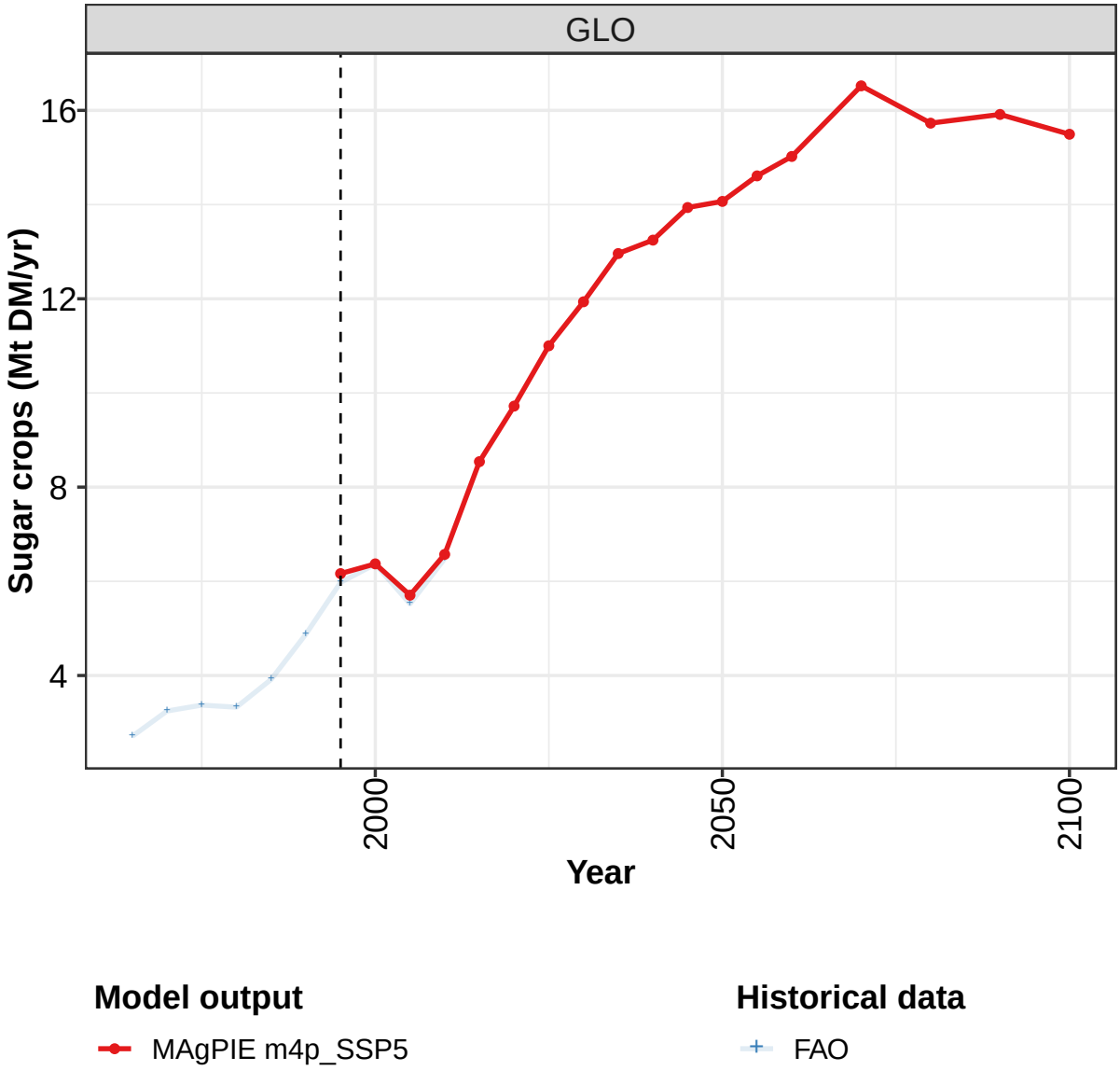
	2050	2055	2060	2070	2080	2090	2100
GLO	2.10	2.30	2.43	2.67	2.75	2.81	2.87
CAZ	0.00	0.00	0.00	0.01	0.01	0.01	0.01
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.01	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.09	0.10	0.10	0.14	0.13	0.14	0.15
MEA	0.08	0.09	0.10	0.11	0.12	0.12	0.13
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.16	0.17	0.18	0.19	0.20	0.21	0.21
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.58	1.71	1.79	1.90	1.93	1.90	1.88
USA	0.18	0.22	0.24	0.31	0.35	0.42	0.48

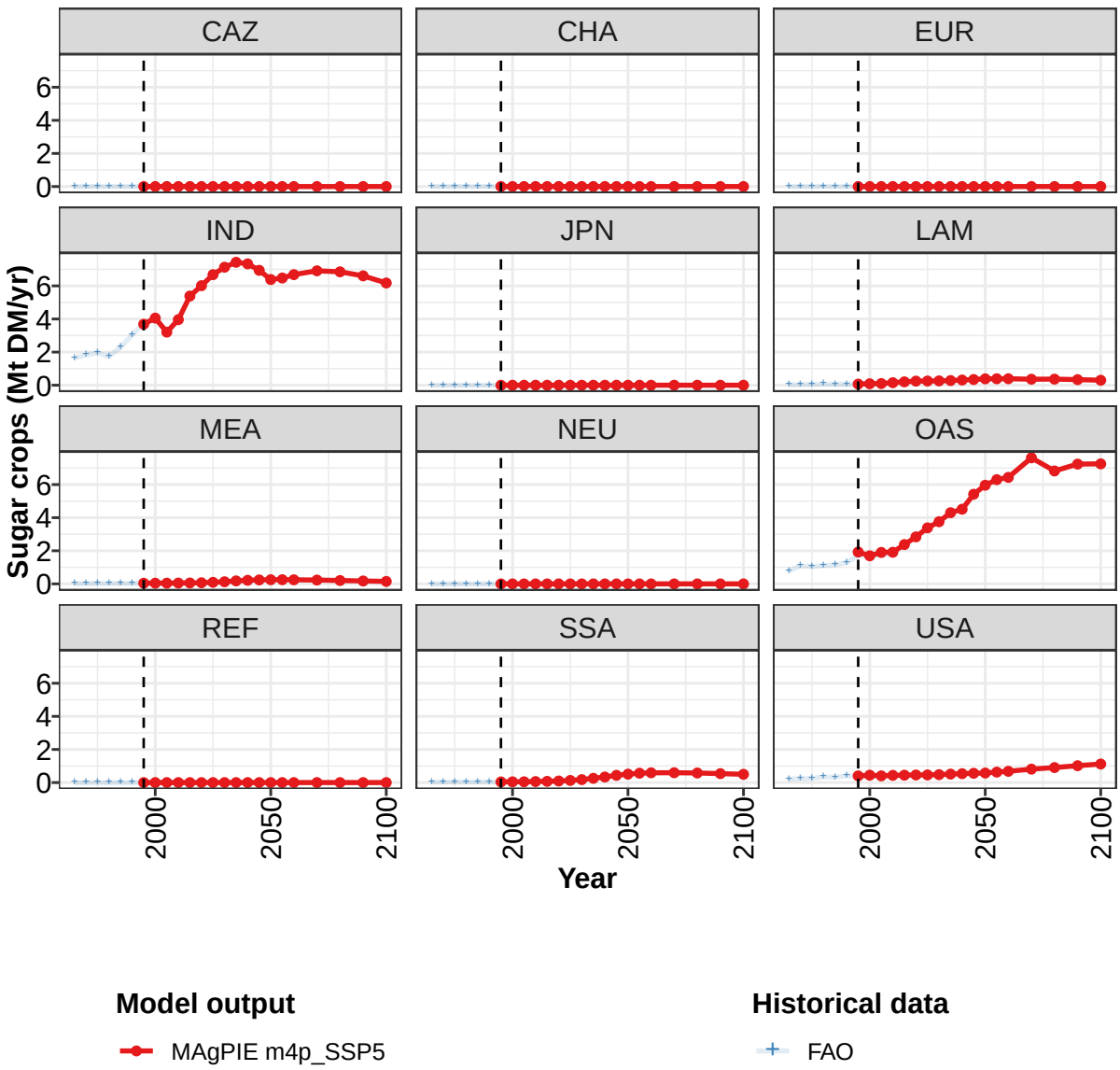
Table 693: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.579	0.514	0.560	0.562	0.562	0.601	0.652	0.744	0.853	0.904
CAZ	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001	0.001
CHA	0.040	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.087	0.055	0.039	0.042	0.038	0.032	0.027	0.024	0.017	0.013
LAM	0.085	0.090	0.073	0.056	0.057	0.054	0.042	0.049	0.044	0.045
MEA	0.019	0.016	0.017	0.018	0.018	0.020	0.023	0.026	0.039	0.037
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.128	0.111	0.116	0.092	0.089	0.076	0.077	0.068	0.071	0.077
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.207	0.230	0.300	0.339	0.343	0.403	0.468	0.561	0.666	0.711
USA	0.012	0.012	0.012	0.014	0.016	0.016	0.014	0.016	0.016	0.021

Table 694: FAO — Demand—Seed—Crops—Other crops—Tropical roots (Mt DM/yr)

10.1.17 Sugar crops





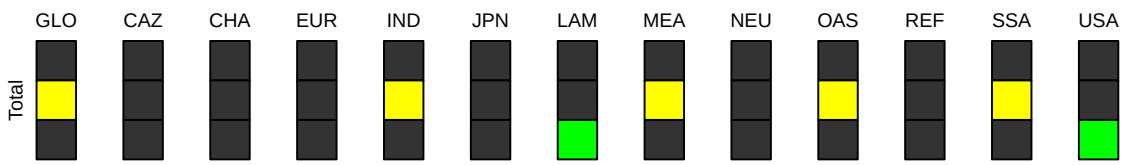


Figure 232: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.2	6.4	5.7	6.6	8.5	9.7	11.0	11.9	13.0	13.2	13.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.7	4.1	3.2	4.0	5.4	6.0	6.7	7.1	7.4	7.3	6.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
MEA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.9	1.7	1.9	1.9	2.4	2.8	3.4	3.8	4.3	4.5	5.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
USA	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6

Table 695: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

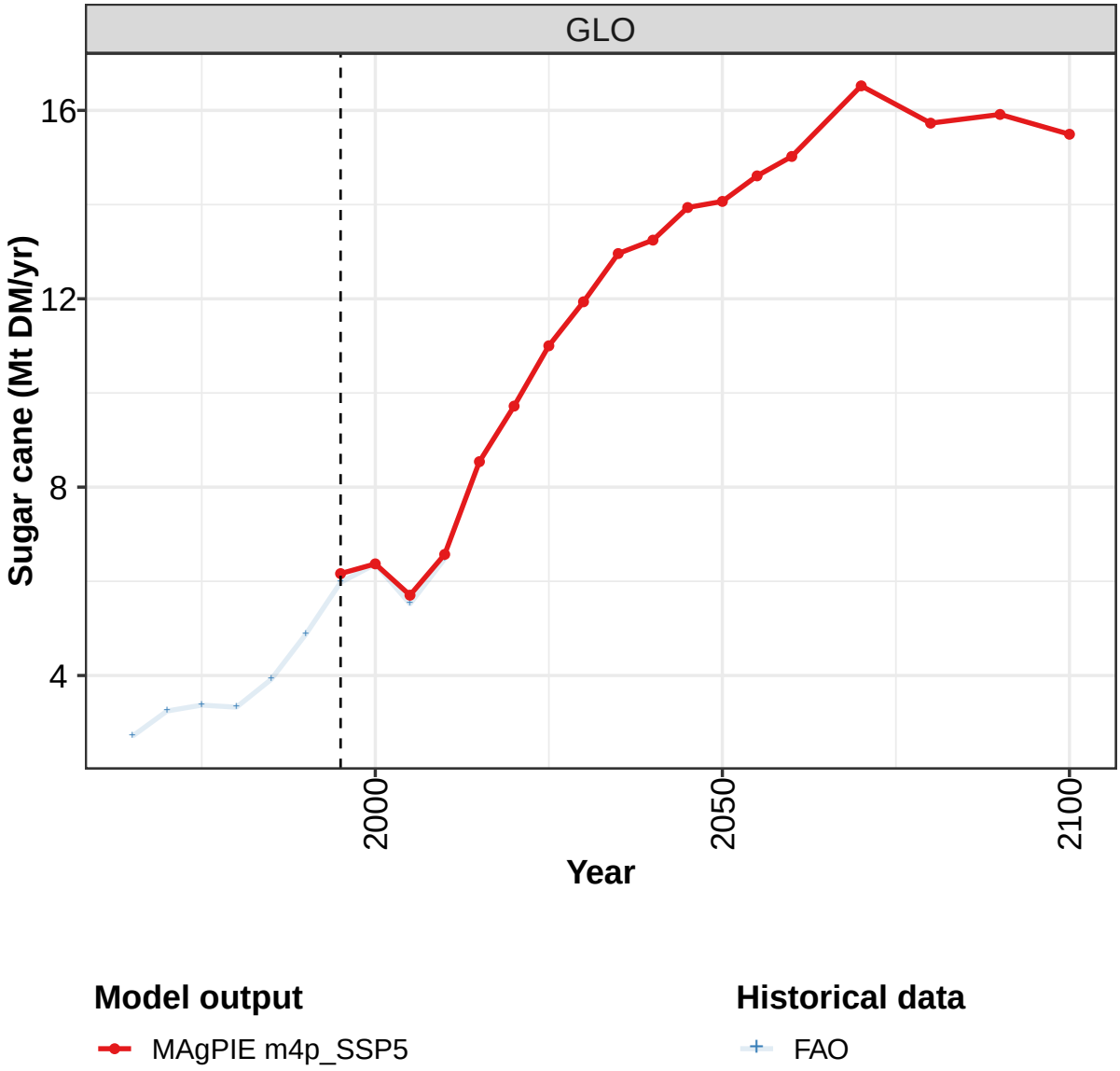
	2050	2055	2060	2070	2080	2090	2100
GLO	14.1	14.6	15.0	16.5	15.7	15.9	15.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	6.4	6.5	6.7	6.9	6.8	6.6	6.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.4	0.4	0.4	0.4	0.4	0.3	0.3
MEA	0.3	0.3	0.2	0.2	0.2	0.2	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	6.0	6.3	6.4	7.6	6.8	7.2	7.3
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.5	0.6	0.6	0.6	0.6	0.5	0.5
USA	0.6	0.6	0.7	0.8	0.9	1.0	1.1

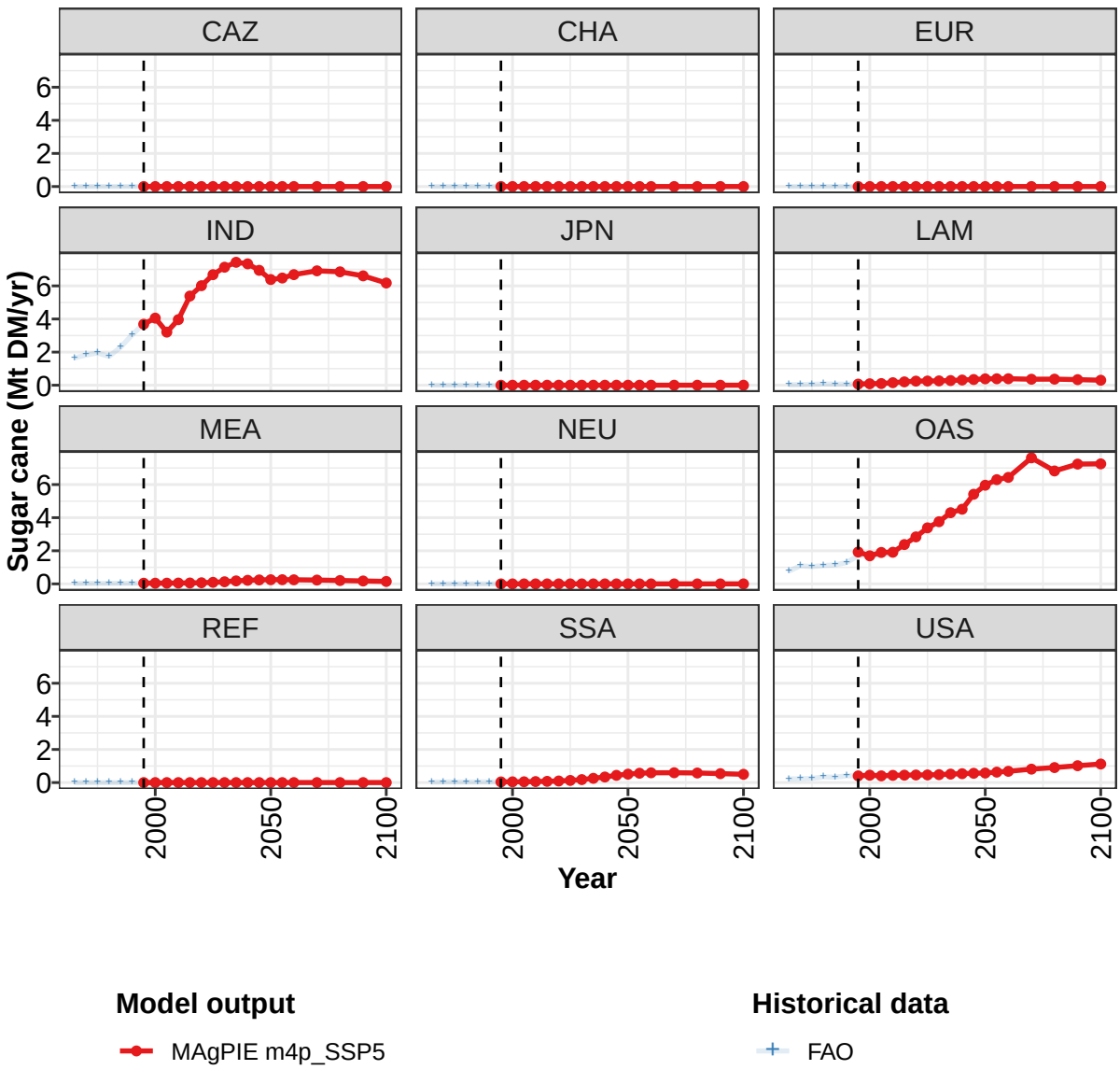
Table 696: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.71	3.25	3.37	3.33	3.92	4.88	5.98	6.36	5.52	6.48
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	1.65	1.82	1.95	1.74	2.30	3.05	3.72	4.04	3.20	3.95
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.03	0.04	0.05	0.08	0.07	0.06	0.06	0.09	0.10	0.15
MEA	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.77	1.09	1.05	1.11	1.15	1.29	1.71	1.70	1.72	1.83
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.03	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.05	0.06
USA	0.22	0.23	0.25	0.34	0.33	0.41	0.40	0.45	0.40	0.46

Table 697: FAO — Demand—Seed—Crops—Sugar crops (Mt DM/yr)

10.1.18 Sugar crops—Sugar cane





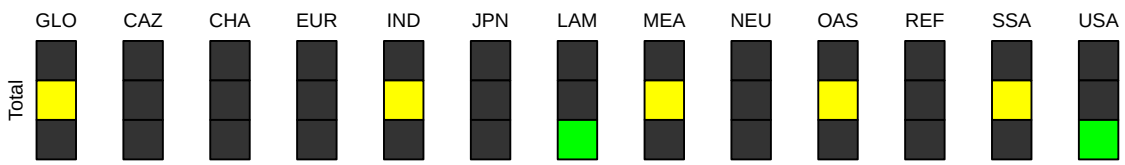


Figure 233: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.2	6.4	5.7	6.6	8.5	9.7	11.0	11.9	13.0	13.2	13.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.7	4.1	3.2	4.0	5.4	6.0	6.7	7.1	7.4	7.3	6.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
MEA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.9	1.7	1.9	1.9	2.4	2.8	3.4	3.8	4.3	4.5	5.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
USA	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6

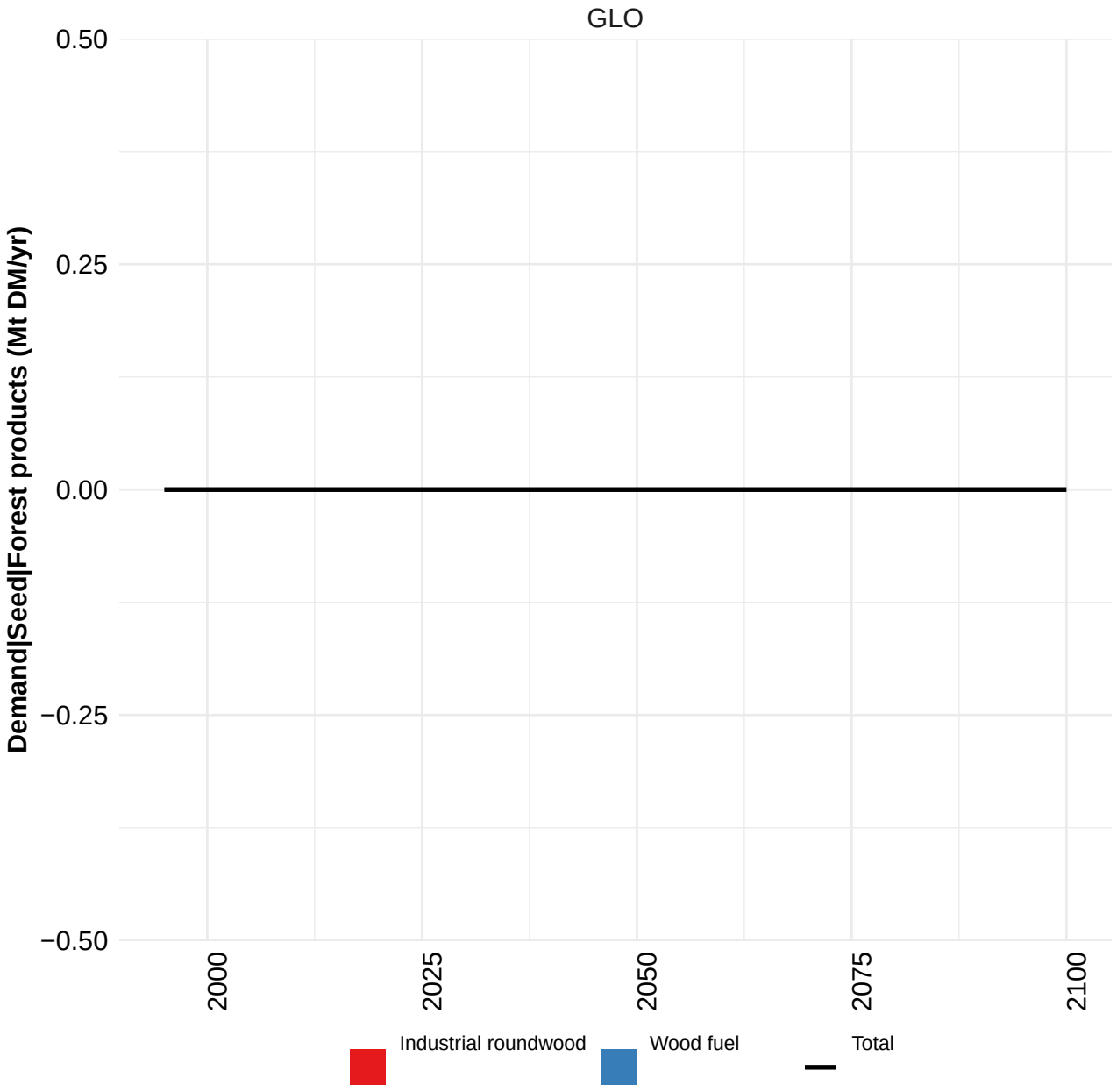
Table 698: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

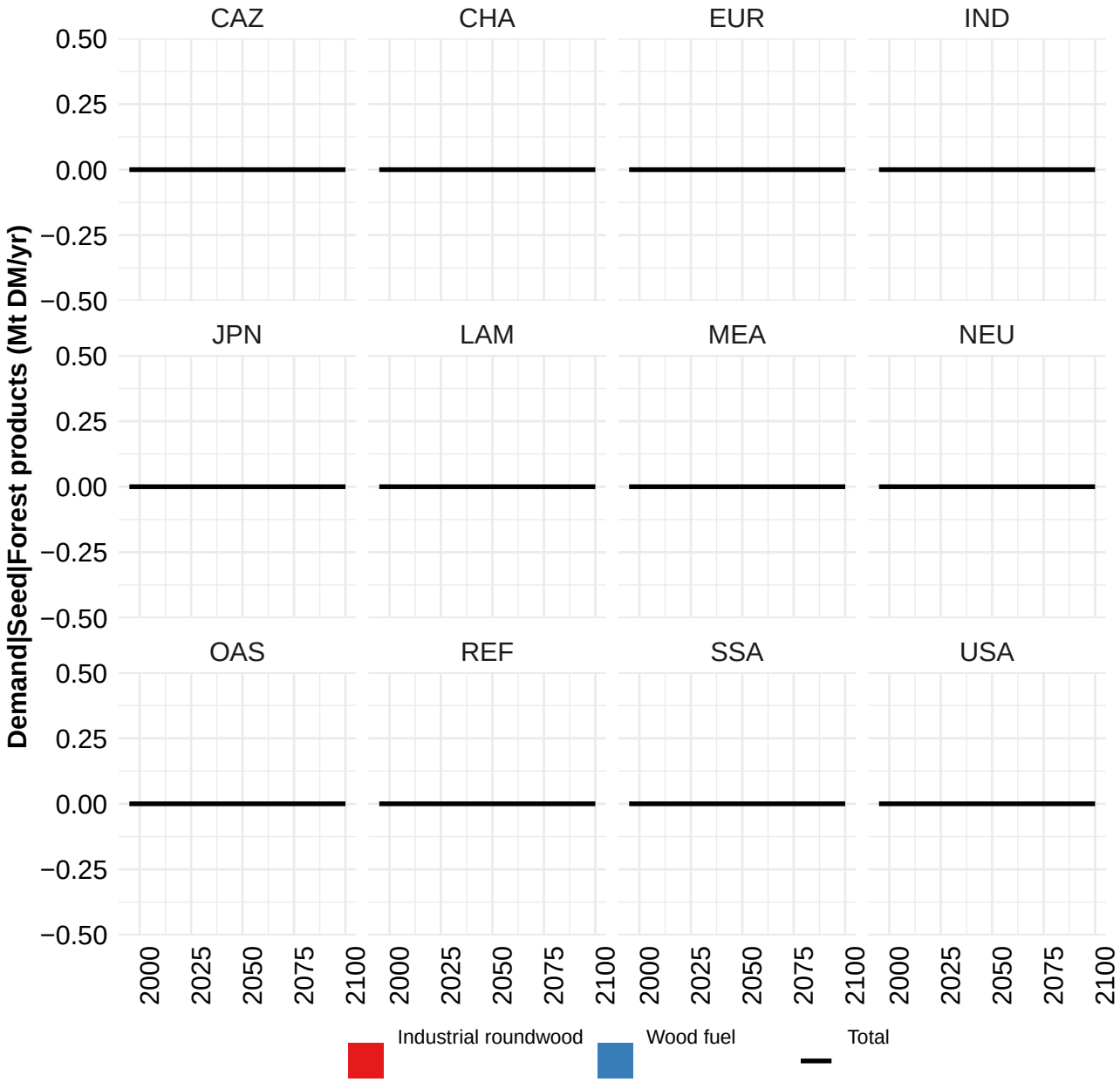
	2050	2055	2060	2070	2080	2090	2100
GLO	14.1	14.6	15.0	16.5	15.7	15.9	15.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	6.4	6.5	6.7	6.9	6.8	6.6	6.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.4	0.4	0.4	0.4	0.4	0.3	0.3
MEA	0.3	0.3	0.2	0.2	0.2	0.2	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	6.0	6.3	6.4	7.6	6.8	7.2	7.3
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.5	0.6	0.6	0.6	0.6	0.5	0.5
USA	0.6	0.6	0.7	0.8	0.9	1.0	1.1

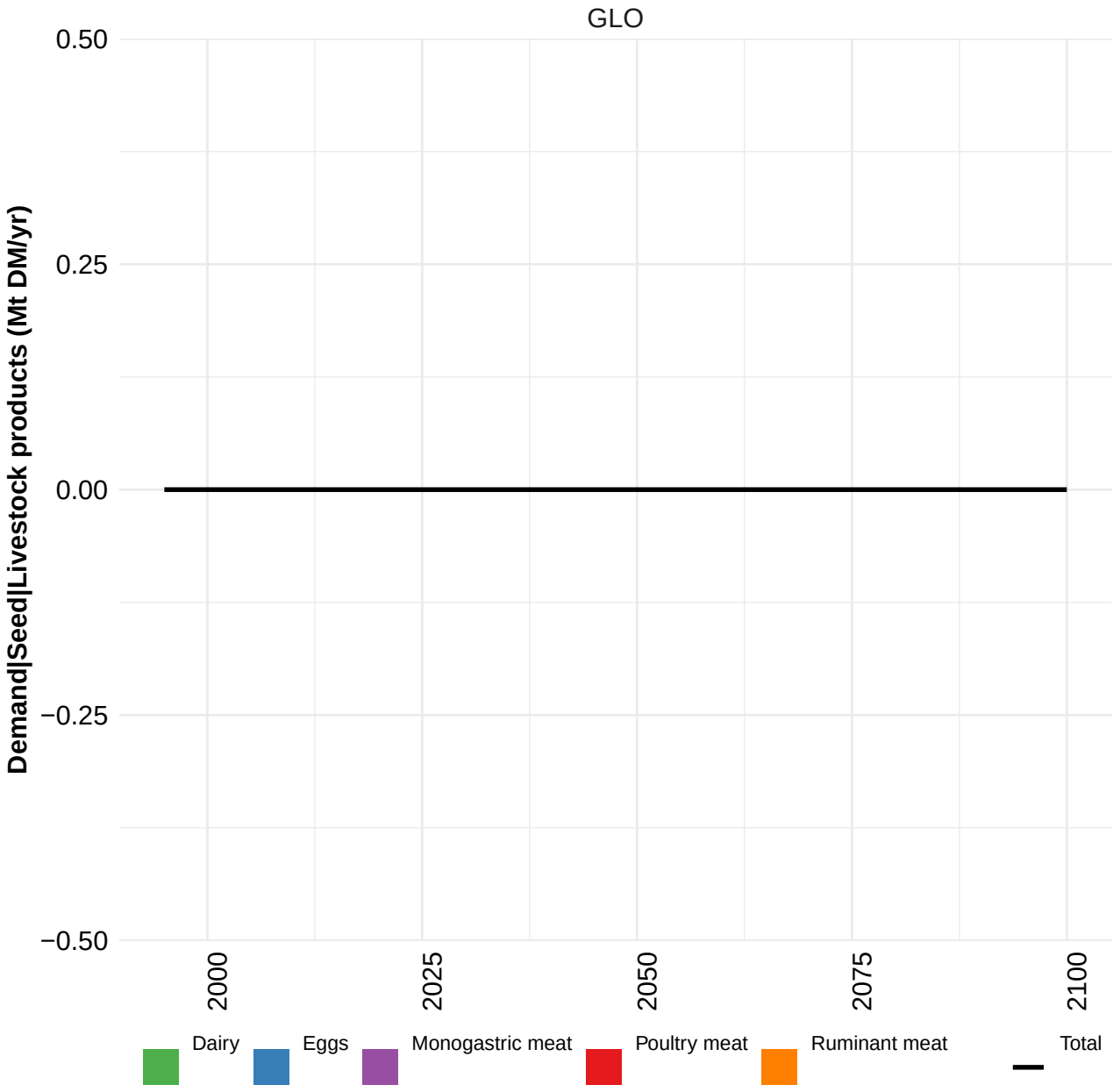
Table 699: MAgPIE m4p_SSP5 — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

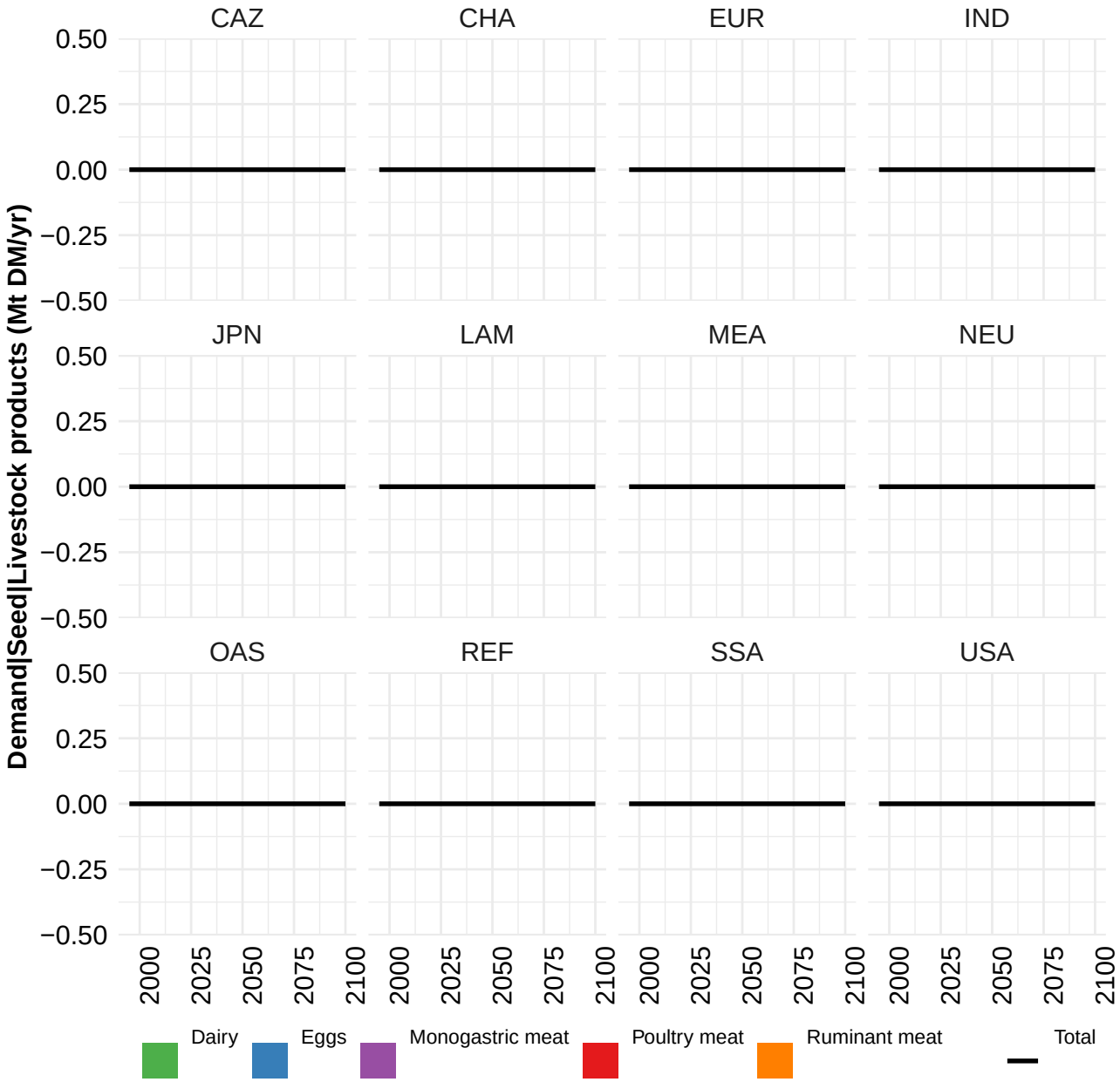
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.71	3.25	3.37	3.33	3.92	4.88	5.98	6.36	5.52	6.48
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	1.65	1.82	1.95	1.74	2.30	3.05	3.72	4.04	3.20	3.95
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.03	0.04	0.05	0.08	0.07	0.06	0.06	0.09	0.10	0.15
MEA	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.77	1.09	1.05	1.11	1.15	1.29	1.71	1.70	1.72	1.83
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.03	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.05	0.06
USA	0.22	0.23	0.25	0.34	0.33	0.41	0.40	0.45	0.40	0.46

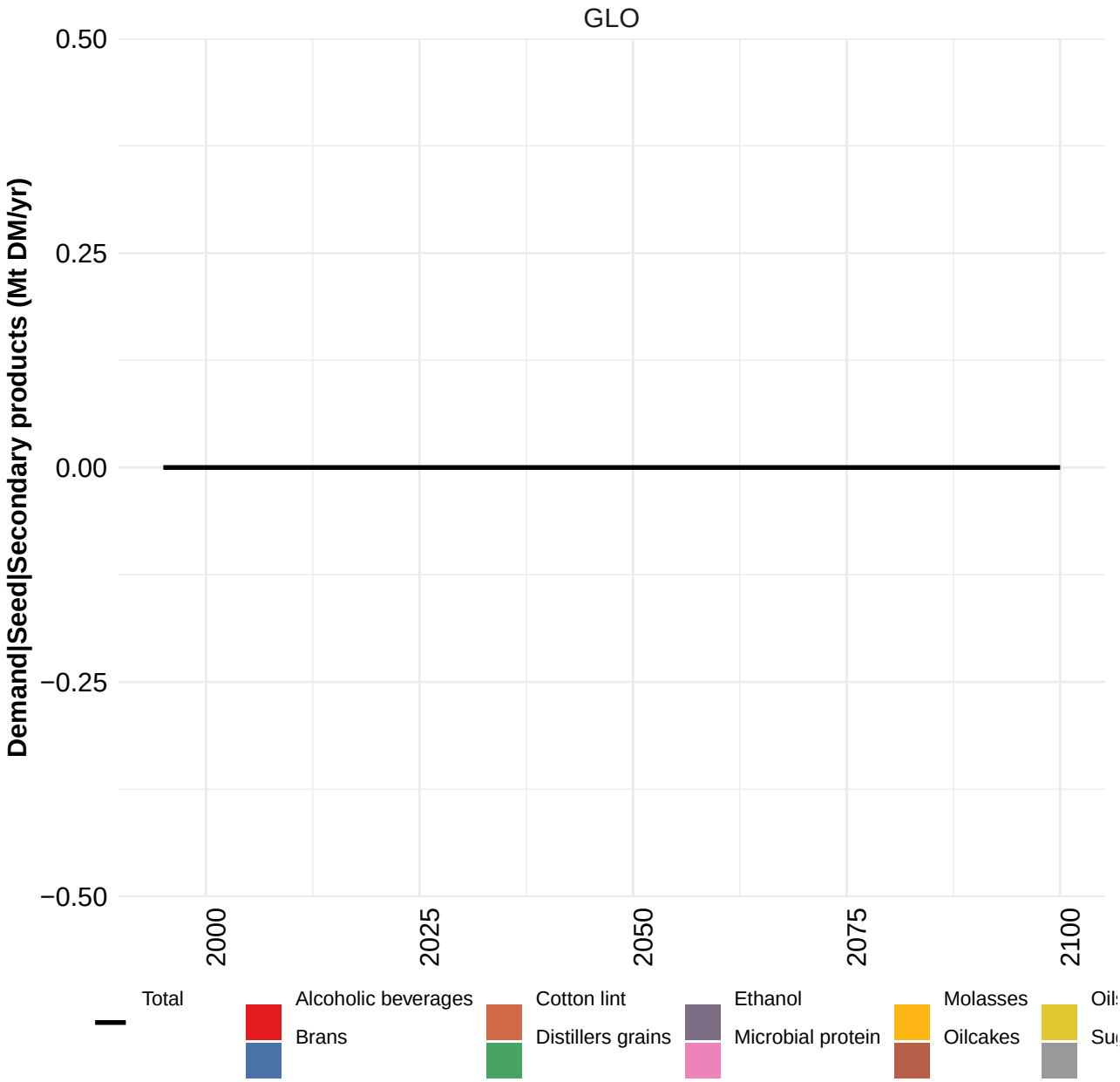
Table 700: FAO — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr)

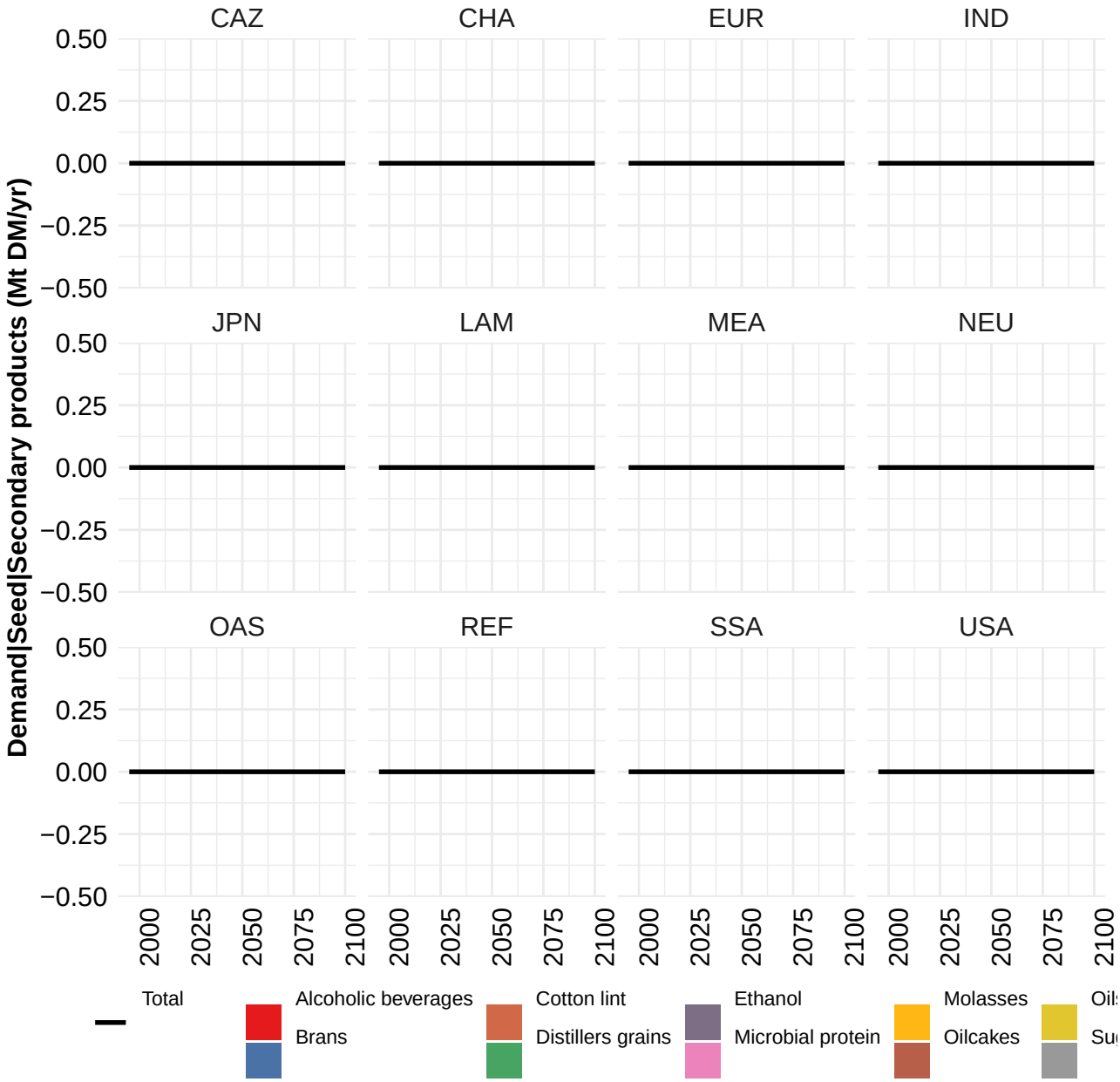

GLO
0.50
0.25
0.00
−0.25
−0.50
Demand|Seed|Forest products (Mt DM/yr)
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Seed|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total


GLO
Demand|Seed|Livestock products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

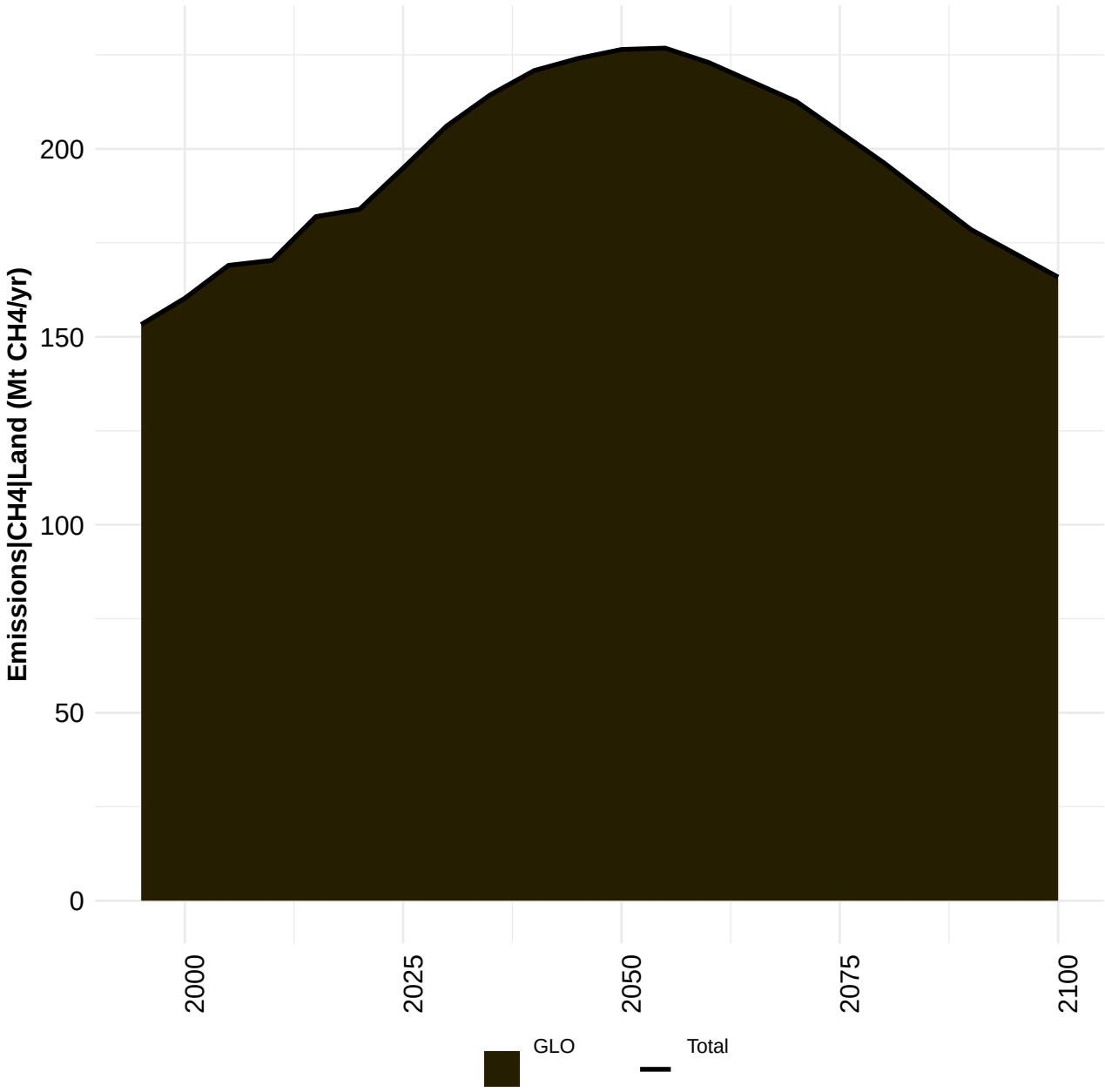

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Seed|Livestock products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

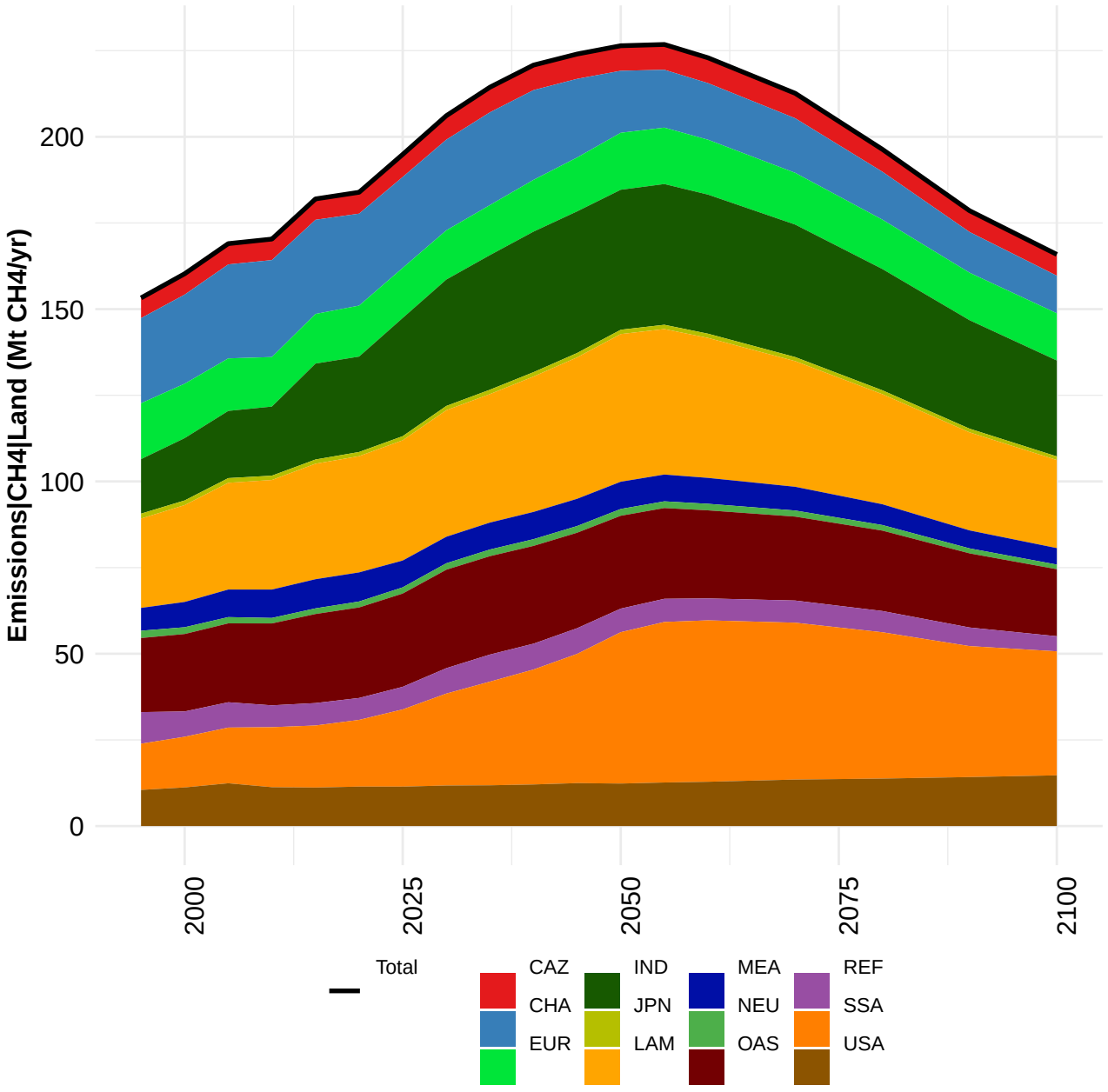

GLO
Demand|Seed|Secondary products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Demand|Seed|Secondary products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Cotton lint
Ethanol
Molasses
Brans
Distillers grains
Microbial protein
Oilcakes

Part IV
Emissions

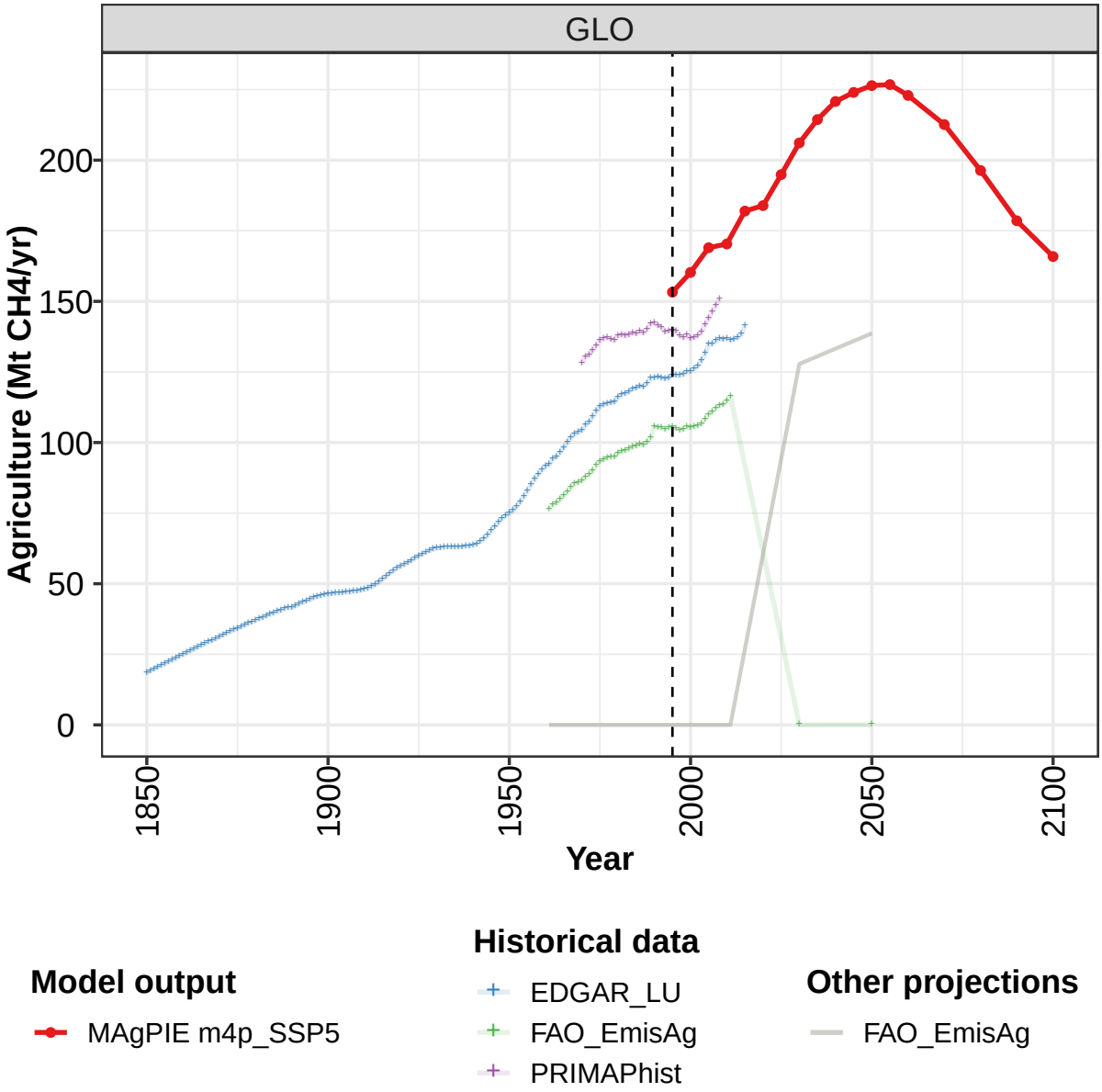
11 CH4

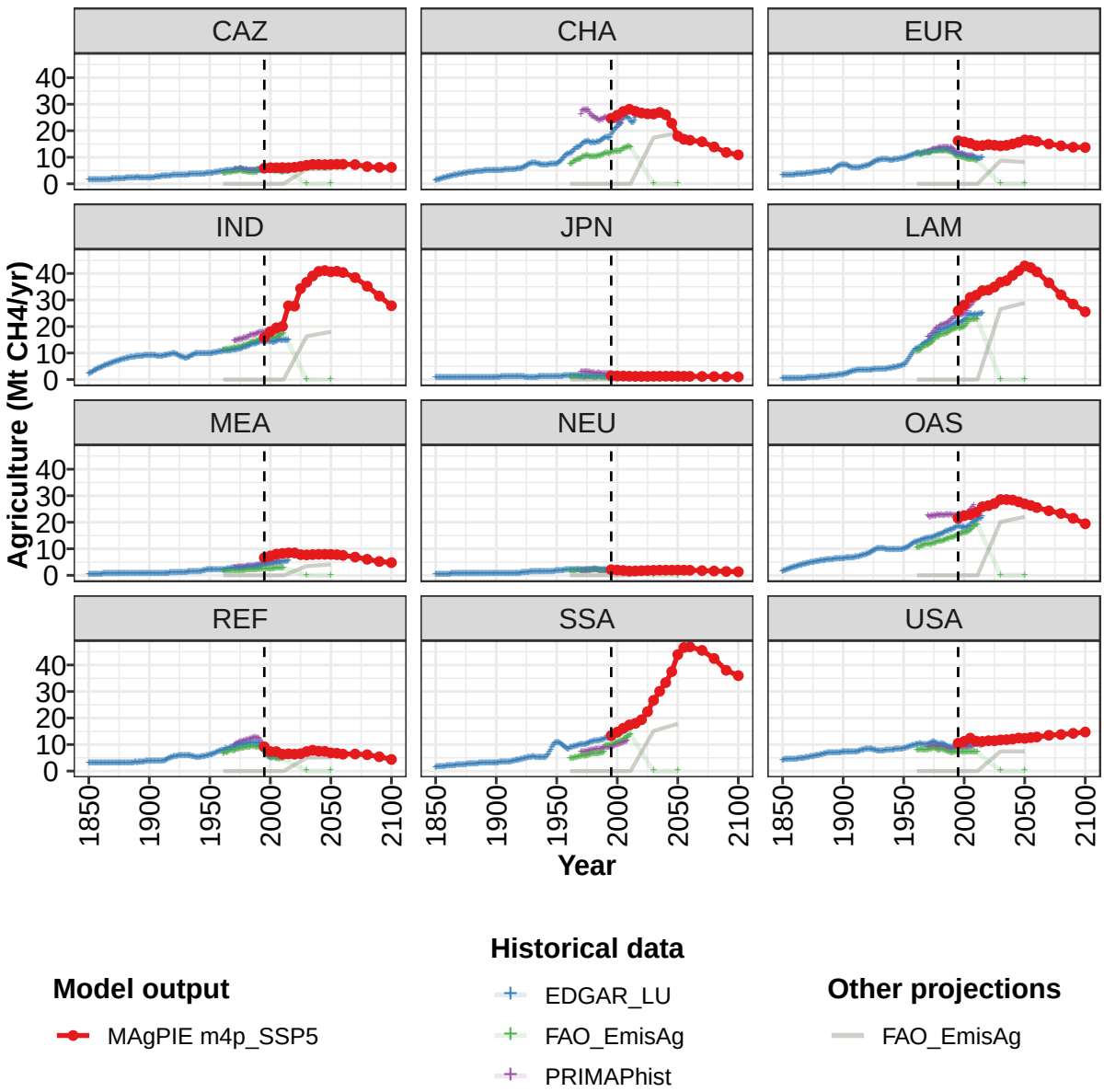



Emissions|CH4|Land (Mt CH4/yr)
200
150
100
50
0
2000
2025
2050
2075
2100
Total
CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA

11.1 Land

11.1.1 Agriculture





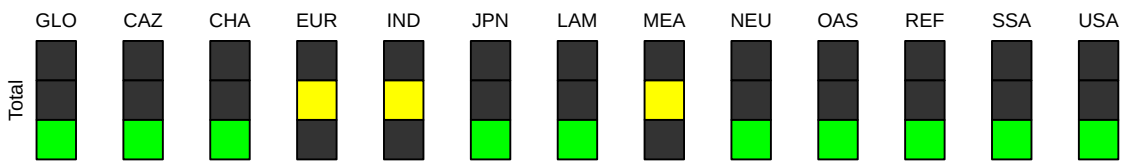


Figure 234: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture (Mt CH4/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	153	160	169	170	182	184	195	206	214	221	224
CAZ	6	6	6	6	6	6	7	7	7	7	7
CHA	25	26	27	28	27	27	26	26	27	26	23
EUR	16	16	15	14	14	15	15	14	15	15	16
IND	16	18	19	20	28	28	34	37	39	41	41
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	26	28	31	32	34	34	35	37	37	39	41
MEA	7	7	8	8	8	8	8	8	8	8	8
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	22	22	23	24	26	26	27	29	29	28	28
REF	9	7	7	6	7	6	7	7	8	7	7
SSA	13	15	16	17	18	19	22	27	30	33	38
USA	10	11	12	11	11	11	11	12	12	12	12

Table 701: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	226	227	223	213	196	179	166
CAZ	7	7	7	7	6	6	6
CHA	18	17	16	16	14	12	11
EUR	17	16	16	15	14	14	14
IND	41	41	40	38	35	31	28
JPN	1	1	1	1	1	1	1
LAM	43	42	41	36	32	28	26
MEA	8	8	8	7	6	5	5
NEU	2	2	2	2	2	1	1
OAS	27	26	26	24	23	22	19
REF	7	7	6	6	6	5	4
SSA	44	47	47	46	42	38	36
USA	12	13	13	13	14	14	15

Table 702: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 2/2]

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860
GLO	18	19	20	20	21	22	22	23	24	24	25
CAZ	1	1	1	1	1	1	1	1	1	1	1
CHA	1	1	1	2	2	2	2	2	2	2	2
EUR	3	3	3	3	3	3	3	3	3	3	3
IND	2	2	3	3	3	3	3	4	4	4	4
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	1	2	2	2	2	2	2	3	3	3	3
REF	3	3	3	3	3	3	3	3	3	3	3
SSA	1	1	1	1	2	2	2	2	2	2	2
USA	4	4	4	4	4	4	4	4	4	4	4

Table 703: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 1/16]

	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871
GLO	26	26	27	27	28	29	29	30	31	31	32
CAZ	1	1	1	1	1	2	2	2	2	2	2
CHA	3	3	3	3	3	3	3	3	3	3	4
EUR	3	3	3	3	3	3	4	4	4	4	4
IND	5	5	5	5	5	6	6	6	6	6	6
JPN	0	0	0	1	1	1	1	1	1	1	1
LAM	0	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	3	3	3	4	4	4	4	4	4	4	4
REF	3	3	3	3	3	3	3	3	3	3	3
SSA	2	2	2	2	2	2	2	2	2	2	2
USA	4	4	4	5	5	5	5	5	5	5	5

Table 704: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 2/16]

	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882
GLO	32	33	34	34	35	35	36	36	37	38	38
CAZ	2	2	2	2	2	2	2	2	2	2	2
CHA	4	4	4	4	4	4	4	4	4	4	4
EUR	4	4	4	4	4	4	4	4	4	4	4
IND	7	7	7	7	7	7	7	8	8	8	8
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1	1	1	1	1
MEA	0	0	0	0	0	0	0	1	1	1	1
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	4	5	5	5	5	5	5	5	5	5	5
REF	3	3	3	3	3	3	3	3	3	3	3
SSA	2	2	2	2	2	2	2	2	3	3	3
USA	5	5	5	5	5	6	6	6	6	6	6

Table 705: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 3/16]

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893
GLO	39	39	40	40	41	41	42	41	42	43	43
CAZ	2	2	2	2	2	2	2	2	2	2	2
CHA	4	4	4	5	5	5	5	5	5	5	5
EUR	4	5	5	5	5	5	5	4	5	5	6
IND	8	8	8	8	8	8	8	8	9	9	9
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	0	0	0	0	1	1	1	1	1	1	1
OAS	5	5	6	6	6	6	6	6	6	6	6
REF	3	3	3	3	3	3	3	3	3	3	3
SSA	3	3	3	3	3	3	3	3	3	3	3
USA	6	6	6	6	7	7	7	7	7	7	7

Table 706: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 4/16]

	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
GLO	44	44	45	45	46	46	46	46	47	47	47
CAZ	2	2	2	2	2	2	2	2	2	2	2
CHA	5	5	5	5	5	5	5	5	5	5	5
EUR	6	6	7	7	7	7	7	7	7	7	7
IND	9	9	9	9	9	9	9	9	9	9	9
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	1	1	2	2	2	2	2	2	2	2	2
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	6	6	6	6	6	6	6	6	6	6	6
REF	3	3	3	3	3	3	3	3	4	4	4
SSA	3	3	3	3	3	3	3	3	3	3	3
USA	7	7	7	7	7	7	7	7	7	7	7

Table 707: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 5/16]

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
GLO	47	47	47	47	48	48	48	49	50	51	52
CAZ	2	2	2	3	3	3	3	3	3	3	3
CHA	5	5	5	5	5	5	5	5	5	5	5
EUR	6	6	6	6	6	6	6	6	6	6	6
IND	9	9	9	9	9	9	9	9	9	9	9
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	3	3	3	3	3	3	3	3	3	3	3
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	6	6	6	7	7	7	7	7	7	7	7
REF	4	4	4	4	4	4	4	4	4	4	4
SSA	3	3	3	3	3	3	3	3	3	4	4
USA	7	7	7	7	7	7	7	7	7	7	8

Table 708: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 6/16]

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
GLO	53	54	55	55	56	57	57	58	59	60	60
CAZ	3	3	3	3	3	3	3	3	3	3	3
CHA	5	5	5	6	6	6	6	6	6	7	7
EUR	6	6	6	7	7	7	7	7	8	8	8
IND	9	9	9	9	10	9	9	9	9	9	9
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	3	3	3	3	3	4	4	4	4	4	4
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	7	7	8	8	8	8	8	9	9	9	9
REF	5	5	5	5	5	5	5	5	6	6	6
SSA	4	4	4	4	4	4	4	5	5	5	5
USA	8	8	8	8	8	8	8	8	8	8	8

Table 709: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 7/16]

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
GLO	61	62	62	62	63	63	63	63	63	63	63
CAZ	3	3	3	3	3	3	3	3	3	3	3
CHA	7	7	8	8	8	8	7	7	7	7	7
EUR	8	9	9	9	9	9	9	9	9	9	9
IND	8	8	8	8	8	8	8	9	9	9	9
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	4	4	4	4	4	4	4	4	4	4	4
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	10	10	10	10	10	10	10	10	10	10	10
REF	6	6	6	6	6	6	6	6	5	5	5
SSA	5	5	5	5	5	5	5	5	5	5	5
USA	8	8	7	7	7	8	8	8	8	8	8

Table 710: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 8/16]

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
GLO	63	63	64	64	65	66	67	69	70	72	73
CAZ	3	3	3	3	3	3	4	4	4	4	4
CHA	7	7	7	7	7	7	7	7	7	7	7
EUR	9	9	9	9	9	9	9	9	9	9	9
IND	10	10	10	10	10	10	10	10	10	10	10
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	4	4	4	4	4	4	5	5	5	5	5
MEA	1	1	1	1	1	1	1	2	2	2	2
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	9	9	9	9	9	9	10	10	10	10	10
REF	5	5	5	5	5	5	5	5	5	6	6
SSA	5	5	5	5	6	6	7	8	9	9	10
USA	8	8	8	8	8	8	8	8	8	8	8

Table 711: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 9/16]

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
GLO	74	75	76	77	79	81	83	85	87	89	90
CAZ	4	4	4	4	4	4	4	4	4	4	4
CHA	7	7	8	8	8	9	9	10	10	11	11
EUR	9	10	10	10	10	10	10	11	11	11	11
IND	10	10	10	10	10	10	10	10	10	10	10
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	5	5	6	6	7	7	8	9	10	10	11
MEA	2	2	2	2	2	2	2	2	2	2	2
NEU	1	1	1	2	2	2	2	2	2	2	2
OAS	10	10	10	10	10	11	11	11	12	12	12
REF	6	6	6	6	6	7	7	7	7	7	8
SSA	11	11	11	10	10	10	9	9	9	8	8
USA	8	8	8	9	9	9	9	9	9	9	10

Table 712: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 10/16]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	91	92	94	95	97	98	100	102	103	103	104
CAZ	5	5	5	5	5	5	5	5	5	5	5
CHA	11	11	11	12	12	13	13	14	14	14	14
EUR	11	11	12	11	11	11	12	12	12	12	12
IND	10	10	10	10	11	10	11	11	11	11	11
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	11	11	12	12	12	13	13	13	14	14	14
MEA	2	2	2	2	2	2	2	2	2	3	3
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	12	12	13	13	13	13	13	13	14	14	14
REF	8	7	8	8	8	8	9	9	9	9	9
SSA	8	9	9	9	9	9	9	9	10	10	10
USA	10	10	10	10	10	10	10	10	10	10	10

Table 713: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 11/16]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	106	107	109	111	113	113	114	114	114	116	117
CAZ	5	5	5	5	6	5	5	5	5	5	5
CHA	15	15	15	16	16	16	16	15	15	15	15
EUR	12	12	12	13	13	13	13	13	13	13	13
IND	11	11	11	11	12	12	12	12	12	12	12
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	14	15	15	16	16	17	17	17	18	18	19
MEA	3	3	3	3	3	3	3	3	3	3	3
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	14	14	14	14	14	14	15	15	15	15	15
REF	9	9	9	10	10	10	10	10	10	10	10
SSA	10	10	10	10	10	10	10	11	11	11	11
USA	10	10	10	11	11	11	10	10	10	10	10

Table 714: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 12/16]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	117	118	119	119	120	120	121	123	123	123	123
CAZ	5	5	5	5	5	5	5	5	5	5	5
CHA	15	16	16	16	16	16	17	17	17	17	17
EUR	13	13	13	13	13	12	12	12	12	12	11
IND	12	13	13	13	13	13	14	14	14	14	14
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	19	19	19	19	19	19	20	20	20	21	21
MEA	3	3	3	3	3	3	3	3	3	3	4
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	15	16	16	16	17	16	17	17	17	17	18
REF	10	10	11	11	11	11	10	10	10	10	9
SSA	11	11	11	11	11	11	12	12	12	12	12
USA	10	10	10	10	9	9	9	9	9	9	9

Table 715: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 13/16]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	122	123	124	124	124	124	125	125	126	127	129
CAZ	5	5	5	5	5	5	5	5	5	5	5
CHA	17	17	18	19	20	20	21	21	22	22	23
EUR	11	11	11	11	11	11	11	10	10	10	10
IND	14	14	14	14	14	14	14	14	14	14	14
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	21	21	22	21	21	21	22	22	22	23	24
MEA	4	4	4	4	4	4	4	4	4	4	5
NEU	2	2	2	2	2	2	2	2	1	1	1
OAS	18	18	18	18	18	18	18	18	18	18	18
REF	9	8	7	7	6	6	5	5	5	5	5
SSA	12	12	12	12	13	13	13	13	13	14	14
USA	9	9	10	9	9	9	10	10	10	10	10

Table 716: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 14/16]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	131	135	135	136	137	137	137	136	137	137	138
CAZ	5	5	5	5	5	5	4	5	5	5	5
CHA	24	25	25	25	25	25	24	23	23	23	23
EUR	10	10	10	10	10	10	10	10	9	9	10
IND	14	14	14	15	15	15	15	15	15	15	15
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	24	25	24	24	24	24	24	24	24	24	25
MEA	5	5	5	5	5	5	5	5	5	5	5
NEU	1	1	2	2	1	1	2	2	2	2	2
OAS	18	19	19	20	20	20	21	21	21	21	21
REF	5	5	5	5	5	5	5	5	5	5	5
SSA	14	15	15	15	16	16	16	17	17	17	17
USA	9	10	10	10	10	10	10	10	10	10	10

Table 717: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 15/16]

	2015
GLO	141
CAZ	4
CHA	24
EUR	10
IND	15
JPN	1
LAM	25
MEA	5
NEU	2
OAS	22
REF	6
SSA	17
USA	10

Table 718: PRIMAPhist — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 16/16]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	76	78	78	80	81	83	84	85	86	86	88
CAZ	4	4	4	4	4	4	4	4	4	4	5
CHA	7	7	8	8	8	9	9	9	9	9	10
EUR	11	11	11	11	11	11	11	11	11	11	11
IND	11	11	11	11	11	11	11	12	12	12	12
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	10	11	11	11	12	12	12	13	13	13	13
MEA	1	1	1	1	1	2	2	2	2	2	2
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	10	10	10	11	11	11	11	12	12	12	12
REF	6	7	7	7	7	7	8	8	8	7	8
SSA	5	5	5	5	5	5	5	5	5	5	6
USA	8	8	8	8	8	8	8	8	8	8	8

Table 719: FAO_EmisAg — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	89	90	92	93	94	94	95	95	96	97	97
CAZ	5	5	5	5	5	5	4	4	4	4	4
CHA	10	10	10	10	10	10	10	10	10	10	10
EUR	12	12	12	12	12	12	12	12	12	12	12
IND	12	12	12	12	12	12	13	13	13	13	13
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	13	14	14	15	15	16	16	16	17	17	17
MEA	2	2	2	2	2	2	2	2	2	2	2
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	11	12	12	12	12	12	13	13	13	13	13
REF	8	8	8	8	8	8	9	9	9	9	9
SSA	6	6	6	6	6	6	6	6	6	6	6
USA	8	8	8	9	8	8	8	8	8	8	8

Table 720: FAO_EmisAg — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	98	98	99	99	99	100	102	106	105	105	105
CAZ	4	4	4	4	4	4	4	5	5	5	5
CHA	10	10	10	11	11	11	11	11	11	11	11
EUR	12	12	12	12	12	12	12	12	11	11	10
IND	14	14	14	14	14	14	14	15	15	15	15
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	17	17	17	17	18	18	18	19	19	19	19
MEA	2	2	2	2	2	2	2	2	2	2	2
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	13	13	13	14	14	14	14	14	14	14	15
REF	9	9	9	9	9	9	9	9	9	9	8
SSA	7	6	6	7	7	7	7	10	10	10	9
USA	8	8	8	7	7	7	7	7	7	7	7

Table 721: FAO_EmisAg — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	105	105	105	104	105	105	105	106	106	106	108
CAZ	5	5	5	5	5	5	6	6	6	5	5
CHA	11	12	12	12	12	12	12	12	12	12	13
EUR	10	10	10	10	10	10	10	9	9	9	9
IND	15	15	15	15	15	15	15	15	15	15	15
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	19	20	19	19	19	20	20	20	21	22	22
MEA	2	2	2	2	2	2	2	2	2	2	3
NEU	2	2	2	1	1	1	1	1	1	1	1
OAS	15	15	15	16	15	16	16	16	16	16	16
REF	8	7	7	6	5	5	5	5	5	5	5
SSA	10	10	10	10	10	10	10	11	11	11	11
USA	7	7	7	7	7	7	7	7	7	7	7

Table 722: FAO_EmisAg — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011	2030	2050
GLO	110	111	112	113	113	115	116	0	0
CAZ	5	5	5	4	4	4	6	0	0
CHA	13	13	13	14	14	14	14	0	0
EUR	9	9	9	9	9	9	9	0	0
IND	16	16	16	17	17	17	17	0	0
JPN	1	1	1	1	1	1	1	0	0
LAM	22	22	22	22	22	23	23	0	0
MEA	3	3	3	3	3	3	3	0	0
NEU	1	1	1	1	1	1	1	0	0
OAS	17	17	18	18	19	19	19	0	0
REF	5	5	4	5	4	5	4	0	0
SSA	12	12	12	13	13	13	14	0	0
USA	7	7	7	7	7	7	7	0	0

Table 723: FAO_EmisAg — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 5/5]

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
GLO	128	130	131	132	134	136	137	137	137	136	138
CAZ	5	5	5	5	5	6	6	5	5	5	5
CHA	26	28	28	27	28	28	28	27	26	25	25
EUR	12	12	12	13	13	13	13	13	13	13	13
IND	15	15	15	15	15	15	15	15	15	15	16
JPN	3	3	3	3	3	3	3	3	2	2	2
LAM	16	16	16	17	17	18	19	19	19	19	20
MEA	3	3	3	3	3	3	3	3	3	3	3
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	23	22	22	22	22	22	22	22	23	23	23
REF	9	10	10	10	11	11	11	11	11	11	11
SSA	7	7	7	7	7	7	7	7	8	8	8
USA	9	9	9	9	9	9	9	9	9	9	9

Table 724: EDGAR_LU — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 1/4]

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
GLO	138	138	138	139	138	139	139	140	142	142	141
CAZ	5	5	5	5	5	5	5	5	5	5	5
CHA	25	24	24	24	24	24	24	24	25	25	25
EUR	13	13	13	14	14	14	13	13	13	13	13
IND	16	16	16	16	17	17	17	17	17	17	18
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	20	20	20	21	21	21	21	22	22	22	23
MEA	3	3	3	3	3	3	3	3	4	4	4
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	23	22	22	23	23	23	22	23	23	22	22
REF	11	12	12	12	12	12	12	12	12	12	12
SSA	8	8	8	8	8	8	8	8	9	9	9
USA	9	9	9	9	9	8	8	8	8	8	8

Table 725: EDGAR_LU — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 2/4]

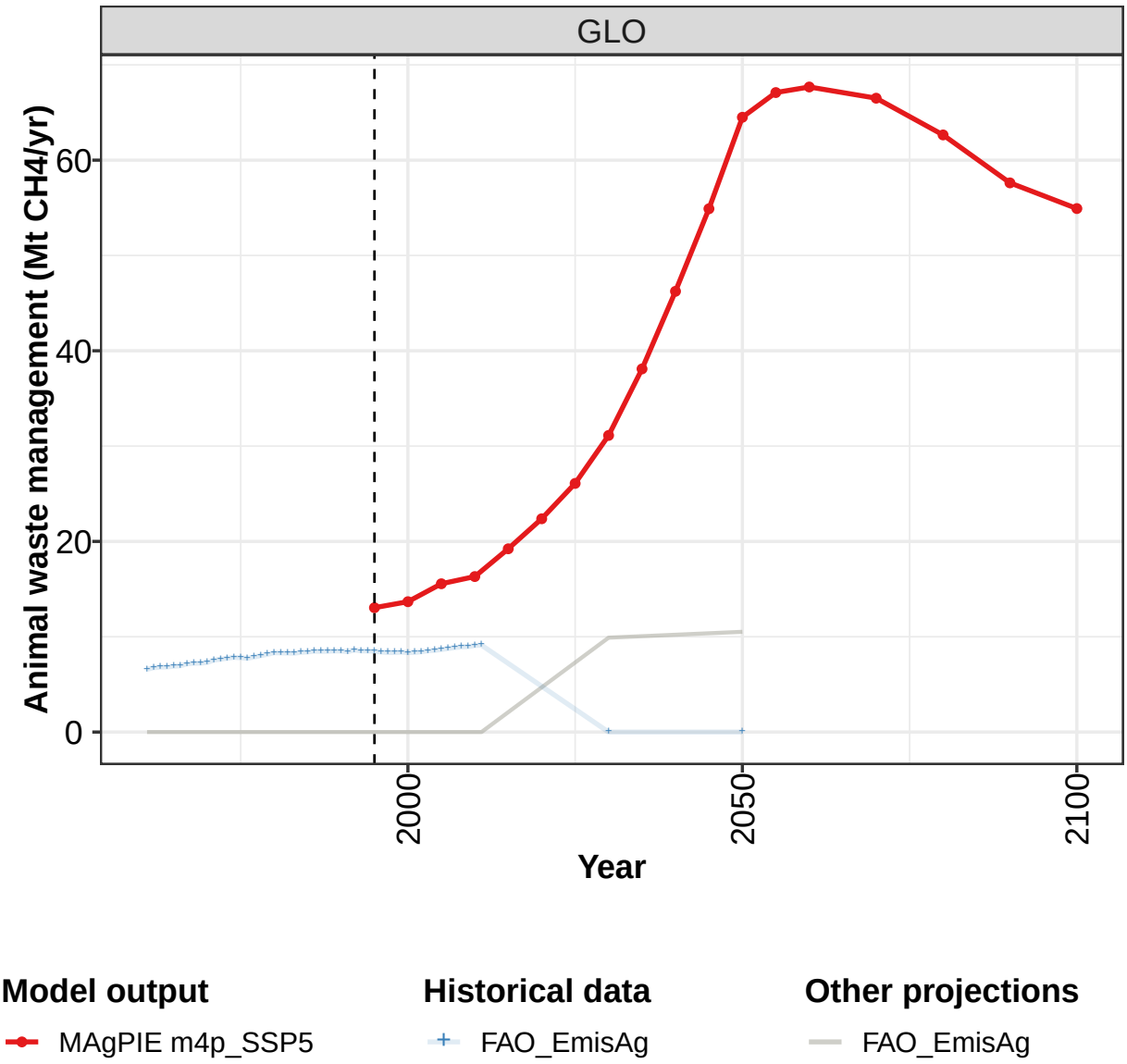
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
GLO	141	139	139	140	139	138	137	138	137	137	138
CAZ	5	5	5	5	5	5	5	5	5	5	5
CHA	24	23	23	24	24	23	24	24	23	23	23
EUR	12	12	11	11	11	11	11	11	11	11	11
IND	18	18	18	18	18	18	18	18	18	18	18
JPN	2	2	2	2	2	2	2	2	2	1	1
LAM	23	24	24	25	24	24	24	24	25	25	26
MEA	4	4	4	4	4	4	4	5	5	5	5
NEU	2	2	2	2	2	2	1	2	2	1	1
OAS	22	22	22	23	23	23	23	23	23	23	23
REF	11	10	10	9	8	7	6	6	6	6	6
SSA	9	9	9	9	9	9	10	10	10	10	10
USA	8	9	9	9	9	9	9	9	9	9	9

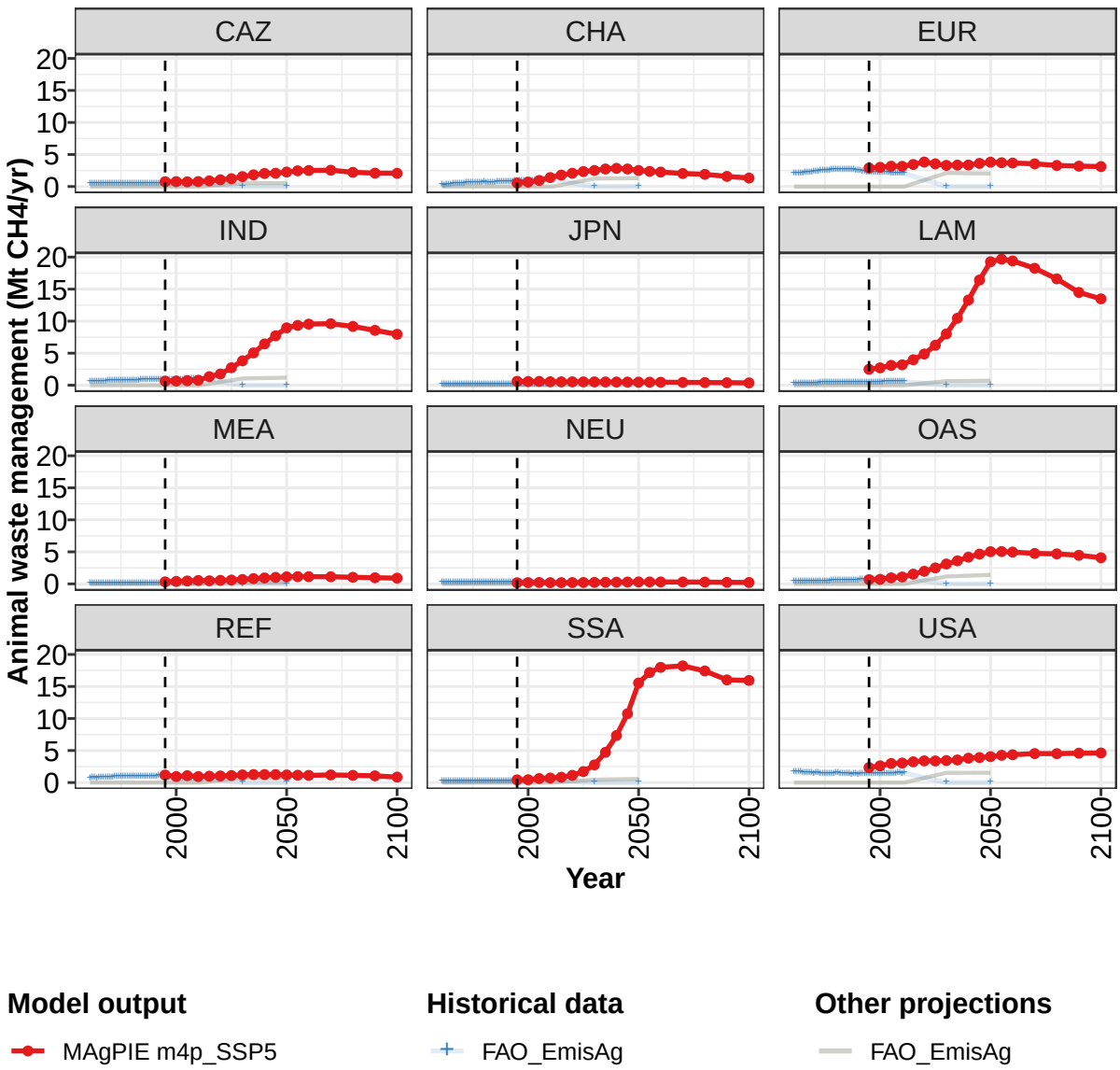
Table 726: EDGAR_LU — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 3/4]

	2003	2004	2005	2006	2007	2008
GLO	139	142	144	146	148	151
CAZ	5	5	5	6	6	6
CHA	23	24	25	26	27	28
EUR	11	10	10	10	10	10
IND	18	18	18	18	18	18
JPN	1	1	1	1	1	1
LAM	27	27	28	28	29	29
MEA	5	5	5	5	5	5
NEU	1	1	1	1	2	2
OAS	23	24	24	25	26	26
REF	6	6	6	6	5	5
SSA	10	10	11	11	11	11
USA	9	9	9	9	9	9

Table 727: EDGAR_LU — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 4/4]

11.1.2 Agriculture—Animal waste management





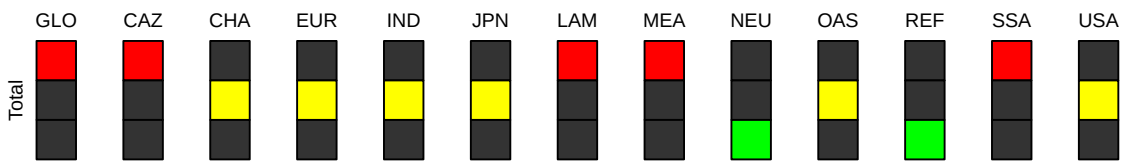


Figure 235: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.0	13.7	15.6	16.3	19.2	22.4	26.1	31.1	38.1	46.2	54.9
CAZ	0.8	0.8	0.7	0.8	0.9	1.1	1.2	1.5	1.8	2.0	2.1
CHA	0.6	0.7	0.9	1.4	1.8	2.1	2.3	2.5	2.7	2.8	2.7
EUR	2.9	3.0	3.2	3.2	3.4	3.8	3.5	3.3	3.3	3.4	3.6
IND	0.6	0.7	0.7	0.8	1.3	1.8	2.7	3.8	5.0	6.4	7.7
JPN	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
LAM	2.5	2.7	3.1	3.2	4.0	4.9	6.2	8.0	10.5	13.3	16.4
MEA	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.9	1.0
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
OAS	0.7	0.7	0.9	1.1	1.5	2.0	2.5	3.1	3.6	4.2	4.6
REF	1.2	0.9	1.1	0.9	1.0	1.0	1.1	1.2	1.3	1.2	1.2
SSA	0.4	0.4	0.6	0.7	0.8	1.1	1.7	2.8	4.7	7.3	10.8
USA	2.3	2.6	3.0	3.0	3.2	3.4	3.4	3.4	3.5	3.8	3.9

Table 728: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	64.5	67.1	67.7	66.5	62.6	57.6	54.9
CAZ	2.3	2.5	2.5	2.5	2.2	2.1	2.1
CHA	2.5	2.4	2.3	2.0	1.9	1.6	1.3
EUR	3.8	3.7	3.7	3.5	3.3	3.2	3.1
IND	9.0	9.3	9.5	9.6	9.2	8.6	7.9
JPN	0.5	0.5	0.5	0.4	0.4	0.4	0.4
LAM	19.3	19.7	19.4	18.3	16.6	14.5	13.5
MEA	1.1	1.1	1.1	1.1	1.0	1.0	0.9
NEU	0.3	0.3	0.3	0.3	0.3	0.2	0.2
OAS	5.0	5.0	5.0	4.7	4.7	4.5	4.1
REF	1.2	1.1	1.1	1.2	1.1	1.0	0.9
SSA	15.5	17.2	18.0	18.2	17.4	16.0	15.9
USA	4.1	4.3	4.3	4.5	4.5	4.6	4.6

Table 729: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	6.59	6.75	6.81	6.83	6.90	6.96	7.16	7.22	7.23	7.30	7.56
CAZ	0.43	0.44	0.44	0.44	0.44	0.43	0.44	0.45	0.45	0.46	0.47
CHA	0.22	0.21	0.25	0.31	0.35	0.38	0.42	0.42	0.40	0.39	0.45
EUR	2.02	2.05	2.04	2.06	2.09	2.14	2.19	2.22	2.24	2.29	2.32
IND	0.60	0.60	0.59	0.60	0.60	0.61	0.61	0.62	0.63	0.63	0.64
JPN	0.07	0.09	0.09	0.10	0.11	0.10	0.11	0.12	0.13	0.14	0.15
LAM	0.26	0.26	0.27	0.28	0.29	0.29	0.30	0.31	0.31	0.32	0.32
MEA	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
NEU	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17
OAS	0.33	0.35	0.36	0.37	0.38	0.39	0.39	0.41	0.41	0.42	0.42
REF	0.68	0.74	0.77	0.69	0.73	0.78	0.80	0.78	0.77	0.78	0.83
SSA	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.18
USA	1.60	1.64	1.63	1.60	1.52	1.44	1.49	1.48	1.47	1.43	1.52

Table 730: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	7.64	7.75	7.84	7.79	7.74	7.87	8.02	8.15	8.32	8.30	8.29
CAZ	0.46	0.45	0.44	0.43	0.42	0.42	0.41	0.42	0.44	0.43	0.43
CHA	0.53	0.55	0.54	0.55	0.58	0.59	0.60	0.62	0.65	0.63	0.61
EUR	2.34	2.46	2.51	2.50	2.50	2.53	2.57	2.59	2.62	2.60	2.60
IND	0.65	0.65	0.65	0.66	0.67	0.68	0.69	0.71	0.72	0.73	0.75
JPN	0.15	0.15	0.15	0.14	0.15	0.15	0.16	0.16	0.16	0.16	0.16
LAM	0.33	0.34	0.35	0.36	0.37	0.38	0.38	0.38	0.40	0.40	0.40
MEA	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08
NEU	0.17	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20	0.20
OAS	0.43	0.44	0.44	0.43	0.42	0.43	0.46	0.47	0.46	0.48	0.49
REF	0.86	0.86	0.88	0.90	0.87	0.88	0.92	0.93	0.94	0.94	0.95
SSA	0.18	0.18	0.18	0.19	0.19	0.20	0.20	0.21	0.21	0.21	0.22
USA	1.47	1.42	1.42	1.36	1.30	1.35	1.36	1.39	1.46	1.44	1.39

Table 731: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	8.27	8.37	8.40	8.49	8.46	8.47	8.51	8.51	8.44	8.61	8.51
CAZ	0.42	0.43	0.43	0.42	0.41	0.42	0.42	0.42	0.41	0.41	0.41
CHA	0.63	0.63	0.65	0.70	0.72	0.70	0.74	0.75	0.77	0.78	0.79
EUR	2.57	2.60	2.60	2.62	2.57	2.57	2.53	2.50	2.42	2.34	2.26
IND	0.76	0.78	0.79	0.80	0.80	0.81	0.82	0.84	0.85	0.86	0.87
JPN	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.19
LAM	0.40	0.41	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.45	0.45
MEA	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.10	0.11	0.11
NEU	0.19	0.20	0.19	0.19	0.20	0.19	0.19	0.19	0.19	0.18	0.17
OAS	0.51	0.52	0.53	0.55	0.56	0.57	0.59	0.59	0.61	0.63	0.64
REF	0.96	0.98	0.98	0.98	0.99	0.96	0.97	0.96	0.94	1.11	1.05
SSA	0.22	0.21	0.22	0.22	0.22	0.23	0.24	0.24	0.24	0.24	0.24
USA	1.35	1.36	1.34	1.31	1.29	1.31	1.30	1.29	1.29	1.32	1.33

Table 732: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 3/5]

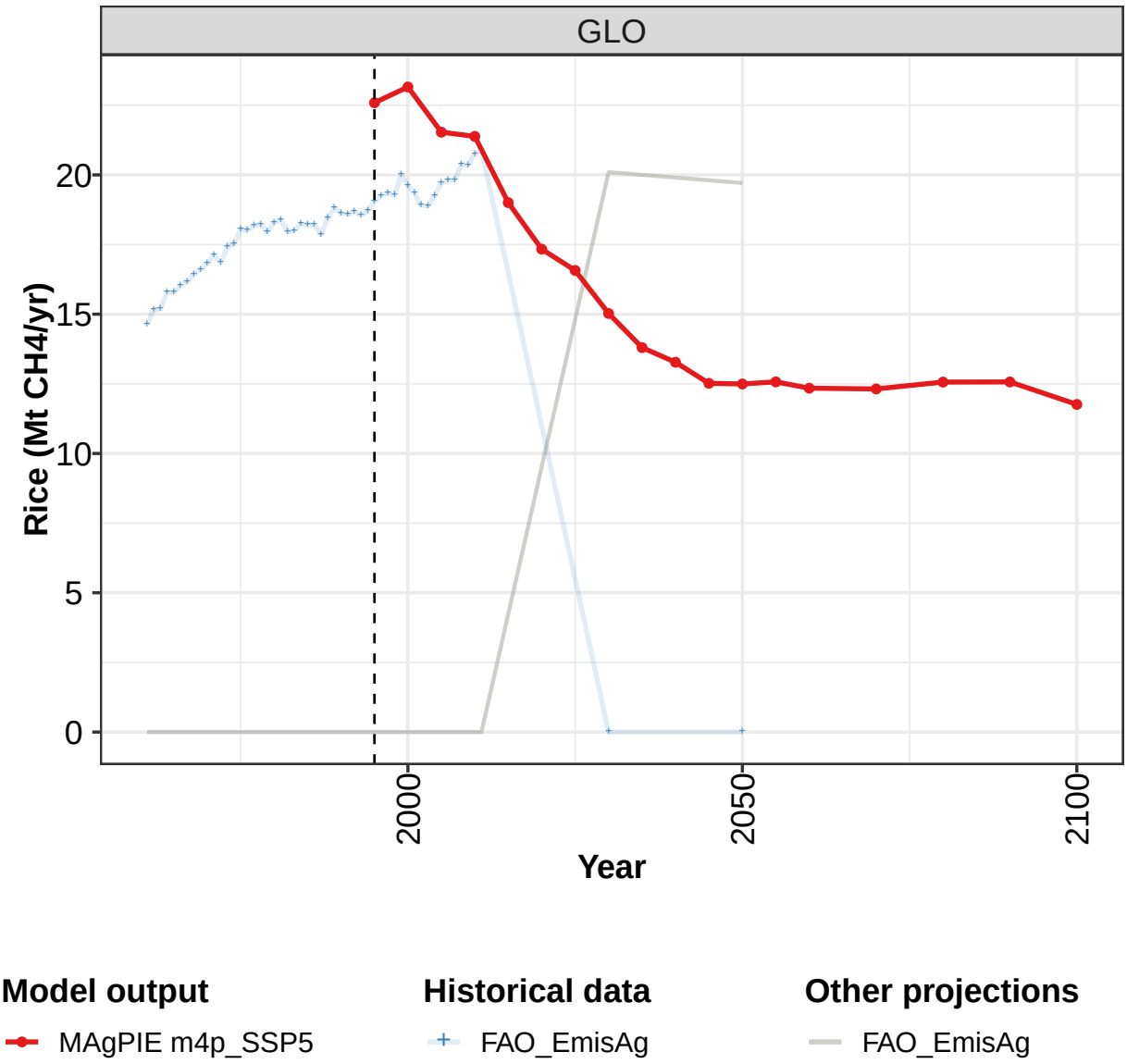
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	8.51	8.47	8.40	8.34	8.34	8.39	8.34	8.35	8.43	8.53	8.57
CAZ	0.42	0.43	0.44	0.44	0.45	0.45	0.45	0.47	0.48	0.48	0.48
CHA	0.80	0.81	0.83	0.83	0.83	0.85	0.87	0.88	0.89	0.90	0.93
EUR	2.25	2.22	2.19	2.19	2.17	2.19	2.17	2.14	2.13	2.12	2.11
IND	0.87	0.88	0.88	0.89	0.89	0.89	0.89	0.90	0.90	0.91	0.92
JPN	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17
LAM	0.46	0.46	0.45	0.45	0.45	0.45	0.46	0.47	0.48	0.50	0.51
MEA	0.11	0.11	0.12	0.12	0.13	0.13	0.12	0.12	0.12	0.13	0.13
NEU	0.17	0.18	0.17	0.17	0.17	0.17	0.16	0.16	0.15	0.15	0.14
OAS	0.66	0.68	0.70	0.72	0.71	0.72	0.72	0.74	0.77	0.80	0.82
REF	1.00	0.92	0.85	0.76	0.72	0.69	0.67	0.64	0.65	0.70	0.66
SSA	0.24	0.25	0.25	0.26	0.27	0.28	0.28	0.28	0.29	0.30	0.30
USA	1.34	1.36	1.35	1.33	1.37	1.39	1.37	1.38	1.39	1.38	1.39

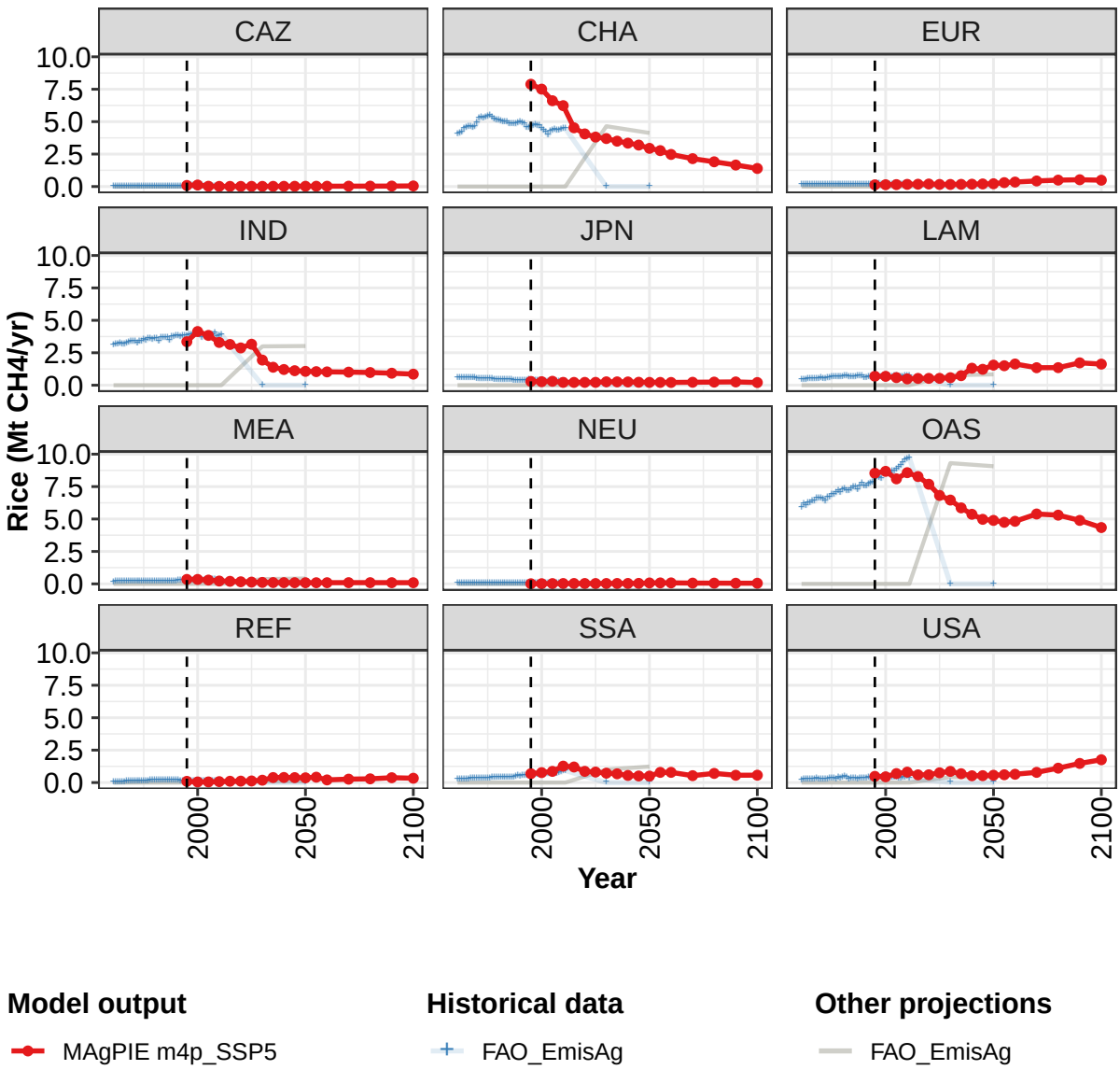
Table 733: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011	2030	2050
GLO	8.66	8.76	8.86	8.93	8.96	9.08	9.12	0.00	0.00
CAZ	0.48	0.48	0.47	0.45	0.45	0.44	0.45	0.00	0.00
CHA	0.96	0.99	1.01	1.02	1.05	1.10	1.09	0.00	0.00
EUR	2.11	2.09	2.10	2.08	2.06	2.07	2.05	0.00	0.00
IND	0.93	0.94	0.97	0.98	1.00	1.02	1.03	0.00	0.00
JPN	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.00	0.00
LAM	0.52	0.53	0.53	0.53	0.54	0.54	0.54	0.00	0.00
MEA	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.00	0.00
NEU	0.14	0.14	0.15	0.14	0.14	0.14	0.14	0.00	0.00
OAS	0.84	0.87	0.90	0.91	0.95	0.96	0.98	0.00	0.00
REF	0.66	0.67	0.66	0.67	0.65	0.67	0.69	0.00	0.00
SSA	0.31	0.32	0.34	0.36	0.36	0.37	0.38	0.00	0.00
USA	1.40	1.41	1.42	1.47	1.44	1.44	1.45	0.00	0.00

Table 734: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 5/5]

11.1.3 Agriculture—Rice





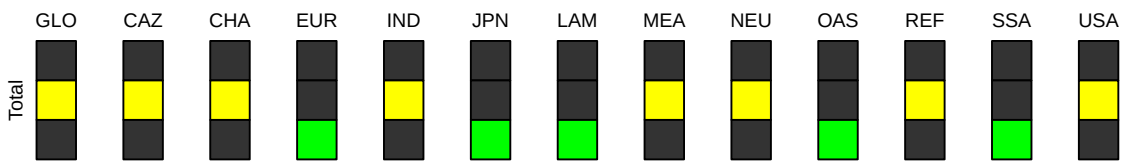


Figure 236: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22.6	23.2	21.5	21.4	19.0	17.3	16.6	15.0	13.8	13.3	12.5
CAZ	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	7.9	7.5	6.6	6.2	4.5	4.1	3.8	3.7	3.5	3.3	3.2
EUR	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	3.4	4.1	3.8	3.3	3.1	2.9	3.2	1.9	1.4	1.2	1.1
JPN	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2
LAM	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.7	1.3	1.2
MEA	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	8.5	8.7	8.1	8.6	8.3	7.7	6.8	6.5	5.9	5.4	5.0
REF	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.4
SSA	0.7	0.8	0.9	1.3	1.2	0.9	0.8	0.7	0.7	0.5	0.5
USA	0.5	0.4	0.7	0.8	0.6	0.6	0.8	0.9	0.7	0.5	0.5

Table 735: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	12.5	12.6	12.3	12.3	12.6	12.6	11.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.9	2.8	2.5	2.1	1.9	1.7	1.4
EUR	0.2	0.3	0.3	0.4	0.5	0.5	0.5
IND	1.1	1.0	1.0	1.0	1.0	0.9	0.9
JPN	0.2	0.2	0.2	0.2	0.2	0.3	0.2
LAM	1.5	1.5	1.6	1.3	1.4	1.7	1.6
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	4.9	4.7	4.8	5.4	5.3	4.9	4.3
REF	0.4	0.4	0.2	0.3	0.3	0.4	0.3
SSA	0.5	0.8	0.8	0.5	0.7	0.6	0.6
USA	0.6	0.6	0.6	0.8	1.1	1.5	1.8

Table 736: MAgPIE m4p_SSP5 — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	14.6	15.2	15.2	15.8	15.8	16.0	16.2	16.4	16.6	16.8	17.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.0	4.1	4.2	4.5	4.5	4.6	4.6	4.5	4.6	4.9	5.3
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	3.1	3.2	3.2	3.2	3.1	3.1	3.2	3.3	3.3	3.3	3.3
JPN	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5
LAM	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
MEA	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	5.9	6.1	6.0	6.2	6.2	6.4	6.4	6.6	6.6	6.6	6.5
REF	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
USA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2

Table 737: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	16.8	17.4	17.5	18.0	18.0	18.2	18.2	17.9	18.3	18.4	18.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.3	5.3	5.4	5.4	5.5	5.4	5.2	5.1	5.1	5.0	5.0
EUR	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
IND	3.3	3.4	3.4	3.5	3.4	3.6	3.6	3.5	3.6	3.6	3.4
JPN	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
LAM	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.7
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	6.3	6.7	6.7	6.9	6.9	7.0	7.1	7.0	7.2	7.3	7.2
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
SSA	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
USA	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.4

Table 738: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	18.0	18.2	18.2	18.2	17.9	18.4	18.8	18.6	18.6	18.7	18.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.0	5.0	4.8	4.8	4.8	4.8	4.9	4.9	4.9	4.8	4.5
EUR	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
IND	3.7	3.6	3.6	3.7	3.4	3.7	3.7	3.8	3.8	3.7	3.8
JPN	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
LAM	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.7	0.6
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	7.2	7.3	7.5	7.4	7.3	7.6	7.7	7.6	7.5	7.7	7.8
REF	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1
SSA	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
USA	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3

Table 739: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 3/5]

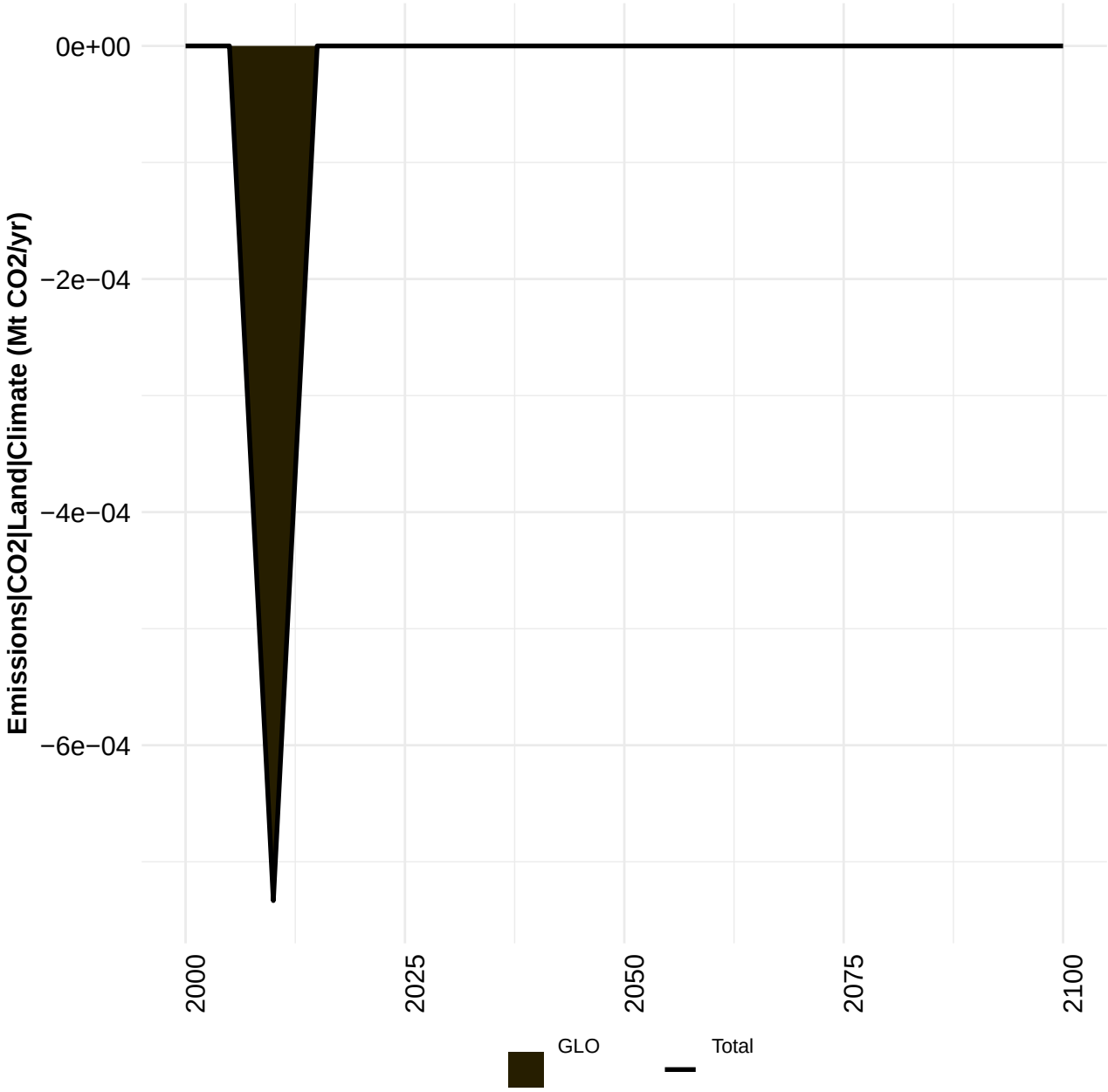
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	18.7	19.0	19.3	19.3	19.3	20.0	19.6	19.3	18.9	18.9	19.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.5	4.6	4.7	4.7	4.7	4.7	4.5	4.3	4.2	4.0	4.2
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	3.8	3.8	3.8	3.9	4.0	4.0	4.0	4.0	3.7	3.8	3.7
JPN	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.7
MEA	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	7.8	8.1	8.2	8.2	8.1	8.7	8.6	8.6	8.5	8.6	8.7
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7
USA	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Table 740: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011	2030	2050
GLO	19.7	19.8	19.8	20.4	20.4	20.8	20.9	0.0	0.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.3	4.4	4.3	4.4	4.4	4.4	4.5	0.0	0.0
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
IND	3.9	3.9	3.9	4.0	3.7	3.8	3.9	0.0	0.0
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0
LAM	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.0	0.0
MEA	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	8.8	9.0	9.1	9.3	9.5	9.6	9.7	0.0	0.0
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
SSA	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.0	0.0
USA	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.0	0.0

Table 741: FAO_EmisAg — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 5/5]

12 CO2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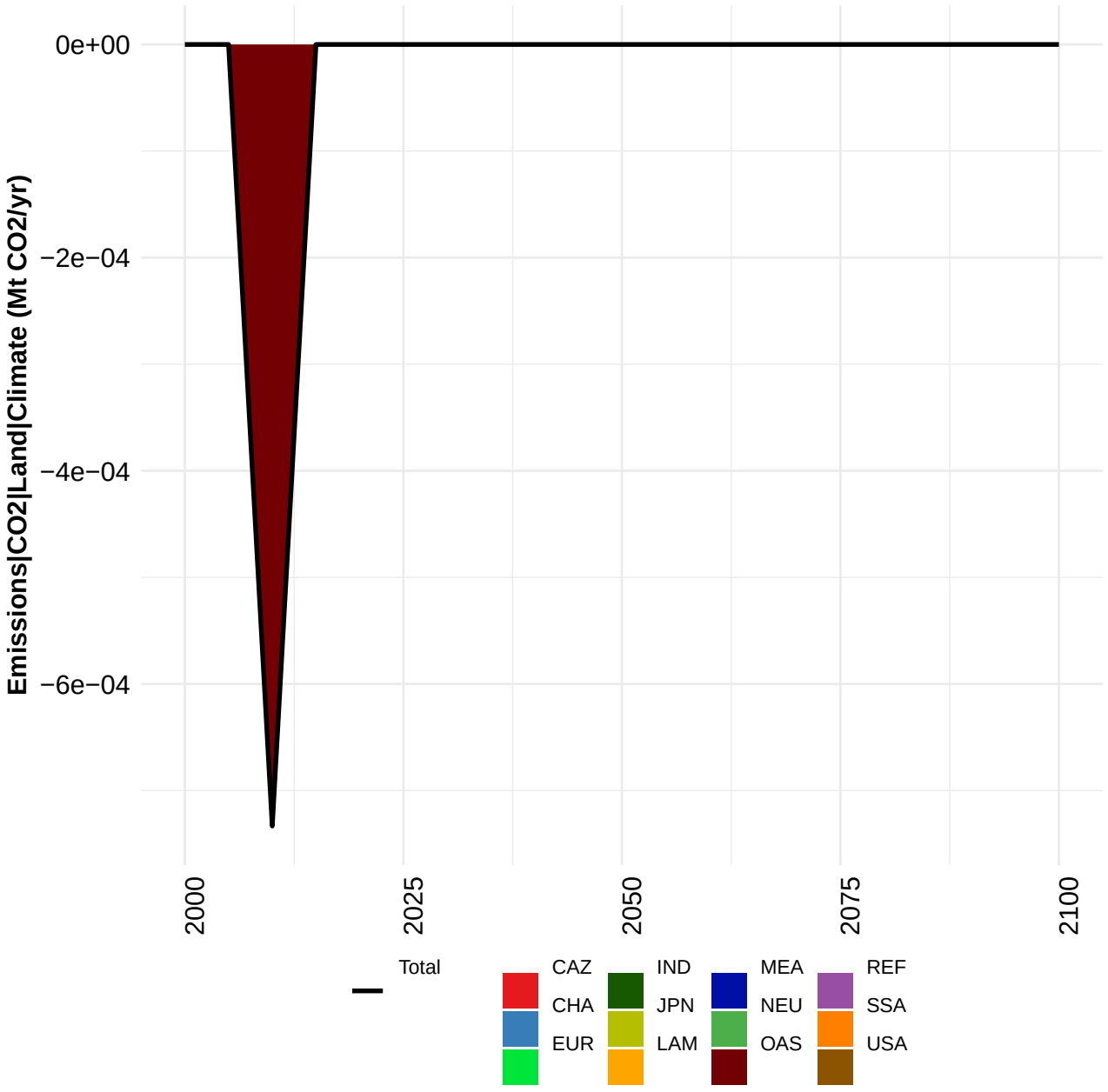
2000
2025
2050
2075
2100
GLO
Total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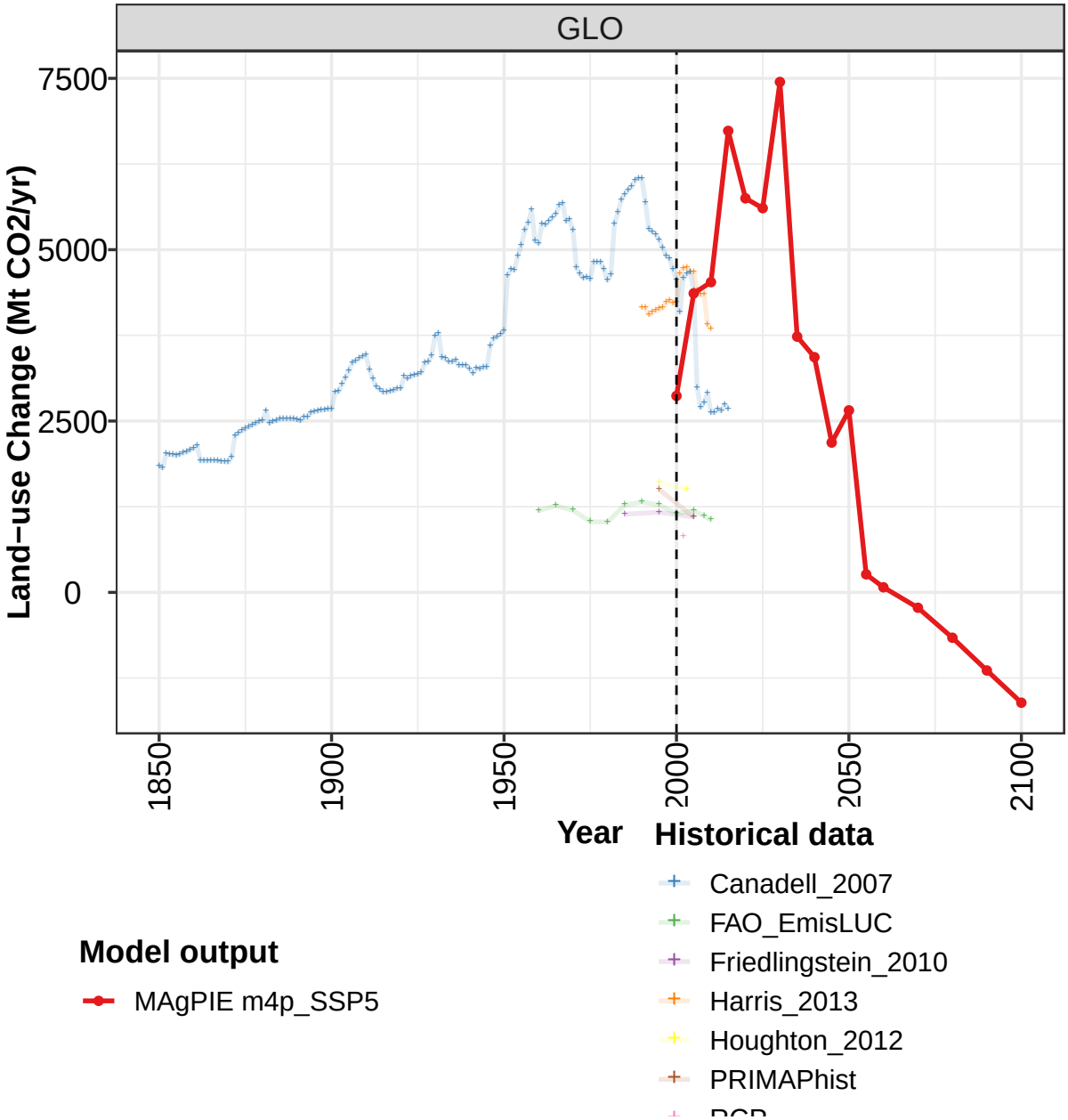
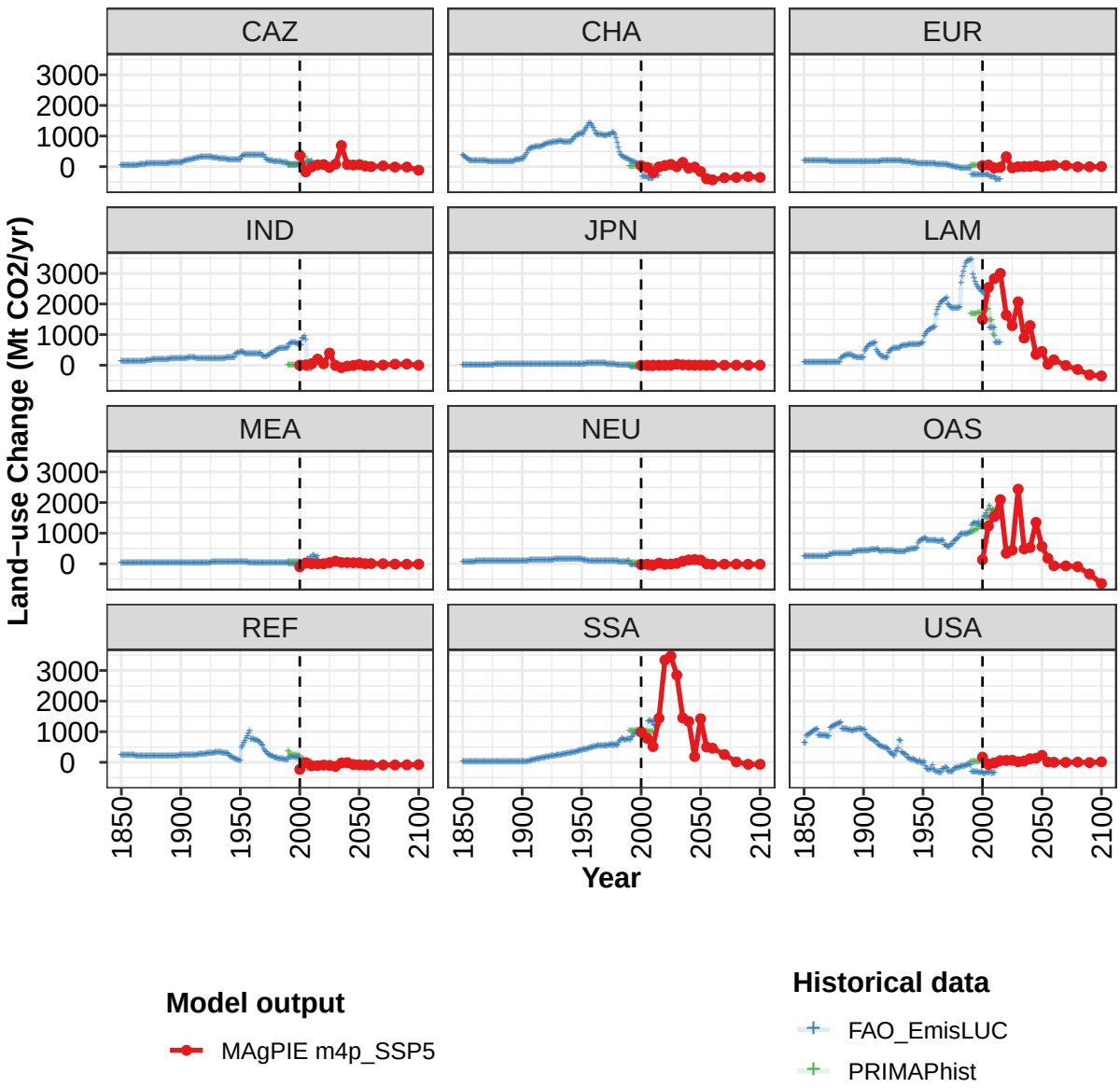
−4e−04
−6e−04
Emissions|CO2|Land|Climate (Mt CO2/yr)
2000
2025
2050
2075
2100
Total
CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA

12.1 Land

12.1.1 Land-use Change





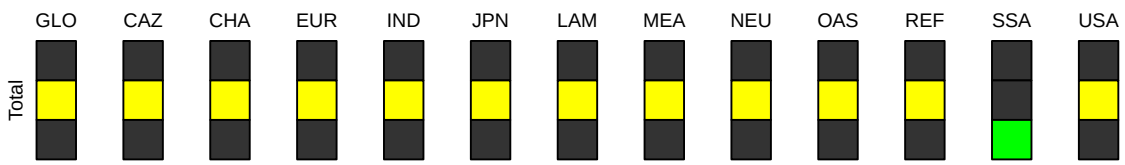


Figure 237: MAgPIE m4p_SSP5 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr)

	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
GLO	2867	4363	4526	6734	5750	5606	7447	3731	3432	2186	2656
CAZ	374	-171	-8	58	67	-25	81	691	68	53	66
CHA	31	-24	-192	-7	36	74	-1	138	-47	-15	-159
EUR	34	54	-42	-18	325	-39	-1	5	7	32	-6
IND	2	10	50	199	45	394	-7	-81	-31	-10	26
JPN	-4	-1	-1	-1	-1	0	34	11	5	-0	1
LAM	1492	2540	2830	3000	1639	1292	2071	888	1295	353	448
MEA	-100	24	-0	-1	-1	36	85	42	39	33	33
NEU	-26	-16	-42	21	-16	-8	13	81	125	137	118
OAS	131	1234	1550	2095	344	444	2436	484	529	1351	563
REF	-229	-10	-114	-109	-90	-102	-133	-21	-13	-70	-83
SSA	991	787	516	1440	3341	3470	2852	1450	1336	189	1423
USA	169	-65	-20	56	62	68	17	43	118	132	226

Table 742: MAgPIE m4p_SSP5 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 1/2]

	2055	2060	2070	2080	2090	2100
GLO	263	75	-224	-661	-1139	-1609
CAZ	18	1	23	-13	-12	-116
CHA	-395	-431	-364	-352	-323	-351
EUR	27	47	39	-3	-2	5
IND	-15	-11	4	33	37	-2
JPN	-0	0	-1	0	-0	1
LAM	30	175	-9	-139	-315	-351
MEA	2	6	2	-10	-15	-14
NEU	-3	-19	-13	-13	-17	-15
OAS	179	-65	-71	-96	-335	-646
REF	-89	-91	-88	-87	-82	-75
SSA	499	461	254	13	-65	-63
USA	10	2	-1	7	-9	18

Table 743: MAgPIE m4p_SSP5 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 2/2]

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860
GLO	1841	1812	2018	2010	2003	1992	2014	2034	2051	2079	2095
CAZ	29	28	28	28	28	28	28	28	28	28	27
CHA	368	336	303	268	233	196	191	186	182	179	177
EUR	176	176	176	176	176	176	176	176	176	176	176
IND	106	106	106	106	106	106	106	106	106	107	107
JPN	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
LAM	87	85	85	84	83	82	81	81	80	80	78
MEA	4	4	4	4	4	4	4	4	4	4	4
NEU	48	48	48	48	48	48	48	48	48	48	48
OAS	222	220	219	219	218	218	218	218	218	218	218
REF	208	208	209	210	211	212	214	215	216	218	219
SSA	-5	-4	-4	-4	-4	-4	-4	-4	-5	-6	-7
USA	601	607	845	874	902	929	955	979	1000	1030	1050

Table 744: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 1/16]

	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871
GLO	2136	1916	1916	1918	1920	1921	1915	1910	1904	1900	1973
CAZ	28	34	36	38	41	43	45	47	49	52	71
CHA	175	173	169	167	166	165	164	163	162	162	161
EUR	176	176	176	176	177	177	178	178	179	179	161
IND	107	107	107	107	107	107	107	108	108	108	137
JPN	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	1
LAM	81	82	82	82	83	81	79	78	77	77	76
MEA	10	11	12	12	12	13	13	14	14	14	14
NEU	61	63	65	66	67	68	69	70	71	71	69
OAS	219	219	219	220	220	220	220	220	221	221	275
REF	221	191	191	191	191	191	190	189	189	189	189
SSA	-8	-7	-6	-5	-2	-2	-1	-1	-2	-2	-3
USA	1070	871	868	865	862	860	852	845	838	831	821

Table 745: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 2/16]

	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882
GLO	2286	2326	2353	2382	2410	2434	2459	2485	2507	2646	2469
CAZ	79	85	88	92	95	94	95	96	96	97	97
CHA	160	160	152	150	148	147	146	147	147	147	146
EUR	158	156	153	150	148	146	145	143	142	140	139
IND	144	148	152	155	157	158	160	161	162	163	163
JPN	2	3	3	3	3	3	4	4	4	4	4
LAM	76	75	75	75	75	77	79	80	82	198	232
MEA	15	15	15	15	16	16	16	16	16	16	17
NEU	70	70	70	70	70	70	70	71	71	71	71
OAS	288	297	304	310	313	316	319	321	323	324	325
REF	189	191	192	192	195	196	196	196	196	196	197
SSA	-4	-3	-2	-1	-0	-0	-0	0	-1	-1	-2
USA	1110	1130	1150	1170	1190	1210	1230	1250	1270	1290	1080

Table 746: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 3/16]

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893
GLO	2495	2506	2529	2533	2532	2531	2529	2517	2504	2557	2560
CAZ	98	98	99	99	100	100	100	100	101	101	101
CHA	145	144	144	143	143	142	142	142	142	142	142
EUR	137	136	135	136	136	137	138	138	139	140	140
IND	164	164	164	165	165	165	166	166	188	193	197
JPN	4	4	4	5	5	5	5	5	5	5	5
LAM	258	280	298	309	316	323	329	333	269	257	247
MEA	17	17	17	17	17	17	18	18	18	18	18
NEU	71	71	71	72	72	73	73	73	74	74	75
OAS	326	326	328	328	329	329	330	330	370	379	386
REF	197	197	199	199	199	200	200	201	201	201	203
SSA	-3	-2	-1	0	0	-0	-1	-1	-2	-2	-4
USA	1080	1070	1070	1060	1050	1040	1030	1010	999	1050	1050

Table 747: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 4/16]

	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
GLO	2618	2638	2647	2655	2664	2664	2671	2914	2926	3033	3130
CAZ	102	102	102	102	103	103	103	104	151	163	173
CHA	198	204	210	216	222	228	233	238	299	363	430
EUR	141	142	142	143	143	144	145	145	146	147	148
IND	200	202	204	205	206	207	208	208	209	209	209
JPN	5	6	6	6	6	6	6	6	6	6	7
LAM	239	234	230	226	224	223	221	447	512	564	608
MEA	18	18	18	19	19	19	19	22	22	23	23
NEU	75	75	76	76	77	77	77	84	85	86	87
OAS	392	396	399	402	403	405	406	408	410	412	414
REF	203	203	204	204	204	204	205	206	206	207	207
SSA	-5	-5	-5	-4	-2	-2	-2	-3	-1	4	10
USA	1050	1060	1060	1060	1060	1050	1050	1050	881	850	815

Table 748: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 5/16]

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
GLO	3229	3342	3374	3409	3434	3456	3243	3109	2996	2956	2913
CAZ	184	194	204	214	222	232	241	250	258	267	276
CHA	498	567	583	597	607	616	624	626	627	641	643
EUR	149	151	152	153	154	155	156	158	159	161	162
IND	210	221	223	225	227	228	229	230	202	196	192
JPN	7	7	7	7	7	7	7	8	8	8	8
LAM	646	664	677	689	698	706	479	413	359	314	273
MEA	23	24	24	24	24	24	24	24	25	25	25
NEU	88	89	89	90	90	91	91	92	92	93	93
OAS	417	437	442	446	449	452	453	455	407	397	390
REF	208	208	208	208	208	208	208	208	226	231	237
SSA	18	27	37	47	57	66	74	83	92	100	108
USA	781	755	728	709	690	671	655	562	541	524	507

Table 749: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 6/16]

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
GLO	2921	2932	2944	2965	2972	3148	3119	3147	3170	3182	3198
CAZ	284	287	290	292	295	298	300	303	305	308	310
CHA	644	662	681	699	717	736	745	754	763	771	779
EUR	163	165	167	168	170	171	173	174	176	177	176
IND	198	197	197	197	197	196	196	196	196	196	190
JPN	8	8	8	8	8	9	9	9	9	9	9
LAM	259	247	237	228	221	384	430	467	498	526	533
MEA	25	25	25	25	25	25	25	25	25	25	34
NEU	94	94	94	94	95	95	95	95	95	96	117
OAS	401	399	400	400	400	400	399	399	401	401	391
REF	241	246	250	255	260	264	269	274	279	284	289
SSA	116	125	134	142	151	158	165	171	177	182	187
USA	489	476	462	456	434	412	313	280	246	207	182

Table 750: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 7/16]

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
GLO	3342	3354	3453	3738	3777	3418	3406	3362	3356	3386	3303
CAZ	274	269	263	258	253	249	245	241	236	232	227
CHA	782	785	791	799	806	809	812	793	792	792	792
EUR	175	173	171	169	166	163	159	155	151	146	141
IND	189	188	188	187	187	187	187	188	188	211	216
JPN	9	9	9	9	9	10	10	10	10	10	10
LAM	539	544	546	550	593	606	614	621	627	634	640
MEA	37	39	39	39	40	41	41	42	42	43	43
NEU	122	126	127	127	128	129	130	130	131	131	132
OAS	388	388	387	386	387	387	387	387	388	428	439
REF	294	295	298	299	302	305	306	301	294	287	280
SSA	192	198	205	211	217	223	231	237	248	254	261
USA	341	341	429	703	688	311	284	257	249	218	120

Table 751: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 8/16]

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
GLO	3313	3307	3260	3196	3274	3254	3277	3282	3589	3700	3729
CAZ	223	220	215	211	212	212	213	213	214	214	214
CHA	792	792	792	792	836	881	929	977	1030	1030	1040
EUR	137	132	127	121	115	110	104	99	94	89	84
IND	221	224	226	230	233	236	240	243	341	366	385
JPN	10	10	10	10	11	11	11	11	11	11	11
LAM	647	652	657	652	650	649	647	647	658	669	681
MEA	44	44	44	45	45	46	46	46	46	46	47
NEU	132	132	132	133	133	132	133	132	132	133	132
OAS	445	451	457	462	469	476	483	490	662	706	738
REF	272	265	253	193	169	145	121	99	85	72	60
SSA	268	277	285	292	300	308	317	325	335	343	357
USA	122	108	60	55	101	48	33	0	-18	22	-19

Table 752: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 9/16]

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
GLO	3768	3815	4613	4714	4703	4901	5064	5277	5390	5576	5123
CAZ	213	214	303	330	352	355	359	360	360	359	359
CHA	1050	1050	1040	1110	1180	1250	1320	1390	1400	1370	1300
EUR	79	74	81	80	79	79	79	80	81	82	75
IND	398	409	417	428	370	365	365	364	365	358	360
JPN	11	11	26	30	33	34	35	35	35	35	35
LAM	694	707	922	991	1048	1095	1136	1159	1180	1197	1211
MEA	47	47	37	36	34	31	29	28	27	27	26
NEU	132	131	109	104	99	93	87	85	84	82	80
OAS	761	781	813	838	741	736	738	738	739	729	728
REF	50	45	452	533	611	686	762	842	920	998	742
SSA	371	386	401	389	400	411	423	435	448	458	469
USA	-39	-42	12	-154	-243	-236	-269	-240	-249	-120	-263

Table 753: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 10/16]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	5089	5367	5360	5412	5460	5517	5648	5675	5415	5435	5278
CAZ	358	356	357	356	356	356	355	355	354	352	350
CHA	1240	1160	1070	1030	1030	1020	1020	1020	1010	1010	1010
EUR	75	66	64	63	62	61	60	58	57	56	47
IND	362	367	353	356	350	357	364	371	290	280	273
JPN	35	35	35	35	35	35	35	35	34	34	34
LAM	1224	1647	1774	1877	1958	2029	2066	2097	2125	2148	2169
MEA	25	25	24	23	23	22	23	24	24	24	23
NEU	79	76	74	73	72	70	73	73	74	73	72
OAS	732	740	712	717	707	719	731	743	602	582	571
REF	752	732	720	708	699	687	646	604	563	526	408
SSA	479	487	491	510	517	526	523	527	512	538	513
USA	-274	-324	-315	-337	-348	-365	-247	-232	-229	-188	-193

Table 754: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 11/16]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	4738	4639	4585	4596	4567	4810	4820	4815	4709	4548	4635
CAZ	253	219	194	185	177	171	166	161	157	153	159
CHA	1010	1020	1030	1030	1050	1090	1100	1030	894	755	609
EUR	38	28	18	8	-2	-12	-22	-33	-44	-51	-56
IND	265	265	299	324	329	370	399	419	438	450	506
JPN	18	13	9	8	7	6	5	4	3	3	3
LAM	1967	1924	1889	1861	1842	1844	1847	1851	1856	1860	1869
MEA	23	23	23	24	24	24	24	24	24	24	18
NEU	70	69	68	67	66	64	63	61	60	59	46
OAS	538	530	586	628	635	707	757	789	818	835	932
REF	356	303	253	230	208	199	178	159	140	125	118
SSA	525	539	553	568	530	584	523	547	552	531	612
USA	-326	-295	-339	-336	-298	-236	-219	-198	-188	-196	-183

Table 755: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 12/16]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	5369	5543	5720	5807	5871	5914	6006	6038	6029	5690	5297
CAZ	145	140	134	127	120	114	108	103	97	57	55
CHA	443	366	339	299	278	257	235	241	221	185	145
EUR	-59	-62	-64	-66	-67	-67	-67	-67	-65	-276	-276
IND	515	522	529	532	529	529	539	549	557	669	696
JPN	3	3	2	1	1	0	-1	-1	-2	-74	-74
LAM	2676	2880	3052	3199	3304	3363	3391	3414	3433	3435	2942
MEA	18	18	19	21	22	23	24	24	25	-13	-13
NEU	44	44	47	52	53	55	56	58	60	-52	-52
OAS	945	953	965	970	961	962	976	995	1007	1232	1279
REF	109	102	96	91	82	79	77	74	71	146	146
SSA	667	717	754	724	710	710	744	724	739	718	786
USA	-137	-140	-153	-142	-123	-111	-76	-77	-114	-336	-336

Table 756: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 13/16]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	5259	5212	5142	5025	4904	4869	4710	4555	4082	4586	4645
CAZ	52	49	47	44	43	42	41	40	95	94	97
CHA	144	156	113	100	77	45	19	-45	-339	-340	-339
EUR	-276	-276	-276	-276	-277	-276	-276	-276	-278	-278	-278
IND	717	711	709	705	696	689	670	655	629	834	885
JPN	-74	-74	-74	-74	-74	-74	-74	-74	-39	-39	-39
LAM	2811	2702	2616	2533	2488	2445	2404	2380	2358	2293	2256
MEA	-13	-13	-13	-13	-13	-13	-13	-13	-16	-16	-16
NEU	-52	-52	-52	-52	-52	-52	-52	-52	-57	-57	-56
OAS	1316	1305	1299	1286	1347	1258	1224	1198	1171	1541	1619
REF	146	146	146	158	115	166	129	134	-15	-8	63
SSA	825	895	964	958	909	989	969	958	961	949	828
USA	-336	-336	-336	-343	-354	-349	-331	-349	-389	-388	-375

Table 757: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 14/16]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	4670	4397	2979	2697	2766	2899	2622	2622	2666	2649	2742
CAZ	93	94	147	135	141	110	159	-36	-17	27	5
CHA	-340	-340	-396	-396	-395	-395	-396	-312	-312	-312	-312
EUR	-278	-278	-340	-339	-340	-340	-340	-427	-427	-428	-428
IND	923	818	-127	-127	-127	-127	-127	121	121	121	121
JPN	-39	-39	-143	-143	-143	-143	-143	7	7	7	7
LAM	2232	2226	1222	1217	1219	1221	1213	723	731	732	730
MEA	-16	-16	138	120	146	210	146	266	263	200	164
NEU	-57	-57	-163	-163	-163	-163	-163	-90	-90	-90	-90
OAS	1708	1500	1881	1543	1536	1757	1528	1433	1434	1439	1639
REF	-48	-30	-196	-200	-63	-163	-189	-180	-127	-181	-179
SSA	829	878	1327	1348	1337	1286	1308	1186	1163	1218	1156
USA	-338	-359	-372	-298	-383	-354	-373	-70	-80	-83	-72

Table 758: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 15/16]

	2015
GLO	2671
CAZ	-5
CHA	-312
EUR	-427
IND	121
JPN	7
LAM	729
MEA	223
NEU	-90
OAS	1488
REF	-167
SSA	1180
USA	-76

Table 759: PRIMAPhist — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 16/16]

	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2008
GLO	1192	1264	1197	1032	1025	1275	1319	1275	1149	1196	1112
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 760: RCP — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 1/2]

	2010
GLO	1057
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 761: RCP — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 2/2]

	1985	1995	2005
GLO	1140	1170	1100
CAZ			
CHA			
EUR			
IND			
JPN			
LAM			
MEA			
NEU			
OAS			
REF			
SSA			
USA			

Table 762: Houghton_2012 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	4151	4151	4054	4080	4106	4132	4149	4229	4258	4215	4227
CAZ	36	36	36	36	36	36	29	22	65	36	22
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	26	26	22	22	22	22	22	22	22	22	23
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1663	1663	1667	1670	1674	1678	1682	1685	1690	1693	1696
MEA	53	53	53	53	53	54	53	54	55	54	55
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	1025	1024	1046	1067	1089	1110	1119	1232	1175	1188	1205
REF	329	329	211	211	211	211	216	190	222	198	202
SSA	1019	1019	1020	1021	1022	1022	1027	1024	1028	1023	1025
USA	0	0	0	0	0	0	0	0	0	0	0

Table 763: FAO_EmisLUC — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 1/2]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GLO	4644	4724	4733	4670	4675	4399	4347	4348	3903	3843
CAZ	284	317	317	299	302	149	144	149	131	163
CHA	0	0	0	0	0	0	0	0	0	0
EUR	15	16	16	16	16	30	30	30	30	30
IND	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0
LAM	1816	1818	1823	1824	1827	1437	1438	1441	996	944
MEA	13	18	11	15	13	21	19	23	30	23
NEU	2	2	2	2	2	0	0	0	0	0
OAS	1492	1521	1491	1506	1487	1768	1719	1709	1724	1689
REF	37	41	85	17	28	14	14	14	14	14
SSA	983	991	990	992	1001	979	982	982	978	981
USA	0	0	0	0	0	0	0	0	0	0

Table 764: FAO_EmisLUC — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 2/2]

	1995	2003
GLO	1600	1500
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 765: Canadell_2007 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr)

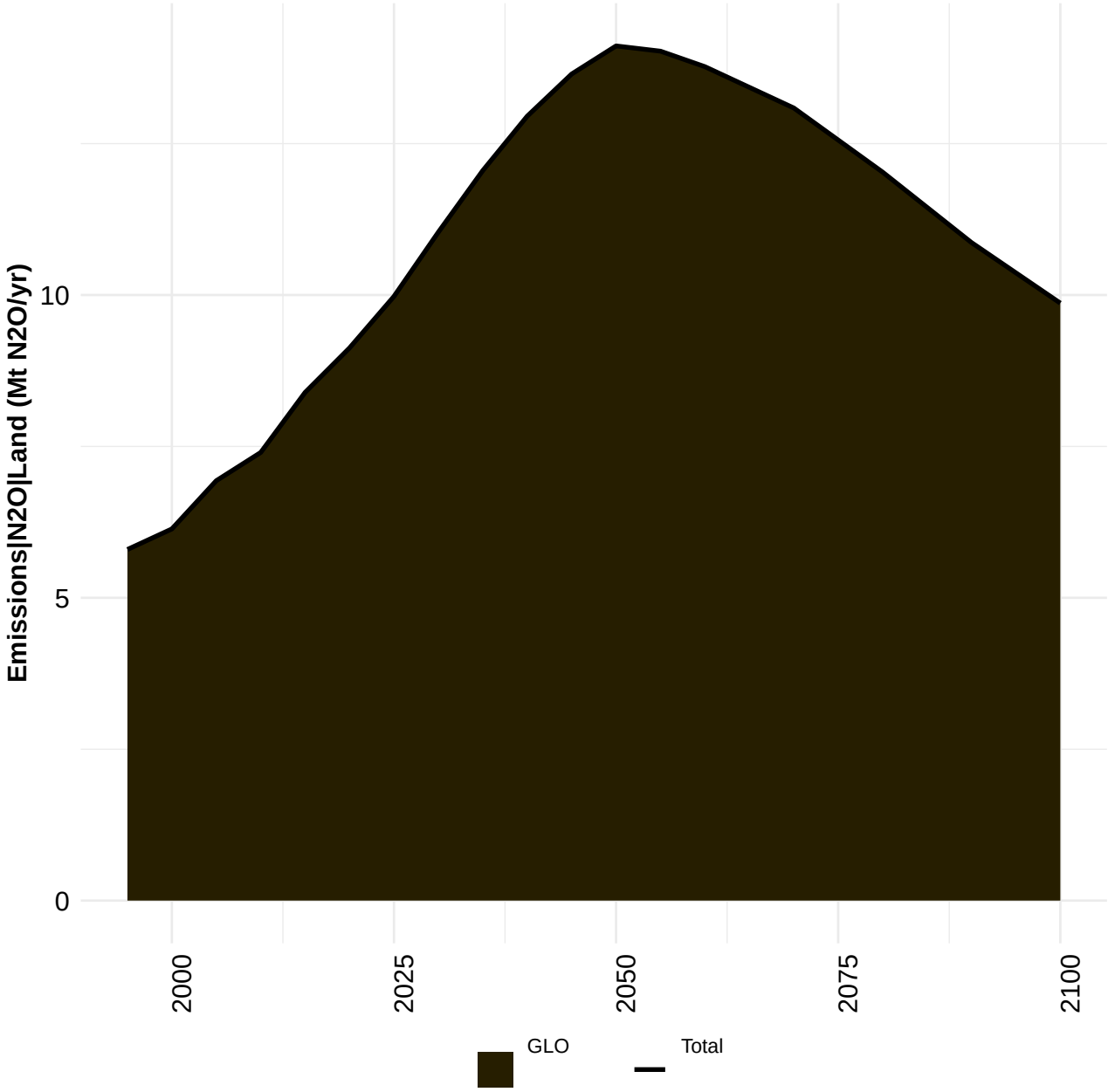
	1995	2005
GLO	1500	1100
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

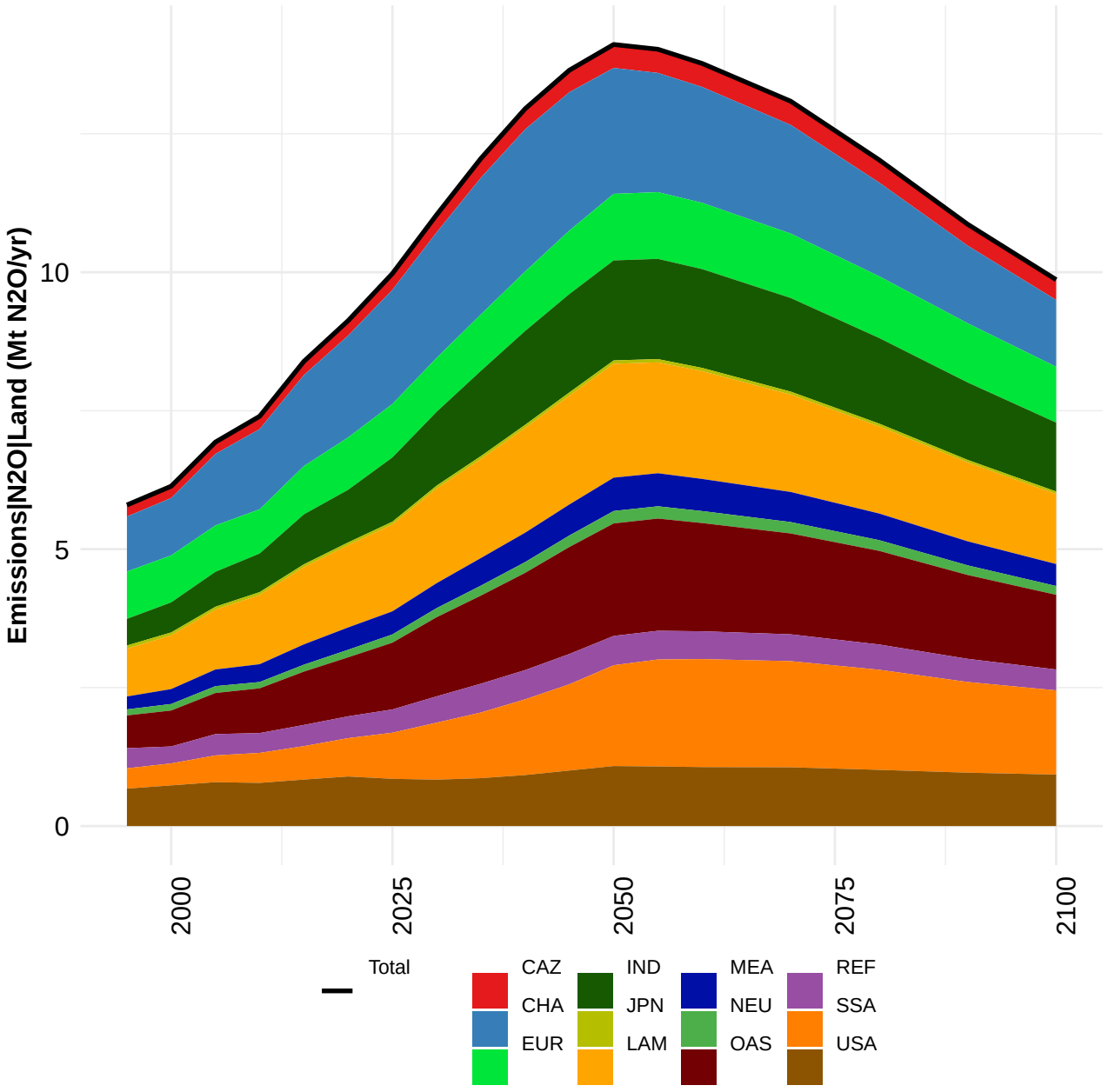
Table 766: Friedlingstein_2010 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr)

	2002
GLO	810
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 767: Harris_2013 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr)

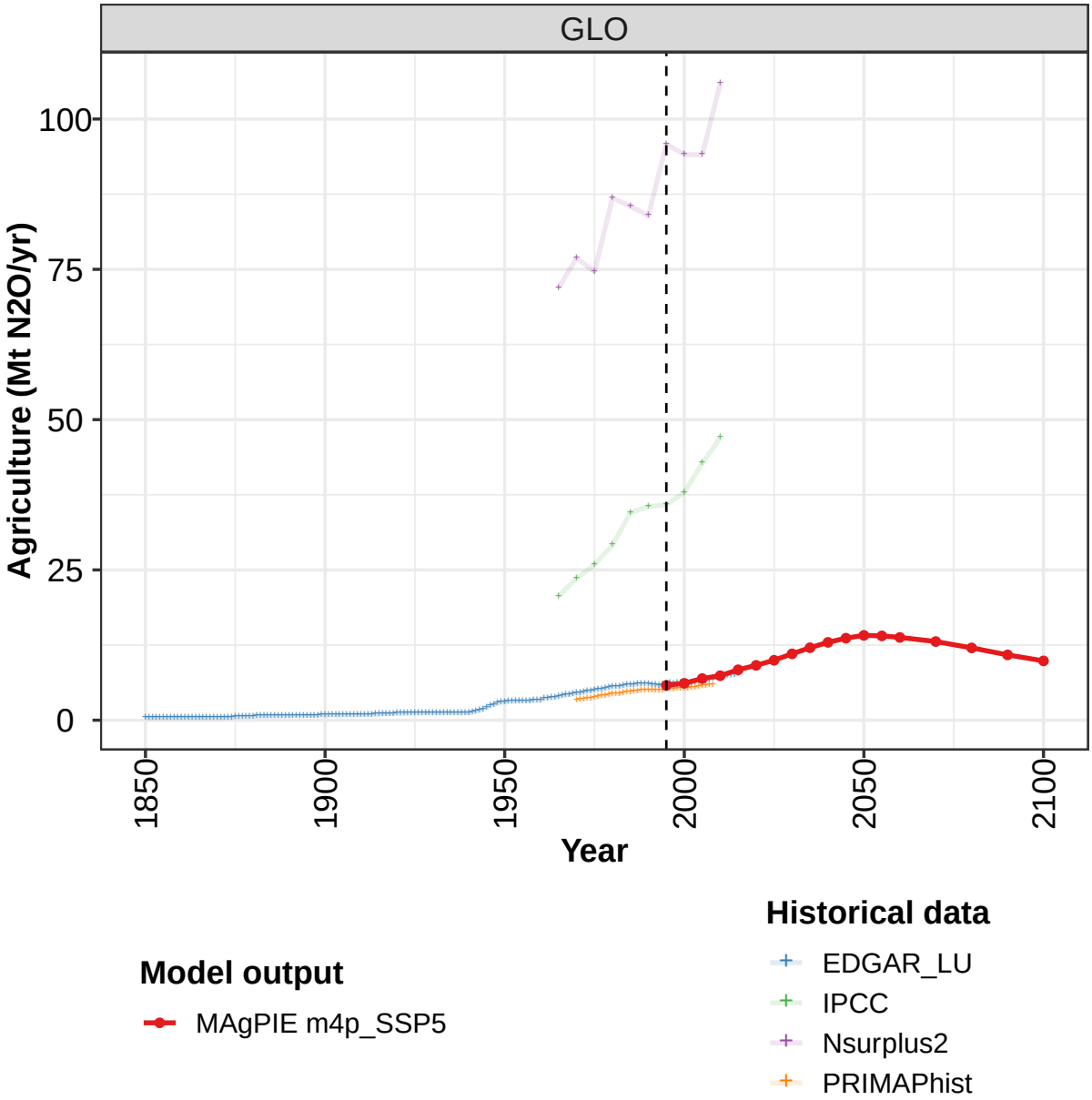
13 N2O


Emissions|N2O|Land (Mt N2O/yr)
10
5
0
2000
2025
2050
2075
2100
GLO
Total


Emissions|N2O|Land (Mt N2O/yr)
10
5
0
2000
2025
2050
2075
2100
Total
CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA

13.1 Land

13.1.1 Agriculture



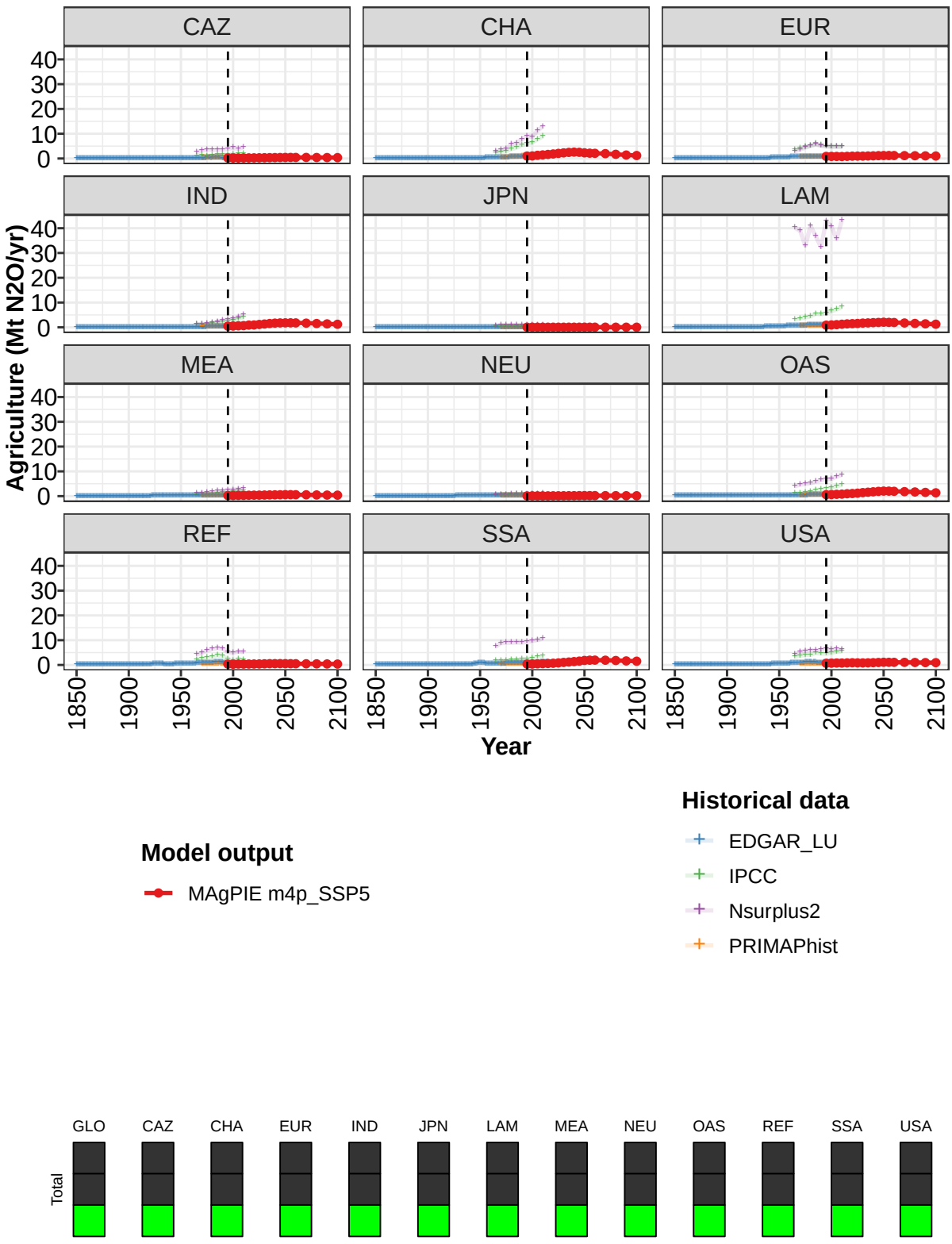


Figure 238: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.8	6.1	6.9	7.4	8.4	9.1	10.0	11.0	12.1	13.0	13.6
CAZ	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4
CHA	1.0	1.0	1.3	1.4	1.6	1.8	2.1	2.3	2.5	2.6	2.5
EUR	0.9	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.1	1.1
IND	0.5	0.5	0.6	0.7	0.9	1.0	1.2	1.3	1.5	1.7	1.8
JPN	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
LAM	0.9	1.0	1.1	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
MEA	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
OAS	0.6	0.6	0.7	0.8	1.0	1.1	1.2	1.4	1.6	1.8	1.9
REF	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
SSA	0.4	0.4	0.5	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.6
USA	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.9	0.9	1.0

Table 768: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	14.1	14.0	13.8	13.1	12.0	10.9	9.9
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CHA	2.3	2.2	2.1	2.0	1.7	1.4	1.2
EUR	1.2	1.2	1.2	1.2	1.1	1.1	1.0
IND	1.8	1.8	1.8	1.7	1.5	1.4	1.2
JPN	0.1	0.1	0.1	0.1	0.1	0.0	0.0
LAM	2.1	2.0	1.9	1.8	1.6	1.4	1.3
MEA	0.6	0.6	0.6	0.5	0.5	0.4	0.4
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	2.0	2.0	2.0	1.8	1.7	1.5	1.3
REF	0.5	0.5	0.5	0.5	0.5	0.4	0.4
SSA	1.8	1.9	1.9	1.9	1.8	1.6	1.5
USA	1.1	1.1	1.1	1.1	1.0	1.0	0.9

Table 769: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 2/2]

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860
GLO	0.35	0.36	0.36	0.37	0.38	0.38	0.39	0.39	0.39	0.40	0.40
CAZ	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
EUR	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
IND	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
REF	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
SSA	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
USA	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

Table 770: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 1/16]

	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871
GLO	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41
CAZ	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
EUR	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
IND	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
REF	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
SSA	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
USA	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Table 771: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 2/16]

	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882
GLO	0.43	0.45	0.48	0.52	0.55	0.58	0.61	0.63	0.65	0.66	0.66
CAZ	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
CHA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
EUR	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
IND	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06
REF	0.10	0.10	0.11	0.12	0.13	0.13	0.14	0.15	0.15	0.15	0.15
SSA	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06
USA	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.18	0.19	0.19	0.19

Table 772: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 3/16]

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893
GLO	0.67	0.67	0.68	0.68	0.68	0.69	0.69	0.72	0.73	0.74	0.75
CAZ	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
CHA	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
EUR	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.07	0.08	0.08	0.09
IND	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
REF	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17
SSA	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
USA	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21

Table 773: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 4/16]

	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
GLO	0.76	0.77	0.78	0.79	0.80	0.80	0.81	0.81	0.82	0.83	0.83
CAZ	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
CHA	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
EUR	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.10	0.10
IND	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.05
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
REF	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
SSA	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
USA	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21

Table 774: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 5/16]

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
GLO	0.84	0.85	0.86	0.87	0.87	0.88	0.89	0.91	0.93	0.96	0.98
CAZ	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CHA	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
EUR	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
IND	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08
MEA	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08
REF	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.20	0.21	0.22
SSA	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.10
USA	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.23	0.23

Table 775: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 6/16]

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
GLO	1.01	1.04	1.07	1.09	1.11	1.12	1.14	1.16	1.17	1.19	1.20
CAZ	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
CHA	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
EUR	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.13	0.13	0.14
IND	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.08	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.08	0.08	0.08
MEA	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
NEU	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10
REF	0.23	0.25	0.26	0.26	0.27	0.27	0.27	0.28	0.28	0.28	0.28
SSA	0.11	0.11	0.12	0.12	0.13	0.13	0.14	0.15	0.15	0.16	0.16
USA	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.23	0.23	0.23

Table 776: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 7/16]

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
GLO	1.21	1.22	1.23	1.24	1.24	1.24	1.24	1.24	1.23	1.23	1.22
CAZ	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
CHA	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
EUR	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14
IND	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
MEA	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
NEU	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OAS	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11
REF	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.27	0.27	0.26	0.25
SSA	0.17	0.17	0.18	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16
USA	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22

Table 777: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 8/16]

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
GLO	1.22	1.22	1.23	1.28	1.41	1.61	1.84	2.10	2.36	2.60	2.81
CAZ	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.09	0.10	0.10
CHA	0.06	0.07	0.07	0.07	0.08	0.08	0.09	0.10	0.11	0.11	0.12
EUR	0.14	0.14	0.14	0.15	0.17	0.20	0.24	0.28	0.32	0.36	0.40
IND	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
JPN	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03
LAM	0.10	0.10	0.10	0.11	0.12	0.14	0.16	0.19	0.21	0.23	0.25
MEA	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10
NEU	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06
OAS	0.11	0.11	0.12	0.12	0.12	0.13	0.15	0.16	0.17	0.18	0.19
REF	0.25	0.25	0.24	0.25	0.26	0.27	0.29	0.31	0.33	0.35	0.37
SSA	0.15	0.15	0.15	0.17	0.21	0.27	0.35	0.43	0.51	0.59	0.65
USA	0.23	0.23	0.23	0.23	0.26	0.29	0.32	0.37	0.41	0.45	0.48

Table 778: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 9/16]

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
GLO	2.96	3.05	3.08	3.11	3.13	3.15	3.17	3.19	3.21	3.24	3.28
CAZ	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13
CHA	0.13	0.13	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.18	0.19
EUR	0.42	0.43	0.44	0.44	0.44	0.45	0.45	0.46	0.46	0.46	0.47
IND	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.27	0.28	0.29	0.31	0.33	0.36	0.38	0.41	0.43	0.45	0.47
MEA	0.10	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.09	0.09
NEU	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
OAS	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.23	0.23	0.23
REF	0.38	0.40	0.41	0.42	0.43	0.44	0.45	0.47	0.48	0.49	0.51
SSA	0.69	0.71	0.71	0.69	0.66	0.62	0.59	0.55	0.51	0.48	0.47
USA	0.50	0.51	0.52	0.52	0.53	0.53	0.54	0.54	0.55	0.55	0.56

Table 779: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 10/16]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	3.33	3.55	3.64	3.71	3.79	3.91	4.06	4.18	4.27	4.33	4.44
CAZ	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.15
CHA	0.19	0.20	0.21	0.22	0.25	0.27	0.29	0.29	0.30	0.31	0.32
EUR	0.47	0.51	0.53	0.53	0.54	0.55	0.57	0.59	0.61	0.62	0.63
IND	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
JPN	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LAM	0.48	0.50	0.51	0.52	0.53	0.55	0.57	0.58	0.59	0.60	0.61
MEA	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.13	0.13	0.13
NEU	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
OAS	0.24	0.25	0.25	0.25	0.26	0.26	0.27	0.28	0.28	0.29	0.30
REF	0.52	0.55	0.58	0.59	0.60	0.61	0.65	0.67	0.69	0.69	0.72
SSA	0.46	0.51	0.52	0.52	0.53	0.54	0.54	0.55	0.56	0.56	0.57
USA	0.57	0.60	0.62	0.65	0.67	0.70	0.72	0.76	0.76	0.78	0.80

Table 780: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 11/16]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	4.56	4.65	4.81	4.84	5.03	5.09	5.17	5.31	5.39	5.51	5.53
CAZ	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
CHA	0.34	0.35	0.37	0.36	0.39	0.39	0.43	0.47	0.51	0.54	0.53
EUR	0.65	0.66	0.68	0.69	0.71	0.71	0.72	0.75	0.76	0.76	0.76
IND	0.08	0.08	0.08	0.08	0.09	0.09	0.10	0.10	0.10	0.11	0.11
JPN	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LAM	0.62	0.64	0.66	0.68	0.69	0.72	0.74	0.74	0.75	0.77	0.78
MEA	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.17	0.18
NEU	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11
OAS	0.30	0.30	0.31	0.31	0.31	0.32	0.33	0.34	0.35	0.35	0.36
REF	0.76	0.78	0.81	0.83	0.85	0.86	0.86	0.89	0.87	0.90	0.90
SSA	0.58	0.58	0.58	0.58	0.59	0.60	0.61	0.62	0.63	0.64	0.65
USA	0.82	0.84	0.88	0.87	0.95	0.95	0.92	0.93	0.95	0.96	0.96

Table 781: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 12/16]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	5.57	5.70	5.82	5.82	5.88	5.96	6.00	6.06	5.98	5.92	5.86
CAZ	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.17	0.13	0.13	0.13
CHA	0.55	0.59	0.62	0.60	0.61	0.69	0.72	0.75	0.78	0.79	0.80
EUR	0.77	0.78	0.79	0.79	0.80	0.78	0.78	0.78	0.76	0.72	0.68
IND	0.11	0.12	0.12	0.13	0.14	0.13	0.14	0.14	0.15	0.15	0.16
JPN	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LAM	0.78	0.78	0.80	0.80	0.82	0.83	0.84	0.85	0.85	0.85	0.87
MEA	0.18	0.19	0.20	0.21	0.21	0.22	0.22	0.23	0.23	0.24	0.26
NEU	0.11	0.11	0.11	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.10
OAS	0.36	0.38	0.38	0.39	0.41	0.41	0.42	0.43	0.42	0.43	0.44
REF	0.93	0.97	0.97	1.00	1.02	1.03	1.01	0.97	0.92	0.88	0.79
SSA	0.65	0.65	0.65	0.66	0.66	0.67	0.68	0.69	0.69	0.69	0.69
USA	0.91	0.92	0.96	0.93	0.90	0.89	0.87	0.90	0.91	0.90	0.91

Table 782: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 13/16]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	5.78	5.91	6.05	6.11	6.10	6.24	6.17	6.14	6.22	6.19	6.35
CAZ	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.14	0.15
CHA	0.76	0.80	0.90	0.94	0.90	0.90	0.93	0.89	0.90	0.89	0.89
EUR	0.67	0.66	0.66	0.66	0.67	0.66	0.66	0.65	0.65	0.64	0.62
IND	0.16	0.15	0.16	0.17	0.18	0.19	0.19	0.19	0.20	0.19	0.20
JPN	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.88	0.90	0.92	0.91	0.93	0.95	0.95	0.99	1.02	1.03	1.09
MEA	0.26	0.44	0.42	0.41	0.40	0.39	0.37	0.36	0.37	0.36	0.39
NEU	0.10	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.10
OAS	0.46	0.45	0.47	0.49	0.50	0.52	0.54	0.55	0.54	0.56	0.58
REF	0.70	0.62	0.59	0.56	0.54	0.55	0.52	0.51	0.50	0.50	0.48
SSA	0.69	0.73	0.74	0.76	0.78	0.84	0.82	0.82	0.84	0.83	0.86
USA	0.93	0.89	0.92	0.93	0.92	0.98	0.91	0.90	0.93	0.93	0.94

Table 783: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 14/16]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	6.55	6.51	6.66	6.85	7.00	7.09	7.28	7.34	7.42	7.47	7.53
CAZ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.17	0.16
CHA	0.93	0.95	1.03	1.11	1.20	1.28	1.37	1.41	1.49	1.49	1.50
EUR	0.63	0.62	0.61	0.61	0.61	0.60	0.60	0.60	0.60	0.61	0.62
IND	0.21	0.22	0.23	0.25	0.25	0.26	0.27	0.28	0.27	0.27	0.27
JPN	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	1.09	1.11	1.14	1.18	1.17	1.15	1.19	1.20	1.21	1.20	1.23
MEA	0.40	0.40	0.40	0.40	0.40	0.39	0.38	0.39	0.41	0.41	0.42
NEU	0.10	0.10	0.11	0.10	0.10	0.11	0.10	0.11	0.12	0.12	0.12
OAS	0.61	0.62	0.63	0.66	0.68	0.73	0.73	0.73	0.74	0.76	0.77
REF	0.49	0.48	0.48	0.47	0.48	0.49	0.50	0.51	0.52	0.52	0.52
SSA	0.87	0.89	0.88	0.90	0.95	0.92	0.96	0.98	0.97	1.00	0.99
USA	1.02	0.93	0.96	0.99	0.97	0.98	1.00	0.96	0.91	0.90	0.90

Table 784: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 15/16]

	2015
GLO	7.72
CAZ	0.16
CHA	1.58
EUR	0.62
IND	0.29
JPN	0.03
LAM	1.26
MEA	0.42
NEU	0.12
OAS	0.80
REF	0.51
SSA	1.02
USA	0.90

Table 785: PRIMAPhist — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 16/16]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	20.6	23.6	25.9	29.1	34.5	35.5	35.8	37.9	42.7	47.0
CAZ	1.1	1.1	1.1	1.2	1.5	1.6	1.6	1.7	1.8	1.9
CHA	2.2	2.5	2.9	3.8	4.4	5.3	6.0	6.4	7.8	8.8
EUR	3.6	4.2	4.7	5.2	5.9	5.3	5.0	4.9	4.9	5.0
IND	1.1	1.2	1.3	1.5	1.8	2.1	2.5	2.8	3.3	4.0
JPN	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3
LAM	3.2	3.6	4.0	4.4	5.5	5.3	5.8	6.5	7.2	8.2
MEA	0.6	0.7	0.8	0.9	1.2	1.4	1.6	1.8	2.1	2.3
NEU	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.7
OAS	1.2	1.3	1.5	1.8	2.3	2.8	3.1	3.4	4.0	4.6
REF	2.2	2.6	2.9	3.2	3.8	3.7	2.3	1.8	2.2	2.1
SSA	1.6	1.7	1.8	1.9	2.1	2.3	2.4	2.6	3.2	3.6
USA	3.2	3.7	4.0	4.1	4.8	4.6	4.5	4.9	5.3	5.5

Table 786: IPCC — Emissions—N2O—Land—Agriculture (Mt N2O/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	72	77	75	87	85	84	96	94	94	106
CAZ	3	3	4	3	4	4	4	4	4	5
CHA	3	3	4	6	6	8	9	9	11	13
EUR	3	4	4	5	6	5	5	5	5	5
IND	1	1	1	2	2	3	3	3	4	5
JPN	1	1	1	1	1	1	1	1	1	1
LAM	40	39	33	41	37	32	43	41	36	43
MEA	1	1	1	2	2	2	3	3	3	3
NEU	1	1	1	1	1	1	1	1	1	1
OAS	4	5	5	5	6	7	7	7	8	9
REF	4	5	6	6	7	7	5	5	5	5
SSA	7	9	9	9	9	9	9	10	10	11
USA	4	5	6	6	6	6	7	6	6	6

Table 787: Nsurplus2 — Emissions—N2O—Land—Agriculture (Mt N2O/yr)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
GLO	3.34	3.42	3.52	3.62	3.66	3.82	3.89	4.00	4.11	4.23	4.32
CAZ	0.17	0.18	0.18	0.18	0.18	0.19	0.19	0.18	0.18	0.18	0.18
CHA	0.34	0.35	0.36	0.38	0.37	0.40	0.41	0.45	0.48	0.52	0.55
EUR	0.60	0.62	0.63	0.66	0.66	0.68	0.68	0.69	0.72	0.74	0.73
IND	0.19	0.20	0.20	0.20	0.20	0.21	0.22	0.23	0.24	0.25	0.26
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.45	0.46	0.48	0.49	0.51	0.53	0.55	0.58	0.57	0.58	0.61
MEA	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.14
NEU	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.09
OAS	0.32	0.32	0.32	0.33	0.33	0.34	0.34	0.36	0.37	0.38	0.38
REF	0.40	0.42	0.44	0.45	0.47	0.49	0.48	0.49	0.50	0.50	0.52
SSA	0.28	0.28	0.28	0.28	0.28	0.29	0.29	0.30	0.31	0.32	0.32
USA	0.40	0.41	0.42	0.45	0.44	0.49	0.48	0.48	0.49	0.51	0.51

Table 788: EDGAR_LU — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 1/4]

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
GLO	4.36	4.42	4.54	4.67	4.69	4.75	4.84	4.94	5.00	5.02	4.97
CAZ	0.19	0.19	0.19	0.19	0.19	0.20	0.19	0.19	0.20	0.21	0.21
CHA	0.55	0.57	0.61	0.64	0.62	0.64	0.72	0.77	0.79	0.82	0.83
EUR	0.73	0.75	0.75	0.77	0.77	0.78	0.77	0.78	0.77	0.73	0.69
IND	0.27	0.28	0.30	0.32	0.33	0.35	0.33	0.37	0.37	0.38	0.40
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.62	0.62	0.62	0.64	0.65	0.66	0.68	0.69	0.70	0.70	0.70
MEA	0.15	0.15	0.16	0.16	0.17	0.17	0.17	0.18	0.19	0.19	0.19
NEU	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
OAS	0.39	0.40	0.42	0.43	0.44	0.44	0.44	0.45	0.46	0.47	0.47
REF	0.52	0.53	0.56	0.57	0.58	0.59	0.60	0.59	0.56	0.54	0.51
SSA	0.32	0.33	0.33	0.32	0.33	0.33	0.33	0.34	0.35	0.36	0.36
USA	0.51	0.49	0.48	0.51	0.49	0.48	0.48	0.45	0.48	0.49	0.49

Table 789: EDGAR_LU — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 2/4]

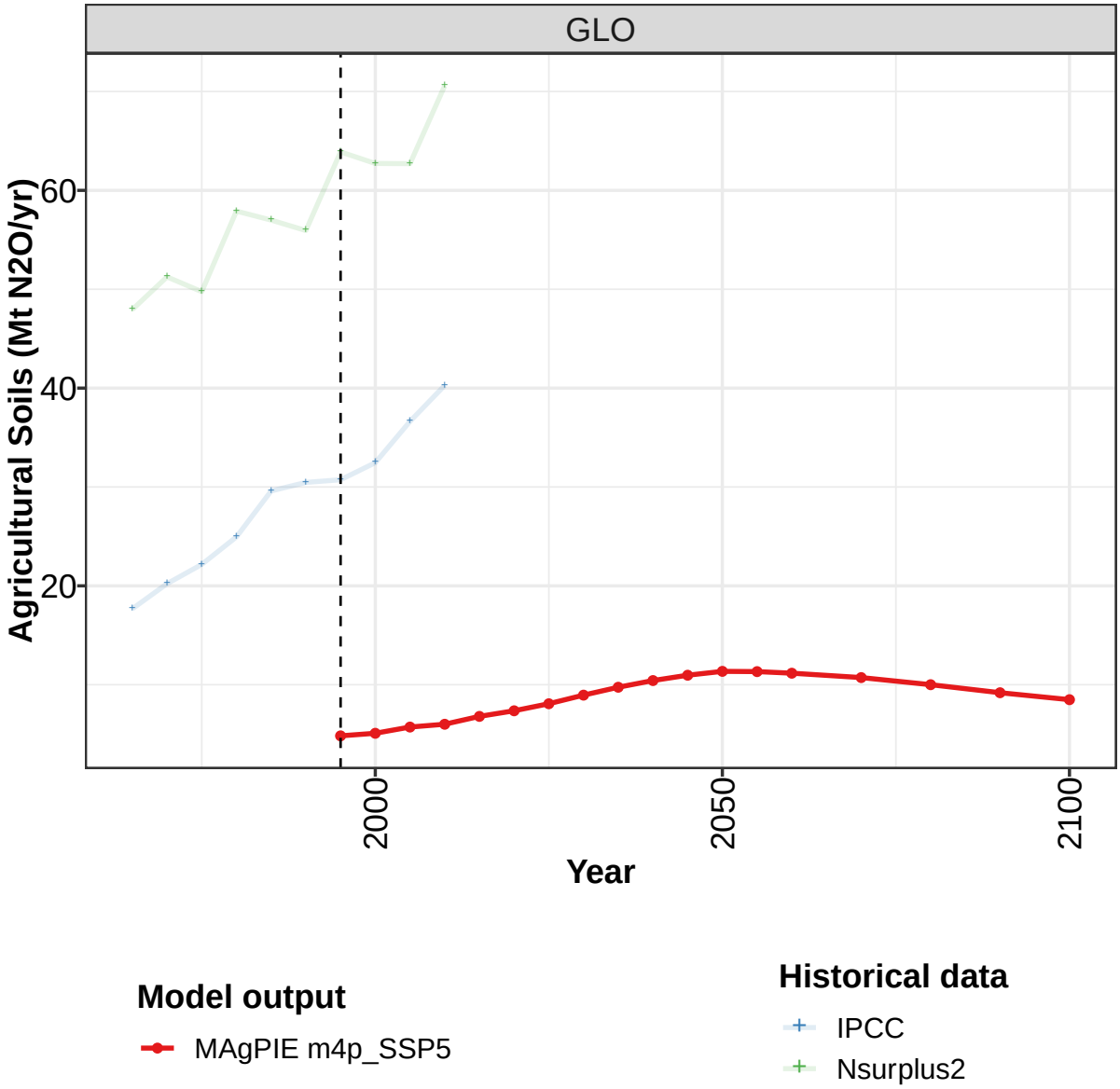
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
GLO	4.96	4.92	4.99	5.10	5.20	5.17	5.23	5.28	5.26	5.32	5.41
CAZ	0.21	0.21	0.22	0.22	0.23	0.23	0.23	0.24	0.24	0.24	0.24
CHA	0.85	0.82	0.86	0.98	1.02	0.94	0.96	1.00	0.98	0.99	1.07
EUR	0.65	0.63	0.64	0.63	0.64	0.65	0.64	0.64	0.62	0.62	0.61
IND	0.41	0.42	0.44	0.45	0.46	0.47	0.48	0.49	0.47	0.48	0.46
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.72	0.74	0.77	0.78	0.77	0.79	0.80	0.80	0.83	0.85	0.87
MEA	0.20	0.20	0.21	0.21	0.22	0.23	0.24	0.24	0.25	0.26	0.26
NEU	0.09	0.09	0.09	0.08	0.09	0.09	0.09	0.09	0.09	0.08	0.08
OAS	0.48	0.49	0.50	0.50	0.52	0.52	0.53	0.53	0.54	0.53	0.55
REF	0.45	0.41	0.36	0.33	0.30	0.30	0.27	0.26	0.26	0.27	0.27
SSA	0.36	0.36	0.36	0.37	0.37	0.38	0.40	0.41	0.41	0.42	0.43
USA	0.51	0.51	0.54	0.53	0.55	0.56	0.56	0.55	0.54	0.55	0.55

Table 790: EDGAR_LU — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 3/4]

	2003	2004	2005	2006	2007	2008
GLO	5.49	5.64	5.68	5.75	5.82	5.88
CAZ	0.24	0.25	0.25	0.25	0.25	0.25
CHA	1.05	1.11	1.12	1.16	1.18	1.22
EUR	0.61	0.61	0.60	0.59	0.58	0.58
IND	0.48	0.50	0.50	0.50	0.51	0.52
JPN	0.03	0.03	0.03	0.03	0.03	0.03
LAM	0.93	0.95	0.96	0.98	1.01	1.03
MEA	0.26	0.27	0.27	0.28	0.28	0.28
NEU	0.08	0.09	0.09	0.09	0.09	0.09
OAS	0.56	0.57	0.58	0.59	0.60	0.61
REF	0.26	0.27	0.27	0.27	0.26	0.26
SSA	0.43	0.44	0.45	0.45	0.46	0.47
USA	0.56	0.58	0.58	0.57	0.56	0.56

Table 791: EDGAR_LU — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 4/4]

13.1.2 Agriculture—Agricultural Soils



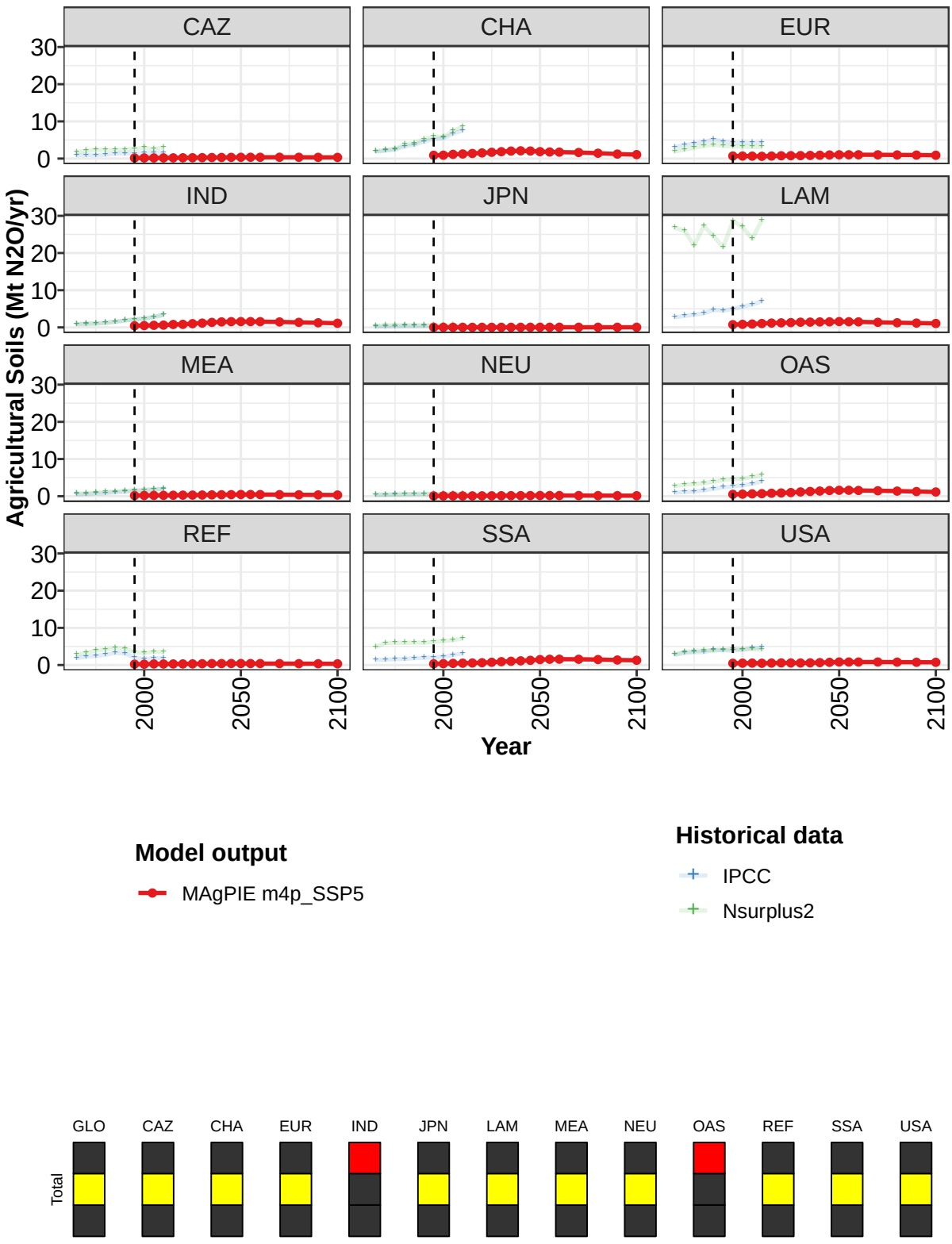


Figure 239: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.8	5.1	5.7	6.0	6.8	7.4	8.1	8.9	9.7	10.4	11.0
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
CHA	0.9	0.9	1.1	1.2	1.4	1.5	1.7	1.9	2.0	2.1	2.0
EUR	0.7	0.7	0.7	0.6	0.7	0.8	0.8	0.8	0.9	0.9	1.0
IND	0.4	0.5	0.6	0.6	0.8	0.8	1.0	1.2	1.3	1.5	1.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.8	0.9	1.0	1.2	1.2	1.3	1.4	1.4	1.5	1.5
MEA	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
OAS	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.2	1.3	1.4	1.5
REF	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
SSA	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.9	1.0	1.1	1.3
USA	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7

Table 792: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	11.4	11.3	11.2	10.7	10.0	9.2	8.5
CAZ	0.3	0.4	0.4	0.4	0.3	0.3	0.3
CHA	1.9	1.8	1.7	1.6	1.4	1.2	1.1
EUR	1.0	1.0	1.0	1.0	1.0	0.9	0.9
IND	1.6	1.6	1.5	1.5	1.4	1.2	1.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.6	1.5	1.5	1.4	1.3	1.2	1.1
MEA	0.5	0.5	0.5	0.4	0.4	0.4	0.3
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.1
OAS	1.6	1.6	1.6	1.5	1.4	1.3	1.1
REF	0.4	0.4	0.4	0.4	0.4	0.4	0.3
SSA	1.5	1.6	1.6	1.6	1.5	1.4	1.3
USA	0.8	0.8	0.8	0.8	0.8	0.8	0.7

Table 793: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr) [PART 2/2]

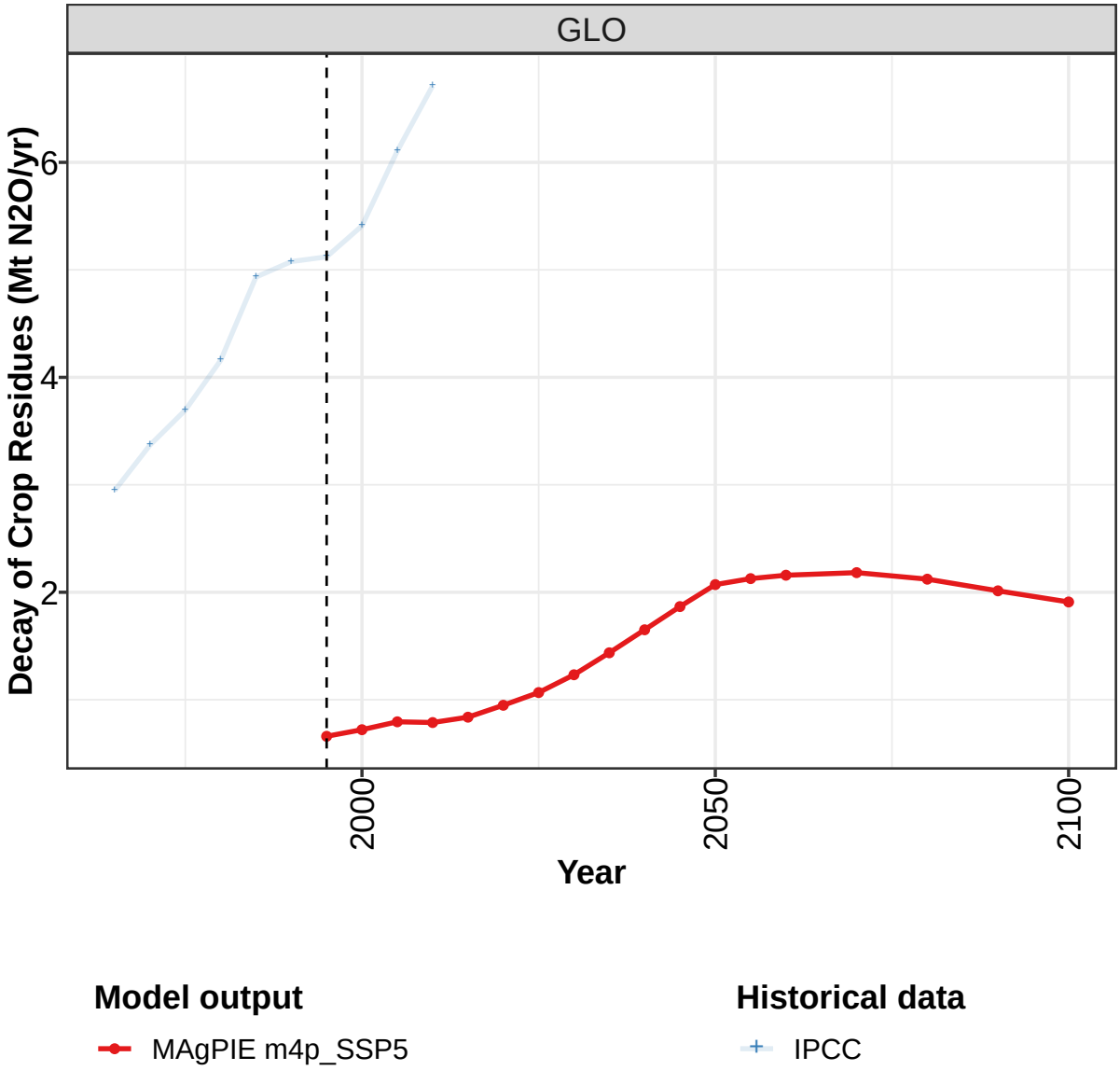
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	17.7	20.2	22.2	24.9	29.6	30.5	30.7	32.5	36.6	40.3
CAZ	0.9	1.0	0.9	1.0	1.3	1.4	1.4	1.4	1.5	1.6
CHA	1.9	2.1	2.4	3.2	3.7	4.6	5.2	5.5	6.7	7.6
EUR	3.1	3.6	4.0	4.5	5.1	4.6	4.2	4.2	4.2	4.3
IND	0.9	1.0	1.1	1.2	1.5	1.8	2.2	2.4	2.8	3.4
JPN	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	2.7	3.1	3.4	3.8	4.7	4.5	5.0	5.6	6.2	7.0
MEA	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.6	1.8	1.9
NEU	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.6
OAS	1.0	1.1	1.3	1.6	2.0	2.4	2.7	2.9	3.4	3.9
REF	1.9	2.3	2.5	2.8	3.3	3.2	2.0	1.5	1.9	1.8
SSA	1.4	1.5	1.6	1.7	1.8	2.0	2.1	2.2	2.7	3.1
USA	2.8	3.2	3.4	3.5	4.1	4.0	3.9	4.2	4.6	4.7

Table 794: IPCC — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	47.9	51.2	49.8	57.9	57.0	55.9	63.9	62.7	62.7	70.6
CAZ	1.8	2.1	2.4	2.3	2.4	2.4	2.6	2.9	2.5	3.0
CHA	2.0	2.3	2.6	3.8	4.2	5.2	5.9	5.8	7.5	8.6
EUR	1.9	2.5	2.9	3.4	3.7	3.4	3.3	3.2	3.1	3.1
IND	0.8	0.9	0.9	1.2	1.5	1.8	2.2	2.3	2.8	3.4
JPN	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
LAM	26.8	26.0	22.0	27.3	24.5	21.6	28.6	27.1	23.8	28.8
MEA	0.7	0.7	1.0	1.1	1.3	1.4	1.7	1.7	1.9	2.0
NEU	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7
OAS	2.7	3.1	3.3	3.5	3.9	4.4	4.5	4.7	5.2	5.8
REF	2.8	3.3	3.9	4.2	4.5	4.4	3.4	3.3	3.6	3.5
SSA	4.9	5.9	6.0	6.0	6.0	6.0	6.2	6.5	6.7	7.1
USA	2.9	3.6	3.7	4.0	3.9	4.2	4.4	4.2	4.3	4.1

Table 795: Nsurplus2 — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr)

13.1.3 Agriculture—Agricultural Soils—Decay of Crop Residues



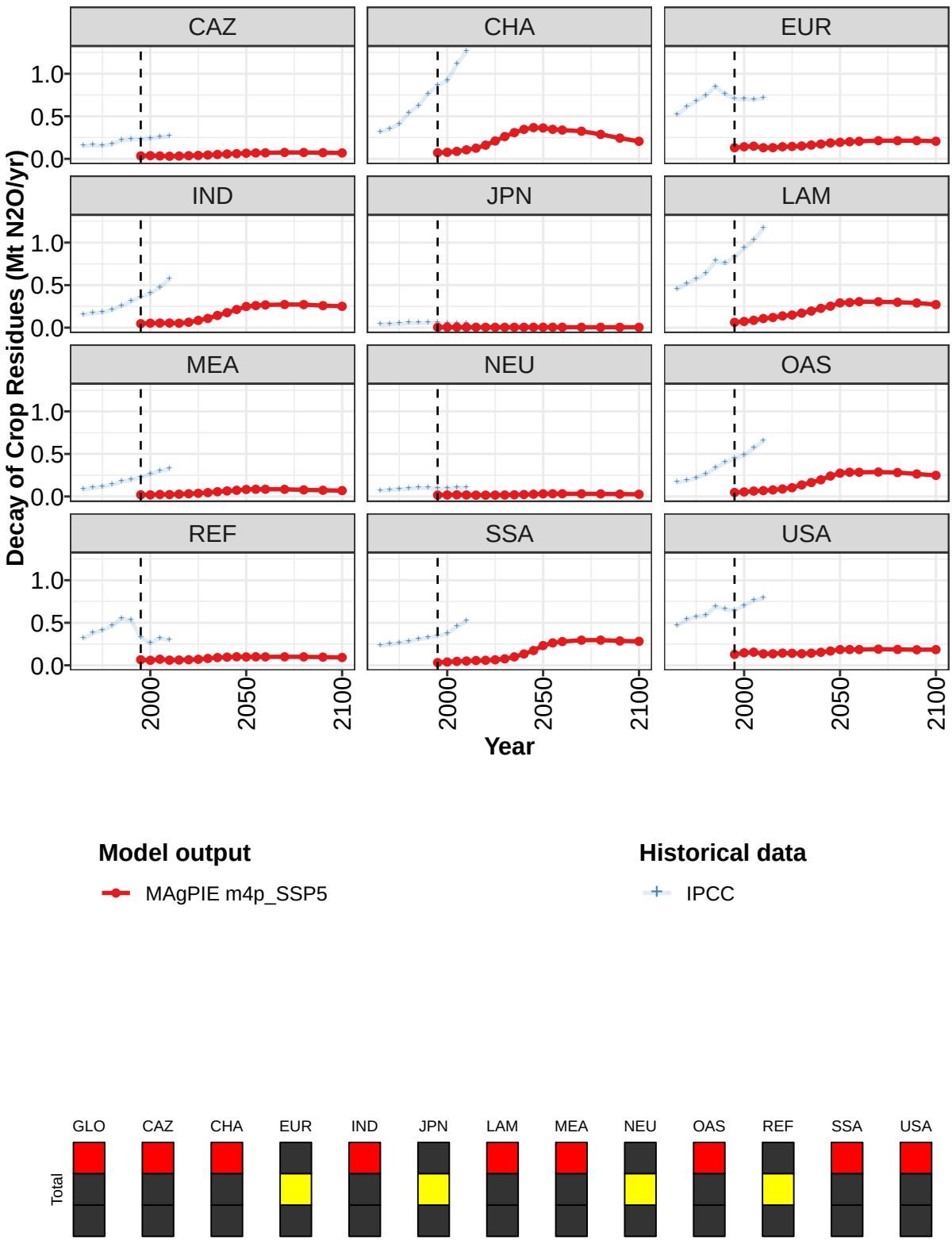


Figure 240: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.66	0.72	0.79	0.79	0.84	0.95	1.07	1.23	1.44	1.65	1.87
CAZ	0.03	0.04	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06
CHA	0.07	0.08	0.09	0.11	0.13	0.16	0.21	0.26	0.31	0.35	0.37
EUR	0.13	0.14	0.15	0.13	0.13	0.14	0.15	0.15	0.16	0.17	0.19
IND	0.05	0.05	0.05	0.05	0.05	0.06	0.09	0.11	0.14	0.18	0.21
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
LAM	0.06	0.07	0.09	0.11	0.12	0.14	0.15	0.17	0.20	0.23	0.25
MEA	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.07
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
OAS	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.14	0.16	0.20	0.24
REF	0.07	0.06	0.07	0.06	0.06	0.07	0.07	0.08	0.09	0.10	0.10
SSA	0.03	0.04	0.05	0.05	0.06	0.06	0.06	0.08	0.10	0.13	0.17
USA	0.13	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.17

Table 796: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt N2O/yr) [PART 1/2]

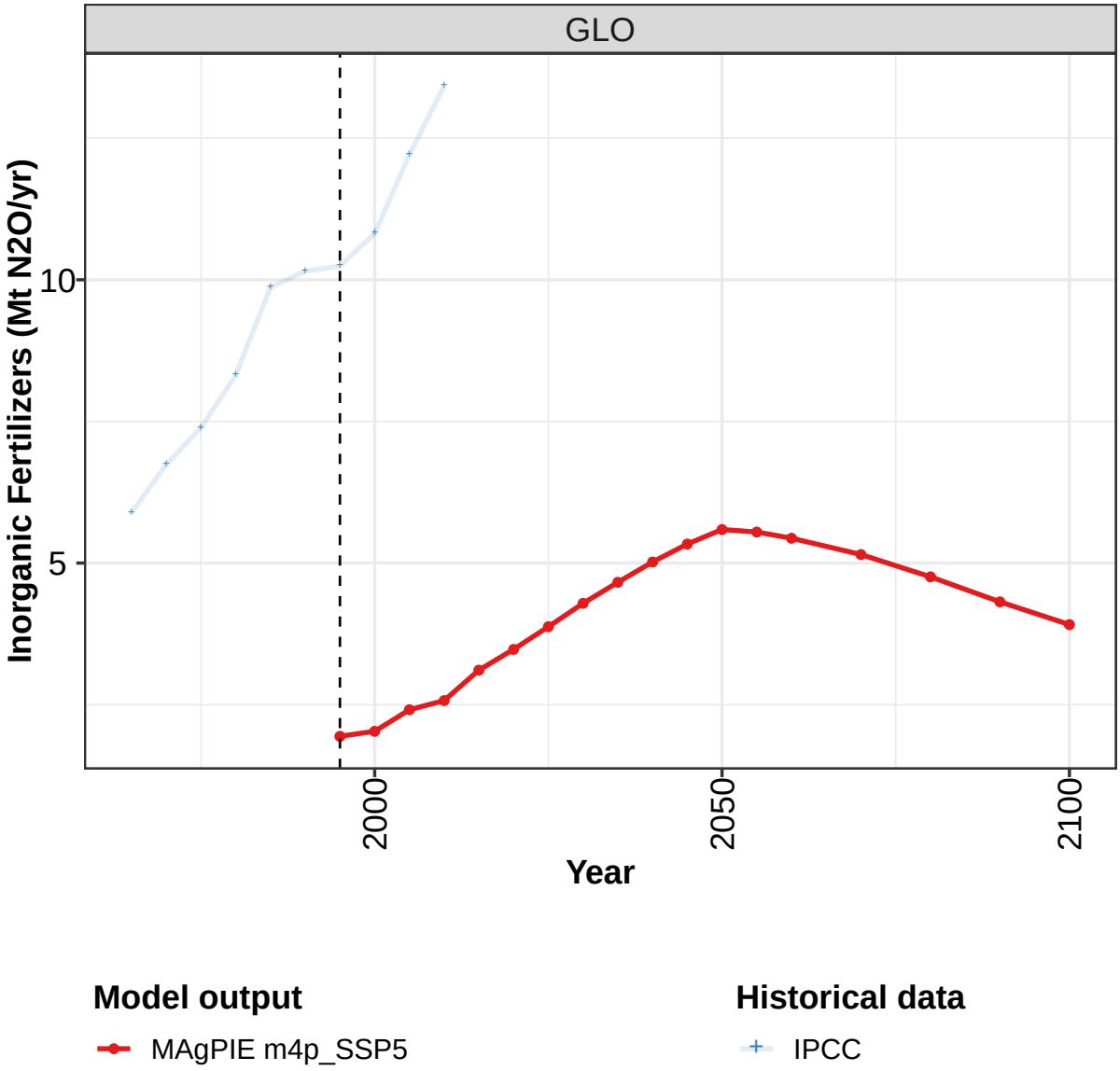
	2050	2055	2060	2070	2080	2090	2100
GLO	2.07	2.13	2.16	2.18	2.12	2.01	1.91
CAZ	0.07	0.07	0.07	0.08	0.07	0.07	0.07
CHA	0.36	0.35	0.34	0.32	0.29	0.24	0.21
EUR	0.19	0.20	0.21	0.21	0.21	0.21	0.21
IND	0.25	0.26	0.27	0.27	0.27	0.26	0.25
JPN	0.01	0.01	0.01	0.00	0.00	0.00	0.00
LAM	0.29	0.30	0.31	0.30	0.30	0.29	0.27
MEA	0.08	0.08	0.09	0.08	0.08	0.07	0.07
NEU	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OAS	0.27	0.28	0.28	0.29	0.28	0.26	0.25
REF	0.10	0.10	0.10	0.10	0.10	0.10	0.09
SSA	0.23	0.26	0.28	0.30	0.30	0.29	0.28
USA	0.18	0.19	0.19	0.19	0.19	0.18	0.18

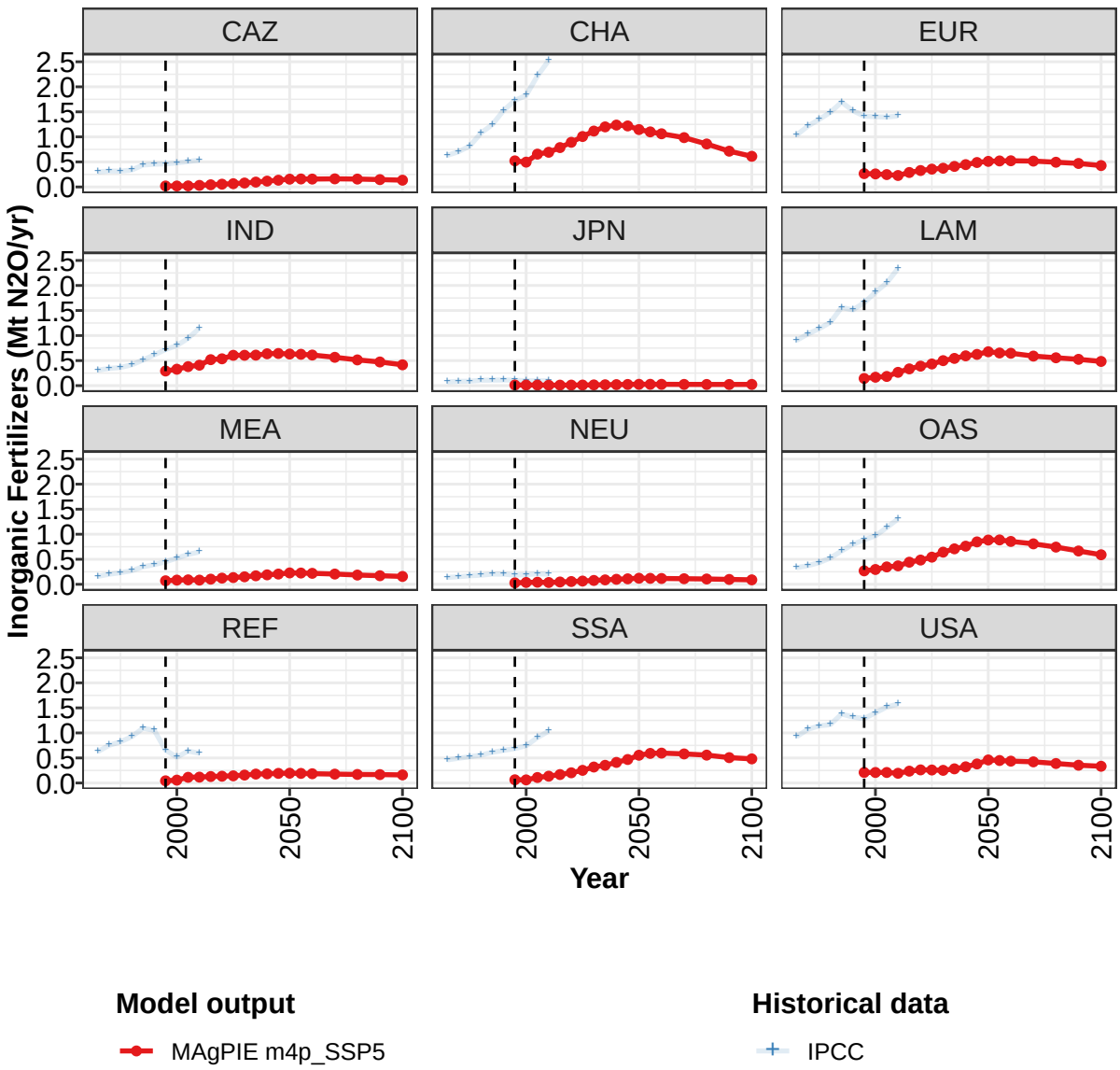
Table 797: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt N2O/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.95	3.37	3.69	4.16	4.93	5.08	5.12	5.41	6.11	6.71
CAZ	0.15	0.16	0.16	0.17	0.22	0.23	0.23	0.24	0.25	0.27
CHA	0.32	0.35	0.41	0.54	0.62	0.76	0.86	0.92	1.11	1.26
EUR	0.52	0.61	0.67	0.74	0.85	0.76	0.71	0.70	0.70	0.71
IND	0.15	0.17	0.18	0.21	0.26	0.31	0.36	0.40	0.47	0.57
JPN	0.04	0.04	0.04	0.05	0.06	0.06	0.05	0.05	0.05	0.05
LAM	0.45	0.51	0.57	0.63	0.78	0.76	0.83	0.93	1.03	1.17
MEA	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.32
NEU	0.07	0.08	0.09	0.09	0.10	0.10	0.09	0.10	0.10	0.10
OAS	0.17	0.19	0.22	0.26	0.33	0.40	0.44	0.48	0.57	0.65
REF	0.31	0.38	0.41	0.46	0.55	0.53	0.33	0.26	0.32	0.30
SSA	0.23	0.25	0.26	0.28	0.31	0.33	0.34	0.37	0.45	0.52
USA	0.46	0.54	0.57	0.58	0.69	0.66	0.64	0.70	0.76	0.79

Table 798: IPCC — Emissions—N2O—Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt N2O/yr)

13.1.4 Agriculture—Agricultural Soils—Inorganic Fertilizers





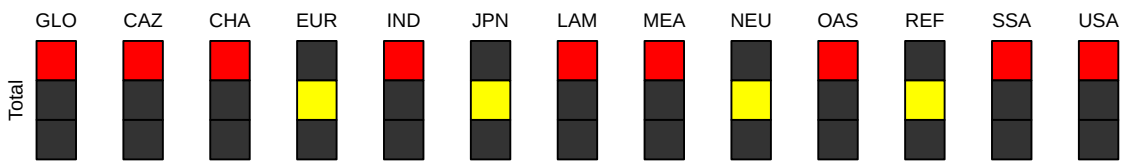


Figure 241: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.94	2.03	2.41	2.57	3.11	3.48	3.88	4.29	4.66	5.02	5.34
CAZ	0.02	0.02	0.02	0.03	0.04	0.06	0.07	0.08	0.10	0.12	0.13
CHA	0.52	0.50	0.66	0.69	0.79	0.89	1.01	1.12	1.20	1.24	1.22
EUR	0.27	0.26	0.25	0.23	0.29	0.33	0.36	0.37	0.41	0.45	0.49
IND	0.29	0.33	0.38	0.41	0.52	0.54	0.61	0.61	0.61	0.64	0.64
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
LAM	0.14	0.17	0.18	0.27	0.33	0.39	0.43	0.50	0.54	0.60	0.62
MEA	0.07	0.08	0.09	0.08	0.10	0.12	0.13	0.15	0.17	0.19	0.20
NEU	0.03	0.04	0.04	0.04	0.05	0.06	0.06	0.08	0.09	0.10	0.11
OAS	0.27	0.30	0.35	0.37	0.44	0.48	0.54	0.64	0.71	0.76	0.85
REF	0.04	0.06	0.11	0.12	0.13	0.14	0.14	0.16	0.18	0.18	0.19
SSA	0.06	0.06	0.11	0.14	0.17	0.20	0.25	0.32	0.35	0.41	0.47
USA	0.21	0.21	0.21	0.19	0.24	0.26	0.26	0.25	0.28	0.32	0.38

Table 799: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt N2O/yr) [PART 1/2]

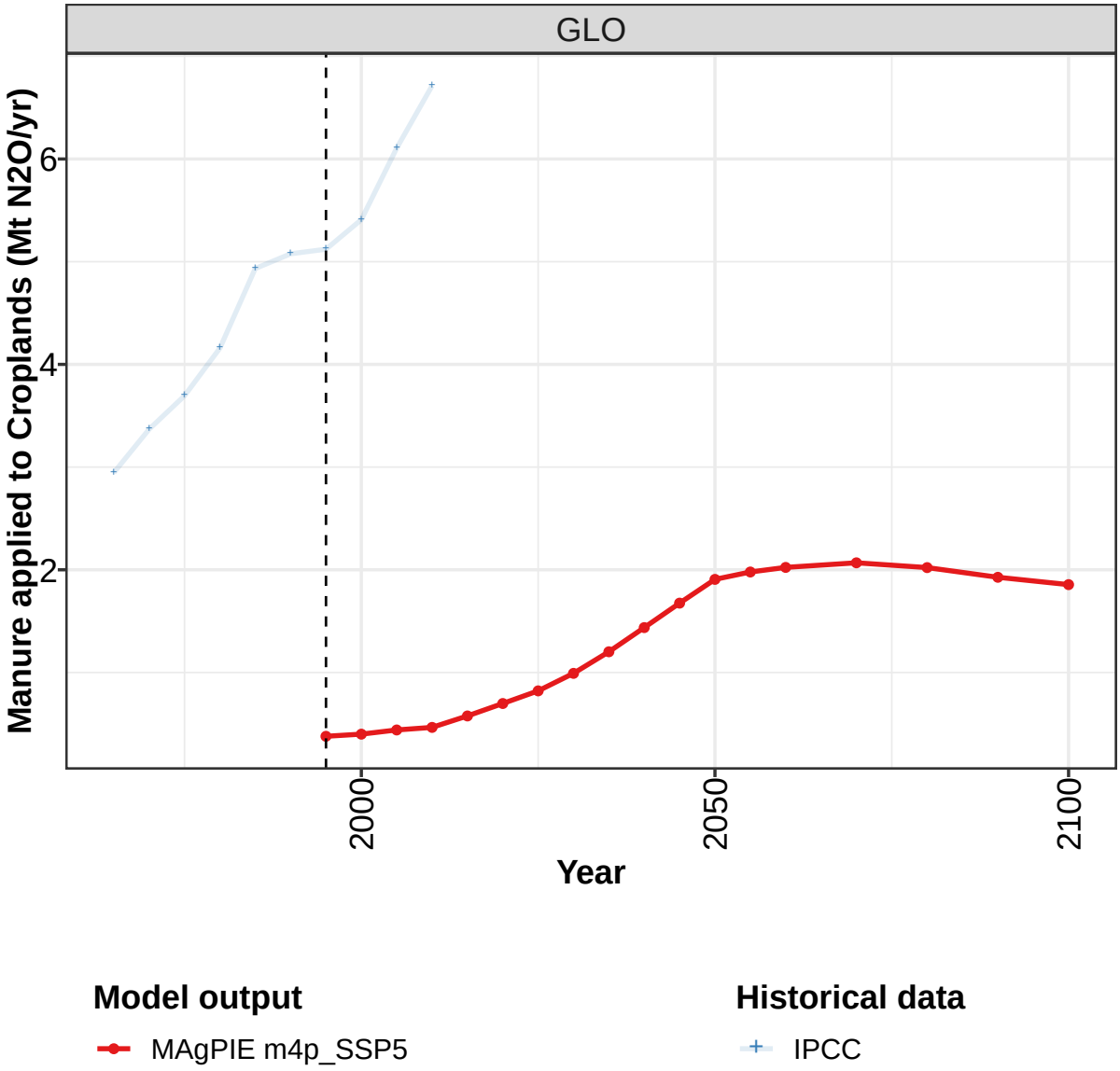
	2050	2055	2060	2070	2080	2090	2100
GLO	5.59	5.55	5.44	5.15	4.76	4.32	3.91
CAZ	0.16	0.16	0.16	0.16	0.16	0.15	0.14
CHA	1.15	1.10	1.06	0.99	0.86	0.71	0.61
EUR	0.51	0.52	0.52	0.52	0.49	0.47	0.43
IND	0.63	0.63	0.61	0.57	0.51	0.47	0.42
JPN	0.03	0.03	0.03	0.02	0.02	0.02	0.02
LAM	0.68	0.65	0.65	0.59	0.56	0.53	0.48
MEA	0.23	0.23	0.22	0.21	0.18	0.17	0.16
NEU	0.12	0.12	0.12	0.11	0.11	0.10	0.09
OAS	0.88	0.89	0.86	0.81	0.74	0.67	0.59
REF	0.20	0.19	0.18	0.18	0.17	0.17	0.16
SSA	0.55	0.59	0.60	0.58	0.56	0.51	0.48
USA	0.46	0.45	0.44	0.42	0.39	0.35	0.33

Table 800: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt N2O/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.9	6.7	7.4	8.3	9.9	10.2	10.2	10.8	12.2	13.4
CAZ	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5
CHA	0.6	0.7	0.8	1.1	1.2	1.5	1.7	1.8	2.2	2.5
EUR	1.0	1.2	1.3	1.5	1.7	1.5	1.4	1.4	1.4	1.4
IND	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.1
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.9	1.0	1.1	1.3	1.6	1.5	1.7	1.9	2.1	2.3
MEA	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.6
NEU	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.3	0.4	0.4	0.5	0.7	0.8	0.9	1.0	1.1	1.3
REF	0.6	0.8	0.8	0.9	1.1	1.1	0.7	0.5	0.6	0.6
SSA	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.9	1.0
USA	0.9	1.1	1.1	1.2	1.4	1.3	1.3	1.4	1.5	1.6

Table 801: IPCC — Emissions—N2O—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt N2O/yr)

13.1.5 Agriculture—Agricultural Soils—Manure applied to Croplands



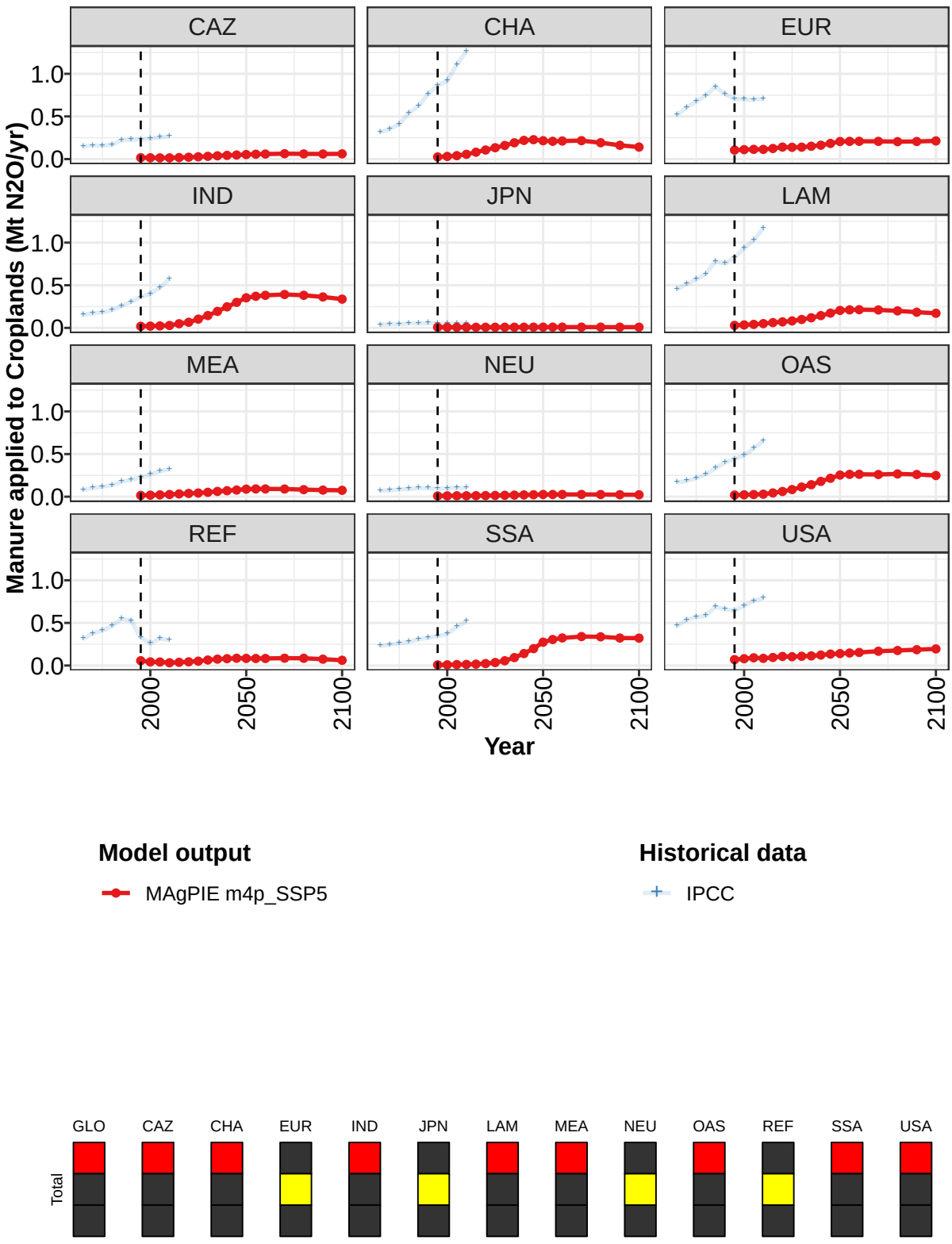


Figure 242: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.38	0.40	0.44	0.47	0.58	0.70	0.82	0.99	1.20	1.44	1.68
CAZ	0.02	0.02	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
CHA	0.03	0.03	0.04	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.23
EUR	0.11	0.11	0.11	0.11	0.12	0.14	0.14	0.14	0.15	0.16	0.18
IND	0.02	0.02	0.02	0.03	0.05	0.07	0.10	0.14	0.19	0.25	0.30
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.10	0.12	0.14	0.17
MEA	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
OAS	0.02	0.02	0.03	0.03	0.04	0.06	0.08	0.11	0.14	0.18	0.22
REF	0.06	0.04	0.04	0.03	0.04	0.04	0.05	0.06	0.08	0.08	0.09
SSA	0.01	0.01	0.01	0.01	0.02	0.02	0.04	0.06	0.09	0.14	0.20
USA	0.07	0.08	0.09	0.08	0.09	0.11	0.10	0.11	0.11	0.12	0.13

Table 802: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt N2O/yr) [PART 1/2]

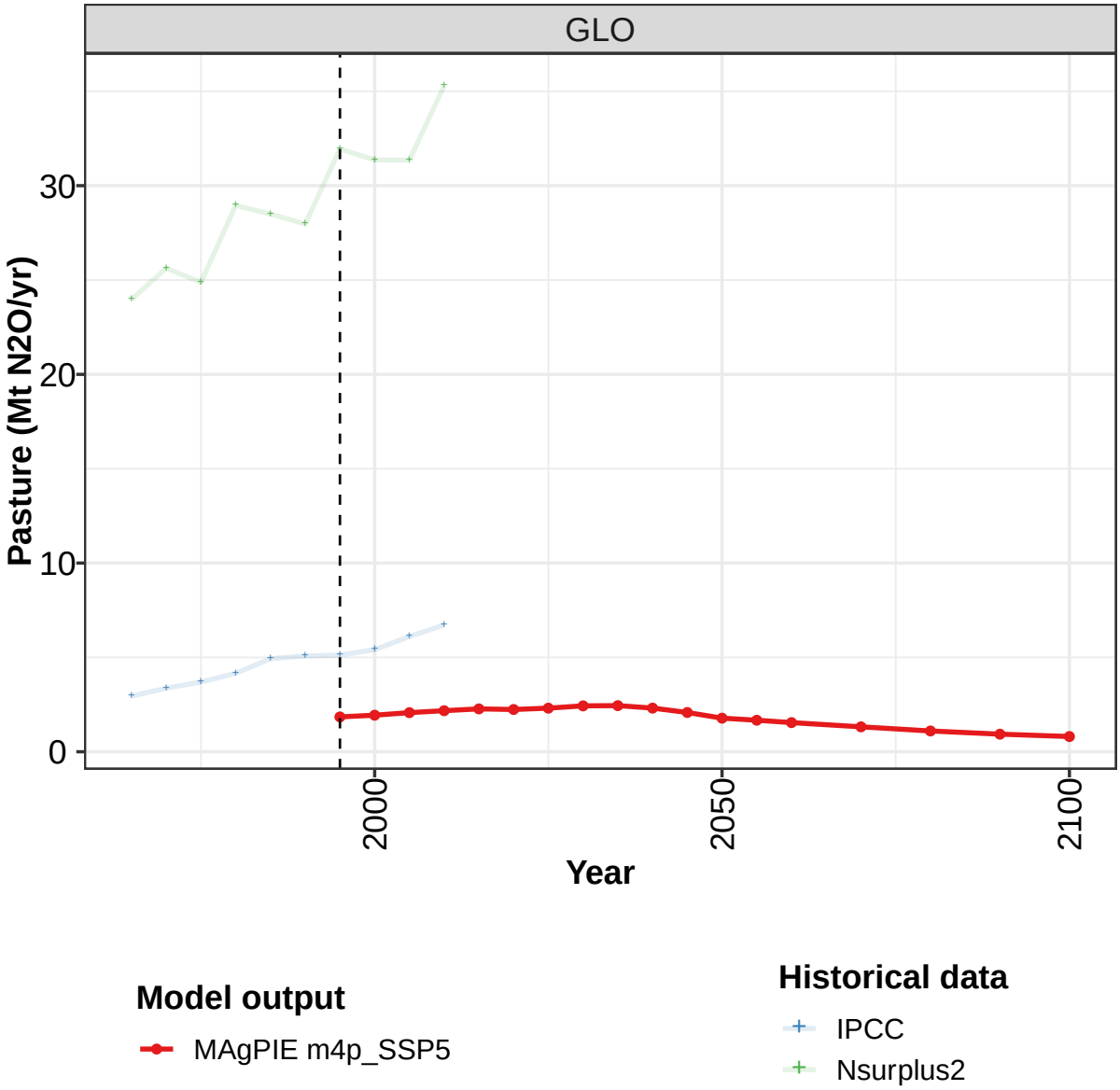
	2050	2055	2060	2070	2080	2090	2100
GLO	1.91	1.98	2.02	2.07	2.02	1.93	1.86
CAZ	0.05	0.06	0.06	0.06	0.06	0.06	0.06
CHA	0.22	0.21	0.21	0.22	0.19	0.16	0.14
EUR	0.21	0.21	0.21	0.21	0.20	0.21	0.21
IND	0.35	0.37	0.38	0.39	0.38	0.36	0.34
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.20	0.21	0.21	0.21	0.20	0.18	0.17
MEA	0.09	0.09	0.09	0.09	0.08	0.08	0.07
NEU	0.03	0.03	0.03	0.03	0.03	0.02	0.02
OAS	0.25	0.26	0.26	0.26	0.27	0.26	0.25
REF	0.08	0.08	0.08	0.09	0.09	0.07	0.06
SSA	0.27	0.31	0.32	0.34	0.34	0.32	0.32
USA	0.14	0.15	0.15	0.17	0.18	0.19	0.19

Table 803: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt N2O/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.95	3.37	3.69	4.16	4.93	5.08	5.12	5.41	6.11	6.71
CAZ	0.15	0.16	0.16	0.17	0.22	0.23	0.23	0.24	0.25	0.27
CHA	0.32	0.35	0.41	0.54	0.62	0.76	0.86	0.92	1.11	1.26
EUR	0.52	0.61	0.67	0.74	0.85	0.76	0.71	0.70	0.70	0.71
IND	0.15	0.17	0.18	0.21	0.26	0.31	0.36	0.40	0.47	0.57
JPN	0.04	0.04	0.04	0.05	0.06	0.06	0.05	0.05	0.05	0.05
LAM	0.45	0.51	0.57	0.63	0.78	0.76	0.83	0.93	1.03	1.17
MEA	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.32
NEU	0.07	0.08	0.09	0.09	0.10	0.10	0.09	0.10	0.10	0.10
OAS	0.17	0.19	0.22	0.26	0.33	0.40	0.44	0.48	0.57	0.65
REF	0.31	0.38	0.41	0.46	0.55	0.53	0.33	0.26	0.32	0.30
SSA	0.23	0.25	0.26	0.28	0.31	0.33	0.34	0.37	0.45	0.52
USA	0.46	0.54	0.57	0.58	0.69	0.66	0.64	0.70	0.76	0.79

Table 804: IPCC — Emissions—N2O—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt N2O/yr)

13.1.6 Agriculture—Agricultural Soils—Pasture



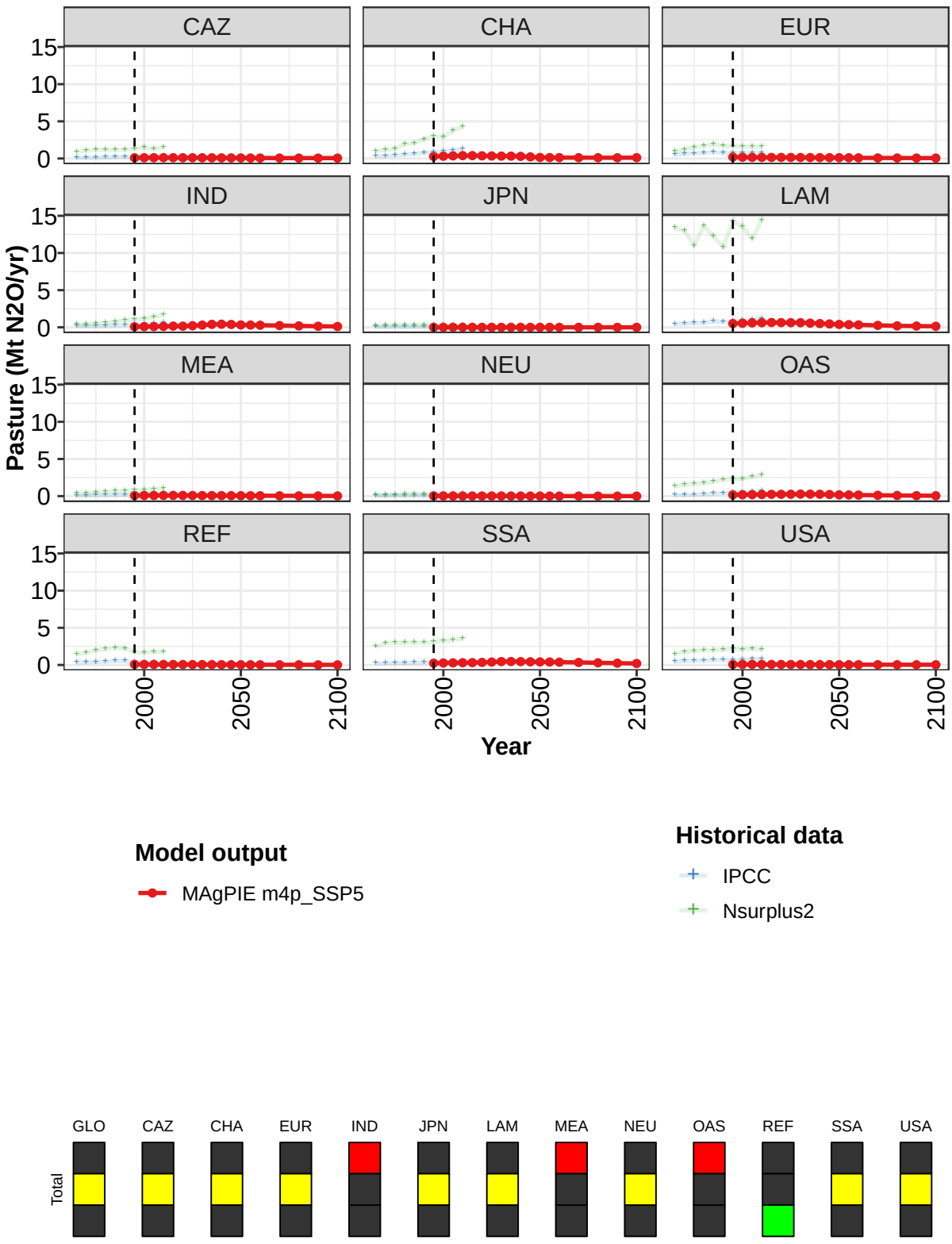


Figure 243: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Pasture (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.85	1.94	2.07	2.18	2.27	2.24	2.31	2.43	2.45	2.31	2.08
CAZ	0.10	0.10	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.09	0.08
CHA	0.28	0.31	0.36	0.39	0.39	0.36	0.34	0.33	0.32	0.29	0.22
EUR	0.19	0.17	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.12	0.11
IND	0.08	0.09	0.11	0.12	0.17	0.16	0.22	0.30	0.40	0.42	0.39
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.51	0.55	0.60	0.62	0.65	0.63	0.63	0.62	0.56	0.51	0.45
MEA	0.08	0.09	0.10	0.10	0.10	0.10	0.09	0.08	0.08	0.07	0.07
NEU	0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.18	0.19	0.20	0.22	0.24	0.25	0.26	0.27	0.27	0.25	0.22
REF	0.08	0.07	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.04	0.04
SSA	0.24	0.26	0.28	0.30	0.31	0.34	0.39	0.46	0.47	0.45	0.43
USA	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05

Table 805: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Pasture (Mt N2O/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.78	1.67	1.54	1.32	1.10	0.93	0.81
CAZ	0.08	0.07	0.07	0.06	0.05	0.05	0.05
CHA	0.14	0.12	0.12	0.11	0.11	0.10	0.11
EUR	0.11	0.10	0.09	0.07	0.07	0.06	0.05
IND	0.32	0.31	0.28	0.24	0.19	0.15	0.11
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.39	0.36	0.32	0.26	0.20	0.17	0.14
MEA	0.06	0.06	0.06	0.05	0.04	0.03	0.03
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.18	0.17	0.15	0.12	0.09	0.07	0.06
REF	0.03	0.03	0.03	0.03	0.02	0.02	0.02
SSA	0.41	0.40	0.37	0.34	0.29	0.24	0.20
USA	0.04	0.04	0.04	0.04	0.03	0.03	0.03

Table 806: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Pasture (Mt N2O/yr) [PART 2/2]

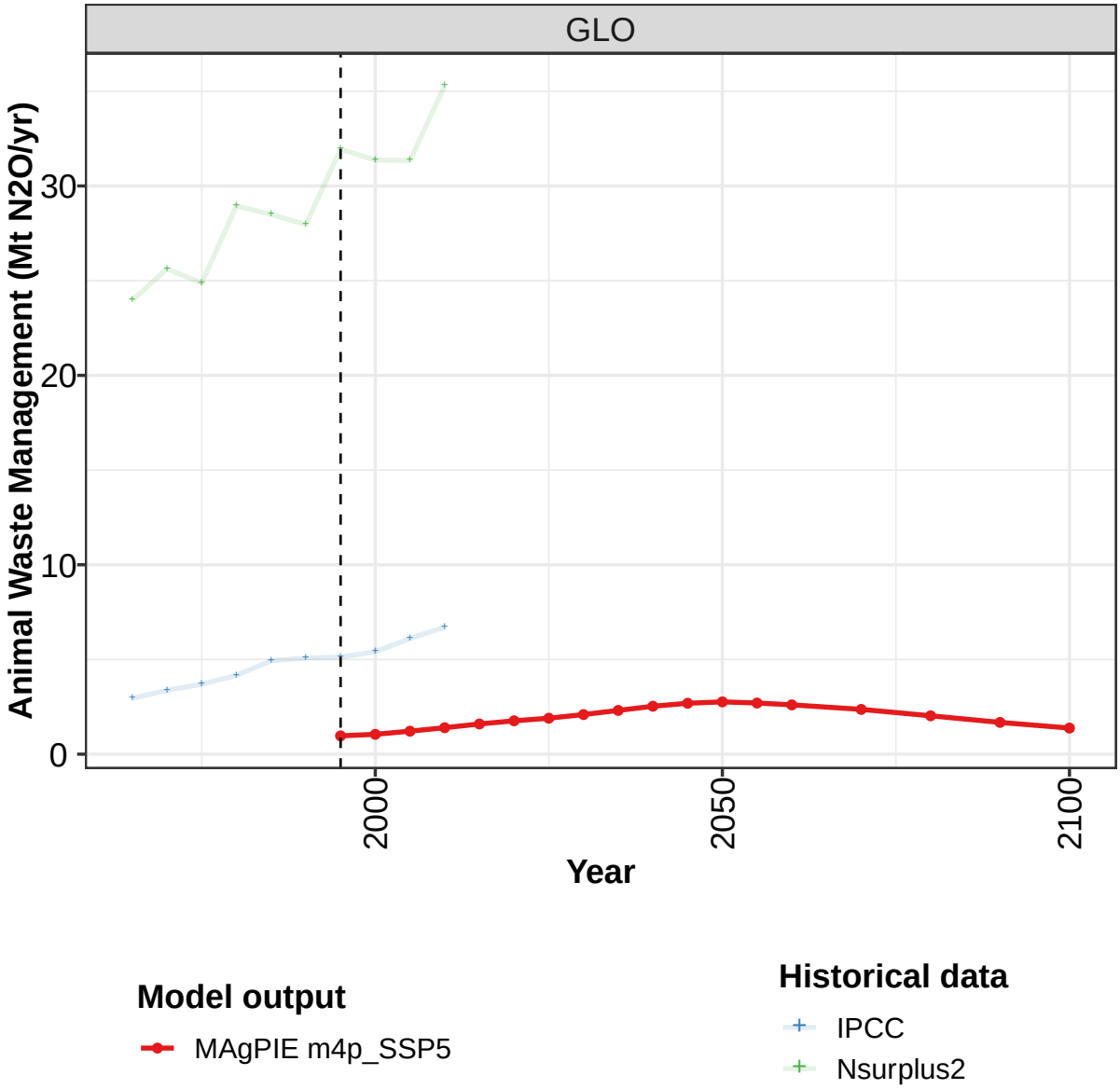
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.95	3.37	3.69	4.16	4.93	5.08	5.12	5.41	6.11	6.71
CAZ	0.15	0.16	0.16	0.17	0.22	0.23	0.23	0.24	0.25	0.27
CHA	0.32	0.35	0.41	0.54	0.62	0.76	0.86	0.92	1.11	1.26
EUR	0.52	0.61	0.67	0.74	0.85	0.76	0.71	0.70	0.70	0.71
IND	0.15	0.17	0.18	0.21	0.26	0.31	0.36	0.40	0.47	0.57
JPN	0.04	0.04	0.04	0.05	0.06	0.06	0.05	0.05	0.05	0.05
LAM	0.45	0.51	0.57	0.63	0.78	0.76	0.83	0.93	1.03	1.17
MEA	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.32
NEU	0.07	0.08	0.09	0.09	0.10	0.10	0.09	0.10	0.10	0.10
OAS	0.17	0.19	0.22	0.26	0.33	0.40	0.44	0.48	0.57	0.65
REF	0.31	0.38	0.41	0.46	0.55	0.53	0.33	0.26	0.32	0.30
SSA	0.23	0.25	0.26	0.28	0.31	0.33	0.34	0.37	0.45	0.52
USA	0.46	0.54	0.57	0.58	0.69	0.66	0.64	0.70	0.76	0.79

Table 807: IPCC — Emissions—N2O—Land—Agriculture—Agricultural Soils—Pasture (Mt N2O/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	24.0	25.6	24.9	29.0	28.5	28.0	31.9	31.4	31.4	35.3
CAZ	0.9	1.0	1.2	1.1	1.2	1.2	1.3	1.5	1.3	1.5
CHA	1.0	1.2	1.3	1.9	2.1	2.6	3.0	2.9	3.8	4.3
EUR	0.9	1.2	1.5	1.7	1.9	1.7	1.6	1.6	1.6	1.6
IND	0.4	0.4	0.5	0.6	0.8	0.9	1.1	1.2	1.4	1.7
JPN	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
LAM	13.4	13.0	11.0	13.6	12.2	10.8	14.3	13.5	11.9	14.4
MEA	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.8	1.0	1.0
NEU	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
OAS	1.3	1.5	1.6	1.7	1.9	2.2	2.3	2.3	2.6	2.9
REF	1.4	1.6	2.0	2.1	2.3	2.2	1.7	1.6	1.8	1.7
SSA	2.4	3.0	3.0	3.0	3.0	3.0	3.1	3.2	3.3	3.6
USA	1.4	1.8	1.9	2.0	1.9	2.1	2.2	2.1	2.2	2.1

Table 808: Nsurplus2 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Pasture (Mt N2O/yr)

13.1.7 Agriculture—Animal Waste Management



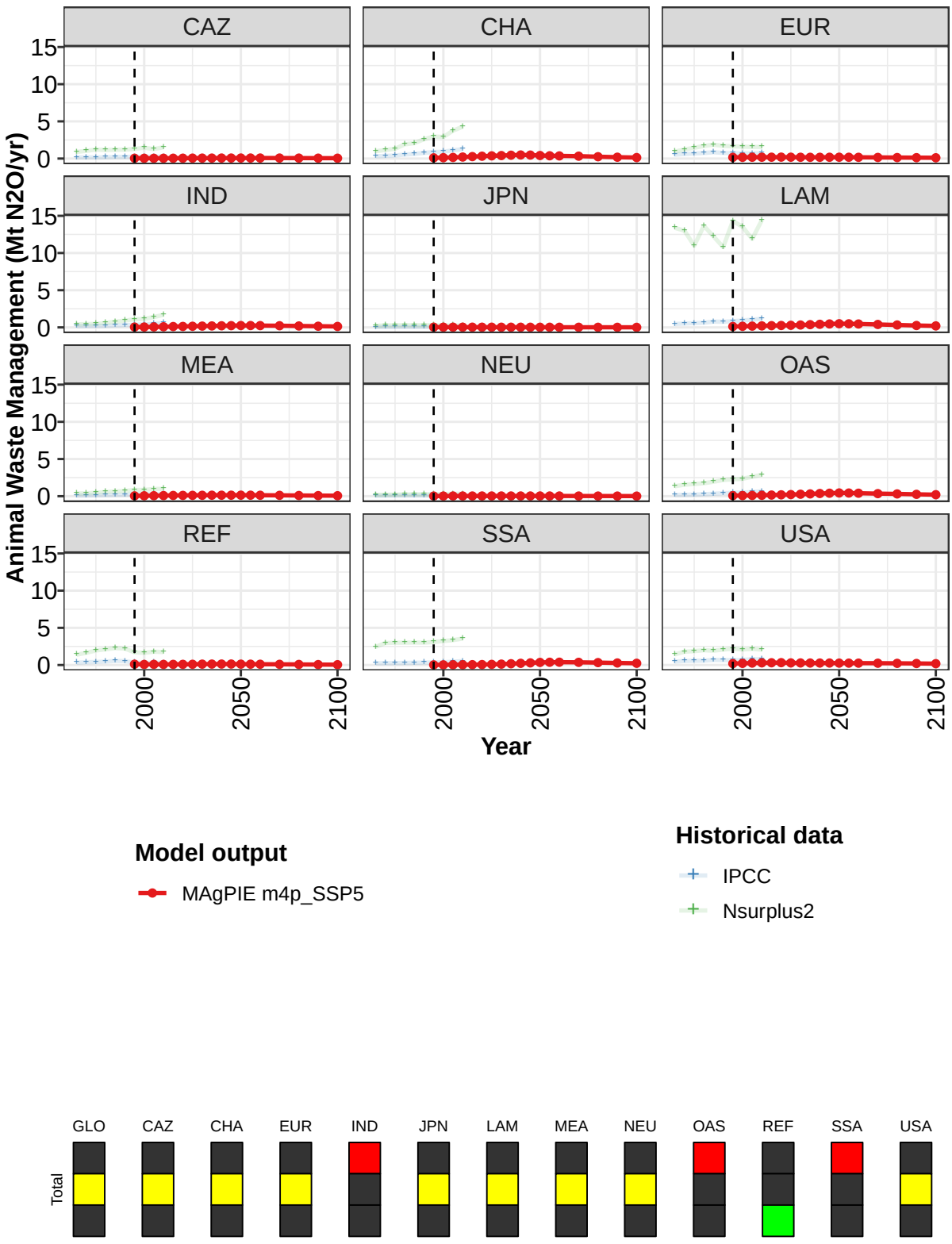


Figure 244: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.97	1.05	1.21	1.40	1.60	1.76	1.90	2.09	2.31	2.53	2.69
CAZ	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.07
CHA	0.10	0.12	0.15	0.21	0.26	0.32	0.37	0.40	0.45	0.48	0.47
EUR	0.16	0.17	0.18	0.18	0.18	0.19	0.18	0.17	0.17	0.17	0.17
IND	0.04	0.05	0.06	0.08	0.11	0.13	0.15	0.17	0.19	0.22	0.23
JPN	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.12	0.15	0.17	0.20	0.23	0.25	0.28	0.32	0.37	0.42	0.46
MEA	0.05	0.06	0.07	0.09	0.10	0.11	0.11	0.12	0.13	0.13	0.13
NEU	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OAS	0.08	0.09	0.10	0.12	0.16	0.18	0.22	0.27	0.31	0.36	0.40
REF	0.11	0.08	0.09	0.08	0.09	0.09	0.10	0.12	0.13	0.13	0.13
SSA	0.02	0.03	0.03	0.04	0.05	0.06	0.09	0.12	0.17	0.23	0.29
USA	0.20	0.23	0.26	0.29	0.31	0.32	0.29	0.28	0.27	0.27	0.27

Table 809: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2.76	2.70	2.60	2.37	2.03	1.68	1.38
CAZ	0.07	0.07	0.07	0.07	0.06	0.05	0.05
CHA	0.41	0.37	0.36	0.32	0.25	0.18	0.13
EUR	0.18	0.18	0.17	0.15	0.14	0.12	0.11
IND	0.25	0.25	0.24	0.22	0.19	0.16	0.13
JPN	0.02	0.02	0.02	0.01	0.01	0.01	0.01
LAM	0.49	0.48	0.46	0.39	0.32	0.25	0.20
MEA	0.14	0.14	0.13	0.12	0.10	0.08	0.07
NEU	0.03	0.03	0.03	0.03	0.02	0.02	0.01
OAS	0.44	0.43	0.40	0.35	0.31	0.25	0.20
REF	0.12	0.11	0.11	0.10	0.08	0.06	0.05
SSA	0.35	0.37	0.38	0.36	0.33	0.28	0.24
USA	0.26	0.26	0.25	0.25	0.23	0.21	0.19

Table 810: MAgPIE m4p_SSP5 — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr) [PART 2/2]

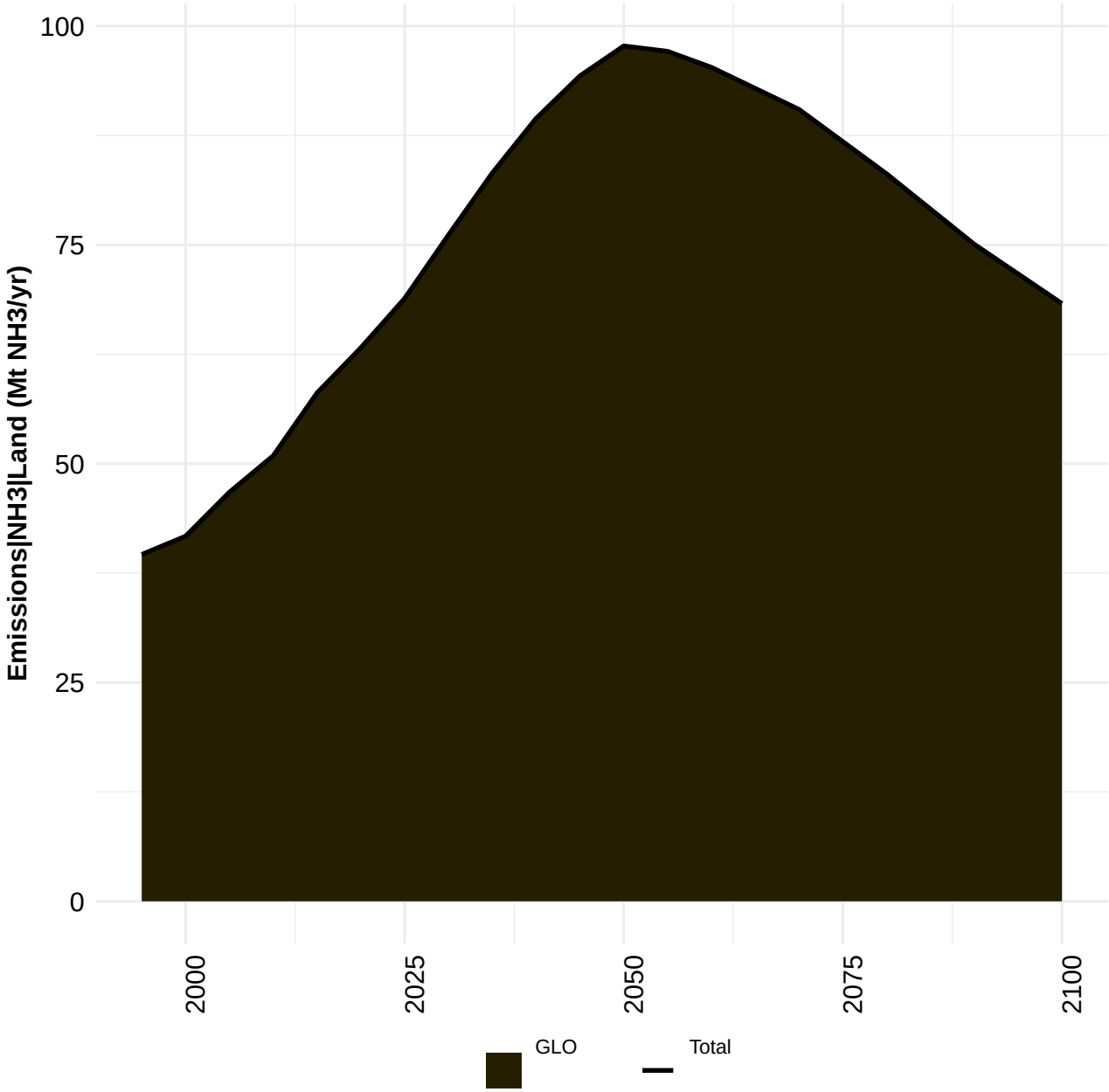
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.95	3.37	3.69	4.16	4.93	5.08	5.12	5.41	6.11	6.71
CAZ	0.15	0.16	0.16	0.17	0.22	0.23	0.23	0.24	0.25	0.27
CHA	0.32	0.35	0.41	0.54	0.62	0.76	0.86	0.92	1.11	1.26
EUR	0.52	0.61	0.67	0.74	0.85	0.76	0.71	0.70	0.70	0.71
IND	0.15	0.17	0.18	0.21	0.26	0.31	0.36	0.40	0.47	0.57
JPN	0.04	0.04	0.04	0.05	0.06	0.06	0.05	0.05	0.05	0.05
LAM	0.45	0.51	0.57	0.63	0.78	0.76	0.83	0.93	1.03	1.17
MEA	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.32
NEU	0.07	0.08	0.09	0.09	0.10	0.10	0.09	0.10	0.10	0.10
OAS	0.17	0.19	0.22	0.26	0.33	0.40	0.44	0.48	0.57	0.65
REF	0.31	0.38	0.41	0.46	0.55	0.53	0.33	0.26	0.32	0.30
SSA	0.23	0.25	0.26	0.28	0.31	0.33	0.34	0.37	0.45	0.52
USA	0.46	0.54	0.57	0.58	0.69	0.66	0.64	0.70	0.76	0.79

Table 811: IPCC — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	24.0	25.6	24.9	29.0	28.5	28.0	31.9	31.4	31.4	35.3
CAZ	0.9	1.0	1.2	1.1	1.2	1.2	1.3	1.5	1.3	1.5
CHA	1.0	1.2	1.3	1.9	2.1	2.6	3.0	2.9	3.8	4.3
EUR	0.9	1.2	1.5	1.7	1.9	1.7	1.6	1.6	1.6	1.6
IND	0.4	0.4	0.5	0.6	0.8	0.9	1.1	1.2	1.4	1.7
JPN	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
LAM	13.4	13.0	11.0	13.6	12.2	10.8	14.3	13.5	11.9	14.4
MEA	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.8	1.0	1.0
NEU	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
OAS	1.3	1.5	1.6	1.7	1.9	2.2	2.3	2.3	2.6	2.9
REF	1.4	1.6	2.0	2.1	2.3	2.2	1.7	1.6	1.8	1.7
SSA	2.4	3.0	3.0	3.0	3.0	3.0	3.1	3.2	3.3	3.6
USA	1.4	1.8	1.9	2.0	1.9	2.1	2.2	2.1	2.2	2.1

Table 812: Nsurplus2 — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr)

14 NH3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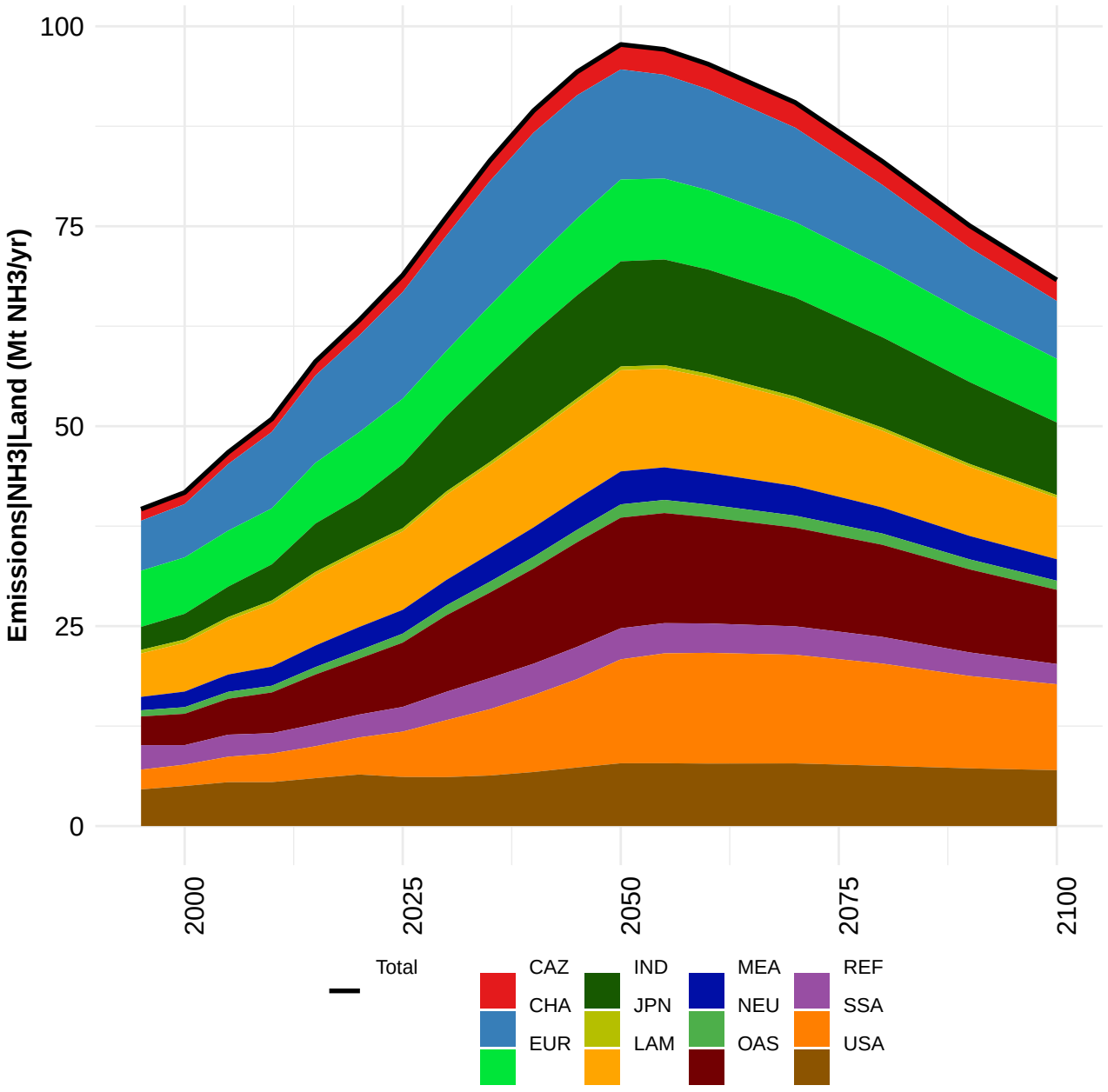
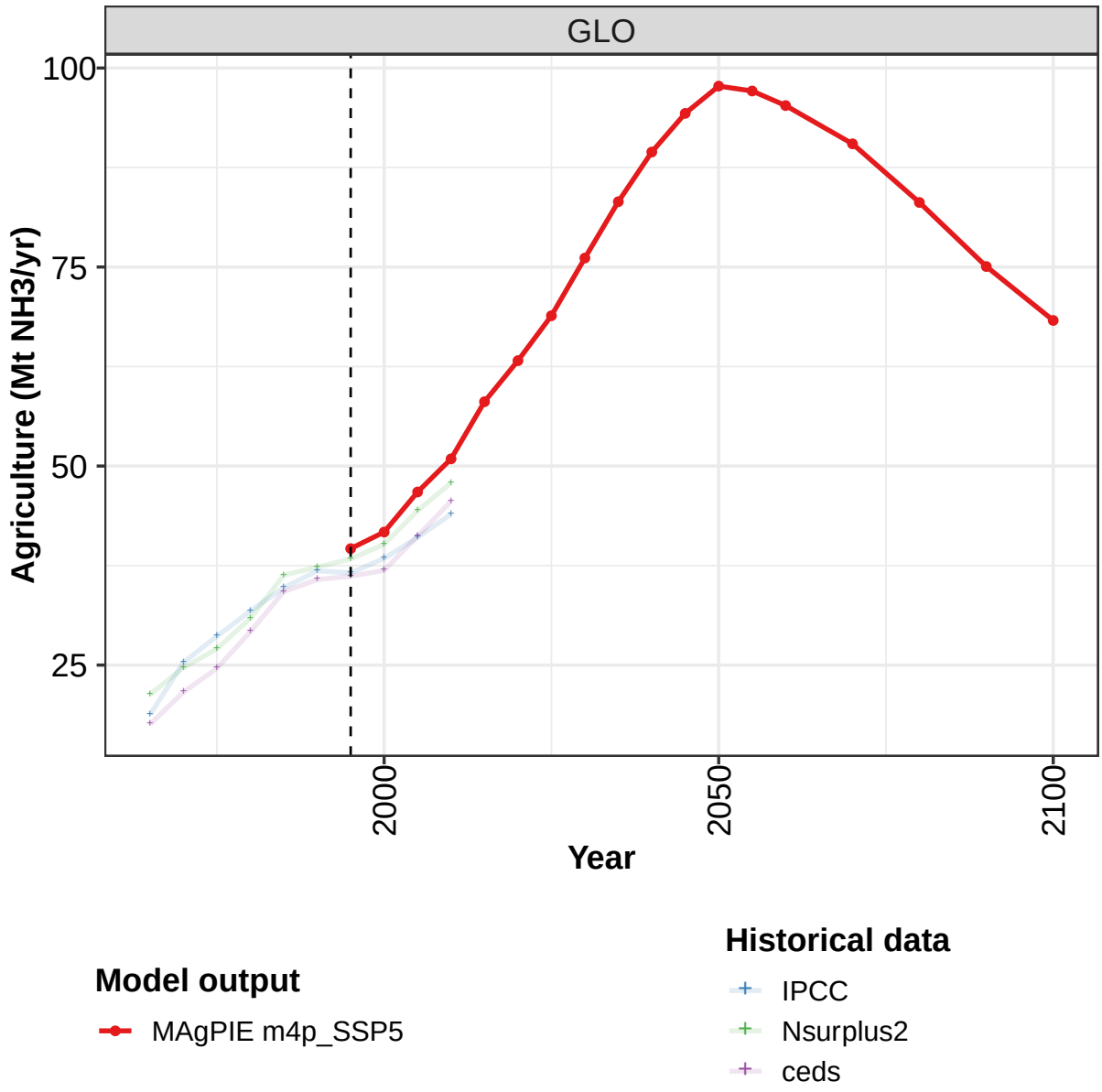
2025
2050
2075
2100
GLO
Total


Emissions|NH3|Land (Mt NH3/yr)
100
75
50
25
0
2000
2025
2050
2075
2100
Total
CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA

14.1 Land

14.1.1 Agriculture



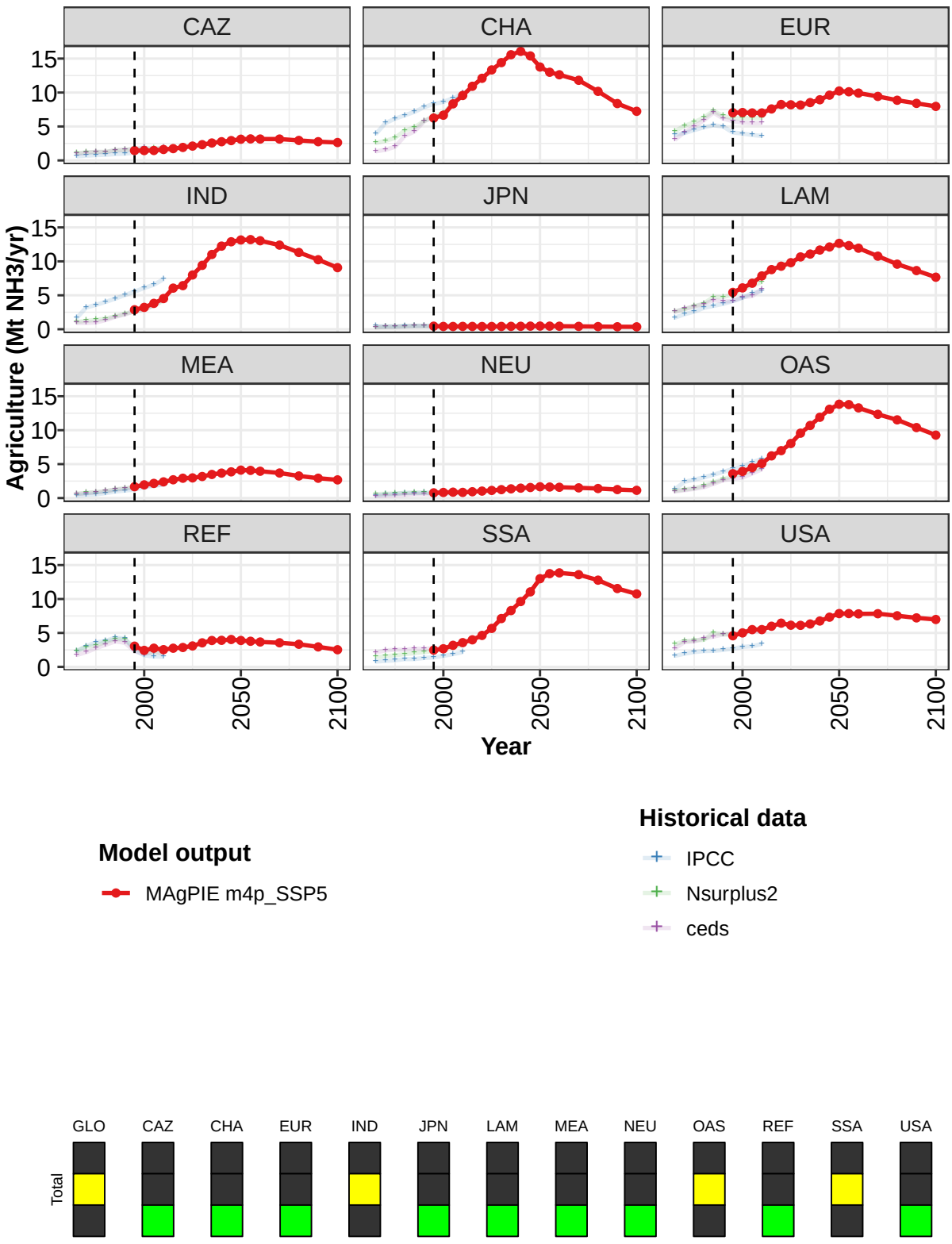


Figure 245: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	39.6	41.7	46.7	50.9	58.1	63.2	68.9	76.1	83.2	89.4	94.3
CAZ	1.5	1.5	1.5	1.6	1.7	1.9	2.1	2.3	2.6	2.8	2.9
CHA	6.2	6.7	8.3	9.6	10.9	12.1	13.3	14.4	15.6	16.1	15.4
EUR	7.0	7.1	7.0	7.0	7.6	8.2	8.2	8.2	8.5	8.9	9.6
IND	2.9	3.2	3.8	4.5	6.1	6.4	8.0	9.4	11.0	12.2	12.9
JPN	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
LAM	5.4	6.1	6.8	7.9	8.8	9.3	9.8	10.7	11.1	11.7	12.1
MEA	1.7	1.9	2.2	2.4	2.7	2.9	3.0	3.2	3.5	3.7	3.9
NEU	0.8	0.8	0.9	0.8	0.9	1.0	1.1	1.2	1.4	1.5	1.6
OAS	3.6	3.9	4.5	5.1	6.2	7.0	8.0	9.6	10.7	11.9	13.1
REF	3.1	2.4	2.8	2.5	2.8	2.9	3.1	3.5	3.9	3.9	4.0
SSA	2.5	2.7	3.2	3.6	4.0	4.6	5.7	7.1	8.3	9.6	11.1
USA	4.6	5.0	5.5	5.5	6.0	6.4	6.1	6.1	6.3	6.8	7.3

Table 813: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture (Mt NH3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	97.7	97.1	95.3	90.5	83.1	75.1	68.3
CAZ	3.1	3.2	3.1	3.1	2.9	2.8	2.6
CHA	13.8	13.0	12.6	11.8	10.2	8.4	7.2
EUR	10.2	10.1	9.9	9.4	8.9	8.4	8.0
IND	13.2	13.2	13.0	12.4	11.3	10.2	9.1
JPN	0.5	0.5	0.4	0.4	0.4	0.4	0.4
LAM	12.7	12.3	11.9	10.8	9.6	8.6	7.7
MEA	4.1	4.1	4.0	3.7	3.3	2.9	2.7
NEU	1.7	1.6	1.6	1.5	1.4	1.3	1.1
OAS	13.8	13.8	13.3	12.3	11.5	10.4	9.3
REF	3.9	3.8	3.7	3.6	3.3	2.9	2.5
SSA	13.0	13.7	13.8	13.6	12.8	11.5	10.7
USA	7.9	7.9	7.8	7.8	7.5	7.2	7.0

Table 814: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture (Mt NH3/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	18.8	25.3	28.6	31.8	34.7	36.8	36.6	38.4	41.0	44.0
CAZ	0.6	0.7	0.8	0.8	0.9	1.0	1.2	1.4	1.5	1.5
CHA	3.9	5.5	6.1	6.6	7.1	7.8	8.3	8.6	9.2	9.8
EUR	3.8	4.0	4.5	4.9	5.2	5.0	4.1	4.0	3.8	3.6
IND	1.6	3.2	3.6	4.0	4.5	5.0	5.5	6.1	6.6	7.4
JPN	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4
LAM	1.7	2.2	2.6	3.1	3.4	3.7	4.1	4.6	5.3	5.6
MEA	0.4	0.5	0.5	0.7	1.0	1.1	1.2	1.6	1.8	2.0
NEU	0.4	0.5	0.6	0.8	0.7	0.8	0.8	0.8	0.9	0.9
OAS	1.3	2.4	2.7	3.1	3.4	3.9	4.3	4.7	5.3	5.8
REF	2.3	3.1	3.6	3.8	4.3	4.2	2.5	1.7	1.5	1.5
SSA	0.8	0.9	1.0	1.1	1.1	1.3	1.4	1.6	1.9	2.2
USA	1.6	1.9	2.2	2.3	2.4	2.5	2.7	2.9	3.0	3.4

Table 815: ceds — Emissions—NH3—Land—Agriculture (Mt NH3/yr)

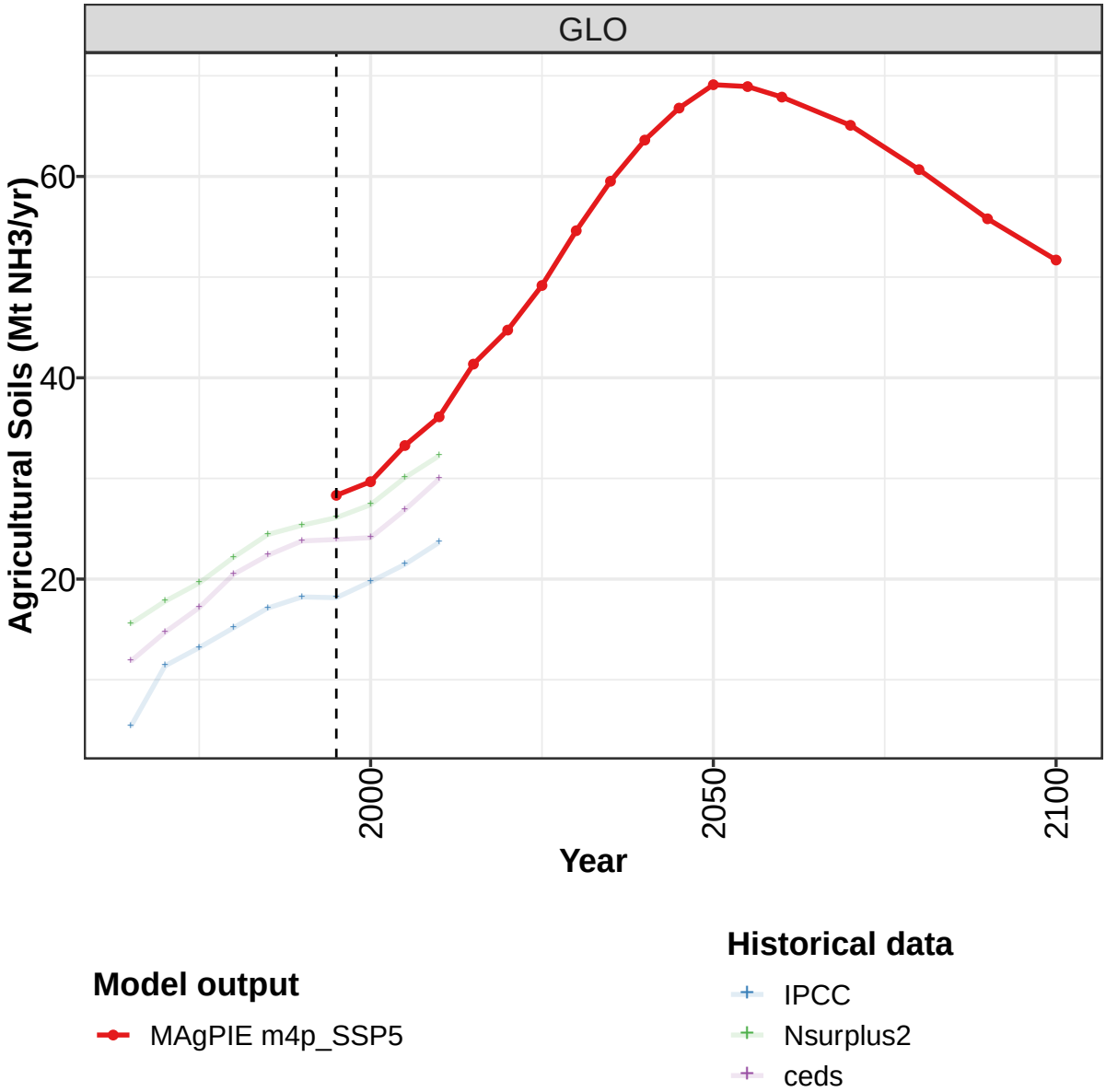
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	21.3	24.7	27.0	30.9	36.3	37.3	38.3	40.2	44.4	47.9
CAZ	1.1	1.2	1.2	1.3	1.5	1.5	1.7	1.8	1.8	1.8
CHA	2.6	2.9	3.3	4.4	4.9	5.8	6.6	7.0	8.4	9.7
EUR	4.3	5.1	5.6	6.3	7.3	6.5	6.2	6.2	6.2	6.2
IND	1.1	1.3	1.4	1.6	1.9	2.3	2.7	2.9	3.5	4.2
JPN	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4
LAM	2.6	3.0	3.4	3.8	4.8	4.7	5.2	5.9	6.4	7.0
MEA	0.6	0.8	0.9	1.0	1.3	1.4	1.6	1.9	2.2	2.4
NEU	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.8
OAS	1.1	1.3	1.5	1.8	2.3	2.8	3.3	3.6	4.0	4.5
REF	2.3	3.0	3.1	3.7	4.1	4.0	2.9	2.1	2.2	2.1
SSA	1.4	1.6	1.7	1.9	2.0	2.2	2.3	2.6	2.9	3.2
USA	3.3	3.8	3.9	4.0	5.0	4.8	4.8	5.1	5.6	5.6

Table 816: IPCC — Emissions—NH3—Land—Agriculture (Mt NH3/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	17.6	21.6	24.6	29.2	34.2	35.7	36.2	36.9	41.2	45.6
CAZ	1.0	1.1	1.3	1.2	1.5	1.6	1.7	1.9	1.6	1.9
CHA	1.3	1.6	2.0	3.6	4.3	5.7	6.5	6.4	8.5	9.8
EUR	3.0	4.2	5.0	5.9	7.1	6.1	5.8	5.6	5.5	5.5
IND	0.9	0.9	1.0	1.3	1.8	2.2	2.6	2.9	3.6	4.4
JPN	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4
LAM	2.6	3.0	3.4	3.7	4.3	4.1	4.2	4.7	4.9	5.9
MEA	0.6	0.7	0.8	1.0	1.3	1.4	1.6	1.8	1.8	2.1
NEU	0.3	0.3	0.4	0.5	0.6	0.6	0.5	0.6	0.7	0.7
OAS	1.0	1.1	1.4	1.6	2.1	2.6	2.8	3.0	3.6	4.2
REF	1.7	2.2	2.7	3.3	3.8	3.5	2.3	1.9	2.2	2.0
SSA	2.1	2.4	2.5	2.5	2.7	2.7	2.7	2.8	3.1	3.6
USA	2.7	3.7	3.8	4.2	4.5	4.8	4.9	5.0	5.3	5.2

Table 817: Nsurplus2 — Emissions—NH3—Land—Agriculture (Mt NH3/yr)

14.1.2 Agriculture—Agricultural Soils



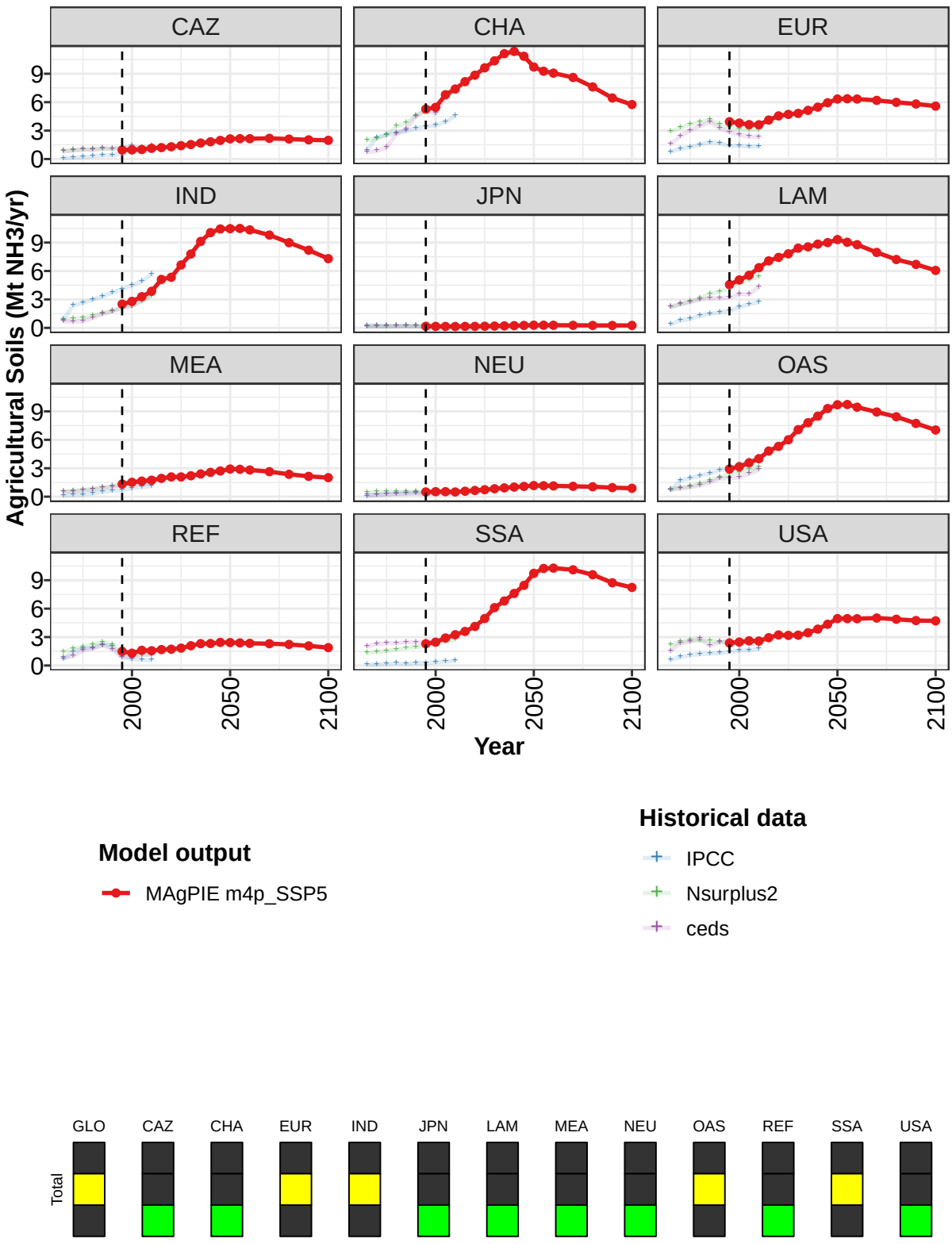


Figure 246: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	28.3	29.7	33.3	36.1	41.4	44.7	49.2	54.6	59.5	63.6	66.8
CAZ	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.7	1.8	2.0
CHA	5.3	5.5	6.8	7.4	8.2	8.8	9.6	10.4	11.1	11.4	10.8
EUR	3.9	3.8	3.6	3.6	4.1	4.6	4.7	4.8	5.1	5.5	5.9
IND	2.5	2.8	3.3	3.9	5.1	5.3	6.6	7.8	9.1	10.1	10.4
JPN	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
LAM	4.6	5.1	5.6	6.3	7.1	7.4	7.8	8.4	8.5	8.8	9.0
MEA	1.3	1.5	1.6	1.7	1.9	2.1	2.1	2.2	2.4	2.6	2.7
NEU	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1
OAS	2.9	3.2	3.6	4.0	4.8	5.3	6.0	7.1	7.8	8.5	9.3
REF	1.5	1.3	1.6	1.6	1.7	1.7	1.8	2.1	2.3	2.3	2.4
SSA	2.3	2.5	2.9	3.2	3.6	4.1	5.0	6.1	6.8	7.6	8.5
USA	2.4	2.5	2.6	2.6	2.9	3.2	3.2	3.2	3.5	3.8	4.4

Table 818: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	69.1	68.9	67.9	65.1	60.7	55.8	51.7
CAZ	2.1	2.2	2.1	2.2	2.1	2.0	2.0
CHA	9.7	9.3	9.1	8.6	7.6	6.4	5.7
EUR	6.3	6.4	6.3	6.2	6.0	5.8	5.6
IND	10.5	10.5	10.3	9.8	9.0	8.2	7.3
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	9.3	9.0	8.8	8.0	7.2	6.7	6.1
MEA	2.9	2.9	2.8	2.6	2.4	2.1	2.0
NEU	1.2	1.2	1.1	1.1	1.0	1.0	0.9
OAS	9.7	9.7	9.4	8.9	8.4	7.7	7.0
REF	2.4	2.4	2.3	2.3	2.2	2.1	1.9
SSA	9.7	10.2	10.3	10.1	9.6	8.7	8.2
USA	4.9	5.0	4.9	5.0	4.9	4.7	4.7

Table 819: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.3	11.4	13.2	15.2	17.1	18.2	18.1	19.7	21.5	23.6
CAZ	0.1	0.1	0.2	0.3	0.4	0.4	0.6	0.7	0.8	0.9
CHA	0.9	2.3	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.5
EUR	0.8	1.1	1.3	1.5	1.8	1.7	1.4	1.4	1.3	1.3
IND	0.8	2.4	2.6	3.0	3.3	3.7	4.1	4.5	4.9	5.6
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
LAM	0.4	0.8	0.9	1.3	1.5	1.6	1.8	2.2	2.5	2.7
MEA	0.1	0.2	0.2	0.3	0.5	0.6	0.7	0.9	1.0	1.1
NEU	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5
OAS	0.7	1.7	1.9	2.2	2.5	2.8	3.1	3.3	3.8	4.1
REF	0.6	1.5	1.8	1.9	2.2	2.0	1.0	0.7	0.6	0.6
SSA	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5
USA	0.6	0.9	1.1	1.2	1.3	1.3	1.4	1.6	1.6	1.7

Table 820: ceds — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr)

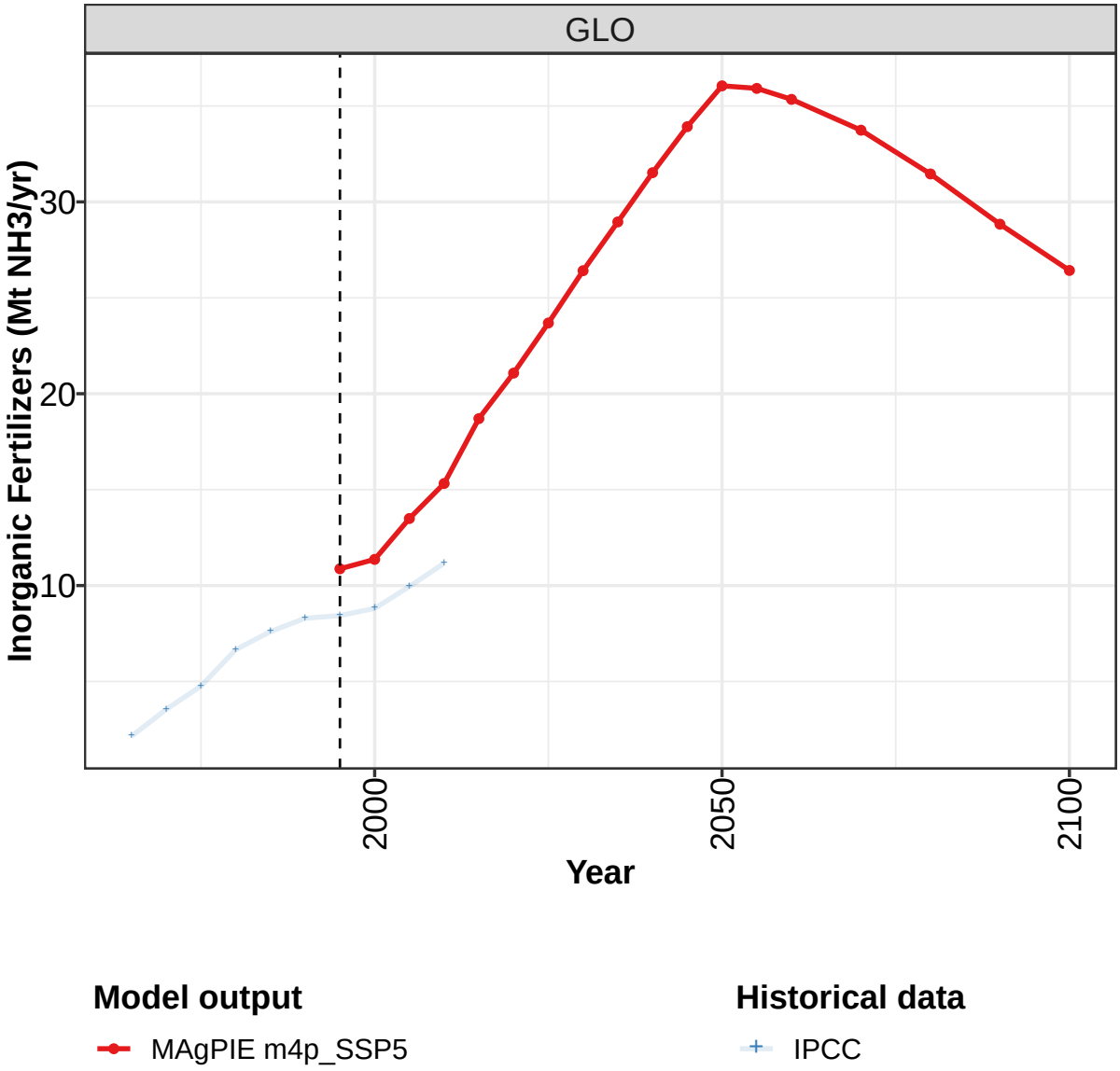
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	15.6	17.8	19.6	22.2	24.4	25.3	26.1	27.4	30.1	32.3
CAZ	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.3
CHA	1.9	2.2	2.5	3.4	3.8	4.6	5.2	5.4	6.6	7.3
EUR	2.9	3.3	3.6	3.9	4.1	3.6	3.3	3.2	3.1	3.1
IND	0.8	1.0	1.1	1.3	1.5	1.8	2.1	2.3	2.8	3.4
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	2.2	2.5	2.8	3.1	3.6	3.8	4.2	4.7	5.1	5.4
MEA	0.5	0.6	0.7	0.8	0.9	1.1	1.3	1.5	1.6	1.7
NEU	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4
OAS	0.8	1.0	1.1	1.4	1.7	2.0	2.3	2.6	2.8	3.1
REF	1.4	1.8	2.0	2.2	2.5	2.2	1.4	1.1	1.1	1.2
SSA	1.3	1.4	1.5	1.7	1.8	1.9	2.1	2.3	2.5	2.7
USA	2.2	2.5	2.7	2.6	2.6	2.5	2.4	2.4	2.6	2.6

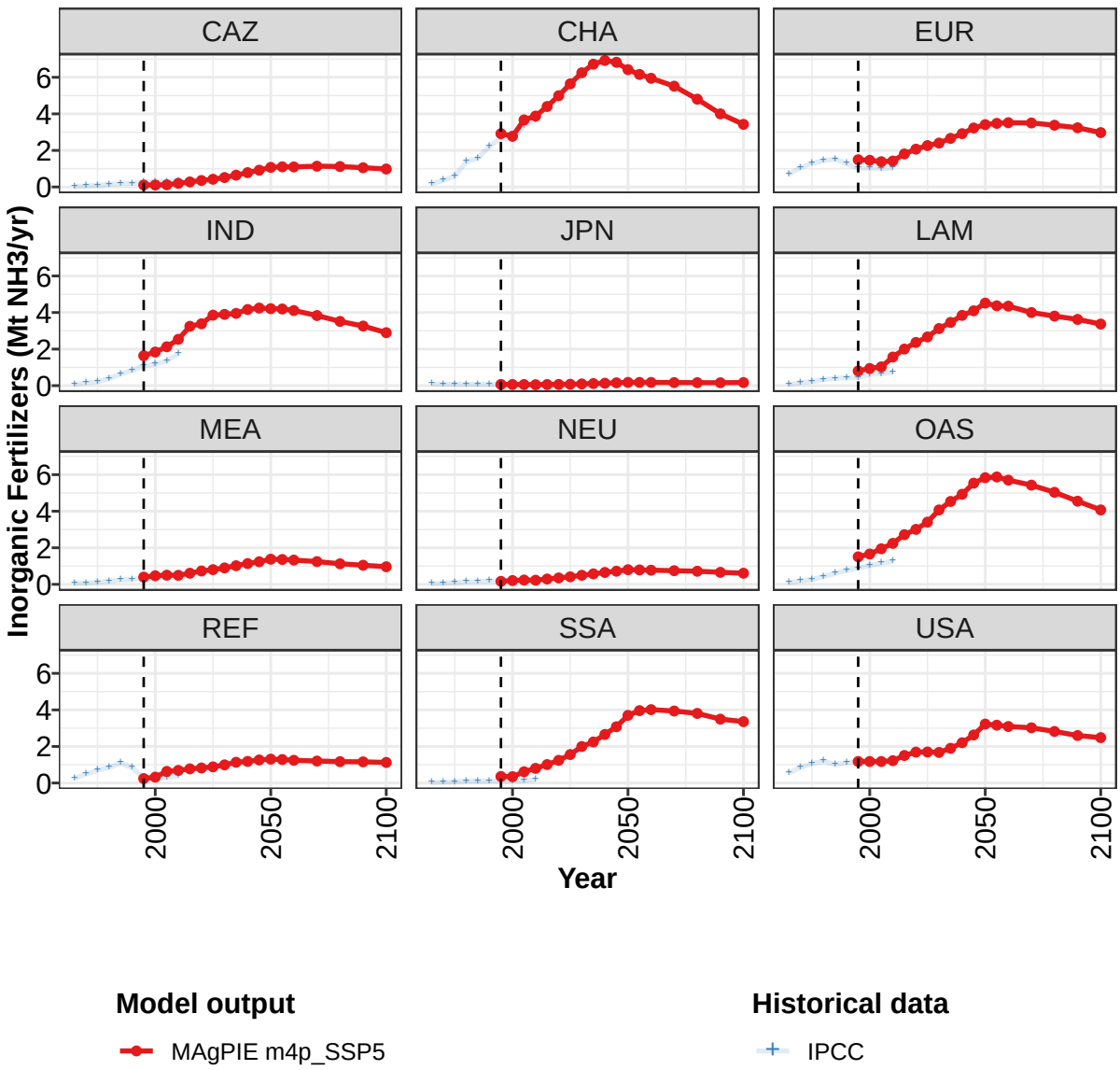
Table 821: IPCC — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.8	14.7	17.2	20.5	22.4	23.8	23.9	24.1	26.9	29.9
CAZ	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.4	1.0	1.4
CHA	0.7	0.9	1.2	2.7	3.2	4.5	5.1	4.8	6.6	7.3
EUR	1.6	2.4	3.0	3.5	3.9	3.3	2.8	2.6	2.4	2.4
IND	0.7	0.6	0.7	1.0	1.5	1.7	2.1	2.3	2.9	3.5
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	2.2	2.5	2.7	3.0	3.1	3.2	3.2	3.6	3.5	4.3
MEA	0.5	0.5	0.7	0.8	1.0	1.0	1.2	1.3	1.3	1.4
NEU	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3
OAS	0.7	0.8	1.0	1.2	1.5	1.9	1.9	2.0	2.4	2.8
REF	0.8	1.0	1.6	1.8	2.1	1.7	0.8	0.9	1.2	1.1
SSA	2.0	2.3	2.4	2.3	2.5	2.4	2.5	2.5	2.7	3.1
USA	1.5	2.4	2.5	2.9	2.1	2.5	2.6	2.3	2.3	2.1

Table 822: Nsurplus2 — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr)

14.1.3 Agriculture—Agricultural Soils—Inorganic Fertilizers





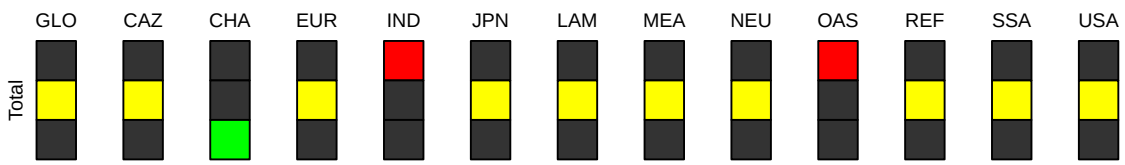


Figure 247: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.9	11.4	13.5	15.3	18.7	21.1	23.7	26.4	29.0	31.5	33.9
CAZ	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.5	0.6	0.8	0.9
CHA	2.9	2.8	3.7	3.9	4.4	5.0	5.6	6.2	6.7	6.9	6.8
EUR	1.5	1.5	1.4	1.4	1.8	2.1	2.3	2.4	2.7	2.9	3.2
IND	1.6	1.8	2.1	2.5	3.2	3.4	3.9	3.9	4.0	4.2	4.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
LAM	0.8	0.9	1.0	1.6	2.0	2.4	2.7	3.1	3.5	3.8	4.1
MEA	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2
NEU	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7
OAS	1.5	1.7	1.9	2.2	2.7	3.0	3.4	4.1	4.5	4.9	5.5
REF	0.2	0.3	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3
SSA	0.4	0.3	0.6	0.8	1.0	1.2	1.6	2.0	2.2	2.7	3.1
USA	1.2	1.2	1.2	1.2	1.5	1.7	1.7	1.7	1.9	2.2	2.6

Table 823: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NH3/yr) [PART 1/2]

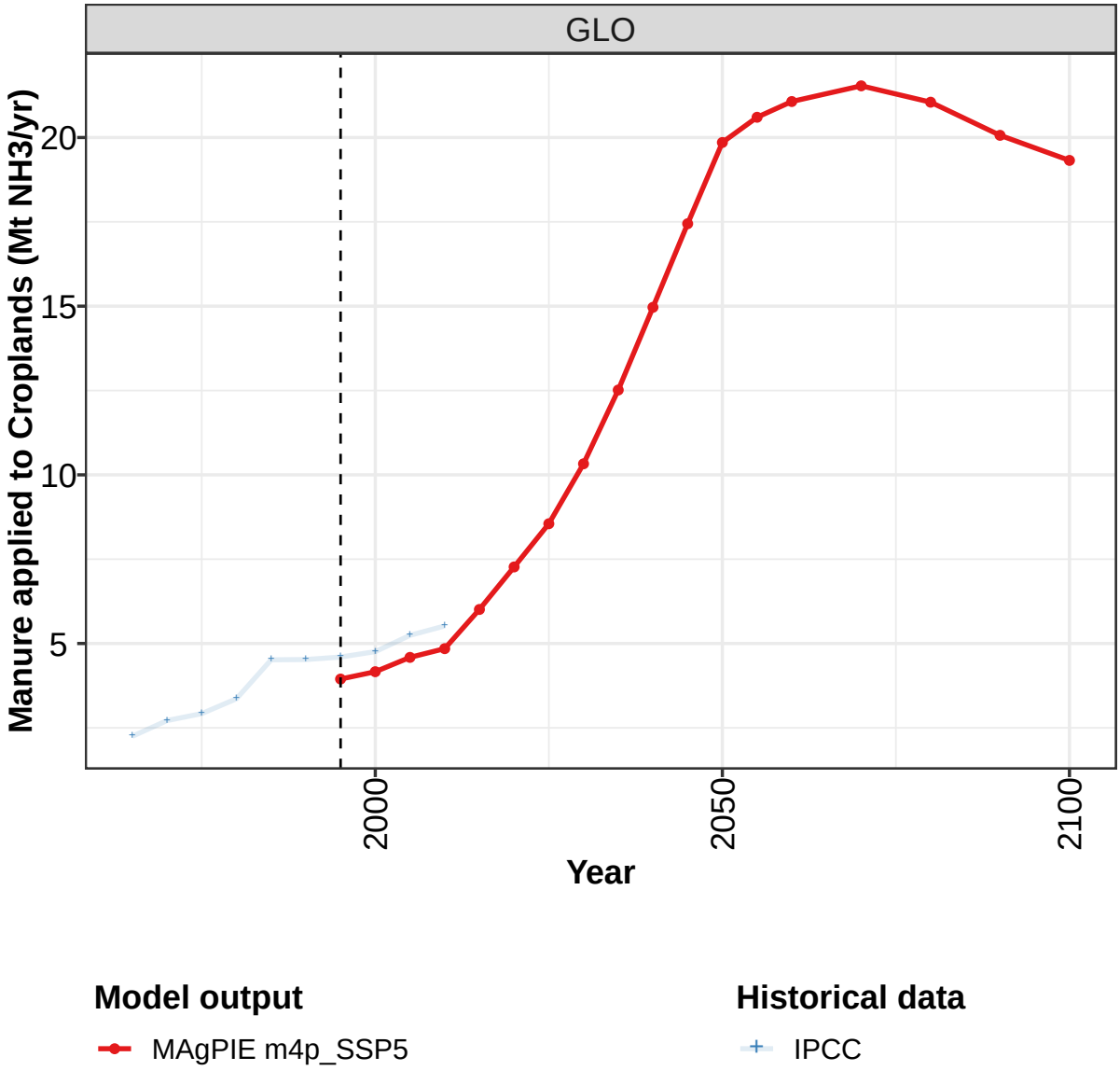
	2050	2055	2060	2070	2080	2090	2100
GLO	36.1	35.9	35.3	33.7	31.5	28.8	26.4
CAZ	1.1	1.1	1.1	1.1	1.1	1.1	1.0
CHA	6.4	6.2	5.9	5.5	4.8	4.0	3.4
EUR	3.4	3.5	3.5	3.5	3.4	3.2	3.0
IND	4.2	4.2	4.1	3.8	3.5	3.3	2.9
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	4.5	4.4	4.3	4.0	3.8	3.6	3.4
MEA	1.4	1.4	1.3	1.2	1.1	1.0	1.0
NEU	0.8	0.8	0.8	0.7	0.7	0.7	0.6
OAS	5.8	5.9	5.7	5.4	5.0	4.5	4.1
REF	1.3	1.3	1.2	1.2	1.2	1.2	1.1
SSA	3.7	4.0	4.0	3.9	3.8	3.5	3.4
USA	3.2	3.2	3.1	3.0	2.8	2.6	2.5

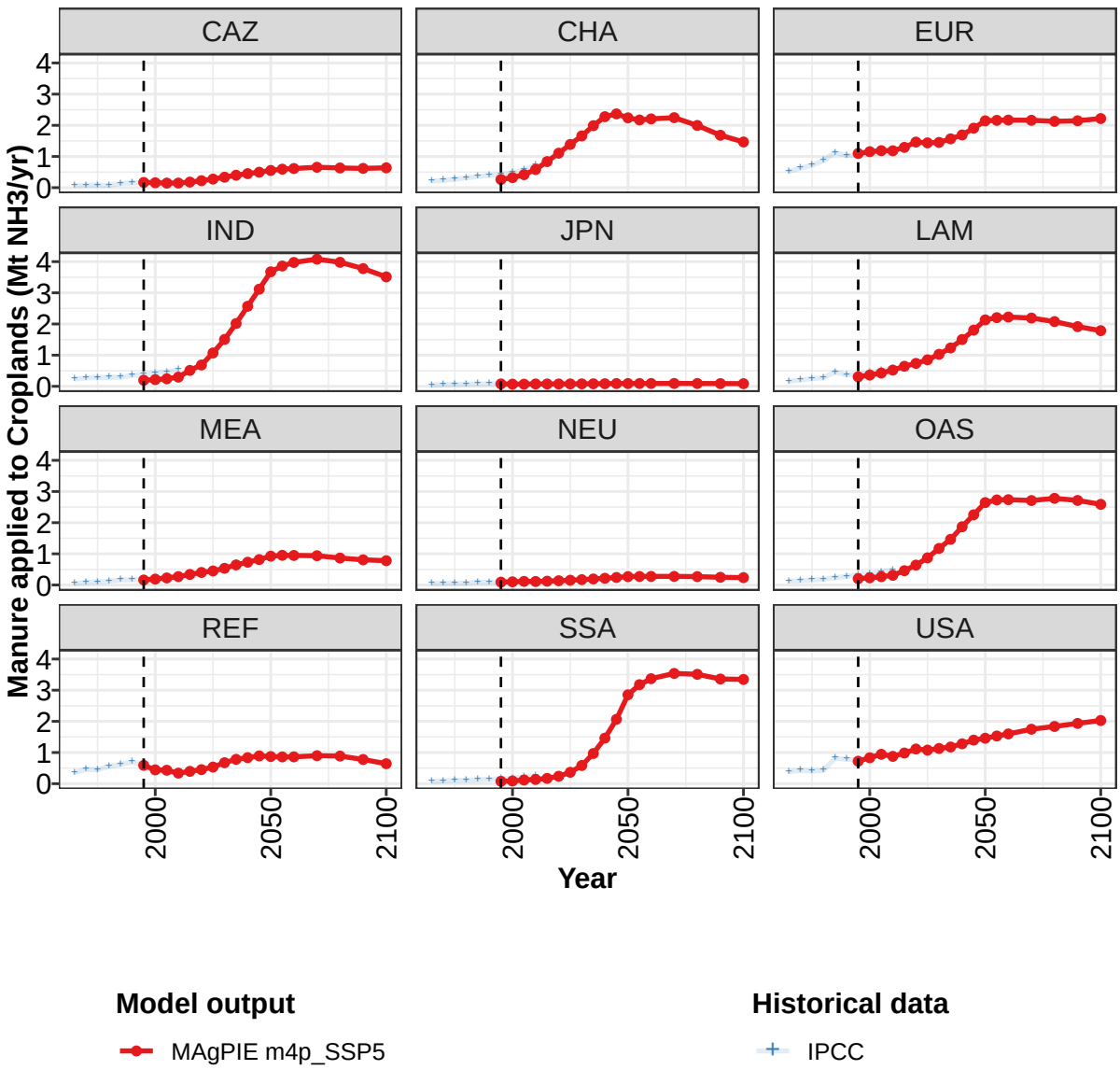
Table 824: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NH3/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.1	3.5	4.8	6.7	7.6	8.3	8.4	8.8	9.9	11.2
CAZ	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4
CHA	0.2	0.4	0.6	1.4	1.6	2.2	2.7	2.6	3.3	3.6
EUR	0.7	1.1	1.3	1.4	1.5	1.3	1.0	1.0	1.0	1.0
IND	0.1	0.1	0.2	0.4	0.6	0.8	1.1	1.2	1.4	1.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.6	0.6	0.7
MEA	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4
NEU	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.1	0.2	0.3	0.4	0.6	0.8	0.9	1.0	1.2	1.3
REF	0.2	0.5	0.7	0.9	1.1	0.8	0.3	0.3	0.3	0.4
SSA	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
USA	0.6	0.8	1.1	1.2	1.0	1.1	1.2	1.1	1.1	1.2

Table 825: IPCC — Emissions—NH3—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NH3/yr)

14.1.4 Agriculture—Agricultural Soils—Manure applied to Croplands





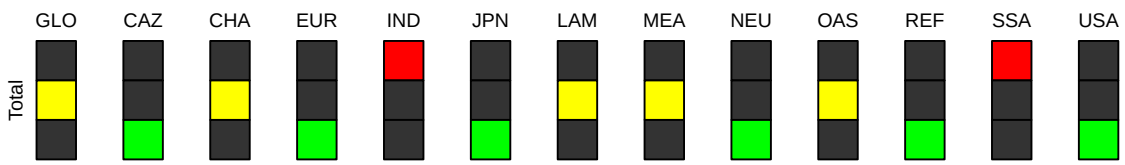


Figure 248: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.9	4.2	4.6	4.8	6.0	7.3	8.6	10.3	12.5	15.0	17.4
CAZ	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5
CHA	0.3	0.3	0.4	0.6	0.8	1.1	1.4	1.7	2.0	2.3	2.4
EUR	1.1	1.2	1.2	1.2	1.3	1.5	1.4	1.5	1.6	1.7	1.9
IND	0.2	0.2	0.2	0.3	0.5	0.7	1.1	1.5	2.0	2.6	3.1
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.3	0.4	0.4	0.5	0.6	0.7	0.9	1.0	1.2	1.5	1.8
MEA	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
OAS	0.2	0.2	0.3	0.3	0.5	0.6	0.9	1.2	1.5	1.9	2.3
REF	0.6	0.4	0.4	0.3	0.4	0.5	0.5	0.7	0.8	0.8	0.9
SSA	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.6	1.0	1.5	2.1
USA	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.3	1.4

Table 826: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NH3/yr) [PART 1/2]

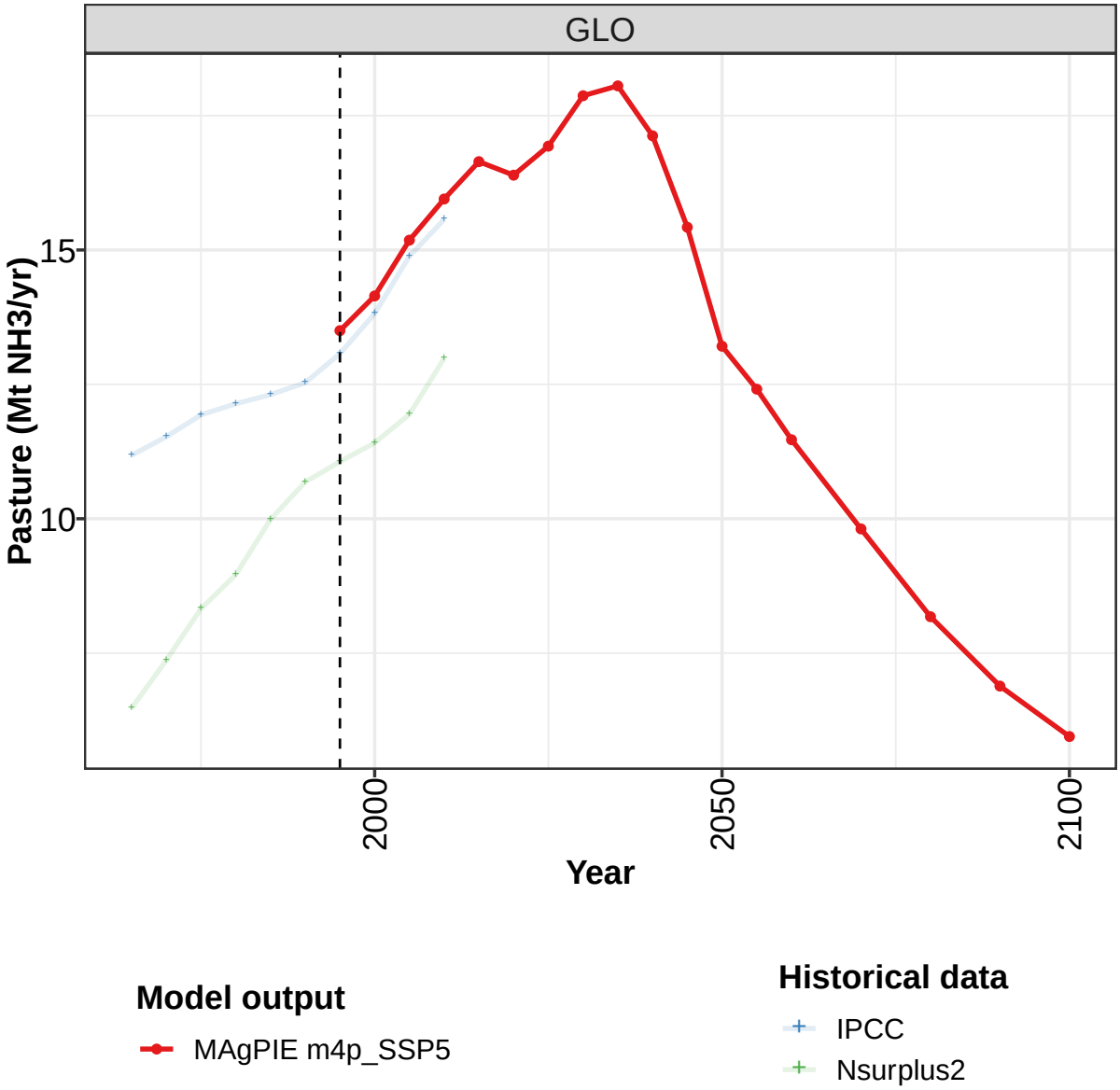
	2050	2055	2060	2070	2080	2090	2100
GLO	19.9	20.6	21.1	21.5	21.0	20.1	19.3
CAZ	0.6	0.6	0.6	0.7	0.6	0.6	0.6
CHA	2.2	2.2	2.2	2.2	2.0	1.7	1.5
EUR	2.1	2.2	2.2	2.2	2.1	2.1	2.2
IND	3.7	3.9	4.0	4.1	4.0	3.8	3.5
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.1	2.2	2.2	2.2	2.1	1.9	1.8
MEA	0.9	1.0	0.9	0.9	0.9	0.8	0.8
NEU	0.3	0.3	0.3	0.3	0.3	0.2	0.2
OAS	2.6	2.7	2.7	2.7	2.8	2.7	2.6
REF	0.9	0.9	0.9	0.9	0.9	0.8	0.6
SSA	2.9	3.2	3.4	3.5	3.5	3.4	3.3
USA	1.5	1.5	1.6	1.7	1.8	1.9	2.0

Table 827: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NH3/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.25	2.72	2.92	3.36	4.52	4.52	4.60	4.76	5.24	5.52
CAZ	0.06	0.08	0.08	0.08	0.13	0.16	0.17	0.17	0.17	0.17
CHA	0.21	0.23	0.27	0.31	0.36	0.39	0.43	0.48	0.57	0.73
EUR	0.52	0.63	0.72	0.87	1.13	1.03	1.04	1.07	1.11	1.10
IND	0.23	0.27	0.28	0.28	0.30	0.35	0.39	0.42	0.46	0.53
JPN	0.04	0.05	0.06	0.07	0.08	0.08	0.08	0.07	0.07	0.08
LAM	0.16	0.20	0.25	0.27	0.46	0.37	0.39	0.44	0.50	0.58
MEA	0.05	0.09	0.10	0.12	0.17	0.17	0.19	0.21	0.25	0.29
NEU	0.05	0.05	0.06	0.06	0.09	0.09	0.09	0.09	0.11	0.11
OAS	0.12	0.14	0.16	0.19	0.24	0.28	0.33	0.36	0.42	0.49
REF	0.35	0.46	0.44	0.56	0.62	0.70	0.58	0.40	0.40	0.30
SSA	0.07	0.09	0.11	0.11	0.13	0.14	0.15	0.18	0.22	0.26
USA	0.39	0.42	0.41	0.43	0.82	0.78	0.75	0.87	0.96	0.90

Table 828: IPCC — Emissions—NH3—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NH3/yr)

14.1.5 Agriculture—Agricultural Soils—Pasture



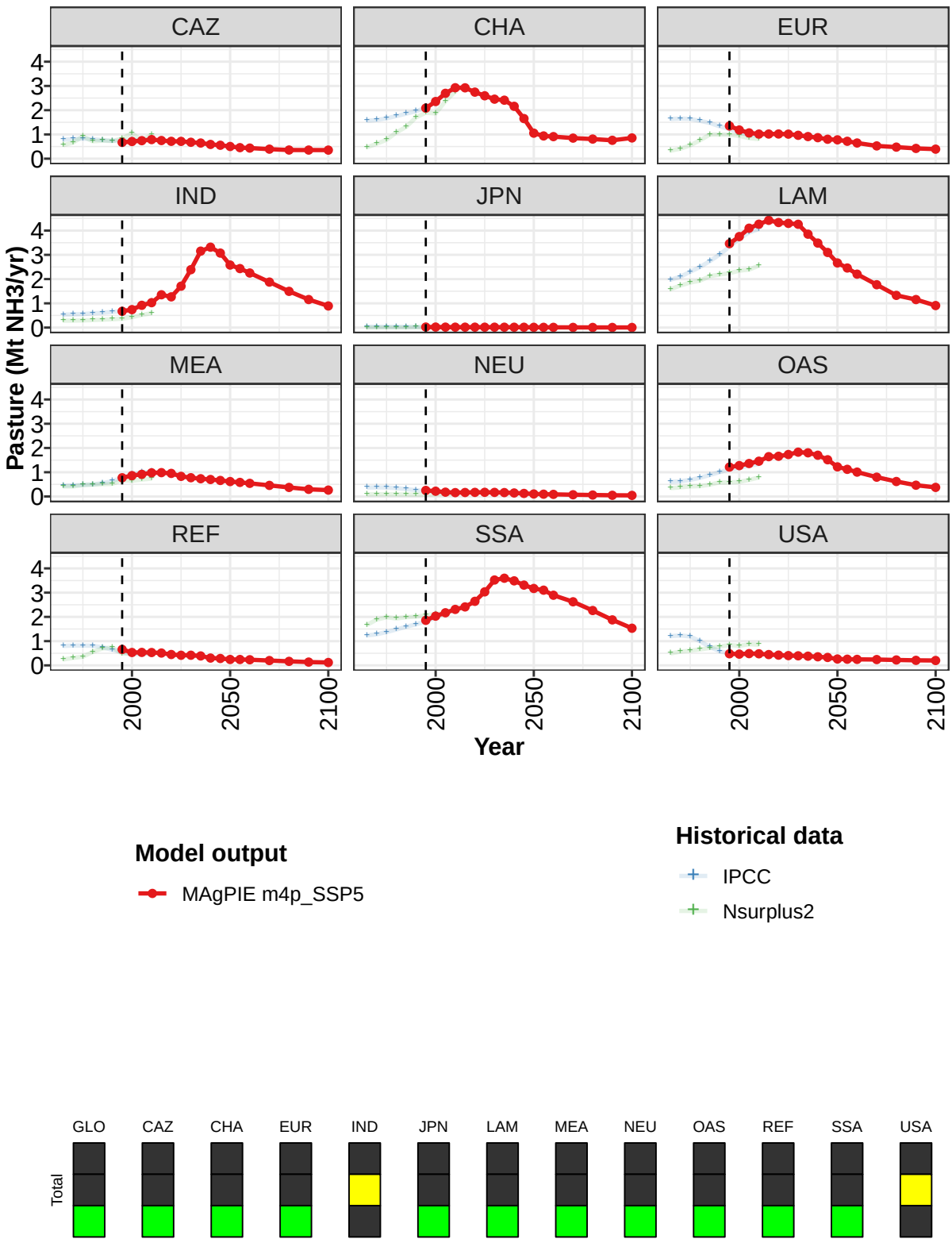


Figure 249: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.5	14.1	15.2	15.9	16.6	16.4	16.9	17.9	18.1	17.1	15.4
CAZ	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6
CHA	2.1	2.4	2.7	2.9	2.9	2.7	2.6	2.5	2.4	2.2	1.7
EUR	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8
IND	0.7	0.7	0.9	1.0	1.4	1.3	1.7	2.4	3.2	3.3	3.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.5	3.8	4.1	4.3	4.4	4.3	4.3	4.3	3.9	3.5	3.1
MEA	0.8	0.9	0.9	1.0	1.0	1.0	0.8	0.8	0.7	0.7	0.7
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
OAS	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.7	1.5
REF	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3
SSA	1.9	2.0	2.2	2.3	2.4	2.6	3.0	3.5	3.6	3.5	3.3
USA	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3

Table 829: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	13.2	12.4	11.5	9.8	8.2	6.9	5.9
CAZ	0.5	0.5	0.4	0.4	0.4	0.4	0.4
CHA	1.1	0.9	0.9	0.8	0.8	0.8	0.9
EUR	0.8	0.7	0.6	0.5	0.5	0.4	0.4
IND	2.6	2.4	2.3	1.9	1.5	1.2	0.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.7	2.5	2.2	1.8	1.3	1.2	0.9
MEA	0.6	0.6	0.5	0.5	0.4	0.3	0.3
NEU	0.1	0.1	0.1	0.1	0.1	0.0	0.0
OAS	1.2	1.1	1.0	0.8	0.6	0.5	0.4
REF	0.2	0.2	0.2	0.2	0.2	0.1	0.1
SSA	3.2	3.1	2.9	2.6	2.3	1.9	1.5
USA	0.3	0.3	0.2	0.2	0.2	0.2	0.2

Table 830: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr) [PART 2/2]

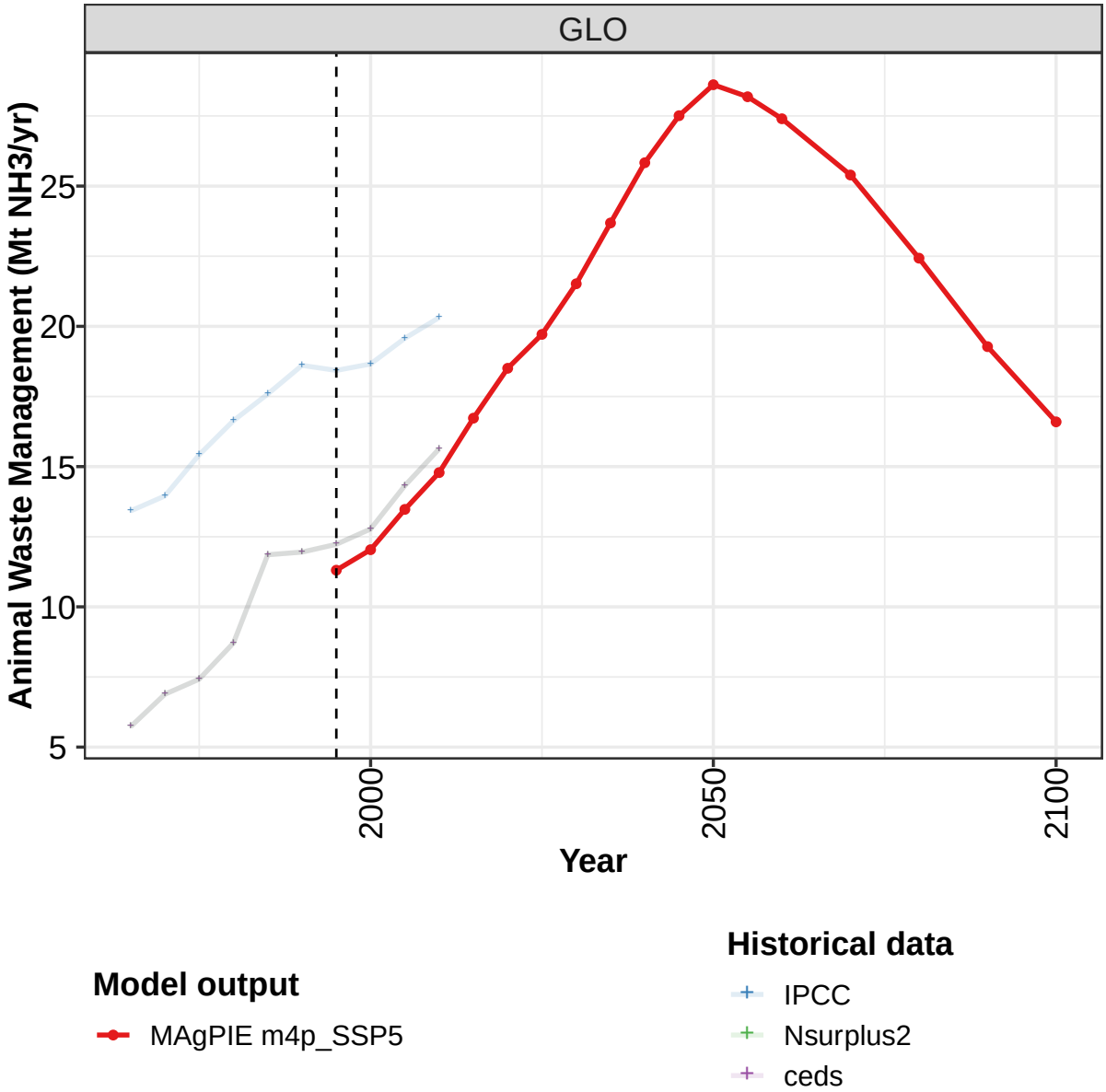
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.2	11.5	11.9	12.1	12.3	12.5	13.1	13.8	14.9	15.6
CAZ	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.8
CHA	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.4	2.7	2.9
EUR	1.6	1.7	1.6	1.6	1.5	1.3	1.2	1.1	1.0	0.9
IND	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	1.0	1.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.0	2.1	2.3	2.5	2.7	3.0	3.3	3.7	3.9	4.1
MEA	0.4	0.5	0.5	0.5	0.5	0.6	0.8	0.9	1.0	1.0
NEU	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1
OAS	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3
REF	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.5
SSA	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2.0	2.2	2.3
USA	1.2	1.2	1.2	1.0	0.8	0.6	0.5	0.5	0.5	0.5

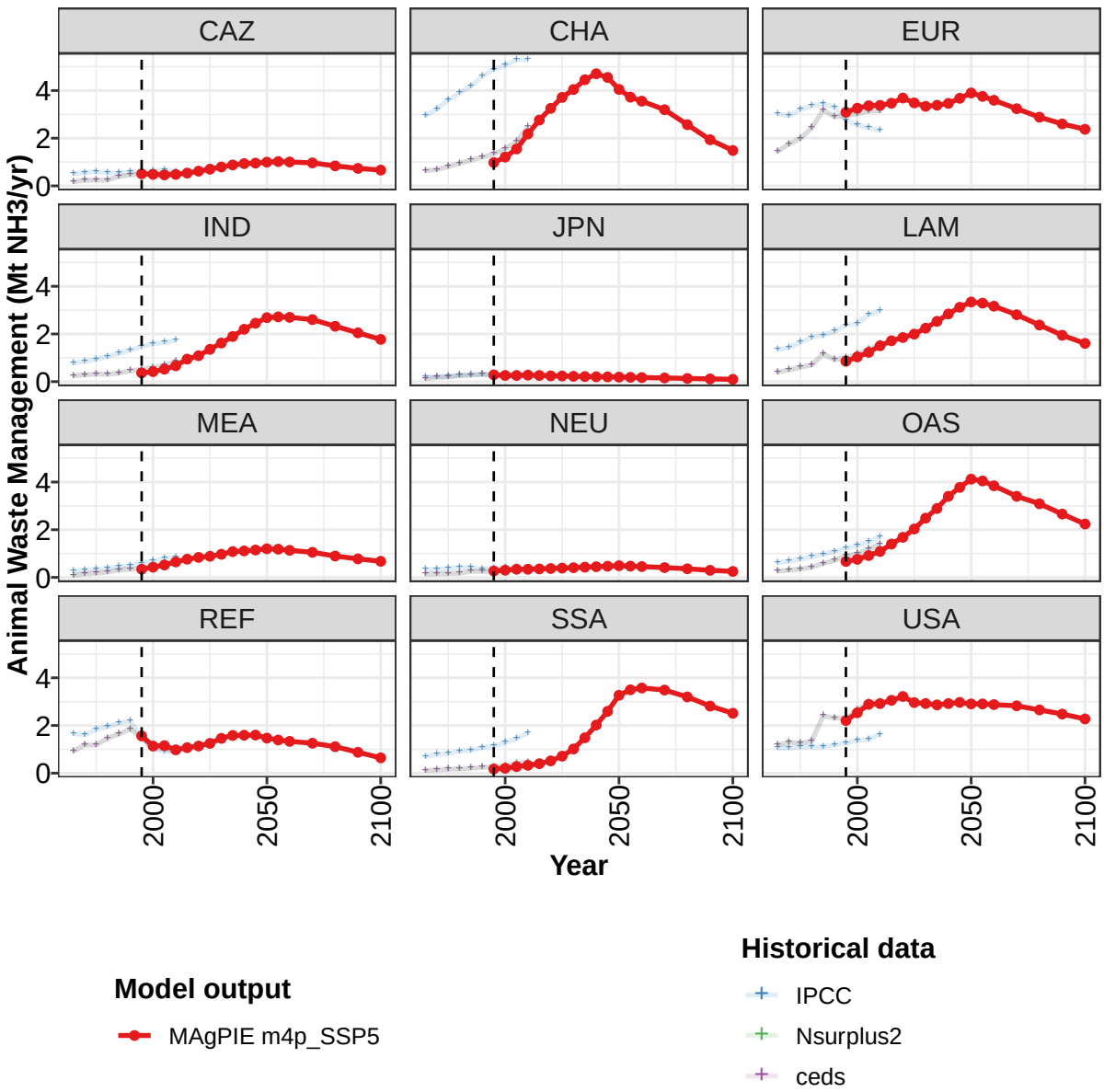
Table 831: IPCC — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	6.5	7.4	8.3	9.0	10.0	10.7	11.1	11.4	11.9	13.0
CAZ	0.6	0.7	0.9	0.7	0.7	0.7	0.8	1.0	0.8	1.0
CHA	0.5	0.6	0.8	1.1	1.3	1.7	1.9	1.9	2.4	2.8
EUR	0.3	0.4	0.5	0.8	1.0	1.0	1.0	0.9	0.8	0.8
IND	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.6	1.7	1.9	1.9	2.1	2.2	2.2	2.3	2.4	2.6
MEA	0.4	0.4	0.5	0.5	0.5	0.5	0.7	0.6	0.7	0.7
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.8
REF	0.2	0.3	0.4	0.6	0.7	0.7	0.5	0.5	0.5	0.5
SSA	1.7	1.9	2.0	1.9	2.0	2.0	2.1	2.1	2.2	2.3
USA	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9

Table 832: Nsurplus2 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr)

14.1.6 Agriculture—Animal Waste Management





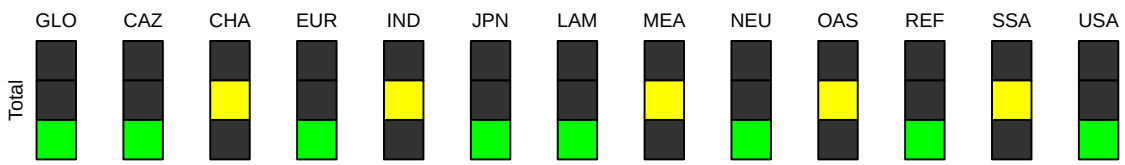


Figure 250: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.3	12.0	13.5	14.8	16.7	18.5	19.7	21.5	23.7	25.8	27.5
CAZ	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.9	1.0
CHA	1.0	1.2	1.5	2.2	2.8	3.3	3.7	4.0	4.5	4.7	4.6
EUR	3.1	3.3	3.4	3.4	3.5	3.7	3.5	3.3	3.4	3.5	3.7
IND	0.4	0.4	0.5	0.7	0.9	1.1	1.4	1.6	1.9	2.2	2.5
JPN	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
LAM	0.9	1.0	1.2	1.5	1.7	1.9	2.0	2.2	2.5	2.8	3.1
MEA	0.3	0.4	0.5	0.6	0.8	0.8	0.9	1.0	1.1	1.1	1.1
NEU	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5
OAS	0.7	0.8	0.9	1.1	1.4	1.7	2.0	2.5	2.9	3.4	3.8
REF	1.6	1.1	1.2	1.0	1.1	1.1	1.3	1.5	1.6	1.6	1.6
SSA	0.2	0.2	0.3	0.3	0.4	0.5	0.7	1.0	1.5	2.0	2.6
USA	2.2	2.5	2.9	2.9	3.1	3.2	3.0	2.9	2.9	2.9	3.0

Table 833: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	28.6	28.2	27.4	25.4	22.4	19.3	16.6
CAZ	1.0	1.0	1.0	1.0	0.8	0.7	0.7
CHA	4.0	3.7	3.6	3.2	2.6	1.9	1.5
EUR	3.9	3.8	3.6	3.2	2.9	2.6	2.4
IND	2.7	2.7	2.7	2.6	2.3	2.0	1.8
JPN	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	3.3	3.3	3.2	2.8	2.4	1.9	1.6
MEA	1.2	1.2	1.1	1.1	0.9	0.8	0.7
NEU	0.5	0.5	0.5	0.4	0.4	0.3	0.3
OAS	4.1	4.0	3.8	3.4	3.1	2.7	2.2
REF	1.5	1.4	1.3	1.3	1.1	0.9	0.6
SSA	3.3	3.5	3.6	3.5	3.2	2.8	2.5
USA	2.9	2.9	2.9	2.8	2.7	2.5	2.3

Table 834: MAgPIE m4p_SSP5 — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	13.4	14.0	15.4	16.6	17.6	18.6	18.4	18.7	19.6	20.3
CAZ	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.7	0.6
CHA	2.9	3.2	3.6	3.9	4.2	4.6	4.9	5.1	5.3	5.3
EUR	3.0	2.9	3.2	3.4	3.4	3.3	2.7	2.6	2.4	2.3
IND	0.8	0.8	0.9	1.1	1.2	1.3	1.5	1.6	1.6	1.7
JPN	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	1.3	1.4	1.6	1.9	1.9	2.1	2.4	2.4	2.8	3.0
MEA	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.8
NEU	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OAS	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.5	1.7
REF	1.7	1.6	1.8	1.9	2.1	2.2	1.5	1.0	0.9	0.9
SSA	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.3	1.5	1.7
USA	1.0	1.1	1.1	1.1	1.1	1.2	1.3	1.4	1.4	1.6

Table 835: ceds — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr)

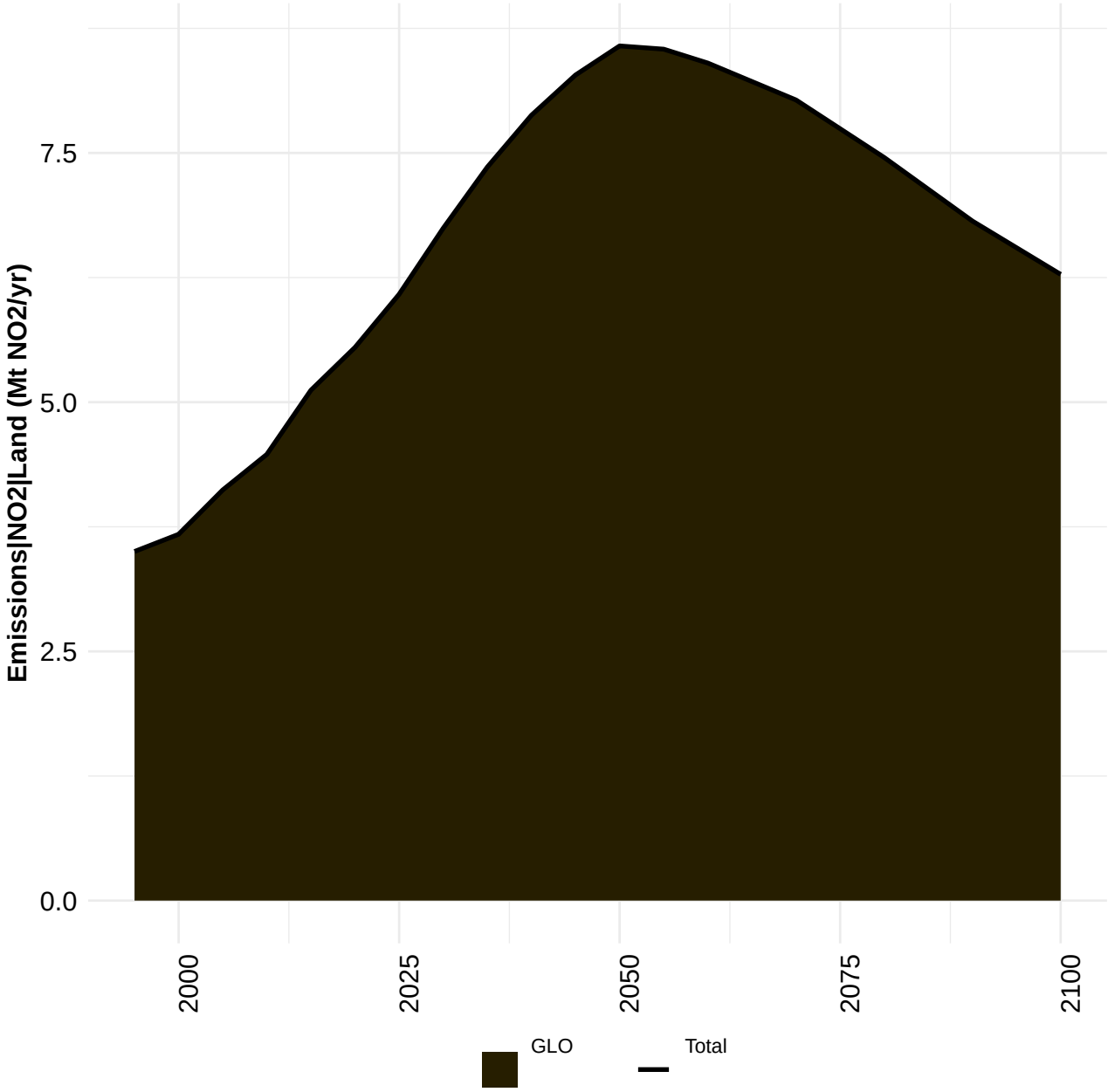
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.7	6.9	7.4	8.7	11.9	12.0	12.2	12.8	14.3	15.6
CAZ	0.2	0.2	0.2	0.2	0.4	0.5	0.5	0.5	0.5	0.5
CHA	0.6	0.7	0.8	0.9	1.1	1.2	1.3	1.6	1.8	2.5
EUR	1.4	1.8	2.0	2.4	3.2	2.9	2.9	3.0	3.1	3.2
IND	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.9
JPN	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	0.4	0.5	0.6	0.7	1.2	0.9	1.0	1.1	1.3	1.6
MEA	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.7
NEU	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3
OAS	0.3	0.3	0.3	0.4	0.6	0.7	0.9	1.0	1.2	1.4
REF	0.9	1.2	1.2	1.5	1.6	1.9	1.5	1.0	1.0	0.9
SSA	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5
USA	1.2	1.3	1.2	1.4	2.4	2.3	2.3	2.6	3.0	3.0

Table 836: IPCC — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.7	6.9	7.4	8.7	11.9	12.0	12.2	12.8	14.3	15.6
CAZ	0.2	0.2	0.2	0.2	0.4	0.5	0.5	0.5	0.5	0.5
CHA	0.6	0.7	0.8	0.9	1.1	1.2	1.3	1.6	1.8	2.5
EUR	1.4	1.8	2.0	2.4	3.2	2.9	2.9	3.0	3.1	3.2
IND	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.9
JPN	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	0.4	0.5	0.6	0.7	1.2	0.9	1.0	1.1	1.3	1.6
MEA	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.7
NEU	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3
OAS	0.3	0.3	0.3	0.4	0.6	0.7	0.9	1.0	1.2	1.4
REF	0.9	1.2	1.2	1.5	1.6	1.9	1.5	1.0	1.0	0.9
SSA	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5
USA	1.2	1.3	1.2	1.4	2.4	2.3	2.3	2.6	3.0	3.0

Table 837: Nsurplus2 — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr)

15 NO2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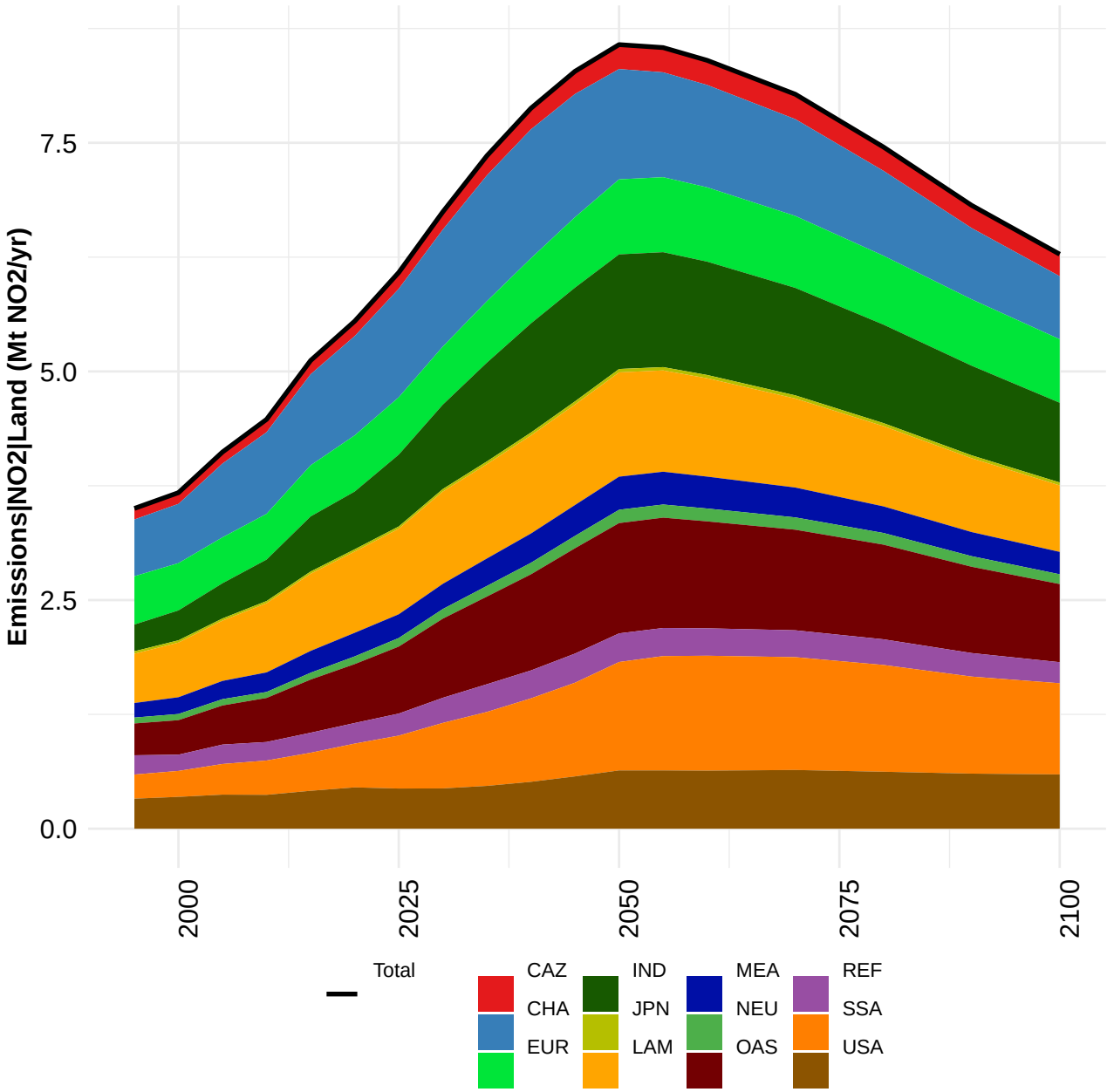
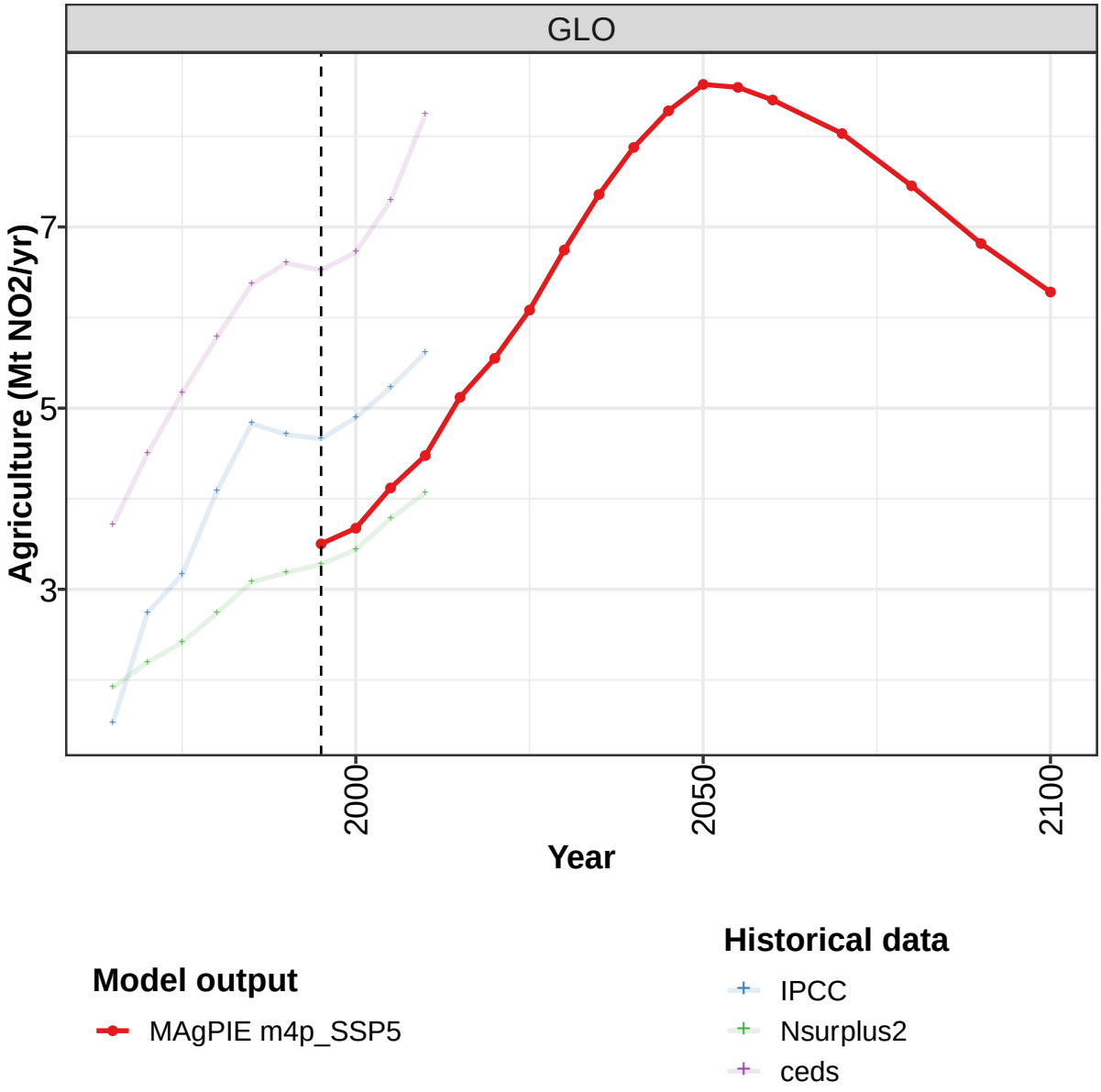
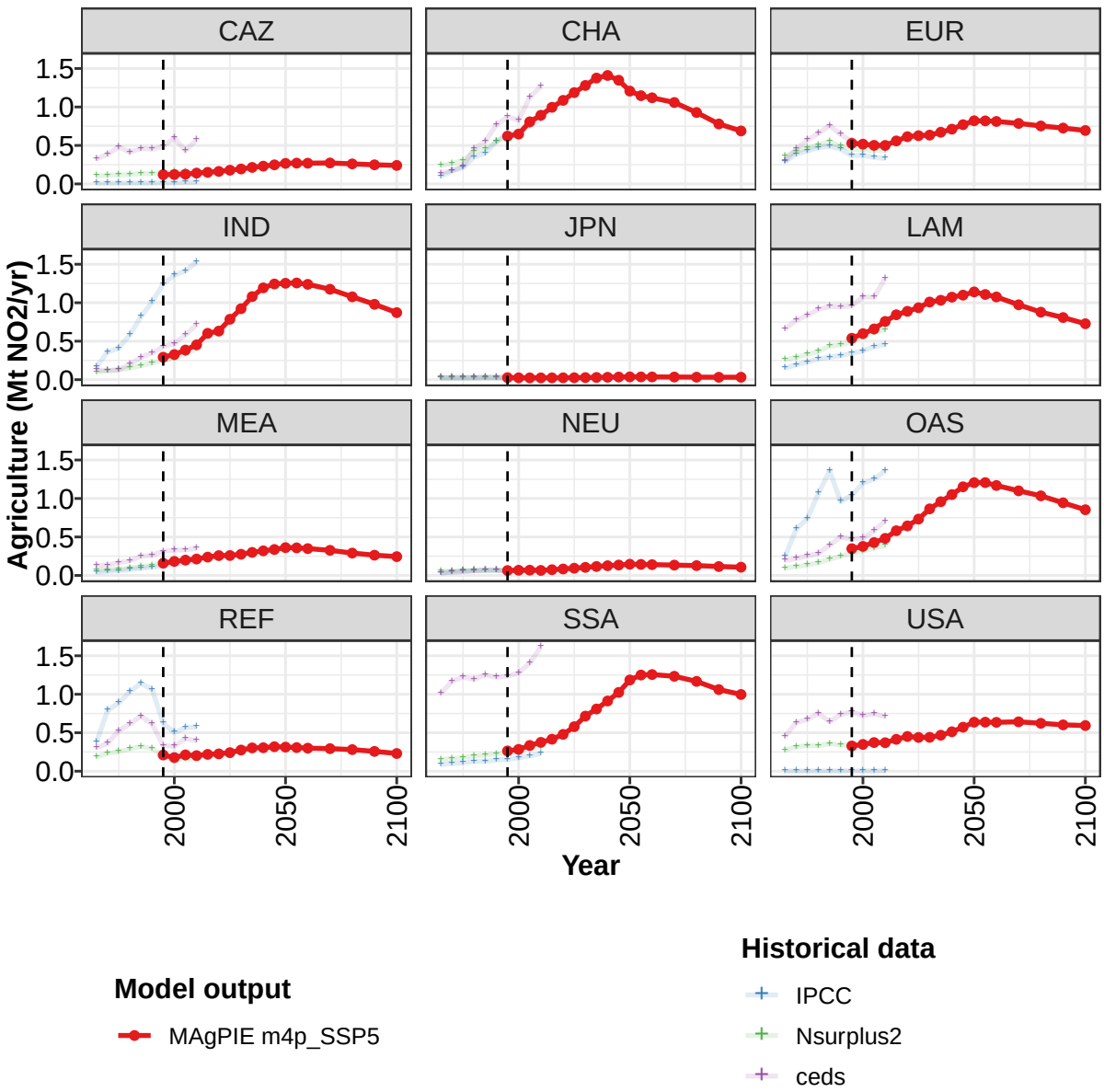
5.0
2.5
0.0
2000
2025
2050
2075
2100
GLO
Total


Emissions|NO2|Land (Mt NO2/yr)
7.5
5.0
2.5
0.0
2000
2025
2050
2075
2100
Total
CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA

15.1 Land

15.1.1 Agriculture





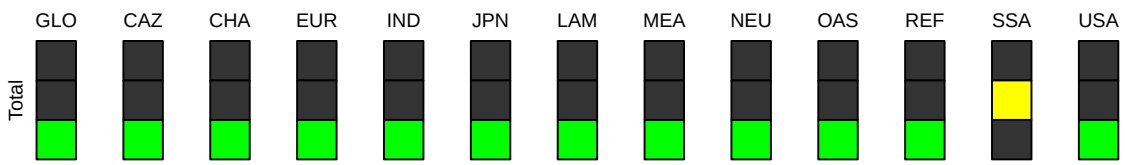


Figure 251: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture (Mt NO2/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.50	3.67	4.12	4.48	5.12	5.55	6.08	6.75	7.36	7.88	8.28
CAZ	0.12	0.12	0.13	0.14	0.15	0.16	0.18	0.19	0.21	0.23	0.25
CHA	0.62	0.65	0.81	0.89	1.00	1.09	1.19	1.28	1.38	1.41	1.35
EUR	0.53	0.52	0.50	0.50	0.56	0.61	0.63	0.63	0.67	0.71	0.77
IND	0.29	0.33	0.39	0.45	0.60	0.63	0.79	0.92	1.08	1.19	1.24
JPN	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
LAM	0.54	0.60	0.66	0.76	0.84	0.89	0.94	1.01	1.03	1.07	1.10
MEA	0.16	0.18	0.20	0.21	0.24	0.26	0.26	0.28	0.30	0.32	0.34
NEU	0.06	0.07	0.07	0.07	0.07	0.08	0.09	0.11	0.12	0.13	0.14
OAS	0.35	0.38	0.43	0.48	0.58	0.64	0.73	0.87	0.96	1.05	1.15
REF	0.21	0.18	0.21	0.20	0.22	0.23	0.24	0.27	0.30	0.31	0.32
SSA	0.26	0.28	0.33	0.38	0.42	0.48	0.58	0.72	0.81	0.91	1.02
USA	0.33	0.35	0.37	0.37	0.41	0.45	0.44	0.44	0.47	0.51	0.57

Table 838: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture (Mt NO2/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	8.57	8.54	8.40	8.03	7.45	6.82	6.28
CAZ	0.27	0.27	0.27	0.27	0.26	0.25	0.24
CHA	1.21	1.15	1.12	1.06	0.93	0.78	0.69
EUR	0.82	0.82	0.81	0.79	0.75	0.73	0.69
IND	1.25	1.26	1.24	1.18	1.08	0.98	0.87
JPN	0.04	0.04	0.04	0.03	0.03	0.03	0.03
LAM	1.14	1.11	1.08	0.97	0.88	0.81	0.73
MEA	0.36	0.36	0.35	0.33	0.29	0.26	0.24
NEU	0.15	0.14	0.14	0.13	0.13	0.12	0.11
OAS	1.21	1.21	1.17	1.10	1.03	0.94	0.85
REF	0.31	0.31	0.30	0.29	0.28	0.26	0.23
SSA	1.19	1.25	1.26	1.23	1.17	1.06	1.00
USA	0.64	0.64	0.64	0.64	0.62	0.60	0.59

Table 839: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture (Mt NO2/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.52	2.74	3.16	4.08	4.83	4.71	4.66	4.90	5.23	5.61
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
CHA	0.10	0.17	0.21	0.35	0.40	0.55	0.66	0.66	0.75	0.84
EUR	0.29	0.39	0.43	0.47	0.49	0.45	0.37	0.37	0.35	0.33
IND	0.16	0.36	0.41	0.58	0.82	1.01	1.24	1.36	1.41	1.53
JPN	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.02
LAM	0.15	0.20	0.23	0.27	0.29	0.31	0.34	0.38	0.43	0.46
MEA	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18
NEU	0.03	0.04	0.05	0.06	0.06	0.07	0.06	0.06	0.06	0.07
OAS	0.25	0.60	0.74	1.07	1.36	0.96	1.04	1.20	1.25	1.36
REF	0.38	0.79	0.89	1.03	1.14	1.06	0.62	0.50	0.56	0.58
SSA	0.09	0.10	0.11	0.13	0.13	0.15	0.15	0.17	0.20	0.23
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 840: ceds — Emissions—NO2—Land—Agriculture (Mt NO2/yr)

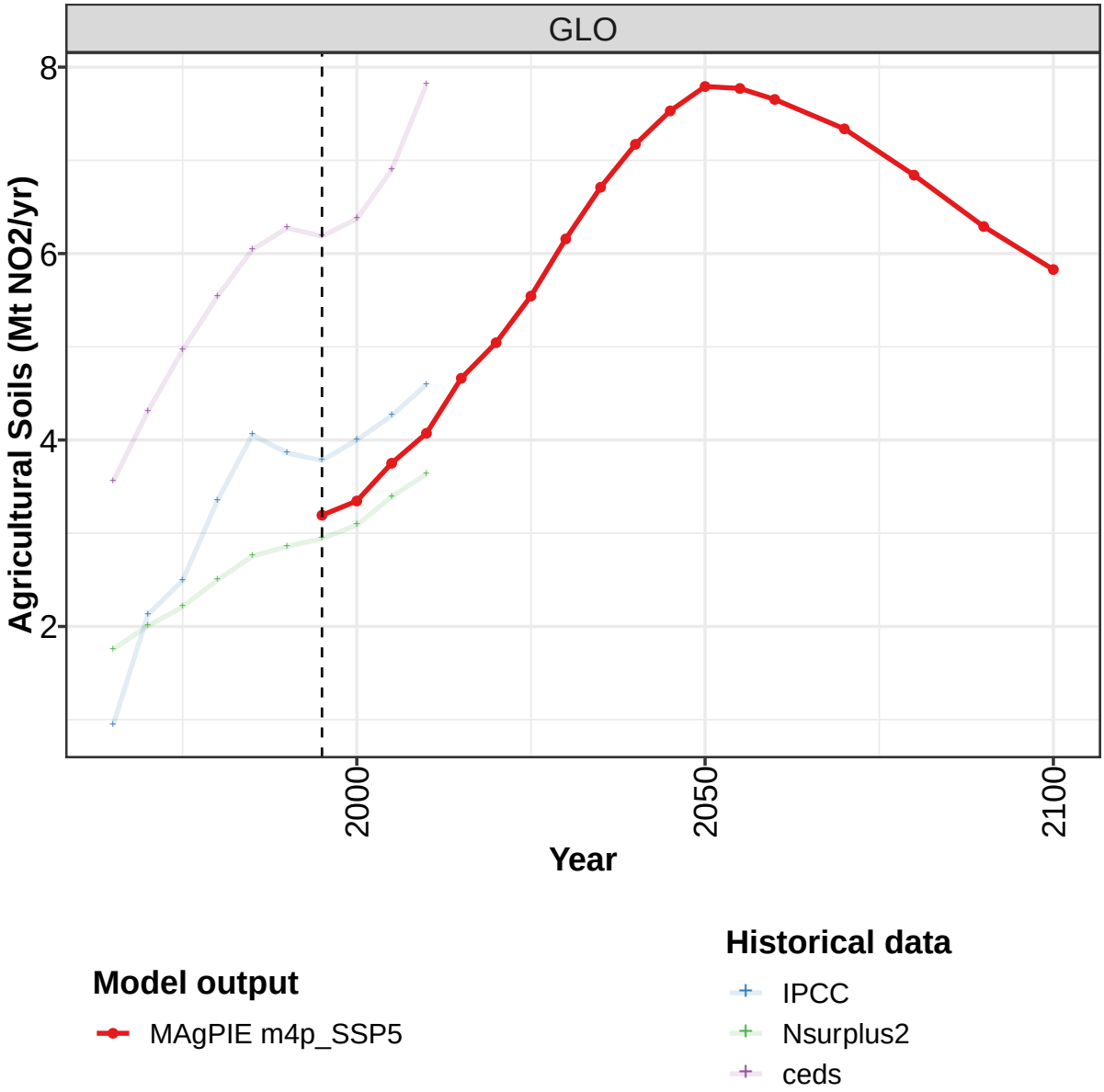
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.91	2.19	2.41	2.74	3.08	3.18	3.28	3.44	3.78	4.06
CAZ	0.10	0.11	0.12	0.12	0.13	0.13	0.15	0.15	0.15	0.16
CHA	0.24	0.27	0.31	0.41	0.46	0.55	0.62	0.66	0.79	0.89
EUR	0.36	0.42	0.46	0.50	0.55	0.49	0.45	0.44	0.43	0.43
IND	0.10	0.12	0.13	0.15	0.18	0.22	0.25	0.28	0.33	0.40
JPN	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.02
LAM	0.26	0.29	0.33	0.37	0.44	0.45	0.50	0.56	0.61	0.65
MEA	0.06	0.07	0.08	0.09	0.12	0.13	0.15	0.18	0.20	0.21
NEU	0.05	0.06	0.06	0.07	0.07	0.07	0.06	0.06	0.06	0.06
OAS	0.10	0.12	0.13	0.17	0.21	0.25	0.29	0.32	0.35	0.39
REF	0.18	0.23	0.25	0.29	0.32	0.30	0.20	0.15	0.16	0.16
SSA	0.15	0.16	0.18	0.20	0.21	0.23	0.24	0.26	0.29	0.32
USA	0.27	0.32	0.33	0.33	0.36	0.34	0.34	0.35	0.37	0.37

Table 841: IPCC — Emissions—NO2—Land—Agriculture (Mt NO2/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.71	4.50	5.17	5.78	6.37	6.60	6.52	6.72	7.29	8.24
CAZ	0.32	0.39	0.48	0.41	0.46	0.45	0.49	0.60	0.43	0.57
CHA	0.14	0.17	0.23	0.46	0.55	0.77	0.87	0.83	1.13	1.27
EUR	0.30	0.45	0.57	0.66	0.76	0.64	0.55	0.52	0.48	0.48
IND	0.13	0.12	0.13	0.20	0.29	0.35	0.43	0.47	0.58	0.72
JPN	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.03
LAM	0.66	0.77	0.84	0.91	0.95	0.95	0.96	1.08	1.07	1.32
MEA	0.13	0.13	0.17	0.19	0.25	0.26	0.31	0.33	0.33	0.35
NEU	0.04	0.04	0.05	0.06	0.07	0.07	0.06	0.07	0.08	0.08
OAS	0.19	0.22	0.25	0.29	0.39	0.50	0.47	0.48	0.58	0.71
REF	0.31	0.36	0.52	0.61	0.72	0.61	0.33	0.32	0.42	0.40
SSA	1.01	1.17	1.22	1.19	1.25	1.22	1.23	1.28	1.40	1.62
USA	0.45	0.63	0.67	0.75	0.64	0.74	0.77	0.72	0.74	0.71

Table 842: Nsurplus2 — Emissions—NO2—Land—Agriculture (Mt NO2/yr)

15.1.2 Agriculture—Agricultural Soils



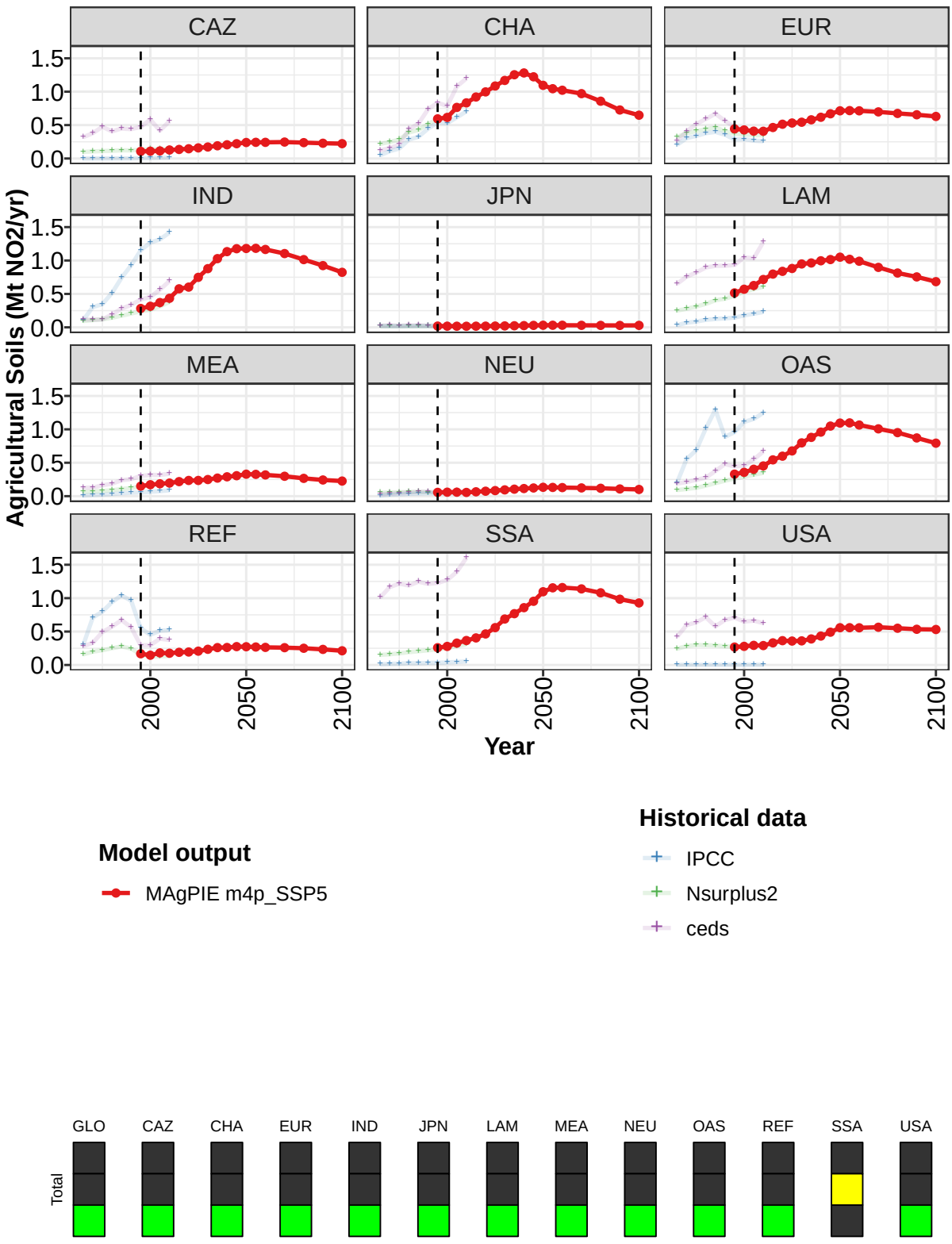


Figure 252: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils (Mt NO2/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.19	3.35	3.75	4.07	4.66	5.04	5.54	6.16	6.71	7.17	7.53
CAZ	0.11	0.11	0.11	0.13	0.14	0.15	0.16	0.17	0.19	0.21	0.22
CHA	0.59	0.61	0.76	0.83	0.92	1.00	1.08	1.17	1.25	1.28	1.22
EUR	0.44	0.43	0.41	0.41	0.46	0.51	0.53	0.54	0.58	0.62	0.67
IND	0.28	0.32	0.37	0.43	0.58	0.60	0.75	0.88	1.03	1.13	1.18
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
LAM	0.52	0.57	0.63	0.72	0.80	0.84	0.88	0.95	0.96	1.00	1.01
MEA	0.15	0.17	0.19	0.20	0.22	0.24	0.24	0.25	0.27	0.29	0.31
NEU	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.09	0.10	0.11	0.12
OAS	0.33	0.36	0.40	0.45	0.54	0.60	0.68	0.80	0.88	0.96	1.05
REF	0.17	0.15	0.18	0.18	0.19	0.19	0.21	0.24	0.26	0.26	0.27
SSA	0.26	0.28	0.33	0.37	0.41	0.46	0.56	0.69	0.77	0.86	0.95
USA	0.27	0.28	0.29	0.29	0.33	0.36	0.36	0.36	0.39	0.43	0.49

Table 843: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils (Mt NO2/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	7.79	7.77	7.65	7.34	6.84	6.29	5.83
CAZ	0.24	0.24	0.24	0.25	0.24	0.23	0.22
CHA	1.10	1.04	1.02	0.97	0.86	0.73	0.65
EUR	0.71	0.72	0.71	0.70	0.67	0.65	0.63
IND	1.18	1.18	1.17	1.10	1.01	0.92	0.82
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAM	1.05	1.02	0.99	0.90	0.81	0.75	0.68
MEA	0.33	0.33	0.32	0.30	0.27	0.24	0.23
NEU	0.13	0.13	0.13	0.12	0.12	0.11	0.10
OAS	1.09	1.10	1.06	1.01	0.95	0.87	0.79
REF	0.27	0.27	0.26	0.26	0.25	0.23	0.21
SSA	1.10	1.15	1.16	1.14	1.08	0.98	0.93
USA	0.56	0.56	0.56	0.56	0.55	0.53	0.53

Table 844: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils (Mt NO2/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.94	2.13	2.49	3.35	4.06	3.86	3.78	4.00	4.26	4.60
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
CHA	0.05	0.11	0.15	0.28	0.32	0.45	0.54	0.53	0.62	0.71
EUR	0.20	0.30	0.34	0.38	0.40	0.36	0.28	0.29	0.27	0.26
IND	0.11	0.30	0.35	0.51	0.74	0.93	1.15	1.27	1.32	1.42
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
LAM	0.03	0.07	0.09	0.11	0.12	0.13	0.15	0.18	0.20	0.23
MEA	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.09
NEU	0.01	0.02	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05
OAS	0.20	0.55	0.69	1.01	1.29	0.89	0.96	1.11	1.16	1.25
REF	0.30	0.71	0.80	0.94	1.04	0.96	0.55	0.45	0.51	0.52
SSA	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.05	0.05
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 845: ceds — Emissions—NO2—Land—Agriculture—Agricultural Soils (Mt NO2/yr)

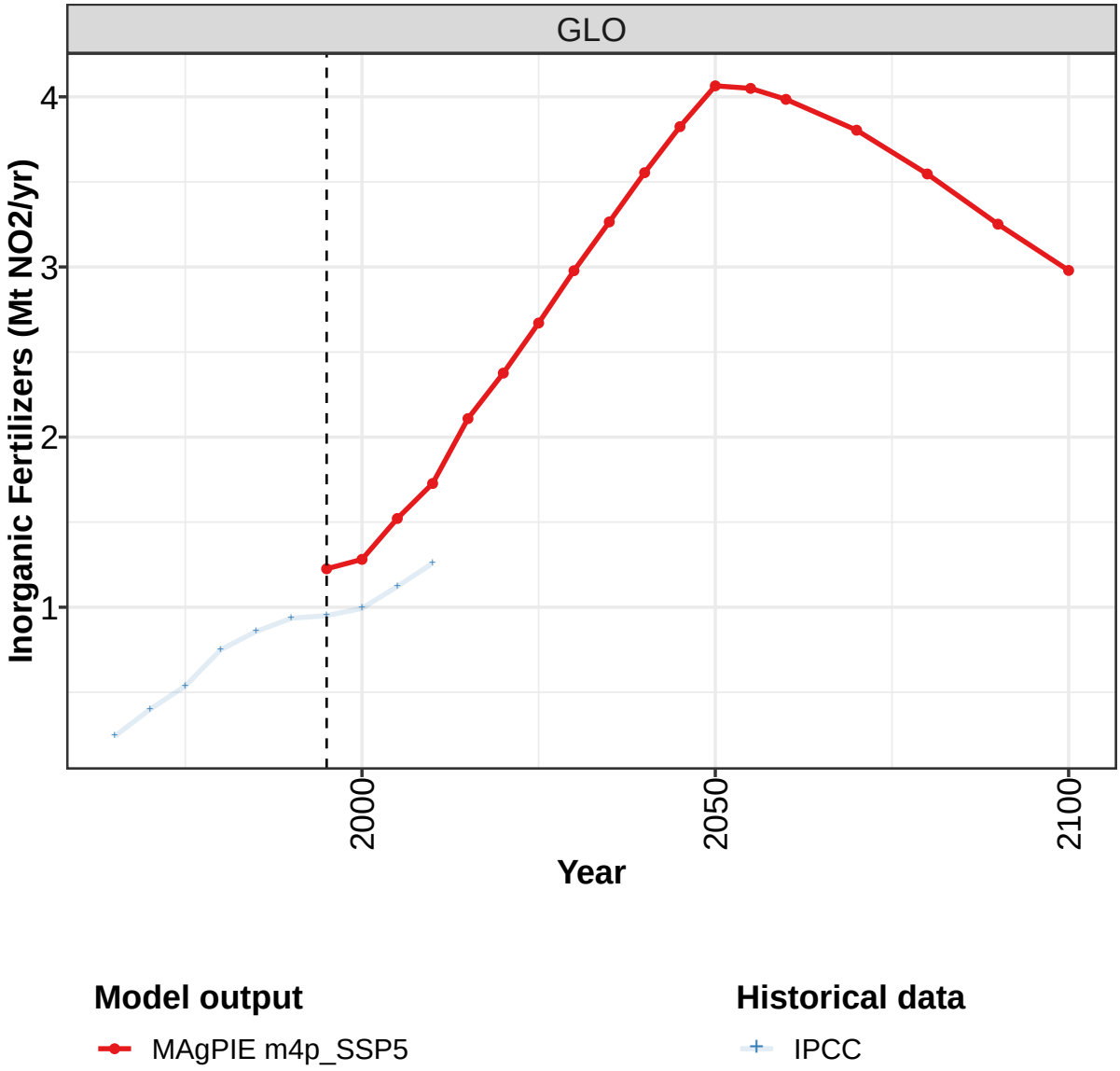
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.76	2.01	2.21	2.50	2.75	2.86	2.94	3.09	3.39	3.64
CAZ	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.14	0.14	0.15
CHA	0.22	0.25	0.28	0.39	0.43	0.52	0.59	0.61	0.74	0.82
EUR	0.32	0.38	0.41	0.44	0.47	0.41	0.37	0.36	0.35	0.35
IND	0.09	0.11	0.12	0.14	0.17	0.21	0.24	0.26	0.31	0.38
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
LAM	0.25	0.28	0.31	0.35	0.40	0.43	0.47	0.53	0.57	0.61
MEA	0.06	0.07	0.08	0.09	0.11	0.12	0.14	0.17	0.18	0.19
NEU	0.05	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05
OAS	0.09	0.11	0.12	0.16	0.19	0.23	0.26	0.29	0.32	0.35
REF	0.16	0.20	0.22	0.25	0.28	0.25	0.16	0.13	0.13	0.13
SSA	0.15	0.16	0.17	0.19	0.21	0.22	0.23	0.25	0.28	0.31
USA	0.24	0.28	0.30	0.30	0.29	0.28	0.28	0.28	0.29	0.29

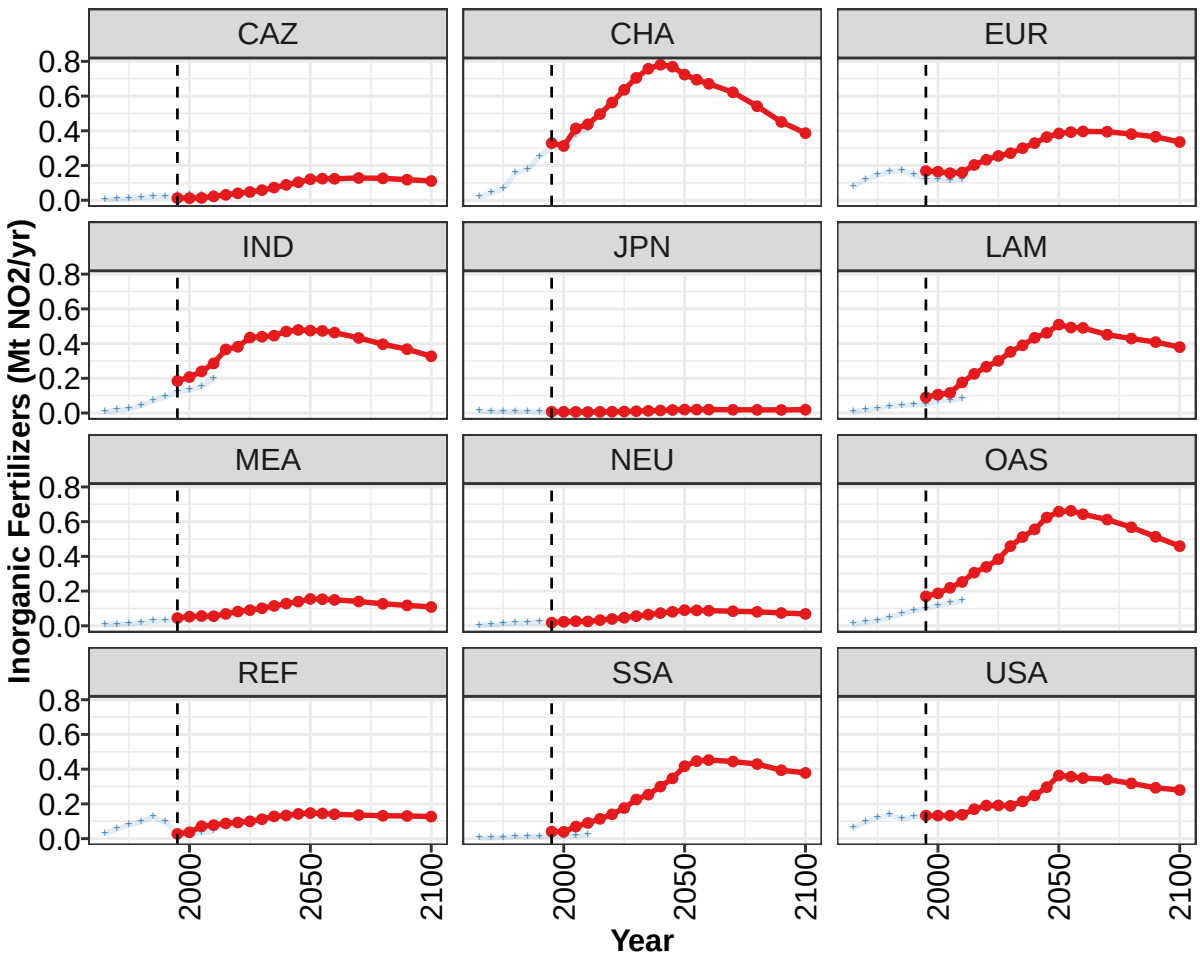
Table 846: IPCC — Emissions—NO2—Land—Agriculture—Agricultural Soils (Mt NO2/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.55	4.31	4.96	5.54	6.04	6.27	6.19	6.37	6.90	7.81
CAZ	0.32	0.38	0.47	0.41	0.45	0.44	0.47	0.58	0.42	0.56
CHA	0.12	0.16	0.21	0.44	0.52	0.74	0.83	0.79	1.08	1.20
EUR	0.26	0.41	0.52	0.59	0.67	0.56	0.47	0.43	0.40	0.40
IND	0.12	0.11	0.12	0.19	0.28	0.34	0.42	0.45	0.56	0.69
JPN	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
LAM	0.65	0.76	0.82	0.90	0.92	0.92	0.93	1.05	1.03	1.27
MEA	0.13	0.13	0.16	0.19	0.24	0.25	0.30	0.32	0.32	0.34
NEU	0.03	0.04	0.05	0.06	0.06	0.07	0.05	0.06	0.07	0.07
OAS	0.19	0.21	0.24	0.28	0.38	0.48	0.45	0.45	0.55	0.67
REF	0.28	0.33	0.49	0.57	0.67	0.56	0.29	0.30	0.39	0.37
SSA	1.01	1.17	1.22	1.19	1.25	1.21	1.23	1.27	1.39	1.60
USA	0.42	0.60	0.64	0.72	0.58	0.67	0.71	0.65	0.66	0.63

Table 847: Nsurplus2 — Emissions—NO2—Land—Agriculture—Agricultural Soils (Mt NO2/yr)

15.1.3 Agriculture—Agricultural Soils—Inorganic Fertilizers





Model output

MAgPIE m4p_SSP5

Historical data

IPCC

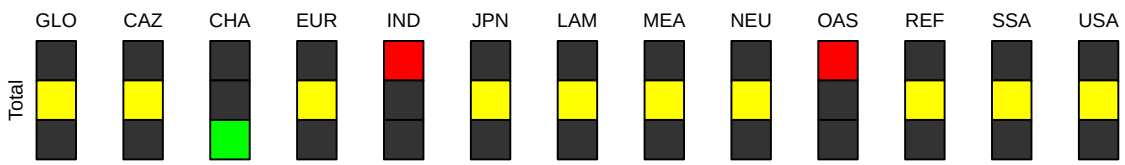


Figure 253: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO2/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.23	1.28	1.52	1.73	2.11	2.38	2.67	2.98	3.26	3.55	3.82
CAZ	0.01	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10
CHA	0.33	0.31	0.41	0.44	0.50	0.56	0.64	0.70	0.76	0.78	0.77
EUR	0.17	0.16	0.16	0.16	0.20	0.23	0.26	0.27	0.30	0.33	0.36
IND	0.18	0.21	0.24	0.29	0.37	0.38	0.43	0.44	0.45	0.47	0.48
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
LAM	0.09	0.11	0.12	0.18	0.23	0.27	0.30	0.35	0.39	0.43	0.46
MEA	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.10	0.11	0.13	0.14
NEU	0.02	0.02	0.03	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08
OAS	0.17	0.19	0.22	0.25	0.31	0.34	0.38	0.46	0.51	0.56	0.62
REF	0.03	0.04	0.07	0.08	0.09	0.09	0.10	0.11	0.13	0.13	0.14
SSA	0.04	0.04	0.07	0.09	0.11	0.14	0.18	0.23	0.25	0.30	0.35
USA	0.13	0.13	0.13	0.14	0.17	0.19	0.19	0.19	0.21	0.25	0.30

Table 848: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO2/yr) [PART 1/2]

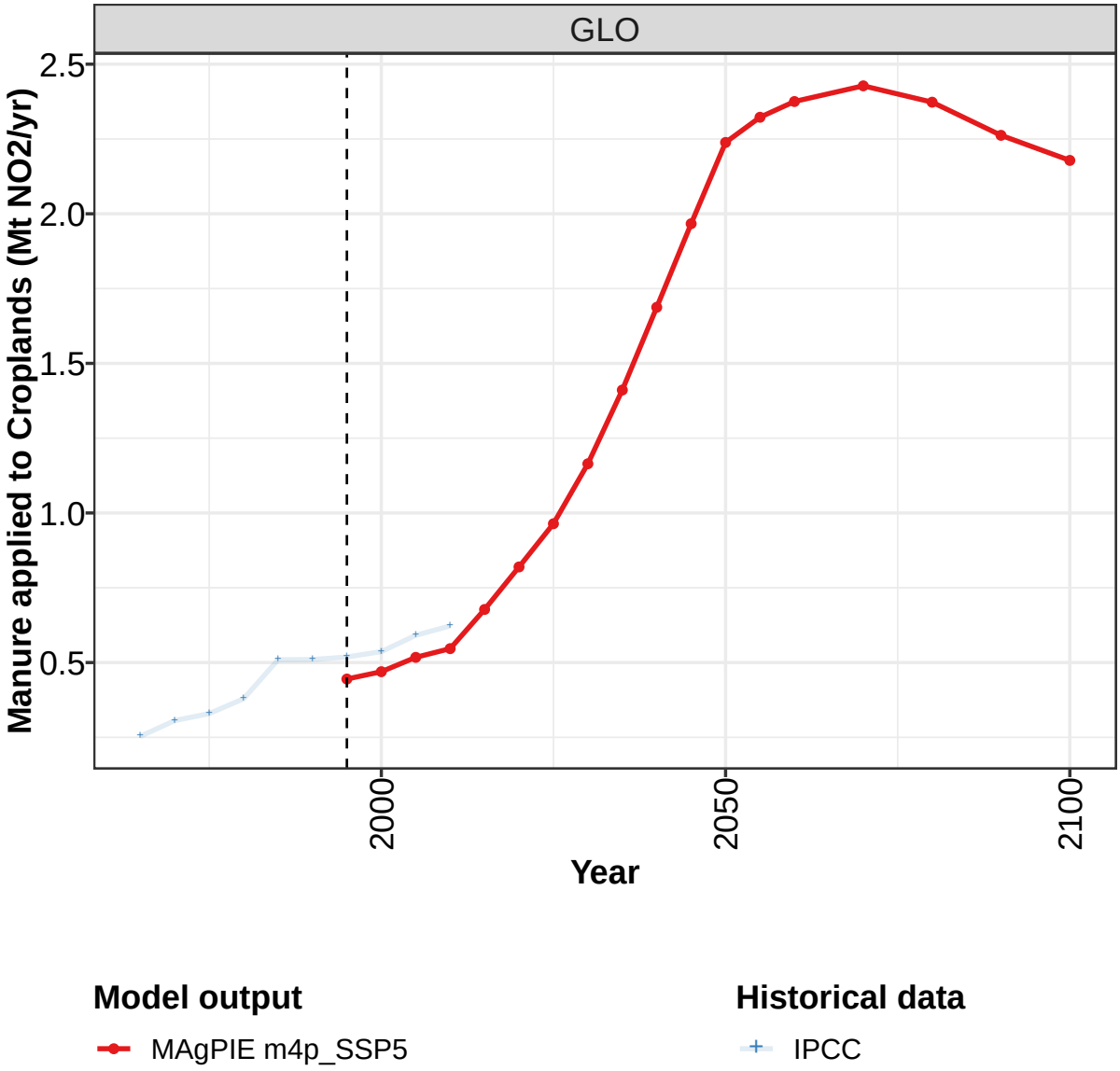
	2050	2055	2060	2070	2080	2090	2100
GLO	4.06	4.05	3.99	3.80	3.55	3.25	2.98
CAZ	0.12	0.12	0.12	0.13	0.13	0.12	0.11
CHA	0.72	0.69	0.67	0.62	0.54	0.45	0.39
EUR	0.38	0.39	0.40	0.39	0.38	0.37	0.34
IND	0.47	0.47	0.46	0.43	0.40	0.37	0.33
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.51	0.49	0.49	0.45	0.43	0.41	0.38
MEA	0.15	0.15	0.15	0.14	0.13	0.12	0.11
NEU	0.09	0.09	0.09	0.08	0.08	0.07	0.07
OAS	0.66	0.66	0.64	0.61	0.57	0.51	0.46
REF	0.15	0.14	0.14	0.14	0.13	0.13	0.13
SSA	0.42	0.45	0.45	0.44	0.43	0.39	0.38
USA	0.36	0.36	0.35	0.34	0.32	0.29	0.28

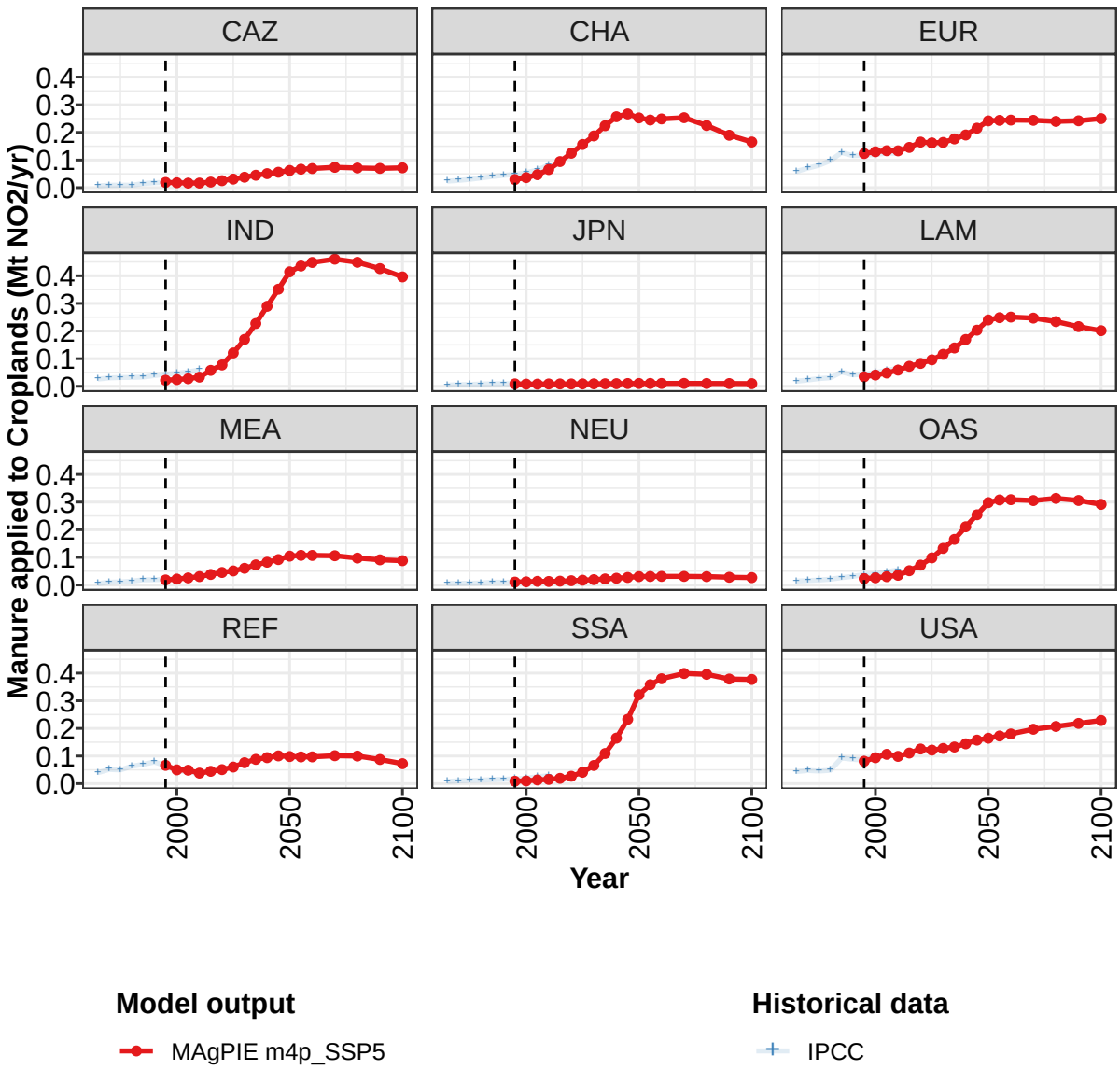
Table 849: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO2/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.24	0.40	0.54	0.75	0.86	0.94	0.95	0.99	1.12	1.26
CAZ	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04
CHA	0.02	0.04	0.07	0.16	0.18	0.25	0.30	0.29	0.38	0.41
EUR	0.08	0.12	0.14	0.16	0.17	0.14	0.12	0.12	0.11	0.12
IND	0.01	0.02	0.02	0.04	0.07	0.09	0.12	0.13	0.15	0.20
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
LAM	0.01	0.02	0.02	0.04	0.04	0.05	0.05	0.07	0.07	0.08
MEA	0.01	0.01	0.01	0.02	0.03	0.03	0.03	0.04	0.04	0.04
NEU	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.01	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.13	0.14
REF	0.03	0.06	0.08	0.10	0.12	0.09	0.03	0.03	0.03	0.04
SSA	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
USA	0.06	0.09	0.12	0.14	0.11	0.12	0.13	0.12	0.13	0.14

Table 850: IPCC — Emissions—NO2—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO2/yr)

15.1.4 Agriculture—Agricultural Soils—Manure applied to Croplands





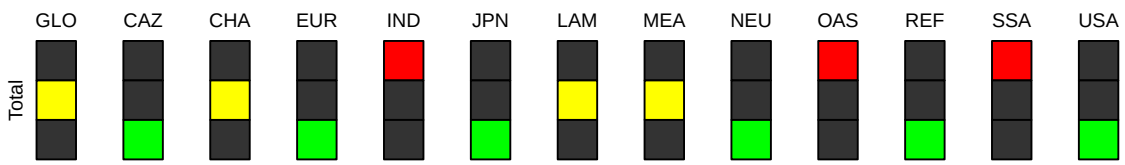


Figure 254: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO2/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.45	0.47	0.52	0.55	0.68	0.82	0.96	1.16	1.41	1.69	1.97
CAZ	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06
CHA	0.03	0.04	0.05	0.07	0.09	0.12	0.16	0.19	0.22	0.26	0.27
EUR	0.12	0.13	0.13	0.13	0.15	0.16	0.16	0.16	0.18	0.19	0.22
IND	0.02	0.02	0.03	0.03	0.06	0.08	0.12	0.17	0.23	0.29	0.35
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.03	0.04	0.05	0.06	0.07	0.08	0.10	0.12	0.14	0.17	0.20
MEA	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09
NEU	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03
OAS	0.02	0.03	0.03	0.04	0.05	0.07	0.10	0.13	0.17	0.21	0.25
REF	0.07	0.05	0.05	0.04	0.04	0.05	0.06	0.08	0.09	0.09	0.10
SSA	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.07	0.11	0.16	0.23
USA	0.08	0.09	0.11	0.10	0.11	0.13	0.12	0.13	0.13	0.14	0.16

Table 851: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO2/yr) [PART 1/2]

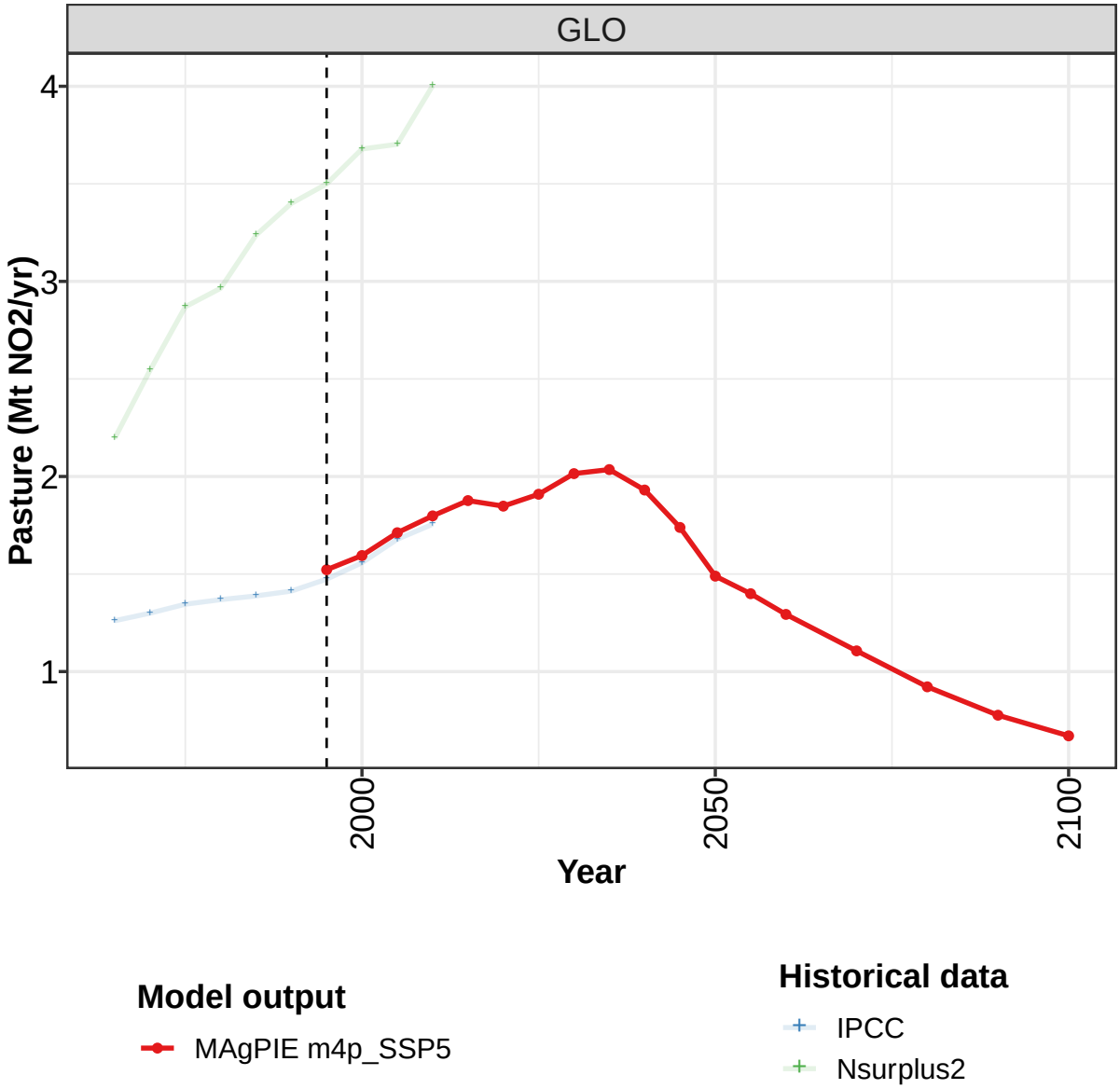
	2050	2055	2060	2070	2080	2090	2100
GLO	2.24	2.32	2.38	2.43	2.37	2.26	2.18
CAZ	0.06	0.07	0.07	0.07	0.07	0.07	0.07
CHA	0.25	0.24	0.25	0.25	0.22	0.19	0.17
EUR	0.24	0.24	0.24	0.24	0.24	0.24	0.25
IND	0.41	0.44	0.45	0.46	0.45	0.43	0.40
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.24	0.25	0.25	0.25	0.23	0.22	0.20
MEA	0.10	0.11	0.11	0.11	0.10	0.09	0.09
NEU	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OAS	0.30	0.31	0.31	0.31	0.31	0.31	0.29
REF	0.10	0.10	0.10	0.10	0.10	0.09	0.07
SSA	0.32	0.36	0.38	0.40	0.40	0.38	0.38
USA	0.16	0.17	0.18	0.20	0.21	0.22	0.23

Table 852: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO2/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.254	0.306	0.329	0.379	0.509	0.510	0.518	0.537	0.591	0.622
CAZ	0.007	0.009	0.009	0.009	0.015	0.018	0.019	0.019	0.020	0.019
CHA	0.024	0.026	0.030	0.035	0.040	0.044	0.048	0.054	0.064	0.082
EUR	0.059	0.070	0.081	0.098	0.127	0.116	0.117	0.120	0.125	0.124
IND	0.026	0.030	0.032	0.032	0.034	0.039	0.044	0.047	0.052	0.059
JPN	0.004	0.006	0.007	0.008	0.009	0.009	0.009	0.008	0.008	0.009
LAM	0.018	0.023	0.028	0.031	0.052	0.041	0.044	0.050	0.057	0.066
MEA	0.005	0.010	0.011	0.014	0.019	0.019	0.021	0.023	0.028	0.033
NEU	0.006	0.006	0.006	0.007	0.010	0.010	0.010	0.011	0.013	0.012
OAS	0.014	0.016	0.018	0.021	0.027	0.031	0.038	0.041	0.047	0.055
REF	0.040	0.051	0.050	0.063	0.070	0.078	0.066	0.045	0.045	0.034
SSA	0.008	0.010	0.012	0.013	0.014	0.016	0.017	0.020	0.025	0.029
USA	0.044	0.048	0.046	0.048	0.093	0.088	0.085	0.098	0.109	0.101

Table 853: IPCC — Emissions—NO2—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO2/yr)

15.1.5 Agriculture—Agricultural Soils—Pasture



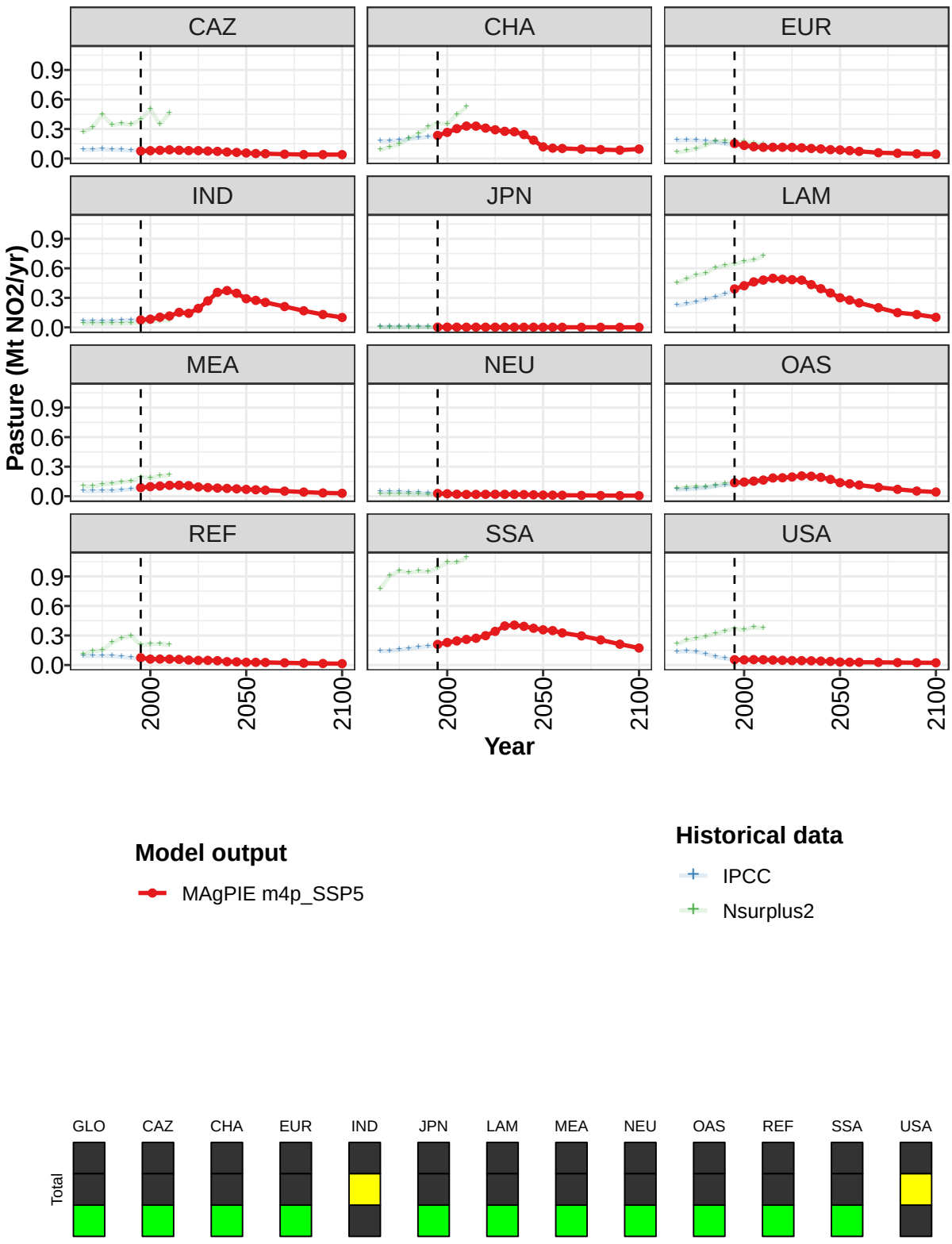


Figure 255: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Pasture (Mt NO2/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.52	1.59	1.71	1.80	1.88	1.85	1.91	2.01	2.04	1.93	1.74
CAZ	0.08	0.08	0.08	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.06
CHA	0.24	0.27	0.30	0.33	0.33	0.31	0.29	0.28	0.27	0.24	0.19
EUR	0.15	0.13	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.09
IND	0.08	0.08	0.10	0.12	0.15	0.14	0.19	0.27	0.36	0.37	0.35
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.39	0.42	0.46	0.48	0.50	0.49	0.48	0.48	0.43	0.39	0.35
MEA	0.09	0.10	0.10	0.11	0.11	0.11	0.09	0.09	0.08	0.08	0.07
NEU	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
OAS	0.14	0.14	0.15	0.16	0.19	0.19	0.20	0.21	0.20	0.19	0.17
REF	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.03
SSA	0.21	0.23	0.24	0.26	0.27	0.30	0.34	0.40	0.41	0.39	0.37
USA	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04

Table 854: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Pasture (Mt NO2/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.49	1.40	1.29	1.11	0.92	0.78	0.67
CAZ	0.06	0.05	0.05	0.04	0.04	0.04	0.04
CHA	0.12	0.11	0.10	0.10	0.09	0.09	0.10
EUR	0.09	0.08	0.07	0.06	0.05	0.05	0.04
IND	0.29	0.27	0.25	0.21	0.17	0.13	0.10
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.30	0.28	0.25	0.20	0.15	0.13	0.10
MEA	0.07	0.07	0.06	0.05	0.04	0.03	0.03
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.14	0.13	0.11	0.09	0.07	0.05	0.04
REF	0.03	0.03	0.03	0.02	0.02	0.02	0.01
SSA	0.36	0.35	0.33	0.30	0.26	0.21	0.17
USA	0.03	0.03	0.03	0.03	0.03	0.02	0.02

Table 855: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Pasture (Mt NO2/yr) [PART 2/2]

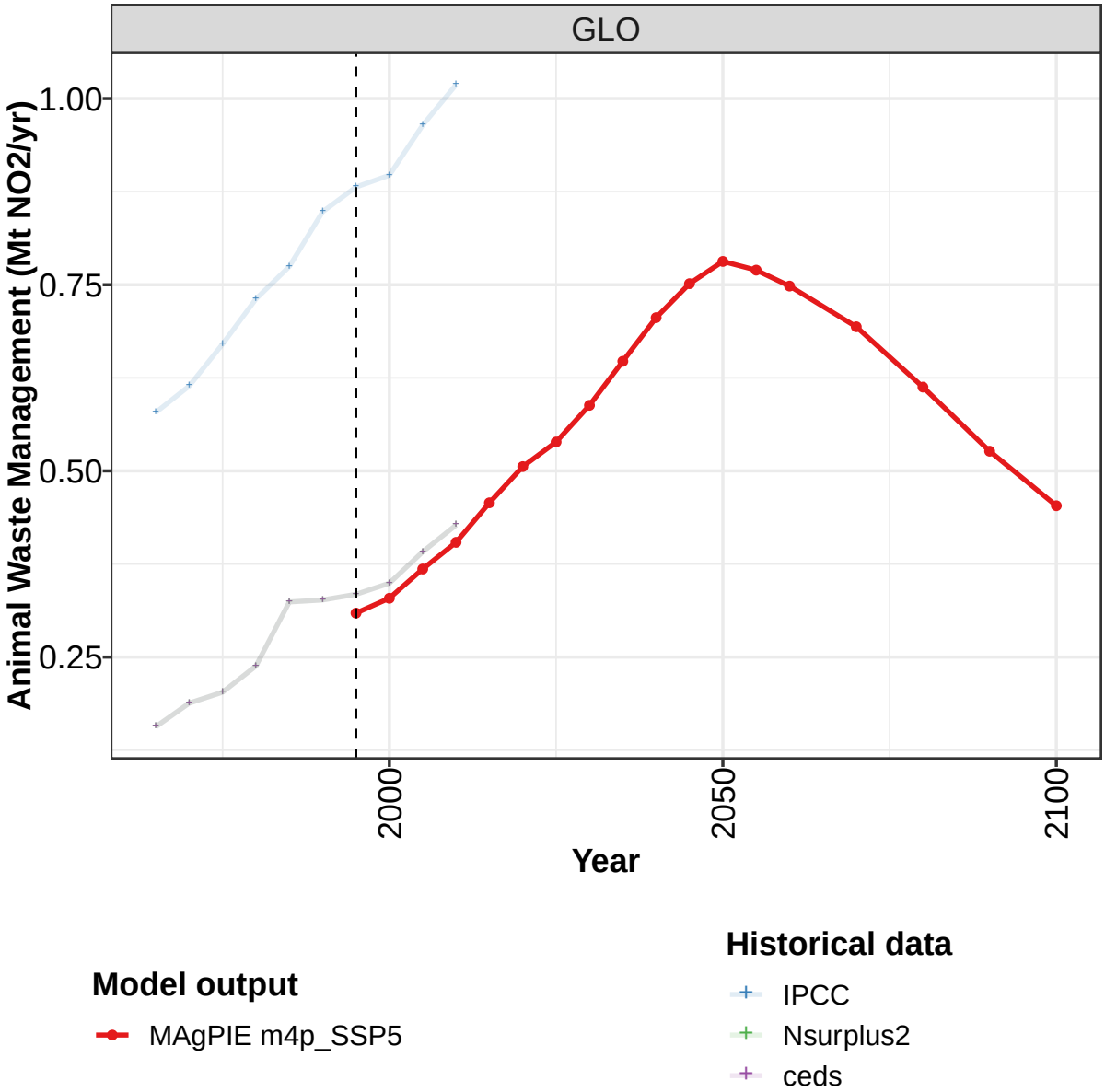
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.26	1.30	1.35	1.37	1.39	1.41	1.47	1.56	1.68	1.76
CAZ	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.09	0.09	0.09
CHA	0.18	0.18	0.19	0.20	0.21	0.22	0.24	0.27	0.30	0.33
EUR	0.18	0.19	0.18	0.18	0.17	0.15	0.14	0.12	0.11	0.11
IND	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.11	0.12
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.22	0.24	0.26	0.28	0.31	0.34	0.38	0.41	0.44	0.46
MEA	0.05	0.05	0.05	0.06	0.06	0.07	0.09	0.10	0.11	0.12
NEU	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
OAS	0.07	0.07	0.08	0.09	0.10	0.11	0.13	0.13	0.14	0.15
REF	0.09	0.09	0.09	0.09	0.08	0.07	0.06	0.05	0.05	0.06
SSA	0.14	0.14	0.15	0.17	0.18	0.19	0.20	0.22	0.24	0.26
USA	0.14	0.14	0.13	0.11	0.09	0.07	0.06	0.05	0.05	0.06

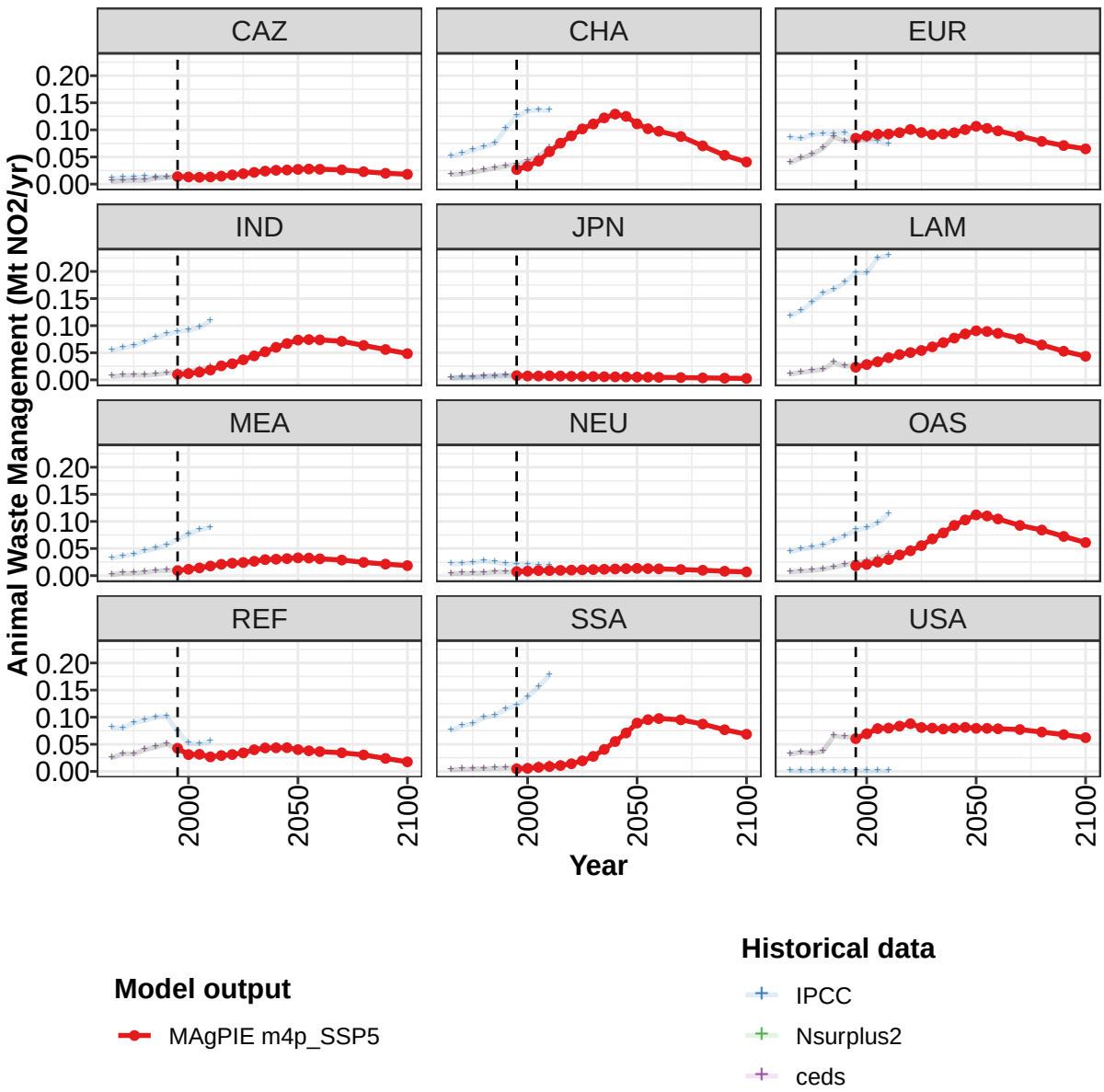
Table 856: IPCC — Emissions—NO2—Land—Agriculture—Agricultural Soils—Pasture (Mt NO2/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.20	2.54	2.87	2.96	3.24	3.40	3.50	3.68	3.70	4.00
CAZ	0.26	0.32	0.45	0.34	0.35	0.35	0.39	0.50	0.35	0.46
CHA	0.09	0.12	0.15	0.20	0.25	0.32	0.36	0.35	0.45	0.52
EUR	0.06	0.08	0.10	0.14	0.18	0.18	0.17	0.17	0.15	0.15
IND	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.07	0.07
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.45	0.49	0.53	0.55	0.61	0.63	0.64	0.67	0.68	0.73
MEA	0.10	0.10	0.12	0.13	0.14	0.15	0.19	0.18	0.20	0.21
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.08	0.09	0.10	0.09	0.11	0.13	0.12	0.12	0.14	0.16
REF	0.11	0.14	0.15	0.23	0.27	0.29	0.20	0.21	0.22	0.20
SSA	0.77	0.90	0.96	0.94	0.95	0.95	0.98	1.04	1.04	1.09
USA	0.22	0.25	0.27	0.29	0.32	0.34	0.37	0.36	0.38	0.38

Table 857: Nsurplus2 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Pasture (Mt NO2/yr)

15.1.6 Agriculture—Animal Waste Management





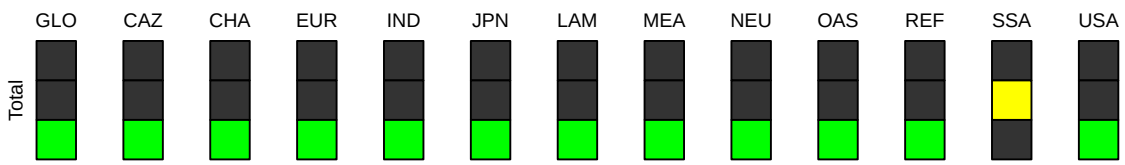


Figure 256: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.309	0.329	0.368	0.404	0.457	0.506	0.539	0.588	0.647	0.706	0.751
CAZ	0.014	0.013	0.013	0.013	0.015	0.017	0.019	0.022	0.024	0.026	0.026
CHA	0.027	0.033	0.042	0.060	0.076	0.089	0.102	0.111	0.122	0.129	0.125
EUR	0.085	0.089	0.092	0.092	0.095	0.101	0.095	0.091	0.093	0.095	0.101
IND	0.010	0.012	0.014	0.018	0.026	0.030	0.037	0.044	0.052	0.060	0.067
JPN	0.008	0.007	0.007	0.008	0.007	0.007	0.006	0.006	0.006	0.006	0.005
LAM	0.023	0.028	0.033	0.041	0.047	0.050	0.054	0.061	0.069	0.077	0.085
MEA	0.009	0.012	0.014	0.018	0.021	0.023	0.024	0.026	0.030	0.030	0.031
NEU	0.007	0.008	0.009	0.009	0.010	0.010	0.011	0.011	0.012	0.012	0.013
OAS	0.018	0.021	0.025	0.030	0.038	0.046	0.055	0.068	0.079	0.093	0.103
REF	0.043	0.031	0.032	0.027	0.029	0.031	0.034	0.040	0.043	0.044	0.044
SSA	0.005	0.006	0.008	0.009	0.011	0.014	0.019	0.028	0.041	0.055	0.071
USA	0.060	0.069	0.079	0.080	0.084	0.088	0.081	0.080	0.078	0.080	0.081

Table 858: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.781	0.770	0.748	0.694	0.613	0.526	0.453
CAZ	0.027	0.028	0.027	0.026	0.023	0.020	0.018
CHA	0.111	0.102	0.098	0.088	0.071	0.053	0.041
EUR	0.107	0.103	0.098	0.089	0.079	0.071	0.065
IND	0.073	0.074	0.074	0.071	0.064	0.056	0.048
JPN	0.005	0.005	0.005	0.004	0.004	0.003	0.003
LAM	0.091	0.089	0.086	0.076	0.064	0.053	0.044
MEA	0.033	0.032	0.031	0.029	0.024	0.021	0.018
NEU	0.013	0.013	0.012	0.011	0.010	0.008	0.007
OAS	0.112	0.110	0.105	0.093	0.084	0.072	0.061
REF	0.040	0.038	0.036	0.034	0.030	0.024	0.018
SSA	0.089	0.095	0.097	0.095	0.087	0.077	0.069
USA	0.079	0.079	0.079	0.077	0.073	0.068	0.062

Table 859: MAgPIE m4p_SSP5 — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.58	0.61	0.67	0.73	0.77	0.85	0.88	0.90	0.96	1.02
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	0.05	0.06	0.06	0.07	0.08	0.10	0.13	0.13	0.14	0.14
EUR	0.09	0.08	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.07
IND	0.05	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.10	0.11
JPN	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.12	0.13	0.14	0.16	0.17	0.18	0.20	0.20	0.22	0.23
MEA	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.09
NEU	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.10	0.11
REF	0.08	0.08	0.09	0.09	0.10	0.10	0.07	0.05	0.05	0.05
SSA	0.08	0.08	0.09	0.10	0.10	0.12	0.12	0.14	0.16	0.18
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 860: ceds — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.157	0.188	0.203	0.238	0.324	0.327	0.334	0.349	0.391	0.427
CAZ	0.005	0.006	0.007	0.007	0.011	0.013	0.014	0.014	0.015	0.014
CHA	0.017	0.019	0.022	0.026	0.030	0.033	0.037	0.042	0.051	0.068
EUR	0.040	0.048	0.054	0.066	0.087	0.079	0.081	0.083	0.086	0.086
IND	0.007	0.008	0.009	0.008	0.010	0.012	0.014	0.016	0.019	0.023
JPN	0.003	0.005	0.005	0.007	0.008	0.008	0.008	0.007	0.007	0.008
LAM	0.011	0.014	0.017	0.019	0.032	0.025	0.027	0.031	0.037	0.043
MEA	0.002	0.004	0.005	0.006	0.009	0.009	0.011	0.012	0.015	0.019
NEU	0.004	0.004	0.004	0.005	0.007	0.007	0.007	0.008	0.009	0.009
OAS	0.007	0.008	0.010	0.012	0.016	0.019	0.025	0.027	0.033	0.038
REF	0.025	0.033	0.032	0.040	0.045	0.051	0.041	0.028	0.029	0.024
SSA	0.003	0.004	0.004	0.005	0.006	0.006	0.007	0.008	0.011	0.013
USA	0.032	0.035	0.034	0.037	0.066	0.063	0.063	0.072	0.081	0.082

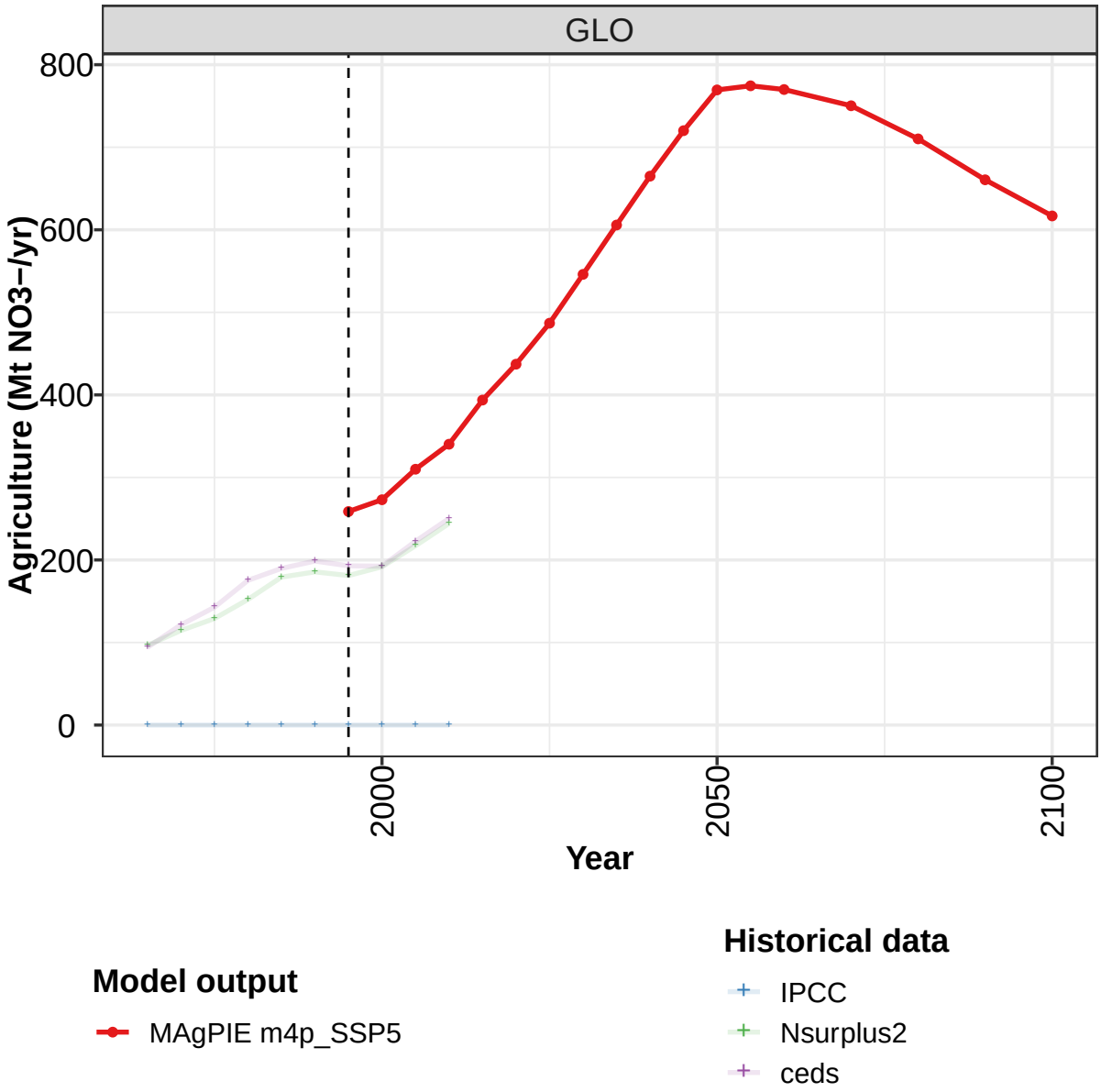
Table 861: IPCC — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr)

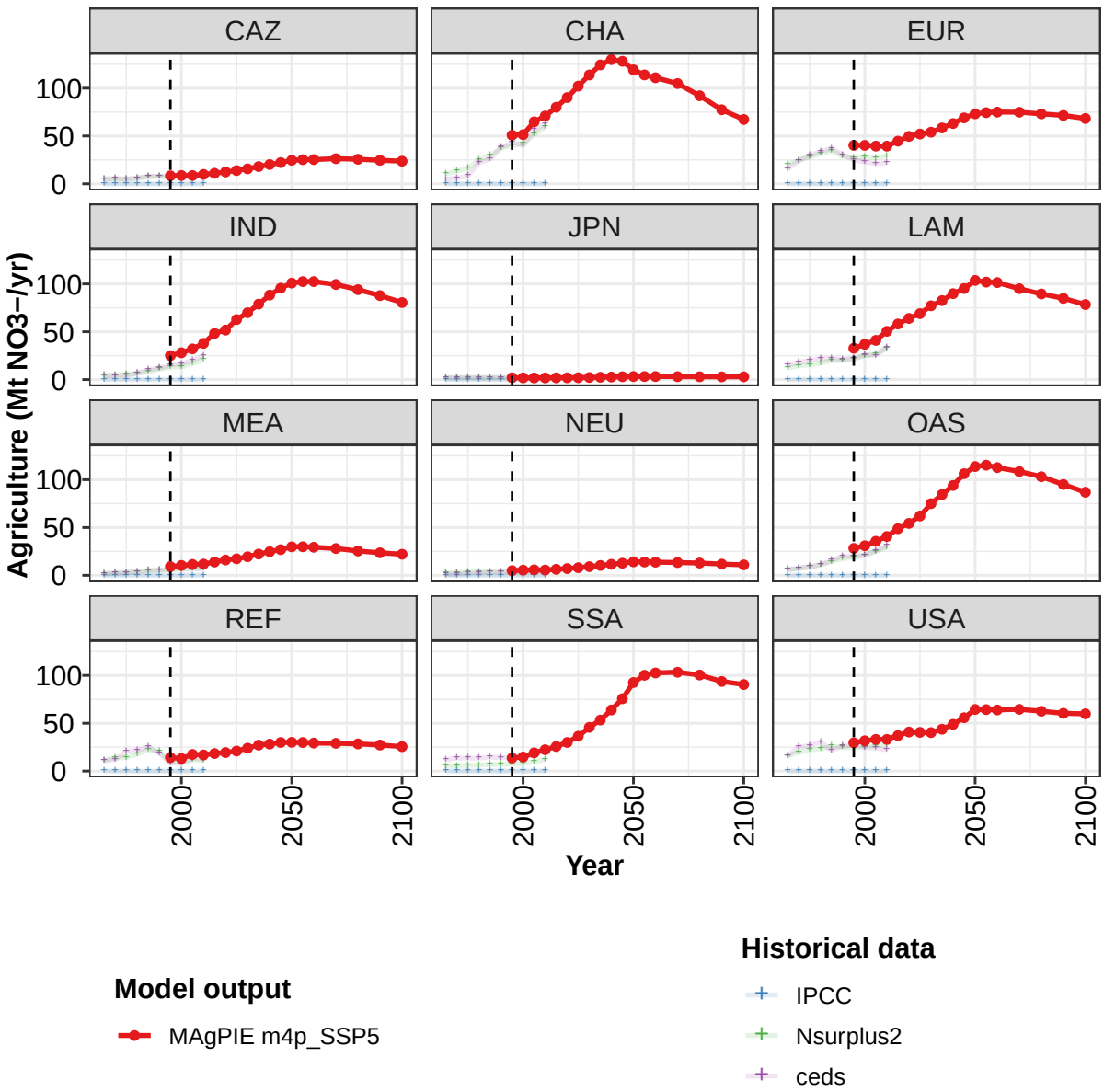
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.157	0.188	0.203	0.238	0.324	0.327	0.334	0.349	0.391	0.427
CAZ	0.005	0.006	0.007	0.007	0.011	0.013	0.014	0.014	0.015	0.014
CHA	0.017	0.019	0.022	0.026	0.030	0.033	0.037	0.042	0.051	0.068
EUR	0.040	0.048	0.054	0.066	0.087	0.079	0.081	0.083	0.086	0.086
IND	0.007	0.008	0.009	0.008	0.010	0.012	0.014	0.016	0.019	0.023
JPN	0.003	0.005	0.005	0.007	0.008	0.008	0.008	0.007	0.007	0.008
LAM	0.011	0.014	0.017	0.019	0.032	0.025	0.027	0.031	0.037	0.043
MEA	0.002	0.004	0.005	0.006	0.009	0.009	0.011	0.012	0.015	0.019
NEU	0.004	0.004	0.004	0.005	0.007	0.007	0.007	0.008	0.009	0.009
OAS	0.007	0.008	0.010	0.012	0.016	0.019	0.025	0.027	0.033	0.038
REF	0.025	0.033	0.032	0.040	0.045	0.051	0.041	0.028	0.029	0.024
SSA	0.003	0.004	0.004	0.005	0.006	0.006	0.007	0.008	0.011	0.013
USA	0.032	0.035	0.034	0.037	0.066	0.063	0.063	0.072	0.081	0.082

Table 862: Nsurplus2 — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr)

16 NO3Land

16.1 Agriculture





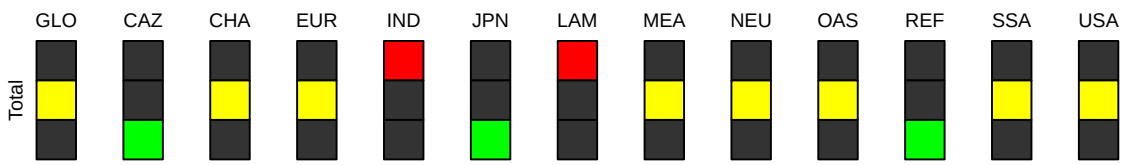


Figure 257: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	259	273	310	340	394	437	487	546	606	665	720
CAZ	8	9	9	10	11	12	14	16	18	20	22
CHA	51	51	65	71	80	90	102	114	124	130	128
EUR	40	40	39	39	45	50	52	54	58	63	69
IND	25	28	32	38	48	52	63	70	79	88	96
JPN	2	2	2	2	2	2	2	2	2	3	3
LAM	33	37	41	50	58	64	69	77	83	90	95
MEA	9	10	11	12	14	16	17	19	22	25	27
NEU	5	5	6	6	6	7	8	9	10	12	13
OAS	28	31	36	41	49	54	62	75	84	94	106
REF	14	13	17	17	18	19	21	24	27	28	30
SSA	14	15	19	22	26	30	36	46	53	64	76
USA	30	32	33	33	37	41	40	40	44	49	56

Table 863: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	769	774	770	750	710	661	617
CAZ	25	25	25	26	26	25	24
CHA	119	114	111	105	92	77	67
EUR	73	74	75	75	73	71	68
IND	101	102	102	99	94	88	81
JPN	3	3	3	3	3	3	3
LAM	104	102	101	95	90	85	78
MEA	30	30	29	28	25	24	22
NEU	14	14	14	13	13	12	11
OAS	114	115	113	109	103	95	87
REF	30	30	29	29	28	27	26
SSA	93	100	103	103	100	94	90
USA	64	64	64	65	63	60	60

Table 864: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture (Mt NO3-/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0

Table 865: ceds — Emissions—NO3Land—Agriculture (Mt NO3-/yr)

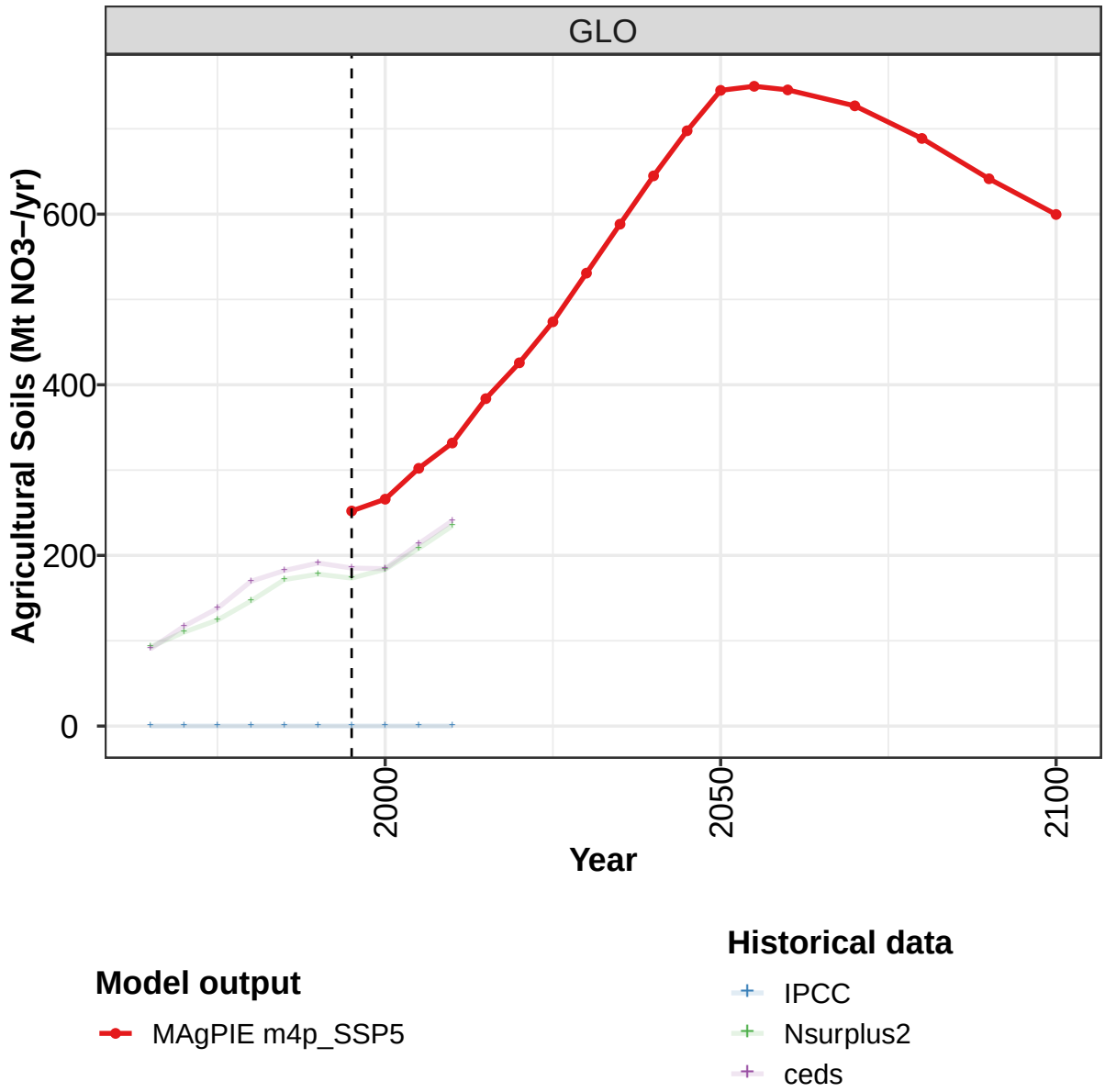
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	97	115	129	152	179	186	181	192	217	244
CAZ	5	5	5	5	8	8	8	8	9	10
CHA	11	13	16	25	29	37	40	42	51	59
EUR	21	24	28	32	34	29	27	28	27	29
IND	4	5	5	6	8	11	13	13	17	21
JPN	2	2	2	2	2	2	2	2	2	2
LAM	12	14	15	17	20	20	21	25	27	33
MEA	2	2	3	4	4	5	6	6	7	7
NEU	2	3	3	4	4	4	3	4	4	4
OAS	6	7	9	11	14	17	19	21	25	29
REF	11	14	14	18	22	20	10	9	12	11
SSA	5	6	6	6	7	7	7	8	10	12
USA	16	19	22	23	26	25	24	26	27	28

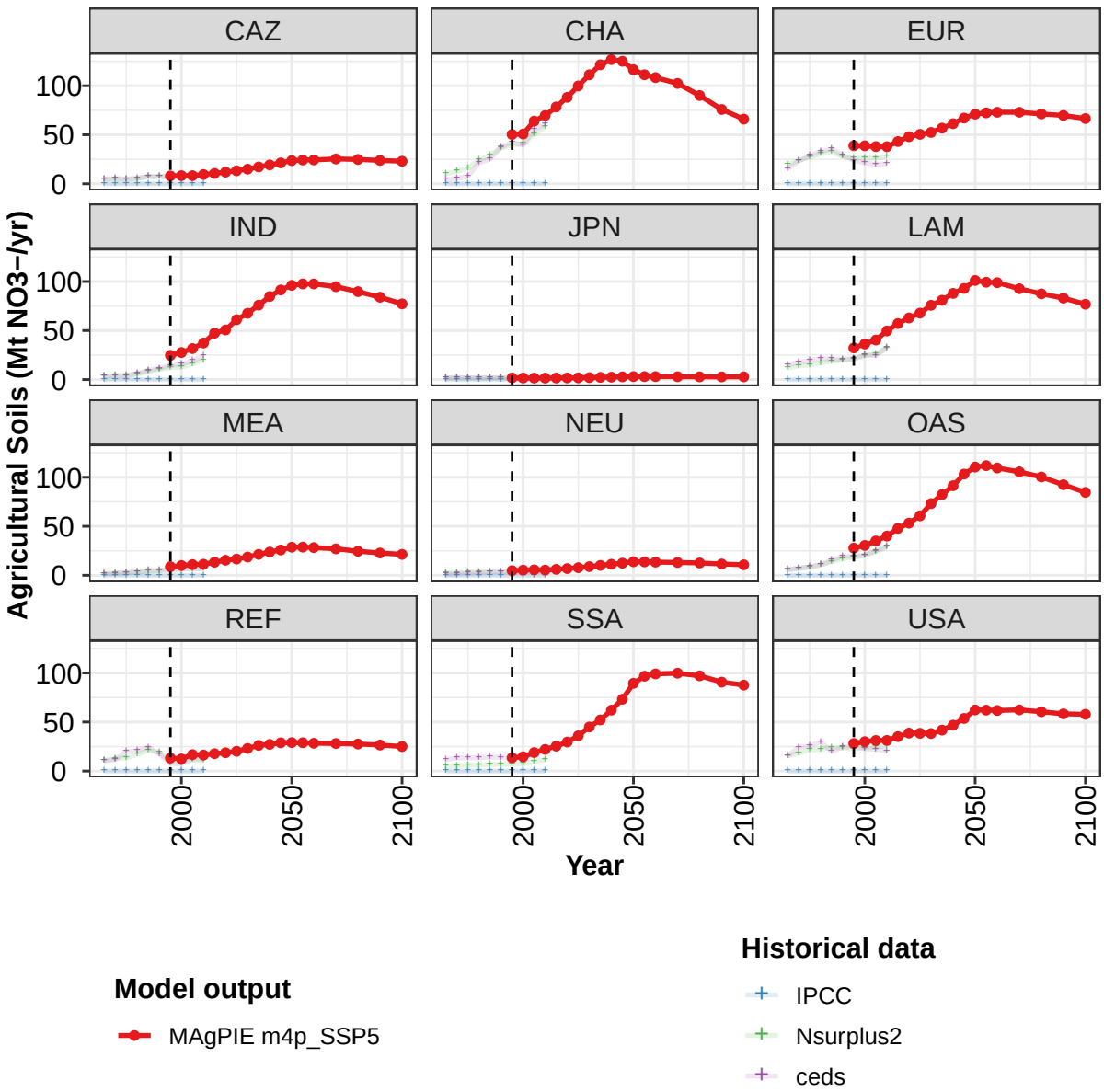
Table 866: IPCC — Emissions—NO3Land—Agriculture (Mt NO3-/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	94	121	143	175	190	199	193	192	223	250
CAZ	5	6	5	6	8	8	8	8	7	9
CHA	5	6	8	22	26	38	43	40	57	62
EUR	16	24	30	34	37	30	25	23	21	22
IND	4	4	4	7	10	12	15	16	20	25
JPN	2	2	2	2	2	2	2	2	2	1
LAM	15	18	20	22	22	21	22	26	25	34
MEA	2	2	3	4	5	5	6	7	7	7
NEU	1	2	2	3	3	3	3	3	3	3
OAS	6	7	9	11	16	20	20	21	26	31
REF	11	12	20	22	25	19	8	8	13	13
SSA	12	14	14	14	15	14	14	14	17	21
USA	16	25	27	30	22	26	27	24	24	22

Table 867: Nsurplus2 — Emissions—NO3Land—Agriculture (Mt NO3-/yr)

16.1.1 Agricultural Soils





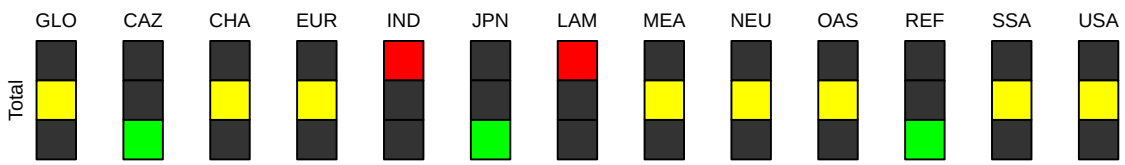


Figure 258: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	252	266	302	332	384	426	474	531	588	645	698
CAZ	8	8	8	9	11	12	13	15	17	19	21
CHA	50	51	64	70	78	88	100	111	121	127	125
EUR	39	39	38	38	43	48	50	52	57	61	67
IND	25	28	32	37	47	51	61	68	76	85	91
JPN	2	2	2	1	2	2	2	2	2	2	3
LAM	32	36	40	50	57	63	68	76	81	88	93
MEA	9	10	11	11	13	15	17	19	21	24	26
NEU	5	5	6	5	6	7	8	9	10	11	12
OAS	28	30	35	40	48	53	61	73	82	91	103
REF	13	12	17	16	18	19	20	23	26	27	29
SSA	14	15	19	22	25	30	36	45	52	62	73
USA	28	30	31	31	35	39	39	38	42	47	54

Table 868: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	745	750	746	727	689	641	600
CAZ	24	24	24	25	25	24	23
CHA	116	111	108	102	90	76	66
EUR	71	72	73	73	71	70	67
IND	96	98	98	95	90	84	77
JPN	3	3	3	3	3	3	3
LAM	101	99	99	93	87	83	77
MEA	29	29	28	27	25	23	21
NEU	14	14	13	13	13	12	11
OAS	110	112	109	106	100	92	85
REF	29	29	28	28	28	27	25
SSA	89	97	99	100	97	91	88
USA	62	62	62	62	60	58	58

Table 869: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO3-/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0

Table 870: ceds — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO3-/yr)

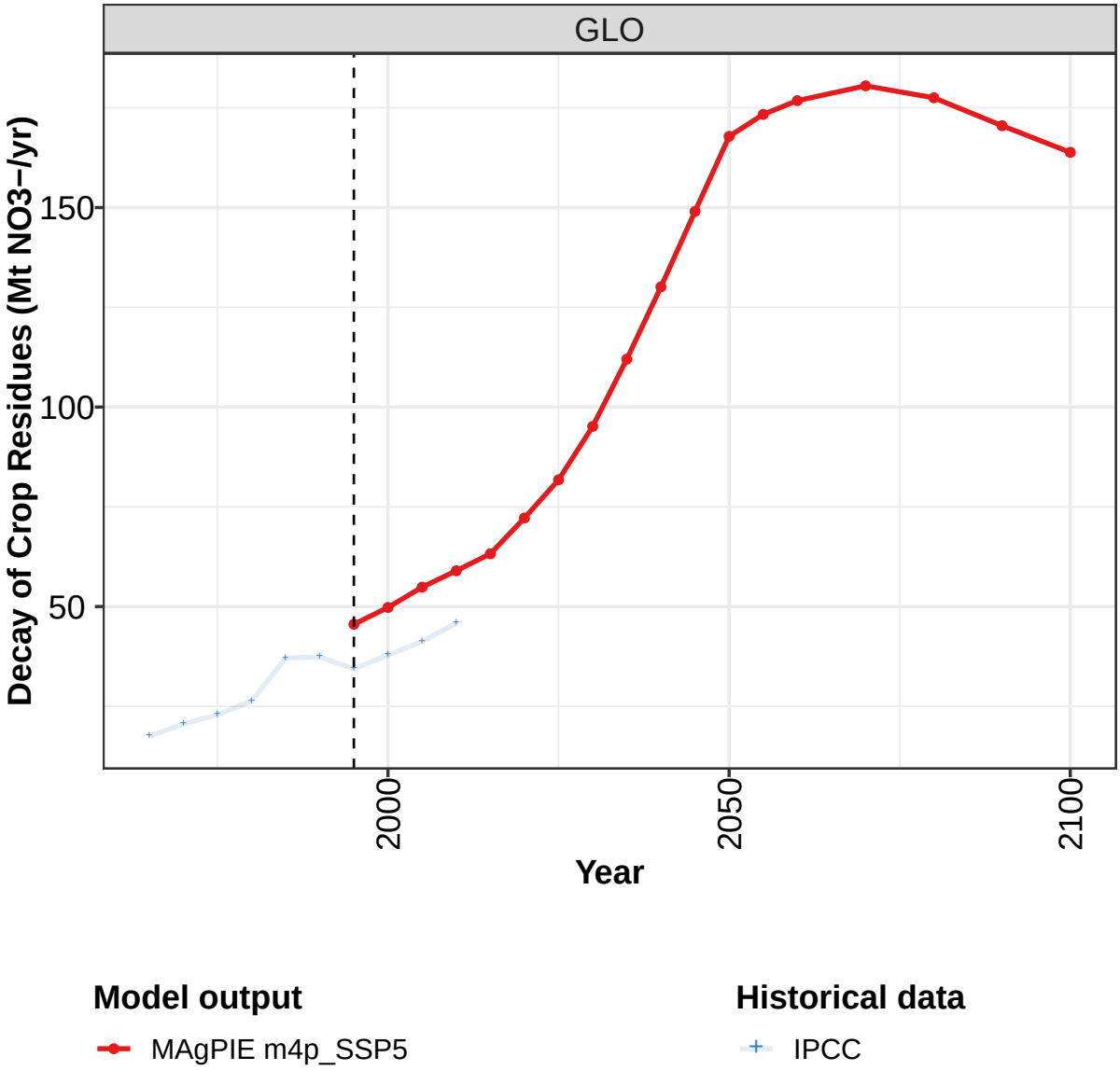
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	93	110	124	147	172	178	173	184	208	235
CAZ	5	5	5	5	7	8	7	8	8	10
CHA	10	13	16	24	29	37	39	41	50	58
EUR	20	24	27	31	33	28	26	26	26	28
IND	4	4	5	6	8	10	12	13	16	20
JPN	2	2	2	2	2	2	2	1	1	1
LAM	12	14	15	17	19	19	21	24	26	32
MEA	2	2	3	3	4	5	5	6	7	7
NEU	2	3	3	3	4	4	3	3	4	4
OAS	6	7	9	11	14	17	18	21	24	28
REF	11	13	13	17	21	19	9	8	11	10
SSA	5	5	6	6	7	7	7	8	10	12
USA	15	18	22	22	24	23	23	24	25	26

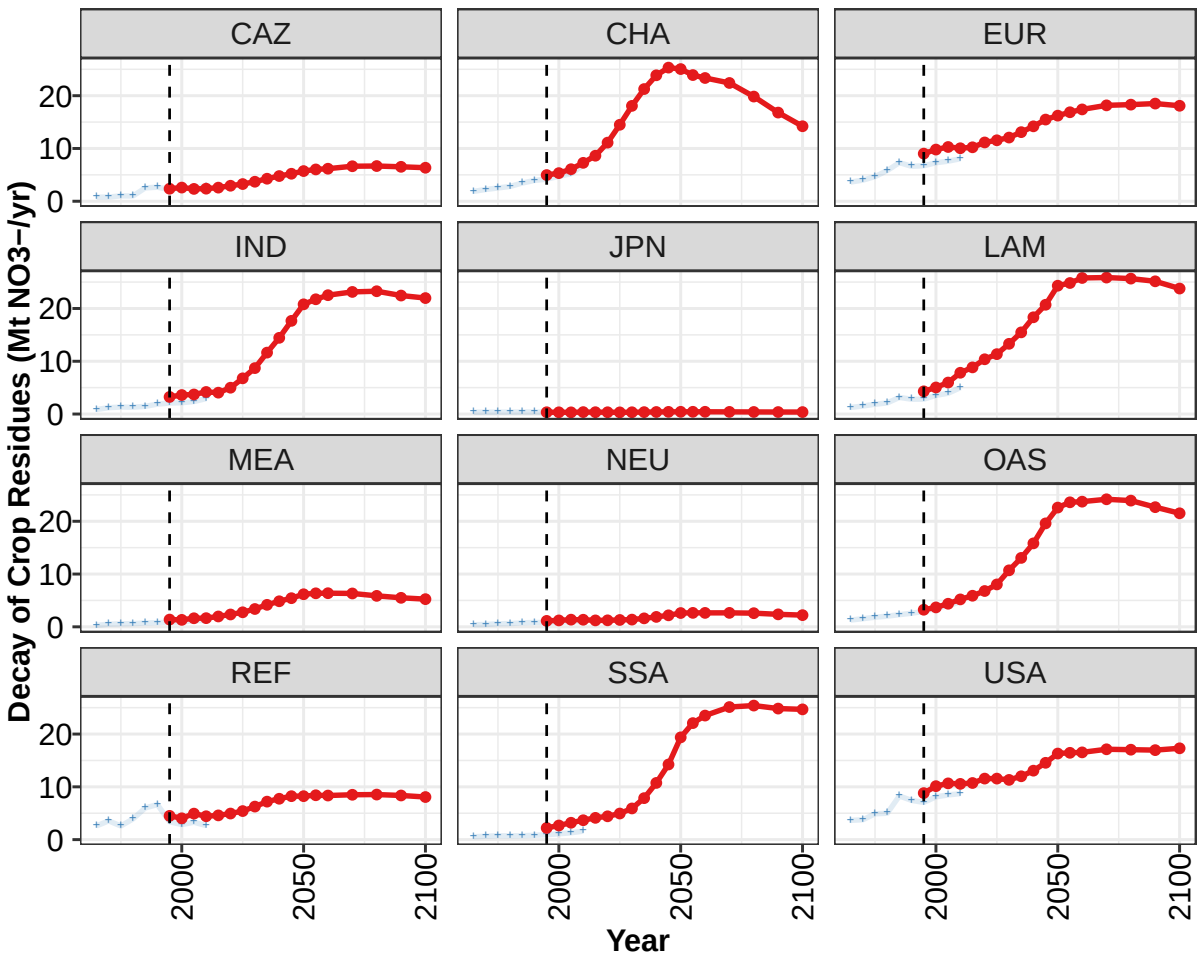
Table 871: IPCC — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO3-/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	90	117	138	170	182	191	185	184	214	241
CAZ	5	5	5	6	7	7	7	8	6	9
CHA	4	5	8	21	25	37	43	39	56	61
EUR	15	23	29	33	36	29	24	21	20	20
IND	4	3	4	6	9	11	14	16	19	24
JPN	2	2	2	2	2	2	2	1	1	1
LAM	15	18	19	21	21	21	21	25	24	33
MEA	2	2	3	3	5	5	6	7	7	7
NEU	1	1	2	2	3	3	2	3	3	3
OAS	6	7	9	11	15	20	19	20	25	30
REF	10	12	20	21	24	18	7	8	13	12
SSA	12	13	13	13	14	14	14	14	17	21
USA	15	24	26	29	20	24	26	23	22	20

Table 872: Nsurplus2 — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO3-/yr)

16.1.2 Agricultural Soils—Decay of Crop Residues





Model output

MAgPIE m4p_SSP5

Historical data

IPCC

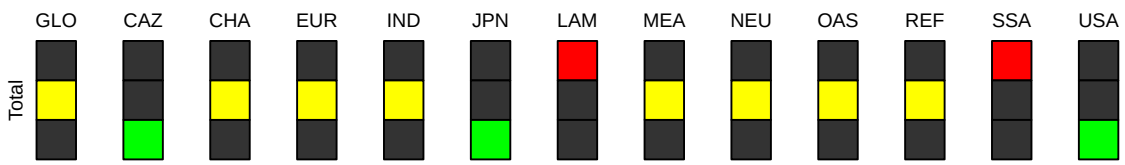


Figure 259: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	46	50	55	59	63	72	82	95	112	130	149
CAZ	2	3	2	2	3	3	3	4	4	5	5
CHA	5	5	6	7	9	11	14	18	21	24	25
EUR	9	10	10	10	10	11	12	12	13	14	15
IND	3	4	4	4	4	5	7	9	12	14	18
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	4	5	6	8	9	10	11	13	15	18	21
MEA	1	1	2	2	2	2	3	3	4	5	5
NEU	1	1	1	1	1	1	1	1	2	2	2
OAS	3	4	4	5	6	7	8	11	13	16	20
REF	5	4	5	4	5	5	5	6	7	8	8
SSA	2	3	3	4	4	4	5	6	8	11	14
USA	9	10	11	11	11	12	12	11	12	13	15

Table 873: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt NO3-/yr) [PART 1/2]

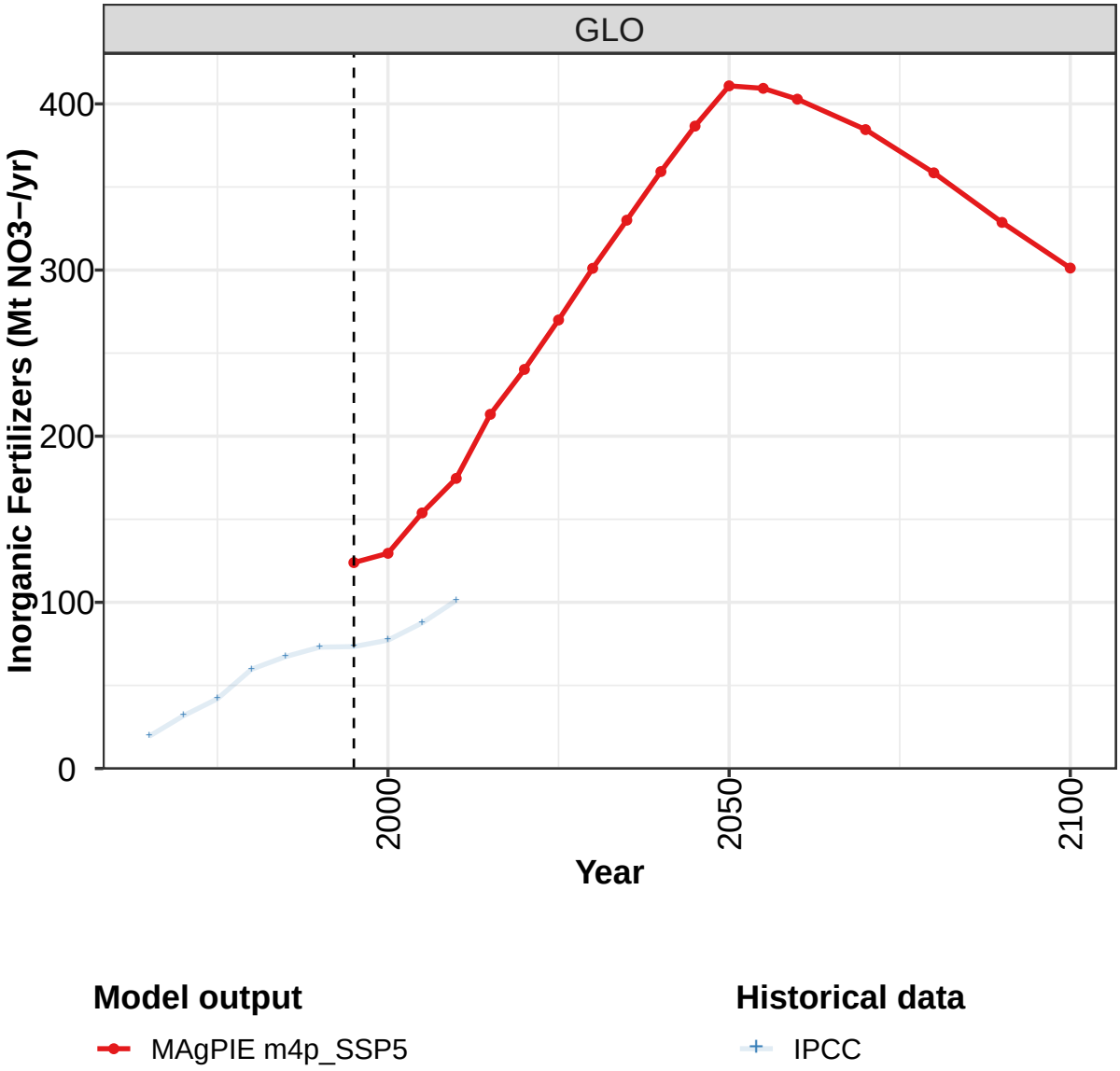
	2050	2055	2060	2070	2080	2090	2100
GLO	168	173	177	181	178	171	164
CAZ	6	6	6	7	7	7	6
CHA	25	24	23	22	20	17	14
EUR	16	17	17	18	18	19	18
IND	21	22	23	23	23	22	22
JPN	0	0	0	0	0	0	0
LAM	24	25	26	26	26	25	24
MEA	6	6	6	6	6	6	5
NEU	3	3	3	3	3	2	2
OAS	23	24	24	24	24	23	22
REF	8	8	8	9	9	8	8
SSA	19	22	24	25	25	25	25
USA	16	16	17	17	17	17	17

Table 874: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt NO3-/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	17.5	20.5	22.9	26.3	37.1	37.3	34.4	37.8	41.2	45.8
CAZ	0.8	0.8	1.0	1.0	2.5	2.7	2.2	2.5	2.6	2.8
CHA	1.9	2.2	2.5	2.8	3.5	3.9	4.2	4.7	5.2	6.8
EUR	3.6	4.0	4.7	5.8	7.3	6.6	6.7	7.3	7.6	8.0
IND	0.9	1.2	1.3	1.3	1.5	1.9	2.1	2.1	2.4	2.9
JPN	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4
LAM	1.2	1.5	1.9	2.1	3.1	2.8	2.8	3.5	3.9	5.0
MEA	0.3	0.5	0.6	0.6	0.7	0.8	0.9	0.9	1.2	1.2
NEU	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8	1.0	0.9
OAS	1.3	1.5	1.8	2.0	2.3	2.6	2.9	3.5	4.0	4.8
REF	2.6	3.6	2.6	3.9	6.0	6.6	3.4	2.9	3.3	2.7
SSA	0.6	0.6	0.7	0.7	0.7	0.8	0.9	1.1	1.3	1.6
USA	3.6	3.8	4.9	5.0	8.3	7.4	7.1	8.1	8.5	8.7

Table 875: IPCC — Emissions—NO3Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt NO3-/yr)

16.1.3 Agricultural Soils—Inorganic Fertilizers



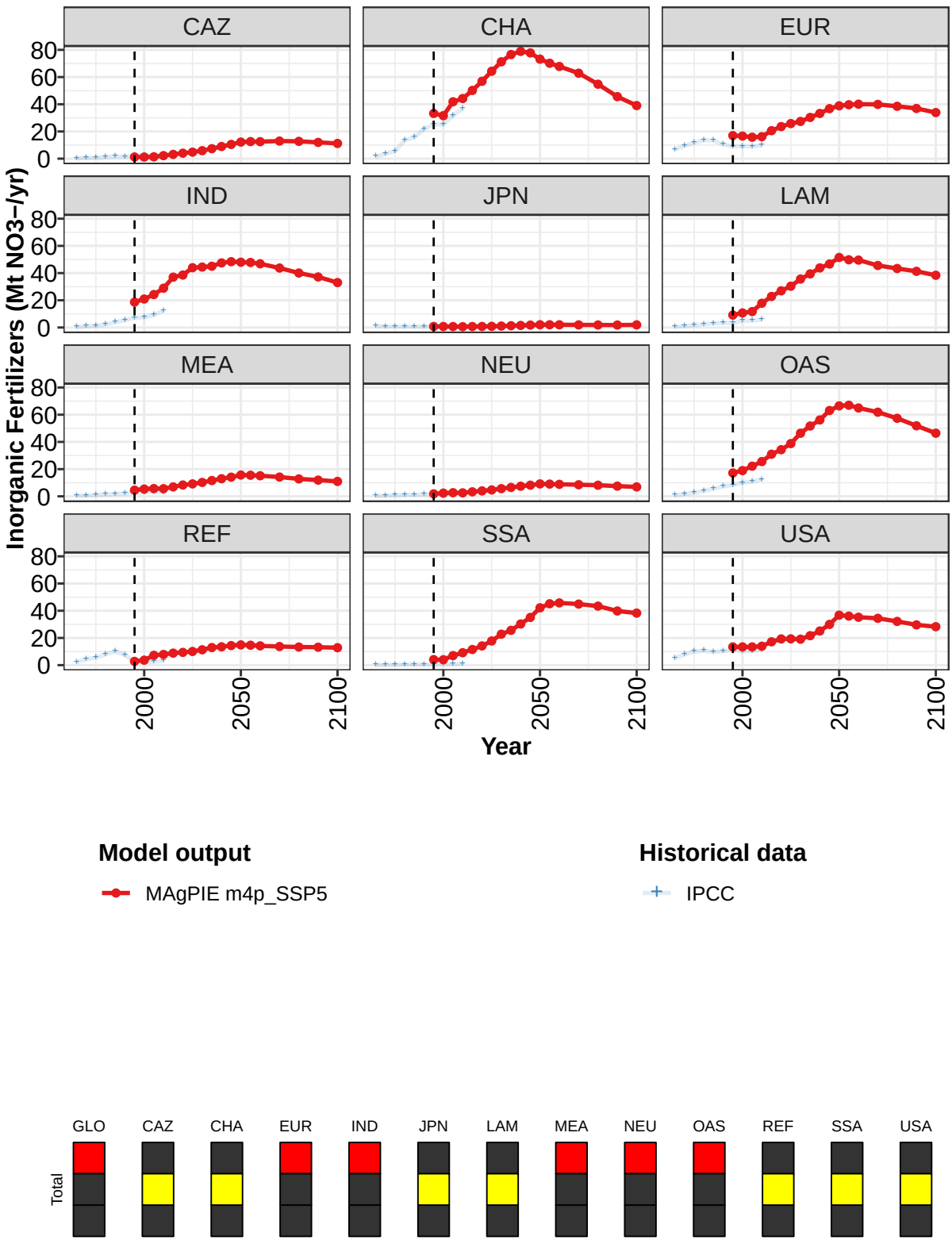


Figure 260: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	124	130	154	175	213	240	270	301	330	359	387
CAZ	1	1	1	2	3	4	5	6	7	9	10
CHA	33	32	42	44	50	57	64	71	77	79	78
EUR	17	17	16	16	21	24	26	27	30	33	37
IND	19	21	24	29	37	39	44	44	45	47	48
JPN	1	1	1	1	1	1	1	1	1	2	2
LAM	9	11	12	18	23	27	30	36	39	44	47
MEA	5	5	6	6	7	8	9	10	12	13	14
NEU	2	2	3	3	3	4	5	6	7	7	8
OAS	17	19	22	26	31	34	39	46	52	56	63
REF	3	4	7	8	9	9	10	11	13	13	14
SSA	4	4	7	9	12	14	18	23	26	30	35
USA	13	13	13	14	17	19	19	19	22	25	30

Table 876: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO3-/yr) [PART 1/2]

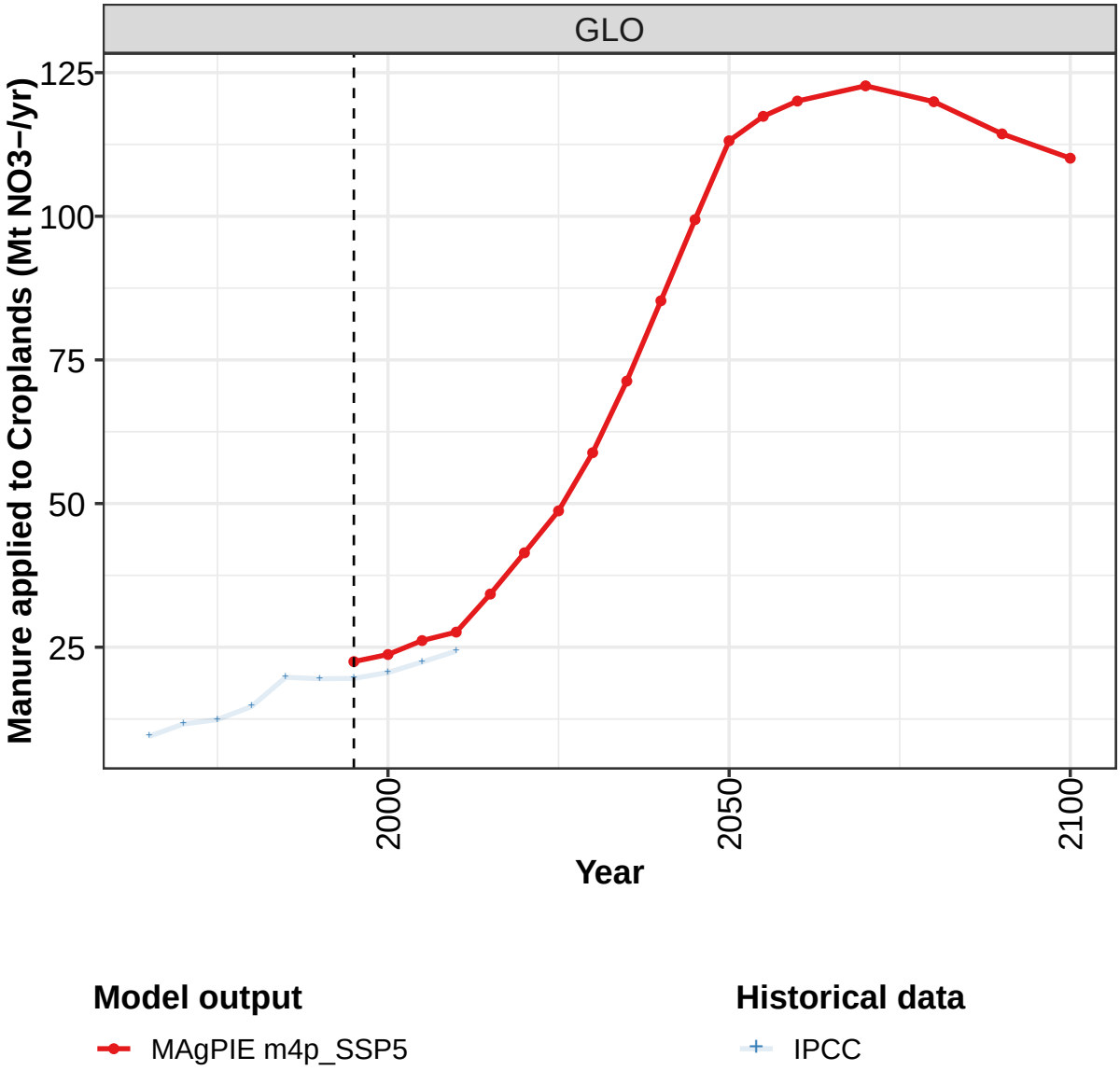
	2050	2055	2060	2070	2080	2090	2100
GLO	411	409	403	385	359	329	301
CAZ	12	13	12	13	13	12	11
CHA	73	70	68	63	55	46	39
EUR	39	40	40	40	39	37	34
IND	48	48	47	44	40	37	33
JPN	2	2	2	2	2	2	2
LAM	51	50	50	46	43	41	38
MEA	16	16	15	14	13	12	11
NEU	9	9	9	9	8	7	7
OAS	67	67	65	62	57	52	46
REF	15	15	14	14	13	13	13
SSA	42	45	46	45	43	40	38
USA	37	36	35	34	32	30	28

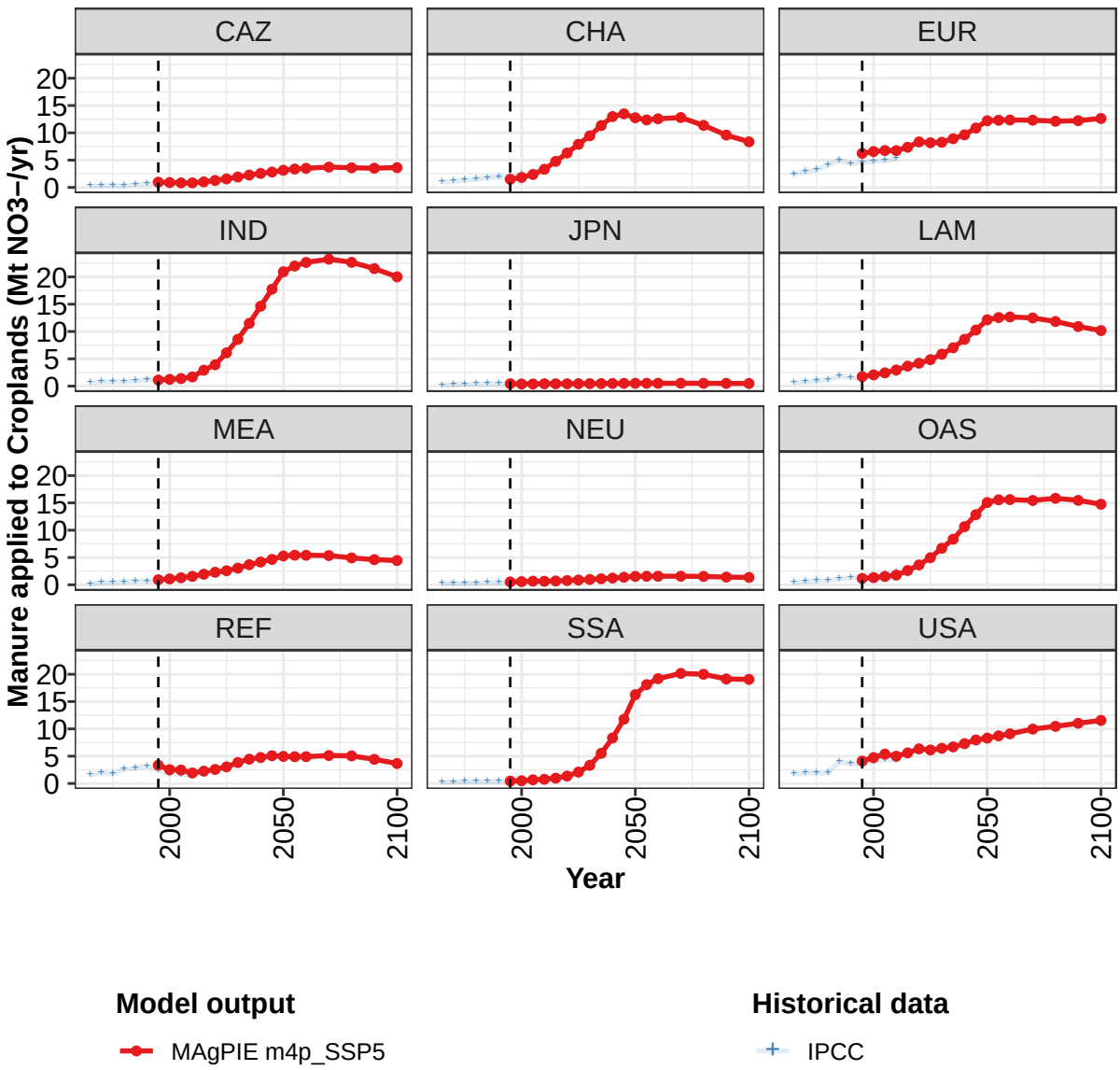
Table 877: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO3-/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	19	32	42	60	67	73	73	77	88	101
CAZ	0	0	1	1	2	2	2	3	3	3
CHA	2	4	6	13	16	22	25	25	32	37
EUR	7	10	12	14	13	11	9	9	9	10
IND	0	1	1	2	4	6	7	7	9	12
JPN	1	1	1	1	1	1	1	0	0	0
LAM	1	1	2	3	3	3	3	5	5	6
MEA	0	1	1	1	2	2	3	3	3	3
NEU	0	1	1	1	1	1	1	1	2	1
OAS	1	2	3	4	6	7	8	10	11	12
REF	2	4	6	8	10	8	2	2	3	3
SSA	0	0	0	1	1	1	1	1	1	1
USA	5	8	10	11	10	10	11	10	10	11

Table 878: IPCC — Emissions—NO3Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO3-/yr)

16.1.4 Agricultural Soils—Manure applied to Croplands





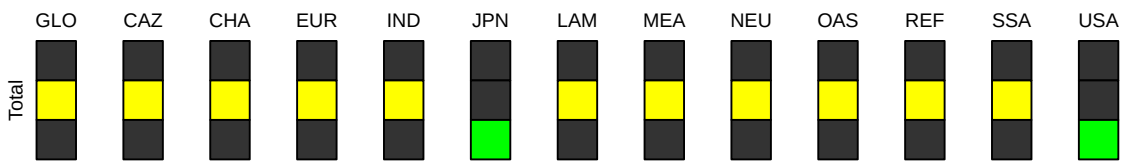


Figure 261: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	24	26	28	34	41	49	59	71	85	99
CAZ	1	1	1	1	1	1	2	2	2	3	3
CHA	1	2	2	3	5	6	8	9	11	13	13
EUR	6	7	7	7	7	8	8	8	9	10	11
IND	1	1	1	2	3	4	6	9	11	15	18
JPN	0	0	0	0	0	0	0	0	0	0	1
LAM	2	2	2	3	4	4	5	6	7	9	10
MEA	1	1	1	2	2	2	3	3	4	4	5
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	1	1	2	2	3	4	5	7	8	11	13
REF	3	3	2	2	2	3	3	4	4	5	5
SSA	0	0	1	1	1	1	2	3	6	8	12
USA	4	5	5	5	6	6	6	6	7	7	8

Table 879: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO3-/yr) [PART 1/2]

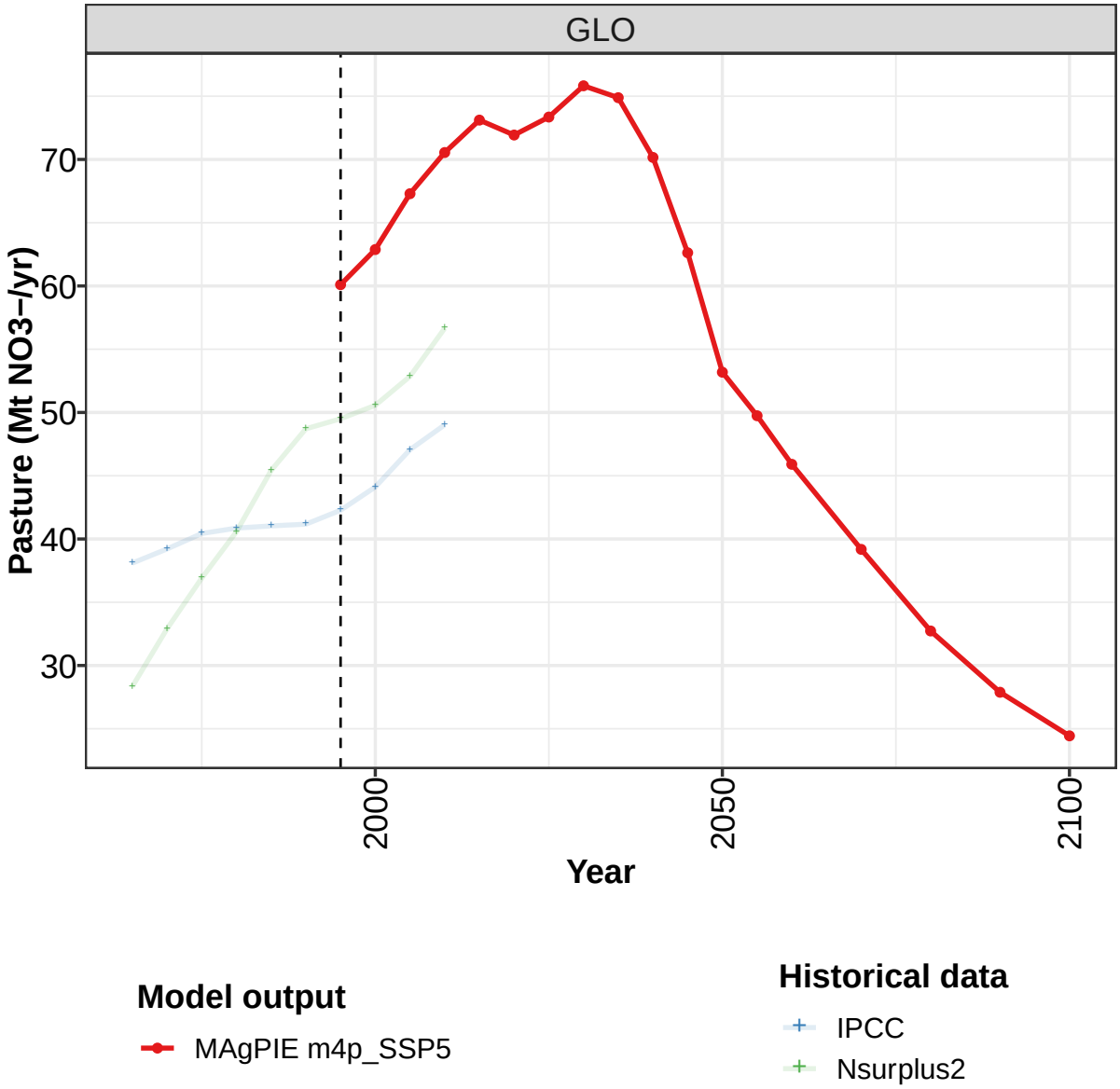
	2050	2055	2060	2070	2080	2090	2100
GLO	113	117	120	123	120	114	110
CAZ	3	3	3	4	4	4	4
CHA	13	12	13	13	11	10	8
EUR	12	12	12	12	12	12	13
IND	21	22	23	23	23	22	20
JPN	1	1	1	1	1	1	0
LAM	12	13	13	12	12	11	10
MEA	5	5	5	5	5	5	4
NEU	2	2	2	2	2	1	1
OAS	15	16	16	15	16	15	15
REF	5	5	5	5	5	4	4
SSA	16	18	19	20	20	19	19
USA	8	9	9	10	10	11	12

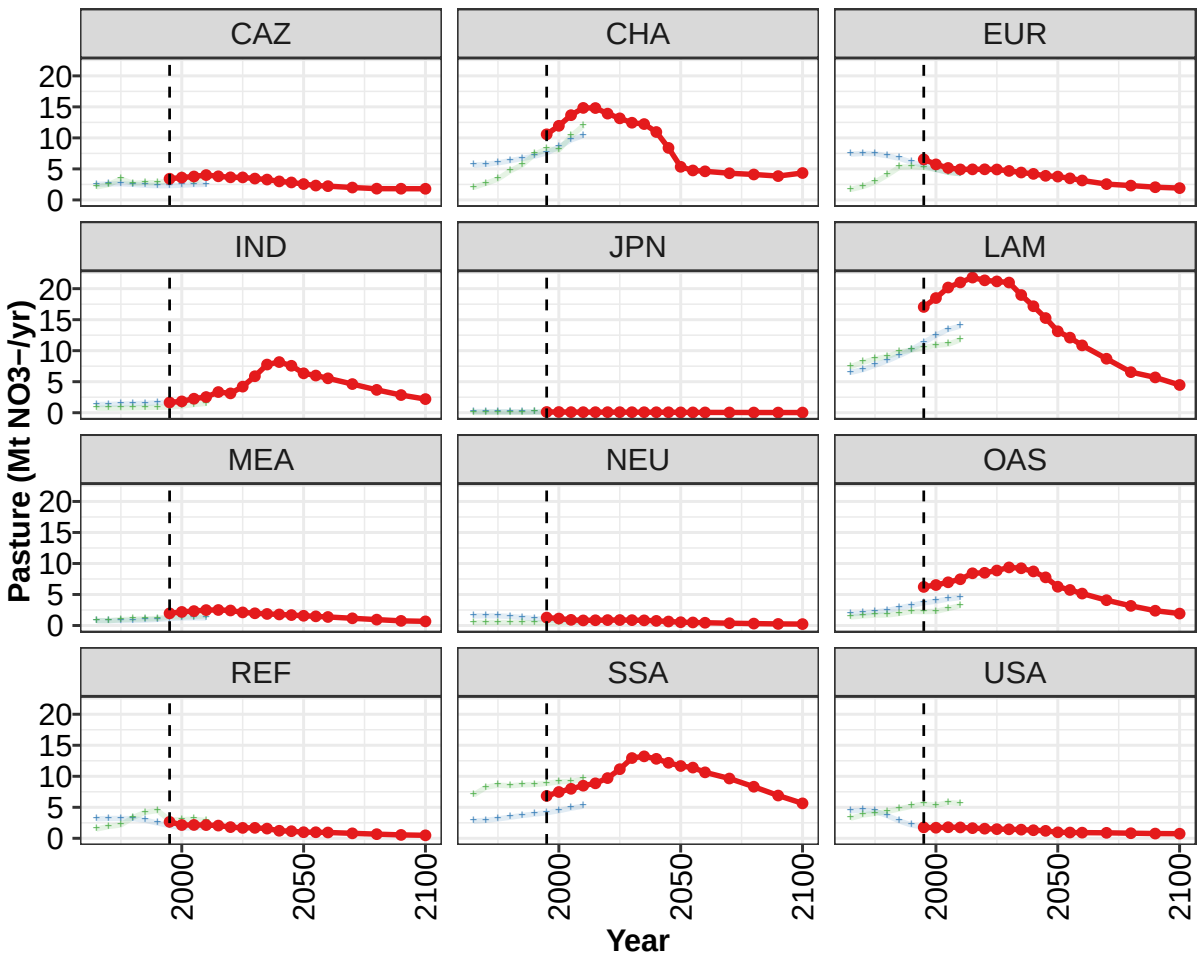
Table 880: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO3-/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.5	11.6	12.4	14.7	19.7	19.5	19.6	20.6	22.4	24.3
CAZ	0.3	0.3	0.4	0.3	0.6	0.7	0.7	0.7	0.7	0.8
CHA	1.0	1.1	1.3	1.5	1.8	2.0	2.0	2.3	2.7	3.7
EUR	2.5	2.9	3.2	4.1	5.0	4.3	4.6	4.8	5.0	5.2
IND	0.6	0.8	0.9	0.8	0.9	1.1	1.3	1.3	1.6	1.9
JPN	0.2	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4
LAM	0.6	0.8	1.0	1.1	1.9	1.5	1.5	1.8	2.0	2.2
MEA	0.2	0.4	0.4	0.5	0.6	0.7	0.7	0.8	1.0	1.2
NEU	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5
OAS	0.5	0.6	0.7	0.8	1.1	1.3	1.5	1.7	1.9	2.3
REF	1.5	2.0	1.7	2.6	2.8	3.1	2.4	1.7	1.7	1.3
SSA	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.7
USA	1.8	2.0	1.9	1.9	3.9	3.6	3.6	4.0	4.4	4.2

Table 881: IPCC — Emissions—NO3Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO3-/yr)

16.1.5 Agricultural Soils—Pasture





Model output

MAgPIE m4p_SSP5

Historical data

IPCC

Nsurplus2

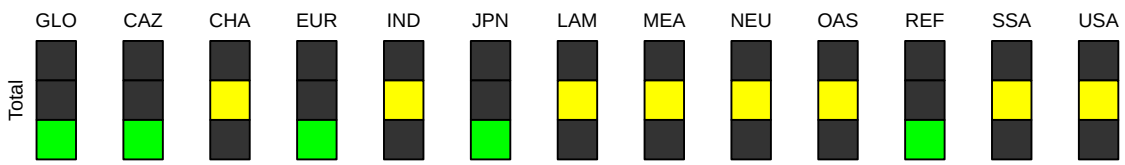


Figure 262: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	60.1	62.9	67.3	70.5	73.1	71.9	73.4	75.8	74.9	70.2	62.6
CAZ	3.4	3.6	3.8	4.0	3.8	3.6	3.6	3.4	3.3	3.0	2.8
CHA	10.6	11.9	13.7	14.8	14.8	13.9	13.2	12.4	12.2	11.0	8.4
EUR	6.5	5.7	5.2	4.9	4.9	4.9	4.9	4.7	4.4	4.2	3.9
IND	1.7	1.8	2.3	2.5	3.3	3.1	4.2	5.9	7.8	8.2	7.6
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	17.1	18.5	20.2	21.0	21.8	21.3	21.2	21.0	19.0	17.2	15.3
MEA	2.0	2.2	2.3	2.5	2.5	2.4	2.1	2.0	1.9	1.8	1.7
NEU	1.3	1.1	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.6
OAS	6.2	6.5	7.0	7.5	8.4	8.5	8.9	9.4	9.2	8.7	7.8
REF	2.7	2.1	2.2	2.1	2.1	1.8	1.7	1.7	1.6	1.2	1.1
SSA	6.8	7.5	8.0	8.5	8.9	9.7	11.1	12.9	13.2	12.8	12.2
USA	1.8	1.7	1.8	1.8	1.6	1.6	1.5	1.5	1.4	1.3	1.2

Table 882: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	53.2	49.7	45.9	39.2	32.7	27.9	24.4
CAZ	2.6	2.3	2.2	2.0	1.8	1.8	1.8
CHA	5.3	4.8	4.6	4.3	4.1	3.8	4.3
EUR	3.8	3.5	3.1	2.6	2.3	2.1	1.9
IND	6.4	6.0	5.5	4.6	3.7	2.9	2.2
JPN	0.1	0.1	0.1	0.0	0.0	0.0	0.0
LAM	13.1	12.1	10.9	8.7	6.5	5.7	4.5
MEA	1.6	1.5	1.4	1.2	1.0	0.8	0.7
NEU	0.5	0.5	0.5	0.4	0.3	0.3	0.2
OAS	6.3	5.7	5.2	4.1	3.2	2.4	1.9
REF	1.0	1.0	0.9	0.8	0.7	0.5	0.5
SSA	11.7	11.4	10.6	9.6	8.3	6.9	5.6
USA	1.0	0.9	0.9	0.9	0.8	0.8	0.7

Table 883: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr) [PART 2/2]

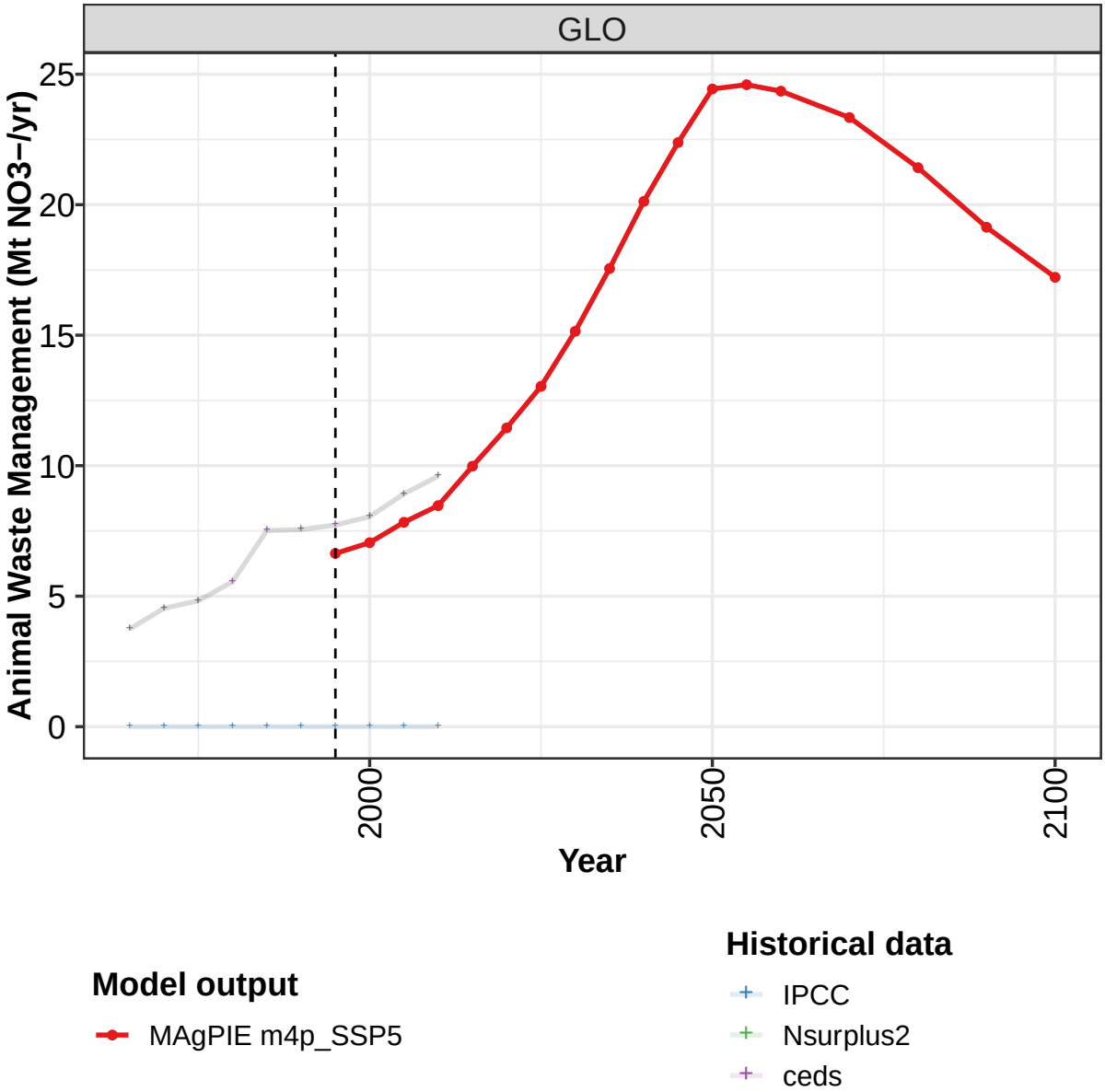
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	38.1	39.2	40.4	40.9	41.0	41.2	42.3	44.1	47.1	49.0
CAZ	2.5	2.6	2.6	2.5	2.4	2.3	2.3	2.4	2.5	2.5
CHA	5.6	5.7	6.0	6.3	6.7	7.1	7.6	8.5	9.7	10.4
EUR	7.4	7.5	7.4	7.1	6.7	6.1	5.5	4.9	4.5	4.2
IND	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	2.4	2.7
JPN	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
LAM	6.5	6.9	7.7	8.4	9.2	10.2	11.3	12.5	13.4	14.0
MEA	0.8	0.8	0.8	0.8	0.9	1.0	1.1	1.2	1.2	1.2
NEU	1.5	1.6	1.6	1.5	1.3	1.1	1.0	0.8	0.7	0.6
OAS	1.9	2.0	2.2	2.4	2.8	3.2	3.7	3.9	4.3	4.5
REF	3.1	3.2	3.2	3.2	2.9	2.5	2.0	1.7	1.7	1.8
SSA	2.8	2.9	3.1	3.4	3.7	3.9	4.1	4.4	4.9	5.2
USA	4.4	4.5	4.4	3.7	2.8	2.1	1.8	1.7	1.8	1.8

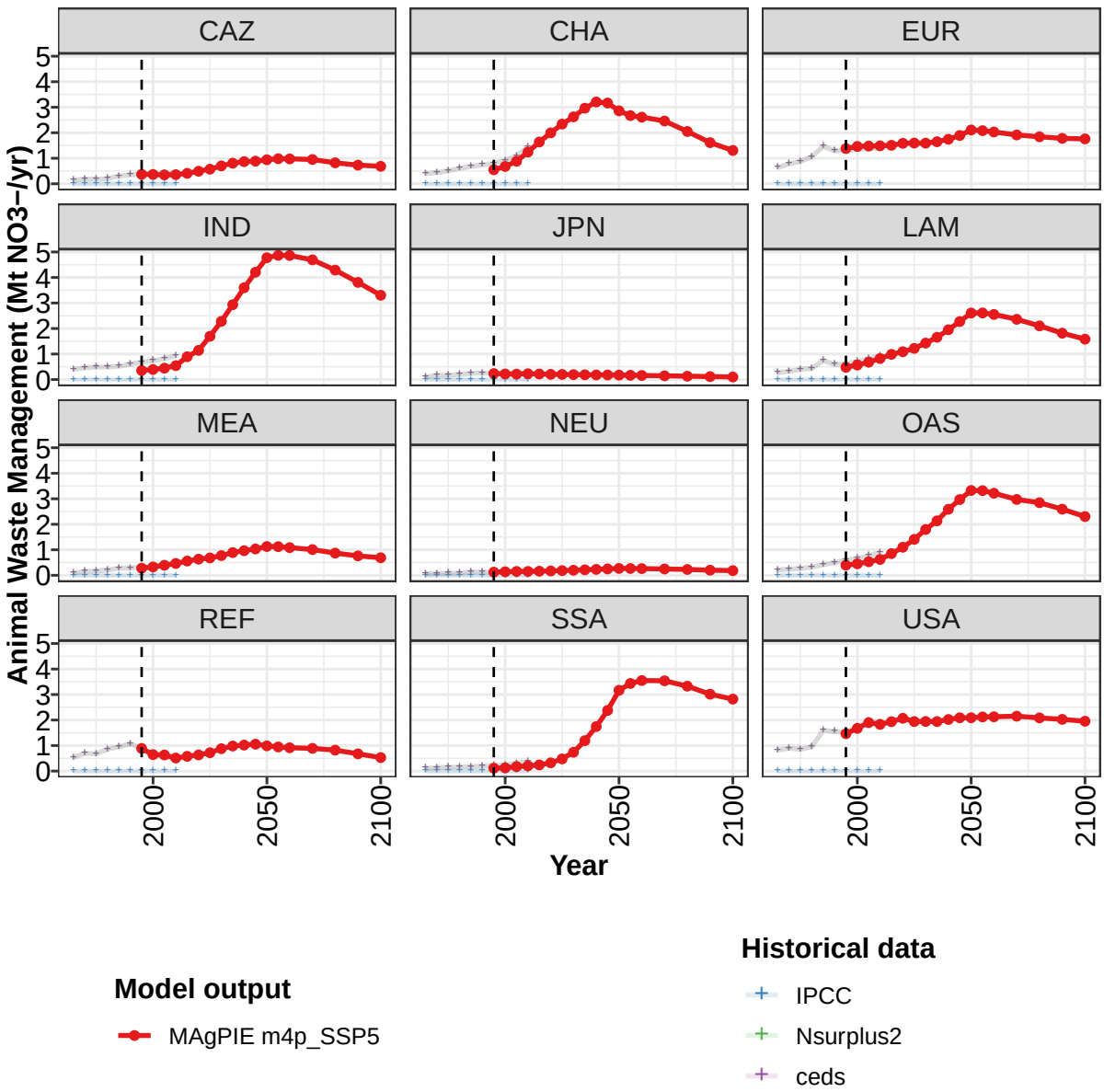
Table 884: IPCC — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	28.3	32.9	36.9	40.6	45.4	48.7	49.5	50.6	52.9	56.7
CAZ	2.1	2.5	3.4	2.7	2.8	2.8	3.1	3.9	2.9	3.8
CHA	2.0	2.7	3.4	4.7	5.7	7.4	8.2	8.1	10.3	12.0
EUR	1.7	2.2	2.9	4.0	5.3	5.3	5.2	4.9	4.4	4.2
IND	0.7	0.7	0.7	0.8	0.8	0.9	0.9	1.1	1.3	1.5
JPN	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	7.4	8.1	8.7	9.1	9.8	10.1	10.5	10.9	11.0	11.8
MEA	0.8	0.8	0.9	1.0	1.1	1.1	1.4	1.4	1.4	1.6
NEU	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5
OAS	1.4	1.5	1.7	1.7	1.9	2.3	2.2	2.3	2.7	3.2
REF	1.5	1.9	2.2	3.4	4.2	4.5	2.9	3.0	3.1	2.9
SSA	7.0	8.2	8.6	8.5	8.6	8.7	8.8	9.1	9.2	9.5
USA	3.2	3.8	4.0	4.3	4.7	5.2	5.5	5.3	5.8	5.6

Table 885: Nsurplus2 — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr)

16.1.6 Animal Waste Management





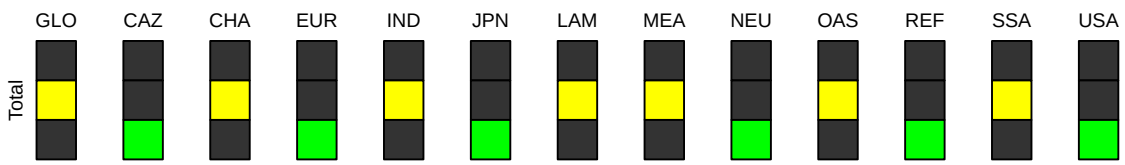


Figure 263: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Animal Waste Management (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.6	7.1	7.8	8.5	10.0	11.4	13.0	15.2	17.6	20.1	22.4
CAZ	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	0.9
CHA	0.5	0.7	0.9	1.2	1.6	2.0	2.3	2.6	3.0	3.2	3.2
EUR	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.9
IND	0.4	0.4	0.4	0.5	0.9	1.1	1.7	2.3	2.9	3.6	4.2
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.4	1.7	2.0	2.3
MEA	0.3	0.3	0.4	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.0
NEU	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
OAS	0.4	0.4	0.5	0.6	0.9	1.1	1.4	1.8	2.1	2.6	3.0
REF	0.9	0.6	0.6	0.5	0.6	0.6	0.7	0.9	1.0	1.0	1.1
SSA	0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.7	1.2	1.7	2.4
USA	1.5	1.7	1.9	1.8	1.9	2.1	1.9	1.9	1.9	2.0	2.1

Table 886: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Animal Waste Management (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	24.4	24.6	24.4	23.3	21.4	19.1	17.2
CAZ	0.9	1.0	1.0	1.0	0.8	0.7	0.7
CHA	2.9	2.7	2.6	2.5	2.1	1.6	1.3
EUR	2.1	2.1	2.0	1.9	1.8	1.8	1.8
IND	4.8	4.9	4.9	4.7	4.3	3.8	3.3
JPN	0.2	0.2	0.2	0.1	0.1	0.1	0.1
LAM	2.6	2.6	2.6	2.4	2.1	1.8	1.6
MEA	1.1	1.1	1.1	1.0	0.9	0.8	0.7
NEU	0.3	0.3	0.3	0.2	0.2	0.2	0.2
OAS	3.3	3.3	3.2	3.0	2.8	2.6	2.3
REF	1.0	0.9	0.9	0.9	0.8	0.7	0.5
SSA	3.2	3.4	3.5	3.5	3.3	3.0	2.8
USA	2.1	2.1	2.1	2.2	2.1	2.0	2.0

Table 887: MAgPIE m4p_SSP5 — Emissions—NO3Land—Agriculture—Animal Waste Management (Mt NO3-/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0

Table 888: ceds — Emissions—NO3Land—Agriculture—Animal Waste Management (Mt NO3-/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.75	4.53	4.82	5.56	7.52	7.55	7.72	8.05	8.92	9.60
CAZ	0.14	0.18	0.19	0.20	0.31	0.35	0.39	0.41	0.41	0.40
CHA	0.39	0.44	0.51	0.60	0.68	0.74	0.80	0.92	1.10	1.45
EUR	0.63	0.78	0.88	1.06	1.47	1.30	1.31	1.35	1.38	1.40
IND	0.40	0.46	0.49	0.49	0.52	0.60	0.68	0.74	0.82	0.93
JPN	0.10	0.16	0.17	0.20	0.24	0.25	0.24	0.23	0.22	0.23
LAM	0.26	0.33	0.40	0.43	0.75	0.59	0.62	0.71	0.81	0.93
MEA	0.08	0.15	0.16	0.21	0.28	0.29	0.32	0.36	0.42	0.50
NEU	0.06	0.07	0.08	0.08	0.13	0.12	0.12	0.13	0.15	0.15
OAS	0.21	0.24	0.27	0.32	0.42	0.49	0.60	0.65	0.77	0.89
REF	0.53	0.69	0.68	0.86	0.95	1.07	0.88	0.59	0.58	0.46
SSA	0.11	0.13	0.15	0.16	0.18	0.19	0.22	0.24	0.31	0.36
USA	0.82	0.90	0.85	0.94	1.60	1.55	1.52	1.74	1.95	1.89

Table 889: IPCC — Emissions—NO3Land—Agriculture—Animal Waste Management (Mt NO3-/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.75	4.53	4.82	5.56	7.52	7.55	7.72	8.05	8.92	9.60
CAZ	0.14	0.18	0.19	0.20	0.31	0.35	0.39	0.41	0.41	0.40
CHA	0.39	0.44	0.51	0.60	0.68	0.74	0.80	0.92	1.10	1.45
EUR	0.63	0.78	0.88	1.06	1.47	1.30	1.31	1.35	1.38	1.40
IND	0.40	0.46	0.49	0.49	0.52	0.60	0.68	0.74	0.82	0.93
JPN	0.10	0.16	0.17	0.20	0.24	0.25	0.24	0.23	0.22	0.23
LAM	0.26	0.33	0.40	0.43	0.75	0.59	0.62	0.71	0.81	0.93
MEA	0.08	0.15	0.16	0.21	0.28	0.29	0.32	0.36	0.42	0.50
NEU	0.06	0.07	0.08	0.08	0.13	0.12	0.12	0.13	0.15	0.15
OAS	0.21	0.24	0.27	0.32	0.42	0.49	0.60	0.65	0.77	0.89
REF	0.53	0.69	0.68	0.86	0.95	1.07	0.88	0.59	0.58	0.46
SSA	0.11	0.13	0.15	0.16	0.18	0.19	0.22	0.24	0.31	0.36
USA	0.82	0.90	0.85	0.94	1.60	1.55	1.52	1.74	1.95	1.89

Table 890: Nsurplus2 — Emissions—NO3Land—Agriculture—Animal Waste Management (Mt NO3-/yr)

Part V
Food Consumption Value

Part VI
Food Expenditure Share

Part VII
Household Expenditure

33 Food

33.1 Expenditure

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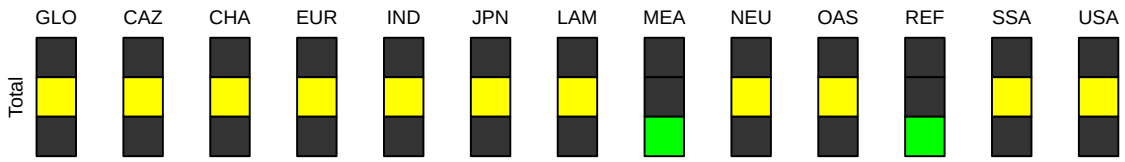

Figure 264: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	548	506	534	558	564	581	603	652	679	705	736
CAZ	715	739	677	664	751	762	833	843	857	878	906
CHA	656	763	879	1019	797	785	824	871	897	935	940
EUR	806	770	747	668	746	765	770	818	845	865	892
IND	239	257	244	327	368	379	384	443	443	499	559
JPN	515	487	470	446	452	453	447	426	428	435	432
LAM	626	615	574	585	595	616	612	653	685	708	742
MEA	551	378	407	456	443	516	566	632	685	739	786
NEU	683	608	620	555	560	581	633	681	685	704	707
OAS	240	267	237	295	326	360	382	407	451	481	515
REF	1104	516	849	576	736	747	767	831	864	894	925
SSA	625	307	360	361	579	603	644	703	750	737	752
USA	734	930	954	817	844	878	896	980	968	959	998

Table 891: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	750	763	764	790	767	764	744
CAZ	930	939	931	933	892	824	802
CHA	913	890	871	799	755	736	717
EUR	891	880	875	898	889	868	812
IND	594	641	662	714	636	623	609
JPN	426	427	423	415	407	401	406
LAM	751	746	681	685	682	662	643
MEA	820	848	851	871	820	814	809
NEU	721	739	738	763	721	746	766
OAS	540	547	554	588	596	591	576
REF	945	932	922	933	893	828	809
SSA	784	809	823	870	877	871	854
USA	969	985	983	1057	989	1022	931

Table 892: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure (USD/capita) [PART 2/2]

33.1.1 Crops

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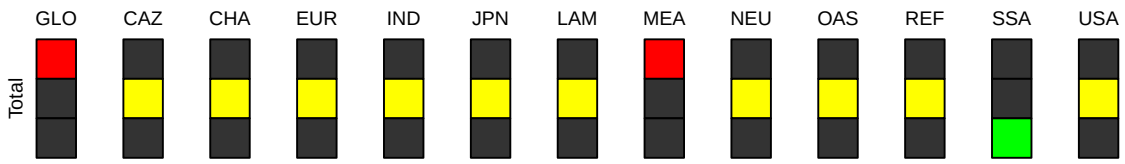

Figure 265: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	155	176	186	199	187	182	183	195	194	195	198
CAZ	131	148	140	156	157	156	151	155	159	164	168
CHA	193	255	281	319	251	235	242	266	283	302	313
EUR	156	163	158	147	161	166	171	186	194	202	214
IND	166	187	176	234	204	186	166	171	155	157	166
JPN	124	120	122	113	119	119	115	106	110	114	121
LAM	120	124	117	123	121	118	116	124	133	140	154
MEA	200	211	210	189	215	228	238	265	260	262	264
NEU	239	219	310	268	244	254	294	322	328	336	345
OAS	107	114	123	128	137	141	137	134	133	132	136
REF	63	37	92	39	78	73	121	203	211	218	228
SSA	163	180	206	207	208	209	209	213	194	171	147
USA	168	197	186	172	186	193	192	208	218	225	237

Table 893: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	201	206	212	229	236	246	254
CAZ	177	185	194	207	211	210	217
CHA	314	316	319	315	313	315	314
EUR	227	230	239	260	270	273	277
IND	174	187	196	222	217	225	232
JPN	125	127	130	135	141	147	162
LAM	166	172	177	191	203	209	213
MEA	270	285	295	312	312	325	338
NEU	351	360	365	382	379	400	416
OAS	141	145	149	175	190	200	207
REF	234	239	244	262	269	271	278
SSA	139	139	144	165	186	208	224
USA	242	250	254	276	285	293	297

Table 894: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops (USD/capita) [PART 2/2]

33.1.2 Crops—Cereals

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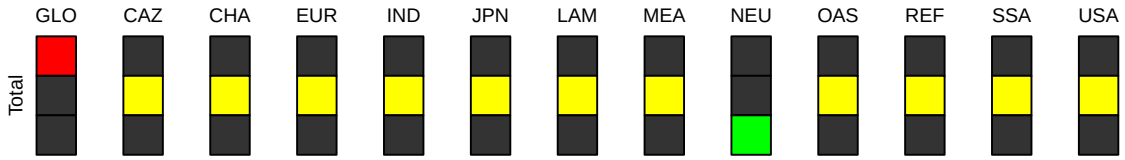

Figure 266: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Cereals (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	64	65	69	71	57	51	45	45	42	40	38
CAZ	34	45	33	41	39	35	30	30	31	32	34
CHA	81	85	81	78	41	32	31	34	35	37	36
EUR	30	27	28	23	27	28	27	30	32	33	35
IND	93	106	96	123	87	70	55	58	46	44	45
JPN	42	36	34	35	37	37	32	21	22	24	26
LAM	37	32	30	34	31	27	25	26	28	28	30
MEA	86	74	91	69	65	67	62	61	60	58	56
NEU	36	34	32	38	29	27	25	35	34	34	37
OAS	53	56	61	65	53	52	45	40	36	33	32
REF	57	30	84	28	64	56	47	47	45	44	45
SSA	62	65	87	87	85	78	70	68	57	46	36
USA	32	37	35	30	32	31	26	33	34	36	41

Table 895: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Cereals (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	38	37	38	39	37	35	33
CAZ	36	37	43	44	43	38	38
CHA	33	33	32	27	24	21	20
EUR	38	37	39	42	42	37	35
IND	44	46	46	49	40	37	34
JPN	28	27	26	25	24	22	20
LAM	31	32	32	33	32	31	27
MEA	56	57	59	60	59	57	54
NEU	36	37	35	34	20	24	25
OAS	31	30	29	30	31	28	25
REF	45	43	42	46	44	38	34
SSA	33	30	30	31	32	32	31
USA	43	45	45	50	49	47	43

Table 896: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Cereals (USD/capita) [PART 2/2]

33.1.3 Crops—Oil crops

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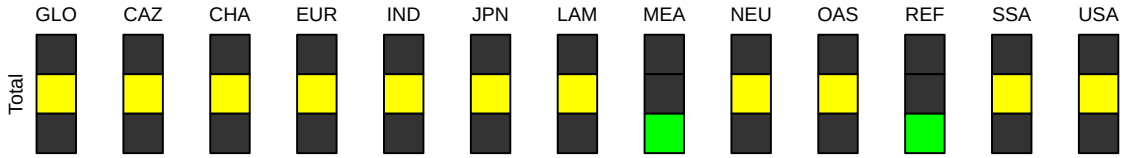

Figure 267: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Oil crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.5	7.1	8.0	8.5	7.9	7.6	7.0	6.5	5.6	5.2	4.8
CAZ	4.3	4.0	4.1	5.4	6.4	6.3	6.0	6.2	5.7	5.9	5.7
CHA	4.7	6.4	6.3	7.5	5.6	4.7	4.2	4.4	4.4	4.5	4.5
EUR	1.9	2.0	1.9	2.5	2.7	2.6	2.4	2.5	2.4	2.5	2.6
IND	7.9	5.7	6.5	10.1	8.9	8.1	6.9	6.5	5.4	5.1	5.0
JPN	8.8	10.1	10.9	9.9	10.5	10.7	10.1	9.9	9.5	9.3	9.3
LAM	2.9	5.0	6.2	5.5	5.4	4.9	4.4	4.0	3.4	3.2	3.2
MEA	1.1	1.6	1.3	1.9	2.0	1.8	1.4	1.2	1.0	0.9	0.8
NEU	1.7	3.0	3.7	3.9	4.0	3.4	2.9	2.6	2.4	2.3	2.1
OAS	15.5	16.6	16.5	13.8	12.7	11.7	10.2	8.5	7.0	6.6	6.1
REF	0.2	0.4	1.1	0.9	1.0	1.1	0.8	0.8	0.7	0.7	0.7
SSA	9.2	10.4	14.6	14.6	14.7	15.7	15.8	14.2	11.9	9.8	7.5
USA	2.9	3.4	4.3	3.9	4.6	4.7	4.3	4.4	4.6	4.4	4.6

Table 897: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Oil crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4.5	4.5	4.5	4.5	4.4	4.3	4.1
CAZ	5.4	5.6	5.5	5.6	5.4	4.8	4.4
CHA	4.2	4.2	4.2	3.7	3.5	3.4	3.3
EUR	2.7	2.7	2.7	2.8	2.7	2.7	2.5
IND	5.0	5.1	5.2	5.3	4.6	4.3	4.0
JPN	8.9	9.1	8.9	9.1	8.8	8.4	7.4
LAM	3.0	3.1	3.1	3.1	2.9	2.8	2.7
MEA	0.8	0.9	0.9	0.9	0.8	1.0	1.0
NEU	2.0	2.0	2.0	2.0	2.0	2.1	2.2
OAS	5.8	5.8	5.7	5.8	5.7	5.2	4.5
REF	0.7	0.6	0.6	0.6	0.6	0.6	0.6
SSA	6.4	6.0	5.9	6.1	6.4	6.6	6.5
USA	4.5	4.7	4.7	5.1	4.6	4.8	4.4

Table 898: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Oil crops (USD/capita) [PART 2/2]

33.1.4 Crops—Other crops

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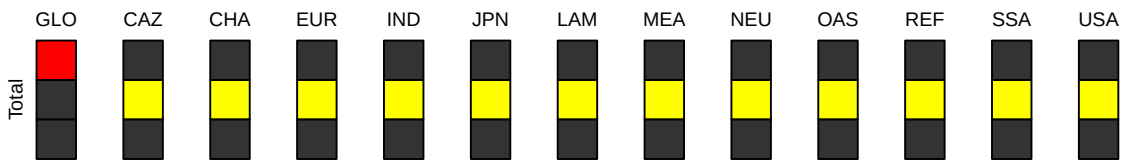

Figure 268: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Other crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	84	103	108	120	122	124	131	143	146	150	155
CAZ	92	99	103	110	111	115	115	118	122	126	129
CHA	107	163	194	234	204	198	207	227	244	260	272
EUR	124	135	128	121	131	135	142	153	160	167	176
IND	64	75	73	100	107	106	103	106	103	107	115
JPN	73	74	77	69	71	71	73	74	78	82	85
LAM	79	87	80	83	85	86	87	94	102	108	121
MEA	113	135	118	117	148	159	174	203	199	203	207
NEU	202	182	274	226	211	224	265	284	291	300	306
OAS	38	41	45	49	71	77	82	85	90	92	98
REF	6	7	8	10	13	16	74	156	165	174	182
SSA	92	104	104	106	109	115	122	131	125	115	104
USA	133	157	147	138	149	157	162	171	179	184	192

Table 899: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Other crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	159	164	170	186	195	207	217
CAZ	136	142	146	157	163	168	175
CHA	276	280	283	284	285	290	291
EUR	186	190	198	215	225	233	240
IND	124	135	144	167	172	183	193
JPN	88	91	95	100	108	117	134
LAM	131	137	142	155	167	175	183
MEA	213	226	235	251	252	267	282
NEU	313	321	328	346	357	374	388
OAS	104	109	114	140	154	167	177
REF	189	195	201	216	225	233	243
SSA	100	103	108	128	148	169	187
USA	195	200	204	221	231	242	250

Table 900: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Other crops (USD/capita) [PART 2/2]

33.1.5 Crops—Sugar crops

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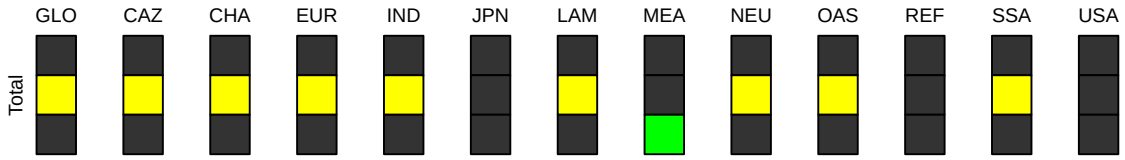

Figure 269: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Sugar crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.143	0.171	0.144	0.251	0.242	0.228	0.202	0.191	0.173	0.158	0.152
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.007	0.005	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.472	0.471	0.385	0.973	0.927	0.819	0.690	0.652	0.528	0.480	0.472
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.038	0.090	0.075	0.119	0.113	0.108	0.102	0.098	0.096	0.094	0.093
MEA	0.236	0.389	0.312	0.268	0.262	0.327	0.317	0.296	0.405	0.385	0.371
NEU	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.240	0.326	0.254	0.231	0.215	0.207	0.191	0.175	0.161	0.146	0.138
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.102	0.089	0.106	0.124	0.123	0.130	0.126	0.114	0.103	0.085	0.069
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 901: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Sugar crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.148	0.151	0.152	0.155	0.132	0.125	0.118
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.001	0.001	0.001	0.001	0.001	0.001	0.001
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.467	0.479	0.487	0.513	0.454	0.437	0.420
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.096	0.098	0.097	0.100	0.100	0.096	0.089
MEA	0.360	0.388	0.400	0.382	0.247	0.245	0.245
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.133	0.128	0.126	0.129	0.132	0.130	0.126
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.059	0.055	0.054	0.055	0.058	0.059	0.059
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 902: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Crops—Sugar crops (USD/capita) [PART 2/2]

33.1.6 Fish

```
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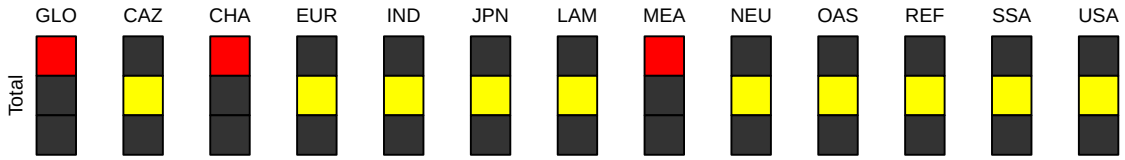

Figure 270: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Fish (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.1	5.4	5.8	6.3	7.4	8.2	9.1	10.1	11.1	11.9	12.5
CAZ	6.3	6.6	6.7	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.3
CHA	5.2	6.5	6.9	8.7	10.1	11.3	12.3	13.0	13.4	13.7	13.9
EUR	8.0	9.1	10.5	10.7	10.9	11.0	11.1	11.1	11.2	11.3	11.4
IND	1.1	1.4	1.6	2.0	3.1	3.6	4.3	5.0	5.7	6.2	6.6
JPN	42.4	38.1	36.1	30.8	32.0	32.1	32.4	32.6	32.9	33.1	33.4
LAM	3.8	3.4	2.9	3.1	3.5	3.7	3.9	4.2	4.4	4.5	4.7
MEA	2.4	2.7	3.2	3.8	4.6	5.1	5.6	6.1	6.7	7.1	7.4
NEU	4.1	3.8	3.5	3.7	3.9	4.2	4.4	4.7	4.8	5.0	5.2
OAS	6.0	6.3	7.0	8.3	11.1	13.3	15.7	18.3	20.5	22.2	23.4
REF	4.2	4.6	5.9	6.3	6.5	6.8	7.2	7.6	8.0	8.2	8.3
SSA	2.8	2.4	2.8	3.1	4.0	5.2	7.0	9.1	11.5	13.7	15.6
USA	5.9	5.9	7.5	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.3

Table 903: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Fish (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	13.0	13.4	13.8	14.3	14.6	14.9	15.1
CAZ	7.3	7.4	7.4	7.5	7.5	7.6	7.6
CHA	14.0	14.1	14.1	14.2	14.2	14.3	14.4
EUR	11.5	11.6	11.7	11.9	12.1	12.3	12.4
IND	6.9	7.1	7.3	7.5	7.7	7.8	7.9
JPN	33.6	34.0	34.3	35.0	35.5	35.9	36.2
LAM	4.8	4.8	4.9	5.0	5.0	5.0	5.1
MEA	7.6	7.8	8.0	8.2	8.3	8.4	8.5
NEU	5.3	5.5	5.6	5.9	6.2	6.5	6.9
OAS	24.3	25.0	25.3	25.9	26.1	26.2	26.3
REF	8.4	8.6	8.7	8.9	9.0	9.1	9.1
SSA	17.2	18.6	19.7	21.5	22.6	23.3	23.9
USA	7.3	7.3	7.4	7.4	7.5	7.5	7.5

Table 904: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Fish (USD/capita) [PART 2/2]

33.1.7 Livestock products

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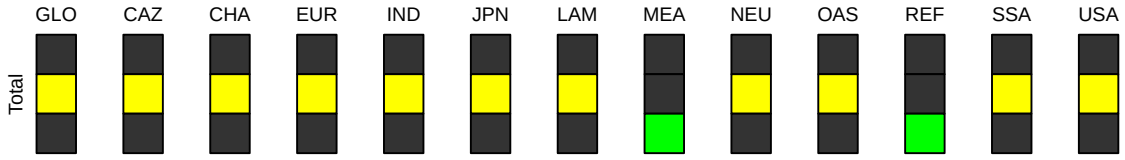

Figure 271: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Livestock products (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	307	246	261	265	255	268	286	319	356	388	412
CAZ	469	401	323	392	362	385	472	490	519	547	579
CHA	359	423	518	578	366	345	372	409	440	486	488
EUR	454	370	396	362	367	383	391	433	460	495	502
IND	40	36	49	47	86	106	124	167	193	249	301
JPN	161	148	143	147	177	163	162	155	166	185	175
LAM	402	379	342	334	336	355	353	386	448	468	489
MEA	305	134	154	234	175	237	274	311	374	429	470
NEU	366	305	242	165	190	202	217	235	246	271	262
OAS	89	123	74	134	132	154	172	194	239	266	297
REF	959	396	628	394	487	507	472	449	485	515	542
SSA	407	59	81	83	293	306	332	369	416	406	428
USA	413	572	470	390	394	422	450	522	511	536	534

Table 905: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Livestock products (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	426	438	437	457	439	435	413
CAZ	606	610	600	599	565	513	496
CHA	476	461	448	399	370	362	354
EUR	496	492	485	502	495	484	434
IND	332	371	388	426	373	363	348
JPN	173	180	179	181	175	174	171
LAM	493	486	422	422	414	399	382
MEA	499	516	512	521	476	463	448
NEU	273	291	290	308	276	289	298
OAS	317	322	331	345	342	334	317
REF	562	552	542	549	512	458	441
SSA	457	477	490	529	543	529	506
USA	509	536	536	605	539	580	493

Table 906: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Livestock products (USD/capita) [PART 2/2]

33.1.8 Secondary products

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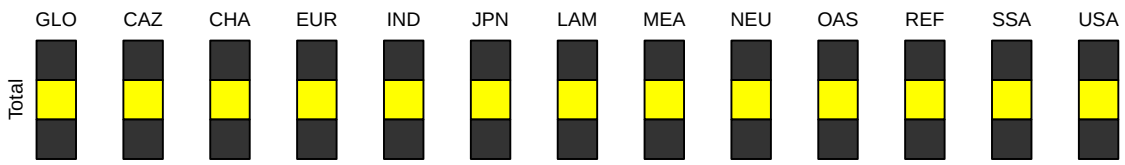


Figure 272: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Secondary products (USD/capita)

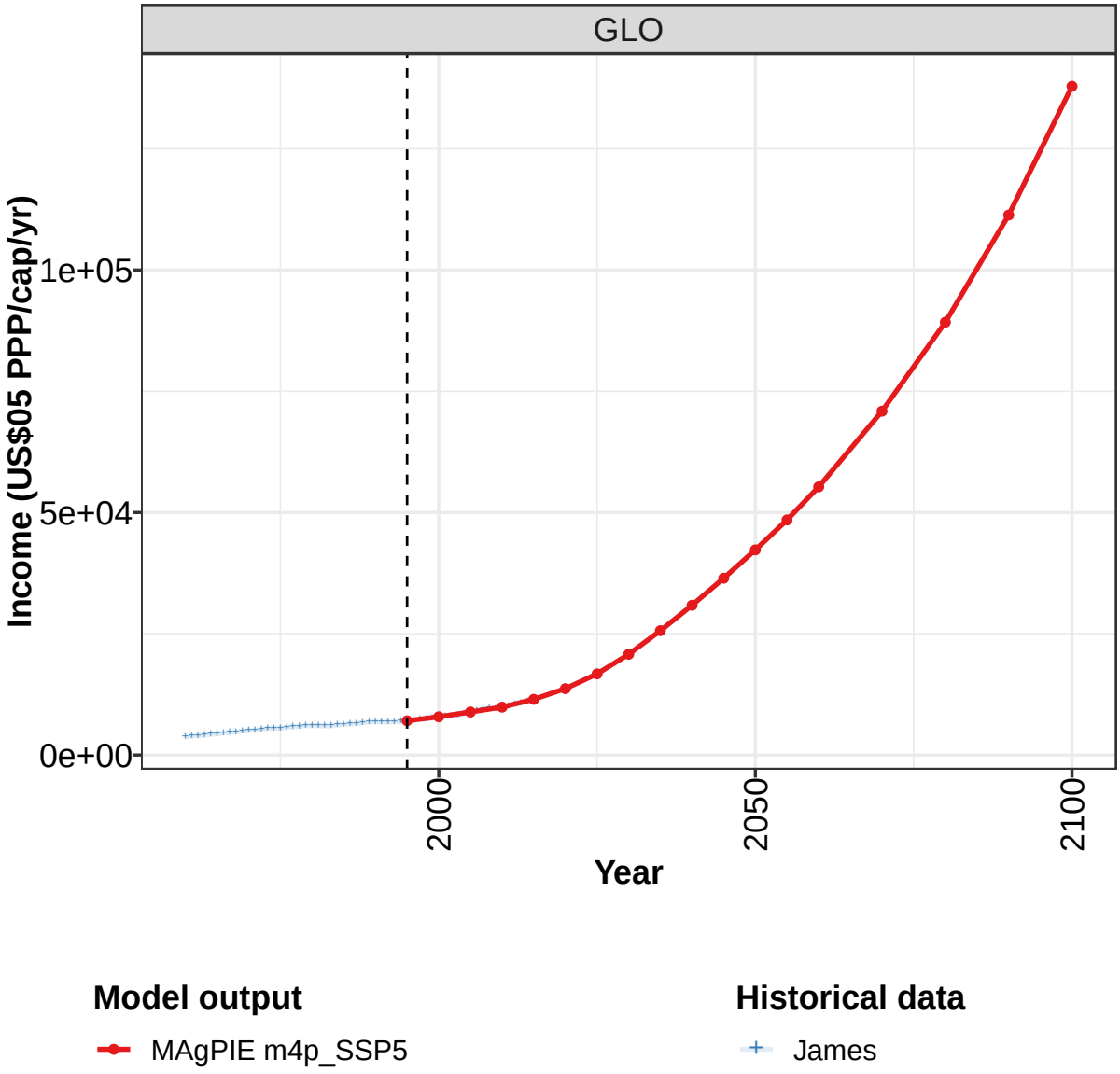
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	82	79	82	88	115	122	125	127	117	110	114
CAZ	108	184	206	109	225	213	203	192	171	160	151
CHA	100	80	74	114	170	194	197	184	160	133	126
EUR	188	228	183	148	207	205	196	188	180	157	165
IND	32	33	18	44	75	84	90	100	89	87	86
JPN	188	182	169	155	125	139	137	133	119	102	103
LAM	100	109	112	125	133	139	139	138	100	96	93
MEA	44	30	40	29	48	46	48	50	44	41	44
NEU	73	79	65	118	123	121	118	118	106	92	95
OAS	38	23	33	25	45	52	57	61	59	60	58
REF	78	78	123	136	164	161	166	171	160	152	147
SSA	52	66	70	67	74	83	96	113	129	147	162
USA	147	155	292	248	257	255	247	243	232	191	219

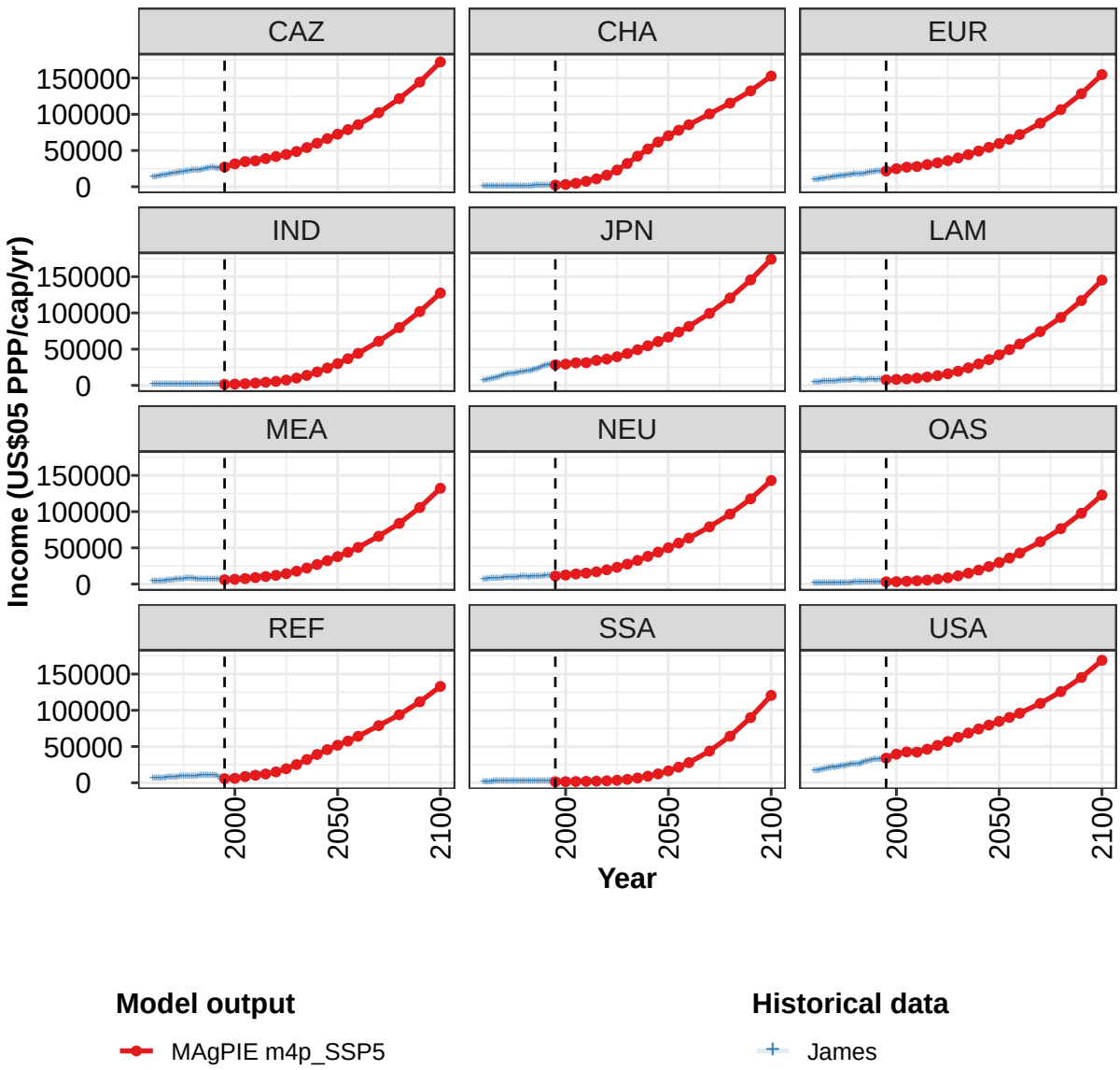
Table 907: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Secondary products (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	110	106	101	90	77	68	62
CAZ	140	137	130	120	108	93	82
CHA	110	99	90	71	59	45	35
EUR	157	146	139	124	113	99	89
IND	81	76	71	59	39	27	22
JPN	95	86	80	64	55	44	37
LAM	88	84	77	67	61	49	43
MEA	43	40	36	30	24	18	15
NEU	91	82	77	68	60	50	46
OAS	57	55	49	42	37	31	26
REF	140	133	126	112	102	90	81
SSA	170	174	169	154	125	111	100
USA	210	193	185	170	158	142	134

Table 908: MAgPIE m4p_SSP5 — Household Expenditure—Food—Expenditure—Secondary products (USD/capita) [PART 2/2]

Part VIII
Income





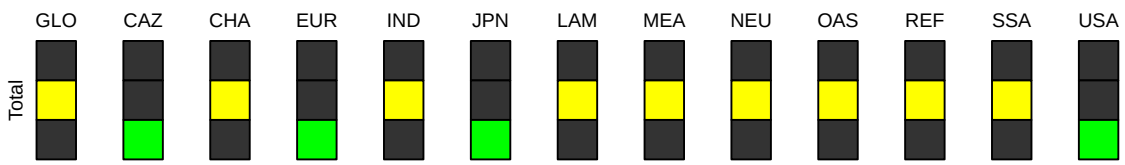


Figure 273: MAgPIE m4p_SSP5 — Income (US$05 PPP/cap/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7073	7892	8875	9881	11486	13688	16739	20791	25645	30885	36462
CAZ	27123	31531	34642	35772	38839	41721	44577	48610	54042	60097	66407
CHA	2294	3145	4773	7508	10894	15903	22982	32072	42195	52118	61659
EUR	21701	24870	27003	27829	30612	33003	35914	39705	44290	49229	54357
IND	1467	1778	2336	3218	4354	5520	7363	10117	13915	18574	23996
JPN	28385	29396	31129	31329	34576	36378	39543	43995	49285	54685	60547
LAM	7651	8298	8937	10115	11659	13483	16015	19597	24251	29616	35620
MEA	6005	6669	7587	8980	10449	12060	14397	17780	22120	27033	32326
NEU	11011	12490	13974	15139	16938	19736	23190	27565	32711	38270	44107
OAS	3138	3362	3927	4630	5527	6832	8758	11476	15047	19318	24247
REF	5643	6102	8573	10334	12155	15037	19318	25130	32082	39125	45734
SSA	1447	1497	1712	1959	2250	2721	3485	4717	6548	9027	12282
USA	33906	39506	42583	42310	46247	51568	56924	62708	68657	74233	79616

Table 909: MAgPIE m4p_SSP5 — Income (US$05 PPP/cap/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	42295	48474	55284	70895	89236	111327	137882
CAZ	72527	78830	85659	102071	121565	144424	172194
CHA	70329	77996	85516	100466	115357	132244	152715
EUR	59629	65481	72048	87728	106355	128368	154754
IND	30057	36815	44246	60898	79778	101892	127517
JPN	66703	73677	81411	99412	120669	145544	174223
LAM	42223	49370	57147	74278	93817	117067	145309
MEA	37886	43932	50649	66004	83838	105630	132236
NEU	50174	56625	63547	79012	96661	117623	142941
OAS	29795	35974	42820	58412	76505	97772	122866
REF	51769	57581	64163	78819	93835	111720	132928
SSA	16449	21553	27777	43683	64306	89947	120606
USA	84741	90130	95937	109506	125749	145269	168989

Table 910: MAgPIE m4p_SSP5 — Income (US$05 PPP/cap/yr) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	3759	3866	3982	4070	4258	4394	4524	4606	4769	4913	5038
CAZ	13146	13232	13762	14252	14879	15382	15934	16158	16724	17373	17666
CHA	348	288	283	303	331	363	382	360	346	373	408
EUR	9030	9404	9730	10077	10531	10892	11245	11562	12046	12580	13054
IND	654	664	671	697	730	733	721	757	772	819	827
JPN	6249	6867	7352	7843	8574	8924	9695	10563	11673	12801	13734
LAM	4102	4223	4296	4352	4536	4652	4738	4835	5017	5168	5373
MEA	3254	3332	3424	3607	3823	4081	4224	4381	4761	5014	5340
NEU	6285	6459	6609	6861	7031	7124	7394	7548	7740	7944	8165
OAS	890	914	930	952	975	999	1030	1035	1088	1137	1194
REF	5379	5582	5643	5449	6044	6304	6528	6739	7054	7091	7551
SSA	1274	1273	1306	1346	1385	1406	1417	1406	1422	1477	1549
USA	15803	15934	16587	17047	17709	18524	19370	19646	20356	20785	20648

Table 911: James — Income (US$05 PPP/cap/yr) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	5140	5285	5509	5544	5523	5699	5814	5949	6051	6049	6048
CAZ	18166	18697	19514	19771	19946	20509	20823	21346	21836	22085	22509
CHA	425	430	459	461	482	481	506	558	597	633	664
EUR	13434	13938	14645	14956	14925	15519	15896	16335	16829	16982	16880
IND	831	813	826	820	863	873	903	942	896	927	964
JPN	14155	15062	16014	15645	15880	16305	16827	17519	18281	18545	19087
LAM	5571	5801	6113	6353	6427	6657	6806	6957	7215	7457	7387
MEA	5603	6055	6329	6639	6660	7174	7234	7125	7284	6962	6686
NEU	8417	8651	8787	8903	8889	9192	9404	9417	9412	9452	9462
OAS	1240	1268	1348	1392	1418	1492	1565	1639	1692	1716	1778
REF	7680	7658	8209	8372	8332	8644	8779	8931	8835	8792	8814
SSA	1599	1613	1634	1702	1668	1678	1671	1643	1646	1658	1663
USA	21089	21973	22918	22678	22481	23423	24218	25229	25708	25425	25806

Table 912: James — Income (US$05 PPP/cap/yr) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	5990	6040	6193	6298	6400	6506	6665	6774	6835	6808	6793
CAZ	21899	22109	23118	23945	24316	24938	25679	26038	25789	25102	25144
CHA	714	773	866	955	1021	1117	1208	1229	1267	1359	1514
EUR	16966	17228	17616	17995	18472	18954	19667	20226	20564	20609	20678
IND	976	1009	1036	1070	1094	1121	1194	1238	1284	1268	1301
JPN	19550	19905	20545	21633	22144	22911	24419	25605	26926	27699	27840
LAM	7198	6859	6968	7015	7174	7244	7170	7130	7056	7180	7274
MEA	6548	6452	6389	6269	6010	5944	5808	5762	5913	5946	5895
NEU	9329	9415	9615	9834	10068	10439	10507	10558	10981	10786	10710
OAS	1822	1896	1958	1976	2045	2133	2249	2366	2501	2621	2716
REF	8965	9179	9225	9242	9540	9594	9738	9852	9541	9169	7785
SSA	1624	1575	1564	1552	1516	1488	1516	1527	1519	1485	1426
USA	25105	26034	27677	28572	29291	29965	30894	31680	31898	31381	32016

Table 913: James — Income (US$05 PPP/cap/yr) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	6805	6912	7032	7185	7361	7433	7595	7842	7913	8025	8203
CAZ	25629	26558	27122	27521	28374	29291	30521	31530	31864	32563	33068
CHA	1725	1909	2077	2250	2388	2524	2689	2882	3092	3350	3669
EUR	20559	21098	21671	22071	22639	23287	23948	24840	25302	25588	25896
IND	1326	1383	1467	1532	1594	1653	1746	1778	1830	1881	1980
JPN	27804	27946	28385	29056	29419	28727	28613	29396	29395	29398	29742
LAM	7421	7646	7596	7733	8036	8106	8021	8246	8194	8131	8170
MEA	5853	5870	6008	6240	6271	6427	6467	6673	6675	6717	6933
NEU	10846	10601	11009	11514	12130	12351	12076	12488	12112	12394	12631
OAS	2823	2969	3131	3273	3341	3079	3194	3355	3392	3517	3621
REF	6912	5983	5643	5433	5511	5310	5582	6102	6470	6838	7383
SSA	1396	1384	1401	1434	1448	1442	1440	1451	1480	1525	1563
USA	32508	33449	33906	34790	35945	37085	38406	39506	39449	39735	40368

Table 914: James — Income (US$05 PPP/cap/yr) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	8505	8820	9163	9530	9689	9514	9826	10099	10420	10747	11089
CAZ	33819	34642	35231	35829	35817	35105	35771	36421	37097	37696	38276
CHA	4033	4488	5001	5643	6136	6648	7242	7833	8469	9153	9892
EUR	26490	26973	27789	28557	28683	27387	27798	28221	28772	29360	29968
IND	2129	2336	2522	2735	2833	2994	3218	3423	3630	3858	4098
JPN	30532	31129	31764	32515	32109	30449	31329	31861	32565	33243	33908
LAM	8528	8888	9267	9677	9952	9665	10069	10350	10656	10965	11279
MEA	7287	7593	7942	8312	8691	8738	8988	9304	9595	9864	10142
NEU	13332	13972	14606	15122	15205	14584	15137	15444	15792	16160	16546
OAS	3770	3920	4093	4280	4397	4410	4623	4782	4950	5128	5319
REF	8027	8573	9314	10147	10684	10043	10334	10653	11012	11382	11769
SSA	1604	1666	1732	1823	1877	1871	1915	1970	2037	2100	2160
USA	41454	42583	43308	43723	43333	41589	42310	42916	43809	44665	45482

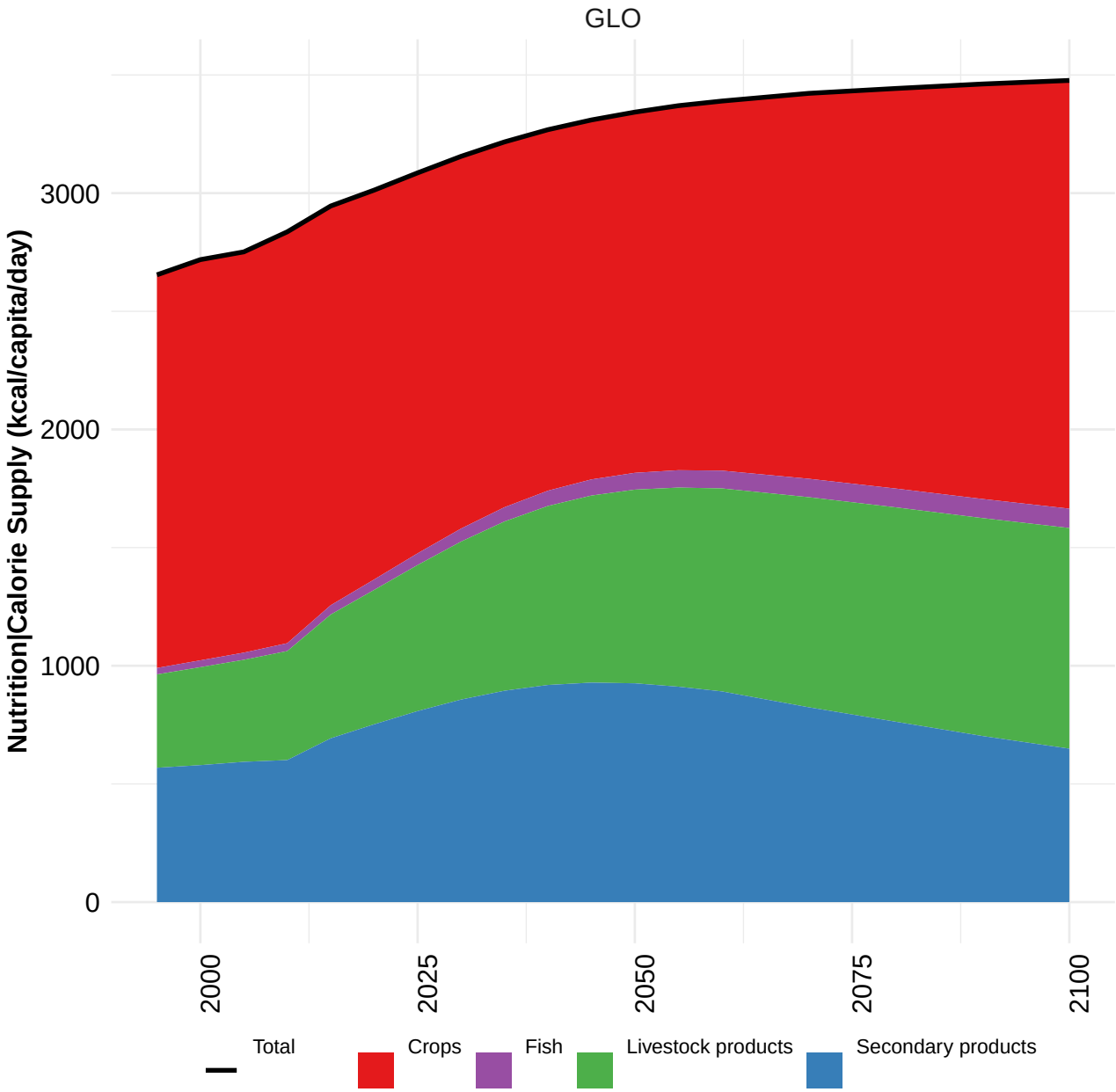
Table 915: James — Income (US$05 PPP/cap/yr) [PART 5/6]

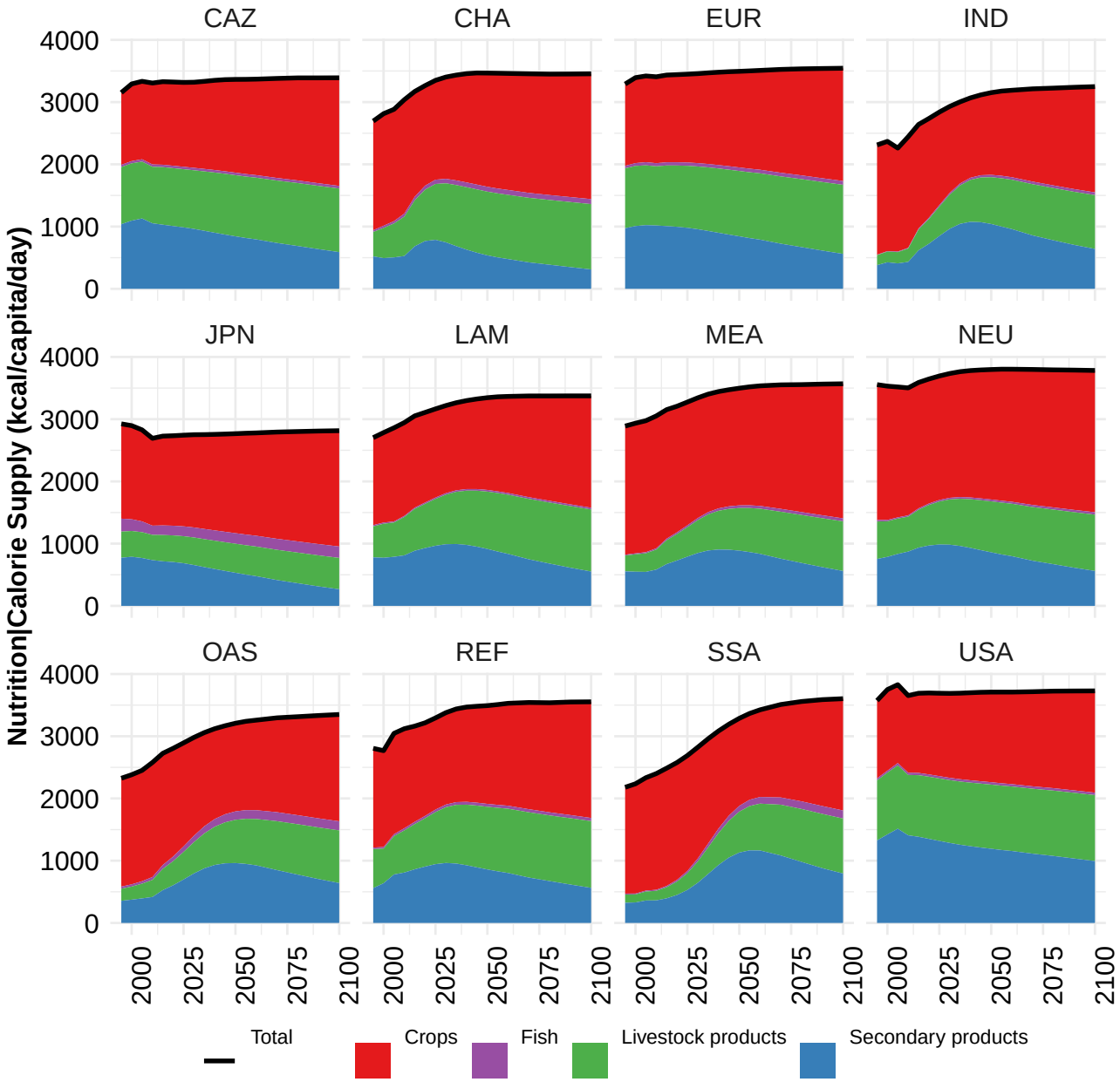
	2015
GLO	11446
CAZ	38838
CHA	10690
EUR	30583
IND	4354
JPN	34576
LAM	11619
MEA	10453
NEU	16937
OAS	5521
REF	12155
SSA	2220
USA	46247

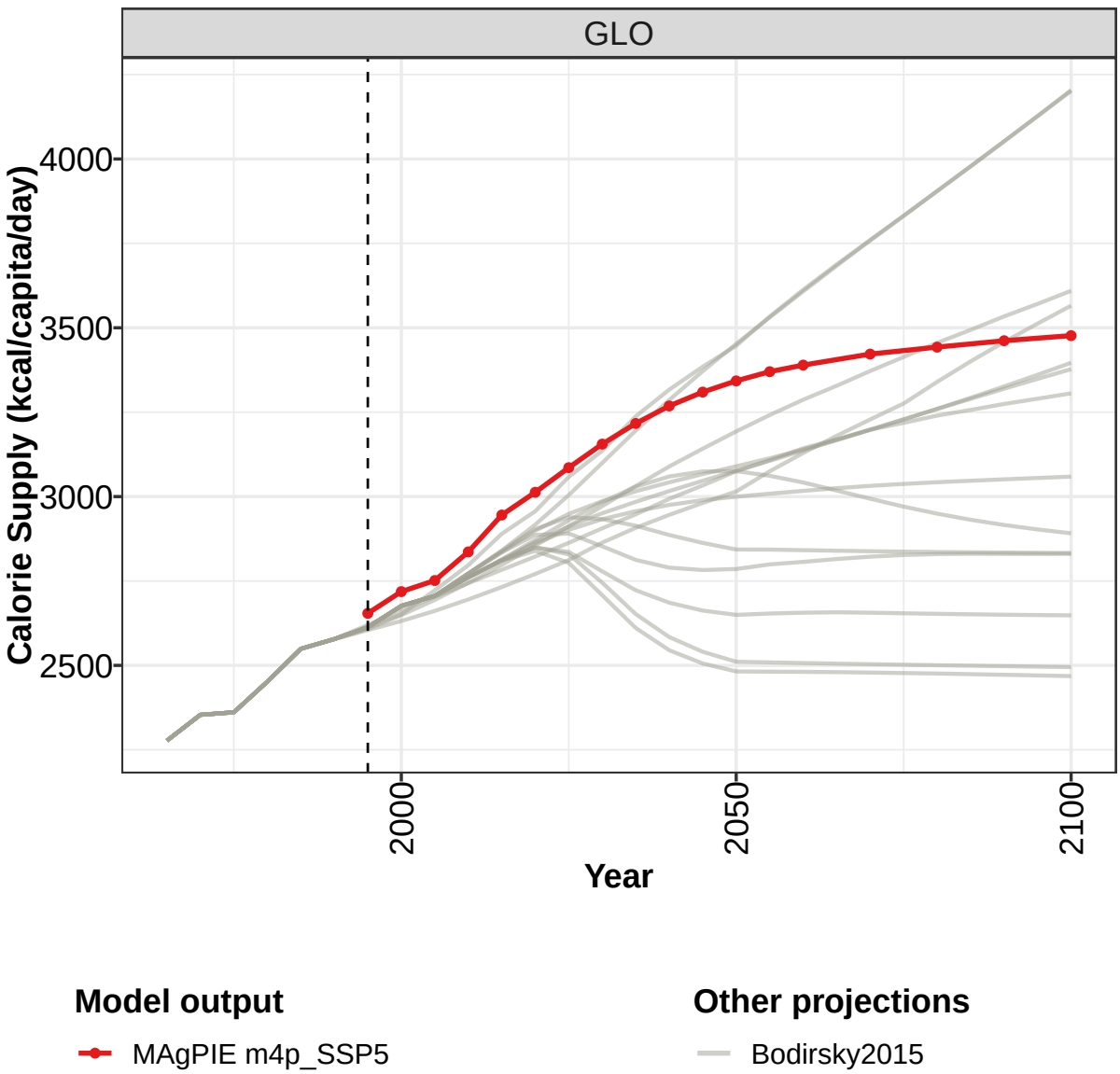
Table 916: James — Income (US$05 PPP/cap/yr) [PART 6/6]

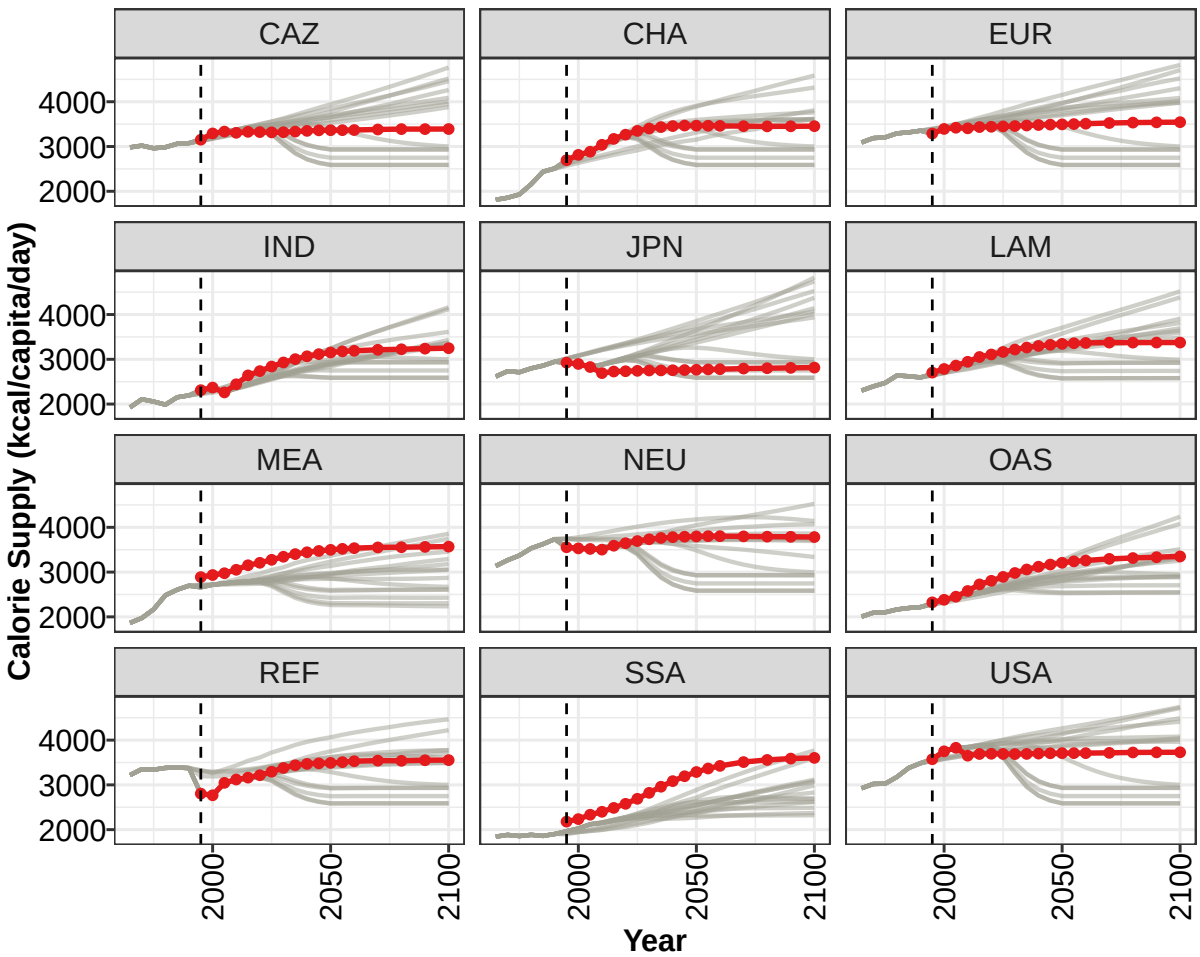
Part IX
Nutrition

34 Calorie Supply




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Nutrition|Calorie Supply (kcal/capita/day)
0
1000
2000
3000
4000
2000
2025
2050
2075
2100
Total
Crops
Fish
Livestock products
Secondary products


GLO
Calorie Supply (kcal/capita/day)
4000
3500
3000
2500
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Other projections
Bodirsky2015



Model output

MAgPIE m4p_SSP5

Other projections

Bodirsky2015

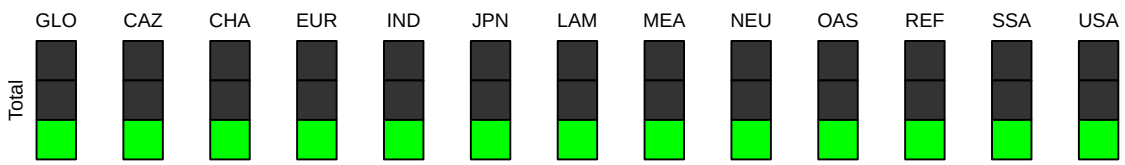


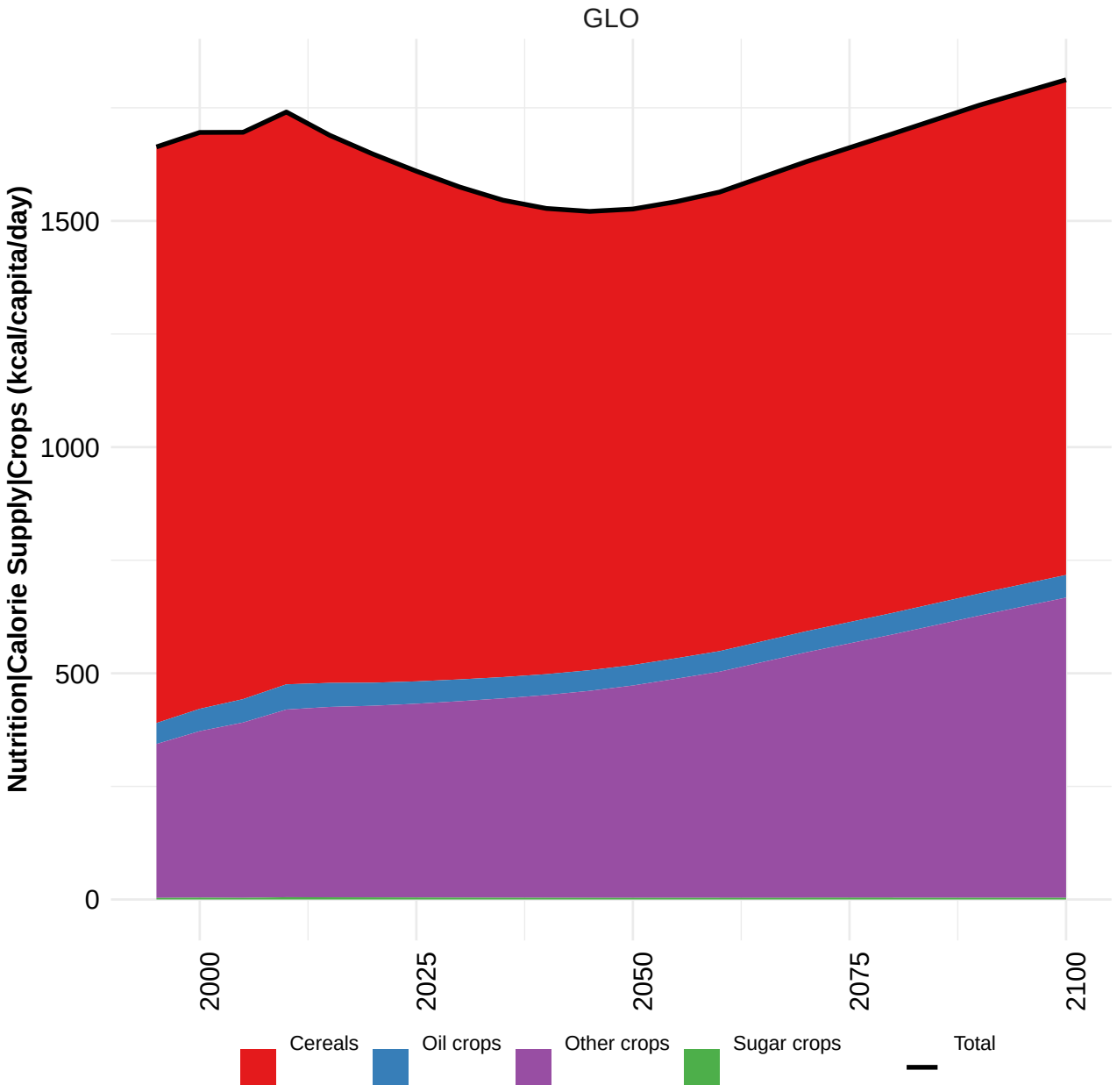
Figure 274: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply (kcal/capita/day)

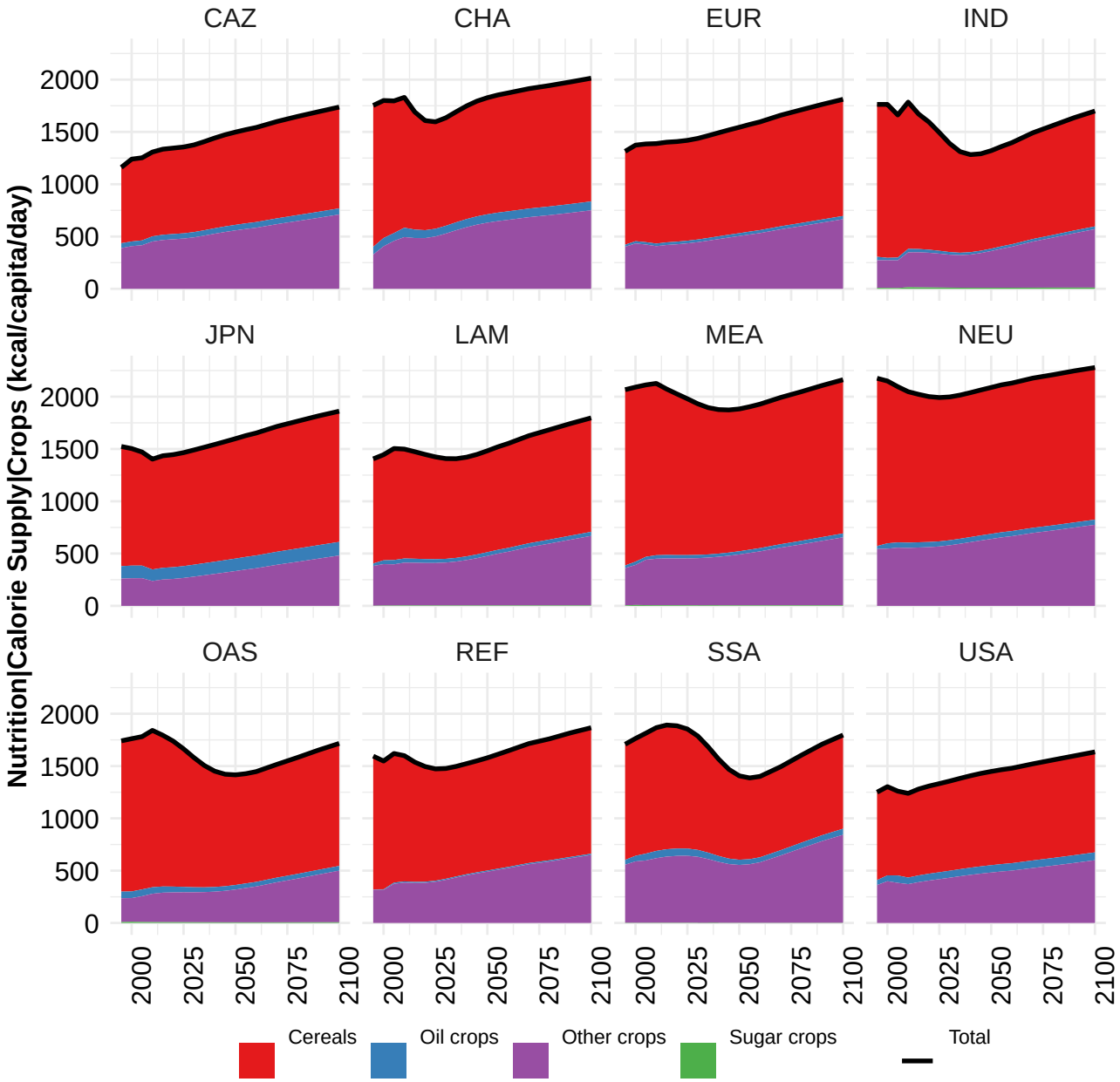
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2654	2719	2751	2836	2945	3013	3086	3156	3217	3268	3310
CAZ	3152	3292	3334	3306	3328	3323	3316	3319	3333	3350	3361
CHA	2694	2813	2883	3039	3170	3265	3349	3402	3434	3457	3468
EUR	3290	3393	3420	3407	3435	3441	3449	3457	3469	3480	3488
IND	2311	2369	2261	2443	2641	2737	2839	2930	3004	3068	3116
JPN	2925	2896	2828	2692	2728	2734	2743	2750	2752	2756	2761
LAM	2703	2784	2860	2945	3053	3108	3165	3219	3264	3299	3325
MEA	2889	2935	2975	3052	3153	3208	3275	3343	3402	3443	3473
NEU	3555	3531	3518	3502	3590	3645	3693	3734	3763	3781	3791
OAS	2325	2382	2451	2579	2726	2806	2893	2981	3059	3121	3168
REF	2805	2768	3046	3121	3162	3216	3294	3379	3438	3469	3482
SSA	2180	2236	2334	2400	2486	2577	2690	2823	2959	3084	3193
USA	3573	3750	3829	3653	3691	3695	3691	3688	3692	3699	3706

Table 917: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply (kcal/capita/day) [PART 1/2]

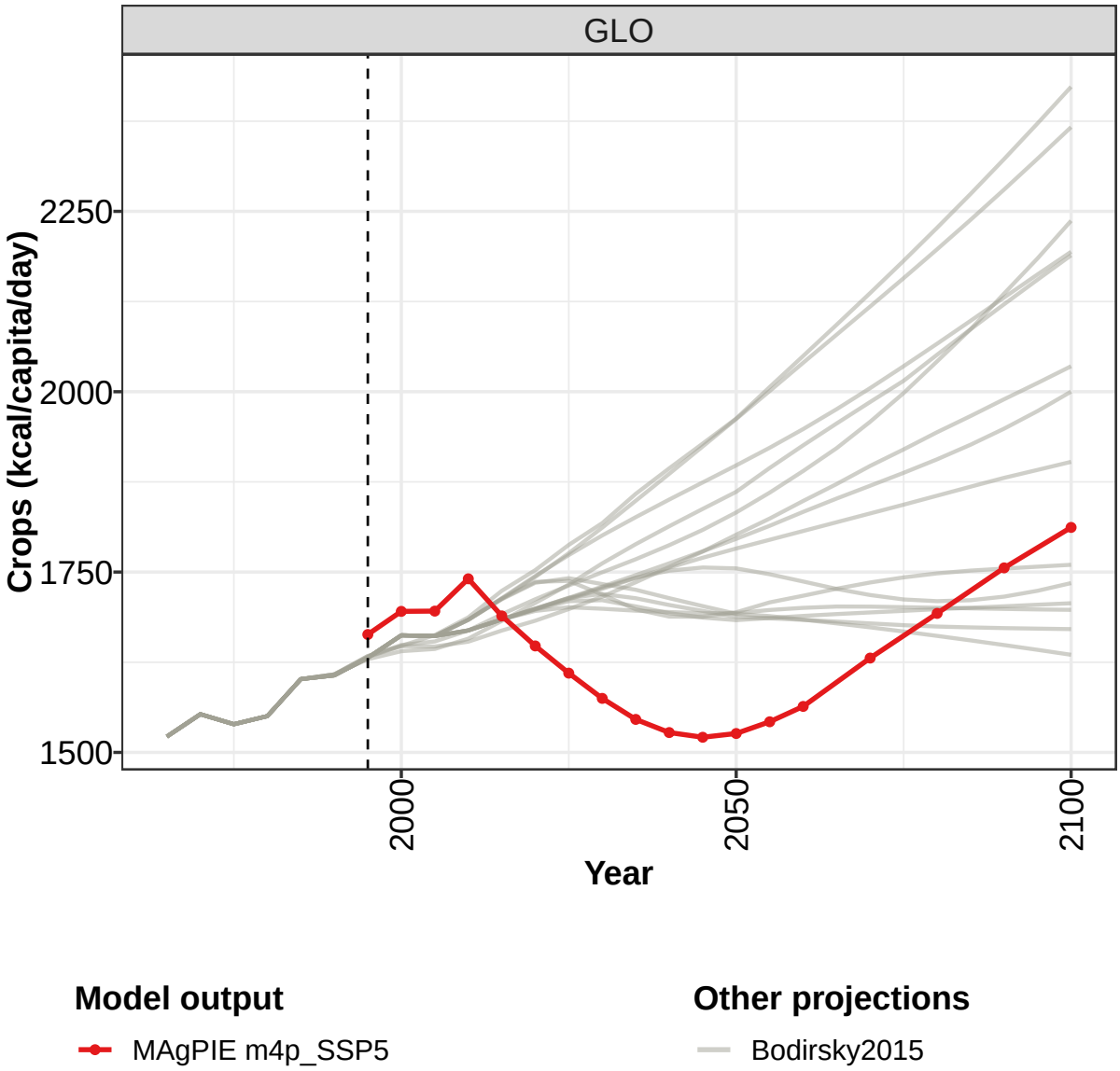
	2050	2055	2060	2070	2080	2090	2100
GLO	3343	3370	3389	3422	3443	3462	3477
CAZ	3364	3366	3369	3380	3389	3389	3391
CHA	3467	3464	3461	3454	3450	3451	3455
EUR	3494	3501	3509	3525	3534	3540	3544
IND	3152	3177	3190	3213	3225	3238	3249
JPN	2767	2774	2779	2793	2801	2809	2815
LAM	3345	3359	3366	3373	3373	3374	3374
MEA	3497	3520	3535	3551	3555	3563	3568
NEU	3797	3803	3802	3798	3792	3788	3783
OAS	3208	3240	3259	3296	3314	3333	3350
REF	3492	3509	3529	3542	3538	3550	3553
SSA	3288	3366	3425	3510	3558	3588	3604
USA	3709	3709	3710	3716	3725	3727	3729

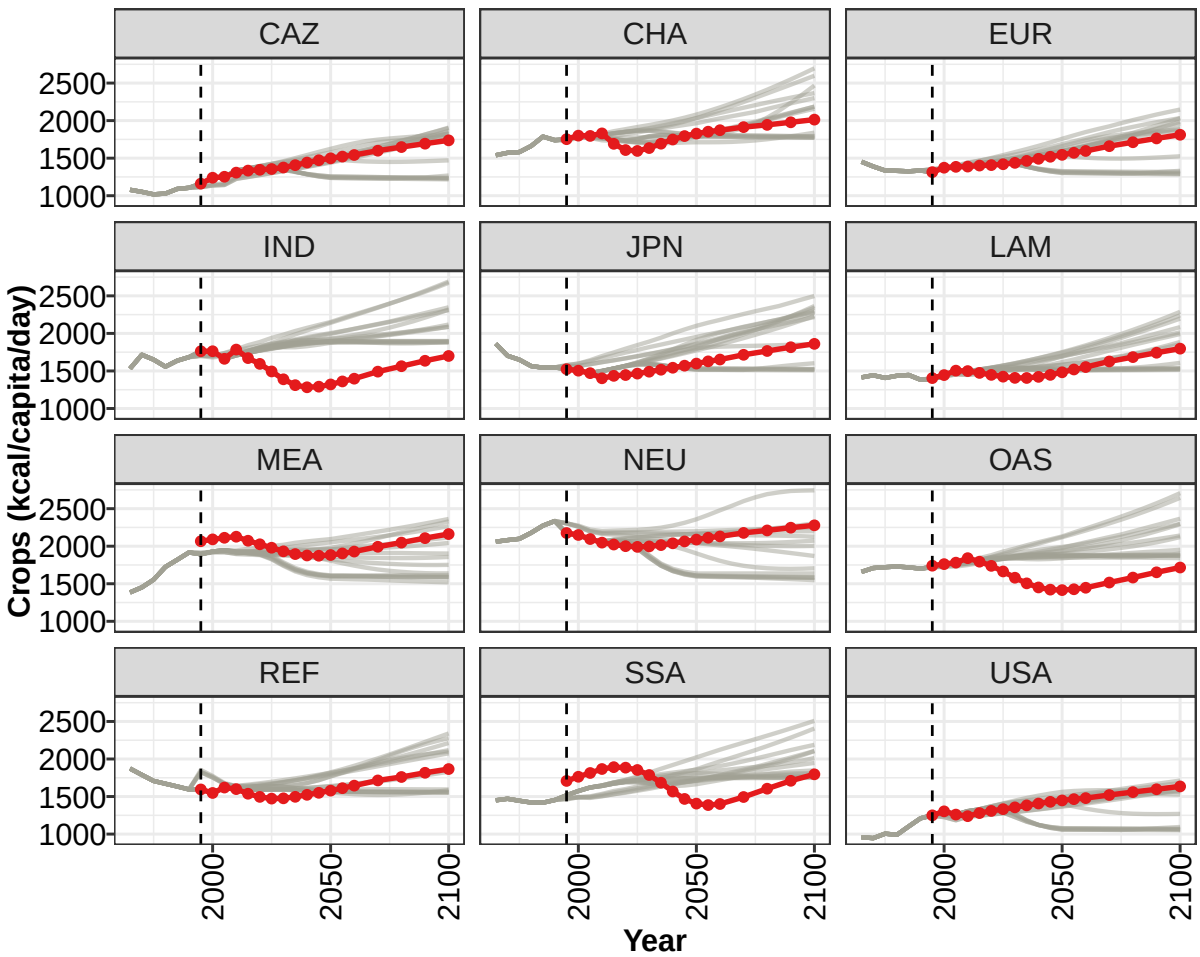
Table 918: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply (kcal/capita/day) [PART 2/2]


GLO
Nutrition|Calorie Supply|Crops (kcal/capita/day)
1500
1000
500
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Nutrition|Calorie Supply|Crops (kcal/capita/day)
0
500
1000
1500
2000
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

34.1 Crops


GLO
Crops (kcal/capita/day)
2250
2000
1750
1500
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Other projections
Bodirsky2015



Model output

MAgPIE m4p_SSP5

Other projections

Bodirsky2015

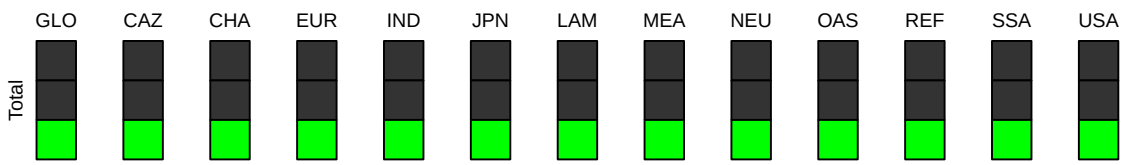


Figure 275: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops (kcal/capita/day)

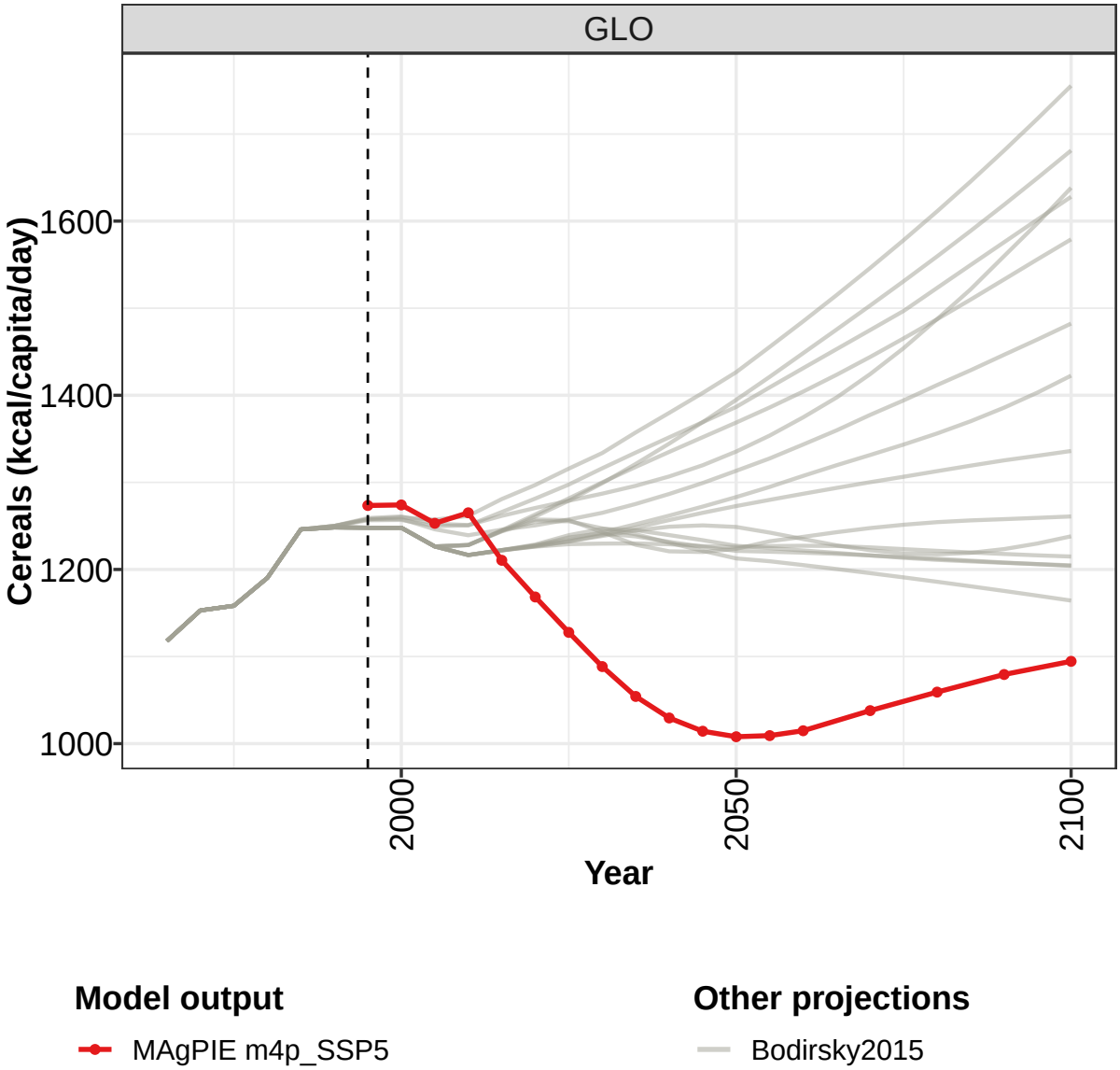
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1663	1696	1696	1741	1689	1648	1610	1575	1546	1528	1521
CAZ	1161	1240	1253	1308	1335	1345	1356	1376	1407	1442	1473
CHA	1753	1800	1796	1830	1691	1608	1596	1635	1693	1749	1794
EUR	1314	1373	1385	1388	1402	1408	1419	1438	1464	1492	1519
IND	1763	1763	1662	1785	1671	1595	1494	1389	1311	1283	1291
JPN	1524	1504	1471	1403	1435	1446	1465	1490	1516	1543	1571
LAM	1405	1445	1504	1499	1474	1448	1424	1408	1407	1422	1448
MEA	2067	2091	2113	2127	2073	2026	1980	1932	1895	1877	1873
NEU	2176	2150	2096	2048	2022	2001	1992	1998	2015	2039	2064
OAS	1741	1762	1781	1841	1794	1739	1664	1581	1505	1451	1422
REF	1595	1548	1620	1599	1538	1495	1473	1477	1497	1523	1550
SSA	1708	1764	1814	1867	1892	1885	1854	1787	1684	1567	1468
USA	1250	1303	1260	1239	1280	1309	1332	1356	1382	1407	1430

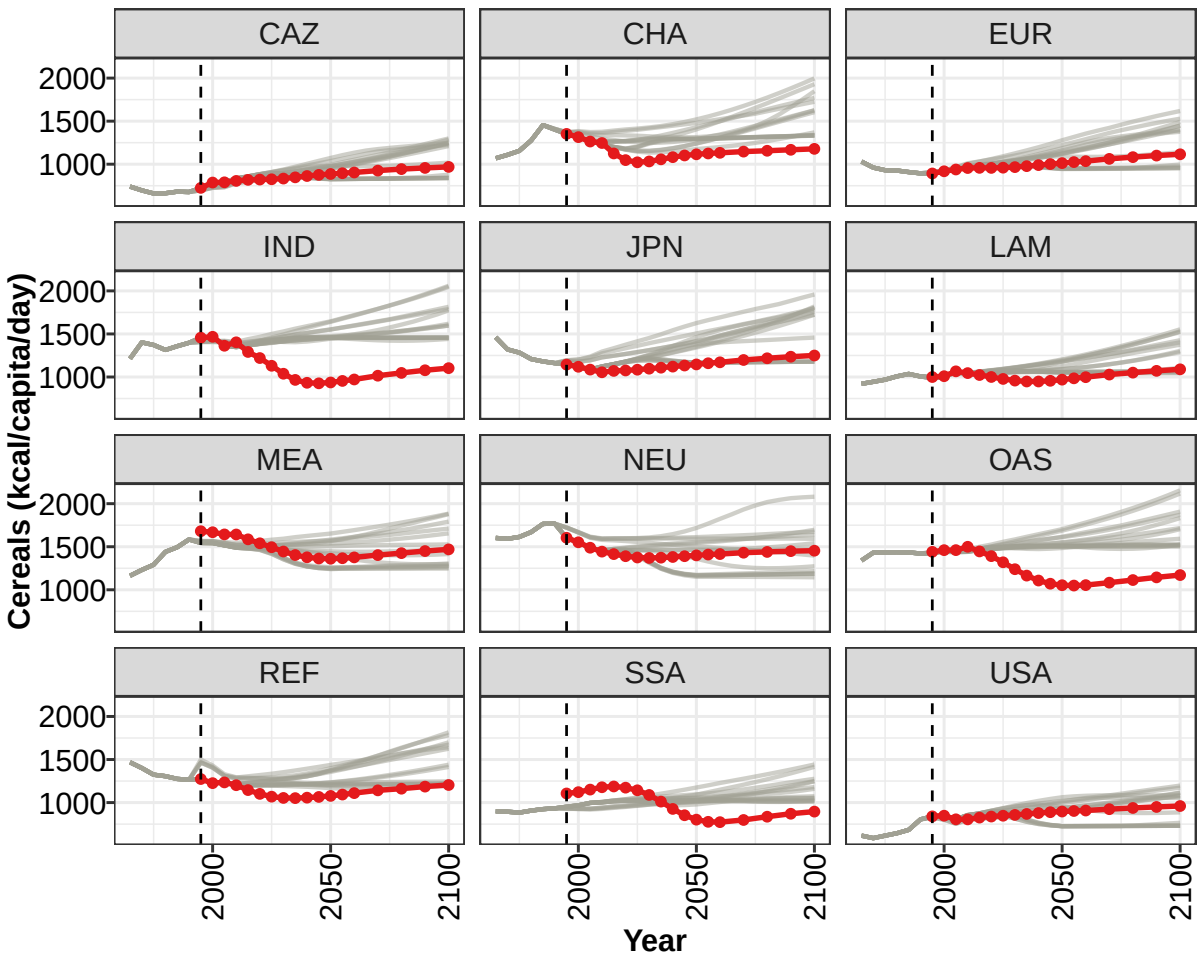
Table 919: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1526	1542	1564	1631	1693	1756	1812
CAZ	1498	1521	1542	1599	1648	1693	1737
CHA	1827	1853	1873	1914	1944	1978	2014
EUR	1544	1572	1596	1660	1712	1763	1812
IND	1321	1361	1398	1491	1564	1636	1700
JPN	1599	1628	1653	1715	1766	1816	1861
LAM	1482	1520	1552	1627	1685	1743	1797
MEA	1883	1904	1929	1993	2048	2108	2162
NEU	2088	2113	2130	2177	2210	2247	2278
OAS	1416	1427	1447	1516	1583	1653	1716
REF	1579	1612	1646	1715	1761	1817	1866
SSA	1406	1386	1401	1494	1605	1710	1796
USA	1448	1465	1479	1521	1559	1597	1635

Table 920: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops (kcal/capita/day) [PART 2/2]

34.1.1 Cereals





Model output

MAgPIE m4p_SSP5

Other projections

Bodirsky2015

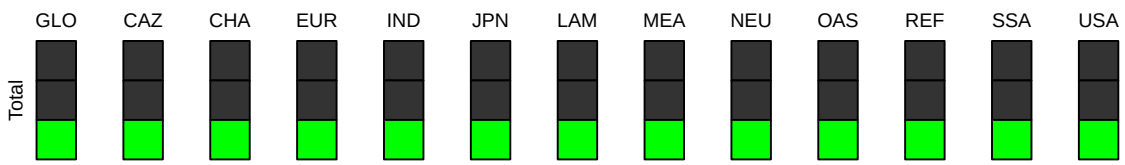


Figure 276: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Cereals (kcal/capita/day)

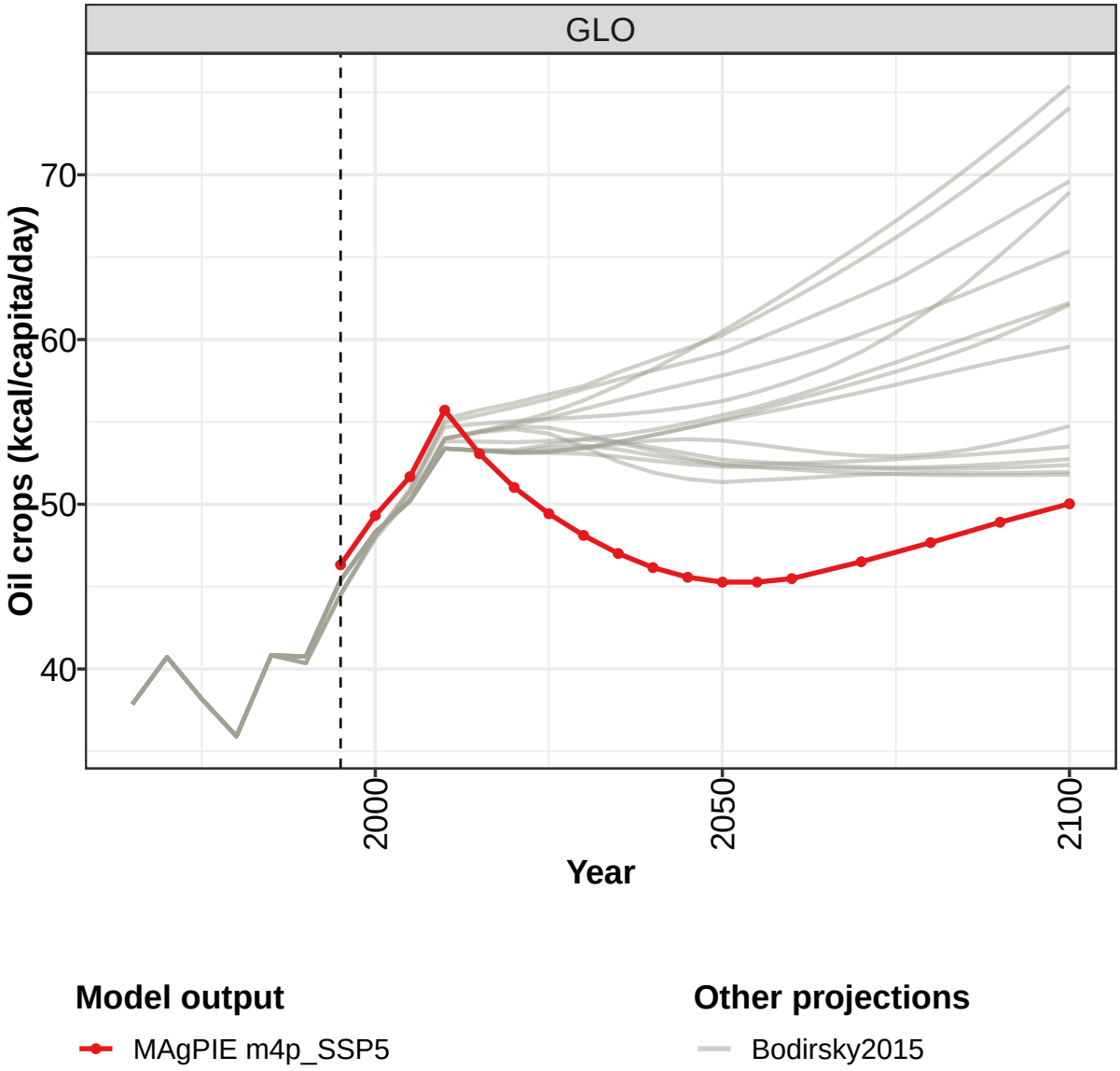
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1273	1274	1253	1265	1211	1168	1128	1089	1054	1029	1014
CAZ	725	787	790	806	818	822	825	833	847	863	876
CHA	1352	1315	1263	1246	1125	1048	1022	1032	1057	1082	1102
EUR	893	918	939	956	958	957	960	966	978	990	1002
IND	1457	1467	1363	1403	1291	1220	1131	1038	966	933	927
JPN	1144	1119	1086	1055	1071	1076	1085	1097	1108	1121	1133
LAM	1000	1009	1066	1046	1023	1000	978	958	948	948	956
MEA	1680	1668	1643	1642	1586	1540	1494	1445	1404	1377	1364
NEU	1604	1552	1489	1443	1415	1390	1375	1370	1373	1381	1390
OAS	1441	1461	1461	1500	1446	1391	1320	1239	1165	1108	1071
REF	1274	1226	1235	1202	1145	1101	1069	1054	1052	1057	1066
SSA	1106	1121	1151	1178	1187	1173	1143	1089	1011	927	853
USA	840	848	806	805	826	838	847	857	868	879	888

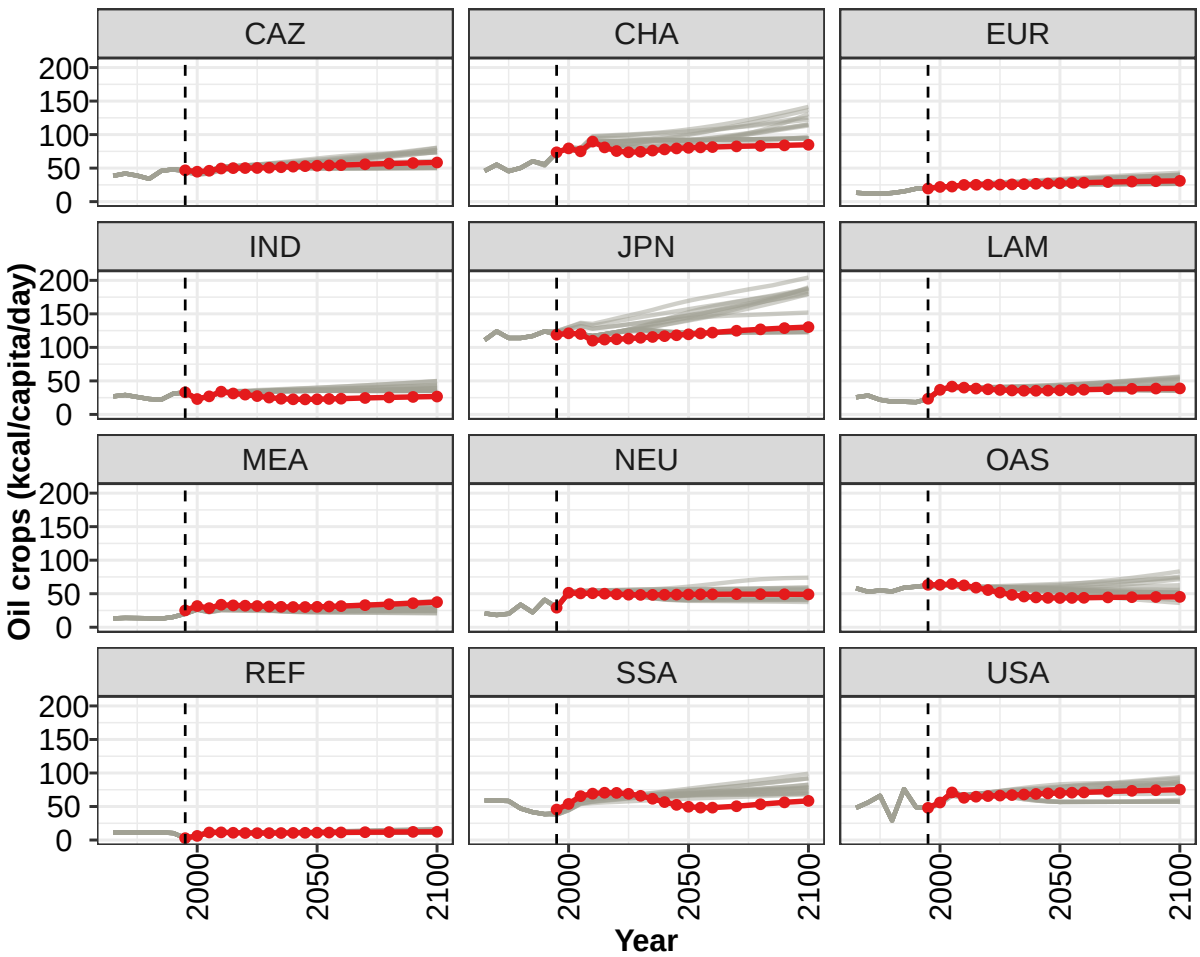
Table 921: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Cereals (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1008	1009	1015	1038	1059	1079	1095
CAZ	887	896	904	926	943	957	969
CHA	1115	1125	1132	1146	1156	1167	1178
EUR	1013	1025	1035	1062	1082	1100	1115
IND	937	955	971	1015	1048	1078	1103
JPN	1146	1160	1171	1198	1218	1236	1250
LAM	969	985	998	1028	1051	1072	1089
MEA	1361	1367	1376	1403	1426	1450	1469
NEU	1400	1409	1415	1431	1440	1449	1454
OAS	1053	1049	1054	1083	1113	1145	1171
REF	1078	1093	1110	1142	1161	1186	1204
SSA	802	777	773	798	836	871	895
USA	896	903	908	923	938	950	960

Table 922: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Cereals (kcal/capita/day) [PART 2/2]

34.1.2 Oil crops





Model output

MAgPIE m4p_SSP5

Other projections

Bodirsky2015

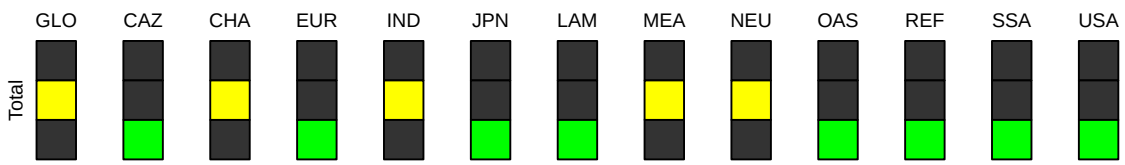


Figure 277: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Oil crops (kcal/capita/day)

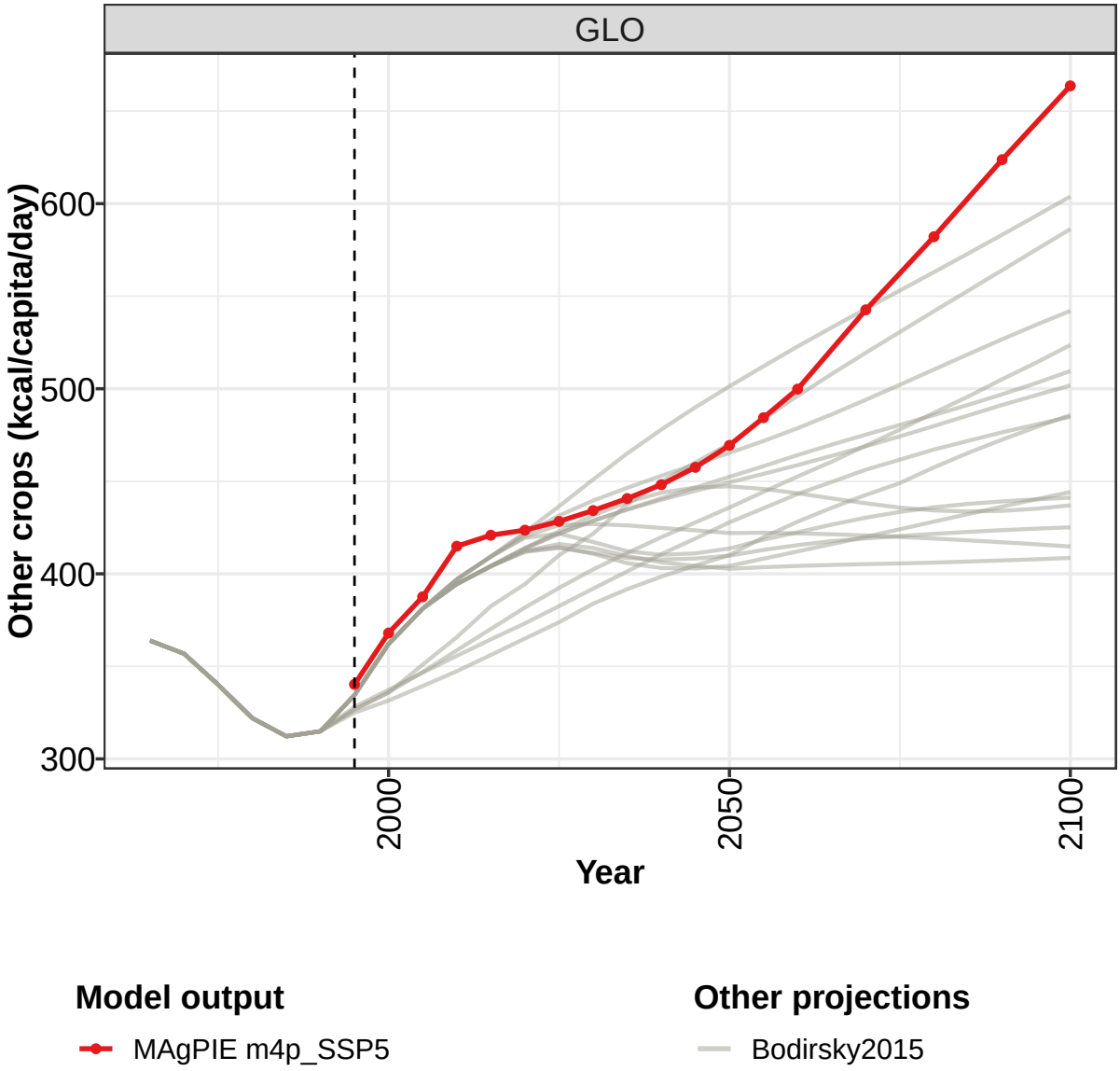
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	46	49	52	56	53	51	49	48	47	46	46
CAZ	47	45	46	49	50	50	50	51	51	52	53
CHA	74	79	75	90	81	75	74	74	76	78	79
EUR	20	22	22	25	25	25	25	26	26	27	27
IND	33	23	27	34	31	30	27	25	23	23	22
JPN	119	121	120	110	112	112	113	114	116	117	118
LAM	23	37	42	40	39	38	37	36	35	35	36
MEA	25	32	29	34	33	32	32	31	30	30	30
NEU	29	51	50	51	50	49	49	48	48	48	49
OAS	63	63	65	62	59	55	52	48	46	44	44
REF	3	6	11	11	11	10	10	10	10	11	11
SSA	45	54	65	69	71	70	69	66	62	57	52
USA	48	56	71	63	65	66	66	67	68	69	70

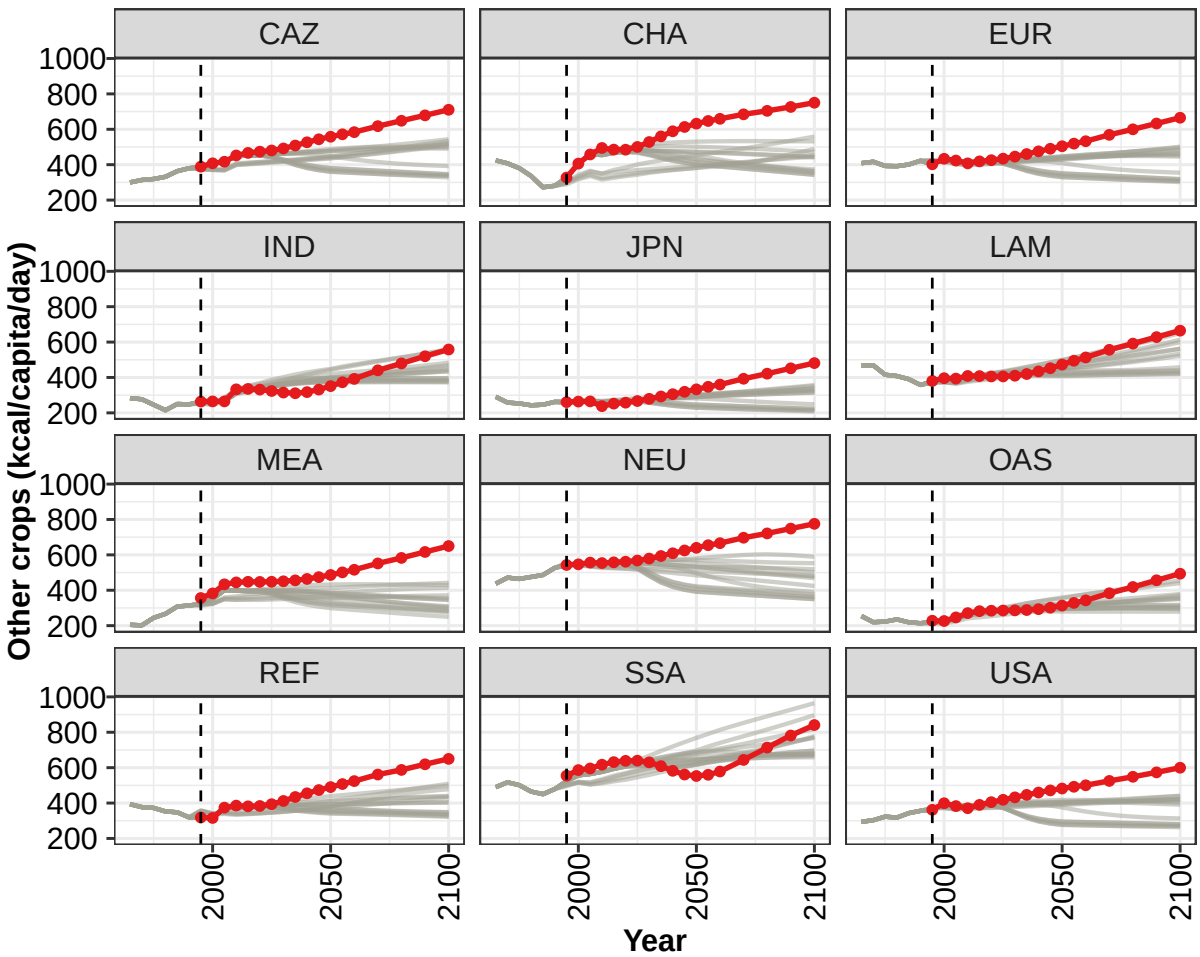
Table 923: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Oil crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	45	45	45	47	48	49	50
CAZ	54	54	54	56	57	58	58
CHA	80	81	81	82	83	84	85
EUR	27	28	28	29	30	31	31
IND	23	23	24	25	25	26	27
JPN	120	121	122	125	127	129	130
LAM	36	37	37	38	38	39	39
MEA	30	31	32	33	34	36	38
NEU	49	49	49	49	49	49	49
OAS	44	44	44	44	45	45	45
REF	11	11	11	12	12	12	12
SSA	50	48	48	50	53	56	58
USA	70	71	71	72	73	74	75

Table 924: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Oil crops (kcal/capita/day) [PART 2/2]

34.1.3 Other crops





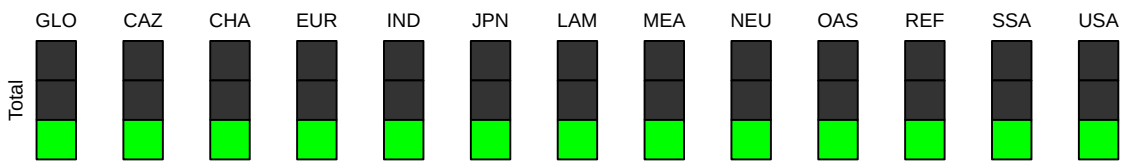


Figure 278: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Other crops (kcal/capita/day)

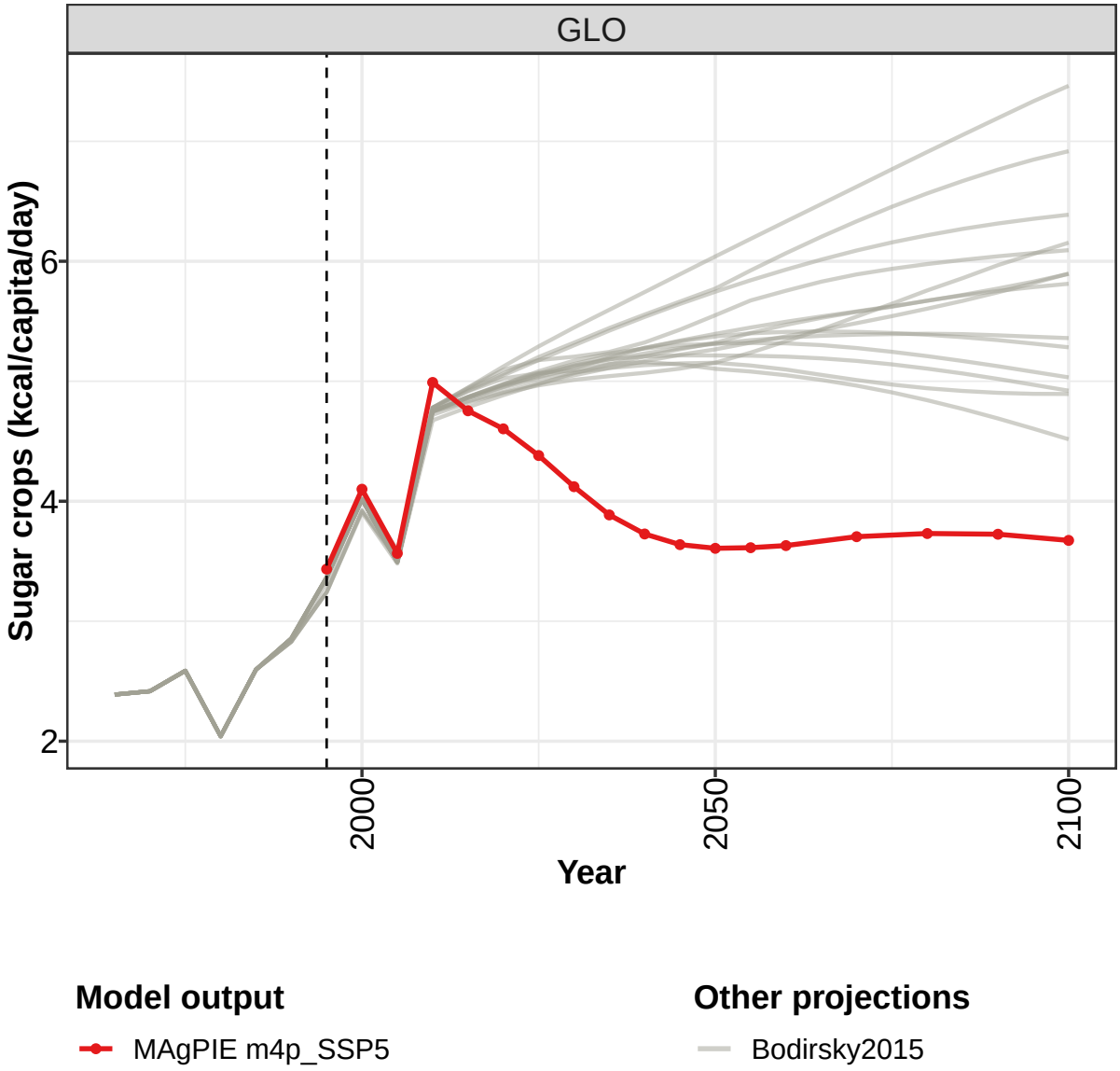
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	340	368	388	415	421	424	428	434	441	448	458
CAZ	389	408	417	452	467	474	480	492	508	527	544
CHA	327	406	458	494	485	485	500	528	560	589	613
EUR	402	433	423	408	419	425	434	446	460	475	490
IND	264	265	265	333	335	332	324	315	311	317	332
JPN	261	264	265	238	252	258	267	279	293	306	319
LAM	380	396	394	409	408	406	406	410	420	434	452
MEA	356	382	434	444	448	447	448	451	456	464	474
NEU	543	547	556	554	558	561	568	579	594	609	625
OAS	228	226	247	271	282	285	286	286	288	293	302
REF	319	316	374	386	382	384	394	412	434	455	474
SSA	555	586	595	617	631	639	640	630	609	582	561
USA	362	399	383	371	390	405	419	432	446	460	472

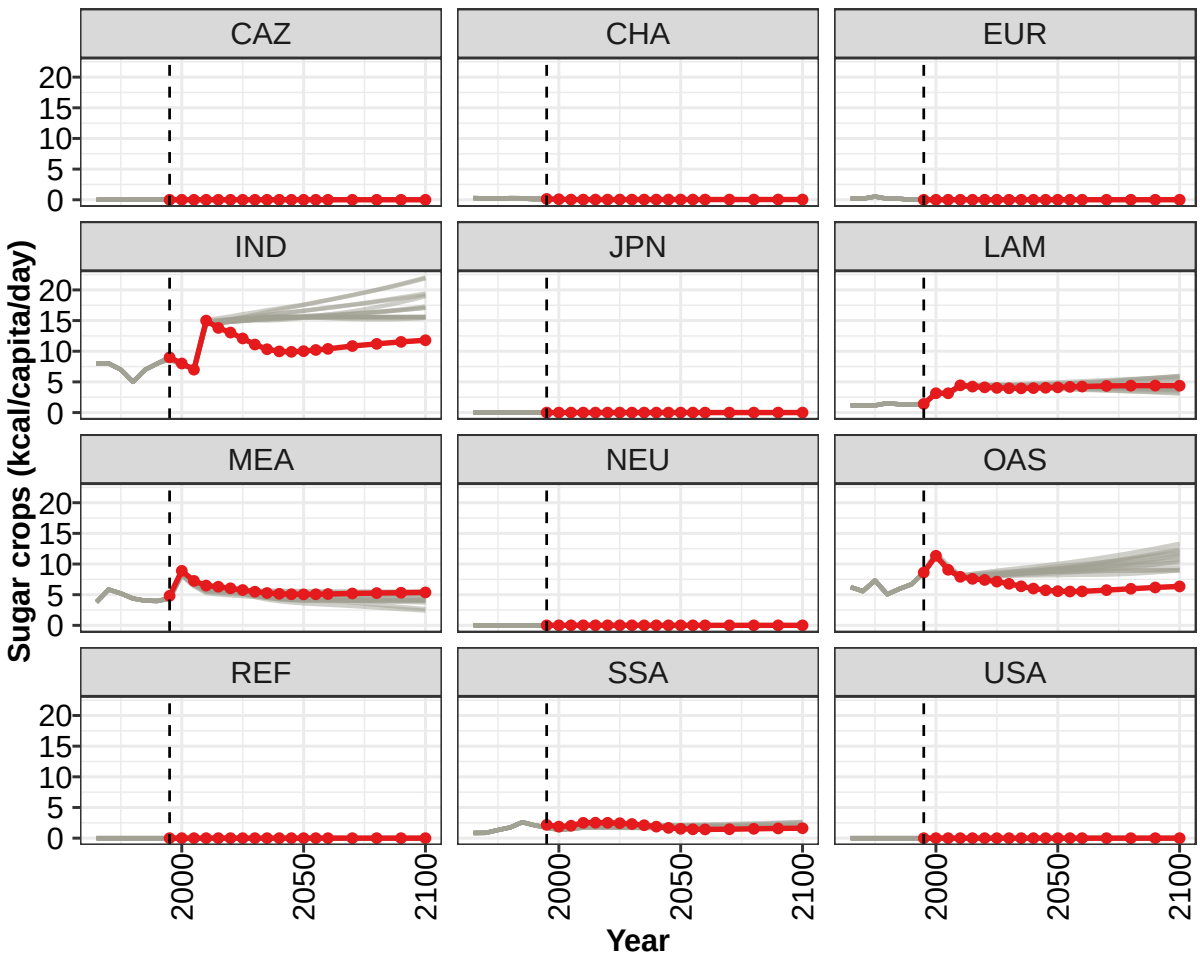
Table 925: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Other crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	469	484	500	543	582	624	664
CAZ	558	572	584	618	648	679	710
CHA	632	647	659	685	704	726	750
EUR	504	519	533	569	600	633	665
IND	351	373	392	440	479	520	558
JPN	333	347	360	393	422	452	481
LAM	473	495	513	556	591	628	665
MEA	487	501	516	552	583	617	650
NEU	640	655	666	697	721	749	776
OAS	314	329	343	383	419	457	494
REF	490	507	524	561	587	619	650
SSA	553	560	578	644	714	782	841
USA	482	492	501	525	548	573	600

Table 926: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Other crops (kcal/capita/day) [PART 2/2]

34.1.4 Sugar crops





Model output

MAgPIE m4p_SSP5

Other projections

Bodirsky2015

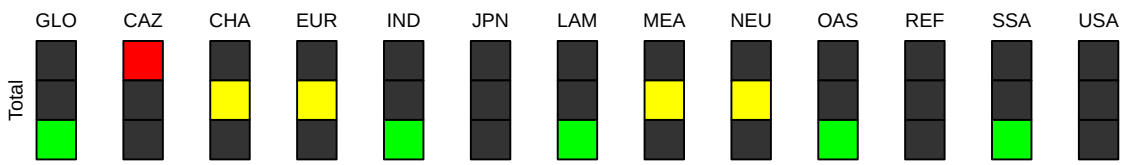


Figure 279: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Sugar crops (kcal/capita/day)

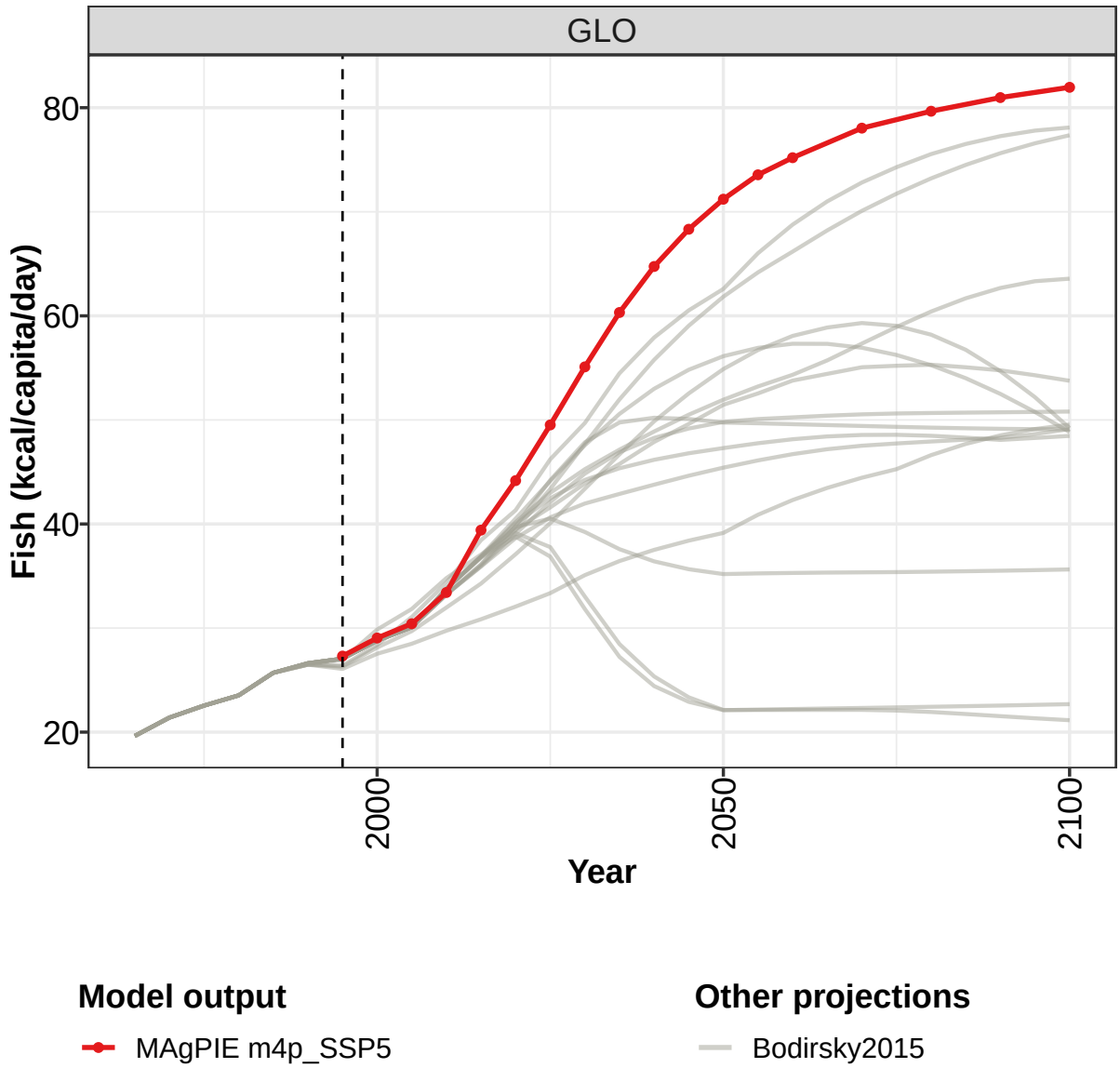
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.4	4.1	3.6	5.0	4.8	4.6	4.4	4.1	3.9	3.7	3.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	9.0	8.0	7.0	15.0	13.8	13.0	12.1	11.1	10.3	10.0	9.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	3.2	3.1	4.4	4.2	4.1	4.0	4.0	4.0	4.0	4.0
MEA	4.8	8.9	7.3	6.5	6.3	6.0	5.8	5.5	5.3	5.1	5.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	8.6	11.3	9.1	7.9	7.6	7.4	7.1	6.8	6.4	6.0	5.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.2	1.9	2.0	2.5	2.5	2.5	2.4	2.3	2.1	1.9	1.7
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

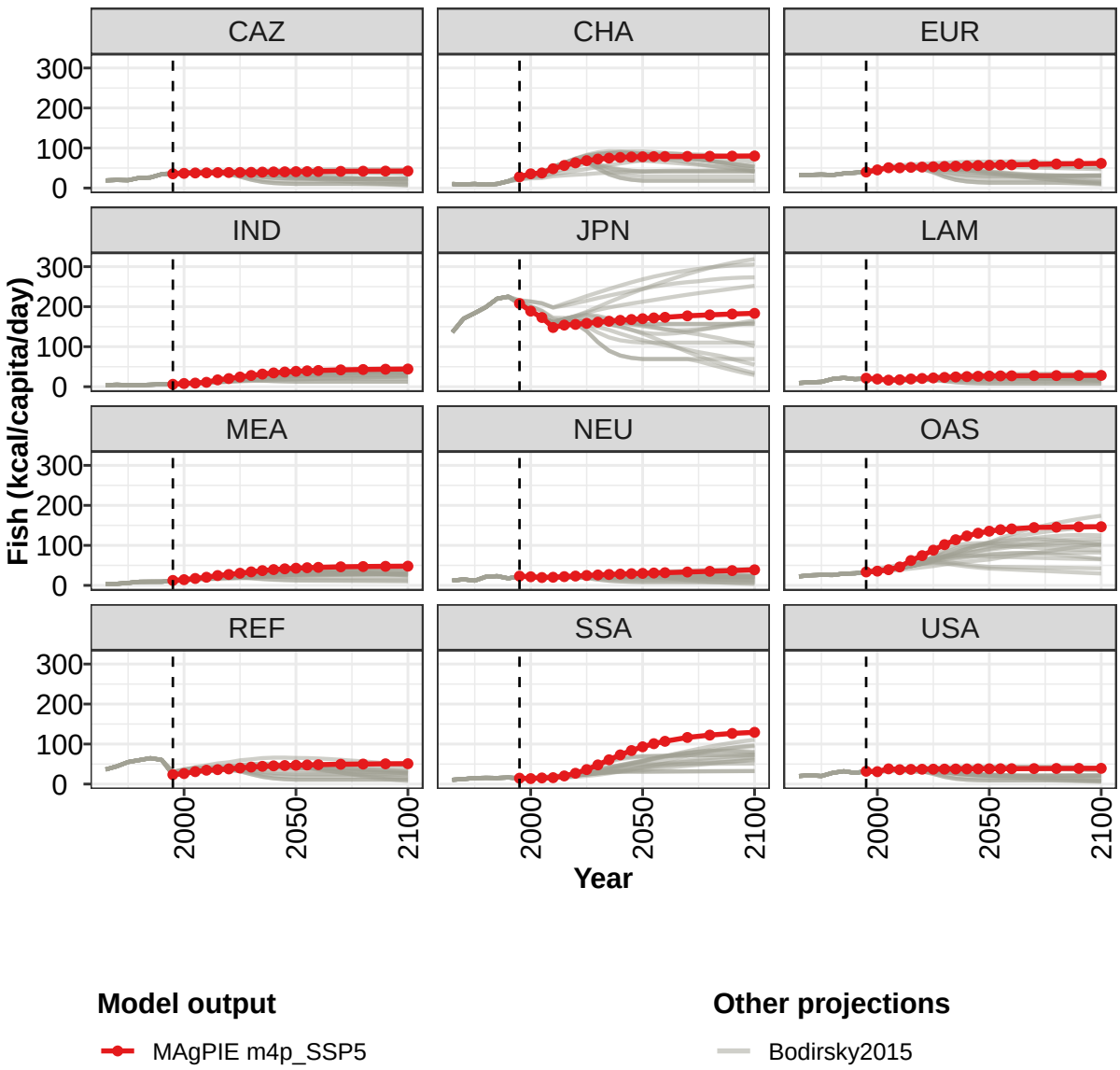
Table 927: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Sugar crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	3.6	3.6	3.6	3.7	3.7	3.7	3.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	10.0	10.2	10.4	10.9	11.2	11.5	11.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	4.1	4.2	4.2	4.3	4.4	4.4	4.4
MEA	5.0	5.1	5.1	5.2	5.3	5.3	5.4
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	5.6	5.5	5.5	5.7	6.0	6.2	6.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.5	1.4	1.4	1.5	1.5	1.6	1.6
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 928: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Crops—Sugar crops (kcal/capita/day) [PART 2/2]

34.2 Fish


GLO
Fish (kcal/capita/day)
80
60
40
20
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Other projections
Bodirsky2015



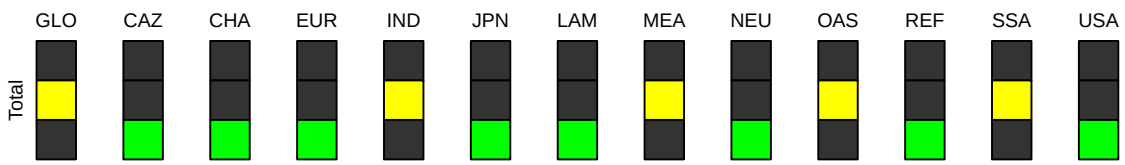


Figure 280: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Fish (kcal/capita/day)

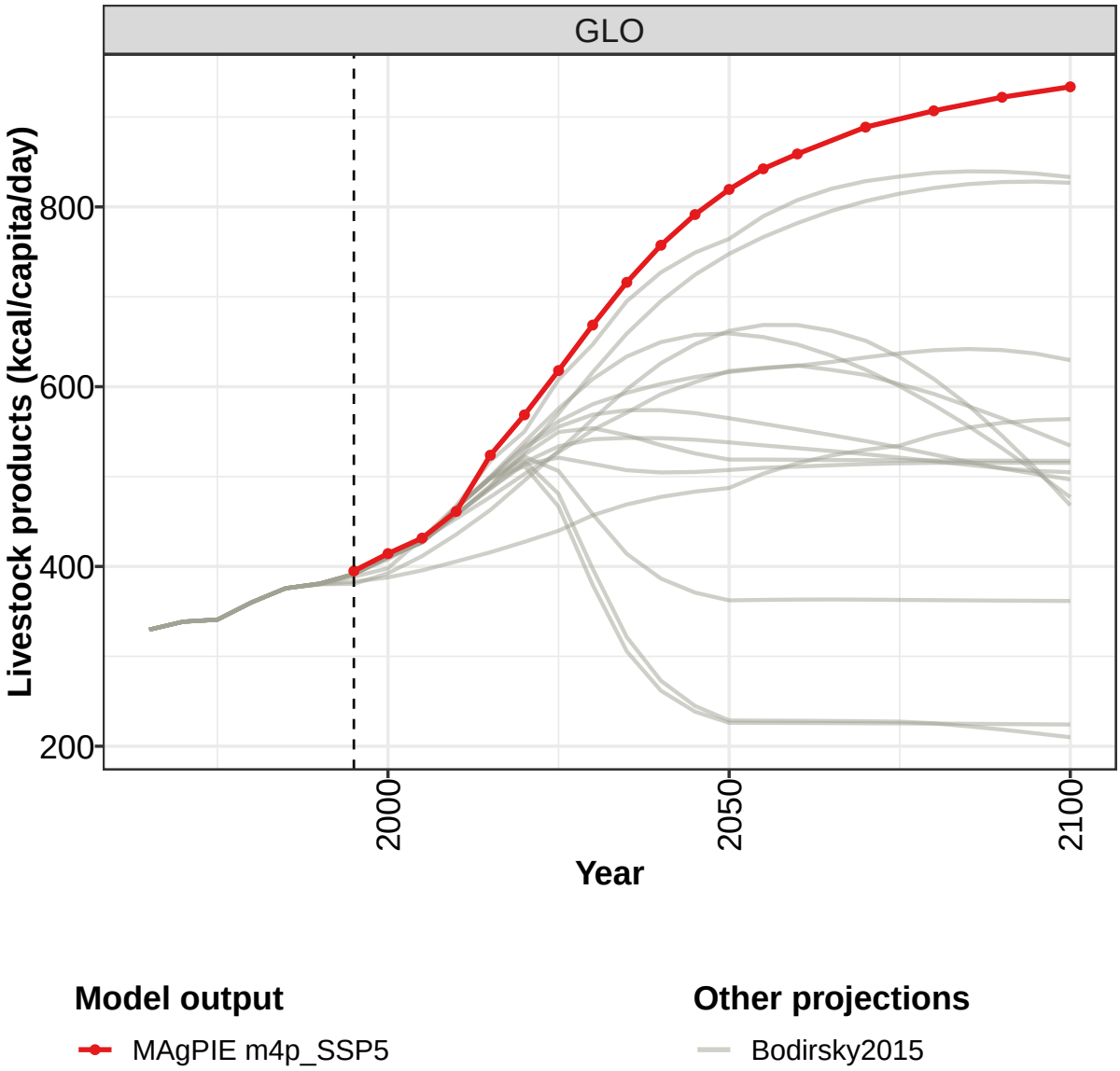
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	27	29	30	33	39	44	50	55	60	65	68
CAZ	36	37	38	38	39	39	39	39	40	40	41
CHA	28	36	38	48	56	63	68	72	75	76	78
EUR	40	45	51	51	52	52	53	54	55	55	56
IND	6	8	9	11	17	20	24	28	32	34	37
JPN	208	189	173	148	154	156	158	161	164	166	168
LAM	21	19	16	17	19	21	22	23	24	25	26
MEA	12	14	17	20	25	27	30	34	37	39	41
NEU	23	22	20	20	22	23	25	26	27	28	29
OAS	34	36	39	46	62	74	88	102	114	124	130
REF	24	26	31	35	36	38	40	43	44	46	46
SSA	15	14	15	16	20	27	36	48	61	73	84
USA	32	31	38	36	37	37	37	37	38	38	38

Table 929: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Fish (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	71	74	75	78	80	81	82
CAZ	41	41	41	42	42	42	42
CHA	78	78	79	79	79	80	80
EUR	57	57	58	59	60	61	62
IND	38	40	41	42	43	44	44
JPN	170	172	173	177	180	182	183
LAM	27	27	27	28	28	28	28
MEA	43	44	45	46	47	48	48
NEU	30	31	32	33	35	37	39
OAS	136	139	141	145	146	146	147
REF	47	48	48	50	50	51	51
SSA	93	101	107	117	122	127	129
USA	38	38	38	39	39	39	39

Table 930: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Fish (kcal/capita/day) [PART 2/2]

34.3 Livestock products



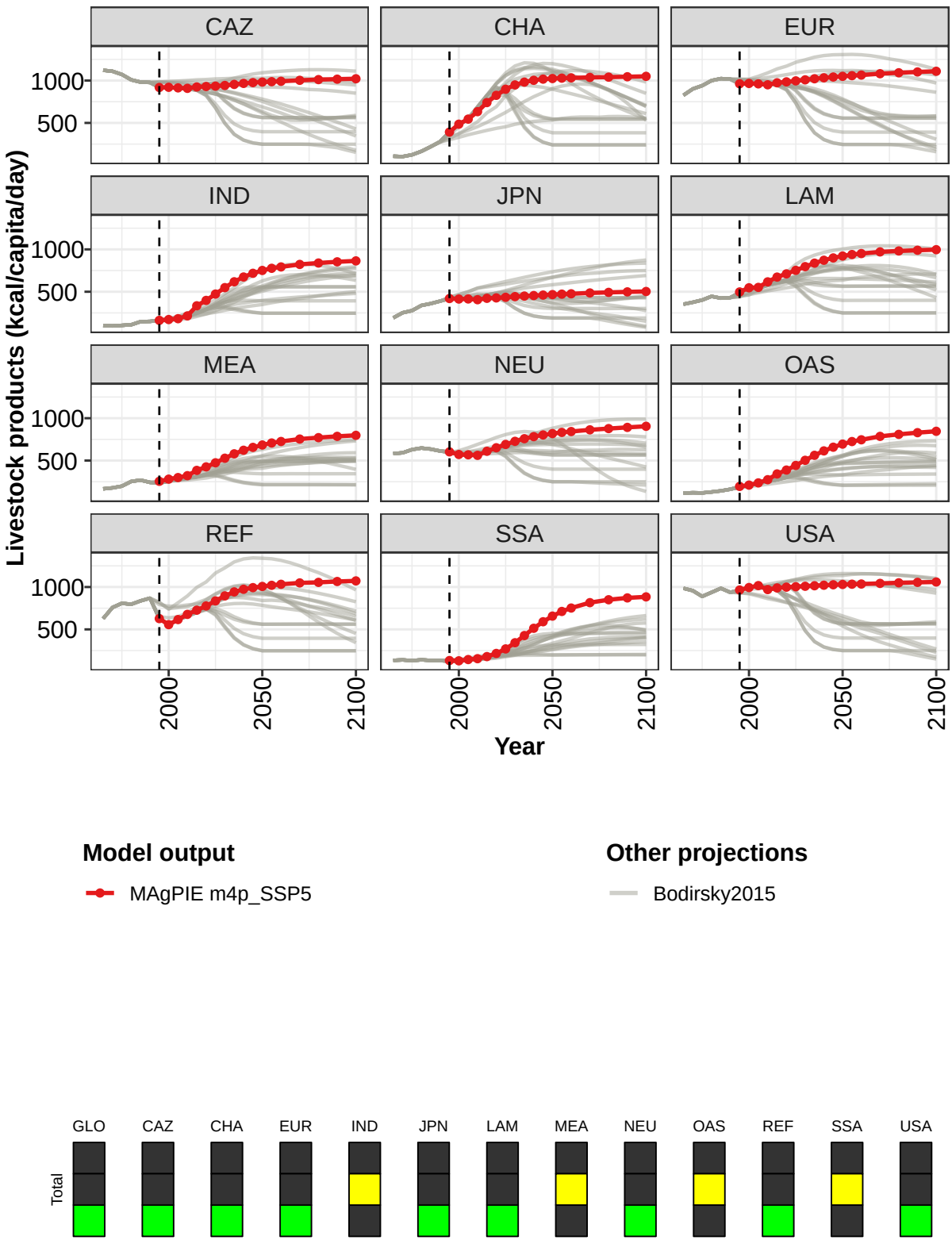


Figure 281: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Livestock products (kcal/capita/day)

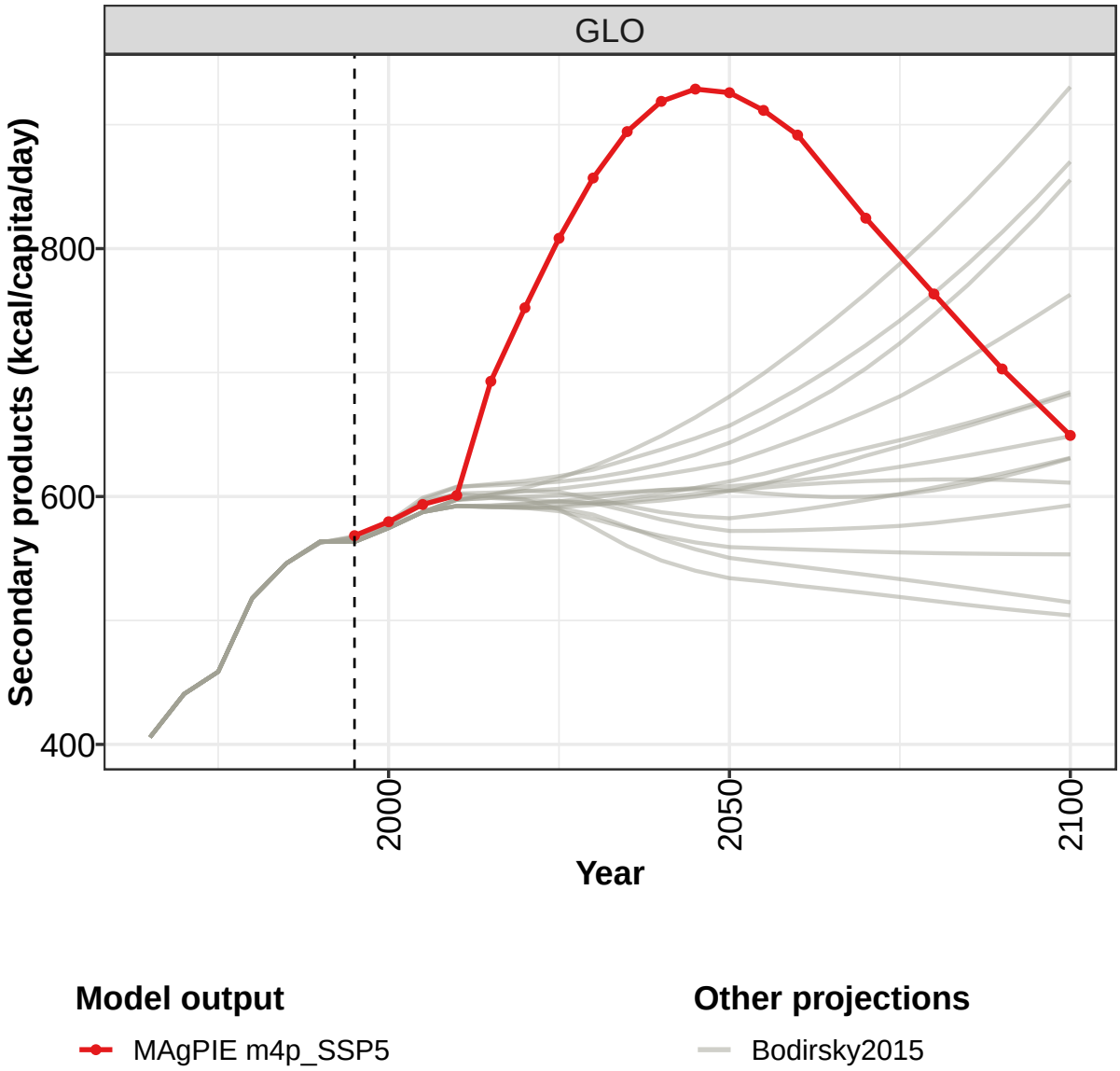
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	395	414	432	461	524	569	618	669	716	757	792
CAZ	919	921	914	908	925	930	935	942	955	967	976
CHA	392	485	545	633	740	826	898	949	982	1003	1017
EUR	962	966	961	950	974	985	996	1009	1021	1033	1042
IND	162	172	182	215	334	398	473	549	618	674	718
JPN	420	414	415	406	423	427	434	443	449	455	461
LAM	497	547	551	617	673	711	753	797	838	872	899
MEA	255	281	299	322	384	426	474	528	580	622	656
NEU	603	572	568	562	610	651	691	727	758	783	802
OAS	195	210	236	274	342	388	443	503	562	614	658
REF	627	556	616	677	727	777	836	896	943	974	993
SSA	132	129	144	154	179	216	270	342	427	513	590
USA	965	994	1017	970	989	999	1004	1009	1015	1021	1027

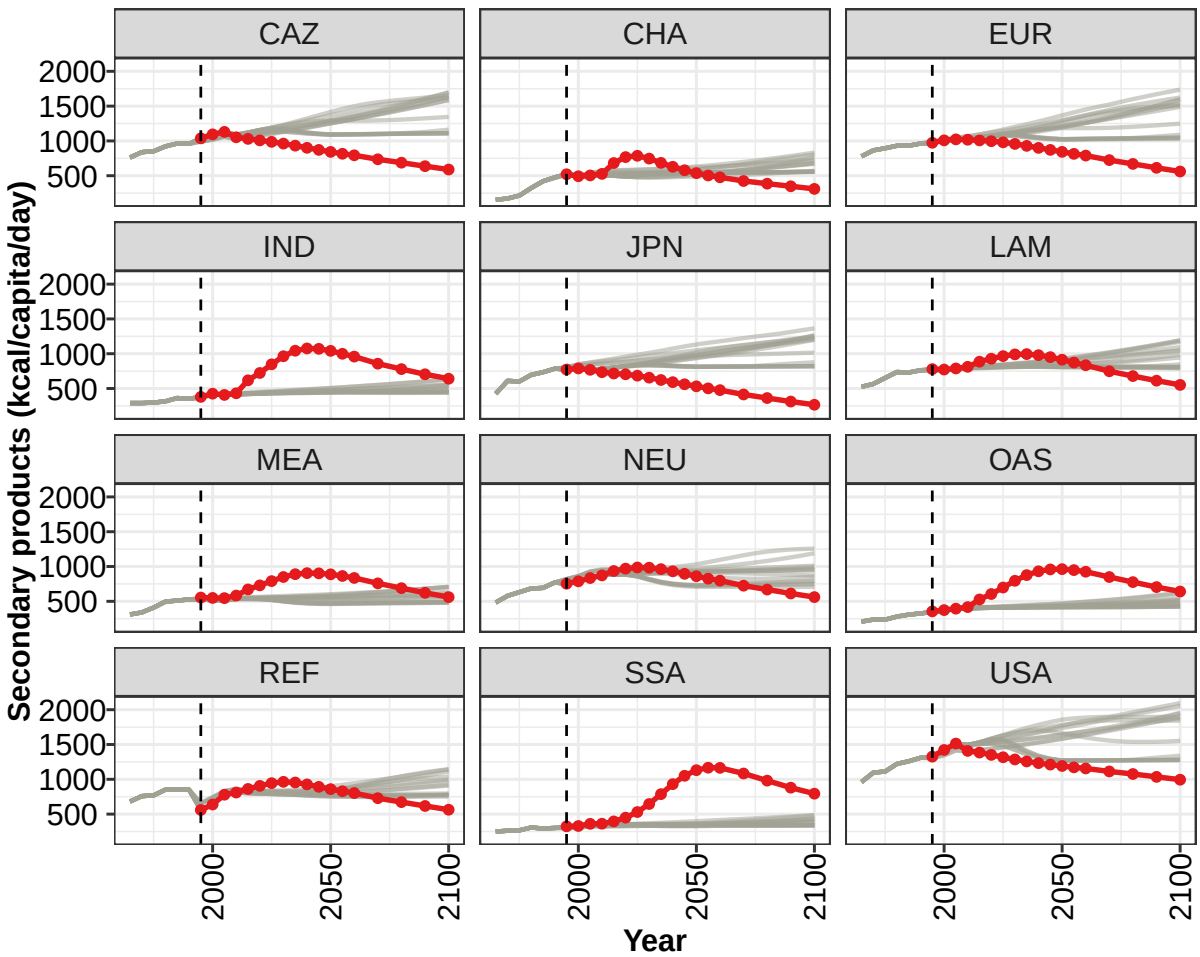
Table 931: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Livestock products (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	819	842	859	889	907	922	934
CAZ	982	987	992	1003	1011	1017	1022
CHA	1024	1029	1032	1037	1041	1045	1050
EUR	1050	1058	1065	1081	1092	1102	1110
IND	751	777	793	823	839	853	864
JPN	466	472	476	486	492	498	503
LAM	922	939	951	971	981	990	997
MEA	684	708	725	754	771	786	798
NEU	819	833	843	863	877	892	905
OAS	695	725	745	786	809	830	846
REF	1007	1020	1032	1049	1055	1066	1072
SSA	657	712	752	816	850	872	884
USA	1031	1034	1036	1043	1050	1055	1060

Table 932: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Livestock products (kcal/capita/day) [PART 2/2]

34.4 Secondary products





Model output

MAgPIE m4p_SSP5

Other projections

Bodirsky2015

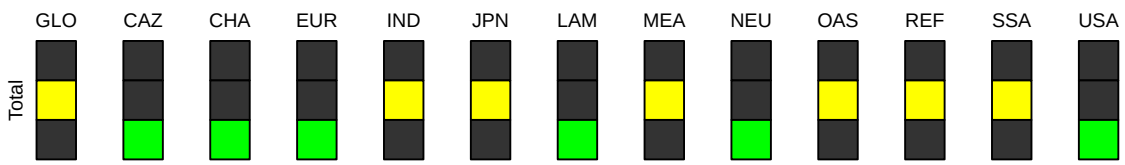


Figure 282: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Secondary products (kcal/capita/day)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	568	580	594	601	693	752	808	857	894	919	929
CAZ	1037	1095	1130	1053	1030	1008	987	962	932	901	871
CHA	521	493	504	527	682	768	787	746	685	629	579
EUR	973	1008	1023	1017	1007	996	980	957	929	900	871
IND	380	426	408	432	618	724	848	964	1044	1076	1070
JPN	773	789	769	735	716	705	685	656	623	592	561
LAM	779	773	788	812	886	929	966	990	995	980	951
MEA	554	549	546	583	671	729	791	849	890	905	902
NEU	753	787	834	872	935	970	986	983	963	931	895
OAS	355	374	395	417	527	605	698	795	877	931	958
REF	560	638	779	810	862	906	945	964	954	927	892
SSA	324	329	360	362	395	449	530	645	787	931	1051
USA	1326	1422	1514	1408	1384	1351	1318	1286	1257	1233	1211

Table 933: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Secondary products (kcal/capita/day) [PART 1/2]

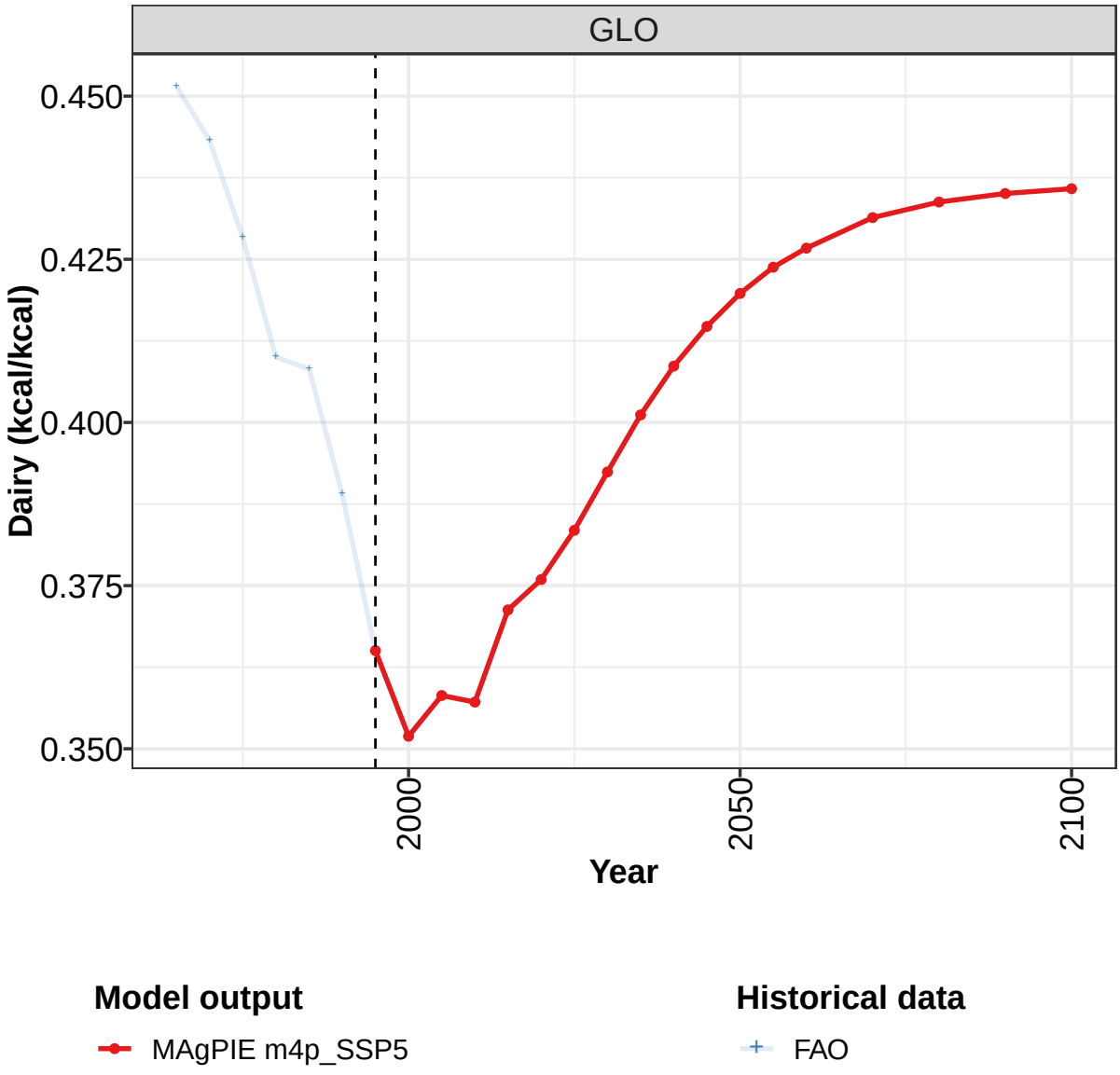
	2050	2055	2060	2070	2080	2090	2100
GLO	926	912	892	825	763	703	649
CAZ	843	816	794	736	688	637	589
CHA	537	504	477	425	386	349	311
EUR	843	815	790	725	670	614	561
IND	1041	999	959	857	779	705	641
JPN	532	502	477	415	363	313	267
LAM	915	873	835	748	679	613	552
MEA	888	864	836	758	689	622	560
NEU	860	826	798	725	669	613	561
OAS	962	949	925	849	776	705	641
REF	859	829	803	729	672	617	563
SSA	1131	1167	1165	1084	981	880	794
USA	1192	1172	1156	1113	1076	1035	994

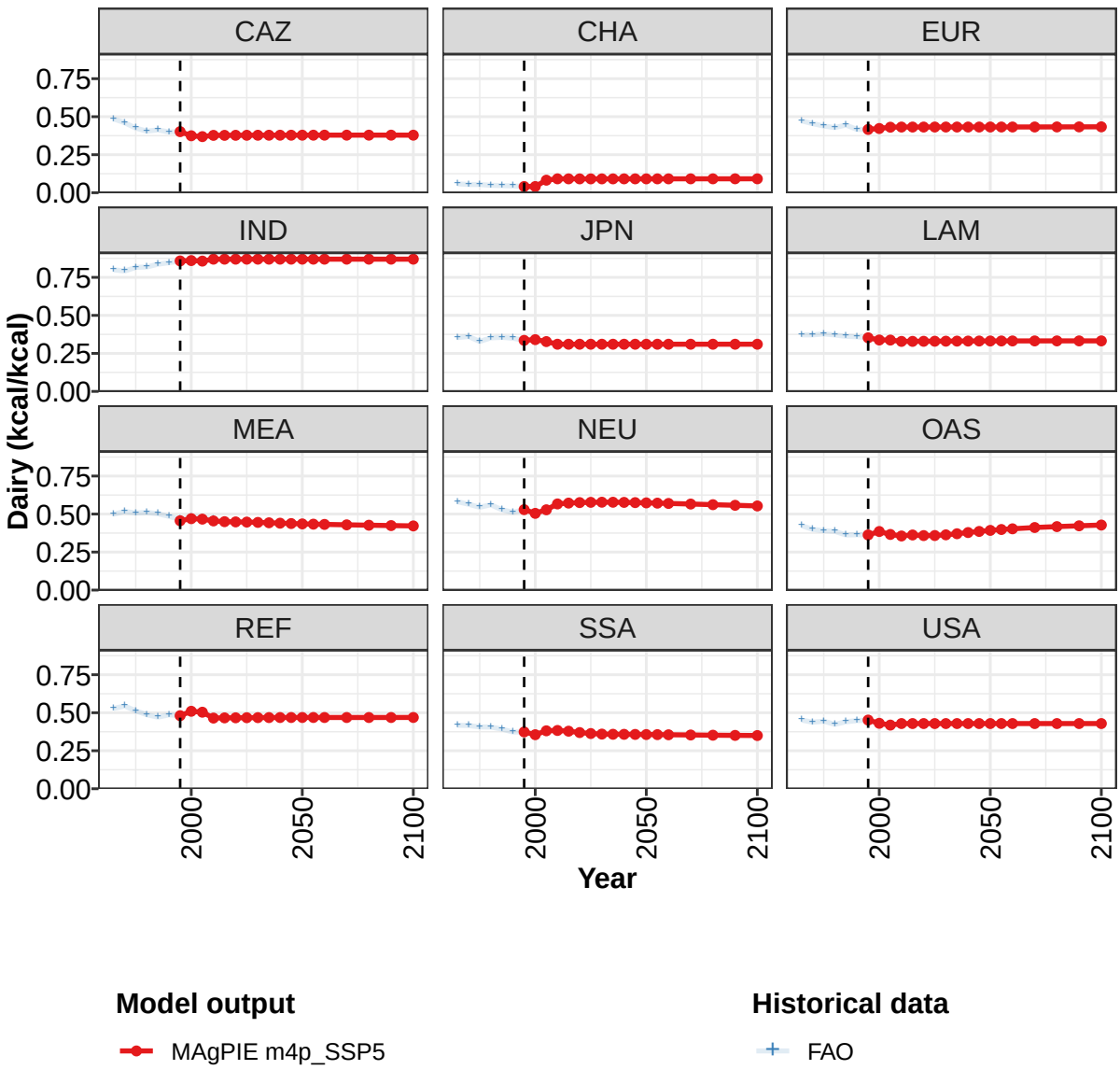
Table 934: MAgPIE m4p_SSP5 — Nutrition—Calorie Supply—Secondary products (kcal/capita/day) [PART 2/2]

35 Dietary Composition

35.1 Livestock Demand Structure

35.1.1 Livestock products—Dairy





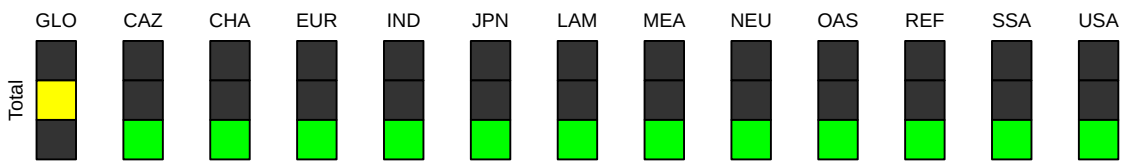


Figure 283: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Dairy (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.365	0.352	0.358	0.357	0.371	0.376	0.383	0.392	0.401	0.409	0.415
CAZ	0.402	0.375	0.369	0.377	0.378	0.378	0.378	0.378	0.378	0.378	0.378
CHA	0.041	0.041	0.083	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091
EUR	0.416	0.422	0.431	0.432	0.432	0.432	0.432	0.432	0.432	0.432	0.432
IND	0.858	0.860	0.857	0.870	0.870	0.870	0.870	0.870	0.870	0.870	0.870
JPN	0.336	0.341	0.328	0.310	0.310	0.310	0.310	0.310	0.310	0.310	0.310
LAM	0.353	0.338	0.338	0.329	0.329	0.330	0.330	0.330	0.331	0.331	0.331
MEA	0.456	0.470	0.467	0.455	0.450	0.448	0.447	0.445	0.443	0.440	0.438
NEU	0.529	0.505	0.528	0.567	0.572	0.575	0.577	0.578	0.578	0.577	0.575
OAS	0.363	0.385	0.366	0.356	0.362	0.359	0.359	0.363	0.371	0.378	0.386
REF	0.481	0.510	0.504	0.465	0.466	0.467	0.467	0.468	0.468	0.469	0.469
SSA	0.374	0.356	0.381	0.384	0.379	0.370	0.363	0.360	0.358	0.358	0.358
USA	0.452	0.431	0.419	0.429	0.429	0.429	0.429	0.429	0.429	0.429	0.429

Table 935: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Dairy (kcal/kcal) [PART 1/2]

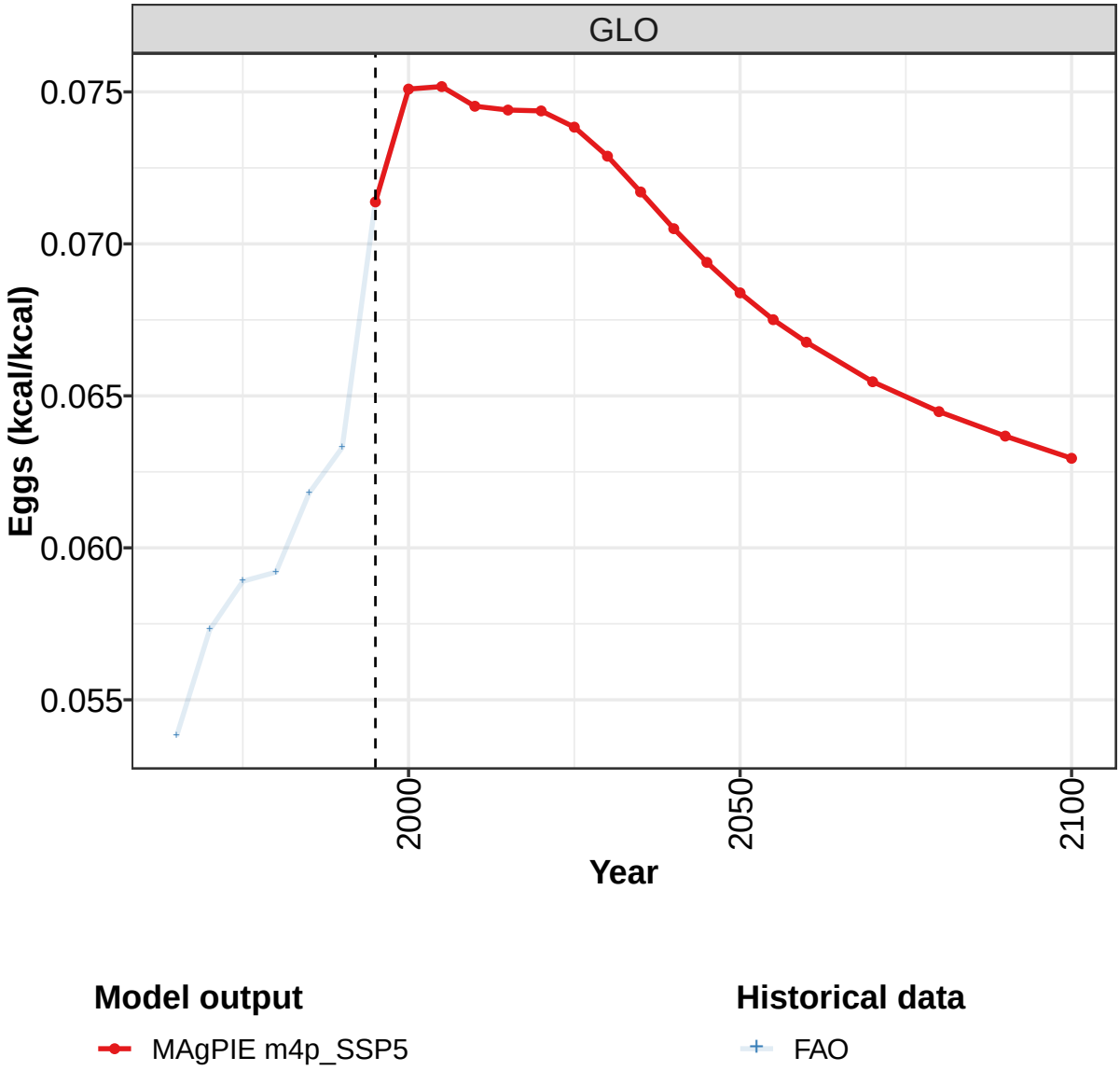
	2050	2055	2060	2070	2080	2090	2100
GLO	0.420	0.424	0.427	0.431	0.434	0.435	0.436
CAZ	0.379	0.379	0.379	0.379	0.379	0.379	0.379
CHA	0.091	0.091	0.091	0.091	0.092	0.092	0.092
EUR	0.432	0.432	0.432	0.432	0.433	0.433	0.433
IND	0.870	0.870	0.870	0.870	0.870	0.870	0.870
JPN	0.310	0.310	0.310	0.310	0.310	0.310	0.310
LAM	0.332	0.332	0.332	0.332	0.332	0.332	0.332
MEA	0.435	0.434	0.432	0.429	0.427	0.424	0.422
NEU	0.574	0.572	0.570	0.566	0.562	0.558	0.553
OAS	0.393	0.399	0.403	0.411	0.418	0.423	0.428
REF	0.469	0.469	0.469	0.469	0.469	0.469	0.469
SSA	0.357	0.356	0.355	0.354	0.352	0.351	0.350
USA	0.429	0.429	0.429	0.429	0.429	0.429	0.429

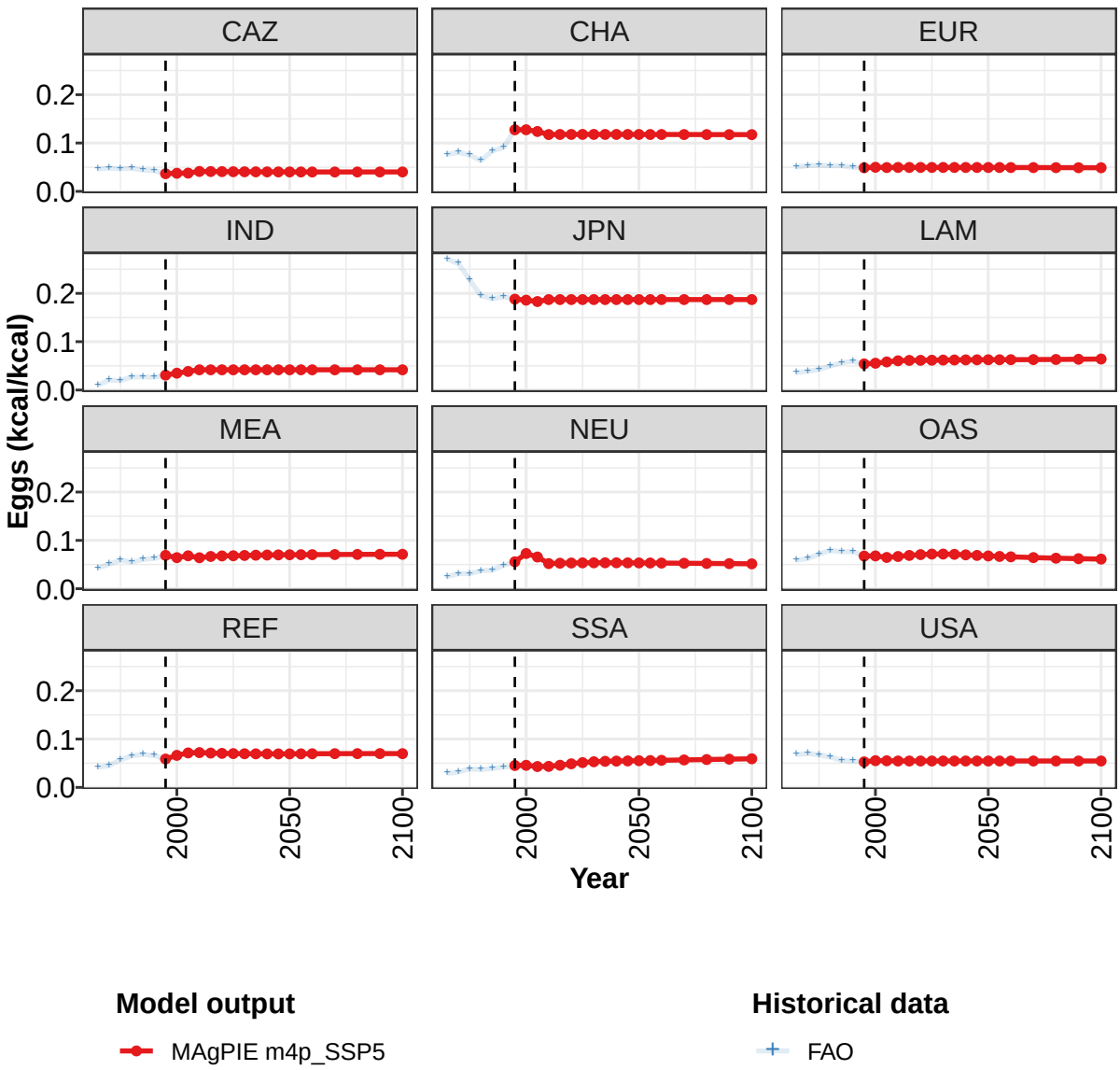
Table 936: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Dairy (kcal/kcal) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.452	0.443	0.428	0.410	0.408	0.389	0.365	0.352	0.358	0.357
CAZ	0.486	0.460	0.425	0.405	0.413	0.400	0.402	0.375	0.369	0.377
CHA	0.059	0.054	0.054	0.049	0.047	0.045	0.041	0.041	0.083	0.091
EUR	0.473	0.455	0.439	0.428	0.445	0.416	0.416	0.422	0.431	0.432
IND	0.800	0.792	0.816	0.818	0.837	0.847	0.858	0.861	0.857	0.870
JPN	0.354	0.361	0.329	0.352	0.356	0.350	0.336	0.341	0.328	0.310
LAM	0.372	0.372	0.378	0.371	0.362	0.359	0.353	0.338	0.337	0.329
MEA	0.499	0.517	0.507	0.511	0.502	0.485	0.465	0.480	0.477	0.466
NEU	0.582	0.565	0.545	0.561	0.528	0.511	0.530	0.505	0.529	0.568
OAS	0.424	0.399	0.391	0.386	0.362	0.364	0.363	0.386	0.366	0.356
REF	0.528	0.544	0.513	0.487	0.471	0.486	0.481	0.510	0.504	0.465
SSA	0.418	0.416	0.407	0.406	0.393	0.373	0.374	0.356	0.383	0.385
USA	0.452	0.438	0.444	0.424	0.441	0.448	0.452	0.431	0.419	0.429

Table 937: FAO — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Dairy (kcal/kcal)

35.1.2 Livestock products—Eggs





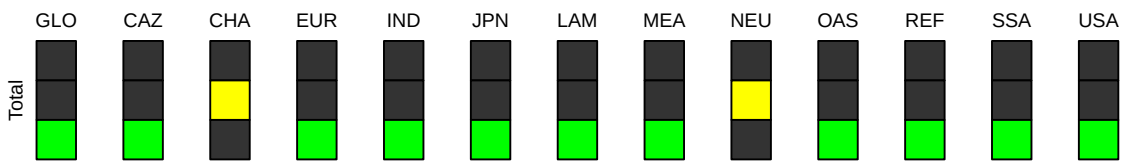


Figure 284: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Eggs (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.071	0.075	0.075	0.075	0.074	0.074	0.074	0.073	0.072	0.071	0.069
CAZ	0.037	0.037	0.038	0.041	0.041	0.041	0.041	0.040	0.040	0.040	0.040
CHA	0.127	0.127	0.124	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118
EUR	0.049	0.050	0.049	0.050	0.050	0.050	0.050	0.050	0.049	0.049	0.049
IND	0.031	0.035	0.038	0.042	0.042	0.042	0.042	0.042	0.042	0.042	0.042
JPN	0.188	0.186	0.183	0.187	0.187	0.187	0.187	0.187	0.187	0.187	0.187
LAM	0.054	0.056	0.058	0.061	0.061	0.061	0.062	0.062	0.062	0.062	0.063
MEA	0.069	0.064	0.068	0.064	0.067	0.068	0.068	0.069	0.069	0.070	0.070
NEU	0.056	0.073	0.066	0.052	0.053	0.053	0.053	0.054	0.054	0.054	0.054
OAS	0.068	0.068	0.065	0.067	0.069	0.071	0.072	0.072	0.071	0.070	0.069
REF	0.059	0.066	0.071	0.072	0.071	0.070	0.070	0.070	0.069	0.069	0.069
SSA	0.045	0.046	0.043	0.043	0.046	0.049	0.051	0.053	0.054	0.054	0.055
USA	0.053	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055

Table 938: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Eggs (kcal/kcal) [PART 1/2]

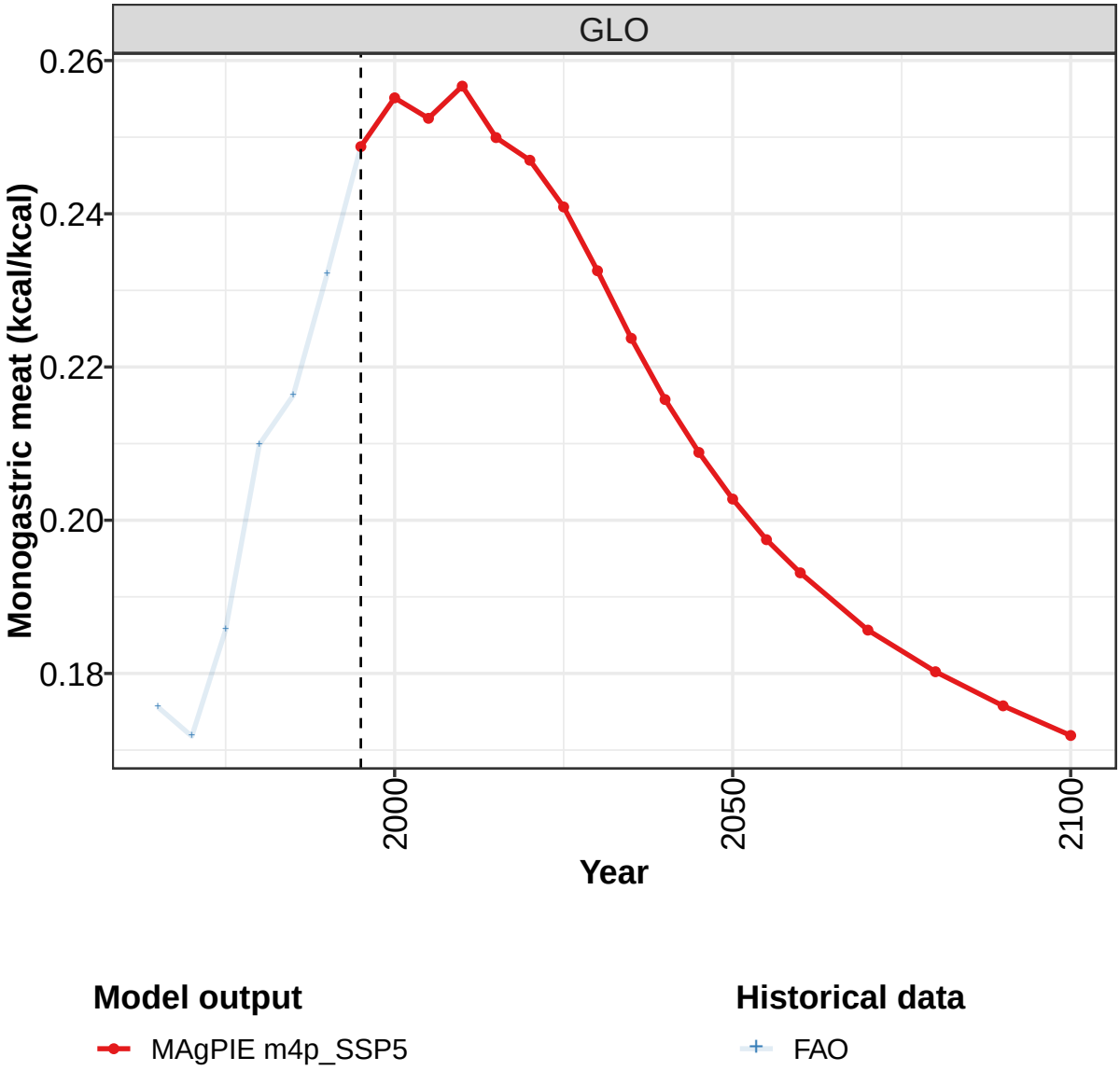
	2050	2055	2060	2070	2080	2090	2100
GLO	0.068	0.068	0.067	0.065	0.064	0.064	0.063
CAZ	0.040	0.040	0.040	0.040	0.040	0.040	0.040
CHA	0.118	0.118	0.118	0.118	0.117	0.117	0.117
EUR	0.049	0.049	0.049	0.049	0.049	0.049	0.049
IND	0.042	0.042	0.042	0.042	0.042	0.042	0.042
JPN	0.187	0.187	0.187	0.187	0.187	0.187	0.187
LAM	0.063	0.063	0.063	0.063	0.063	0.064	0.064
MEA	0.070	0.070	0.071	0.071	0.071	0.071	0.071
NEU	0.053	0.053	0.053	0.053	0.052	0.052	0.052
OAS	0.068	0.067	0.066	0.064	0.063	0.062	0.061
REF	0.069	0.069	0.070	0.070	0.070	0.070	0.070
SSA	0.055	0.056	0.056	0.057	0.058	0.058	0.059
USA	0.055	0.055	0.055	0.055	0.055	0.055	0.055

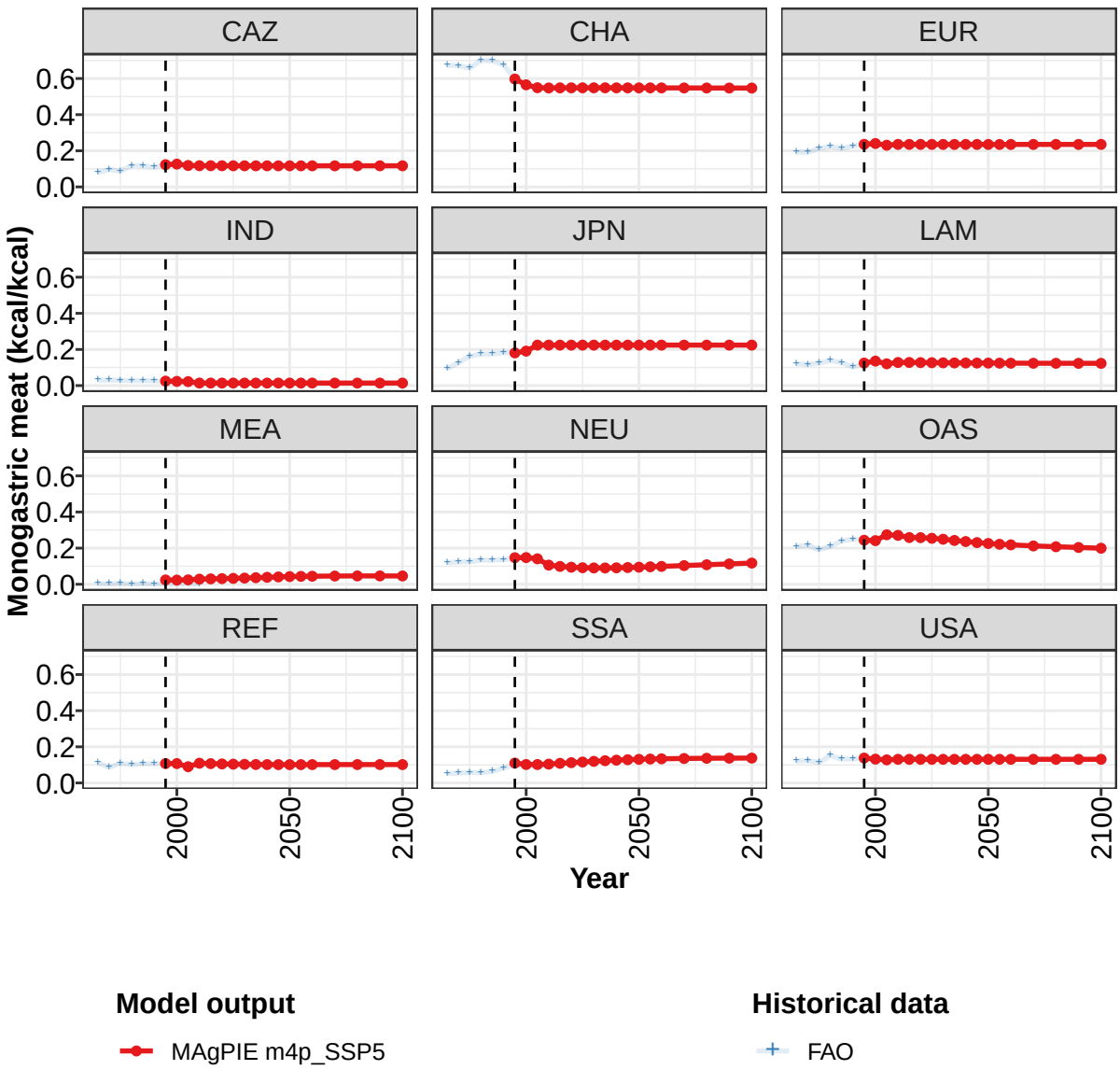
Table 939: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Eggs (kcal/kcal) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.054	0.057	0.059	0.059	0.062	0.063	0.071	0.075	0.075	0.074
CAZ	0.046	0.048	0.047	0.048	0.044	0.043	0.036	0.037	0.038	0.041
CHA	0.076	0.081	0.075	0.064	0.084	0.090	0.127	0.128	0.124	0.118
EUR	0.050	0.053	0.054	0.053	0.053	0.050	0.049	0.050	0.049	0.050
IND	0.010	0.021	0.019	0.027	0.027	0.027	0.031	0.035	0.038	0.042
JPN	0.271	0.262	0.227	0.195	0.189	0.193	0.188	0.186	0.183	0.187
LAM	0.036	0.039	0.043	0.049	0.057	0.059	0.054	0.055	0.058	0.060
MEA	0.043	0.051	0.059	0.055	0.060	0.063	0.069	0.063	0.068	0.063
NEU	0.025	0.031	0.031	0.037	0.039	0.049	0.056	0.073	0.066	0.052
OAS	0.059	0.062	0.072	0.079	0.076	0.077	0.067	0.068	0.064	0.067
REF	0.042	0.045	0.057	0.066	0.068	0.066	0.059	0.066	0.071	0.072
SSA	0.029	0.032	0.038	0.037	0.039	0.042	0.044	0.044	0.041	0.042
USA	0.068	0.070	0.068	0.063	0.056	0.054	0.053	0.055	0.055	0.055

Table 940: FAO — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Eggs (kcal/kcal)

35.1.3 Livestock products—Monogastric meat





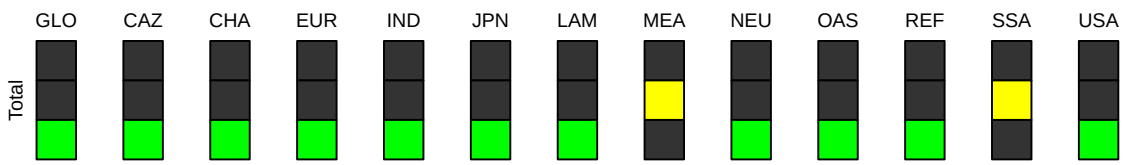


Figure 285: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Monogastric meat (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.249	0.255	0.252	0.257	0.250	0.247	0.241	0.233	0.224	0.216	0.209
CAZ	0.123	0.126	0.119	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117
CHA	0.597	0.565	0.549	0.548	0.548	0.548	0.549	0.549	0.549	0.548	0.548
EUR	0.236	0.240	0.231	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235
IND	0.025	0.023	0.022	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
JPN	0.181	0.191	0.224	0.224	0.224	0.224	0.224	0.224	0.224	0.224	0.224
LAM	0.125	0.136	0.121	0.128	0.128	0.127	0.127	0.126	0.126	0.125	0.125
MEA	0.024	0.023	0.024	0.028	0.030	0.031	0.033	0.034	0.036	0.039	0.041
NEU	0.147	0.148	0.141	0.106	0.099	0.094	0.092	0.090	0.090	0.091	0.093
OAS	0.244	0.241	0.274	0.271	0.259	0.258	0.255	0.249	0.243	0.236	0.231
REF	0.108	0.107	0.090	0.109	0.107	0.105	0.104	0.103	0.102	0.102	0.101
SSA	0.110	0.102	0.102	0.104	0.109	0.112	0.116	0.120	0.123	0.126	0.129
USA	0.138	0.132	0.128	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131

Table 941: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Monogastric meat (kcal/kcal) [PART 1/2]

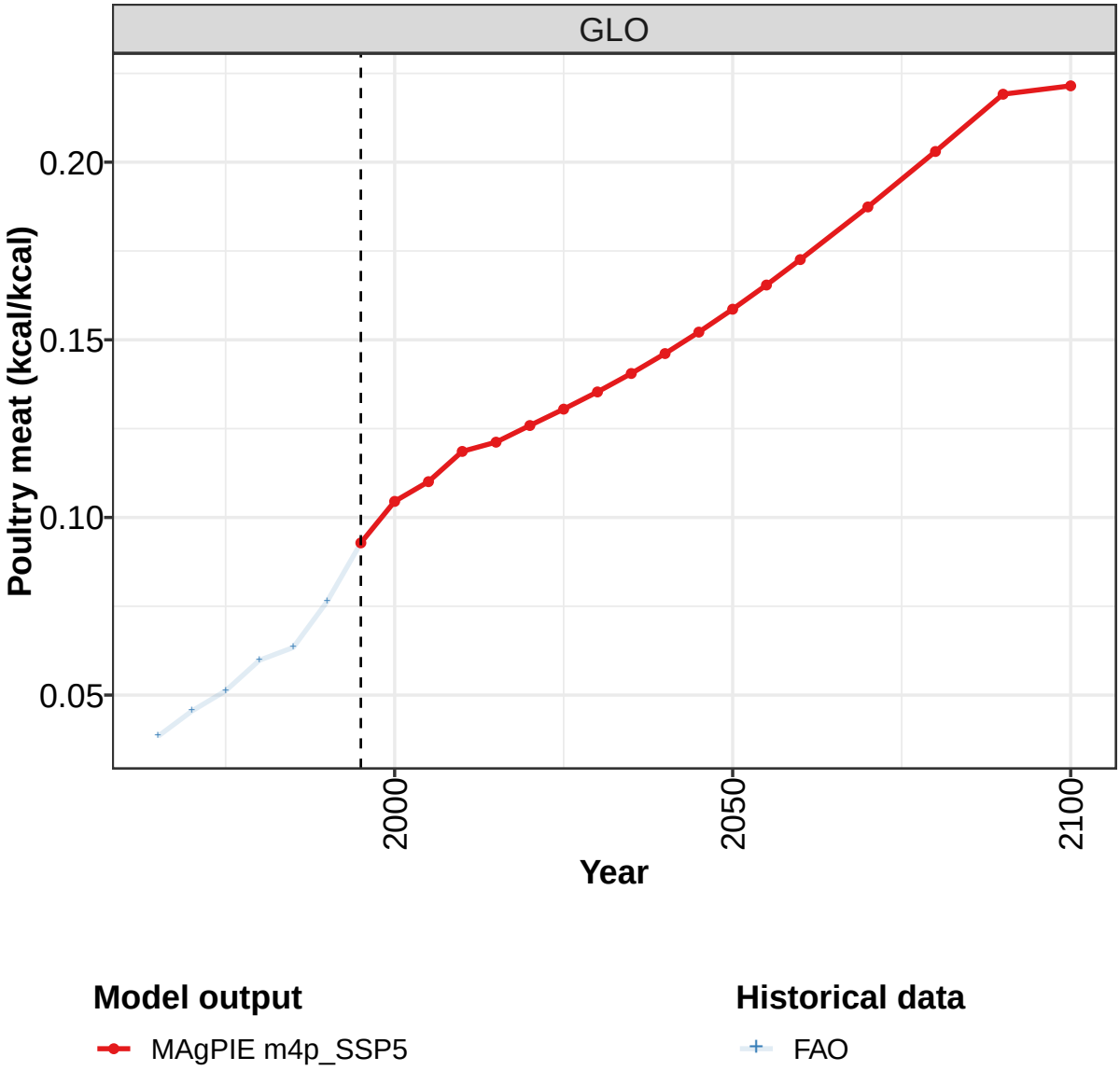
	2050	2055	2060	2070	2080	2090	2100
GLO	0.203	0.197	0.193	0.186	0.180	0.176	0.172
CAZ	0.117	0.117	0.117	0.117	0.117	0.117	0.117
CHA	0.548	0.548	0.548	0.548	0.548	0.547	0.547
EUR	0.235	0.235	0.235	0.235	0.235	0.235	0.235
IND	0.014	0.014	0.014	0.014	0.014	0.014	0.014
JPN	0.224	0.224	0.224	0.224	0.224	0.224	0.224
LAM	0.125	0.124	0.124	0.124	0.123	0.123	0.123
MEA	0.043	0.044	0.045	0.046	0.046	0.046	0.046
NEU	0.095	0.097	0.099	0.103	0.108	0.113	0.117
OAS	0.226	0.221	0.218	0.212	0.208	0.204	0.200
REF	0.101	0.101	0.101	0.102	0.102	0.102	0.102
SSA	0.131	0.132	0.134	0.135	0.137	0.137	0.138
USA	0.131	0.131	0.131	0.131	0.131	0.131	0.131

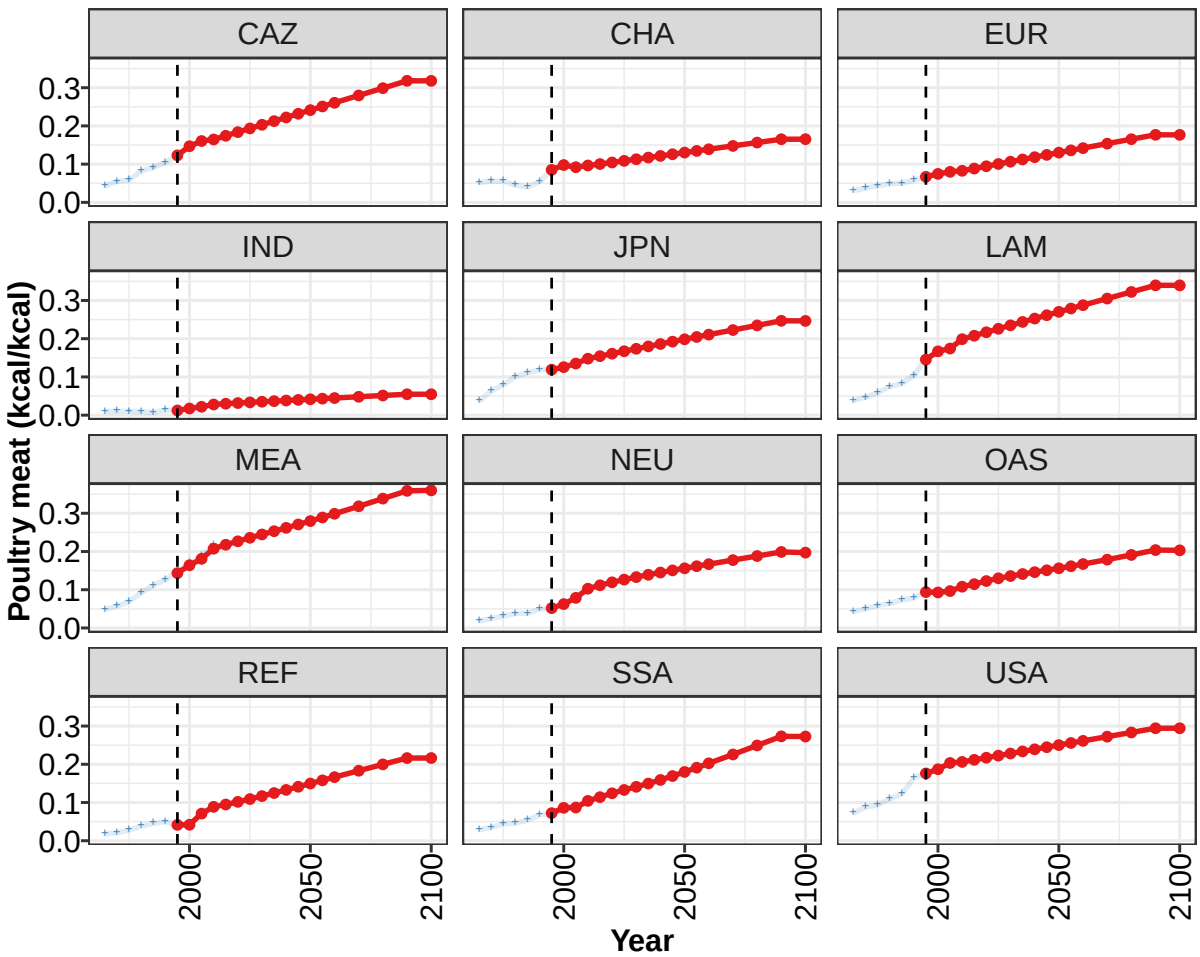
Table 942: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Monogastric meat (kcal/kcal) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.176	0.172	0.186	0.210	0.216	0.232	0.249	0.255	0.253	0.257
CAZ	0.079	0.097	0.087	0.118	0.116	0.109	0.123	0.126	0.119	0.117
CHA	0.673	0.671	0.658	0.700	0.698	0.676	0.597	0.565	0.549	0.548
EUR	0.193	0.191	0.212	0.225	0.213	0.227	0.236	0.240	0.231	0.235
IND	0.030	0.031	0.029	0.027	0.027	0.027	0.025	0.023	0.022	0.014
JPN	0.094	0.127	0.163	0.175	0.175	0.182	0.181	0.191	0.224	0.224
LAM	0.120	0.117	0.124	0.138	0.127	0.102	0.123	0.134	0.119	0.127
MEA	0.004	0.003	0.004	0.002	0.003	0.002	0.002	0.003	0.003	0.002
NEU	0.120	0.124	0.125	0.134	0.132	0.137	0.147	0.147	0.141	0.106
OAS	0.209	0.216	0.191	0.209	0.240	0.250	0.244	0.241	0.275	0.271
REF	0.112	0.086	0.109	0.102	0.106	0.106	0.107	0.107	0.090	0.109
SSA	0.052	0.055	0.058	0.056	0.064	0.082	0.101	0.094	0.094	0.096
USA	0.121	0.124	0.114	0.151	0.131	0.133	0.138	0.132	0.128	0.131

Table 943: FAO — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Monogastric meat (kcal/kcal)

35.1.4 Livestock products—Poultry meat





Model output

MAgPIE m4p_SSP5

Historical data

FAO

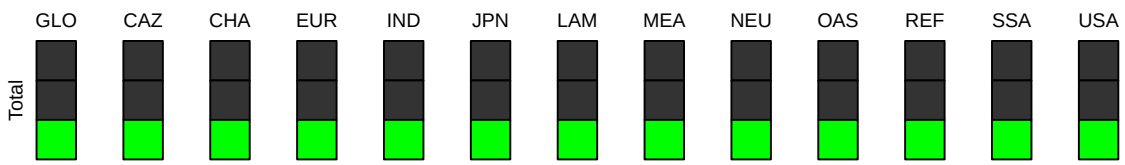


Figure 286: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Poultry meat (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.093	0.105	0.110	0.119	0.121	0.126	0.130	0.135	0.141	0.146	0.152
CAZ	0.123	0.147	0.161	0.165	0.174	0.184	0.193	0.203	0.213	0.222	0.232
CHA	0.085	0.098	0.092	0.097	0.100	0.104	0.109	0.113	0.117	0.122	0.126
EUR	0.067	0.074	0.080	0.083	0.088	0.094	0.100	0.106	0.112	0.118	0.124
IND	0.012	0.017	0.022	0.028	0.030	0.032	0.033	0.035	0.037	0.038	0.040
JPN	0.119	0.126	0.135	0.148	0.154	0.161	0.167	0.174	0.180	0.186	0.192
LAM	0.145	0.167	0.174	0.199	0.208	0.217	0.226	0.235	0.244	0.253	0.262
MEA	0.143	0.164	0.181	0.207	0.218	0.227	0.236	0.245	0.253	0.262	0.271
NEU	0.052	0.062	0.079	0.103	0.112	0.119	0.126	0.133	0.139	0.145	0.151
OAS	0.094	0.093	0.097	0.108	0.115	0.123	0.130	0.136	0.141	0.146	0.151
REF	0.042	0.042	0.071	0.089	0.095	0.102	0.109	0.117	0.125	0.133	0.141
SSA	0.072	0.086	0.087	0.104	0.114	0.124	0.133	0.141	0.150	0.159	0.169
USA	0.176	0.187	0.204	0.206	0.212	0.217	0.223	0.228	0.234	0.239	0.245

Table 944: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Poultry meat (kcal/kcal) [PART 1/2]

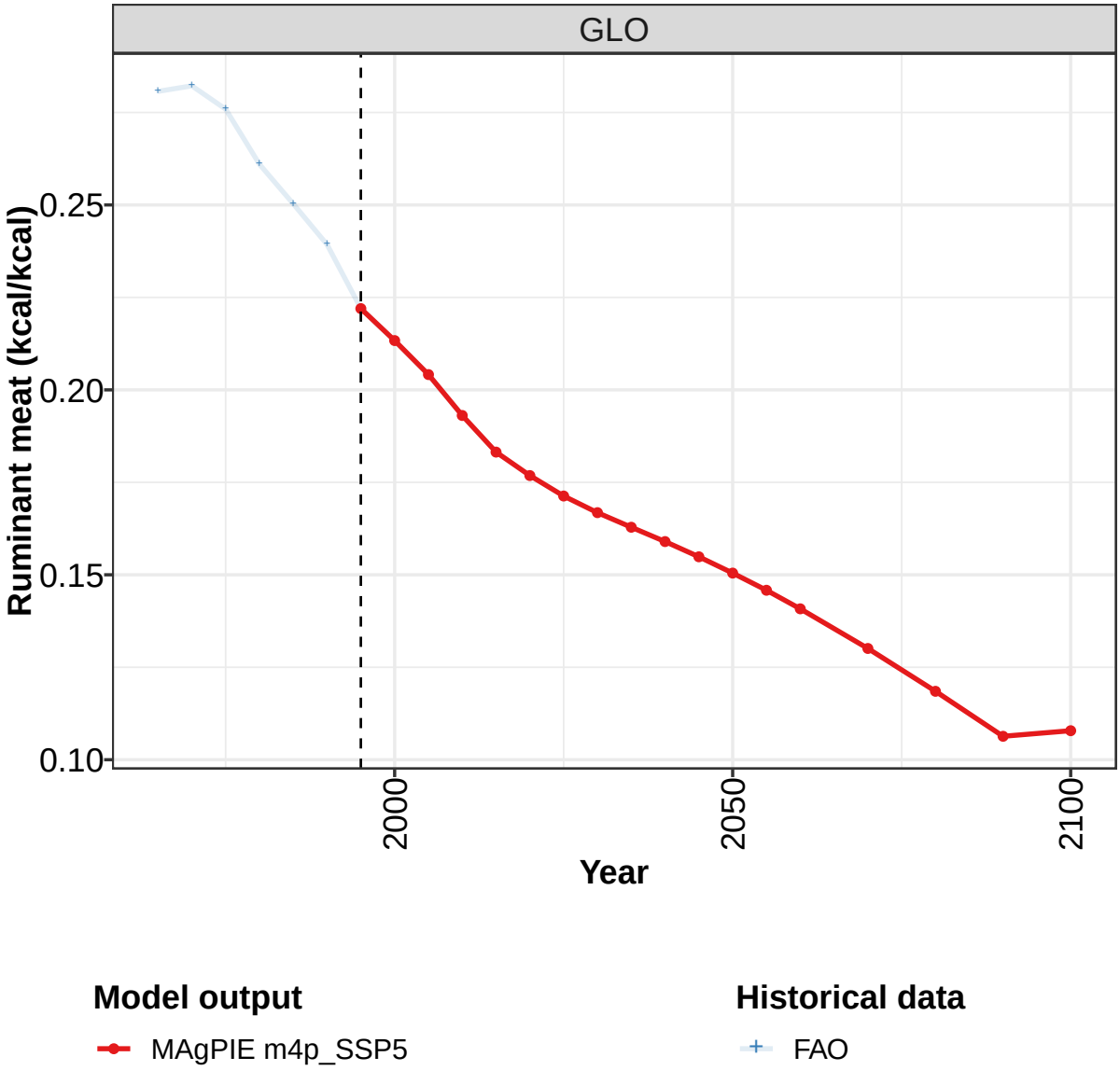
	2050	2055	2060	2070	2080	2090	2100
GLO	0.159	0.165	0.173	0.187	0.203	0.219	0.221
CAZ	0.241	0.251	0.261	0.280	0.299	0.318	0.318
CHA	0.130	0.135	0.139	0.148	0.156	0.165	0.165
EUR	0.130	0.136	0.142	0.154	0.165	0.177	0.177
IND	0.042	0.043	0.045	0.048	0.051	0.055	0.055
JPN	0.198	0.205	0.211	0.223	0.235	0.247	0.247
LAM	0.270	0.279	0.288	0.305	0.322	0.340	0.340
MEA	0.280	0.289	0.299	0.318	0.338	0.359	0.360
NEU	0.156	0.162	0.167	0.178	0.188	0.199	0.197
OAS	0.156	0.161	0.167	0.179	0.191	0.204	0.203
REF	0.150	0.158	0.166	0.183	0.200	0.216	0.216
SSA	0.180	0.191	0.203	0.226	0.249	0.273	0.273
USA	0.250	0.256	0.261	0.272	0.283	0.294	0.294

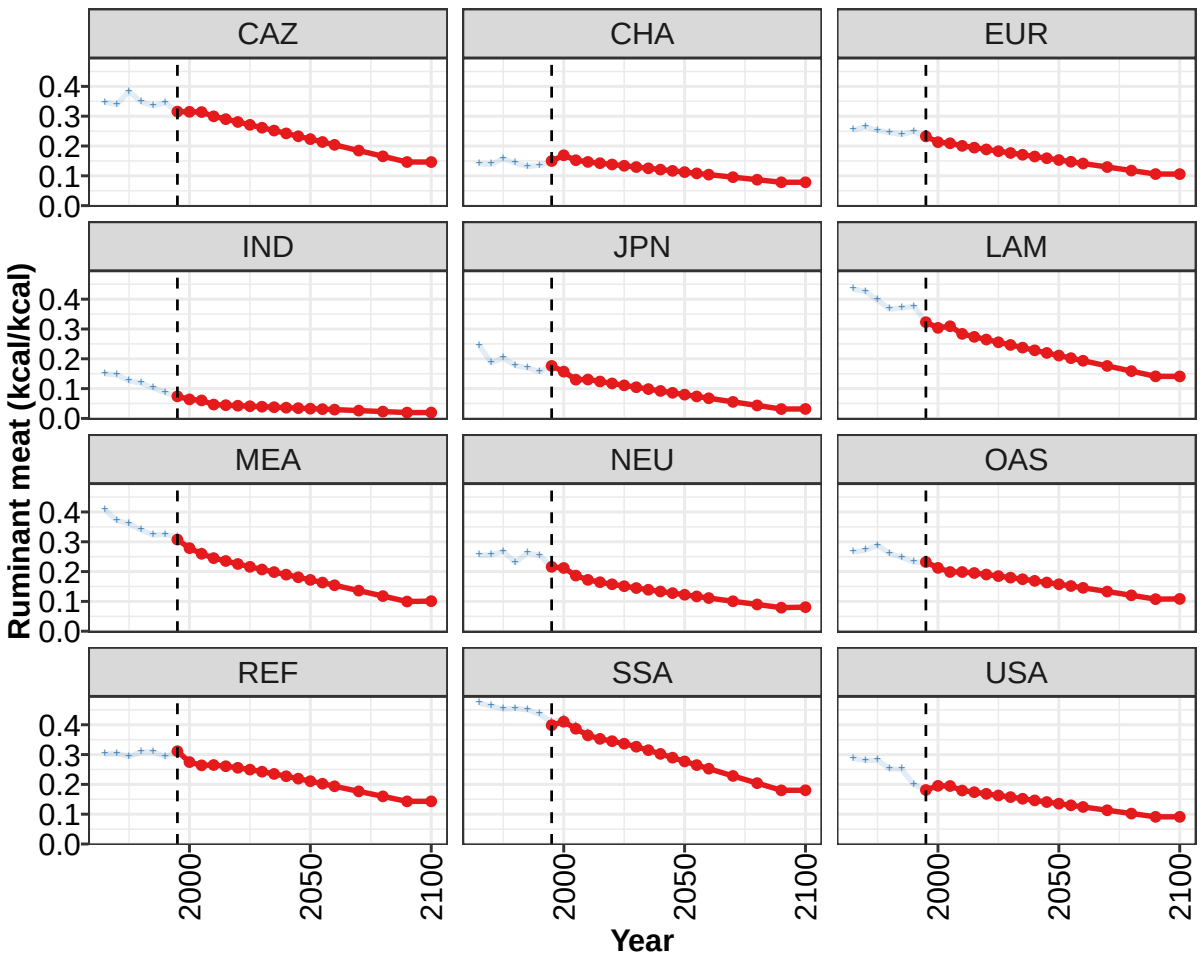
Table 945: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Poultry meat (kcal/kcal) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.038	0.045	0.051	0.060	0.063	0.076	0.093	0.104	0.110	0.119
CAZ	0.042	0.055	0.058	0.082	0.092	0.104	0.123	0.147	0.161	0.165
CHA	0.052	0.055	0.055	0.045	0.040	0.054	0.085	0.098	0.092	0.097
EUR	0.031	0.037	0.043	0.049	0.050	0.058	0.067	0.074	0.080	0.083
IND	0.010	0.010	0.010	0.009	0.007	0.013	0.012	0.017	0.022	0.028
JPN	0.036	0.064	0.079	0.101	0.111	0.118	0.119	0.126	0.135	0.148
LAM	0.038	0.047	0.058	0.075	0.083	0.104	0.146	0.168	0.175	0.200
MEA	0.048	0.057	0.069	0.092	0.112	0.125	0.148	0.169	0.188	0.218
NEU	0.018	0.025	0.031	0.038	0.038	0.049	0.052	0.062	0.079	0.103
OAS	0.043	0.050	0.059	0.064	0.073	0.078	0.094	0.093	0.096	0.108
REF	0.018	0.021	0.027	0.038	0.046	0.050	0.042	0.042	0.071	0.089
SSA	0.028	0.035	0.044	0.046	0.054	0.067	0.071	0.085	0.086	0.103
USA	0.072	0.088	0.093	0.110	0.122	0.164	0.176	0.187	0.203	0.206

Table 946: FAO — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Poultry meat (kcal/kcal)

35.1.5 Livestock products—Ruminant meat





Model output

MAgPIE m4p_SSP5

Historical data

FAO

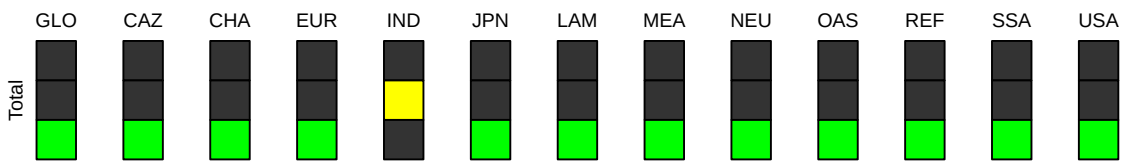


Figure 287: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Ruminant meat (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.222	0.213	0.204	0.193	0.183	0.177	0.171	0.167	0.163	0.159	0.155
CAZ	0.316	0.315	0.314	0.300	0.290	0.281	0.271	0.261	0.252	0.242	0.233
CHA	0.150	0.169	0.152	0.147	0.142	0.138	0.134	0.130	0.125	0.121	0.117
EUR	0.232	0.213	0.209	0.201	0.195	0.189	0.183	0.177	0.171	0.165	0.159
IND	0.074	0.064	0.060	0.047	0.044	0.043	0.041	0.039	0.038	0.036	0.034
JPN	0.176	0.157	0.130	0.131	0.124	0.117	0.111	0.105	0.098	0.092	0.086
LAM	0.323	0.304	0.309	0.284	0.274	0.265	0.256	0.246	0.237	0.229	0.220
MEA	0.307	0.279	0.260	0.245	0.236	0.226	0.216	0.207	0.198	0.190	0.181
NEU	0.216	0.212	0.187	0.172	0.164	0.157	0.151	0.145	0.139	0.133	0.128
OAS	0.232	0.212	0.199	0.199	0.195	0.190	0.185	0.180	0.174	0.169	0.163
REF	0.311	0.275	0.264	0.265	0.261	0.256	0.250	0.243	0.235	0.227	0.219
SSA	0.399	0.410	0.387	0.364	0.353	0.345	0.336	0.326	0.315	0.302	0.290
USA	0.181	0.195	0.195	0.179	0.174	0.168	0.163	0.157	0.152	0.146	0.141

Table 947: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Ruminant meat (kcal/kcal) [PART 1/2]

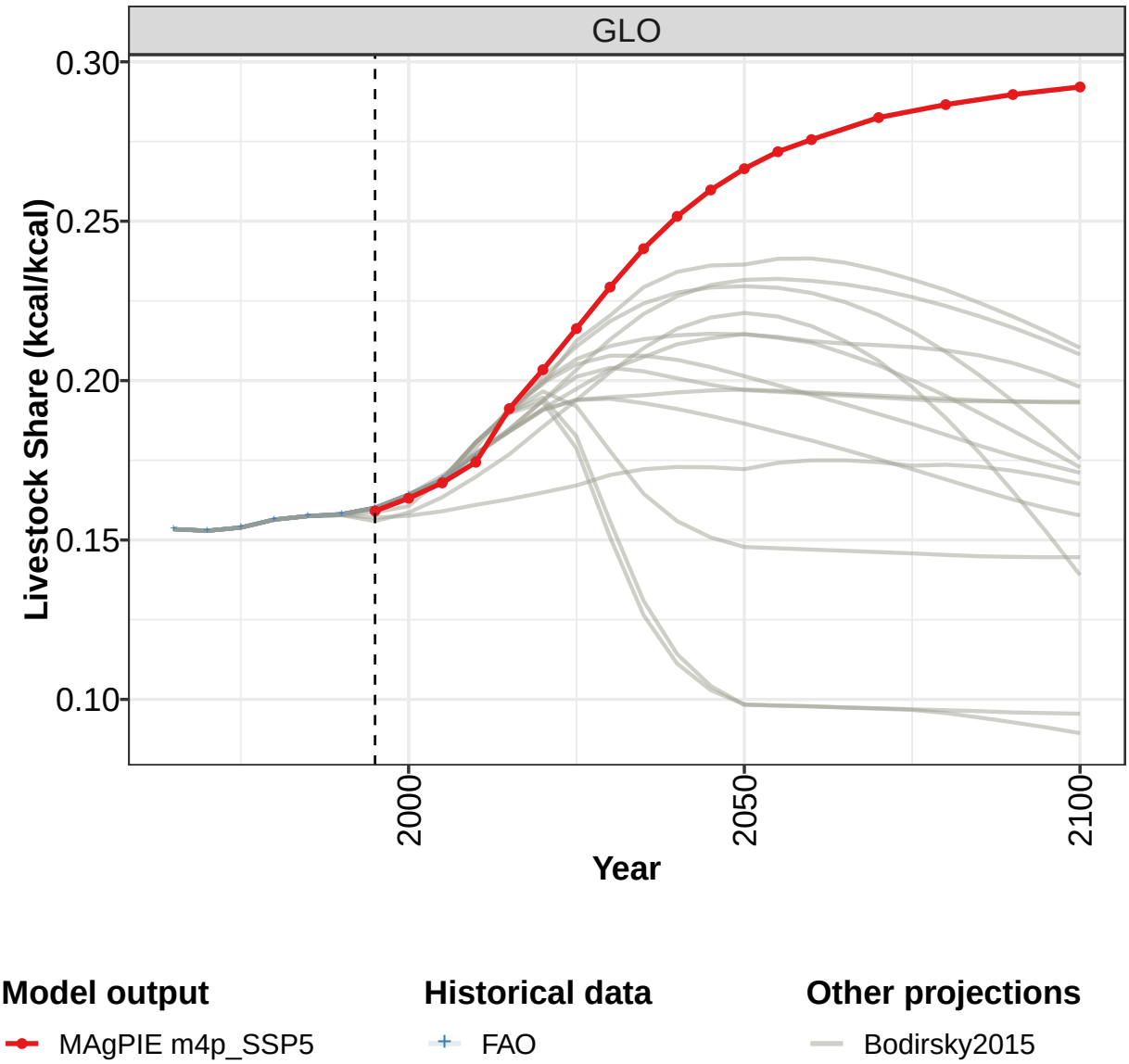
	2050	2055	2060	2070	2080	2090	2100
GLO	0.150	0.146	0.141	0.130	0.119	0.106	0.108
CAZ	0.223	0.214	0.204	0.185	0.165	0.146	0.146
CHA	0.112	0.108	0.104	0.096	0.087	0.078	0.078
EUR	0.153	0.147	0.141	0.129	0.118	0.106	0.106
IND	0.033	0.031	0.030	0.026	0.023	0.020	0.020
JPN	0.080	0.074	0.068	0.056	0.044	0.031	0.032
LAM	0.211	0.202	0.194	0.176	0.159	0.141	0.141
MEA	0.172	0.163	0.154	0.136	0.118	0.100	0.101
NEU	0.122	0.117	0.111	0.100	0.090	0.079	0.081
OAS	0.158	0.152	0.146	0.133	0.120	0.108	0.108
REF	0.211	0.202	0.194	0.177	0.160	0.143	0.143
SSA	0.277	0.265	0.253	0.228	0.204	0.180	0.180
USA	0.135	0.130	0.124	0.113	0.102	0.091	0.091

Table 948: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Ruminant meat (kcal/kcal) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.281	0.282	0.276	0.261	0.250	0.239	0.222	0.213	0.204	0.193
CAZ	0.346	0.340	0.383	0.347	0.335	0.344	0.316	0.315	0.314	0.300
CHA	0.140	0.139	0.158	0.142	0.132	0.135	0.150	0.169	0.152	0.147
EUR	0.253	0.264	0.252	0.245	0.239	0.249	0.232	0.213	0.209	0.201
IND	0.150	0.146	0.126	0.118	0.102	0.087	0.074	0.064	0.060	0.046
JPN	0.245	0.186	0.202	0.177	0.169	0.157	0.176	0.157	0.130	0.131
LAM	0.433	0.426	0.397	0.366	0.371	0.376	0.325	0.305	0.311	0.285
MEA	0.406	0.372	0.360	0.339	0.323	0.325	0.316	0.284	0.265	0.251
NEU	0.255	0.256	0.268	0.231	0.263	0.255	0.216	0.212	0.187	0.172
OAS	0.266	0.272	0.288	0.261	0.248	0.231	0.232	0.212	0.199	0.199
REF	0.301	0.304	0.294	0.308	0.309	0.292	0.311	0.275	0.264	0.265
SSA	0.472	0.463	0.453	0.455	0.451	0.435	0.410	0.421	0.397	0.374
USA	0.287	0.280	0.281	0.252	0.251	0.200	0.181	0.195	0.195	0.179

Table 949: FAO — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Ruminant meat (kcal/kcal)

35.2 Livestock Share



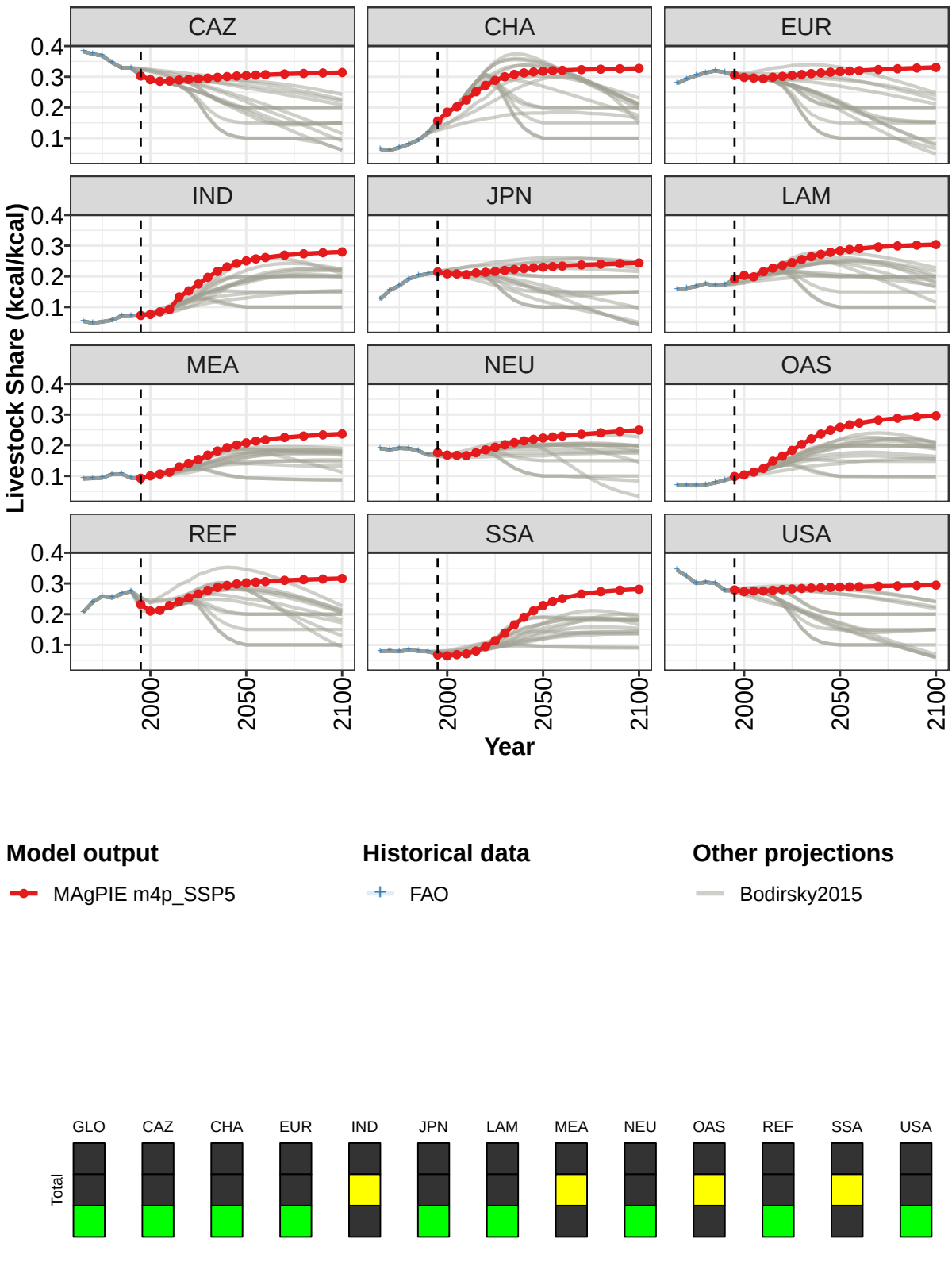


Figure 288: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Share (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.159	0.163	0.168	0.174	0.191	0.203	0.216	0.229	0.241	0.252	0.260
CAZ	0.303	0.291	0.285	0.286	0.289	0.292	0.294	0.296	0.298	0.301	0.303
CHA	0.156	0.185	0.202	0.224	0.251	0.272	0.288	0.300	0.308	0.312	0.316
EUR	0.305	0.298	0.296	0.294	0.299	0.301	0.304	0.307	0.310	0.313	0.315
IND	0.073	0.076	0.084	0.093	0.133	0.153	0.175	0.197	0.216	0.231	0.242
JPN	0.215	0.208	0.208	0.206	0.211	0.213	0.216	0.220	0.223	0.225	0.228
LAM	0.192	0.203	0.199	0.215	0.227	0.235	0.245	0.255	0.264	0.272	0.278
MEA	0.093	0.100	0.106	0.112	0.130	0.141	0.154	0.168	0.181	0.192	0.201
NEU	0.176	0.168	0.167	0.166	0.176	0.185	0.194	0.202	0.209	0.214	0.219
OAS	0.098	0.103	0.112	0.124	0.148	0.165	0.183	0.203	0.221	0.236	0.249
REF	0.232	0.210	0.212	0.228	0.241	0.253	0.266	0.278	0.287	0.294	0.299
SSA	0.067	0.064	0.068	0.071	0.080	0.094	0.114	0.138	0.165	0.190	0.211
USA	0.279	0.273	0.276	0.275	0.278	0.280	0.282	0.284	0.285	0.286	0.287

Table 950: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Share (kcal/kcal) [PART 1/2]

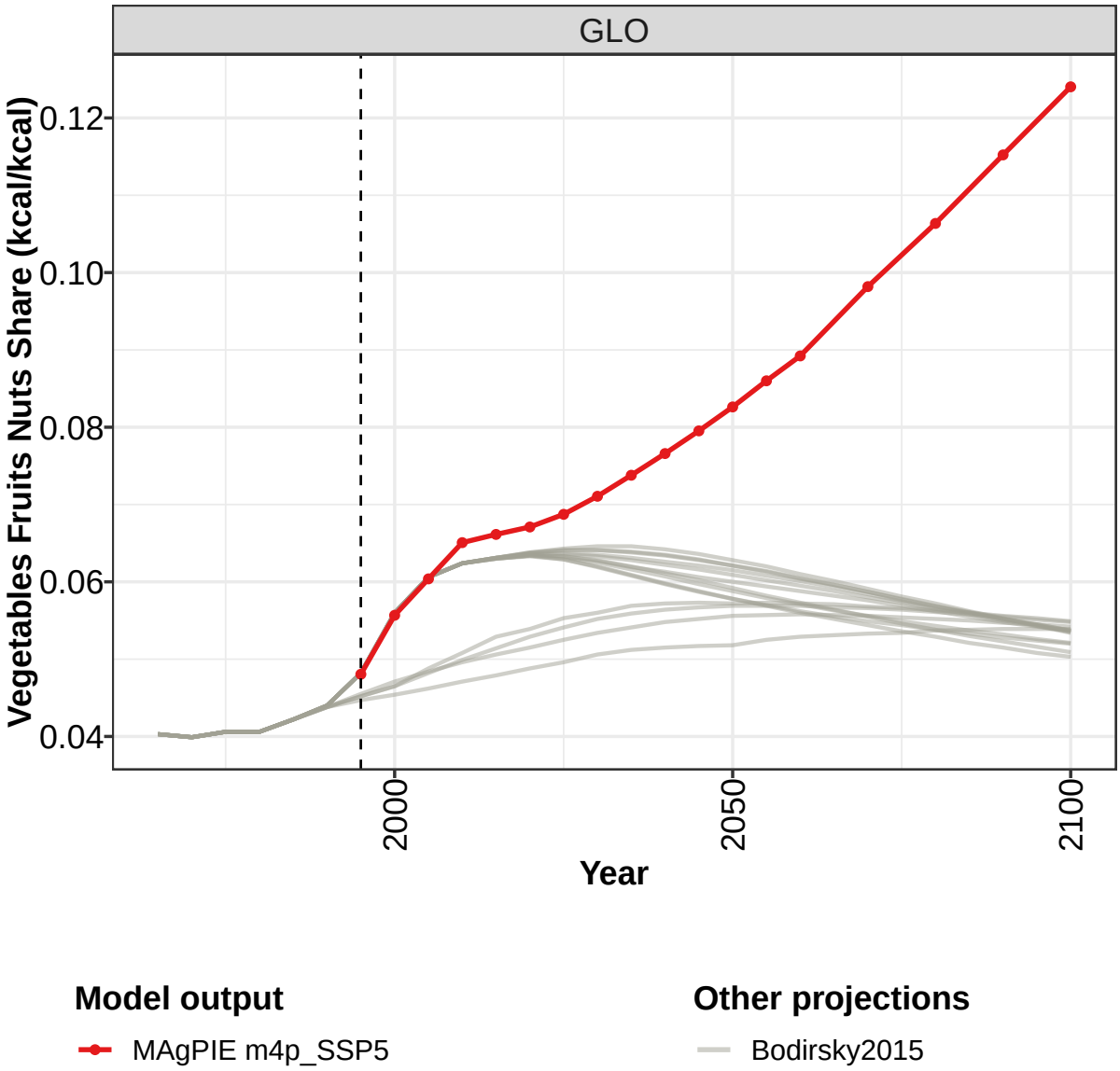
	2050	2055	2060	2070	2080	2090	2100
GLO	0.266	0.272	0.276	0.283	0.287	0.290	0.292
CAZ	0.304	0.305	0.307	0.309	0.311	0.312	0.314
CHA	0.318	0.320	0.321	0.323	0.325	0.326	0.327
EUR	0.317	0.319	0.320	0.323	0.326	0.328	0.330
IND	0.251	0.257	0.261	0.269	0.274	0.277	0.280
JPN	0.230	0.232	0.234	0.237	0.240	0.242	0.244
LAM	0.283	0.288	0.291	0.296	0.299	0.302	0.304
MEA	0.208	0.214	0.218	0.225	0.230	0.234	0.237
NEU	0.224	0.227	0.230	0.236	0.241	0.245	0.249
OAS	0.259	0.267	0.272	0.282	0.288	0.293	0.296
REF	0.302	0.304	0.306	0.310	0.312	0.314	0.316
SSA	0.228	0.242	0.251	0.266	0.273	0.278	0.281
USA	0.288	0.289	0.290	0.291	0.292	0.294	0.295

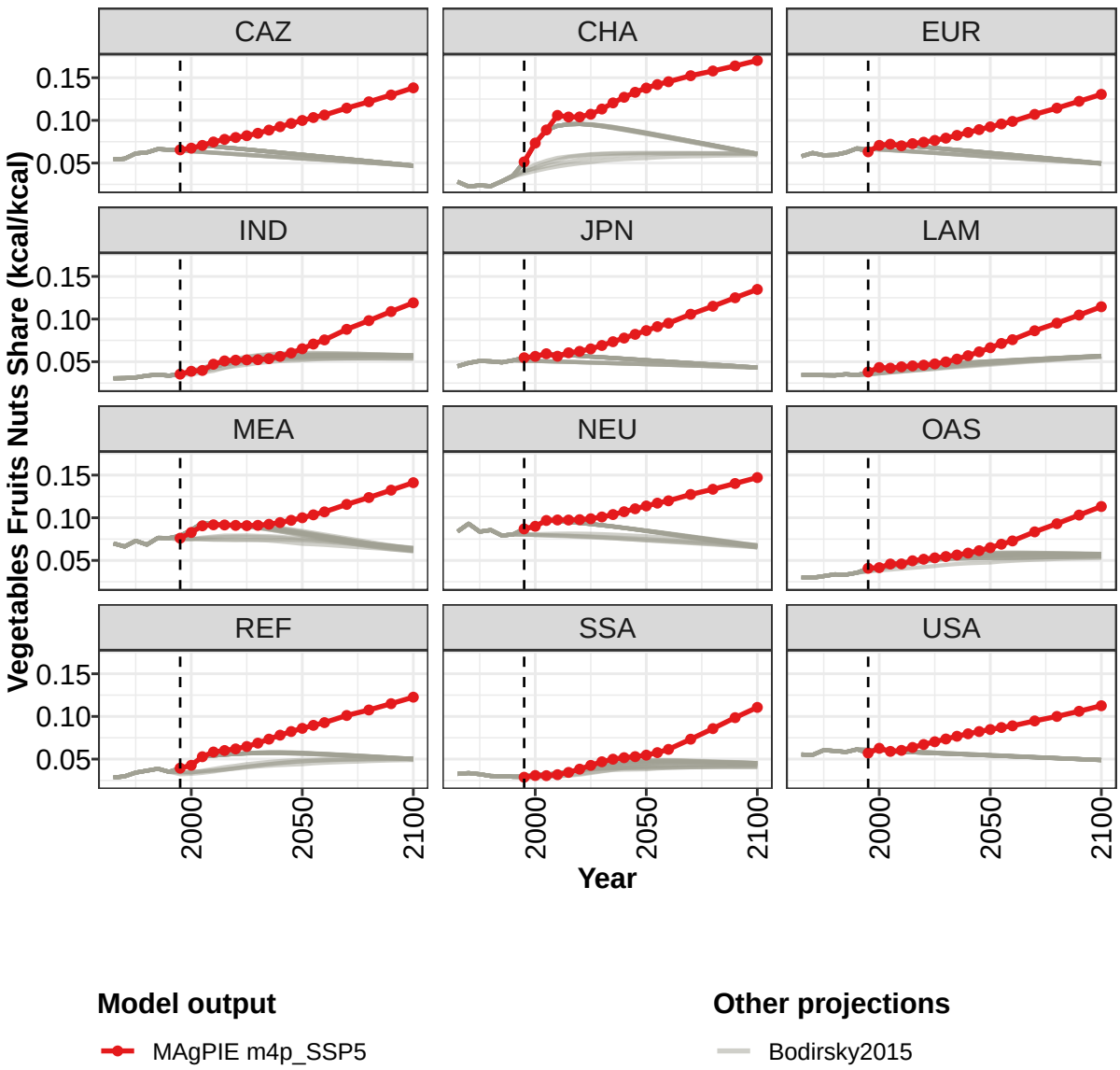
Table 951: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Livestock Share (kcal/kcal) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.153	0.153	0.154	0.156	0.158	0.158	0.160	0.164	0.169	0.176
CAZ	0.383	0.374	0.369	0.346	0.329	0.329	0.303	0.291	0.285	0.286
CHA	0.065	0.060	0.069	0.080	0.094	0.118	0.156	0.185	0.202	0.224
EUR	0.278	0.293	0.304	0.313	0.320	0.315	0.305	0.298	0.296	0.294
IND	0.054	0.048	0.052	0.057	0.071	0.071	0.073	0.076	0.085	0.092
JPN	0.125	0.154	0.170	0.192	0.203	0.208	0.215	0.208	0.208	0.206
LAM	0.157	0.162	0.167	0.176	0.170	0.173	0.191	0.203	0.198	0.215
MEA	0.091	0.092	0.094	0.106	0.107	0.093	0.091	0.100	0.105	0.109
NEU	0.189	0.186	0.190	0.189	0.182	0.169	0.176	0.168	0.167	0.166
OAS	0.069	0.070	0.069	0.072	0.078	0.086	0.097	0.102	0.111	0.123
REF	0.206	0.240	0.258	0.254	0.266	0.275	0.232	0.210	0.212	0.228
SSA	0.079	0.081	0.079	0.083	0.080	0.078	0.070	0.067	0.071	0.074
USA	0.344	0.324	0.300	0.304	0.301	0.277	0.279	0.273	0.276	0.275

Table 952: FAO — Nutrition—Dietary Composition—Livestock Share (kcal/kcal)

35.3 Vegetables Fruits Nuts Share





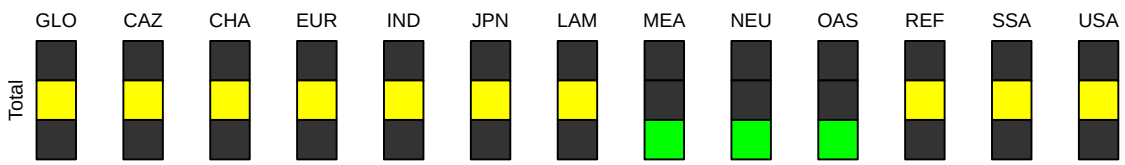


Figure 289: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Vegetables Fruits Nuts Share (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.048	0.056	0.060	0.065	0.066	0.067	0.069	0.071	0.074	0.077	0.080
CAZ	0.066	0.067	0.071	0.075	0.078	0.080	0.082	0.085	0.089	0.093	0.096
CHA	0.051	0.073	0.089	0.106	0.104	0.104	0.107	0.113	0.121	0.127	0.133
EUR	0.063	0.071	0.072	0.070	0.073	0.074	0.077	0.079	0.082	0.086	0.089
IND	0.035	0.039	0.040	0.047	0.051	0.052	0.052	0.052	0.054	0.056	0.060
JPN	0.055	0.056	0.059	0.056	0.060	0.062	0.065	0.069	0.073	0.078	0.082
LAM	0.038	0.043	0.042	0.044	0.045	0.046	0.047	0.050	0.053	0.057	0.062
MEA	0.076	0.083	0.091	0.092	0.092	0.091	0.091	0.091	0.092	0.094	0.097
NEU	0.087	0.090	0.097	0.097	0.097	0.098	0.099	0.101	0.104	0.107	0.111
OAS	0.041	0.042	0.046	0.046	0.050	0.051	0.053	0.055	0.056	0.059	0.061
REF	0.039	0.043	0.053	0.058	0.060	0.062	0.065	0.069	0.073	0.078	0.082
SSA	0.029	0.031	0.031	0.032	0.034	0.038	0.043	0.047	0.050	0.052	0.053
USA	0.057	0.063	0.059	0.060	0.064	0.067	0.070	0.074	0.077	0.080	0.082

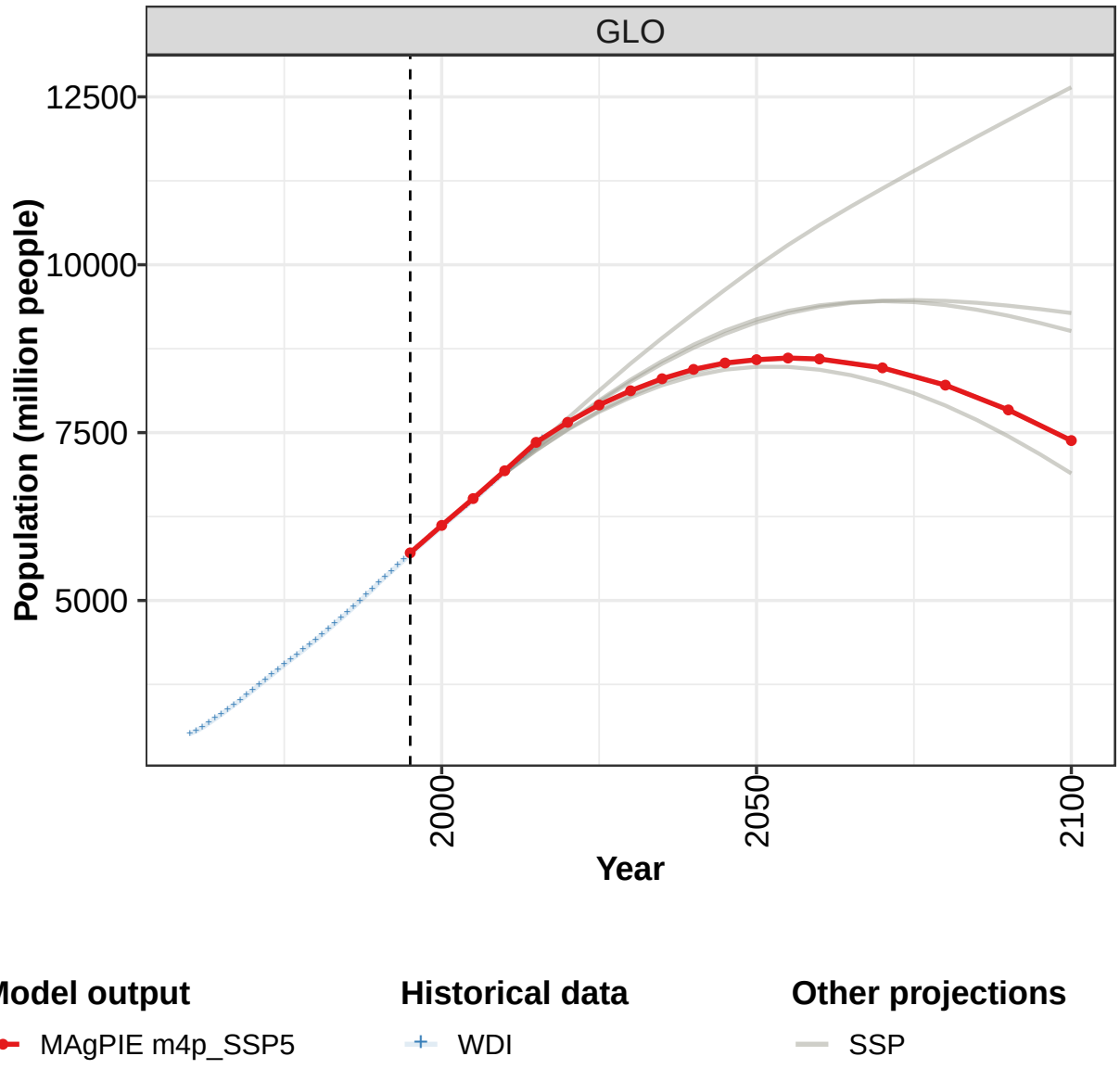
Table 953: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Vegetables Fruits Nuts Share (kcal/kcal) [PART 1/2]

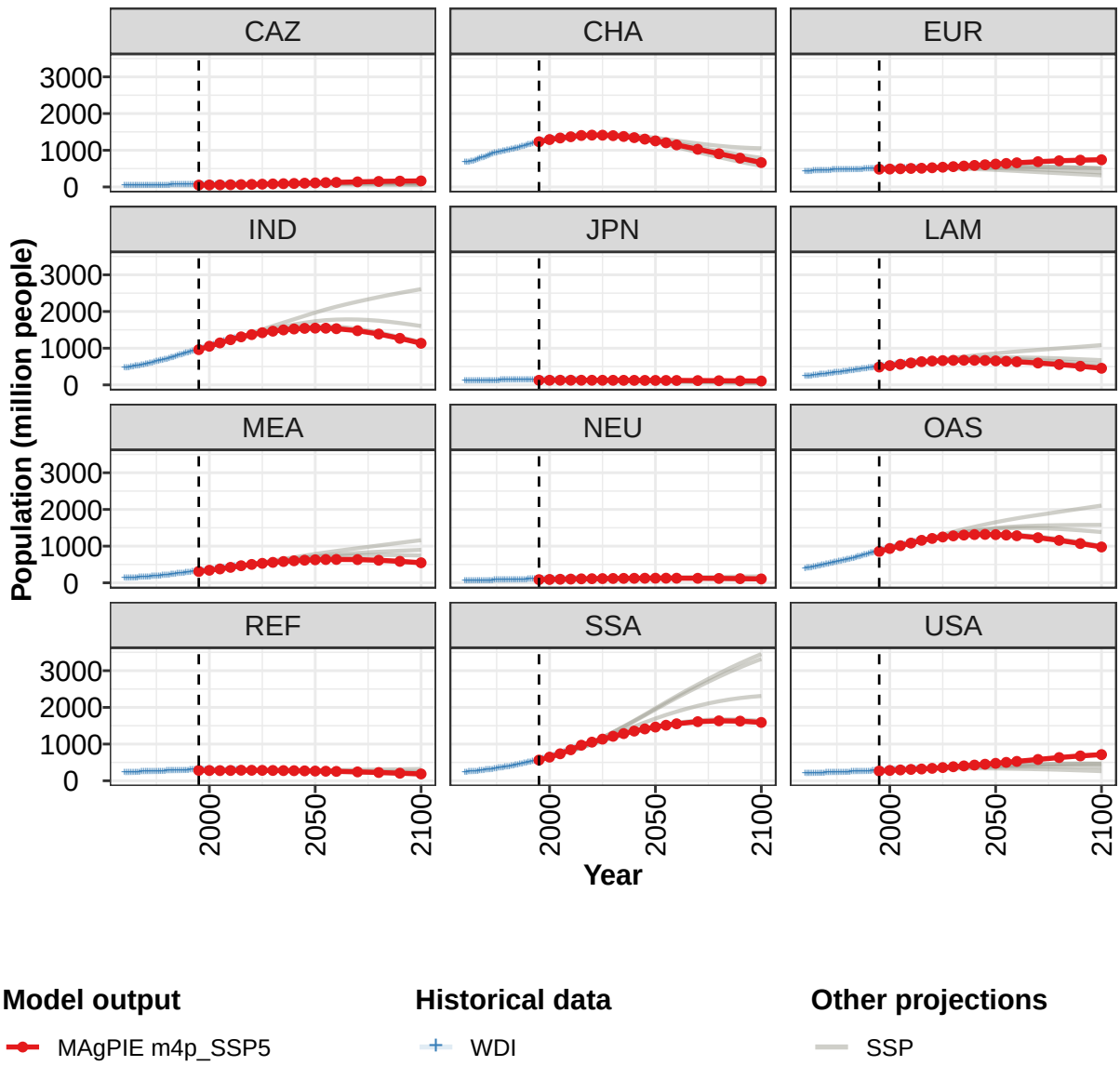
	2050	2055	2060	2070	2080	2090	2100
GLO	0.083	0.086	0.089	0.098	0.106	0.115	0.124
CAZ	0.100	0.103	0.106	0.114	0.122	0.130	0.138
CHA	0.138	0.142	0.145	0.152	0.158	0.164	0.170
EUR	0.092	0.096	0.099	0.107	0.114	0.122	0.131
IND	0.065	0.071	0.076	0.088	0.098	0.109	0.119
JPN	0.087	0.091	0.095	0.106	0.115	0.125	0.135
LAM	0.066	0.071	0.076	0.086	0.095	0.105	0.114
MEA	0.100	0.103	0.107	0.116	0.124	0.132	0.141
NEU	0.114	0.117	0.120	0.127	0.133	0.140	0.147
OAS	0.065	0.069	0.073	0.083	0.093	0.103	0.113
REF	0.086	0.090	0.093	0.101	0.108	0.115	0.123
SSA	0.055	0.058	0.061	0.073	0.086	0.099	0.111
USA	0.085	0.087	0.089	0.095	0.100	0.106	0.113

Table 954: MAgPIE m4p_SSP5 — Nutrition—Dietary Composition—Vegetables Fruits Nuts Share (kcal/kcal) [PART 2/2]

Part X

Population





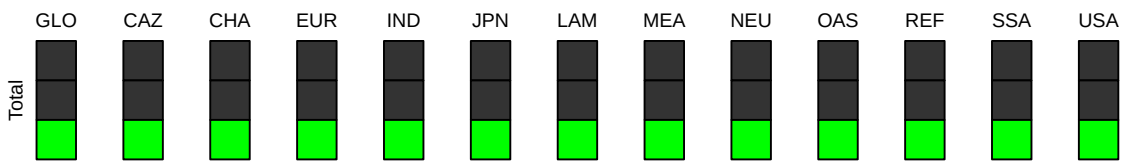


Figure 290: MAgPIE m4p_SSP5 — Population (million people)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5710	6118	6518	6932	7356	7653	7911	8124	8303	8442	8537
CAZ	51	54	57	60	64	70	76	82	89	96	103
CHA	1233	1292	1334	1368	1402	1412	1410	1398	1376	1344	1304
EUR	485	489	496	505	510	523	538	554	570	586	604
IND	960	1053	1144	1231	1309	1370	1422	1464	1499	1524	1541
JPN	125	127	128	128	127	127	126	126	125	124	123
LAM	487	526	562	598	632	650	662	669	672	671	665
MEA	310	344	379	422	467	501	531	557	581	601	617
NEU	88	92	97	102	109	113	116	119	122	124	125
OAS	858	936	1012	1083	1158	1209	1250	1280	1302	1315	1319
REF	283	280	278	281	287	286	284	281	278	275	271
SSA	564	644	736	845	969	1053	1135	1212	1286	1354	1414
USA	266	282	296	309	321	339	360	382	405	427	451

Table 955: MAgPIE m4p_SSP5 — Population (million people) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	8586	8611	8597	8464	8207	7838	7382
CAZ	110	117	125	139	150	159	164
CHA	1256	1203	1147	1027	905	784	664
EUR	623	641	658	689	713	730	741
IND	1547	1545	1532	1477	1386	1268	1134
JPN	122	122	121	118	114	110	105
LAM	655	644	630	595	555	508	453
MEA	628	635	638	633	615	586	547
NEU	126	127	126	124	120	114	106
OAS	1314	1302	1283	1229	1157	1071	977
REF	266	261	255	242	225	206	186
SSA	1464	1513	1554	1610	1633	1625	1590
USA	476	501	528	581	632	677	713

Table 956: MAgPIE m4p_SSP5 — Population (million people) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	3016	3056	3109	3173	3238	3304	3374	3443	3513	3587	3662
CAZ	31	31	32	32	33	34	34	35	36	36	37
CHA	670	664	669	686	702	719	739	758	779	800	823
EUR	410	413	417	421	424	428	431	434	437	440	442
IND	449	458	468	478	487	498	508	519	530	542	554
JPN	93	95	96	97	98	99	100	101	101	103	104
LAM	220	227	233	239	246	253	260	266	273	280	287
MEA	113	116	119	122	126	129	133	137	141	145	149
NEU	43	44	45	46	47	48	49	50	51	52	53
OAS	378	388	398	409	420	431	442	454	466	479	491
REF	207	210	213	216	220	223	225	228	230	232	234
SSA	221	226	232	237	243	249	255	262	268	275	282
USA	181	184	187	189	192	194	197	199	201	203	205

Table 957: WDI — Population (million people) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	3739	3815	3891	3967	4042	4114	4186	4260	4335	4411	4489
CAZ	37	38	39	40	40	41	41	42	42	42	43
CHA	845	866	886	905	921	935	948	961	974	987	999
EUR	445	447	450	453	455	457	459	461	463	465	466
IND	566	579	593	607	621	636	650	666	681	697	713
JPN	106	107	108	110	112	113	114	115	116	117	118
LAM	295	302	310	317	325	332	340	348	356	364	372
MEA	153	157	162	166	171	176	182	187	193	200	206
NEU	54	56	57	58	59	60	61	62	63	64	65
OAS	503	516	528	541	554	567	580	594	608	622	636
REF	237	239	241	243	245	248	250	252	254	257	259
SSA	290	298	306	314	323	332	341	351	361	371	382
USA	208	210	212	214	216	218	220	223	225	227	229

Table 958: WDI — Population (million people) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	4569	4651	4732	4815	4900	4988	5076	5165	5263	5350	5433
CAZ	44	44	44	45	45	46	47	47	48	49	50
CHA	1014	1029	1042	1057	1073	1090	1108	1125	1141	1157	1171
EUR	468	469	470	471	472	473	475	477	478	479	481
IND	730	747	764	782	799	817	834	852	870	888	906
JPN	118	119	120	121	121	122	123	123	124	124	124
LAM	380	388	396	404	412	421	429	437	445	453	462
MEA	213	221	228	236	243	251	258	266	275	283	288
NEU	67	68	69	70	71	72	74	75	83	84	85
OAS	651	666	681	696	712	728	744	760	777	793	809
REF	261	263	266	268	271	273	276	278	280	281	282
SSA	393	404	416	428	440	452	465	478	492	506	520
USA	232	234	236	238	240	242	244	247	250	253	257

Table 959: WDI — Population (million people) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	5518	5602	5686	5769	5852	5933	6014	6094	6173	6253	6332
CAZ	50	51	51	52	52	53	53	54	54	55	56
CHA	1185	1198	1211	1224	1237	1249	1260	1270	1279	1288	1296
EUR	482	483	484	485	486	487	488	488	489	491	492
IND	924	942	960	979	997	1016	1035	1053	1071	1090	1108
JPN	125	125	125	126	126	126	127	127	127	127	128
LAM	470	478	486	494	502	510	517	525	532	539	547
MEA	295	302	310	317	323	330	337	343	350	357	364
NEU	86	87	88	89	89	90	91	92	93	94	95
OAS	825	842	858	874	890	905	921	936	952	967	982
REF	283	283	283	282	282	281	281	280	279	279	278
SSA	534	548	563	579	594	610	626	643	660	678	696
USA	260	263	266	269	273	276	279	282	285	288	290

Table 960: WDI — Population (million people) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	6412	6492	6574	6656	6739	6822	6906	6988	7068	7153	7239
CAZ	56	57	57	58	59	60	60	61	62	63	64
CHA	1303	1311	1318	1325	1332	1339	1345	1352	1358	1365	1372
EUR	494	496	498	500	502	503	505	504	505	507	508
IND	1126	1144	1162	1180	1197	1214	1231	1247	1263	1279	1294
JPN	128	128	128	128	128	128	128	128	128	127	127
LAM	554	561	568	575	582	589	597	604	611	618	624
MEA	371	379	387	395	404	413	421	430	439	448	457
NEU	96	97	98	99	100	101	102	103	105	106	107
OAS	997	1012	1026	1040	1054	1068	1083	1097	1113	1128	1143
REF	278	278	277	278	278	279	281	282	283	285	286
SSA	715	735	755	776	798	820	843	867	887	912	937
USA	293	296	298	301	304	307	309	312	314	316	319

Table 961: WDI — Population (million people) [PART 5/6]

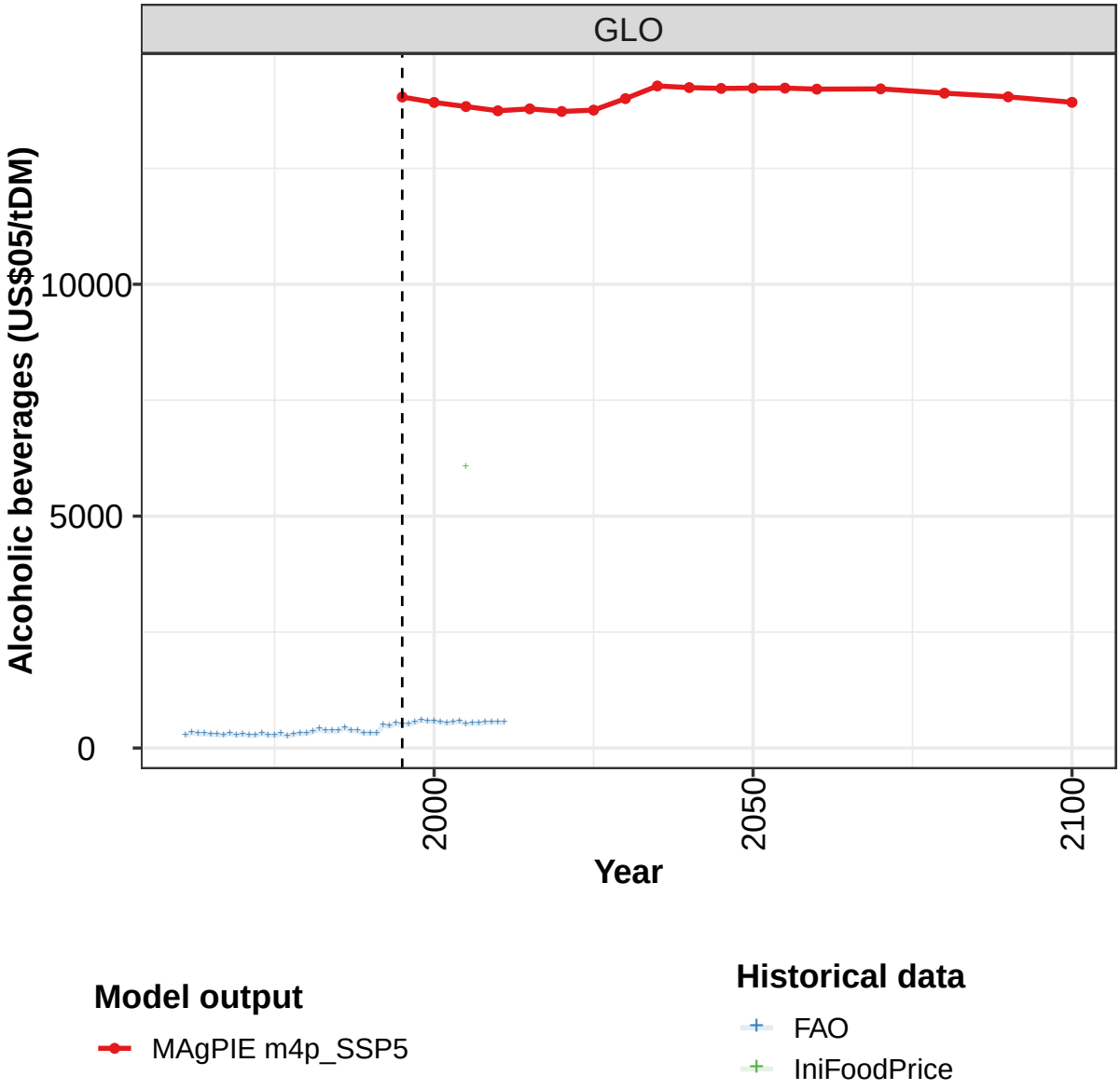
	2015	2016
GLO	7325	7412
CAZ	64	65
CHA	1379	1387
EUR	510	512
IND	1309	1324
JPN	127	127
LAM	631	638
MEA	466	475
NEU	109	110
OAS	1158	1173
REF	287	289
SSA	963	990
USA	321	323

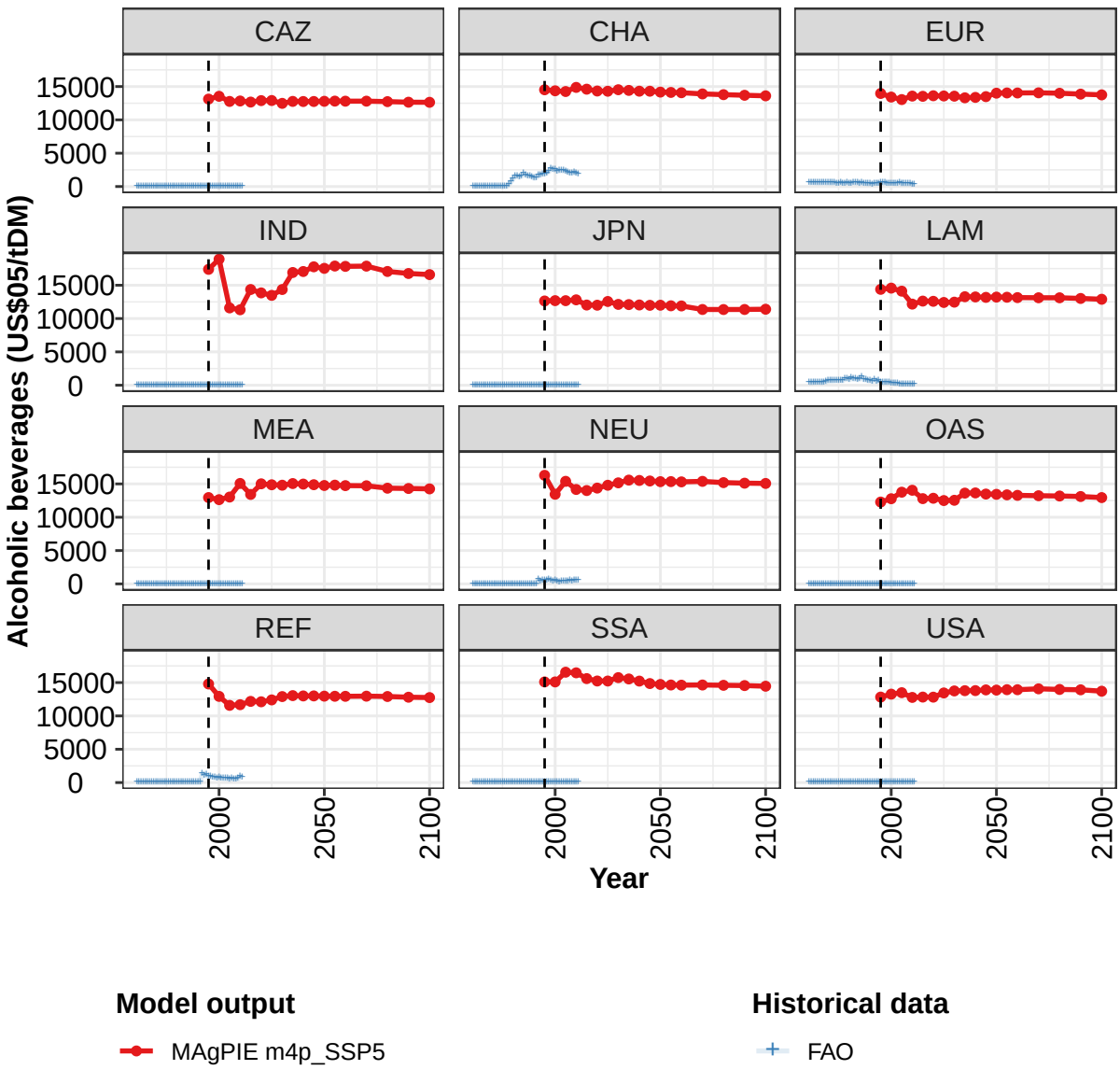
Table 962: WDI — Population (million people) [PART 6/6]

Part XI
Prices

36 Agriculture

36.1 Alcoholic beverages





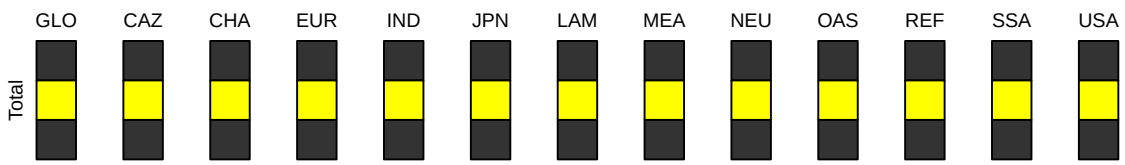


Figure 291: MAgPIE m4p_SSP5 — Prices—Agriculture—Alcoholic beverages (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14037	13921	13832	13741	13783	13726	13755	14003	14276	14241	14222
CAZ	13121	13538	12771	12834	12675	12893	12907	12481	12775	12755	12761
CHA	14517	14366	14255	14874	14606	14332	14298	14524	14426	14307	14302
EUR	13963	13425	13049	13571	13538	13620	13590	13559	13313	13373	13489
IND	17384	18912	11600	11321	14361	13853	13481	14362	16913	17059	17768
JPN	12639	12687	12685	12810	12032	12006	12562	12127	12097	12041	11989
LAM	14386	14568	14114	12171	12619	12587	12418	12464	13279	13247	13180
MEA	12953	12639	13029	15071	13426	15017	14873	14807	15053	14978	14885
NEU	16289	13446	15390	14170	14006	14376	14802	15161	15571	15523	15439
OAS	12280	12777	13759	14051	12793	12849	12506	12544	13623	13649	13478
REF	14795	12932	11584	11685	12181	12122	12402	12902	13046	13001	13002
SSA	15101	15101	16565	16471	15601	15242	15238	15748	15549	15225	14857
USA	12827	13267	13485	12780	12827	12819	13448	13749	13789	13801	13902

Table 963: MAgPIE m4p_SSP5 — Prices—Agriculture—Alcoholic beverages (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	14229	14230	14208	14213	14121	14042	13924
CAZ	12790	12817	12807	12808	12739	12653	12636
CHA	14172	14122	14076	13895	13786	13692	13608
EUR	14010	14043	14039	14061	13995	13867	13753
IND	17533	17880	17831	17865	17067	16761	16596
JPN	12002	11916	11893	11361	11354	11363	11397
LAM	13222	13199	13146	13121	13116	13016	12895
MEA	14765	14814	14745	14721	14359	14316	14257
NEU	15340	15347	15308	15382	15193	15113	15071
OAS	13437	13360	13284	13227	13187	13112	12949
REF	12966	12950	12941	12963	12914	12807	12752
SSA	14722	14641	14615	14641	14594	14553	14456
USA	13875	13935	13934	14064	13972	13918	13709

Table 964: MAgPIE m4p_SSP5 — Prices—Agriculture—Alcoholic beverages (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	264	330	304	302	294	286	278	309	276	290	270
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	509	614	579	553	537	530	525	590	524	523	498
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	348	355	384	408	430	425	377	451	473	663	629
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 965: FAO — Prices—Agriculture—Alcoholic beverages (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	268	317	271	266	301	258	290	316	310	353	401
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	328	702	1159	1601	1498
EUR	494	580	484	483	561	481	478	516	472	484	621
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	625	658	677	708	709	669	915	937	802	1039	922
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 966: FAO — Prices—Agriculture—Alcoholic beverages (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	362	363	363	434	366	370	321	317	309	495	470
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	1392	1532	1898	1698	1559	1532	1412	1230	1311	1731	1678
EUR	514	518	426	526	445	435	376	405	348	483	483
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	909	817	903	1231	816	805	652	677	557	760	553
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	655	386
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	1308	1094
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 967: FAO — Prices—Agriculture—Alcoholic beverages (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	525	505	505	546	594	576	573	560	527	558	577
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	1875	1841	2023	2245	2672	2530	2474	2260	2328	2437	2310
EUR	483	502	517	500	482	481	461	465	437	420	494
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	696	452	352	373	350	378	307	314	190	226	154
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	532	512	555	616	549	386	448	378	275	405	431
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	1133	836	826	804	695	658	687	660	582	572	554
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 968: FAO — Prices—Agriculture—Alcoholic beverages (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	519	532	529	549	553	558	545
CAZ	0	0	0	0	0	0	0
CHA	2271	2101	2007	1996	2046	1982	1872
EUR	352	375	363	370	367	312	340
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	77	100	110	111	79	59	66
MEA	0	0	0	0	0	0	0
NEU	331	328	458	412	489	478	435
OAS	0	0	0	0	0	0	0
REF	433	561	541	529	556	845	791
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

Table 969: FAO — Prices—Agriculture—Alcoholic beverages (US$05/tDM) [PART 5/5]

	2005
GLO	6054
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 970: IniFoodPrice — Prices—Agriculture—Alcoholic beverages (US$05/tDM)

36.2 Brans

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## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
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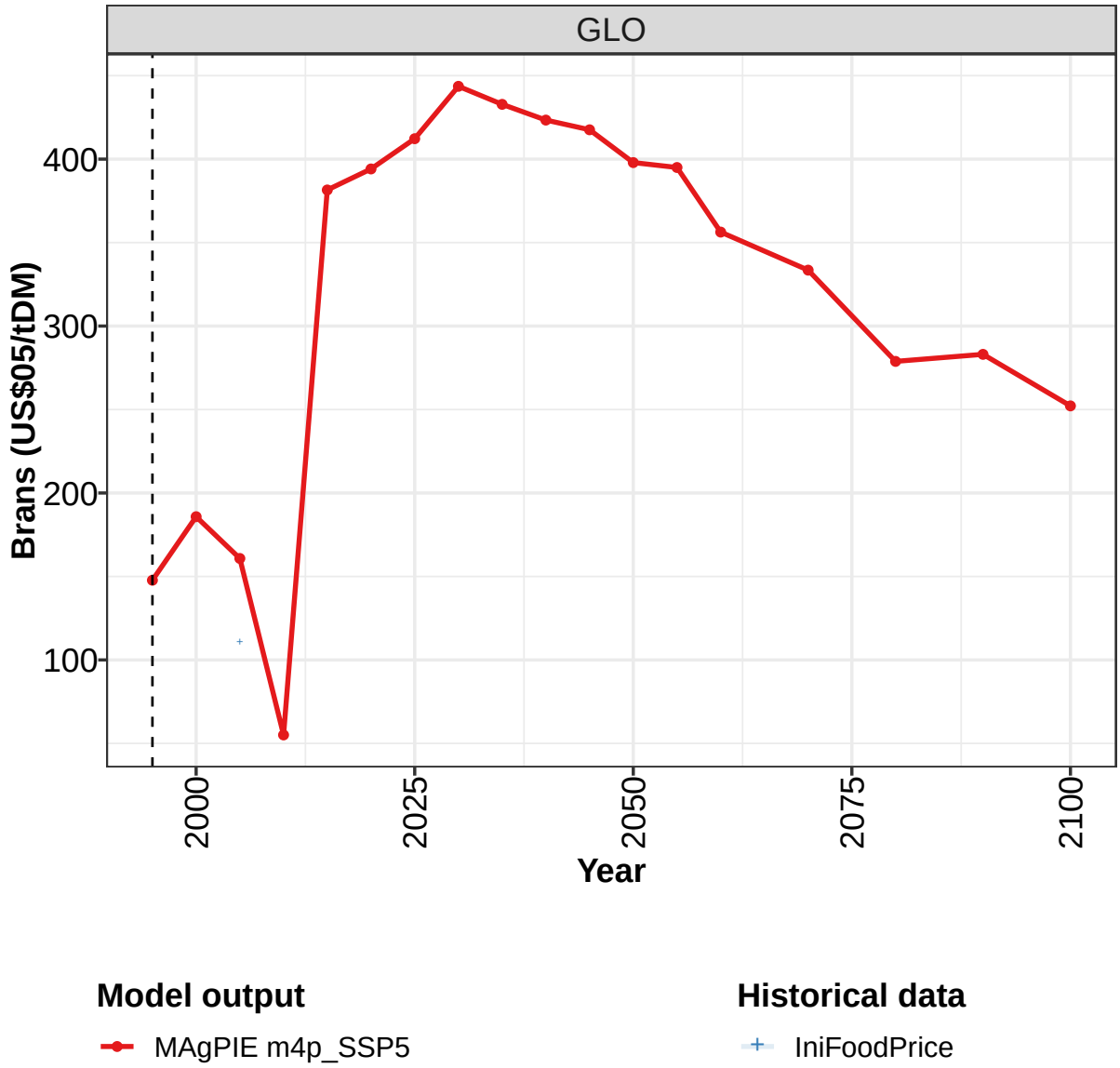


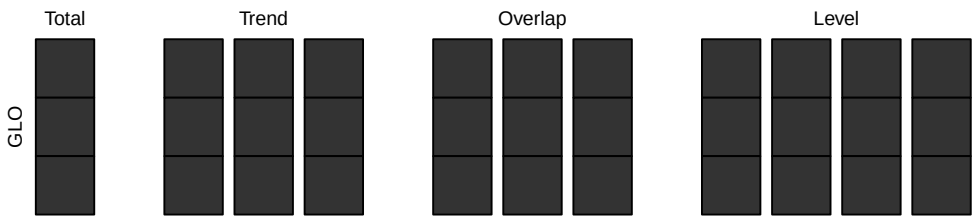


Figure 292: MAgPIE m4p_SSP5 — Prices—Agriculture—Brans (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	148	186	161	55	382	394	412	444	433	423	418

Table 971: MAgPIE m4p_SSP5 — Prices—Agriculture—Brans (US$05/tDM) [PART 1/2]

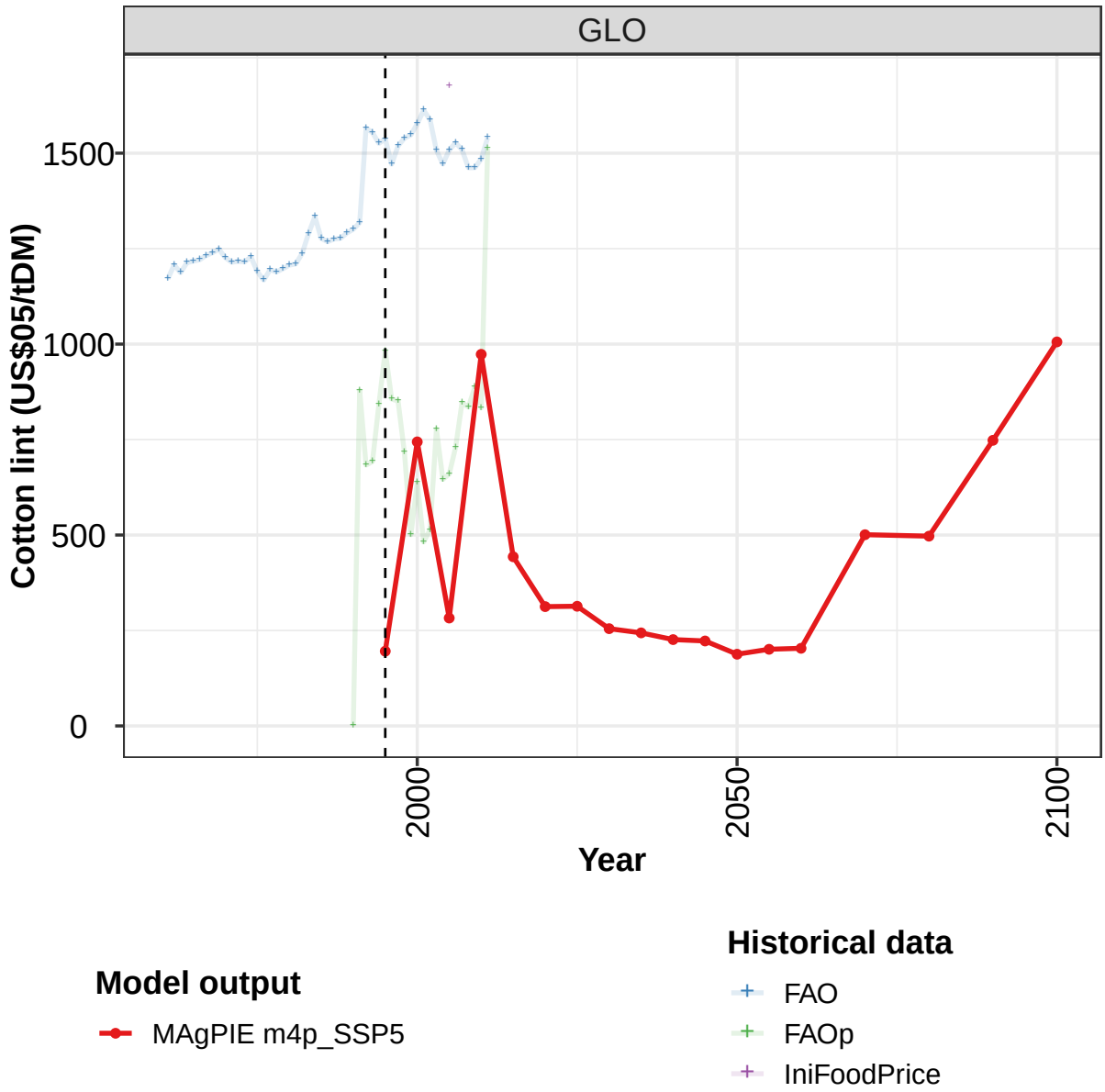
	2050	2055	2060	2070	2080	2090	2100
GLO	398	395	356	333	279	283	252

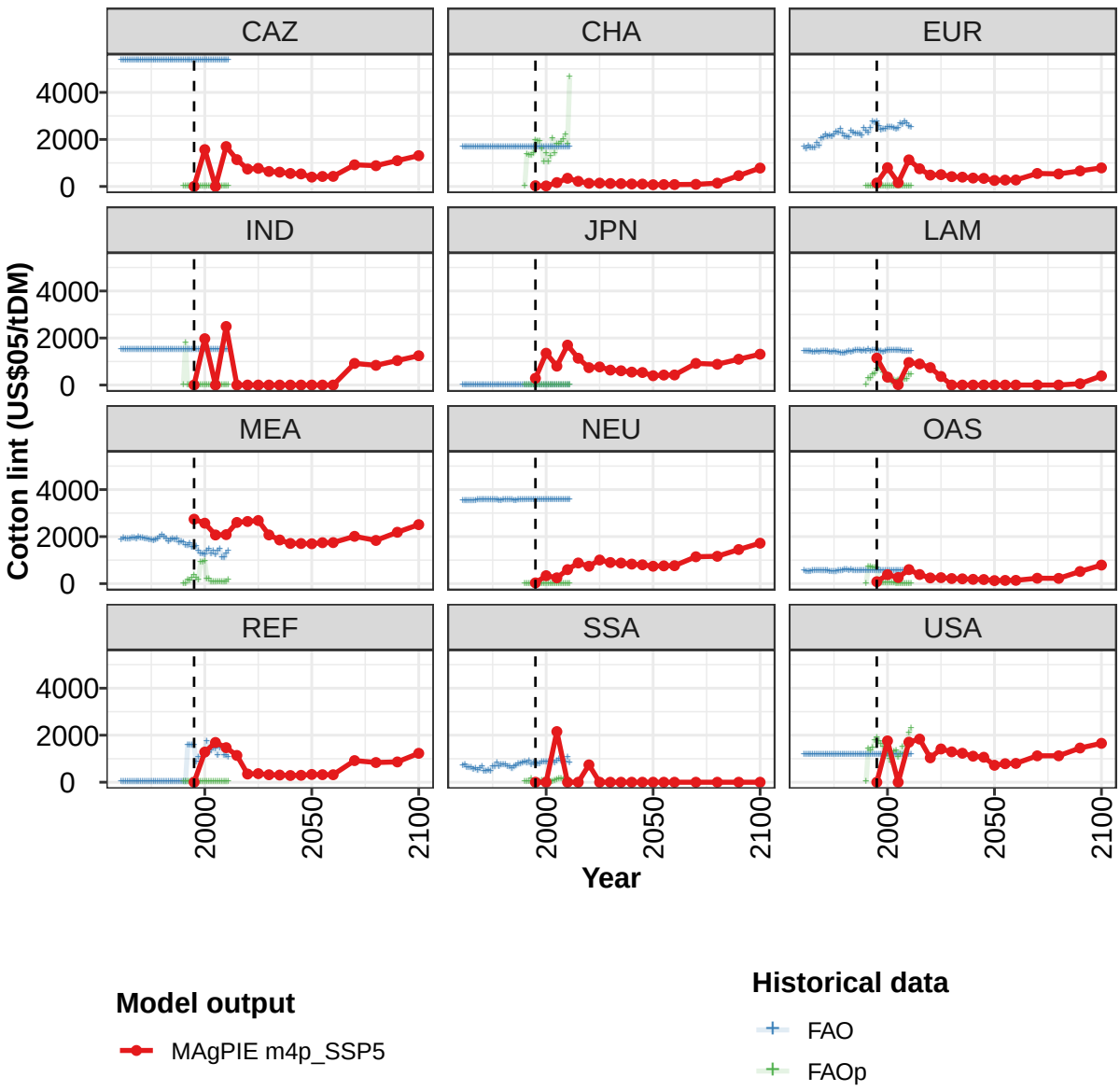
Table 972: MAgPIE m4p_SSP5 — Prices—Agriculture—Brans (US$05/tDM) [PART 2/2]

	2005
GLO	111

Table 973: IniFoodPrice — Prices—Agriculture—Brans (US$05/tDM)

36.3 Cotton lint





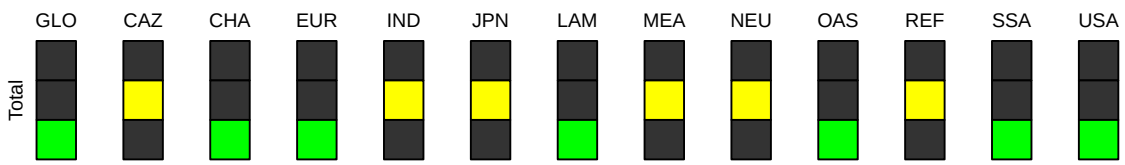


Figure 293: MAgPIE m4p_SSP5 — Prices—Agriculture—Cotton lint (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	196	744	283	973	443	312	313	255	244	226	223
CAZ	0	1567	0	1698	1140	739	770	638	607	551	533
CHA	30	21	165	348	220	133	141	125	118	105	101
EUR	148	799	159	1132	752	482	502	417	396	357	343
IND	3	1971	0	2490	0	0	0	0	0	0	0
JPN	287	1354	804	1698	1140	739	770	638	607	551	533
LAM	1146	338	16	958	896	739	365	0	0	0	0
MEA	2741	2571	2070	2084	2603	2644	2684	2072	1857	1710	1706
NEU	32	338	247	596	879	739	1004	898	875	831	801
OAS	83	382	261	596	388	243	254	216	204	183	175
REF	0	1283	1691	1472	1140	349	366	319	306	287	294
SSA	0	0	2154	0	0	739	0	0	0	0	0
USA	0	1759	0	1702	1835	1038	1415	1294	1234	1108	1063

Table 974: MAgPIE m4p_SSP5 — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	188	201	203	501	497	748	1006
CAZ	397	425	429	920	883	1097	1311
CHA	74	79	80	88	140	460	783
EUR	254	272	275	552	531	661	789
IND	0	0	0	920	838	1042	1246
JPN	397	425	429	920	883	1097	1311
LAM	0	0	0	0	0	57	391
MEA	1697	1741	1746	2012	1838	2186	2510
NEU	741	757	763	1143	1164	1450	1720
OAS	129	138	140	230	224	517	790
REF	332	322	320	920	838	864	1231
SSA	0	0	0	0	0	0	0
USA	722	789	801	1123	1124	1455	1655

Table 975: MAgPIE m4p_SSP5 — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	1171	1207	1187	1213	1217	1221	1232	1239	1248	1226	1214
CAZ	5358	5358	5357	5359	5359	5359	5359	5359	5359	5359	5359
CHA	1651	1650	1651	1651	1651	1651	1651	1651	1651	1651	1651
EUR	1675	1570	1706	1632	1635	1613	1825	1701	2010	2046	2166
IND	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1436	1438	1410	1404	1397	1395	1410	1398	1410	1416	1415
MEA	1863	1909	1887	1878	1876	1922	1934	1880	1952	1925	1914
NEU	3513	3521	3512	3524	3512	3521	3528	3550	3543	3543	3552
OAS	536	511	506	517	521	547	544	557	526	519	530
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	697	741	621	617	600	531	560	479	565	656	461
USA	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180

Table 976: FAO — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	1217	1215	1228	1190	1168	1195	1189	1197	1207	1210	1237
CAZ	5359	5359	5359	5359	5359	5359	5359	5359	5359	5359	5359
CHA	1652	1652	1652	1652	1652	1652	1652	1652	1652	1652	1652
EUR	2093	2156	2115	2202	2317	2261	2418	2217	2122	2098	2079
IND	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1400	1388	1376	1406	1386	1363	1348	1335	1332	1388	1408
MEA	1907	1885	1865	1854	1823	1853	1905	1968	2037	1977	1894
NEU	3548	3542	3546	3538	3537	3542	3535	3532	3547	3538	3538
OAS	533	512	514	491	486	533	520	554	584	577	559
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	459	501	469	638	638	798	667	744	735	724	666
USA	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180

Table 977: FAO — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	1289	1334	1277	1268	1276	1277	1291	1301	1318	1566	1554
CAZ	5359	5359	5359	5359	5359	5359	5359	5359	5359	5359	5359
CHA	1652	1652	1652	1652	1652	1652	1652	1652	1652	1652	1652
EUR	2330	2267	2230	2230	2228	2154	2455	2326	2253	2460	2730
IND	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1389	1416	1446	1460	1454	1435	1461	1425	1481	1440	1467
MEA	1789	1854	1876	1856	1893	1721	1751	1748	1629	1593	1709
NEU	3549	3546	3532	3533	3538	3555	3550	3558	3572	3572	3573
OAS	564	540	542	538	547	553	553	554	552	558	549
REF	0	0	0	0	0	0	0	0	0	1562	1562
SSA	640	557	637	687	754	760	807	844	793	892	747
USA	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180

Table 978: FAO — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	1526	1537	1471	1519	1539	1548	1577	1612	1588	1507	1471
CAZ	5359	5359	5359	5359	5359	5359	5359	5359	5359	5359	5359
CHA	1652	1652	1652	1652	1652	1652	1652	1652	1652	1652	1652
EUR	2692	2738	2524	2382	2427	2412	2513	2501	2496	2456	2419
IND	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483	1483
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1453	1442	1440	1420	1396	1433	1456	1446	1461	1466	1455
MEA	1548	1534	1578	1380	1261	1266	1221	1381	1438	1252	1363
NEU	3573	3573	3573	3573	3573	3573	3573	3573	3573	3573	3573
OAS	546	544	534	529	527	530	528	532	527	526	531
REF	1564	1552	840	1065	859	1284	1328	1735	1264	1322	1467
SSA	801	800	763	774	848	857	849	829	847	892	809
USA	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180

Table 979: FAO — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	1508	1528	1509	1462	1462	1485	1540
CAZ	5359	5359	5359	5359	5359	5359	5359
CHA	1652	1652	1652	1652	1652	1652	1652
EUR	2445	2650	2635	2756	2675	2538	2484
IND	1483	1483	1483	1483	1483	1483	1483
JPN	0	0	0	0	0	0	0
LAM	1446	1454	1439	1425	1426	1421	1407
MEA	1229	1382	1460	1108	1079	1260	1379
NEU	3573	3573	3573	3573	3573	3573	3573
OAS	530	527	524	524	521	507	505
REF	1395	1143	1446	1426	1129	1146	1039
SSA	875	980	893	836	840	1042	793
USA	1180	1180	1180	1180	1180	1180	1180

Table 980: FAO — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	878	683	692	842	982	856	851	716	501	637
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	1351	1327	1292	1385	1959	1923	1890	1594	1024	1389
EUR	0	0	3	2	2	5	4	3	2	2	1
IND	0	1774	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	263	259	428	484	669	688	703	508	320	228
MEA	0	0	130	100	203	343	239	148	879	895	943
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	687	712	660	676	654	4	4	6	5	6
REF	0	0	0	33	70	64	76	0	0	0	0
SSA	0	32	34	115	21	19	20	19	61	62	42
USA	0	1423	1344	1430	1763	1874	1726	1621	1474	1102	1220

Table 981: FAOp — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 1/3]

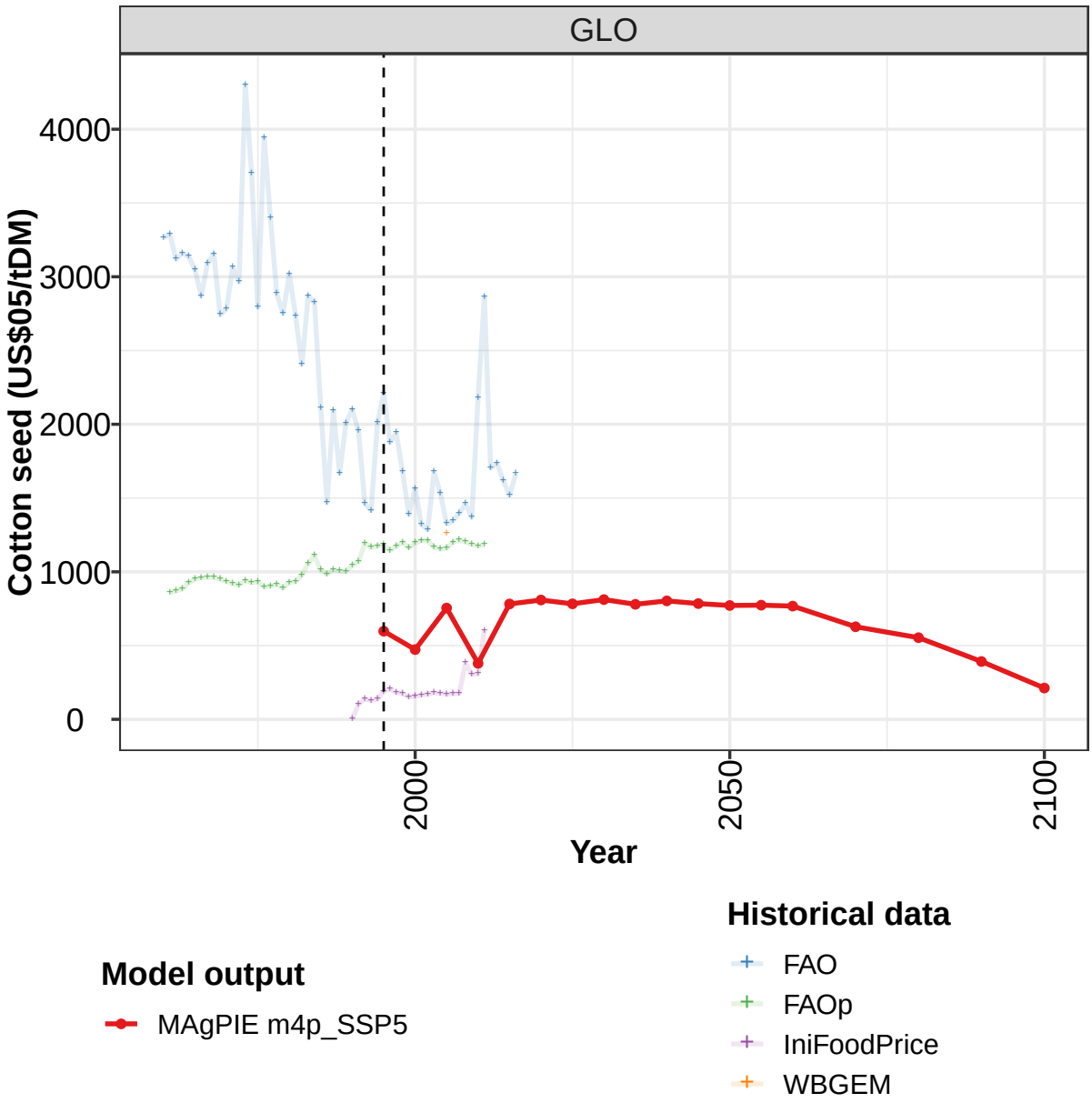
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	482	514	777	646	660	730	847	835	888	833	1512
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	1016	1284	2021	1377	1781	1798	1879	1981	2188	1805	4630
EUR	2	1	1	1	0	0	0	0	0	1	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	187	128	176	165	188	215	210	232	244	420	425
MEA	192	177	48	49	48	71	75	53	46	65	154
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	11	8	8	1	2	2	1	1	1	1	2
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	38	19	25	40	111	114	148	105	17	18	41
USA	953	823	1267	1330	1045	1163	1501	1202	1588	2072	2290

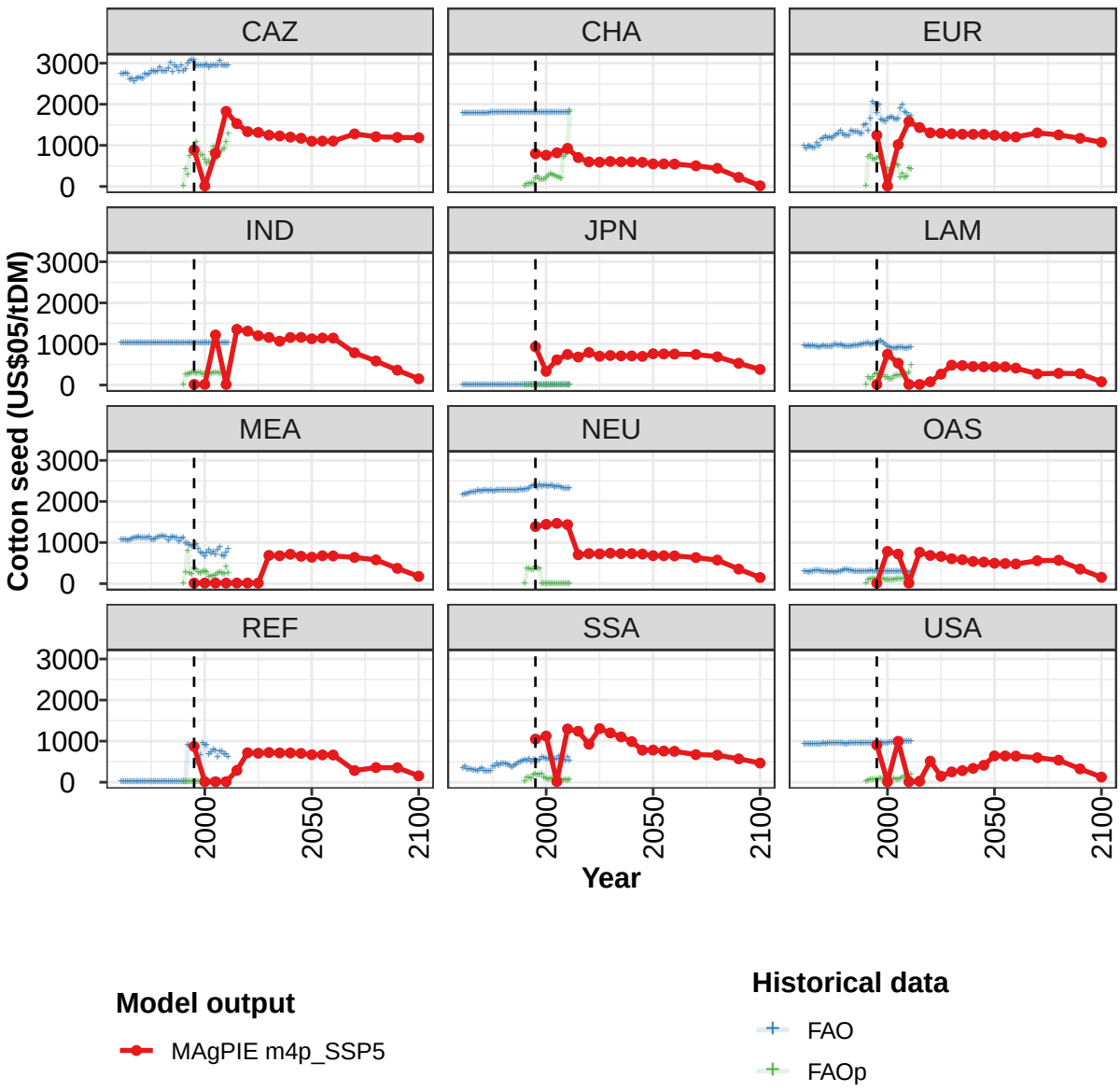
Table 982: FAOp — Prices—Agriculture—Cotton lint (US$05/tDM) [PART 2/3]

	2005
GLO	1676
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 983: IniFoodPrice — Prices—Agriculture—Cotton lint (US$05/tDM)

36.4 Cotton seed





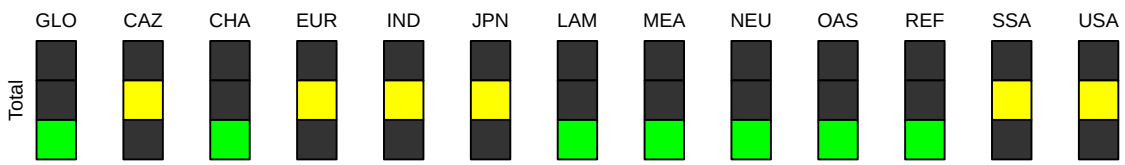


Figure 294: MAgPIE m4p_SSP5 — Prices—Agriculture—Cotton seed (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	598	473	754	380	782	809	783	812	780	803	785
CAZ	889	12	806	1828	1528	1335	1315	1249	1229	1201	1174
CHA	799	759	818	927	703	598	591	608	598	598	587
EUR	1247	11	1019	1581	1435	1305	1294	1281	1271	1269	1271
IND	15	15	1219	15	1356	1313	1200	1160	1068	1157	1161
JPN	930	333	613	745	682	791	702	719	709	708	698
LAM	16	747	532	16	15	79	266	484	474	451	445
MEA	14	14	14	14	14	14	14	688	678	716	667
NEU	1389	1443	1467	1436	703	730	723	741	731	730	720
OAS	14	784	719	14	763	686	662	605	583	540	525
REF	872	13	12	12	288	716	706	723	713	713	702
SSA	1049	1124	15	1296	1241	924	1304	1200	1103	990	780
USA	904	11	996	11	24	512	147	252	283	337	412

Table 984: MAgPIE m4p_SSP5 — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	772	774	768	628	554	392	212
CAZ	1100	1104	1104	1279	1210	1195	1187
CHA	549	547	543	502	441	221	16
EUR	1247	1218	1205	1303	1255	1172	1075
IND	1125	1143	1143	785	585	361	151
JPN	761	757	754	743	688	529	379
LAM	444	443	411	273	286	276	80
MEA	643	678	675	638	579	371	176
NEU	681	679	676	634	573	354	148
OAS	496	488	478	558	568	354	153
REF	669	667	663	285	356	353	154
SSA	783	759	753	672	658	569	467
USA	642	640	636	596	537	324	125

Table 985: MAgPIE m4p_SSP5 — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	3264	3288	3118	3158	3137	3048	2870	3090	3154	2742	2781
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 986: WBGEM — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	3062	2964	4298	3699	2792	3942	3399	2885	2748	3018	2735
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 987: WBGEM — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	2407	2869	2825	2108	1469	2092	1667	2007	2100	1955	1462
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 988: WBGEM — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	1416	2010	2210	1877	1942	1678	1387	1562	1319	1286	1677
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 989: WBGEM — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	1533	1325	1344	1396	1461	1368	2180	2863	1704	1734	1619
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 990: WBGEM — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 5/6]

	2015	2016
GLO	1518	1666
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 991: WBGEM — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	858	870	884	925	950	960	963	962	949	935	919
CAZ	2736	2735	2739	2719	2595	2604	2533	2622	2644	2631	2611
CHA	1782	1781	1782	1782	1782	1783	1783	1782	1783	1782	1783
EUR	967	908	986	946	937	931	1034	980	1127	1155	1203
IND	1016	1016	1016	1017	1017	1017	1017	1017	1017	1016	1017
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	946	934	939	937	952	924	924	904	922	942	924
MEA	1047	1066	1052	1038	1052	1090	1110	1100	1119	1111	1099
NEU	2154	2177	2178	2204	2205	2225	2223	2253	2242	2235	2255
OAS	291	277	274	281	285	302	298	310	283	277	283
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	337	371	315	313	306	274	285	264	298	332	252
USA	916	919	925	920	924	919	907	911	924	930	925

Table 992: FAO — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	910	939	926	931	897	901	914	889	929	932	979
CAZ	2731	2707	2722	2787	2789	2770	2789	2888	2788	2788	2791
CHA	1783	1783	1783	1783	1783	1783	1783	1783	1783	1783	1783
EUR	1150	1188	1159	1214	1254	1265	1341	1261	1237	1215	1223
IND	1017	1017	1017	1017	1016	1016	1017	1017	1017	1016	1016
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	927	915	928	962	966	945	962	939	922	931	935
MEA	1094	1095	1125	1058	1058	1088	1121	1121	1154	1137	1119
NEU	2256	2248	2255	2247	2247	2257	2251	2252	2267	2258	2257
OAS	286	273	277	262	260	292	285	306	328	322	305
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	253	261	262	368	361	441	395	442	437	433	410
USA	934	939	936	939	937	942	934	933	927	922	932

Table 993: FAO — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	1055	1109	1010	985	1014	1004	1003	1042	1066	1193	1166
CAZ	2851	2991	2778	2924	2880	2797	2922	2799	2849	2987	3042
CHA	1783	1783	1783	1783	1783	1783	1783	1783	1783	1783	1783
EUR	1333	1317	1326	1328	1275	1261	1479	1502	1336	1642	2034
IND	1017	1017	1016	1017	1016	1017	1016	1017	1017	1016	1016
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	934	954	948	949	970	962	989	987	1011	977	986
MEA	1046	1103	1136	1097	1103	1006	1074	1103	959	967	930
NEU	2268	2264	2252	2253	2259	2277	2272	2281	2294	2305	2353
OAS	314	290	291	285	291	296	295	295	294	297	292
REF	0	0	0	0	0	0	0	0	0	888	864
SSA	390	357	404	424	452	474	503	526	511	553	485
USA	932	931	934	936	936	934	942	941	934	941	934

Table 994: FAO — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	1174	1184	1144	1172	1199	1162	1195	1213	1208	1169	1153
CAZ	3063	3067	2937	2939	2935	2922	2936	2953	2874	2938	2935
CHA	1783	1783	1783	1783	1783	1783	1783	1783	1783	1783	1783
EUR	2005	1760	1978	1611	1580	1558	1645	1659	1684	1625	1619
IND	1017	1016	1016	1017	1017	1017	1017	1017	1017	1016	1017
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	990	1018	1065	1053	1016	981	932	913	883	882	889
MEA	902	913	949	824	750	706	653	738	804	724	760
NEU	2386	2386	2320	2389	2343	2372	2367	2362	2365	2377	2341
OAS	291	289	284	280	278	279	278	281	275	275	277
REF	857	874	472	562	655	931	897	884	672	722	779
SSA	526	534	508	528	588	571	545	558	559	597	523
USA	939	943	947	954	940	949	950	956	963	958	972

Table 995: FAO — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	1158	1199	1214	1201	1185	1174	1183
CAZ	2935	2935	3044	2935	2936	2935	2920
CHA	1786	1783	1783	1783	1783	1783	1783
EUR	1633	1881	1966	1795	1767	1696	1696
IND	1017	1016	1016	1016	1017	1016	1016
JPN	0	0	0	0	0	0	0
LAM	899	908	896	875	871	911	894
MEA	686	809	879	663	649	743	827
NEU	2358	2348	2338	2297	2297	2297	2297
OAS	277	282	280	280	278	271	269
REF	753	609	734	724	672	664	590
SSA	555	619	537	524	514	608	502
USA	998	971	980	987	982	985	977

Table 996: FAO — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	103	137	128	137	189	206	181	173	151	158
CAZ	0	400	275	737	827	931	1073	833	745	748	640
CHA	0	45	52	57	64	180	233	159	159	161	198
EUR	0	706	745	655	629	671	703	550	519	438	429
IND	0	252	238	261	301	299	265	282	288	251	239
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	180	142	178	233	268	236	256	227	167	181
MEA	0	259	795	236	210	344	323	267	229	291	282
NEU	0	351	345	340	320	402	344	349	0	0	0
OAS	0	81	102	111	110	107	108	103	104	92	92
REF	0	0	0	3	6	8	10	4	4	2	2
SSA	3	101	95	82	165	183	163	170	184	102	88
USA	0	39	53	61	55	58	76	72	77	53	63

Table 997: FAOp — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 1/3]

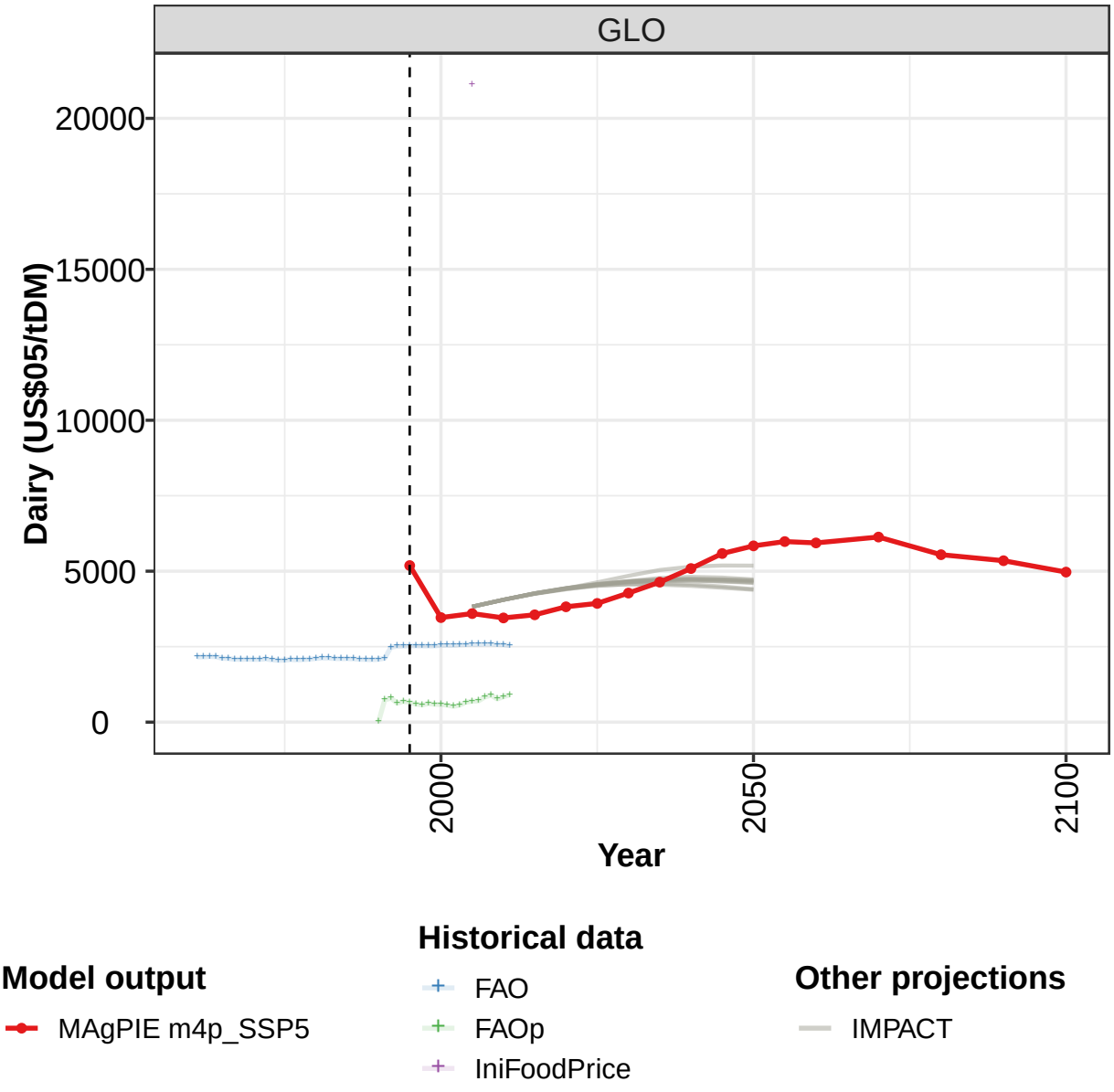
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	164	171	180	177	170	172	176	382	304	308	602
CAZ	552	582	826	950	698	685	821	872	911	1068	1262
CHA	244	290	267	244	224	206	191	711	739	852	1839
EUR	367	380	554	515	496	211	301	202	224	429	407
IND	306	242	265	293	279	292	270	375	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	137	129	196	220	212	218	252	299	253	296	469
MEA	263	154	162	175	188	238	270	233	210	394	249
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	75	89	92	93	93	96	105	100	121	146	0
REF	3	2	21	20	18	17	27	23	28	37	47
SSA	64	70	83	78	78	75	48	39	51	36	56
USA	54	60	70	64	58	66	97	134	95	96	156

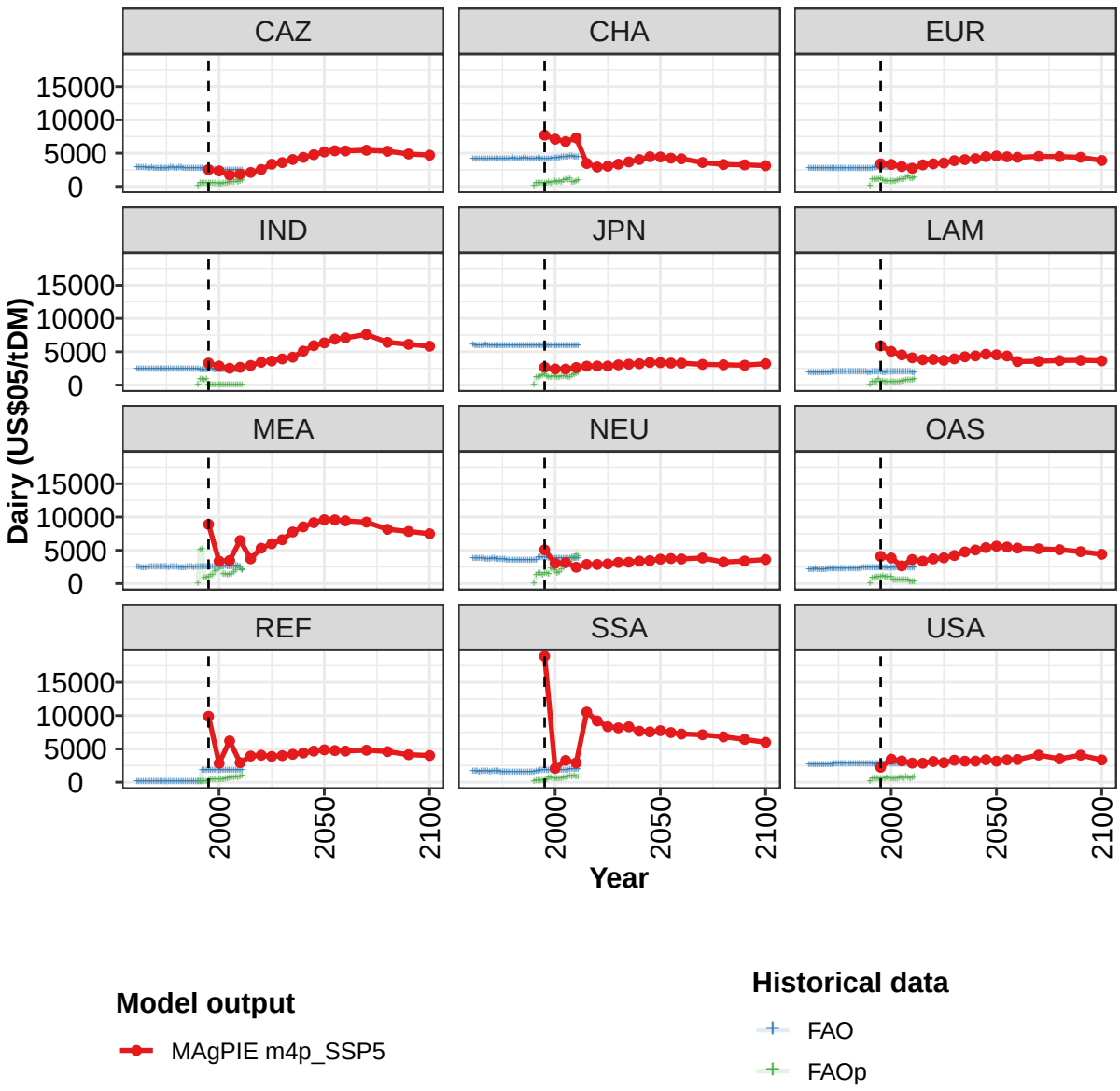
Table 998: FAOp — Prices—Agriculture—Cotton seed (US$05/tDM) [PART 2/3]

	2005
GLO	1260
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 999: IniFoodPrice — Prices—Agriculture—Cotton seed (US$05/tDM)

36.5 Dairy


GLO
Dairy (US$05/tDM)
20000
15000
10000
5000
0
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO
FAOp
IniFoodPrice
Other projections
IMPACT



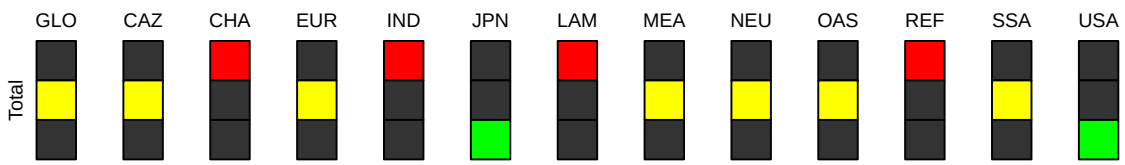


Figure 295: MAgPIE m4p_SSP5 — Prices—Agriculture—Dairy (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5188	3464	3597	3452	3555	3821	3933	4276	4637	5089	5586
CAZ	2525	2329	1695	1846	2101	2549	3342	3587	4048	4362	4770
CHA	7704	7099	6745	7288	3452	2917	3039	3345	3683	4041	4462
EUR	3398	3306	2985	2721	3242	3399	3522	3876	4030	4171	4472
IND	3303	2860	2524	2666	2940	3429	3613	3923	4184	5097	5919
JPN	2655	2410	2396	2627	2836	2852	2856	3027	3137	3199	3387
LAM	5886	5052	4527	4093	3817	3864	3721	3937	4247	4381	4636
MEA	8904	3369	3468	6467	3725	5319	5985	6594	7759	8536	9157
NEU	5066	3046	3148	2466	2882	2878	2957	3169	3204	3380	3448
OAS	4093	3842	2664	3614	3366	3710	3876	4212	4762	5051	5406
REF	9890	2838	6193	2937	3932	4050	3870	3992	4194	4392	4669
SSA	18916	2086	3275	2905	10527	9198	8336	8151	8317	7655	7551
USA	2249	3455	3197	2865	2854	3109	2936	3304	3165	3165	3373

Table 1000: MAgPIE m4p_SSP5 — Prices—Agriculture—Dairy (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5839	5981	5937	6131	5547	5348	4971
CAZ	5188	5362	5339	5447	5289	4880	4701
CHA	4428	4249	4151	3602	3294	3243	3120
EUR	4571	4450	4376	4506	4486	4377	3906
IND	6335	6887	7084	7593	6417	6122	5833
JPN	3369	3304	3288	3103	3036	2976	3206
LAM	4537	4360	3530	3572	3680	3725	3635
MEA	9593	9570	9425	9236	8155	7837	7488
NEU	3668	3758	3694	3841	3228	3387	3607
OAS	5622	5494	5327	5234	5089	4796	4399
REF	4861	4752	4674	4804	4597	4133	4009
SSA	7736	7454	7234	7124	6805	6429	5986
USA	3159	3355	3408	4076	3512	4059	3346

Table 1001: MAgPIE m4p_SSP5 — Prices—Agriculture—Dairy (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	2162	2158	2175	2165	2117	2105	2084	2078	2085	2079	2080
CAZ	2805	2782	2773	2761	2739	2723	2702	2732	2724	2707	2698
CHA	4077	4080	4075	4061	4053	4038	4029	4112	4110	4108	4110
EUR	2662	2662	2666	2663	2654	2654	2637	2631	2629	2626	2624
IND	2286	2299	2309	2319	2324	2324	2286	2289	2293	2291	2294
JPN	5931	5923	5920	5923	5924	5924	5928	5920	5913	5914	5909
LAM	1798	1799	1791	1780	1796	1827	1840	1834	1844	1857	1857
MEA	2433	2427	2360	2377	2370	2366	2397	2413	2409	2423	2444
NEU	3695	3702	3710	3695	3688	3653	3648	3649	3642	3653	3658
OAS	2093	2099	2089	2116	2101	2098	2084	2065	2087	2124	2147
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	1551	1538	1531	1495	1536	1535	1539	1538	1519	1558	1539
USA	2631	2626	2629	2631	2633	2638	2637	2639	2640	2641	2642

Table 1002: FAO — Prices—Agriculture—Dairy (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	2091	2063	2047	2055	2074	2061	2073	2086	2108	2123	2121
CAZ	2701	2690	2716	2716	2707	2733	2763	2702	2727	2745	2760
CHA	4107	4093	4088	4084	4080	4079	4110	4051	4139	4102	4126
EUR	2626	2616	2609	2613	2618	2613	2613	2619	2622	2627	2626
IND	2294	2294	2297	2289	2291	2293	2291	2296	2291	2293	2296
JPN	5915	5917	5920	5920	5919	5912	5908	5904	5909	5911	5912
LAM	1876	1883	1883	1880	1878	1902	1906	1902	1898	1897	1911
MEA	2424	2443	2413	2407	2388	2413	2401	2401	2398	2383	2381
NEU	3631	3597	3548	3530	3514	3493	3493	3488	3487	3473	3450
OAS	2148	2131	2129	2134	2130	2159	2157	2161	2185	2176	2169
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	1527	1523	1512	1497	1500	1477	1447	1451	1471	1466	1473
USA	2644	2647	2646	2646	2647	2646	2648	2648	2646	2645	2645

Table 1003: FAO — Prices—Agriculture—Dairy (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	2105	2103	2105	2096	2083	2075	2070	2078	2117	2481	2513
CAZ	2712	2679	2656	2647	2682	2686	2709	2695	2667	2637	2582
CHA	4115	4121	4143	4141	4128	4121	4119	4113	4126	4136	4106
EUR	2615	2611	2607	2602	2602	2599	2592	2600	2631	2737	2836
IND	2311	2313	2315	2314	2303	2295	2300	2285	2278	2275	2274
JPN	5905	5903	5897	5898	5912	5914	5910	5913	5913	5902	5894
LAM	1898	1898	1903	1891	1863	1868	1847	1855	1880	1882	1892
MEA	2376	2386	2396	2406	2414	2389	2402	2405	2428	2474	2497
NEU	3444	3456	3449	3455	3438	3454	3454	3467	3506	3829	3836
OAS	2162	2170	2220	2279	2294	2307	2336	2310	2307	2309	2300
REF	0	0	0	0	0	0	0	0	0	1679	1695
SSA	1467	1455	1412	1409	1437	1439	1442	1496	1529	1549	1698
USA	2645	2648	2646	2647	2649	2647	2645	2645	2645	2644	2645

Table 1004: FAO — Prices—Agriculture—Dairy (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	2516	2523	2528	2524	2521	2523	2546	2545	2544	2562	2568
CAZ	2553	2572	2536	2514	2511	2502	2462	2448	2414	2410	2416
CHA	4082	4058	4071	4054	4126	4138	4176	4211	4256	4315	4366
EUR	2843	2847	2850	2851	2848	2851	2921	2918	2918	2917	2915
IND	2276	2287	2286	2284	2280	2275	2274	2268	2268	2271	2269
JPN	5911	5911	5909	5908	5906	5908	5907	5911	5909	5911	5911
LAM	1872	1861	1853	1859	1866	1866	1878	1880	1884	1881	1883
MEA	2488	2468	2456	2458	2446	2467	2471	2491	2492	2546	2488
NEU	3818	3807	3798	3785	3761	3792	3792	3794	3792	3790	3786
OAS	2287	2279	2272	2253	2252	2246	2277	2319	2283	2279	2266
REF	1698	1703	1711	1711	1708	1718	1725	1743	1754	1753	1733
SSA	1678	1707	1697	1691	1685	1705	1708	1700	1737	1737	1754
USA	2645	2647	2649	2650	2650	2649	2649	2649	2648	2650	2650

Table 1005: FAO — Prices—Agriculture—Dairy (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	2575	2574	2586	2582	2571	2565	2534
CAZ	2416	2422	2428	2440	2423	2423	2417
CHA	4391	4410	4423	4423	4393	4386	4398
EUR	2913	2911	2907	2910	2905	2906	2902
IND	2265	2265	2256	2250	2250	2250	2259
JPN	5908	5909	5912	5914	5907	5911	5918
LAM	1869	1877	1878	1882	1872	1861	1852
MEA	2492	2483	2491	2546	2535	2517	1934
NEU	3782	3779	3771	3778	3782	3794	3790
OAS	2272	2277	2270	2270	2264	2258	2253
REF	1755	1675	1756	1747	1741	1732	1718
SSA	1739	1764	1855	1892	1897	1921	1909
USA	2649	2648	2647	2646	2647	2647	2644

Table 1006: FAO — Prices—Agriculture—Dairy (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	735	795	626	688	651	599	569	615	590	586
CAZ	0	388	394	388	384	402	446	413	352	355	329
CHA	0	436	457	434	408	436	458	566	402	548	645
EUR	0	971	1042	947	974	1127	815	733	742	693	636
IND	0	770	782	681	751	0	0	0	0	0	0
JPN	0	1081	1152	1284	1376	1476	1243	1115	1034	1182	1240
LAM	0	356	379	397	787	435	460	456	438	384	422
MEA	0	5009	5128	843	800	931	1162	1144	1707	1903	2399
NEU	0	1232	1493	1444	1253	1526	1432	1314	2164	2057	1943
OAS	0	794	815	851	931	991	1005	963	952	910	868
REF	0	0	12	45	103	216	329	378	325	273	293
SSA	8	152	172	148	181	214	354	566	558	512	468
USA	0	446	479	467	475	467	533	484	561	520	448

Table 1007: FAOp — Prices—Agriculture—Dairy (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	564	520	563	660	694	700	830	894	767	840	907
CAZ	344	376	382	455	524	512	597	797	609	726	903
CHA	570	686	495	876	919	908	1146	592	619	744	802
EUR	659	674	784	952	992	981	1193	1378	1111	1141	1288
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	1109	1075	1176	1254	1209	1118	1099	1316	1572	1650	1836
LAM	422	386	403	424	490	499	609	703	613	723	763
MEA	2396	1349	1305	1271	1284	1393	1663	1908	2307	2306	1998
NEU	1498	1624	2071	2390	2587	2796	3202	3916	3661	4222	3991
OAS	473	483	440	445	447	516	524	496	185	194	175
REF	329	390	419	510	611	643	628	781	618	753	941
SSA	477	508	482	566	636	712	889	787	853	768	794
USA	543	441	454	584	549	469	695	667	467	590	731

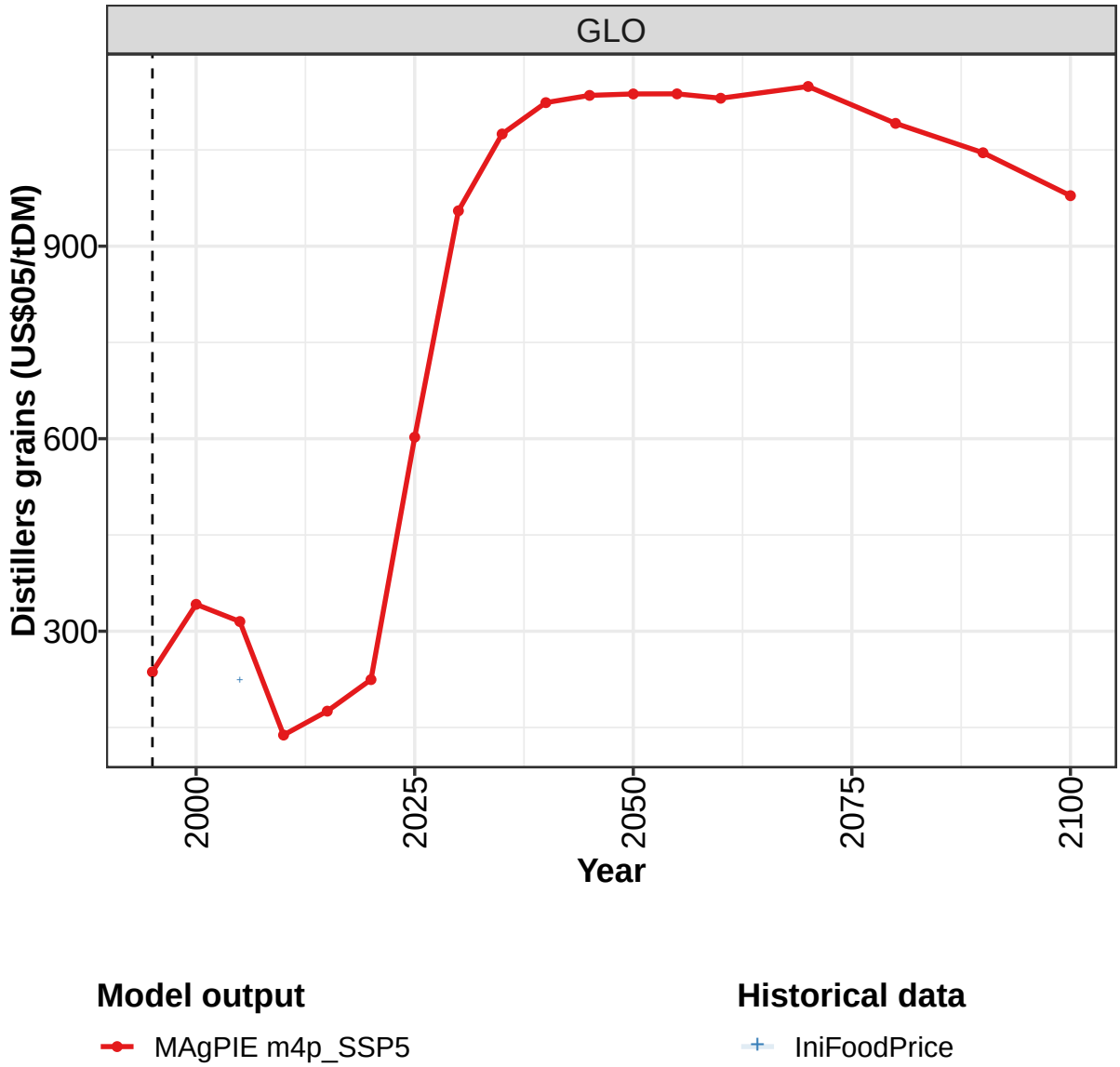
Table 1008: FAOp — Prices—Agriculture—Dairy (US$05/tDM) [PART 2/3]

	2005
GLO	21104
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1009: IniFoodPrice — Prices—Agriculture—Dairy (US$05/tDM)

36.6 Distillers grains

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



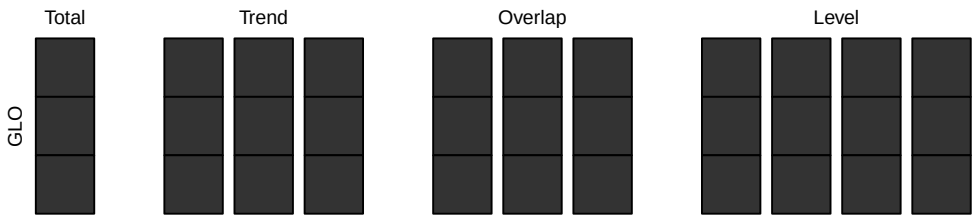


Figure 296: MAgPIE m4p_SSP5 — Prices—Agriculture—Distillers grains (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	237	342	315	138	175	225	602	955	1075	1124	1135

Table 1010: MAgPIE m4p_SSP5 — Prices—Agriculture—Distillers grains (US$05/tDM) [PART 1/2]

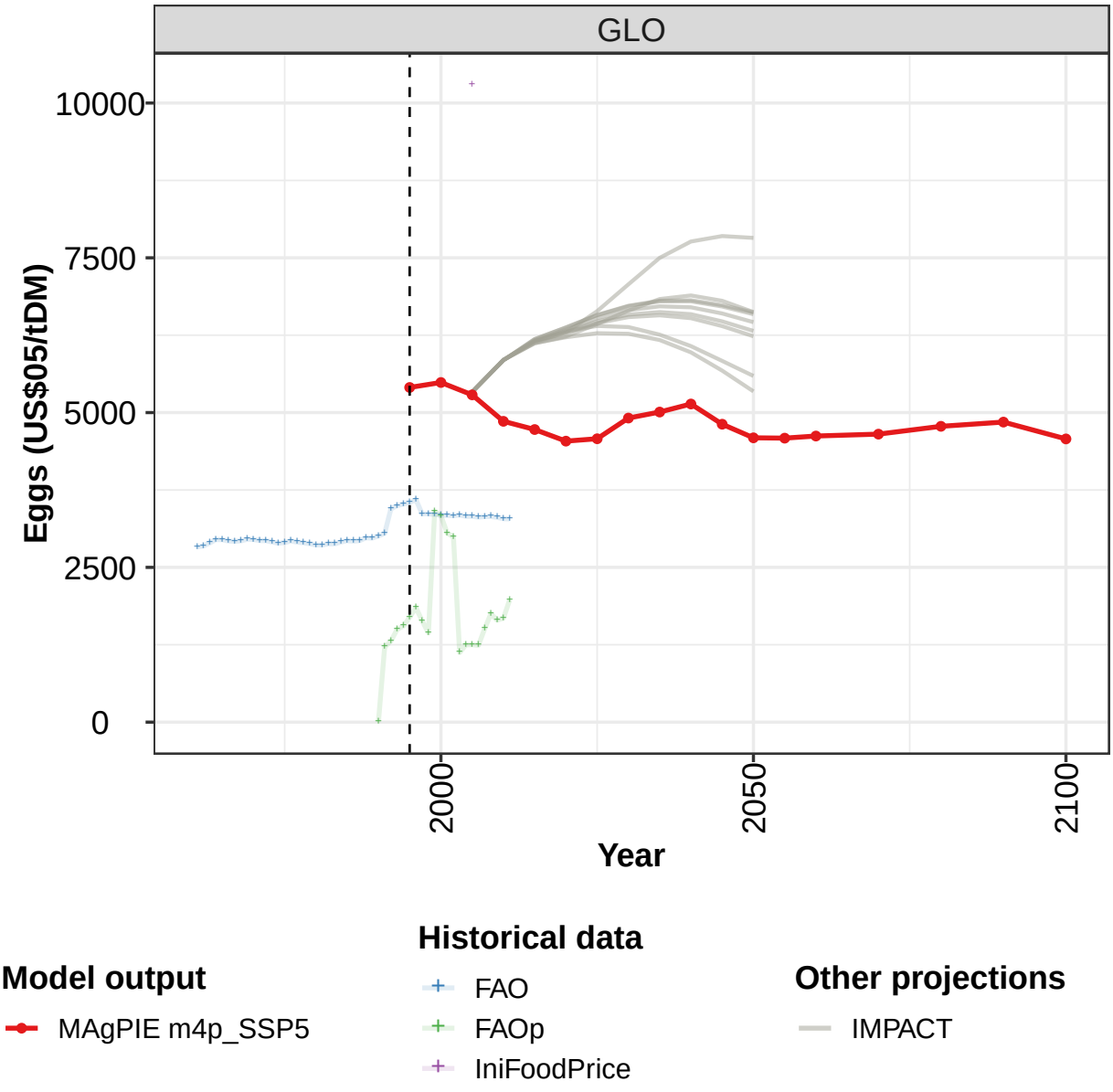
	2050	2055	2060	2070	2080	2090	2100
GLO	1137	1137	1131	1149	1091	1046	979

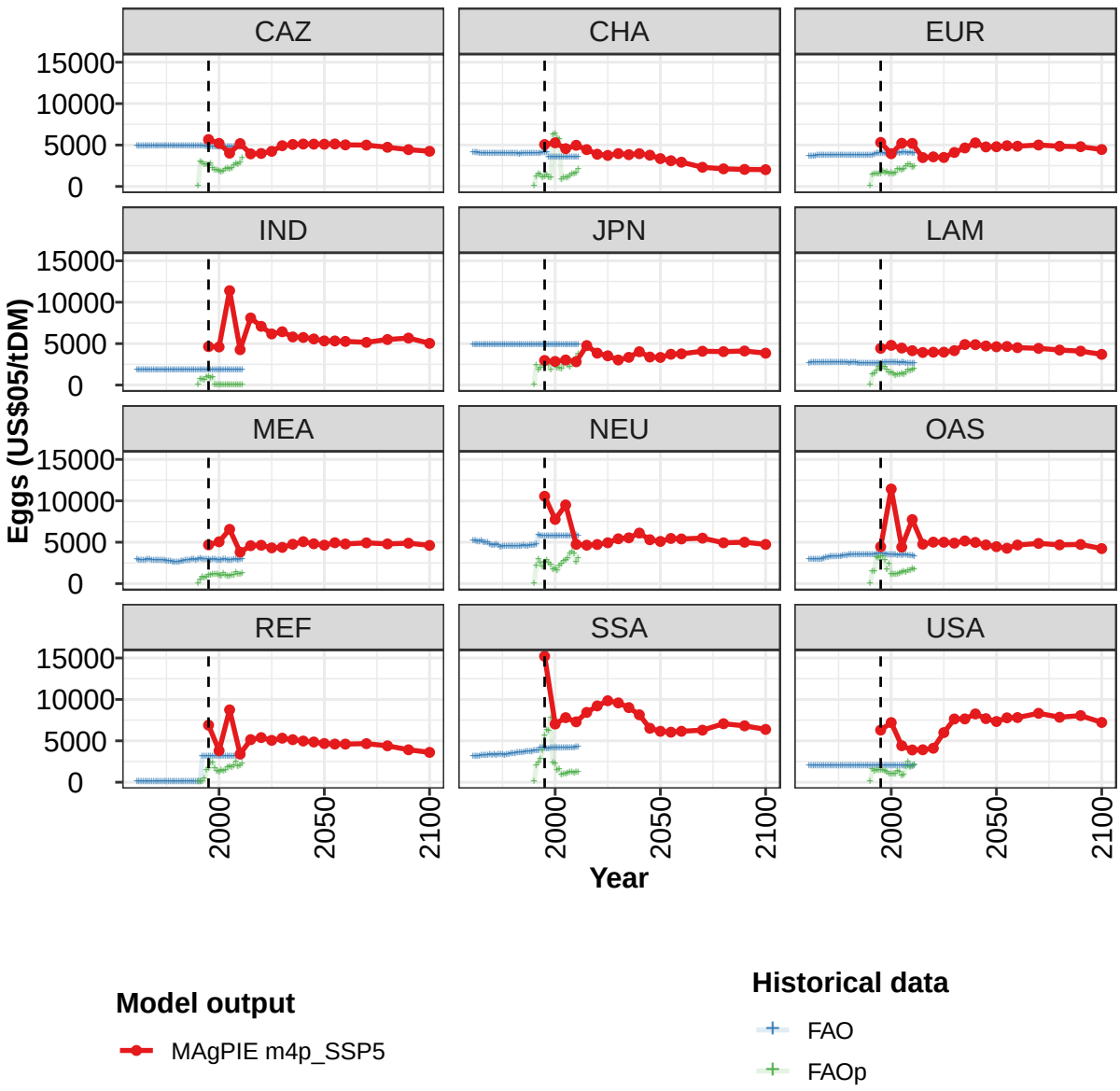
Table 1011: MAgPIE m4p_SSP5 — Prices—Agriculture—Distillers grains (US$05/tDM) [PART 2/2]

	2005
GLO	223

Table 1012: IniFoodPrice — Prices—Agriculture—Distillers grains (US$05/tDM)

36.7 Eggs


GLO
Eggs (US$05/tDM)
10000
7500
5000
2500
0
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO
FAOp
IniFoodPrice
Other projections
IMPACT



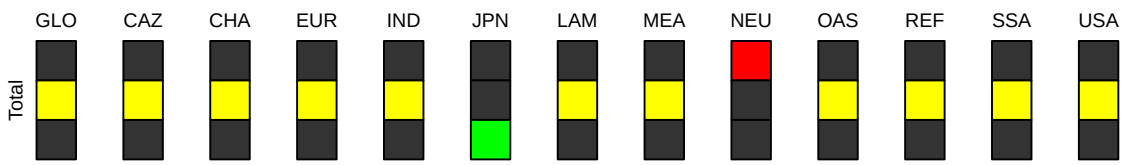


Figure 297: MAgPIE m4p_SSP5 — Prices—Agriculture—Eggs (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5406	5486	5287	4859	4726	4539	4578	4912	5009	5139	4812
CAZ	5665	5202	4021	5173	3938	3983	4239	4919	5069	5121	5106
CHA	5060	5264	4565	4970	4447	3890	3749	3969	3838	3958	3774
EUR	5314	3955	5215	5199	3485	3571	3501	4105	4647	5266	4774
IND	4642	4600	11396	4271	8099	7091	6172	6436	5809	5748	5566
JPN	2968	2848	3028	2815	4769	3850	3528	3023	3345	4025	3382
LAM	4436	4795	4468	4144	3935	3968	3972	4153	4892	4877	4717
MEA	4682	5051	6555	3802	4578	4633	4322	4375	4759	5066	4816
NEU	10552	7759	9502	4743	4642	4722	4934	5417	5530	6107	5300
OAS	4456	11426	4409	7733	4766	5012	4999	4895	5157	4979	4675
REF	6895	3814	8739	3404	5143	5390	5056	5319	5141	4977	4859
SSA	15215	7029	7798	7293	8431	9218	9841	9578	9012	8146	6515
USA	6295	7201	4409	3900	3922	4104	5993	7637	7648	8248	7683

Table 1013: MAgPIE m4p_SSP5 — Prices—Agriculture—Eggs (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4593	4587	4622	4652	4778	4847	4575
CAZ	5099	5129	5021	4994	4730	4445	4247
CHA	3363	3104	2932	2313	2126	2057	2027
EUR	4795	4918	4862	5003	4855	4801	4461
IND	5331	5329	5268	5155	5496	5670	5035
JPN	3333	3717	3769	4081	4037	4111	3848
LAM	4623	4654	4514	4432	4229	4094	3705
MEA	4647	4940	4789	4923	4799	4883	4616
NEU	5096	5456	5395	5493	4934	5001	4736
OAS	4465	4272	4662	4855	4683	4730	4234
REF	4676	4607	4602	4661	4395	3922	3606
SSA	6154	6043	6152	6288	7063	6811	6377
USA	7333	7778	7808	8324	7848	8046	7221

Table 1014: MAgPIE m4p_SSP5 — Prices—Agriculture—Eggs (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	2832	2846	2893	2949	2947	2926	2920	2928	2954	2951	2933
CAZ	4798	4799	4806	4794	4819	4840	4837	4853	4842	4836	4855
CHA	4018	4013	4008	4000	3968	3965	3991	3957	3934	3930	3965
EUR	3566	3587	3646	3659	3684	3711	3708	3703	3698	3704	3711
IND	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790
JPN	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869
LAM	2580	2628	2625	2631	2628	2631	2629	2626	2641	2631	2659
MEA	2832	2805	2807	2817	2793	2852	2829	2805	2774	2799	2786
NEU	5138	5157	5030	4972	5129	4962	4941	4875	4740	4619	4600
OAS	2878	2888	2911	2908	2917	2890	2896	2963	3147	3126	3171
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3087	3097	3131	3134	3204	3215	3216	3233	3278	3247	3256
USA	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902

Table 1015: FAO — Prices—Agriculture—Eggs (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	2931	2910	2891	2900	2928	2908	2897	2882	2863	2862	2880
CAZ	4882	4879	4868	4887	4885	4882	4894	4880	4852	4871	4871
CHA	3942	3969	3952	3954	3948	3906	3951	3888	3893	3900	3907
EUR	3729	3712	3721	3746	3768	3751	3735	3740	3700	3711	3709
IND	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790
JPN	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869
LAM	2668	2704	2682	2682	2692	2700	2711	2690	2621	2647	2658
MEA	2779	2777	2758	2710	2693	2684	2589	2558	2544	2562	2633
NEU	4657	4589	4383	4442	4442	4467	4516	4482	4409	4442	4441
OAS	3207	3198	3250	3271	3261	3351	3324	3334	3413	3396	3397
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3250	3284	3306	3322	3234	3317	3361	3388	3396	3417	3480
USA	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902

Table 1016: FAO — Prices—Agriculture—Eggs (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	2880	2909	2932	2923	2932	2978	2972	3007	3051	3446	3496
CAZ	4866	4864	4845	4845	4829	4824	4842	4891	4849	4813	4815
CHA	3866	3904	3935	3941	3941	3967	3961	3966	3986	3979	3988
EUR	3720	3713	3695	3707	3693	3736	3719	3718	3714	3799	3928
IND	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790
JPN	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869
LAM	2647	2604	2597	2577	2580	2600	2563	2542	2538	2562	2590
MEA	2703	2745	2774	2742	2835	2867	2792	2851	2960	2869	2844
NEU	4501	4510	4520	4495	4490	4626	4573	4559	4697	5804	5739
OAS	3407	3409	3393	3422	3436	3477	3472	3434	3444	3485	3521
REF	0	0	0	0	0	0	0	0	0	3058	3056
SSA	3527	3558	3572	3637	3678	3645	3608	3765	3773	3800	4065
USA	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902

Table 1017: FAO — Prices—Agriculture—Eggs (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	3524	3549	3594	3364	3365	3354	3346	3340	3334	3346	3325
CAZ	4757	4747	4739	4737	4752	4739	4712	4698	4694	4678	4699
CHA	4003	4005	4058	3496	3499	3502	3504	3504	3487	3510	3511
EUR	3900	3904	3908	3894	3864	3887	3957	3966	4000	4054	3986
IND	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790
JPN	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869	4869
LAM	2598	2605	2639	2637	2662	2646	2641	2670	2635	2631	2616
MEA	2843	2889	2803	2845	2854	2773	2766	2765	2844	2839	2759
NEU	5743	5696	5710	5683	5688	5691	5690	5731	5739	5725	5732
OAS	3518	3547	3512	3505	3408	3405	3398	3431	3410	3378	3415
REF	3073	3077	3084	3092	3092	3092	3109	3112	3097	3099	3083
SSA	4092	4052	4019	3979	4103	4106	4094	4096	4087	4098	4103
USA	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902

Table 1018: FAO — Prices—Agriculture—Eggs (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	3324	3312	3321	3321	3308	3286	3283
CAZ	4697	4750	4728	4720	4714	4728	4767
CHA	3517	3515	3516	3521	3522	3513	3522
EUR	4019	4019	4019	3998	4012	3944	3983
IND	1790	1790	1790	1790	1790	1790	1790
JPN	4869	4869	4869	4869	4869	4869	4869
LAM	2627	2626	2615	2607	2581	2570	2561
MEA	2796	2780	2855	2900	2819	2911	2875
NEU	5721	5709	5698	5721	5734	5755	5739
OAS	3366	3408	3416	3368	3335	3285	3227
REF	3083	3043	3070	3052	3042	3023	2998
SSA	4120	4132	4149	4133	4148	4155	4173
USA	1902	1902	1902	1902	1902	1902	1902

Table 1019: FAO — Prices—Agriculture—Eggs (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	1213	1311	1499	1551	1694	1849	1637	1441	3399	3333
CAZ	0	2912	2763	2620	2639	2429	2748	2114	1962	1929	1800
CHA	0	1179	1423	1303	1019	1179	1359	1055	993	6215	6286
EUR	0	1363	1491	1487	1490	1501	1783	1581	1644	1427	1544
IND	0	696	611	519	854	1022	718	933	0	0	0
JPN	0	2314	1786	2013	2290	2714	2648	2372	1833	2414	2525
LAM	0	1160	1309	1662	2062	1924	2169	2111	1737	1390	1423
MEA	0	393	698	649	785	969	987	1027	1030	1070	962
NEU	0	2095	2861	2433	1947	2540	2762	2472	2194	1674	1810
OAS	0	1388	1435	3149	3021	3262	3224	2751	1681	2313	1072
REF	0	0	78	355	1423	1605	2322	2294	1652	1258	1207
SSA	0	1962	2296	2716	3728	5580	6284	6073	7691	2346	2137
USA	0	1472	1255	1381	1339	1362	1404	1283	1148	988	975

Table 1020: FAOp — Prices—Agriculture—Eggs (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	3054	2992	1123	1249	1251	1240	1508	1751	1647	1680	1973
CAZ	1732	1797	2026	2108	2042	2125	2431	2742	2603	2769	3422
CHA	5765	5662	784	987	1030	976	1290	1447	1477	1535	2056
EUR	1482	1538	2040	2013	1910	2064	2315	2574	2540	2210	2381
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	1990	1991	1865	2319	2699	2285	2168	2835	2768	3200	3725
LAM	1359	1063	1170	1245	1291	1228	1422	1757	1612	1792	1922
MEA	868	1194	912	803	803	979	921	1262	1134	1087	1189
NEU	1518	2063	2359	2630	2815	2956	3534	3810	3519	2523	2940
OAS	1090	1038	1077	1197	1351	1409	1358	1484	1526	1729	1592
REF	1395	1306	1365	1683	1816	1714	1912	2454	1869	1942	2148
SSA	1393	1473	831	950	967	1038	1207	1131	1029	1137	1207
USA	993	898	1255	1218	758	878	1862	2385	1782	1867	2082

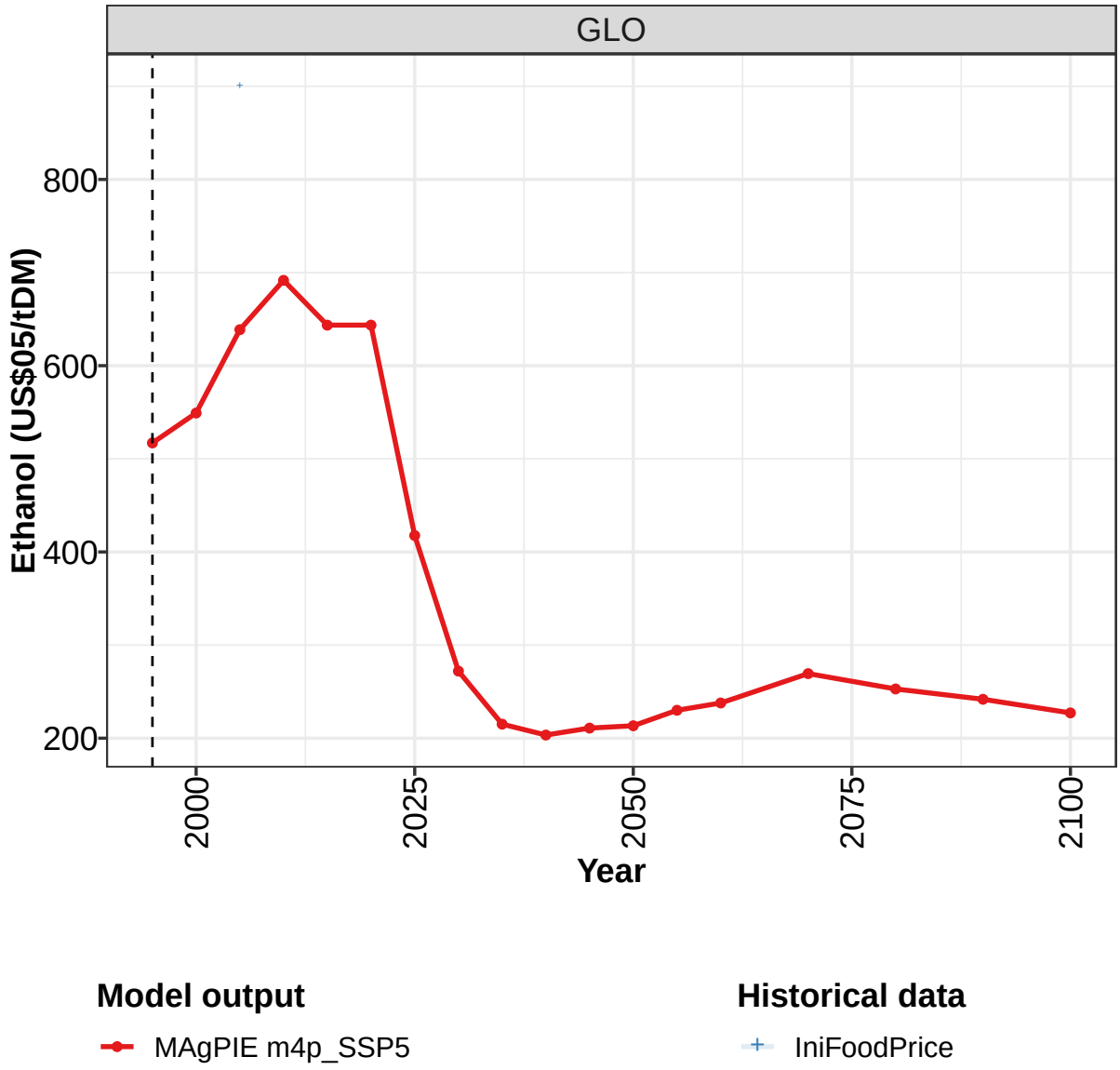
Table 1021: FAOp — Prices—Agriculture—Eggs (US$05/tDM) [PART 2/3]

	2005
GLO	10291
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1022: IniFoodPrice — Prices—Agriculture—Eggs (US$05/tDM)

36.8 Ethanol

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



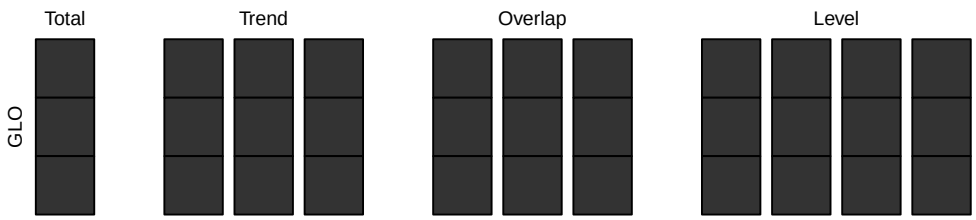


Figure 298: MAgPIE m4p_SSP5 — Prices—Agriculture—Ethanol (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	517	549	639	692	644	644	418	272	215	203	211

Table 1023: MAgPIE m4p_SSP5 — Prices—Agriculture—Ethanol (US$05/tDM) [PART 1/2]

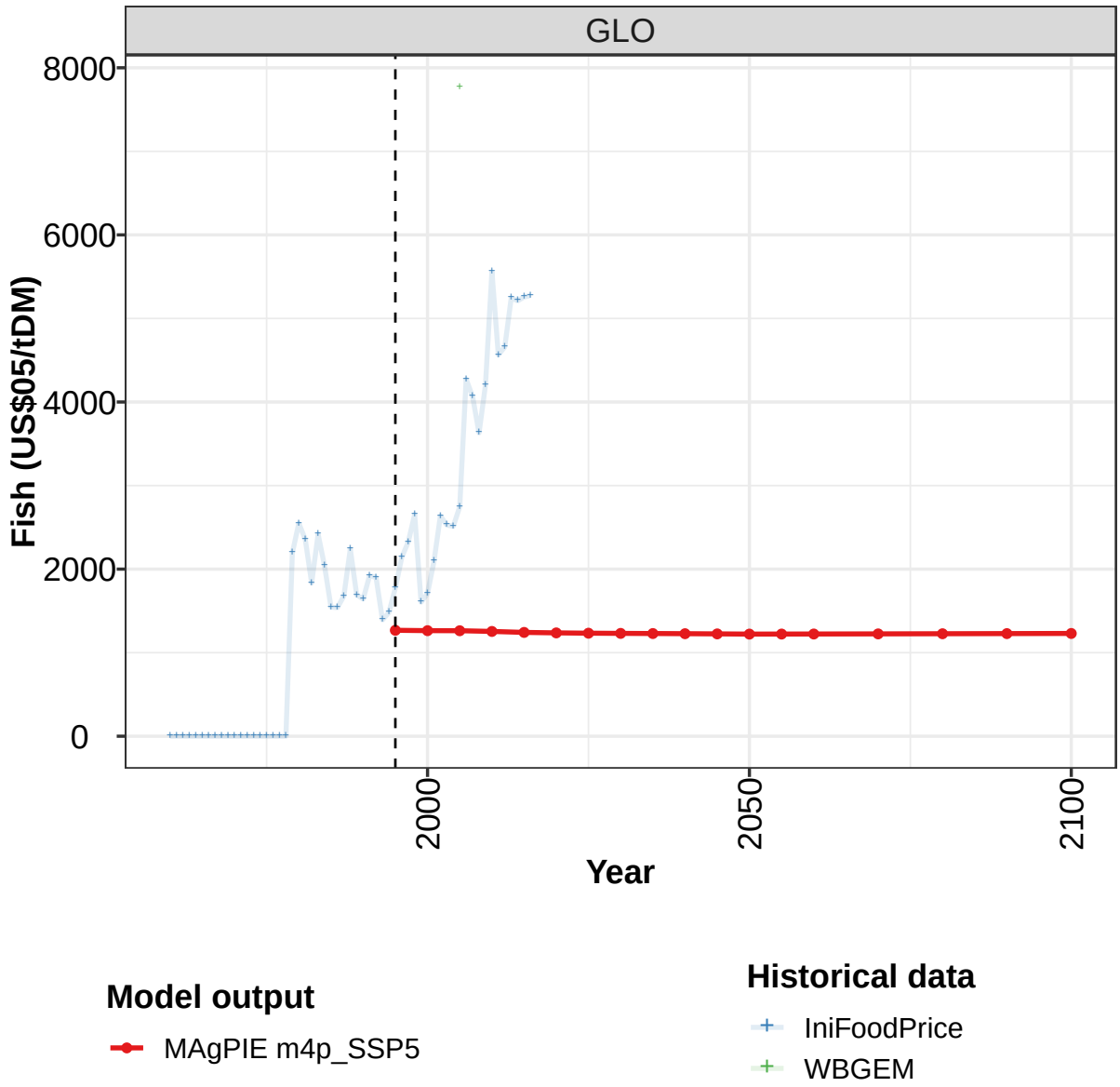
	2050	2055	2060	2070	2080	2090	2100
GLO	213	230	238	269	253	242	227

Table 1024: MAgPIE m4p_SSP5 — Prices—Agriculture—Ethanol (US$05/tDM) [PART 2/2]

	2005
GLO	900

Table 1025: IniFoodPrice — Prices—Agriculture—Ethanol (US$05/tDM)

36.9 Fish



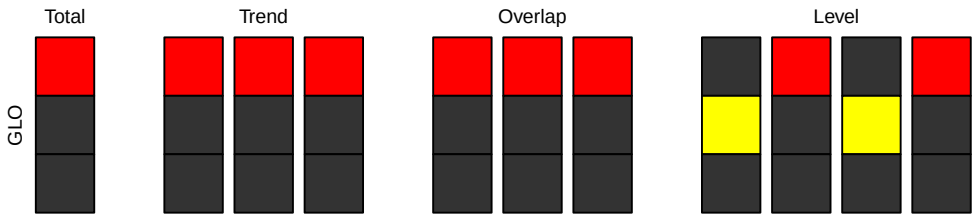


Figure 299: MAgPIE m4p_SSP5 — Prices—Agriculture—Fish (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1268	1263	1263	1254	1242	1237	1233	1231	1229	1227	1225

Table 1026: MAgPIE m4p_SSP5 — Prices—Agriculture—Fish (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1222	1223	1223	1225	1226	1228	1230

Table 1027: MAgPIE m4p_SSP5 — Prices—Agriculture—Fish (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	0	0	0	0	0	0	0	0	0	0	0

Table 1028: WBGEM — Prices—Agriculture—Fish (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	0	0	0	0	0	0	0	0	2194	2548	2358

Table 1029: WBGEM — Prices—Agriculture—Fish (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	1835	2417	2038	1546	1538	1679	2239	1689	1642	1922	1901

Table 1030: WBGEM — Prices—Agriculture—Fish (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	1392	1481	1774	2141	2324	2654	1604	1710	2094	2637	2527

Table 1031: WBGEM — Prices—Agriculture—Fish (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	2513	2745	4273	4064	3630	4201	5559	4564	4659	5245	5211

Table 1032: WBGEM — Prices—Agriculture—Fish (US$05/tDM) [PART 5/6]

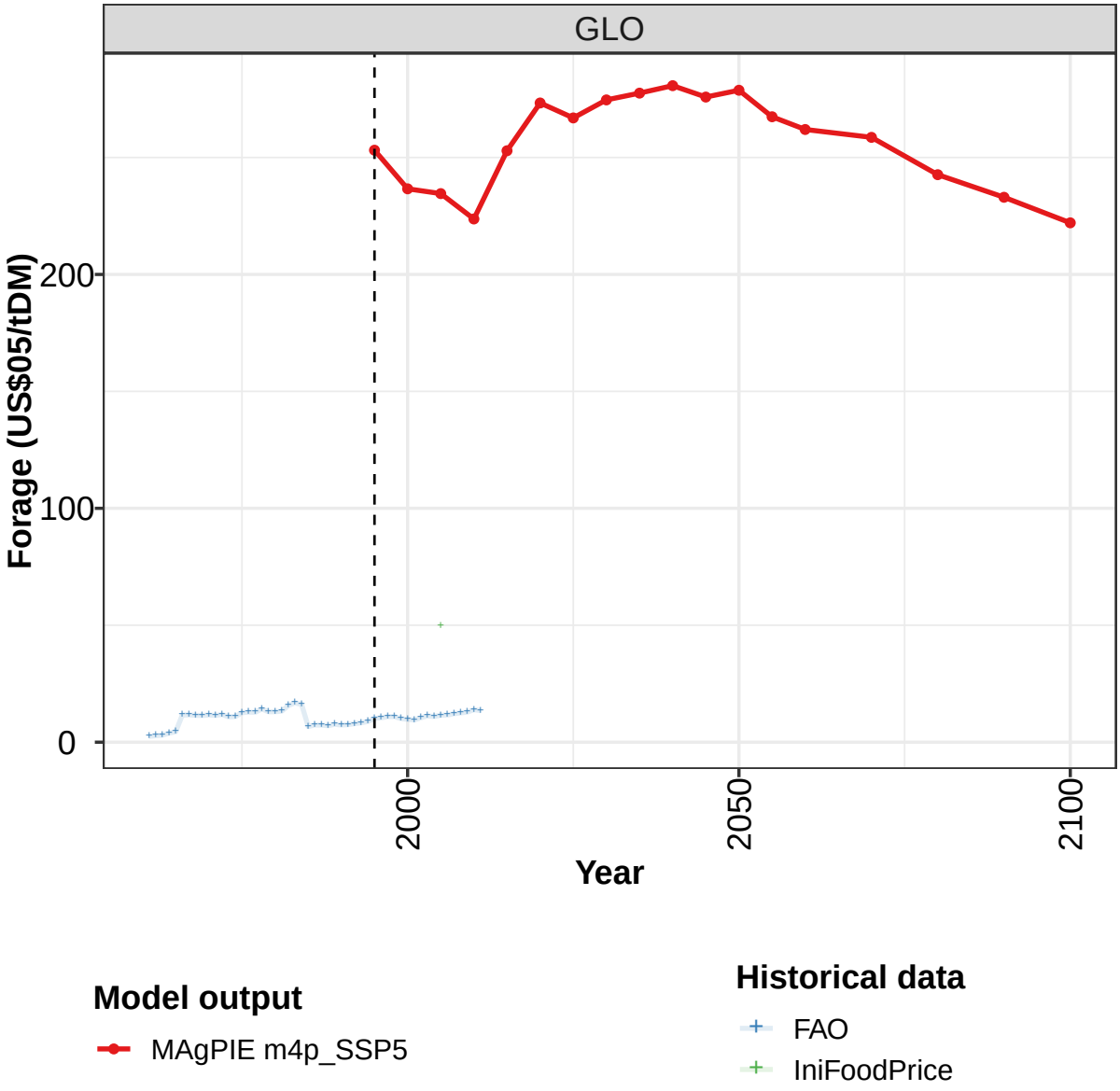
	2015	2016
GLO	5256	5275

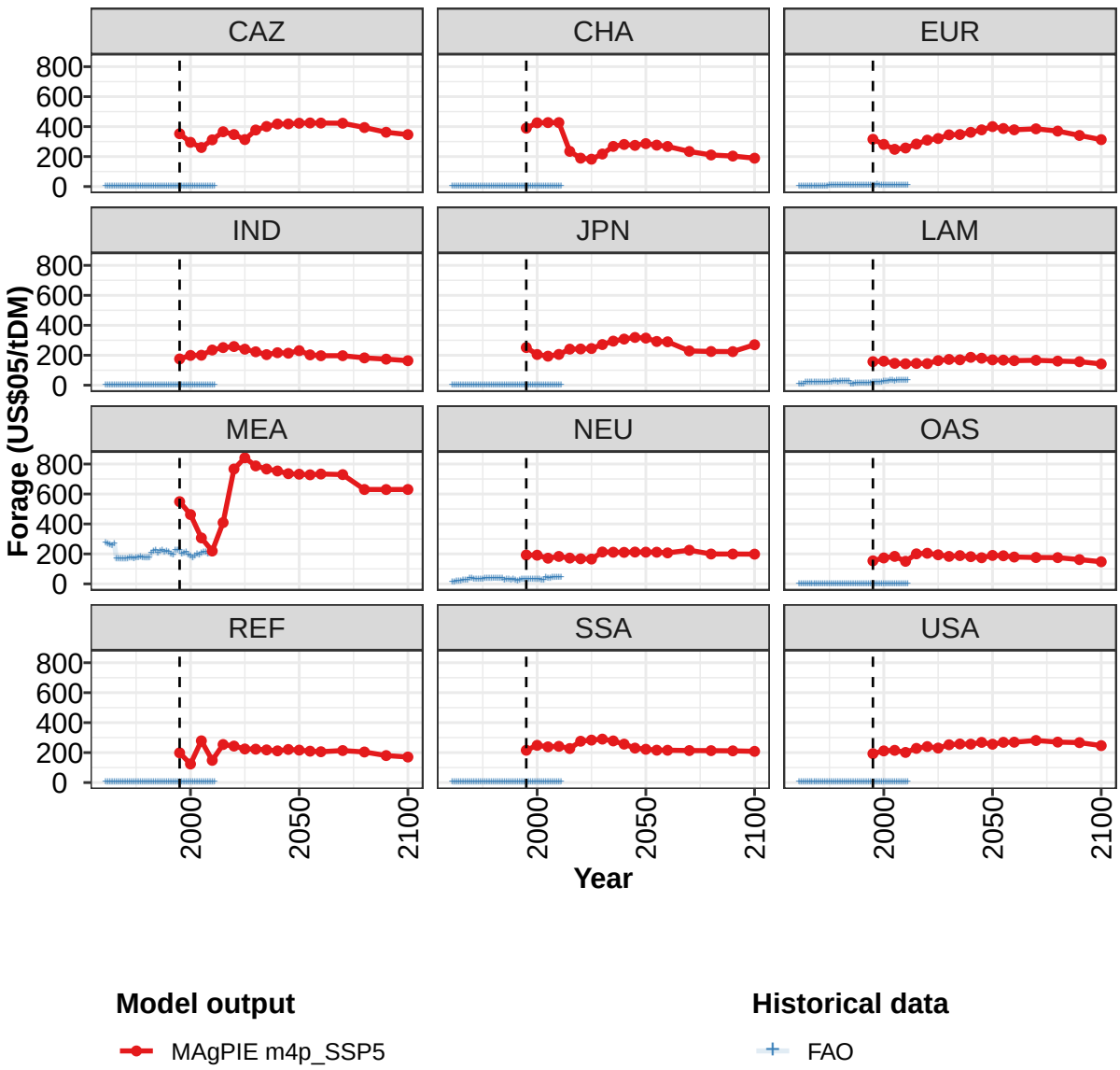
Table 1033: WBGEM — Prices—Agriculture—Fish (US$05/tDM) [PART 6/6]

	2005
GLO	7766

Table 1034: IniFoodPrice — Prices—Agriculture—Fish (US$05/tDM)

36.10 Forage





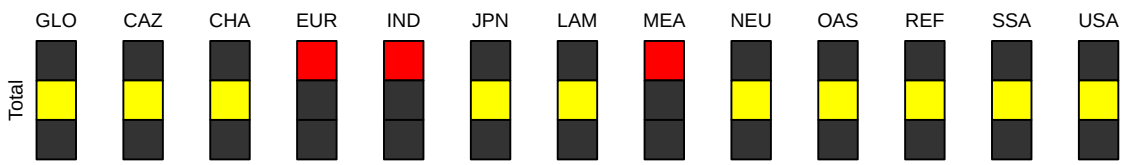


Figure 300: MAgPIE m4p_SSP5 — Prices—Agriculture—Forage (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	253	237	235	224	253	273	267	275	278	281	276
CAZ	353	295	260	312	366	347	313	377	401	418	418
CHA	389	425	427	427	235	189	182	217	268	281	275
EUR	315	281	248	257	283	310	321	345	347	362	378
IND	175	199	200	235	251	258	240	223	204	217	214
JPN	251	205	194	206	241	242	245	271	294	308	319
LAM	157	161	146	143	146	144	164	172	170	186	180
MEA	549	463	307	219	409	767	841	788	767	754	736
NEU	193	192	172	183	172	168	166	213	211	211	213
OAS	154	173	184	151	201	204	194	184	189	182	175
REF	199	124	279	148	254	244	224	223	218	212	221
SSA	216	248	239	242	227	276	283	290	278	257	230
USA	193	211	215	201	228	240	230	253	258	257	268

Table 1035: MAgPIE m4p_SSP5 — Prices—Agriculture—Forage (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	279	267	262	259	243	233	222
CAZ	423	424	424	422	394	362	347
CHA	286	276	268	234	211	203	189
EUR	400	387	379	385	370	341	313
IND	231	203	197	197	182	174	164
JPN	314	292	290	229	225	224	270
LAM	169	167	164	166	161	157	142
MEA	732	728	733	730	630	630	630
NEU	212	212	207	225	199	199	199
OAS	190	188	179	176	175	162	148
REF	217	210	206	214	204	180	171
SSA	222	216	216	214	213	212	208
USA	256	269	270	281	270	267	247

Table 1036: MAgPIE m4p_SSP5 — Prices—Agriculture—Forage (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	2	3	3	4	4	12	12	11	11	12	11
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	6	7	15	19	16	18	16	15	18	17
MEA	269	264	257	254	266	164	165	163	163	163	165
NEU	8	12	14	15	19	23	24	24	36	37	29
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1037: FAO — Prices—Agriculture—Forage (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	12	11	11	13	13	13	14	13	13	13	16
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	7	6	7	7	7	8	9	9
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	18	18	19	20	20	22	22	20	24	21	23
MEA	174	170	168	174	175	179	174	172	171	173	204
NEU	29	29	29	31	33	33	33	33	37	37	35
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1038: FAO — Prices—Agriculture—Forage (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	17	16	7	7	7	7	8	7	7	8	8
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	9	8	5	7	6	7	8	7	7	9	9
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	24	25	7	8	9	9	12	14	13	11	12
MEA	217	223	202	215	220	209	216	209	195	192	220
NEU	34	35	25	26	26	23	28	22	19	25	26
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1039: FAO — Prices—Agriculture—Forage (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	9	10	10	11	11	10	10	10	10	11	11
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	8	7	8	10	8	9	7	7	8	8	8
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	14	18	18	17	18	18	22	24	26	27	27
MEA	224	224	198	201	207	191	187	172	186	194	189
NEU	28	28	26	27	26	26	27	25	24	24	40
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1040: FAO — Prices—Agriculture—Forage (US$05/tDM) [PART 4/5]

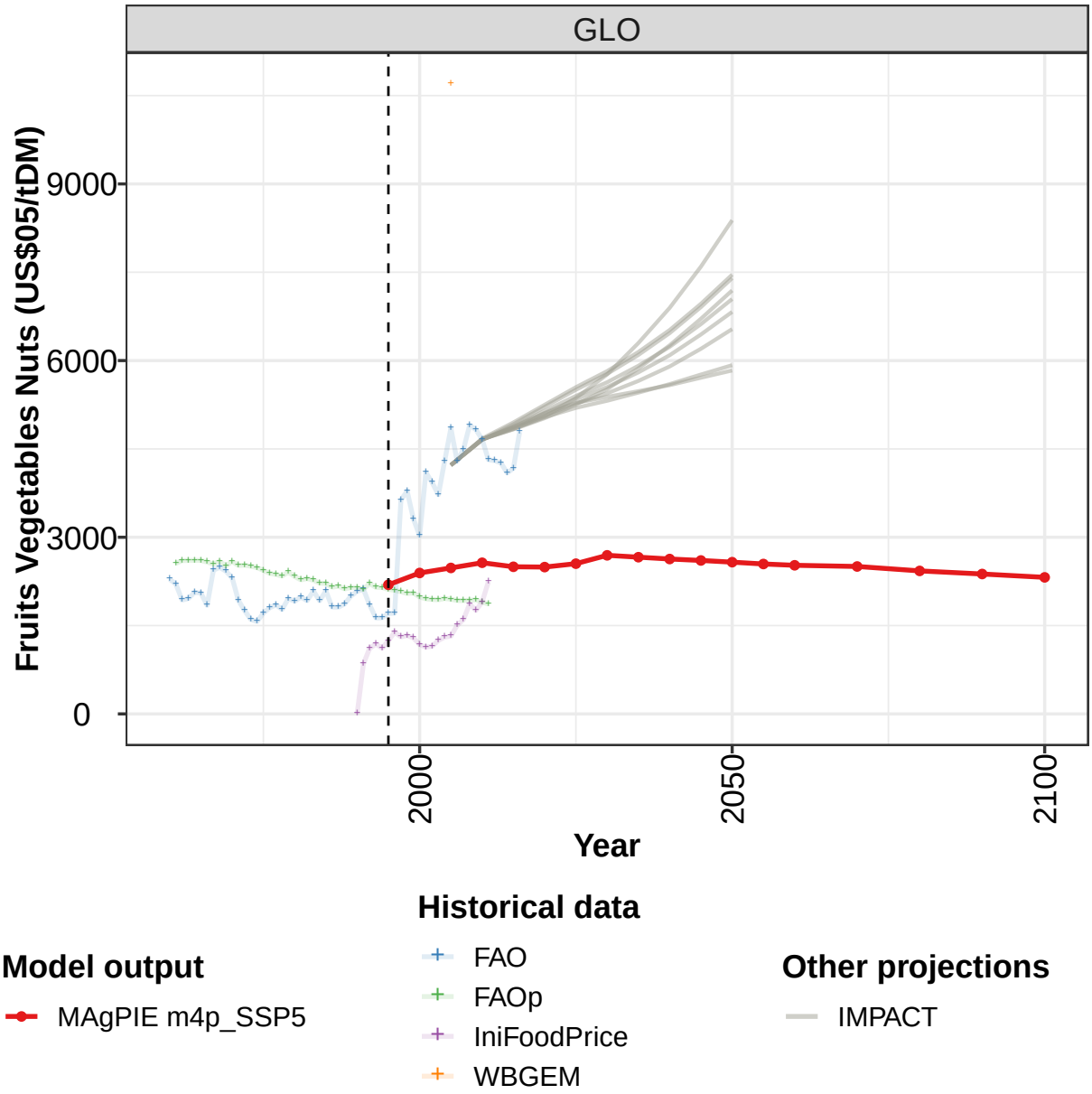
	2005	2006	2007	2008	2009	2010	2011
GLO	12	12	12	13	13	14	14
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	8	7	8	9	8	8	7
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	26	28	28	30	28	29	28
MEA	201	207	208	198	207	214	215
NEU	36	33	41	42	43	44	43
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

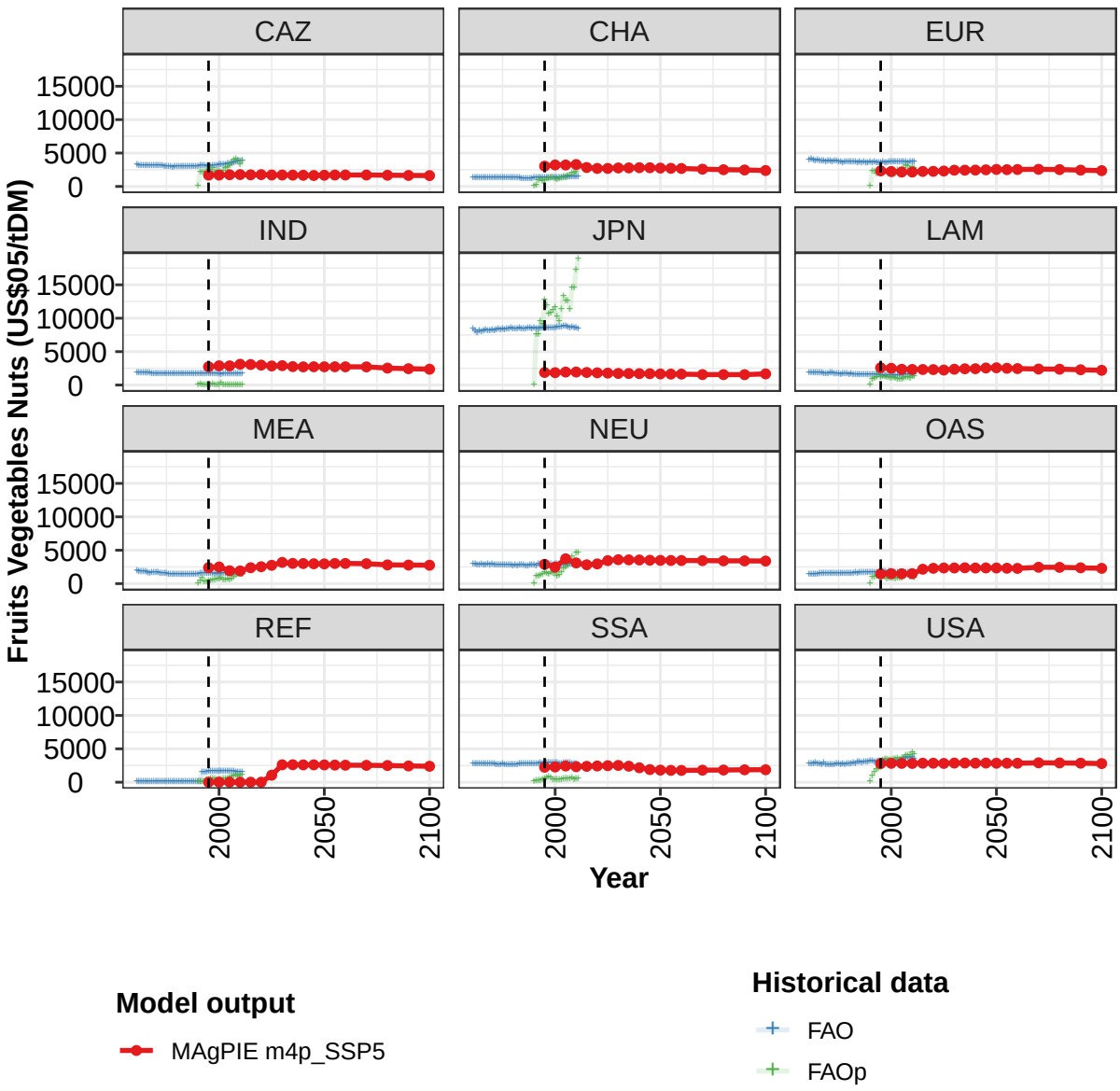
Table 1041: FAO — Prices—Agriculture—Forage (US$05/tDM) [PART 5/5]

	2005
GLO	50
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1042: IniFoodPrice — Prices—Agriculture—Forage (US$05/tDM)

36.11 Fruits Vegetables Nuts





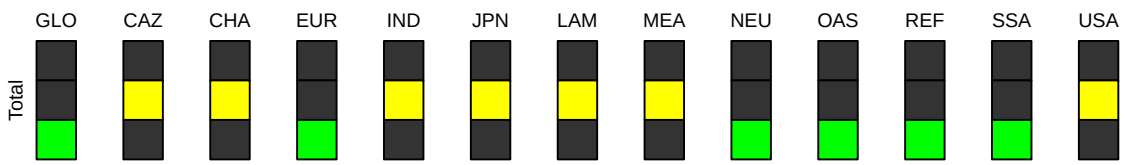


Figure 301: MAgPIE m4p_SSP5 — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2192	2393	2479	2567	2498	2493	2551	2693	2661	2630	2606
CAZ	1699	1705	1750	1772	1736	1768	1718	1713	1695	1672	1643
CHA	3040	3213	3214	3281	2836	2698	2700	2768	2780	2806	2798
EUR	2329	2237	2154	2154	2247	2262	2308	2433	2438	2448	2491
IND	2735	2882	2876	3113	3070	2980	2857	2902	2762	2723	2741
JPN	1880	1851	1945	1948	1879	1830	1783	1737	1728	1706	1697
LAM	2588	2503	2362	2334	2327	2312	2244	2370	2433	2438	2552
MEA	2387	2494	1932	1902	2380	2529	2742	3183	3034	3007	2973
NEU	2889	2477	3715	3092	2823	2952	3447	3589	3559	3540	3501
OAS	1456	1489	1476	1498	2160	2293	2345	2346	2371	2339	2353
REF	9	9	9	9	9	9	1056	2612	2619	2598	2604
SSA	2239	2287	2428	2327	2381	2434	2478	2515	2398	2162	1897
USA	2786	2833	2826	2813	2850	2851	2818	2872	2878	2856	2877

Table 1043: MAgPIE m4p_SSP5 — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2577	2546	2524	2504	2428	2376	2319
CAZ	1681	1714	1711	1712	1680	1650	1627
CHA	2749	2712	2686	2586	2509	2466	2385
EUR	2549	2516	2540	2564	2521	2441	2366
IND	2732	2736	2729	2720	2533	2448	2373
JPN	1665	1639	1636	1568	1561	1554	1670
LAM	2583	2507	2462	2395	2374	2286	2204
MEA	2956	3019	3020	2986	2805	2780	2758
NEU	3480	3468	3460	3445	3415	3405	3380
OAS	2343	2306	2281	2451	2436	2370	2292
REF	2592	2568	2553	2531	2500	2435	2392
SSA	1814	1777	1772	1804	1828	1861	1870
USA	2851	2852	2844	2907	2891	2855	2795

Table 1044: MAgPIE m4p_SSP5 — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	2288	2204	1933	1959	2064	2052	1843	2440	2488	2424	2311
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1045: WBGEM — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	1928	1755	1601	1569	1712	1800	1852	1774	1960	1914	1984
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1046: WBGEM — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	1923	2088	1921	2088	1813	1812	1867	2000	2081	2117	1851
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1047: WBGEM — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	1628	1632	1706	1711	3632	3784	3312	3026	4101	3930	3722
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1048: WBGEM — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	4294	4851	4291	4491	4901	4828	4662	4316	4300	4263	4093
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1049: WBGEM — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 5/6]

	2015	2016
GLO	4170	4788
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1050: WBGEM — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	2556	2603	2606	2607	2607	2579	2546	2590	2513	2588	2520
CAZ	3160	3053	3126	3129	3018	3083	3054	3030	3048	3053	3088
CHA	1308	1254	1280	1294	1292	1290	1287	1273	1278	1275	1259
EUR	3876	4000	3864	3835	3919	3773	3756	3816	3653	3831	3763
IND	1788	1774	1769	1757	1732	1728	1731	1715	1707	1713	1711
JPN	8312	8009	7733	8134	7981	8034	8193	8070	8096	8172	8101
LAM	1846	1827	1803	1750	1804	1742	1767	1705	1705	1705	1738
MEA	1847	1716	1729	1693	1736	1554	1524	1629	1553	1583	1606
NEU	2808	2850	2779	2799	2814	2781	2787	2822	2679	2858	2781
OAS	1343	1375	1373	1400	1404	1426	1420	1448	1452	1459	1456
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	2712	2672	2710	2728	2697	2697	2645	2653	2659	2726	2709
USA	2689	2659	2746	2785	2709	2664	2590	2797	2616	2596	2627

Table 1051: FAO — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	2527	2508	2484	2437	2388	2368	2342	2409	2332	2276	2300
CAZ	3074	3077	2981	2966	2919	2905	2847	2902	2925	2901	2905
CHA	1295	1300	1295	1284	1283	1271	1263	1257	1256	1249	1234
EUR	3694	3755	3749	3636	3674	3554	3587	3700	3631	3566	3608
IND	1695	1702	1693	1691	1683	1682	1685	1690	1693	1687	1691
JPN	8166	8294	8195	8321	8242	8302	8378	8464	8348	8319	8357
LAM	1717	1616	1680	1636	1568	1628	1651	1655	1562	1589	1558
MEA	1508	1535	1498	1428	1366	1342	1343	1361	1309	1314	1279
NEU	2760	2766	2739	2773	2686	2717	2729	2681	2641	2676	2656
OAS	1487	1490	1489	1439	1457	1514	1470	1542	1468	1481	1496
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	2632	2630	2574	2642	2616	2599	2573	2620	2620	2599	2596
USA	2599	2618	2681	2717	2625	2688	2613	2767	2638	2710	2849

Table 1052: FAO — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	2270	2222	2215	2153	2168	2123	2147	2145	2116	2213	2149
CAZ	2934	2891	2978	2994	2984	2995	2949	2939	3024	3035	3037
CHA	1219	1177	1167	1126	1142	1138	1152	1192	1225	1213	1223
EUR	3593	3554	3592	3522	3592	3455	3529	3566	3470	3569	3529
IND	1692	1685	1701	1697	1691	1651	1677	1668	1651	1670	1641
JPN	8446	8329	8357	8332	8431	8440	8368	8501	8403	8407	8461
LAM	1558	1535	1523	1509	1527	1494	1451	1462	1456	1450	1444
MEA	1305	1305	1278	1285	1310	1343	1397	1341	1444	1414	1462
NEU	2732	2702	2666	2631	2618	2721	2775	2702	2620	2917	2884
OAS	1557	1498	1554	1568	1583	1617	1634	1611	1645	1668	1647
REF	0	0	0	0	0	0	0	0	0	1406	1443
SSA	2666	2685	2697	2673	2667	2720	2731	2696	2684	2679	2776
USA	2764	3020	2974	2909	3022	2994	2988	3156	3122	3007	2947

Table 1053: FAO — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	2147	2114	2100	2075	2044	2054	1986	1954	1943	1938	1959
CAZ	2988	2988	2983	3072	3098	3109	3166	3227	3246	3277	3282
CHA	1256	1284	1291	1290	1315	1316	1248	1244	1256	1290	1325
EUR	3539	3558	3584	3551	3546	3586	3694	3634	3682	3591	3580
IND	1683	1672	1699	1700	1616	1597	1598	1576	1604	1602	1657
JPN	8480	8411	8443	8529	8466	8471	8524	8568	8585	8639	8719
LAM	1469	1430	1404	1379	1430	1389	1380	1432	1409	1416	1405
MEA	1446	1447	1446	1462	1399	1425	1381	1459	1443	1495	1483
NEU	2893	2812	2810	2830	2807	2770	2807	2806	2757	2780	2704
OAS	1659	1753	1723	1710	1682	1728	1699	1674	1678	1672	1673
REF	1481	1531	1545	1519	1586	1562	1613	1604	1638	1603	1597
SSA	2769	2779	2777	2803	2831	2832	2856	2818	2770	2768	2842
USA	3055	2926	2957	2959	2842	3195	3021	3040	3179	3158	3207

Table 1054: FAO — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	1948	1927	1924	1932	1936	1898	1867
CAZ	3385	3410	3544	3570	3706	3734	3829
CHA	1338	1341	1365	1412	1426	1408	1423
EUR	3616	3597	3578	3528	3594	3579	3605
IND	1617	1601	1593	1604	1602	1581	1580
JPN	8738	8571	8552	8625	8512	8510	8412
LAM	1420	1451	1444	1462	1445	1459	1472
MEA	1482	1513	1499	1569	1568	1557	1366
NEU	2799	2837	2822	2882	2840	2877	2823
OAS	1671	1642	1648	1633	1603	1553	1537
REF	1615	1556	1530	1452	1458	1423	1385
SSA	2824	2787	2783	2769	2731	2656	2618
USA	3305	3368	3636	3562	3610	3737	3452

Table 1055: FAO — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	848	1112	1187	1117	1242	1387	1308	1332	1291	1178
CAZ	0	2083	2075	2030	2135	2313	2310	2595	2111	2265	2203
CHA	0	100	870	1085	735	807	1164	1057	1258	1260	1055
EUR	0	2264	2191	1880	2015	2286	2198	2143	2125	1871	1688
IND	0	131	29	30	32	31	37	38	34	30	29
JPN	0	7476	7502	9520	8980	12627	11838	10565	10749	11113	11550
LAM	0	864	964	1096	1775	1085	1194	1184	1142	1031	1009
MEA	0	341	758	247	284	401	418	459	533	643	701
NEU	0	1128	1116	1212	1269	1586	1494	1403	1676	1441	1454
OAS	0	874	950	1034	994	1132	1095	895	705	750	801
REF	0	0	19	99	311	271	406	523	479	380	334
SSA	2	131	144	176	295	456	613	699	616	310	265
USA	0	874	1386	1929	2062	2213	3280	3395	3413	3312	3261

Table 1056: FAOp — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 1/3]

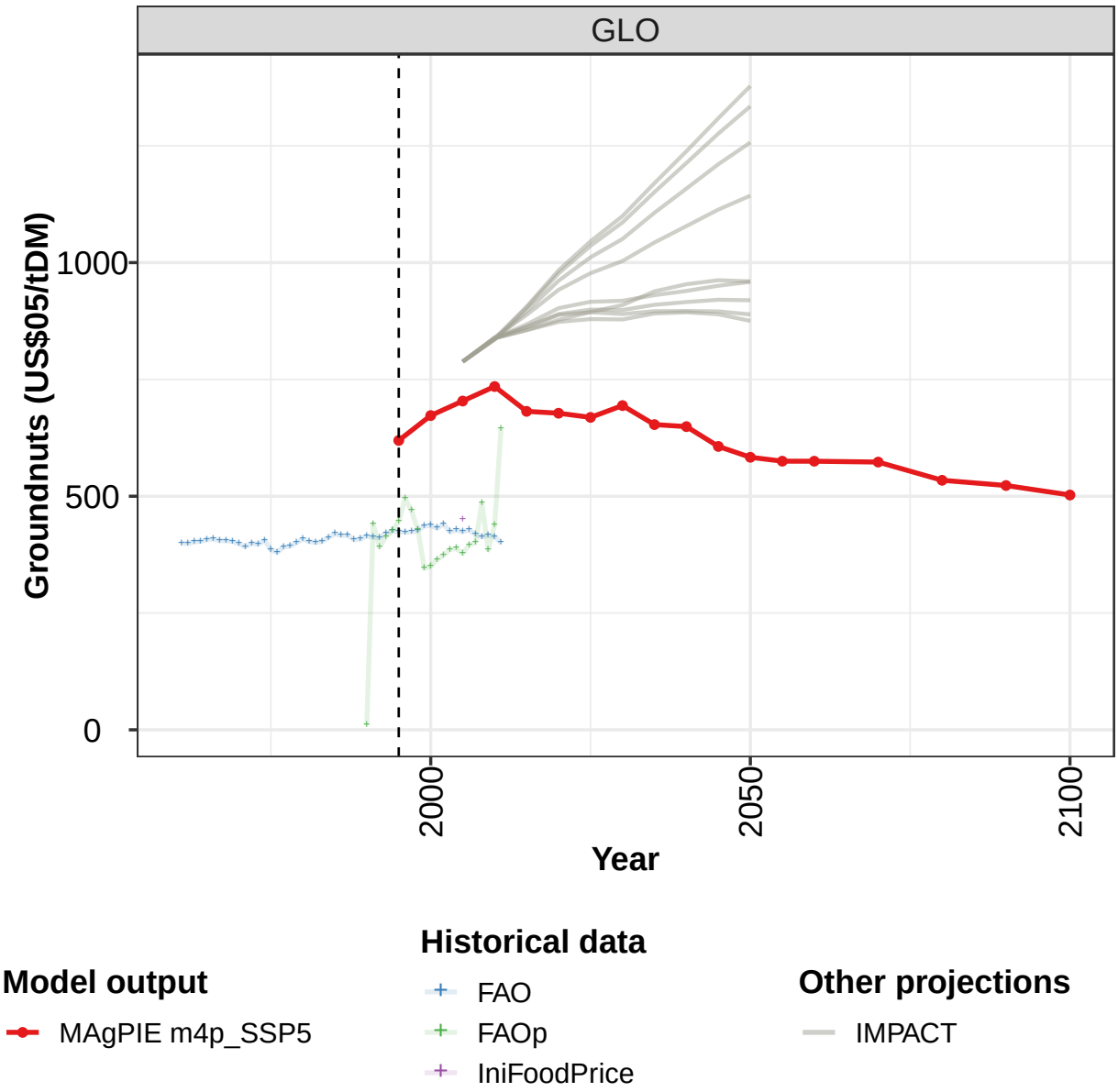
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	1133	1150	1247	1304	1320	1505	1601	1867	1757	1901	2245
CAZ	2146	2247	2699	2758	3027	3442	3941	4023	3796	3242	3770
CHA	1011	1129	1186	1206	1224	1470	1571	1993	1909	2050	2744
EUR	1724	1809	2379	2364	2541	2664	3088	2965	2575	2735	2713
IND	210	4	6	8	7	8	0	0	0	0	0
JPN	10151	9511	11282	13285	12554	12582	11323	14460	14496	17195	18859
LAM	1034	936	817	841	856	916	1031	1094	1011	1271	1290
MEA	777	559	558	590	564	696	987	1256	1303	1316	1371
NEU	1083	1235	1641	2128	2469	2662	3297	3935	3406	4556	4619
OAS	756	681	755	741	725	1345	1161	1131	975	1104	708
REF	371	411	462	539	581	705	891	960	741	842	1026
SSA	270	291	370	404	431	476	493	570	390	451	488
USA	3393	3400	3541	3310	3486	3494	3983	3988	4007	4343	4106

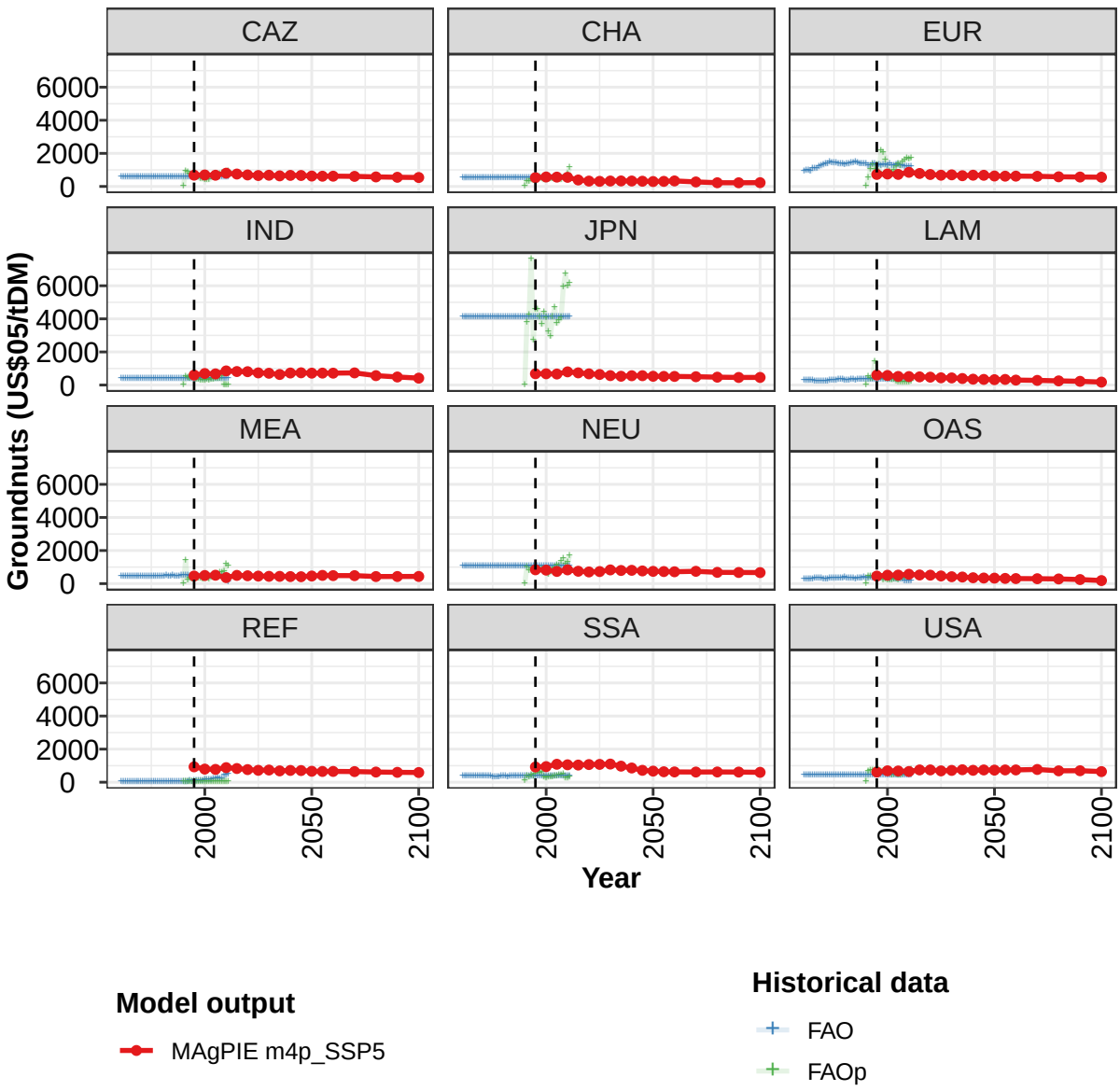
Table 1057: FAOp — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM) [PART 2/3]

	2005
GLO	10696
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1058: IniFoodPrice — Prices—Agriculture—Fruits Vegetables Nuts (US$05/tDM)

36.12 Groundnuts





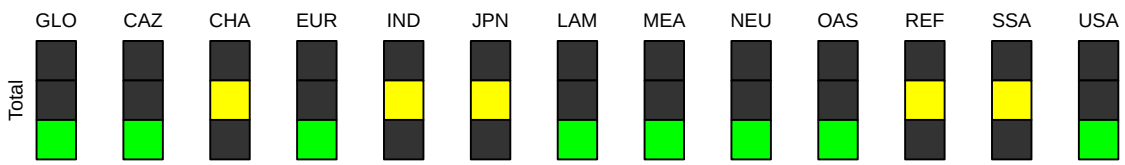


Figure 302: MAgPIE m4p_SSP5 — Prices—Agriculture—Groundnuts (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	619	673	704	735	682	678	669	694	653	649	607
CAZ	682	695	679	803	751	696	661	679	641	668	663
CHA	533	572	565	552	390	325	309	329	333	329	316
EUR	728	752	730	853	785	721	681	702	650	681	675
IND	604	697	676	854	817	809	734	714	638	728	740
JPN	684	682	668	799	736	677	640	570	533	562	565
LAM	604	577	519	512	495	478	439	432	395	355	341
MEA	460	492	508	365	499	475	457	441	440	428	419
NEU	837	817	738	832	749	707	730	830	796	805	769
OAS	455	509	517	563	523	512	464	418	400	357	340
REF	931	794	776	882	829	764	720	738	686	713	706
SSA	922	943	1086	1055	1039	1070	1079	1098	972	860	719
USA	616	691	680	649	743	746	686	716	756	721	742

Table 1059: MAgPIE m4p_SSP5 — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	583	575	575	573	534	523	503
CAZ	629	619	621	610	577	555	541
CHA	297	307	333	272	224	223	230
EUR	633	622	624	612	584	569	557
IND	719	721	719	734	568	487	417
JPN	531	522	520	503	476	459	460
LAM	325	339	299	282	251	224	178
MEA	460	498	485	483	429	432	434
NEU	742	731	717	745	681	674	668
OAS	332	317	306	298	283	247	186
REF	664	652	654	643	615	599	588
SSA	672	633	622	616	620	614	598
USA	732	744	744	771	689	695	643

Table 1060: MAgPIE m4p_SSP5 — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	399	398	402	404	407	408	405	405	403	398	392
CAZ	543	544	544	544	543	543	543	544	543	543	543
CHA	481	487	497	496	497	504	498	501	502	501	507
EUR	899	974	953	915	1084	1058	1073	1170	1219	1271	1354
IND	359	359	359	359	359	359	359	359	359	359	359
JPN	4082	4082	4082	4082	4082	4082	4082	4082	4082	4082	4082
LAM	246	254	248	278	243	231	233	229	227	219	236
MEA	427	421	419	409	418	412	410	408	409	425	424
NEU	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
OAS	265	262	245	281	282	317	320	308	295	284	269
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	361	366	371	369	374	367	366	373	374	367	359
USA	421	421	421	421	421	421	421	421	421	421	421

Table 1061: FAO — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	399	397	406	385	380	392	393	400	408	403	401
CAZ	543	543	543	543	543	543	544	543	543	543	543
CHA	506	506	509	509	505	509	509	513	517	518	518
EUR	1360	1456	1431	1401	1395	1358	1327	1344	1323	1341	1349
IND	359	359	359	359	359	359	359	359	359	359	359
JPN	4082	4082	4082	4082	4082	4082	4082	4082	4082	4082	4082
LAM	222	271	290	291	265	322	327	297	268	284	288
MEA	412	407	411	417	418	412	425	421	428	438	457
NEU	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
OAS	274	298	300	308	306	320	318	335	346	325	298
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	365	346	376	316	305	325	330	332	348	337	325
USA	421	421	421	421	421	421	421	421	421	421	421

Table 1062: FAO — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	403	412	420	416	417	407	408	415	412	411	421
CAZ	543	543	543	543	543	543	543	543	543	544	543
CHA	521	520	522	522	520	521	523	524	522	522	524
EUR	1391	1435	1490	1422	1367	1377	1377	1342	1239	1253	1340
IND	359	359	359	359	359	359	359	359	359	359	359
JPN	4082	4082	4082	4082	4082	4082	4082	4082	4083	4082	4082
LAM	310	316	296	326	333	347	345	335	339	323	317
MEA	448	452	461	448	445	450	461	485	474	458	452
NEU	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
OAS	306	308	286	319	314	328	344	333	328	353	328
REF	0	0	0	0	0	0	0	0	0	39	50
SSA	337	343	340	347	339	353	339	339	338	343	349
USA	421	421	421	421	421	421	421	421	421	421	421

Table 1063: FAO — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	426	424	423	424	426	436	437	431	440	424	428
CAZ	543	544	544	543	543	543	543	544	543	543	544
CHA	525	524	525	525	526	526	526	527	526	526	527
EUR	1342	1222	1278	1246	1302	1283	1260	1331	1264	1253	1273
IND	359	359	359	359	359	359	359	359	359	359	359
JPN	4082	4082	4082	4082	4082	4082	4082	4083	4082	4083	4082
LAM	309	307	335	339	336	339	336	332	311	313	310
MEA	433	425	423	429	439	425	430	435	424	431	442
NEU	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
OAS	322	308	302	300	300	301	291	278	273	268	260
REF	45	60	53	85	87	77	134	111	143	109	218
SSA	355	349	375	368	369	374	375	360	373	363	368
USA	421	421	421	421	421	421	421	421	421	421	421

Table 1064: FAO — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	424	428	418	413	416	413	400
CAZ	544	543	543	543	543	544	543
CHA	527	526	527	527	527	527	527
EUR	1278	1259	1235	1167	1185	1187	1165
IND	359	359	359	359	359	359	359
JPN	4082	4082	4083	4082	4082	4082	4082
LAM	299	304	320	314	326	324	320
MEA	448	448	450	433	430	435	105
NEU	1030	1030	1030	1030	1030	1030	1030
OAS	250	253	242	152	145	150	146
REF	176	269	204	188	402	424	457
SSA	373	385	369	365	366	368	343
USA	421	421	421	421	421	421	421

Table 1065: FAO — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	10	440	391	413	426	446	495	469	427	346	350
CAZ	0	908	828	735	586	587	608	584	448	453	413
CHA	0	309	307	384	359	418	539	541	463	379	401
EUR	0	481	1024	1294	1031	1297	859	2168	2006	1594	729
IND	0	488	419	376	420	424	354	330	268	285	289
JPN	0	3787	4235	7615	2717	4545	4565	4091	3646	4382	4029
LAM	0	480	370	390	1416	436	450	462	449	395	418
MEA	0	1363	201	289	257	278	301	290	329	258	398
NEU	0	982	792	870	741	863	881	826	900	774	860
OAS	0	400	404	407	439	435	445	395	210	262	219
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	59	348	277	407	342	475	618	519	610	286	247
USA	0	664	703	713	678	687	687	658	666	596	643

Table 1066: FAOp — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 1/3]

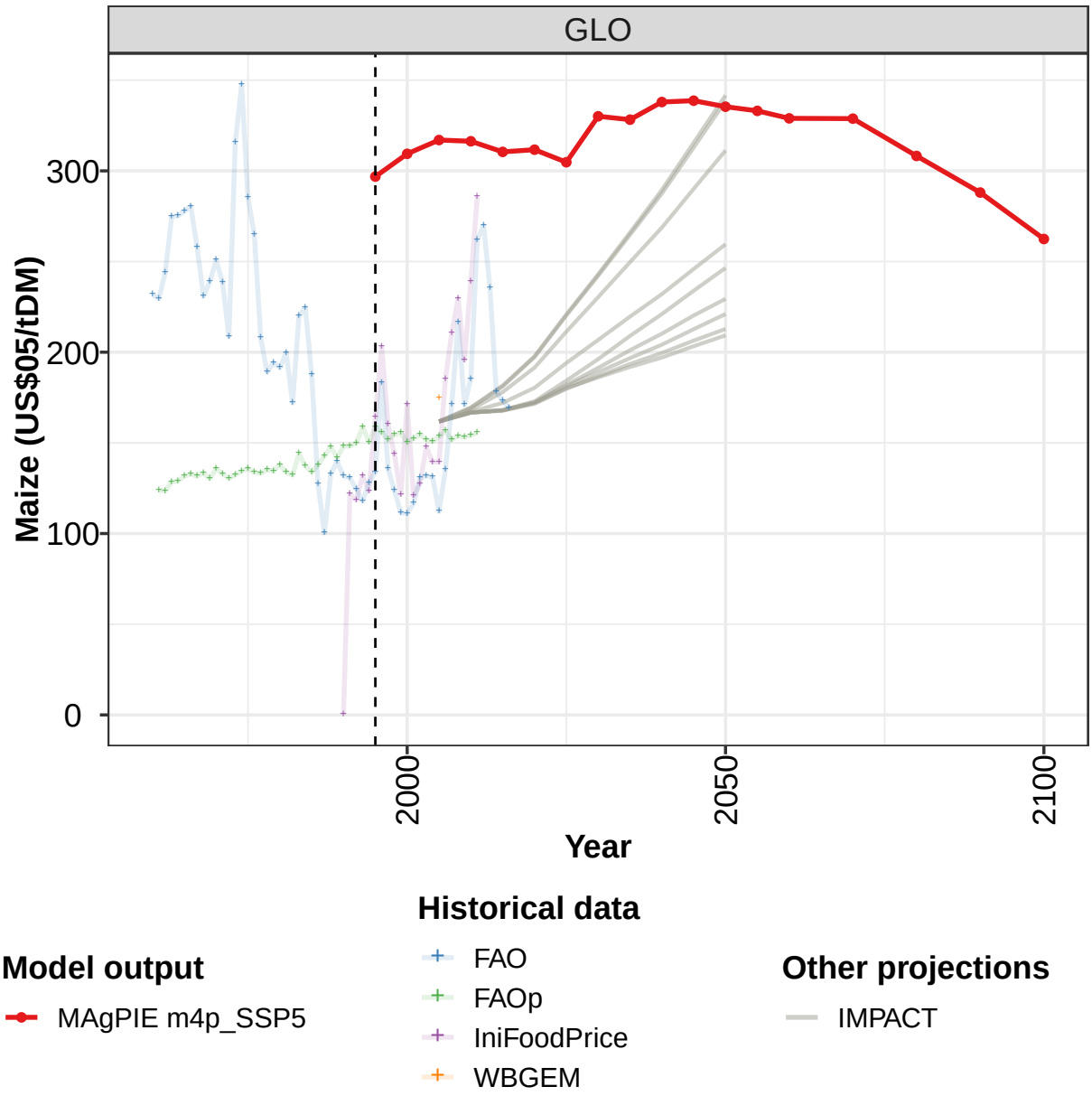
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	364	373	386	388	377	395	401	486	385	438	644
CAZ	391	405	545	533	536	561	714	763	768	849	910
CHA	440	455	473	446	422	404	394	519	590	751	1115
EUR	906	826	986	1203	1379	1218	1451	1557	1681	1662	1682
IND	302	297	320	352	367	357	399	513	0	0	0
JPN	3204	2944	4077	4647	3702	3898	4042	5894	6673	5970	6117
LAM	363	320	317	189	151	179	133	158	147	172	206
MEA	300	250	364	387	425	479	638	659	704	1132	1045
NEU	556	710	800	959	1085	1046	1336	1471	1147	1277	1690
OAS	199	220	267	254	229	297	340	363	352	499	530
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	283	314	325	357	367	438	415	447	231	219	304
USA	549	427	452	444	405	415	481	539	508	528	746

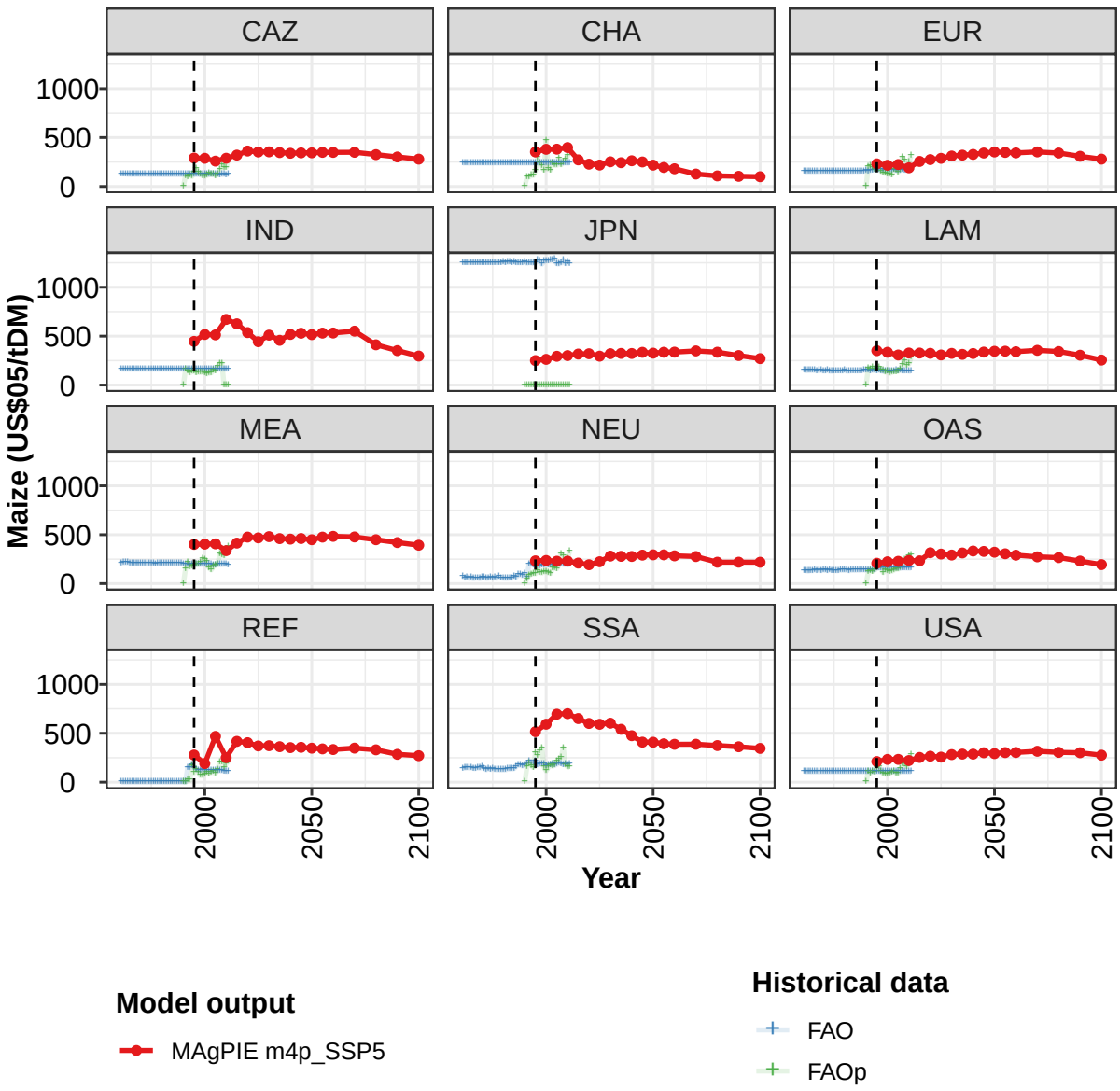
Table 1067: FAOp — Prices—Agriculture—Groundnuts (US$05/tDM) [PART 2/3]

	2005
GLO	451
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1068: IniFoodPrice — Prices—Agriculture—Groundnuts (US$05/tDM)

36.13 Maize


GLO
Maize (US$05/tDM)
300
200
100
0
2000
2050
2100
Year
Historical data
FAO
FAOp
IniFoodPrice
WBGEM
Model output
MAgPIE m4p_SSP5
Other projections
IMPACT



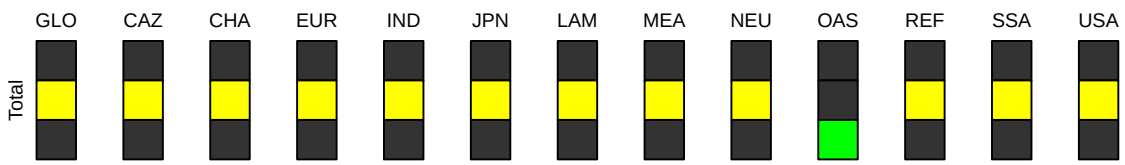


Figure 303: MAgPIE m4p_SSP5 — Prices—Agriculture—Maize (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	297	309	317	316	310	312	305	330	328	338	339
CAZ	290	288	259	288	321	362	352	354	346	339	343
CHA	353	380	381	398	272	228	219	252	243	263	251
EUR	231	216	224	191	256	275	287	311	320	328	342
IND	447	517	513	671	626	536	443	510	457	518	530
JPN	250	263	294	301	317	320	295	321	323	323	335
LAM	352	335	307	328	327	324	308	324	314	322	337
MEA	401	404	407	337	415	476	468	480	460	455	461
NEU	233	236	229	230	210	193	224	281	279	278	291
OAS	208	223	228	237	233	316	302	292	314	334	330
REF	278	191	468	251	417	404	371	373	363	354	357
SSA	517	593	695	701	650	601	592	603	541	476	410
USA	211	233	233	221	253	266	256	282	287	287	301

Table 1069: MAgPIE m4p_SSP5 — Prices—Agriculture—Maize (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	335	333	329	329	308	288	262
CAZ	344	349	348	349	325	302	279
CHA	218	194	181	127	108	104	100
EUR	353	348	343	353	342	308	279
IND	516	531	532	551	411	352	296
JPN	326	336	337	349	336	302	270
LAM	345	346	341	355	343	305	255
MEA	449	476	484	477	449	420	393
NEU	294	294	284	277	219	219	218
OAS	322	305	291	274	266	231	194
REF	348	341	334	348	331	285	271
SSA	409	393	388	388	374	362	346
USA	292	303	304	316	305	301	277

Table 1070: MAgPIE m4p_SSP5 — Prices—Agriculture—Maize (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	232	230	244	275	275	278	280	258	231	239	251
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1071: WBGEM — Prices—Agriculture—Maize (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	238	209	316	347	285	265	208	189	194	191	200
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1072: WBGEM — Prices—Agriculture—Maize (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	172	220	225	187	127	100	133	140	132	131	125
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1073: WBGEM — Prices—Agriculture—Maize (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	118	128	134	183	136	124	112	111	117	131	132
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1074: WBGEM — Prices—Agriculture—Maize (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	131	112	135	171	216	171	185	262	270	236	178
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1075: WBGEM — Prices—Agriculture—Maize (US$05/tDM) [PART 5/6]

	2015	2016
GLO	173	169
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1076: WBGEM — Prices—Agriculture—Maize (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	124	123	129	129	132	133	132	133	130	136	133
CAZ	127	127	127	123	123	121	122	122	122	122	122
CHA	239	238	239	239	239	239	239	239	239	239	239
EUR	156	151	153	152	152	151	152	154	152	154	154
IND	162	162	162	162	162	162	162	162	162	162	162
JPN	1252	1252	1252	1252	1252	1252	1252	1252	1252	1252	1252
LAM	146	146	148	149	149	147	144	147	146	143	143
MEA	208	212	213	212	210	207	209	209	210	208	210
NEU	74	55	66	53	58	49	57	56	51	59	60
OAS	129	133	127	134	131	135	132	137	132	136	134
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	142	143	147	146	145	141	139	148	142	154	140
USA	106	106	106	106	106	106	106	106	106	106	106

Table 1077: FAO — Prices—Agriculture—Maize (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	130	132	134	136	134	133	135	134	138	134	132
CAZ	124	122	121	121	122	122	121	120	120	119	120
CHA	238	238	238	238	238	239	239	239	239	239	239
EUR	154	152	153	150	154	153	155	152	155	154	152
IND	162	162	162	162	162	162	162	162	162	162	162
JPN	1252	1251	1252	1252	1252	1251	1252	1252	1253	1252	1253
LAM	146	141	140	144	145	144	144	142	147	141	141
MEA	208	208	210	209	206	201	204	205	204	203	207
NEU	53	55	60	54	58	54	68	57	54	53	53
OAS	132	136	134	134	131	132	136	135	135	136	131
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	126	139	129	135	127	126	125	124	125	126	132
USA	106	106	106	106	106	106	106	106	106	106	106

Table 1078: FAO — Prices—Agriculture—Maize (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	144	137	134	138	143	148	142	148	148	150	159
CAZ	119	120	120	121	120	120	119	120	119	122	119
CHA	238	238	238	238	238	238	238	238	238	238	238
EUR	153	153	156	153	155	157	154	160	154	164	166
IND	162	162	162	162	162	162	162	162	162	162	162
JPN	1257	1252	1253	1250	1250	1250	1250	1253	1245	1250	1250
LAM	145	145	144	144	145	145	149	153	149	145	147
MEA	206	205	207	207	206	205	204	199	194	193	191
NEU	58	54	69	67	87	88	78	98	66	194	201
OAS	134	135	135	137	136	139	138	138	135	141	137
REF	0	0	0	0	0	0	0	0	0	150	150
SSA	133	135	138	160	177	171	164	178	189	214	191
USA	106	106	106	106	106	106	106	106	106	106	106

Table 1079: FAO — Prices—Agriculture—Maize (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	150	159	156	152	154	155	150	152	155	152	151
CAZ	119	120	121	121	119	120	121	120	120	119	120
CHA	238	238	238	238	239	239	239	239	239	239	239
EUR	167	167	168	167	167	166	168	167	167	169	167
IND	162	162	162	162	162	162	162	162	162	162	162
JPN	1245	1250	1273	1263	1235	1263	1269	1270	1278	1280	1288
LAM	147	146	147	143	140	144	144	144	145	145	147
MEA	196	195	195	195	195	196	198	192	192	192	189
NEU	189	183	187	180	191	186	210	186	186	205	190
OAS	139	154	159	159	154	158	159	155	154	155	156
REF	178	144	131	116	122	128	116	116	119	116	113
SSA	196	213	176	182	184	186	169	177	175	181	171
USA	106	106	106	106	106	106	106	106	106	106	106

Table 1080: FAO — Prices—Agriculture—Maize (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	153	157	152	154	153	154	155
CAZ	120	120	118	120	120	119	119
CHA	239	239	239	239	239	239	239
EUR	165	165	168	164	164	164	165
IND	162	162	162	162	162	162	162
JPN	1238	1237	1246	1278	1240	1255	1240
LAM	144	147	143	142	145	141	139
MEA	190	192	192	193	196	196	190
NEU	198	193	207	196	195	192	195
OAS	157	156	158	159	158	158	158
REF	116	114	117	114	112	109	109
SSA	182	190	189	178	182	174	181
USA	106	106	106	106	106	106	106

Table 1081: FAO — Prices—Agriculture—Maize (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	122	118	132	123	164	203	160	144	122	171
CAZ	0	109	97	118	100	147	177	145	119	109	103
CHA	0	91	96	110	111	162	293	240	212	166	466
EUR	0	200	206	186	173	192	197	153	138	133	127
IND	0	158	140	123	137	137	125	129	127	135	126
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	171	160	180	164	156	183	151	146	130	142
MEA	0	150	220	168	179	183	197	198	217	256	244
NEU	0	48	84	93	103	100	130	113	107	122	120
OAS	0	116	129	124	141	186	208	179	111	142	129
REF	0	0	20	18	167	95	125	102	66	66	84
SSA	1	152	194	167	151	298	268	318	350	154	114
USA	0	106	92	111	101	145	159	109	86	82	83

Table 1082: FAOp — Prices—Agriculture—Maize (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	121	127	148	139	139	185	211	230	196	239	286
CAZ	111	132	119	128	107	125	171	215	187	193	275
CHA	177	166	243	215	215	286	220	248	276	310	365
EUR	124	118	174	174	147	174	296	263	195	247	311
IND	113	120	123	150	145	192	221	219	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	118	129	135	136	140	161	205	250	203	213	286
MEA	220	156	139	175	187	200	300	292	283	353	373
NEU	109	102	154	160	151	193	298	286	222	258	331
OAS	122	125	137	151	147	167	202	242	240	285	289
REF	96	85	99	104	87	129	207	201	148	186	214
SSA	152	176	161	180	213	236	252	351	179	155	152
USA	89	103	108	92	90	136	188	182	159	232	278

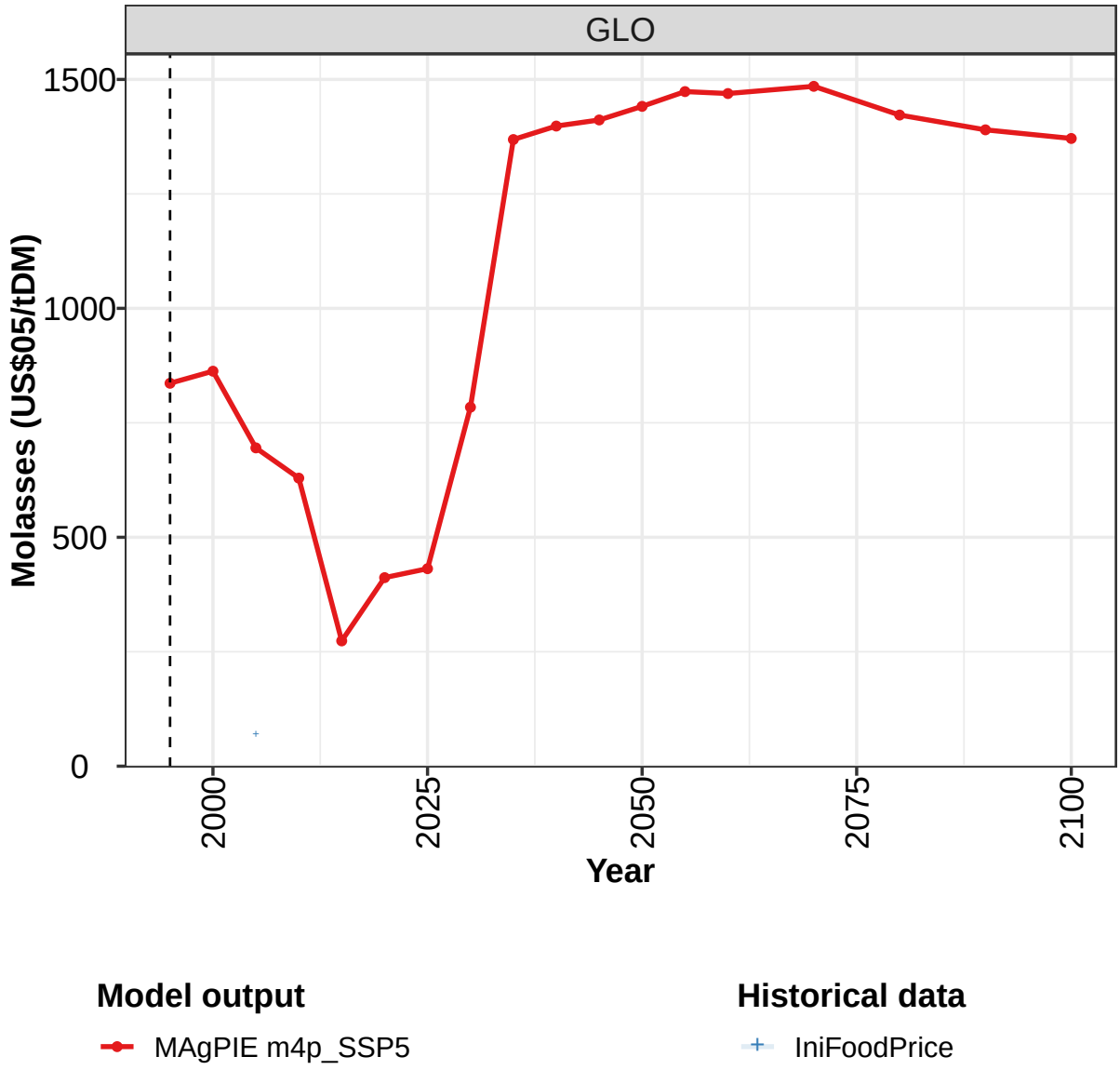
Table 1083: FAOp — Prices—Agriculture—Maize (US$05/tDM) [PART 2/3]

	2005
GLO	174
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1084: IniFoodPrice — Prices—Agriculture—Maize (US$05/tDM)

36.14 Molasses

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



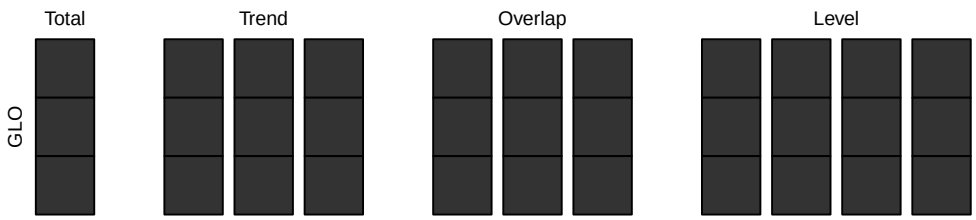


Figure 304: MAgPIE m4p_SSP5 — Prices—Agriculture—Molasses (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	836	863	695	629	274	412	431	784	1369	1398	1412

Table 1085: MAgPIE m4p_SSP5 — Prices—Agriculture—Molasses (US$05/tDM) [PART 1/2]

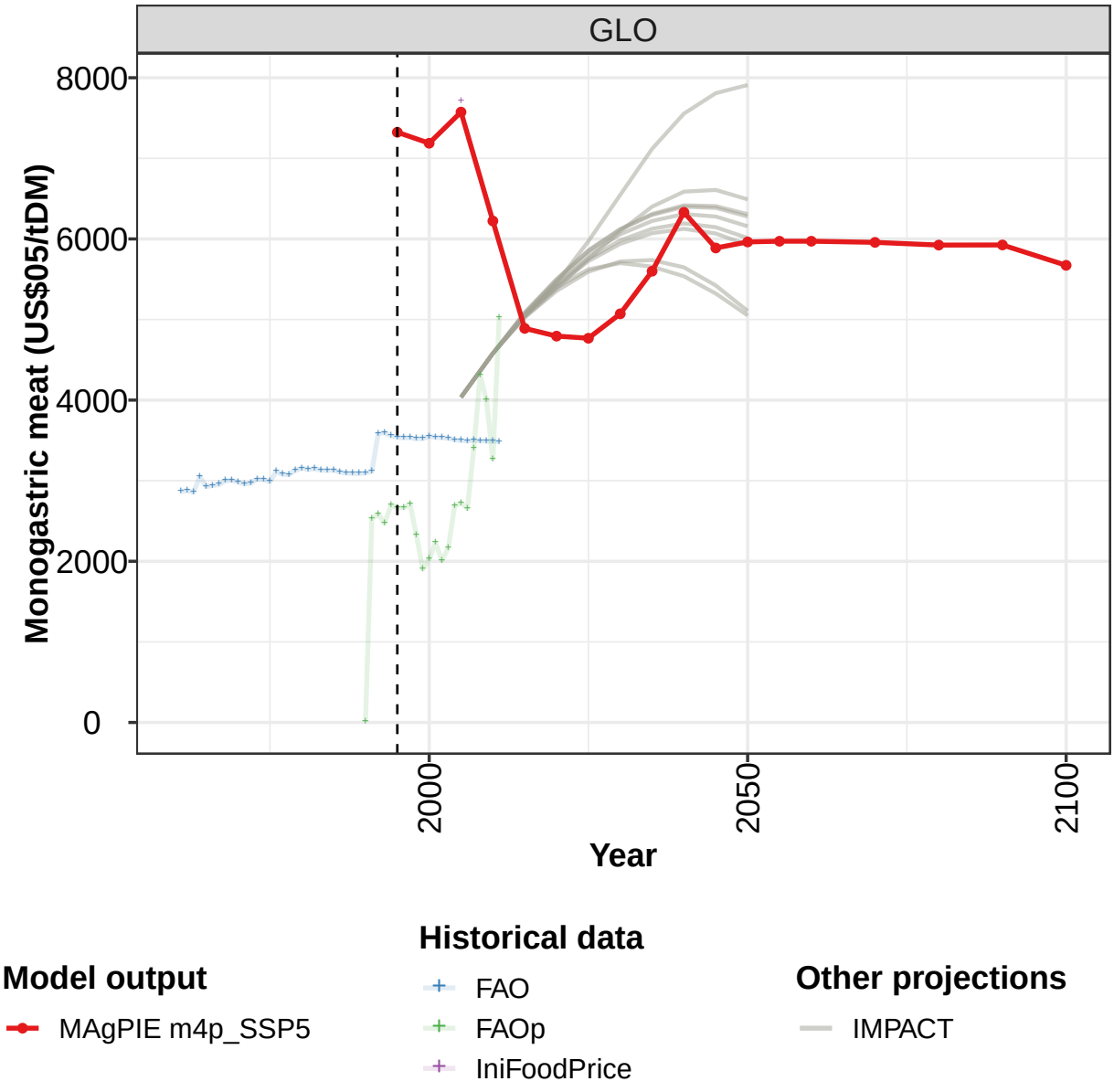
	2050	2055	2060	2070	2080	2090	2100
GLO	1441	1473	1469	1485	1422	1390	1371

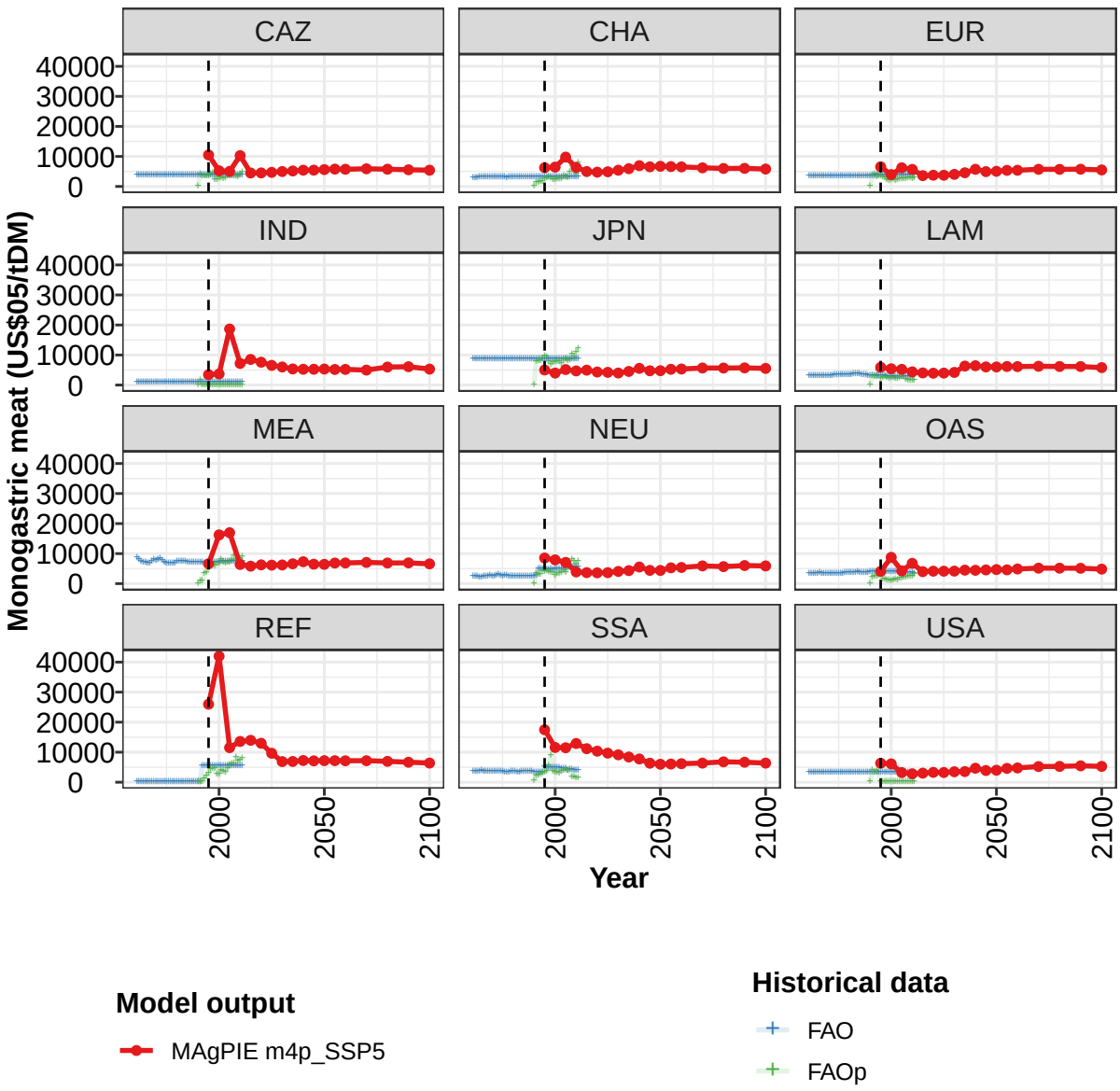
Table 1086: MAgPIE m4p_SSP5 — Prices—Agriculture—Molasses (US$05/tDM) [PART 2/2]

	2005
GLO	68.0

Table 1087: IniFoodPrice — Prices—Agriculture—Molasses (US$05/tDM)

36.15 Monogastric meat





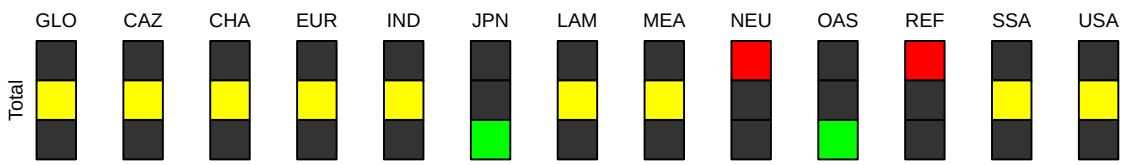


Figure 305: MAgPIE m4p_SSP5 — Prices—Agriculture—Monogastric meat (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7324	7187	7574	6223	4890	4794	4768	5071	5600	6330	5888
CAZ	10477	5205	5006	10276	4486	4510	4699	4966	5160	5411	5430
CHA	6237	6437	9776	6327	4961	4755	4888	5405	5919	6919	6541
EUR	6546	3946	6219	5678	3606	3738	3730	4025	4567	5717	4940
IND	3449	3708	18661	7187	8539	7605	6544	6014	5370	5255	5264
JPN	5015	3983	5161	4709	4959	4341	4235	4000	4530	5554	4744
LAM	5915	5419	5220	4399	4038	3947	3983	4210	6318	6435	6038
MEA	6608	16241	16964	6390	5820	6254	6157	6212	6608	7294	6478
NEU	8543	7919	7069	3903	3660	3597	3652	4067	4347	5539	4427
OAS	4071	8751	4270	6764	3990	4154	4145	4167	4494	4443	4568
REF	25979	41965	11512	13580	13966	12973	9648	6875	6911	7234	7118
SSA	17475	11586	11481	12910	11180	10356	9689	9133	8408	7746	6344
USA	6325	6117	3218	2800	3018	3285	3241	3486	3550	4672	3910

Table 1088: MAgPIE m4p_SSP5 — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5963	5971	5971	5957	5924	5925	5673
CAZ	5615	5779	5722	5884	5737	5555	5416
CHA	6710	6614	6513	6208	5994	6024	5800
EUR	5049	5361	5397	5710	5700	5737	5506
IND	5325	5182	5210	4976	5994	6100	5314
JPN	4782	5247	5335	5677	5658	5717	5541
LAM	6027	6182	6144	6253	6183	6166	5806
MEA	6432	6863	6893	7067	6885	6909	6585
NEU	4399	5263	5392	5908	5669	6027	5901
OAS	4685	4597	4883	5151	5151	5117	4836
REF	7184	7183	7143	7176	6957	6662	6392
SSA	5997	6054	6175	6376	6795	6658	6378
USA	4000	4612	4759	5216	5274	5465	5277

Table 1089: MAgPIE m4p_SSP5 — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	2868	2876	2858	3049	2929	2940	2952	2998	3005	2983	2959
CAZ	3701	3702	3705	3706	3707	3699	3687	3690	3692	3685	3686
CHA	2741	2801	2942	2998	3016	3009	3005	2995	2978	2951	2969
EUR	3436	3441	3431	3485	3449	3446	3433	3449	3465	3441	3435
IND	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005
JPN	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612
LAM	3134	3111	3120	3119	3069	3011	3040	3040	3046	3036	3015
MEA	8461	8075	7201	7107	7060	6668	6838	7311	7880	7563	8039
NEU	2225	2365	2375	2161	2029	2421	2405	2491	2758	2478	2385
OAS	3361	3281	3347	3382	3432	3482	3364	3370	3410	3397	3362
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3512	3537	3558	3573	3745	3577	3550	3648	3550	3542	3627
USA	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317

Table 1090: FAO — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	2971	3018	3014	2987	3113	3077	3076	3126	3155	3138	3148
CAZ	3685	3684	3681	3687	3686	3693	3686	3675	3669	3669	3675
CHA	2980	2955	2969	2999	2951	2926	2949	2962	3007	3014	3022
EUR	3436	3445	3440	3440	3490	3481	3465	3491	3492	3491	3508
IND	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005
JPN	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612
LAM	3126	3222	3283	3338	3386	3387	3468	3455	3469	3502	3589
MEA	8148	7674	7002	6699	6643	6810	6754	6827	7466	7445	7478
NEU	2636	2879	2520	2478	2626	2520	2245	2375	2504	2424	2470
OAS	3357	3384	3379	3369	3371	3405	3490	3695	3729	3579	3609
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3653	3651	3681	3526	3320	3315	3322	3385	3395	3379	3371
USA	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317

Table 1091: FAO — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	3132	3126	3133	3105	3095	3091	3088	3096	3116	3583	3595
CAZ	3674	3677	3679	3679	3676	3675	3676	3677	3678	3677	3678
CHA	3020	3022	3028	3026	3026	3044	3052	3050	3048	3058	3065
EUR	3500	3497	3492	3488	3485	3474	3464	3484	3484	3560	3703
IND	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005
JPN	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612
LAM	3646	3695	3604	3392	3280	3215	3156	3130	3117	3112	2996
MEA	7456	7356	7087	7001	6932	6966	6940	6952	6943	6891	6733
NEU	2486	2244	2394	2499	2375	2407	2448	2434	2590	4811	4896
OAS	3682	3776	3740	3529	3599	3663	3734	3831	3808	4034	4037
REF	0	0	0	0	0	0	0	0	0	5446	5457
SSA	3327	3388	3477	3521	3439	3525	3448	3301	3257	3318	3307
USA	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317

Table 1092: FAO — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	3554	3540	3531	3534	3519	3521	3549	3540	3532	3528	3507
CAZ	3678	3678	3678	3677	3674	3668	3666	3664	3663	3663	3663
CHA	3067	3069	3066	3095	3114	3122	3119	3116	3122	3130	3129
EUR	3700	3666	3659	3671	3660	3674	3856	3853	3829	3827	3822
IND	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005
JPN	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612	8612
LAM	2945	2964	2941	2954	2864	2877	2860	2873	2851	2799	2796
MEA	6788	6910	6988	7168	6993	7085	7163	7219	7266	7345	7360
NEU	4817	4744	4633	4664	4714	4676	4691	4818	4745	4795	4860
OAS	3995	4005	4056	4035	4023	4001	3919	3887	3843	3875	3689
REF	5460	5442	5414	5392	5359	5346	5378	5368	5399	5410	5397
SSA	3247	4982	4875	4877	4910	4901	4839	4715	4624	4323	4373
USA	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317	3317

Table 1093: FAO — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	3497	3493	3499	3496	3488	3491	3484
CAZ	3663	3663	3663	3661	3658	3659	3660
CHA	3132	3134	3137	3145	3148	3151	3150
EUR	3827	3830	3830	3829	3838	3833	3834
IND	1005	1005	1005	1005	1005	1005	1005
JPN	8612	8612	8612	8612	8612	8612	8612
LAM	2865	2877	2847	2841	2836	2835	2885
MEA	7369	7374	7378	7391	7437	7470	7464
NEU	4848	5427	5330	5398	5455	5429	5404
OAS	3562	3578	3561	3524	3450	3458	3297
REF	5365	5370	5388	5430	5448	5449	5438
SSA	4439	3974	4028	4098	3885	3924	3901
USA	3317	3317	3317	3317	3317	3317	3317

Table 1094: FAO — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	4	2526	2586	2472	2693	2666	2663	2708	2323	1900	2024
CAZ	0	3904	3399	3563	3344	3377	4119	4206	2303	2274	2887
CHA	0	1304	1353	1486	1544	2568	2719	3105	2813	2196	2296
EUR	0	3780	4100	3211	3473	3308	3140	2642	2048	1819	2059
IND	0	1368	0	0	0	0	0	0	0	0	0
JPN	0	7848	7998	8071	8748	9564	9159	7849	6740	7524	7697
LAM	0	2889	2807	2580	4706	2239	2299	2738	2300	1979	2303
MEA	0	683	723	3435	3709	5858	5847	5969	5710	6553	6781
NEU	0	3420	3114	3010	4077	3942	4135	3896	3711	3460	2557
OAS	0	2175	2361	2407	2582	2960	1410	1488	989	1108	949
REF	0	0	187	1088	2104	3016	4231	4442	4387	2634	2524
SSA	523	2127	2162	2472	2951	3164	3559	5271	8817	3562	3190
USA	0	3813	3271	3548	3130	0	0	0	0	0	0

Table 1095: FAOp — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	2230	2010	2166	2687	2724	2652	3395	4310	3997	3269	5020
CAZ	2927	2489	2735	3428	3510	3293	3484	3377	3215	4076	4731
CHA	2475	2327	2566	3325	3187	2945	4761	6384	5843	4162	7642
EUR	2376	1862	2097	2378	2460	2534	2495	2935	2706	2511	2827
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	7598	7741	6936	8400	8518	7945	8246	10142	9138	10850	12018
LAM	2289	1984	2009	2333	2810	2723	1697	1551	1364	1569	1416
MEA	7851	7090	6796	6985	7105	7754	9337	7874	6592	8148	8985
NEU	3146	3391	3691	4235	3740	5150	5935	7981	7209	6407	7252
OAS	1169	1297	1206	1613	1722	2074	2003	2269	2277	2356	2870
REF	3704	3428	3280	4375	5844	5958	5988	8232	7062	7228	8013
SSA	3123	3064	3532	3913	4099	3729	4255	1804	1704	1428	1502
USA	0	0	0	0	0	0	0	0	0	0	0

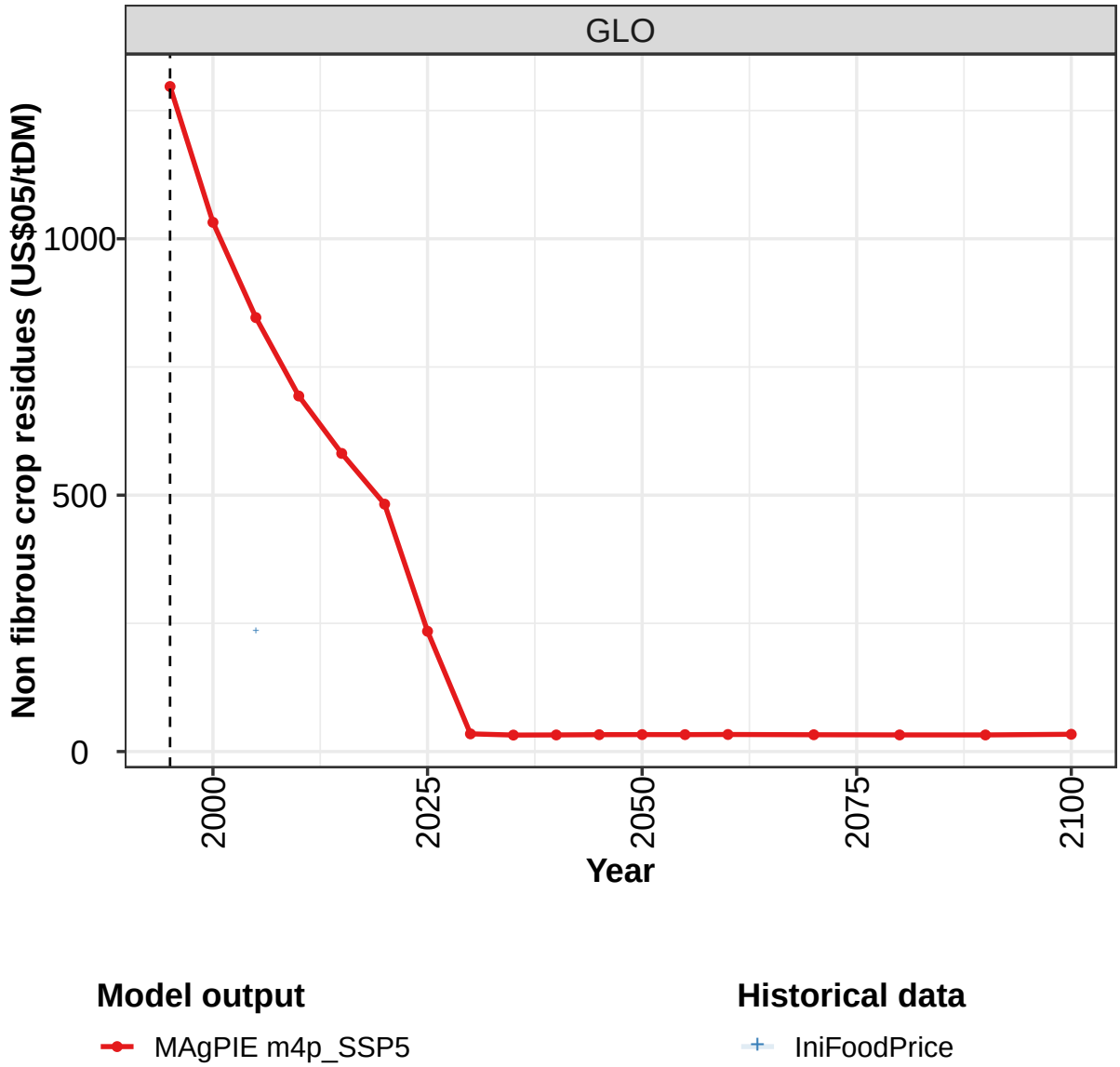
Table 1096: FAOp — Prices—Agriculture—Monogastric meat (US$05/tDM) [PART 2/3]

	2005
GLO	7703
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1097: IniFoodPrice — Prices—Agriculture—Monogastric meat (US$05/tDM)

36.16 Non fibrous crop residues

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



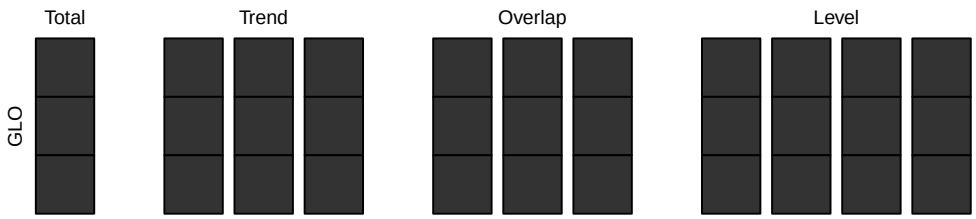


Figure 306: MAgPIE m4p_SSP5 — Prices—Agriculture—Non fibrous crop residues (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1297	1032	846	693	581	482	235	34	32	32	33

Table 1098: MAgPIE m4p_SSP5 — Prices—Agriculture—Non fibrous crop residues (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	33	33	33	33	32	32	34

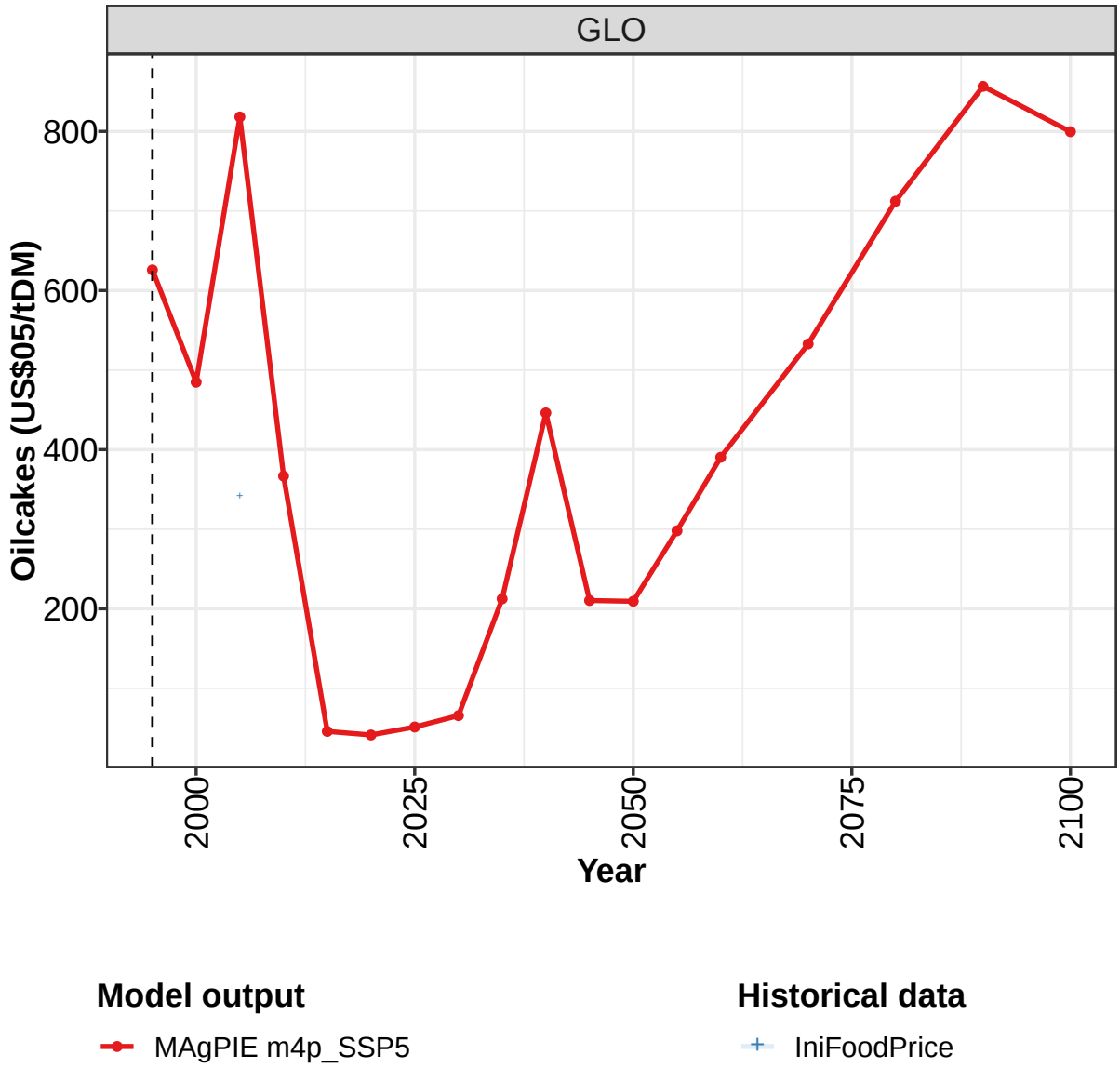
Table 1099: MAgPIE m4p_SSP5 — Prices—Agriculture—Non fibrous crop residues (US$05/tDM) [PART 2/2]

	2005
GLO	234

Table 1100: IniFoodPrice — Prices—Agriculture—Non fibrous crop residues (US$05/tDM)

36.17 Oilcakes

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



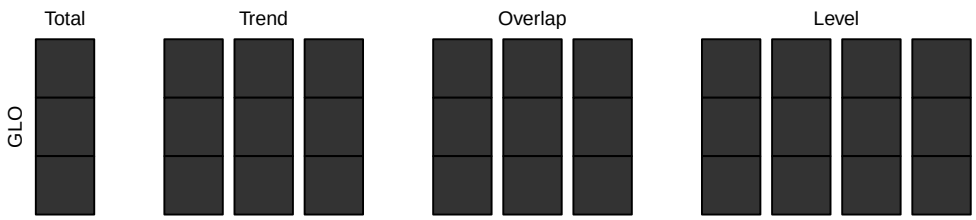


Figure 307: MAgPIE m4p_SSP5 — Prices—Agriculture—Oilcakes (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	626	485	818	367	46	41	51	66	212	446	210

Table 1101: MAgPIE m4p_SSP5 — Prices—Agriculture—Oilcakes (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	209	298	390	533	712	857	800

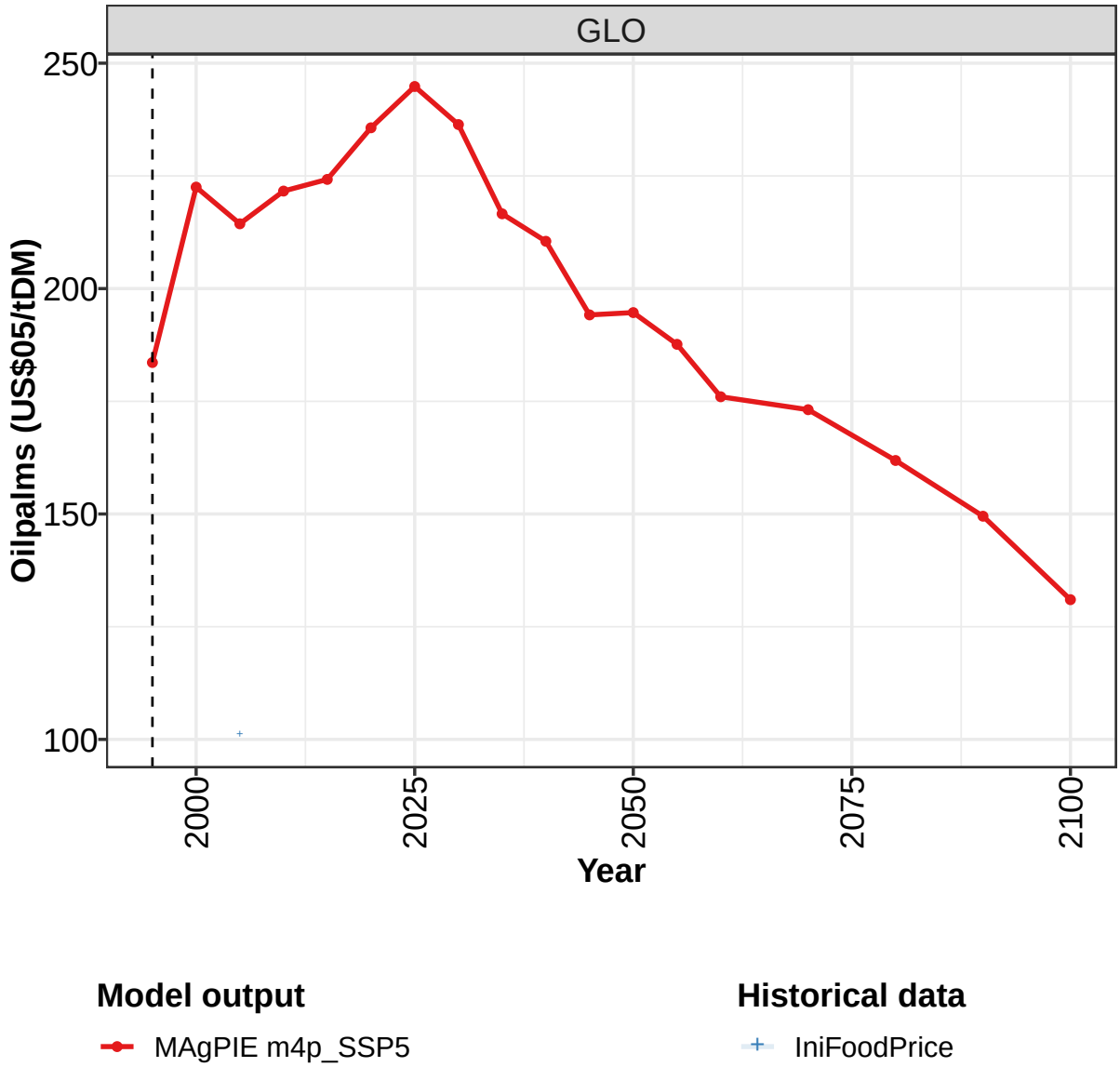
Table 1102: MAgPIE m4p_SSP5 — Prices—Agriculture—Oilcakes (US$05/tDM) [PART 2/2]

	2005
GLO	341

Table 1103: IniFoodPrice — Prices—Agriculture—Oilcakes (US$05/tDM)

36.18 Oilpalms

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



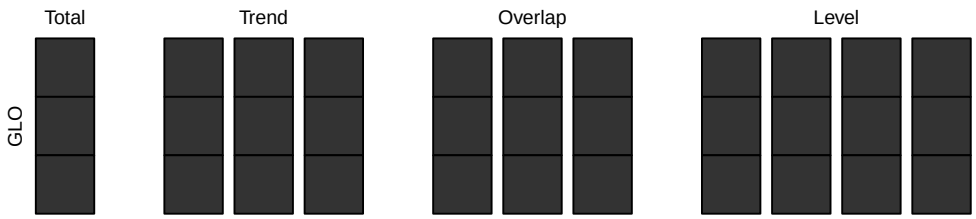


Figure 308: MAgPIE m4p_SSP5 — Prices—Agriculture—Oilpalms (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	184	223	214	222	224	236	245	236	217	210	194

Table 1104: MAgPIE m4p_SSP5 — Prices—Agriculture—Oilpalms (US$05/tDM) [PART 1/2]

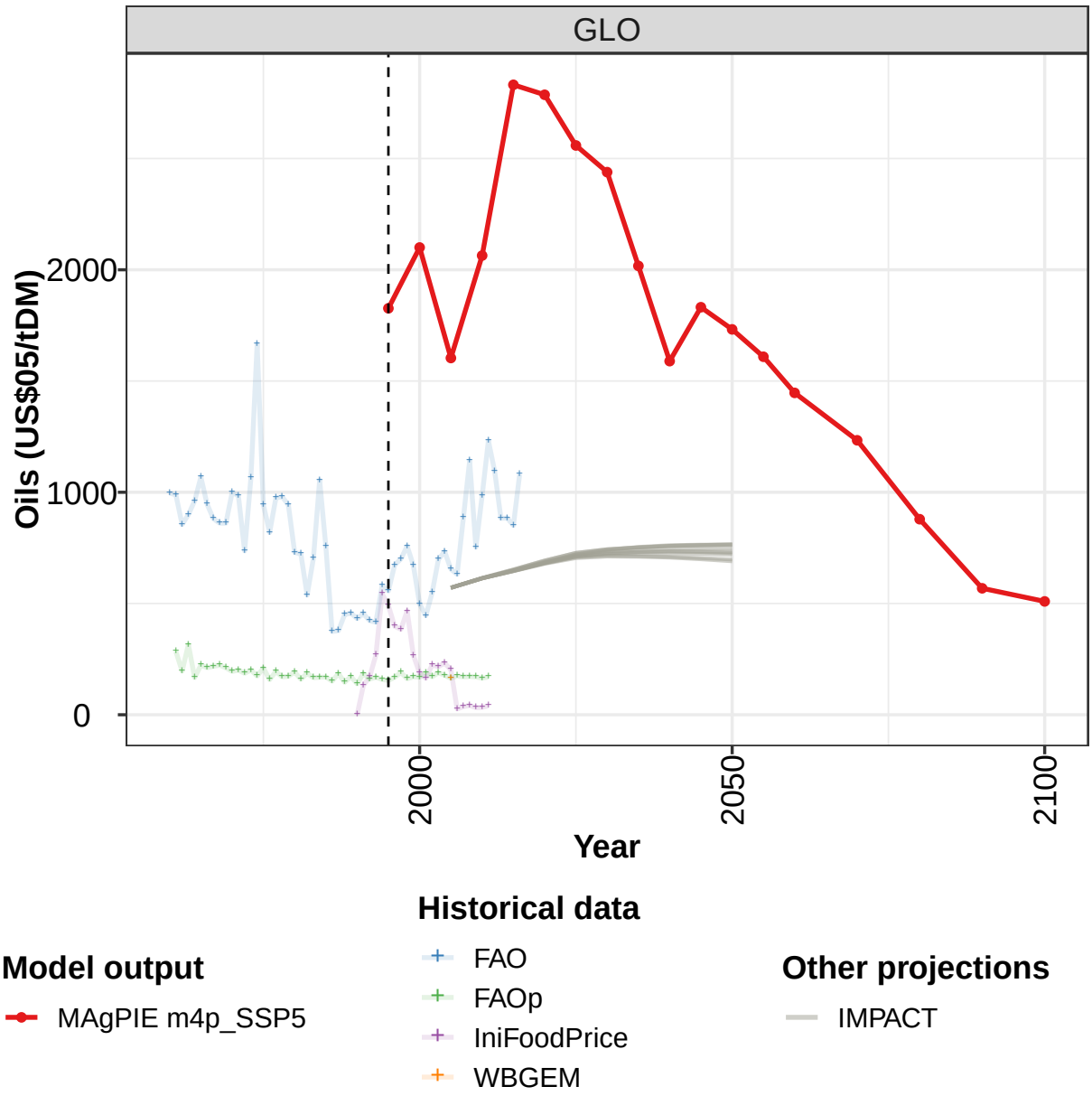
	2050	2055	2060	2070	2080	2090	2100
GLO	195	188	176	173	162	150	131

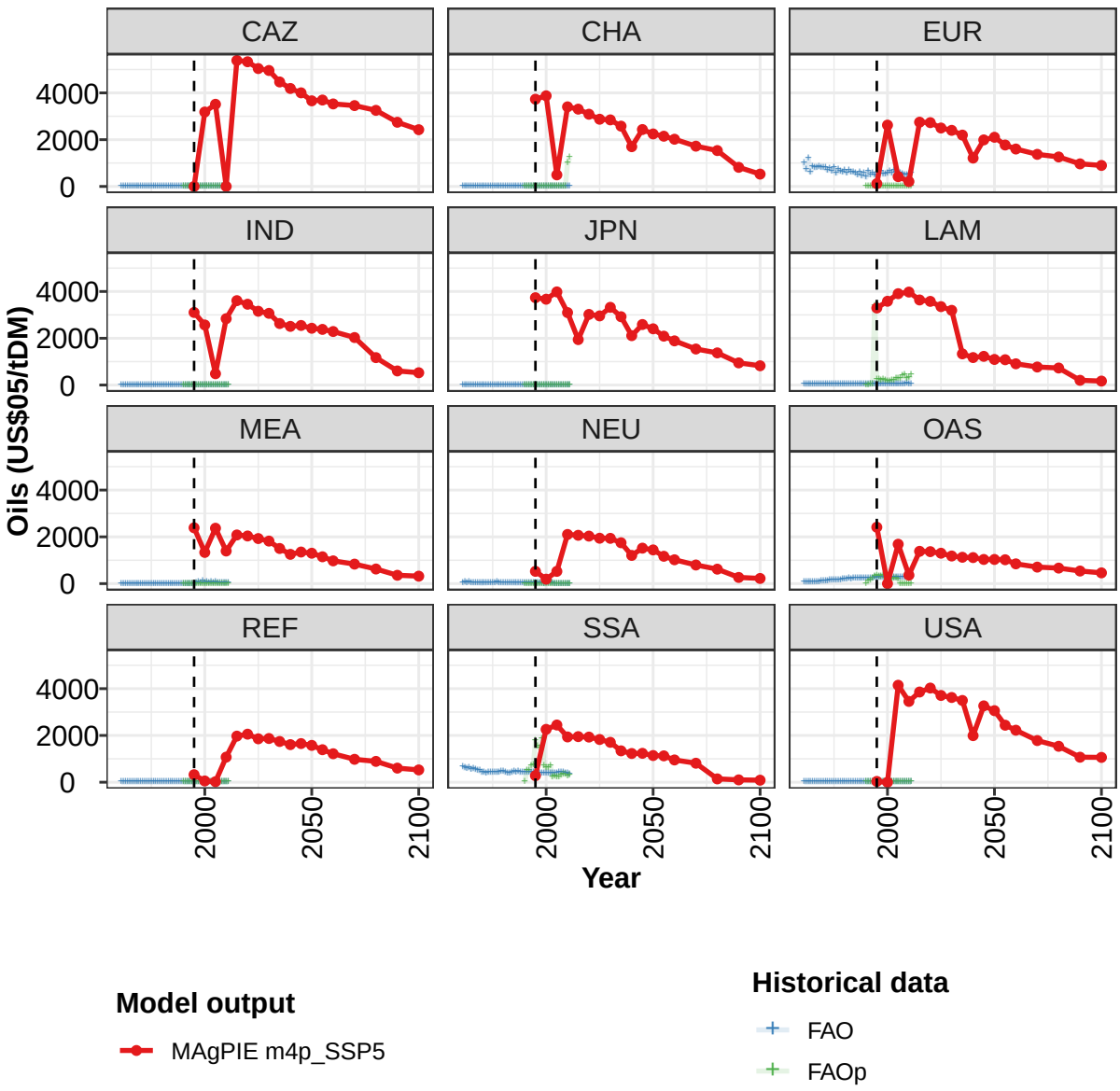
Table 1105: MAgPIE m4p_SSP5 — Prices—Agriculture—Oilpalms (US$05/tDM) [PART 2/2]

	2005
GLO	101

Table 1106: IniFoodPrice — Prices—Agriculture—Oilpalms (US$05/tDM)

36.19 Oils


GLO
Oils (US$05/tDM)
2000
1000
0
2000
2050
2100
Year
Historical data
FAO
FAOp
IniFoodPrice
WBGEM
Model output
MAgPIE m4p_SSP5
Other projections
IMPACT



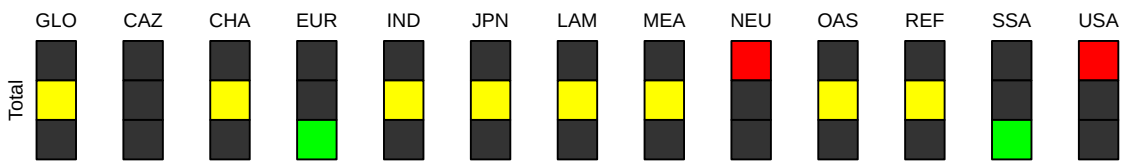


Figure 309: MAgPIE m4p_SSP5 — Prices—Agriculture—Oils (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1827	2100	1604	2064	2832	2787	2559	2439	2018	1589	1832
CAZ	0	3183	3513	2	5387	5331	5041	4959	4468	4189	4003
CHA	3729	3876	496	3405	3306	3088	2874	2847	2579	1700	2433
EUR	119	2623	419	209	2748	2728	2499	2398	2196	1213	1990
IND	3104	2569	485	2838	3609	3455	3155	3066	2631	2509	2547
JPN	3735	3670	3983	3098	1943	3020	2956	3323	2922	2112	2588
LAM	3295	3582	3906	3975	3637	3577	3353	3194	1333	1176	1227
MEA	2387	1335	2370	1395	2081	2038	1928	1820	1503	1253	1352
NEU	526	191	525	2103	2067	2032	1942	1937	1748	1207	1518
OAS	2412	0	1685	364	1382	1368	1301	1182	1127	1115	1034
REF	323	54	24	1073	1972	2055	1857	1869	1742	1608	1653
SSA	280	2260	2446	1937	1950	1931	1827	1707	1343	1228	1236
USA	35	0	4146	3456	3858	4026	3710	3624	3496	1992	3265

Table 1107: MAgPIE m4p_SSP5 — Prices—Agriculture—Oils (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1732	1609	1447	1234	879	568	509
CAZ	3661	3694	3529	3458	3254	2745	2426
CHA	2245	2149	2019	1723	1534	818	528
EUR	2104	1771	1601	1373	1260	966	898
IND	2428	2380	2289	2031	1172	604	526
JPN	2405	2091	1889	1541	1374	947	824
LAM	1095	1083	909	771	728	202	169
MEA	1301	1148	974	835	626	358	319
NEU	1442	1170	1020	797	620	266	222
OAS	1034	1022	846	708	665	539	461
REF	1576	1390	1218	980	892	604	526
SSA	1142	1128	953	813	143	101	88
USA	3059	2439	2224	1782	1537	1070	1062

Table 1108: MAgPIE m4p_SSP5 — Prices—Agriculture—Oils (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	997	988	855	900	961	1068	946	881	861	861	999
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1109: WBGEM — Prices—Agriculture—Oils (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	985	736	1064	1666	943	819	974	980	943	730	723
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1110: WBGEM — Prices—Agriculture—Oils (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	538	702	1054	755	374	377	450	457	432	454	423
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1111: WBGEM — Prices—Agriculture—Oils (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	416	581	556	673	700	758	671	497	446	549	698
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1112: WBGEM — Prices—Agriculture—Oils (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	734	654	631	886	1141	753	985	1231	1096	883	884
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1113: WBGEM — Prices—Agriculture—Oils (US$05/tDM) [PART 5/6]

	2015	2016
GLO	851	1081
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1114: WBGEM — Prices—Agriculture—Oils (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	284	196	316	167	223	211	218	222	211	195	201
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	8	7	6	6	5	7	8	10	11	12	13
EUR	1016	715	1177	597	842	782	805	829	802	793	787
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	15	15	17	18	16	16	20	23	19	18	22
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	22	44	34	64	36	28	33	26	27	10	29
OAS	60	49	53	56	60	65	75	82	93	96	105
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	637	596	584	596	552	584	524	502	489	401	427
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1115: FAO — Prices—Agriculture—Oils (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	186	201	174	210	158	195	170	173	192	160	187
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	15	15	15	14	16	15	13	12	10	9	8
EUR	679	751	651	792	549	714	624	599	667	569	664
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	23	22	18	15	14	15	14	15	15	18	21
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	24	42	32	38	32	45	25	27	21	20	12
OAS	115	131	147	150	142	161	159	181	191	190	208
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	384	417	400	415	412	396	423	452	465	404	390
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1116: FAO — Prices—Agriculture—Oils (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	166	169	169	151	185	146	172	139	186	160	168
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	8	7	9	10	8	8	8	6	6	6	6
EUR	608	604	575	478	610	430	544	381	644	493	549
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	22	25	24	29	30	33	36	37	40	39	42
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	37	15	20	9	18	13	15	5	18	8	16
OAS	195	219	214	204	210	220	236	225	232	235	241
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	382	404	439	427	438	396	414	398	402	424	425
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1117: FAO — Prices—Agriculture—Oils (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	159	154	168	190	162	170	169	188	170	189	177
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	6	6	5	5	4	4	4	4	3	3	3
EUR	473	451	534	630	505	516	542	632	545	682	611
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	43	39	39	44	41	38	43	46	42	39	44
MEA	0	0	29	66	19	88	13	74	24	45	13
NEU	14	17	9	11	3	2	4	6	5	4	3
OAS	243	238	247	250	246	261	254	256	259	262	259
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	419	420	386	380	389	388	389	360	363	376	393
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1118: FAO — Prices—Agriculture—Oils (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	164	174	170	172	170	165	170
CAZ	0	0	0	0	0	0	0
CHA	3	3	3	3	3	2	2
EUR	518	553	532	479	470	516	539
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	46	47	46	48	52	47	48
MEA	60	14	15	27	7	31	27
NEU	2	2	2	2	2	2	2
OAS	262	267	263	268	267	250	260
REF	0	0	0	0	0	0	0
SSA	390	417	426	418	394	357	341
USA	0	0	0	0	0	0	0

Table 1119: FAO — Prices—Agriculture—Oils (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	132	170	268	544	491	397	384	466	267	187
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	6	15	35	3375	235	224	198	221	207	153
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	85	137	229	304	360	289	292	341	234	154
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	502	481	705	747	1752	1512	1461	1846	681	610
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1120: FAOp — Prices—Agriculture—Oils (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	164	224	216	232	202	26	36	42	32	33	40
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	1012	1228
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	150	174	202	287	270	277	373	432	270	300	422
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	132	192	219	230	199	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	605	697	211	241	211	216	286	339	333	268	284
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1121: FAOp — Prices—Agriculture—Oils (US$05/tDM) [PART 2/3]

	2005
GLO	164
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1122: IniFoodPrice — Prices—Agriculture—Oils (US$05/tDM)

36.20 Other fibrous crop residues

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## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
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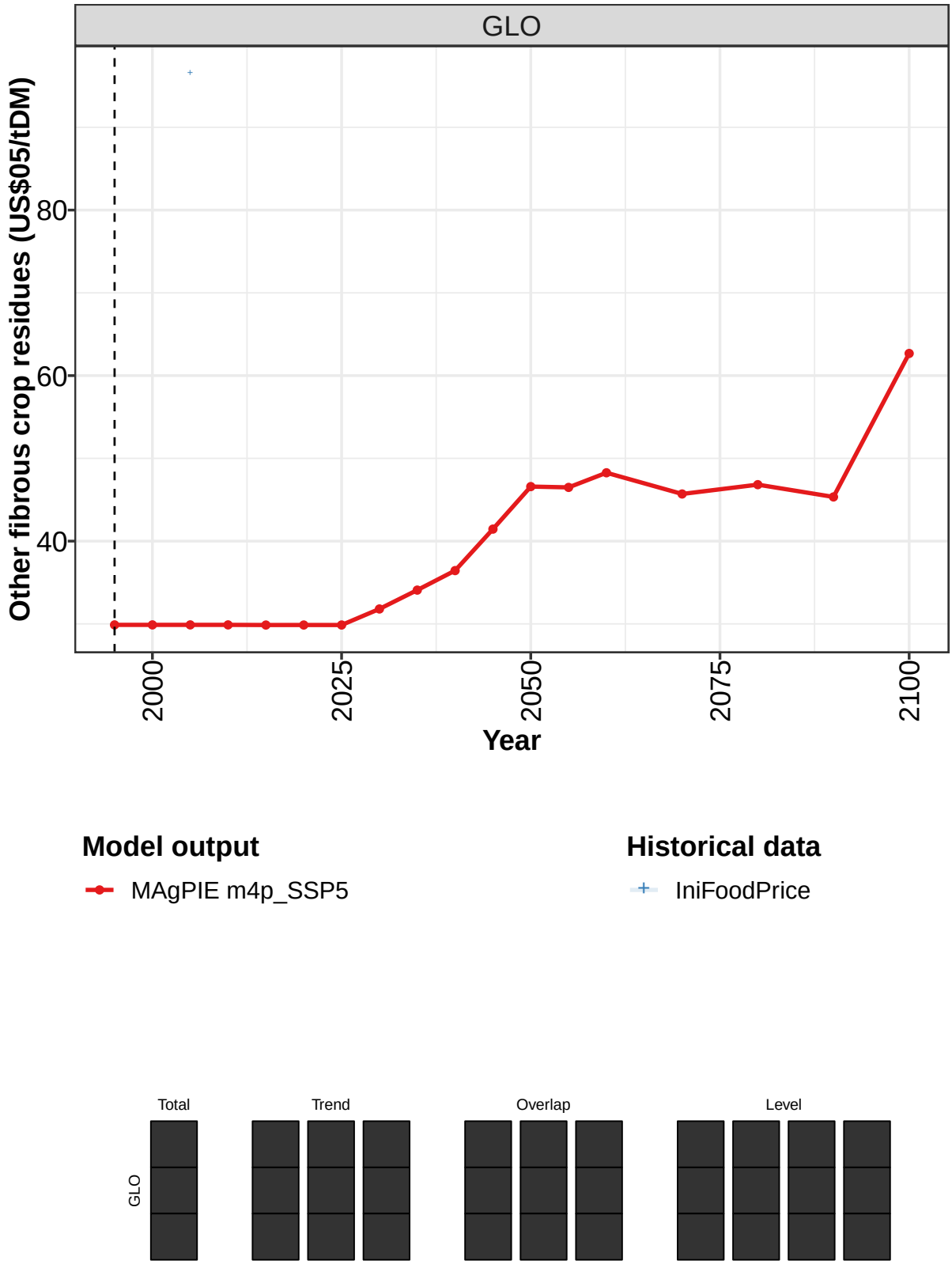


Figure 310: MAgPIE m4p_SSP5 — Prices—Agriculture—Other fibrous crop residues (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	29.9	29.9	29.9	29.9	29.9	29.9	29.9	31.8	34.1	36.4	41.5

Table 1123: MAgPIE m4p_SSP5 — Prices—Agriculture—Other fibrous crop residues (US$05/tDM) [PART 1/2]

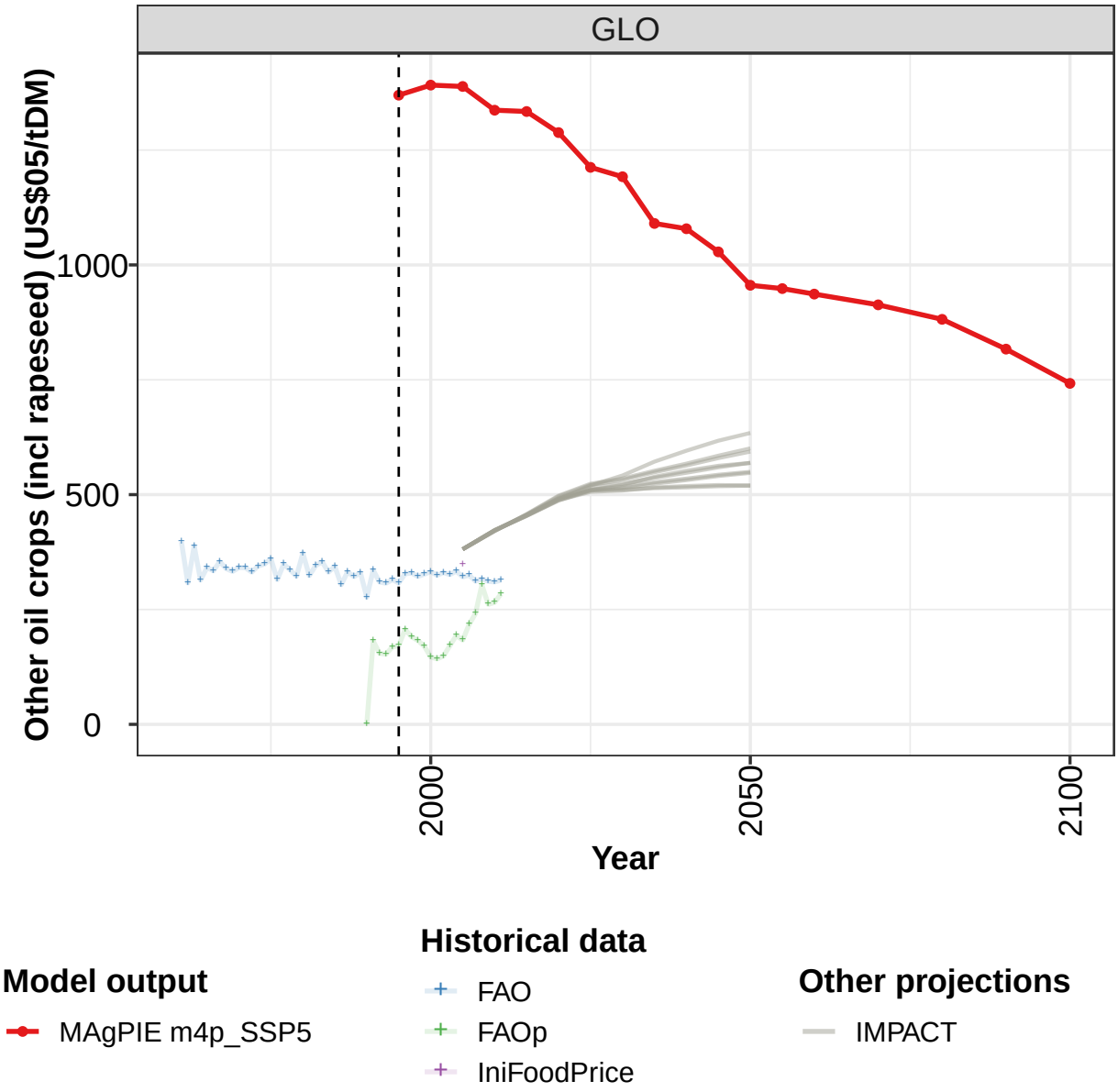
	2050	2055	2060	2070	2080	2090	2100
GLO	46.6	46.5	48.3	45.7	46.8	45.3	62.7

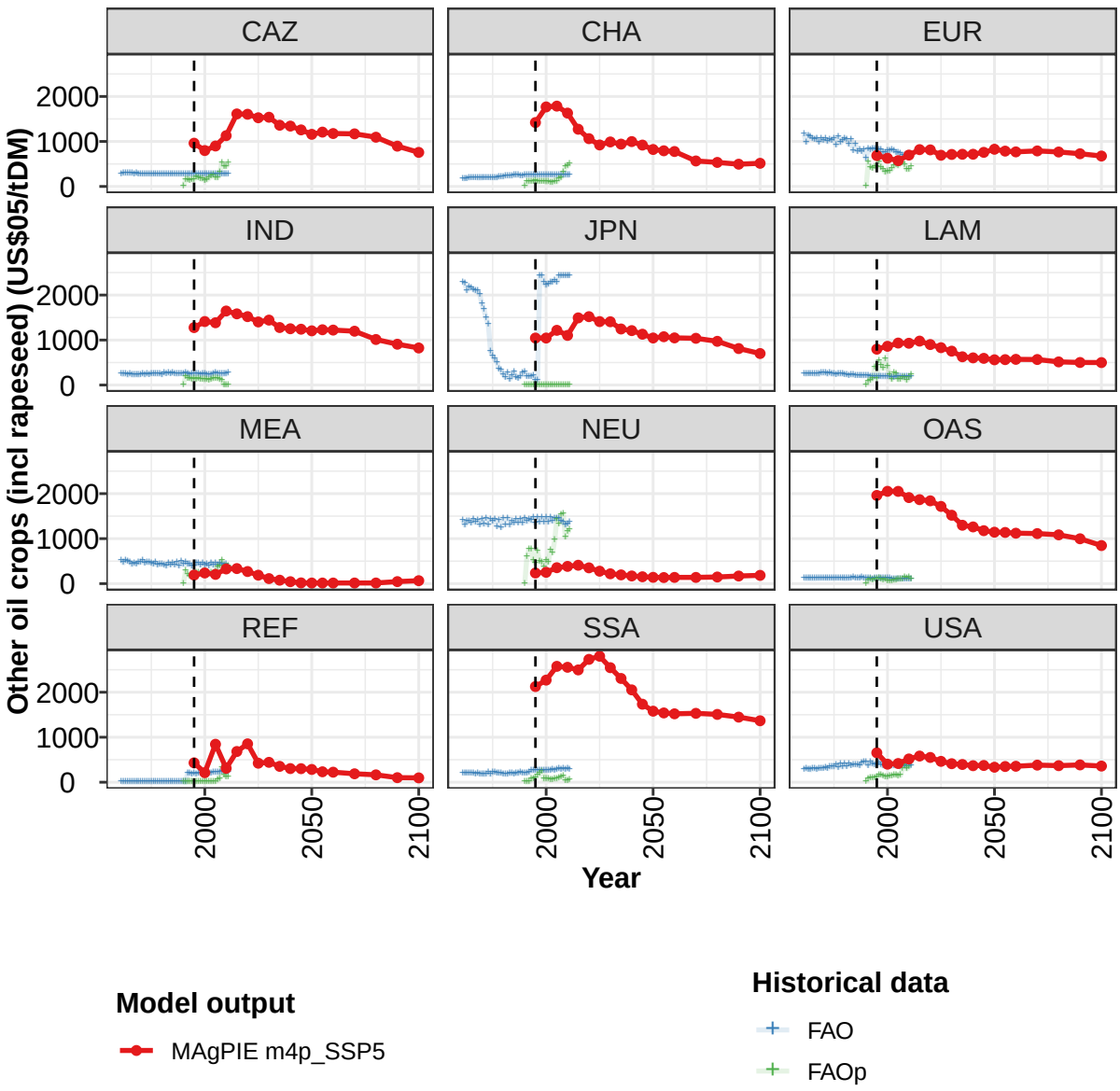
Table 1124: MAgPIE m4p_SSP5 — Prices—Agriculture—Other fibrous crop residues (US$05/tDM) [PART 2/2]

	2005
GLO	96.5

Table 1125: IniFoodPrice — Prices—Agriculture—Other fibrous crop residues (US$05/tDM)

36.21 Other oil crops (incl rapeseed)





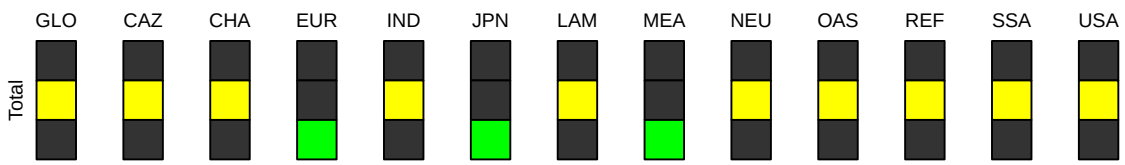


Figure 311: MAgPIE m4p_SSP5 — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1370	1391	1388	1337	1334	1288	1212	1192	1090	1079	1028
CAZ	961	798	900	1129	1612	1605	1527	1539	1361	1342	1257
CHA	1420	1767	1786	1630	1272	1062	922	989	941	997	919
EUR	687	627	574	697	818	813	694	712	715	716	758
IND	1277	1412	1385	1646	1582	1521	1403	1443	1278	1251	1241
JPN	1045	1045	1216	1104	1493	1520	1411	1407	1246	1210	1130
LAM	797	861	933	929	976	900	831	753	628	604	593
MEA	191	237	206	327	335	269	189	112	76	43	17
NEU	237	252	354	384	409	352	277	219	195	171	153
OAS	1960	2052	2051	1913	1867	1841	1716	1521	1298	1261	1177
REF	431	212	844	310	683	854	423	442	353	304	301
SSA	2126	2270	2576	2555	2497	2731	2800	2546	2307	2053	1735
USA	654	401	416	517	582	551	464	412	395	368	373

Table 1126: MAgPIE m4p_SSP5 — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	956	948	937	913	882	817	742
CAZ	1159	1208	1176	1169	1095	896	757
CHA	822	793	777	566	534	494	515
EUR	827	785	768	790	766	727	676
IND	1205	1229	1222	1197	1013	907	824
JPN	1046	1074	1048	1039	972	811	701
LAM	561	565	571	567	515	501	500
MEA	14	14	14	14	14	45	65
NEU	140	136	139	139	147	169	184
OAS	1143	1138	1121	1113	1085	998	846
REF	284	232	224	188	164	102	97
SSA	1579	1540	1521	1531	1508	1447	1366
USA	334	350	355	380	368	385	359

Table 1127: MAgPIE m4p_SSP5 — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	397	308	388	314	341	334	354	339	333	341	341
CAZ	280	283	284	280	281	280	275	285	278	274	269
CHA	161	175	174	190	196	195	196	187	185	189	196
EUR	1161	977	1130	1091	1052	1041	1067	984	1056	1012	1050
IND	236	235	234	216	235	221	216	228	215	230	235
JPN	2277	2262	2092	2173	2158	2115	2082	2088	1999	1799	1667
LAM	240	242	249	248	248	237	242	236	255	259	255
MEA	511	459	509	490	469	418	453	436	460	475	505
NEU	1411	1295	1388	1391	1341	1422	1353	1410	1304	1425	1308
OAS	110	109	107	108	108	107	111	114	116	117	115
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	197	201	201	201	204	189	182	194	173	178	166
USA	271	297	286	272	291	288	279	307	302	303	319

Table 1128: FAO — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	331	345	349	360	315	349	336	322	373	324	345
CAZ	271	273	273	268	272	270	267	267	266	269	269
CHA	196	195	192	192	189	187	204	215	209	229	230
EUR	992	1029	1017	1067	920	1094	966	1025	1051	1030	929
IND	221	236	230	251	244	240	240	239	224	261	251
JPN	1484	1346	752	641	569	495	350	317	226	168	269
LAM	237	259	241	237	232	241	237	239	232	223	212
MEA	453	466	459	454	423	465	407	434	419	413	382
NEU	1441	1306	1415	1377	1431	1266	1410	1244	1437	1308	1447
OAS	113	115	119	118	119	116	117	115	105	108	113
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	178	210	168	215	210	204	191	188	183	172	170
USA	301	331	332	333	387	321	395	338	402	348	410

Table 1129: FAO — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	354	331	344	304	332	321	330	277	335	310	307
CAZ	266	267	268	269	266	264	266	269	266	265	266
CHA	227	229	239	239	245	236	236	243	243	244	243
EUR	1041	794	930	773	804	776	809	616	834	802	837
IND	255	250	256	248	239	248	254	252	256	253	233
JPN	123	199	289	167	149	192	259	280	182	186	192
LAM	221	214	210	212	211	207	205	206	206	192	189
MEA	454	416	442	411	465	386	485	418	467	419	434
NEU	1290	1372	1348	1416	1349	1428	1335	1442	1371	1429	1392
OAS	122	128	122	120	118	126	122	114	110	110	104
REF	0	0	0	0	0	0	0	0	0	203	193
SSA	185	185	183	188	185	217	202	198	202	207	246
USA	369	387	382	375	362	425	447	440	367	442	397

Table 1130: FAO — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	315	308	328	329	322	327	332	325	330	326	333
CAZ	265	267	268	267	268	269	268	270	268	269	268
CHA	241	245	244	242	243	245	247	247	247	244	247
EUR	828	808	810	814	739	749	791	783	804	795	752
IND	234	239	243	254	231	243	249	227	228	227	255
JPN	203	101	89	2427	2427	2275	2206	2236	2272	2287	2318
LAM	183	187	190	179	178	178	180	178	171	171	177
MEA	385	393	446	438	408	449	403	429	395	458	403
NEU	1464	1332	1464	1357	1455	1358	1463	1358	1461	1389	1438
OAS	109	109	108	108	107	108	110	109	104	101	105
REF	182	185	177	187	190	204	195	200	196	197	221
SSA	247	254	262	260	260	261	261	262	264	270	266
USA	378	375	429	378	357	368	350	363	356	362	363

Table 1131: FAO — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	321	325	312	317	311	310	314
CAZ	268	268	270	269	269	270	270
CHA	245	243	241	244	244	243	243
EUR	744	720	681	691	648	633	653
IND	263	254	246	236	241	243	264
JPN	2283	2427	2427	2427	2427	2429	2428
LAM	179	179	179	179	181	182	182
MEA	440	403	442	420	413	417	364
NEU	1436	1442	1379	1350	1296	1326	1354
OAS	105	101	102	103	100	99	99
REF	206	211	219	242	236	227	208
SSA	275	295	284	289	274	295	279
USA	356	332	379	354	345	380	365

Table 1132: FAO — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	181	155	153	168	172	207	191	182	170	147
CAZ	0	137	147	133	147	151	200	195	165	157	131
CHA	0	99	101	104	108	122	110	104	114	113	95
EUR	0	532	423	400	437	435	535	416	367	306	328
IND	0	178	150	135	129	132	117	131	123	118	111
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	83	91	134	389	146	526	425	366	574	402
MEA	0	273	190	165	140	213	238	248	221	261	253
NEU	0	592	755	761	520	448	724	493	478	362	507
OAS	0	75	86	84	91	102	112	94	79	94	60
REF	0	0	0	0	1	6	5	6	11	11	9
SSA	0	4	4	69	77	92	145	190	242	60	63
USA	0	73	98	89	100	121	163	162	140	113	118

Table 1133: FAOp — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	143	149	171	193	183	217	241	303	261	265	284
CAZ	139	180	219	239	191	187	315	525	441	439	527
CHA	94	84	80	97	100	164	193	311	427	447	506
EUR	336	385	447	469	448	503	519	483	371	371	431
IND	114	102	118	134	143	143	112	101	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	226	114	256	248	113	119	157	161	95	160	213
MEA	246	212	242	218	270	368	389	508	383	393	388
NEU	471	742	684	969	1426	1325	1536	1539	1032	1143	1190
OAS	57	61	65	71	93	94	104	132	113	134	87
REF	7	5	4	9	8	45	78	310	163	119	108
SSA	59	53	56	64	65	92	116	122	38	35	39
USA	140	138	147	162	129	145	291	374	291	330	446

Table 1134: FAOp — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM) [PART 2/3]

	2005
GLO	348
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1135: IniFoodPrice — Prices—Agriculture—Other oil crops (incl rapeseed) (US$05/tDM)

36.22 Pasture

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## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
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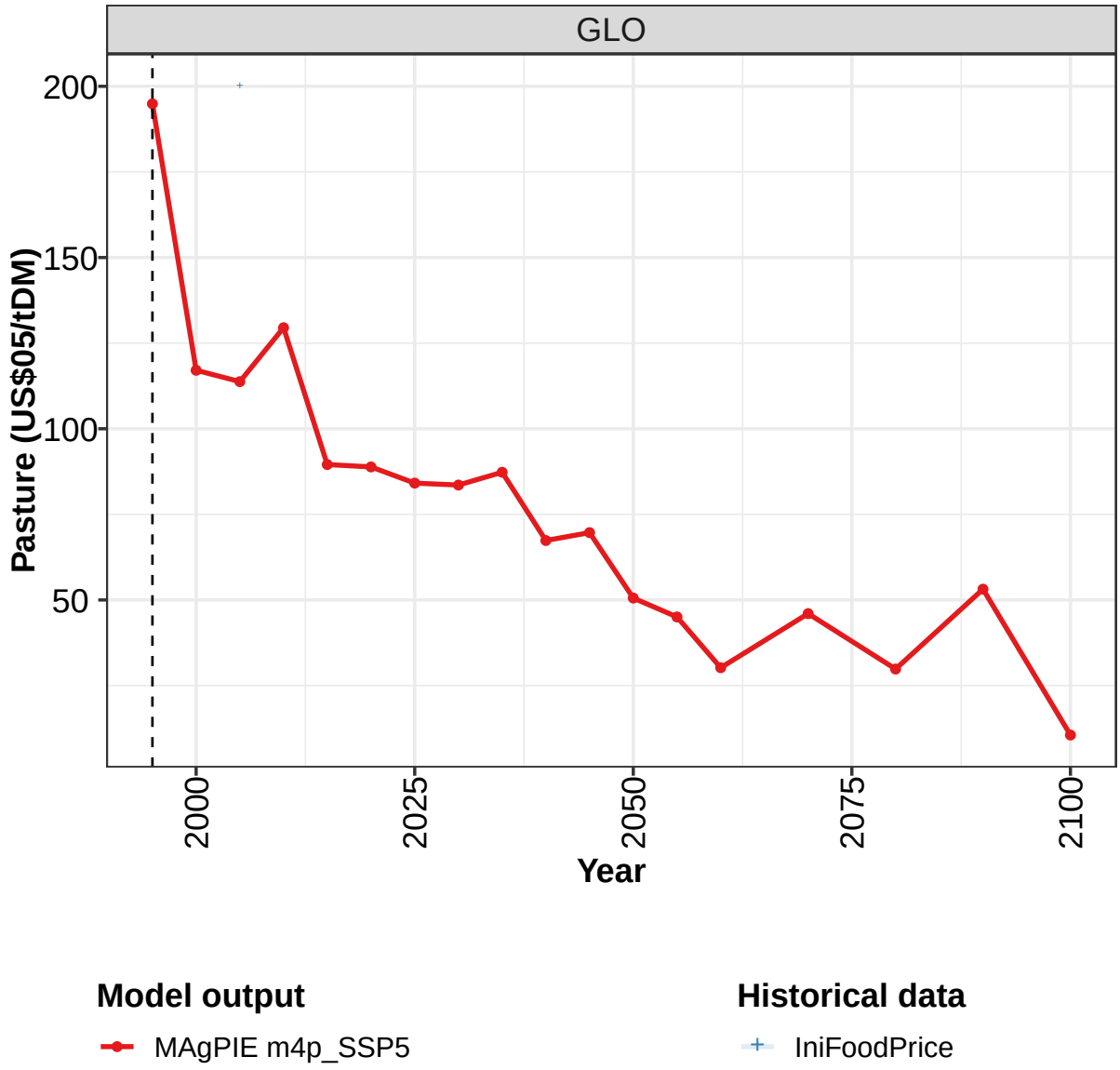


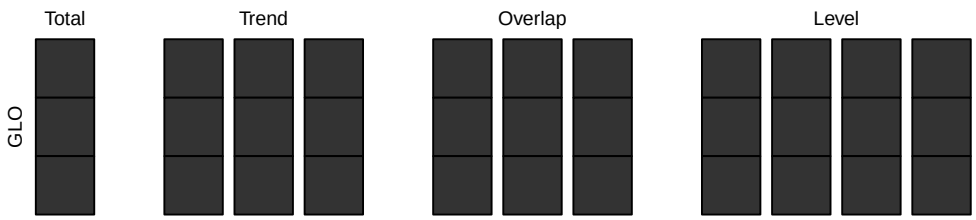


Figure 312: MAgPIE m4p_SSP5 — Prices—Agriculture—Pasture (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	195	117	114	130	90	89	84	84	87	67	70

Table 1136: MAgPIE m4p_SSP5 — Prices—Agriculture—Pasture (US$05/tDM) [PART 1/2]

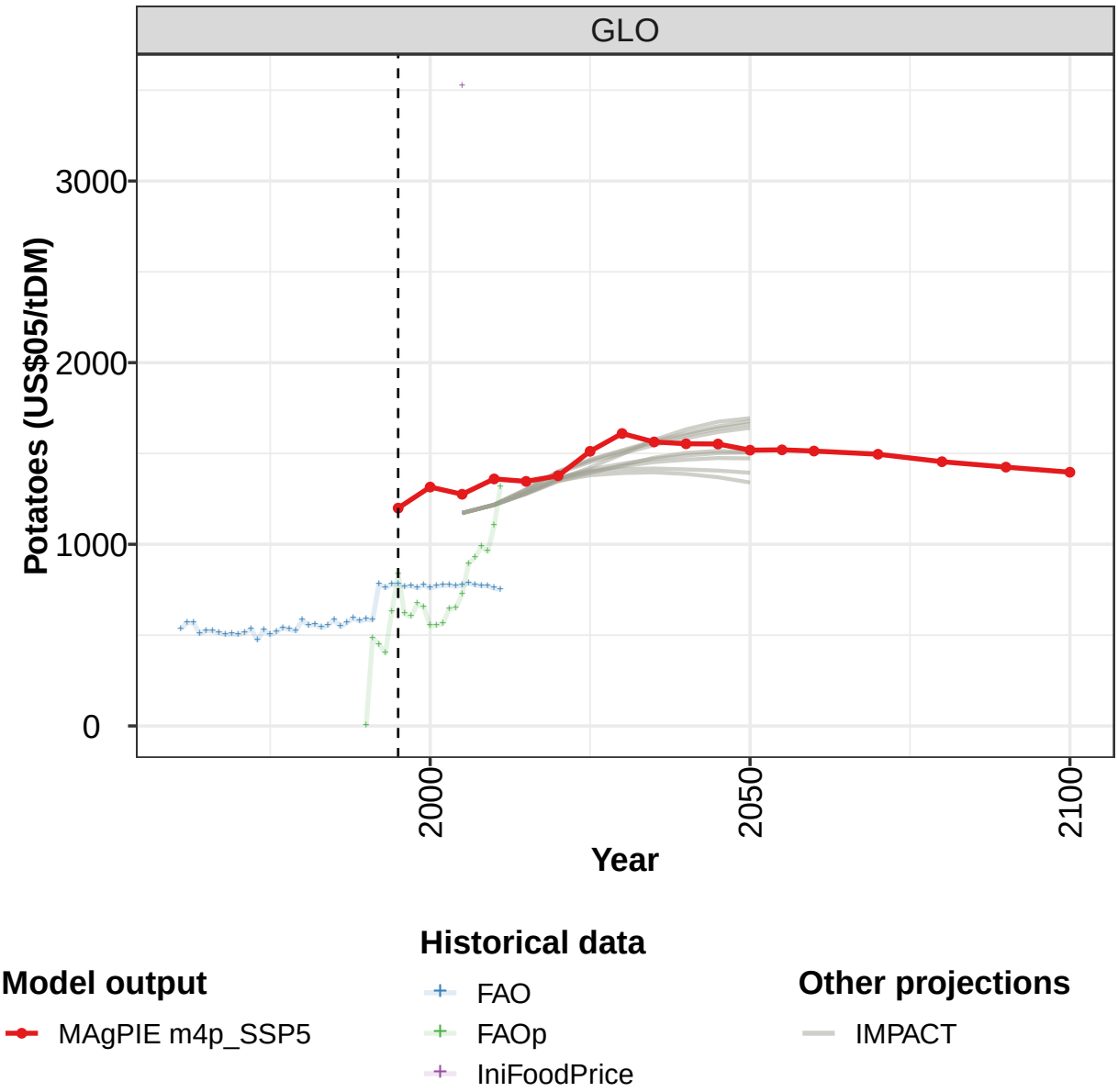
	2050	2055	2060	2070	2080	2090	2100
GLO	51	45	30	46	30	53	11

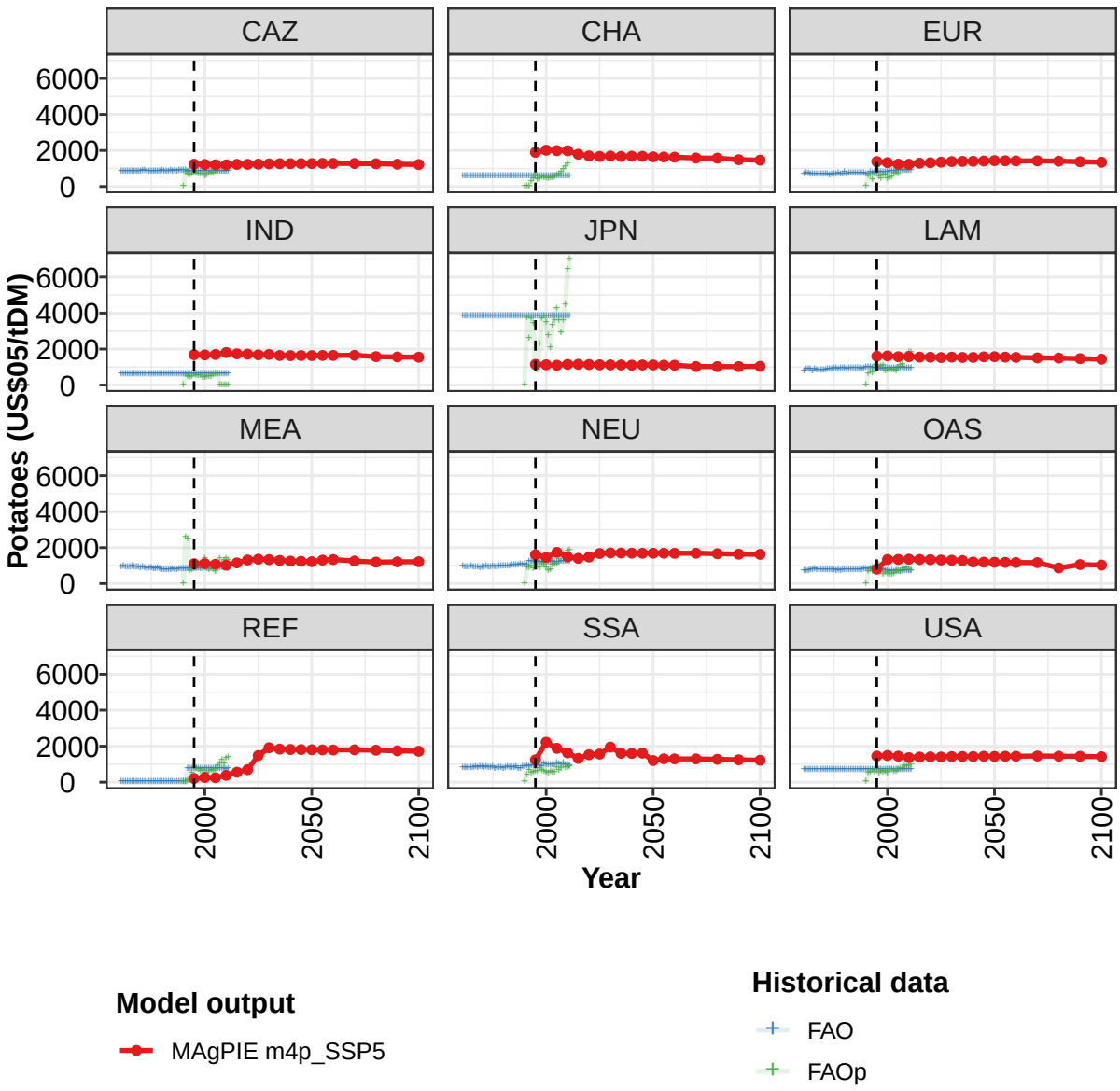
Table 1137: MAgPIE m4p_SSP5 — Prices—Agriculture—Pasture (US$05/tDM) [PART 2/2]

	2005
GLO	200

Table 1138: IniFoodPrice — Prices—Agriculture—Pasture (US$05/tDM)

36.23 Potatoes





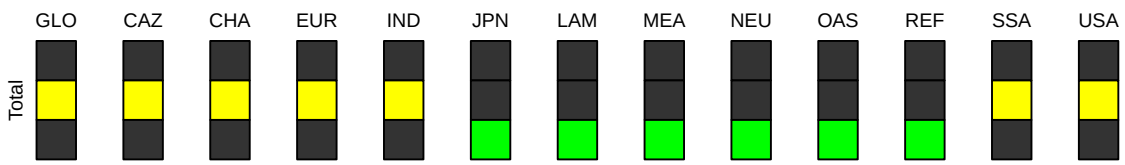


Figure 313: MAgPIE m4p_SSP5 — Prices—Agriculture—Potatoes (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1199	1315	1275	1360	1346	1377	1512	1610	1563	1553	1552
CAZ	1237	1222	1205	1200	1227	1228	1239	1255	1263	1265	1269
CHA	1897	2014	1992	1985	1791	1697	1669	1688	1669	1680	1674
EUR	1382	1323	1240	1234	1294	1319	1351	1383	1393	1398	1415
IND	1686	1674	1697	1806	1737	1717	1678	1699	1642	1634	1641
JPN	1147	1126	1099	1150	1153	1142	1125	1121	1117	1107	1116
LAM	1602	1619	1576	1579	1554	1547	1530	1551	1535	1535	1567
MEA	1102	1109	1078	1023	1149	1313	1356	1331	1289	1248	1237
NEU	1606	1454	1738	1488	1405	1481	1676	1705	1701	1694	1688
OAS	804	1340	1343	1356	1341	1331	1312	1298	1280	1198	1191
REF	208	258	247	381	554	697	1483	1914	1840	1819	1812
SSA	1246	2221	1883	1632	1324	1528	1565	1950	1606	1601	1615
USA	1452	1484	1449	1367	1398	1410	1403	1426	1431	1429	1443

Table 1139: MAgPIE m4p_SSP5 — Prices—Agriculture—Potatoes (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1518	1520	1513	1496	1455	1425	1397
CAZ	1271	1282	1278	1277	1262	1235	1220
CHA	1646	1637	1627	1582	1574	1487	1463
EUR	1436	1426	1419	1423	1406	1375	1345
IND	1637	1644	1645	1653	1578	1561	1546
JPN	1117	1104	1102	1028	1026	1027	1040
LAM	1575	1551	1537	1509	1498	1467	1437
MEA	1218	1304	1338	1254	1194	1208	1217
NEU	1690	1690	1686	1690	1662	1637	1628
OAS	1185	1179	1171	1165	871	1057	1031
REF	1803	1796	1790	1798	1779	1743	1721
SSA	1205	1300	1296	1294	1274	1246	1220
USA	1432	1442	1443	1457	1446	1439	1416

Table 1140: MAgPIE m4p_SSP5 — Prices—Agriculture—Potatoes (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	532	568	567	508	524	521	512	503	505	504	511
CAZ	822	829	849	833	826	832	845	836	853	843	861
CHA	590	590	590	590	590	590	590	590	590	590	590
EUR	691	708	705	665	692	682	676	669	668	665	691
IND	586	586	586	586	586	586	586	586	586	586	586
JPN	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803
LAM	782	873	856	853	784	848	832	833	811	816	834
MEA	907	938	905	895	907	938	912	892	891	884	917
NEU	948	926	923	922	954	886	922	922	884	899	918
OAS	710	701	694	764	762	790	756	759	760	754	761
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	793	785	801	798	794	820	826	819	826	828	818
USA	668	668	668	668	668	668	668	668	668	668	668

Table 1141: FAO — Prices—Agriculture—Potatoes (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	533	473	529	501	518	539	531	523	583	553	559
CAZ	875	854	833	853	842	840	846	842	857	852	853
CHA	590	590	590	590	589	590	590	590	590	590	590
EUR	666	643	673	654	660	700	680	675	753	687	722
IND	586	586	586	586	586	586	586	586	586	586	586
JPN	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803
LAM	890	882	857	909	898	886	923	937	943	878	925
MEA	855	832	852	871	832	824	840	811	772	757	743
NEU	945	895	901	963	926	904	975	946	986	970	974
OAS	742	759	737	755	708	771	716	737	751	746	733
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	830	812	819	834	759	801	785	814	751	819	846
USA	668	668	668	668	668	668	668	668	668	668	668

Table 1142: FAO — Prices—Agriculture—Potatoes (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	540	553	583	545	569	591	576	587	582	780	760
CAZ	853	860	852	856	853	868	861	868	870	849	852
CHA	590	590	590	590	590	590	590	590	590	590	590
EUR	722	719	728	700	706	700	712	690	693	766	737
IND	586	586	586	586	586	586	586	586	586	586	586
JPN	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803
LAM	918	928	897	898	913	875	918	981	957	976	933
MEA	763	771	804	771	767	809	808	791	809	829	814
NEU	954	997	1024	991	1036	1081	1024	1045	1022	1212	1228
OAS	733	744	753	774	758	749	808	785	769	807	871
REF	0	0	0	0	0	0	0	0	0	737	723
SSA	791	772	818	837	743	747	859	869	890	829	881
USA	668	668	668	668	668	668	668	668	668	668	668

Table 1143: FAO — Prices—Agriculture—Potatoes (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	779	780	767	771	760	774	759	770	773	774	768
CAZ	848	840	848	845	847	845	832	844	838	826	830
CHA	590	590	590	590	590	590	590	590	590	590	590
EUR	780	777	771	787	773	800	789	820	844	851	849
IND	586	586	586	586	586	586	586	586	586	586	586
JPN	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803	3803
LAM	920	917	916	894	886	908	912	927	915	930	921
MEA	817	823	822	843	809	820	853	814	830	850	869
NEU	1197	1183	1204	1185	1184	1196	1217	1177	1178	1198	1167
OAS	836	875	880	796	753	719	698	647	690	670	680
REF	735	741	728	743	733	739	732	744	745	744	736
SSA	901	904	895	897	869	999	938	935	944	946	934
USA	668	668	668	668	668	668	668	668	668	668	668

Table 1144: FAO — Prices—Agriculture—Potatoes (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	775	785	777	772	770	757	751
CAZ	840	828	827	842	830	839	834
CHA	590	590	590	590	590	590	590
EUR	869	890	858	860	875	866	872
IND	586	586	586	586	586	586	586
JPN	3803	3803	3803	3803	3803	3803	3803
LAM	940	931	957	942	926	926	914
MEA	855	857	851	852	886	902	797
NEU	1151	1195	1212	1200	1199	1198	1197
OAS	680	663	679	689	708	683	683
REF	747	745	745	730	740	718	738
SSA	1043	1025	970	1072	961	945	924
USA	668	668	668	668	668	668	668

Table 1145: FAO — Prices—Agriculture—Potatoes (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	484	448	401	629	836	615	601	671	653	550
CAZ	0	771	658	631	697	764	730	683	668	689	596
CHA	0	0	0	262	405	612	385	419	532	483	477
EUR	0	586	558	371	699	1026	538	439	623	620	404
IND	0	584	436	421	458	533	518	522	530	396	427
JPN	0	3698	2588	3650	3429	886	811	2292	3688	3803	3438
LAM	0	586	728	678	1095	984	977	1036	1100	780	831
MEA	0	2583	2483	717	770	1090	905	856	1097	1188	1404
NEU	0	833	833	944	825	1215	922	848	1124	993	860
OAS	0	629	740	676	730	968	1026	735	498	584	544
REF	0	0	51	140	465	777	745	704	587	661	504
SSA	0	372	645	470	562	614	566	753	658	607	537
USA	0	495	555	618	559	677	491	564	559	577	509

Table 1146: FAOp — Prices—Agriculture—Potatoes (US$05/tDM) [PART 1/3]

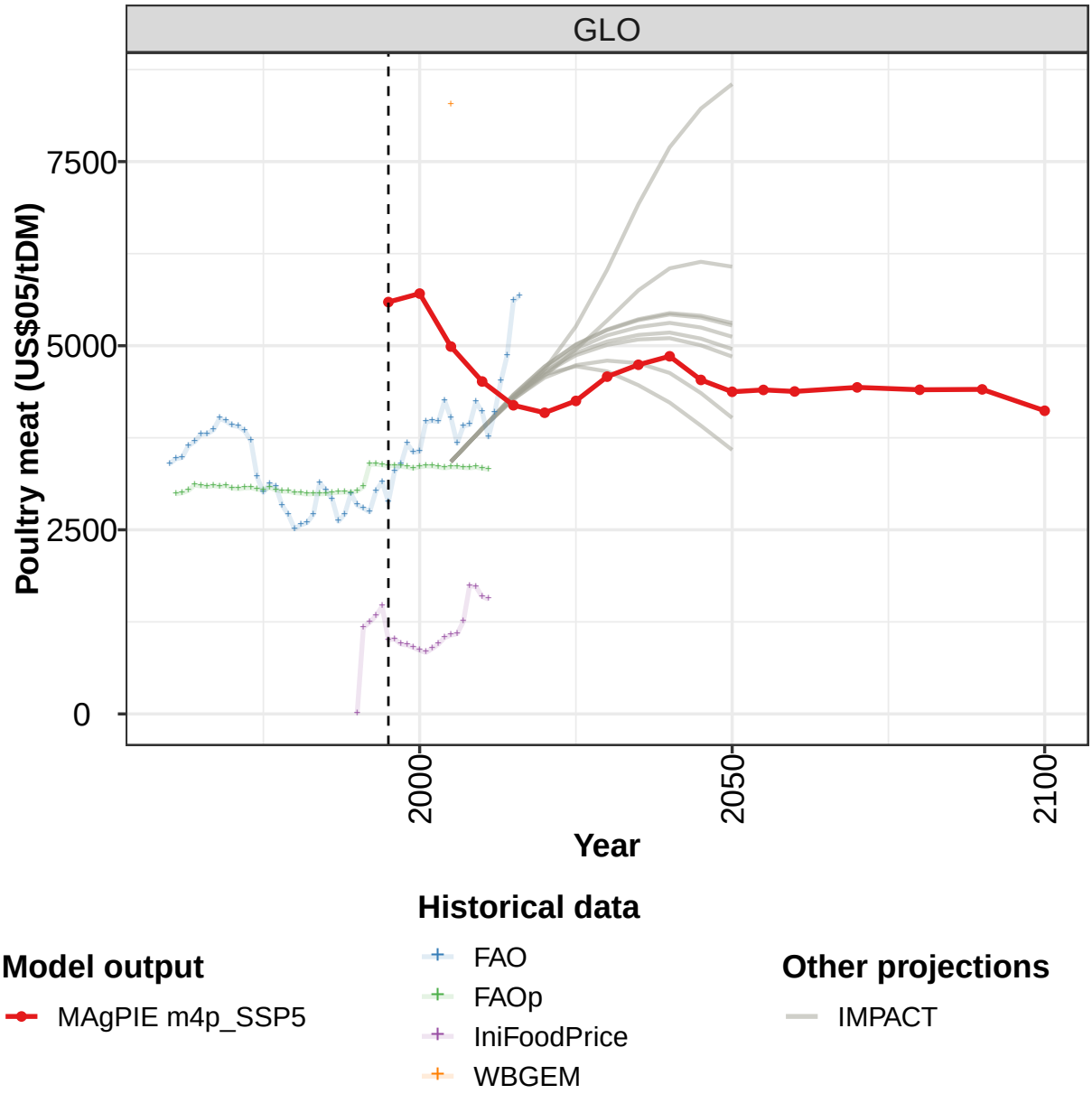
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	553	564	645	648	725	893	926	987	960	1102	1317
CAZ	615	713	733	746	809	943	1008	1214	1186	1206	1311
CHA	434	450	461	494	599	678	782	915	1104	1248	2014
EUR	483	494	713	728	698	1158	1184	1068	890	1062	1163
IND	464	434	434	571	595	591	0	0	0	0	0
JPN	2715	2045	3313	3582	4240	3589	2909	3562	4465	6392	7000
LAM	877	816	797	744	984	1065	1150	1521	1643	1779	1817
MEA	1020	766	795	733	676	987	1369	1135	1298	1381	1277
NEU	728	769	1033	1051	1090	1303	1625	1650	1534	1787	1868
OAS	493	498	529	653	662	640	820	828	861	745	690
REF	484	582	659	580	709	901	1005	1202	1000	1317	1382
SSA	484	584	530	549	806	632	753	974	789	777	857
USA	700	668	591	568	705	732	755	909	827	923	941

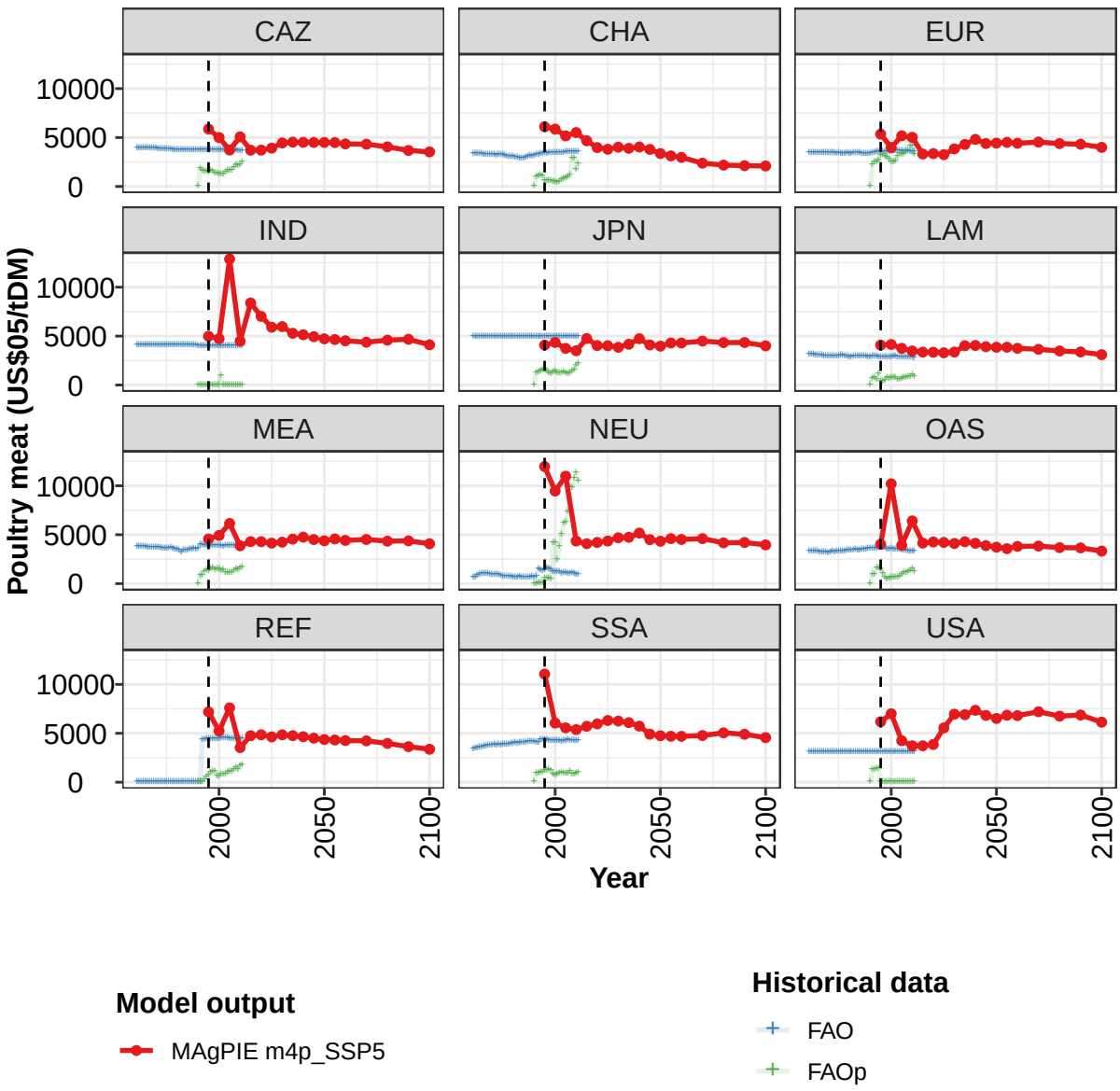
Table 1147: FAOp — Prices—Agriculture—Potatoes (US$05/tDM) [PART 2/3]

	2005
GLO	3522
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1148: IniFoodPrice — Prices—Agriculture—Potatoes (US$05/tDM)

36.24 Poultry meat





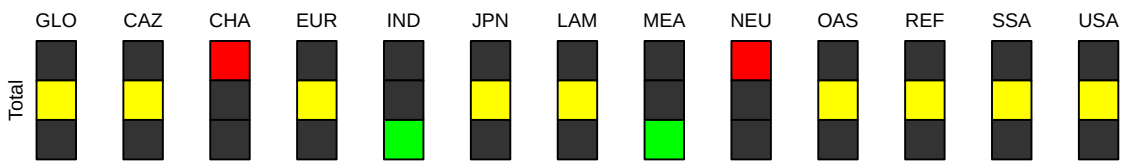


Figure 314: MAgPIE m4p_SSP5 — Prices—Agriculture—Poultry meat (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5593	5708	4989	4514	4191	4090	4250	4580	4742	4856	4536
CAZ	5861	4995	3719	5071	3709	3712	3916	4443	4528	4509	4497
CHA	6104	5858	5166	5507	4665	3976	3801	4015	3893	4034	3788
EUR	5350	3975	5178	5021	3314	3360	3250	3842	4294	4809	4389
IND	4981	4739	12876	4495	8388	7018	5908	5975	5289	5137	4946
JPN	4085	4354	3744	3504	4754	4039	4016	3857	4171	4733	4099
LAM	4084	4147	3755	3478	3363	3356	3299	3375	4017	4046	3917
MEA	4563	4924	6153	3871	4289	4286	4140	4240	4550	4751	4509
NEU	11968	9461	10985	4356	4080	4212	4357	4689	4737	5170	4493
OAS	4029	10201	3925	6410	4146	4259	4214	4108	4282	4123	3884
REF	7187	5237	7600	3539	4755	4849	4635	4844	4759	4652	4507
SSA	11052	6049	5559	5377	5713	5961	6310	6252	6092	5737	4910
USA	6182	6999	4243	3724	3722	3858	5551	6955	6901	7347	6831

Table 1149: MAgPIE m4p_SSP5 — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4375	4400	4379	4434	4401	4407	4117
CAZ	4495	4483	4346	4315	4050	3677	3532
CHA	3366	3122	2971	2379	2185	2121	2093
EUR	4431	4504	4414	4531	4382	4312	3995
IND	4726	4654	4525	4377	4591	4672	4114
JPN	3977	4301	4295	4493	4337	4349	4008
LAM	3860	3865	3753	3650	3481	3381	3102
MEA	4379	4569	4421	4513	4341	4368	4078
NEU	4338	4601	4515	4600	4170	4207	3961
OAS	3721	3574	3805	3837	3680	3655	3325
REF	4364	4317	4258	4229	3967	3634	3369
SSA	4753	4697	4692	4775	5044	4903	4558
USA	6517	6849	6811	7204	6753	6866	6136

Table 1150: MAgPIE m4p_SSP5 — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	3395	3465	3481	3640	3695	3796	3801	3857	4013	3976	3918
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1151: WBGEM — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	3903	3843	3709	3216	3008	3123	3086	2832	2704	2514	2567
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1152: WBGEM — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	2597	2711	3137	3040	2919	2615	2711	2990	2834	2792	2744
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1153: WBGEM — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	3024	3152	2882	3299	3389	3669	3552	3567	3967	3979	3970
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1154: WBGEM — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	4251	4023	3675	3911	3928	4238	4098	3759	4086	4518	4867
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1155: WBGEM — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 5/6]

	2015	2016
GLO	5608	5678
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1156: WBGEM — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	2989	3002	3034	3108	3093	3088	3097	3091	3098	3066	3057
CAZ	3954	3953	3954	3948	3935	3953	3917	3893	3885	3877	3841
CHA	3302	3312	3318	3314	3290	3282	3269	3252	3250	3255	3231
EUR	3407	3412	3425	3429	3442	3433	3427	3417	3417	3391	3391
IND	4065	4075	4085	4093	4101	4108	4103	4097	4091	4086	4081
JPN	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982
LAM	3158	3145	3098	3075	3010	2989	2985	2967	2949	2926	2932
MEA	3806	3778	3773	3767	3742	3723	3715	3715	3713	3708	3678
NEU	589	635	777	876	965	998	1004	968	919	867	890
OAS	3332	3309	3311	3291	3273	3218	3189	3237	3208	3154	3214
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3410	3438	3507	3564	3596	3632	3680	3715	3765	3776	3804
USA	3105	3103	3103	3103	3103	3103	3104	3102	3101	3101	3102

Table 1157: FAO — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	3067	3072	3052	3038	3075	3042	3022	3023	3005	2996	2985
CAZ	3829	3839	3805	3777	3789	3770	3747	3753	3722	3731	3743
CHA	3177	3202	3211	3195	3171	3060	3026	3028	3005	2948	2940
EUR	3401	3400	3379	3387	3380	3375	3384	3390	3369	3376	3386
IND	4077	4078	4079	4079	4079	4082	4097	4102	4102	4107	4111
JPN	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982
LAM	2928	2921	2942	2982	3000	2987	2949	2897	2859	2870	2903
MEA	3634	3606	3605	3572	3596	3641	3579	3503	3476	3380	3210
NEU	906	896	844	726	715	743	705	717	671	640	620
OAS	3270	3234	3292	3269	3290	3306	3273	3361	3417	3403	3420
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3765	3819	3789	3845	3848	3833	3886	3907	3926	4002	3954
USA	3102	3102	3102	3101	3102	3101	3101	3101	3101	3101	3101

Table 1158: FAO — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	2990	2987	2993	3002	3007	3014	3005	3026	3081	3389	3392
CAZ	3727	3745	3726	3725	3722	3722	3712	3717	3713	3701	3703
CHA	2875	2895	2908	2982	3007	3105	3082	3113	3210	3242	3298
EUR	3398	3389	3394	3380	3374	3375	3380	3374	3387	3469	3543
IND	4111	4107	4105	4096	4050	4046	4035	4021	3998	3995	3993
JPN	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982
LAM	2893	2939	2943	2967	2950	2942	2874	2880	2917	2906	2890
MEA	3373	3357	3372	3489	3517	3554	3461	3565	3977	3925	3911
NEU	682	623	662	625	599	624	678	634	685	1444	1343
OAS	3465	3436	3431	3475	3507	3494	3562	3612	3605	3597	3598
REF	0	0	0	0	0	0	0	0	0	4350	4357
SSA	4004	3994	4018	4063	4102	4094	4114	4130	4066	4051	4294
USA	3101	3101	3101	3102	3103	3103	3103	3103	3103	3102	3102

Table 1159: FAO — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	3381	3372	3371	3363	3350	3337	3357	3366	3363	3351	3340
CAZ	3715	3716	3714	3687	3682	3696	3695	3713	3693	3684	3684
CHA	3336	3402	3383	3396	3427	3441	3451	3461	3460	3472	3480
EUR	3527	3525	3511	3499	3484	3486	3591	3583	3582	3619	3593
IND	3996	3999	4002	4003	3996	3991	3984	3981	3974	3969	3966
JPN	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982	4982
LAM	2884	2882	2883	2886	2870	2864	2878	2904	2902	2861	2836
MEA	3871	3819	3860	3878	3906	3851	3848	3834	3812	3865	3858
NEU	1295	1367	1556	1509	1406	1223	1193	1223	1205	1026	1112
OAS	3655	3653	3673	3645	3525	3523	3543	3523	3533	3470	3495
REF	4395	4422	4385	4407	4421	4435	4458	4474	4502	4491	4483
SSA	4314	4289	4296	4278	4277	4246	4208	4209	4223	4177	4210
USA	3101	3101	3101	3101	3100	3100	3100	3100	3100	3100	3099

Table 1160: FAO — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	3352	3352	3346	3341	3350	3337	3324
CAZ	3676	3668	3656	3671	3660	3648	3623
CHA	3501	3502	3515	3533	3537	3541	3537
EUR	3580	3568	3567	3576	3559	3550	3547
IND	3963	3960	3956	3955	3953	3952	3953
JPN	4982	4982	4982	4982	4982	4982	4982
LAM	2880	2880	2861	2830	2826	2795	2778
MEA	3881	3872	3838	3883	3927	3934	3872
NEU	1059	1017	996	1088	961	910	882
OAS	3424	3394	3348	3308	3308	3303	3312
REF	4454	4434	4453	4433	4433	4424	4430
SSA	4212	4285	4279	4279	4275	4262	4248
USA	3099	3099	3099	3099	3099	3098	3098

Table 1161: FAO — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	1174	1243	1332	1460	1005	1018	948	936	901	864
CAZ	0	1790	1602	1535	1485	1475	1623	1538	1379	1332	1284
CHA	0	1000	1049	1137	1026	556	587	541	526	492	457
EUR	0	2212	2448	2511	2626	3131	3241	3078	2939	2746	2499
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	1194	1276	1432	1545	1597	1377	1230	1143	1311	1375
LAM	0	689	714	504	1101	375	405	459	730	669	711
MEA	0	807	801	1215	1359	1290	1514	1614	1386	1454	1442
NEU	0	0	98	67	71	513	537	529	477	4127	4136
OAS	0	879	924	1571	1554	1516	1040	650	446	511	621
REF	0	0	33	254	515	710	962	1088	1082	612	631
SSA	16	931	852	999	999	1198	1221	1226	1177	797	744
USA	0	1267	1272	1338	1381	0	0	0	0	0	0

Table 1162: FAOp — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 1/3]

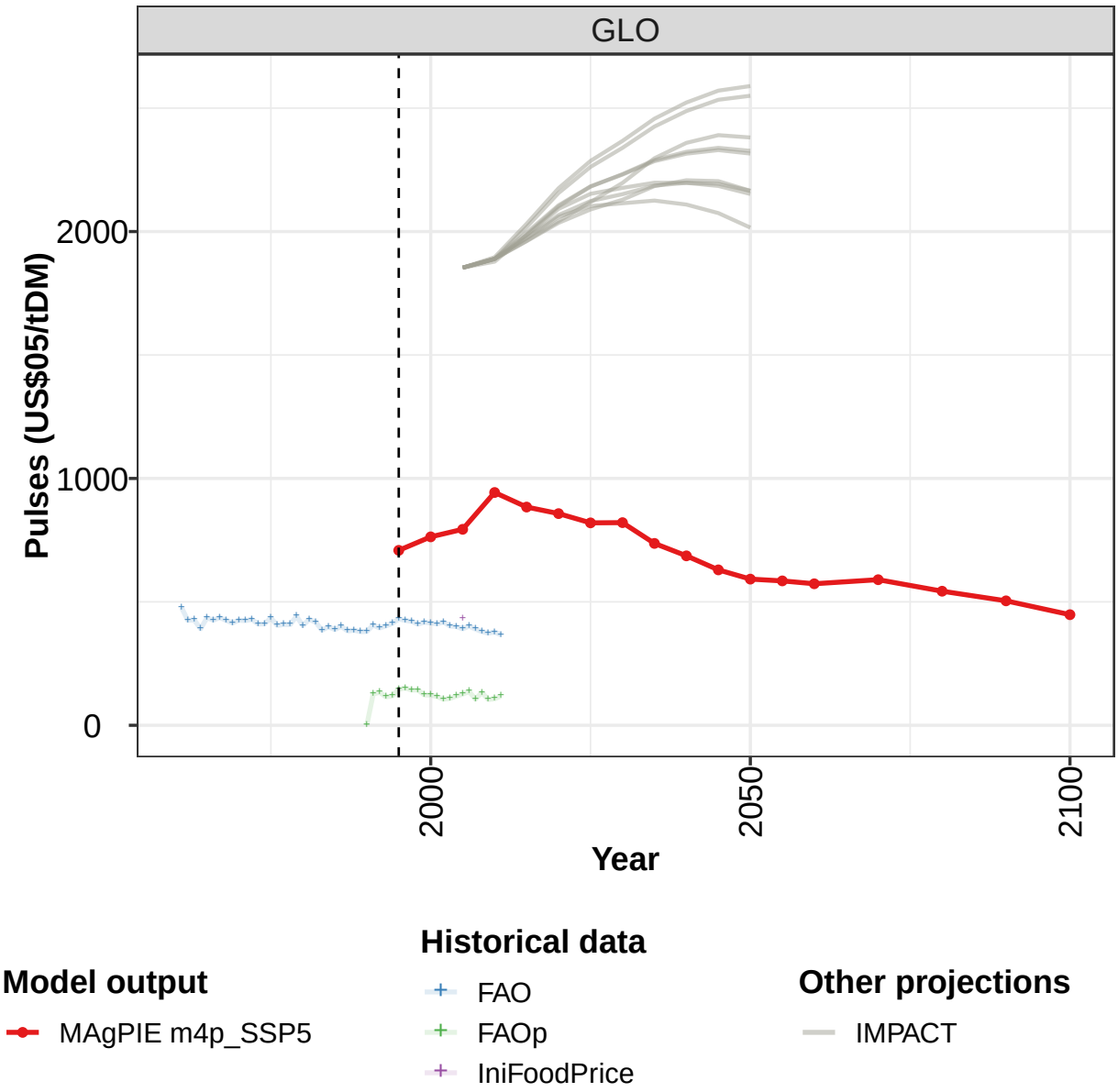
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	835	885	948	1037	1070	1089	1256	1742	1728	1594	1559
CAZ	1263	1223	1418	1609	1633	1637	1899	2206	2102	2217	2454
CHA	352	481	643	806	849	908	1115	2842	2902	1691	2266
EUR	2450	2579	3007	3292	3260	3310	3637	4876	4133	4067	3250
IND	890	0	0	0	0	0	0	0	0	0	0
JPN	1220	1183	1259	1309	1208	1127	1174	1435	1552	1978	2194
LAM	768	711	594	584	682	712	782	875	878	990	869
MEA	1318	1419	1113	1128	1143	1116	1267	1457	1351	1544	1697
NEU	2403	3774	4976	6117	6261	7279	9892	9759	10714	11289	10466
OAS	601	655	642	748	954	1073	1103	1181	1326	1509	1177
REF	785	749	778	950	1094	1047	1233	1498	1308	1644	1710
SSA	794	852	957	931	939	939	1083	771	840	895	949
USA	0	0	0	0	0	0	0	0	0	0	0

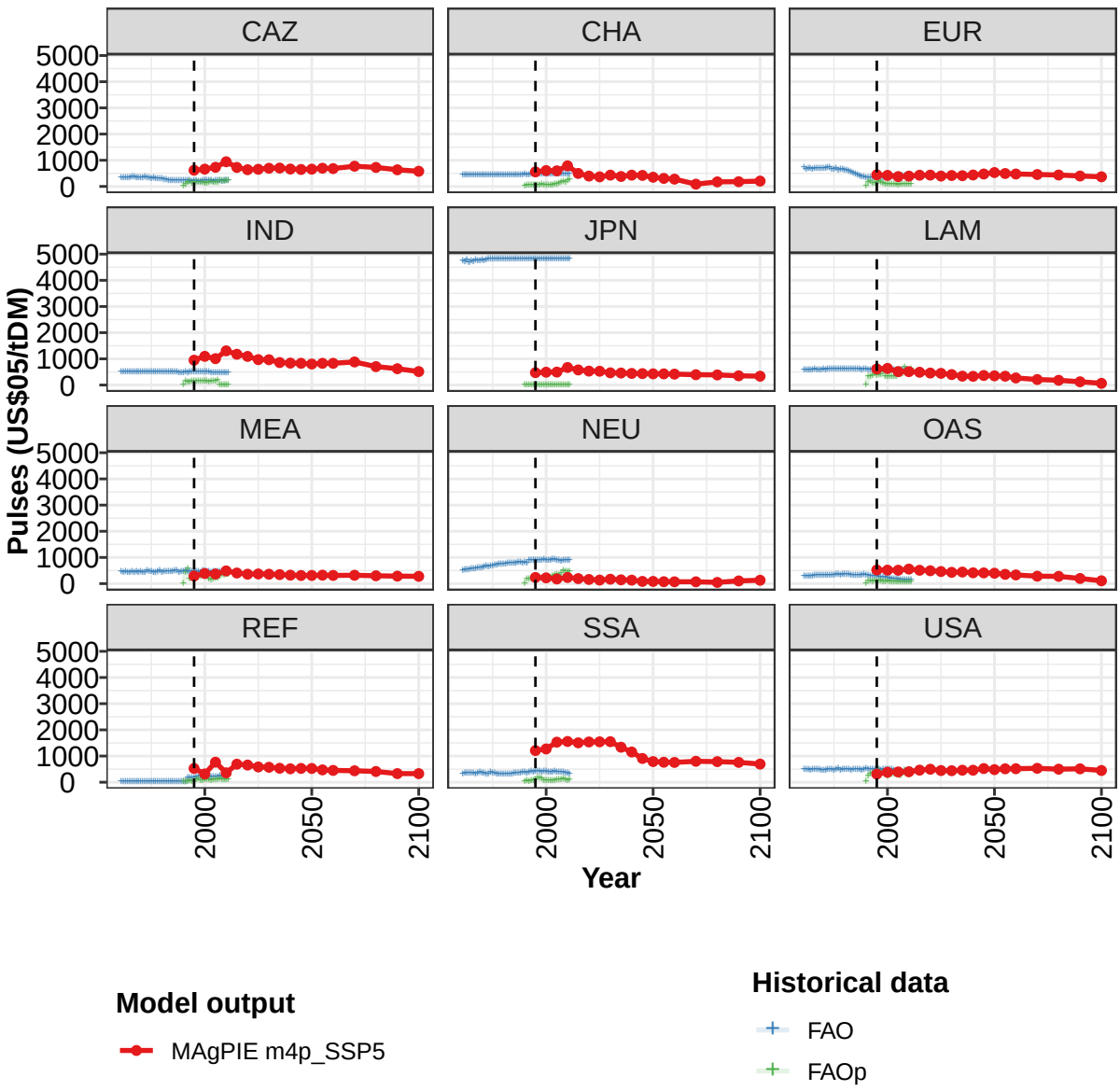
Table 1163: FAOp — Prices—Agriculture—Poultry meat (US$05/tDM) [PART 2/3]

	2005
GLO	8277
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1164: IniFoodPrice — Prices—Agriculture—Poultry meat (US$05/tDM)

36.25 Pulses


GLO
Pulses (US$05/tDM)
2000
1000
0
2000
2050
2100
Year
Historical data
FAO
FAOp
IniFoodPrice
Model output
MAgPIE m4p_SSP5
Other projections
IMPACT



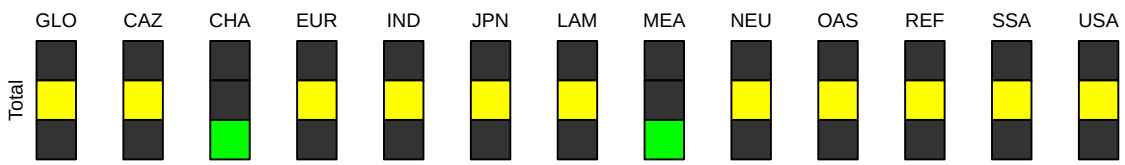


Figure 315: MAgPIE m4p_SSP5 — Prices—Agriculture—Pulses (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	709	763	794	943	884	858	820	821	737	686	630
CAZ	619	662	730	943	727	640	656	694	703	665	649
CHA	556	606	596	788	498	396	367	432	380	432	422
EUR	446	423	377	395	429	434	397	418	411	438	475
IND	949	1096	1008	1305	1177	1094	971	967	859	837	830
JPN	473	491	496	671	577	534	528	468	459	443	436
LAM	613	635	512	512	489	458	446	401	339	332	366
MEA	290	388	368	486	407	361	370	360	346	324	311
NEU	236	221	179	235	192	160	136	169	145	133	85
OAS	523	515	513	557	512	493	463	432	443	414	410
REF	528	316	766	359	689	657	584	571	533	514	528
SSA	1209	1271	1530	1556	1506	1539	1543	1550	1337	1155	908
USA	312	381	392	401	462	496	447	440	459	459	523

Table 1165: MAgPIE m4p_SSP5 — Prices—Agriculture—Pulses (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	592	585	573	590	543	504	448
CAZ	660	696	683	772	727	636	580
CHA	352	308	279	87	175	182	204
EUR	531	495	475	456	437	399	368
IND	802	829	830	881	704	623	516
JPN	428	427	417	394	386	353	338
LAM	352	338	271	210	182	124	65
MEA	312	322	313	320	300	286	279
NEU	85	73	70	71	47	103	130
OAS	398	355	332	284	278	196	109
REF	526	472	452	437	410	329	328
SSA	789	764	756	800	787	758	694
USA	482	513	517	532	498	512	448

Table 1166: MAgPIE m4p_SSP5 — Prices—Agriculture—Pulses (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	477	425	427	391	435	426	437	425	415	426	424
CAZ	304	317	326	320	330	351	358	321	331	312	303
CHA	433	435	433	431	432	434	434	435	437	438	434
EUR	703	653	681	674	651	689	675	670	662	674	678
IND	496	491	496	508	497	486	488	480	483	485	491
JPN	4720	4690	4771	4673	4716	4696	4755	4744	4750	4764	4750
LAM	579	577	571	578	573	582	578	576	579	582	580
MEA	437	416	432	414	421	448	402	452	404	460	420
NEU	495	508	525	526	550	538	563	577	589	590	626
OAS	287	280	271	269	280	288	291	315	297	303	303
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	314	320	328	331	338	329	314	318	355	342	335
USA	489	459	469	455	466	480	467	462	447	458	439

Table 1167: FAO — Prices—Agriculture—Pulses (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	429	410	411	435	404	408	408	441	404	429	418
CAZ	339	318	303	296	332	289	284	275	273	239	231
CHA	436	437	437	437	434	436	432	431	432	434	437
EUR	698	706	641	643	669	621	628	639	600	616	567
IND	498	479	496	487	493	479	491	495	481	479	477
JPN	4785	4790	4793	4791	4791	4793	4794	4793	4791	4787	4800
LAM	584	590	597	593	590	596	593	607	587	588	584
MEA	422	471	460	460	426	406	433	471	428	436	464
NEU	669	631	655	669	702	695	724	720	742	732	752
OAS	299	304	315	318	343	339	321	329	327	332	333
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	280	313	373	348	337	293	307	312	290	299	309
USA	478	476	460	458	476	500	452	476	474	494	484

Table 1168: FAO — Prices—Agriculture—Pulses (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	385	399	388	401	382	385	379	380	406	394	403
CAZ	214	206	210	202	213	202	205	218	213	209	197
CHA	439	439	443	441	439	444	443	447	437	441	454
EUR	523	493	462	427	394	366	364	327	330	327	326
IND	474	489	475	475	474	466	466	458	491	451	476
JPN	4793	4803	4803	4803	4804	4804	4806	4807	4807	4808	4807
LAM	606	603	582	591	586	575	581	587	578	574	581
MEA	440	458	463	476	467	411	463	451	479	455	458
NEU	759	770	771	774	800	811	769	811	783	876	866
OAS	303	295	295	293	308	306	328	301	293	270	263
REF	0	0	0	0	0	0	0	0	0	146	146
SSA	287	285	324	335	329	341	355	361	333	352	397
USA	455	484	491	467	472	452	459	496	482	480	462

Table 1169: FAO — Prices—Agriculture—Pulses (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	413	431	425	421	410	418	415	411	419	402	400
CAZ	192	196	198	189	188	204	210	224	230	206	188
CHA	451	457	456	456	456	465	465	465	460	463	466
EUR	330	342	336	328	324	330	338	350	347	343	347
IND	483	486	475	482	476	476	477	488	476	452	465
JPN	4810	4811	4810	4811	4811	4811	4811	4810	4812	4812	4812
LAM	575	585	583	574	572	566	558	570	570	562	555
MEA	457	436	447	443	429	478	463	432	443	430	456
NEU	870	879	875	881	888	902	892	892	892	895	895
OAS	256	254	241	238	228	219	208	195	175	172	163
REF	151	166	188	206	220	208	213	196	204	199	195
SSA	374	396	394	399	369	391	389	375	356	374	390
USA	489	464	488	455	460	473	481	466	477	455	381

Table 1170: FAO — Prices—Agriculture—Pulses (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	391	402	390	380	373	378	367
CAZ	202	208	202	192	200	214	220
CHA	464	462	460	463	463	461	458
EUR	350	368	384	388	368	352	369
IND	458	462	453	460	463	452	457
JPN	4812	4812	4812	4812	4812	4812	4812
LAM	553	560	549	557	546	542	526
MEA	440	451	465	462	446	478	401
NEU	878	863	858	869	869	886	889
OAS	153	138	136	114	113	112	113
REF	200	189	217	209	216	234	214
SSA	383	382	361	352	341	346	307
USA	398	401	386	413	384	410	445

Table 1171: FAO — Prices—Agriculture—Pulses (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	127	134	115	119	146	151	143	143	123	123
CAZ	0	53	137	181	123	148	149	147	138	128	109
CHA	0	27	28	32	24	37	51	51	63	40	45
EUR	0	148	175	116	119	150	162	126	110	85	80
IND	0	130	107	109	122	138	123	127	132	126	118
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	319	296	360	421	340	370	374	485	320	301
MEA	0	403	562	174	204	308	262	244	262	362	385
NEU	0	163	162	172	157	264	219	185	195	207	241
OAS	0	76	74	64	78	99	98	74	71	73	76
REF	0	0	20	31	25	27	93	111	66	62	88
SSA	0	39	30	51	60	90	144	139	121	54	57
USA	0	234	305	320	332	310	445	332	341	281	226

Table 1172: FAOp — Prices—Agriculture—Pulses (US$05/tDM) [PART 1/3]

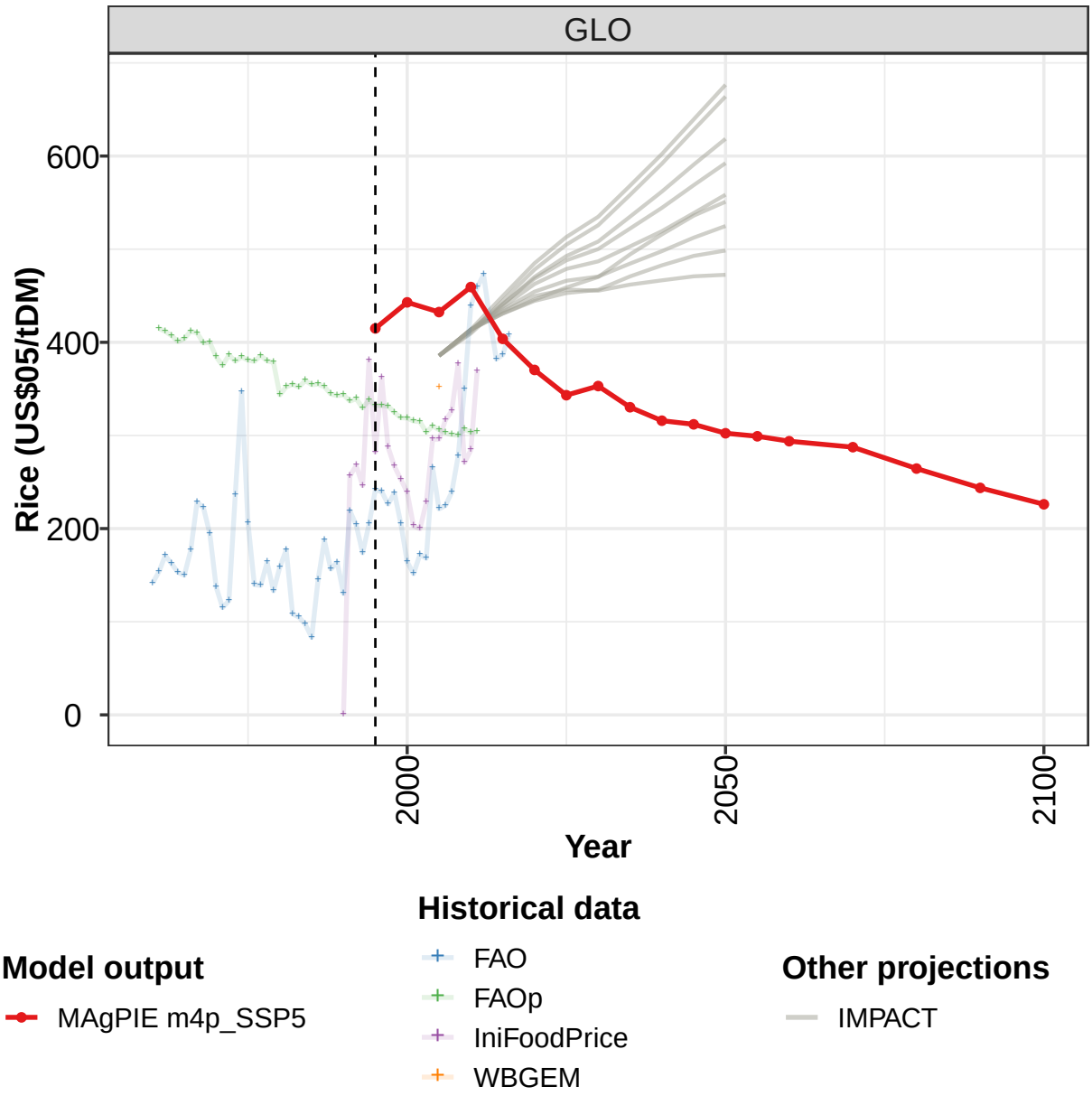
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	116	106	109	118	126	137	106	133	105	107	118
CAZ	123	129	168	137	147	131	200	223	192	197	216
CHA	48	52	53	59	61	117	141	182	145	204	254
EUR	71	69	63	66	48	57	74	74	60	68	78
IND	119	117	119	132	138	153	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	306	309	317	304	368	370	412	683	524	541	593
MEA	279	150	141	167	182	207	258	330	314	329	345
NEU	177	210	253	296	331	318	385	492	442	449	447
OAS	64	52	53	58	59	46	49	50	44	51	52
REF	89	72	65	80	74	90	133	90	73	83	101
SSA	59	53	55	63	78	80	93	131	68	61	84
USA	267	291	290	284	255	238	337	436	285	270	367

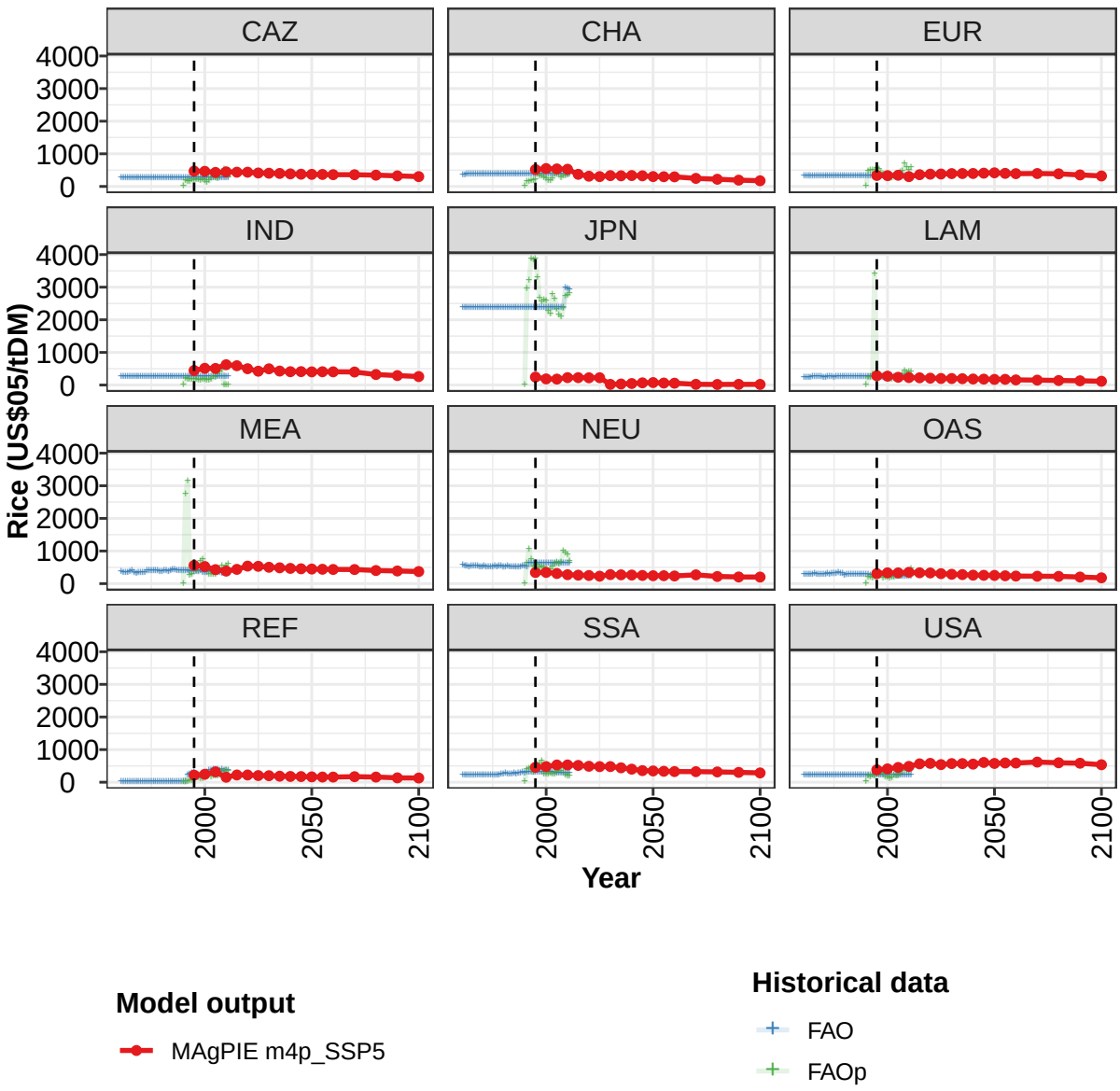
Table 1173: FAOp — Prices—Agriculture—Pulses (US$05/tDM) [PART 2/3]

	2005
GLO	431
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1174: IniFoodPrice — Prices—Agriculture—Pulses (US$05/tDM)

36.26 Rice


GLO
Rice (US$05/tDM)
600
400
200
0
2000
2050
2100
Year
Historical data
FAO
FAOp
IniFoodPrice
WBGEM
Model output
MAgPIE m4p_SSP5
Other projections
IMPACT



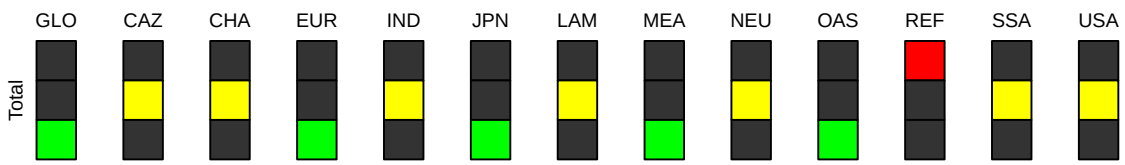


Figure 316: MAgPIE m4p_SSP5 — Prices—Agriculture—Rice (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	415	443	432	459	404	370	343	353	330	316	312
CAZ	469	463	430	447	437	437	413	405	399	386	376
CHA	518	548	537	528	372	314	303	332	327	334	327
EUR	337	333	344	302	360	376	381	393	396	397	408
IND	446	513	509	623	592	501	425	498	429	409	412
JPN	244	188	182	227	227	223	225	20	32	46	67
LAM	286	273	238	230	222	211	201	200	195	185	182
MEA	559	525	430	385	438	538	531	502	485	468	455
NEU	341	343	311	274	260	249	229	277	270	264	251
OAS	307	331	329	347	333	328	306	286	277	260	255
REF	218	244	318	153	222	222	204	200	185	177	173
SSA	456	479	529	530	515	490	479	480	442	401	356
USA	383	409	452	486	564	579	541	572	571	555	607

Table 1175: MAgPIE m4p_SSP5 — Prices—Agriculture—Rice (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	302	299	294	287	264	244	226
CAZ	370	368	361	359	346	325	302
CHA	303	298	295	247	221	193	174
EUR	418	401	392	396	386	353	322
IND	404	408	406	399	322	290	261
JPN	76	61	57	22	18	21	19
LAM	172	175	158	151	139	131	115
MEA	447	440	435	433	402	388	371
NEU	243	243	235	270	219	205	202
OAS	252	241	232	227	222	202	178
REF	164	159	158	170	159	134	129
SSA	346	336	327	324	316	302	285
USA	577	590	589	618	596	583	537

Table 1176: MAgPIE m4p_SSP5 — Prices—Agriculture—Rice (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	141	154	171	162	153	150	177	228	223	194	137
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1177: WBGEM — Prices—Agriculture—Rice (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	115	122	236	346	206	140	139	164	133	159	177
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1178: WBGEM — Prices—Agriculture—Rice (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	108	105	97	83	145	187	156	164	130	219	204
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1179: WBGEM — Prices—Agriculture—Rice (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	174	205	242	240	226	238	206	164	151	172	168
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1180: WBGEM — Prices—Agriculture—Rice (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	265	221	225	239	278	350	439	459	473	424	382
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1181: WBGEM — Prices—Agriculture—Rice (US$05/tDM) [PART 5/6]

	2015	2016
GLO	386	408
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1182: WBGEM — Prices—Agriculture—Rice (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	415	412	407	401	404	412	410	399	400	384	375
CAZ	257	257	257	257	257	257	257	257	257	257	257
CHA	353	355	357	358	358	359	359	358	359	360	361
EUR	308	306	308	308	308	310	312	312	314	313	316
IND	257	257	257	257	257	257	257	257	257	257	257
JPN	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365
LAM	234	234	235	237	240	241	240	242	238	235	236
MEA	365	341	332	342	365	380	324	313	322	335	325
NEU	546	546	524	502	519	532	531	525	503	513	520
OAS	287	269	286	288	281	300	282	265	285	278	284
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	203	214	200	204	206	200	219	220	213	214	215
USA	211	211	211	211	211	211	211	211	211	211	211

Table 1183: FAO — Prices—Agriculture—Rice (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	386	380	384	381	379	386	380	378	344	352	355
CAZ	257	257	257	257	257	257	257	257	257	257	257
CHA	360	362	361	361	360	361	362	362	363	363	363
EUR	314	316	318	318	318	315	318	319	316	317	317
IND	257	257	257	257	257	257	257	257	257	257	257
JPN	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365
LAM	238	239	237	235	240	238	241	243	242	242	241
MEA	344	376	384	386	393	378	387	359	368	401	390
NEU	498	512	514	501	529	509	522	532	490	516	522
OAS	288	282	290	288	301	317	313	303	251	274	276
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	220	220	224	221	199	214	220	237	248	258	248
USA	211	211	211	211	211	211	211	211	211	211	211

Table 1184: FAO — Prices—Agriculture—Rice (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	352	359	354	355	352	344	343	344	337	340	329
CAZ	257	257	257	257	257	257	257	257	257	257	257
CHA	363	364	364	365	365	365	365	366	366	366	366
EUR	323	322	323	323	320	321	320	317	315	317	319
IND	257	257	257	257	257	257	257	257	257	257	257
JPN	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365
LAM	245	241	241	239	243	241	241	244	244	244	242
MEA	362	395	409	404	403	391	391	382	397	384	372
NEU	516	513	512	497	495	516	544	524	503	618	606
OAS	277	280	276	276	275	280	272	269	260	256	244
REF	0	0	0	0	0	0	0	0	0	219	247
SSA	251	251	258	249	259	269	296	278	306	311	302
USA	211	211	211	211	211	211	211	211	211	211	211

Table 1185: FAO — Prices—Agriculture—Rice (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	338	332	332	331	325	319	319	315	315	304	310
CAZ	257	257	257	257	257	257	257	257	257	257	257
CHA	366	366	367	366	367	367	366	367	366	366	367
EUR	316	315	313	312	312	312	311	311	312	312	312
IND	257	257	257	257	257	257	257	257	257	257	257
JPN	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365	2365
LAM	238	237	233	232	236	234	240	242	243	239	239
MEA	353	353	371	346	382	344	328	339	358	365	341
NEU	607	606	611	612	610	608	608	605	605	606	606
OAS	248	242	249	252	243	238	236	237	230	222	227
REF	269	294	209	210	187	212	260	297	350	353	394
SSA	286	301	297	303	295	301	302	288	286	283	285
USA	211	211	211	211	211	211	211	211	211	211	211

Table 1186: FAO — Prices—Agriculture—Rice (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	306	303	301	300	307	303	304
CAZ	257	257	257	257	257	257	257
CHA	367	367	368	367	367	367	367
EUR	313	314	315	314	315	313	312
IND	257	257	257	257	257	257	257
JPN	2365	2365	2365	2365	2957	2932	2899
LAM	242	241	243	244	241	247	247
MEA	350	334	334	315	345	404	359
NEU	605	605	605	605	606	606	606
OAS	220	216	213	216	217	209	213
REF	393	379	350	370	327	346	362
SSA	279	281	267	279	267	259	264
USA	211	211	211	211	211	211	211

Table 1187: FAO — Prices—Agriculture—Rice (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	257	268	246	381	282	362	287	267	253	239
CAZ	0	158	138	134	203	181	210	211	186	197	178
CHA	0	140	136	170	168	209	438	302	316	268	234
EUR	0	466	477	486	487	541	529	412	375	341	243
IND	0	184	176	162	162	173	178	137	138	166	152
JPN	0	2949	3202	3862	3837	3849	3270	2642	2545	2595	2565
LAM	0	230	215	294	3399	220	235	242	268	192	179
MEA	0	2744	3129	251	268	465	388	374	670	743	453
NEU	0	631	1038	741	494	512	565	479	498	460	449
OAS	0	188	185	166	187	213	248	232	158	183	195
REF	0	0	12	28	38	95	139	137	95	105	175
SSA	7	386	403	448	296	352	537	543	637	246	244
USA	0	192	149	202	171	232	244	254	225	151	143

Table 1188: FAOp — Prices—Agriculture—Rice (US$05/tDM) [PART 1/3]

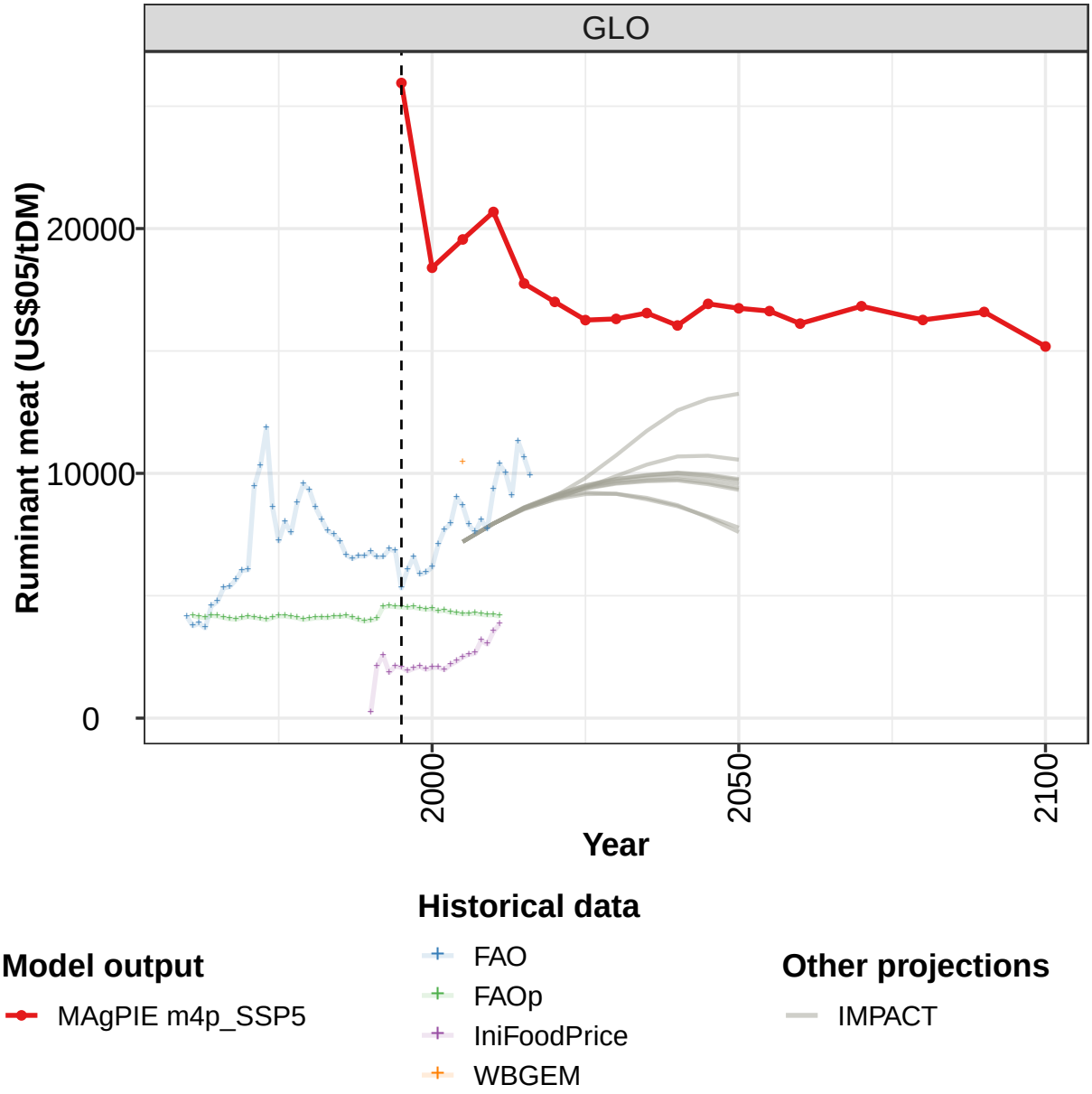
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	203	200	228	296	296	316	326	376	271	284	369
CAZ	127	171	259	275	261	236	326	400	516	482	284
CHA	173	160	236	358	366	377	259	317	324	338	460
EUR	242	244	285	272	245	417	467	676	571	483	569
IND	143	143	154	239	234	298	397	443	0	0	0
JPN	2265	2171	2758	2634	2318	2144	2083	2352	2700	2751	2801
LAM	177	170	202	245	238	239	317	433	378	402	402
MEA	542	270	271	284	274	453	402	537	445	544	580
NEU	350	427	512	592	632	593	659	987	921	883	662
OAS	173	180	178	204	212	220	271	298	270	302	438
REF	228	266	142	177	183	175	219	299	356	345	336
SSA	232	257	241	232	308	317	335	399	214	168	179
USA	108	114	205	186	194	253	324	425	364	322	368

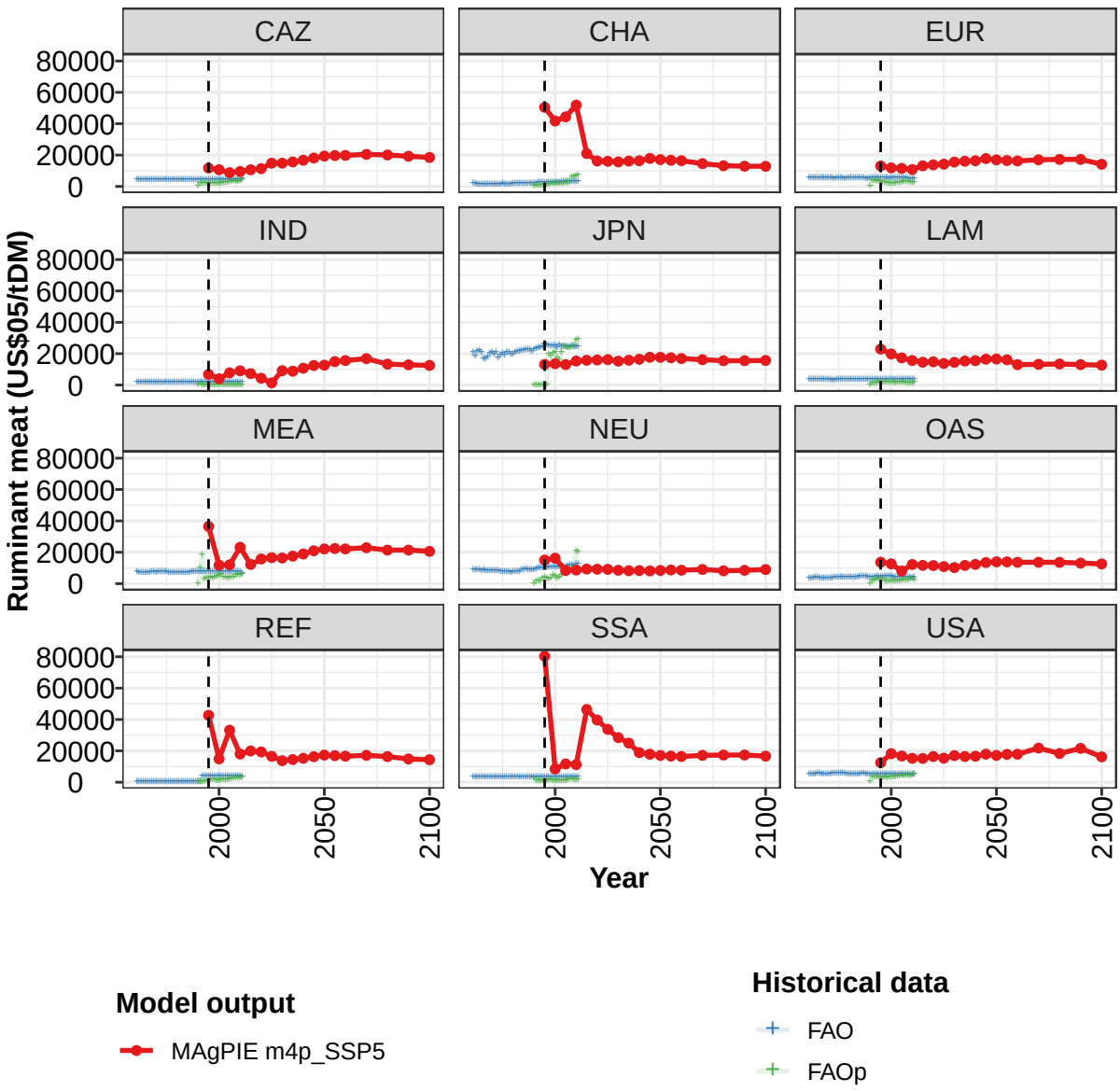
Table 1189: FAOp — Prices—Agriculture—Rice (US$05/tDM) [PART 2/3]

	2005
GLO	352
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1190: IniFoodPrice — Prices—Agriculture—Rice (US$05/tDM)

36.27 Ruminant meat





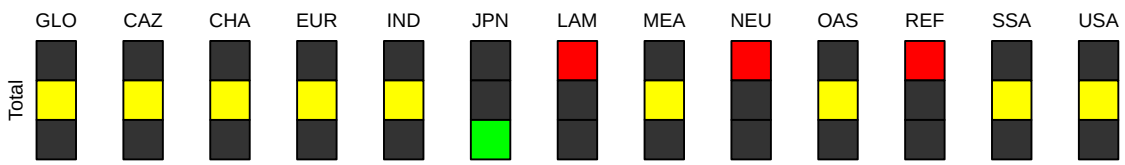


Figure 317: MAgPIE m4p_SSP5 — Prices—Agriculture—Ruminant meat (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	25949	18400	19557	20680	17756	17005	16261	16310	16549	16042	16926
CAZ	11723	10666	8793	9515	10630	11350	14849	14834	15640	16688	18131
CHA	50463	41739	44382	51902	20999	16224	16042	15667	16167	16387	17874
EUR	13071	11852	11510	10814	13167	13776	14212	15571	16072	16389	17778
IND	6788	3969	7777	9072	7304	4338	1385	9174	8846	10721	12467
JPN	13151	13612	13054	15320	15805	15986	16197	15237	15849	16444	17707
LAM	22946	19801	17295	15638	14559	14828	13787	14476	15300	15543	16495
MEA	36458	11776	12019	23190	12236	15687	16552	16330	17512	18902	20956
NEU	15007	16235	8343	8650	9304	9199	9125	8531	8224	8310	8108
OAS	13643	12620	8036	12196	11648	11526	10862	10223	11614	12269	13466
REF	42668	14910	33190	17979	19941	19323	16520	13739	14474	15280	16291
SSA	80340	8478	11643	11271	46397	39660	33720	28452	24962	18871	17872
USA	12425	18188	16717	15257	15187	16399	15362	16975	16413	16561	17890

Table 1191: MAgPIE m4p_SSP5 — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	16743	16630	16117	16829	16266	16594	15183
CAZ	19355	19700	19788	20450	20055	19253	18485
CHA	17115	16711	16424	14539	13206	12912	12842
EUR	16945	16514	16273	17002	17223	17235	14149
IND	12676	14932	15592	16849	13324	12865	12514
JPN	17655	17381	16885	16163	15489	15508	15678
LAM	16630	16095	13020	13196	13422	13004	12690
MEA	22117	22382	22145	22890	21387	21382	20593
NEU	8393	8691	8579	9045	8160	8493	8990
OAS	13921	13877	13629	13647	13591	13104	12568
REF	17306	16933	16598	17136	16347	14839	14356
SSA	17083	16672	16403	17145	17329	17350	16621
USA	17115	17761	17851	21779	18323	21586	16175

Table 1192: MAgPIE m4p_SSP5 — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	4146	3765	3871	3679	4579	4755	5317	5368	5644	6037	6054
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1193: WBGEM — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	9456	10310	11867	8604	7229	8013	7554	8781	9548	9316	8602
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1194: WBGEM — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	8106	7636	7492	7218	6663	6514	6628	6616	6803	6570	6593
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1195: WBGEM — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	6896	6830	5307	6070	6582	5869	5954	6163	7093	7699	7935
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1196: WBGEM — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	9012	8668	7888	7590	8092	7722	9337	10362	10006	9080	11309
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1197: WBGEM — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 5/6]

	2015	2016
GLO	10644	9909
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1198: WBGEM — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	4174	4129	4100	4194	4158	4106	4048	4040	4096	4142	4116
CAZ	4242	4248	4268	4291	4349	4328	4287	4287	4274	4219	4214
CHA	1581	1498	1319	1226	1219	1259	1281	1302	1341	1338	1326
EUR	5307	5305	5311	5171	5143	5238	5240	5214	5252	5307	5246
IND	1744	1782	1782	1768	1754	1743	1721	1698	1679	1657	1630
JPN	20734	18239	21150	21882	20687	16476	16576	17592	19984	20982	19738
LAM	3166	3168	3161	3165	3174	3180	3177	3151	3152	3138	3156
MEA	7250	7163	7103	7115	7128	7158	7157	7236	7234	7151	7198
NEU	8522	8429	8605	8469	8282	8399	8157	7811	8113	8165	7976
OAS	3457	3539	3598	3759	3619	3427	3437	3414	3391	3518	3513
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3097	3053	3086	3127	3133	3088	3101	3154	3243	3163	3224
USA	5102	5083	5088	5143	5309	5340	5268	5252	5269	5271	5175

Table 1199: FAO — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	4072	4010	4107	4172	4164	4135	4094	4021	4054	4093	4109
CAZ	4236	4252	4270	4328	4344	4348	4329	4279	4224	4226	4244
CHA	1304	1366	1429	1481	1404	1423	1473	1456	1536	1537	1548
EUR	5056	5044	5121	5098	5114	5085	5045	5084	5143	5114	5088
IND	1613	1602	1589	1593	1585	1580	1588	1589	1595	1601	1603
JPN	20517	16869	18739	20010	18910	20448	20695	19243	19328	20860	21176
LAM	3122	3125	3145	3158	3155	3144	3140	3137	3142	3153	3154
MEA	7237	7283	7237	7217	7164	7056	6956	6866	6791	6871	6957
NEU	7889	7917	7672	7743	7657	7732	7455	7191	7271	7521	7557
OAS	3577	3707	3844	4093	3970	3858	3870	3941	3956	3956	3910
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	3235	3127	3154	3168	3183	3192	3253	3291	3408	3344	3350
USA	5284	5292	5316	5538	5537	5446	5391	5124	5053	5139	5252

Table 1200: FAO — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	4094	4154	4153	4178	4110	4023	3963	3996	4063	4543	4567
CAZ	4231	4205	4194	4208	4170	4176	4152	4187	4183	4150	4144
CHA	1575	1583	1548	1603	1757	1844	1945	1970	2067	2097	2226
EUR	5105	5136	5130	5192	5114	4997	4946	5053	5168	5244	5273
IND	1603	1602	1592	1595	1629	1630	1630	1634	1633	1632	1640
JPN	21337	22099	22073	22458	22187	22213	21519	22531	23319	23743	23734
LAM	3164	3158	3153	3211	3203	3201	3193	3290	3281	3282	3270
MEA	6964	6904	7056	7140	7293	7365	7535	7551	7609	7580	7557
NEU	7595	8543	8491	9103	8583	8599	8811	8668	9111	10074	9945
OAS	3844	3993	4281	4560	4483	4242	3903	3873	3867	4087	4258
REF	0	0	0	0	0	0	0	0	0	3816	3882
SSA	3379	3390	3366	3124	3182	3138	3092	3029	3046	3076	3368
USA	5220	5250	5253	5344	5290	5197	5149	5164	5126	5050	5050

Table 1201: FAO — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	4553	4528	4517	4527	4477	4441	4458	4378	4398	4320	4299
CAZ	4140	4106	4127	4149	4169	4172	4157	4136	4104	4068	4126
CHA	2231	2343	2429	2570	2620	2616	2663	2650	2653	2679	2708
EUR	5245	5264	5217	5188	5050	5019	5180	5170	5185	5110	5136
IND	1649	1658	1665	1675	1677	1679	1680	1682	1684	1686	1700
JPN	24219	25985	25448	24821	24797	25110	25083	23732	25235	24184	24651
LAM	3275	3274	3253	3269	3252	3220	3210	3204	3206	3205	3198
MEA	7393	7311	7344	7286	7236	7325	7396	7388	7511	7408	7401
NEU	10160	9974	9917	10396	10296	10507	10457	10574	10512	10344	10636
OAS	4223	4182	4224	4578	4683	4478	4340	4004	3833	3733	3718
REF	3940	3815	3878	3823	3783	3709	3718	3731	3737	3677	3673
SSA	3389	3295	3326	3336	3296	3283	3275	3238	3254	3255	3284
USA	5074	5115	5165	5158	5062	5086	5159	5129	5152	5096	4988

Table 1202: FAO — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	4259	4267	4270	4237	4208	4219	4164
CAZ	4139	4121	4110	4089	4083	4096	4071
CHA	2705	2700	2749	2730	2727	2706	2703
EUR	5096	5079	5052	5012	5000	4937	4886
IND	1712	1726	1739	1749	1756	1759	1770
JPN	24378	24194	24351	24688	24201	24293	24257
LAM	3220	3261	3301	3210	3201	3235	3246
MEA	7382	7368	7359	7382	7441	7512	6365
NEU	10528	11350	11576	11448	11242	11982	12159
OAS	3652	3668	3623	3692	3767	3607	3736
REF	3647	3590	3611	3631	3599	3550	3417
SSA	3270	3196	3243	3286	3264	3275	3273
USA	4972	5069	5049	4966	4959	4972	4965

Table 1203: FAO — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	217	2114	2565	1864	2123	2071	1926	2026	2108	1986	2066
CAZ	0	1891	1794	1746	1889	1802	1723	1865	1765	1883	1937
CHA	0	629	640	703	639	851	891	1116	1971	1748	1863
EUR	0	3323	3515	3259	3393	3169	2430	2147	2108	1708	1582
IND	0	959	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	19687	18165	20234	20698
LAM	0	893	1014	960	2183	1792	1688	1778	1819	1534	1661
MEA	0	9618	17971	2917	3029	3474	3901	3512	4018	4525	5144
NEU	0	1630	1762	1548	3364	3797	3057	2975	3510	4949	4283
OAS	0	1458	1874	2983	2866	3023	2482	1740	1346	1404	1328
REF	0	0	80	391	705	1005	1434	1443	1508	1038	1058
SSA	2412	608	581	730	827	1022	1074	1183	1229	657	628
USA	0	3306	3252	3339	3095	2837	2732	2911	2746	2918	3161

Table 1204: FAOp — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	2071	1974	2184	2314	2490	2605	2650	3169	3017	3536	3838
CAZ	2024	2319	2353	2663	3045	3050	3283	3149	3130	3661	4777
CHA	1834	1866	1952	1979	2122	2353	2835	5672	5837	6521	7271
EUR	1601	1831	2244	2433	2537	2677	2752	2780	2173	2088	2222
IND	480	0	0	0	0	0	0	0	0	0	0
JPN	16997	15646	20502	24020	24475	23534	23604	24141	25013	28420	29262
LAM	1558	1341	1428	1499	1724	1800	1096	1075	987	1272	1394
MEA	5451	3685	3616	3465	3687	3934	4143	4926	5480	5351	5409
NEU	3244	3828	5389	6508	6670	7605	9189	9693	8961	20711	20180
OAS	1332	1738	1748	1750	2031	2136	2310	2083	2687	3484	2109
REF	1399	1388	1295	1687	2115	2281	2640	2822	2455	2615	3098
SSA	679	769	926	984	1102	1381	1698	1858	1199	1231	1409
USA	3281	3060	3657	3944	4114	4004	4124	4085	3674	4228	5180

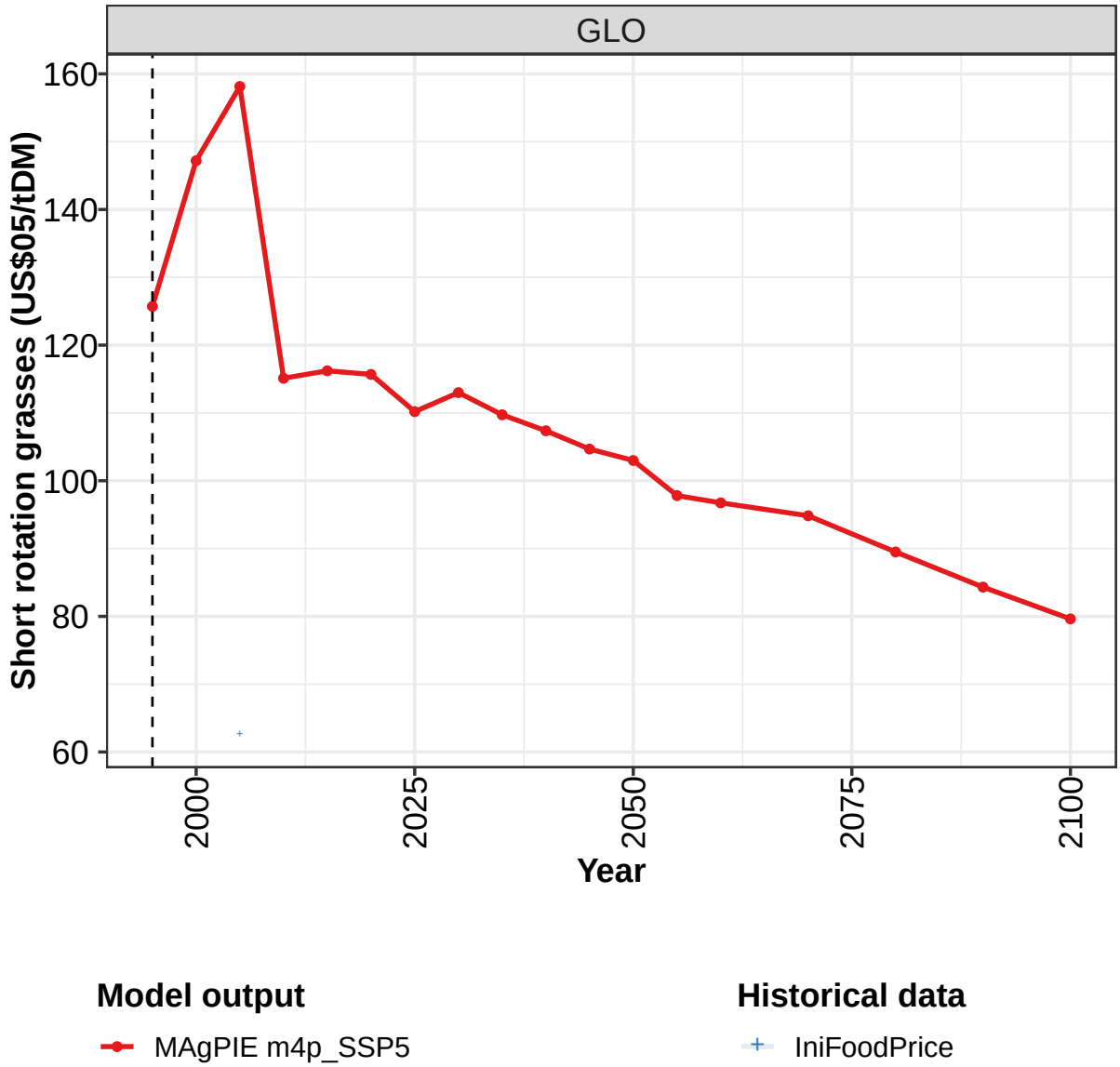
Table 1205: FAOp — Prices—Agriculture—Ruminant meat (US$05/tDM) [PART 2/3]

	2005
GLO	10464
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1206: IniFoodPrice — Prices—Agriculture—Ruminant meat (US$05/tDM)

36.28 Short rotation grasses

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



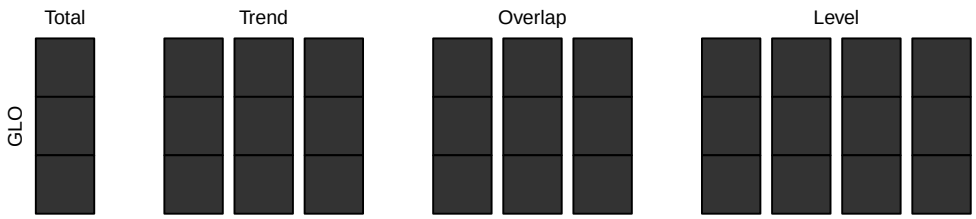


Figure 318: MAgPIE m4p_SSP5 — Prices—Agriculture—Short rotation grasses (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	126	147	158	115	116	116	110	113	110	107	105

Table 1207: MAgPIE m4p_SSP5 — Prices—Agriculture—Short rotation grasses (US$05/tDM) [PART 1/2]

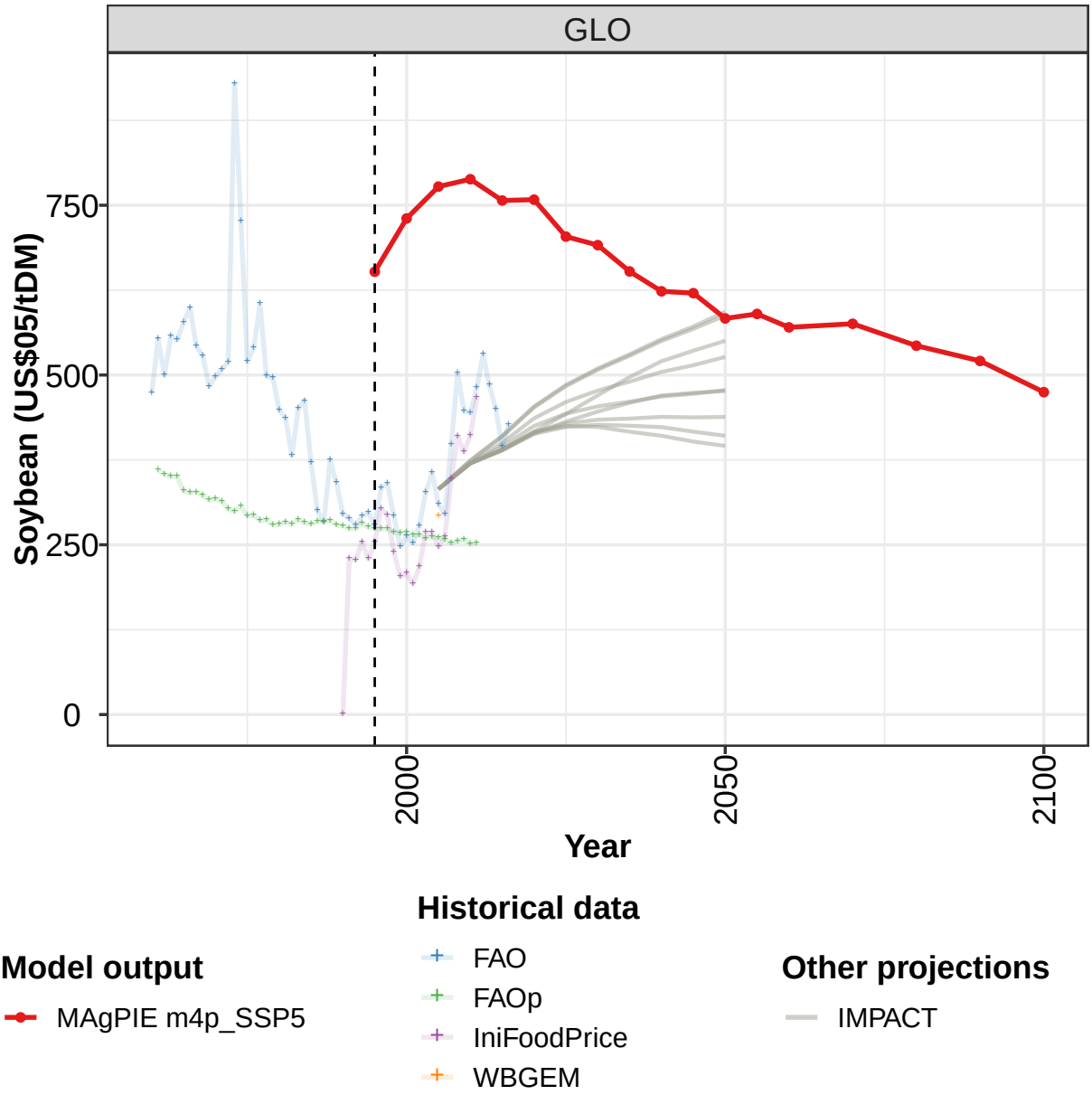
	2050	2055	2060	2070	2080	2090	2100
GLO	103	98	97	95	89	84	80

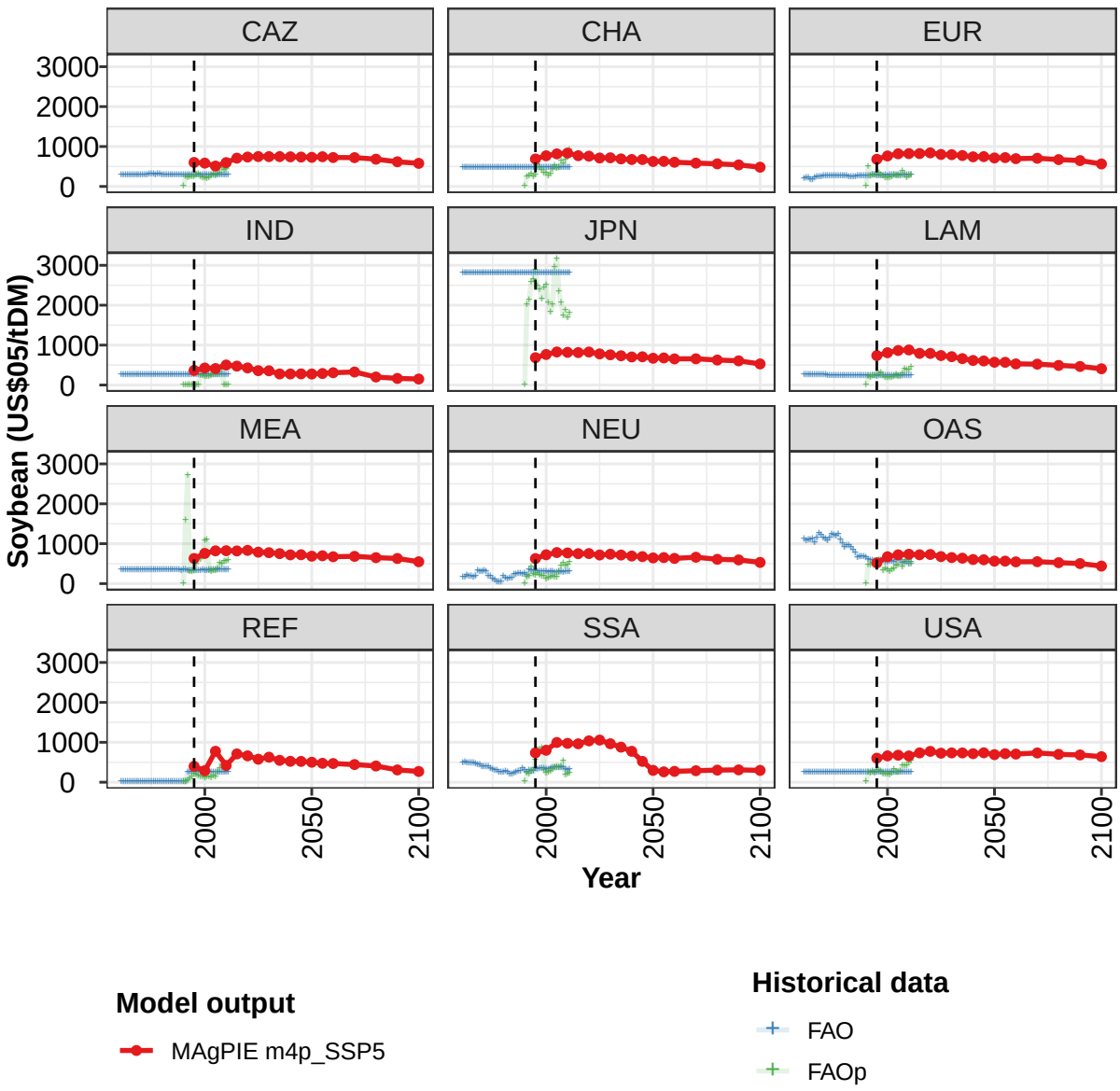
Table 1208: MAgPIE m4p_SSP5 — Prices—Agriculture—Short rotation grasses (US$05/tDM) [PART 2/2]

	2005
GLO	62.5

Table 1209: IniFoodPrice — Prices—Agriculture—Short rotation grasses (US$05/tDM)

36.29 Soybean





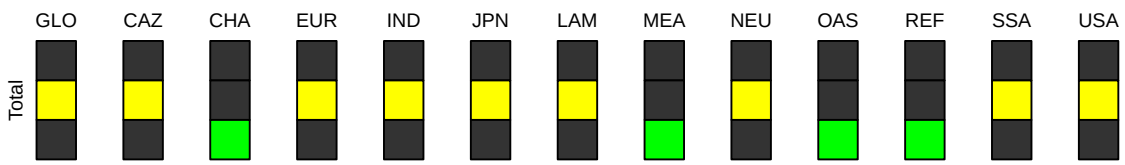


Figure 319: MAgPIE m4p_SSP5 — Prices—Agriculture—Soybean (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	652	731	778	788	757	758	704	691	653	623	621
CAZ	602	585	511	598	709	737	749	748	748	742	736
CHA	688	769	816	836	770	759	713	718	690	675	674
EUR	681	764	818	823	824	842	802	796	774	743	748
IND	366	426	413	502	474	429	361	357	278	278	280
JPN	686	765	829	819	813	827	780	757	734	704	708
LAM	738	810	866	879	794	792	739	711	662	616	604
MEA	630	757	822	825	819	834	788	777	752	721	724
NEU	628	723	779	770	751	754	718	738	717	692	677
OAS	522	674	722	737	723	730	678	654	638	604	598
REF	399	290	776	420	709	662	577	628	549	525	522
SSA	737	801	996	974	963	1036	1056	964	879	776	522
USA	602	660	677	659	736	773	728	735	734	716	738

Table 1210: MAgPIE m4p_SSP5 — Prices—Agriculture—Soybean (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	583	590	570	575	543	521	475
CAZ	729	744	725	722	684	618	579
CHA	626	629	607	585	566	540	482
EUR	714	722	697	706	673	648	564
IND	277	289	309	327	201	166	151
JPN	672	679	655	658	626	606	529
LAM	571	570	529	524	492	466	408
MEA	688	698	674	683	651	630	549
NEU	645	653	632	661	609	595	532
OAS	563	564	546	550	525	503	440
REF	501	474	468	443	407	308	270
SSA	298	261	272	289	303	310	297
USA	691	715	706	734	699	684	640

Table 1211: MAgPIE m4p_SSP5 — Prices—Agriculture—Soybean (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	474	553	499	557	552	578	599	542	528	483	497
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1212: WBGEM — Prices—Agriculture—Soybean (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	508	519	928	727	520	540	605	499	496	449	436
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1213: WBGEM — Prices—Agriculture—Soybean (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	381	451	462	371	300	283	374	341	295	289	279
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1214: WBGEM — Prices—Agriculture—Soybean (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	292	297	279	334	340	292	247	263	253	278	327
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1215: WBGEM — Prices—Agriculture—Soybean (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	356	309	295	397	502	447	444	481	530	485	450
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1216: WBGEM — Prices—Agriculture—Soybean (US$05/tDM) [PART 5/6]

	2015	2016
GLO	395	427
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1217: WBGEM — Prices—Agriculture—Soybean (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	360	353	351	351	329	327	327	322	316	318	314
CAZ	286	286	286	286	286	286	286	286	286	287	288
CHA	472	472	472	472	471	472	471	471	472	472	472
EUR	179	214	204	156	156	214	232	243	240	251	253
IND	254	254	253	253	253	253	253	253	253	253	253
JPN	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812
LAM	245	244	246	251	246	246	249	254	249	246	240
MEA	338	338	338	338	338	332	332	332	332	334	332
NEU	156	165	208	168	167	151	185	314	289	304	307
OAS	1103	1067	1096	1081	1111	1023	1130	1254	1216	1135	1105
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	481	491	482	471	470	475	459	439	437	379	394
USA	246	246	246	246	246	246	246	246	246	246	246

Table 1218: FAO — Prices—Agriculture—Soybean (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	302	298	307	292	294	285	287	279	280	284	280
CAZ	290	290	294	294	294	290	293	293	291	291	290
CHA	471	472	471	472	472	472	473	474	474	475	475
EUR	251	256	260	265	263	258	262	262	261	255	242
IND	253	254	253	253	253	253	253	253	253	253	253
JPN	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812
LAM	239	236	234	235	232	231	229	228	229	228	227
MEA	335	337	334	333	333	335	340	343	345	347	346
NEU	297	178	184	96	79	42	28	26	177	129	111
OAS	1076	1130	1226	1195	1185	1236	1084	1003	908	951	950
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	373	382	335	312	287	281	244	241	239	255	244
USA	246	246	246	246	246	246	246	246	246	246	246

Table 1219: FAO — Prices—Agriculture—Soybean (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	287	282	280	285	285	286	279	277	274	274	281
CAZ	289	290	291	291	289	289	291	289	288	288	287
CHA	475	475	475	475	475	475	475	475	475	475	475
EUR	237	239	245	250	255	258	258	259	254	263	269
IND	253	253	253	253	253	253	253	253	253	253	253
JPN	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812
LAM	228	225	226	224	226	223	227	223	222	222	223
MEA	345	345	345	346	351	340	323	335	352	322	322
NEU	119	131	217	234	243	239	231	252	193	333	324
OAS	892	832	764	654	663	678	676	649	595	575	573
REF	0	0	0	0	0	0	0	0	0	251	251
SSA	191	188	216	237	254	272	341	293	245	300	261
USA	246	246	246	246	246	246	246	246	246	246	246

Table 1220: FAO — Prices—Agriculture—Soybean (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	276	274	273	273	268	267	268	264	264	259	261
CAZ	288	287	287	287	287	288	288	287	287	286	287
CHA	475	475	475	476	476	476	476	476	476	476	476
EUR	270	270	268	267	268	271	268	271	272	270	268
IND	253	253	253	253	253	253	253	253	253	253	253
JPN	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812	2812
LAM	223	222	221	223	221	220	220	220	220	220	220
MEA	325	321	315	324	324	330	328	328	328	331	333
NEU	324	317	293	292	301	285	286	279	289	295	277
OAS	554	561	573	585	567	525	528	549	542	521	571
REF	252	252	253	253	251	249	250	251	249	248	247
SSA	262	338	317	344	346	339	322	315	342	353	364
USA	246	246	246	246	246	246	246	246	246	246	246

Table 1221: FAO — Prices—Agriculture—Soybean (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	260	258	252	255	258	251	252
CAZ	287	287	287	286	287	287	286
CHA	476	476	476	476	476	476	476
EUR	269	269	270	273	272	273	273
IND	253	253	253	253	253	253	253
JPN	2812	2812	2812	2812	2812	2812	2812
LAM	219	219	219	219	221	219	221
MEA	333	331	333	335	333	334	334
NEU	266	283	283	282	283	286	293
OAS	620	583	509	534	532	472	520
REF	247	246	248	247	249	247	250
SSA	352	355	353	352	308	285	317
USA	246	246	246	246	246	246	246

Table 1222: FAO — Prices—Agriculture—Soybean (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	229	227	254	230	253	303	293	239	204	208
CAZ	0	222	220	242	241	238	288	297	239	203	200
CHA	0	226	268	315	238	278	539	475	408	320	324
EUR	0	480	252	282	272	265	319	287	262	208	199
IND	0	0	0	0	0	0	0	0	217	221	217
JPN	0	2001	2134	2564	2637	2861	2464	2372	2157	2435	2508
LAM	0	194	192	222	226	210	271	290	224	170	187
MEA	0	1581	2706	305	285	328	488	605	601	776	1056
NEU	0	152	181	408	230	208	238	205	180	183	114
OAS	0	464	461	493	511	540	564	499	312	374	329
REF	0	0	38	71	122	186	162	140	121	116	93
SSA	0	208	206	296	286	538	810	797	860	283	217
USA	0	231	230	265	226	278	278	268	204	191	188

Table 1223: FAOp — Prices—Agriculture—Soybean (US$05/tDM) [PART 1/3]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	193	218	268	268	247	261	347	410	387	411	466
CAZ	190	211	263	302	257	302	321	440	409	421	503
CHA	268	301	411	510	452	465	622	564	656	832	905
EUR	213	231	288	285	257	251	374	281	213	263	285
IND	211	205	225	249	258	254	293	360	0	0	0
JPN	2048	1814	2007	2946	3156	2334	2042	1734	1860	1681	1806
LAM	175	182	216	241	210	209	272	384	372	362	433
MEA	1086	350	300	314	323	353	505	480	560	557	583
NEU	133	152	182	155	154	277	444	496	432	447	527
OAS	295	334	370	442	456	723	410	534	572	577	471
REF	118	124	103	137	122	236	340	429	381	376	418
SSA	249	263	302	358	377	368	391	526	172	200	227
USA	181	229	304	238	234	266	418	412	396	467	517

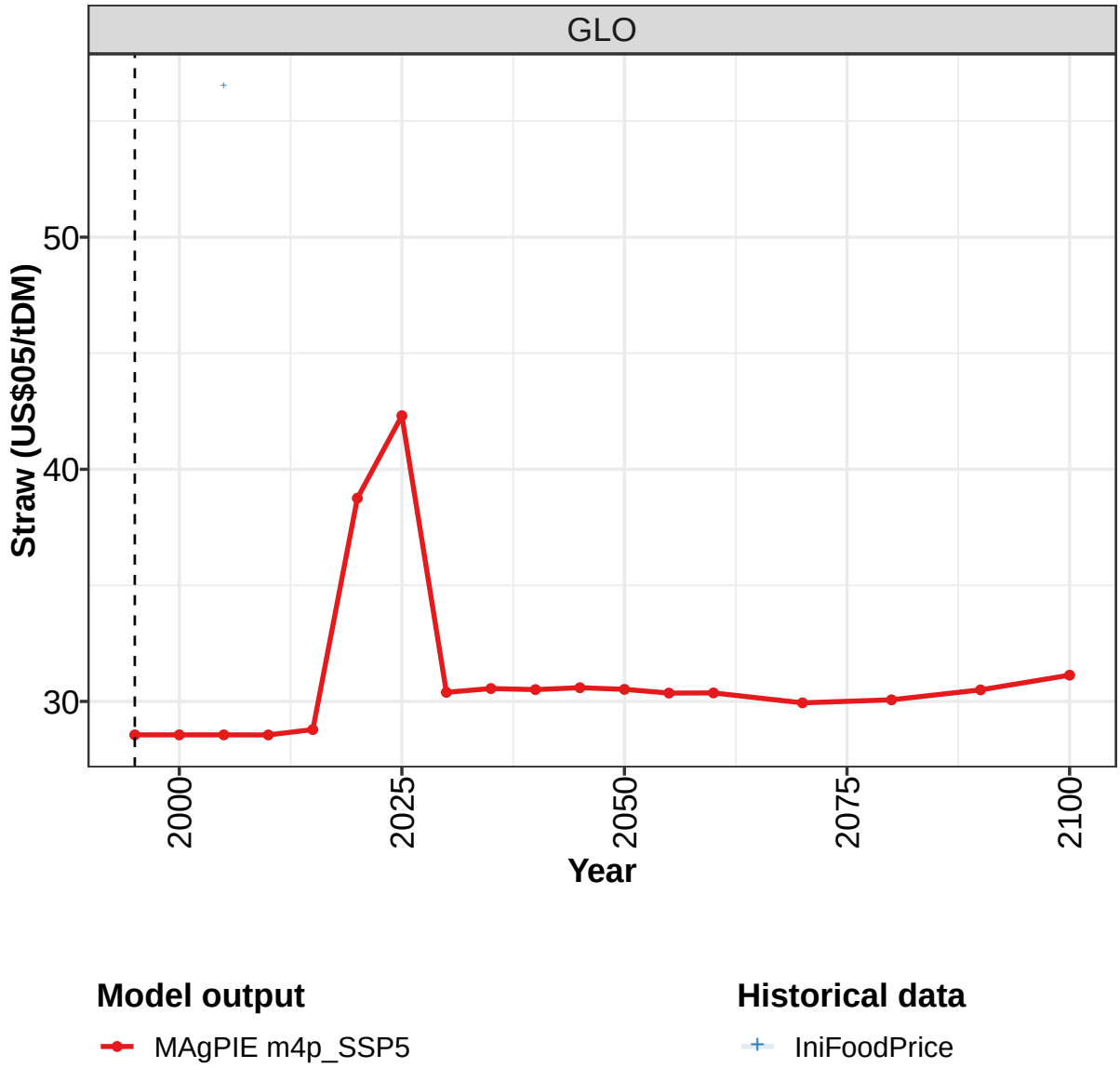
Table 1224: FAOp — Prices—Agriculture—Soybean (US$05/tDM) [PART 2/3]

	2005
GLO	293
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1225: IniFoodPrice — Prices—Agriculture—Soybean (US$05/tDM)

36.30 Straw

```
## geom_path:  Each group consists of only one observation.  Do you need to adjust the
group## aesthetic?
```



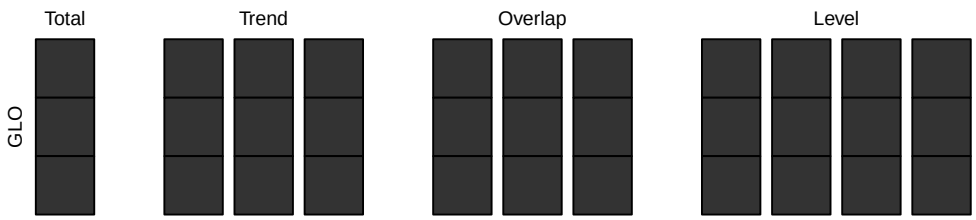


Figure 320: MAgPIE m4p_SSP5 — Prices—Agriculture—Straw (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	28.6	28.6	28.6	28.6	28.8	38.8	42.3	30.4	30.6	30.5	30.6

Table 1226: MAgPIE m4p_SSP5 — Prices—Agriculture—Straw (US$05/tDM) [PART 1/2]

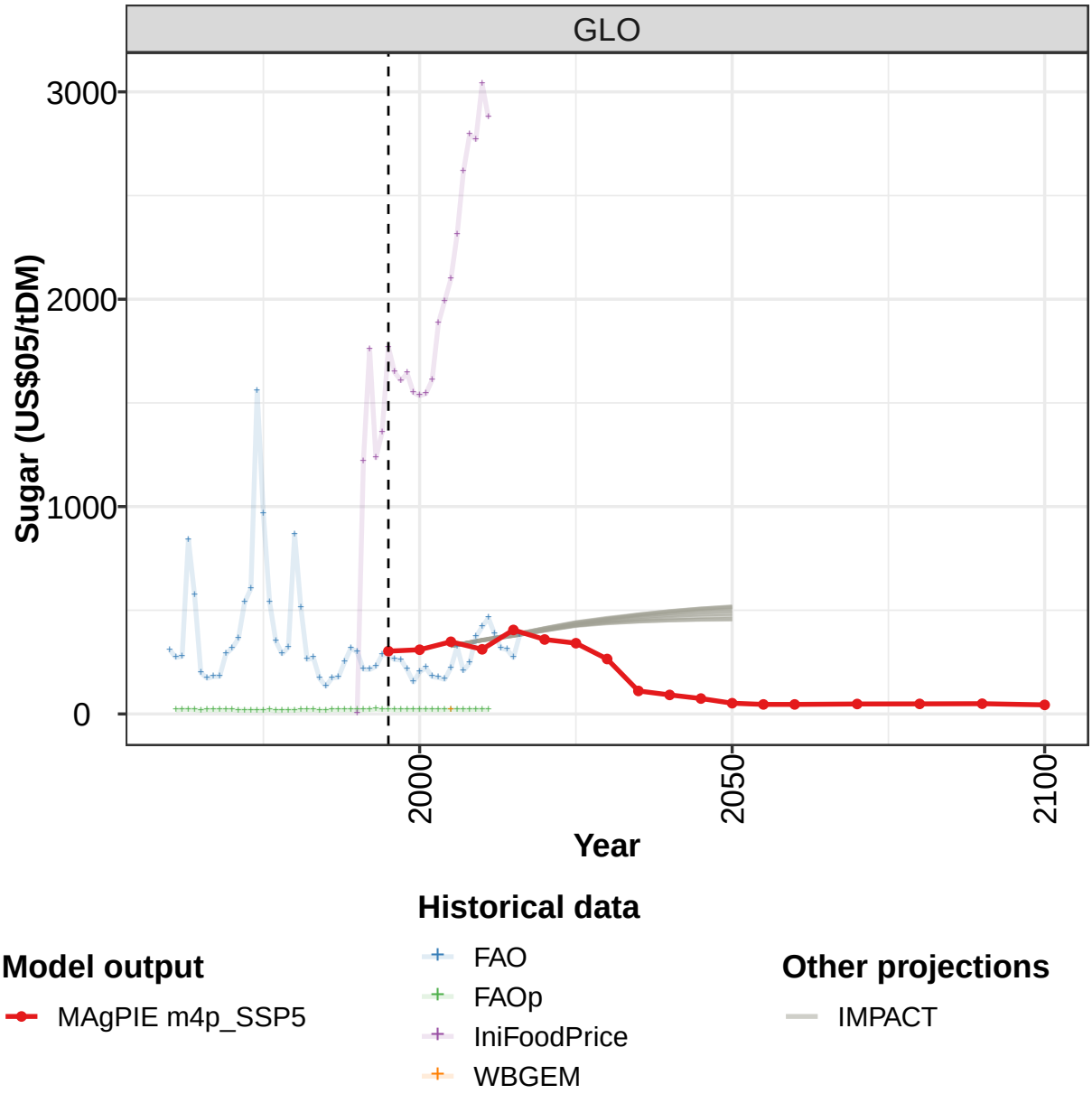
	2050	2055	2060	2070	2080	2090	2100
GLO	30.5	30.4	30.4	29.9	30.1	30.5	31.1

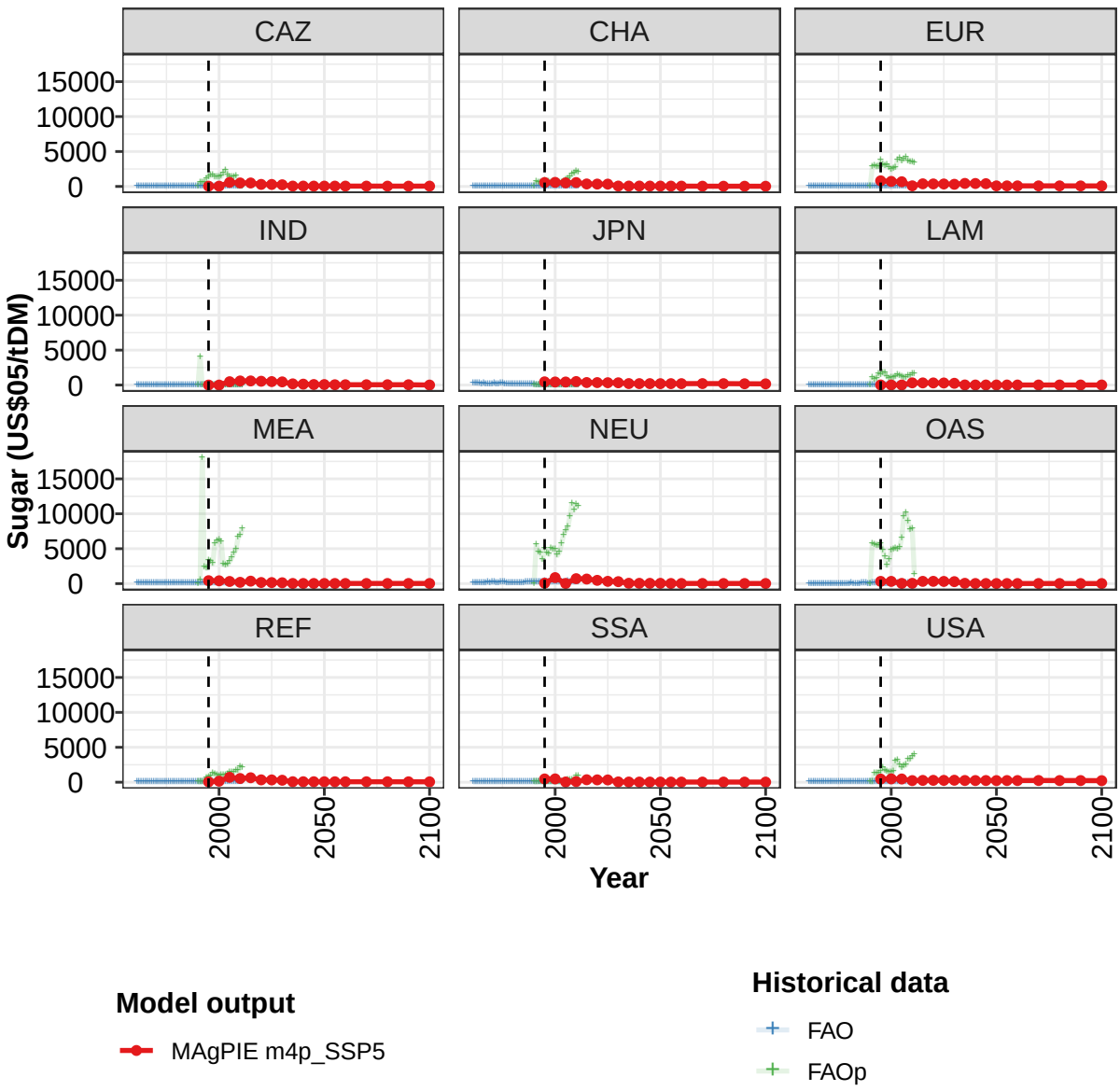
Table 1227: MAgPIE m4p_SSP5 — Prices—Agriculture—Straw (US$05/tDM) [PART 2/2]

	2005
GLO	56.5

Table 1228: IniFoodPrice — Prices—Agriculture—Straw (US$05/tDM)

36.31 Sugar


GLO
Sugar (US$05/tDM)
3000
2000
1000
0
2000
2050
2100
Year
Historical data
FAO
FAOp
IniFoodPrice
WBGEM
Model output
MAgPIE m4p_SSP5
Other projections
IMPACT



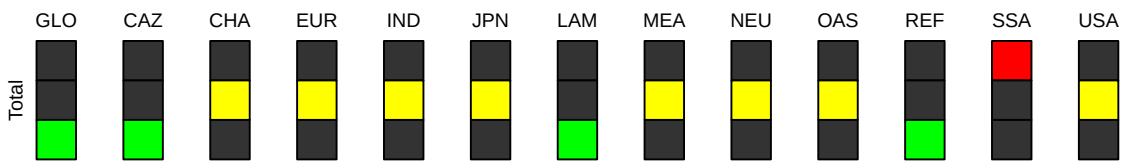


Figure 321: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	303	310	348	312	405	359	341	265	111	92	74
CAZ	35	41	581	501	495	292	284	239	51	48	47
CHA	556	581	514	556	357	340	331	56	54	55	53
EUR	806	724	674	87	378	361	352	308	435	426	396
IND	0	0	478	586	590	546	494	452	168	129	73
JPN	461	437	434	499	359	349	333	324	212	204	205
LAM	10	9	7	313	305	303	295	251	12	6	7
MEA	421	405	314	189	357	164	153	127	28	25	25
NEU	67	863	25	713	657	475	331	287	54	48	45
OAS	324	322	32	45	327	329	318	287	46	18	18
REF	59	152	704	534	640	340	332	288	76	72	71
SSA	469	476	37	94	357	340	331	48	32	28	24
USA	454	484	465	235	262	273	265	288	249	242	246

Table 1229: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	52	46	46	48	49	49	44
CAZ	46	47	47	47	44	41	48
CHA	48	45	43	33	29	28	27
EUR	81	80	80	81	79	74	69
IND	71	45	45	45	45	44	0
JPN	196	200	200	206	200	184	168
LAM	7	7	7	7	7	6	6
MEA	24	24	24	24	24	23	21
NEU	45	25	24	23	19	19	19
OAS	18	17	17	16	15	14	12
REF	69	68	68	69	67	61	58
SSA	24	24	23	23	23	22	21
USA	234	241	242	250	242	240	223

Table 1230: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	309	273	278	840	571	198	172	180	181	289	317
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1231: WBGEM — Prices—Agriculture—Sugar (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	363	538	604	1556	965	539	350	290	321	866	512
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1232: WBGEM — Prices—Agriculture—Sugar (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	262	271	170	134	174	177	251	317	299	216	214
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1233: WBGEM — Prices—Agriculture—Sugar (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	229	285	285	261	261	214	153	203	222	179	176
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1234: WBGEM — Prices—Agriculture—Sugar (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	166	222	324	208	245	371	420	462	386	318	311
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1235: WBGEM — Prices—Agriculture—Sugar (US$05/tDM) [PART 5/6]

	2015	2016
GLO	271	380
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1236: WBGEM — Prices—Agriculture—Sugar (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	18	21	21	19	17	18	19	19	18	18	17
CAZ	58	38	52	42	46	39	36	29	45	42	36
CHA	19	24	21	15	12	12	14	15	18	18	18
EUR	26	31	33	31	32	32	35	35	31	37	31
IND	4	5	5	4	5	6	7	7	6	6	6
JPN	203	295	213	178	141	174	165	170	154	157	185
LAM	7	9	9	9	8	9	8	8	8	7	7
MEA	67	68	63	62	56	48	48	39	36	38	39
NEU	124	130	135	133	110	107	107	156	115	206	143
OAS	2	1	1	1	1	1	1	1	1	1	1
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	10	9	8	8	9	7	6	7	6	7	6
USA	58	55	52	47	41	40	35	28	43	35	29

Table 1237: FAO — Prices—Agriculture—Sugar (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	17	17	17	16	19	15	16	17	17	18	18
CAZ	36	40	34	36	33	32	43	43	40	39	38
CHA	19	15	13	15	14	12	12	16	17	14	14
EUR	27	28	30	26	37	25	24	25	25	24	31
IND	7	7	7	6	6	6	5	6	8	6	6
JPN	135	165	218	177	150	139	113	90	63	59	65
LAM	8	8	8	8	8	8	9	9	9	10	7
MEA	52	42	42	39	38	38	47	45	48	43	39
NEU	135	129	153	154	175	112	113	132	138	136	139
OAS	1	2	1	2	2	3	4	4	4	14	6
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	6	6	6	7	6	6	6	6	6	5	5
USA	29	33	26	23	23	22	28	28	22	19	23

Table 1238: FAO — Prices—Agriculture—Sugar (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	18	17	16	19	19	19	19	18	18	20	22
CAZ	43	43	45	42	44	38	29	36	35	39	29
CHA	16	14	13	14	20	17	15	14	12	11	13
EUR	37	31	26	32	33	34	39	30	31	32	35
IND	6	6	6	7	6	6	6	5	5	5	5
JPN	63	57	61	45	49	39	41	39	33	32	31
LAM	9	7	8	10	10	10	10	10	10	10	11
MEA	38	39	40	38	45	44	50	47	46	46	51
NEU	116	123	135	170	142	184	164	180	188	225	244
OAS	6	7	8	12	9	11	9	9	11	9	9
REF	0	0	0	0	0	0	0	0	0	42	40
SSA	7	5	6	6	7	7	8	8	8	11	22
USA	20	15	12	16	17	16	13	14	15	14	15

Table 1239: FAO — Prices—Agriculture—Sugar (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	21	22	19	18	19	19	20	20	19	19	20
CAZ	35	25	26	26	29	28	24	32	25	26	25
CHA	14	13	13	12	11	16	18	14	12	14	16
EUR	34	38	27	26	29	30	31	38	30	39	36
IND	5	5	4	4	4	4	4	4	4	4	5
JPN	30	27	27	26	25	29	30	27	28	28	28
LAM	10	9	8	8	8	9	9	8	8	7	7
MEA	56	54	66	56	57	52	50	47	45	34	48
NEU	219	363	209	188	190	233	181	213	238	270	250
OAS	9	10	8	8	8	10	17	20	18	15	13
REF	50	45	58	75	78	76	65	63	56	48	42
SSA	19	19	18	15	16	16	16	18	18	17	17
USA	13	13	12	11	12	11	12	10	9	10	10

Table 1240: FAO — Prices—Agriculture—Sugar (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	21	21	19	20	21	21	20
CAZ	26	33	25	27	29	30	33
CHA	16	14	12	15	18	18	17
EUR	35	44	39	43	40	45	40
IND	5	4	3	4	5	5	4
JPN	27	26	27	27	22	23	23
LAM	8	8	7	7	6	6	7
MEA	56	58	66	69	75	63	64
NEU	249	280	251	232	206	221	259
OAS	23	22	23	20	23	22	16
REF	41	37	37	41	44	48	26
SSA	17	19	16	16	14	17	15
USA	9	8	8	9	8	9	8

Table 1241: FAO — Prices—Agriculture—Sugar (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	1218	1758	1235	1359	1769	1648	1608	1643	1549	1535
CAZ	0	488	496	491	1125	1328	1566	1611	1289	1272	1271
CHA	0	599	532	596	544	763	608	675	567	715	729
EUR	0	2743	2955	2758	2786	3685	3110	2913	3018	2705	2401
IND	0	3989	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	1081	829	862	1523	1477	1716	1738	1164	966	999
MEA	0	507	18037	2325	2153	3252	3175	2819	5746	6031	6165
NEU	0	5510	4515	4404	3399	4972	4332	4178	4998	4891	4826
OAS	0	5691	5523	5434	5391	5647	4727	3870	2564	3396	4736
REF	0	0	0	10	630	691	789	1298	1174	994	843
SSA	2	2	59	57	19	28	27	26	31	30	30
USA	0	0	1237	1212	1187	1540	1997	1691	1484	1349	1342

Table 1242: FAOp — Prices—Agriculture—Sugar (US$05/tDM) [PART 1/3]

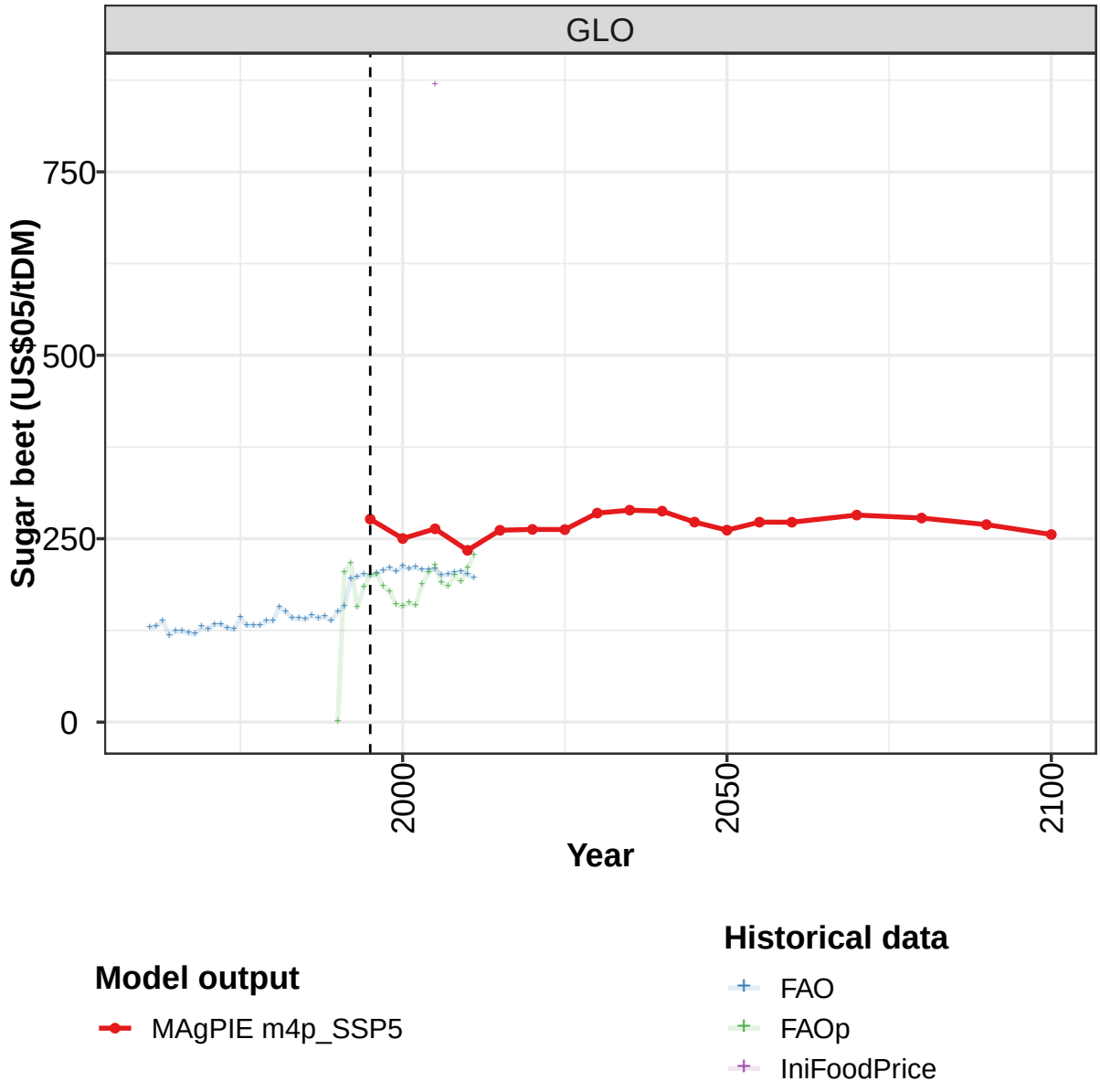
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	1544	1611	1884	1991	2097	2312	2615	2793	2770	3038	2875
CAZ	1403	1879	2323	1648	1279	1311	1371	1535	0	0	0
CHA	608	543	520	711	905	1132	1401	1745	1813	2097	1998
EUR	2599	2731	3741	3982	3641	3893	4088	3625	3534	3486	3354
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1002	1205	1387	1296	1209	1032	1090	1338	1367	1584	1606
MEA	5941	2707	2607	2681	3119	3665	4393	4828	6560	6930	7879
NEU	4019	4435	5714	6947	7587	8031	9603	11423	10523	11284	10996
OAS	4898	5074	4924	5161	6543	9543	10082	8874	7659	7806	1330
REF	960	932	1005	1121	1329	1324	1409	1705	1590	2187	2105
SSA	29	24	31	17	22	288	295	262	173	882	796
USA	1583	2985	3119	2447	2074	2260	2421	3196	3312	3640	3969

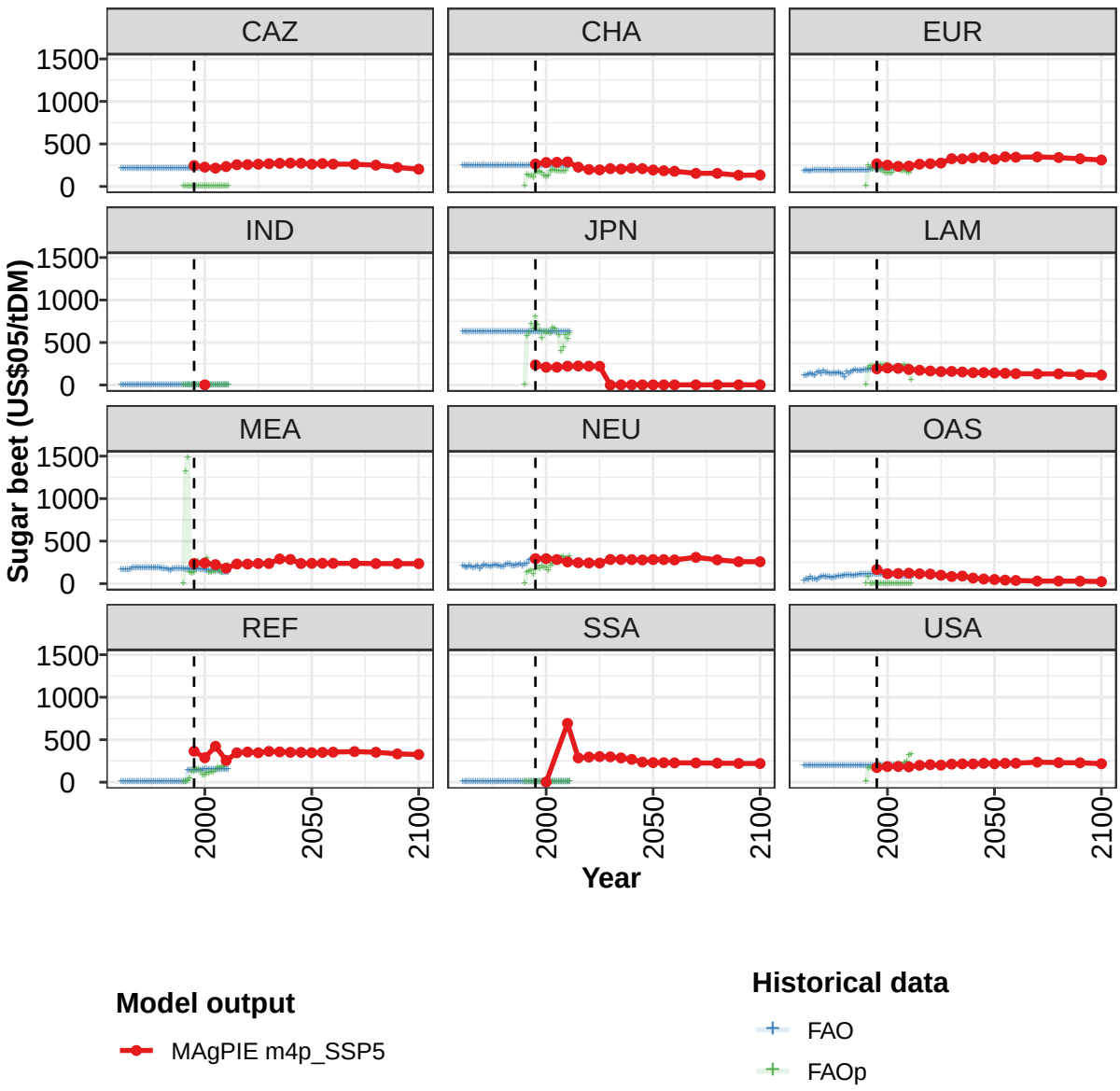
Table 1243: FAOp — Prices—Agriculture—Sugar (US$05/tDM) [PART 2/3]

	2005
GLO	22
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1244: IniFoodPrice — Prices—Agriculture—Sugar (US$05/tDM)

36.32 Sugar beet





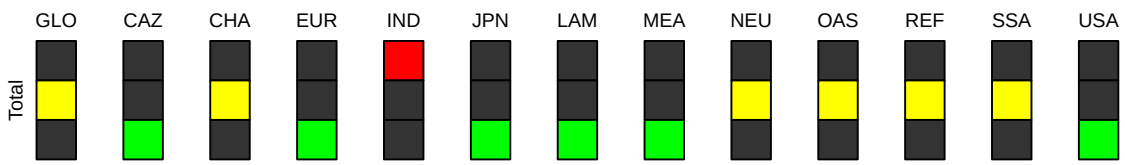


Figure 322: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar beet (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	277	250	263	234	262	263	262	285	289	288	273
CAZ	246	227	215	234	255	257	262	267	272	274	273
CHA	264	282	285	289	227	200	195	209	204	214	209
EUR	267	251	236	239	261	268	275	326	324	335	344
IND		2									
JPN	237	209	210	222	224	222	220	0	2	2	2
LAM	191	201	197	183	174	165	158	161	154	146	146
MEA	238	242	223	182	231	230	237	237	290	285	237
NEU	294	293	283	255	246	243	242	284	283	283	279
OAS	166	117	119	123	116	113	99	84	89	65	55
REF	364	288	422	257	346	355	347	363	357	352	351
SSA		2		692	287	296	302	299	286	269	236
USA	173	185	186	181	199	206	201	213	216	215	223

Table 1245: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	262	273	272	282	278	269	256
CAZ	261	269	263	260	251	224	203
CHA	193	185	178	154	154	132	134
EUR	320	349	344	347	340	325	311
IND							
JPN	2	2	2	2	2	2	2
LAM	143	139	134	131	132	123	117
MEA	239	240	239	238	236	235	235
NEU	283	283	279	309	280	258	258
OAS	49	42	37	30	30	29	24
REF	348	351	354	360	353	333	326
SSA	231	230	228	227	224	221	220
USA	217	223	223	236	230	229	218

Table 1246: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	129	131	138	118	123	124	121	120	130	126	133
CAZ	207	207	207	207	207	207	207	207	207	207	207
CHA	239	239	239	239	239	239	239	239	239	239	239
EUR	180	183	181	180	186	181	183	182	185	184	184
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	619	619	619	619	619	619	619	619	619	619	619
LAM	109	107	118	131	117	106	136	155	126	157	138
MEA	155	165	165	159	162	179	180	183	180	178	178
NEU	205	194	185	205	189	177	195	205	167	196	217
OAS	33	45	44	72	46	56	41	61	76	81	74
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	192	192	192	192	192	192	192	192	192	192	192

Table 1247: FAO — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	133	128	126	142	132	132	132	138	138	157	150
CAZ	207	207	207	207	207	207	207	207	207	207	207
CHA	239	239	239	239	239	239	239	239	239	239	239
EUR	183	184	179	186	192	186	186	183	186	189	185
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	619	619	619	619	619	619	619	619	619	619	619
LAM	143	128	129	135	134	144	127	119	87	148	132
MEA	182	185	183	180	181	177	179	176	172	169	168
NEU	209	202	191	203	215	205	206	198	190	210	222
OAS	77	67	59	69	76	81	82	83	91	97	96
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	192	192	192	192	192	192	192	192	192	192	192

Table 1248: FAO — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	142	141	140	145	141	144	138	150	157	195	198
CAZ	207	207	207	207	207	207	207	207	207	207	207
CHA	239	239	239	239	239	239	239	239	239	239	239
EUR	189	186	184	188	189	191	189	190	189	196	203
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	619	619	619	619	619	619	619	619	619	619	619
LAM	148	163	169	165	167	166	174	168	171	179	185
MEA	156	148	168	171	170	171	167	168	165	166	165
NEU	222	204	201	213	216	230	203	224	226	272	285
OAS	94	88	96	97	100	100	100	100	101	101	100
REF	0	0	0	0	0	0	0	0	0	140	139
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	192	192	192	192	192	192	192	192	192	192	192

Table 1249: FAO — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	201	199	203	206	210	205	212	209	211	207	207
CAZ	207	207	207	207	207	207	207	207	207	207	207
CHA	239	239	239	239	239	239	239	239	239	239	239
EUR	204	203	203	203	205	204	213	212	212	211	211
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	619	619	619	619	619	619	619	619	619	619	619
LAM	187	188	189	188	188	188	188	188	188	190	190
MEA	163	164	164	167	161	160	155	146	148	152	150
NEU	276	279	278	284	286	280	292	281	283	283	276
OAS	100	100	100	100	99	100	100	100	101	100	99
REF	138	139	139	138	138	142	145	144	145	146	145
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	192	192	192	192	192	192	192	192	192	192	192

Table 1250: FAO — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	208	200	201	203	205	202	196
CAZ	207	207	207	207	207	207	207
CHA	239	239	239	239	239	239	239
EUR	213	208	207	206	206	206	205
IND	0	0	0	0	0	0	0
JPN	619	619	619	619	619	619	619
LAM	191	193	196	197	201	197	193
MEA	149	149	139	123	127	126	125
NEU	274	276	275	285	283	279	282
OAS	99	98	87	83	86	78	59
REF	145	144	146	146	148	146	146
SSA	0	0	0	0	0	0	0
USA	192	192	192	192	192	192	192

Table 1251: FAO — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	203	216	156	183	200	201	185	178	160	157
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	129	119	124	98	144	171	167	150	121	107
EUR	0	237	220	199	219	239	211	182	175	156	152
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	571	609	712	657	801	705	632	545	620	612
LAM	0	194	213	219	215	215	227	232	234	233	233
MEA	0	1310	1482	131	119	130	191	254	238	230	248
NEU	0	127	143	146	104	157	193	171	201	183	184
OAS	0	75	0	0	0	0	0	0	0	0	0
REF	0	0	11	40	125	120	148	148	125	77	86
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	0	163	171	163	163	158	208	179	167	171	158

Table 1252: FAOp — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 1/3]

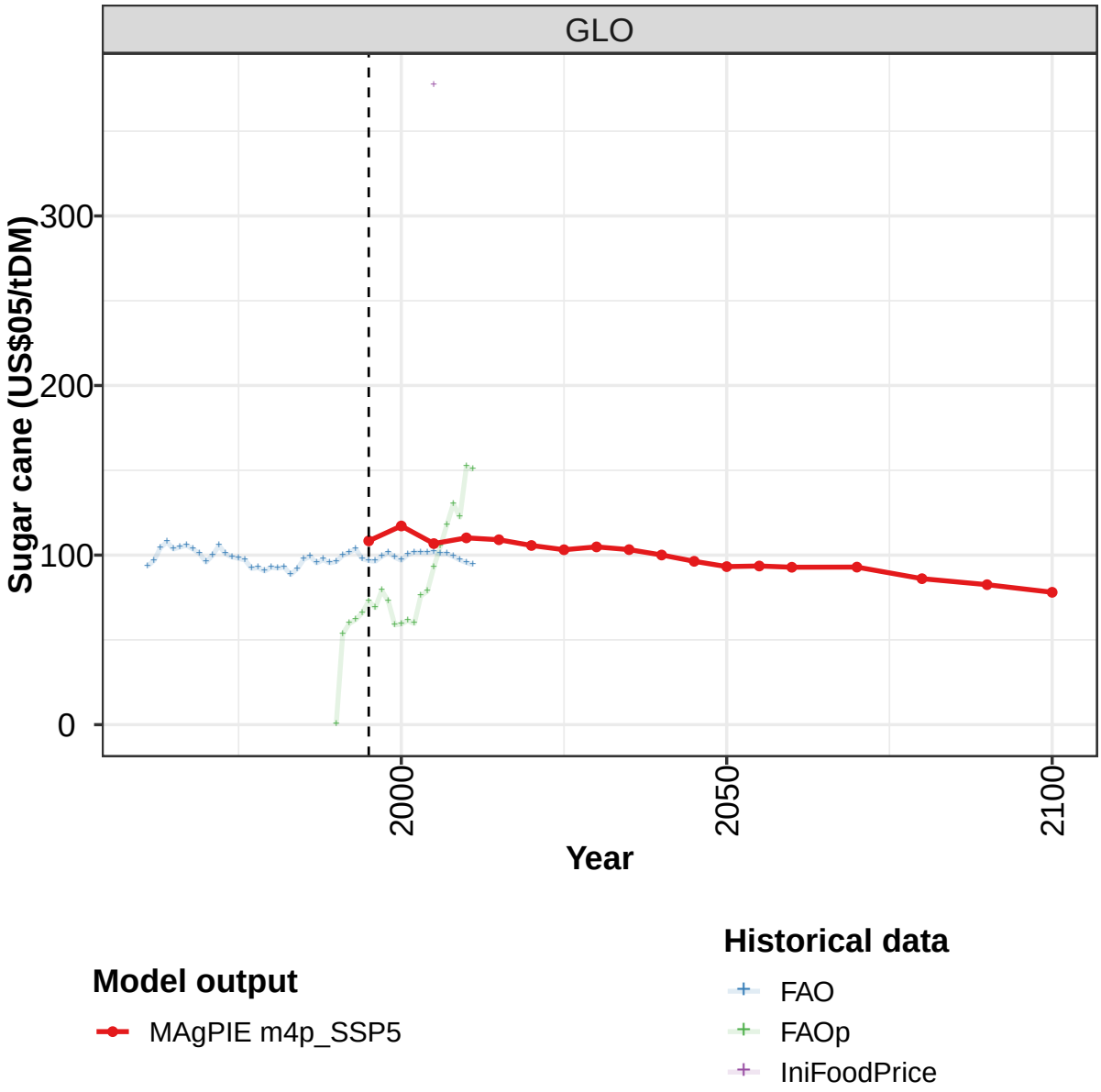
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	162	159	188	203	213	190	185	200	191	210	228
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	125	176	192	183	177	173	172	178	171	215	271
EUR	152	151	196	222	227	181	180	182	164	156	181
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	619	604	666	658	620	577	393	433	575	538	607
LAM	213	198	191	190	189	197	216	230	204	212	50
MEA	295	127	125	135	143	169	136	126	169	180	205
NEU	153	205	228	283	274	249	298	308	276	290	310
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	100	98	113	116	141	165	155	184	173	224	239
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	183	183	192	171	200	204	192	221	233	308	321

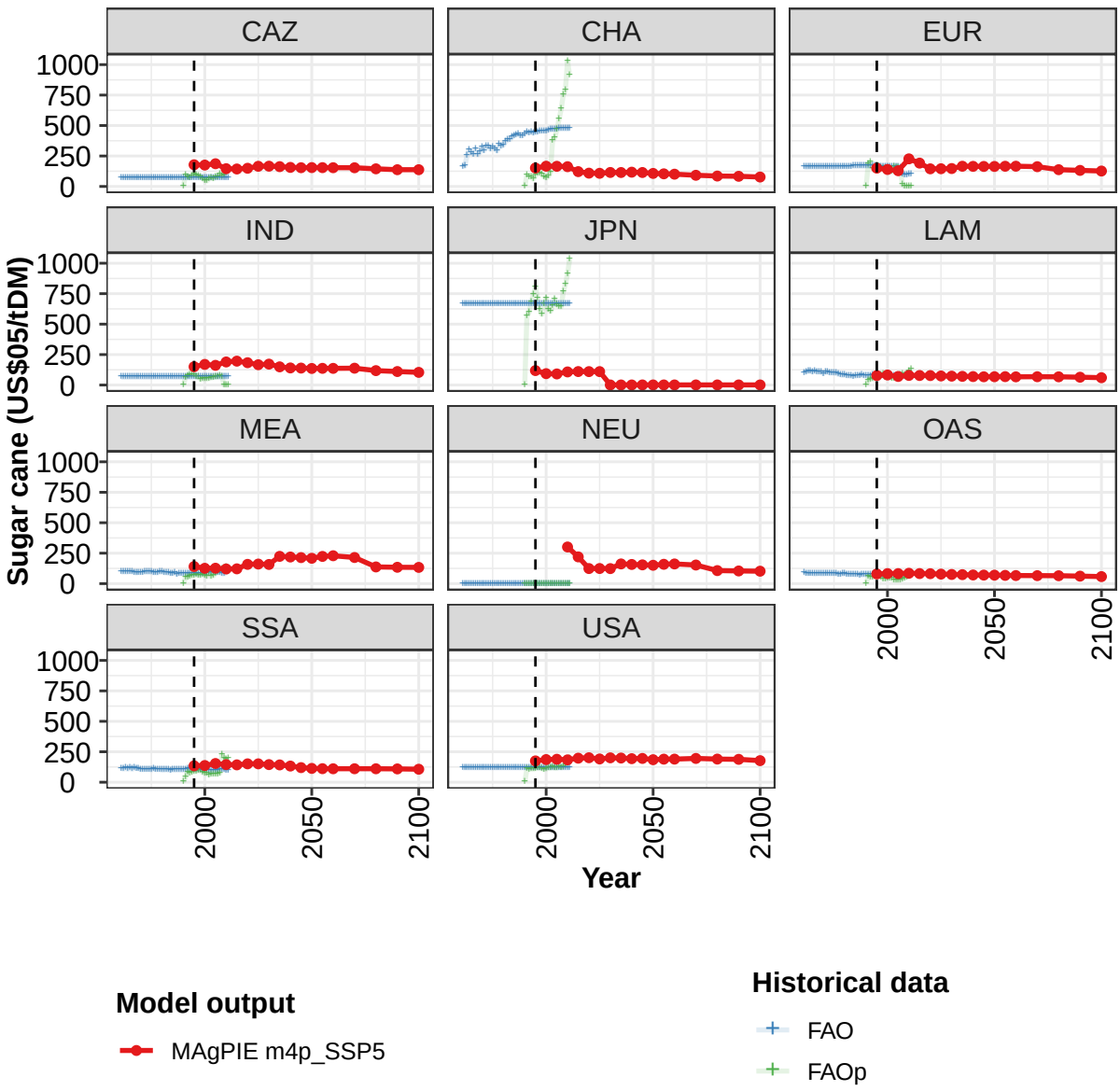
Table 1253: FAOp — Prices—Agriculture—Sugar beet (US$05/tDM) [PART 2/3]

	2005
GLO	868
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1254: IniFoodPrice — Prices—Agriculture—Sugar beet (US$05/tDM)

36.33 Sugar cane





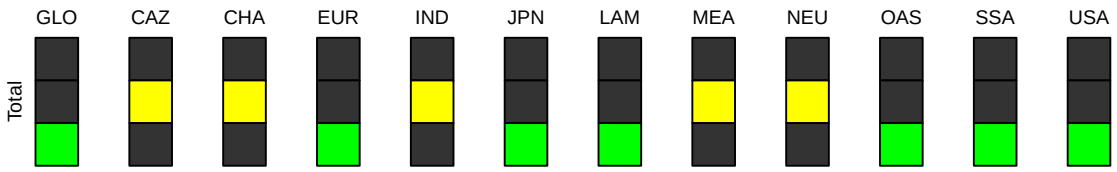


Figure 323: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar cane (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	108	117	107	110	109	106	103	105	103	100	96
CAZ	178	176	187	146	143	149	166	166	163	157	154
CHA	151	166	165	162	122	109	108	115	114	117	115
EUR	150	140	129	227	192	145	146	147	166	165	164
IND	150	169	162	189	196	184	167	172	149	140	139
JPN	119	94	91	108	111	110	110	1	1	1	1
LAM	78	82	71	79	78	78	75	73	71	70	68
MEA	140	126	127	121	122	158	161	158	224	219	214
NEU				301	220	124	124	124	162	158	154
OAS	80	83	82	85	83	82	78	75	74	71	70
SSA	135	137	154	145	143	151	151	145	142	133	120
USA	175	186	189	184	198	201	191	200	199	194	196

Table 1255: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	93	94	93	93	86	83	78
CAZ	155	154	154	154	145	137	137
CHA	107	104	101	92	86	83	77
EUR	164	166	166	162	138	132	127
IND	136	137	137	138	118	111	104
JPN	1	1	1	1	1	1	1
LAM	69	69	67	68	68	64	60
MEA	208	223	229	215	137	134	133
NEU	151	159	162	153	107	104	102
OAS	70	68	66	66	65	62	58
SSA	114	111	111	111	111	109	107
USA	185	189	190	195	190	188	177

Table 1256: MAgPIE m4p_SSP5 — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	94	97	104	108	104	105	106	103	101	96	100
CAZ	71	71	71	71	71	71	71	71	71	71	71
CHA	163	166	255	302	275	263	306	260	281	325	293
EUR	162	157	158	158	160	159	159	159	160	159	160
IND	63	63	63	63	63	63	63	63	63	63	63
JPN	667	667	667	667	667	667	667	667	667	667	667
LAM	100	107	114	113	106	115	107	107	106	93	104
MEA	96	96	96	96	99	97	91	89	91	91	92
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	85	84	82	84	82	79	80	83	80	80	81
SSA	113	108	114	107	117	107	115	112	111	105	104
USA	119	119	119	119	119	119	119	119	119	119	119

Table 1257: FAO — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	106	101	99	98	97	92	93	91	93	92	93
CAZ	71	71	71	71	71	71	71	71	71	71	71
CHA	328	326	305	322	309	290	341	328	339	367	385
EUR	158	161	158	160	160	159	160	162	163	161	163
IND	63	63	63	63	63	63	63	63	63	63	63
JPN	667	667	667	667	667	667	667	667	667	667	667
LAM	108	99	100	97	96	87	85	79	80	76	75
MEA	94	95	94	93	89	89	88	97	95	90	89
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	81	81	81	83	80	77	77	79	80	77	75
SSA	104	105	105	101	108	104	104	104	100	99	104
USA	119	119	119	119	119	119	119	119	119	119	119

Table 1258: FAO — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	89	92	97	99	95	97	95	96	100	102	103
CAZ	71	71	71	71	71	71	71	71	71	71	71
CHA	383	404	417	423	426	416	417	432	444	440	442
EUR	164	165	165	165	165	165	165	166	165	165	165
IND	63	63	63	63	63	63	63	63	63	63	63
JPN	667	667	667	667	667	667	667	667	667	667	667
LAM	72	71	73	77	76	79	76	73	74	76	82
MEA	85	82	83	85	76	83	83	82	79	82	84
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	74	76	73	74	69	72	72	73	72	72	73
SSA	99	98	101	99	100	100	99	100	100	108	112
USA	119	119	119	119	119	119	119	119	119	119	119

Table 1259: FAO — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	98	97	96	99	102	99	97	100	102	102	101
CAZ	71	71	71	71	71	71	71	71	71	71	71
CHA	436	442	446	452	455	455	455	461	464	466	469
EUR	165	164	162	163	164	165	164	164	164	164	163
IND	63	63	63	63	63	63	63	63	63	63	63
JPN	667	667	667	667	667	667	667	667	667	667	667
LAM	76	76	76	74	77	79	78	79	76	77	75
MEA	84	83	81	80	80	83	85	87	88	92	94
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	72	69	69	69	69	68	69	69	69	67	68
SSA	99	100	101	99	100	95	100	101	97	96	97
USA	119	119	119	119	119	119	119	119	119	119	119

Table 1260: FAO — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	102	101	101	99	97	96	94
CAZ	71	71	71	71	71	71	71
CHA	470	472	472	472	473	472	472
EUR	161	150	99	94	93	97	98
IND	63	63	63	63	63	63	63
JPN	667	667	667	667	667	667	667
LAM	76	75	73	69	67	67	67
MEA	92	90	90	81	79	93	96
NEU	0	0	0	0	0	0	0
OAS	70	70	67	65	67	66	65
SSA	98	97	102	103	100	98	97
USA	119	119	119	119	119	119	119

Table 1261: FAO — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	53	60	62	66	73	69	79	73	59	59
CAZ	0	92	76	71	81	99	93	88	74	65	49
CHA	0	92	80	74	61	91	109	108	98	78	69
EUR	0	186	198	147	148	169	163	146	146	144	124
IND	0	61	76	79	80	85	66	69	47	48	49
JPN	0	563	597	680	740	805	708	618	579	666	709
LAM	0	38	44	49	57	60	61	83	87	62	63
MEA	0	47	49	55	62	68	70	67	68	70	69
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	56	52	51	55	62	59	54	38	38	44
SSA	1	43	82	72	80	88	87	96	96	78	72
USA	0	107	104	107	107	111	115	115	111	104	107

Table 1262: FAOp — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 1/3]

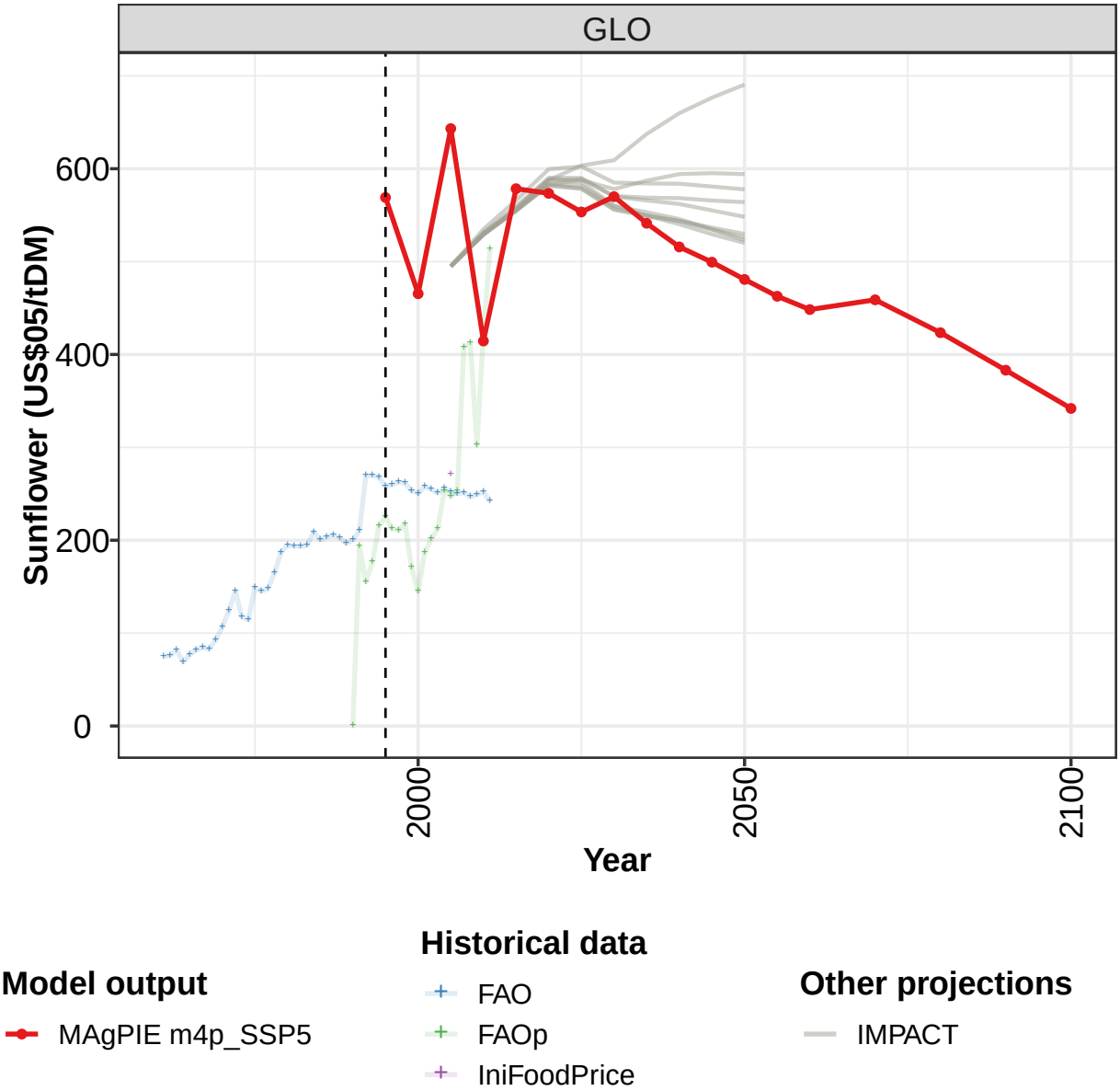
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	61	60	76	79	93	105	118	130	122	152	150
CAZ	44	62	67	63	74	78	102	81	94	150	145
CHA	83	117	373	397	465	549	634	752	793	1027	912
EUR	130	119	160	156	152	130	17	0	0	0	0
IND	49	53	58	61	64	66	73	69	0	0	0
JPN	621	604	649	702	655	644	641	765	828	911	1034
LAM	66	54	56	57	75	86	90	83	86	111	127
MEA	57	90	56	65	84	94	102	118	128	131	116
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	44	40	28	26	27	29	36	45	53	71	79
SSA	71	59	64	65	66	65	71	225	195	183	194
USA	119	115	122	115	115	126	119	122	141	170	193

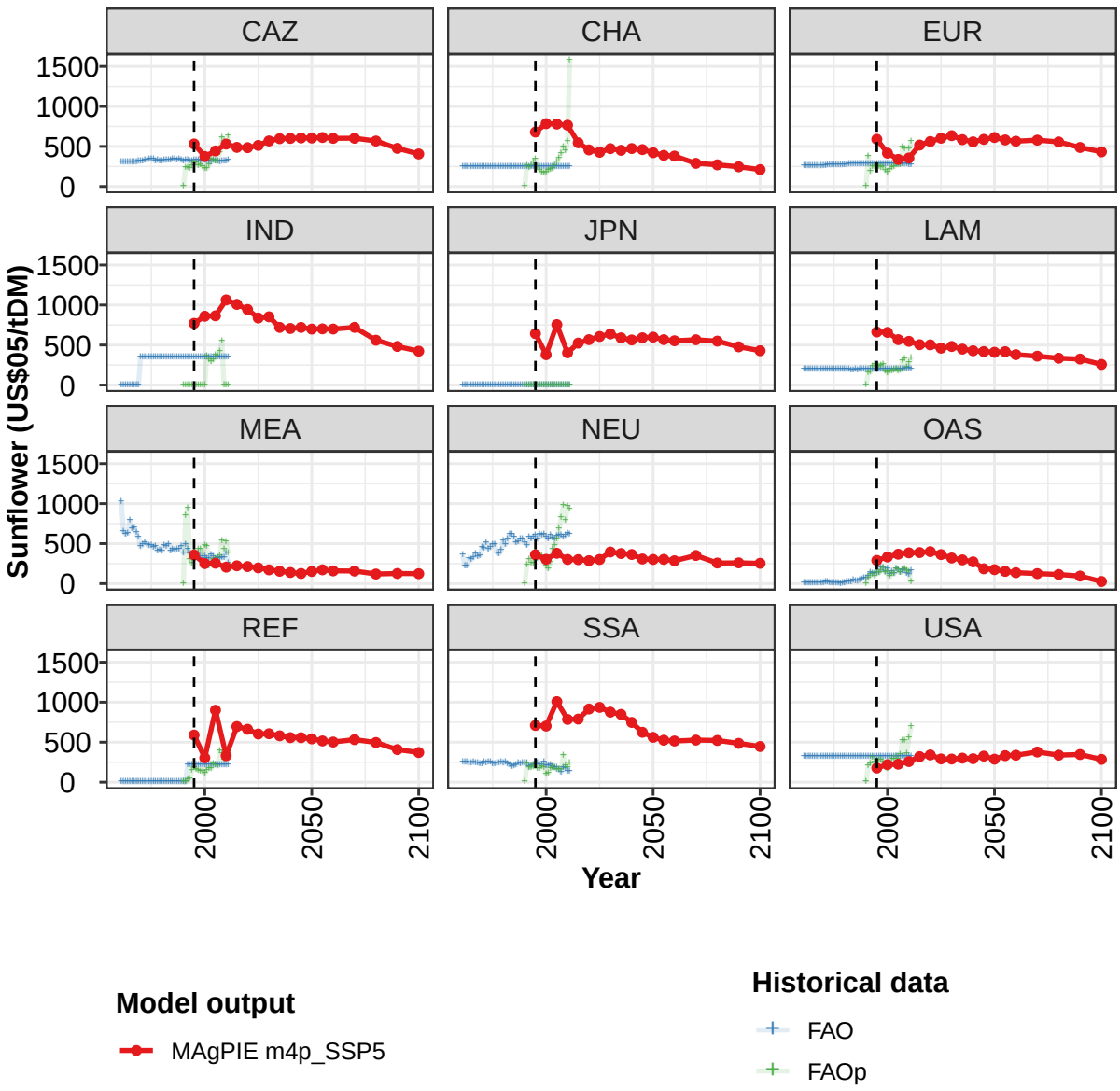
Table 1263: FAOp — Prices—Agriculture—Sugar cane (US$05/tDM) [PART 2/3]

	2005
GLO	377
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
SSA	
USA	

Table 1264: IniFoodPrice — Prices—Agriculture—Sugar cane (US$05/tDM)

36.34 Sunflower





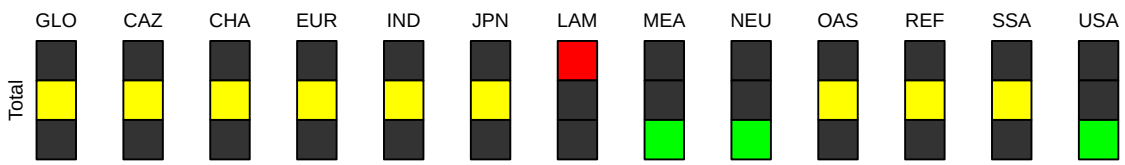


Figure 324: MAgPIE m4p_SSP5 — Prices—Agriculture—Sunflower (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	569	465	643	415	579	573	553	570	541	516	499
CAZ	531	374	444	530	488	485	513	569	597	601	606
CHA	680	785	780	766	546	457	427	472	452	474	461
EUR	589	416	338	356	517	562	603	635	585	558	588
IND	771	860	865	1064	1009	944	838	853	721	707	720
JPN	643	379	755	403	524	567	607	639	590	564	591
LAM	663	658	567	547	505	502	461	482	449	428	418
MEA	359	250	255	206	223	213	197	172	154	139	126
NEU	361	304	379	302	300	287	302	395	376	364	308
OAS	290	333	368	385	388	400	363	320	297	272	185
REF	590	304	900	331	696	661	602	606	580	557	556
SSA	709	702	1007	785	789	915	935	876	847	747	624
USA	177	220	225	258	320	341	291	290	301	294	326

Table 1265: MAgPIE m4p_SSP5 — Prices—Agriculture—Sunflower (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	481	463	448	459	423	383	342
CAZ	605	612	601	602	568	476	406
CHA	422	388	380	289	271	246	210
EUR	612	581	565	579	556	487	433
IND	699	702	700	721	561	482	423
JPN	599	567	553	566	549	478	429
LAM	410	417	380	361	335	325	258
MEA	152	172	159	157	120	126	124
NEU	302	303	286	352	257	259	254
OAS	175	153	137	125	114	94	27
REF	542	516	502	532	496	408	371
SSA	561	525	515	526	522	485	446
USA	288	332	337	378	338	346	285

Table 1266: MAgPIE m4p_SSP5 — Prices—Agriculture—Sunflower (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	75	76	82	69	76	82	85	83	93	107	124
CAZ	304	303	303	302	302	305	301	307	310	313	317
CHA	245	245	245	245	245	245	245	245	245	245	245
EUR	256	255	254	254	253	255	254	254	254	261	262
IND	0	0	0	0	0	0	0	0	0	347	347
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	193	192	195	195	192	194	191	191	191	191	195
MEA	1022	649	616	625	783	685	690	632	576	457	486
NEU	352	221	221	305	296	325	373	336	347	449	438
OAS	4	4	5	5	6	5	6	7	8	10	14
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	244	244	244	236	235	245	243	237	231	227	247
USA	319	318	319	319	319	319	319	319	319	319	319

Table 1267: FAO — Prices—Agriculture—Sunflower (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	145	117	114	149	145	148	165	187	194	194	193
CAZ	328	331	341	335	334	320	324	319	319	323	323
CHA	245	245	245	245	245	245	245	245	245	245	245
EUR	263	263	266	269	266	265	266	267	273	269	276
IND	347	347	347	347	347	347	347	347	347	347	347
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	193	192	190	192	192	191	191	191	191	191	190
MEA	511	489	468	468	454	459	407	411	403	468	464
NEU	505	432	449	489	483	381	371	410	536	485	560
OAS	21	11	5	6	5	4	0	3	4	23	22
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	239	253	250	229	226	241	236	243	232	252	224
USA	319	319	319	319	319	319	319	319	319	319	319

Table 1268: FAO — Prices—Agriculture—Sunflower (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	195	209	201	203	205	203	196	200	210	269	270
CAZ	329	329	336	338	332	336	331	316	322	324	315
CHA	245	245	245	245	245	245	245	245	245	245	245
EUR	277	280	281	278	280	281	279	282	278	280	285
IND	347	347	347	347	347	347	347	347	347	347	347
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	189	190	190	190	192	194	197	197	192	191	192
MEA	490	408	431	411	421	424	458	381	490	432	372
NEU	618	609	578	511	522	552	559	508	479	579	559
OAS	23	36	36	25	42	53	67	66	83	131	125
REF	0	0	0	0	0	0	0	0	0	212	212
SSA	211	194	205	215	236	229	236	233	232	186	204
USA	319	319	319	319	319	319	319	319	319	319	319

Table 1269: FAO — Prices—Agriculture—Sunflower (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	268	258	260	263	262	253	250	258	255	251	256
CAZ	319	327	323	330	319	327	325	317	311	304	322
CHA	245	245	245	245	245	245	245	245	245	245	245
EUR	282	279	283	285	282	279	283	282	279	277	276
IND	347	347	347	347	347	347	347	347	347	347	347
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	190	190	191	190	191	190	191	191	191	191	192
MEA	331	351	353	378	333	306	337	311	315	359	332
NEU	578	596	553	610	599	611	582	560	600	571	561
OAS	119	140	136	192	194	149	181	113	145	123	181
REF	212	212	211	213	213	214	212	214	213	213	213
SSA	213	238	237	213	217	244	201	204	217	188	181
USA	319	319	319	319	319	319	319	319	319	319	319

Table 1270: FAO — Prices—Agriculture—Sunflower (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	252	250	251	247	249	252	242
CAZ	317	315	303	315	313	315	330
CHA	245	245	245	245	245	245	245
EUR	275	275	281	276	277	272	273
IND	347	347	347	347	347	347	347
JPN	0	0	0	0	0	0	0
LAM	192	192	198	198	203	211	198
MEA	310	324	308	325	327	378	247
NEU	592	603	604	576	600	619	609
OAS	165	138	160	165	126	107	161
REF	213	213	213	212	212	212	212
SSA	175	156	121	181	169	131	129
USA	319	319	319	319	319	319	319

Table 1271: FAO — Prices—Agriculture—Sunflower (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	193	155	176	216	225	212	211	217	171	145
CAZ	0	234	237	220	261	296	297	257	264	243	224
CHA	0	262	234	255	306	334	250	200	177	162	170
EUR	0	377	181	242	245	260	241	229	249	198	177
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	150	158	235	250	230	230	242	258	173	146
MEA	0	852	934	293	254	310	353	421	423	376	470
NEU	0	231	303	250	256	322	307	342	344	279	211
OAS	0	67	112	107	94	138	129	160	195	139	147
REF	0	0	26	42	146	183	161	144	138	132	107
SSA	0	222	178	182	189	229	172	168	195	184	97
USA	0	206	231	305	254	273	273	275	252	178	163

Table 1272: FAOp — Prices—Agriculture—Sunflower (US$05/tDM) [PART 1/3]

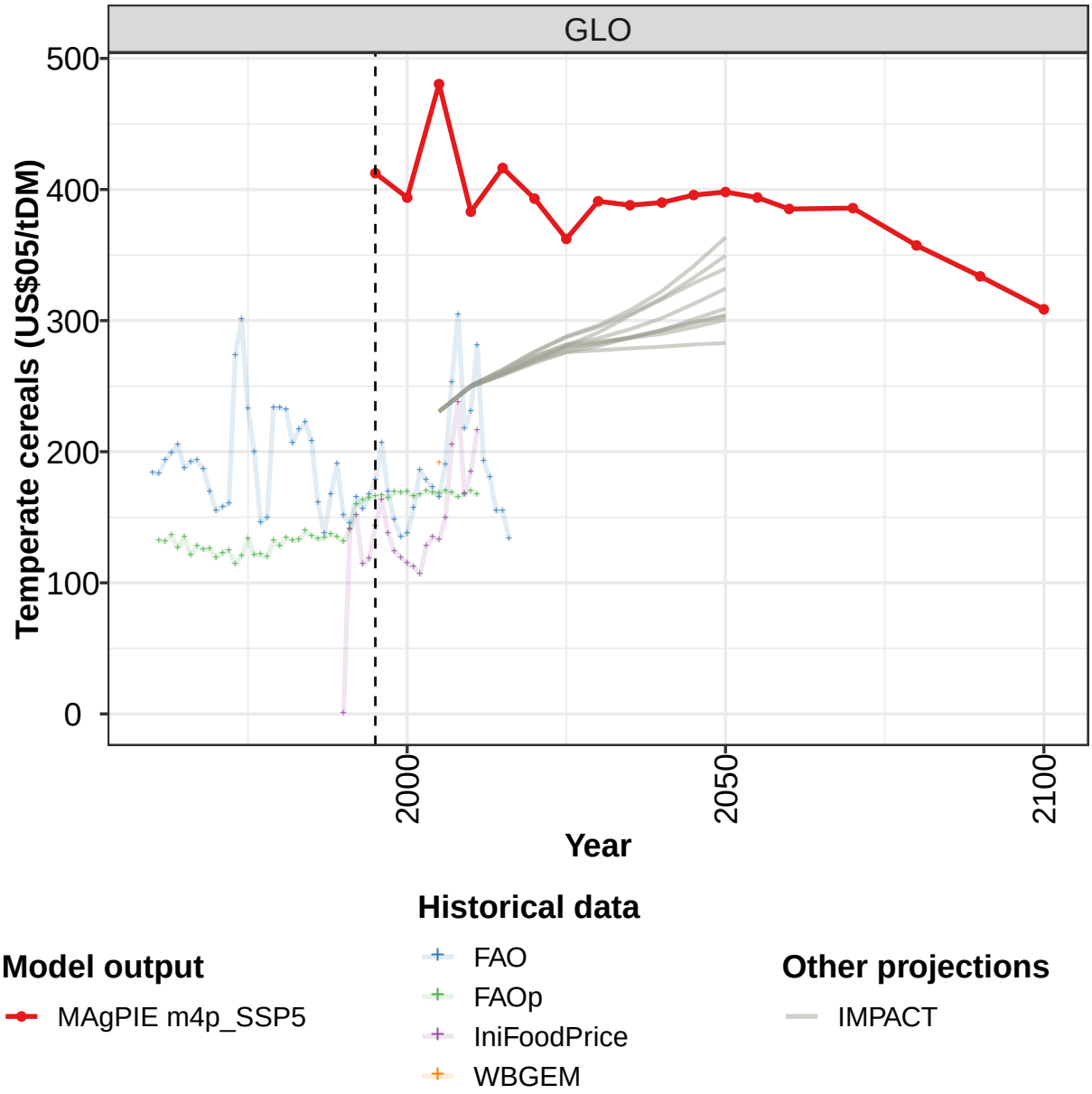
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	187	201	212	253	247	253	408	412	302	422	514
CAZ	218	274	340	331	314	319	424	610	564	499	627
CHA	200	207	217	257	300	349	409	495	441	556	1575
EUR	212	237	240	271	271	273	489	472	317	461	558
IND	357	311	289	318	366	356	414	547	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	175	172	182	196	170	181	302	324	219	274	337
MEA	461	222	262	293	286	318	340	528	423	523	381
NEU	186	259	424	468	552	680	823	970	784	959	924
OAS	83	124	118	178	167	139	171	182	158	150	14
REF	145	165	169	223	209	198	392	350	272	390	426
SSA	111	168	178	185	157	154	151	335	204	183	237
USA	228	287	287	325	287	344	514	517	358	553	690

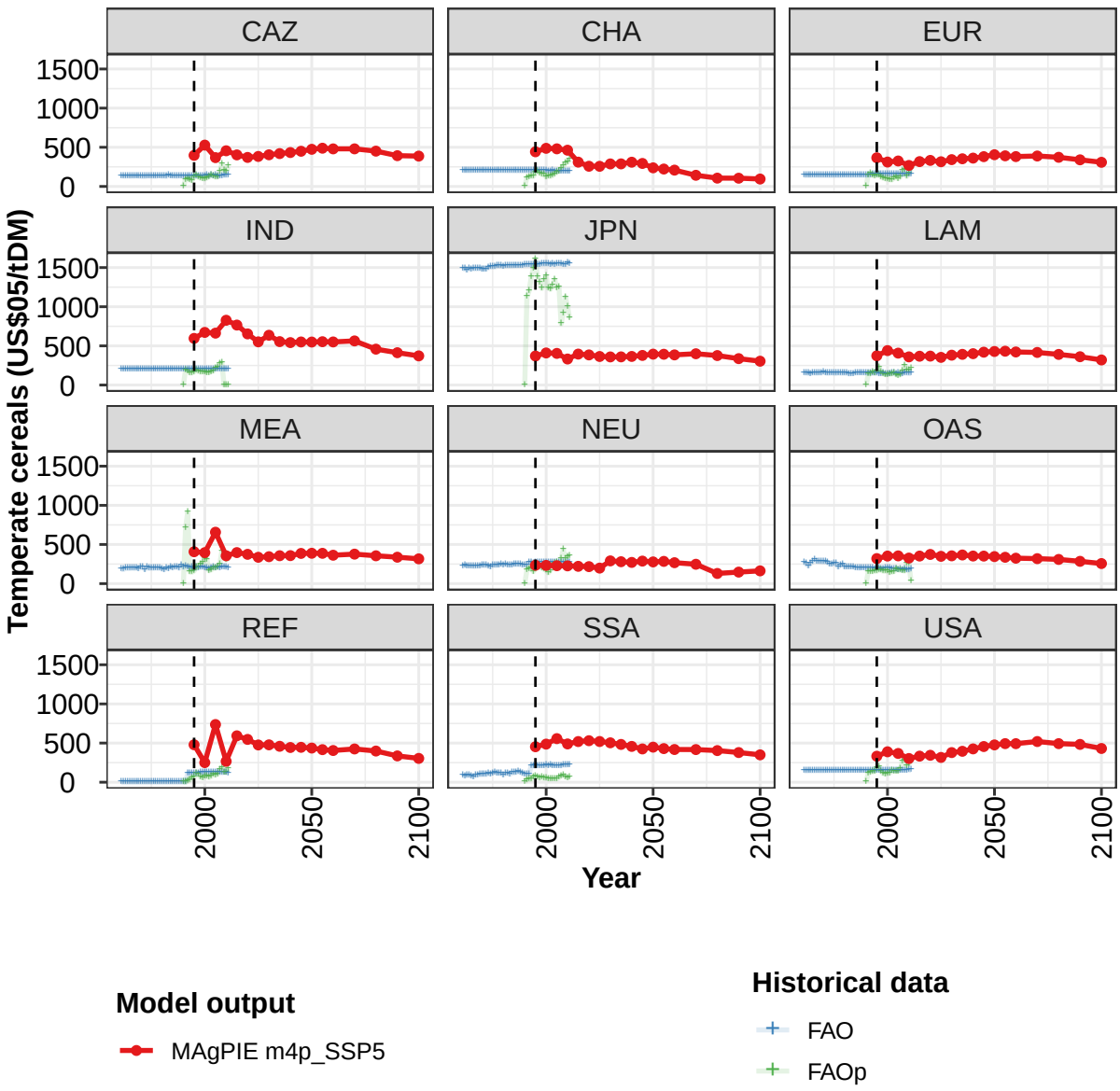
Table 1273: FAOp — Prices—Agriculture—Sunflower (US$05/tDM) [PART 2/3]

	2005
GLO	271
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1274: IniFoodPrice — Prices—Agriculture—Sunflower (US$05/tDM)

36.35 Temperate cereals





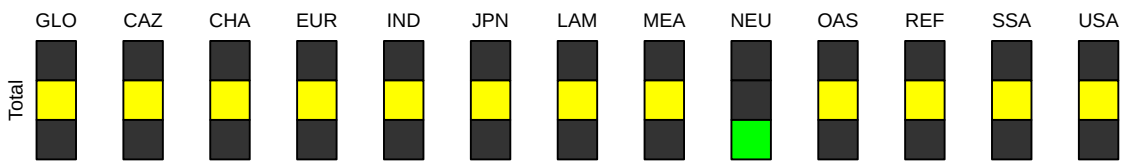


Figure 325: MAgPIE m4p_SSP5 — Prices—Agriculture—Temperate cereals (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	412	394	480	383	416	393	362	391	388	390	396
CAZ	397	528	368	456	403	371	383	404	420	433	450
CHA	443	487	480	463	311	258	257	288	288	310	294
EUR	366	312	325	268	317	333	315	343	353	362	380
IND	596	672	663	827	766	653	552	636	555	542	550
JPN	371	410	404	333	395	385	365	359	360	365	378
LAM	373	440	408	360	368	370	354	381	392	401	420
MEA	407	396	657	356	397	375	337	344	356	358	386
NEU	234	233	229	227	221	217	199	291	280	271	288
OAS	320	352	354	327	352	373	349	355	366	353	352
REF	478	250	737	267	593	547	476	478	459	444	446
SSA	453	487	557	489	520	530	520	503	483	458	425
USA	332	389	367	303	333	344	317	379	395	426	456

Table 1275: MAgPIE m4p_SSP5 — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	398	394	385	386	357	334	309
CAZ	474	488	480	480	451	393	388
CHA	238	222	209	143	106	105	95
EUR	405	391	382	389	372	340	309
IND	549	553	551	564	458	413	372
JPN	394	393	385	400	377	337	305
LAM	429	432	422	416	391	362	320
MEA	388	387	363	377	356	338	317
NEU	277	284	267	248	130	148	163
OAS	346	337	325	319	309	285	256
REF	437	416	405	425	399	336	304
SSA	448	430	418	417	404	379	350
USA	477	493	493	520	493	483	431

Table 1276: MAgPIE m4p_SSP5 — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	184	183	193	199	205	187	192	193	186	169	155
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1277: WBGEM — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	158	160	273	301	232	199	146	149	233	234	232
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1278: WBGEM — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	206	217	222	208	161	137	167	190	151	145	165
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1279: WBGEM — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	156	167	178	206	169	148	135	137	156	186	178
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1280: WBGEM — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	172	165	190	253	304	217	231	281	192	180	154
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1281: WBGEM — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 5/6]

	2015	2016
GLO	155	134
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1282: WBGEM — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	132	131	136	126	135	121	128	125	126	119	123
CAZ	136	132	131	134	129	133	131	136	131	129	127
CHA	204	201	201	201	201	203	202	202	204	204	203
EUR	138	141	140	140	142	141	141	140	140	140	140
IND	202	202	203	203	203	203	203	203	204	204	204
JPN	1483	1483	1467	1482	1480	1483	1483	1484	1487	1478	1480
LAM	153	155	148	146	154	154	151	155	153	161	156
MEA	182	181	193	192	193	198	193	201	190	205	213
NEU	222	229	226	225	226	219	221	225	223	231	228
OAS	264	252	225	262	277	303	286	283	279	276	278
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	84	75	83	89	76	69	89	93	94	95	96
USA	145	145	145	146	146	146	147	147	146	146	147

Table 1283: FAO — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	124	114	120	133	121	121	119	132	128	134	132
CAZ	126	132	133	132	130	128	136	137	130	132	126
CHA	203	203	203	203	202	201	202	201	201	201	200
EUR	140	138	139	141	139	138	139	141	142	141	141
IND	204	204	204	204	204	204	204	205	205	205	205
JPN	1481	1499	1506	1505	1508	1517	1518	1518	1514	1520	1522
LAM	149	151	155	150	147	156	150	150	151	149	143
MEA	179	210	193	202	193	203	195	203	185	177	197
NEU	230	221	214	236	232	234	237	243	237	243	239
OAS	270	249	243	258	256	210	237	244	212	214	213
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	97	107	104	117	128	112	114	113	91	111	116
USA	148	148	149	149	150	149	149	150	151	150	151

Table 1284: FAO — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	133	139	136	133	134	137	135	131	141	160	163
CAZ	137	137	133	131	129	134	131	131	129	132	132
CHA	200	200	199	198	199	198	198	198	198	199	198
EUR	140	142	141	142	142	142	141	140	142	146	153
IND	205	205	205	205	205	205	205	205	205	205	205
JPN	1520	1522	1524	1526	1526	1527	1528	1529	1531	1533	1532
LAM	145	146	154	155	156	155	154	151	152	150	150
MEA	190	214	199	206	212	194	227	205	218	204	194
NEU	236	238	242	244	242	240	237	239	238	269	267
OAS	215	213	203	199	197	203	202	200	197	198	195
REF	0	0	0	0	0	0	0	0	0	110	111
SSA	97	121	118	124	133	126	107	103	103	104	210
USA	150	150	150	150	150	152	151	152	151	151	152

Table 1285: FAO — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	165	166	166	164	169	168	169	165	167	170	168
CAZ	128	133	135	134	136	137	136	139	133	139	136
CHA	197	197	197	197	197	197	198	196	196	197	196
EUR	153	152	153	152	152	152	155	153	154	155	154
IND	205	205	205	205	205	205	205	205	205	205	205
JPN	1534	1537	1540	1539	1541	1541	1545	1543	1540	1543	1538
LAM	148	149	144	145	147	143	143	145	148	148	146
MEA	205	187	204	199	205	208	202	193	189	202	209
NEU	263	264	271	264	265	267	270	266	267	271	265
OAS	190	195	193	186	187	192	200	202	188	182	190
REF	111	113	111	112	119	120	122	118	121	127	124
SSA	208	219	211	210	210	211	215	212	215	212	212
USA	152	152	152	152	152	153	152	153	152	153	153

Table 1286: FAO — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	168	170	168	165	167	170	167
CAZ	138	130	132	136	138	140	142
CHA	195	195	196	196	196	195	196
EUR	153	155	155	155	153	154	154
IND	205	205	205	205	205	205	205
JPN	1547	1550	1543	1540	1536	1554	1552
LAM	149	145	144	154	153	147	147
MEA	199	205	201	214	212	204	201
NEU	269	269	269	270	270	271	270
OAS	178	180	175	185	172	173	183
REF	125	128	125	119	123	121	115
SSA	211	212	209	219	216	221	223
USA	153	153	153	153	153	153	153

Table 1287: FAO — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	140	151	114	118	143	163	137	124	119	114
CAZ	0	88	91	81	75	120	144	116	106	100	96
CHA	0	111	124	128	127	175	190	169	150	152	119
EUR	0	149	167	139	131	139	146	118	104	97	91
IND	0	192	171	153	155	166	185	173	163	168	168
JPN	0	1125	1198	1377	1490	1609	1378	1313	1231	1339	1389
LAM	0	136	144	160	154	181	224	163	141	132	134
MEA	0	708	908	147	145	161	207	210	241	273	318
NEU	0	170	190	192	152	204	244	211	200	183	169
OAS	0	151	155	152	156	159	173	174	157	158	163
REF	0	0	13	28	50	64	112	103	63	57	75
SSA	0	33	35	37	65	71	63	50	60	47	48
USA	0	117	129	131	137	182	192	138	108	103	108

Table 1288: FAOp — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 1/3]

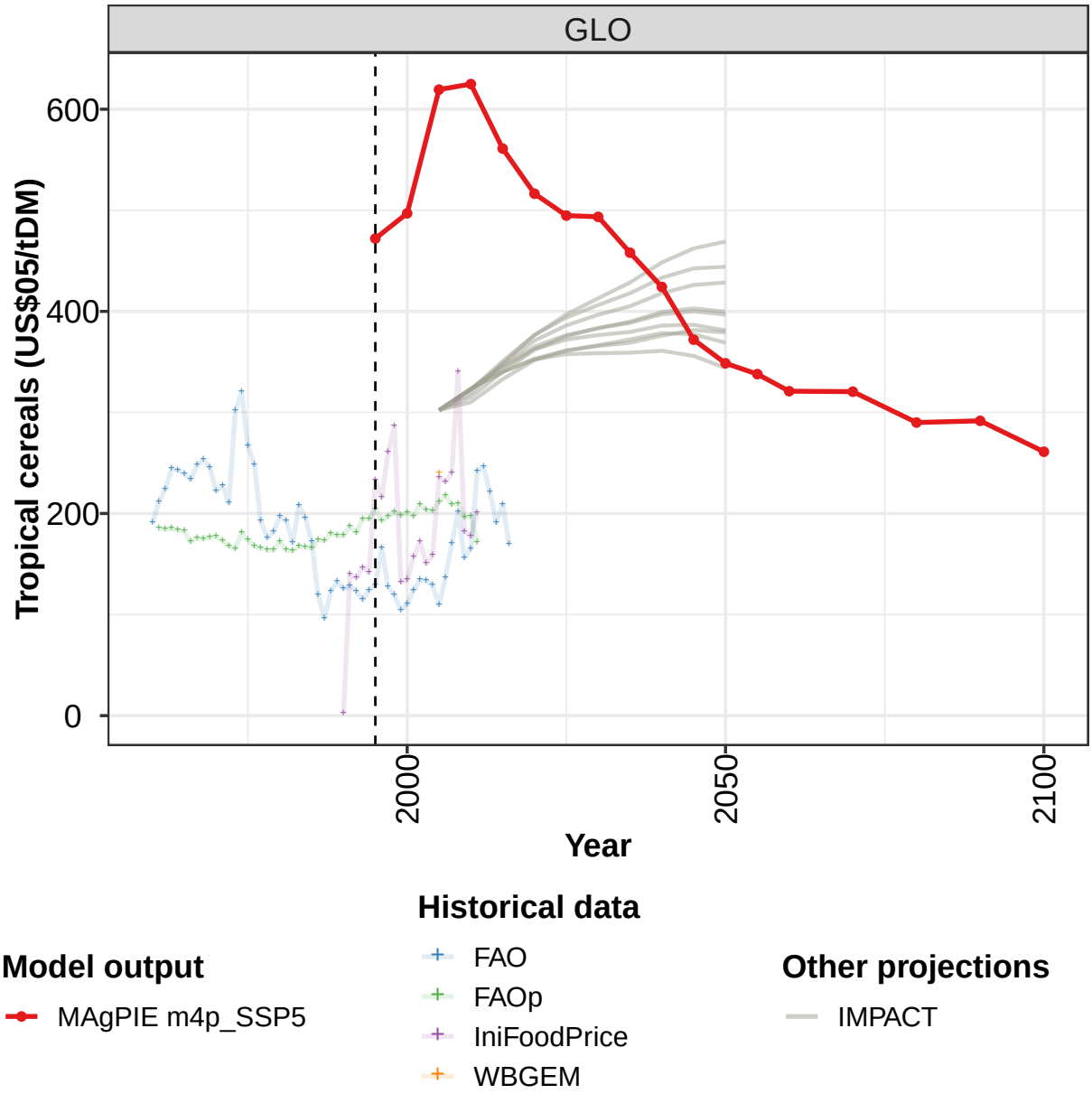
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	112	106	128	135	132	149	205	237	168	184	216
CAZ	106	124	144	129	119	121	189	288	203	185	257
CHA	129	127	137	159	179	193	225	260	298	310	346
EUR	86	82	106	114	99	122	198	211	125	168	227
IND	158	158	170	178	214	223	275	282	0	0	0
JPN	1237	1221	1274	1345	1239	1249	780	919	1123	1004	852
LAM	138	142	149	130	119	130	176	247	191	187	209
MEA	308	163	175	198	200	209	250	414	335	302	322
NEU	136	167	225	251	269	248	321	432	318	341	355
OAS	139	145	154	182	176	170	167	161	258	259	29
REF	75	58	74	96	87	101	154	185	127	128	177
SSA	45	42	45	45	41	59	79	91	66	55	59
USA	115	147	141	139	141	174	263	280	204	233	298

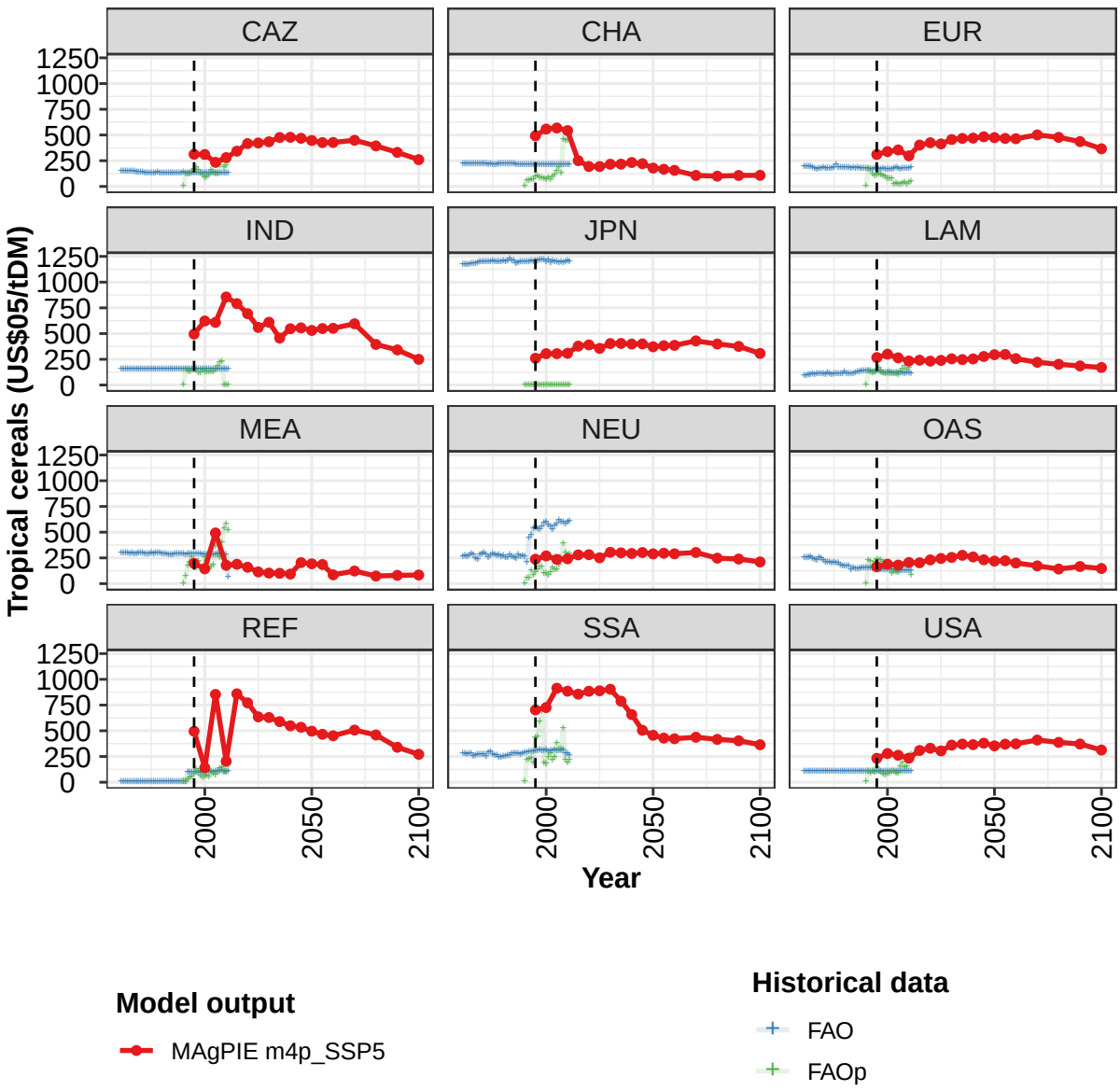
Table 1289: FAOp — Prices—Agriculture—Temperate cereals (US$05/tDM) [PART 2/3]

	2005
GLO	191
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1290: IniFoodPrice — Prices—Agriculture—Temperate cereals (US$05/tDM)

36.36 Tropical cereals





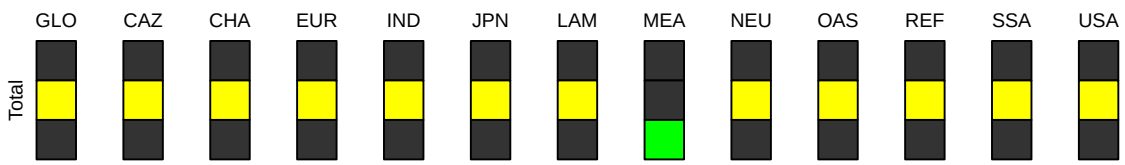


Figure 326: MAgPIE m4p_SSP5 — Prices—Agriculture—Tropical cereals (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	472	497	619	625	561	516	495	494	458	424	372
CAZ	313	311	234	280	343	416	422	434	476	478	468
CHA	492	558	568	543	251	194	193	216	217	233	221
EUR	311	338	355	298	402	425	413	456	467	470	483
IND	495	623	609	856	791	694	560	610	457	547	556
JPN	260	305	305	309	378	390	356	403	404	399	400
LAM	267	300	265	234	242	233	240	255	248	254	278
MEA	197	144	492	179	188	160	114	103	101	93	205
NEU	237	269	236	241	279	282	251	305	299	293	303
OAS	163	190	181	205	203	231	244	255	275	259	232
REF	495	141	854	204	860	772	635	629	589	548	534
SSA	703	726	914	885	856	884	889	904	788	657	505
USA	233	279	262	234	309	330	305	360	371	365	380

Table 1291: MAgPIE m4p_SSP5 — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	349	338	321	321	290	292	261
CAZ	447	427	428	449	394	331	261
CHA	179	167	157	107	100	107	108
EUR	475	467	464	501	477	436	366
IND	531	549	552	595	395	342	250
JPN	371	382	386	429	399	375	307
LAM	295	297	257	221	202	186	171
MEA	193	186	86	123	74	80	84
NEU	289	296	290	303	247	239	211
OAS	219	223	201	173	142	166	147
REF	496	466	452	507	459	340	271
SSA	456	429	423	437	417	403	365
USA	354	370	373	410	387	372	313

Table 1292: MAgPIE m4p_SSP5 — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 2/2]

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
GLO	190	212	224	244	243	239	234	248	253	246	222
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1293: WBGEM — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 1/6]

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
GLO	228	210	301	320	267	248	193	176	182	197	193
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1294: WBGEM — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 2/6]

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GLO	171	208	195	172	120	96	122	133	125	128	123
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1295: WBGEM — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 3/6]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GLO	114	124	129	166	127	119	104	110	124	134	133
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1296: WBGEM — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 4/6]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GLO	129	109	136	170	201	156	165	241	246	221	191
CAZ											
CHA											
EUR											
IND											
JPN											
LAM											
MEA											
NEU											
OAS											
REF											
SSA											
USA											

Table 1297: WBGEM — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 5/6]

	2015	2016
GLO	209	170
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

Table 1298: WBGEM — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 6/6]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	185	184	185	183	182	172	175	175	176	178	173
CAZ	146	148	147	145	145	143	141	137	136	135	132
CHA	217	214	215	215	214	216	216	216	216	217	216
EUR	194	194	187	193	181	170	166	171	175	180	174
IND	153	154	153	153	153	153	153	154	153	151	152
JPN	1171	1169	1172	1172	1175	1181	1177	1186	1198	1198	1198
LAM	89	89	94	96	105	101	110	111	108	103	101
MEA	291	294	295	293	290	293	287	291	293	293	294
NEU	257	272	259	270	285	279	245	234	281	285	292
OAS	247	248	251	258	241	233	221	251	239	220	208
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	275	278	271	274	275	252	258	264	267	269	266
USA	104	104	104	104	104	104	104	104	104	104	104

Table 1299: FAO — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	167	165	181	174	168	166	163	164	172	164	163
CAZ	128	129	130	128	128	128	132	130	127	128	129
CHA	214	213	214	212	210	213	213	213	213	214	215
EUR	174	174	174	184	208	178	184	181	180	177	177
IND	152	152	154	152	153	154	153	154	153	153	154
JPN	1199	1198	1199	1200	1200	1198	1198	1198	1201	1199	1201
LAM	112	103	100	108	108	105	106	109	122	110	106
MEA	285	285	288	295	291	291	291	294	289	288	287
NEU	281	249	272	287	282	267	274	256	270	254	253
OAS	207	209	198	201	198	196	180	171	166	171	167
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	246	284	295	269	257	260	239	242	244	249	257
USA	104	104	104	104	104	104	104	104	104	104	104

Table 1300: FAO — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	168	167	166	174	173	180	178	178	187	181	195
CAZ	130	128	127	128	129	130	127	132	129	129	129
CHA	214	214	215	212	211	210	212	211	209	209	210
EUR	176	178	174	177	176	174	174	169	169	164	165
IND	153	153	154	153	155	152	153	153	153	153	154
JPN	1225	1201	1202	1176	1190	1199	1196	1198	1193	1195	1201
LAM	107	110	115	123	129	130	138	134	133	130	122
MEA	278	278	279	282	287	285	290	286	277	282	282
NEU	275	255	253	239	274	261	265	256	202	439	467
OAS	136	150	140	139	143	152	153	154	151	148	144
REF	0	0	0	0	0	0	0	0	0	95	93
SSA	255	279	272	278	279	271	280	282	281	293	296
USA	104	104	104	104	104	104	104	104	104	104	104

Table 1301: FAO — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	195	204	193	197	201	197	201	197	209	204	202
CAZ	130	130	127	128	129	128	129	129	129	128	128
CHA	207	208	209	208	211	211	212	211	210	210	212
EUR	172	169	167	166	169	168	166	166	165	169	177
IND	152	153	153	151	152	153	151	151	153	150	151
JPN	1194	1205	1200	1212	1212	1212	1198	1212	1182	1201	1198
LAM	129	134	131	125	118	118	118	121	119	116	116
MEA	289	286	282	285	283	282	281	281	280	278	275
NEU	529	542	529	523	548	587	599	570	551	526	558
OAS	156	152	150	135	136	129	135	131	128	129	126
REF	93	91	92	91	88	94	98	95	99	95	95
SSA	291	302	299	307	304	304	311	295	301	303	307
USA	104	104	104	104	104	105	104	105	104	105	105

Table 1302: FAO — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	211	218	209	210	196	197	171
CAZ	126	127	129	126	127	128	128
CHA	211	211	213	211	212	210	212
EUR	169	167	168	176	172	176	181
IND	151	151	150	151	152	150	150
JPN	1192	1184	1194	1182	1191	1207	1191
LAM	112	114	112	109	112	112	106
MEA	280	283	283	280	275	276	60
NEU	577	610	592	592	575	593	607
OAS	120	124	128	123	124	126	122
REF	100	100	105	109	93	95	102
SSA	303	304	303	308	273	274	260
USA	105	105	105	105	104	105	105

Table 1303: FAO — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	2	139	136	146	141	233	216	260	286	132	134
CAZ	0	119	118	121	139	165	181	155	125	113	83
CHA	0	56	57	66	64	92	98	77	78	70	67
EUR	0	167	159	119	101	104	117	110	97	88	70
IND	0	155	134	129	141	147	143	115	117	146	122
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	137	128	112	123	136	162	126	115	104	112
MEA	0	66	172	204	251	178	147	210	153	137	249
NEU	0	49	53	121	79	106	130	156	155	100	96
OAS	0	221	213	165	205	229	222	219	203	171	193
REF	0	0	21	37	47	80	120	101	60	43	60
SSA	7	210	223	230	186	426	441	586	682	184	173
USA	0	100	83	102	94	140	103	97	73	71	86

Table 1304: FAOp — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 1/3]

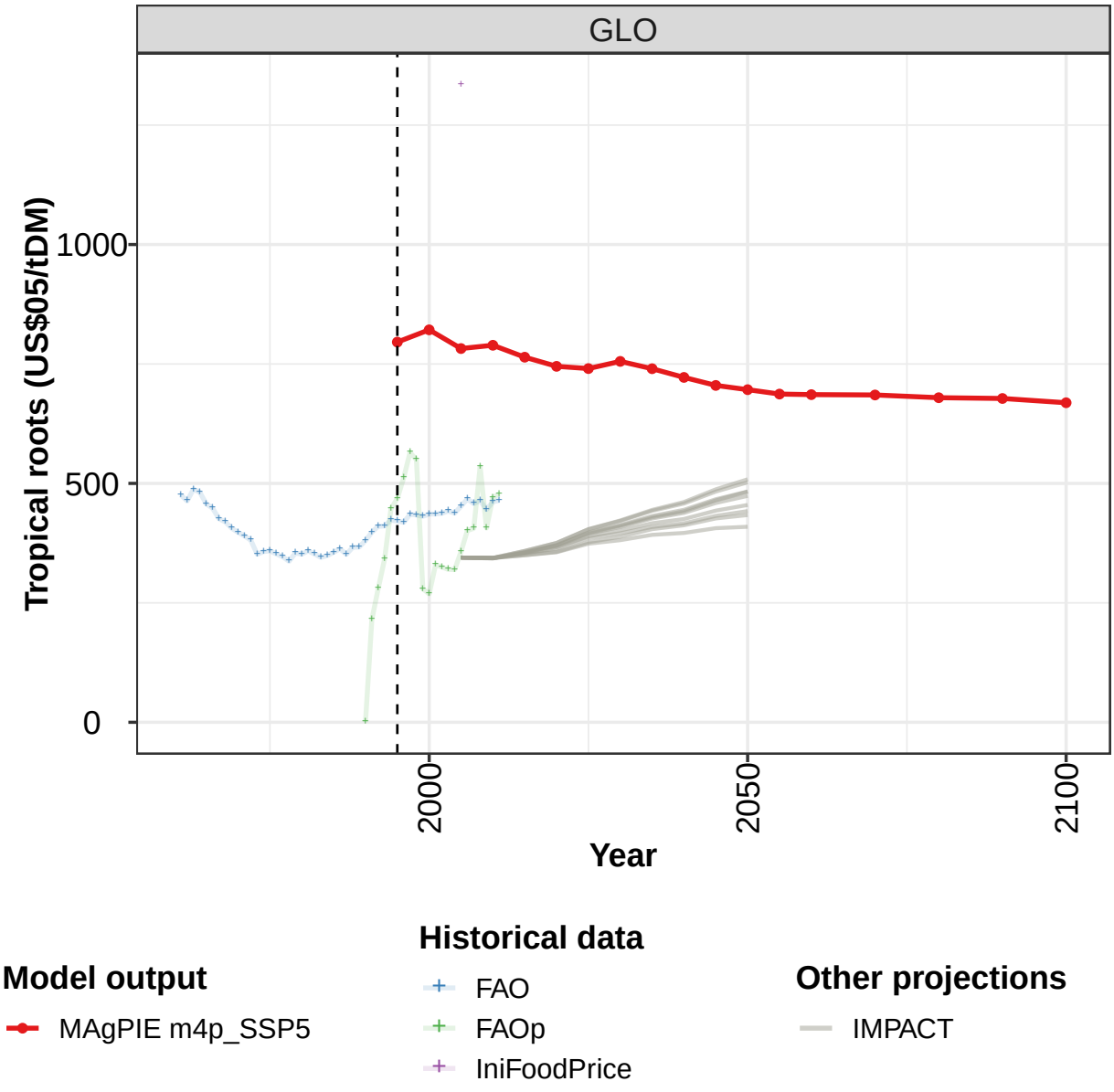
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	157	172	150	158	235	231	240	340	182	177	201
CAZ	89	110	157	138	119	120	197	244	182	200	244
CHA	84	63	90	112	147	180	126	458	447	446	498
EUR	73	76	22	24	20	17	32	33	22	34	44
IND	123	129	128	128	147	178	213	222	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	107	110	107	106	95	123	154	175	142	159	223
MEA	217	146	157	176	357	273	248	395	530	574	514
NEU	81	108	152	134	134	178	249	389	293	266	284
OAS	172	99	114	113	108	139	168	175	184	202	82
REF	59	52	100	86	64	91	134	138	103	105	168
SSA	241	273	211	240	376	320	323	522	210	189	209
USA	87	105	108	81	85	149	183	143	144	225	269

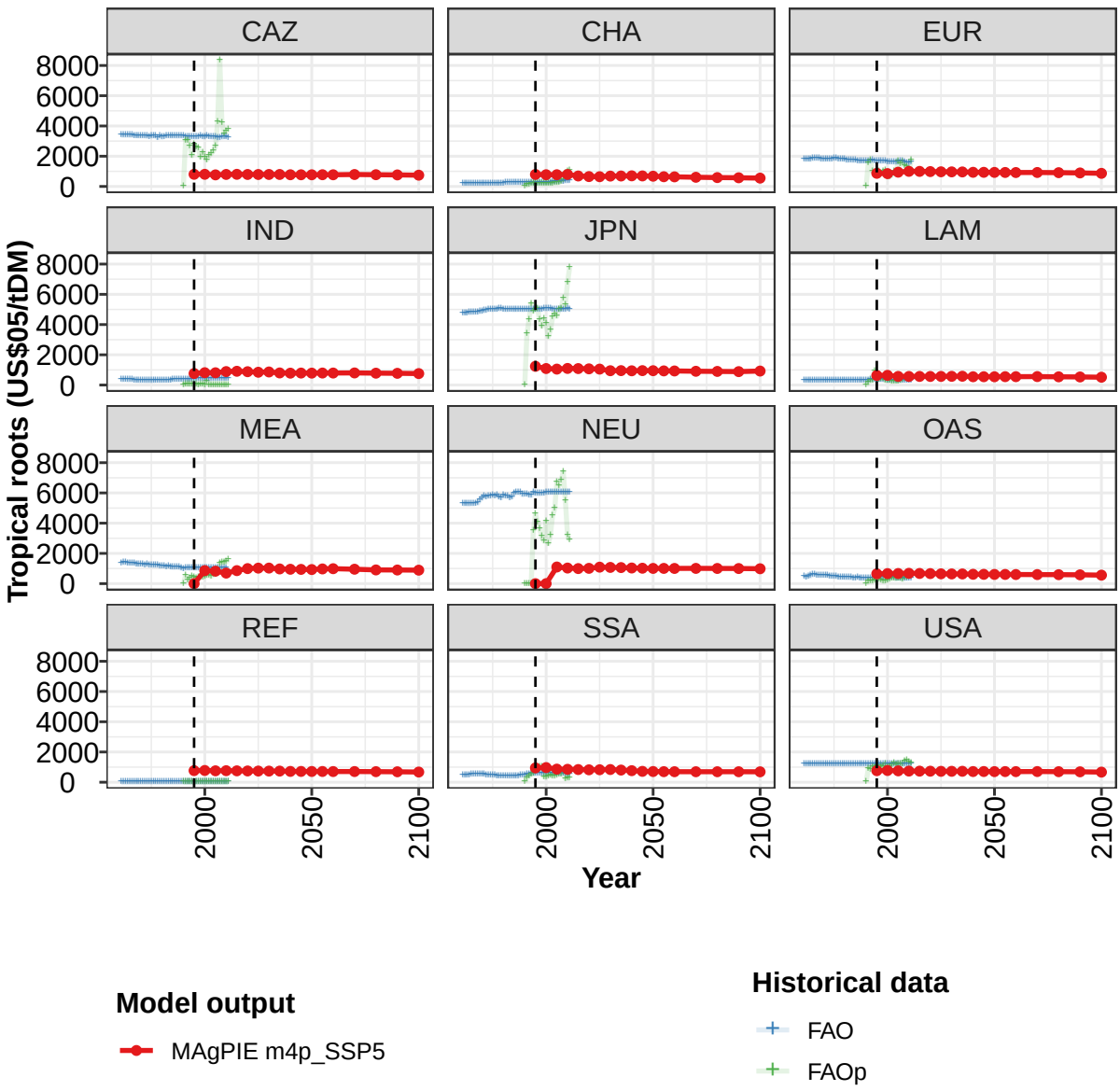
Table 1305: FAOp — Prices—Agriculture—Tropical cereals (US$05/tDM) [PART 2/3]

	2005
GLO	240
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1306: IniFoodPrice — Prices—Agriculture—Tropical cereals (US$05/tDM)

36.37 Tropical roots





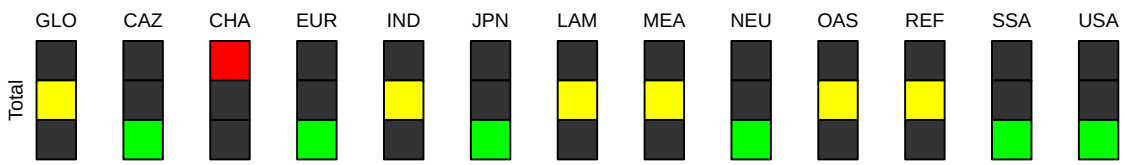


Figure 327: MAgPIE m4p_SSP5 — Prices—Agriculture—Tropical roots (US$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	796	821	782	789	764	745	740	755	740	722	705
CAZ	805	804	766	794	803	793	791	793	792	775	772
CHA	795	775	776	794	693	653	646	686	692	703	697
EUR	868	850	944	999	996	983	969	964	960	937	934
IND	765	817	811	891	912	883	846	866	801	788	793
JPN	1239	1093	1055	1099	1090	1072	1055	947	954	943	953
LAM	636	643	571	568	570	569	571	577	582	549	551
MEA	0	862	825	697	861	994	1027	1029	972	952	942
NEU	0	2	1100	1031	996	1012	1090	1073	1062	1034	1020
OAS	652	665	670	683	674	664	649	642	640	619	616
REF	768	779	757	763	753	747	740	737	738	716	714
SSA	948	970	867	856	840	822	827	840	805	766	720
USA	764	777	752	738	734	731	720	722	724	706	708

Table 1307: MAgPIE m4p_SSP5 — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	696	687	686	685	679	678	669
CAZ	772	776	772	790	777	763	745
CHA	678	643	636	607	587	575	551
EUR	931	926	920	923	911	894	867
IND	789	795	795	801	785	776	758
JPN	949	936	932	911	901	888	925
LAM	550	554	554	559	544	536	518
MEA	932	973	988	953	906	902	892
NEU	1008	1008	1007	1010	1005	1000	986
OAS	611	609	603	599	593	582	562
REF	711	711	708	707	699	691	673
SSA	709	699	696	694	695	694	690
USA	702	705	702	707	697	690	670

Table 1308: MAgPIE m4p_SSP5 — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	476	463	488	481	457	448	426	419	406	398	390
CAZ	3390	3384	3384	3385	3374	3379	3358	3356	3343	3339	3353
CHA	185	185	188	189	187	183	184	188	188	188	192
EUR	1792	1794	1795	1787	1820	1835	1842	1821	1786	1788	1795
IND	334	349	359	329	337	332	318	301	300	288	300
JPN	4760	4766	4769	4782	4791	4800	4816	4819	4848	4857	4910
LAM	306	303	298	295	295	300	299	295	298	304	310
MEA	1344	1386	1366	1359	1357	1347	1352	1284	1256	1279	1265
NEU	5281	5278	5270	5263	5285	5282	5314	5315	5547	5637	5779
OAS	438	437	466	502	580	595	550	545	545	545	537
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	451	452	467	479	503	520	521	521	539	533	507
USA	1194	1189	1191	1197	1190	1194	1192	1192	1190	1190	1193

Table 1309: FAO — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	381	352	357	359	352	346	337	354	352	359	352
CAZ	3335	3305	3298	3316	3336	3342	3221	3316	3252	3301	3339
CHA	196	189	194	195	199	199	200	208	213	223	223
EUR	1817	1784	1807	1827	1842	1800	1803	1801	1773	1708	1742
IND	285	281	283	286	290	302	316	306	312	314	315
JPN	4930	4990	5003	4989	5004	4992	5019	5026	5008	4986	4986
LAM	312	320	320	317	315	314	317	318	320	316	311
MEA	1231	1276	1203	1224	1189	1189	1191	1146	1170	1164	1113
NEU	5728	5782	5766	5810	5800	5840	5702	5675	5820	5786	5750
OAS	528	498	473	485	452	436	396	425	396	395	386
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	459	458	449	452	424	414	409	423	423	410	402
USA	1192	1193	1192	1190	1187	1192	1189	1186	1189	1187	1184

Table 1310: FAO — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	345	349	356	363	352	366	367	380	398	410	411
CAZ	3346	3337	3335	3336	3327	3329	3340	3317	3280	3269	3279
CHA	222	226	230	237	231	235	230	230	236	242	239
EUR	1742	1709	1738	1690	1665	1683	1686	1671	1691	1676	1701
IND	322	325	330	347	350	344	358	365	367	369	387
JPN	5004	5005	4980	4987	4992	5003	4984	4994	5006	4981	4972
LAM	317	321	314	311	316	319	313	317	325	333	336
MEA	1138	1100	1068	1065	1111	1057	1031	989	1020	1046	1025
NEU	5682	5719	5986	6004	6017	6014	5869	5917	5926	5842	5817
OAS	385	372	373	400	370	357	345	362	365	361	361
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	385	392	390	393	393	437	451	478	518	543	562
USA	1185	1191	1188	1193	1198	1203	1200	1194	1199	1199	1199

Table 1311: FAO — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	423	421	418	435	434	431	436	436	437	442	438
CAZ	3257	3247	3254	3269	3304	3276	3280	3319	3300	3266	3247
CHA	246	245	235	252	248	246	258	264	268	277	277
EUR	1693	1688	1686	1642	1669	1663	1618	1621	1626	1605	1581
IND	385	383	390	407	406	422	408	400	397	413	420
JPN	5005	5009	4997	4993	4998	5034	5020	5018	5018	5005	4991
LAM	331	331	349	338	338	332	325	323	316	316	310
MEA	1046	1036	1021	1027	1032	1033	1021	1006	1042	1007	1035
NEU	6021	5954	5945	5938	5953	5981	6011	6031	6039	6040	6042
OAS	376	401	382	384	404	409	407	402	410	382	341
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	570	566	569	571	569	573	570	560	555	566	563
USA	1196	1198	1195	1195	1209	1217	1217	1213	1207	1200	1193

Table 1312: FAO — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	452	468	458	464	445	462	464
CAZ	3258	3200	3222	3248	3280	3284	3236
CHA	285	321	341	337	351	363	365
EUR	1599	1677	1687	1589	1551	1568	1577
IND	414	419	425	425	422	441	438
JPN	4992	4987	4991	4994	4986	5019	5006
LAM	308	312	307	313	316	316	319
MEA	1010	1024	1003	1026	1016	1040	677
NEU	6042	6038	6042	6041	6023	6024	6024
OAS	373	358	358	346	333	355	370
REF	0	0	0	0	0	0	0
SSA	576	582	556	571	529	542	544
USA	1197	1192	1198	1190	1189	1184	1182

Table 1313: FAO — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 5/5]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	0	215	280	342	447	469	512	565	550	279	269
CAZ	0	3026	3015	2656	2020	2783	2575	2514	1941	2237	1897
CHA	0	107	143	189	172	271	196	215	186	185	175
EUR	0	1528	1715	984	892	985	959	860	965	1058	617
IND	0	29	24	18	19	21	25	16	17	17	14
JPN	0	3366	4301	5377	4889	4994	5058	4288	3881	4341	4061
LAM	0	178	281	293	882	415	366	395	403	288	285
MEA	0	518	208	338	461	413	341	382	429	412	480
NEU	0	0	0	0	3495	4587	4067	3590	3135	2799	4108
OAS	0	159	164	162	196	267	252	233	151	179	209
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	1	296	391	528	553	717	933	1015	1021	358	325
USA	0	883	814	998	928	1051	953	1042	1017	1167	1024

Table 1314: FAOp — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 1/3]

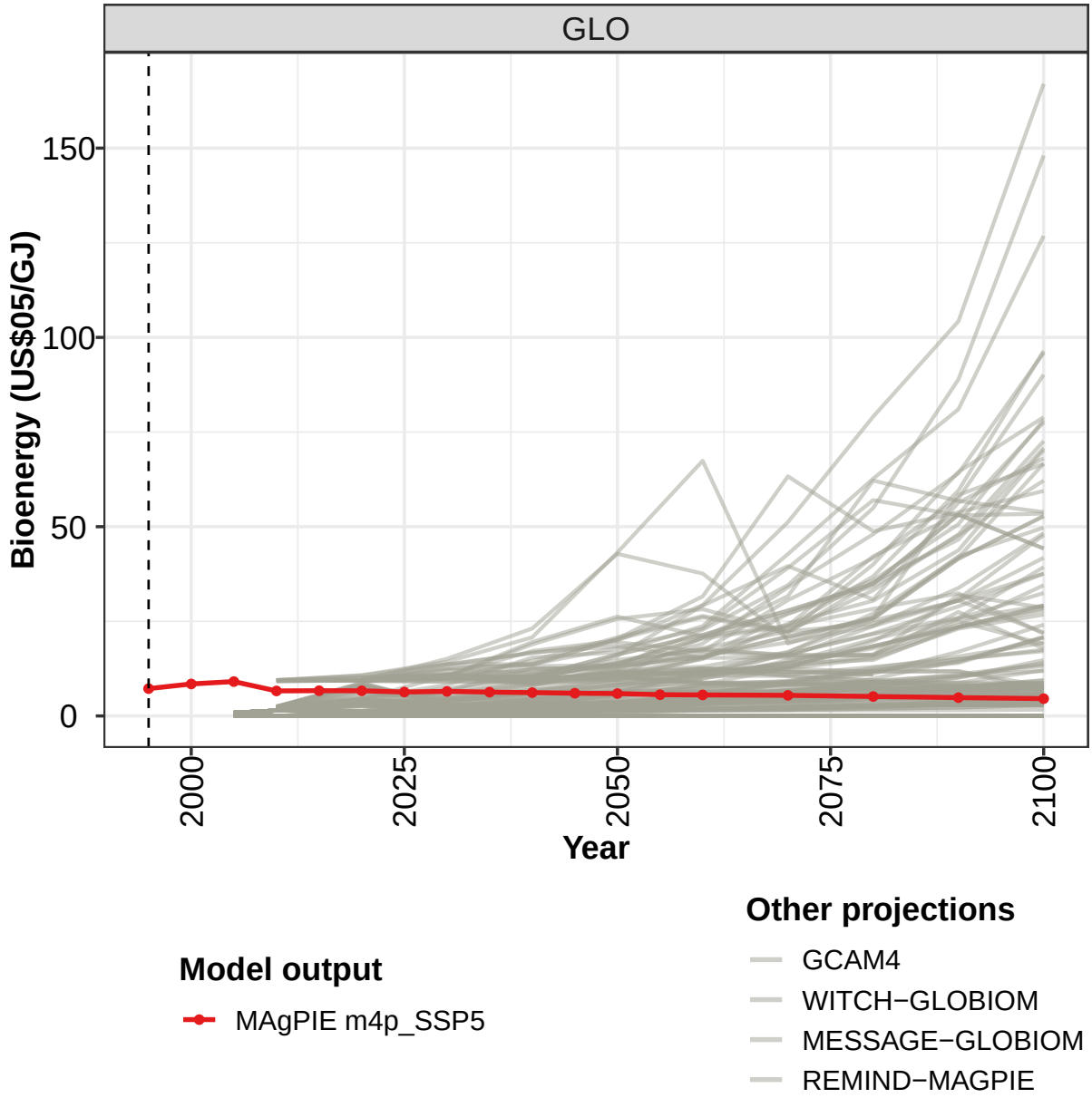
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	329	325	320	320	357	401	406	534	407	471	478
CAZ	1753	2037	2170	2333	2637	4246	8334	4220	3446	3653	3737
CHA	209	189	197	223	227	266	328	434	836	1008	1076
EUR	631	734	970	863	1693	1460	1587	1369	1314	997	1717
IND	256	0	0	0	0	0	0	0	0	0	0
JPN	3184	3624	4476	4661	4528	5006	5073	5704	5324	6787	7787
LAM	270	217	236	244	262	285	333	420	438	491	545
MEA	517	555	475	564	599	906	1311	1387	1413	1433	1581
NEU	2642	3214	4502	4943	6711	6437	6833	7382	5483	3174	2870
OAS	297	338	346	313	365	328	263	417	393	512	467
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	409	433	392	382	442	510	502	664	225	257	251
USA	1024	1118	1267	1160	1199	1204	1210	1392	1439	1309	1241

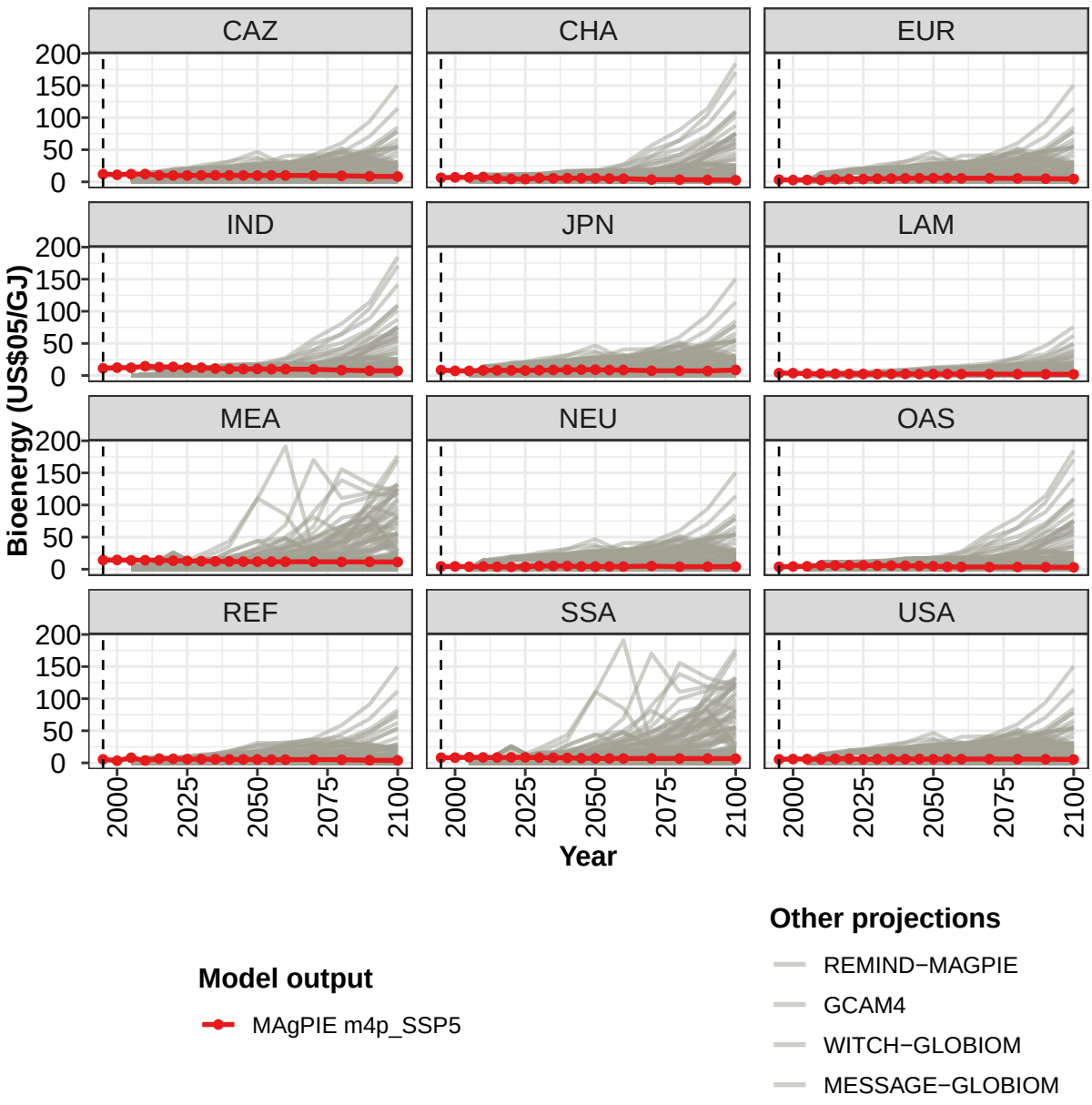
Table 1315: FAOp — Prices—Agriculture—Tropical roots (US$05/tDM) [PART 2/3]

	2005
GLO	1334
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

Table 1316: IniFoodPrice — Prices—Agriculture—Tropical roots (US$05/tDM)

37 Bioenergy





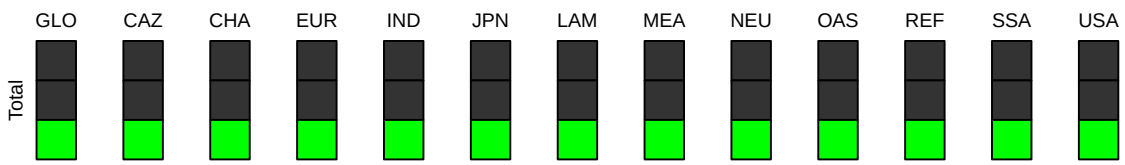


Figure 328: MAgPIE m4p_SSP5 — Prices—Bioenergy (US$05/GJ)

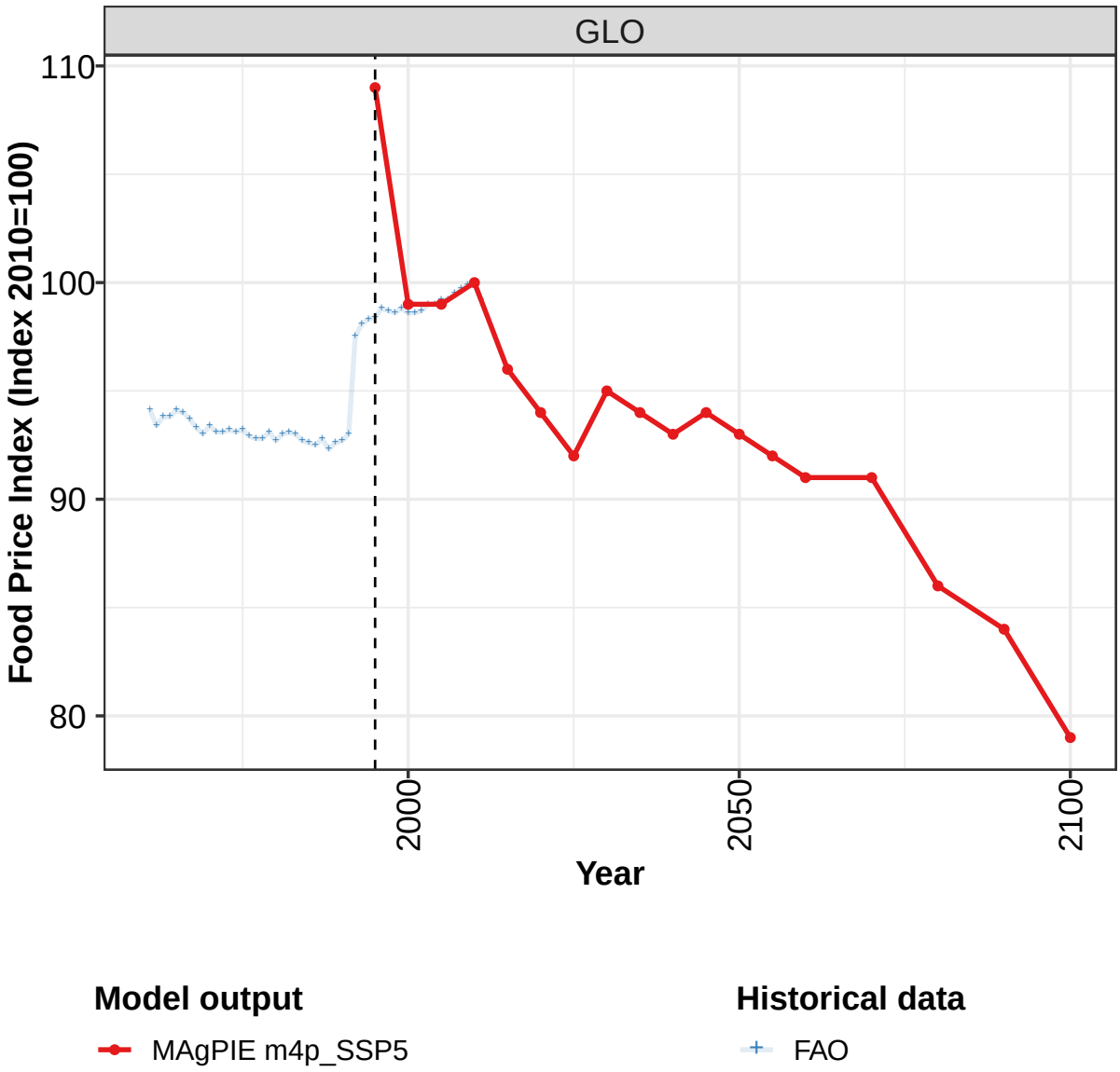
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.2	8.5	9.1	6.6	6.7	6.6	6.3	6.5	6.3	6.2	6.0
CAZ	12.0	10.9	12.0	12.2	10.0	9.8	9.9	10.1	10.1	10.1	9.9
CHA	6.3	7.0	7.0	7.5	5.1	4.5	4.4	5.9	5.5	5.8	5.7
EUR	3.3	2.9	3.0	2.9	4.1	4.3	4.5	4.9	5.1	5.4	5.7
IND	11.3	12.2	12.1	14.4	13.1	13.5	12.3	12.2	10.9	10.1	10.1
JPN	8.5	7.3	7.2	8.0	8.1	8.0	7.9	8.3	8.7	8.9	9.1
LAM	3.7	3.8	3.0	2.9	2.8	2.6	2.5	2.4	2.4	2.5	2.3
MEA	14.2	14.5	13.9	14.0	13.8	13.2	13.0	12.5	12.2	12.0	11.8
NEU	4.4	4.3	3.9	4.2	3.7	3.5	3.7	4.9	5.0	4.9	4.2
OAS	3.7	4.2	4.5	6.0	5.8	6.0	6.0	5.8	5.5	5.4	5.0
REF	5.6	3.5	8.0	3.7	6.7	6.4	5.9	5.9	5.6	5.5	5.5
SSA	8.1	8.2	8.9	8.5	8.4	8.7	8.6	8.3	8.1	7.8	7.3
USA	5.6	6.0	6.0	5.8	6.4	6.6	5.6	5.9	5.9	5.9	6.0

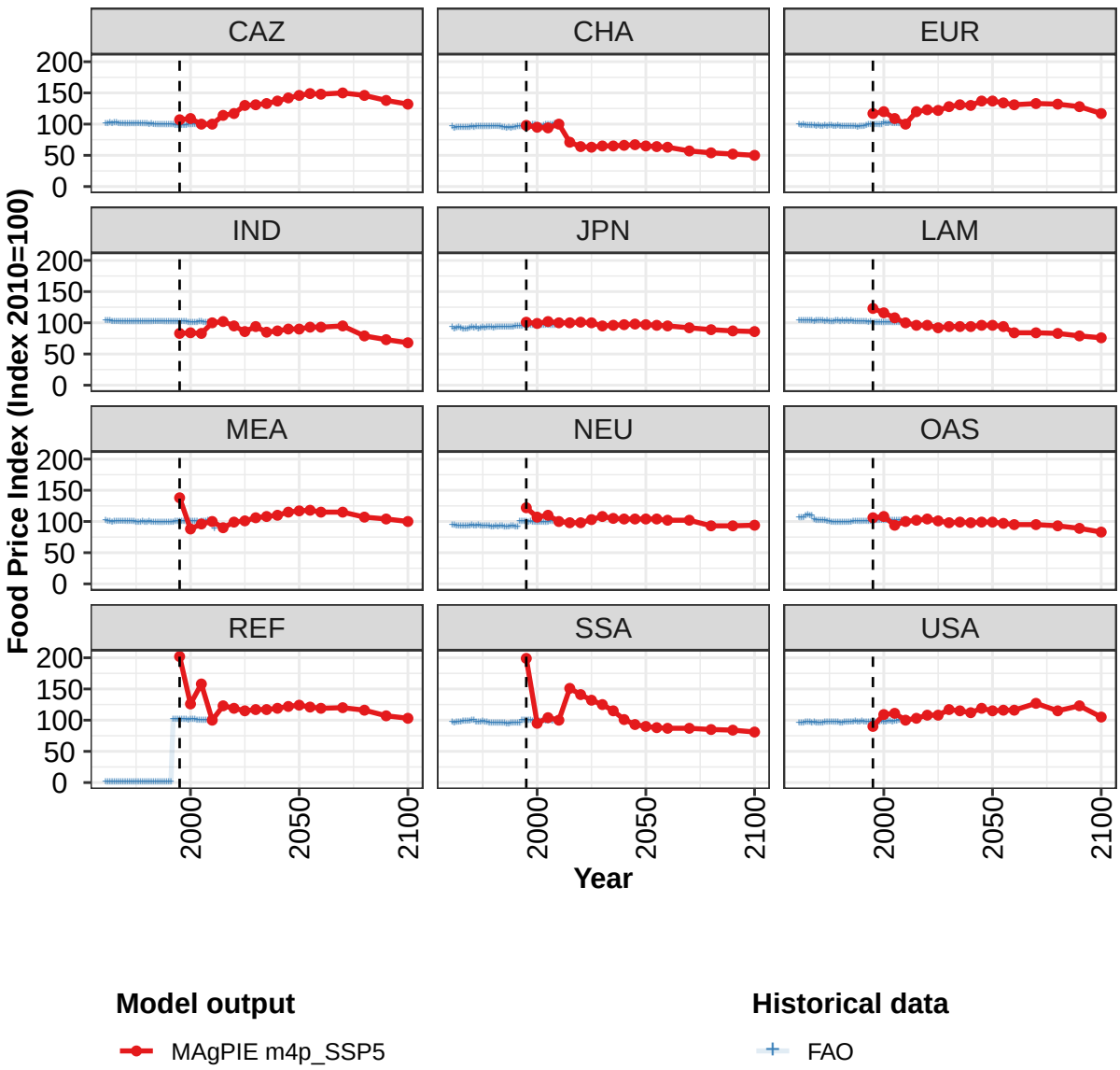
Table 1317: MAgPIE m4p_SSP5 — Prices—Bioenergy (US$05/GJ) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5.9	5.6	5.6	5.4	5.1	4.8	4.6
CAZ	9.8	10.0	9.9	9.9	9.4	8.6	8.2
CHA	5.6	5.2	5.1	3.5	3.4	2.9	2.6
EUR	5.9	5.7	5.5	5.6	5.4	5.0	4.6
IND	10.2	9.9	9.9	9.7	8.4	7.4	7.3
JPN	9.1	8.6	8.5	7.4	7.3	7.1	8.7
LAM	2.3	2.4	2.2	2.1	2.1	2.0	1.9
MEA	11.7	11.7	11.6	11.6	11.4	11.4	11.3
NEU	4.1	4.2	4.1	4.9	3.8	3.9	4.0
OAS	4.7	3.6	3.5	3.3	3.4	3.2	2.9
REF	5.4	5.2	5.1	5.2	5.0	4.1	3.8
SSA	7.0	6.9	6.8	6.9	6.8	6.7	6.6
USA	5.8	5.9	5.9	6.0	5.9	5.8	5.4

Table 1318: MAgPIE m4p_SSP5 — Prices—Bioenergy (US$05/GJ) [PART 2/2]

38 Food Price Index





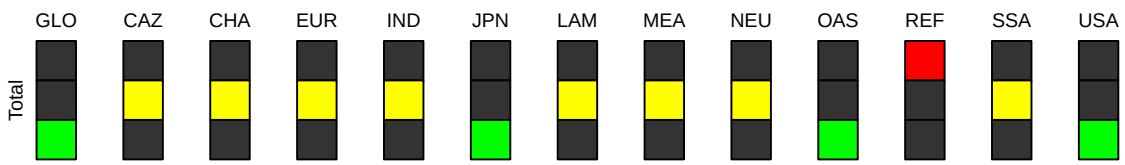


Figure 329: MAgPIE m4p_SSP5 — Prices—Food Price Index (Index 2010=100)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	109	99	99	100	96	94	92	95	94	93	94
CAZ	107	109	100	100	114	117	130	131	133	137	142
CHA	98	95	94	100	71	64	63	65	65	66	67
EUR	117	120	109	100	120	123	122	128	131	130	137
IND	83	84	83	100	102	95	86	94	85	87	90
JPN	101	99	102	100	100	101	100	95	96	97	98
LAM	123	116	108	100	96	96	92	94	94	94	96
MEA	138	88	96	100	90	99	101	106	108	110	115
NEU	122	107	110	100	98	98	103	108	105	104	104
OAS	106	108	94	100	102	104	101	98	99	98	99
REF	202	126	158	100	123	119	115	117	117	119	122
SSA	199	95	104	100	151	141	132	125	115	101	93
USA	90	109	111	100	103	108	108	117	115	112	119

Table 1319: MAgPIE m4p_SSP5 — Prices—Food Price Index (Index 2010=100) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	93	92	91	91	86	84	79
CAZ	146	149	148	150	146	138	132
CHA	65	64	63	57	54	52	50
EUR	137	134	131	133	132	128	117
IND	90	93	93	95	79	73	68
JPN	97	96	95	92	89	87	86
LAM	96	94	84	84	83	79	76
MEA	117	118	115	115	107	104	100
NEU	104	104	102	102	93	93	94
OAS	99	97	95	95	93	89	83
REF	124	121	119	120	116	107	103
SSA	90	88	87	87	85	84	81
USA	115	116	116	127	115	123	105

Table 1320: MAgPIE m4p_SSP5 — Prices—Food Price Index (Index 2010=100) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	94	93	94	94	94	94	94	93	93	93	93
CAZ	101	100	101	101	101	102	101	100	100	100	100
CHA	95	93	94	94	94	94	94	94	94	95	94
EUR	99	98	98	97	98	97	97	97	96	97	96
IND	103	103	103	102	102	102	102	101	101	101	101
JPN	92	90	91	92	91	89	90	90	91	92	91
LAM	104	103	103	102	103	102	102	102	102	102	103
MEA	100	100	99	99	99	100	100	100	100	100	99
NEU	93	93	92	93	92	92	92	93	92	94	92
OAS	105	105	106	108	110	109	109	102	101	101	102
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	96	96	96	97	97	98	98	98	98	99	99
USA	95	95	95	96	96	96	95	96	95	95	95

Table 1321: FAO — Prices—Food Price Index (Index 2010=100) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	93	93	93	93	93	93	93	93	93	93	93
CAZ	100	100	100	100	101	100	100	100	100	99	100
CHA	95	95	95	95	95	95	95	96	96	96	96
EUR	96	97	96	97	97	96	96	97	96	96	96
IND	101	101	101	101	101	101	101	101	101	101	101
JPN	92	90	91	92	91	92	92	92	91	92	93
LAM	102	102	102	102	101	101	102	102	101	102	102
MEA	100	100	99	98	98	98	99	98	98	99	98
NEU	92	93	93	92	92	93	92	91	91	92	91
OAS	101	101	100	99	98	98	98	98	98	98	98
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	96	97	96	98	96	96	95	94	95	95	94
USA	95	96	96	97	97	96	96	96	95	95	97

Table 1322: FAO — Prices—Food Price Index (Index 2010=100) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	93	93	93	92	93	92	93	93	93	98	98
CAZ	99	99	98	98	98	98	98	98	98	98	98
CHA	95	94	94	93	94	93	94	94	95	95	96
EUR	96	96	96	96	96	95	96	96	96	98	99
IND	102	102	102	102	102	101	101	101	101	101	101
JPN	93	93	93	93	93	93	93	94	94	94	94
LAM	102	102	102	102	101	101	101	101	101	101	100
MEA	99	98	98	98	97	98	99	98	98	98	99
NEU	92	92	90	91	91	92	93	91	91	99	99
OAS	98	98	99	100	100	100	99	99	100	100	99
REF	0	0	0	0	0	0	0	0	0	100	100
SSA	96	94	94	94	93	95	95	95	94	94	99
USA	96	97	97	97	98	97	97	98	97	97	96

Table 1323: FAO — Prices—Food Price Index (Index 2010=100) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	98	98	99	99	99	99	99	99	99	99	99
CAZ	98	98	98	98	98	99	98	99	99	98	98
CHA	96	97	98	97	98	98	96	96	96	97	98
EUR	99	98	99	99	98	98	101	101	101	101	101
IND	101	101	102	102	101	100	100	100	100	100	101
JPN	95	95	95	95	95	95	95	95	95	95	96
LAM	101	100	100	100	100	100	100	100	100	100	100
MEA	99	99	100	100	99	100	100	100	100	100	99
NEU	99	100	98	99	98	98	98	99	98	98	98
OAS	100	101	100	101	101	102	101	101	102	101	101
REF	101	100	101	100	100	100	100	100	100	99	99
SSA	99	99	99	99	98	99	99	98	98	99	98
USA	97	96	97	97	96	98	97	97	98	98	97

Table 1324: FAO — Prices—Food Price Index (Index 2010=100) [PART 4/5]

	2005	2006	2007	2008	2009	2010	2011
GLO	99	99	100	100	100	100	99
CAZ	99	99	99	99	100	100	101
CHA	98	98	99	100	100	100	100
EUR	101	101	100	100	100	100	100
IND	101	100	100	100	100	100	100
JPN	96	95	95	95	100	100	99
LAM	100	100	100	100	100	100	100
MEA	100	100	100	101	101	100	88
NEU	99	100	99	100	99	100	99
OAS	101	101	101	101	100	100	100
REF	99	99	99	99	100	100	99
SSA	98	99	98	99	99	98	98
USA	98	98	100	99	99	100	99

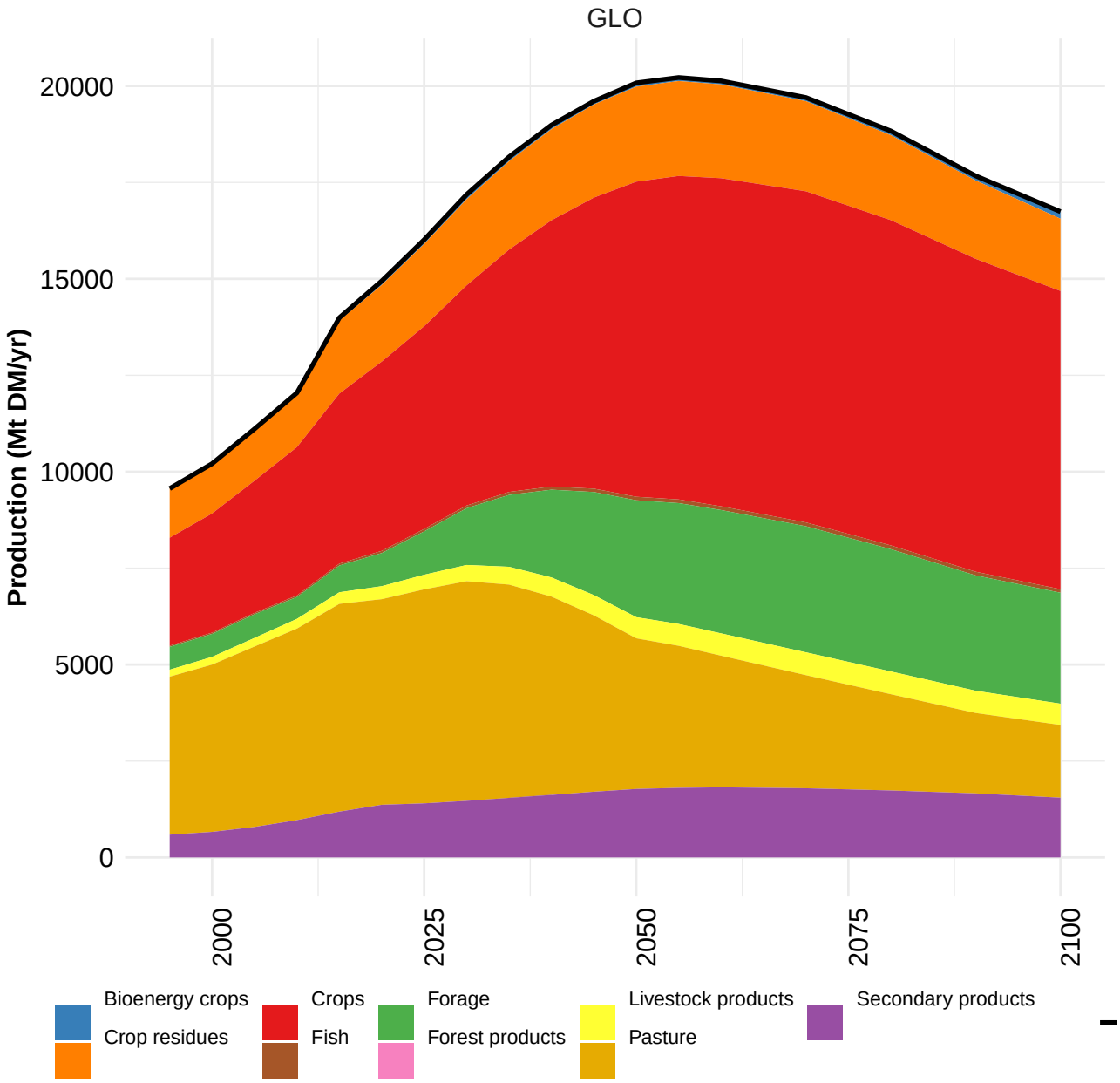
Table 1325: FAO — Prices—Food Price Index (Index 2010=100) [PART 5/5]

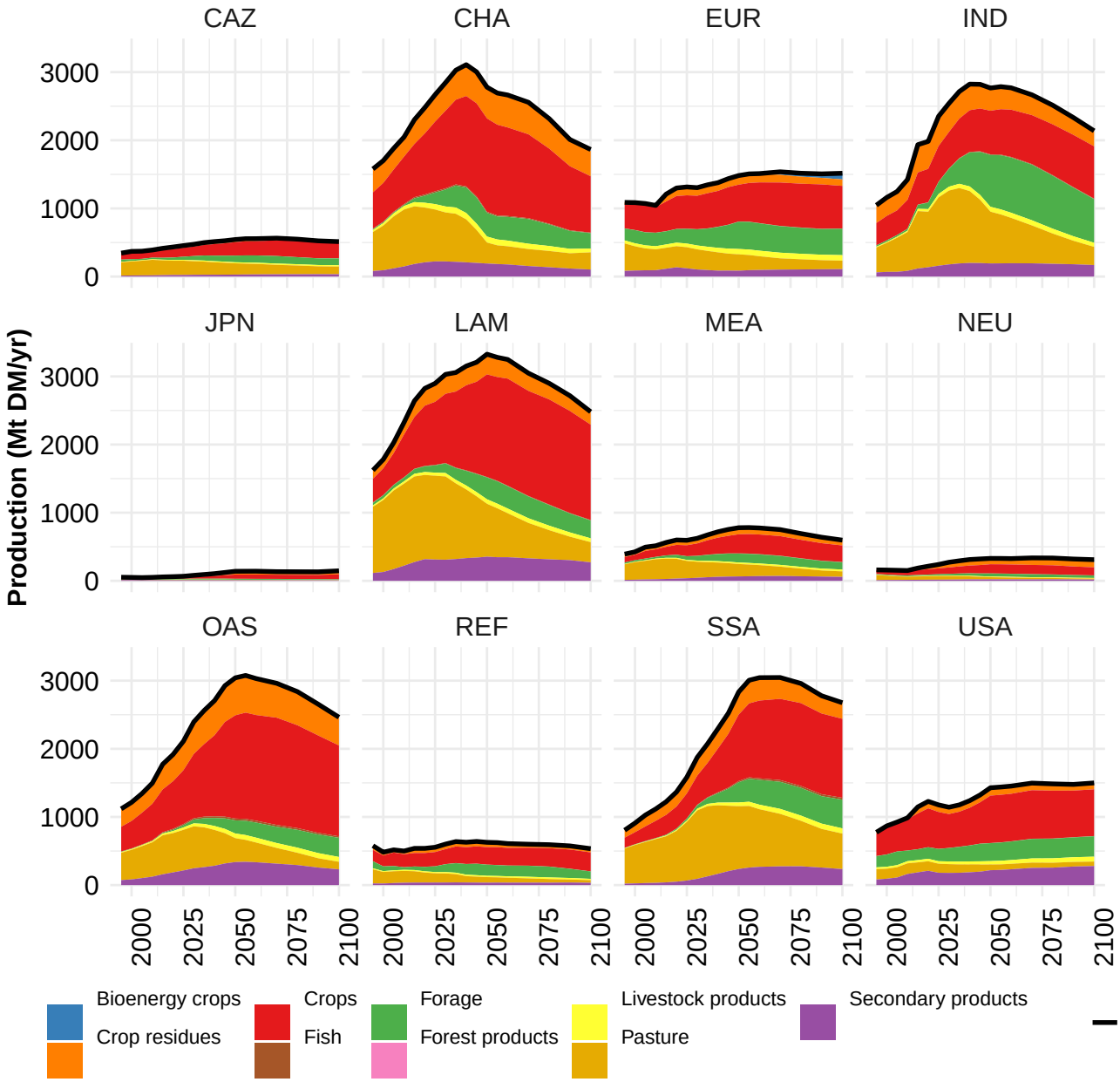
39 GHG Emission

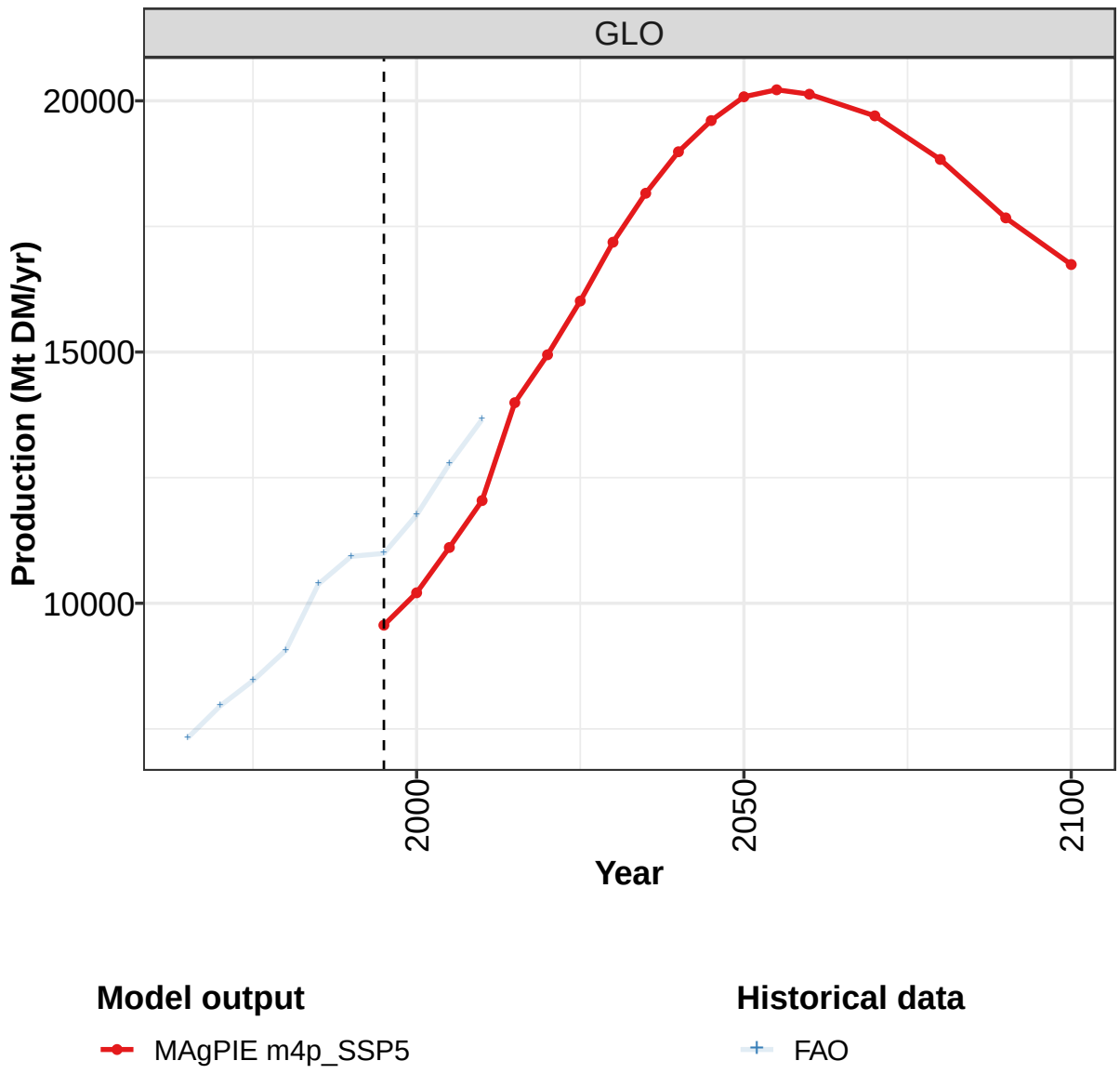
40 Land

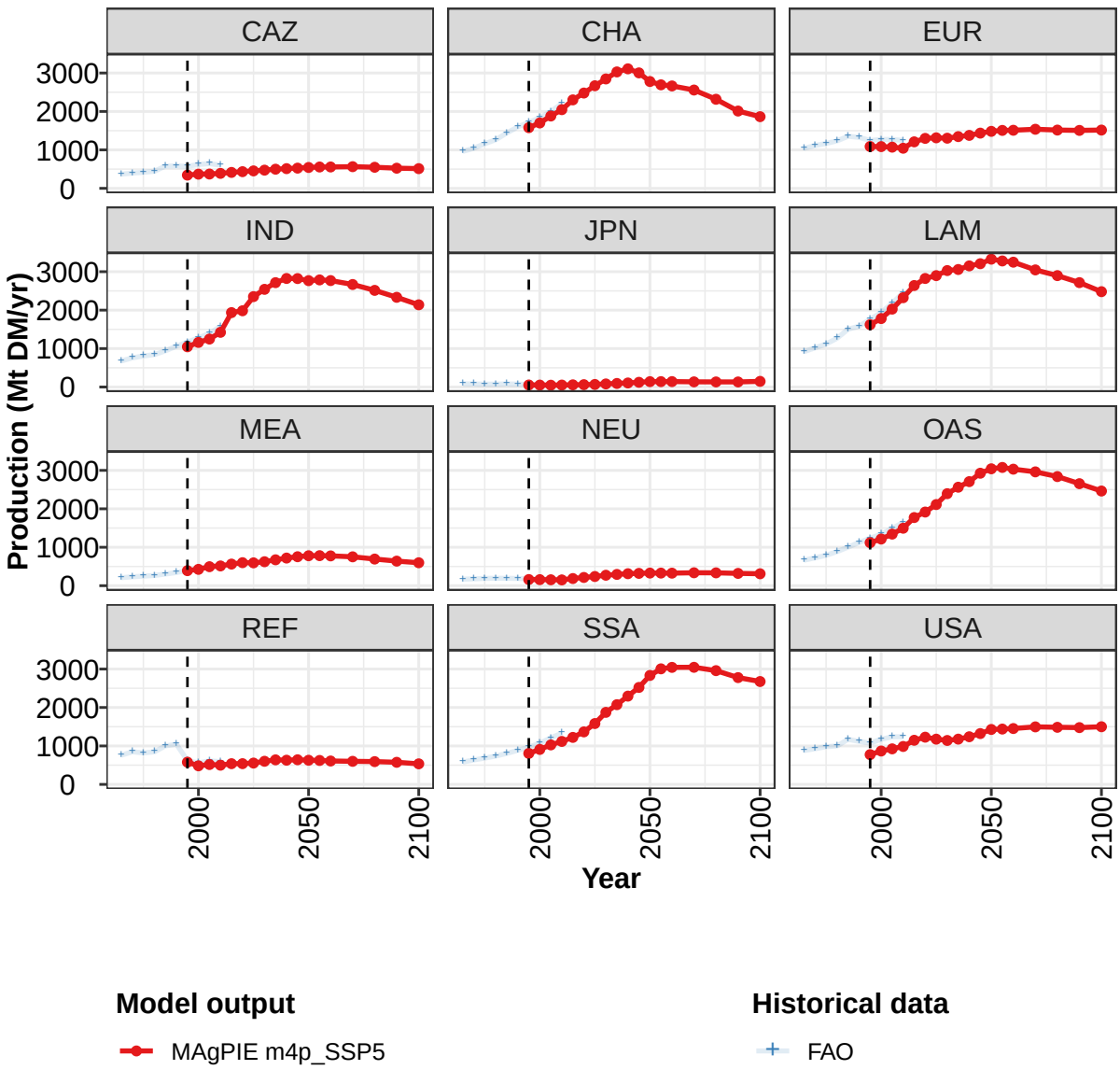
41 Water

Part XII
Production




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production (Mt DM/yr)
3000
2000
1000
0
2000
2025
2050
2075
2100
Bioenergy crops
Crop residues
Crops
Fish
Forage
Forest products
Livestock products
Pasture
Secondary products


GLO
20000
15000
10000
Production (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



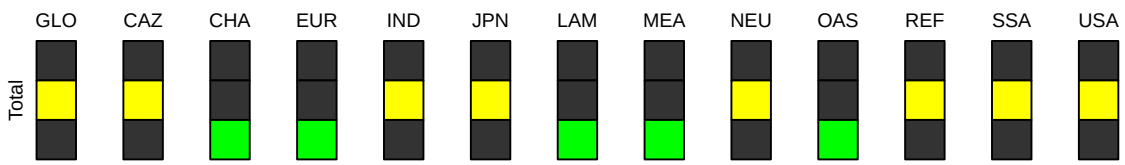


Figure 330: MAgPIE m4p_SSP5 — Production (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9564	10209	11110	12044	13993	14946	16016	17186	18161	18987	19607
CAZ	344	369	372	390	415	434	454	473	498	513	526
CHA	1579	1702	1882	2047	2302	2479	2669	2846	3029	3110	3004
EUR	1088	1085	1072	1044	1210	1300	1315	1305	1347	1378	1437
IND	1047	1161	1248	1423	1936	1984	2352	2542	2716	2824	2822
JPN	53	50	47	51	57	61	67	81	93	105	123
LAM	1623	1781	2028	2324	2641	2824	2898	3030	3057	3152	3208
MEA	392	426	495	514	563	599	595	624	674	720	754
NEU	161	158	155	151	187	215	240	273	294	313	321
OAS	1119	1215	1343	1496	1773	1917	2111	2395	2563	2707	2926
REF	578	483	517	500	539	539	555	601	639	629	641
SSA	805	910	1028	1118	1223	1366	1583	1874	2074	2296	2522
USA	775	868	925	987	1148	1229	1177	1143	1177	1239	1323

Table 1326: MAgPIE m4p_SSP5 — Production (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	20081	20220	20131	19701	18833	17670	16742
CAZ	544	556	556	564	549	524	513
CHA	2779	2693	2664	2557	2317	2011	1865
EUR	1483	1507	1511	1537	1516	1507	1516
IND	2767	2787	2770	2667	2515	2334	2139
JPN	140	141	141	134	133	132	147
LAM	3326	3280	3248	3047	2899	2716	2481
MEA	779	782	776	752	694	640	597
NEU	329	329	327	337	335	320	310
OAS	3042	3077	3032	2961	2839	2655	2463
REF	628	623	609	600	593	575	535
SSA	2835	3006	3044	3046	2959	2778	2676
USA	1429	1439	1453	1497	1485	1477	1499

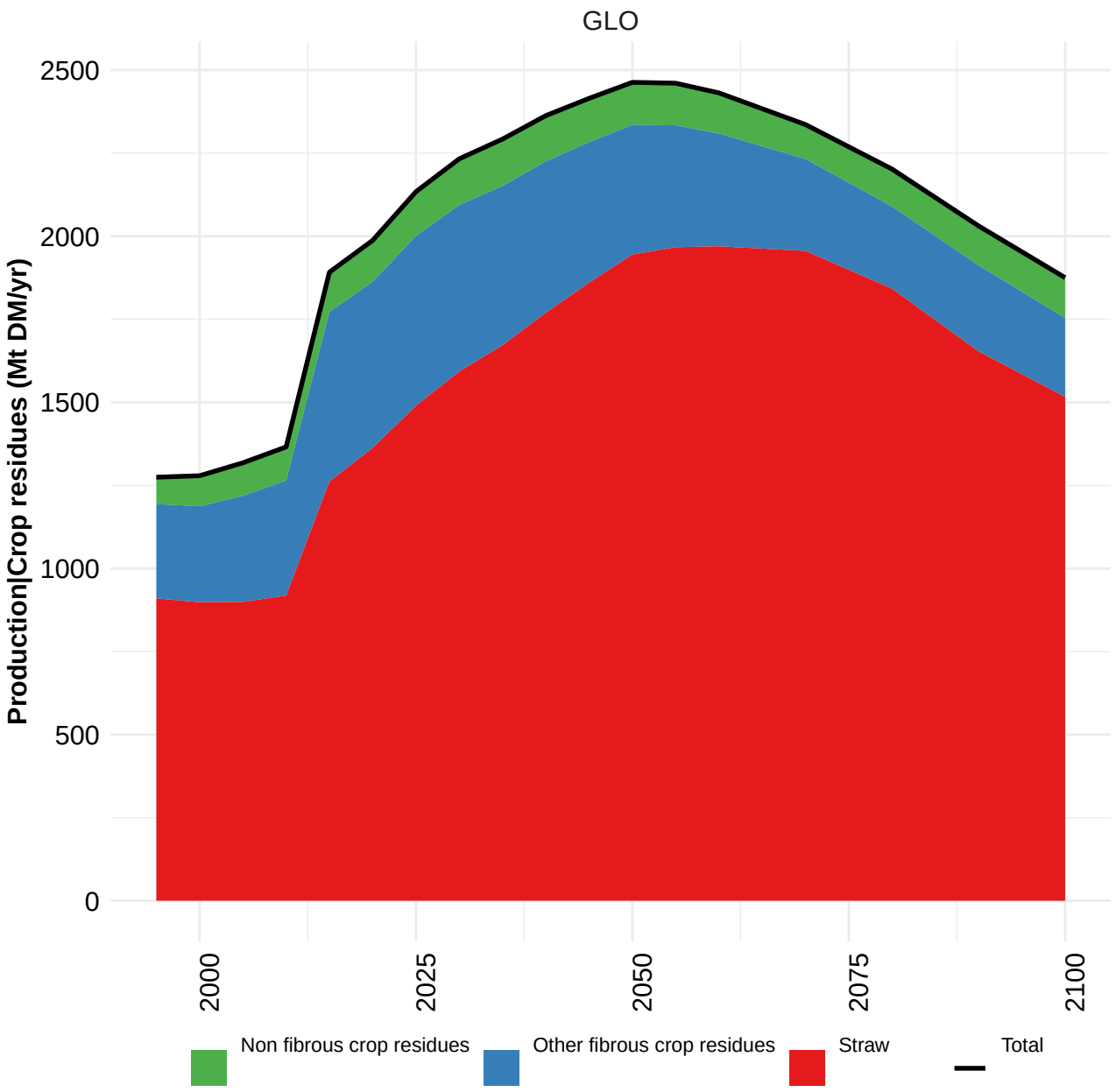
Table 1327: MAgPIE m4p_SSP5 — Production (Mt DM/yr) [PART 2/2]

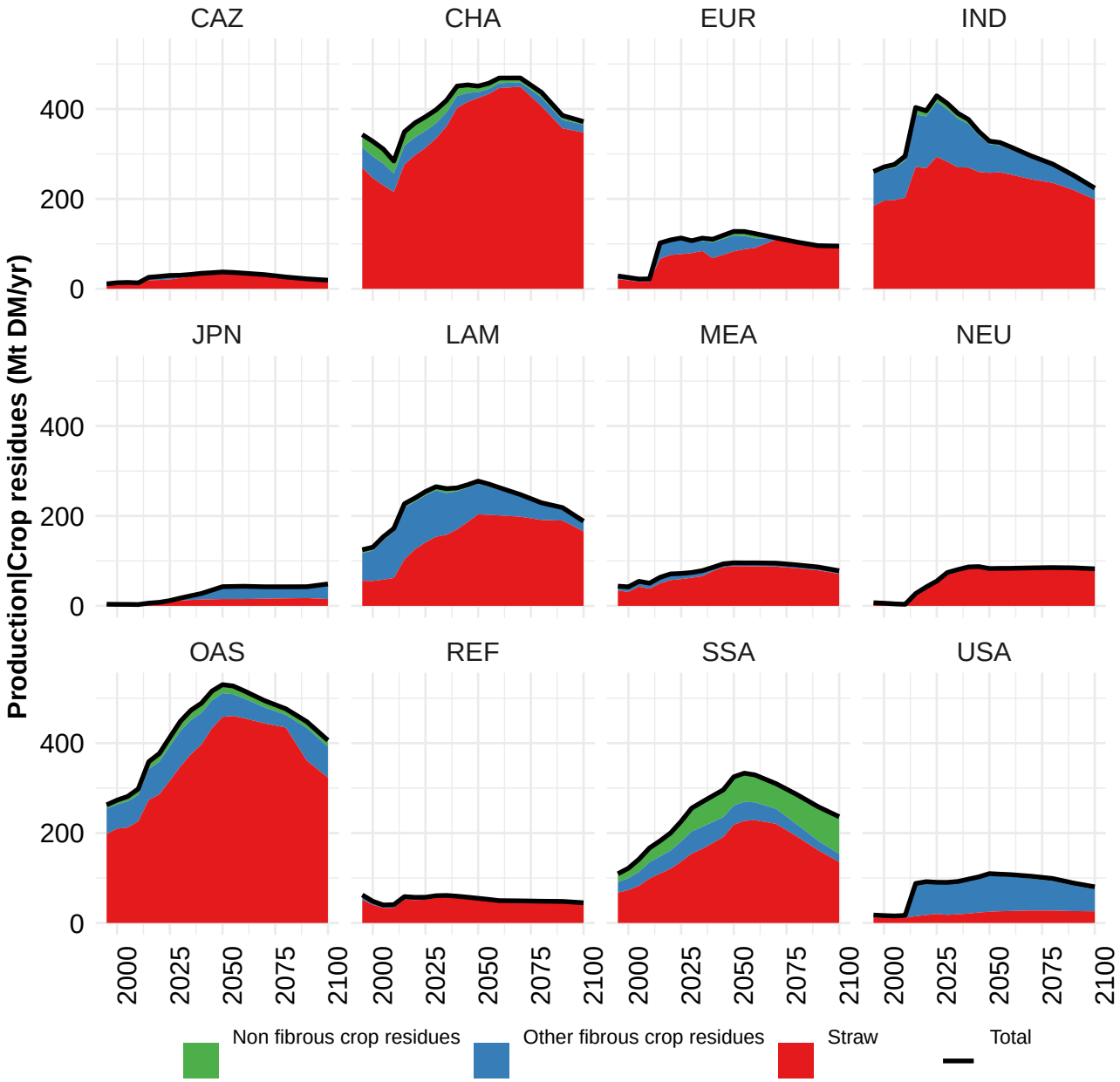
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7317	7958	8459	9061	10381	10933	10993	11756	12774	13658
CAZ	368	397	417	445	578	583	570	621	643	603
CHA	961	1042	1160	1264	1439	1599	1716	1836	1998	2207
EUR	1041	1114	1167	1236	1355	1327	1243	1271	1271	1247
IND	678	759	808	843	942	1062	1168	1278	1395	1577
JPN	83	80	73	75	80	75	67	61	57	59
LAM	921	1020	1118	1269	1505	1582	1760	1936	2181	2454
MEA	208	231	249	266	304	343	397	438	513	524
NEU	170	178	191	193	193	189	174	172	173	173
OAS	664	726	791	887	1004	1124	1234	1339	1486	1651
REF	759	849	820	846	1002	1044	622	558	612	591
SSA	580	635	684	737	806	887	969	1071	1210	1333
USA	882	927	980	1000	1172	1117	1072	1174	1237	1241

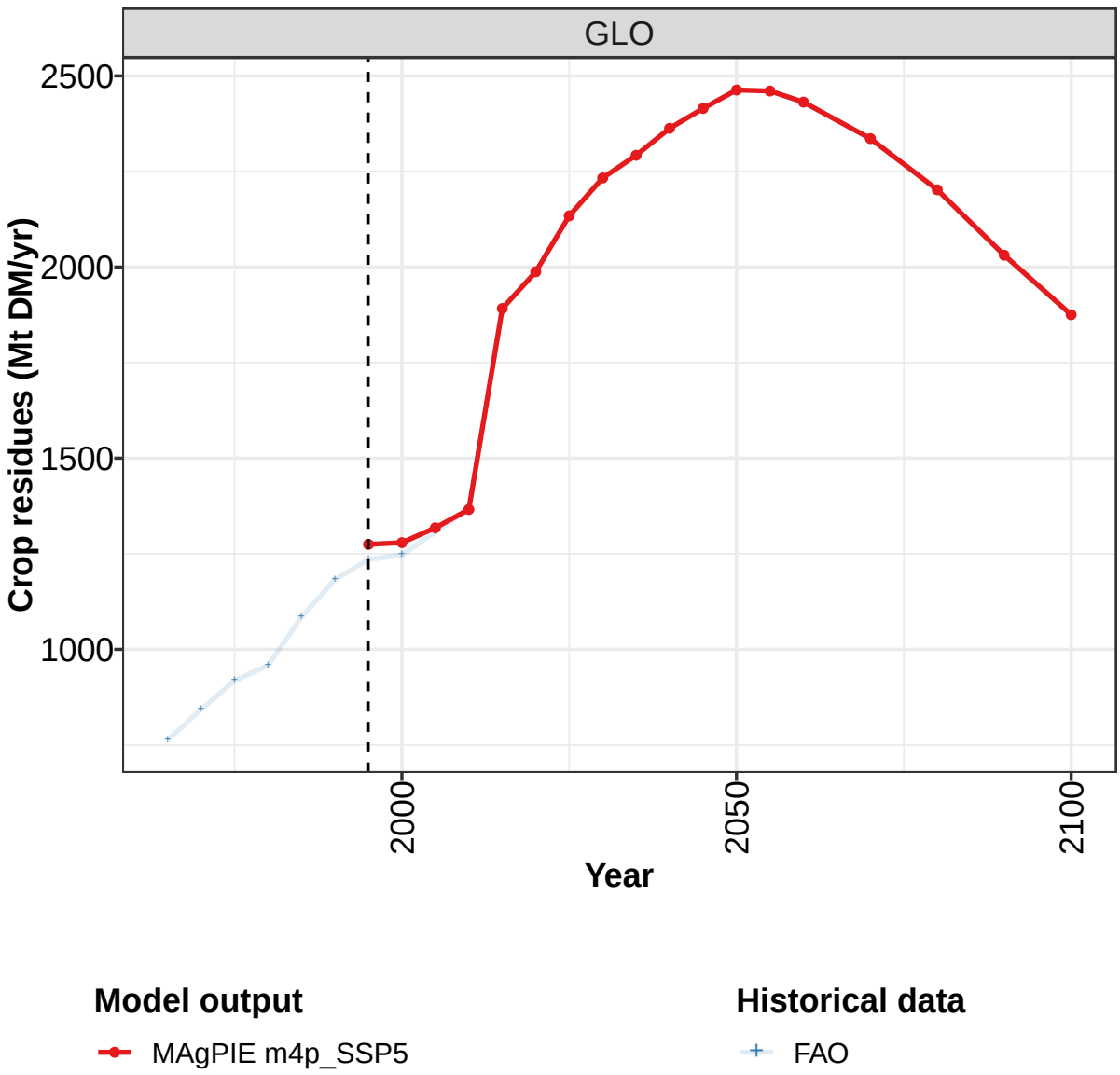
Table 1328: FAO — Production (Mt DM/yr)

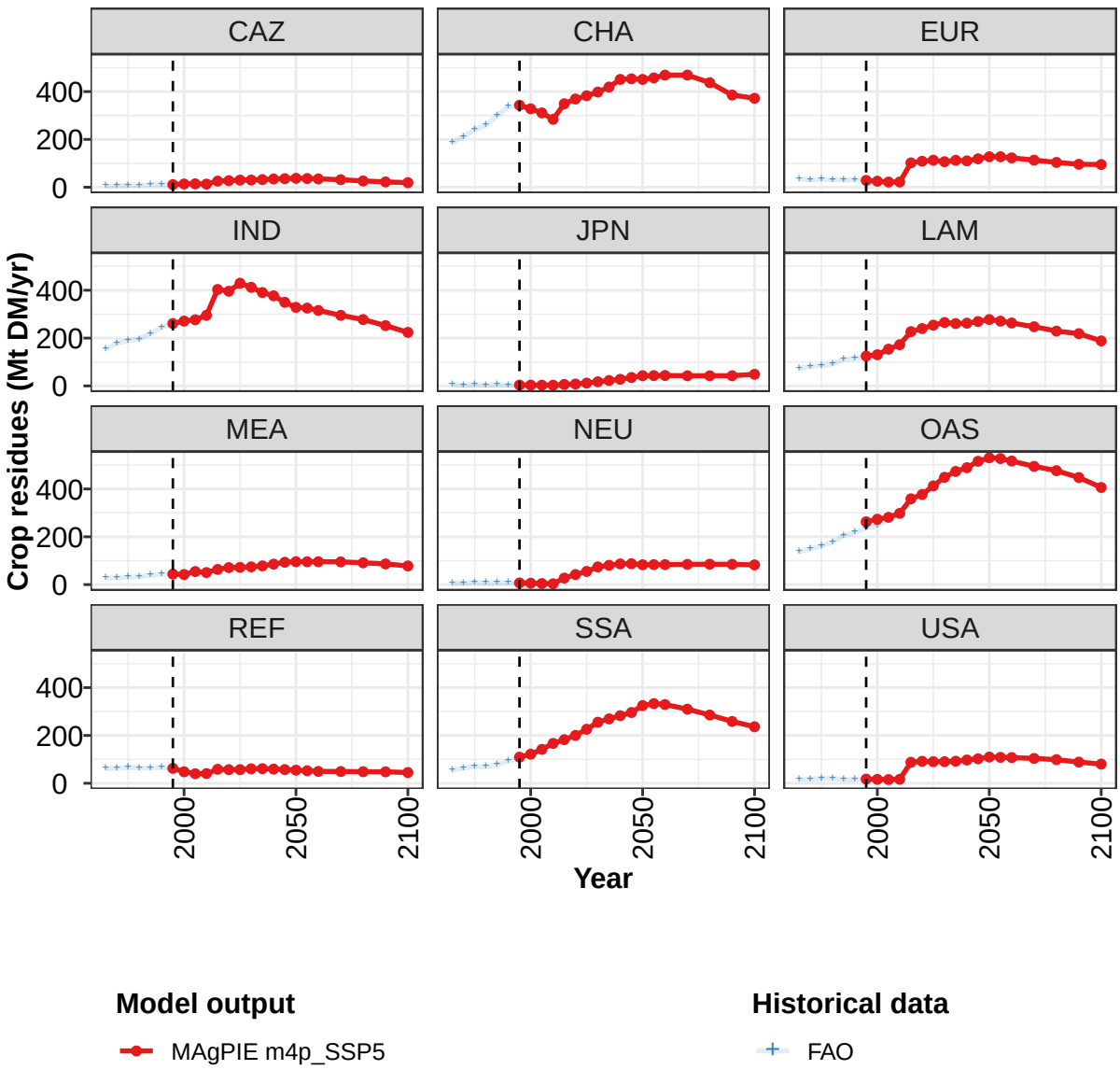
42 Bioenergy crops

43 Crop residues




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Crop residues (Mt DM/yr)
0
200
400
2000
2025
2050
2075
2100
Non fibrous crop residues
Other fibrous crop residues
Straw
Total


GLO
2500
2000
1500
1000
Crop residues (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



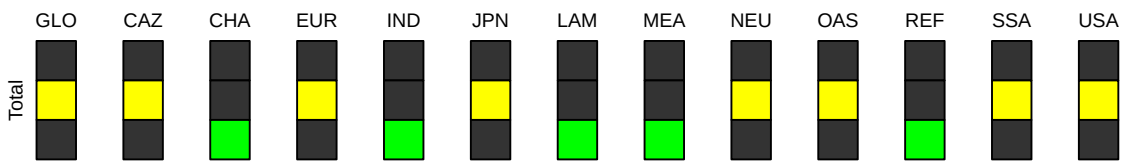


Figure 331: MAgPIE m4p_SSP5 — Production—Crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1275	1279	1318	1366	1892	1988	2134	2233	2292	2363	2415
CAZ	11	13	14	13	26	27	30	30	32	34	36
CHA	343	328	311	284	349	369	383	398	419	451	454
EUR	29	25	22	22	102	109	113	107	113	110	119
IND	261	271	277	295	403	396	429	412	391	377	350
JPN	4	3	3	3	6	8	12	17	23	28	35
LAM	125	130	154	172	227	240	254	265	261	262	269
MEA	44	42	55	50	63	71	72	74	78	86	93
NEU	7	6	4	3	27	42	55	74	81	87	87
OAS	263	273	281	298	359	377	413	449	473	489	516
REF	62	48	40	41	58	57	57	61	61	59	57
SSA	109	122	142	167	183	200	226	255	269	283	296
USA	18	16	16	17	88	92	90	90	92	97	103

Table 1329: MAgPIE m4p_SSP5 — Production—Crop residues (Mt DM/yr) [PART 1/2]

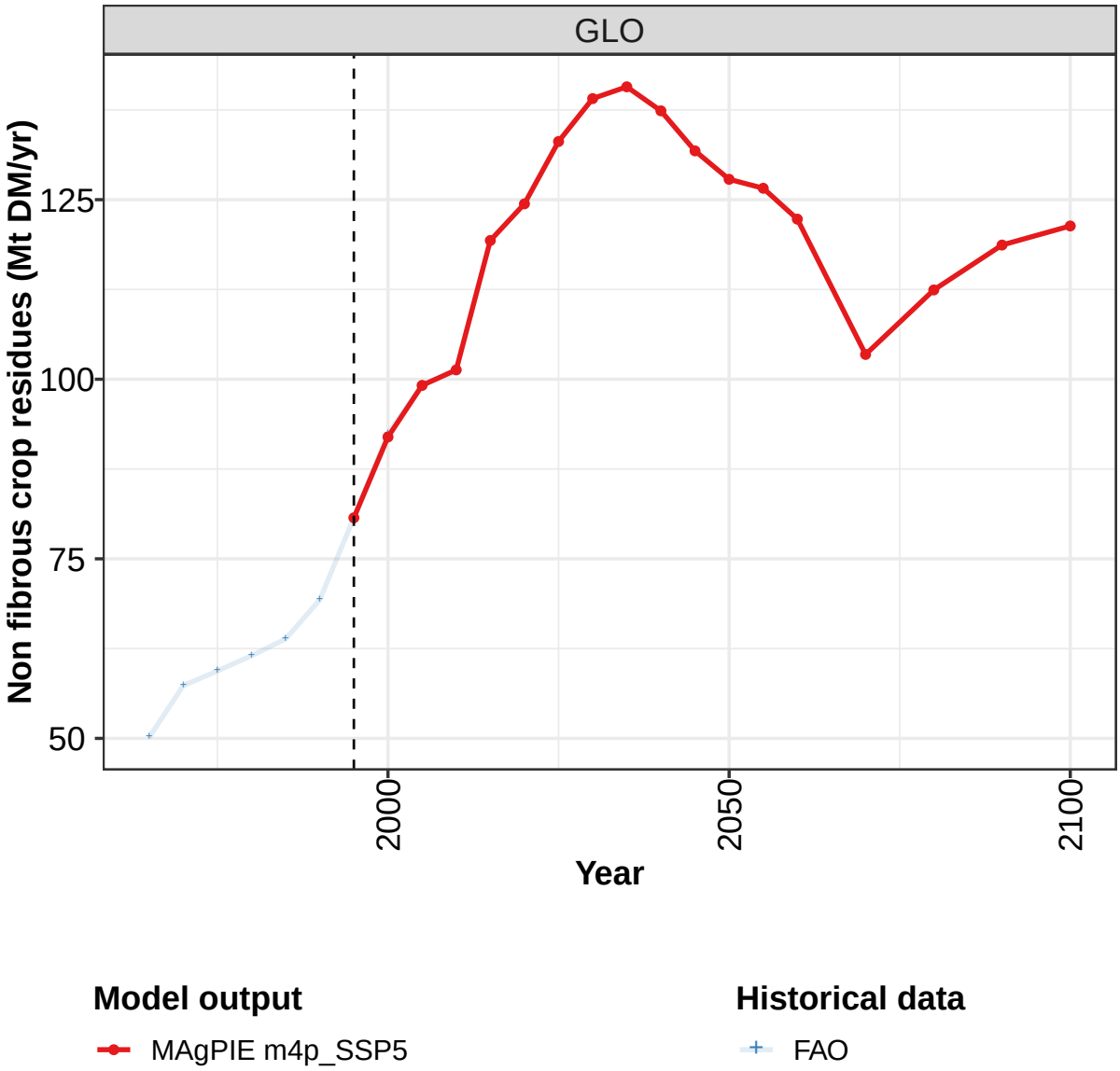
	2050	2055	2060	2070	2080	2090	2100
GLO	2463	2460	2431	2336	2202	2031	1875
CAZ	37	36	35	32	26	22	19
CHA	451	457	469	469	437	386	372
EUR	128	127	123	113	104	96	95
IND	329	325	316	295	278	252	224
JPN	43	43	44	42	43	43	49
LAM	277	271	263	248	229	219	188
MEA	96	96	96	95	91	86	78
NEU	83	83	84	85	85	85	82
OAS	530	527	517	494	476	448	406
REF	55	52	50	49	48	48	45
SSA	325	333	329	310	285	259	236
USA	110	108	108	104	99	89	80

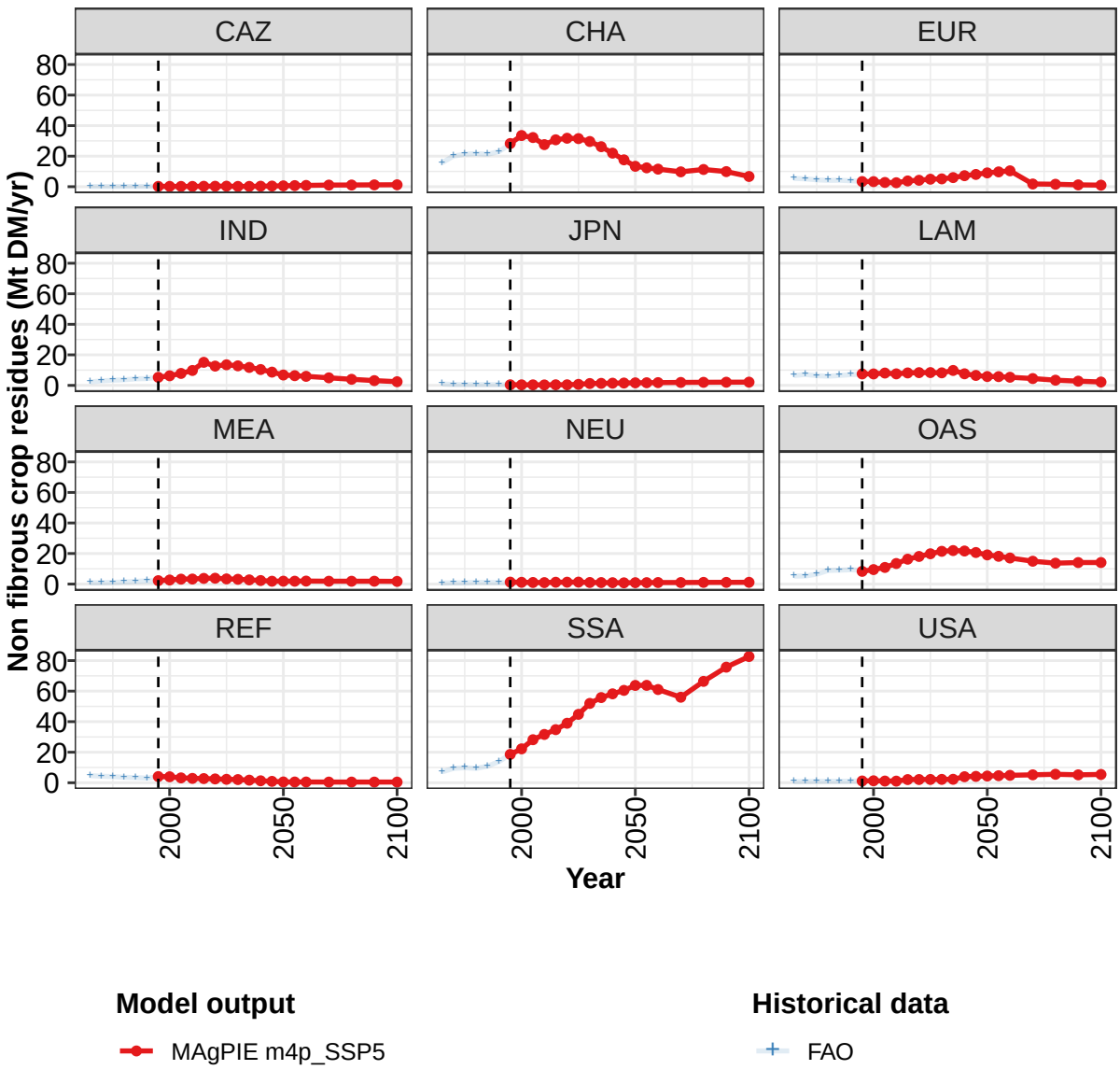
Table 1330: MAgPIE m4p_SSP5 — Production—Crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	763	843	918	958	1085	1182	1235	1247	1307	1365
CAZ	6	7	9	9	11	10	12	16	17	15
CHA	186	212	240	260	299	337	339	327	310	284
EUR	33	32	32	31	31	32	27	24	21	21
IND	153	179	190	195	219	244	262	272	280	298
JPN	6	4	4	4	4	4	4	3	3	3
LAM	74	82	85	91	111	113	121	128	150	167
MEA	27	28	32	34	39	42	45	42	55	50
NEU	7	7	8	8	8	7	7	6	4	3
OAS	138	150	161	176	205	219	236	246	271	299
REF	61	63	66	63	63	66	60	46	39	40
SSA	55	64	70	69	77	93	104	119	141	167
USA	16	18	20	19	17	15	18	17	16	17

Table 1331: FAO — Production—Crop residues (Mt DM/yr)

43.1 Non fibrous crop residues





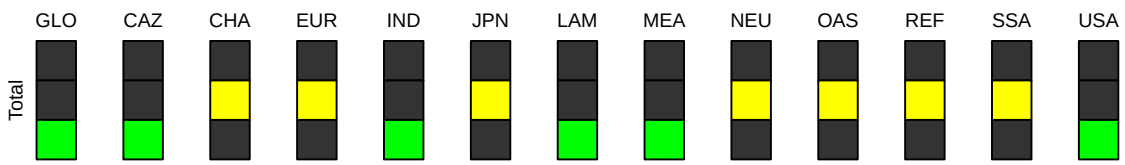


Figure 332: MAgPIE m4p_SSP5 — Production—Crop residues—Non fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	92	99	101	119	124	133	139	141	137	132
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	28	34	32	28	31	32	32	30	26	22	18
EUR	3	3	3	3	4	4	5	5	6	7	8
IND	5	6	8	10	15	13	13	13	12	10	9
JPN	0	0	0	0	0	0	1	1	1	1	2
LAM	8	8	8	8	8	8	8	8	10	8	7
MEA	2	3	3	3	4	4	3	3	3	2	2
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	8	9	11	13	16	18	20	21	22	22	21
REF	4	4	3	3	3	3	2	2	2	1	1
SSA	19	22	28	32	35	39	45	52	56	58	60
USA	1	1	1	1	2	2	2	2	2	4	4

Table 1332: MAgPIE m4p_SSP5 — Production—Crop residues—Non fibrous crop residues (Mt DM/yr) [PART 1/2]

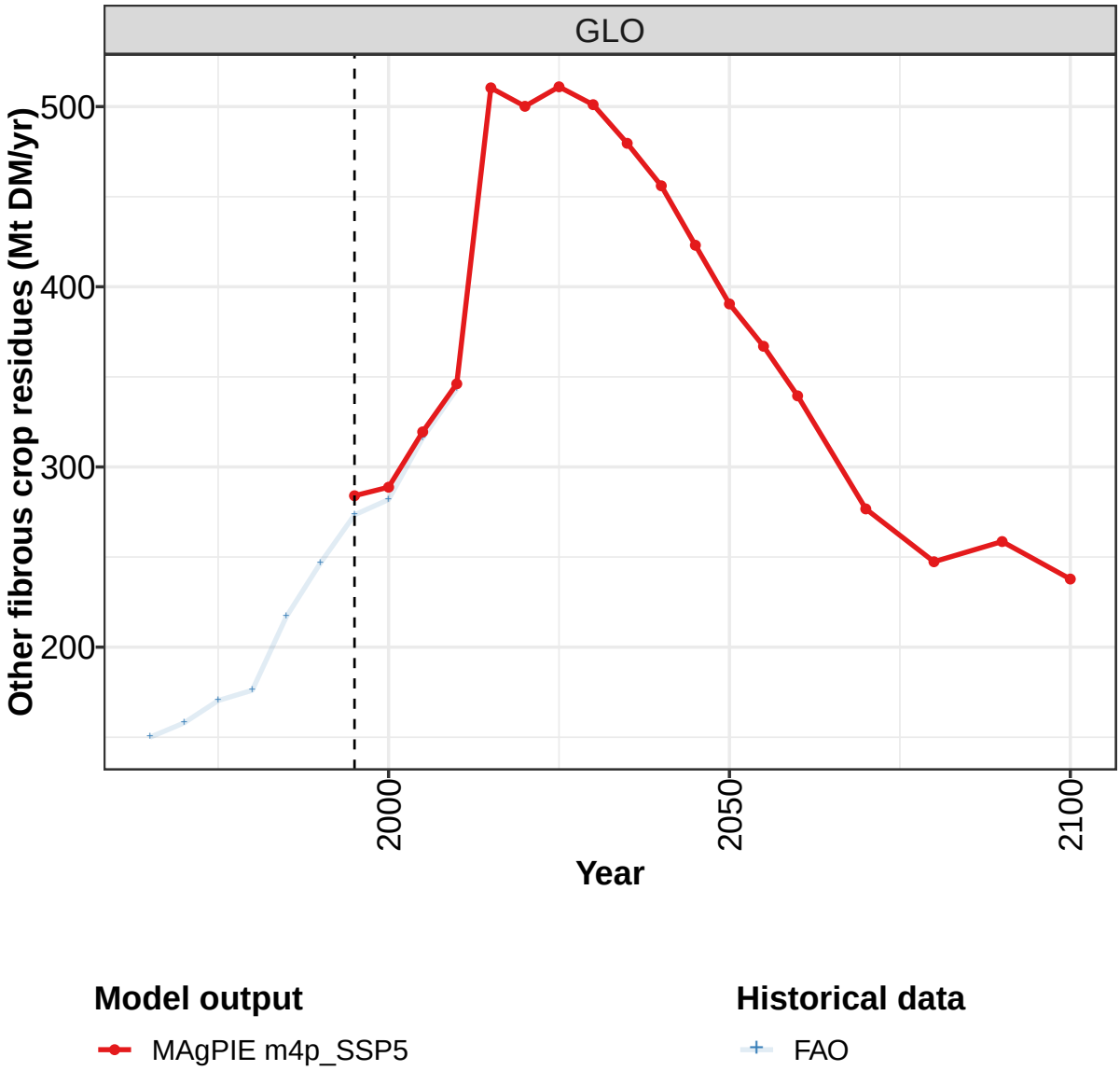
	2050	2055	2060	2070	2080	2090	2100
GLO	128	127	122	103	112	119	121
CAZ	1	1	1	1	1	1	1
CHA	13	12	12	10	11	10	7
EUR	9	10	10	2	2	1	1
IND	7	6	6	5	4	3	2
JPN	2	2	2	2	2	2	2
LAM	6	6	5	4	3	3	2
MEA	2	2	2	2	2	2	2
NEU	1	1	1	1	1	1	1
OAS	19	18	17	15	14	14	14
REF	1	0	0	0	0	0	0
SSA	64	64	61	56	66	76	83
USA	4	5	5	5	6	5	5

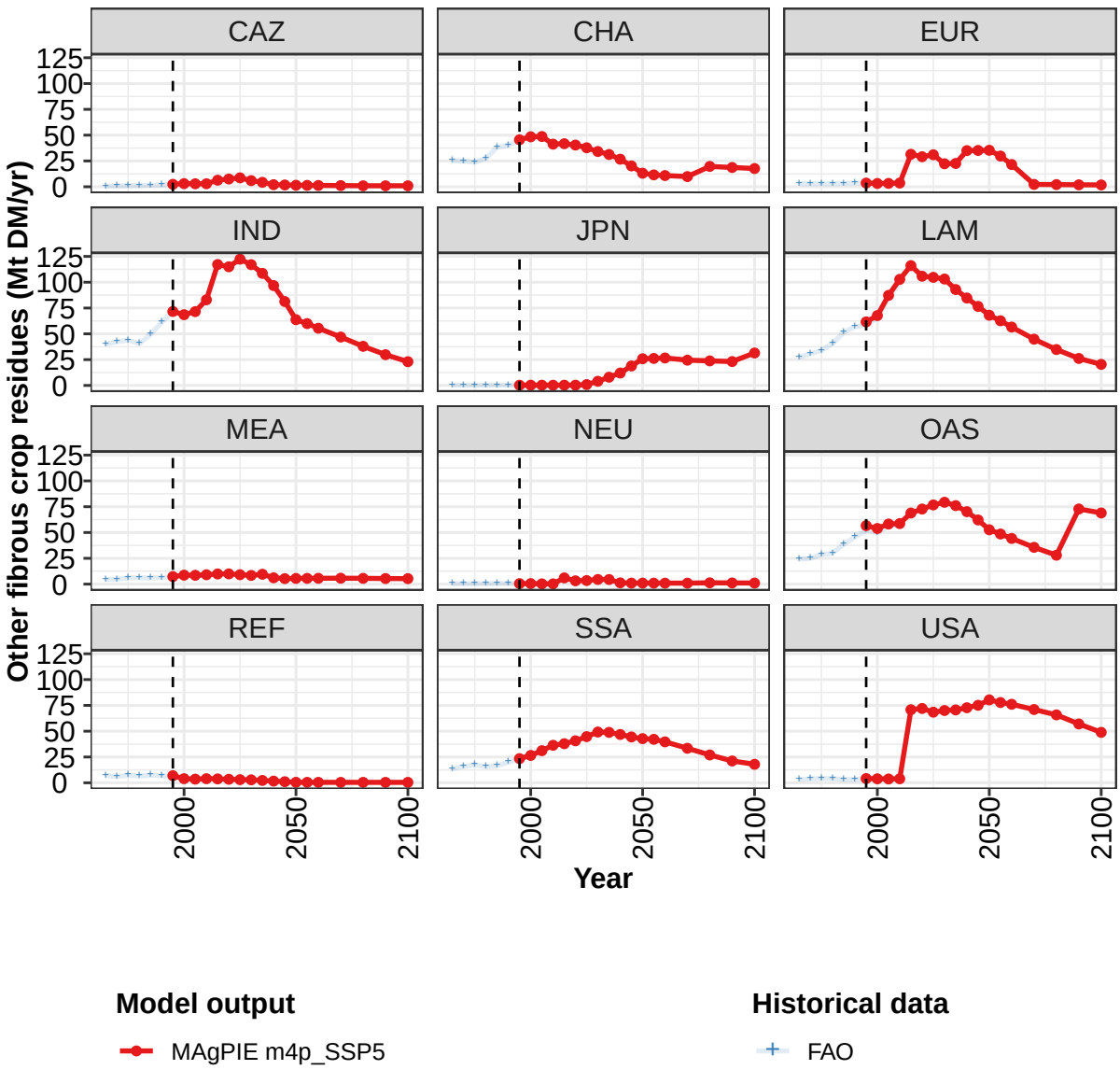
Table 1333: MAgPIE m4p_SSP5 — Production—Crop residues—Non fibrous crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	50	57	59	62	64	69	81	92	99	101
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	16	20	21	22	21	23	28	33	32	28
EUR	5	5	5	4	4	4	3	3	3	3
IND	2	3	3	4	4	4	5	6	8	10
JPN	1	1	0	0	0	0	0	0	0	0
LAM	6	7	6	6	6	7	7	7	8	7
MEA	1	1	1	1	2	2	2	3	3	3
NEU	1	1	1	1	1	1	1	1	1	1
OAS	5	5	6	9	9	9	9	10	11	13
REF	5	4	4	4	3	3	4	4	3	3
SSA	7	9	10	9	11	14	19	23	28	32
USA	1	1	1	1	1	1	1	1	1	1

Table 1334: FAO — Production—Crop residues—Non fibrous crop residues (Mt DM/yr)

43.2 Other fibrous crop residues





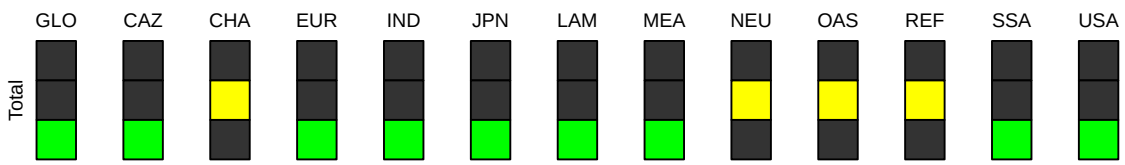


Figure 333: MAgPIE m4p_SSP5 — Production—Crop residues—Other fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	284	289	319	346	510	500	511	501	480	456	423
CAZ	2	3	3	3	6	8	9	6	4	2	2
CHA	46	48	49	41	42	40	38	34	31	27	20
EUR	4	3	3	4	31	29	31	22	23	35	35
IND	72	69	72	83	117	115	122	117	109	97	81
JPN	0	0	0	0	0	0	1	4	8	12	19
LAM	62	68	87	103	116	106	105	103	93	85	77
MEA	7	9	9	9	10	10	9	8	10	6	5
NEU	0	1	0	0	6	3	3	5	5	1	1
OAS	57	54	58	59	69	73	77	79	76	70	62
REF	7	4	4	4	4	3	3	3	2	2	1
SSA	23	27	31	36	38	41	45	49	49	47	44
USA	4	4	4	4	71	72	68	70	71	73	75

Table 1335: MAgPIE m4p_SSP5 — Production—Crop residues—Other fibrous crop residues (Mt DM/yr) [PART 1/2]

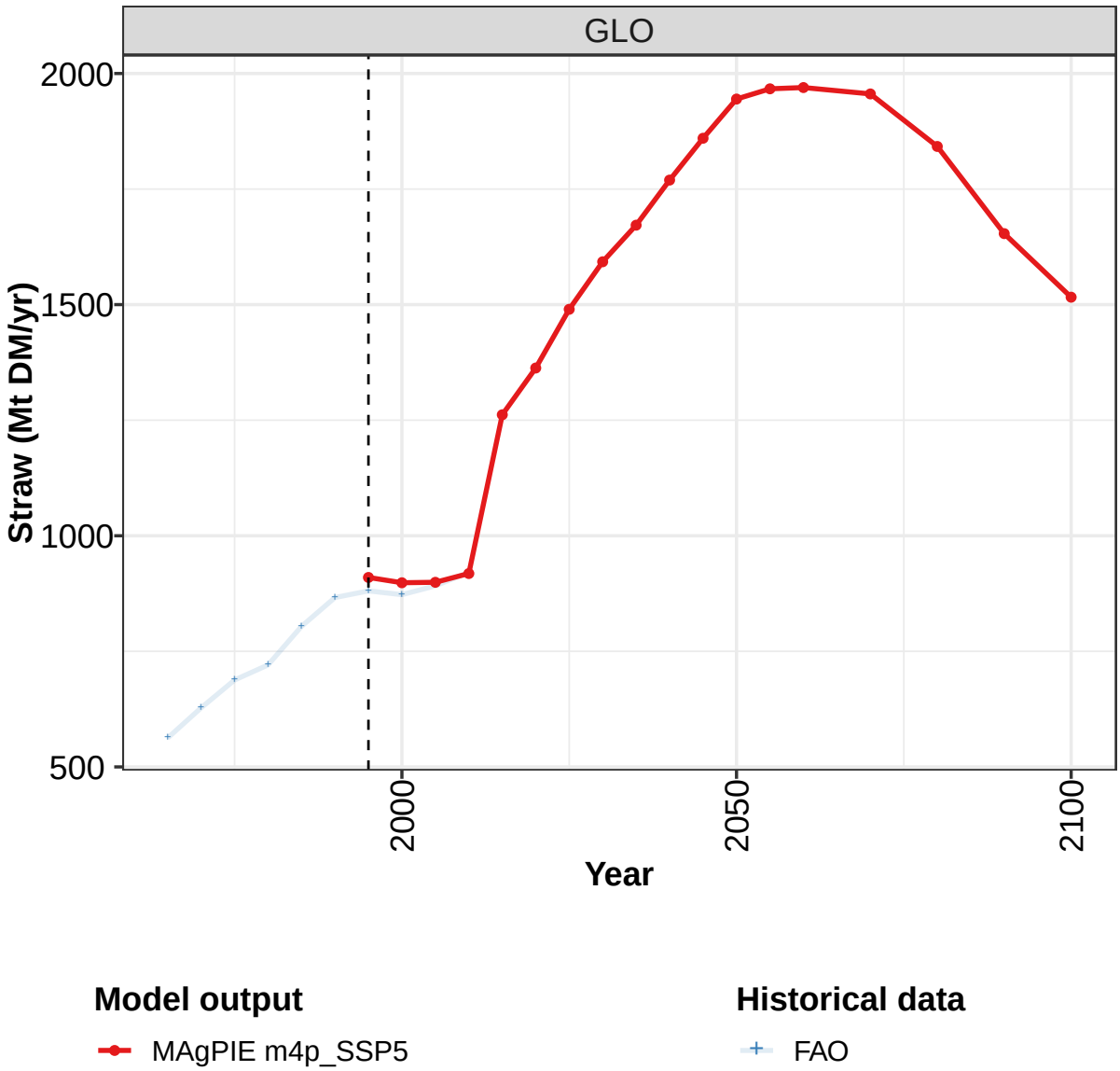
	2050	2055	2060	2070	2080	2090	2100
GLO	390	367	339	277	247	259	238
CAZ	1	1	1	1	1	1	1
CHA	13	12	11	10	20	19	18
EUR	35	30	22	2	2	2	2
IND	64	60	55	47	38	30	23
JPN	26	26	27	25	24	23	31
LAM	68	63	57	45	35	26	20
MEA	6	6	6	6	6	5	5
NEU	1	1	1	1	1	1	1
OAS	53	49	44	36	28	73	69
REF	0	0	0	0	0	0	0
SSA	43	42	40	33	27	21	18
USA	80	78	76	71	66	57	49

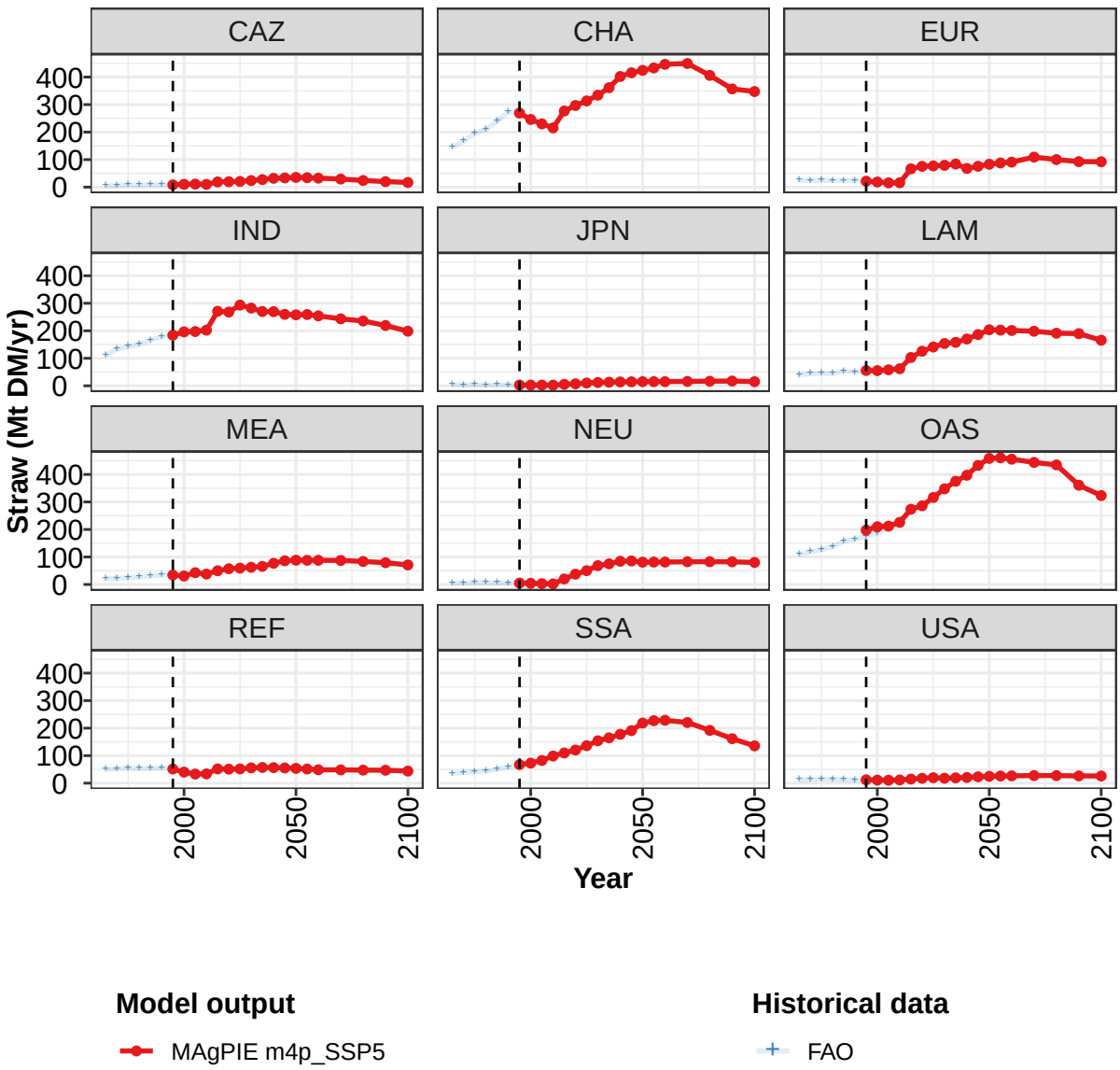
Table 1336: MAgPIE m4p_SSP5 — Production—Crop residues—Other fibrous crop residues (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	150	158	170	176	217	247	273	282	316	343
CAZ	1	1	1	1	2	2	3	4	4	3
CHA	26	25	24	28	38	40	45	48	48	41
EUR	3	3	3	3	3	4	3	3	3	4
IND	40	42	44	41	49	61	72	69	72	83
JPN	0	0	0	0	0	0	0	0	0	0
LAM	27	31	34	41	52	57	58	65	85	99
MEA	4	5	6	6	6	6	7	9	9	9
NEU	1	1	1	1	1	1	1	1	0	0
OAS	24	25	29	30	39	46	52	50	56	58
REF	7	6	7	6	7	7	5	3	3	4
SSA	14	16	17	16	17	20	23	26	31	36
USA	3	4	4	4	3	3	4	4	4	4

Table 1337: FAO — Production—Crop residues—Other fibrous crop residues (Mt DM/yr)

43.3 Straw


GLO
2000
1500
1000
500
Straw (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



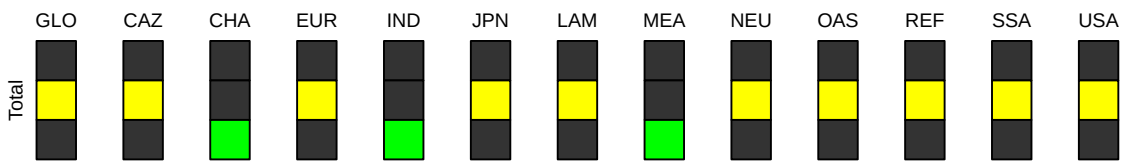


Figure 334: MAgPIE m4p_SSP5 — Production—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	910	898	899	918	1262	1363	1490	1593	1672	1769	1860
CAZ	8	10	11	10	19	20	21	24	27	32	34
CHA	269	246	230	215	277	297	313	334	362	402	416
EUR	22	19	16	16	67	75	77	79	84	68	76
IND	184	196	197	202	271	268	293	283	270	270	260
JPN	3	3	3	2	5	7	10	12	13	14	15
LAM	56	55	58	62	103	126	141	154	158	170	186
MEA	34	31	43	38	50	57	59	63	66	77	86
NEU	5	4	3	2	20	38	50	69	75	84	86
OAS	198	210	212	226	274	286	316	348	375	397	433
REF	51	40	33	34	52	51	52	56	57	56	55
SSA	67	73	82	99	110	120	136	154	165	178	191
USA	12	11	11	12	15	18	20	18	19	21	23

Table 1338: MAgPIE m4p_SSP5 — Production—Crop residues—Straw (Mt DM/yr) [PART 1/2]

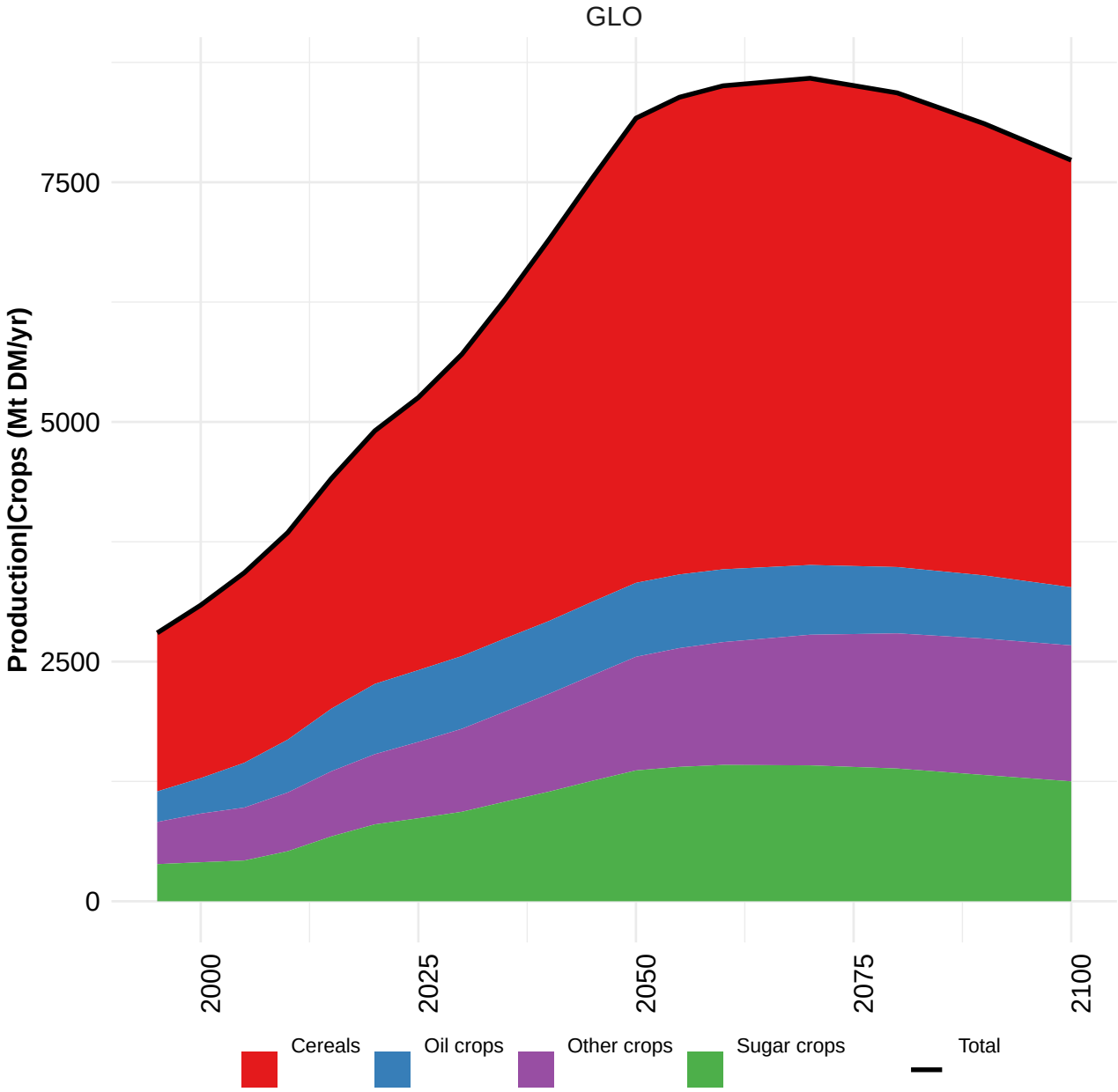
	2050	2055	2060	2070	2080	2090	2100
GLO	1945	1967	1970	1956	1842	1654	1516
CAZ	35	34	33	29	24	20	17
CHA	424	433	446	449	406	357	348
EUR	83	88	91	109	100	93	92
IND	258	259	254	243	236	219	199
JPN	15	15	15	16	17	17	15
LAM	204	203	201	198	191	190	166
MEA	88	88	88	87	84	79	71
NEU	81	82	82	83	83	82	80
OAS	458	460	455	444	435	361	323
REF	54	51	49	48	48	47	44
SSA	219	227	229	221	192	162	136
USA	25	26	27	28	27	26	26

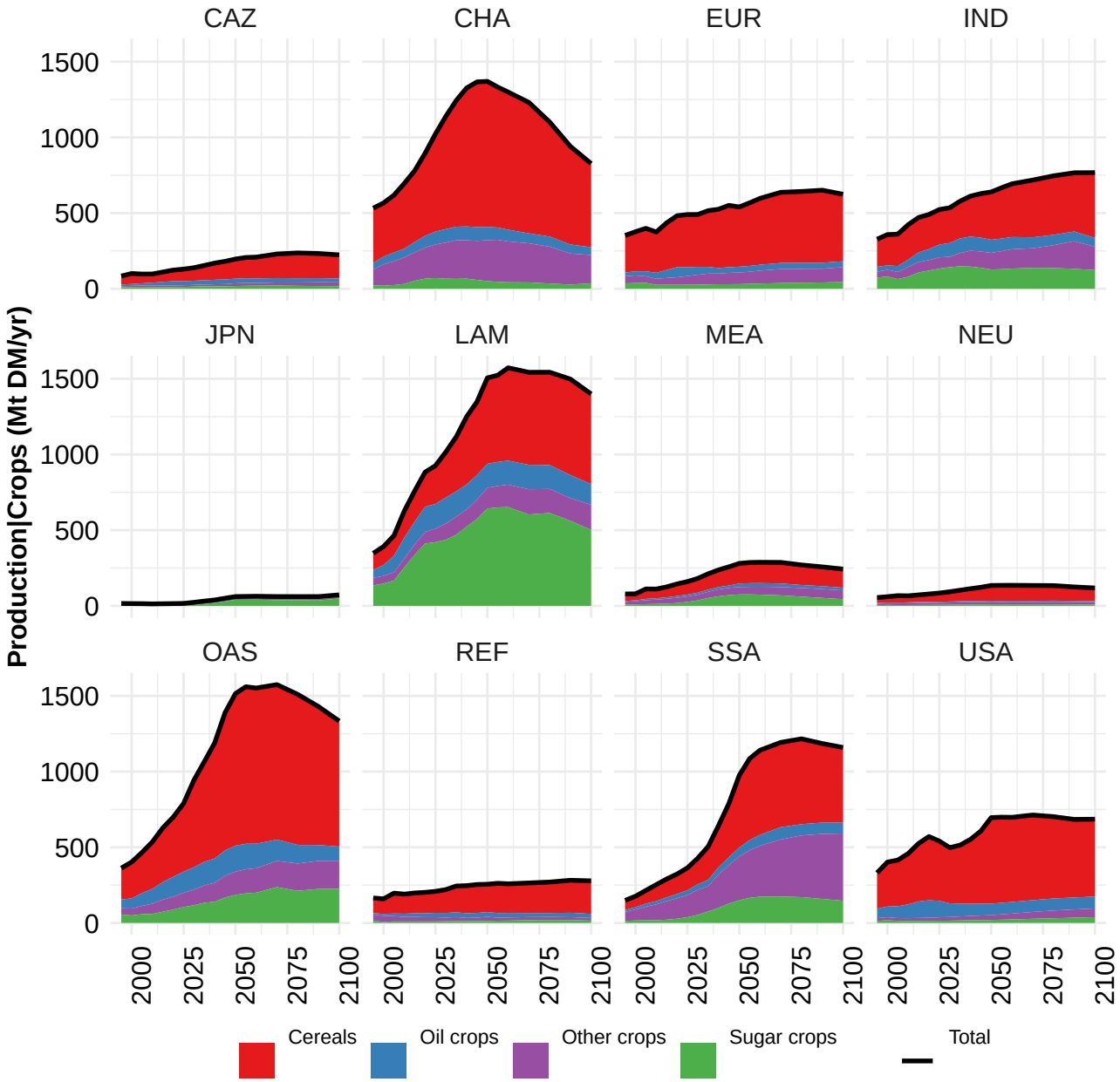
Table 1339: MAgPIE m4p_SSP5 — Production—Crop residues—Straw (Mt DM/yr) [PART 2/2]

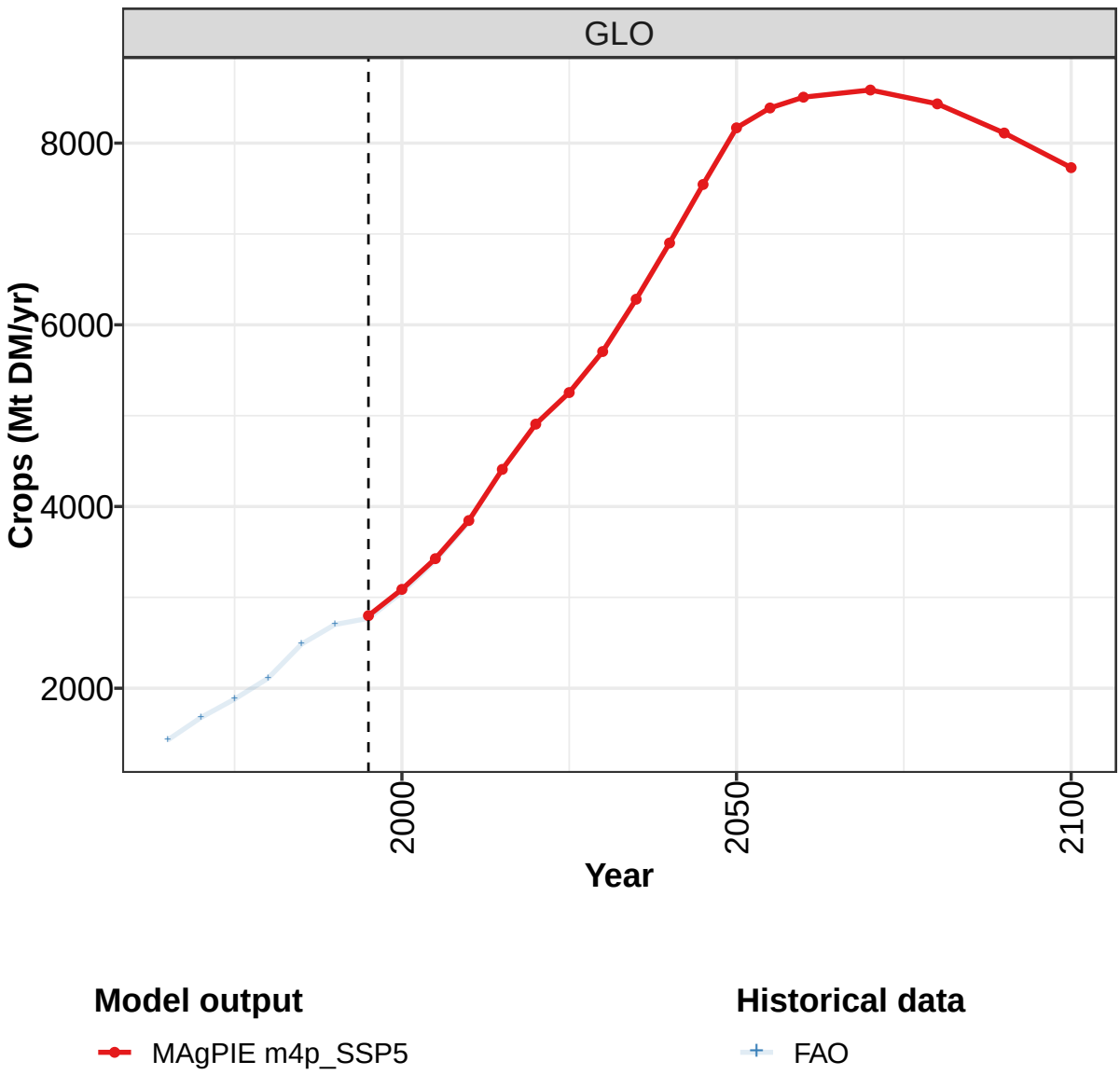
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	563	628	688	721	804	866	881	873	892	921
CAZ	5	6	7	7	9	8	9	12	14	12
CHA	145	167	195	210	239	274	266	246	230	215
EUR	25	24	25	24	24	24	21	18	15	15
IND	111	133	142	151	165	178	185	198	200	205
JPN	4	3	4	3	3	3	3	3	3	2
LAM	40	44	45	44	53	50	55	56	57	60
MEA	22	22	25	27	31	34	35	31	43	38
NEU	6	6	7	6	6	6	5	4	3	2
OAS	108	119	126	137	157	164	175	186	204	227
REF	50	52	55	53	53	56	51	39	32	33
SSA	35	39	42	44	50	59	63	70	81	99
USA	12	13	15	14	13	11	13	12	11	12

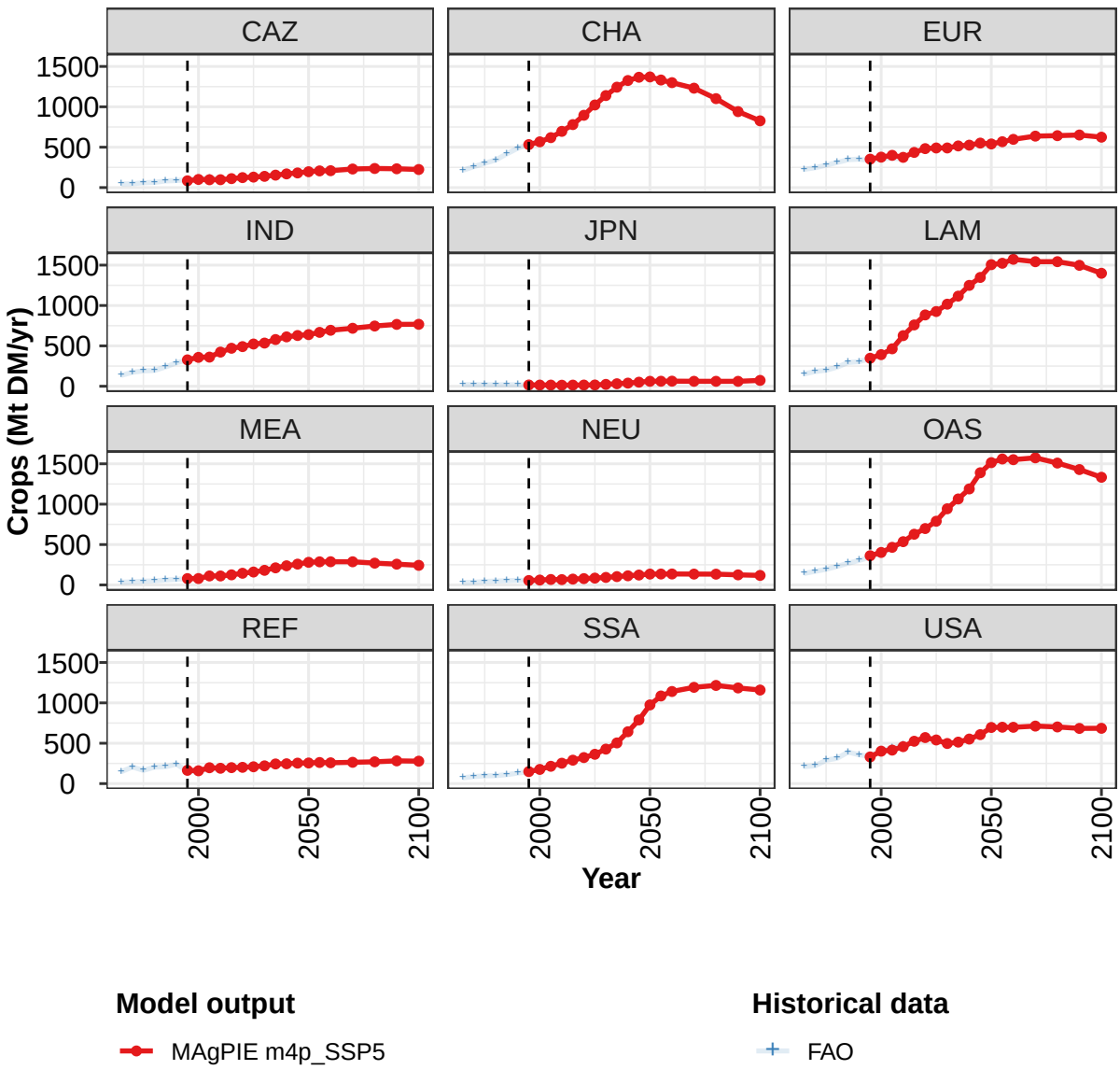
Table 1340: FAO — Production—Crop residues—Straw (Mt DM/yr)

44 Crops


GLO
Production|Crops (Mt DM/yr)
7500
5000
2500
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Crops (Mt DM/yr)
1500
1000
500
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


GLO
Crops (Mt DM/yr)
8000
6000
4000
2000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



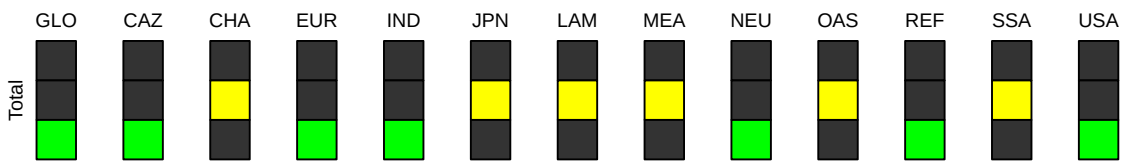


Figure 335: MAgPIE m4p_SSP5 — Production—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2799	3088	3426	3846	4409	4907	5254	5706	6282	6901	7545
CAZ	84	101	97	98	111	123	130	139	154	170	181
CHA	532	567	618	696	780	895	1023	1139	1243	1326	1366
EUR	352	377	399	375	435	482	490	491	516	525	551
IND	327	358	361	423	471	491	523	535	579	612	629
JPN	16	15	15	13	14	15	16	23	31	39	50
LAM	347	392	464	627	760	883	926	1016	1116	1249	1348
MEA	79	79	112	111	125	145	160	181	212	237	258
NEU	55	60	68	66	72	78	85	93	103	113	123
OAS	362	402	466	536	628	698	789	943	1065	1189	1389
REF	165	159	197	190	198	202	208	220	244	246	254
SSA	149	176	215	253	290	323	364	427	504	643	789
USA	331	402	415	458	525	571	541	497	514	552	607

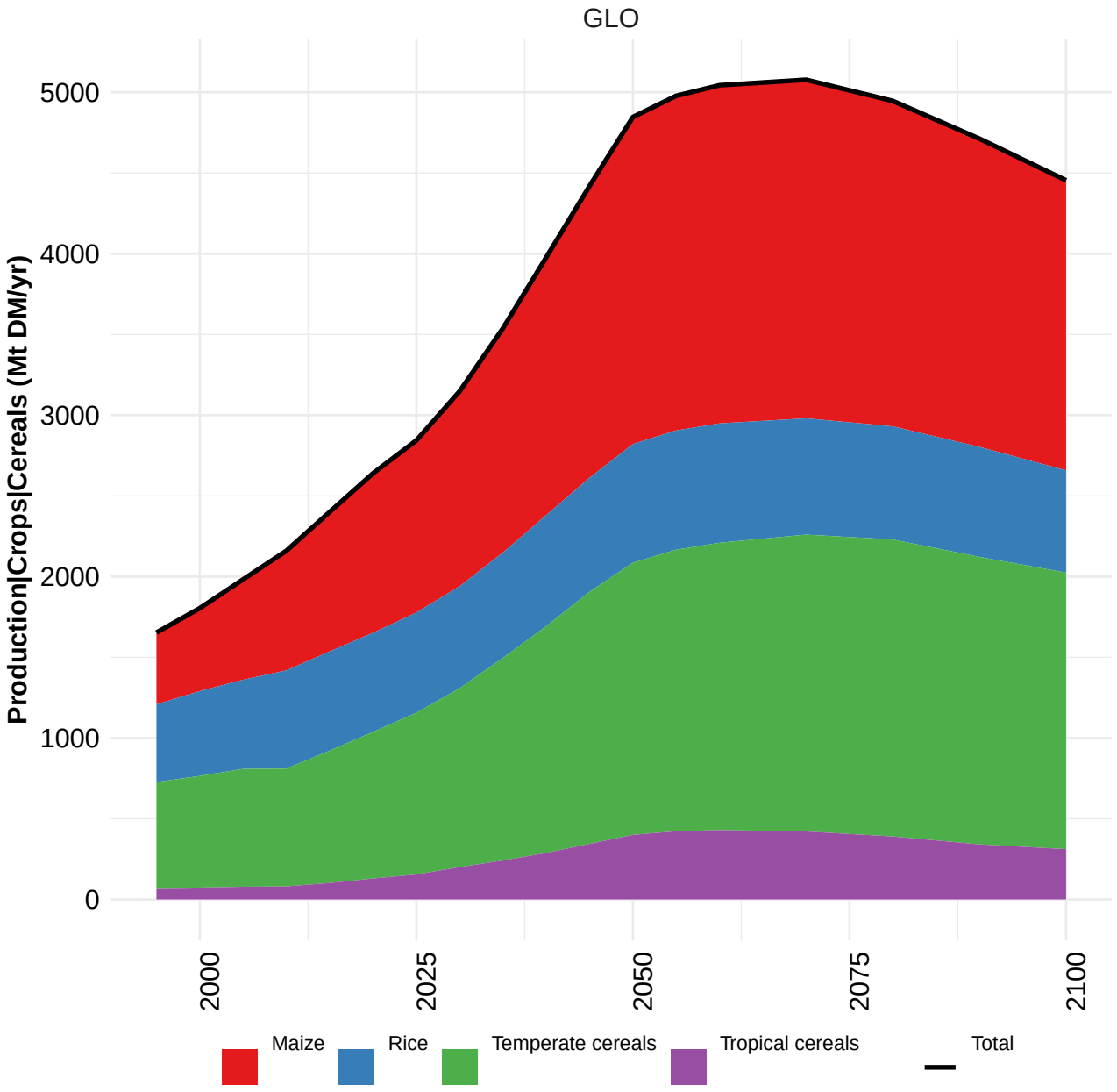
Table 1341: MAgPIE m4p_SSP5 — Production—Crops (Mt DM/yr) [PART 1/2]

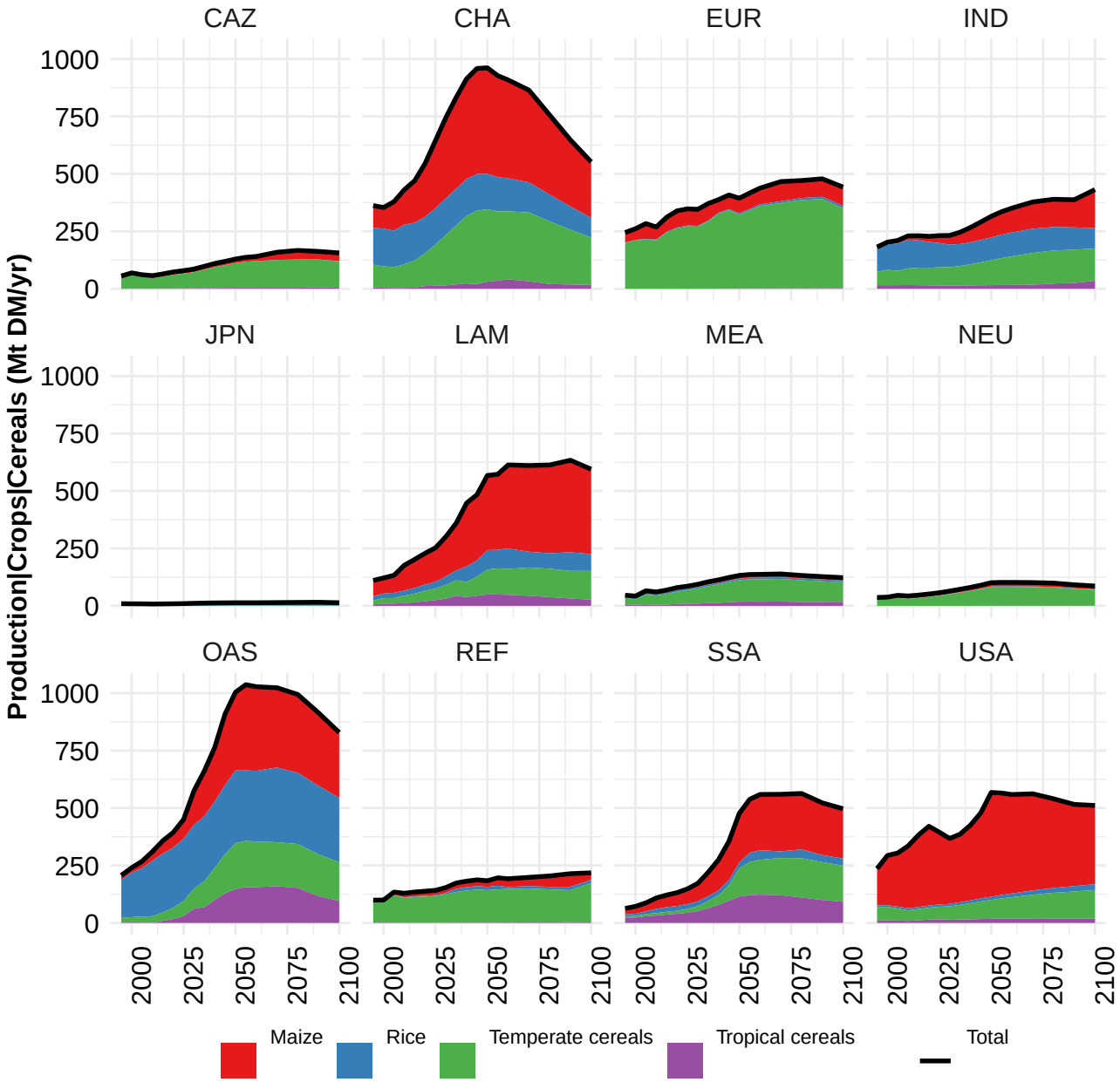
	2050	2055	2060	2070	2080	2090	2100
GLO	8168	8387	8506	8585	8432	8111	7730
CAZ	196	207	209	230	237	233	224
CHA	1370	1332	1299	1231	1102	941	827
EUR	540	568	597	637	643	651	624
IND	639	667	693	718	746	766	767
JPN	61	62	63	61	61	61	73
LAM	1506	1523	1572	1543	1543	1498	1399
MEA	280	286	288	287	270	257	243
NEU	135	135	136	135	134	125	118
OAS	1514	1560	1551	1574	1509	1429	1333
REF	256	262	258	264	270	282	278
SSA	975	1085	1141	1192	1216	1185	1159
USA	696	699	698	713	702	684	685

Table 1342: MAgPIE m4p_SSP5 — Production—Crops (Mt DM/yr) [PART 2/2]

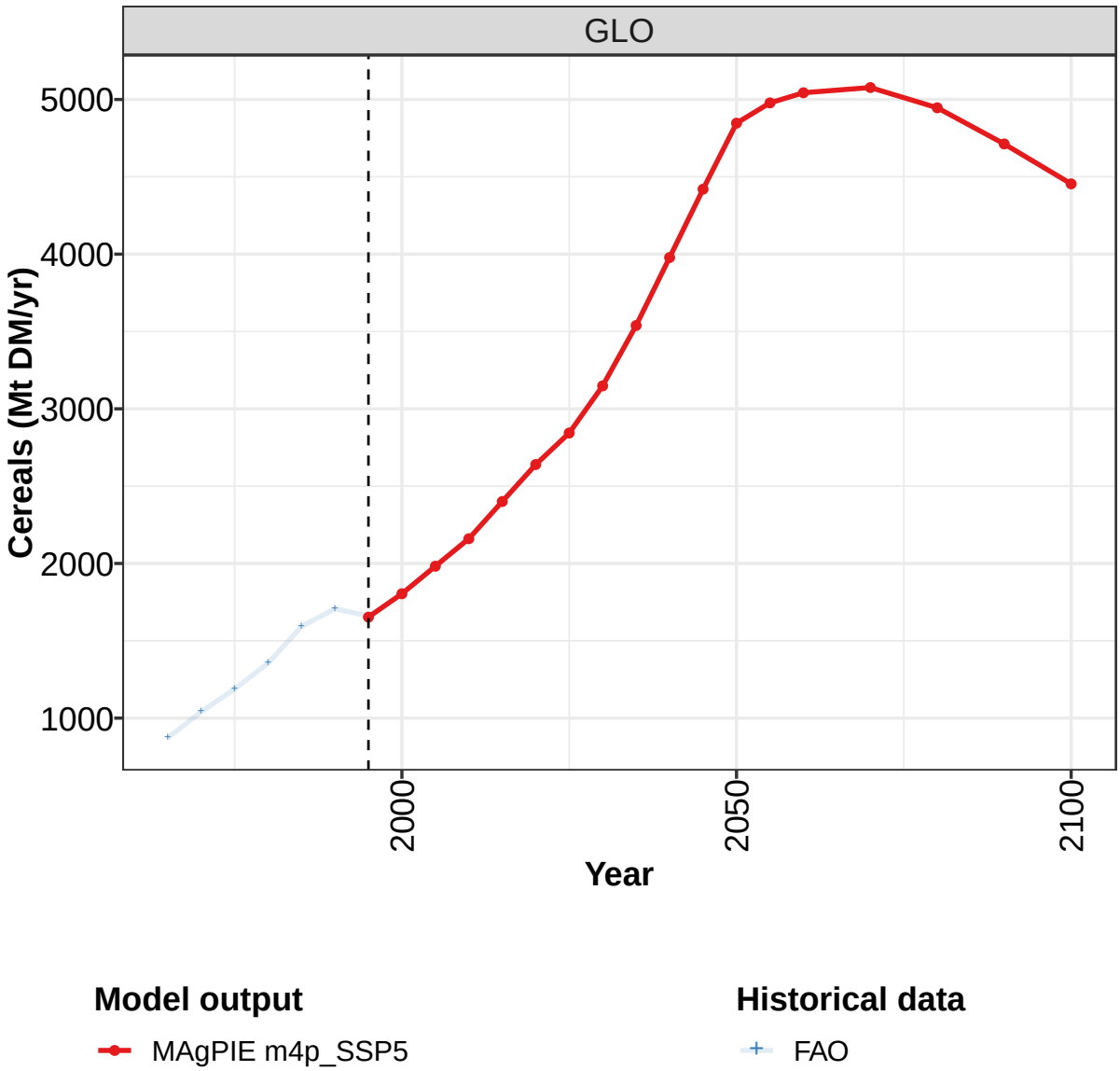
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1430	1679	1880	2110	2486	2702	2769	3057	3404	3830
CAZ	44	47	60	64	81	88	95	109	116	108
CHA	214	258	301	342	417	488	536	569	615	702
EUR	226	245	278	311	345	353	333	356	363	353
IND	135	173	190	196	239	289	330	360	360	426
JPN	21	20	19	17	19	17	16	15	15	13
LAM	153	182	199	237	294	305	343	384	462	615
MEA	34	38	46	50	61	70	78	78	108	108
NEU	29	33	43	48	52	58	54	57	65	63
OAS	143	168	194	229	269	304	345	394	455	535
REF	148	206	164	204	208	241	153	144	188	173
SSA	72	87	97	99	111	131	148	176	216	258
USA	210	221	289	314	390	358	338	415	440	475

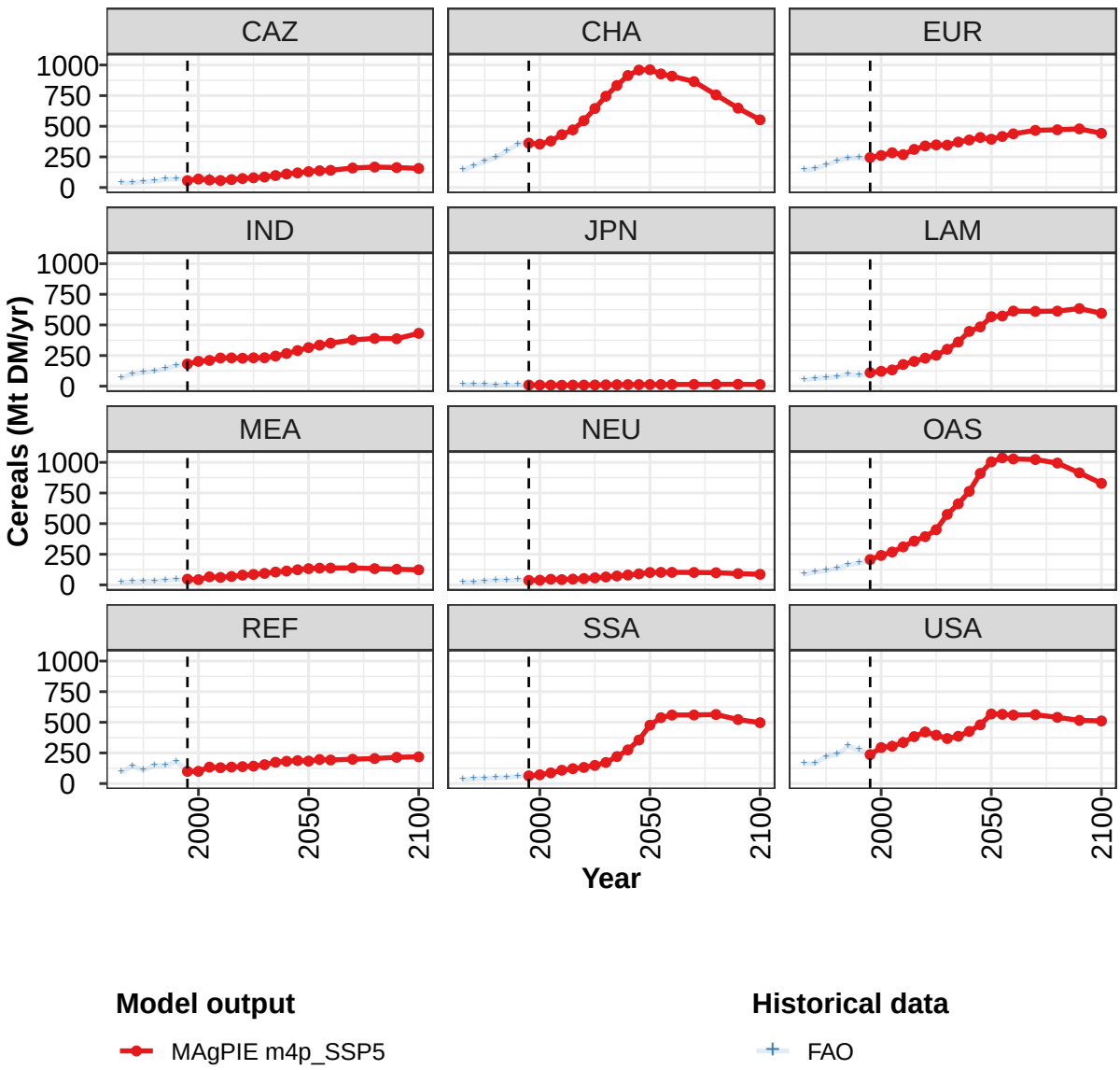
Table 1343: FAO — Production—Crops (Mt DM/yr)


GLO
Production|Crops|Cereals (Mt DM/yr)
5000
4000
3000
2000
1000
0
2000
2025
2050
2075
2100
Maize
Rice
Temperate cereals
Tropical cereals
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Crops|Cereals (Mt DM/yr)
1000
750
500
250
0
2000
2025
2050
2075
2100
Maize
Rice
Temperate cereals
Tropical cereals
Total

44.1 Cereals


GLO
5000
4000
3000
2000
1000
Cereals (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



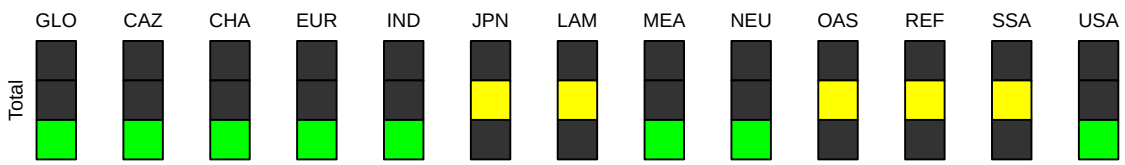


Figure 336: MAgPIE m4p_SSP5 — Production—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1653	1804	1982	2160	2401	2640	2844	3148	3539	3978	4420
CAZ	56	69	61	57	65	73	79	86	98	110	119
CHA	362	354	379	431	470	546	645	745	833	914	959
EUR	245	261	284	269	311	339	348	346	371	388	408
IND	182	203	210	230	231	228	232	232	246	267	291
JPN	10	9	9	8	9	9	10	11	12	13	13
LAM	110	122	133	177	202	229	253	301	360	447	484
MEA	46	43	66	61	69	80	85	94	105	113	124
NEU	37	38	46	43	47	52	57	64	72	80	90
OAS	207	240	268	310	358	394	450	575	662	763	910
REF	99	100	134	129	135	138	142	154	174	182	187
SSA	63	72	87	109	122	132	148	172	220	275	355
USA	236	294	304	335	383	421	395	367	386	425	479

Table 1344: MAgPIE m4p_SSP5 — Production—Crops—Cereals (Mt DM/yr) [PART 1/2]

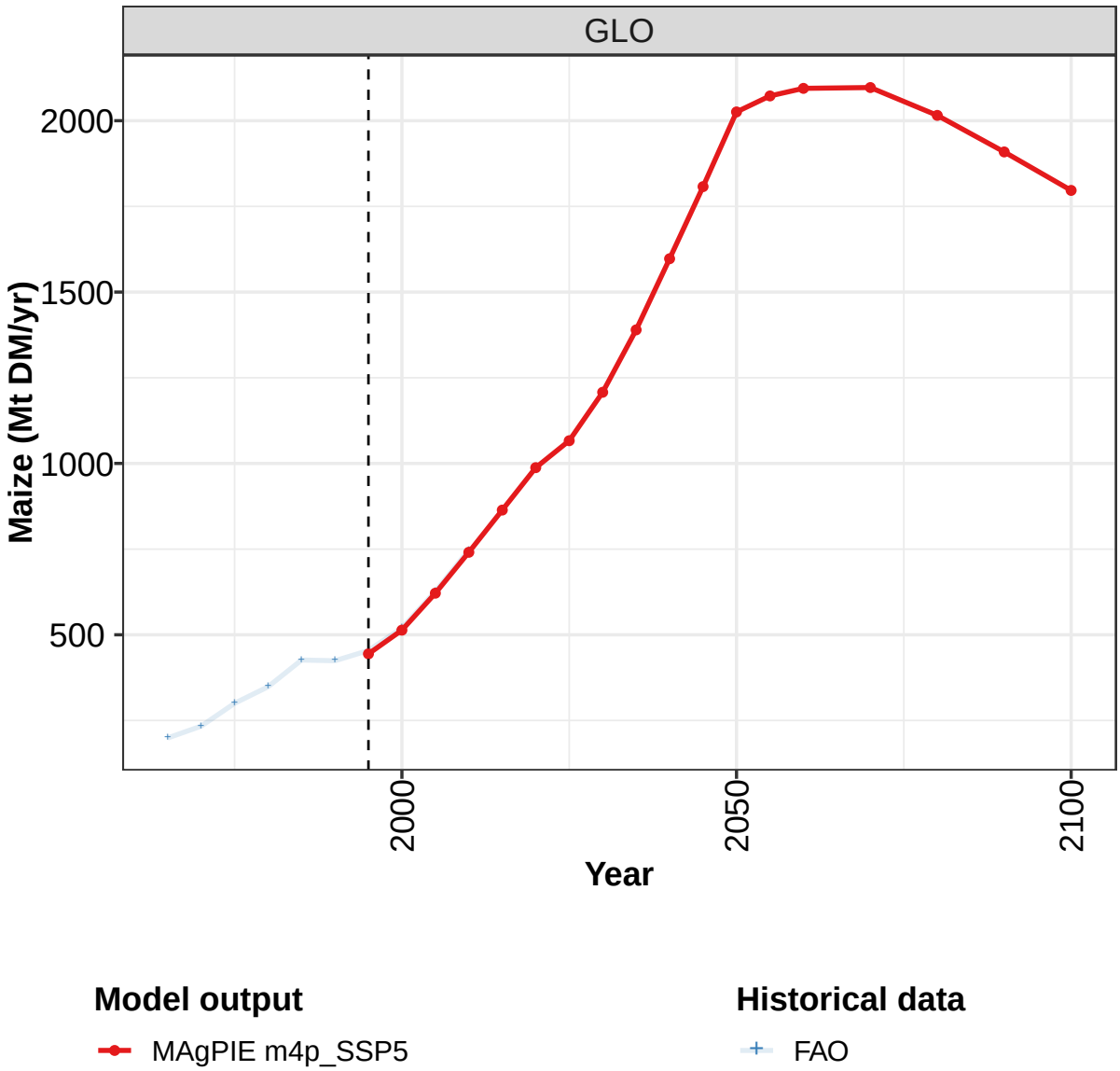
	2050	2055	2060	2070	2080	2090	2100
GLO	4847	4978	5043	5077	4946	4713	4454
CAZ	129	137	141	159	167	163	156
CHA	962	927	909	865	757	648	552
EUR	394	417	438	466	471	479	442
IND	315	335	351	378	390	388	432
JPN	14	14	14	14	15	16	14
LAM	567	572	613	611	613	634	595
MEA	132	137	137	139	132	127	123
NEU	101	102	102	101	99	92	86
OAS	1004	1037	1028	1023	994	914	829
REF	184	196	192	198	204	214	218
SSA	477	538	559	560	563	522	497
USA	568	565	559	562	540	516	511

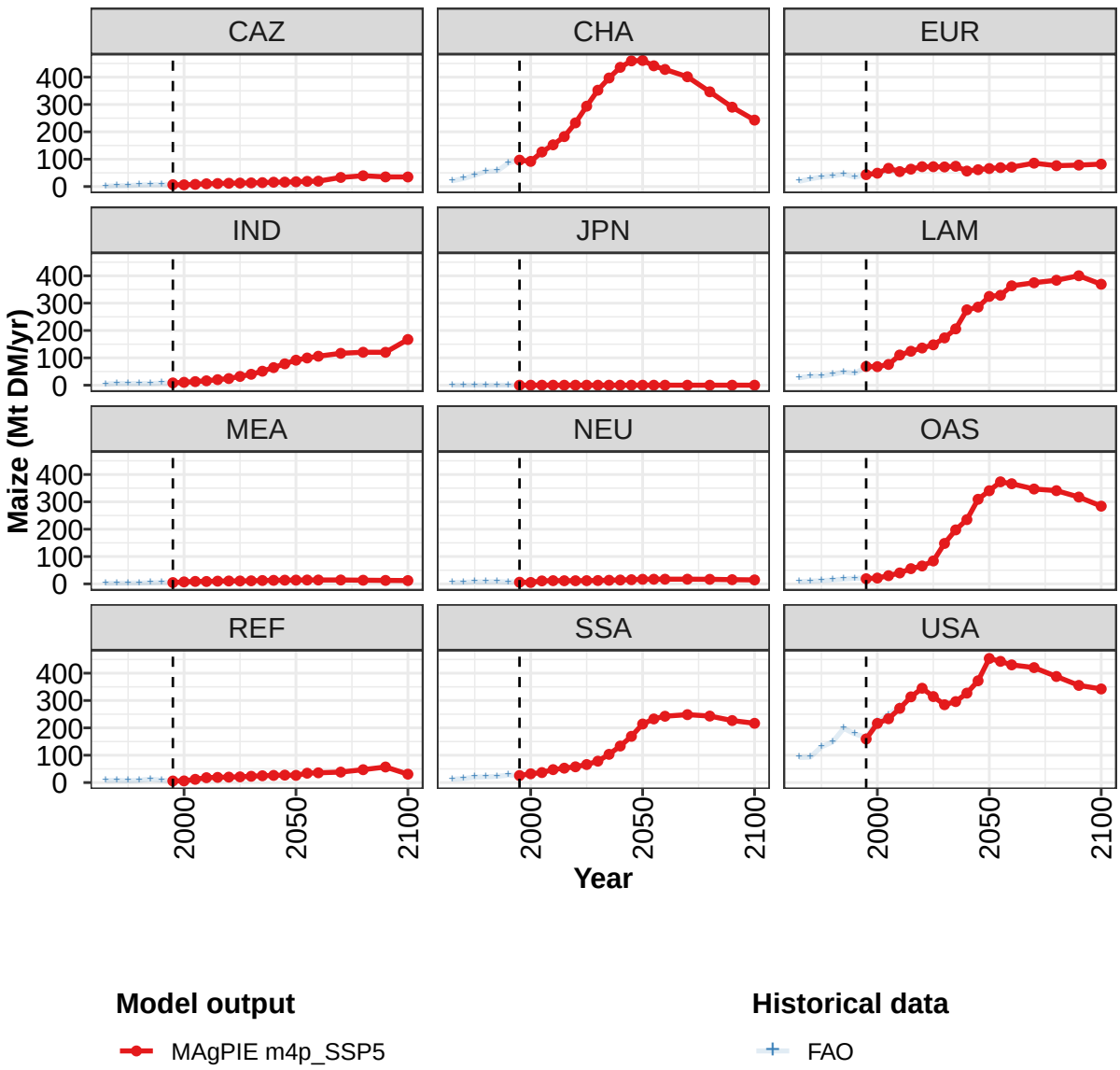
Table 1345: MAgPIE m4p_SSP5 — Production—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	872	1041	1188	1356	1593	1707	1659	1802	1984	2167
CAZ	37	37	49	51	65	71	68	76	81	70
CHA	142	176	214	245	297	354	366	356	376	436
EUR	143	155	184	217	238	241	229	247	256	249
IND	70	100	112	123	145	169	184	205	210	234
JPN	13	12	12	9	11	10	10	9	9	8
LAM	51	63	71	78	97	87	109	121	135	170
MEA	23	24	29	31	37	44	47	42	65	61
NEU	21	24	31	34	37	39	37	37	45	41
OAS	86	106	116	137	162	178	198	233	265	313
REF	92	144	108	147	146	180	104	102	133	118
SSA	33	38	43	46	52	59	63	72	88	112
USA	162	164	219	238	305	275	244	301	322	353

Table 1346: FAO — Production—Crops—Cereals (Mt DM/yr)

44.1.1 Maize


GLO
Maize (Mt DM/yr)
2000
1500
1000
500
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



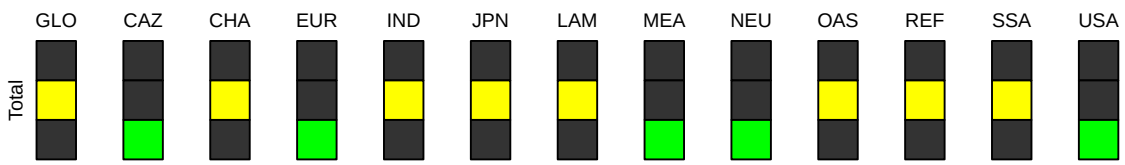


Figure 337: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	444	514	621	741	864	988	1066	1208	1390	1597	1808
CAZ	7	6	8	10	11	12	13	13	14	16	16
CHA	97	92	126	152	183	233	294	352	397	436	459
EUR	43	49	67	55	64	72	72	72	74	57	62
IND	8	11	13	16	20	24	32	40	51	64	78
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	68	68	76	110	124	136	148	173	206	276	286
MEA	5	7	9	9	10	11	11	11	12	13	14
NEU	6	5	11	12	12	12	12	12	13	14	15
OAS	19	21	30	40	56	66	84	148	198	235	309
REF	6	6	12	18	19	20	21	23	25	26	27
SSA	26	32	37	47	53	58	66	78	103	134	169
USA	159	216	233	271	313	345	314	285	296	327	372

Table 1347: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

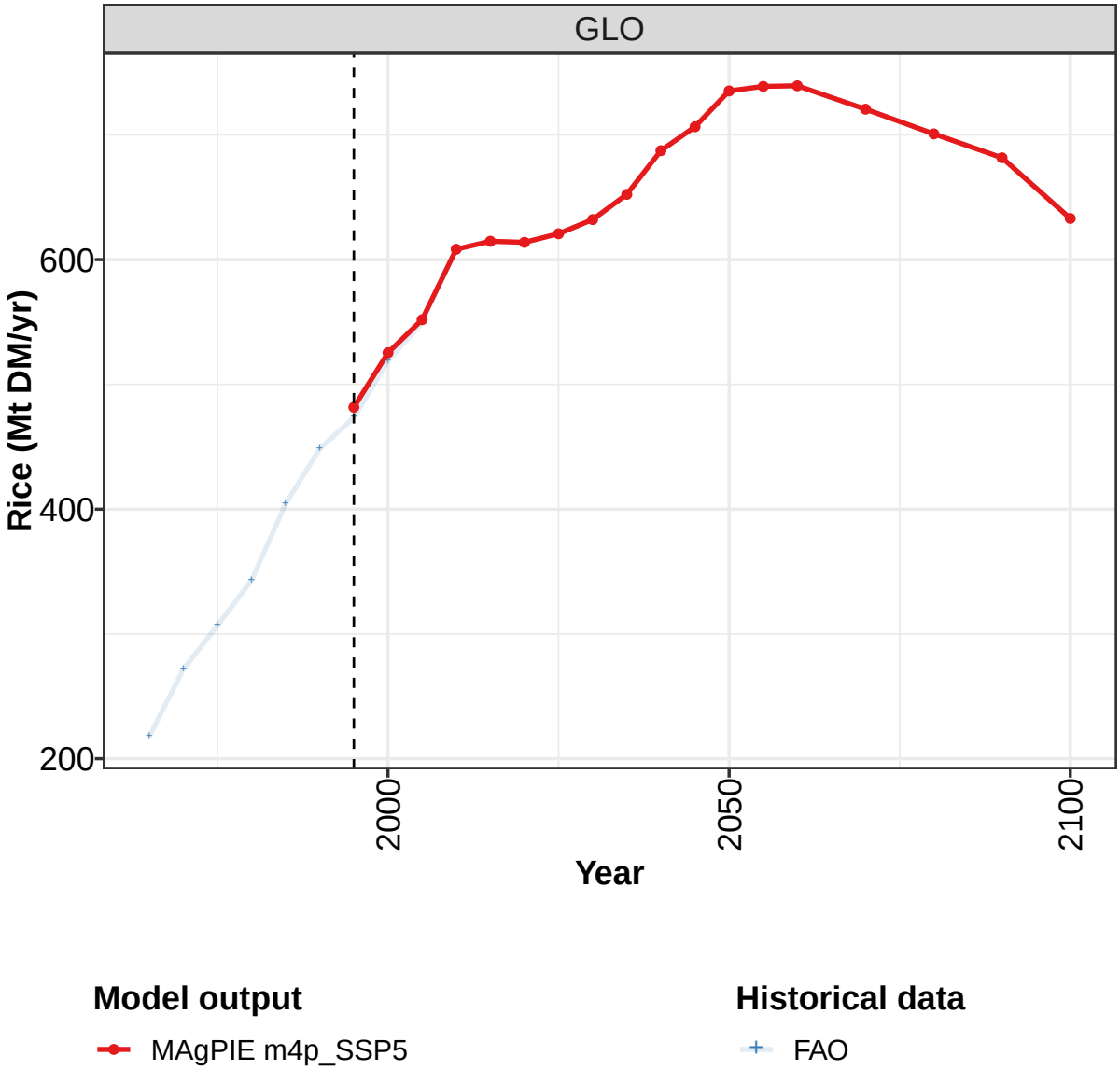
	2050	2055	2060	2070	2080	2090	2100
GLO	2026	2072	2094	2097	2016	1909	1797
CAZ	17	19	20	33	39	35	35
CHA	461	441	428	401	346	290	243
EUR	66	69	71	85	76	78	82
IND	92	100	106	117	121	120	167
JPN	0	0	0	0	0	0	0
LAM	325	329	363	375	384	400	369
MEA	14	14	14	14	13	13	12
NEU	17	17	17	17	17	15	15
OAS	341	373	366	347	341	318	284
REF	26	34	36	38	47	57	31
SSA	214	233	243	248	243	227	217
USA	454	443	430	420	388	355	342

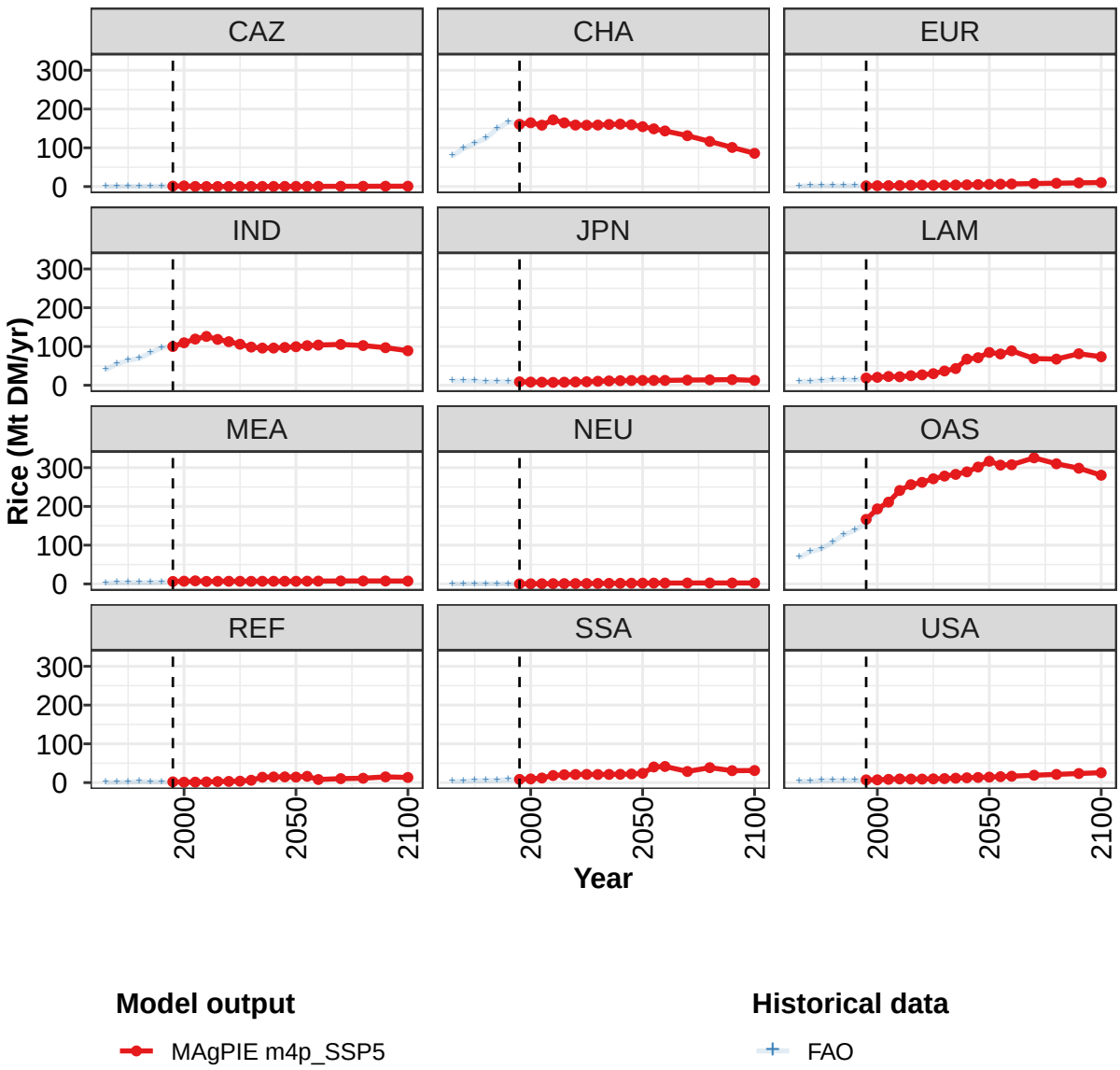
Table 1348: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	199	233	300	348	426	424	454	520	627	748
CAZ	2	3	3	5	7	7	7	7	9	11
CHA	21	29	42	55	56	86	99	93	123	156
EUR	19	28	35	39	45	34	44	47	58	52
IND	4	7	6	6	6	8	8	11	13	19
JPN	0	0	0	0	0	0	0	0	0	0
LAM	27	34	34	40	49	44	66	67	77	103
MEA	2	2	3	3	4	5	5	7	9	9
NEU	5	6	8	8	9	7	8	6	11	11
OAS	8	10	12	14	18	21	20	23	30	41
REF	7	8	6	8	13	9	6	7	12	16
SSA	12	15	20	21	23	27	26	32	37	51
USA	92	93	131	148	198	177	165	222	248	278

Table 1349: FAO — Production—Crops—Cereals—Maize (Mt DM/yr)

44.1.2 Rice


GLO
Rice (Mt DM/yr)
600
400
200
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



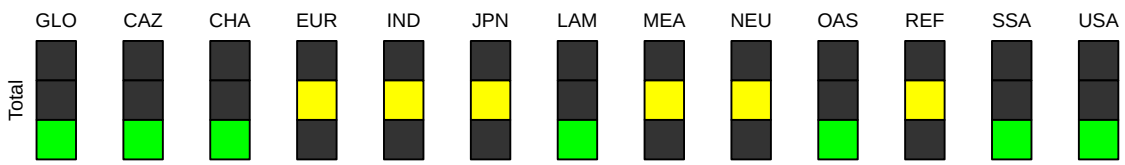


Figure 338: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	482	525	552	608	615	614	621	632	652	687	707
CAZ	1	2	0	0	0	0	0	0	0	0	0
CHA	161	164	158	172	164	159	158	159	160	161	159
EUR	2	2	2	3	3	4	3	4	4	5	5
IND	100	110	119	126	118	112	106	98	96	96	97
JPN	9	8	8	7	8	8	9	10	11	12	12
LAM	19	20	23	22	25	27	30	37	43	67	71
MEA	6	7	8	7	7	7	7	7	7	7	7
NEU	0	0	1	1	1	1	1	1	1	2	2
OAS	167	194	211	241	256	262	271	278	283	289	302
REF	2	1	1	2	3	3	4	6	14	15	15
SSA	8	10	12	18	20	21	21	21	21	22	22
USA	7	7	8	9	9	9	10	10	11	12	13

Table 1350: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

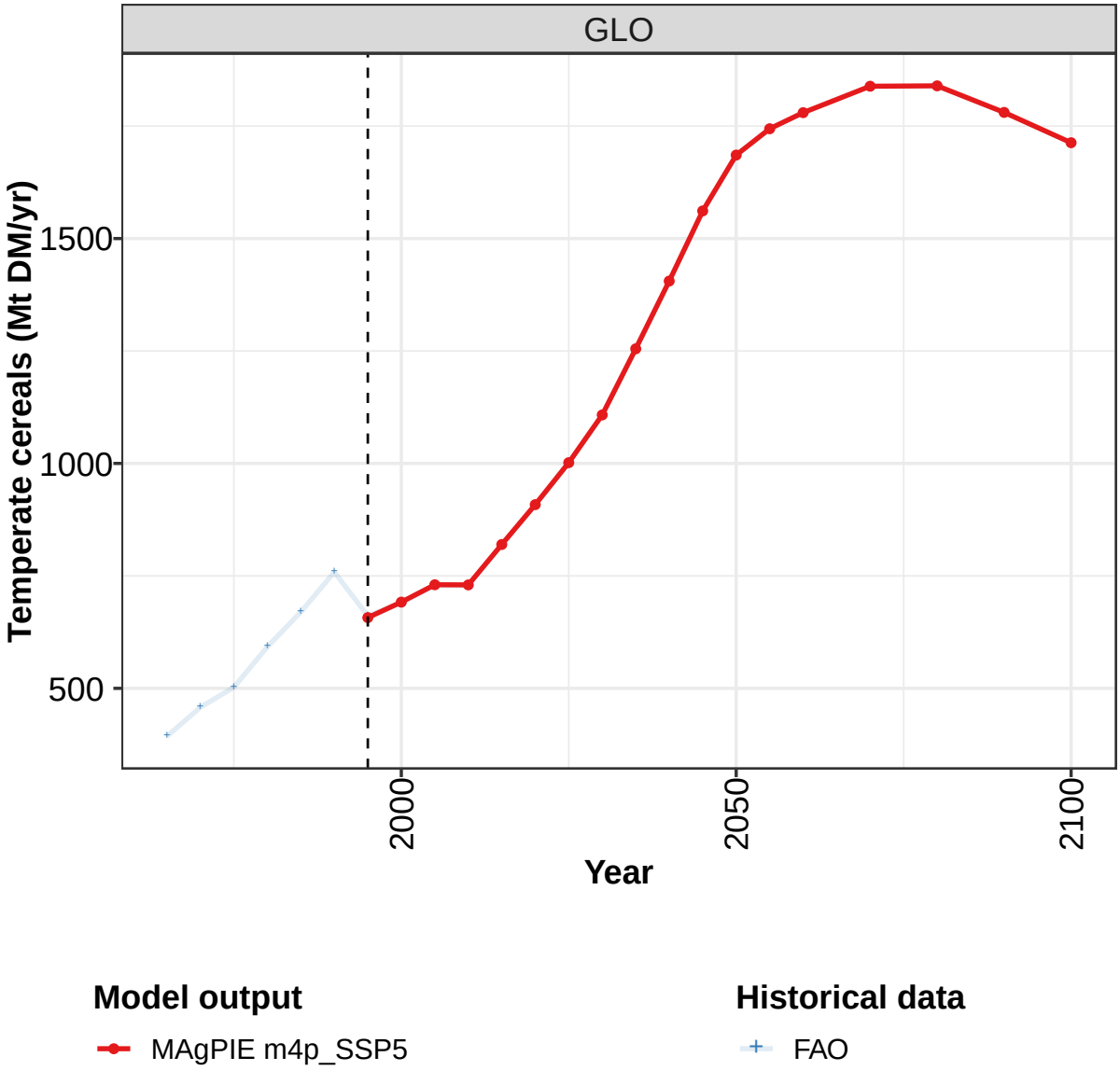
	2050	2055	2060	2070	2080	2090	2100
GLO	735	739	739	721	701	682	633
CAZ	0	1	1	1	1	1	1
CHA	155	149	143	131	116	101	86
EUR	6	6	7	8	9	9	11
IND	99	102	104	105	102	97	89
JPN	13	13	13	13	14	15	13
LAM	85	81	89	69	68	81	74
MEA	7	7	7	8	8	8	7
NEU	2	2	2	2	3	2	2
OAS	316	307	308	325	310	298	280
REF	14	16	8	10	11	15	13
SSA	24	40	42	29	39	31	31
USA	14	15	17	19	21	23	26

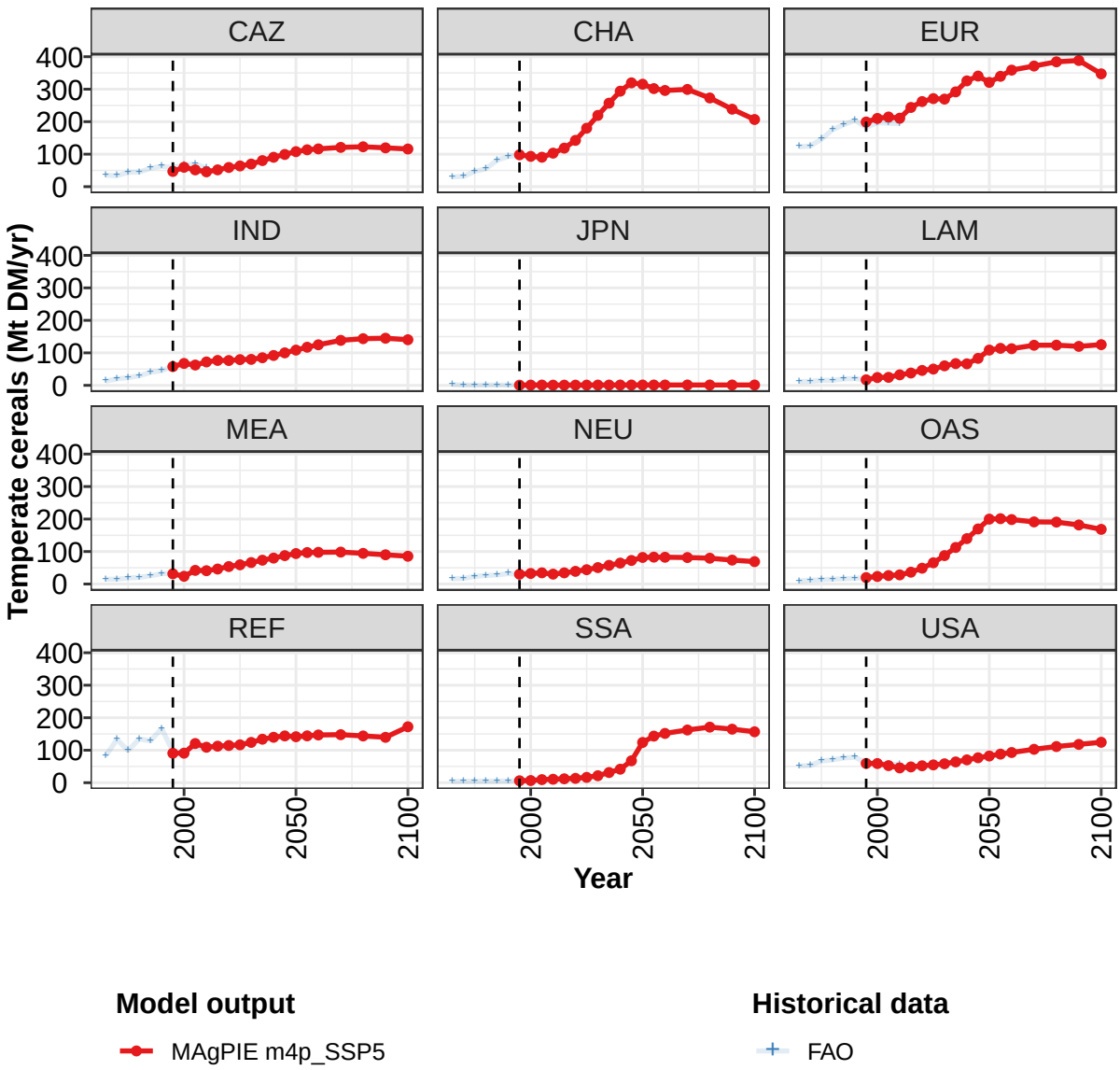
Table 1351: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	218	272	307	343	404	448	473	519	550	609
CAZ	0	0	0	1	1	1	1	1	0	0
CHA	79	98	112	124	149	167	163	165	158	172
EUR	1	2	2	2	2	2	2	2	2	3
IND	40	55	64	70	83	97	100	111	120	125
JPN	11	11	11	8	10	9	9	8	8	7
LAM	9	10	12	14	15	14	19	20	23	22
MEA	3	3	3	3	4	5	6	7	8	7
NEU	0	0	0	0	0	0	0	0	1	1
OAS	68	83	90	107	127	138	156	186	208	243
REF	0	1	2	2	2	2	1	1	1	2
SSA	3	4	5	5	6	8	8	10	12	18
USA	3	3	5	6	5	6	7	8	9	10

Table 1352: FAO — Production—Crops—Cereals—Rice (Mt DM/yr)

44.1.3 Temperate cereals





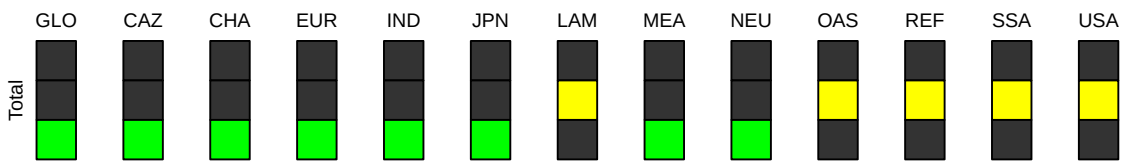


Figure 339: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	657	692	730	730	820	908	1002	1108	1255	1405	1561
CAZ	47	60	52	46	52	59	64	70	80	91	99
CHA	98	93	91	103	119	142	180	219	257	294	320
EUR	199	210	214	211	244	262	271	270	292	326	340
IND	58	67	63	72	77	77	79	80	85	92	100
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	17	24	25	32	38	46	50	60	67	66	83
MEA	31	24	42	41	46	54	59	66	73	80	87
NEU	30	33	35	31	34	39	44	51	58	65	73
OAS	20	23	26	28	36	49	65	88	113	140	170
REF	91	91	121	109	112	115	117	124	134	140	144
SSA	6	7	10	11	12	13	16	22	31	42	68
USA	59	59	53	46	49	52	55	58	64	70	77

Table 1353: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

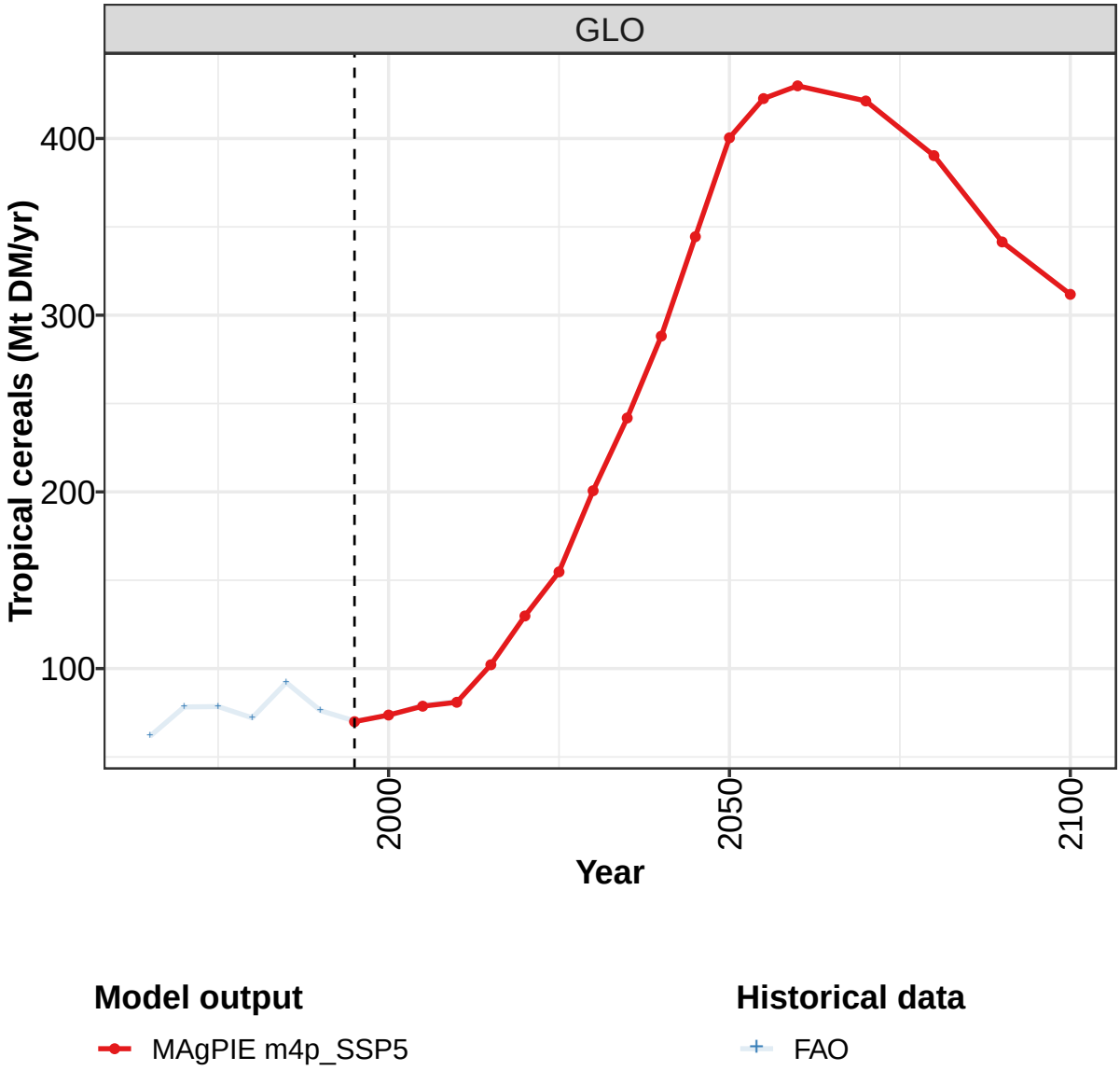
	2050	2055	2060	2070	2080	2090	2100
GLO	1686	1744	1780	1839	1839	1780	1713
CAZ	108	114	116	121	123	119	116
CHA	315	302	296	299	273	238	207
EUR	321	340	359	371	384	388	347
IND	109	117	125	138	144	145	140
JPN	1	1	1	1	1	1	1
LAM	109	114	113	123	124	120	125
MEA	94	97	98	98	94	90	86
NEU	82	83	82	82	80	74	69
OAS	200	201	198	191	191	182	168
REF	142	144	147	148	144	140	172
SSA	124	143	152	162	171	165	157
USA	82	88	93	103	111	118	124

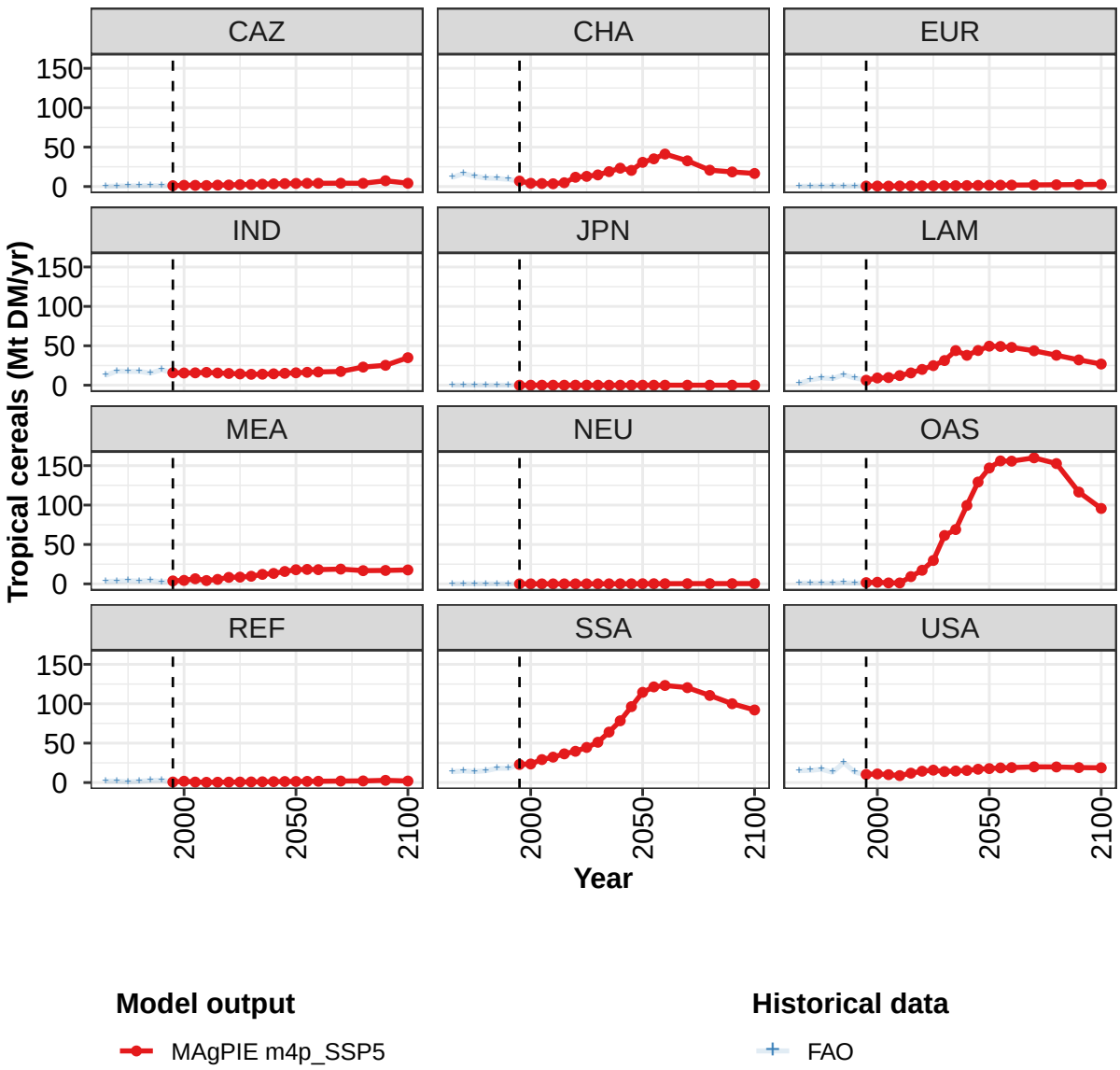
Table 1354: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	393	458	502	592	670	758	661	690	728	729
CAZ	35	34	44	45	57	63	59	66	70	58
CHA	30	32	47	55	81	93	98	94	91	105
EUR	123	125	146	175	191	204	183	197	195	194
IND	13	20	24	29	40	45	59	68	61	72
JPN	2	1	0	1	1	1	1	1	1	1
LAM	12	12	16	15	20	21	17	24	25	33
MEA	15	15	18	21	25	32	32	24	42	42
NEU	16	17	23	27	28	32	29	31	33	29
OAS	9	12	13	15	16	18	20	23	26	28
REF	83	133	99	135	129	166	96	93	119	100
SSA	4	5	4	5	5	5	6	7	9	11
USA	52	53	67	70	76	78	61	61	56	57

Table 1355: FAO — Production—Crops—Cereals—Temperate cereals (Mt DM/yr)

44.1.4 Tropical cereals





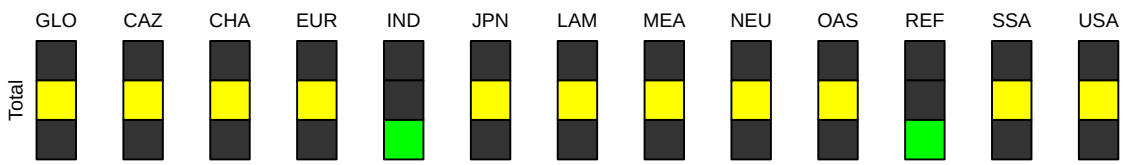


Figure 340: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	70	74	79	81	102	130	155	201	242	288	344
CAZ	1	2	1	1	2	2	2	3	3	3	4
CHA	7	4	4	4	5	12	13	15	19	23	20
EUR	1	1	0	1	1	1	1	1	1	1	1
IND	16	15	16	16	15	15	14	14	14	14	15
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	9	10	12	16	20	25	31	44	38	44
MEA	4	4	7	4	6	8	9	10	12	13	16
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	2	2	1	1	9	17	30	61	69	100	129
REF	1	2	1	0	0	1	1	1	1	1	1
SSA	23	24	29	32	36	40	45	51	64	78	96
USA	10	11	10	9	12	14	16	14	15	15	17

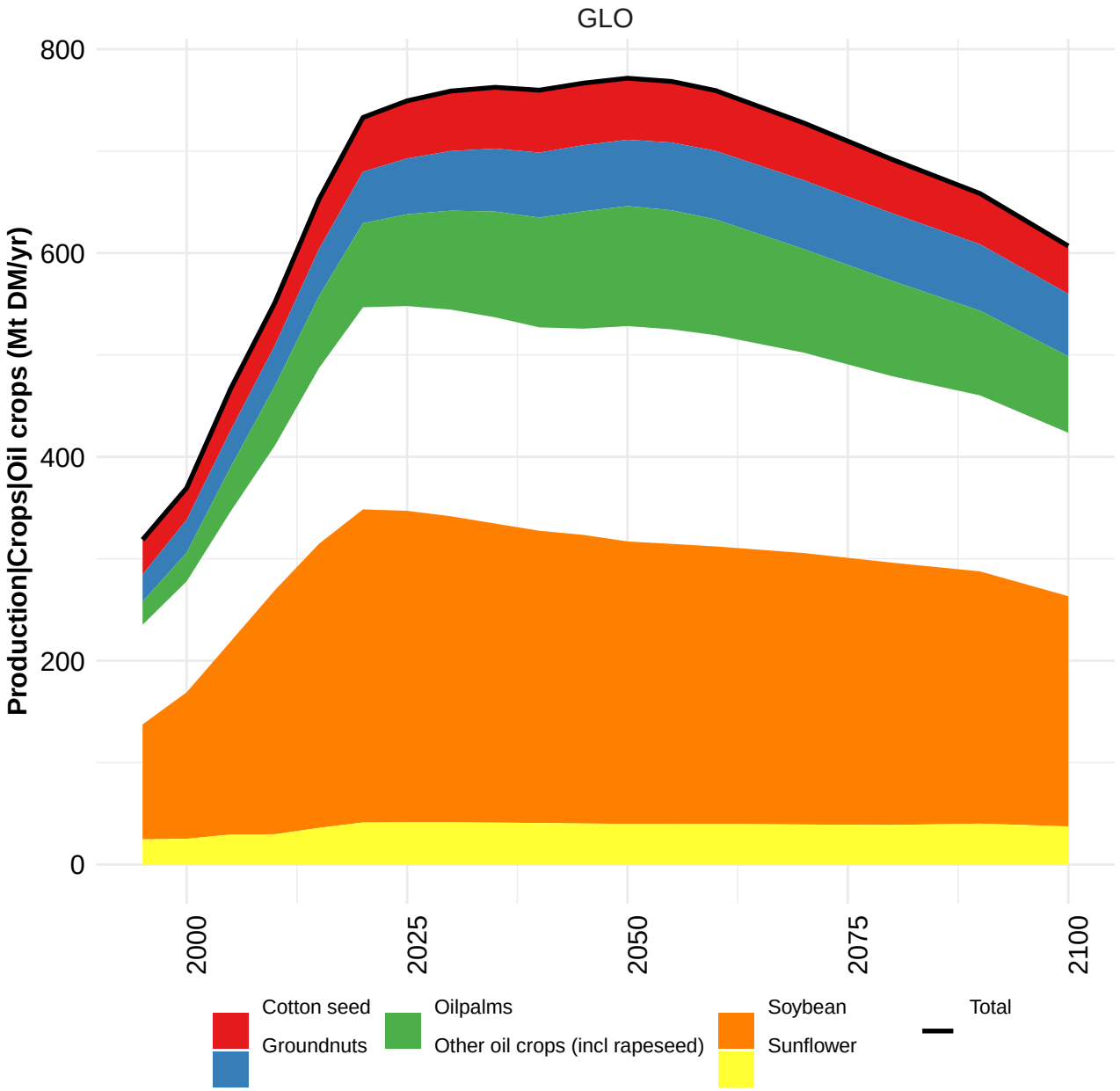
Table 1356: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

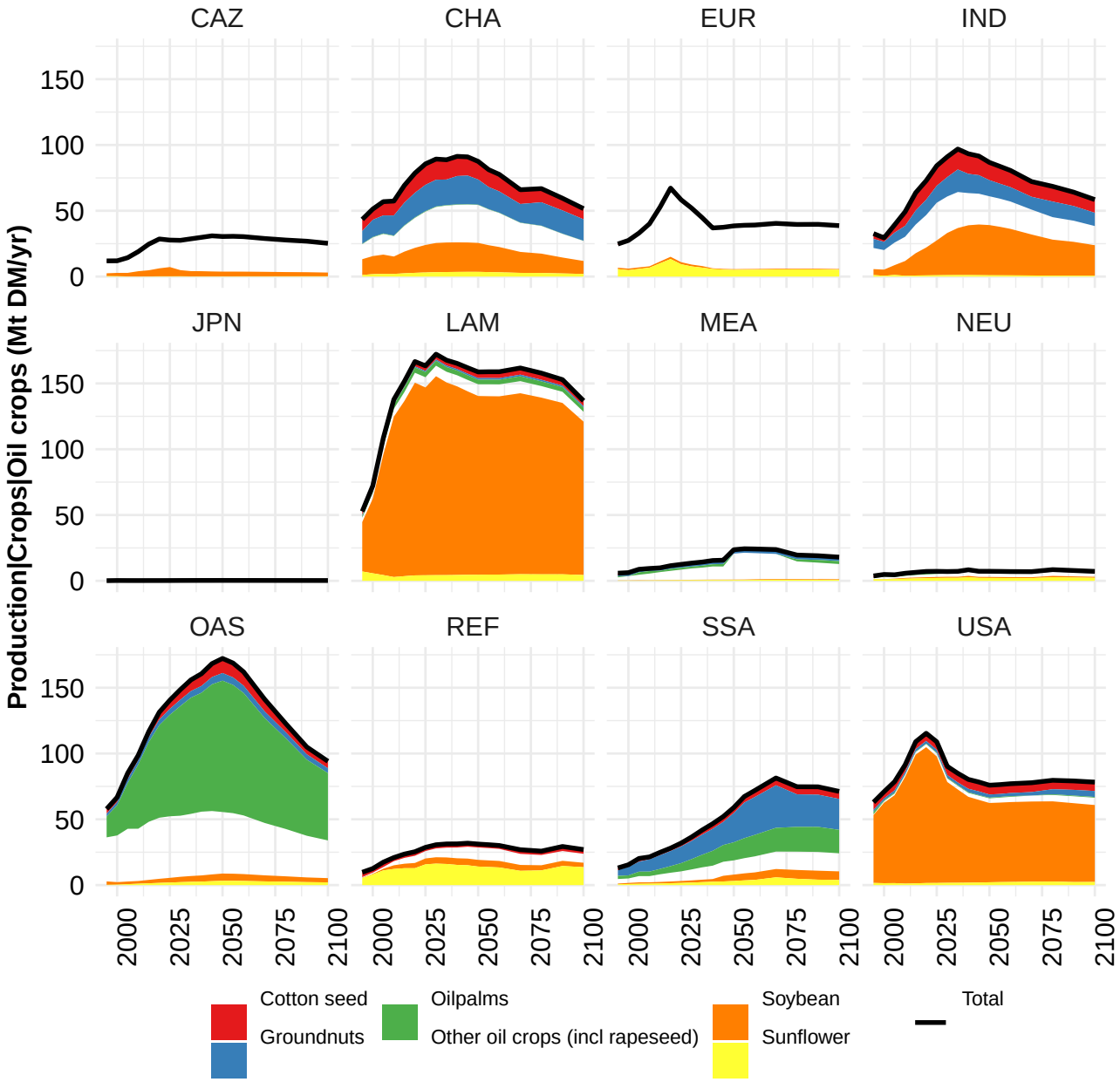
	2050	2055	2060	2070	2080	2090	2100
GLO	400	423	430	421	390	341	312
CAZ	4	4	4	4	4	7	4
CHA	31	35	41	33	21	19	17
EUR	2	2	2	2	2	2	3
IND	16	16	17	17	23	25	35
JPN	0	0	0	0	0	0	0
LAM	50	49	48	44	38	32	27
MEA	18	18	18	19	17	17	18
NEU	0	0	0	0	0	0	0
OAS	147	156	156	160	153	117	96
REF	1	2	2	2	2	3	2
SSA	114	121	123	120	111	100	92
USA	18	19	19	20	20	19	19

Table 1357: MAgPIE m4p_SSP5 — Production—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

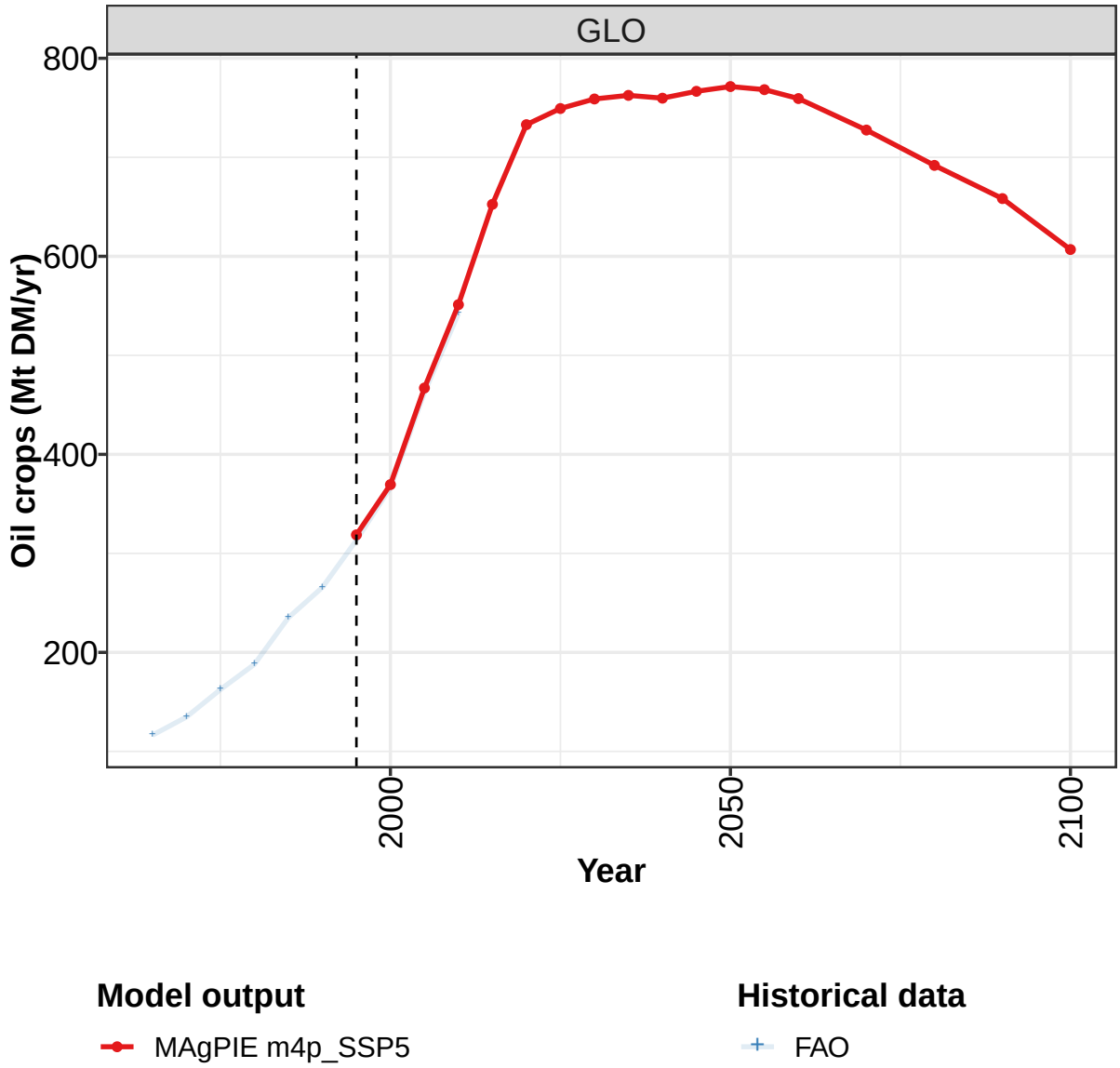
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	61.7	78.3	78.5	72.1	92.1	76.2	70.4	73.3	79.4	81.4
CAZ	0.2	0.5	0.8	0.8	1.2	0.9	1.2	1.9	1.8	1.4
CHA	11.7	16.3	13.2	10.8	10.3	9.1	6.9	4.2	3.8	3.5
EUR	0.2	0.4	0.5	0.6	0.3	0.5	0.5	0.6	0.5	0.6
IND	12.5	17.8	17.6	17.4	15.5	19.5	15.8	15.5	15.6	17.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.2	6.7	9.2	8.4	13.3	8.9	7.0	10.0	10.0	12.2
MEA	3.0	3.4	4.0	3.5	4.4	2.3	3.8	4.1	6.4	4.2
NEU	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
OAS	1.0	1.1	1.1	1.0	1.3	1.1	1.0	1.1	1.1	1.2
REF	1.8	1.7	1.0	1.6	2.6	2.9	0.7	1.5	0.6	0.3
SSA	13.7	14.7	14.0	15.0	18.0	18.1	23.0	23.8	30.4	32.2
USA	15.1	15.4	16.9	13.1	25.2	13.0	10.4	10.7	9.1	8.0

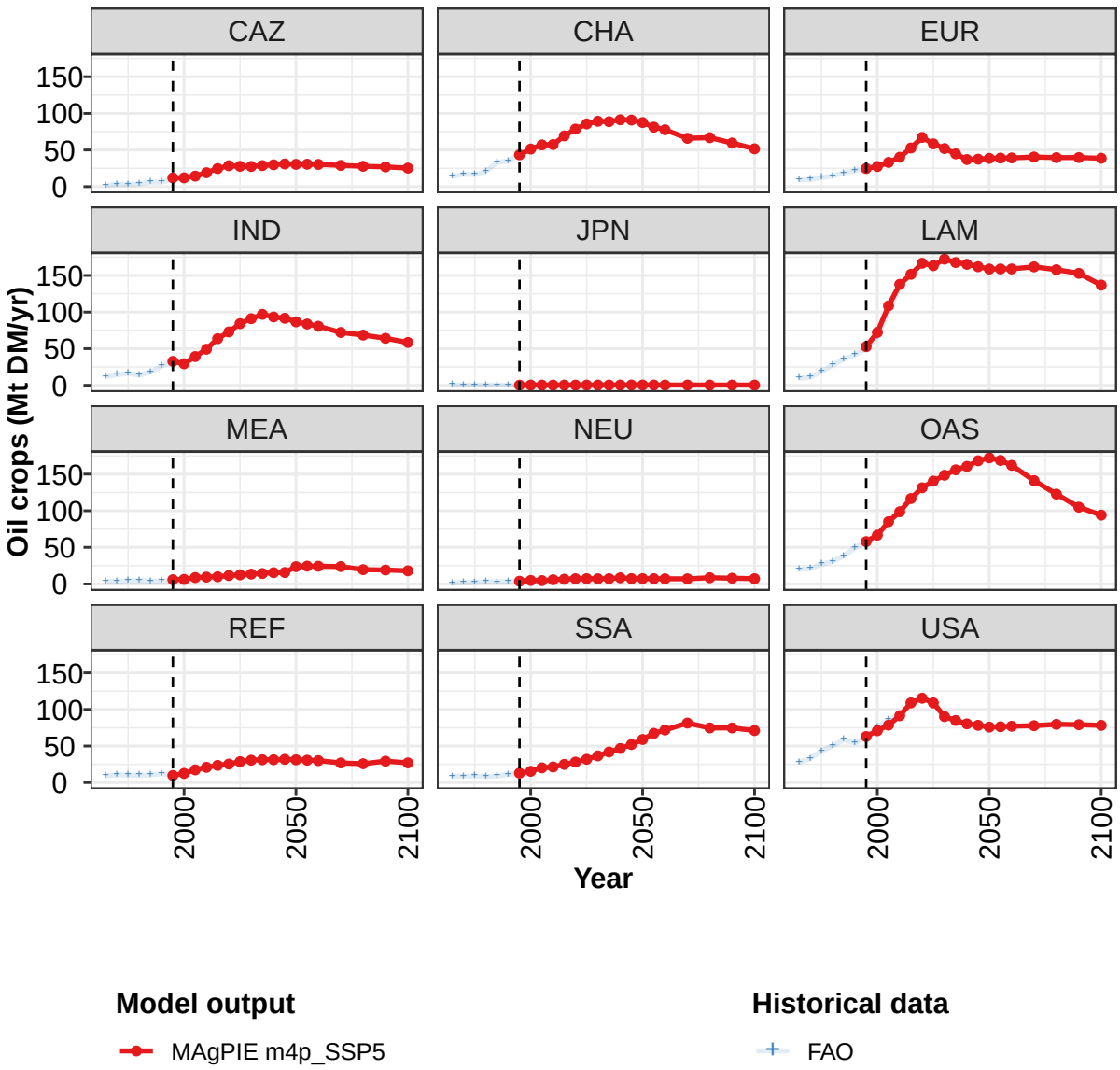
Table 1358: FAO — Production—Crops—Cereals—Tropical cereals (Mt DM/yr)


GLO
Production|Crops|Oil crops (Mt DM/yr)
800
600
400
200
0
2000
2025
2050
2075
2100
Cotton seed
Groundnuts
Oilpalms
Other oil crops (incl rapeseed)
Soybean
Sunflower
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Crops|Oil crops (Mt DM/yr)
150
100
50
0
2000
2025
2050
2075
2100
Cotton seed
Groundnuts
Oilpalms
Other oil crops (incl rapeseed)
Soybean
Sunflower
Total

44.2 Oil crops





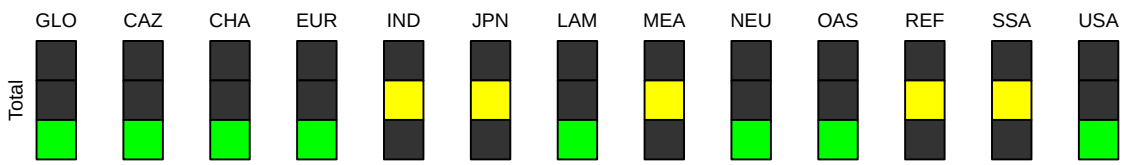


Figure 341: MAgPIE m4p_SSP5 — Production—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	319	369	467	551	653	733	749	759	763	760	767
CAZ	12	12	14	19	25	29	28	28	29	30	31
CHA	43	51	57	57	69	79	86	89	89	91	91
EUR	25	27	33	40	53	67	58	52	45	37	37
IND	33	29	39	49	64	73	84	91	97	93	92
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	53	72	109	138	152	167	163	172	168	165	162
MEA	6	6	9	9	10	11	12	13	14	15	16
NEU	4	5	5	6	6	7	7	7	7	8	7
OAS	58	67	85	99	117	131	141	149	156	161	168
REF	10	13	17	21	24	25	29	31	31	31	32
SSA	13	15	20	21	25	28	32	37	42	47	52
USA	63	71	79	91	109	115	109	90	85	80	78

Table 1359: MAgPIE m4p_SSP5 — Production—Crops—Oil crops (Mt DM/yr) [PART 1/2]

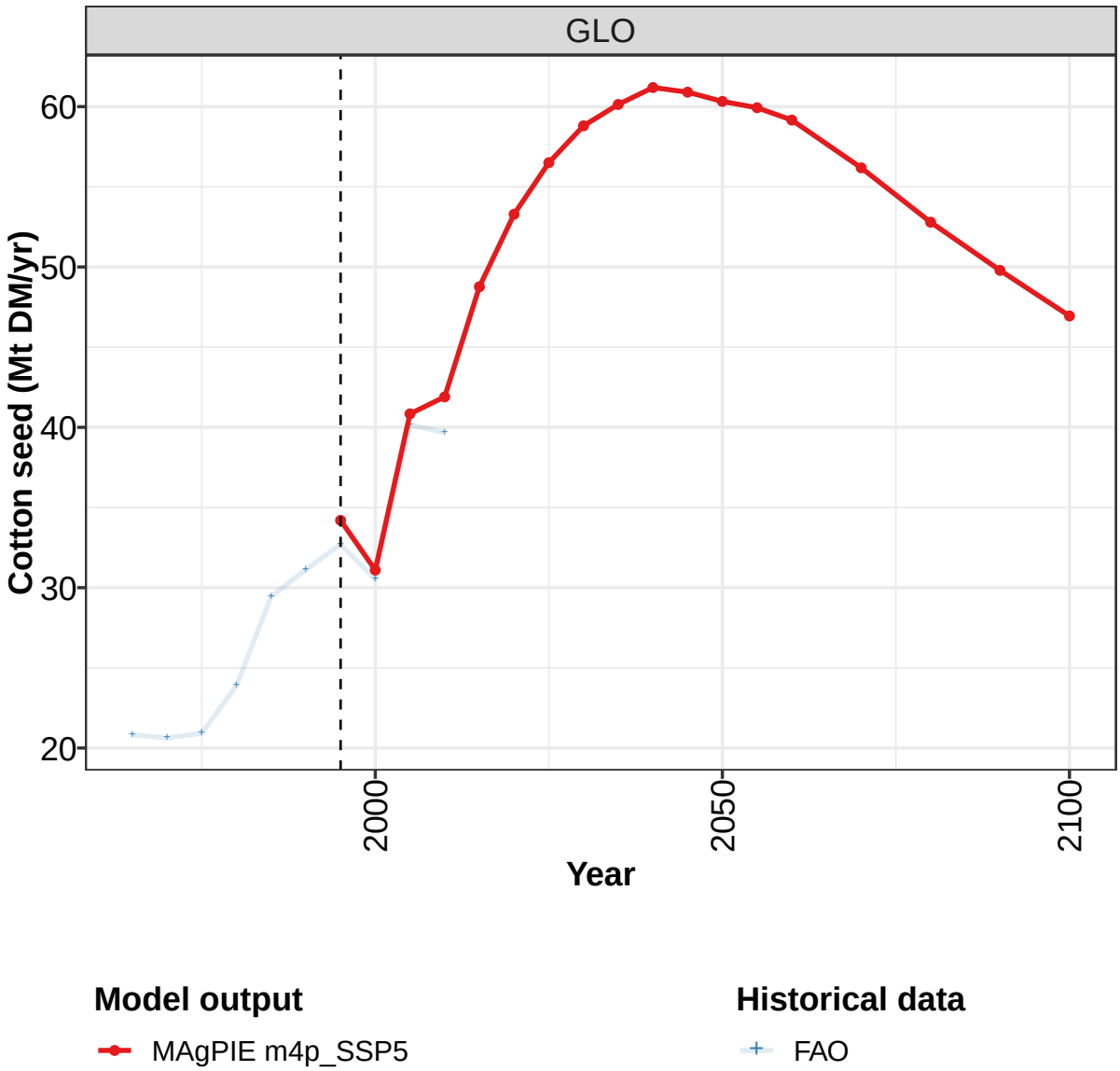
	2050	2055	2060	2070	2080	2090	2100
GLO	771	768	759	728	692	658	607
CAZ	30	31	30	29	28	27	25
CHA	88	81	78	66	67	60	52
EUR	39	39	39	40	40	40	39
IND	87	84	81	72	69	64	58
JPN	0	0	0	0	0	0	0
LAM	159	159	159	162	158	153	137
MEA	24	24	24	24	20	19	18
NEU	7	7	7	7	9	8	7
OAS	172	169	162	141	123	105	94
REF	31	31	30	27	26	29	27
SSA	59	67	72	81	75	75	71
USA	76	76	77	78	80	79	78

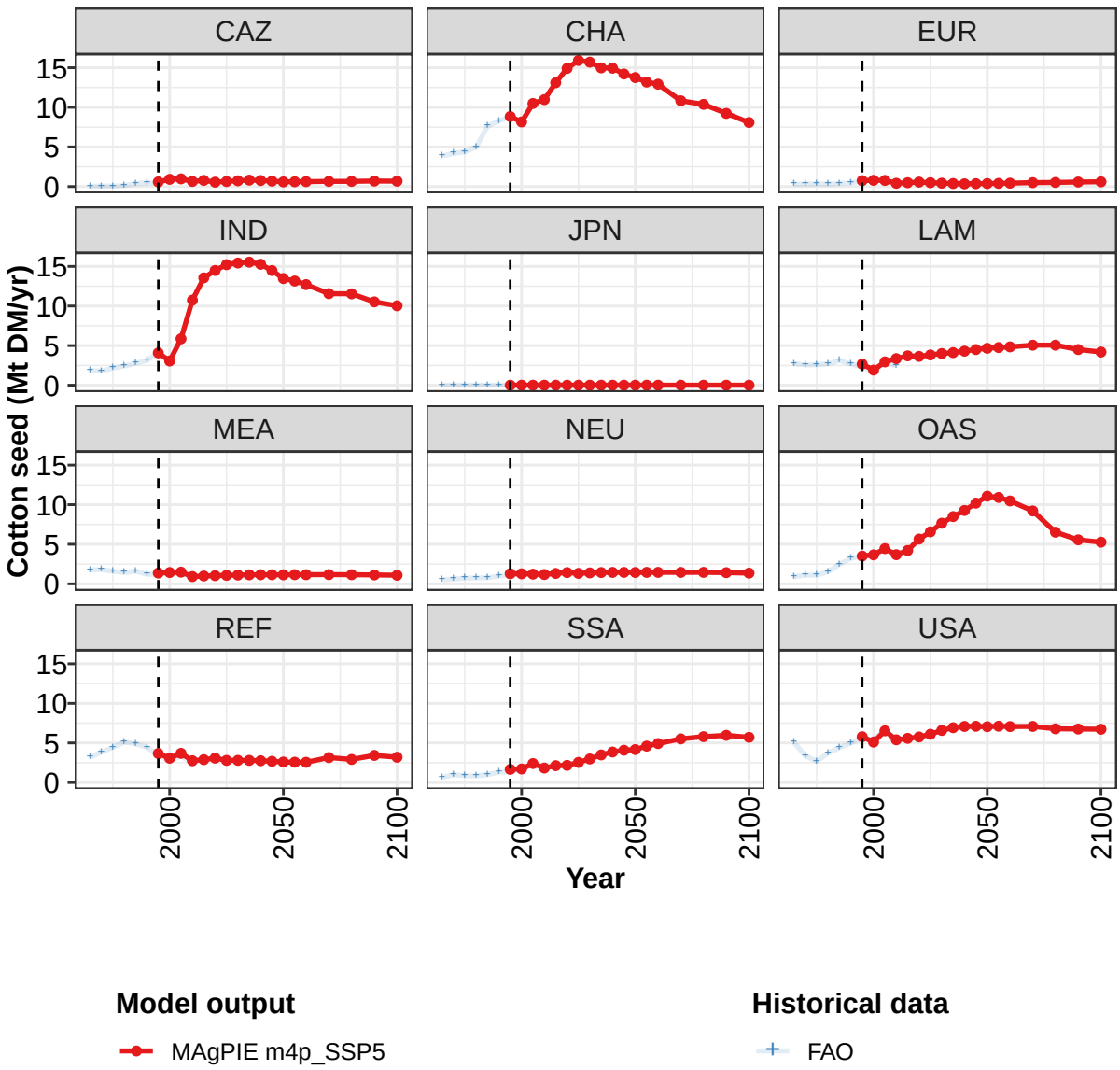
Table 1360: MAgPIE m4p_SSP5 — Production—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	116	135	163	188	235	266	313	366	462	542
CAZ	1	3	3	4	6	6	10	13	15	19
CHA	14	17	17	21	33	35	44	52	56	57
EUR	9	10	12	15	19	22	25	28	33	39
IND	12	15	16	14	18	26	33	29	39	49
JPN	0	0	0	0	0	0	0	0	0	0
LAM	9	11	18	27	36	42	50	66	101	133
MEA	3	4	5	4	4	4	5	6	7	7
NEU	1	2	2	3	3	4	3	4	4	5
OAS	20	21	27	31	38	49	58	66	84	100
REF	9	11	10	10	11	12	11	11	17	20
SSA	9	9	9	8	9	11	12	15	20	22
USA	28	33	43	50	59	54	62	76	86	90

Table 1361: FAO — Production—Crops—Oil crops (Mt DM/yr)

44.2.1 Cotton seed





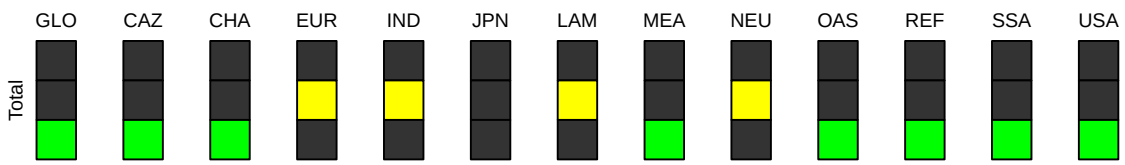


Figure 342: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.2	31.1	40.8	41.9	48.8	53.3	56.5	58.8	60.1	61.2	60.9
CAZ	0.6	0.9	1.0	0.6	0.8	0.6	0.6	0.7	0.8	0.8	0.7
CHA	8.8	8.2	10.5	11.0	13.1	14.9	15.9	15.7	15.0	14.9	14.2
EUR	0.7	0.8	0.8	0.4	0.5	0.6	0.5	0.4	0.4	0.3	0.4
IND	4.1	3.1	5.9	10.7	13.6	14.5	15.2	15.4	15.5	15.3	14.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.7	1.9	2.9	3.4	3.7	3.6	3.8	4.0	4.1	4.3	4.5
MEA	1.4	1.4	1.5	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2
NEU	1.3	1.3	1.2	1.2	1.3	1.4	1.3	1.4	1.4	1.5	1.5
OAS	3.5	3.7	4.5	3.7	4.2	5.7	6.6	7.7	8.5	9.3	10.2
REF	3.7	3.1	3.7	2.8	2.9	3.1	2.8	2.8	2.8	2.8	2.7
SSA	1.7	1.7	2.4	1.8	2.1	2.2	2.5	3.0	3.5	3.9	4.1
USA	5.8	5.1	6.5	5.4	5.6	5.8	6.1	6.6	6.9	7.1	7.1

Table 1362: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

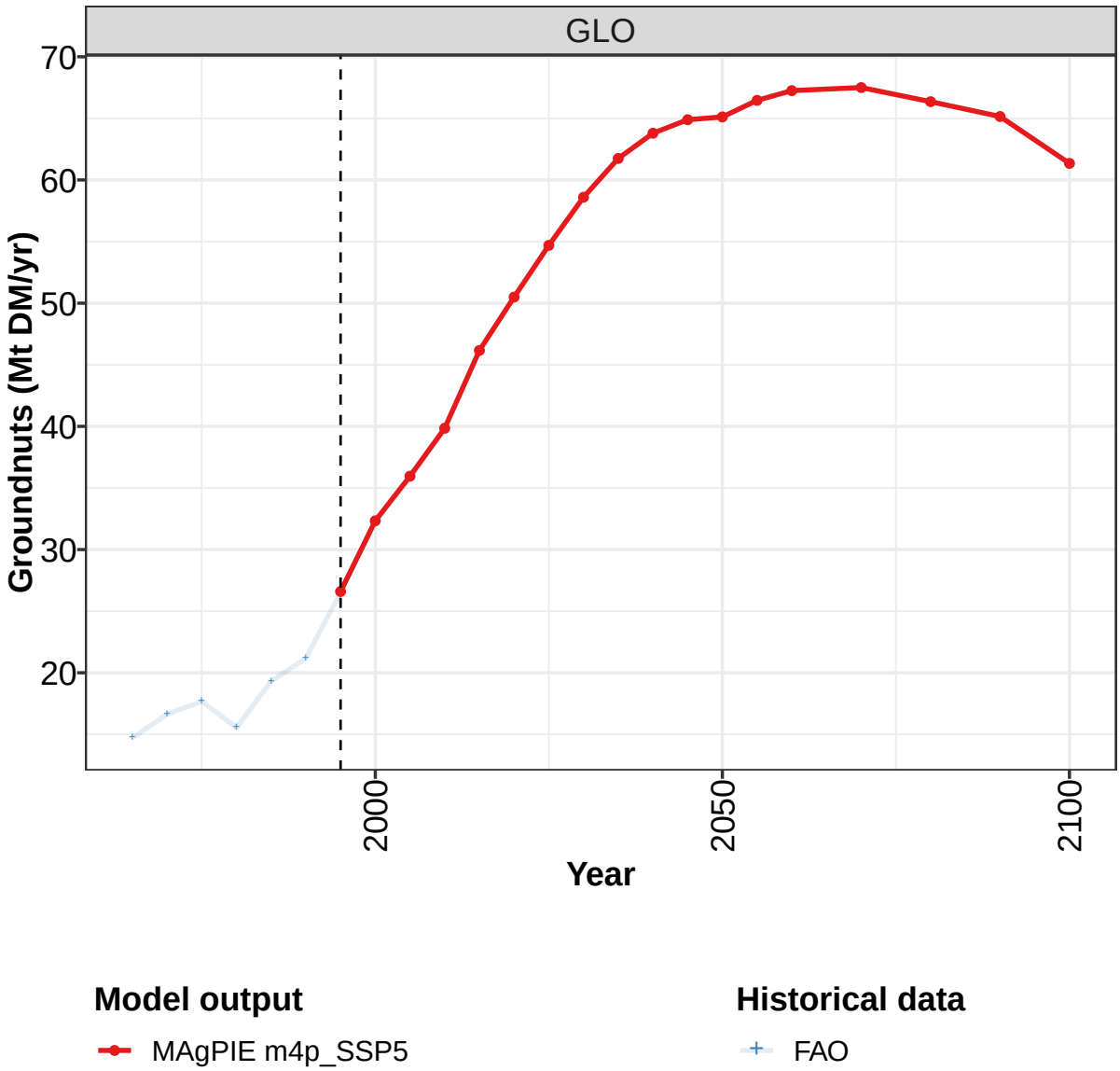
	2050	2055	2060	2070	2080	2090	2100
GLO	60.3	59.9	59.2	56.2	52.8	49.8	46.9
CAZ	0.6	0.6	0.6	0.6	0.7	0.7	0.7
CHA	13.8	13.2	12.9	10.8	10.4	9.2	8.1
EUR	0.4	0.4	0.4	0.5	0.5	0.6	0.6
IND	13.5	13.2	12.7	11.6	11.5	10.5	10.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	4.7	4.8	4.8	5.1	5.1	4.5	4.2
MEA	1.1	1.2	1.2	1.2	1.2	1.1	1.1
NEU	1.4	1.5	1.5	1.5	1.5	1.4	1.4
OAS	11.1	10.9	10.5	9.2	6.5	5.6	5.3
REF	2.6	2.6	2.6	3.2	2.9	3.4	3.2
SSA	4.2	4.6	4.9	5.5	5.8	6.0	5.7
USA	7.1	7.1	7.1	7.1	6.8	6.8	6.7

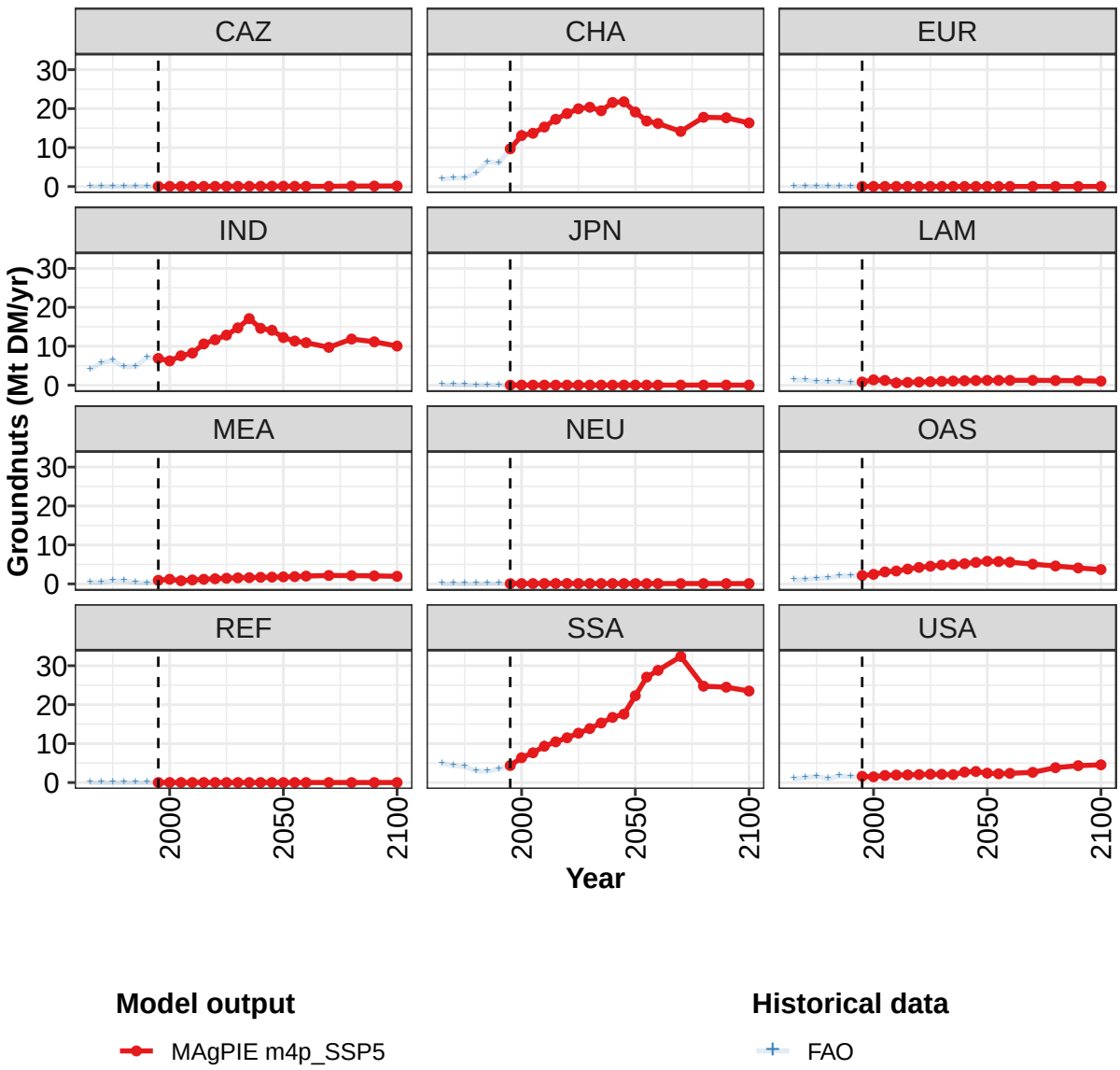
Table 1363: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	20.8	20.6	20.9	23.9	29.4	31.1	32.7	30.5	40.2	39.7
CAZ	0.0	0.0	0.0	0.1	0.4	0.5	0.4	1.0	0.8	0.5
CHA	3.9	4.2	4.4	5.0	7.6	8.3	8.8	8.1	10.5	11.0
EUR	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.8	0.8	0.4
IND	1.9	1.8	2.2	2.4	2.8	3.1	4.1	3.1	5.9	10.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.7	2.6	2.6	2.7	3.1	2.7	2.3	1.8	2.9	2.5
MEA	1.8	1.8	1.6	1.4	1.6	1.2	1.2	1.4	1.4	0.7
NEU	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.2	1.2	1.2
OAS	0.9	1.1	1.1	1.5	2.5	3.2	3.5	3.6	4.3	3.7
REF	3.2	3.9	4.4	5.1	4.9	4.4	3.4	2.7	3.3	2.5
SSA	0.6	1.0	0.9	0.8	1.0	1.3	1.4	1.6	2.3	1.6
USA	5.1	3.4	2.7	3.7	4.4	5.0	5.7	5.4	6.8	5.1

Table 1364: FAO — Production—Crops—Oil crops—Cotton seed (Mt DM/yr)

44.2.2 Groundnuts





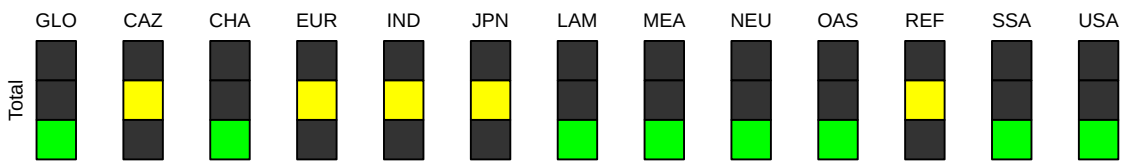


Figure 343: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26.6	32.3	36.0	39.8	46.2	50.5	54.7	58.6	61.7	63.8	64.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
CHA	9.7	13.1	13.7	15.3	17.3	18.7	20.0	20.4	19.5	21.6	21.8
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	6.9	6.2	7.6	8.2	10.6	11.7	12.9	14.7	17.1	14.6	14.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.8	1.4	1.2	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2
MEA	0.9	1.2	0.8	1.0	1.2	1.3	1.4	1.5	1.6	1.7	1.7
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	2.2	2.4	3.1	3.3	3.8	4.2	4.5	4.8	5.0	5.2	5.5
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	4.4	6.4	7.6	9.3	10.5	11.5	12.7	13.9	15.3	16.7	17.6
USA	1.6	1.5	1.8	1.9	2.0	2.1	2.1	2.1	2.1	2.7	2.8

Table 1365: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

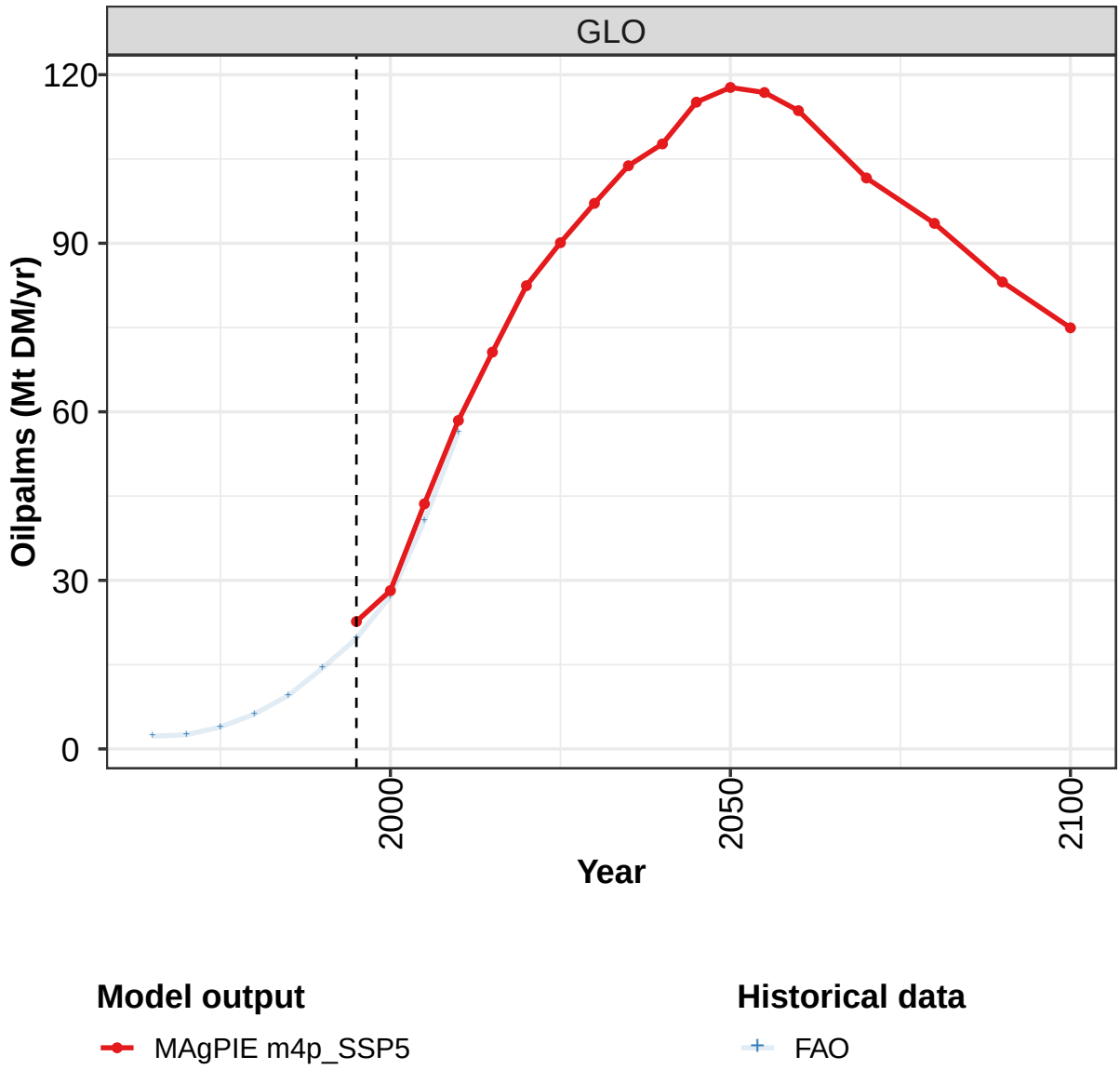
	2050	2055	2060	2070	2080	2090	2100
GLO	65.1	66.5	67.3	67.5	66.4	65.2	61.3
CAZ	0.1	0.0	0.0	0.0	0.1	0.1	0.1
CHA	19.1	16.8	16.2	14.1	17.8	17.6	16.3
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	12.2	11.3	10.9	9.7	11.8	11.1	10.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.2	1.2	1.2	1.3	1.2	1.2	1.0
MEA	1.8	1.9	2.0	2.2	2.1	2.0	1.9
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	5.8	5.7	5.6	5.1	4.6	4.1	3.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	22.3	27.1	28.8	32.4	24.7	24.5	23.5
USA	2.4	2.2	2.4	2.6	3.8	4.3	4.6

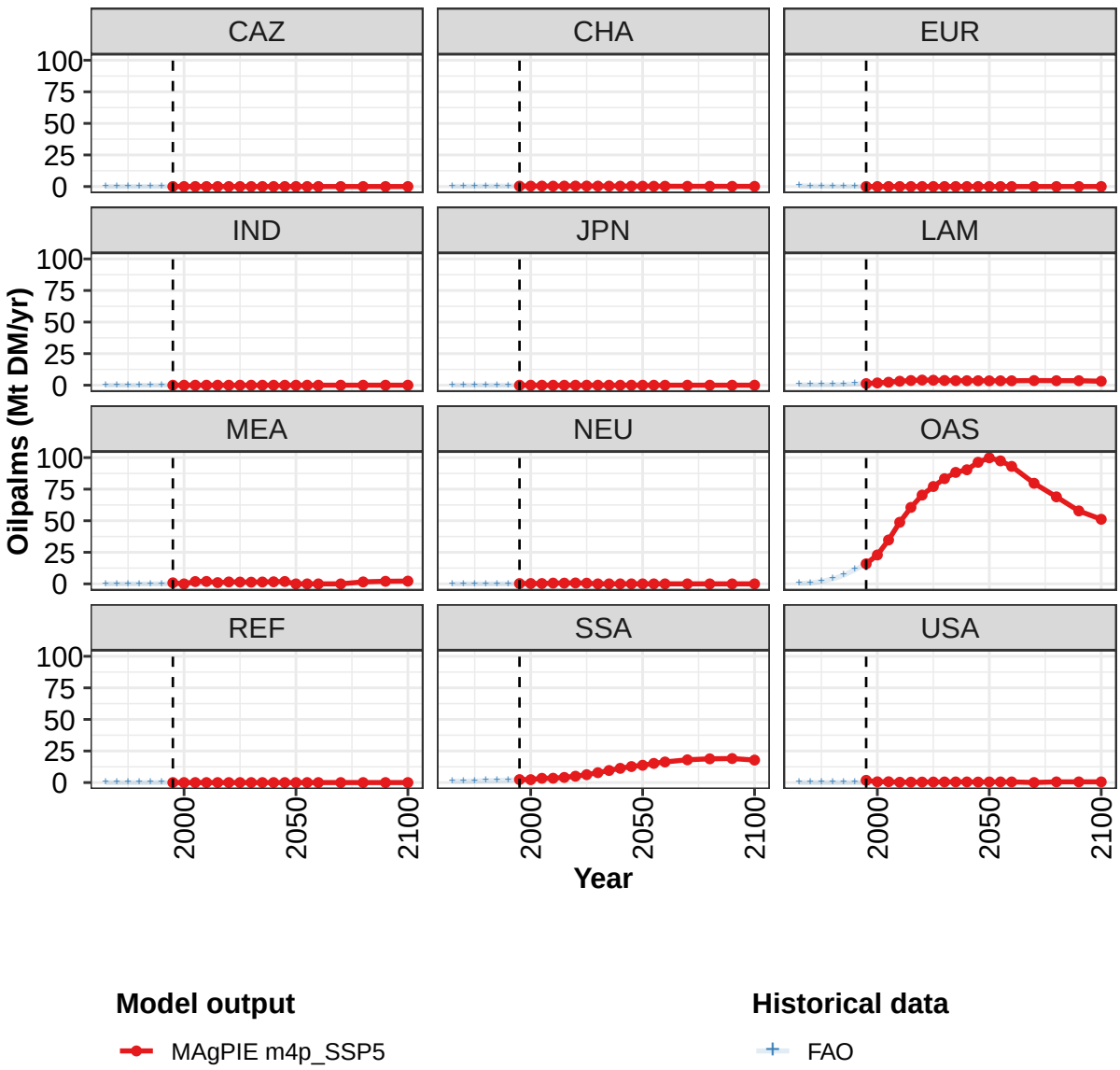
Table 1366: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	14.7	16.6	17.7	15.5	19.3	21.2	26.5	32.3	35.9	39.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.9	2.1	2.2	3.5	6.3	6.0	9.7	13.6	13.5	14.8
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	4.0	5.7	6.3	4.7	4.8	7.1	7.1	6.1	7.5	7.8
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.3	1.3	1.0	1.0	0.9	0.6	0.6	0.9	1.1	1.2
MEA	0.4	0.4	0.8	0.8	0.4	0.2	0.9	1.2	0.8	1.0
NEU	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.0	1.2	1.4	1.5	2.0	2.1	2.2	2.5	3.1	3.3
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	4.9	4.4	4.1	3.0	2.9	3.5	4.4	6.5	7.6	9.8
USA	1.0	1.3	1.6	1.0	1.8	1.5	1.5	1.4	2.1	1.8

Table 1367: FAO — Production—Crops—Oil crops—Groundnuts (Mt DM/yr)

44.2.3 Oilpalms





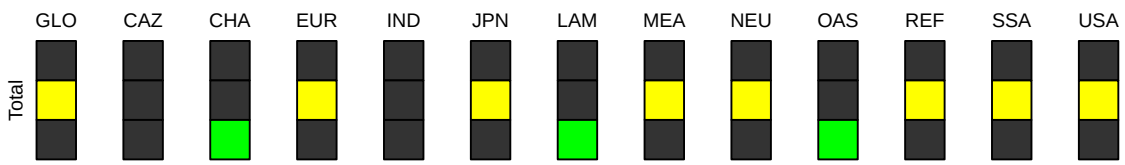


Figure 344: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Oilpalms (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	23	28	44	58	71	82	90	97	104	108	115
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	2	3	4	4	4	4	4	4	4
MEA	1	0	2	2	1	2	1	1	1	2	2
NEU	0	0	0	1	1	1	1	0	0	0	0
OAS	16	23	35	49	61	70	77	83	88	90	96
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	2	2	3	3	4	5	6	8	10	11	13
USA	2	1	1	0	0	0	0	0	1	0	0

Table 1368: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Oilpalms (Mt DM/yr) [PART 1/2]

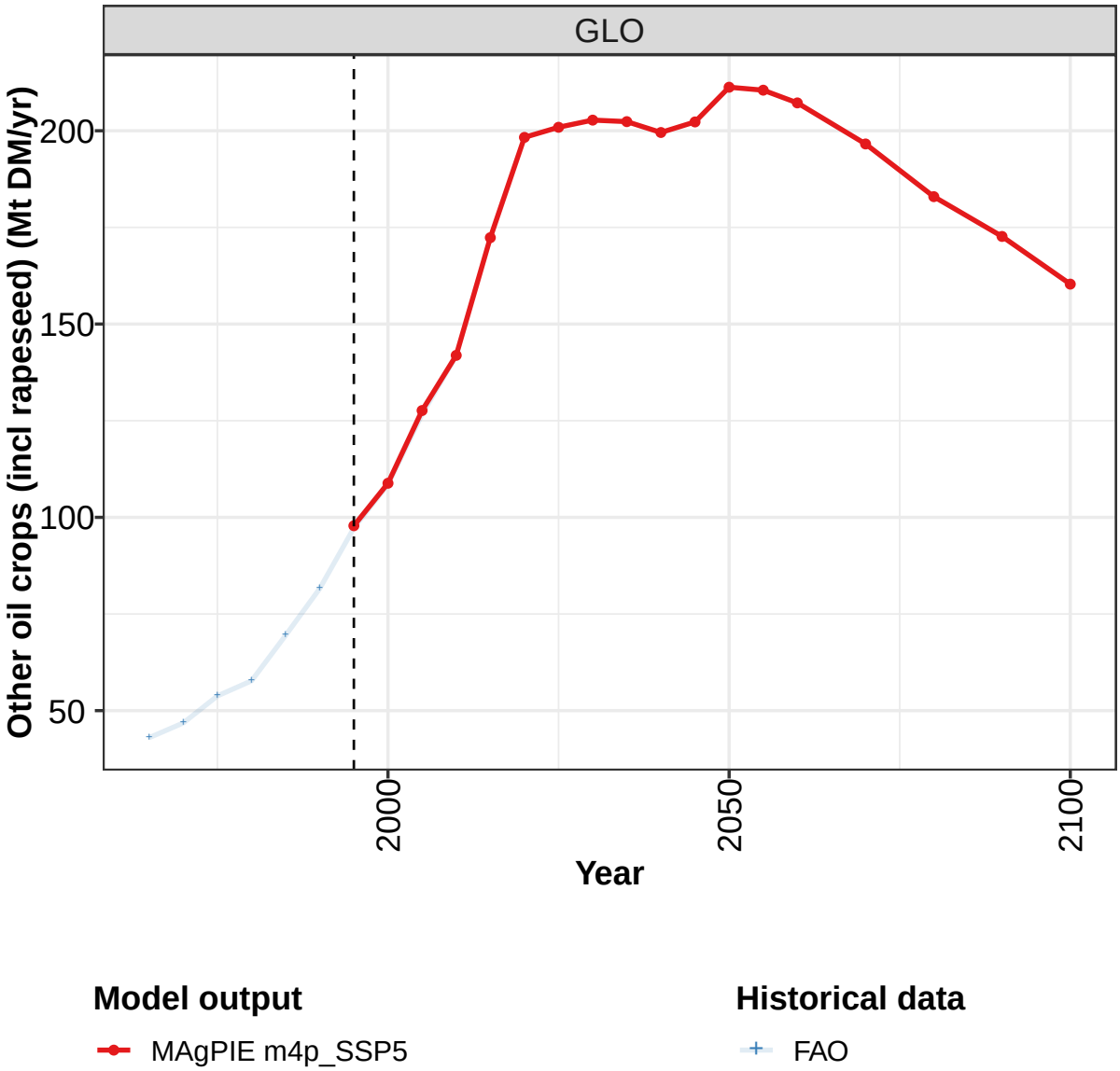
	2050	2055	2060	2070	2080	2090	2100
GLO	118	117	114	102	94	83	75
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	3	3	4	4	4	4	3
MEA	0	0	0	0	2	2	2
NEU	0	0	0	0	0	0	0
OAS	100	97	93	80	69	58	51
REF	0	0	0	0	0	0	0
SSA	14	15	16	18	19	19	18
USA	0	1	1	0	1	1	1

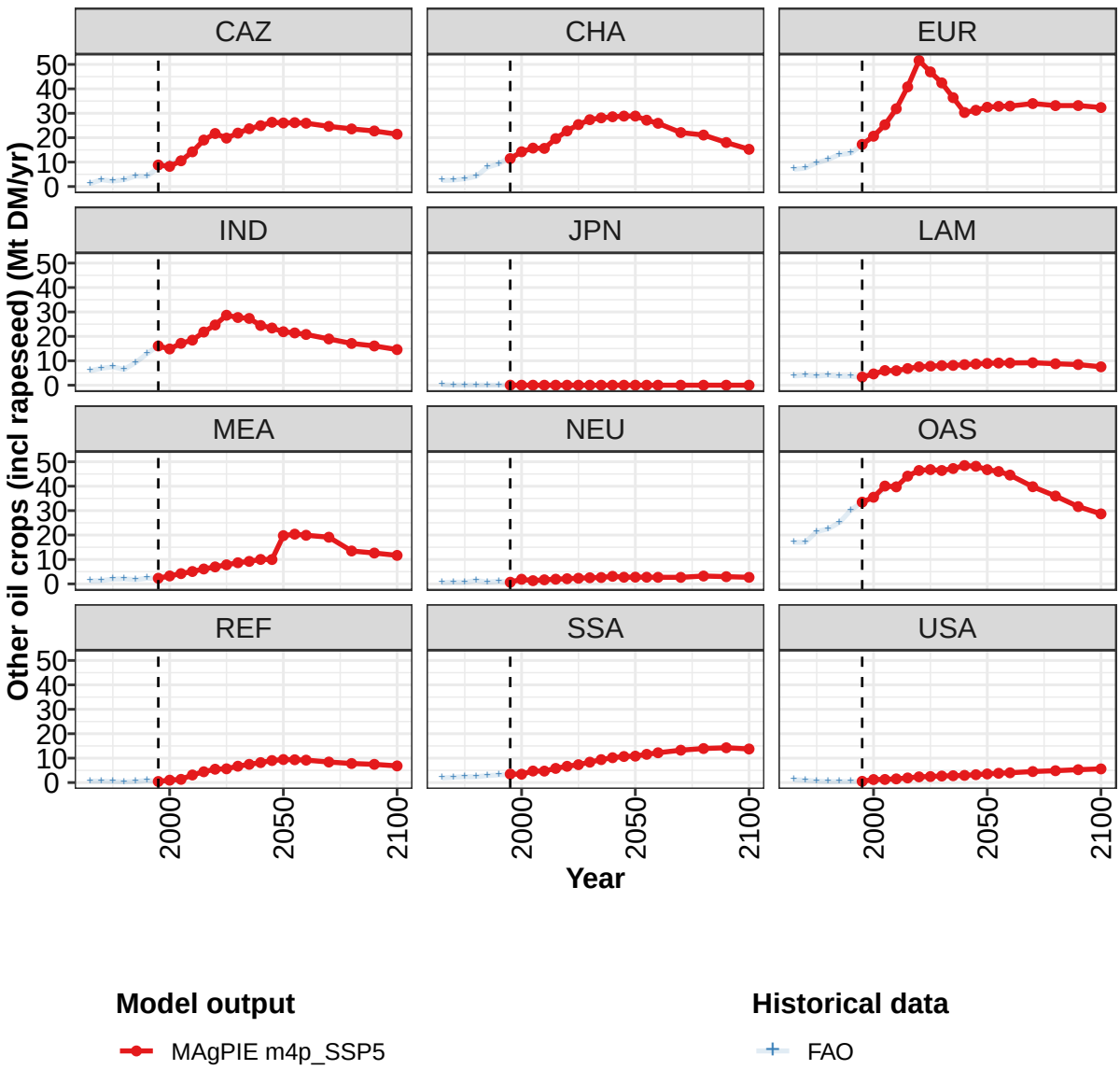
Table 1369: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Oilpalms (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.3	2.5	3.9	6.2	9.5	14.4	19.7	27.2	40.6	56.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3
EUR	0.6	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.2	0.3	0.3	0.4	0.7	1.0	1.2	1.7	2.3	3.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.3	0.7	1.9	3.9	6.9	11.2	15.9	23.0	34.6	49.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.1	1.0	1.2	1.5	1.6	1.9	2.3	2.3	3.4	3.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1370: FAO — Production—Crops—Oil crops—Oilpalms (Mt DM/yr)

44.2.4 Other oil crops (incl rapeseed)





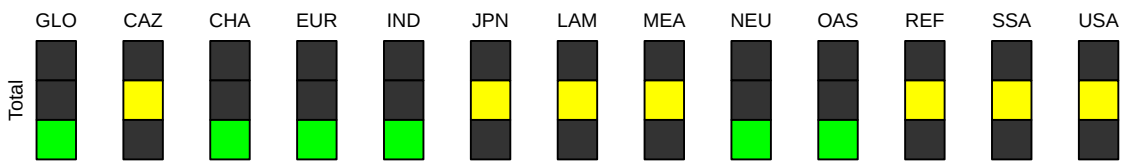


Figure 345: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	98	109	128	142	172	198	201	203	202	200	202
CAZ	9	8	11	14	19	22	20	22	24	25	26
CHA	11	14	16	16	20	23	25	27	28	29	29
EUR	17	21	25	32	41	52	47	42	36	30	31
IND	16	15	17	18	22	25	29	28	27	24	23
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	5	6	6	7	8	8	8	8	8	9
MEA	2	3	4	5	6	7	8	9	9	10	10
NEU	1	2	1	2	2	2	2	3	3	3	3
OAS	33	35	40	40	44	46	47	46	47	48	48
REF	0	1	1	3	4	5	6	7	7	8	9
SSA	3	3	5	5	6	7	7	8	9	10	11
USA	1	1	1	2	2	2	2	3	3	3	3

Table 1371: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

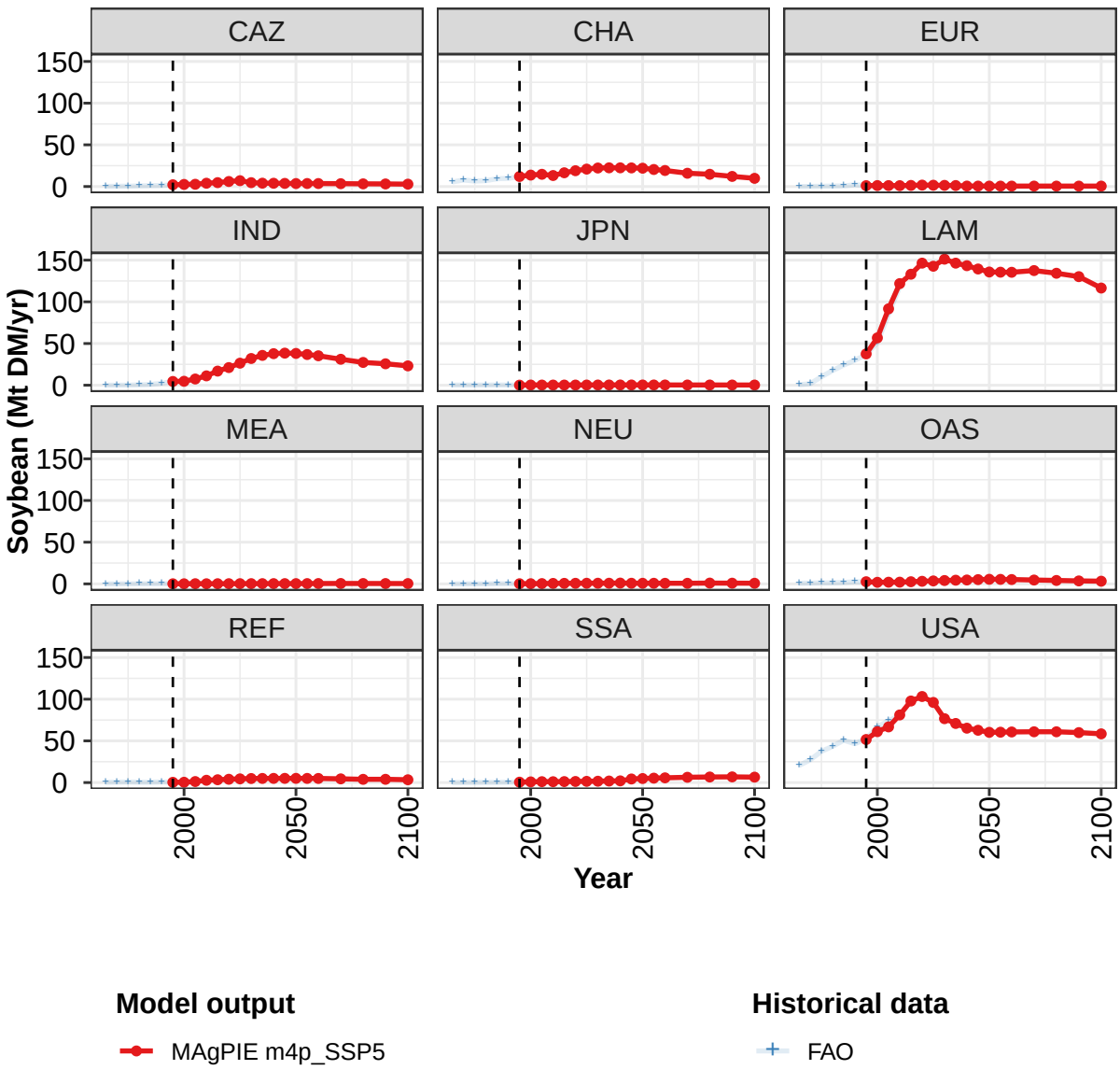
	2050	2055	2060	2070	2080	2090	2100
GLO	211	210	207	197	183	173	160
CAZ	26	26	26	25	24	23	21
CHA	29	27	26	22	21	18	15
EUR	32	33	33	34	33	33	32
IND	22	21	21	19	17	16	15
JPN	0	0	0	0	0	0	0
LAM	9	9	9	9	9	8	8
MEA	20	20	20	19	13	13	12
NEU	3	3	3	3	3	3	3
OAS	47	46	45	40	36	32	29
REF	9	9	9	8	8	7	7
SSA	11	12	12	13	14	14	14
USA	4	4	4	5	5	5	6

Table 1372: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	43	47	54	58	69	82	97	109	127	142
CAZ	1	3	2	3	4	4	8	9	11	14
CHA	2	3	3	4	8	9	12	14	16	16
EUR	7	8	10	11	13	14	17	21	25	31
IND	6	7	8	6	9	13	16	15	17	19
JPN	0	0	0	0	0	0	0	0	0	0
LAM	4	4	4	4	4	4	3	4	6	6
MEA	1	1	2	2	2	2	2	3	4	5
NEU	0	1	1	1	1	1	1	2	1	2
OAS	17	17	21	23	25	30	34	35	39	40
REF	1	1	0	0	0	1	0	1	1	3
SSA	2	2	2	2	3	3	3	3	5	5
USA	1	1	1	0	0	0	1	1	1	2

Table 1373: FAO — Production—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

44.2.5 Soybean



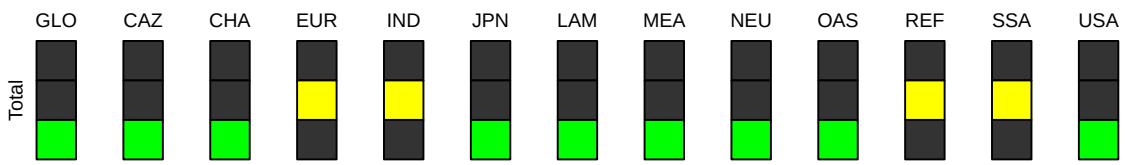


Figure 346: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	113	144	190	239	279	307	305	300	293	287	283
CAZ	2	3	3	4	5	6	7	5	4	4	4
CHA	12	14	15	13	16	19	21	22	22	22	22
EUR	1	1	1	1	1	2	2	1	1	1	1
IND	4	5	7	11	17	21	26	32	36	38	38
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	38	57	92	122	133	146	143	151	146	143	139
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	1	1	1	1	1	1	1	1
OAS	3	2	2	2	3	3	4	4	4	5	5
REF	0	0	1	3	3	4	4	5	5	5	5
SSA	0	1	1	1	1	1	1	2	2	2	4
USA	52	61	67	81	98	103	96	77	71	65	63

Table 1374: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

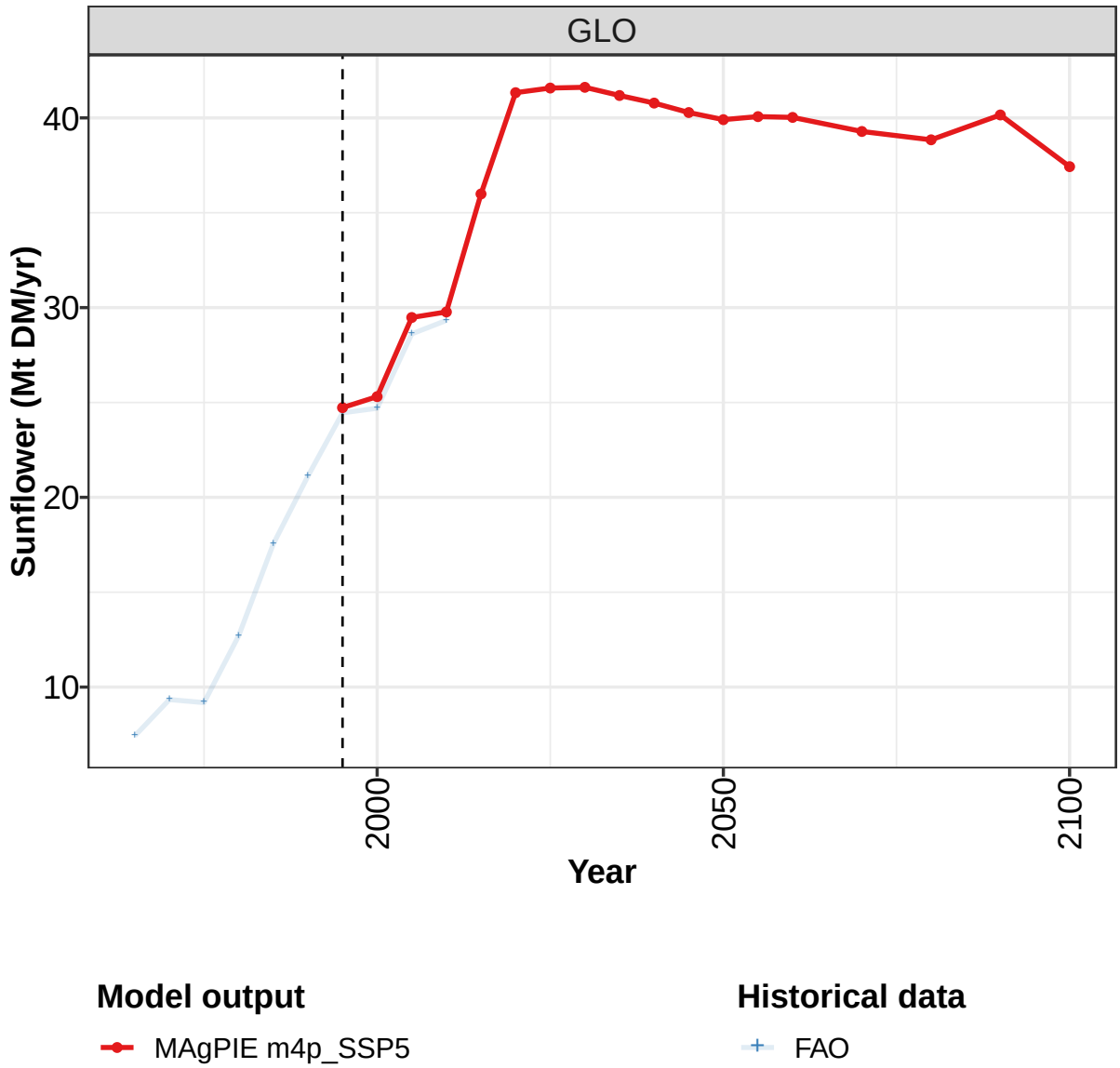
	2050	2055	2060	2070	2080	2090	2100
GLO	277	275	272	266	257	247	226
CAZ	4	4	4	3	3	3	3
CHA	22	20	19	16	15	12	10
EUR	1	1	1	1	1	1	1
IND	38	37	35	31	27	26	23
JPN	0	0	0	0	0	0	0
LAM	136	136	135	138	134	130	117
MEA	0	0	0	0	0	0	0
NEU	1	1	1	1	1	1	1
OAS	6	5	5	5	4	4	3
REF	5	5	5	4	4	4	3
SSA	5	5	6	6	7	7	7
USA	60	60	61	61	61	60	58

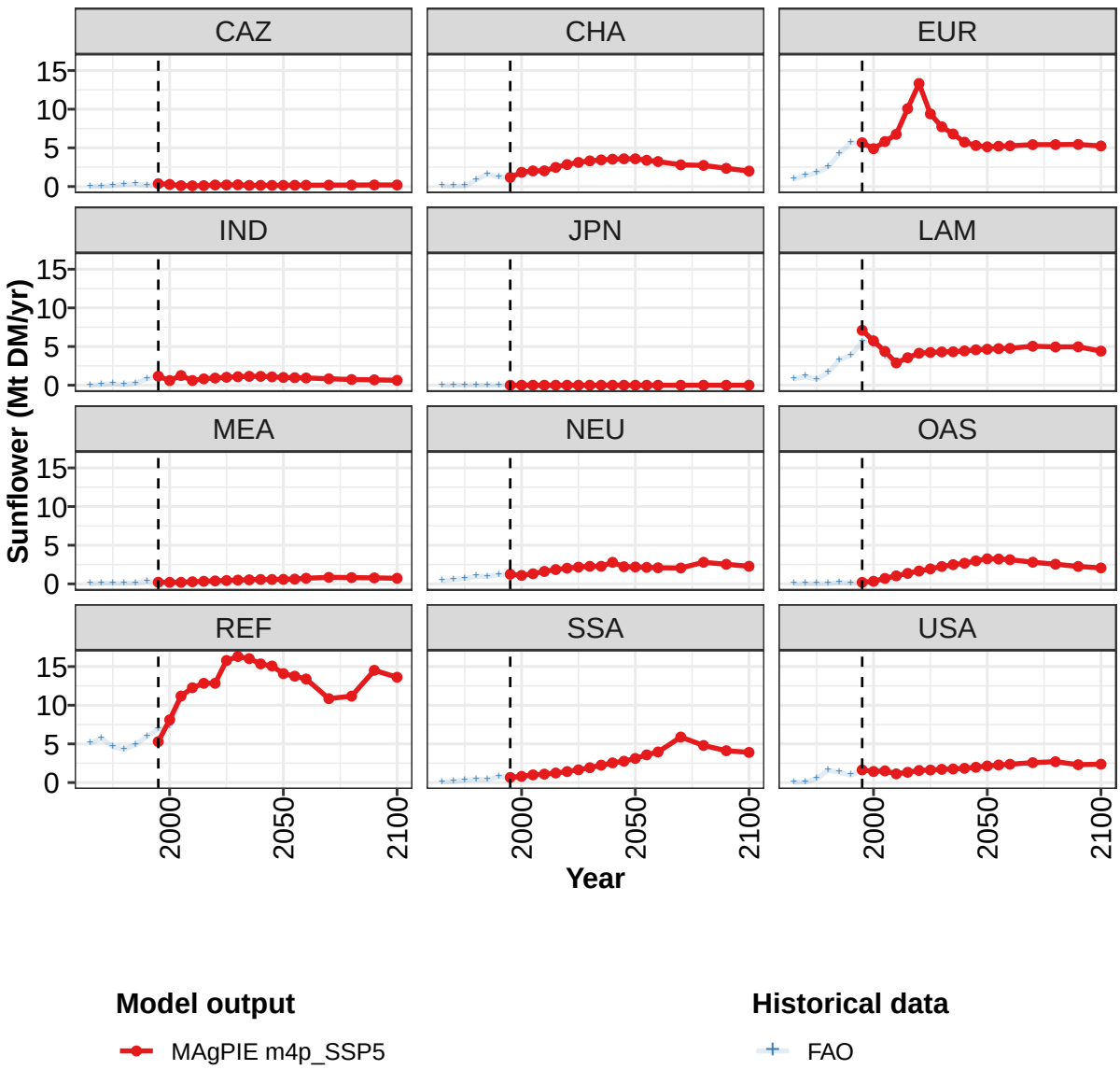
Table 1375: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	28	39	57	72	90	96	113	143	191	235
CAZ	0	0	0	1	1	1	2	2	3	4
CHA	6	8	6	7	9	10	12	14	15	13
EUR	0	0	0	1	1	2	1	1	1	1
IND	0	0	0	0	1	2	5	5	7	11
JPN	0	0	0	0	0	0	0	0	0	0
LAM	1	2	10	18	24	30	37	51	85	118
MEA	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	1
OAS	1	1	1	1	2	3	3	2	2	2
REF	0	1	1	0	0	1	0	0	1	3
SSA	0	0	0	0	0	1	0	1	1	1
USA	20	27	37	43	51	47	53	67	74	80

Table 1376: FAO — Production—Crops—Oil crops—Soybean (Mt DM/yr)

44.2.6 Sunflower





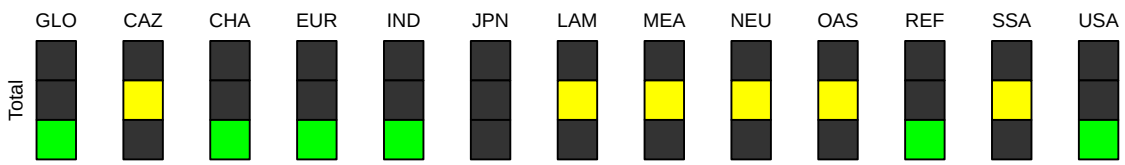


Figure 347: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	24.7	25.3	29.5	29.8	36.0	41.3	41.6	41.6	41.2	40.8	40.3
CAZ	0.4	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2
CHA	1.2	1.8	2.0	2.0	2.5	2.8	3.1	3.3	3.4	3.5	3.6
EUR	5.7	4.9	5.8	6.8	10.1	13.3	9.4	7.7	6.8	5.7	5.3
IND	1.2	0.6	1.3	0.6	0.8	0.9	1.0	1.1	1.1	1.1	1.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	7.1	5.7	4.4	2.9	3.6	4.1	4.2	4.3	4.3	4.4	4.6
MEA	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6
NEU	1.2	1.1	1.3	1.6	1.9	2.0	2.2	2.3	2.3	2.8	2.2
OAS	0.2	0.3	0.7	1.0	1.4	1.7	1.9	2.2	2.5	2.7	3.0
REF	5.3	8.1	11.2	12.3	12.8	12.8	15.8	16.3	16.0	15.3	15.1
SSA	0.7	0.8	1.0	1.1	1.2	1.4	1.7	1.9	2.3	2.5	2.8
USA	1.6	1.4	1.5	1.1	1.3	1.6	1.6	1.7	1.8	1.8	2.0

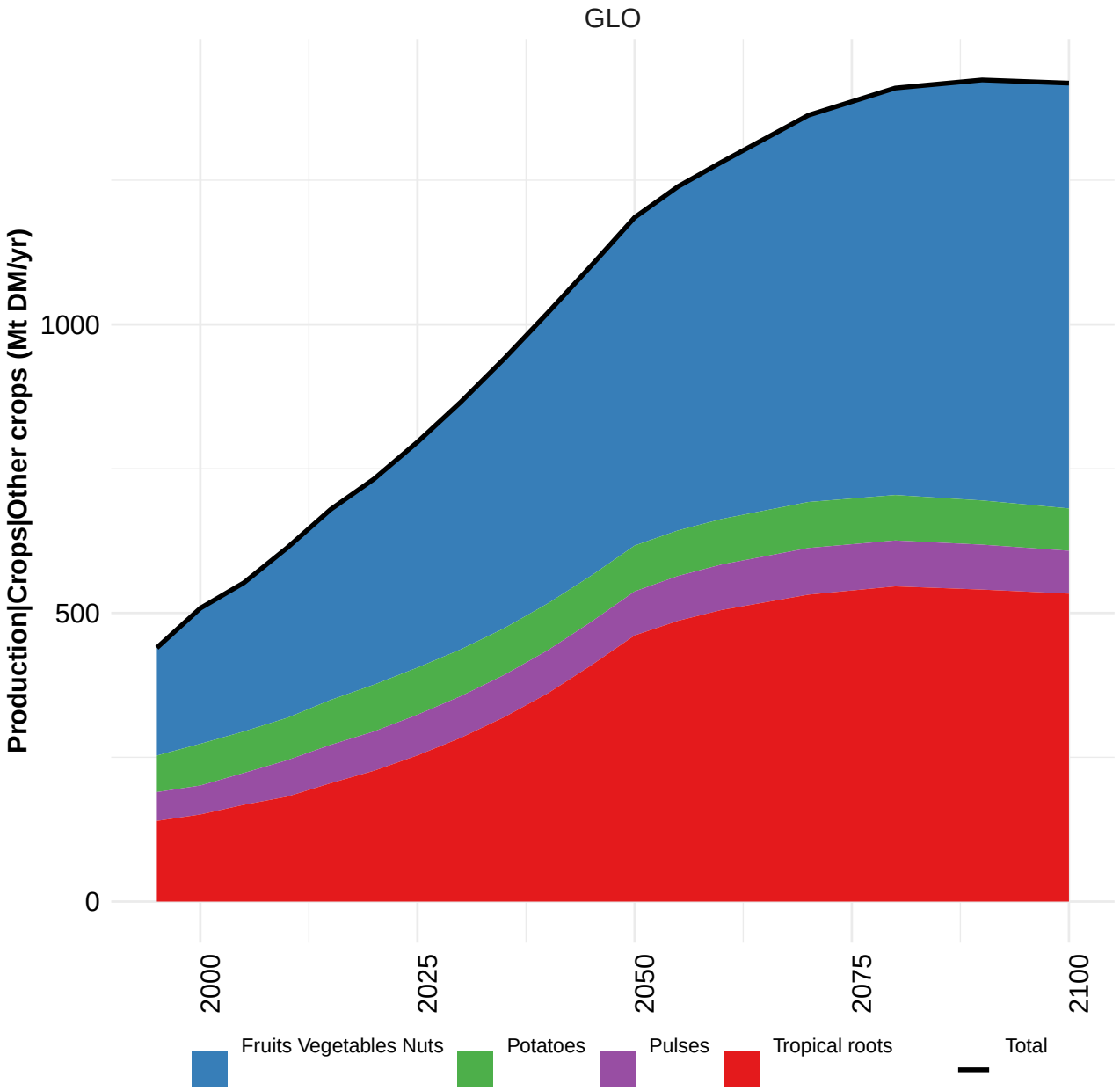
Table 1377: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

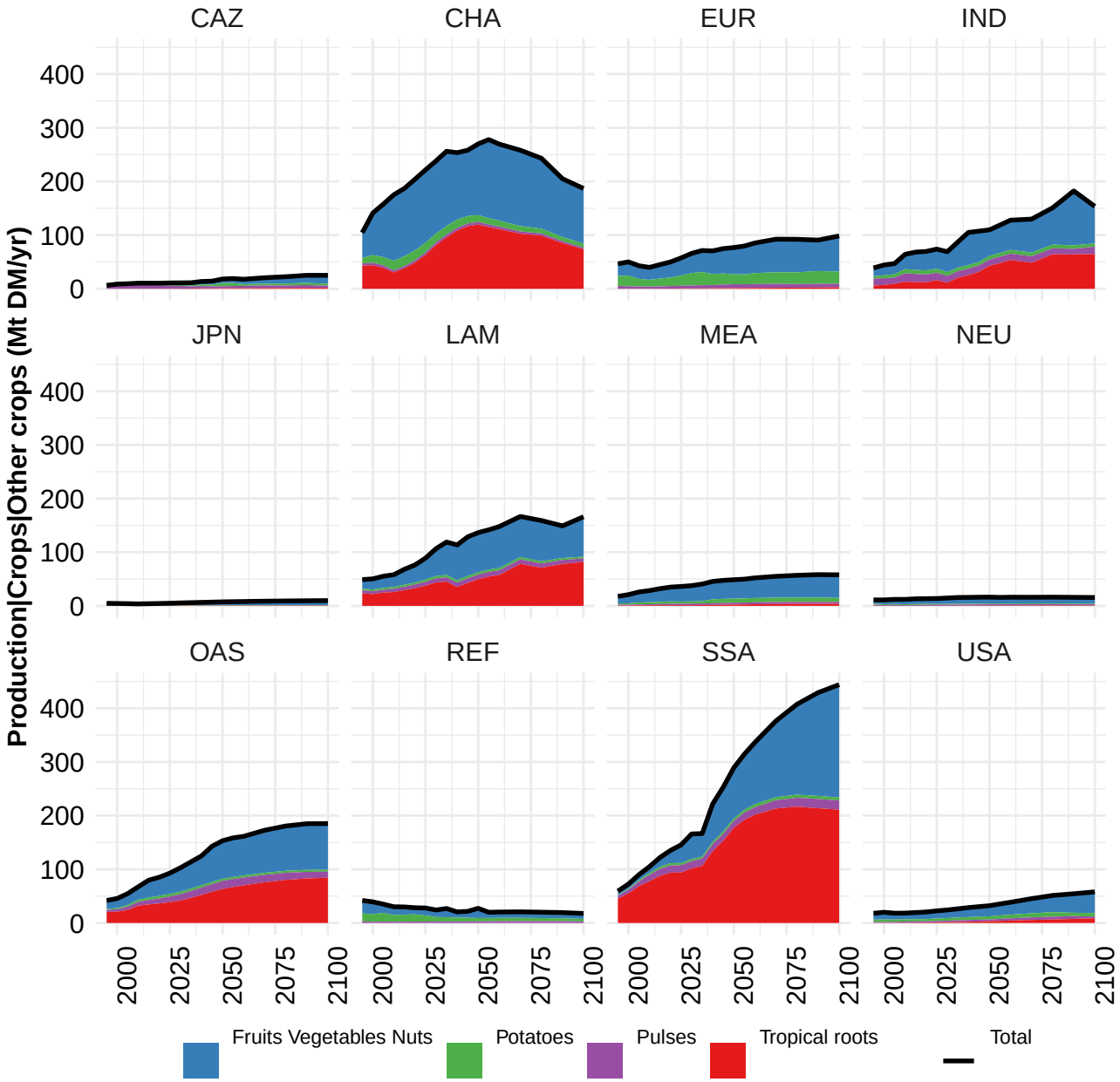
	2050	2055	2060	2070	2080	2090	2100
GLO	39.9	40.1	40.0	39.3	38.8	40.2	37.4
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	3.6	3.4	3.2	2.8	2.7	2.4	2.0
EUR	5.1	5.2	5.3	5.4	5.4	5.4	5.2
IND	1.0	1.0	0.9	0.8	0.7	0.7	0.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	4.6	4.7	4.8	5.0	4.9	5.0	4.4
MEA	0.6	0.6	0.7	0.8	0.8	0.8	0.7
NEU	2.2	2.1	2.1	2.1	2.8	2.5	2.3
OAS	3.2	3.2	3.1	2.8	2.5	2.3	2.1
REF	14.1	13.8	13.4	10.9	11.2	14.5	13.6
SSA	3.1	3.6	4.0	5.9	4.8	4.1	3.9
USA	2.1	2.3	2.4	2.6	2.7	2.3	2.4

Table 1378: MAgPIE m4p_SSP5 — Production—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

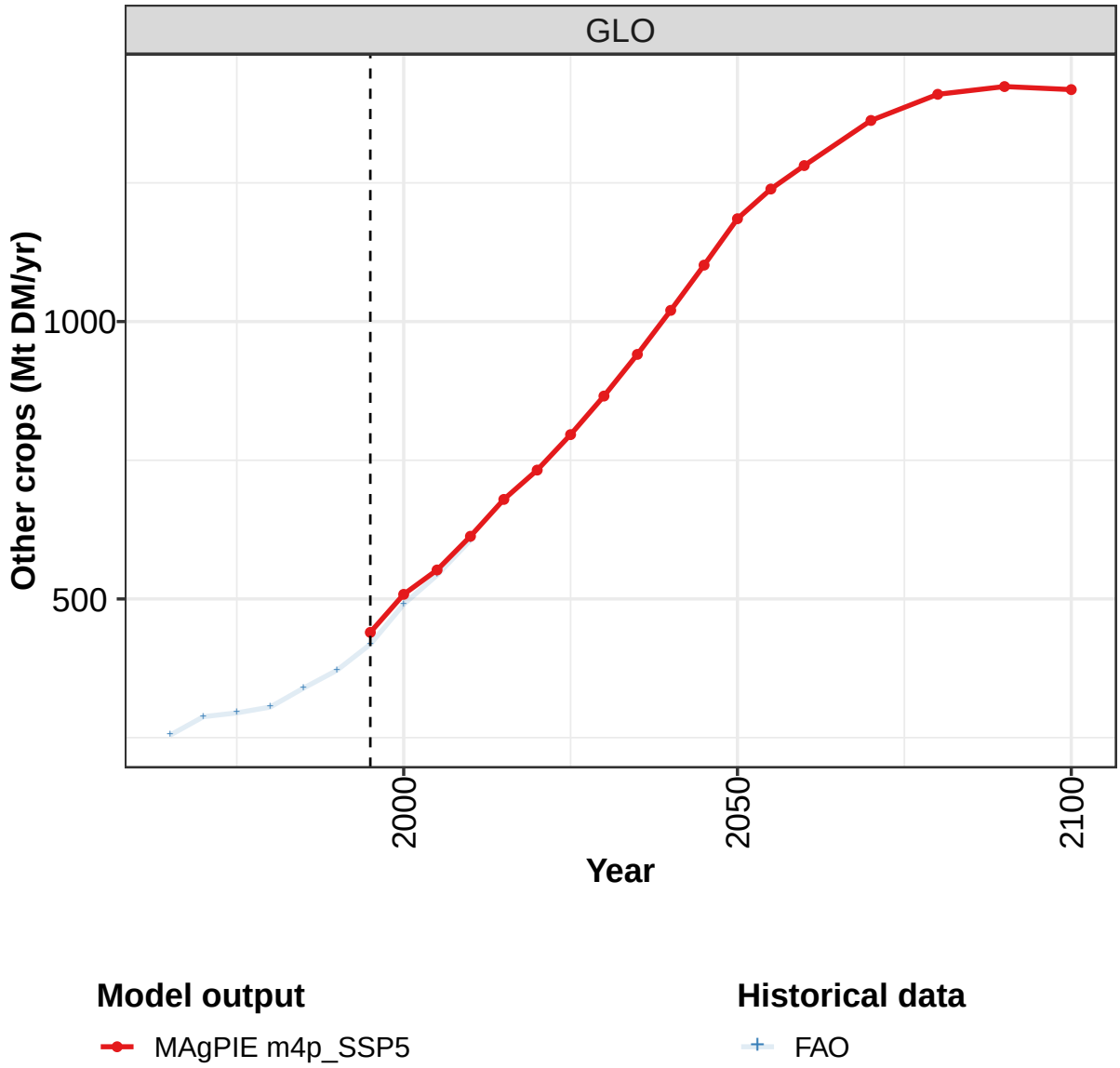
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7.4	9.3	9.2	12.7	17.5	21.1	24.5	24.7	28.6	29.3
CAZ	0.0	0.0	0.1	0.3	0.3	0.2	0.2	0.3	0.1	0.1
CHA	0.1	0.1	0.1	0.8	1.6	1.2	1.2	1.8	1.8	2.1
EUR	1.0	1.4	1.8	2.5	4.3	5.7	5.6	4.9	5.7	6.6
IND	0.0	0.1	0.2	0.1	0.3	0.8	1.2	0.6	1.3	0.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.8	1.1	0.8	1.6	3.3	3.9	5.6	6.0	3.8	2.7
MEA	0.0	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.3
NEU	0.4	0.6	0.7	1.0	1.0	1.2	1.1	1.1	1.3	1.6
OAS	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.3	0.7	1.1
REF	5.1	5.7	4.6	4.3	4.9	6.0	6.9	7.3	11.0	12.0
SSA	0.1	0.1	0.3	0.4	0.4	0.8	0.6	0.8	1.0	1.1
USA	0.0	0.1	0.5	1.6	1.3	1.0	1.7	1.5	1.7	1.2

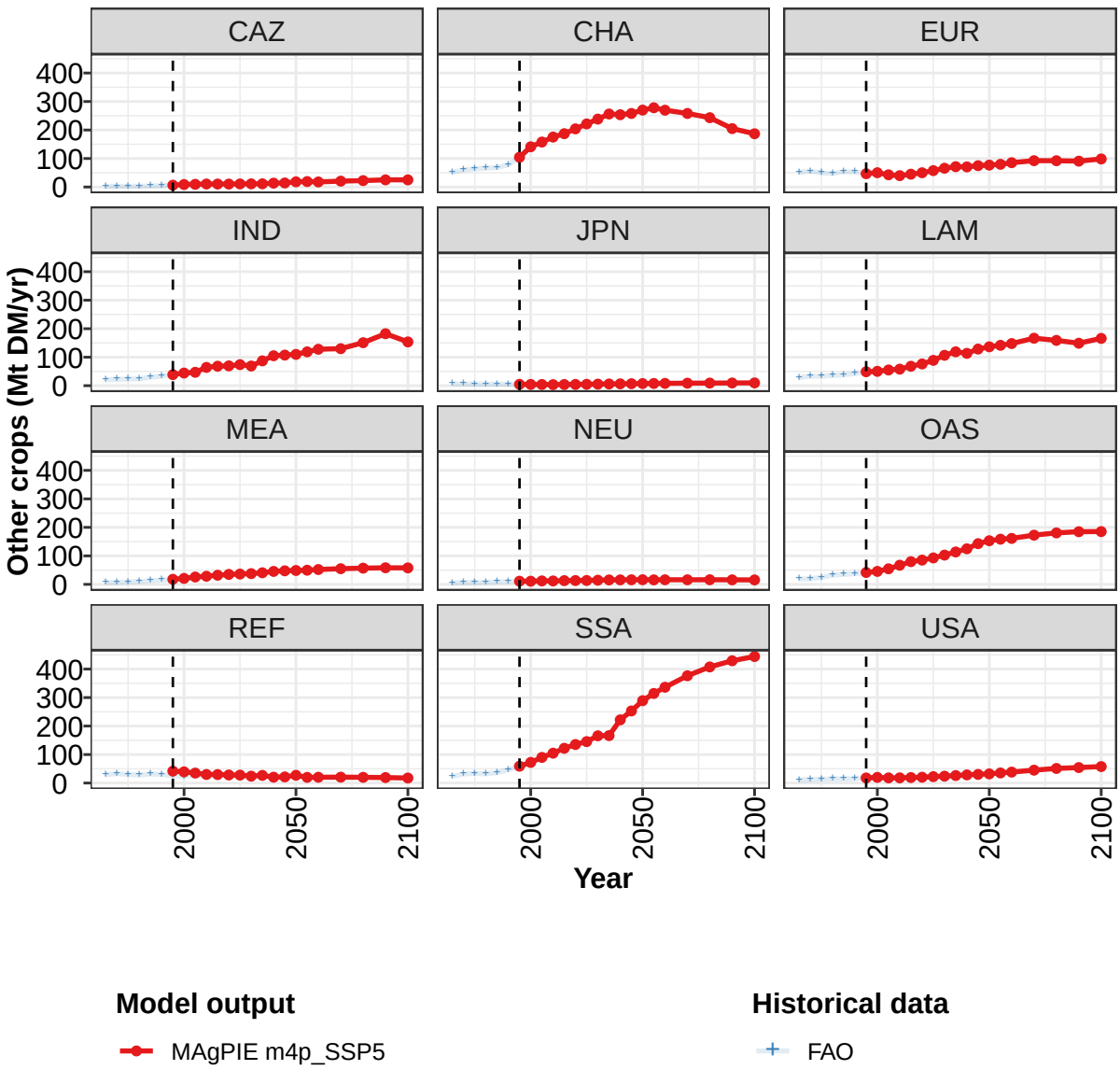
Table 1379: FAO — Production—Crops—Oil crops—Sunflower (Mt DM/yr)


GLO
Production|Crops|Other crops (Mt DM/yr)
1000
500
0
2000
2025
2050
2075
2100
Fruits Vegetables Nuts
Potatoes
Pulses
Tropical roots
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Crops|Other crops (Mt DM/yr)
0
100
200
300
400
2000
2025
2050
2075
2100
Fruits Vegetables Nuts
Potatoes
Pulses
Tropical roots
Total

44.3 Other crops





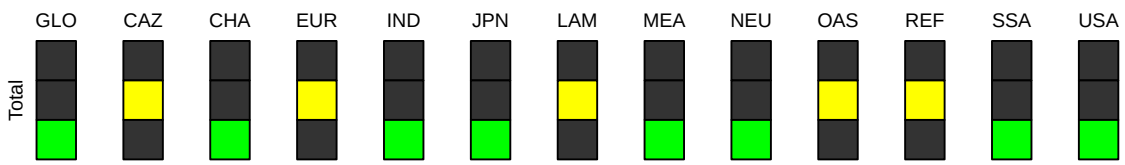


Figure 348: MAgPIE m4p_SSP5 — Production—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	440	508	552	613	679	732	796	866	941	1020	1102
CAZ	6	9	9	11	10	10	11	11	11	14	14
CHA	104	141	158	175	187	204	221	238	256	254	258
EUR	47	50	43	40	45	50	58	66	71	71	75
IND	39	44	47	64	68	70	74	69	87	105	107
JPN	5	4	4	4	4	4	5	5	6	6	7
LAM	49	50	55	58	68	76	89	107	119	113	129
MEA	18	21	26	29	32	35	36	38	41	45	48
NEU	11	11	12	12	13	13	14	15	16	16	16
OAS	42	46	55	67	80	85	93	103	114	125	143
REF	42	39	35	30	30	28	28	24	27	21	22
SSA	59	72	90	105	122	135	145	166	167	222	253
USA	18	20	18	18	19	20	22	24	26	29	30

Table 1380: MAgPIE m4p_SSP5 — Production—Crops—Other crops (Mt DM/yr) [PART 1/2]

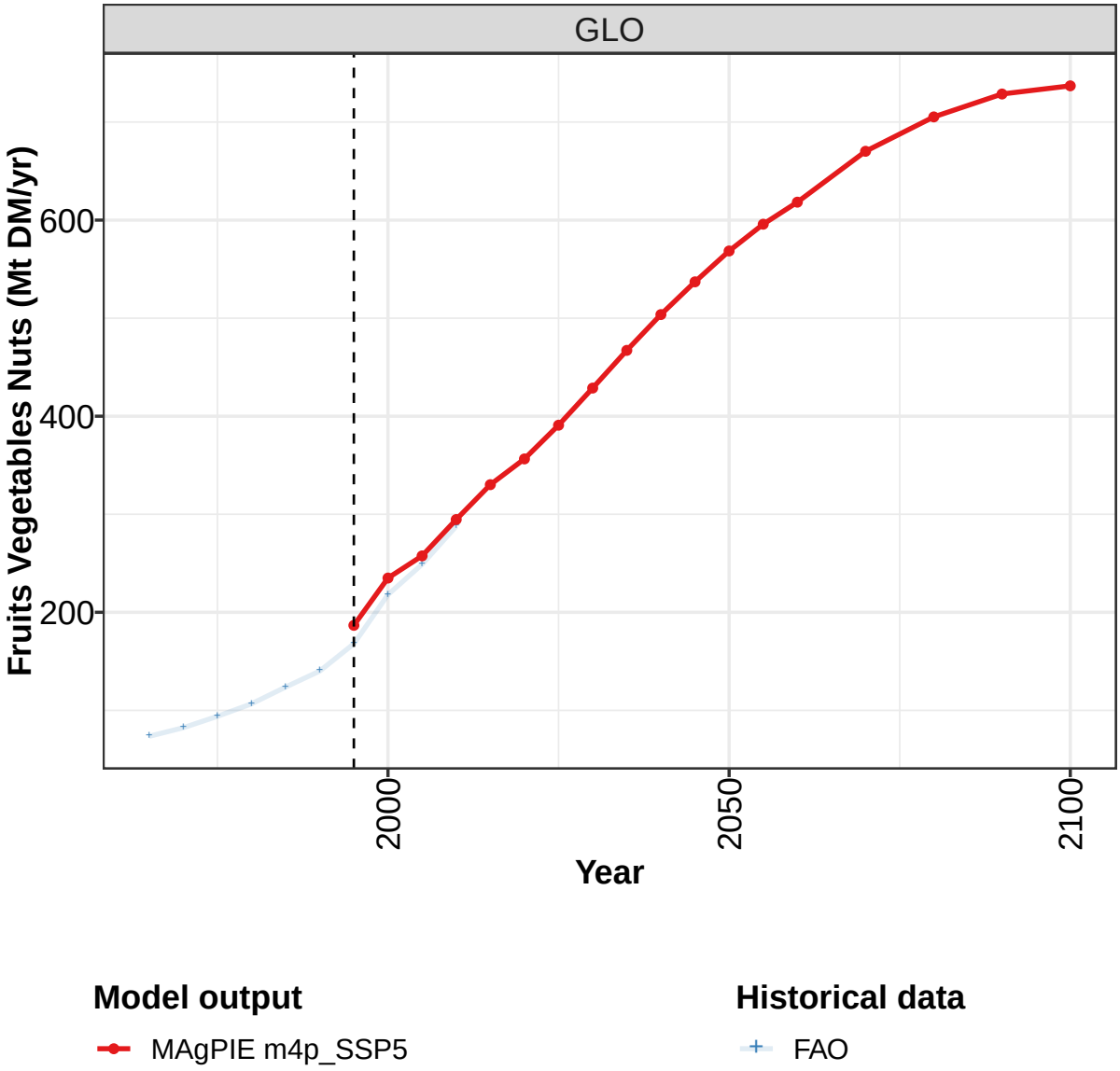
	2050	2055	2060	2070	2080	2090	2100
GLO	1185	1239	1281	1363	1410	1424	1418
CAZ	18	19	18	21	22	25	25
CHA	270	278	270	258	243	205	187
EUR	77	80	85	92	92	91	98
IND	110	119	128	130	151	182	154
JPN	8	8	8	9	9	10	10
LAM	136	142	148	167	159	149	166
MEA	49	50	52	55	57	58	58
NEU	16	16	16	16	16	16	16
OAS	153	159	161	173	181	185	185
REF	27	20	20	21	20	19	18
SSA	289	314	336	376	408	429	444
USA	32	35	39	45	51	54	58

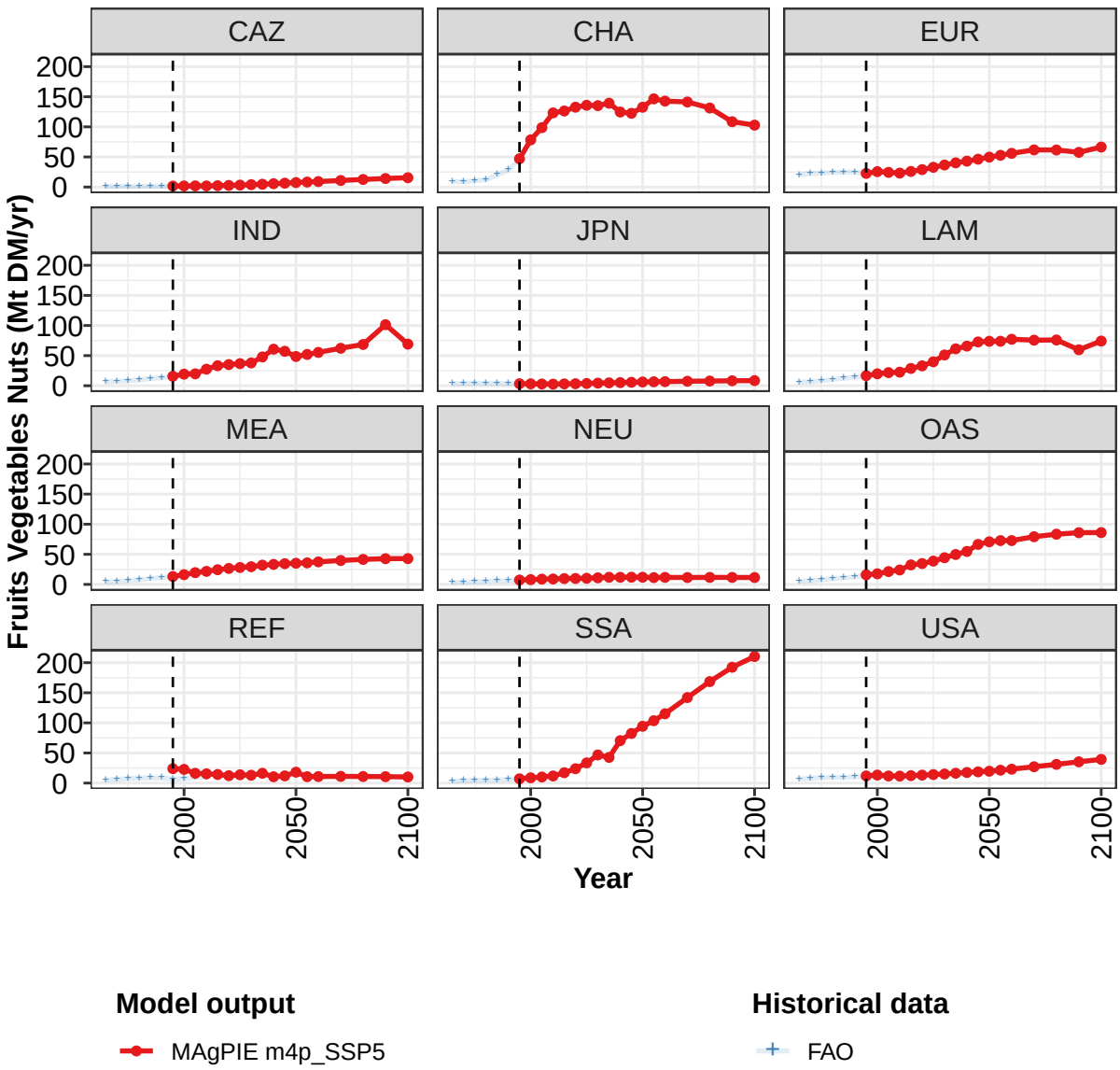
Table 1381: MAgPIE m4p_SSP5 — Production—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	254	288	295	305	339	371	418	490	543	606
CAZ	2	2	2	2	3	4	7	9	10	10
CHA	52	60	64	66	68	78	104	141	158	176
EUR	52	56	50	47	54	53	46	49	42	40
IND	21	22	23	24	30	33	39	44	47	65
JPN	6	6	6	6	6	5	5	4	4	4
LAM	29	33	33	35	38	42	48	51	55	58
MEA	6	7	8	10	13	15	17	20	25	27
NEU	5	6	6	7	9	10	10	11	12	12
OAS	19	20	24	33	35	38	40	45	53	65
REF	29	33	30	28	32	30	25	24	28	24
SSA	24	32	34	32	37	47	59	72	90	107
USA	11	12	13	14	15	16	18	20	18	18

Table 1382: FAO — Production—Crops—Other crops (Mt DM/yr)

44.3.1 Fruits Vegetables Nuts





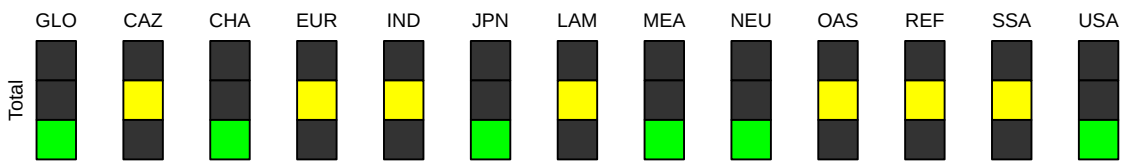


Figure 349: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	187	235	258	295	330	356	391	429	467	504	537
CAZ	2	2	2	2	2	3	3	4	5	6	6
CHA	47	78	99	123	126	133	136	135	139	125	123
EUR	23	26	24	23	26	29	33	37	40	43	46
IND	16	19	20	27	33	35	37	38	48	61	57
JPN	3	3	3	3	3	3	4	4	5	5	6
LAM	17	20	22	23	29	33	40	51	61	66	73
MEA	13	16	20	22	24	27	28	29	32	33	34
NEU	7	8	9	9	10	10	10	11	12	12	12
OAS	16	18	21	24	32	35	39	44	50	55	66
REF	24	23	16	15	14	12	14	13	16	11	12
SSA	7	9	10	12	17	24	34	47	43	71	82
USA	12	13	12	12	12	13	14	15	16	18	19

Table 1383: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

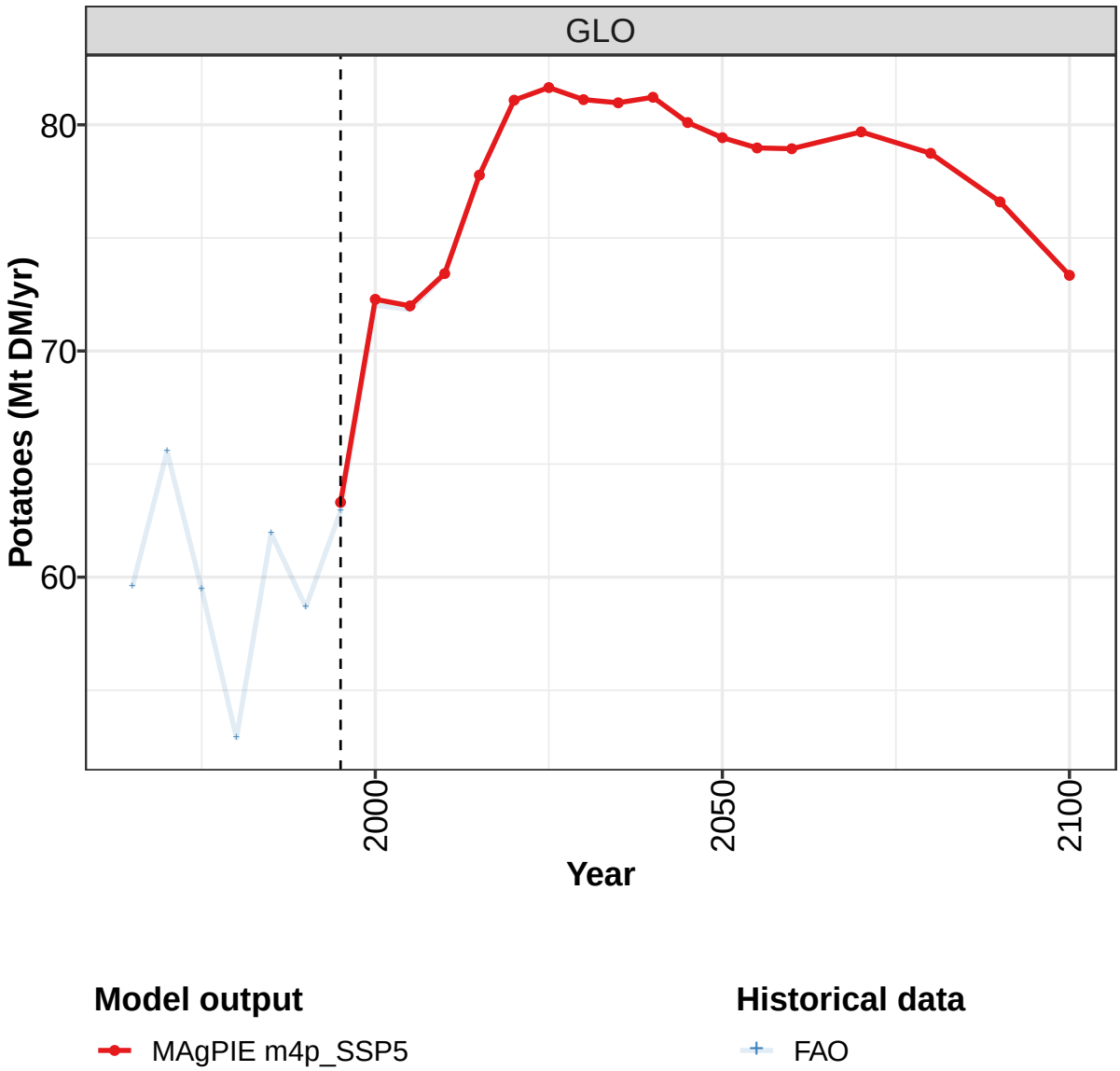
	2050	2055	2060	2070	2080	2090	2100
GLO	569	596	618	670	705	729	737
CAZ	8	8	9	11	13	14	16
CHA	133	146	143	141	131	109	103
EUR	50	53	56	62	62	58	66
IND	49	52	55	62	69	101	69
JPN	6	7	7	7	8	8	9
LAM	74	74	77	76	76	60	74
MEA	35	36	37	40	42	43	43
NEU	12	11	12	11	12	12	11
OAS	71	73	73	79	83	86	86
REF	18	11	11	11	11	11	10
SSA	94	104	115	142	169	192	210
USA	20	21	23	27	31	35	39

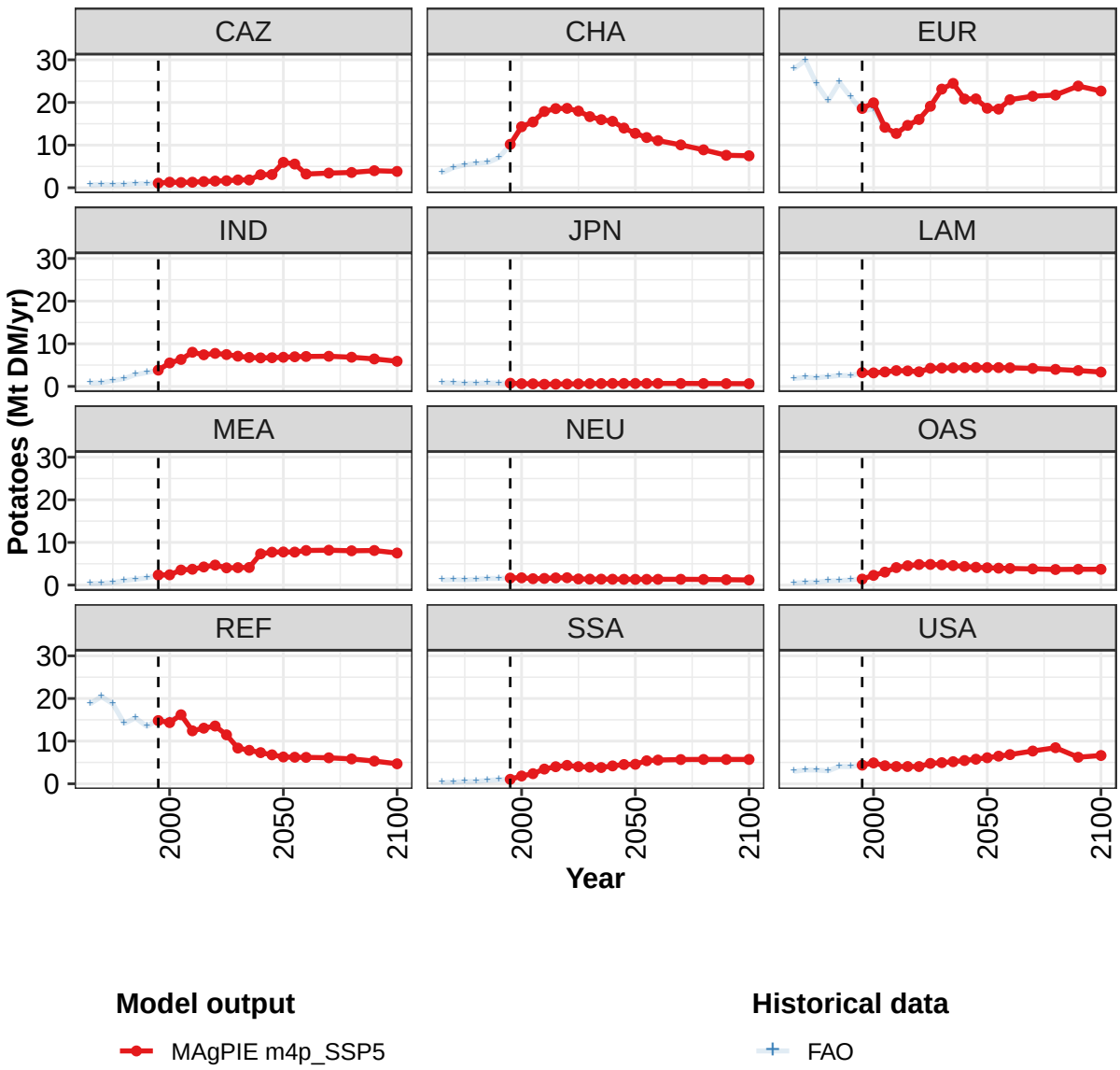
Table 1384: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	74	82	94	107	124	140	168	218	249	288
CAZ	1	1	1	1	1	1	2	2	2	2
CHA	9	9	10	12	20	28	47	78	98	123
EUR	20	23	23	24	25	25	23	26	24	23
IND	6	7	8	10	12	13	16	19	20	28
JPN	3	4	4	4	4	4	3	3	3	3
LAM	6	7	8	10	12	14	17	20	22	23
MEA	4	5	6	7	10	11	13	16	19	21
NEU	3	4	4	5	6	6	7	8	8	9
OAS	5	6	8	10	11	13	16	18	21	23
REF	5	6	7	8	9	8	7	7	9	10
SSA	3	4	4	5	5	6	7	9	10	12
USA	7	8	9	10	9	10	12	13	12	12

Table 1385: FAO — Production—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

44.3.2 Potatoes





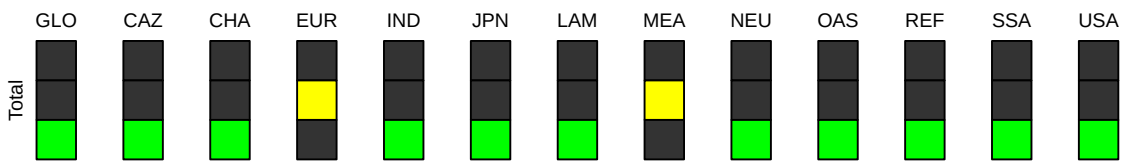


Figure 350: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	63.3	72.3	72.0	73.4	77.8	81.1	81.6	81.1	81.0	81.2	80.1
CAZ	1.1	1.3	1.2	1.3	1.4	1.6	1.6	1.8	1.8	3.1	3.1
CHA	10.2	14.3	15.4	17.9	18.6	18.6	18.0	16.7	16.0	15.6	14.0
EUR	18.6	19.9	14.2	12.7	14.6	16.0	19.1	23.1	24.5	20.8	20.8
IND	3.8	5.5	6.3	8.0	7.4	7.8	7.5	7.1	6.8	6.7	6.7
JPN	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
LAM	3.2	3.2	3.4	3.7	3.6	3.4	4.3	4.3	4.3	4.4	4.4
MEA	2.4	2.4	3.5	3.7	4.2	4.7	4.0	4.1	4.1	7.3	7.7
NEU	1.7	1.7	1.5	1.6	1.7	1.7	1.4	1.4	1.4	1.4	1.4
OAS	1.4	2.3	3.0	4.1	4.5	4.8	4.8	4.7	4.6	4.4	4.2
REF	14.8	14.4	16.2	12.4	13.0	13.6	11.5	8.4	7.8	7.3	6.8
SSA	1.0	1.8	2.4	3.5	4.0	4.3	4.0	3.9	3.8	4.2	4.5
USA	4.4	4.9	4.2	4.0	4.0	4.0	4.8	5.0	5.2	5.4	5.8

Table 1386: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

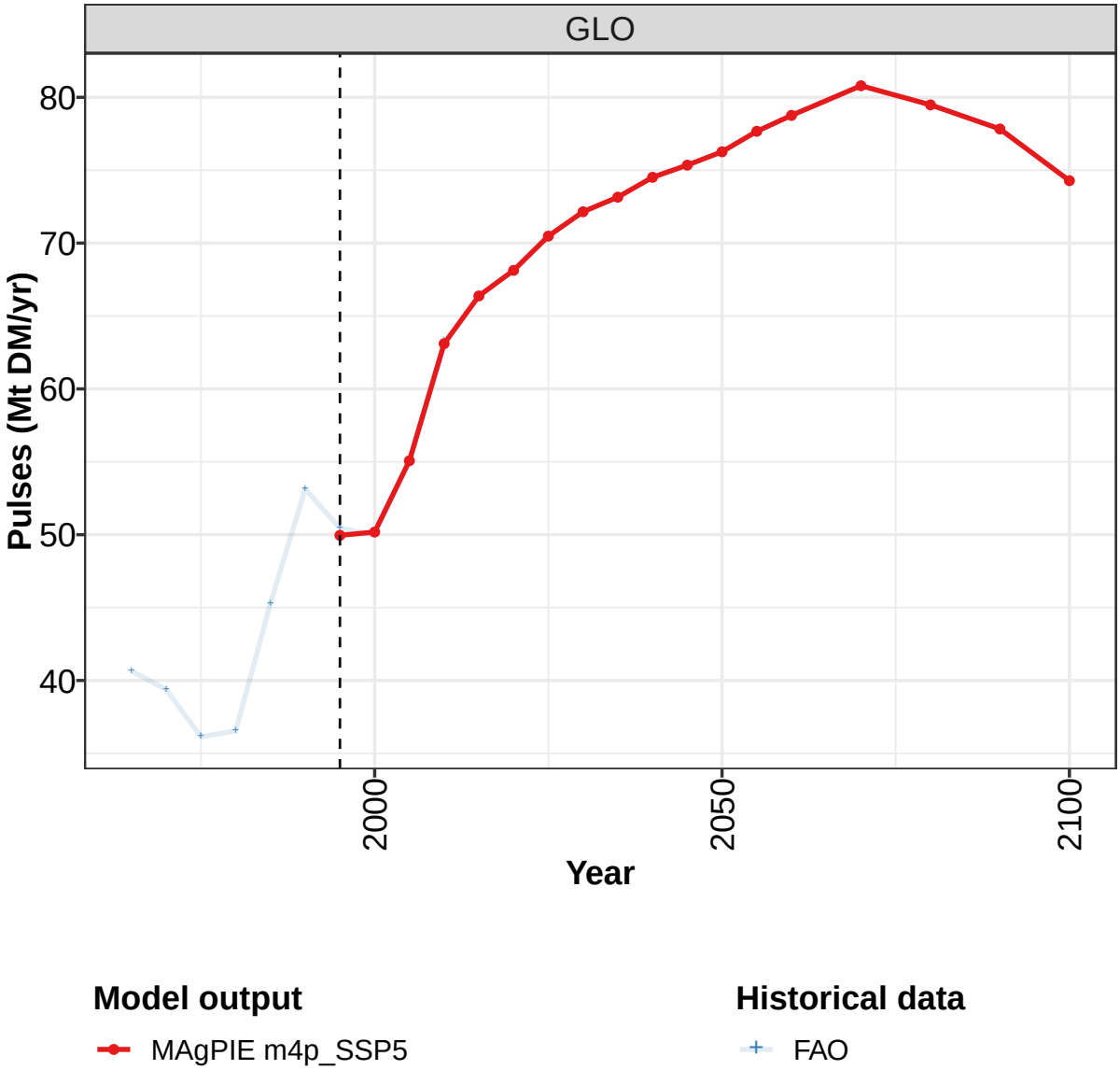
	2050	2055	2060	2070	2080	2090	2100
GLO	79.4	79.0	78.9	79.7	78.7	76.6	73.3
CAZ	6.0	5.6	3.2	3.4	3.6	4.0	3.8
CHA	12.8	11.8	11.0	10.0	8.9	7.6	7.5
EUR	18.6	18.4	20.6	21.5	21.7	23.9	22.7
IND	6.8	6.9	7.0	7.1	6.8	6.4	5.9
JPN	0.7	0.7	0.7	0.7	0.7	0.7	0.6
LAM	4.4	4.4	4.4	4.2	4.0	3.7	3.4
MEA	7.8	7.7	8.1	8.2	8.0	8.1	7.5
NEU	1.3	1.4	1.4	1.4	1.3	1.3	1.2
OAS	4.1	4.0	3.9	3.8	3.7	3.7	3.7
REF	6.3	6.2	6.2	6.1	5.8	5.3	4.7
SSA	4.6	5.4	5.6	5.7	5.7	5.7	5.7
USA	6.1	6.5	6.8	7.7	8.5	6.2	6.6

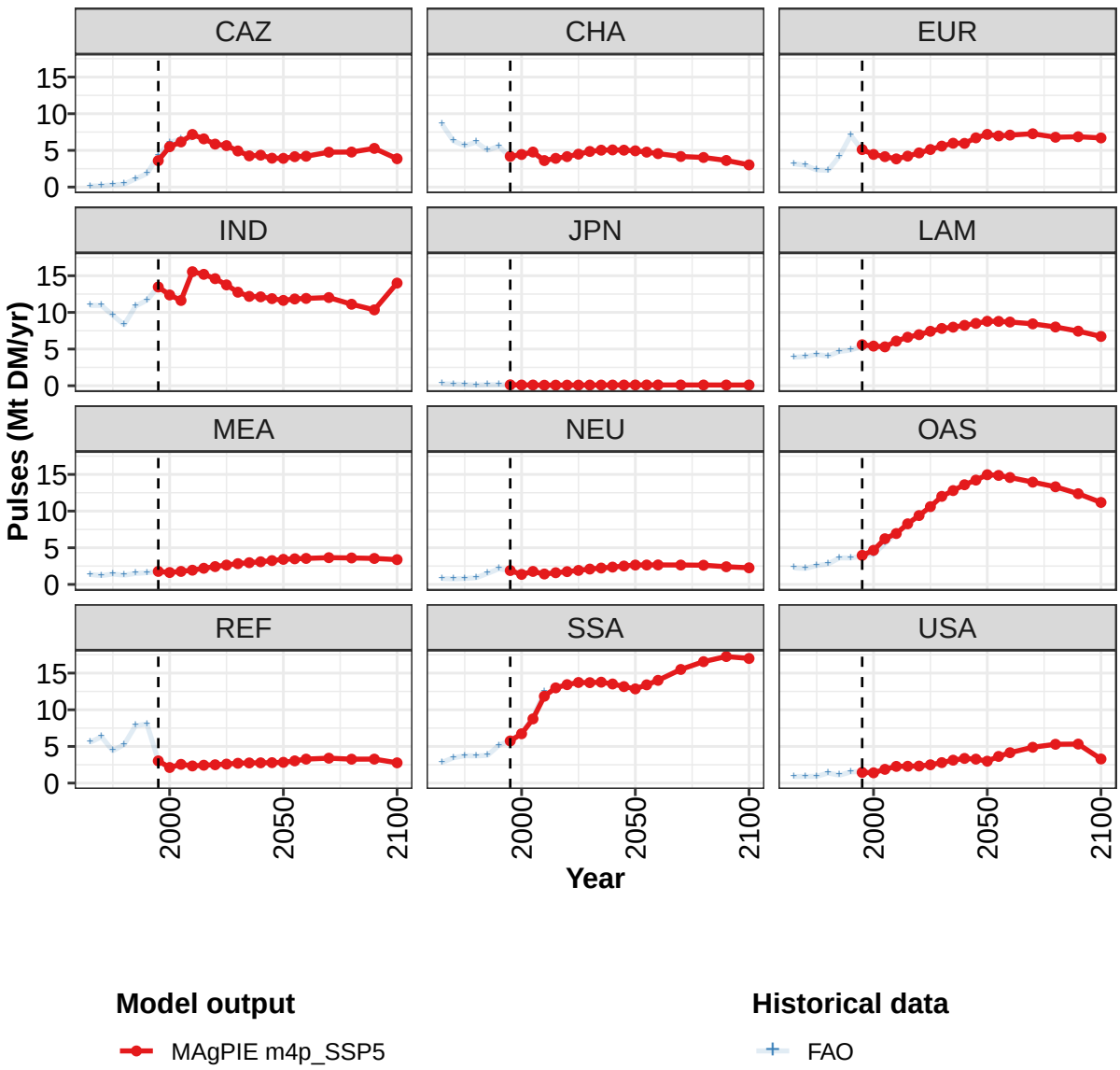
Table 1387: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	59.6	65.6	59.5	52.9	61.9	58.7	62.9	72.0	71.8	73.4
CAZ	0.6	0.8	0.7	0.8	0.9	1.0	1.2	1.4	1.4	1.4
CHA	3.5	4.7	5.4	5.7	5.9	7.0	10.1	14.6	15.6	18.0
EUR	27.9	29.8	24.3	20.4	24.7	21.2	17.9	18.5	13.8	12.6
IND	0.8	0.9	1.4	1.8	2.8	3.2	3.8	5.5	6.3	8.0
JPN	0.9	0.8	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.5
LAM	1.9	2.1	2.0	2.3	2.6	2.5	3.2	3.1	3.4	3.7
MEA	0.4	0.4	0.6	1.1	1.4	1.7	2.3	2.4	3.5	3.6
NEU	1.2	1.3	1.2	1.4	1.6	1.5	1.6	1.7	1.5	1.6
OAS	0.5	0.6	0.7	1.0	1.0	1.2	1.4	2.3	3.1	4.1
REF	18.8	20.5	18.8	14.2	15.4	13.4	15.0	14.9	16.0	12.4
SSA	0.3	0.4	0.5	0.6	0.8	1.0	1.0	1.8	2.4	3.5
USA	2.9	3.3	3.2	3.0	4.1	4.0	4.4	5.1	4.2	4.0

Table 1388: FAO — Production—Crops—Other crops—Potatoes (Mt DM/yr)

44.3.3 Pulses


GLO
Pulses (Mt DM/yr)
80
70
60
50
40
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



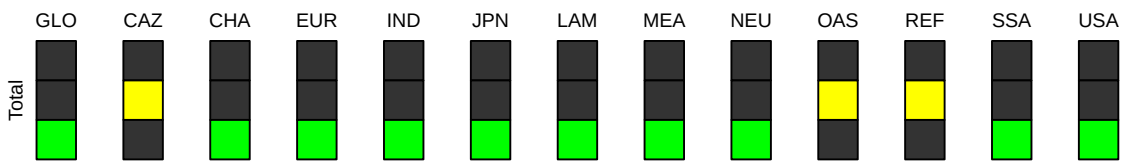


Figure 351: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	50.0	50.2	55.1	63.1	66.4	68.1	70.5	72.2	73.2	74.5	75.3
CAZ	3.6	5.5	6.2	7.2	6.6	5.9	5.7	4.9	4.3	4.3	3.9
CHA	4.2	4.4	4.8	3.6	3.9	4.1	4.5	4.9	5.0	5.1	5.0
EUR	5.1	4.5	4.1	3.8	4.2	4.7	5.1	5.6	6.0	6.0	6.7
IND	13.5	12.4	11.6	15.6	15.2	14.6	13.8	12.8	12.2	12.1	11.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	5.6	5.4	5.3	6.1	6.6	7.0	7.4	7.8	8.0	8.2	8.5
MEA	1.8	1.6	1.8	1.9	2.2	2.4	2.6	2.8	3.0	3.1	3.2
NEU	1.9	1.4	1.8	1.4	1.6	1.7	1.9	2.1	2.2	2.4	2.5
OAS	4.0	4.7	6.2	6.9	8.3	9.4	10.6	12.0	12.8	13.6	14.2
REF	3.0	2.1	2.6	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.8
SSA	5.7	6.7	8.8	11.9	13.0	13.4	13.7	13.7	13.8	13.5	13.2
USA	1.5	1.4	1.9	2.3	2.3	2.3	2.5	2.8	3.1	3.4	3.3

Table 1389: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

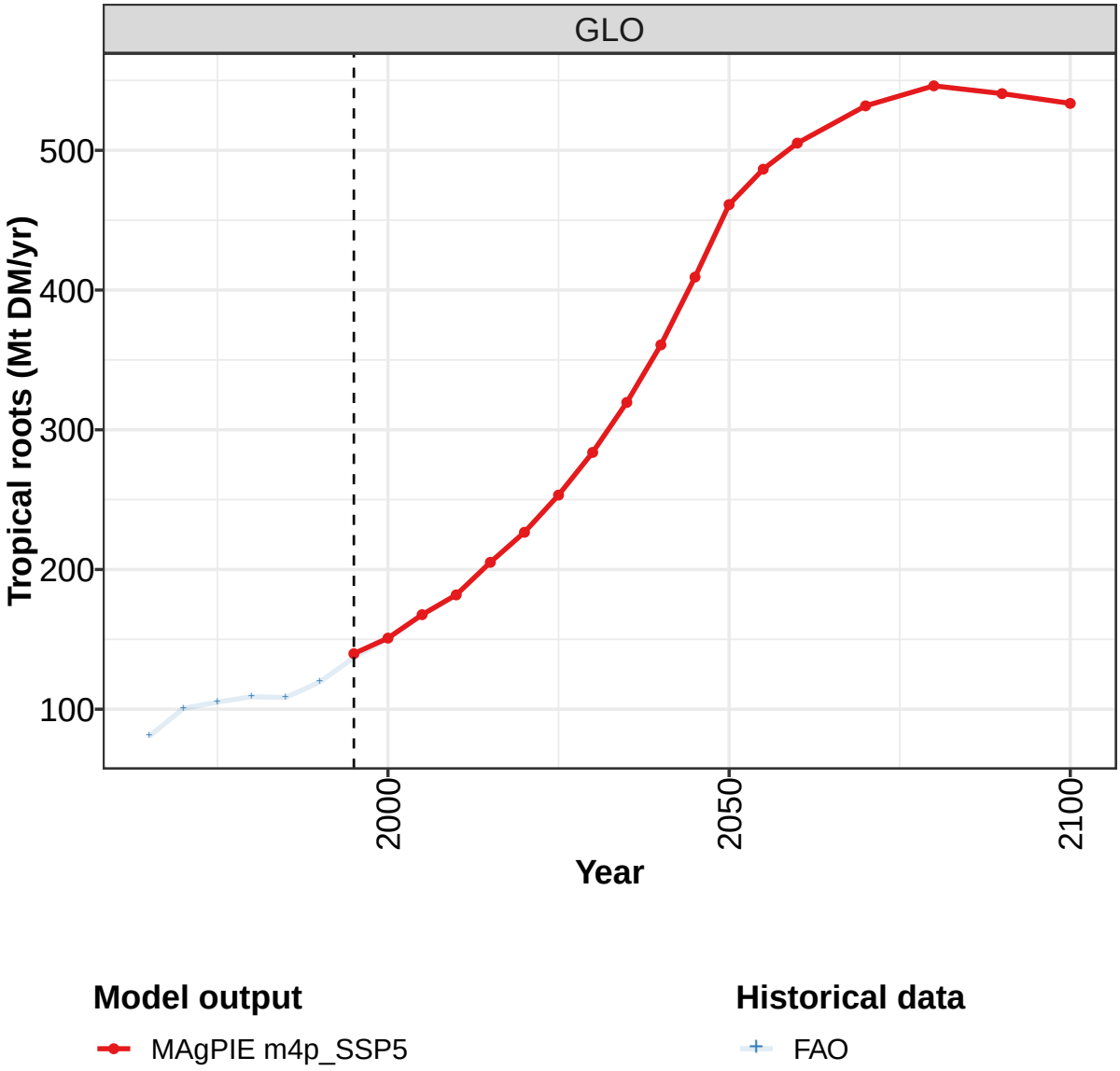
	2050	2055	2060	2070	2080	2090	2100
GLO	76.3	77.7	78.8	80.8	79.5	77.8	74.3
CAZ	3.9	4.1	4.2	4.8	4.8	5.3	3.9
CHA	4.9	4.8	4.6	4.2	4.0	3.6	3.0
EUR	7.2	7.0	7.1	7.3	6.8	6.9	6.7
IND	11.6	11.8	11.9	12.0	11.1	10.3	14.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	8.8	8.8	8.7	8.4	8.0	7.4	6.7
MEA	3.4	3.5	3.5	3.6	3.6	3.5	3.4
NEU	2.6	2.6	2.7	2.6	2.6	2.4	2.3
OAS	15.0	14.9	14.6	13.9	13.3	12.4	11.2
REF	2.8	3.0	3.3	3.4	3.3	3.3	2.8
SSA	12.9	13.4	14.0	15.5	16.6	17.3	17.0
USA	3.0	3.6	4.1	4.9	5.3	5.3	3.3

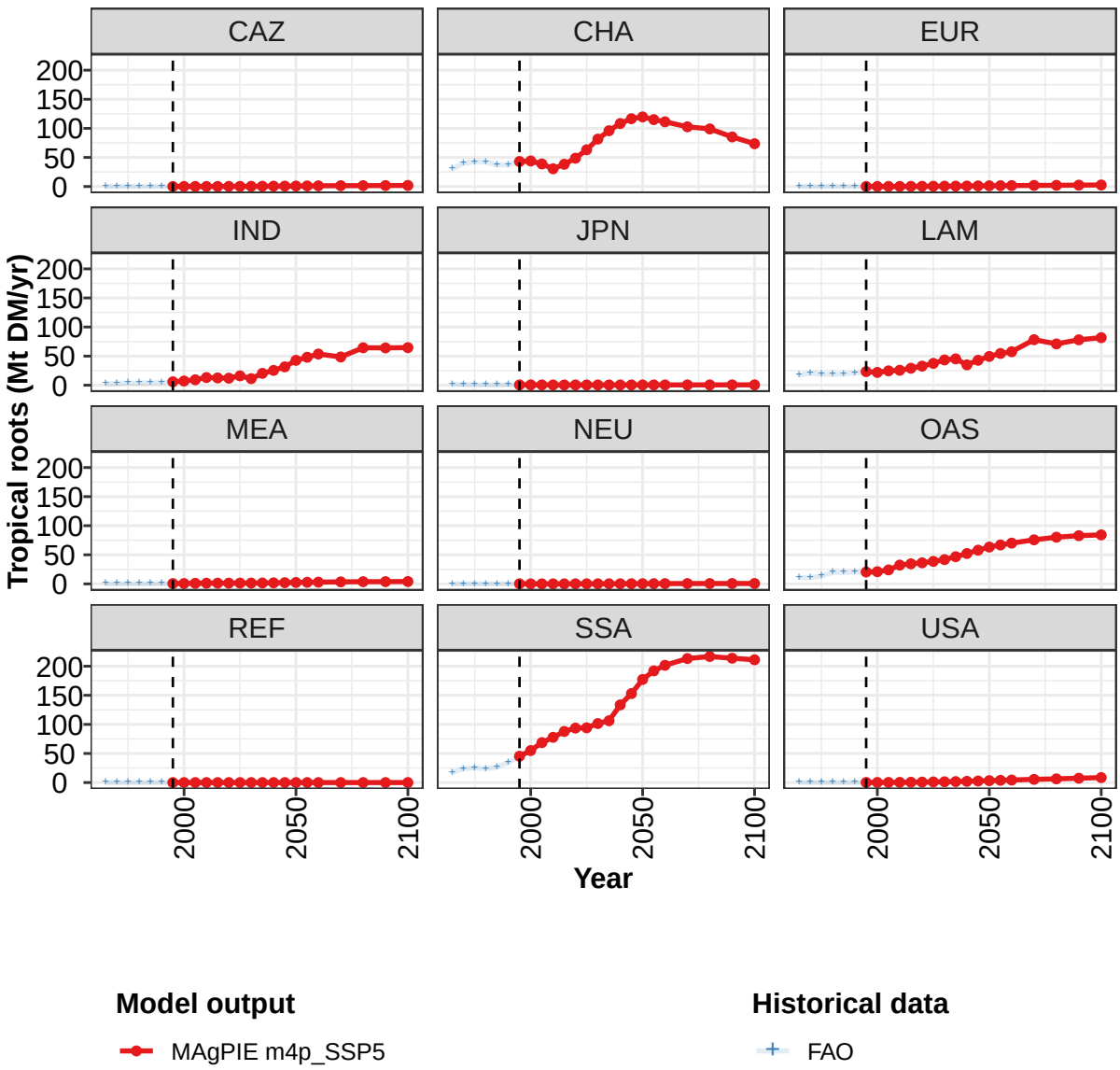
Table 1390: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	40.7	39.4	36.1	36.5	45.3	53.1	50.4	50.0	55.0	63.3
CAZ	0.1	0.2	0.3	0.4	1.1	1.8	4.3	6.1	6.5	6.7
CHA	8.6	6.3	5.6	6.1	5.0	5.6	4.1	4.3	4.7	3.5
EUR	3.2	3.0	2.3	2.3	4.2	7.0	5.0	4.4	4.1	3.8
IND	10.9	11.0	9.6	8.3	10.9	11.7	13.5	12.4	11.7	15.6
JPN	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	3.9	4.0	4.3	4.1	4.7	4.9	5.4	5.4	5.3	6.1
MEA	1.3	1.2	1.4	1.3	1.5	1.6	1.8	1.6	1.8	1.9
NEU	0.8	0.8	0.8	0.9	1.5	2.1	1.9	1.3	1.6	1.4
OAS	2.3	2.2	2.6	2.8	3.6	3.6	3.9	4.1	5.6	7.0
REF	5.6	6.3	4.4	5.3	7.8	8.1	3.1	2.0	2.7	2.4
SSA	2.8	3.4	3.7	3.7	3.8	5.1	5.8	6.8	8.9	12.5
USA	0.9	0.9	0.9	1.4	1.1	1.5	1.6	1.4	1.9	2.4

Table 1391: FAO — Production—Crops—Other crops—Pulses (Mt DM/yr)

44.3.4 Tropical roots





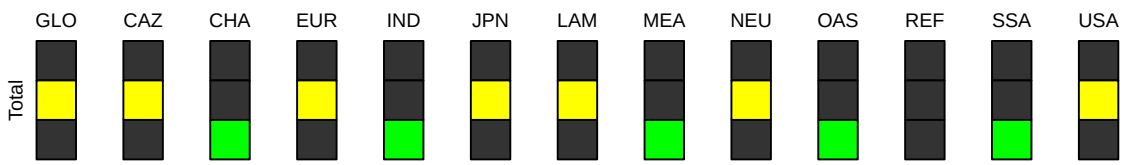


Figure 352: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	140	151	168	182	205	227	253	284	320	361	409
CAZ	0	0	0	0	0	0	0	0	0	1	1
CHA	43	44	39	31	38	49	63	82	96	108	117
EUR	0	0	0	0	0	0	0	1	1	1	1
IND	6	7	9	13	13	12	16	11	20	26	32
JPN	1	1	1	0	0	0	0	0	0	0	0
LAM	23	22	25	26	29	33	37	43	45	35	43
MEA	1	1	1	1	1	1	1	1	2	2	2
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	20	21	24	32	34	36	39	42	47	52	58
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	45	55	69	78	88	94	94	101	106	134	153
USA	0	0	0	0	1	1	1	1	2	2	3

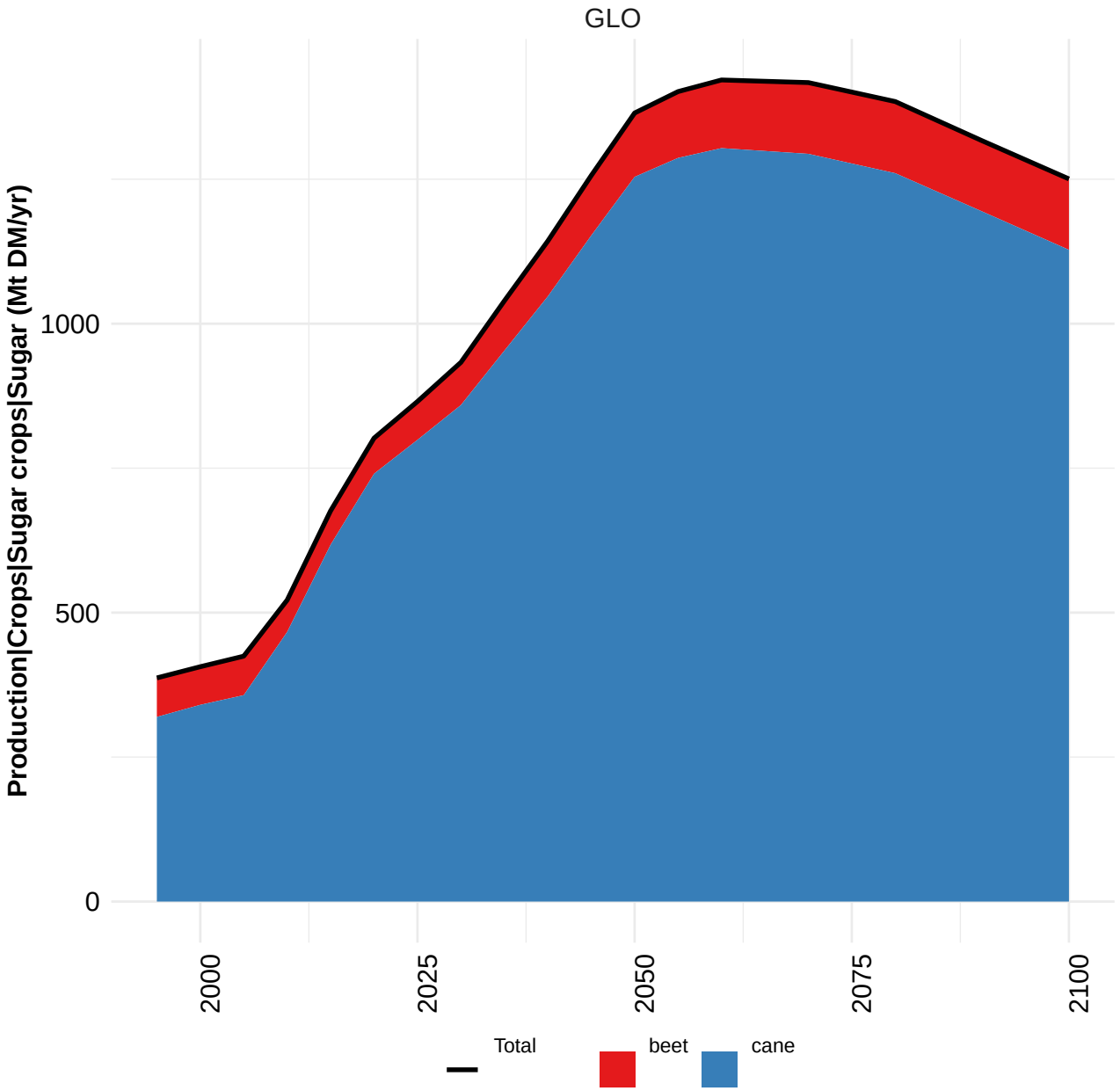
Table 1392: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

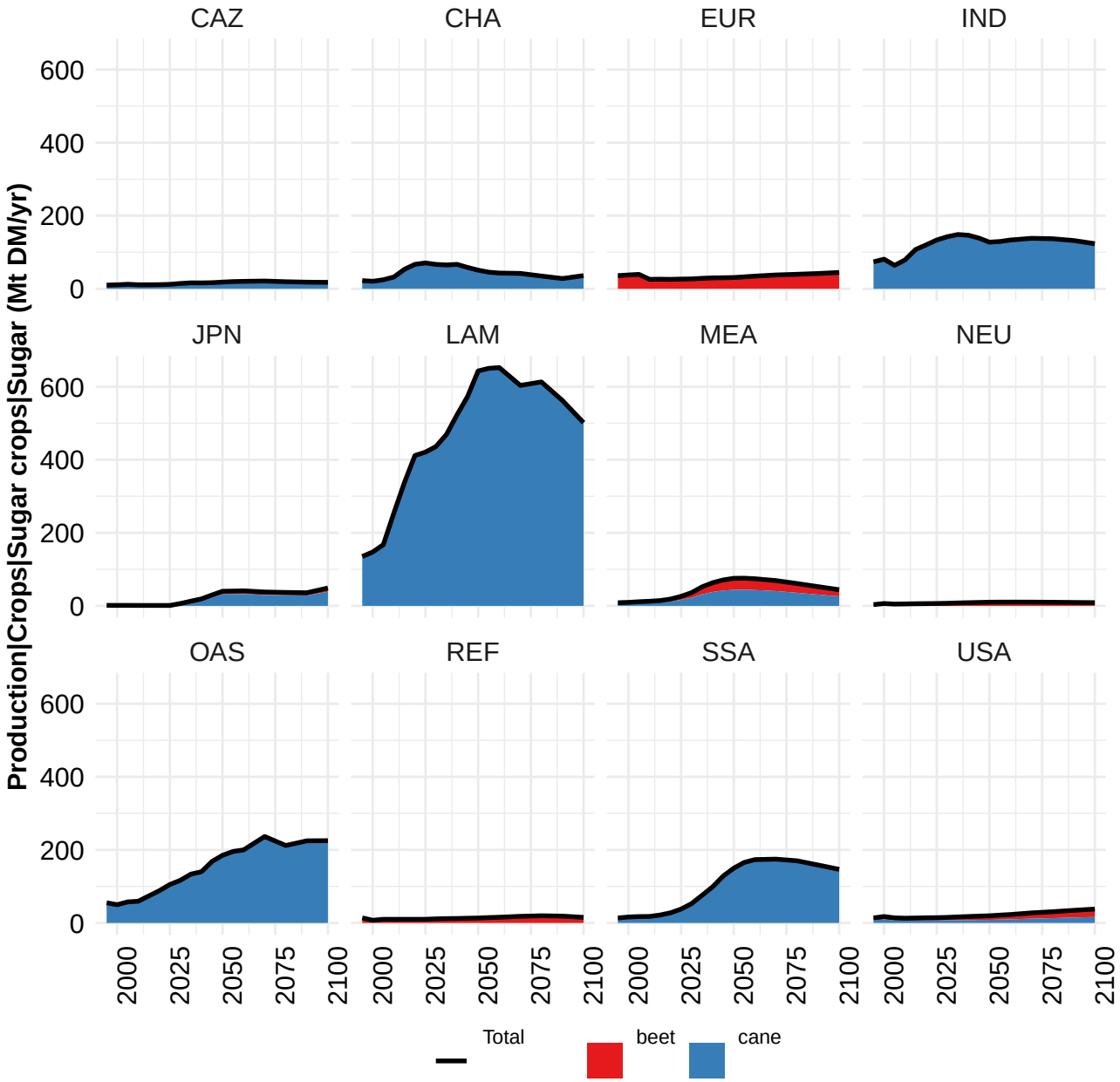
	2050	2055	2060	2070	2080	2090	2100
GLO	461	487	505	532	546	541	534
CAZ	1	1	1	1	2	2	2
CHA	120	115	111	103	99	85	74
EUR	1	1	2	2	2	2	3
IND	43	48	54	49	64	64	65
JPN	0	0	0	1	1	1	1
LAM	49	55	58	78	71	78	82
MEA	2	3	3	3	4	4	4
NEU	0	0	0	1	1	1	1
OAS	63	67	70	76	80	83	84
REF	0	0	0	0	0	0	0
SSA	177	192	202	213	217	214	211
USA	3	4	4	6	6	7	9

Table 1393: MAgPIE m4p_SSP5 — Production—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

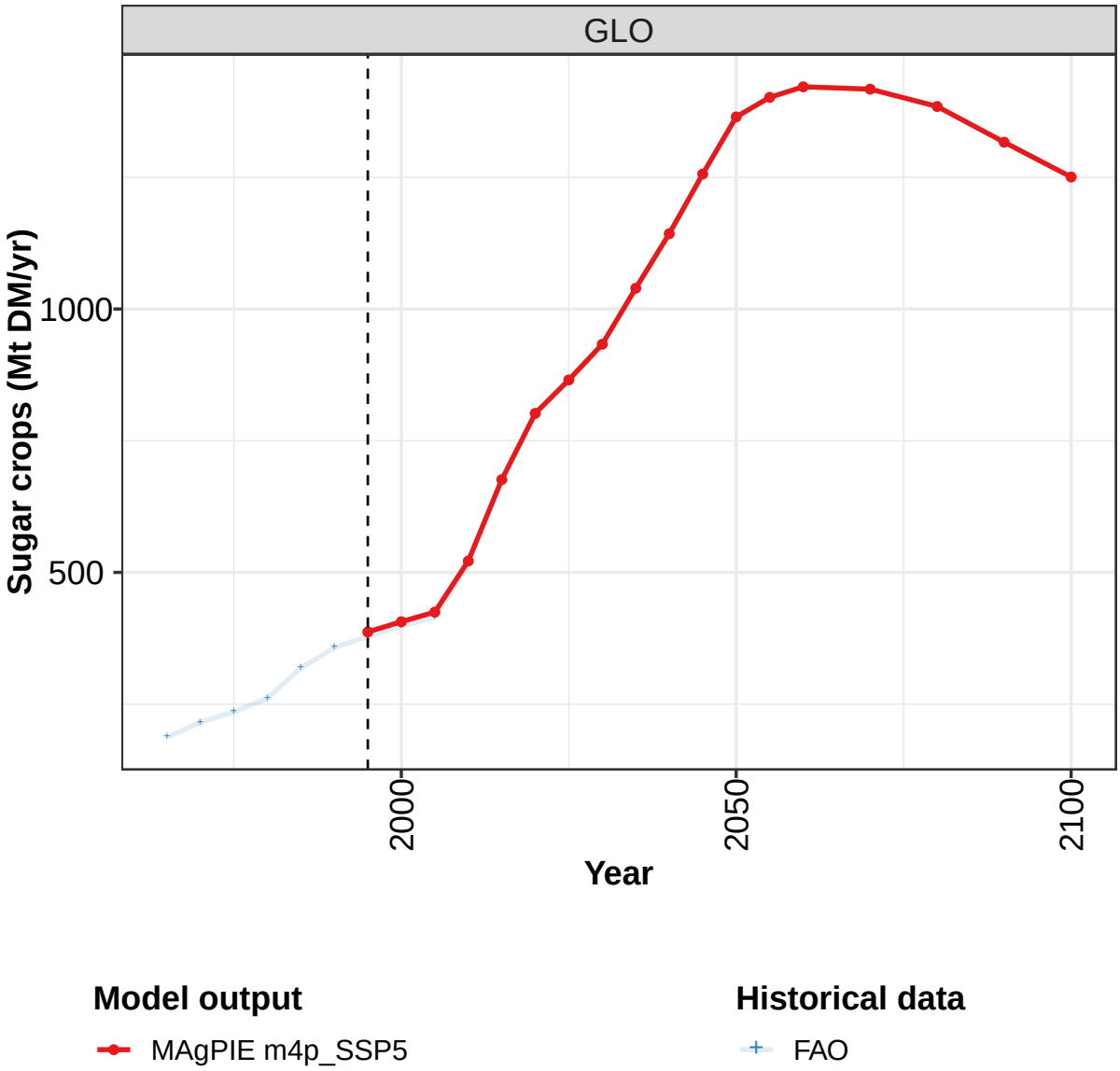
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	81	101	105	109	108	119	137	150	167	181
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	30	40	42	42	37	38	43	44	39	31
EUR	0	0	0	0	0	0	0	0	0	0
IND	3	3	4	4	4	5	6	7	9	13
JPN	2	1	1	1	1	1	1	1	1	0
LAM	17	20	19	19	19	21	22	22	25	25
MEA	0	0	0	0	0	0	0	1	1	1
NEU	0	0	0	0	0	0	0	0	0	0
OAS	11	11	13	20	20	20	19	21	24	31
REF	0	0	0	0	0	0	0	0	0	0
SSA	17	24	25	24	27	35	45	55	68	79
USA	0	0	0	0	0	0	0	0	0	0

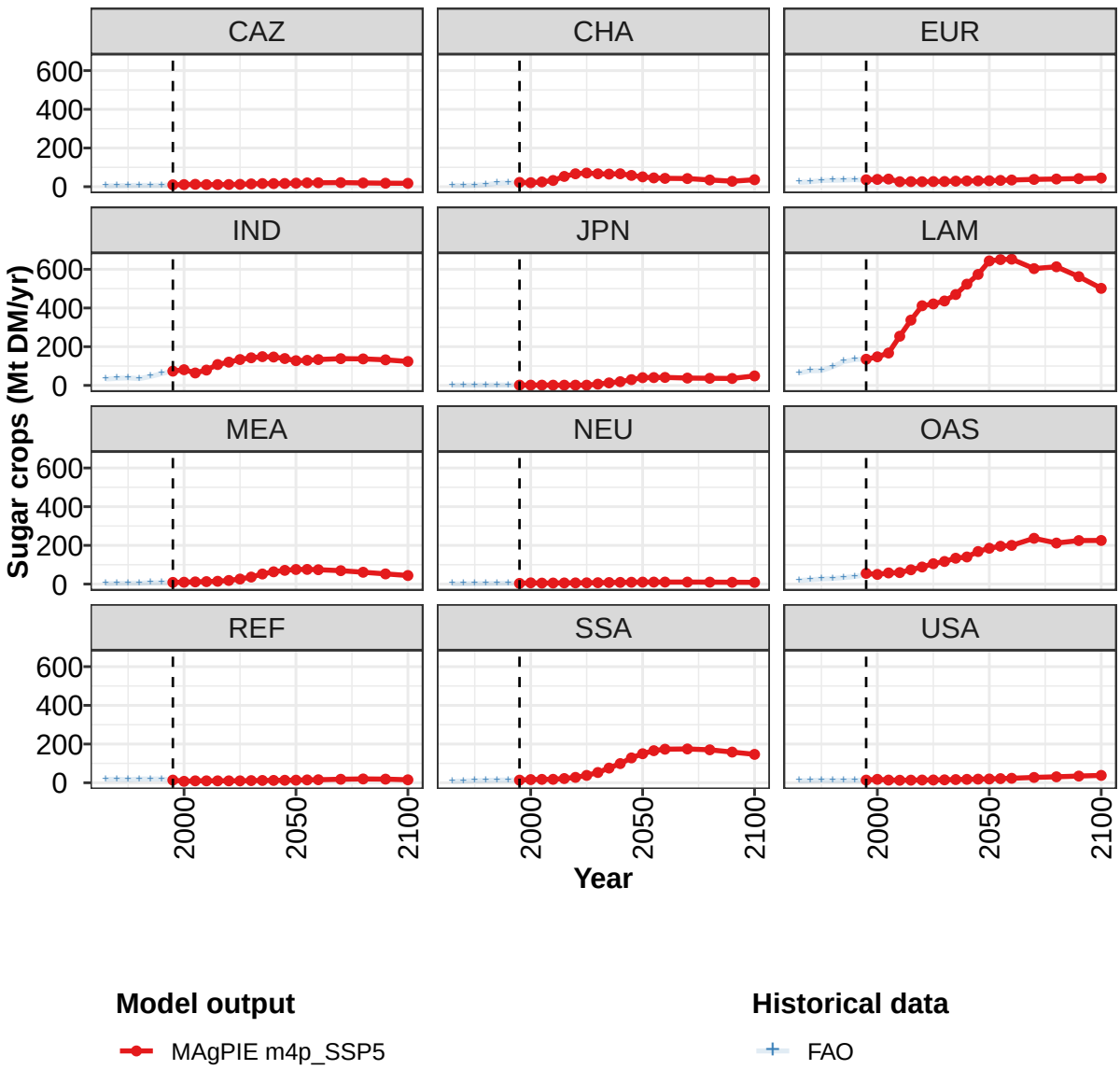
Table 1394: FAO — Production—Crops—Other crops—Tropical roots (Mt DM/yr)


GLO
Production|Crops|Sugar crops|Sugar (Mt DM/yr)
1000
500
0
2000
2025
2050
2075
2100
Total
beet
cane


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Crops|Sugar crops|Sugar (Mt DM/yr)
600
400
200
0
2000
2025
2050
2075
2100
Total
beet
cane

44.4 Sugar crops





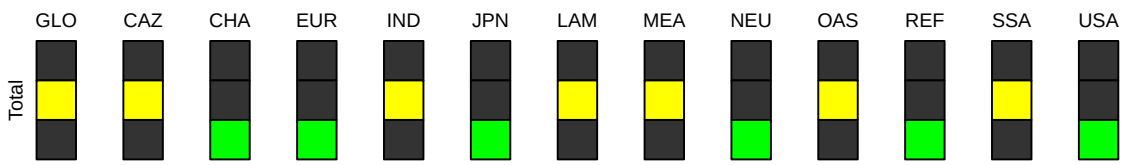


Figure 353: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	387	406	425	522	676	802	865	933	1039	1143	1256
CAZ	10	11	12	11	11	11	12	15	16	16	17
CHA	22	21	25	32	53	67	71	67	65	67	58
EUR	36	38	40	26	26	26	27	27	29	30	30
IND	74	81	64	79	108	120	134	143	149	147	139
JPN	1	1	1	1	1	1	1	6	13	19	30
LAM	135	148	167	254	337	412	421	436	470	523	574
MEA	9	10	11	13	14	19	26	36	52	63	71
NEU	3	6	5	5	6	6	7	7	8	9	9
OAS	55	50	58	59	74	88	105	117	134	140	168
REF	14	7	10	10	10	10	10	11	12	12	13
SSA	13	16	17	18	22	28	38	53	76	99	129
USA	14	18	14	13	14	14	14	15	16	18	19

Table 1395: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

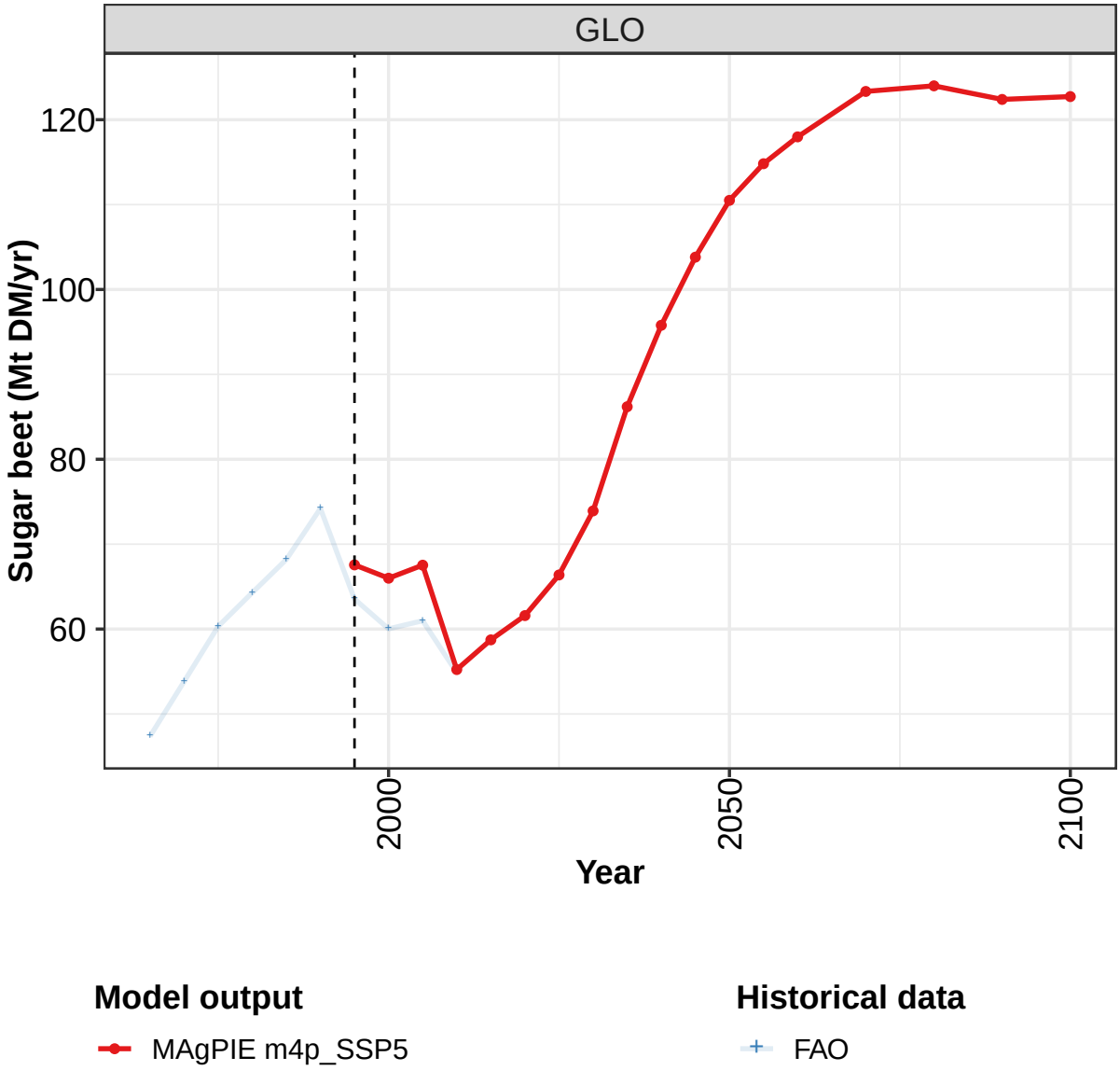
	2050	2055	2060	2070	2080	2090	2100
GLO	1365	1402	1422	1417	1384	1317	1251
CAZ	18	20	20	21	19	18	18
CHA	51	45	43	42	35	28	36
EUR	31	33	35	38	40	42	45
IND	128	130	134	138	137	132	123
JPN	40	40	41	38	37	36	49
LAM	643	650	652	604	613	562	502
MEA	75	76	74	69	61	53	44
NEU	10	10	10	10	10	9	9
OAS	185	196	200	237	212	225	225
REF	13	15	16	18	20	19	15
SSA	150	166	173	175	170	159	147
USA	20	21	23	27	31	35	38

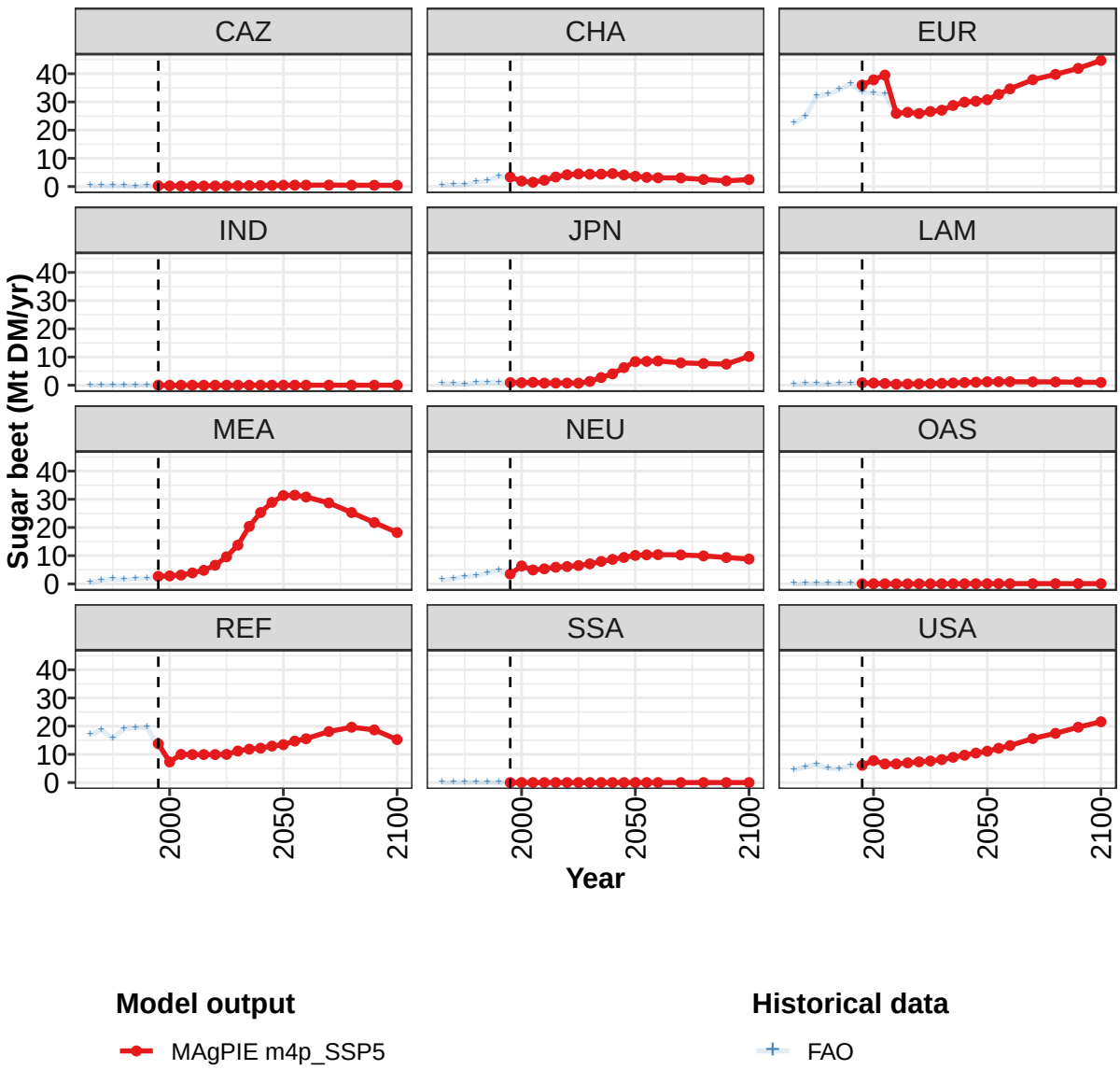
Table 1396: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	187	215	235	261	319	357	379	398	415	515
CAZ	4	5	6	7	7	7	10	11	10	9
CHA	7	6	7	10	18	21	22	21	26	32
EUR	23	25	32	33	34	37	33	33	33	25
IND	33	36	39	35	46	61	74	81	64	79
JPN	1	1	1	1	2	1	1	1	1	1
LAM	64	75	77	96	123	134	137	146	172	254
MEA	2	4	5	5	7	7	9	9	11	12
NEU	1	2	3	3	4	5	3	5	5	5
OAS	18	22	27	29	34	39	49	50	52	57
REF	17	19	16	19	19	20	13	7	10	10
SSA	7	9	11	12	14	14	13	16	18	17
USA	10	11	13	12	12	13	14	18	14	14

Table 1397: FAO — Production—Crops—Sugar crops (Mt DM/yr)

44.4.1 Sugar beet





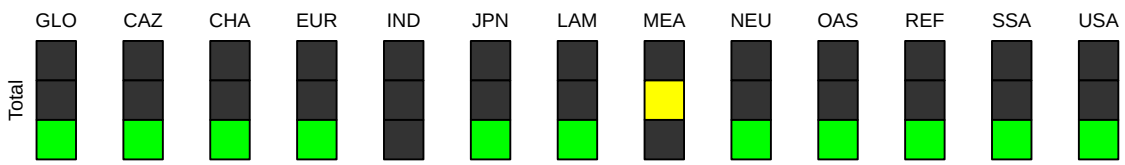


Figure 354: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	68	66	68	55	59	62	66	74	86	96	104
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	3	2	2	2	3	4	4	4	4	5	4
EUR	36	38	40	26	26	26	27	27	29	30	30
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	1	1	1	1	1	1	1	1	3	4	6
LAM	1	1	1	0	0	0	1	1	1	1	1
MEA	3	3	3	4	5	7	10	14	20	25	29
NEU	3	6	5	5	6	6	7	7	8	9	9
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	14	7	10	10	10	10	10	11	12	12	13
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	6	8	7	7	7	7	8	8	9	10	10

Table 1398: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

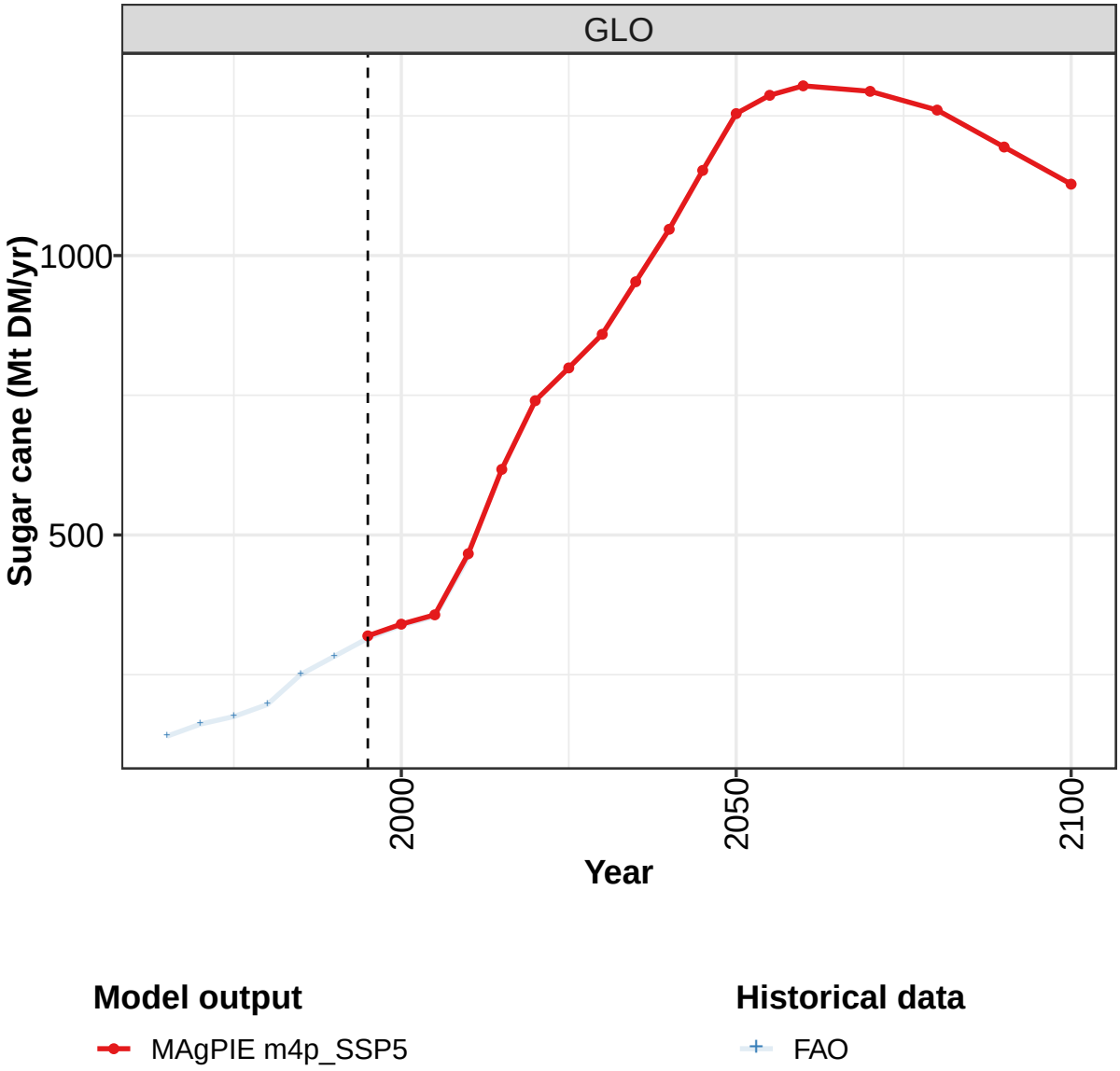
	2050	2055	2060	2070	2080	2090	2100
GLO	110	115	118	123	124	122	123
CAZ	0	0	0	1	0	0	0
CHA	4	3	3	3	3	2	2
EUR	31	33	35	38	40	42	45
IND	0	0	0	0	0	0	0
JPN	8	8	9	8	8	7	10
LAM	1	1	1	1	1	1	1
MEA	31	31	31	29	25	22	18
NEU	10	10	10	10	10	9	9
OAS	0	0	0	0	0	0	0
REF	13	15	16	18	20	19	15
SSA	0	0	0	0	0	0	0
USA	11	12	13	16	17	20	22

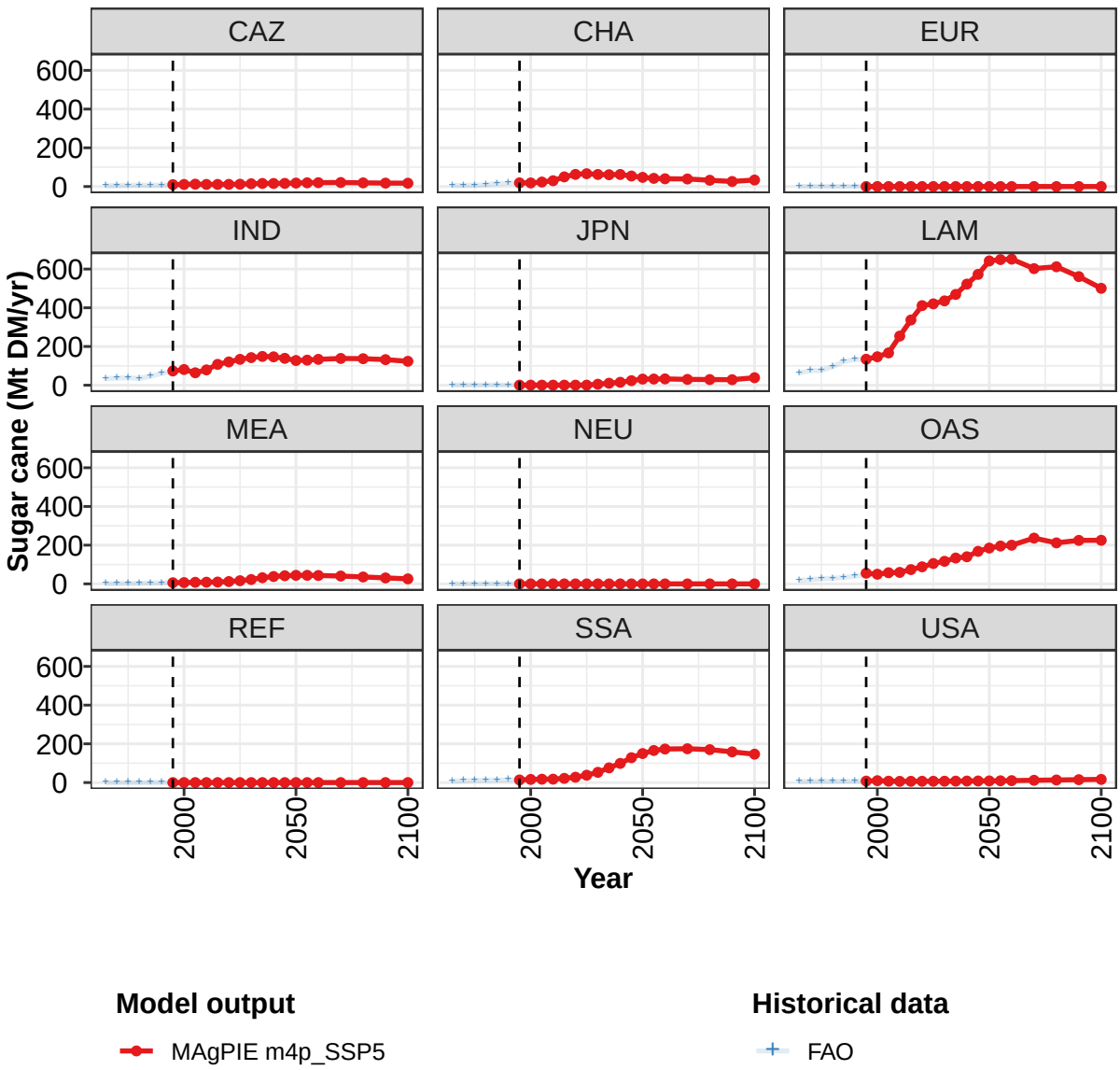
Table 1399: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	47.4	53.8	60.3	64.3	68.2	74.2	63.5	60.0	61.0	54.9
CAZ	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1
CHA	0.5	0.5	0.6	1.5	2.1	3.5	3.4	1.9	1.9	2.2
EUR	22.5	24.9	32.0	32.7	34.4	36.5	33.4	33.1	32.8	25.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.4	0.6	0.4	0.9	0.9	1.0	0.9	0.9	1.0	0.7
LAM	0.3	0.5	0.5	0.2	0.6	0.6	0.9	0.7	0.6	0.4
MEA	0.5	1.3	1.7	1.6	1.8	2.0	2.7	2.8	3.1	3.8
NEU	1.4	1.7	2.7	2.9	3.9	4.8	3.3	5.1	4.7	5.4
OAS	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
REF	17.0	18.6	15.6	19.1	19.4	19.6	12.6	7.4	10.0	9.9
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	4.5	5.5	6.5	5.1	4.9	6.0	6.1	7.8	6.6	7.0

Table 1400: FAO — Production—Crops—Sugar crops—Sugar beet (Mt DM/yr)

44.4.2 Sugar cane





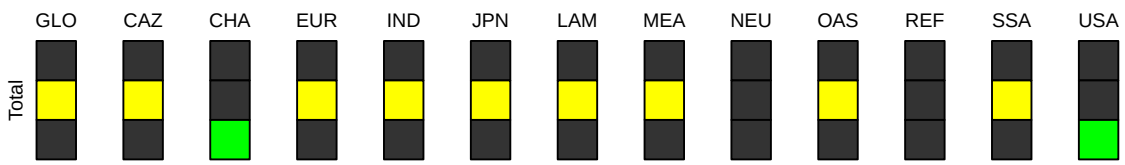


Figure 355: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	319	340	357	467	617	740	799	859	953	1047	1152
CAZ	10	11	12	11	11	11	12	14	16	16	16
CHA	19	19	23	30	50	63	66	62	61	62	54
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	74	81	64	79	108	120	134	143	149	147	139
JPN	0	0	0	0	0	0	0	5	10	15	24
LAM	134	147	167	254	337	411	420	436	469	522	572
MEA	6	7	8	9	10	12	17	22	32	38	42
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	55	50	58	59	74	88	105	117	134	140	168
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	13	16	17	18	22	28	38	53	76	99	129
USA	8	10	7	6	7	7	7	7	7	8	8

Table 1401: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

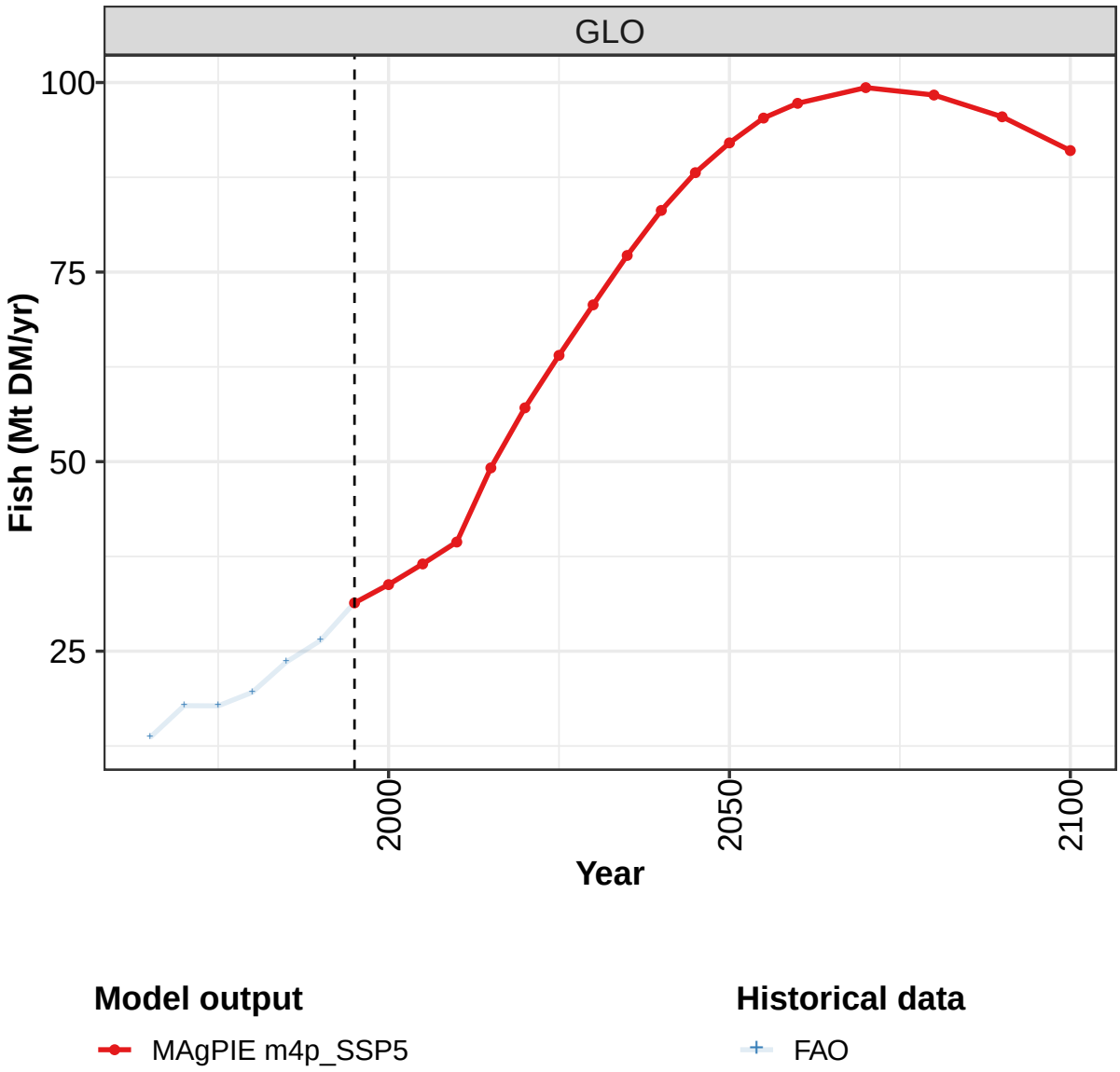
	2050	2055	2060	2070	2080	2090	2100
GLO	1254	1287	1304	1294	1260	1194	1128
CAZ	18	19	20	21	19	18	17
CHA	47	42	40	39	32	26	34
EUR	0	0	0	0	0	0	0
IND	128	130	134	138	137	132	123
JPN	32	32	33	30	29	28	39
LAM	642	649	651	602	612	561	501
MEA	44	44	43	41	36	31	26
NEU	0	0	0	0	0	0	0
OAS	185	196	200	236	212	225	225
REF	0	0	0	0	0	0	0
SSA	150	166	173	175	170	159	147
USA	8	9	10	12	13	15	16

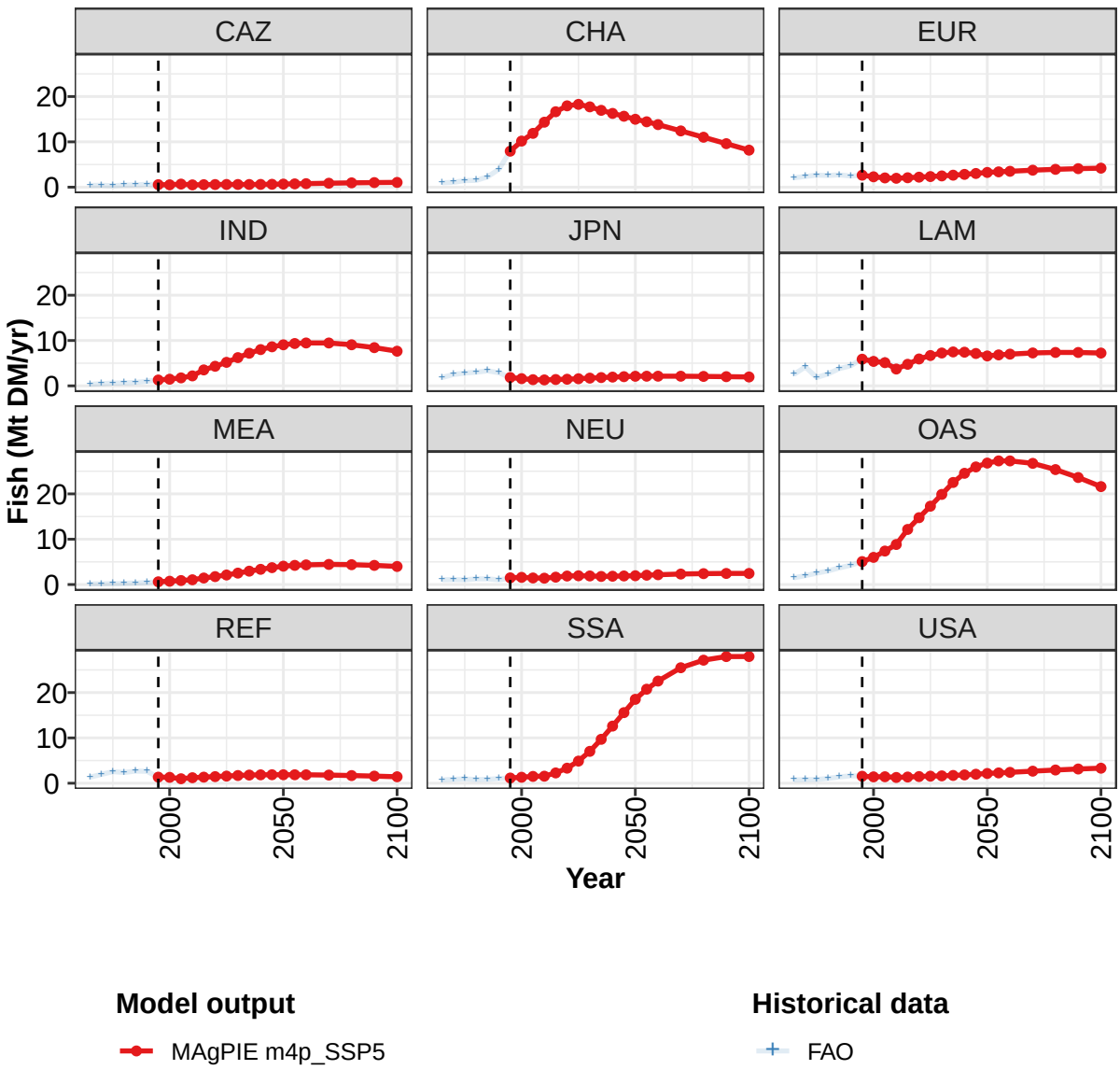
Table 1402: MAgPIE m4p_SSP5 — Production—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	140	162	175	197	251	283	315	338	354	460
CAZ	4	5	6	6	7	7	9	10	10	8
CHA	6	5	7	9	16	17	19	19	24	30
EUR	0	0	0	0	0	0	0	0	0	0
IND	33	36	39	35	46	61	74	81	64	79
JPN	1	1	1	1	1	1	0	0	0	0
LAM	64	75	76	96	122	133	136	145	171	254
MEA	1	2	3	3	5	5	6	7	8	8
NEU	0	0	0	0	0	0	0	0	0	0
OAS	18	22	27	29	34	39	49	50	52	57
REF	0	0	0	0	0	0	0	0	0	0
SSA	7	9	11	12	14	14	13	16	18	17
USA	6	6	7	7	7	7	8	10	7	7

Table 1403: FAO — Production—Crops—Sugar crops—Sugar cane (Mt DM/yr)

45 Fish


GLO
100
75
50
25
Fish (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



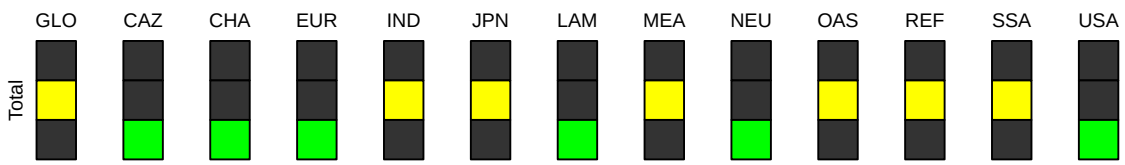


Figure 356: MAgPIE m4p_SSP5 — Production—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	31.4	33.8	36.5	39.4	49.2	57.1	64.0	70.7	77.2	83.1	88.1
CAZ	0.6	0.5	0.7	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
CHA	7.9	10.2	11.9	14.3	16.6	17.9	18.3	17.7	17.0	16.3	15.7
EUR	2.6	2.3	2.0	2.0	2.1	2.2	2.3	2.5	2.6	2.8	3.0
IND	1.3	1.5	1.8	2.2	3.5	4.3	5.2	6.2	7.2	8.0	8.6
JPN	1.8	1.6	1.4	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
LAM	5.9	5.4	5.1	3.7	4.8	5.9	6.7	7.3	7.5	7.4	7.1
MEA	0.6	0.7	0.9	1.1	1.4	1.7	2.1	2.5	3.0	3.4	3.7
NEU	1.5	1.6	1.5	1.4	1.6	1.9	1.9	1.9	1.8	1.8	1.9
OAS	5.1	6.0	7.4	8.8	12.2	14.8	17.3	19.9	22.5	24.5	25.9
REF	1.3	1.3	1.0	1.2	1.3	1.5	1.6	1.7	1.8	1.9	1.9
SSA	1.1	1.3	1.5	1.6	2.3	3.3	4.9	7.0	9.7	12.6	15.6
USA	1.5	1.4	1.4	1.3	1.4	1.5	1.6	1.6	1.7	1.8	2.0

Table 1404: MAgPIE m4p_SSP5 — Production—Fish (Mt DM/yr) [PART 1/2]

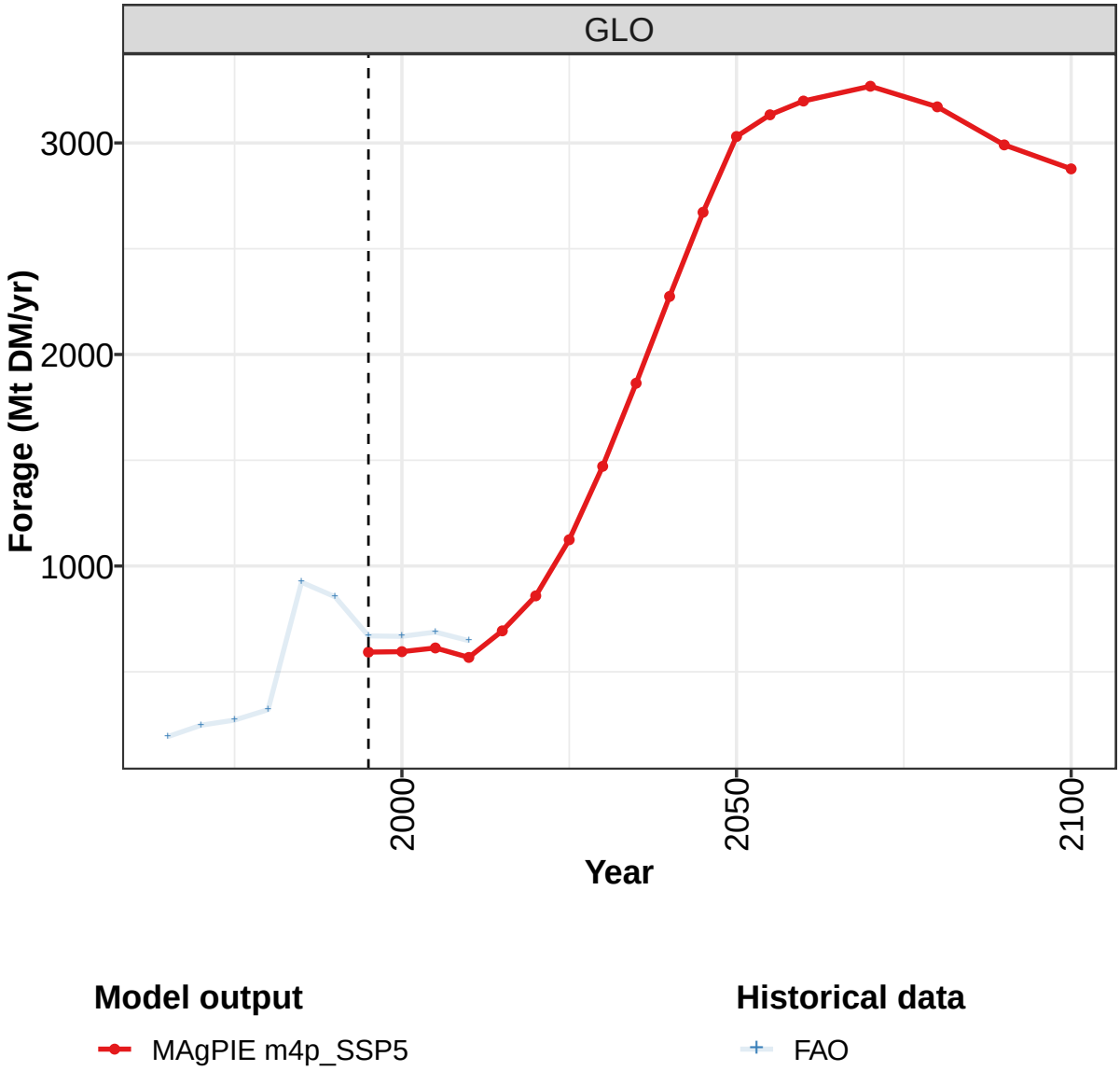
	2050	2055	2060	2070	2080	2090	2100
GLO	92.0	95.3	97.3	99.3	98.4	95.5	91.0
CAZ	0.7	0.7	0.8	0.9	1.0	1.0	1.1
CHA	15.0	14.4	13.8	12.4	11.0	9.6	8.2
EUR	3.3	3.4	3.5	3.7	3.9	4.1	4.2
IND	9.1	9.3	9.5	9.5	9.1	8.4	7.6
JPN	2.1	2.1	2.1	2.1	2.1	2.0	2.0
LAM	6.6	6.8	7.0	7.3	7.4	7.4	7.2
MEA	4.1	4.2	4.3	4.4	4.4	4.2	4.0
NEU	1.9	2.1	2.2	2.3	2.4	2.5	2.4
OAS	26.8	27.3	27.3	26.7	25.4	23.6	21.6
REF	1.9	1.9	1.9	1.8	1.7	1.6	1.4
SSA	18.5	20.7	22.5	25.5	27.1	27.9	28.0
USA	2.2	2.3	2.4	2.7	2.9	3.1	3.3

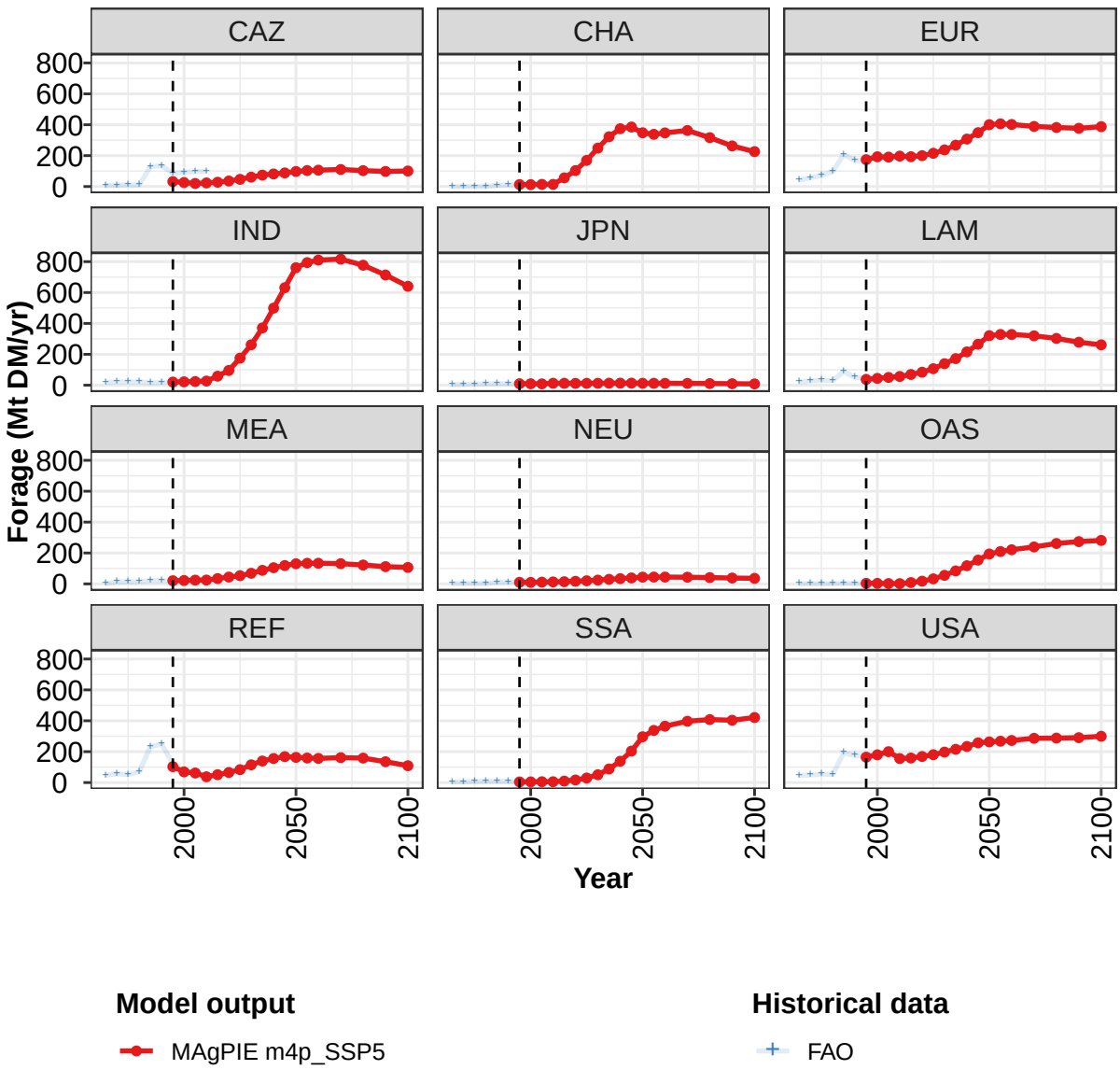
Table 1405: MAgPIE m4p_SSP5 — Production—Fish (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	13.6	17.8	17.8	19.6	23.6	26.4	31.4	33.8	36.6	39.5
CAZ	0.4	0.4	0.3	0.5	0.5	0.6	0.5	0.5	0.6	0.5
CHA	1.0	1.1	1.5	1.5	2.3	3.9	8.0	10.1	11.9	14.3
EUR	2.1	2.4	2.7	2.6	2.7	2.5	2.6	2.3	2.0	2.0
IND	0.4	0.5	0.6	0.7	0.8	1.0	1.3	1.5	1.8	2.3
JPN	1.8	2.5	2.8	3.0	3.3	2.9	1.8	1.6	1.4	1.3
LAM	2.5	4.2	1.8	2.7	3.8	4.4	6.0	5.7	5.5	3.8
MEA	0.1	0.2	0.2	0.2	0.3	0.4	0.6	0.7	0.9	1.1
NEU	1.1	1.1	1.0	1.3	1.3	1.0	1.4	1.6	1.5	1.5
OAS	1.5	2.0	2.5	3.0	3.7	4.3	5.1	5.7	7.1	8.8
REF	1.3	1.9	2.6	2.4	2.7	2.6	1.3	1.2	1.0	1.2
SSA	0.7	0.9	1.0	0.8	0.8	1.0	1.1	1.3	1.5	1.5
USA	0.7	0.8	0.8	1.1	1.4	1.6	1.6	1.4	1.5	1.3

Table 1406: FAO — Production—Fish (Mt DM/yr)

46 Forage


GLO
Forage (Mt DM/yr)
3000
2000
1000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



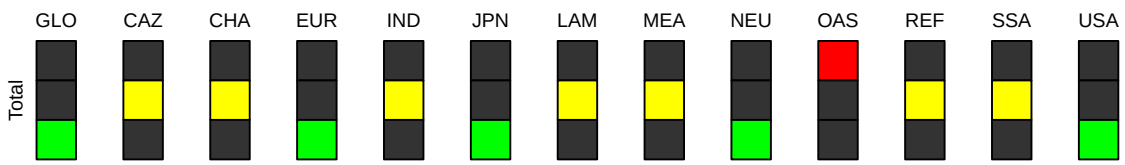


Figure 357: MAgPIE m4p_SSP5 — Production—Forage (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	593	595	613	568	694	859	1124	1471	1864	2275	2672
CAZ	32	26	20	23	28	36	47	61	74	81	88
CHA	13	12	14	14	56	103	169	249	322	374	385
EUR	174	193	191	197	193	200	215	237	268	307	349
IND	20	22	24	27	58	95	175	262	371	499	631
JPN	10	10	9	13	12	12	12	13	13	13	13
LAM	37	44	50	56	70	84	107	139	172	216	265
MEA	21	22	24	25	34	44	53	69	88	105	119
NEU	10	10	11	13	14	17	20	24	29	34	39
OAS	4	3	2	2	9	18	33	55	84	118	154
REF	103	69	62	38	51	65	83	115	140	156	168
SSA	4	4	5	5	10	17	29	51	88	138	204
USA	165	180	200	155	159	169	180	197	215	234	257

Table 1407: MAgPIE m4p_SSP5 — Production—Forage (Mt DM/yr) [PART 1/2]

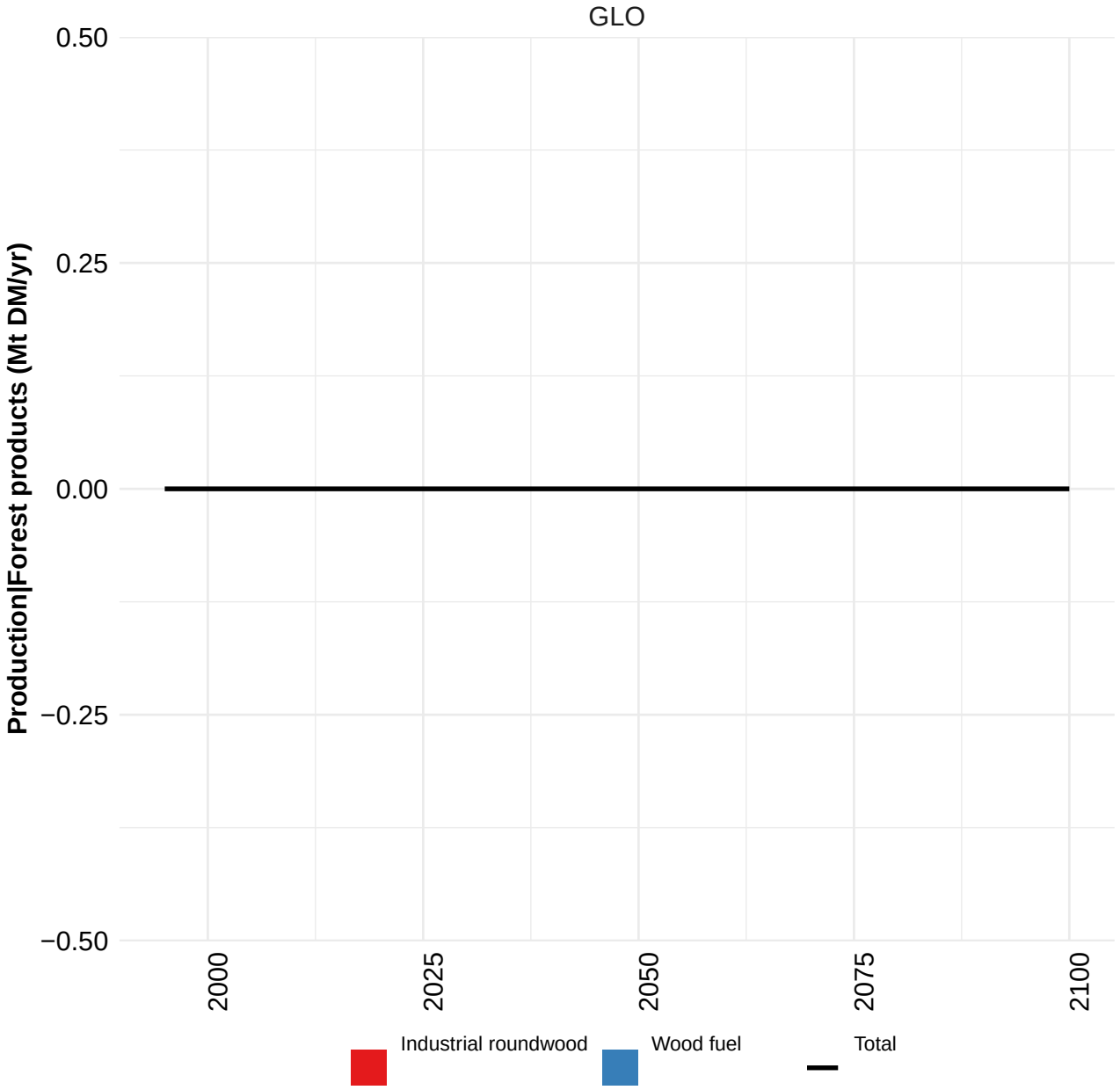
	2050	2055	2060	2070	2080	2090	2100
GLO	3030	3133	3198	3268	3171	2991	2878
CAZ	97	103	106	110	103	98	101
CHA	348	338	347	363	317	263	226
EUR	401	406	402	389	382	377	388
IND	761	794	810	816	777	714	640
JPN	12	12	12	12	11	10	8
LAM	321	329	328	320	303	278	261
MEA	130	133	134	131	122	112	107
NEU	44	44	44	43	41	38	36
OAS	193	210	221	239	262	274	281
REF	163	159	156	161	158	135	109
SSA	297	338	365	397	408	403	421
USA	263	268	273	287	288	291	300

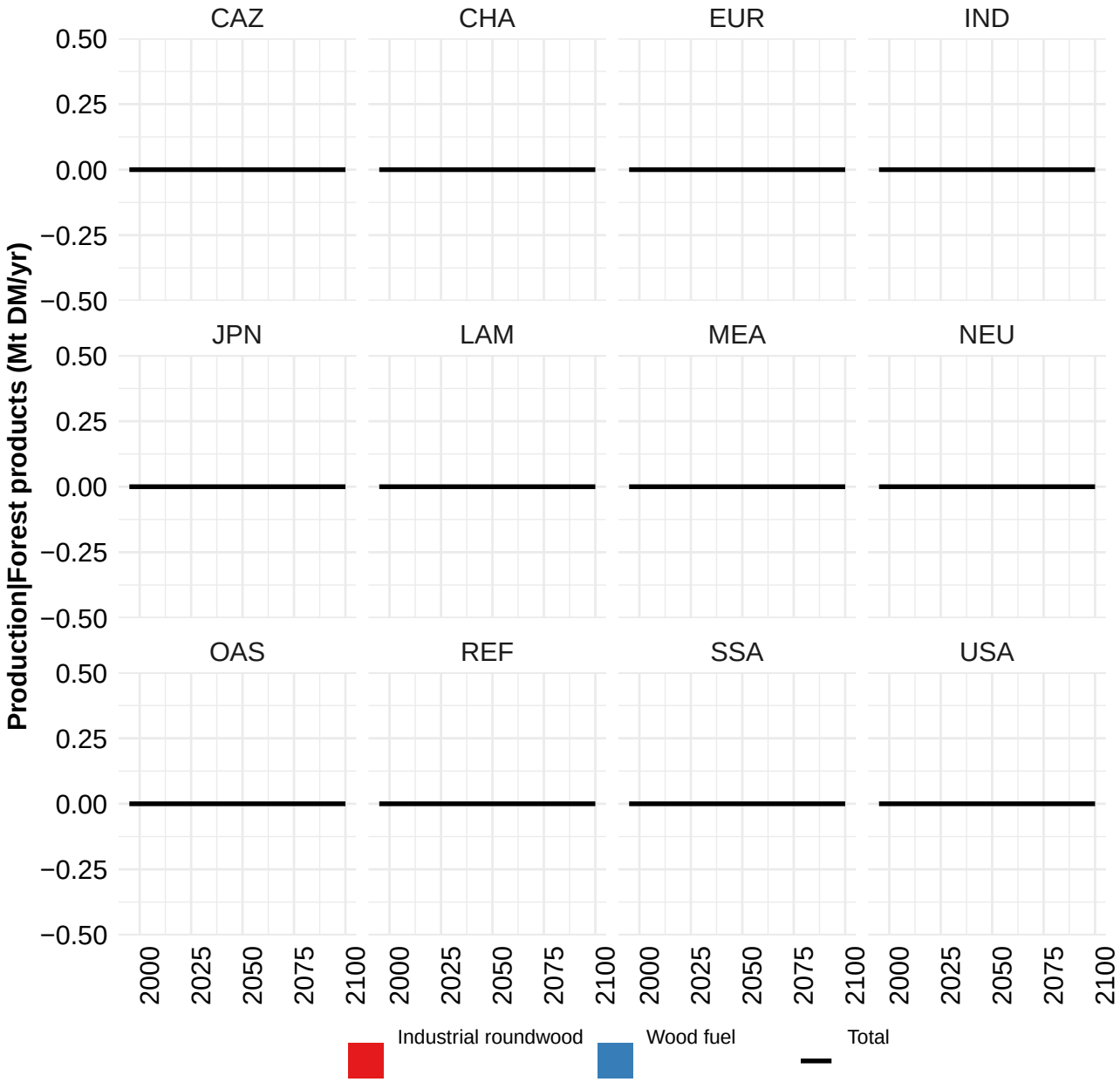
Table 1408: MAgPIE m4p_SSP5 — Production—Forage (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	193	247	272	321	923	855	670	667	688	647
CAZ	7	9	10	10	128	135	85	93	96	99
CHA	0	0	0	0	8	10	11	12	13	14
EUR	40	57	71	97	206	168	169	182	186	196
IND	19	21	21	22	15	18	20	22	25	28
JPN	3	6	8	9	10	10	9	9	8	12
LAM	21	27	33	31	88	51	46	50	51	54
MEA	2	14	13	15	21	20	20	21	23	25
NEU	2	2	3	3	11	11	11	10	12	13
OAS	1	1	1	1	3	2	2	2	2	2
REF	47	57	52	71	232	248	123	77	65	38
SSA	4	5	6	9	9	7	5	5	5	5
USA	47	48	54	53	193	175	170	185	201	162

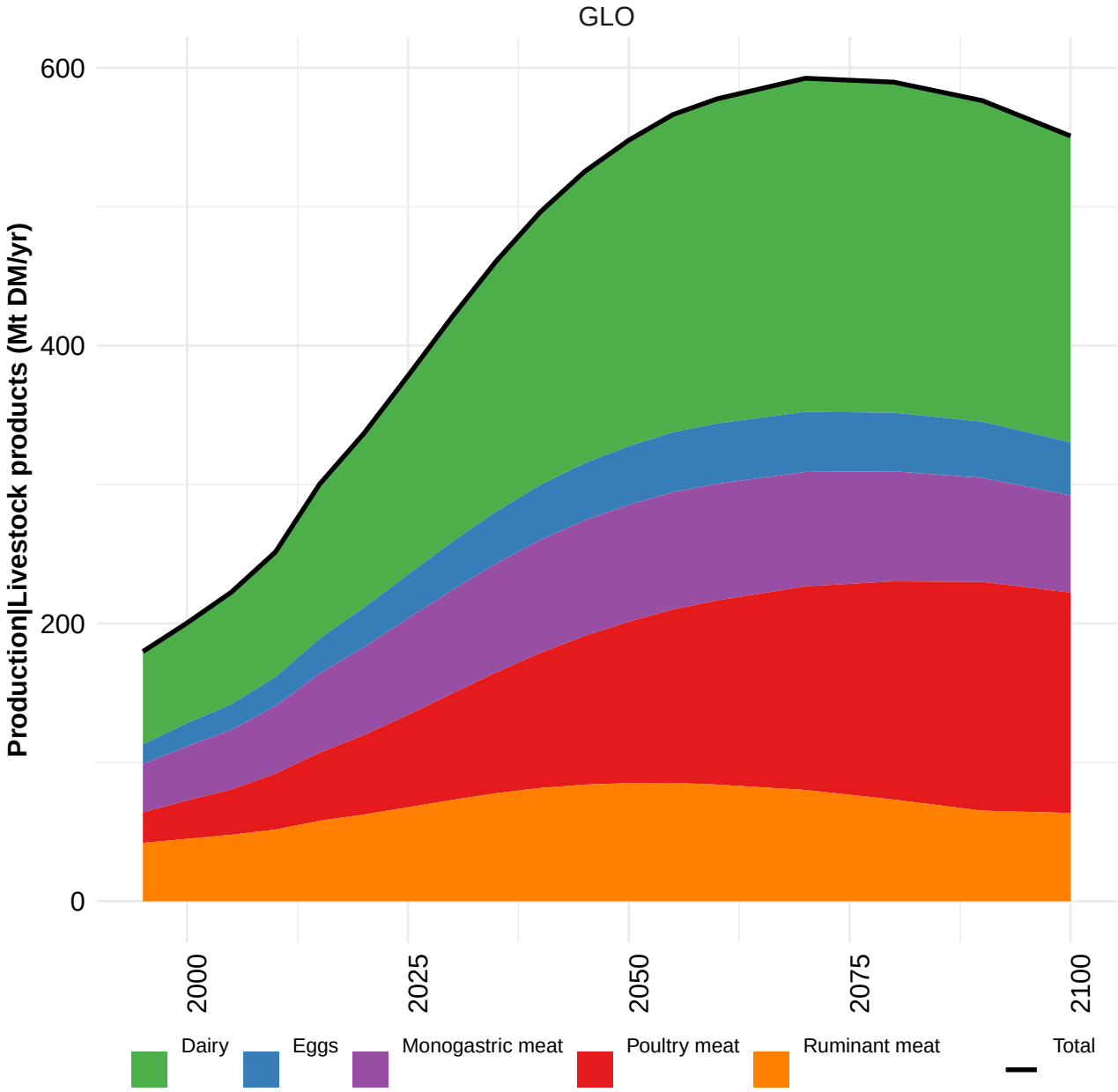
Table 1409: FAO — Production—Forage (Mt DM/yr)

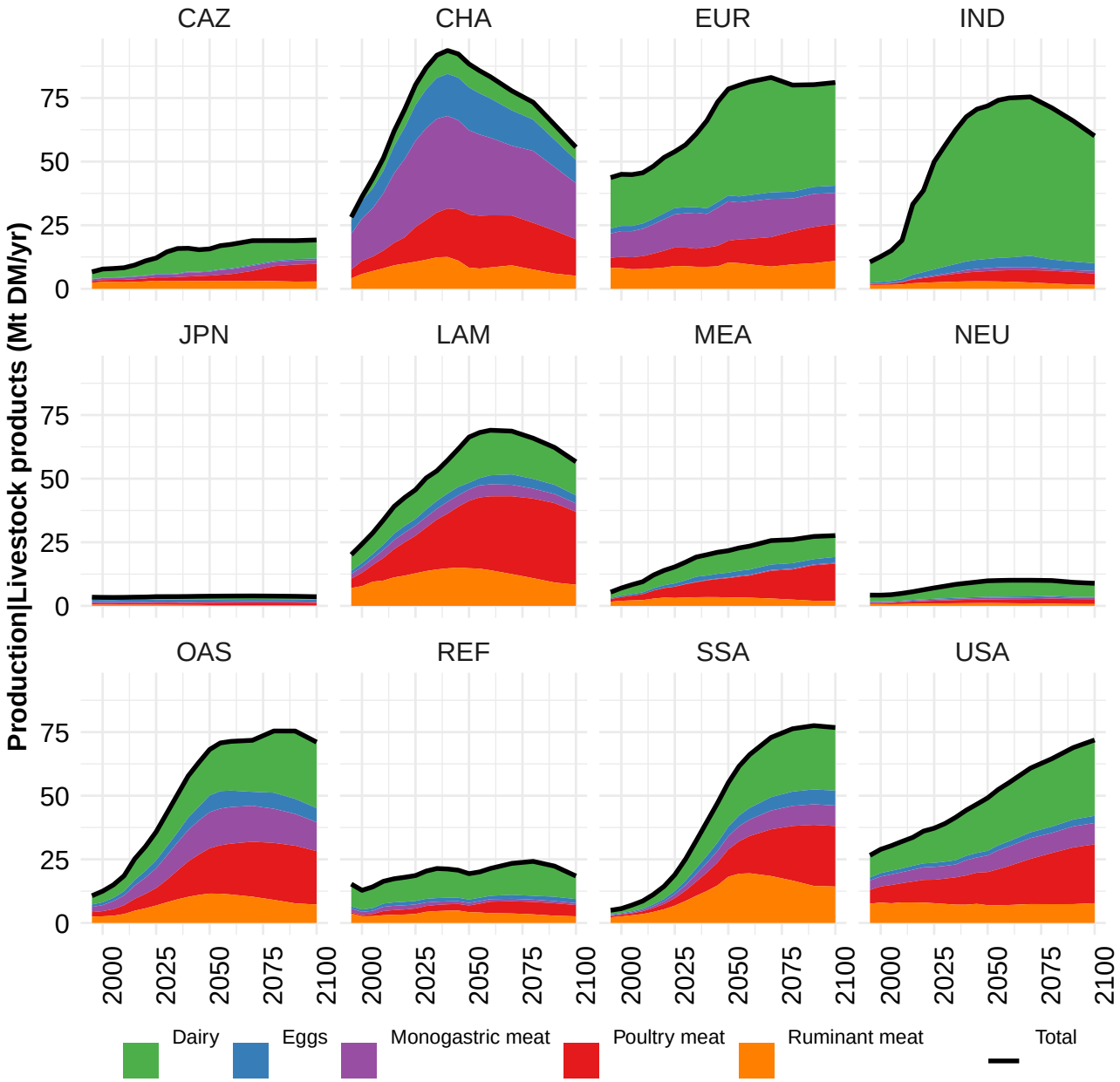
47 Forest products

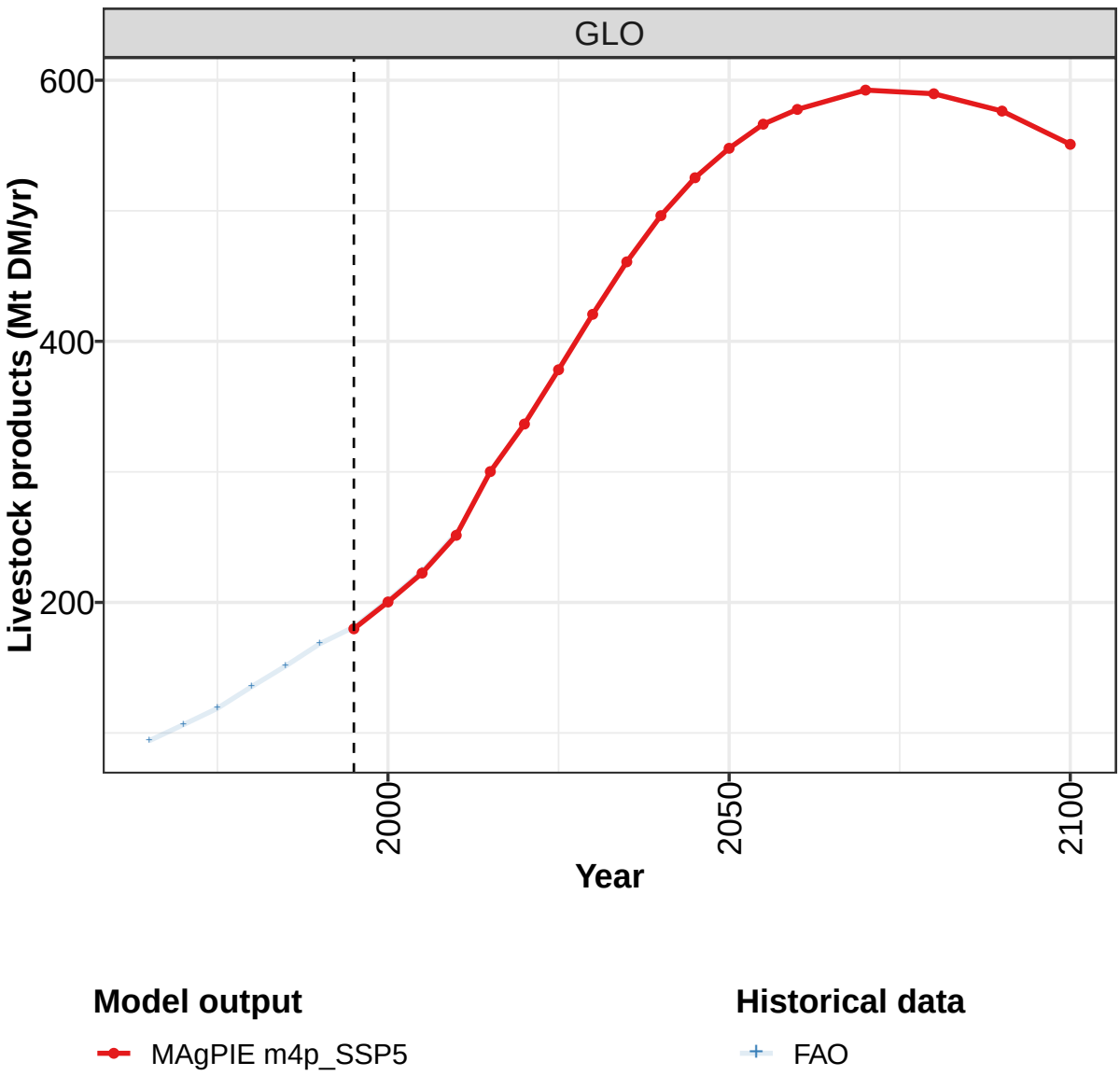


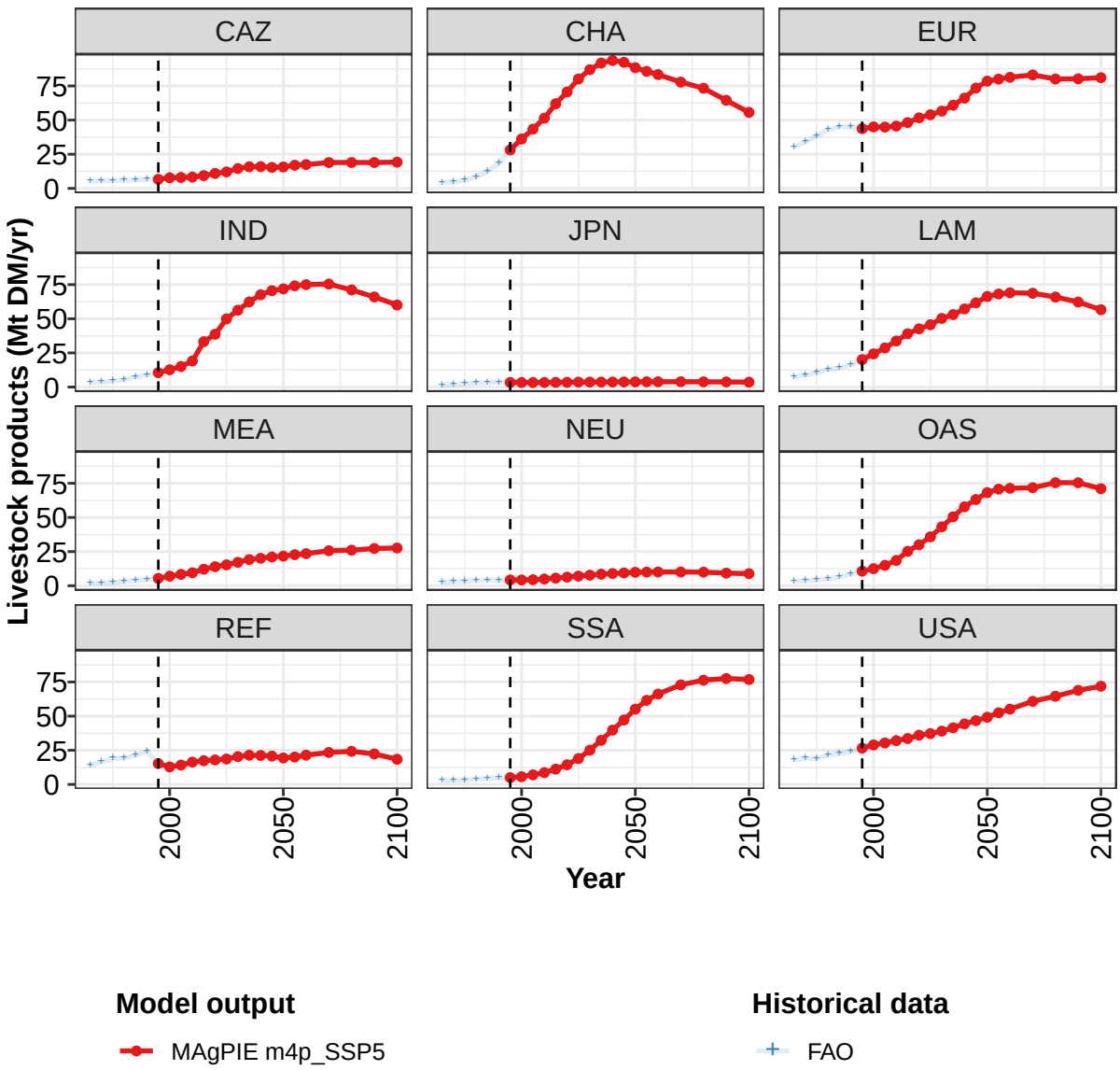

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Forest products (Mt DM/yr)
0.50
0.25
0.00
−0.25
−0.50
2000
2025
2050
2075
2100
Industrial roundwood
Wood fuel
Total

48 Livestock products




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Livestock products (Mt DM/yr)
0
25
50
75
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


GLO
600
400
200
Livestock products (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



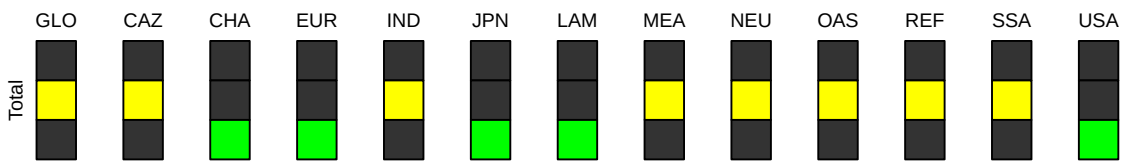


Figure 358: MAgPIE m4p_SSP5 — Production—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	180	200	222	251	300	337	378	421	461	496	525
CAZ	7	8	8	8	9	11	12	15	16	16	15
CHA	28	36	43	51	62	71	80	87	92	94	92
EUR	44	45	45	46	48	52	54	57	61	66	73
IND	11	13	15	19	33	39	50	56	62	68	71
JPN	3	3	3	3	3	3	4	4	4	4	4
LAM	20	24	29	34	39	43	46	50	53	57	62
MEA	5	7	8	10	12	14	15	17	19	20	21
NEU	4	4	4	5	6	6	7	8	8	9	9
OAS	11	12	15	19	25	30	36	43	50	58	63
REF	15	13	14	16	17	18	19	20	21	21	21
SSA	5	6	7	9	11	14	19	25	32	40	47
USA	27	29	30	32	34	36	37	39	41	44	47

Table 1410: MAgPIE m4p_SSP5 — Production—Livestock products (Mt DM/yr) [PART 1/2]

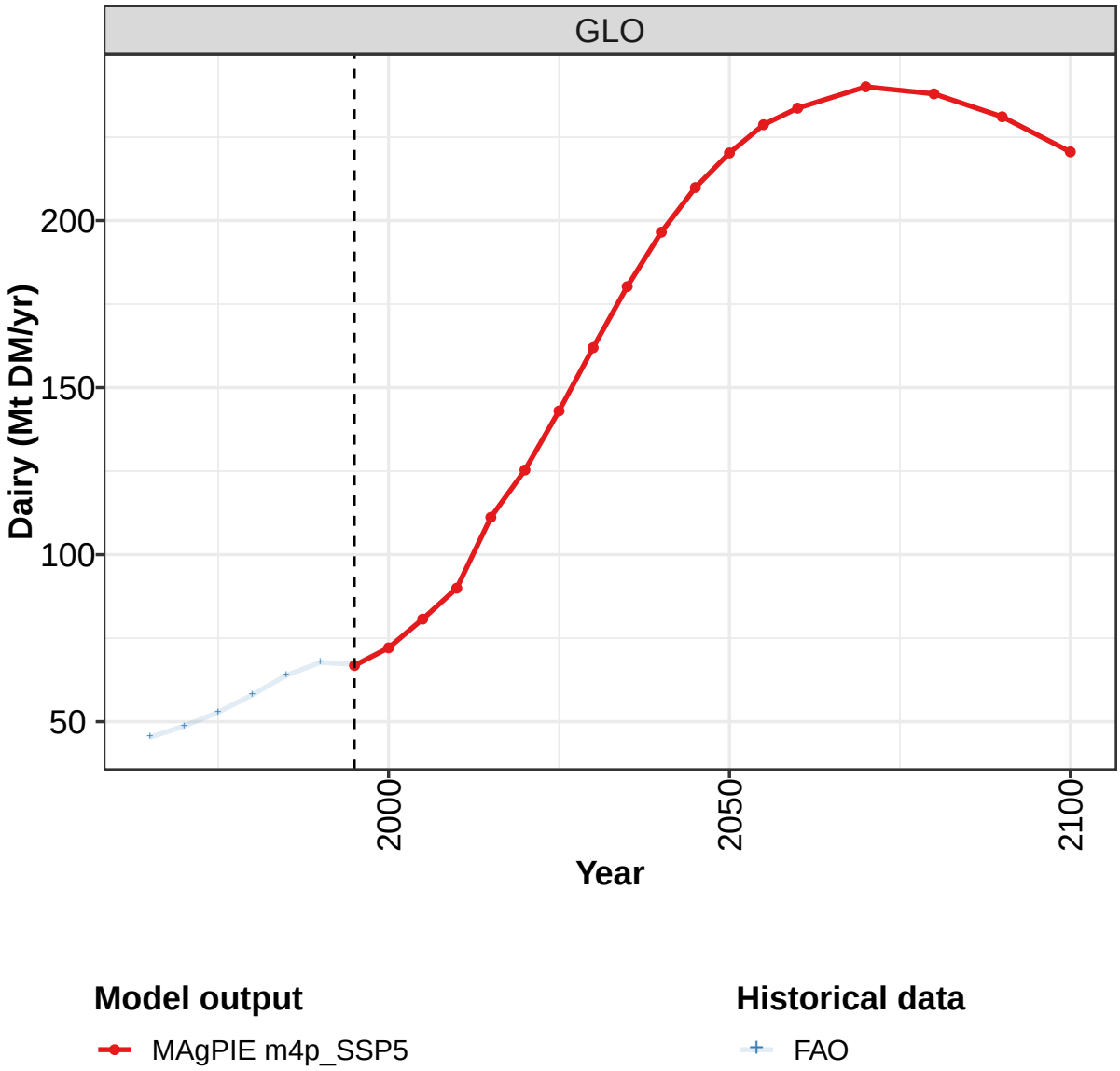
	2050	2055	2060	2070	2080	2090	2100
GLO	548	566	578	592	590	576	551
CAZ	16	17	17	19	19	19	19
CHA	88	86	83	78	73	64	56
EUR	79	80	81	83	80	80	81
IND	72	74	75	75	71	66	60
JPN	4	4	4	4	4	4	4
LAM	66	68	69	69	66	62	57
MEA	22	23	23	26	26	27	28
NEU	10	10	10	10	10	9	9
OAS	68	71	71	72	75	75	71
REF	19	20	21	23	24	22	18
SSA	55	62	66	73	76	78	77
USA	49	52	55	61	65	69	72

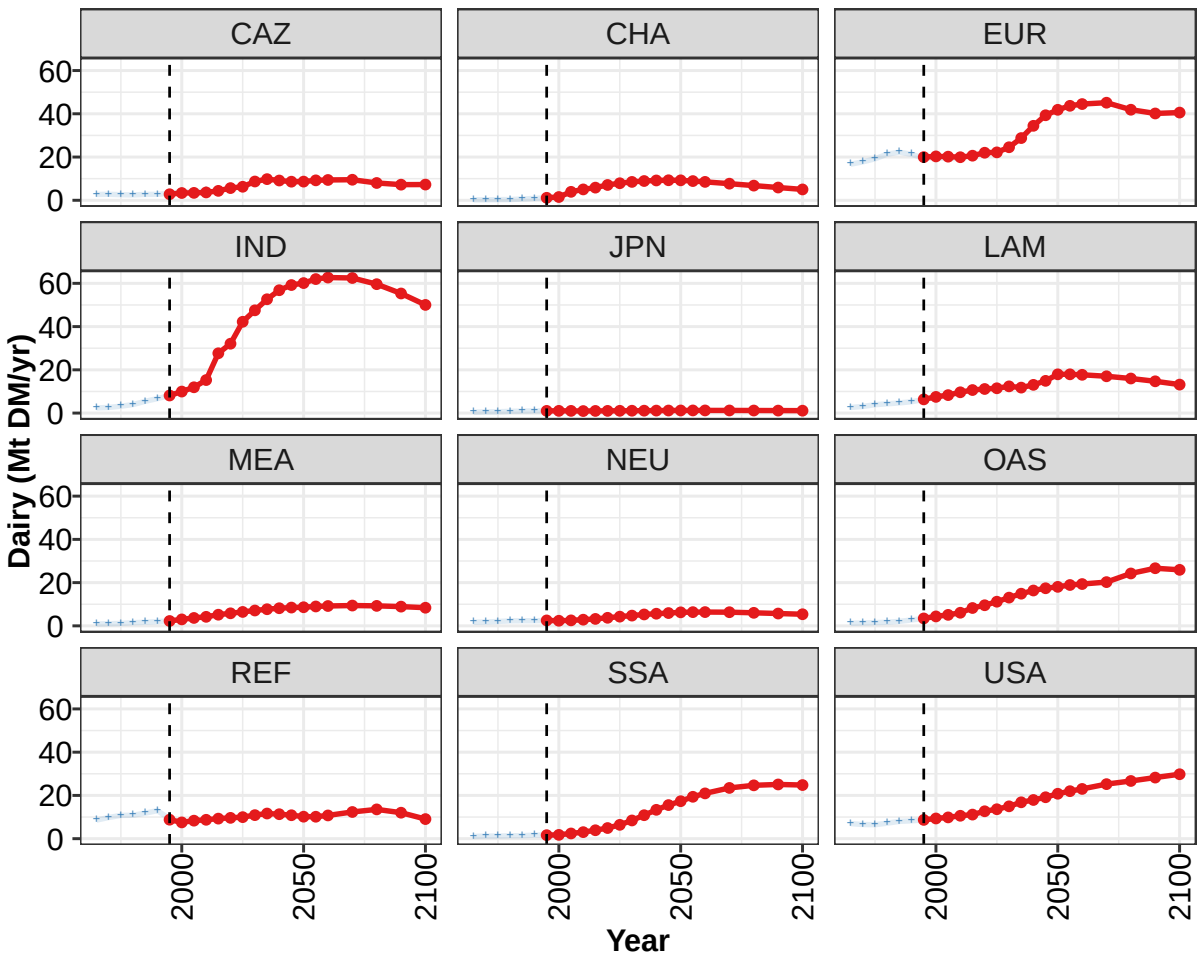
Table 1411: MAgPIE m4p_SSP5 — Production—Livestock products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	94	106	119	135	151	168	181	202	224	253
CAZ	5	6	6	6	6	7	7	9	9	10
CHA	4	5	6	9	13	18	28	36	44	52
EUR	30	34	38	43	45	45	43	44	43	44
IND	3	4	4	5	7	9	11	13	15	19
JPN	1	2	2	3	3	4	3	3	3	3
LAM	7	9	10	13	14	16	20	24	29	33
MEA	2	2	2	3	4	5	6	7	8	10
NEU	3	3	3	4	4	4	4	4	4	5
OAS	3	4	4	5	6	8	11	13	15	19
REF	14	17	19	19	21	24	16	13	14	16
SSA	3	3	3	4	4	5	5	6	7	9
USA	18	19	19	21	23	24	27	30	31	33

Table 1412: FAO — Production—Livestock products (Mt DM/yr)

48.1 Dairy


GLO
Dairy (Mt DM/yr)
200
150
100
50
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

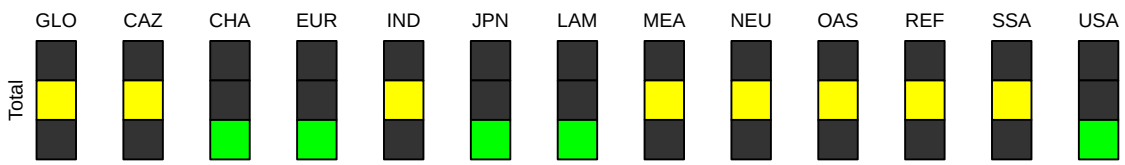


Figure 359: MAgPIE m4p_SSP5 — Production—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	67	72	81	90	111	125	143	162	180	197	210
CAZ	3	3	3	4	4	6	6	9	10	9	9
CHA	1	2	4	5	6	7	8	9	9	9	9
EUR	20	20	20	20	21	22	22	25	29	34	39
IND	8	10	12	15	28	32	42	48	53	57	59
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	6	7	8	10	11	11	11	12	12	13	15
MEA	2	3	4	4	5	6	6	7	8	8	8
NEU	3	2	3	3	3	4	4	5	5	6	6
OAS	3	4	5	6	8	10	11	13	15	16	17
REF	9	8	8	9	9	10	10	11	12	11	11
SSA	2	2	2	3	4	5	6	8	11	13	16
USA	9	9	10	11	11	13	14	15	17	18	19

Table 1413: MAgPIE m4p_SSP5 — Production—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

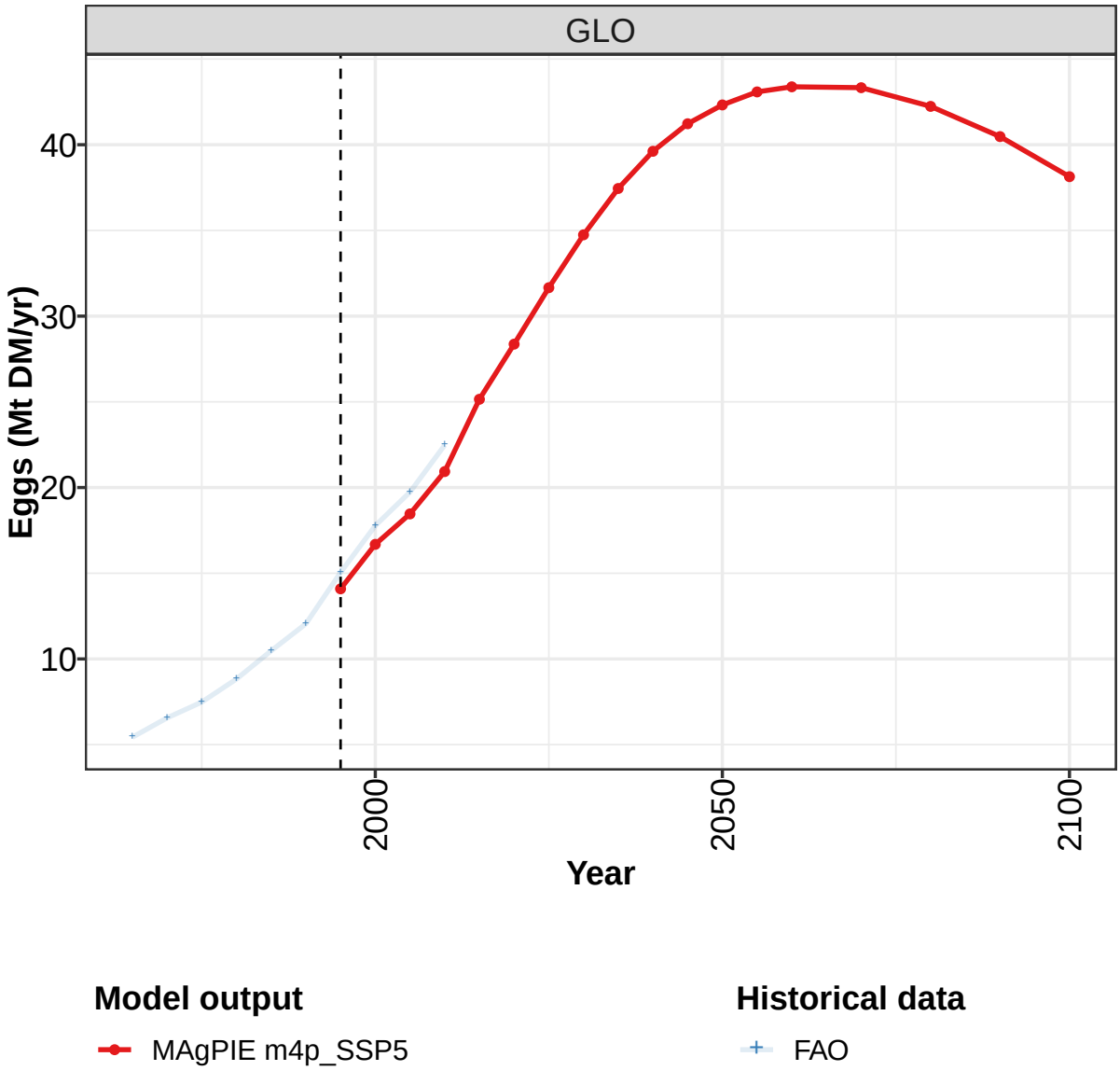
	2050	2055	2060	2070	2080	2090	2100
GLO	220	229	234	240	238	231	221
CAZ	9	9	9	10	8	7	7
CHA	9	9	9	8	7	6	5
EUR	42	44	45	45	42	40	41
IND	60	62	63	62	60	55	50
JPN	1	1	1	1	1	1	1
LAM	18	18	18	17	16	15	13
MEA	9	9	9	9	9	9	8
NEU	6	6	6	6	6	6	5
OAS	18	19	19	20	24	27	26
REF	10	10	11	12	14	12	9
SSA	17	19	21	23	25	25	25
USA	21	22	23	25	27	28	30

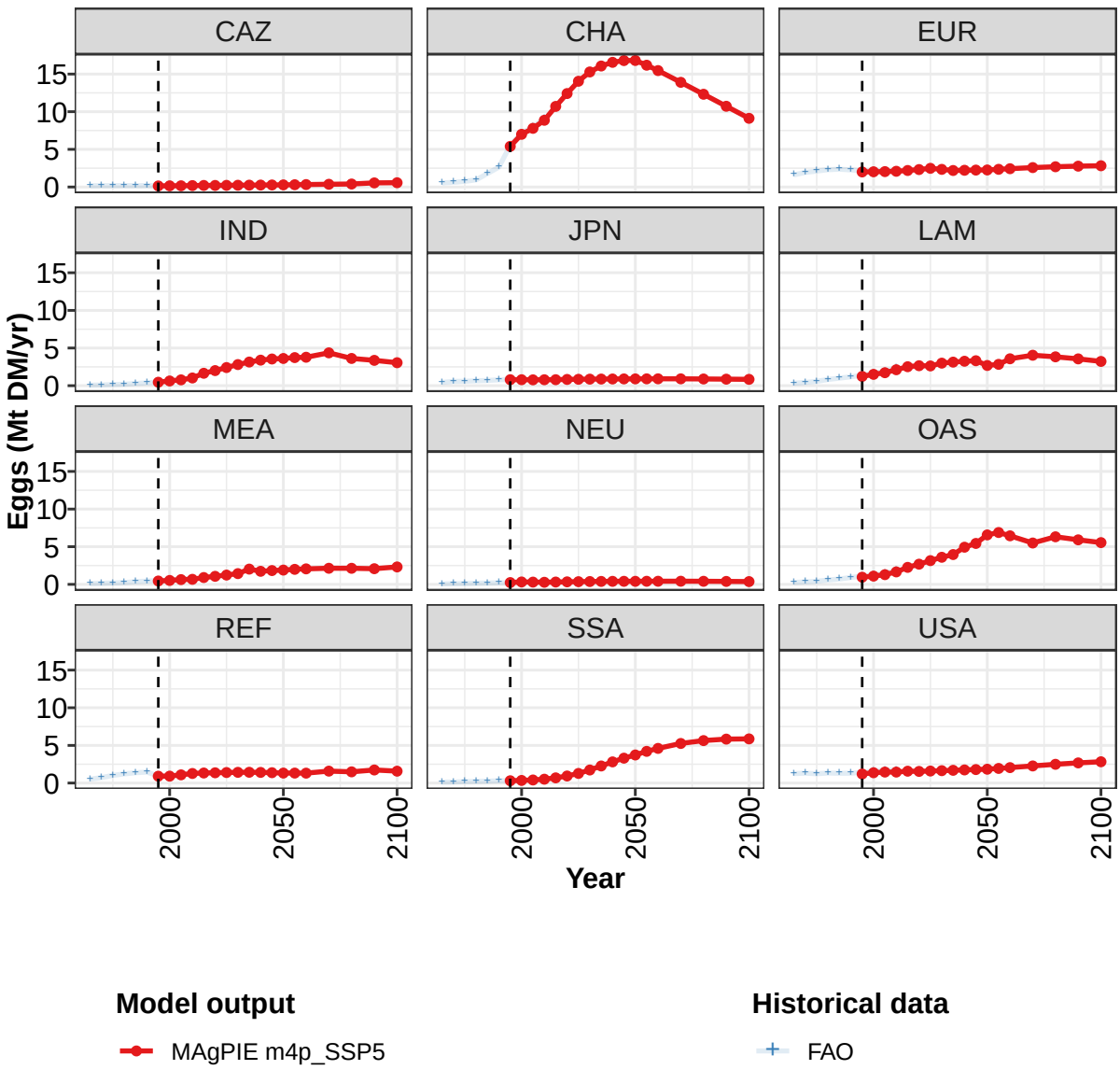
Table 1414: MAgPIE m4p_SSP5 — Production—Livestock products—Dairy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	45.3	48.7	52.8	58.0	63.9	67.7	67.2	72.2	80.7	89.9
CAZ	2.7	2.8	2.6	2.5	2.7	2.8	3.2	3.9	4.1	4.3
CHA	0.2	0.2	0.3	0.4	0.6	0.9	1.2	1.5	3.9	5.0
EUR	16.7	17.8	19.2	21.3	22.2	21.3	19.5	19.5	19.4	19.2
IND	2.4	2.6	3.2	3.9	5.5	6.7	8.1	10.0	12.0	15.3
JPN	0.4	0.6	0.6	0.8	0.9	1.0	1.0	1.0	1.0	1.0
LAM	2.6	3.1	3.9	4.3	4.7	5.2	6.3	7.5	8.3	9.7
MEA	0.9	1.0	1.2	1.5	1.7	2.0	2.3	3.1	3.7	4.2
NEU	1.7	1.8	2.0	2.3	2.4	2.4	2.5	2.4	2.5	2.9
OAS	1.2	1.3	1.5	1.7	2.1	2.7	3.5	4.4	5.1	6.1
REF	8.6	9.8	10.8	10.8	11.8	13.0	9.2	7.7	8.2	8.5
SSA	1.0	1.2	1.2	1.3	1.4	1.6	1.7	1.8	2.4	3.0
USA	7.0	6.5	6.4	7.2	8.0	8.2	8.7	9.3	9.9	10.8

Table 1415: FAO — Production—Livestock products—Dairy (Mt DM/yr)

48.2 Eggs


GLO
Eggs (Mt DM/yr)
40
30
20
10
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



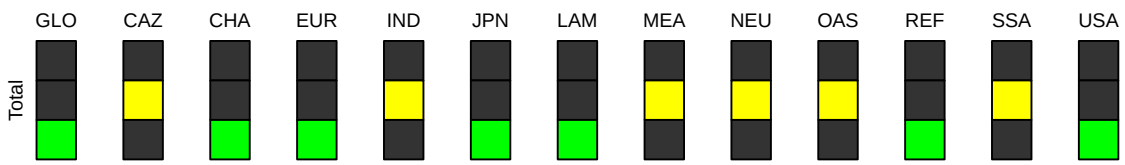


Figure 360: MAgPIE m4p_SSP5 — Production—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.1	16.7	18.5	20.9	25.2	28.4	31.7	34.7	37.4	39.6	41.2
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
CHA	5.4	7.0	7.8	8.9	10.7	12.4	14.0	15.3	16.1	16.6	16.8
EUR	2.0	2.0	2.0	2.1	2.2	2.3	2.5	2.3	2.2	2.2	2.2
IND	0.5	0.6	0.8	1.0	1.7	2.0	2.4	2.8	3.1	3.4	3.5
JPN	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
LAM	1.2	1.5	1.7	2.1	2.5	2.7	2.6	3.0	3.1	3.2	3.3
MEA	0.4	0.5	0.6	0.7	0.9	1.1	1.2	1.4	2.0	1.7	1.8
NEU	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
OAS	1.0	1.1	1.3	1.7	2.3	2.7	3.2	3.6	4.0	4.9	5.4
REF	0.9	0.9	1.1	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4
SSA	0.3	0.3	0.4	0.5	0.7	0.9	1.3	1.7	2.3	2.8	3.3
USA	1.2	1.4	1.5	1.5	1.6	1.5	1.6	1.6	1.7	1.7	1.8

Table 1416: MAgPIE m4p_SSP5 — Production—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

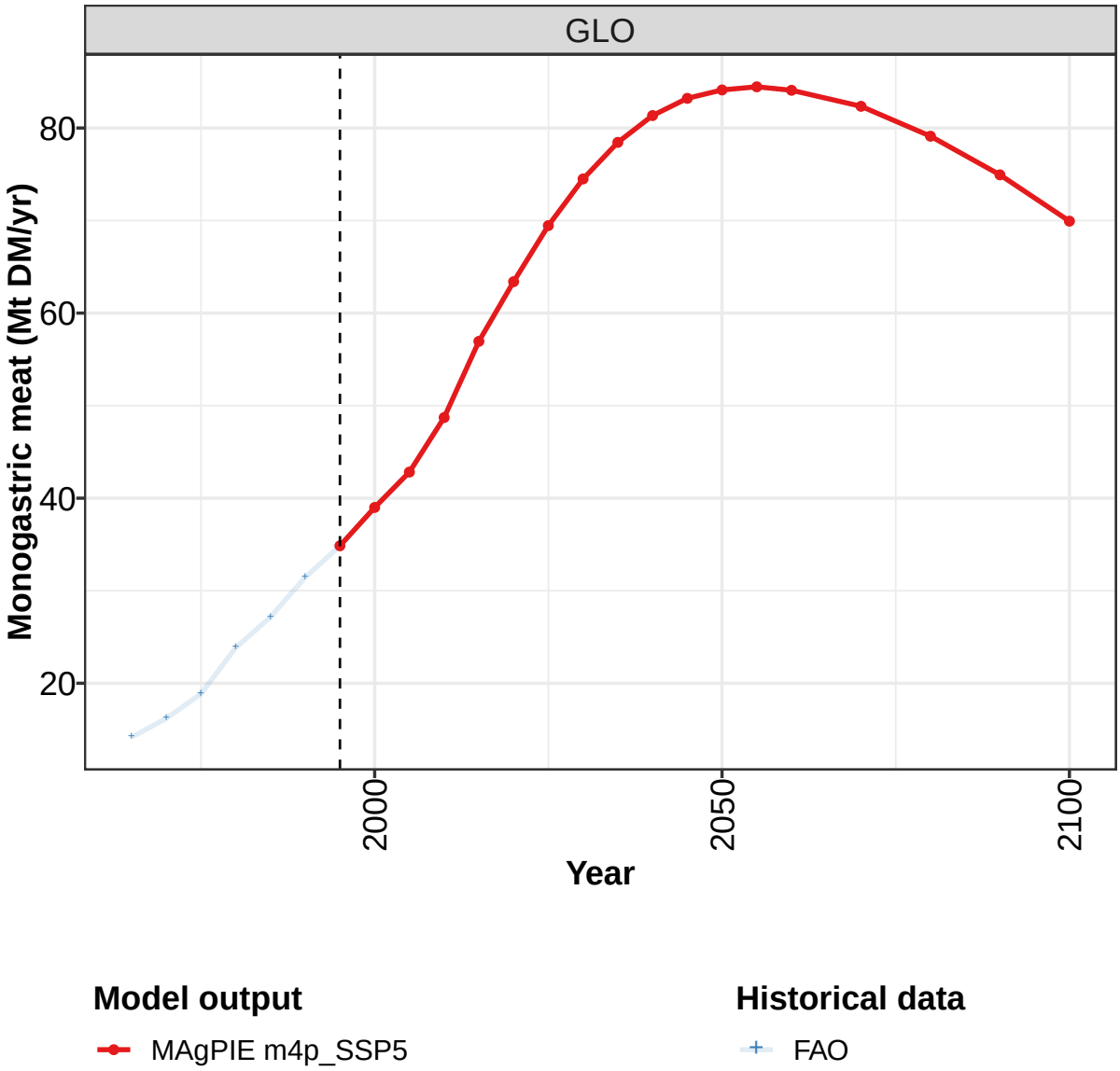
	2050	2055	2060	2070	2080	2090	2100
GLO	42.3	43.1	43.4	43.3	42.2	40.5	38.1
CAZ	0.3	0.3	0.3	0.4	0.4	0.5	0.6
CHA	16.8	16.2	15.5	13.9	12.3	10.7	9.1
EUR	2.3	2.4	2.4	2.6	2.7	2.8	2.8
IND	3.6	3.7	3.8	4.4	3.6	3.4	3.1
JPN	0.9	0.9	0.9	0.9	0.9	0.9	0.8
LAM	2.7	2.8	3.6	4.0	3.8	3.6	3.2
MEA	1.9	2.0	2.1	2.1	2.1	2.1	2.3
NEU	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OAS	6.6	6.9	6.4	5.5	6.3	5.9	5.5
REF	1.3	1.3	1.3	1.6	1.5	1.7	1.6
SSA	3.7	4.2	4.6	5.3	5.6	5.8	5.9
USA	1.8	1.9	2.1	2.3	2.5	2.7	2.8

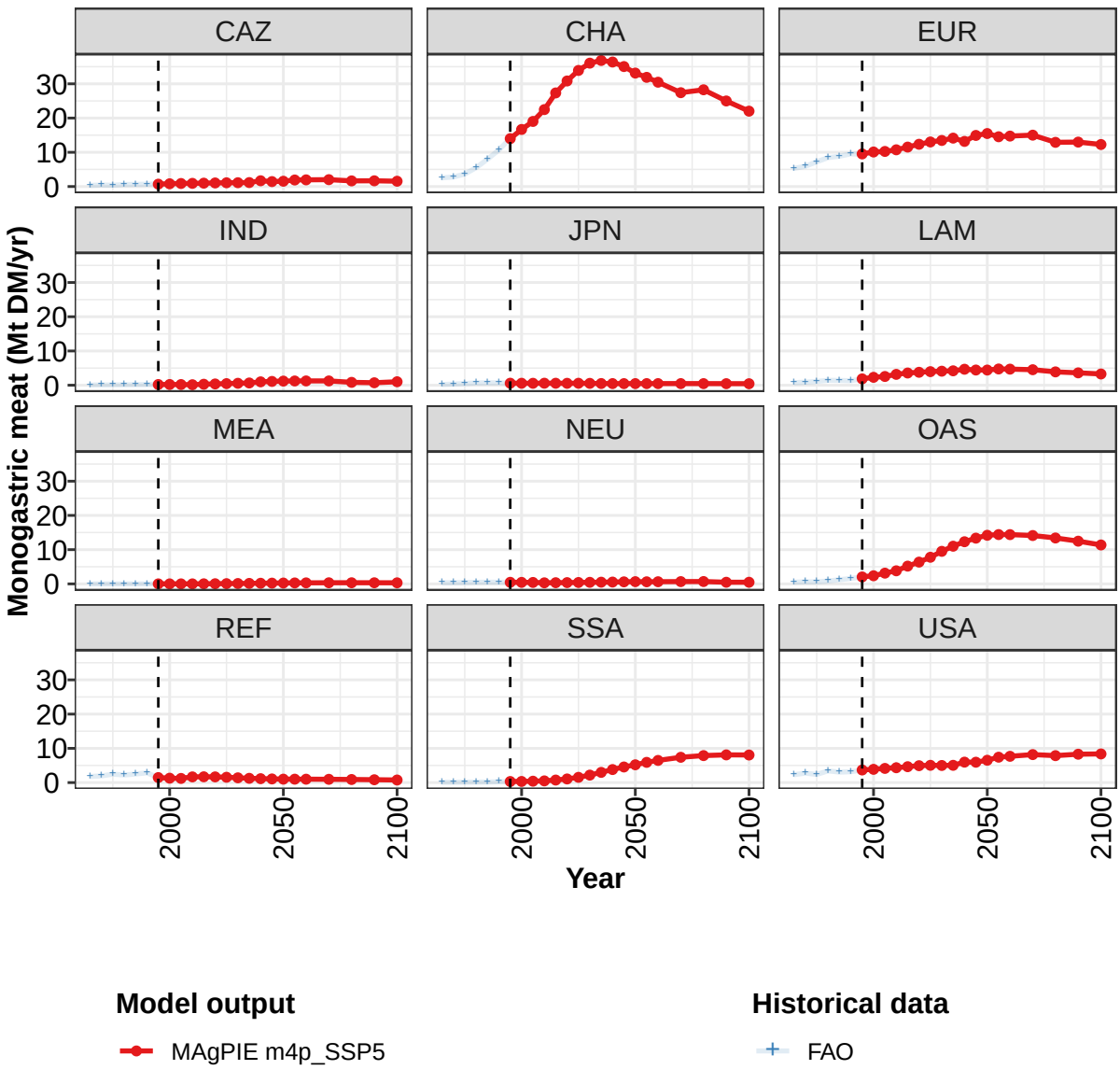
Table 1417: MAgPIE m4p_SSP5 — Production—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.4	6.6	7.5	8.8	10.5	12.0	15.0	17.8	19.7	22.5
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	0.5	0.6	0.7	0.9	1.8	2.6	5.5	7.2	8.0	9.1
EUR	1.6	1.9	2.1	2.3	2.4	2.3	2.1	2.2	2.2	2.2
IND	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.7	0.8	1.1
JPN	0.4	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8
LAM	0.3	0.4	0.6	0.8	1.0	1.2	1.4	1.7	1.9	2.4
MEA	0.1	0.1	0.2	0.2	0.4	0.4	0.5	0.6	0.7	0.8
NEU	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3
OAS	0.3	0.3	0.4	0.6	0.7	0.9	1.1	1.3	1.5	1.9
REF	0.5	0.7	1.0	1.2	1.4	1.5	0.9	0.9	1.1	1.3
SSA	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.6
USA	1.3	1.3	1.2	1.3	1.3	1.3	1.4	1.6	1.7	1.7

Table 1418: FAO — Production—Livestock products—Eggs (Mt DM/yr)

48.3 Monogastric meat





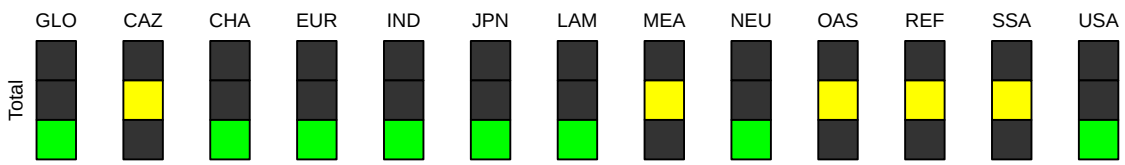


Figure 361: MAgPIE m4p_SSP5 — Production—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.9	39.0	42.8	48.7	56.9	63.4	69.5	74.5	78.4	81.3	83.2
CAZ	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.7	1.4
CHA	14.0	16.7	19.0	22.5	27.3	30.8	33.9	36.0	36.8	36.4	35.0
EUR	9.5	10.1	10.3	10.7	11.5	12.3	13.0	13.5	14.1	13.2	14.9
IND	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.7	1.0	1.1
JPN	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
LAM	1.9	2.3	2.6	3.2	3.6	3.8	4.0	4.1	4.2	4.7	4.4
MEA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6
OAS	2.0	2.4	3.1	3.8	5.2	6.4	7.8	9.5	11.0	12.3	13.4
REF	1.5	1.3	1.2	1.7	1.7	1.7	1.6	1.4	1.3	1.1	1.1
SSA	0.3	0.3	0.4	0.5	0.7	1.1	1.5	2.2	3.0	3.8	4.6
USA	3.7	3.9	4.1	4.3	4.6	4.9	5.0	5.0	5.0	6.0	5.9

Table 1419: MAgPIE m4p_SSP5 — Production—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

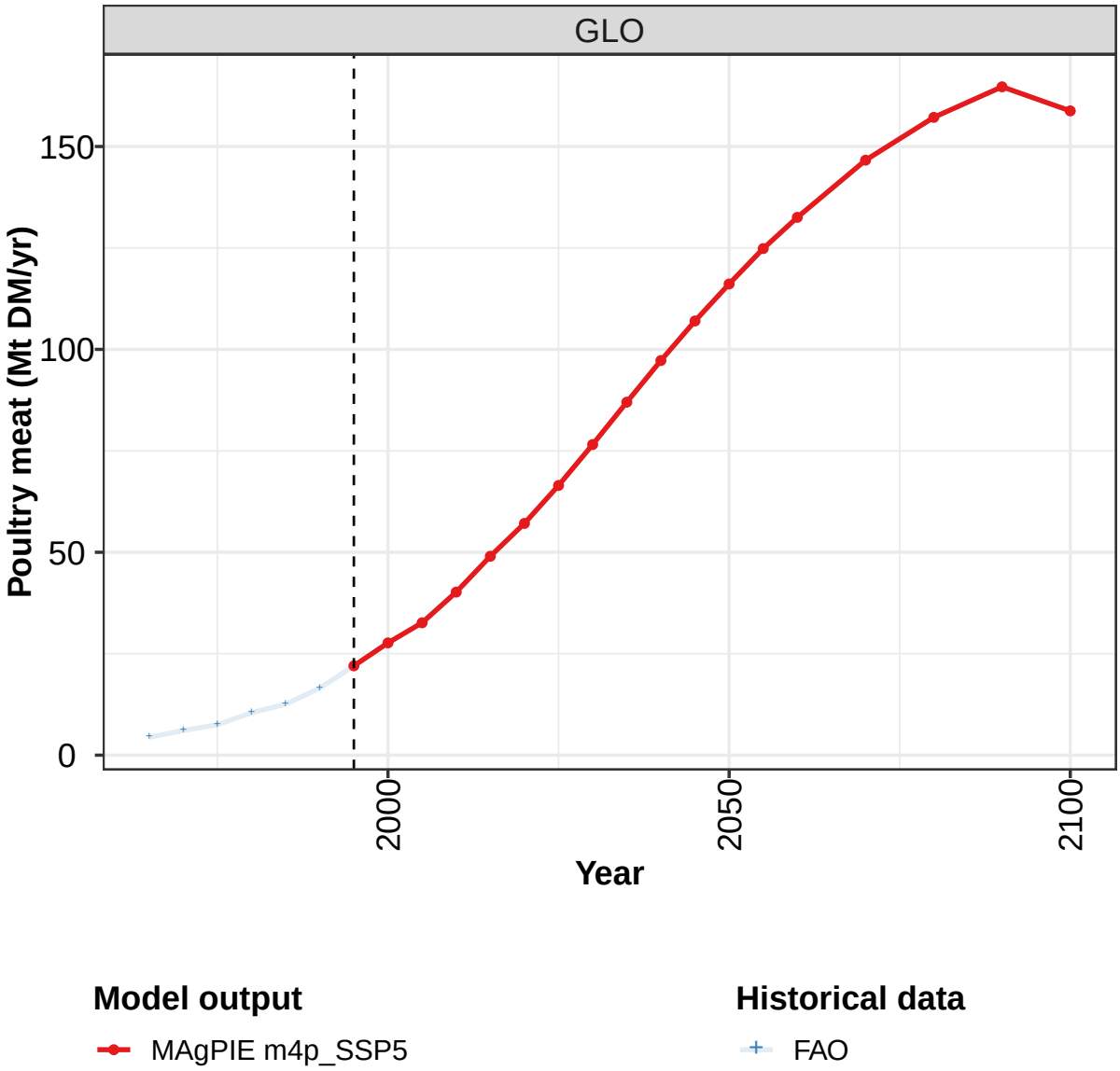
	2050	2055	2060	2070	2080	2090	2100
GLO	84.1	84.5	84.1	82.3	79.1	74.9	69.9
CAZ	1.5	1.9	2.0	2.0	1.7	1.7	1.6
CHA	33.1	31.9	30.5	27.4	28.3	25.0	22.0
EUR	15.5	14.5	14.7	15.0	12.9	13.0	12.3
IND	1.2	1.2	1.3	1.3	0.8	0.7	1.0
JPN	0.5	0.5	0.5	0.5	0.5	0.5	0.4
LAM	4.4	4.7	4.7	4.5	3.9	3.6	3.3
MEA	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NEU	0.7	0.6	0.6	0.7	0.7	0.5	0.5
OAS	14.2	14.4	14.4	14.1	13.4	12.5	11.4
REF	1.0	1.0	1.0	1.0	0.9	0.8	0.8
SSA	5.2	5.9	6.5	7.4	7.9	8.1	8.1
USA	6.5	7.4	7.7	8.2	7.9	8.3	8.4

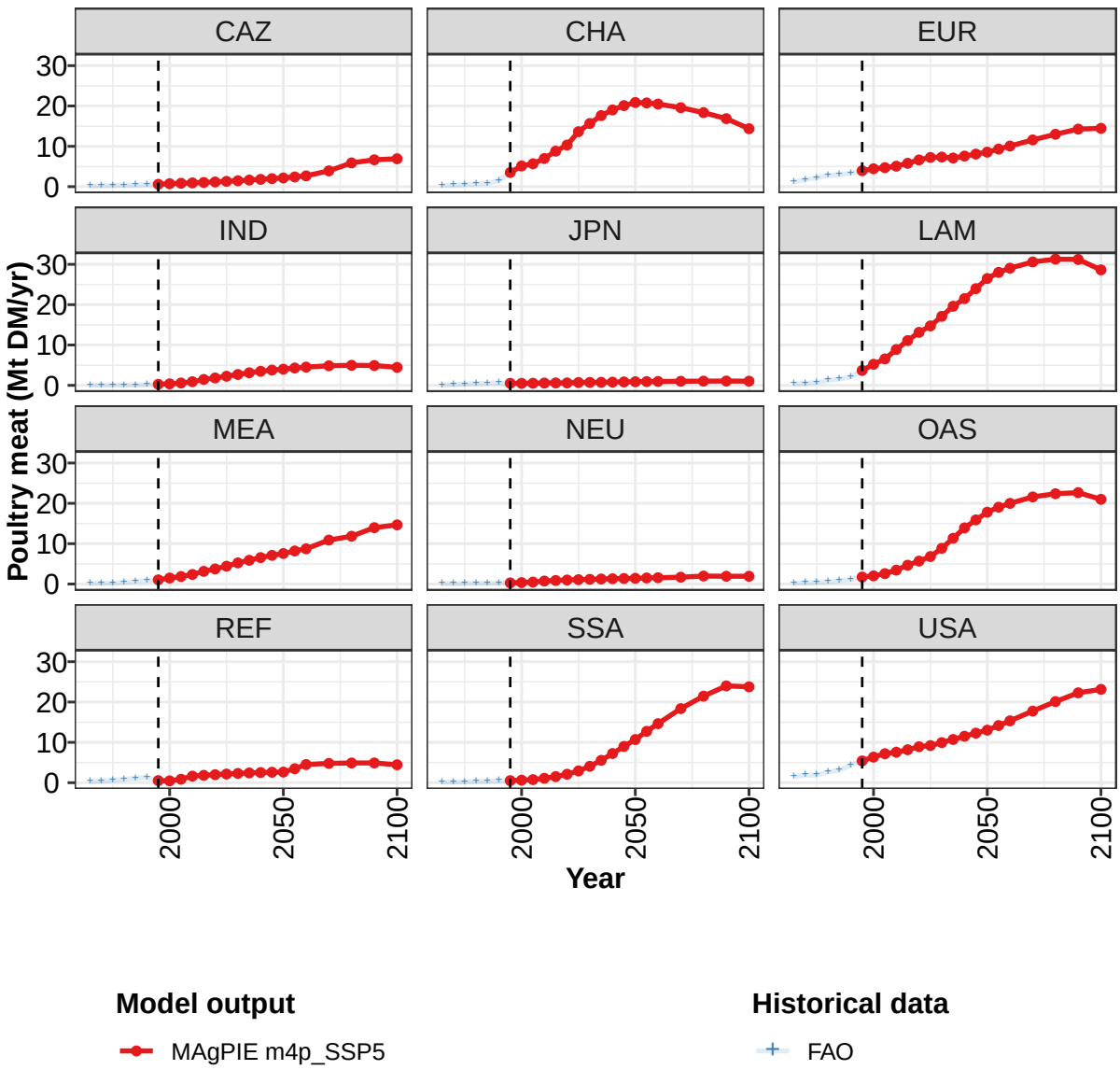
Table 1420: MAgPIE m4p_SSP5 — Production—Livestock products—Monogastric meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	14.2	16.2	18.9	23.8	27.1	31.4	34.9	39.0	42.8	48.7
CAZ	0.3	0.4	0.4	0.6	0.6	0.7	0.8	0.9	1.1	1.0
CHA	2.5	2.8	3.6	5.5	8.0	10.7	14.1	16.7	19.0	22.5
EUR	5.3	5.9	7.2	8.4	8.8	9.5	9.4	9.9	9.9	10.5
IND	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
JPN	0.2	0.3	0.5	0.7	0.7	0.7	0.6	0.6	0.6	0.6
LAM	0.7	0.9	1.1	1.4	1.4	1.3	1.9	2.3	2.6	3.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3
OAS	0.5	0.6	0.6	0.8	1.2	1.6	2.0	2.4	3.2	3.8
REF	1.8	1.9	2.5	2.2	2.5	2.8	1.5	1.3	1.2	1.7
SSA	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5
USA	2.3	2.8	2.4	3.4	3.0	3.2	3.7	3.9	4.3	4.6

Table 1421: FAO — Production—Livestock products—Monogastric meat (Mt DM/yr)

48.4 Poultry meat





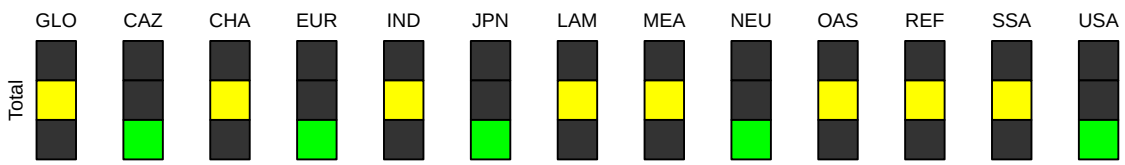


Figure 362: MAgPIE m4p_SSP5 — Production—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	28	33	40	49	57	66	77	87	97	107
CAZ	1	1	1	1	1	1	1	1	2	2	2
CHA	4	5	6	7	9	10	14	16	18	19	20
EUR	4	4	5	5	6	7	7	7	7	8	8
IND	0	0	1	1	1	2	2	3	3	3	4
JPN	1	0	1	1	1	1	1	1	1	1	1
LAM	4	5	7	9	11	13	15	17	20	22	24
MEA	1	1	2	2	3	4	4	5	6	7	7
NEU	0	0	0	1	1	1	1	1	1	1	1
OAS	2	2	3	3	5	6	7	9	11	14	16
REF	1	0	1	2	2	2	2	2	2	3	3
SSA	1	1	1	1	2	2	3	4	6	7	9
USA	5	6	7	8	8	9	9	10	11	12	12

Table 1422: MAgPIE m4p_SSP5 — Production—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

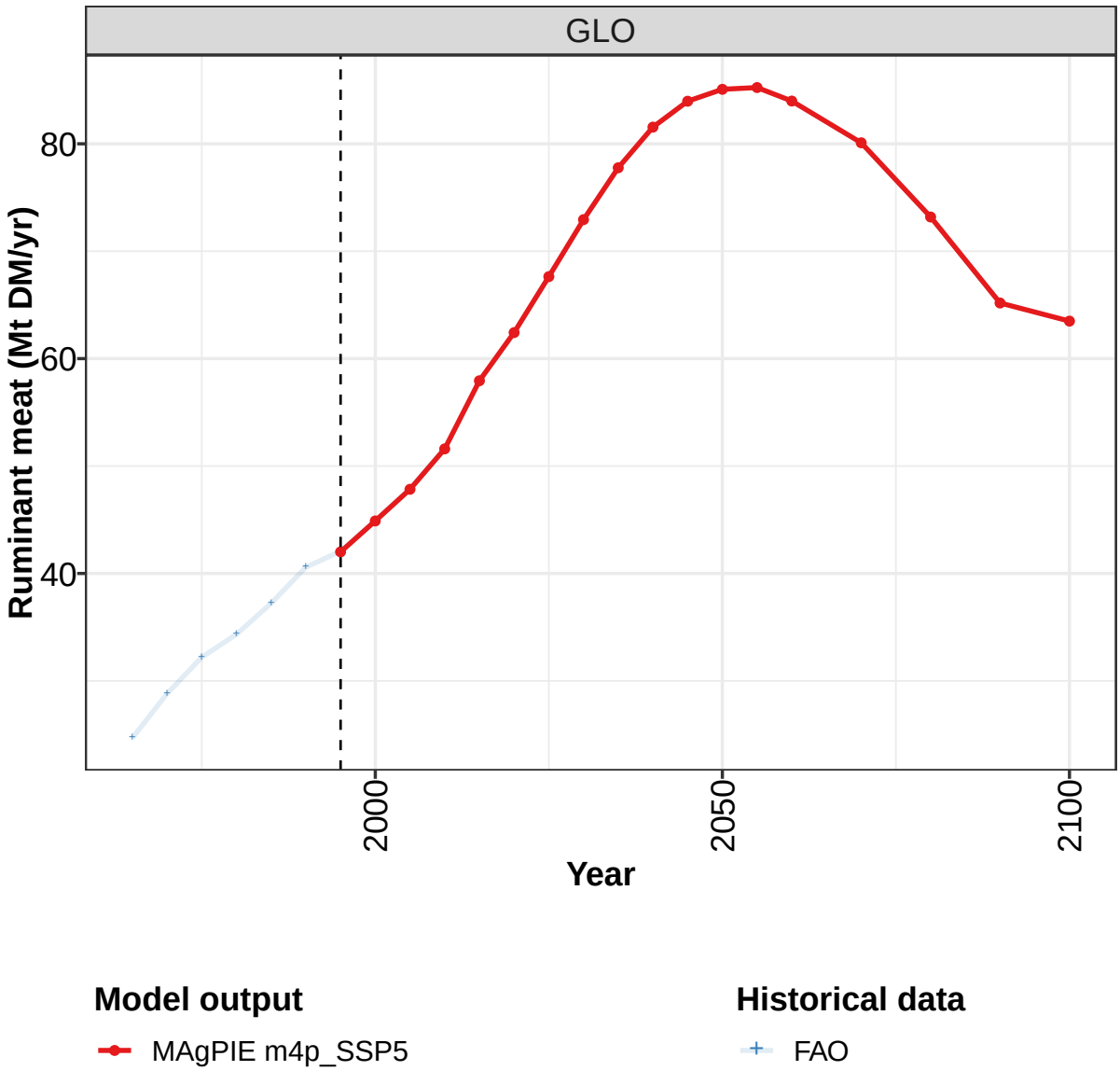
	2050	2055	2060	2070	2080	2090	2100
GLO	116	125	133	147	157	165	159
CAZ	2	2	3	4	6	7	7
CHA	21	21	20	20	18	17	14
EUR	9	9	10	12	13	14	14
IND	4	4	5	5	5	5	4
JPN	1	1	1	1	1	1	1
LAM	26	28	29	31	31	31	29
MEA	8	8	9	11	12	14	15
NEU	1	2	2	2	2	2	2
OAS	18	19	20	22	22	23	21
REF	3	3	5	5	5	5	4
SSA	11	13	15	18	21	24	24
USA	13	14	15	18	20	22	23

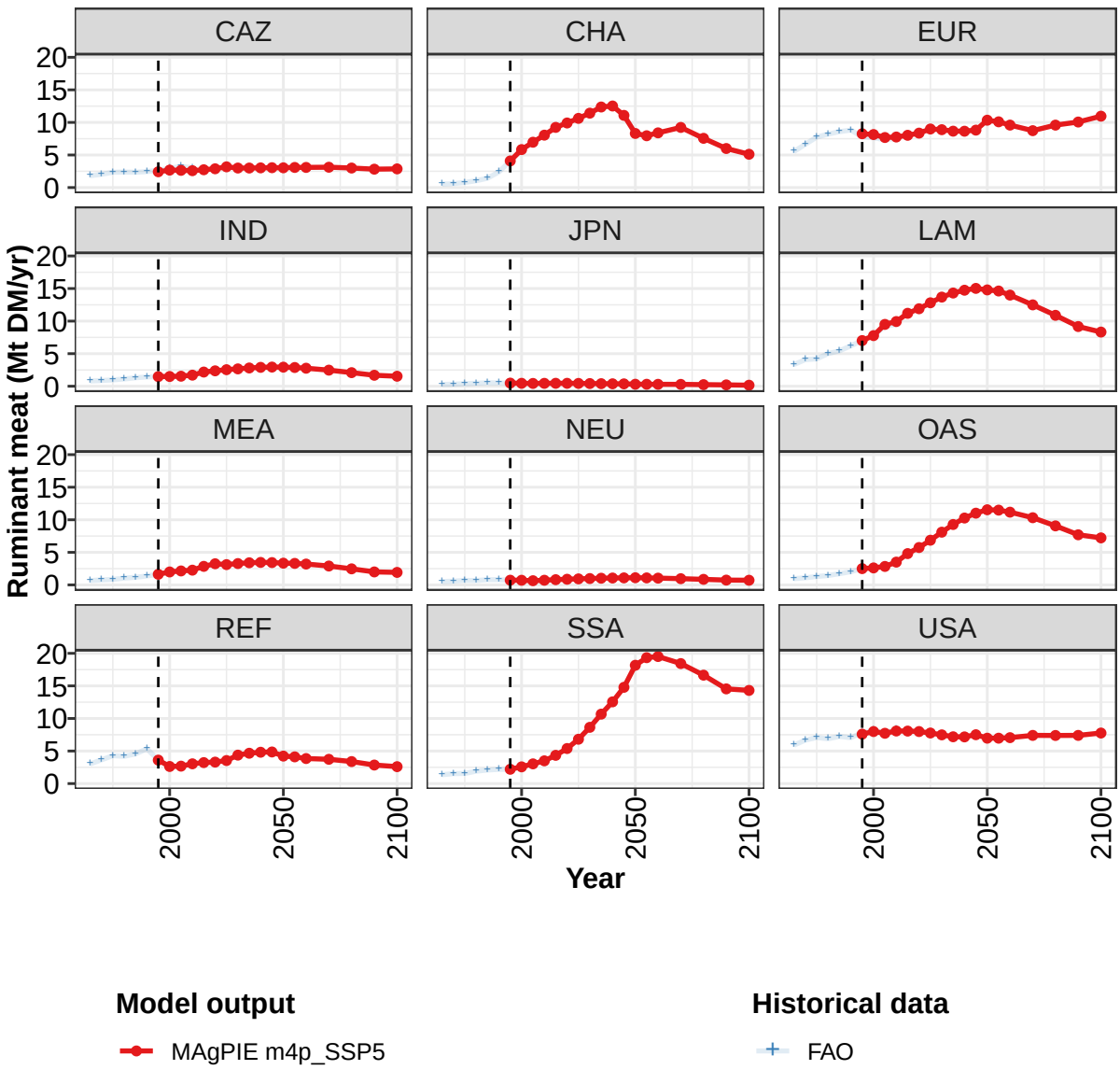
Table 1423: MAgPIE m4p_SSP5 — Production—Livestock products—Poultry meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.4	6.1	7.5	10.4	12.6	16.5	22.0	27.7	32.6	40.2
CAZ	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.7	0.9	0.9
CHA	0.3	0.4	0.5	0.7	0.8	1.5	3.5	5.1	5.7	7.0
EUR	1.2	1.7	2.2	2.8	2.9	3.4	3.8	4.3	4.4	4.9
IND	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.9
JPN	0.1	0.2	0.3	0.5	0.5	0.6	0.5	0.5	0.5	0.6
LAM	0.3	0.5	0.7	1.3	1.5	2.1	3.6	5.1	6.5	8.7
MEA	0.1	0.2	0.2	0.4	0.7	0.8	1.0	1.5	1.9	2.4
NEU	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.5	0.7
OAS	0.2	0.3	0.4	0.5	0.8	1.1	1.7	2.0	2.5	3.4
REF	0.3	0.4	0.6	0.8	1.1	1.3	0.5	0.5	0.9	1.6
SSA	0.1	0.2	0.2	0.3	0.4	0.5	0.5	0.6	0.8	1.1
USA	1.5	1.9	1.9	2.6	3.1	4.4	5.6	6.6	7.5	7.9

Table 1424: FAO — Production—Livestock products—Poultry meat (Mt DM/yr)

48.5 Ruminant meat





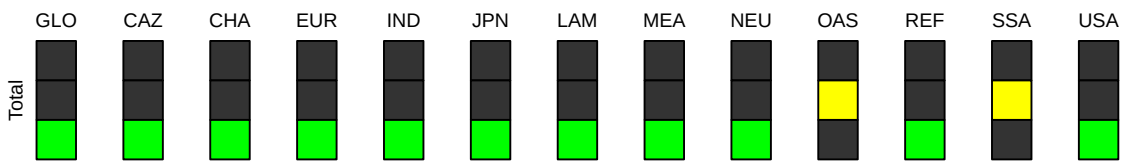


Figure 363: MAgPIE m4p_SSP5 — Production—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	42.0	44.9	47.8	51.6	57.9	62.4	67.6	72.9	77.8	81.6	84.0
CAZ	2.4	2.7	2.6	2.6	2.7	2.9	3.2	3.0	3.0	3.0	3.0
CHA	4.1	5.8	7.0	8.0	9.2	9.9	10.6	11.4	12.4	12.5	11.1
EUR	8.3	8.1	7.7	7.8	8.0	8.4	9.0	8.9	8.7	8.7	8.8
IND	1.5	1.5	1.5	1.7	2.2	2.4	2.5	2.7	2.8	2.9	2.9
JPN	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4
LAM	7.0	7.8	9.5	9.9	11.2	11.9	12.8	13.7	14.3	14.7	15.0
MEA	1.6	2.0	2.1	2.3	2.9	3.3	3.1	3.3	3.4	3.5	3.4
NEU	0.7	0.7	0.6	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1
OAS	2.5	2.6	2.8	3.5	4.8	5.7	6.9	8.1	9.3	10.3	11.0
REF	3.6	2.6	2.7	3.0	3.2	3.3	3.5	4.4	4.7	4.8	4.9
SSA	2.2	2.6	3.0	3.5	4.3	5.4	6.8	8.6	10.7	12.6	14.8
USA	7.6	8.0	7.7	8.1	8.1	8.0	7.8	7.5	7.2	7.2	7.5

Table 1425: MAgPIE m4p_SSP5 — Production—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

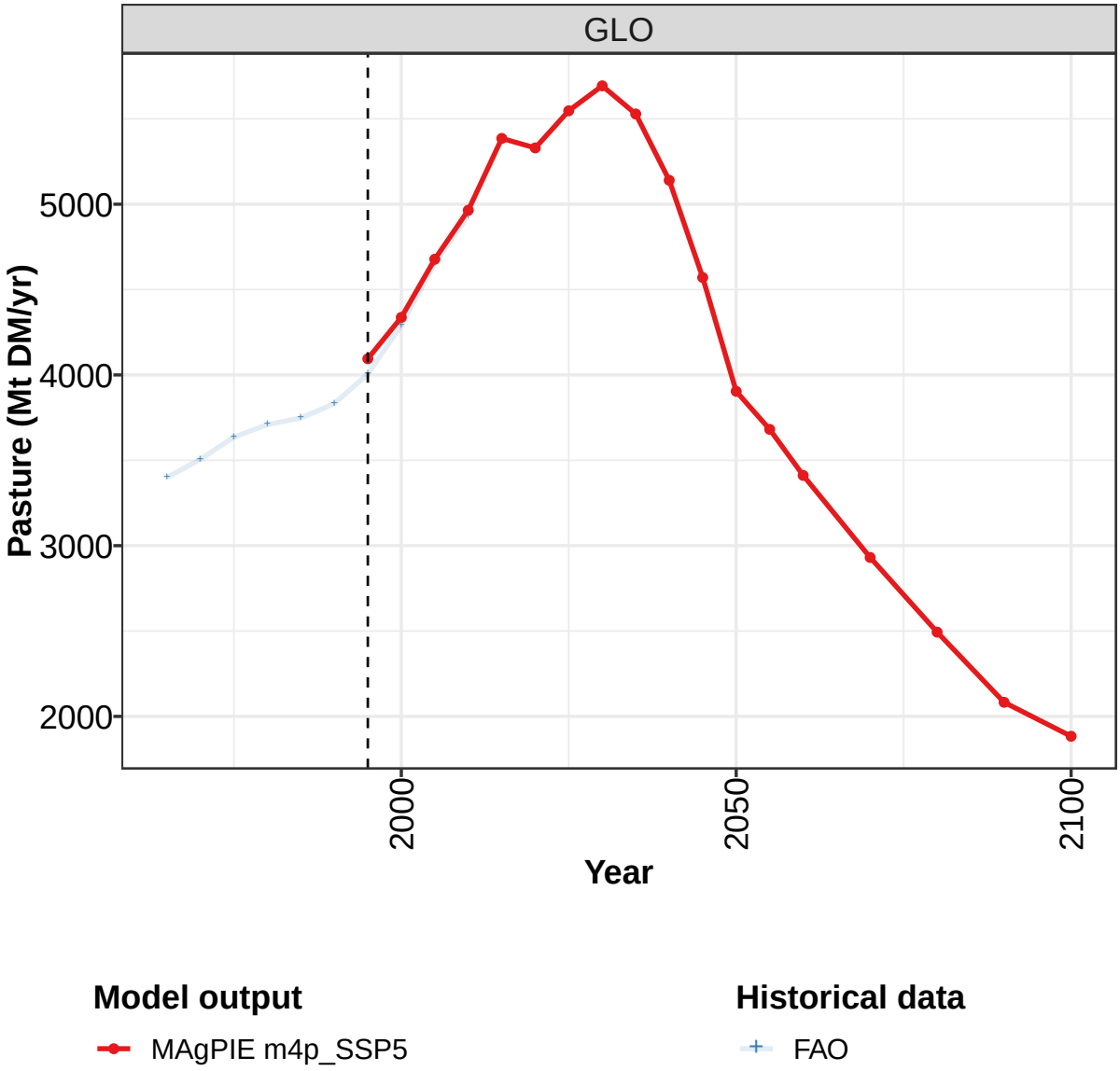
	2050	2055	2060	2070	2080	2090	2100
GLO	85.1	85.2	84.0	80.1	73.2	65.2	63.5
CAZ	3.0	3.1	3.1	3.1	3.0	2.8	2.9
CHA	8.3	8.0	8.4	9.2	7.6	6.0	5.1
EUR	10.3	10.1	9.6	8.7	9.6	10.1	11.0
IND	2.9	2.9	2.8	2.5	2.1	1.7	1.5
JPN	0.3	0.3	0.3	0.3	0.2	0.2	0.2
LAM	14.8	14.6	14.0	12.5	10.9	9.2	8.3
MEA	3.3	3.3	3.2	2.9	2.5	2.0	1.9
NEU	1.1	1.1	1.0	1.0	0.9	0.7	0.7
OAS	11.5	11.5	11.2	10.3	9.1	7.7	7.2
REF	4.2	4.1	3.8	3.7	3.4	2.9	2.6
SSA	18.2	19.3	19.5	18.4	16.7	14.5	14.3
USA	7.0	7.0	7.1	7.4	7.4	7.4	7.8

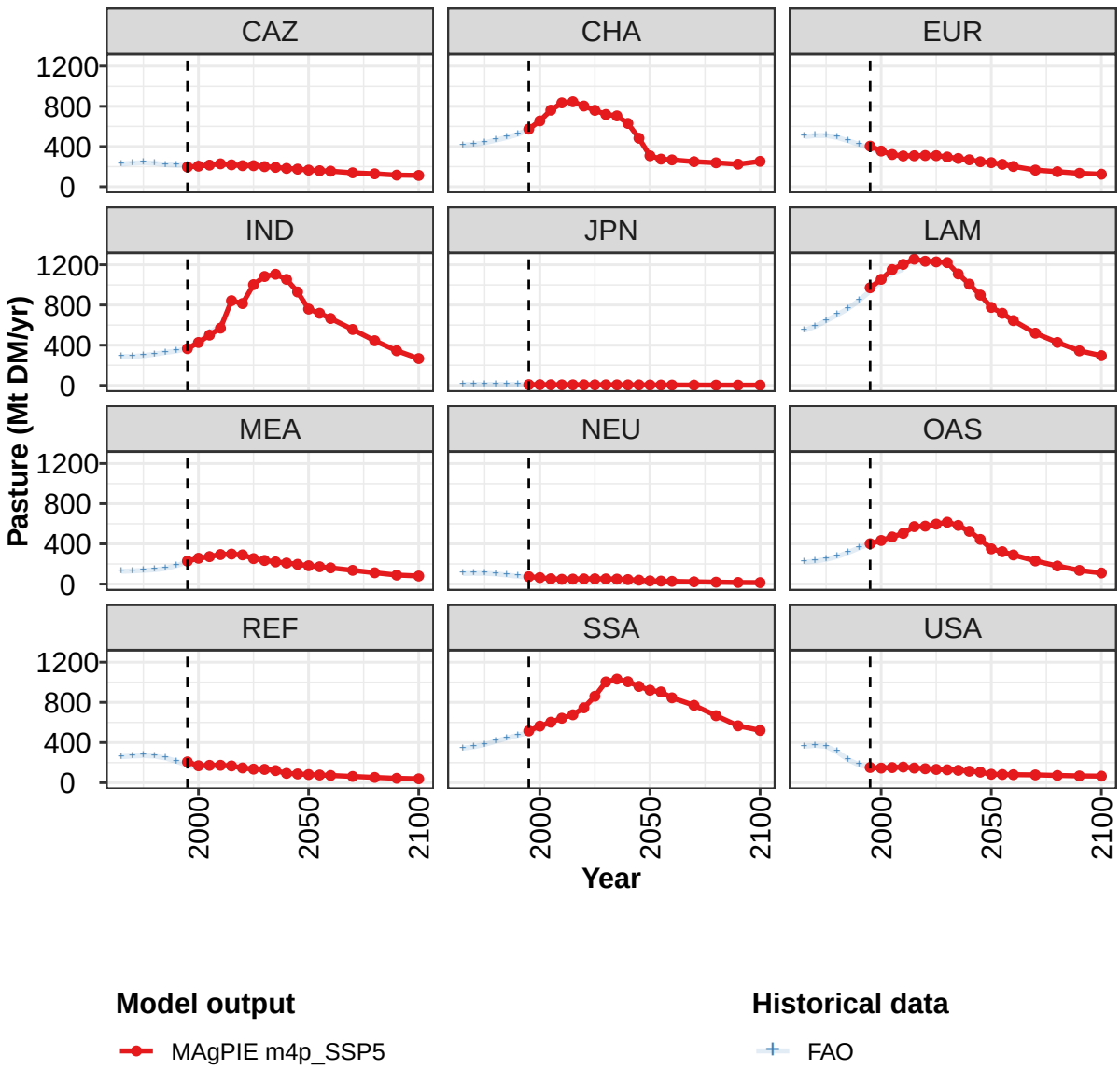
Table 1426: MAgPIE m4p_SSP5 — Production—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	24.7	28.8	32.2	34.3	37.2	40.6	42.1	44.9	47.9	51.7
CAZ	1.8	2.0	2.3	2.4	2.3	2.4	2.7	3.0	3.2	3.0
CHA	0.5	0.6	0.8	1.0	1.4	2.4	4.1	5.8	6.9	8.0
EUR	5.5	6.6	7.7	8.2	8.6	8.8	7.8	7.6	7.4	7.5
IND	0.8	0.9	1.0	1.1	1.3	1.4	1.5	1.5	1.6	1.8
JPN	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4
LAM	3.3	4.1	4.2	5.0	5.4	6.2	7.0	7.8	9.2	9.5
MEA	0.7	0.8	0.9	1.0	1.2	1.4	1.6	2.0	2.2	2.3
NEU	0.5	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.7
OAS	1.0	1.1	1.3	1.4	1.7	2.0	2.5	2.6	2.8	3.5
REF	3.0	3.6	4.3	4.2	4.6	5.3	3.6	2.6	2.7	3.0
SSA	1.4	1.5	1.6	1.9	2.1	2.2	2.2	2.6	3.0	3.5
USA	5.9	6.7	7.1	6.9	7.2	7.1	7.8	8.2	7.8	8.4

Table 1427: FAO — Production—Livestock products—Ruminant meat (Mt DM/yr)

49 Pasture


GLO
Pasture (Mt DM/yr)
5000
4000
3000
2000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



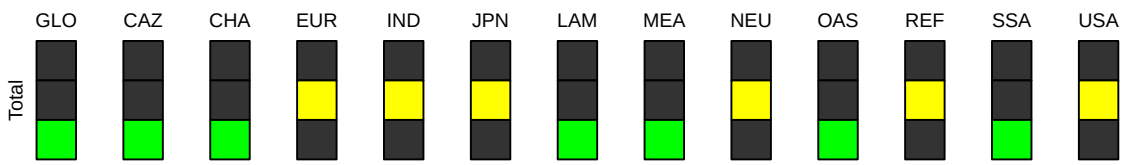


Figure 364: MAgPIE m4p_SSP5 — Production—Pasture (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4095	4337	4678	4965	5385	5330	5547	5693	5528	5140	4571
CAZ	196	205	215	228	218	210	209	200	193	182	175
CHA	573	655	762	835	846	803	761	719	705	630	483
EUR	404	355	321	306	308	310	309	296	281	268	249
IND	365	427	501	570	843	815	1003	1084	1106	1055	930
JPN	7	7	6	5	5	5	5	5	5	5	4
LAM	972	1056	1153	1204	1256	1236	1230	1222	1109	1008	899
MEA	228	257	273	294	298	290	254	235	221	209	196
NEU	73	64	52	47	49	51	52	51	49	44	38
OAS	401	434	468	504	572	576	597	616	584	525	444
REF	207	169	173	174	167	147	136	133	121	93	87
SSA	516	564	603	642	676	746	861	1004	1031	1006	959
USA	152	146	151	156	146	140	133	129	124	115	105

Table 1428: MAgPIE m4p_SSP5 — Production—Pasture (Mt DM/yr) [PART 1/2]

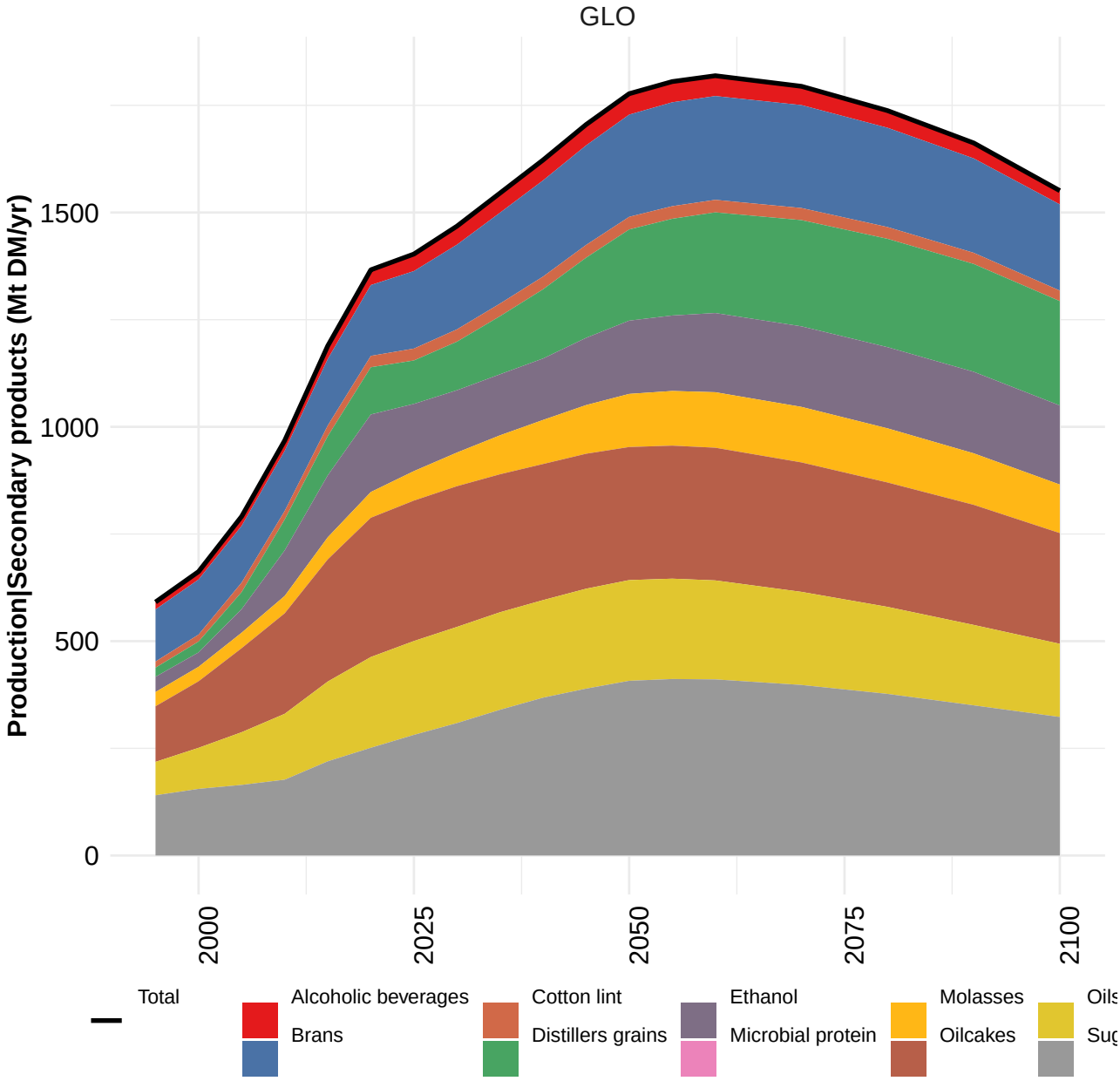
	2050	2055	2060	2070	2080	2090	2100
GLO	3904	3681	3412	2931	2494	2083	1884
CAZ	165	159	155	138	128	116	112
CHA	308	275	267	249	238	224	252
EUR	240	223	201	165	150	133	124
IND	760	718	665	556	444	345	267
JPN	4	3	3	3	2	2	2
LAM	776	717	645	520	427	344	296
MEA	182	172	161	137	112	89	80
NEU	32	29	27	22	19	15	14
OAS	350	322	290	230	180	136	110
REF	81	77	72	62	53	44	39
SSA	921	904	846	770	668	567	521
USA	84	82	80	78	72	68	66

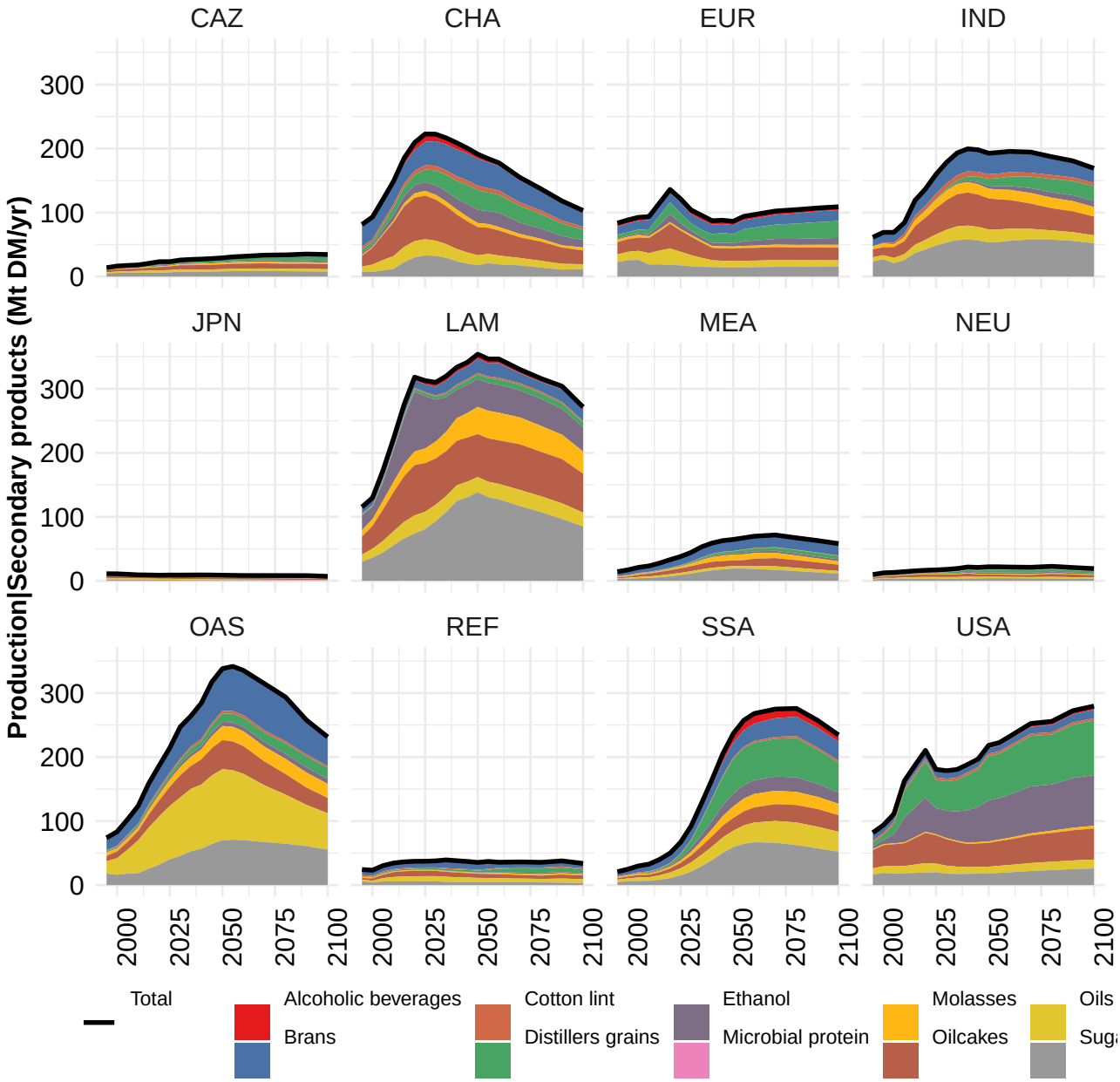
Table 1429: MAgPIE m4p_SSP5 — Production—Pasture (Mt DM/yr) [PART 2/2]

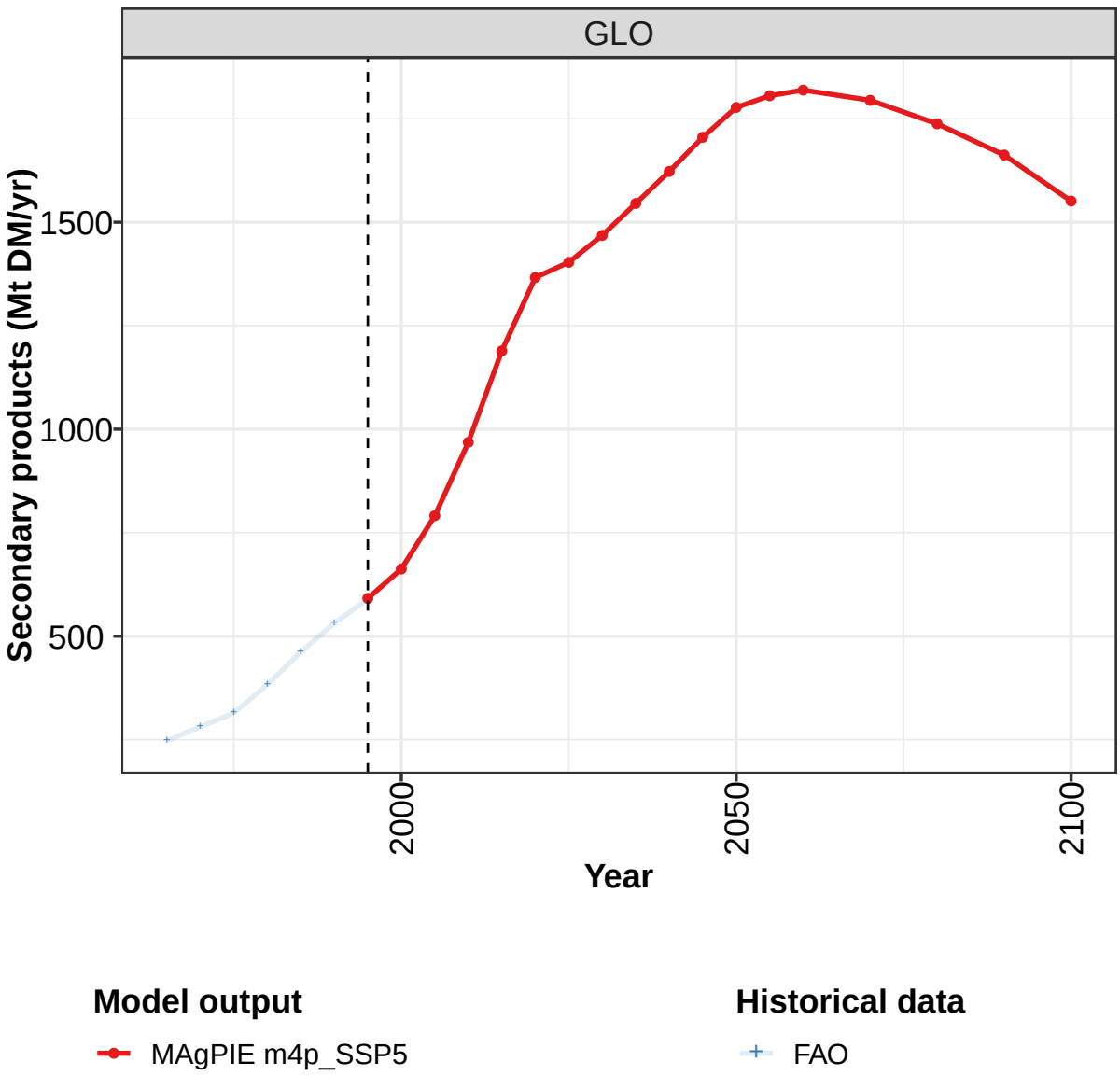
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3399	3506	3636	3709	3748	3832	4006	4290	4653	4931
CAZ	225	234	239	233	220	212	215	223	229	231
CHA	414	422	438	463	490	521	572	657	760	832
EUR	499	509	510	491	457	421	381	339	309	296
IND	287	288	295	311	328	342	367	429	522	594
JPN	10	10	9	9	8	8	7	7	6	5
LAM	548	586	643	702	765	845	939	1034	1113	1157
MEA	127	130	136	142	156	183	222	260	284	294
NEU	105	107	107	101	89	78	68	59	51	47
OAS	218	228	246	273	313	360	402	438	475	503
REF	260	266	270	265	246	213	173	148	152	168
SSA	344	357	381	412	443	471	502	546	600	640
USA	362	371	361	307	230	177	157	149	152	162

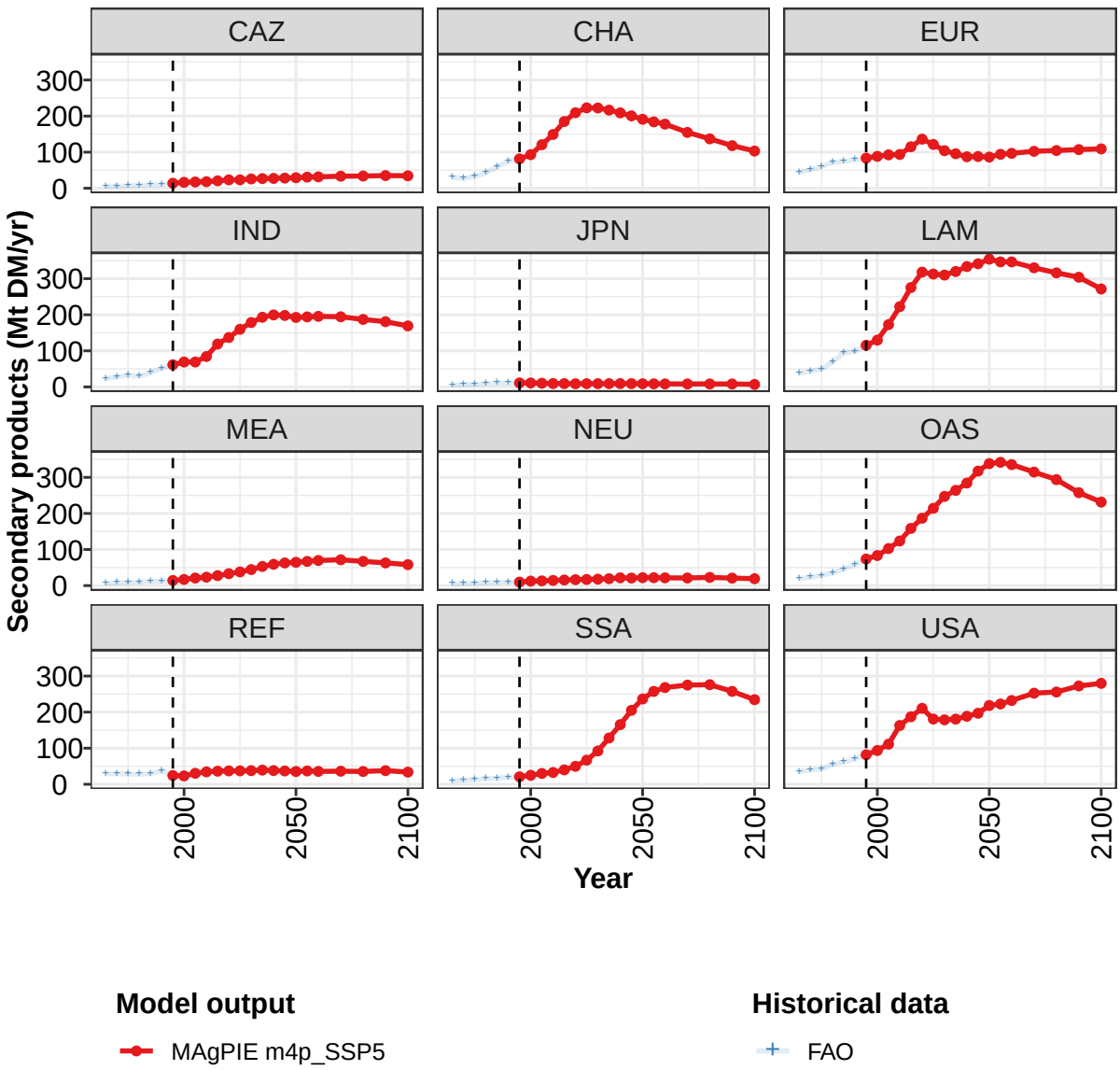
Table 1430: FAO — Production—Pasture (Mt DM/yr)

50 Secondary products




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Production|Secondary products (Mt DM/yr)
0
100
200
300
2000
2025
2050
2075
2100
Total
Alcoholic beverages
Brans
Cotton lint
Distillers grains
Ethanol
Microbial protein
Molasses
Oilcakes
Oils


GLO
Secondary products (Mt DM/yr)
1500
1000
500
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



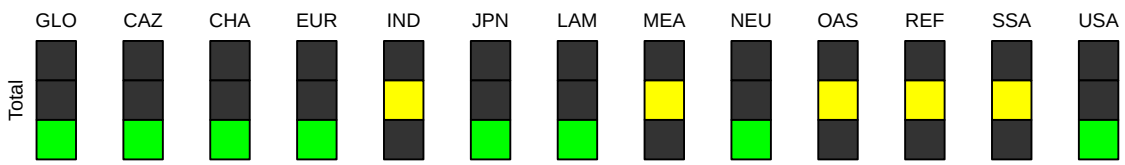


Figure 365: MAgPIE m4p_SSP5 — Production—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	591	662	791	968	1189	1366	1403	1468	1545	1623	1705
CAZ	14	16	17	18	21	23	23	26	27	27	28
CHA	81	93	121	149	185	209	223	222	217	209	201
EUR	84	88	93	94	115	136	121	104	96	87	88
IND	61	69	69	84	119	137	160	178	193	200	198
JPN	11	11	10	9	9	9	9	9	9	9	9
LAM	115	130	173	222	275	318	313	310	320	334	341
MEA	14	17	21	23	28	33	38	44	53	59	63
NEU	10	12	13	14	16	16	17	18	19	22	21
OAS	74	83	103	124	159	187	214	247	264	284	317
REF	24	23	30	34	36	37	37	38	39	38	37
SSA	21	25	30	33	40	50	67	92	128	165	205
USA	82	94	111	163	187	210	181	179	181	188	197

Table 1431: MAgPIE m4p_SSP5 — Production—Secondary products (Mt DM/yr) [PART 1/2]

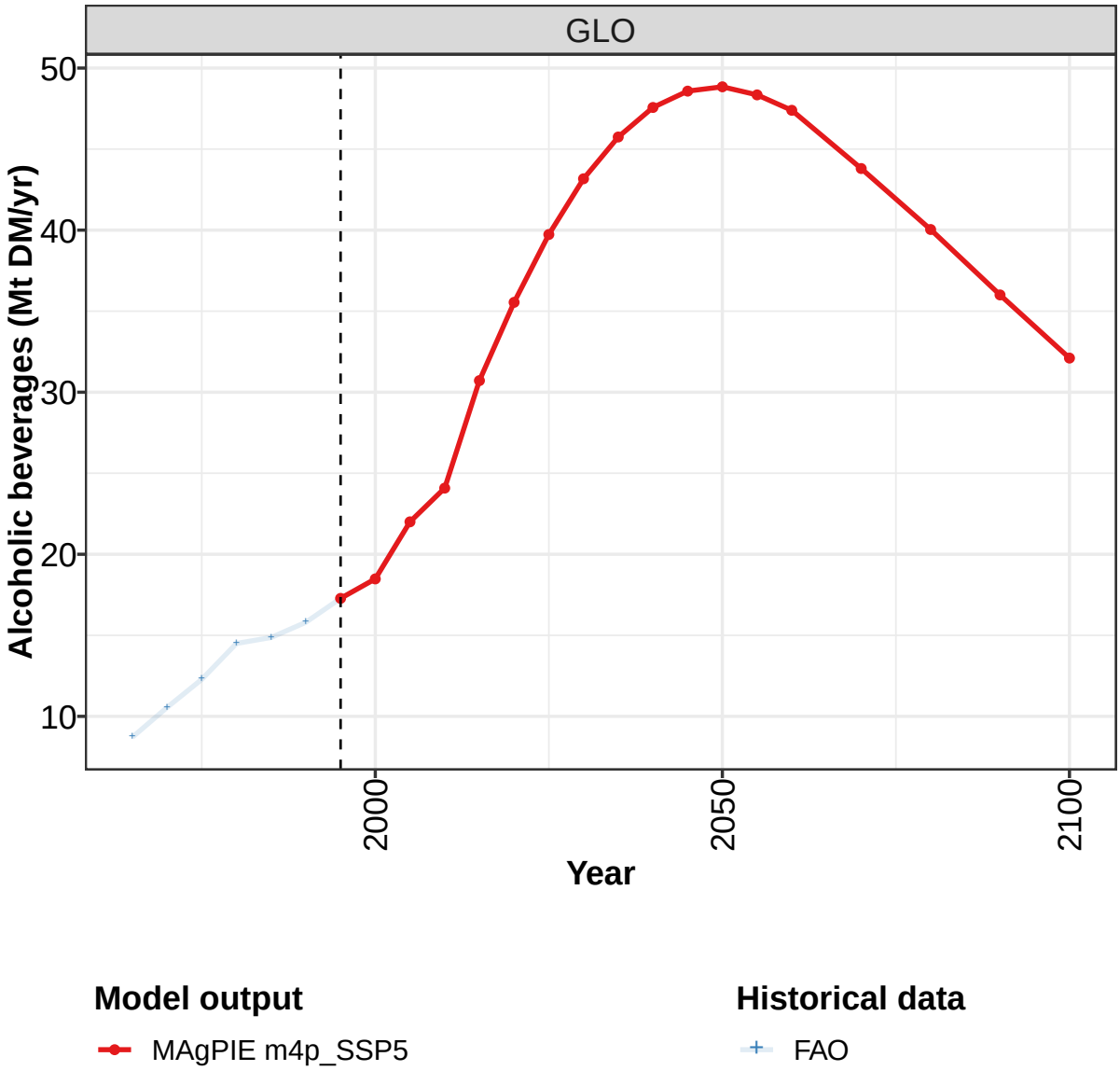
	2050	2055	2060	2070	2080	2090	2100
GLO	1777	1805	1819	1794	1738	1662	1551
CAZ	29	31	32	33	34	35	34
CHA	191	184	178	155	137	118	103
EUR	86	94	97	102	105	107	109
IND	193	194	196	194	187	181	169
JPN	9	9	8	8	8	8	7
LAM	354	346	347	330	316	304	271
MEA	65	67	70	72	67	63	58
NEU	22	22	22	21	23	21	19
OAS	338	342	335	315	294	258	231
REF	35	37	36	36	36	38	34
SSA	237	257	268	275	276	257	235
USA	218	222	232	252	256	272	280

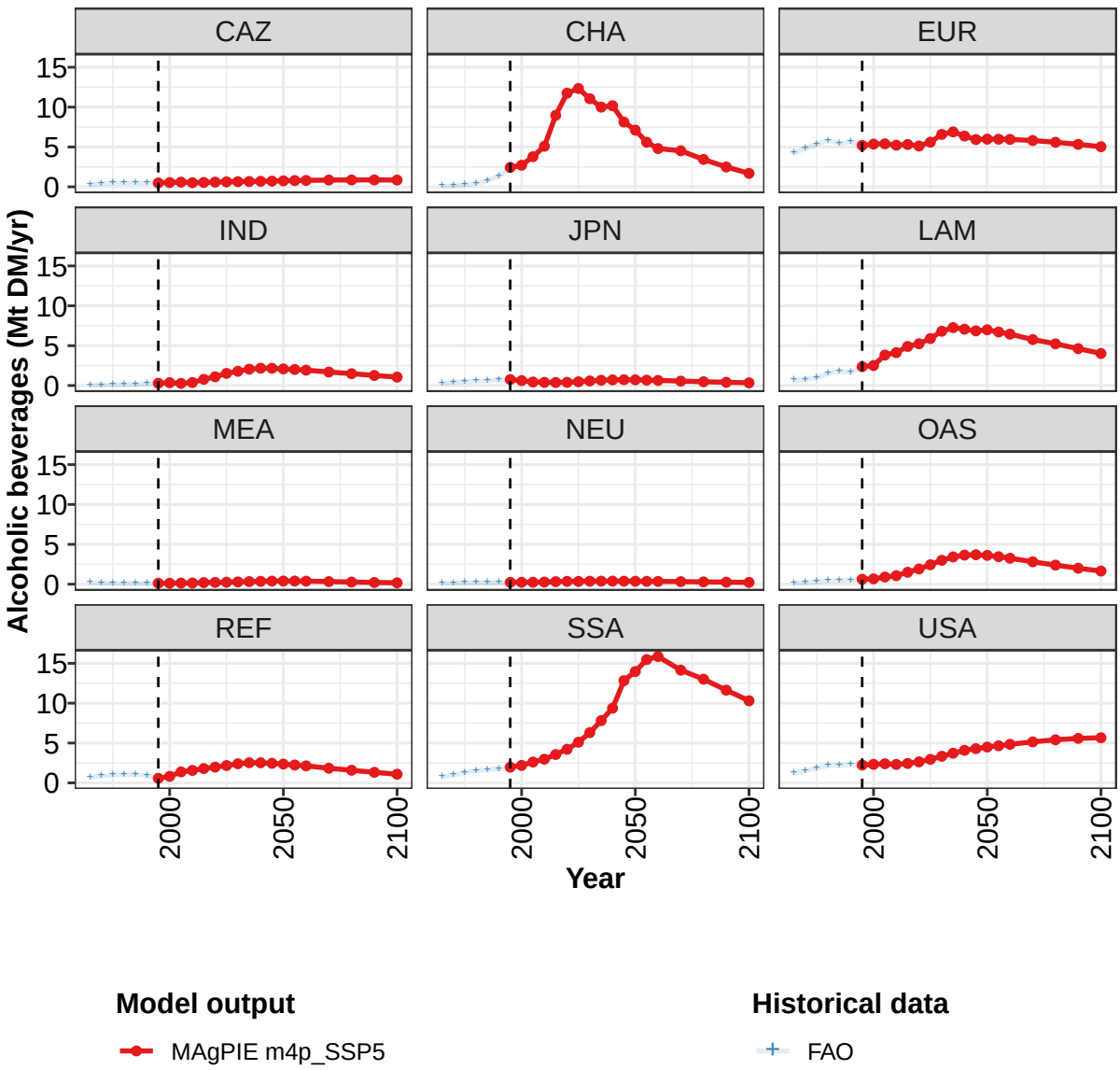
Table 1432: MAgPIE m4p_SSP5 — Production—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	247	281	315	383	462	532	590	657	786	964
CAZ	5	6	7	8	9	10	13	16	16	18
CHA	30	27	32	43	60	75	81	93	120	149
EUR	45	51	60	72	74	79	82	86	88	92
IND	23	28	32	30	40	51	64	69	69	84
JPN	5	7	7	9	11	11	11	11	10	9
LAM	37	44	49	70	94	98	115	127	175	218
MEA	6	8	9	10	12	12	14	17	20	23
NEU	5	6	7	8	9	10	9	11	13	14
OAS	19	23	28	35	46	58	73	83	101	126
REF	28	30	28	28	30	37	23	22	30	34
SSA	9	12	13	15	17	20	21	25	30	32
USA	35	40	42	56	62	70	83	96	114	164

Table 1433: FAO — Production—Secondary products (Mt DM/yr)

50.1 Alcoholic beverages





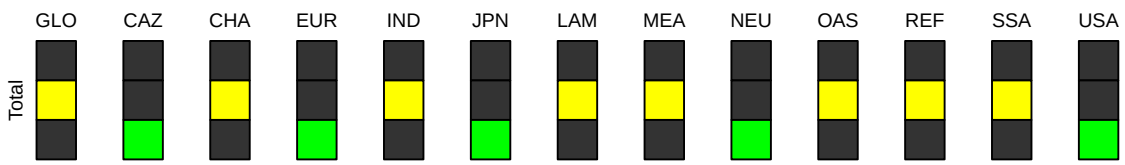


Figure 366: MAgPIE m4p_SSP5 — Production—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.3	18.5	22.0	24.1	30.7	35.5	39.7	43.2	45.7	47.6	48.6
CAZ	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7
CHA	2.4	2.7	3.8	5.1	9.0	11.8	12.3	11.1	10.0	10.2	8.1
EUR	5.2	5.4	5.4	5.2	5.3	5.1	5.6	6.6	6.9	6.4	5.9
IND	0.3	0.4	0.3	0.4	0.8	1.1	1.5	1.8	2.1	2.2	2.2
JPN	0.7	0.6	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7
LAM	2.4	2.5	3.8	4.1	4.9	5.2	5.9	6.8	7.3	7.1	6.9
MEA	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4
NEU	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4
OAS	0.6	0.7	0.9	1.1	1.5	1.9	2.4	3.0	3.4	3.6	3.7
REF	0.6	0.8	1.4	1.6	1.8	2.0	2.2	2.4	2.5	2.5	2.5
SSA	2.0	2.2	2.6	3.0	3.6	4.2	5.1	6.3	7.8	9.4	12.8
USA	2.2	2.3	2.4	2.3	2.4	2.6	2.9	3.3	3.7	4.1	4.3

Table 1434: MAgPIE m4p_SSP5 — Production—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

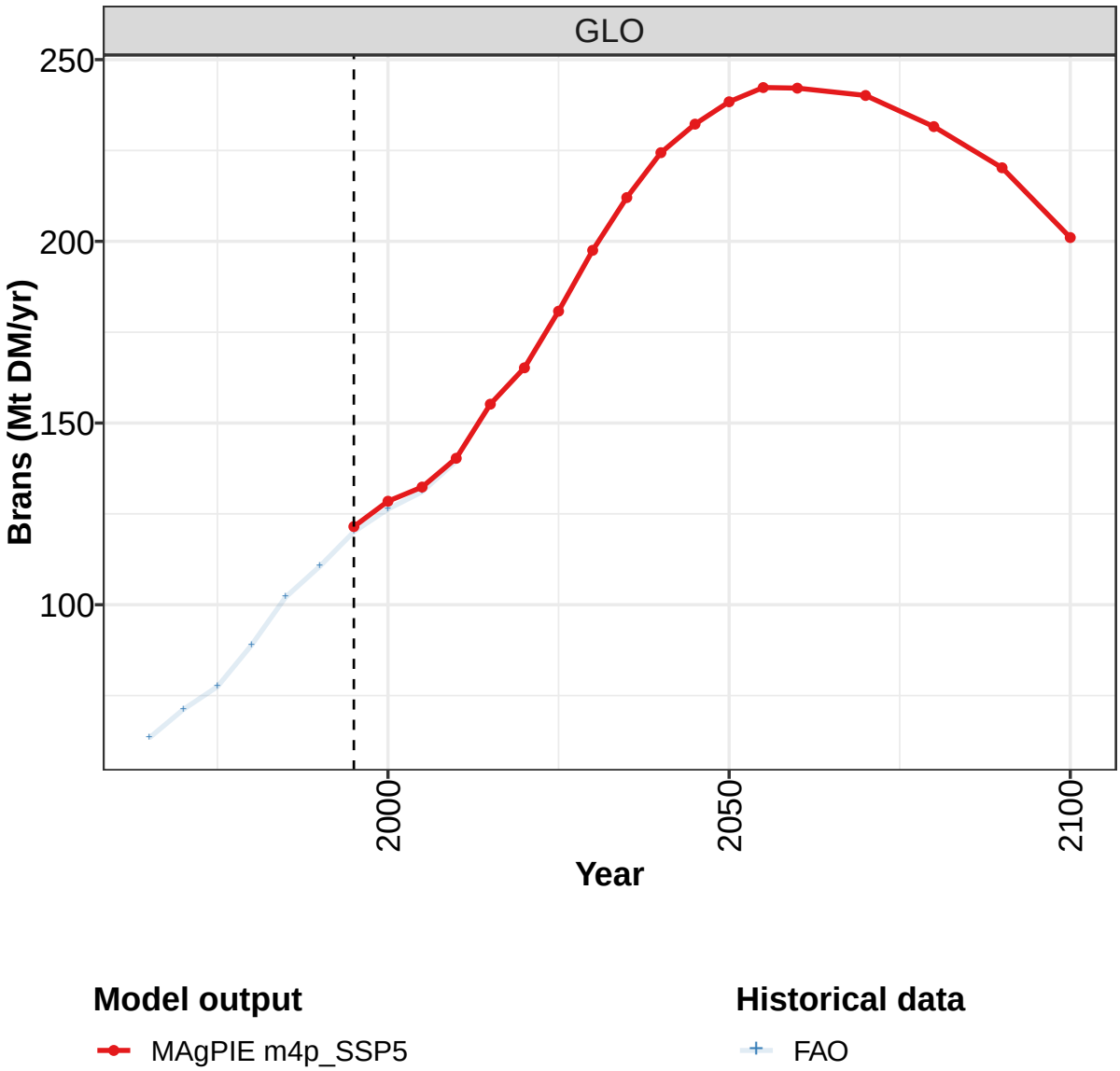
	2050	2055	2060	2070	2080	2090	2100
GLO	48.8	48.3	47.4	43.8	40.0	36.0	32.1
CAZ	0.8	0.8	0.8	0.9	0.9	0.9	0.9
CHA	7.1	5.6	4.8	4.5	3.4	2.5	1.7
EUR	6.0	6.0	6.0	5.8	5.6	5.3	5.0
IND	2.1	2.0	1.9	1.7	1.5	1.3	1.1
JPN	0.7	0.7	0.6	0.6	0.5	0.4	0.3
LAM	7.0	6.7	6.4	5.8	5.2	4.6	4.0
MEA	0.4	0.4	0.4	0.3	0.3	0.2	0.2
NEU	0.4	0.4	0.4	0.3	0.3	0.3	0.2
OAS	3.6	3.5	3.3	2.8	2.4	2.0	1.7
REF	2.4	2.2	2.1	1.8	1.6	1.3	1.1
SSA	14.0	15.5	15.9	14.1	13.0	11.6	10.3
USA	4.5	4.7	4.8	5.1	5.4	5.6	5.7

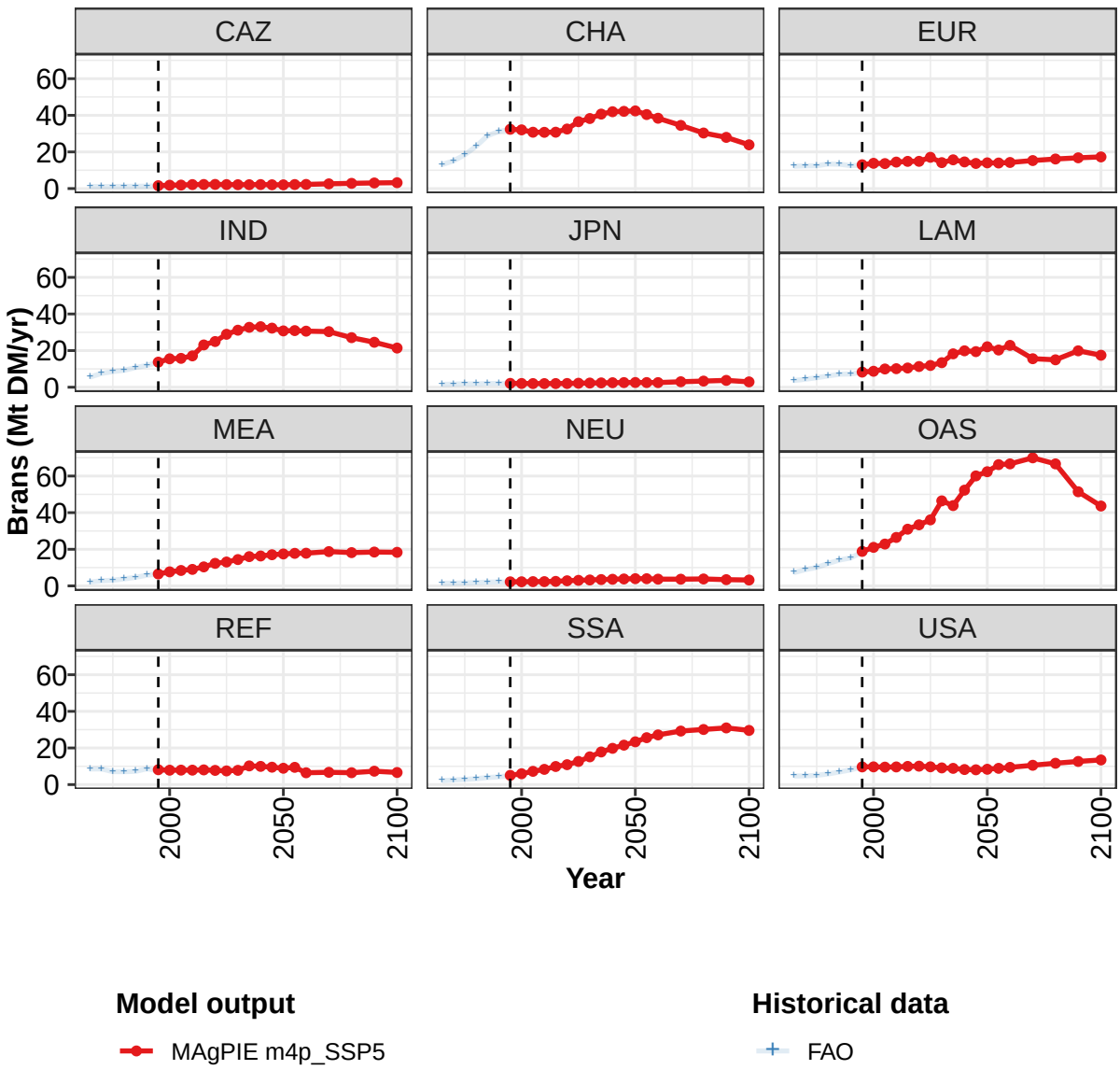
Table 1435: MAgPIE m4p_SSP5 — Production—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.7	10.5	12.3	14.5	14.9	15.8	17.3	18.5	22.0	24.1
CAZ	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5
CHA	0.1	0.1	0.2	0.4	0.8	1.3	2.4	2.7	3.8	5.1
EUR	4.2	4.9	5.3	5.8	5.4	5.6	5.2	5.4	5.3	5.1
IND	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.4
JPN	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.6	0.4	0.4
LAM	0.7	0.8	1.0	1.6	1.8	1.7	2.4	2.5	3.9	4.2
MEA	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
NEU	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
OAS	0.1	0.2	0.3	0.4	0.5	0.5	0.6	0.7	0.9	1.0
REF	0.6	0.9	1.0	1.1	1.1	0.9	0.6	0.8	1.4	1.6
SSA	0.8	1.0	1.3	1.5	1.6	1.8	1.9	2.2	2.6	3.0
USA	1.2	1.5	1.8	2.2	2.2	2.3	2.2	2.3	2.4	2.3

Table 1436: FAO — Production—Secondary products—Alcoholic beverages (Mt DM/yr)

50.2 Brans


GLO
250
200
150
100
Brans (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



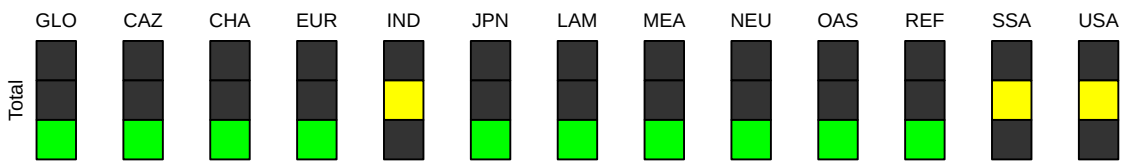


Figure 367: MAgPIE m4p_SSP5 — Production—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	122	128	132	140	155	165	181	198	212	224	232
CAZ	2	2	2	2	2	2	2	2	2	2	2
CHA	32	32	31	31	31	33	37	38	41	42	42
EUR	13	14	14	14	15	15	17	14	16	15	14
IND	14	16	16	17	23	25	29	31	33	33	32
JPN	2	2	2	2	2	2	2	2	2	2	3
LAM	8	9	10	10	11	11	12	13	18	20	19
MEA	7	8	8	9	10	12	13	14	16	16	17
NEU	2	2	2	2	2	3	3	3	3	4	4
OAS	19	21	23	26	31	33	36	46	44	52	60
REF	8	8	8	8	8	8	7	8	10	10	10
SSA	5	6	7	8	10	11	13	15	18	20	22
USA	10	10	10	10	10	10	10	9	9	8	8

Table 1437: MAgPIE m4p_SSP5 — Production—Secondary products—Brans (Mt DM/yr) [PART 1/2]

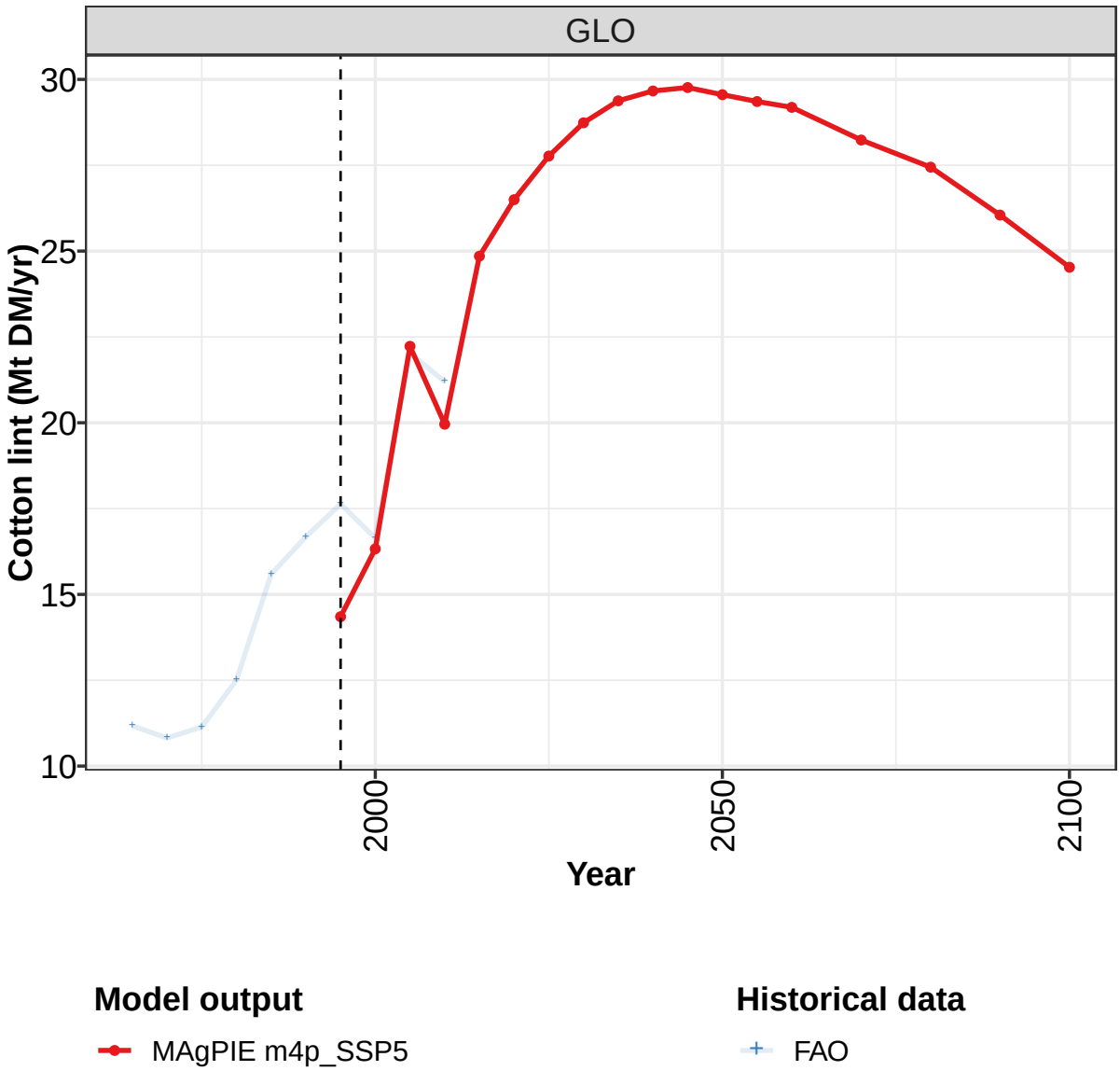
	2050	2055	2060	2070	2080	2090	2100
GLO	238	242	242	240	232	220	201
CAZ	2	2	2	3	3	3	3
CHA	42	40	38	34	30	28	24
EUR	14	14	14	15	16	17	17
IND	31	31	31	30	27	25	21
JPN	3	3	3	3	3	4	3
LAM	22	20	23	16	15	20	17
MEA	17	18	18	19	18	18	18
NEU	4	4	4	4	4	3	3
OAS	62	66	67	70	67	51	44
REF	9	9	6	7	6	7	7
SSA	23	26	27	29	30	31	30
USA	8	9	9	11	12	13	13

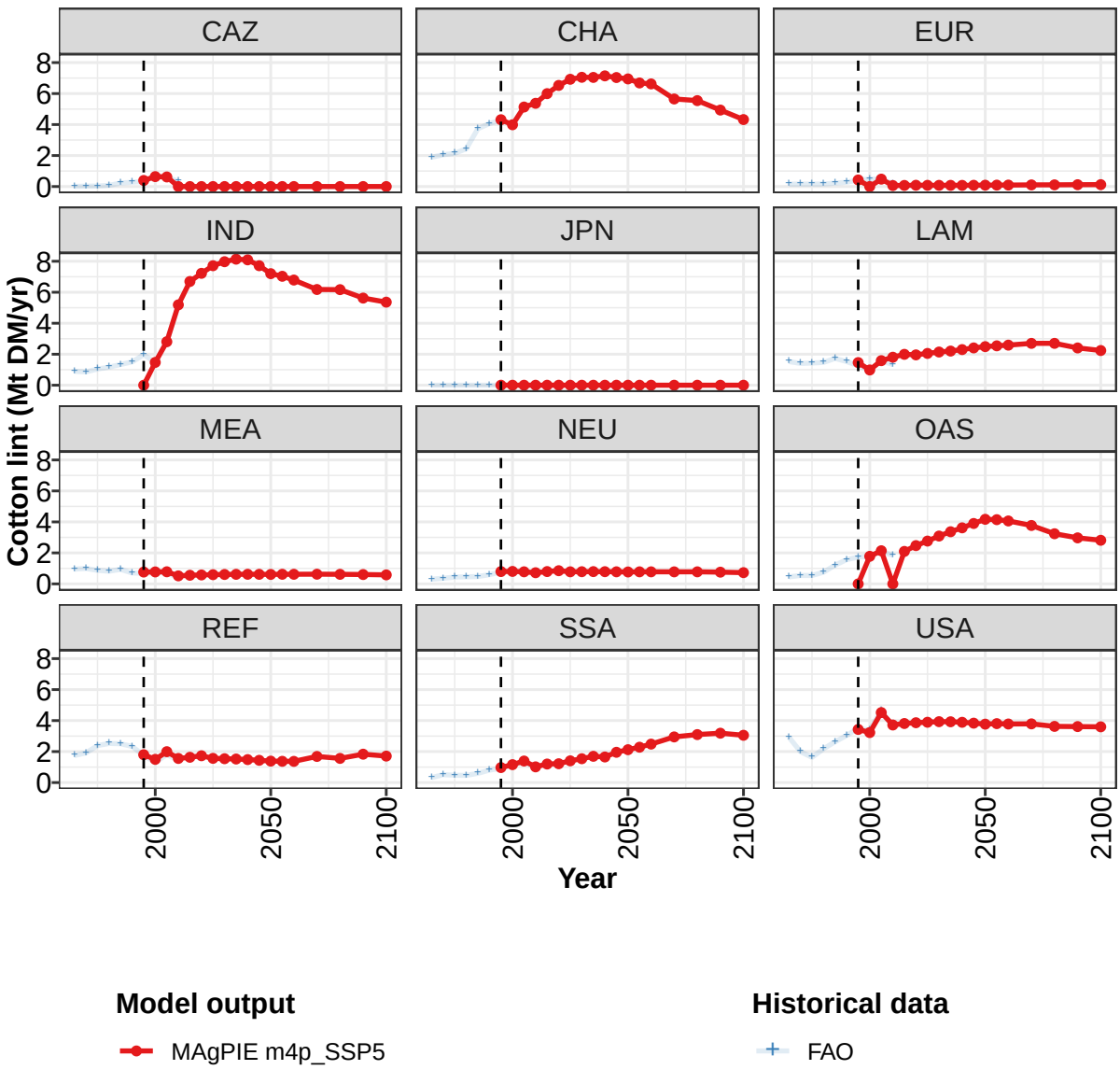
Table 1438: MAgPIE m4p_SSP5 — Production—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	63	71	77	89	102	111	120	126	131	140
CAZ	1	1	1	1	1	1	2	2	2	2
CHA	13	15	18	23	29	31	32	32	31	31
EUR	12	12	12	13	13	13	13	13	13	14
IND	6	8	9	9	11	12	14	16	16	17
JPN	2	2	2	2	2	2	2	2	2	2
LAM	4	4	5	6	7	7	8	9	10	10
MEA	2	3	3	4	5	6	7	7	8	9
NEU	1	2	2	2	2	2	2	2	2	2
OAS	7	9	10	12	14	15	19	21	23	26
REF	9	9	7	7	7	9	8	8	8	8
SSA	2	3	3	3	4	4	5	6	7	8
USA	5	5	5	6	7	8	10	10	10	10

Table 1439: FAO — Production—Secondary products—Brans (Mt DM/yr)

50.3 Cotton lint





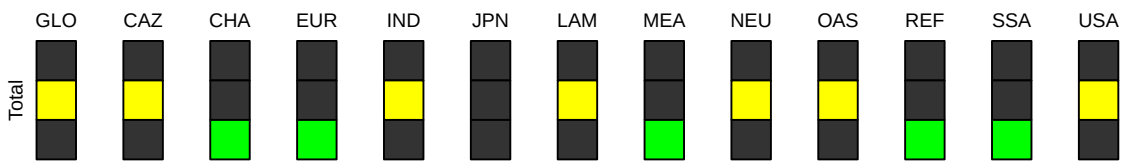


Figure 368: MAgPIE m4p_SSP5 — Production—Secondary products—Cotton lint (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.4	16.3	22.2	20.0	24.9	26.5	27.8	28.7	29.4	29.7	29.8
CAZ	0.4	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.3	4.0	5.1	5.4	6.0	6.5	6.9	7.1	7.0	7.1	7.0
EUR	0.4	0.0	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	0.0	1.5	2.8	5.2	6.7	7.2	7.7	8.0	8.1	8.1	7.7
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.5	1.0	1.6	1.8	2.0	2.0	2.1	2.1	2.2	2.3	2.4
MEA	0.8	0.8	0.8	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NEU	0.8	0.8	0.8	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.8
OAS	0.0	1.8	2.1	0.0	2.1	2.5	2.8	3.1	3.4	3.6	3.9
REF	1.8	1.5	2.0	1.6	1.6	1.7	1.6	1.5	1.5	1.5	1.4
SSA	1.0	1.2	1.4	1.0	1.2	1.2	1.4	1.5	1.7	1.7	2.0
USA	3.4	3.2	4.5	3.7	3.8	3.9	3.9	3.9	3.9	3.9	3.8

Table 1440: MAgPIE m4p_SSP5 — Production—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

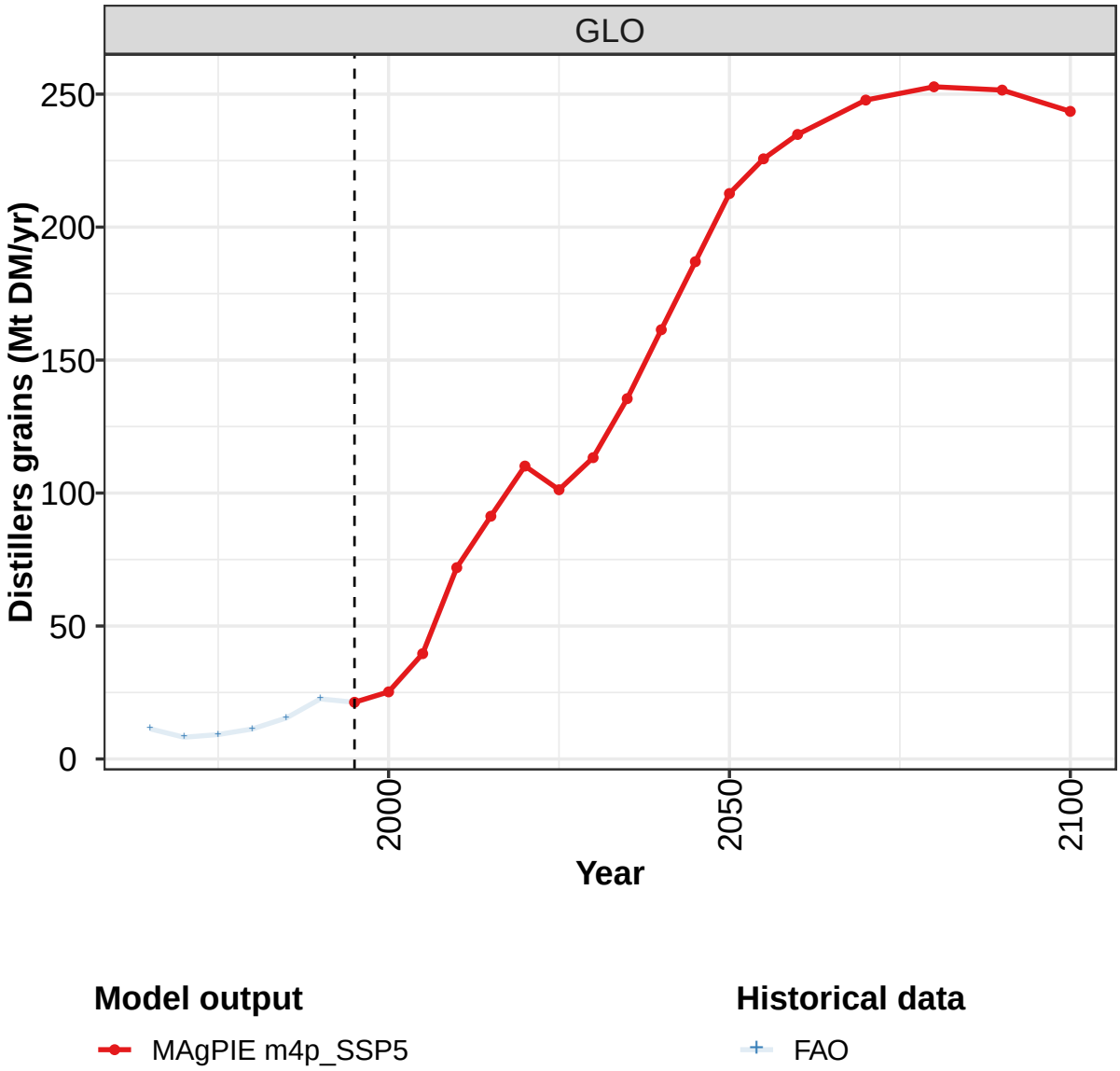
	2050	2055	2060	2070	2080	2090	2100
GLO	29.6	29.4	29.2	28.2	27.4	26.0	24.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.9	6.7	6.6	5.7	5.5	4.9	4.3
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	7.2	7.0	6.8	6.2	6.2	5.6	5.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.5	2.5	2.6	2.7	2.7	2.4	2.2
MEA	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NEU	0.8	0.8	0.8	0.8	0.8	0.8	0.7
OAS	4.2	4.1	4.1	3.8	3.2	3.0	2.8
REF	1.4	1.4	1.4	1.7	1.6	1.8	1.7
SSA	2.1	2.3	2.5	2.9	3.1	3.2	3.1
USA	3.8	3.8	3.8	3.8	3.6	3.6	3.6

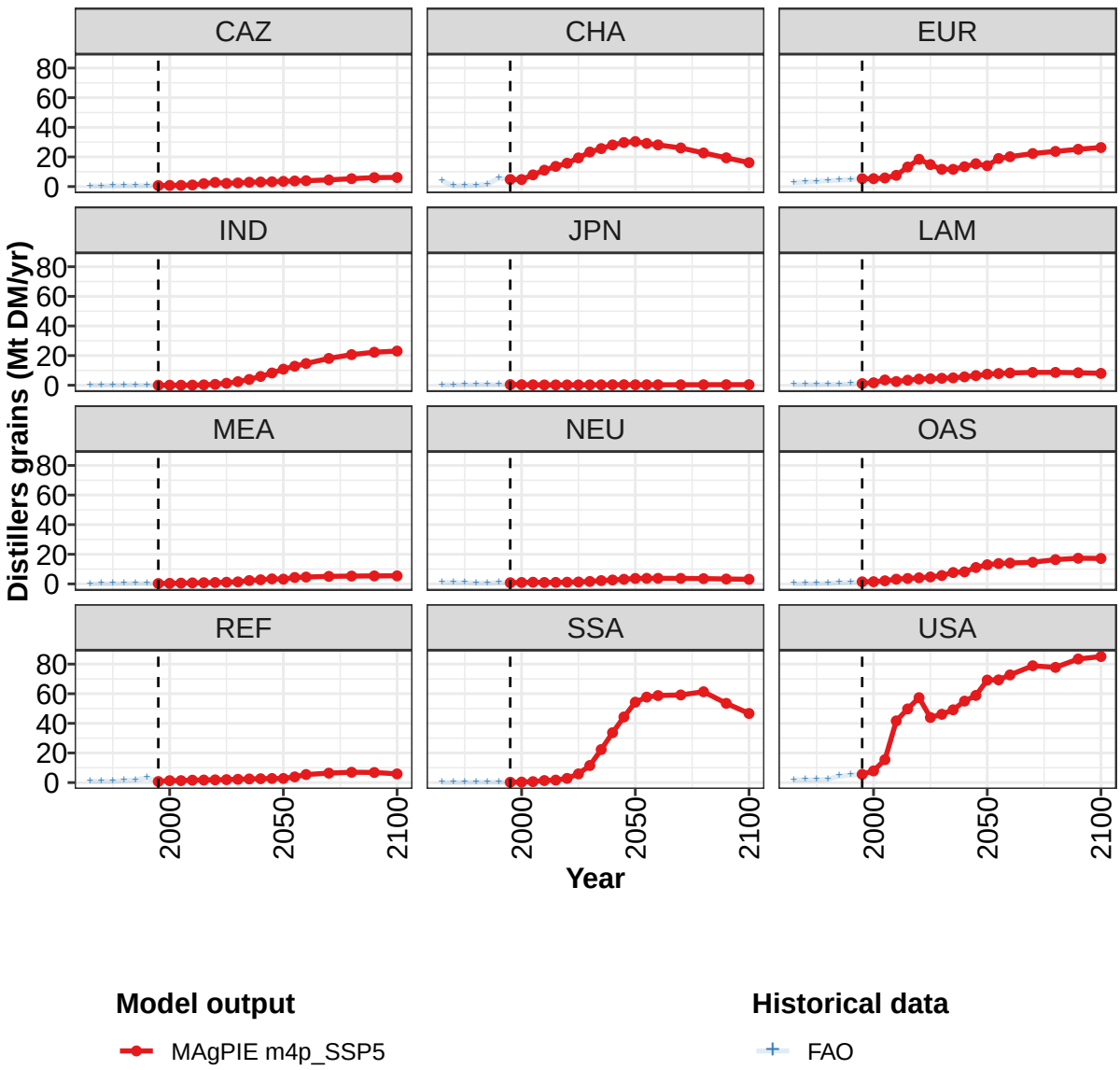
Table 1441: MAgPIE m4p_SSP5 — Production—Secondary products—Cotton lint (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.2	10.8	11.1	12.5	15.6	16.7	17.6	16.6	22.0	21.2
CAZ	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.7	0.6	0.3
CHA	1.9	2.1	2.1	2.4	3.7	4.1	4.3	4.0	5.1	5.4
EUR	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.2
IND	0.9	0.9	1.0	1.2	1.3	1.5	2.0	1.5	2.8	5.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.5	1.4	1.4	1.5	1.7	1.5	1.3	1.0	1.6	1.3
MEA	1.0	1.0	0.9	0.8	0.9	0.7	0.7	0.7	0.7	0.4
NEU	0.3	0.4	0.4	0.5	0.5	0.6	0.8	0.8	0.8	0.7
OAS	0.4	0.5	0.5	0.8	1.2	1.6	1.7	1.8	2.1	1.8
REF	1.7	1.9	2.4	2.5	2.5	2.3	1.7	1.3	1.8	1.4
SSA	0.3	0.5	0.5	0.5	0.6	0.8	0.9	1.1	1.4	0.9
USA	2.9	2.0	1.6	2.2	2.6	3.0	3.5	3.4	4.7	3.5

Table 1442: FAO — Production—Secondary products—Cotton lint (Mt DM/yr)

50.4 Distillers grains





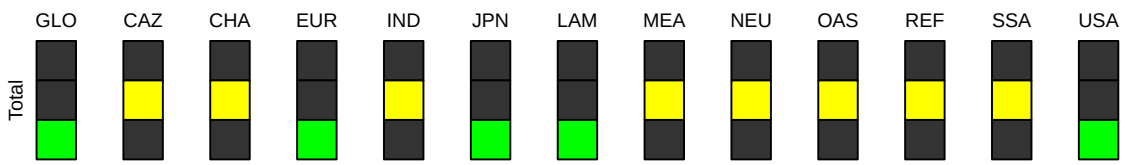


Figure 369: MAgPIE m4p_SSP5 — Production—Secondary products—Distillers grains (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21	25	40	72	91	110	101	113	135	161	187
CAZ	1	1	1	1	2	3	2	2	3	3	3
CHA	5	5	8	11	14	16	19	23	26	28	30
EUR	5	5	6	8	13	18	15	12	12	13	15
IND	0	0	0	0	0	1	1	2	4	6	8
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	4	2	3	4	4	5	5	6	6
MEA	0	0	1	1	1	1	1	1	2	3	3
NEU	1	1	1	1	1	1	1	2	2	3	3
OAS	1	2	2	3	4	4	5	6	8	8	11
REF	1	1	1	2	2	2	2	2	2	3	3
SSA	0	0	1	1	2	3	6	12	22	34	44
USA	6	8	15	42	50	57	44	46	49	55	59

Table 1443: MAgPIE m4p_SSP5 — Production—Secondary products—Distillers grains (Mt DM/yr) [PART 1/2]

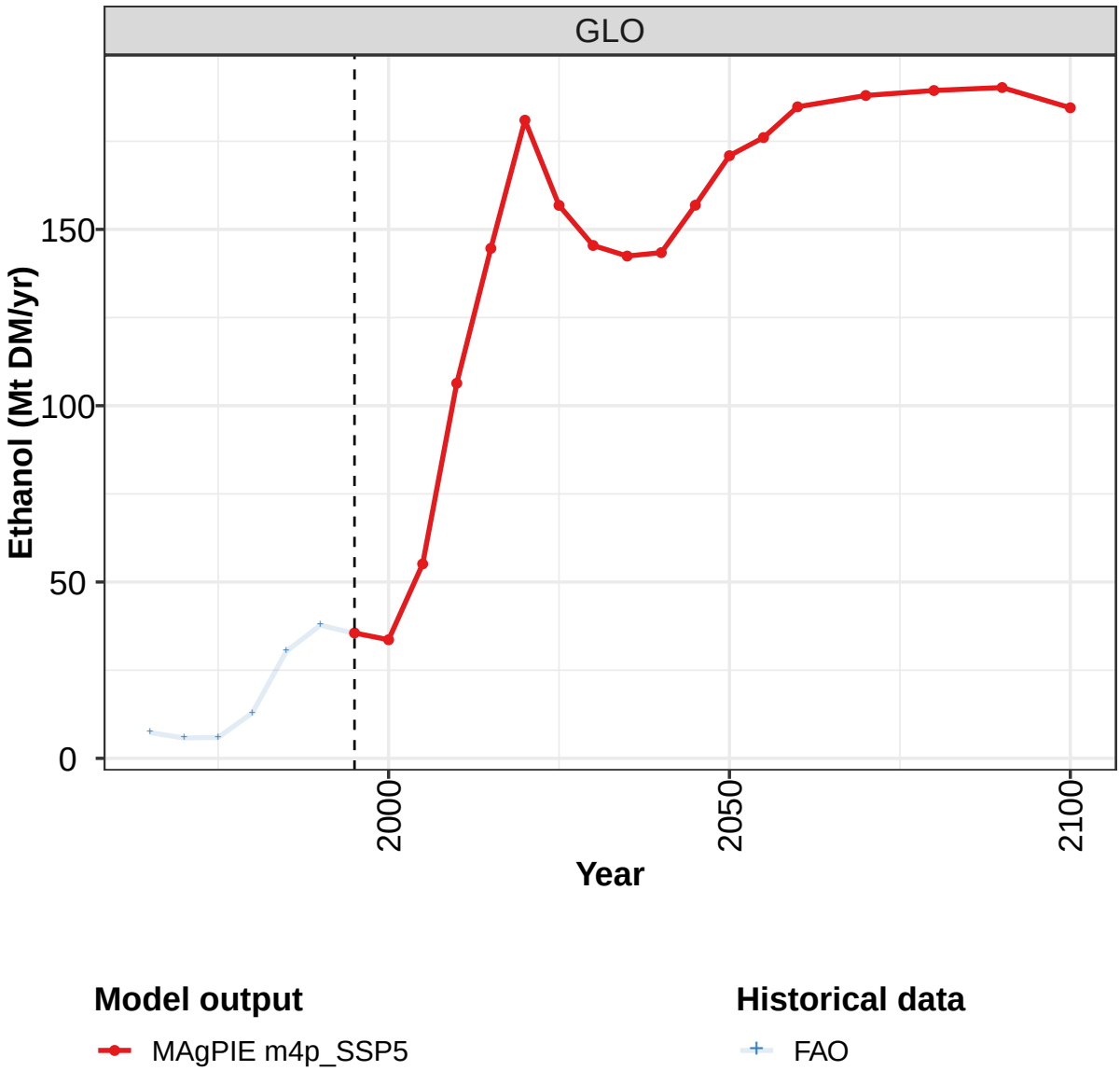
	2050	2055	2060	2070	2080	2090	2100
GLO	213	226	235	248	253	252	244
CAZ	3	4	4	4	5	6	6
CHA	30	29	28	26	23	19	16
EUR	14	19	20	22	24	25	26
IND	11	13	15	18	21	22	23
JPN	0	0	0	0	0	0	0
LAM	7	8	8	9	9	8	8
MEA	3	4	5	5	5	5	5
NEU	4	4	4	4	4	3	3
OAS	13	14	14	15	16	17	17
REF	3	4	5	6	7	7	6
SSA	54	58	59	59	61	53	47
USA	69	69	73	79	78	83	85

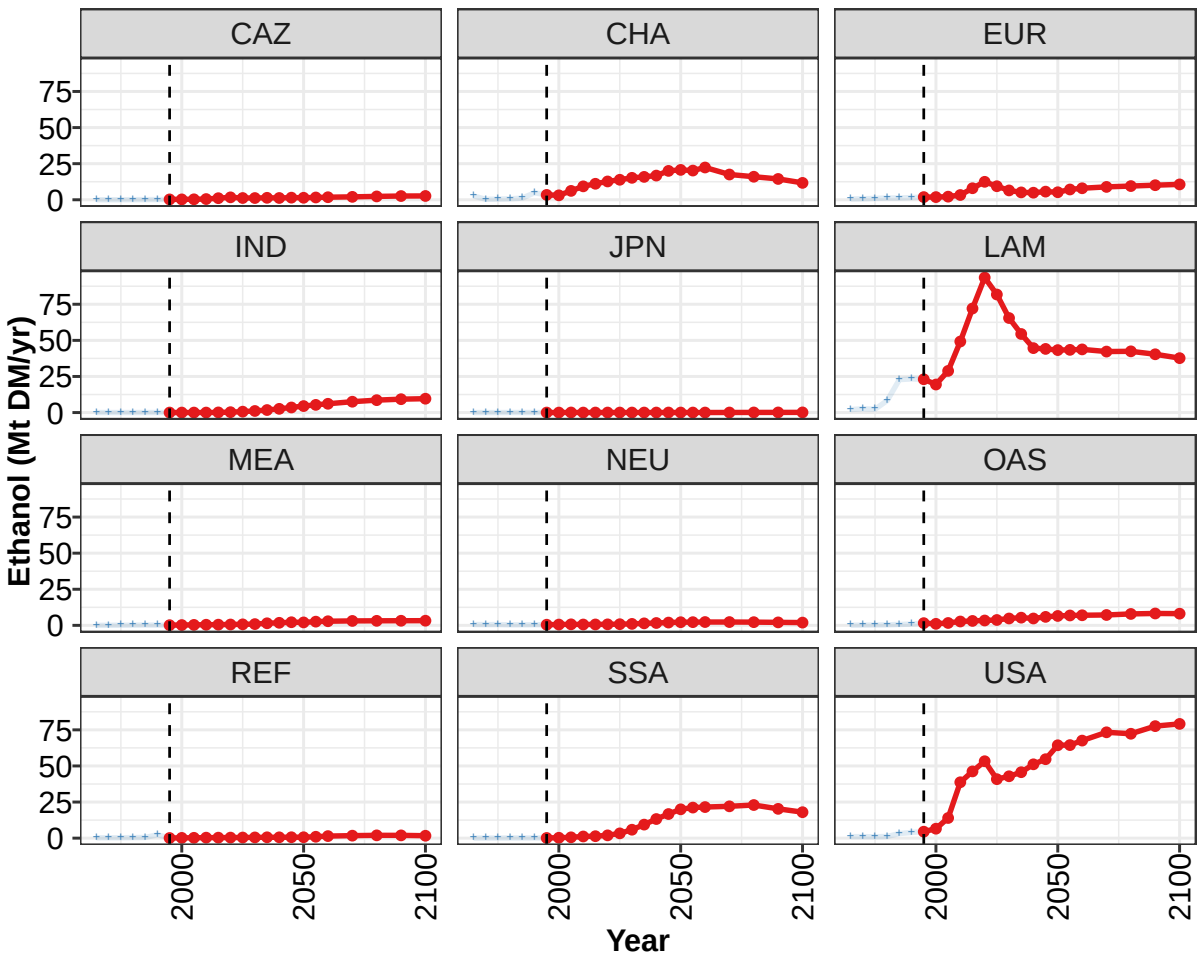
Table 1444: MAgPIE m4p_SSP5 — Production—Secondary products—Distillers grains (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.3	8.2	9.2	11.3	15.4	22.6	21.3	25.0	39.3	71.8
CAZ	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.8	0.7	1.1
CHA	4.0	0.4	0.6	0.8	1.6	5.7	4.8	4.7	7.9	11.1
EUR	2.8	3.0	3.5	4.0	4.3	4.7	5.3	5.2	5.7	7.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.2
LAM	0.3	0.3	0.4	0.5	0.6	0.9	1.1	1.7	3.6	2.5
MEA	0.0	0.1	0.1	0.2	0.3	0.2	0.3	0.4	0.5	0.7
NEU	0.9	0.8	0.9	0.6	0.6	0.7	0.8	0.9	1.1	1.0
OAS	0.1	0.2	0.2	0.4	0.8	1.0	1.4	1.5	2.1	3.2
REF	0.8	0.8	0.9	1.3	1.7	3.2	0.7	1.3	1.3	1.6
SSA	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.6	1.4
USA	1.8	1.8	1.9	2.3	4.3	5.0	5.6	7.9	15.5	41.7

Table 1445: FAO — Production—Secondary products—Distillers grains (Mt DM/yr)

50.5 Ethanol


GLO
Ethanol (Mt DM/yr)
150
100
50
0
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

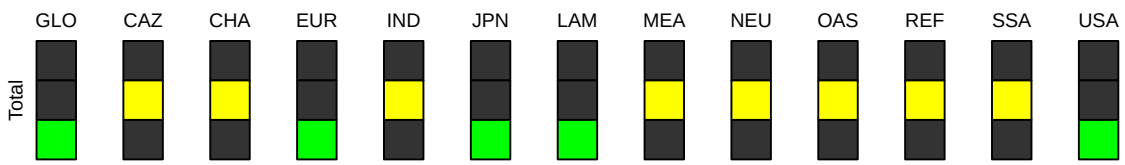


Figure 370: MAgPIE m4p_SSP5 — Production—Secondary products—Ethanol (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	36	34	55	106	145	181	157	145	142	143	157
CAZ	0	0	0	1	1	2	1	1	1	1	1
CHA	3	3	6	9	11	13	14	15	16	17	20
EUR	2	2	2	3	8	12	9	6	5	5	6
IND	0	0	0	0	0	0	1	1	2	3	4
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	23	19	29	49	72	93	82	65	54	45	44
MEA	0	0	0	0	1	1	1	1	1	2	2
NEU	0	1	1	1	1	1	1	1	1	2	2
OAS	2	1	2	3	3	3	4	5	5	5	6
REF	0	0	0	0	0	0	0	1	1	1	1
SSA	0	0	1	1	1	2	3	6	9	13	17
USA	4	7	14	39	46	53	41	43	46	51	55

Table 1446: MAgPIE m4p_SSP5 — Production—Secondary products—Ethanol (Mt DM/yr) [PART 1/2]

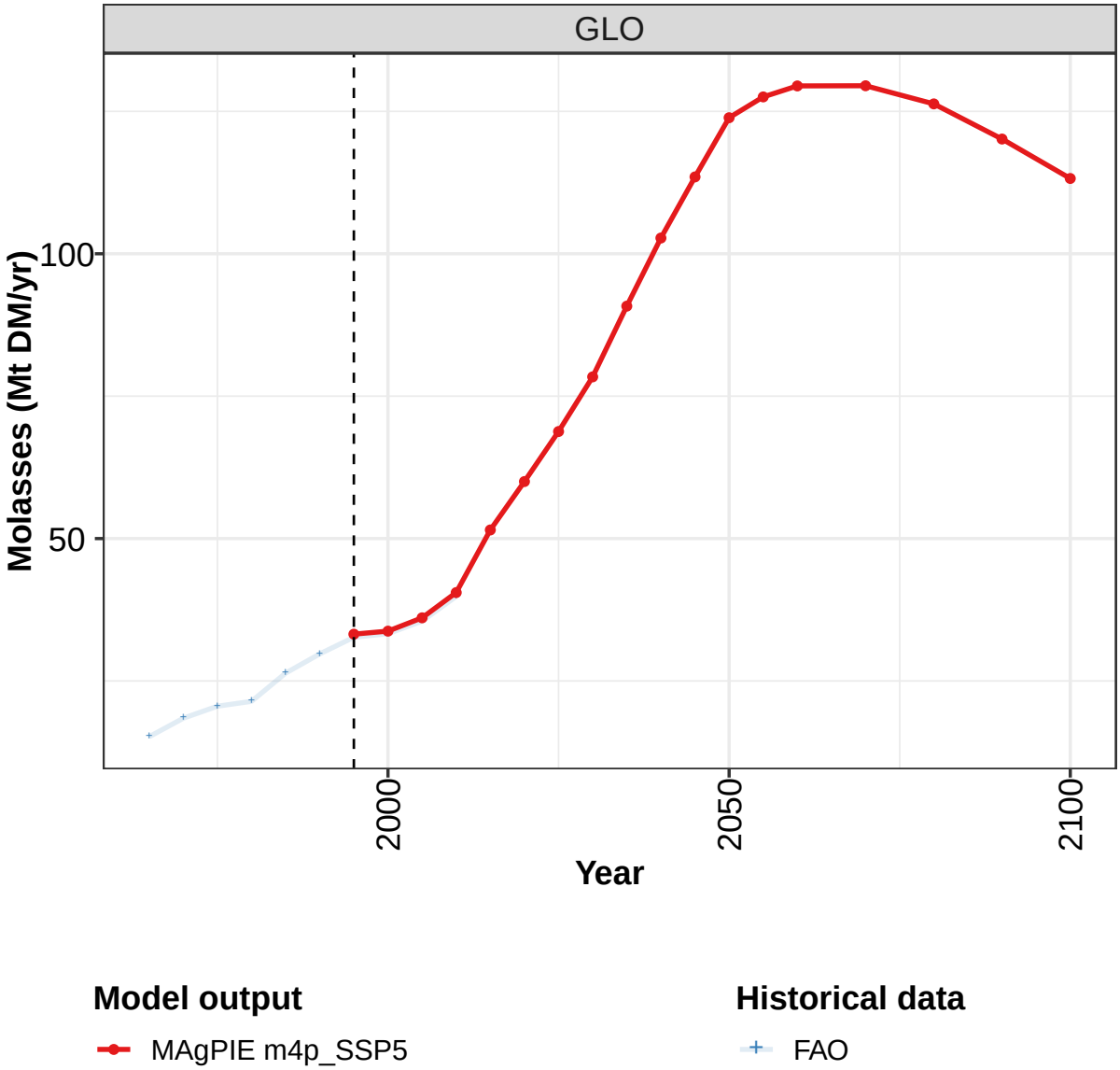
	2050	2055	2060	2070	2080	2090	2100
GLO	171	176	185	188	189	190	184
CAZ	1	2	2	2	2	3	3
CHA	21	20	22	18	16	14	12
EUR	5	7	8	9	10	10	11
IND	5	5	6	8	9	9	10
JPN	0	0	0	0	0	0	0
LAM	43	43	44	42	42	40	38
MEA	2	3	3	3	3	3	3
NEU	2	2	2	2	2	2	2
OAS	7	7	7	7	8	8	8
REF	1	1	1	2	2	2	2
SSA	20	21	22	22	23	20	18
USA	64	64	68	73	72	78	79

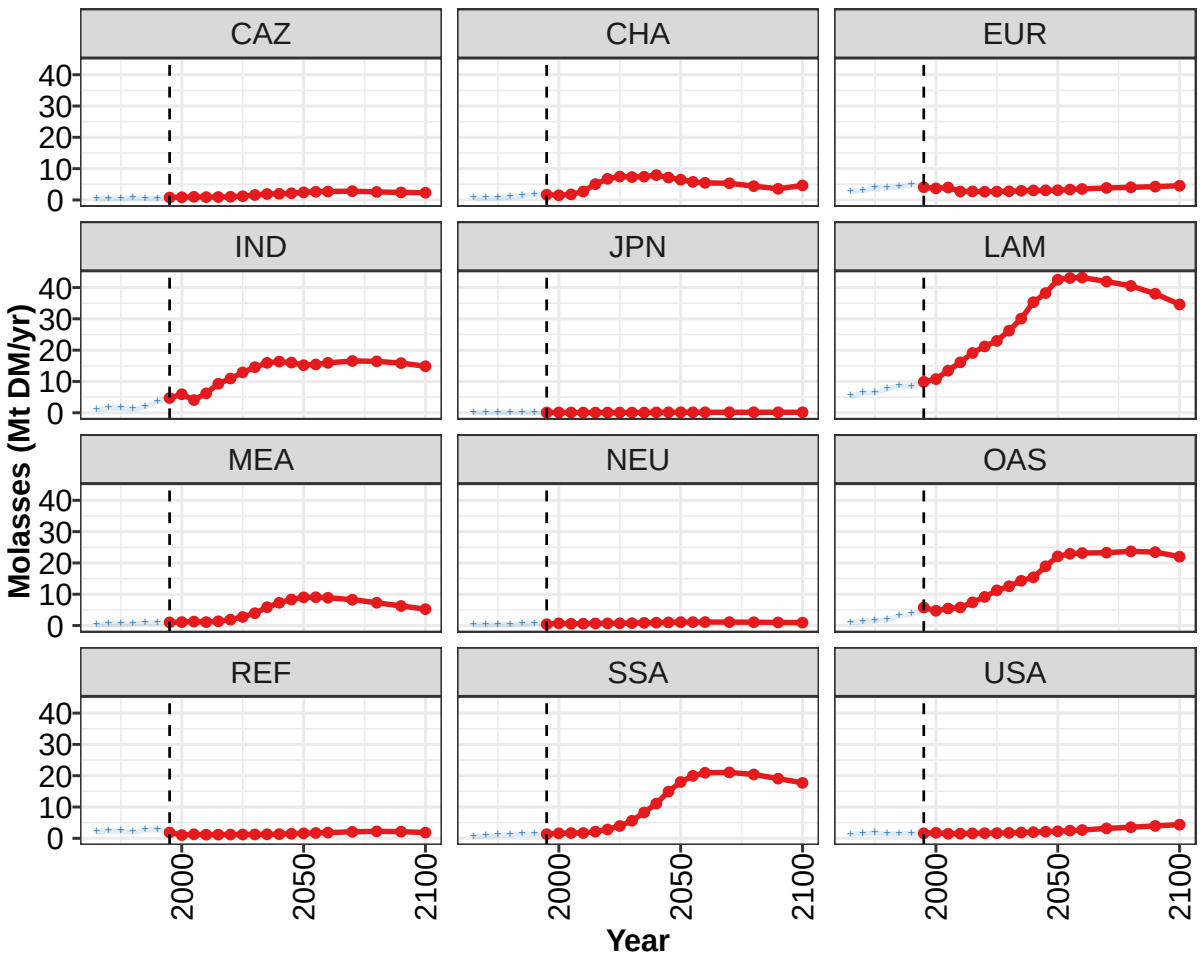
Table 1447: MAgPIE m4p_SSP5 — Production—Secondary products—Ethanol (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7	6	6	13	30	38	35	34	55	106
CAZ	0	0	0	0	0	0	0	0	0	1
CHA	3	0	0	1	1	5	3	3	6	9
EUR	1	1	1	1	1	2	2	2	2	3
IND	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0
LAM	2	3	2	8	23	23	23	19	29	49
MEA	0	0	0	0	0	0	0	0	0	0
NEU	1	0	1	0	0	0	0	1	1	1
OAS	0	0	0	0	1	1	2	1	2	3
REF	0	0	0	0	0	2	0	0	0	0
SSA	0	0	0	0	0	0	0	0	1	1
USA	1	1	1	1	3	4	4	7	14	39

Table 1448: FAO — Production—Secondary products—Ethanol (Mt DM/yr)

50.6 Molasses





Model output

MAgPIE m4p_SSP5

Historical data

FAO

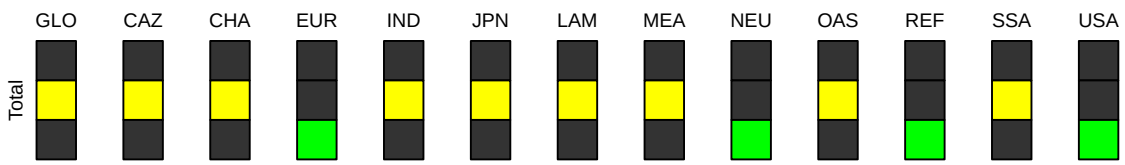


Figure 371: MAgPIE m4p_SSP5 — Production—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	33	34	36	41	52	60	69	78	91	103	113
CAZ	1	1	1	1	1	1	1	2	2	2	2
CHA	2	1	2	3	5	7	7	7	7	8	7
EUR	4	4	4	3	3	3	3	3	3	3	3
IND	5	6	4	6	9	11	13	15	16	16	16
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	10	11	13	16	19	21	23	26	30	35	38
MEA	1	1	1	1	1	2	3	4	6	7	8
NEU	0	1	1	1	1	1	1	1	1	1	1
OAS	6	5	5	6	7	9	11	13	14	15	19
REF	2	1	1	1	1	1	1	1	1	1	1
SSA	1	2	2	2	2	3	4	6	8	11	15
USA	2	2	1	2	2	2	2	2	2	2	2

Table 1449: MAgPIE m4p_SSP5 — Production—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

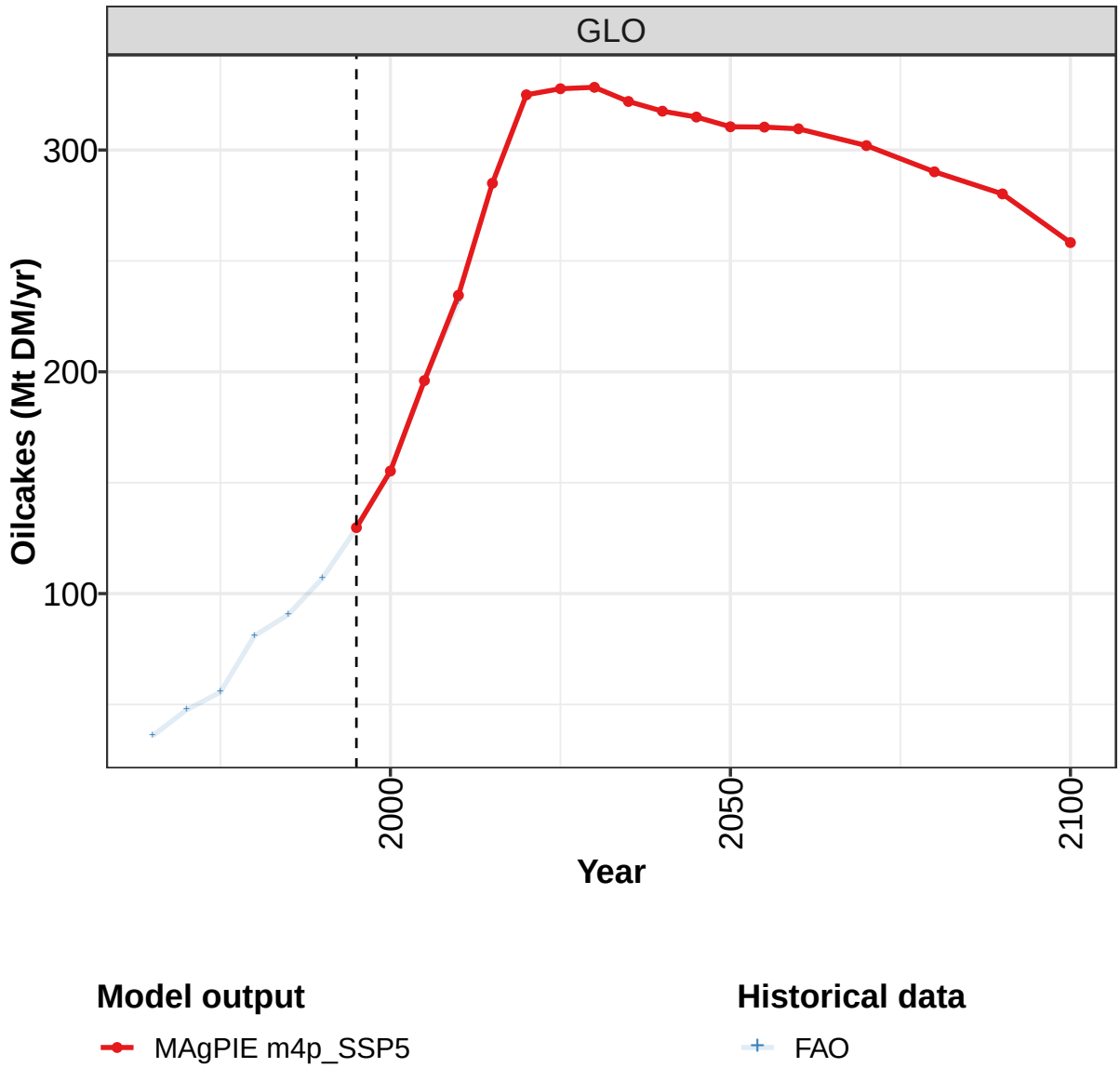
	2050	2055	2060	2070	2080	2090	2100
GLO	124	128	129	130	126	120	113
CAZ	2	3	3	3	3	2	2
CHA	6	6	5	5	4	4	5
EUR	3	3	4	4	4	4	5
IND	15	15	16	17	16	16	15
JPN	0	0	0	0	0	0	0
LAM	42	43	43	42	41	38	35
MEA	9	9	9	8	7	6	5
NEU	1	1	1	1	1	1	1
OAS	22	23	23	23	24	23	22
REF	2	2	2	2	2	2	2
SSA	18	20	21	21	20	19	18
USA	2	2	3	3	4	4	4

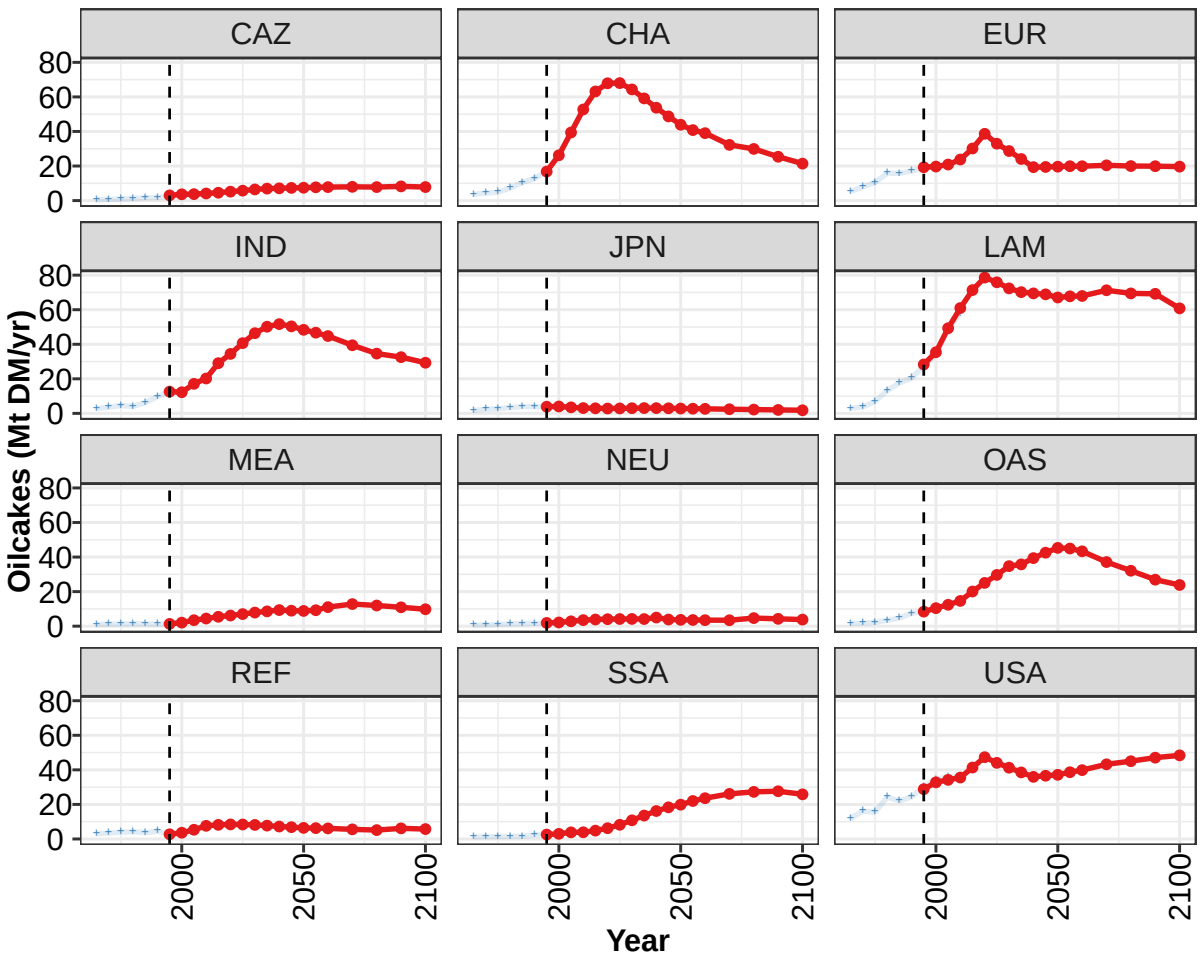
Table 1450: MAgPIE m4p_SSP5 — Production—Secondary products—Molasses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	15.2	18.5	20.6	21.4	26.4	29.8	32.7	33.3	35.5	39.8
CAZ	0.3	0.4	0.5	0.5	0.5	0.5	0.8	0.8	0.8	0.7
CHA	0.6	0.6	0.7	0.9	1.3	1.7	1.7	1.5	1.8	2.7
EUR	2.6	3.1	3.9	3.9	4.3	4.8	4.0	3.5	3.7	2.7
IND	1.0	1.5	1.5	1.2	1.8	3.6	4.8	5.9	4.1	6.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	5.3	6.3	6.4	7.6	8.5	8.4	10.1	10.6	13.9	16.1
MEA	0.2	0.4	0.5	0.6	0.8	0.8	1.0	1.1	1.3	1.1
NEU	0.2	0.2	0.3	0.4	0.5	0.6	0.4	0.6	0.6	0.6
OAS	0.8	1.3	1.6	1.8	3.1	3.6	5.1	4.8	4.9	5.4
REF	2.2	2.3	2.3	1.9	2.7	2.8	1.7	1.0	1.3	1.2
SSA	0.6	0.9	1.0	1.2	1.3	1.3	1.3	1.6	1.7	1.6
USA	1.3	1.5	1.7	1.4	1.4	1.5	1.6	1.8	1.5	1.6

Table 1451: FAO — Production—Secondary products—Molasses (Mt DM/yr)

50.7 Oilcakes





Model output

MAgPIE m4p_SSP5

Historical data

FAO

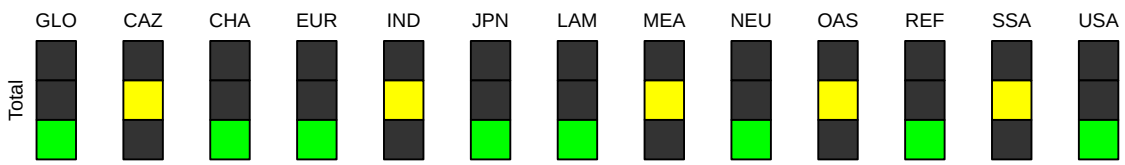


Figure 372: MAgPIE m4p_SSP5 — Production—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	130	155	196	234	285	325	328	328	322	318	315
CAZ	3	4	4	4	5	5	6	6	7	7	7
CHA	17	26	39	53	63	68	68	64	59	54	49
EUR	19	20	21	24	30	39	33	29	24	19	19
IND	13	12	17	20	29	34	41	46	50	52	50
JPN	4	4	4	3	3	3	3	3	3	3	3
LAM	28	35	49	61	71	79	76	72	70	69	69
MEA	1	2	3	4	5	6	7	8	9	9	9
NEU	2	2	3	4	4	4	4	4	4	5	4
OAS	8	10	12	15	20	25	30	35	36	39	43
REF	3	4	5	8	8	8	8	8	8	7	7
SSA	3	3	4	4	5	6	8	11	14	16	18
USA	29	33	34	36	41	47	44	41	39	36	37

Table 1452: MAgPIE m4p_SSP5 — Production—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

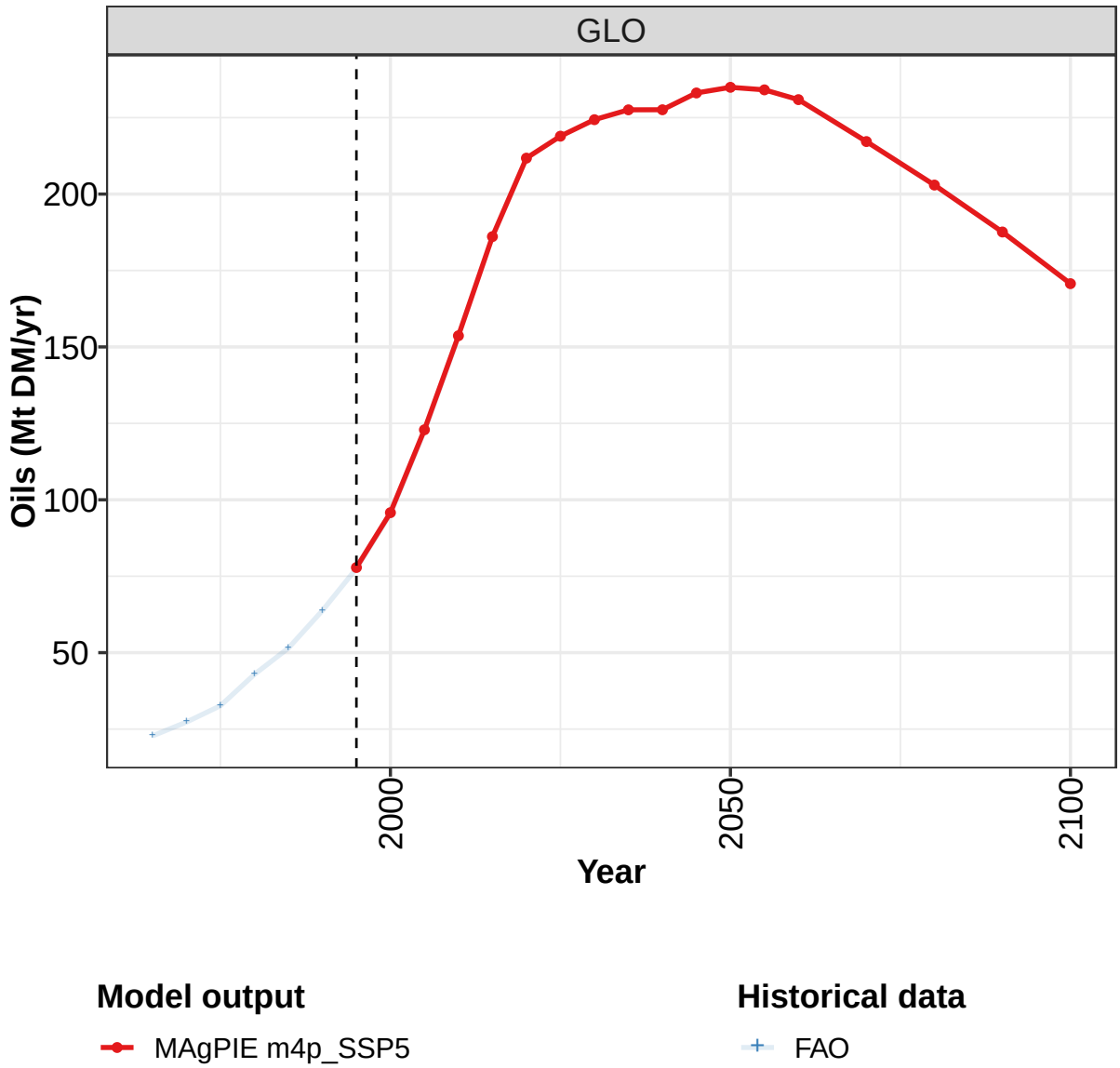
	2050	2055	2060	2070	2080	2090	2100
GLO	310	310	310	302	290	280	258
CAZ	7	8	8	8	8	8	8
CHA	44	41	39	32	30	25	21
EUR	20	20	20	20	20	20	20
IND	48	47	45	39	35	33	29
JPN	3	3	3	2	2	2	2
LAM	67	68	68	71	69	69	61
MEA	9	9	11	13	12	11	10
NEU	4	4	3	3	5	4	4
OAS	45	45	43	37	32	27	24
REF	6	6	6	6	5	6	6
SSA	20	22	24	26	27	28	26
USA	37	39	40	43	45	47	48

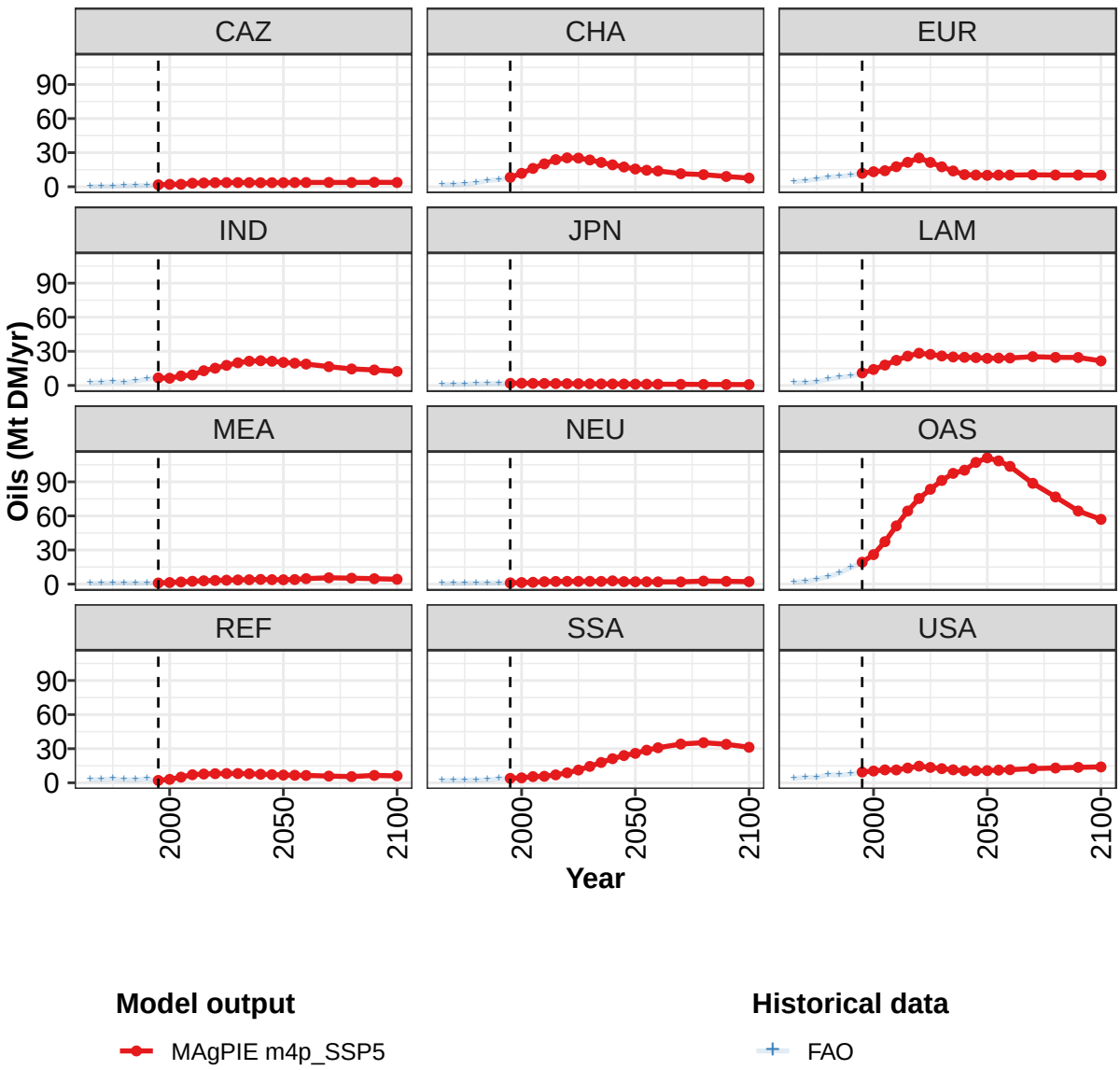
Table 1453: MAgPIE m4p_SSP5 — Production—Secondary products—Oilcakes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	36	48	56	81	91	107	129	155	196	232
CAZ	0	1	1	1	2	2	3	3	4	4
CHA	4	4	5	7	10	13	17	26	39	53
EUR	5	8	10	16	16	17	19	20	20	23
IND	3	4	5	4	6	10	13	12	17	20
JPN	2	3	3	3	4	4	4	4	4	3
LAM	3	4	7	13	18	20	27	34	49	58
MEA	1	1	1	1	1	1	1	2	3	4
NEU	1	1	1	1	1	2	2	2	3	3
OAS	2	2	2	3	5	7	9	10	13	15
REF	3	3	4	4	4	5	3	3	5	8
SSA	1	1	1	1	2	2	2	3	4	4
USA	12	16	15	24	22	24	30	35	36	36

Table 1454: FAO — Production—Secondary products—Oilcakes (Mt DM/yr)

50.8 Oils


GLO
Oils (Mt DM/yr)
200
150
100
50
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



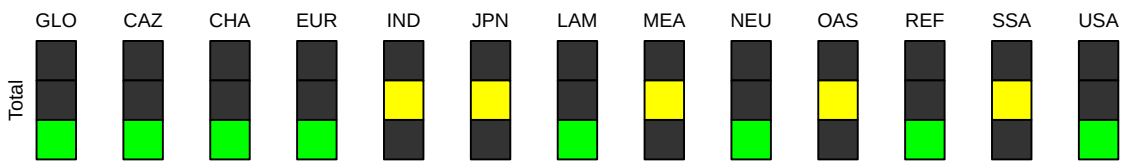


Figure 373: MAgPIE m4p_SSP5 — Production—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	78	96	123	154	186	212	219	224	228	228	233
CAZ	2	2	2	3	3	4	4	4	4	4	4
CHA	8	12	16	20	24	25	25	24	21	19	17
EUR	12	13	14	18	21	25	21	18	14	11	10
IND	7	6	8	9	13	15	18	20	21	22	21
JPN	2	2	2	2	2	2	1	1	1	1	1
LAM	11	14	18	22	26	28	27	26	25	25	24
MEA	1	1	2	2	3	3	3	4	4	4	4
NEU	1	1	2	2	2	2	2	2	2	3	2
OAS	19	26	37	51	64	75	83	91	97	100	107
REF	2	3	5	7	8	8	8	8	8	8	7
SSA	4	4	5	6	7	9	11	14	18	21	24
USA	9	10	11	11	13	15	14	12	11	10	11

Table 1455: MAgPIE m4p_SSP5 — Production—Secondary products—Oils (Mt DM/yr) [PART 1/2]

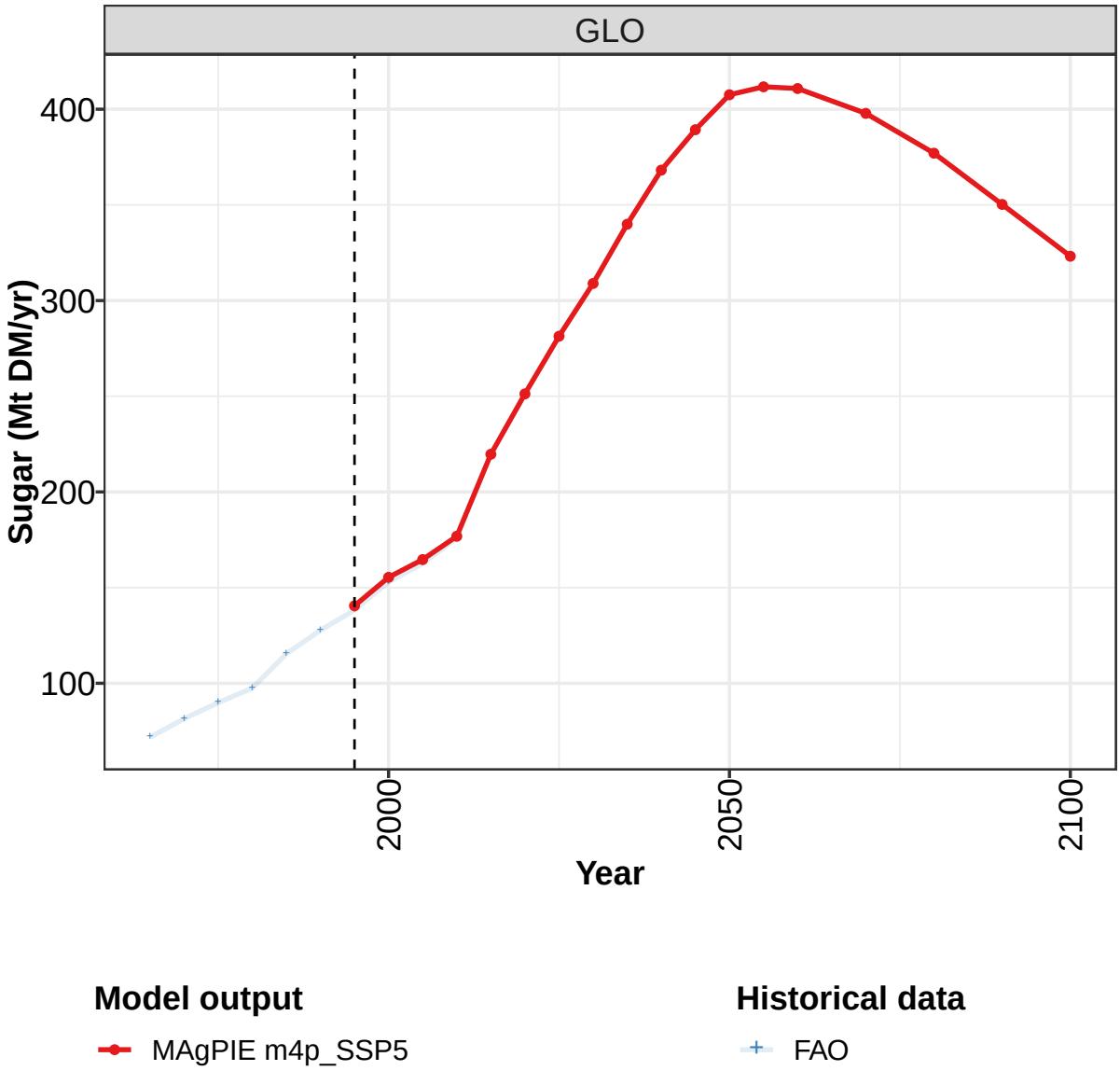
	2050	2055	2060	2070	2080	2090	2100
GLO	235	234	231	217	203	188	171
CAZ	4	4	4	4	4	4	4
CHA	16	15	14	11	11	9	8
EUR	10	10	10	11	10	10	10
IND	20	20	19	17	14	14	12
JPN	1	1	1	1	1	1	1
LAM	24	24	24	25	25	25	22
MEA	4	4	5	6	5	5	4
NEU	2	2	2	2	3	2	2
OAS	111	108	104	89	77	64	57
REF	7	7	6	6	5	6	6
SSA	26	29	31	34	35	34	31
USA	11	11	11	12	13	14	14

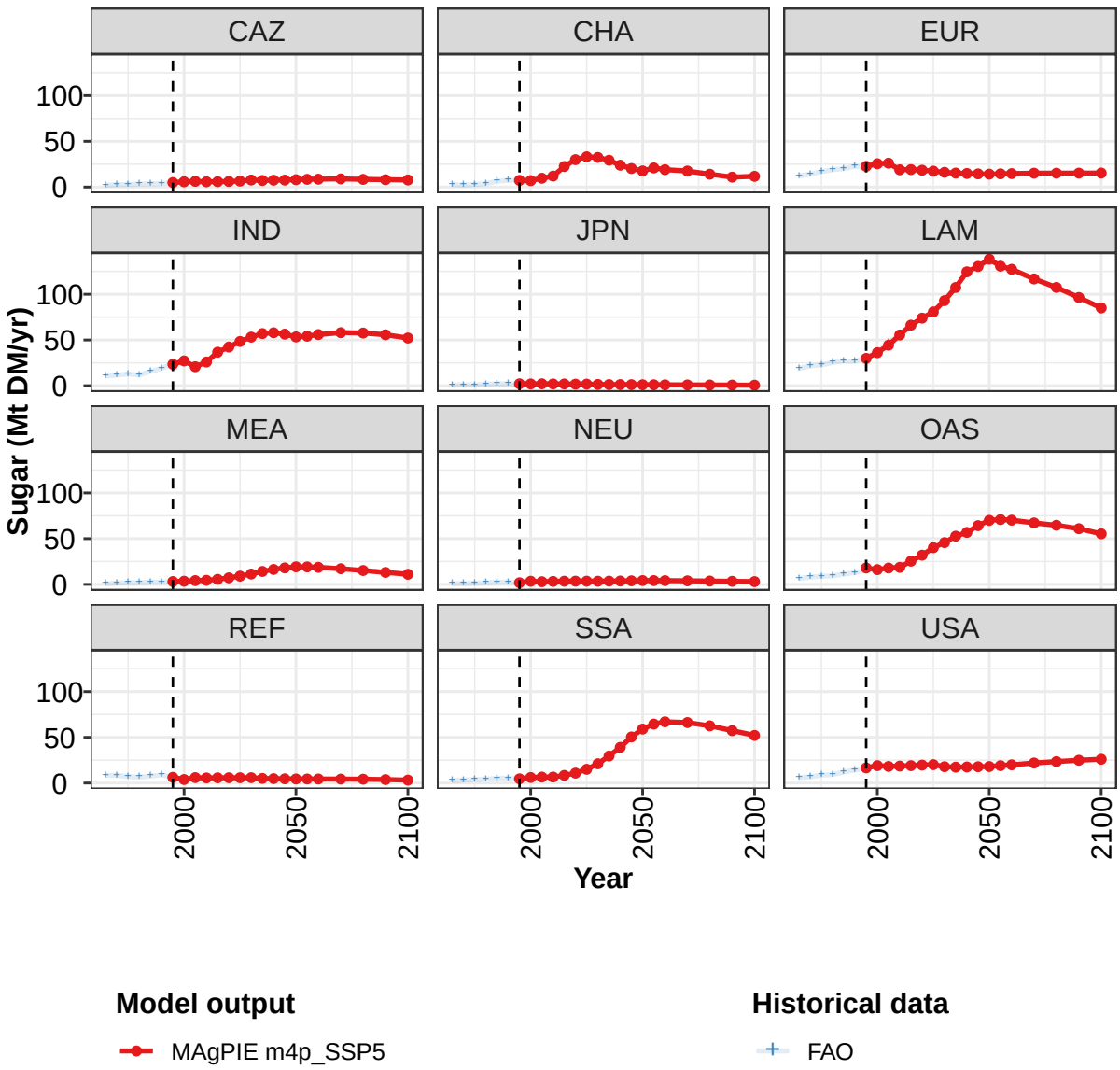
Table 1456: MAgPIE m4p_SSP5 — Production—Secondary products—Oils (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	23	27	33	43	51	64	78	95	122	153
CAZ	0	0	0	1	1	1	2	2	2	3
CHA	2	2	2	3	5	6	8	12	16	20
EUR	5	5	7	9	9	10	12	13	14	18
IND	2	3	3	3	4	6	7	6	8	9
JPN	1	1	1	1	2	2	2	2	2	2
LAM	2	2	3	5	7	8	11	13	18	21
MEA	1	1	1	1	1	1	1	1	2	2
NEU	0	1	1	1	1	1	1	1	2	2
OAS	2	2	4	7	10	14	19	26	37	52
REF	3	3	3	3	3	3	2	3	5	7
SSA	2	2	2	2	3	4	4	4	5	6
USA	4	5	5	7	7	8	10	11	12	11

Table 1457: FAO — Production—Secondary products—Oils (Mt DM/yr)

50.9 Sugar


GLO
400
300
200
100
Sugar (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



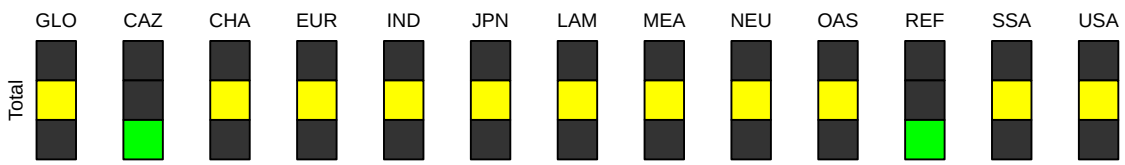


Figure 374: MAgPIE m4p_SSP5 — Production—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	140	155	165	177	220	251	281	309	340	368	389
CAZ	5	6	6	6	6	6	7	8	7	7	8
CHA	7	7	10	12	22	30	33	32	29	24	20
EUR	23	25	26	19	19	18	17	16	15	15	14
IND	23	27	21	26	37	42	48	53	57	58	56
JPN	2	2	2	2	2	2	2	1	1	1	1
LAM	30	36	44	55	66	74	81	93	107	125	130
MEA	3	3	4	4	5	7	9	11	14	16	18
NEU	2	3	3	3	3	3	3	3	4	4	4
OAS	18	16	18	19	25	32	40	46	53	57	64
REF	6	4	6	6	6	6	6	6	5	5	5
SSA	5	6	7	7	8	11	15	21	30	39	50
USA	17	19	18	19	19	20	20	18	17	18	18

Table 1458: MAgPIE m4p_SSP5 — Production—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	408	412	411	398	377	350	323
CAZ	8	8	9	9	8	8	8
CHA	18	21	19	18	14	11	12
EUR	14	14	15	15	15	15	15
IND	53	54	56	58	58	56	52
JPN	1	1	1	1	1	1	1
LAM	138	131	127	117	107	96	85
MEA	19	19	19	17	15	13	11
NEU	4	4	4	4	4	3	3
OAS	70	71	70	67	65	61	55
REF	4	4	4	4	4	4	3
SSA	59	64	67	66	63	57	52
USA	18	19	20	22	23	25	26

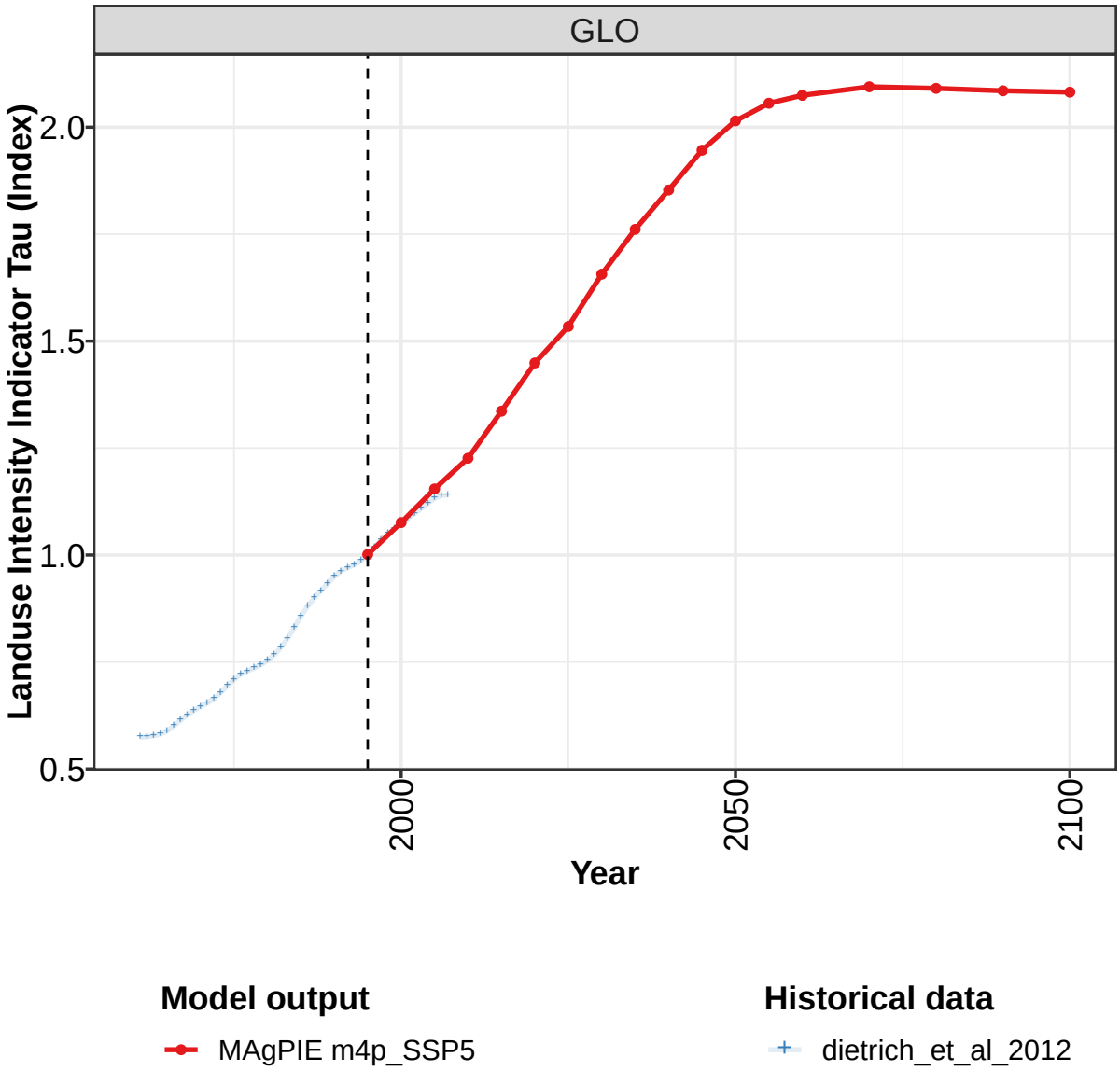
Table 1459: MAgPIE m4p_SSP5 — Production—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

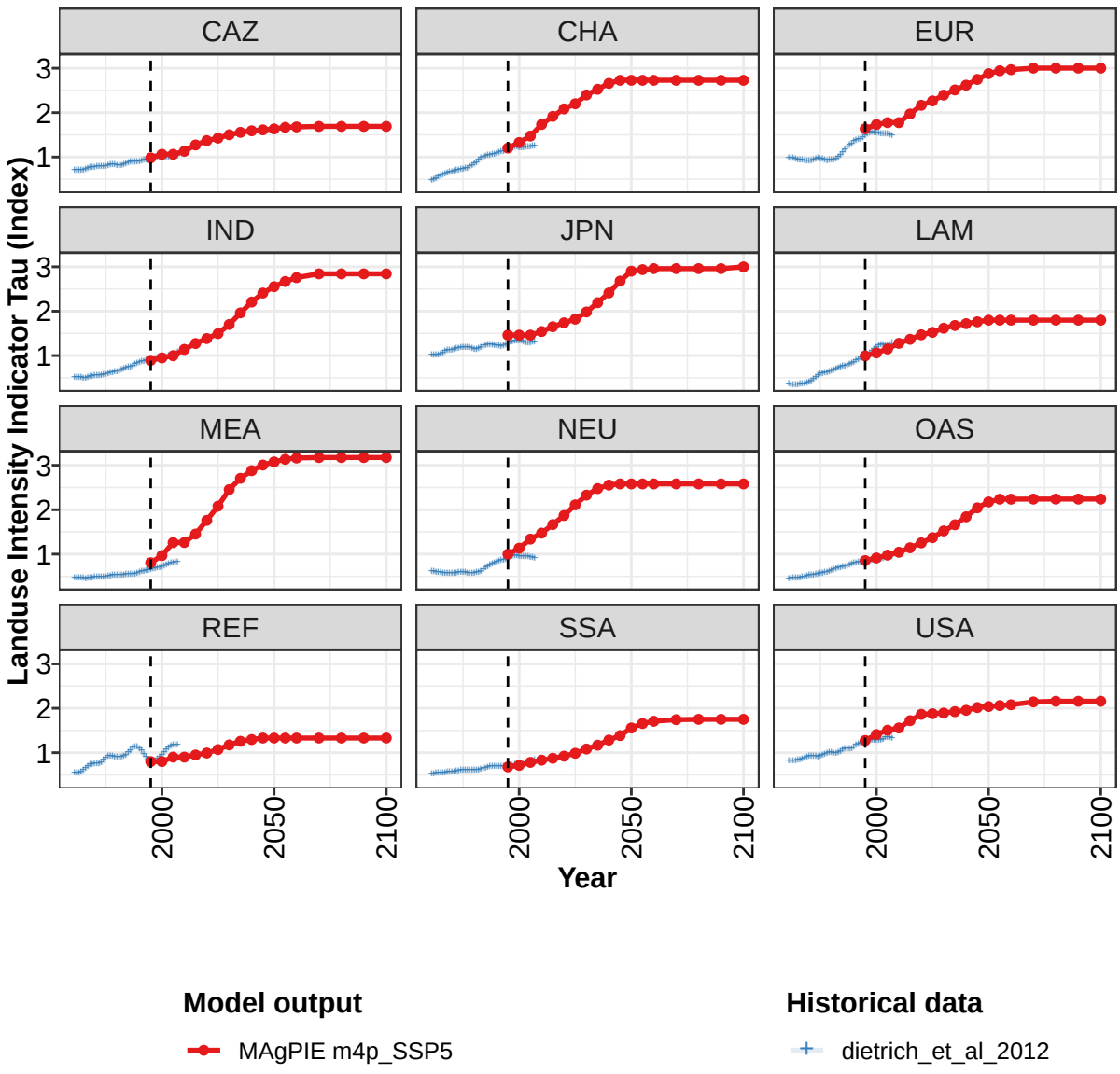
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	72	81	90	97	115	128	138	153	163	176
CAZ	2	2	3	3	3	4	5	6	5	5
CHA	3	2	3	4	6	7	7	7	10	12
EUR	12	14	17	19	20	23	22	23	23	19
IND	10	12	13	12	16	19	24	27	21	26
JPN	1	1	1	2	2	2	2	2	2	2
LAM	19	22	23	25	27	27	31	37	47	55
MEA	1	1	2	2	3	2	3	3	4	4
NEU	1	1	1	2	2	2	2	3	3	3
OAS	6	8	9	9	11	13	16	16	17	18
REF	8	8	7	7	8	9	6	4	6	6
SSA	2	3	4	4	5	5	5	6	7	6
USA	6	7	9	9	12	14	17	19	18	20

Table 1460: FAO — Production—Secondary products—Sugar (Mt DM/yr)

Part XIII
Productivity

51 Landuse Intensity Indicator Tau





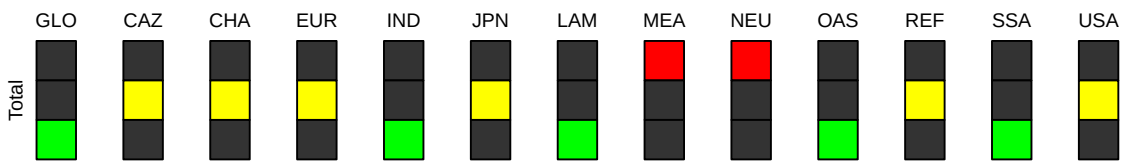


Figure 375: MAgPIE m4p_SSP5 — Productivity—Landuse Intensity Indicator Tau (Index)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.08	1.15	1.23	1.34	1.45	1.53	1.66	1.76	1.85	1.95
CAZ	0.98	1.06	1.06	1.13	1.27	1.37	1.43	1.50	1.56	1.59	1.61
CHA	1.20	1.33	1.47	1.73	1.92	2.08	2.20	2.40	2.53	2.66	2.73
EUR	1.64	1.73	1.78	1.78	1.97	2.17	2.26	2.40	2.51	2.62	2.75
IND	0.89	0.95	1.00	1.14	1.27	1.38	1.49	1.70	1.96	2.21	2.41
JPN	1.46	1.46	1.46	1.54	1.65	1.74	1.82	1.98	2.19	2.41	2.68
LAM	0.99	1.06	1.15	1.28	1.37	1.47	1.52	1.62	1.68	1.72	1.76
MEA	0.81	0.97	1.26	1.26	1.45	1.76	2.08	2.45	2.71	2.88	3.01
NEU	1.00	1.13	1.34	1.47	1.67	1.87	2.11	2.33	2.48	2.56	2.58
OAS	0.85	0.91	0.98	1.04	1.14	1.25	1.37	1.52	1.66	1.84	2.04
REF	0.80	0.80	0.90	0.90	0.95	0.99	1.07	1.18	1.26	1.30	1.33
SSA	0.68	0.71	0.78	0.83	0.87	0.92	0.99	1.08	1.17	1.28	1.39
USA	1.27	1.41	1.51	1.56	1.72	1.86	1.88	1.89	1.92	1.95	2.02

Table 1461: MAgPIE m4p_SSP5 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2.01	2.06	2.07	2.09	2.09	2.09	2.08
CAZ	1.63	1.67	1.68	1.69	1.69	1.69	1.69
CHA	2.73	2.73	2.73	2.73	2.73	2.73	2.73
EUR	2.88	2.94	2.97	3.00	3.00	3.00	3.00
IND	2.55	2.67	2.76	2.84	2.84	2.84	2.84
JPN	2.90	2.94	2.96	2.96	2.96	2.96	3.00
LAM	1.80	1.80	1.80	1.80	1.80	1.80	1.80
MEA	3.08	3.14	3.16	3.17	3.17	3.17	3.17
NEU	2.58	2.58	2.58	2.58	2.58	2.58	2.58
OAS	2.18	2.24	2.24	2.24	2.24	2.24	2.24
REF	1.33	1.33	1.33	1.33	1.33	1.33	1.33
SSA	1.56	1.66	1.71	1.74	1.75	1.75	1.75
USA	2.04	2.06	2.08	2.14	2.16	2.16	2.16

Table 1462: MAgPIE m4p_SSP5 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	0.57	0.58	0.58	0.58	0.59	0.60	0.61	0.63	0.64	0.65	0.65
CAZ	0.69	0.69	0.69	0.69	0.70	0.71	0.73	0.75	0.76	0.77	0.77
CHA	0.47	0.48	0.51	0.54	0.57	0.60	0.61	0.63	0.65	0.66	0.68
EUR	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.91	0.91
IND	0.50	0.50	0.50	0.49	0.49	0.49	0.50	0.52	0.53	0.54	0.54
JPN	1.00	1.00	1.00	1.01	1.03	1.05	1.09	1.11	1.12	1.12	1.13
LAM	0.35	0.34	0.34	0.34	0.34	0.35	0.35	0.36	0.38	0.40	0.43
MEA	0.45	0.45	0.46	0.45	0.45	0.44	0.45	0.45	0.46	0.47	0.47
NEU	0.60	0.59	0.59	0.58	0.57	0.57	0.57	0.56	0.56	0.56	0.56
OAS	0.44	0.45	0.45	0.45	0.45	0.46	0.47	0.48	0.50	0.51	0.52
REF	0.54	0.53	0.53	0.55	0.59	0.65	0.69	0.72	0.73	0.74	0.74
SSA	0.52	0.52	0.53	0.53	0.53	0.54	0.55	0.55	0.56	0.56	0.57
USA	0.82	0.81	0.81	0.81	0.82	0.84	0.86	0.88	0.89	0.91	0.91

Table 1463: dietrich_et_al_2012 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	0.66	0.68	0.69	0.71	0.72	0.73	0.74	0.74	0.75	0.77	0.78
CAZ	0.78	0.78	0.78	0.79	0.80	0.81	0.82	0.81	0.81	0.80	0.81
CHA	0.69	0.70	0.71	0.72	0.73	0.75	0.77	0.80	0.83	0.87	0.92
EUR	0.93	0.94	0.96	0.96	0.94	0.92	0.91	0.92	0.92	0.94	0.96
IND	0.54	0.55	0.56	0.57	0.59	0.60	0.61	0.62	0.64	0.66	0.68
JPN	1.14	1.16	1.18	1.18	1.18	1.18	1.17	1.15	1.13	1.13	1.15
LAM	0.47	0.51	0.55	0.58	0.59	0.60	0.61	0.62	0.64	0.67	0.70
MEA	0.47	0.47	0.48	0.49	0.50	0.51	0.51	0.51	0.51	0.52	0.52
NEU	0.57	0.58	0.59	0.59	0.58	0.57	0.56	0.56	0.57	0.58	0.59
OAS	0.52	0.53	0.54	0.55	0.56	0.58	0.59	0.60	0.62	0.64	0.66
REF	0.74	0.77	0.82	0.88	0.91	0.92	0.91	0.90	0.89	0.89	0.89
SSA	0.57	0.58	0.59	0.59	0.59	0.59	0.59	0.59	0.60	0.60	0.61
USA	0.91	0.90	0.90	0.91	0.94	0.96	0.98	0.99	0.99	0.98	0.98

Table 1464: dietrich_et_al_2012 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	0.81	0.83	0.86	0.88	0.90	0.92	0.93	0.95	0.96	0.97	0.98
CAZ	0.82	0.84	0.87	0.88	0.88	0.87	0.88	0.89	0.91	0.92	0.93
CHA	0.96	1.00	1.02	1.03	1.04	1.04	1.06	1.07	1.09	1.11	1.13
EUR	0.99	1.04	1.10	1.17	1.22	1.25	1.29	1.34	1.37	1.39	1.40
IND	0.70	0.71	0.73	0.74	0.76	0.79	0.81	0.83	0.85	0.86	0.87
JPN	1.18	1.21	1.23	1.23	1.23	1.23	1.23	1.22	1.21	1.20	1.21
LAM	0.72	0.74	0.75	0.76	0.78	0.80	0.82	0.85	0.87	0.90	0.94
MEA	0.52	0.53	0.53	0.54	0.54	0.54	0.56	0.58	0.59	0.61	0.62
NEU	0.61	0.64	0.68	0.72	0.75	0.77	0.79	0.82	0.84	0.85	0.86
OAS	0.68	0.69	0.71	0.72	0.73	0.75	0.77	0.78	0.80	0.81	0.82
REF	0.91	0.94	0.99	1.04	1.10	1.13	1.13	1.09	1.03	0.96	0.90
SSA	0.62	0.64	0.65	0.66	0.67	0.68	0.69	0.69	0.69	0.68	0.67
USA	0.99	1.02	1.05	1.07	1.08	1.07	1.09	1.12	1.16	1.19	1.22

Table 1465: dietrich_et_al_2012 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 3/5]

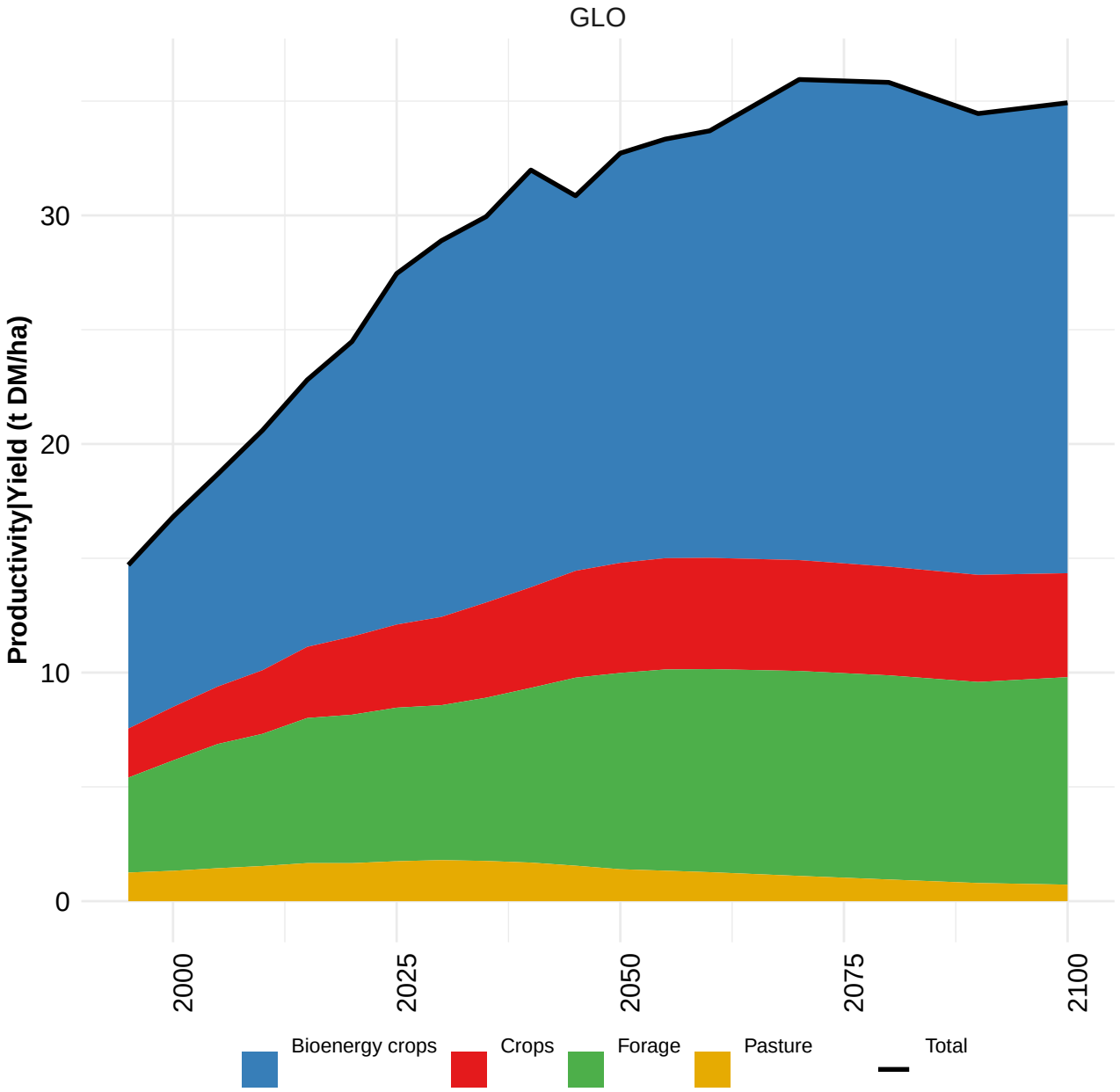
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	0.99	1.00	1.02	1.04	1.05	1.06	1.07	1.09	1.10	1.11	1.12
CAZ	0.95	0.97	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
CHA	1.15	1.17	1.19	1.21	1.22	1.21	1.21	1.21	1.21	1.21	1.22
EUR	1.43	1.47	1.51	1.54	1.55	1.55	1.54	1.53	1.52	1.52	1.51
IND	0.88	0.89	0.90	0.92	0.94	0.95	0.96	0.96	0.97	0.99	1.01
JPN	1.24	1.27	1.30	1.31	1.31	1.32	1.33	1.32	1.30	1.28	1.27
LAM	0.96	0.99	1.02	1.05	1.09	1.13	1.17	1.21	1.24	1.23	1.22
MEA	0.63	0.64	0.66	0.67	0.68	0.69	0.70	0.72	0.75	0.77	0.78
NEU	0.88	0.90	0.93	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.93
OAS	0.82	0.83	0.83	0.84	0.85	0.86	0.86	0.87	0.88	0.89	0.91
REF	0.84	0.80	0.79	0.81	0.85	0.89	0.94	1.00	1.06	1.10	1.14
SSA	0.67	0.68	0.70	0.71	0.72	0.73	0.74	0.74	0.75	0.75	0.77
USA	1.24	1.25	1.27	1.27	1.28	1.27	1.27	1.27	1.28	1.30	1.33

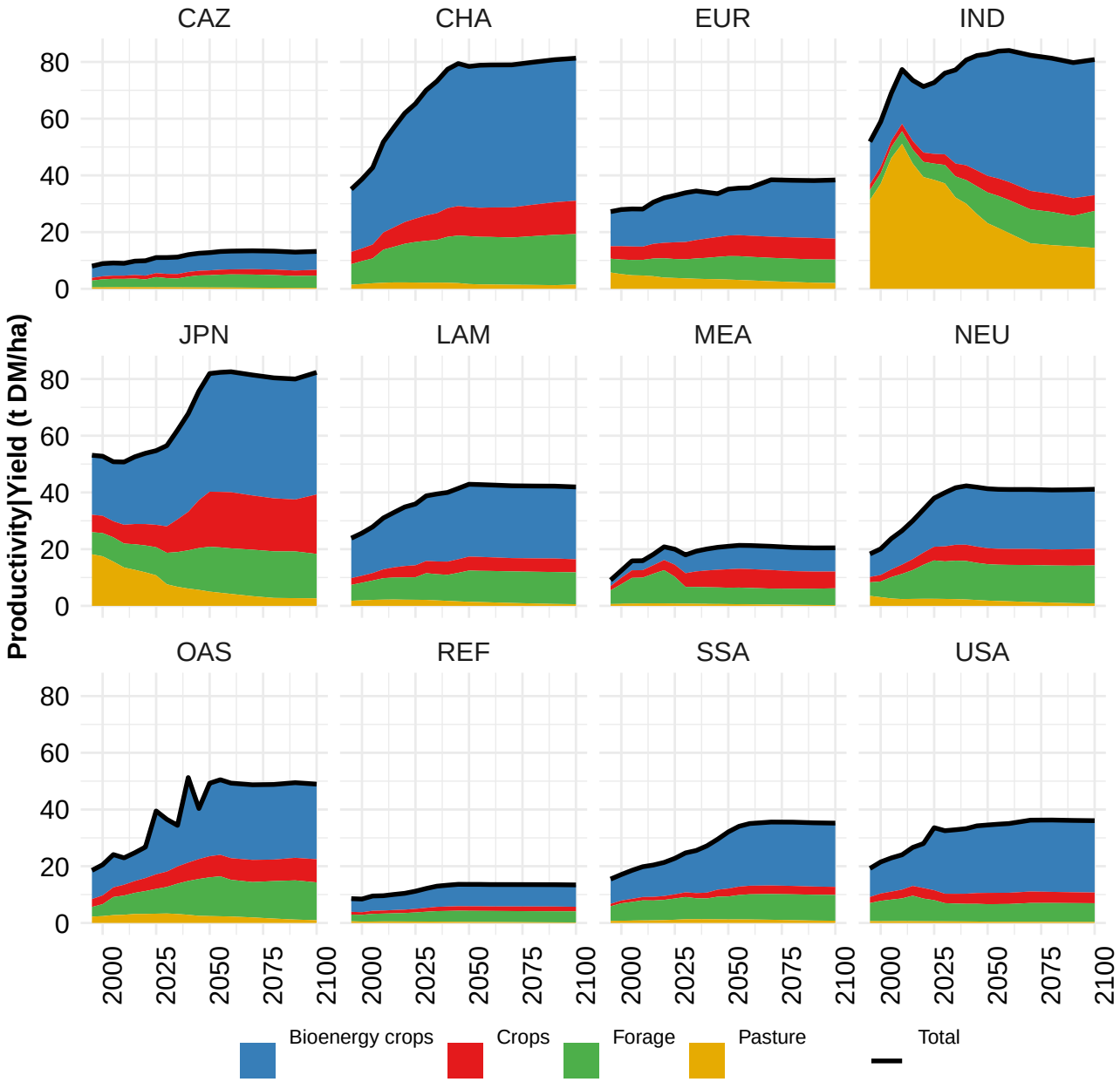
Table 1466: dietrich_et_al_2012 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 4/5]

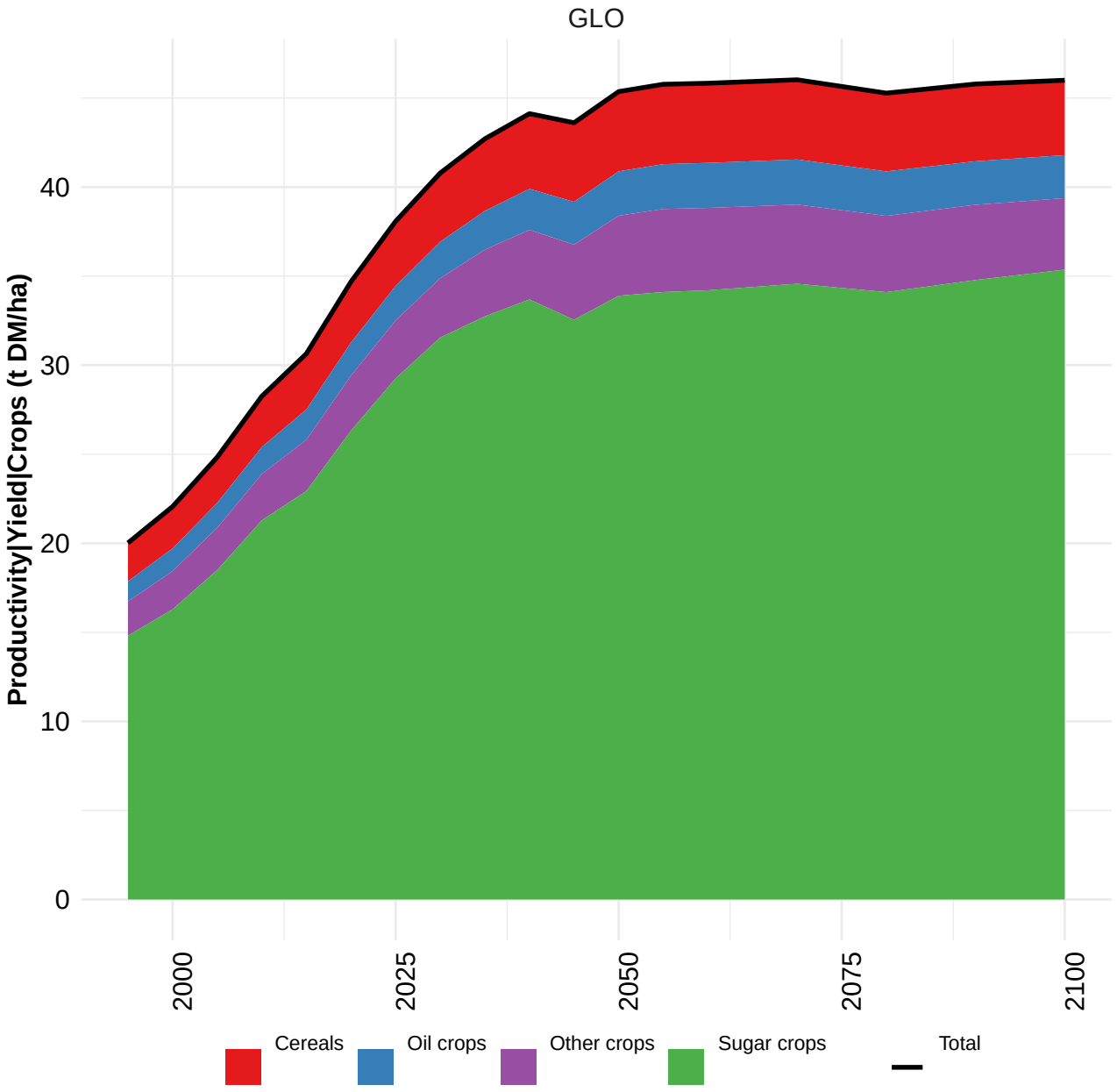
	2005	2006	2007
GLO	1.13	1.14	1.14
CAZ	1.01	1.01	1.00
CHA	1.23	1.23	1.24
EUR	1.51	1.49	1.47
IND	1.03	1.05	1.06
JPN	1.28	1.29	1.29
LAM	1.23	1.25	1.27
MEA	0.80	0.81	0.82
NEU	0.93	0.92	0.91
OAS	0.93	0.94	0.94
REF	1.16	1.17	1.17
SSA	0.79	0.81	0.83
USA	1.34	1.33	1.31

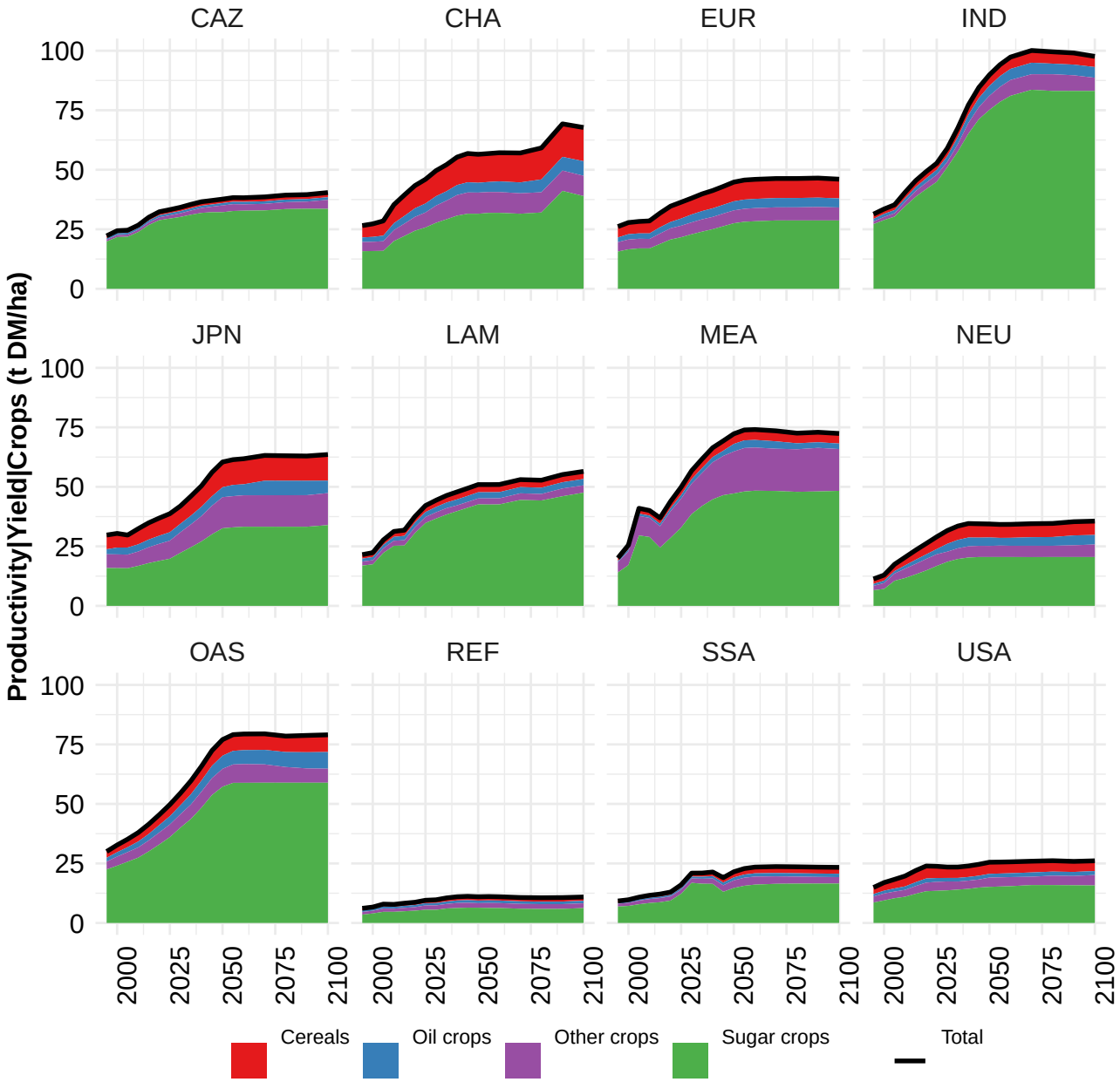
Table 1467: dietrich_et_al_2012 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 5/5]

52 Yield

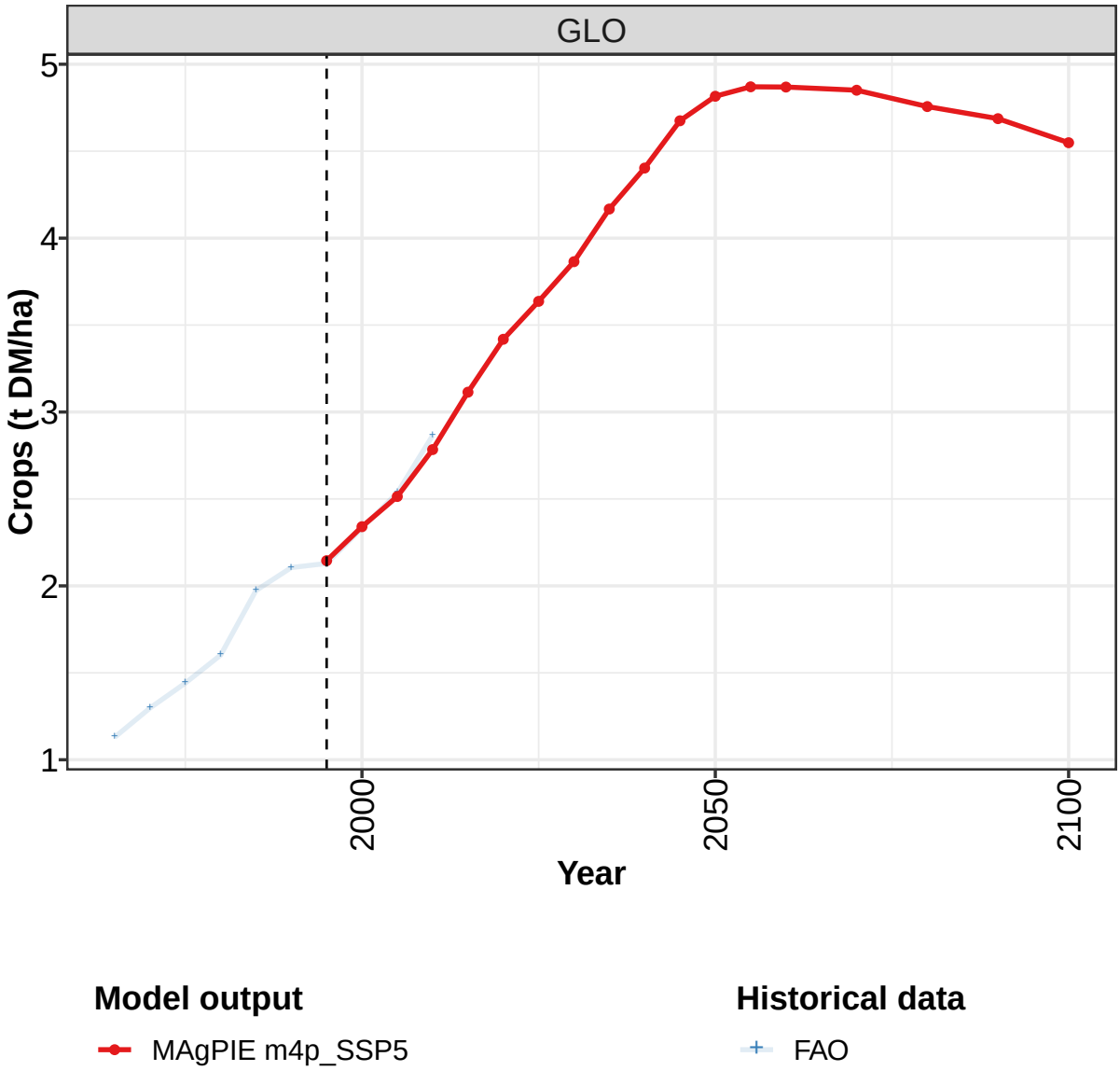

GLO
Productivity|Yield (t DM/ha)
0
10
20
30
2000
2025
2050
2075
2100
Bioenergy crops
Crops
Forage
Pasture
Total

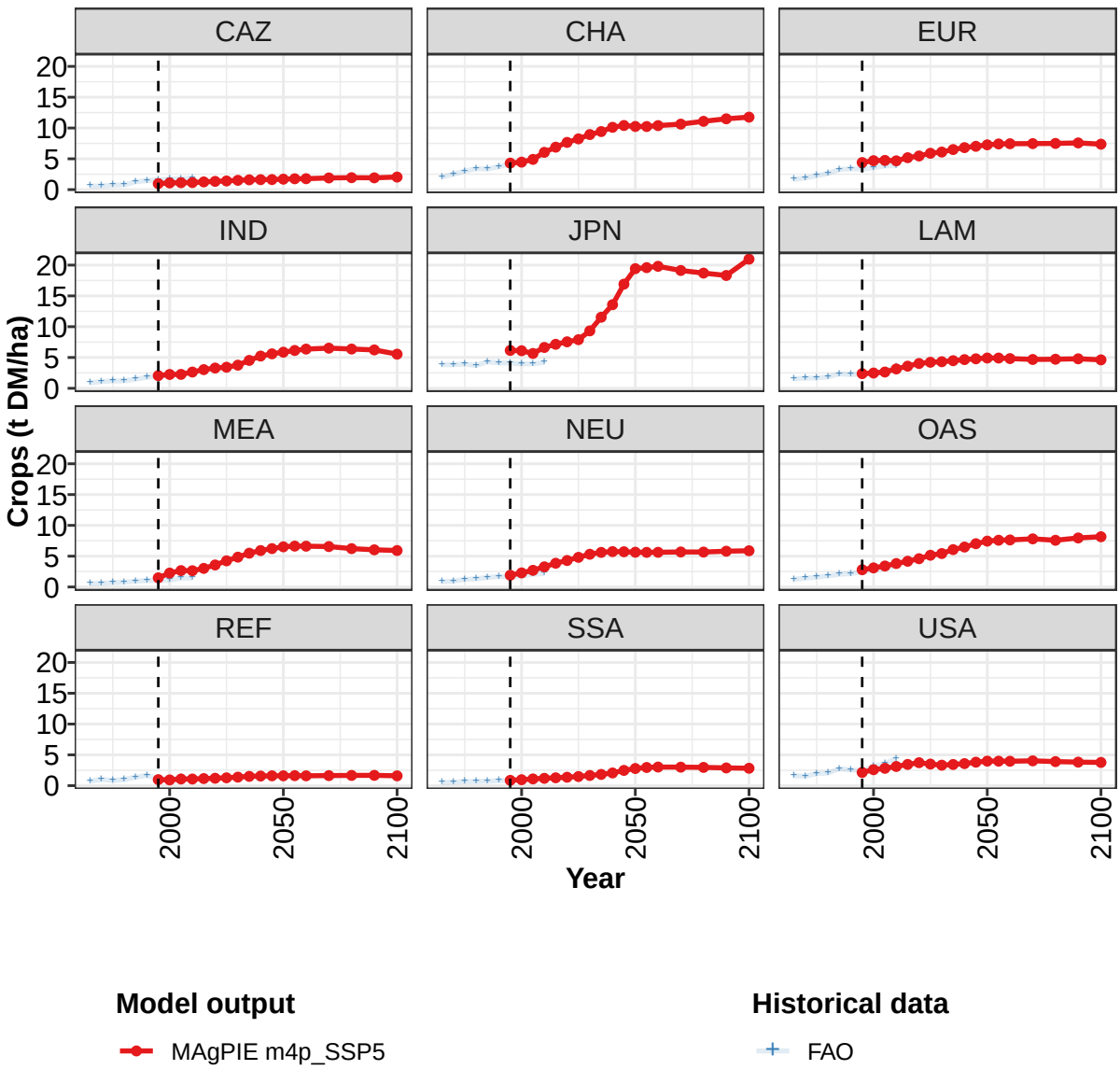

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Productivity|Yield (t DM/ha)
0
20
40
60
80
2000
2025
2050
2075
2100
Bioenergy crops
Crops
Forage
Pasture
Total


GLO
Productivity|Yield|Crops (t DM/ha)
0
10
20
30
40
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Productivity|Yield|Crops (t DM/ha)
100
75
50
25
0
2000
2025
2050
2075
2100
Cereals
Oil crops
Other crops
Sugar crops
Total

52.1 Crops


GLO
Crops (t DM/ha)
5
4
3
2
1
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



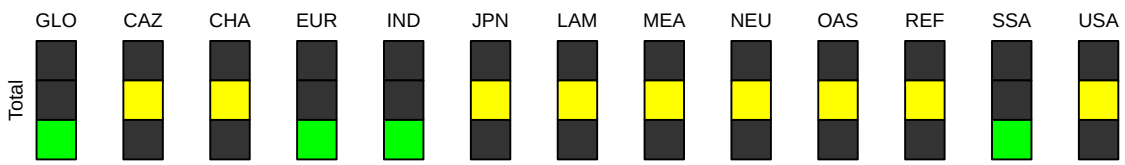


Figure 376: MAgPIE m4p_SSP5 — Productivity—Yield—Crops (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.1	2.3	2.5	2.8	3.1	3.4	3.6	3.9	4.2	4.4	4.7
CAZ	1.0	1.1	1.1	1.1	1.3	1.3	1.4	1.5	1.6	1.6	1.6
CHA	4.3	4.5	4.9	6.1	6.9	7.7	8.2	8.9	9.4	10.1	10.4
EUR	4.4	4.7	4.7	4.7	5.2	5.5	5.9	6.1	6.5	6.8	7.0
IND	2.1	2.2	2.3	2.6	3.0	3.3	3.4	3.8	4.5	5.2	5.6
JPN	6.1	6.1	5.7	6.6	7.1	7.5	7.9	9.3	11.5	13.6	16.9
LAM	2.4	2.5	2.6	3.1	3.6	4.0	4.2	4.3	4.5	4.7	4.8
MEA	1.5	2.3	2.7	2.6	3.0	3.6	4.2	4.8	5.5	5.9	6.2
NEU	1.9	2.3	2.7	3.3	3.9	4.3	4.8	5.3	5.6	5.7	5.7
OAS	2.8	3.1	3.4	3.8	4.2	4.6	5.2	5.4	6.1	6.5	7.0
REF	1.0	0.9	1.1	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.6
SSA	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.7	1.8	2.1	2.5
USA	2.1	2.6	2.8	3.1	3.4	3.7	3.5	3.3	3.4	3.6	3.8

Table 1468: MAgPIE m4p_SSP5 — Productivity—Yield—Crops (t DM/ha) [PART 1/2]

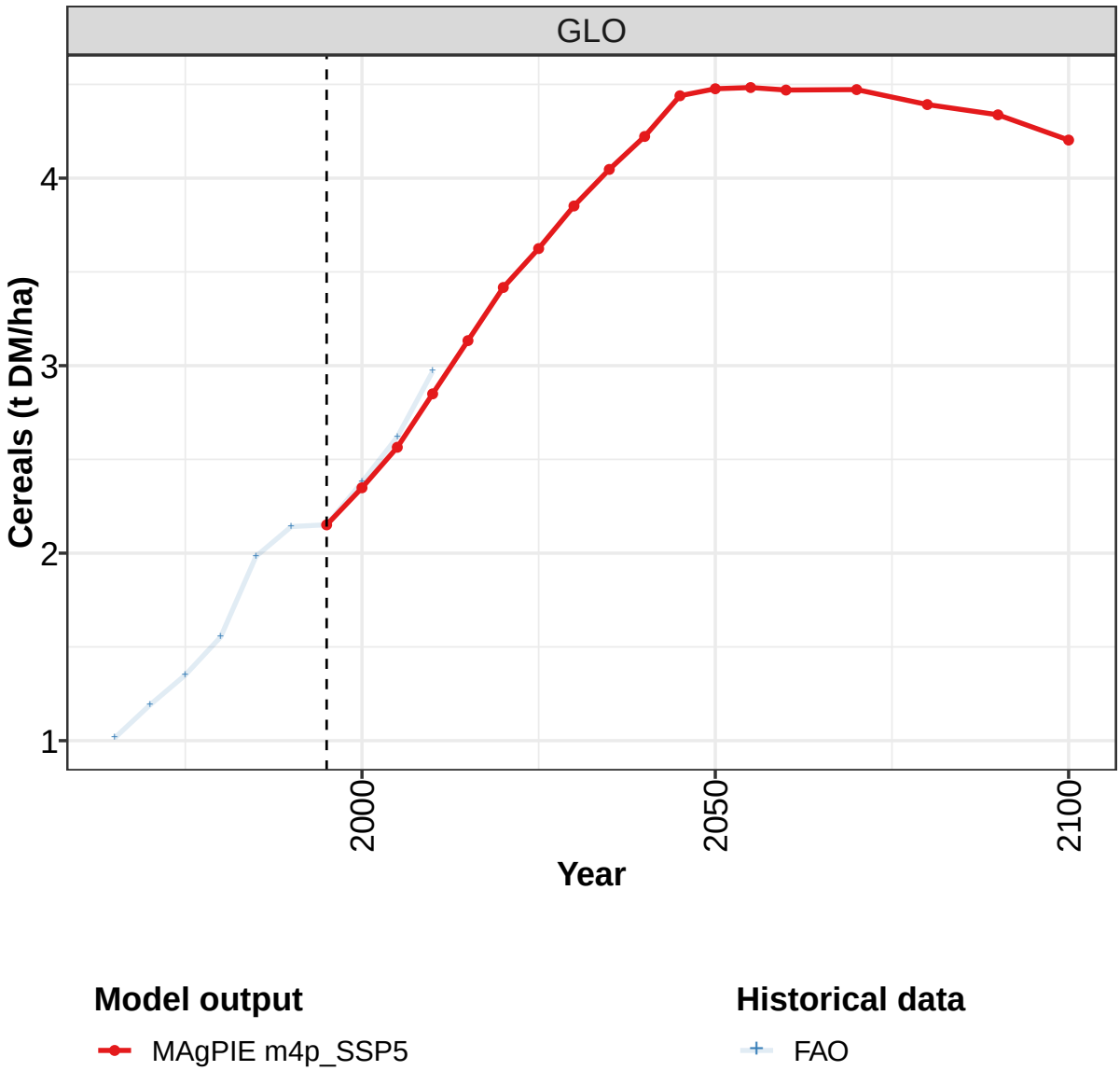
	2050	2055	2060	2070	2080	2090	2100
GLO	4.8	4.9	4.9	4.9	4.8	4.7	4.5
CAZ	1.7	1.8	1.8	1.9	1.9	1.9	2.0
CHA	10.3	10.2	10.4	10.6	11.1	11.5	11.8
EUR	7.3	7.4	7.4	7.5	7.5	7.6	7.4
IND	5.9	6.1	6.4	6.5	6.4	6.2	5.5
JPN	19.4	19.6	19.8	19.1	18.7	18.3	21.0
LAM	4.9	4.9	4.8	4.7	4.7	4.8	4.6
MEA	6.5	6.6	6.6	6.6	6.2	6.0	5.9
NEU	5.6	5.6	5.6	5.7	5.7	5.8	5.9
OAS	7.4	7.6	7.6	7.8	7.6	8.0	8.2
REF	1.6	1.6	1.6	1.6	1.7	1.7	1.6
SSA	2.8	3.0	3.0	3.0	3.0	2.9	2.8
USA	4.0	4.0	4.0	4.0	3.9	3.8	3.8

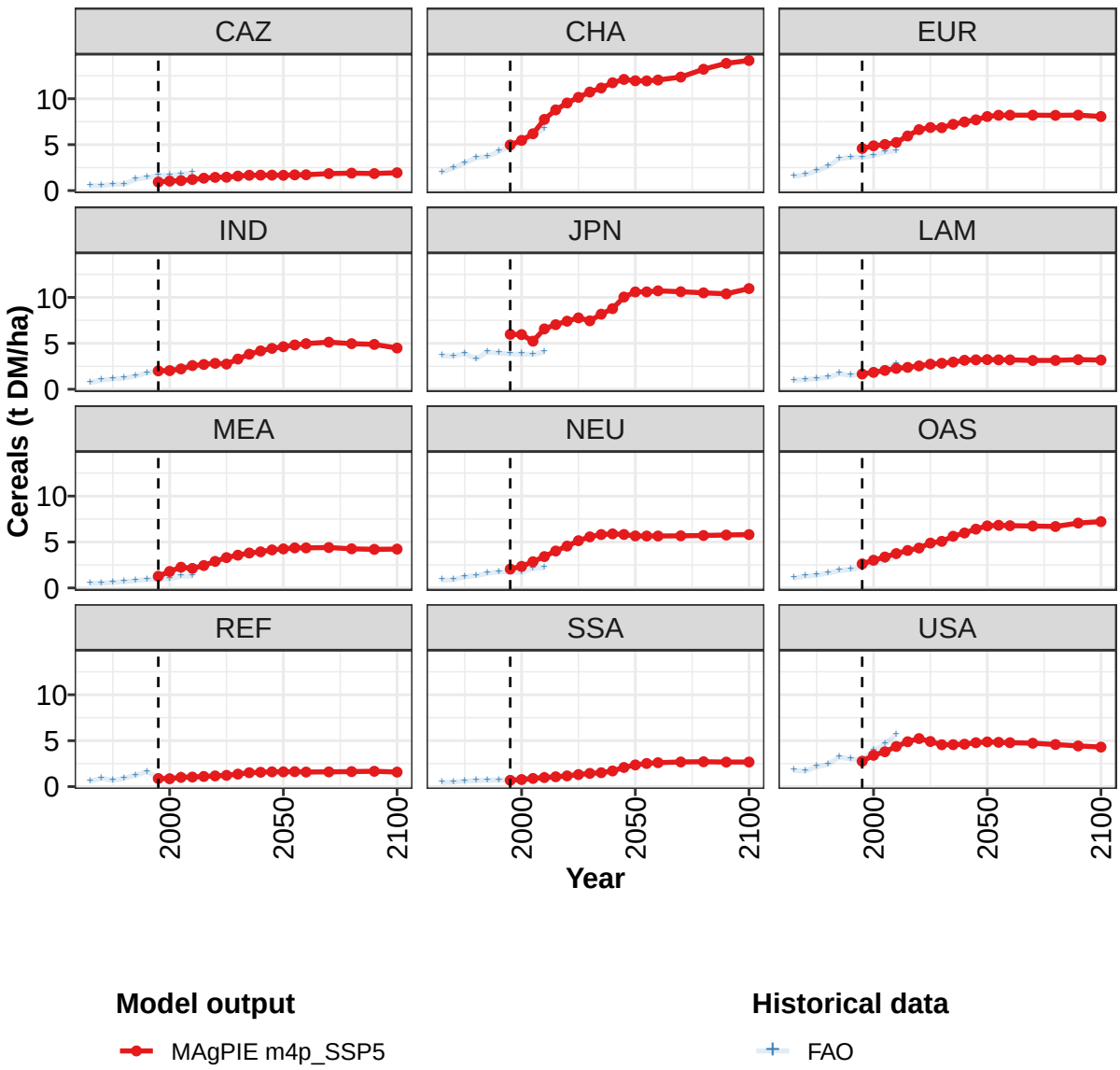
Table 1469: MAgPIE m4p_SSP5 — Productivity—Yield—Crops (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.13	1.30	1.44	1.60	1.97	2.11	2.13	2.33	2.54	2.86
CAZ	0.58	0.58	0.74	0.77	1.27	1.47	1.61	1.66	1.79	1.85
CHA	2.05	2.52	2.99	3.41	3.35	3.74	4.15	4.43	4.97	5.80
EUR	1.68	1.90	2.25	2.64	3.26	3.39	3.32	3.58	3.85	3.89
IND	0.86	1.09	1.20	1.21	1.48	1.78	2.03	2.22	2.24	2.67
JPN	3.83	3.82	3.95	3.71	4.31	4.15	4.09	3.98	3.98	4.19
LAM	1.54	1.66	1.66	1.86	2.34	2.23	2.31	2.53	2.76	3.54
MEA	0.55	0.61	0.71	0.79	0.94	1.05	1.07	1.13	1.44	1.45
NEU	0.87	0.95	1.22	1.34	1.55	1.70	1.63	1.80	2.07	2.18
OAS	1.24	1.43	1.59	1.81	2.05	2.17	2.48	2.72	3.00	3.35
REF	0.73	1.03	0.82	1.01	1.37	1.67	1.10	1.04	1.25	1.15
SSA	0.50	0.59	0.66	0.69	0.73	0.81	0.85	0.96	1.09	1.24
USA	1.60	1.53	1.97	2.06	2.75	2.56	2.44	3.13	3.61	4.37

Table 1470: FAO — Productivity—Yield—Crops (t DM/ha)

52.1.1 Cereals





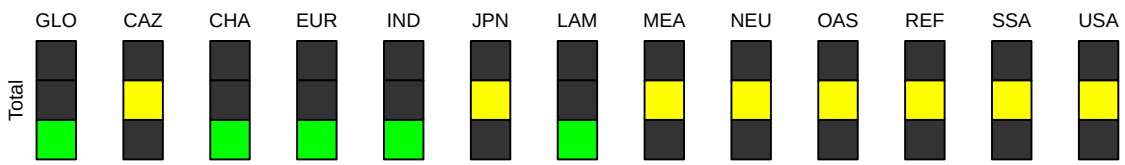


Figure 377: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.2	2.3	2.6	2.8	3.1	3.4	3.6	3.9	4.0	4.2	4.4
CAZ	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.7
CHA	5.0	5.5	6.2	7.8	8.8	9.5	10.2	10.7	11.2	11.7	12.1
EUR	4.6	4.9	5.0	5.2	5.9	6.6	6.9	6.8	7.2	7.5	7.7
IND	2.0	2.0	2.2	2.6	2.7	2.8	2.7	3.3	3.8	4.2	4.5
JPN	6.0	5.9	5.2	6.6	7.0	7.4	7.8	7.4	8.2	8.8	10.0
LAM	1.7	1.8	2.1	2.3	2.4	2.5	2.7	2.8	3.0	3.2	3.2
MEA	1.3	1.8	2.3	2.1	2.4	2.9	3.3	3.6	3.8	3.9	4.1
NEU	2.1	2.3	2.9	3.4	4.0	4.6	5.1	5.6	5.8	5.9	5.8
OAS	2.6	3.0	3.4	3.7	4.1	4.3	4.9	5.1	5.6	6.0	6.4
REF	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.4	1.5	1.6	1.6
SSA	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.7	2.1
USA	2.8	3.4	3.8	4.4	4.9	5.2	4.9	4.6	4.6	4.6	4.8

Table 1471: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals (t DM/ha) [PART 1/2]

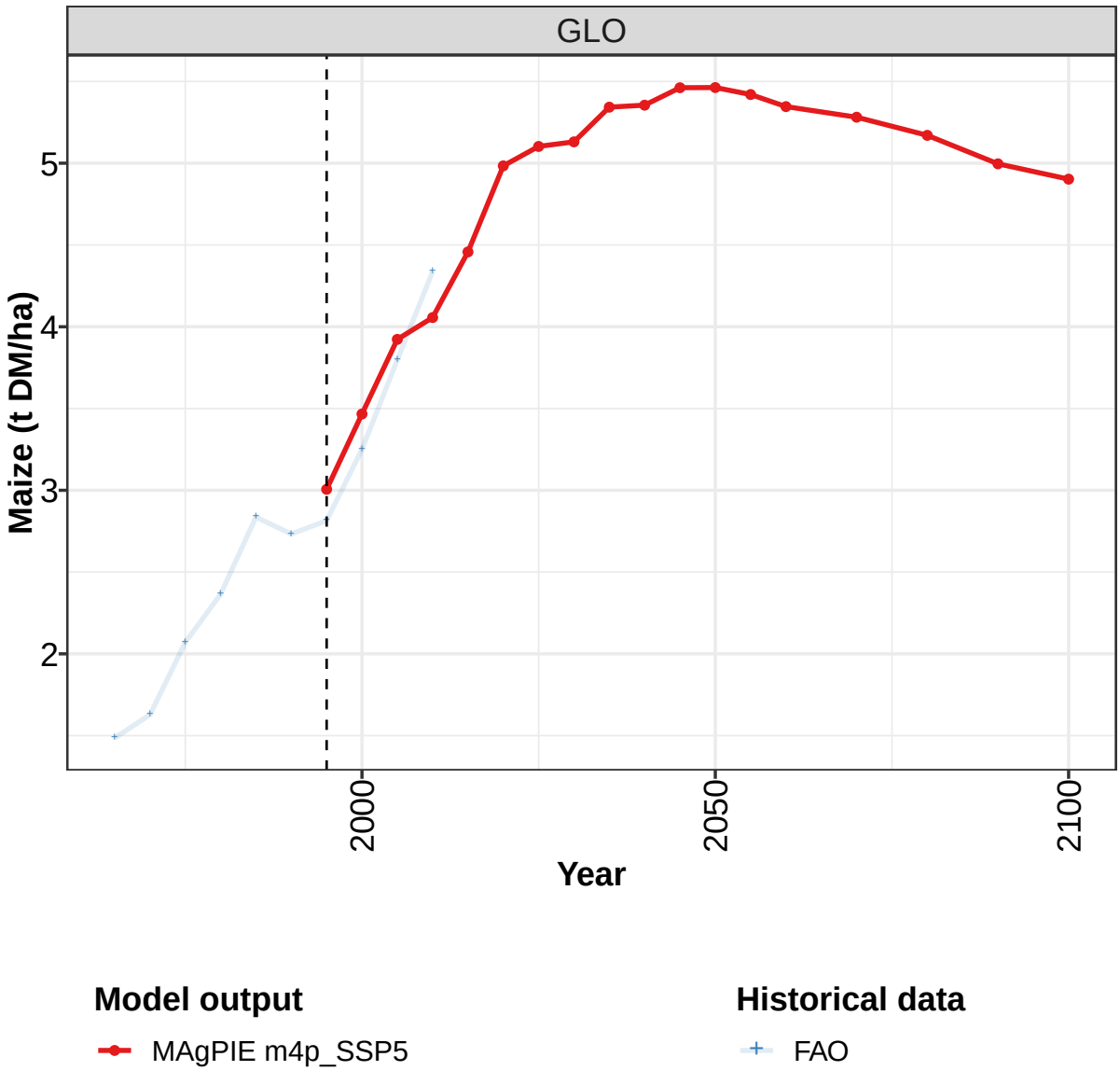
	2050	2055	2060	2070	2080	2090	2100
GLO	4.5	4.5	4.5	4.5	4.4	4.3	4.2
CAZ	1.7	1.7	1.7	1.8	1.9	1.9	1.9
CHA	12.0	11.9	12.0	12.4	13.2	13.8	14.2
EUR	8.1	8.2	8.2	8.2	8.2	8.2	8.1
IND	4.6	4.8	5.0	5.1	5.0	4.9	4.5
JPN	10.6	10.6	10.7	10.6	10.5	10.4	11.0
LAM	3.2	3.2	3.2	3.1	3.1	3.2	3.2
MEA	4.3	4.4	4.4	4.4	4.3	4.2	4.2
NEU	5.7	5.7	5.7	5.7	5.7	5.8	5.8
OAS	6.8	6.8	6.8	6.7	6.7	7.1	7.2
REF	1.6	1.6	1.6	1.6	1.6	1.7	1.6
SSA	2.4	2.5	2.6	2.7	2.7	2.7	2.7
USA	4.9	4.8	4.8	4.7	4.6	4.4	4.3

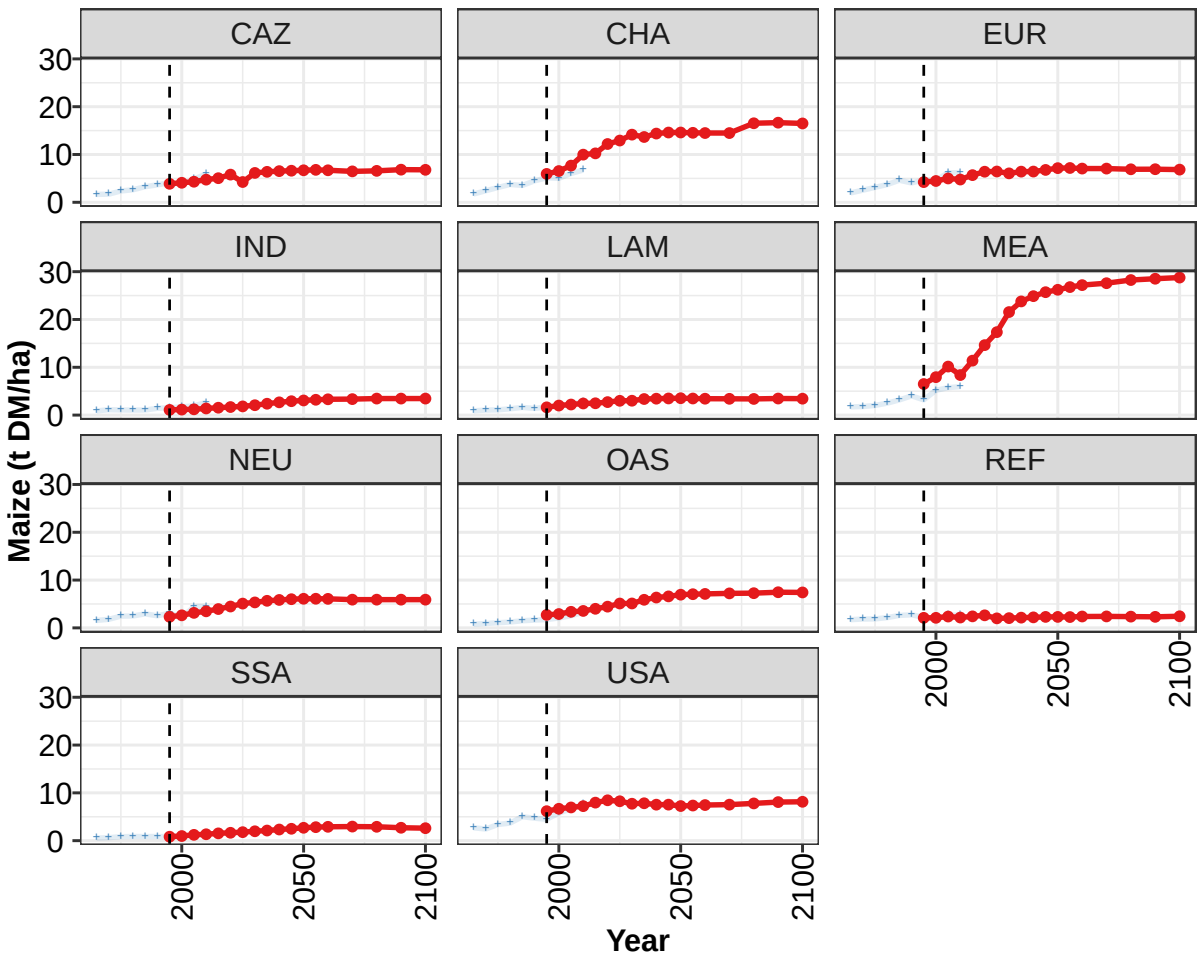
Table 1472: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.01	1.19	1.35	1.55	1.98	2.14	2.15	2.38	2.62	2.97
CAZ	0.53	0.53	0.68	0.69	1.22	1.44	1.63	1.66	1.79	1.94
CHA	2.01	2.47	3.02	3.56	3.71	4.26	4.82	5.15	5.92	6.79
EUR	1.55	1.73	2.15	2.64	3.46	3.64	3.61	3.83	4.17	4.34
IND	0.73	1.00	1.12	1.22	1.46	1.77	2.01	2.18	2.37	2.79
JPN	3.64	3.62	3.88	3.31	4.06	3.94	3.83	3.83	3.79	4.04
LAM	0.98	1.08	1.15	1.30	1.70	1.49	1.70	1.94	2.18	2.78
MEA	0.49	0.52	0.61	0.68	0.80	0.92	0.97	0.99	1.28	1.29
NEU	0.86	0.90	1.22	1.35	1.59	1.77	1.69	1.73	2.11	2.19
OAS	1.07	1.27	1.38	1.62	1.92	2.01	2.30	2.65	2.98	3.37
REF	0.58	0.92	0.68	0.92	1.24	1.62	0.99	0.98	1.20	1.12
SSA	0.44	0.51	0.61	0.65	0.69	0.73	0.74	0.83	0.95	1.14
USA	1.76	1.69	2.16	2.43	3.22	3.00	2.92	3.93	4.61	5.67

Table 1473: FAO — Productivity—Yield—Crops—Cereals (t DM/ha)

52.1.2 Cereals—Maize





Model output

MAgPIE m4p_SSP5

Historical data

FAO

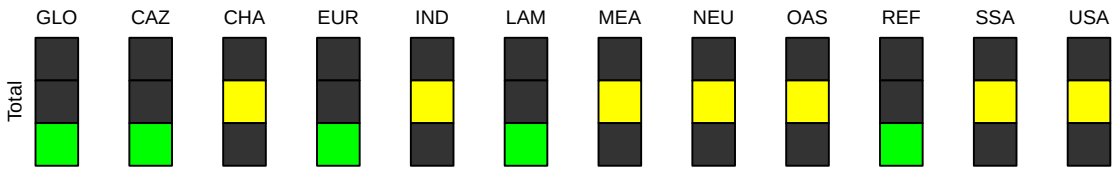


Figure 378: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Maize (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.0	3.5	3.9	4.1	4.5	5.0	5.1	5.1	5.3	5.4	5.5
CAZ	3.9	4.1	4.3	4.7	5.0	5.8	4.2	6.1	6.4	6.5	6.6
CHA	5.9	6.5	7.7	10.0	10.2	12.2	12.9	14.2	13.7	14.4	14.6
EUR	4.2	4.5	5.0	4.8	5.7	6.4	6.4	6.1	6.4	6.4	6.8
IND	1.1	1.2	1.2	1.4	1.5	1.7	1.8	2.1	2.4	2.7	2.9
LAM	1.6	2.0	2.2	2.4	2.5	2.7	3.0	3.0	3.4	3.4	3.5
MEA	6.5	7.9	10.2	8.4	11.4	14.6	17.4	21.6	23.8	24.9	25.7
NEU	2.3	2.6	3.1	3.5	3.9	4.5	5.1	5.3	5.7	5.8	6.0
OAS	2.7	2.9	3.4	3.5	4.0	4.4	5.1	5.1	5.9	6.4	6.6
REF	2.1	2.1	2.4	2.2	2.4	2.6	2.0	2.0	2.1	2.2	2.3
SSA	0.8	1.0	1.2	1.3	1.5	1.7	1.8	2.0	2.1	2.3	2.5
USA	6.2	6.7	7.0	7.2	8.0	8.5	8.2	7.7	7.8	7.5	7.5

Table 1474: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Maize (t DM/ha) [PART 1/2]

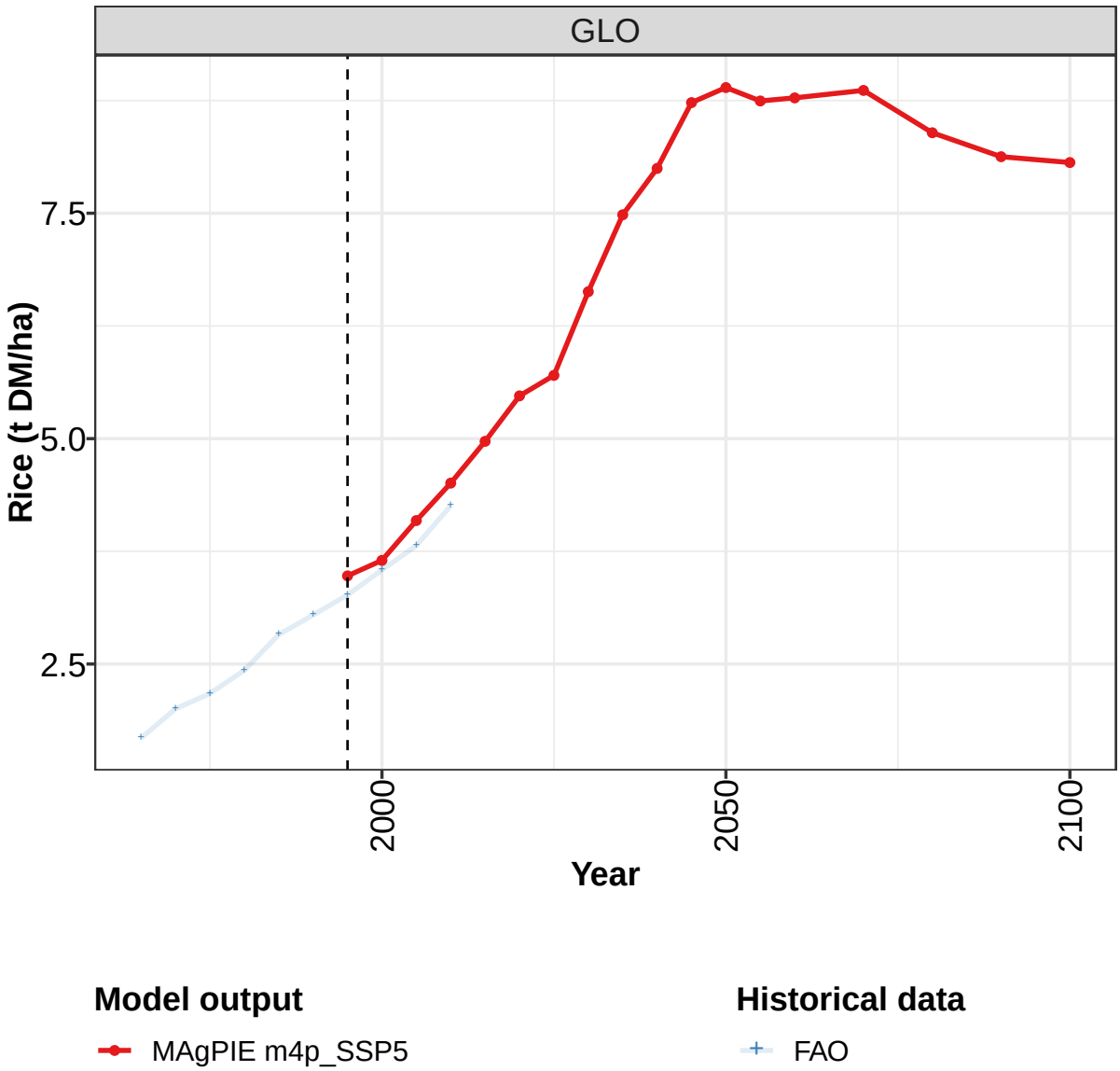
	2050	2055	2060	2070	2080	2090	2100
GLO	5.5	5.4	5.3	5.3	5.2	5.0	4.9
CAZ	6.7	6.8	6.7	6.5	6.6	6.8	6.8
CHA	14.6	14.5	14.5	14.5	16.5	16.7	16.5
EUR	7.2	7.2	7.1	7.1	6.9	6.9	6.8
IND	3.1	3.2	3.3	3.3	3.5	3.5	3.5
LAM	3.5	3.5	3.4	3.4	3.4	3.5	3.4
MEA	26.2	26.8	27.2	27.6	28.3	28.5	28.8
NEU	6.1	6.1	6.1	5.9	5.9	5.9	5.9
OAS	6.9	7.1	7.1	7.2	7.3	7.5	7.4
REF	2.3	2.3	2.4	2.4	2.4	2.3	2.4
SSA	2.7	2.8	2.9	3.0	2.9	2.7	2.6
USA	7.2	7.4	7.5	7.5	7.8	8.1	8.1

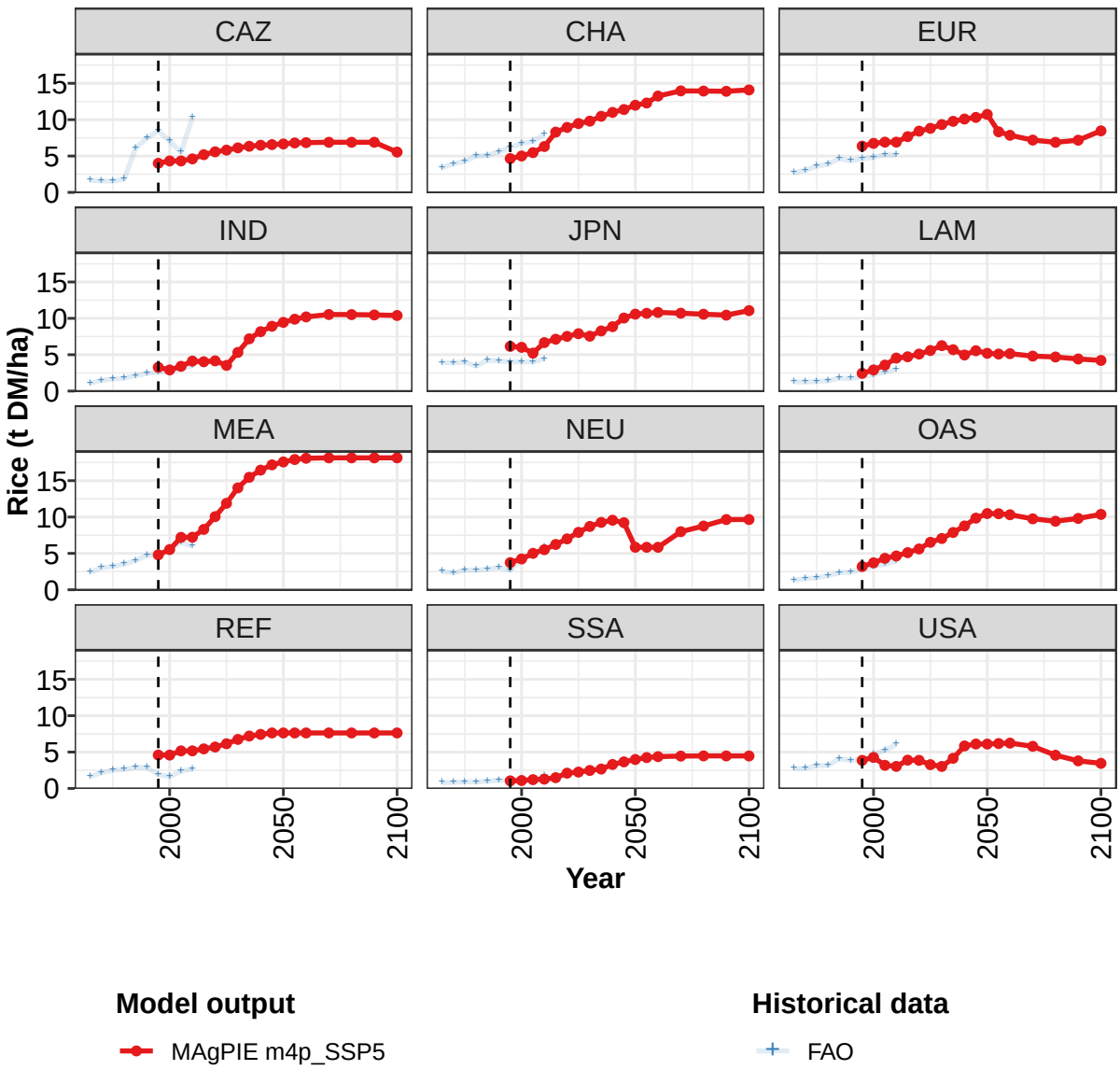
Table 1475: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Maize (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.49	1.63	2.07	2.37	2.84	2.73	2.81	3.25	3.80	4.34
CAZ	1.65	1.69	2.36	2.62	3.27	3.65	4.11	3.70	4.85	5.92
CHA	1.73	2.42	3.10	3.74	3.52	4.49	5.11	5.02	6.03	6.75
EUR	1.96	2.53	3.12	3.71	4.62	4.04	4.70	4.64	6.16	6.21
IND	0.86	1.13	1.08	1.05	1.06	1.43	1.53	1.74	1.92	2.67
LAM	0.90	1.04	1.10	1.32	1.60	1.40	1.70	1.88	2.22	2.85
MEA	1.71	1.79	2.02	2.50	3.18	4.01	3.19	5.19	5.74	5.96
NEU	1.55	1.79	2.45	2.49	2.94	2.52	3.09	2.20	4.42	4.49
OAS	0.78	0.92	1.07	1.22	1.49	1.63	1.74	2.07	2.55	3.25
REF	1.71	1.85	1.88	2.15	2.61	2.73	2.20	1.75	2.71	2.64
SSA	0.53	0.64	0.82	0.88	0.86	0.87	0.83	1.05	1.07	1.36
USA	2.69	2.44	3.38	3.68	5.01	4.70	4.47	5.77	6.64	7.79

Table 1476: FAO — Productivity—Yield—Crops—Cereals—Maize (t DM/ha)

52.1.3 Cereals—Rice





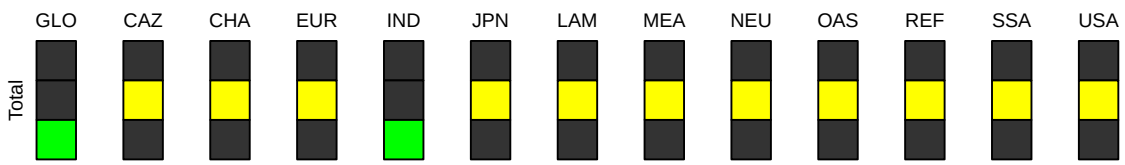


Figure 379: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Rice (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.5	3.6	4.1	4.5	5.0	5.5	5.7	6.6	7.5	8.0	8.7
CAZ	4.0	4.3	4.3	4.6	5.2	5.6	5.8	6.1	6.3	6.5	6.6
CHA	4.7	5.0	5.5	6.3	8.3	8.9	9.5	9.8	10.5	11.0	11.4
EUR	6.4	6.7	6.9	6.9	7.7	8.4	8.8	9.3	9.8	10.1	10.3
IND	3.3	2.9	3.4	4.1	4.0	4.2	3.5	5.3	7.2	8.2	8.9
JPN	6.1	6.0	5.2	6.7	7.1	7.5	7.9	7.5	8.3	8.9	10.0
LAM	2.4	2.9	3.6	4.5	4.7	5.1	5.6	6.2	5.7	5.0	5.6
MEA	4.8	5.5	7.2	7.2	8.3	10.1	11.9	14.0	15.5	16.5	17.2
NEU	3.7	4.2	5.0	5.5	6.2	7.0	7.9	8.7	9.3	9.6	9.2
OAS	3.2	3.7	4.3	4.6	5.1	5.6	6.5	7.0	7.9	8.8	9.8
REF	4.6	4.6	5.2	5.2	5.4	5.7	6.1	6.7	7.2	7.4	7.6
SSA	1.0	1.1	1.2	1.3	1.5	2.1	2.3	2.5	2.7	3.3	3.7
USA	3.9	4.3	3.2	3.0	3.9	3.9	3.3	3.0	4.1	5.8	6.1

Table 1477: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Rice (t DM/ha) [PART 1/2]

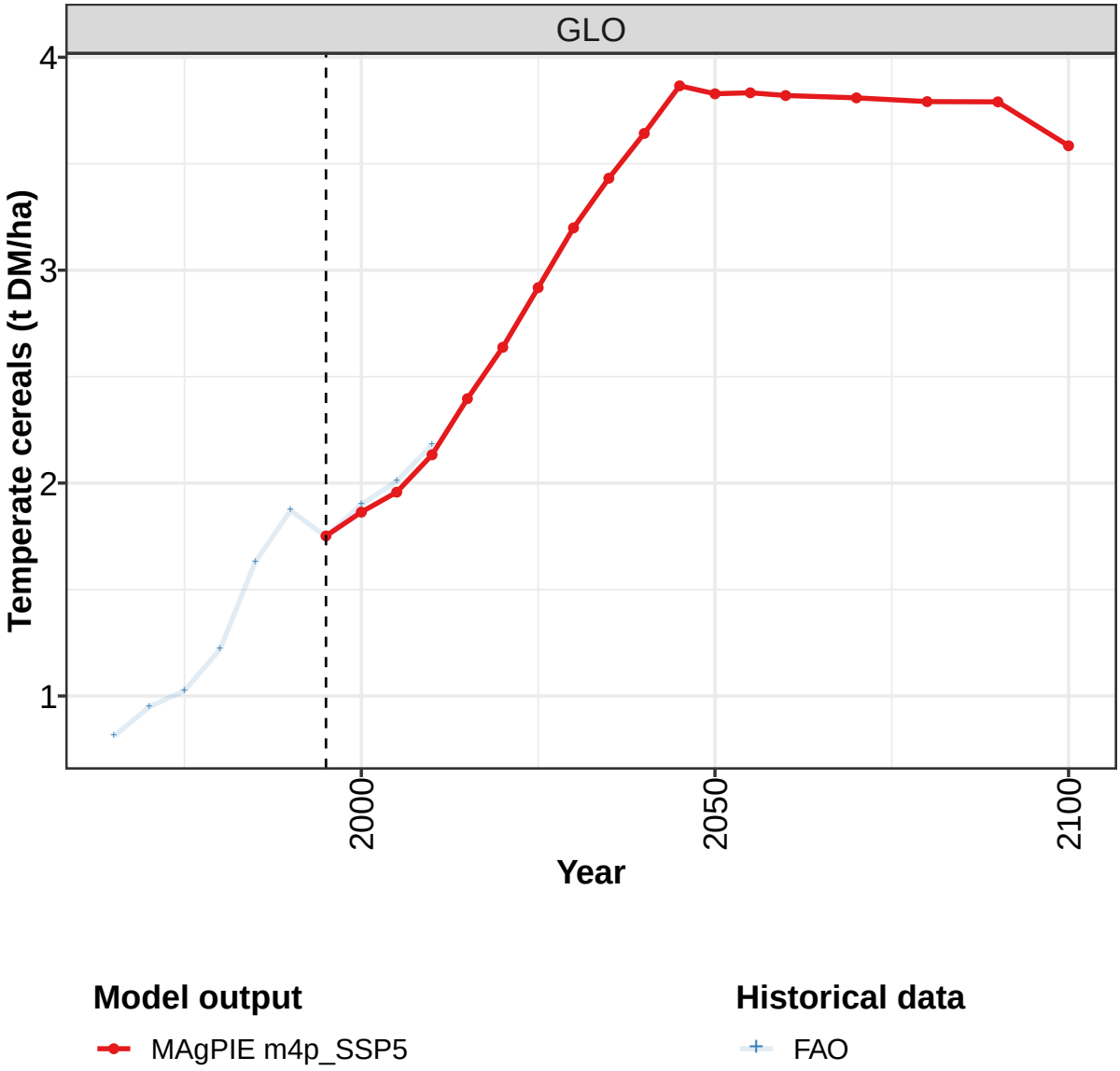
	2050	2055	2060	2070	2080	2090	2100
GLO	8.9	8.7	8.8	8.9	8.4	8.1	8.1
CAZ	6.7	6.8	6.8	6.9	6.9	6.9	5.5
CHA	12.0	12.3	13.3	14.0	13.9	13.9	14.1
EUR	10.7	8.3	7.9	7.2	6.9	7.2	8.5
IND	9.5	9.9	10.2	10.5	10.5	10.5	10.4
JPN	10.6	10.7	10.8	10.7	10.6	10.4	11.1
LAM	5.2	5.1	5.1	4.8	4.7	4.4	4.2
MEA	17.6	17.9	18.1	18.1	18.1	18.1	18.1
NEU	5.8	5.8	5.8	8.0	8.8	9.7	9.7
OAS	10.5	10.5	10.3	9.8	9.4	9.8	10.4
REF	7.6	7.6	7.6	7.6	7.6	7.6	7.6
SSA	4.0	4.2	4.4	4.4	4.5	4.5	4.5
USA	6.1	6.2	6.2	5.8	4.6	3.8	3.5

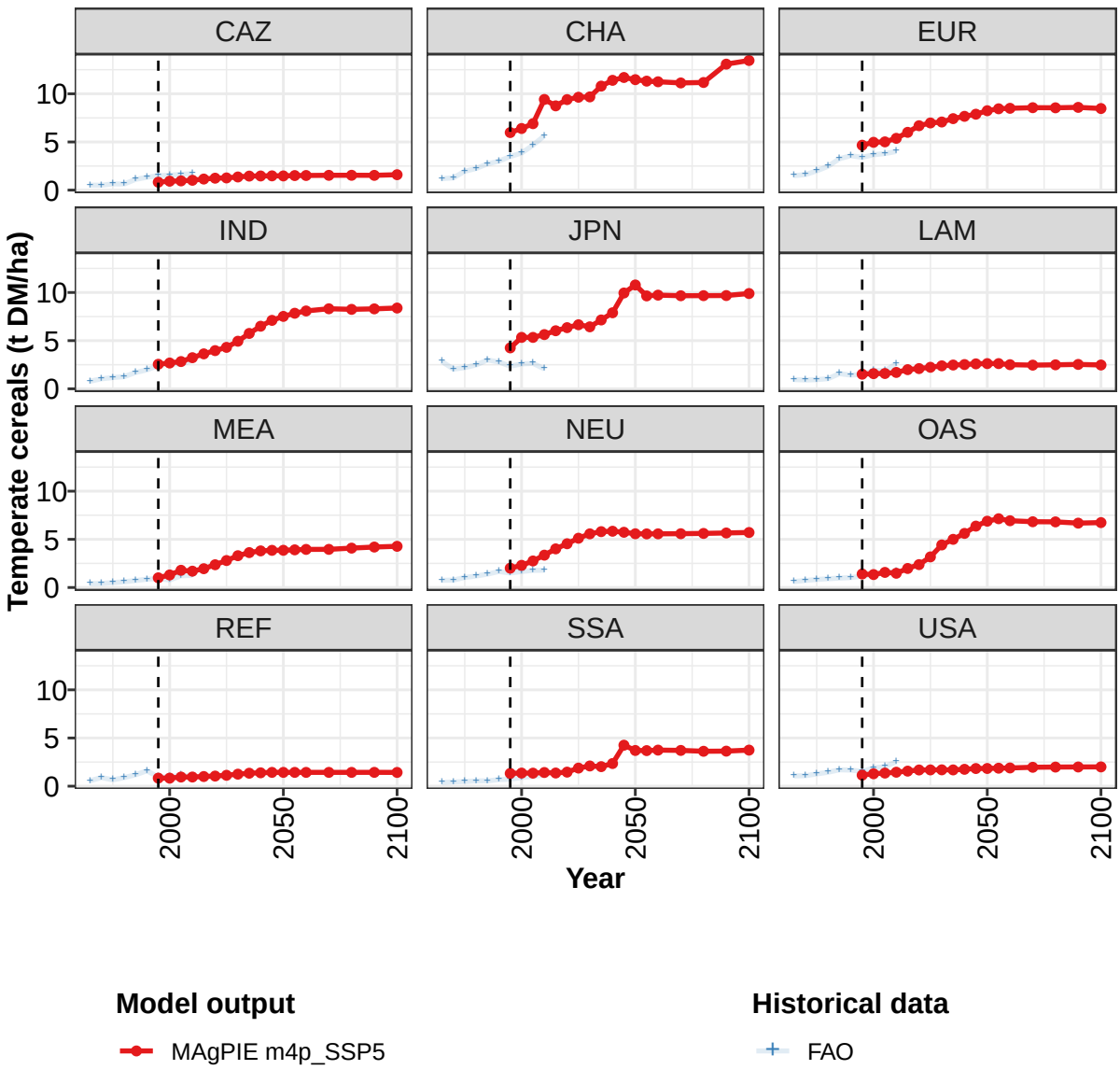
Table 1478: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Rice (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.7	2.0	2.2	2.4	2.8	3.0	3.3	3.5	3.8	4.3
CAZ	1.7	1.6	1.5	1.8	6.1	7.5	8.5	7.0	5.5	10.3
CHA	3.4	3.9	4.3	5.0	5.1	5.6	6.2	6.7	7.0	8.0
EUR	2.7	3.0	3.6	3.9	4.6	4.4	4.6	4.8	5.2	5.1
IND	1.1	1.5	1.6	1.8	2.1	2.4	2.6	2.7	3.1	3.5
JPN	3.9	3.9	4.0	3.4	4.2	4.2	4.0	4.0	4.0	4.4
LAM	1.3	1.3	1.3	1.4	1.8	1.7	2.0	2.3	2.6	3.0
MEA	2.4	3.0	3.2	3.5	4.0	4.7	4.8	5.6	6.5	6.0
NEU	2.5	2.3	2.7	2.7	2.9	3.0	2.7	4.1	4.8	5.9
OAS	1.3	1.5	1.6	2.0	2.3	2.4	2.8	3.2	3.5	3.9
REF	1.6	2.2	2.5	2.6	2.9	2.9	1.9	1.6	2.4	2.7
SSA	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.3	1.7
USA	2.7	2.7	3.2	3.2	4.1	3.9	3.9	4.7	5.3	6.1

Table 1479: FAO — Productivity—Yield—Crops—Cereals—Rice (t DM/ha)

52.1.4 Cereals—Temperate cereals





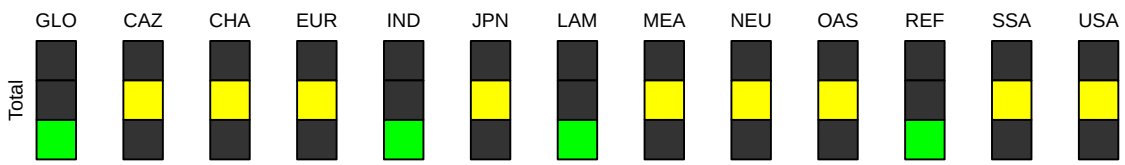


Figure 380: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Temperate cereals (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.8	1.9	2.0	2.1	2.4	2.6	2.9	3.2	3.4	3.6	3.9
CAZ	0.8	0.9	1.0	1.0	1.2	1.2	1.3	1.4	1.5	1.5	1.5
CHA	6.0	6.4	6.9	9.4	8.7	9.4	9.6	9.7	10.8	11.4	11.7
EUR	4.7	5.0	5.0	5.4	6.0	6.7	7.0	7.1	7.4	7.7	7.9
IND	2.5	2.7	2.8	3.2	3.6	4.0	4.3	4.9	5.8	6.5	7.1
JPN	4.2	5.3	5.3	5.6	6.0	6.3	6.7	6.4	7.1	7.9	9.9
LAM	1.5	1.6	1.6	1.7	2.0	2.1	2.2	2.4	2.5	2.5	2.6
MEA	1.0	1.3	1.8	1.7	2.0	2.4	2.8	3.3	3.6	3.8	3.9
NEU	2.0	2.3	2.8	3.4	4.0	4.5	5.1	5.6	5.8	5.8	5.7
OAS	1.4	1.3	1.6	1.5	2.0	2.4	3.2	4.4	5.0	5.6	6.4
REF	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.2	1.3	1.4	1.4
SSA	1.3	1.4	1.4	1.4	1.4	1.5	1.9	2.1	2.0	2.4	4.3
USA	1.1	1.3	1.4	1.5	1.6	1.7	1.7	1.7	1.7	1.8	1.8

Table 1480: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Temperate cereals (t DM/ha) [PART 1/2]

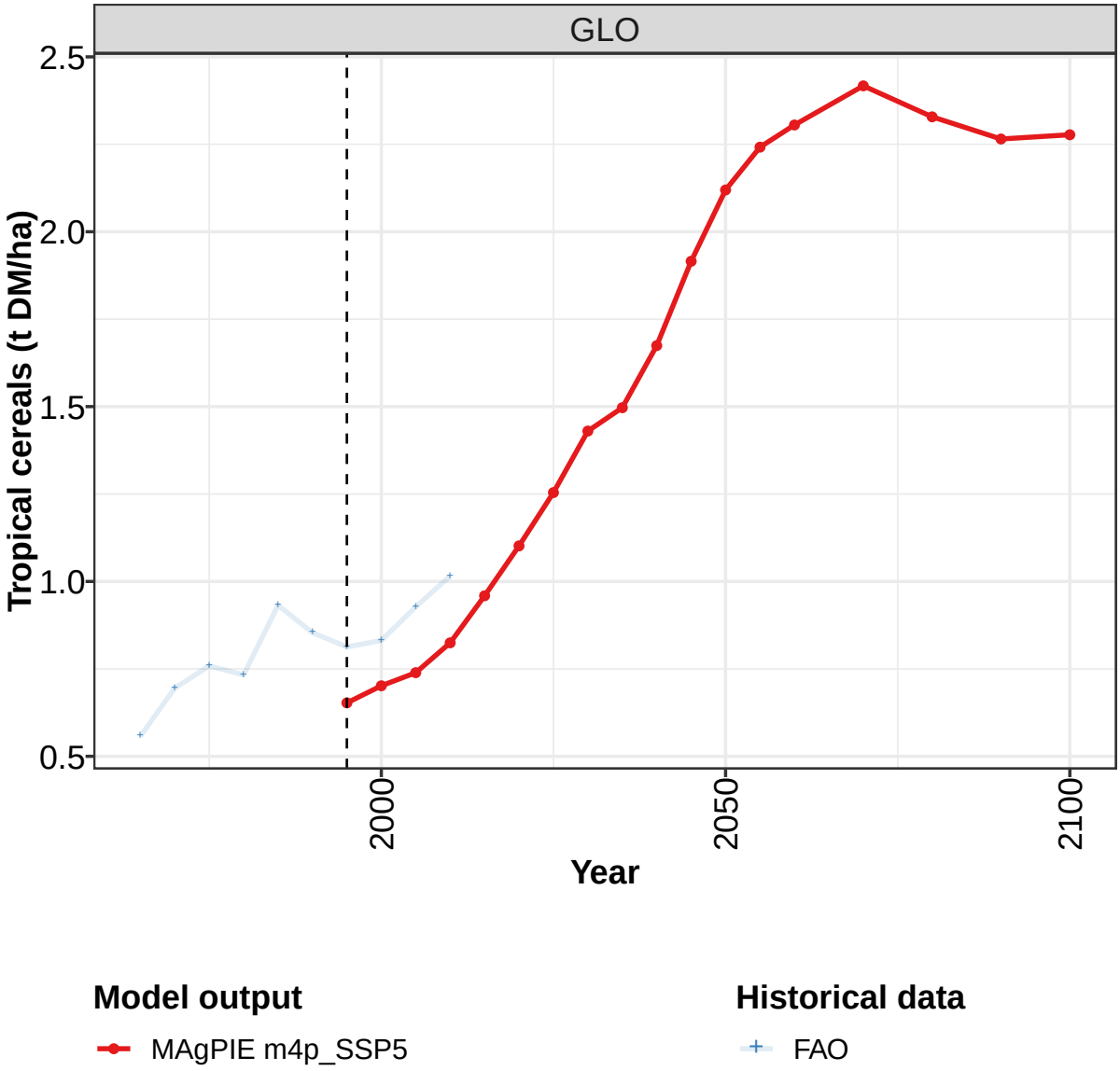
	2050	2055	2060	2070	2080	2090	2100
GLO	3.8	3.8	3.8	3.8	3.8	3.8	3.6
CAZ	1.5	1.5	1.5	1.5	1.5	1.5	1.6
CHA	11.5	11.3	11.3	11.1	11.2	13.1	13.5
EUR	8.2	8.4	8.5	8.6	8.5	8.6	8.5
IND	7.5	7.8	8.1	8.3	8.2	8.3	8.4
JPN	10.8	9.6	9.7	9.7	9.7	9.7	9.9
LAM	2.6	2.6	2.5	2.5	2.5	2.5	2.5
MEA	3.9	3.9	4.0	4.0	4.1	4.2	4.3
NEU	5.6	5.6	5.6	5.6	5.6	5.7	5.7
OAS	6.9	7.1	6.9	6.8	6.8	6.7	6.7
REF	1.4	1.4	1.4	1.4	1.4	1.4	1.4
SSA	3.7	3.7	3.7	3.7	3.6	3.6	3.7
USA	1.8	1.9	1.9	2.0	2.0	2.0	2.0

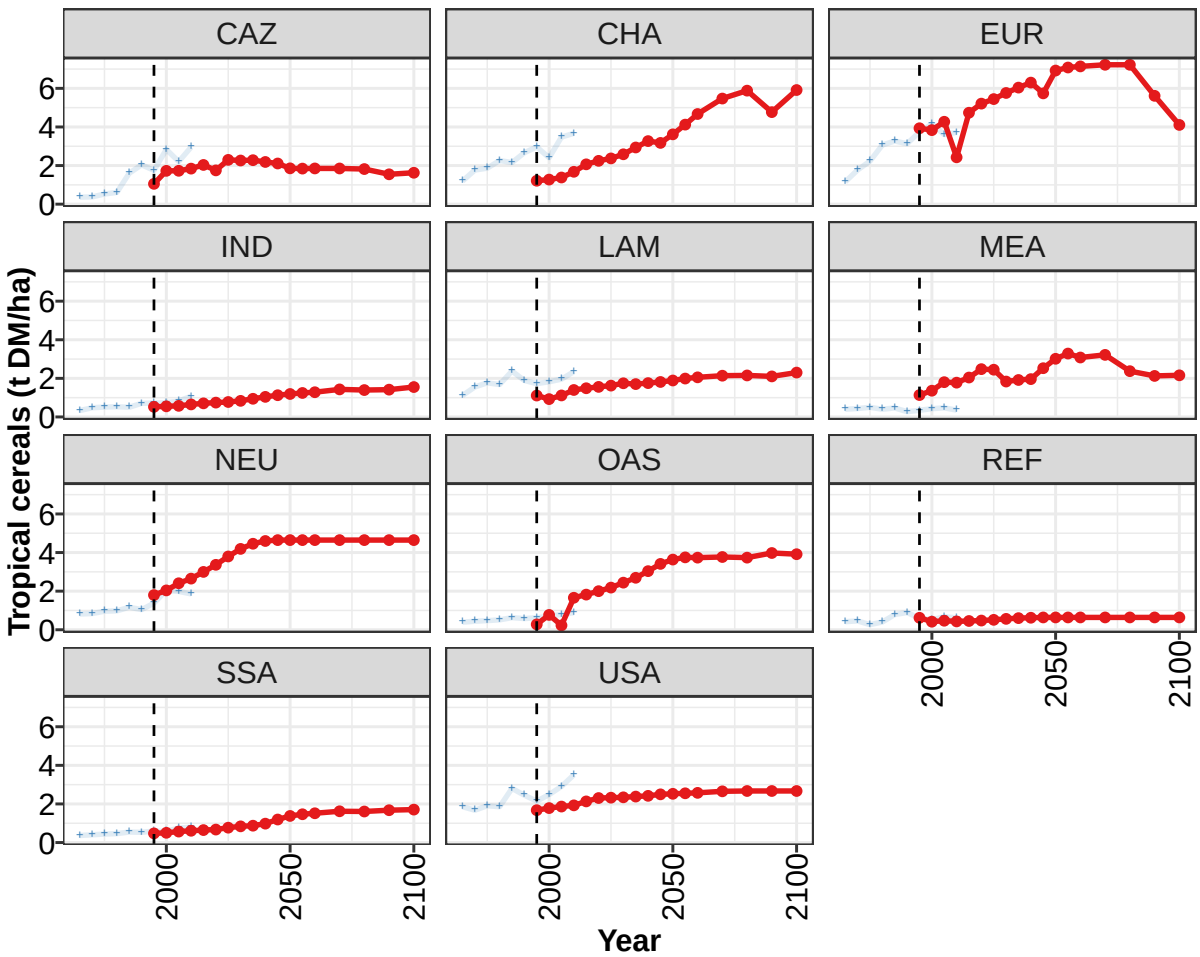
Table 1481: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Temperate cereals (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.81	0.95	1.03	1.22	1.63	1.87	1.75	1.90	2.01	2.18
CAZ	0.51	0.51	0.65	0.63	1.12	1.34	1.50	1.54	1.65	1.71
CHA	1.19	1.28	1.96	2.25	2.73	3.01	3.49	3.86	4.66	5.64
EUR	1.50	1.61	2.00	2.48	3.26	3.57	3.41	3.67	3.80	4.01
IND	0.79	1.04	1.17	1.27	1.69	1.97	2.41	2.63	2.55	2.96
JPN	2.83	2.05	2.19	2.47	2.99	2.79	2.35	2.58	2.64	2.07
LAM	0.96	0.91	0.95	1.05	1.57	1.43	1.49	1.93	1.86	2.62
MEA	0.40	0.42	0.51	0.60	0.72	0.86	0.92	0.78	1.21	1.26
NEU	0.75	0.77	1.04	1.19	1.39	1.66	1.50	1.66	1.78	1.79
OAS	0.61	0.73	0.83	0.91	0.97	1.03	1.17	1.31	1.56	1.66
REF	0.55	0.90	0.65	0.89	1.18	1.60	0.95	0.96	1.14	1.01
SSA	0.37	0.45	0.47	0.55	0.55	0.68	0.73	0.90	1.02	1.16
USA	1.06	1.08	1.27	1.45	1.70	1.67	1.53	1.90	2.02	2.53

Table 1482: FAO — Productivity—Yield—Crops—Cereals—Temperate cereals (t DM/ha)

52.1.5 Cereals—Tropical cereals





Model output

MAgPIE m4p_SSP5

Historical data

FAO

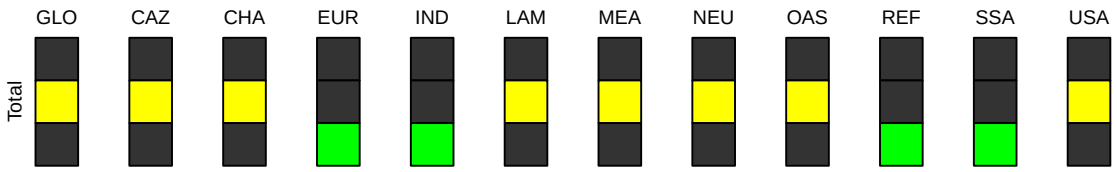


Figure 381: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Tropical cereals (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.65	0.70	0.74	0.82	0.96	1.10	1.25	1.43	1.50	1.67	1.92
CAZ	1.05	1.73	1.73	1.84	2.03	1.75	2.30	2.26	2.28	2.19	2.11
CHA	1.22	1.27	1.38	1.68	2.07	2.25	2.37	2.59	2.94	3.27	3.18
EUR	3.93	3.84	4.27	2.43	4.74	5.21	5.45	5.76	6.04	6.30	5.74
IND	0.53	0.55	0.58	0.65	0.71	0.74	0.78	0.84	0.94	1.04	1.13
LAM	1.11	0.93	1.12	1.40	1.49	1.56	1.62	1.75	1.70	1.76	1.81
MEA	1.14	1.36	1.80	1.78	2.04	2.48	2.45	1.84	1.92	1.96	2.53
NEU	1.80	2.04	2.41	2.65	3.00	3.37	3.80	4.19	4.46	4.60	4.65
OAS	0.28	0.77	0.23	1.66	1.82	2.00	2.18	2.44	2.69	3.04	3.41
REF	0.62	0.42	0.47	0.43	0.46	0.48	0.51	0.56	0.60	0.62	0.64
SSA	0.48	0.51	0.57	0.61	0.65	0.67	0.77	0.84	0.87	0.98	1.19
USA	1.68	1.79	1.87	1.93	2.13	2.31	2.33	2.34	2.38	2.42	2.50

Table 1483: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Tropical cereals (t DM/ha) [PART 1/2]

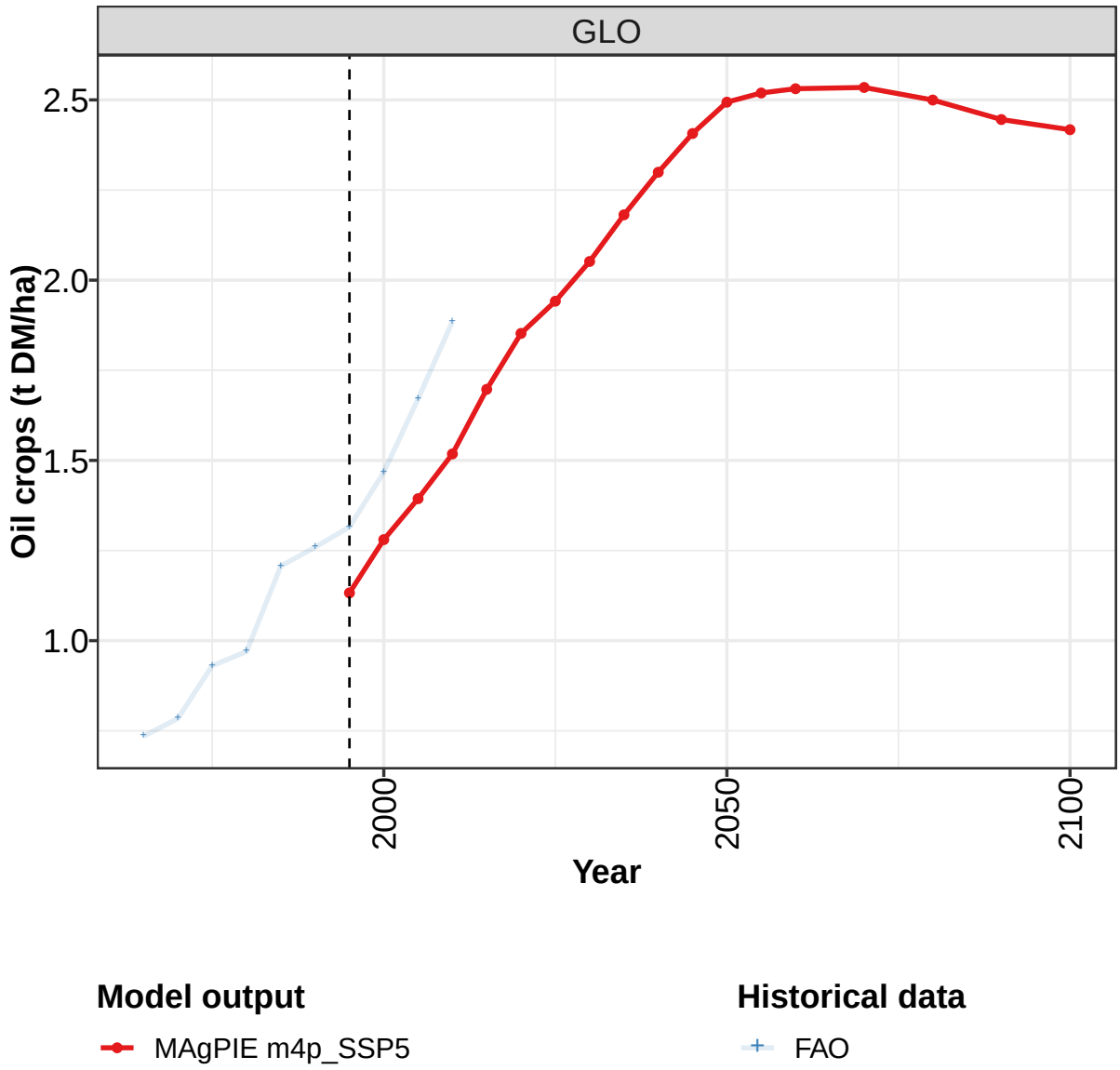
	2050	2055	2060	2070	2080	2090	2100
GLO	2.12	2.24	2.31	2.42	2.33	2.27	2.28
CAZ	1.86	1.84	1.85	1.85	1.82	1.55	1.63
CHA	3.62	4.12	4.67	5.47	5.88	4.77	5.91
EUR	6.92	7.08	7.14	7.22	7.22	5.62	4.11
IND	1.19	1.24	1.28	1.43	1.39	1.42	1.55
LAM	1.89	1.99	2.05	2.14	2.15	2.10	2.30
MEA	3.01	3.29	3.08	3.22	2.37	2.13	2.16
NEU	4.65	4.65	4.65	4.65	4.65	4.65	4.65
OAS	3.64	3.75	3.74	3.77	3.74	3.98	3.91
REF	0.64	0.64	0.64	0.64	0.64	0.64	0.64
SSA	1.38	1.47	1.52	1.62	1.61	1.68	1.71
USA	2.53	2.55	2.58	2.65	2.67	2.67	2.67

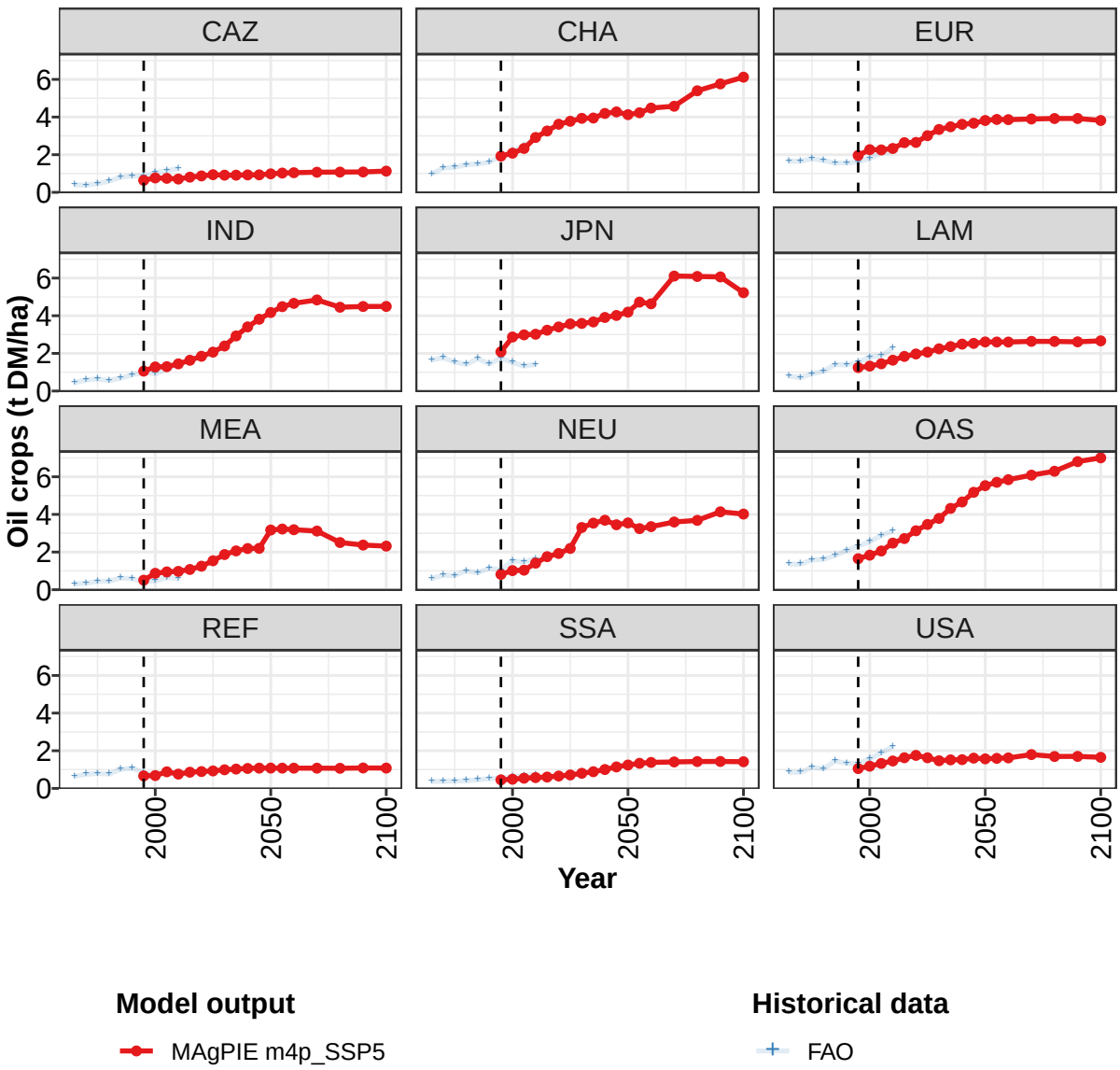
Table 1484: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Cereals—Tropical cereals (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.56	0.69	0.76	0.73	0.93	0.85	0.81	0.83	0.93	1.02
CAZ	0.36	0.38	0.53	0.61	1.60	2.04	1.75	2.84	2.21	2.95
CHA	1.20	1.77	1.86	2.26	2.16	2.67	2.97	2.41	3.48	3.67
EUR	1.16	1.77	2.23	3.07	3.27	3.13	3.74	4.15	3.60	3.72
IND	0.33	0.48	0.51	0.53	0.50	0.71	0.72	0.74	0.82	1.07
LAM	1.11	1.55	1.77	1.68	2.38	1.89	1.73	1.82	1.96	2.35
MEA	0.40	0.44	0.50	0.40	0.47	0.27	0.35	0.43	0.47	0.35
NEU	0.81	0.84	0.96	0.98	1.17	1.04	1.38	2.04	1.99	1.86
OAS	0.39	0.44	0.47	0.51	0.63	0.58	0.62	0.70	0.79	0.88
REF	0.42	0.46	0.26	0.40	0.79	0.89	0.59	0.52	0.67	0.62
SSA	0.37	0.40	0.44	0.46	0.54	0.53	0.59	0.58	0.75	0.79
USA	1.85	1.68	1.90	1.86	2.81	2.45	2.15	2.48	2.91	3.51

Table 1485: FAO — Productivity—Yield—Crops—Cereals—Tropical cereals (t DM/ha)

52.1.6 Oil crops





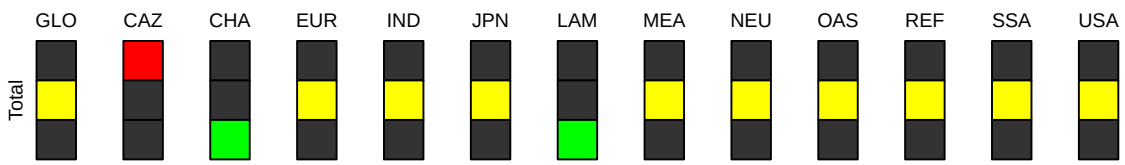


Figure 382: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.13	1.28	1.39	1.52	1.70	1.85	1.94	2.05	2.18	2.30	2.41
CAZ	0.64	0.77	0.75	0.71	0.81	0.87	0.94	0.91	0.91	0.93	0.93
CHA	1.93	2.08	2.33	2.92	3.26	3.62	3.78	3.93	3.95	4.19	4.27
EUR	1.96	2.27	2.26	2.33	2.64	2.65	3.01	3.34	3.48	3.61	3.67
IND	1.06	1.28	1.29	1.44	1.64	1.85	2.07	2.39	2.93	3.41	3.81
JPN	2.09	2.87	2.99	3.02	3.23	3.41	3.57	3.59	3.67	3.91	4.02
LAM	1.25	1.32	1.45	1.64	1.84	1.97	2.07	2.24	2.36	2.49	2.53
MEA	0.50	0.87	0.95	0.98	1.08	1.25	1.54	1.87	2.06	2.19	2.20
NEU	0.82	1.02	1.04	1.41	1.76	1.93	2.19	3.30	3.54	3.69	3.45
OAS	1.65	1.84	2.06	2.48	2.72	3.13	3.47	3.79	4.32	4.66	5.18
REF	0.66	0.68	0.88	0.76	0.86	0.89	0.93	0.99	1.03	1.06	1.08
SSA	0.46	0.49	0.54	0.57	0.60	0.66	0.71	0.80	0.89	1.00	1.14
USA	1.05	1.18	1.33	1.46	1.63	1.75	1.63	1.47	1.52	1.53	1.61

Table 1486: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops (t DM/ha) [PART 1/2]

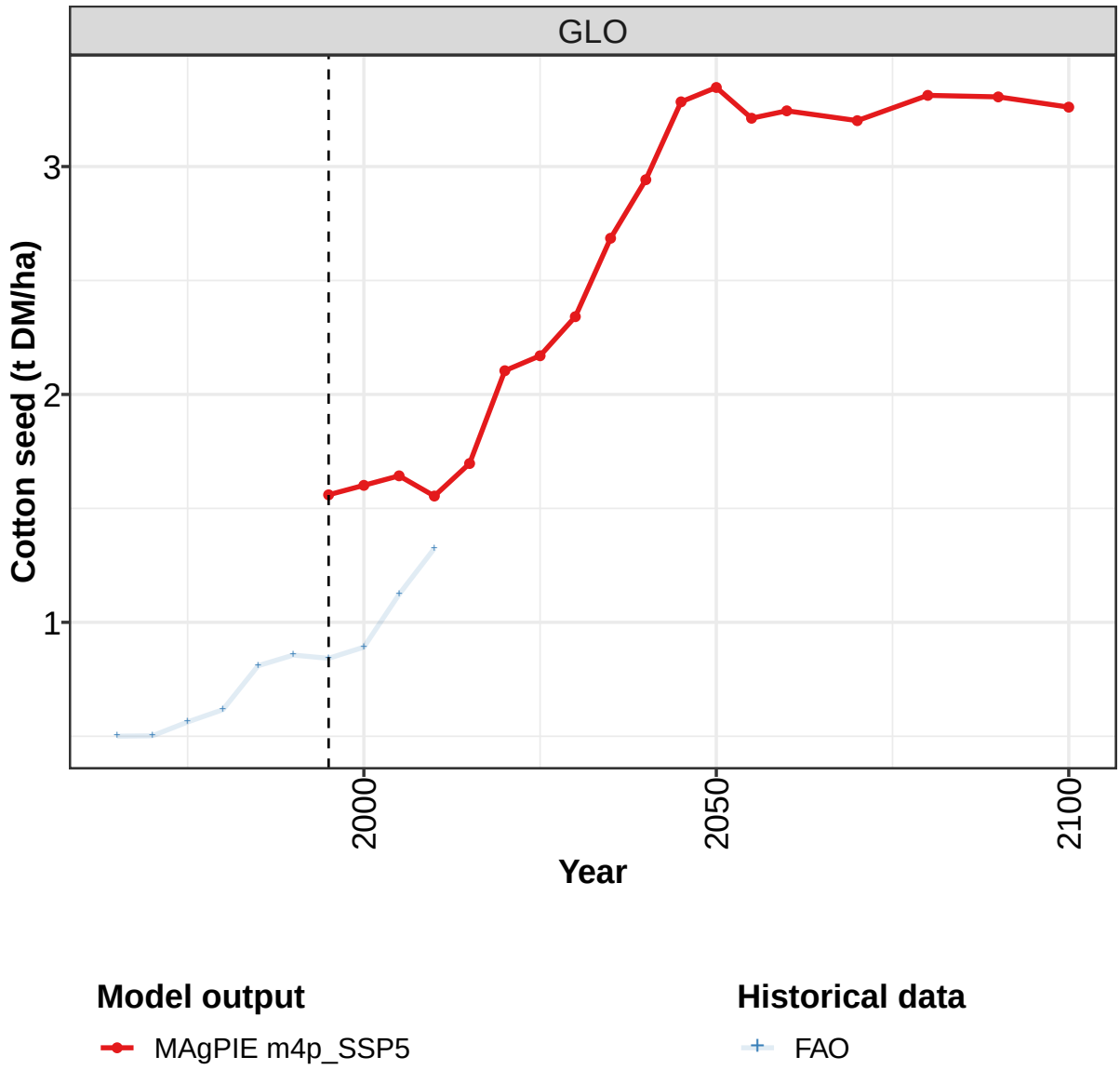
	2050	2055	2060	2070	2080	2090	2100
GLO	2.49	2.52	2.53	2.53	2.50	2.45	2.42
CAZ	0.98	1.03	1.04	1.07	1.08	1.08	1.13
CHA	4.13	4.23	4.48	4.58	5.40	5.76	6.12
EUR	3.82	3.87	3.86	3.90	3.92	3.92	3.82
IND	4.17	4.48	4.66	4.84	4.45	4.49	4.49
JPN	4.19	4.72	4.63	6.11	6.09	6.06	5.22
LAM	2.61	2.60	2.60	2.64	2.63	2.61	2.67
MEA	3.17	3.22	3.19	3.12	2.51	2.37	2.32
NEU	3.55	3.25	3.35	3.60	3.68	4.14	4.02
OAS	5.53	5.71	5.85	6.09	6.29	6.81	7.01
REF	1.08	1.08	1.08	1.07	1.07	1.09	1.08
SSA	1.24	1.33	1.38	1.41	1.43	1.43	1.42
USA	1.57	1.60	1.62	1.80	1.69	1.70	1.65

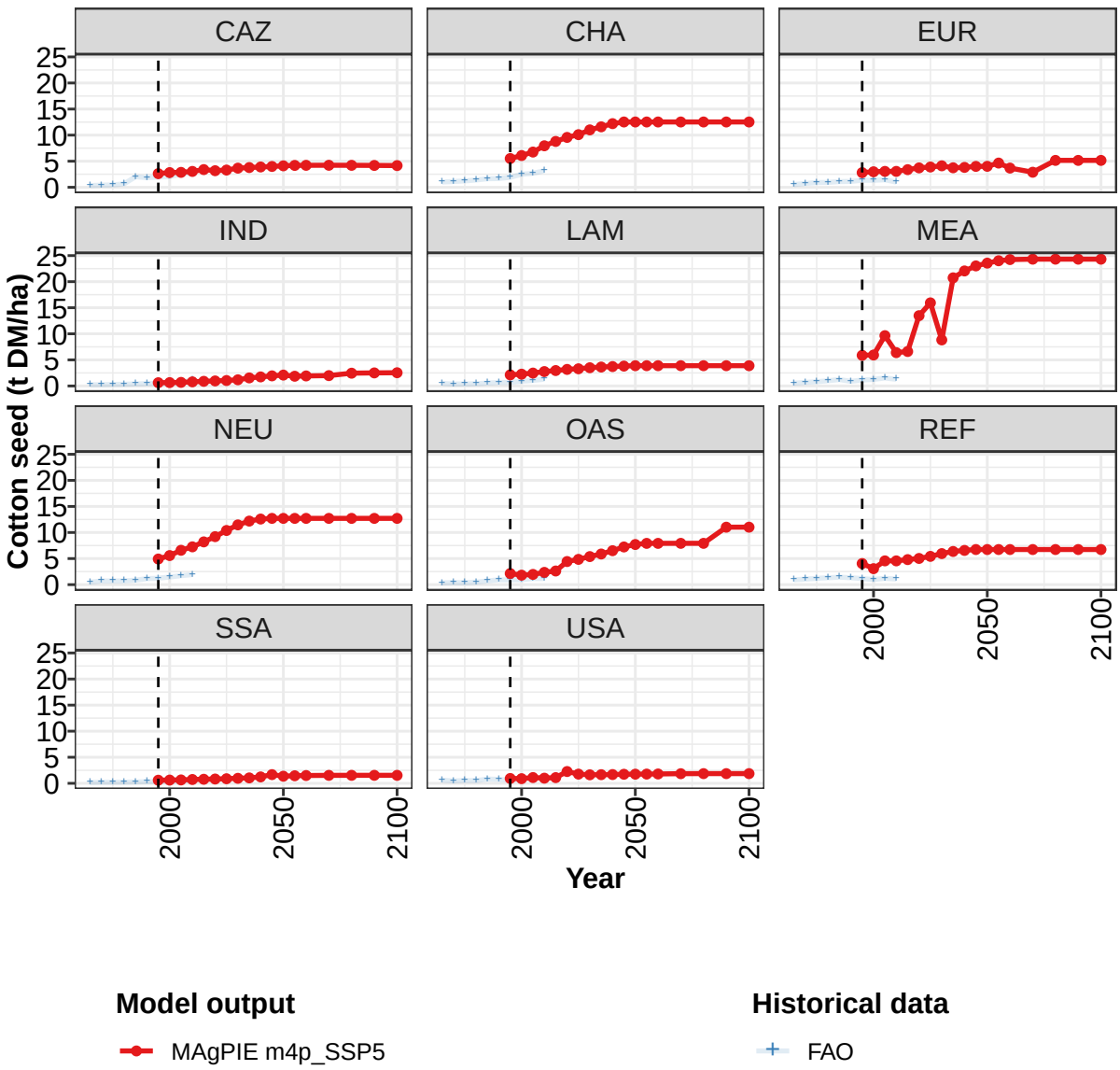
Table 1487: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.74	0.78	0.93	0.97	1.21	1.26	1.32	1.47	1.67	1.89
CAZ	0.40	0.38	0.46	0.59	0.81	0.87	0.87	1.04	1.15	1.27
CHA	0.98	1.29	1.33	1.47	1.52	1.61	1.91	2.19	2.46	2.88
EUR	1.66	1.65	1.78	1.70	1.55	1.57	1.61	1.81	2.09	2.16
IND	0.45	0.58	0.65	0.56	0.68	0.87	0.99	0.92	1.14	1.50
JPN	1.65	1.77	1.54	1.42	1.72	1.44	1.74	1.52	1.33	1.41
LAM	0.79	0.71	0.92	1.05	1.41	1.38	1.53	1.80	1.86	2.29
MEA	0.31	0.34	0.45	0.45	0.61	0.59	0.41	0.48	0.64	0.60
NEU	0.59	0.77	0.76	1.00	0.90	1.14	1.05	1.53	1.47	1.64
OAS	1.36	1.36	1.58	1.62	1.81	2.08	2.33	2.55	2.89	3.12
REF	0.65	0.75	0.80	0.76	1.01	1.07	0.84	0.70	0.82	0.75
SSA	0.37	0.38	0.39	0.41	0.45	0.52	0.54	0.61	0.70	0.74
USA	0.85	0.85	1.12	1.04	1.45	1.33	1.31	1.57	1.89	2.22

Table 1488: FAO — Productivity—Yield—Crops—Oil crops (t DM/ha)

52.1.7 Oil crops—Cotton seed





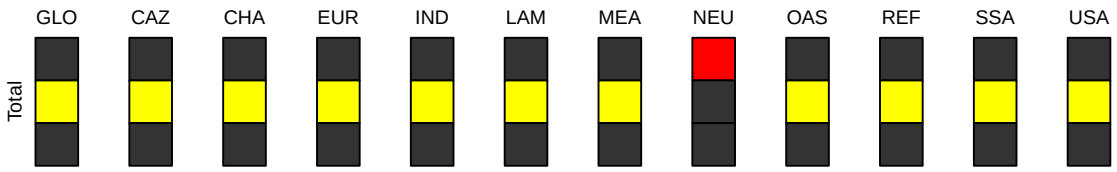


Figure 383: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Cotton seed (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.6	1.6	1.6	1.6	1.7	2.1	2.2	2.3	2.7	2.9	3.3
CAZ	2.6	2.8	2.9	3.0	3.4	3.2	3.3	3.7	3.8	3.9	4.0
CHA	5.5	6.1	6.8	8.0	8.8	9.6	10.1	11.0	11.6	12.2	12.5
EUR	2.8	3.0	3.1	3.1	3.4	3.7	3.9	4.1	3.7	3.8	4.0
IND	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.2	1.5	1.7	1.9
LAM	2.1	2.3	2.5	2.8	3.0	3.2	3.3	3.5	3.6	3.7	3.8
MEA	5.9	5.9	9.6	6.4	6.6	13.5	15.9	8.8	20.7	22.1	23.0
NEU	4.9	5.6	6.6	7.3	8.2	9.2	10.4	11.5	12.2	12.6	12.7
OAS	2.1	1.8	2.0	2.4	2.6	4.4	4.8	5.4	5.9	6.5	7.2
REF	4.1	3.1	4.6	4.6	4.8	5.0	5.4	6.0	6.4	6.6	6.7
SSA	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.2	1.7
USA	0.9	0.9	1.1	1.0	1.1	2.3	1.8	1.6	1.7	1.7	1.7

Table 1489: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Cotton seed (t DM/ha) [PART 1/2]

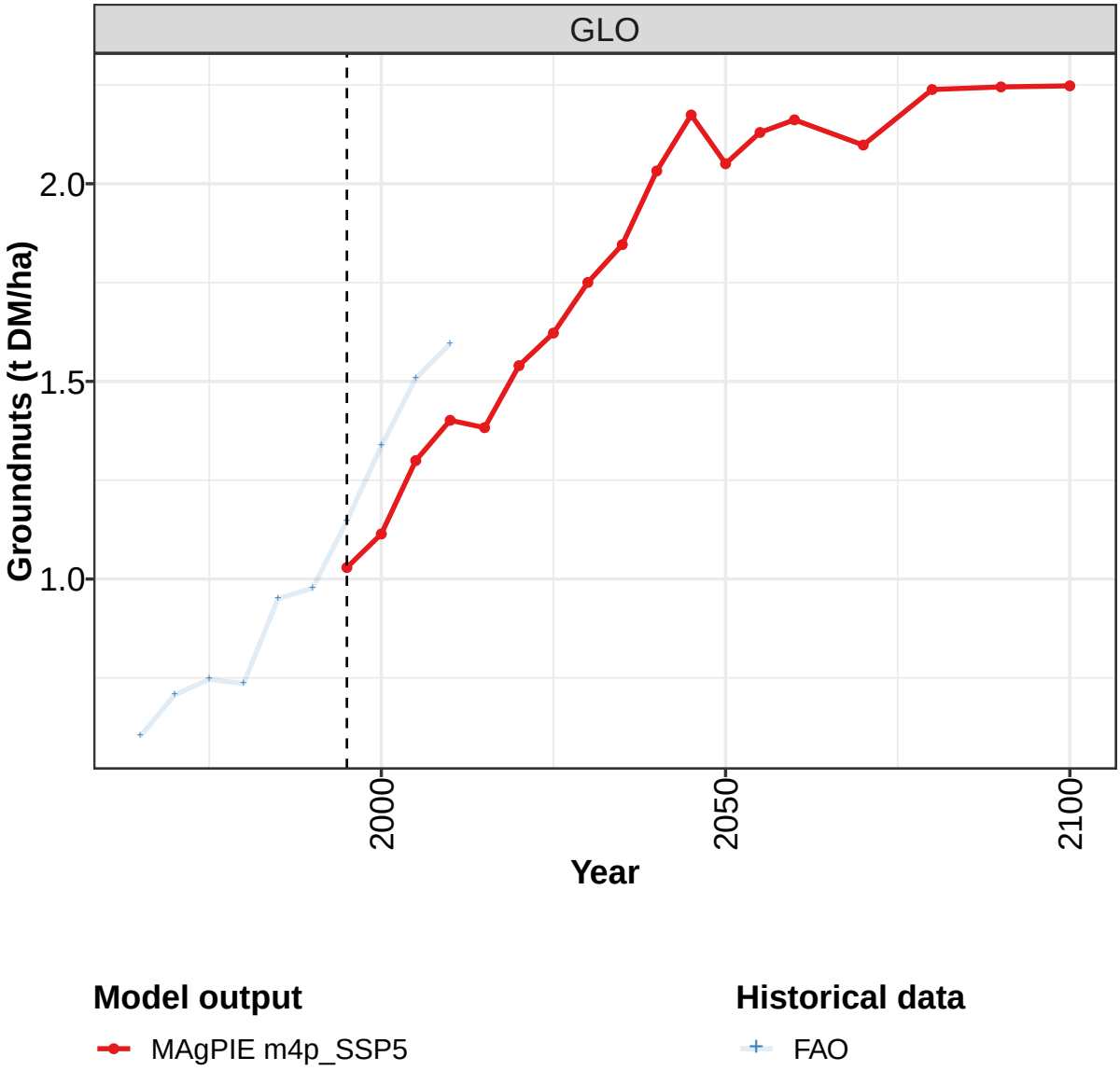
	2050	2055	2060	2070	2080	2090	2100
GLO	3.3	3.2	3.2	3.2	3.3	3.3	3.3
CAZ	4.1	4.2	4.2	4.2	4.2	4.2	4.2
CHA	12.5	12.5	12.5	12.5	12.5	12.5	12.5
EUR	4.0	4.6	3.7	2.9	5.2	5.2	5.2
IND	2.1	1.9	1.9	2.0	2.4	2.5	2.5
LAM	3.9	3.9	3.9	3.9	3.9	3.9	3.9
MEA	23.6	24.0	24.2	24.3	24.3	24.3	24.3
NEU	12.7	12.7	12.7	12.7	12.7	12.7	12.7
OAS	7.7	7.9	7.9	7.9	7.9	11.0	11.0
REF	6.7	6.7	6.7	6.7	6.7	6.7	6.7
SSA	1.4	1.5	1.5	1.5	1.5	1.5	1.5
USA	1.8	1.8	1.8	1.8	1.9	1.9	1.9

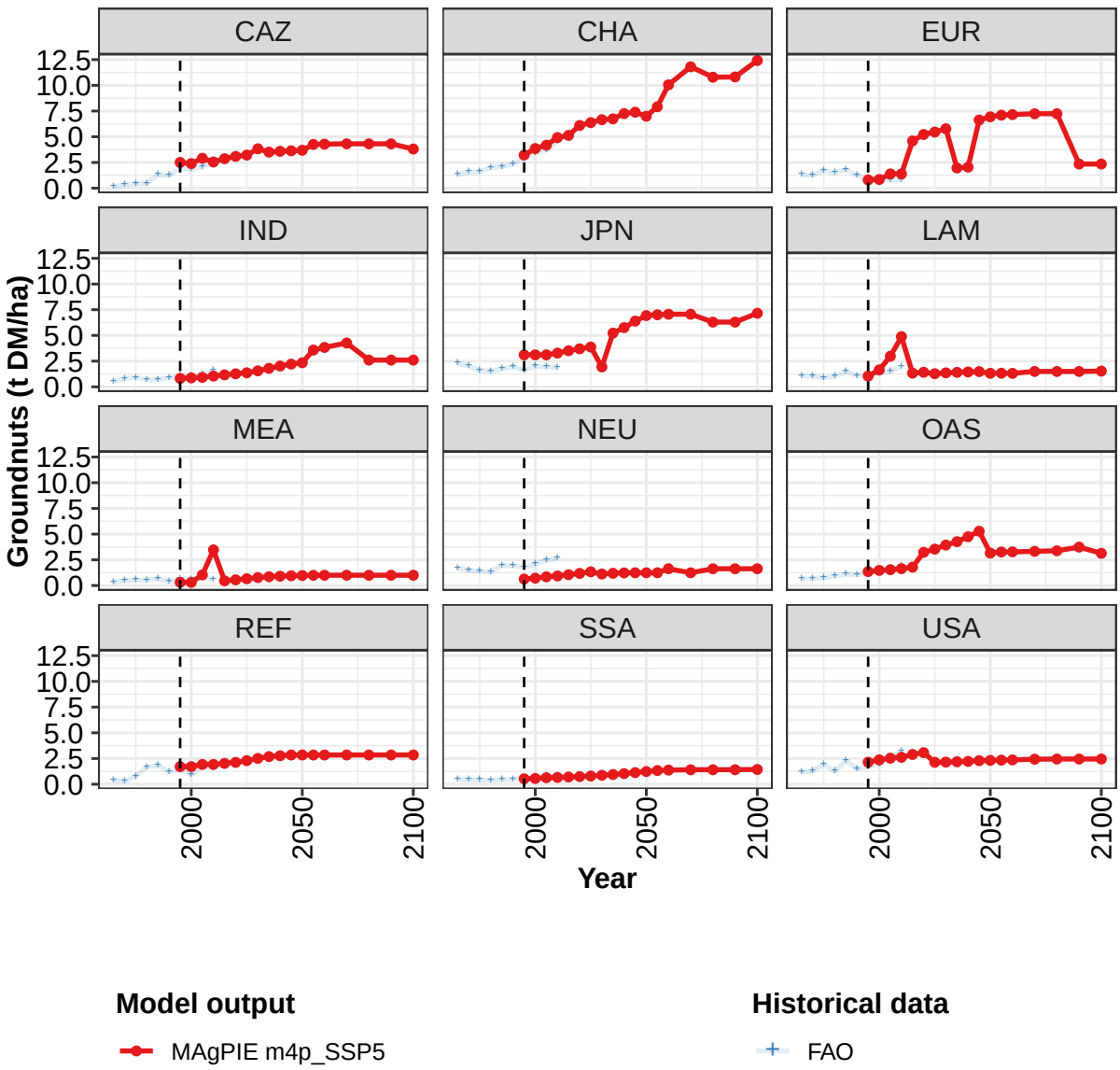
Table 1490: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Cotton seed (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.50	0.50	0.56	0.62	0.81	0.86	0.84	0.89	1.12	1.32
CAZ	0.32	0.41	0.44	0.66	2.02	1.84	1.95	2.03	2.51	2.76
CHA	1.00	1.10	1.22	1.40	1.64	1.67	1.91	2.49	2.68	3.18
EUR	0.52	0.73	0.90	0.93	1.09	1.12	1.35	1.34	1.44	0.99
IND	0.23	0.24	0.30	0.32	0.39	0.45	0.49	0.39	0.76	1.14
LAM	0.49	0.36	0.38	0.42	0.56	0.66	0.68	0.90	1.07	1.30
MEA	0.52	0.68	0.81	1.01	1.23	0.89	1.14	1.26	1.53	1.27
NEU	0.47	0.70	0.70	0.71	0.86	1.15	1.23	1.46	1.72	1.93
OAS	0.33	0.41	0.36	0.49	0.71	0.93	0.94	0.97	1.17	1.18
REF	0.92	1.06	1.20	1.32	1.43	1.32	1.17	0.99	1.21	1.08
SSA	0.15	0.20	0.20	0.22	0.26	0.32	0.34	0.33	0.41	0.47
USA	0.61	0.46	0.53	0.51	0.82	0.75	0.63	0.77	0.99	1.08

Table 1491: FAO — Productivity—Yield—Crops—Oil crops—Cotton seed (t DM/ha)

52.1.8 Oil crops—Groundnuts





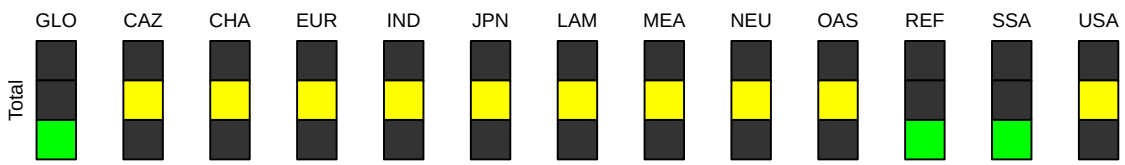


Figure 384: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Groundnuts (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.0	1.1	1.3	1.4	1.4	1.5	1.6	1.8	1.8	2.0	2.2
CAZ	2.5	2.4	2.9	2.5	2.9	3.1	3.2	3.8	3.5	3.6	3.6
CHA	3.2	3.9	4.2	4.9	5.1	6.1	6.4	6.7	6.7	7.3	7.4
EUR	0.8	0.8	1.4	1.4	4.6	5.2	5.5	5.8	2.0	2.0	6.6
IND	0.8	0.9	0.9	1.0	1.2	1.3	1.4	1.6	1.8	2.0	2.2
JPN	3.1	3.1	3.1	3.3	3.5	3.7	3.9	1.9	5.2	5.8	6.4
LAM	1.0	1.7	3.0	4.9	1.3	1.4	1.3	1.4	1.4	1.4	1.5
MEA	0.3	0.3	1.0	3.5	0.5	0.6	0.7	0.8	0.9	0.9	1.0
NEU	0.6	0.7	0.8	0.9	1.1	1.2	1.3	1.1	1.2	1.2	1.2
OAS	1.4	1.5	1.5	1.6	1.8	3.2	3.5	3.9	4.3	4.7	5.3
REF	1.7	1.7	1.9	1.9	2.0	2.1	2.3	2.5	2.7	2.8	2.8
SSA	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.1
USA	2.1	2.4	2.5	2.6	2.9	3.1	2.1	2.2	2.2	2.2	2.3

Table 1492: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Groundnuts (t DM/ha) [PART 1/2]

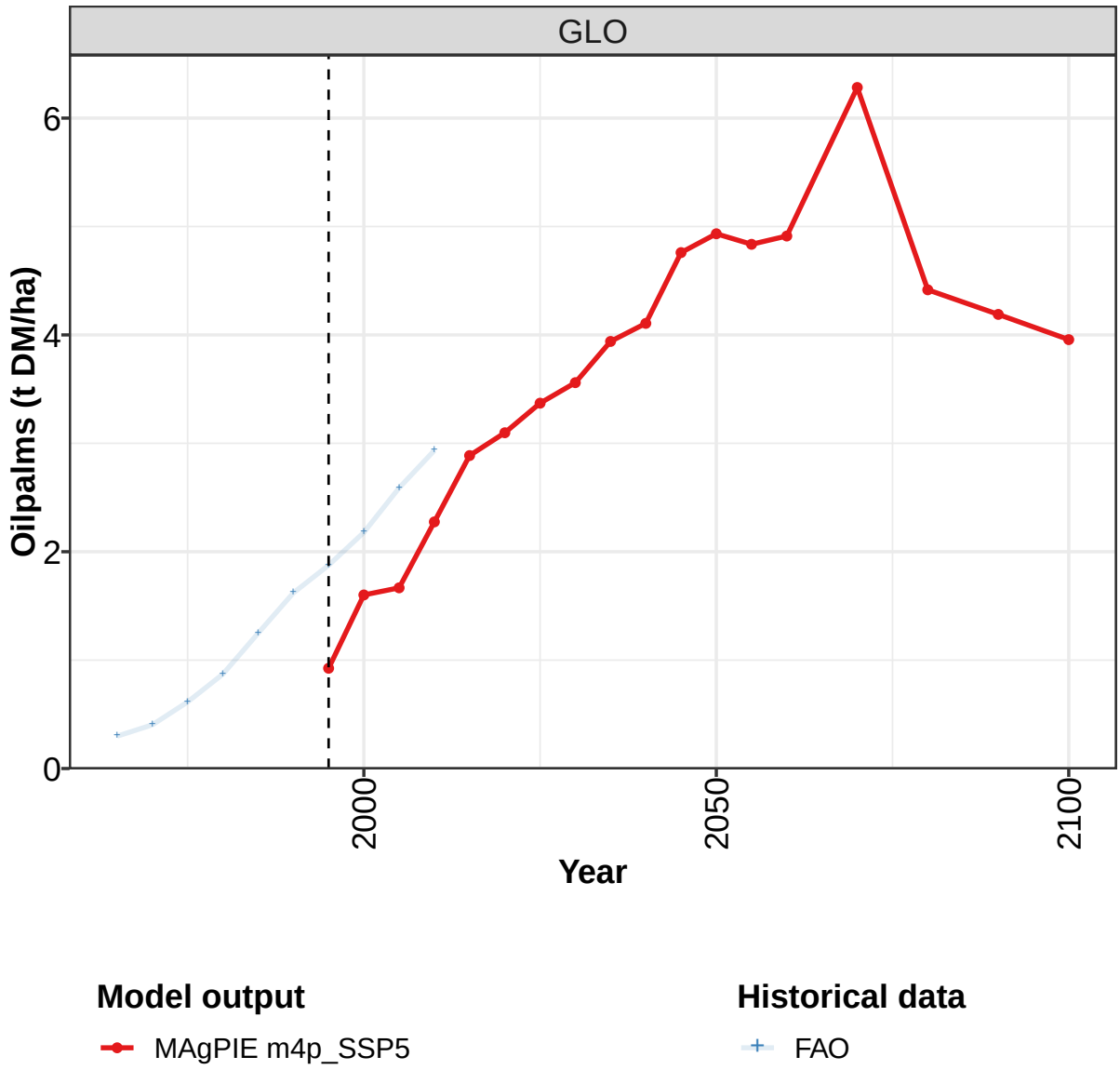
	2050	2055	2060	2070	2080	2090	2100
GLO	2.1	2.1	2.2	2.1	2.2	2.2	2.2
CAZ	3.7	4.3	4.3	4.3	4.3	4.3	3.8
CHA	7.0	7.9	10.1	11.8	10.8	10.8	12.4
EUR	6.9	7.1	7.2	7.2	7.2	2.3	2.3
IND	2.3	3.6	3.8	4.3	2.6	2.6	2.6
JPN	6.9	7.0	7.1	7.1	6.3	6.3	7.2
LAM	1.3	1.3	1.3	1.5	1.5	1.5	1.5
MEA	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NEU	1.2	1.2	1.6	1.2	1.6	1.6	1.6
OAS	3.2	3.3	3.3	3.3	3.4	3.7	3.1
REF	2.8	2.8	2.8	2.8	2.8	2.8	2.8
SSA	1.2	1.3	1.4	1.4	1.4	1.4	1.4
USA	2.3	2.3	2.4	2.4	2.5	2.5	2.5

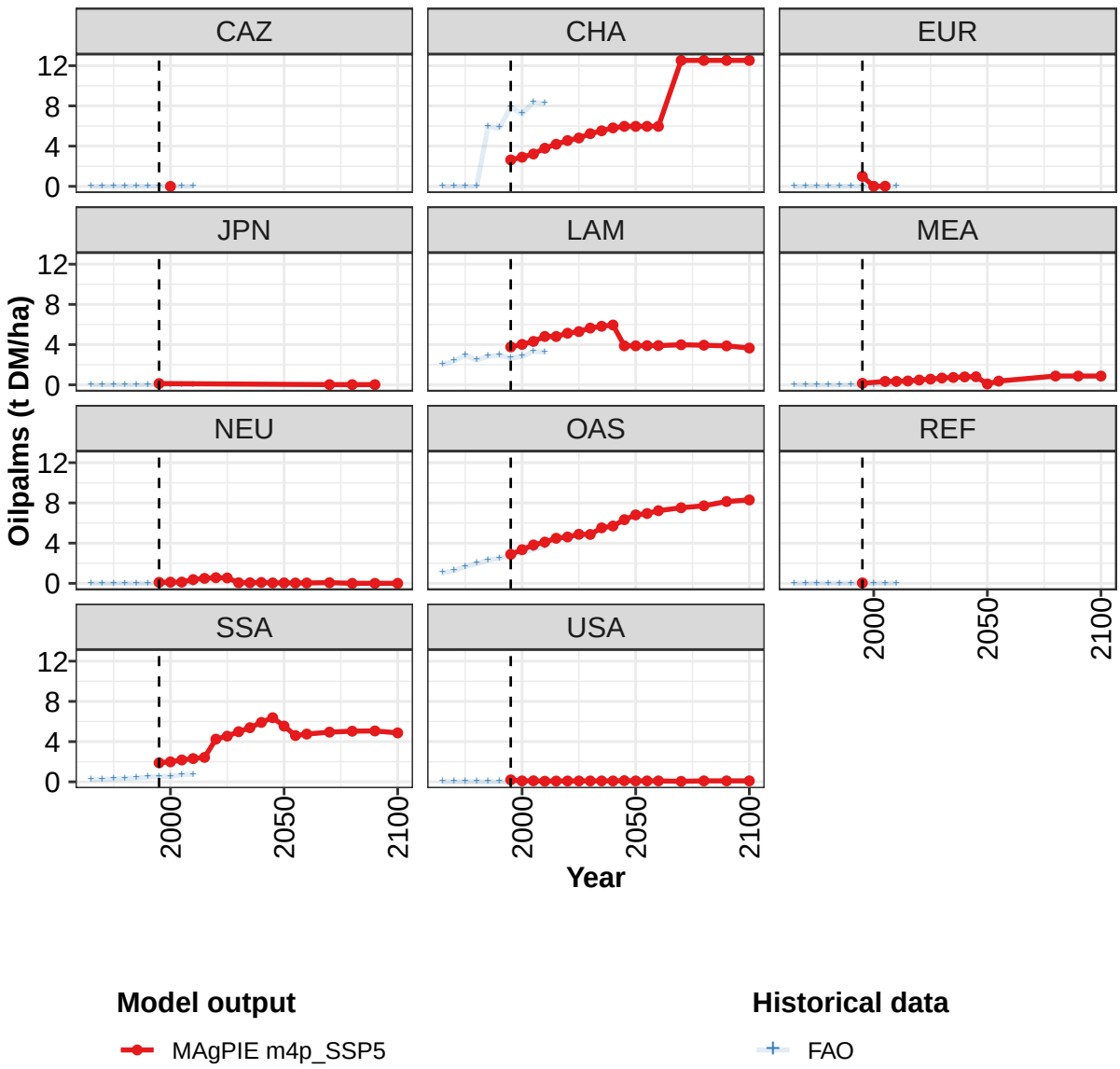
Table 1493: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Groundnuts (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.60	0.71	0.75	0.74	0.95	0.98	1.15	1.34	1.51	1.59
CAZ	0.16	0.35	0.43	0.46	1.31	1.23	1.94	1.86	2.06	2.48
CHA	1.31	1.58	1.59	2.00	2.09	2.32	2.98	3.46	3.73	4.55
EUR	1.30	1.27	1.69	1.48	1.84	1.22	1.00	0.86	0.76	0.77
IND	0.51	0.79	0.90	0.71	0.71	0.91	1.03	1.01	1.25	1.58
JPN	2.29	2.02	1.59	1.51	1.75	1.95	1.62	2.01	1.94	1.91
LAM	1.08	1.03	0.90	1.01	1.49	1.08	1.10	1.34	1.54	1.99
MEA	0.33	0.47	0.53	0.52	0.67	0.42	0.63	0.59	0.75	0.58
NEU	1.70	1.50	1.41	1.34	1.95	1.92	1.78	2.08	2.45	2.64
OAS	0.63	0.69	0.75	0.91	1.09	1.05	1.20	1.41	1.65	1.89
REF	0.41	0.29	0.77	1.67	1.85	1.22	1.43	0.96	1.68	1.55
SSA	0.48	0.44	0.42	0.38	0.44	0.49	0.53	0.72	0.79	0.81
USA	1.15	1.30	1.92	1.27	2.27	1.50	1.72	1.96	2.56	3.22

Table 1494: FAO — Productivity—Yield—Crops—Oil crops—Groundnuts (t DM/ha)

52.1.9 Oil crops—Oilpalms





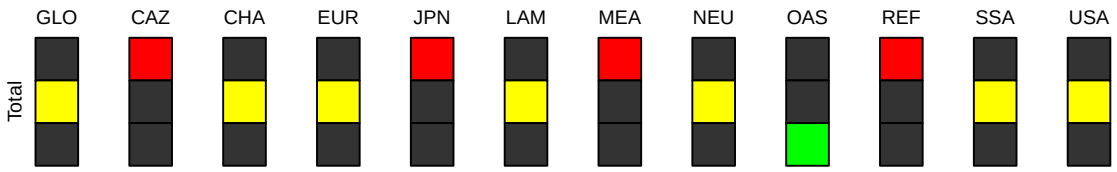


Figure 385: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Oilpalms (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1	2	2	2	3	3	3	4	4	4	5
CAZ		0									
CHA	3	3	3	4	4	5	5	5	6	6	6
EUR	1	0	0								
JPN	0										
LAM	4	4	4	5	5	5	5	6	6	6	4
MEA	0		0	0	0	0	1	1	1	1	1
NEU	0	0	0	0	0	1	1	0	0	0	0
OAS	3	3	4	4	4	5	5	5	6	6	6
REF	0										
SSA	2	2	2	2	2	4	5	5	5	6	6
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1495: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Oilpalms (t DM/ha) [PART 1/2]

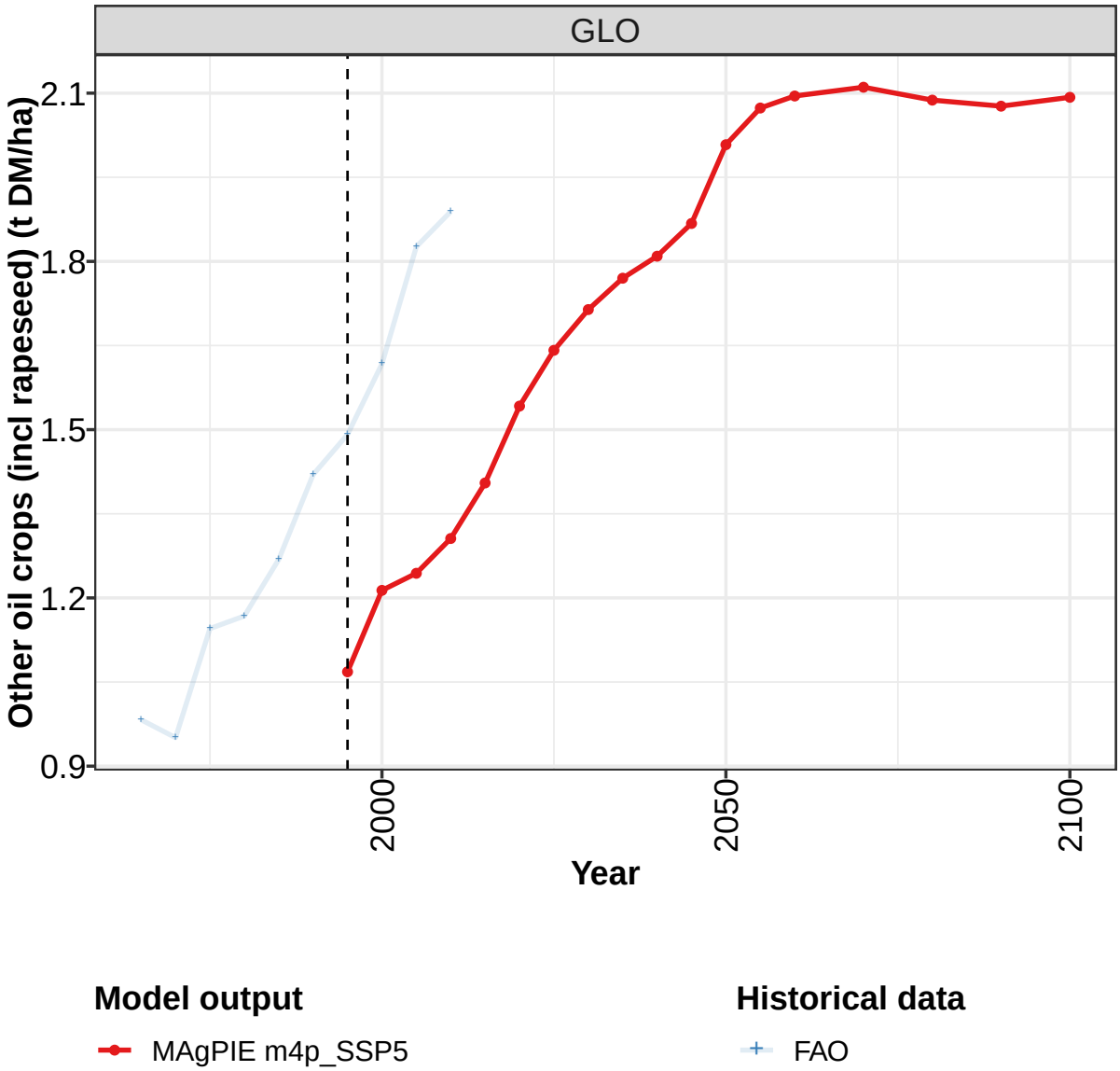
	2050	2055	2060	2070	2080	2090	2100
GLO	5	5	5	6	4	4	4
CAZ							
CHA	6	6	6	13	13	13	13
EUR							
JPN				0	0	0	
LAM	4	4	4	4	4	4	4
MEA	0	0			1	1	1
NEU	0	0	0	0	0	0	0
OAS	7	7	7	8	8	8	8
REF							
SSA	6	5	5	5	5	5	5
USA	0	0	0	0	0	0	0

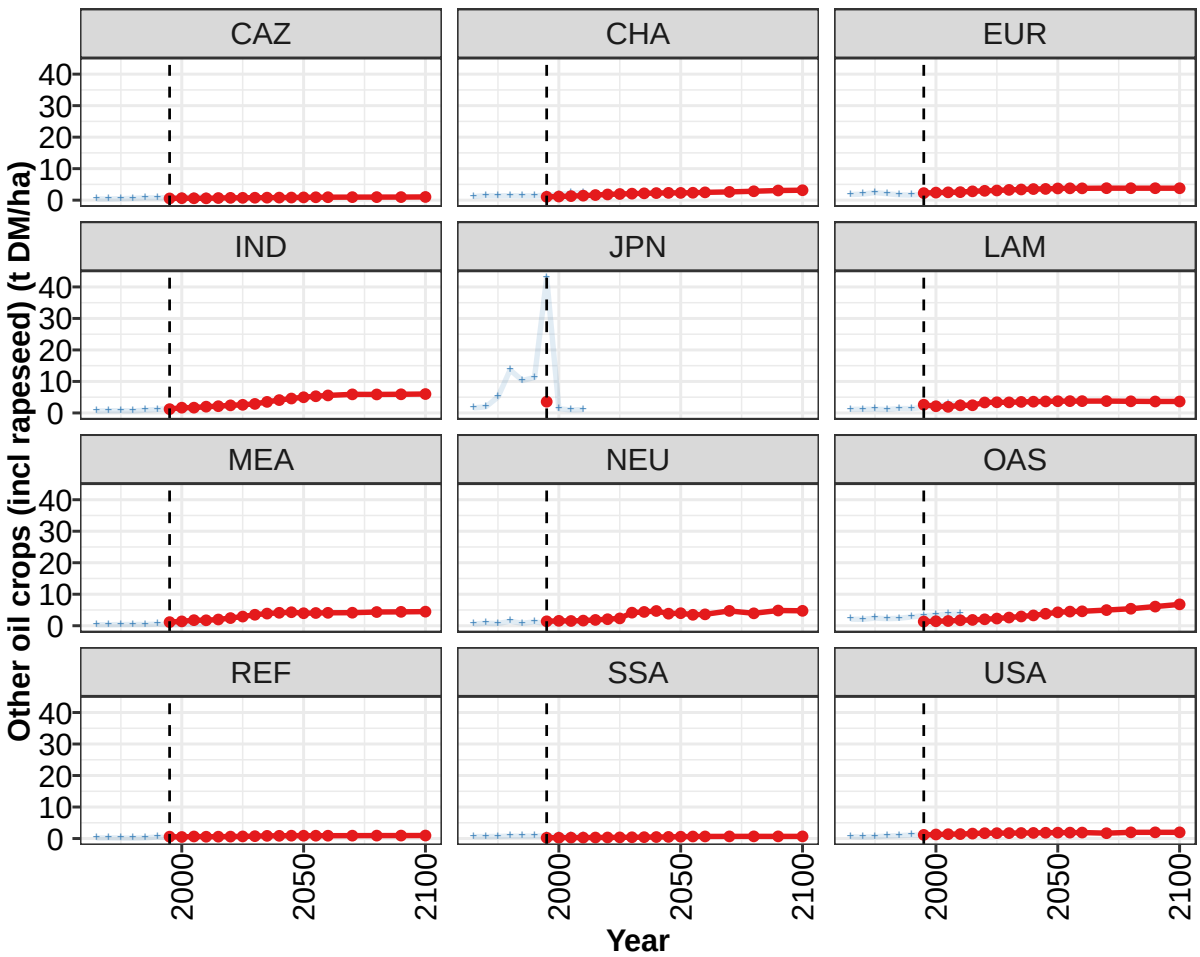
Table 1496: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Oilpalms (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.30	0.40	0.61	0.87	1.25	1.62	1.88	2.18	2.59	2.93
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	5.93	5.80	7.86	7.21	8.36	8.24
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	2.02	2.36	2.93	2.46	2.81	2.96	2.65	2.82	3.32	3.26
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	1.03	1.26	1.67	1.96	2.30	2.51	2.79	3.04	3.36	3.67
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.21	0.24	0.28	0.34	0.38	0.49	0.53	0.53	0.73	0.72
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1497: FAO — Productivity—Yield—Crops—Oil crops—Oilpalms (t DM/ha)

52.1.10 Oil crops—Other oil crops (incl rapeseed)





Model output

MAgPIE m4p_SSP5

Historical data

FAO

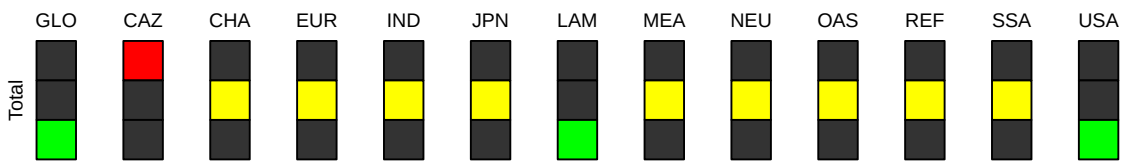


Figure 386: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Other oil crops (incl rapeseed) (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1	1	1	1	1	2	2	2	2	2	2
CAZ	1	1	1	1	1	1	1	1	1	1	1
CHA	1	1	1	1	2	2	2	2	2	2	2
EUR	2	2	2	3	3	3	3	3	3	4	4
IND	1	2	2	2	2	2	3	3	4	4	5
JPN	4										
LAM	3	2	2	2	2	3	3	3	4	4	4
MEA	1	1	2	2	2	2	3	3	4	4	4
NEU	1	2	2	2	2	2	2	4	4	5	4
OAS	1	1	2	2	2	2	2	3	3	3	4
REF	1	0	1	1	1	1	1	1	1	1	1
SSA	0	0	0	0	0	0	0	0	0	0	1
USA	1	1	1	1	2	2	2	2	2	2	2

Table 1498: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Other oil crops (incl rapeseed) (t DM/ha) [PART 1/2]

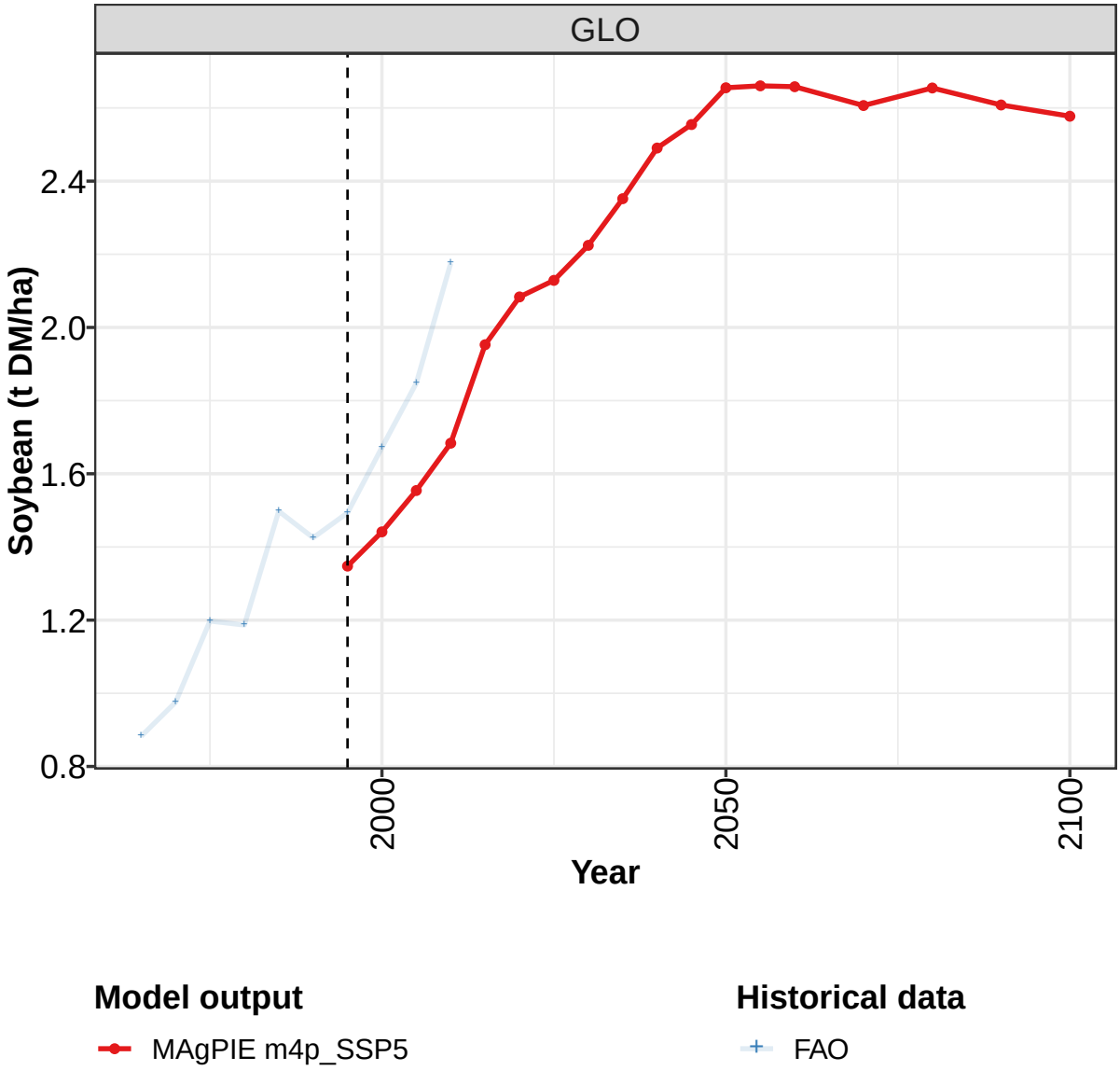
	2050	2055	2060	2070	2080	2090	2100
GLO	2	2	2	2	2	2	2
CAZ	1	1	1	1	1	1	1
CHA	2	2	2	3	3	3	3
EUR	4	4	4	4	4	4	4
IND	5	5	6	6	6	6	6
JPN							
LAM	4	4	4	4	4	4	4
MEA	4	4	4	4	4	4	4
NEU	4	3	4	5	4	5	5
OAS	4	4	5	5	5	6	7
REF	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1
USA	2	2	2	2	2	2	2

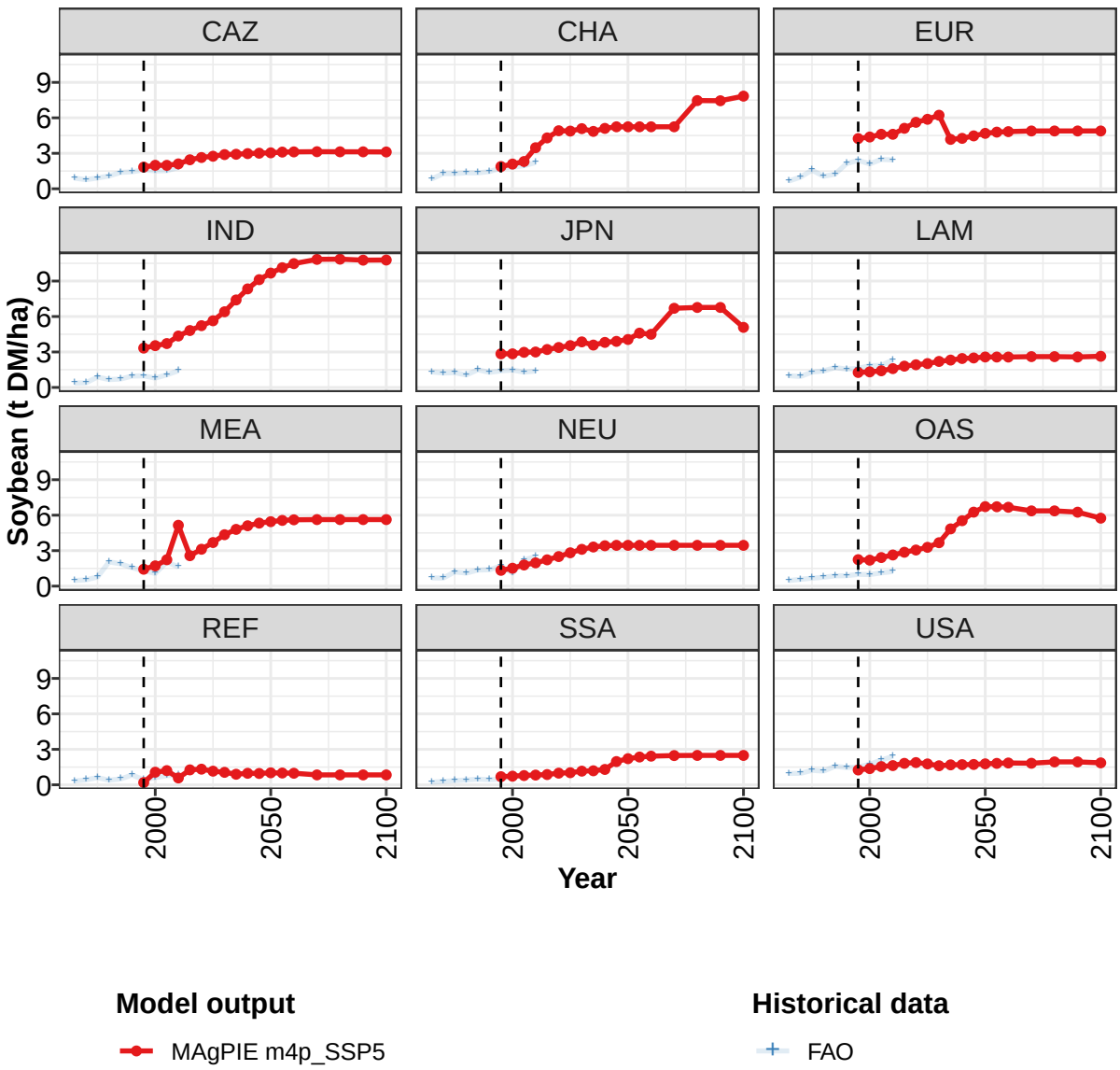
Table 1499: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Other oil crops (incl rapeseed) (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.8	1.9
CAZ	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.2
CHA	1.1	1.5	1.4	1.4	1.4	1.4	1.6	1.8	2.2	2.5
EUR	1.8	1.9	2.4	2.0	1.7	1.6	1.8	2.1	2.3	2.4
IND	0.6	0.7	0.7	0.6	0.9	1.1	1.4	1.3	1.5	1.9
JPN	1.6	1.9	5.0	13.6	10.3	11.3	43.0	1.4	0.9	1.1
LAM	1.2	1.2	1.2	1.1	1.4	1.4	1.8	2.2	2.8	3.0
MEA	0.3	0.3	0.4	0.4	0.4	0.5	0.3	0.4	0.6	0.6
NEU	0.5	0.8	0.7	1.4	0.8	1.2	0.7	1.9	1.3	1.4
OAS	2.1	2.0	2.4	2.2	2.4	2.8	3.2	3.4	3.7	3.7
REF	0.2	0.2	0.2	0.1	0.2	0.5	0.3	0.4	0.7	0.7
SSA	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
USA	0.6	0.4	0.6	0.8	0.9	1.1	1.1	1.1	1.2	1.7

Table 1500: FAO — Productivity—Yield—Crops—Oil crops—Other oil crops (incl rapeseed) (t DM/ha)

52.1.11 Oil crops—Soybean





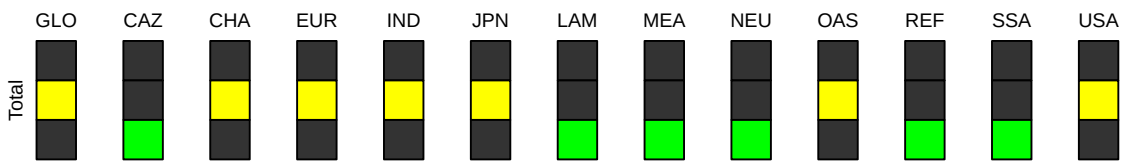


Figure 387: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Soybean (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.3	1.4	1.6	1.7	2.0	2.1	2.1	2.2	2.4	2.5	2.6
CAZ	1.8	2.0	2.0	2.1	2.5	2.6	2.8	2.9	2.9	3.0	3.0
CHA	1.9	2.1	2.3	3.5	4.3	4.9	4.9	5.1	4.9	5.1	5.2
EUR	4.2	4.4	4.6	4.6	5.1	5.6	5.9	6.2	4.2	4.3	4.5
IND	3.3	3.5	3.7	4.4	4.8	5.2	5.6	6.4	7.4	8.3	9.1
JPN	2.8	2.8	3.0	3.0	3.2	3.4	3.5	3.9	3.6	3.8	3.9
LAM	1.3	1.3	1.4	1.6	1.8	1.9	2.0	2.2	2.3	2.4	2.5
MEA	1.4	1.7	2.2	5.1	2.6	3.1	3.7	4.4	4.8	5.1	5.3
NEU	1.3	1.5	1.8	2.0	2.2	2.5	2.8	3.1	3.3	3.4	3.5
OAS	2.2	2.2	2.4	2.6	2.9	3.1	3.3	3.7	4.8	5.5	6.3
REF	0.2	1.1	1.2	0.6	1.3	1.3	1.2	1.1	0.9	1.0	1.0
SSA	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.2	1.2	1.3	2.0
USA	1.3	1.4	1.5	1.6	1.8	1.9	1.8	1.6	1.7	1.7	1.7

Table 1501: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Soybean (t DM/ha) [PART 1/2]

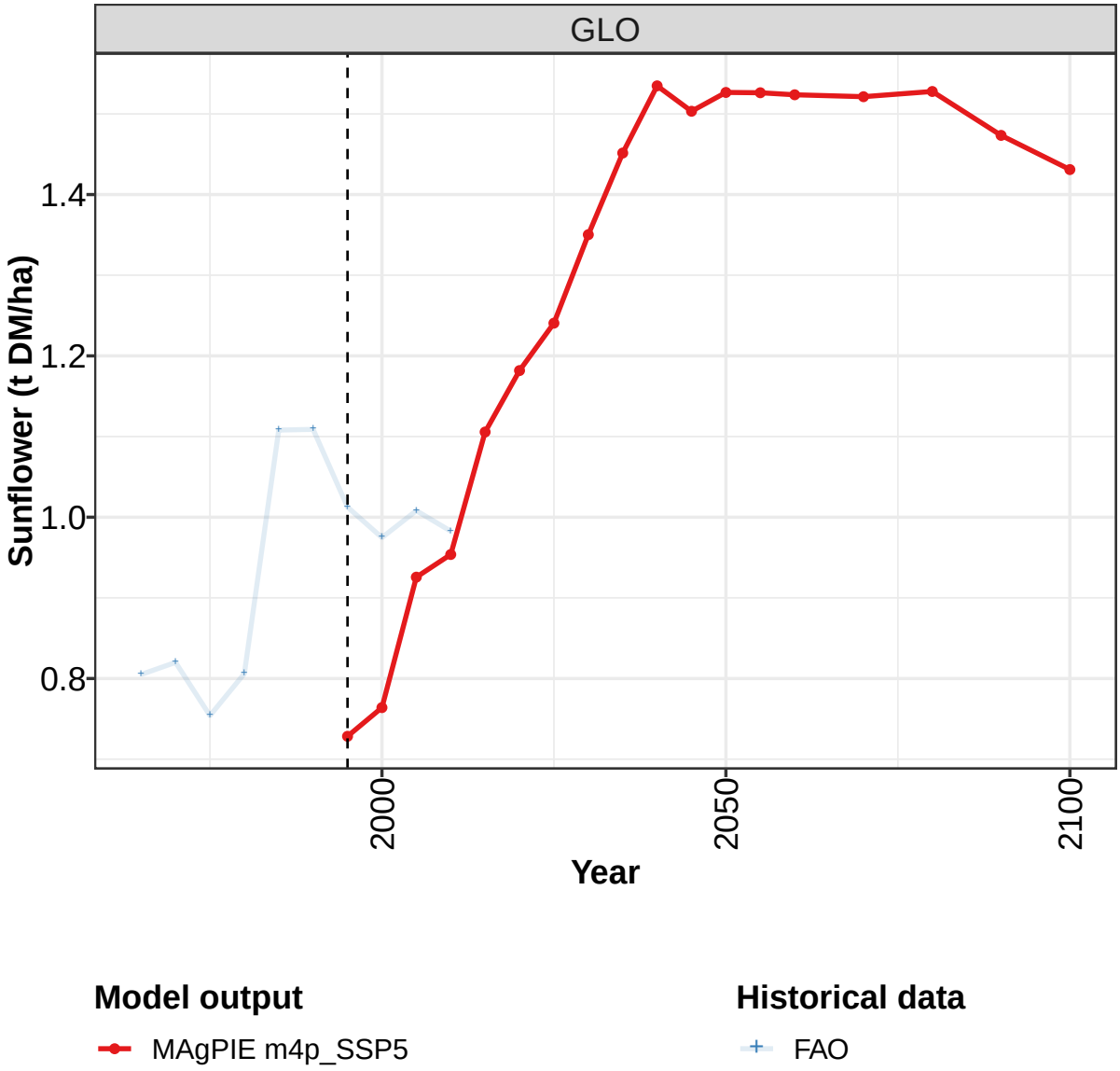
	2050	2055	2060	2070	2080	2090	2100
GLO	2.7	2.7	2.7	2.6	2.7	2.6	2.6
CAZ	3.0	3.1	3.1	3.1	3.1	3.1	3.1
CHA	5.2	5.2	5.2	5.2	7.5	7.4	7.8
EUR	4.7	4.8	4.8	4.9	4.9	4.9	4.9
IND	9.7	10.1	10.5	10.8	10.9	10.8	10.8
JPN	4.1	4.6	4.5	6.7	6.8	6.8	5.1
LAM	2.6	2.6	2.6	2.6	2.6	2.6	2.6
MEA	5.5	5.6	5.6	5.6	5.6	5.6	5.6
NEU	3.5	3.5	3.5	3.5	3.5	3.5	3.5
OAS	6.7	6.7	6.7	6.4	6.4	6.3	5.8
REF	1.0	1.0	1.0	0.8	0.8	0.8	0.8
SSA	2.2	2.4	2.4	2.5	2.5	2.5	2.5
USA	1.8	1.8	1.8	1.8	1.9	1.9	1.9

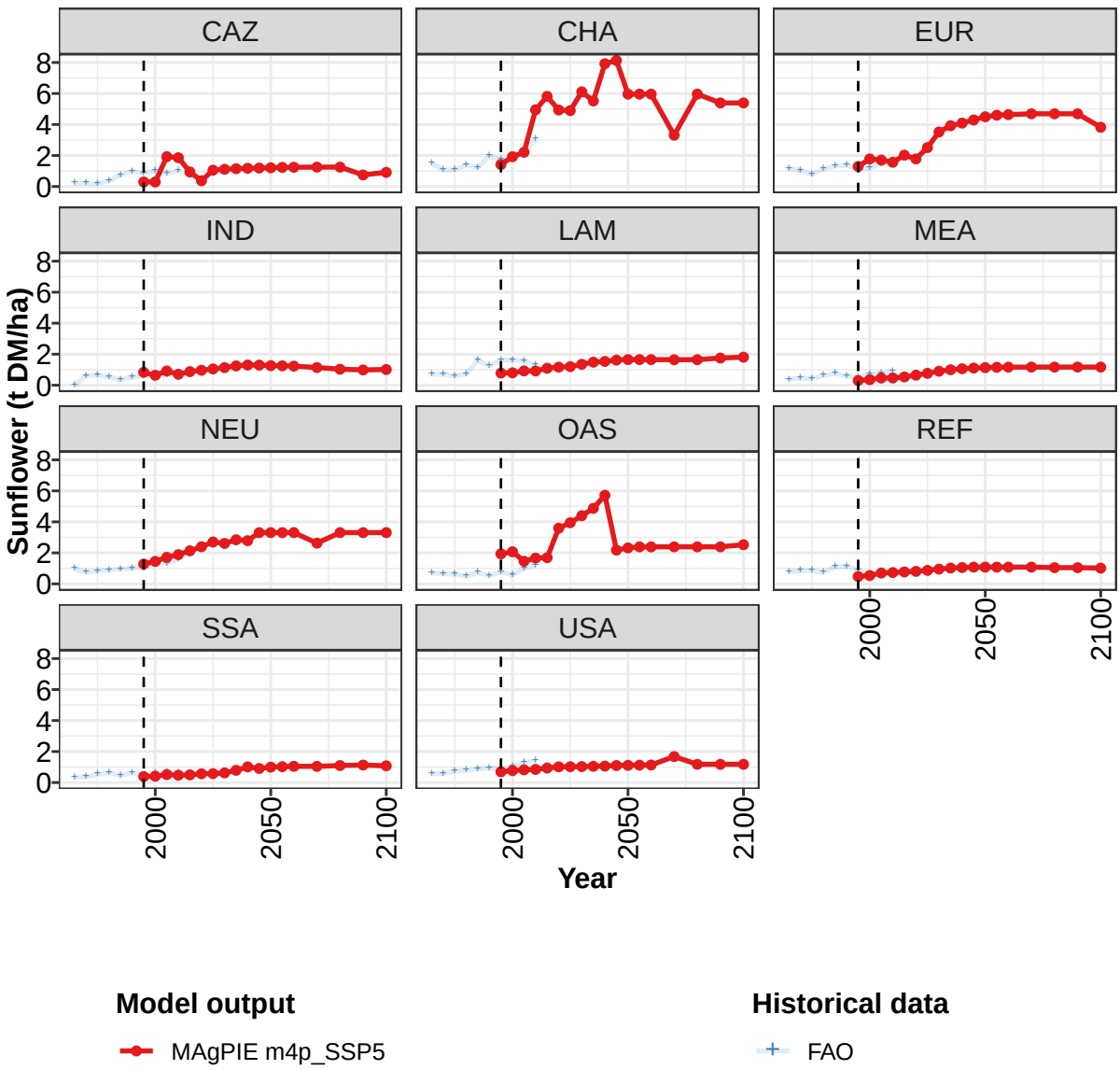
Table 1502: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Soybean (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.88	0.98	1.20	1.19	1.50	1.43	1.49	1.67	1.85	2.18
CAZ	0.90	0.77	0.92	1.09	1.38	1.44	1.60	1.52	1.53	1.80
CHA	0.83	1.28	1.28	1.35	1.34	1.46	1.74	1.82	1.96	2.21
EUR	0.66	0.98	1.58	1.06	1.24	2.13	2.40	2.10	2.48	2.44
IND	0.38	0.39	0.88	0.67	0.71	0.96	0.98	0.79	1.07	1.41
JPN	1.32	1.22	1.25	1.06	1.50	1.28	1.40	1.48	1.29	1.39
LAM	1.00	0.93	1.30	1.39	1.69	1.55	1.61	1.84	1.87	2.32
MEA	0.47	0.53	0.77	2.05	1.89	1.56	1.30	1.07	2.04	1.63
NEU	0.70	0.68	1.20	1.10	1.36	1.38	1.71	1.10	2.21	2.50
OAS	0.47	0.58	0.67	0.75	0.87	0.88	0.99	0.98	1.12	1.24
REF	0.32	0.42	0.61	0.39	0.50	0.83	0.43	0.61	0.77	0.82
SSA	0.22	0.29	0.35	0.41	0.48	0.43	0.48	0.80	0.78	0.83
USA	0.96	0.97	1.22	1.16	1.56	1.46	1.51	1.74	2.09	2.40

Table 1503: FAO — Productivity—Yield—Crops—Oil crops—Soybean (t DM/ha)

52.1.12 Oil crops—Sunflower





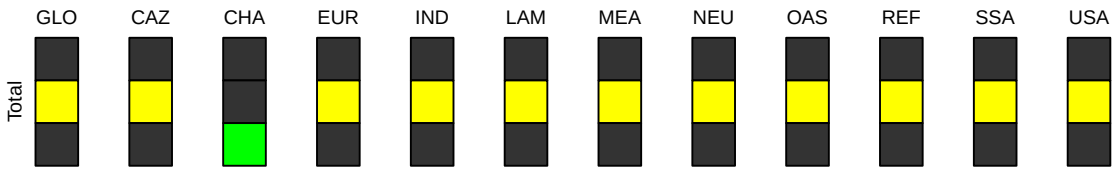


Figure 388: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Sunflower (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.73	0.76	0.93	0.95	1.11	1.18	1.24	1.35	1.45	1.53	1.50
CAZ	0.30	0.29	1.93	1.86	0.94	0.37	1.05	1.11	1.15	1.18	1.19
CHA	1.42	1.92	2.21	4.95	5.82	4.94	4.90	6.11	5.52	7.92	8.13
EUR	1.29	1.78	1.71	1.57	2.02	1.78	2.51	3.52	3.92	4.09	4.29
IND	0.83	0.64	0.92	0.70	0.88	0.96	1.05	1.14	1.25	1.30	1.30
LAM	0.78	0.80	0.92	0.92	1.10	1.17	1.20	1.35	1.49	1.53	1.62
MEA	0.30	0.36	0.46	0.47	0.53	0.65	0.77	0.90	1.00	1.06	1.11
NEU	1.28	1.45	1.71	1.89	2.13	2.40	2.70	2.61	2.85	2.79	3.31
OAS	1.94	2.07	1.46	1.67	1.69	3.59	3.94	4.40	4.87	5.72	2.18
REF	0.47	0.54	0.70	0.73	0.77	0.81	0.87	0.96	1.02	1.05	1.08
SSA	0.39	0.41	0.51	0.47	0.50	0.57	0.58	0.63	0.79	1.01	0.91
USA	0.69	0.77	0.82	0.85	0.94	1.02	1.02	1.03	1.05	1.07	1.10

Table 1504: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Sunflower (t DM/ha) [PART 1/2]

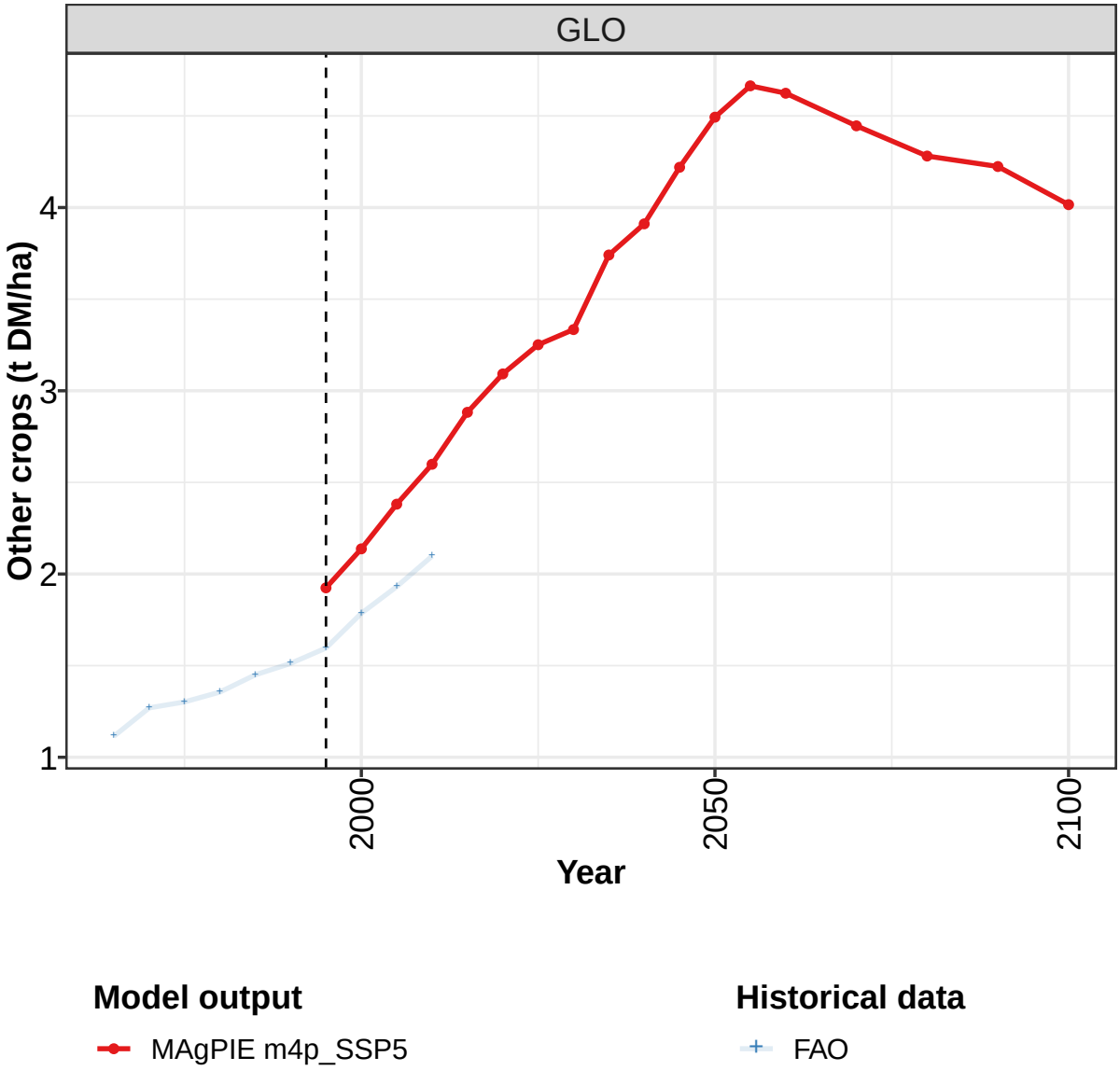
	2050	2055	2060	2070	2080	2090	2100
GLO	1.53	1.53	1.52	1.52	1.53	1.47	1.43
CAZ	1.21	1.23	1.24	1.25	1.25	0.75	0.91
CHA	5.96	5.96	5.96	3.31	5.96	5.39	5.39
EUR	4.50	4.60	4.64	4.69	4.69	4.69	3.82
IND	1.26	1.25	1.23	1.14	1.03	0.99	1.01
LAM	1.65	1.65	1.65	1.64	1.65	1.75	1.81
MEA	1.13	1.15	1.17	1.17	1.17	1.17	1.17
NEU	3.31	3.31	3.31	2.63	3.31	3.31	3.31
OAS	2.32	2.39	2.39	2.39	2.39	2.39	2.53
REF	1.08	1.08	1.08	1.08	1.05	1.05	1.02
SSA	1.00	1.02	1.05	1.05	1.10	1.13	1.08
USA	1.11	1.12	1.13	1.68	1.18	1.18	1.18

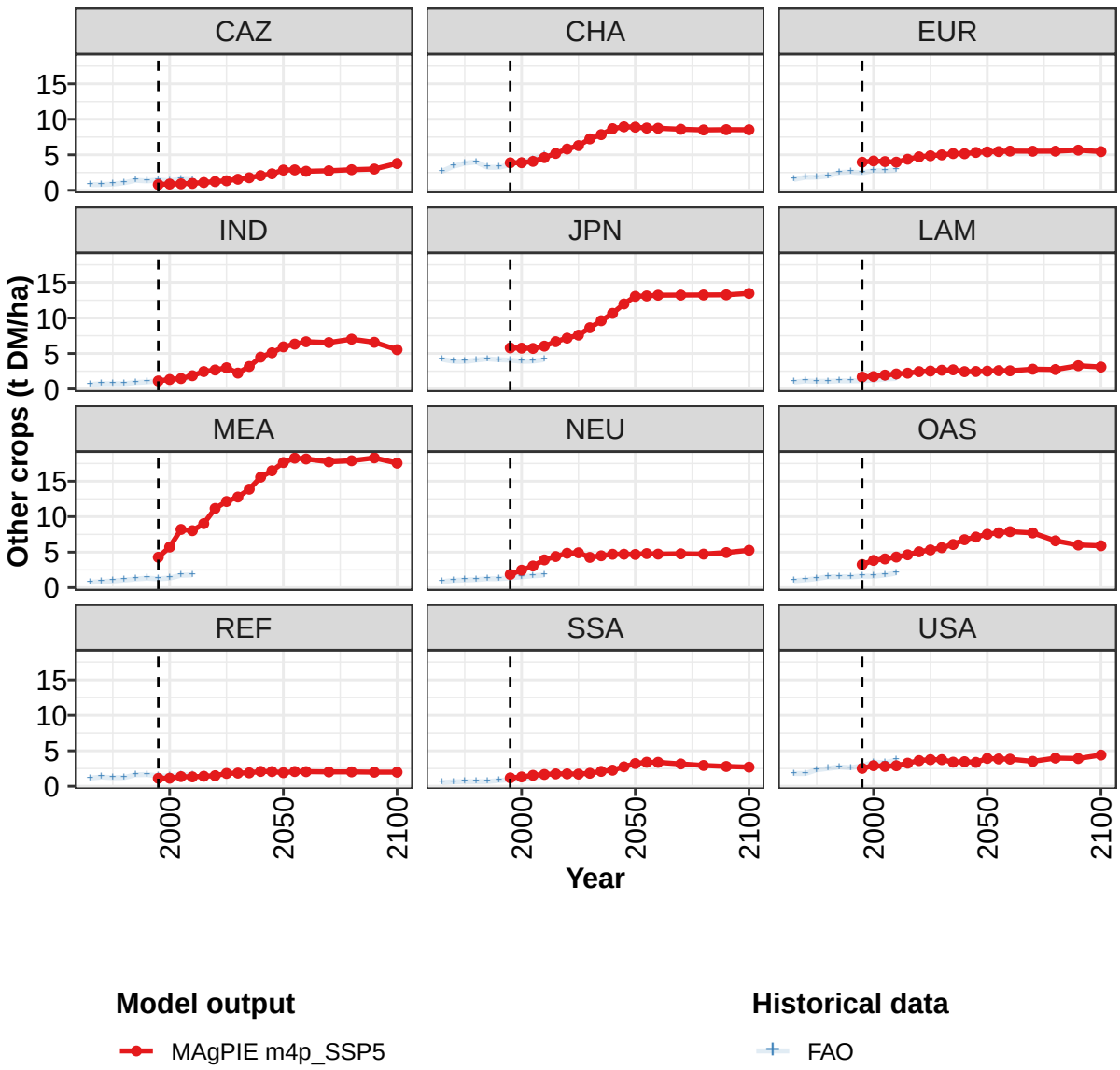
Table 1505: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Oil crops—Sunflower (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.81	0.82	0.75	0.81	1.11	1.11	1.01	0.97	1.01	0.98
CAZ	0.22	0.23	0.20	0.36	0.74	0.99	0.86	1.00	0.84	1.03
CHA	1.50	1.07	1.08	1.39	1.21	1.97	1.72	1.83	2.28	3.05
EUR	1.17	1.05	0.78	1.13	1.32	1.38	1.14	1.19	1.46	1.60
IND	0.00	0.61	0.65	0.53	0.36	0.53	0.60	0.61	0.64	0.78
LAM	0.72	0.71	0.61	0.74	1.60	1.23	1.61	1.63	1.56	1.30
MEA	0.38	0.46	0.42	0.63	0.77	0.59	0.52	0.71	0.77	0.89
NEU	0.97	0.76	0.84	0.90	0.96	1.01	1.20	1.25	1.33	1.59
OAS	0.70	0.67	0.64	0.50	0.73	0.54	0.76	0.59	1.00	1.20
REF	0.79	0.86	0.86	0.73	1.10	1.15	0.86	0.66	0.77	0.69
SSA	0.32	0.37	0.55	0.65	0.46	0.63	0.45	0.64	0.67	0.65
USA	0.58	0.57	0.75	0.78	0.89	0.92	0.89	1.06	1.30	1.40

Table 1506: FAO — Productivity—Yield—Crops—Oil crops—Sunflower (t DM/ha)

52.1.13 Other crops





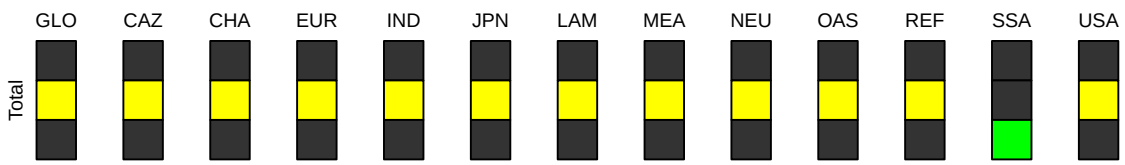


Figure 389: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.9	2.1	2.4	2.6	2.9	3.1	3.3	3.3	3.7	3.9	4.2
CAZ	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.6	1.8	2.1	2.3
CHA	3.9	3.9	4.1	4.6	5.2	5.8	6.3	7.2	7.8	8.7	8.9
EUR	4.0	4.1	4.0	4.0	4.4	4.7	4.9	5.0	5.2	5.2	5.3
IND	1.1	1.3	1.5	1.9	2.4	2.7	3.0	2.2	3.2	4.5	5.1
JPN	5.8	5.7	5.7	6.0	6.7	7.2	7.6	8.6	9.6	10.7	12.0
LAM	1.7	1.8	2.0	2.1	2.2	2.4	2.5	2.6	2.7	2.4	2.5
MEA	4.3	5.7	8.2	8.0	9.0	11.2	12.1	12.8	13.9	15.6	16.5
NEU	1.9	2.5	3.0	3.9	4.4	4.8	4.9	4.3	4.5	4.7	4.7
OAS	3.3	3.8	4.0	4.3	4.6	5.0	5.3	5.6	6.1	6.8	7.1
REF	1.1	1.1	1.4	1.3	1.4	1.5	1.8	1.9	1.9	2.1	2.1
SSA	1.2	1.3	1.5	1.7	1.7	1.8	1.7	1.8	2.1	2.3	2.7
USA	2.5	2.9	2.8	2.9	3.3	3.6	3.8	3.8	3.4	3.5	3.4

Table 1507: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops (t DM/ha) [PART 1/2]

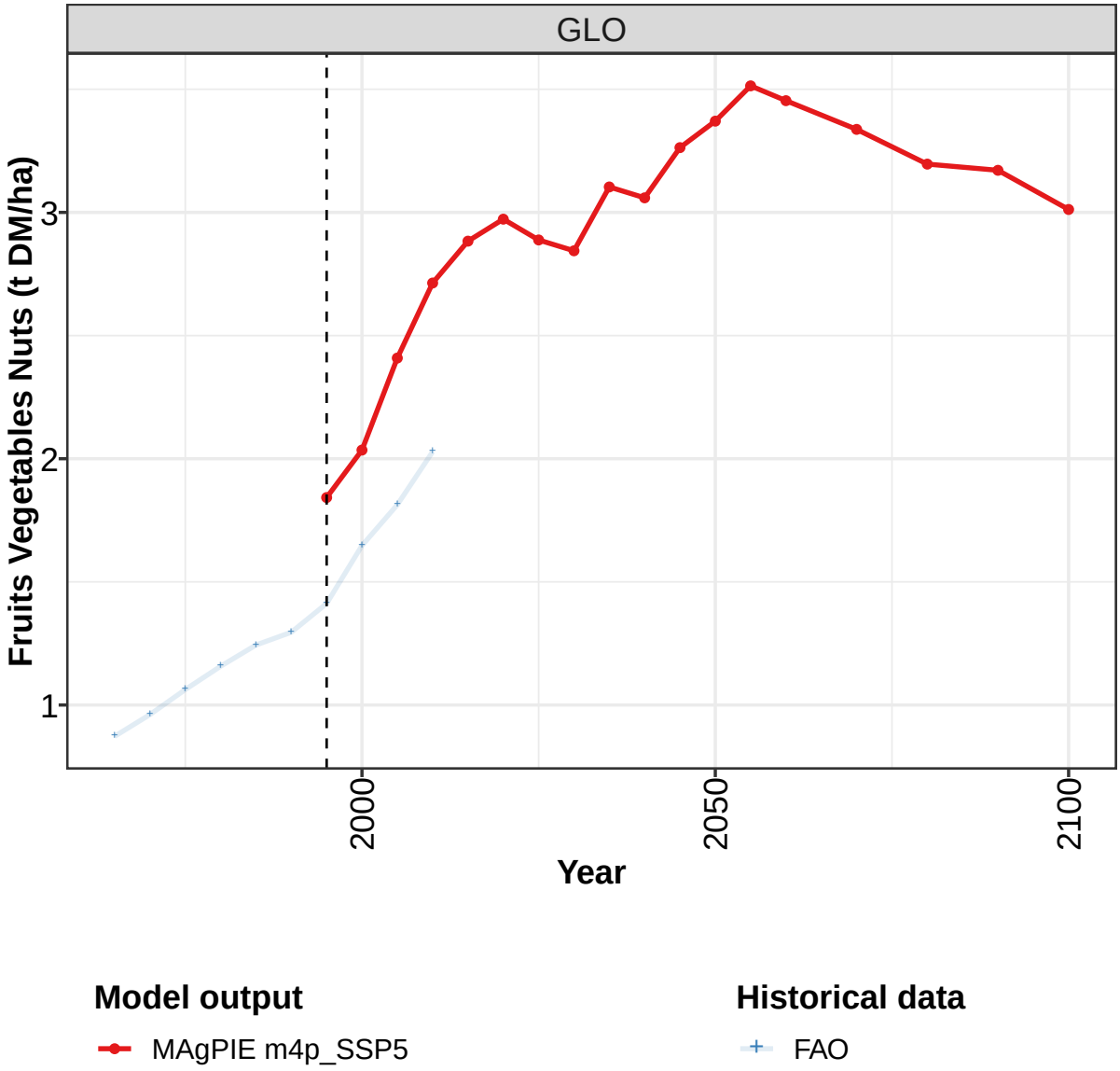
	2050	2055	2060	2070	2080	2090	2100
GLO	4.5	4.7	4.6	4.4	4.3	4.2	4.0
CAZ	2.9	2.9	2.7	2.8	2.9	3.0	3.8
CHA	8.9	8.8	8.7	8.6	8.5	8.5	8.5
EUR	5.4	5.5	5.5	5.5	5.5	5.7	5.4
IND	5.9	6.3	6.7	6.5	7.0	6.6	5.5
JPN	13.1	13.1	13.2	13.2	13.2	13.3	13.5
LAM	2.5	2.6	2.6	2.8	2.7	3.3	3.1
MEA	17.6	18.3	18.1	17.7	17.9	18.3	17.5
NEU	4.7	4.8	4.7	4.8	4.7	4.9	5.3
OAS	7.5	7.7	7.9	7.7	6.6	6.0	5.9
REF	1.9	2.1	2.1	2.0	2.0	2.0	2.0
SSA	3.2	3.4	3.4	3.1	2.9	2.8	2.7
USA	3.9	3.9	3.8	3.5	4.0	3.9	4.4

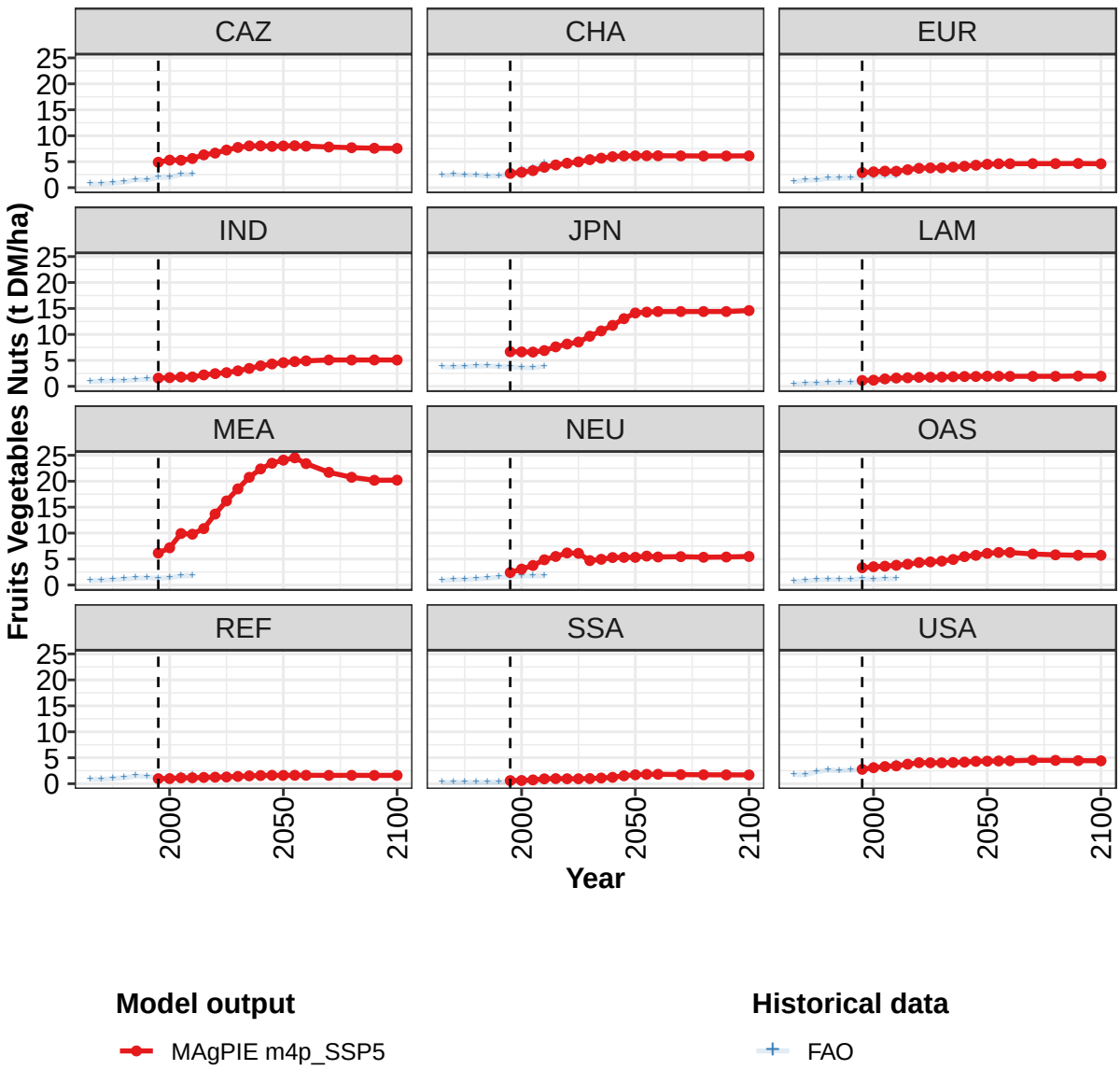
Table 1508: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.11	1.27	1.30	1.36	1.45	1.51	1.60	1.79	1.93	2.10
CAZ	0.79	0.81	0.86	1.06	1.40	1.32	1.45	1.32	1.56	1.48
CHA	2.68	3.38	3.81	3.98	3.25	3.23	3.61	4.08	4.36	4.97
EUR	1.53	1.83	1.85	2.01	2.50	2.57	2.45	2.77	2.74	2.84
IND	0.64	0.73	0.74	0.73	0.90	0.99	1.15	1.40	1.37	1.63
JPN	4.18	3.89	3.87	4.06	4.24	4.12	4.06	3.89	3.92	4.14
LAM	0.97	1.12	1.07	1.07	1.14	1.13	1.17	1.24	1.40	1.49
MEA	0.76	0.83	0.94	1.07	1.22	1.33	1.24	1.35	1.74	1.80
NEU	0.82	1.02	1.07	1.14	1.25	1.26	1.37	1.54	1.66	1.77
OAS	0.97	1.10	1.27	1.54	1.54	1.53	1.62	1.61	1.78	2.05
REF	1.15	1.30	1.22	1.23	1.62	1.65	1.47	1.44	1.68	1.60
SSA	0.53	0.63	0.66	0.64	0.66	0.81	0.92	1.04	1.21	1.35
USA	1.80	1.80	2.32	2.52	2.71	2.61	2.87	3.40	3.31	3.69

Table 1509: FAO — Productivity—Yield—Crops—Other crops (t DM/ha)

52.1.14 Other crops—Fruits Vegetables Nuts





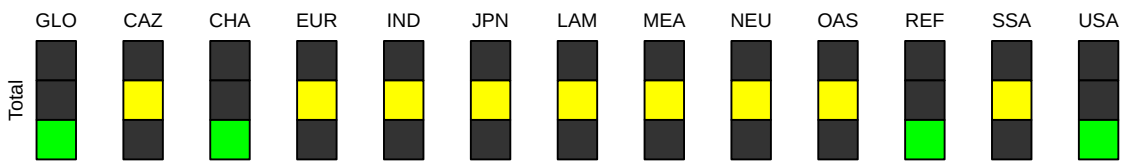


Figure 390: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Fruits Vegetables Nuts (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.8	2.0	2.4	2.7	2.9	3.0	2.9	2.8	3.1	3.1	3.3
CAZ	4.9	5.3	5.3	5.6	6.3	6.7	7.2	7.7	8.0	8.1	8.0
CHA	2.7	3.0	3.3	3.9	4.4	4.7	5.0	5.4	5.7	6.0	6.1
EUR	2.9	3.0	3.2	3.2	3.5	3.7	3.8	3.8	4.0	4.1	4.3
IND	1.6	1.7	1.8	1.8	2.2	2.4	2.6	3.0	3.5	4.0	4.3
JPN	6.7	6.6	6.6	6.9	7.6	8.1	8.5	9.7	10.7	11.7	13.0
LAM	1.1	1.2	1.4	1.6	1.6	1.7	1.7	1.8	1.9	1.9	1.9
MEA	6.2	7.2	9.9	9.8	10.9	13.7	16.2	18.5	20.8	22.4	23.5
NEU	2.4	3.1	3.8	4.9	5.5	6.2	6.1	4.7	5.0	5.3	5.3
OAS	3.3	3.5	3.6	3.8	4.0	4.3	4.5	4.6	4.9	5.5	5.7
REF	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.6
SSA	0.6	0.6	0.7	0.9	1.0	1.0	0.9	1.0	1.1	1.2	1.5
USA	2.8	3.1	3.3	3.4	3.8	4.1	4.0	4.0	4.1	4.2	4.3

Table 1510: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Fruits Vegetables Nuts (t DM/ha) [PART 1/2]

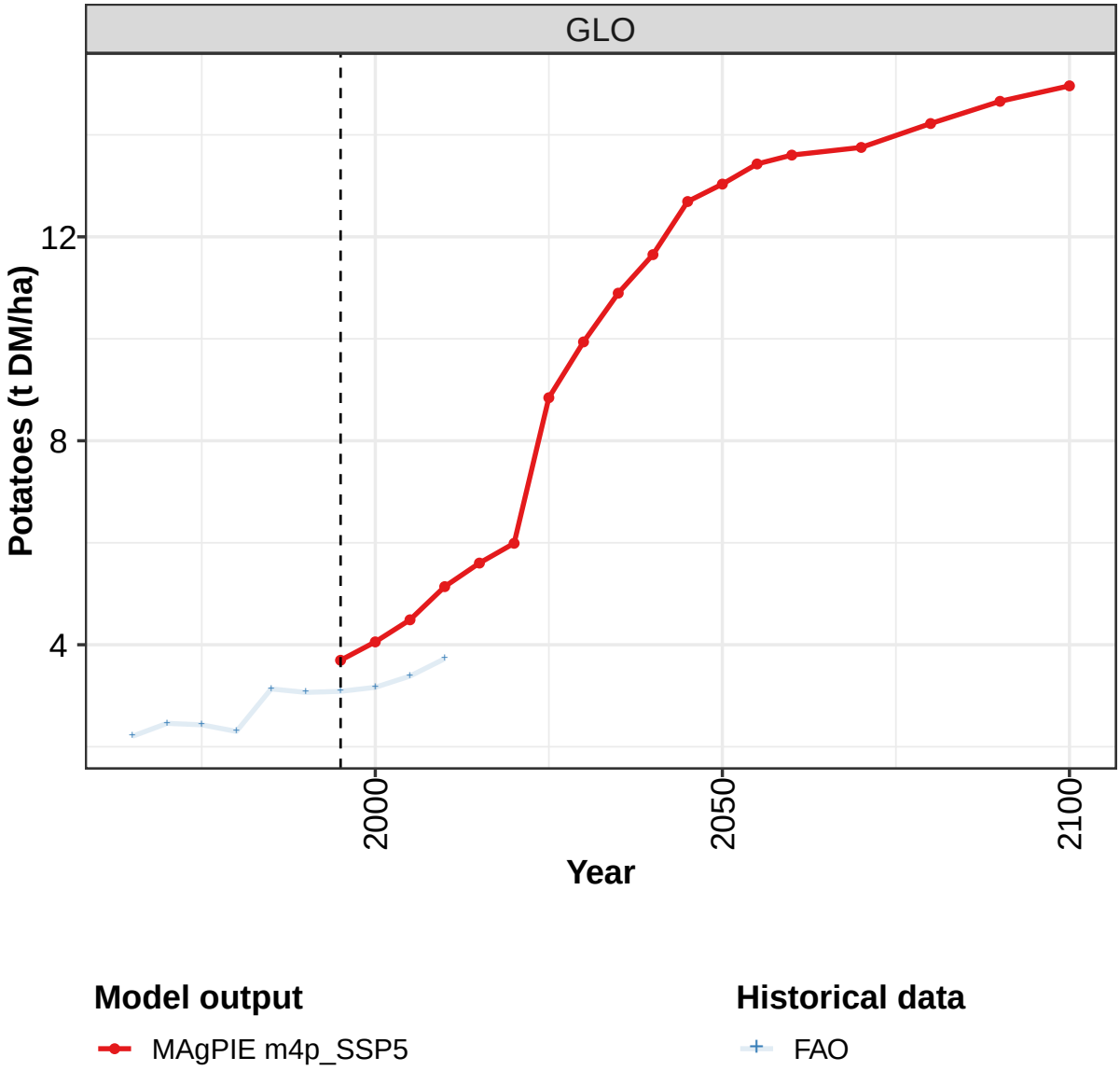
	2050	2055	2060	2070	2080	2090	2100
GLO	3.4	3.5	3.5	3.3	3.2	3.2	3.0
CAZ	8.0	8.1	8.0	7.8	7.7	7.6	7.6
CHA	6.1	6.1	6.1	6.1	6.1	6.1	6.1
EUR	4.5	4.6	4.6	4.6	4.6	4.7	4.6
IND	4.6	4.8	4.9	5.1	5.1	5.1	5.1
JPN	14.1	14.3	14.4	14.4	14.4	14.4	14.6
LAM	2.0	2.0	1.9	1.9	1.9	2.0	2.0
MEA	24.1	24.5	23.4	21.7	20.8	20.2	20.2
NEU	5.3	5.6	5.4	5.5	5.3	5.4	5.5
OAS	6.1	6.3	6.3	6.0	5.8	5.7	5.7
REF	1.6	1.6	1.6	1.6	1.6	1.6	1.6
SSA	1.7	1.8	1.8	1.8	1.7	1.7	1.7
USA	4.3	4.4	4.4	4.5	4.5	4.4	4.4

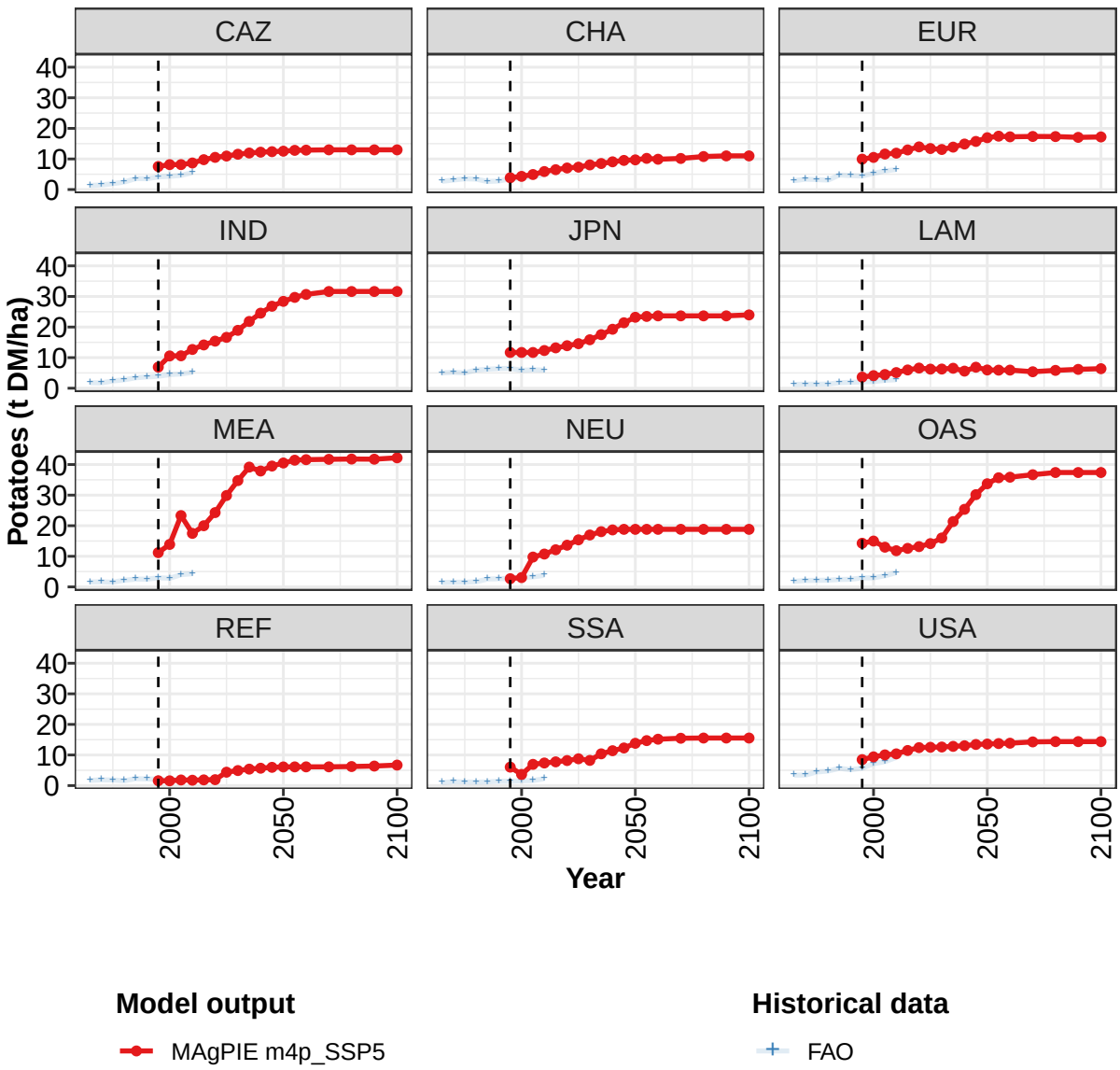
Table 1511: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Fruits Vegetables Nuts (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.87	0.96	1.06	1.16	1.24	1.30	1.41	1.65	1.81	2.03
CAZ	0.68	0.71	0.87	1.07	1.53	1.52	1.93	2.01	2.54	2.57
CHA	2.33	2.50	2.46	2.44	2.27	2.27	2.67	3.43	3.83	4.64
EUR	1.19	1.41	1.49	1.75	1.82	1.88	1.86	2.14	2.20	2.26
IND	0.92	0.99	1.06	1.11	1.25	1.39	1.39	1.64	1.57	1.87
JPN	3.72	3.69	3.84	3.88	3.96	3.84	3.76	3.60	3.58	3.86
LAM	0.44	0.51	0.62	0.69	0.76	0.74	0.83	0.92	1.01	1.09
MEA	0.83	0.91	1.03	1.16	1.31	1.39	1.30	1.43	1.73	1.81
NEU	0.87	1.00	1.07	1.17	1.32	1.50	1.54	1.76	1.76	1.75
OAS	0.68	0.81	0.96	1.07	1.03	1.03	1.20	1.10	1.16	1.21
REF	0.90	0.84	1.00	1.16	1.49	1.42	1.12	1.13	1.49	1.69
SSA	0.22	0.26	0.27	0.28	0.29	0.34	0.39	0.42	0.48	0.51
USA	1.75	1.72	2.30	2.62	2.52	2.58	2.84	3.31	3.36	3.85

Table 1512: FAO — Productivity—Yield—Crops—Other crops—Fruits Vegetables Nuts (t DM/ha)

52.1.15 Other crops—Potatoes





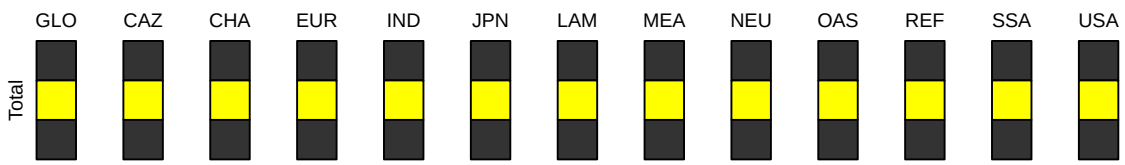


Figure 391: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Potatoes (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.7	4.1	4.5	5.1	5.6	6.0	8.8	9.9	10.9	11.7	12.7
CAZ	7.5	8.2	8.2	8.7	9.8	10.5	11.0	11.5	11.9	12.2	12.4
CHA	3.9	4.3	4.9	5.9	6.5	7.0	7.3	8.1	8.5	9.1	9.5
EUR	9.9	10.5	11.6	11.9	12.9	13.9	13.4	13.1	13.9	14.9	15.7
IND	6.9	10.6	10.6	12.7	14.2	15.4	16.6	18.9	21.8	24.5	26.8
JPN	11.7	11.7	11.7	12.3	13.2	13.9	14.6	15.8	17.5	19.3	21.4
LAM	3.6	4.1	4.5	5.1	6.0	6.6	6.2	6.3	6.5	5.6	6.9
MEA	11.2	13.9	23.3	17.5	20.0	24.3	29.9	34.8	39.2	37.9	39.5
NEU	2.7	3.1	9.8	10.7	12.1	13.6	15.4	17.0	18.1	18.6	18.8
OAS	14.3	15.0	13.0	11.8	12.6	13.2	14.2	16.0	21.4	25.4	30.2
REF	1.6	1.6	1.8	1.8	1.9	1.9	4.4	4.9	5.4	5.7	6.0
SSA	6.0	3.7	6.9	7.4	7.8	8.2	8.8	8.2	10.4	11.4	12.3
USA	8.5	9.4	10.0	10.4	11.5	12.4	12.5	12.6	12.8	13.0	13.4

Table 1513: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Potatoes (t DM/ha) [PART 1/2]

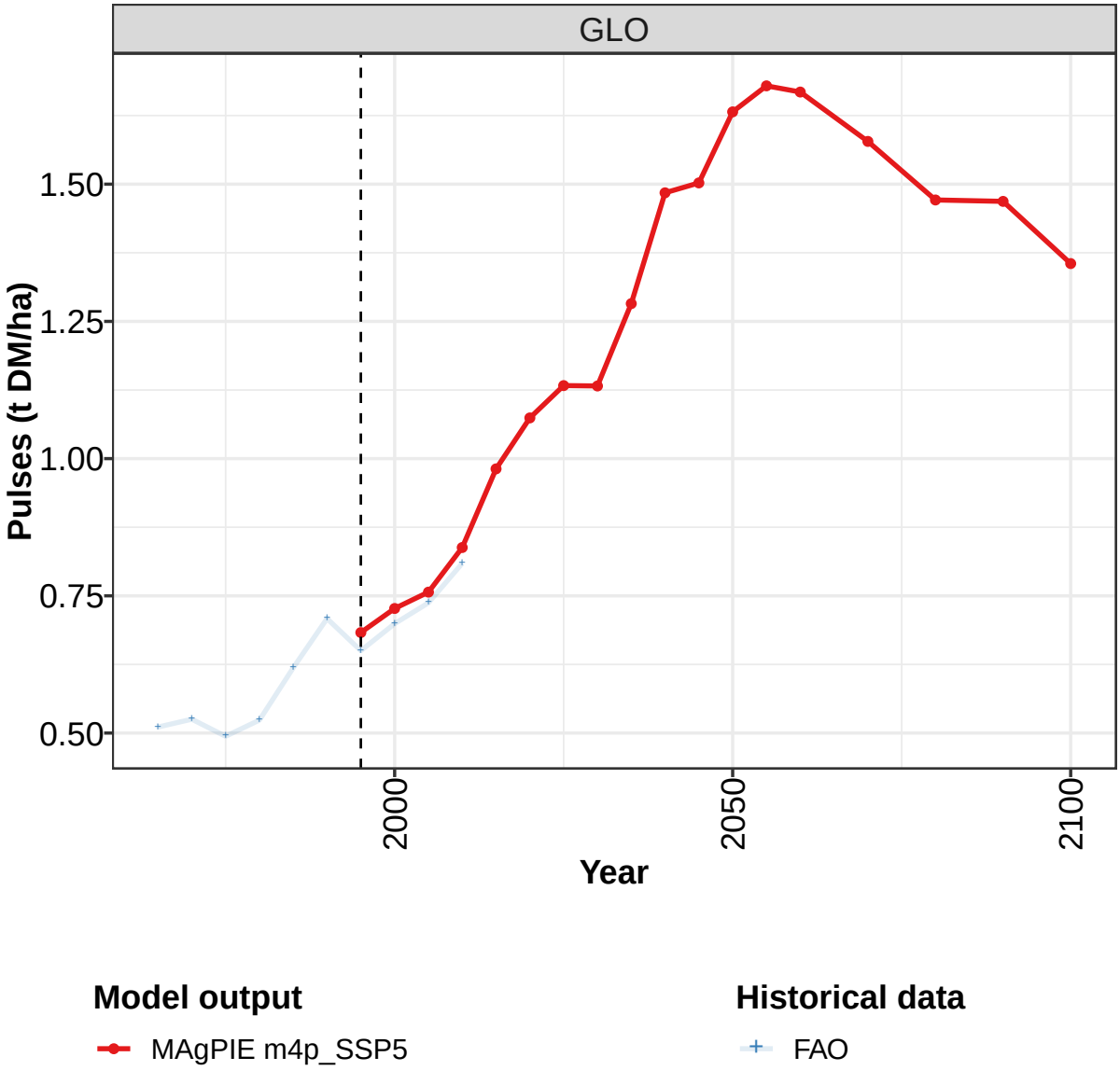
	2050	2055	2060	2070	2080	2090	2100
GLO	13.0	13.4	13.6	13.8	14.2	14.7	15.0
CAZ	12.5	12.8	12.9	13.0	13.0	13.0	13.0
CHA	9.7	10.2	9.9	10.2	10.8	11.0	11.0
EUR	16.9	17.4	17.2	17.4	17.3	17.1	17.2
IND	28.4	29.7	30.7	31.6	31.6	31.6	31.6
JPN	23.2	23.5	23.7	23.7	23.7	23.7	24.0
LAM	6.0	5.9	5.9	5.4	5.8	6.2	6.4
MEA	40.5	41.4	41.6	41.7	41.8	41.7	42.2
NEU	18.8	18.8	18.8	18.8	18.8	18.8	18.8
OAS	33.7	35.7	35.9	36.7	37.4	37.4	37.4
REF	6.1	6.1	6.1	6.1	6.2	6.4	6.7
SSA	13.8	14.7	15.2	15.5	15.5	15.5	15.5
USA	13.6	13.7	13.9	14.3	14.4	14.4	14.4

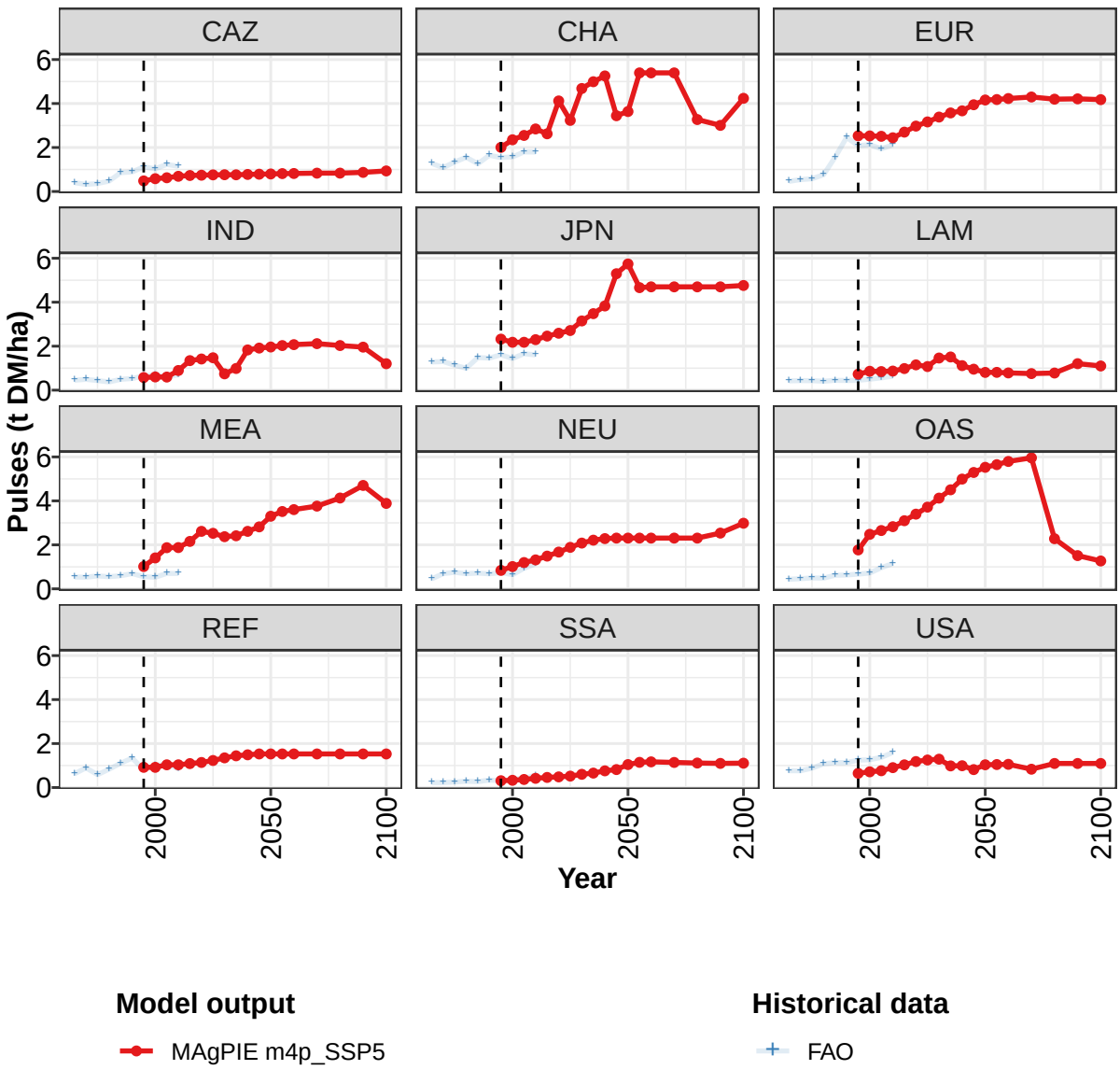
Table 1514: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Potatoes (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.20	2.46	2.43	2.30	3.13	3.07	3.09	3.16	3.38	3.73
CAZ	1.31	1.50	1.91	2.46	3.57	3.56	4.12	4.33	4.61	5.54
CHA	2.69	3.11	3.52	3.41	2.63	2.80	3.48	3.83	4.14	4.84
EUR	2.89	3.38	3.26	3.09	4.75	4.54	4.43	5.30	6.05	6.56
IND	1.80	1.75	2.37	2.76	3.42	3.70	3.90	4.45	4.67	5.23
JPN	4.99	5.20	5.01	5.92	6.20	6.42	6.48	5.84	6.02	5.91
LAM	1.23	1.32	1.30	1.36	1.81	1.92	2.07	2.16	2.59	2.77
MEA	1.60	1.67	1.54	2.17	2.55	2.52	2.97	2.82	3.99	4.33
NEU	1.42	1.53	1.52	1.69	2.56	2.68	2.75	3.07	3.28	3.78
OAS	1.78	2.10	2.14	2.20	2.42	2.50	2.94	2.96	3.63	4.67
REF	1.71	1.88	1.84	1.57	2.28	2.17	2.11	1.80	2.02	1.84
SSA	0.99	1.27	1.21	1.11	1.22	1.44	1.42	1.58	1.65	2.24
USA	3.41	3.43	4.45	4.76	5.64	5.20	5.69	7.17	7.82	9.20

Table 1515: FAO — Productivity—Yield—Crops—Other crops—Potatoes (t DM/ha)

52.1.16 Other crops—Pulses





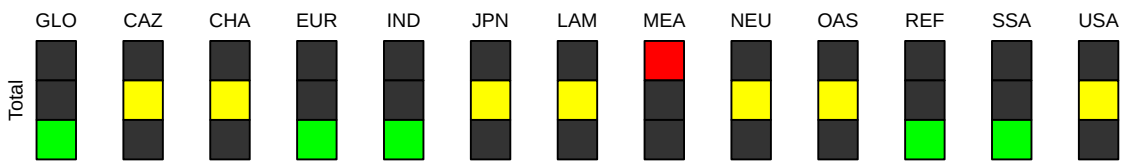


Figure 392: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Pulses (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.68	0.73	0.76	0.84	0.98	1.07	1.13	1.13	1.28	1.48	1.50
CAZ	0.48	0.58	0.62	0.69	0.73	0.74	0.76	0.76	0.76	0.78	0.79
CHA	2.01	2.35	2.55	2.84	2.62	4.12	3.23	4.68	4.99	5.26	3.45
EUR	2.53	2.53	2.51	2.44	2.70	2.97	3.17	3.39	3.57	3.67	3.94
IND	0.57	0.60	0.60	0.89	1.34	1.42	1.47	0.74	0.99	1.83	1.91
JPN	2.32	2.18	2.18	2.30	2.46	2.59	2.71	3.15	3.48	3.83	5.30
LAM	0.73	0.86	0.85	0.87	0.98	1.15	1.07	1.46	1.51	1.12	0.95
MEA	1.02	1.41	1.87	1.88	2.16	2.62	2.53	2.37	2.41	2.62	2.82
NEU	0.84	1.01	1.20	1.32	1.49	1.67	1.89	2.08	2.21	2.29	2.31
OAS	1.77	2.48	2.65	2.83	3.10	3.40	3.72	4.13	4.51	4.99	5.29
REF	0.92	0.92	1.03	1.03	1.09	1.14	1.23	1.35	1.44	1.49	1.53
SSA	0.31	0.33	0.37	0.42	0.46	0.49	0.52	0.60	0.66	0.76	0.82
USA	0.65	0.72	0.76	0.91	1.03	1.18	1.25	1.29	0.98	0.99	0.82

Table 1516: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Pulses (t DM/ha) [PART 1/2]

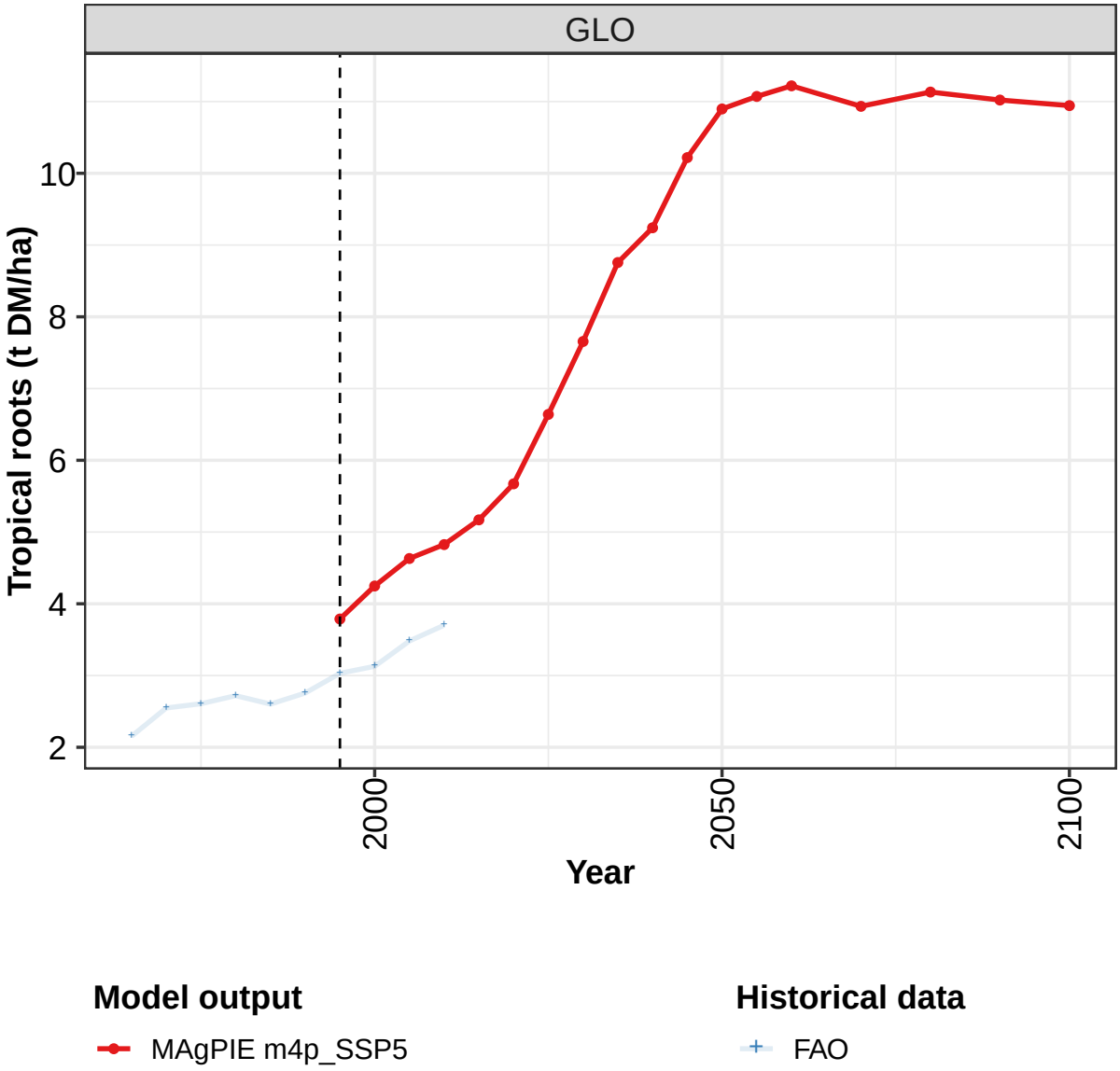
	2050	2055	2060	2070	2080	2090	2100
GLO	1.63	1.68	1.67	1.58	1.47	1.47	1.36
CAZ	0.80	0.81	0.82	0.83	0.84	0.87	0.93
CHA	3.64	5.39	5.39	5.39	3.27	3.01	4.24
EUR	4.16	4.18	4.23	4.30	4.20	4.21	4.18
IND	1.96	2.03	2.07	2.12	2.03	1.96	1.20
JPN	5.74	4.66	4.70	4.70	4.70	4.70	4.76
LAM	0.81	0.81	0.78	0.75	0.78	1.21	1.10
MEA	3.30	3.52	3.60	3.76	4.13	4.70	3.89
NEU	2.31	2.31	2.31	2.31	2.31	2.54	2.98
OAS	5.53	5.65	5.79	5.96	2.28	1.51	1.27
REF	1.53	1.53	1.53	1.53	1.53	1.53	1.53
SSA	1.05	1.15	1.17	1.14	1.11	1.10	1.11
USA	1.03	1.05	1.06	0.83	1.09	1.09	1.09

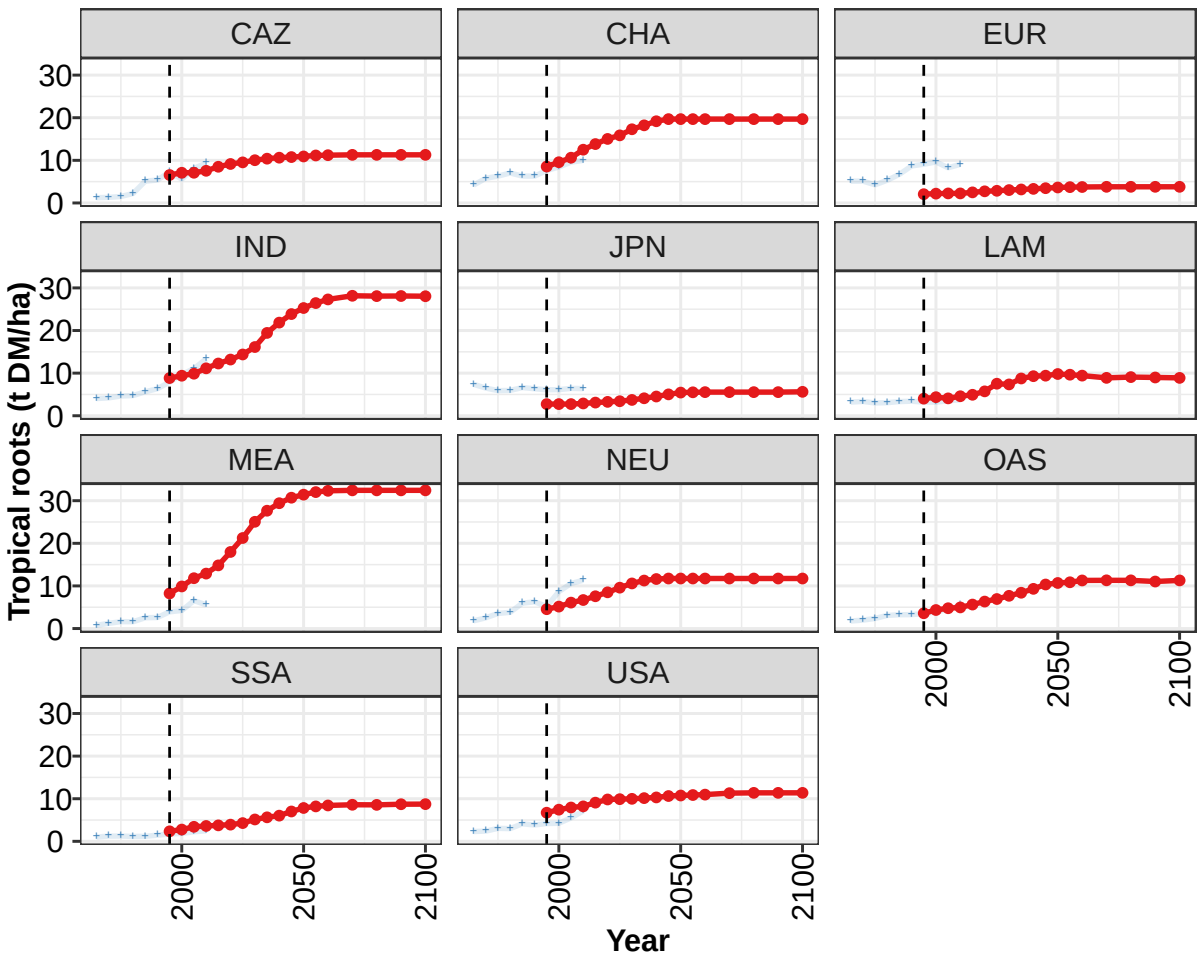
Table 1517: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Pulses (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.51	0.53	0.49	0.52	0.62	0.71	0.65	0.70	0.74	0.81
CAZ	0.40	0.32	0.36	0.47	0.85	0.89	1.12	1.03	1.23	1.15
CHA	1.28	1.08	1.34	1.56	1.26	1.65	1.54	1.57	1.80	1.79
EUR	0.46	0.54	0.58	0.76	1.56	2.46	2.08	2.13	1.94	2.12
IND	0.45	0.49	0.44	0.37	0.49	0.53	0.65	0.69	0.60	0.70
JPN	1.28	1.30	1.13	1.00	1.48	1.46	1.61	1.44	1.66	1.60
LAM	0.42	0.43	0.43	0.41	0.45	0.44	0.45	0.50	0.56	0.63
MEA	0.54	0.53	0.59	0.55	0.60	0.69	0.55	0.53	0.70	0.70
NEU	0.45	0.69	0.75	0.69	0.72	0.69	0.74	0.65	0.93	1.14
OAS	0.43	0.46	0.50	0.49	0.62	0.63	0.67	0.72	0.96	1.15
REF	0.62	0.89	0.58	0.83	1.10	1.34	0.82	1.00	1.06	0.85
SSA	0.23	0.23	0.25	0.29	0.27	0.34	0.30	0.38	0.42	0.56
USA	0.77	0.76	0.88	1.08	1.13	1.13	1.25	1.26	1.37	1.60

Table 1518: FAO — Productivity—Yield—Crops—Other crops—Pulses (t DM/ha)

52.1.17 Other crops—Tropical roots





Model output

MAgPIE m4p_SSP5

Historical data

FAO

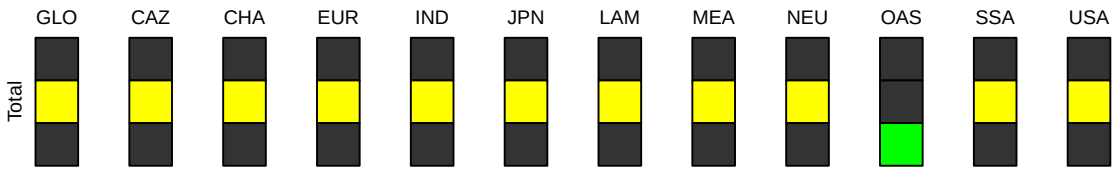


Figure 393: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Tropical roots (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.8	4.2	4.6	4.8	5.2	5.7	6.6	7.7	8.8	9.2	10.2
CAZ	6.6	7.1	7.1	7.6	8.5	9.1	9.5	10.0	10.4	10.6	10.8
CHA	8.5	9.6	10.6	12.5	13.8	15.0	15.9	17.3	18.2	19.2	19.7
EUR	2.1	2.2	2.2	2.2	2.5	2.7	2.9	3.0	3.2	3.3	3.5
IND	8.8	9.4	9.9	11.1	12.3	13.2	14.4	16.1	19.4	21.9	23.9
JPN	2.7	2.7	2.7	2.9	3.1	3.3	3.4	3.7	4.1	4.5	5.0
LAM	4.0	4.4	4.1	4.6	4.9	5.7	7.5	7.4	8.7	9.3	9.4
MEA	8.2	9.9	11.8	12.9	14.8	18.0	21.3	25.1	27.7	29.4	30.7
NEU	4.5	5.2	6.1	6.7	7.6	8.5	9.6	10.6	11.3	11.6	11.7
OAS	3.6	4.4	4.8	5.0	5.6	6.3	6.9	7.7	8.4	9.3	10.3
SSA	2.4	2.8	3.4	3.6	3.8	3.9	4.3	5.1	5.6	6.0	7.0
USA	6.7	7.4	7.9	8.2	9.1	9.8	9.9	10.0	10.1	10.3	10.6

Table 1519: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Tropical roots (t DM/ha) [PART 1/2]

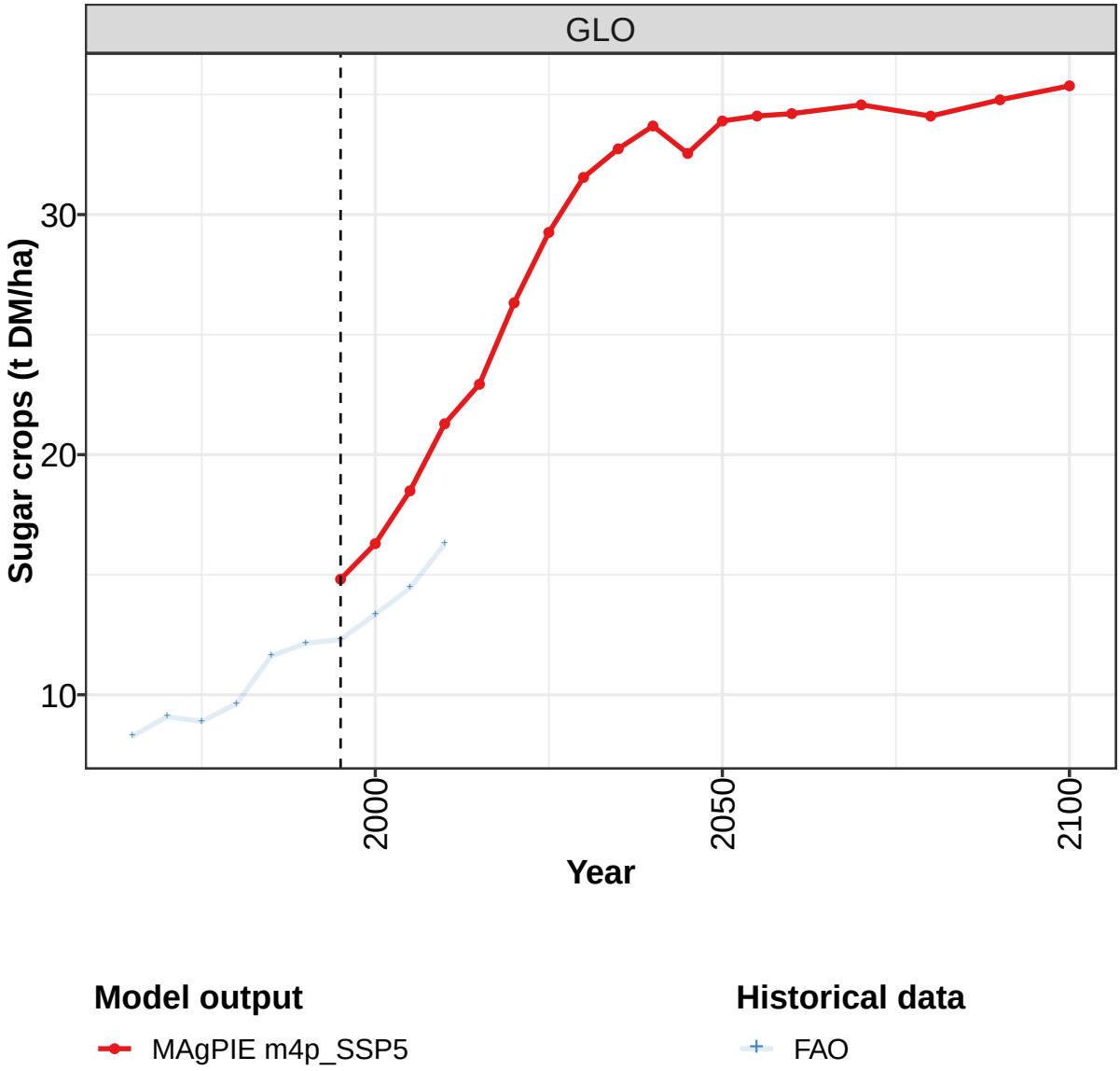
	2050	2055	2060	2070	2080	2090	2100
GLO	10.9	11.1	11.2	10.9	11.1	11.0	10.9
CAZ	10.9	11.1	11.2	11.3	11.3	11.3	11.3
CHA	19.7	19.7	19.7	19.7	19.7	19.7	19.7
EUR	3.6	3.7	3.7	3.8	3.8	3.8	3.8
IND	25.3	26.4	27.3	28.2	28.1	28.1	28.0
JPN	5.4	5.5	5.5	5.5	5.5	5.5	5.6
LAM	9.8	9.6	9.4	8.9	9.1	9.0	8.9
MEA	31.4	32.0	32.3	32.4	32.4	32.4	32.4
NEU	11.7	11.7	11.7	11.7	11.7	11.7	11.7
OAS	10.7	10.9	11.3	11.3	11.3	11.0	11.3
SSA	7.8	8.2	8.4	8.6	8.6	8.7	8.7
USA	10.8	10.9	11.0	11.3	11.4	11.4	11.4

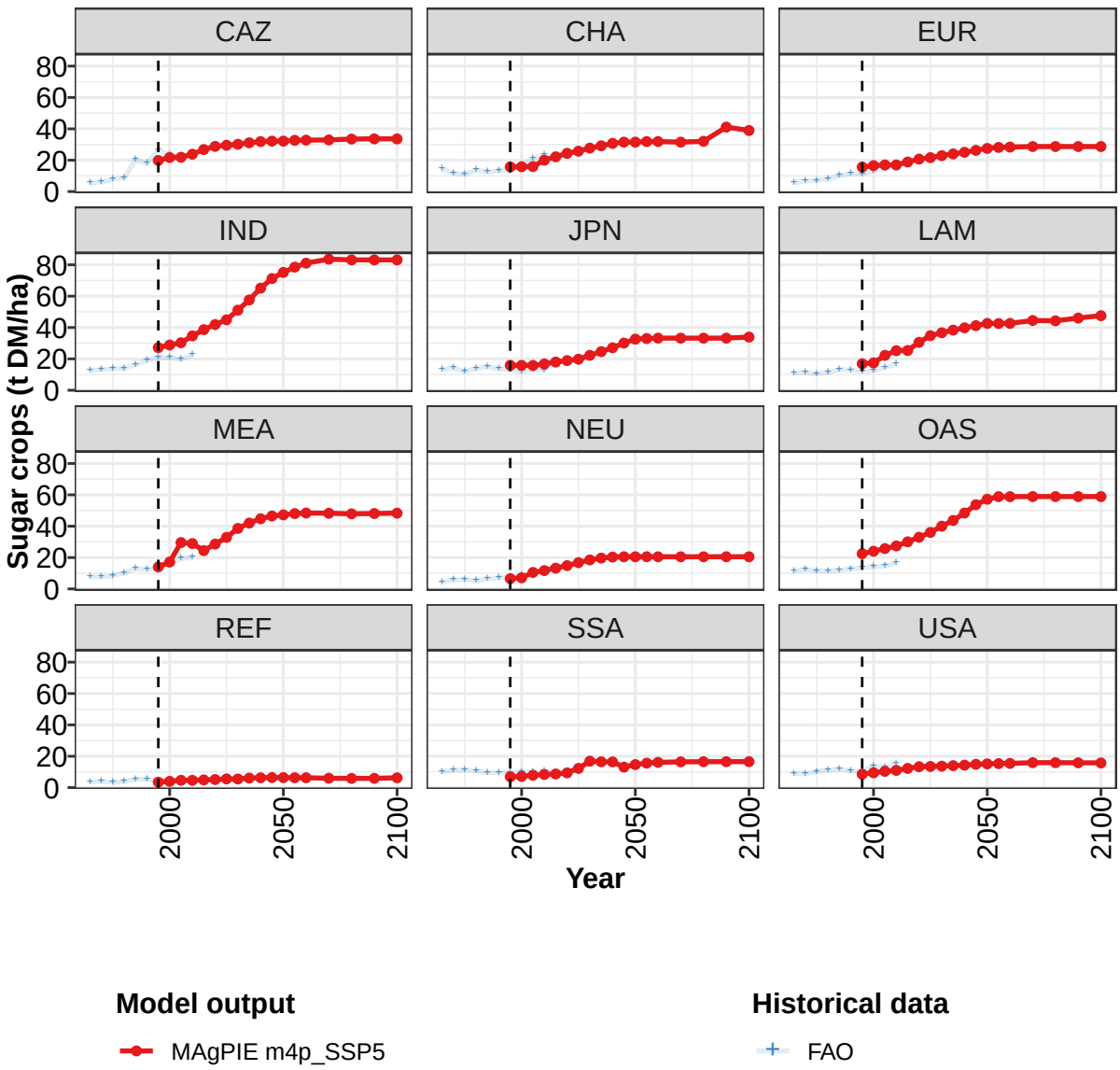
Table 1520: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Other crops—Tropical roots (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.2	2.5	2.6	2.7	2.6	2.8	3.0	3.1	3.5	3.7
CAZ	1.2	1.3	1.5	2.2	5.1	5.4	7.3	5.6	8.1	9.3
CHA	4.2	5.8	6.3	7.0	6.3	6.3	7.6	8.4	9.6	10.0
EUR	5.1	5.1	4.3	5.3	6.7	8.7	9.1	9.6	8.3	9.1
IND	4.0	4.2	4.6	4.7	5.6	6.3	7.9	9.7	11.1	13.3
JPN	7.4	6.5	5.9	5.9	6.6	6.3	6.1	6.1	6.4	6.4
LAM	3.2	3.4	3.0	3.1	3.3	3.4	3.2	3.2	3.5	3.7
MEA	0.7	1.2	1.6	1.6	2.5	2.6	3.9	4.2	6.5	5.6
NEU	1.8	2.5	3.5	3.8	5.9	6.3	5.2	8.7	10.6	11.3
OAS	1.8	2.0	2.4	3.1	3.2	3.3	3.5	3.9	4.5	5.5
SSA	1.0	1.2	1.2	1.2	1.2	1.4	1.7	1.9	2.2	2.5
USA	2.3	2.4	3.0	3.0	4.1	3.8	4.2	4.2	5.5	7.1

Table 1521: FAO — Productivity—Yield—Crops—Other crops—Tropical roots (t DM/ha)

52.1.18 Sugar crops





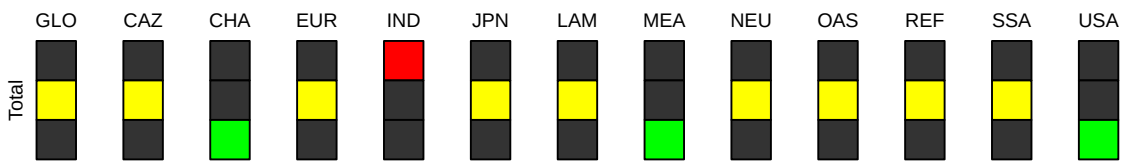


Figure 394: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.8	16.3	18.5	21.3	22.9	26.3	29.3	31.5	32.7	33.7	32.5
CAZ	19.9	21.7	21.9	23.8	26.8	28.8	29.5	30.2	31.1	31.9	32.2
CHA	15.8	15.9	15.9	20.0	22.2	24.4	25.8	27.7	29.2	30.7	31.5
EUR	15.6	16.6	17.0	17.0	18.8	20.7	21.6	22.9	24.0	25.0	26.3
IND	27.2	28.9	30.3	34.7	38.6	41.9	44.9	51.1	57.6	65.1	71.2
JPN	15.9	15.9	15.8	16.8	18.0	18.9	19.8	22.3	24.6	27.1	30.1
LAM	16.9	17.4	22.2	25.2	25.4	30.6	34.8	36.7	38.4	39.8	41.2
MEA	14.0	17.1	29.6	28.9	24.4	28.6	32.9	38.6	42.0	44.8	46.5
NEU	6.6	7.1	10.5	11.7	13.2	14.9	16.8	18.5	19.7	20.3	20.5
OAS	22.5	24.0	25.7	27.4	30.1	33.0	36.1	40.0	43.7	48.4	53.7
REF	3.5	4.0	4.7	4.7	4.9	5.1	5.6	5.5	6.1	6.3	6.4
SSA	6.9	7.2	7.8	8.4	8.7	9.4	12.3	16.8	16.5	16.4	13.1
USA	8.6	9.5	10.4	11.0	12.2	13.3	13.5	13.7	14.0	14.3	14.9

Table 1522: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops (t DM/ha) [PART 1/2]

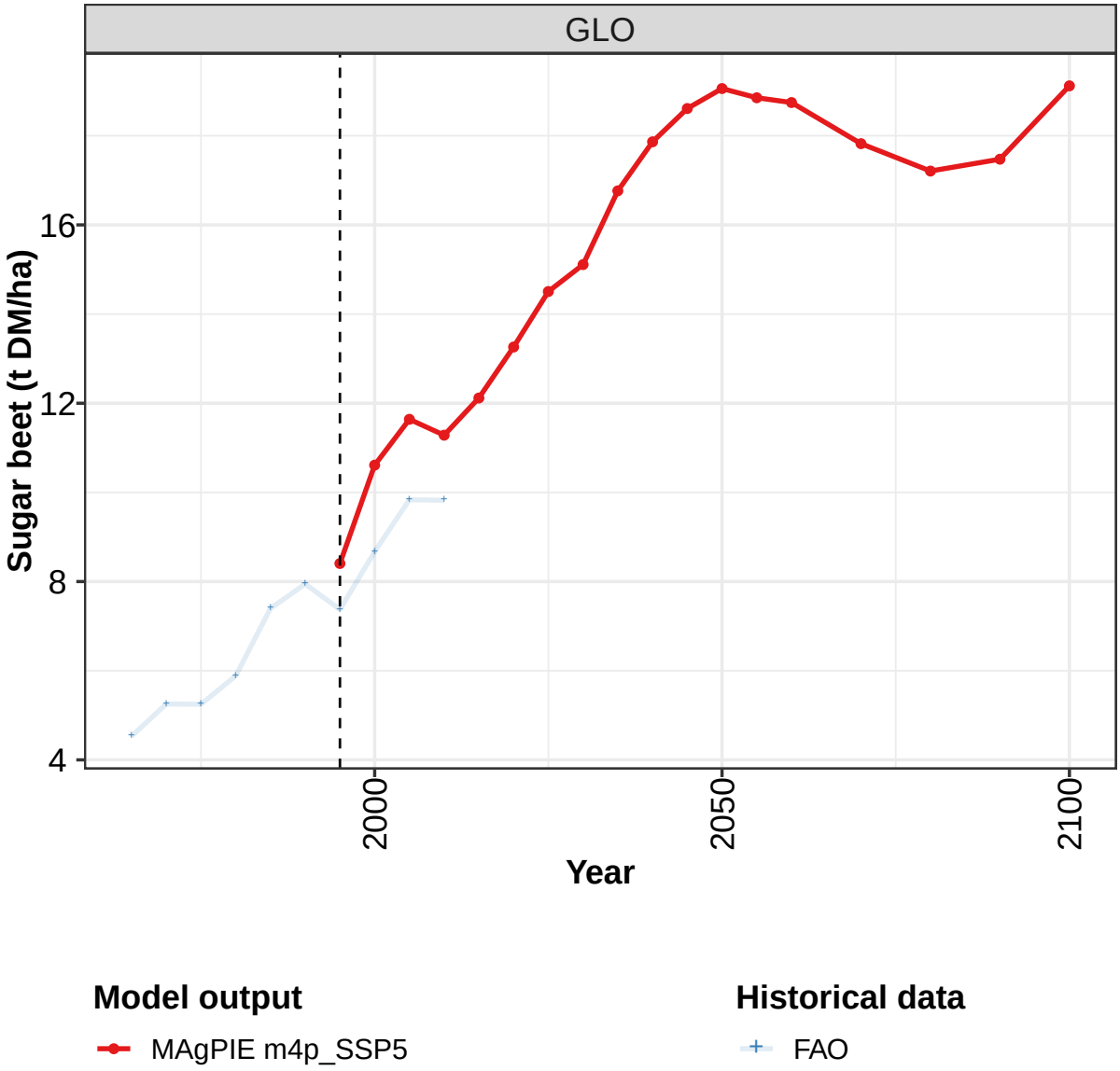
	2050	2055	2060	2070	2080	2090	2100
GLO	33.9	34.1	34.2	34.6	34.1	34.8	35.4
CAZ	32.2	32.7	32.8	32.9	33.5	33.6	33.6
CHA	31.5	31.9	31.9	31.5	32.1	41.1	39.0
EUR	27.5	28.1	28.4	28.7	28.7	28.7	28.7
IND	75.2	78.5	81.1	83.6	83.1	83.1	83.1
JPN	32.6	33.0	33.2	33.2	33.2	33.2	33.9
LAM	42.6	42.6	42.6	44.5	44.3	46.1	47.6
MEA	47.2	48.0	48.4	48.3	47.9	48.1	48.3
NEU	20.5	20.5	20.5	20.5	20.5	20.5	20.5
OAS	57.2	58.8	58.9	58.9	58.9	58.9	58.9
REF	6.4	6.3	6.3	6.0	5.9	5.9	6.2
SSA	14.7	15.6	16.1	16.4	16.5	16.5	16.6
USA	15.1	15.3	15.4	15.9	15.9	15.8	15.7

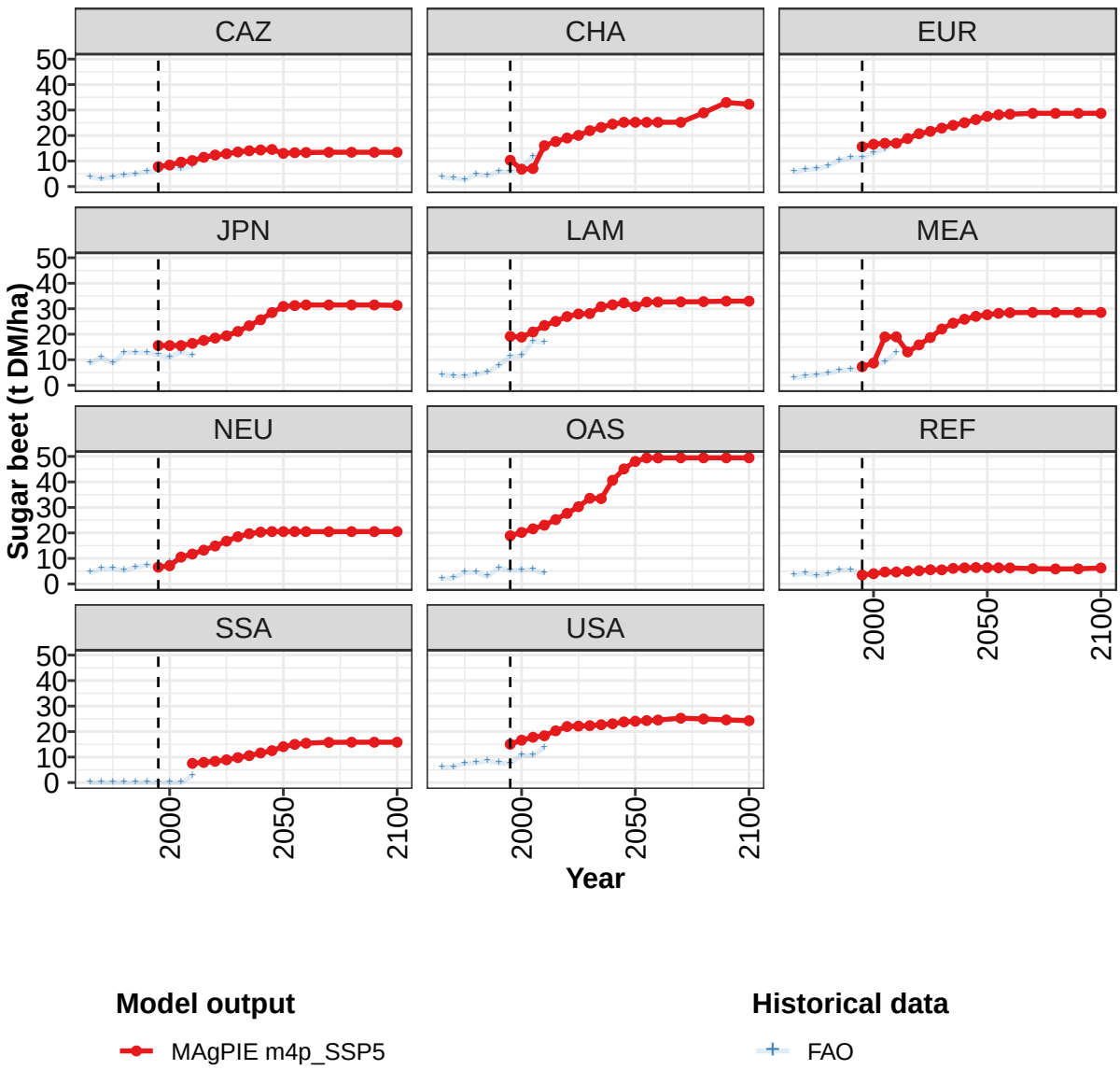
Table 1523: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.3	9.1	8.9	9.6	11.6	12.1	12.3	13.3	14.5	16.3
CAZ	5.6	6.1	7.7	8.6	20.4	17.9	26.3	23.2	21.9	23.2
CHA	14.4	11.7	11.0	13.7	12.5	13.3	14.0	16.8	20.9	23.7
EUR	5.7	6.7	7.0	8.0	10.2	11.3	11.2	13.2	14.8	17.2
IND	12.4	13.3	13.7	13.7	16.3	18.9	21.0	20.8	19.6	22.5
JPN	13.3	14.1	11.8	14.0	15.1	13.6	13.1	11.8	13.0	12.8
LAM	11.0	11.3	10.4	11.4	13.1	12.9	11.9	12.5	14.6	16.7
MEA	7.7	7.8	8.3	10.2	13.0	12.2	13.0	15.9	19.4	20.1
NEU	4.4	5.9	6.0	5.2	6.5	7.3	6.9	8.8	9.2	10.7
OAS	11.3	12.5	11.6	11.5	11.9	12.8	13.4	14.1	14.6	16.6
REF	3.5	4.1	3.3	4.0	5.3	5.5	4.0	3.2	4.6	3.9
SSA	10.1	11.1	11.5	10.8	9.6	9.6	9.1	10.0	10.3	10.3
USA	9.0	8.8	10.3	11.0	12.0	10.5	10.2	13.8	12.8	15.3

Table 1524: FAO — Productivity—Yield—Crops—Sugar crops (t DM/ha)

52.1.19 Sugar crops—Sugar beet





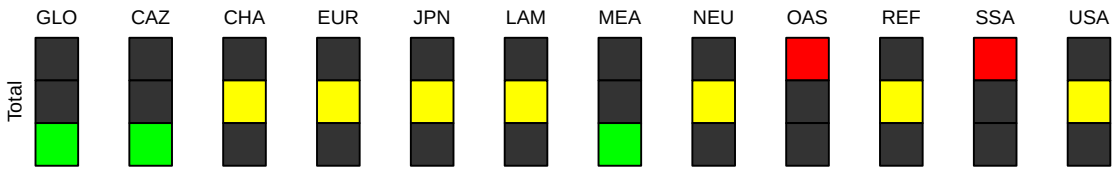


Figure 395: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops—Sugar beet (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8	11	12	11	12	13	15	15	17	18	19
CAZ	8	8	10	10	11	12	13	14	14	14	15
CHA	10	7	7	16	18	19	20	22	23	24	25
EUR	16	17	17	17	19	21	22	23	24	25	26
JPN	16	16	16	16	18	19	19	21	23	26	28
LAM	19	19	21	23	25	27	28	28	31	32	32
MEA	7	9	19	19	13	16	19	22	24	26	27
NEU	7	7	11	12	13	15	17	19	20	20	21
OAS	19	20	22	23	25	28	30	34	33	41	45
REF	3	4	5	5	5	5	6	6	6	6	6
SSA				8	8	8	9	10	11	12	13
USA	15	17	18	18	20	22	22	22	23	23	24

Table 1525: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops—Sugar beet (t DM/ha) [PART 1/2]

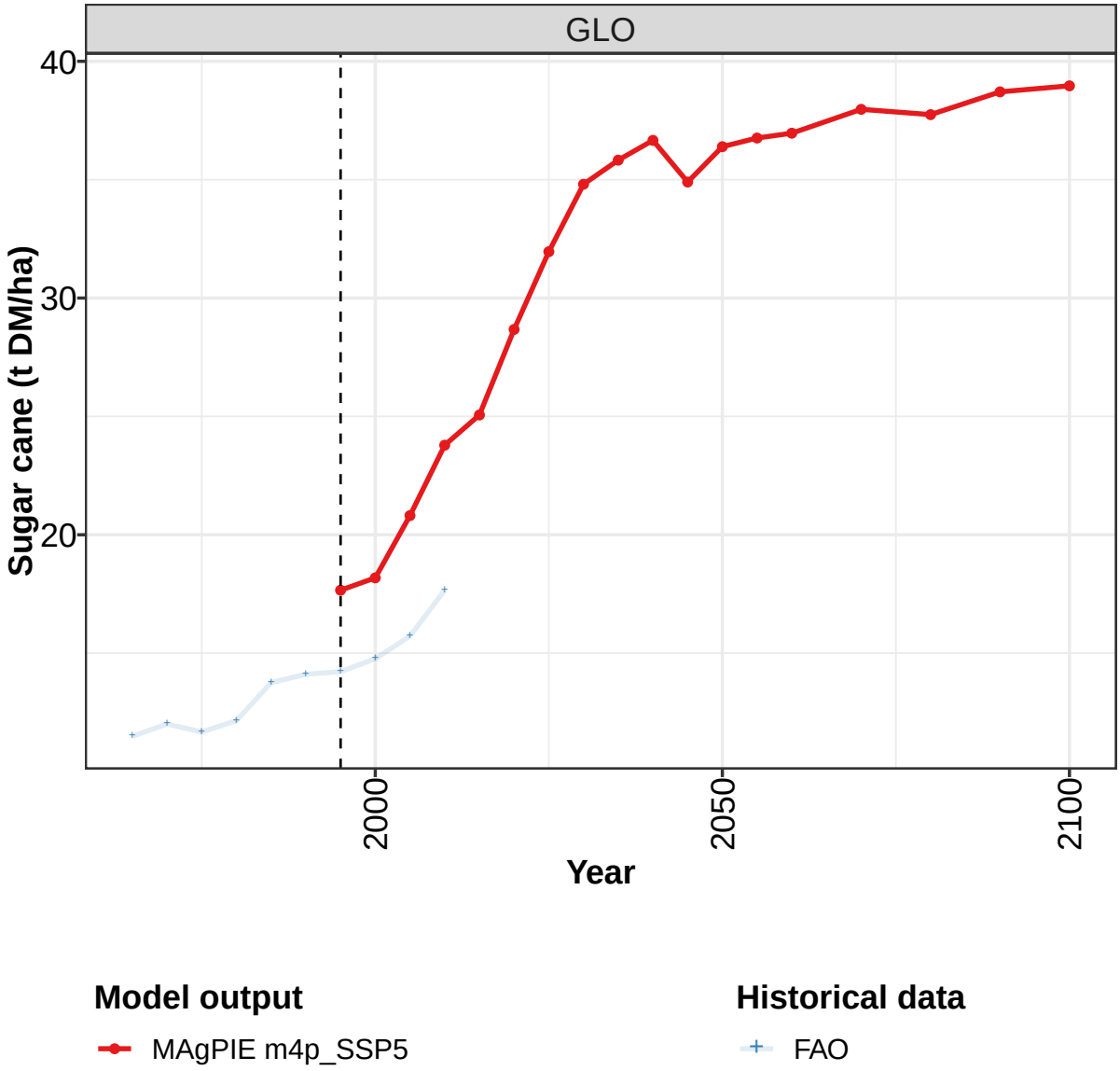
	2050	2055	2060	2070	2080	2090	2100
GLO	19	19	19	18	17	17	19
CAZ	13	13	13	13	13	13	13
CHA	25	25	25	25	29	33	32
EUR	28	28	28	29	29	29	29
JPN	31	31	31	31	31	31	31
LAM	31	33	33	33	33	33	33
MEA	28	28	28	29	29	29	29
NEU	21	21	21	20	21	21	21
OAS	48	49	49	49	49	49	49
REF	6	6	6	6	6	6	6
SSA	14	15	15	16	16	16	16
USA	24	24	25	25	25	25	24

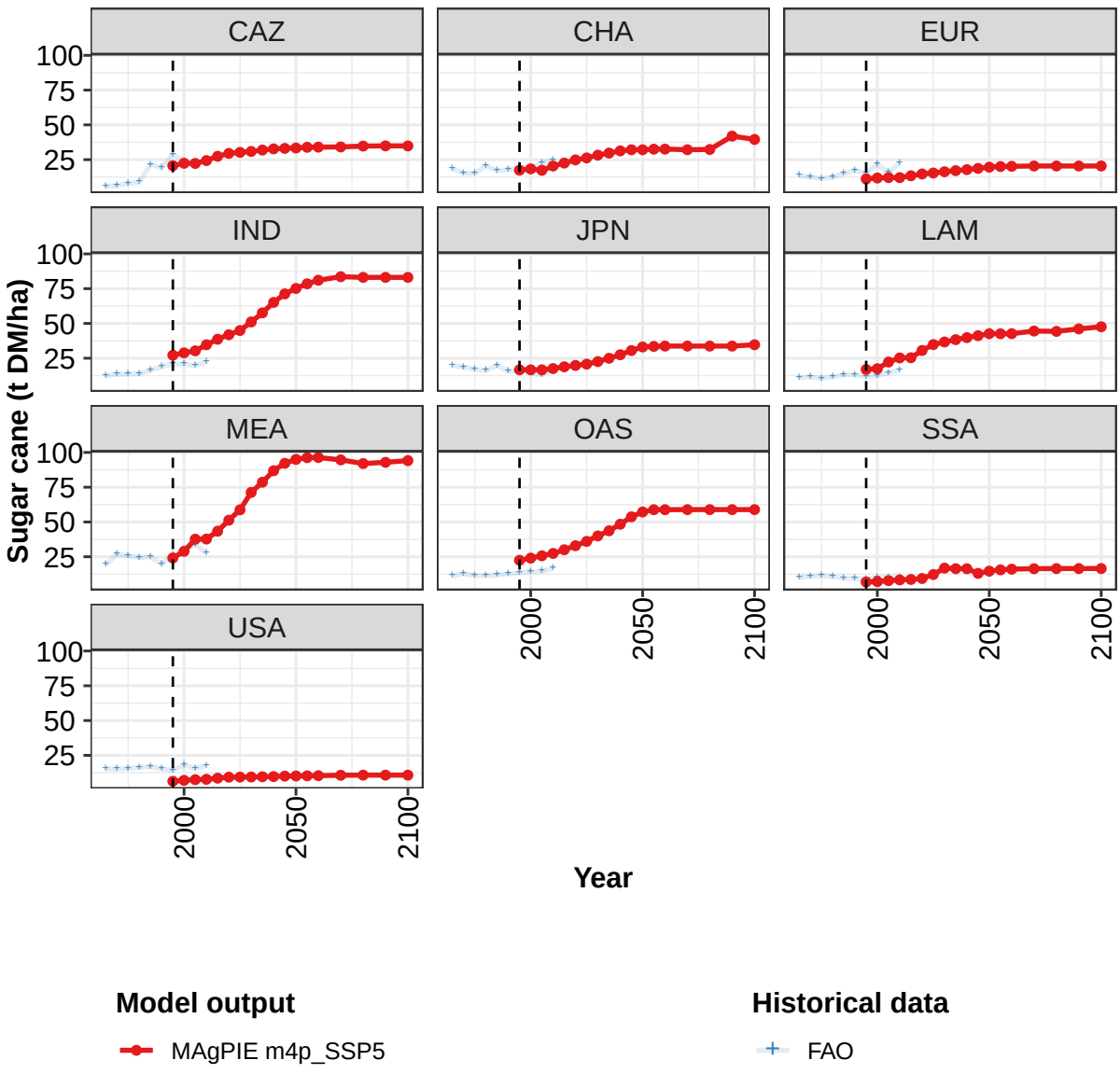
Table 1526: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops—Sugar beet (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.5	5.3	5.2	5.9	7.4	7.9	7.4	8.7	9.8	9.8
CAZ	3.7	3.1	3.8	4.5	4.9	5.8	6.5	7.9	6.9	8.2
CHA	3.6	3.3	2.7	4.7	4.2	5.9	5.7	7.3	11.7	14.3
EUR	5.7	6.6	7.0	8.0	10.2	11.3	11.2	13.2	14.8	17.2
JPN	8.6	10.8	8.6	12.8	12.8	12.7	11.9	11.0	12.9	11.5
LAM	4.0	3.6	3.4	4.3	5.2	7.8	11.2	11.5	17.3	16.7
MEA	2.9	3.4	3.9	4.8	5.8	6.3	6.1	7.6	9.2	12.8
NEU	4.4	5.9	6.0	5.2	6.5	7.3	6.9	8.8	9.2	10.7
OAS	2.0	2.4	4.4	4.5	3.0	6.2	5.3	5.3	5.6	4.1
REF	3.5	4.1	3.3	4.0	5.3	5.5	4.0	3.2	4.6	3.9
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
USA	5.8	6.1	7.5	7.8	8.4	7.7	7.6	10.7	10.6	13.8

Table 1527: FAO — Productivity—Yield—Crops—Sugar crops—Sugar beet (t DM/ha)

52.1.20 Sugar crops—Sugar cane





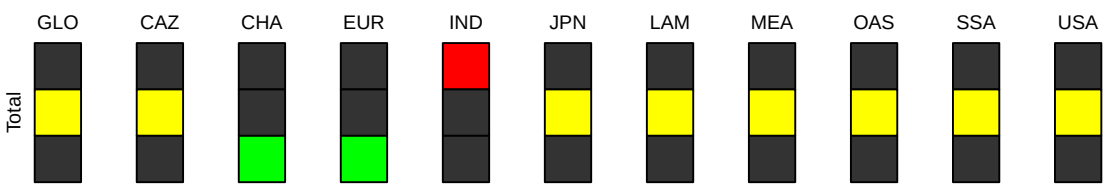


Figure 396: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops—Sugar cane (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.7	18.2	20.8	23.8	25.1	28.7	32.0	34.8	35.8	36.7	34.9
CAZ	20.7	22.4	22.3	24.4	27.4	29.5	30.2	30.9	31.9	32.8	33.1
CHA	17.4	18.4	17.3	20.4	22.6	24.9	26.3	28.2	29.7	31.3	32.1
EUR	11.1	11.8	12.1	12.1	13.4	14.8	15.4	16.3	17.1	17.8	18.7
IND	27.2	28.9	30.3	34.7	38.6	41.9	44.9	51.1	57.6	65.1	71.2
JPN	16.7	16.7	16.7	17.6	18.8	19.8	20.8	22.6	25.0	27.5	30.5
LAM	16.9	17.4	22.2	25.2	25.4	30.6	34.8	36.7	38.4	39.8	41.2
MEA	24.1	28.9	37.7	37.7	43.4	51.3	58.8	71.3	78.6	86.8	92.2
OAS	22.5	24.0	25.7	27.4	30.1	33.0	36.1	40.0	43.7	48.4	53.7
SSA	6.9	7.2	7.8	8.4	8.7	9.4	12.3	16.8	16.5	16.4	13.1
USA	6.4	7.0	7.5	7.8	8.6	9.3	9.4	9.4	9.6	9.7	10.1

Table 1528: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops—Sugar cane (t DM/ha) [PART 1/2]

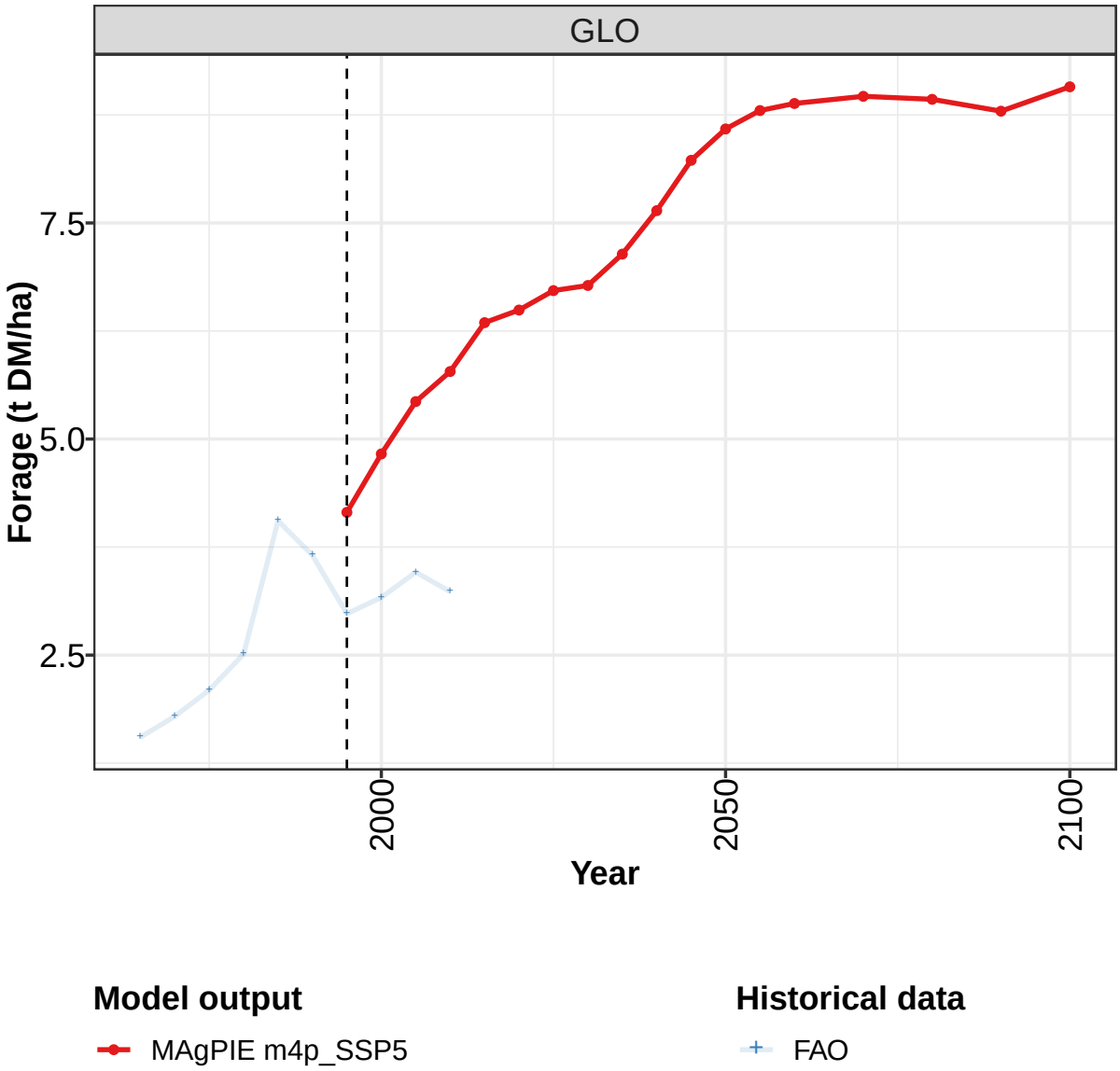
	2050	2055	2060	2070	2080	2090	2100
GLO	36.4	36.8	37.0	38.0	37.7	38.7	39.0
CAZ	33.4	33.9	34.0	34.1	34.8	34.9	34.9
CHA	32.1	32.6	32.6	32.2	32.3	41.9	39.6
EUR	19.6	20.1	20.2	20.5	20.5	20.5	20.5
IND	75.2	78.5	81.1	83.6	83.1	83.1	83.1
JPN	33.1	33.5	33.7	33.7	33.7	33.7	34.7
LAM	42.6	42.6	42.6	44.5	44.3	46.1	47.6
MEA	95.0	96.3	96.3	94.7	92.0	92.9	94.1
OAS	57.2	58.9	58.9	58.9	58.9	58.9	58.9
SSA	14.7	15.6	16.1	16.4	16.5	16.5	16.6
USA	10.2	10.3	10.4	10.7	10.8	10.8	10.8

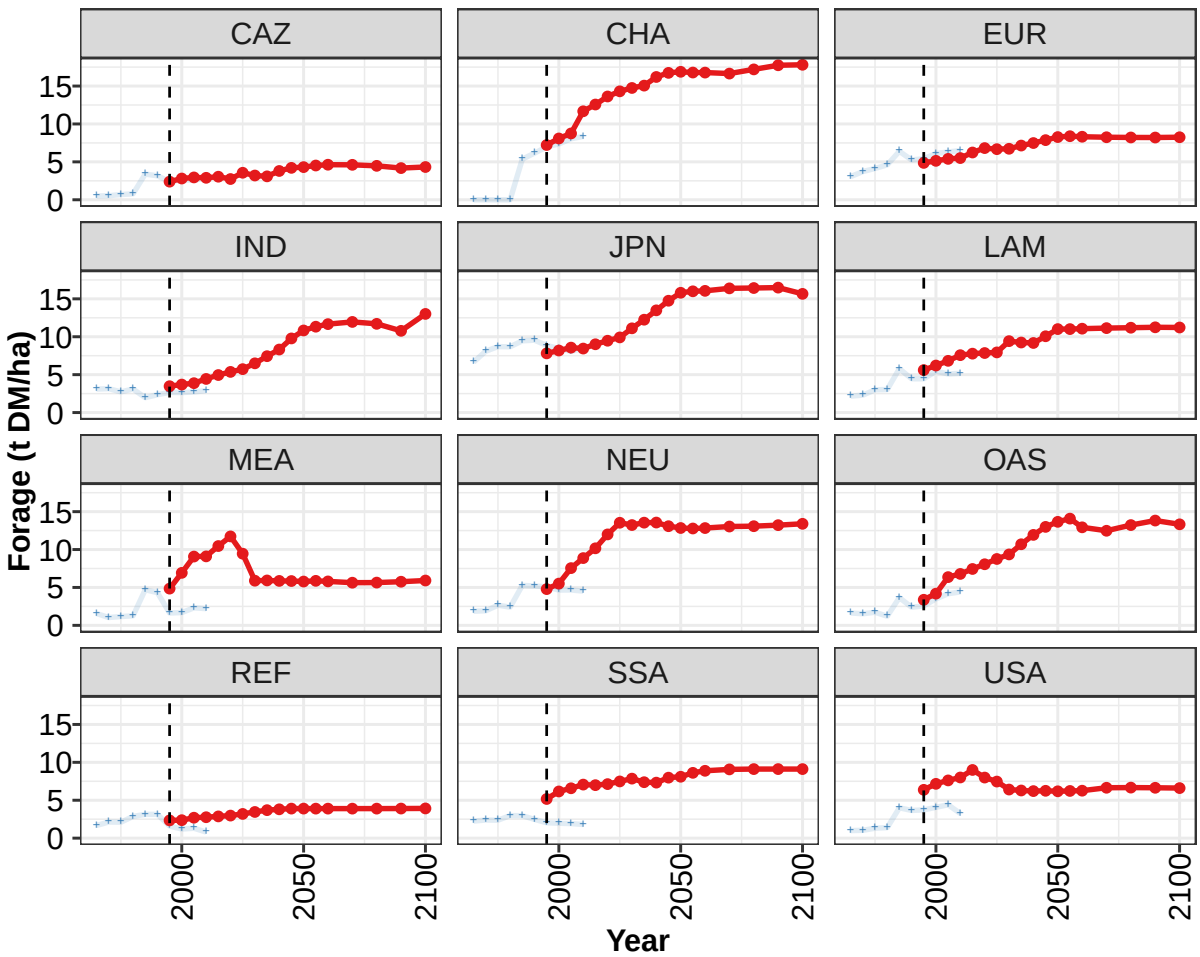
Table 1529: MAgPIE m4p_SSP5 — Productivity—Yield—Crops—Sugar crops—Sugar cane (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.5	12.0	11.7	12.1	13.8	14.1	14.2	14.8	15.7	17.7
CAZ	5.8	6.3	8.0	8.9	21.3	19.3	28.6	24.1	22.6	23.9
CHA	18.7	15.4	15.1	20.4	17.0	18.0	18.9	19.4	22.3	24.9
EUR	13.5	12.5	11.4	12.3	14.9	17.3	15.5	21.7	15.8	22.7
IND	12.4	13.3	13.7	13.7	16.3	18.9	21.0	20.8	19.6	22.5
JPN	19.8	18.7	17.0	16.3	19.7	15.5	16.6	14.1	13.3	16.5
LAM	11.1	11.4	10.6	11.5	13.2	12.9	11.9	12.5	14.5	16.7
MEA	19.3	27.0	25.7	24.5	24.9	19.8	26.5	29.7	33.7	28.0
OAS	11.4	12.7	11.6	11.6	11.9	12.8	13.5	14.1	14.6	16.6
SSA	10.1	11.1	11.5	10.8	9.6	9.6	9.1	10.0	10.3	10.3
USA	15.3	15.2	15.7	16.3	17.0	15.4	14.3	17.8	15.7	17.4

Table 1530: FAO — Productivity—Yield—Crops—Sugar crops—Sugar cane (t DM/ha)

52.2 Forage


GLO
Forage (t DM/ha)
7.5
5.0
2.5
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

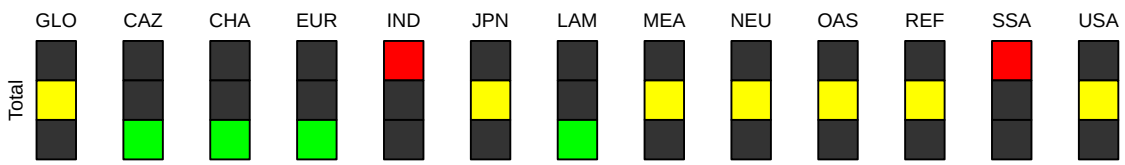


Figure 397: MAgPIE m4p_SSP5 — Productivity—Yield—Forage (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.2	4.8	5.4	5.8	6.3	6.5	6.7	6.8	7.1	7.6	8.2
CAZ	2.4	2.8	3.0	2.9	3.0	2.7	3.6	3.2	3.1	3.8	4.2
CHA	7.2	8.1	8.8	11.7	12.6	13.6	14.3	14.8	15.1	16.2	16.7
EUR	4.9	5.1	5.4	5.5	6.2	6.8	6.7	6.7	7.2	7.5	7.9
IND	3.5	3.7	3.9	4.4	5.0	5.4	5.7	6.5	7.4	8.3	9.8
JPN	7.8	8.2	8.6	8.4	9.0	9.5	9.9	11.1	12.3	13.5	14.8
LAM	5.6	6.2	6.8	7.6	7.8	7.9	7.9	9.4	9.2	9.2	10.1
MEA	4.8	6.9	9.1	9.1	10.5	11.7	9.5	5.9	5.9	5.9	5.8
NEU	4.8	5.5	7.6	8.9	10.2	12.0	13.5	13.2	13.6	13.6	13.1
OAS	3.4	4.2	6.4	6.8	7.4	8.1	8.8	9.4	10.7	11.9	13.0
REF	2.3	2.4	2.7	2.8	2.9	3.0	3.2	3.5	3.7	3.8	3.9
SSA	5.2	6.2	6.6	7.1	7.0	7.1	7.5	7.9	7.4	7.3	8.0
USA	6.4	7.2	7.6	8.0	9.0	8.0	7.5	6.4	6.3	6.2	6.2

Table 1531: MAgPIE m4p_SSP5 — Productivity—Yield—Forage (t DM/ha) [PART 1/2]

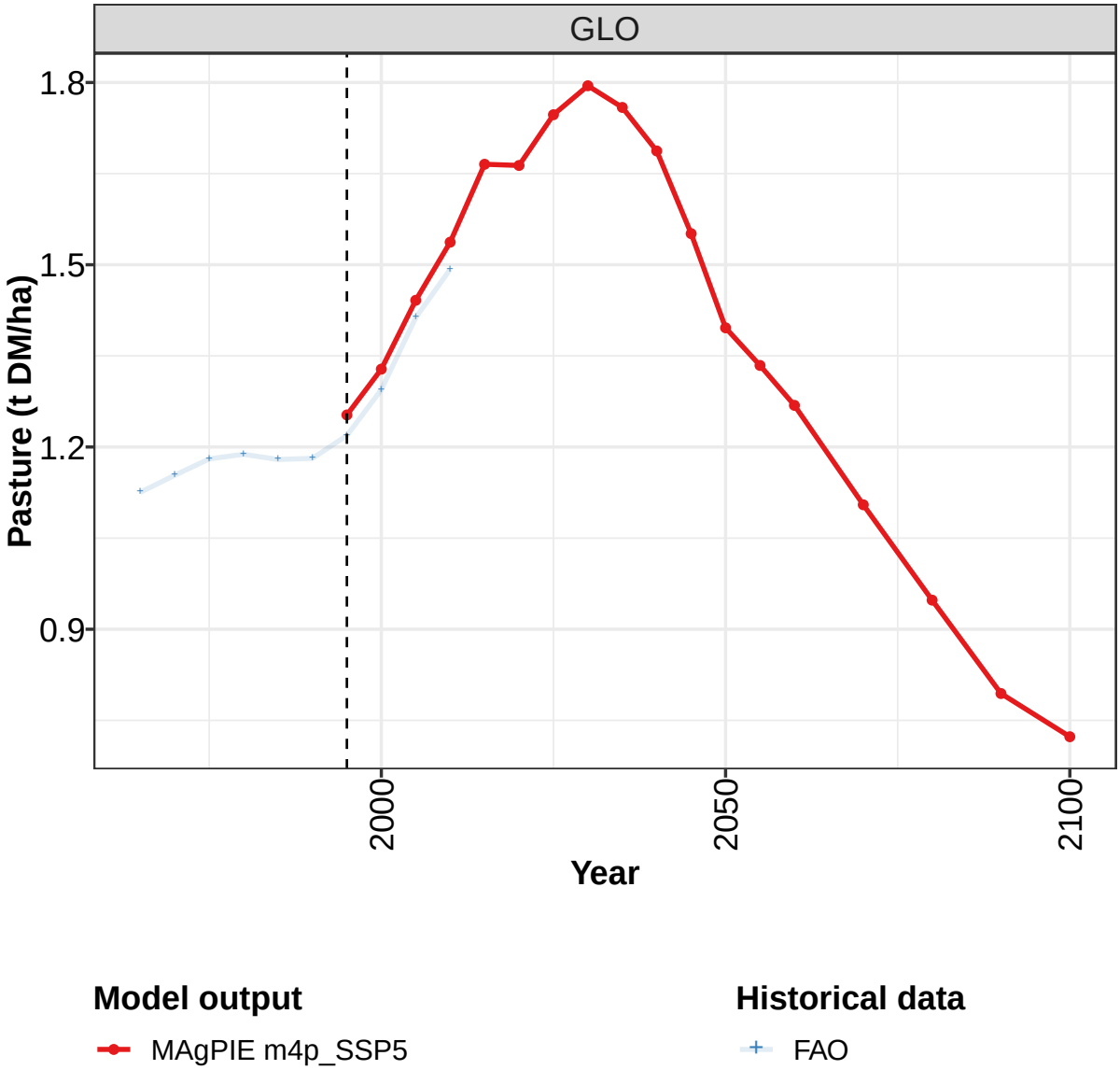
	2050	2055	2060	2070	2080	2090	2100
GLO	8.6	8.8	8.9	9.0	8.9	8.8	9.1
CAZ	4.3	4.5	4.6	4.6	4.5	4.2	4.3
CHA	16.9	16.8	16.8	16.7	17.2	17.7	17.8
EUR	8.3	8.4	8.3	8.2	8.2	8.2	8.3
IND	10.8	11.3	11.7	12.0	11.7	10.8	13.0
JPN	15.8	16.0	16.1	16.4	16.4	16.5	15.7
LAM	11.0	11.0	11.1	11.1	11.2	11.2	11.2
MEA	5.8	5.9	5.8	5.6	5.6	5.8	5.9
NEU	12.8	12.8	12.8	13.0	13.1	13.2	13.4
OAS	13.7	14.1	12.9	12.5	13.2	13.8	13.3
REF	3.9	3.9	3.9	3.9	3.9	3.9	3.9
SSA	8.1	8.6	8.9	9.1	9.1	9.1	9.1
USA	6.2	6.2	6.3	6.6	6.7	6.6	6.6

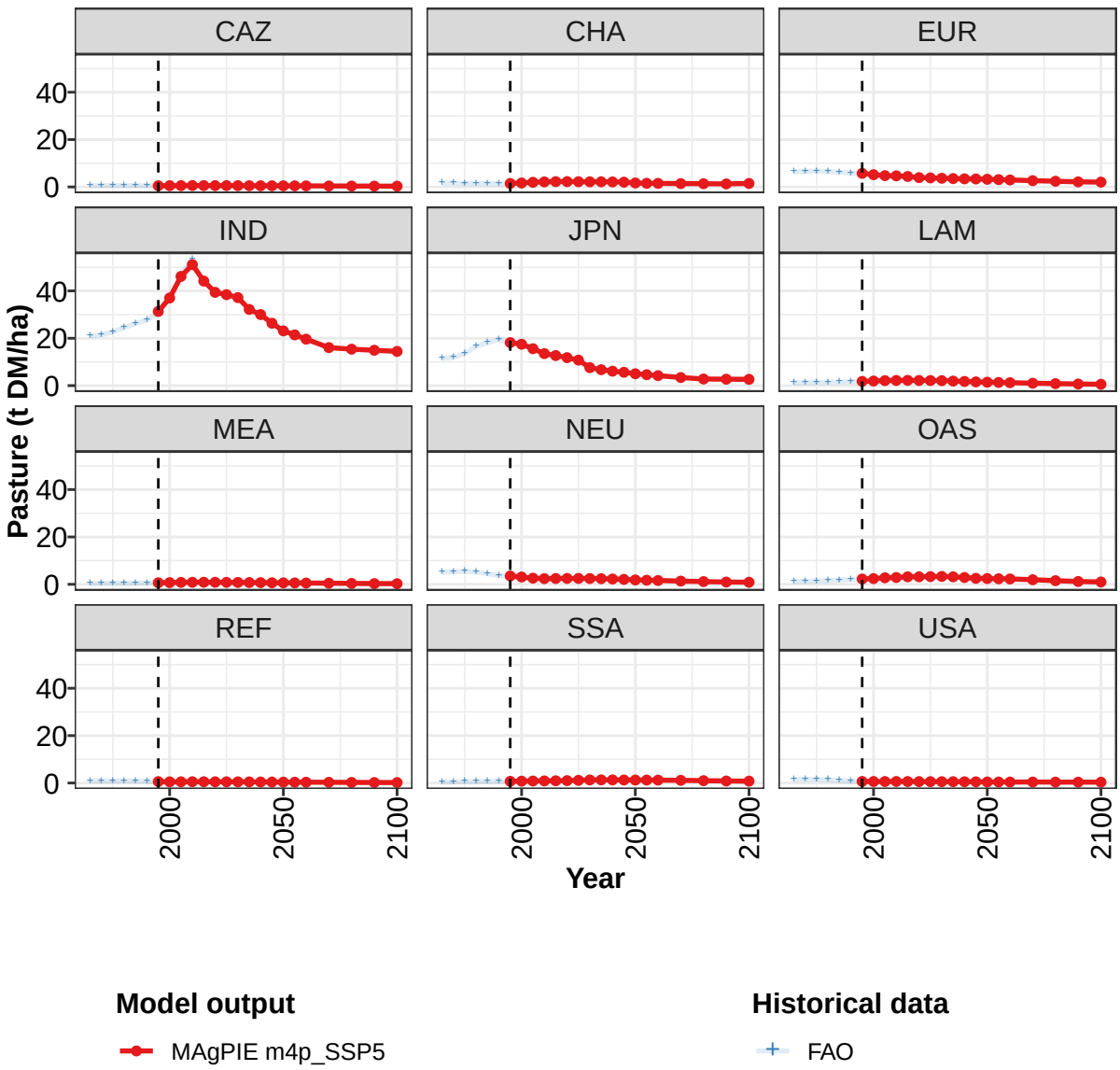
Table 1532: MAgPIE m4p_SSP5 — Productivity—Yield—Forage (t DM/ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.55	1.79	2.09	2.51	4.05	3.65	2.98	3.17	3.46	3.23
CAZ	0.50	0.53	0.69	0.78	3.39	3.16	2.42	2.59	2.58	2.93
CHA	0.00	0.00	0.00	0.00	5.36	6.15	6.99	7.36	8.05	8.36
EUR	3.05	3.72	4.13	4.60	6.40	5.25	5.42	6.10	6.31	6.49
IND	3.09	3.15	2.73	3.10	1.97	2.35	2.66	2.64	2.72	2.90
JPN	6.65	8.09	8.70	8.68	9.46	9.55	8.86	8.43	8.08	8.47
LAM	2.17	2.30	3.00	3.04	5.79	4.46	4.45	5.45	5.10	5.17
MEA	1.57	1.03	1.16	1.25	4.70	4.32	1.63	1.69	2.31	2.21
NEU	1.86	1.92	2.66	2.40	5.27	5.20	5.08	4.65	4.66	4.52
OAS	1.63	1.53	1.73	1.21	3.66	2.39	2.56	3.49	4.17	4.41
REF	1.67	2.12	2.10	2.86	3.14	3.14	1.58	1.21	1.30	0.81
SSA	2.25	2.39	2.37	2.98	2.96	2.47	2.03	1.97	1.92	1.80
USA	0.99	1.03	1.31	1.39	4.01	3.65	3.72	4.06	4.41	3.25

Table 1533: FAO — Productivity—Yield—Forage (t DM/ha)

52.3 Pasture


GLO
1.8
1.5
1.2
0.9
Pasture (t DM/ha)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



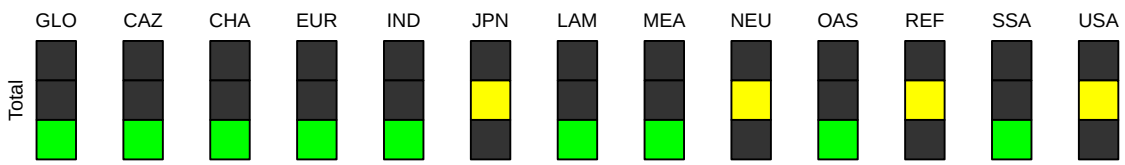


Figure 398: MAgPIE m4p_SSP5 — Productivity—Yield—Pasture (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.3	1.3	1.4	1.5	1.7	1.7	1.7	1.8	1.8	1.7	1.6
CAZ	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
CHA	1.5	1.7	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.0
EUR	5.7	5.2	4.8	4.7	4.4	3.9	3.8	3.7	3.5	3.4	3.4
IND	31.3	37.0	46.1	51.1	44.1	39.4	38.4	37.2	32.2	30.0	26.3
JPN	18.2	17.5	15.6	13.5	12.7	11.8	10.8	7.6	6.7	6.1	5.6
LAM	1.8	2.0	2.1	2.2	2.2	2.2	2.1	2.1	1.9	1.8	1.6
MEA	0.6	0.7	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.7
NEU	3.5	3.1	2.6	2.4	2.5	2.5	2.5	2.4	2.4	2.3	2.1
OAS	2.2	2.4	2.8	2.9	3.2	3.2	3.3	3.3	3.2	2.9	2.5
REF	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
SSA	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.3	1.3	1.3	1.3
USA	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5

Table 1534: MAgPIE m4p_SSP5 — Productivity—Yield—Pasture (t DM/ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.4	1.3	1.3	1.1	0.9	0.8	0.7
CAZ	0.5	0.5	0.5	0.4	0.4	0.3	0.3
CHA	1.7	1.5	1.5	1.4	1.4	1.3	1.5
EUR	3.3	3.1	3.0	2.7	2.4	2.1	2.0
IND	23.1	21.4	19.6	16.1	15.4	14.9	14.4
JPN	5.0	4.6	4.2	3.4	2.8	2.7	2.7
LAM	1.4	1.3	1.2	1.0	0.8	0.7	0.6
MEA	0.6	0.6	0.5	0.5	0.4	0.3	0.3
NEU	1.8	1.7	1.6	1.4	1.1	0.9	0.9
OAS	2.4	2.3	2.3	1.9	1.5	1.2	1.0
REF	0.4	0.4	0.3	0.3	0.2	0.2	0.2
SSA	1.2	1.2	1.2	1.1	1.0	0.8	0.8
USA	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Table 1535: MAgPIE m4p_SSP5 — Productivity—Yield—Pasture (t DM/ha) [PART 2/2]

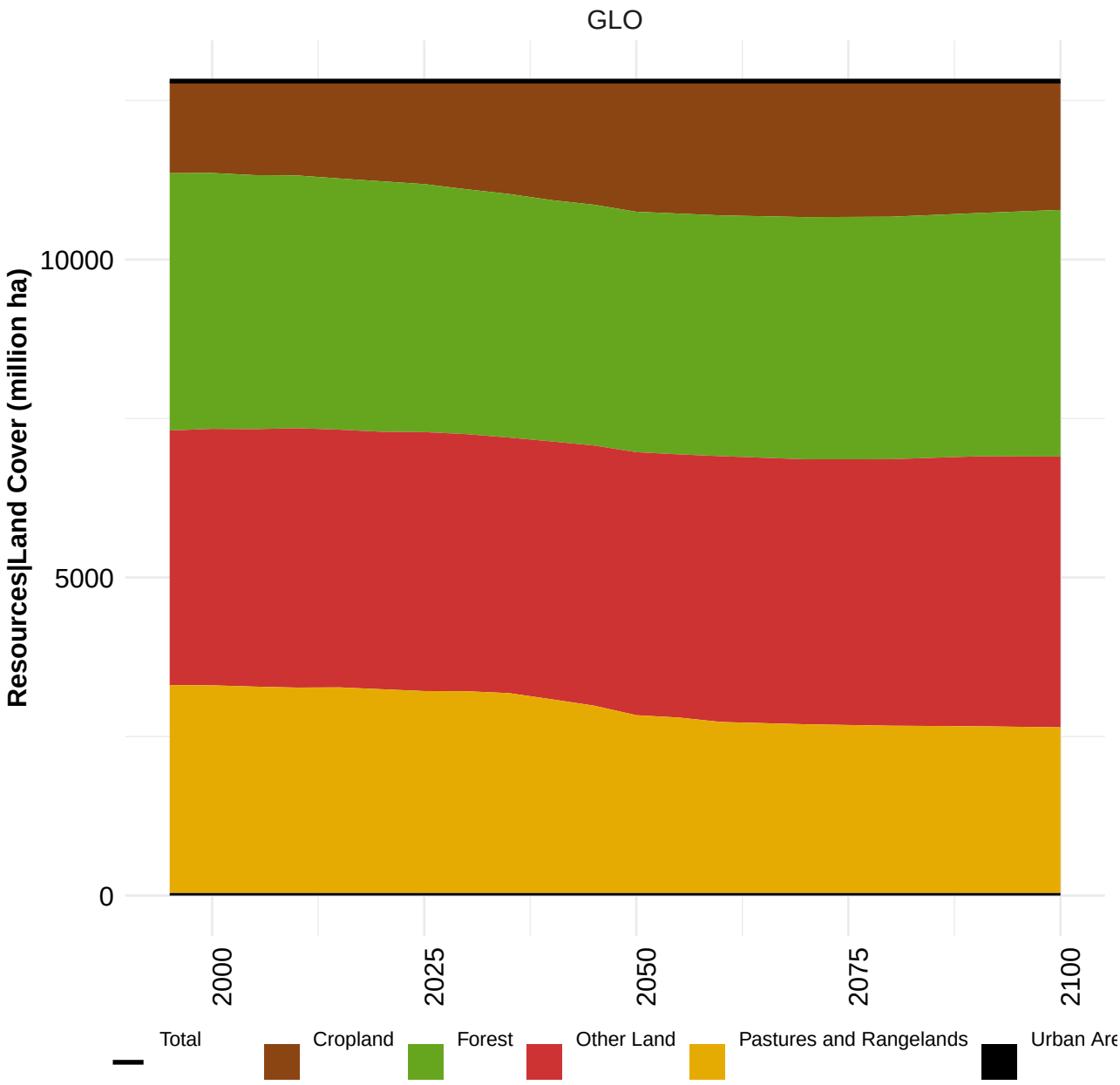
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.5
CAZ	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6
CHA	1.6	1.6	1.5	1.4	1.3	1.3	1.5	1.7	2.0	2.1
EUR	6.4	6.5	6.7	6.5	6.2	5.9	5.3	4.9	4.5	4.4
IND	20.8	21.5	22.7	24.5	26.3	27.8	30.7	37.0	46.5	53.4
JPN	11.5	11.9	13.5	16.6	18.1	19.3	18.4	17.6	15.6	13.5
LAM	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.1
MEA	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.8
NEU	5.1	5.3	5.4	5.3	4.5	3.7	3.3	2.9	2.5	2.3
OAS	1.2	1.3	1.4	1.5	1.8	2.0	2.2	2.3	2.7	2.6
REF	0.8	0.9	0.9	0.8	0.8	0.7	0.5	0.4	0.4	0.5
SSA	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.9
USA	1.4	1.5	1.5	1.3	1.0	0.7	0.7	0.6	0.6	0.7

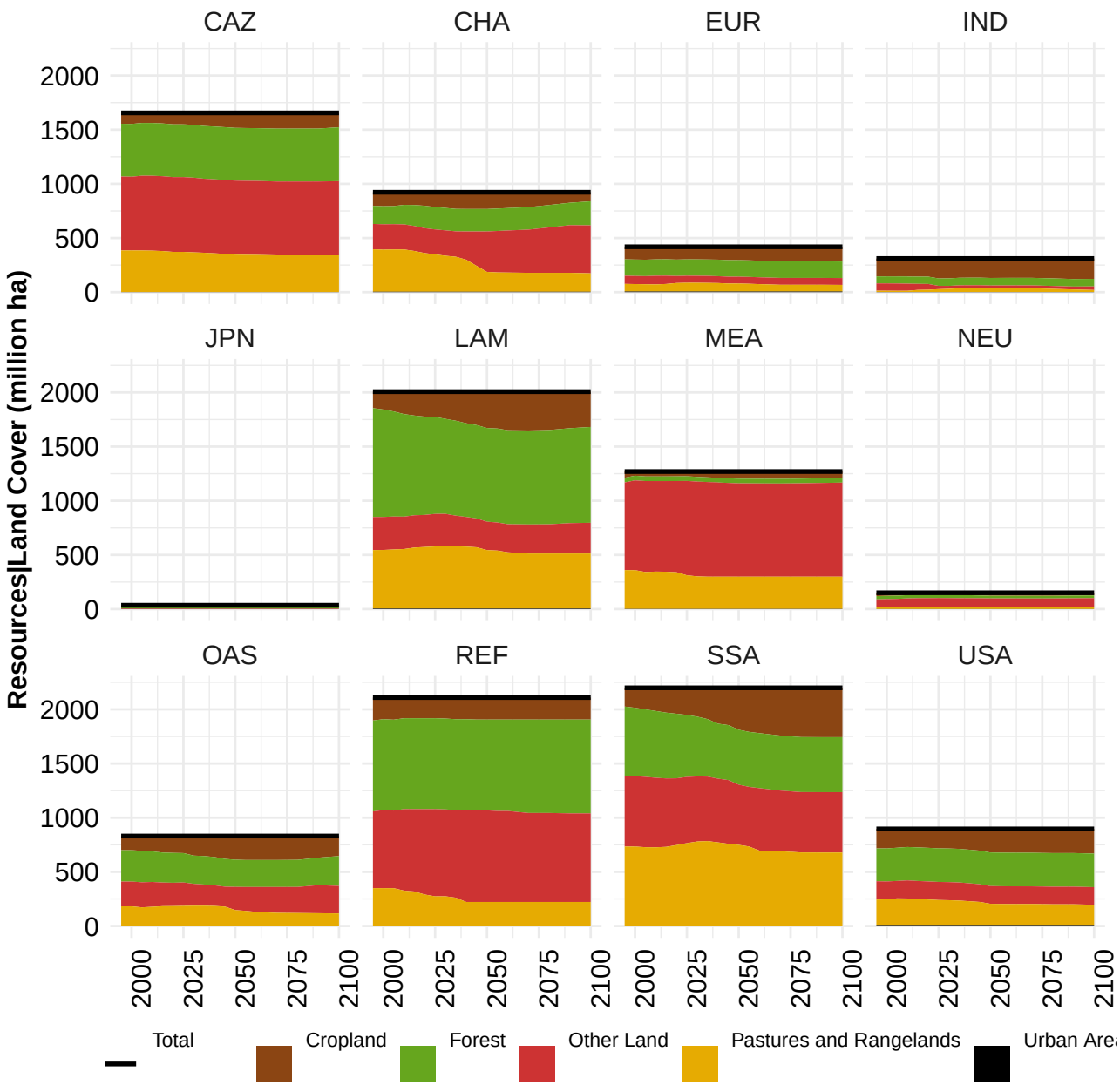
Table 1536: FAO — Productivity—Yield—Pasture (t DM/ha)

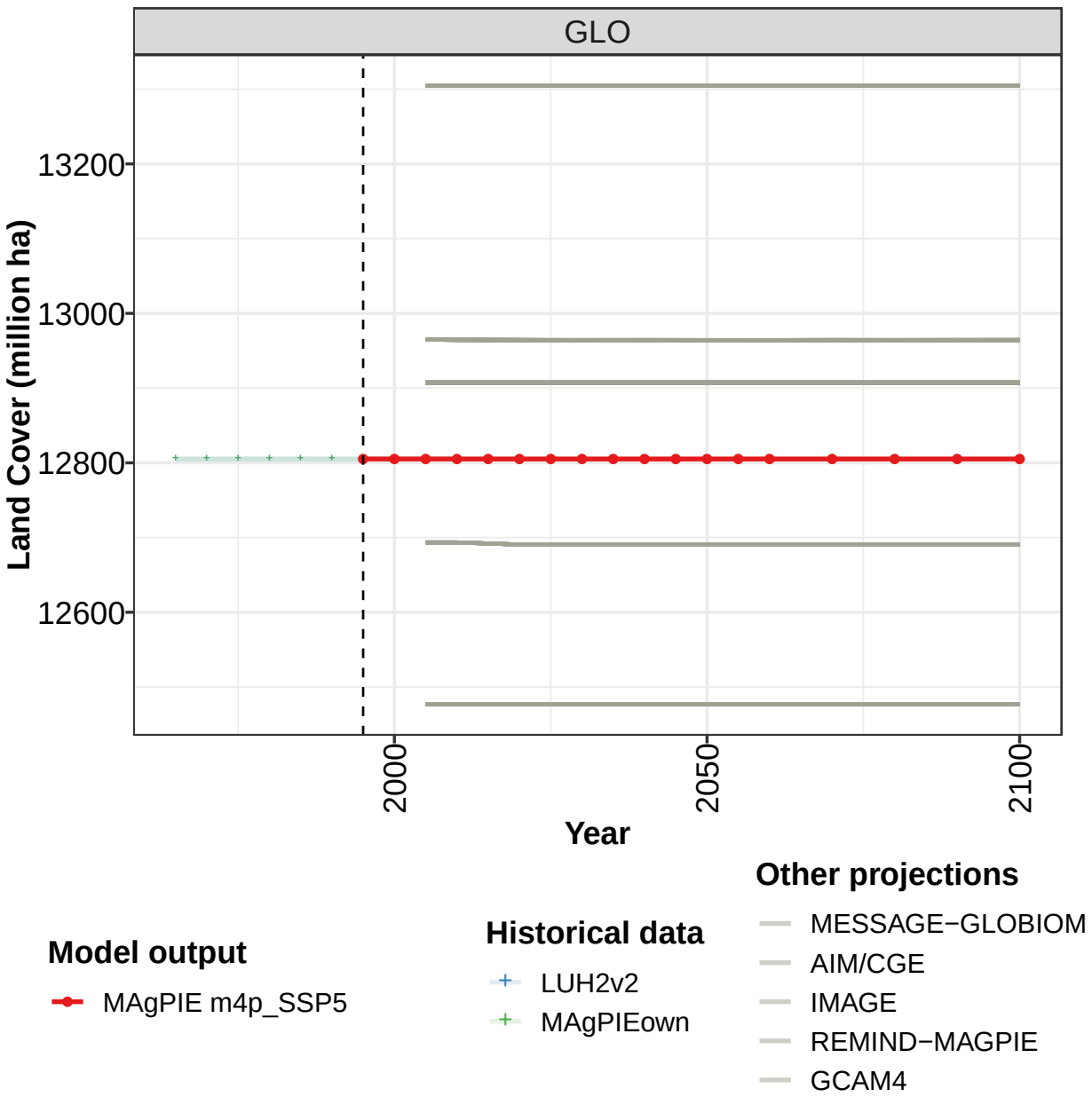
53 Yield-increasing technological change

Part XIV
Resources

54 Land Cover




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Resources|Land Cover (million ha)
0
500
1000
1500
2000
2000
2025
2050
2075
2100
Total
Cropland
Forest
Other Land
Pastures and Rangelands
Urban Area


GLO
Land Cover (million ha)
13200
13000
12800
12600
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
LUH2v2
MAgPIEown
Other projections
MESSAGE−GLOBIOM
AIM/CGE
IMAGE
REMIND−MAGPIE
GCAM4

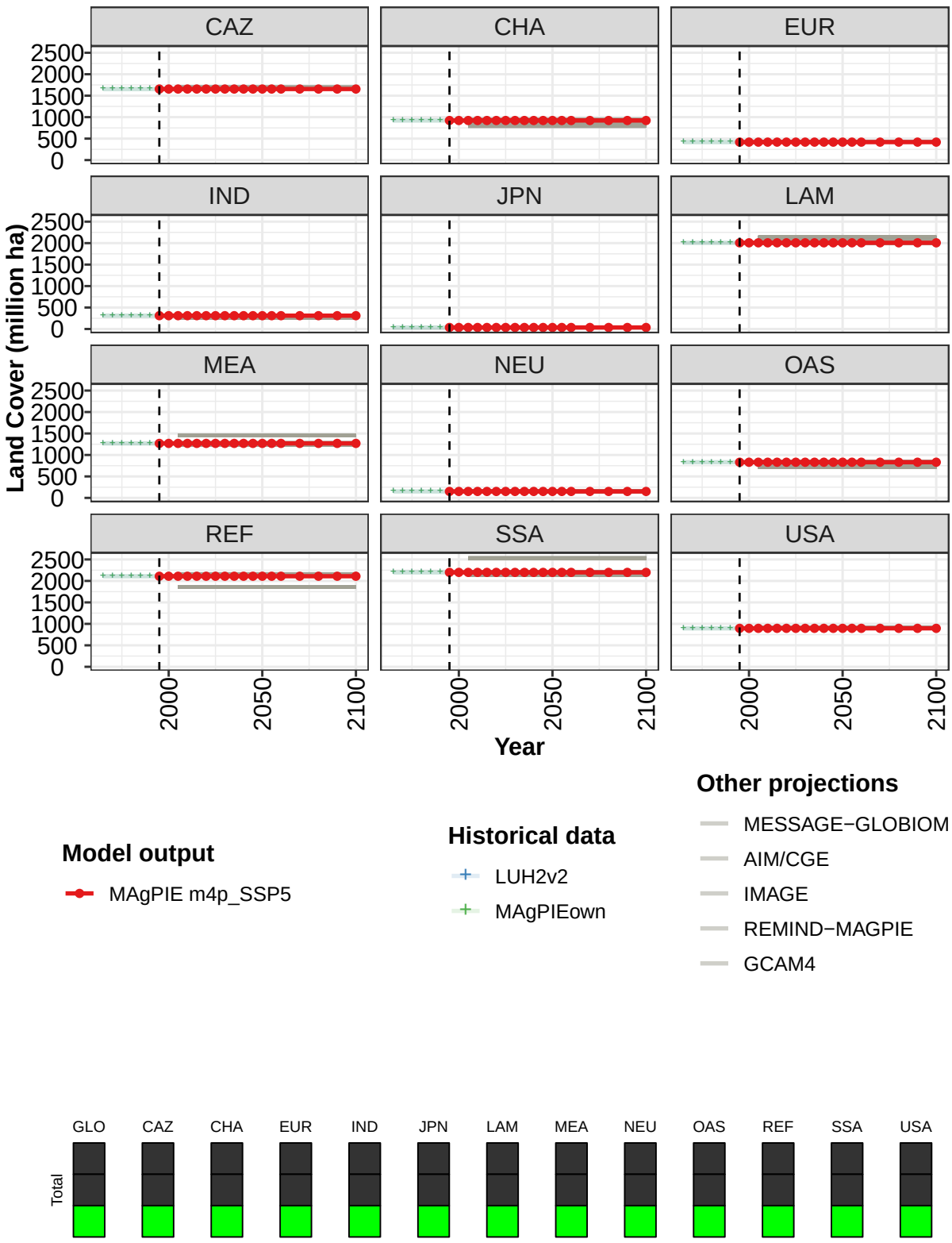


Figure 399: MAgPIE m4p_SSP5 — Resources—Land Cover (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	12805	12805	12805	12805	12805	12805	12805	12805	12805	12805	12805
CAZ	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655
CHA	922	922	922	922	922	922	922	922	922	922	922
EUR	419	419	419	419	419	419	419	419	419	419	419
IND	310	310	310	310	310	310	310	310	310	310	310
JPN	35	35	35	35	35	35	35	35	35	35	35
LAM	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007
MEA	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269
NEU	151	151	151	151	151	151	151	151	151	151	151
OAS	831	831	831	831	831	831	831	831	831	831	831
REF	2110	2110	2110	2110	2110	2110	2110	2110	2110	2110	2110
SSA	2199	2199	2199	2199	2199	2199	2199	2199	2199	2199	2199
USA	896	896	896	896	896	896	896	896	896	896	896

Table 1537: MAgPIE m4p_SSP5 — Resources—Land Cover (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	12805	12805	12805	12805	12805	12805	12805
CAZ	1655	1655	1655	1655	1655	1655	1655
CHA	922	922	922	922	922	922	922
EUR	419	419	419	419	419	419	419
IND	310	310	310	310	310	310	310
JPN	35	35	35	35	35	35	35
LAM	2007	2007	2007	2007	2007	2007	2007
MEA	1269	1269	1269	1269	1269	1269	1269
NEU	151	151	151	151	151	151	151
OAS	831	831	831	831	831	831	831
REF	2110	2110	2110	2110	2110	2110	2110
SSA	2199	2199	2199	2199	2199	2199	2199
USA	896	896	896	896	896	896	896

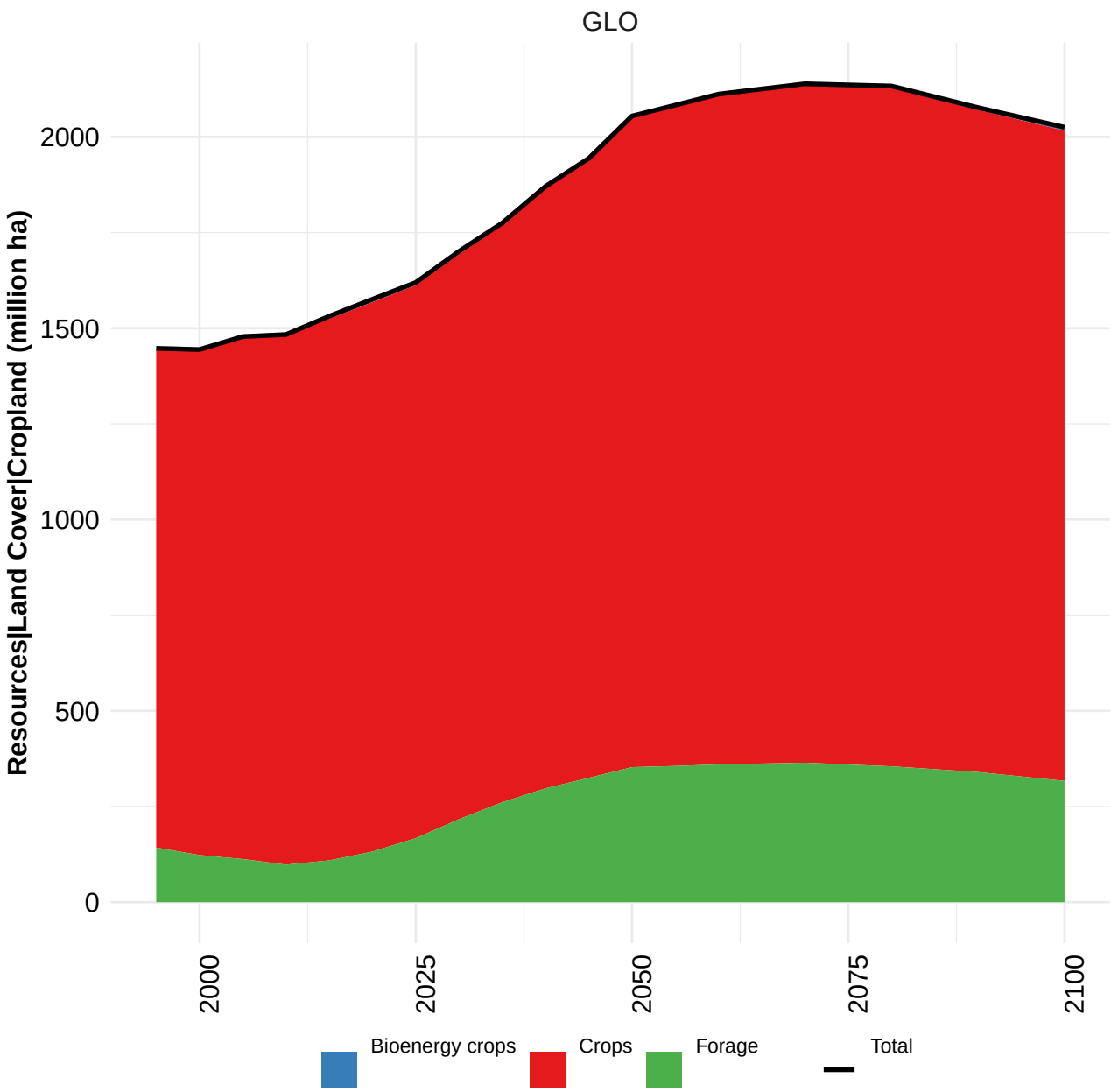
Table 1538: MAgPIE m4p_SSP5 — Resources—Land Cover (million ha) [PART 2/2]

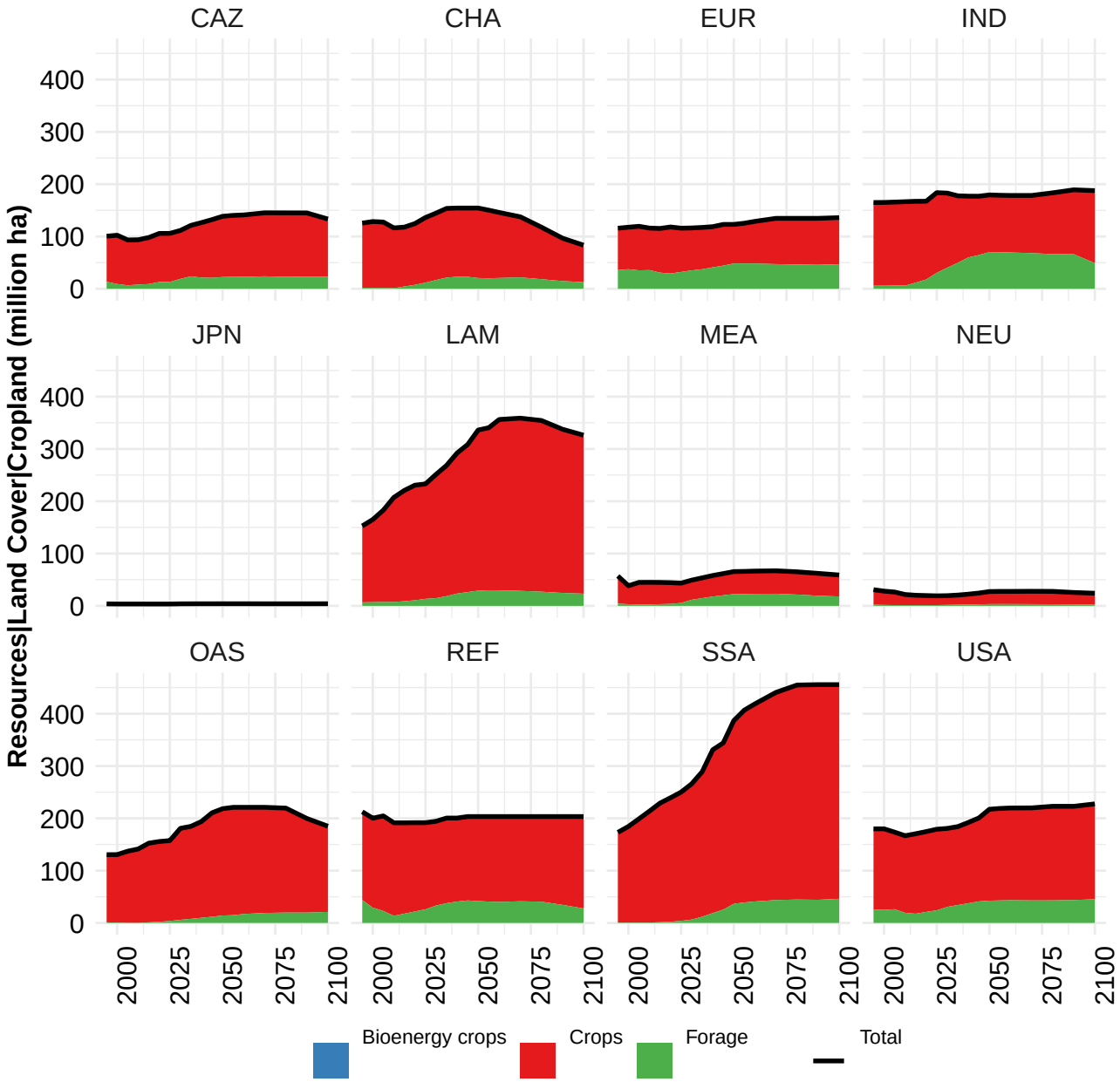
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12805	12805	12805	12805	12805	12805	12805	12805	12805	12805
CAZ	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655
CHA	922	922	922	922	922	922	922	922	922	922
EUR	419	419	419	419	419	419	419	419	419	419
IND	310	310	310	310	310	310	310	310	310	310
JPN	35	35	35	35	35	35	35	35	35	35
LAM	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007
MEA	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269
NEU	151	151	151	151	151	151	151	151	151	151
OAS	831	831	831	831	831	831	831	831	831	831
REF	2110	2110	2110	2110	2110	2110	2110	2110	2110	2110
SSA	2199	2199	2199	2199	2199	2199	2199	2199	2199	2199
USA	896	896	896	896	896	896	896	896	896	896

Table 1539: LUH2v2 — Resources—Land Cover (million ha)

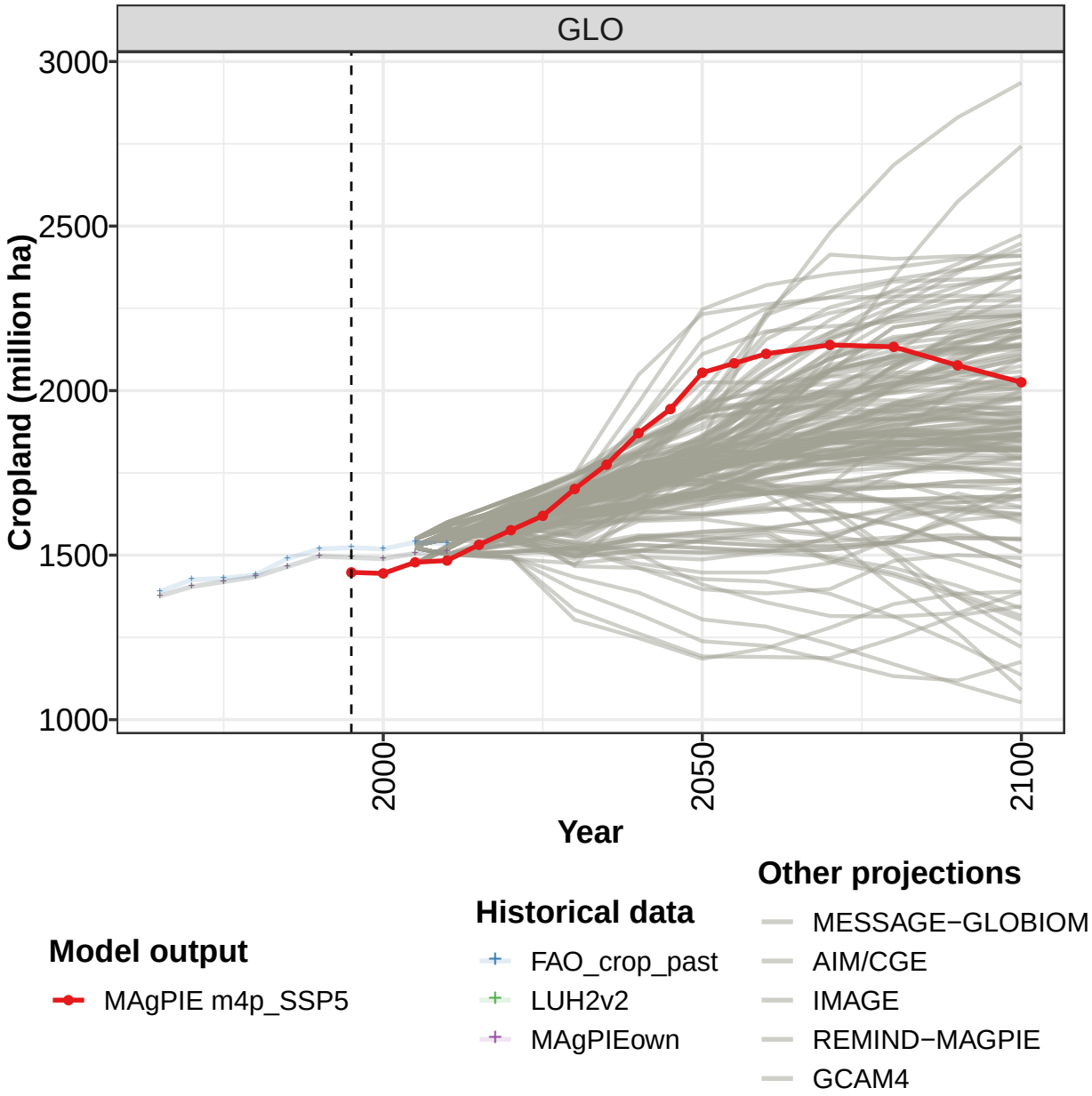
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12805	12805	12805	12805	12805	12805	12805	12805	12805	12805
CAZ	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655
CHA	922	922	922	922	922	922	922	922	922	922
EUR	419	419	419	419	419	419	419	419	419	419
IND	310	310	310	310	310	310	310	310	310	310
JPN	35	35	35	35	35	35	35	35	35	35
LAM	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007
MEA	1269	1269	1269	1269	1269	1269	1269	1269	1269	1269
NEU	151	151	151	151	151	151	151	151	151	151
OAS	831	831	831	831	831	831	831	831	831	831
REF	2110	2110	2110	2110	2110	2110	2110	2110	2110	2110
SSA	2199	2199	2199	2199	2199	2199	2199	2199	2199	2199
USA	896	896	896	896	896	896	896	896	896	896

Table 1540: MAgPIEown — Resources—Land Cover (million ha)




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Resources|Land Cover|Cropland (million ha)
0
100
200
300
400
2000
2025
2050
2075
2100
Bioenergy crops
Crops
Forage
Total

54.1 Cropland



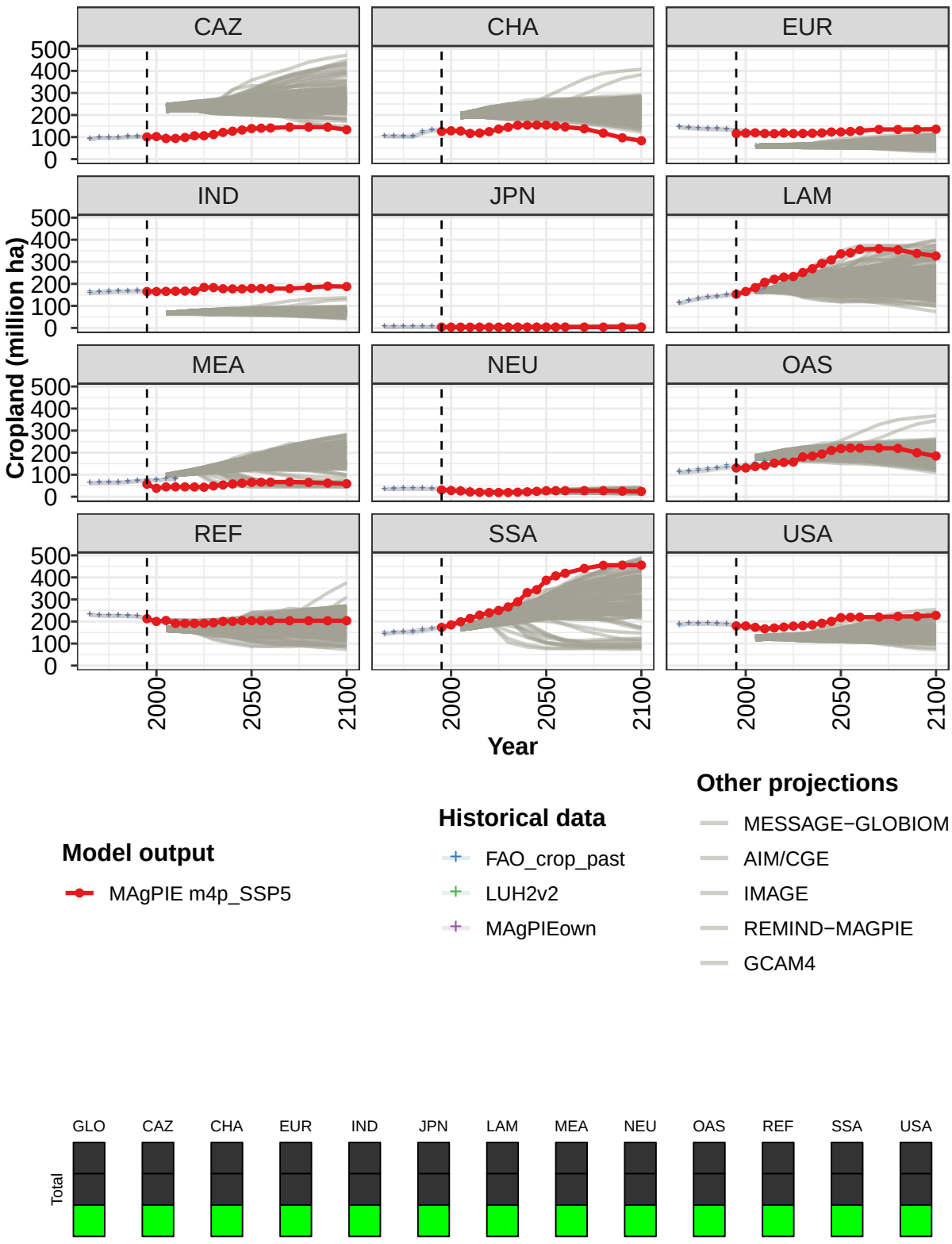


Figure 400: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1448	1444	1478	1484	1531	1576	1619	1701	1775	1871	1944
CAZ	101	102	93	94	98	106	106	112	121	127	132
CHA	126	129	128	116	118	125	136	145	154	154	154
EUR	116	118	119	116	115	118	116	116	117	119	123
IND	165	165	166	166	167	167	184	183	178	177	177
JPN	4	4	4	4	4	4	4	4	4	4	4
LAM	153	165	183	207	221	231	233	251	268	292	308
MEA	57	38	45	45	45	44	43	49	54	58	62
NEU	31	28	26	22	20	20	19	19	21	22	24
OAS	130	131	137	141	152	156	157	181	185	194	211
REF	213	200	205	191	191	192	192	194	200	200	203
SSA	173	184	199	214	229	239	250	266	289	331	344
USA	180	180	174	167	171	175	179	181	184	192	201

Table 1541: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2054	2083	2112	2139	2133	2077	2025
CAZ	139	140	141	145	145	145	133
CHA	154	150	146	138	118	97	83
EUR	123	125	129	135	135	135	136
IND	179	179	178	178	183	189	188
JPN	4	4	4	4	4	4	4
LAM	336	341	356	359	354	338	326
MEA	66	66	67	67	65	62	59
NEU	27	28	28	28	28	26	24
OAS	218	221	221	221	220	200	185
REF	203	203	203	203	203	203	203
SSA	387	407	419	441	455	456	456
USA	217	219	220	220	223	223	228

Table 1542: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1390	1425	1430	1440	1489	1519	1523	1519	1539	1534
CAZ	91	98	96	97	102	103	94	101	102	92
CHA	105	103	101	100	126	132	131	130	125	123
EUR	147	144	140	139	138	136	131	129	123	120
IND	162	165	167	168	169	170	170	170	170	169
JPN	6	6	6	5	5	5	5	5	5	5
LAM	109	121	131	137	141	148	159	161	177	184
MEA	64	65	67	65	69	72	78	75	80	80
NEU	35	36	36	37	36	36	35	34	34	32
OAS	116	118	122	127	132	141	140	145	152	160
REF	231	227	227	226	226	223	217	203	200	198
SSA	146	153	150	148	156	166	179	188	203	214
USA	179	190	188	191	190	188	184	178	168	159

Table 1543: FAO_crop_past — Resources—Land Cover—Cropland (million ha)

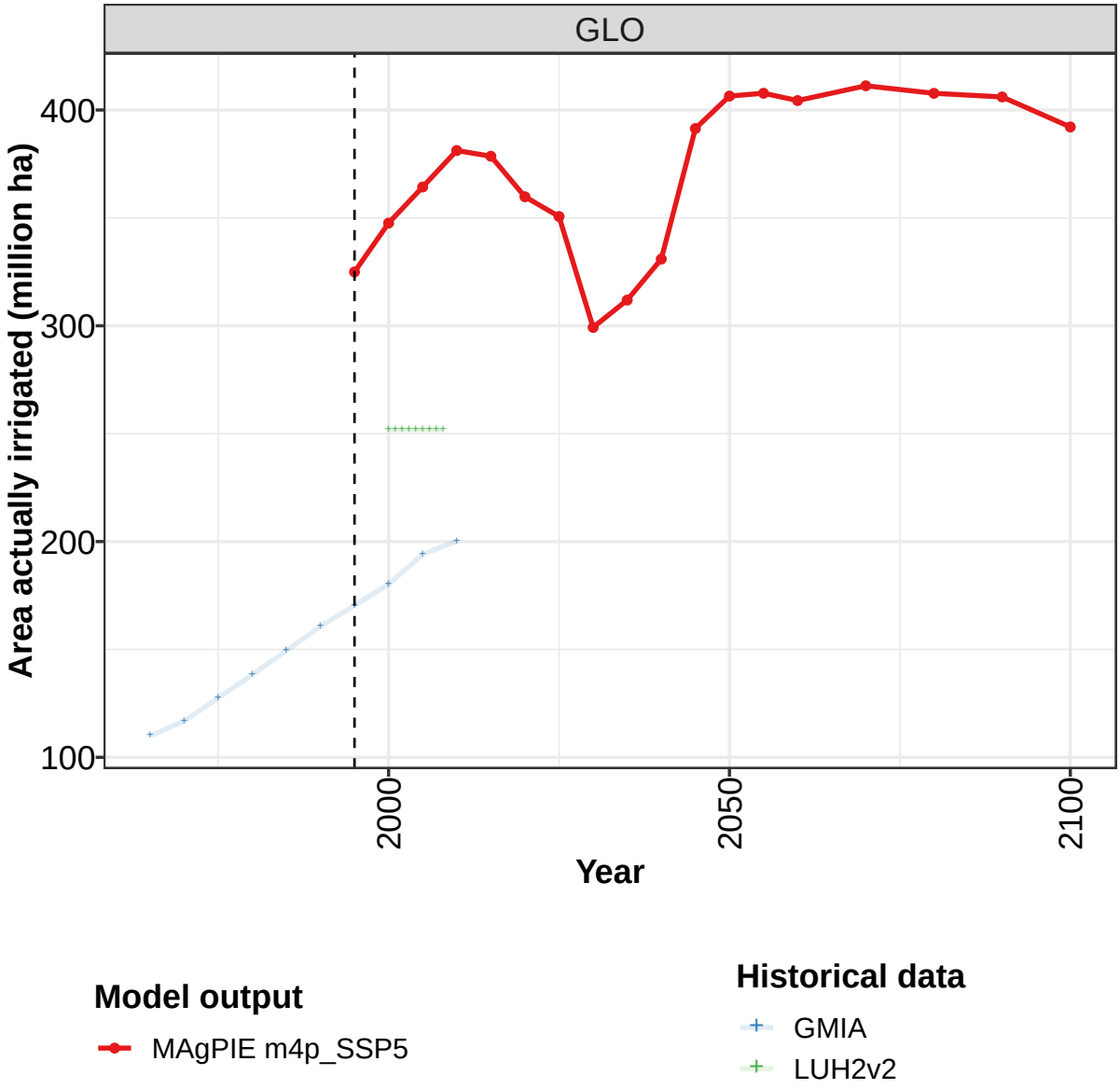
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1376	1404	1419	1434	1465	1497	1493	1489	1506	1510
CAZ	91	96	96	96	99	101	101	100	101	91
CHA	104	104	104	103	117	130	129	128	130	122
EUR	143	140	138	135	134	133	130	127	119	118
IND	158	160	162	163	164	165	166	167	169	168
JPN	5	5	5	5	5	5	4	4	4	4
LAM	112	124	132	140	144	148	154	160	165	182
MEA	62	63	63	64	67	70	72	75	79	78
NEU	34	35	36	36	36	35	34	33	33	31
OAS	108	112	116	120	126	132	134	136	141	150
REF	230	227	226	225	224	223	213	203	199	196
SSA	142	149	153	157	162	168	173	179	197	212
USA	187	190	190	190	188	186	182	178	167	158

Table 1544: LUH2v2 — Resources—Land Cover—Cropland (million ha)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1376	1404	1419	1434	1465	1497	1493	1489	1506	1510
CAZ	91	96	96	96	99	101	101	100	101	91
CHA	104	104	104	103	117	130	129	128	130	122
EUR	143	140	138	135	134	133	130	127	119	118
IND	158	160	162	163	164	165	166	167	169	168
JPN	5	5	5	5	5	5	4	4	4	4
LAM	112	124	132	140	144	148	154	160	165	182
MEA	62	63	63	64	67	70	72	75	79	78
NEU	34	35	36	36	36	35	34	33	33	31
OAS	108	112	116	120	126	132	134	136	141	150
REF	230	227	226	225	224	223	213	203	199	196
SSA	142	149	153	157	162	168	173	179	197	212
USA	187	190	190	190	188	186	182	178	167	158

Table 1545: MAgPIEown — Resources—Land Cover—Cropland (million ha)

54.1.1 Area actually irrigated



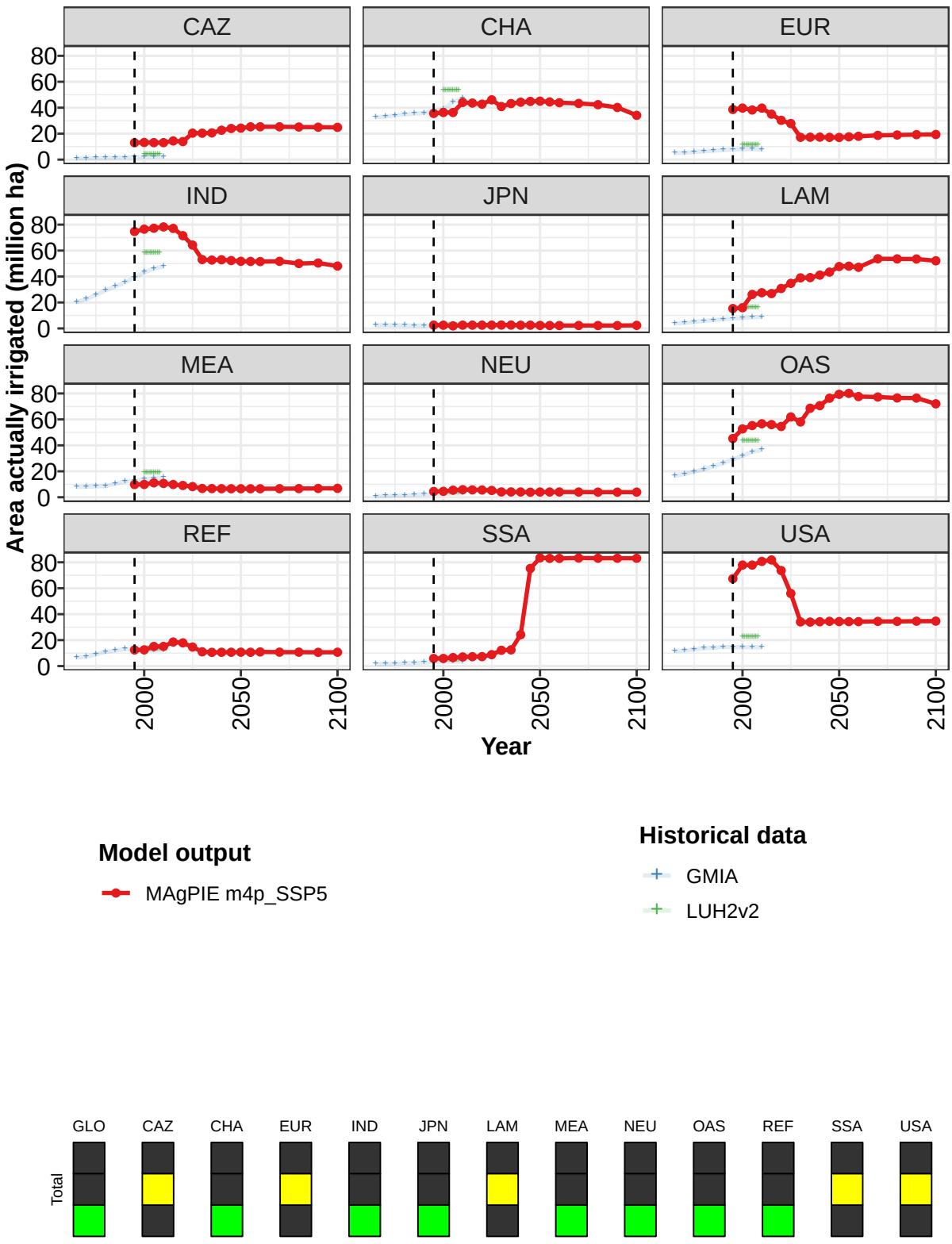


Figure 401: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Area actually irrigated (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	325	348	364	381	379	360	351	299	312	331	391
CAZ	13	13	13	13	14	14	20	20	21	23	24
CHA	36	36	36	44	44	43	46	41	43	44	45
EUR	39	40	38	40	35	30	28	17	17	17	17
IND	75	77	77	78	77	72	64	53	53	53	52
JPN	3	3	2	3	3	3	3	3	3	2	3
LAM	15	16	26	28	27	31	35	39	39	41	43
MEA	10	10	11	11	10	9	8	7	7	7	7
NEU	4	5	5	6	6	6	5	4	4	4	4
OAS	45	53	55	57	56	55	62	58	69	71	76
REF	12	13	15	15	19	18	15	11	11	11	11
SSA	6	6	7	7	7	7	9	12	12	24	75
USA	67	78	78	81	82	74	56	34	34	34	34

Table 1546: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Area actually irrigated (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	406	408	404	411	408	406	392
CAZ	24	25	25	25	25	25	25
CHA	45	44	44	43	42	40	34
EUR	17	18	18	19	19	19	19
IND	52	52	52	52	50	50	48
JPN	2	2	2	2	2	2	2
LAM	48	48	47	54	54	54	52
MEA	7	7	7	7	7	7	7
NEU	4	4	4	4	4	4	4
OAS	79	80	78	77	77	76	72
REF	11	11	11	11	11	11	11
SSA	83	83	83	83	83	83	83
USA	34	34	34	34	34	35	35

Table 1547: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Area actually irrigated (million ha) [PART 2/2]

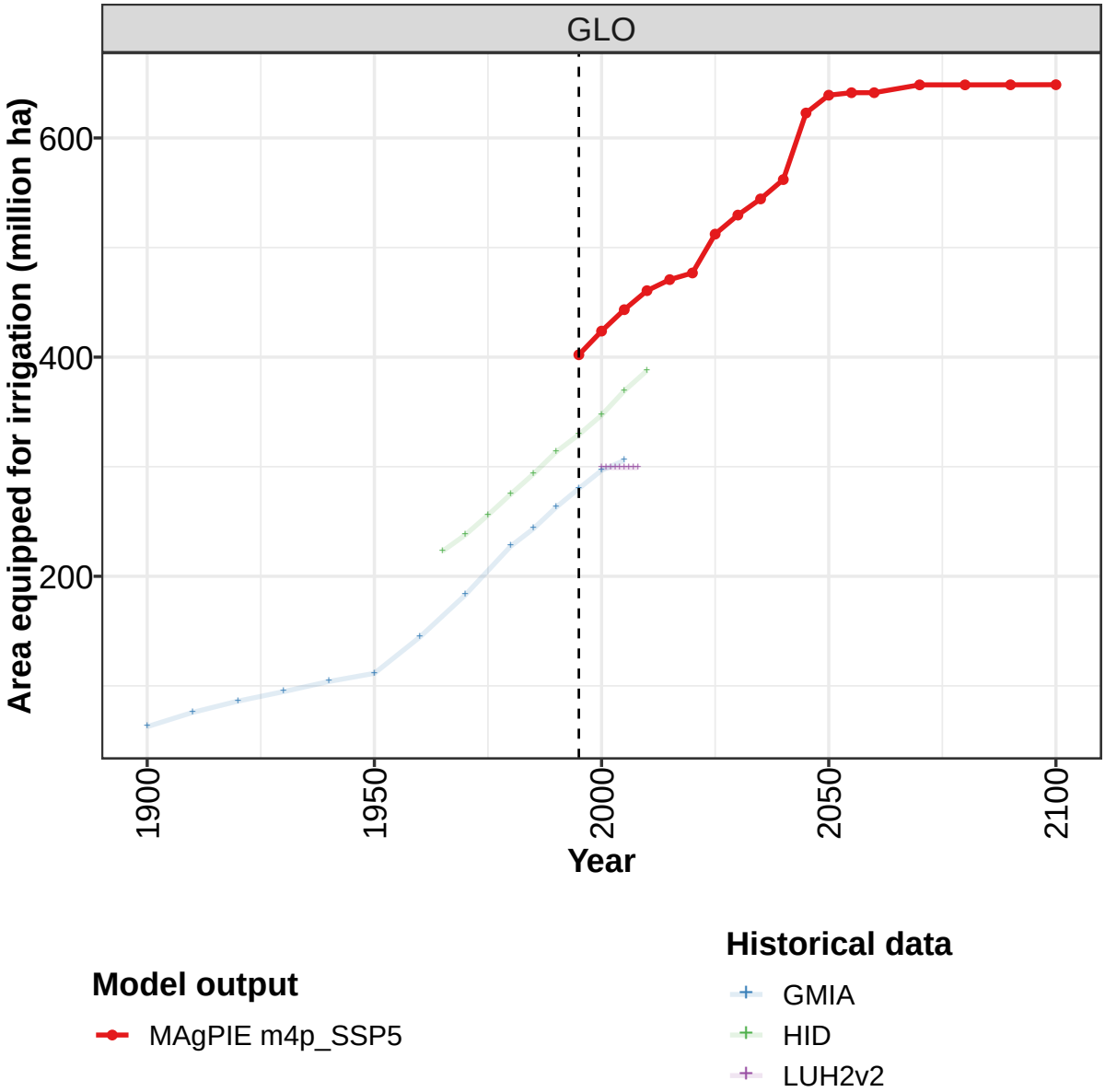
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	110	117	128	138	149	161	170	180	194	200
CAZ	1	1	1	1	1	2	2	2	2	2
CHA	33	33	34	35	35	36	37	39	44	47
EUR	5	5	6	6	7	7	8	8	8	8
IND	20	22	26	29	32	35	39	43	46	48
JPN	2	3	2	2	2	2	2	2	2	2
LAM	4	4	5	6	6	7	8	8	9	9
MEA	8	8	8	9	10	12	13	14	15	15
NEU	1	1	1	1	2	2	2	3	3	3
OAS	16	18	20	21	24	26	29	32	35	36
REF	7	7	9	11	12	13	13	12	12	12
SSA	2	2	2	2	2	3	3	3	3	4
USA	11	12	13	14	14	15	15	15	14	14

Table 1548: LUH2v2 — Resources—Land Cover—Cropland—Area actually irrigated (million ha)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
GLO	252	252	252	252	252	252	252	252	252
CAZ	4	4	4	4	4	4	4	4	4
CHA	53	53	53	53	53	53	53	53	53
EUR	11	11	11	11	11	11	11	11	11
IND	58	58	58	58	58	58	58	58	58
JPN	3	3	3	3	3	3	3	3	3
LAM	16	16	16	16	16	16	16	16	16
MEA	19	19	19	19	19	19	19	19	19
NEU	4	4	4	4	4	4	4	4	4
OAS	43	43	43	43	43	43	43	43	43
REF	13	13	13	13	13	13	13	13	13
SSA	5	5	5	5	5	5	5	5	5
USA	22	22	22	22	22	22	22	22	22

Table 1549: GMIA — Resources—Land Cover—Cropland—Area actually irrigated (million ha)

54.1.2 Area equipped for irrigation



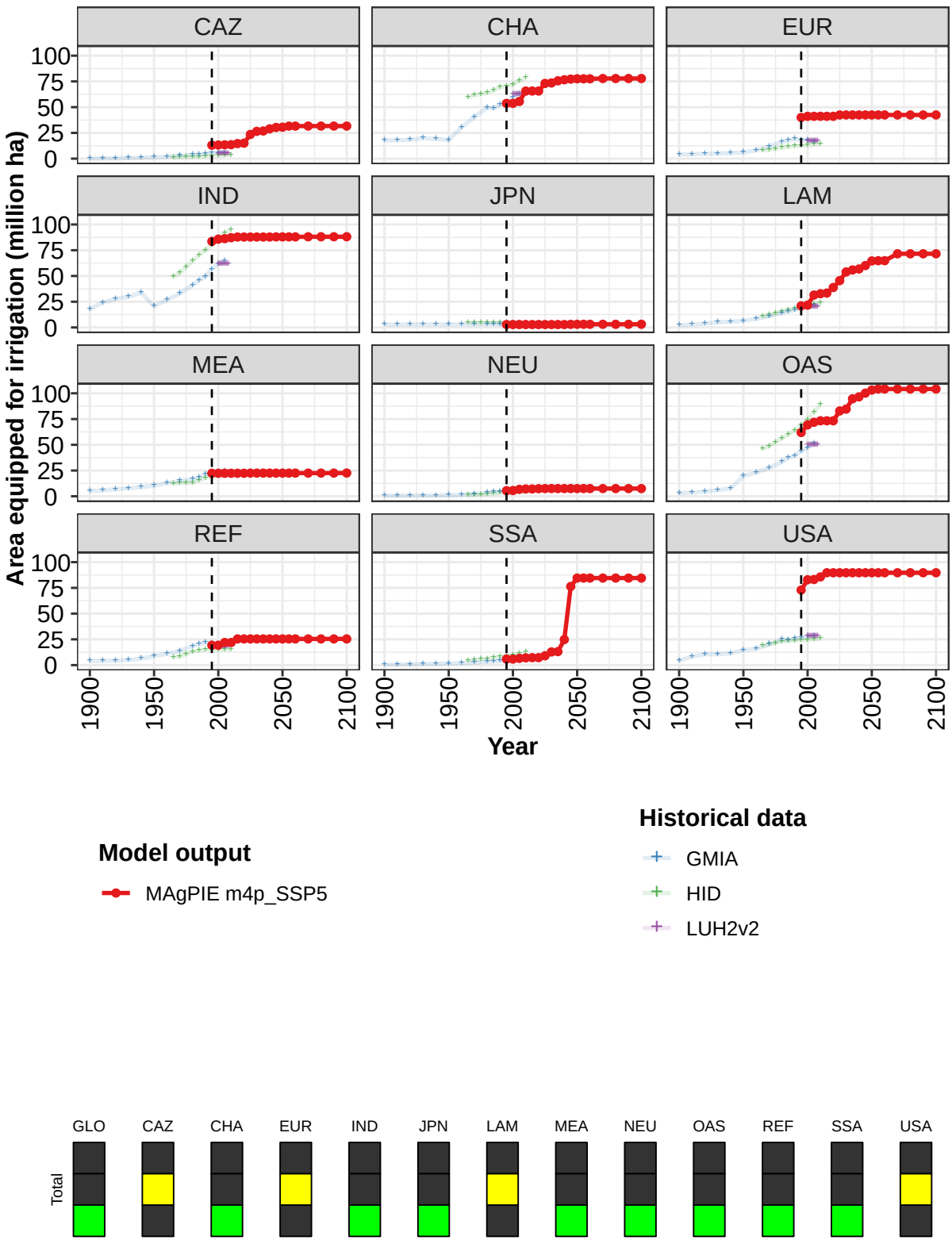


Figure 402: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	402	424	443	461	471	477	512	530	544	562	623
CAZ	13	13	13	14	15	15	24	27	27	29	30
CHA	54	54	56	66	66	66	73	74	76	77	77
EUR	40	41	41	41	41	41	42	42	42	42	42
IND	84	86	86	87	88	88	88	88	88	88	88
JPN	3	3	3	3	3	3	3	3	3	3	3
LAM	21	22	32	33	33	39	45	54	56	57	60
MEA	22	22	22	22	22	22	23	23	23	23	23
NEU	5	6	7	7	7	7	8	8	8	8	8
OAS	62	69	72	73	73	73	83	85	95	97	100
REF	19	19	22	22	25	25	25	25	25	25	25
SSA	6	6	7	7	7	7	9	13	13	25	76
USA	73	83	83	86	90	90	90	90	90	90	90

Table 1550: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	639	641	641	648	648	649	649
CAZ	31	32	32	32	32	32	32
CHA	78	78	78	78	78	78	78
EUR	42	42	42	42	42	42	42
IND	88	88	88	88	88	88	88
JPN	3	3	3	3	3	3	3
LAM	65	65	65	72	72	72	72
MEA	23	23	23	23	23	23	23
NEU	8	8	8	8	8	8	8
OAS	103	104	104	104	104	104	104
REF	25	25	25	25	25	25	25
SSA	85	85	85	85	85	85	85
USA	90	90	90	90	90	90	90

Table 1551: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha) [PART 2/2]

	1900	1910	1920	1930	1940	1950	1960	1970	1980	1985	1990
GLO	63	76	86	95	104	111	144	183	227	243	263
CAZ	0	0	0	1	1	1	2	3	4	4	5
CHA	18	18	18	20	19	18	30	40	49	49	52
EUR	4	4	5	5	5	6	8	12	16	18	19
IND	18	24	28	30	34	21	27	33	41	46	49
JPN	3	3	3	3	3	3	3	3	3	3	3
LAM	2	3	4	5	6	6	8	11	14	16	17
MEA	5	6	7	8	9	10	13	15	17	18	21
NEU	1	1	1	1	1	1	1	2	3	4	5
OAS	3	4	5	6	8	20	23	27	33	37	39
REF	4	4	4	5	6	9	11	14	18	20	22
SSA	1	1	1	1	1	2	2	2	3	4	4
USA	4	8	11	11	11	15	16	20	25	24	26

Table 1552: HID — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha) [PART 1/2]

	1995	2000	2005
GLO	280	297	306
CAZ	6	5	6
CHA	54	59	62
EUR	18	18	16
IND	57	62	65
JPN	3	3	3
LAM	19	20	21
MEA	23	24	24
NEU	5	6	6
OAS	44	47	51
REF	21	20	17
SSA	5	5	5
USA	26	28	28

Table 1553: HID — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha) [PART 2/2]

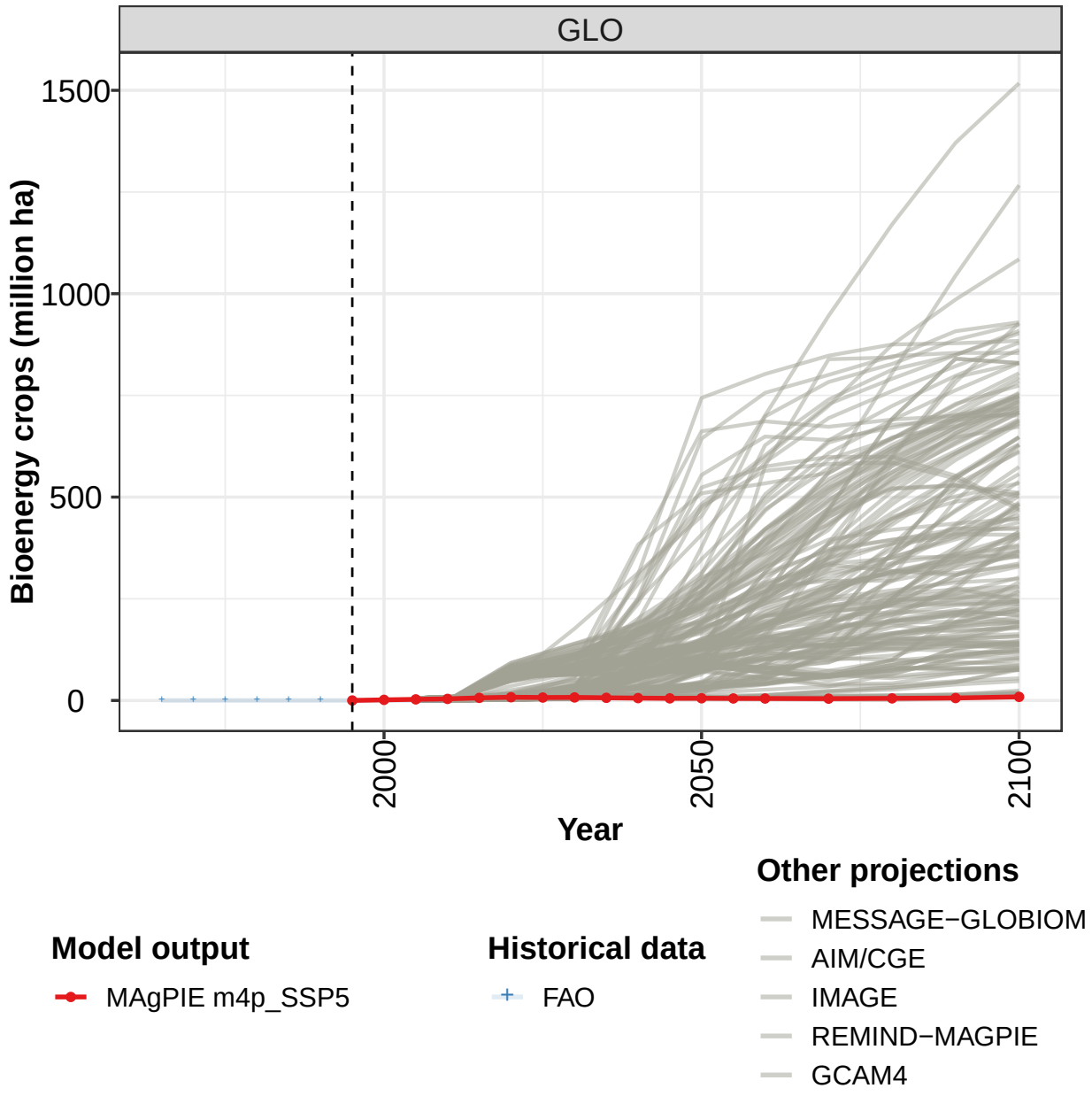
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	223	238	256	275	293	313	329	347	369	388
CAZ	1	1	2	2	2	2	3	3	3	3
CHA	59	62	63	64	66	70	70	72	76	79
EUR	8	9	10	11	11	12	12	13	14	14
IND	49	53	59	65	70	75	81	87	92	95
JPN	5	5	5	5	5	5	4	4	4	4
LAM	11	12	14	16	17	18	19	20	22	24
MEA	12	13	13	13	15	18	19	20	22	23
NEU	1	1	2	2	3	3	4	4	4	4
OAS	46	49	53	56	60	64	69	74	82	89
REF	8	8	11	13	14	15	15	15	15	15
SSA	4	5	5	6	7	8	9	10	11	12
USA	19	20	22	23	23	24	24	25	25	25

Table 1554: LUH2v2 — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
GLO	299	299	299	299	299	299	299	299	299
CAZ	5	5	5	5	5	5	5	5	5
CHA	62	62	62	62	62	62	62	62	62
EUR	17	17	17	17	17	17	17	17	17
IND	62	62	62	62	62	62	62	62	62
JPN	3	3	3	3	3	3	3	3	3
LAM	20	20	20	20	20	20	20	20	20
MEA	23	23	23	23	23	23	23	23	23
NEU	6	6	6	6	6	6	6	6	6
OAS	50	50	50	50	50	50	50	50	50
REF	19	19	19	19	19	19	19	19	19
SSA	5	5	5	5	5	5	5	5	5
USA	28	28	28	28	28	28	28	28	28

Table 1555: GMIA — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha)

54.1.3 Bioenergy crops



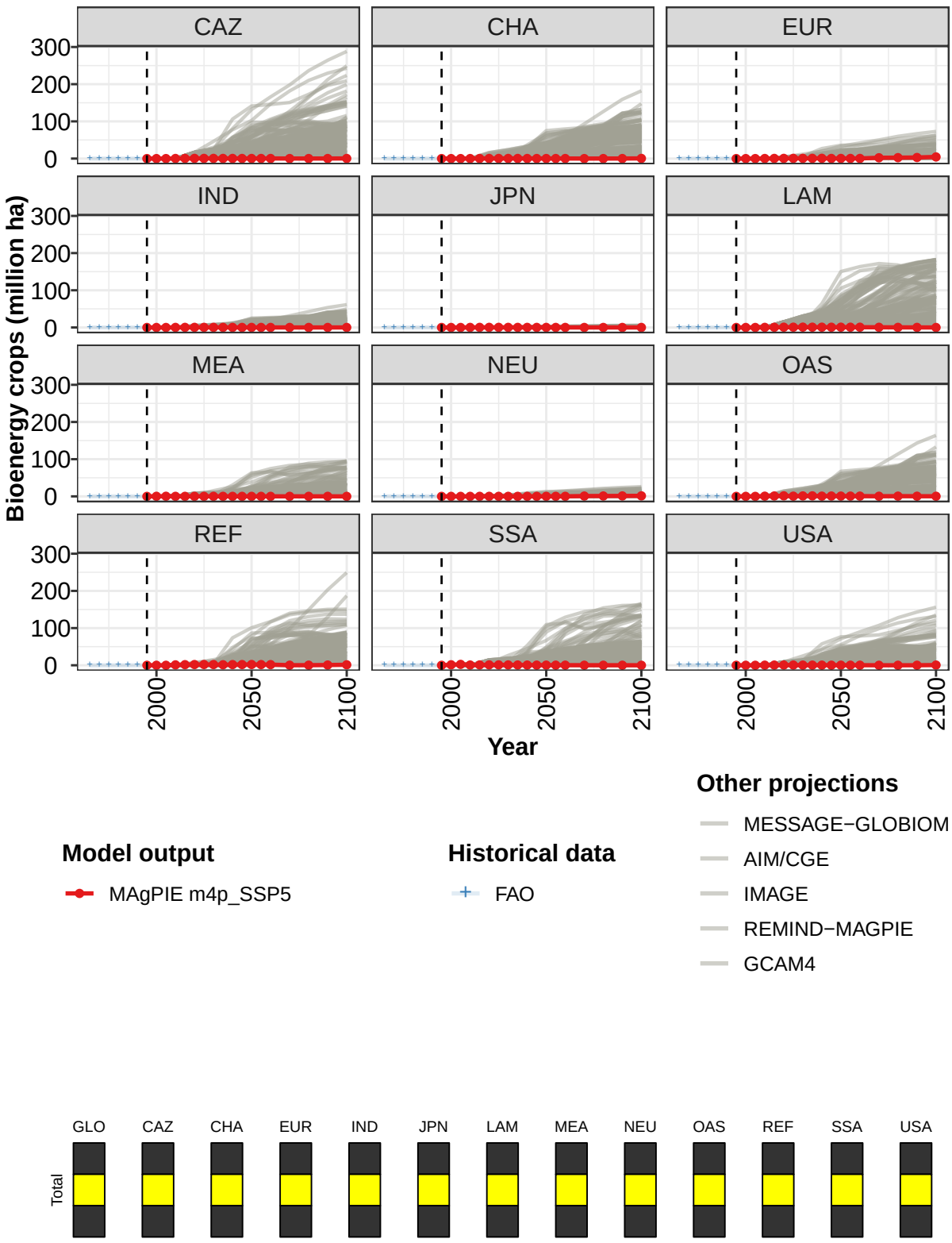


Figure 403: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Bioenergy crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00	1.52	2.72	3.88	6.40	7.95	7.19	7.46	6.55	5.79	5.20
CAZ	0.00	0.00	0.00	0.25	0.41	0.50	0.48	0.47	0.38	0.34	0.25
CHA	0.00	0.00	0.00	0.11	0.20	0.28	0.31	0.31	0.31	0.19	0.15
EUR	0.00	0.00	0.00	0.22	0.41	0.54	0.57	0.65	0.59	0.66	0.33
IND	0.00	0.00	0.00	0.14	0.24	0.30	0.29	0.27	0.20	0.17	0.12
JPN	0.00	0.00	0.00	0.13	0.24	0.30	0.29	0.28	0.21	0.18	0.12
LAM	0.00	0.00	0.00	0.24	0.48	0.67	0.75	0.84	0.77	0.77	0.66
MEA	0.00	0.20	0.30	0.09	0.12	0.12	0.10	0.08	0.12	0.05	0.04
NEU	0.00	0.00	0.00	0.05	0.09	0.12	0.11	0.12	0.10	0.11	0.09
OAS	0.00	0.00	0.00	0.52	1.06	1.46	0.59	1.19	1.37	0.67	0.93
REF	0.00	0.00	0.00	1.06	1.63	1.93	2.09	1.89	1.42	1.78	1.92
SSA	0.00	1.32	2.41	0.71	0.96	1.10	1.01	0.92	0.72	0.57	0.38
USA	0.00	0.00	0.00	0.34	0.56	0.63	0.62	0.44	0.36	0.31	0.22

Table 1556: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Bioenergy crops (million ha) [PART 1/2]

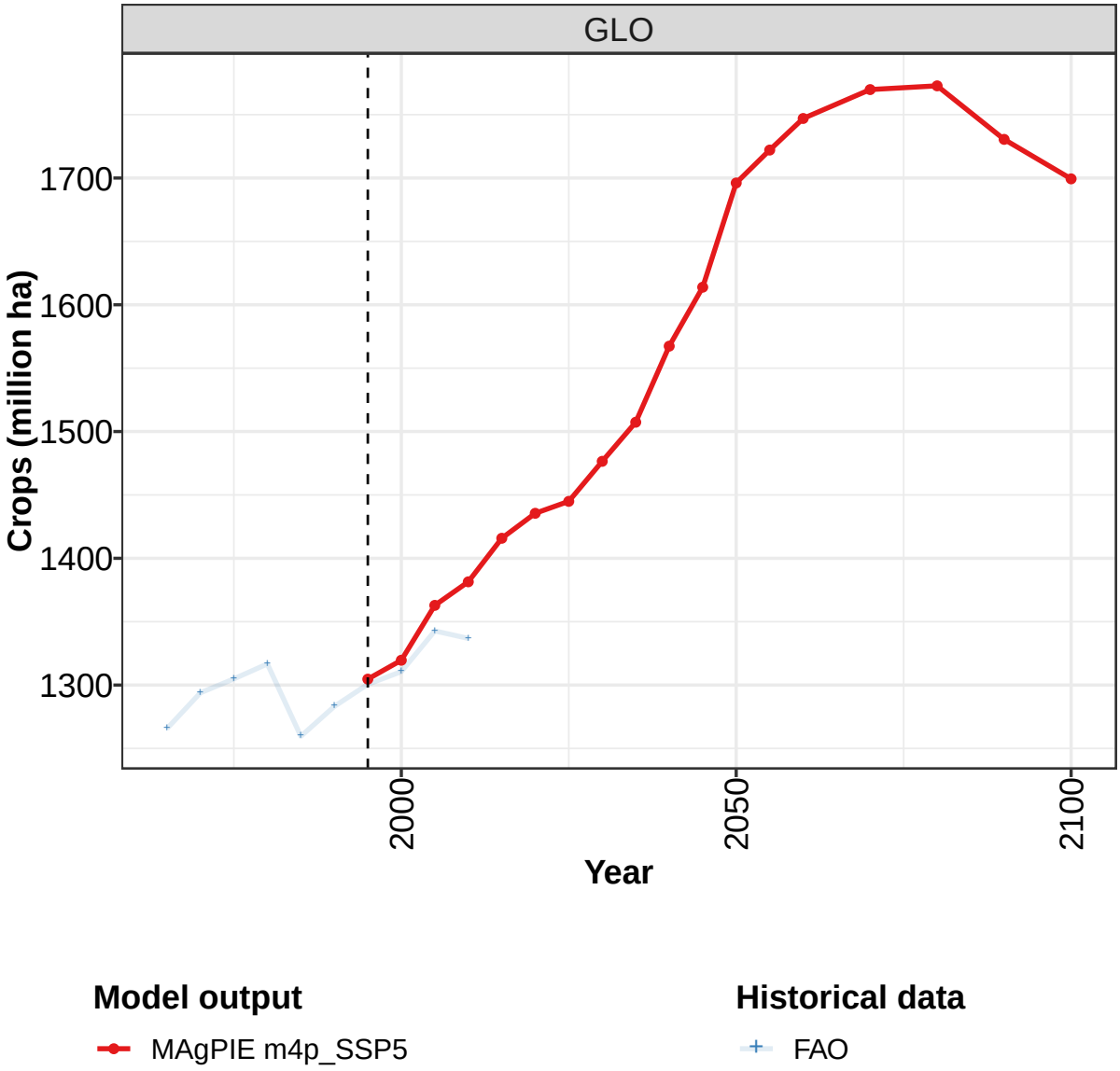
	2050	2055	2060	2070	2080	2090	2100
GLO	5.44	4.96	4.83	4.50	5.14	5.97	8.86
CAZ	0.28	0.25	0.26	0.08	0.11	0.16	0.32
CHA	0.16	0.15	0.15	0.01	0.05	0.11	0.42
EUR	0.37	0.35	0.37	2.16	2.46	2.89	4.38
IND	0.12	0.11	0.11	0.05	0.06	0.04	0.08
JPN	0.13	0.12	0.12	0.05	0.05	0.07	0.06
LAM	0.75	0.71	0.68	0.46	0.26	0.18	0.01
MEA	0.04	0.03	0.03	0.08	0.09	0.10	0.00
NEU	0.12	0.12	0.12	0.88	1.01	1.19	1.41
OAS	0.78	0.71	0.71	0.40	0.64	0.43	0.30
REF	2.09	1.87	1.74	0.19	0.25	0.64	1.32
SSA	0.36	0.31	0.30	0.14	0.12	0.09	0.00
USA	0.25	0.23	0.23	0.00	0.03	0.09	0.55

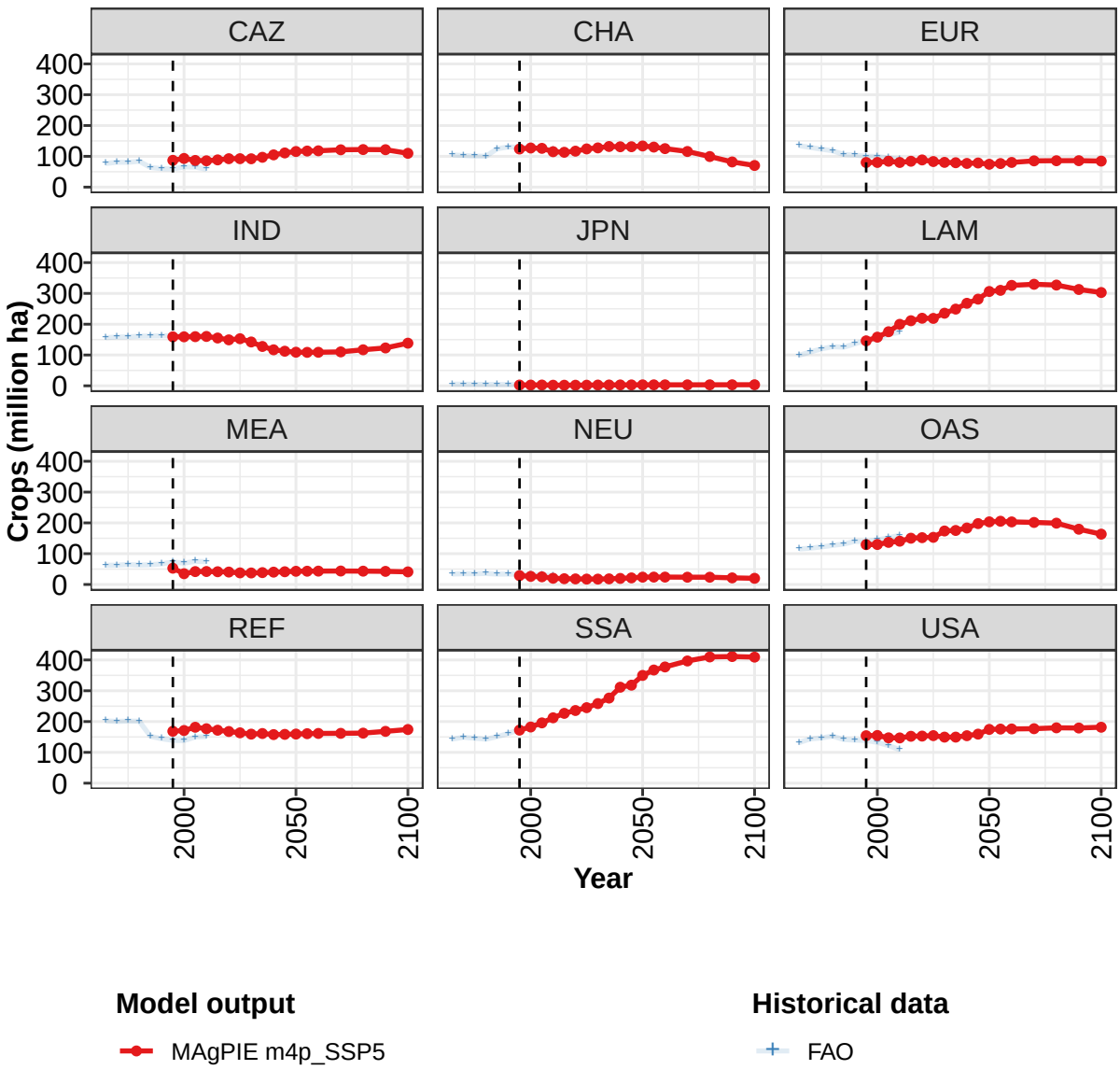
Table 1557: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Bioenergy crops (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0

Table 1558: FAO — Resources—Land Cover—Cropland—Bioenergy crops (million ha)

54.1.4 Crops


GLO
Crops (million ha)
1700
1600
1500
1400
1300
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



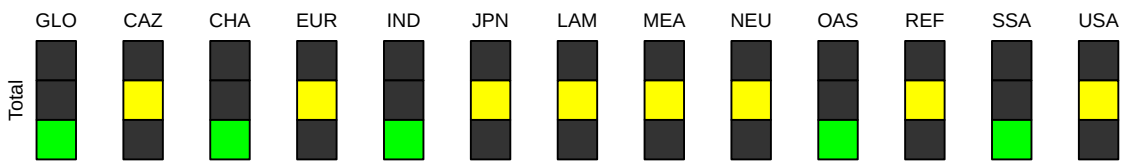


Figure 404: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1305	1320	1363	1381	1416	1436	1445	1477	1507	1567	1614
CAZ	87	93	87	85	88	92	92	92	97	105	111
CHA	124	127	126	115	113	117	124	127	132	131	131
EUR	80	80	84	80	84	88	83	80	79	77	78
IND	159	159	160	160	155	149	153	142	128	117	112
JPN	3	2	3	2	2	2	2	3	3	3	3
LAM	146	158	176	200	211	219	219	236	249	268	281
MEA	53	35	42	42	41	40	38	37	39	40	41
NEU	29	26	25	20	19	18	18	18	18	20	21
OAS	129	130	137	141	150	152	153	174	175	183	198
REF	169	171	182	177	172	168	163	159	161	158	158
SSA	172	182	196	212	227	236	245	258	276	312	318
USA	154	155	147	147	152	153	154	150	150	154	159

Table 1559: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops (million ha) [PART 1/2]

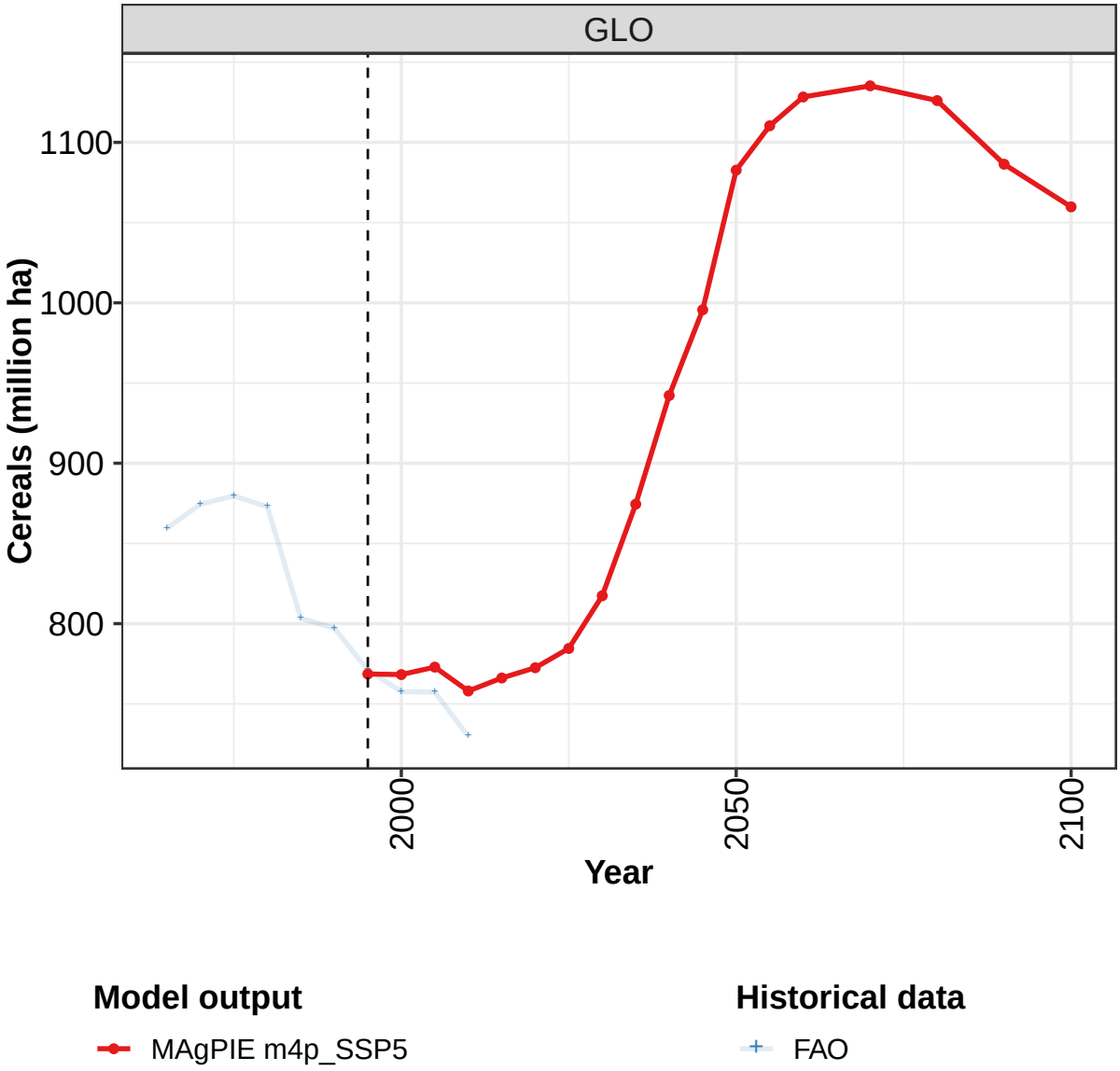
	2050	2055	2060	2070	2080	2090	2100
GLO	1696	1722	1747	1770	1773	1730	1699
CAZ	116	117	118	121	122	122	110
CHA	134	130	125	116	99	82	70
EUR	74	77	80	85	86	86	85
IND	109	109	109	110	117	123	138
JPN	3	3	3	3	3	3	3
LAM	306	310	326	330	327	313	303
MEA	43	43	43	44	43	43	41
NEU	24	24	24	24	24	22	20
OAS	203	205	203	201	199	180	163
REF	159	161	162	162	162	168	174
SSA	350	367	377	397	410	411	409
USA	175	176	176	177	180	179	182

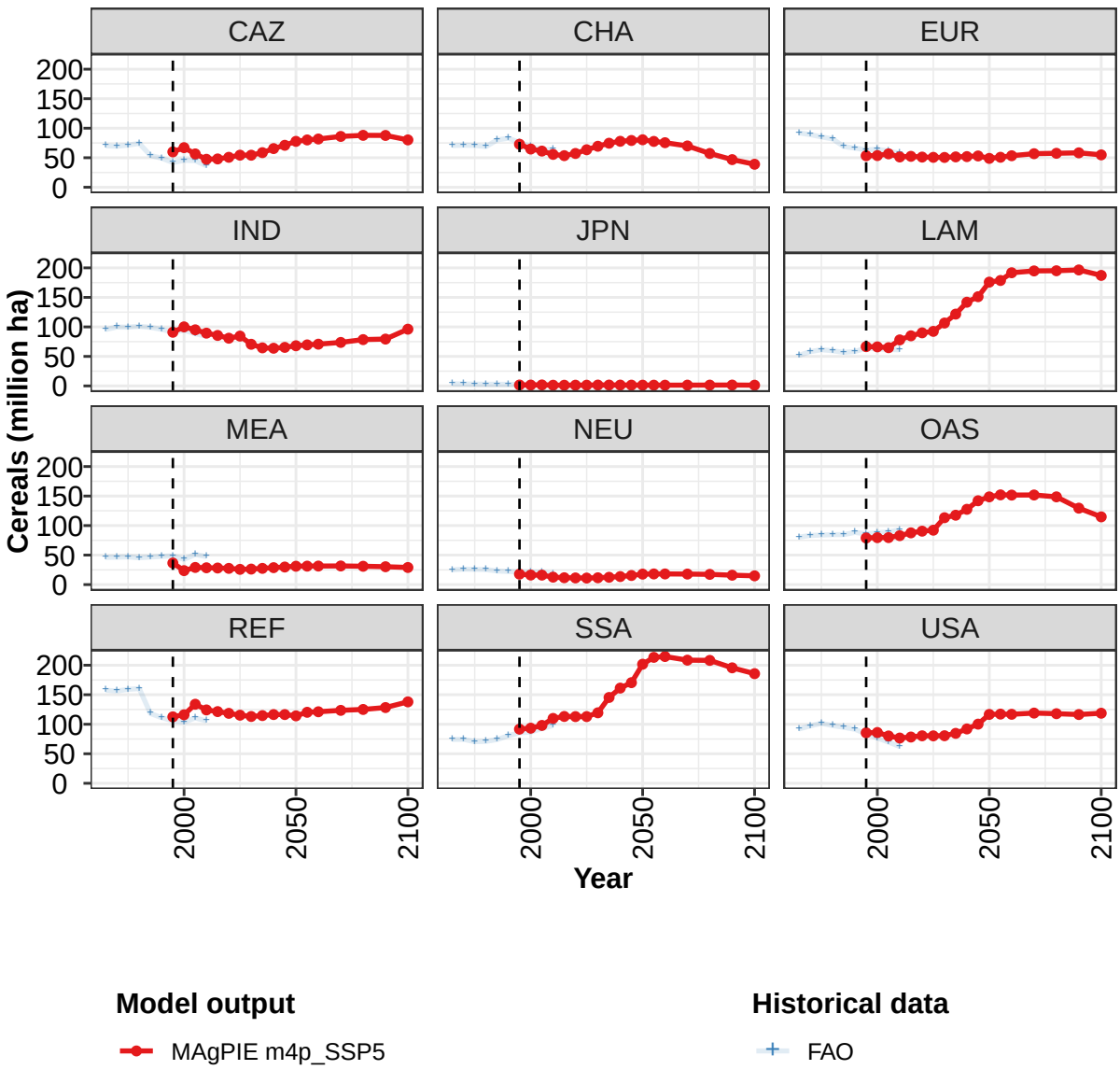
Table 1560: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1266	1294	1305	1317	1260	1283	1301	1311	1343	1337
CAZ	77	81	81	84	64	60	59	66	65	58
CHA	105	103	101	100	124	131	129	128	124	121
EUR	135	129	123	118	106	104	100	99	94	91
IND	156	158	159	161	162	162	162	162	161	160
JPN	6	5	5	4	4	4	4	4	4	3
LAM	99	110	120	127	125	136	148	152	167	174
MEA	62	63	65	63	64	67	73	69	75	74
NEU	34	35	35	36	34	34	33	32	32	29
OAS	115	118	122	127	131	140	139	145	152	160
REF	202	200	202	201	152	144	139	138	150	151
SSA	143	149	146	143	151	161	175	183	198	208
USA	132	144	147	153	142	140	139	133	122	109

Table 1561: FAO — Resources—Land Cover—Cropland—Crops (million ha)

54.1.5 Crops—Cereals





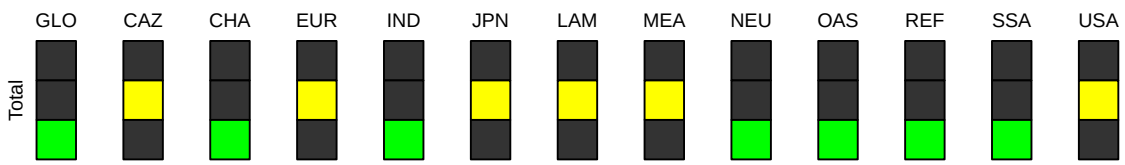


Figure 405: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	769	768	773	758	766	773	785	817	875	942	996
CAZ	60	67	56	47	48	51	54	54	59	66	71
CHA	73	65	61	56	54	57	64	69	75	78	79
EUR	53	54	57	51	52	51	51	50	51	52	53
IND	91	100	95	89	86	81	84	71	65	64	65
JPN	2	2	2	1	1	1	1	2	1	1	1
LAM	67	66	65	78	85	90	92	107	122	142	151
MEA	37	24	29	29	28	28	26	26	28	29	30
NEU	18	16	16	13	12	11	11	12	12	14	15
OAS	79	80	80	83	88	91	92	113	118	128	142
REF	113	116	134	124	121	119	115	113	115	116	116
SSA	92	93	98	110	113	113	113	119	145	161	170
USA	86	86	80	77	78	80	80	81	85	92	100

Table 1562: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals (million ha) [PART 1/2]

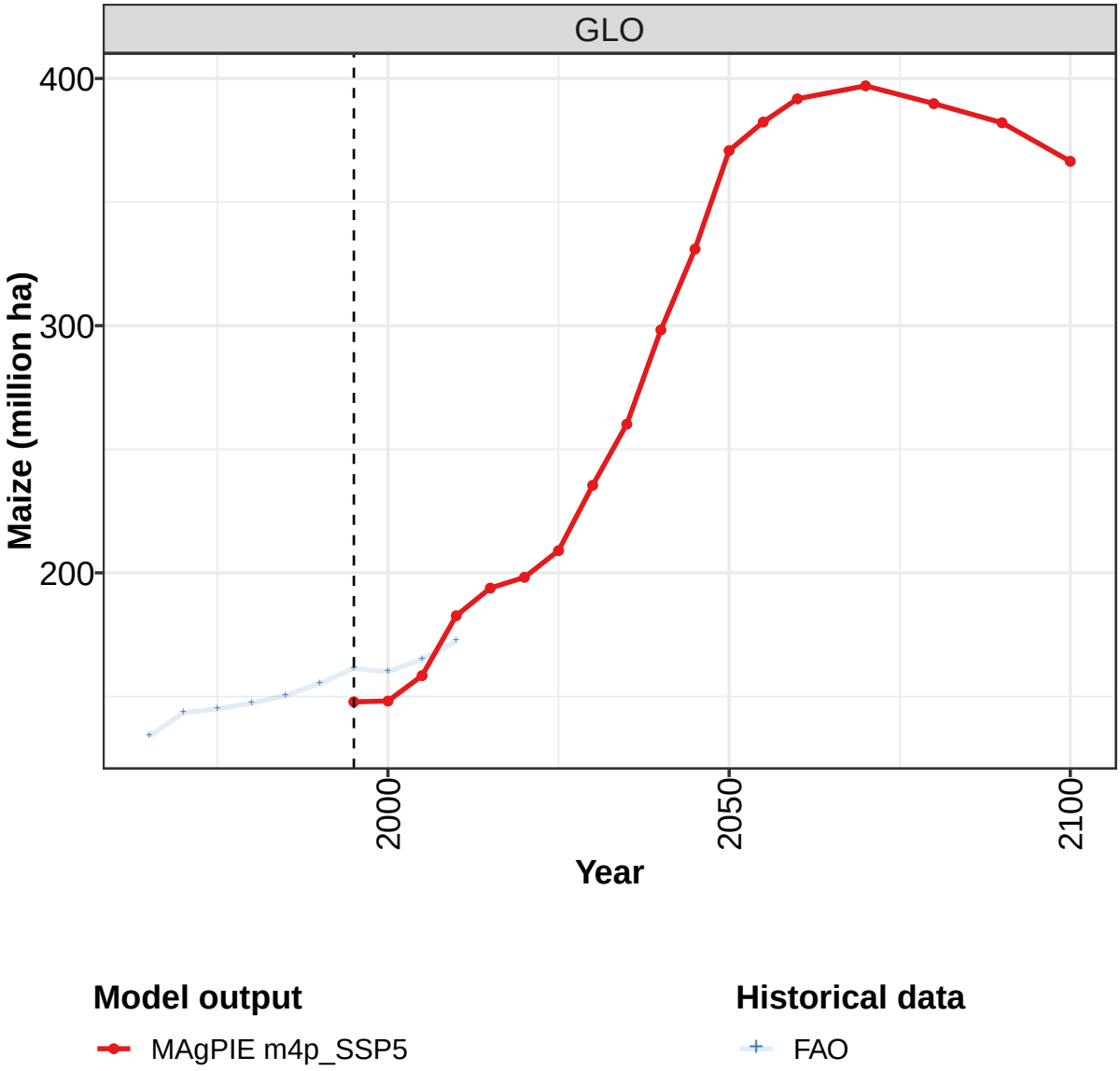
	2050	2055	2060	2070	2080	2090	2100
GLO	1083	1110	1128	1135	1126	1086	1060
CAZ	78	80	82	86	88	88	80
CHA	80	78	76	70	57	47	39
EUR	49	51	53	57	58	58	55
IND	68	70	71	74	78	79	96
JPN	1	1	1	1	1	2	1
LAM	176	179	192	195	195	196	187
MEA	31	31	31	32	31	30	29
NEU	18	18	18	18	17	16	15
OAS	149	152	152	152	149	129	115
REF	114	120	121	124	125	128	138
SSA	202	213	215	209	208	196	186
USA	117	117	117	119	118	116	119

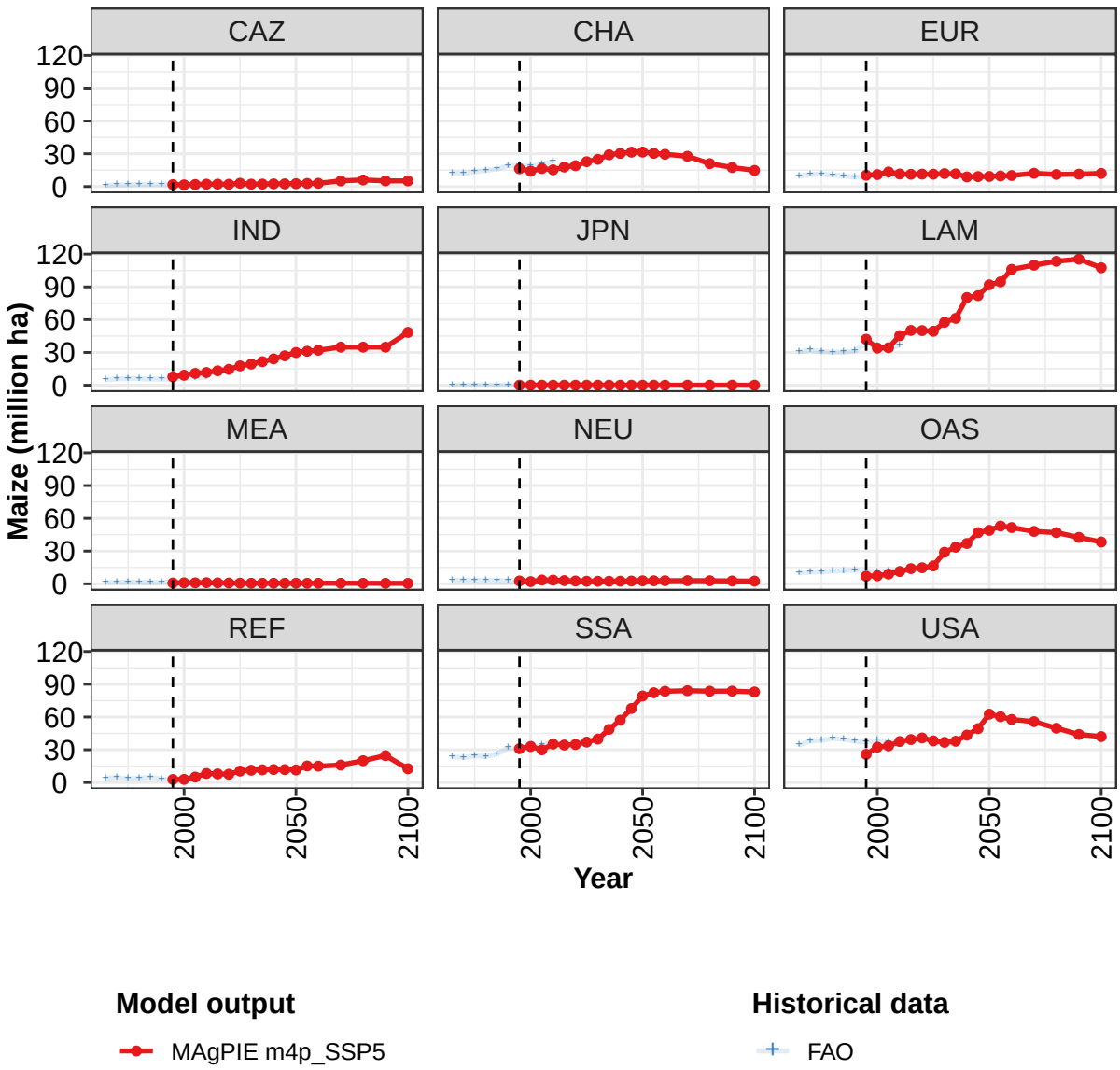
Table 1563: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	859	874	880	873	803	797	771	758	757	730
CAZ	70	69	71	74	54	49	42	46	45	36
CHA	71	71	71	69	80	83	76	69	64	64
EUR	92	89	85	82	69	66	63	64	61	57
IND	96	100	100	101	99	96	91	94	89	84
JPN	4	3	3	3	3	3	3	2	2	2
LAM	52	58	61	60	57	58	64	63	62	61
MEA	46	46	47	45	47	48	49	43	51	47
NEU	25	26	26	25	23	22	22	21	21	19
OAS	80	83	84	85	85	88	86	88	89	93
REF	158	156	159	160	118	111	106	104	111	106
SSA	74	74	71	71	74	81	86	87	93	98
USA	92	97	102	98	95	91	84	77	70	62

Table 1564: FAO — Resources—Land Cover—Cropland—Crops—Cereals (million ha)

54.1.6 Crops—Cereals—Maize





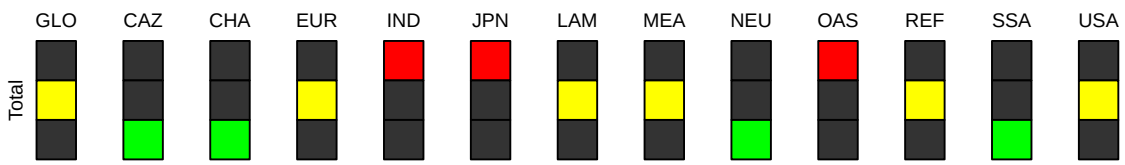


Figure 406: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Maize (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	148	148	158	183	194	198	209	235	260	298	331
CAZ	2	2	2	2	2	2	3	2	2	2	2
CHA	16	14	16	15	18	19	23	25	29	30	31
EUR	10	11	13	11	11	11	11	12	12	9	9
IND	8	9	11	12	13	14	18	19	22	24	27
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	42	34	34	45	50	50	49	58	61	80	82
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	3	2	3	3	3	3	2	2	2	2	3
OAS	7	7	9	11	14	15	16	29	34	37	47
REF	3	3	5	8	8	8	10	11	12	12	12
SSA	31	33	30	35	34	35	37	40	49	57	68
USA	26	32	34	38	39	41	38	37	38	43	49

Table 1565: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Maize (million ha) [PART 1/2]

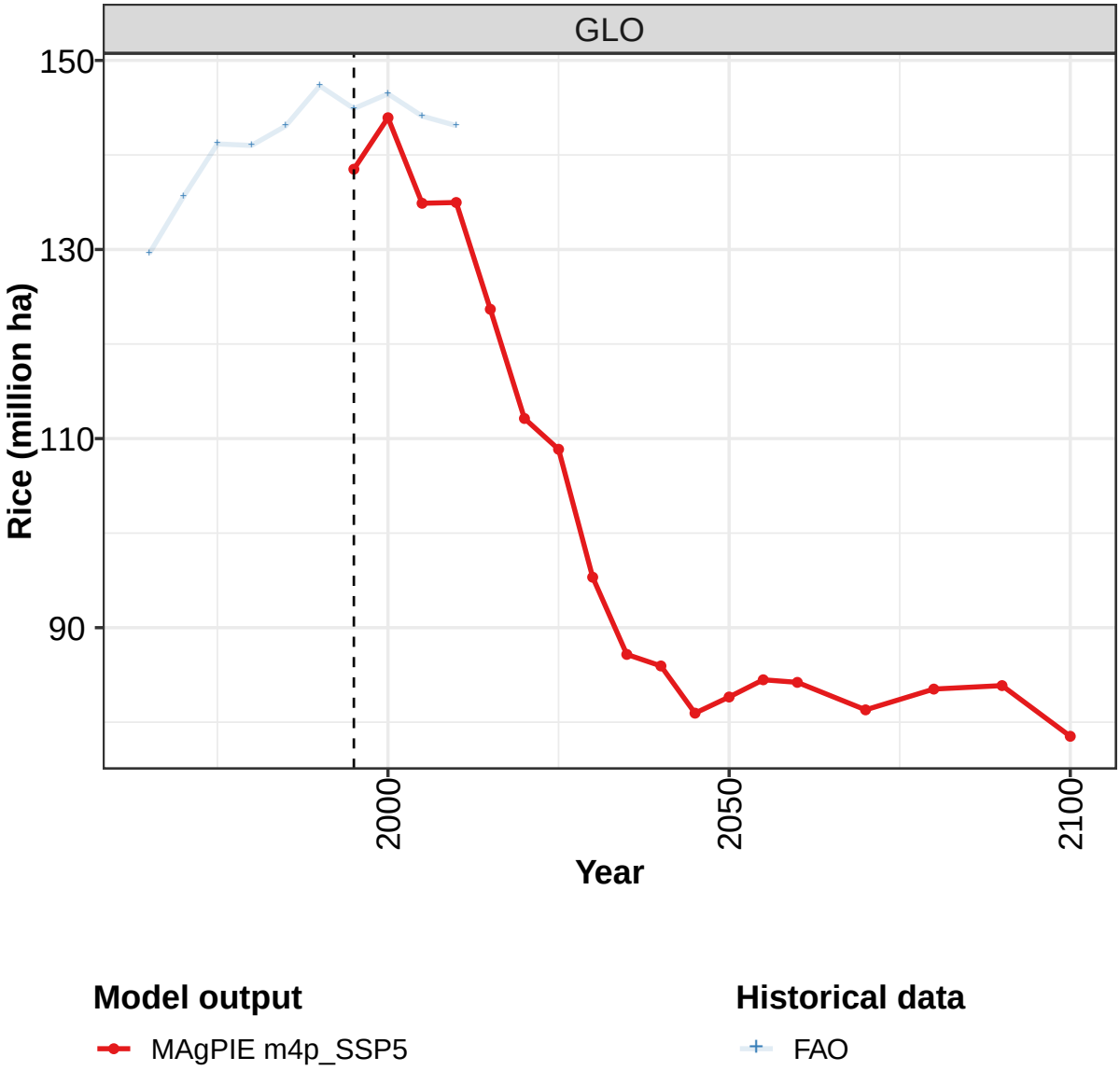
	2050	2055	2060	2070	2080	2090	2100
GLO	371	382	392	397	390	382	366
CAZ	3	3	3	5	6	5	5
CHA	32	30	30	28	21	17	15
EUR	9	10	10	12	11	11	12
IND	30	31	32	35	35	35	48
JPN	0	0	0	0	0	0	0
LAM	92	95	106	110	113	115	108
MEA	1	1	1	1	0	0	0
NEU	3	3	3	3	3	3	2
OAS	49	53	52	48	47	43	38
REF	11	15	15	16	20	25	13
SSA	79	82	84	84	84	84	83
USA	63	60	58	56	50	44	42

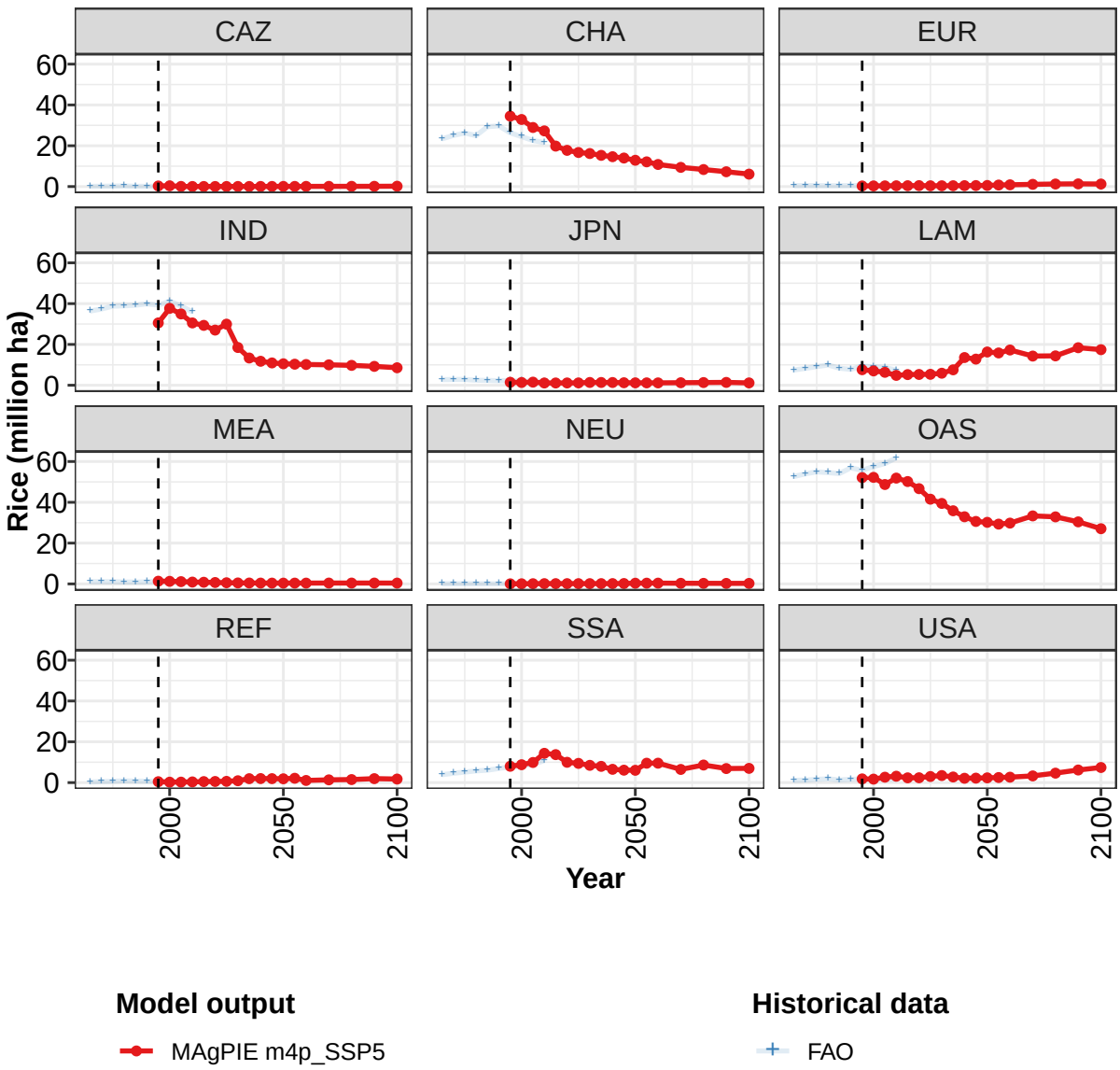
Table 1566: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Maize (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	134	143	145	147	150	155	161	160	165	172
CAZ	1	1	1	2	2	2	2	2	2	2
CHA	12	12	13	15	16	19	19	19	20	23
EUR	10	11	11	11	10	9	9	10	9	8
IND	5	6	6	6	6	6	5	6	7	7
JPN	0	0	0	0	0	0	0	0	0	0
LAM	30	32	31	30	30	31	39	36	35	36
MEA	1	1	1	1	1	1	2	1	2	2
NEU	3	3	3	3	3	3	2	3	3	3
OAS	10	11	11	12	12	13	12	11	12	13
REF	4	4	3	4	5	3	3	4	4	6
SSA	23	23	24	24	26	32	31	31	34	37
USA	34	38	39	40	40	38	37	38	37	36

Table 1567: FAO — Resources—Land Cover—Cropland—Crops—Cereals—Maize (million ha)

54.1.7 Crops—Cereals—Rice





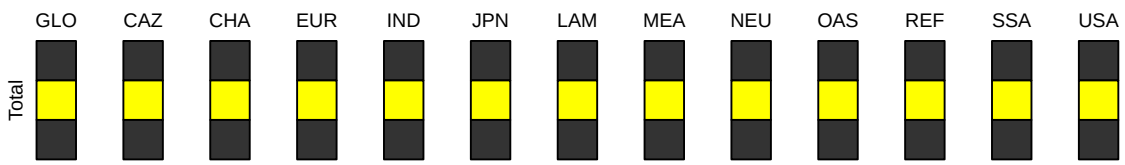


Figure 407: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Rice (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	138	144	135	135	124	112	109	95	87	86	81
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	35	33	29	27	20	18	17	16	15	15	14
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	31	38	35	31	29	27	30	19	13	12	11
JPN	1	1	2	1	1	1	1	1	1	1	1
LAM	8	7	6	5	5	5	5	6	8	14	13
MEA	1	1	1	1	1	1	1	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	52	52	49	52	50	47	42	39	36	33	31
REF	0	0	0	0	0	1	1	1	2	2	2
SSA	8	9	10	14	14	10	9	8	8	7	6
USA	2	2	3	3	2	2	3	3	3	2	2

Table 1568: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Rice (million ha) [PART 1/2]

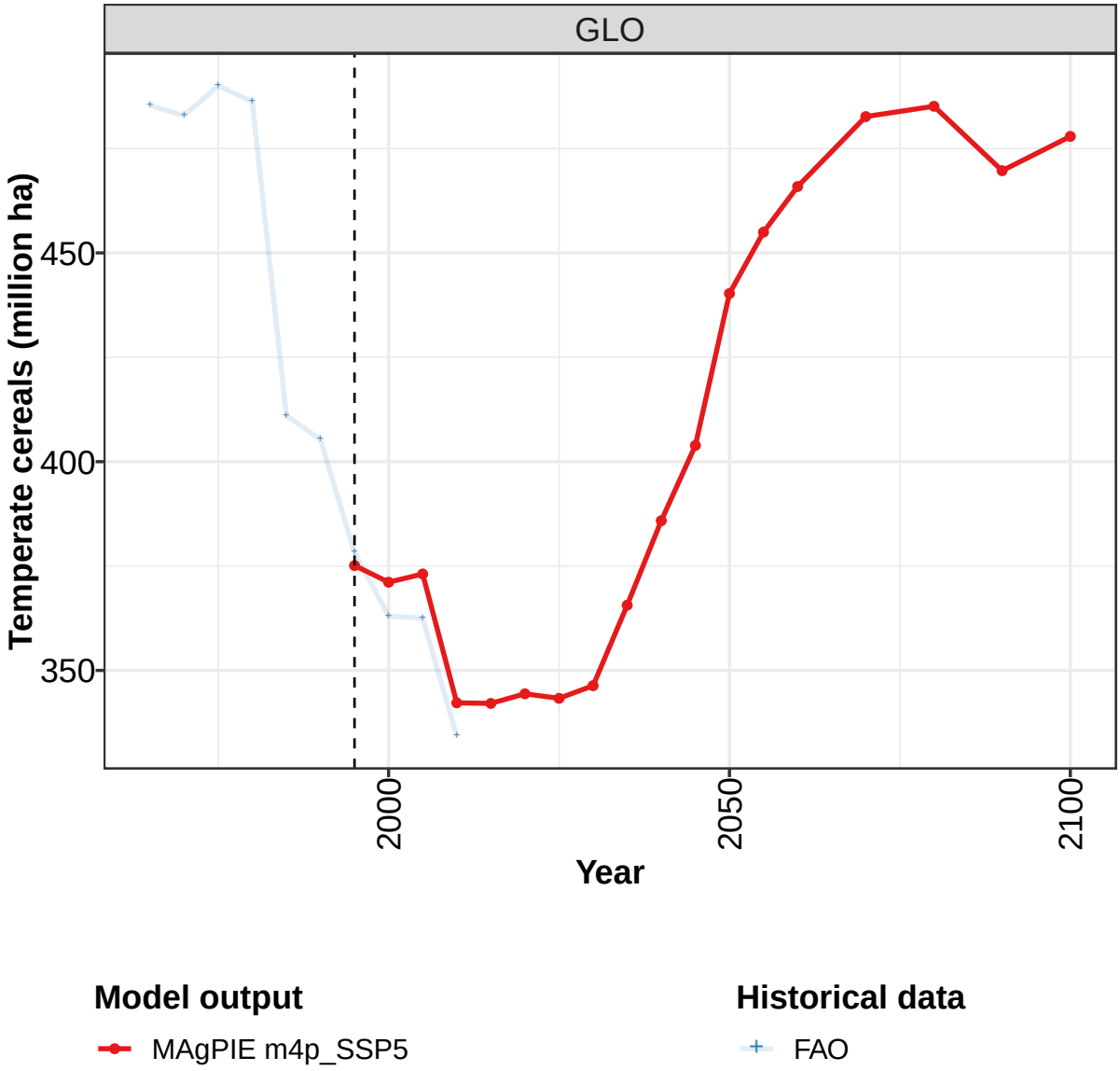
	2050	2055	2060	2070	2080	2090	2100
GLO	83	84	84	81	84	84	79
CAZ	0	0	0	0	0	0	0
CHA	13	12	11	9	8	7	6
EUR	1	1	1	1	1	1	1
IND	11	10	10	10	10	9	9
JPN	1	1	1	1	1	1	1
LAM	16	16	17	14	14	18	17
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	30	29	30	33	33	30	27
REF	2	2	1	1	1	2	2
SSA	6	10	10	6	9	7	7
USA	2	2	3	3	5	6	7

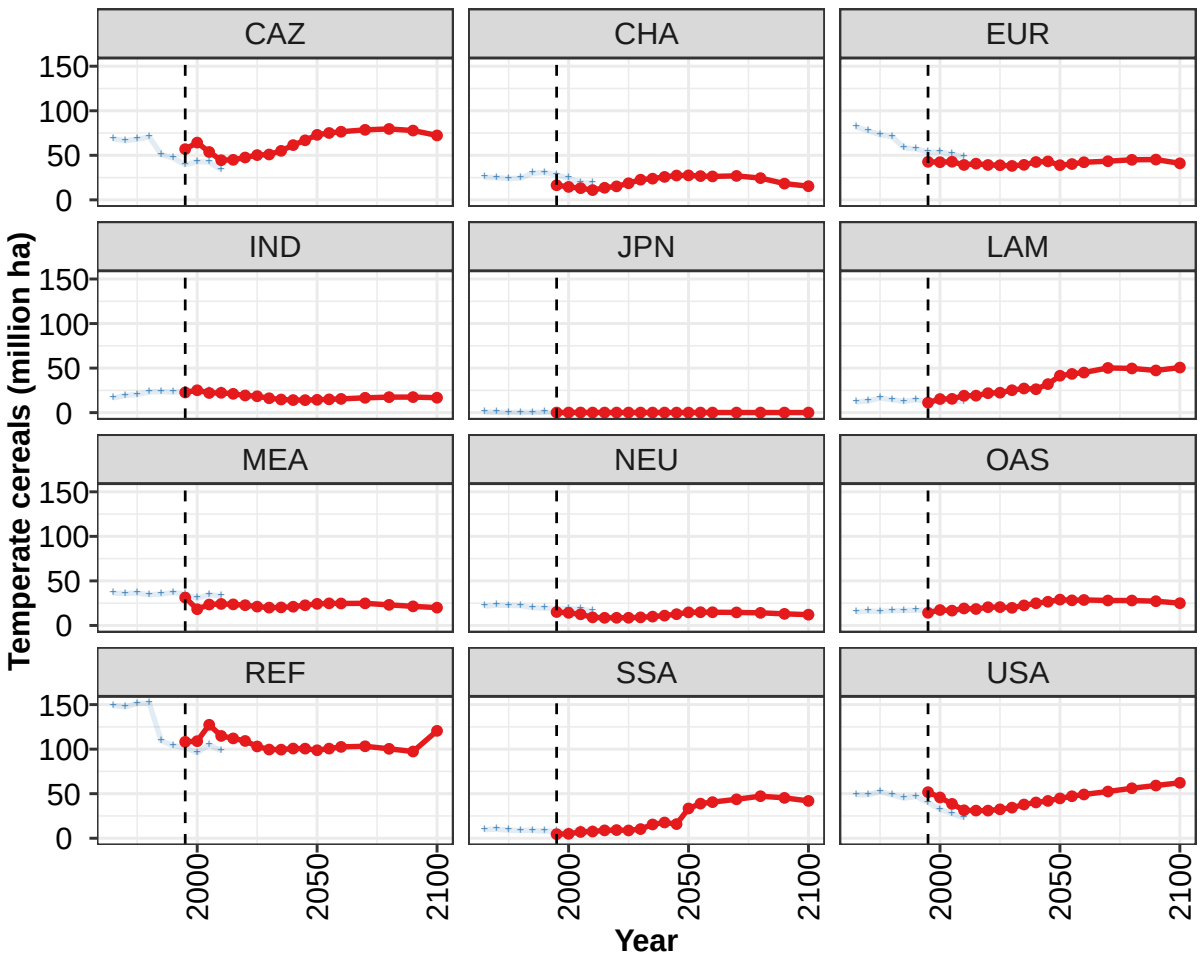
Table 1569: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Rice (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	130	136	141	141	143	147	145	146	144	143
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	23	25	26	25	29	30	26	24	23	22
EUR	0	0	0	0	0	0	0	0	0	1
IND	36	37	39	39	39	40	39	41	39	36
JPN	3	3	3	2	2	2	2	2	2	2
LAM	7	8	9	10	8	8	9	9	9	7
MEA	1	1	1	1	1	1	1	1	1	1
NEU	0	0	0	0	0	0	0	0	0	0
OAS	53	54	55	55	54	57	56	58	59	62
REF	0	0	1	1	1	1	1	1	0	1
SSA	4	5	5	6	6	7	8	8	9	11
USA	1	1	2	2	1	2	2	2	2	2

Table 1570: FAO — Resources—Land Cover—Cropland—Crops—Cereals—Rice (million ha)

54.1.8 Crops—Cereals—Temperate cereals





Model output

MAgPIE m4p_SSP5

Historical data

FAO

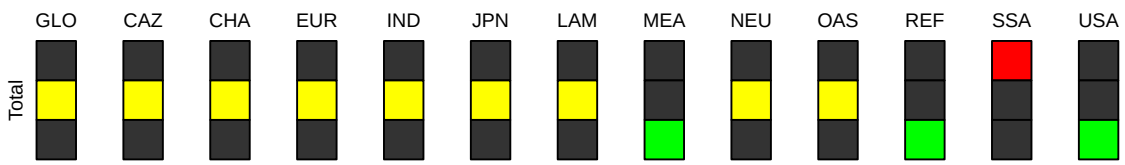


Figure 408: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Temperate cereals (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	375	371	373	342	342	344	343	346	366	386	404
CAZ	57	64	54	45	45	48	50	51	55	61	67
CHA	16	15	13	11	14	15	19	23	24	26	27
EUR	43	42	43	39	41	39	39	38	39	42	43
IND	23	25	22	22	21	19	18	16	15	14	14
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	11	15	16	19	19	22	22	25	27	26	32
MEA	31	18	23	24	24	23	21	20	20	21	23
NEU	15	14	13	9	9	9	9	9	10	11	13
OAS	14	17	17	19	18	20	21	20	23	25	27
REF	108	109	127	115	112	109	103	100	99	101	101
SSA	5	5	7	8	9	9	9	10	15	18	16
USA	52	46	39	31	31	31	32	34	38	40	42

Table 1571: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Temperate cereals (million ha) [PART 1/2]

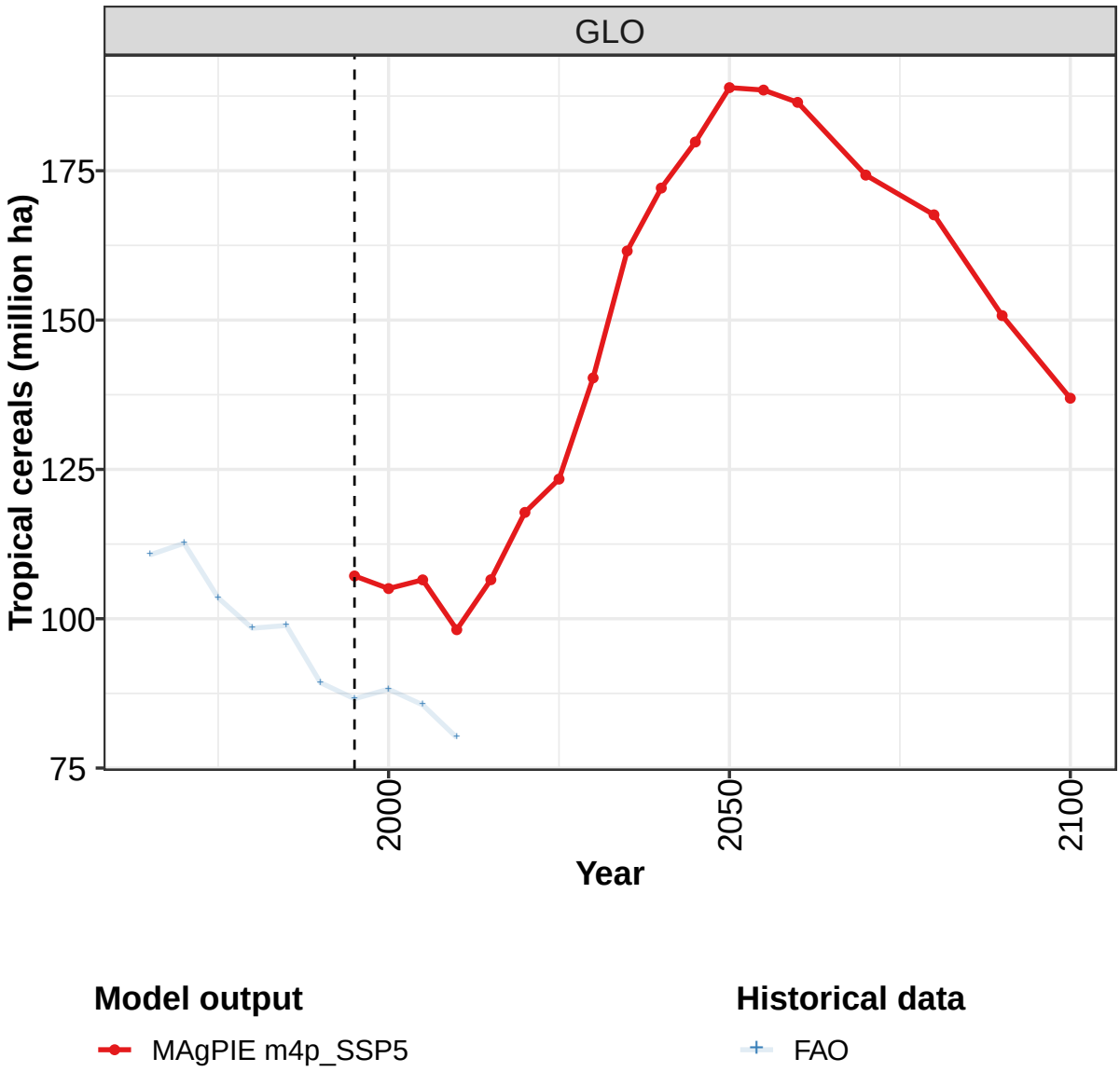
	2050	2055	2060	2070	2080	2090	2100
GLO	440	455	466	483	485	470	478
CAZ	73	75	76	79	80	78	72
CHA	27	27	26	27	24	18	15
EUR	39	40	42	43	45	45	41
IND	14	15	15	17	17	17	17
JPN	0	0	0	0	0	0	0
LAM	41	43	45	50	50	47	51
MEA	24	25	25	25	23	21	20
NEU	15	15	15	15	14	13	12
OAS	29	28	29	28	28	27	25
REF	99	101	103	103	100	97	121
SSA	33	39	41	44	47	45	42
USA	45	47	49	52	56	59	62

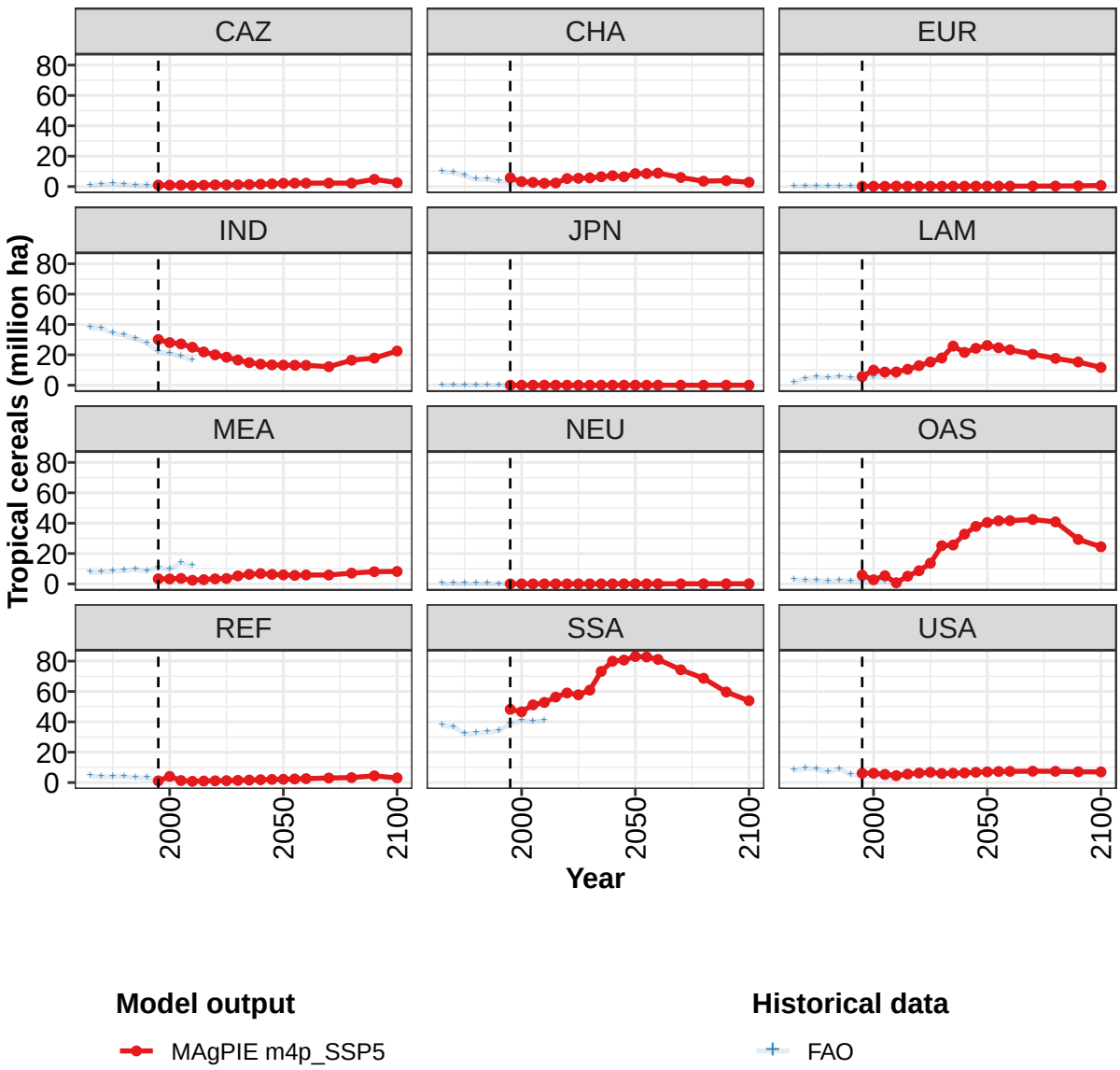
Table 1572: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Temperate cereals (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	485	483	490	486	411	405	378	363	363	334
CAZ	69	66	68	71	51	47	39	43	42	34
CHA	25	25	24	24	30	31	28	24	19	19
EUR	82	78	73	71	59	57	54	54	51	48
IND	17	19	21	23	24	23	24	26	24	24
JPN	1	0	0	0	0	0	0	0	0	0
LAM	12	13	16	15	13	15	12	12	13	12
MEA	36	36	36	34	35	37	35	31	35	33
NEU	22	23	23	22	20	19	19	19	18	16
OAS	15	16	16	17	17	17	17	18	17	17
REF	149	147	151	152	109	104	101	96	105	98
SSA	10	10	9	9	9	8	8	7	9	9
USA	49	49	53	49	45	47	40	32	28	23

Table 1573: FAO — Resources—Land Cover—Cropland—Crops—Cereals—Temperate cereals (million ha)

54.1.9 Crops—Cereals—Tropical cereals





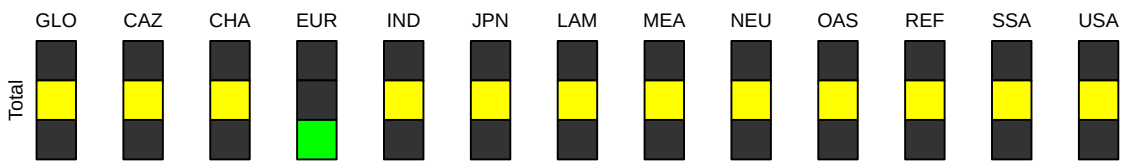


Figure 409: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Tropical cereals (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	107	105	107	98	107	118	123	140	162	172	180
CAZ	1	1	1	1	1	1	1	1	1	2	2
CHA	6	3	3	2	2	5	5	6	6	7	6
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	30	28	27	25	22	20	18	17	15	14	13
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	10	9	9	10	13	15	18	26	22	24
MEA	3	3	4	2	3	3	4	5	6	7	6
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	6	3	5	1	5	9	14	25	26	33	38
REF	1	4	1	1	1	1	1	1	2	2	2
SSA	48	47	51	53	56	59	58	61	73	80	81
USA	6	6	5	5	6	6	7	6	6	6	7

Table 1574: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Tropical cereals (million ha) [PART 1/2]

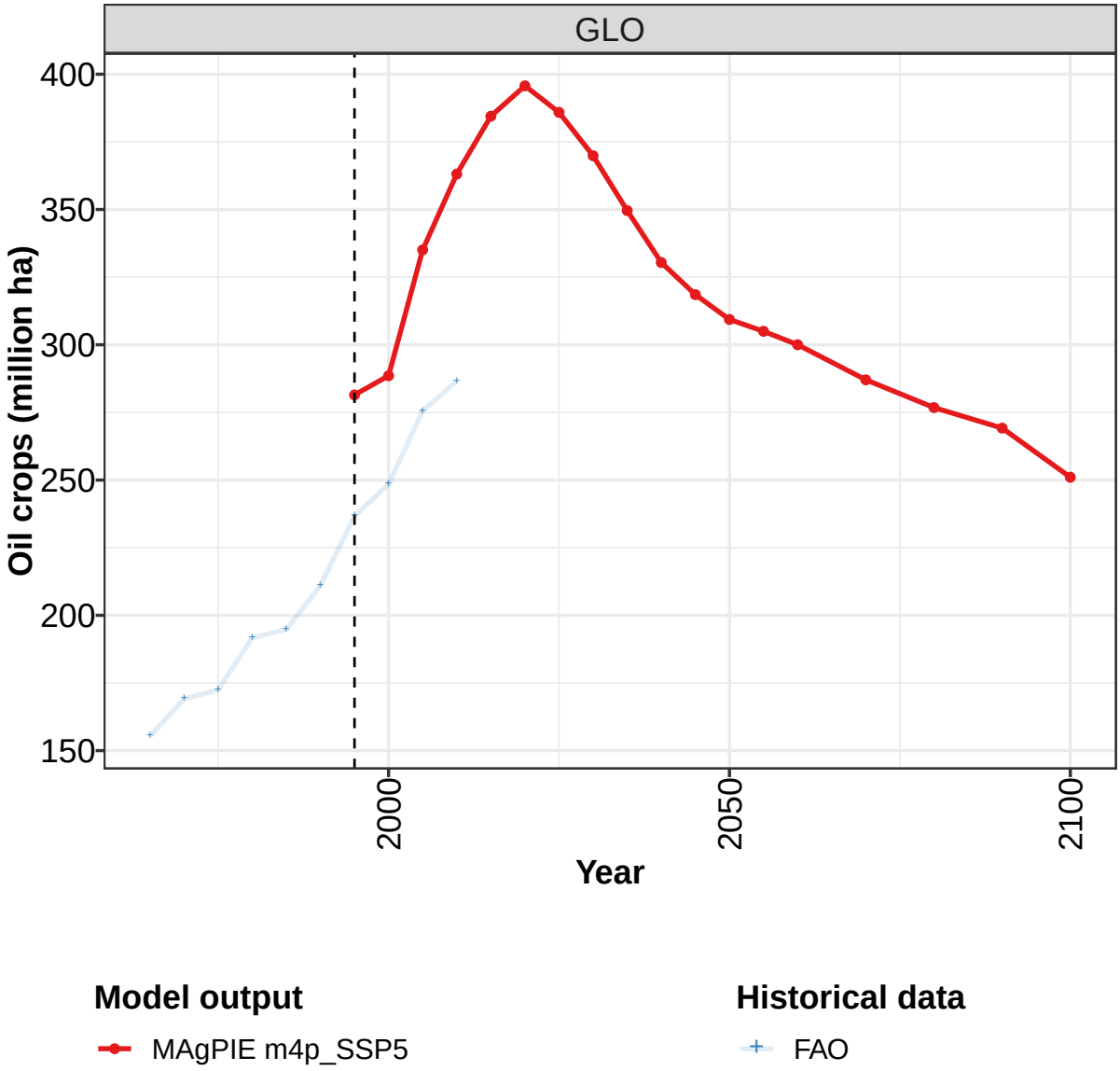
	2050	2055	2060	2070	2080	2090	2100
GLO	189	189	186	174	168	151	137
CAZ	2	2	2	2	2	5	3
CHA	8	9	9	6	4	4	3
EUR	0	0	0	0	0	0	1
IND	13	13	13	12	16	18	23
JPN	0	0	0	0	0	0	0
LAM	26	25	23	20	18	15	12
MEA	6	6	6	6	7	8	8
NEU	0	0	0	0	0	0	0
OAS	40	42	42	42	41	29	24
REF	2	2	3	3	3	4	3
SSA	83	83	81	74	69	60	54
USA	7	7	7	7	7	7	7

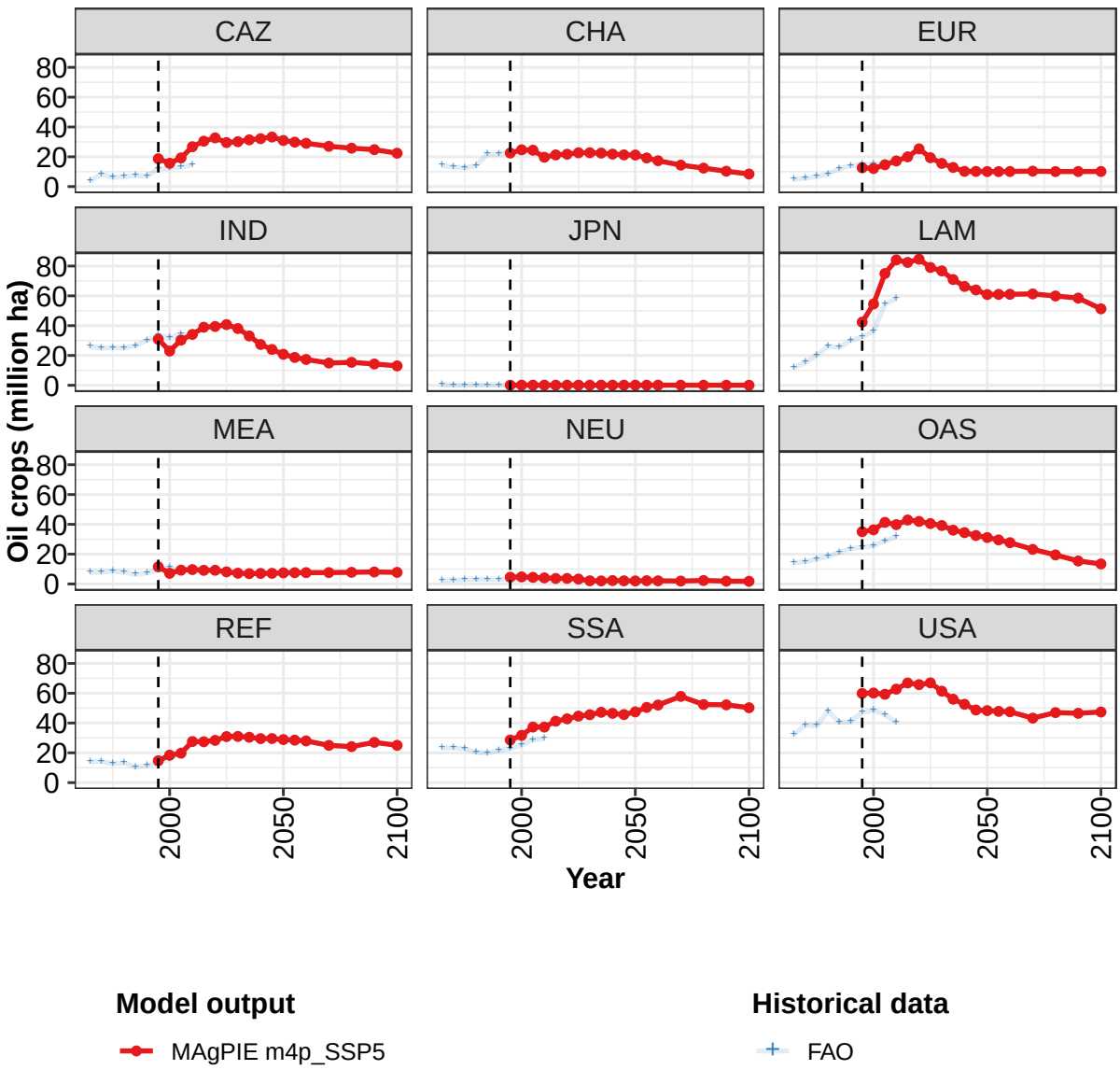
Table 1575: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Cereals—Tropical cereals (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	111	113	103	98	99	89	87	88	86	80
CAZ	1	1	2	1	1	0	1	1	1	0
CHA	10	9	7	5	5	3	2	2	1	1
EUR	0	0	0	0	0	0	0	0	0	0
IND	38	37	34	33	31	28	22	21	19	16
JPN	0	0	0	0	0	0	0	0	0	0
LAM	2	4	5	5	6	5	4	5	5	5
MEA	8	8	8	9	9	8	11	10	14	12
NEU	0	0	0	0	0	0	0	0	0	0
OAS	3	2	2	2	2	2	2	2	1	1
REF	4	4	4	4	3	3	1	3	1	1
SSA	38	37	32	33	33	34	39	41	40	41
USA	8	9	9	7	9	5	5	4	3	2

Table 1576: FAO — Resources—Land Cover—Cropland—Crops—Cereals—Tropical cereals (million ha)

54.1.10 Crops—Oil crops





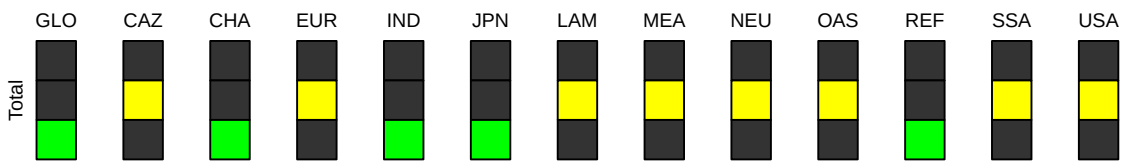


Figure 410: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	281	289	335	363	384	396	386	370	350	330	319
CAZ	19	16	19	27	30	33	30	30	31	32	33
CHA	23	25	24	20	21	22	23	23	22	22	21
EUR	13	12	15	17	20	25	19	16	13	10	10
IND	31	23	30	34	39	39	41	38	33	27	24
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	42	55	75	84	82	85	79	77	71	66	64
MEA	12	7	9	10	9	9	8	7	7	7	7
NEU	5	5	4	4	4	4	3	2	2	2	2
OAS	35	36	41	40	43	42	41	39	36	34	33
REF	15	18	20	28	27	28	31	31	30	30	30
SSA	29	32	37	37	41	43	45	46	47	46	46
USA	60	60	59	63	67	66	67	61	56	53	49

Table 1577: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops (million ha) [PART 1/2]

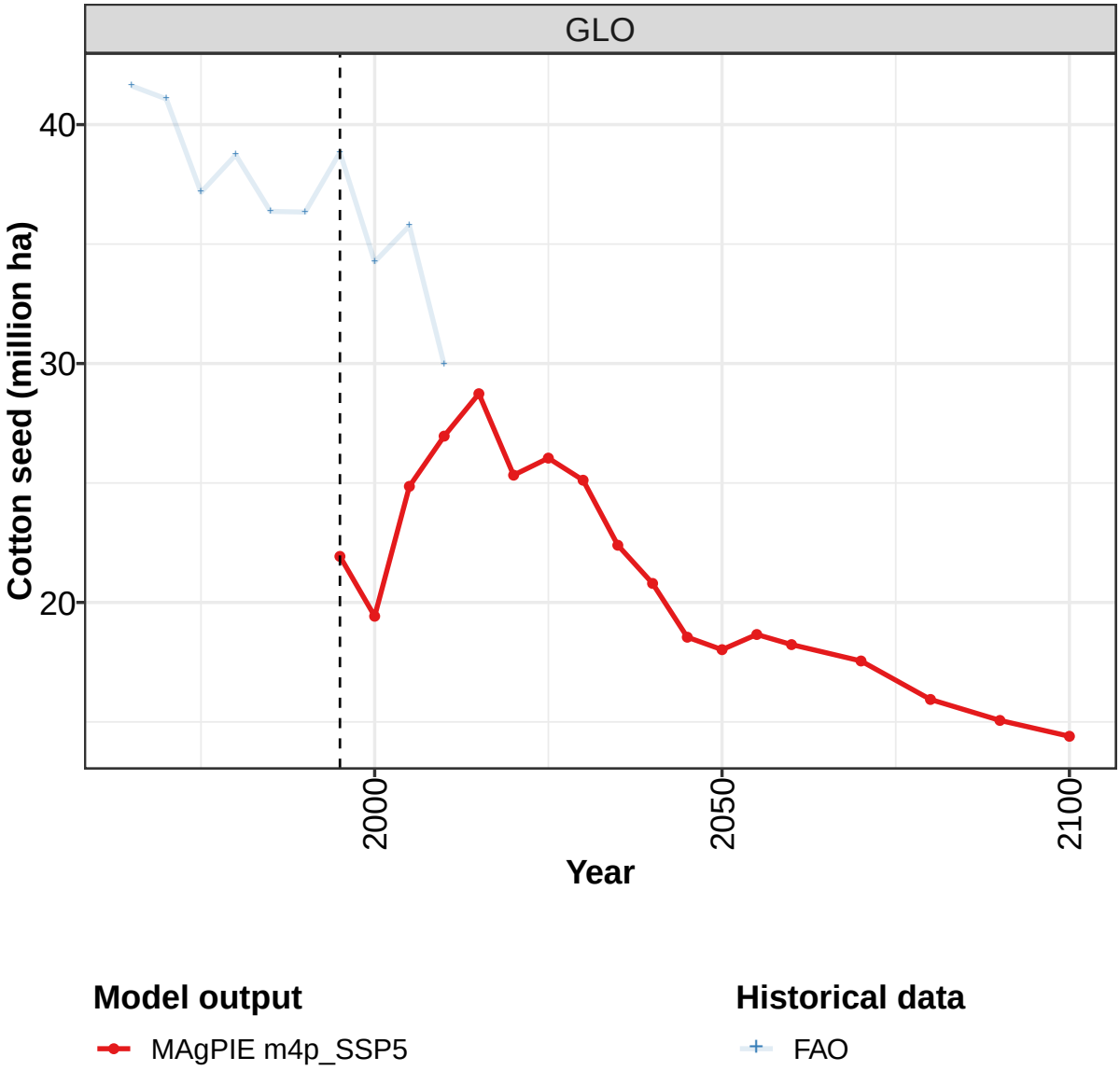
	2050	2055	2060	2070	2080	2090	2100
GLO	309	305	300	287	277	269	251
CAZ	31	30	29	27	26	25	22
CHA	21	19	17	14	12	10	8
EUR	10	10	10	10	10	10	10
IND	21	19	17	15	15	14	13
JPN	0	0	0	0	0	0	0
LAM	61	61	61	61	60	59	51
MEA	7	8	8	8	8	8	8
NEU	2	2	2	2	2	2	2
OAS	31	30	28	23	19	15	13
REF	29	29	28	25	24	27	25
SSA	47	50	52	58	52	52	50
USA	48	48	48	43	47	47	47

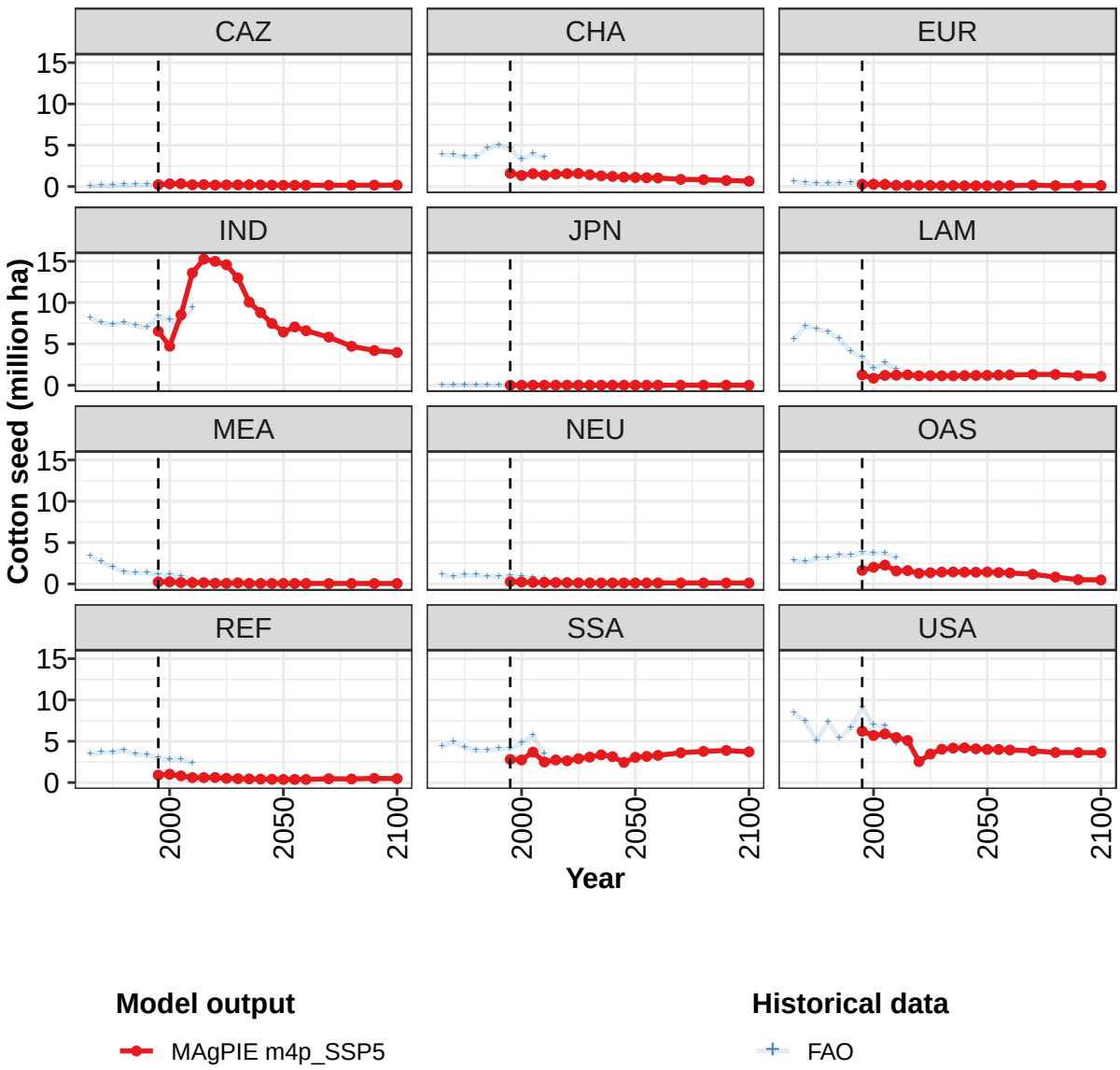
Table 1578: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	155	169	172	192	195	211	237	248	276	287
CAZ	4	8	6	7	7	7	12	12	13	15
CHA	14	13	12	14	22	22	23	24	23	20
EUR	5	6	7	8	12	14	15	15	15	18
IND	26	25	25	25	26	30	34	32	34	33
JPN	0	0	0	0	0	0	0	0	0	0
LAM	12	15	20	26	25	30	32	36	54	58
MEA	8	8	9	8	6	7	10	11	9	11
NEU	2	3	3	3	3	3	3	3	3	3
OAS	14	15	17	18	21	24	25	26	29	32
REF	14	14	13	13	10	11	13	16	20	27
SSA	23	23	23	20	20	22	23	25	29	29
USA	32	39	38	48	41	41	47	49	46	41

Table 1579: FAO — Resources—Land Cover—Cropland—Crops—Oil crops (million ha)

54.1.11 Crops—Oil crops—Cotton seed





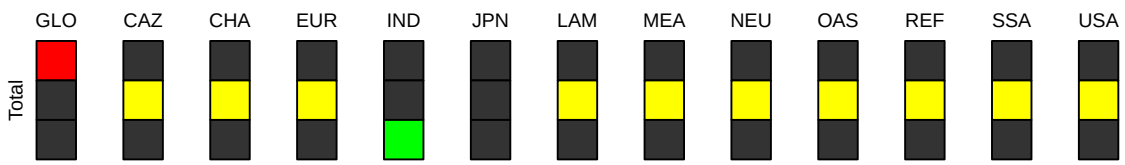


Figure 411: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Cotton seed (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21.9	19.4	24.9	27.0	28.7	25.3	26.0	25.1	22.4	20.8	18.5
CAZ	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	1.6	1.3	1.6	1.4	1.5	1.6	1.6	1.4	1.3	1.2	1.1
EUR	0.3	0.3	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
IND	6.5	4.7	8.5	13.6	15.3	15.0	14.6	13.0	10.1	8.8	7.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.3	0.8	1.2	1.2	1.3	1.1	1.2	1.1	1.1	1.2	1.2
MEA	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
OAS	1.6	2.0	2.3	1.6	1.6	1.3	1.4	1.4	1.4	1.4	1.4
REF	0.9	1.0	0.8	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4
SSA	2.8	2.7	3.7	2.5	2.7	2.6	2.9	3.1	3.4	3.1	2.4
USA	6.2	5.7	5.9	5.5	5.1	2.5	3.5	4.0	4.2	4.2	4.1

Table 1580: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Cotton seed (million ha) [PART 1/2]

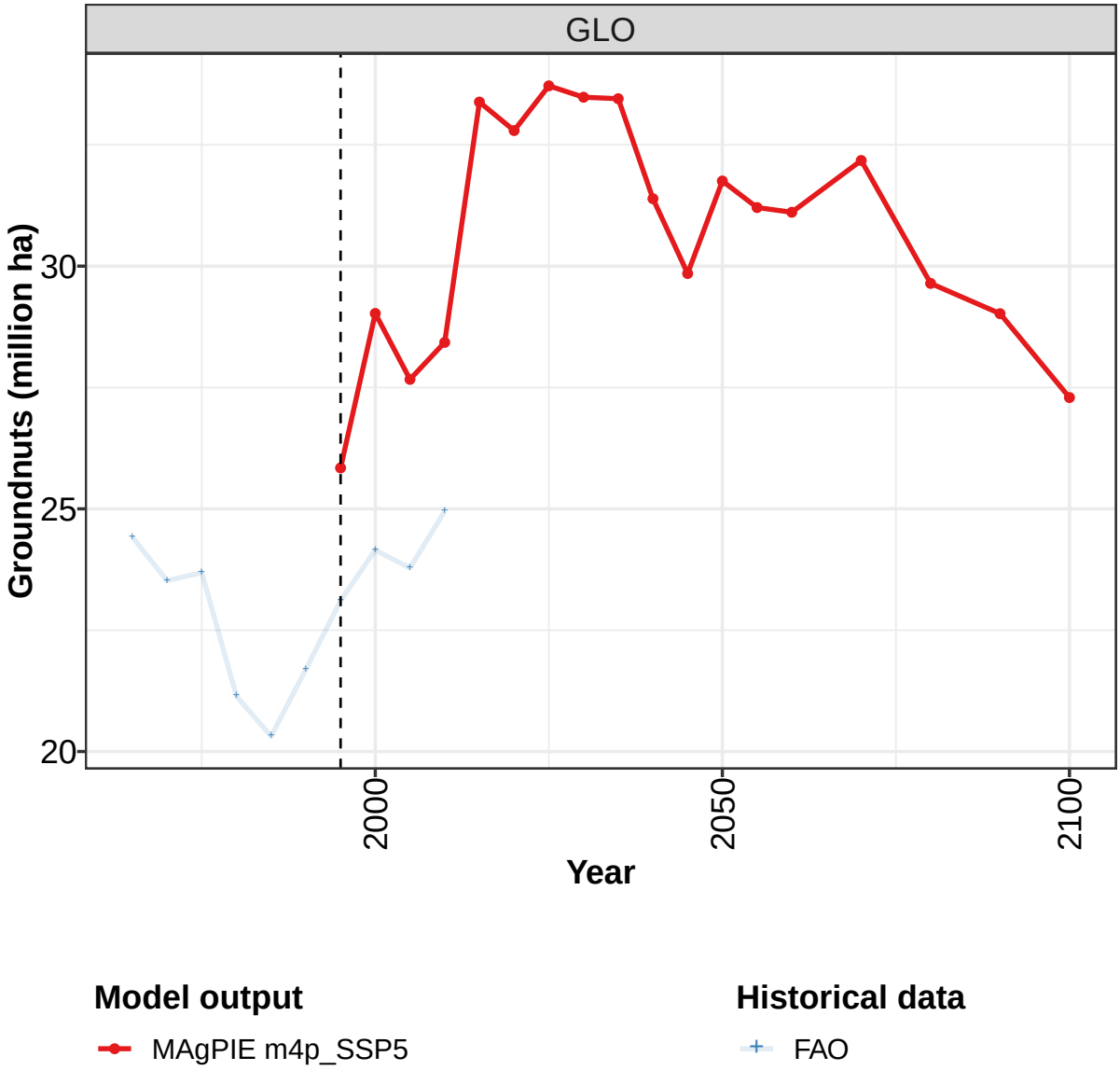
	2050	2055	2060	2070	2080	2090	2100
GLO	18.0	18.7	18.2	17.5	15.9	15.1	14.4
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CHA	1.1	1.1	1.0	0.9	0.8	0.7	0.6
EUR	0.1	0.1	0.1	0.2	0.1	0.1	0.1
IND	6.4	7.1	6.6	5.8	4.7	4.2	4.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.2	1.2	1.2	1.3	1.3	1.2	1.1
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.4	1.4	1.3	1.2	0.8	0.5	0.5
REF	0.4	0.4	0.4	0.5	0.4	0.5	0.5
SSA	3.1	3.2	3.3	3.6	3.8	3.9	3.7
USA	4.0	4.0	3.9	3.8	3.6	3.6	3.6

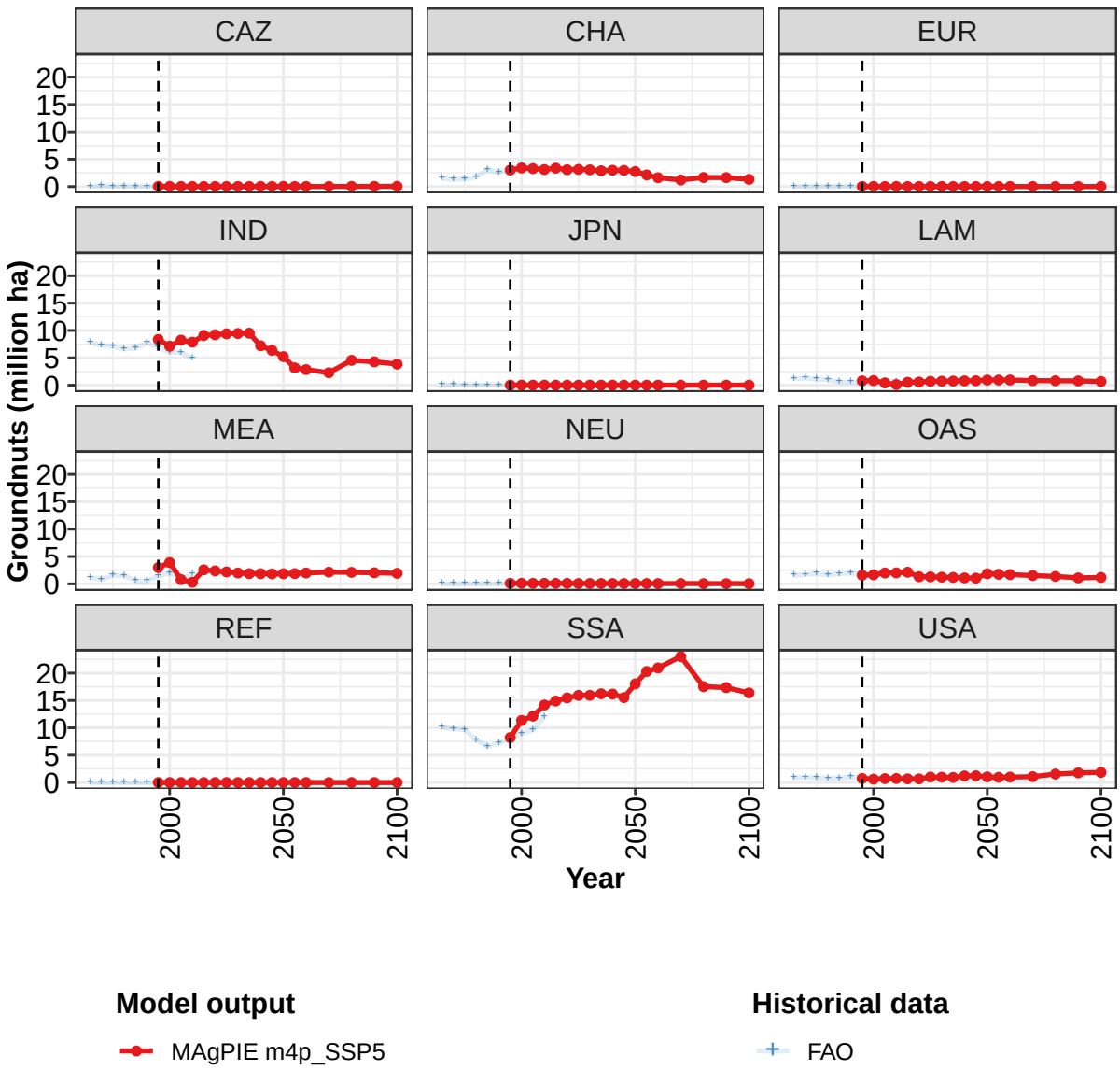
Table 1581: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Cotton seed (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	41.6	41.1	37.2	38.7	36.4	36.3	38.8	34.3	35.8	30.0
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.5	0.3	0.2
CHA	3.8	3.8	3.6	3.6	4.6	5.0	4.6	3.3	3.9	3.4
EUR	0.6	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.5	0.4
IND	8.1	7.6	7.3	7.6	7.2	7.0	8.3	7.9	7.7	9.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	5.6	7.1	6.8	6.4	5.6	4.1	3.4	2.0	2.7	1.9
MEA	3.4	2.6	2.0	1.4	1.3	1.4	1.1	1.1	0.9	0.5
NEU	1.1	0.9	1.0	1.0	0.9	0.8	0.9	0.8	0.7	0.6
OAS	2.8	2.7	3.1	3.2	3.5	3.4	3.8	3.7	3.7	3.1
REF	3.4	3.6	3.7	3.8	3.4	3.4	2.9	2.7	2.8	2.3
SSA	4.4	4.9	4.2	3.9	3.9	4.1	4.1	4.8	5.7	3.4
USA	8.4	7.4	5.0	7.3	5.4	6.6	9.1	6.9	6.9	4.7

Table 1582: FAO — Resources—Land Cover—Cropland—Crops—Oil crops—Cotton seed (million ha)

54.1.12 Crops—Oil crops—Groundnuts





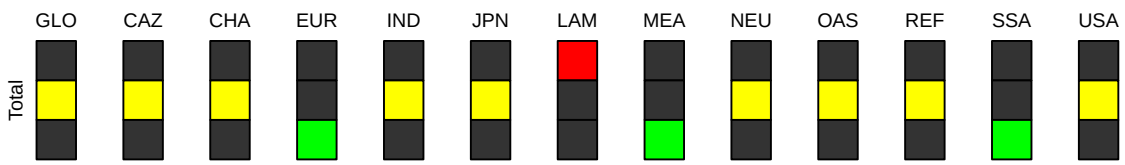


Figure 412: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Groundnuts (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	25.8	29.0	27.7	28.4	33.4	32.8	33.7	33.5	33.4	31.4	29.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.0	3.4	3.3	3.1	3.4	3.1	3.1	3.1	2.9	3.0	2.9
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	8.4	7.1	8.2	7.9	9.1	9.2	9.4	9.4	9.5	7.2	6.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.8	0.8	0.4	0.1	0.5	0.6	0.7	0.7	0.8	0.8	0.8
MEA	3.0	3.9	0.8	0.3	2.6	2.4	2.2	2.0	1.9	1.9	1.8
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.6	1.7	2.0	2.0	2.1	1.3	1.3	1.2	1.2	1.1	1.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	8.2	11.3	12.1	14.2	14.9	15.5	15.9	15.9	16.2	16.2	15.5
USA	0.7	0.6	0.7	0.7	0.7	0.7	1.0	1.0	0.9	1.2	1.2

Table 1583: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Groundnuts (million ha) [PART 1/2]

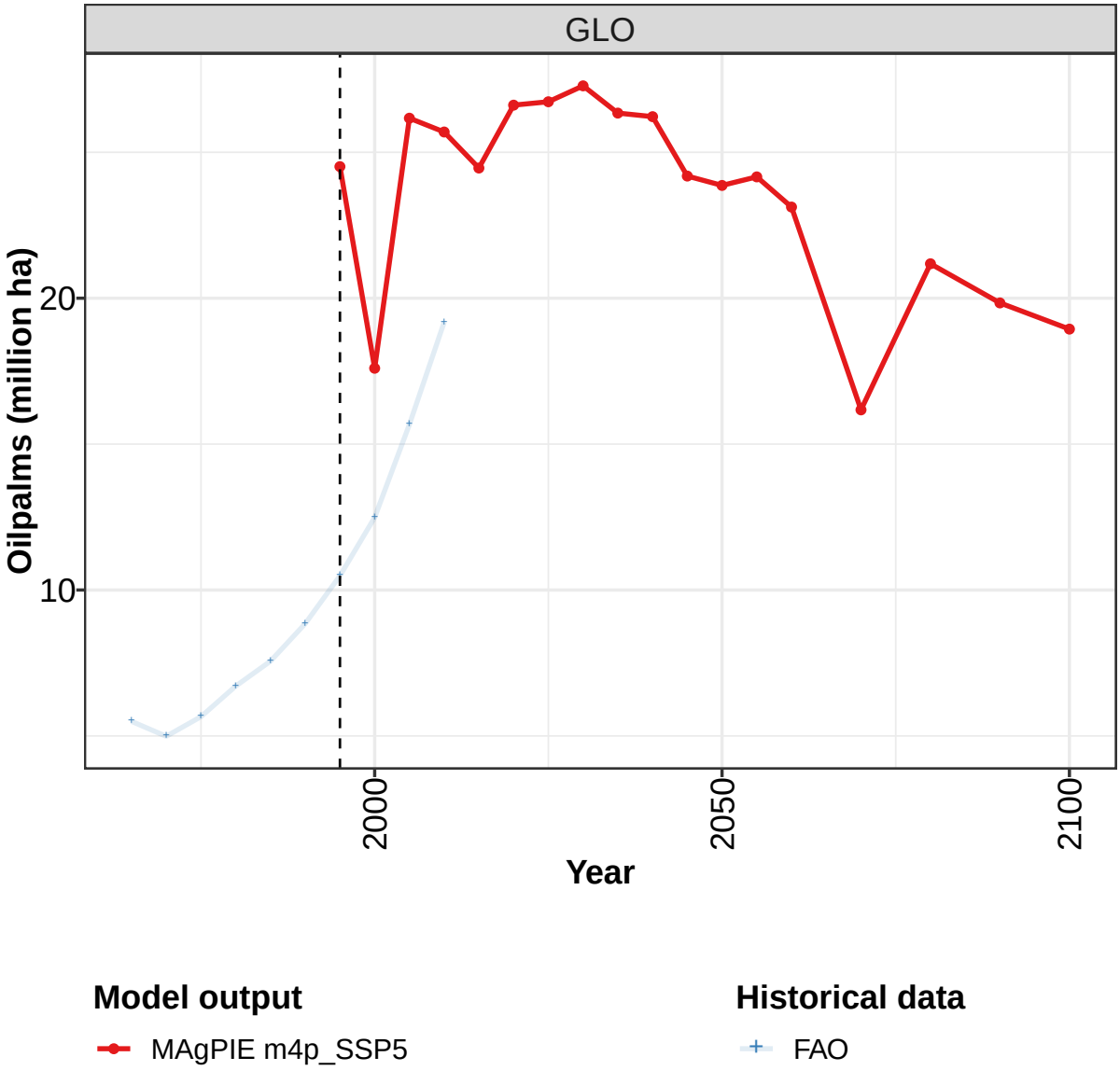
	2050	2055	2060	2070	2080	2090	2100
GLO	31.8	31.2	31.1	32.2	29.6	29.0	27.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.7	2.1	1.6	1.2	1.6	1.6	1.3
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	5.2	3.2	2.8	2.3	4.5	4.3	3.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.9	0.8	0.8	0.8	0.7
MEA	1.9	1.9	2.0	2.2	2.1	2.0	1.9
NEU	0.1	0.1	0.0	0.1	0.0	0.0	0.0
OAS	1.8	1.8	1.7	1.5	1.4	1.1	1.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	18.0	20.3	20.9	23.0	17.5	17.4	16.4
USA	1.0	1.0	1.0	1.1	1.6	1.8	1.9

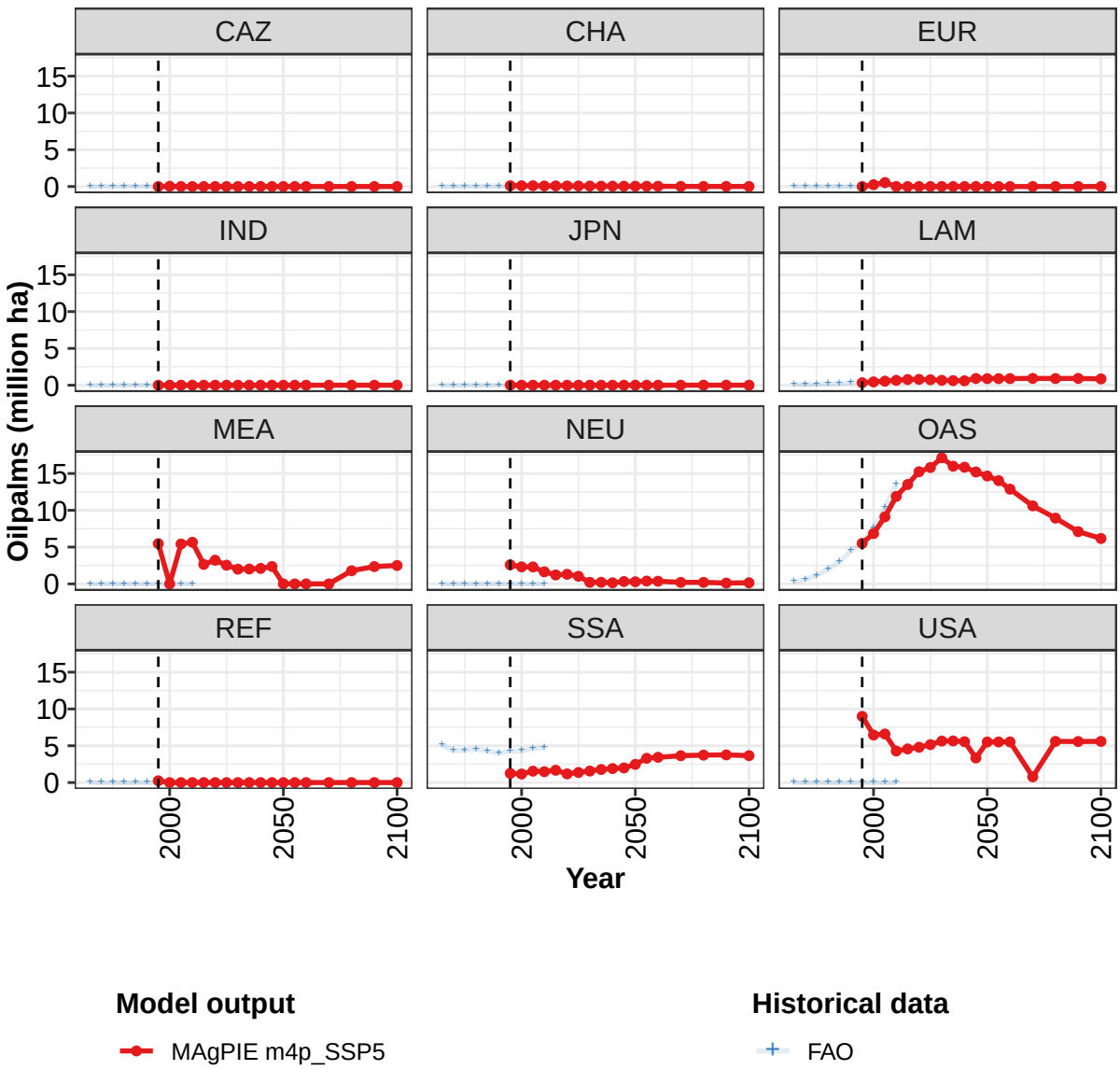
Table 1584: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Groundnuts (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	24.4	23.5	23.7	21.1	20.3	21.7	23.1	24.1	23.8	25.0
CAZ	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.5	1.3	1.4	1.7	3.0	2.6	3.3	3.9	3.6	3.2
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	7.9	7.3	7.1	6.6	6.8	7.8	6.9	6.0	6.0	4.9
JPN	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.2	1.3	1.1	1.0	0.6	0.6	0.5	0.7	0.7	0.6
MEA	1.1	0.9	1.6	1.5	0.6	0.5	1.4	2.0	1.1	1.7
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.6	1.7	1.9	1.6	1.8	2.0	1.8	1.7	1.9	1.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	10.1	9.9	9.6	7.8	6.6	7.1	8.2	8.9	9.6	12.1
USA	0.9	1.0	0.9	0.8	0.8	1.0	0.9	0.7	0.8	0.6

Table 1585: FAO — Resources—Land Cover—Cropland—Crops—Oil crops—Groundnuts (million ha)

54.1.13 Crops—Oil crops—Oilpalms





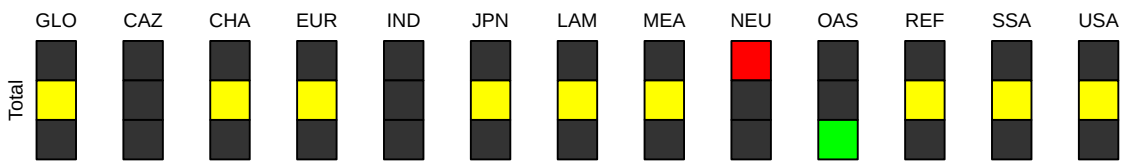


Figure 413: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Oilpalms (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	24.5	17.6	26.2	25.7	24.5	26.6	26.7	27.3	26.3	26.2	24.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
EUR	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.4	0.5	0.7	0.8	0.8	0.7	0.7	0.6	0.6	0.9
MEA	5.5	0.0	5.4	5.7	2.6	3.2	2.5	2.0	2.0	2.1	2.4
NEU	2.6	2.3	2.3	1.6	1.2	1.3	1.0	0.2	0.2	0.1	0.3
OAS	5.5	6.8	9.1	11.9	13.5	15.2	15.8	17.1	16.0	15.9	15.2
REF	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.2	1.2	1.5	1.5	1.7	1.2	1.4	1.6	1.8	1.9	2.0
USA	9.0	6.5	6.6	4.3	4.6	4.8	5.2	5.6	5.7	5.6	3.3

Table 1586: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Oilpalms (million ha) [PART 1/2]

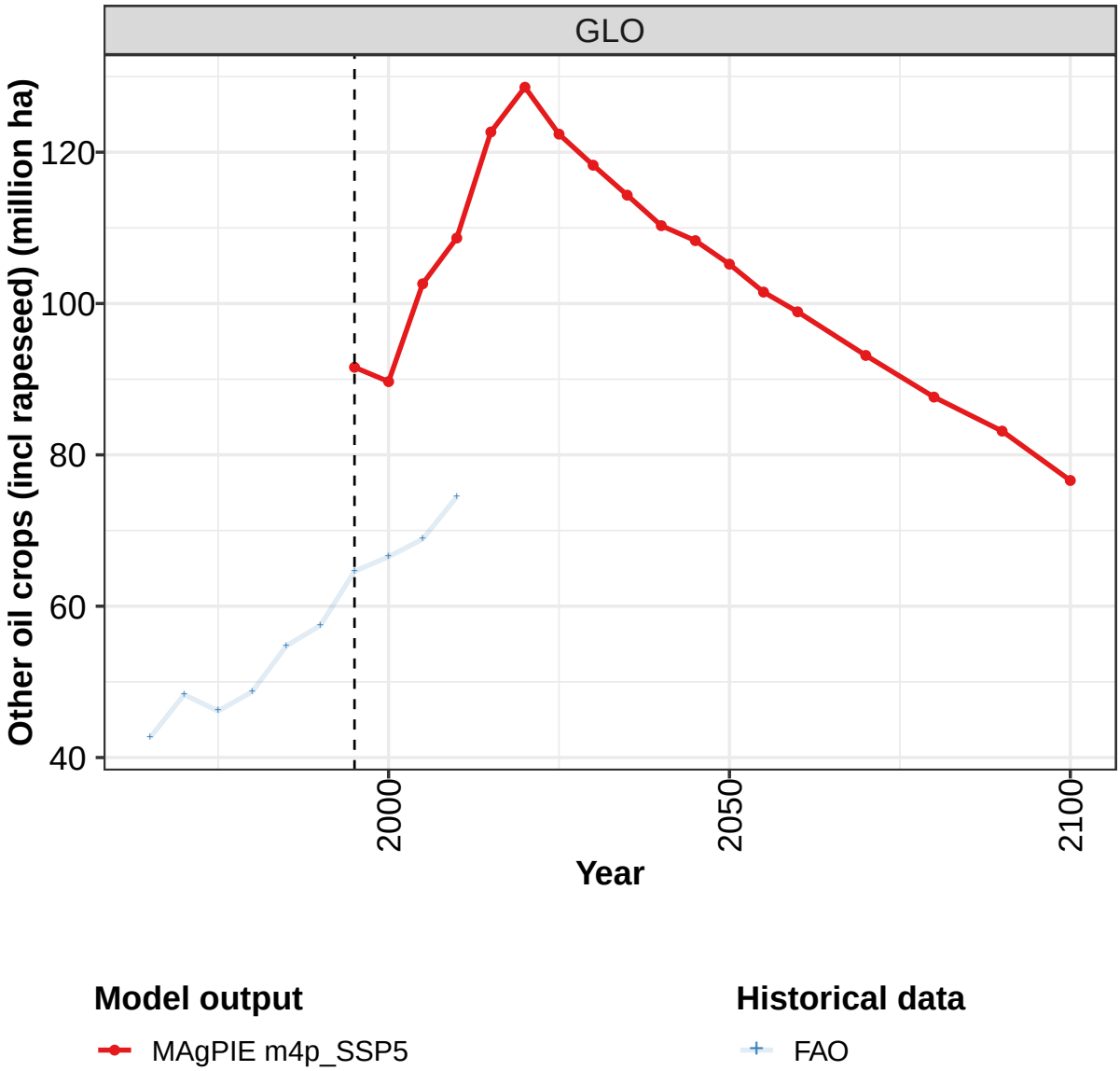
	2050	2055	2060	2070	2080	2090	2100
GLO	23.9	24.2	23.1	16.2	21.2	19.8	18.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.9	0.9	0.9	0.9	0.9
MEA	0.0	0.0	0.0	0.0	1.8	2.3	2.5
NEU	0.3	0.4	0.4	0.2	0.2	0.1	0.2
OAS	14.7	14.0	12.9	10.6	8.9	7.1	6.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.5	3.3	3.4	3.6	3.7	3.8	3.7
USA	5.5	5.5	5.5	0.8	5.6	5.6	5.6

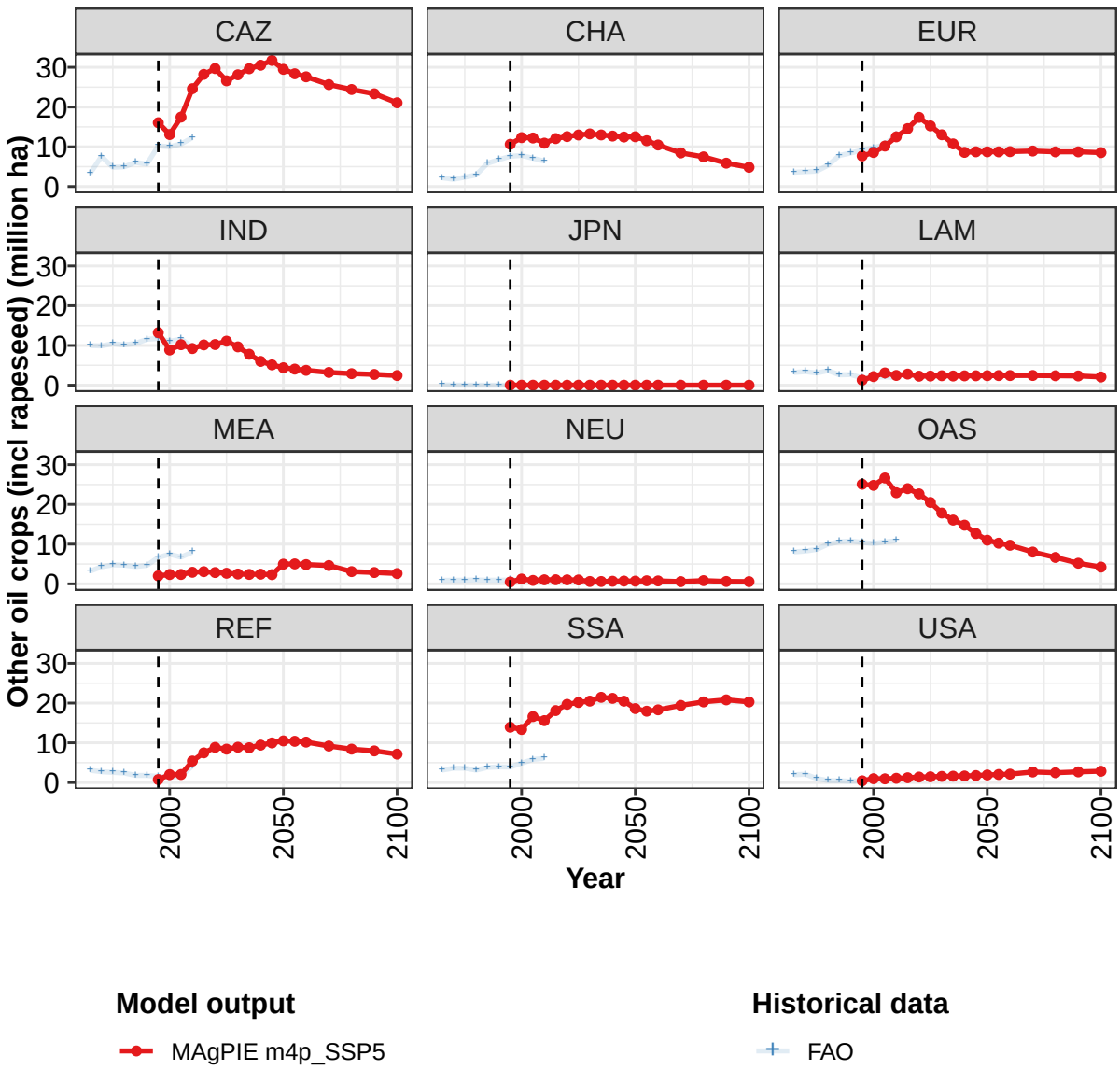
Table 1587: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Oilpalms (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.5	5.0	5.7	6.7	7.6	8.8	10.5	12.5	15.7	19.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.6	0.7	0.9
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.3	0.6	1.1	2.0	3.0	4.5	5.7	7.5	10.3	13.5
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	5.1	4.3	4.4	4.5	4.3	4.0	4.3	4.3	4.6	4.7
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1588: FAO — Resources—Land Cover—Cropland—Crops—Oil crops—Oilpalms (million ha)

54.1.14 Crops—Oil crops—Other oil crops (incl rapeseed)





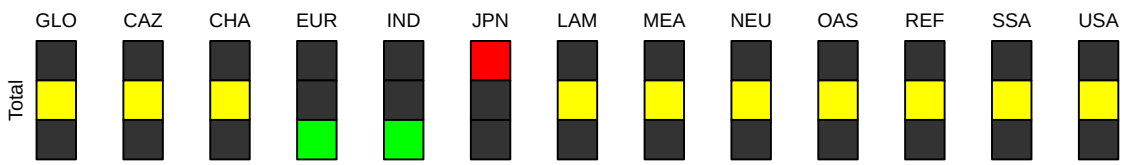


Figure 414: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Other oil crops (incl rapeseed) (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	92	90	103	109	123	129	122	118	114	110	108
CAZ	16	13	17	25	28	30	27	28	30	31	32
CHA	11	12	12	11	12	13	13	13	13	13	12
EUR	8	9	10	13	15	17	15	13	11	9	9
IND	13	9	10	9	10	10	11	10	8	6	5
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	3	2	3	2	2	2	2	2	2
MEA	2	2	2	3	3	3	3	2	2	2	2
NEU	0	1	1	1	1	1	1	1	1	1	1
OAS	25	25	27	23	24	23	20	18	16	15	13
REF	1	2	2	5	7	9	8	9	9	9	10
SSA	14	13	17	16	18	20	20	21	21	21	20
USA	0	1	1	1	1	1	1	2	2	2	2

Table 1589: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Other oil crops (incl rapeseed) (million ha) [PART 1/2]

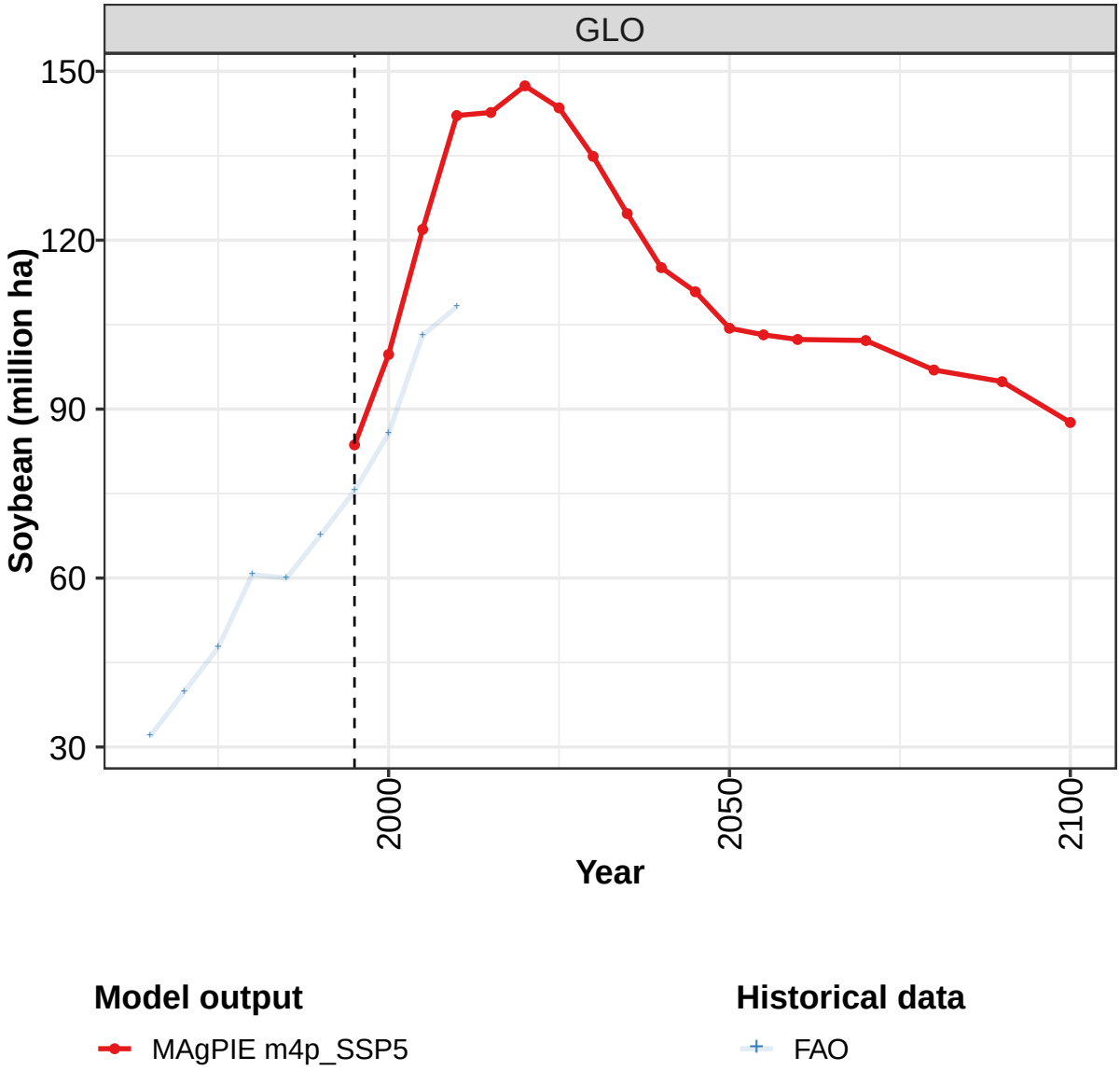
	2050	2055	2060	2070	2080	2090	2100
GLO	105	102	99	93	88	83	77
CAZ	29	28	28	26	24	23	21
CHA	13	12	10	8	7	6	5
EUR	9	9	9	9	9	9	9
IND	4	4	4	3	3	3	2
JPN	0	0	0	0	0	0	0
LAM	2	2	2	2	2	2	2
MEA	5	5	5	5	3	3	3
NEU	1	1	1	1	1	1	1
OAS	11	10	10	8	7	5	4
REF	10	10	10	9	8	8	7
SSA	19	18	18	19	20	21	20
USA	2	2	2	3	2	3	3

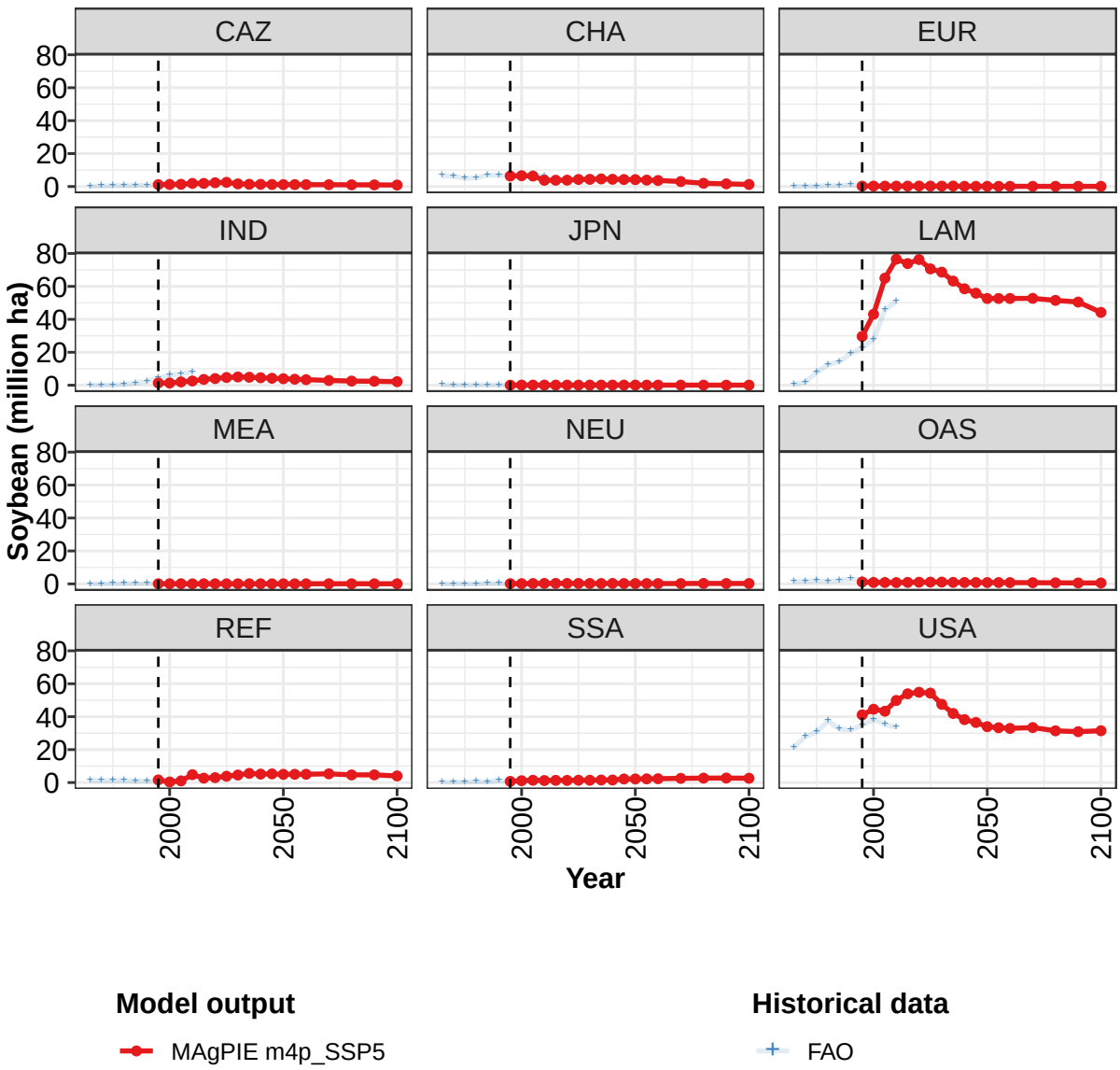
Table 1590: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Other oil crops (incl rapeseed) (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	42.6	48.3	46.2	48.7	54.8	57.5	64.6	66.5	68.9	74.5
CAZ	3.3	7.6	4.8	5.0	6.1	5.7	10.3	10.0	10.7	12.3
CHA	2.2	1.8	2.3	2.9	5.8	6.8	7.6	7.8	7.1	6.4
EUR	3.6	3.7	3.9	5.3	7.8	8.4	9.1	9.7	10.6	13.0
IND	10.0	9.9	10.4	10.2	10.5	11.5	11.8	11.1	11.6	9.6
JPN	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.2	3.4	3.1	3.7	2.6	2.7	1.8	2.0	2.1	1.9
MEA	3.2	4.3	4.8	4.7	4.4	4.6	6.6	7.5	6.7	8.0
NEU	0.9	0.9	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.2
OAS	8.1	8.3	8.7	10.0	10.6	10.8	10.4	10.2	10.5	10.8
REF	3.1	2.7	2.6	2.4	1.8	1.8	1.5	1.3	1.6	4.2
SSA	3.1	3.6	3.6	3.1	3.8	3.9	3.9	4.9	5.8	6.1
USA	2.0	2.1	1.0	0.5	0.4	0.3	0.5	1.2	1.2	0.9

Table 1591: FAO — Resources—Land Cover—Cropland—Crops—Oil crops—Other oil crops (incl rapeseed) (million ha)

54.1.15 Crops—Oil crops—Soybean





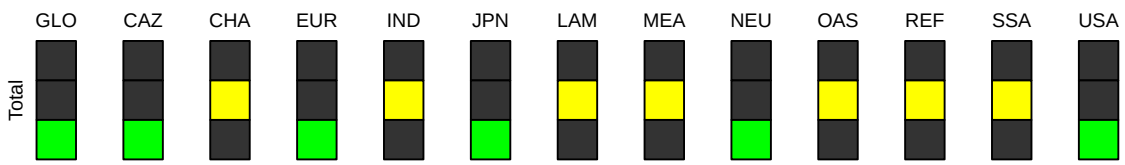


Figure 415: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Soybean (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	84	100	122	142	143	147	144	135	125	115	111
CAZ	1	1	1	2	2	2	3	2	1	1	1
CHA	6	7	6	4	4	4	4	4	5	4	4
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	1	1	2	3	4	4	5	5	5	5	4
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	30	43	65	77	74	76	71	69	63	59	56
MEA	0	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	1	1	1	1	1	1	1	1	1	1	1
REF	2	0	1	5	3	3	4	5	6	5	5
SSA	1	1	1	1	1	1	1	1	2	2	2
USA	41	45	43	50	54	55	54	48	42	38	36

Table 1592: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Soybean (million ha) [PART 1/2]

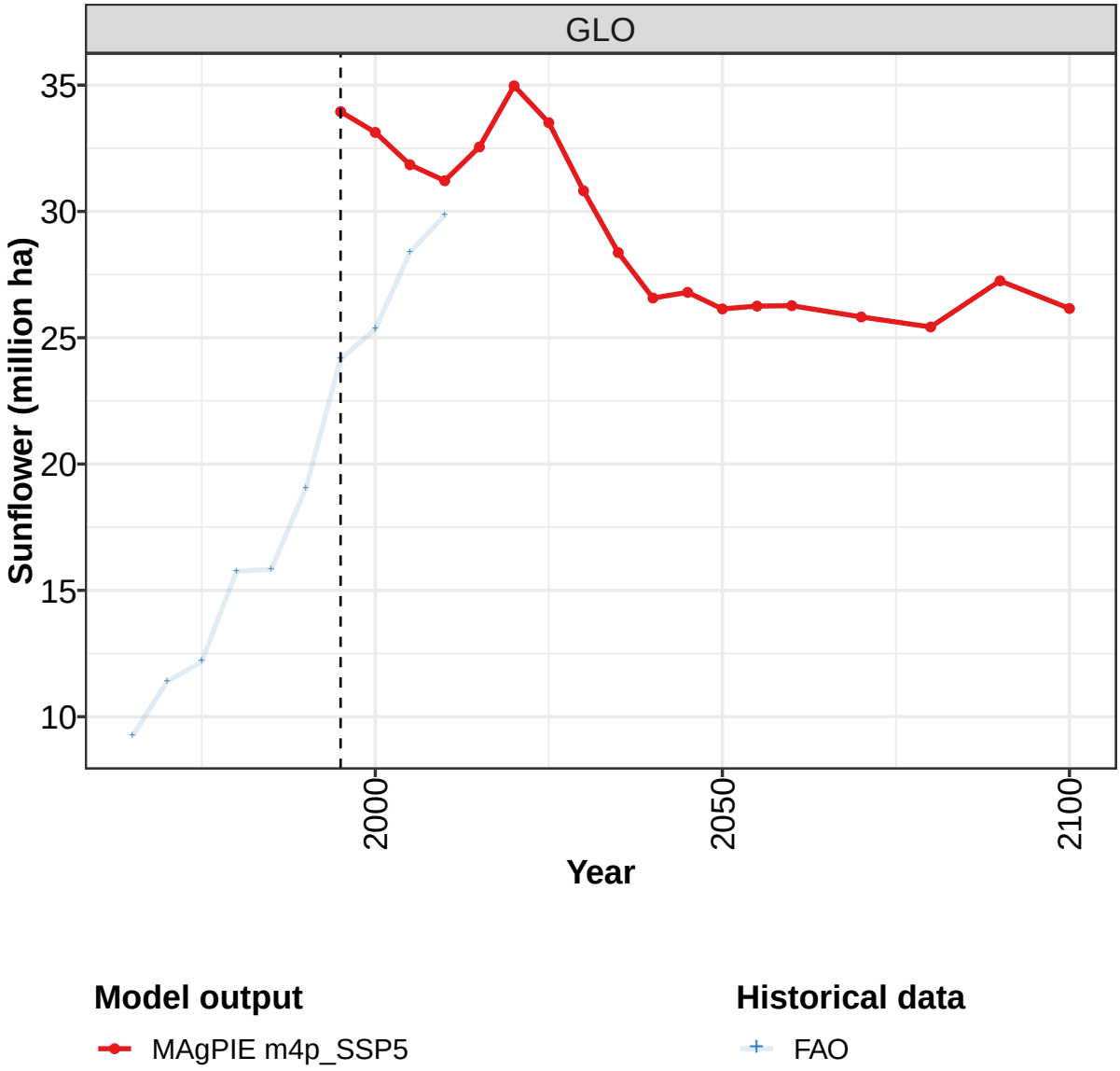
	2050	2055	2060	2070	2080	2090	2100
GLO	104	103	102	102	97	95	88
CAZ	1	1	1	1	1	1	1
CHA	4	4	4	3	2	2	1
EUR	0	0	0	0	0	0	0
IND	4	4	3	3	3	2	2
JPN	0	0	0	0	0	0	0
LAM	53	53	53	53	52	50	44
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	1	1	1	1	1	1	1
REF	5	5	5	5	5	5	4
SSA	2	2	2	3	3	3	3
USA	34	33	33	33	31	31	31

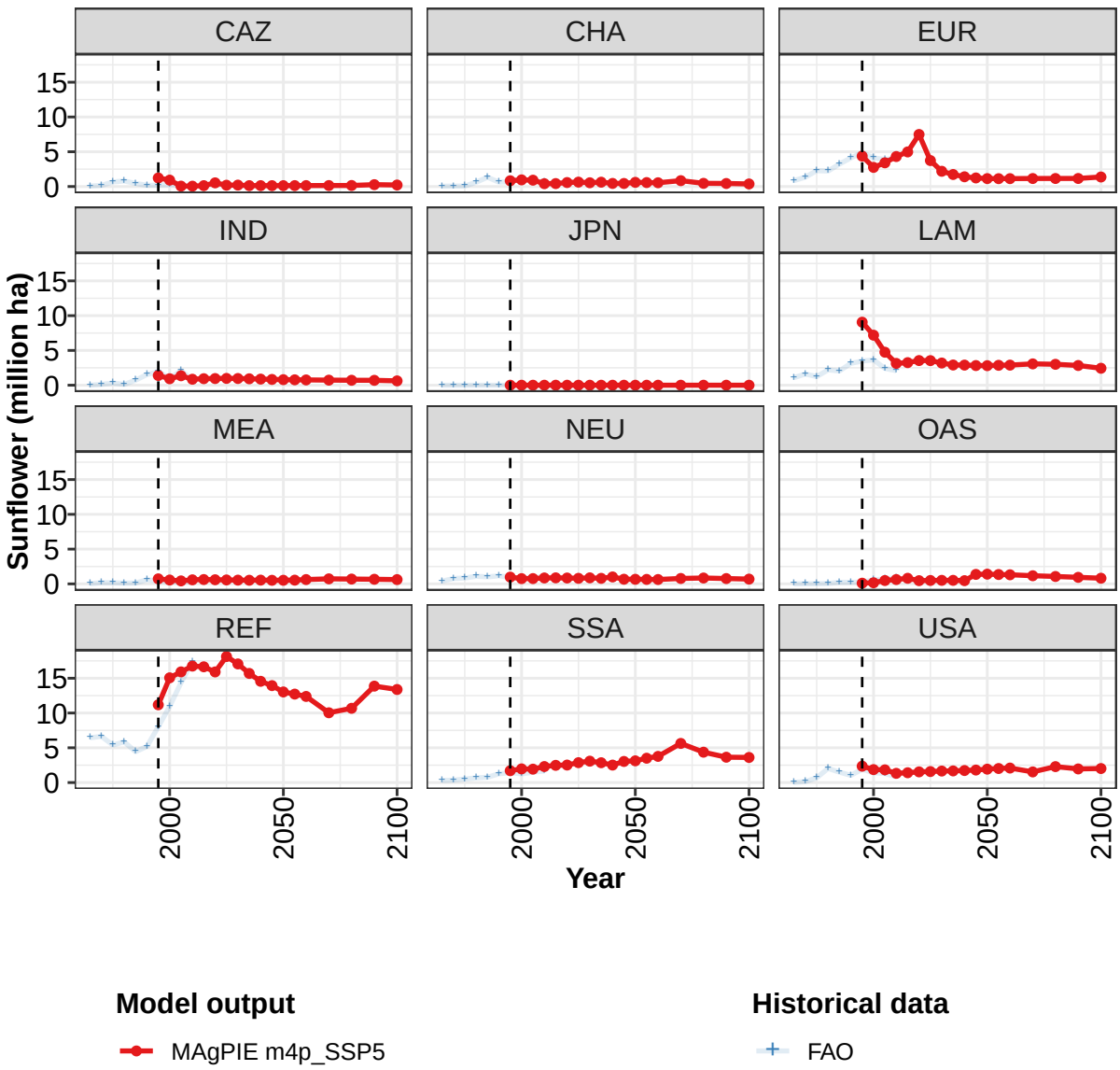
Table 1593: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Soybean (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	32	40	48	61	60	68	75	86	103	108
CAZ	0	0	0	1	1	1	1	2	2	2
CHA	7	6	5	5	7	7	7	8	7	6
EUR	0	0	0	1	1	1	0	1	0	0
IND	0	0	0	1	1	2	5	6	7	8
JPN	0	0	0	0	0	0	0	0	0	0
LAM	1	2	8	13	14	19	23	28	46	51
MEA	0	0	0	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0	0	0	0
OAS	2	2	2	2	2	3	3	2	2	2
REF	1	1	1	1	1	1	1	1	2	3
SSA	0	0	0	1	0	1	1	1	1	2
USA	21	28	31	37	32	32	35	38	35	34

Table 1594: FAO — Resources—Land Cover—Cropland—Crops—Oil crops—Soybean (million ha)

54.1.16 Crops—Oil crops—Sunflower





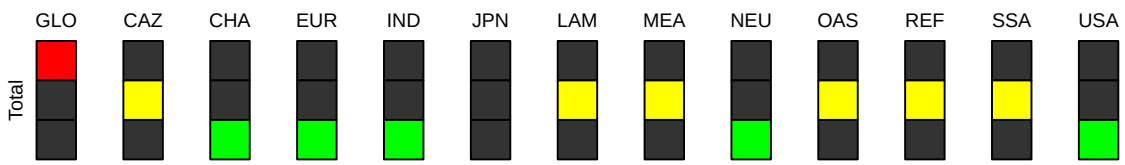


Figure 416: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Sunflower (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	33.9	33.1	31.8	31.2	32.6	35.0	33.5	30.8	28.4	26.6	26.8
CAZ	1.2	0.9	0.1	0.1	0.1	0.5	0.2	0.2	0.1	0.1	0.1
CHA	0.8	1.0	0.9	0.4	0.4	0.6	0.6	0.5	0.6	0.4	0.4
EUR	4.4	2.8	3.4	4.3	5.0	7.5	3.7	2.2	1.7	1.4	1.2
IND	1.4	0.9	1.4	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	9.1	7.2	4.7	3.1	3.2	3.5	3.5	3.2	2.9	2.9	2.8
MEA	0.7	0.6	0.4	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
NEU	1.0	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.8	1.0	0.7
OAS	0.1	0.2	0.5	0.6	0.8	0.5	0.5	0.5	0.5	0.5	1.4
REF	11.2	15.1	15.9	16.7	16.6	15.9	18.1	17.1	15.7	14.6	13.9
SSA	1.7	2.0	1.9	2.3	2.5	2.5	2.9	3.1	2.9	2.5	3.0
USA	2.4	1.9	1.8	1.3	1.4	1.5	1.6	1.7	1.7	1.7	1.8

Table 1595: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Sunflower (million ha) [PART 1/2]

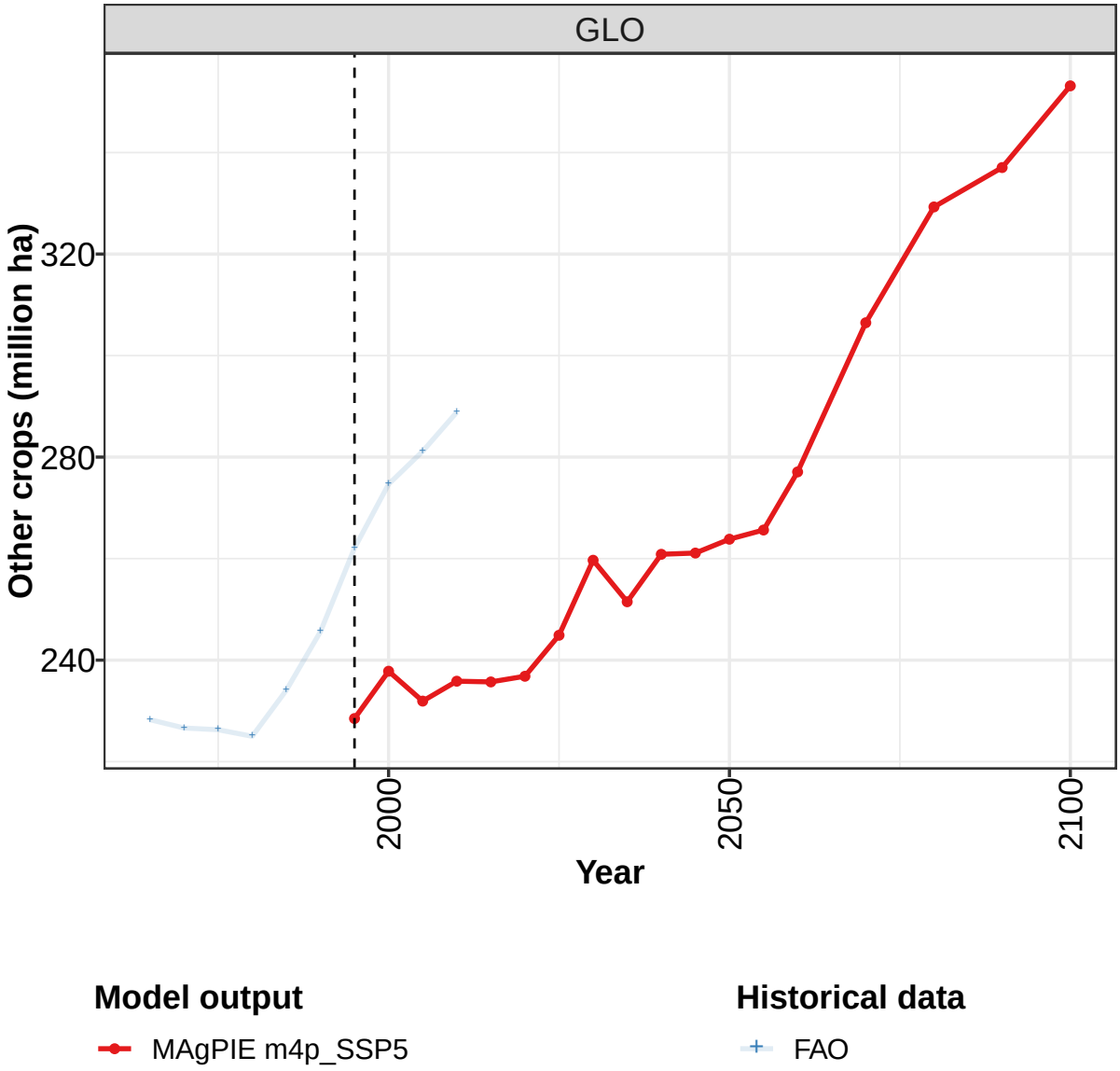
	2050	2055	2060	2070	2080	2090	2100
GLO	26.1	26.3	26.3	25.8	25.4	27.3	26.2
CAZ	0.1	0.1	0.1	0.1	0.1	0.3	0.2
CHA	0.6	0.6	0.5	0.8	0.5	0.4	0.4
EUR	1.1	1.1	1.1	1.2	1.2	1.2	1.4
IND	0.8	0.8	0.8	0.7	0.7	0.7	0.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.8	2.9	2.9	3.1	3.0	2.8	2.4
MEA	0.5	0.5	0.6	0.7	0.7	0.7	0.6
NEU	0.7	0.6	0.6	0.8	0.8	0.8	0.7
OAS	1.4	1.3	1.3	1.2	1.1	0.9	0.8
REF	13.0	12.7	12.4	10.0	10.7	13.9	13.4
SSA	3.1	3.5	3.8	5.6	4.4	3.6	3.6
USA	1.9	2.0	2.1	1.5	2.3	2.0	2.0

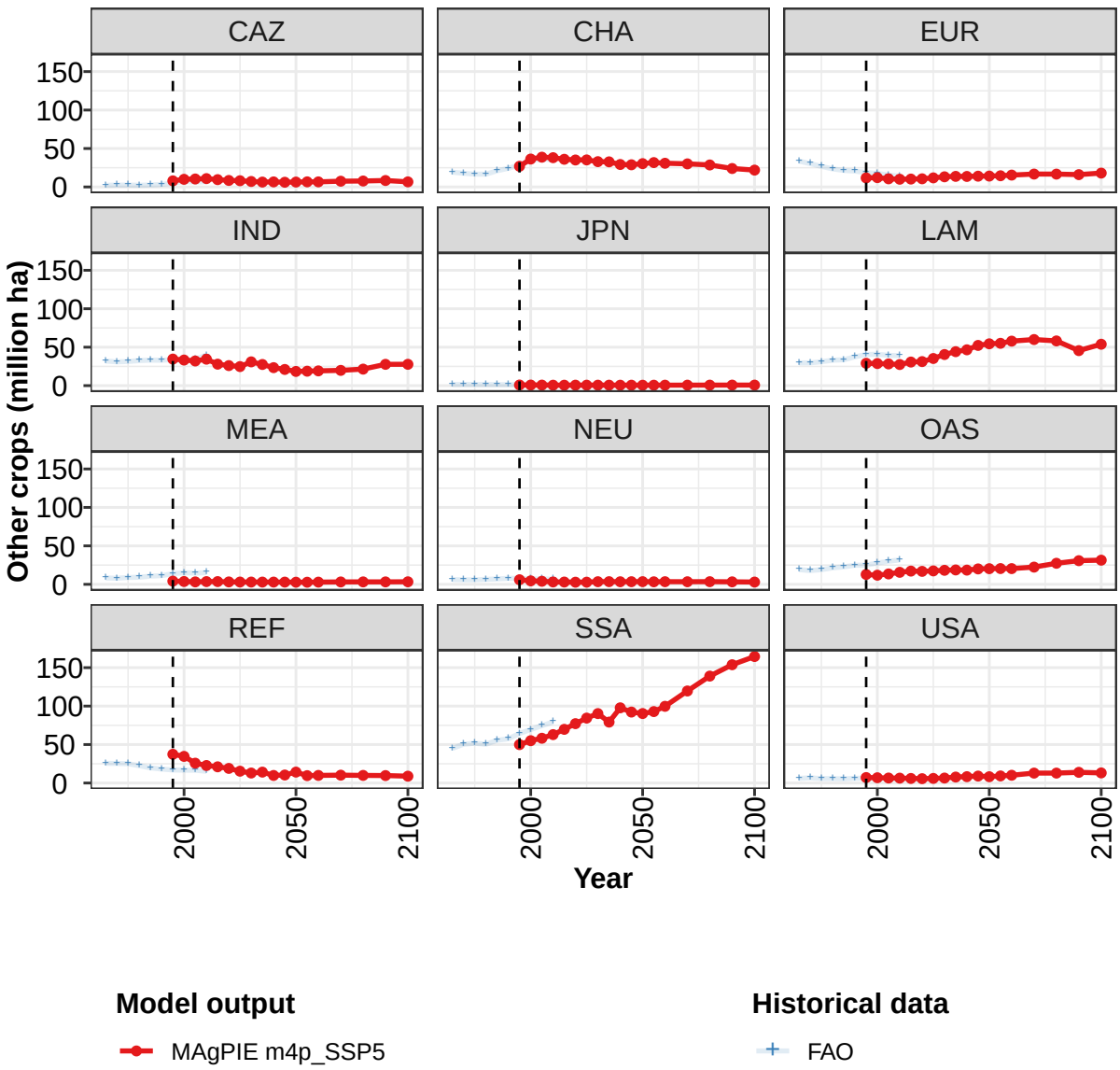
Table 1596: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Oil crops—Sunflower (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.2	11.4	12.2	15.8	15.8	19.0	24.2	25.3	28.4	29.8
CAZ	0.1	0.2	0.7	0.8	0.4	0.2	0.2	0.3	0.2	0.1
CHA	0.0	0.1	0.1	0.6	1.3	0.6	0.7	1.0	0.8	0.7
EUR	0.8	1.3	2.3	2.2	3.2	4.1	4.9	4.1	3.9	4.1
IND	0.0	0.1	0.3	0.1	0.7	1.5	1.9	1.0	2.1	0.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.1	1.6	1.2	2.2	2.0	3.1	3.5	3.6	2.4	2.1
MEA	0.0	0.2	0.2	0.1	0.1	0.6	0.4	0.3	0.3	0.3
NEU	0.4	0.8	0.8	1.1	1.0	1.2	0.9	0.8	0.9	1.0
OAS	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.6	0.7	0.9
REF	6.4	6.6	5.4	5.9	4.4	5.2	8.0	11.0	14.4	17.4
SSA	0.3	0.3	0.5	0.7	0.8	1.3	1.4	1.2	1.5	1.7
USA	0.0	0.1	0.7	2.0	1.5	1.0	1.9	1.4	1.3	0.8

Table 1597: FAO — Resources—Land Cover—Cropland—Crops—Oil crops—Sunflower (million ha)

54.1.17 Crops—Other crops





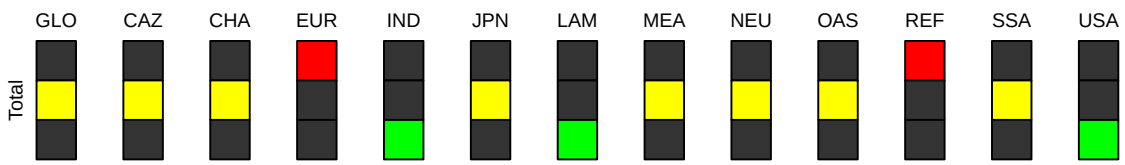


Figure 417: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	229	238	232	236	236	237	245	260	252	261	261
CAZ	8	10	10	11	10	8	8	7	6	7	6
CHA	27	36	39	38	36	35	35	33	33	29	29
EUR	12	12	11	10	10	11	12	13	14	14	14
IND	35	33	32	34	28	26	25	31	28	23	21
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	29	29	28	27	31	31	35	40	44	47	52
MEA	4	4	3	4	4	3	3	3	3	3	3
NEU	6	5	4	3	3	3	3	3	3	3	3
OAS	13	12	14	16	17	17	17	18	19	18	20
REF	37	35	26	23	21	19	15	13	14	10	10
SSA	50	55	58	63	70	77	84	90	79	98	92
USA	7	7	6	6	6	6	6	6	8	8	9

Table 1598: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops (million ha) [PART 1/2]

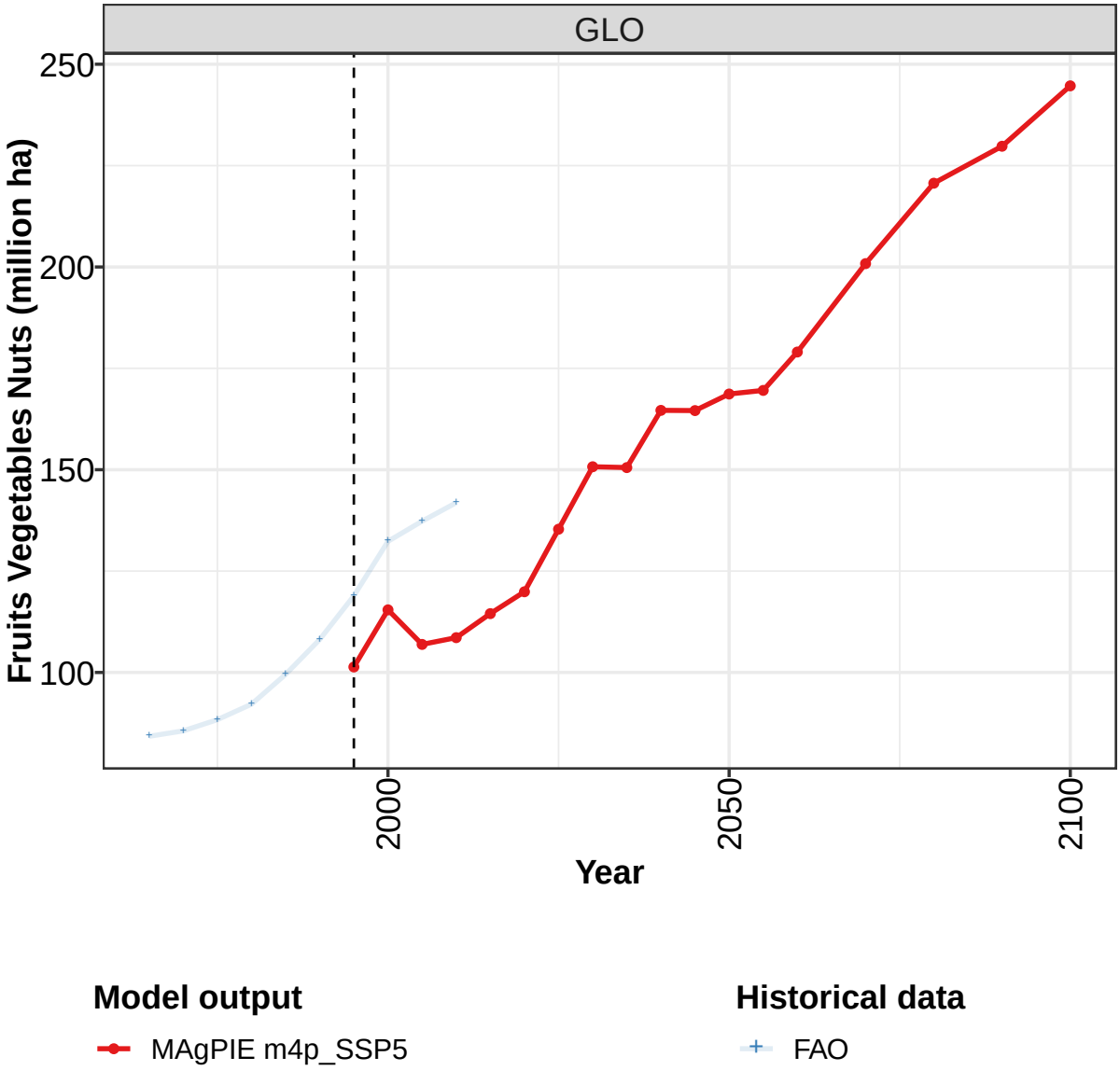
	2050	2055	2060	2070	2080	2090	2100
GLO	264	266	277	306	329	337	353
CAZ	6	7	7	7	8	8	7
CHA	30	32	31	30	29	24	22
EUR	14	15	15	17	17	16	18
IND	19	19	19	20	22	28	28
JPN	1	1	1	1	1	1	1
LAM	54	55	58	60	58	46	54
MEA	3	3	3	3	3	3	3
NEU	3	3	3	3	3	3	3
OAS	20	21	20	22	27	31	31
REF	14	10	10	10	10	10	9
SSA	90	93	100	120	139	154	164
USA	8	9	10	13	13	14	13

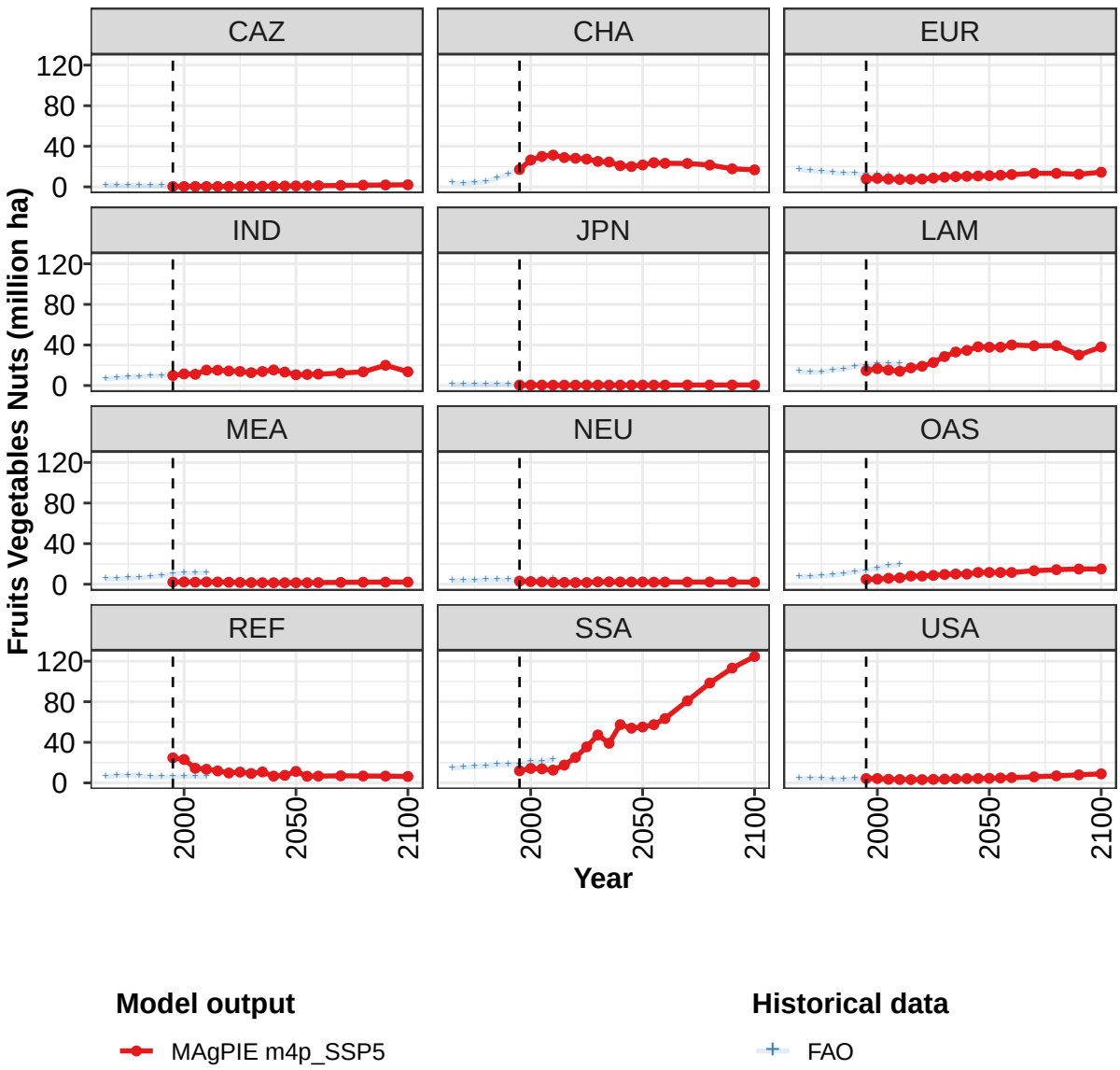
Table 1599: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	228	227	226	225	234	246	262	275	281	289
CAZ	2	2	2	2	2	3	5	7	6	7
CHA	19	18	17	17	21	24	29	34	36	35
EUR	34	30	27	23	22	21	19	18	15	14
IND	32	31	31	33	33	33	34	32	34	40
JPN	1	2	1	1	1	1	1	1	1	1
LAM	30	30	31	33	34	37	40	41	39	39
MEA	8	8	9	9	11	11	14	15	15	15
NEU	6	6	6	6	7	8	8	7	7	7
OAS	19	18	19	21	23	25	25	28	30	32
REF	26	25	25	23	20	18	17	17	17	15
SSA	45	50	52	50	56	58	64	70	75	79
USA	6	7	6	6	5	6	6	6	6	5

Table 1600: FAO — Resources—Land Cover—Cropland—Crops—Other crops (million ha)

54.1.18 Crops—Other crops—Fruits Vegetables Nuts





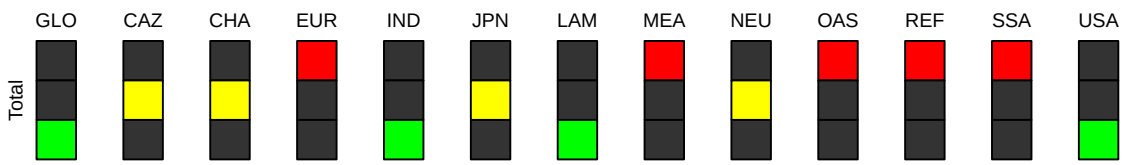


Figure 418: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Fruits Vegetables Nuts (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	101	115	107	109	115	120	135	151	151	165	165
CAZ	0	0	0	0	0	0	0	1	1	1	1
CHA	17	27	30	31	29	28	27	25	25	21	20
EUR	8	8	8	7	7	8	9	10	10	10	11
IND	10	11	11	15	15	14	14	13	14	15	13
JPN	1	0	0	0	0	0	0	0	0	0	0
LAM	15	17	15	14	17	19	23	29	33	35	38
MEA	2	2	2	2	2	2	2	2	2	1	1
NEU	3	3	2	2	2	2	2	2	2	2	2
OAS	5	5	6	6	8	8	9	10	10	10	12
REF	25	23	14	13	12	10	11	9	11	7	7
SSA	12	14	14	13	18	25	36	47	39	57	54
USA	4	4	4	3	3	3	4	4	4	4	4

Table 1601: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Fruits Vegetables Nuts (million ha) [PART 1/2]

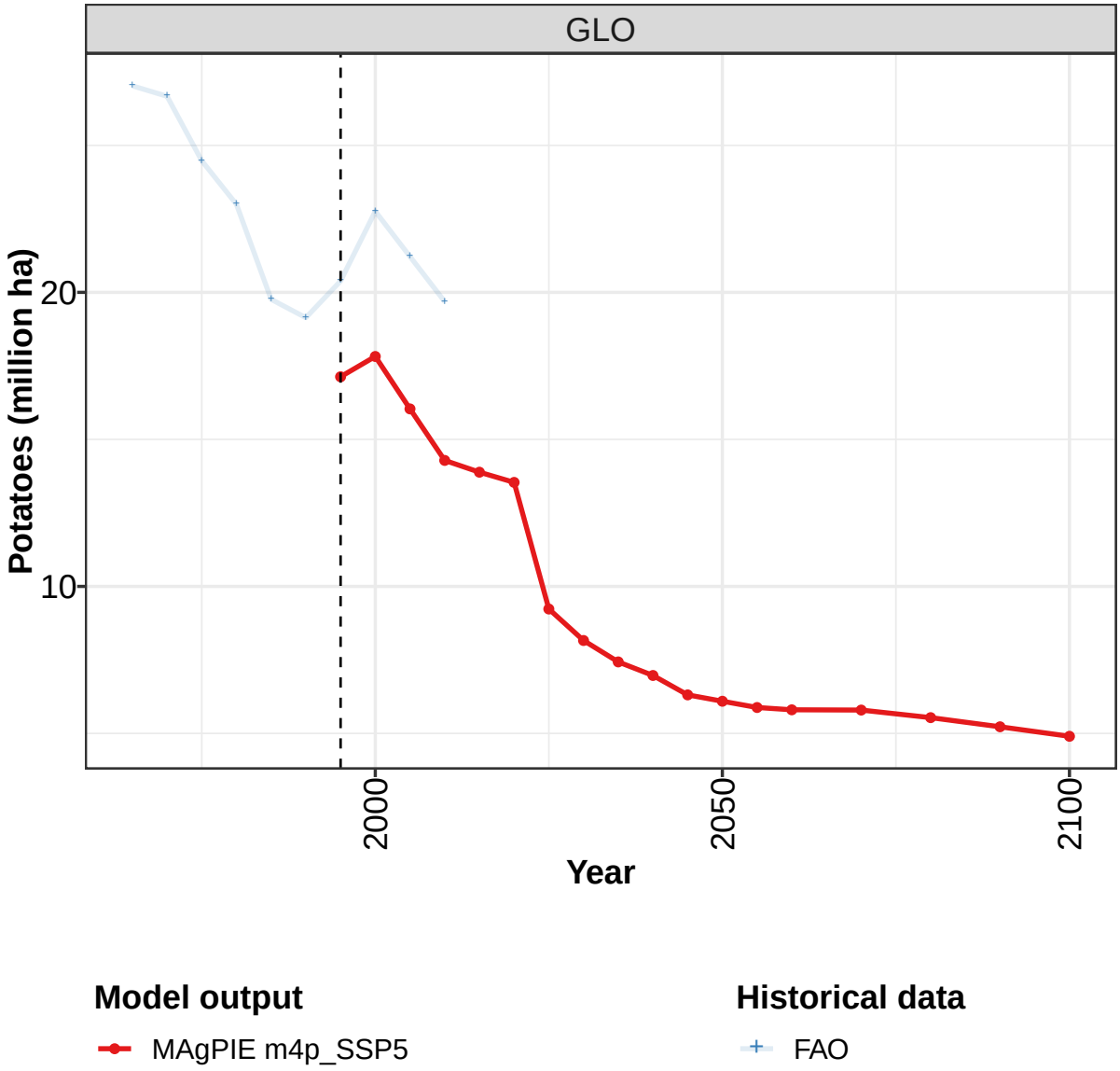
	2050	2055	2060	2070	2080	2090	2100
GLO	169	170	179	201	221	230	245
CAZ	1	1	1	1	2	2	2
CHA	22	24	23	23	22	18	17
EUR	11	11	12	13	13	12	14
IND	11	11	11	12	14	20	14
JPN	0	0	0	1	1	1	1
LAM	38	38	40	39	39	30	38
MEA	1	1	2	2	2	2	2
NEU	2	2	2	2	2	2	2
OAS	12	12	12	13	14	15	15
REF	11	7	7	7	7	7	6
SSA	55	57	63	81	98	113	125
USA	5	5	5	6	7	8	9

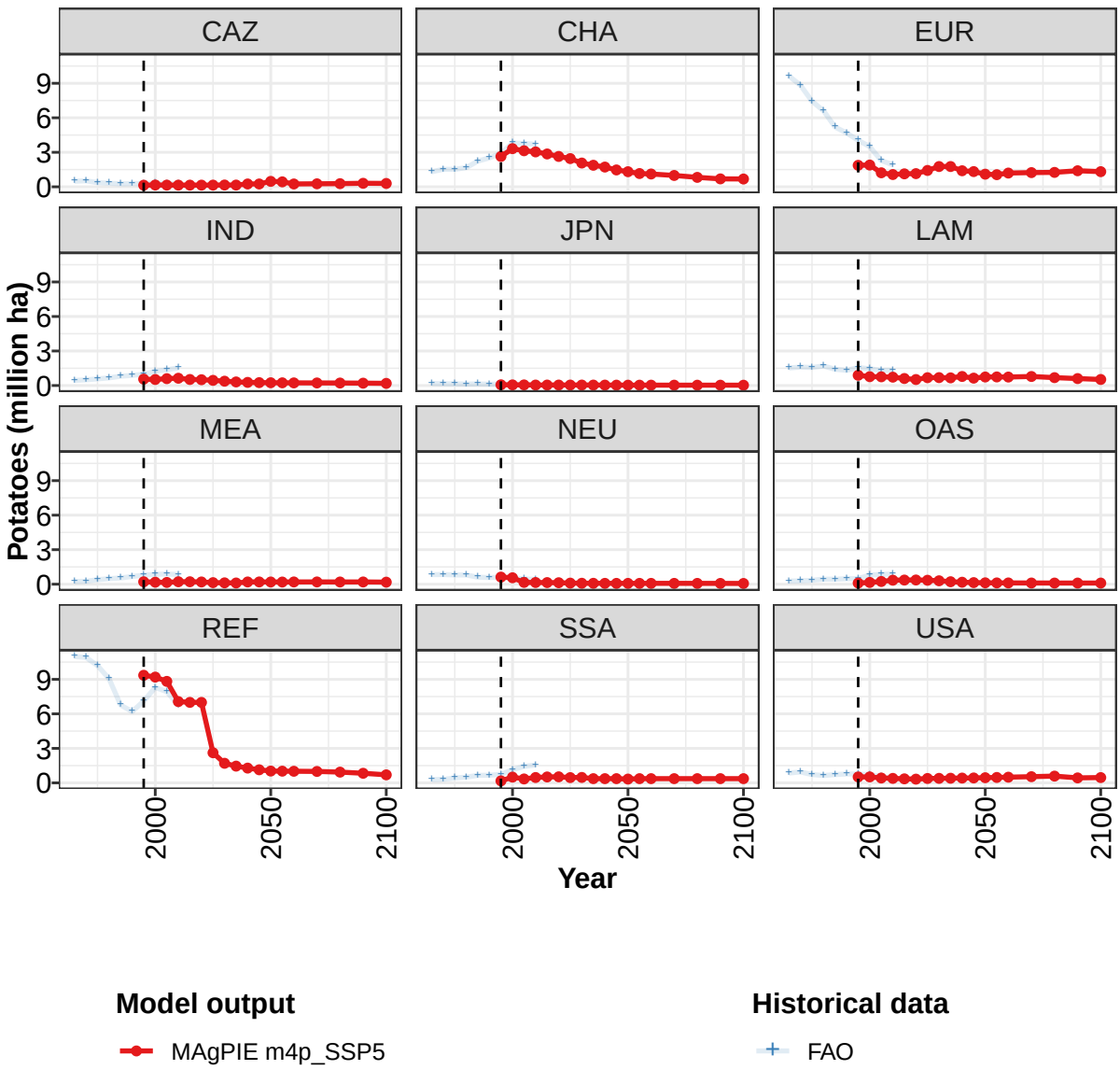
Table 1602: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Fruits Vegetables Nuts (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	84	86	88	92	100	108	119	132	137	142
CAZ	1	1	1	1	1	1	1	1	1	1
CHA	4	3	4	5	9	12	18	23	26	27
EUR	17	16	15	14	14	13	12	12	11	10
IND	7	7	8	9	10	10	11	12	13	15
JPN	1	1	1	1	1	1	1	1	1	1
LAM	13	13	13	15	16	19	20	22	22	21
MEA	5	5	6	6	7	8	10	11	11	11
NEU	4	4	4	4	4	4	5	4	5	5
OAS	8	7	8	9	10	12	13	16	18	19
REF	6	7	7	7	6	6	6	6	6	6
SSA	15	15	16	17	18	18	19	21	21	23
USA	4	4	4	4	4	4	4	4	4	3

Table 1603: FAO — Resources—Land Cover—Cropland—Crops—Other crops—Fruits Vegetables Nuts (million ha)

54.1.19 Crops—Other crops—Potatoes





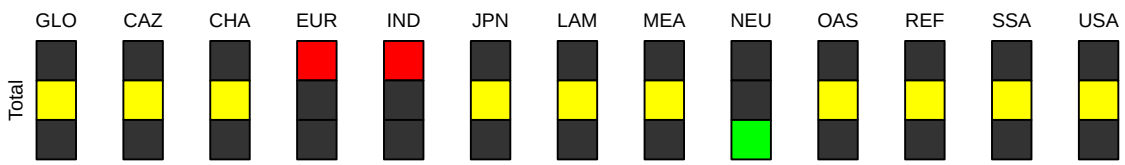


Figure 419: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Potatoes (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.1	17.8	16.0	14.3	13.9	13.5	9.2	8.2	7.4	7.0	6.3
CAZ	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
CHA	2.6	3.3	3.1	3.0	2.9	2.6	2.5	2.1	1.9	1.7	1.5
EUR	1.9	1.9	1.2	1.1	1.1	1.1	1.4	1.8	1.8	1.4	1.3
IND	0.6	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3
JPN	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.8	0.8	0.7	0.6	0.5	0.7	0.7	0.7	0.8	0.6
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2
NEU	0.6	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.1	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.1
REF	9.4	9.2	8.8	7.1	7.0	7.0	2.6	1.7	1.5	1.3	1.1
SSA	0.2	0.5	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
USA	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4

Table 1604: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Potatoes (million ha) [PART 1/2]

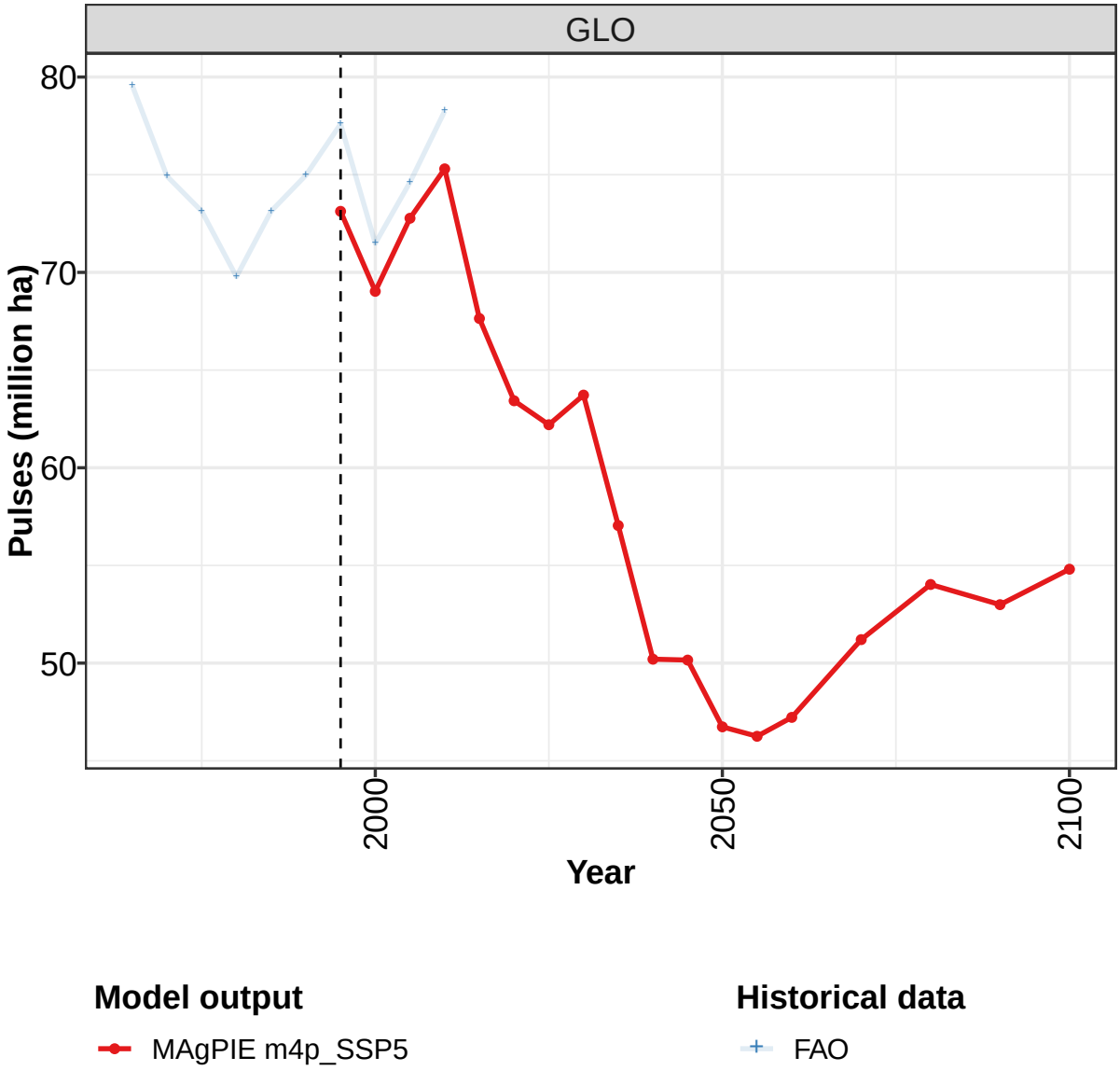
	2050	2055	2060	2070	2080	2090	2100
GLO	6.1	5.9	5.8	5.8	5.5	5.2	4.9
CAZ	0.5	0.4	0.2	0.3	0.3	0.3	0.3
CHA	1.3	1.2	1.1	1.0	0.8	0.7	0.7
EUR	1.1	1.1	1.2	1.2	1.3	1.4	1.3
IND	0.2	0.2	0.2	0.2	0.2	0.2	0.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.7	0.7	0.8	0.7	0.6	0.5
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.1	0.1	0.1	0.1	0.1	0.1	0.1
REF	1.0	1.0	1.0	1.0	0.9	0.8	0.7
SSA	0.3	0.4	0.4	0.4	0.4	0.4	0.4
USA	0.4	0.5	0.5	0.5	0.6	0.4	0.5

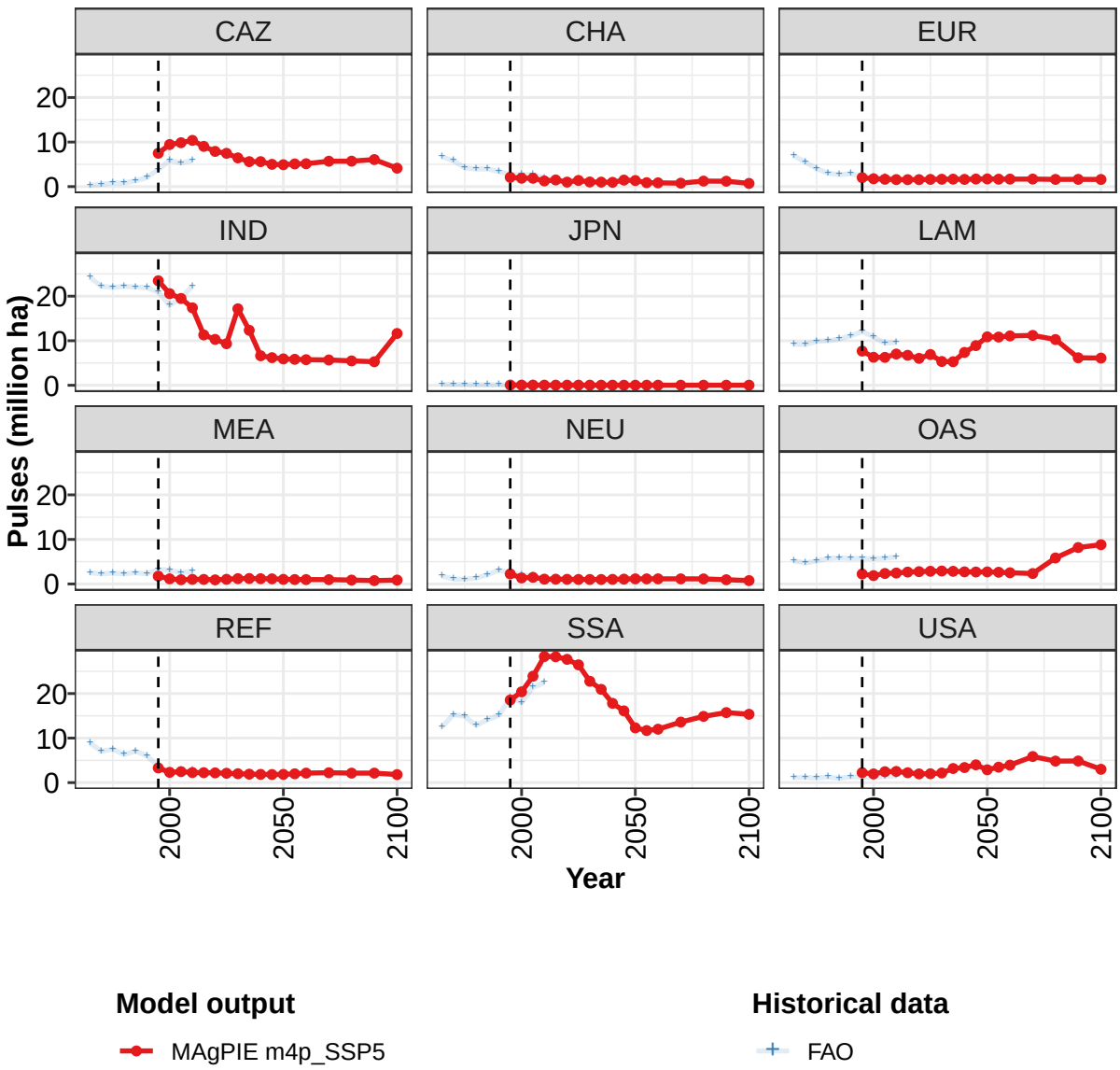
Table 1605: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Potatoes (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	27.0	26.7	24.5	23.0	19.8	19.1	20.4	22.8	21.2	19.7
CAZ	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2
CHA	1.3	1.5	1.5	1.7	2.2	2.5	2.9	3.8	3.8	3.7
EUR	9.6	8.8	7.4	6.6	5.2	4.7	4.0	3.5	2.3	1.9
IND	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.5
JPN	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.5	1.6	1.6	1.7	1.4	1.3	1.6	1.5	1.3	1.3
MEA	0.2	0.3	0.4	0.5	0.5	0.7	0.8	0.9	0.9	0.8
NEU	0.8	0.8	0.8	0.8	0.6	0.6	0.6	0.5	0.5	0.4
OAS	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.8	0.9	0.9
REF	11.0	10.9	10.2	9.1	6.8	6.2	7.1	8.3	7.9	6.7
SSA	0.3	0.3	0.4	0.5	0.6	0.7	0.7	1.1	1.4	1.6
USA	0.9	0.9	0.7	0.6	0.7	0.8	0.8	0.7	0.5	0.4

Table 1606: FAO — Resources—Land Cover—Cropland—Crops—Other crops—Potatoes (million ha)

54.1.20 Crops—Other crops—Pulses





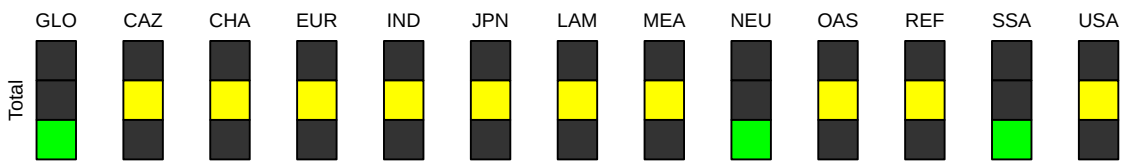


Figure 420: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Pulses (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	73.1	69.0	72.8	75.3	67.6	63.4	62.2	63.7	57.0	50.2	50.2
CAZ	7.5	9.4	9.9	10.4	9.0	7.9	7.5	6.4	5.6	5.6	5.0
CHA	2.1	1.9	1.9	1.3	1.5	1.0	1.4	1.0	1.0	1.0	1.5
EUR	2.0	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7
IND	23.5	20.6	19.5	17.4	11.3	10.3	9.3	17.2	12.4	6.6	6.2
JPN	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	7.7	6.3	6.3	7.0	6.7	6.0	6.9	5.3	5.3	7.4	8.9
MEA	1.7	1.2	0.9	1.0	1.0	0.9	1.0	1.2	1.2	1.2	1.2
NEU	2.3	1.3	1.5	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.1
OAS	2.2	1.9	2.3	2.5	2.7	2.8	2.9	2.9	2.8	2.7	2.7
REF	3.3	2.3	2.5	2.3	2.2	2.2	2.1	2.0	1.9	1.9	1.8
SSA	18.6	20.4	23.9	28.3	28.3	27.7	26.5	22.8	20.9	17.8	16.1
USA	2.2	2.0	2.5	2.5	2.2	2.0	2.0	2.2	3.2	3.4	4.0

Table 1607: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Pulses (million ha) [PART 1/2]

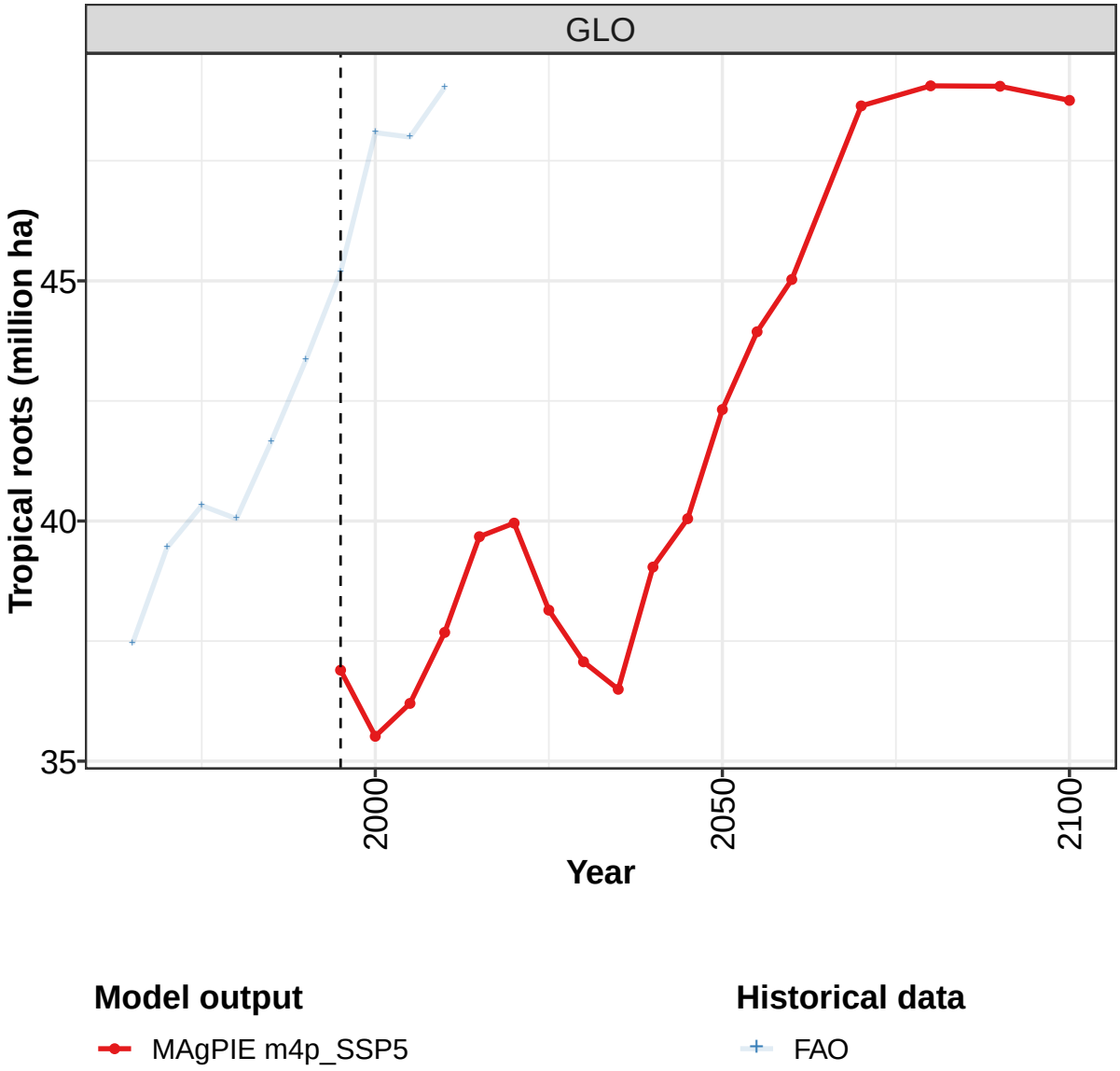
	2050	2055	2060	2070	2080	2090	2100
GLO	46.7	46.3	47.2	51.2	54.0	53.0	54.8
CAZ	4.9	5.1	5.1	5.7	5.7	6.1	4.1
CHA	1.4	0.9	0.8	0.8	1.2	1.2	0.7
EUR	1.7	1.7	1.7	1.7	1.6	1.6	1.6
IND	5.9	5.8	5.7	5.7	5.5	5.3	11.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	10.9	10.8	11.1	11.2	10.3	6.2	6.1
MEA	1.0	1.0	1.0	1.0	0.9	0.8	0.9
NEU	1.1	1.1	1.2	1.1	1.1	1.0	0.8
OAS	2.7	2.6	2.5	2.3	5.8	8.2	8.8
REF	1.9	2.0	2.1	2.2	2.1	2.1	1.8
SSA	12.3	11.7	12.0	13.6	14.9	15.7	15.3
USA	2.9	3.5	3.9	5.9	4.8	4.9	3.0

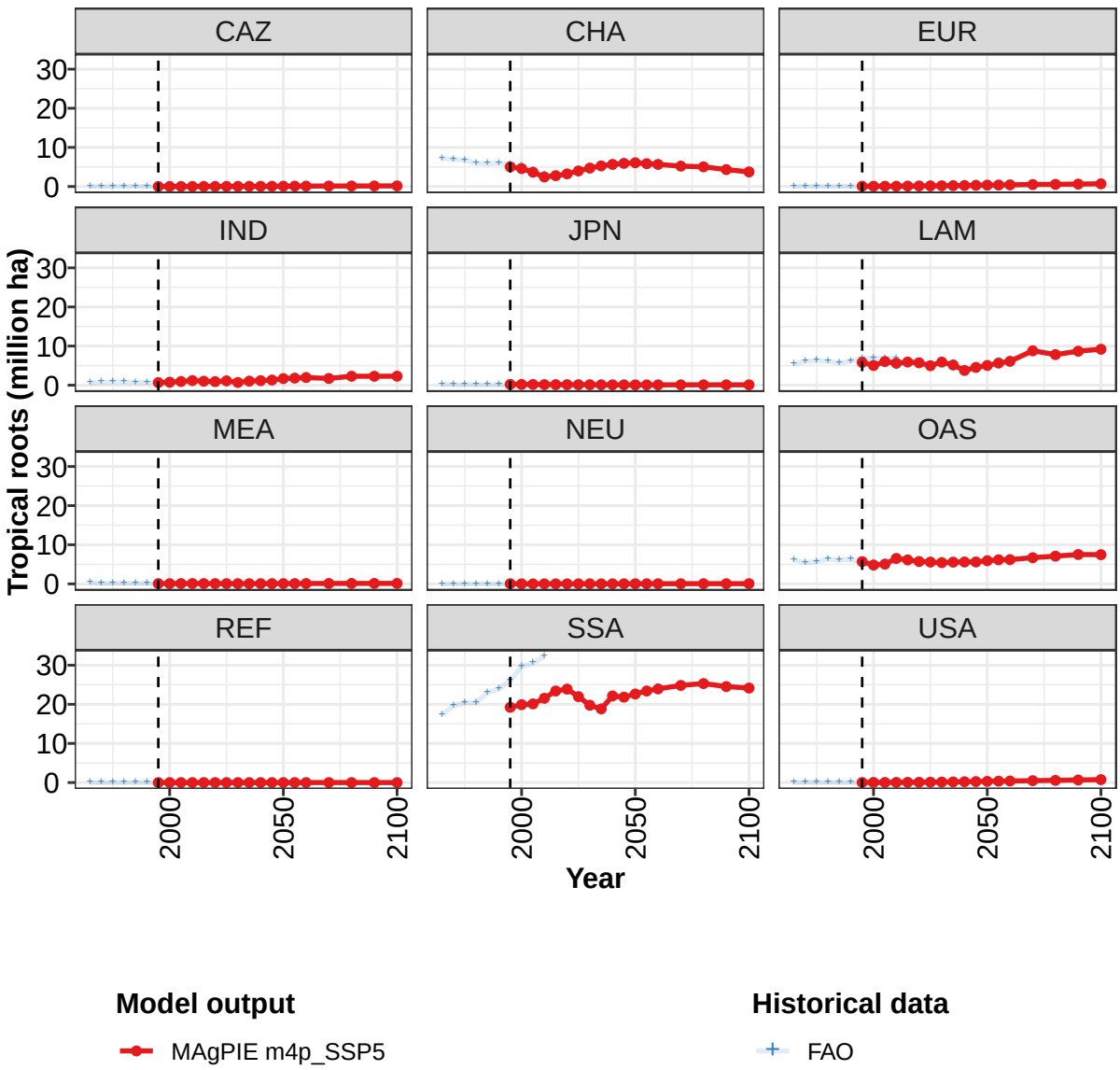
Table 1608: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Pulses (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	79.5	74.9	73.1	69.8	73.1	75.0	77.6	71.5	74.6	78.3
CAZ	0.3	0.5	0.8	0.8	1.3	2.0	3.8	5.9	5.3	5.8
CHA	6.7	5.8	4.2	3.9	4.0	3.4	2.6	2.7	2.6	2.0
EUR	6.9	5.5	4.0	3.0	2.7	2.9	2.4	2.1	2.1	1.8
IND	24.2	22.2	22.0	22.2	22.1	21.9	20.9	17.9	19.6	22.3
JPN	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
LAM	9.2	9.1	9.9	10.0	10.4	11.1	12.1	10.9	9.5	9.6
MEA	2.5	2.3	2.4	2.3	2.5	2.3	3.2	3.1	2.5	2.8
NEU	1.8	1.1	1.1	1.3	2.1	3.1	2.5	2.1	1.7	1.3
OAS	5.2	4.7	5.2	5.7	5.9	5.7	5.8	5.7	5.8	6.1
REF	8.9	7.0	7.5	6.3	7.1	6.0	3.8	2.0	2.6	2.8
SSA	12.5	15.3	14.9	12.8	14.1	15.1	19.1	18.0	21.4	22.5
USA	1.2	1.2	1.0	1.3	1.0	1.3	1.3	1.1	1.4	1.5

Table 1609: FAO — Resources—Land Cover—Cropland—Crops—Other crops—Pulses (million ha)

54.1.21 Crops—Other crops—Tropical roots





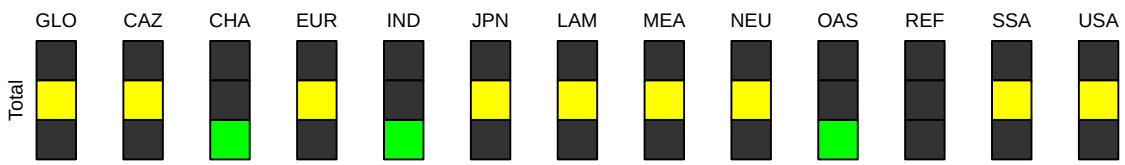


Figure 421: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Tropical roots (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	36.9	35.5	36.2	37.7	39.7	40.0	38.1	37.1	36.5	39.0	40.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
CHA	5.0	4.6	3.7	2.4	2.8	3.2	4.0	4.7	5.3	5.7	5.9
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3
IND	0.7	0.8	0.9	1.2	1.0	0.9	1.1	0.7	1.0	1.2	1.3
JPN	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	5.8	5.0	6.0	5.6	5.9	5.7	5.0	5.9	5.2	3.8	4.6
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	5.7	4.8	5.0	6.5	6.1	5.7	5.6	5.4	5.6	5.6	5.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	19.2	19.9	20.1	21.5	23.4	23.9	22.0	19.8	18.8	22.1	21.8
USA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3

Table 1610: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Tropical roots (million ha) [PART 1/2]

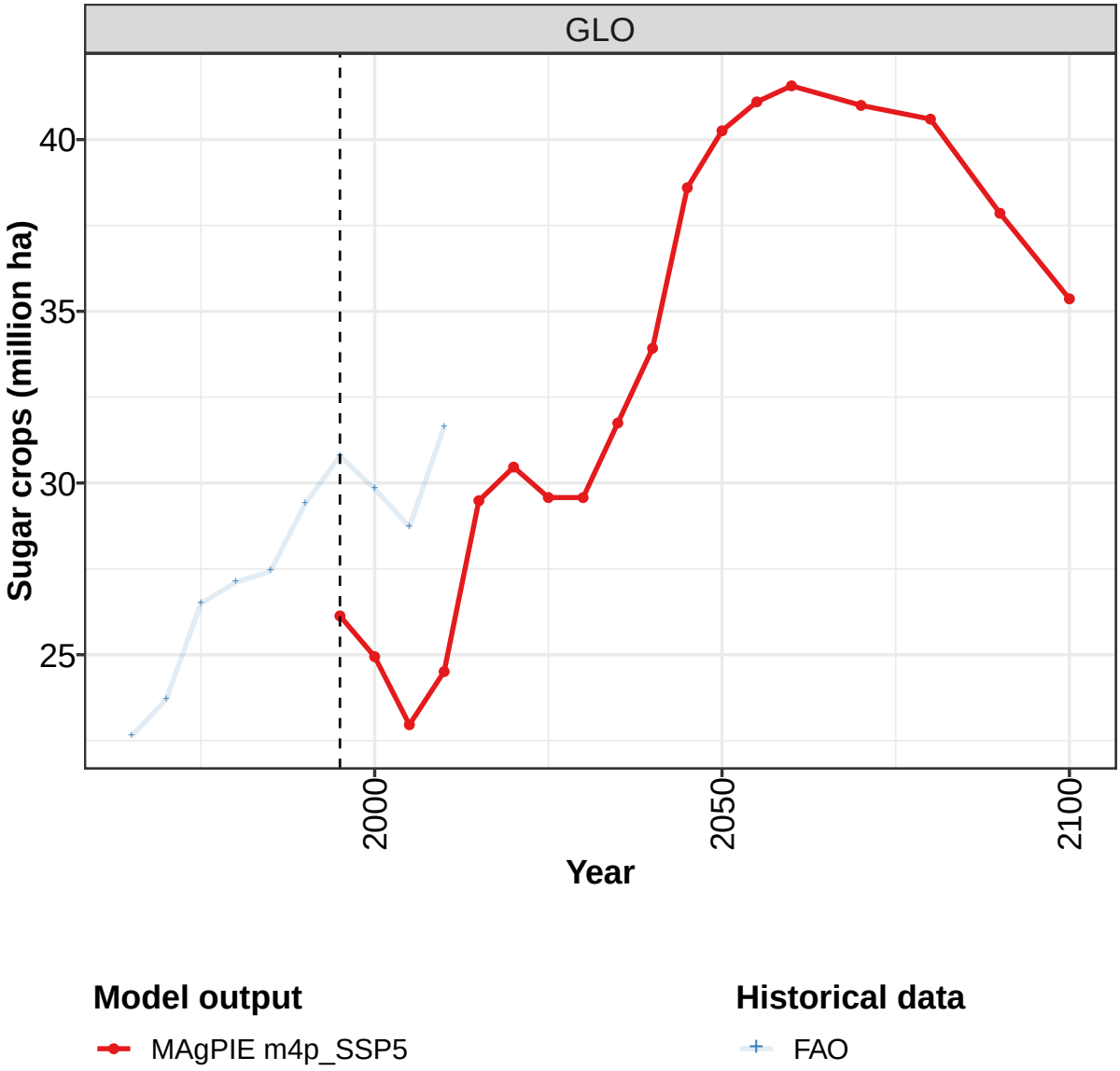
	2050	2055	2060	2070	2080	2090	2100
GLO	42.3	43.9	45.0	48.6	49.1	49.1	48.8
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.2
CHA	6.1	5.8	5.7	5.2	5.0	4.3	3.7
EUR	0.4	0.4	0.4	0.5	0.6	0.6	0.7
IND	1.7	1.8	2.0	1.7	2.3	2.3	2.3
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	5.0	5.7	6.1	8.8	7.8	8.7	9.2
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.0	0.0	0.0	0.0	0.1	0.1	0.1
OAS	5.9	6.2	6.2	6.7	7.1	7.5	7.5
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	22.6	23.4	23.9	24.8	25.3	24.5	24.2
USA	0.3	0.4	0.4	0.5	0.6	0.7	0.8

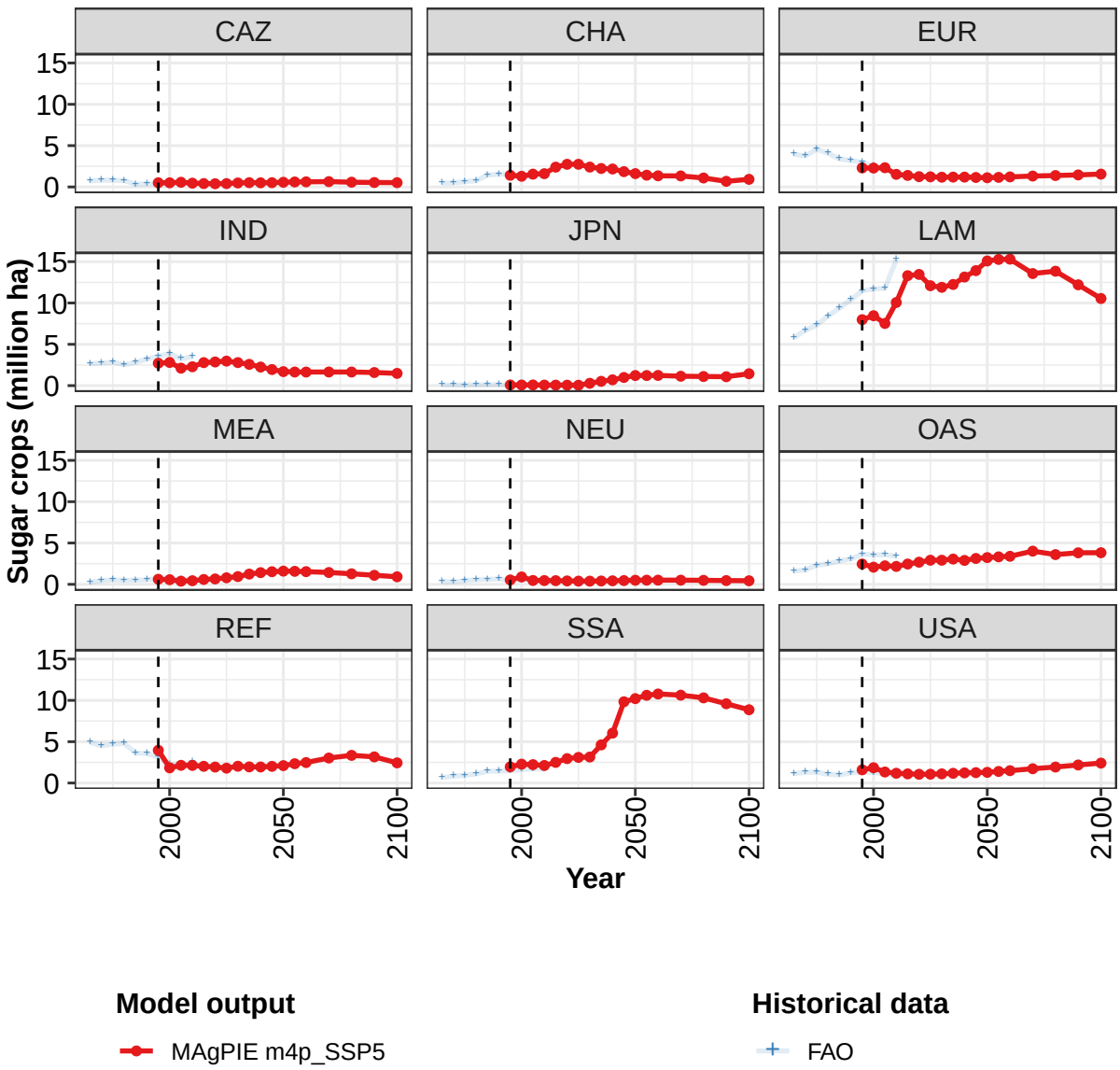
Table 1611: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Other crops—Tropical roots (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	37.4	39.4	40.3	40.0	41.6	43.3	45.2	48.1	48.0	49.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	7.2	7.0	6.7	6.0	5.9	6.0	5.6	5.2	4.1	3.1
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.6	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	1.0
JPN	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	5.3	6.1	6.3	6.1	5.7	6.1	7.0	7.0	6.9	6.8
MEA	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	6.1	5.5	5.7	6.4	6.0	6.3	5.5	5.3	5.3	5.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	17.4	19.6	20.4	20.4	23.0	24.0	26.1	29.6	30.5	32.2
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1

Table 1612: FAO — Resources—Land Cover—Cropland—Crops—Other crops—Tropical roots (million ha)

54.1.22 Crops—Sugar crops





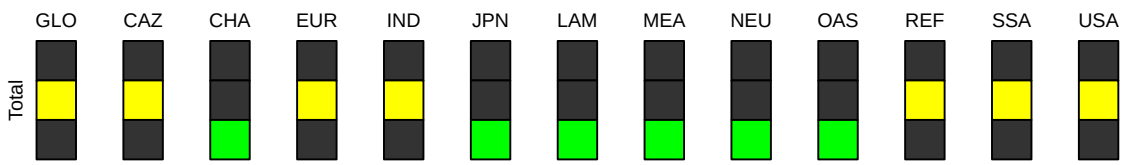


Figure 422: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26.1	24.9	23.0	24.5	29.5	30.5	29.6	29.6	31.7	33.9	38.6
CAZ	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5
CHA	1.4	1.3	1.6	1.6	2.4	2.7	2.7	2.4	2.2	2.2	1.9
EUR	2.3	2.3	2.3	1.5	1.4	1.2	1.2	1.2	1.2	1.2	1.2
IND	2.7	2.8	2.1	2.3	2.8	2.9	3.0	2.8	2.6	2.3	1.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.5	0.7	1.0
LAM	8.0	8.5	7.5	10.1	13.3	13.5	12.1	11.9	12.2	13.1	13.9
MEA	0.6	0.6	0.4	0.4	0.6	0.7	0.8	0.9	1.2	1.4	1.5
NEU	0.5	0.9	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
OAS	2.5	2.1	2.2	2.2	2.5	2.7	2.9	2.9	3.1	2.9	3.1
REF	4.0	1.8	2.1	2.1	2.0	1.9	1.8	2.0	2.0	1.9	2.0
SSA	2.0	2.3	2.2	2.1	2.5	3.0	3.1	3.1	4.6	6.0	9.8
USA	1.6	1.9	1.3	1.2	1.1	1.1	1.1	1.1	1.2	1.2	1.3

Table 1613: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops (million ha) [PART 1/2]

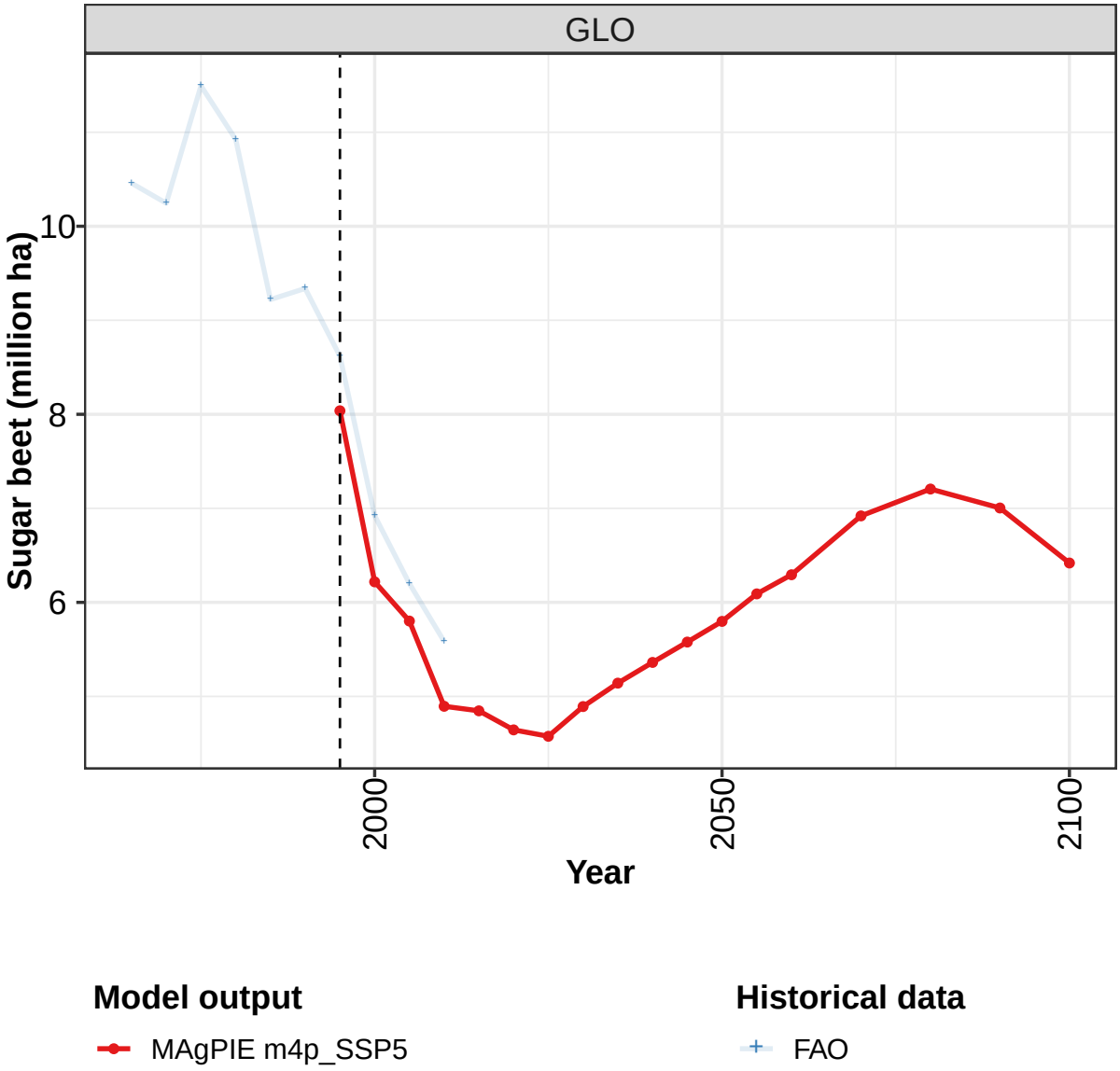
	2050	2055	2060	2070	2080	2090	2100
GLO	40.3	41.1	41.6	41.0	40.6	37.9	35.4
CAZ	0.6	0.6	0.6	0.6	0.6	0.5	0.5
CHA	1.6	1.4	1.4	1.3	1.1	0.7	0.9
EUR	1.1	1.2	1.2	1.3	1.4	1.5	1.6
IND	1.7	1.6	1.6	1.7	1.6	1.6	1.5
JPN	1.2	1.2	1.2	1.1	1.1	1.1	1.4
LAM	15.1	15.3	15.3	13.6	13.8	12.2	10.5
MEA	1.6	1.6	1.5	1.4	1.3	1.1	0.9
NEU	0.5	0.5	0.5	0.5	0.5	0.5	0.4
OAS	3.2	3.3	3.4	4.0	3.6	3.8	3.8
REF	2.1	2.3	2.5	3.0	3.3	3.2	2.4
SSA	10.2	10.6	10.8	10.6	10.3	9.6	8.9
USA	1.3	1.4	1.5	1.7	1.9	2.2	2.4

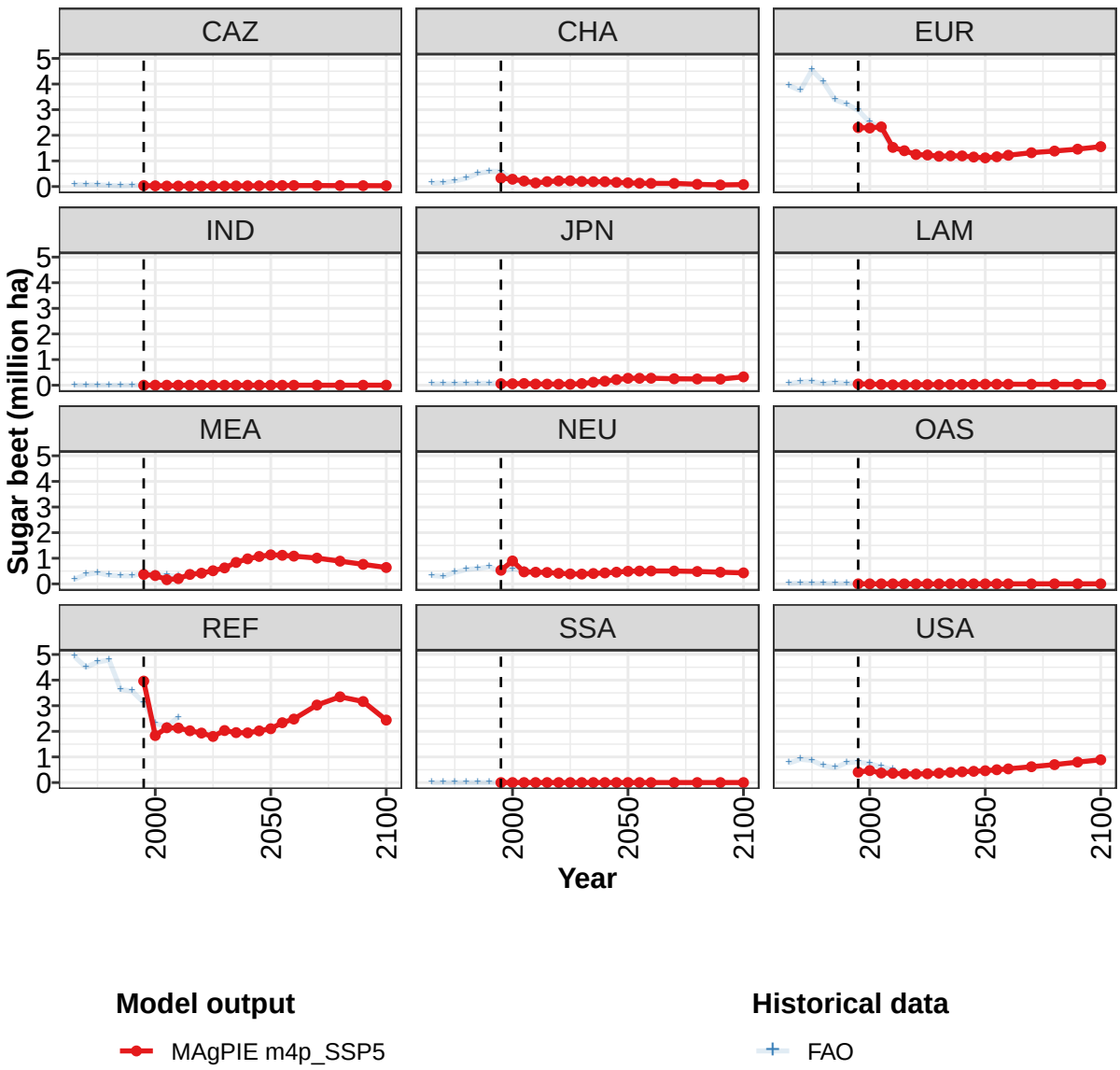
Table 1614: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	22.6	23.7	26.5	27.1	27.4	29.4	30.8	29.8	28.7	31.6
CAZ	0.7	0.8	0.8	0.8	0.3	0.4	0.4	0.5	0.5	0.4
CHA	0.5	0.5	0.7	0.7	1.4	1.5	1.6	1.2	1.2	1.4
EUR	4.0	3.8	4.6	4.1	3.4	3.2	3.0	2.5	2.2	1.5
IND	2.7	2.7	2.8	2.5	2.8	3.2	3.5	3.9	3.3	3.5
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	5.8	6.7	7.3	8.4	9.4	10.4	11.5	11.7	11.8	15.2
MEA	0.3	0.5	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.6
NEU	0.3	0.3	0.4	0.6	0.6	0.7	0.5	0.6	0.5	0.5
OAS	1.6	1.8	2.3	2.5	2.8	3.1	3.6	3.6	3.6	3.4
REF	4.9	4.5	4.7	4.8	3.6	3.6	3.1	2.3	2.2	2.5
SSA	0.7	0.8	0.9	1.1	1.4	1.4	1.5	1.6	1.7	1.7
USA	1.1	1.3	1.3	1.1	1.0	1.2	1.3	1.3	1.1	0.9

Table 1615: FAO — Resources—Land Cover—Cropland—Crops—Sugar crops (million ha)

54.1.23 Crops—Sugar crops—Sugar beet





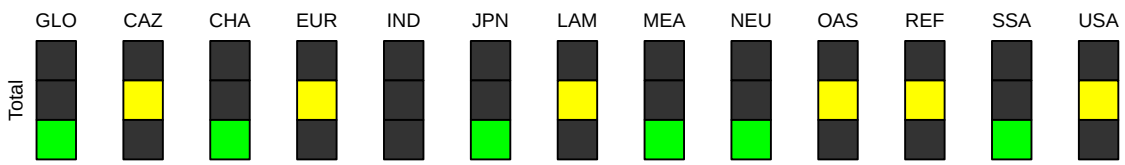


Figure 423: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar beet (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8.04	6.22	5.80	4.89	4.85	4.64	4.58	4.89	5.14	5.36	5.58
CAZ	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
CHA	0.33	0.28	0.21	0.14	0.19	0.22	0.22	0.20	0.19	0.19	0.16
EUR	2.30	2.28	2.33	1.53	1.40	1.25	1.23	1.18	1.20	1.20	1.15
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.06	0.06	0.07	0.05	0.04	0.04	0.04	0.06	0.12	0.16	0.22
LAM	0.05	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
MEA	0.37	0.33	0.16	0.21	0.37	0.42	0.51	0.62	0.84	0.98	1.07
NEU	0.53	0.90	0.47	0.46	0.45	0.41	0.39	0.38	0.41	0.43	0.46
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	3.96	1.84	2.14	2.13	2.02	1.93	1.80	2.03	1.95	1.94	2.02
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.41	0.47	0.37	0.36	0.34	0.33	0.34	0.37	0.39	0.42	0.44

Table 1616: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar beet (million ha) [PART 1/2]

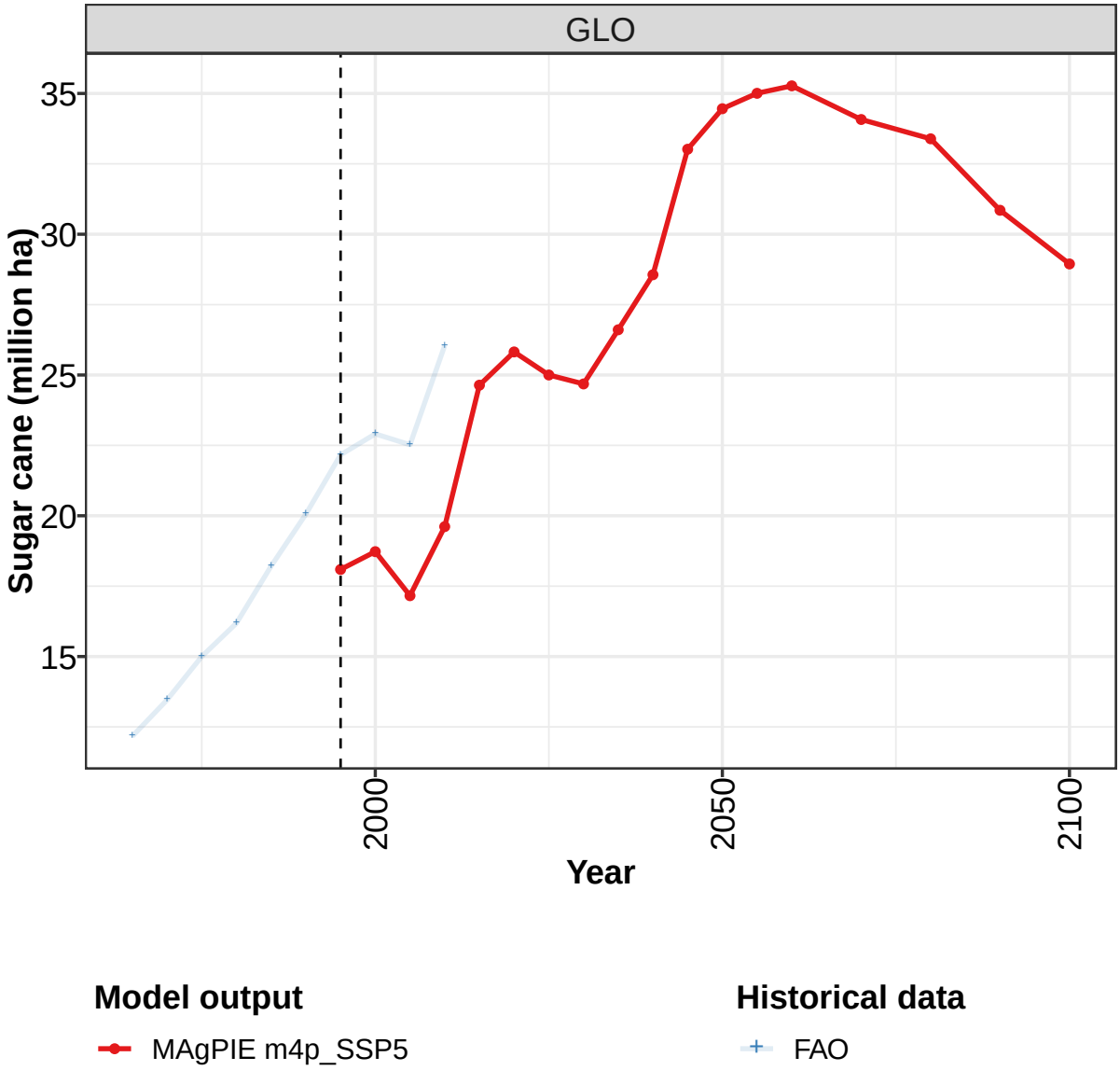
	2050	2055	2060	2070	2080	2090	2100
GLO	5.80	6.09	6.29	6.92	7.21	7.00	6.42
CAZ	0.03	0.04	0.04	0.04	0.03	0.03	0.03
CHA	0.14	0.13	0.12	0.12	0.09	0.06	0.08
EUR	1.12	1.16	1.22	1.32	1.39	1.46	1.56
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.27	0.27	0.27	0.25	0.24	0.24	0.33
LAM	0.04	0.04	0.04	0.04	0.04	0.03	0.03
MEA	1.13	1.12	1.08	1.01	0.89	0.76	0.64
NEU	0.49	0.50	0.50	0.50	0.48	0.46	0.43
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	2.10	2.34	2.48	3.03	3.35	3.16	2.44
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.46	0.50	0.53	0.62	0.70	0.80	0.89

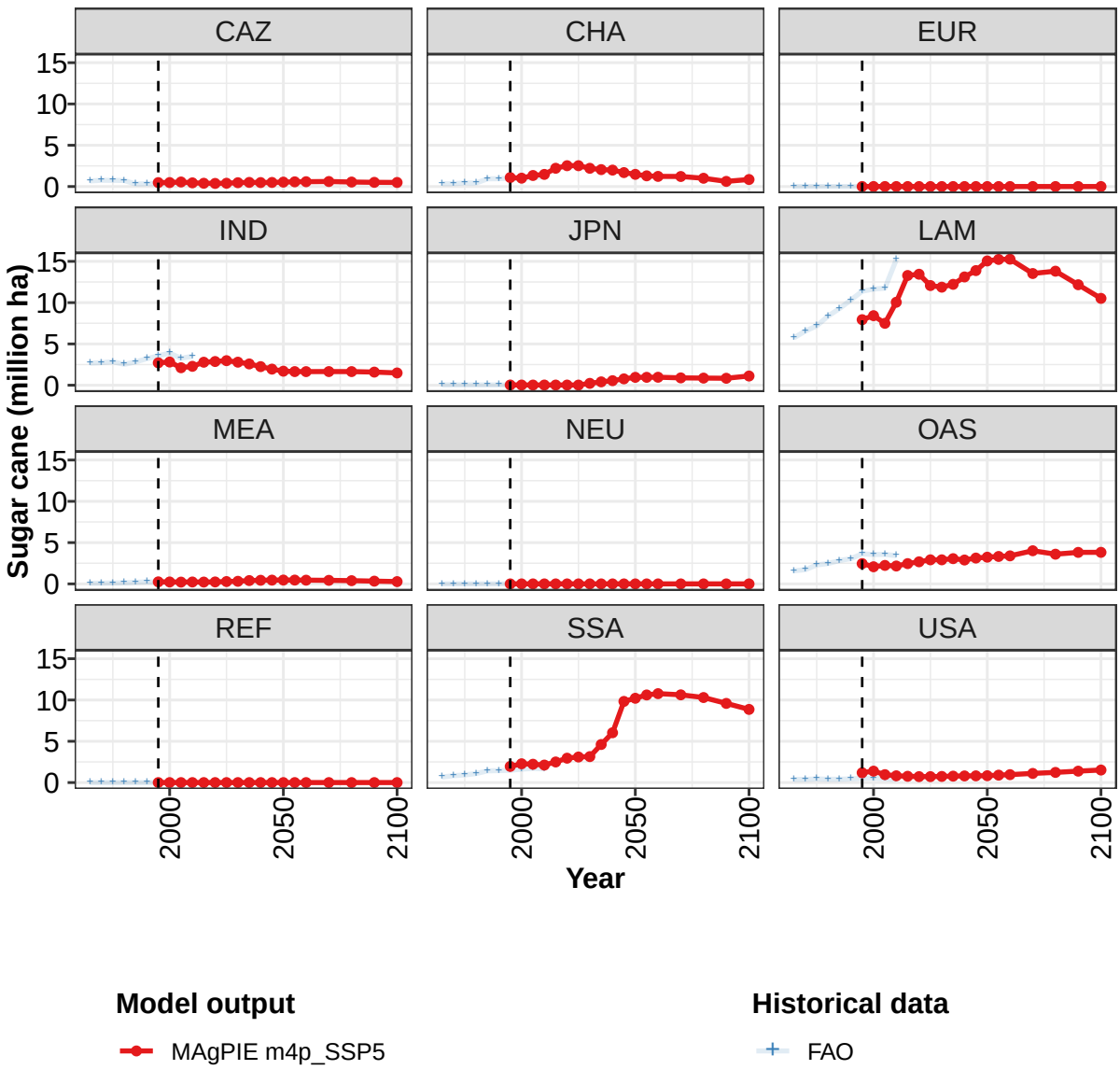
Table 1617: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar beet (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	10.5	10.2	11.5	10.9	9.2	9.3	8.6	6.9	6.2	5.6
CAZ	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.2	0.2	0.3	0.5	0.6	0.6	0.3	0.2	0.2
EUR	3.9	3.7	4.5	4.1	3.4	3.2	3.0	2.5	2.2	1.5
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
MEA	0.2	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3
NEU	0.3	0.3	0.4	0.6	0.6	0.7	0.5	0.6	0.5	0.5
OAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REF	4.9	4.5	4.7	4.8	3.6	3.6	3.1	2.3	2.2	2.5
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.8	0.9	0.9	0.7	0.6	0.8	0.8	0.7	0.6	0.5

Table 1618: FAO — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar beet (million ha)

54.1.24 Crops—Sugar crops—Sugar cane





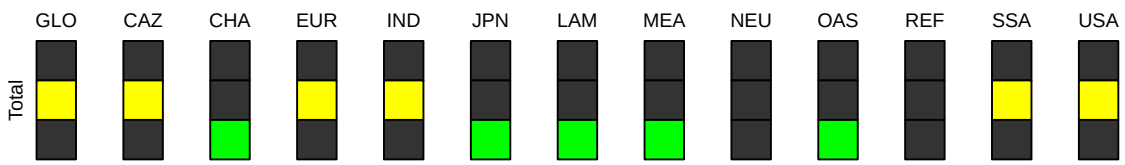


Figure 424: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar cane (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	18.1	18.7	17.2	19.6	24.6	25.8	25.0	24.7	26.6	28.6	33.0
CAZ	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
CHA	1.1	1.0	1.3	1.5	2.2	2.5	2.5	2.2	2.0	2.0	1.7
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.7	2.8	2.1	2.3	2.8	2.9	3.0	2.8	2.6	2.3	1.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.8
LAM	7.9	8.4	7.5	10.1	13.3	13.4	12.1	11.9	12.2	13.1	13.9
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	2.1	2.2	2.2	2.5	2.7	2.9	2.9	3.1	2.9	3.1
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.0	2.3	2.2	2.1	2.5	3.0	3.1	3.1	4.6	6.0	9.8
USA	1.2	1.4	1.0	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8

Table 1619: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar cane (million ha) [PART 1/2]

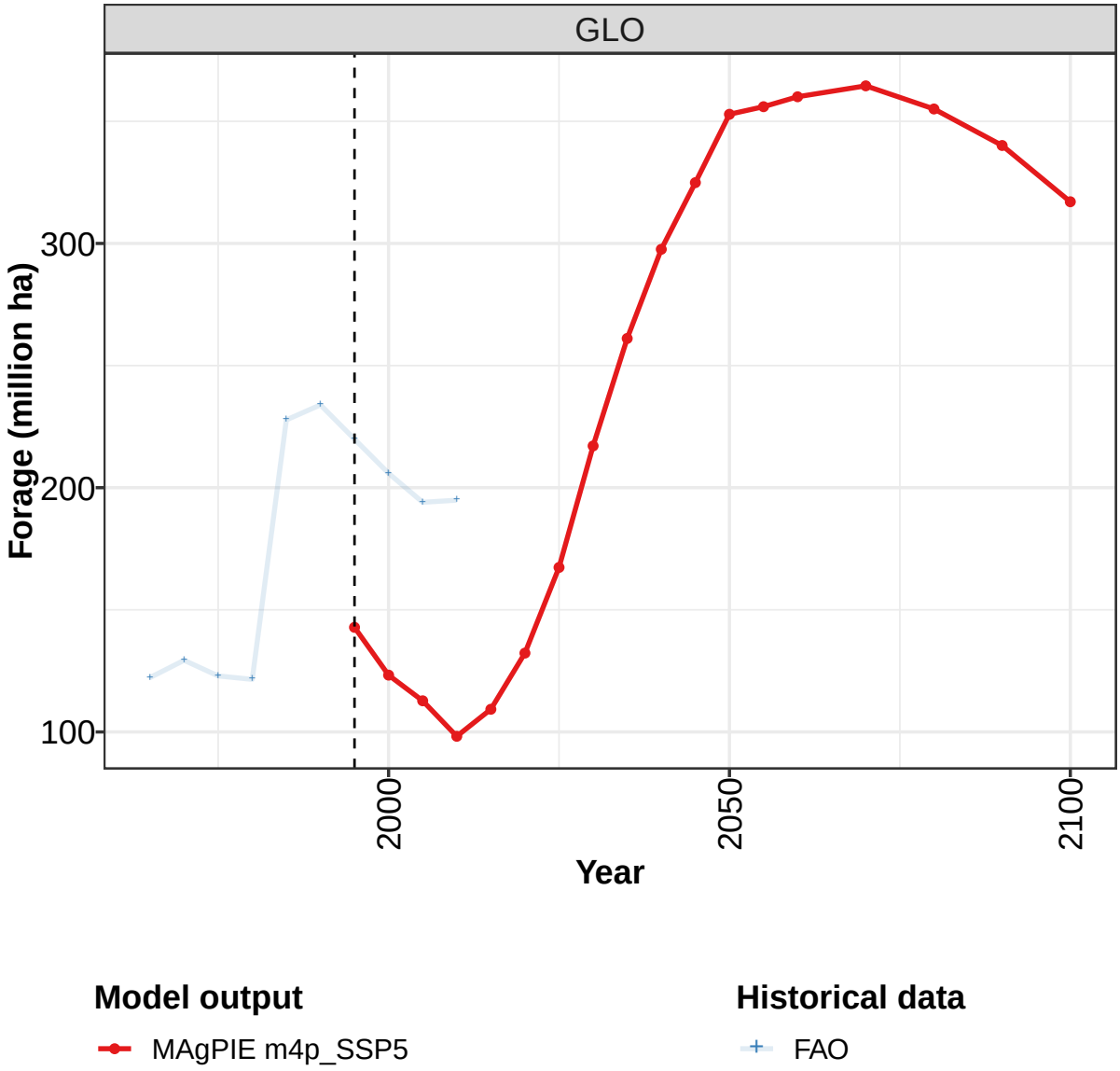
	2050	2055	2060	2070	2080	2090	2100
GLO	34.5	35.0	35.3	34.1	33.4	30.9	28.9
CAZ	0.5	0.6	0.6	0.6	0.5	0.5	0.5
CHA	1.5	1.3	1.2	1.2	1.0	0.6	0.9
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.7	1.6	1.6	1.7	1.6	1.6	1.5
JPN	1.0	1.0	1.0	0.9	0.9	0.8	1.1
LAM	15.1	15.2	15.3	13.5	13.8	12.2	10.5
MEA	0.5	0.5	0.5	0.4	0.4	0.3	0.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	3.2	3.3	3.4	4.0	3.6	3.8	3.8
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	10.2	10.6	10.8	10.6	10.3	9.6	8.9
USA	0.8	0.9	1.0	1.1	1.2	1.4	1.5

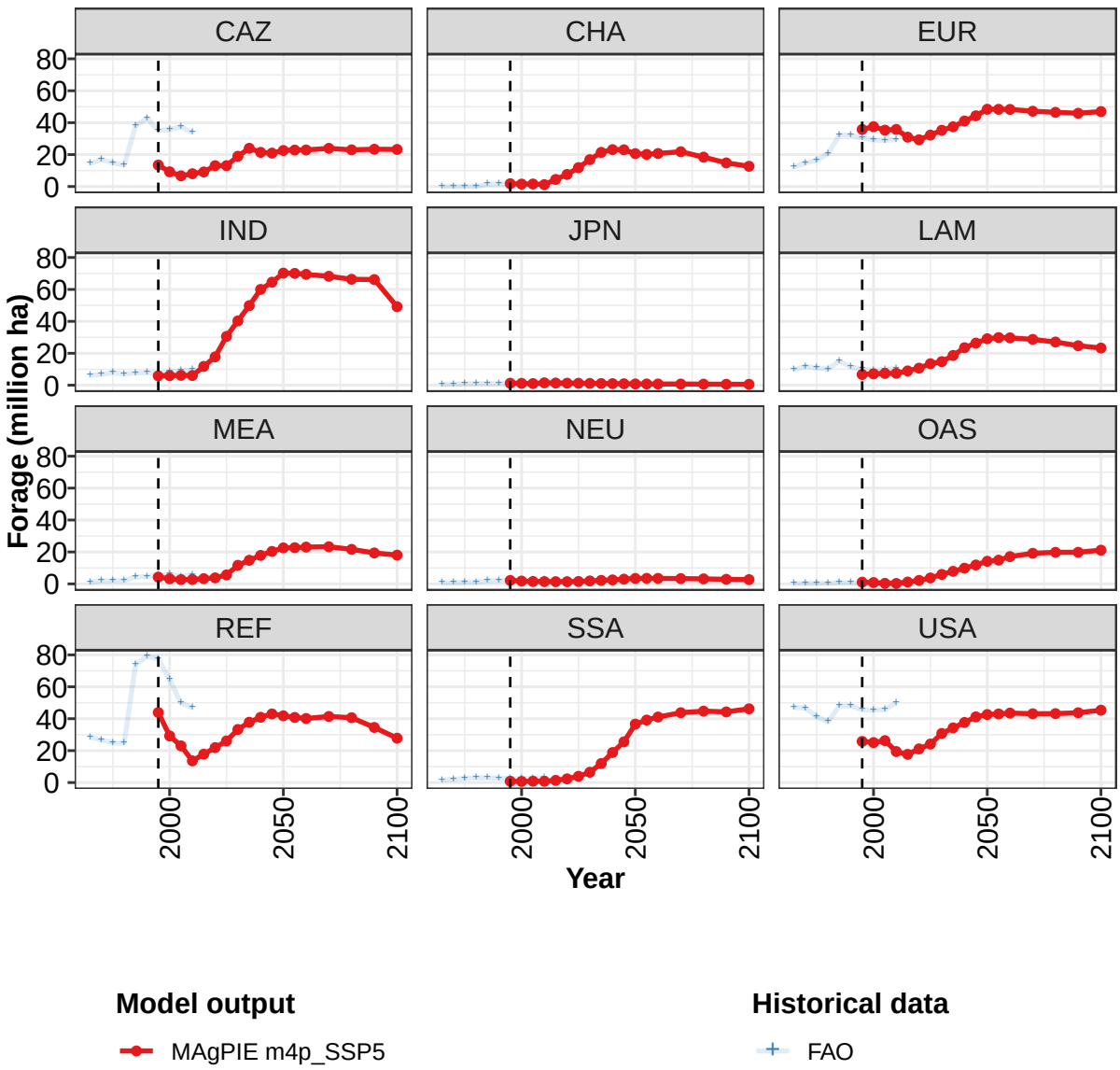
Table 1620: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar cane (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12.2	13.5	15.0	16.2	18.2	20.1	22.2	22.9	22.5	26.0
CAZ	0.7	0.8	0.7	0.7	0.3	0.3	0.3	0.4	0.5	0.4
CHA	0.3	0.3	0.4	0.4	0.9	1.0	1.0	1.0	1.1	1.2
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.7	2.7	2.8	2.5	2.8	3.2	3.5	3.9	3.3	3.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	5.7	6.6	7.2	8.4	9.3	10.3	11.4	11.6	11.7	15.2
MEA	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.6	1.7	2.3	2.5	2.8	3.1	3.6	3.6	3.6	3.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.7	0.8	0.9	1.1	1.4	1.4	1.5	1.6	1.7	1.7
USA	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4

Table 1621: FAO — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar cane (million ha)

54.1.25 Forage





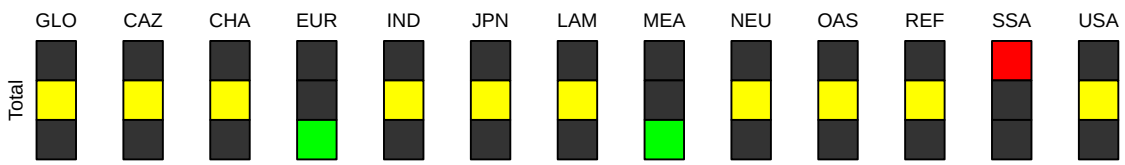


Figure 425: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Forage (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	143	123	113	98	109	132	167	217	261	298	325
CAZ	13	9	7	8	9	13	13	19	24	21	21
CHA	2	2	2	1	4	8	12	17	21	23	23
EUR	36	38	35	36	31	29	32	35	37	41	44
IND	6	6	6	6	12	18	31	40	50	60	65
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	7	7	7	7	9	11	13	15	19	23	26
MEA	4	3	3	3	3	4	6	12	15	18	20
NEU	2	2	1	1	1	1	1	2	2	3	3
OAS	1	1	0	0	1	2	4	6	8	10	12
REF	44	29	23	14	18	22	26	33	38	41	43
SSA	1	1	1	1	1	2	4	6	12	19	26
USA	26	25	26	19	18	21	24	31	34	38	41

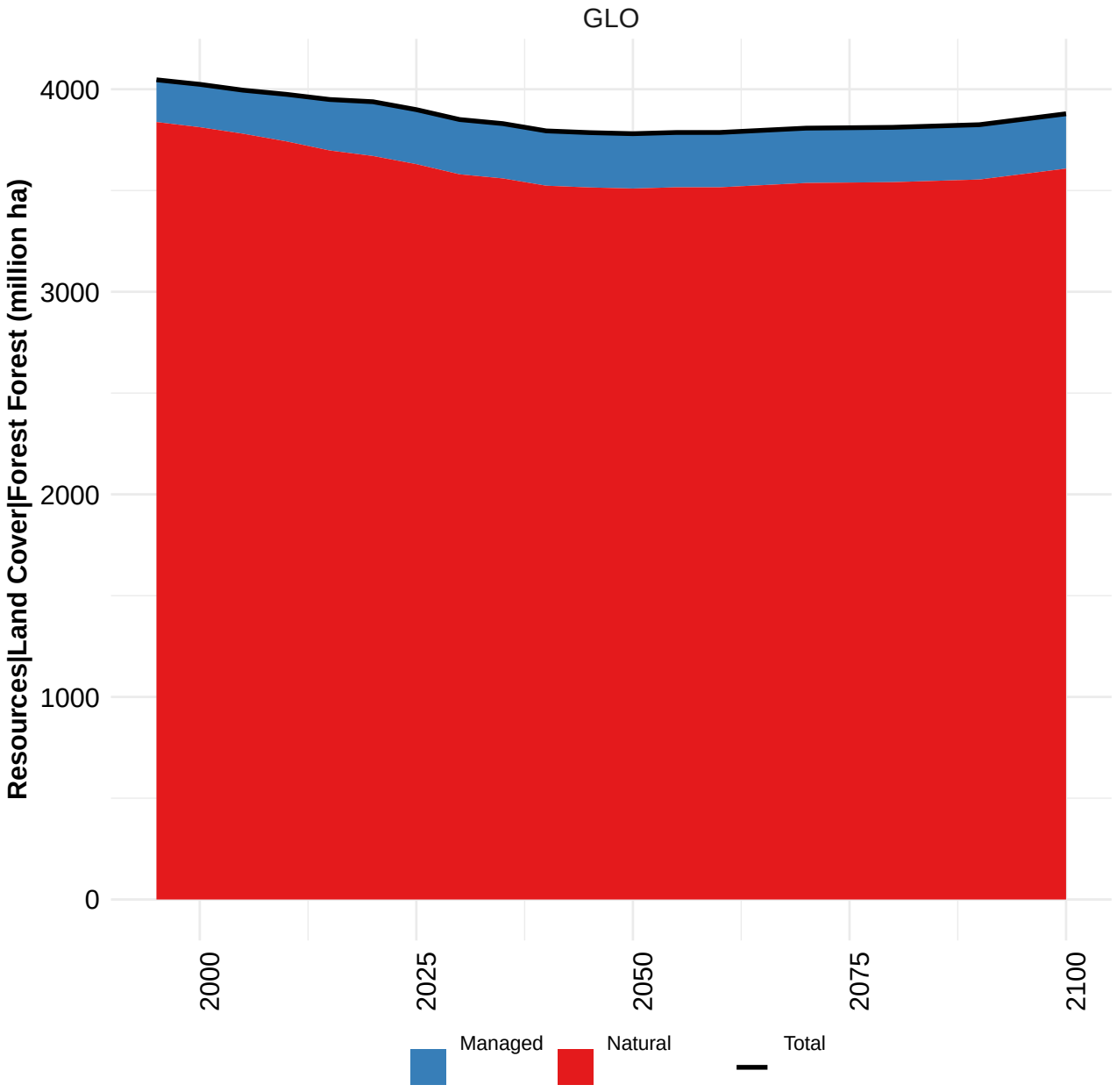
Table 1622: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Forage (million ha) [PART 1/2]

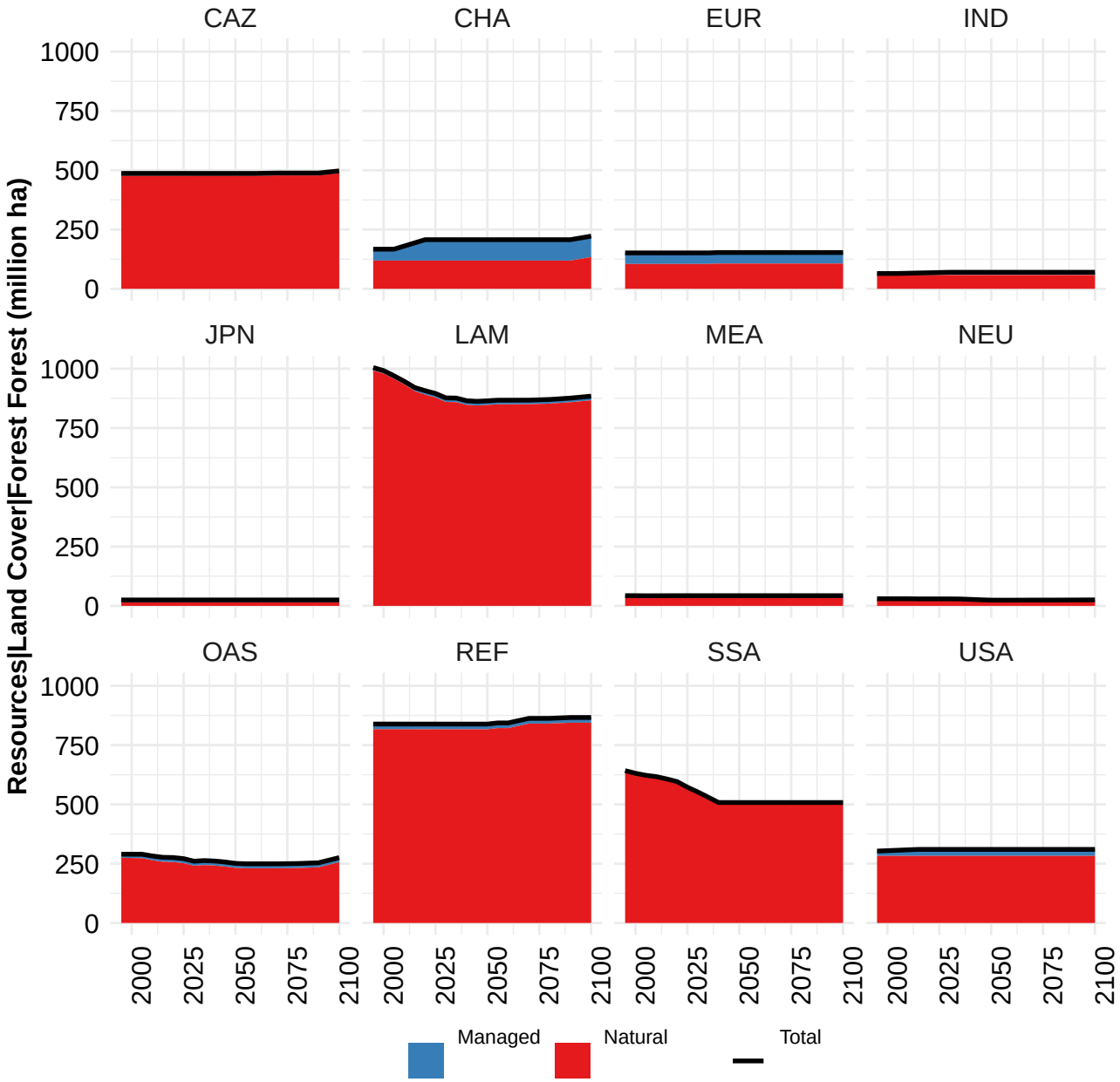
	2050	2055	2060	2070	2080	2090	2100
GLO	353	356	360	365	355	340	317
CAZ	23	23	23	24	23	23	23
CHA	21	20	21	22	18	15	13
EUR	48	48	48	47	46	46	47
IND	70	70	69	68	66	66	49
JPN	1	1	1	1	1	1	1
LAM	29	30	30	29	27	25	23
MEA	23	23	23	23	22	19	18
NEU	3	3	3	3	3	3	3
OAS	14	15	17	19	20	20	21
REF	42	41	40	41	41	35	28
SSA	37	39	41	44	45	44	46
USA	43	43	44	43	43	44	45

Table 1623: MAgPIE m4p_SSP5 — Resources—Land Cover—Cropland—Forage (million ha) [PART 2/2]

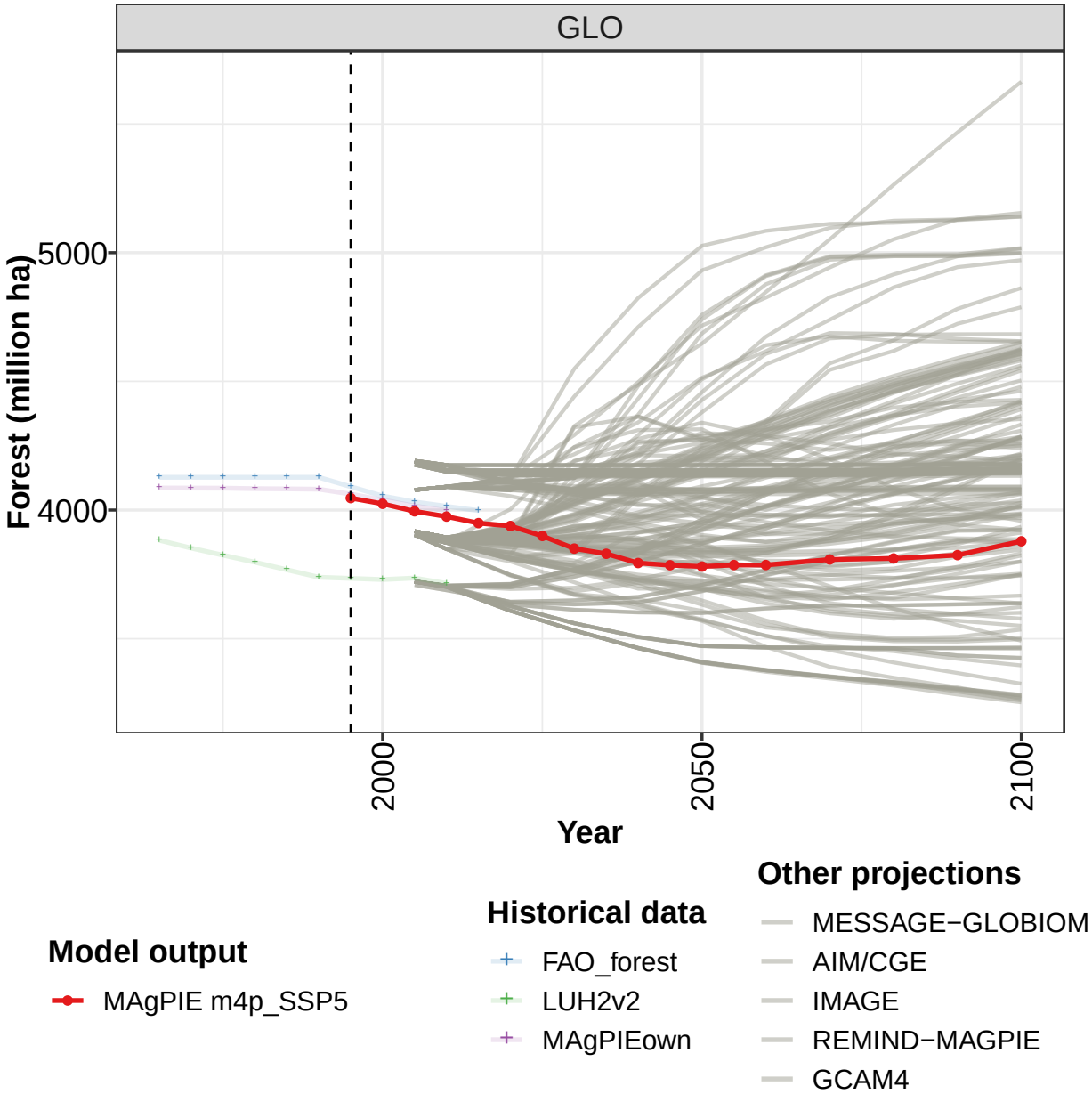
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	122	129	123	122	228	234	220	206	194	195
CAZ	14	17	15	13	38	43	35	36	37	34
CHA	0	0	0	0	2	2	2	2	2	2
EUR	12	15	16	21	32	32	30	29	29	30
IND	6	7	8	7	8	8	8	8	9	10
JPN	1	1	1	1	1	1	1	1	1	1
LAM	10	12	11	10	15	11	10	9	10	10
MEA	1	2	2	2	4	5	6	6	5	6
NEU	1	1	1	1	2	2	2	2	3	3
OAS	0	0	0	0	1	1	0	0	0	0
REF	28	27	25	25	74	79	78	64	50	47
SSA	2	2	3	3	3	3	2	2	3	3
USA	47	47	41	38	48	48	46	45	46	50

Table 1624: FAO — Resources—Land Cover—Cropland—Forage (million ha)


GLO
Resources|Land Cover|Forest Forest (million ha)
4000
3000
2000
1000
0
2000
2025
2050
2075
2100
Managed
Natural
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Resources|Land Cover|Forest Forest (million ha)
1000
750
500
250
0
2000
2025
2050
2075
2100
Managed
Natural
Total

54.2 Forest


GLO
Forest (million ha)
5000
4000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO_forest
LUH2v2
MAgPIEown
Other projections
MESSAGE−GLOBIOM
AIM/CGE
IMAGE
REMIND−MAGPIE
GCAM4

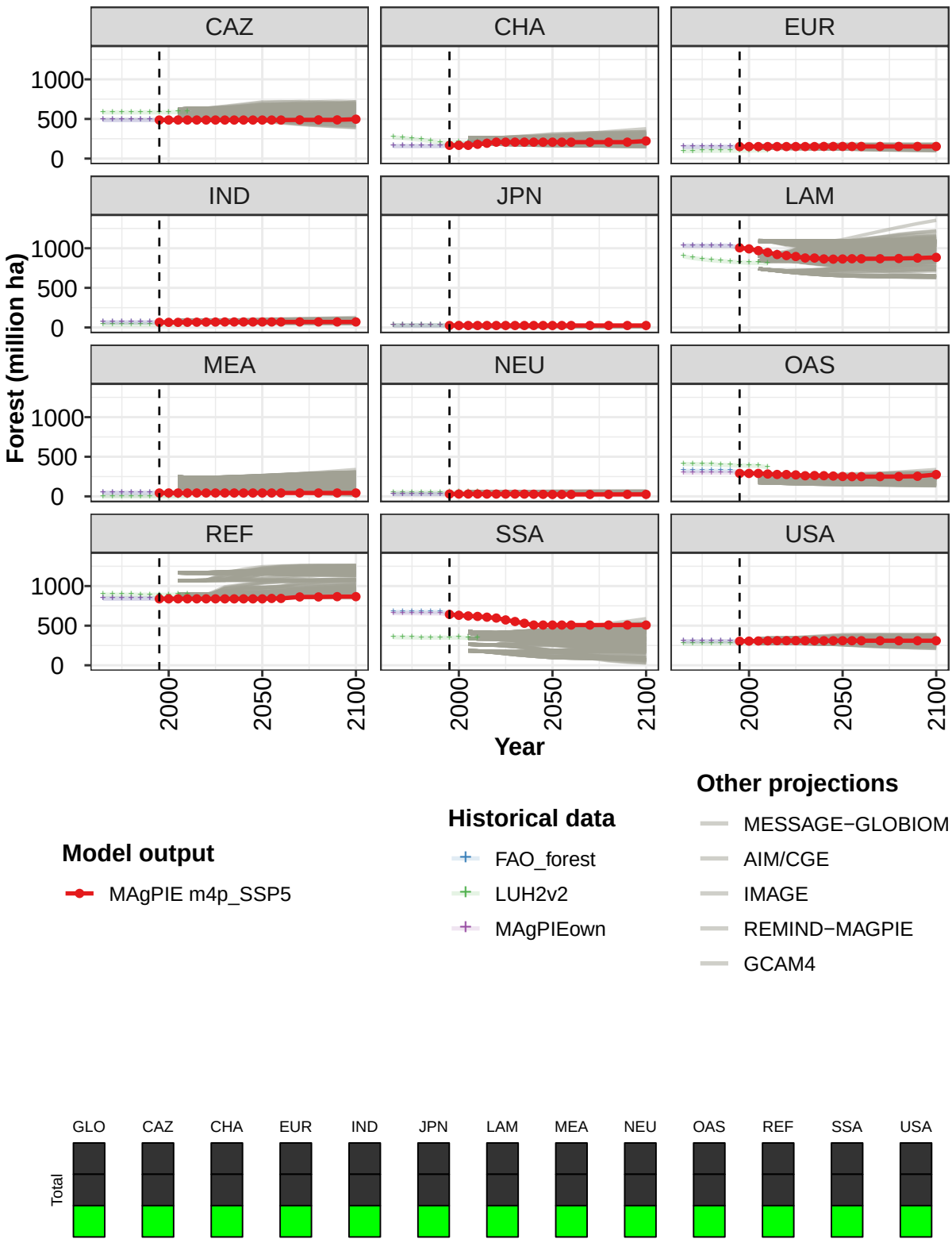


Figure 426: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4046	4024	3995	3975	3949	3938	3899	3850	3830	3794	3786
CAZ	487	487	487	487	487	487	487	487	487	487	487
CHA	167	167	167	180	194	207	207	207	207	207	207
EUR	151	151	151	151	151	151	151	151	151	153	153
IND	65	65	65	66	67	68	69	70	70	70	70
JPN	25	25	25	25	25	25	25	25	25	25	25
LAM	1005	992	970	947	921	907	896	877	876	865	862
MEA	43	43	43	43	43	43	43	43	43	43	43
NEU	30	30	30	30	29	29	29	29	29	27	26
OAS	290	290	290	282	277	276	271	260	263	261	257
REF	839	839	839	839	839	839	839	839	839	839	839
SSA	642	631	623	617	607	596	573	552	530	508	508
USA	303	305	307	308	310	310	310	310	310	310	310

Table 1625: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	3780	3786	3786	3808	3812	3825	3879
CAZ	487	487	487	488	488	488	497
CHA	207	207	207	207	207	207	222
EUR	153	153	153	153	153	153	153
IND	70	70	70	70	70	70	70
JPN	25	25	25	25	25	25	25
LAM	864	867	867	867	870	876	884
MEA	43	43	43	43	43	43	43
NEU	24	24	24	25	25	25	25
OAS	251	249	249	249	251	254	275
REF	839	844	844	863	863	866	866
SSA	508	508	508	508	508	508	508
USA	310	310	310	310	310	310	310

Table 1626: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
GLO	4127	4127	4127	4127	4127	4127	4091	4055	4032	4014	3998
CAZ	486	486	486	486	486	486	487	487	485	481	482
CHA	157	157	157	157	157	157	167	177	193	201	208
EUR	148	148	148	148	148	148	151	155	157	159	161
IND	64	64	64	64	64	64	65	65	68	70	71
JPN	25	25	25	25	25	25	25	25	25	25	25
LAM	1032	1032	1032	1032	1032	1032	1010	988	964	946	935
MEA	44	44	44	44	44	44	44	43	44	44	43
NEU	30	30	30	30	30	30	30	31	31	32	33
OAS	322	322	322	322	322	322	310	298	292	291	285
REF	842	842	842	842	842	842	843	843	843	850	850
SSA	674	674	674	674	674	674	657	640	625	608	595
USA	302	302	302	302	302	302	303	304	305	309	310

Table 1627: FAO_forest — Resources—Land Cover—Forest (million ha)

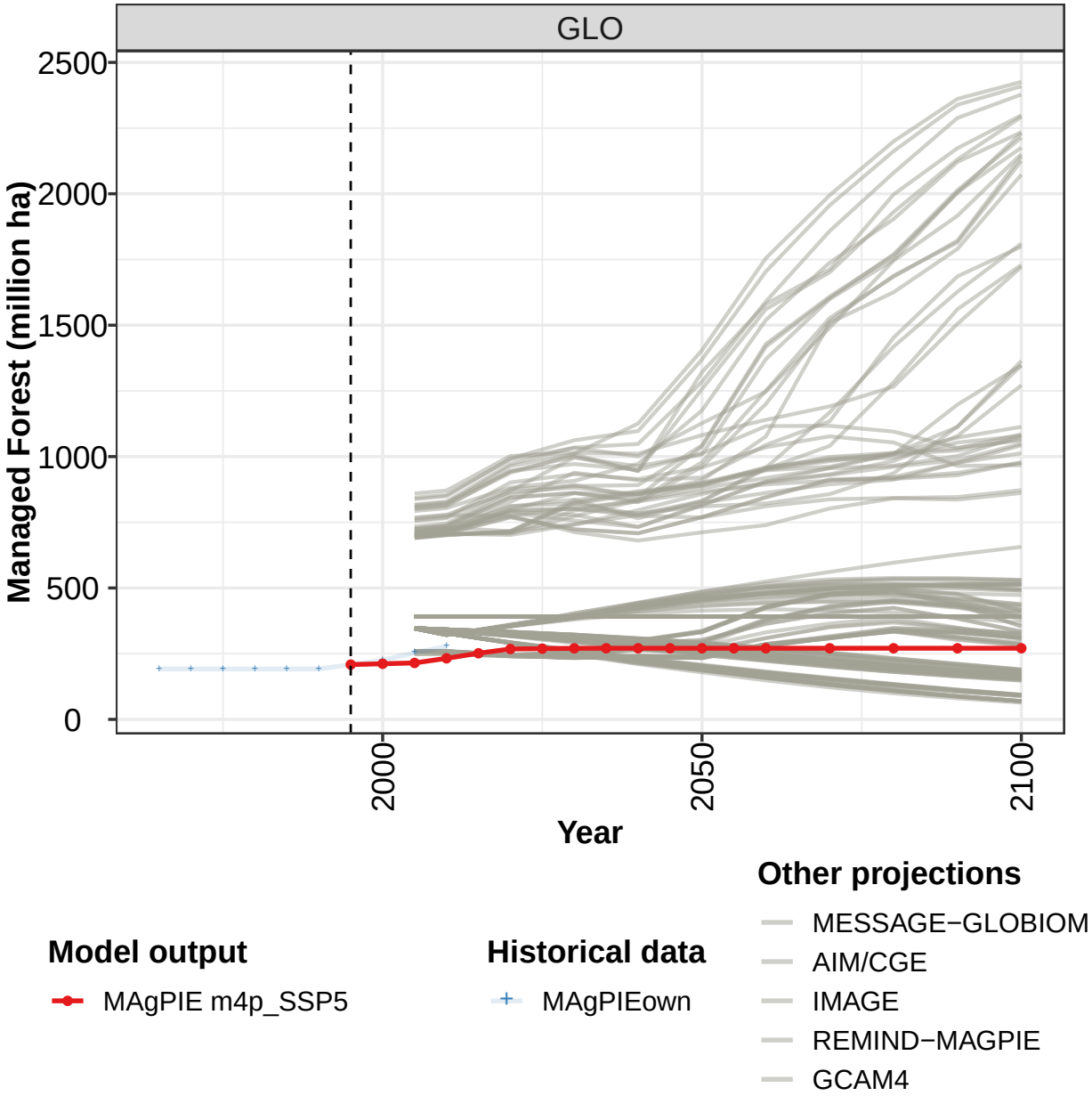
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3883	3852	3825	3797	3768	3739	3735	3730	3736	3715
CAZ	583	582	582	582	583	583	583	584	587	590
CHA	267	261	249	237	220	203	204	206	204	207
EUR	94	95	96	97	98	98	100	102	103	103
IND	37	37	36	36	36	36	36	36	36	36
JPN	29	29	29	29	29	29	30	30	30	30
LAM	897	876	862	847	839	830	823	815	815	808
MEA	0	0	0	0	0	0	0	0	0	0
NEU	50	50	50	51	50	50	51	52	52	52
OAS	408	406	405	404	398	393	390	388	386	368
REF	892	891	891	890	890	890	890	889	895	895
SSA	354	352	350	349	349	348	349	349	345	342
USA	273	273	274	274	276	278	279	279	282	285

Table 1628: LUH2v2 — Resources—Land Cover—Forest (million ha)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4086	4085	4085	4083	4082	4081	4062	4039	4016	3998
CAZ	486	486	486	486	486	486	487	487	485	481
CHA	157	157	157	157	157	157	167	177	193	201
EUR	148	148	148	148	148	148	151	155	157	159
IND	64	64	64	64	64	64	65	65	68	70
JPN	25	25	25	25	25	25	25	25	25	25
LAM	1031	1031	1031	1030	1030	1030	1008	986	962	945
MEA	44	44	44	44	44	44	44	43	44	44
NEU	29	29	29	29	29	29	30	31	31	32
OAS	298	298	298	298	298	298	297	297	291	289
REF	842	842	842	842	842	842	843	843	843	850
SSA	658	658	658	656	655	654	642	627	611	594
USA	302	302	302	302	302	302	303	304	305	309

Table 1629: MAgPIEown — Resources—Land Cover—Forest (million ha)

54.2.1 Managed Forest



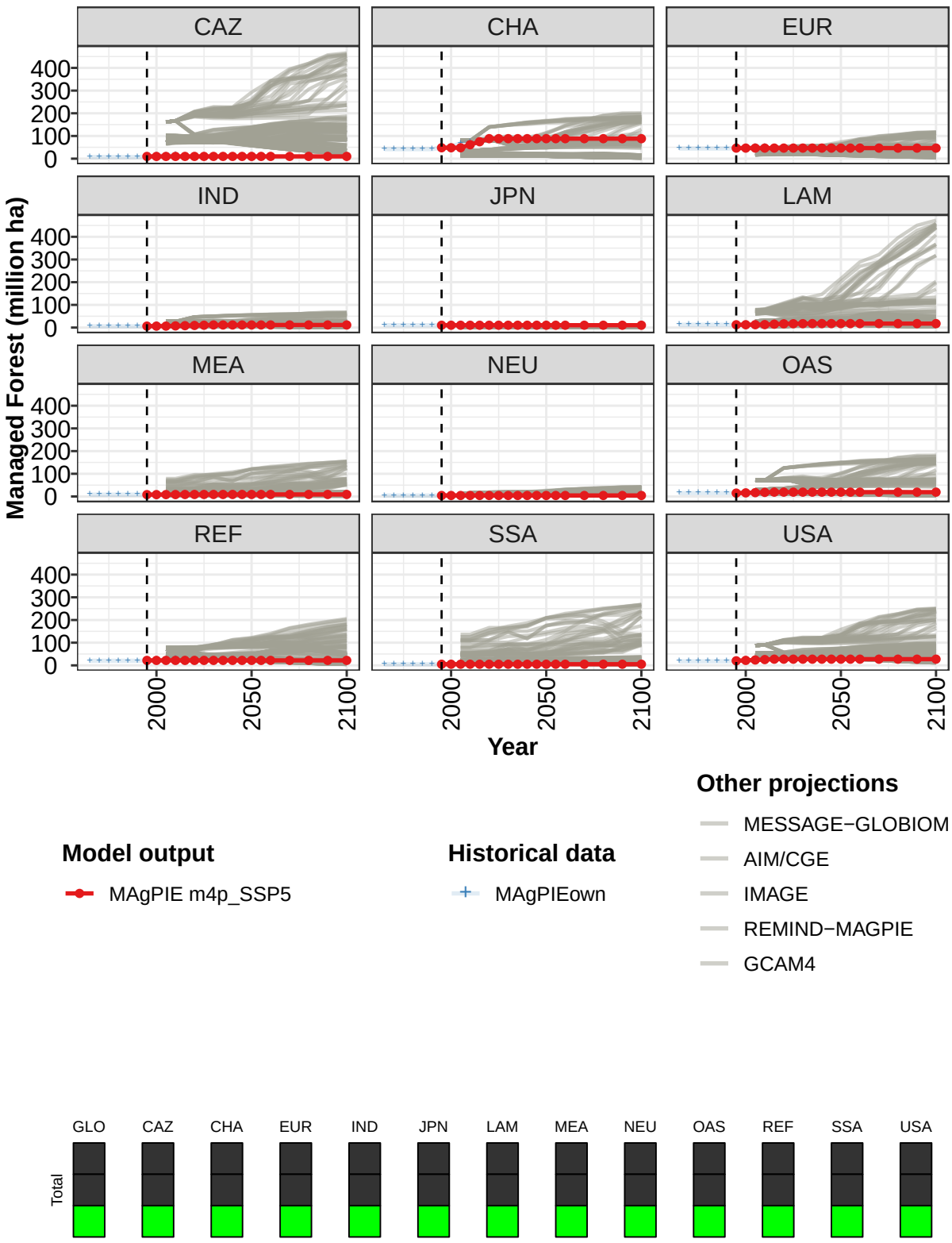


Figure 427: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Managed Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	209	212	215	232	252	268	269	270	271	271	271
CAZ	10	10	10	10	10	10	10	10	10	10	10
CHA	48	48	48	62	75	88	88	88	88	88	88
EUR	47	47	47	47	47	47	47	47	47	47	47
IND	6	6	6	7	8	9	10	11	11	11	11
JPN	10	10	10	10	10	10	10	10	10	10	10
LAM	12	13	13	13	15	17	17	17	17	17	17
MEA	8	8	8	8	9	9	9	9	9	9	9
NEU	4	4	4	4	4	4	4	4	4	4	4
OAS	15	16	17	18	19	19	19	19	19	19	19
REF	22	22	22	22	22	22	22	22	22	22	22
SSA	5	5	5	5	5	5	5	5	5	5	5
USA	20	22	24	26	27	27	27	27	27	27	27

Table 1630: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Managed Forest (million ha) [PART 1/2]

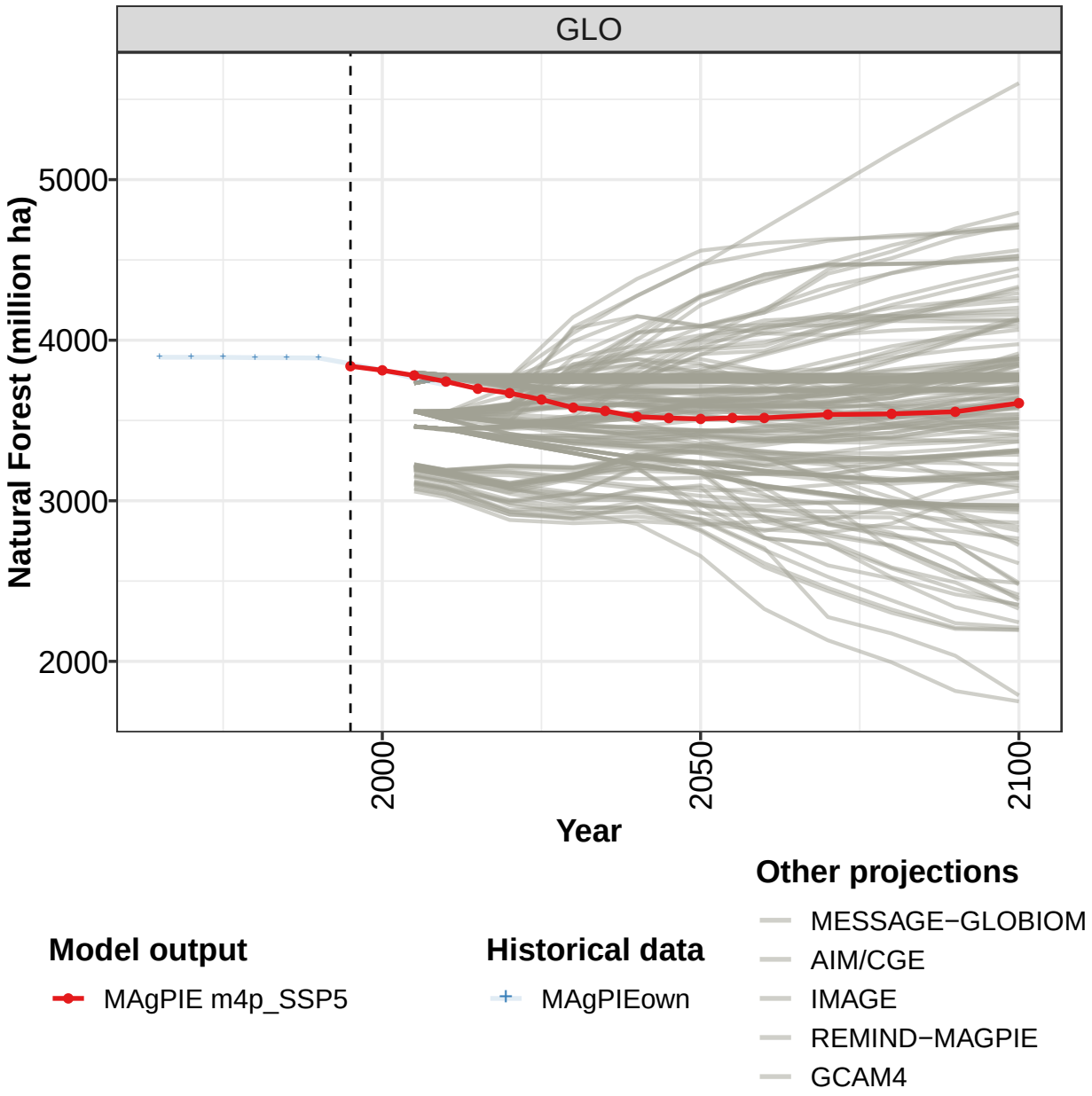
	2050	2055	2060	2070	2080	2090	2100
GLO	271	271	271	271	271	271	271
CAZ	10	10	10	10	10	10	10
CHA	88	88	88	88	88	88	88
EUR	47	47	47	47	47	47	47
IND	11	11	11	11	11	11	11
JPN	10	10	10	10	10	10	10
LAM	17	17	17	17	17	17	17
MEA	9	9	9	9	9	9	9
NEU	4	4	4	4	4	4	4
OAS	19	19	19	19	19	19	19
REF	22	22	22	22	22	22	22
SSA	5	5	5	5	5	5	5
USA	27	27	27	27	27	27	27

Table 1631: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Managed Forest (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	192	192	192	192	192	192	209	225	253	277
CAZ	7	7	7	7	7	7	10	13	15	18
CHA	42	42	42	42	42	42	48	54	67	73
EUR	45	45	45	45	45	45	47	49	52	54
IND	6	6	6	6	6	6	6	7	9	11
JPN	10	10	10	10	10	10	10	10	10	10
LAM	12	12	12	12	12	12	12	12	12	14
MEA	8	8	8	8	8	8	8	9	9	10
NEU	4	4	4	4	4	4	4	5	5	6
OAS	15	15	15	15	15	15	15	15	17	19
REF	20	20	20	20	20	20	22	24	25	28
SSA	5	5	5	5	5	5	5	5	6	7
USA	18	18	18	18	18	18	20	23	24	26

Table 1632: MAgPIEown — Resources—Land Cover—Forest—Managed Forest (million ha)

54.2.2 Natural Forest



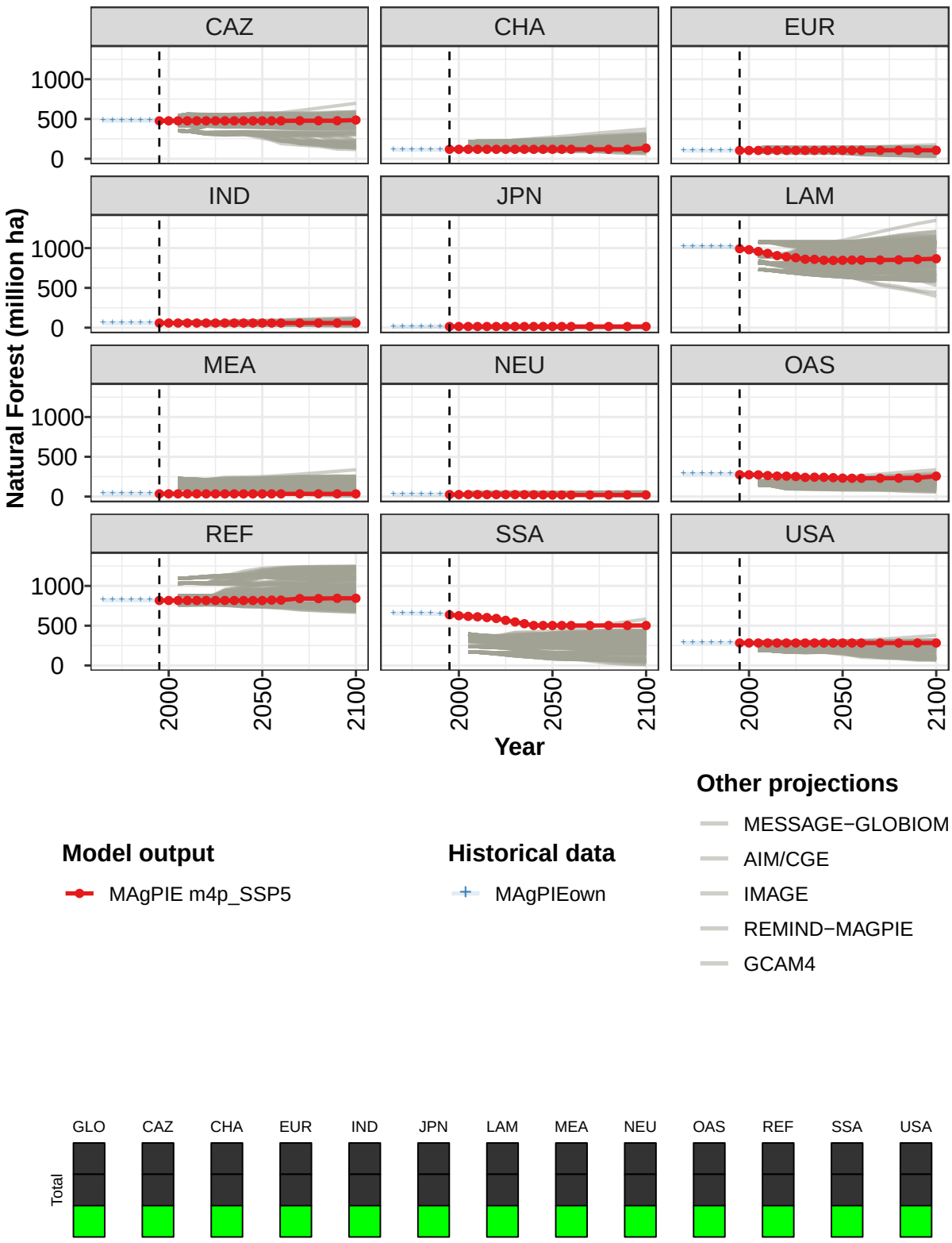


Figure 428: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3838	3812	3780	3742	3698	3670	3630	3580	3559	3524	3515
CAZ	477	477	477	477	477	477	477	477	477	477	477
CHA	119	119	119	119	119	119	119	119	119	119	119
EUR	105	105	105	105	105	105	105	105	105	106	106
IND	58	58	58	58	58	58	58	58	58	58	58
JPN	15	15	15	15	15	15	15	15	15	15	15
LAM	993	980	957	934	906	891	879	860	859	848	845
MEA	35	35	34	34	34	34	34	34	34	34	34
NEU	26	26	26	26	25	25	25	25	25	23	21
OAS	275	274	273	264	258	257	252	241	244	242	238
REF	817	817	817	817	817	817	817	817	817	817	817
SSA	637	626	617	612	602	591	567	547	525	503	503
USA	283	283	283	283	283	283	283	283	283	283	283

Table 1633: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest (million ha) [PART 1/2]

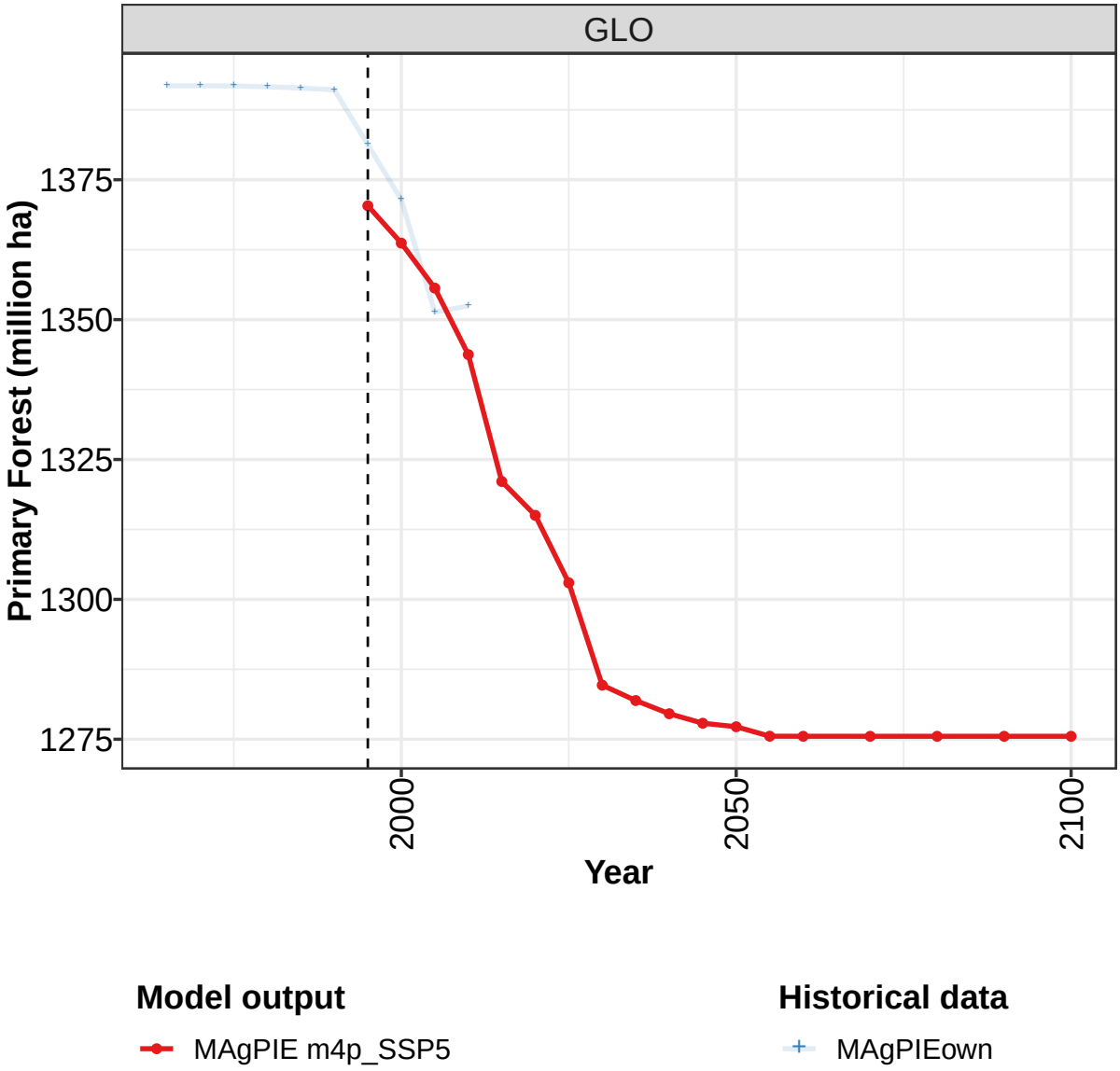
	2050	2055	2060	2070	2080	2090	2100
GLO	3510	3516	3516	3537	3541	3554	3608
CAZ	477	477	477	478	478	478	487
CHA	119	119	119	119	119	119	134
EUR	106	106	106	106	106	106	106
IND	58	58	58	58	58	58	58
JPN	15	15	15	15	15	15	15
LAM	847	850	850	850	853	859	867
MEA	34	34	34	34	34	34	34
NEU	20	20	20	20	20	21	21
OAS	232	230	230	230	231	235	256
REF	817	822	822	841	841	844	844
SSA	503	503	503	503	503	503	503
USA	283	283	283	283	283	283	283

Table 1634: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3894	3894	3893	3891	3891	3889	3853	3813	3762	3721
CAZ	479	479	479	479	479	479	477	474	470	463
CHA	115	115	115	115	115	115	119	123	126	128
EUR	103	103	103	103	103	103	105	106	105	105
IND	58	58	58	58	58	58	58	58	58	59
JPN	15	15	15	15	15	15	15	15	15	15
LAM	1018	1018	1018	1018	1018	1018	996	974	950	930
MEA	36	36	36	36	36	36	35	34	35	34
NEU	25	25	25	25	25	25	26	26	26	26
OAS	284	284	284	284	284	284	283	282	274	270
REF	822	822	822	822	822	822	821	820	818	821
SSA	654	653	653	651	650	649	637	621	605	587
USA	285	285	285	285	285	285	283	281	280	283

Table 1635: MAgPIEown — Resources—Land Cover—Forest—Natural Forest (million ha)

54.2.3 Natural Forest—Primary Forest



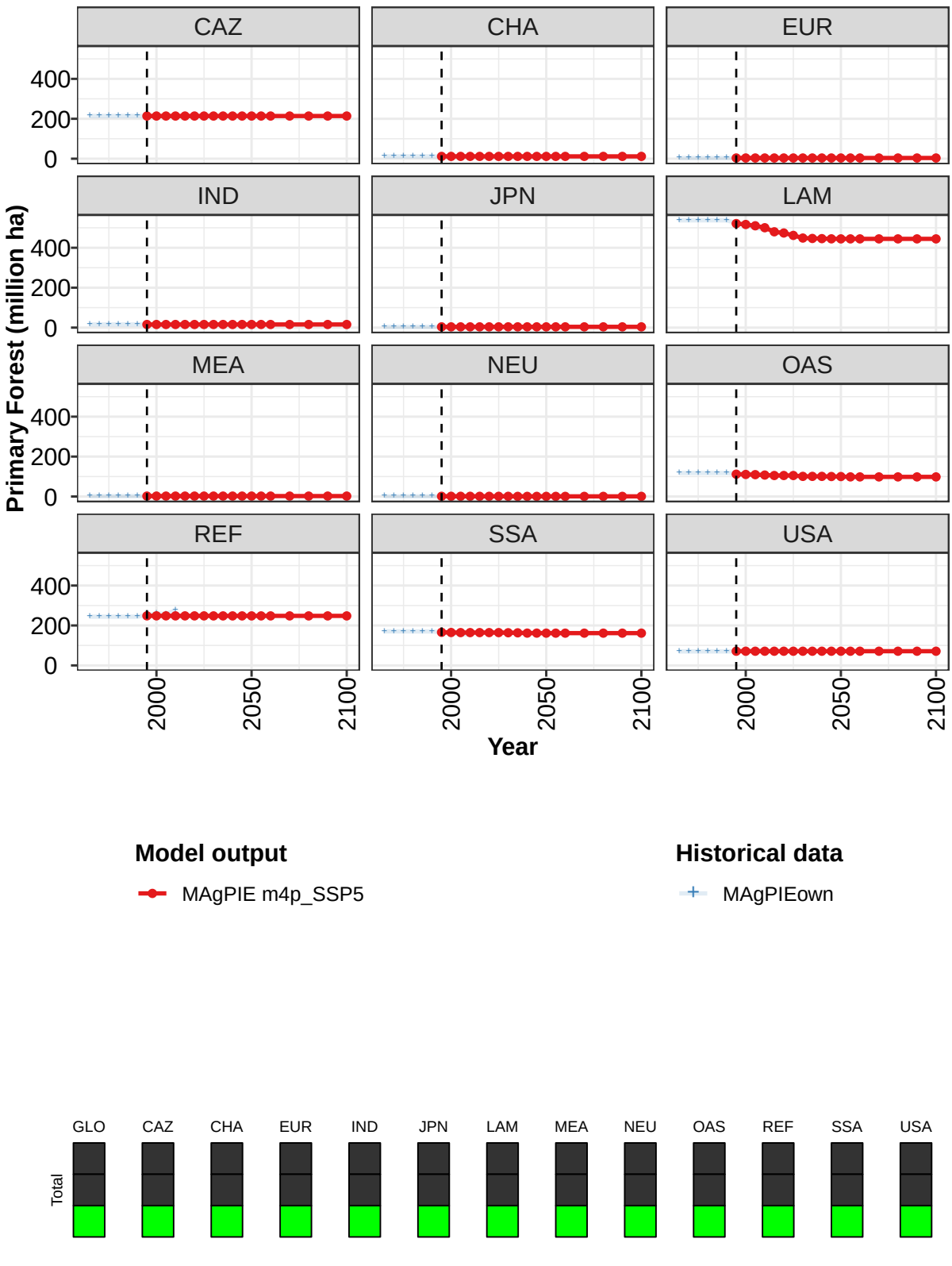


Figure 429: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest—Primary Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1370	1364	1356	1344	1321	1315	1303	1285	1282	1280	1278
CAZ	214	214	214	214	214	214	214	214	214	214	214
CHA	12	12	12	12	12	12	12	12	12	12	12
EUR	4	4	4	4	4	4	4	4	4	4	4
IND	16	16	16	16	16	16	16	16	16	16	16
JPN	4	4	4	4	4	4	4	4	4	4	4
LAM	521	517	510	500	480	474	462	449	447	446	445
MEA	2	2	2	2	2	2	2	2	2	2	2
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	112	111	110	108	105	105	105	101	101	101	100
REF	248	248	248	248	248	248	248	248	248	248	248
SSA	166	165	164	164	164	164	164	164	163	162	162
USA	71	71	71	71	71	71	71	71	71	71	71

Table 1636: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest—Primary Forest (million ha) [PART 1/2]

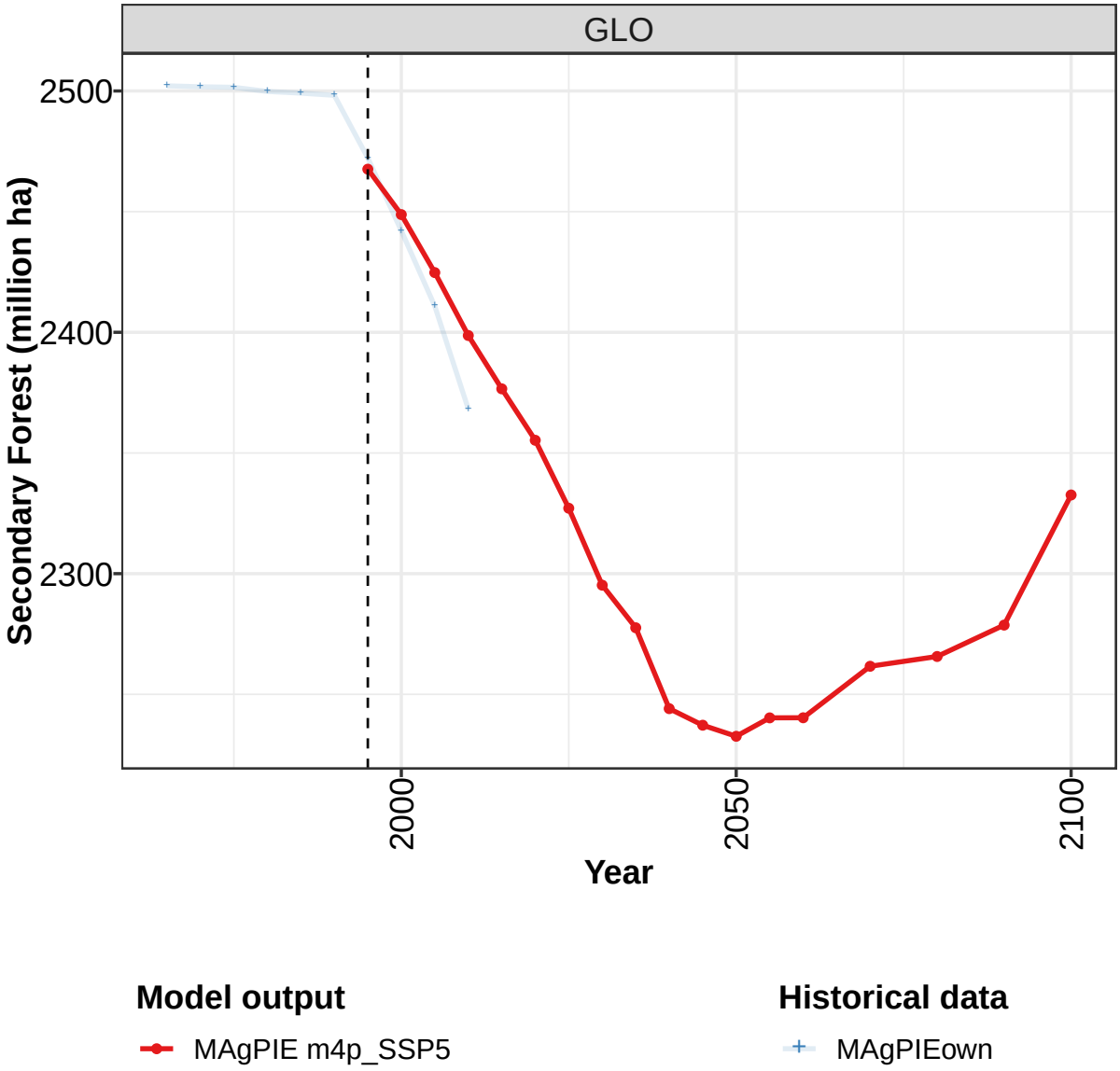
	2050	2055	2060	2070	2080	2090	2100
GLO	1277	1276	1276	1276	1276	1276	1276
CAZ	214	214	214	214	214	214	214
CHA	12	12	12	12	12	12	12
EUR	4	4	4	4	4	4	4
IND	16	16	16	16	16	16	16
JPN	4	4	4	4	4	4	4
LAM	444	444	444	444	444	444	444
MEA	2	2	2	2	2	2	2
NEU	1	1	1	1	1	1	1
OAS	100	98	98	98	98	98	98
REF	248	248	248	248	248	248	248
SSA	162	162	162	162	162	162	162
USA	71	71	71	71	71	71	71

Table 1637: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest—Primary Forest (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1392	1392	1392	1392	1391	1391	1381	1371	1351	1352
CAZ	214	214	214	214	214	214	214	214	214	213
CHA	12	12	12	12	12	12	12	12	12	12
EUR	4	4	4	4	4	4	4	4	4	4
IND	16	16	16	16	16	16	16	16	16	16
JPN	4	4	4	4	4	4	4	4	4	5
LAM	537	537	537	537	537	537	525	512	500	490
MEA	2	2	2	2	2	2	2	2	2	2
NEU	1	1	1	1	1	1	1	1	1	1
OAS	118	118	118	118	118	118	115	113	108	106
REF	244	244	244	244	244	244	252	260	258	276
SSA	171	171	170	170	170	170	166	162	158	153
USA	70	70	70	70	70	70	71	72	76	75

Table 1638: MAgPIEown — Resources—Land Cover—Forest—Natural Forest—Primary Forest (million ha)

54.2.4 Natural Forest—Secondary Forest



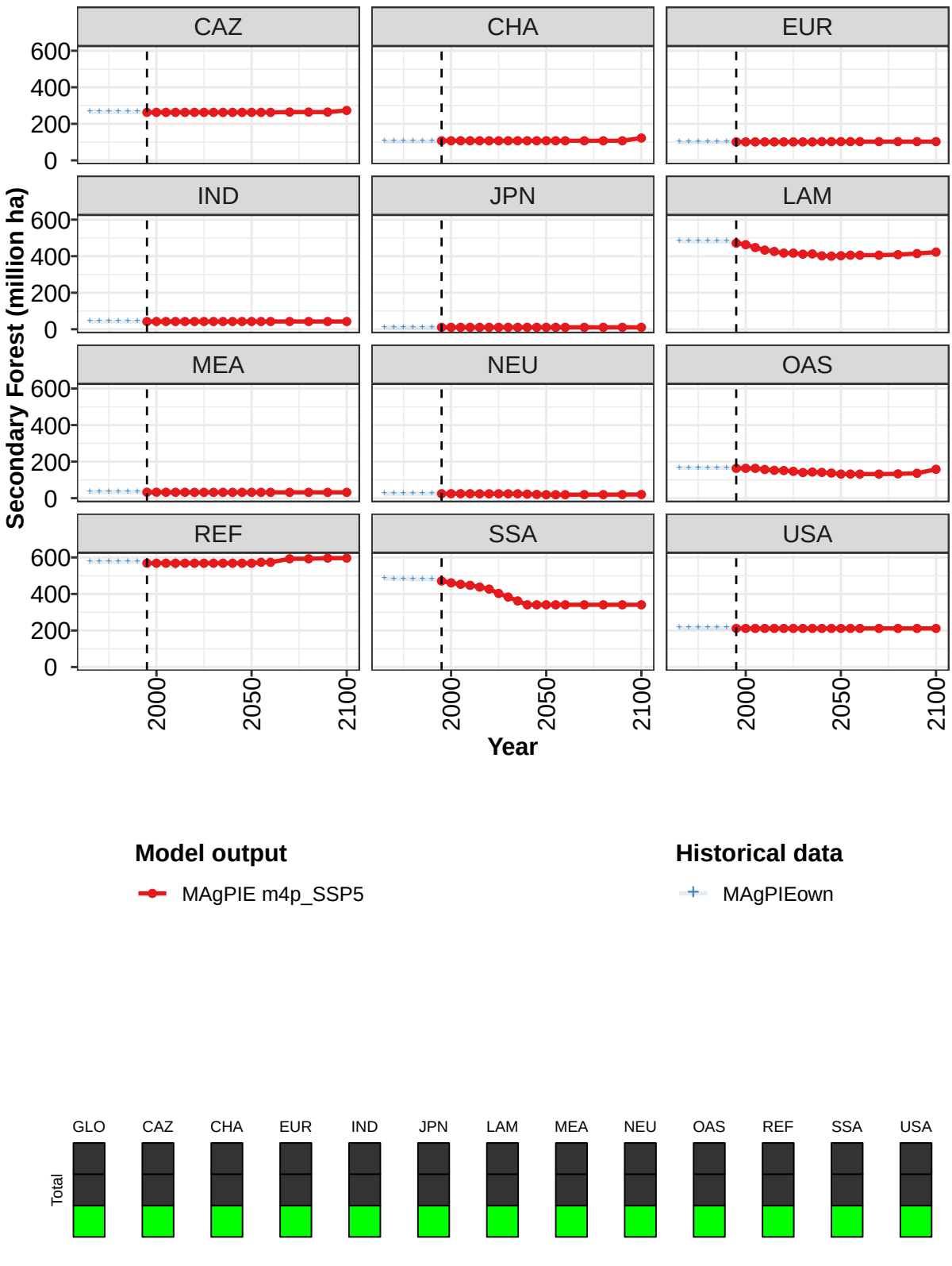


Figure 430: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest—Secondary Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2468	2449	2425	2399	2377	2355	2327	2295	2278	2244	2237
CAZ	263	263	263	263	263	263	263	263	263	263	263
CHA	107	107	107	107	107	107	107	107	107	107	107
EUR	101	101	101	101	101	101	101	101	101	103	103
IND	43	43	43	43	43	43	43	43	43	43	43
JPN	11	11	11	11	11	11	11	11	11	11	11
LAM	471	463	447	433	426	417	417	411	412	402	400
MEA	33	33	32	32	32	32	32	32	32	32	32
NEU	24	24	24	24	24	24	24	24	24	22	21
OAS	163	163	163	157	152	151	147	140	143	141	138
REF	569	569	569	569	569	569	569	569	569	569	569
SSA	471	461	453	447	438	427	403	383	362	341	341
USA	212	212	212	212	212	212	212	212	212	212	212

Table 1639: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest—Secondary Forest (million ha) [PART 1/2]

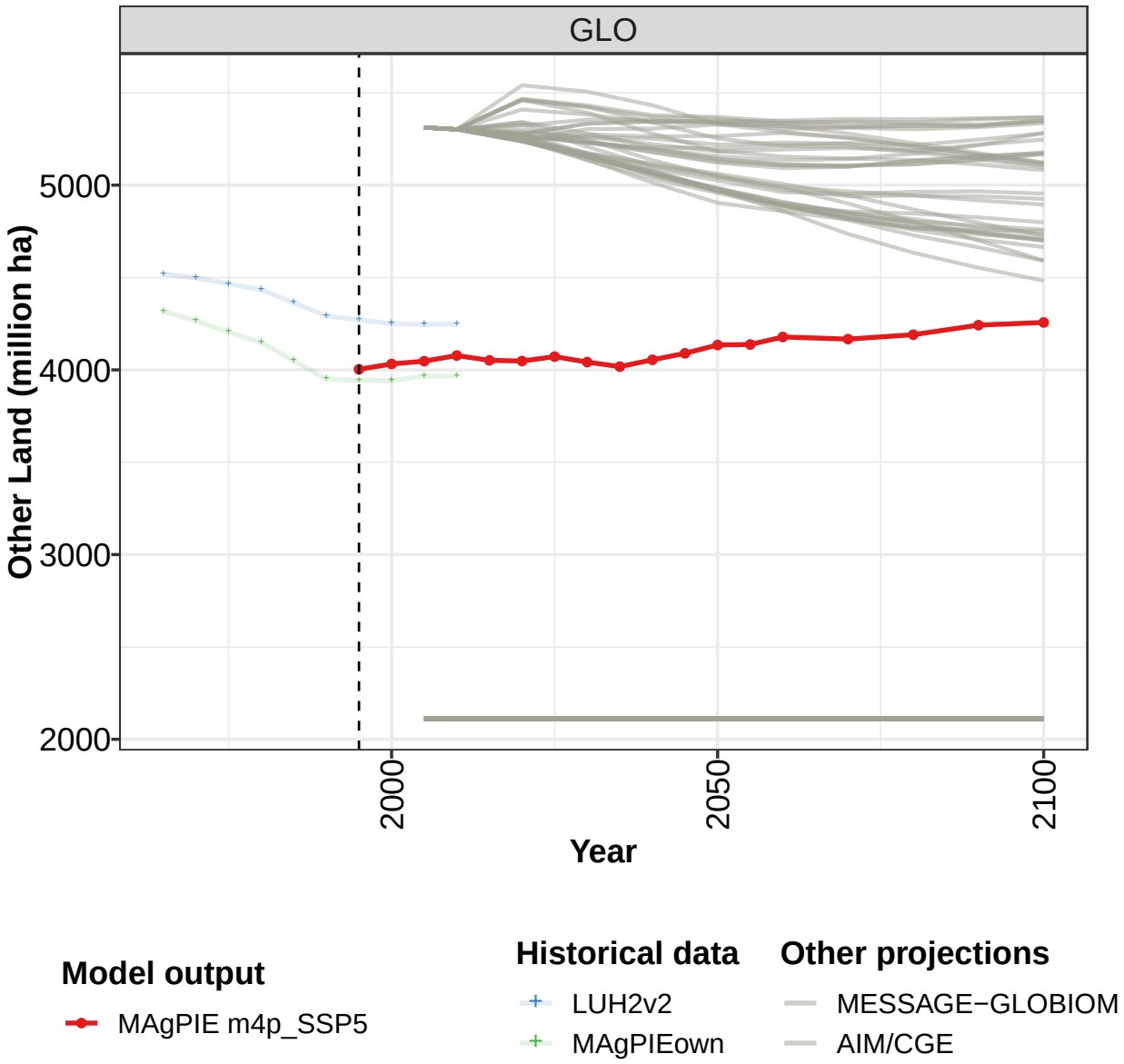
	2050	2055	2060	2070	2080	2090	2100
GLO	2233	2240	2240	2262	2266	2279	2333
CAZ	263	263	263	264	264	264	273
CHA	107	107	107	107	107	107	122
EUR	103	103	103	103	103	103	103
IND	43	43	43	43	43	43	43
JPN	11	11	11	11	11	11	11
LAM	403	405	405	406	408	414	422
MEA	32	32	32	32	32	32	32
NEU	19	19	19	19	19	20	20
OAS	132	132	132	132	133	136	158
REF	569	574	574	593	593	596	596
SSA	341	341	341	341	341	341	341
USA	212	212	212	212	212	212	212

Table 1640: MAgPIE m4p_SSP5 — Resources—Land Cover—Forest—Natural Forest—Secondary Forest (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2502	2502	2502	2500	2499	2498	2472	2442	2411	2368
CAZ	265	265	265	265	265	265	263	260	256	249
CHA	104	104	104	104	104	104	107	111	114	116
EUR	100	100	100	100	100	100	101	102	101	101
IND	43	43	43	43	43	43	43	43	43	43
JPN	11	11	11	11	11	11	11	10	10	10
LAM	481	481	481	481	481	481	471	462	451	440
MEA	34	34	34	34	34	34	33	32	33	32
NEU	24	24	24	24	24	24	24	25	25	25
OAS	166	166	166	166	166	166	167	169	166	165
REF	578	578	578	578	578	578	569	559	560	546
SSA	483	483	482	481	480	479	471	460	448	434
USA	214	214	214	214	214	214	212	209	205	208

Table 1641: MAgPIEown — Resources—Land Cover—Forest—Natural Forest—Secondary Forest (million ha)

54.3 Other Land



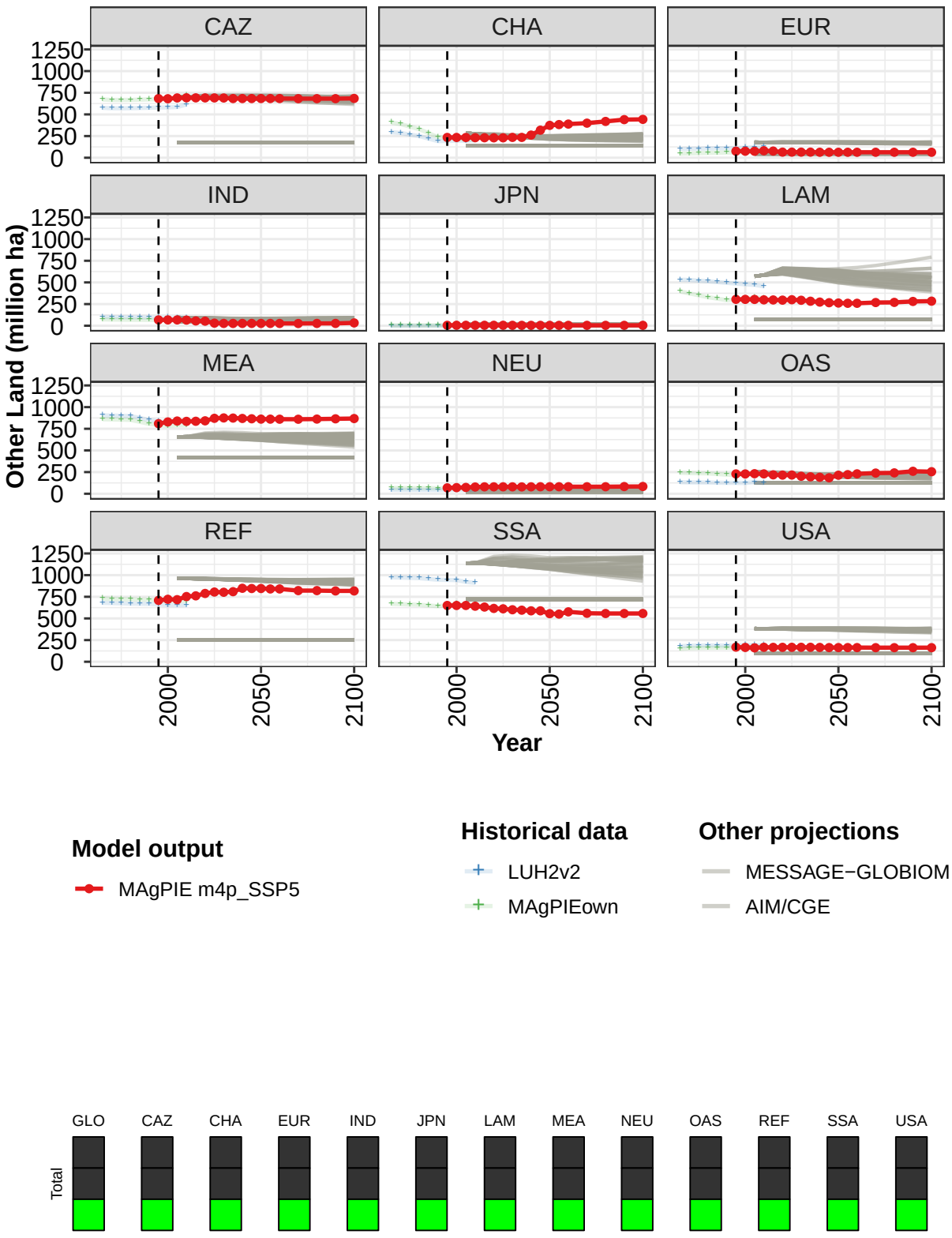


Figure 431: MAgPIE m4p_SSP5 — Resources—Land Cover—Other Land (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4003	4032	4047	4078	4051	4048	4072	4042	4018	4054	4090
CAZ	683	681	690	692	691	691	691	690	683	683	683
CHA	234	234	234	231	231	230	230	235	235	261	318
EUR	76	75	75	80	77	65	65	65	65	63	63
IND	67	67	67	65	56	53	30	27	27	27	27
JPN	5	5	5	5	5	5	5	5	5	5	5
LAM	305	304	304	299	298	296	300	294	283	273	266
MEA	809	829	839	836	837	842	871	875	874	869	865
NEU	68	71	73	78	80	80	80	80	79	80	81
OAS	229	229	232	229	218	215	216	202	195	190	184
REF	709	721	717	753	761	789	805	802	809	848	845
SSA	650	650	650	642	632	616	611	601	595	588	588
USA	169	165	161	167	166	167	167	167	167	166	164

Table 1642: MAgPIE m4p_SSP5 — Resources—Land Cover—Other Land (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4135	4137	4178	4166	4190	4242	4257
CAZ	683	683	683	682	682	682	685
CHA	374	383	389	399	419	440	443
EUR	63	63	63	63	63	63	63
IND	27	27	27	26	27	27	33
JPN	5	5	5	5	5	5	5
LAM	262	259	259	268	270	280	284
MEA	862	861	861	860	862	865	868
NEU	81	81	81	81	81	83	84
OAS	214	221	230	239	241	259	255
REF	845	841	841	821	821	818	818
SSA	555	550	576	560	557	557	557
USA	164	164	164	163	163	163	163

Table 1643: MAgPIE m4p_SSP5 — Resources—Land Cover—Other Land (million ha) [PART 2/2]

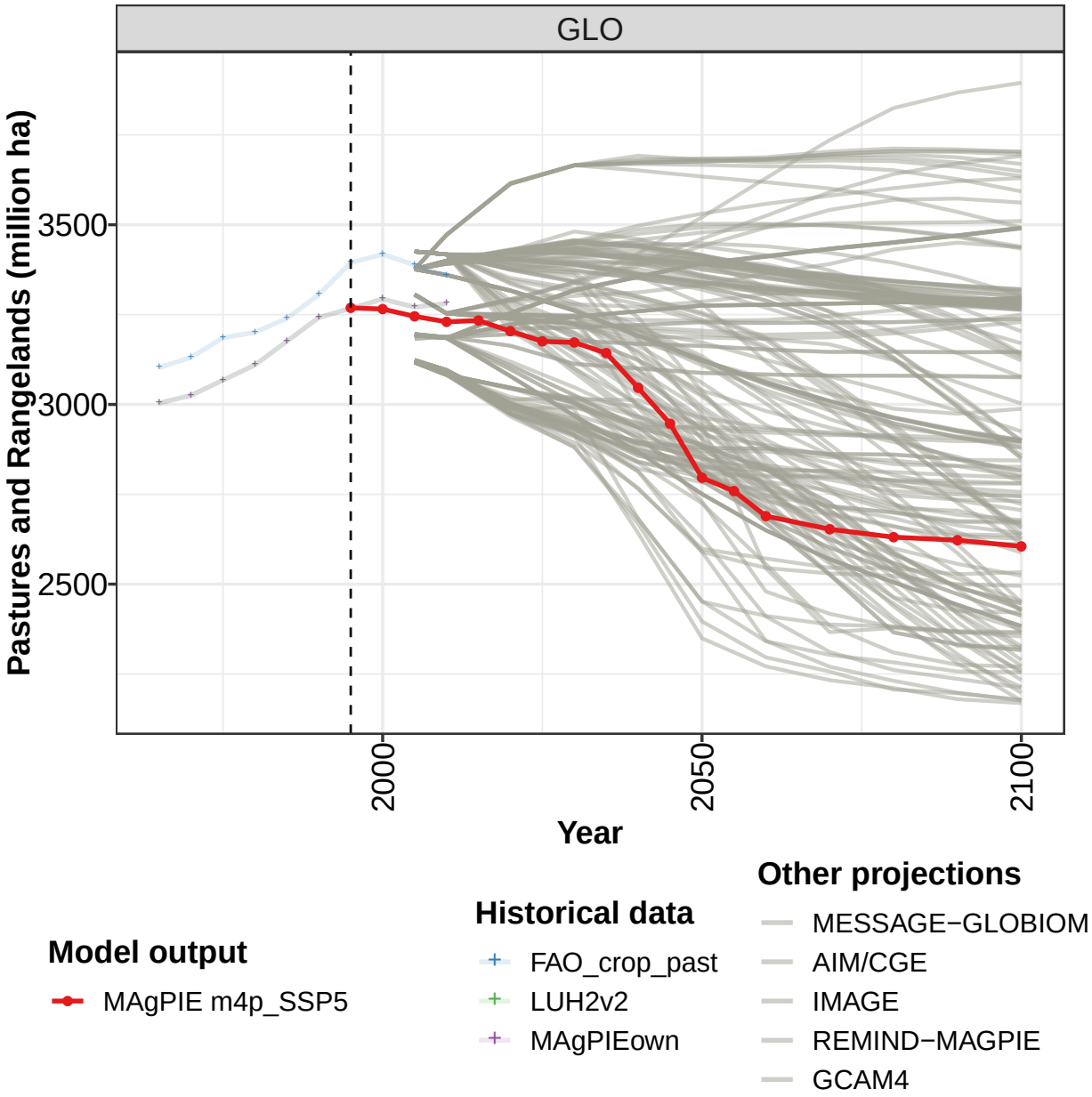
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4519	4498	4466	4434	4363	4292	4271	4250	4246	4248
CAZ	576	571	571	571	574	577	579	581	585	614
CHA	295	285	268	250	221	192	194	197	196	200
EUR	101	103	105	107	108	110	113	116	122	125
IND	101	99	98	97	96	96	95	94	93	93
JPN	0	0	0	0	0	0	0	0	0	0
LAM	531	528	521	513	505	496	487	478	472	456
MEA	904	902	900	897	874	852	839	825	835	835
NEU	45	44	44	44	44	43	43	44	43	45
OAS	133	131	130	130	128	126	125	125	133	122
REF	680	677	674	672	670	668	661	654	652	654
SSA	974	972	968	965	956	947	945	943	922	911
USA	179	185	187	189	188	186	190	193	192	192

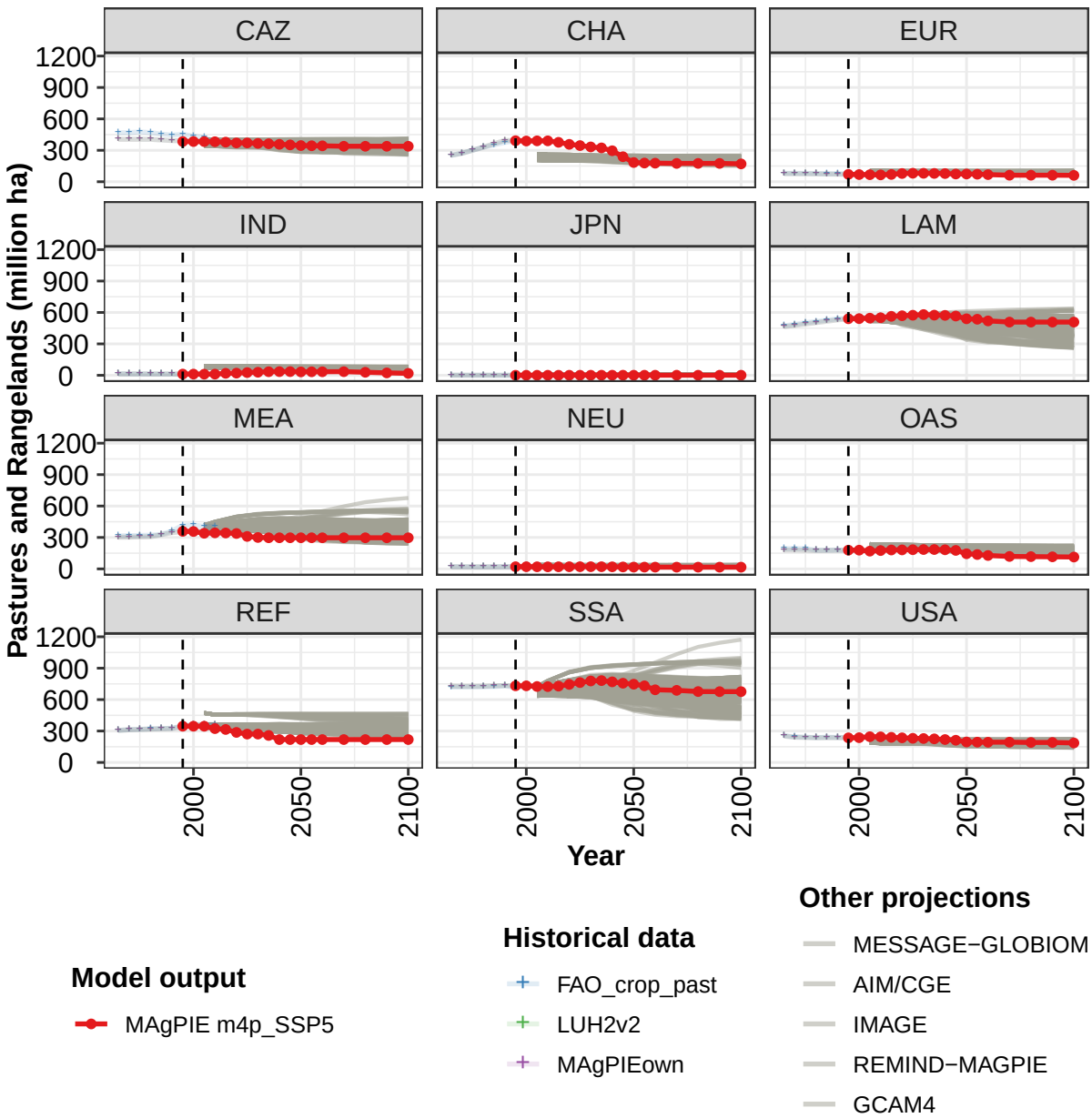
Table 1644: LUH2v2 — Resources—Land Cover—Other Land (million ha)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4317	4265	4206	4148	4049	3950	3944	3941	3966	3966
CAZ	672	667	667	667	670	674	676	678	687	724
CHA	406	389	359	329	283	237	231	225	207	206
EUR	47	50	53	56	58	60	61	62	69	69
IND	74	72	70	69	69	68	66	65	61	59
JPN	4	4	4	4	4	4	5	5	5	5
LAM	397	374	352	330	313	296	302	308	325	319
MEA	860	858	855	853	830	807	795	782	791	791
NEU	66	65	65	65	65	64	65	65	64	65
OAS	243	239	237	235	228	220	218	216	229	201
REF	730	726	723	720	718	716	708	700	704	699
SSA	669	665	661	658	649	641	652	666	656	659
USA	149	156	159	161	161	162	165	169	170	168

Table 1645: MAgPIEown — Resources—Land Cover—Other Land (million ha)

54.4 Pastures and Rangelands





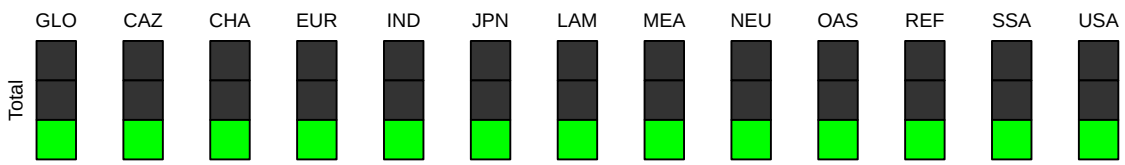


Figure 432: MAgPIE m4p_SSP5 — Resources—Land Cover—Pastures and Rangelands (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3269	3265	3245	3230	3234	3204	3175	3172	3143	3046	2946
CAZ	384	384	384	382	378	371	371	366	363	357	352
CHA	392	389	391	391	376	357	345	332	323	296	239
EUR	70	68	67	65	69	79	81	80	80	78	74
IND	12	12	11	11	19	21	26	29	34	35	35
JPN	0	0	0	0	0	0	0	1	1	1	1
LAM	540	541	546	550	563	569	573	580	575	572	566
MEA	358	357	340	344	343	338	310	300	297	297	297
NEU	21	21	20	20	20	21	21	21	21	20	18
OAS	179	179	170	175	181	181	183	185	185	183	177
REF	346	346	346	323	315	287	271	271	258	219	219
SSA	732	732	725	725	729	745	763	778	782	770	757
USA	235	237	246	245	240	235	231	229	225	219	212

Table 1646: MAgPIE m4p_SSP5 — Resources—Land Cover—Pastures and Rangelands (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2796	2759	2689	2653	2631	2622	2605
CAZ	345	344	343	339	339	339	339
CHA	184	179	177	175	175	175	170
EUR	74	71	68	62	62	62	61
IND	33	34	34	35	29	23	18
JPN	1	1	1	1	1	1	1
LAM	540	535	519	508	508	508	508
MEA	297	297	297	297	297	297	297
NEU	17	17	17	16	16	16	16
OAS	144	137	128	119	117	115	113
REF	219	219	219	219	219	219	219
SSA	747	732	694	689	677	676	676
USA	196	194	193	194	191	191	186

Table 1647: MAgPIE m4p_SSP5 — Resources—Land Cover—Pastures and Rangelands (million ha) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3102	3131	3186	3201	3240	3305	3395	3418	3388	3358
CAZ	468	469	476	469	455	446	452	437	422	381
CHA	251	273	301	328	351	374	393	393	393	393
EUR	81	81	80	79	76	76	74	72	70	68
IND	15	13	13	12	12	11	11	11	10	10
JPN	1	1	1	1	0	0	0	0	0	0
LAM	473	486	503	514	527	539	547	554	555	561
MEA	316	318	319	322	329	362	416	420	405	406
NEU	20	20	19	19	19	20	20	21	22	22
OAS	194	195	195	178	178	181	173	185	169	169
REF	307	313	316	320	325	326	355	362	362	363
SSA	720	720	721	722	724	730	718	727	735	736
USA	257	244	242	238	242	239	236	236	244	250

Table 1648: FAO_crop_past — Resources—Land Cover—Pastures and Rangelands (million ha)

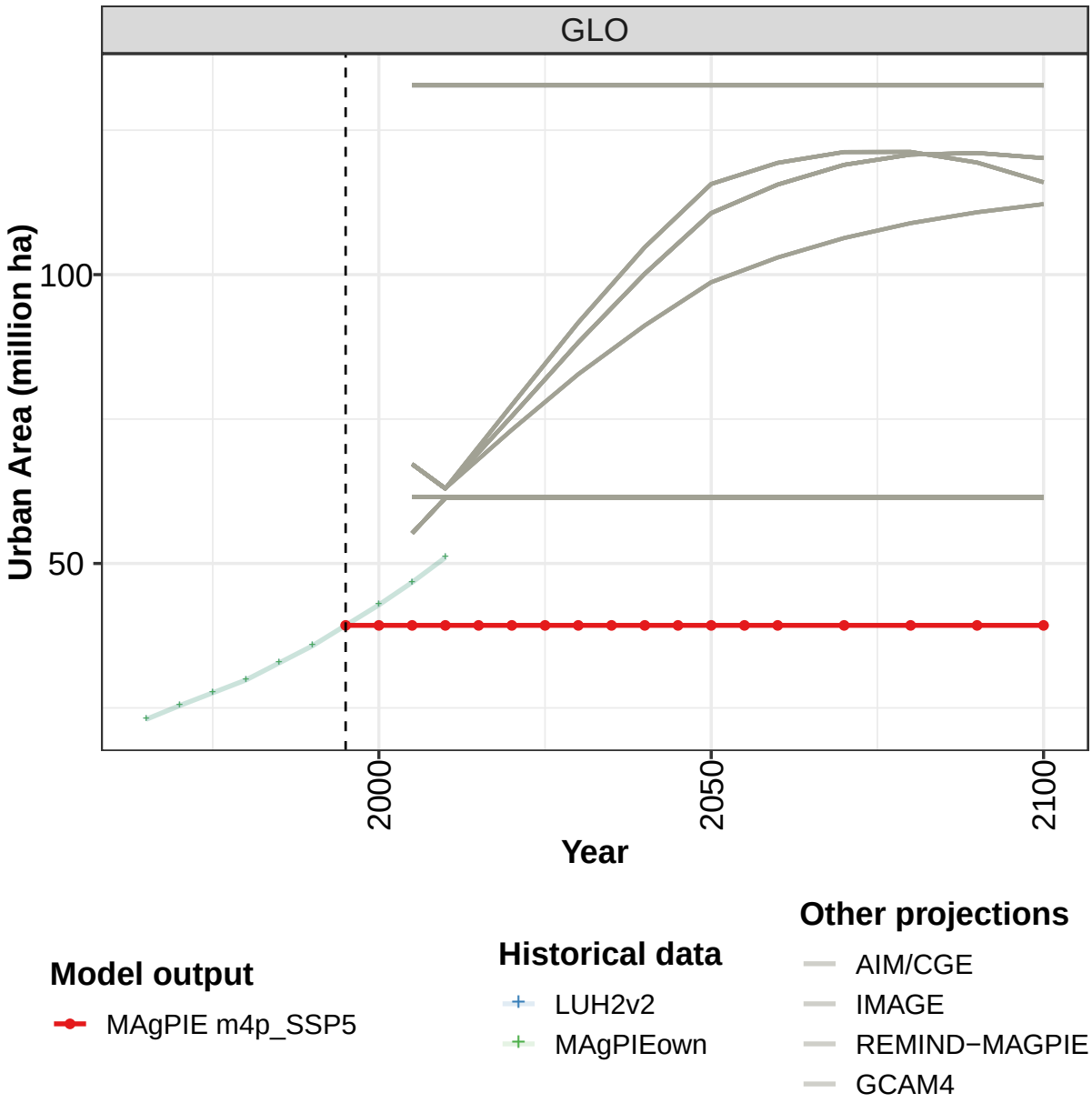
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3004	3025	3068	3110	3176	3242	3267	3293	3271	3281
CAZ	405	405	405	405	399	393	391	389	380	358
CHA	253	270	300	330	362	395	391	388	388	388
EUR	77	76	75	75	73	72	70	69	68	66
IND	14	13	13	13	12	12	12	12	11	11
JPN	1	1	1	1	0	0	0	0	0	0
LAM	465	476	490	503	516	529	539	549	549	555
MEA	303	303	306	308	327	346	356	367	353	353
NEU	21	20	20	19	20	21	21	20	21	21
OAS	180	180	178	175	177	178	179	179	166	187
REF	306	312	315	319	322	325	342	360	360	361
SSA	728	726	727	727	731	734	730	725	731	731
USA	252	241	238	236	236	237	236	236	243	249

Table 1649: LUH2v2 — Resources—Land Cover—Pastures and Rangelands (million ha)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3004	3025	3068	3110	3176	3242	3267	3293	3271	3281
CAZ	405	405	405	405	399	393	391	389	380	358
CHA	253	270	300	330	362	395	391	388	388	388
EUR	77	76	75	75	73	72	70	69	68	66
IND	14	13	13	13	12	12	12	12	11	11
JPN	1	1	1	1	0	0	0	0	0	0
LAM	465	476	490	503	516	529	539	549	549	555
MEA	303	303	306	308	327	346	356	367	353	353
NEU	21	20	20	19	20	21	21	20	21	21
OAS	180	180	178	175	177	178	179	179	166	187
REF	306	312	315	319	322	325	342	360	360	361
SSA	728	726	727	727	731	734	730	725	731	731
USA	252	241	238	236	236	237	236	236	243	249

Table 1650: MAgPIEown — Resources—Land Cover—Pastures and Rangelands (million ha)

54.5 Urban Area



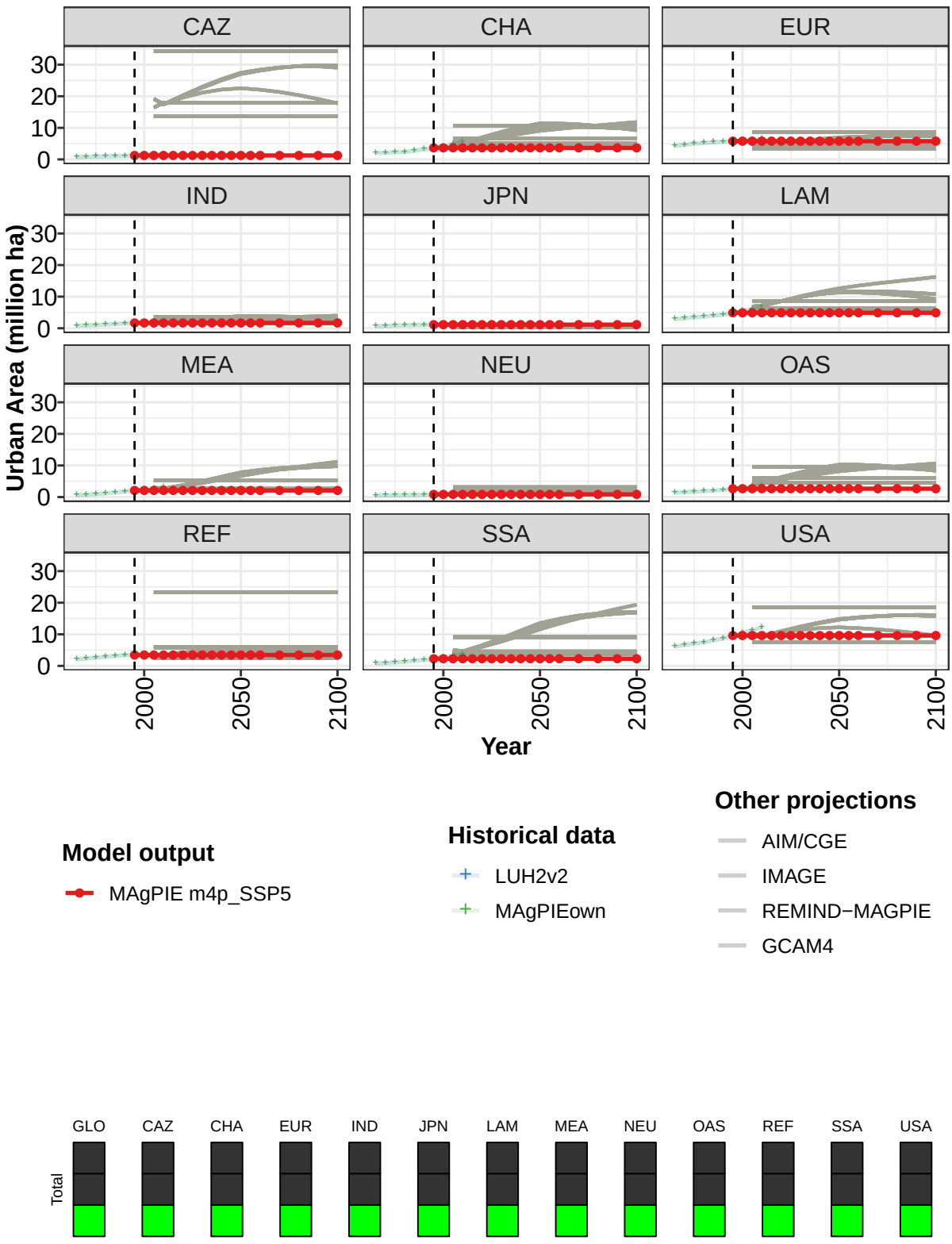


Figure 433: MAgPIE m4p_SSP5 — Resources—Land Cover—Urban Area (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3
CAZ	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
CHA	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
EUR	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
IND	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
JPN	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
LAM	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
MEA	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
NEU	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
OAS	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
REF	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
SSA	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
USA	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6

Table 1651: MAgPIE m4p_SSP5 — Resources—Land Cover—Urban Area (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	39.3	39.3	39.3	39.3	39.3	39.3	39.3
CAZ	1.3	1.3	1.3	1.3	1.3	1.3	1.3
CHA	3.7	3.7	3.7	3.7	3.7	3.7	3.7
EUR	5.8	5.8	5.8	5.8	5.8	5.8	5.8
IND	1.7	1.7	1.7	1.7	1.7	1.7	1.7
JPN	1.1	1.1	1.1	1.1	1.1	1.1	1.1
LAM	4.9	4.9	4.9	4.9	4.9	4.9	4.9
MEA	2.1	2.1	2.1	2.1	2.1	2.1	2.1
NEU	0.8	0.8	0.8	0.8	0.8	0.8	0.8
OAS	2.6	2.6	2.6	2.6	2.6	2.6	2.6
REF	3.4	3.4	3.4	3.4	3.4	3.4	3.4
SSA	2.3	2.3	2.3	2.3	2.3	2.3	2.3
USA	9.6	9.6	9.6	9.6	9.6	9.6	9.6

Table 1652: MAgPIE m4p_SSP5 — Resources—Land Cover—Urban Area (million ha) [PART 2/2]

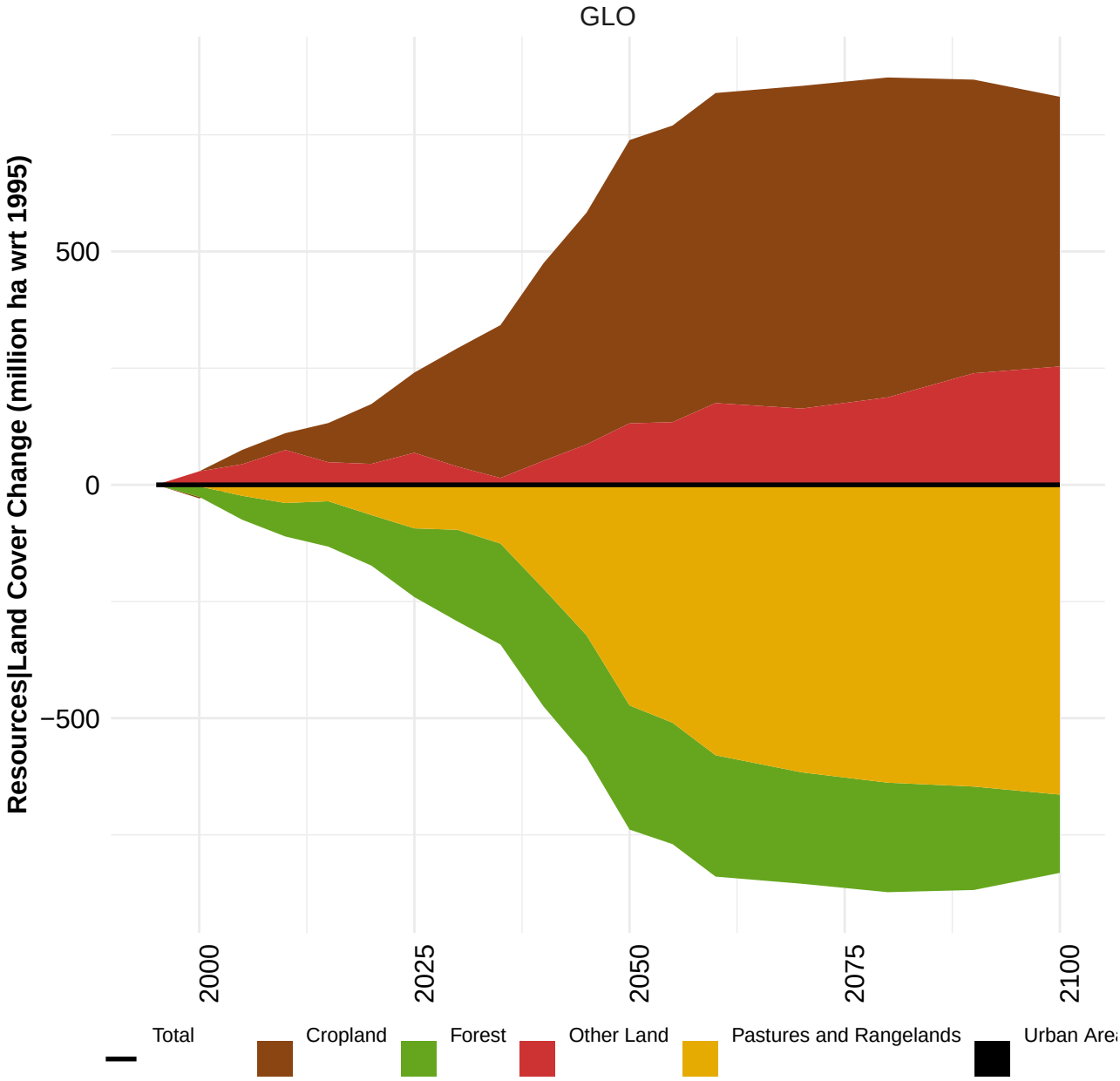
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	23.0	25.4	27.6	29.8	32.8	35.7	39.3	42.8	46.7	51.0
CAZ	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.3	1.5	1.6
CHA	2.1	2.2	2.3	2.3	2.8	3.2	3.7	4.1	4.7	5.5
EUR	4.3	4.6	4.9	5.3	5.5	5.6	5.8	5.9	6.2	6.4
IND	0.8	0.9	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.2
JPN	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2
LAM	2.9	3.2	3.4	3.7	4.0	4.3	4.9	5.5	6.1	6.8
MEA	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.8	3.1
NEU	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.1
OAS	1.4	1.6	1.7	1.8	2.1	2.3	2.6	3.0	3.3	3.7
REF	2.1	2.4	2.6	2.9	3.2	3.4	3.4	3.5	3.5	3.6
SSA	0.8	0.9	1.1	1.3	1.6	1.9	2.3	2.6	3.1	3.7
USA	6.1	6.7	7.1	7.5	8.1	8.7	9.6	10.5	11.3	12.1

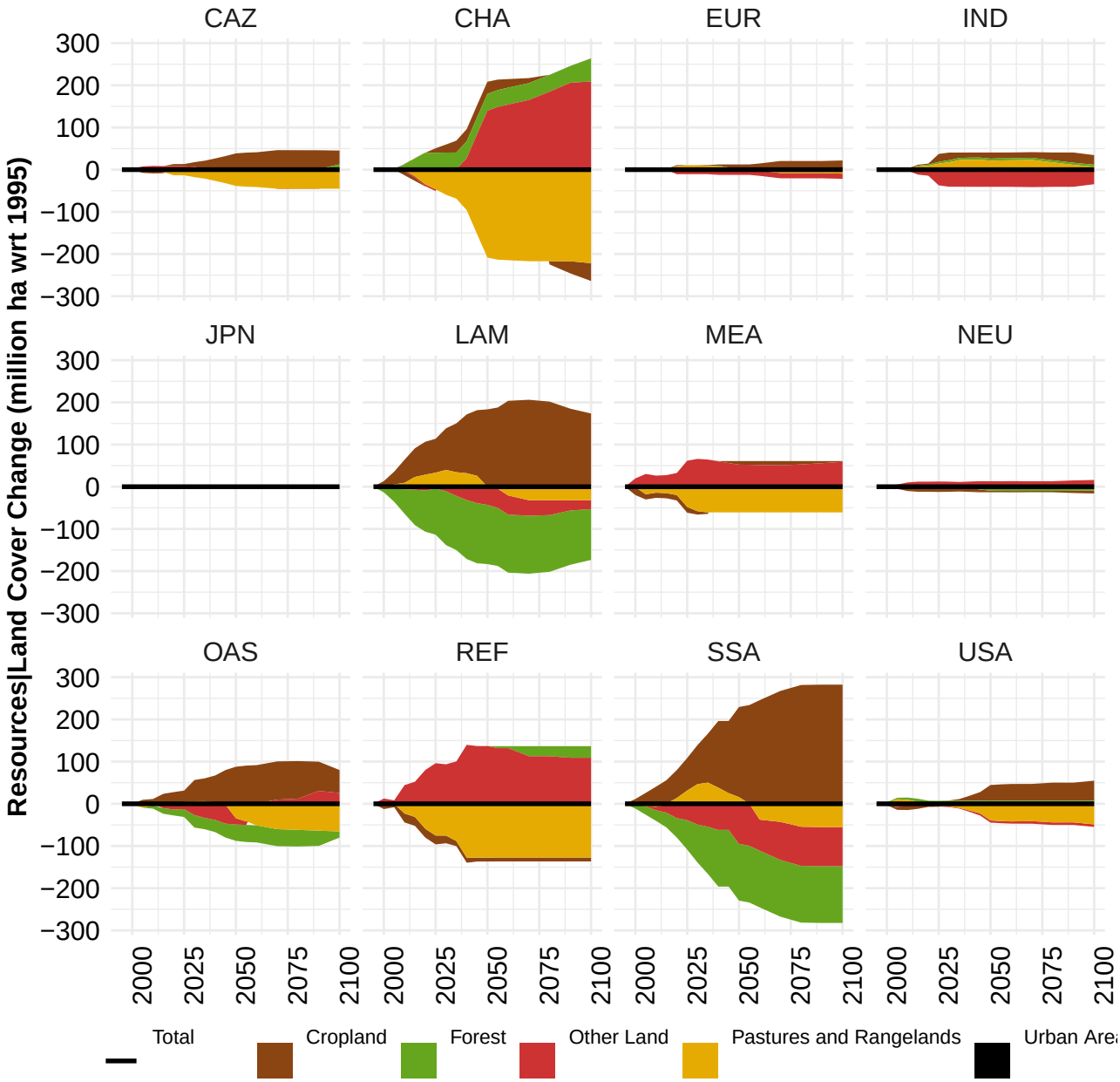
Table 1653: LUH2v2 — Resources—Land Cover—Urban Area (million ha)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	23.0	25.4	27.6	29.8	32.8	35.7	39.3	42.8	46.7	51.0
CAZ	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.3	1.5	1.6
CHA	2.1	2.2	2.3	2.3	2.8	3.2	3.7	4.1	4.7	5.5
EUR	4.3	4.6	4.9	5.3	5.5	5.6	5.8	5.9	6.2	6.4
IND	0.8	0.9	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.2
JPN	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2
LAM	2.9	3.2	3.4	3.7	4.0	4.3	4.9	5.5	6.1	6.8
MEA	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.8	3.1
NEU	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.1
OAS	1.4	1.6	1.7	1.8	2.1	2.3	2.6	3.0	3.3	3.7
REF	2.1	2.4	2.6	2.9	3.2	3.4	3.4	3.5	3.5	3.6
SSA	0.8	0.9	1.1	1.3	1.6	1.9	2.3	2.6	3.1	3.7
USA	6.1	6.7	7.1	7.5	8.1	8.7	9.6	10.5	11.3	12.1

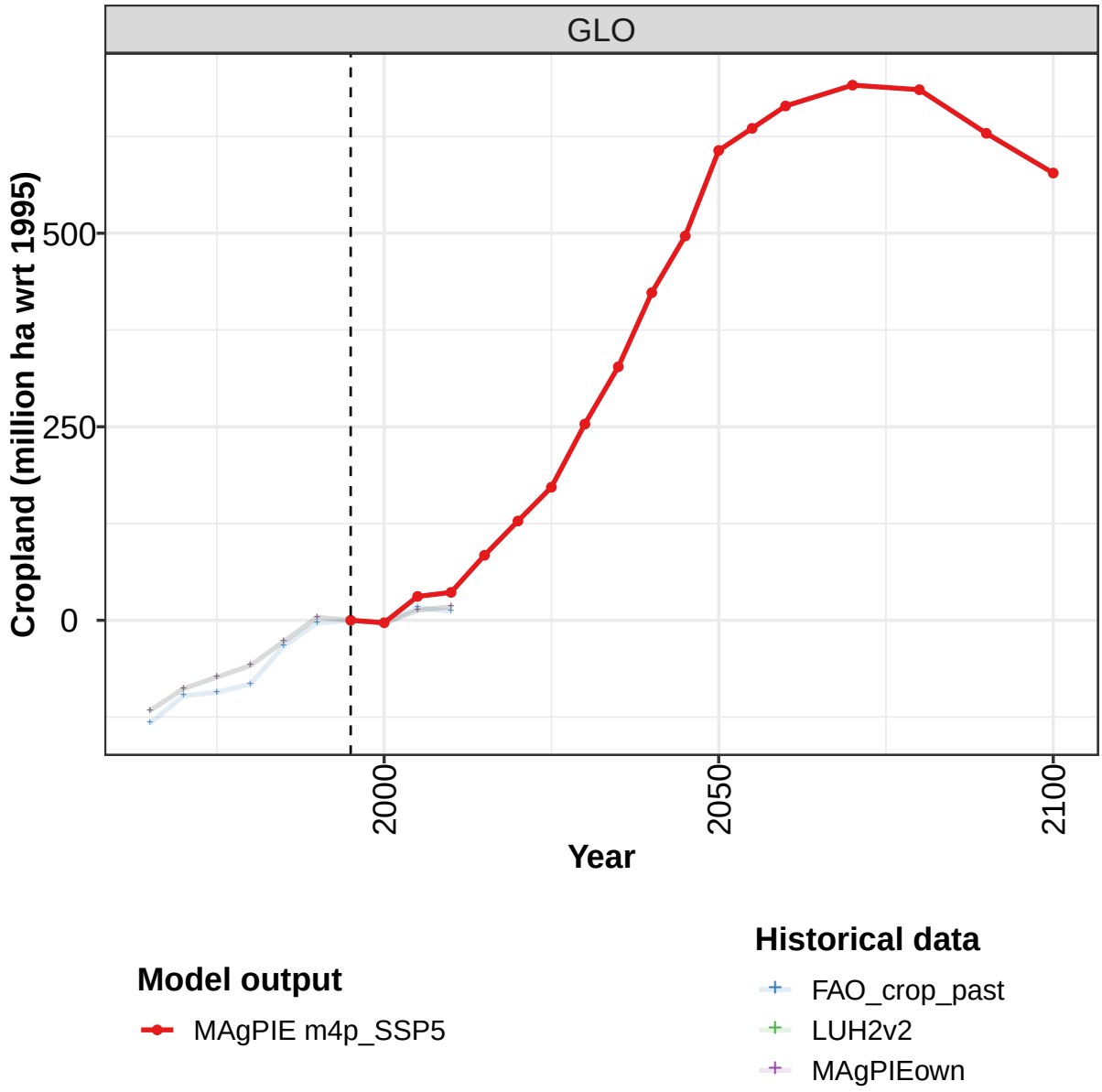
Table 1654: MAgPIEown — Resources—Land Cover—Urban Area (million ha)

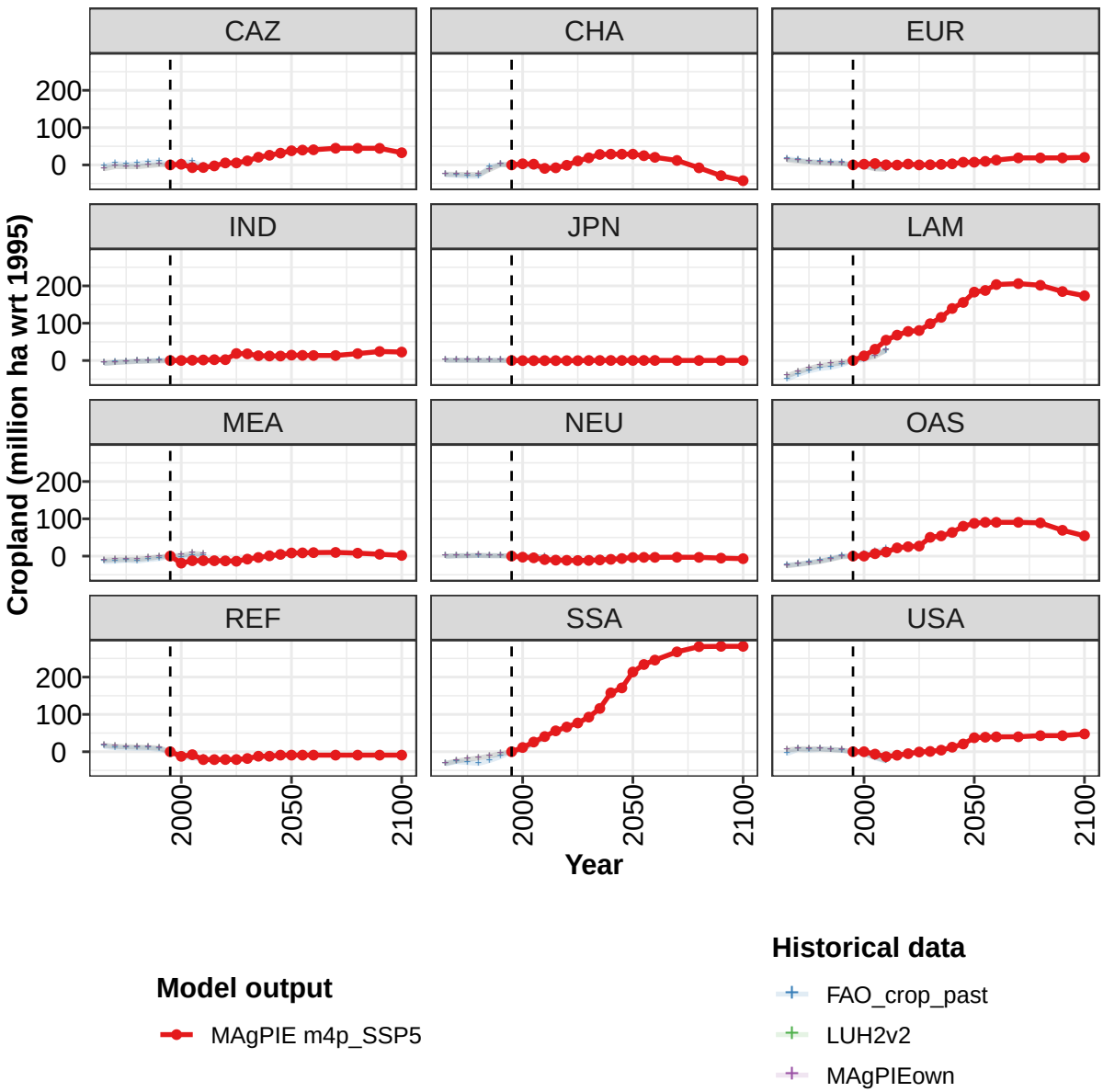
55 Land Cover Change




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Resources|Land Cover Change (million ha wrt 1995)
300
200
100
0
−100
−200
−300
2000
2025
2050
2075
2100
Total
Cropland
Forest
Other Land
Pastures and Rangelands
Urban Area

55.1 Cropland





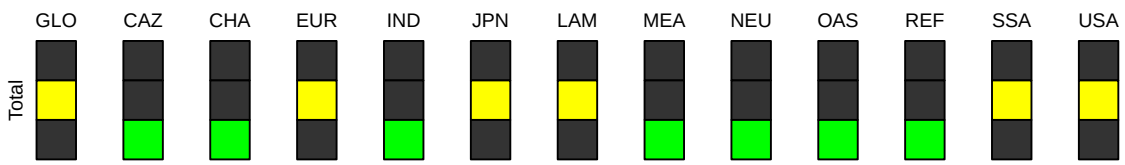


Figure 434: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Cropland (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	-3	31	36	84	128	172	254	327	423	496
CAZ	0	2	-7	-7	-3	5	5	11	21	26	32
CHA	0	3	2	-9	-8	-1	11	19	28	29	29
EUR	0	2	4	0	-0	2	0	1	1	3	7
IND	0	0	1	2	2	2	19	18	13	12	12
JPN	0	-0	-0	-0	-0	-0	-0	0	0	0	0
LAM	0	12	30	55	68	78	80	99	116	139	156
MEA	0	-19	-12	-12	-12	-13	-14	-8	-4	1	5
NEU	0	-3	-4	-9	-11	-11	-12	-11	-10	-9	-6
OAS	0	0	7	11	22	25	27	50	54	63	80
REF	0	-12	-8	-21	-21	-21	-21	-18	-12	-12	-9
SSA	0	11	26	41	56	66	77	93	116	158	171
USA	0	-0	-6	-13	-9	-5	-1	1	4	12	21

Table 1655: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Cropland (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	607	636	664	691	685	629	578
CAZ	38	40	41	45	45	44	33
CHA	29	25	20	12	-8	-29	-42
EUR	7	10	13	19	19	19	20
IND	14	14	13	13	18	24	23
JPN	0	0	0	0	0	0	0
LAM	183	188	204	206	202	185	174
MEA	8	9	9	10	8	5	2
NEU	-4	-3	-3	-3	-3	-5	-7
OAS	88	91	91	91	89	69	54
REF	-9	-9	-9	-9	-9	-9	-9
SSA	214	234	246	268	282	282	282
USA	37	39	40	40	43	43	48

Table 1656: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Cropland (million ha wrt 1995) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-133.1	-97.7	-93.0	-82.6	-33.4	-3.7	0.0	-4.0	16.6	11.6
CAZ	-3.1	3.5	1.3	3.1	7.5	8.4	0.0	7.1	8.1	-2.3
CHA	-26.4	-28.4	-30.2	-30.7	-5.0	1.3	0.0	-0.9	-5.4	-8.3
EUR	16.5	13.1	9.1	8.0	7.4	5.5	0.0	-2.0	-7.4	-10.3
IND	-7.5	-4.9	-3.1	-1.8	-0.6	0.2	0.0	0.2	-0.2	-0.7
JPN	1.0	0.8	0.5	0.4	0.3	0.2	0.0	-0.2	-0.3	-0.4
LAM	-50.1	-37.3	-27.9	-21.6	-18.2	-11.1	0.0	2.1	18.6	25.3
MEA	-14.9	-13.8	-11.2	-13.4	-9.5	-6.8	0.0	-3.2	1.5	1.2
NEU	-0.5	0.6	0.8	1.6	0.7	0.8	0.0	-1.1	-1.0	-3.3
OAS	-23.9	-21.6	-17.4	-12.3	-7.4	1.1	0.0	5.6	12.3	20.4
REF	13.9	10.4	9.9	9.0	9.3	6.5	0.0	-14.1	-17.0	-19.1
SSA	-32.8	-26.6	-29.0	-31.5	-23.6	-13.4	0.0	8.6	23.9	34.8
USA	-5.3	6.4	4.1	6.5	5.7	3.6	0.0	-6.1	-16.3	-25.6

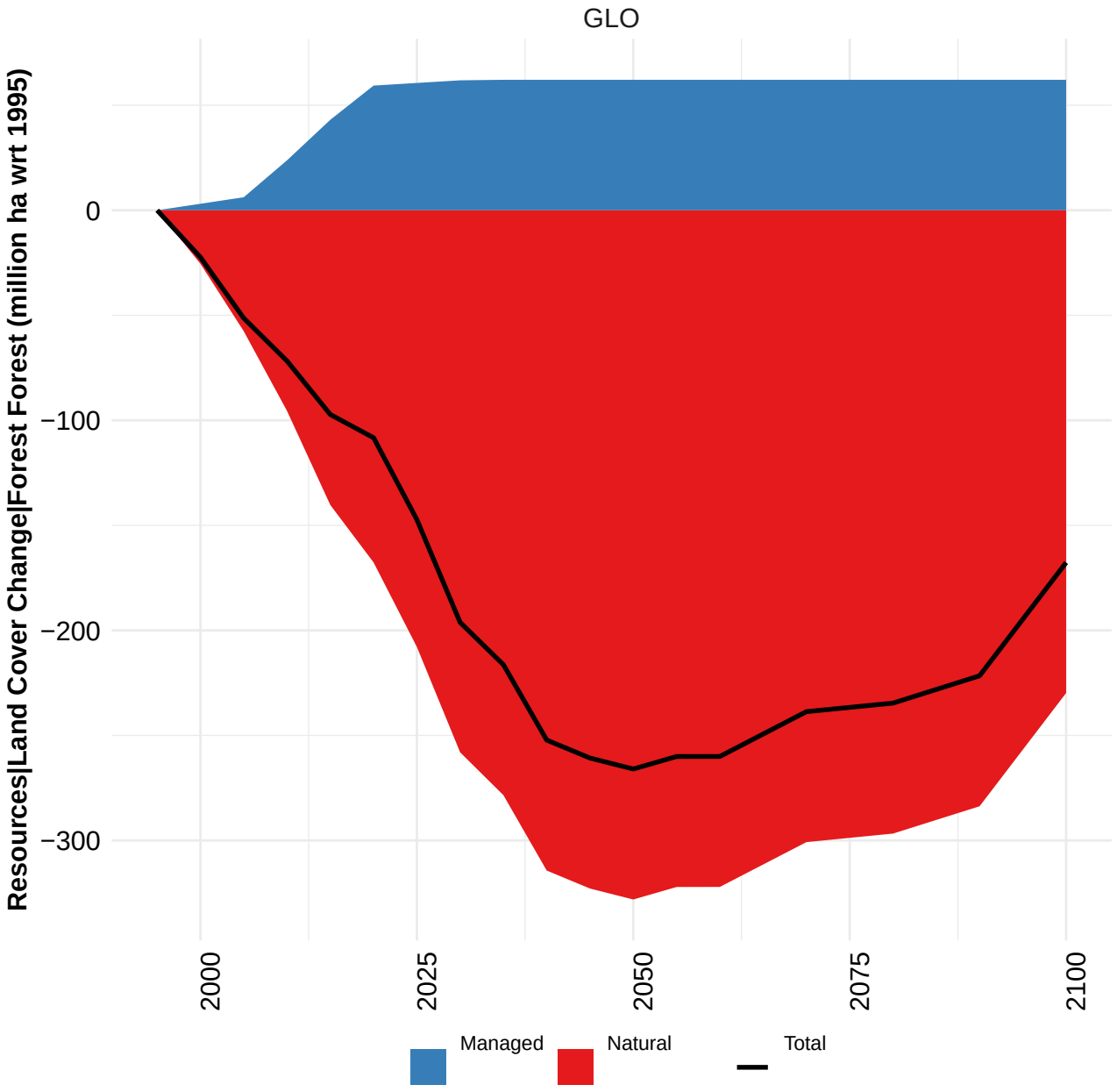
Table 1657: FAO_crop_past — Resources—Land Cover Change—Cropland (million ha wrt 1995)

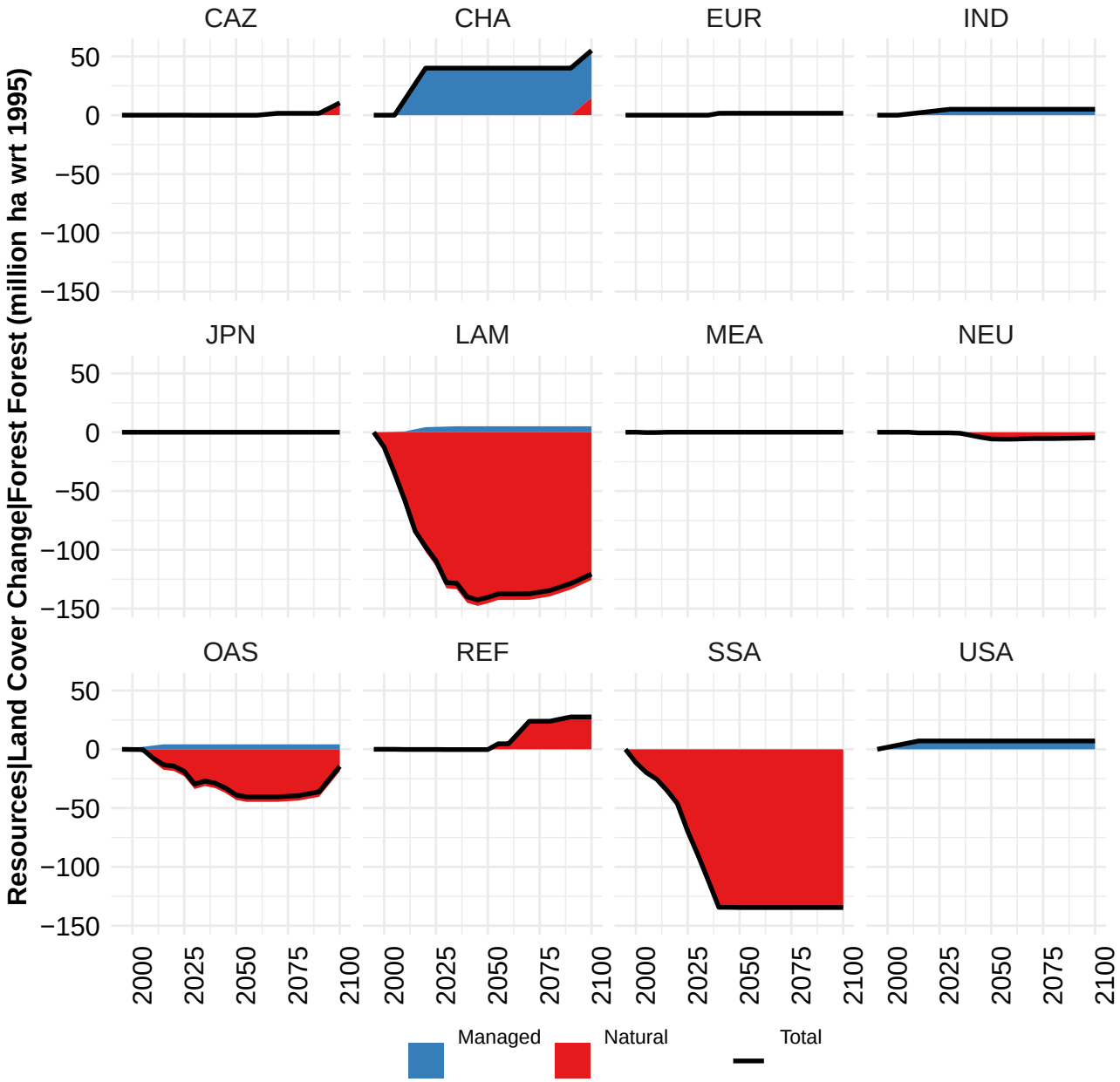
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-116.7	-88.3	-73.4	-58.5	-27.3	3.8	0.0	-3.8	12.9	17.4
CAZ	-10.3	-4.5	-4.6	-4.8	-2.1	0.6	0.0	-0.6	0.5	-9.8
CHA	-24.9	-25.3	-25.5	-25.7	-12.4	1.0	0.0	-1.0	1.1	-7.1
EUR	13.0	10.2	7.9	5.5	4.4	3.3	0.0	-3.3	-10.5	-11.8
IND	-7.5	-5.5	-4.0	-2.4	-1.8	-1.2	0.0	1.2	2.8	2.6
JPN	0.7	0.7	0.5	0.4	0.3	0.2	0.0	-0.2	-0.3	-0.4
LAM	-41.5	-30.2	-21.8	-13.4	-9.7	-5.9	0.0	5.9	11.0	28.1
MEA	-10.7	-9.5	-9.2	-9.0	-5.6	-2.2	0.0	2.2	6.9	5.7
NEU	-0.0	1.0	1.4	1.9	1.5	1.1	0.0	-1.1	-0.9	-3.0
OAS	-26.1	-22.3	-18.4	-14.4	-8.1	-1.8	0.0	1.8	7.0	15.6
REF	17.2	14.0	13.3	12.6	11.3	10.1	0.0	-10.1	-13.8	-16.8
SSA	-31.4	-24.7	-20.8	-16.8	-11.3	-5.8	0.0	5.8	23.5	38.2
USA	4.8	8.0	7.8	7.7	6.1	4.4	0.0	-4.4	-14.6	-23.9

Table 1658: LUH2v2 — Resources—Land Cover Change—Cropland (million ha wrt 1995)

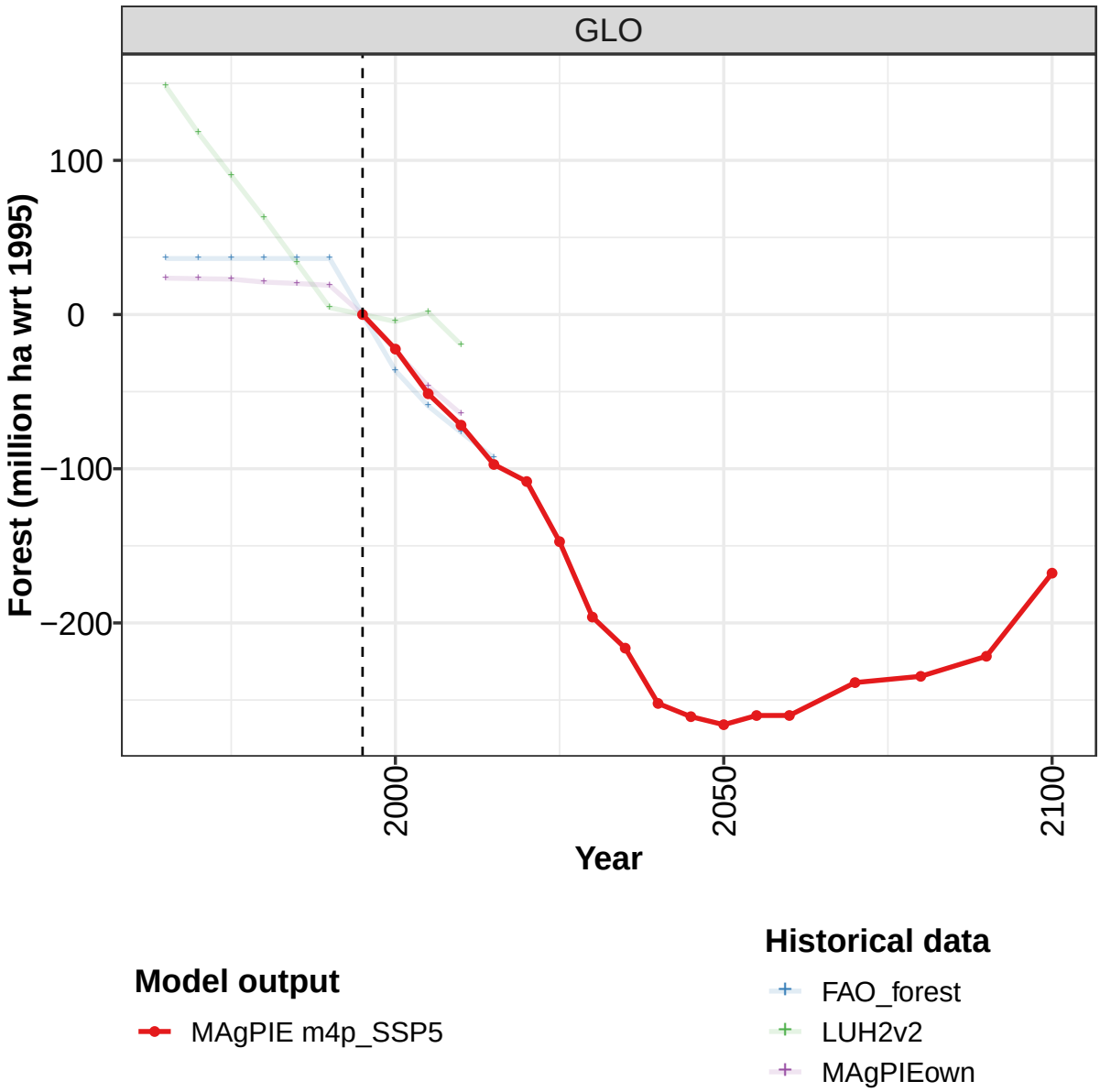
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-116.7	-88.3	-73.4	-58.5	-27.3	3.8	0.0	-3.8	12.9	17.4
CAZ	-10.3	-4.5	-4.6	-4.8	-2.1	0.6	0.0	-0.6	0.5	-9.8
CHA	-24.9	-25.3	-25.5	-25.7	-12.4	1.0	0.0	-1.0	1.1	-7.1
EUR	13.0	10.2	7.9	5.5	4.4	3.3	0.0	-3.3	-10.5	-11.8
IND	-7.5	-5.5	-4.0	-2.4	-1.8	-1.2	0.0	1.2	2.8	2.6
JPN	0.7	0.7	0.5	0.4	0.3	0.2	0.0	-0.2	-0.3	-0.4
LAM	-41.5	-30.2	-21.8	-13.4	-9.7	-5.9	0.0	5.9	11.0	28.1
MEA	-10.7	-9.5	-9.2	-9.0	-5.6	-2.2	0.0	2.2	6.9	5.7
NEU	-0.0	1.0	1.4	1.9	1.5	1.1	0.0	-1.1	-0.9	-3.0
OAS	-26.1	-22.3	-18.4	-14.4	-8.1	-1.8	0.0	1.8	7.0	15.6
REF	17.2	14.0	13.3	12.6	11.3	10.1	0.0	-10.1	-13.8	-16.8
SSA	-31.4	-24.7	-20.8	-16.8	-11.3	-5.8	0.0	5.8	23.5	38.2
USA	4.8	8.0	7.8	7.7	6.1	4.4	0.0	-4.4	-14.6	-23.9

Table 1659: MAgPIEown — Resources—Land Cover Change—Cropland (million ha wrt 1995)


GLO
Resources|Land Cover Change|Forest Forest (million ha wrt 1995)
0
−100
−200
−300
2000
2025
2050
2075
2100
Managed
Natural
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Resources|Land Cover Change|Forest Forest (million ha wrt 1995)
50
0
−50
−100
−150
2000
2025
2050
2075
2100
Managed
Natural
Total

55.2 Forest


GLO
Forest (million ha wrt 1995)
100
0
−100
−200
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO_forest
LUH2v2
MAgPIEown

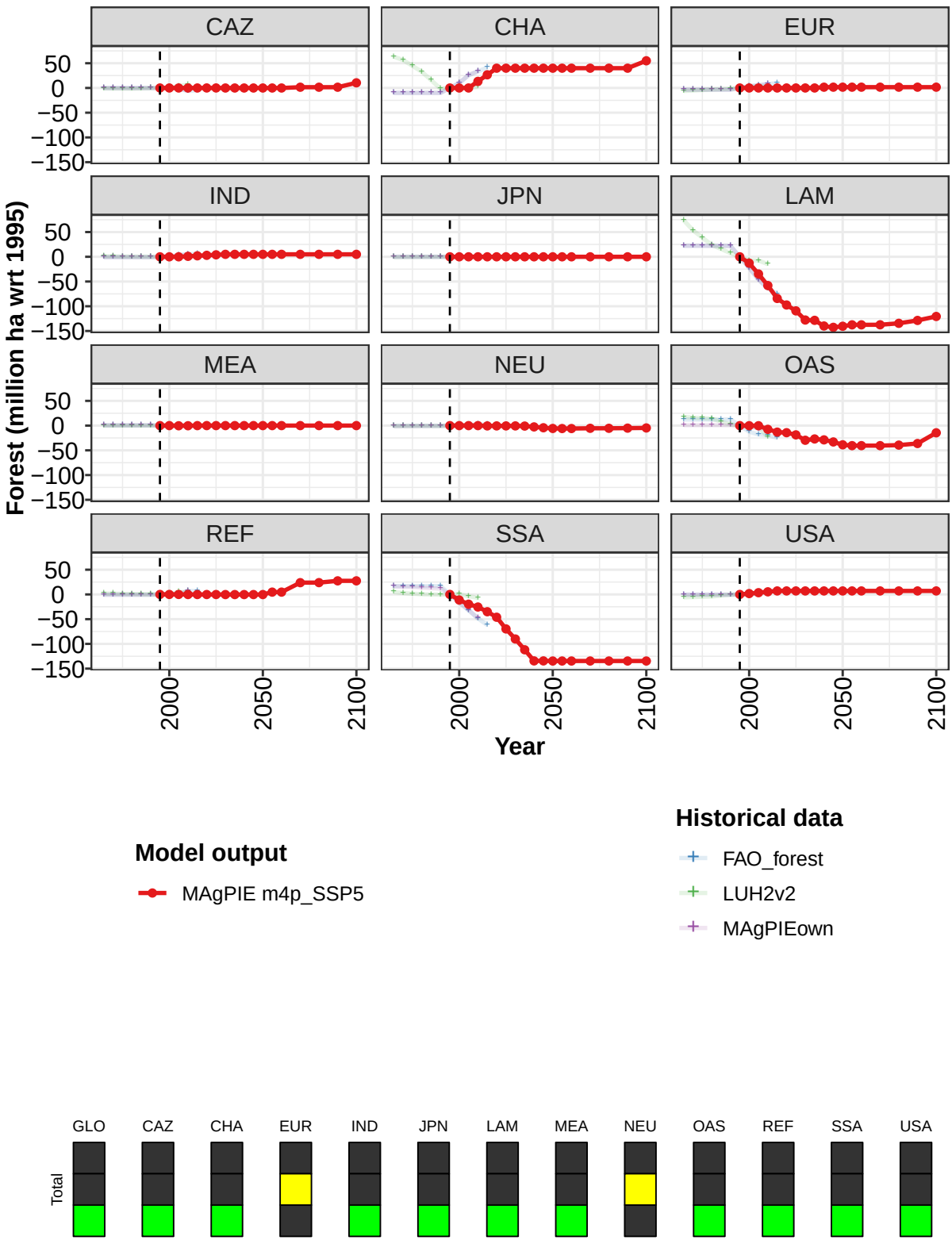


Figure 435: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-22.4	-51.4	-71.7	-97.2	-108.3	-147.3	-196.2	-216.3	-252.2	-260.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1
CHA	0.0	0.0	0.0	13.3	26.7	40.0	40.0	40.0	40.0	40.0	40.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
IND	0.0	0.0	0.0	1.0	2.0	3.0	4.0	5.0	5.0	5.0	5.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	-12.8	-34.7	-58.1	-84.2	-97.4	-109.3	-127.8	-128.5	-139.9	-142.6
MEA	0.0	0.0	-0.3	-0.2	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	-0.0	-0.0	-0.6	-0.6	-0.6	-0.6	-0.9	-2.6	-4.3
OAS	0.0	-0.2	-0.2	-7.5	-13.1	-14.3	-18.7	-29.6	-27.0	-28.8	-33.0
REF	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
SSA	0.0	-11.3	-19.7	-25.4	-34.9	-46.1	-69.7	-90.1	-111.9	-134.4	-134.4
USA	0.0	1.8	3.6	5.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1

Table 1660: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	-266.0	-260.0	-260.0	-238.7	-234.6	-221.6	-167.7
CAZ	-0.1	-0.1	-0.1	1.6	1.6	1.6	10.4
CHA	40.0	40.0	40.0	40.0	40.0	40.0	55.0
EUR	1.6	1.6	1.6	1.6	1.6	1.6	1.6
IND	5.0	5.0	5.0	5.0	5.0	5.0	5.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	-140.4	-137.6	-137.6	-137.4	-134.5	-128.7	-120.6
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	-5.7	-5.9	-5.9	-5.4	-5.4	-5.1	-4.7
OAS	-38.8	-40.5	-40.4	-40.4	-39.4	-36.2	-14.5
REF	-0.2	4.7	4.7	23.8	23.9	27.5	27.5
SSA	-134.6	-134.6	-134.6	-134.6	-134.6	-134.6	-134.6
USA	7.1	7.1	7.1	7.1	7.1	7.1	7.1

Table 1661: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest (million ha wrt 1995) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
GLO	36.3	36.3	36.3	36.3	36.3	36.3	0.0	-36.3	-59.3	-76.4	-92.9
CAZ	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	0.0	0.2	-1.2	-6.0	-4.7
CHA	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	0.0	9.9	26.0	33.5	41.3
EUR	-3.4	-3.4	-3.4	-3.4	-3.4	-3.4	0.0	3.4	5.4	7.9	9.7
IND	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	0.0	0.7	3.0	5.1	6.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	0.0	0.1	0.0
LAM	22.3	22.3	22.3	22.3	22.3	22.3	0.0	-22.3	-46.1	-63.9	-74.8
MEA	0.6	0.6	0.6	0.6	0.6	0.6	0.0	-0.6	0.4	0.3	-0.5
NEU	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	0.0	0.4	0.9	1.9	2.5
OAS	12.3	12.3	12.3	12.3	12.3	12.3	0.0	-12.3	-17.8	-19.5	-24.7
REF	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	0.0	0.6	0.5	6.9	6.9
SSA	16.9	16.9	16.9	16.9	16.9	16.9	0.0	-16.9	-32.2	-48.4	-61.8
USA	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	0.5	1.8	5.7	7.1

Table 1662: FAO_forest — Resources—Land Cover Change—Forest (million ha wrt 1995)

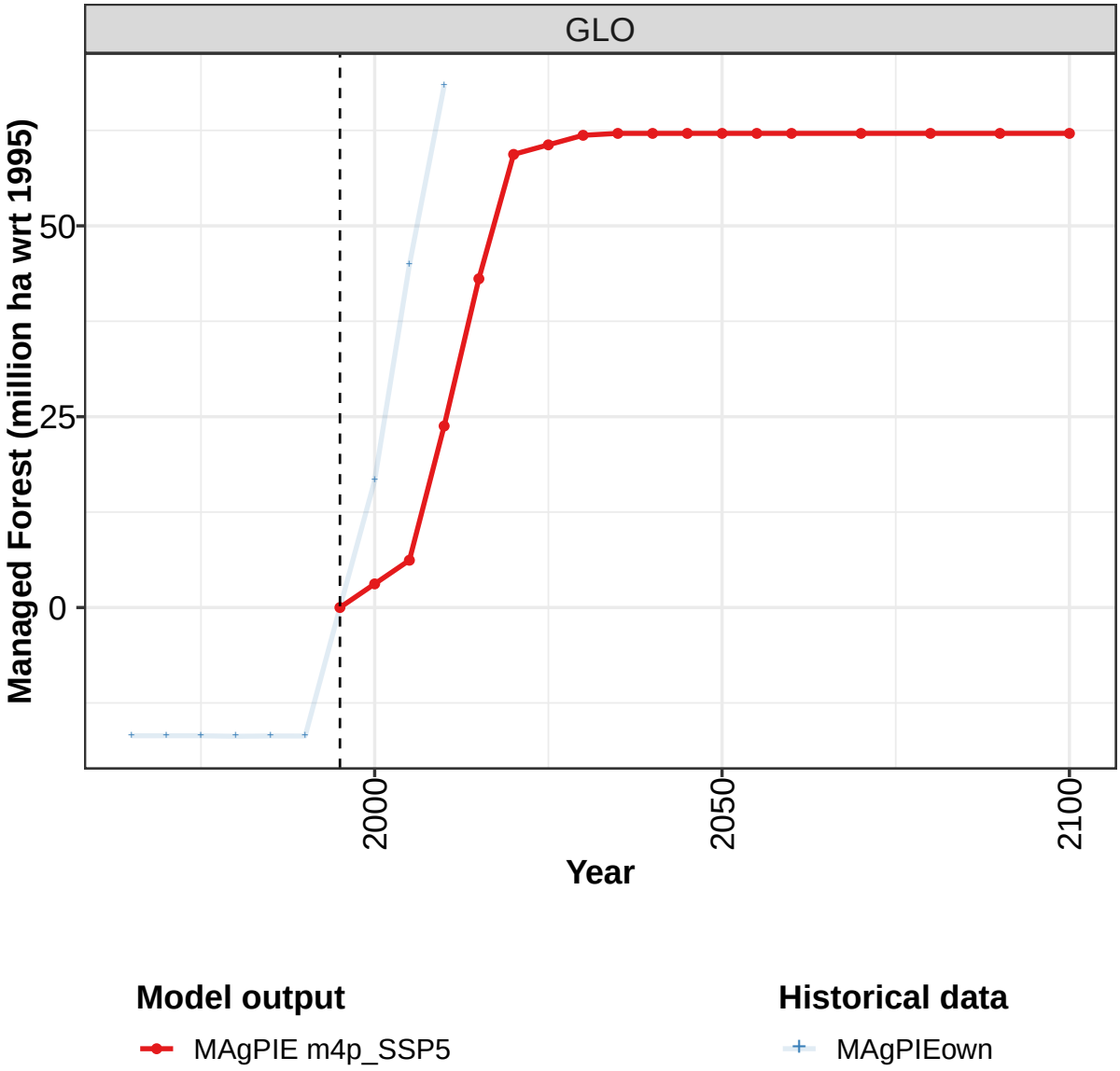
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	148	118	90	63	34	5	0	-5	1	-20
CAZ	-1	-1	-1	-1	-1	-0	0	0	4	7
CHA	63	56	45	33	16	-1	0	1	0	3
EUR	-6	-5	-4	-3	-2	-2	0	2	3	3
IND	1	1	0	0	0	0	0	-0	-0	-0
JPN	-1	-1	-1	-0	-0	-0	0	0	0	0
LAM	74	53	39	24	16	8	0	-8	-8	-15
MEA	0	0	0	0	0	0	0	0	0	0
NEU	-1	-1	-1	-1	-1	-1	0	1	1	1
OAS	18	16	15	14	8	2	0	-2	-4	-22
REF	2	2	1	1	1	0	0	-0	5	5
SSA	5	3	2	0	-0	-0	0	0	-4	-7
USA	-6	-5	-5	-4	-2	-1	0	1	3	6

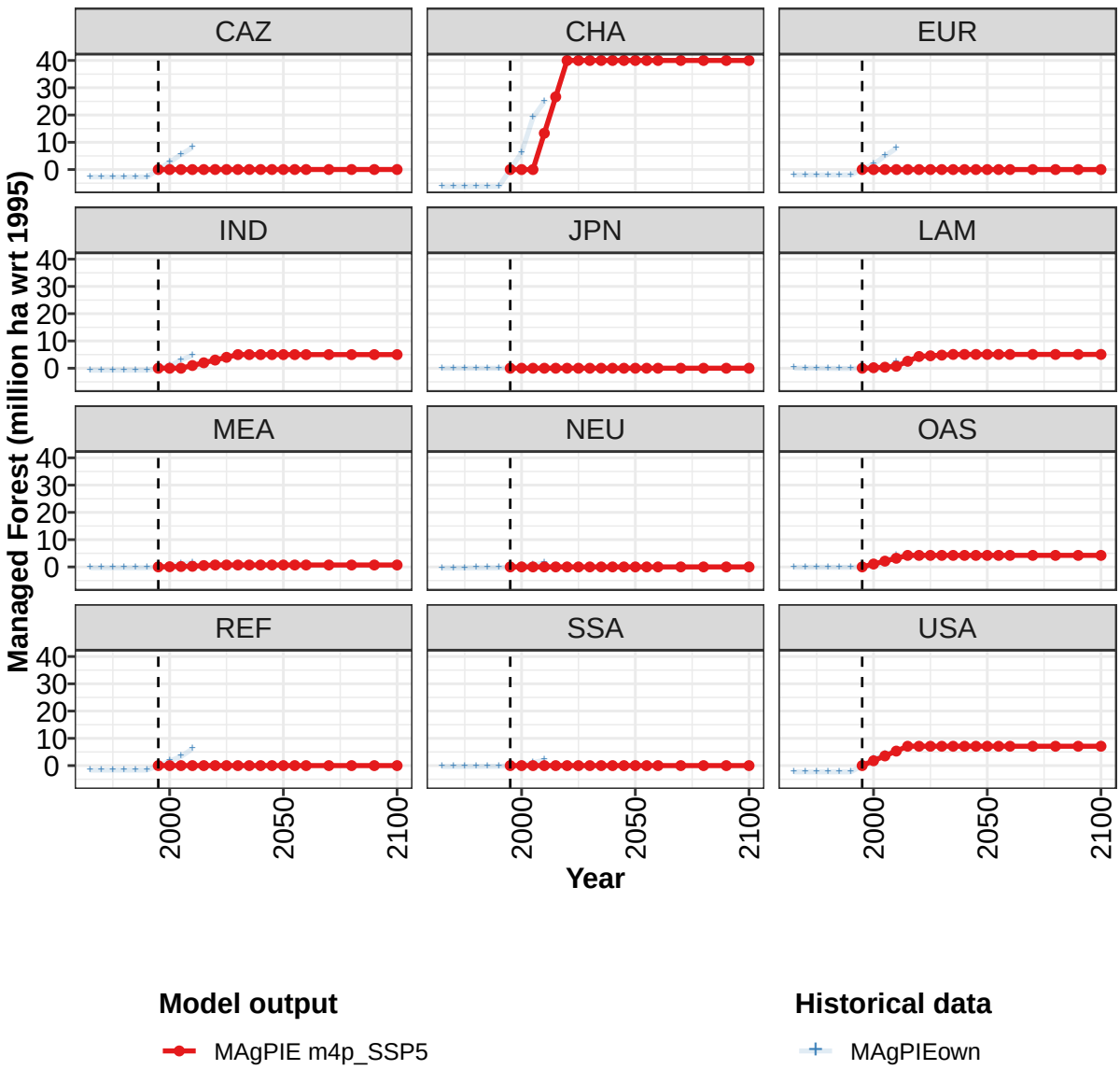
Table 1663: LUH2v2 — Resources—Land Cover Change—Forest (million ha wrt 1995)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	23.6	23.2	23.0	21.1	20.2	18.9	0.0	-23.4	-46.4	-64.5
CAZ	-0.2	-0.2	-0.2	-0.4	-0.2	-0.2	0.0	0.2	-1.2	-6.0
CHA	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	0.0	9.9	26.0	33.5
EUR	-3.4	-3.4	-3.4	-3.4	-3.4	-3.4	0.0	3.4	5.4	7.9
IND	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	0.0	0.7	3.0	5.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	0.0	0.1
LAM	22.5	22.4	22.3	22.0	21.9	21.8	0.0	-22.2	-45.9	-63.7
MEA	0.6	0.6	0.6	0.6	0.6	0.6	0.0	-0.6	0.4	0.3
NEU	-1.1	-1.0	-0.9	-0.8	-0.7	-0.7	0.0	0.5	1.0	1.9
OAS	1.0	1.0	1.0	1.0	0.9	0.9	0.0	-0.9	-6.3	-8.0
REF	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	0.0	0.6	0.5	6.9
SSA	16.1	15.7	15.4	13.9	12.8	11.7	0.0	-15.5	-31.0	-48.1
USA	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	0.5	1.8	5.7

Table 1664: MAgPIEown — Resources—Land Cover Change—Forest (million ha wrt 1995)

55.2.1 Managed Forest





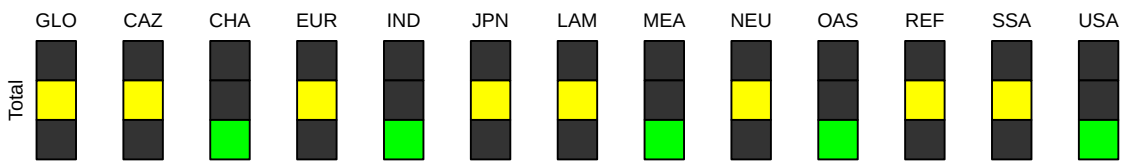


Figure 436: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Managed Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	3.1	6.2	23.8	43.1	59.4	60.6	61.9	62.1	62.1	62.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	13.3	26.7	40.0	40.0	40.0	40.0	40.0	40.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	1.0	2.0	3.0	4.0	5.0	5.0	5.0	5.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.2	0.4	0.7	2.6	4.3	4.6	4.8	5.1	5.1	5.1
MEA	0.0	0.1	0.2	0.2	0.5	0.7	0.7	0.7	0.7	0.7	0.7
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.0	1.1	2.1	3.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	1.8	3.6	5.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1

Table 1665: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Managed Forest (million ha wrt 1995) [PART 1/2]

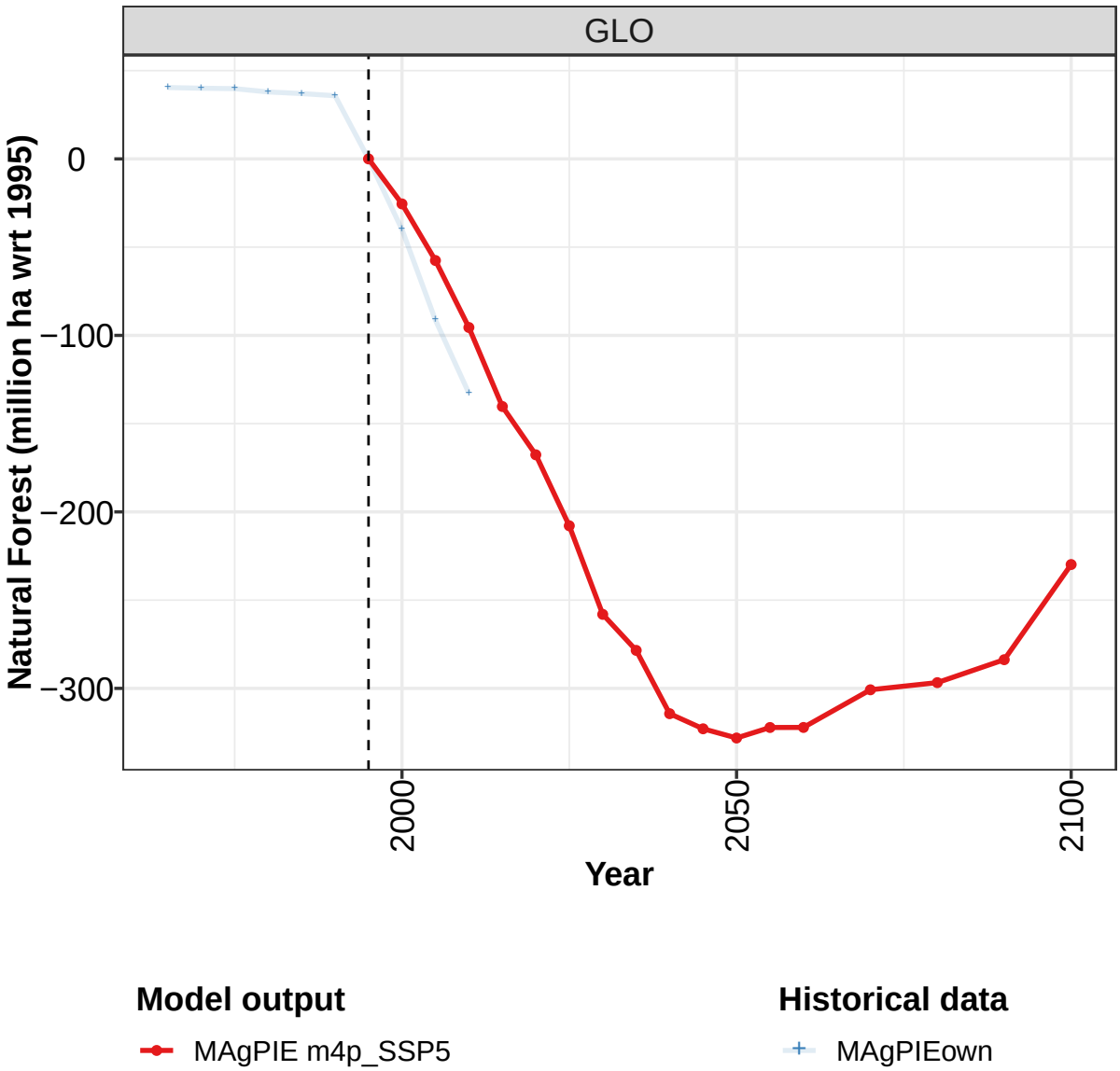
	2050	2055	2060	2070	2080	2090	2100
GLO	62.1	62.1	62.1	62.1	62.1	62.1	62.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	40.0	40.0	40.0	40.0	40.0	40.0	40.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	5.0	5.0	5.0	5.0	5.0	5.0	5.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	5.1	5.1	5.1	5.1	5.1	5.1	5.1
MEA	0.7	0.7	0.7	0.7	0.7	0.7	0.7
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	4.2	4.2	4.2	4.2	4.2	4.2	4.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	7.1	7.1	7.1	7.1	7.1	7.1	7.1

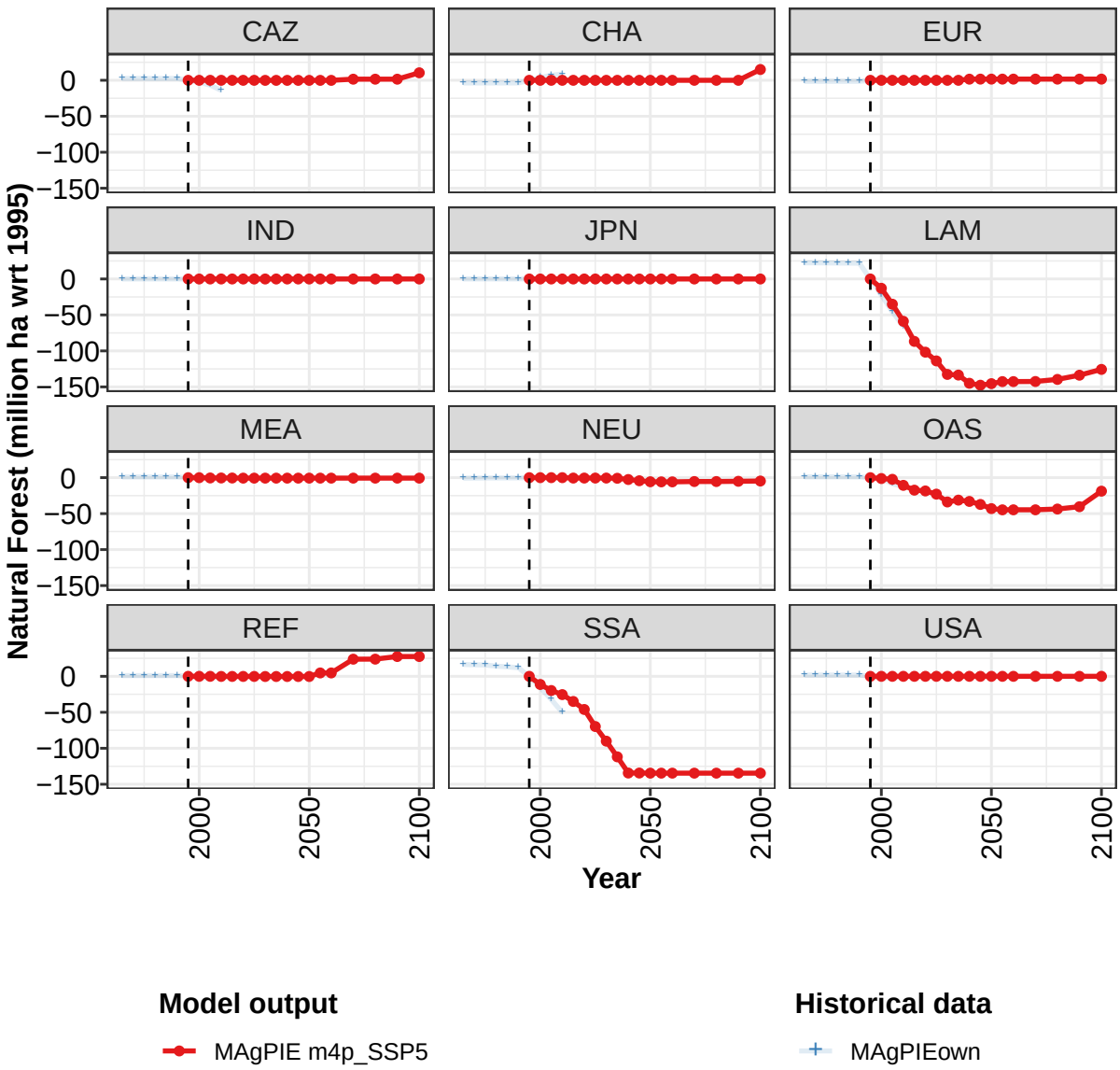
Table 1666: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Managed Forest (million ha wrt 1995) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-16.8	-16.8	-16.8	-16.9	-16.8	-16.8	0.0	16.7	44.9	68.3
CAZ	-2.7	-2.7	-2.7	-2.8	-2.7	-2.7	0.0	2.7	5.5	8.1
CHA	-6.2	-6.2	-6.2	-6.2	-6.2	-6.2	0.0	6.2	19.0	24.9
EUR	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	2.0	5.0	7.8
IND	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	0.0	0.7	3.0	4.7
JPN	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	0.0	-0.0
LAM	0.0	0.0	-0.0	-0.1	-0.1	-0.1	0.0	-0.1	-0.3	2.1
MEA	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	0.0	0.3	1.2	1.5
NEU	-0.4	-0.4	-0.4	-0.4	-0.4	-0.3	0.0	0.3	0.7	1.5
OAS	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	0.0	0.2	2.2	4.2
REF	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	0.0	1.6	3.3	6.2
SSA	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	0.0	0.3	1.0	2.1
USA	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	0.0	2.3	4.2	5.3

Table 1667: MAgPIEown — Resources—Land Cover Change—Forest—Managed Forest (million ha wrt 1995)

55.2.2 Natural Forest





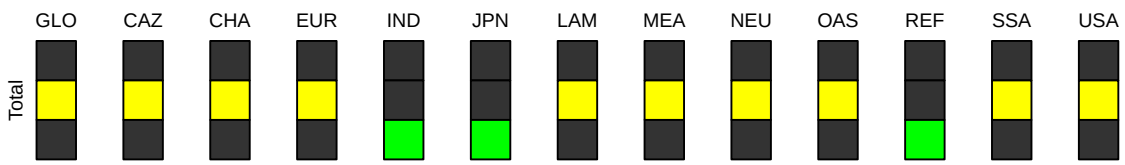


Figure 437: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-25.5	-57.6	-95.5	-140.3	-167.7	-207.9	-258.1	-278.5	-314.3	-322.9
CAZ	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	-13.0	-35.1	-58.8	-86.8	-101.7	-113.9	-132.6	-133.5	-145.0	-147.6
MEA	0.0	-0.0	-0.4	-0.5	-0.5	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
NEU	0.0	0.0	-0.0	-0.0	-0.6	-0.6	-0.6	-0.6	-0.9	-2.6	-4.3
OAS	0.0	-1.2	-2.3	-10.7	-17.4	-18.5	-22.9	-33.8	-31.2	-33.0	-37.2
REF	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
SSA	0.0	-11.3	-19.7	-25.4	-34.9	-46.1	-69.7	-90.1	-111.9	-134.4	-134.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1668: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest (million ha wrt 1995) [PART 1/2]

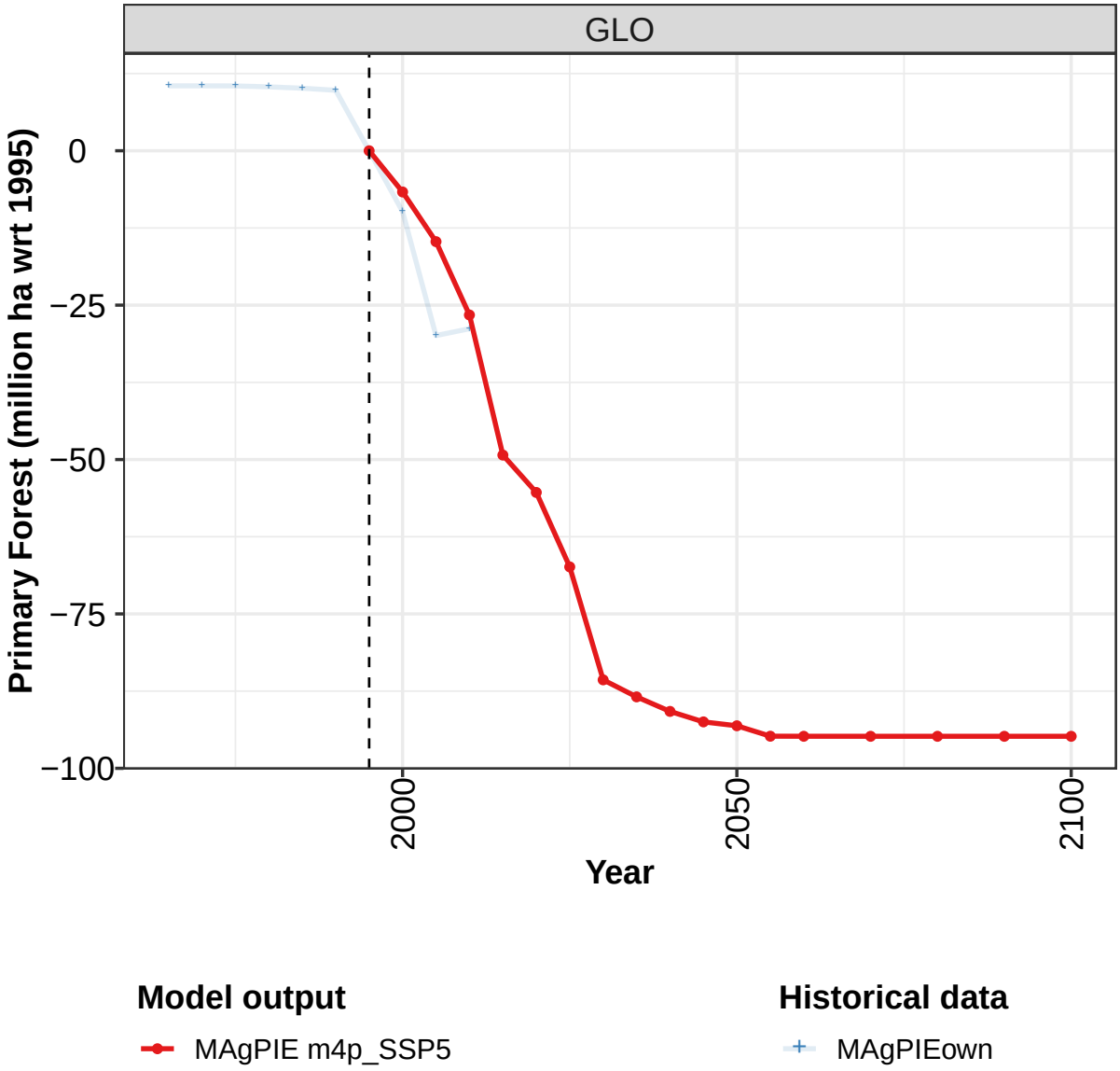
	2050	2055	2060	2070	2080	2090	2100
GLO	-328.1	-322.2	-322.1	-300.8	-296.7	-283.7	-229.8
CAZ	-0.1	-0.1	-0.1	1.5	1.5	1.5	10.4
CHA	0.0	0.0	0.0	0.0	0.0	0.0	15.0
EUR	1.6	1.6	1.6	1.6	1.6	1.6	1.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	-145.5	-142.6	-142.6	-142.5	-139.6	-133.7	-125.7
MEA	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
NEU	-5.7	-5.9	-5.9	-5.4	-5.4	-5.1	-4.7
OAS	-43.0	-44.7	-44.7	-44.7	-43.6	-40.4	-18.8
REF	-0.2	4.7	4.7	23.8	23.9	27.5	27.5
SSA	-134.6	-134.6	-134.6	-134.6	-134.6	-134.6	-134.6
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

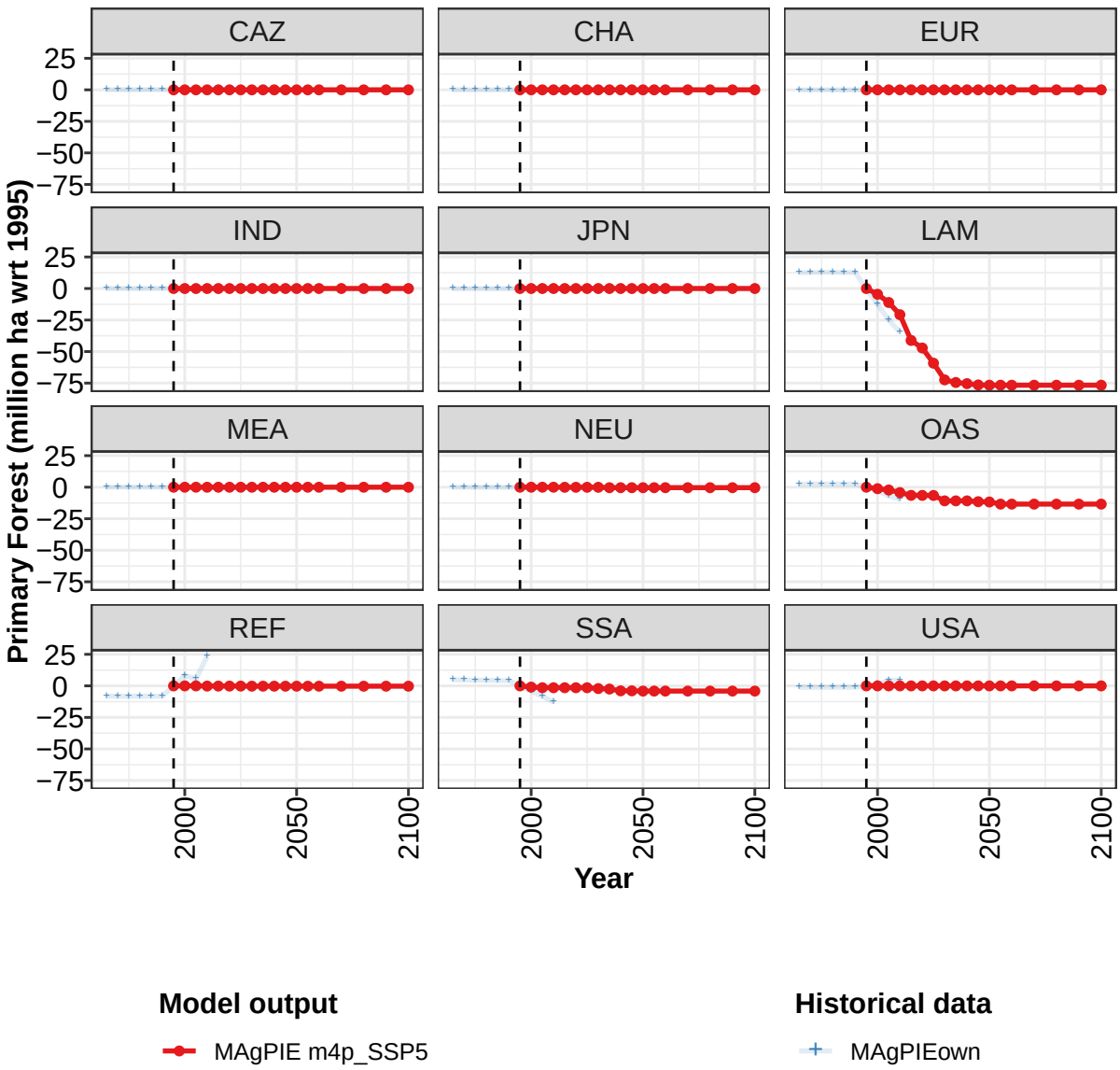
Table 1669: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest (million ha wrt 1995) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	40.4	40.0	39.8	37.9	37.0	35.8	0.0	-40.0	-91.3	-132.8
CAZ	2.6	2.6	2.6	2.3	2.6	2.6	0.0	-2.6	-6.8	-14.0
CHA	-3.7	-3.7	-3.7	-3.7	-3.7	-3.7	0.0	3.7	6.9	8.6
EUR	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	0.0	1.5	0.4	0.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-0.1	0.0	0.1
LAM	22.4	22.4	22.3	22.1	22.0	21.9	0.0	-22.2	-45.6	-65.8
MEA	0.9	0.9	0.9	0.9	0.9	0.9	0.0	-0.9	-0.7	-1.2
NEU	-0.7	-0.6	-0.5	-0.4	-0.4	-0.3	0.0	0.2	0.4	0.3
OAS	1.1	1.1	1.1	1.1	1.1	1.0	0.0	-1.0	-8.6	-12.2
REF	1.0	1.0	1.0	1.0	1.0	1.0	0.0	-1.0	-2.9	0.7
SSA	16.5	16.0	15.7	14.2	13.1	12.0	0.0	-15.8	-32.1	-50.2
USA	1.8	1.8	1.8	1.8	1.8	1.8	0.0	-1.8	-2.4	0.4

Table 1670: MAgPIEown — Resources—Land Cover Change—Forest—Natural Forest (million ha wrt 1995)

55.2.3 Natural Forest—Primary Forest





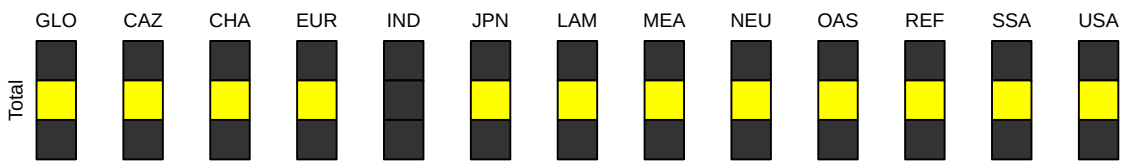


Figure 438: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest—Primary Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	-7	-15	-27	-49	-55	-67	-86	-88	-91	-92
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	-5	-11	-21	-41	-47	-59	-72	-74	-75	-76
MEA	0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0
NEU	0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0
OAS	0	-1	-2	-4	-6	-6	-7	-11	-11	-11	-11
REF	0	0	0	-0	-0	-0	-0	-0	-0	-0	-0
SSA	0	-1	-1	-1	-1	-1	-1	-2	-3	-4	-4
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1671: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest—Primary Forest (million ha wrt 1995) [PART 1/2]

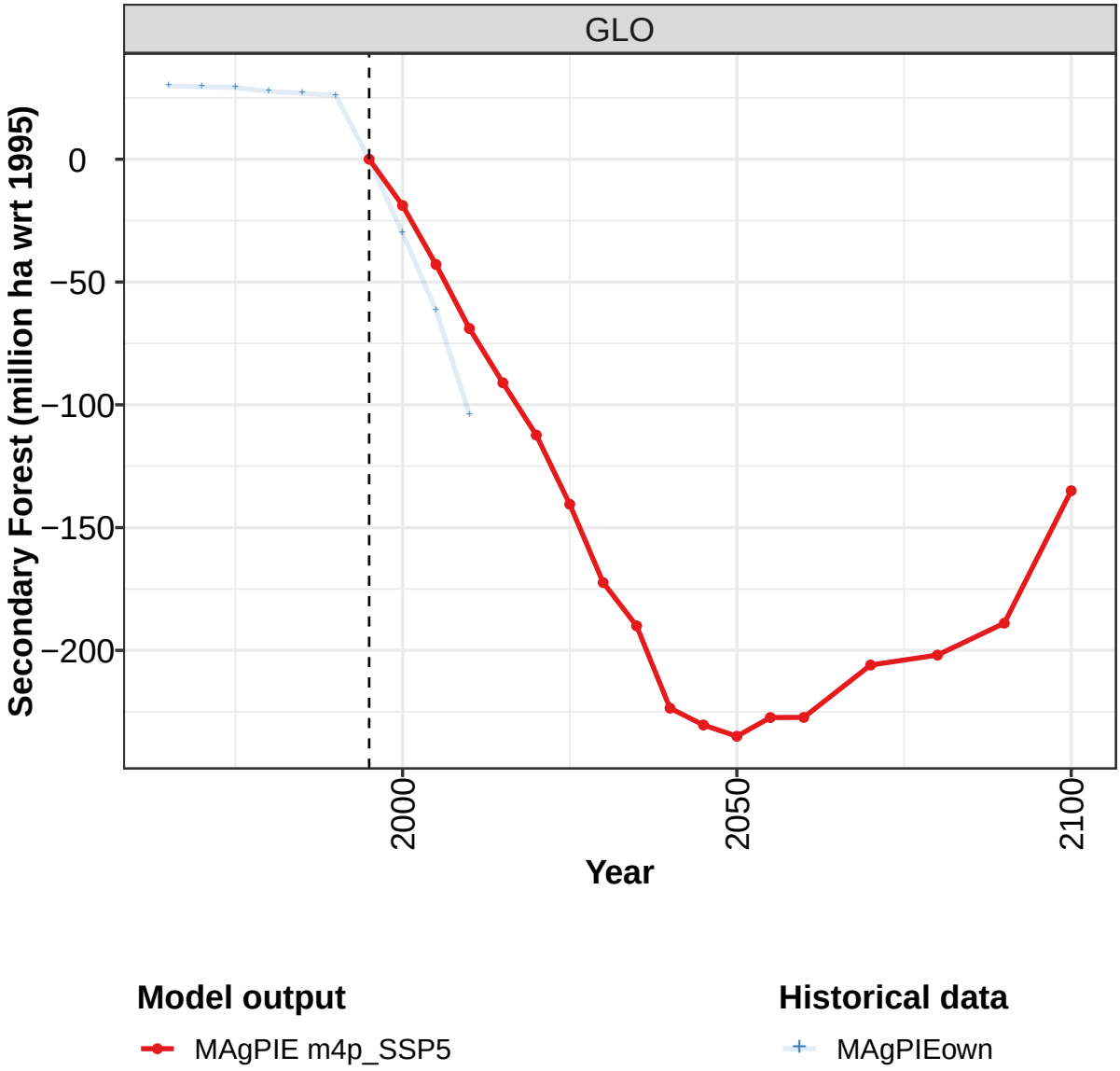
	2050	2055	2060	2070	2080	2090	2100
GLO	-93	-95	-95	-95	-95	-95	-95
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	-77	-77	-77	-77	-77	-77	-77
MEA	-0	-0	-0	-0	-0	-0	-0
NEU	-0	-0	-0	-0	-0	-0	-0
OAS	-12	-13	-13	-13	-13	-13	-13
REF	-0	-0	-0	-0	-0	-0	-0
SSA	-4	-4	-4	-4	-4	-4	-4
USA	0	0	0	0	0	0	0

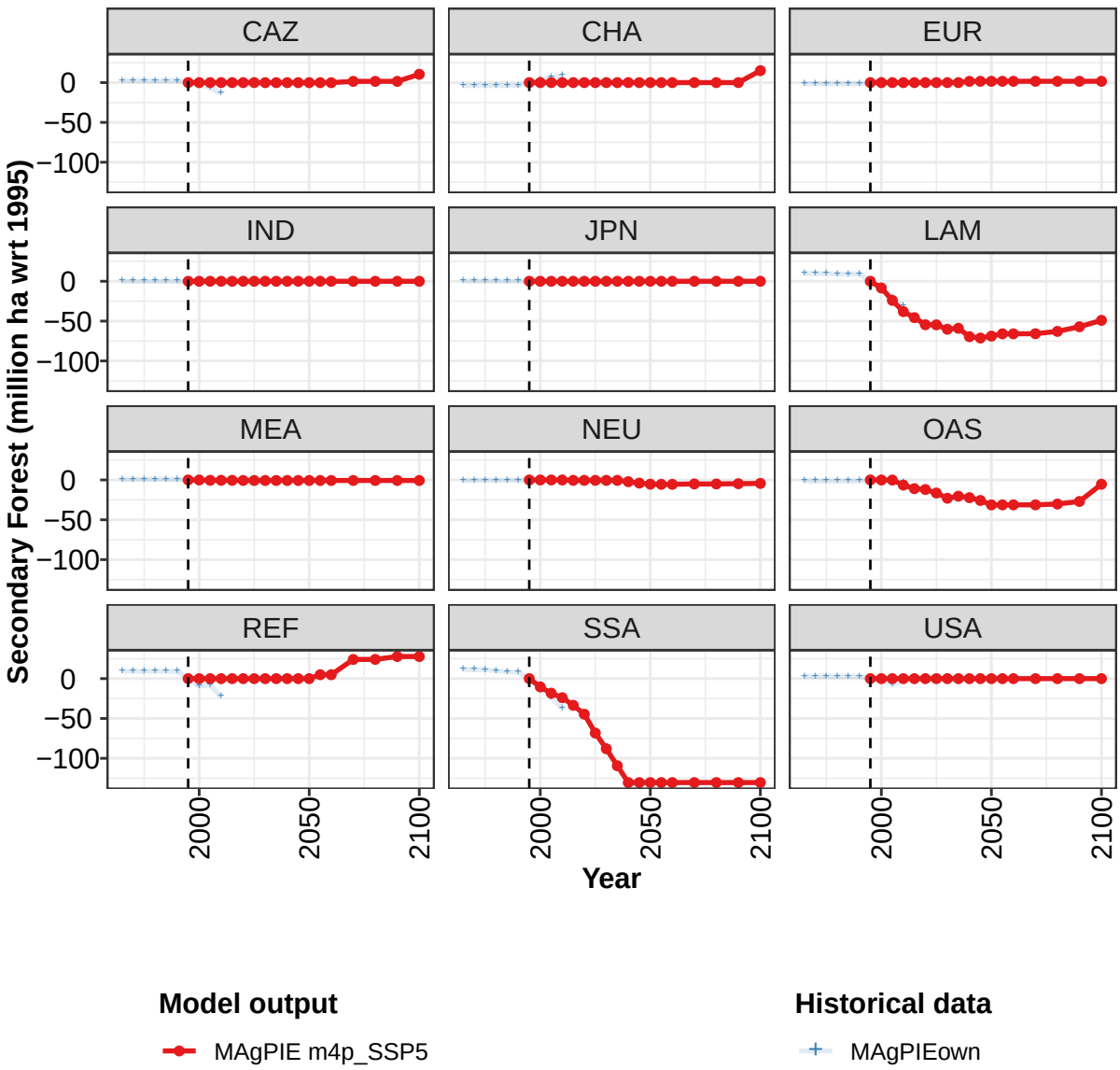
Table 1672: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest—Primary Forest (million ha wrt 1995) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	10.5	10.5	10.5	10.3	10.1	9.8	0.0	-9.9	-29.9	-28.8
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-0.1	-0.3	-0.7
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0
EUR	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.5	0.9
LAM	12.6	12.7	12.8	12.9	12.8	12.6	0.0	-12.6	-25.0	-34.5
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-0.1	-0.1	-0.2
NEU	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	0.0	0.1
OAS	2.5	2.5	2.5	2.5	2.5	2.4	0.0	-2.4	-7.0	-9.5
REF	-8.2	-8.2	-8.2	-8.2	-8.2	-8.2	0.0	8.2	5.6	23.3
SSA	4.8	4.7	4.6	4.4	4.3	4.2	0.0	-4.2	-8.3	-12.7
USA	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	0.0	1.1	4.6	4.1

Table 1673: MAgPIEown — Resources—Land Cover Change—Forest—Natural Forest—Primary Forest (million ha wrt 1995)

55.2.4 Natural Forest—Secondary Forest





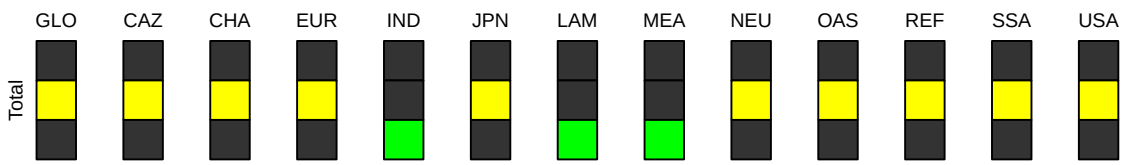


Figure 439: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest—Secondary Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-18.8	-42.8	-68.9	-91.0	-112.3	-140.5	-172.4	-190.0	-223.5	-230.4
CAZ	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	-8.4	-24.0	-38.1	-45.6	-54.6	-54.7	-60.2	-59.0	-69.5	-71.2
MEA	0.0	-0.0	-0.4	-0.5	-0.5	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
NEU	0.0	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5	-2.2	-3.9
OAS	0.0	-0.1	-0.1	-6.5	-10.9	-12.0	-16.4	-23.0	-20.4	-22.2	-25.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.0	-10.3	-18.3	-23.9	-33.5	-44.6	-68.3	-88.0	-109.4	-130.4	-130.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1674: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest—Secondary Forest (million ha wrt 1995) [PART 1/2]

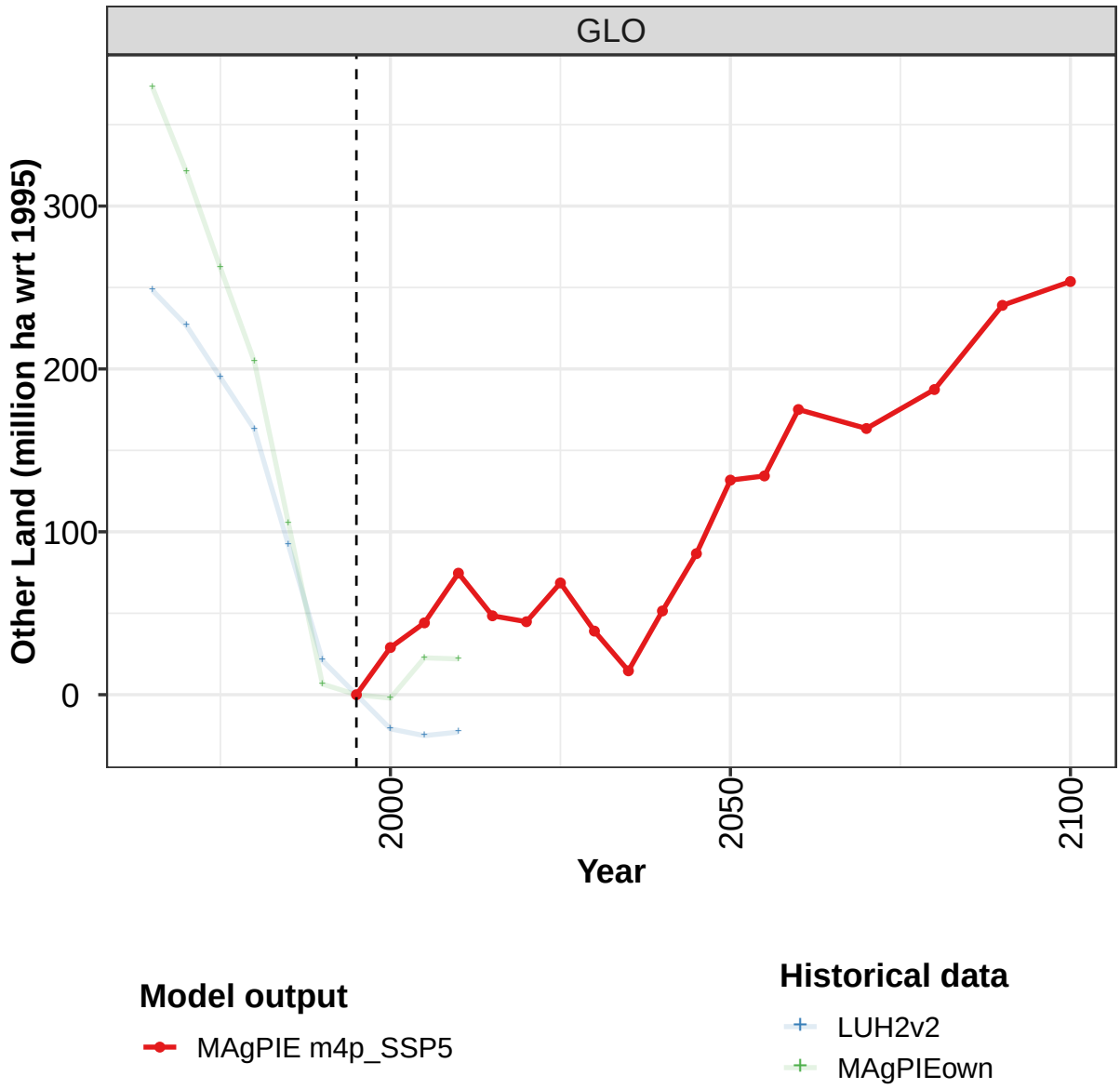
	2050	2055	2060	2070	2080	2090	2100
GLO	-235.0	-227.4	-227.3	-206.0	-201.9	-188.9	-135.0
CAZ	-0.1	-0.1	-0.1	1.5	1.5	1.5	10.4
CHA	0.0	0.0	0.0	0.0	0.0	0.0	15.0
EUR	1.6	1.6	1.6	1.6	1.6	1.6	1.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	-68.8	-66.0	-66.0	-65.8	-62.9	-57.1	-49.0
MEA	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
NEU	-5.3	-5.5	-5.5	-5.0	-5.0	-4.7	-4.3
OAS	-31.3	-31.3	-31.3	-31.3	-30.2	-27.0	-5.3
REF	0.0	4.9	4.9	24.0	24.1	27.8	27.8
SSA	-130.4	-130.4	-130.4	-130.4	-130.4	-130.4	-130.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

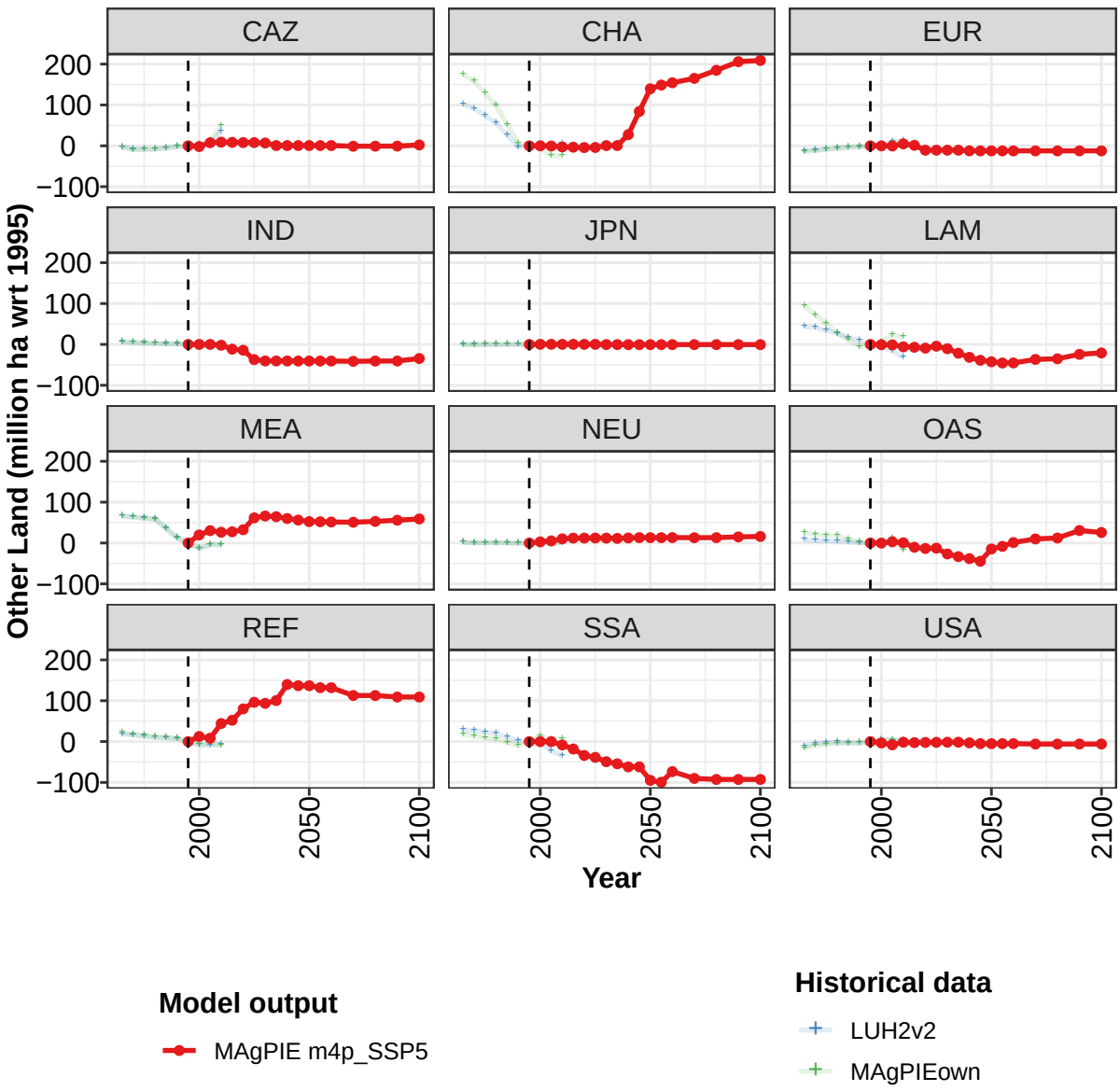
Table 1675: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Forest—Natural Forest—Secondary Forest (million ha wrt 1995) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	29.9	29.5	29.3	27.6	26.9	26.0	0.0	-30.2	-61.4	-104.0
CAZ	2.4	2.4	2.4	2.2	2.4	2.4	0.0	-2.4	-6.4	-13.3
CHA	-3.7	-3.7	-3.7	-3.7	-3.7	-3.7	0.0	3.7	6.9	8.7
EUR	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	0.0	1.4	0.3	-0.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.0	-0.2	-0.5	-0.8
LAM	9.8	9.7	9.5	9.2	9.3	9.3	0.0	-9.6	-20.6	-31.2
MEA	0.9	0.9	0.9	0.9	0.9	0.9	0.0	-0.9	-0.6	-1.1
NEU	-0.7	-0.6	-0.5	-0.4	-0.4	-0.3	0.0	0.1	0.3	0.3
OAS	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	0.0	1.4	-1.6	-2.8
REF	9.3	9.3	9.3	9.3	9.3	9.3	0.0	-9.3	-8.4	-22.6
SSA	11.6	11.3	11.2	9.8	8.8	7.9	0.0	-11.6	-23.7	-37.5
USA	2.9	2.9	2.9	2.9	2.9	2.9	0.0	-2.9	-7.0	-3.7

Table 1676: MAgPIEown — Resources—Land Cover Change—Forest—Natural Forest—Secondary Forest (million ha wrt 1995)

55.3 Other Land





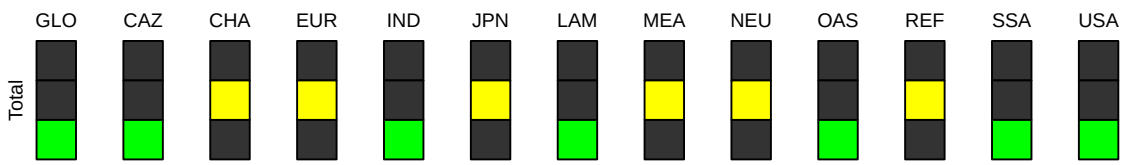


Figure 440: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Other Land (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	29	44	75	48	45	69	39	15	51	87
CAZ	0	-2	8	9	8	8	8	7	1	1	1
CHA	0	-0	-1	-3	-3	-4	-4	0	1	27	84
EUR	0	-0	-1	5	1	-11	-11	-11	-11	-12	-12
IND	0	0	0	-2	-12	-14	-37	-40	-41	-41	-41
JPN	0	0	0	0	0	0	0	-0	-0	-1	-1
LAM	0	-1	-1	-6	-7	-9	-4	-11	-22	-32	-39
MEA	0	20	30	26	27	33	62	66	64	60	56
NEU	0	3	5	10	12	12	12	12	11	12	13
OAS	0	-0	3	1	-11	-13	-13	-27	-33	-38	-45
REF	0	12	8	44	52	80	96	94	100	140	137
SSA	0	-0	-0	-8	-18	-34	-39	-49	-54	-62	-62
USA	0	-3	-8	-2	-2	-2	-2	-2	-2	-3	-5

Table 1677: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Other Land (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	132	134	175	163	187	239	254
CAZ	1	1	1	-1	-1	-1	2
CHA	140	149	154	165	185	206	209
EUR	-12	-12	-12	-12	-12	-12	-12
IND	-41	-41	-41	-41	-41	-41	-35
JPN	-1	-1	-1	-1	-0	-0	-1
LAM	-43	-46	-45	-37	-35	-24	-21
MEA	52	52	51	51	53	56	59
NEU	13	13	13	13	13	15	16
OAS	-15	-8	1	10	12	31	26
REF	137	132	132	113	113	109	109
SSA	-95	-99	-73	-90	-93	-93	-93
USA	-5	-5	-5	-6	-6	-6	-6

Table 1678: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Other Land (million ha wrt 1995) [PART 2/2]

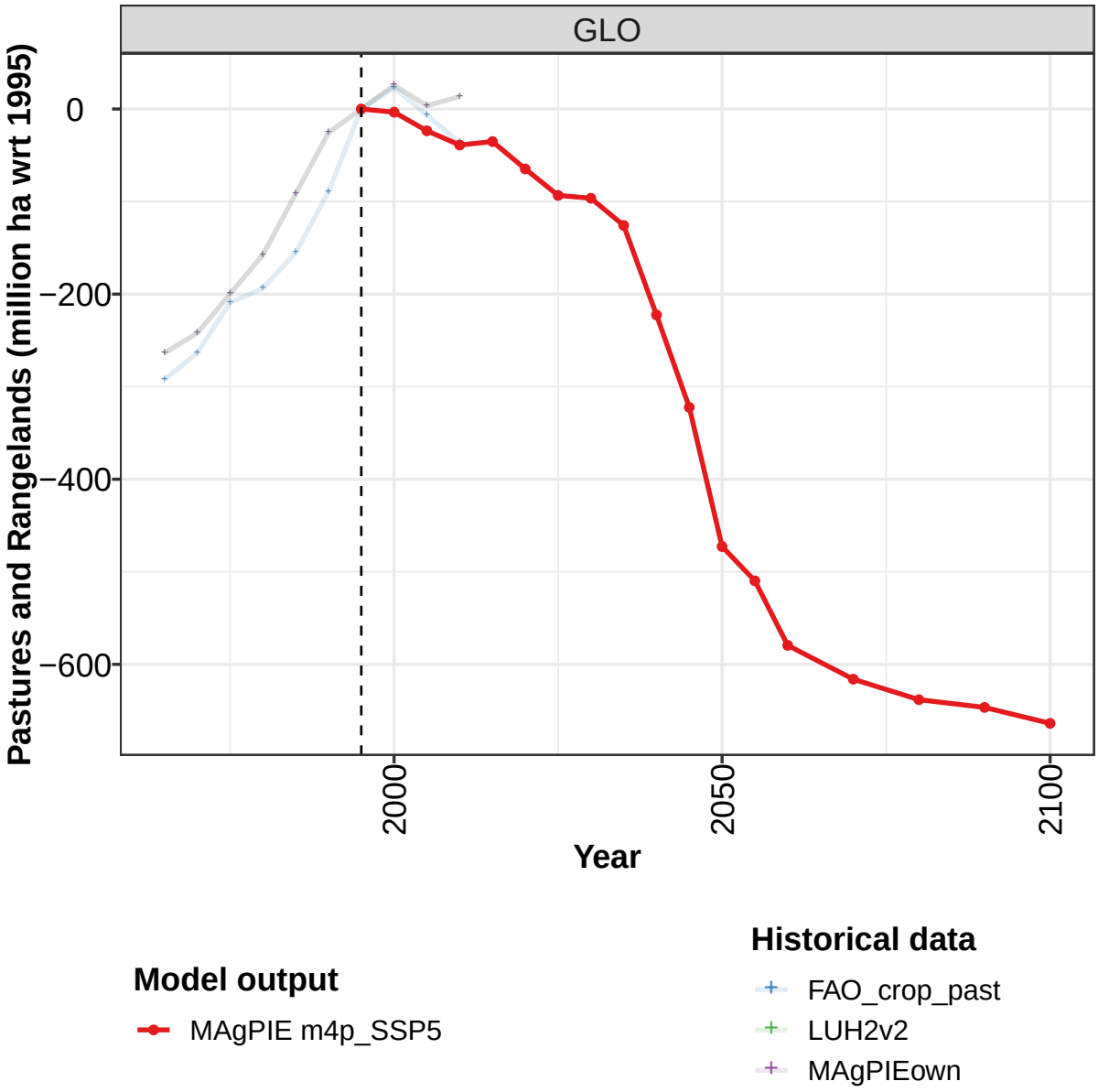
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	248	227	195	163	92	21	0	-21	-25	-23
CAZ	-3	-8	-8	-8	-5	-2	0	2	6	35
CHA	101	91	73	55	26	-3	0	3	1	6
EUR	-12	-10	-8	-6	-4	-3	0	3	10	13
IND	6	4	3	2	1	1	0	-1	-2	-2
JPN	0	0	0	0	0	0	0	0	0	0
LAM	44	41	34	26	17	9	0	-9	-15	-31
MEA	66	64	61	59	36	13	0	-13	-4	-4
NEU	1	1	1	1	0	-0	0	0	-0	2
OAS	8	6	5	4	2	1	0	-1	8	-3
REF	19	16	13	10	9	7	0	-7	-9	-7
SSA	29	27	23	20	11	2	0	-2	-23	-34
USA	-11	-5	-3	-1	-2	-3	0	3	3	3

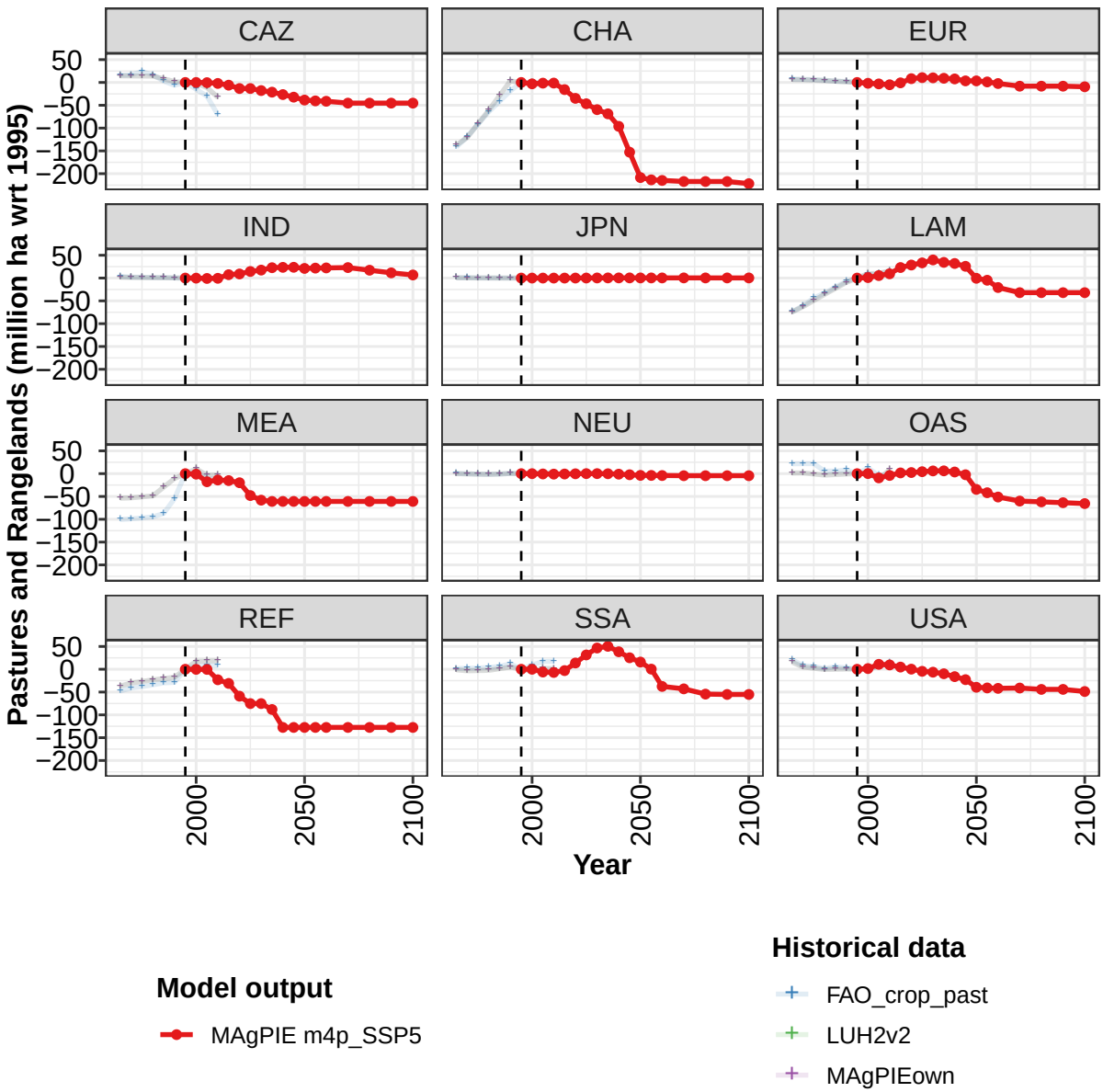
Table 1679: LUH2v2 — Resources—Land Cover Change—Other Land (million ha wrt 1995)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	373	321	262	204	105	7	0	-2	23	22
CAZ	-4	-9	-9	-9	-6	-2	0	2	12	48
CHA	174	158	128	98	52	6	0	-6	-25	-25
EUR	-14	-12	-9	-6	-3	-1	0	1	7	8
IND	7	6	4	3	2	2	0	-2	-5	-7
JPN	-1	-1	-1	-0	-0	-0	0	0	0	0
LAM	95	72	50	28	11	-6	0	6	23	18
MEA	65	63	61	58	35	13	0	-13	-4	-4
NEU	2	1	1	1	0	-1	0	1	-1	1
OAS	25	21	19	17	10	2	0	-2	11	-17
REF	21	18	15	12	10	8	0	-8	-5	-9
SSA	18	14	9	6	-2	-10	0	14	5	7
USA	-17	-9	-7	-5	-4	-3	0	3	4	3

Table 1680: MAgPIEown — Resources—Land Cover Change—Other Land (million ha wrt 1995)

55.4 Pastures and Rangelands





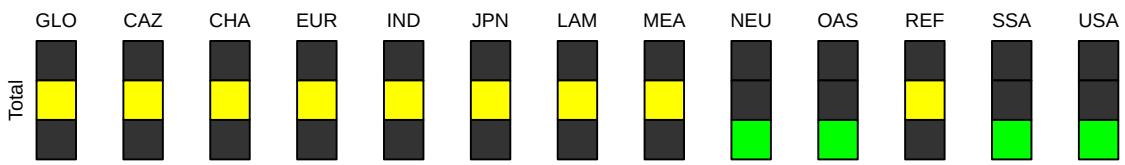


Figure 441: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-3.4	-23.6	-38.9	-35.2	-64.8	-93.3	-96.4	-125.8	-222.5	-322.3
CAZ	0.0	-0.0	-0.4	-2.1	-5.9	-13.3	-13.3	-17.7	-21.2	-26.5	-32.2
CHA	0.0	-3.0	-1.5	-1.3	-15.6	-34.8	-46.7	-59.5	-68.7	-96.1	-152.9
EUR	0.0	-1.8	-3.1	-5.0	-0.8	8.4	10.6	10.2	9.3	7.8	3.5
IND	0.0	-0.1	-0.8	-0.5	7.4	9.0	14.4	17.5	22.7	23.5	23.6
JPN	0.0	-0.0	-0.0	-0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.4
LAM	0.0	1.0	5.5	9.4	23.1	28.6	33.3	39.8	34.4	32.0	25.8
MEA	0.0	-1.1	-17.7	-13.9	-15.2	-19.9	-48.0	-58.0	-60.8	-60.8	-60.8
NEU	0.0	-0.0	-0.6	-1.0	-0.7	-0.2	0.1	0.1	-0.1	-1.1	-2.3
OAS	0.0	0.2	-9.3	-3.9	1.6	2.5	4.3	6.0	6.2	3.7	-2.3
REF	0.0	-0.2	-0.3	-23.0	-31.0	-59.1	-75.2	-75.2	-88.2	-127.5	-127.5
SSA	0.0	0.0	-6.1	-7.0	-2.9	13.7	31.4	46.6	50.3	38.4	25.2
USA	0.0	1.6	10.8	9.5	4.8	0.3	-4.5	-6.4	-9.8	-16.1	-22.7

Table 1681: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	-472.7	-509.8	-579.4	-616.0	-638.1	-646.5	-663.7
CAZ	-38.5	-40.3	-41.2	-45.3	-45.3	-45.3	-45.3
CHA	-208.5	-213.5	-214.7	-217.1	-217.1	-217.1	-221.8
EUR	3.5	1.2	-2.3	-8.1	-8.1	-8.1	-9.4
IND	21.2	21.9	22.2	23.0	17.2	11.4	6.8
JPN	0.3	0.3	0.3	0.4	0.3	0.3	0.3
LAM	-0.5	-4.8	-20.7	-32.0	-32.0	-32.0	-32.0
MEA	-60.8	-60.8	-60.8	-60.8	-60.8	-60.8	-60.8
NEU	-3.7	-3.9	-4.1	-4.5	-4.5	-4.5	-4.5
OAS	-34.5	-41.8	-51.2	-60.1	-61.8	-63.6	-65.6
REF	-127.5	-127.5	-127.5	-127.5	-127.5	-127.5	-127.5
SSA	15.8	0.3	-37.6	-42.9	-54.4	-55.2	-55.2
USA	-39.5	-41.0	-41.9	-41.1	-44.1	-44.1	-48.7

Table 1682: MAgPIE m4p_SSP5 — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-292.3	-263.4	-209.2	-193.8	-155.2	-89.4	0.0	22.9	-6.5	-36.5
CAZ	16.0	16.7	24.1	16.7	3.0	-6.3	0.0	-14.9	-30.0	-70.8
CHA	-141.8	-119.8	-91.8	-64.5	-41.5	-18.4	0.0	0.0	0.0	-0.0
EUR	7.2	6.8	6.1	4.8	2.7	2.3	0.0	-2.1	-3.3	-5.5
IND	3.7	2.0	1.8	1.1	1.0	0.3	0.0	-0.2	-0.6	-0.7
JPN	0.6	0.5	0.3	0.2	0.1	0.0	0.0	0.0	-0.4	-0.4
LAM	-73.9	-60.9	-43.7	-33.0	-19.7	-7.3	0.0	6.9	8.6	14.3
MEA	-100.7	-98.9	-97.1	-94.7	-87.2	-55.0	0.0	3.0	-11.6	-10.9
NEU	0.3	-0.3	-1.2	-1.4	-1.0	0.4	0.0	1.3	1.8	1.9
OAS	21.5	21.9	21.9	5.5	5.6	8.2	0.0	12.2	-3.9	-3.7
REF	-47.6	-41.3	-38.1	-34.2	-29.9	-28.7	0.0	7.1	7.8	8.2
SSA	1.4	2.1	2.6	4.1	6.2	12.0	0.0	9.1	17.1	17.4
USA	21.0	7.9	5.9	1.5	5.6	3.2	0.0	0.3	8.0	13.9

Table 1683: FAO_crop_past — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-263.6	-242.1	-199.8	-157.6	-91.7	-25.7	0.0	25.7	3.5	13.4
CAZ	14.5	14.3	14.2	14.0	8.0	2.0	0.0	-2.0	-11.1	-32.5
CHA	-137.9	-120.8	-91.0	-61.2	-28.9	3.4	0.0	-3.4	-3.6	-3.4
EUR	6.3	6.0	5.1	4.1	2.8	1.5	0.0	-1.5	-2.6	-4.8
IND	1.8	1.4	1.1	0.7	0.5	0.4	0.0	-0.4	-0.7	-0.8
JPN	0.5	0.4	0.3	0.1	0.1	0.0	0.0	-0.0	-0.0	-0.0
LAM	-74.3	-62.8	-49.3	-35.7	-22.7	-9.6	0.0	9.6	10.3	15.9
MEA	-53.8	-53.0	-50.8	-48.7	-29.7	-10.6	0.0	10.6	-3.7	-2.9
NEU	-0.1	-0.5	-1.0	-1.5	-0.6	0.3	0.0	-0.3	0.2	0.2
OAS	1.4	1.5	-0.8	-3.2	-2.0	-0.8	0.0	0.8	-12.1	8.8
REF	-36.7	-30.4	-26.8	-23.3	-20.4	-17.6	0.0	17.6	17.9	18.7
SSA	-1.1	-3.3	-2.8	-2.4	1.2	4.8	0.0	-4.8	1.9	1.5
USA	15.8	4.9	2.2	-0.5	0.0	0.6	0.0	-0.6	7.0	12.7

Table 1684: LUH2v2 — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995)

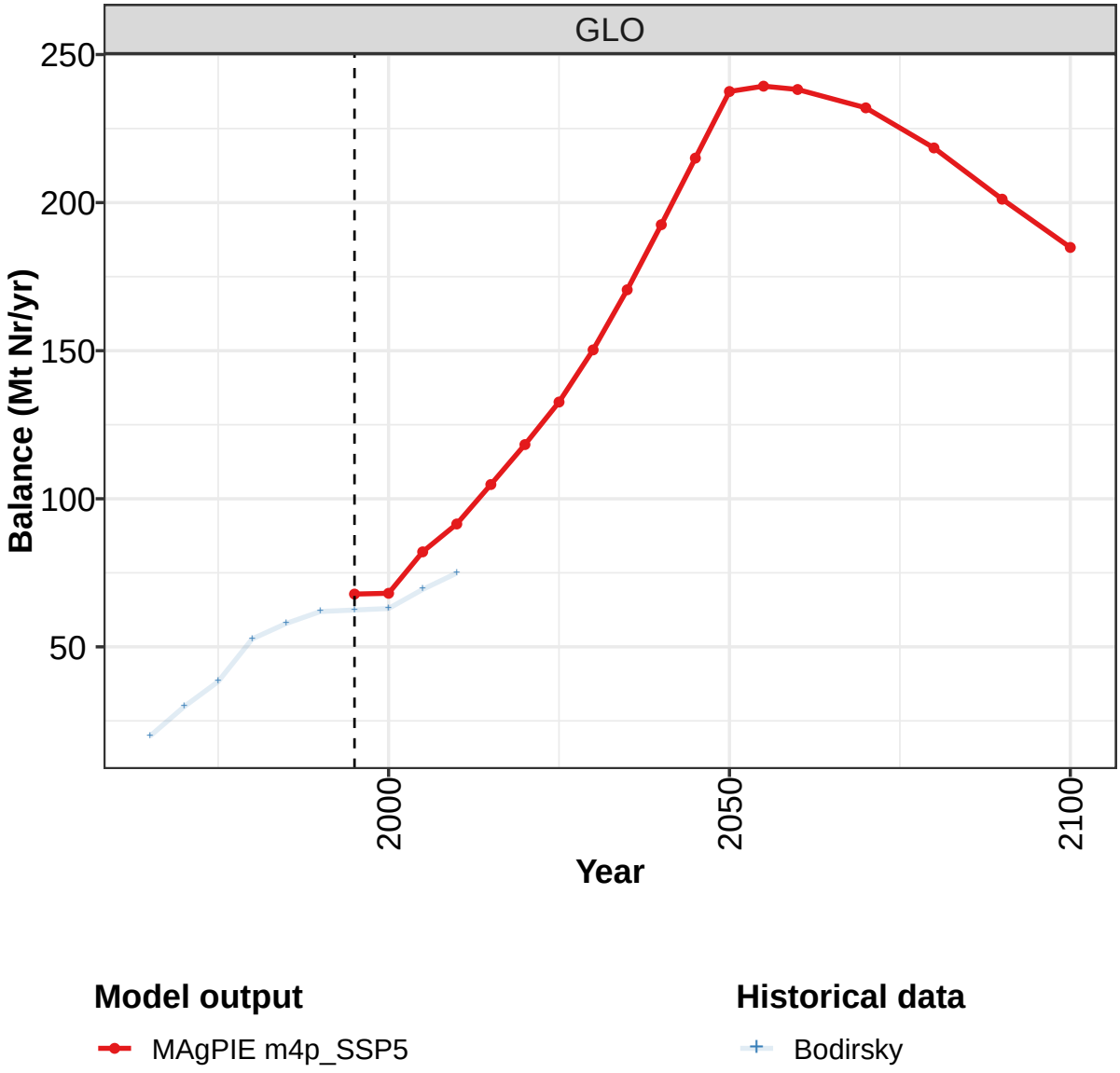
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-263.6	-242.1	-199.8	-157.6	-91.7	-25.7	0.0	25.7	3.5	13.4
CAZ	14.5	14.3	14.2	14.0	8.0	2.0	0.0	-2.0	-11.1	-32.5
CHA	-137.9	-120.8	-91.0	-61.2	-28.9	3.4	0.0	-3.4	-3.6	-3.4
EUR	6.3	6.0	5.1	4.1	2.8	1.5	0.0	-1.5	-2.6	-4.8
IND	1.8	1.4	1.1	0.7	0.5	0.4	0.0	-0.4	-0.7	-0.8
JPN	0.5	0.4	0.3	0.1	0.1	0.0	0.0	-0.0	-0.0	-0.0
LAM	-74.3	-62.8	-49.3	-35.7	-22.7	-9.6	0.0	9.6	10.3	15.9
MEA	-53.8	-53.0	-50.8	-48.7	-29.7	-10.6	0.0	10.6	-3.7	-2.9
NEU	-0.1	-0.5	-1.0	-1.5	-0.6	0.3	0.0	-0.3	0.2	0.2
OAS	1.4	1.5	-0.8	-3.2	-2.0	-0.8	0.0	0.8	-12.1	8.8
REF	-36.7	-30.4	-26.8	-23.3	-20.4	-17.6	0.0	17.6	17.9	18.7
SSA	-1.1	-3.3	-2.8	-2.4	1.2	4.8	0.0	-4.8	1.9	1.5
USA	15.8	4.9	2.2	-0.5	0.0	0.6	0.0	-0.6	7.0	12.7

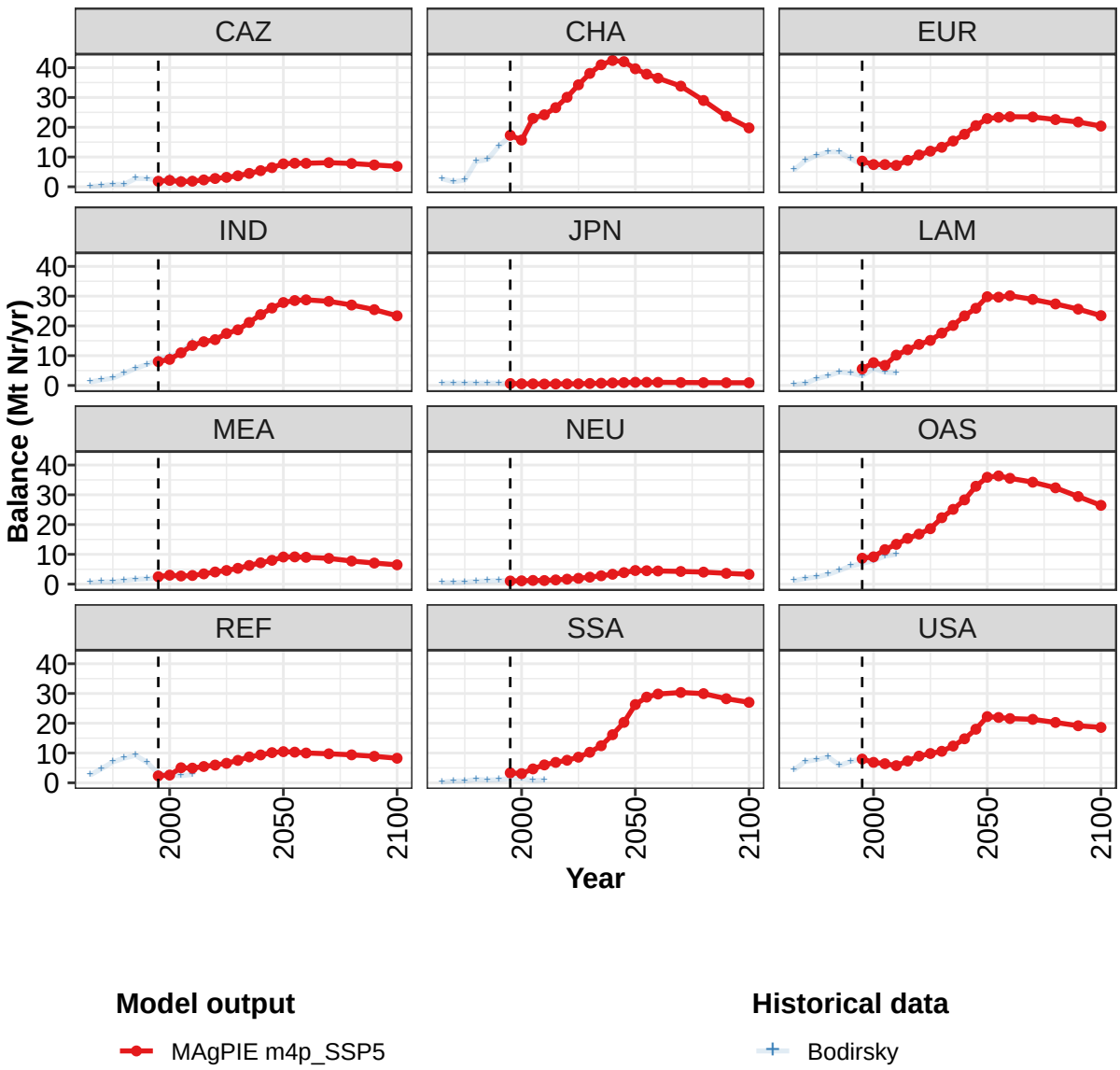
Table 1685: MAgPIEown — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995)

56 Nitrogen

56.1 Cropland Budget

56.1.1 Balance





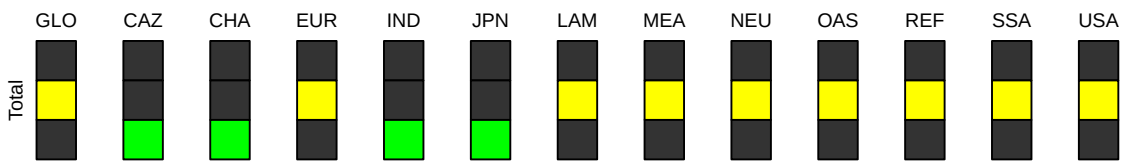


Figure 442: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	68	68	82	91	105	118	133	150	171	193	215
CAZ	2	2	2	2	2	3	3	4	4	5	6
CHA	17	16	23	24	27	30	34	38	41	42	42
EUR	9	7	7	7	9	11	12	13	15	18	21
IND	8	9	11	13	15	15	17	19	21	24	26
JPN	1	1	1	0	0	1	1	1	1	1	1
LAM	6	8	7	10	12	14	15	18	20	23	26
MEA	2	3	3	3	3	4	5	5	6	7	8
NEU	1	1	1	1	1	2	2	2	3	3	4
OAS	9	9	12	13	15	17	19	22	25	28	33
REF	2	3	5	5	5	6	7	8	9	9	10
SSA	3	3	5	6	7	8	9	10	12	16	20
USA	8	7	6	6	7	9	10	11	12	15	18

Table 1686: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance (Mt Nr/yr) [PART 1/2]

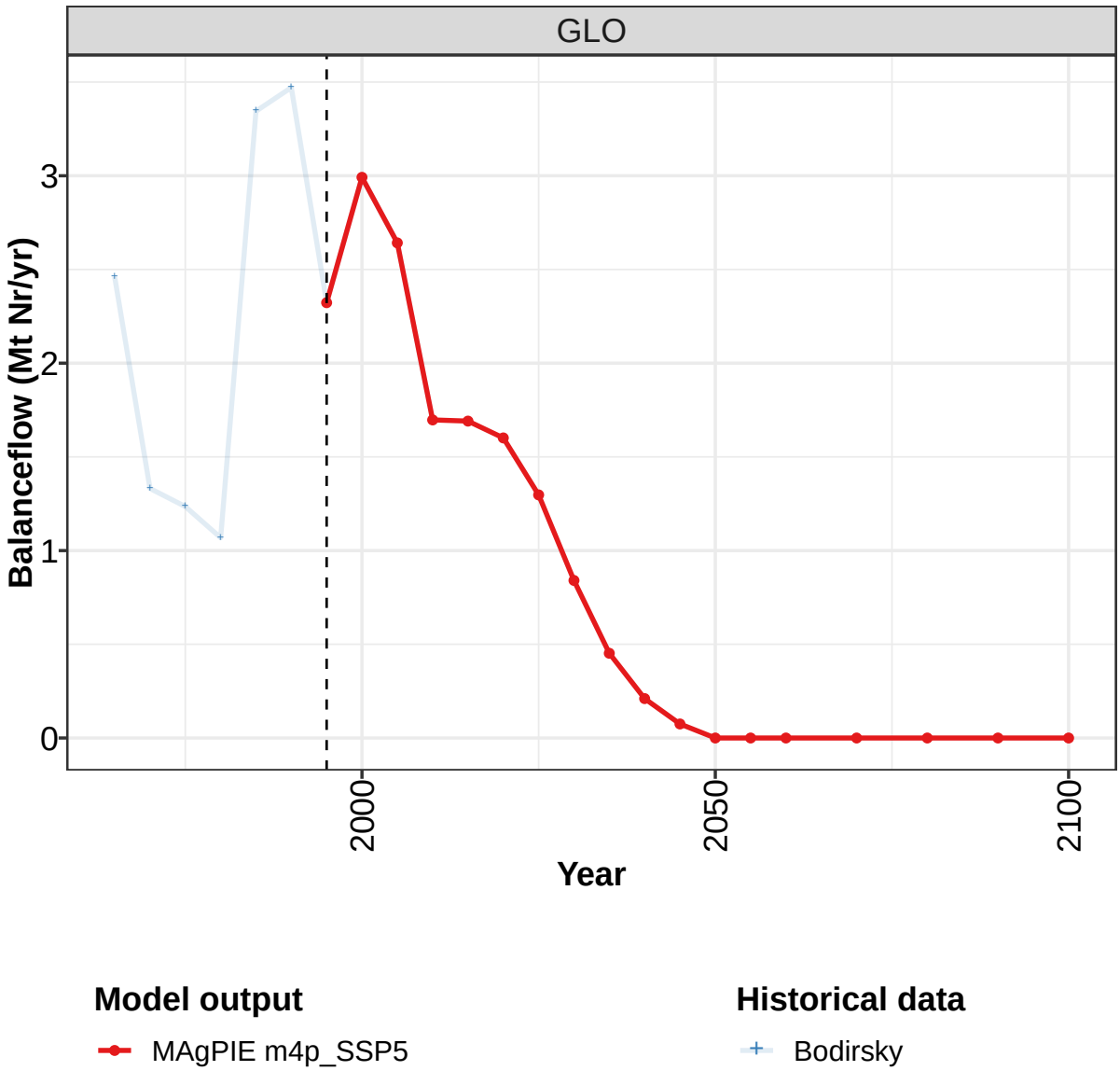
	2050	2055	2060	2070	2080	2090	2100
GLO	238	239	238	232	218	201	185
CAZ	8	8	8	8	8	7	7
CHA	40	38	36	34	29	24	20
EUR	23	23	24	23	23	22	20
IND	28	29	29	28	27	25	23
JPN	1	1	1	1	1	1	1
LAM	30	30	30	29	27	26	23
MEA	9	9	9	9	8	7	6
NEU	5	5	4	4	4	4	3
OAS	36	36	36	34	32	29	26
REF	10	10	10	10	9	9	8
SSA	26	29	30	30	30	28	27
USA	22	22	22	21	20	19	19

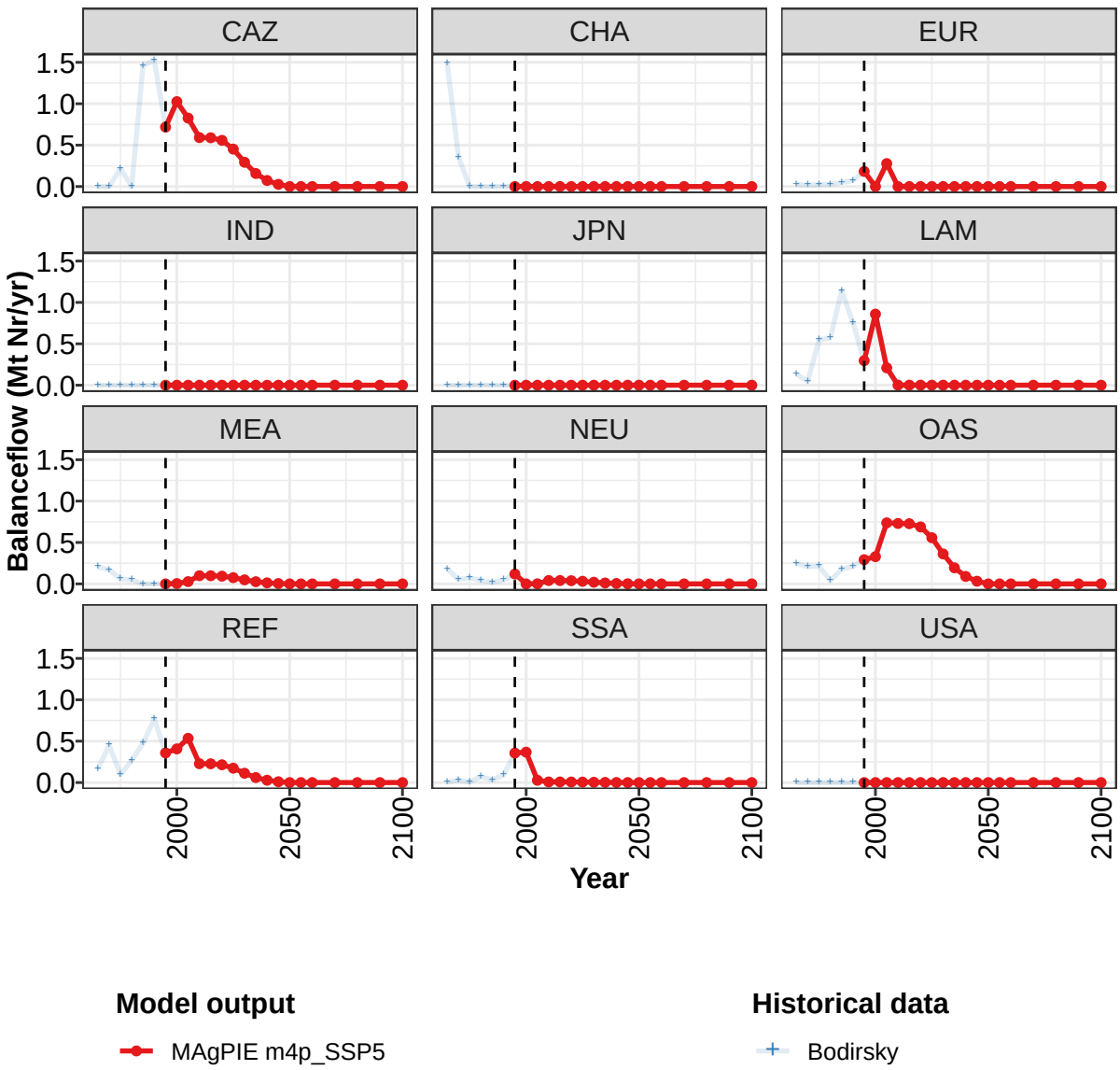
Table 1687: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	19.8	29.8	38.3	52.7	57.9	61.9	62.4	62.9	69.4	74.9
CAZ	0.1	0.3	0.8	0.8	2.8	2.7	2.3	2.8	2.1	2.2
CHA	2.7	1.7	2.2	8.5	9.1	13.7	17.0	15.6	22.0	24.0
EUR	5.6	8.8	10.5	11.7	11.7	9.4	7.5	6.5	6.5	5.9
IND	1.1	1.9	2.4	4.0	5.7	7.1	8.9	9.6	11.4	14.6
JPN	0.7	0.8	0.7	0.8	0.8	0.7	0.6	0.5	0.5	0.5
LAM	0.3	0.7	2.3	3.3	4.5	4.2	3.2	5.6	4.5	4.2
MEA	0.6	0.7	0.8	1.2	1.6	1.8	2.1	2.7	2.4	2.7
NEU	0.5	0.5	0.7	1.0	1.1	1.2	1.2	1.1	1.2	1.1
OAS	1.1	1.9	2.4	3.3	4.6	6.1	7.0	7.9	9.4	10.0
REF	2.6	4.7	7.0	8.3	9.2	6.9	3.1	2.6	2.4	2.8
SSA	0.2	0.6	0.6	1.1	0.9	1.0	1.5	1.5	0.7	0.9
USA	4.3	7.2	7.8	8.7	5.9	7.2	8.2	6.3	6.1	5.9

Table 1688: Bodirsky — Resources—Nitrogen—Cropland Budget—Balance (Mt Nr/yr)

56.1.2 Balance—Balanceflow





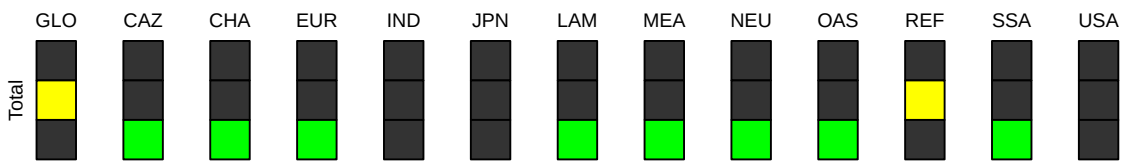


Figure 443: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance—Balanceflow (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.32	2.99	2.64	1.70	1.69	1.60	1.30	0.84	0.45	0.21	0.07
CAZ	0.72	1.03	0.83	0.59	0.59	0.56	0.45	0.29	0.16	0.07	0.03
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.18	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.30	0.86	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.03	0.10	0.10	0.09	0.08	0.05	0.03	0.01	0.00
NEU	0.12	0.00	0.00	0.04	0.04	0.04	0.03	0.02	0.01	0.01	0.00
OAS	0.29	0.33	0.74	0.73	0.73	0.69	0.56	0.36	0.19	0.09	0.03
REF	0.36	0.41	0.53	0.23	0.23	0.21	0.17	0.11	0.06	0.03	0.01
SSA	0.36	0.37	0.03	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1689: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance—Balanceflow (Mt Nr/yr) [PART 1/2]

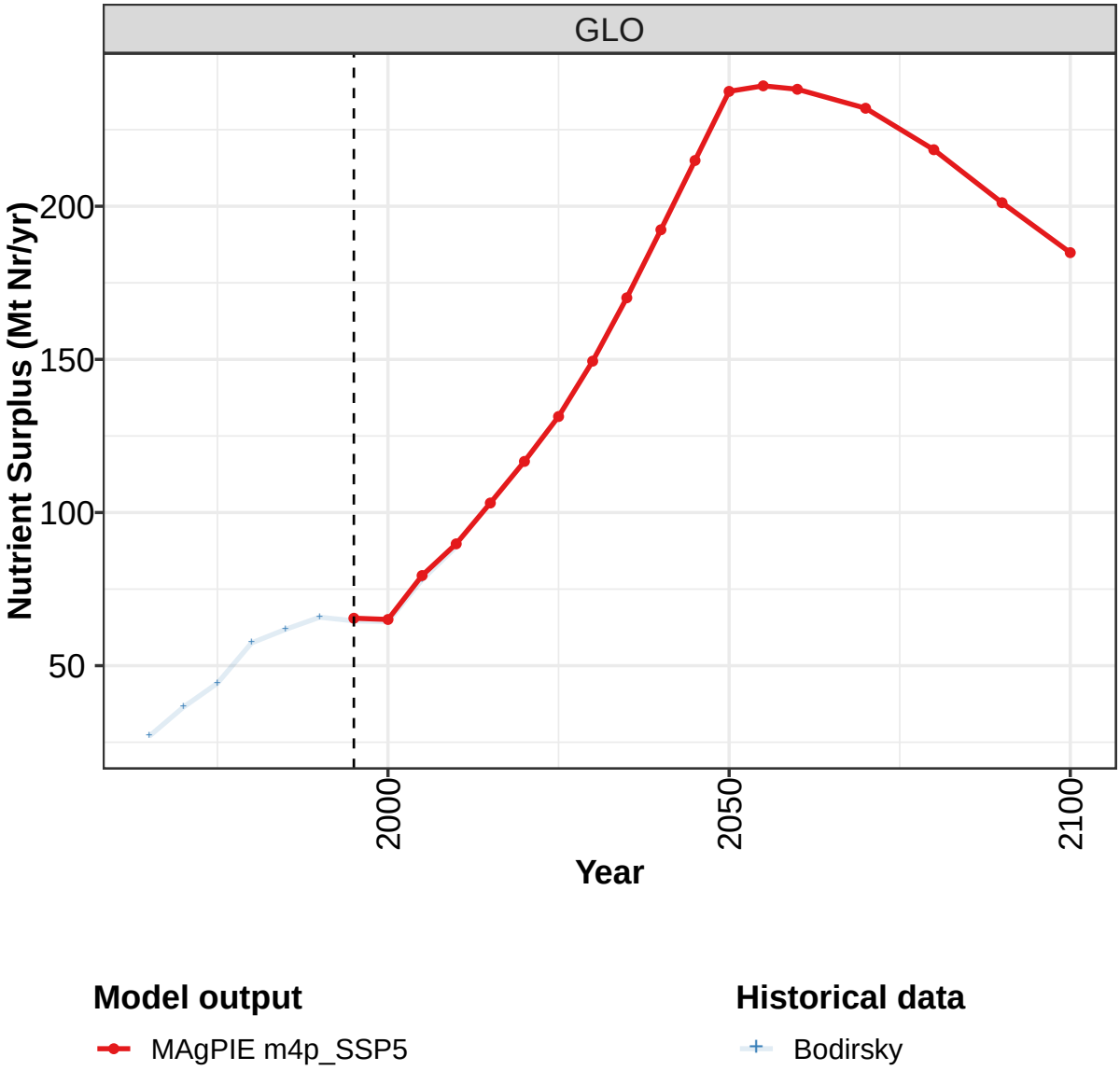
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

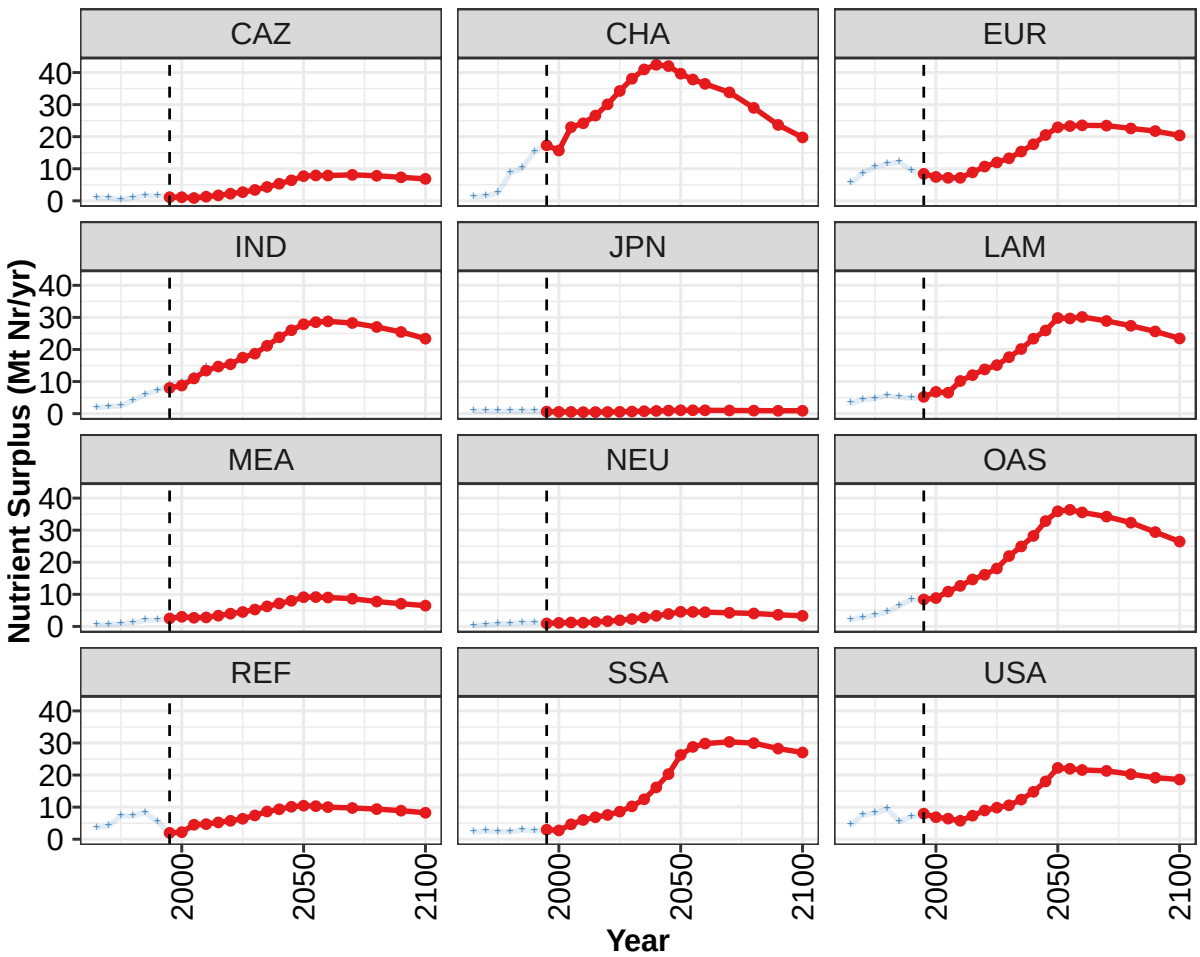
Table 1690: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance—Balanceflow (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.46	1.33	1.24	1.07	3.34	3.47	2.32	2.99	2.64	1.70
CAZ	0.00	0.00	0.22	0.00	1.46	1.52	0.72	1.03	0.83	0.59
CHA	1.49	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.02	0.02	0.02	0.03	0.05	0.07	0.18	0.00	0.28	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.13	0.05	0.55	0.57	1.14	0.76	0.30	0.86	0.21	0.00
MEA	0.21	0.17	0.06	0.05	0.00	0.00	0.00	0.00	0.03	0.10
NEU	0.18	0.06	0.07	0.04	0.02	0.05	0.12	0.00	0.00	0.04
OAS	0.25	0.21	0.22	0.04	0.18	0.21	0.29	0.33	0.74	0.73
REF	0.17	0.45	0.10	0.27	0.47	0.77	0.36	0.41	0.53	0.23
SSA	0.01	0.03	0.01	0.07	0.03	0.09	0.36	0.37	0.03	0.01
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1691: Bodirsky — Resources—Nitrogen—Cropland Budget—Balance—Balanceflow (Mt Nr/yr)

56.1.3 Balance—Nutrient Surplus





Model output

MAgPIE m4p_SSP5

Historical data

Bodirsky

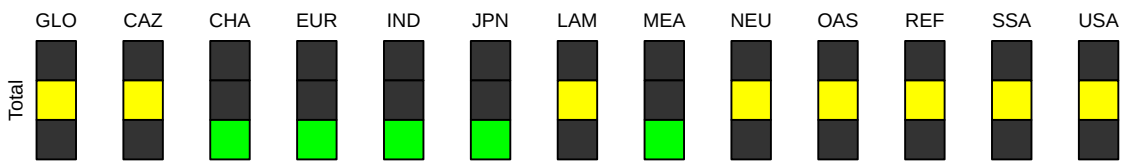


Figure 444: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance—Nutrient Surplus (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	65	65	79	90	103	117	131	149	170	192	215
CAZ	1	1	1	1	2	2	3	3	4	5	6
CHA	17	16	23	24	27	30	34	38	41	42	42
EUR	8	7	7	7	9	11	12	13	15	18	21
IND	8	9	11	13	15	15	17	19	21	24	26
JPN	1	1	1	0	0	1	1	1	1	1	1
LAM	5	7	7	10	12	14	15	18	20	23	26
MEA	2	3	3	3	3	4	5	5	6	7	8
NEU	1	1	1	1	1	2	2	2	3	3	4
OAS	8	9	11	13	15	16	18	22	25	28	33
REF	2	2	5	5	5	6	6	7	9	9	10
SSA	3	3	5	6	7	8	9	10	12	16	20
USA	8	7	6	6	7	9	10	11	12	15	18

Table 1692: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance—Nutrient Surplus (Mt Nr/yr) [PART 1/2]

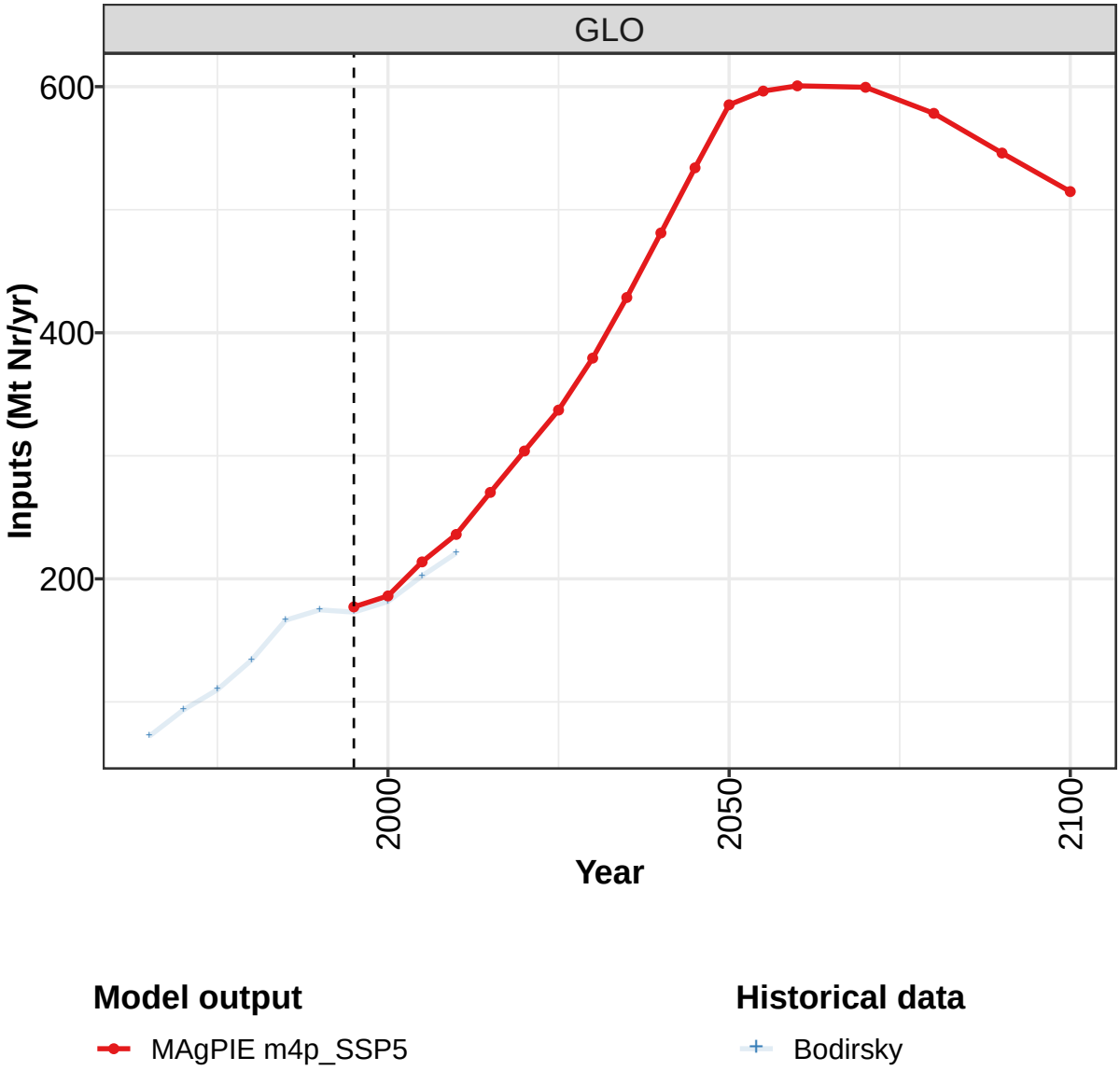
	2050	2055	2060	2070	2080	2090	2100
GLO	238	239	238	232	218	201	185
CAZ	8	8	8	8	8	7	7
CHA	40	38	36	34	29	24	20
EUR	23	23	24	23	23	22	20
IND	28	29	29	28	27	25	23
JPN	1	1	1	1	1	1	1
LAM	30	30	30	29	27	26	23
MEA	9	9	9	9	8	7	6
NEU	5	5	4	4	4	4	3
OAS	36	36	36	34	32	29	26
REF	10	10	10	10	9	9	8
SSA	26	29	30	30	30	28	27
USA	22	22	22	21	20	19	19

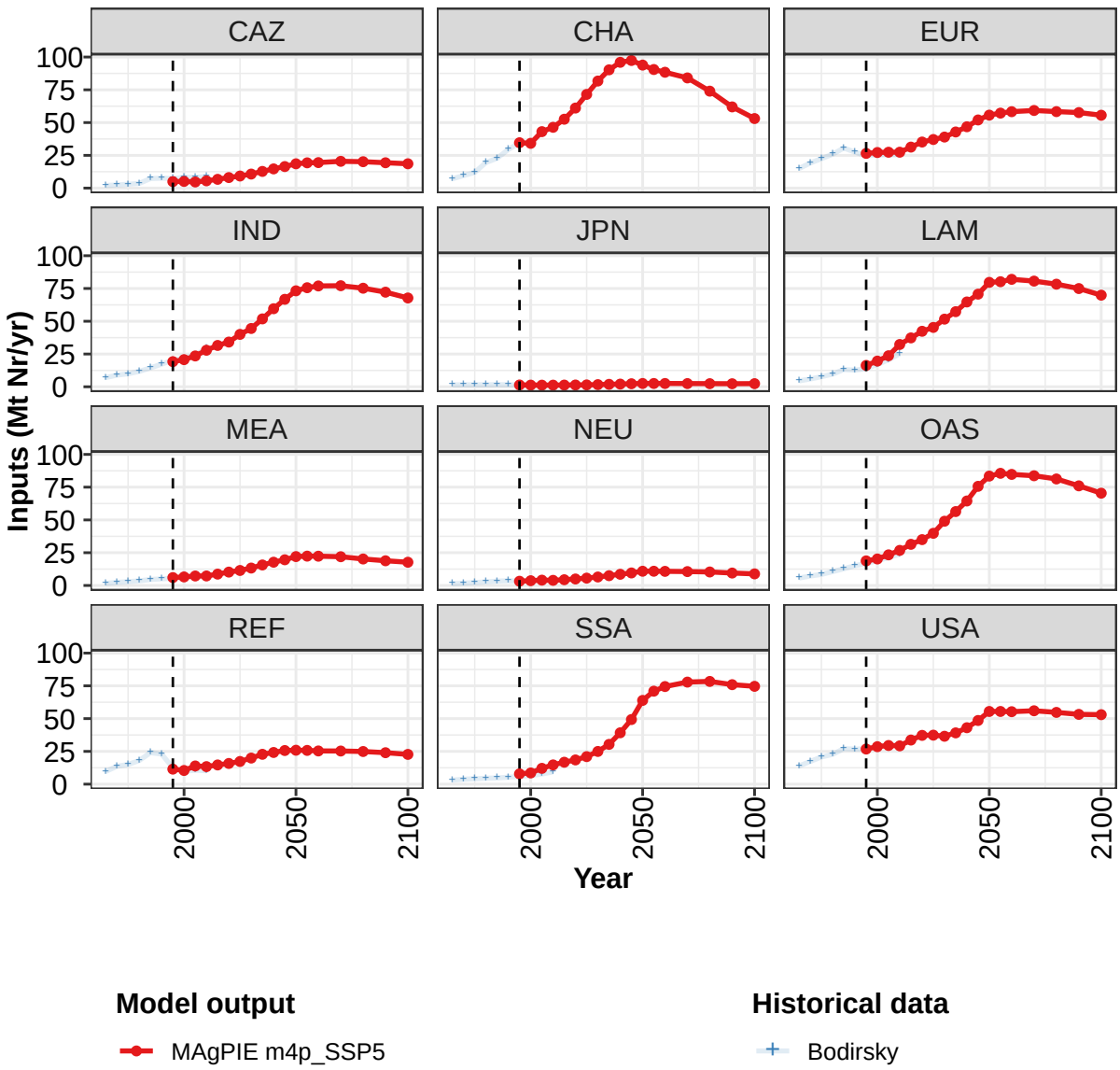
Table 1693: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Balance—Nutrient Surplus (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	26.9	36.4	44.3	57.4	61.9	65.8	64.6	64.4	78.1	88.8
CAZ	0.9	1.0	0.4	1.0	1.6	1.6	1.4	1.4	1.4	1.8
CHA	1.2	1.5	2.5	8.6	10.2	15.3	17.5	16.0	22.9	24.5
EUR	5.5	8.6	10.6	11.5	12.1	9.5	7.6	6.7	6.3	6.4
IND	2.0	2.2	2.4	4.0	6.0	7.2	9.0	9.7	11.9	14.6
JPN	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.5	0.5	0.4
LAM	3.3	4.3	4.8	5.6	5.1	4.9	5.0	6.5	6.2	9.4
MEA	0.4	0.6	0.8	1.2	1.9	2.1	2.4	2.9	2.6	2.8
NEU	0.3	0.5	0.7	0.9	1.1	1.2	1.0	1.1	1.2	1.2
OAS	2.1	2.8	3.5	4.5	6.4	8.3	8.3	8.9	11.0	13.0
REF	3.7	4.1	7.3	7.3	8.3	5.4	1.9	1.9	4.0	3.9
SSA	2.3	2.6	2.4	2.4	2.8	2.6	2.7	2.4	4.1	5.5
USA	4.4	7.6	8.2	9.4	5.5	7.1	7.3	6.4	6.0	5.4

Table 1694: Bodirsky — Resources—Nitrogen—Cropland Budget—Balance—Nutrient Surplus (Mt Nr/yr)

56.1.4 Inputs


GLO
600
400
200
Inputs (Mt Nr/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
Bodirsky



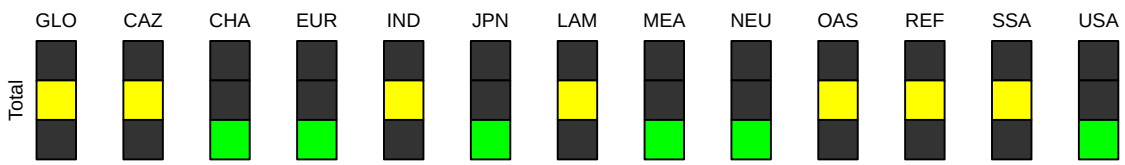


Figure 445: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	177	186	214	236	270	304	337	379	429	481	534
CAZ	5	5	5	6	7	8	9	11	13	15	16
CHA	35	34	43	46	53	61	72	82	90	96	97
EUR	26	27	27	27	31	35	37	39	43	47	52
IND	19	21	24	28	32	34	40	44	52	60	67
JPN	1	1	1	1	1	1	1	2	2	2	2
LAM	16	20	24	32	37	42	45	52	57	65	71
MEA	6	7	7	7	9	10	11	13	16	18	20
NEU	3	4	4	4	4	5	6	6	7	9	10
OAS	19	20	23	27	31	35	40	49	56	64	76
REF	11	10	14	13	15	16	17	20	23	24	26
SSA	8	9	12	15	17	18	21	25	30	39	49
USA	27	29	30	29	34	37	37	37	39	43	49

Table 1695: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs (Mt Nr/yr) [PART 1/2]

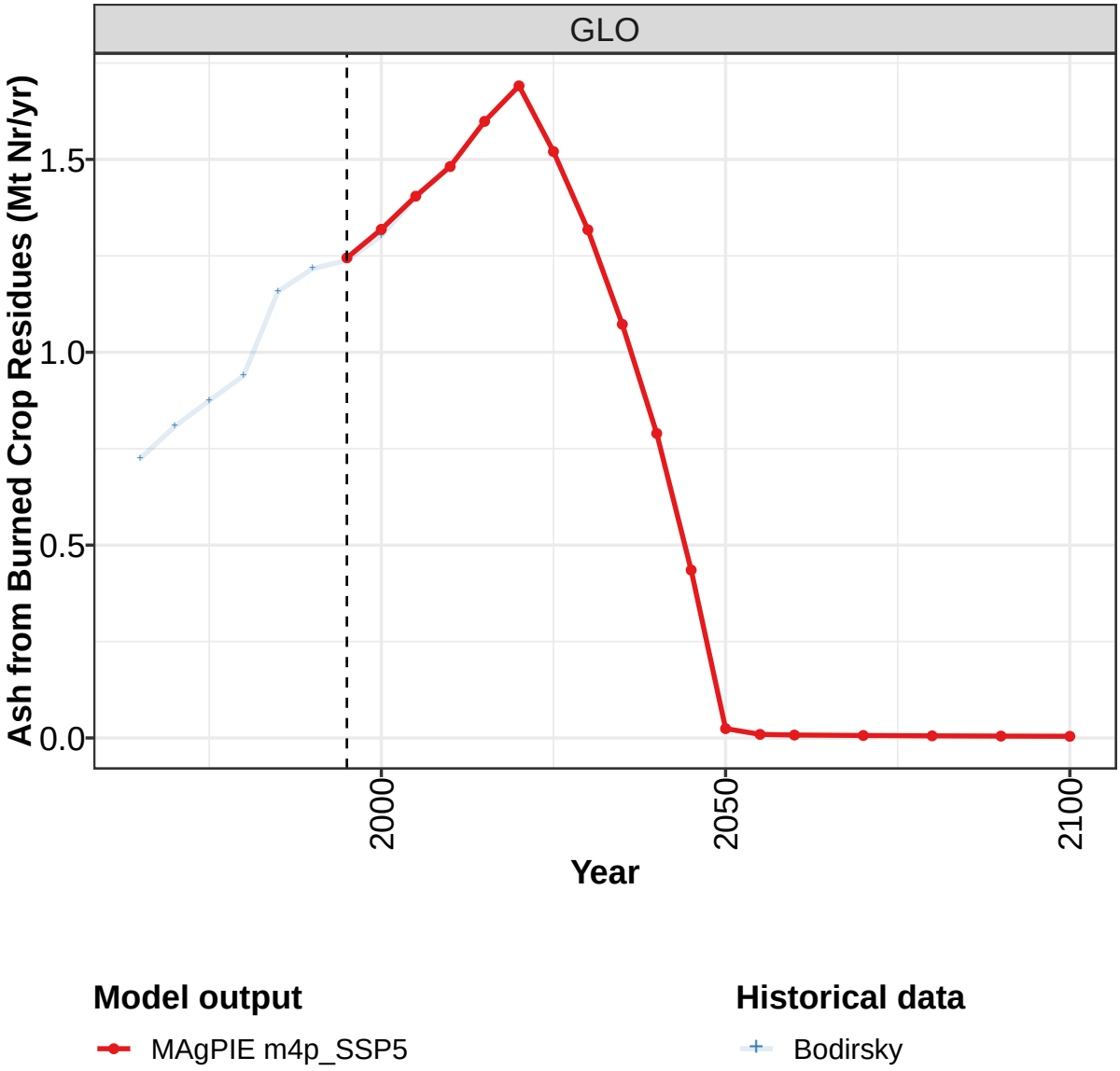
	2050	2055	2060	2070	2080	2090	2100
GLO	585	596	601	599	578	546	515
CAZ	19	19	19	20	20	19	19
CHA	94	90	88	84	74	62	53
EUR	56	57	58	59	58	58	56
IND	73	76	77	77	75	72	68
JPN	3	3	3	2	2	2	2
LAM	80	80	82	81	78	75	70
MEA	22	22	22	22	20	19	18
NEU	11	11	11	11	10	9	9
OAS	83	86	85	84	81	76	70
REF	26	26	25	25	25	24	23
SSA	64	71	74	78	78	76	75
USA	55	55	55	56	55	53	53

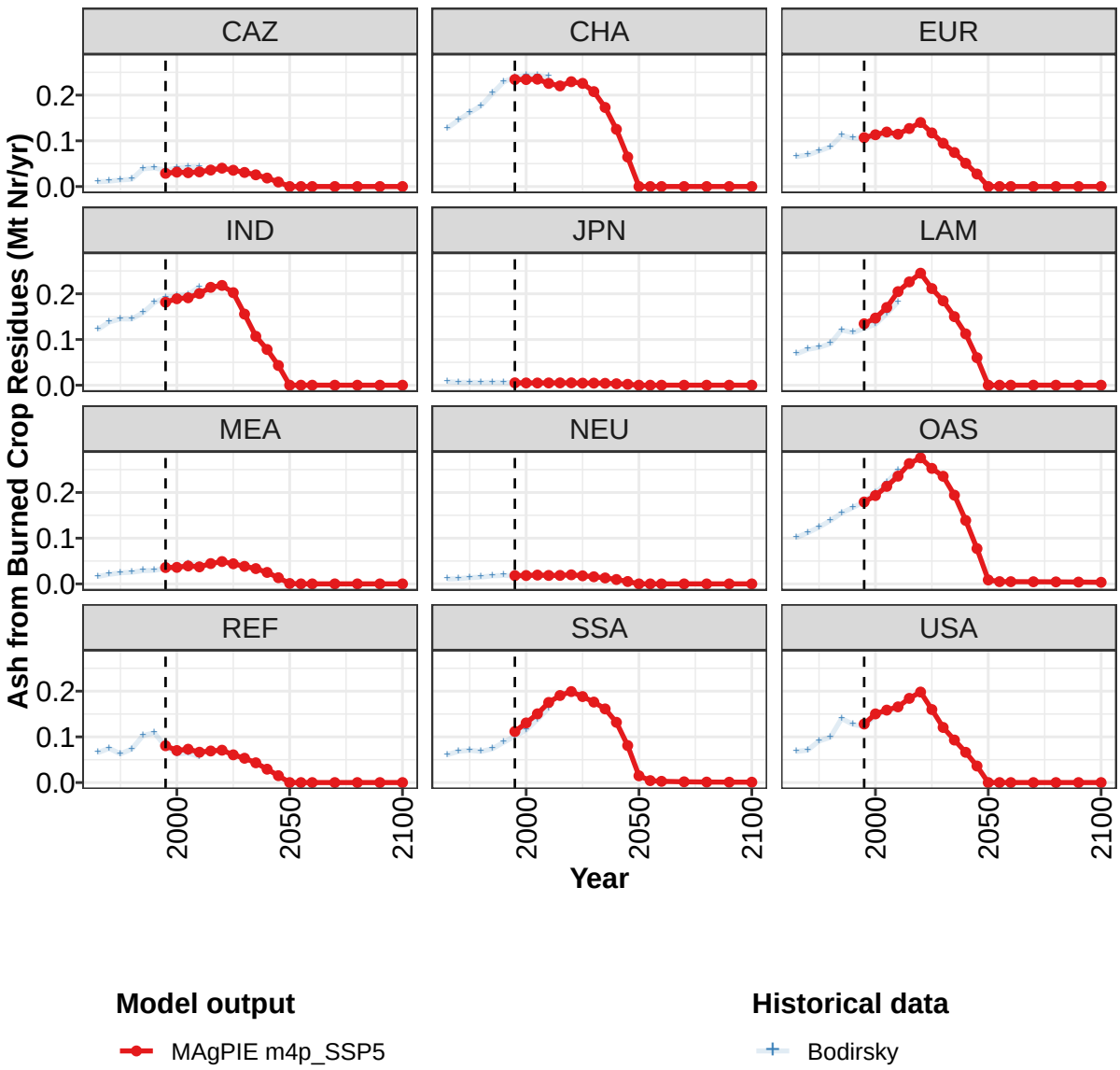
Table 1696: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	72	93	110	134	166	175	173	182	202	221
CAZ	2	2	3	4	7	8	7	8	8	9
CHA	7	10	12	20	23	29	34	34	42	47
EUR	15	19	22	26	31	27	25	25	25	25
IND	7	9	10	12	14	17	20	22	24	29
JPN	1	2	2	2	2	2	1	1	1	1
LAM	4	6	8	10	13	13	14	17	21	25
MEA	2	2	3	4	5	5	6	6	7	7
NEU	1	2	2	3	3	4	3	4	4	4
OAS	6	7	8	11	13	15	17	19	21	24
REF	10	14	15	18	24	23	12	10	11	10
SSA	3	4	4	5	5	5	6	7	8	9
USA	14	17	21	23	27	27	27	29	30	30

Table 1697: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs (Mt Nr/yr)

56.1.5 Inputs—Ash from Burned Crop Residues





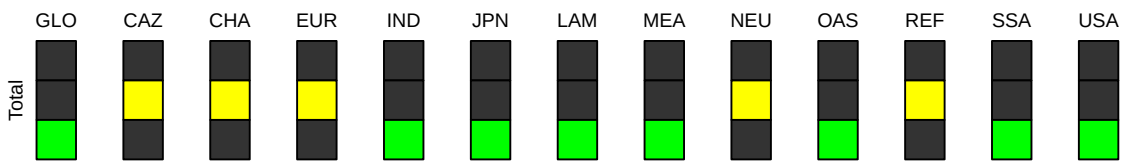


Figure 446: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Ash from Burned Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.24	1.32	1.40	1.48	1.60	1.69	1.52	1.32	1.07	0.79	0.44
CAZ	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.02	0.01
CHA	0.23	0.23	0.23	0.23	0.22	0.23	0.23	0.21	0.17	0.13	0.06
EUR	0.11	0.11	0.12	0.11	0.13	0.14	0.12	0.09	0.07	0.05	0.03
IND	0.18	0.19	0.19	0.20	0.21	0.22	0.20	0.16	0.11	0.08	0.04
JPN	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
LAM	0.13	0.15	0.17	0.20	0.23	0.25	0.21	0.18	0.15	0.11	0.06
MEA	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.03	0.03	0.01
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
OAS	0.18	0.19	0.21	0.24	0.26	0.28	0.25	0.24	0.19	0.14	0.08
REF	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.05	0.04	0.03	0.02
SSA	0.11	0.13	0.15	0.18	0.19	0.20	0.19	0.18	0.16	0.13	0.08
USA	0.13	0.15	0.16	0.17	0.18	0.20	0.16	0.12	0.09	0.07	0.04

Table 1698: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Ash from Burned Crop Residues (Mt Nr/yr) [PART 1/2]

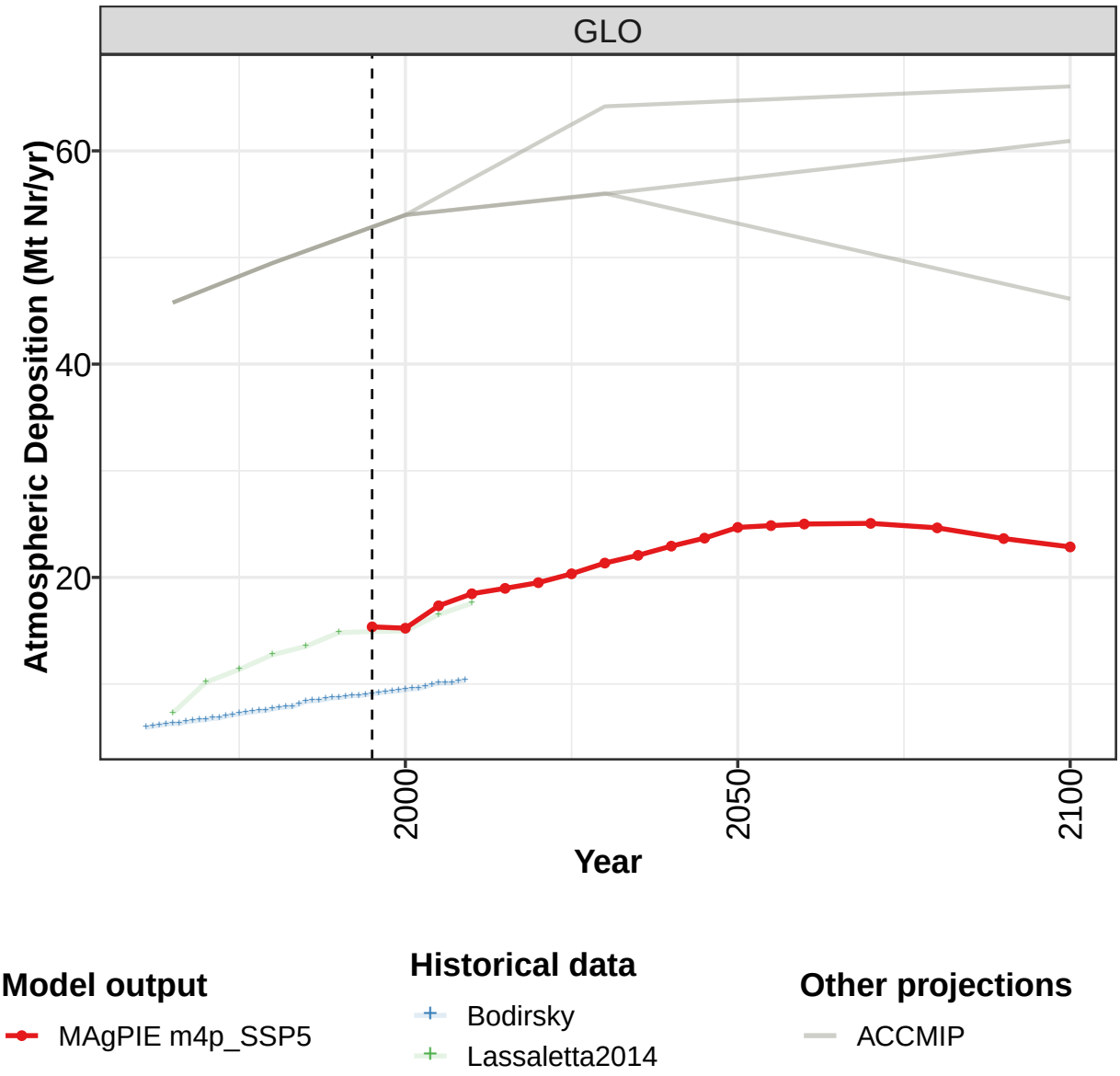
	2050	2055	2060	2070	2080	2090	2100
GLO	0.02	0.01	0.01	0.01	0.01	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.01	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.01	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

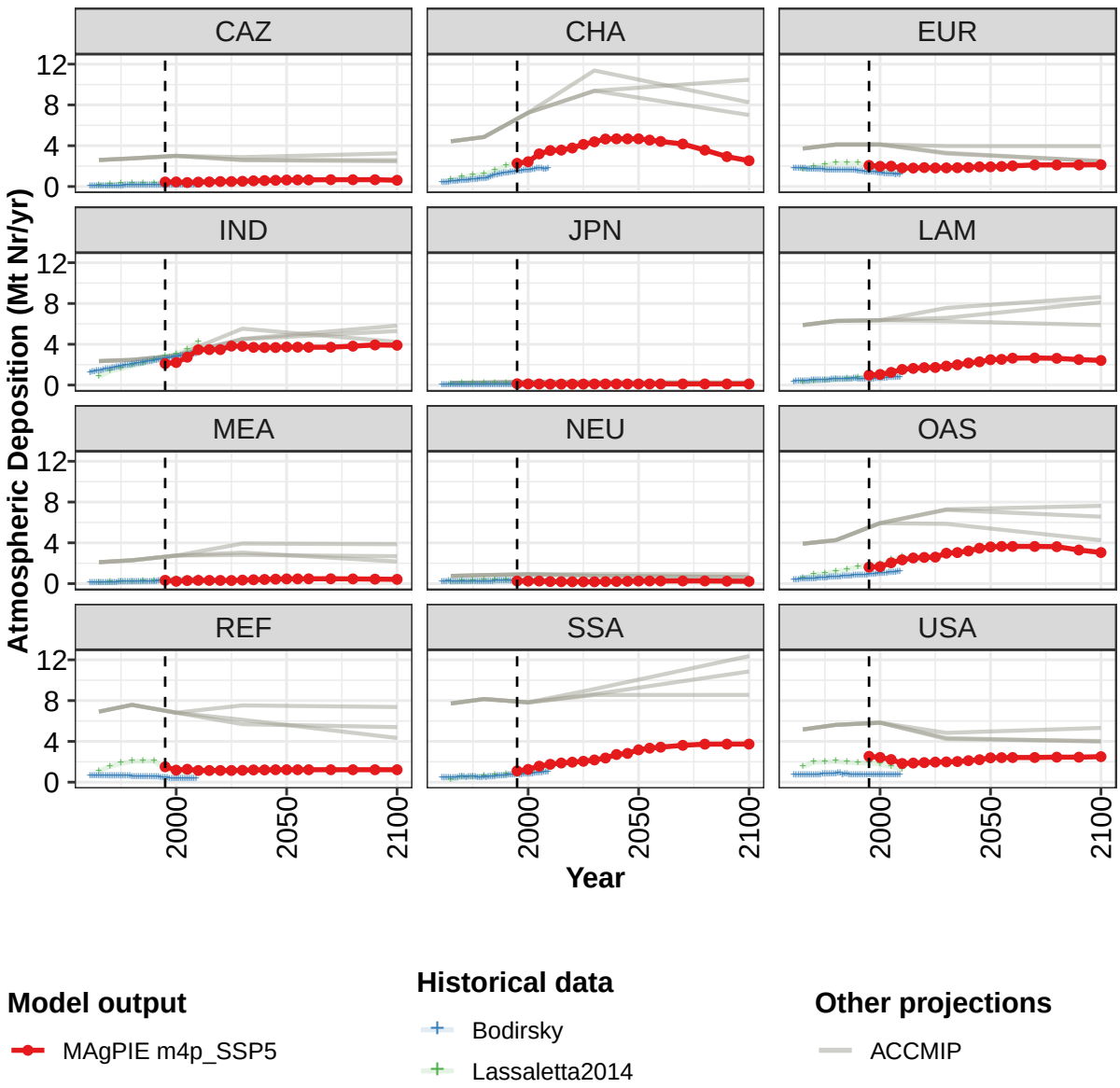
Table 1699: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Ash from Burned Crop Residues (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.72	0.81	0.87	0.94	1.16	1.22	1.24	1.30	1.40	1.48
CAZ	0.01	0.01	0.01	0.02	0.04	0.04	0.04	0.04	0.04	0.04
CHA	0.13	0.15	0.16	0.18	0.20	0.23	0.24	0.24	0.24	0.24
EUR	0.07	0.07	0.08	0.09	0.11	0.11	0.10	0.11	0.11	0.11
IND	0.12	0.14	0.14	0.14	0.16	0.18	0.19	0.20	0.20	0.21
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01
LAM	0.07	0.08	0.08	0.09	0.12	0.12	0.12	0.13	0.16	0.18
MEA	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04
NEU	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.10	0.11	0.12	0.14	0.16	0.17	0.18	0.20	0.22	0.25
REF	0.07	0.07	0.06	0.07	0.10	0.11	0.08	0.06	0.06	0.06
SSA	0.06	0.07	0.07	0.07	0.07	0.09	0.10	0.11	0.14	0.16
USA	0.07	0.07	0.09	0.10	0.14	0.13	0.12	0.15	0.16	0.16

Table 1700: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Ash from Burned Crop Residues (Mt Nr/yr)

56.1.6 Inputs—Atmospheric Deposition





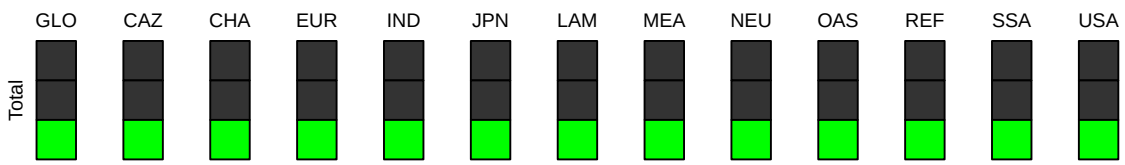


Figure 447: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.4	15.2	17.3	18.5	19.0	19.5	20.3	21.3	22.1	22.9	23.7
CAZ	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6
CHA	2.3	2.4	3.2	3.5	3.6	3.8	4.1	4.4	4.7	4.7	4.7
EUR	2.1	2.0	2.0	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9
IND	2.1	2.2	2.7	3.5	3.5	3.5	3.8	3.8	3.7	3.7	3.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.0	1.0	1.2	1.5	1.6	1.7	1.7	1.9	2.0	2.2	2.3
MEA	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
NEU	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	1.6	1.7	2.0	2.3	2.5	2.6	2.6	3.0	3.0	3.2	3.5
REF	1.5	1.2	1.3	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2
SSA	1.1	1.3	1.6	1.8	1.9	2.0	2.1	2.2	2.4	2.7	2.8
USA	2.5	2.4	2.2	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.2

Table 1701: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	24.7	24.9	25.0	25.1	24.6	23.6	22.9
CAZ	0.6	0.6	0.6	0.7	0.7	0.7	0.6
CHA	4.7	4.6	4.4	4.2	3.6	2.9	2.5
EUR	1.9	2.0	2.0	2.1	2.1	2.1	2.1
IND	3.7	3.7	3.7	3.7	3.8	3.9	3.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.5	2.5	2.6	2.7	2.6	2.5	2.4
MEA	0.5	0.5	0.5	0.5	0.5	0.4	0.4
NEU	0.3	0.3	0.3	0.3	0.3	0.2	0.2
OAS	3.6	3.6	3.6	3.6	3.6	3.3	3.1
REF	1.2	1.2	1.2	1.2	1.2	1.2	1.2
SSA	3.2	3.3	3.4	3.6	3.7	3.7	3.7
USA	2.4	2.4	2.4	2.4	2.5	2.5	2.5

Table 1702: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	5.9	6.0	6.1	6.2	6.3	6.3	6.4	6.5	6.6	6.7	6.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
CHA	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6
EUR	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
IND	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
REF	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5
SSA	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
USA	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

Table 1703: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	6.8	7.0	7.1	7.2	7.3	7.4	7.5	7.5	7.7	7.8	7.9
CAZ	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8
EUR	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
IND	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7
REF	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
SSA	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.5
USA	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Table 1704: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	7.9	8.1	8.4	8.4	8.5	8.6	8.7	8.7	8.8	8.9	8.9
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.4
EUR	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4
IND	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
MEA	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
REF	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
SSA	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7
USA	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

Table 1705: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	9.0	9.1	9.2	9.2	9.3	9.4	9.5	9.5	9.6	9.7	10.0
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7
EUR	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.2
IND	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0
REF	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SSA	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9
USA	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

Table 1706: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 4/5]

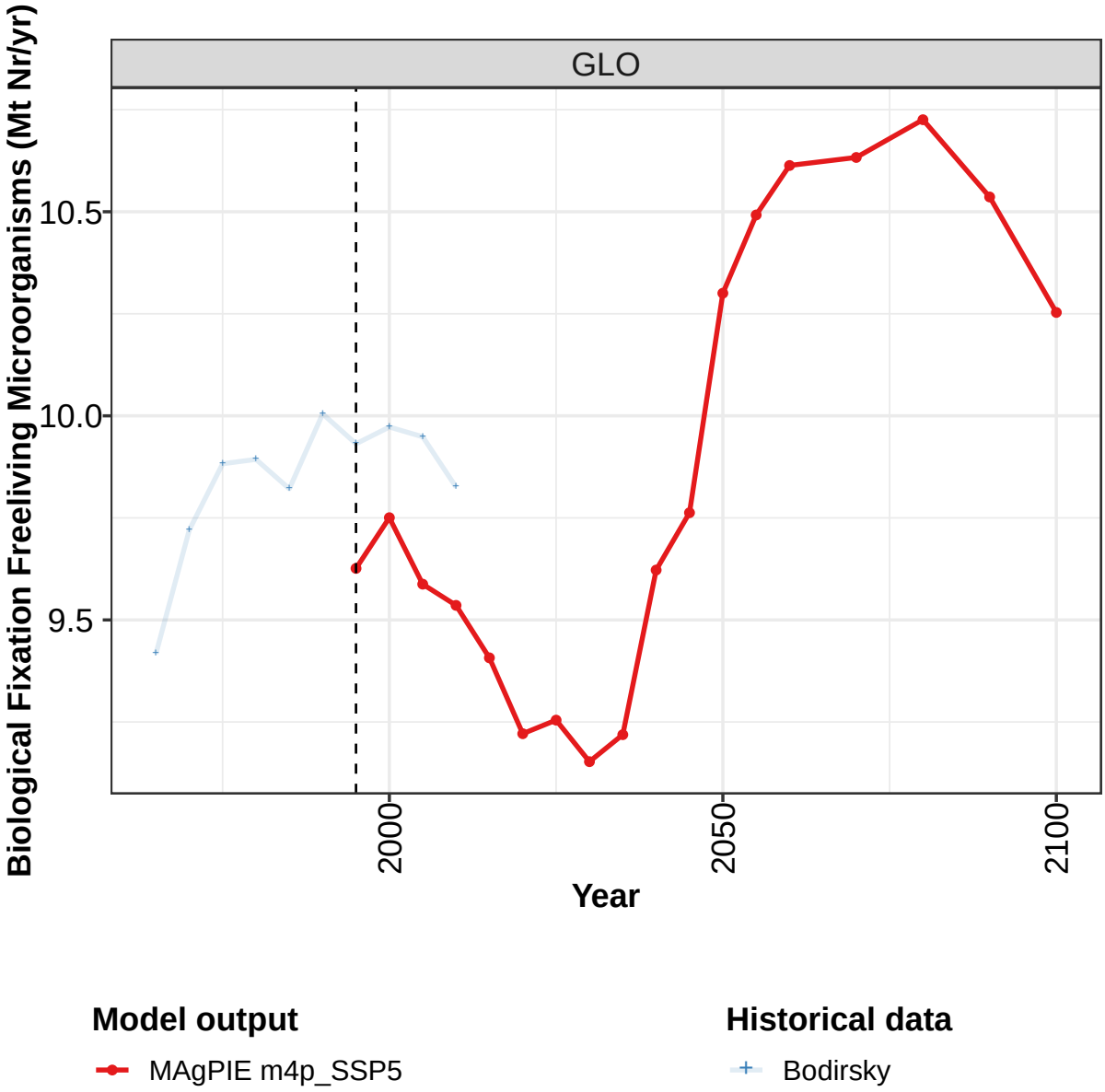
	2005	2006	2007	2008	2009
GLO	10.1	10.1	10.1	10.3	10.4
CAZ	0.1	0.1	0.1	0.1	0.1
CHA	1.7	1.8	1.7	1.7	1.7
EUR	1.2	1.2	1.1	1.2	1.1
IND	2.9	2.9	3.0	3.0	3.0
JPN	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.7	0.7	0.8	0.7
MEA	0.3	0.3	0.3	0.3	0.3
NEU	0.2	0.2	0.2	0.2	0.2
OAS	1.1	1.1	1.1	1.1	1.1
REF	0.3	0.3	0.3	0.3	0.3
SSA	0.9	0.9	0.9	0.9	0.9
USA	0.7	0.7	0.7	0.7	0.7

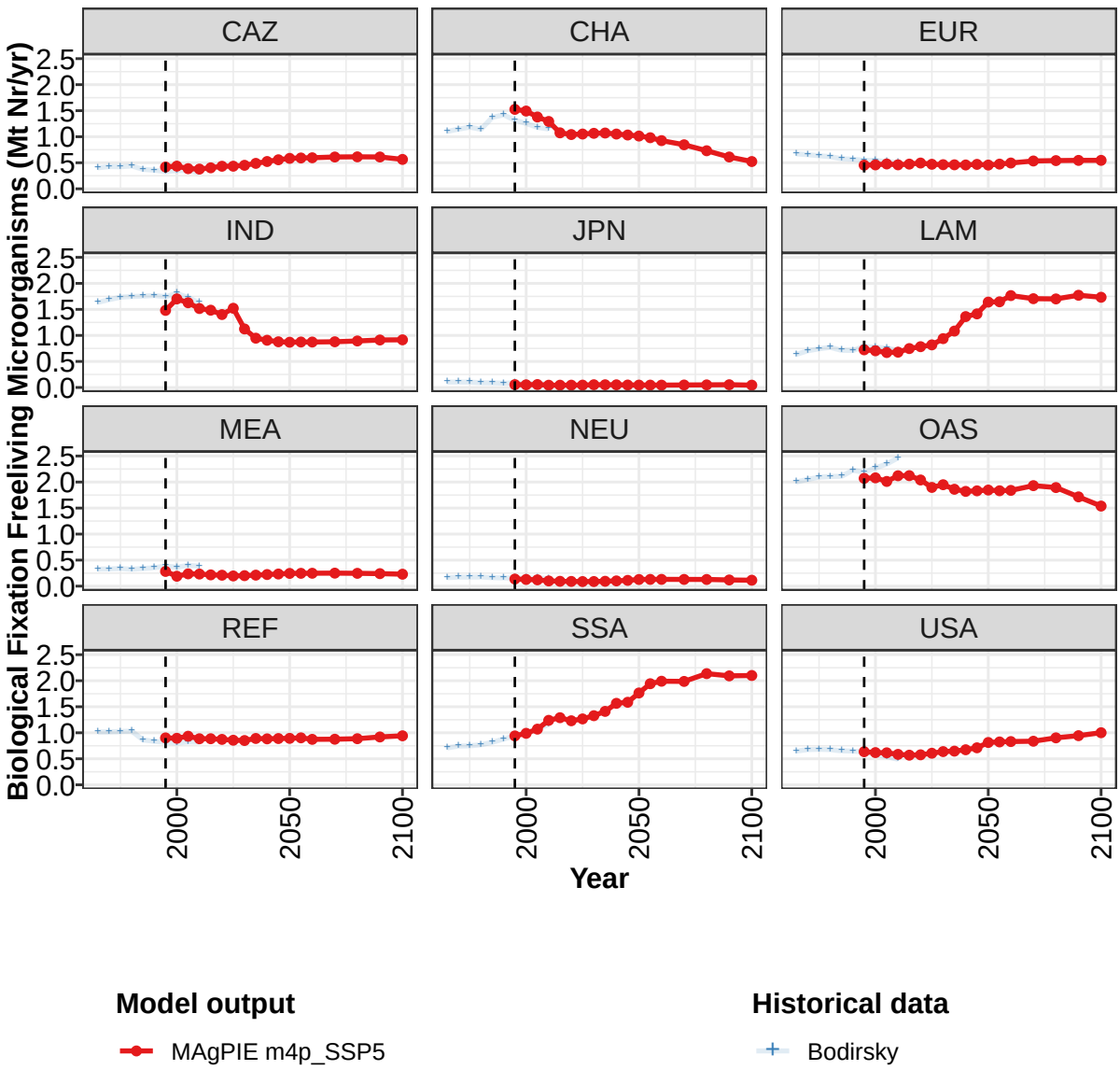
Table 1707: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 5/5]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7.3	10.2	11.4	12.7	13.5	14.8	14.9	15.0	16.5	17.6
CAZ	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	0.6	0.9	1.1	1.2	1.5	2.0	2.4	2.5	3.1	3.4
EUR	1.6	1.9	2.1	2.3	2.3	2.3	1.9	1.7	1.6	1.4
IND	0.8	1.4	1.6	1.9	2.1	2.5	2.8	3.0	3.5	4.2
JPN	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
LAM	0.3	0.4	0.5	0.6	0.6	0.7	0.9	0.9	1.1	1.2
MEA	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5
NEU	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3
OAS	0.5	0.9	1.0	1.2	1.4	1.6	1.8	1.9	2.3	2.6
REF	1.1	1.5	1.8	2.0	2.1	2.1	1.3	1.0	0.9	0.9
SSA	0.3	0.5	0.5	0.6	0.6	0.7	0.9	1.0	1.3	1.4
USA	1.5	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.5	1.3

Table 1708: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr)

56.1.7 Inputs—Biological Fixation Freeliving Microorganisms





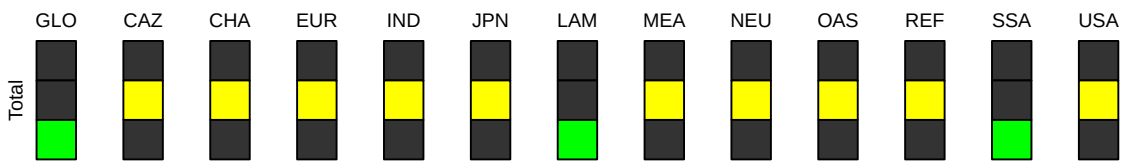


Figure 448: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Free-living Microorganisms (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.6	9.8	9.6	9.5	9.4	9.2	9.3	9.2	9.2	9.6	9.8
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6
CHA	1.5	1.5	1.4	1.3	1.1	1.0	1.1	1.1	1.1	1.1	1.0
EUR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IND	1.5	1.7	1.6	1.5	1.5	1.4	1.5	1.1	0.9	0.9	0.9
JPN	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
LAM	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.9	1.1	1.4	1.4
MEA	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	2.1	2.1	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.8	1.8
REF	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
SSA	0.9	1.0	1.1	1.2	1.3	1.2	1.3	1.3	1.4	1.6	1.6
USA	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7

Table 1709: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Freeliving Microorganisms (Mt Nr/yr) [PART 1/2]

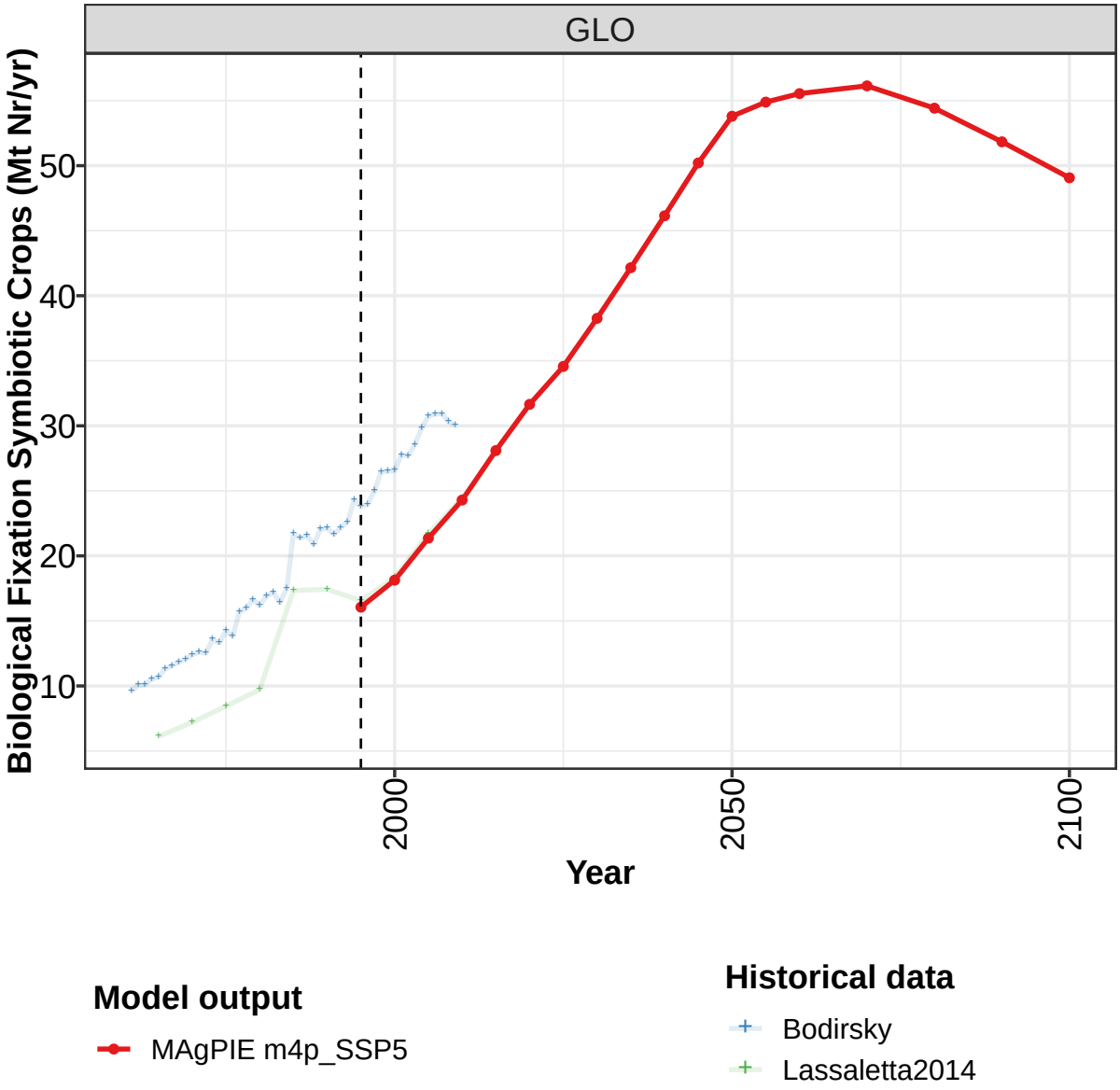
	2050	2055	2060	2070	2080	2090	2100
GLO	10.3	10.5	10.6	10.6	10.7	10.5	10.3
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	1.0	1.0	0.9	0.8	0.7	0.6	0.5
EUR	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IND	0.9	0.9	0.9	0.9	0.9	0.9	0.9
JPN	0.0	0.0	0.0	0.0	0.0	0.1	0.0
LAM	1.6	1.6	1.8	1.7	1.7	1.8	1.7
MEA	0.2	0.2	0.2	0.3	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.8	1.8	1.8	1.9	1.9	1.7	1.5
REF	0.9	0.9	0.9	0.9	0.9	0.9	0.9
SSA	1.8	1.9	2.0	2.0	2.1	2.1	2.1
USA	0.8	0.8	0.8	0.8	0.9	0.9	1.0

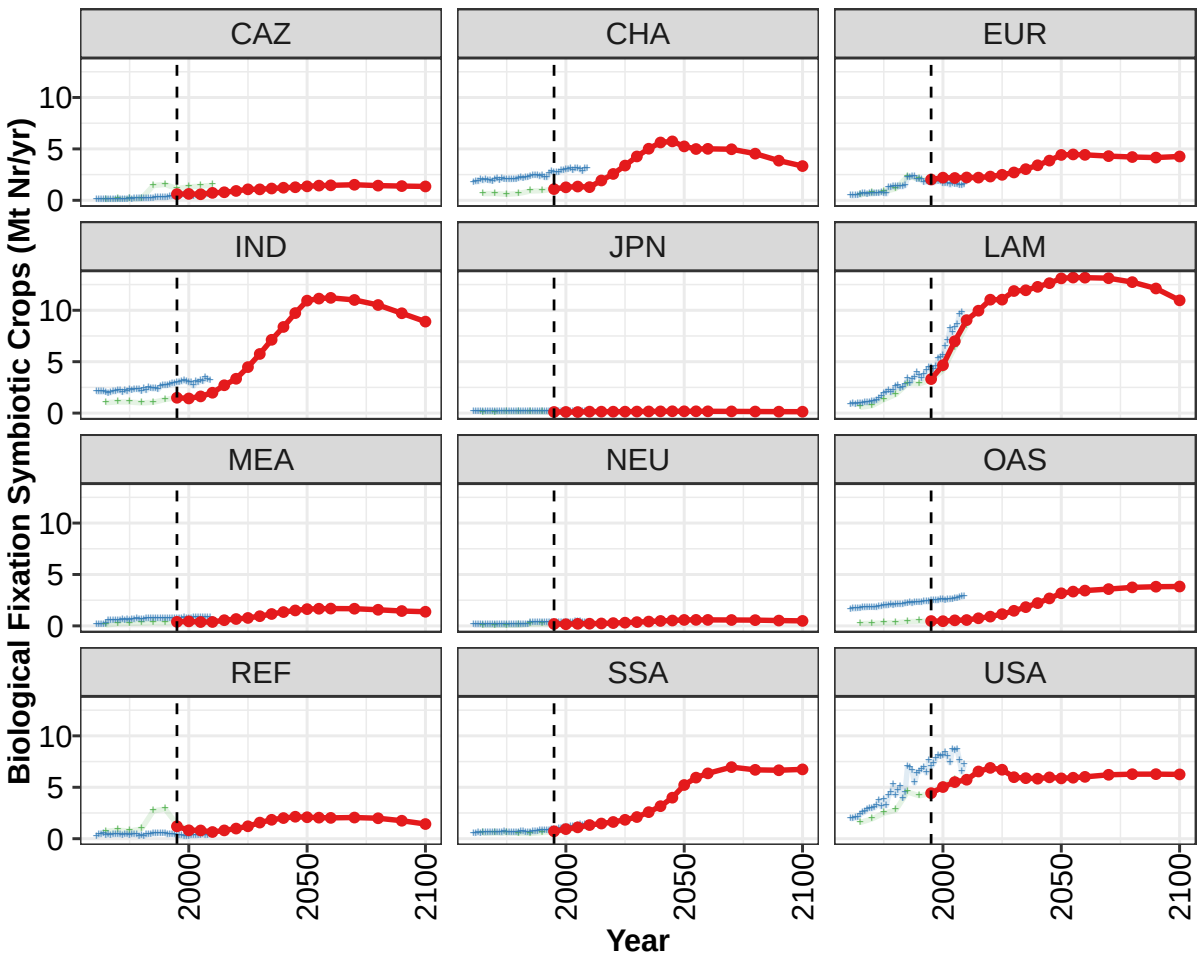
Table 1710: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Freeliving Microorganisms (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.4	9.7	9.9	9.9	9.8	10.0	9.9	10.0	9.9	9.8
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3
CHA	1.1	1.1	1.2	1.1	1.4	1.4	1.3	1.3	1.2	1.1
EUR	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
IND	1.6	1.7	1.7	1.7	1.8	1.8	1.7	1.8	1.7	1.6
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.7
MEA	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
OAS	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.5
REF	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.8
SSA	0.7	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.2
USA	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5

Table 1711: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Freeliving Microorganisms (Mt Nr/yr)

56.1.8 Inputs—Biological Fixation Symbiotic Crops





Model output

MAgPIE m4p_SSP5

Historical data

Bodirsky

Lassaletta2014

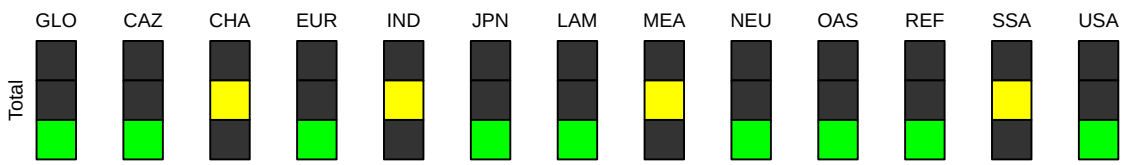


Figure 449: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.1	18.1	21.4	24.3	28.1	31.6	34.6	38.3	42.2	46.1	50.2
CAZ	0.6	0.6	0.6	0.7	0.8	0.9	1.1	1.1	1.1	1.2	1.3
CHA	1.1	1.3	1.3	1.3	1.9	2.6	3.4	4.3	5.0	5.6	5.7
EUR	2.0	2.2	2.2	2.2	2.2	2.3	2.5	2.7	3.0	3.4	3.9
IND	1.5	1.4	1.6	2.0	2.7	3.3	4.5	5.8	7.1	8.4	9.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
LAM	3.3	4.7	7.0	9.0	10.0	11.0	11.0	11.9	11.9	12.3	12.6
MEA	0.4	0.4	0.4	0.4	0.6	0.7	0.8	0.9	1.2	1.3	1.5
NEU	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
OAS	0.5	0.5	0.5	0.6	0.7	0.9	1.1	1.5	1.8	2.2	2.7
REF	1.2	0.8	0.8	0.7	0.8	1.0	1.2	1.6	1.8	2.0	2.1
SSA	0.7	0.9	1.1	1.3	1.5	1.6	1.8	2.1	2.6	3.2	4.0
USA	4.4	5.0	5.5	5.7	6.5	6.9	6.7	6.0	5.9	5.8	6.0

Table 1712: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	53.8	54.9	55.5	56.1	54.4	51.8	49.1
CAZ	1.4	1.4	1.5	1.5	1.4	1.4	1.3
CHA	5.2	5.0	5.0	5.0	4.5	3.9	3.3
EUR	4.4	4.5	4.4	4.3	4.2	4.2	4.3
IND	10.9	11.1	11.2	11.0	10.5	9.7	8.9
JPN	0.2	0.2	0.2	0.2	0.2	0.1	0.1
LAM	13.1	13.2	13.2	13.1	12.7	12.1	11.0
MEA	1.6	1.7	1.7	1.7	1.6	1.4	1.4
NEU	0.6	0.6	0.6	0.6	0.6	0.5	0.5
OAS	3.2	3.3	3.4	3.6	3.7	3.8	3.8
REF	2.1	2.0	2.0	2.1	2.0	1.7	1.4
SSA	5.2	5.9	6.4	7.0	6.7	6.7	6.7
USA	5.9	5.9	6.0	6.2	6.3	6.3	6.3

Table 1713: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	9.6	10.1	10.1	10.5	10.7	11.3	11.6	11.8	12.1	12.4	12.6
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	1.7	1.8	1.8	2.0	1.9	1.9	1.9	1.9	1.8	2.0	2.1
EUR	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
IND	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.1	2.1	2.2	2.2
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
LAM	0.8	0.9	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1
MEA	0.1	0.1	0.1	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8
REF	0.2	0.4	0.4	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.3
SSA	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
USA	1.9	2.0	2.0	2.0	2.3	2.5	2.6	2.8	2.9	2.9	3.0

Table 1714: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	12.5	13.6	13.3	14.2	13.8	15.7	16.0	16.6	16.2	16.9	17.2
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1
EUR	0.7	0.7	0.7	0.7	0.6	1.2	1.2	1.3	1.3	1.3	1.3
IND	2.0	2.1	2.0	2.2	2.2	2.3	2.3	2.3	2.1	2.3	2.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.2	1.4	1.6	1.9	2.0	2.2	2.0	2.1	2.6	2.6	2.4
MEA	0.6	0.5	0.6	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.6
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.0
REF	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.2	0.3	0.2	0.3
SSA	0.6	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
USA	3.2	3.7	3.1	3.8	3.2	4.2	4.4	5.2	4.2	4.7	5.1

Table 1715: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	16.4	17.5	21.7	21.4	21.6	20.9	22.0	22.1	21.6	22.2	22.6
CAZ	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.4
CHA	2.2	2.2	2.3	2.4	2.4	2.4	2.3	2.4	2.2	2.2	2.6
EUR	1.3	1.4	2.2	2.2	2.3	2.3	2.0	2.0	2.0	1.7	1.8
IND	2.4	2.4	2.3	2.4	2.3	2.6	2.7	2.7	2.7	2.7	2.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.5	2.7	3.3	2.9	3.2	3.5	3.9	3.7	3.3	3.8	4.1
MEA	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6
NEU	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OAS	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3
REF	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.3	0.4	0.4
SSA	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.8
USA	3.9	4.5	6.9	6.9	6.6	5.4	6.3	6.5	6.7	6.9	6.4

Table 1716: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	24.3	23.8	24.0	25.0	26.5	26.5	26.6	27.8	27.7	28.6	29.8
CAZ	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5
CHA	2.8	2.7	2.7	2.7	2.9	2.9	3.0	3.0	3.1	2.9	3.1
EUR	1.7	1.7	1.7	1.8	1.8	1.8	1.6	1.6	1.6	1.5	1.6
IND	2.8	2.9	3.0	3.0	3.1	3.0	2.9	2.9	2.6	3.1	2.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	4.4	4.4	4.2	4.5	5.3	5.4	5.6	6.5	7.0	8.2	7.8
MEA	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
NEU	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
OAS	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6
REF	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3
SSA	0.8	0.8	0.9	0.9	1.0	1.1	1.0	1.1	1.1	1.2	1.2
USA	7.6	7.0	7.3	7.8	8.0	8.0	8.1	8.3	7.9	7.4	8.6

Table 1717: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 4/5]

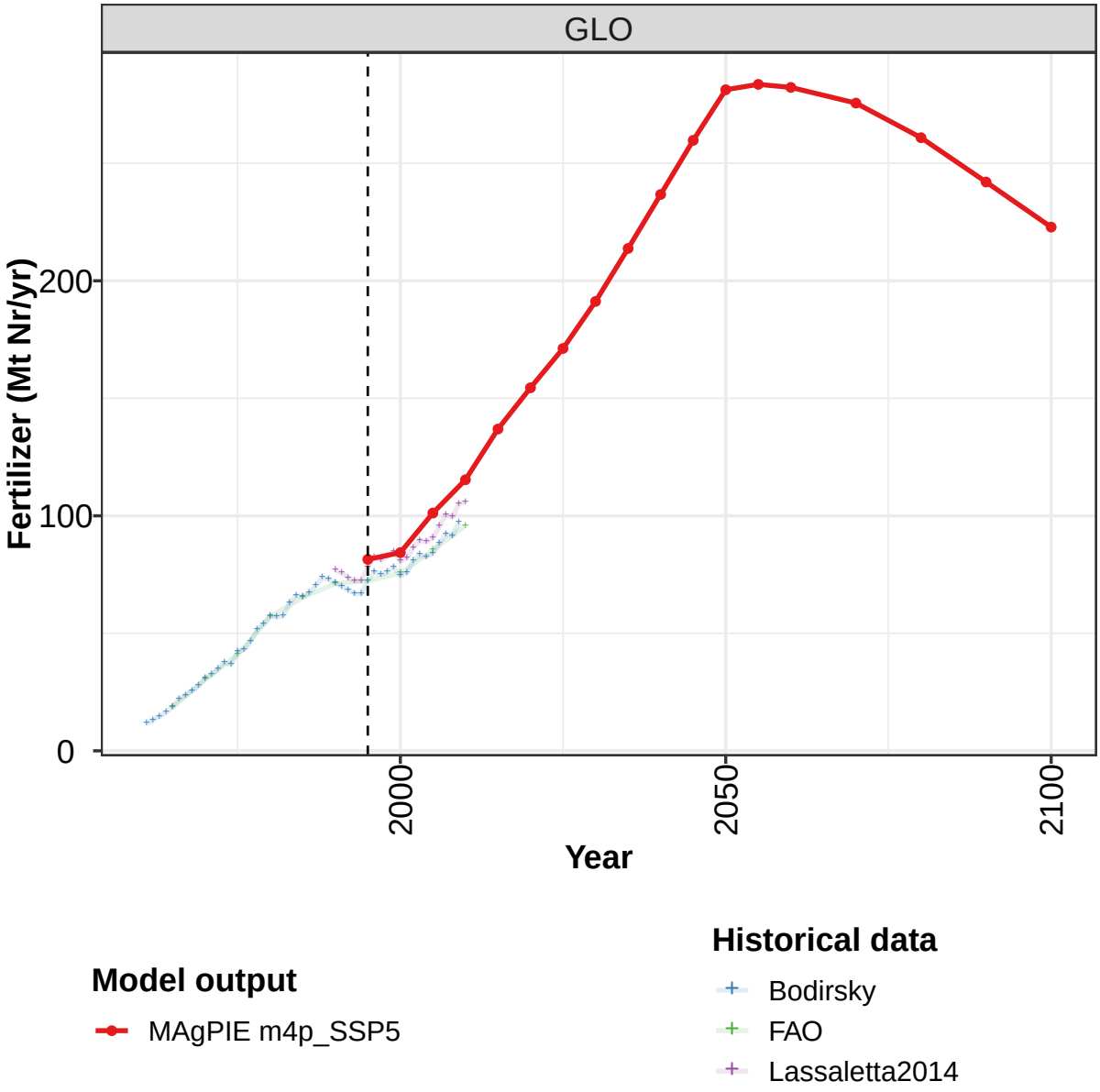
	2005	2006	2007	2008	2009
GLO	30.7	30.9	30.9	30.3	30.0
CAZ	0.6	0.5	0.5	0.6	0.6
CHA	3.1	2.9	2.8	3.1	3.1
EUR	1.6	1.5	1.4	1.4	1.5
IND	3.1	3.1	3.5	3.3	3.1
JPN	0.1	0.1	0.1	0.1	0.1
LAM	8.3	8.6	9.6	9.8	8.7
MEA	0.8	0.8	0.8	0.8	0.8
NEU	0.4	0.4	0.3	0.3	0.3
OAS	2.7	2.7	2.7	2.8	2.8
REF	0.3	0.3	0.3	0.3	0.3
SSA	1.3	1.4	1.3	1.4	1.4
USA	8.6	8.6	7.6	6.5	7.2

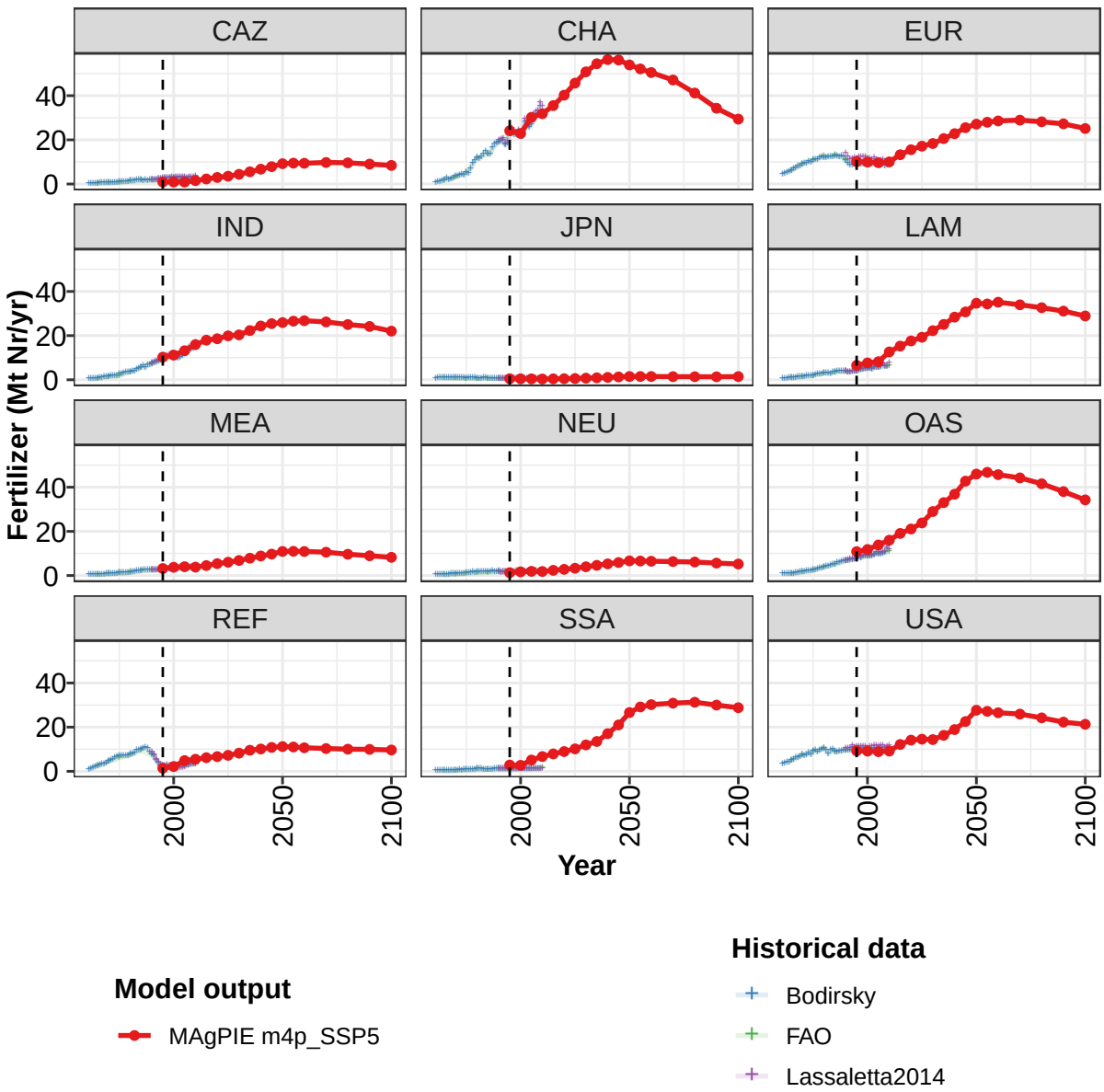
Table 1718: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 5/5]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	6.1	7.2	8.4	9.7	17.3	17.4	16.6	18.4	21.7	24.5
CAZ	0.1	0.1	0.1	0.2	1.4	1.5	1.1	1.3	1.4	1.5
CHA	0.6	0.7	0.6	0.7	0.9	0.9	1.1	1.3	1.4	1.3
EUR	0.5	0.7	0.8	1.1	2.3	2.1	2.0	2.1	2.1	2.2
IND	1.0	1.1	1.1	1.0	1.0	1.3	1.5	1.4	1.7	2.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.6	0.7	1.3	1.8	2.9	2.8	3.2	4.2	6.4	8.5
MEA	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4
NEU	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6
REF	0.7	0.8	0.7	0.9	2.7	2.9	1.4	0.9	0.8	0.6
SSA	0.5	0.6	0.6	0.5	0.5	0.6	0.7	0.8	1.0	1.3
USA	1.6	1.9	2.5	2.8	4.5	4.2	4.4	5.2	5.7	5.6

Table 1719: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr)

56.1.9 Inputs—Fertilizer





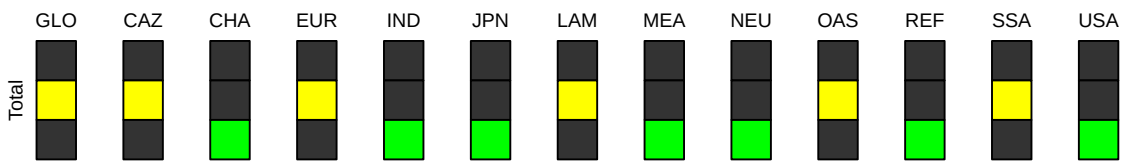


Figure 450: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	84	101	115	137	154	171	191	214	237	260
CAZ	1	1	1	2	2	3	4	4	6	7	8
CHA	24	23	30	32	36	40	46	51	54	56	56
EUR	10	10	10	10	13	16	17	18	21	23	26
IND	10	11	13	16	18	19	20	20	22	24	25
JPN	1	0	0	0	0	0	1	1	1	1	1
LAM	7	8	8	13	15	18	19	22	25	28	31
MEA	3	4	4	4	5	5	6	7	8	9	10
NEU	1	2	2	2	2	3	3	4	5	5	6
OAS	11	12	14	16	19	21	24	29	33	37	43
REF	1	2	5	5	6	7	7	8	10	10	11
SSA	3	3	5	7	8	9	10	12	14	17	21
USA	9	9	9	9	12	14	15	14	16	19	23

Table 1720: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	281	284	282	276	261	242	223
CAZ	9	9	9	10	10	9	8
CHA	54	52	50	47	41	34	29
EUR	27	28	29	29	28	27	25
IND	26	27	27	26	25	24	22
JPN	1	1	1	1	1	1	1
LAM	35	34	35	34	33	31	29
MEA	11	11	11	11	10	9	8
NEU	7	7	6	6	6	6	5
OAS	46	47	46	44	42	38	34
REF	11	11	11	10	10	10	10
SSA	27	29	30	31	31	30	29
USA	28	27	27	26	24	22	21

Table 1721: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	11.6	13.1	14.6	16.3	18.8	21.7	23.6	25.6	27.6	30.7	32.3
CAZ	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.4	0.4	0.4	0.5
CHA	0.5	0.8	1.0	1.2	1.8	2.7	1.9	2.1	2.6	3.3	3.3
EUR	4.5	4.7	5.0	5.4	6.0	6.6	7.2	7.9	8.2	8.7	9.1
IND	0.2	0.3	0.4	0.6	0.6	0.7	1.0	1.2	1.3	1.5	1.8
JPN	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7
LAM	0.4	0.5	0.6	0.7	0.7	0.8	0.9	1.1	1.2	1.3	1.3
MEA	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7
NEU	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.7	0.8
OAS	0.6	0.6	0.7	0.6	0.7	0.8	1.1	1.2	1.4	1.6	1.6
REF	0.9	1.1	1.3	1.7	2.2	2.6	3.0	3.4	3.7	4.4	5.0
SSA	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4
USA	3.1	3.6	3.9	4.2	4.8	5.4	6.1	6.2	6.6	7.2	7.1

Table 1722: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	34.8	37.6	36.7	42.3	43.0	46.5	51.4	54.0	57.3	56.8	57.3
CAZ	0.6	0.7	0.7	0.7	0.8	1.0	1.1	1.1	1.2	1.2	1.3
CHA	3.8	4.4	3.8	5.0	4.7	7.0	9.1	10.5	11.9	11.3	12.0
EUR	9.4	9.9	9.9	10.6	10.8	11.0	11.8	12.2	11.9	11.9	12.1
IND	1.8	1.8	1.7	2.7	2.4	2.8	3.3	3.4	3.5	3.9	3.9
JPN	0.7	0.8	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6
LAM	1.6	1.7	1.8	1.9	2.2	2.5	2.4	2.6	2.8	2.8	2.8
MEA	0.8	0.9	0.9	1.0	1.0	1.1	1.0	1.3	1.4	1.5	1.7
NEU	0.9	0.9	0.8	1.0	1.2	1.3	1.5	1.4	1.5	1.5	1.6
OAS	2.0	2.0	2.0	2.2	2.5	2.9	3.3	3.4	3.7	3.9	4.2
REF	5.4	5.9	6.3	6.9	6.8	7.0	7.1	6.9	7.6	7.7	8.3
SSA	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.9	1.0	0.9
USA	7.3	8.0	7.5	9.1	9.3	8.7	9.3	9.9	10.3	9.5	7.8

Table 1723: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	62.7	66.2	65.4	67.2	70.3	73.6	72.9	71.4	70.0	68.2	66.9
CAZ	1.6	1.7	1.6	1.5	1.6	1.6	1.6	1.6	1.8	1.9	2.0
CHA	13.4	14.8	13.5	13.2	16.4	18.0	18.3	19.0	19.4	19.7	17.4
EUR	12.3	12.3	12.5	12.5	12.3	12.5	12.2	10.5	9.4	8.4	8.6
IND	4.4	5.1	5.5	6.2	5.4	6.8	6.8	7.1	7.6	7.9	8.2
JPN	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
LAM	2.7	3.2	3.4	3.8	3.9	3.7	3.7	3.6	3.4	3.5	3.7
MEA	1.9	1.9	2.0	2.3	2.3	2.3	2.5	2.3	2.4	2.5	2.5
NEU	1.7	1.8	1.7	1.7	1.9	1.8	1.8	1.8	1.6	1.6	1.7
OAS	4.4	4.8	5.1	5.6	5.7	6.1	6.4	6.6	6.6	7.0	7.1
REF	9.4	9.3	9.9	10.3	10.5	10.3	8.8	7.7	6.9	4.7	3.5
SSA	0.8	0.9	0.9	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0
USA	9.5	9.8	8.9	8.7	8.9	8.9	9.3	9.5	9.6	9.5	10.5

Table 1724: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	66.8	72.4	76.3	74.9	76.2	78.0	74.5	75.7	80.9	83.3	82.5
CAZ	2.1	2.3	2.5	2.5	2.6	2.8	2.6	2.7	2.7	2.7	2.7
CHA	18.5	23.0	24.4	22.2	22.1	23.3	21.3	21.6	28.0	27.3	25.5
EUR	8.8	8.6	9.3	9.0	9.0	9.0	8.6	8.7	8.7	9.2	8.7
IND	8.9	9.2	9.6	10.1	10.5	10.7	10.1	10.4	9.6	10.1	10.7
JPN	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
LAM	3.8	3.8	4.4	4.7	4.8	4.8	5.0	5.1	4.7	5.6	5.6
MEA	2.4	2.6	2.7	2.8	3.0	3.0	3.1	3.3	3.3	3.4	3.5
NEU	1.4	1.5	1.6	1.7	1.9	1.9	1.8	1.6	1.7	1.8	2.0
OAS	7.3	7.6	8.1	7.9	8.6	8.8	8.9	8.6	8.8	9.2	10.0
REF	2.4	2.3	2.1	2.5	2.2	2.3	2.3	2.5	2.0	2.2	2.2
SSA	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1
USA	9.7	10.2	10.2	10.1	10.2	10.1	9.4	9.8	9.8	10.3	10.1

Table 1725: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 4/5]

	2005	2006	2007	2008	2009
GLO	84.0	88.1	92.2	91.5	97.2
CAZ	2.8	2.3	2.6	2.5	2.3
CHA	26.9	29.8	31.1	31.7	35.2
EUR	8.4	8.3	8.8	8.0	8.3
IND	11.6	12.5	13.1	13.7	14.2
JPN	0.4	0.4	0.4	0.4	0.3
LAM	5.6	5.7	7.0	6.0	5.8
MEA	3.5	3.4	3.3	3.6	2.9
NEU	1.9	1.9	1.9	1.7	2.0
OAS	9.7	9.6	9.9	10.2	12.1
REF	2.4	2.7	2.9	3.3	3.4
SSA	1.0	1.2	1.0	1.1	1.0
USA	9.8	10.3	10.2	9.4	9.7

Table 1726: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 5/5]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	18.4	30.4	40.8	57.1	65.2	71.1	72.3	75.6	85.4	95.8
CAZ	0.3	0.5	0.7	1.2	1.7	1.6	2.3	2.6	2.6	3.0
CHA	1.5	3.1	5.0	11.8	13.5	19.0	23.0	22.1	28.7	31.2
EUR	6.1	9.0	11.0	12.4	13.1	11.0	8.8	9.0	8.6	8.9
IND	0.5	1.3	1.9	3.4	5.5	7.1	9.2	10.1	11.6	15.1
JPN	0.8	0.7	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.3
LAM	0.7	1.3	1.9	2.8	3.4	3.7	3.8	5.3	5.6	6.4
MEA	0.4	0.6	1.0	1.4	2.0	2.3	2.6	3.0	3.2	3.1
NEU	0.2	0.5	0.8	1.2	1.4	1.6	1.3	1.6	1.7	1.5
OAS	0.7	1.6	2.3	3.7	5.1	6.6	7.6	8.9	9.9	10.9
REF	2.1	4.2	6.0	7.3	9.4	7.2	2.2	2.2	2.5	3.4
SSA	0.2	0.4	0.6	0.9	0.9	1.0	0.9	1.0	1.0	1.6
USA	4.8	7.2	9.1	10.3	8.7	9.5	10.2	9.4	9.7	10.3

Table 1727: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr)

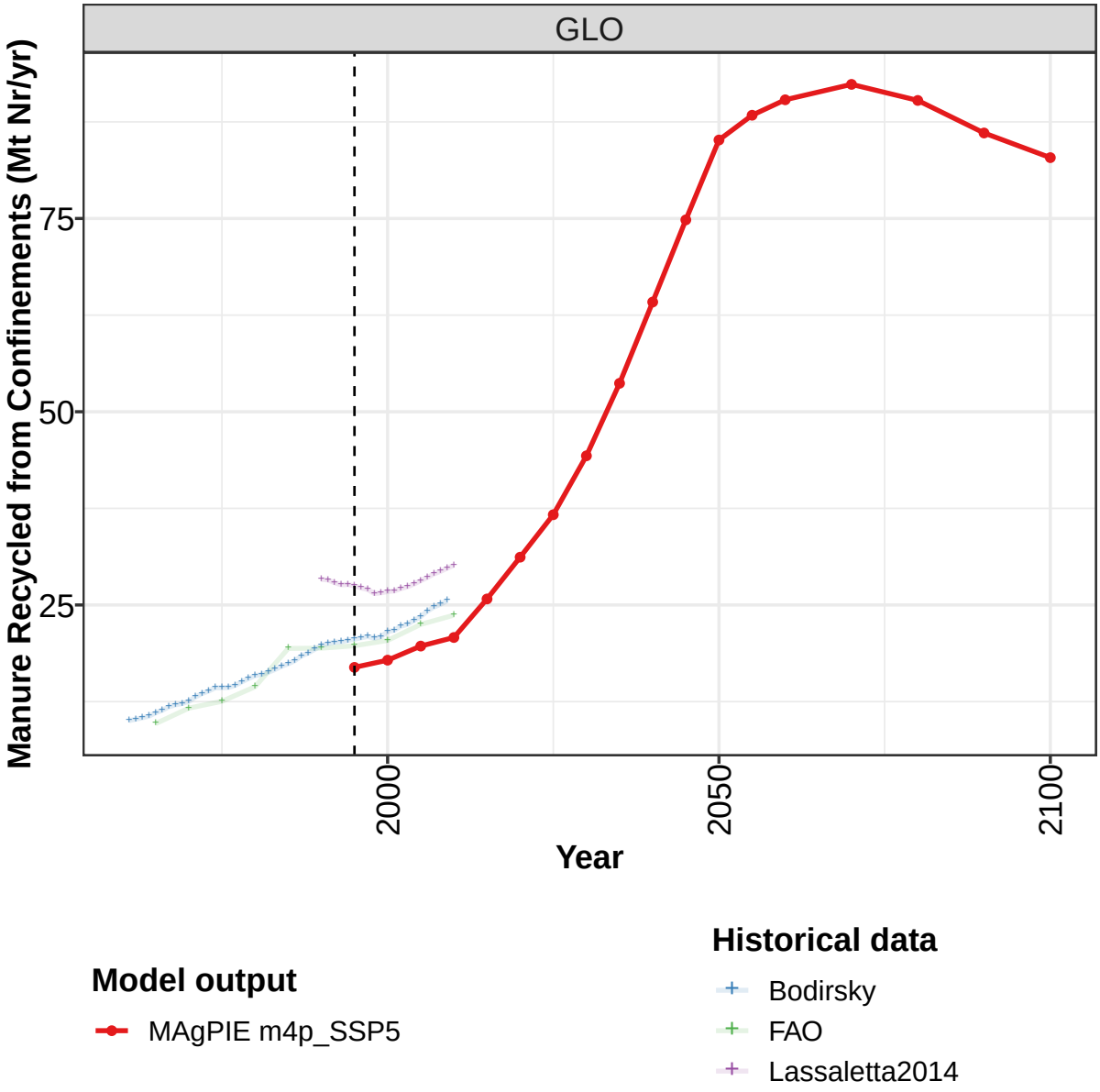
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	77	76	74	72	72	78	82	81	83	85	81
CAZ	2	2	2	2	2	2	3	3	3	3	3
CHA	20	20	20	18	19	24	25	23	23	24	22
EUR	14	12	11	11	12	11	12	12	12	12	11
IND	8	8	8	9	10	10	10	11	11	12	11
JPN	1	1	1	1	1	1	1	0	0	0	0
LAM	4	4	4	4	4	4	4	5	5	5	5
MEA	2	2	3	3	2	3	3	3	3	3	3
NEU	1	1	1	2	1	1	1	1	2	2	2
OAS	7	7	7	7	8	8	8	8	9	9	9
REF	8	8	5	4	3	3	2	3	2	2	2
SSA	1	1	1	1	1	1	1	1	1	1	1
USA	10	10	10	11	11	11	11	11	11	11	10

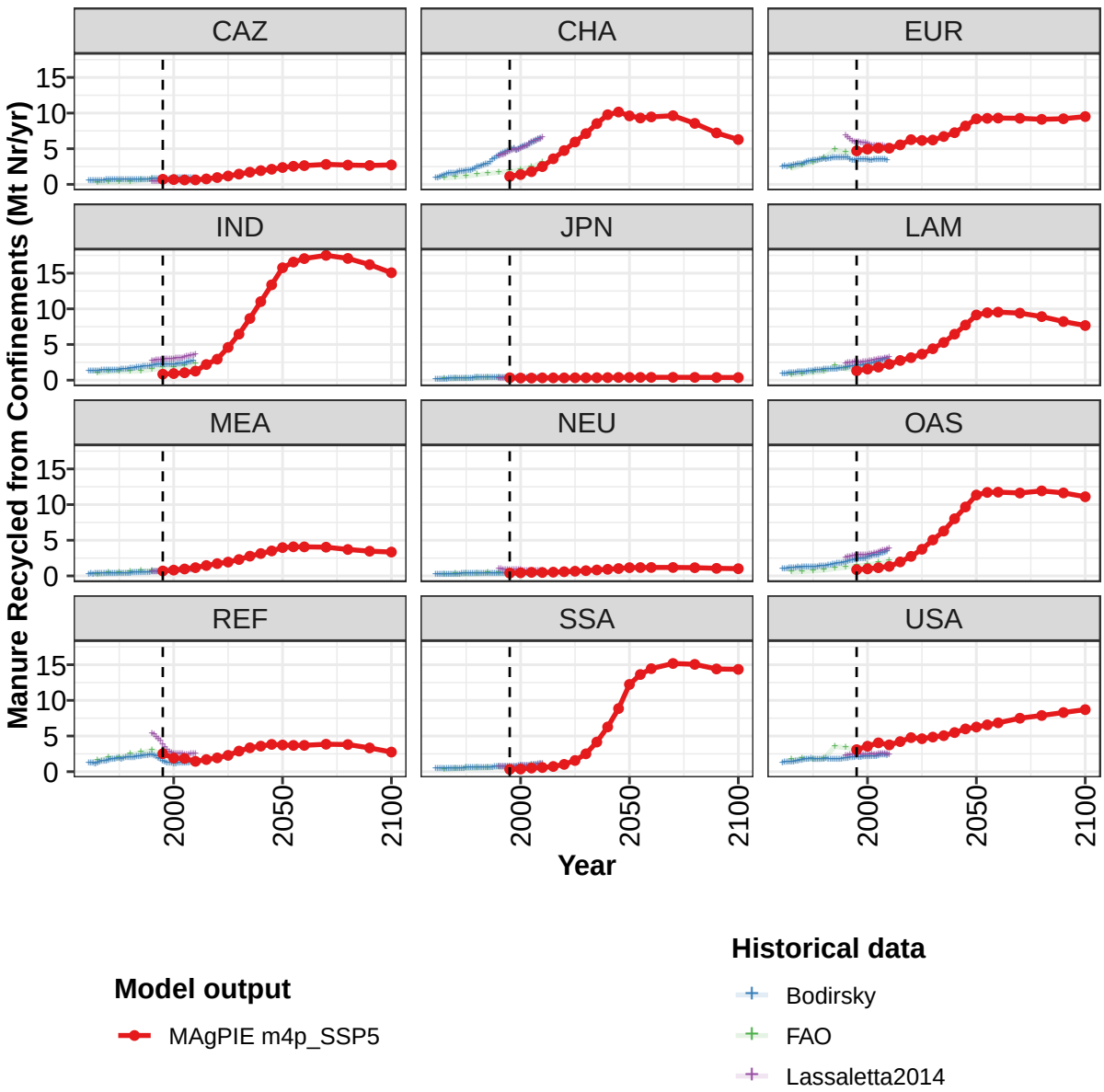
Table 1728: FAO — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 1/2]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GLO	82	86	90	89	90	96	100	99	105	106
CAZ	3	3	3	3	3	2	3	3	3	3
CHA	22	29	28	27	28	31	33	33	37	35
EUR	11	11	12	11	10	10	11	10	10	11
IND	11	10	11	12	13	14	14	15	16	17
JPN	0	1	1	1	1	1	1	0	1	0
LAM	5	5	6	6	6	6	7	6	6	7
MEA	3	3	3	4	4	4	3	4	3	3
NEU	1	2	2	2	2	2	2	2	2	2
OAS	9	9	10	10	10	10	10	11	13	12
REF	3	1	2	2	2	3	3	3	3	3
SSA	1	1	1	1	1	1	1	1	1	1
USA	11	11	12	11	11	12	12	11	11	11

Table 1729: FAO — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 2/2]

56.1.10 Inputs—Manure Recycled from Confinements





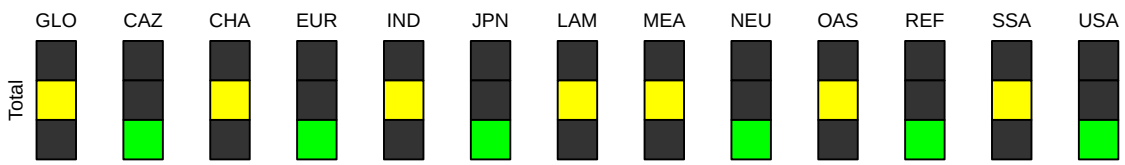


Figure 451: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.9	17.9	19.7	20.8	25.8	31.2	36.7	44.3	53.7	64.2	74.8
CAZ	0.7	0.7	0.6	0.6	0.8	1.0	1.2	1.4	1.7	1.9	2.1
CHA	1.1	1.4	1.8	2.5	3.6	4.7	5.9	7.1	8.5	9.8	10.2
EUR	4.7	4.9	5.1	5.1	5.5	6.3	6.2	6.2	6.7	7.3	8.2
IND	0.8	0.9	1.0	1.3	2.2	2.9	4.6	6.5	8.6	11.0	13.4
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
LAM	1.3	1.6	1.8	2.2	2.8	3.2	3.6	4.4	5.3	6.4	7.7
MEA	0.7	0.8	1.0	1.2	1.5	1.7	1.9	2.3	2.8	3.1	3.5
NEU	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.9	1.0
OAS	0.9	1.0	1.1	1.3	2.0	2.7	3.7	5.0	6.3	8.0	9.7
REF	2.5	1.9	1.9	1.5	1.7	1.9	2.3	2.9	3.3	3.6	3.8
SSA	0.3	0.4	0.5	0.6	0.7	1.0	1.6	2.5	4.2	6.3	8.9
USA	3.1	3.6	4.0	3.8	4.2	4.8	4.6	4.8	5.0	5.5	6.0

Table 1730: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	85.2	88.4	90.4	92.4	90.3	86.1	82.9
CAZ	2.4	2.5	2.6	2.8	2.7	2.7	2.7
CHA	9.6	9.3	9.5	9.6	8.6	7.2	6.3
EUR	9.2	9.3	9.3	9.3	9.1	9.2	9.5
IND	15.8	16.6	17.0	17.5	17.1	16.2	15.1
JPN	0.4	0.4	0.4	0.4	0.4	0.4	0.4
LAM	9.1	9.5	9.5	9.4	8.9	8.2	7.7
MEA	4.0	4.1	4.1	4.0	3.7	3.5	3.3
NEU	1.2	1.2	1.2	1.2	1.2	1.1	1.0
OAS	11.3	11.7	11.7	11.6	11.9	11.6	11.1
REF	3.7	3.7	3.7	3.9	3.8	3.3	2.8
SSA	12.2	13.6	14.4	15.2	15.1	14.4	14.4
USA	6.3	6.6	6.8	7.5	7.9	8.3	8.7

Table 1731: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	10.0	10.2	10.4	10.6	11.1	11.4	11.8	12.1	12.2	12.5	13.1
CAZ	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
CHA	0.9	0.9	1.0	1.1	1.2	1.3	1.5	1.5	1.5	1.4	1.6
EUR	2.5	2.5	2.5	2.5	2.6	2.6	2.7	2.8	2.8	2.8	2.9
IND	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
LAM	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2
REF	1.1	1.2	1.2	1.0	1.2	1.3	1.4	1.4	1.4	1.5	1.7
SSA	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
USA	1.2	1.3	1.3	1.4	1.3	1.4	1.4	1.5	1.5	1.6	1.6

Table 1732: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	13.5	13.9	14.3	14.3	14.3	14.6	15.1	15.5	15.8	16.0	16.3
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	1.7	1.8	1.8	1.9	1.9	1.9	2.1	2.2	2.4	2.5	2.5
EUR	3.0	3.1	3.2	3.2	3.3	3.3	3.4	3.5	3.5	3.5	3.5
IND	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.7
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
LAM	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5
MEA	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
OAS	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4
REF	1.7	1.7	1.8	1.8	1.7	1.9	1.9	1.9	1.9	1.9	1.9
SSA	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
USA	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7

Table 1733: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	16.6	17.1	17.4	17.8	18.4	18.8	19.3	19.7	20.0	20.2	20.2
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7
CHA	2.6	2.7	2.9	3.0	3.4	3.6	3.8	3.9	4.2	4.3	4.5
EUR	3.6	3.6	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.4
IND	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1
JPN	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
LAM	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.8	1.8
MEA	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
NEU	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OAS	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.1
REF	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.0	1.9
SSA	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
USA	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9

Table 1734: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	20.4	20.6	20.7	20.9	20.7	20.9	21.6	21.7	22.2	22.5	23.0
CAZ	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.9
CHA	4.6	4.7	4.9	5.0	4.8	4.8	5.2	5.3	5.4	5.4	5.6
EUR	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
IND	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
JPN	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	1.9	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.5
MEA	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.8	0.8
NEU	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OAS	2.2	2.3	2.3	2.4	2.3	2.4	2.6	2.6	2.7	2.8	2.9
REF	1.7	1.5	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.2	1.1
SSA	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
USA	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1

Table 1735: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 4/5]

	2005	2006	2007	2008	2009
GLO	23.5	24.2	24.7	25.1	25.5
CAZ	0.9	0.9	0.9	0.8	0.8
CHA	5.7	6.0	6.1	6.3	6.5
EUR	3.4	3.4	3.4	3.4	3.4
IND	2.3	2.4	2.4	2.5	2.6
JPN	0.3	0.3	0.3	0.3	0.3
LAM	2.5	2.7	2.7	2.8	2.9
MEA	0.8	0.9	0.9	0.9	0.9
NEU	0.3	0.3	0.3	0.3	0.3
OAS	2.9	3.1	3.2	3.2	3.3
REF	1.1	1.2	1.2	1.2	1.2
SSA	0.9	0.9	1.0	1.0	1.0
USA	2.2	2.3	2.3	2.3	2.2

Table 1736: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 5/5]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.6	11.6	12.5	14.4	19.4	19.4	19.7	20.4	22.5	23.7
CAZ	0.3	0.3	0.3	0.3	0.6	0.7	0.7	0.7	0.7	0.7
CHA	0.9	1.0	1.2	1.3	1.5	1.7	1.8	2.1	2.4	3.1
EUR	2.2	2.7	3.1	3.7	4.8	4.4	4.5	4.6	4.7	4.7
IND	1.0	1.2	1.2	1.2	1.3	1.5	1.7	1.8	2.0	2.3
JPN	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3
LAM	0.7	0.9	1.1	1.2	2.0	1.6	1.7	1.9	2.2	2.5
MEA	0.2	0.4	0.4	0.5	0.7	0.7	0.8	0.9	1.1	1.3
NEU	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.5
OAS	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.5	1.8	2.1
REF	1.5	2.0	1.9	2.4	2.7	3.0	2.5	1.7	1.7	1.3
SSA	0.3	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.9	1.1
USA	1.7	1.8	1.7	1.8	3.5	3.4	3.2	3.7	4.1	3.8

Table 1737: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr)

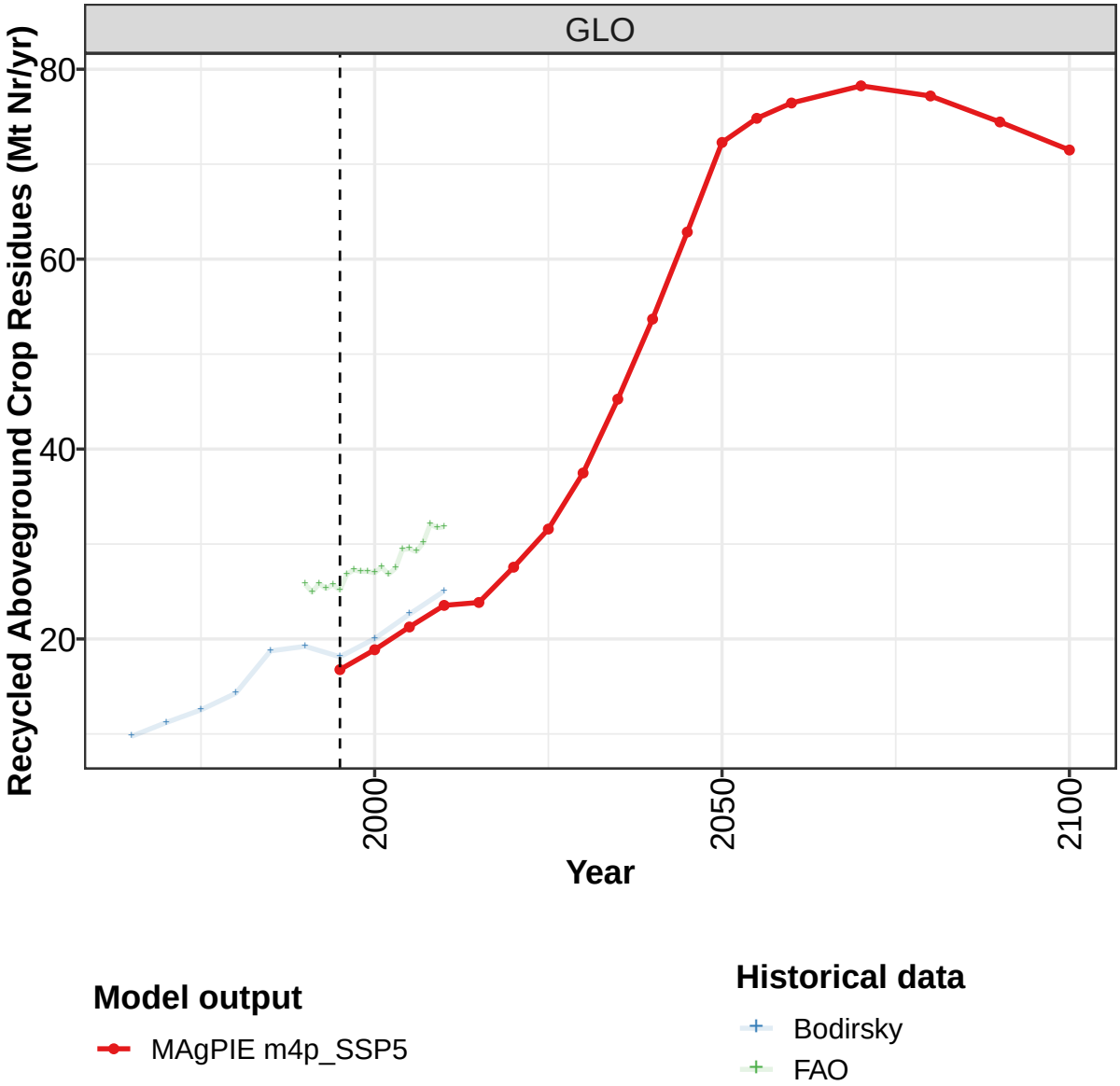
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	28.3	28.2	27.9	27.6	27.6	27.5	27.2	27.0	26.5	26.6	26.7
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CHA	4.0	4.1	4.1	4.2	4.4	4.6	4.8	4.9	4.7	4.9	5.0
EUR	6.8	6.6	6.3	6.0	5.9	5.8	5.8	5.8	5.7	5.7	5.6
IND	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	2.3	2.3	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.5	2.6
MEA	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7
NEU	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
OAS	2.5	2.6	2.6	2.7	2.8	2.8	2.9	2.9	2.8	2.8	2.9
REF	5.3	5.2	4.8	4.6	4.3	3.8	3.4	3.0	2.7	2.6	2.5
SSA	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7
USA	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4

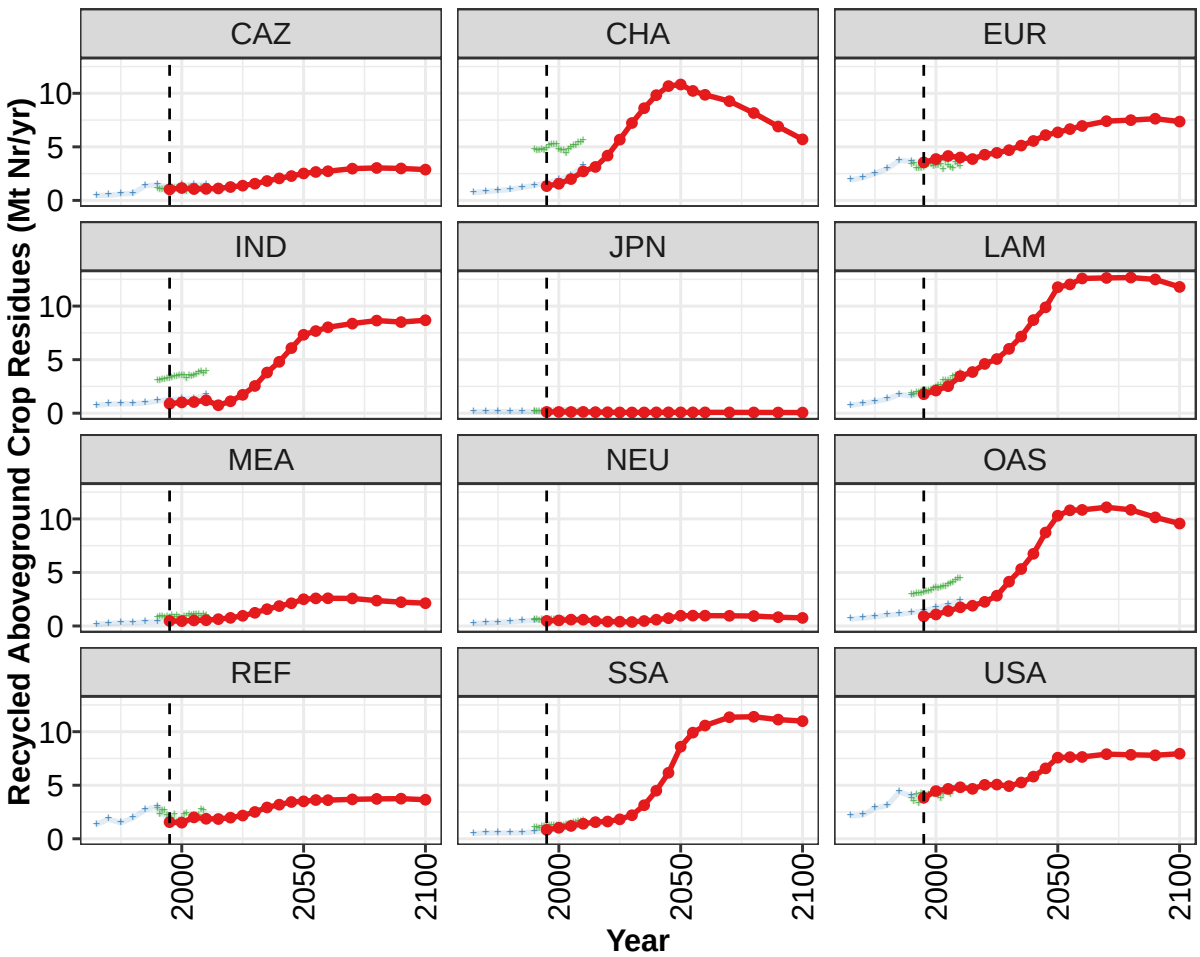
Table 1738: FAO — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 1/2]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GLO	26.8	27.1	27.3	27.7	28.1	28.6	29.0	29.3	29.8	30.1
CAZ	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
CHA	5.2	5.3	5.4	5.6	5.8	6.0	6.1	6.2	6.3	6.5
EUR	5.5	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.2	5.2
IND	3.0	3.0	3.0	3.1	3.2	3.2	3.3	3.4	3.4	3.5
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	2.6	2.7	2.7	2.8	2.9	2.9	2.9	3.0	3.1	3.1
MEA	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9
NEU	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
OAS	2.9	3.0	3.1	3.2	3.2	3.4	3.5	3.6	3.7	3.7
REF	2.4	2.4	2.5	2.4	2.3	2.3	2.4	2.4	2.4	2.5
SSA	0.7	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0
USA	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4

Table 1739: FAO — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 2/2]

56.1.11 Inputs—Recycled Aboveground Crop Residues





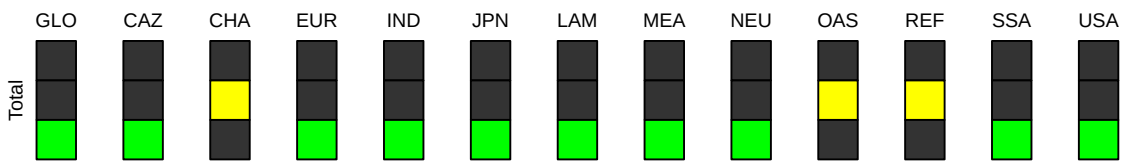


Figure 452: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.8	18.9	21.3	23.5	23.8	27.6	31.6	37.5	45.3	53.7	62.9
CAZ	1.0	1.2	1.1	1.1	1.1	1.3	1.4	1.6	1.8	2.1	2.3
CHA	1.3	1.6	2.0	2.7	3.1	4.2	5.7	7.2	8.6	9.8	10.7
EUR	3.6	3.9	4.1	4.0	3.9	4.3	4.4	4.7	5.1	5.6	6.1
IND	0.9	1.0	1.0	1.2	0.7	1.1	1.7	2.5	3.8	4.8	6.1
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.8	2.1	2.5	3.5	3.8	4.6	5.1	6.0	7.2	8.7	9.9
MEA	0.5	0.5	0.5	0.5	0.6	0.8	1.0	1.2	1.6	1.9	2.1
NEU	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.6	0.7
OAS	0.9	1.1	1.4	1.7	1.9	2.3	2.8	4.1	5.3	6.7	8.7
REF	1.6	1.5	2.0	1.9	1.8	2.0	2.2	2.5	2.9	3.2	3.4
SSA	0.8	1.0	1.2	1.4	1.6	1.6	1.8	2.2	3.1	4.5	6.2
USA	3.8	4.5	4.7	4.8	4.7	5.0	5.1	4.9	5.3	5.8	6.6

Table 1740: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	72.3	74.8	76.4	78.3	77.2	74.4	71.5
CAZ	2.5	2.7	2.7	3.0	3.0	3.0	2.9
CHA	10.8	10.2	9.9	9.3	8.2	6.9	5.7
EUR	6.4	6.7	7.0	7.4	7.5	7.6	7.4
IND	7.3	7.7	8.0	8.4	8.7	8.5	8.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	11.8	12.0	12.6	12.6	12.7	12.5	11.8
MEA	2.5	2.6	2.6	2.6	2.4	2.2	2.1
NEU	1.0	1.0	1.0	1.0	0.9	0.8	0.8
OAS	10.3	10.8	10.8	11.1	10.8	10.1	9.6
REF	3.5	3.6	3.6	3.7	3.7	3.7	3.6
SSA	8.6	9.9	10.6	11.4	11.4	11.1	11.0
USA	7.6	7.6	7.6	7.9	7.8	7.8	7.9

Table 1741: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	9.7	11.2	12.5	14.3	18.7	19.2	18.1	20.0	22.6	25.0
CAZ	0.5	0.5	0.6	0.7	1.4	1.4	1.3	1.4	1.5	1.5
CHA	0.7	0.8	0.9	1.0	1.2	1.4	1.7	1.9	2.3	3.2
EUR	1.9	2.1	2.5	3.0	3.7	3.6	3.5	3.8	4.0	4.0
IND	0.7	0.8	0.9	0.9	1.0	1.1	1.3	1.4	1.4	1.7
JPN	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
LAM	0.7	0.9	1.1	1.3	1.8	1.6	1.8	2.1	2.5	3.4
MEA	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.6	0.6
NEU	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6
OAS	0.6	0.7	0.9	1.0	1.1	1.2	1.4	1.7	2.0	2.4
REF	1.3	1.8	1.5	2.0	2.7	3.0	1.6	1.4	1.8	1.6
SSA	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.8	1.0	1.2
USA	2.1	2.2	2.9	3.1	4.4	4.0	3.8	4.5	4.8	4.8

Table 1742: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr)

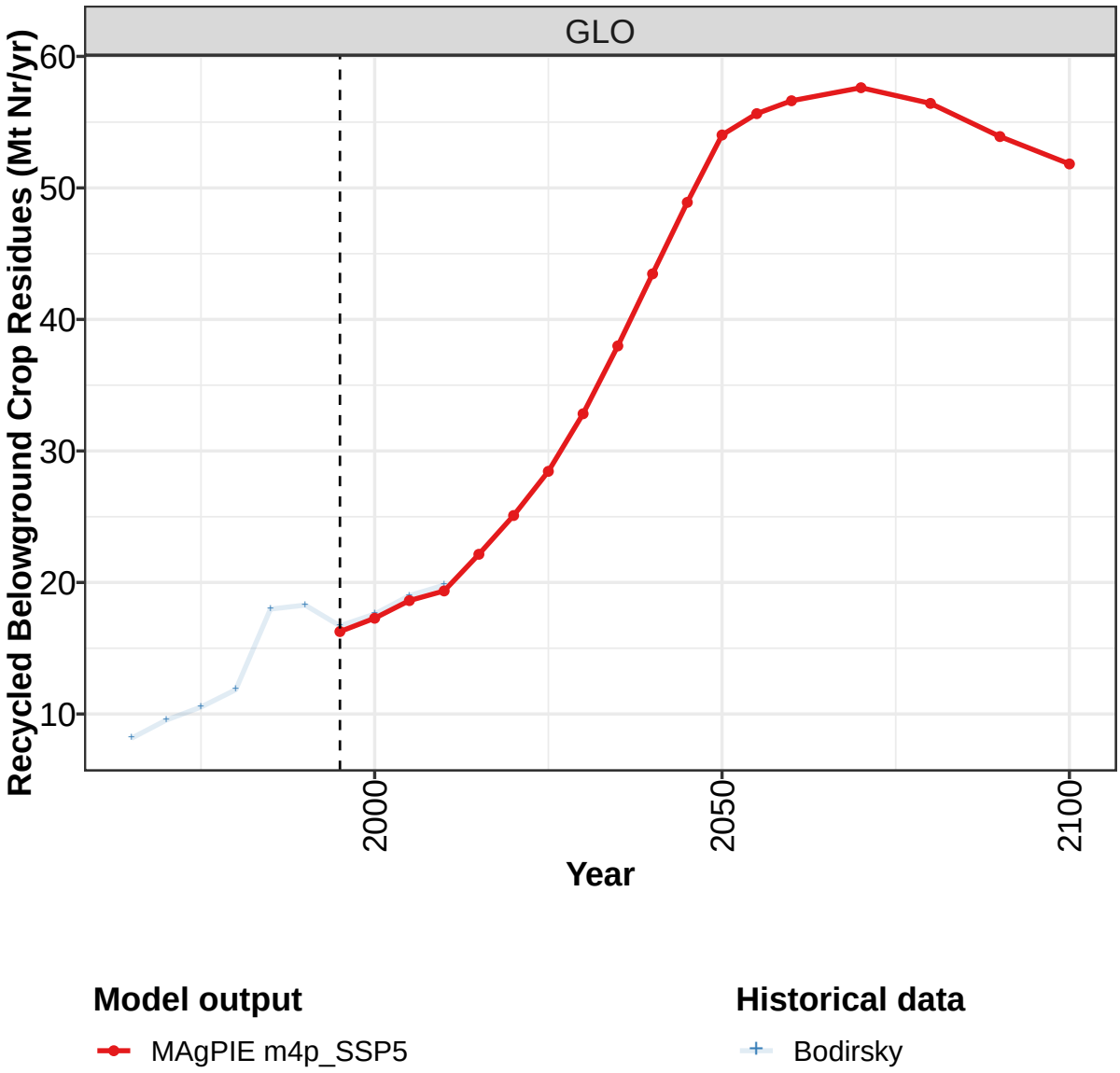
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	25.8	24.9	25.8	25.3	25.7	25.2	26.8	27.3	27.1	27.1	27.0
CAZ	1.0	1.0	1.0	1.0	0.8	1.0	1.2	1.1	1.1	1.2	1.1
CHA	4.7	4.6	4.7	4.8	4.6	4.8	5.1	5.2	5.2	5.2	4.7
EUR	3.3	3.4	3.0	3.0	3.0	3.0	3.2	3.4	3.4	3.2	3.2
IND	3.0	3.0	3.1	3.2	3.2	3.2	3.3	3.4	3.4	3.5	3.5
JPN	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.8	1.7	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.4
MEA	0.7	0.9	0.8	0.8	0.9	0.8	1.0	0.8	0.9	0.7	0.7
NEU	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.5
OAS	2.9	2.9	3.0	3.0	3.0	3.1	3.2	3.2	3.3	3.5	3.5
REF	2.8	2.3	2.7	2.6	2.1	1.9	1.9	2.2	1.5	1.7	1.8
SSA	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2
USA	3.8	3.4	4.1	3.3	4.2	3.5	4.0	4.1	4.3	4.1	4.2

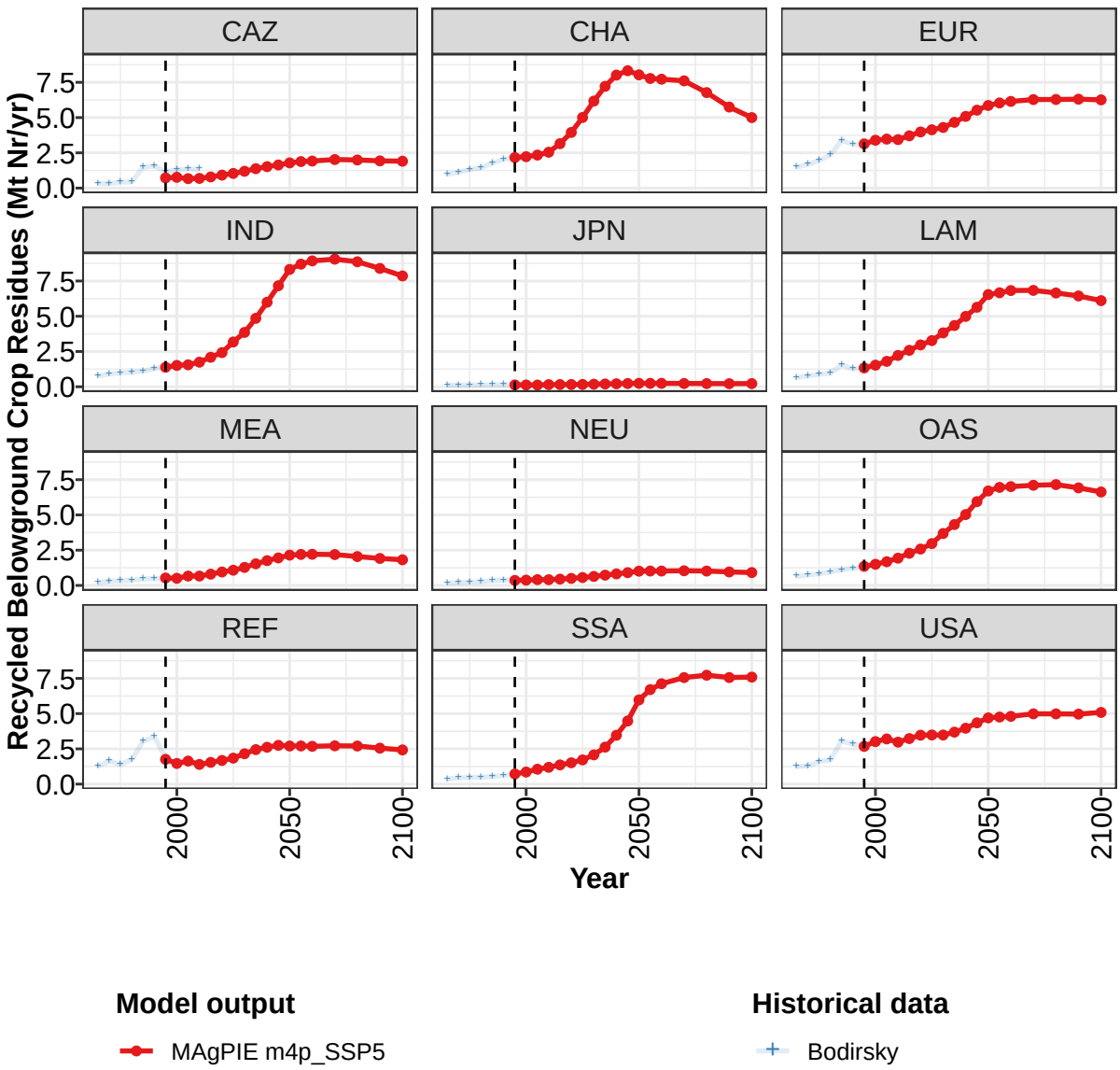
Table 1743: FAO — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr) [PART 1/2]

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GLO	27.6	26.8	27.4	29.4	29.5	29.2	30.1	32.1	31.7	31.8
CAZ	1.1	0.8	1.2	1.1	1.2	0.9	1.0	1.2	1.1	1.1
CHA	4.6	4.6	4.4	4.7	4.9	5.1	5.1	5.3	5.4	5.5
EUR	3.2	3.3	2.9	3.6	3.2	3.1	3.0	3.5	3.3	3.1
IND	3.5	3.2	3.5	3.4	3.5	3.6	3.8	3.9	3.7	3.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.6	2.6	3.0	3.0	3.0	3.1	3.4	3.4	3.1	3.7
MEA	0.8	0.9	1.0	1.0	1.1	1.1	1.0	0.8	1.0	1.0
NEU	0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.6
OAS	3.5	3.5	3.7	3.7	3.9	3.9	4.1	4.2	4.4	4.4
REF	2.2	2.3	1.8	2.2	2.2	2.2	2.2	2.7	2.6	1.9
SSA	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.5	1.7
USA	4.0	3.7	4.1	4.6	4.4	4.1	4.6	4.7	4.9	4.7

Table 1744: FAO — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr) [PART 2/2]

56.1.12 Inputs—Recycled Belowground Crop Residues





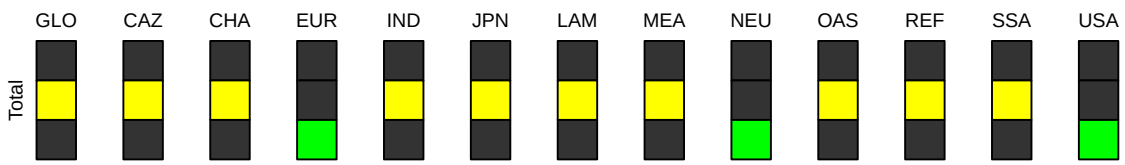


Figure 453: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Belowground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.3	17.3	18.6	19.4	22.1	25.1	28.5	32.8	38.0	43.5	48.9
CAZ	0.7	0.8	0.7	0.7	0.8	0.9	1.0	1.2	1.4	1.5	1.6
CHA	2.2	2.2	2.3	2.5	3.2	3.9	5.0	6.2	7.2	8.0	8.3
EUR	3.1	3.4	3.5	3.4	3.7	4.0	4.1	4.3	4.7	5.1	5.5
IND	1.4	1.5	1.6	1.7	2.1	2.4	3.2	3.9	4.9	6.0	7.2
JPN	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	1.3	1.5	1.8	2.2	2.6	3.0	3.3	3.8	4.3	5.0	5.6
MEA	0.5	0.5	0.7	0.7	0.8	1.0	1.1	1.3	1.5	1.8	2.0
NEU	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.9
OAS	1.4	1.5	1.7	1.9	2.3	2.6	3.0	3.7	4.3	5.0	5.9
REF	1.8	1.5	1.6	1.4	1.5	1.7	1.8	2.2	2.4	2.6	2.7
SSA	0.7	0.9	1.1	1.2	1.4	1.5	1.7	2.1	2.6	3.5	4.5
USA	2.7	3.0	3.2	3.0	3.2	3.5	3.5	3.5	3.7	4.0	4.3

Table 1745: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Belowground Crop Residues (Mt Nr/yr) [PART 1/2]

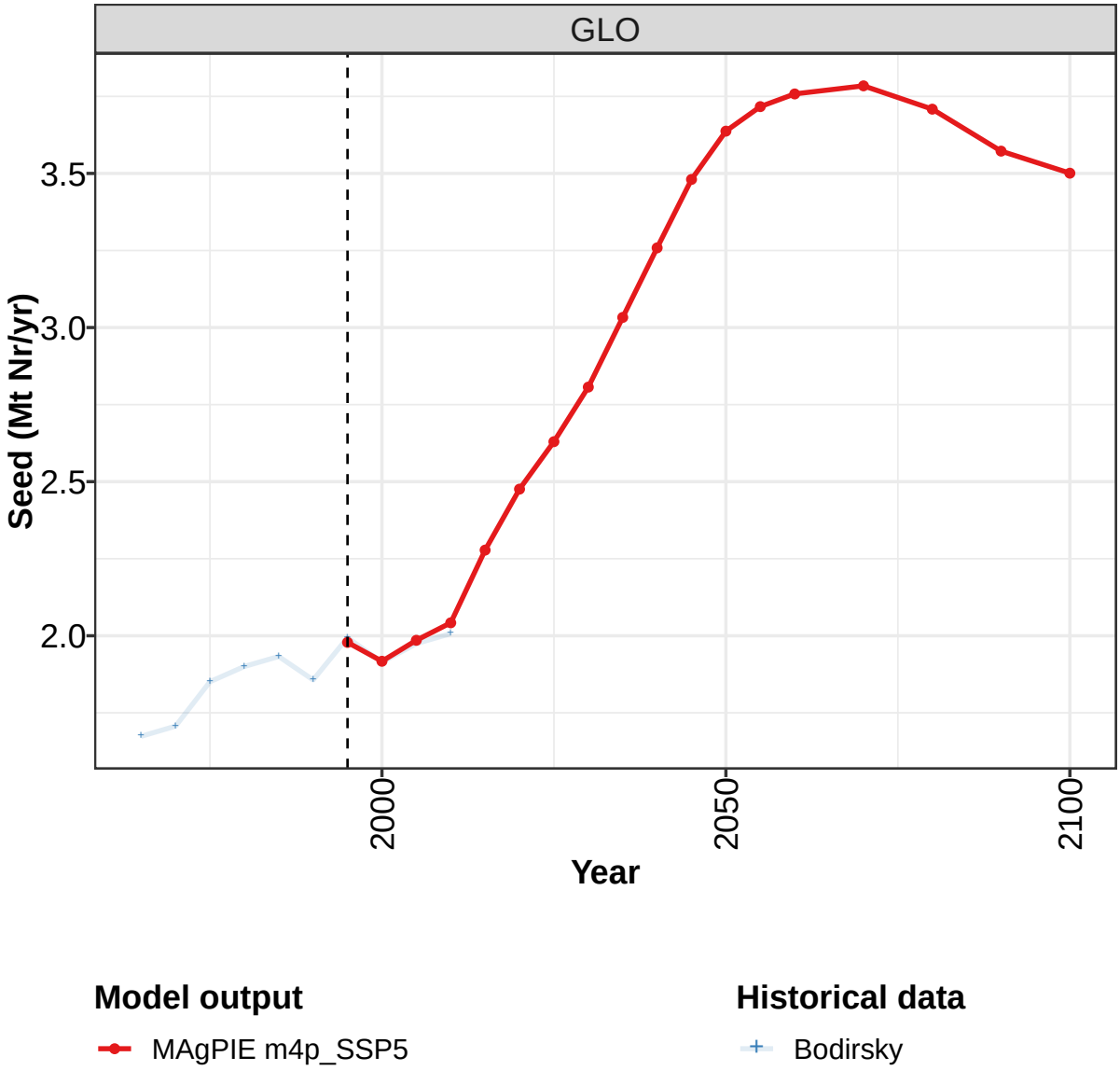
	2050	2055	2060	2070	2080	2090	2100
GLO	54.0	55.6	56.6	57.6	56.4	53.9	51.8
CAZ	1.8	1.9	1.9	2.0	2.0	1.9	1.9
CHA	8.0	7.8	7.7	7.6	6.8	5.7	5.0
EUR	5.9	6.0	6.1	6.3	6.3	6.3	6.3
IND	8.3	8.7	8.9	9.0	8.9	8.4	7.9
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	6.5	6.7	6.8	6.8	6.7	6.4	6.1
MEA	2.1	2.2	2.2	2.2	2.0	1.9	1.8
NEU	1.0	1.0	1.0	1.0	1.0	1.0	0.9
OAS	6.7	7.0	7.0	7.1	7.2	6.9	6.6
REF	2.7	2.7	2.7	2.7	2.7	2.6	2.4
SSA	6.0	6.7	7.1	7.6	7.7	7.6	7.6
USA	4.7	4.8	4.8	5.0	5.0	5.0	5.1

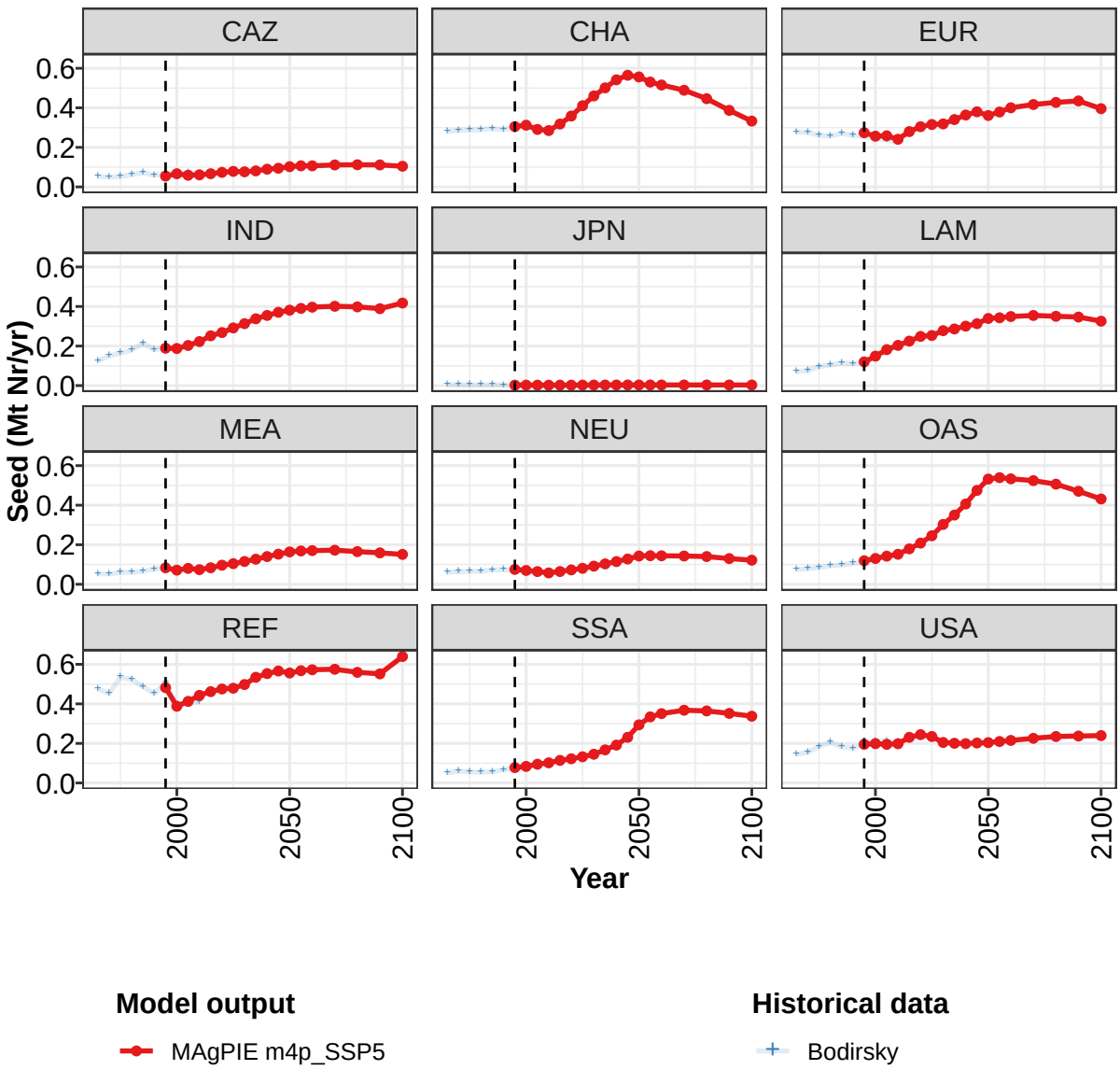
Table 1746: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Belowground Crop Residues (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.2	9.5	10.5	11.8	18.0	18.3	16.7	17.6	19.0	19.8
CAZ	0.3	0.3	0.4	0.4	1.5	1.6	1.2	1.3	1.4	1.3
CHA	1.0	1.1	1.3	1.4	1.8	2.0	2.2	2.3	2.4	2.6
EUR	1.5	1.7	1.9	2.3	3.4	3.1	3.0	3.2	3.3	3.3
IND	0.8	0.9	1.0	1.0	1.1	1.3	1.4	1.6	1.6	1.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.6	0.8	0.9	1.0	1.6	1.3	1.3	1.5	1.7	2.1
MEA	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.7	0.7
NEU	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4
OAS	0.7	0.7	0.8	1.0	1.1	1.2	1.3	1.5	1.7	2.0
REF	1.3	1.6	1.4	1.7	3.0	3.4	1.9	1.4	1.6	1.2
SSA	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.8	1.0	1.2
USA	1.2	1.3	1.6	1.7	3.1	2.8	2.7	3.0	3.2	3.0

Table 1747: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Belowground Crop Residues (Mt Nr/yr)

56.1.13 Inputs—Seed





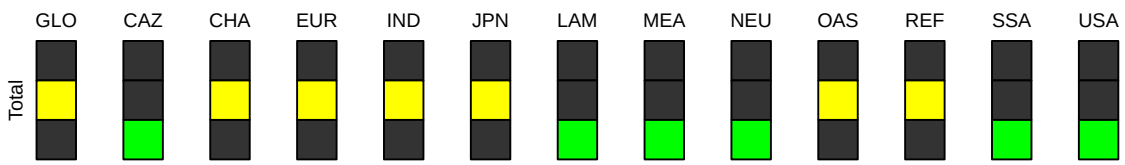


Figure 454: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Seed (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.98	1.92	1.99	2.04	2.28	2.48	2.63	2.81	3.03	3.26	3.48
CAZ	0.05	0.07	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.09	0.09
CHA	0.31	0.31	0.29	0.29	0.32	0.36	0.41	0.46	0.50	0.54	0.56
EUR	0.27	0.26	0.26	0.24	0.28	0.30	0.32	0.32	0.34	0.36	0.38
IND	0.19	0.19	0.20	0.22	0.25	0.27	0.29	0.31	0.34	0.35	0.37
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.12	0.15	0.18	0.20	0.22	0.25	0.25	0.28	0.29	0.30	0.31
MEA	0.08	0.07	0.08	0.07	0.08	0.10	0.10	0.12	0.13	0.14	0.15
NEU	0.08	0.07	0.06	0.06	0.06	0.07	0.08	0.09	0.10	0.11	0.13
OAS	0.12	0.13	0.14	0.15	0.18	0.21	0.25	0.30	0.35	0.41	0.47
REF	0.48	0.39	0.41	0.44	0.46	0.48	0.48	0.50	0.53	0.55	0.57
SSA	0.08	0.08	0.09	0.10	0.11	0.12	0.13	0.15	0.17	0.19	0.23
USA	0.20	0.20	0.20	0.20	0.23	0.24	0.24	0.20	0.20	0.20	0.20

Table 1748: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Seed (Mt Nr/yr) [PART 1/2]

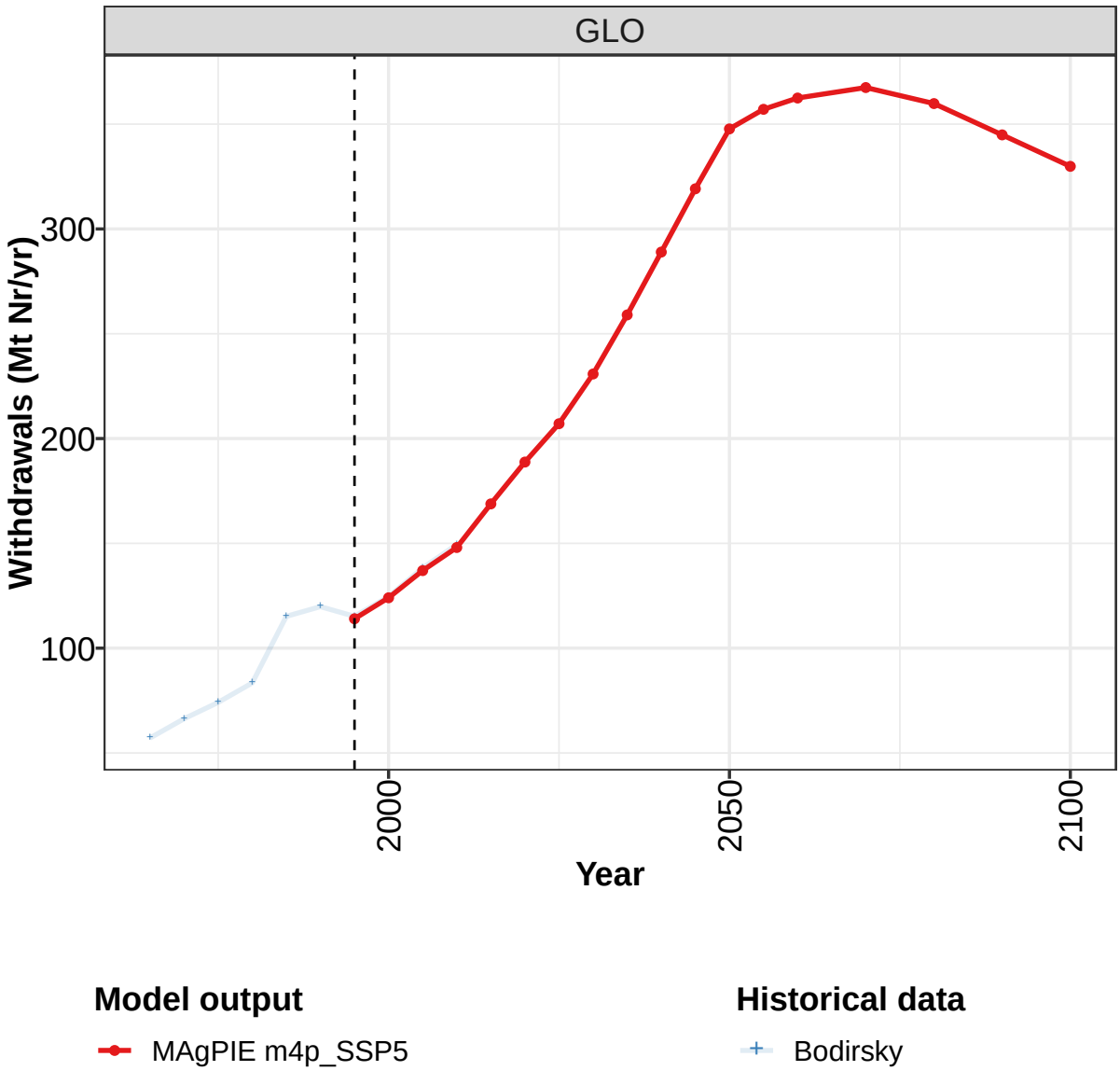
	2050	2055	2060	2070	2080	2090	2100
GLO	3.64	3.72	3.76	3.78	3.71	3.57	3.50
CAZ	0.10	0.11	0.11	0.11	0.11	0.11	0.10
CHA	0.56	0.53	0.52	0.49	0.45	0.39	0.33
EUR	0.36	0.38	0.40	0.42	0.43	0.43	0.40
IND	0.38	0.39	0.40	0.40	0.40	0.39	0.42
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.34	0.34	0.35	0.35	0.35	0.35	0.33
MEA	0.16	0.17	0.17	0.17	0.17	0.16	0.15
NEU	0.14	0.14	0.14	0.14	0.14	0.13	0.12
OAS	0.53	0.54	0.53	0.52	0.51	0.47	0.43
REF	0.56	0.57	0.57	0.58	0.56	0.55	0.64
SSA	0.29	0.33	0.35	0.37	0.36	0.35	0.34
USA	0.20	0.21	0.22	0.23	0.23	0.24	0.24

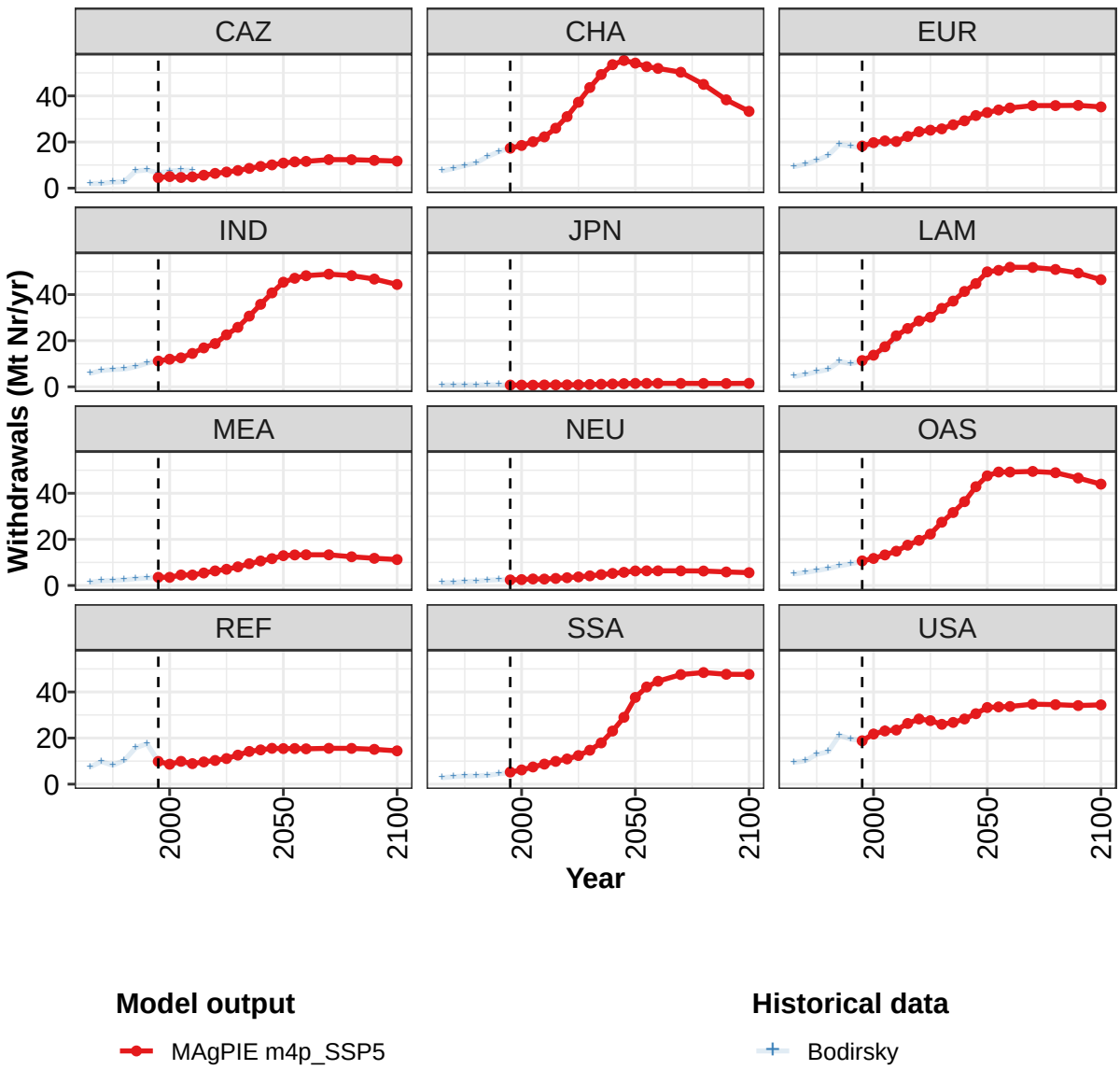
Table 1749: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Inputs—Seed (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.67	1.71	1.85	1.90	1.93	1.86	1.99	1.91	1.97	2.01
CAZ	0.05	0.05	0.05	0.06	0.07	0.06	0.07	0.07	0.07	0.07
CHA	0.28	0.29	0.29	0.29	0.29	0.29	0.31	0.31	0.29	0.29
EUR	0.28	0.28	0.26	0.26	0.27	0.26	0.26	0.24	0.24	0.22
IND	0.12	0.15	0.16	0.18	0.21	0.18	0.19	0.19	0.20	0.22
JPN	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.07	0.08	0.10	0.10	0.11	0.11	0.12	0.14	0.17	0.20
MEA	0.05	0.05	0.06	0.06	0.07	0.08	0.08	0.07	0.08	0.07
NEU	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.05
OAS	0.08	0.08	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15
REF	0.48	0.45	0.54	0.52	0.49	0.45	0.51	0.39	0.41	0.41
SSA	0.05	0.06	0.06	0.05	0.06	0.07	0.08	0.08	0.09	0.10
USA	0.14	0.16	0.18	0.20	0.18	0.18	0.20	0.21	0.21	0.21

Table 1750: Bodirsky — Resources—Nitrogen—Cropland Budget—Inputs—Seed (Mt Nr/yr)

56.1.14 Withdrawals





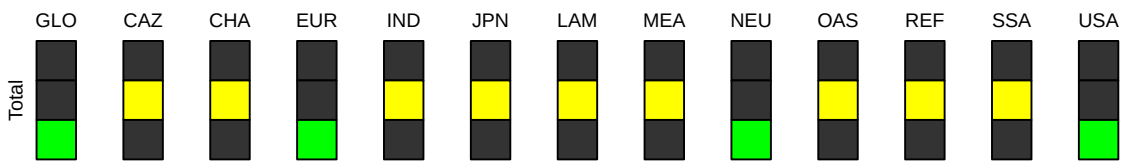


Figure 455: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	114	124	137	148	169	189	207	231	259	289	319
CAZ	5	5	5	5	6	6	7	8	9	9	10
CHA	17	19	20	22	26	31	37	44	49	54	55
EUR	18	20	20	20	22	24	25	26	27	29	31
IND	11	12	13	14	17	19	23	26	31	36	41
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	11	14	17	22	25	29	30	34	37	41	45
MEA	4	4	5	5	5	6	7	8	9	11	12
NEU	2	3	3	3	3	3	4	4	5	5	6
OAS	11	12	13	15	17	20	22	27	32	36	43
REF	10	9	10	9	10	10	11	13	14	15	16
SSA	5	6	7	9	10	11	12	15	18	23	29
USA	19	22	23	23	26	28	28	26	27	28	31

Table 1751: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals (Mt Nr/yr) [PART 1/2]

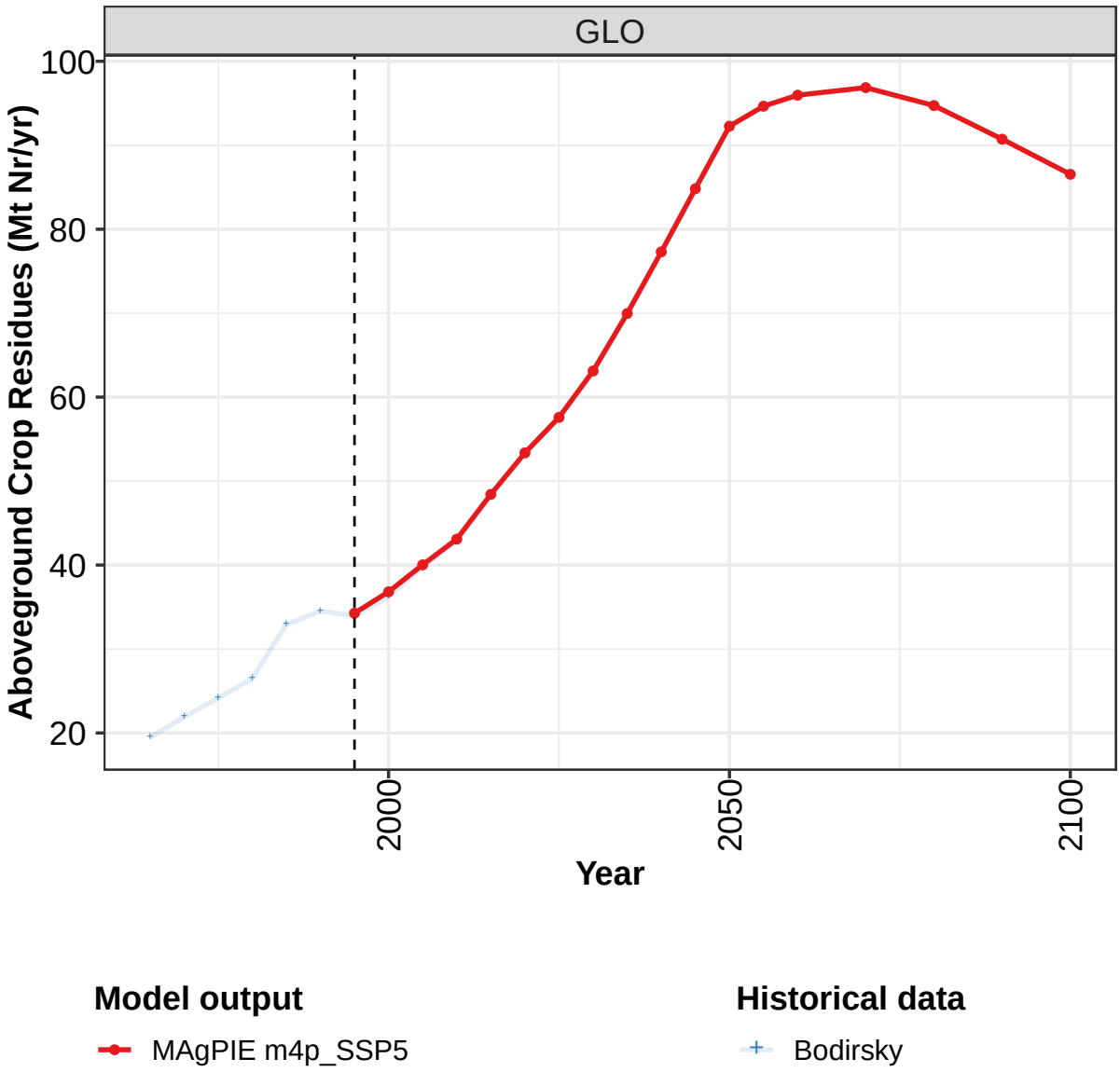
	2050	2055	2060	2070	2080	2090	2100
GLO	348	357	362	367	360	345	330
CAZ	11	11	12	12	12	12	12
CHA	54	53	52	50	45	38	33
EUR	33	34	35	36	36	36	35
IND	45	47	48	49	48	47	44
JPN	1	1	1	1	1	1	1
LAM	50	51	52	52	51	49	46
MEA	13	13	13	13	12	12	11
NEU	6	6	6	6	6	6	6
OAS	48	49	49	49	49	47	44
REF	15	15	15	16	16	15	14
SSA	38	42	45	48	48	48	48
USA	33	34	34	35	35	34	34

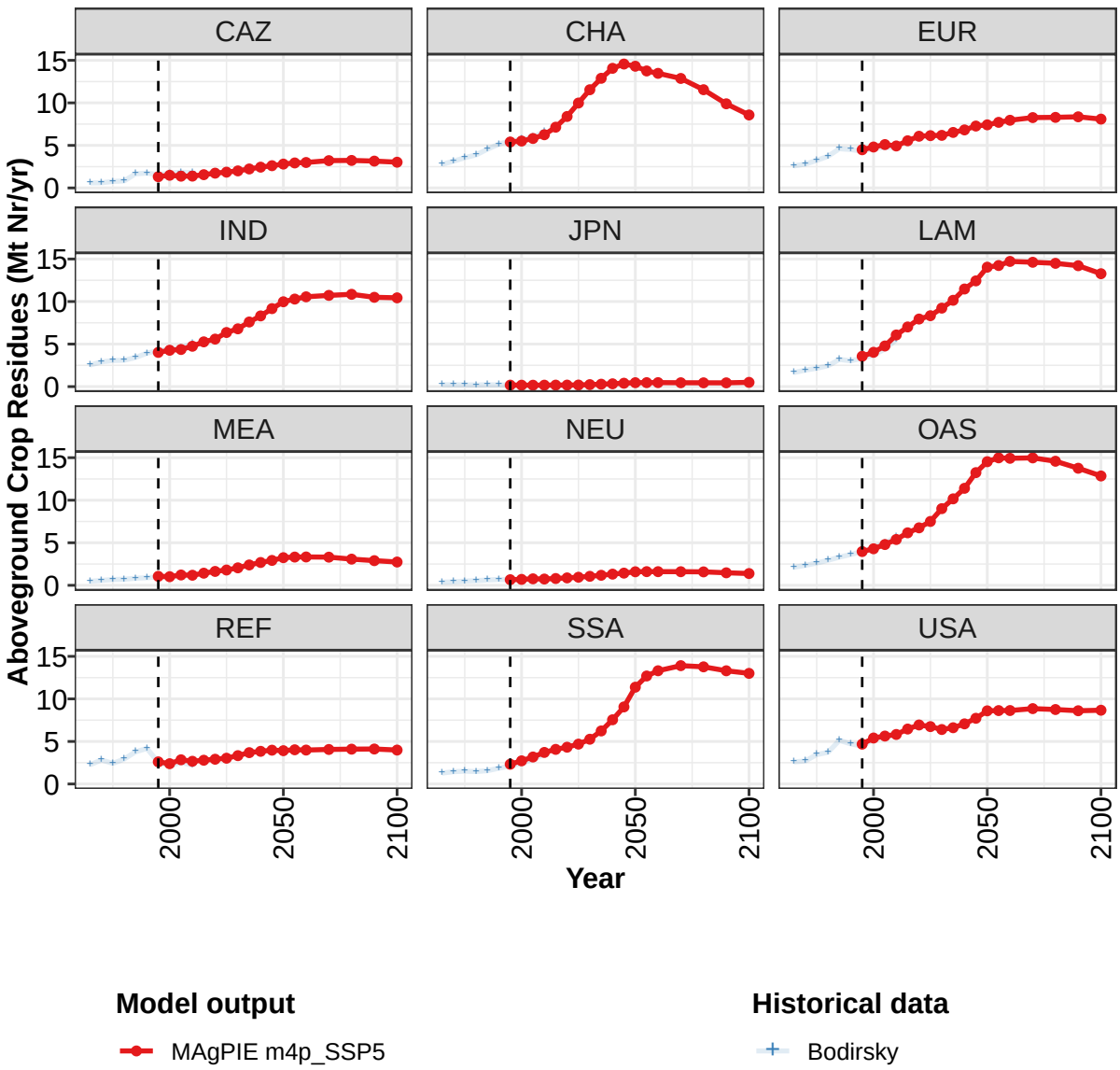
Table 1752: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	57	66	74	83	115	120	115	125	138	149
CAZ	2	2	3	3	7	8	7	7	8	8
CHA	7	9	10	11	14	16	17	19	20	23
EUR	9	10	12	14	19	18	17	19	19	19
IND	6	7	7	8	9	10	12	12	13	15
JPN	1	1	1	1	1	1	1	1	1	1
LAM	4	5	7	8	11	10	11	13	17	21
MEA	1	2	2	2	3	3	3	3	5	5
NEU	1	1	2	2	2	3	2	2	3	3
OAS	5	6	6	7	9	9	10	12	13	15
REF	7	10	8	10	16	18	10	8	9	8
SSA	3	3	3	4	4	4	5	6	7	8
USA	10	10	13	14	21	20	19	22	24	24

Table 1753: Bodirsky — Resources—Nitrogen—Cropland Budget—Withdrawals (Mt Nr/yr)

56.1.15 Withdrawals—Aboveground Crop Residues





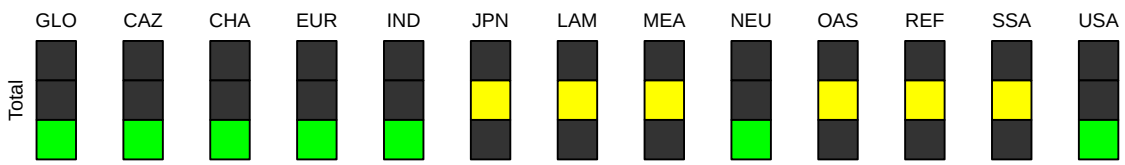


Figure 456: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Aboveground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.3	36.8	40.0	43.1	48.4	53.4	57.6	63.1	70.0	77.3	84.8
CAZ	1.3	1.5	1.4	1.4	1.6	1.7	1.9	2.0	2.2	2.4	2.6
CHA	5.4	5.5	5.8	6.3	7.1	8.4	10.0	11.5	12.9	14.1	14.6
EUR	4.5	4.8	5.1	4.9	5.5	6.1	6.1	6.2	6.5	6.8	7.3
IND	4.0	4.3	4.4	4.7	5.3	5.6	6.4	6.8	7.6	8.3	9.2
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4
LAM	3.6	4.0	4.8	6.1	7.0	7.9	8.3	9.2	10.1	11.5	12.4
MEA	1.1	1.0	1.2	1.2	1.4	1.6	1.8	2.1	2.4	2.7	2.9
NEU	0.7	0.7	0.8	0.7	0.8	0.9	0.9	1.1	1.2	1.3	1.4
OAS	4.0	4.3	4.8	5.4	6.2	6.8	7.5	9.0	10.2	11.4	13.2
REF	2.6	2.4	2.8	2.7	2.8	2.9	3.0	3.3	3.7	3.8	4.0
SSA	2.3	2.7	3.2	3.7	4.1	4.3	4.7	5.3	6.2	7.5	9.1
USA	4.7	5.4	5.6	5.8	6.5	6.9	6.7	6.4	6.6	7.1	7.7

Table 1754: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Aboveground Crop Residues (Mt Nr/yr) [PART 1/2]

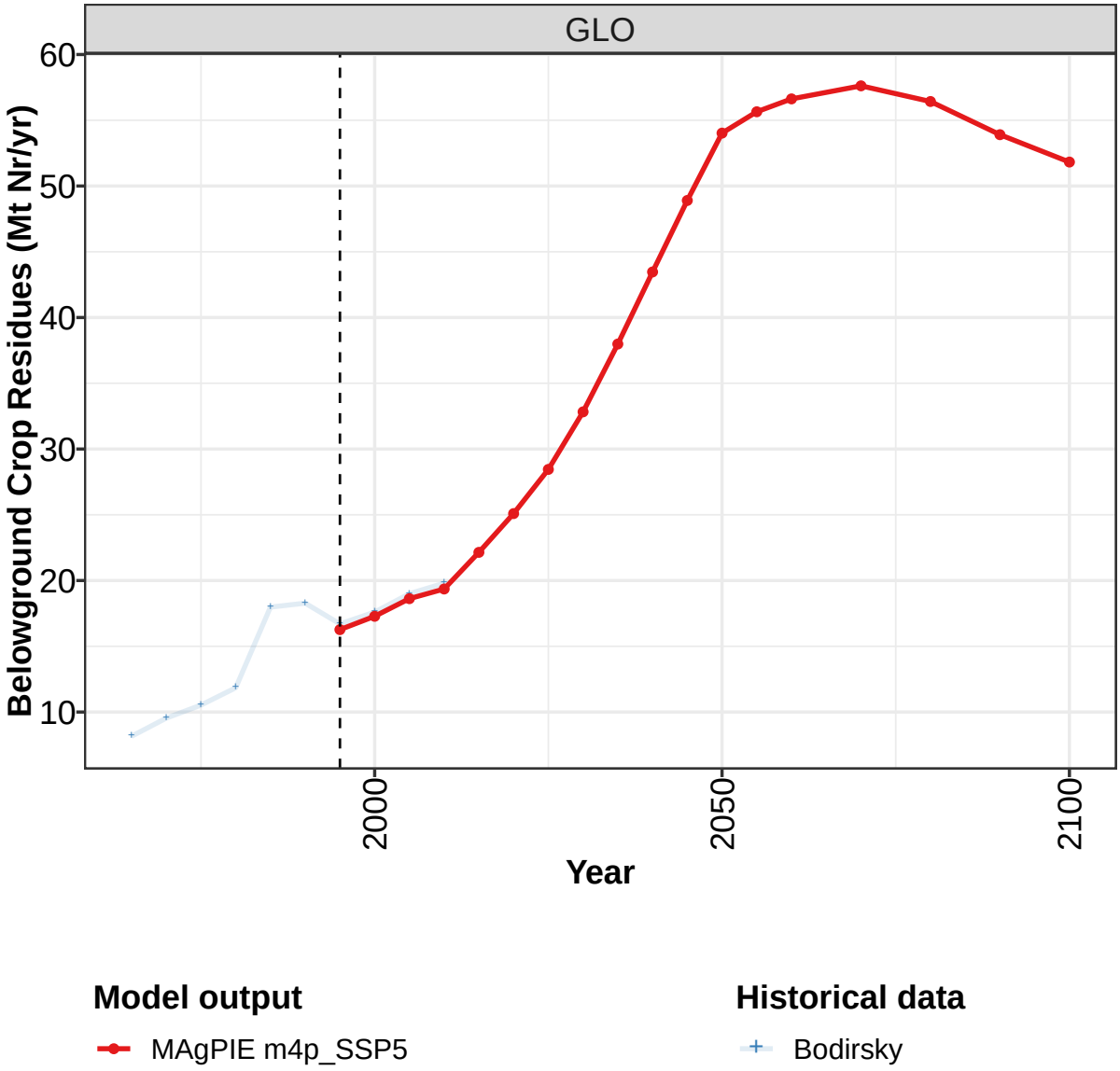
	2050	2055	2060	2070	2080	2090	2100
GLO	92.3	94.7	96.0	96.9	94.7	90.7	86.5
CAZ	2.8	2.9	3.0	3.2	3.2	3.2	3.0
CHA	14.3	13.7	13.5	12.9	11.5	9.9	8.6
EUR	7.4	7.7	8.0	8.3	8.3	8.4	8.1
IND	10.0	10.3	10.6	10.7	10.9	10.5	10.4
JPN	0.5	0.5	0.5	0.5	0.5	0.4	0.5
LAM	14.0	14.2	14.7	14.6	14.5	14.2	13.3
MEA	3.2	3.3	3.3	3.3	3.1	2.9	2.7
NEU	1.6	1.6	1.6	1.6	1.6	1.5	1.4
OAS	14.5	15.0	14.9	15.0	14.6	13.8	12.9
REF	3.9	4.0	4.0	4.1	4.1	4.1	4.0
SSA	11.4	12.7	13.3	13.9	13.8	13.3	13.0
USA	8.6	8.6	8.6	8.9	8.8	8.6	8.7

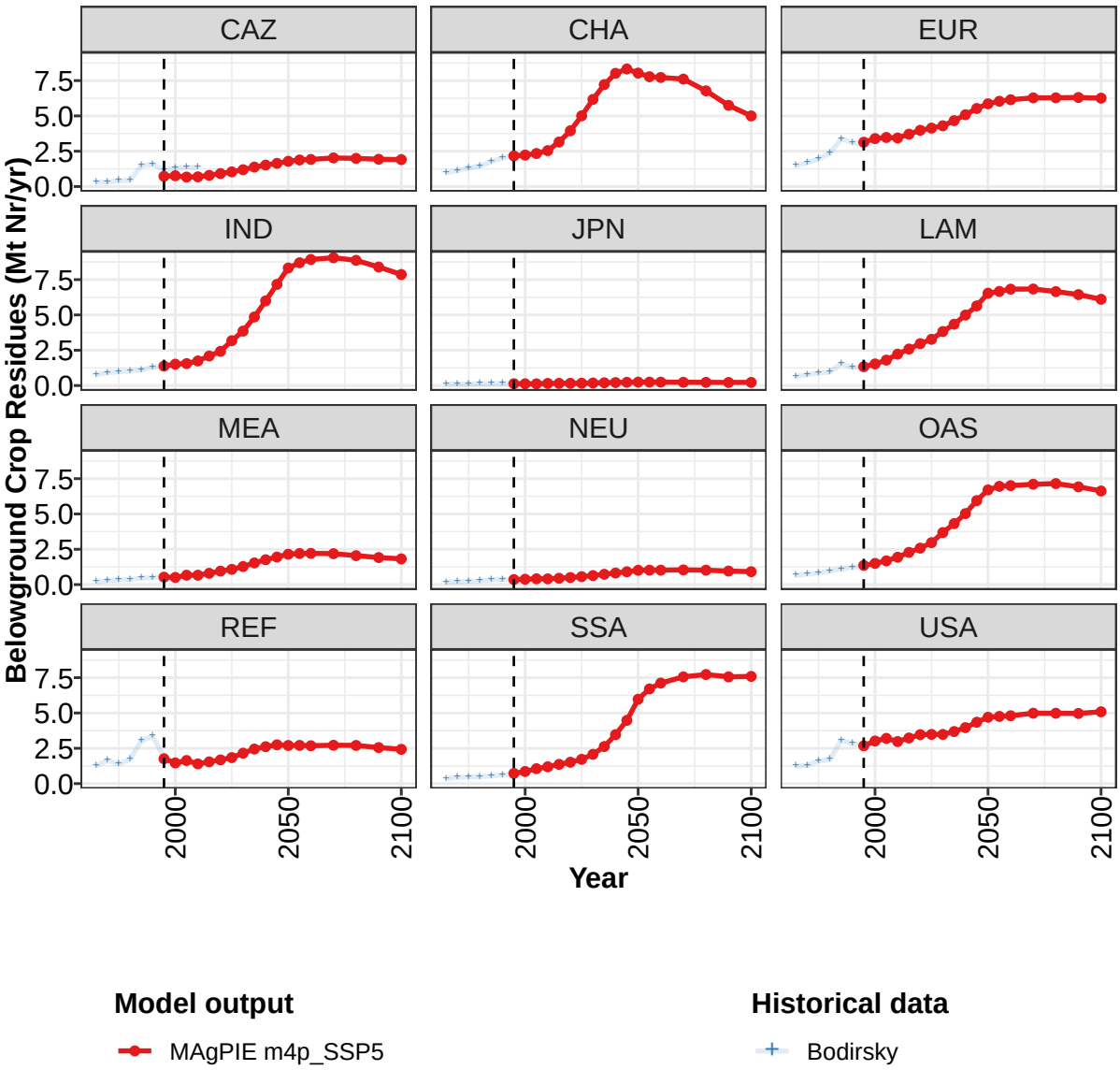
Table 1755: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Aboveground Crop Residues (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	19.5	21.9	24.1	26.5	32.9	34.5	33.9	36.2	39.7	43.0
CAZ	0.6	0.6	0.8	0.8	1.7	1.7	1.6	1.8	1.8	1.8
CHA	2.8	3.1	3.5	3.9	4.6	5.1	5.5	5.7	6.0	6.6
EUR	2.6	2.8	3.2	3.7	4.6	4.5	4.3	4.6	4.8	4.8
IND	2.5	2.9	3.1	3.1	3.4	3.9	4.3	4.4	4.5	5.1
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	1.7	1.9	2.2	2.5	3.2	3.0	3.3	3.7	4.4	5.5
MEA	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.3	1.3
NEU	0.4	0.4	0.5	0.5	0.6	0.7	0.6	0.7	0.7	0.7
OAS	2.1	2.3	2.6	2.9	3.3	3.6	4.0	4.4	5.0	5.7
REF	2.3	2.8	2.4	2.9	3.8	4.2	2.5	2.1	2.5	2.2
SSA	1.3	1.4	1.5	1.5	1.6	1.9	2.1	2.4	2.9	3.4
USA	2.6	2.7	3.4	3.7	5.1	4.7	4.5	5.2	5.6	5.7

Table 1756: Bodirsky — Resources—Nitrogen—Cropland Budget—Withdrawals—Aboveground Crop Residues (Mt Nr/yr)

56.1.16 Withdrawals—Belowground Crop Residues





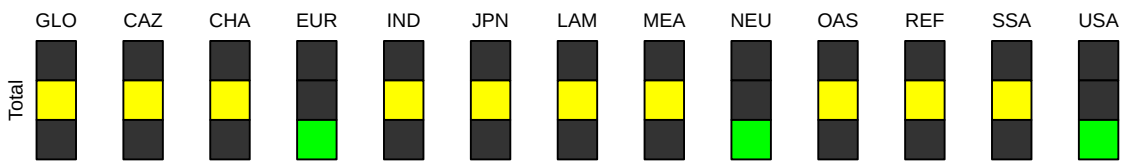


Figure 457: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Belowground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.3	17.3	18.6	19.4	22.1	25.1	28.5	32.8	38.0	43.5	48.9
CAZ	0.7	0.8	0.7	0.7	0.8	0.9	1.0	1.2	1.4	1.5	1.6
CHA	2.2	2.2	2.3	2.5	3.2	3.9	5.0	6.2	7.2	8.0	8.3
EUR	3.1	3.4	3.5	3.4	3.7	4.0	4.1	4.3	4.7	5.1	5.5
IND	1.4	1.5	1.6	1.7	2.1	2.4	3.2	3.9	4.9	6.0	7.2
JPN	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	1.3	1.5	1.8	2.2	2.6	3.0	3.3	3.8	4.3	5.0	5.6
MEA	0.5	0.5	0.7	0.7	0.8	1.0	1.1	1.3	1.5	1.8	2.0
NEU	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.9
OAS	1.4	1.5	1.7	1.9	2.3	2.6	3.0	3.7	4.3	5.0	5.9
REF	1.8	1.5	1.6	1.4	1.5	1.7	1.8	2.2	2.4	2.6	2.7
SSA	0.7	0.9	1.1	1.2	1.4	1.5	1.7	2.1	2.6	3.5	4.5
USA	2.7	3.0	3.2	3.0	3.2	3.5	3.5	3.5	3.7	4.0	4.3

Table 1757: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Belowground Crop Residues (Mt Nr/yr) [PART 1/2]

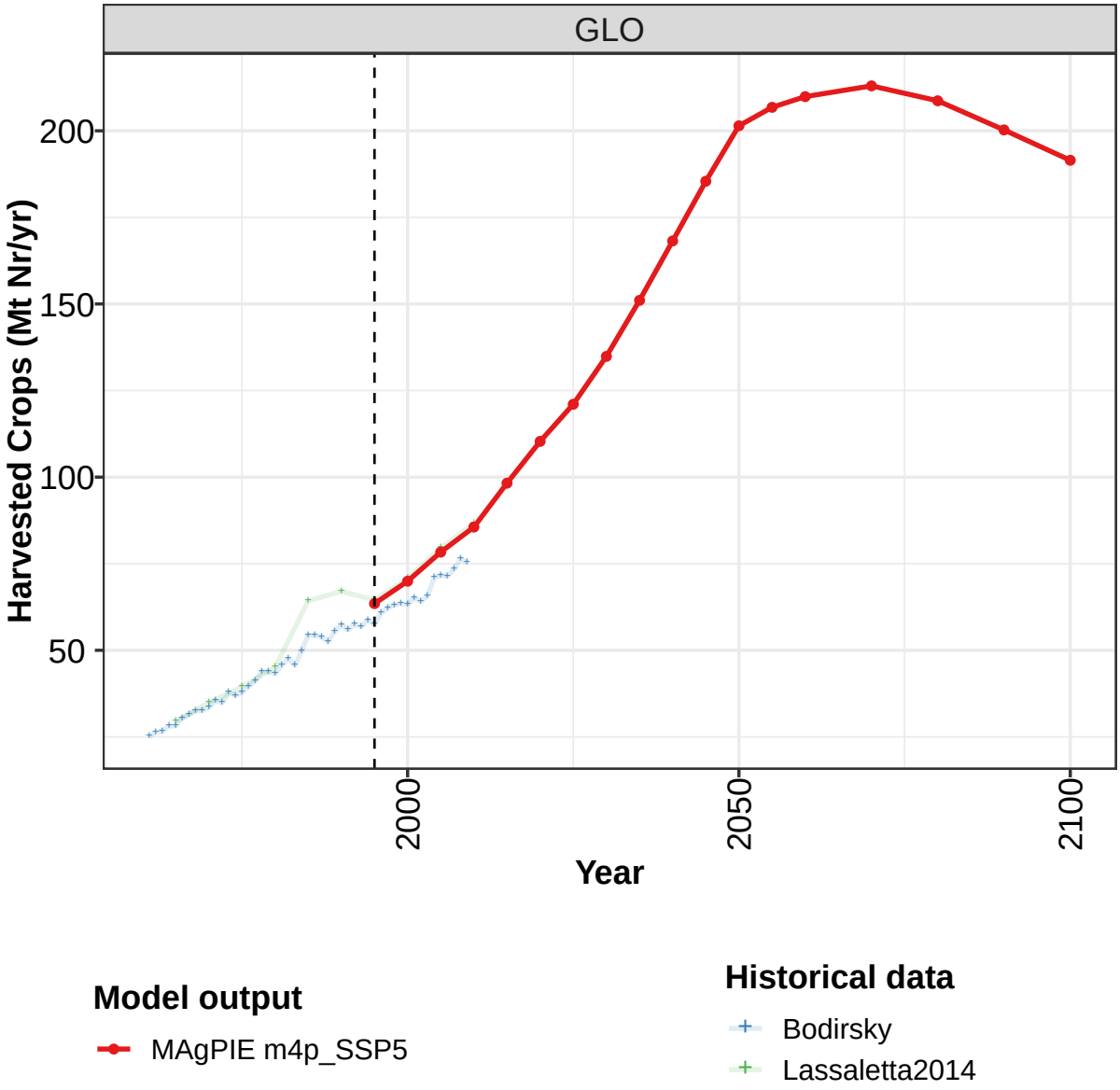
	2050	2055	2060	2070	2080	2090	2100
GLO	54.0	55.6	56.6	57.6	56.4	53.9	51.8
CAZ	1.8	1.9	1.9	2.0	2.0	1.9	1.9
CHA	8.0	7.8	7.7	7.6	6.8	5.7	5.0
EUR	5.9	6.0	6.1	6.3	6.3	6.3	6.3
IND	8.3	8.7	8.9	9.0	8.9	8.4	7.9
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	6.5	6.7	6.8	6.8	6.7	6.4	6.1
MEA	2.1	2.2	2.2	2.2	2.0	1.9	1.8
NEU	1.0	1.0	1.0	1.0	1.0	1.0	0.9
OAS	6.7	7.0	7.0	7.1	7.2	6.9	6.6
REF	2.7	2.7	2.7	2.7	2.7	2.6	2.4
SSA	6.0	6.7	7.1	7.6	7.7	7.6	7.6
USA	4.7	4.8	4.8	5.0	5.0	5.0	5.1

Table 1758: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Belowground Crop Residues (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.2	9.5	10.5	11.8	18.0	18.3	16.7	17.6	19.0	19.8
CAZ	0.3	0.3	0.4	0.4	1.5	1.6	1.2	1.3	1.4	1.3
CHA	1.0	1.1	1.3	1.4	1.8	2.0	2.2	2.3	2.4	2.6
EUR	1.5	1.7	1.9	2.3	3.4	3.1	3.0	3.2	3.3	3.3
IND	0.8	0.9	1.0	1.0	1.1	1.3	1.4	1.6	1.6	1.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.6	0.8	0.9	1.0	1.6	1.3	1.3	1.5	1.7	2.1
MEA	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.7	0.7
NEU	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4
OAS	0.7	0.7	0.8	1.0	1.1	1.2	1.3	1.5	1.7	2.0
REF	1.3	1.6	1.4	1.7	3.0	3.4	1.9	1.4	1.6	1.2
SSA	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.8	1.0	1.2
USA	1.2	1.3	1.6	1.7	3.1	2.8	2.7	3.0	3.2	3.0

Table 1759: Bodirsky — Resources—Nitrogen—Cropland Budget—Withdrawals—Belowground Crop Residues (Mt Nr/yr)

56.1.17 Withdrawals—Harvested Crops



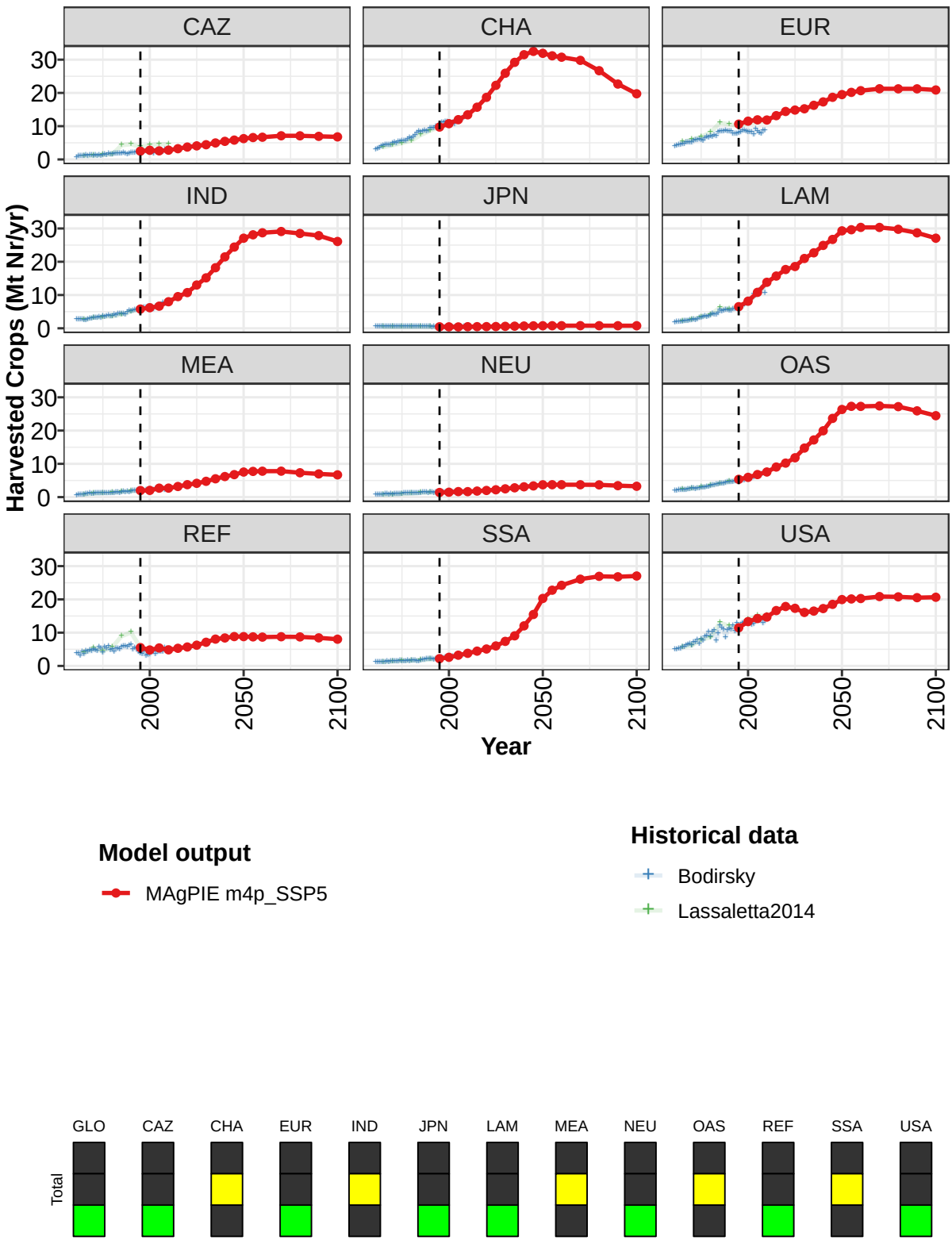


Figure 458: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	63	70	78	86	98	110	121	135	151	168	185
CAZ	2	3	3	3	3	4	4	4	5	5	6
CHA	10	11	12	13	16	19	22	26	29	31	32
EUR	11	12	12	12	13	14	15	15	16	17	19
IND	6	6	7	8	10	11	13	15	18	21	24
JPN	0	0	0	0	0	1	1	1	1	1	1
LAM	6	8	11	14	16	18	19	21	23	25	27
MEA	2	2	3	3	3	4	4	5	6	6	7
NEU	1	1	2	2	2	2	2	2	3	3	3
OAS	5	6	7	8	9	10	12	15	17	20	24
REF	6	5	5	5	5	6	6	7	8	8	9
SSA	2	3	3	4	4	5	6	7	9	12	15
USA	11	13	14	15	17	18	17	16	16	17	19

Table 1760: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	201	207	210	213	209	200	191
CAZ	6	7	7	7	7	7	7
CHA	32	31	31	30	27	23	20
EUR	19	20	21	21	21	21	21
IND	27	28	29	29	28	28	26
JPN	1	1	1	1	1	1	1
LAM	29	30	30	30	30	29	27
MEA	8	8	8	8	7	7	7
NEU	4	4	4	4	4	3	3
OAS	26	27	27	27	27	26	24
REF	9	9	9	9	9	8	8
SSA	20	23	24	26	27	27	27
USA	20	20	20	21	21	21	21

Table 1761: MAgPIE m4p_SSP5 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 2/2]

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
GLO	25.1	26.3	26.6	28.1	28.2	30.3	31.3	32.5	32.6	33.5	35.5
CAZ	0.6	0.9	1.0	1.0	1.0	1.2	0.9	1.2	1.2	1.0	1.3
CHA	3.0	3.3	3.5	3.9	4.0	4.4	4.4	4.3	4.3	4.8	5.0
EUR	4.0	4.2	4.2	4.3	4.5	4.7	5.1	5.1	5.1	5.0	5.5
IND	2.6	2.6	2.6	2.7	2.5	2.4	2.7	2.9	2.9	3.2	3.2
JPN	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.4
LAM	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.5
MEA	0.5	0.7	0.7	0.7	0.7	0.9	1.0	1.0	1.0	1.0	1.0
NEU	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9
OAS	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.3	2.4	2.5	2.5
REF	3.7	3.8	3.1	4.1	3.5	4.5	4.2	4.6	4.4	4.9	4.7
SSA	1.0	1.1	1.1	1.1	1.1	1.1	1.3	1.2	1.3	1.3	1.4
USA	5.0	5.0	5.3	5.0	5.7	5.7	6.2	6.4	6.5	6.2	7.1

Table 1762: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 1/5]

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
GLO	34.8	37.9	36.9	37.8	39.6	41.1	43.9	43.7	43.3	45.6	47.5
CAZ	1.1	1.2	1.1	1.3	1.4	1.4	1.6	1.5	1.4	1.7	1.6
CHA	4.7	5.2	5.3	5.5	5.5	5.4	6.1	6.4	6.3	6.6	7.2
EUR	5.7	5.8	6.0	5.7	5.6	6.4	6.8	6.6	6.9	6.8	7.2
IND	3.0	3.3	3.0	3.5	3.4	3.7	3.8	3.5	3.6	3.9	3.8
JPN	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4
LAM	2.5	2.7	3.0	3.2	3.3	3.5	3.4	3.5	3.8	4.2	4.1
MEA	1.2	1.0	1.1	1.1	1.2	1.1	1.2	1.1	1.2	1.2	1.3
NEU	0.9	0.8	0.9	1.0	1.1	1.1	1.0	1.1	1.1	1.1	1.2
OAS	2.4	2.7	2.7	2.8	2.9	2.9	3.1	3.1	3.3	3.5	3.5
REF	4.4	5.7	5.1	3.9	5.7	5.2	5.9	4.7	5.0	4.3	5.1
SSA	1.4	1.2	1.5	1.4	1.4	1.4	1.5	1.4	1.5	1.6	1.5
USA	7.1	7.8	6.7	7.9	7.6	8.7	9.0	10.1	8.7	10.2	10.5

Table 1763: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 2/5]

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
GLO	45.6	49.8	54.4	54.3	53.9	52.4	55.5	57.3	55.9	57.5	56.8
CAZ	1.8	1.8	1.8	2.0	1.8	1.5	1.7	1.9	1.9	1.9	2.1
CHA	7.9	8.4	8.1	8.4	8.7	8.5	8.6	9.5	9.3	9.4	9.9
EUR	6.9	8.1	8.4	8.4	8.5	8.6	8.5	8.3	8.5	7.6	7.7
IND	4.4	4.4	4.3	4.3	4.1	4.7	5.2	5.1	5.2	5.4	5.6
JPN	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3
LAM	4.0	4.4	5.4	5.0	5.2	5.5	5.4	5.3	5.2	5.7	5.8
MEA	1.3	1.2	1.5	1.6	1.5	1.6	1.5	1.6	1.8	1.8	1.7
NEU	1.2	1.2	1.2	1.4	1.4	1.4	1.3	1.4	1.4	1.2	1.3
OAS	3.7	3.8	4.0	4.1	3.9	4.2	4.4	4.4	4.5	4.6	4.7
REF	5.2	4.9	5.5	5.8	5.9	5.5	6.0	6.3	4.8	5.4	5.2
SSA	1.4	1.4	1.6	1.8	1.7	1.9	2.0	1.9	2.1	1.9	2.1
USA	7.4	9.7	12.1	11.4	10.8	8.6	10.5	11.2	10.8	12.2	10.3

Table 1764: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 3/5]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	58.7	57.5	60.7	62.2	63.1	63.5	63.3	65.1	64.0	65.7	70.9
CAZ	1.9	2.2	2.5	2.3	2.5	2.7	2.5	2.3	1.7	2.5	2.5
CHA	9.9	10.3	10.9	11.0	11.2	11.2	10.9	10.8	11.0	10.5	11.5
EUR	7.6	7.8	8.2	8.6	8.6	8.5	8.2	8.2	8.3	7.4	9.1
IND	5.7	5.8	6.0	6.2	6.2	6.4	6.3	6.3	5.6	6.5	6.4
JPN	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	6.2	6.2	6.2	6.4	7.2	7.3	7.5	8.5	8.8	10.1	9.9
MEA	1.9	1.8	2.1	1.8	2.0	1.8	1.7	1.9	2.1	2.3	2.3
NEU	1.2	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.4	1.3	1.5
OAS	4.6	4.9	5.0	4.9	5.1	5.4	5.6	5.5	5.7	5.9	6.1
REF	4.2	3.7	3.5	4.2	2.9	3.2	3.4	4.1	4.2	3.5	4.2
SSA	2.2	2.2	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.8	2.9
USA	12.8	11.0	12.2	12.7	13.1	12.8	13.1	13.0	12.3	12.5	14.3

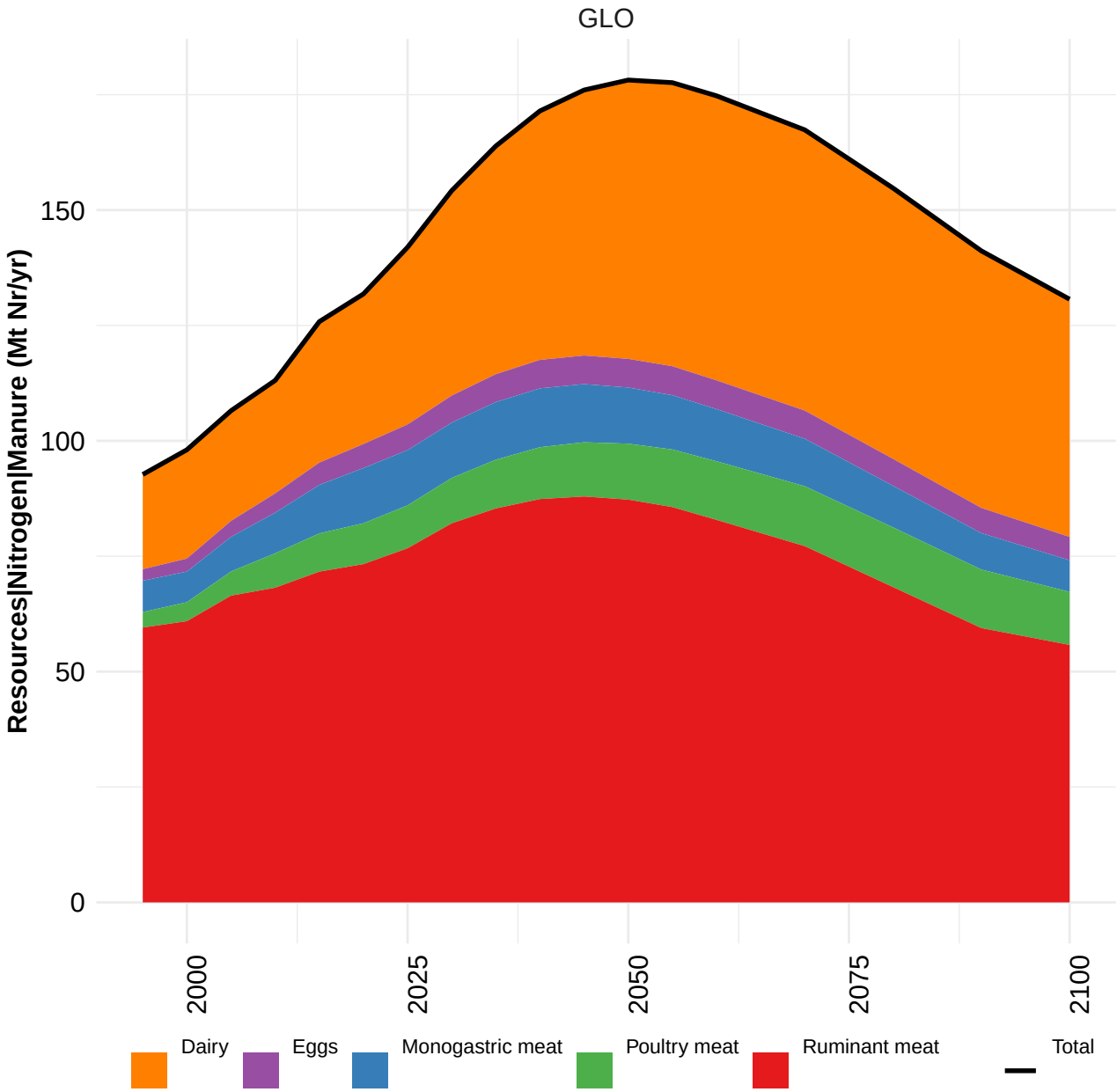
Table 1765: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 4/5]

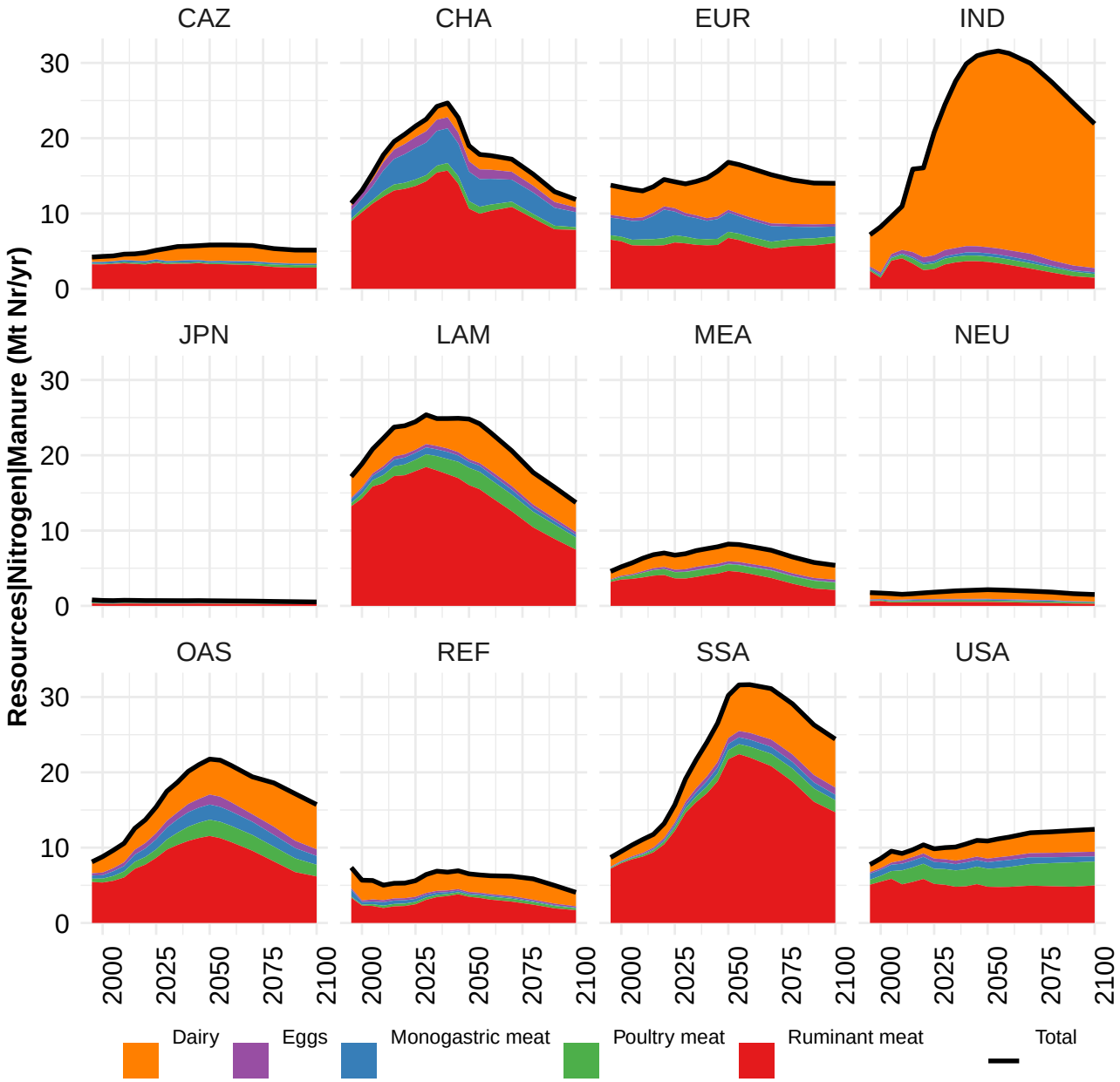
	2005	2006	2007	2008	2009
GLO	71.6	71.4	73.3	76.4	75.4
CAZ	2.7	2.2	2.3	2.8	2.7
CHA	11.7	12.0	12.1	12.9	12.9
EUR	8.3	8.0	7.7	8.7	8.6
IND	6.8	6.9	7.6	7.5	7.2
JPN	0.3	0.3	0.3	0.4	0.3
LAM	10.2	10.6	11.9	12.1	10.5
MEA	2.3	2.4	2.3	2.0	2.4
NEU	1.5	1.5	1.3	1.4	1.5
OAS	6.4	6.5	6.8	7.1	7.3
REF	4.3	4.3	4.3	5.4	5.1
SSA	3.1	3.2	3.1	3.4	3.4
USA	13.9	13.5	13.6	12.7	13.5

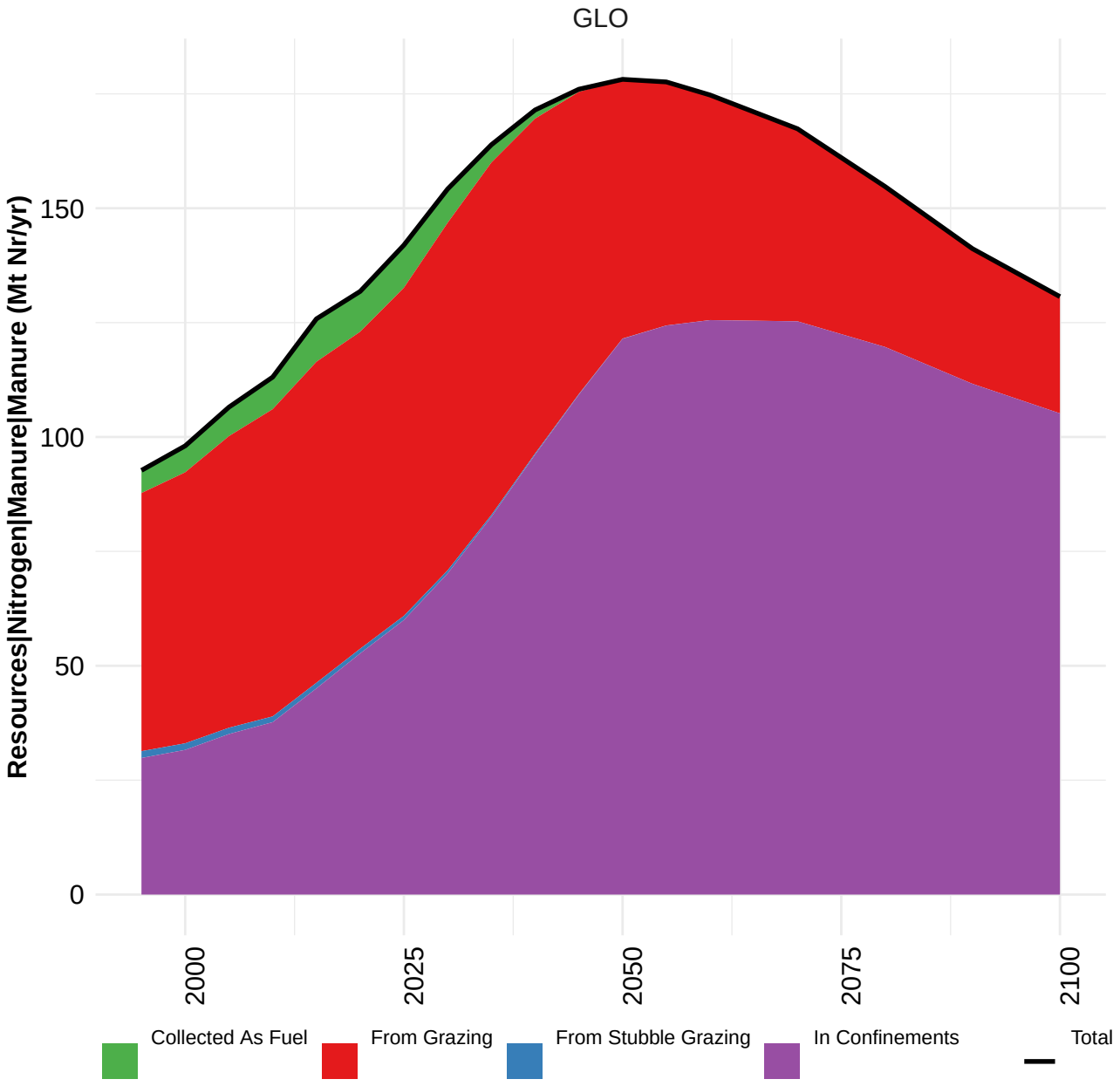
Table 1766: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 5/5]

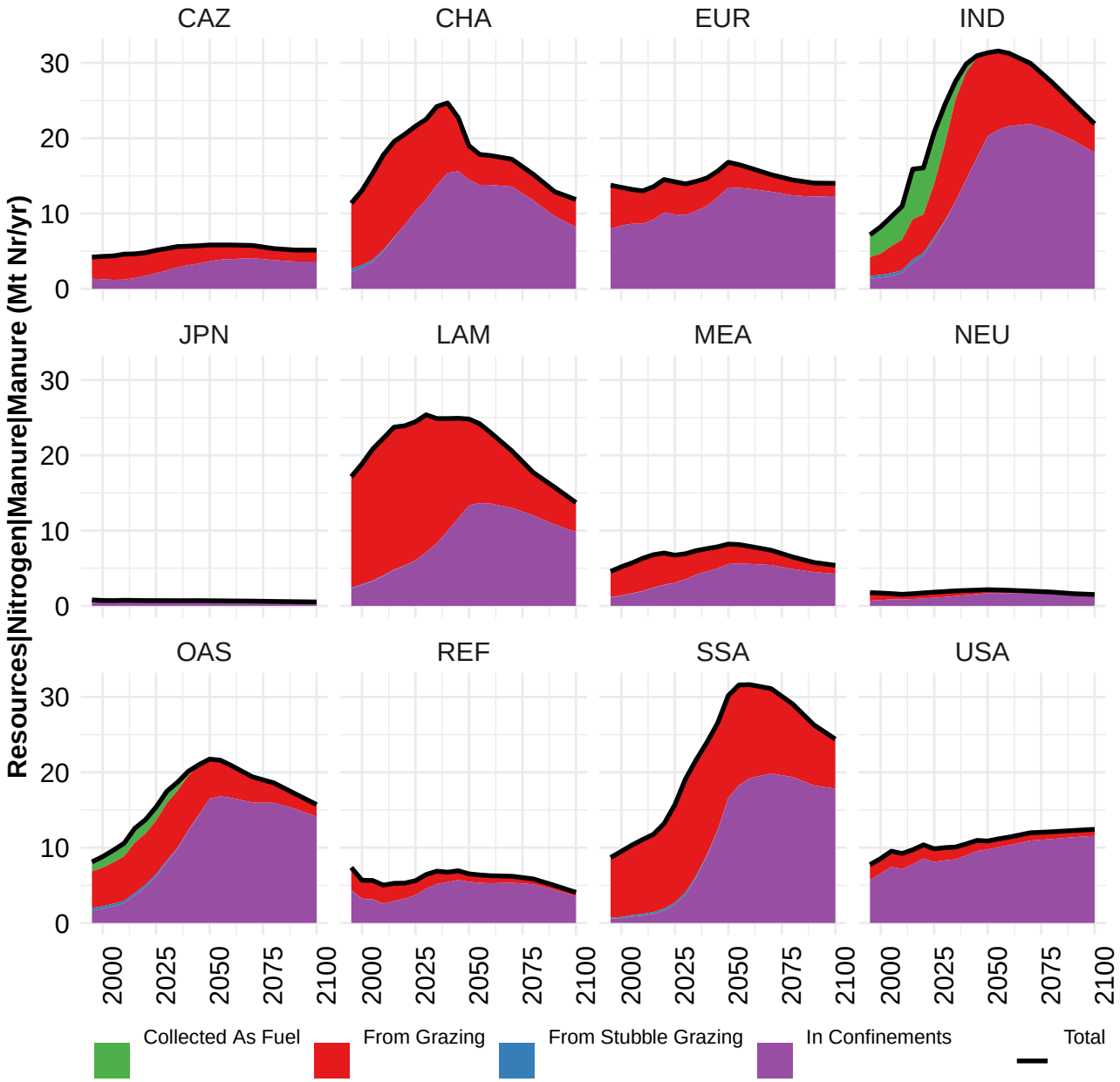
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	29.5	34.9	39.5	45.1	64.3	67.0	64.5	70.8	79.5	86.6
CAZ	1.0	1.1	1.4	1.5	4.3	4.6	3.8	4.3	4.6	4.6
CHA	3.7	4.3	4.9	5.6	7.3	8.6	9.8	10.8	11.9	13.5
EUR	5.3	5.9	6.8	8.1	11.0	10.6	10.1	10.9	11.2	11.4
IND	2.6	3.2	3.4	3.6	4.2	5.0	5.8	6.2	6.6	8.1
JPN	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.5
LAM	2.2	2.7	3.5	4.1	6.2	5.7	6.5	7.9	10.4	13.4
MEA	0.8	1.1	1.2	1.3	1.7	1.8	2.0	2.0	2.6	2.7
NEU	0.7	0.8	0.9	1.1	1.3	1.4	1.4	1.4	1.6	1.6
OAS	2.2	2.6	3.0	3.5	4.1	4.6	5.2	5.8	6.7	7.6
REF	3.9	5.4	4.4	5.6	8.9	10.0	5.6	4.5	5.2	4.4
SSA	1.2	1.4	1.5	1.6	1.7	2.0	2.2	2.6	3.2	3.9
USA	5.7	6.1	7.9	8.6	13.0	12.0	11.8	13.9	15.1	15.1

Table 1767: Bodirsky — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr)

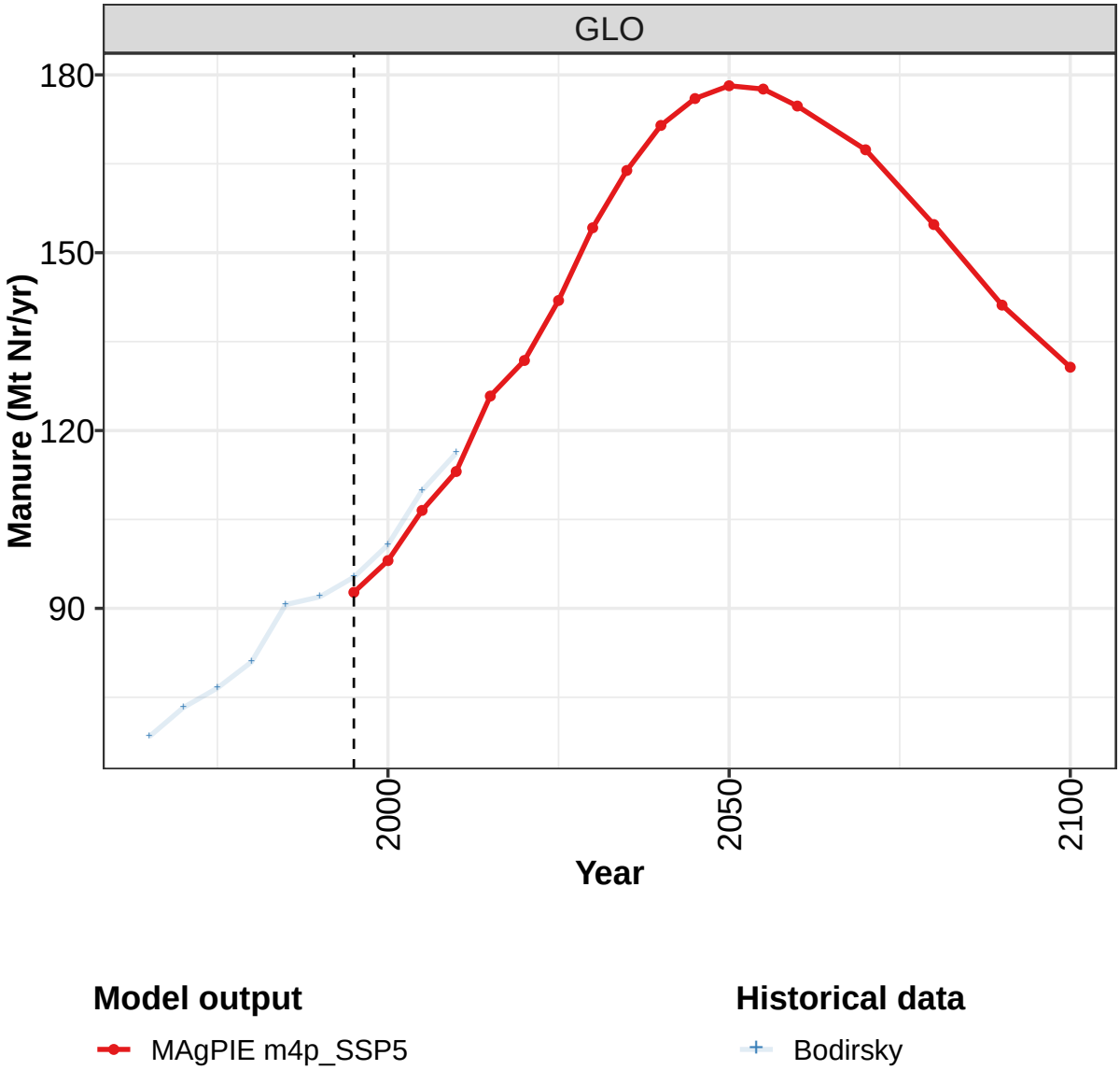

GLO
Resources|Nitrogen|Manure (Mt Nr/yr)
150
100
50
0
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total

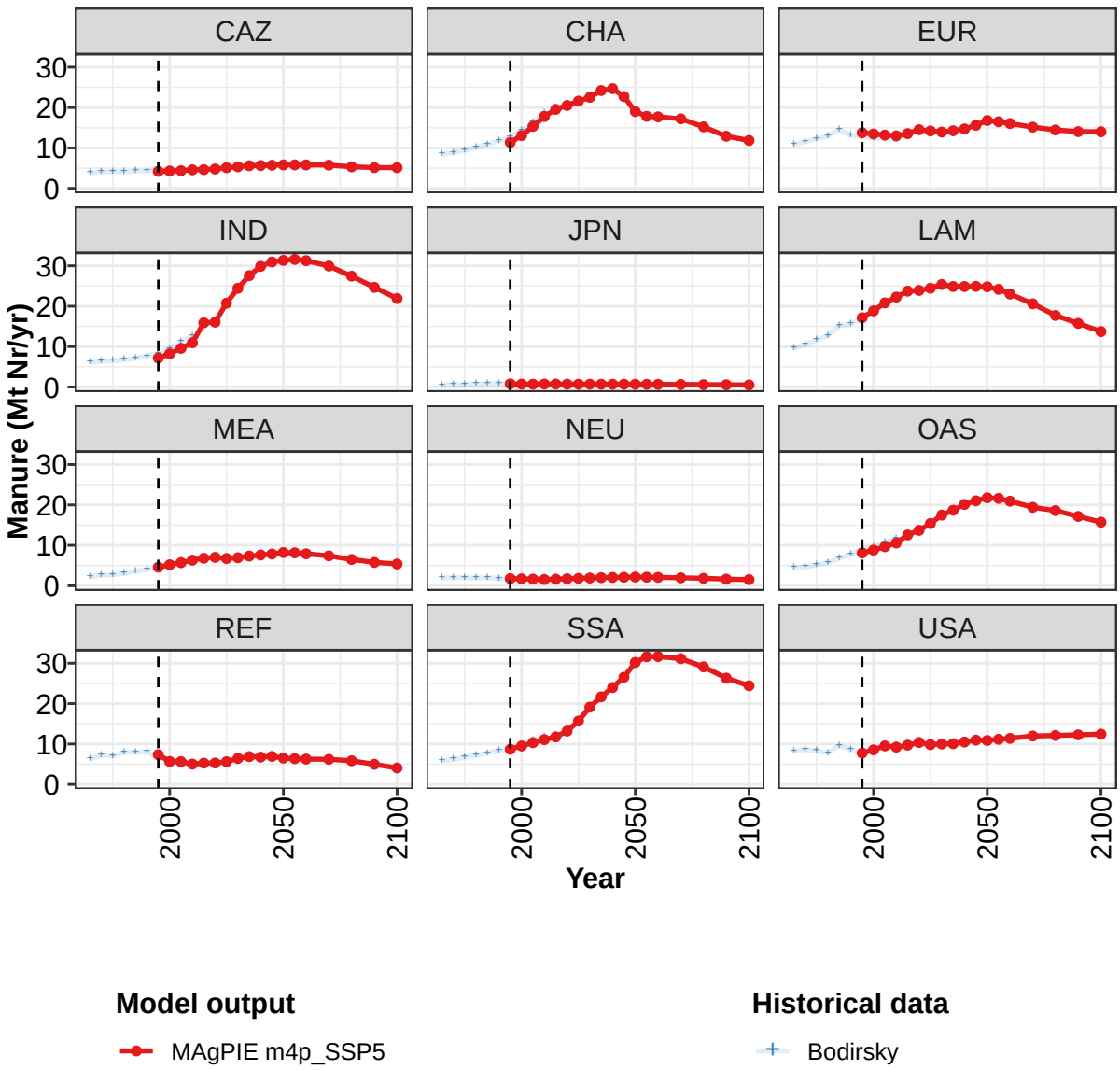

CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Resources|Nitrogen|Manure (Mt Nr/yr)
0
10
20
30
2000
2025
2050
2075
2100
Dairy
Eggs
Monogastric meat
Poultry meat
Ruminant meat
Total


GLO
Resources|Nitrogen|Manure|Manure (Mt Nr/yr)
150
100
50
0
2000
2025
2050
2075
2100
Collected As Fuel
From Grazing
From Stubble Grazing
In Confinements
Total


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Resources|Nitrogen|Manure|Manure (Mt Nr/yr)
0
10
20
30
2000
2025
2050
2075
2100
Collected As Fuel
From Grazing
From Stubble Grazing
In Confinements
Total

56.2 Manure


GLO
180
150
120
90
Manure (Mt Nr/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
Bodirsky



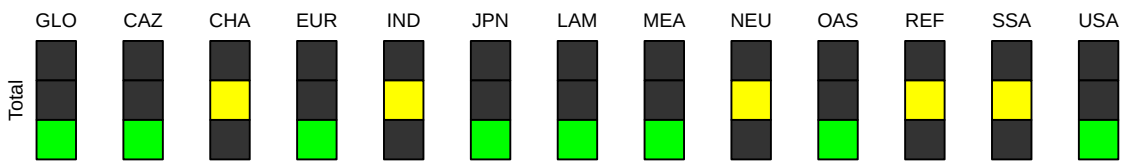


Figure 459: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	93	98	107	113	126	132	142	154	164	171	176
CAZ	4	4	4	5	5	5	5	5	6	6	6
CHA	11	13	15	18	20	21	22	23	24	25	23
EUR	14	13	13	13	14	15	14	14	14	15	16
IND	7	8	10	11	16	16	21	24	28	30	31
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	17	19	21	22	24	24	24	25	25	25	25
MEA	5	5	6	6	7	7	7	7	7	8	8
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	8	9	10	11	13	14	15	17	19	20	21
REF	7	6	6	5	5	5	6	6	7	7	7
SSA	9	10	10	11	12	13	16	19	22	24	27
USA	8	9	10	9	10	10	10	10	10	10	11

Table 1768: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure (Mt Nr/yr) [PART 1/2]

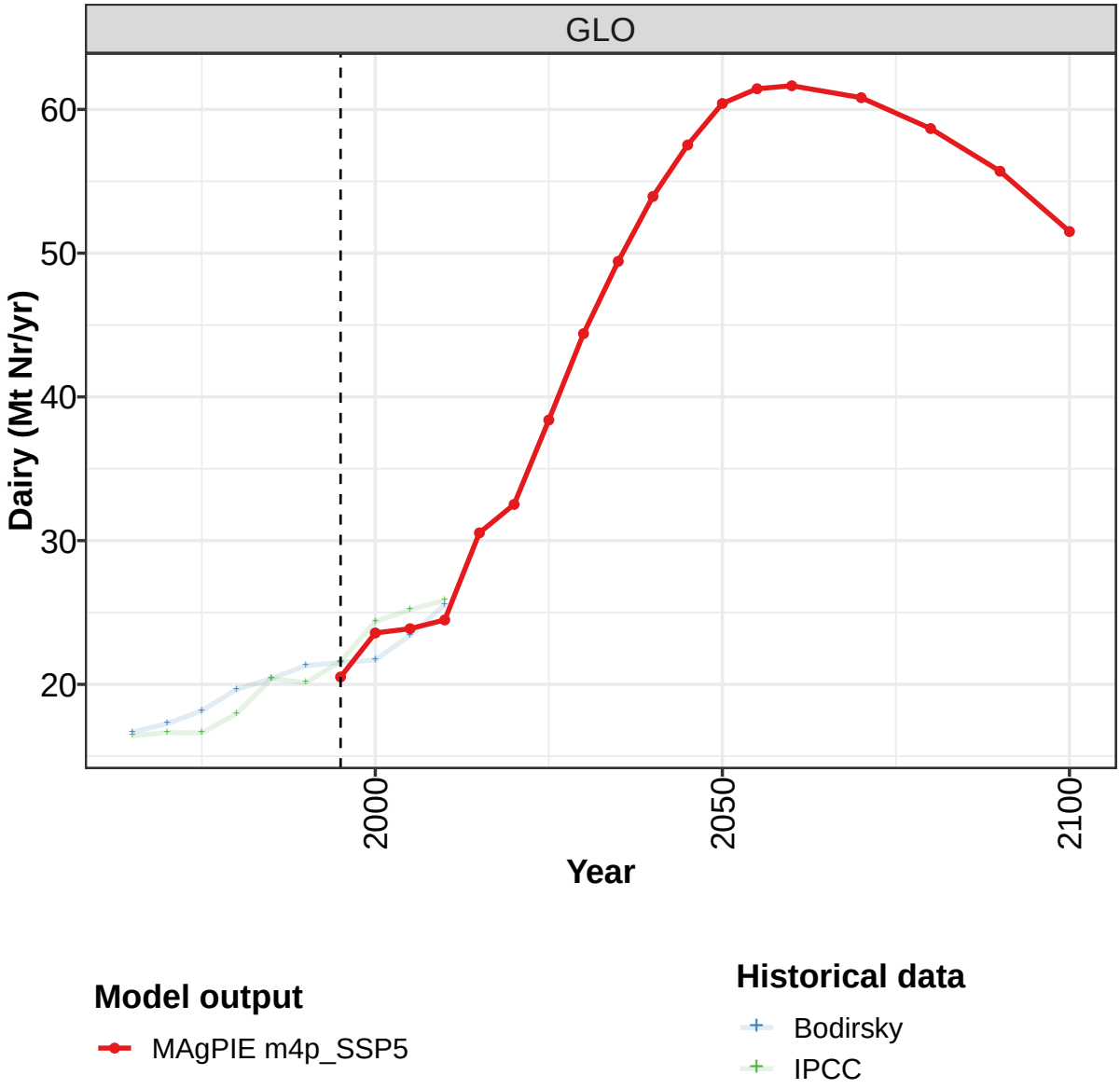
	2050	2055	2060	2070	2080	2090	2100
GLO	178	178	175	167	155	141	131
CAZ	6	6	6	6	5	5	5
CHA	19	18	18	17	15	13	12
EUR	17	16	16	15	14	14	14
IND	31	32	31	30	27	25	22
JPN	1	1	1	1	1	1	1
LAM	25	24	23	21	18	16	14
MEA	8	8	8	7	7	6	5
NEU	2	2	2	2	2	2	2
OAS	22	22	21	19	19	17	16
REF	7	6	6	6	6	5	4
SSA	30	32	32	31	29	26	24
USA	11	11	11	12	12	12	12

Table 1769: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	68	73	77	81	91	92	95	101	110	116
CAZ	4	4	4	4	4	4	5	5	5	5
CHA	8	9	9	10	11	12	13	14	16	19
EUR	11	12	12	13	15	13	13	12	12	12
IND	6	6	7	7	7	8	8	9	11	13
JPN	0	1	1	1	1	1	1	1	1	1
LAM	10	10	12	13	15	16	17	19	21	22
MEA	2	3	3	3	4	4	5	5	6	7
NEU	2	2	2	2	2	2	2	2	2	1
OAS	4	5	5	6	7	8	9	10	11	12
REF	6	7	7	8	8	8	7	5	5	5
SSA	6	6	7	7	8	8	9	10	11	12
USA	8	9	8	8	10	9	8	9	10	9

Table 1770: Bodirsky — Resources—Nitrogen—Manure (Mt Nr/yr)

56.2.1 Dairy


GLO
Dairy (Mt Nr/yr)
60
50
40
30
20
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
Bodirsky
IPCC

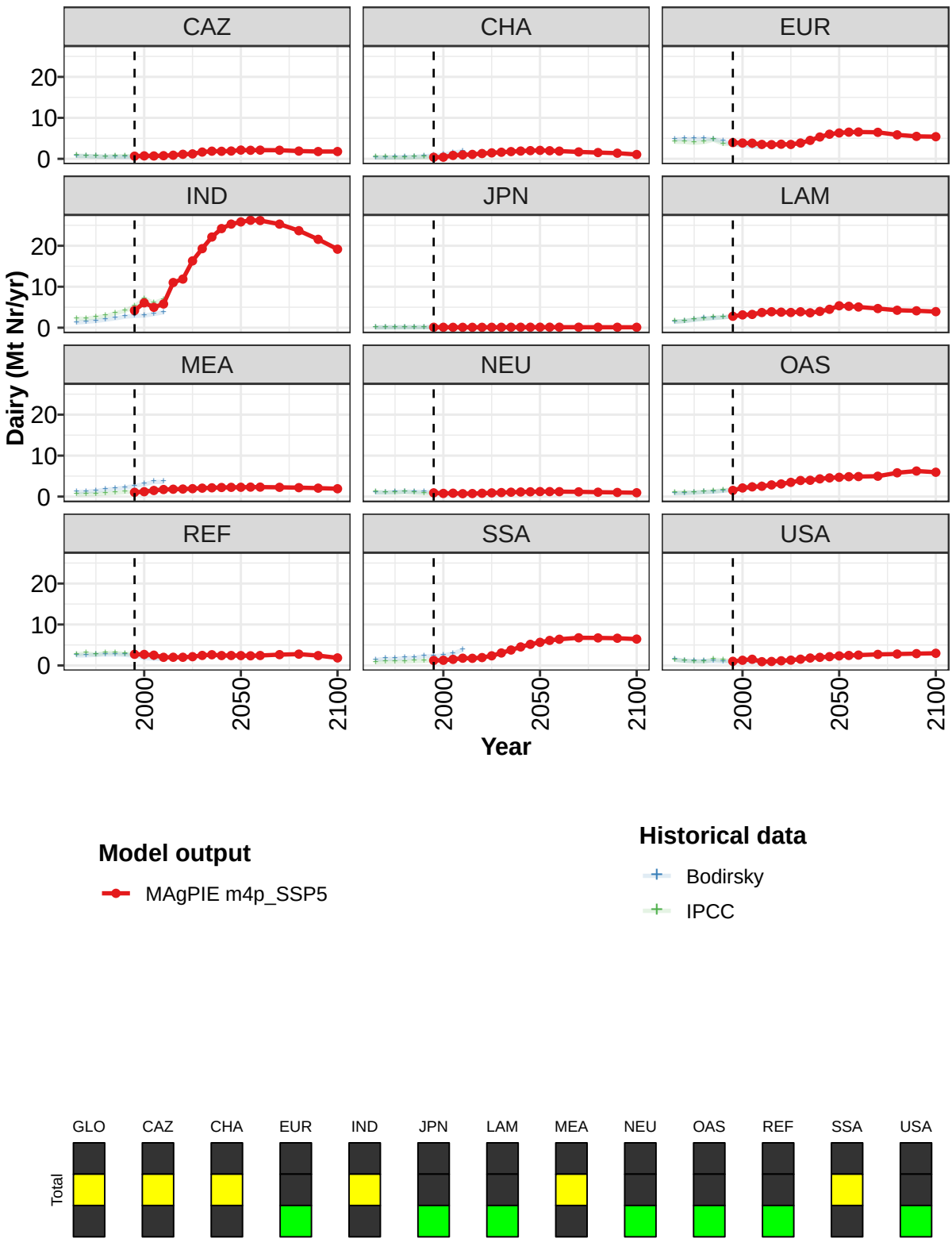


Figure 460: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	20.5	23.6	23.9	24.5	30.5	32.5	38.4	44.4	49.4	53.9	57.5
CAZ	0.6	0.7	0.7	0.8	0.9	1.1	1.2	1.6	1.9	1.8	1.9
CHA	0.4	0.4	0.8	1.0	1.1	1.3	1.5	1.6	1.8	1.9	2.0
EUR	4.0	3.9	3.8	3.5	3.5	3.6	3.5	3.9	4.5	5.3	6.0
IND	4.2	6.1	5.0	5.8	11.0	11.9	16.3	19.3	22.1	24.2	25.3
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.8	3.1	3.2	3.7	3.9	3.8	3.7	3.9	3.6	4.0	4.5
MEA	1.0	1.2	1.5	1.7	1.8	1.8	1.9	2.1	2.1	2.2	2.3
NEU	0.9	0.8	0.8	0.7	0.7	0.8	0.9	1.0	1.1	1.1	1.2
OAS	1.5	2.1	2.4	2.5	2.8	3.1	3.5	3.9	4.0	4.3	4.6
REF	2.7	2.7	2.5	2.0	2.0	2.0	2.1	2.5	2.6	2.4	2.4
SSA	1.2	1.3	1.5	1.8	1.7	1.9	2.4	3.1	3.8	4.5	5.2
USA	1.0	1.3	1.5	0.9	1.0	1.1	1.3	1.5	1.8	2.0	2.2

Table 1771: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	60.4	61.4	61.6	60.8	58.7	55.7	51.5
CAZ	2.1	2.1	2.1	2.1	1.9	1.8	1.8
CHA	2.1	2.0	1.9	1.7	1.5	1.4	1.1
EUR	6.3	6.5	6.5	6.5	5.9	5.5	5.4
IND	25.8	26.2	26.2	25.3	23.7	21.6	19.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	5.4	5.2	5.1	4.7	4.3	4.1	3.9
MEA	2.3	2.3	2.3	2.3	2.2	2.1	1.9
NEU	1.2	1.2	1.2	1.2	1.1	1.0	0.9
OAS	4.7	4.9	4.9	5.0	5.8	6.2	5.9
REF	2.4	2.4	2.4	2.6	2.8	2.4	1.9
SSA	5.7	6.1	6.4	6.8	6.7	6.7	6.4
USA	2.3	2.4	2.5	2.7	2.8	2.9	3.0

Table 1772: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr) [PART 2/2]

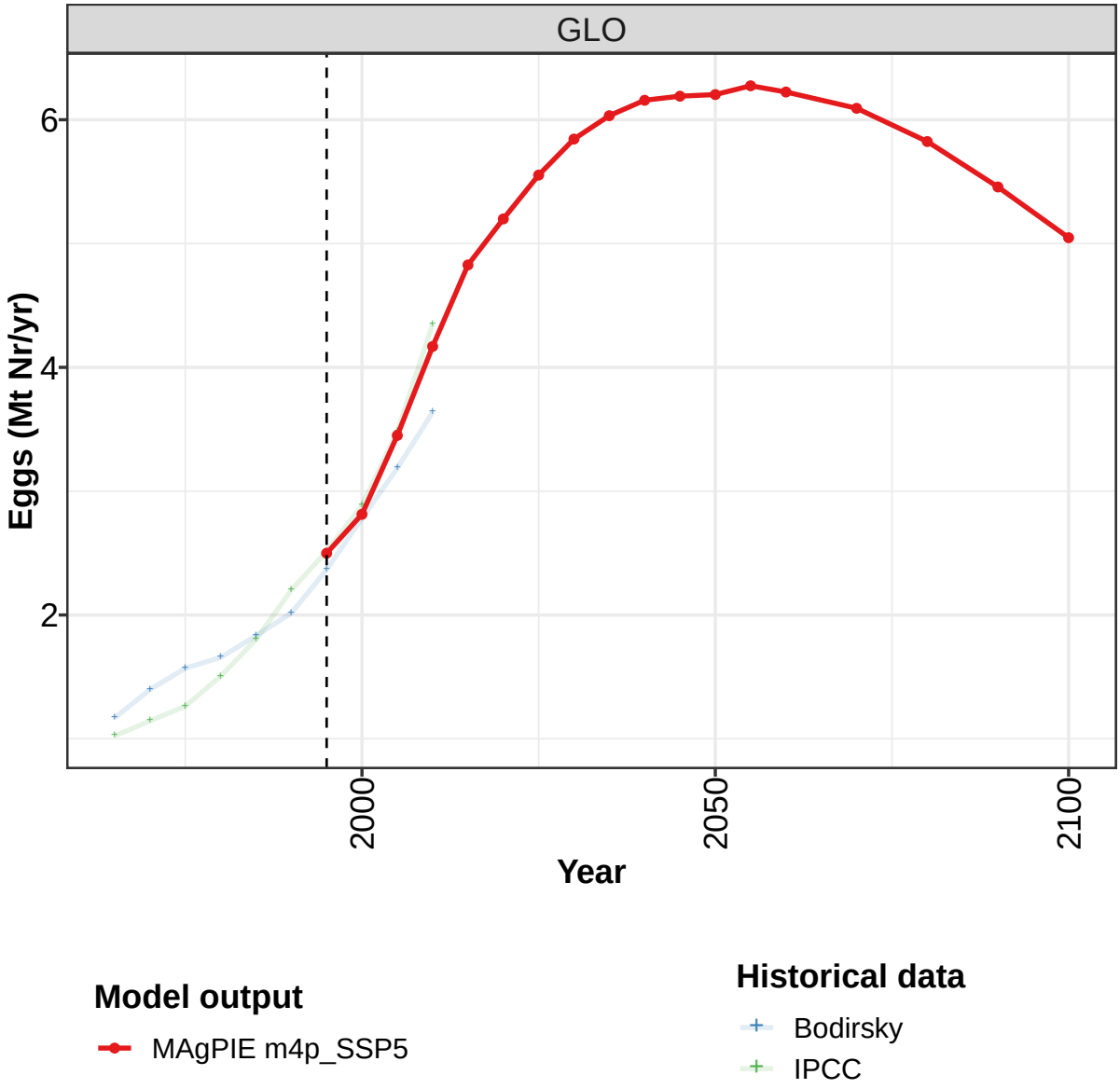
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	16.7	17.3	18.2	19.6	20.4	21.3	21.5	21.7	23.4	25.5
CAZ	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6
CHA	0.3	0.3	0.4	0.4	0.5	0.6	0.8	1.0	1.5	1.8
EUR	4.8	4.8	4.9	4.9	4.8	4.3	3.6	3.2	2.9	2.8
IND	1.2	1.4	1.6	2.0	2.3	2.7	2.9	3.0	3.3	3.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.5	1.6	1.9	2.3	2.3	2.6	2.8	2.8	3.1	3.2
MEA	1.1	1.2	1.4	1.7	1.9	2.2	2.6	3.0	3.6	3.6
NEU	1.0	1.0	1.1	1.2	1.2	1.2	1.1	0.9	0.7	0.7
OAS	0.8	0.8	0.9	1.1	1.1	1.4	1.6	1.9	2.1	2.7
REF	2.4	2.5	2.6	2.7	2.7	2.6	2.4	1.8	1.6	1.6
SSA	1.4	1.6	1.6	1.8	1.9	2.2	2.3	2.5	2.9	3.8
USA	1.5	1.2	1.1	1.0	1.1	1.0	0.9	0.9	0.9	0.9

Table 1773: IPCC — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	16.4	16.6	16.6	18.0	20.4	20.1	21.6	24.4	25.2	25.8
CAZ	0.7	0.7	0.6	0.5	0.6	0.6	0.7	0.8	0.8	0.9
CHA	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	1.0	1.2
EUR	4.1	4.1	3.9	4.1	4.7	3.6	3.6	3.5	3.4	3.1
IND	2.2	2.2	2.5	2.8	3.5	4.1	5.2	7.1	6.0	6.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.5	1.6	2.1	2.1	2.5	2.5	2.8	3.2	3.3	3.7
MEA	0.5	0.6	0.6	0.8	0.9	1.1	1.2	1.4	1.8	1.9
NEU	1.1	1.0	0.9	1.1	0.9	0.8	0.8	0.7	0.8	0.7
OAS	0.9	1.0	1.0	1.1	1.3	1.5	1.7	2.4	2.6	2.8
REF	2.7	3.0	2.7	3.1	3.1	2.8	2.8	2.3	2.3	1.7
SSA	0.8	0.9	0.9	0.9	1.0	1.1	1.2	1.3	1.6	2.0
USA	1.4	1.1	1.0	0.9	1.4	1.3	1.0	1.3	1.5	0.9

Table 1774: Bodirsky — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr)

56.2.2 Eggs


GLO
Eggs (Mt Nr/yr)
6
4
2
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
Bodirsky
IPCC

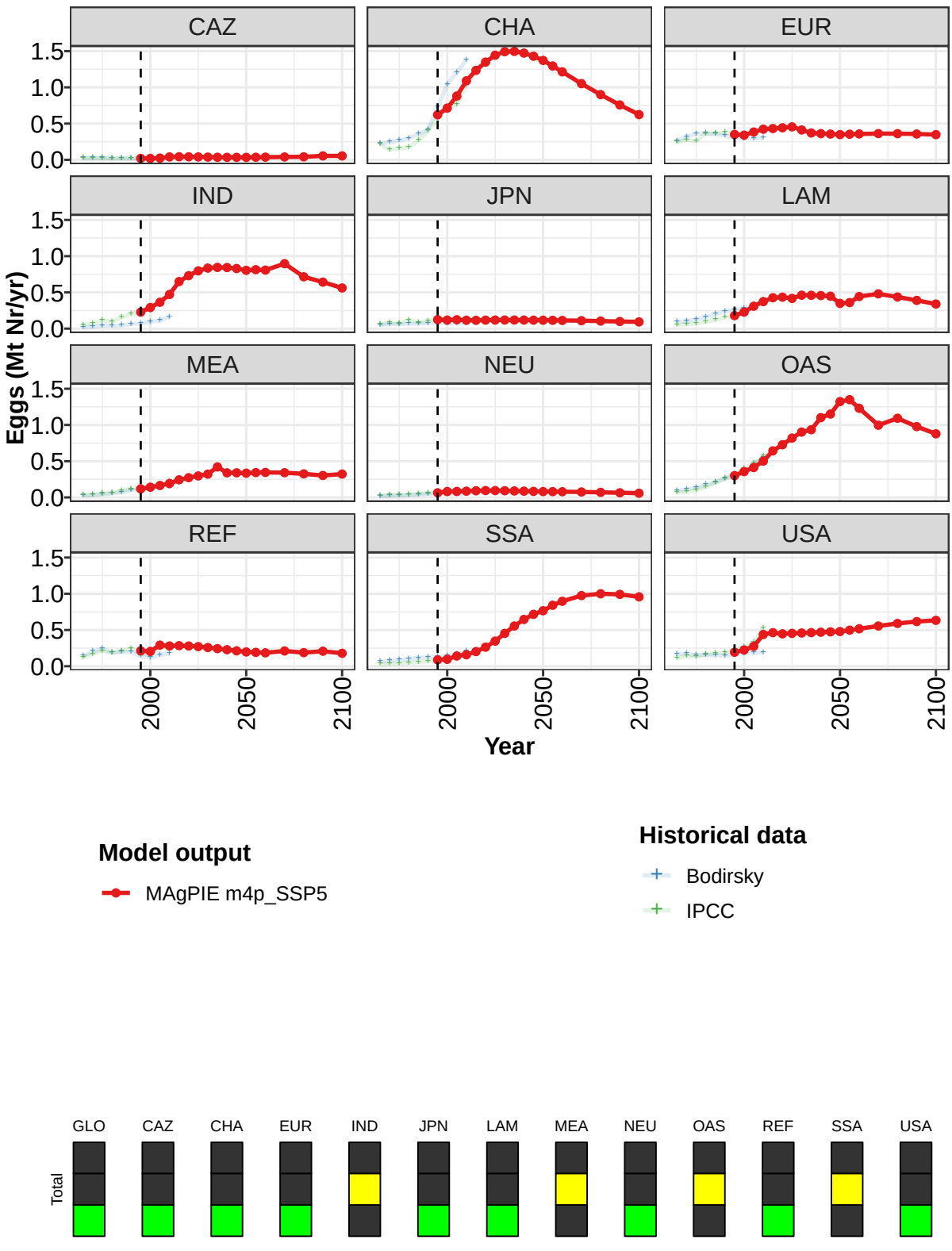


Figure 461: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.50	2.81	3.45	4.17	4.83	5.20	5.55	5.84	6.03	6.16	6.19
CAZ	0.02	0.02	0.02	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03
CHA	0.62	0.71	0.88	1.09	1.23	1.35	1.44	1.49	1.50	1.47	1.43
EUR	0.35	0.34	0.38	0.42	0.43	0.44	0.45	0.41	0.37	0.36	0.36
IND	0.23	0.29	0.36	0.47	0.65	0.73	0.80	0.84	0.84	0.84	0.83
JPN	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.12	0.12	0.12	0.12
LAM	0.18	0.23	0.31	0.37	0.43	0.43	0.42	0.46	0.46	0.46	0.45
MEA	0.12	0.14	0.16	0.19	0.24	0.27	0.30	0.32	0.42	0.34	0.34
NEU	0.06	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08
OAS	0.30	0.36	0.41	0.50	0.64	0.73	0.82	0.90	0.93	1.10	1.15
REF	0.21	0.20	0.29	0.28	0.28	0.28	0.27	0.26	0.24	0.23	0.21
SSA	0.09	0.10	0.14	0.16	0.20	0.26	0.35	0.45	0.55	0.65	0.72
USA	0.19	0.22	0.27	0.44	0.46	0.45	0.45	0.46	0.46	0.47	0.47

Table 1775: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	6.20	6.27	6.22	6.09	5.82	5.46	5.05
CAZ	0.03	0.04	0.04	0.04	0.04	0.05	0.05
CHA	1.37	1.29	1.21	1.05	0.90	0.76	0.62
EUR	0.35	0.35	0.36	0.36	0.36	0.36	0.35
IND	0.80	0.81	0.81	0.90	0.72	0.64	0.56
JPN	0.12	0.11	0.11	0.11	0.10	0.10	0.09
LAM	0.35	0.36	0.44	0.48	0.44	0.39	0.34
MEA	0.33	0.34	0.35	0.34	0.33	0.30	0.32
NEU	0.08	0.08	0.08	0.08	0.07	0.06	0.06
OAS	1.32	1.35	1.23	1.00	1.09	0.98	0.88
REF	0.20	0.19	0.19	0.21	0.19	0.21	0.18
SSA	0.77	0.84	0.90	0.97	1.00	0.99	0.96
USA	0.48	0.50	0.52	0.56	0.59	0.62	0.63

Table 1776: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr) [PART 2/2]

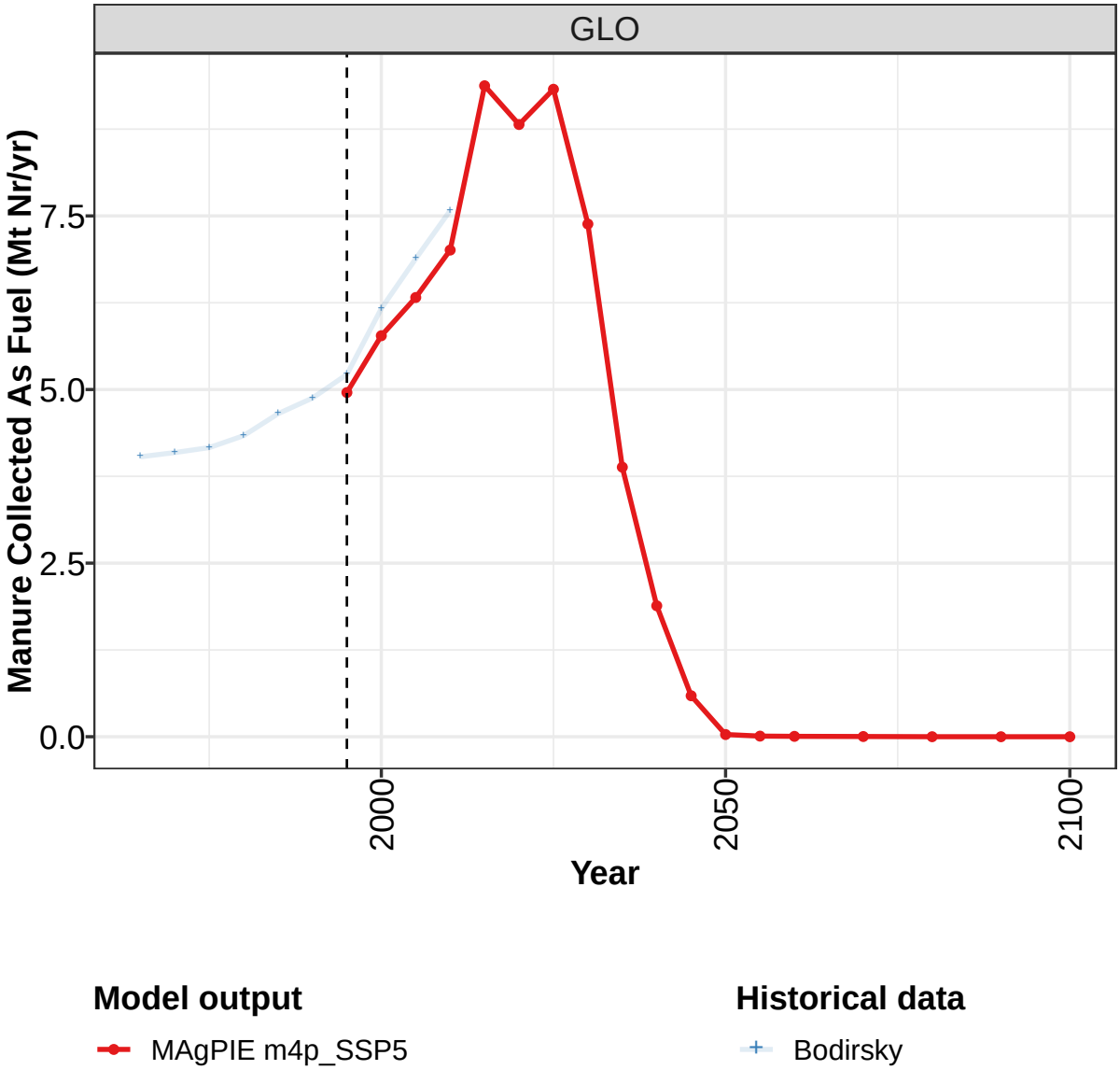
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.17	1.40	1.57	1.66	1.83	2.02	2.37	2.78	3.19	3.64
CAZ	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.22	0.24	0.27	0.30	0.35	0.42	0.73	1.04	1.20	1.38
EUR	0.26	0.32	0.36	0.37	0.35	0.34	0.30	0.29	0.30	0.30
IND	0.02	0.03	0.04	0.04	0.04	0.06	0.07	0.09	0.12	0.16
JPN	0.05	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.07	0.08
LAM	0.09	0.10	0.13	0.15	0.20	0.24	0.26	0.28	0.32	0.38
MEA	0.03	0.03	0.04	0.05	0.07	0.10	0.12	0.12	0.15	0.15
NEU	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.05	0.05	0.05
OAS	0.09	0.11	0.13	0.18	0.21	0.26	0.32	0.37	0.45	0.55
REF	0.14	0.21	0.24	0.19	0.20	0.19	0.14	0.12	0.16	0.18
SSA	0.06	0.07	0.09	0.10	0.12	0.12	0.13	0.14	0.17	0.20
USA	0.16	0.17	0.15	0.16	0.15	0.15	0.16	0.18	0.19	0.19

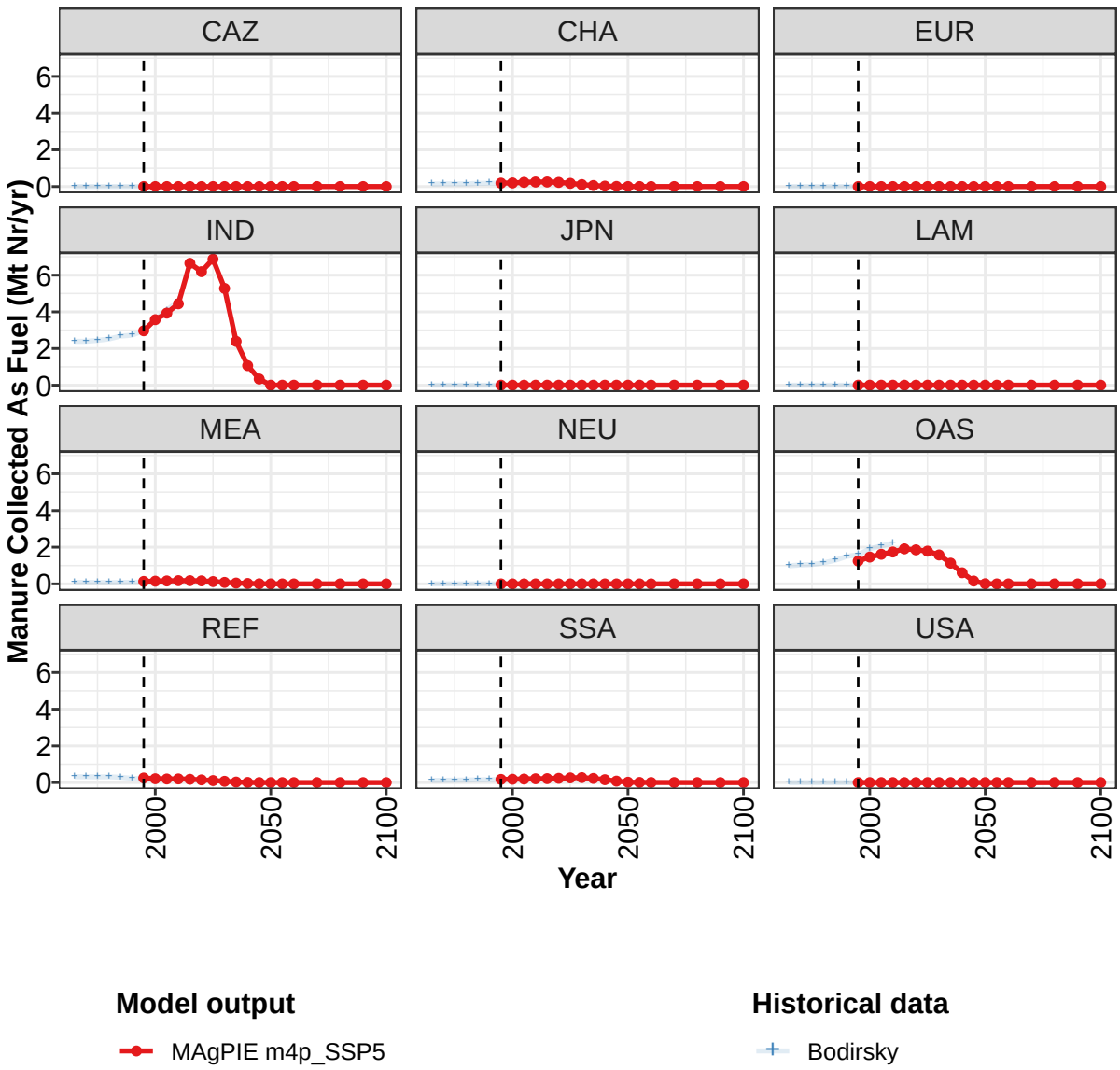
Table 1777: IPCC — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.02	1.14	1.26	1.50	1.80	2.20	2.51	2.89	3.48	4.35
CAZ	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04
CHA	0.21	0.14	0.16	0.18	0.27	0.40	0.58	0.73	0.76	1.02
EUR	0.24	0.28	0.26	0.36	0.36	0.38	0.37	0.34	0.39	0.44
IND	0.05	0.07	0.11	0.10	0.15	0.20	0.24	0.30	0.38	0.49
JPN	0.06	0.08	0.07	0.12	0.09	0.10	0.13	0.12	0.13	0.12
LAM	0.05	0.06	0.07	0.09	0.12	0.15	0.17	0.22	0.33	0.39
MEA	0.03	0.04	0.05	0.06	0.09	0.12	0.13	0.15	0.18	0.22
NEU	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10
OAS	0.06	0.08	0.10	0.14	0.20	0.27	0.32	0.40	0.47	0.57
REF	0.12	0.17	0.21	0.19	0.21	0.24	0.17	0.16	0.25	0.27
SSA	0.03	0.04	0.04	0.05	0.06	0.07	0.10	0.10	0.15	0.17
USA	0.11	0.14	0.13	0.16	0.18	0.18	0.23	0.26	0.32	0.52

Table 1778: Bodirsky — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr)

56.2.3 Manure Collected As Fuel





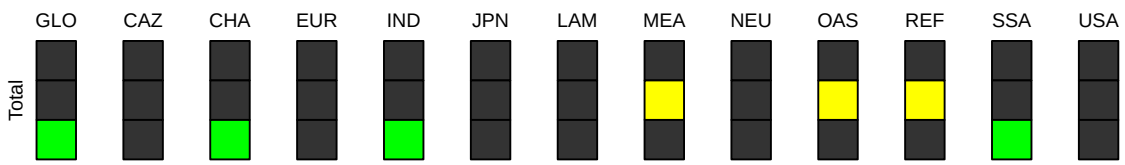


Figure 462: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure Collected As Fuel (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.96	5.78	6.33	7.01	9.37	8.82	9.32	7.38	3.88	1.89	0.59
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.19	0.20	0.23	0.25	0.25	0.23	0.17	0.11	0.06	0.02	0.01
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	2.97	3.58	3.93	4.44	6.65	6.19	6.87	5.28	2.39	1.07	0.34
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.13	0.15	0.16	0.17	0.18	0.16	0.13	0.08	0.05	0.02	0.01
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	1.25	1.46	1.61	1.74	1.91	1.86	1.79	1.58	1.13	0.61	0.16
REF	0.25	0.21	0.20	0.20	0.18	0.15	0.11	0.07	0.03	0.01	0.00
SSA	0.17	0.18	0.19	0.21	0.22	0.23	0.26	0.27	0.23	0.16	0.08
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1779: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure Collected As Fuel (Mt Nr/yr) [PART 1/2]

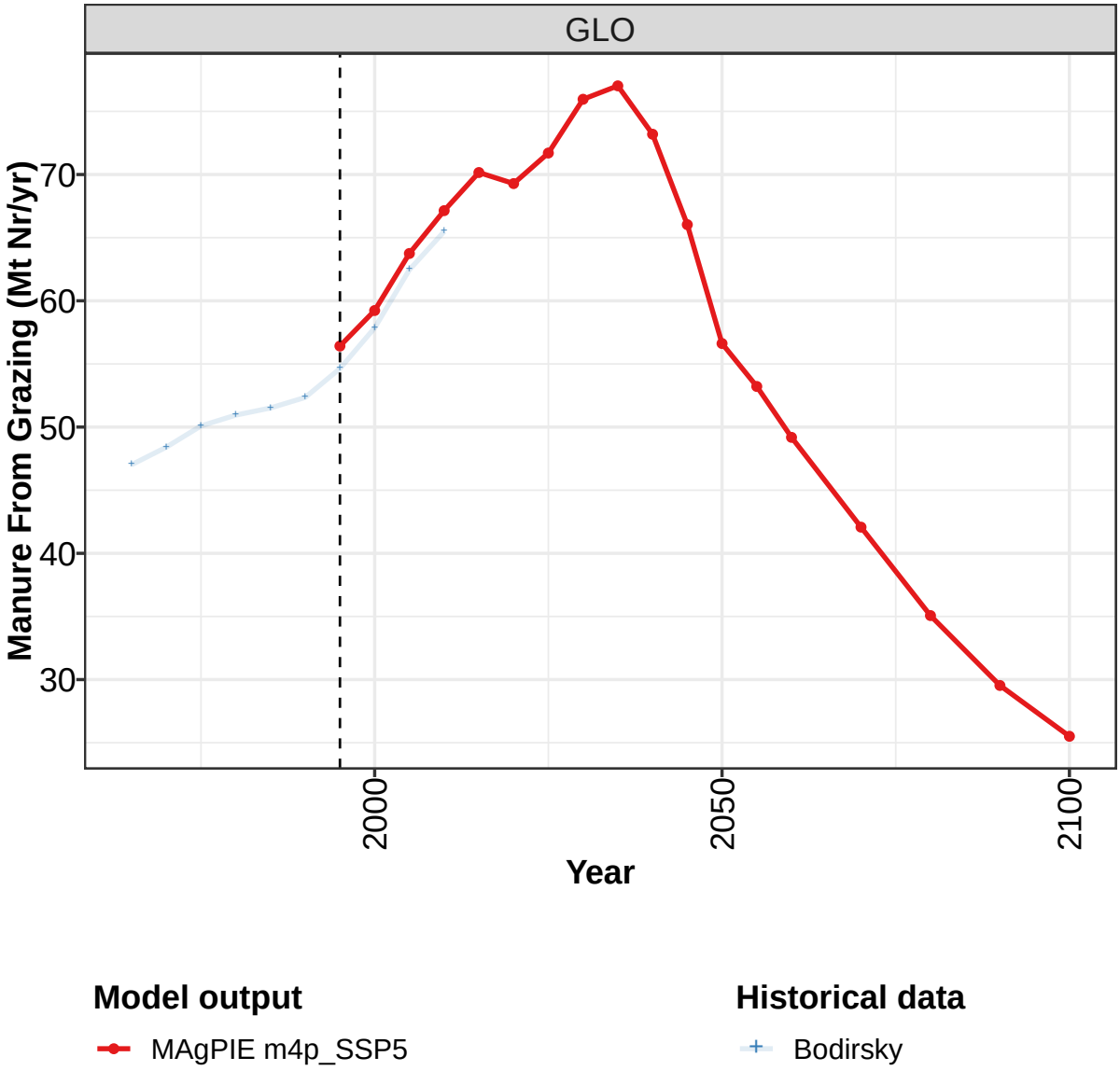
	2050	2055	2060	2070	2080	2090	2100
GLO	0.03	0.01	0.01	0.00	0.00	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.01	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.02	0.01	0.01	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

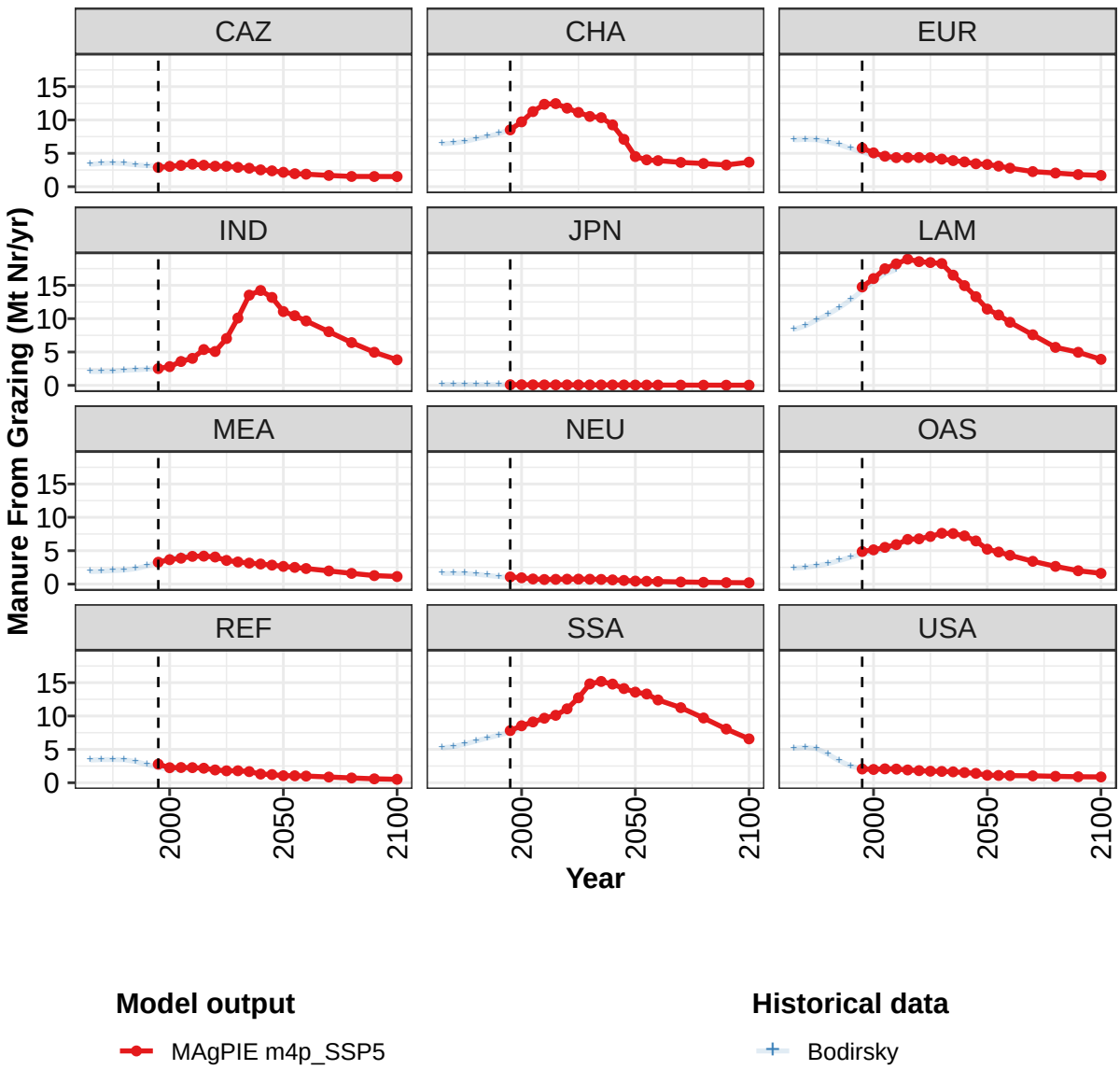
Table 1780: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure Collected As Fuel (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.03	4.09	4.16	4.33	4.65	4.88	5.22	6.17	6.88	7.58
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.13	0.15	0.15	0.14	0.17	0.18	0.19	0.20	0.23	0.24
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	2.39	2.39	2.45	2.52	2.68	2.73	2.98	3.59	4.08	4.60
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.08	0.08	0.07	0.07	0.08	0.09	0.09	0.11	0.12	0.12
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.98	1.03	1.05	1.15	1.29	1.50	1.59	1.91	2.07	2.22
REF	0.32	0.32	0.31	0.32	0.29	0.23	0.19	0.17	0.18	0.19
SSA	0.12	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.20	0.21
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1781: Bodirsky — Resources—Nitrogen—Manure—Manure Collected As Fuel (Mt Nr/yr)

56.2.4 Manure From Grazing





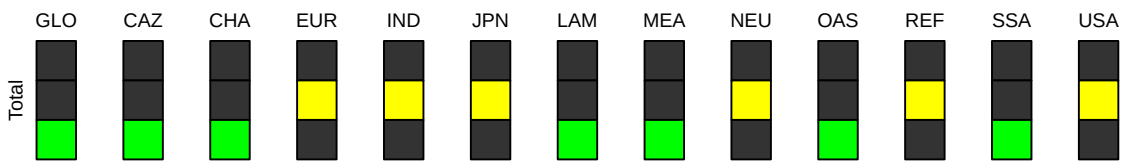


Figure 463: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure From Grazing (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	56.4	59.2	63.7	67.1	70.2	69.3	71.7	76.0	77.0	73.2	66.0
CAZ	2.9	3.0	3.2	3.4	3.2	3.1	3.1	2.9	2.8	2.5	2.4
CHA	8.5	9.7	11.3	12.3	12.5	11.8	11.1	10.5	10.3	9.3	7.1
EUR	5.8	5.1	4.6	4.4	4.4	4.4	4.3	4.1	3.9	3.7	3.4
IND	2.5	2.8	3.6	4.0	5.4	5.1	7.0	10.1	13.5	14.2	13.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	14.8	16.0	17.5	18.2	18.9	18.6	18.4	18.3	16.5	14.9	13.3
MEA	3.3	3.7	3.9	4.2	4.2	4.1	3.5	3.3	3.1	3.0	2.8
NEU	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5
OAS	4.9	5.1	5.5	5.9	6.7	6.8	7.1	7.6	7.6	7.2	6.5
REF	2.8	2.2	2.3	2.3	2.2	1.9	1.8	1.8	1.7	1.3	1.2
SSA	7.8	8.5	9.1	9.7	10.1	11.1	12.7	14.8	15.2	14.8	14.1
USA	2.1	2.0	2.1	2.1	1.9	1.8	1.7	1.7	1.6	1.5	1.4

Table 1782: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure From Grazing (Mt Nr/yr) [PART 1/2]

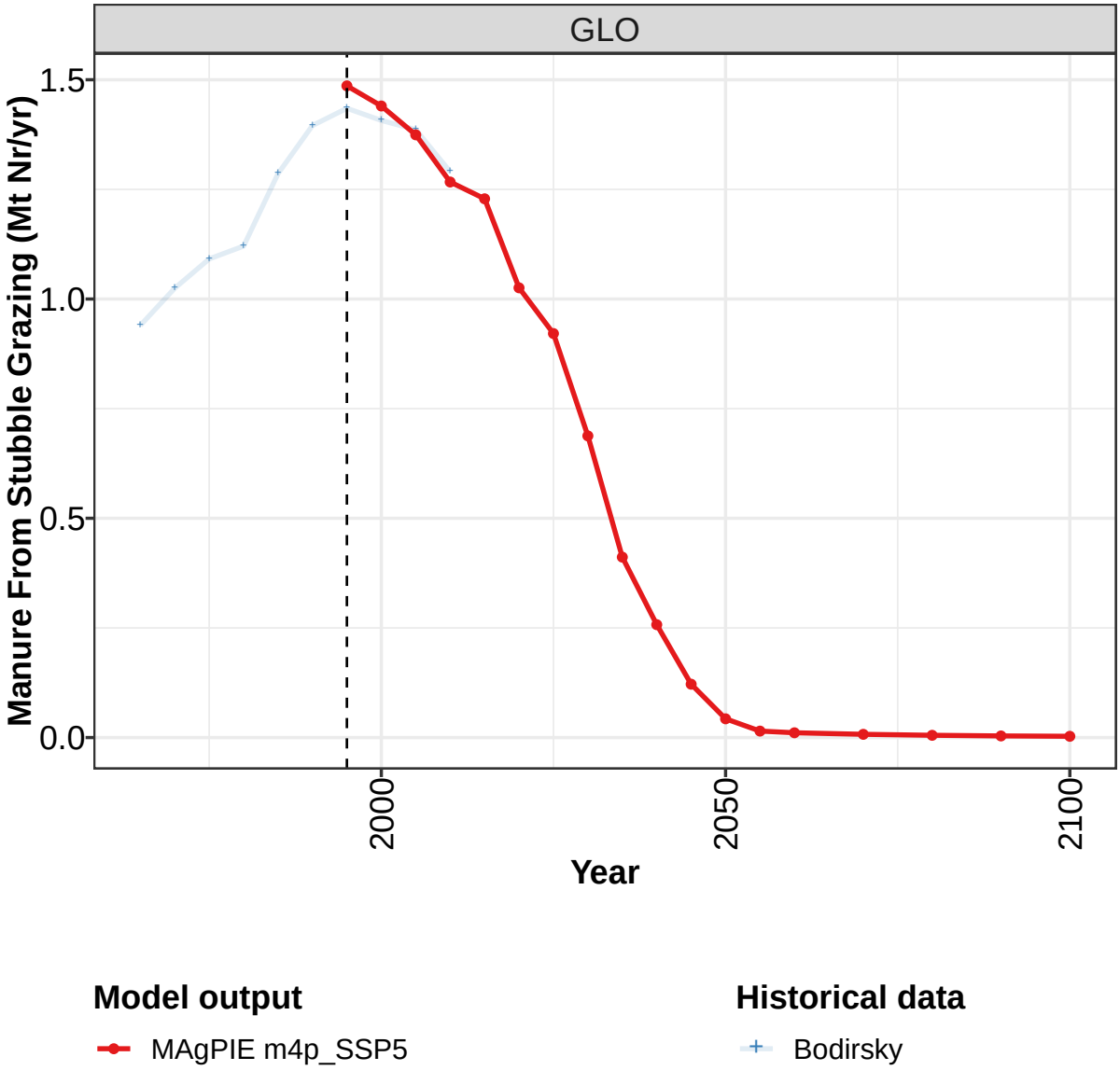
	2050	2055	2060	2070	2080	2090	2100
GLO	56.6	53.2	49.2	42.1	35.1	29.5	25.5
CAZ	2.2	2.0	1.9	1.7	1.5	1.5	1.5
CHA	4.5	4.0	3.9	3.6	3.5	3.3	3.7
EUR	3.3	3.1	2.8	2.3	2.0	1.8	1.7
IND	11.1	10.4	9.7	8.0	6.4	5.0	3.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	11.4	10.5	9.5	7.6	5.7	5.0	3.9
MEA	2.6	2.5	2.3	2.0	1.6	1.3	1.1
NEU	0.4	0.4	0.4	0.3	0.3	0.2	0.2
OAS	5.2	4.8	4.3	3.4	2.6	2.0	1.6
REF	1.0	1.0	1.0	0.9	0.7	0.6	0.5
SSA	13.6	13.3	12.4	11.3	9.7	8.0	6.6
USA	1.1	1.1	1.1	1.0	1.0	0.9	0.9

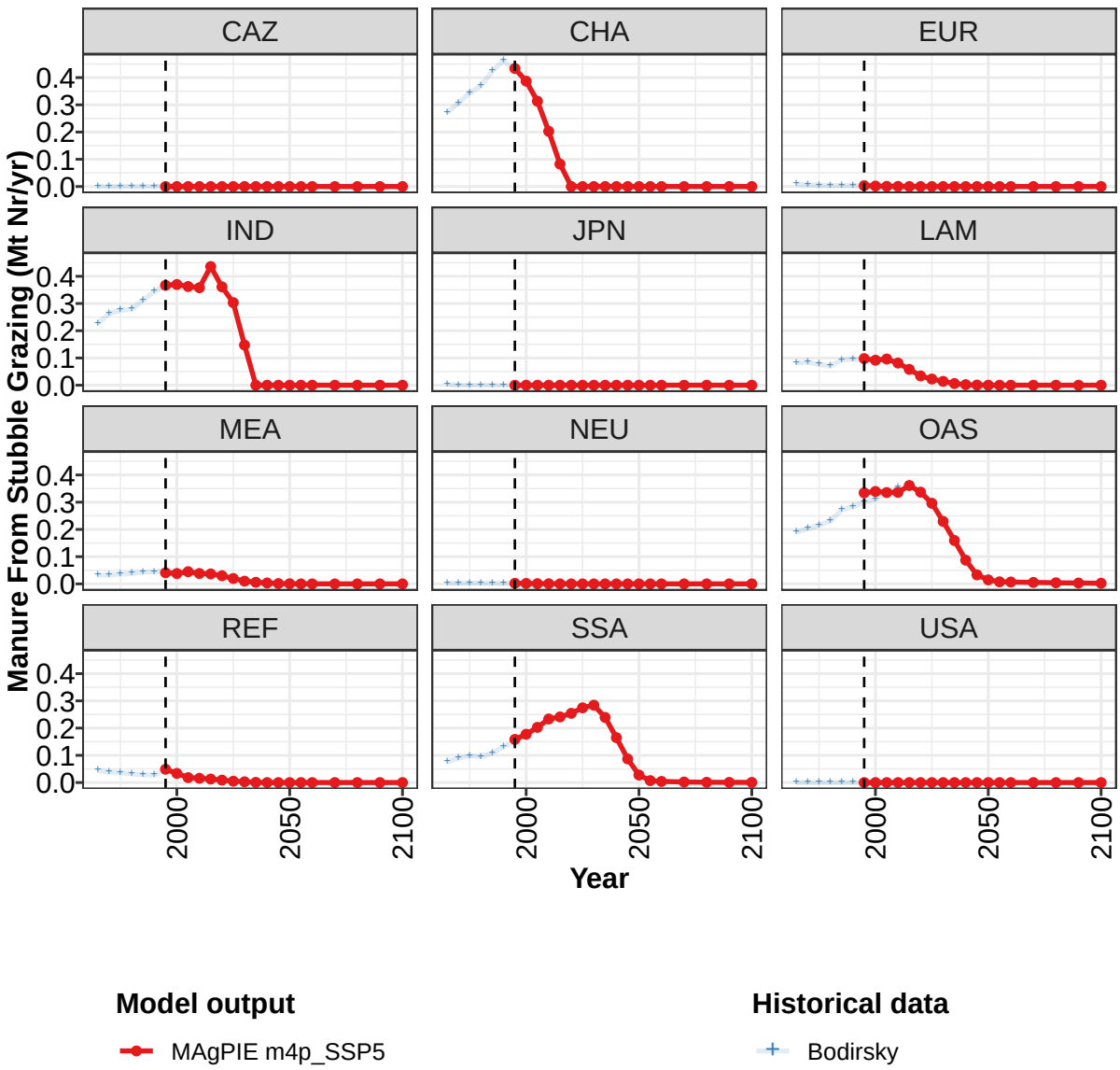
Table 1783: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure From Grazing (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	47.0	48.4	50.1	50.9	51.5	52.3	54.6	57.9	62.5	65.5
CAZ	3.4	3.5	3.5	3.5	3.3	3.2	3.2	3.2	3.3	3.3
CHA	6.4	6.5	6.8	7.2	7.5	7.9	8.6	9.8	11.2	12.2
EUR	7.0	7.1	7.0	6.7	6.3	5.7	5.2	4.6	4.2	4.0
IND	2.1	2.1	2.1	2.3	2.3	2.4	2.5	2.8	3.8	4.3
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	8.4	8.9	9.8	10.6	11.7	12.8	14.2	15.6	16.7	17.4
MEA	1.9	1.9	2.0	2.1	2.3	2.7	3.3	3.8	4.2	4.4
NEU	1.6	1.6	1.6	1.5	1.3	1.1	1.0	0.8	0.7	0.6
OAS	2.4	2.5	2.7	3.1	3.5	4.0	4.5	4.7	5.1	5.4
REF	3.4	3.5	3.5	3.4	3.2	2.7	2.3	1.9	2.0	2.1
SSA	5.2	5.4	5.8	6.3	6.7	7.1	7.6	8.3	9.0	9.6
USA	5.2	5.3	5.1	4.3	3.3	2.5	2.1	2.0	2.1	2.1

Table 1784: Bodirsky — Resources—Nitrogen—Manure—Manure From Grazing (Mt Nr/yr)

56.2.5 Manure From Stubble Grazing





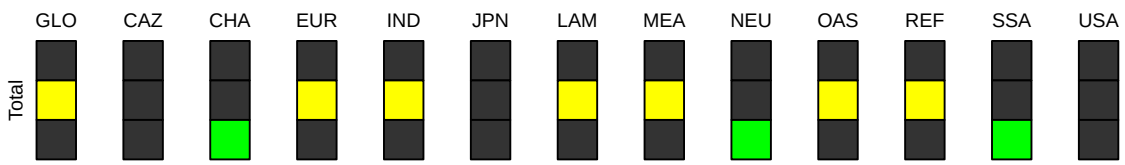


Figure 464: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure From Stubble Grazing (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.49	1.44	1.37	1.27	1.23	1.03	0.92	0.69	0.41	0.26	0.12
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.43	0.39	0.31	0.20	0.08	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.37	0.37	0.36	0.36	0.44	0.36	0.30	0.15	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.10	0.09	0.10	0.08	0.06	0.03	0.02	0.01	0.01	0.00	0.00
MEA	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.01	0.01	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.33	0.34	0.34	0.34	0.36	0.34	0.30	0.23	0.16	0.09	0.03
REF	0.05	0.03	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00
SSA	0.16	0.18	0.20	0.23	0.24	0.25	0.27	0.28	0.24	0.16	0.09
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1785: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure From Stubble Grazing (Mt Nr/yr) [PART 1/2]

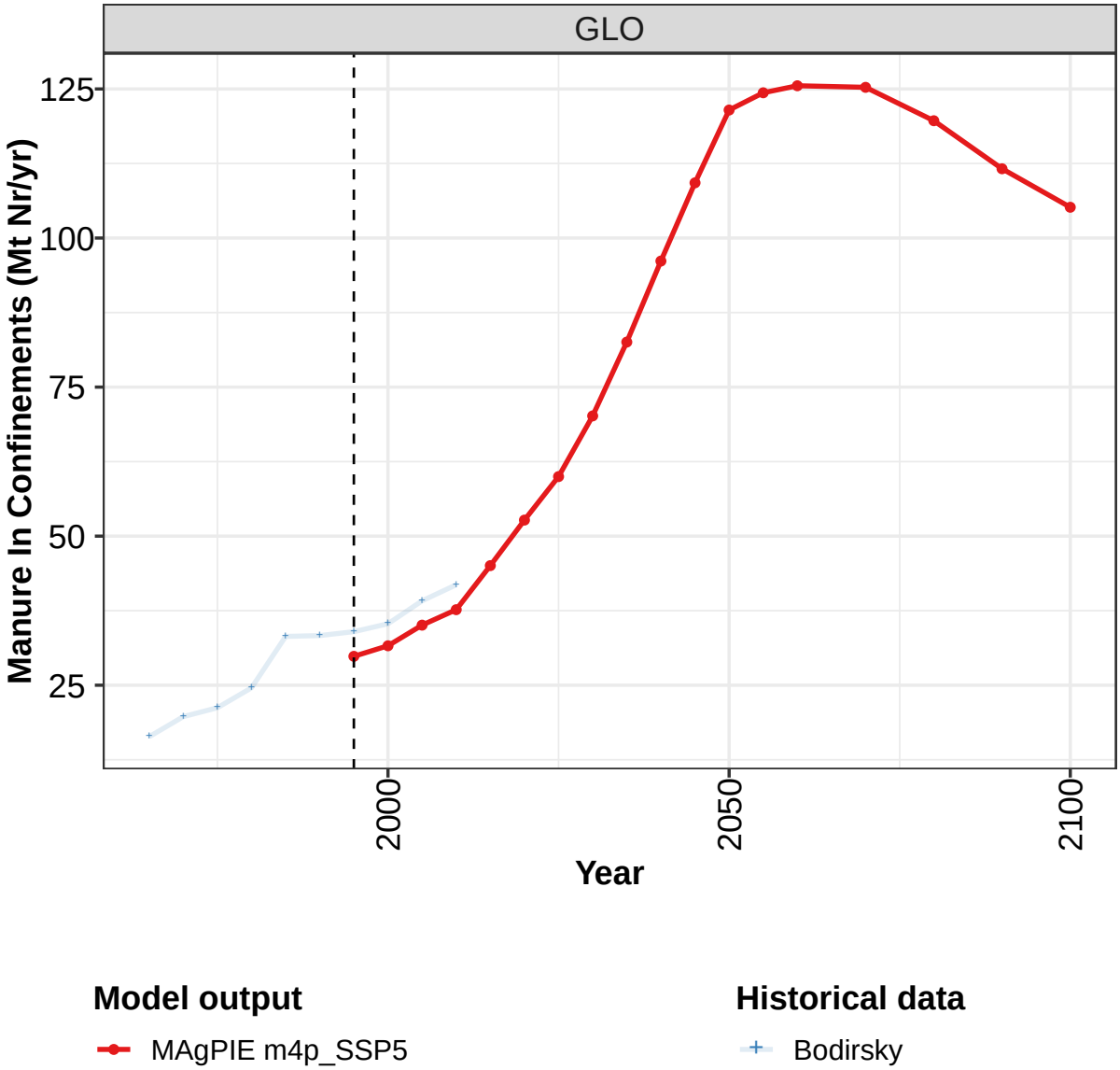
	2050	2055	2060	2070	2080	2090	2100
GLO	0.04	0.01	0.01	0.01	0.01	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.01	0.01	0.01	0.01	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.03	0.01	0.00	0.00	0.00	0.00	0.00
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

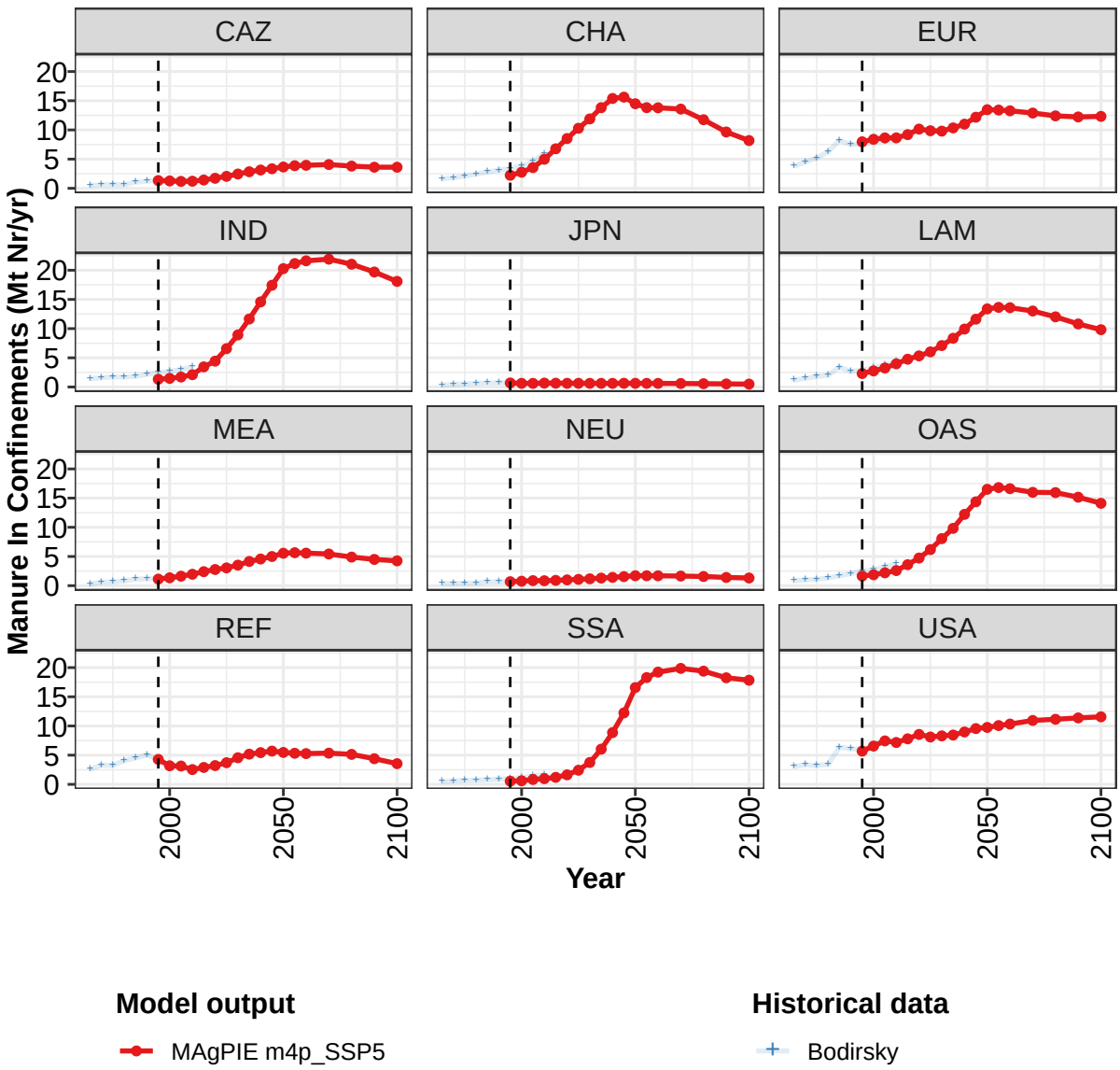
Table 1786: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure From Stubble Grazing (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.94	1.02	1.09	1.12	1.29	1.40	1.43	1.41	1.39	1.29
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.27	0.31	0.34	0.37	0.42	0.46	0.43	0.38	0.31	0.20
EUR	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.23	0.26	0.28	0.28	0.31	0.34	0.37	0.37	0.37	0.36
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.08	0.08	0.08	0.07	0.09	0.10	0.09	0.09	0.10	0.08
MEA	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.04
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.19	0.20	0.22	0.23	0.27	0.28	0.30	0.31	0.34	0.35
REF	0.04	0.04	0.04	0.03	0.03	0.03	0.05	0.03	0.02	0.02
SSA	0.08	0.09	0.10	0.10	0.11	0.13	0.15	0.17	0.20	0.24
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1787: Bodirsky — Resources—Nitrogen—Manure—Manure From Stubble Grazing (Mt Nr/yr)

56.2.6 Manure In Confinements





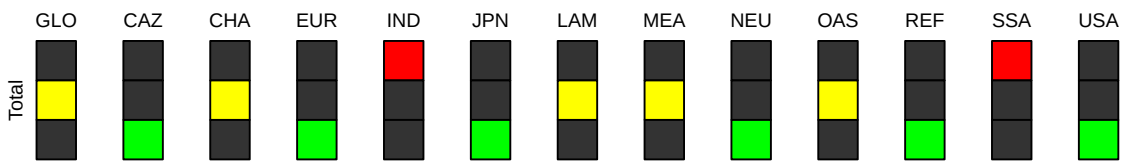


Figure 465: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure In Confinements (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	30	32	35	38	45	53	60	70	83	96	109
CAZ	1	1	1	1	1	2	2	2	3	3	3
CHA	2	3	4	5	7	9	10	12	14	15	16
EUR	8	8	9	9	9	10	10	10	10	11	12
IND	1	1	2	2	3	4	7	9	12	15	17
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	2	3	3	4	5	5	6	7	8	10	12
MEA	1	1	2	2	2	3	3	4	4	5	5
NEU	1	1	1	1	1	1	1	1	1	1	2
OAS	2	2	2	3	4	5	6	8	10	12	14
REF	4	3	3	3	3	3	4	5	5	5	6
SSA	1	1	1	1	1	2	2	4	6	9	12
USA	6	7	7	7	8	9	8	8	8	9	10

Table 1788: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure In Confinements (Mt Nr/yr) [PART 1/2]

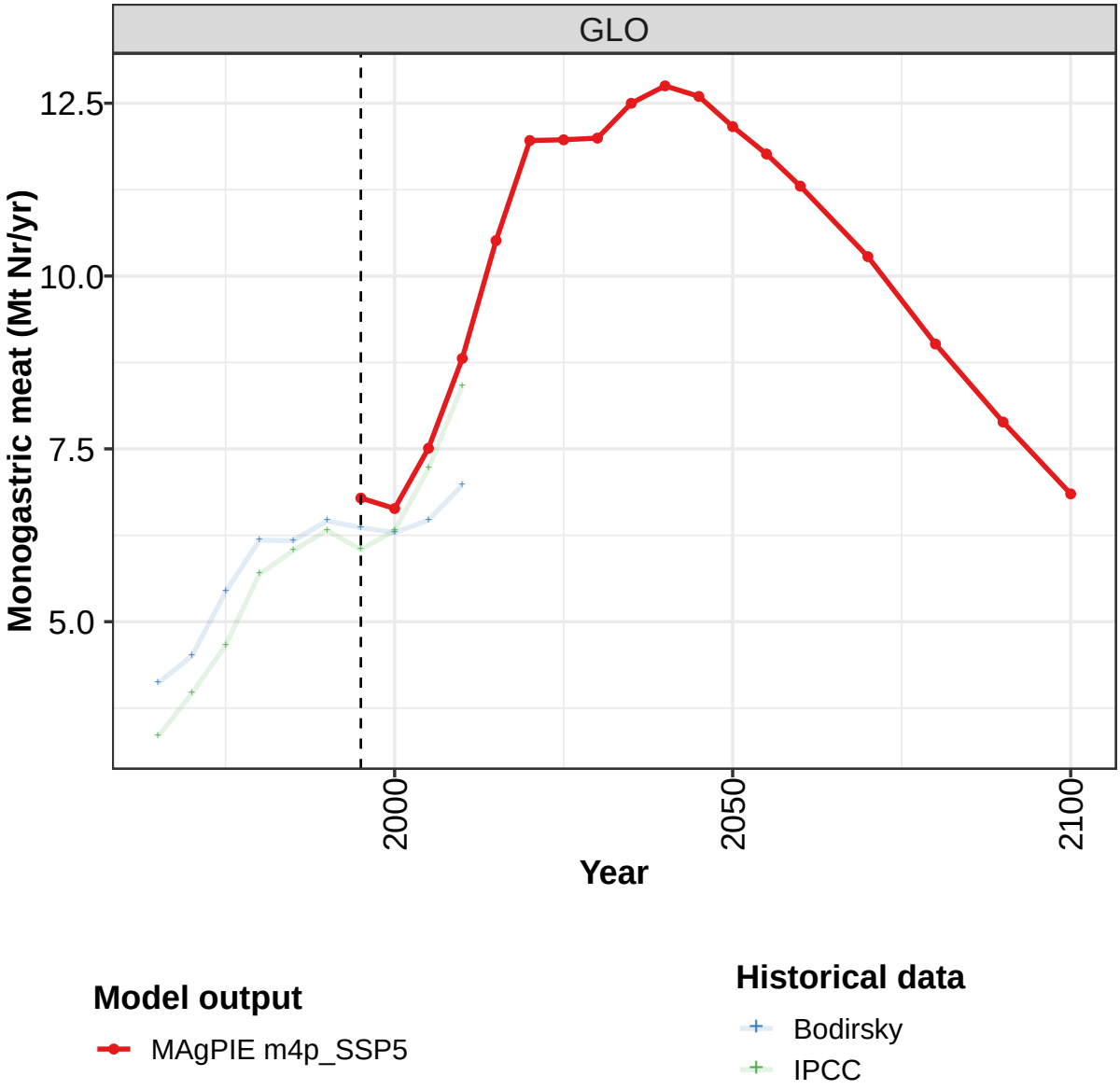
	2050	2055	2060	2070	2080	2090	2100
GLO	121	124	126	125	120	112	105
CAZ	4	4	4	4	4	4	4
CHA	14	14	14	14	12	10	8
EUR	13	13	13	13	12	12	12
IND	20	21	22	22	21	20	18
JPN	1	1	1	1	1	1	0
LAM	13	14	14	13	12	11	10
MEA	6	6	6	5	5	5	4
NEU	2	2	2	2	2	1	1
OAS	17	17	17	16	16	15	14
REF	5	5	5	5	5	4	4
SSA	17	18	19	20	19	18	18
USA	10	10	10	11	11	11	12

Table 1789: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Manure In Confinements (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	16.4	19.7	21.2	24.6	33.2	33.3	34.0	35.3	39.2	41.8
CAZ	0.5	0.6	0.6	0.6	1.0	1.2	1.4	1.4	1.4	1.4
CHA	1.6	1.8	2.1	2.4	2.8	3.1	3.4	3.9	4.6	6.0
EUR	3.8	4.5	5.2	6.3	8.2	7.5	7.6	7.8	8.1	8.1
IND	1.4	1.6	1.7	1.7	1.8	2.2	2.4	2.7	3.0	3.4
JPN	0.3	0.5	0.5	0.6	0.7	0.7	0.7	0.6	0.6	0.7
LAM	1.2	1.5	1.8	2.0	3.4	2.7	2.8	3.3	3.8	4.4
MEA	0.3	0.6	0.7	0.8	1.1	1.2	1.3	1.5	1.7	2.1
NEU	0.4	0.4	0.4	0.5	0.7	0.6	0.7	0.7	0.8	0.8
OAS	0.9	1.0	1.1	1.3	1.7	2.0	2.5	2.7	3.2	3.7
REF	2.5	3.3	3.2	4.1	4.5	5.1	4.2	2.9	2.9	2.3
SSA	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.4	1.7
USA	3.1	3.4	3.2	3.4	6.4	6.1	6.0	6.8	7.6	7.4

Table 1790: Bodirsky — Resources—Nitrogen—Manure—Manure In Confinements (Mt Nr/yr)

56.2.7 Monogastric meat



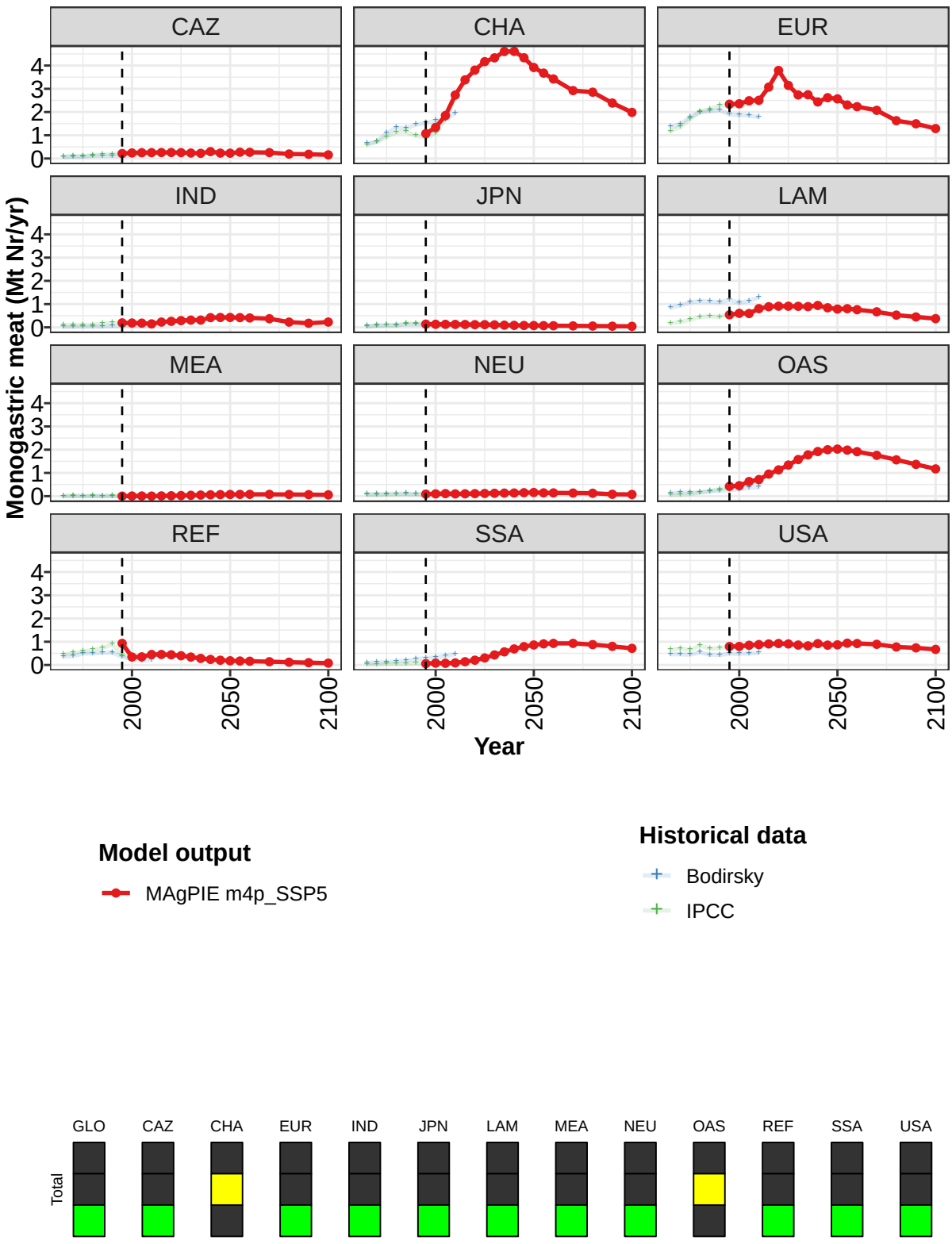


Figure 466: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.8	6.6	7.5	8.8	10.5	12.0	12.0	12.0	12.5	12.8	12.6
CAZ	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2
CHA	1.1	1.3	1.8	2.7	3.4	3.8	4.2	4.3	4.6	4.6	4.3
EUR	2.3	2.4	2.5	2.5	3.1	3.8	3.1	2.7	2.7	2.4	2.6
IND	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.5	0.6	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.4	0.5	0.6	0.7	0.9	1.1	1.3	1.6	1.8	1.9	2.0
REF	0.9	0.3	0.3	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2
SSA	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.6	0.7	0.8
USA	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9

Table 1791: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	12.2	11.8	11.3	10.3	9.0	7.9	6.8
CAZ	0.2	0.3	0.3	0.3	0.2	0.2	0.2
CHA	3.9	3.7	3.4	2.9	2.9	2.4	2.0
EUR	2.6	2.3	2.2	2.1	1.6	1.5	1.3
IND	0.4	0.4	0.4	0.4	0.2	0.2	0.2
JPN	0.1	0.1	0.1	0.1	0.1	0.0	0.0
LAM	0.8	0.8	0.8	0.7	0.5	0.4	0.4
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.2	0.1	0.1	0.1	0.1	0.1	0.1
OAS	2.0	2.0	1.9	1.8	1.6	1.4	1.2
REF	0.2	0.2	0.2	0.1	0.1	0.1	0.1
SSA	0.9	0.9	0.9	0.9	0.9	0.8	0.7
USA	0.9	0.9	0.9	0.9	0.8	0.7	0.7

Table 1792: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr) [PART 2/2]

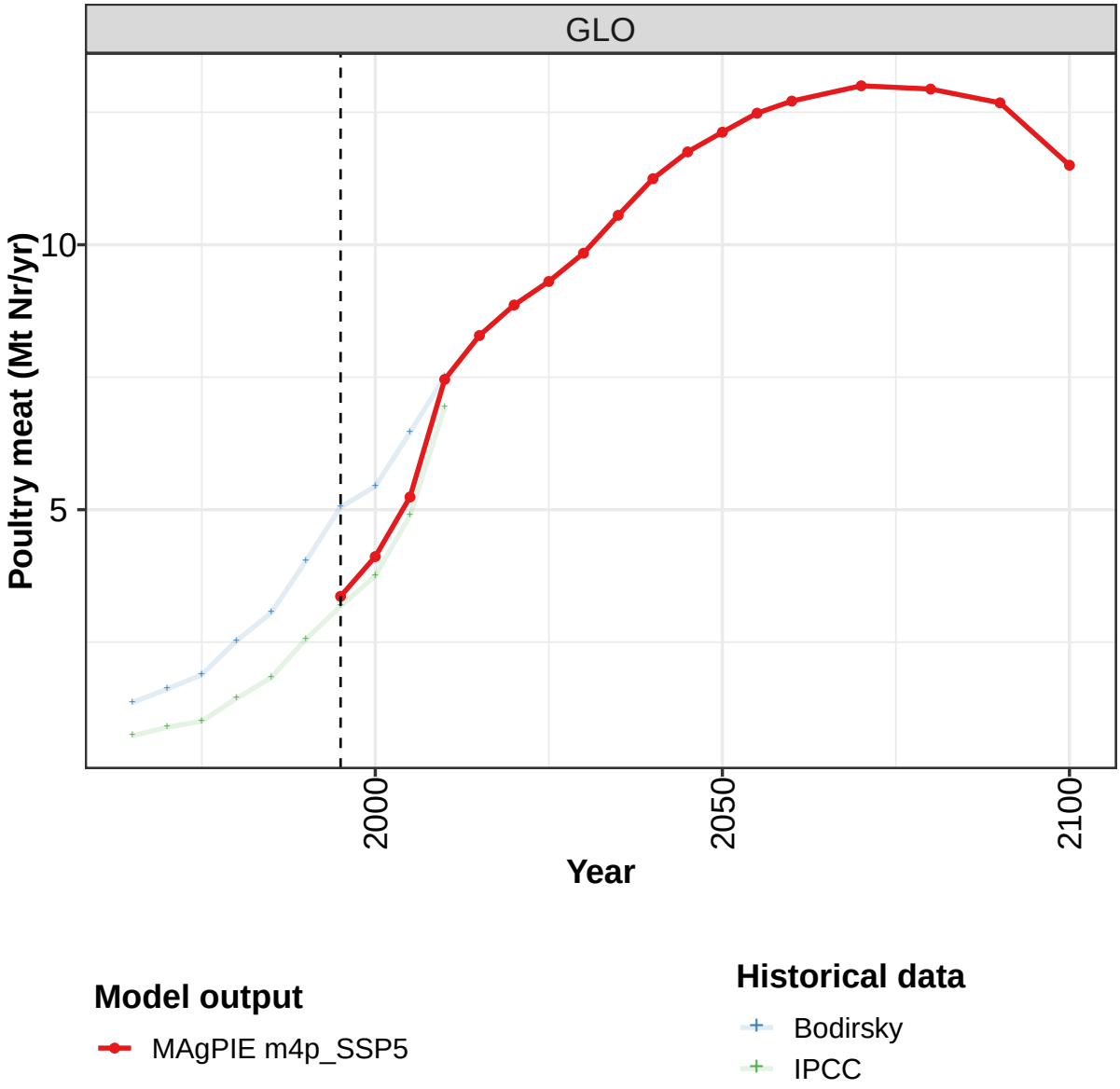
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.11	4.50	5.43	6.18	6.17	6.46	6.36	6.29	6.47	6.98
CAZ	0.07	0.09	0.08	0.11	0.12	0.12	0.12	0.14	0.15	0.13
CHA	0.64	0.72	1.08	1.34	1.29	1.45	1.52	1.63	1.67	1.96
EUR	1.36	1.48	1.78	1.99	2.04	2.09	1.90	1.86	1.86	1.78
IND	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	0.05	0.04
JPN	0.04	0.07	0.08	0.11	0.12	0.13	0.11	0.11	0.10	0.11
LAM	0.85	0.94	1.07	1.13	1.10	1.08	1.17	1.06	1.14	1.28
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.09	0.08	0.10	0.10	0.11	0.09	0.09	0.08	0.08	0.08
OAS	0.13	0.15	0.15	0.17	0.20	0.23	0.26	0.29	0.36	0.38
REF	0.36	0.38	0.49	0.50	0.53	0.53	0.35	0.26	0.19	0.22
SSA	0.09	0.11	0.12	0.15	0.18	0.25	0.29	0.33	0.37	0.47
USA	0.45	0.46	0.44	0.54	0.44	0.43	0.48	0.48	0.49	0.52

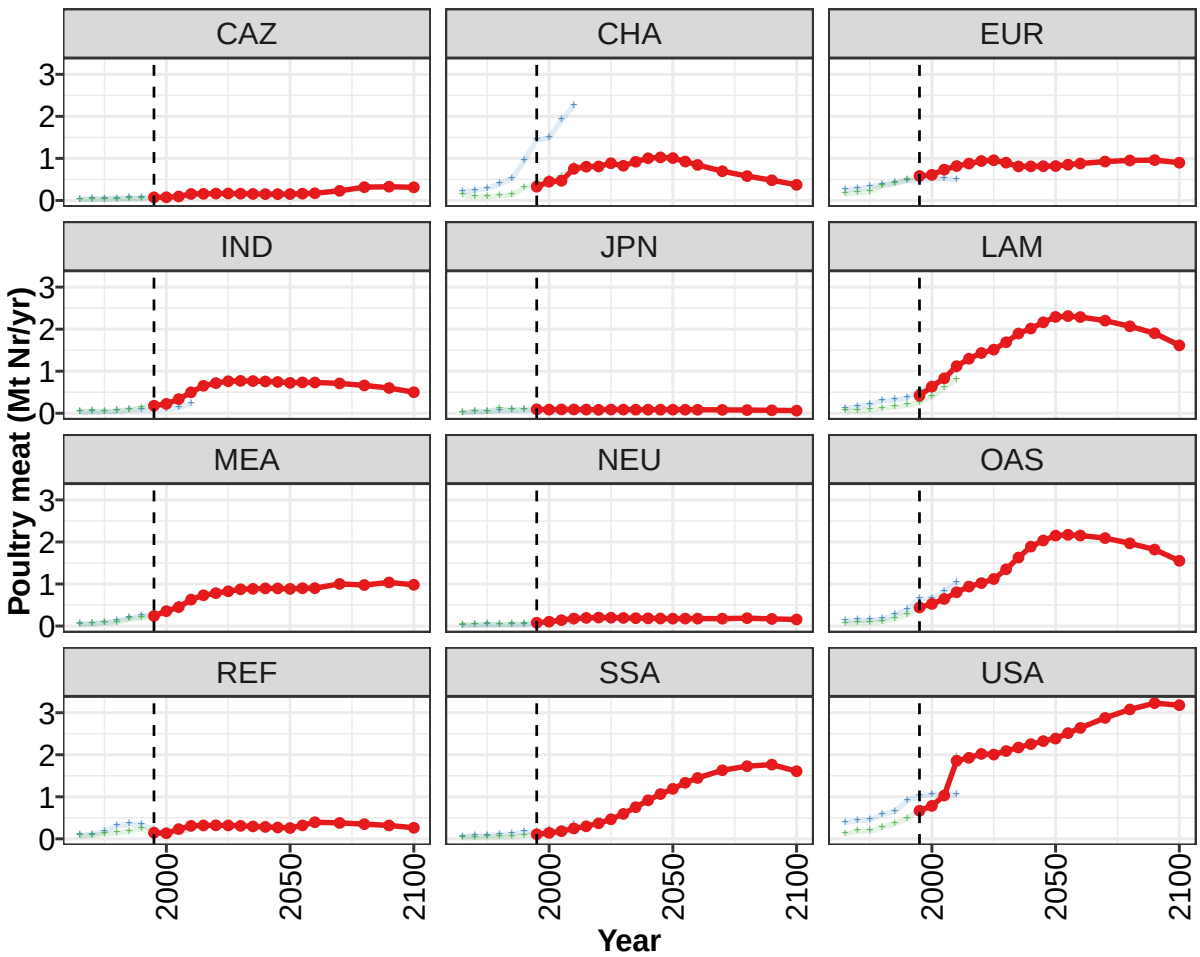
Table 1793: IPCC — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.34	3.96	4.66	5.69	6.03	6.32	6.04	6.32	7.21	8.41
CAZ	0.07	0.10	0.10	0.15	0.17	0.19	0.24	0.28	0.30	0.26
CHA	0.58	0.72	0.91	1.14	1.15	0.98	0.87	1.10	1.68	2.59
EUR	1.16	1.36	1.70	2.02	2.12	2.29	2.25	2.26	2.35	2.35
IND	0.09	0.10	0.11	0.10	0.16	0.19	0.20	0.20	0.19	0.15
JPN	0.04	0.08	0.09	0.07	0.16	0.16	0.14	0.13	0.13	0.13
LAM	0.17	0.23	0.33	0.44	0.47	0.45	0.58	0.65	0.63	0.78
MEA	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00
NEU	0.06	0.06	0.07	0.07	0.08	0.07	0.06	0.07	0.08	0.09
OAS	0.05	0.07	0.09	0.15	0.22	0.31	0.42	0.41	0.59	0.66
REF	0.45	0.52	0.58	0.65	0.73	0.89	0.42	0.32	0.30	0.38
SSA	0.02	0.03	0.04	0.05	0.06	0.08	0.06	0.09	0.07	0.09
USA	0.65	0.70	0.65	0.83	0.71	0.72	0.80	0.81	0.88	0.94

Table 1794: Bodirsky — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr)

56.2.8 Poultry meat





Model output

MAgPIE m4p_SSP5

Historical data

Bodirsky

IPCC

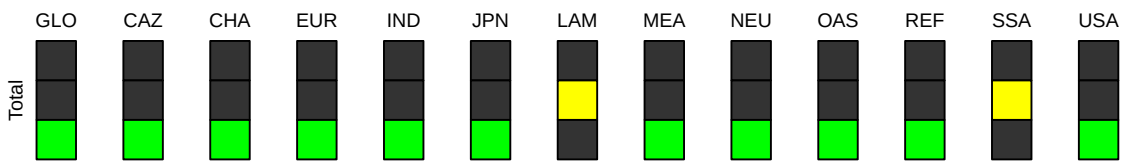


Figure 467: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.4	4.1	5.2	7.5	8.3	8.9	9.3	9.8	10.6	11.2	11.8
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	0.3	0.4	0.5	0.8	0.8	0.8	0.9	0.8	0.9	1.0	1.0
EUR	0.6	0.6	0.7	0.8	0.9	0.9	1.0	0.9	0.8	0.8	0.8
IND	0.2	0.2	0.3	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.4	0.6	0.8	1.1	1.3	1.4	1.5	1.7	1.9	2.0	2.2
MEA	0.2	0.4	0.5	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9
NEU	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.4	0.5	0.6	0.8	0.9	1.0	1.1	1.4	1.6	1.9	2.0
REF	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SSA	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.1
USA	0.7	0.8	1.0	1.9	1.9	2.0	2.0	2.1	2.2	2.3	2.3

Table 1795: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	12.1	12.5	12.7	13.0	12.9	12.7	11.5
CAZ	0.2	0.2	0.2	0.2	0.3	0.3	0.3
CHA	1.0	0.9	0.8	0.7	0.6	0.5	0.4
EUR	0.8	0.9	0.9	0.9	1.0	1.0	0.9
IND	0.7	0.7	0.7	0.7	0.7	0.6	0.5
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.3	2.3	2.3	2.2	2.1	1.9	1.6
MEA	0.9	0.9	0.9	1.0	1.0	1.0	1.0
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	2.2	2.2	2.2	2.1	2.0	1.8	1.6
REF	0.3	0.3	0.4	0.4	0.3	0.3	0.3
SSA	1.2	1.3	1.4	1.6	1.7	1.8	1.6
USA	2.4	2.5	2.6	2.9	3.1	3.2	3.2

Table 1796: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr) [PART 2/2]

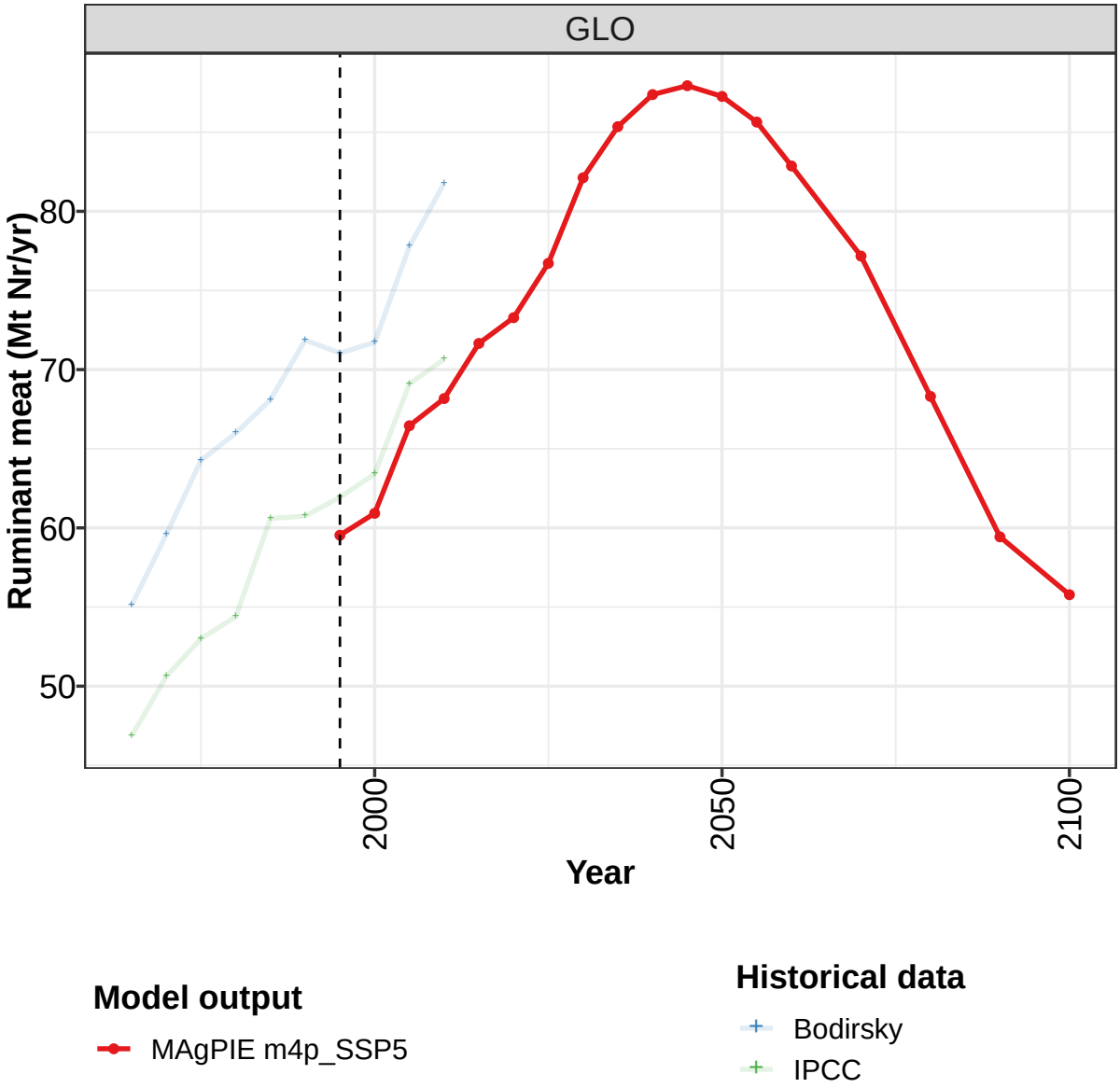
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.36	1.61	1.89	2.52	3.06	4.03	5.05	5.44	6.46	7.51
CAZ	0.03	0.04	0.04	0.05	0.05	0.06	0.08	0.09	0.09	0.09
CHA	0.20	0.24	0.29	0.39	0.52	0.94	1.44	1.49	1.91	2.25
EUR	0.25	0.28	0.32	0.37	0.42	0.47	0.47	0.51	0.52	0.50
IND	0.03	0.04	0.03	0.05	0.08	0.07	0.09	0.10	0.14	0.22
JPN	0.02	0.04	0.05	0.06	0.07	0.07	0.06	0.06	0.05	0.05
LAM	0.12	0.16	0.21	0.30	0.32	0.36	0.53	0.67	0.84	1.02
MEA	0.04	0.06	0.08	0.12	0.19	0.24	0.26	0.35	0.51	0.67
NEU	0.02	0.02	0.02	0.03	0.03	0.03	0.07	0.09	0.11	0.09
OAS	0.12	0.14	0.14	0.17	0.27	0.39	0.64	0.65	0.82	1.02
REF	0.09	0.10	0.17	0.31	0.35	0.34	0.21	0.16	0.17	0.24
SSA	0.05	0.07	0.08	0.10	0.11	0.16	0.17	0.21	0.23	0.33
USA	0.39	0.44	0.45	0.58	0.65	0.91	1.02	1.06	1.06	1.04

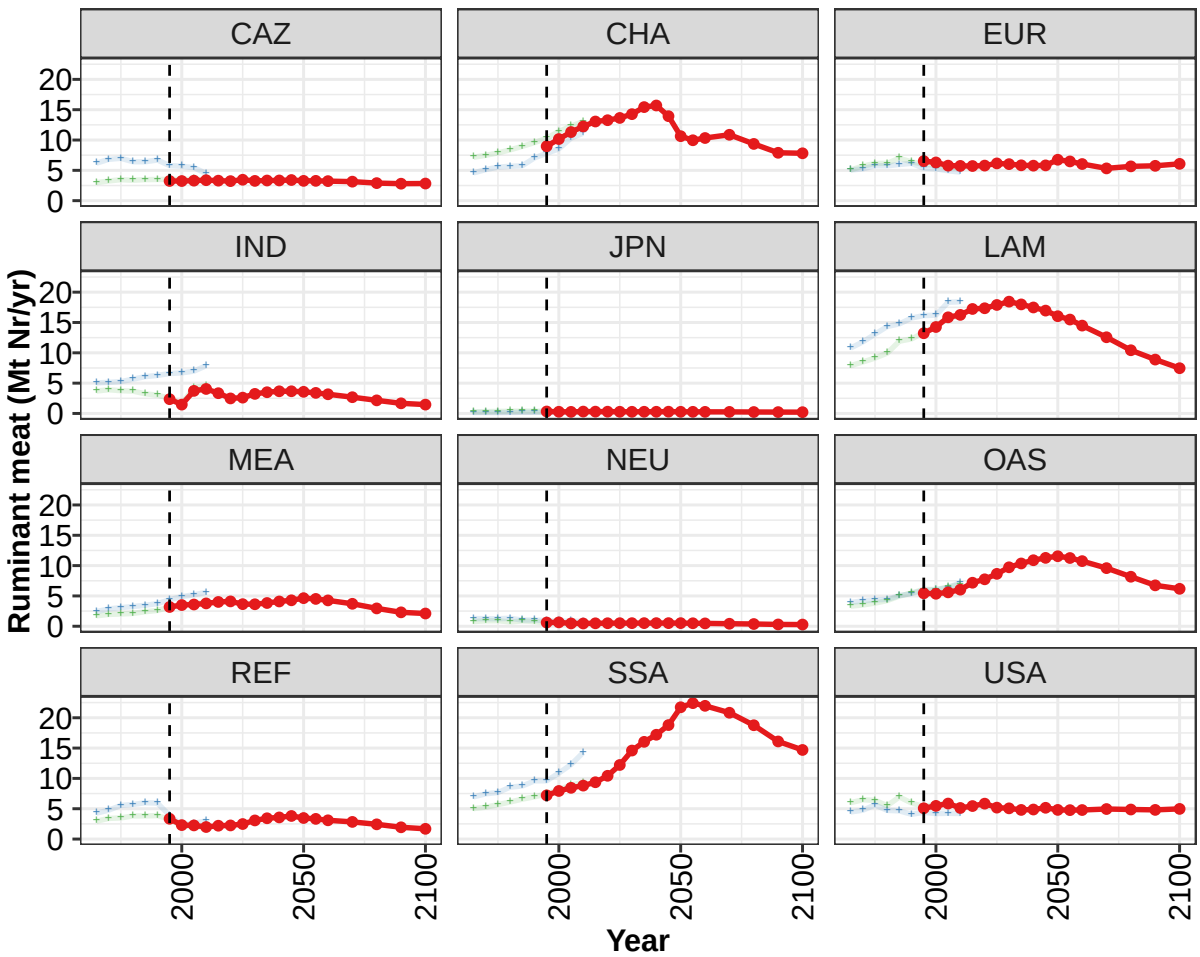
Table 1797: IPCC — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr)

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.73	0.89	1.01	1.44	1.83	2.56	3.18	3.75	4.89	6.94
CAZ	0.02	0.02	0.02	0.03	0.04	0.04	0.06	0.05	0.07	0.12
CHA	0.12	0.08	0.09	0.11	0.14	0.30	0.43	0.51	0.57	0.81
EUR	0.15	0.19	0.21	0.35	0.40	0.50	0.55	0.55	0.66	0.73
IND	0.04	0.05	0.05	0.05	0.08	0.13	0.18	0.22	0.34	0.50
JPN	0.02	0.04	0.04	0.10	0.08	0.09	0.09	0.09	0.09	0.09
LAM	0.05	0.06	0.08	0.12	0.15	0.19	0.26	0.40	0.60	0.80
MEA	0.04	0.05	0.07	0.09	0.16	0.19	0.23	0.33	0.42	0.59
NEU	0.02	0.03	0.04	0.04	0.04	0.05	0.08	0.10	0.14	0.18
OAS	0.06	0.07	0.08	0.10	0.17	0.27	0.40	0.46	0.59	0.73
REF	0.06	0.08	0.11	0.13	0.18	0.24	0.11	0.10	0.18	0.23
SSA	0.03	0.04	0.04	0.05	0.05	0.08	0.10	0.12	0.17	0.21
USA	0.12	0.18	0.18	0.27	0.36	0.48	0.69	0.82	1.08	1.95

Table 1798: Bodirsky — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr)

56.2.9 Ruminant meat





Model output

MAgPIE m4p_SSP5

Historical data

Bodirsky

IPCC

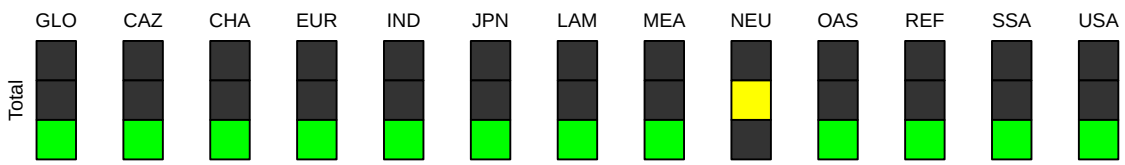


Figure 468: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	59.5	60.9	66.5	68.2	71.7	73.3	76.7	82.1	85.4	87.4	87.9
CAZ	3.3	3.2	3.3	3.4	3.3	3.2	3.5	3.3	3.3	3.3	3.4
CHA	9.0	10.2	11.3	12.2	13.1	13.3	13.6	14.3	15.4	15.7	13.9
EUR	6.5	6.3	5.8	5.7	5.7	5.8	6.1	6.0	5.8	5.8	5.8
IND	2.4	1.5	3.7	4.0	3.3	2.5	2.6	3.2	3.5	3.7	3.7
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	13.2	14.3	15.9	16.3	17.2	17.3	17.9	18.4	18.0	17.5	17.0
MEA	3.2	3.5	3.6	3.8	4.0	4.1	3.7	3.6	3.8	4.1	4.3
NEU	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
OAS	5.4	5.4	5.6	6.0	7.2	7.7	8.6	9.7	10.4	10.9	11.3
REF	3.3	2.3	2.3	2.0	2.2	2.2	2.5	3.1	3.4	3.6	3.8
SSA	7.2	7.9	8.4	8.8	9.4	10.4	12.2	14.6	16.0	17.2	18.8
USA	5.1	5.5	5.9	5.1	5.4	5.8	5.2	5.1	4.8	4.9	5.2

Table 1799: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	87.3	85.6	82.9	77.2	68.3	59.4	55.8
CAZ	3.3	3.3	3.2	3.1	2.9	2.8	2.8
CHA	10.6	10.0	10.3	10.9	9.4	7.9	7.8
EUR	6.7	6.5	6.0	5.3	5.7	5.8	6.1
IND	3.6	3.4	3.2	2.7	2.2	1.7	1.5
JPN	0.3	0.3	0.3	0.3	0.2	0.2	0.2
LAM	16.0	15.5	14.5	12.6	10.4	8.9	7.5
MEA	4.6	4.5	4.3	3.7	2.9	2.3	2.1
NEU	0.5	0.5	0.5	0.4	0.4	0.3	0.3
OAS	11.6	11.3	10.7	9.6	8.2	6.7	6.2
REF	3.5	3.3	3.1	2.8	2.4	1.9	1.7
SSA	21.7	22.4	22.0	20.8	18.8	16.1	14.7
USA	4.8	4.8	4.8	5.0	4.9	4.8	5.0

Table 1800: MAgPIE m4p_SSP5 — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	55.1	59.6	64.3	66.0	68.1	71.9	71.0	71.7	77.8	81.8
CAZ	6.2	6.8	7.0	6.4	6.4	6.7	5.8	5.7	5.4	4.5
CHA	4.6	5.1	5.5	5.7	5.8	7.1	7.8	8.5	10.3	11.1
EUR	5.1	5.2	5.8	5.7	6.0	6.2	5.4	5.3	4.9	4.7
IND	5.0	5.1	5.3	5.7	6.1	6.3	6.6	6.7	7.0	7.9
JPN	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	10.8	11.8	13.1	14.3	14.8	15.7	16.1	16.2	18.3	18.4
MEA	2.4	2.9	3.1	3.3	3.5	3.7	4.4	4.9	5.2	5.6
NEU	1.3	1.3	1.2	1.3	1.0	1.0	0.9	0.8	0.9	0.8
OAS	3.9	4.2	4.3	4.4	5.1	5.4	6.0	6.0	6.4	7.2
REF	4.3	4.8	5.5	5.7	6.0	5.9	3.9	2.3	2.6	3.0
SSA	7.0	7.5	7.7	8.6	8.8	9.6	9.6	10.9	12.3	14.3
USA	4.5	4.8	5.6	4.7	4.6	4.1	4.4	4.2	4.2	4.2

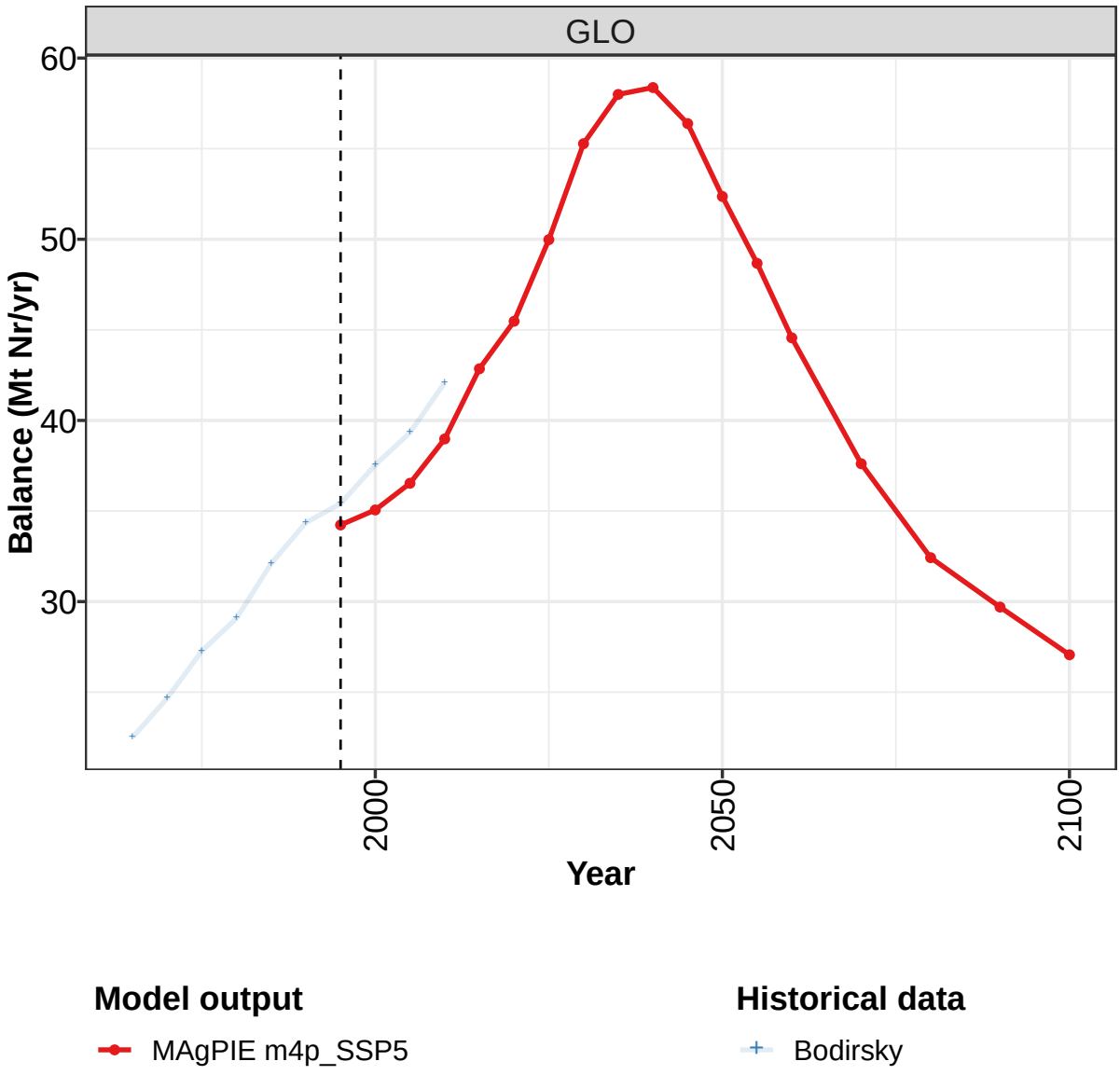
Table 1801: IPCC — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr)

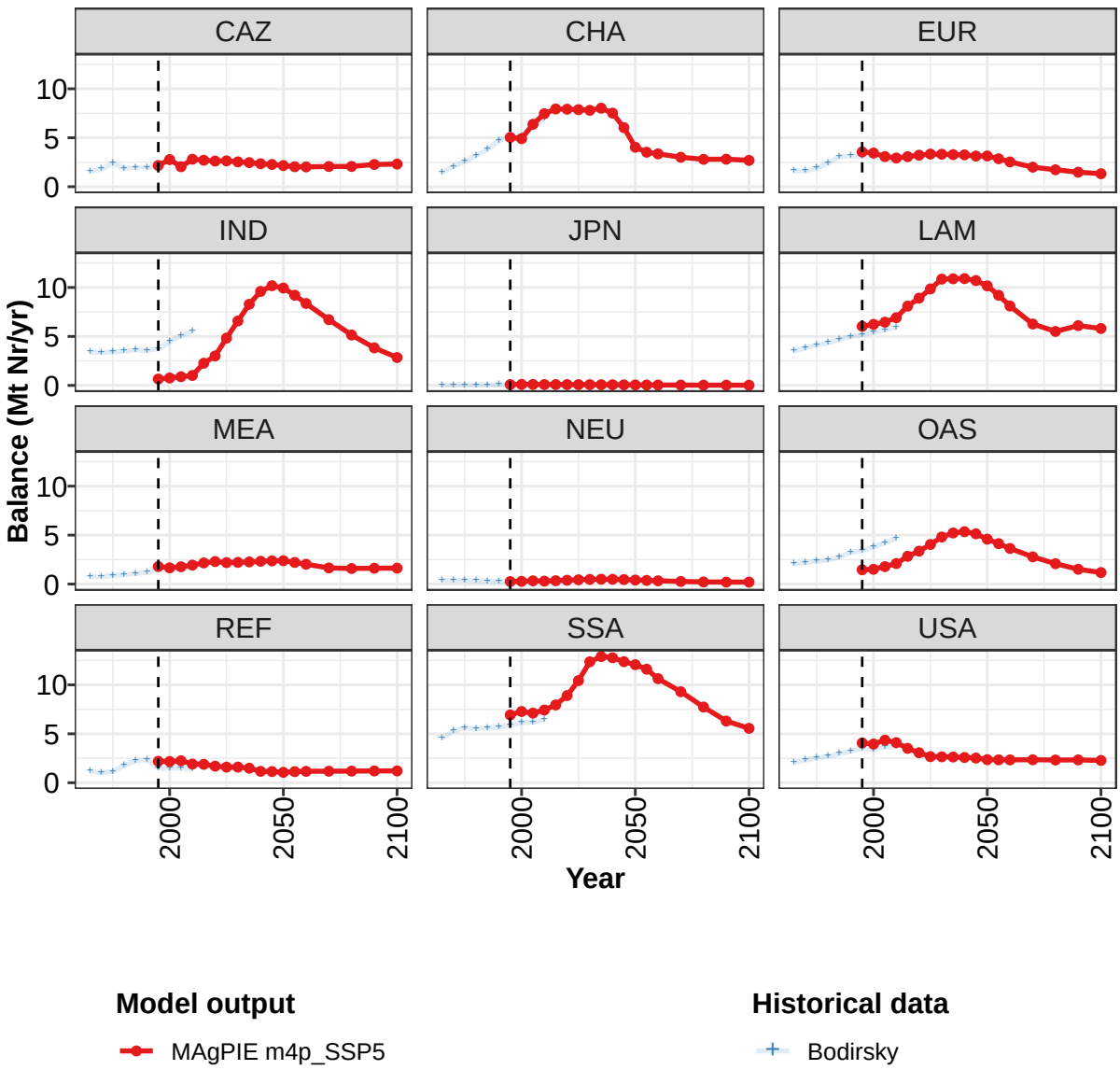
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	46.8	50.6	53.0	54.4	60.6	60.8	61.9	63.4	69.1	70.7
CAZ	3.0	3.2	3.5	3.4	3.5	3.5	3.5	3.5	3.5	3.4
CHA	7.2	7.5	7.9	8.4	9.0	9.6	10.3	11.4	12.3	13.0
EUR	5.1	5.7	6.1	6.2	7.0	6.4	6.0	5.8	5.4	5.5
IND	3.7	3.9	3.8	3.7	3.2	3.0	2.5	1.7	4.3	4.6
JPN	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3
LAM	7.9	8.5	9.1	9.9	11.9	12.3	13.3	14.5	15.7	16.1
MEA	1.7	2.0	2.0	2.1	2.4	2.6	3.2	3.6	3.7	3.9
NEU	0.8	0.9	0.9	0.7	0.9	0.8	0.6	0.6	0.5	0.4
OAS	3.3	3.5	3.8	4.2	5.0	5.5	6.1	6.1	6.5	6.9
REF	2.9	3.4	3.5	3.8	3.8	3.9	3.2	2.2	2.0	2.0
SSA	5.0	5.3	5.7	6.1	6.6	7.0	7.4	8.2	8.9	9.3
USA	6.0	6.5	6.4	5.5	6.9	5.9	5.4	5.7	5.9	5.1

Table 1802: Bodirsky — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr)

56.3 Pasture Budget

56.3.1 Balance





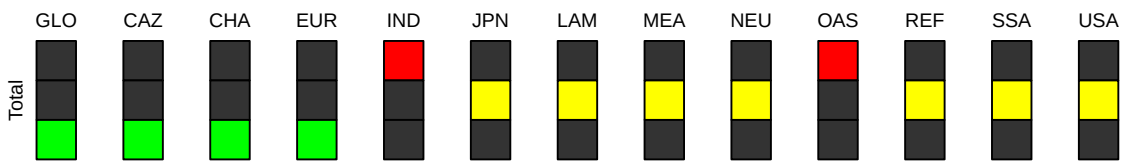


Figure 469: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Balance (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.2	35.1	36.5	39.0	42.9	45.5	50.0	55.3	58.0	58.4	56.4
CAZ	2.2	2.8	2.0	2.8	2.7	2.6	2.6	2.5	2.5	2.3	2.3
CHA	5.0	4.9	6.4	7.5	7.9	7.9	7.9	7.8	8.0	7.5	6.0
EUR	3.6	3.4	3.1	2.9	3.1	3.2	3.3	3.3	3.3	3.3	3.1
IND	0.6	0.8	0.9	1.0	2.3	3.0	4.8	6.6	8.3	9.6	10.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	6.0	6.2	6.5	6.9	8.1	8.9	9.9	10.9	10.9	10.9	10.7
MEA	1.8	1.7	1.8	1.9	2.2	2.3	2.2	2.2	2.3	2.3	2.4
NEU	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5
OAS	1.5	1.5	1.8	2.1	2.8	3.4	4.0	4.8	5.2	5.4	5.1
REF	2.2	2.2	2.2	1.9	1.9	1.7	1.6	1.6	1.5	1.2	1.1
SSA	6.9	7.3	7.1	7.4	7.9	8.9	10.4	12.4	12.9	12.8	12.4
USA	4.1	4.0	4.4	4.1	3.5	3.1	2.7	2.7	2.6	2.6	2.5

Table 1803: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Balance (Mt Nr/yr) [PART 1/2]

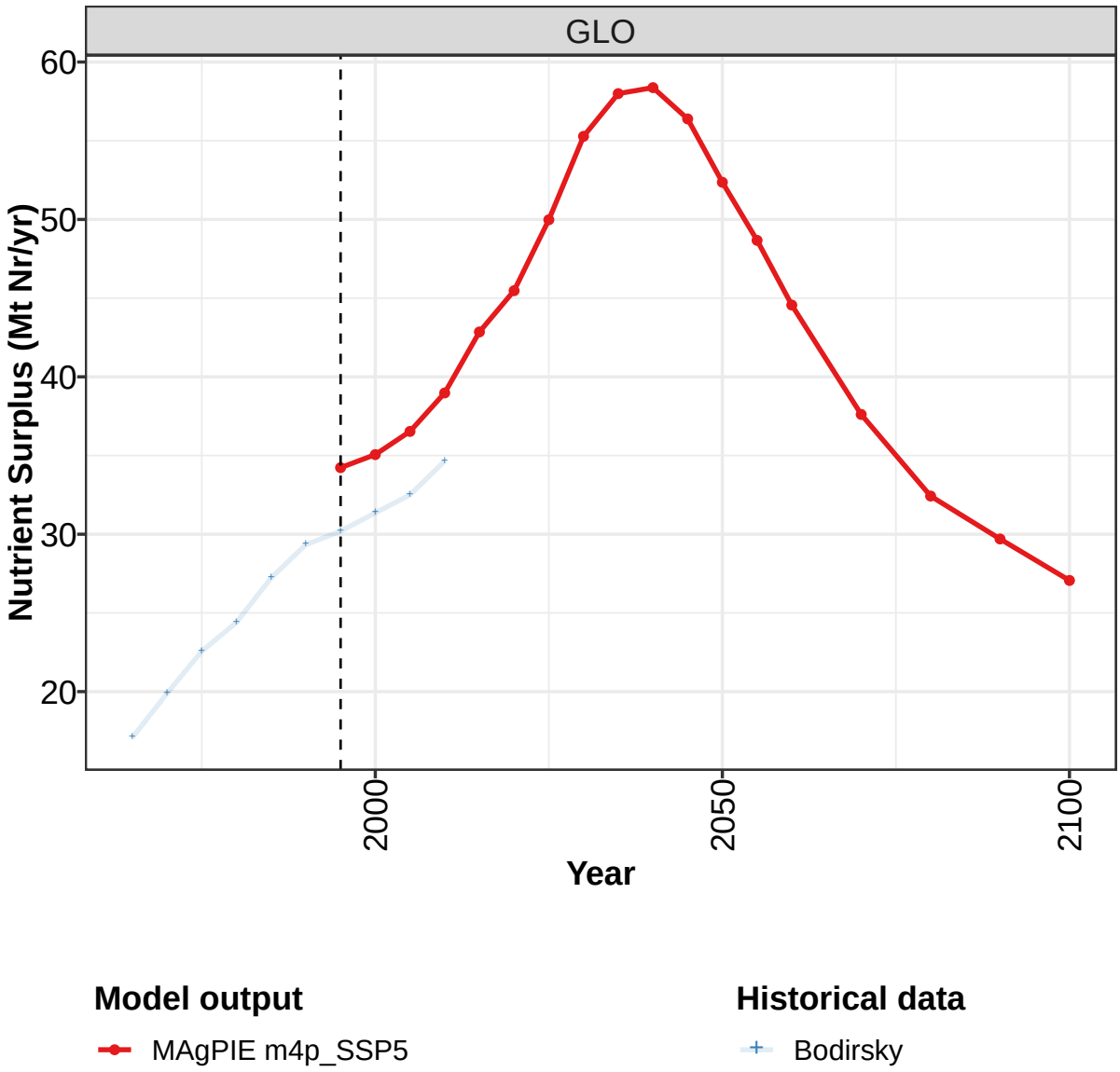
	2050	2055	2060	2070	2080	2090	2100
GLO	52.4	48.7	44.6	37.6	32.4	29.7	27.1
CAZ	2.2	2.0	2.0	2.1	2.1	2.3	2.3
CHA	4.0	3.5	3.4	3.0	2.8	2.8	2.7
EUR	3.1	2.9	2.5	2.0	1.7	1.5	1.3
IND	9.9	9.2	8.4	6.7	5.1	3.8	2.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	10.2	9.2	8.1	6.3	5.5	6.1	5.8
MEA	2.4	2.2	2.0	1.6	1.6	1.6	1.6
NEU	0.4	0.4	0.3	0.3	0.2	0.2	0.2
OAS	4.6	4.1	3.6	2.8	2.1	1.5	1.2
REF	1.1	1.1	1.2	1.2	1.2	1.2	1.2
SSA	12.1	11.6	10.6	9.3	7.7	6.3	5.6
USA	2.4	2.3	2.3	2.4	2.3	2.3	2.3

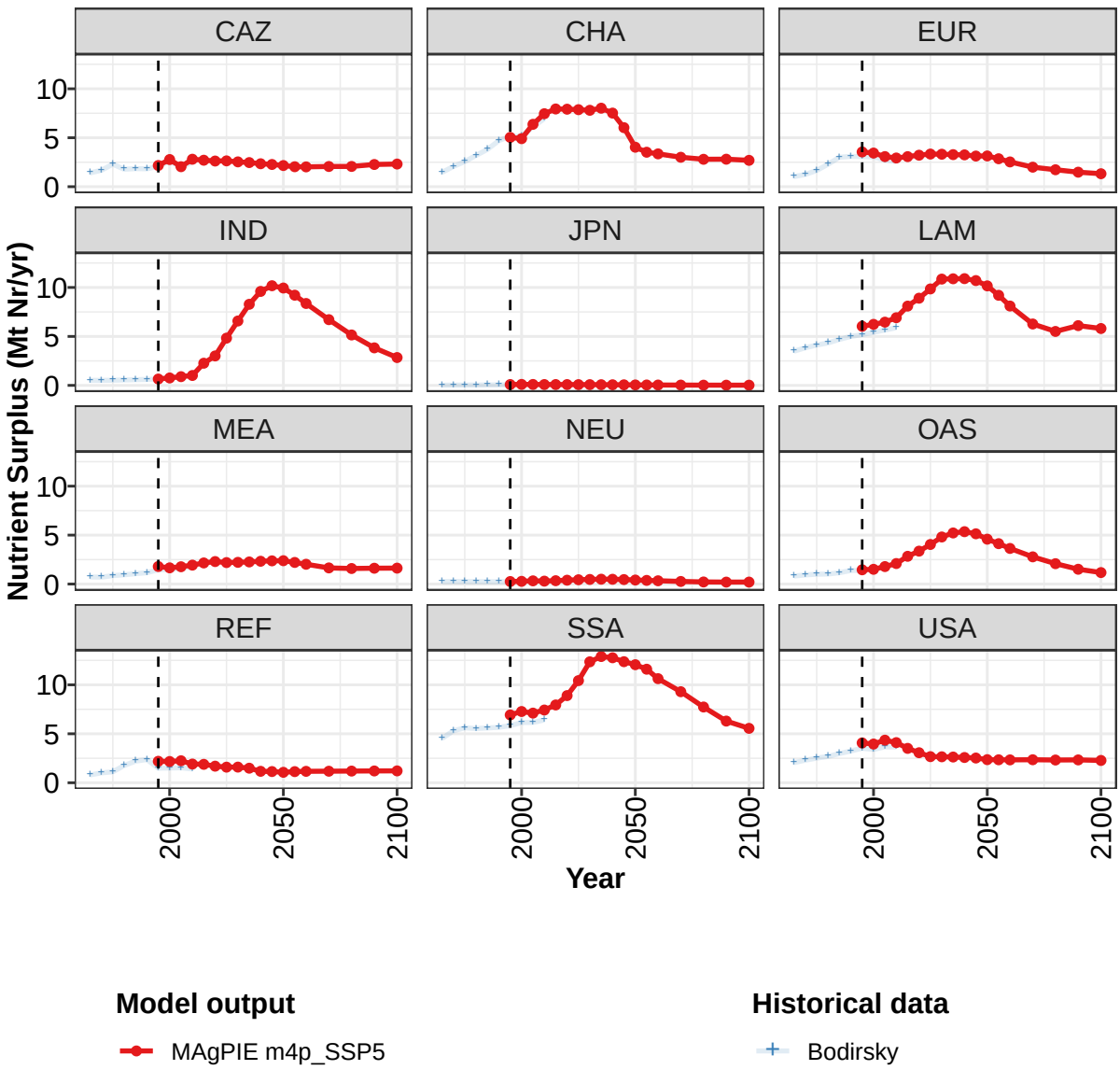
Table 1804: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Balance (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	22.5	24.7	27.3	29.1	32.1	34.4	35.4	37.5	39.3	42.1
CAZ	1.5	1.8	2.4	1.9	2.0	1.9	2.2	2.7	2.1	2.7
CHA	1.5	2.1	2.6	3.2	3.8	4.7	5.2	5.1	6.1	7.0
EUR	1.6	1.6	1.9	2.4	3.1	3.1	3.1	3.1	2.8	2.6
IND	3.4	3.3	3.4	3.5	3.6	3.6	3.7	4.5	5.1	5.5
JPN	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
LAM	3.5	3.8	4.1	4.3	4.7	5.0	5.2	5.4	5.7	5.9
MEA	0.8	0.7	0.9	1.0	1.1	1.2	1.5	1.5	1.7	1.8
NEU	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OAS	2.1	2.2	2.3	2.5	2.8	3.3	3.4	3.8	4.2	4.7
REF	1.2	1.0	1.1	1.8	2.2	2.4	1.5	1.5	1.5	1.4
SSA	4.5	5.3	5.6	5.5	5.6	5.7	5.8	6.2	6.2	6.4
USA	2.1	2.3	2.5	2.7	3.0	3.2	3.5	3.4	3.7	3.7

Table 1805: Bodirsky — Resources—Nitrogen—Pasture Budget—Balance (Mt Nr/yr)

56.3.2 Balance—Nutrient Surplus





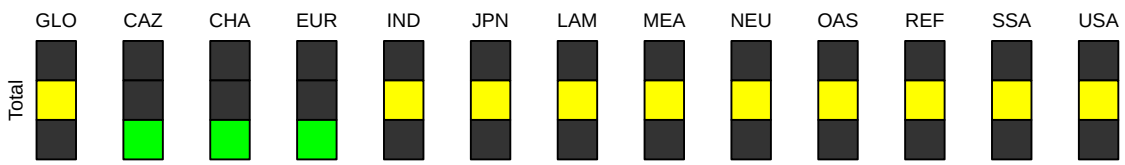


Figure 470: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Balance—Nutrient Surplus (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.2	35.1	36.5	39.0	42.9	45.5	50.0	55.3	58.0	58.4	56.4
CAZ	2.2	2.8	2.0	2.8	2.7	2.6	2.6	2.5	2.5	2.3	2.3
CHA	5.0	4.9	6.4	7.5	7.9	7.9	7.9	7.8	8.0	7.5	6.0
EUR	3.6	3.4	3.1	2.9	3.1	3.2	3.3	3.3	3.3	3.3	3.1
IND	0.6	0.8	0.9	1.0	2.3	3.0	4.8	6.6	8.3	9.6	10.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	6.0	6.2	6.5	6.9	8.1	8.9	9.9	10.9	10.9	10.9	10.7
MEA	1.8	1.7	1.8	1.9	2.2	2.3	2.2	2.2	2.3	2.3	2.4
NEU	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5
OAS	1.5	1.5	1.8	2.1	2.8	3.4	4.0	4.8	5.2	5.4	5.1
REF	2.2	2.2	2.2	1.9	1.9	1.7	1.6	1.6	1.5	1.2	1.1
SSA	6.9	7.3	7.1	7.4	7.9	8.9	10.4	12.4	12.9	12.8	12.4
USA	4.1	4.0	4.4	4.1	3.5	3.1	2.7	2.7	2.6	2.6	2.5

Table 1806: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Balance—Nutrient Surplus (Mt Nr/yr) [PART 1/2]

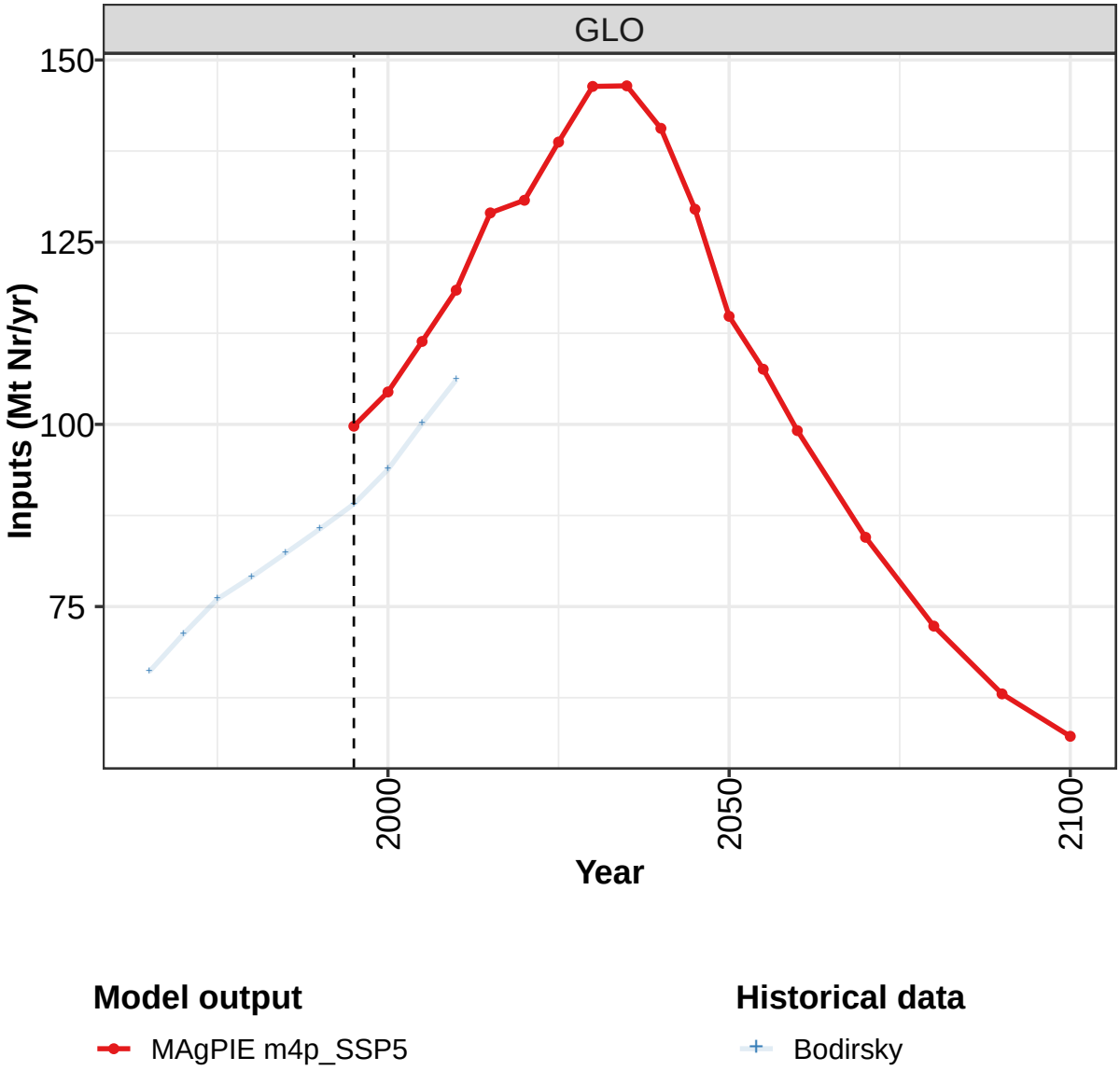
	2050	2055	2060	2070	2080	2090	2100
GLO	52.4	48.7	44.6	37.6	32.4	29.7	27.1
CAZ	2.2	2.0	2.0	2.1	2.1	2.3	2.3
CHA	4.0	3.5	3.4	3.0	2.8	2.8	2.7
EUR	3.1	2.9	2.5	2.0	1.7	1.5	1.3
IND	9.9	9.2	8.4	6.7	5.1	3.8	2.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	10.2	9.2	8.1	6.3	5.5	6.1	5.8
MEA	2.4	2.2	2.0	1.6	1.6	1.6	1.6
NEU	0.4	0.4	0.3	0.3	0.2	0.2	0.2
OAS	4.6	4.1	3.6	2.8	2.1	1.5	1.2
REF	1.1	1.1	1.2	1.2	1.2	1.2	1.2
SSA	12.1	11.6	10.6	9.3	7.7	6.3	5.6
USA	2.4	2.3	2.3	2.4	2.3	2.3	2.3

Table 1807: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Balance—Nutrient Surplus (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	17.1	19.9	22.6	24.4	27.2	29.3	30.2	31.4	32.5	34.7
CAZ	1.4	1.7	2.3	1.8	1.8	1.8	2.1	2.6	1.9	2.5
CHA	1.5	2.1	2.6	3.2	3.8	4.7	5.2	5.1	6.1	7.0
EUR	1.0	1.3	1.7	2.3	3.0	3.1	3.1	3.0	2.7	2.6
IND	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.8	0.9	1.1
JPN	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
LAM	3.5	3.8	4.1	4.3	4.7	5.0	5.2	5.4	5.7	5.9
MEA	0.7	0.7	0.9	0.9	1.1	1.2	1.5	1.5	1.6	1.8
NEU	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3
OAS	0.8	0.9	1.0	1.0	1.2	1.4	1.4	1.5	1.7	2.0
REF	0.8	1.0	1.1	1.8	2.2	2.4	1.5	1.5	1.5	1.4
SSA	4.5	5.3	5.6	5.5	5.6	5.7	5.8	6.2	6.2	6.4
USA	2.1	2.3	2.5	2.7	3.0	3.2	3.5	3.4	3.7	3.7

Table 1808: Bodirsky — Resources—Nitrogen—Pasture Budget—Balance—Nutrient Surplus (Mt Nr/yr)

56.3.3 Inputs


GLO
150
125
100
75
Inputs (Mt Nr/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
Bodirsky

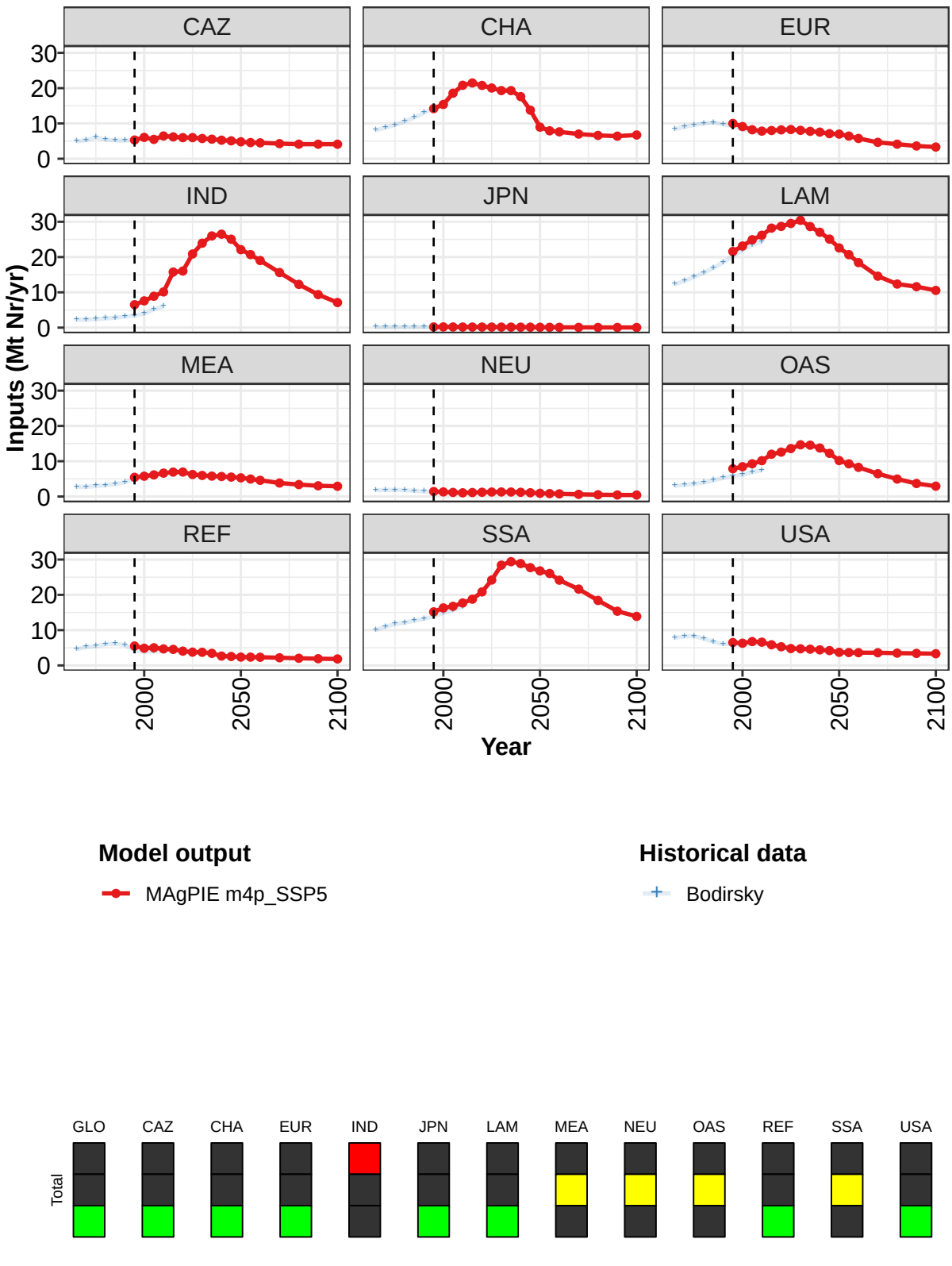


Figure 471: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	100	104	111	118	129	131	139	146	146	141	130
CAZ	5	6	5	6	6	6	6	6	6	5	5
CHA	14	15	19	21	21	21	20	19	19	18	14
EUR	10	9	8	8	8	8	8	8	8	8	7
IND	6	8	9	10	16	16	21	24	26	26	25
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	22	23	25	26	28	29	30	30	29	27	25
MEA	5	6	6	7	7	7	6	6	6	6	6
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	8	8	9	10	12	13	14	15	15	14	12
REF	6	5	5	5	5	4	4	4	3	3	3
SSA	15	16	17	18	19	21	24	28	29	29	28
USA	7	6	7	7	6	5	5	5	5	4	4

Table 1809: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs (Mt Nr/yr) [PART 1/2]

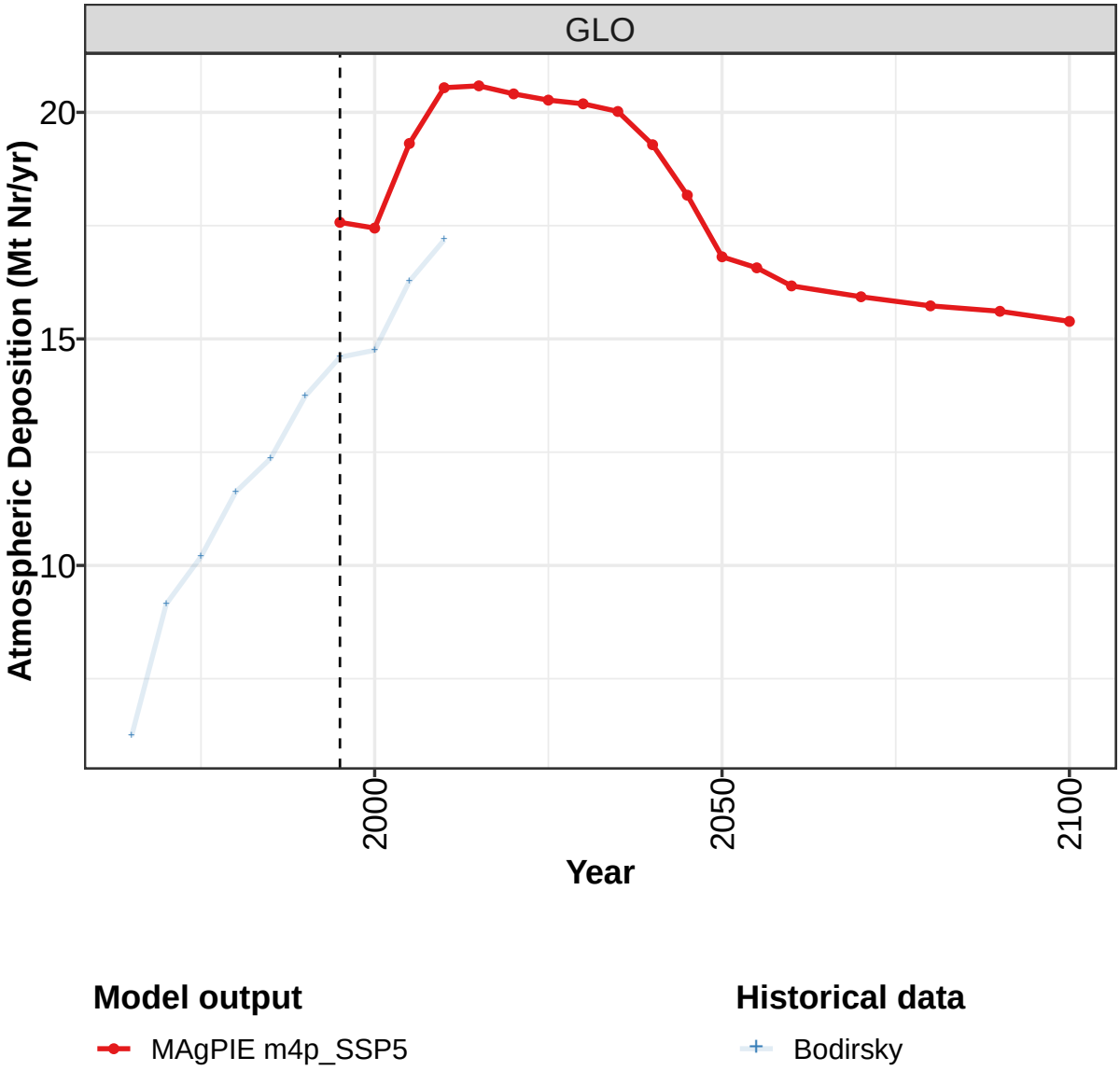
	2050	2055	2060	2070	2080	2090	2100
GLO	115	108	99	85	72	63	57
CAZ	5	5	5	4	4	4	4
CHA	9	8	8	7	7	6	7
EUR	7	6	6	5	4	4	3
IND	22	21	19	16	12	9	7
JPN	0	0	0	0	0	0	0
LAM	23	21	18	15	12	12	11
MEA	5	5	5	4	3	3	3
NEU	1	1	1	1	1	0	0
OAS	10	9	8	6	5	4	3
REF	2	2	2	2	2	2	2
SSA	27	26	24	22	18	15	14
USA	4	4	4	4	3	3	3

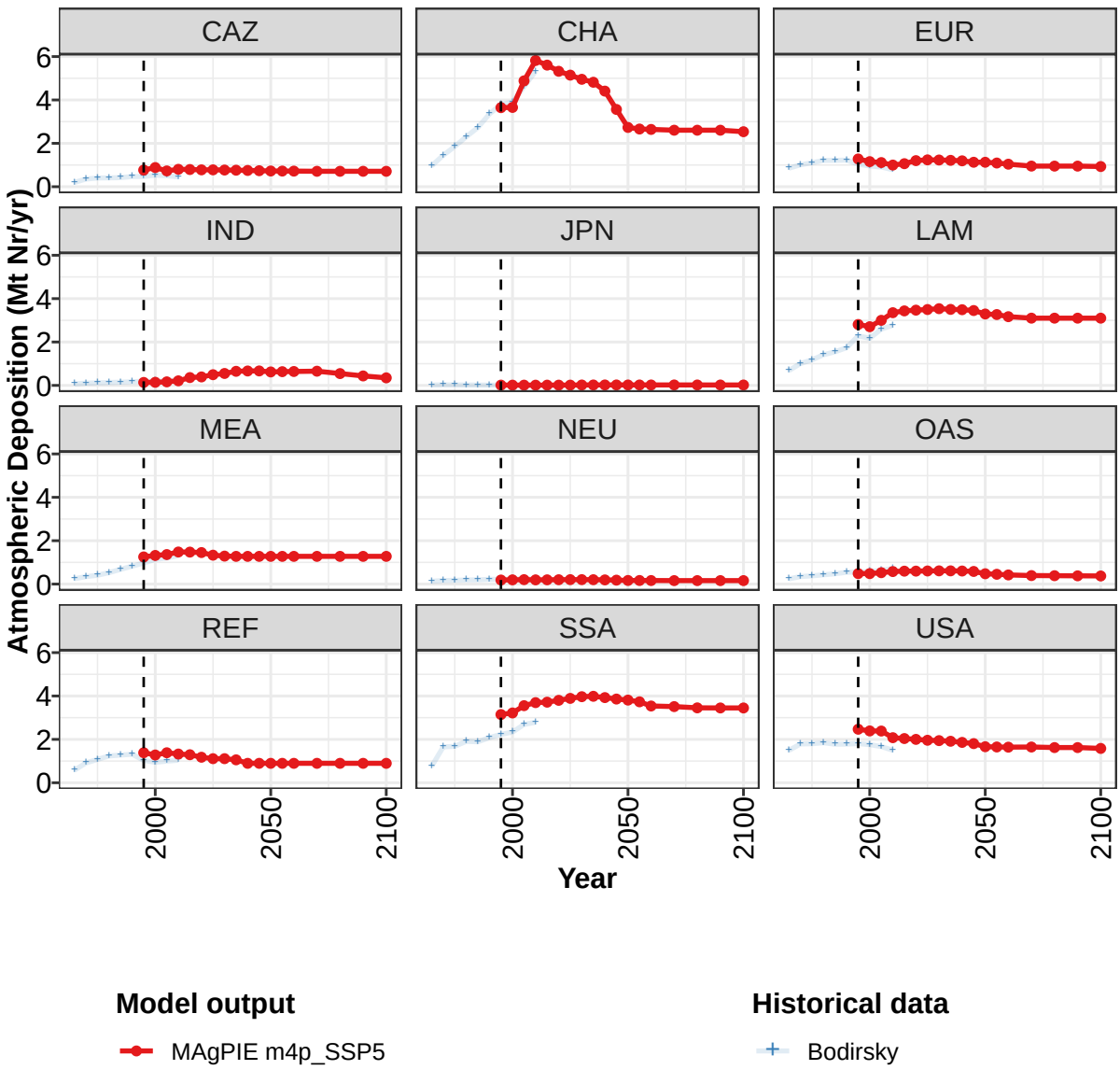
Table 1810: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	66	71	76	79	82	86	89	94	100	106
CAZ	5	5	6	5	5	5	5	6	5	6
CHA	8	9	10	11	12	13	14	16	18	20
EUR	8	9	10	10	10	10	9	8	8	7
IND	2	2	2	3	3	3	3	4	5	6
JPN	0	0	0	0	0	0	0	0	0	0
LAM	12	13	14	16	17	19	20	22	23	24
MEA	3	3	3	3	4	4	5	6	6	6
NEU	2	2	2	2	2	1	1	1	1	1
OAS	3	3	4	4	5	5	6	6	7	7
REF	5	5	5	6	6	6	4	4	4	4
SSA	10	11	12	12	13	13	14	15	16	17
USA	8	8	8	8	7	6	6	6	6	6

Table 1811: Bodirsky — Resources—Nitrogen—Pasture Budget—Inputs (Mt Nr/yr)

56.3.4 Inputs—Atmospheric Deposition





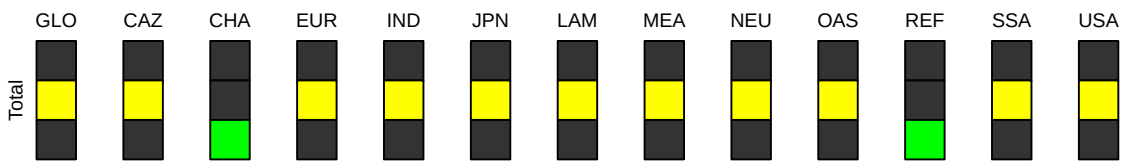


Figure 472: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Atmospheric Deposition (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.6	17.4	19.3	20.5	20.6	20.4	20.3	20.2	20.0	19.3	18.2
CAZ	0.8	0.9	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7
CHA	3.6	3.7	4.9	5.8	5.6	5.3	5.1	5.0	4.8	4.4	3.6
EUR	1.3	1.2	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.2	1.1
IND	0.1	0.1	0.2	0.2	0.4	0.4	0.5	0.6	0.6	0.7	0.7
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.8	2.7	3.0	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5
MEA	1.3	1.3	1.4	1.5	1.5	1.5	1.3	1.3	1.3	1.3	1.3
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
REF	1.4	1.3	1.4	1.3	1.3	1.2	1.1	1.1	1.1	0.9	0.9
SSA	3.1	3.2	3.6	3.7	3.7	3.8	3.9	4.0	4.0	3.9	3.9
USA	2.5	2.4	2.4	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8

Table 1812: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 1/2]

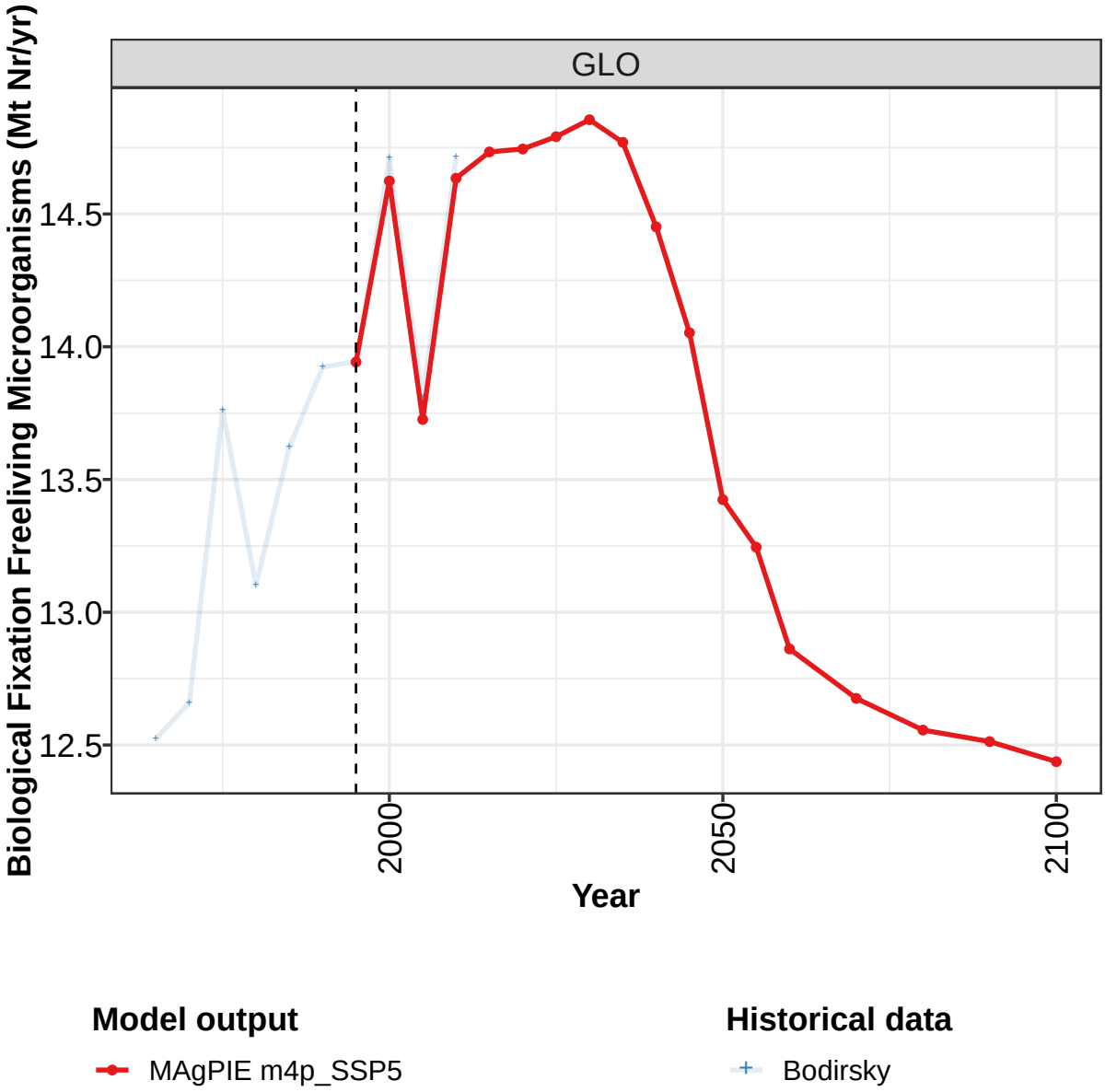
	2050	2055	2060	2070	2080	2090	2100
GLO	16.8	16.6	16.2	15.9	15.7	15.6	15.4
CAZ	0.7	0.7	0.7	0.7	0.7	0.7	0.7
CHA	2.7	2.7	2.6	2.6	2.6	2.6	2.5
EUR	1.1	1.1	1.0	1.0	1.0	1.0	0.9
IND	0.6	0.6	0.6	0.7	0.5	0.4	0.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.3	3.3	3.2	3.1	3.1	3.1	3.1
MEA	1.3	1.3	1.3	1.3	1.3	1.3	1.3
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.5	0.5	0.4	0.4	0.4	0.4	0.4
REF	0.9	0.9	0.9	0.9	0.9	0.9	0.9
SSA	3.8	3.7	3.5	3.5	3.5	3.4	3.4
USA	1.7	1.6	1.6	1.6	1.6	1.6	1.6

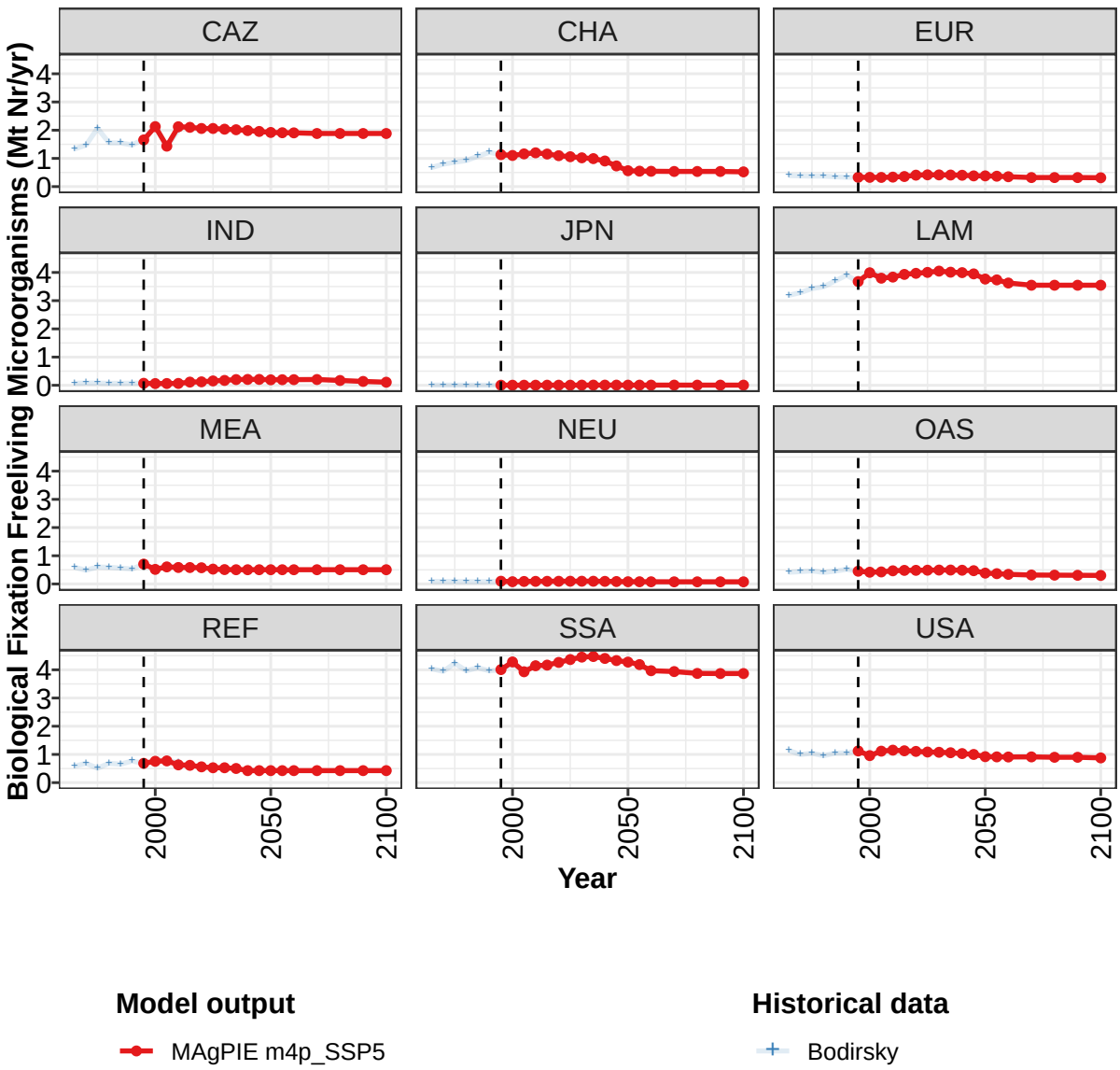
Table 1813: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	6.2	9.1	10.2	11.6	12.4	13.7	14.6	14.7	16.3	17.2
CAZ	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
CHA	1.0	1.4	1.9	2.3	2.7	3.4	3.8	3.9	4.6	5.3
EUR	0.9	1.0	1.1	1.2	1.2	1.2	1.0	1.0	0.9	0.8
IND	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	1.0	1.2	1.4	1.5	1.7	2.3	2.2	2.6	2.8
MEA	0.2	0.3	0.4	0.5	0.7	0.8	1.0	1.1	1.2	1.3
NEU	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7
REF	0.6	0.9	1.1	1.2	1.3	1.3	1.0	0.9	1.0	1.0
SSA	0.8	1.7	1.7	1.9	1.9	2.1	2.2	2.3	2.7	2.8
USA	1.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.5

Table 1814: Bodirsky — Resources—Nitrogen—Pasture Budget—Inputs—Atmospheric Deposition (Mt Nr/yr)

56.3.5 Inputs—Biological Fixation Freeliving Microorganisms





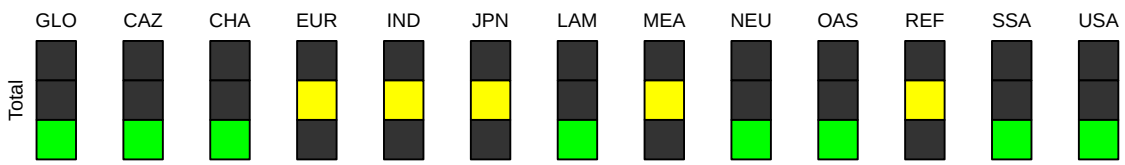


Figure 473: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Biological Fixation Freeliving Microorganisms (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.9	14.6	13.7	14.6	14.7	14.7	14.8	14.9	14.8	14.5	14.1
CAZ	1.7	2.1	1.4	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0
CHA	1.1	1.1	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.7
EUR	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
IND	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.7	4.0	3.8	3.8	3.9	4.0	4.0	4.0	4.0	4.0	4.0
MEA	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
REF	0.7	0.8	0.8	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4
SSA	4.0	4.3	3.9	4.1	4.2	4.3	4.4	4.5	4.5	4.4	4.3
USA	1.1	1.0	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.0	1.0

Table 1815: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Biological Fixation Freeliving Microorganisms (Mt Nr/yr) [PART 1/2]

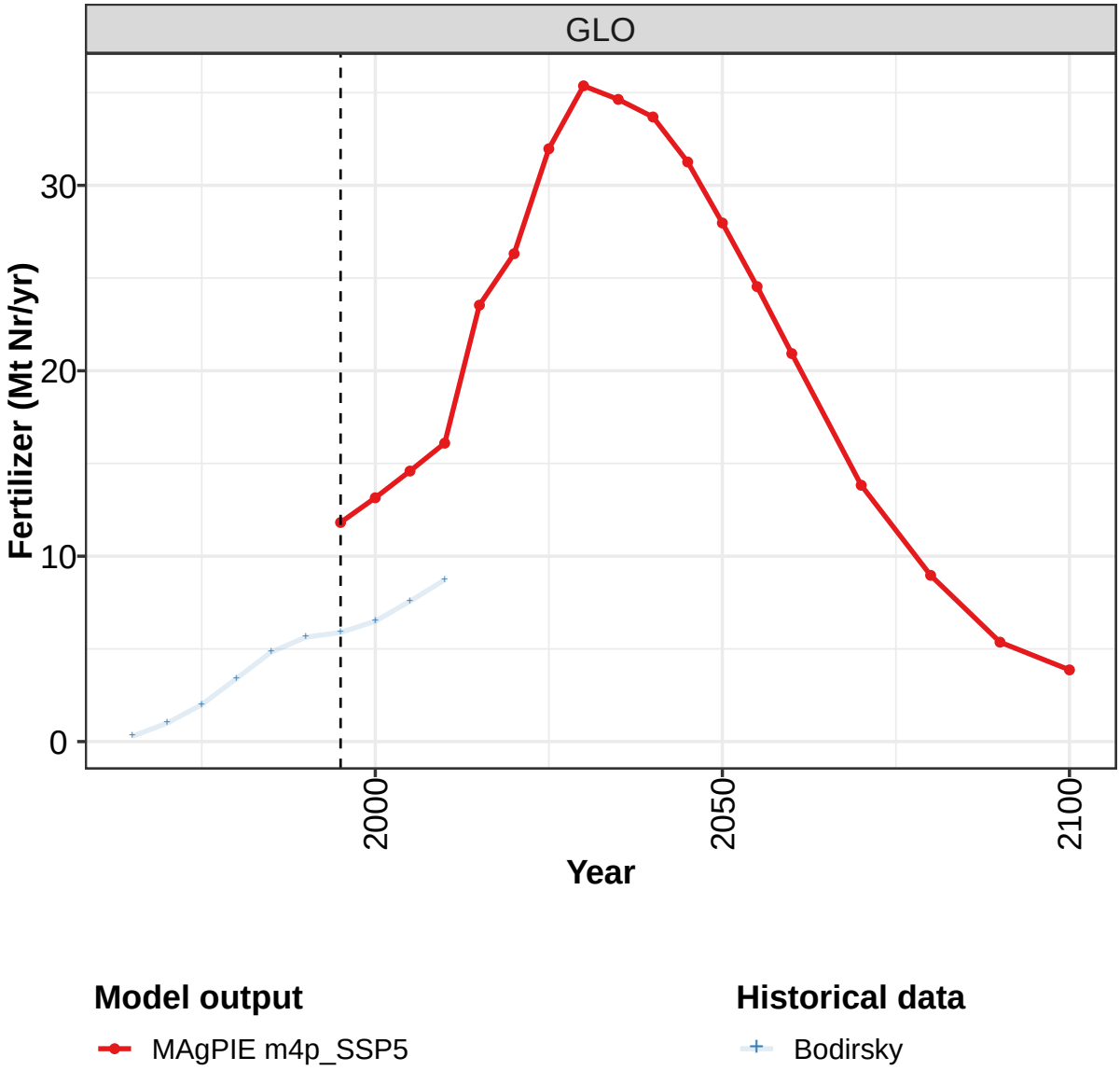
	2050	2055	2060	2070	2080	2090	2100
GLO	13.4	13.2	12.9	12.7	12.6	12.5	12.4
CAZ	1.9	1.9	1.9	1.9	1.9	1.9	1.9
CHA	0.6	0.5	0.5	0.5	0.5	0.5	0.5
EUR	0.4	0.4	0.4	0.3	0.3	0.3	0.3
IND	0.2	0.2	0.2	0.2	0.2	0.1	0.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.8	3.7	3.6	3.5	3.5	3.5	3.5
MEA	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.4	0.4	0.3	0.3	0.3	0.3	0.3
REF	0.4	0.4	0.4	0.4	0.4	0.4	0.4
SSA	4.3	4.2	4.0	3.9	3.9	3.9	3.9
USA	0.9	0.9	0.9	0.9	0.9	0.9	0.9

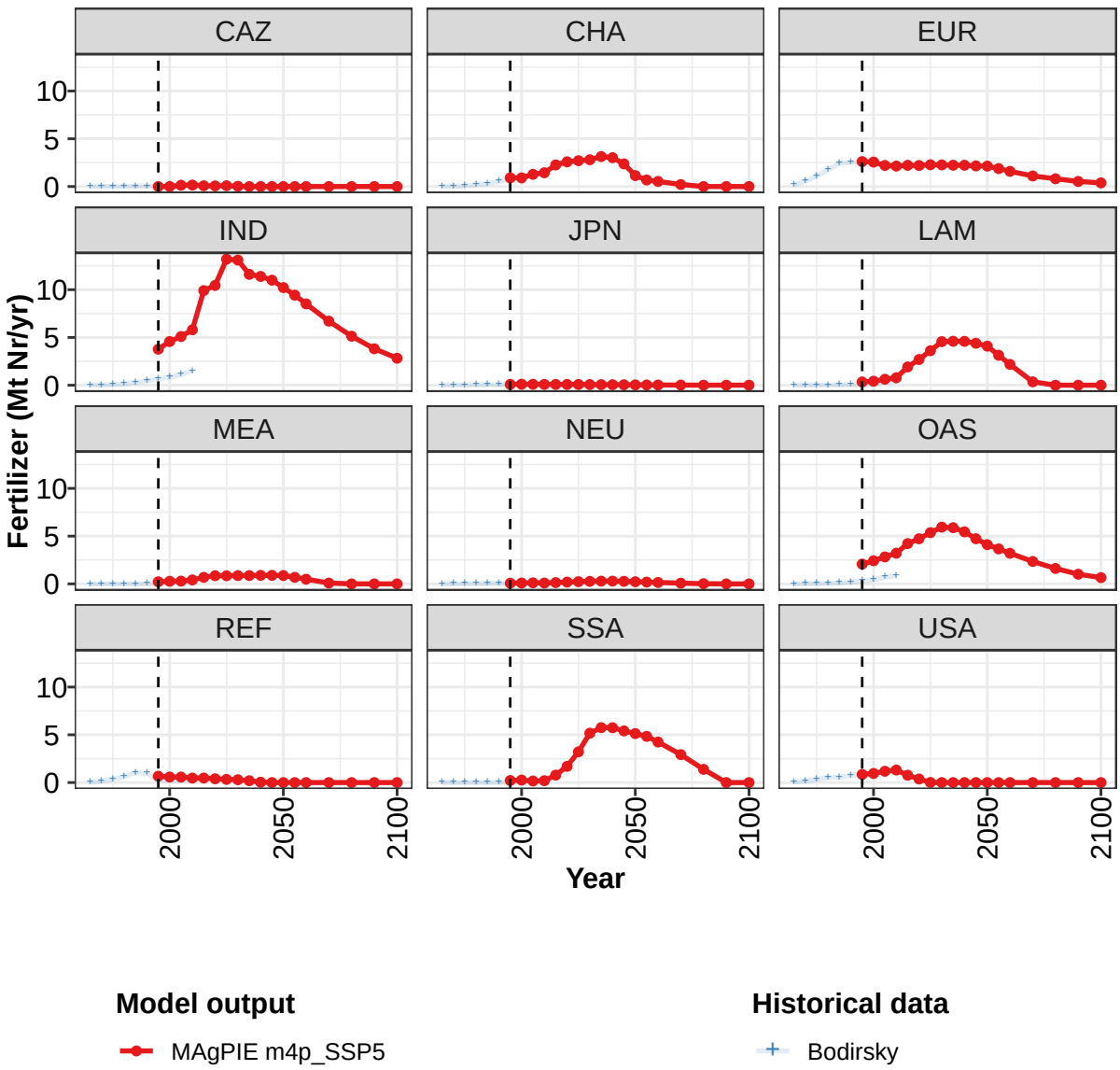
Table 1816: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Biological Fixation Freeliving Microorganisms (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12.5	12.7	13.8	13.1	13.6	13.9	13.9	14.7	13.8	14.7
CAZ	1.3	1.5	2.1	1.6	1.5	1.5	1.7	2.2	1.4	2.0
CHA	0.7	0.8	0.9	0.9	1.1	1.2	1.1	1.1	1.2	1.2
EUR	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
IND	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.2	3.3	3.4	3.5	3.7	3.9	3.7	4.0	3.8	3.9
MEA	0.6	0.5	0.6	0.6	0.6	0.5	0.7	0.5	0.6	0.6
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.5
REF	0.6	0.7	0.5	0.7	0.7	0.8	0.7	0.8	0.8	0.7
SSA	4.0	3.9	4.2	4.0	4.1	4.0	4.0	4.2	4.0	4.2
USA	1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.0	1.1	1.2

Table 1817: Bodirsky — Resources—Nitrogen—Pasture Budget—Inputs—Biological Fixation Freeliving Microorganisms (Mt Nr/yr)

56.3.6 Inputs—Fertilizer





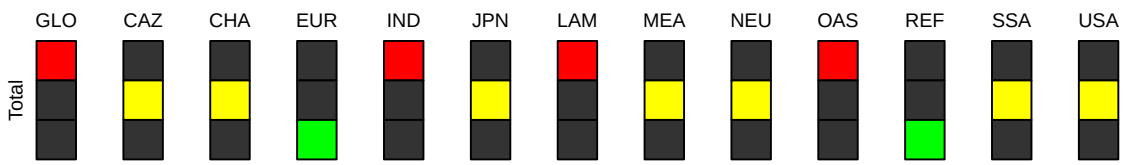


Figure 474: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Fertilizer (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.8	13.2	14.6	16.1	23.5	26.3	32.0	35.4	34.6	33.7	31.3
CAZ	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
CHA	0.9	0.9	1.3	1.4	2.3	2.6	2.7	2.8	3.1	3.0	2.4
EUR	2.6	2.6	2.2	2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.2
IND	3.8	4.6	5.1	5.8	9.9	10.5	13.2	13.1	11.6	11.4	11.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
LAM	0.3	0.4	0.6	0.8	1.9	2.7	3.6	4.6	4.6	4.6	4.4
MEA	0.2	0.3	0.3	0.4	0.7	0.9	0.8	0.9	0.9	0.9	0.9
NEU	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3
OAS	2.1	2.4	2.8	3.2	4.2	4.7	5.4	5.9	5.9	5.4	4.7
REF	0.7	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.0	0.0
SSA	0.2	0.3	0.2	0.2	0.8	1.7	3.2	5.2	5.8	5.7	5.4
USA	0.9	1.0	1.2	1.3	0.8	0.4	0.0	0.0	0.0	0.0	0.0

Table 1818: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 1/2]

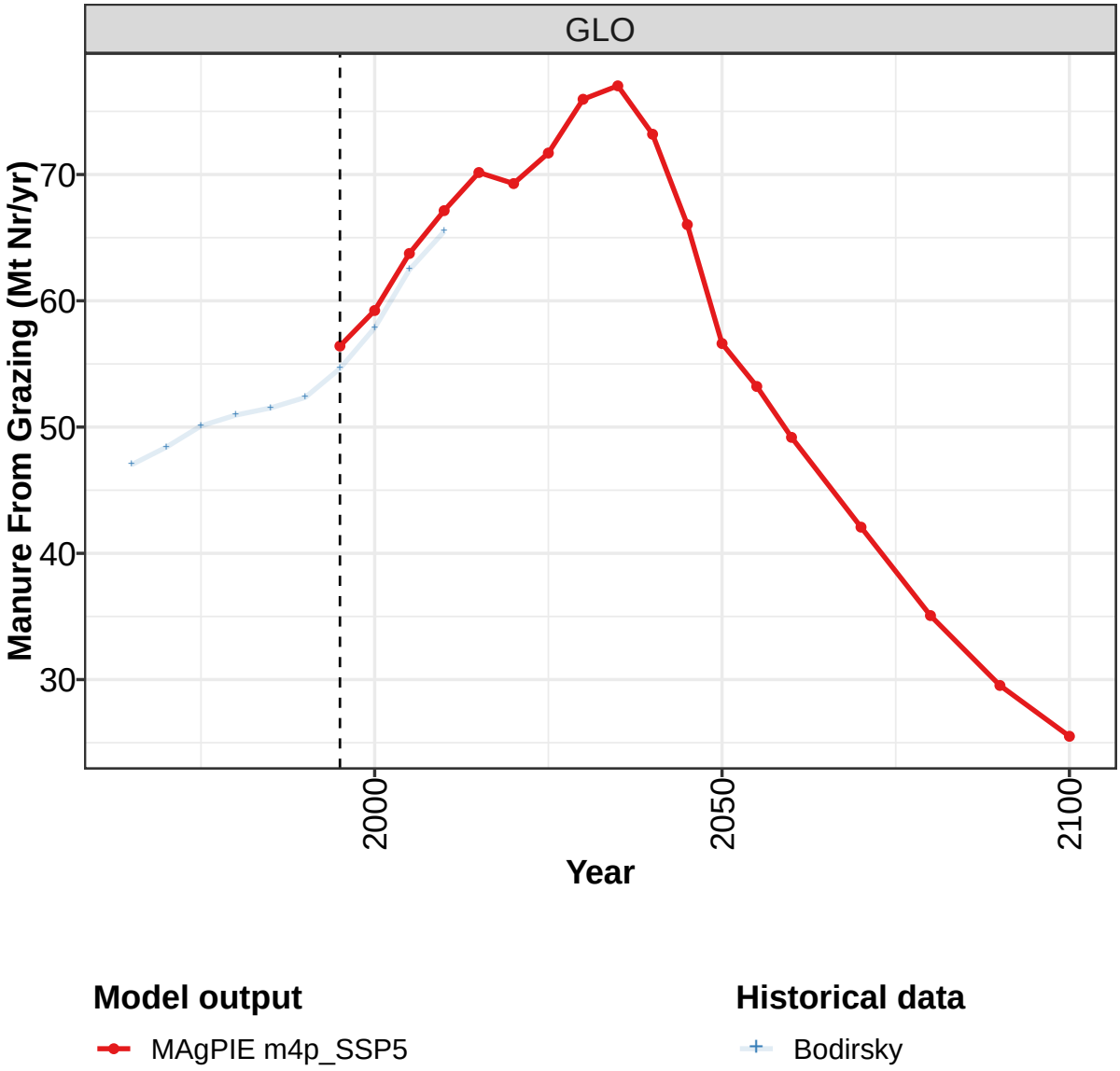
	2050	2055	2060	2070	2080	2090	2100
GLO	28.0	24.5	20.9	13.8	9.0	5.4	3.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.1	0.7	0.5	0.2	0.0	0.0	0.0
EUR	2.1	1.9	1.6	1.1	0.8	0.5	0.4
IND	10.2	9.4	8.5	6.7	5.1	3.8	2.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	4.1	3.1	2.2	0.4	0.0	0.0	0.0
MEA	0.9	0.7	0.5	0.1	0.0	0.0	0.0
NEU	0.2	0.2	0.1	0.1	0.0	0.0	0.0
OAS	4.1	3.7	3.2	2.3	1.6	1.0	0.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	5.1	4.8	4.2	2.9	1.4	0.0	0.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

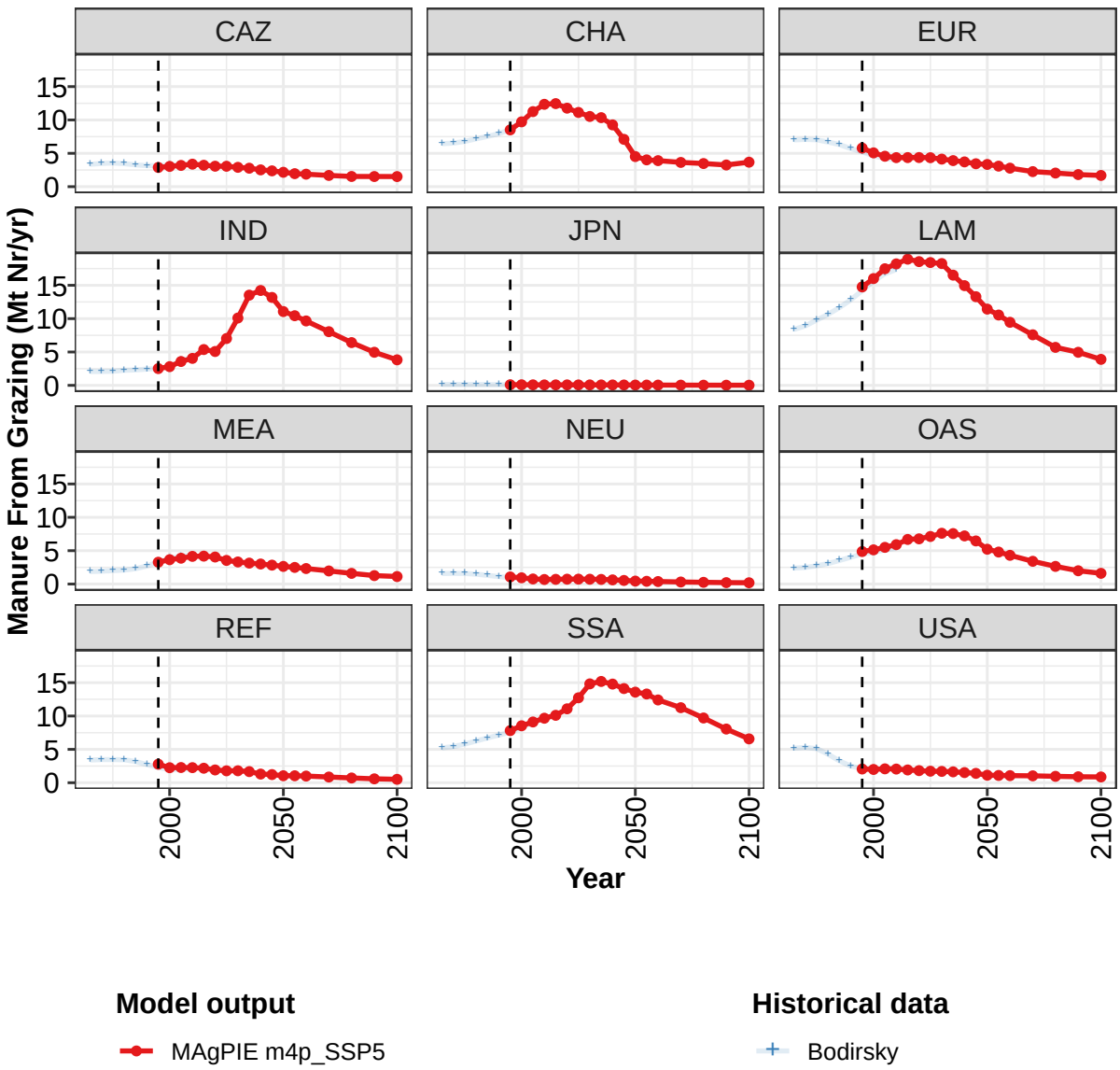
Table 1819: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.29	0.99	1.99	3.40	4.83	5.63	5.89	6.49	7.57	8.72
CAZ	0.00	0.00	0.00	0.01	0.01	0.02	0.08	0.16	0.25	0.30
CHA	0.01	0.03	0.07	0.21	0.31	0.54	0.77	0.86	1.28	1.53
EUR	0.17	0.56	1.07	1.74	2.40	2.53	2.57	2.53	2.15	2.10
IND	0.00	0.02	0.05	0.13	0.28	0.44	0.67	0.85	1.12	1.49
JPN	0.01	0.02	0.03	0.03	0.05	0.06	0.09	0.10	0.10	0.09
LAM	0.00	0.00	0.01	0.02	0.03	0.05	0.06	0.12	0.29	0.37
MEA	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.09	0.15	0.16
NEU	0.00	0.01	0.01	0.03	0.04	0.05	0.05	0.06	0.09	0.09
OAS	0.00	0.02	0.04	0.07	0.11	0.19	0.31	0.42	0.70	0.86
REF	0.04	0.16	0.37	0.63	1.03	0.98	0.26	0.21	0.20	0.26
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.03
USA	0.05	0.17	0.34	0.53	0.56	0.76	0.97	1.05	1.22	1.44

Table 1820: Bodirsky — Resources—Nitrogen—Pasture Budget—Inputs—Fertilizer (Mt Nr/yr)

56.3.7 Inputs—Manure From Grazing





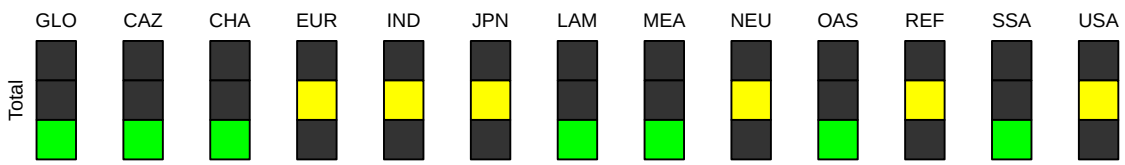


Figure 475: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Manure From Grazing (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	56.4	59.2	63.7	67.1	70.2	69.3	71.7	76.0	77.0	73.2	66.0
CAZ	2.9	3.0	3.2	3.4	3.2	3.1	3.1	2.9	2.8	2.5	2.4
CHA	8.5	9.7	11.3	12.3	12.5	11.8	11.1	10.5	10.3	9.3	7.1
EUR	5.8	5.1	4.6	4.4	4.4	4.4	4.3	4.1	3.9	3.7	3.4
IND	2.5	2.8	3.6	4.0	5.4	5.1	7.0	10.1	13.5	14.2	13.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	14.8	16.0	17.5	18.2	18.9	18.6	18.4	18.3	16.5	14.9	13.3
MEA	3.3	3.7	3.9	4.2	4.2	4.1	3.5	3.3	3.1	3.0	2.8
NEU	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5
OAS	4.9	5.1	5.5	5.9	6.7	6.8	7.1	7.6	7.6	7.2	6.5
REF	2.8	2.2	2.3	2.3	2.2	1.9	1.8	1.8	1.7	1.3	1.2
SSA	7.8	8.5	9.1	9.7	10.1	11.1	12.7	14.8	15.2	14.8	14.1
USA	2.1	2.0	2.1	2.1	1.9	1.8	1.7	1.7	1.6	1.5	1.4

Table 1821: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Manure From Grazing (Mt Nr/yr) [PART 1/2]

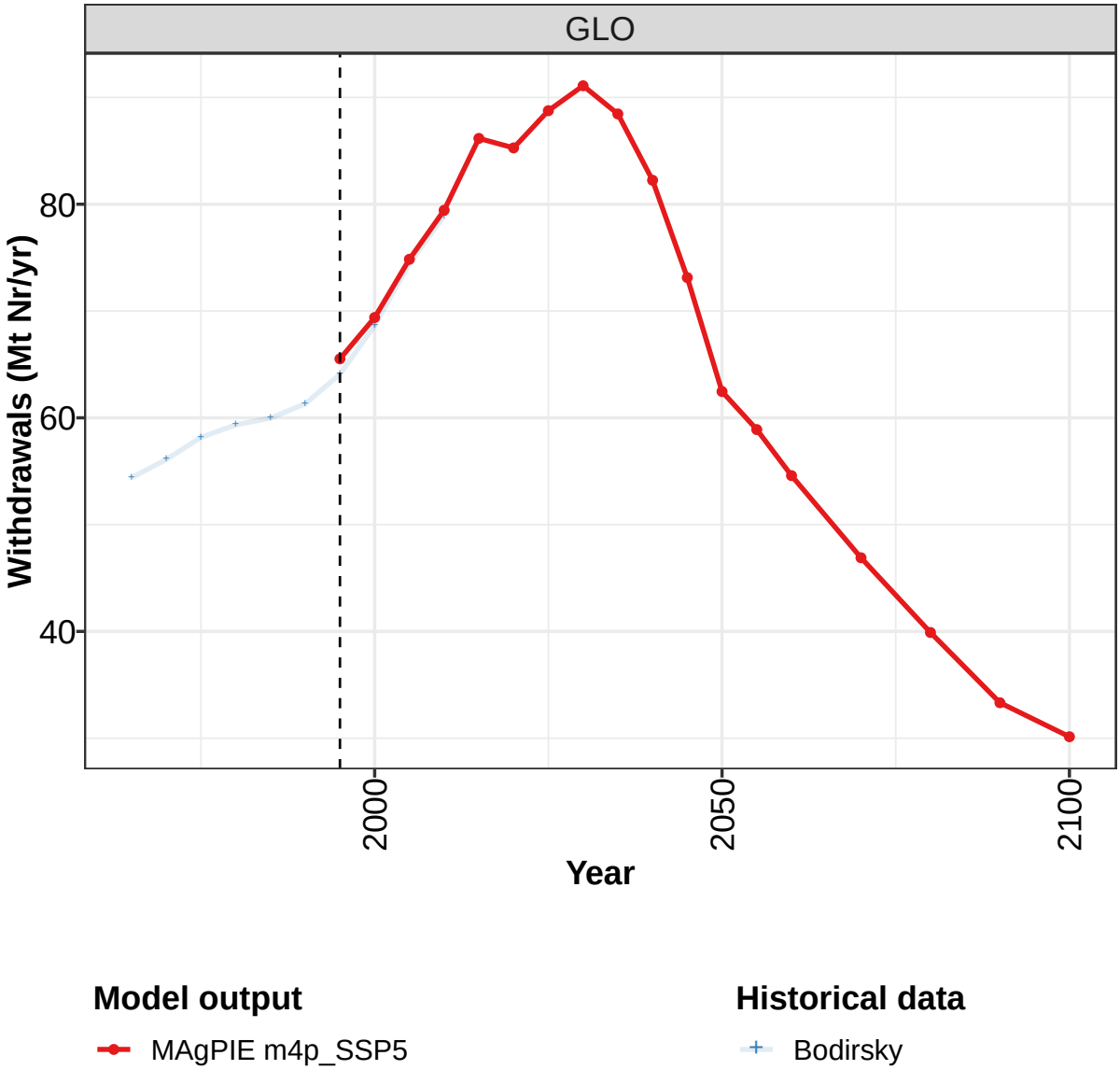
	2050	2055	2060	2070	2080	2090	2100
GLO	56.6	53.2	49.2	42.1	35.1	29.5	25.5
CAZ	2.2	2.0	1.9	1.7	1.5	1.5	1.5
CHA	4.5	4.0	3.9	3.6	3.5	3.3	3.7
EUR	3.3	3.1	2.8	2.3	2.0	1.8	1.7
IND	11.1	10.4	9.7	8.0	6.4	5.0	3.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	11.4	10.5	9.5	7.6	5.7	5.0	3.9
MEA	2.6	2.5	2.3	2.0	1.6	1.3	1.1
NEU	0.4	0.4	0.4	0.3	0.3	0.2	0.2
OAS	5.2	4.8	4.3	3.4	2.6	2.0	1.6
REF	1.0	1.0	1.0	0.9	0.7	0.6	0.5
SSA	13.6	13.3	12.4	11.3	9.7	8.0	6.6
USA	1.1	1.1	1.1	1.0	1.0	0.9	0.9

Table 1822: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Inputs—Manure From Grazing (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	47.0	48.4	50.1	50.9	51.5	52.3	54.6	57.9	62.5	65.5
CAZ	3.4	3.5	3.5	3.5	3.3	3.2	3.2	3.2	3.3	3.3
CHA	6.4	6.5	6.8	7.2	7.5	7.9	8.6	9.8	11.2	12.2
EUR	7.0	7.1	7.0	6.7	6.3	5.7	5.2	4.6	4.2	4.0
IND	2.1	2.1	2.1	2.3	2.3	2.4	2.5	2.8	3.8	4.3
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	8.4	8.9	9.8	10.6	11.7	12.8	14.2	15.6	16.7	17.4
MEA	1.9	1.9	2.0	2.1	2.3	2.7	3.3	3.8	4.2	4.4
NEU	1.6	1.6	1.6	1.5	1.3	1.1	1.0	0.8	0.7	0.6
OAS	2.4	2.5	2.7	3.1	3.5	4.0	4.5	4.7	5.1	5.4
REF	3.4	3.5	3.5	3.4	3.2	2.7	2.3	1.9	2.0	2.1
SSA	5.2	5.4	5.8	6.3	6.7	7.1	7.6	8.3	9.0	9.6
USA	5.2	5.3	5.1	4.3	3.3	2.5	2.1	2.0	2.1	2.1

Table 1823: Bodirsky — Resources—Nitrogen—Pasture Budget—Inputs—Manure From Grazing (Mt Nr/yr)

56.3.8 Withdrawals



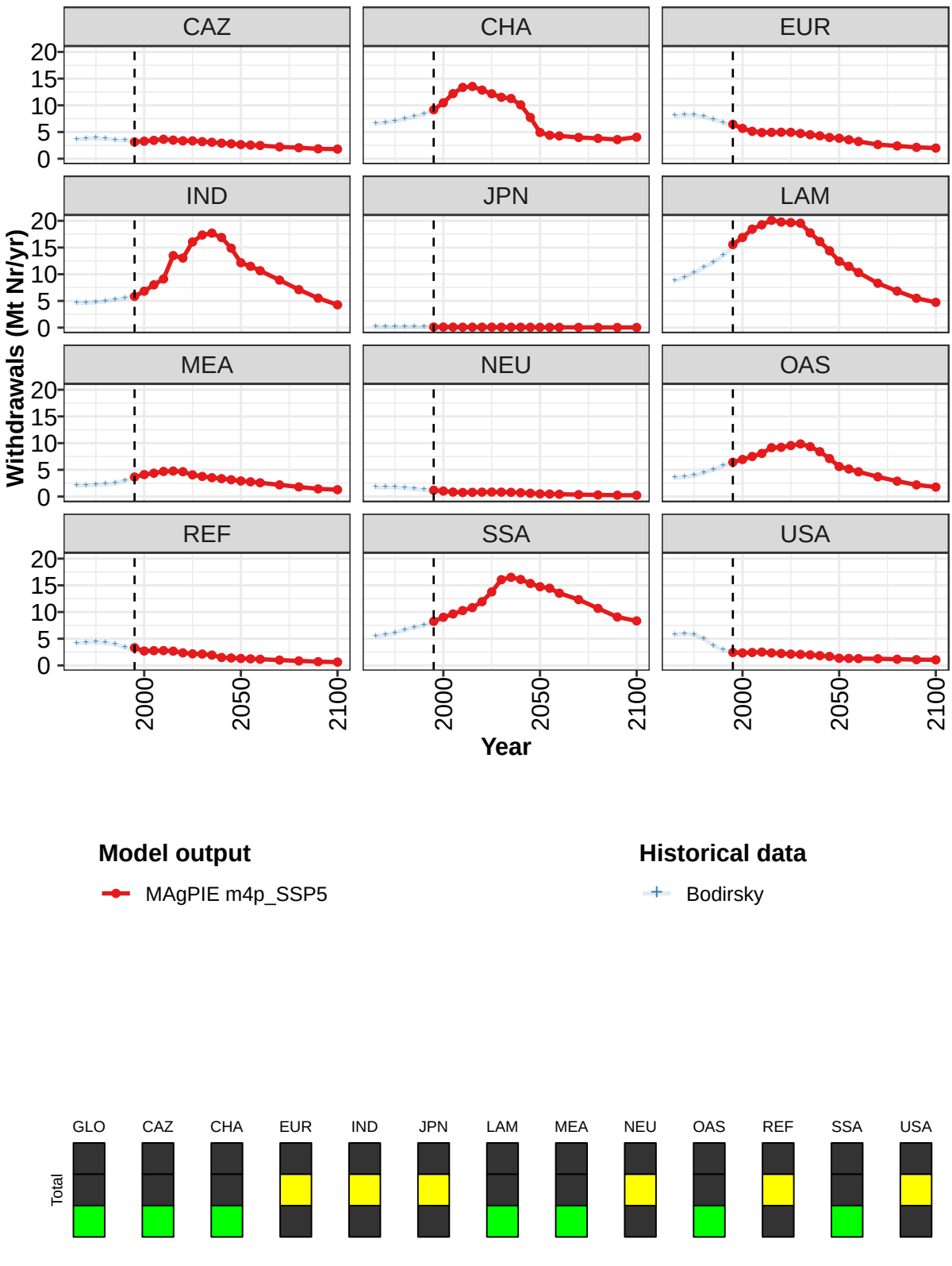


Figure 476: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Withdrawals (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	65.5	69.4	74.8	79.4	86.2	85.3	88.8	91.1	88.5	82.2	73.1
CAZ	3.1	3.3	3.4	3.6	3.5	3.4	3.4	3.2	3.1	2.9	2.8
CHA	9.2	10.5	12.2	13.4	13.5	12.9	12.2	11.5	11.3	10.1	7.7
EUR	6.5	5.7	5.1	4.9	4.9	5.0	4.9	4.7	4.5	4.3	4.0
IND	5.8	6.8	8.0	9.1	13.5	13.0	16.0	17.3	17.7	16.9	14.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	15.5	16.9	18.4	19.3	20.1	19.8	19.7	19.6	17.7	16.1	14.4
MEA	3.7	4.1	4.4	4.7	4.8	4.6	4.1	3.8	3.5	3.3	3.1
NEU	1.2	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6
OAS	6.4	6.9	7.5	8.1	9.1	9.2	9.5	9.8	9.3	8.4	7.1
REF	3.3	2.7	2.8	2.8	2.7	2.4	2.2	2.1	1.9	1.5	1.4
SSA	8.3	9.0	9.6	10.3	10.8	11.9	13.8	16.1	16.5	16.1	15.3
USA	2.4	2.3	2.4	2.5	2.3	2.2	2.1	2.1	2.0	1.8	1.7

Table 1824: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Withdrawals (Mt Nr/yr) [PART 1/2]

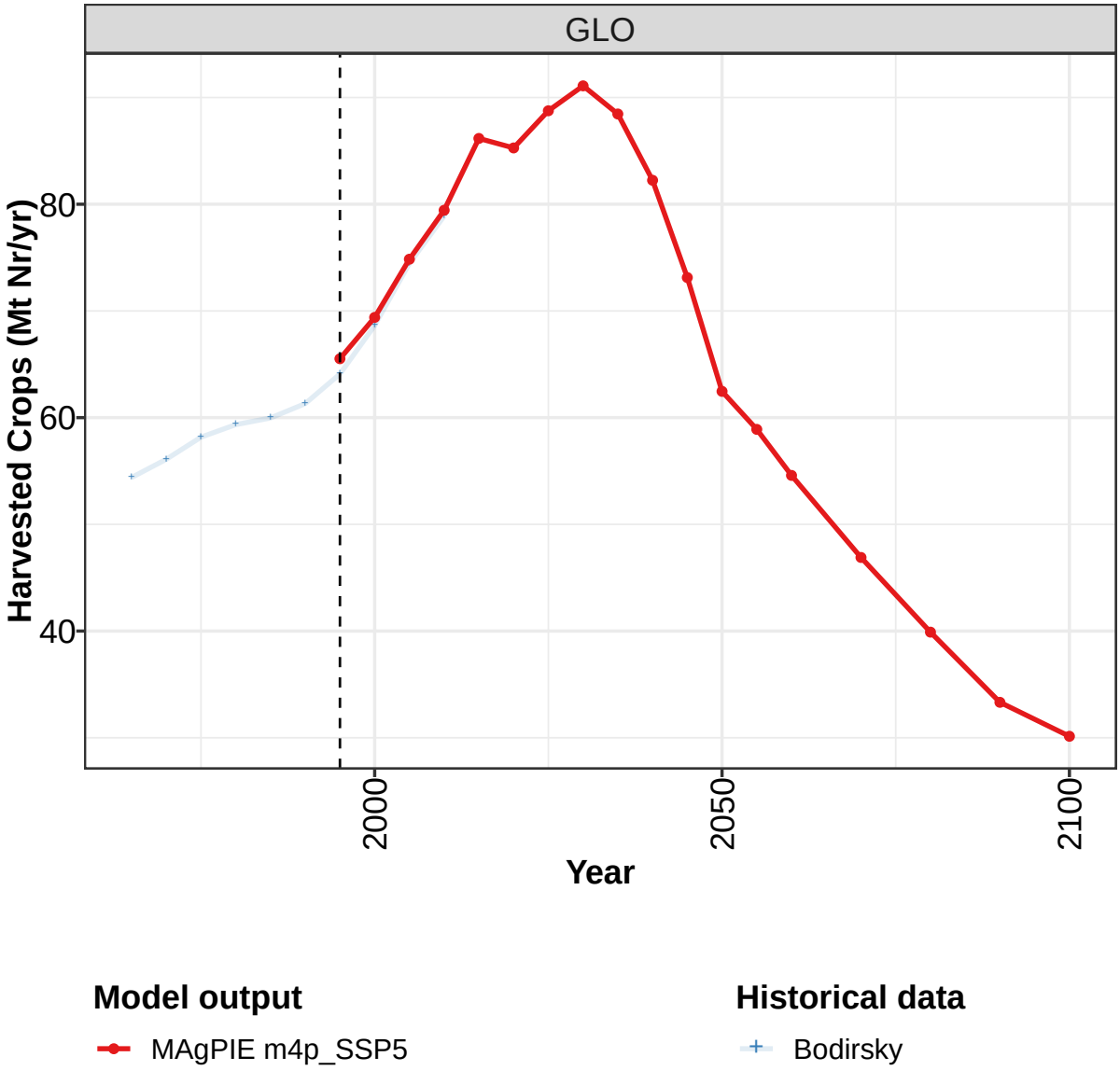
	2050	2055	2060	2070	2080	2090	2100
GLO	62.5	58.9	54.6	46.9	39.9	33.3	30.1
CAZ	2.6	2.5	2.5	2.2	2.1	1.8	1.8
CHA	4.9	4.4	4.3	4.0	3.8	3.6	4.0
EUR	3.8	3.6	3.2	2.6	2.4	2.1	2.0
IND	12.2	11.5	10.6	8.9	7.1	5.5	4.3
JPN	0.1	0.1	0.0	0.0	0.0	0.0	0.0
LAM	12.4	11.5	10.3	8.3	6.8	5.5	4.7
MEA	2.9	2.8	2.6	2.2	1.8	1.4	1.3
NEU	0.5	0.5	0.4	0.4	0.3	0.2	0.2
OAS	5.6	5.2	4.6	3.7	2.9	2.2	1.8
REF	1.3	1.2	1.2	1.0	0.8	0.7	0.6
SSA	14.7	14.5	13.5	12.3	10.7	9.1	8.3
USA	1.4	1.3	1.3	1.2	1.2	1.1	1.0

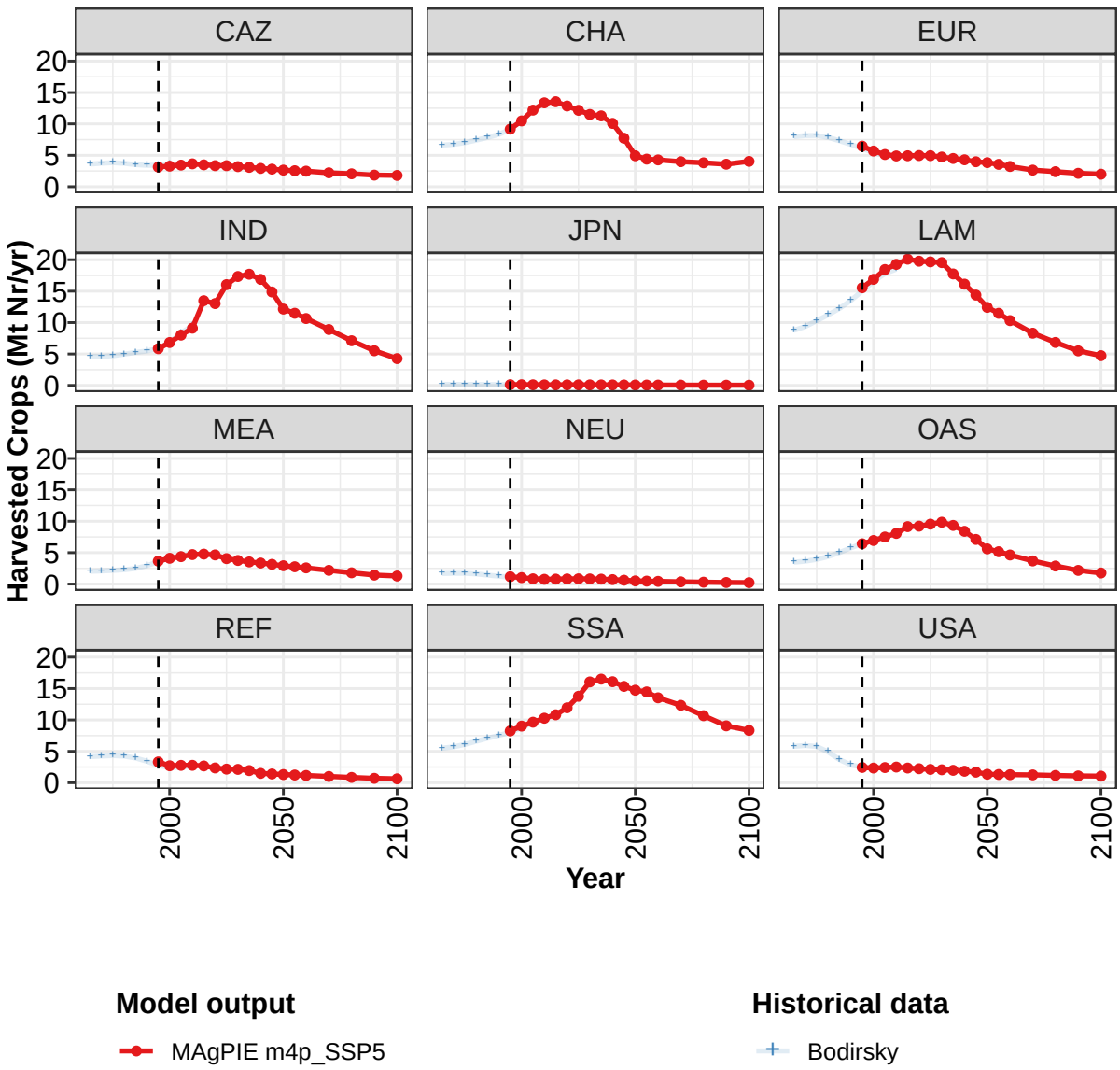
Table 1825: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Withdrawals (Mt Nr/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	54.4	56.1	58.2	59.3	60.0	61.3	64.1	68.6	74.4	78.9
CAZ	3.6	3.7	3.8	3.7	3.5	3.4	3.4	3.6	3.7	3.7
CHA	6.6	6.7	7.0	7.4	7.8	8.3	9.1	10.5	12.2	13.3
EUR	8.0	8.1	8.2	7.9	7.3	6.7	6.1	5.4	4.9	4.7
IND	4.6	4.6	4.7	5.0	5.3	5.5	5.9	6.9	8.4	9.5
JPN	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	8.8	9.4	10.3	11.2	12.2	13.5	15.0	16.5	17.8	18.5
MEA	2.0	2.1	2.2	2.3	2.5	2.9	3.6	4.2	4.6	4.7
NEU	1.7	1.7	1.7	1.6	1.4	1.2	1.1	0.9	0.8	0.8
OAS	3.5	3.6	3.9	4.4	5.0	5.8	6.4	7.0	7.6	8.0
REF	4.2	4.2	4.3	4.2	3.9	3.4	2.8	2.4	2.4	2.7
SSA	5.5	5.7	6.1	6.6	7.1	7.5	8.0	8.7	9.6	10.2
USA	5.8	5.9	5.8	4.9	3.7	2.8	2.5	2.4	2.4	2.6

Table 1826: Bodirsky — Resources—Nitrogen—Pasture Budget—Withdrawals (Mt Nr/yr)

56.3.9 Withdrawals—Harvested Crops





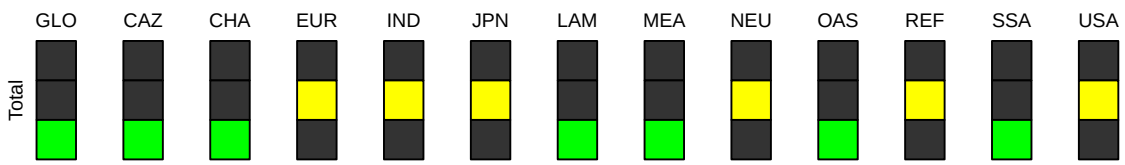


Figure 477: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Withdrawals—Harvested Crops (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	65.5	69.4	74.8	79.4	86.2	85.3	88.8	91.1	88.5	82.2	73.1
CAZ	3.1	3.3	3.4	3.6	3.5	3.4	3.4	3.2	3.1	2.9	2.8
CHA	9.2	10.5	12.2	13.4	13.5	12.9	12.2	11.5	11.3	10.1	7.7
EUR	6.5	5.7	5.1	4.9	4.9	5.0	4.9	4.7	4.5	4.3	4.0
IND	5.8	6.8	8.0	9.1	13.5	13.0	16.0	17.3	17.7	16.9	14.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	15.5	16.9	18.4	19.3	20.1	19.8	19.7	19.6	17.7	16.1	14.4
MEA	3.7	4.1	4.4	4.7	4.8	4.6	4.1	3.8	3.5	3.3	3.1
NEU	1.2	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6
OAS	6.4	6.9	7.5	8.1	9.1	9.2	9.5	9.8	9.3	8.4	7.1
REF	3.3	2.7	2.8	2.8	2.7	2.4	2.2	2.1	1.9	1.5	1.4
SSA	8.3	9.0	9.6	10.3	10.8	11.9	13.8	16.1	16.5	16.1	15.3
USA	2.4	2.3	2.4	2.5	2.3	2.2	2.1	2.1	2.0	1.8	1.7

Table 1827: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	62.5	58.9	54.6	46.9	39.9	33.3	30.1
CAZ	2.6	2.5	2.5	2.2	2.1	1.8	1.8
CHA	4.9	4.4	4.3	4.0	3.8	3.6	4.0
EUR	3.8	3.6	3.2	2.6	2.4	2.1	2.0
IND	12.2	11.5	10.6	8.9	7.1	5.5	4.3
JPN	0.1	0.1	0.0	0.0	0.0	0.0	0.0
LAM	12.4	11.5	10.3	8.3	6.8	5.5	4.7
MEA	2.9	2.8	2.6	2.2	1.8	1.4	1.3
NEU	0.5	0.5	0.4	0.4	0.3	0.2	0.2
OAS	5.6	5.2	4.6	3.7	2.9	2.2	1.8
REF	1.3	1.2	1.2	1.0	0.8	0.7	0.6
SSA	14.7	14.5	13.5	12.3	10.7	9.1	8.3
USA	1.4	1.3	1.3	1.2	1.2	1.1	1.0

Table 1828: MAgPIE m4p_SSP5 — Resources—Nitrogen—Pasture Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 2/2]

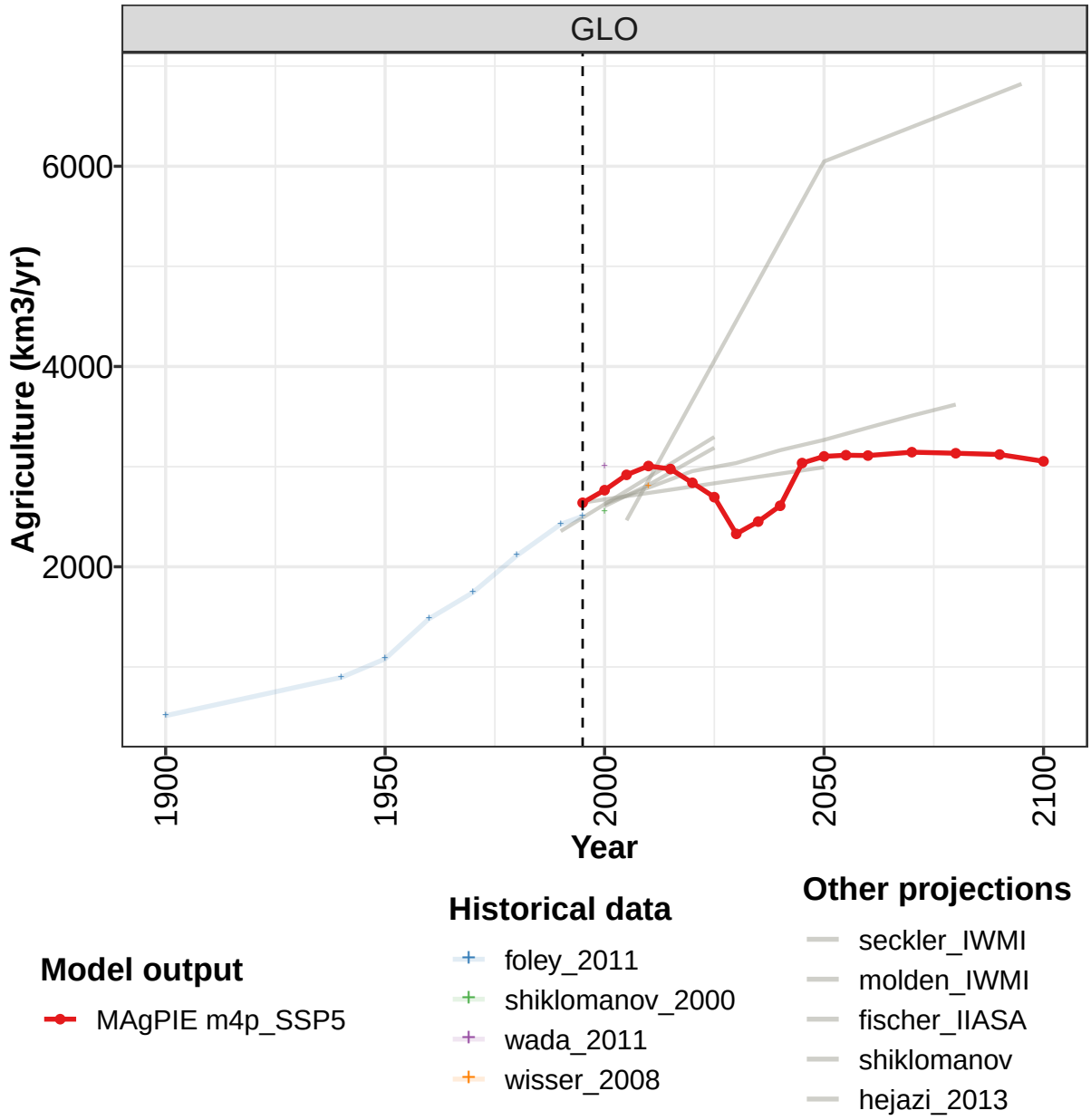
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	54.4	56.1	58.2	59.3	60.0	61.3	64.1	68.6	74.4	78.9
CAZ	3.6	3.7	3.8	3.7	3.5	3.4	3.4	3.6	3.7	3.7
CHA	6.6	6.7	7.0	7.4	7.8	8.3	9.1	10.5	12.2	13.3
EUR	8.0	8.1	8.2	7.9	7.3	6.7	6.1	5.4	4.9	4.7
IND	4.6	4.6	4.7	5.0	5.3	5.5	5.9	6.9	8.4	9.5
JPN	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	8.8	9.4	10.3	11.2	12.2	13.5	15.0	16.5	17.8	18.5
MEA	2.0	2.1	2.2	2.3	2.5	2.9	3.6	4.2	4.6	4.7
NEU	1.7	1.7	1.7	1.6	1.4	1.2	1.1	0.9	0.8	0.8
OAS	3.5	3.6	3.9	4.4	5.0	5.8	6.4	7.0	7.6	8.0
REF	4.2	4.2	4.3	4.2	3.9	3.4	2.8	2.4	2.4	2.7
SSA	5.5	5.7	6.1	6.6	7.1	7.5	8.0	8.7	9.6	10.2
USA	5.8	5.9	5.8	4.9	3.7	2.8	2.5	2.4	2.4	2.6

Table 1829: Bodirsky — Resources—Nitrogen—Pasture Budget—Withdrawals—Harvested Crops (Mt Nr/yr)

57 Water

57.1 Withdrawal

57.1.1 Agriculture



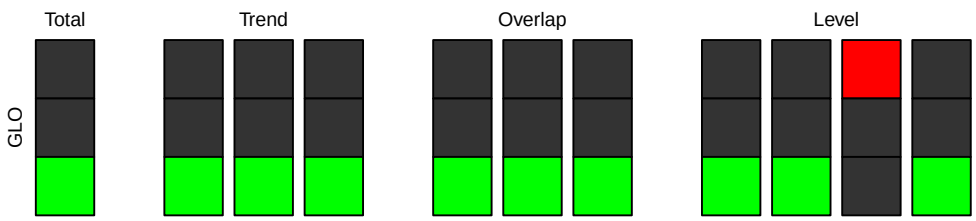


Figure 478: MAgPIE m4p_SSP5 — Resources—Water—Withdrawal—Agriculture (km3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2639	2765	2918	3006	2976	2839	2695	2329	2451	2609	3036

Table 1830: MAgPIE m4p_SSP5 — Resources—Water—Withdrawal—Agriculture (km3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	3102	3114	3111	3144	3134	3121	3053

Table 1831: MAgPIE m4p_SSP5 — Resources—Water—Withdrawal—Agriculture (km3/yr) [PART 2/2]

	1900	1940	1950	1960	1970	1980	1990	1995
GLO	513	895	1080	1481	1743	2112	2425	2504

Table 1832: shiklomanov_2000 — Resources—Water—Withdrawal—Agriculture (km3/yr)

	2000
GLO	2548

Table 1833: wada_2011 — Resources—Water—Withdrawal—Agriculture (km3/yr)

	2000
GLO	3000

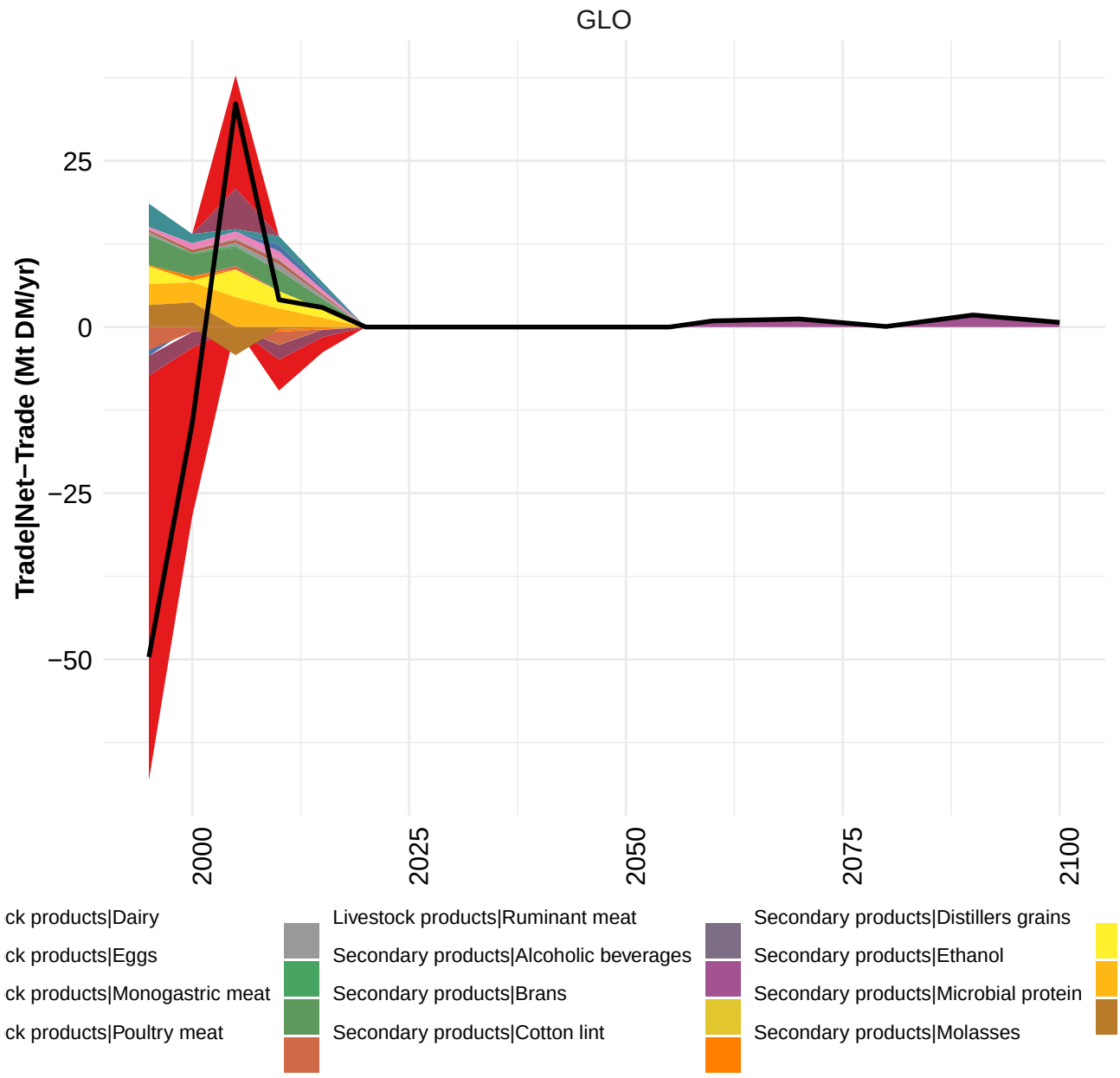
Table 1834: wisser_2008 — Resources—Water—Withdrawal—Agriculture (km3/yr)

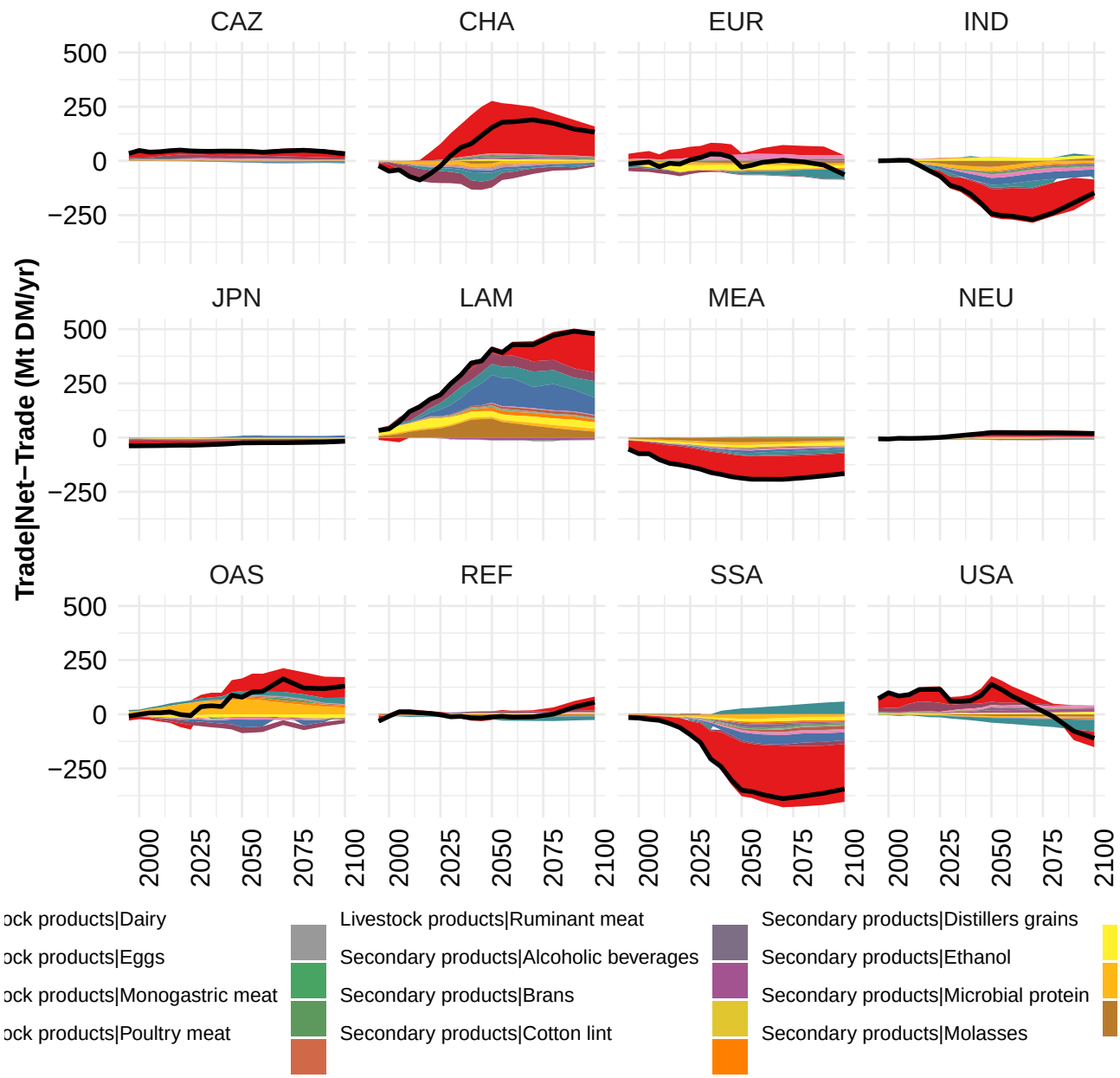
	2010
GLO	2800

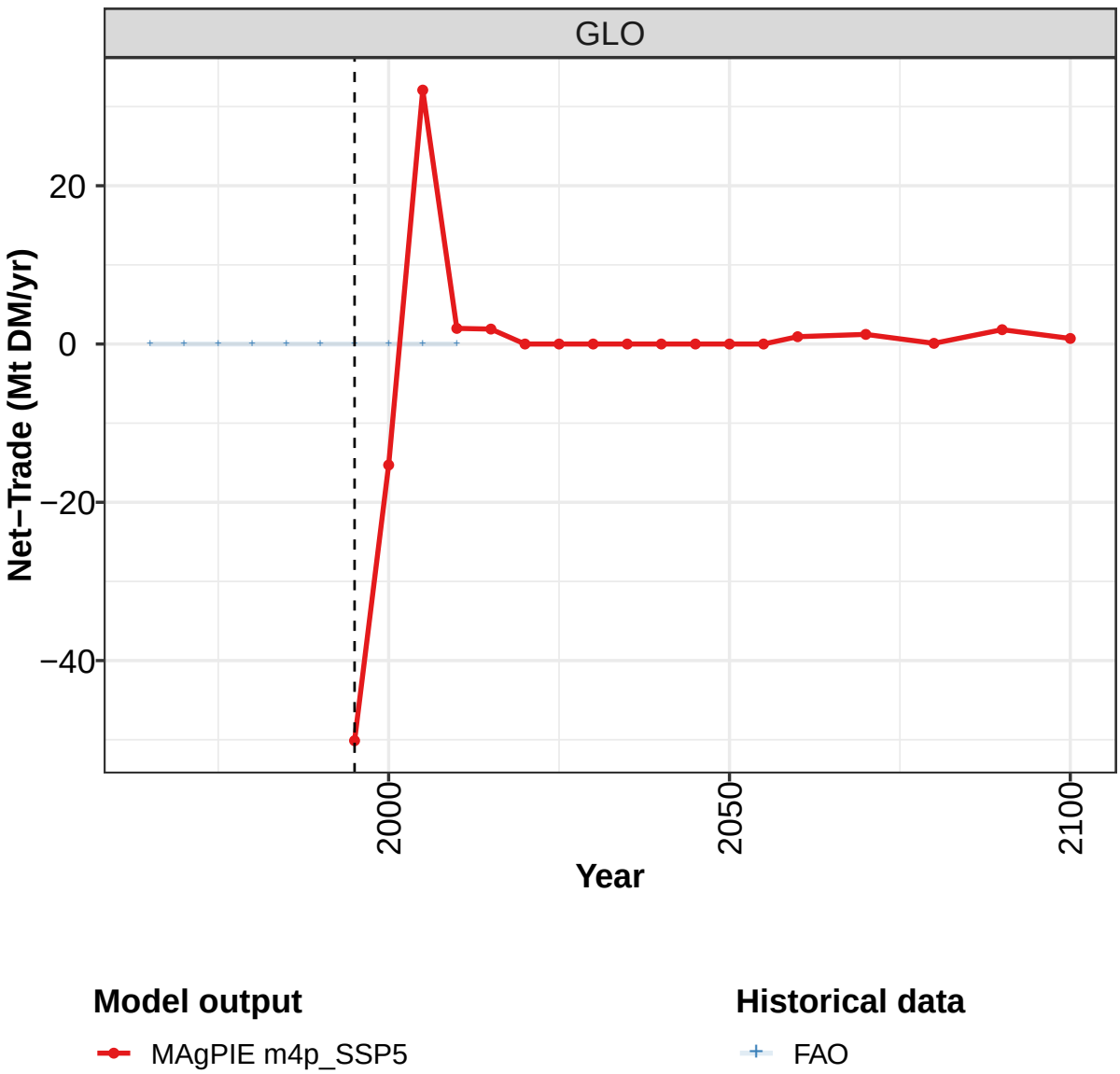
Table 1835: foley_2011 — Resources—Water—Withdrawal—Agriculture (km3/yr)

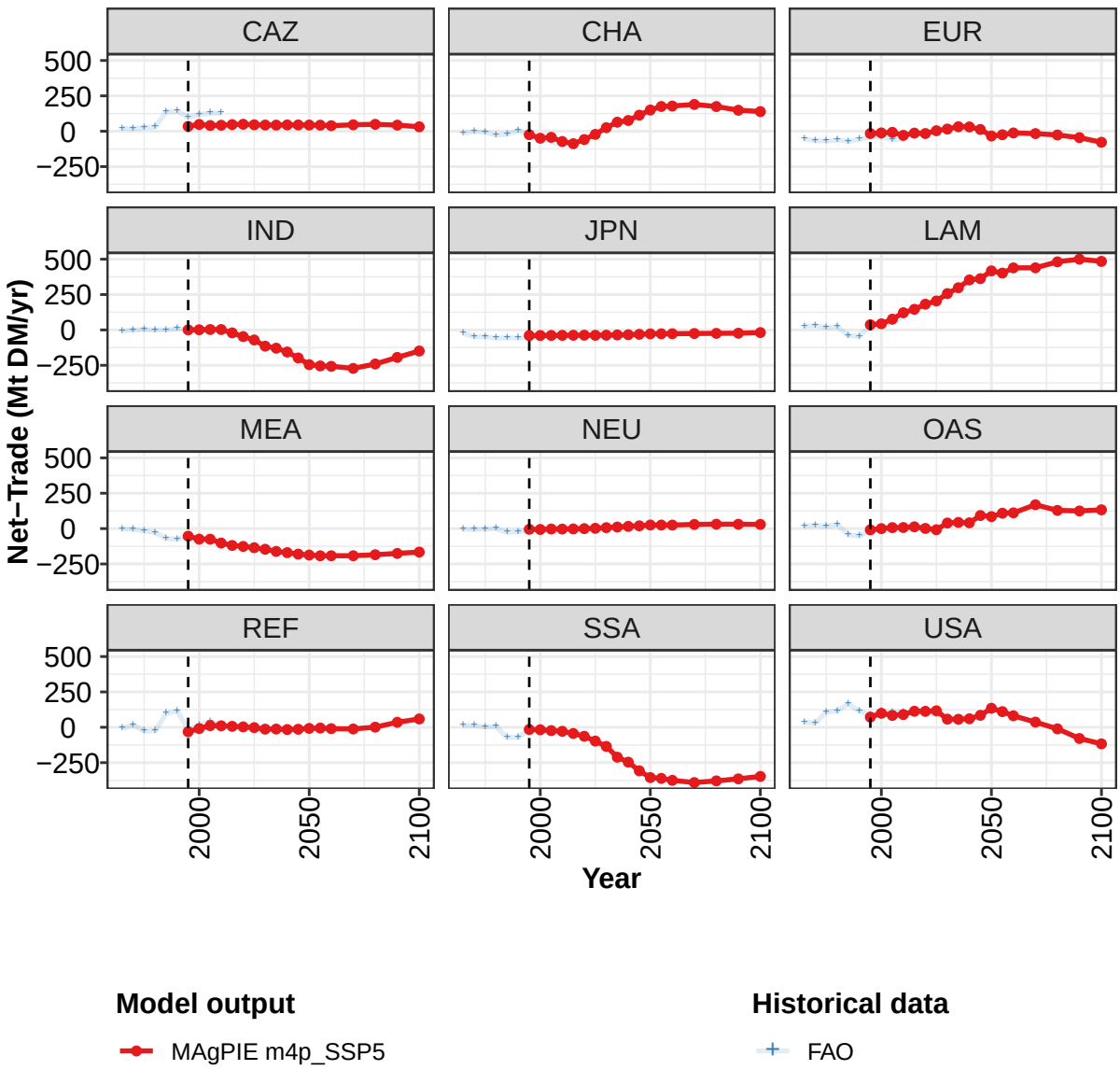
Part XV
Trade

58 Net-Trade




CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Trade|Net−Trade (Mt DM/yr)
500
250
0
−250
2000
2025
2050
2075
2100
ock products|Dairy
ock products|Eggs
ock products|Monogastric meat
ock products|Poultry meat
Livestock products|Ruminant meat
Secondary products|Alcoholic beverages
Secondary products|Brans
Secondary products|Cotton lint
Secondary products|Distillers grains
Secondary products|Ethanol
Secondary products|Microbial protein
Secondary products|Molasses


GLO
Net−Trade (Mt DM/yr)
20
0
−20
−40
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



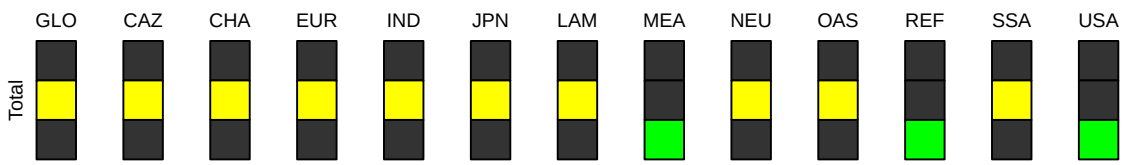


Figure 479: MAgPIE m4p_SSP5 — Trade—Net-Trade (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-50	-15	32	2	2	-0	-0	-0	-0	0	0
CAZ	34	48	41	42	47	49	46	44	43	45	45
CHA	-24	-49	-43	-73	-88	-59	-22	25	64	76	114
EUR	-16	-12	-8	-29	-13	-16	4	16	32	31	13
IND	0	1	3	3	-21	-47	-71	-115	-129	-156	-198
JPN	-40	-39	-39	-38	-38	-37	-38	-37	-35	-34	-31
LAM	37	43	76	122	146	182	204	257	298	353	362
MEA	-53	-74	-75	-102	-119	-126	-135	-146	-161	-170	-180
NEU	-5	-6	-3	-3	-2	-0	2	7	11	16	20
OAS	-9	-0	7	8	13	1	-8	40	44	41	93
REF	-32	-9	11	11	7	3	-2	-13	-12	-16	-14
SSA	-15	-17	-23	-28	-44	-63	-97	-135	-211	-246	-307
USA	72	99	84	90	114	113	117	58	57	60	85

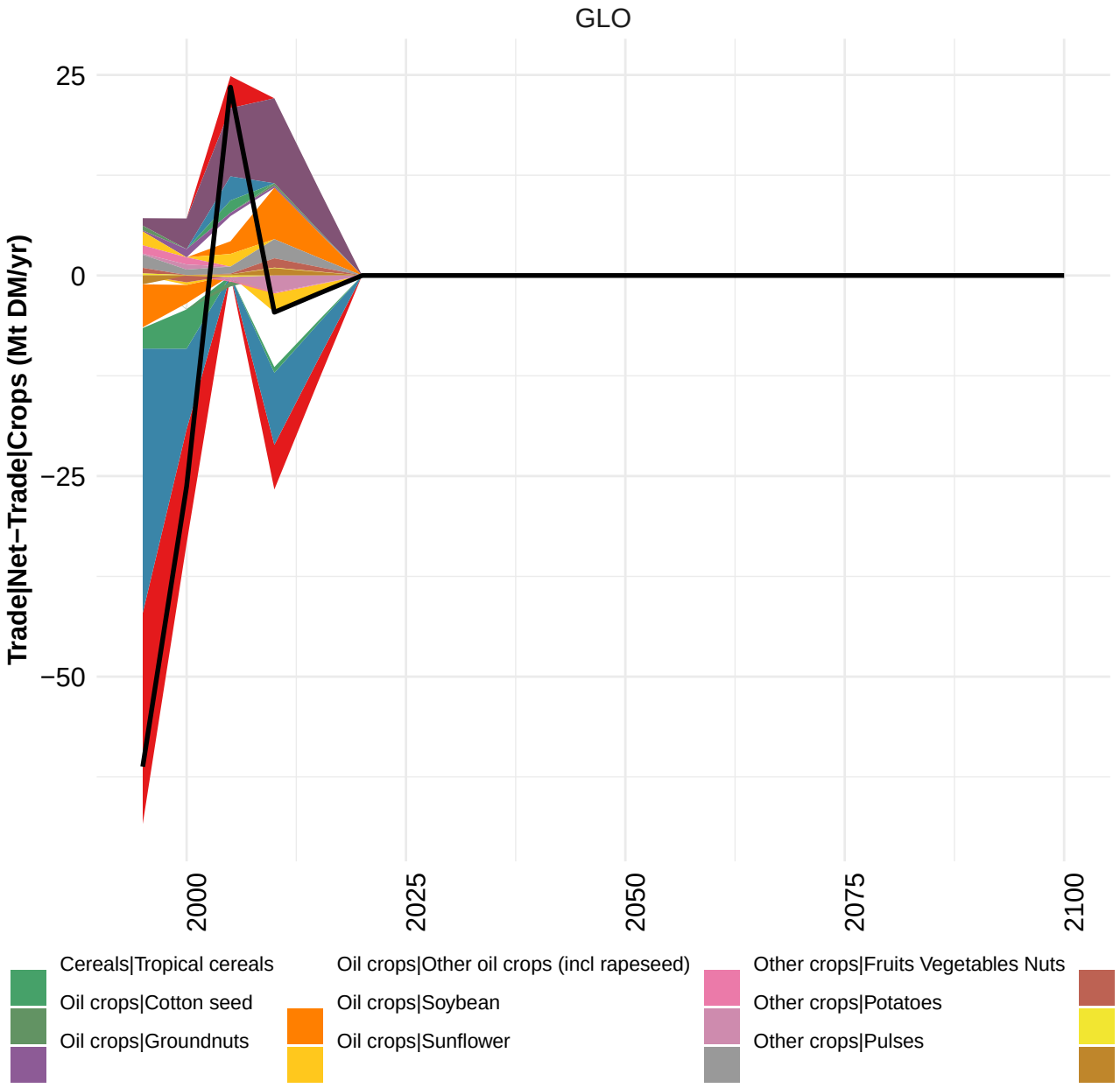
Table 1836: MAgPIE m4p_SSP5 — Trade—Net-Trade (Mt DM/yr) [PART 1/2]

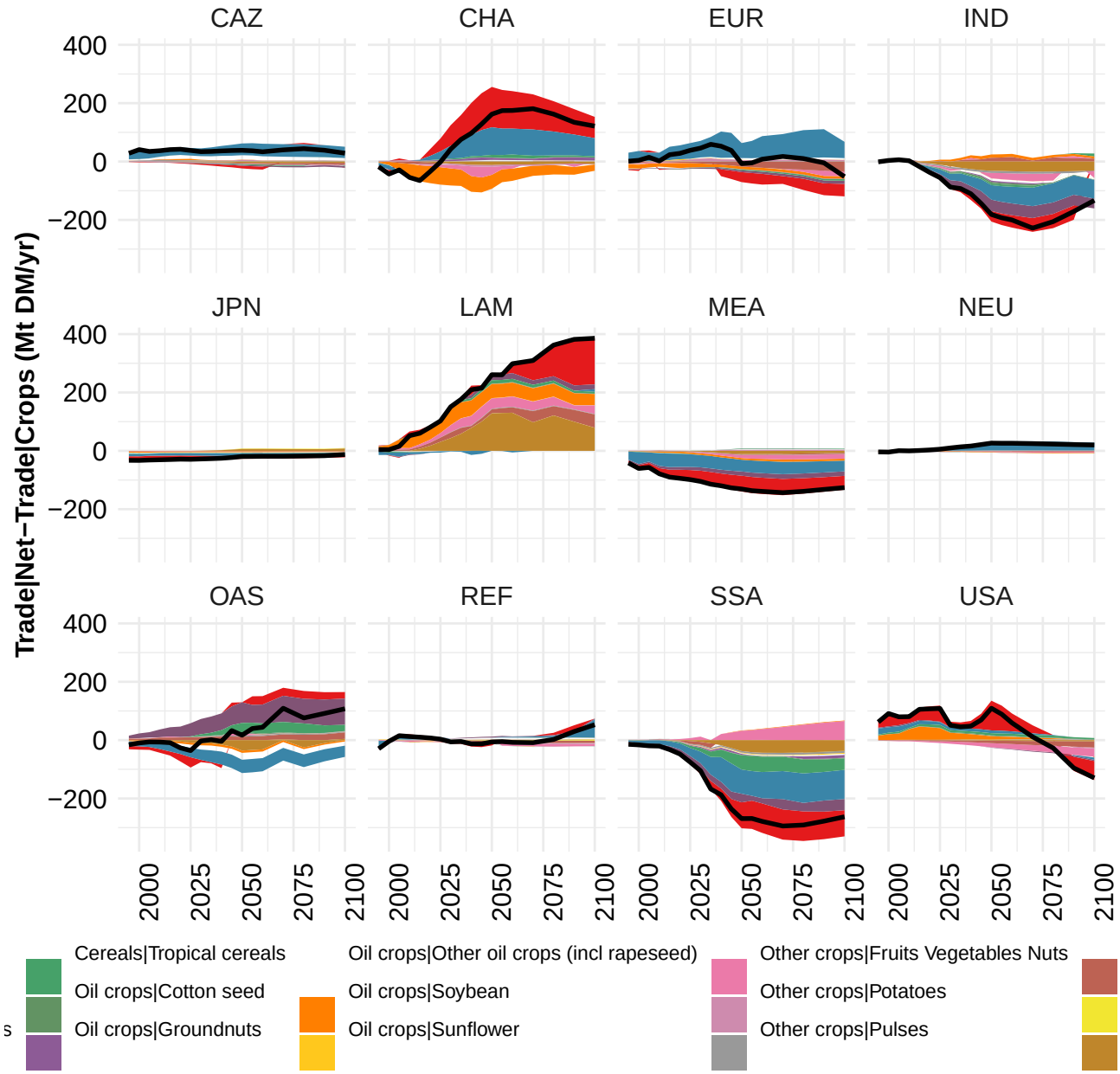
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	1	1	0	2	1
CAZ	44	43	39	46	49	43	32
CHA	150	175	178	190	175	149	139
EUR	-34	-25	-12	-17	-26	-45	-78
IND	-245	-254	-257	-272	-241	-194	-149
JPN	-28	-27	-27	-25	-24	-23	-19
LAM	417	402	438	439	481	500	484
MEA	-187	-192	-192	-192	-185	-175	-166
NEU	25	25	25	30	31	31	30
OAS	85	109	111	169	129	125	133
REF	-8	-5	-10	-12	1	35	59
SSA	-355	-361	-375	-391	-379	-364	-347
USA	135	111	81	37	-11	-79	-117

Table 1837: MAgPIE m4p_SSP5 — Trade—Net-Trade (Mt DM/yr) [PART 2/2]

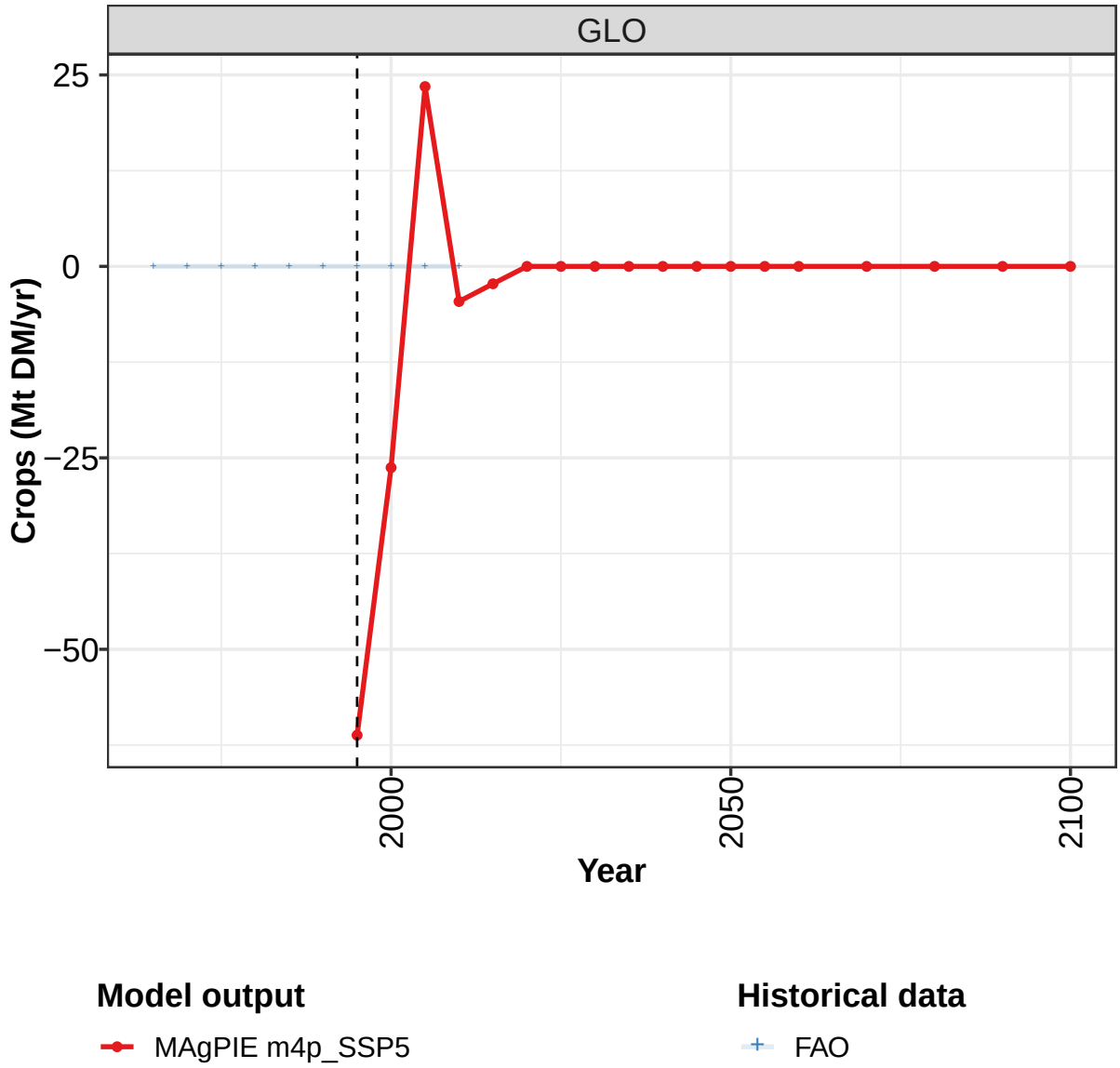
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	21	19	26	31	136	141	98	119	128	128
CHA	-12	-3	-6	-27	-21	3	-25	-59	-69	-93
EUR	-54	-66	-70	-61	-71	-57	-39	-41	-58	-56
IND	-9	-0	2	-0	0	8	6	3	-1	3
JPN	-24	-47	-48	-58	-55	-58	-54	-50	-47	-42
LAM	26	30	17	22	-39	-47	35	29	52	97
MEA	-2	-7	-16	-28	-69	-74	-56	-80	-85	-111
NEU	-4	-6	-3	-1	-26	-23	-6	-10	-13	-11
OAS	17	23	16	28	-42	-53	-14	-12	-15	-3
REF	-8	16	-28	-26	98	116	-15	12	41	15
SSA	13	12	2	5	-74	-71	-15	-25	-43	-37
USA	36	31	107	116	163	115	84	113	109	109

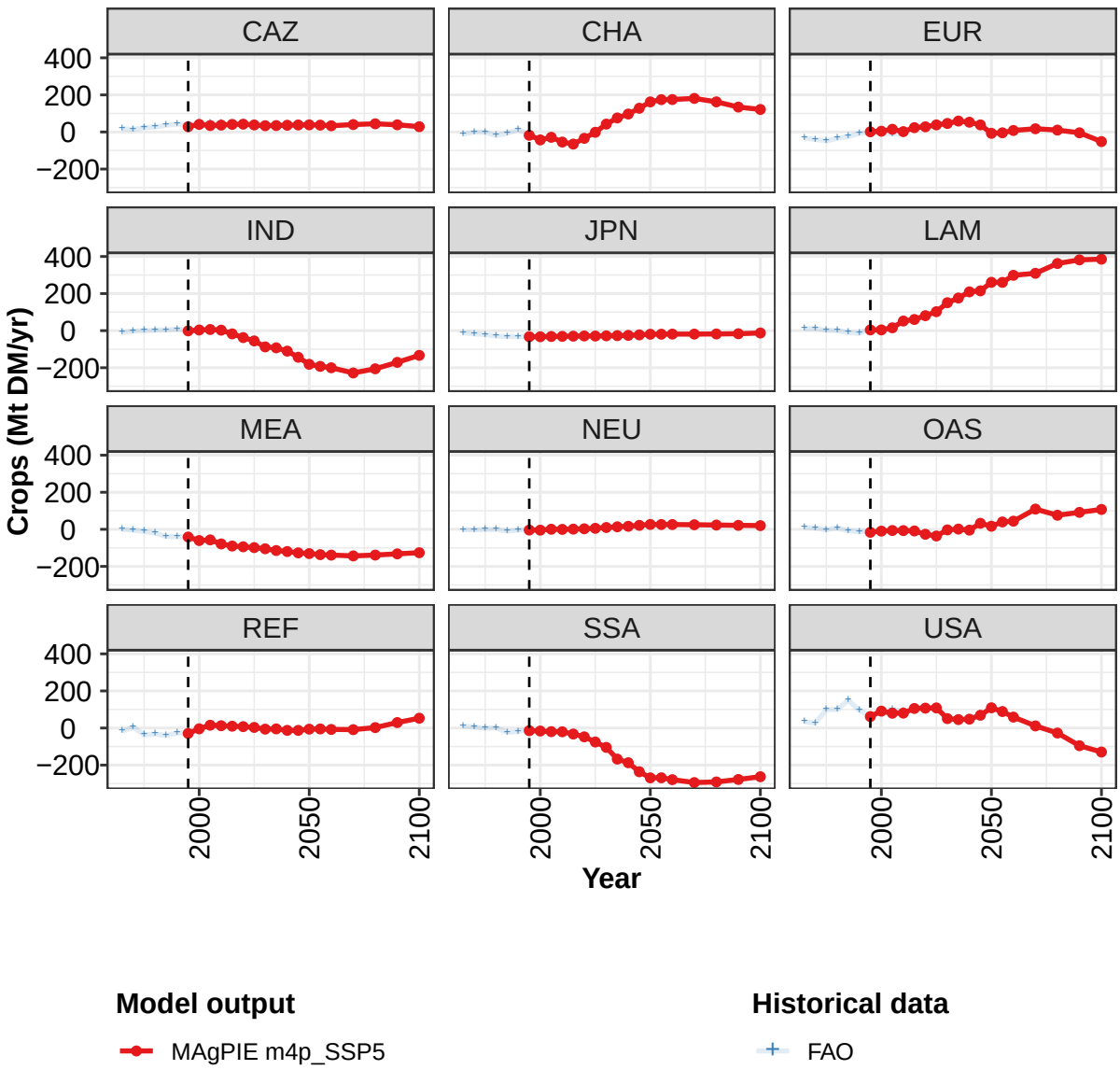
Table 1838: FAO — Trade—Net-Trade (Mt DM/yr)


GLO
Trade|Net−Trade|Crops (Mt DM/yr)
25
0
−25
−50
2000
2025
2050
2075
2100
Cereals|Tropical cereals
Oil crops|Cotton seed
Oil crops|Groundnuts
Oil crops|Other oil crops (incl rapeseed)
Oil crops|Soybean
Oil crops|Sunflower
Other crops|Fruits Vegetables Nuts
Other crops|Potatoes
Other crops|Pulses


CAZ
CHA
EUR
IND
JPN
LAM
MEA
NEU
OAS
REF
SSA
USA
Trade|Net−Trade|Crops (Mt DM/yr)
400
200
0
−200
2000
2025
2050
2075
2100
Cereals|Tropical cereals
Oil crops|Cotton seed
Oil crops|Groundnuts
Oil crops|Other oil crops (incl rapeseed)
Oil crops|Soybean
Oil crops|Sunflower
Other crops|Fruits Vegetables Nuts
Other crops|Potatoes
Other crops|Pulses

58.1 Crops


GLO
25
0
−25
−50
Crops (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



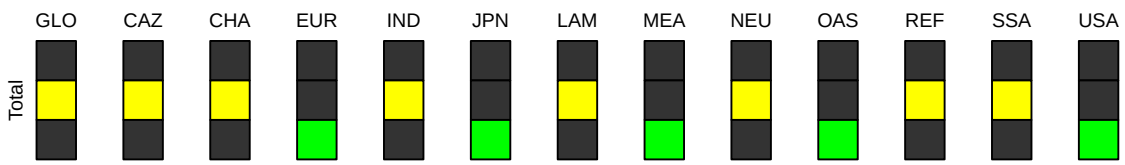


Figure 480: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-61	-26	23	-5	-2	-0	-0	-0	-0	-0	0
CAZ	28	41	35	37	41	42	38	34	35	36	38
CHA	-18	-43	-29	-54	-65	-34	-2	42	76	97	128
EUR	1	4	15	2	23	28	38	46	59	53	38
IND	-1	4	6	3	-17	-37	-55	-88	-93	-110	-144
JPN	-33	-33	-31	-31	-30	-29	-29	-28	-27	-25	-23
LAM	4	4	15	52	60	81	102	151	176	209	215
MEA	-41	-60	-57	-79	-90	-94	-99	-105	-114	-120	-127
NEU	-4	-4	1	-0	1	3	6	10	14	16	21
OAS	-16	-10	-6	-7	-9	-27	-36	-3	1	-4	33
REF	-29	-4	15	12	10	7	3	-6	-5	-13	-13
SSA	-14	-16	-20	-20	-32	-48	-75	-105	-168	-187	-236
USA	62	91	80	80	106	107	108	51	45	48	69

Table 1839: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops (Mt DM/yr) [PART 1/2]

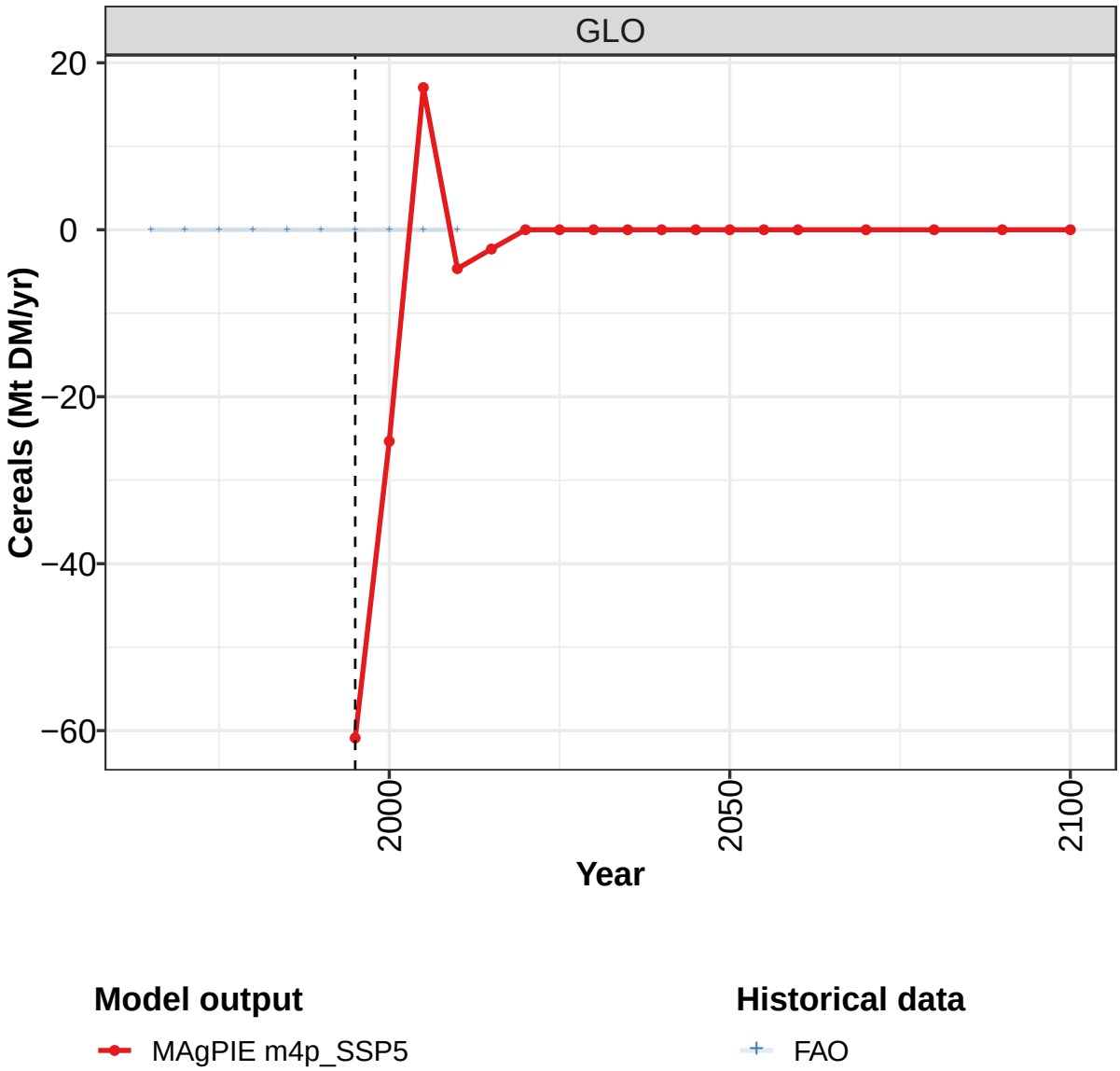
	2050	2055	2060	2070	2080	2090	2100
GLO	-0	0	-0	-0	-0	-0	0
CAZ	38	37	33	40	44	39	29
CHA	162	174	175	181	162	134	121
EUR	-7	-5	8	17	10	-4	-52
IND	-182	-193	-200	-228	-206	-171	-133
JPN	-19	-19	-19	-19	-18	-17	-13
LAM	261	260	299	309	362	382	386
MEA	-131	-137	-139	-143	-139	-132	-126
NEU	26	26	26	25	23	21	20
OAS	17	40	44	109	76	91	107
REF	-6	-5	-8	-9	2	30	53
SSA	-269	-269	-278	-294	-291	-278	-263
USA	109	89	59	11	-27	-95	-130

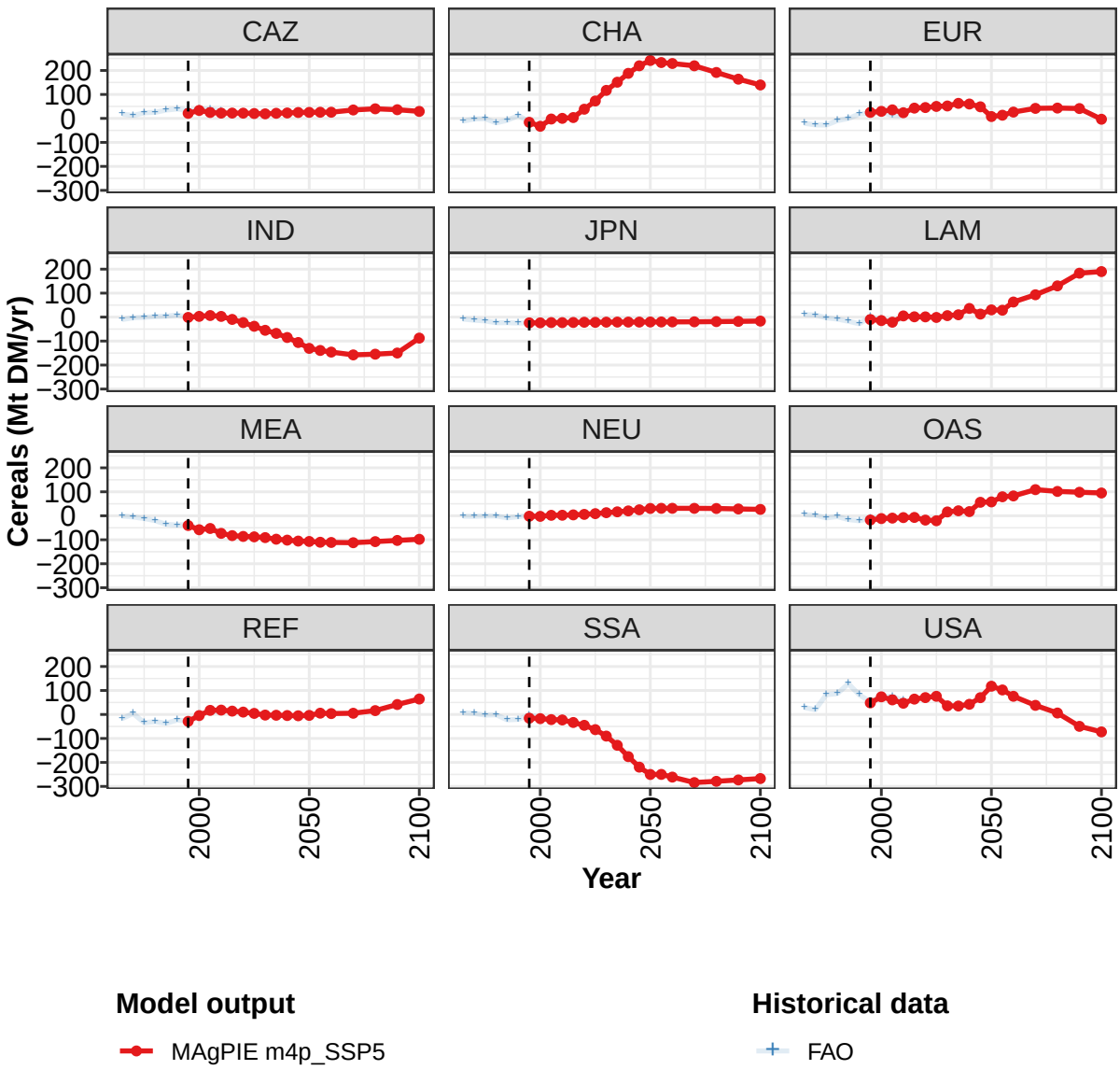
Table 1840: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	18	14	24	26	37	42	40	47	49	46
CHA	-11	-1	-2	-19	-7	13	-15	-41	-33	-52
EUR	-32	-40	-48	-34	-25	-8	-3	-1	-10	-11
IND	-10	-3	-1	2	4	8	1	6	5	6
JPN	-11	-18	-21	-30	-31	-33	-32	-33	-32	-31
LAM	12	11	2	-1	-10	-15	14	6	4	47
MEA	-0	-5	-12	-20	-38	-40	-37	-58	-59	-80
NEU	-3	-3	-2	-1	-9	-4	2	-2	-2	-2
OAS	10	8	-2	7	-8	-13	-9	-8	-13	-6
REF	-17	5	-37	-33	-40	-27	-24	-2	15	4
SSA	9	6	-1	1	-23	-19	-2	-11	-24	-14
USA	35	26	99	100	150	95	65	97	99	92

Table 1841: FAO — Trade—Net-Trade—Crops (Mt DM/yr)

58.1.1 Cereals





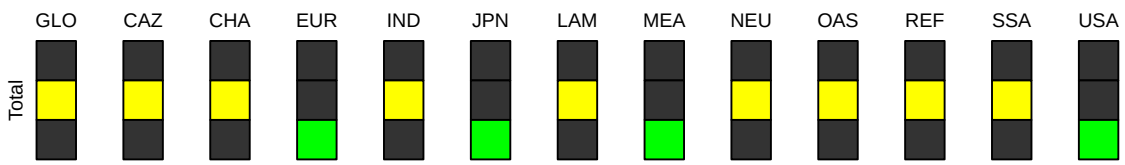


Figure 481: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-61	-25	17	-5	-2	-0	0	-0	0	-0	0
CAZ	21	33	25	22	22	22	21	19	21	23	25
CHA	-16	-33	-2	0	4	38	73	117	151	188	220
EUR	25	30	36	24	43	45	50	52	63	60	49
IND	-1	3	7	3	-10	-23	-38	-55	-68	-85	-106
JPN	-24	-24	-23	-23	-22	-21	-22	-21	-21	-21	-21
LAM	-10	-14	-21	5	1	1	-1	6	10	36	13
MEA	-41	-58	-53	-73	-83	-86	-88	-91	-98	-101	-105
NEU	-2	-2	2	2	4	6	9	13	17	20	25
OAS	-18	-12	-10	-8	-7	-18	-21	16	21	18	56
REF	-29	-5	17	18	14	10	5	-2	-3	-4	-5
SSA	-16	-17	-21	-23	-33	-45	-63	-90	-129	-176	-220
USA	48	74	61	47	64	70	76	36	35	43	70

Table 1842: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals (Mt DM/yr) [PART 1/2]

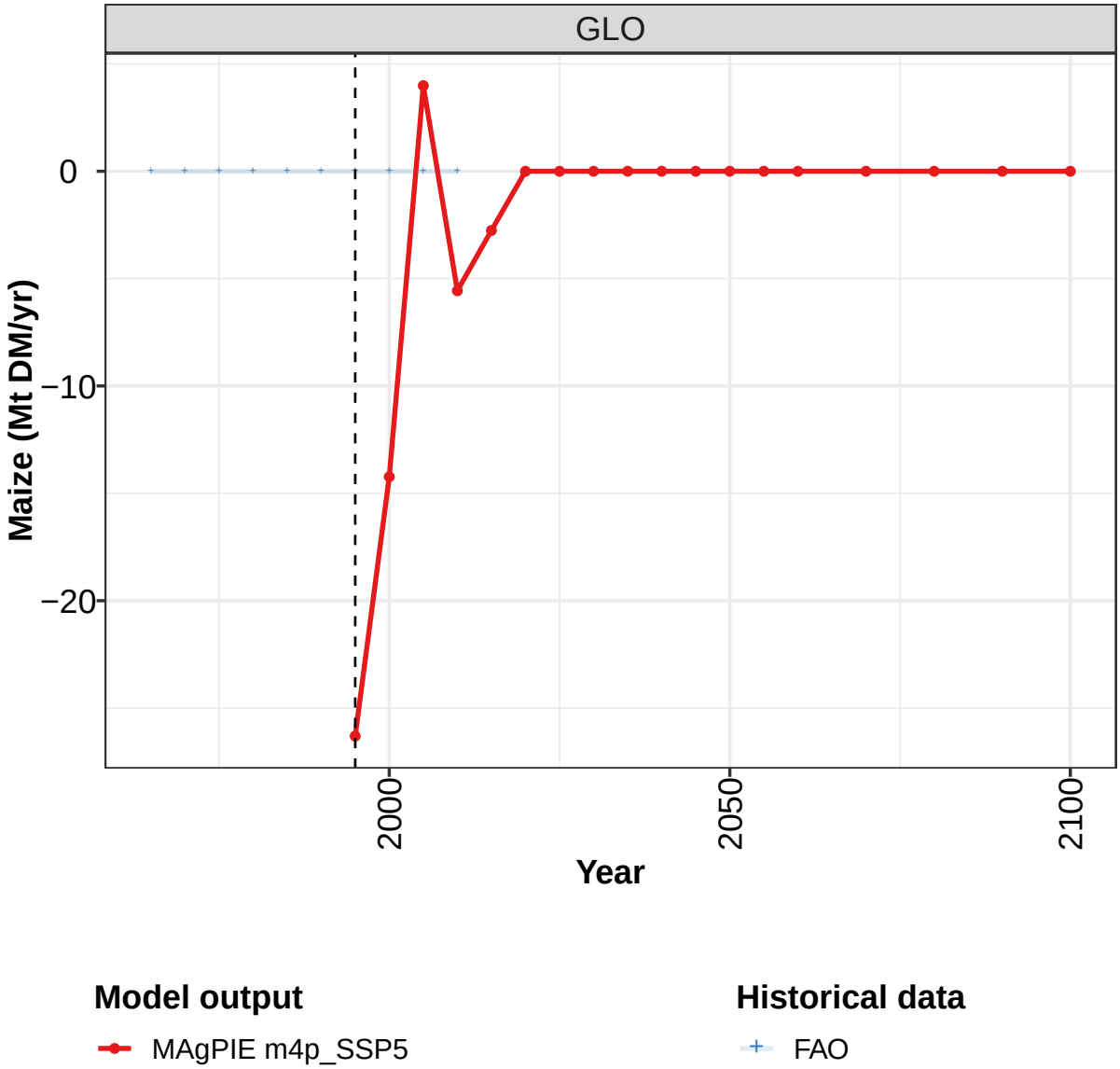
	2050	2055	2060	2070	2080	2090	2100
GLO	-0	0	0	-0	0	-0	0
CAZ	25	26	26	35	40	36	29
CHA	242	233	229	220	192	164	140
EUR	8	13	26	42	43	41	-3
IND	-130	-139	-146	-158	-155	-150	-88
JPN	-20	-20	-20	-20	-19	-18	-17
LAM	30	29	63	93	130	183	190
MEA	-107	-110	-111	-112	-108	-103	-98
NEU	31	31	31	31	30	28	27
OAS	58	79	83	109	102	98	95
REF	-4	5	4	5	16	41	64
SSA	-250	-250	-261	-284	-279	-273	-267
USA	118	102	76	38	6	-49	-73

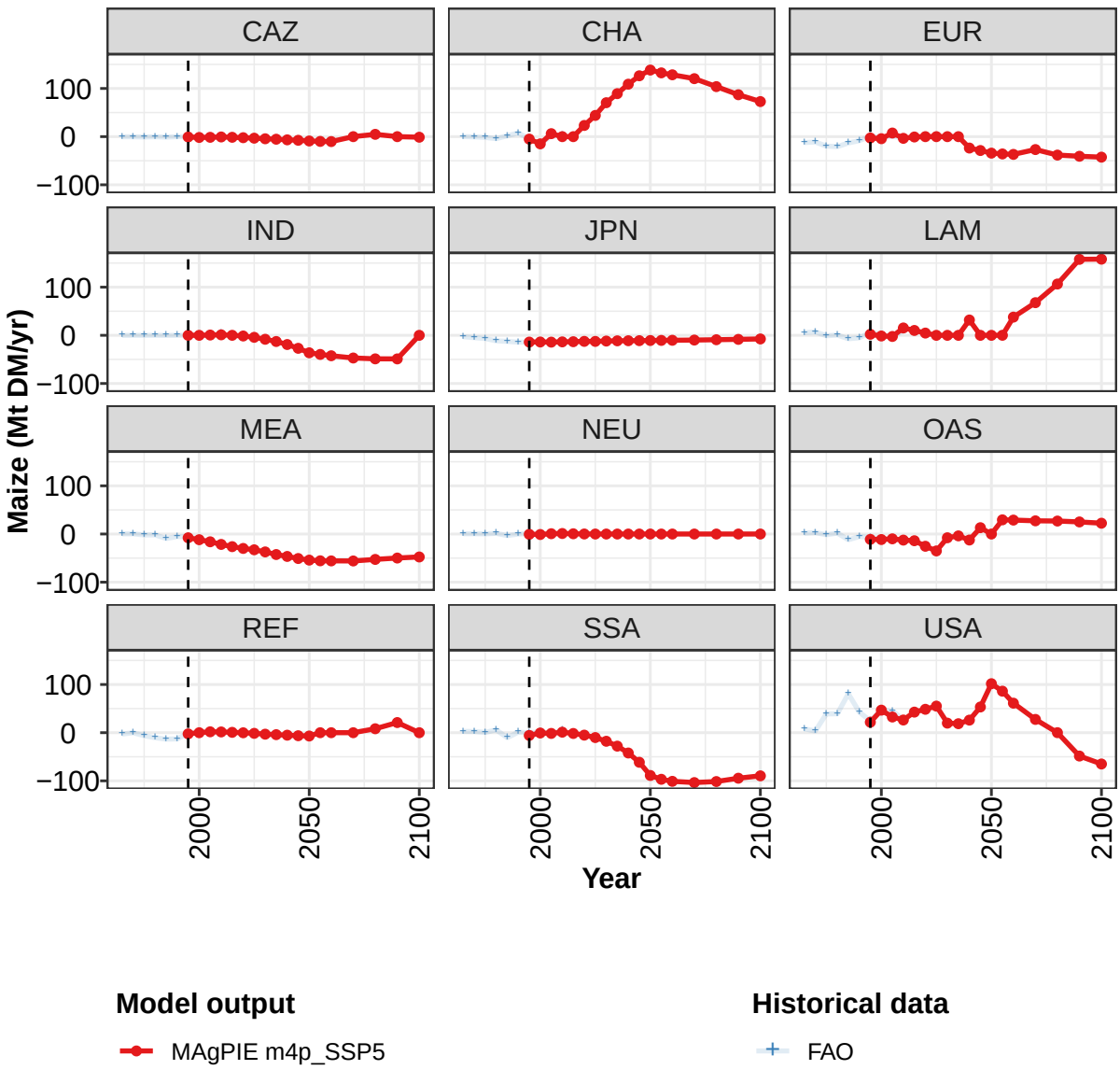
Table 1843: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	18	12	23	26	35	39	34	38	39	32
CHA	-11	-2	-1	-18	-8	12	-13	-31	-8	3
EUR	-20	-27	-27	-9	-0	18	22	26	12	11
IND	-10	-3	-1	2	4	9	1	5	6	6
JPN	-8	-13	-16	-23	-23	-25	-24	-24	-23	-23
LAM	10	9	-3	-8	-17	-28	1	-10	-25	-1
MEA	-1	-5	-11	-20	-36	-39	-36	-55	-54	-73
NEU	-2	-3	-1	-1	-9	-4	2	-1	-0	1
OAS	5	2	-9	-3	-16	-21	-10	-9	-14	-5
REF	-17	4	-34	-30	-37	-23	-27	-3	16	9
SSA	7	4	-3	-1	-23	-20	-3	-12	-24	-19
USA	29	20	83	87	128	82	53	76	75	59

Table 1844: FAO — Trade—Net-Trade—Crops—Cereals (Mt DM/yr)

58.1.2 Cereals—Maize





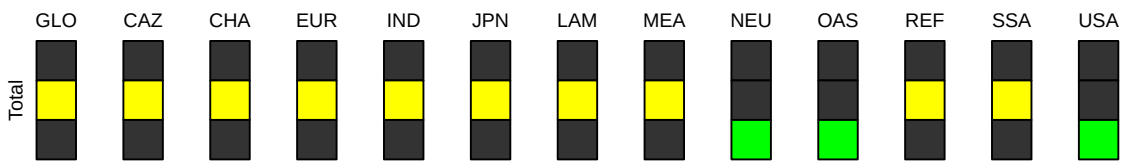


Figure 482: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-26	-14	4	-6	-3	-0	0	-0	0	-0	0
CAZ	-1	-2	-1	-1	-1	-2	-3	-4	-5	-7	-8
CHA	-5	-15	6	0	0	23	44	70	89	109	126
EUR	-3	-4	8	-3	-1	-0	0	0	0	-24	-29
IND	0	0	1	1	0	-1	-4	-8	-13	-19	-27
JPN	-14	-14	-14	-14	-13	-13	-13	-12	-11	-11	-11
LAM	2	-1	-2	15	10	5	-0	0	0	32	0
MEA	-8	-12	-16	-22	-26	-30	-33	-37	-43	-47	-51
NEU	-1	-1	1	1	1	0	-0	0	0	0	0
OAS	-11	-11	-10	-13	-14	-25	-35	-8	-4	-12	13
REF	-2	0	2	2	1	-0	-1	-3	-4	-5	-6
SSA	-6	-1	-2	1	-2	-5	-10	-18	-28	-42	-61
USA	22	47	33	26	43	49	55	20	19	26	53

Table 1845: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

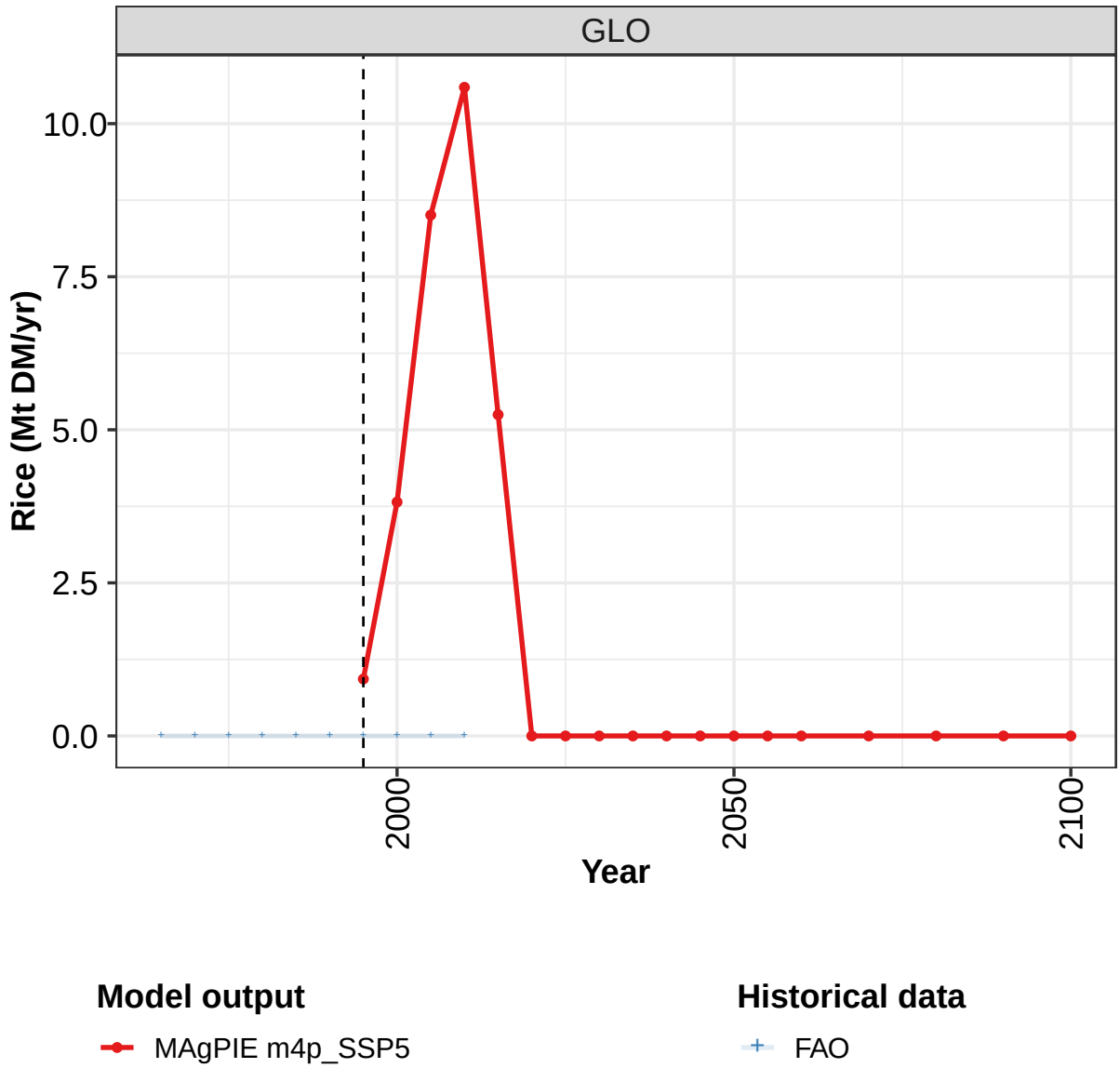
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	-0	0
CAZ	-9	-10	-10	0	5	0	-1
CHA	138	132	128	120	104	87	73
EUR	-34	-36	-37	-27	-38	-41	-43
IND	-36	-40	-42	-47	-49	-49	0
JPN	-11	-11	-10	-10	-9	-8	-8
LAM	0	0	38	68	107	158	158
MEA	-54	-56	-56	-56	-53	-50	-48
NEU	0	0	0	0	0	-0	0
OAS	0	29	29	27	27	25	22
REF	-7	0	0	0	8	21	-0
SSA	-89	-97	-101	-104	-101	-95	-90
USA	102	86	61	28	0	-48	-65

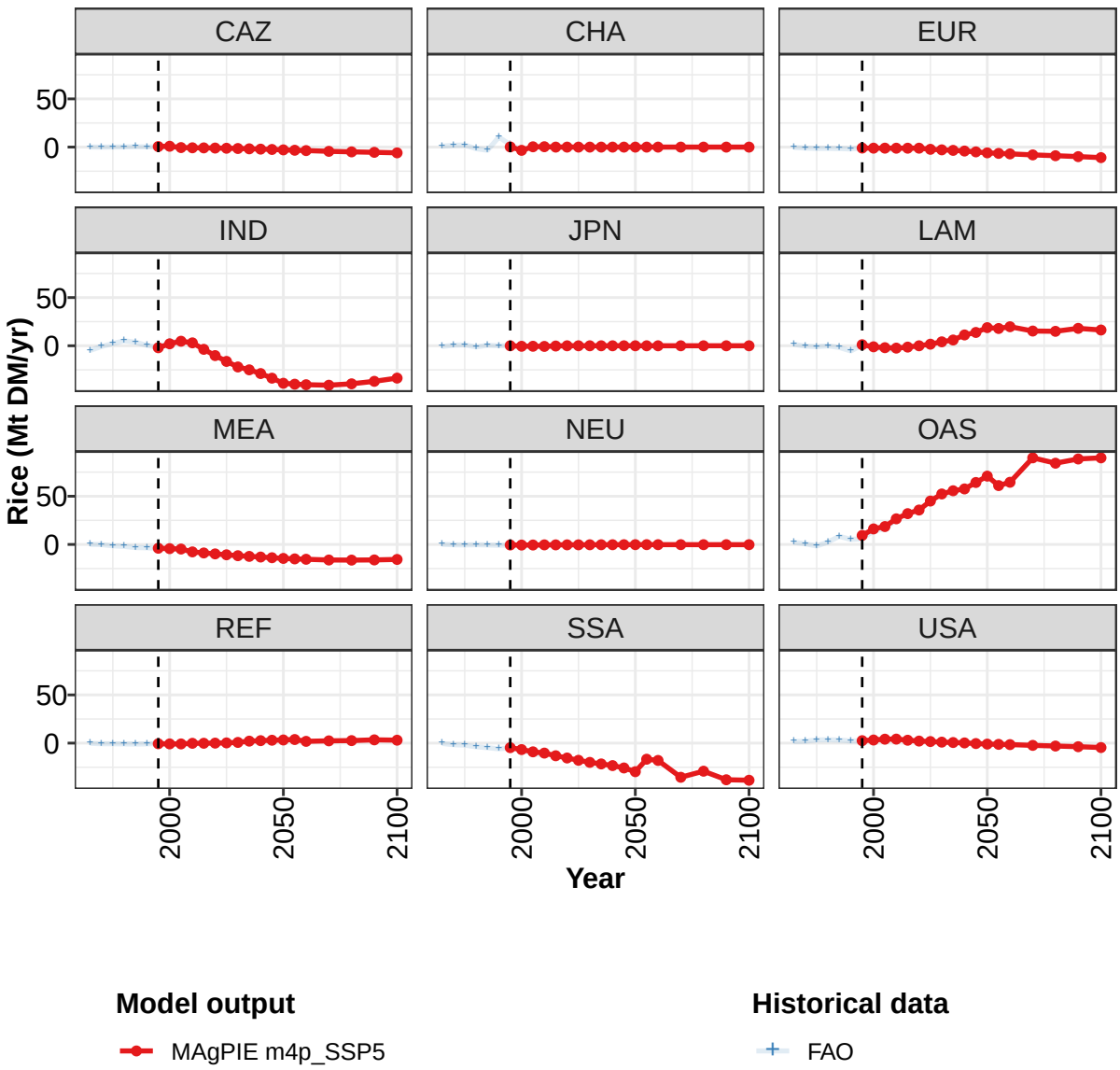
Table 1846: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	-0.3	-0.3	-0.9	-0.2	-1.1	-0.1	-0.1	-1.5	-1.6	-0.6
CHA	0.1	-0.6	-1.6	-4.2	1.7	7.7	-4.6	-14.7	1.1	2.2
EUR	-12.2	-11.2	-19.7	-20.8	-13.1	-8.4	1.0	-2.1	0.3	-2.7
IND	-0.2	0.0	-0.1	0.0	-0.2	0.0	0.1	0.0	0.4	3.9
JPN	-2.9	-4.9	-6.7	-11.4	-12.6	-14.2	-14.0	-13.8	-14.2	-13.6
LAM	5.5	7.1	-0.9	0.5	-7.1	-5.2	6.5	1.4	-2.8	9.3
MEA	0.3	0.4	-2.0	-2.0	-9.3	-5.4	-5.7	-10.3	-15.8	-21.3
NEU	0.6	0.5	0.2	1.4	-3.3	-0.1	1.0	-0.1	-0.1	1.0
OAS	1.7	3.0	-1.6	1.9	-11.9	-5.3	-6.8	-9.7	-11.2	-11.7
REF	-3.0	-0.0	-6.3	-10.5	-13.4	-12.9	-1.5	0.9	1.7	0.4
SSA	2.6	2.4	0.6	5.9	-10.4	1.1	-0.4	2.2	-2.4	5.3
USA	7.9	3.5	38.9	39.3	80.7	42.7	24.6	47.8	44.5	27.7

Table 1847: FAO — Trade—Net-Trade—Crops—Cereals—Maize (Mt DM/yr)

58.1.3 Cereals—Rice





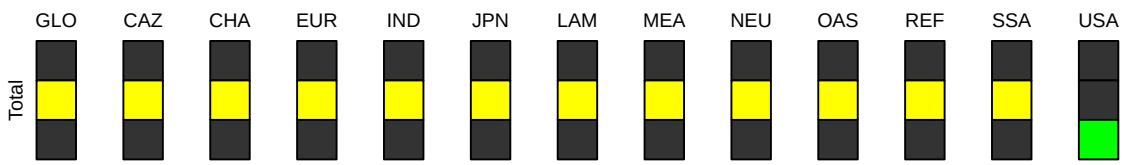


Figure 483: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.9	3.8	8.5	10.6	5.2	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.6	0.9	-0.5	-0.7	-0.8	-1.0	-1.2	-1.5	-1.8	-2.1	-2.5
CHA	0.2	-3.4	0.3	0.4	0.0	0.0	0.0	0.0	-0.0	0.0	0.0
EUR	-1.0	-1.1	-1.1	-1.2	-1.2	-1.1	-2.3	-2.9	-3.4	-4.1	-4.9
IND	-2.0	2.1	4.7	3.0	-3.7	-10.2	-16.2	-22.0	-24.9	-28.8	-33.6
JPN	0.0	-0.5	-0.5	-0.6	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.1	-1.1	-2.0	-2.4	-1.4	-0.0	1.7	4.1	6.0	11.2	13.8
MEA	-3.9	-4.3	-4.7	-7.7	-8.8	-9.8	-10.7	-11.7	-12.4	-13.0	-13.7
NEU	-0.5	-0.6	-0.6	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2
OAS	9.4	16.1	18.6	26.6	32.0	35.7	45.0	52.4	55.7	57.6	64.3
REF	-0.6	-0.8	-0.8	-0.2	-0.1	0.0	0.2	0.7	2.1	2.6	3.0
SSA	-4.7	-6.7	-9.0	-10.3	-13.1	-15.4	-17.8	-20.0	-21.6	-23.3	-25.7
USA	2.6	3.2	4.1	4.2	3.0	2.1	1.7	1.0	0.6	0.2	-0.4

Table 1848: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

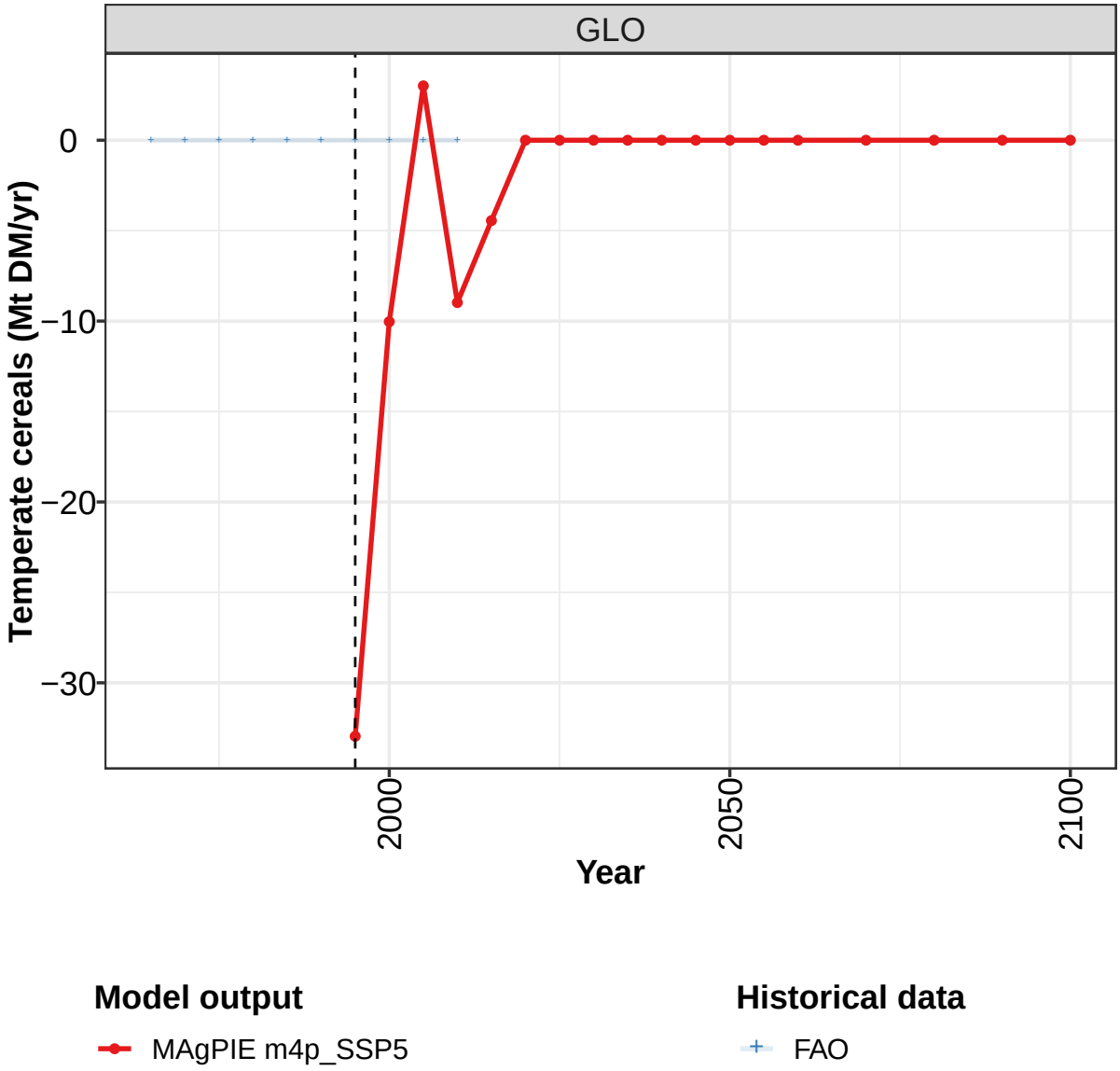
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	-2.9	-3.3	-3.6	-4.4	-4.9	-5.4	-5.9
CHA	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	-6.0	-6.5	-7.1	-8.1	-9.0	-9.9	-10.9
IND	-38.9	-39.9	-40.4	-40.9	-39.5	-36.9	-33.5
JPN	0.0	0.0	0.0	0.0	0.0	-0.0	0.0
LAM	18.8	17.9	19.8	15.3	15.0	18.1	16.3
MEA	-14.5	-15.0	-15.4	-16.1	-16.2	-16.1	-15.5
NEU	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
OAS	70.9	61.1	64.5	89.8	84.3	88.7	89.8
REF	3.3	3.8	1.9	2.4	2.6	3.4	3.1
SSA	-29.6	-16.7	-17.9	-35.4	-29.1	-38.0	-38.5
USA	-1.0	-1.2	-1.5	-2.3	-3.0	-3.7	-4.6

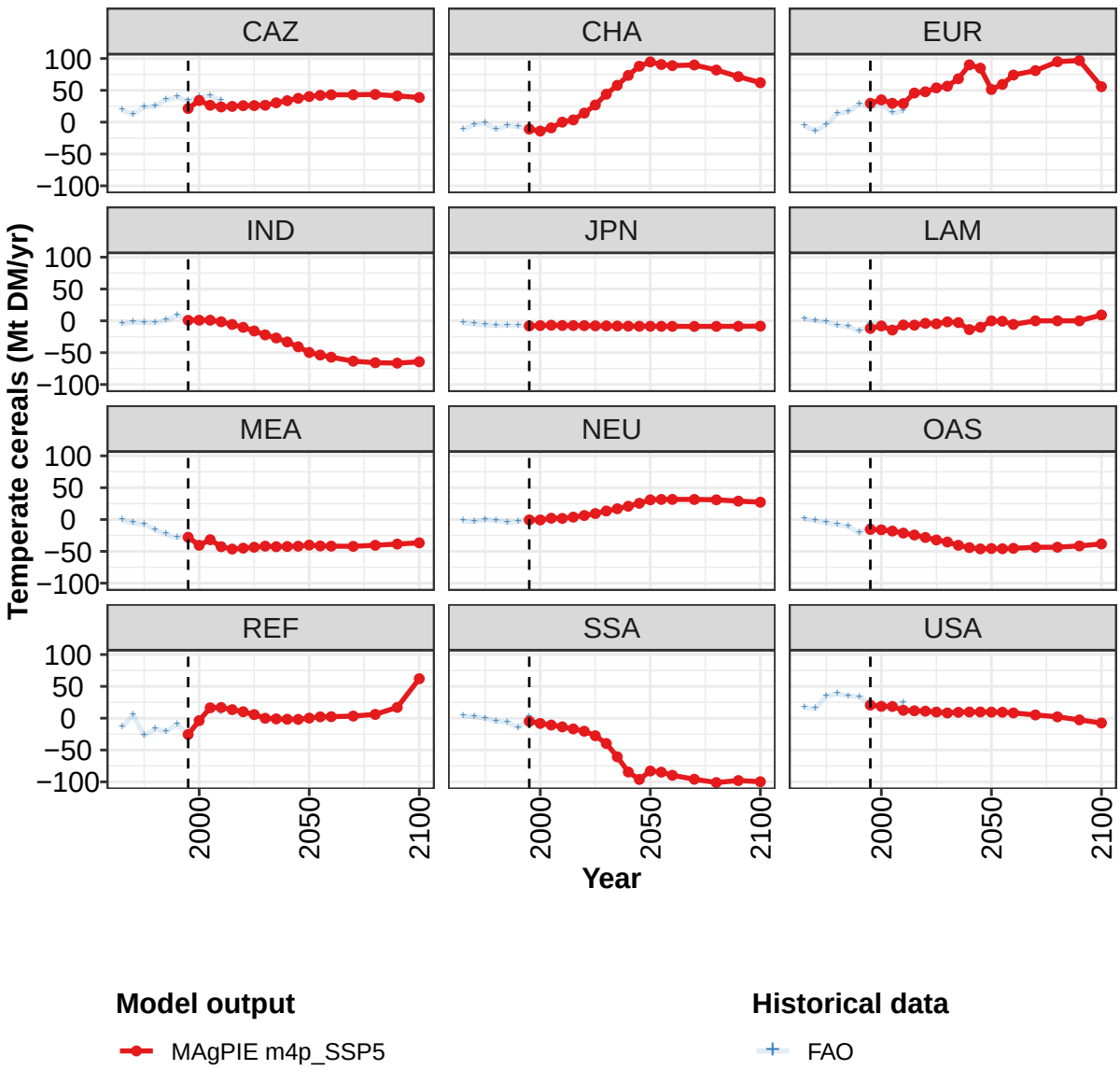
Table 1849: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.0	-0.0	0.0	0.2	0.4	0.2	0.4	0.1	-0.7	-0.9
CHA	0.9	1.8	2.1	-1.7	-3.3	10.3	2.6	-2.8	0.0	-0.6
EUR	-0.4	-1.0	-1.4	-1.4	-1.6	-1.9	-1.1	-1.6	-2.2	-2.6
IND	-4.8	-0.8	2.3	5.1	3.6	0.4	-1.5	3.3	5.3	2.2
JPN	-0.8	0.6	0.9	-1.2	0.5	-0.0	0.3	-0.5	-0.6	-0.7
LAM	1.5	-0.4	-1.0	-0.2	-1.8	-5.4	0.8	-2.0	-3.7	-4.6
MEA	0.1	-0.2	-1.4	-2.1	-3.2	-3.5	-4.0	-4.7	-5.5	-8.6
NEU	0.1	-0.4	-0.6	-0.3	-0.6	-0.9	-0.6	-0.9	-1.1	-1.1
OAS	2.2	0.7	-1.6	2.6	8.4	5.2	6.0	14.0	16.2	25.9
REF	-0.2	-0.6	-0.7	-0.8	-1.0	-0.8	-0.4	-1.0	-1.2	-0.7
SSA	-0.3	-1.7	-2.1	-3.8	-4.7	-5.9	-4.8	-7.5	-10.8	-12.5
USA	1.7	1.9	3.3	3.5	3.2	2.2	2.4	3.5	4.4	4.2

Table 1850: FAO — Trade—Net-Trade—Crops—Cereals—Rice (Mt DM/yr)

58.1.4 Cereals—Temperate cereals





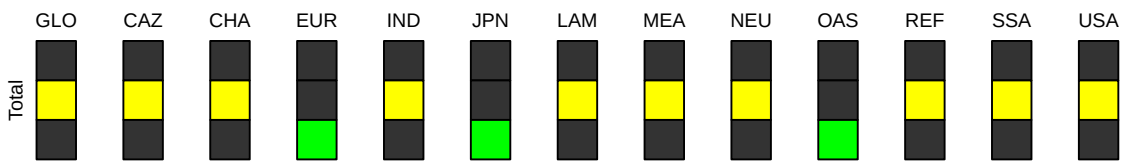


Figure 484: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-33.0	-10.0	3.0	-9.0	-4.4	0.0	0.0	-0.0	0.0	-0.0	0.0
CAZ	21.4	34.1	26.6	23.9	24.8	25.9	26.0	26.6	30.4	33.8	37.4
CHA	-10.9	-13.9	-9.0	-0.0	3.6	14.2	27.0	43.9	57.8	73.5	87.9
EUR	29.7	35.1	29.6	29.2	45.8	47.7	53.8	56.5	68.2	90.1	84.9
IND	0.8	1.0	1.0	-1.5	-5.7	-10.2	-15.9	-22.0	-26.9	-33.2	-40.8
JPN	-8.0	-7.5	-7.0	-7.3	-7.4	-7.5	-7.8	-7.9	-8.1	-8.3	-8.5
LAM	-11.9	-8.0	-14.5	-6.6	-6.8	-3.9	-4.7	-1.6	-2.8	-13.7	-10.1
MEA	-27.9	-40.5	-31.7	-42.7	-46.4	-45.0	-43.5	-41.8	-42.7	-42.4	-41.9
NEU	-0.6	-0.7	2.0	1.8	3.8	6.3	9.4	13.4	16.9	20.9	25.5
OAS	-15.6	-16.2	-18.1	-21.3	-24.3	-28.2	-32.1	-35.3	-40.5	-44.1	-46.1
REF	-25.6	-3.8	16.4	16.8	13.4	10.1	5.7	-0.1	-1.1	-1.6	-1.9
SSA	-4.9	-8.2	-10.8	-13.6	-16.8	-20.4	-27.5	-39.8	-60.6	-84.5	-96.2
USA	20.6	18.6	18.4	12.4	11.7	11.0	9.7	8.2	9.3	9.7	9.8

Table 1851: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

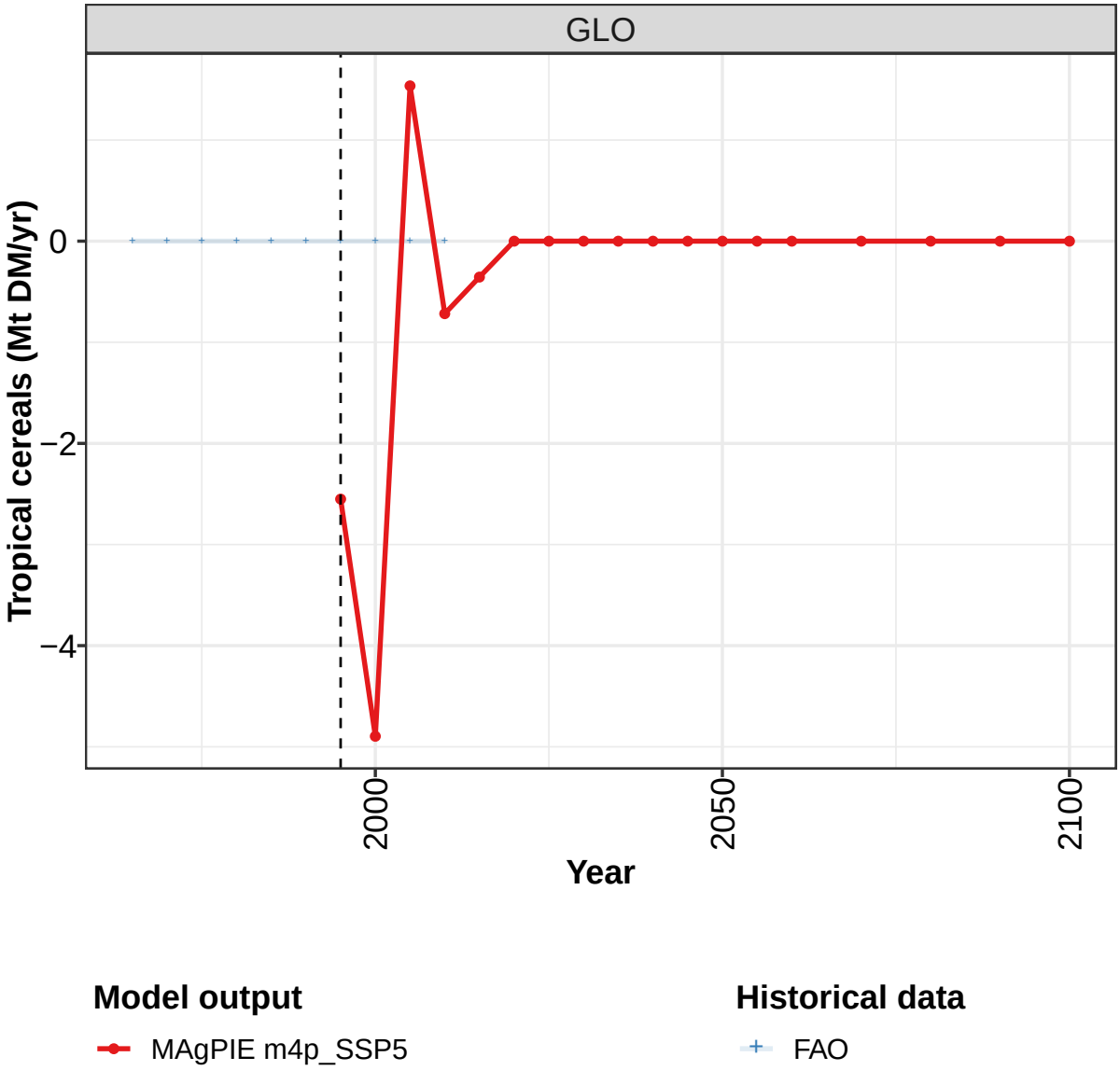
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	-0.0	0.0	-0.0	0.0
CAZ	40.2	42.1	43.0	43.0	43.5	41.2	38.7
CHA	94.6	90.6	88.8	89.8	81.9	71.5	62.0
EUR	51.3	59.3	74.0	81.0	94.9	96.9	55.7
IND	-49.7	-53.7	-57.1	-63.4	-65.8	-66.4	-64.3
JPN	-8.5	-8.6	-8.6	-8.8	-8.7	-8.6	-8.3
LAM	0.0	-0.6	-5.6	0.0	0.0	0.0	9.2
MEA	-40.2	-41.5	-41.8	-42.1	-40.5	-38.6	-36.7
NEU	31.0	31.6	31.6	31.5	31.0	28.9	27.2
OAS	-45.6	-45.9	-45.3	-43.6	-43.5	-41.5	-38.4
REF	0.2	2.1	2.4	3.4	6.0	17.0	62.1
SSA	-83.0	-84.8	-89.7	-95.9	-101.1	-97.9	-99.8
USA	9.6	9.4	8.3	5.1	2.1	-2.6	-7.5

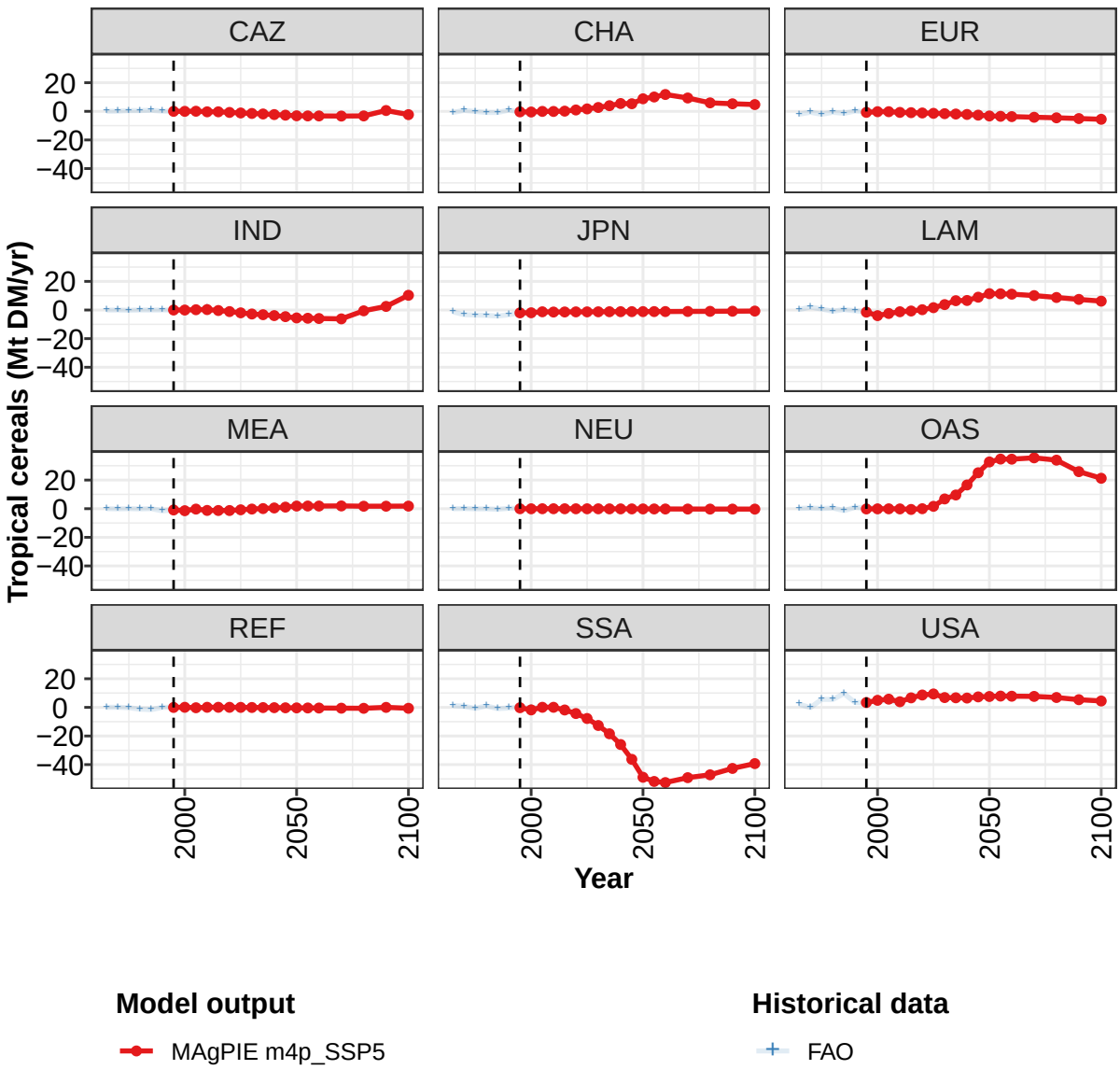
Table 1852: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	18.4	12.5	23.7	25.0	34.9	39.2	33.6	39.1	40.9	34.4
CHA	-11.4	-3.9	-1.8	-11.5	-5.4	-6.9	-10.9	-13.5	-8.8	1.7
EUR	-5.3	-14.2	-4.3	13.6	15.8	28.4	22.1	28.8	14.7	17.1
IND	-4.9	-2.1	-3.1	-3.0	0.6	8.1	2.0	1.9	-0.2	-1.4
JPN	-3.1	-5.3	-6.8	-7.0	-7.0	-7.3	-7.9	-7.5	-7.0	-7.3
LAM	2.9	0.3	-1.6	-7.7	-8.6	-16.7	-4.7	-6.0	-15.4	-4.6
MEA	-1.2	-5.1	-7.8	-16.1	-23.1	-28.5	-25.6	-39.6	-32.0	-41.9
NEU	-2.6	-2.9	-0.2	-1.6	-4.2	-3.1	1.6	0.1	1.2	0.6
OAS	0.5	-1.6	-5.6	-8.2	-10.7	-21.7	-9.4	-14.5	-18.9	-19.6
REF	-14.1	4.8	-27.1	-17.3	-20.7	-9.8	-25.0	-3.5	15.3	9.1
SSA	3.6	2.8	-0.3	-4.6	-6.5	-15.2	1.8	-6.1	-11.4	-11.8
USA	17.3	14.7	35.0	38.3	34.8	33.6	22.4	20.6	21.6	23.7

Table 1853: FAO — Trade—Net-Trade—Crops—Cereals—Temperate cereals (Mt DM/yr)

58.1.5 Cereals—Tropical cereals





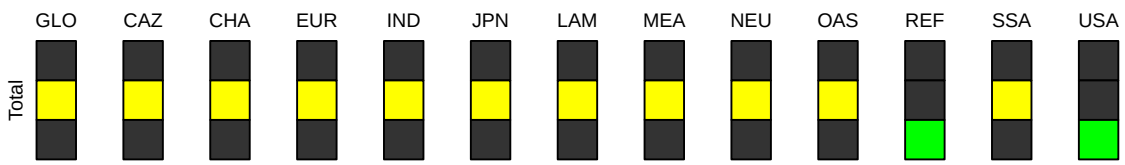


Figure 485: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-2.6	-4.9	1.5	-0.7	-0.4	0.0	0.0	-0.0	0.0	0.0	0.0
CAZ	0.0	0.0	0.1	-0.3	-0.3	-0.8	-1.1	-1.5	-1.8	-2.3	-2.7
CHA	-0.4	-0.5	-0.0	-0.1	0.1	1.0	1.7	2.7	4.0	5.5	5.3
EUR	-0.7	-0.2	-0.2	-0.7	-0.9	-1.1	-1.4	-1.6	-1.9	-2.2	-2.7
IND	0.0	0.0	0.2	0.3	-0.3	-1.1	-2.0	-2.8	-3.3	-3.9	-4.6
JPN	-2.0	-1.9	-1.2	-1.4	-1.3	-1.3	-1.3	-1.2	-1.2	-1.2	-1.1
LAM	-1.5	-3.9	-2.4	-1.2	-0.7	0.2	1.6	3.8	6.5	6.7	9.0
MEA	-0.9	-1.4	-0.3	-1.2	-1.2	-1.3	-0.8	-0.2	0.1	0.5	1.1
NEU	-0.0	-0.1	-0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1
OAS	-0.2	-0.1	-0.1	-0.1	-0.5	0.0	1.7	6.8	9.6	16.6	25.1
REF	-0.0	0.1	-0.3	0.1	0.1	0.1	-0.0	-0.1	-0.1	-0.2	-0.3
SSA	-0.2	-1.8	0.1	0.1	-1.8	-4.3	-7.8	-12.7	-18.4	-25.9	-36.3
USA	3.4	4.9	5.7	3.9	6.7	8.7	9.4	6.9	6.7	6.5	7.3

Table 1854: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

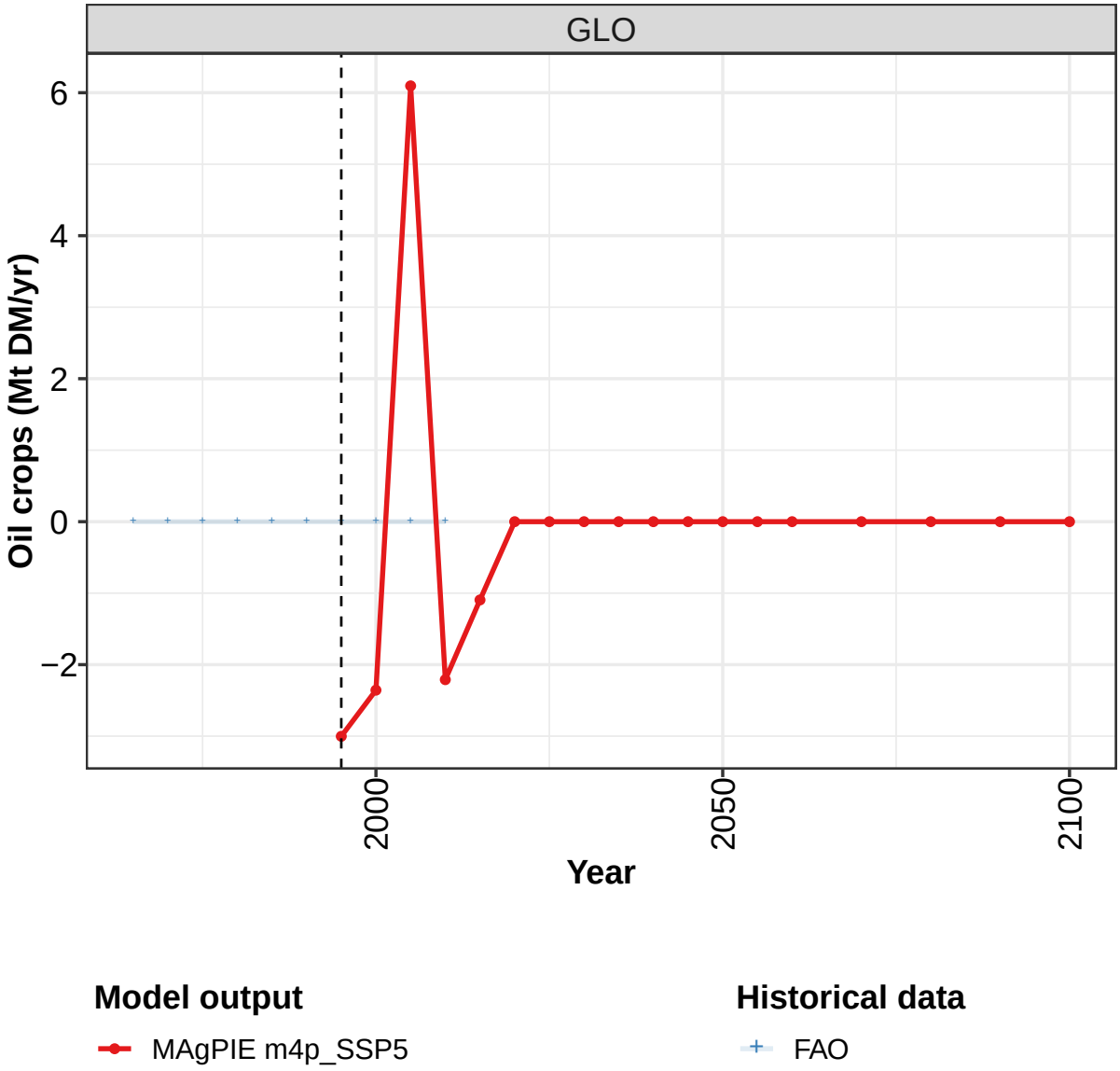
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	-0.0	0.0	-0.0	-0.0	-0.0	-0.0
CAZ	-3.1	-3.2	-3.2	-3.3	-3.2	0.6	-2.3
CHA	8.8	10.0	11.8	9.3	5.9	5.3	4.7
EUR	-3.2	-3.5	-3.7	-4.1	-4.5	-5.0	-5.6
IND	-5.5	-5.8	-5.9	-6.2	-0.6	2.5	10.3
JPN	-1.1	-1.1	-1.1	-1.0	-0.9	-0.8	-0.7
LAM	11.4	11.4	11.1	10.1	8.8	7.4	6.2
MEA	1.8	1.9	1.9	1.9	1.7	1.8	1.8
NEU	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3
OAS	32.7	34.7	34.6	35.5	33.9	25.9	21.3
REF	-0.4	-0.4	-0.5	-0.6	-0.6	-0.0	-0.6
SSA	-48.8	-51.8	-52.5	-49.1	-47.1	-42.7	-39.3
USA	7.6	7.9	7.8	7.7	6.9	5.4	4.5

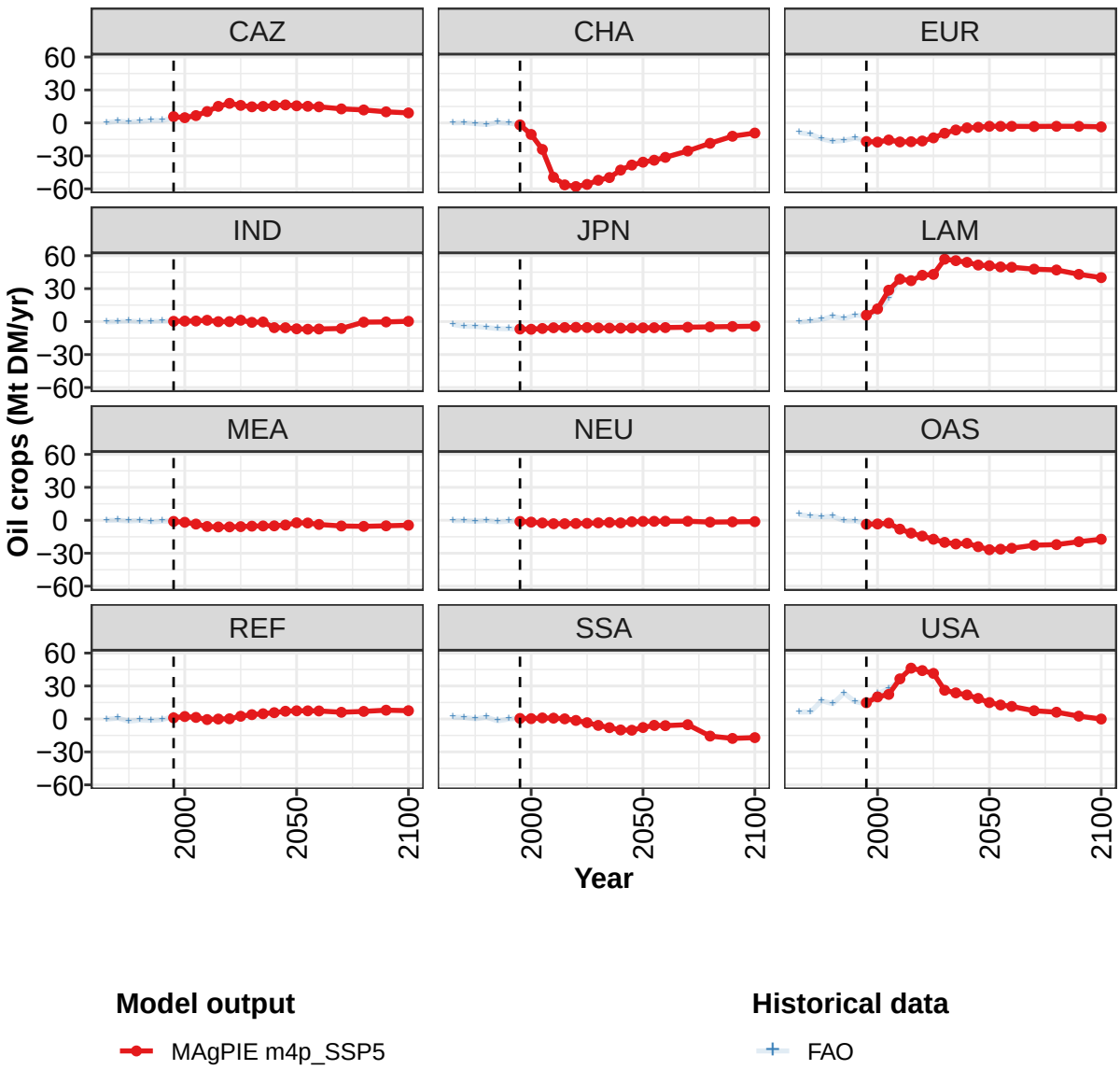
Table 1855: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.02	0.11	0.55	0.54	0.75	0.11	0.08	0.38	0.17	-0.34
CHA	-0.77	0.66	-0.08	-0.79	-0.81	0.84	-0.33	-0.36	-0.05	-0.07
EUR	-2.00	-0.64	-2.07	-0.66	-1.36	0.23	-0.31	0.42	-0.45	-0.63
IND	-0.04	-0.02	-0.18	0.00	-0.01	0.03	0.03	0.03	0.12	1.57
JPN	-1.25	-3.26	-3.51	-3.75	-4.22	-3.32	-1.99	-1.91	-1.25	-1.41
LAM	0.34	2.07	0.70	-0.85	0.30	-0.57	-1.08	-3.21	-2.82	-1.11
MEA	0.03	-0.16	0.03	-0.18	0.05	-1.57	-0.68	-0.85	-0.40	-1.17
NEU	-0.03	0.09	-0.15	-0.13	-0.45	0.28	0.12	0.26	-0.12	0.03
OAS	0.19	0.43	0.12	0.46	-1.35	1.00	0.40	0.91	-0.37	0.01
REF	0.03	0.09	-0.23	-1.23	-1.60	0.03	0.08	0.50	-0.33	0.06
SSA	1.28	0.80	-0.74	1.03	-0.90	-0.40	0.40	-0.66	0.85	0.16
USA	2.21	-0.16	5.57	5.55	9.59	3.34	3.29	4.47	4.65	2.90

Table 1856: FAO — Trade—Net-Trade—Crops—Cereals—Tropical cereals (Mt DM/yr)

58.1.6 Oil crops





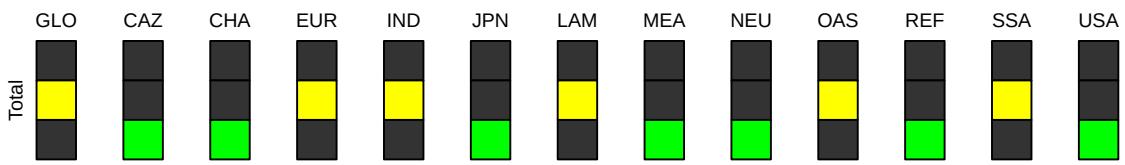


Figure 486: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-3.0	-2.4	6.1	-2.2	-1.1	-0.0	-0.0	0.0	-0.0	0.0	-0.0
CAZ	5.8	4.7	6.7	10.4	15.1	17.8	16.0	14.7	15.0	15.7	16.4
CHA	-1.8	-10.5	-24.1	-49.5	-56.4	-57.9	-56.0	-52.2	-49.7	-42.9	-38.3
EUR	-16.9	-17.5	-15.5	-17.3	-17.1	-16.5	-13.6	-9.4	-6.4	-4.5	-3.9
IND	0.2	0.5	0.5	1.2	-0.0	0.0	1.3	-0.7	-0.3	-5.5	-5.6
JPN	-6.8	-7.0	-6.3	-5.6	-5.4	-5.2	-5.4	-5.7	-5.9	-6.0	-5.8
LAM	5.9	11.6	28.6	38.7	37.3	42.2	43.0	56.9	55.5	54.0	51.5
MEA	-1.0	-1.8	-3.4	-5.7	-6.0	-6.0	-5.8	-5.4	-5.1	-5.1	-4.3
NEU	-1.0	-1.7	-2.4	-3.1	-3.1	-2.9	-2.8	-2.4	-2.0	-2.4	-1.3
OAS	-3.7	-3.3	-2.6	-8.1	-11.7	-14.4	-17.3	-20.1	-21.6	-21.0	-24.0
REF	1.1	2.2	1.4	-0.5	-0.1	0.2	2.5	3.9	4.8	5.7	7.0
SSA	0.5	0.3	0.9	0.8	0.1	-1.3	-3.4	-5.8	-7.9	-10.0	-10.2
USA	14.8	20.1	22.4	36.5	46.3	44.0	41.5	26.1	23.8	21.9	18.7

Table 1857: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops (Mt DM/yr) [PART 1/2]

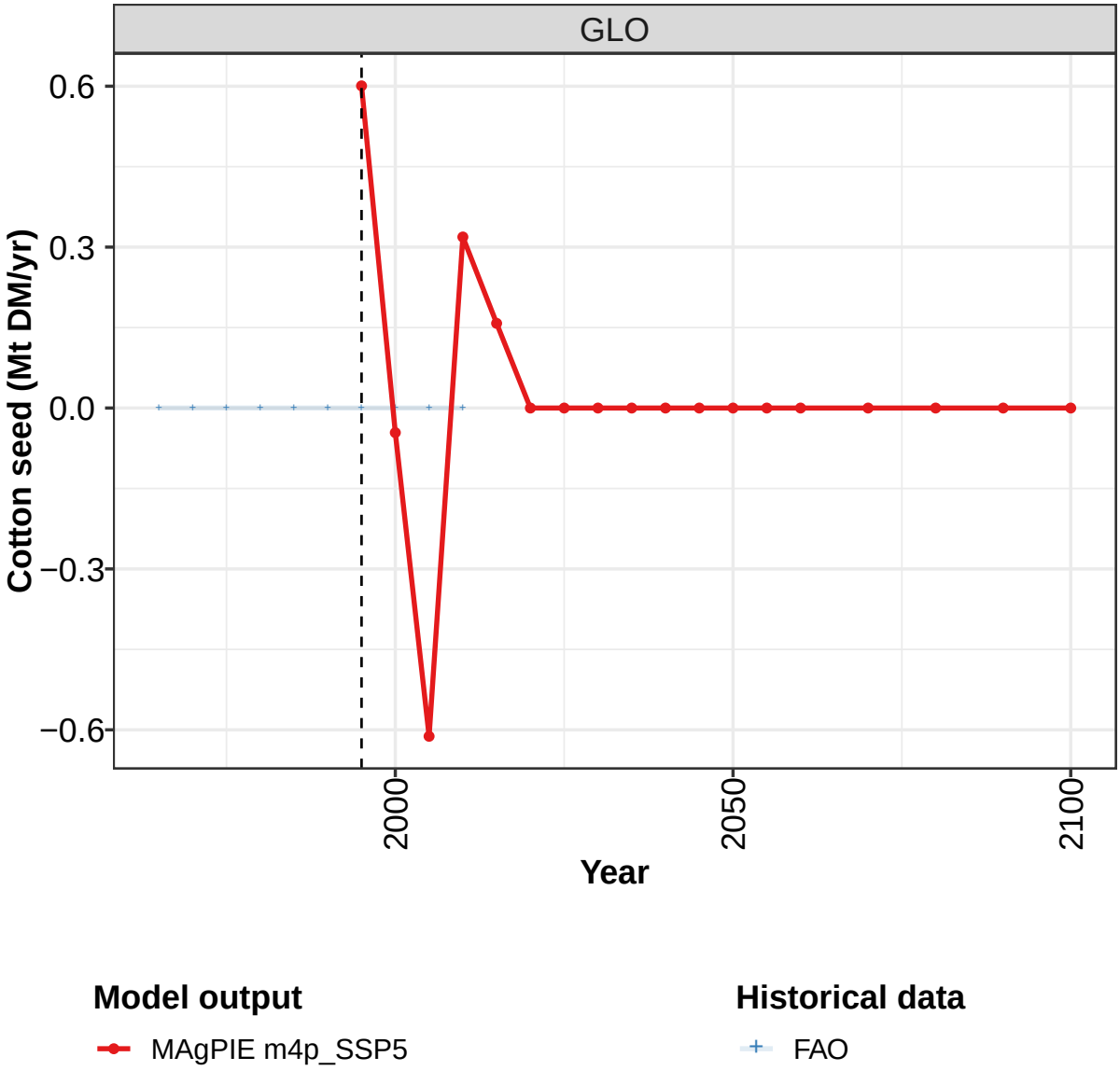
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	-0.0	-0.0	-0.0	0.0	0.0	0.0
CAZ	15.6	15.2	14.7	12.8	11.8	10.1	9.1
CHA	-35.7	-34.0	-31.4	-25.5	-18.6	-12.1	-9.2
EUR	-3.1	-3.1	-3.1	-3.2	-3.1	-3.1	-3.6
IND	-6.5	-6.9	-6.7	-6.3	-0.5	-0.3	0.3
JPN	-5.7	-5.6	-5.4	-5.1	-4.8	-4.5	-4.2
LAM	50.9	49.8	49.5	47.7	47.0	43.0	40.1
MEA	-2.3	-2.5	-3.8	-5.2	-5.5	-5.0	-4.5
NEU	-1.0	-0.9	-0.9	-0.9	-1.7	-1.4	-1.2
OAS	-26.8	-26.3	-25.5	-22.7	-22.1	-19.5	-17.3
REF	7.4	7.4	7.3	6.1	6.9	8.0	7.5
SSA	-7.8	-5.8	-6.1	-5.2	-15.6	-17.7	-17.0
USA	14.9	12.7	11.4	7.5	6.2	2.6	-0.1

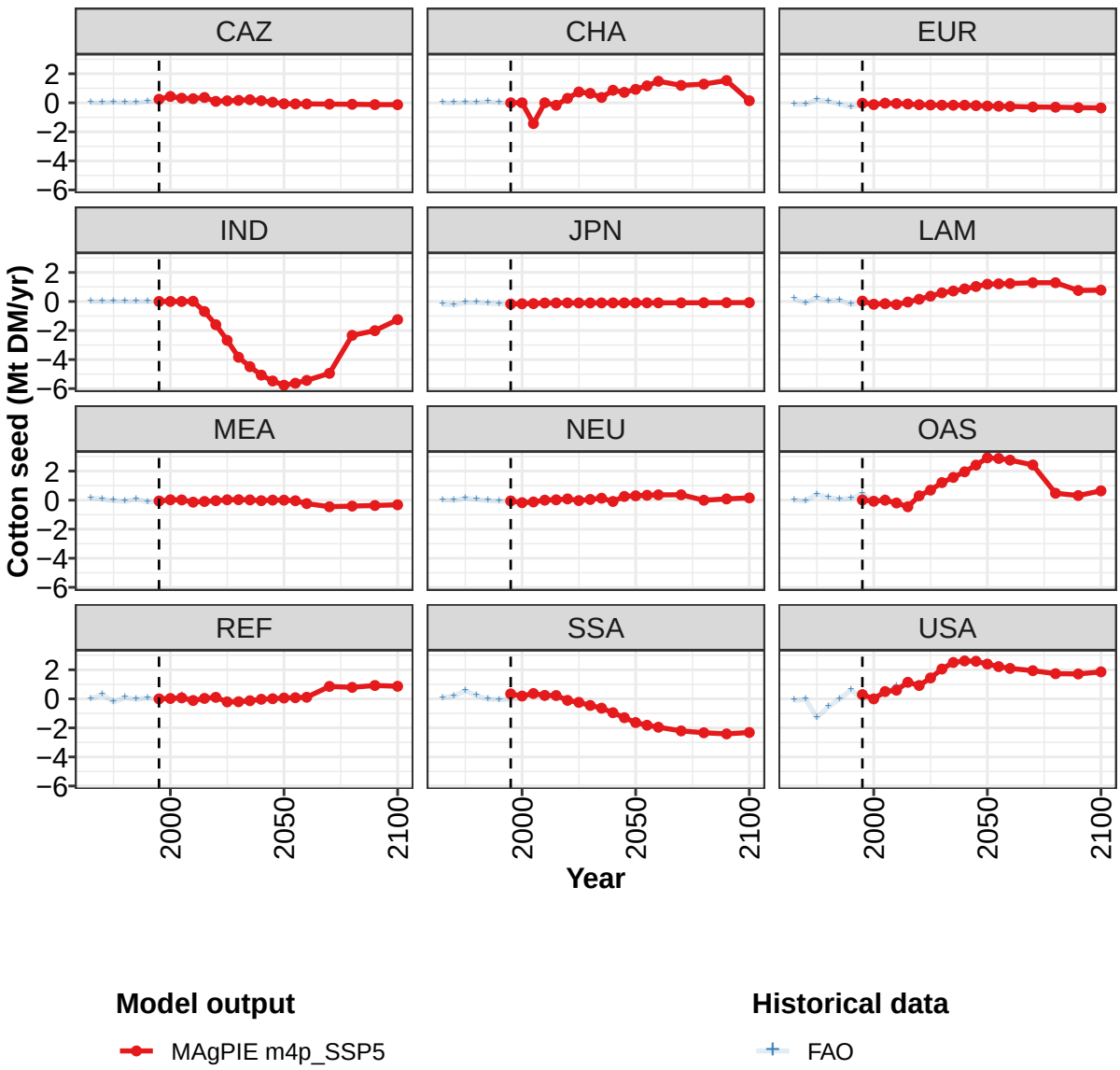
Table 1858: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.3	1.6	0.9	1.3	2.2	2.1	4.7	6.0	7.4	9.6
CHA	-0.0	0.3	-0.7	-1.4	0.3	-0.4	-1.0	-9.8	-24.5	-49.7
EUR	-8.9	-10.2	-14.5	-16.8	-16.0	-13.8	-16.2	-17.3	-16.0	-16.8
IND	-0.4	0.0	0.4	-0.1	0.1	0.2	0.7	0.4	0.6	1.2
JPN	-2.6	-4.2	-4.4	-5.3	-6.4	-6.6	-6.7	-6.9	-6.3	-5.6
LAM	-0.4	0.5	2.0	4.7	2.8	5.8	5.3	9.0	21.1	40.2
MEA	-0.1	0.0	-0.7	-0.2	-1.5	-0.8	-0.8	-1.7	-3.9	-5.5
NEU	-0.5	-0.4	-0.9	-0.3	-1.5	-0.8	-0.8	-1.4	-2.8	-3.0
OAS	5.1	3.7	3.2	3.6	-0.4	-0.7	-2.5	-3.6	-4.3	-7.5
REF	-0.3	0.8	-2.0	-1.0	-1.4	-0.7	2.7	1.4	1.7	-0.5
SSA	1.6	1.5	0.1	1.7	-1.8	-0.1	0.8	0.8	-0.6	1.7
USA	6.3	6.3	16.7	13.8	23.5	15.7	13.8	23.2	27.3	35.9

Table 1859: FAO — Trade—Net-Trade—Crops—Oil crops (Mt DM/yr)

58.1.7 Oil crops—Cotton seed





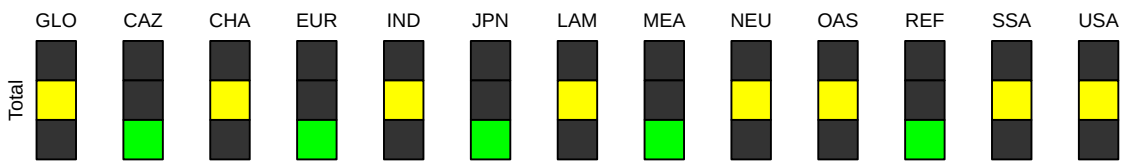


Figure 487: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.60	-0.05	-0.61	0.32	0.16	0.00	-0.00	0.00	0.00	-0.00	0.00
CAZ	0.24	0.43	0.32	0.28	0.37	0.10	0.14	0.17	0.21	0.14	0.04
CHA	0.00	0.00	-1.43	0.00	-0.17	0.31	0.75	0.65	0.37	0.86	0.72
EUR	-0.03	-0.13	-0.02	-0.05	-0.08	-0.13	-0.15	-0.17	-0.17	-0.16	-0.19
IND	0.00	-0.00	-0.00	0.02	-0.69	-1.60	-2.67	-3.84	-4.49	-5.07	-5.48
JPN	-0.17	-0.16	-0.15	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
LAM	0.02	-0.19	-0.16	-0.21	-0.04	0.15	0.37	0.60	0.72	0.87	1.03
MEA	-0.06	0.03	0.02	-0.14	-0.09	-0.04	0.02	0.03	0.02	-0.04	0.00
NEU	-0.05	-0.17	-0.12	0.00	0.02	0.09	-0.03	0.05	0.13	-0.09	0.26
OAS	0.01	-0.07	0.00	-0.19	-0.45	0.30	0.69	1.21	1.57	1.95	2.41
REF	0.00	0.03	0.07	-0.11	0.03	0.10	-0.21	-0.20	-0.13	-0.03	0.01
SSA	0.34	0.19	0.37	0.24	0.23	-0.11	-0.24	-0.45	-0.64	-0.96	-1.30
USA	0.29	0.00	0.50	0.60	1.14	0.92	1.44	2.05	2.50	2.61	2.59

Table 1860: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

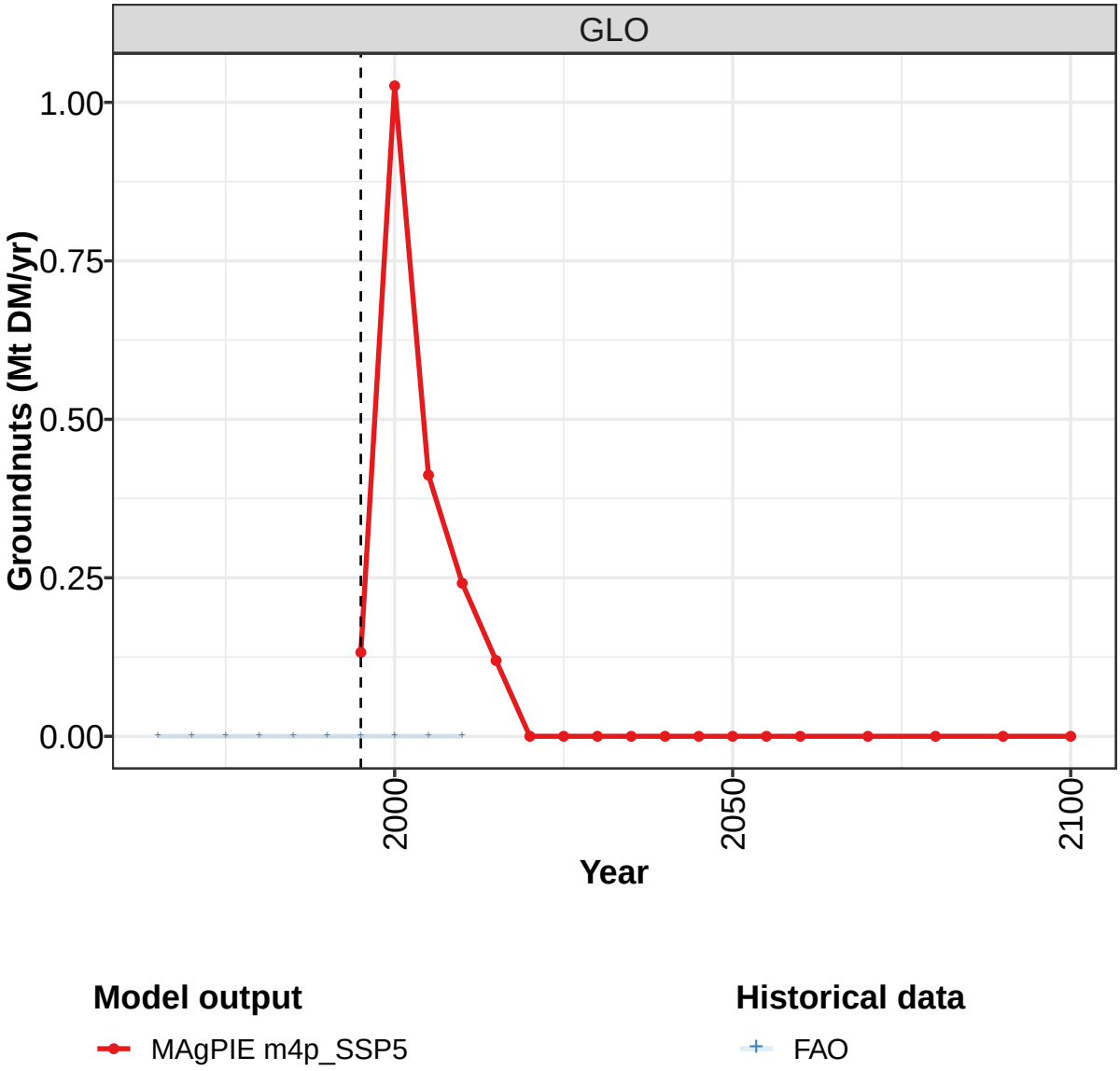
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	-0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.07	-0.07	-0.08	-0.09	-0.10	-0.13	-0.13
CHA	0.93	1.17	1.48	1.20	1.29	1.54	0.14
EUR	-0.22	-0.23	-0.25	-0.29	-0.30	-0.33	-0.35
IND	-5.76	-5.63	-5.43	-4.94	-2.33	-2.01	-1.25
JPN	-0.10	-0.09	-0.09	-0.09	-0.09	-0.08	-0.08
LAM	1.19	1.21	1.24	1.29	1.29	0.76	0.78
MEA	0.00	-0.04	-0.24	-0.45	-0.41	-0.37	-0.32
NEU	0.30	0.34	0.36	0.37	-0.00	0.09	0.16
OAS	2.91	2.87	2.76	2.42	0.48	0.32	0.64
REF	0.06	0.08	0.11	0.85	0.79	0.92	0.87
SSA	-1.63	-1.82	-1.95	-2.21	-2.34	-2.41	-2.32
USA	2.39	2.22	2.09	1.94	1.73	1.71	1.86

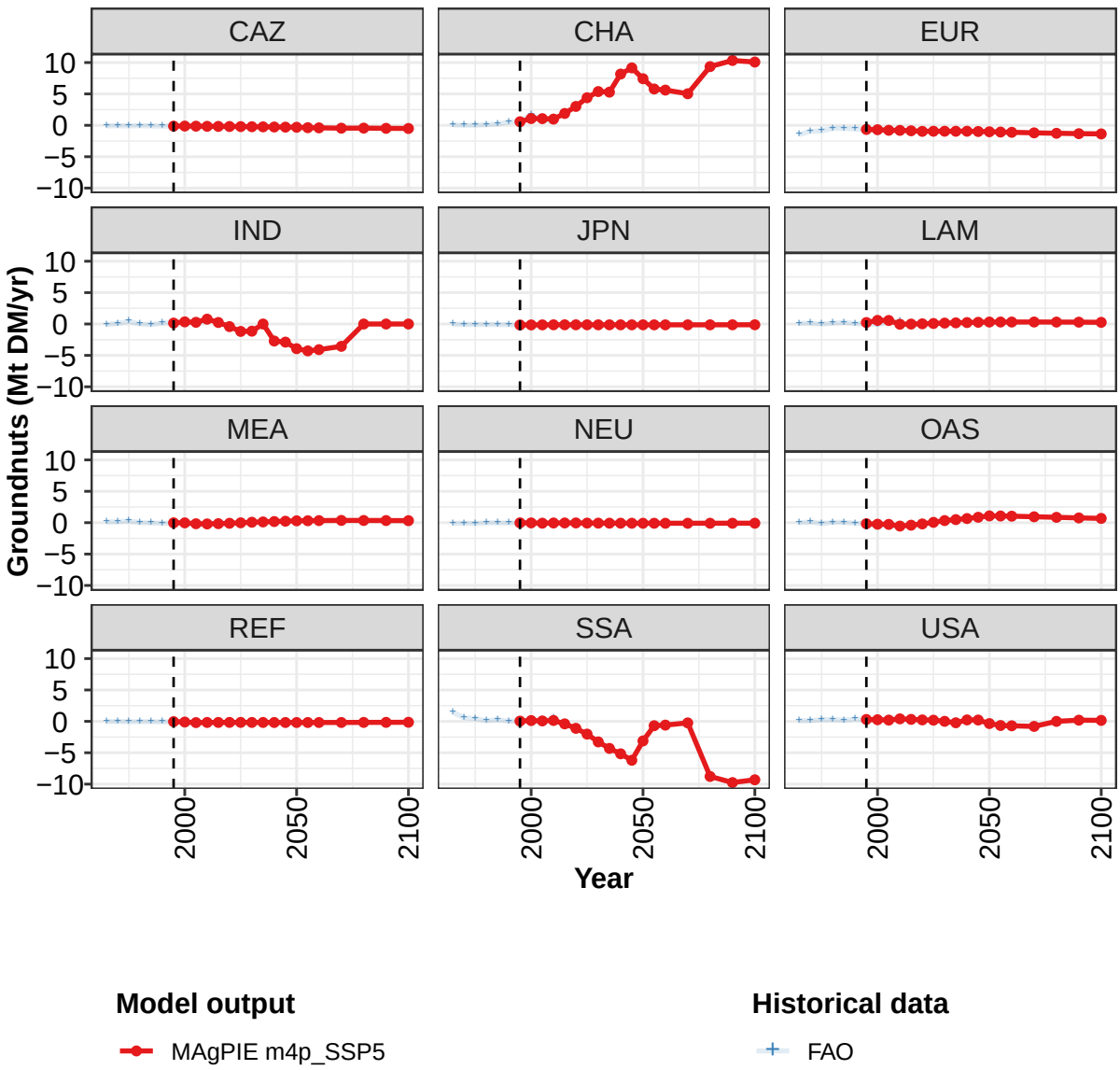
Table 1861: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	-0.002	-0.002	0.044	0.018	-0.000	0.105	0.110	0.566	0.226	0.113
CHA	-0.002	-0.006	0.033	0.014	0.083	0.007	-0.011	-0.001	-1.367	-0.020
EUR	-0.120	-0.108	0.206	0.113	-0.093	-0.279	-0.113	-0.120	0.057	-0.088
IND	-0.000	-0.001	0.008	0.004	-0.002	-0.004	0.000	0.001	0.003	0.003
JPN	-0.193	-0.242	-0.083	-0.068	-0.127	-0.156	-0.177	-0.158	-0.147	-0.107
LAM	0.170	-0.104	0.253	0.038	0.100	-0.217	-0.019	-0.172	-0.030	-0.230
MEA	0.152	0.076	-0.038	-0.081	0.055	-0.114	-0.099	0.002	0.082	-0.126
NEU	0.021	-0.019	0.133	0.058	-0.036	-0.060	-0.088	-0.161	-0.073	-0.026
OAS	0.013	-0.062	0.408	0.174	0.073	0.108	0.423	-0.078	0.100	-0.262
REF	-0.001	0.295	-0.217	0.077	-0.027	0.064	-0.018	0.024	0.245	-0.119
SSA	0.075	0.192	0.550	0.216	-0.016	-0.058	-0.016	0.086	0.457	-0.034
USA	-0.113	-0.018	-1.296	-0.564	-0.010	0.604	0.009	0.012	0.446	0.895

Table 1862: FAO — Trade—Net-Trade—Crops—Oil crops—Cotton seed (Mt DM/yr)

58.1.8 Oil crops—Groundnuts





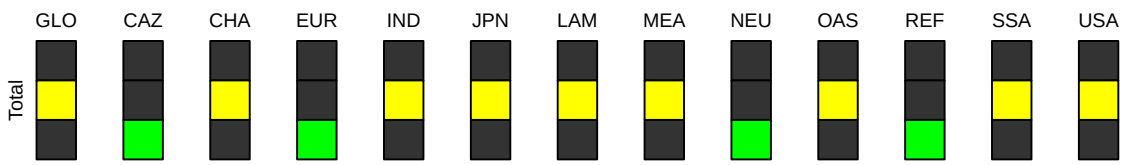


Figure 488: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.1	1.0	0.4	0.2	0.1	0.0	-0.0	0.0	0.0	0.0	-0.0
CAZ	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3
CHA	0.6	1.1	1.1	1.0	1.9	3.0	4.4	5.4	5.3	8.2	9.2
EUR	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-0.9	-0.9	-0.9	-0.9	-1.0
IND	0.1	0.3	0.3	0.8	0.2	-0.4	-1.2	-1.1	-0.0	-2.7	-2.9
JPN	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LAM	0.2	0.6	0.6	-0.0	-0.0	0.0	0.1	0.1	0.2	0.2	0.3
MEA	-0.0	-0.0	-0.2	-0.2	-0.2	-0.1	-0.0	0.1	0.1	0.2	0.2
NEU	-0.0	-0.0	-0.1	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1
OAS	-0.2	-0.2	-0.3	-0.5	-0.4	-0.2	0.1	0.3	0.5	0.7	0.9
REF	-0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
SSA	0.0	0.1	0.1	0.1	-0.4	-1.1	-2.0	-3.3	-4.3	-5.2	-6.2
USA	0.3	0.3	0.2	0.4	0.3	0.2	0.2	0.0	-0.2	0.2	0.2

Table 1863: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

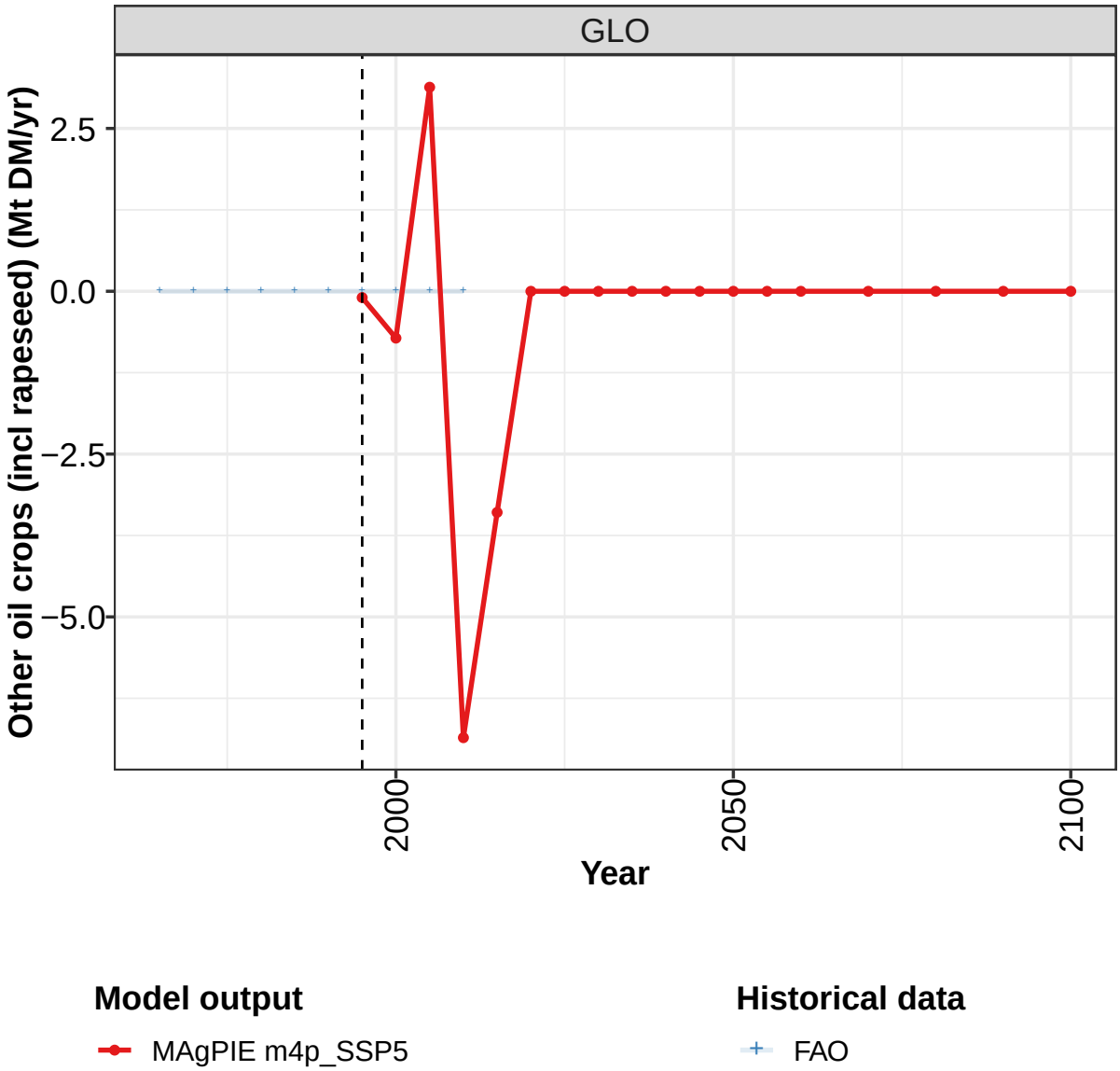
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	-0.0	-0.0	0.0	-0.0	0.0	-0.0
CAZ	-0.3	-0.4	-0.4	-0.5	-0.4	-0.5	-0.5
CHA	7.4	5.8	5.6	5.0	9.4	10.3	10.1
EUR	-1.0	-1.1	-1.1	-1.2	-1.3	-1.3	-1.4
IND	-3.9	-4.3	-4.1	-3.6	-0.0	-0.0	0.0
JPN	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LAM	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MEA	0.3	0.3	0.3	0.4	0.4	0.3	0.3
NEU	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
OAS	1.1	1.1	1.0	0.9	0.9	0.8	0.7
REF	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
SSA	-3.1	-0.7	-0.6	-0.2	-8.8	-9.8	-9.3
USA	-0.3	-0.7	-0.7	-0.8	0.0	0.2	0.2

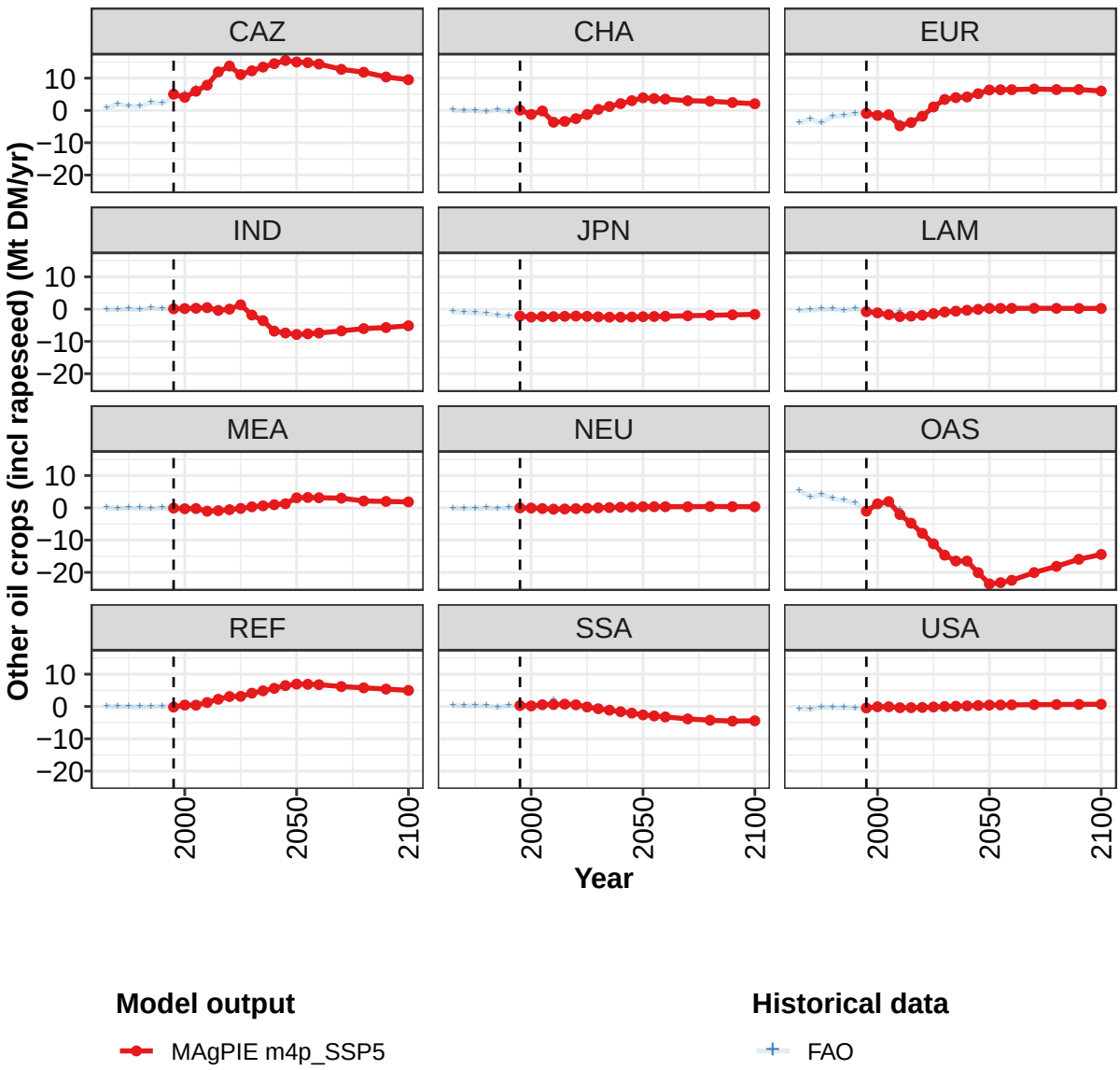
Table 1864: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.09	-0.07	-0.10	-0.06	-0.11	-0.13	-0.13	-0.14	-0.14	-0.16
CHA	0.08	0.01	0.01	0.10	0.21	0.55	0.63	1.64	0.96	0.49
EUR	-1.46	-0.96	-0.88	-0.48	-0.49	-0.60	-0.67	-0.84	-0.84	-0.83
IND	-0.12	0.10	0.42	0.00	-0.11	0.14	0.35	0.20	0.29	0.36
JPN	-0.03	-0.08	-0.07	-0.09	-0.09	-0.12	-0.15	-0.15	-0.14	-0.13
LAM	0.10	0.14	-0.02	0.13	0.25	0.09	0.01	-0.08	0.34	0.49
MEA	0.13	0.14	0.28	0.01	-0.04	-0.11	-0.03	-0.11	-0.20	-0.22
NEU	-0.11	-0.09	-0.13	-0.01	-0.02	-0.07	-0.03	-0.10	-0.10	-0.06
OAS	-0.02	0.12	-0.14	0.05	0.05	-0.08	-0.18	-0.44	-0.35	-0.60
REF	-0.04	-0.01	-0.08	-0.04	-0.07	-0.08	-0.05	-0.15	-0.21	-0.19
SSA	1.44	0.58	0.44	0.09	0.26	0.03	0.07	0.01	-0.04	0.60
USA	0.11	0.12	0.27	0.31	0.16	0.38	0.17	0.17	0.44	0.25

Table 1865: FAO — Trade—Net-Trade—Crops—Oil crops—Groundnuts (Mt DM/yr)

58.1.9 Oil crops—Other oil crops (incl rapeseed)





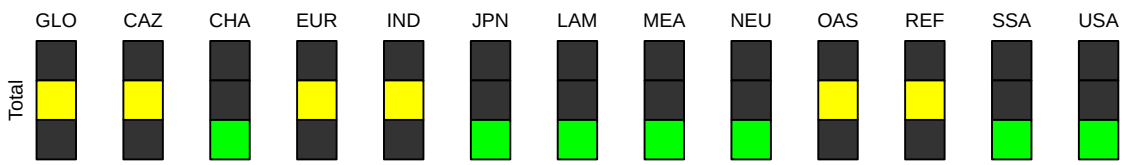


Figure 489: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.1	-0.7	3.1	-6.9	-3.4	-0.0	0.0	-0.0	0.0	0.0	0.0
CAZ	5.0	4.1	6.0	7.8	11.9	13.7	11.1	12.3	13.4	14.5	15.5
CHA	0.1	-1.2	-0.2	-3.7	-3.4	-2.5	-1.3	0.3	1.2	2.1	3.0
EUR	-0.9	-1.6	-1.3	-4.8	-3.8	-1.8	1.1	3.4	4.0	4.2	5.2
IND	0.1	0.2	0.3	0.5	-0.4	0.0	1.3	-1.8	-3.6	-6.8	-7.4
JPN	-2.2	-2.5	-2.3	-2.3	-2.2	-2.1	-2.2	-2.4	-2.5	-2.5	-2.4
LAM	-0.8	-1.2	-1.7	-2.3	-2.2	-1.9	-1.4	-0.9	-0.6	-0.4	-0.1
MEA	-0.1	-0.3	-0.2	-1.0	-0.9	-0.6	-0.2	0.3	0.6	1.0	1.3
NEU	-0.0	-0.1	-0.2	-0.4	-0.4	-0.3	-0.1	0.0	0.1	0.2	0.3
OAS	-1.0	1.2	1.9	-2.1	-4.8	-7.9	-11.2	-14.7	-16.5	-16.5	-20.1
REF	-0.2	0.4	0.4	1.2	2.3	3.1	3.1	4.1	4.9	5.6	6.5
SSA	0.3	0.2	0.6	0.6	0.7	0.5	-0.1	-0.7	-1.1	-1.6	-2.1
USA	-0.5	-0.1	-0.1	-0.4	-0.4	-0.3	-0.2	0.0	0.1	0.2	0.3

Table 1866: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

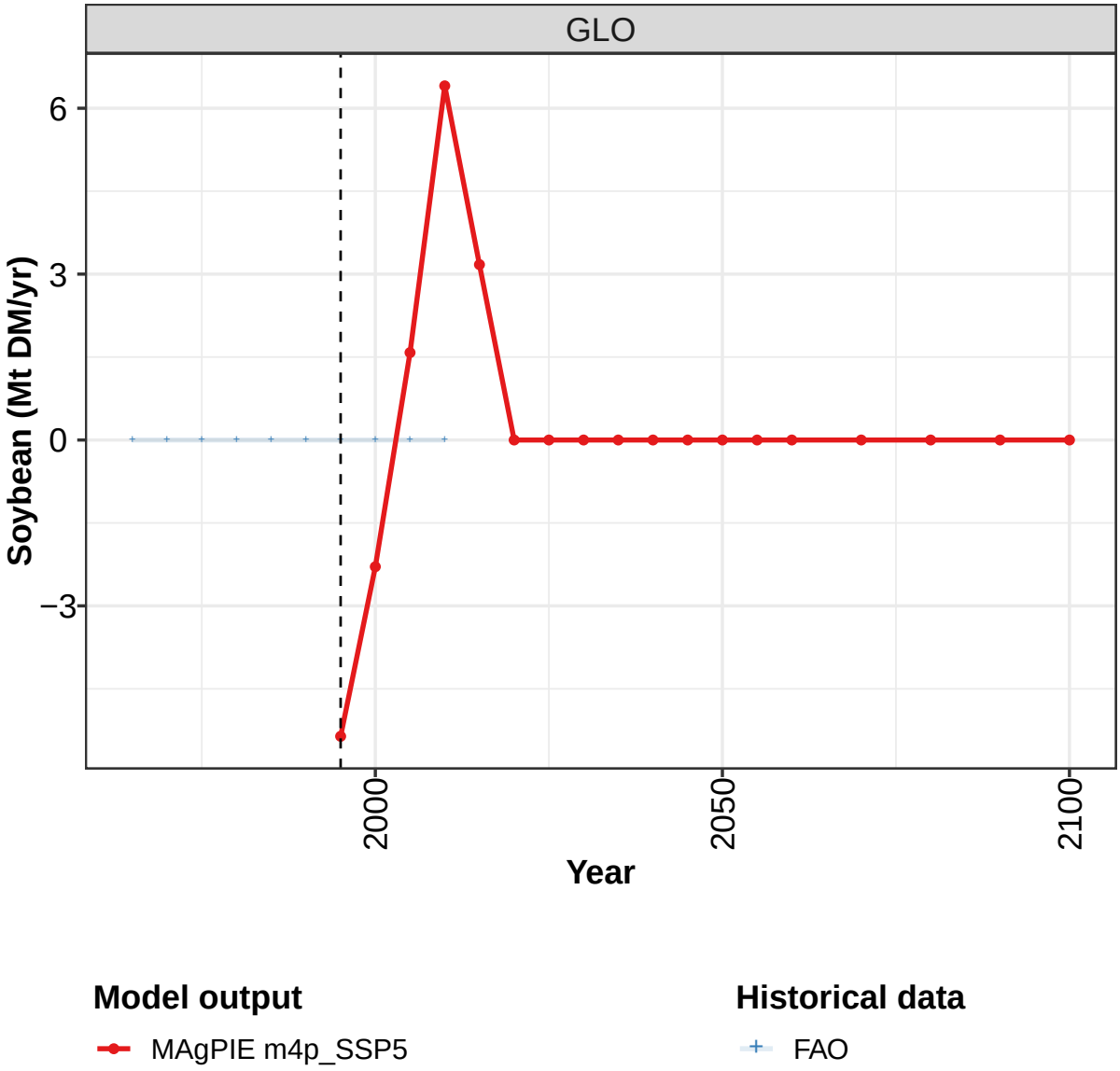
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	-0.0	-0.0	0.0	-0.0	-0.0
CAZ	15.0	14.8	14.4	12.7	11.8	10.4	9.5
CHA	3.9	3.7	3.5	3.0	2.9	2.4	2.1
EUR	6.3	6.4	6.4	6.6	6.5	6.5	6.0
IND	-7.8	-7.6	-7.4	-6.7	-6.0	-5.7	-5.2
JPN	-2.3	-2.3	-2.2	-2.1	-1.9	-1.8	-1.6
LAM	0.2	0.3	0.3	0.3	0.2	0.2	0.2
MEA	3.1	3.2	3.1	3.0	2.1	2.0	1.8
NEU	0.3	0.3	0.3	0.3	0.4	0.4	0.3
OAS	-23.6	-23.2	-22.4	-20.0	-18.1	-15.9	-14.4
REF	6.9	6.9	6.8	6.2	5.8	5.4	5.0
SSA	-2.6	-2.9	-3.2	-3.9	-4.3	-4.5	-4.4
USA	0.4	0.5	0.5	0.6	0.6	0.7	0.7

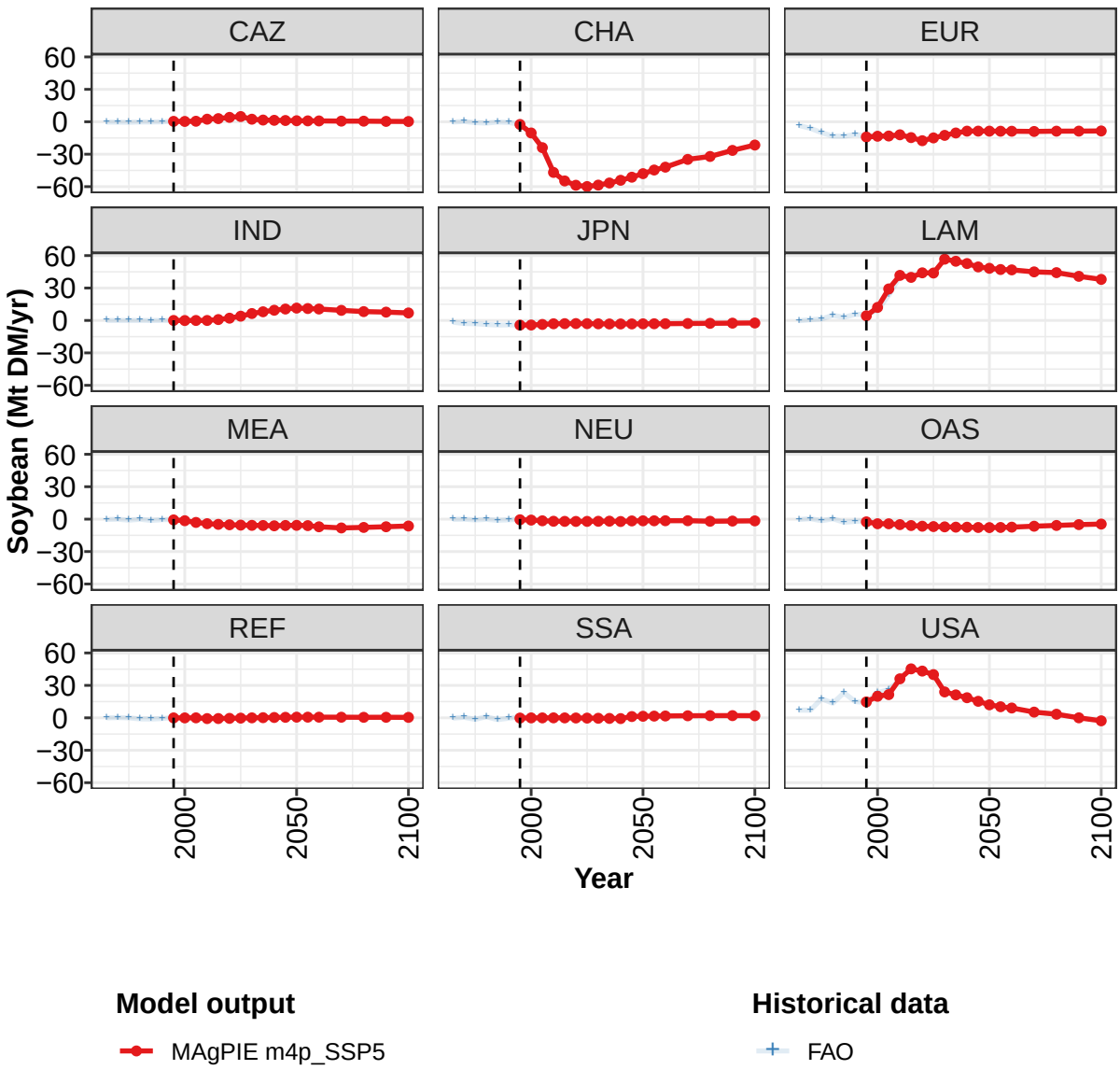
Table 1867: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.71	1.97	1.39	1.33	2.47	2.15	4.21	5.13	6.72	7.52
CHA	0.08	-0.03	-0.03	-0.33	0.23	-0.31	0.73	-1.22	-0.24	-3.47
EUR	-3.79	-2.69	-3.81	-1.84	-1.59	-1.10	-0.87	-1.57	-1.70	-3.83
IND	-0.24	-0.08	-0.05	-0.14	0.31	0.06	0.27	0.22	0.29	0.68
JPN	-0.79	-1.08	-1.19	-1.44	-1.91	-2.20	-2.15	-2.44	-2.32	-2.28
LAM	-0.49	-0.28	-0.05	0.02	-0.45	0.17	-0.73	-0.95	-2.36	-0.76
MEA	-0.08	-0.14	-0.11	-0.08	-0.32	-0.07	-0.09	-0.24	-0.48	-0.47
NEU	-0.22	-0.24	-0.20	-0.07	-0.24	-0.04	-0.01	-0.01	-0.41	0.02
OAS	5.37	3.24	4.08	2.84	2.31	1.45	-0.97	0.67	0.84	-0.58
REF	-0.05	-0.05	-0.11	-0.09	-0.13	0.08	-0.15	0.10	0.07	1.51
SSA	0.30	0.19	0.25	0.21	-0.29	0.32	0.23	0.38	-0.31	2.00
USA	-0.80	-0.83	-0.18	-0.40	-0.39	-0.51	-0.47	-0.08	-0.10	-0.34

Table 1868: FAO — Trade—Net-Trade—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

58.1.10 Oil crops—Soybean





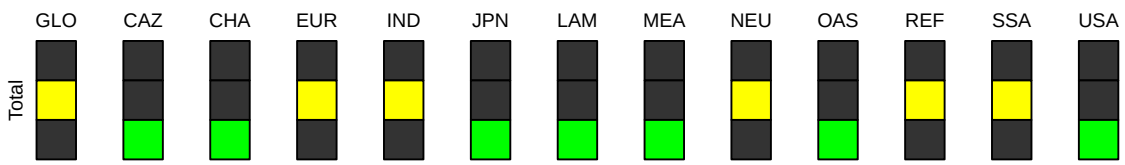


Figure 490: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-5.4	-2.3	1.6	6.4	3.2	0.0	-0.0	0.0	-0.0	0.0	-0.0
CAZ	0.4	0.3	0.5	2.4	2.9	4.1	4.9	2.4	1.6	1.4	1.2
CHA	-2.5	-10.4	-23.9	-46.8	-54.7	-58.7	-59.9	-58.6	-56.6	-54.1	-51.2
EUR	-14.0	-13.4	-13.1	-12.0	-14.6	-17.5	-14.9	-12.6	-10.3	-8.7	-8.6
IND	0.0	-0.0	0.0	0.0	0.8	2.1	4.0	6.4	8.0	9.5	10.6
JPN	-4.3	-4.2	-3.7	-3.0	-2.9	-2.9	-2.9	-3.1	-3.2	-3.2	-3.2
LAM	4.3	12.1	29.2	41.7	39.9	44.1	43.9	56.7	54.8	52.7	49.5
MEA	-0.7	-1.4	-3.0	-4.2	-4.8	-5.2	-5.5	-5.7	-5.9	-6.2	-5.8
NEU	-0.6	-0.9	-1.5	-1.9	-2.1	-2.1	-2.1	-2.0	-1.9	-2.2	-1.6
OAS	-2.5	-4.2	-4.3	-5.1	-5.9	-6.5	-6.9	-7.1	-7.4	-7.4	-7.7
REF	-0.1	-0.1	-0.0	-0.7	-0.6	-0.5	-0.3	0.0	0.2	0.3	0.5
SSA	-0.2	-0.1	-0.0	0.0	-0.1	-0.1	-0.3	-0.4	-0.5	-0.7	1.2
USA	14.7	19.9	21.5	36.1	45.3	43.3	40.0	24.0	21.2	18.6	15.3

Table 1869: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

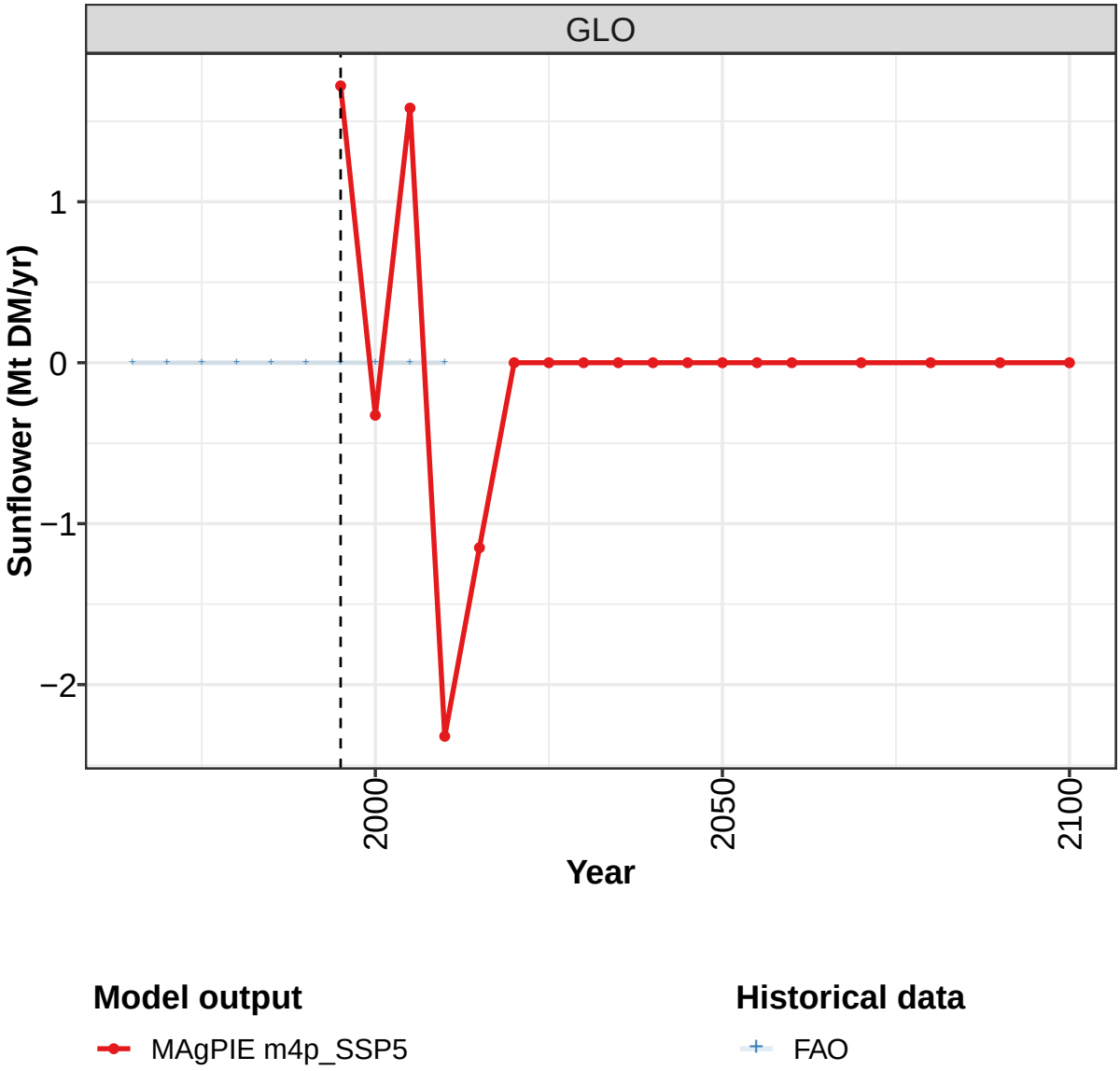
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0
CAZ	1.0	0.9	0.8	0.6	0.6	0.4	0.3
CHA	-48.0	-44.6	-42.0	-34.8	-32.1	-26.4	-21.5
EUR	-8.7	-8.7	-8.7	-9.0	-8.7	-8.6	-8.5
IND	11.4	11.0	10.6	9.3	8.2	7.7	7.0
JPN	-3.1	-3.0	-3.0	-2.8	-2.7	-2.5	-2.3
LAM	48.2	47.1	46.8	44.9	44.2	40.8	38.0
MEA	-5.7	-6.0	-7.1	-8.1	-7.6	-7.0	-6.3
NEU	-1.5	-1.5	-1.5	-1.5	-2.0	-1.8	-1.6
OAS	-7.8	-7.7	-7.4	-6.5	-5.8	-5.1	-4.6
REF	0.6	0.6	0.6	0.6	0.5	0.5	0.4
SSA	1.5	1.6	1.7	1.9	2.0	2.0	2.0
USA	12.0	10.3	9.1	5.3	3.3	0.0	-2.8

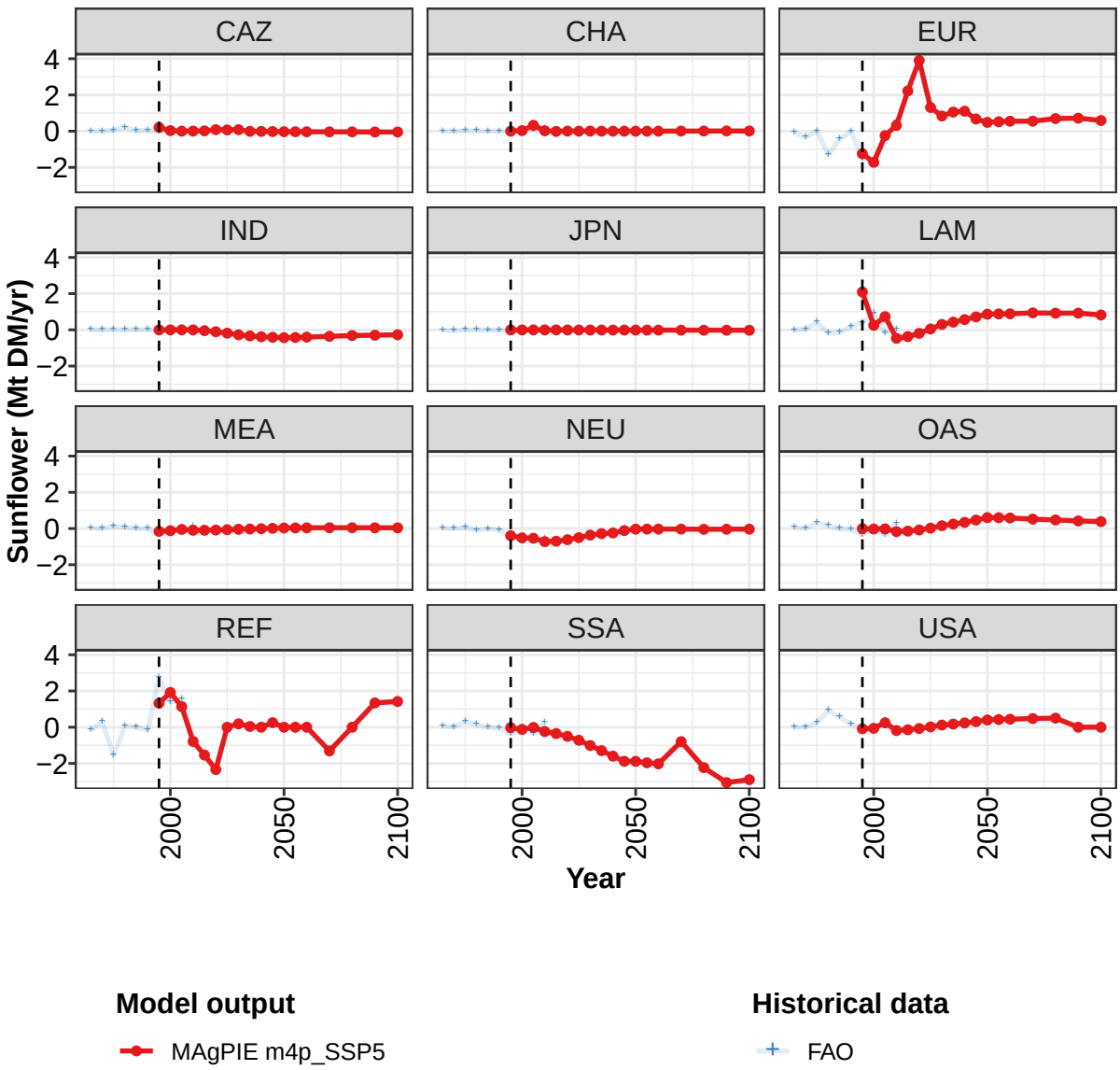
Table 1870: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	-0.3	-0.3	-0.5	-0.2	-0.2	-0.0	0.5	0.4	0.6	2.1
CHA	-0.2	0.3	-0.8	-1.2	-0.2	-0.6	-2.4	-10.3	-23.9	-46.8
EUR	-3.5	-6.1	-10.0	-13.3	-13.4	-11.8	-13.1	-13.1	-13.0	-12.6
IND	-0.0	0.0	-0.0	0.0	-0.1	-0.0	0.0	-0.1	-0.0	0.1
JPN	-1.6	-2.8	-3.0	-3.7	-4.3	-4.1	-4.2	-4.2	-3.7	-3.1
LAM	-0.2	0.7	1.4	4.7	3.0	5.6	5.7	9.3	23.4	40.6
MEA	-0.3	-0.0	-1.0	-0.1	-1.2	-0.5	-0.2	-1.2	-3.1	-4.8
NEU	-0.2	-0.0	-0.8	-0.2	-1.1	-0.6	-0.2	-0.6	-1.5	-2.3
OAS	-0.3	0.4	-1.5	0.3	-2.9	-2.1	-1.5	-3.8	-4.6	-6.4
REF	-0.0	0.3	-0.0	-1.0	-1.2	-0.6	0.2	0.1	0.1	-1.0
SSA	-0.3	0.5	-1.4	1.1	-1.7	-0.3	0.9	0.4	-0.4	-1.1
USA	7.1	7.1	17.6	13.5	23.2	15.0	14.2	23.1	26.2	35.2

Table 1871: FAO — Trade—Net-Trade—Crops—Oil crops—Soybean (Mt DM/yr)

58.1.11 Oil crops—Sunflower





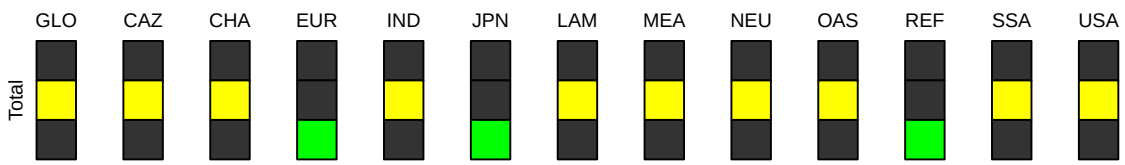


Figure 491: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.72	-0.33	1.58	-2.32	-1.15	0.00	-0.00	-0.00	-0.00	0.00	0.00
CAZ	0.21	0.03	0.00	0.00	0.02	0.08	0.07	0.08	-0.01	-0.01	-0.02
CHA	0.00	0.03	0.32	0.02	-0.01	0.00	0.00	0.01	0.00	0.00	0.00
EUR	-1.24	-1.72	-0.24	0.32	2.22	3.90	1.31	0.84	1.06	1.10	0.67
IND	0.00	0.00	-0.00	0.00	-0.04	-0.10	-0.18	-0.27	-0.33	-0.38	-0.41
JPN	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.01	-0.01	-0.01	-0.01	-0.01
LAM	2.09	0.25	0.73	-0.47	-0.37	-0.19	0.05	0.30	0.43	0.57	0.72
MEA	-0.16	-0.12	-0.05	-0.10	-0.09	-0.08	-0.06	-0.04	-0.02	-0.01	0.01
NEU	-0.39	-0.52	-0.53	-0.72	-0.70	-0.62	-0.50	-0.36	-0.28	-0.24	-0.11
OAS	-0.00	-0.03	-0.01	-0.17	-0.14	-0.08	0.02	0.16	0.25	0.34	0.47
REF	1.32	1.92	1.14	-0.78	-1.54	-2.34	0.00	0.19	0.04	0.00	0.25
SSA	-0.02	-0.12	-0.01	-0.24	-0.35	-0.51	-0.72	-1.01	-1.29	-1.60	-1.88
USA	-0.09	-0.06	0.24	-0.18	-0.14	-0.07	0.02	0.12	0.17	0.24	0.31

Table 1872: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

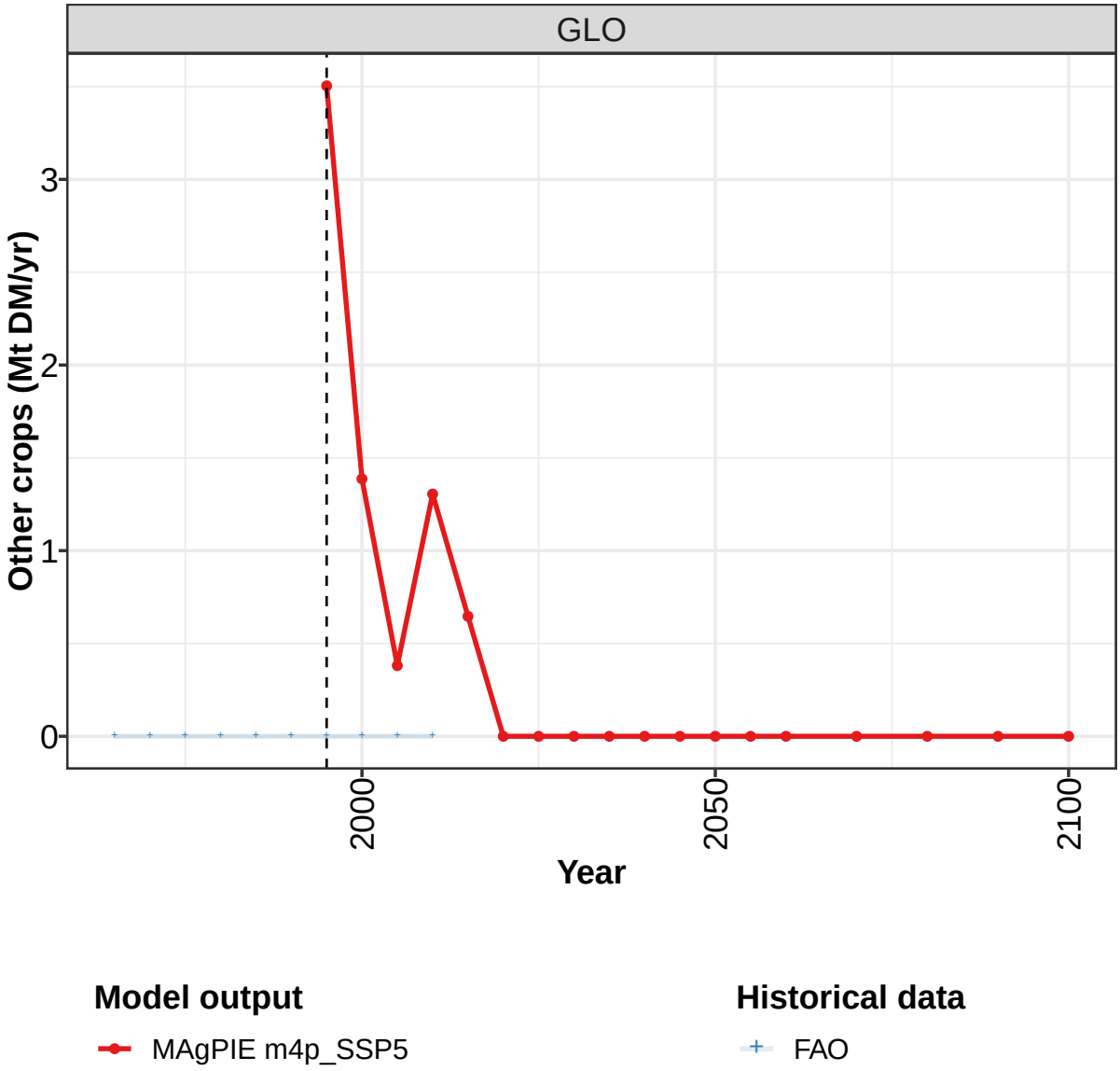
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	-0.00	-0.00	0.00	-0.00	0.00
CAZ	-0.03	-0.03	-0.03	-0.04	-0.04	-0.04	-0.05
CHA	0.00	-0.00	-0.00	0.01	0.01	0.01	0.01
EUR	0.49	0.52	0.55	0.55	0.70	0.72	0.59
IND	-0.43	-0.42	-0.40	-0.36	-0.31	-0.30	-0.27
JPN	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02
LAM	0.87	0.88	0.89	0.94	0.92	0.92	0.82
MEA	0.03	0.03	0.04	0.05	0.04	0.04	0.04
NEU	-0.03	-0.03	-0.03	-0.03	-0.04	-0.04	-0.03
OAS	0.60	0.60	0.58	0.52	0.47	0.42	0.38
REF	0.00	0.00	-0.00	-1.31	0.00	1.34	1.42
SSA	-1.89	-1.96	-2.02	-0.79	-2.23	-3.06	-2.90
USA	0.40	0.42	0.44	0.48	0.50	-0.00	0.00

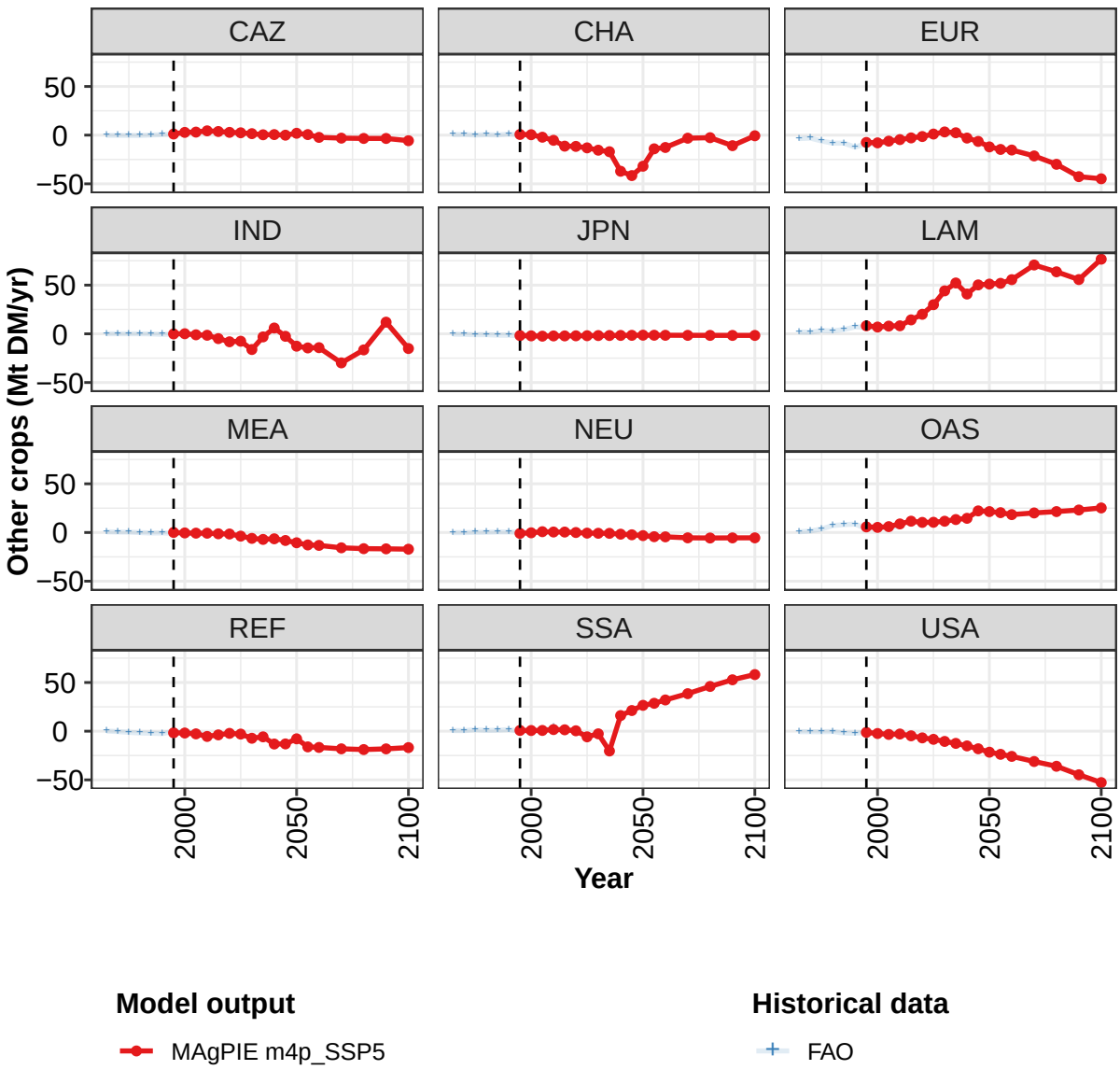
Table 1873: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.01	0.01	0.06	0.21	0.04	0.04	-0.01	0.05	-0.00	0.05
CHA	0.01	0.00	0.03	0.02	0.01	0.01	-0.02	0.03	0.08	0.16
EUR	-0.05	-0.34	0.01	-1.30	-0.43	-0.04	-1.48	-1.71	-0.47	0.56
IND	0.00	0.00	0.01	0.00	0.00	0.00	-0.01	0.00	0.09	0.01
JPN	-0.00	-0.05	0.00	0.00	-0.00	-0.00	-0.01	-0.00	-0.01	0.01
LAM	-0.00	0.03	0.42	-0.20	-0.15	0.18	0.40	0.89	-0.16	0.05
MEA	0.03	0.01	0.13	0.08	0.00	-0.01	-0.30	-0.09	-0.18	0.10
NEU	0.04	-0.01	0.05	-0.10	-0.02	-0.08	-0.48	-0.48	-0.62	-0.57
OAS	0.07	0.01	0.31	0.16	-0.00	-0.05	-0.34	0.04	-0.32	0.28
REF	-0.17	0.31	-1.56	0.05	0.02	-0.18	2.72	1.40	1.56	-0.72
SSA	0.08	0.02	0.31	0.14	-0.02	-0.05	-0.37	-0.05	-0.33	0.24
USA	-0.00	0.00	0.24	0.93	0.55	0.18	-0.09	-0.06	0.37	-0.17

Table 1874: FAO — Trade—Net-Trade—Crops—Oil crops—Sunflower (Mt DM/yr)

58.1.12 Other crops





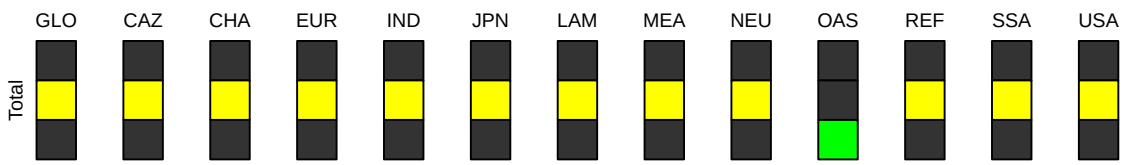


Figure 492: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.5	1.4	0.4	1.3	0.6	0.0	-0.0	-0.0	0.0	0.0	0.0
CAZ	1.2	2.8	3.1	4.4	3.8	2.9	2.4	1.6	0.4	0.6	-0.0
CHA	0.7	0.5	-2.1	-5.3	-11.3	-11.5	-13.0	-15.4	-17.0	-37.1	-41.5
EUR	-7.5	-7.9	-6.1	-4.6	-2.8	-1.4	1.1	3.3	2.5	-3.0	-6.4
IND	-0.1	0.1	-1.0	-1.5	-4.9	-8.2	-7.6	-16.1	-3.1	6.0	-2.5
JPN	-1.8	-2.1	-2.4	-2.1	-2.1	-2.0	-1.9	-1.8	-1.7	-1.6	-1.5
LAM	8.2	7.0	7.9	8.3	14.3	20.1	29.9	44.1	52.2	40.9	50.2
MEA	0.1	-0.4	-0.6	-0.7	-1.3	-1.5	-3.7	-6.0	-7.1	-6.5	-8.2
NEU	-0.9	-0.3	0.8	0.5	0.5	0.0	-0.6	-0.8	-0.8	-1.7	-2.3
OAS	5.8	5.3	6.0	8.8	11.6	10.4	10.5	11.6	13.3	14.6	22.2
REF	-1.7	-1.9	-2.7	-5.4	-3.8	-2.2	-3.0	-7.2	-5.8	-13.2	-13.1
SSA	0.8	0.7	0.8	1.7	1.4	0.4	-5.8	-2.7	-20.3	16.1	21.2
USA	-1.2	-2.4	-3.3	-2.9	-4.7	-6.9	-8.3	-10.5	-12.5	-15.1	-18.1

Table 1875: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops (Mt DM/yr) [PART 1/2]

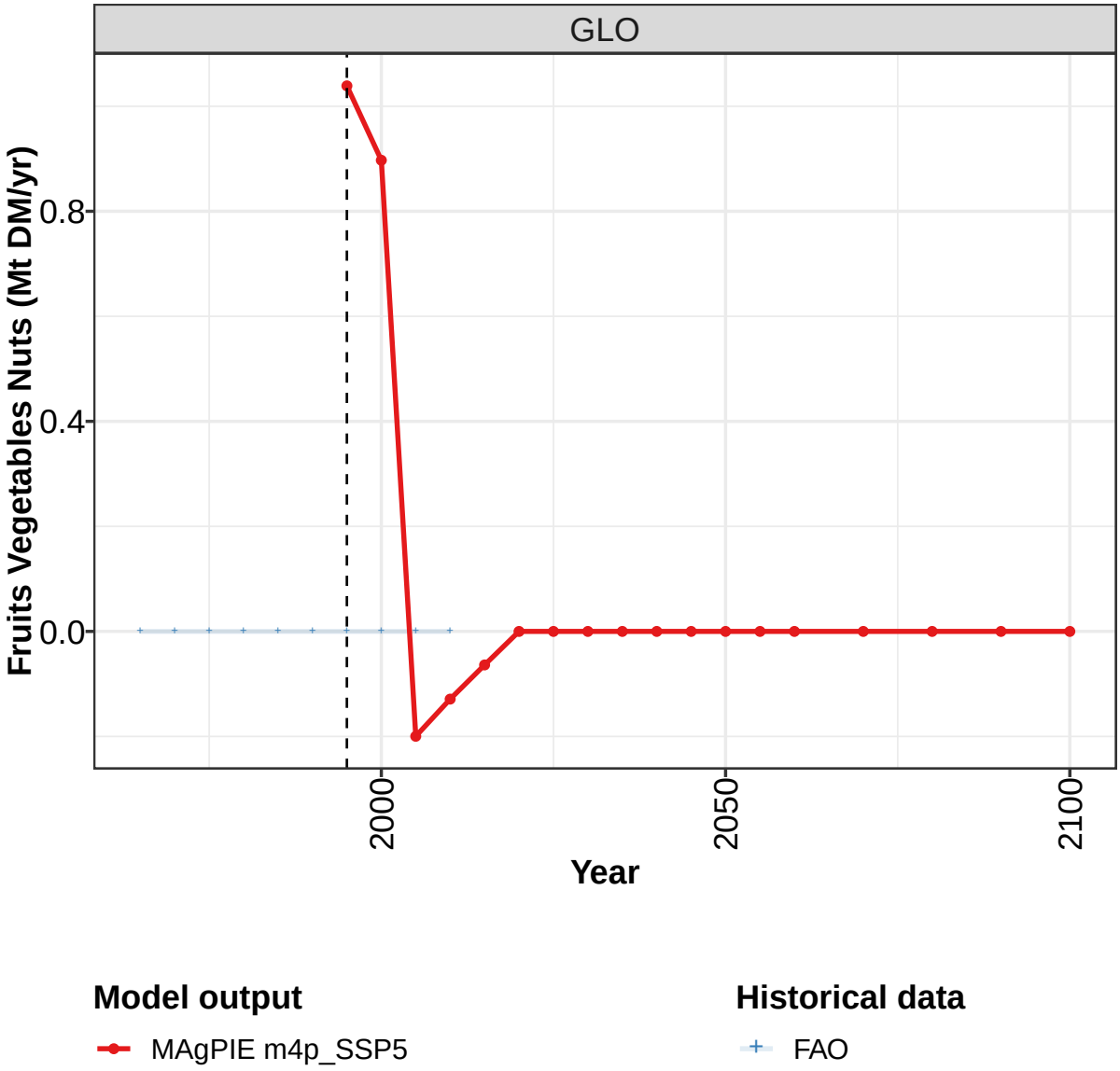
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	-0.0	0.0	0.0	-0.0	-0.0	-0.0
CAZ	1.9	0.6	-2.3	-3.1	-3.4	-3.4	-5.7
CHA	-31.9	-14.0	-12.7	-3.1	-2.6	-10.8	-0.6
EUR	-12.1	-14.7	-15.3	-21.3	-29.9	-42.6	-44.8
IND	-12.7	-14.5	-14.2	-29.8	-16.5	12.0	-15.1
JPN	-1.4	-1.4	-1.5	-1.6	-1.6	-1.6	-1.6
LAM	51.1	51.9	55.6	70.7	63.7	55.7	76.7
MEA	-10.5	-12.8	-13.2	-15.7	-16.6	-16.8	-17.1
NEU	-3.2	-4.3	-4.4	-5.5	-5.6	-5.5	-5.5
OAS	21.5	20.4	18.4	20.1	21.5	23.1	25.2
REF	-7.8	-16.1	-16.7	-18.1	-18.9	-18.1	-16.8
SSA	26.6	28.7	32.1	38.5	45.9	52.8	58.2
USA	-21.5	-23.8	-25.9	-31.1	-36.0	-44.8	-52.8

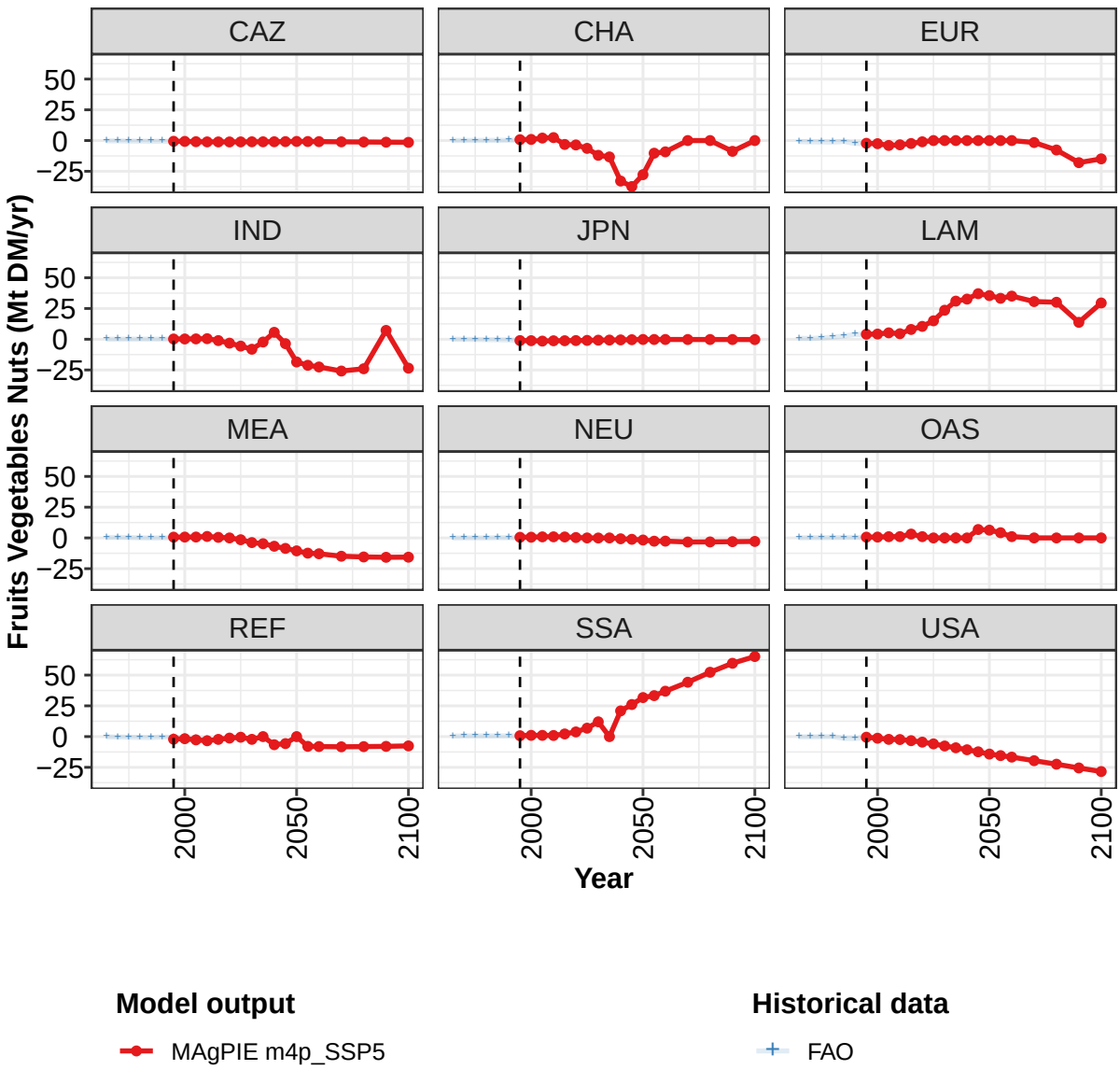
Table 1876: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.23	-0.24	-0.31	-0.38	0.15	0.54	1.28	3.02	3.20	3.91
CHA	0.50	0.72	0.05	0.48	0.12	1.12	0.32	0.11	-1.87	-5.13
EUR	-3.50	-3.06	-6.01	-8.25	-8.22	-12.35	-8.48	-9.26	-6.43	-4.81
IND	0.06	0.09	0.10	0.08	-0.11	-0.61	-0.18	0.12	-0.88	-1.22
JPN	-0.32	-0.57	-0.93	-0.88	-1.42	-1.52	-1.78	-2.08	-2.36	-2.12
LAM	1.87	1.61	3.26	2.99	4.42	7.11	6.59	6.83	8.11	8.29
MEA	0.67	0.48	0.40	-0.08	-0.54	-0.41	-0.84	-1.13	-1.32	-1.94
NEU	-0.15	-0.10	0.11	0.23	0.58	0.53	0.18	-0.08	0.43	0.25
OAS	0.74	1.48	3.64	7.13	8.09	8.60	4.13	4.67	5.34	6.18
REF	0.17	-0.43	-1.19	-1.90	-2.08	-2.50	-0.15	-0.37	-1.66	-4.26
SSA	0.69	0.59	1.47	0.87	1.03	1.59	0.03	0.33	0.62	3.74
USA	-0.49	-0.56	-0.59	-0.29	-2.01	-2.10	-1.09	-2.16	-3.18	-2.88

Table 1877: FAO — Trade—Net-Trade—Crops—Other crops (Mt DM/yr)

58.1.13 Other crops—Fruits Vegetables Nuts





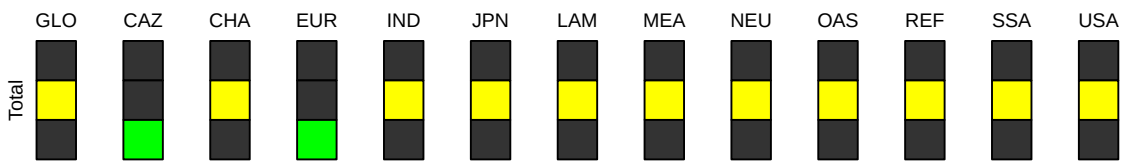


Figure 493: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.0	0.9	-0.2	-0.1	-0.1	0.0	-0.0	0.0	0.0	0.0	0.0
CAZ	-0.6	-0.7	-0.9	-1.1	-1.1	-1.1	-1.1	-1.0	-1.0	-1.0	-0.9
CHA	0.7	0.9	2.0	2.4	-3.2	-3.6	-6.3	-12.0	-13.3	-32.9	-37.4
EUR	-2.2	-2.5	-4.0	-3.5	-2.4	-1.0	-0.0	0.0	0.0	0.0	0.0
IND	0.2	0.2	0.3	0.5	-1.1	-3.2	-5.6	-8.1	-2.2	5.6	-3.6
JPN	-1.1	-1.2	-1.5	-1.3	-1.2	-1.1	-0.9	-0.8	-0.7	-0.5	-0.4
LAM	4.1	4.2	5.2	4.5	8.0	10.4	15.0	23.6	31.0	32.6	37.0
MEA	0.6	0.7	0.7	1.2	0.5	0.0	-1.5	-3.8	-4.7	-6.8	-8.5
NEU	0.5	0.6	0.9	0.9	0.8	0.3	0.0	-0.1	0.0	-0.7	-1.1
OAS	0.6	0.7	1.0	1.1	3.1	1.0	0.0	0.0	0.0	0.0	6.8
REF	-2.1	-1.7	-2.6	-3.4	-2.3	-1.2	-0.5	-2.2	0.0	-6.6	-5.7
SSA	0.7	1.0	1.0	0.9	2.2	3.8	6.8	12.0	0.0	20.9	26.1
USA	-0.5	-1.3	-2.3	-2.4	-3.3	-4.5	-5.9	-7.6	-9.1	-10.7	-12.4

Table 1878: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

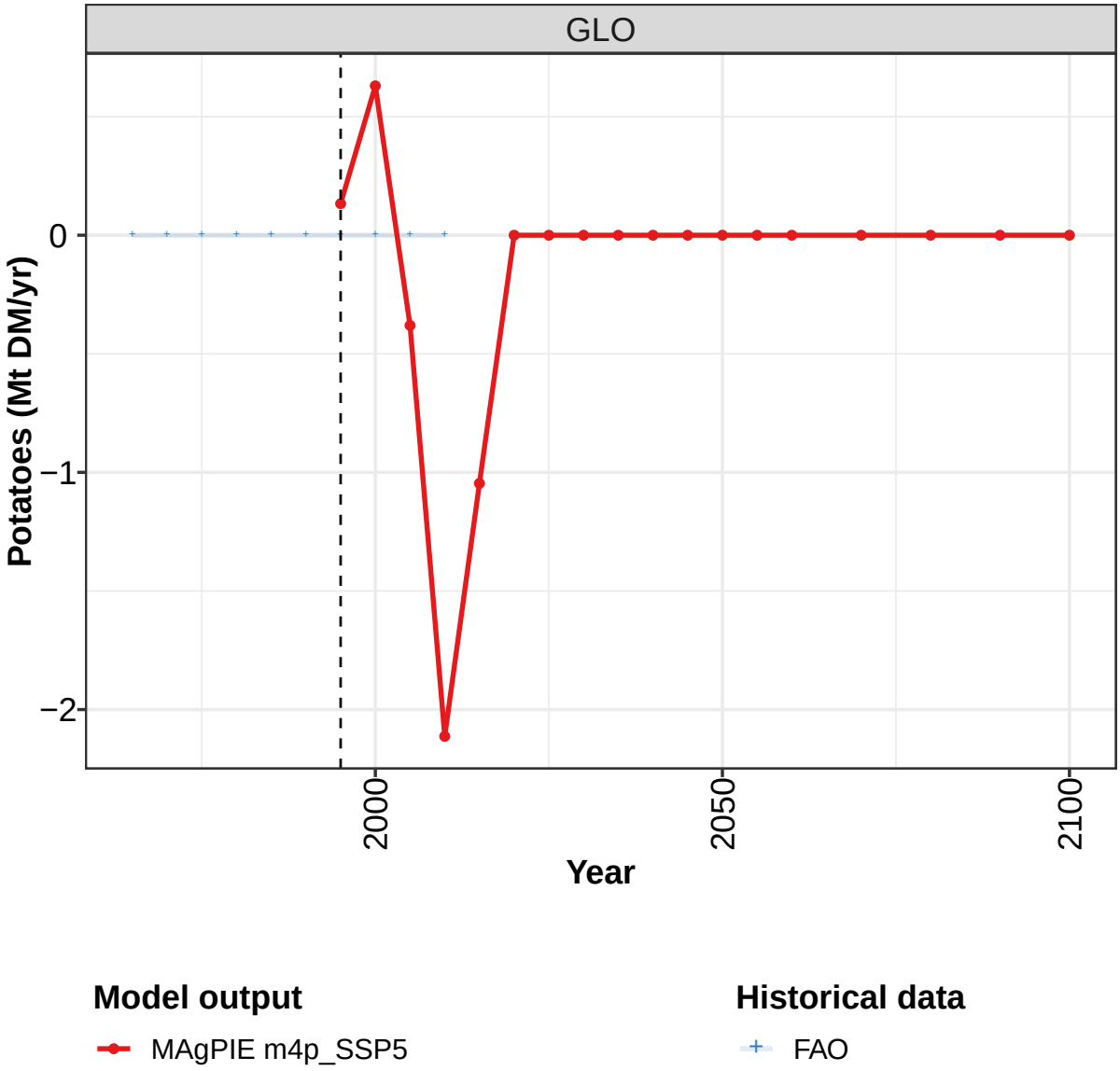
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0
CAZ	-0.7	-0.8	-0.9	-1.0	-1.2	-1.3	-1.5
CHA	-27.7	-10.3	-9.2	0.0	0.0	-8.8	0.0
EUR	0.0	0.0	0.0	-1.6	-7.7	-18.0	-14.9
IND	-18.5	-21.2	-22.5	-25.9	-24.0	7.2	-23.5
JPN	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3
LAM	35.5	33.3	35.1	30.6	30.1	13.7	29.5
MEA	-10.5	-12.4	-12.9	-14.9	-15.5	-15.8	-15.6
NEU	-1.7	-2.7	-2.6	-3.3	-3.3	-3.1	-2.9
OAS	6.3	4.2	1.0	0.0	0.0	0.0	-0.0
REF	0.0	-7.9	-8.1	-8.3	-8.1	-7.9	-7.6
SSA	31.7	33.3	36.9	44.2	52.3	59.6	65.1
USA	-14.2	-15.5	-16.7	-19.6	-22.5	-25.5	-28.4

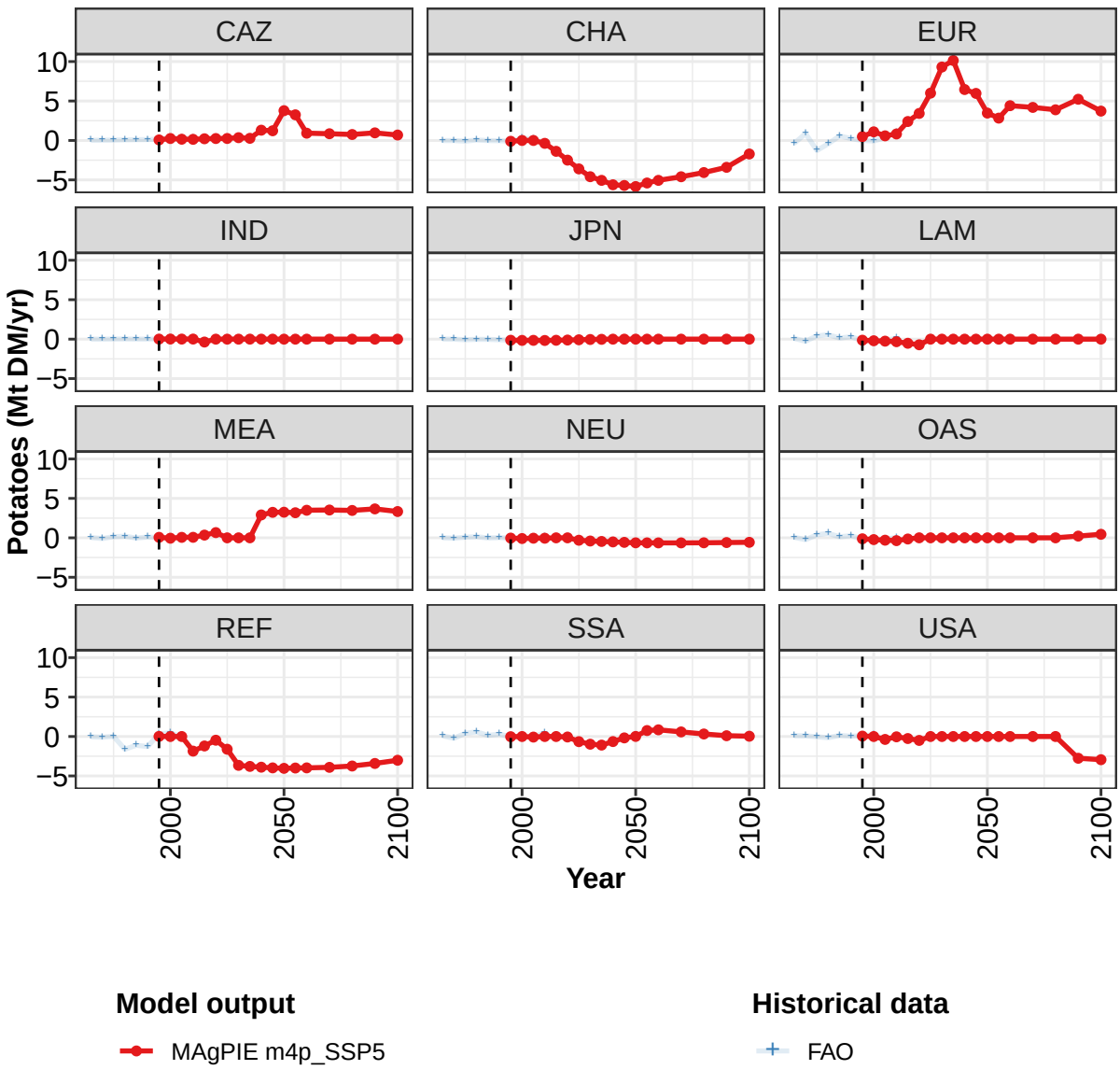
Table 1879: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.20	-0.22	-0.42	-0.50	-0.54	-0.54	-0.62	-0.71	-0.90	-1.08
CHA	0.02	0.10	0.11	0.15	0.16	0.24	0.39	0.61	1.88	2.48
EUR	-0.84	-1.13	-1.16	-1.33	-0.77	-2.37	-2.37	-2.71	-3.91	-3.43
IND	0.05	0.06	0.09	0.13	0.16	0.12	0.18	0.21	0.38	0.60
JPN	-0.03	-0.09	-0.19	-0.31	-0.41	-0.63	-1.05	-1.18	-1.49	-1.23
LAM	0.69	0.61	1.07	1.71	2.58	3.91	3.79	4.27	5.48	5.18
MEA	0.35	0.48	0.35	0.05	-0.05	0.05	-0.06	0.05	0.09	0.16
NEU	-0.11	-0.01	0.02	0.00	0.19	0.15	0.18	0.35	0.61	0.71
OAS	0.04	0.18	0.18	0.28	0.34	0.43	0.21	0.33	0.53	0.27
REF	-0.25	-0.35	-0.53	-0.70	-0.81	-0.35	-0.66	-0.62	-1.51	-2.17
SSA	0.40	0.60	0.58	0.53	0.59	0.61	0.56	0.74	1.04	0.92
USA	-0.13	-0.23	-0.09	-0.02	-1.43	-1.61	-0.55	-1.33	-2.19	-2.41

Table 1880: FAO — Trade—Net-Trade—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

58.1.14 Other crops—Potatoes





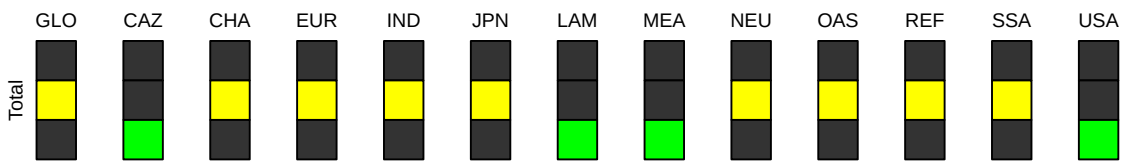


Figure 494: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.1	0.6	-0.4	-2.1	-1.0	0.0	0.0	-0.0	0.0	-0.0	-0.0
CAZ	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.3	1.3	1.2
CHA	-0.1	0.0	0.0	-0.4	-1.4	-2.5	-3.6	-4.6	-5.1	-5.6	-5.7
EUR	0.5	1.1	0.6	0.8	2.4	3.4	6.0	9.3	10.1	6.5	6.0
IND	0.0	0.0	0.0	0.0	-0.4	0.0	0.0	0.0	0.0	0.0	0.0
JPN	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.0	-0.0	0.0	0.0
LAM	-0.1	-0.2	-0.3	-0.3	-0.5	-0.7	0.0	0.0	0.0	0.0	0.0
MEA	0.1	-0.0	0.1	0.1	0.3	0.7	0.0	-0.0	0.0	2.9	3.2
NEU	-0.0	-0.1	-0.0	-0.0	0.0	0.0	-0.3	-0.4	-0.5	-0.5	-0.6
OAS	-0.1	-0.2	-0.3	-0.4	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
REF	0.0	-0.0	0.0	-1.9	-1.2	-0.5	-1.6	-3.7	-3.8	-3.9	-4.0
SSA	-0.0	0.0	-0.1	0.0	0.0	-0.1	-0.7	-1.0	-1.1	-0.6	-0.2
USA	0.0	0.0	-0.4	-0.0	-0.3	-0.5	0.0	0.0	0.0	0.0	0.0

Table 1881: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

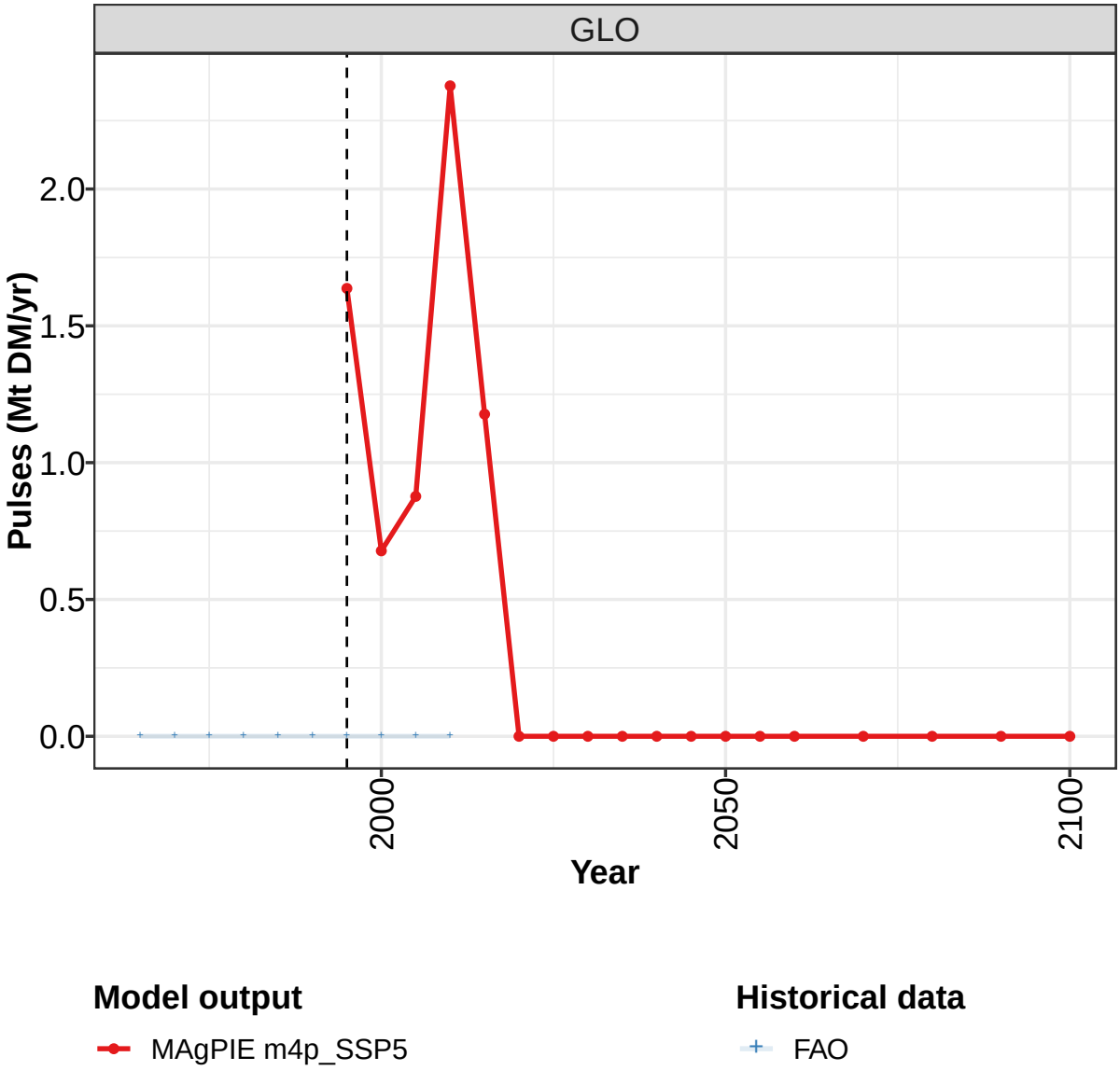
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	-0.0	0.0	0.0	0.0
CAZ	3.8	3.3	0.9	0.9	0.8	1.0	0.7
CHA	-5.8	-5.4	-5.1	-4.6	-4.1	-3.4	-1.7
EUR	3.5	2.8	4.4	4.2	3.9	5.2	3.7
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	3.2	3.2	3.5	3.5	3.5	3.7	3.3
NEU	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
OAS	0.0	0.0	-0.0	0.0	0.0	0.2	0.4
REF	-4.0	-4.0	-4.0	-3.9	-3.7	-3.4	-3.0
SSA	0.0	0.8	0.8	0.6	0.3	0.1	0.0
USA	0.0	0.0	0.0	0.0	0.0	-2.8	-2.9

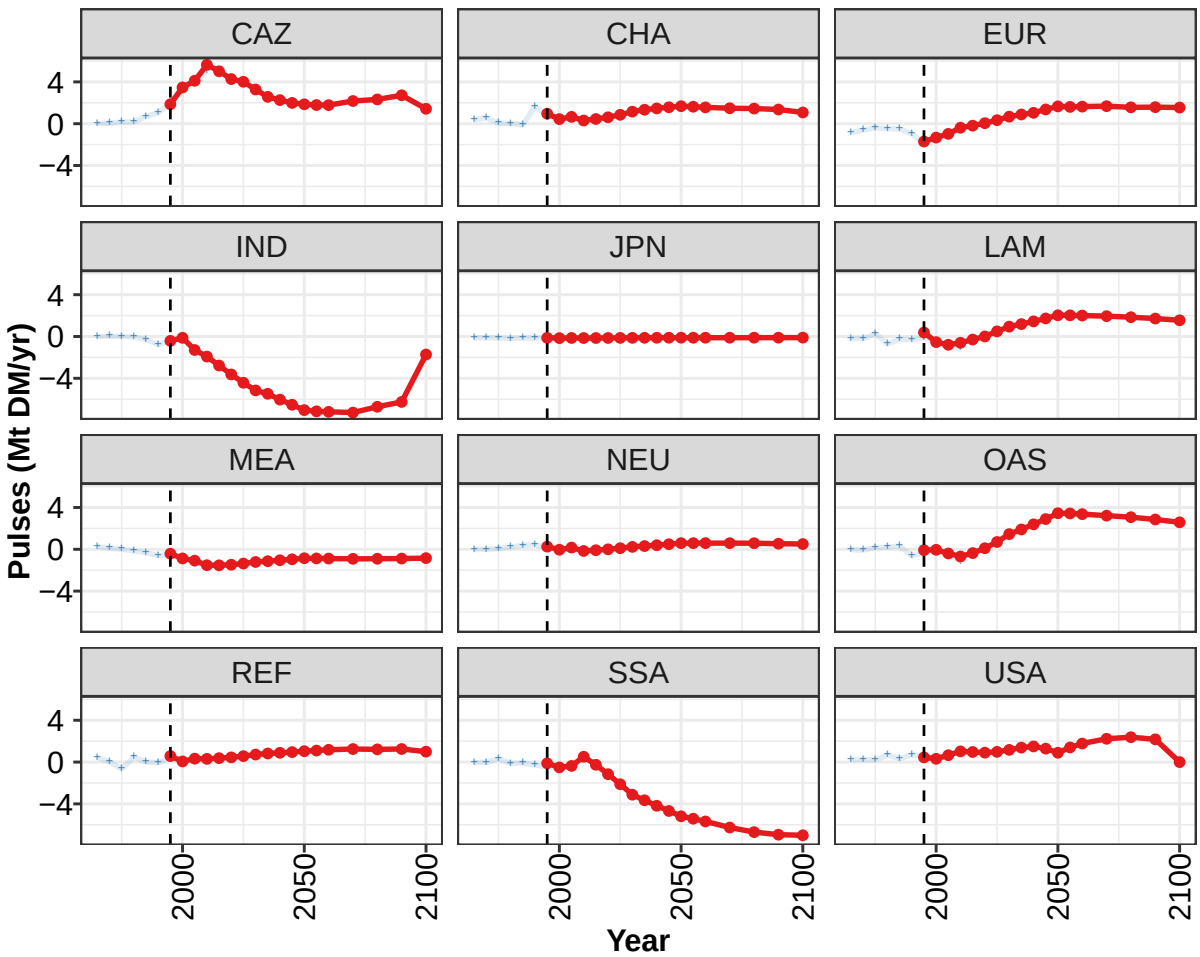
Table 1882: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.02	0.03	0.04	0.08	0.10	0.11	0.18	0.31	0.29	0.26
CHA	-0.01	-0.01	-0.09	0.06	-0.01	-0.03	-0.08	0.29	0.20	-0.28
EUR	-0.36	0.87	-1.27	-0.42	0.58	0.23	-0.00	-0.07	0.35	1.02
IND	0.00	-0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.02	0.05
JPN	0.01	-0.00	-0.08	-0.03	-0.03	-0.08	-0.14	-0.16	-0.15	-0.16
LAM	0.09	-0.27	0.41	0.56	0.14	0.30	-0.18	-0.35	-0.16	0.12
MEA	0.04	-0.09	0.13	0.20	-0.03	0.10	0.02	-0.11	0.08	0.16
NEU	-0.00	-0.04	0.07	0.14	-0.02	0.03	-0.05	-0.13	-0.02	0.09
OAS	0.06	-0.24	0.38	0.57	0.12	0.27	-0.14	-0.35	-0.22	0.07
REF	-0.04	-0.09	0.01	-1.61	-1.12	-1.27	0.33	0.46	-0.04	-1.76
SSA	0.09	-0.23	0.41	0.59	0.14	0.30	-0.05	-0.13	0.01	0.47
USA	0.11	0.08	-0.04	-0.15	0.13	0.03	0.11	0.22	-0.37	-0.05

Table 1883: FAO — Trade—Net-Trade—Crops—Other crops—Potatoes (Mt DM/yr)

58.1.15 Other crops—Pulses





Model output

MAgPIE m4p_SSP5

Historical data

FAO

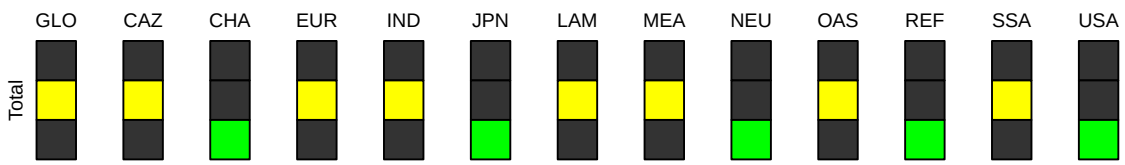


Figure 495: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.64	0.68	0.88	2.38	1.18	-0.00	-0.00	0.00	0.00	-0.00	-0.00
CAZ	1.86	3.47	4.11	5.64	5.02	4.27	4.01	3.27	2.57	2.26	1.99
CHA	0.96	0.44	0.66	0.31	0.45	0.62	0.85	1.15	1.34	1.46	1.57
EUR	-1.70	-1.33	-0.97	-0.38	-0.19	0.05	0.34	0.67	0.89	1.05	1.36
IND	-0.42	-0.13	-1.29	-1.92	-2.78	-3.63	-4.43	-5.16	-5.48	-6.04	-6.53
JPN	-0.13	-0.15	-0.14	-0.15	-0.14	-0.14	-0.13	-0.13	-0.12	-0.12	-0.12
LAM	0.39	-0.53	-0.79	-0.60	-0.29	0.01	0.49	0.94	1.18	1.45	1.73
MEA	-0.42	-0.87	-1.09	-1.52	-1.53	-1.47	-1.37	-1.21	-1.14	-1.05	-0.96
NEU	0.26	-0.04	0.16	-0.16	-0.09	0.00	0.11	0.23	0.31	0.39	0.49
OAS	-0.08	-0.05	-0.40	-0.69	-0.36	0.10	0.70	1.45	1.90	2.39	2.89
REF	0.58	0.06	0.33	0.31	0.38	0.45	0.57	0.72	0.82	0.89	0.96
SSA	-0.12	-0.51	-0.36	0.51	-0.26	-1.16	-2.12	-3.12	-3.65	-4.18	-4.68
USA	0.45	0.32	0.66	1.03	0.97	0.90	0.98	1.17	1.39	1.50	1.29

Table 1884: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

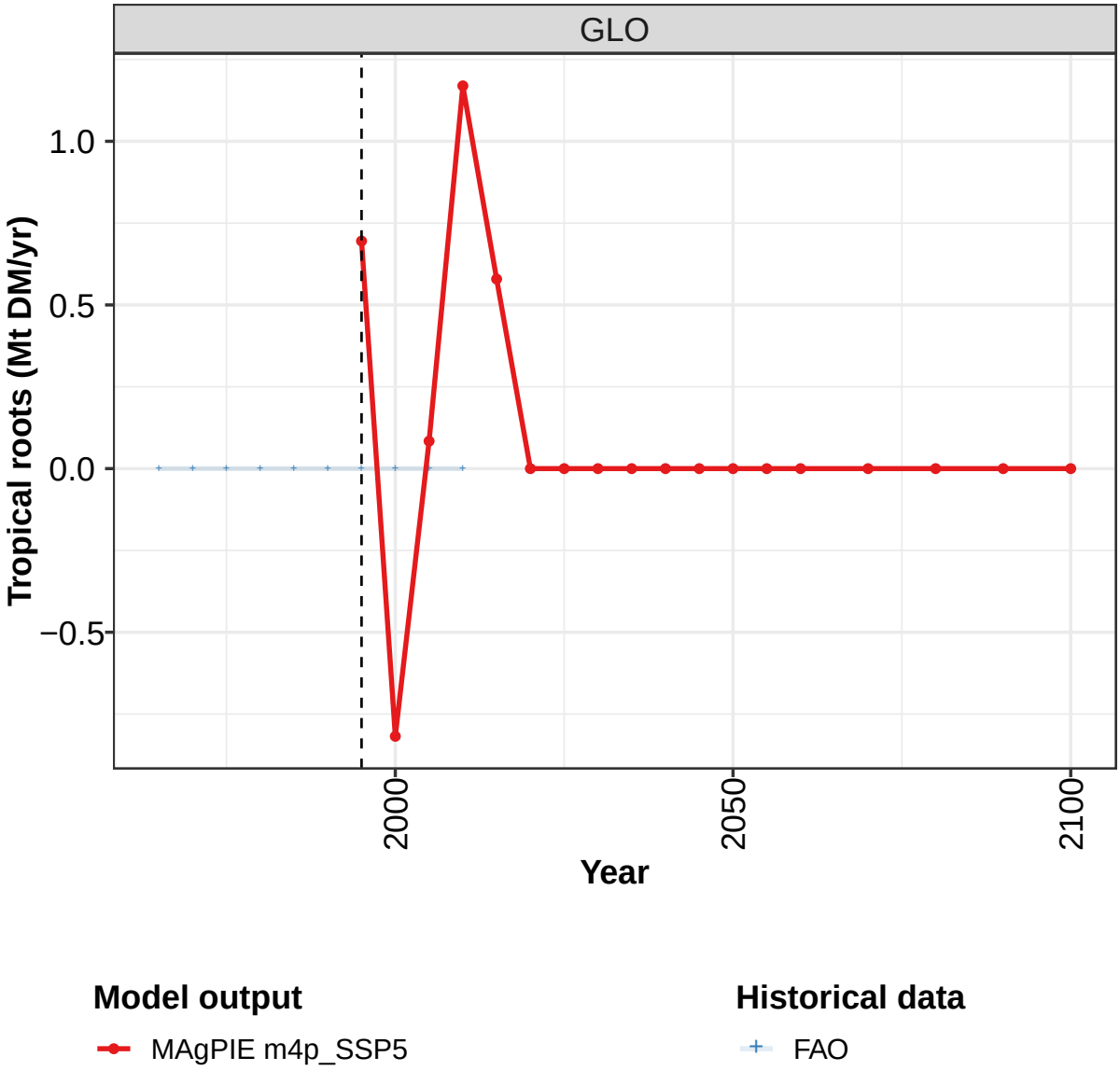
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.00	0.00	0.00	0.00	0.00	-0.00	0.00
CAZ	1.86	1.79	1.78	2.17	2.32	2.72	1.43
CHA	1.68	1.62	1.56	1.48	1.45	1.36	1.08
EUR	1.66	1.61	1.64	1.68	1.57	1.58	1.55
IND	-7.04	-7.16	-7.21	-7.28	-6.73	-6.26	-1.72
JPN	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11
LAM	2.03	2.03	2.00	1.95	1.85	1.72	1.55
MEA	-0.85	-0.87	-0.89	-0.91	-0.90	-0.89	-0.85
NEU	0.59	0.59	0.59	0.59	0.58	0.54	0.50
OAS	3.45	3.43	3.37	3.22	3.07	2.85	2.58
REF	1.04	1.10	1.18	1.25	1.22	1.25	1.00
SSA	-5.19	-5.42	-5.68	-6.26	-6.70	-6.95	-7.00
USA	0.89	1.40	1.78	2.23	2.38	2.18	-0.00

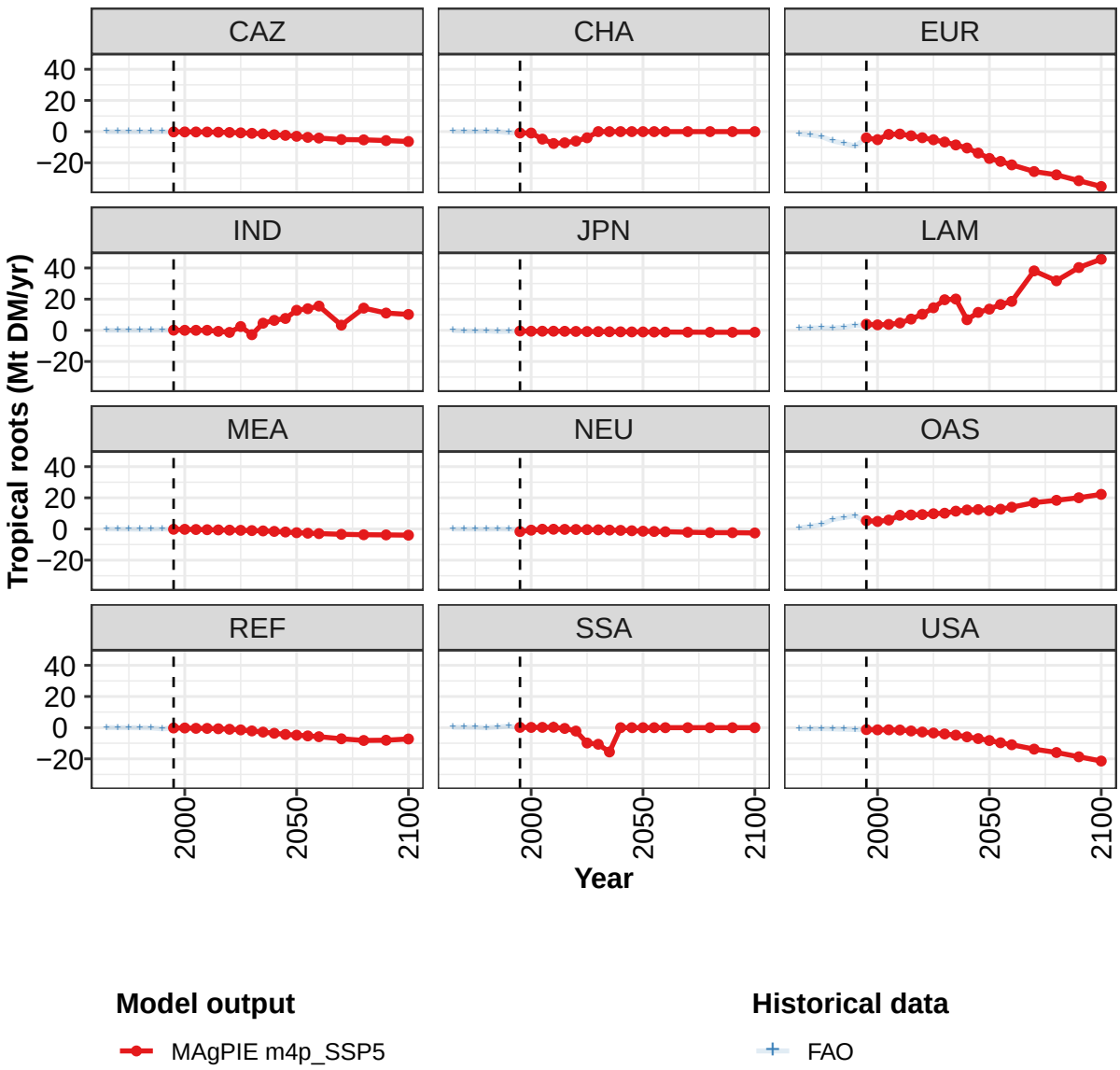
Table 1885: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Pulses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.01	0.04	0.16	0.17	0.70	1.06	1.93	3.60	4.03	5.02
CHA	0.37	0.58	0.04	0.03	-0.11	1.64	0.84	0.25	0.63	0.19
EUR	-0.86	-0.61	-0.39	-0.48	-0.50	-0.98	-1.86	-1.43	-1.10	-0.71
IND	-0.00	0.03	0.00	-0.07	-0.28	-0.78	-0.41	-0.10	-1.29	-1.89
JPN	-0.15	-0.12	-0.16	-0.20	-0.15	-0.16	-0.13	-0.16	-0.14	-0.16
LAM	-0.19	-0.22	0.28	-0.72	-0.26	-0.33	-0.12	-0.66	-0.99	-1.12
MEA	0.26	0.12	0.01	-0.15	-0.34	-0.58	-0.56	-0.93	-1.15	-1.72
NEU	-0.03	-0.00	0.07	0.20	0.38	0.43	0.17	-0.09	-0.01	-0.31
OAS	-0.03	-0.09	0.16	0.20	0.31	-0.63	-0.39	-0.16	-0.51	-1.15
REF	0.44	0.03	-0.66	0.47	0.03	-0.07	0.42	-0.03	0.32	0.20
SSA	-0.06	-0.02	0.31	-0.13	-0.09	-0.28	-0.48	-0.62	-0.51	0.55
USA	0.23	0.26	0.19	0.68	0.32	0.68	0.58	0.33	0.72	1.08

Table 1886: FAO — Trade—Net-Trade—Crops—Other crops—Pulses (Mt DM/yr)

58.1.16 Other crops—Tropical roots





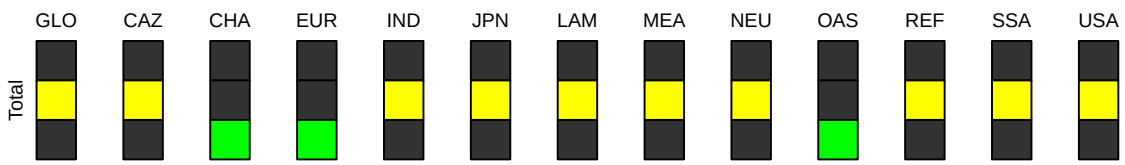


Figure 496: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.7	-0.8	0.1	1.2	0.6	-0.0	0.0	-0.0	0.0	0.0	0.0
CAZ	-0.2	-0.2	-0.2	-0.3	-0.4	-0.5	-0.8	-1.1	-1.5	-2.0	-2.4
CHA	-0.9	-0.9	-4.8	-7.6	-7.2	-6.1	-3.9	0.0	0.0	0.0	0.0
EUR	-4.0	-5.1	-1.8	-1.5	-2.7	-3.9	-5.2	-6.7	-8.6	-10.5	-13.8
IND	0.1	0.0	0.0	0.0	-0.7	-1.3	2.4	-2.8	4.6	6.4	7.6
JPN	-0.4	-0.6	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-0.9	-1.0	-1.0
LAM	3.9	3.5	3.8	4.7	7.2	10.3	14.5	19.6	20.0	6.8	11.5
MEA	-0.2	-0.2	-0.3	-0.5	-0.6	-0.7	-0.9	-1.0	-1.2	-1.5	-1.9
NEU	-1.7	-0.7	-0.1	-0.2	-0.2	-0.3	-0.4	-0.5	-0.7	-0.9	-1.1
OAS	5.3	4.9	5.7	8.8	9.0	9.2	9.8	10.1	11.4	12.2	12.5
REF	-0.2	-0.2	-0.4	-0.5	-0.7	-1.0	-1.4	-2.1	-2.8	-3.6	-4.3
SSA	0.2	0.2	0.2	0.3	-0.5	-2.2	-9.8	-10.6	-15.6	0.0	0.0
USA	-1.2	-1.4	-1.3	-1.5	-2.1	-2.8	-3.4	-4.0	-4.8	-5.9	-7.0

Table 1887: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

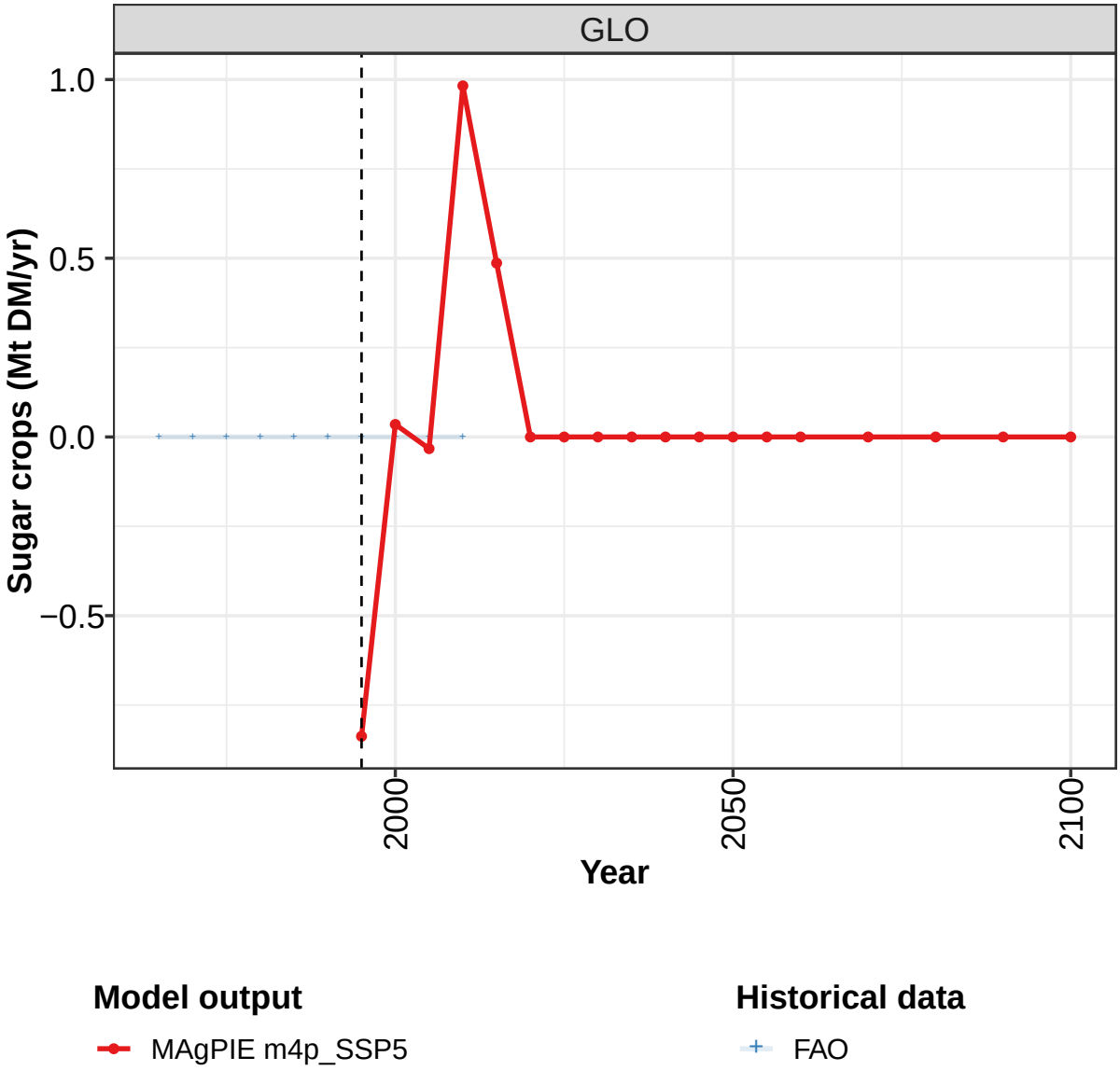
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	-0.0	-0.0	0.0	-0.0	0.0	0.0
CAZ	-3.0	-3.7	-4.1	-5.1	-5.3	-5.7	-6.4
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	-17.2	-19.1	-21.3	-25.6	-27.7	-31.5	-35.2
IND	12.8	13.9	15.6	3.3	14.2	11.1	10.2
JPN	-1.1	-1.1	-1.2	-1.2	-1.3	-1.3	-1.3
LAM	13.6	16.6	18.6	38.1	31.8	40.3	45.6
MEA	-2.4	-2.7	-2.9	-3.4	-3.7	-3.8	-4.0
NEU	-1.4	-1.6	-1.8	-2.1	-2.3	-2.4	-2.5
OAS	11.7	12.7	14.0	16.9	18.4	20.0	22.2
REF	-4.8	-5.3	-5.8	-7.1	-8.2	-8.0	-7.3
SSA	-0.0	0.0	-0.0	0.0	0.0	0.0	0.0
USA	-8.2	-9.7	-11.0	-13.8	-15.9	-18.7	-21.4

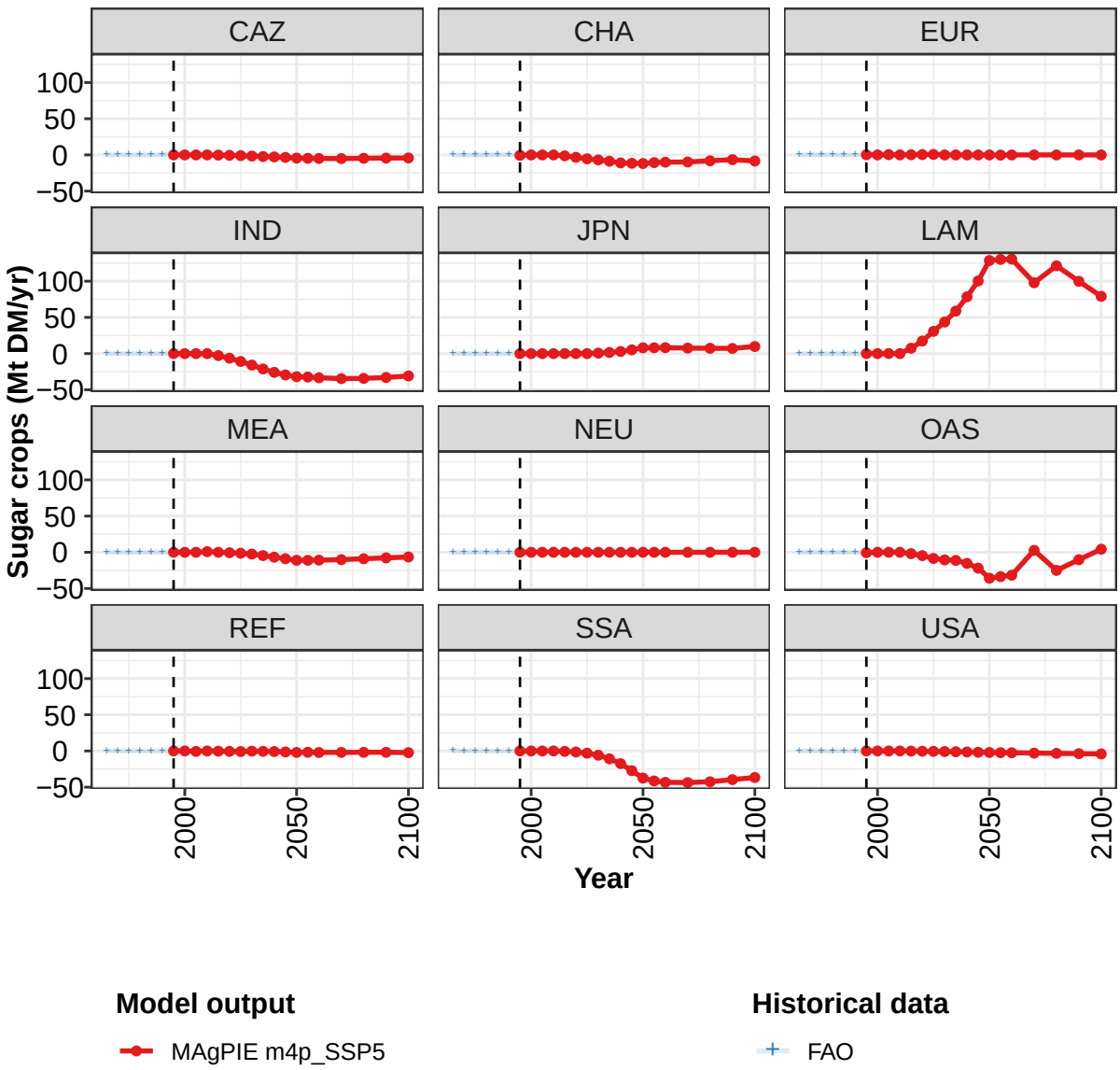
Table 1888: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.06	-0.09	-0.09	-0.13	-0.11	-0.09	-0.21	-0.18	-0.22	-0.29
CHA	0.11	0.06	-0.01	0.25	0.09	-0.72	-0.82	-1.03	-4.58	-7.52
EUR	-1.44	-2.19	-3.19	-6.02	-7.53	-9.24	-4.26	-5.06	-1.77	-1.70
IND	0.00	0.00	0.00	-0.00	0.01	0.04	0.03	0.01	0.01	0.02
JPN	-0.15	-0.36	-0.50	-0.34	-0.83	-0.64	-0.45	-0.58	-0.57	-0.58
LAM	1.28	1.47	1.50	1.43	1.96	3.23	3.08	3.57	3.78	4.11
MEA	0.02	-0.03	-0.09	-0.19	-0.11	0.02	-0.24	-0.13	-0.34	-0.55
NEU	-0.01	-0.04	-0.04	-0.11	0.04	-0.08	-0.12	-0.21	-0.15	-0.24
OAS	0.66	1.62	2.91	6.08	7.32	8.54	4.45	4.85	5.53	6.99
REF	0.01	-0.01	-0.00	-0.06	-0.18	-0.80	-0.23	-0.17	-0.42	-0.52
SSA	0.26	0.24	0.16	-0.12	0.39	0.95	-0.01	0.32	0.08	1.79
USA	-0.71	-0.68	-0.65	-0.79	-1.04	-1.21	-1.23	-1.39	-1.34	-1.50

Table 1889: FAO — Trade—Net-Trade—Crops—Other crops—Tropical roots (Mt DM/yr)

58.1.17 Sugar crops





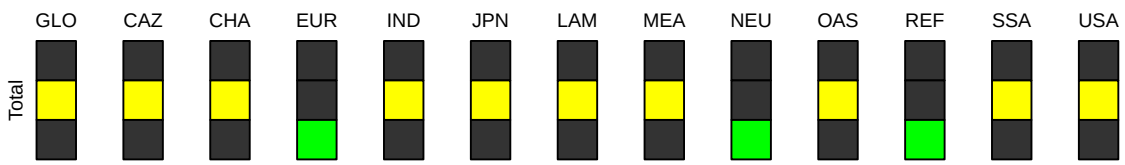


Figure 497: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-1	0	-0	1	0	0	-0	0	-0	0	0
CAZ	0	-0	-0	-0	-0	-1	-1	-2	-2	-3	-3
CHA	-1	0	0	0	-1	-3	-5	-7	-9	-11	-12
EUR	0	-0	0	0	0	0	1	-0	-0	-0	-0
IND	0	-0	0	0	-3	-6	-11	-16	-21	-26	-29
JPN	-0	0	0	0	0	0	0	1	2	3	5
LAM	0	0	0	0	7	17	31	44	59	78	100
MEA	0	0	0	1	0	-1	-1	-2	-5	-7	-9
NEU	0	0	0	0	-0	-0	-0	-0	-0	-0	-0
OAS	-1	0	0	0	-2	-5	-9	-11	-11	-15	-22
REF	0	0	-1	0	-0	-1	-1	-0	-0	-1	-1
SSA	0	-0	0	0	-1	-1	-3	-6	-11	-17	-27
USA	0	0	-0	0	-0	-0	-1	-1	-1	-1	-2

Table 1890: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

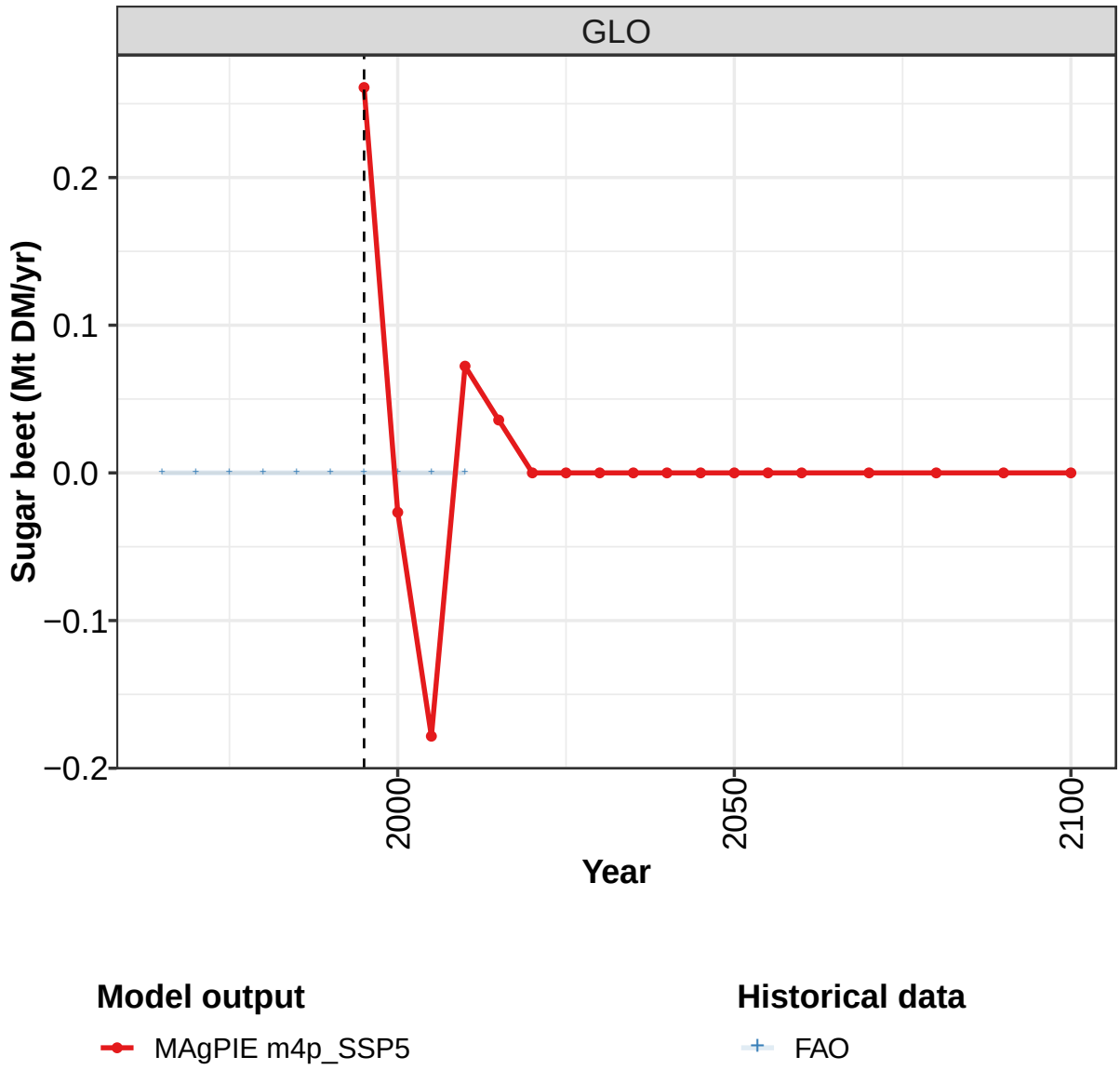
	2050	2055	2060	2070	2080	2090	2100
GLO	0	-0	-0	0	0	0	0
CAZ	-4	-5	-5	-5	-5	-4	-4
CHA	-12	-11	-10	-10	-8	-7	-8
EUR	-0	-0	-0	-0	-0	-0	-0
IND	-32	-32	-33	-35	-34	-33	-31
JPN	8	8	8	8	7	7	10
LAM	129	130	130	98	121	100	79
MEA	-11	-11	-11	-10	-9	-8	-6
NEU	-0	-0	-0	-0	-0	-0	-0
OAS	-36	-34	-32	3	-25	-10	4
REF	-2	-2	-2	-2	-2	-2	-2
SSA	-37	-41	-43	-44	-43	-40	-37
USA	-2	-2	-2	-3	-3	-4	-4

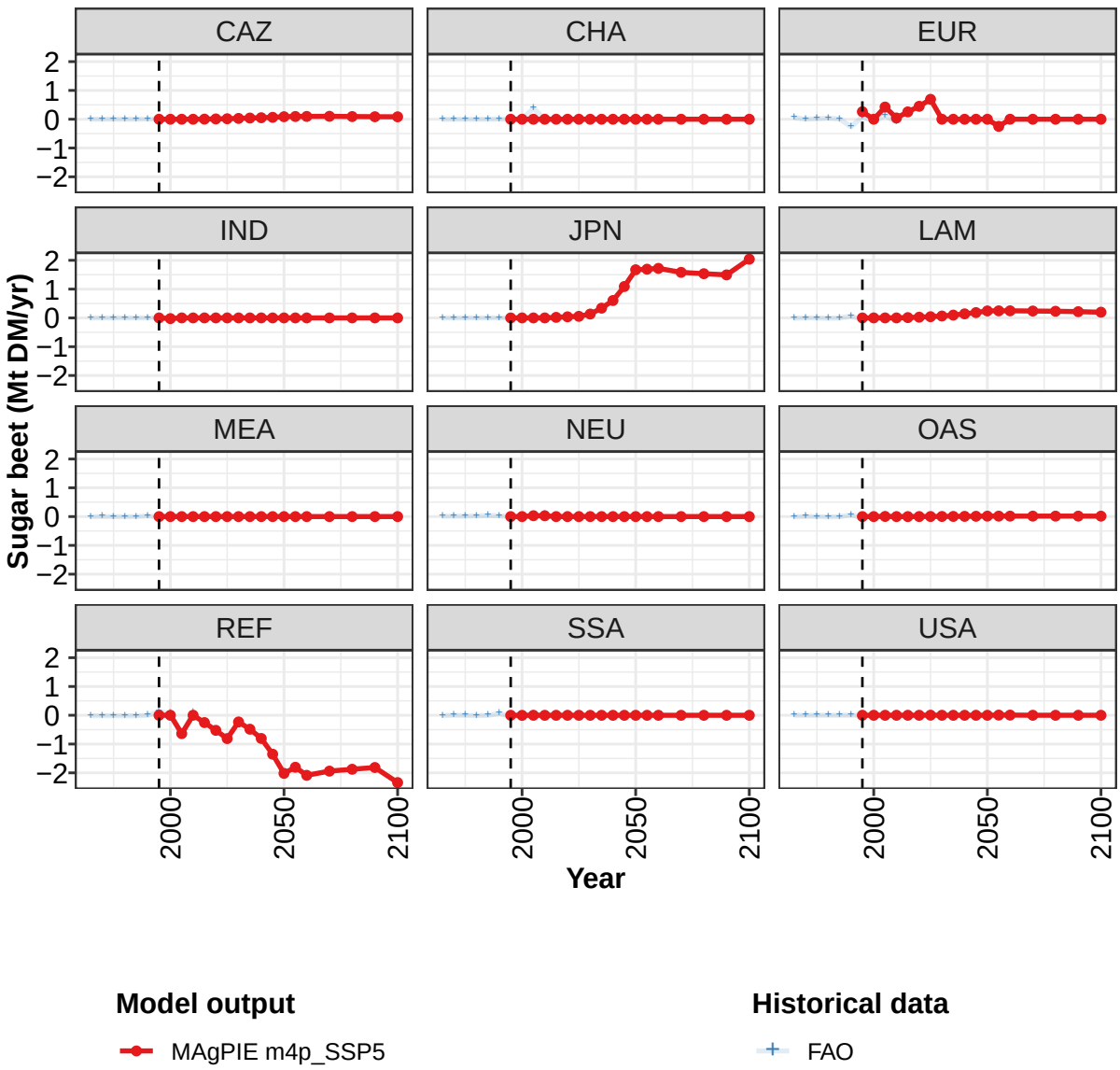
Table 1891: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.004	0.000	-0.001	-0.002	-0.016	0.000	0.017	-0.001	0.001	-0.020
CHA	-0.269	-0.002	-0.003	-0.002	0.715	0.406	-0.526	-0.001	0.784	-0.016
EUR	0.091	0.001	0.014	0.036	-0.093	-0.304	0.235	-0.080	0.106	-0.236
IND	0.001	0.000	-0.000	-0.000	-0.003	0.000	0.003	0.000	0.000	-0.004
JPN	0.001	0.000	-0.000	-0.000	-0.003	0.000	0.003	-0.000	0.000	-0.004
LAM	0.053	0.011	0.002	-0.007	-0.165	0.026	0.170	0.052	-0.256	-0.098
MEA	0.016	-0.000	-0.004	-0.009	-0.066	0.000	0.071	-0.003	0.002	-0.086
NEU	0.026	0.016	0.012	0.023	-0.015	0.011	0.058	-0.020	0.006	0.008
OAS	0.044	-0.006	0.006	-0.000	-0.137	-0.117	-0.373	-0.004	0.009	0.617
REF	-0.007	-0.018	-0.017	-0.023	-0.056	-0.019	0.177	0.062	-0.658	0.056
SSA	0.039	-0.000	-0.008	-0.018	-0.159	0.000	0.172	-0.009	0.007	-0.202
USA	0.001	0.000	-0.000	0.002	-0.002	-0.002	-0.007	0.003	-0.001	-0.017

Table 1892: FAO — Trade—Net-Trade—Crops—Sugar crops (Mt DM/yr)

58.1.18 Sugar crops—Sugar beet





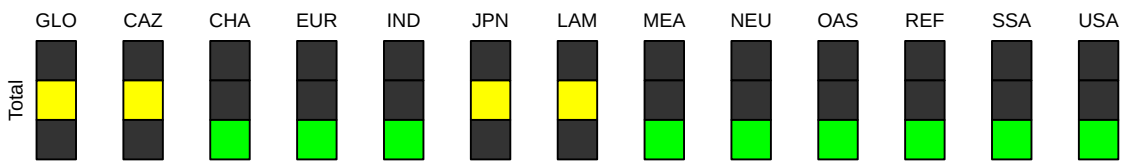


Figure 498: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.26	-0.03	-0.18	0.07	0.04	0.00	0.00	0.00	-0.00	0.00	0.00
CAZ	0.00	-0.00	-0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.05	0.07
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.26	0.00	0.42	0.04	0.26	0.45	0.69	0.00	0.00	0.00	0.00
IND	0.00	-0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.02	0.04	0.05	0.13	0.34	0.60	1.09
LAM	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.07	0.10	0.14	0.18
MEA	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00
NEU	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	-0.00
OAS	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
REF	0.00	0.00	-0.64	0.00	-0.25	-0.52	-0.81	-0.23	-0.48	-0.81	-1.35
SSA	0.00	-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
USA	0.00	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1893: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

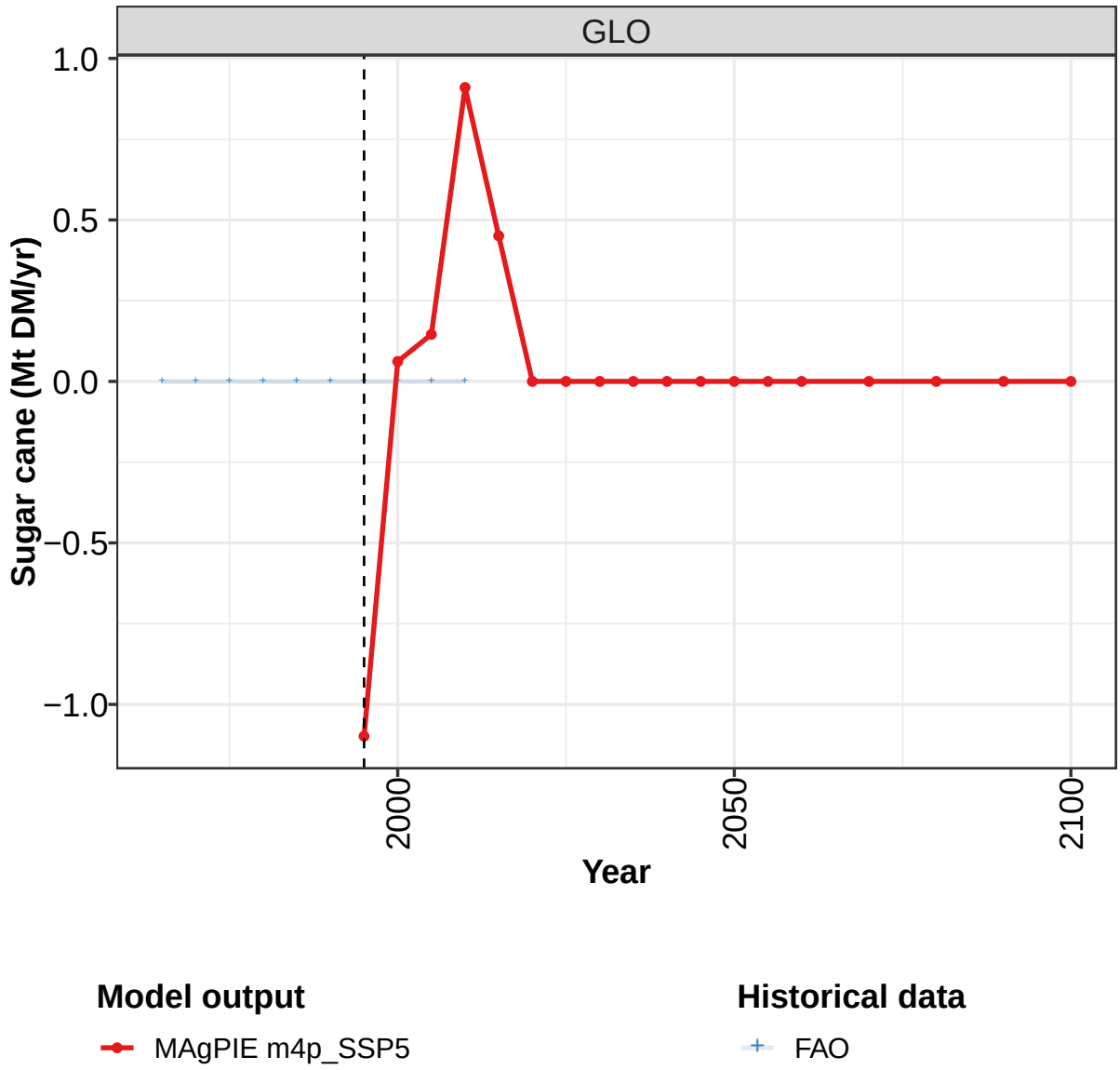
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	-0.00	-0.00	0.00	0.00	-0.00	0.00
CAZ	0.09	0.09	0.10	0.10	0.09	0.09	0.08
CHA	0.00	0.00	0.00	-0.00	0.00	0.00	0.00
EUR	0.00	-0.25	-0.00	0.00	-0.00	-0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	1.67	1.69	1.72	1.58	1.54	1.49	2.04
LAM	0.24	0.25	0.25	0.24	0.23	0.22	0.20
MEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEU	0.00	-0.00	0.00	0.00	0.00	-0.00	0.00
OAS	0.02	0.02	0.02	0.02	0.02	0.02	0.02
REF	-2.02	-1.81	-2.09	-1.94	-1.88	-1.81	-2.34
SSA	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
USA	0.00	0.01	0.01	0.00	0.00	0.00	0.00

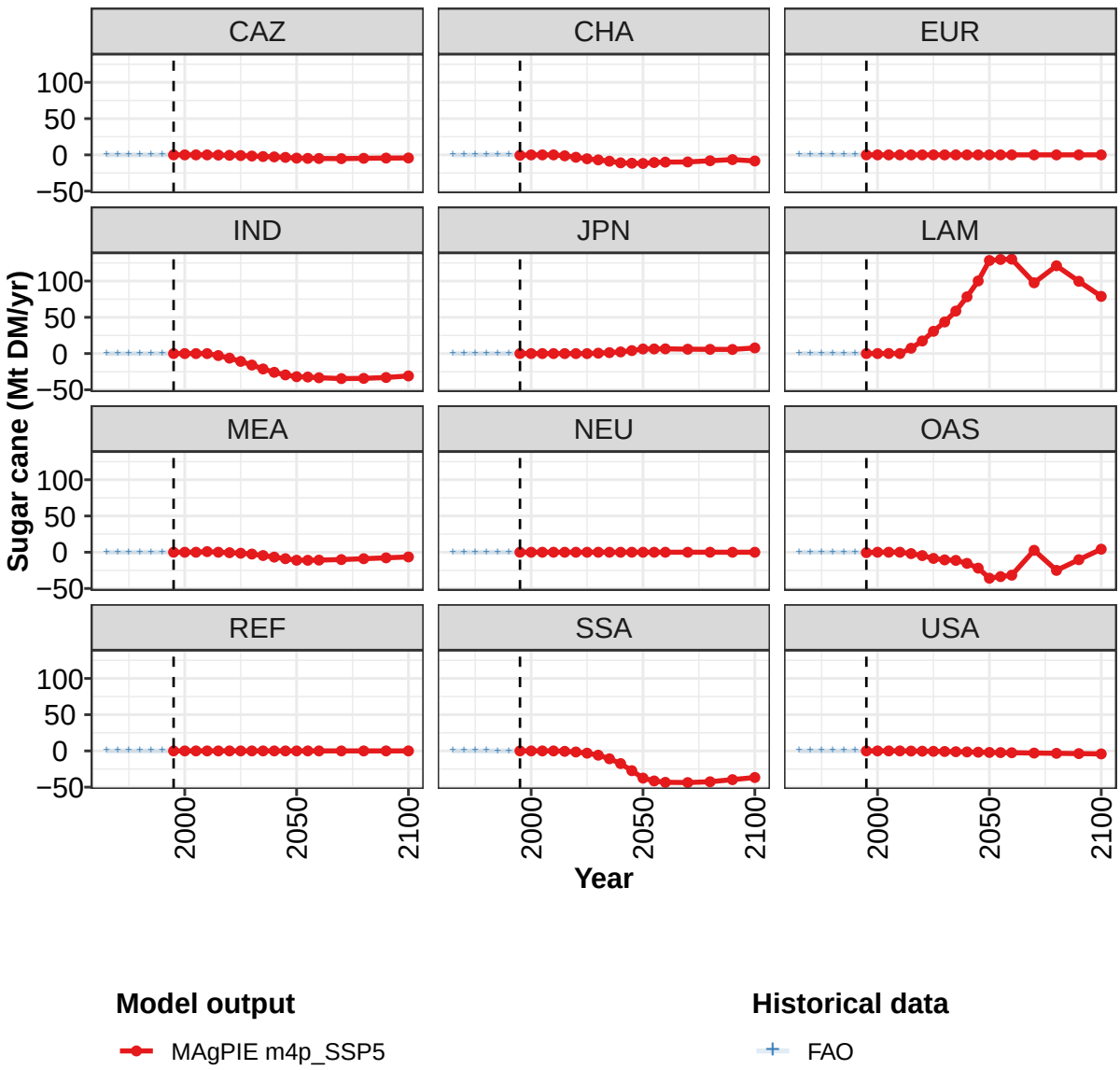
Table 1894: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	-0.001	0.000	-0.000	-0.001	-0.001	0.006	-0.005	0.000	0.004	-0.001
CHA	-0.004	-0.003	-0.003	-0.001	-0.001	0.005	-0.005	0.001	0.382	-0.001
EUR	0.057	0.001	0.018	0.040	0.009	-0.262	0.086	-0.072	0.123	-0.110
IND	-0.000	0.000	-0.000	-0.000	-0.000	0.001	-0.001	0.000	0.001	-0.000
JPN	-0.000	0.000	-0.000	-0.000	-0.000	0.001	-0.001	0.000	0.001	-0.000
LAM	-0.013	0.001	-0.004	-0.013	-0.006	0.068	-0.057	0.006	0.039	-0.016
MEA	-0.005	0.000	-0.002	-0.005	-0.003	0.026	-0.022	0.002	0.014	-0.009
NEU	0.010	0.016	0.014	0.025	0.033	0.031	-0.013	-0.016	0.015	0.068
OAS	-0.012	0.001	-0.003	-0.012	-0.006	0.061	-0.051	0.005	0.035	-0.014
REF	-0.019	-0.018	-0.016	-0.021	-0.020	-0.004	0.124	0.065	-0.651	0.100
SSA	-0.012	0.001	-0.004	-0.013	-0.006	0.064	-0.053	0.005	0.036	-0.015
USA	-0.000	0.000	-0.000	0.002	0.001	0.001	-0.001	0.003	0.001	0.000

Table 1895: FAO — Trade—Net-Trade—Crops—Sugar crops—Sugar beet (Mt DM/yr)

58.1.19 Sugar crops—Sugar cane





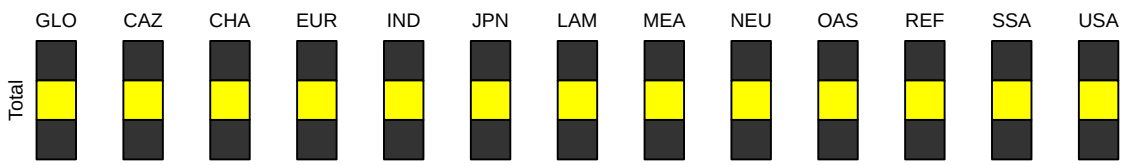


Figure 499: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-1	0	0	1	0	0	-0	0	0	0	0
CAZ	0	0	0	-0	-0	-1	-1	-2	-2	-3	-3
CHA	-1	0	0	0	-1	-3	-5	-7	-9	-11	-12
EUR	0	-0	0	-0	-0	-0	-0	-0	-0	-0	-0
IND	0	0	0	0	-3	-6	-11	-16	-21	-26	-29
JPN	-0	0	0	0	-0	-0	-0	1	1	2	4
LAM	0	0	0	0	7	17	31	44	59	78	100
MEA	0	0	0	1	0	-1	-1	-2	-5	-7	-9
NEU	0	0	0	-0	-0	-0	-0	-0	-0	-0	-0
OAS	-1	0	0	0	-2	-5	-9	-11	-11	-15	-22
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	-1	-1	-3	-6	-11	-17	-27
USA	0	0	-0	0	-0	-0	-1	-1	-1	-1	-2

Table 1896: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

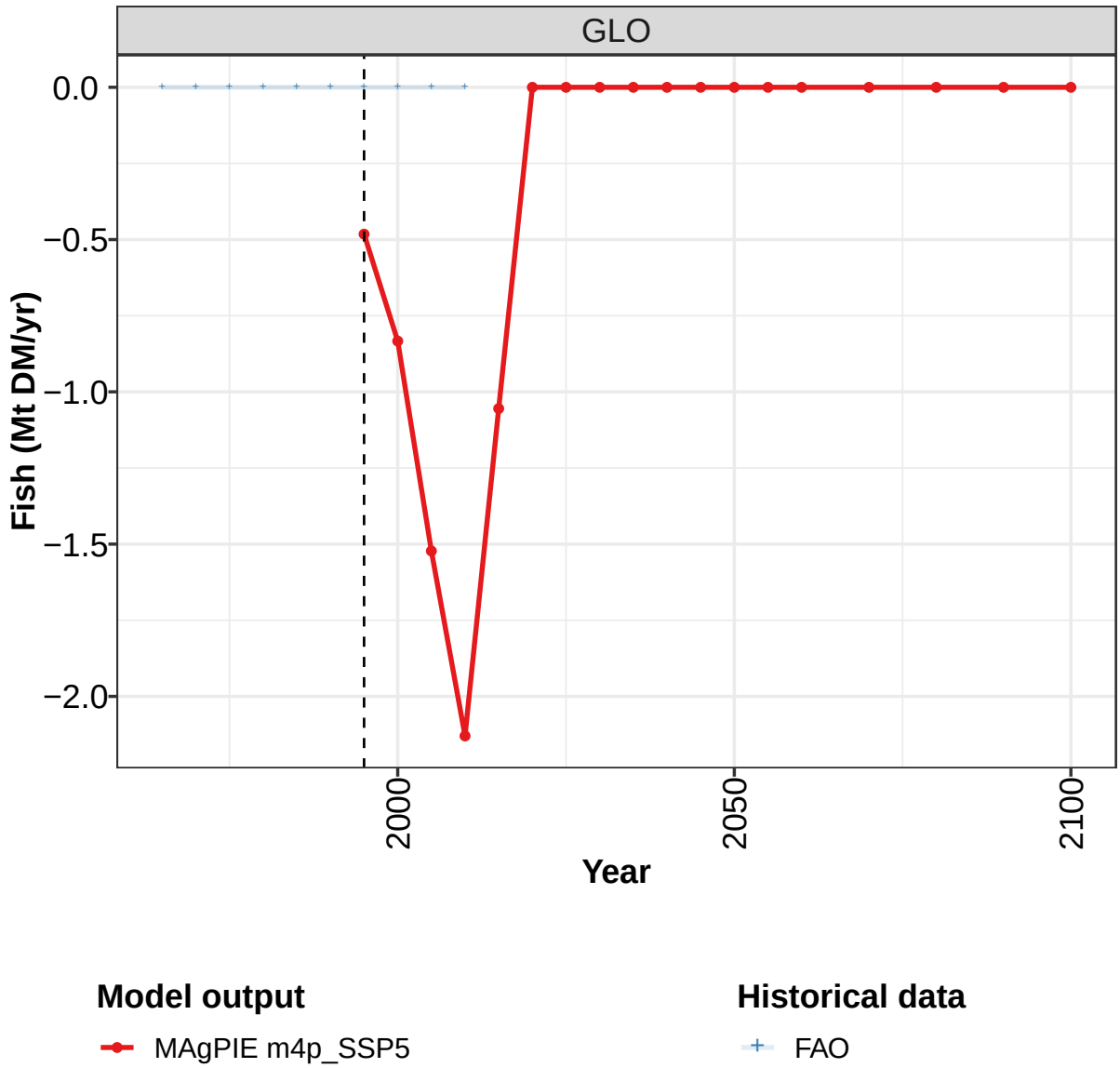
	2050	2055	2060	2070	2080	2090	2100
GLO	0	-0	0	0	0	0	0
CAZ	-4	-5	-5	-5	-5	-4	-4
CHA	-12	-11	-10	-10	-8	-7	-8
EUR	-0	-0	-0	-0	-0	-0	-0
IND	-32	-32	-33	-35	-34	-33	-31
JPN	6	6	7	6	6	6	8
LAM	128	130	130	98	121	100	79
MEA	-11	-11	-11	-10	-9	-8	-6
NEU	-0	-0	-0	-0	-0	-0	-0
OAS	-36	-34	-32	3	-25	-10	4
REF	0	0	0	0	0	0	0
SSA	-37	-41	-43	-44	-43	-40	-37
USA	-2	-2	-2	-3	-3	-4	-4

Table 1897: MAgPIE m4p_SSP5 — Trade—Net-Trade—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.005	-0.000	-0.001	-0.001	-0.015	-0.006	0.022	-0.001	-0.003	-0.018
CHA	-0.265	0.000	-0.000	-0.001	0.716	0.401	-0.521	-0.001	0.402	-0.015
EUR	0.034	-0.001	-0.004	-0.004	-0.102	-0.043	0.150	-0.008	-0.017	-0.126
IND	0.001	0.000	-0.000	-0.000	-0.003	-0.001	0.004	0.000	-0.001	-0.004
JPN	0.001	0.000	-0.000	-0.000	-0.003	-0.001	0.004	-0.000	-0.001	-0.004
LAM	0.066	0.010	0.005	0.007	-0.158	-0.042	0.227	0.046	-0.294	-0.082
MEA	0.021	-0.001	-0.002	-0.004	-0.063	-0.026	0.093	-0.005	-0.012	-0.076
NEU	0.016	-0.000	-0.002	-0.002	-0.048	-0.020	0.071	-0.004	-0.009	-0.059
OAS	0.056	-0.007	0.009	0.012	-0.131	-0.179	-0.322	-0.009	-0.026	0.631
REF	0.012	-0.000	-0.001	-0.001	-0.036	-0.015	0.053	-0.003	-0.007	-0.044
SSA	0.051	-0.001	-0.004	-0.005	-0.153	-0.064	0.225	-0.014	-0.030	-0.186
USA	0.001	0.000	-0.000	-0.000	-0.003	-0.003	-0.006	0.000	-0.002	-0.017

Table 1898: FAO — Trade—Net-Trade—Crops—Sugar crops—Sugar cane (Mt DM/yr)

58.2 Fish


GLO
0.0
−0.5
−1.0
−1.5
−2.0
Fish (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO

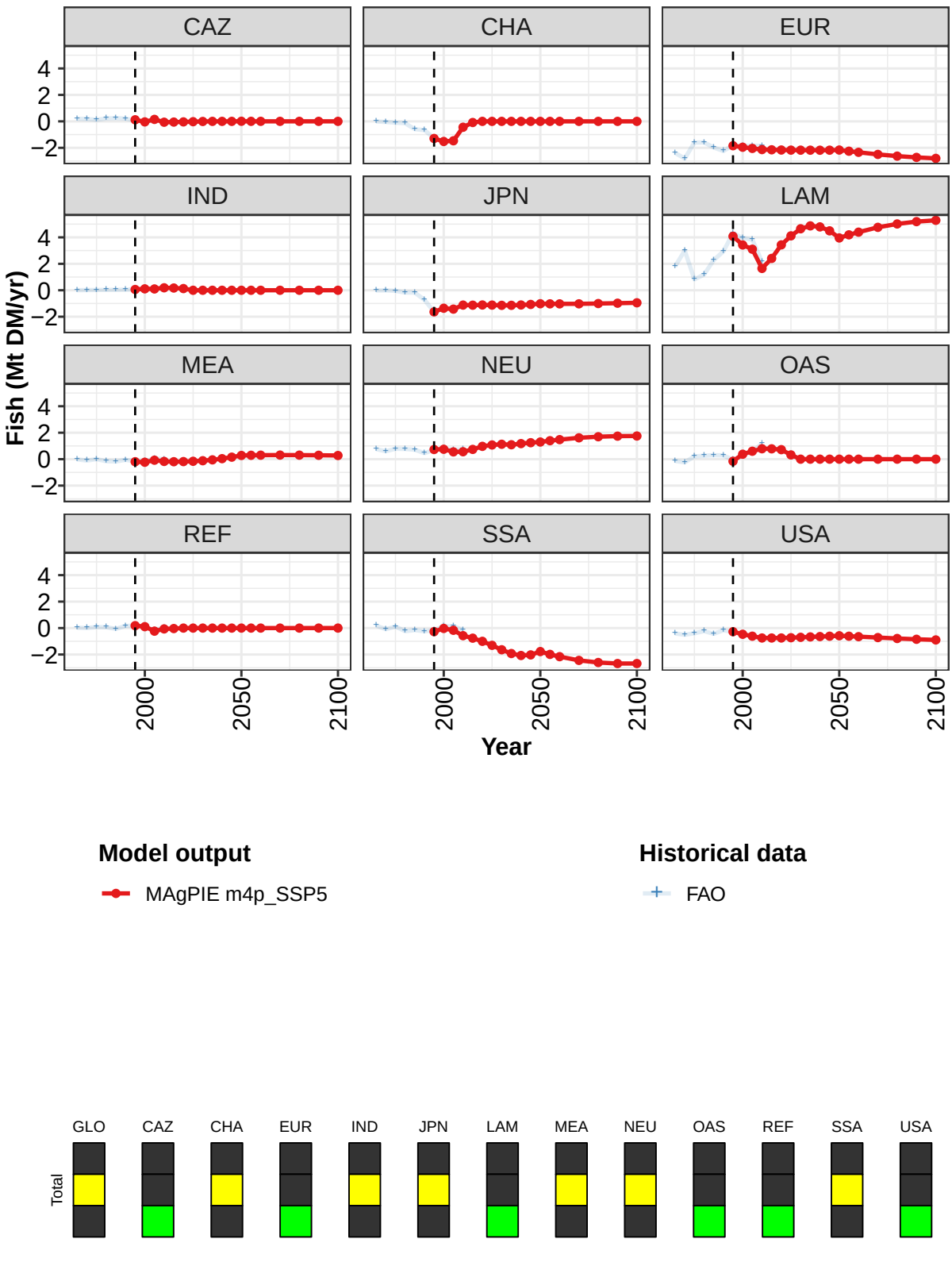


Figure 500: MAgPIE m4p_SSP5 — Trade—Net-Trade—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.48	-0.83	-1.52	-2.13	-1.05	0.00	-0.00	0.00	0.00	0.00	0.00
CAZ	0.12	-0.04	0.15	-0.06	-0.05	-0.04	-0.02	-0.01	0.00	0.00	0.00
CHA	-1.29	-1.52	-1.47	-0.44	-0.09	0.00	0.00	0.00	0.00	0.00	-0.00
EUR	-1.84	-1.95	-2.04	-2.13	-2.15	-2.16	-2.17	-2.18	-2.18	-2.18	-2.18
IND	0.06	0.11	0.10	0.19	0.17	0.13	0.00	0.00	-0.00	0.00	0.00
JPN	-1.64	-1.36	-1.42	-1.12	-1.13	-1.11	-1.12	-1.14	-1.14	-1.11	-1.07
LAM	4.08	3.43	3.10	1.65	2.41	3.43	4.11	4.65	4.87	4.79	4.49
MEA	-0.19	-0.23	-0.08	-0.17	-0.19	-0.18	-0.16	-0.12	-0.05	0.04	0.15
NEU	0.73	0.75	0.55	0.56	0.74	0.97	1.07	1.13	1.09	1.18	1.25
OAS	-0.16	0.37	0.60	0.79	0.78	0.72	0.32	0.00	0.00	0.00	0.00
REF	0.18	0.11	-0.23	-0.06	-0.04	0.00	0.00	0.00	-0.00	-0.00	-0.00
SSA	-0.27	-0.03	-0.17	-0.57	-0.76	-1.00	-1.30	-1.64	-1.92	-2.07	-2.03
USA	-0.27	-0.47	-0.61	-0.75	-0.75	-0.75	-0.73	-0.70	-0.67	-0.64	-0.61

Table 1899: MAgPIE m4p_SSP5 — Trade—Net-Trade—Fish (Mt DM/yr) [PART 1/2]

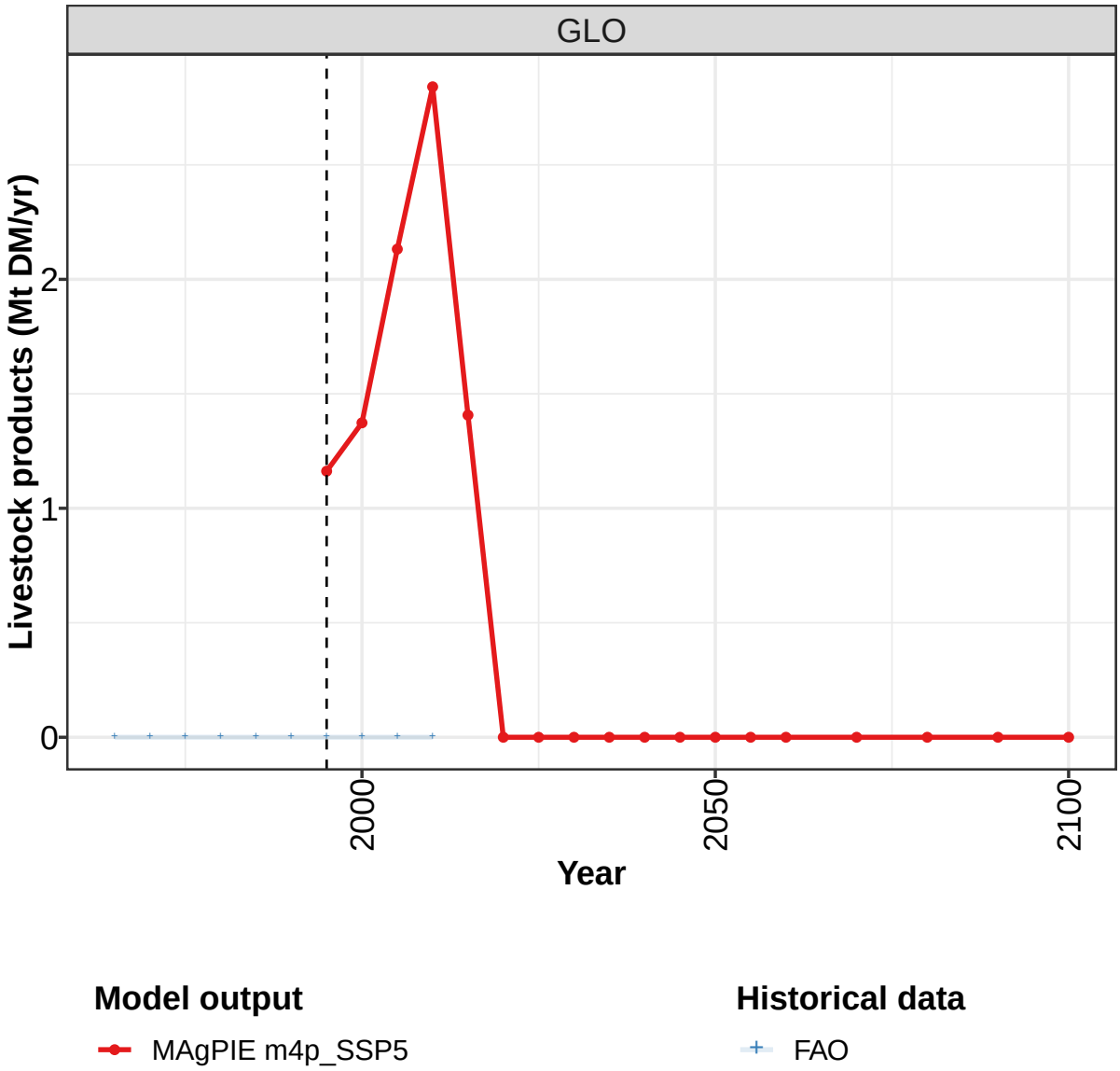
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	-0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.01	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	-0.00	0.00	0.00	-0.00	0.00
EUR	-2.17	-2.25	-2.34	-2.50	-2.63	-2.72	-2.80
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	-1.02	-1.03	-1.03	-1.02	-1.00	-0.98	-0.95
LAM	3.96	4.19	4.39	4.76	5.01	5.19	5.29
MEA	0.28	0.29	0.30	0.31	0.31	0.29	0.28
NEU	1.30	1.40	1.48	1.61	1.70	1.74	1.75
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	-1.78	-1.99	-2.16	-2.44	-2.60	-2.68	-2.68
USA	-0.58	-0.61	-0.65	-0.72	-0.79	-0.85	-0.90

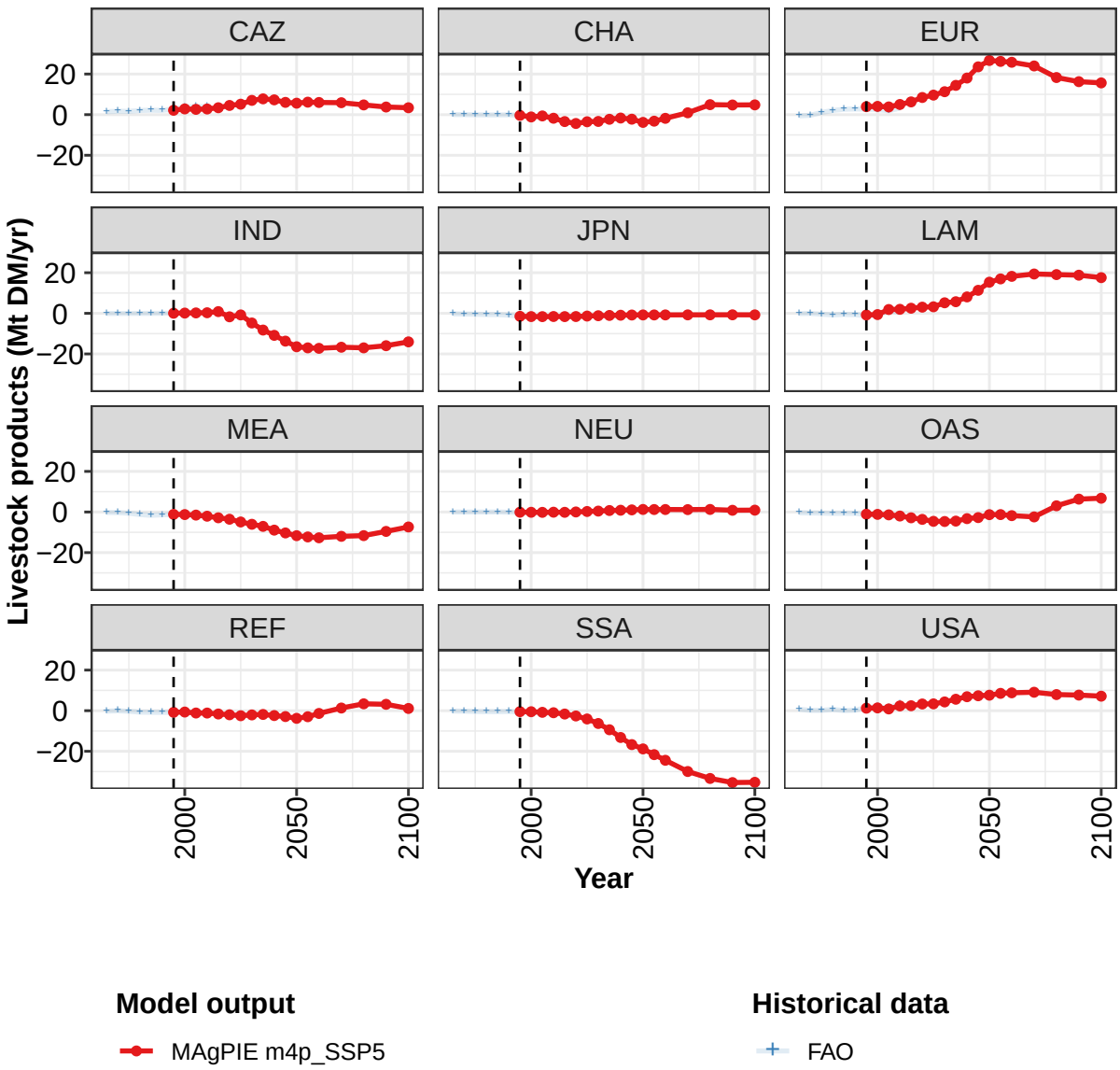
Table 1900: MAgPIE m4p_SSP5 — Trade—Net-Trade—Fish (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.20	0.18	0.12	0.22	0.24	0.21	0.06	-0.02	0.08	-0.02
CHA	-0.01	-0.05	-0.10	-0.14	-0.59	-0.66	-1.27	-1.53	-1.44	-0.47
EUR	-2.38	-2.81	-1.61	-1.59	-1.97	-2.24	-1.80	-1.86	-1.84	-1.86
IND	0.01	0.01	0.02	0.03	0.03	0.04	0.08	0.14	0.12	0.25
JPN	-0.02	-0.01	-0.05	-0.17	-0.18	-0.72	-1.64	-1.35	-1.42	-1.10
LAM	1.80	3.01	0.82	1.18	2.28	2.94	4.32	3.95	3.83	2.15
MEA	-0.02	-0.11	0.00	-0.16	-0.18	-0.05	-0.16	-0.17	0.05	0.01
NEU	0.76	0.60	0.79	0.77	0.71	0.45	0.71	0.82	0.70	0.75
OAS	-0.14	-0.24	0.21	0.26	0.30	0.28	-0.04	0.28	0.59	1.17
REF	0.02	0.01	0.08	0.06	-0.06	0.16	0.18	0.07	-0.16	0.03
SSA	0.18	-0.09	0.11	-0.23	-0.16	-0.24	-0.17	0.15	0.14	-0.14
USA	-0.41	-0.50	-0.39	-0.24	-0.43	-0.17	-0.28	-0.49	-0.63	-0.78

Table 1901: FAO — Trade—Net-Trade—Fish (Mt DM/yr)

58.3 Livestock products





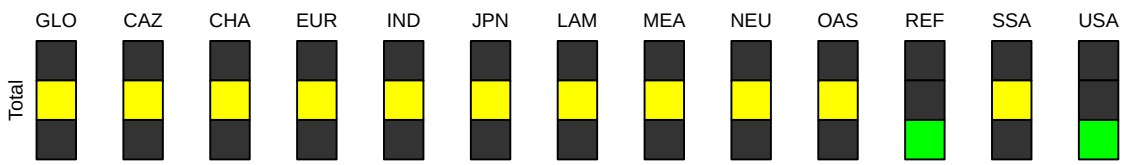


Figure 501: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.2	1.4	2.1	2.8	1.4	0.0	0.0	-0.0	-0.0	-0.0	0.0
CAZ	2.2	2.8	2.6	2.8	3.4	4.5	5.2	7.0	7.8	7.3	6.1
CHA	-0.3	-1.1	-0.6	-1.8	-3.4	-4.3	-3.5	-3.3	-2.3	-1.7	-2.2
EUR	3.9	4.1	3.8	5.0	6.3	8.5	9.6	11.3	14.4	18.0	23.6
IND	0.1	0.1	0.2	0.3	0.9	-1.7	-0.8	-4.8	-8.2	-10.8	-13.7
JPN	-1.5	-1.6	-1.6	-1.6	-1.6	-1.6	-1.3	-1.2	-1.0	-0.9	-0.8
LAM	-0.8	-0.6	1.9	2.0	2.5	3.1	3.2	5.2	5.7	8.1	11.3
MEA	-1.2	-1.3	-1.5	-2.1	-2.8	-3.6	-4.9	-6.0	-7.1	-8.9	-10.3
NEU	-0.1	-0.1	-0.2	-0.1	-0.1	0.0	0.3	0.5	0.7	0.9	1.1
OAS	-1.1	-1.2	-1.4	-2.0	-2.9	-3.6	-4.6	-4.7	-4.5	-3.3	-2.7
REF	-0.8	-0.7	-1.1	-1.1	-1.6	-2.0	-2.5	-2.1	-1.9	-2.4	-2.9
SSA	-0.5	-0.5	-0.8	-1.0	-1.6	-2.6	-4.1	-6.3	-9.4	-13.2	-16.7
USA	1.2	1.4	0.9	2.3	2.4	3.3	3.4	4.3	5.6	6.9	7.4

Table 1902: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products (Mt DM/yr) [PART 1/2]

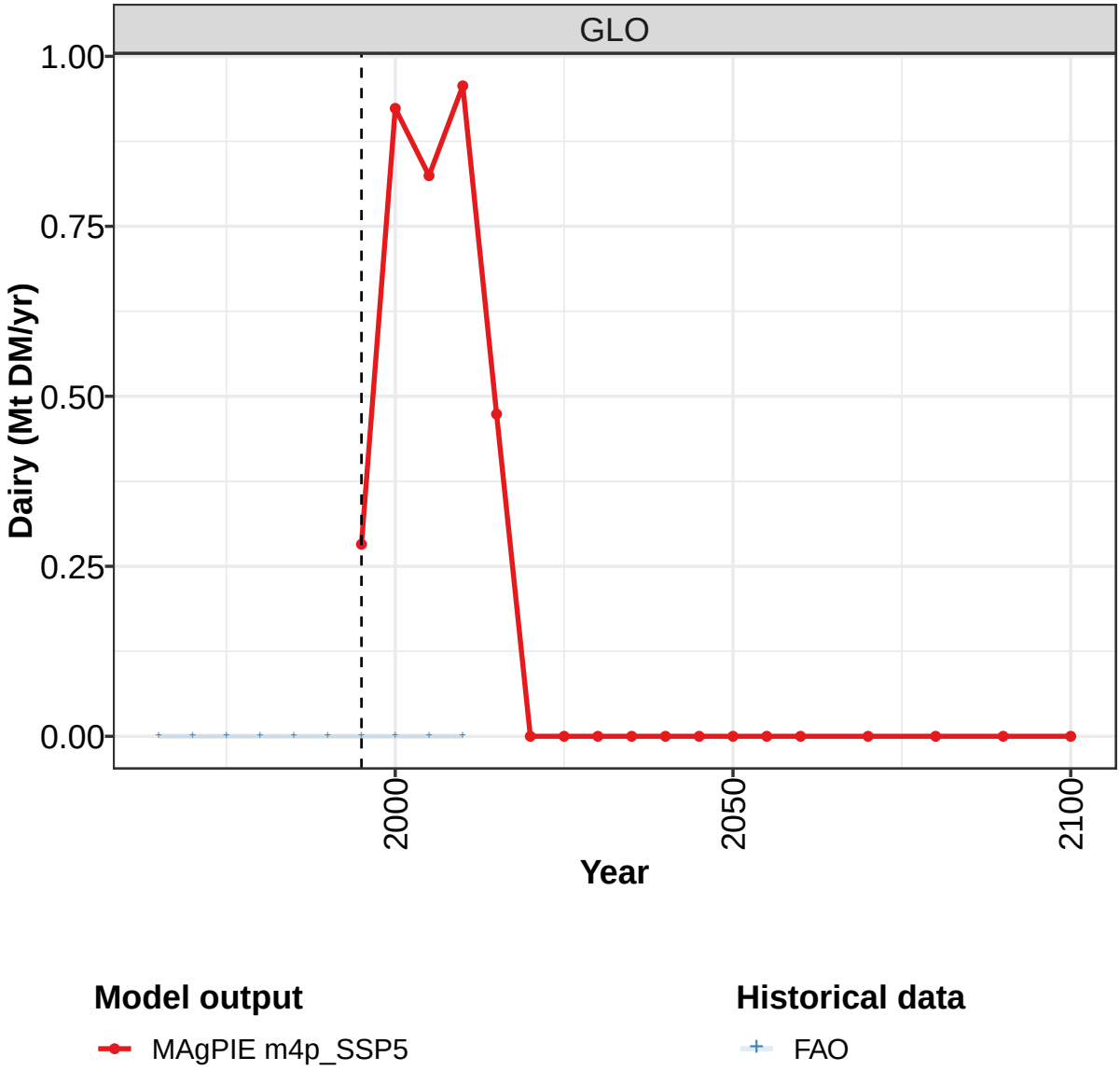
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.0
CAZ	5.6	6.2	6.0	5.9	4.8	3.8	3.4
CHA	-3.8	-3.2	-1.8	0.9	4.9	4.8	4.8
EUR	26.7	26.2	25.8	24.0	18.3	16.3	15.7
IND	-16.5	-17.0	-17.2	-16.7	-17.0	-15.9	-14.1
JPN	-0.8	-0.8	-0.8	-0.8	-0.7	-0.7	-0.7
LAM	15.3	17.0	18.2	19.4	19.1	18.8	17.6
MEA	-11.7	-12.3	-12.7	-12.0	-11.6	-9.6	-7.4
NEU	1.3	1.2	1.2	1.2	1.3	0.9	0.9
OAS	-1.3	-1.3	-1.8	-2.4	3.1	6.3	6.8
REF	-3.8	-3.0	-1.3	1.3	3.4	3.1	1.1
SSA	-18.8	-21.6	-24.4	-29.9	-33.4	-35.4	-35.3
USA	7.6	8.5	8.8	9.1	7.9	7.7	7.2

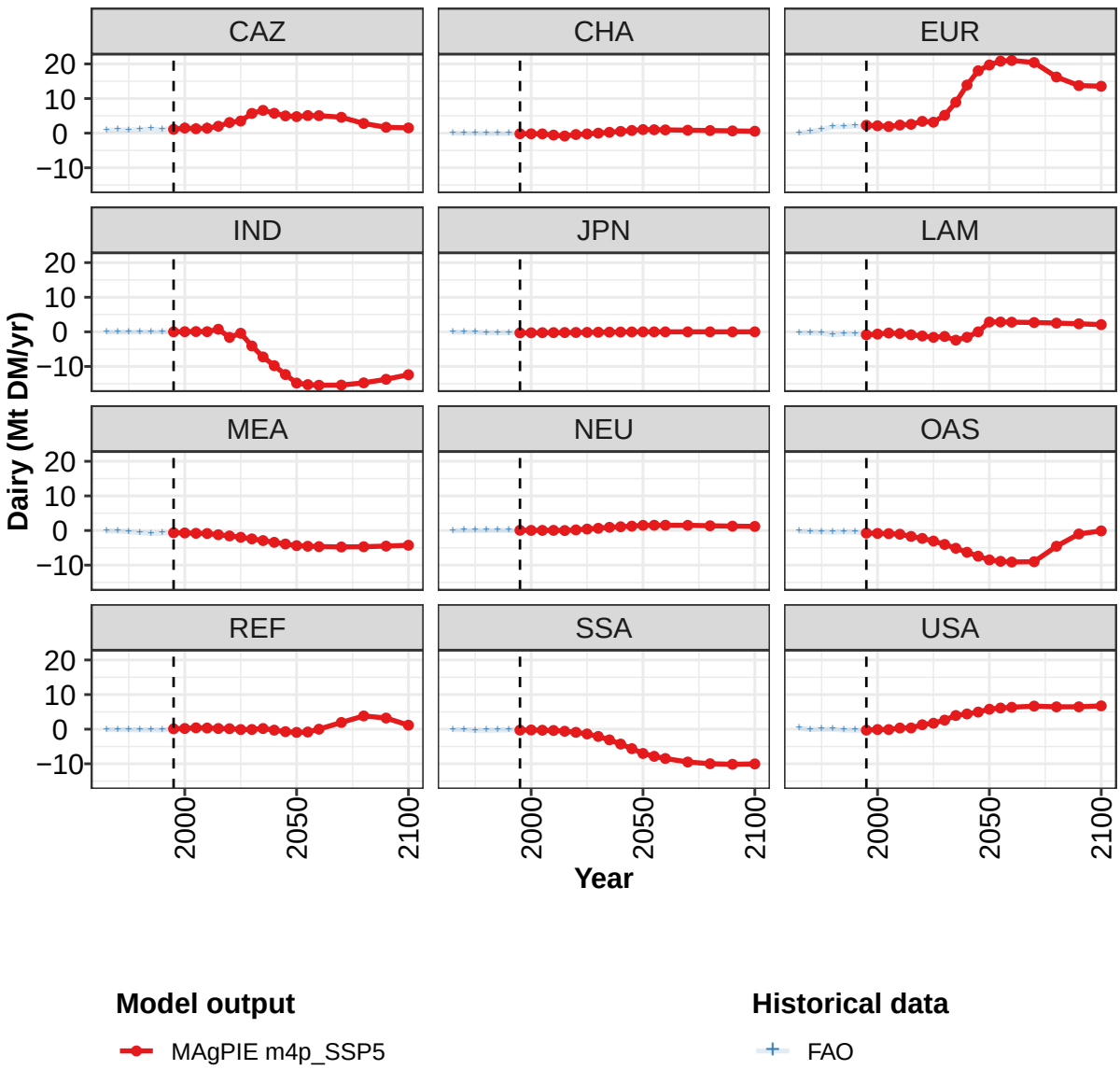
Table 1903: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	1.41	1.69	1.61	2.05	2.19	2.08	2.84	3.74	3.97	3.92
CHA	0.03	-0.02	-0.10	-0.15	-0.15	-0.10	-0.33	-1.14	-0.70	-1.80
EUR	-0.62	-0.30	1.09	2.06	2.66	2.79	2.71	2.52	1.91	3.23
IND	-0.08	-0.07	-0.05	-0.03	-0.03	0.03	0.07	0.17	0.34	0.38
JPN	-0.24	-0.34	-0.43	-0.61	-0.65	-0.90	-1.46	-1.59	-1.63	-1.56
LAM	-0.13	-0.04	-0.43	-0.79	-0.54	-0.71	-1.18	-1.02	1.16	0.57
MEA	-0.24	-0.30	-0.58	-1.25	-1.64	-1.36	-1.25	-1.39	-1.73	-2.29
NEU	-0.01	-0.03	-0.00	-0.01	0.03	-0.14	-0.21	-0.22	-0.30	-0.28
OAS	-0.39	-0.47	-0.55	-0.69	-0.64	-0.68	-1.29	-1.47	-1.84	-2.49
REF	-0.23	-0.05	-0.29	-0.71	-0.80	-0.85	-0.80	-0.70	-1.31	-1.51
SSA	-0.20	-0.22	-0.41	-0.47	-0.49	-0.39	-0.70	-0.78	-1.23	-1.57
USA	0.70	0.15	0.15	0.61	0.05	0.24	1.60	1.89	1.37	3.41

Table 1904: FAO — Trade—Net-Trade—Livestock products (Mt DM/yr)

58.3.1 Dairy


GLO
1.00
0.75
0.50
0.25
0.00
Dairy (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



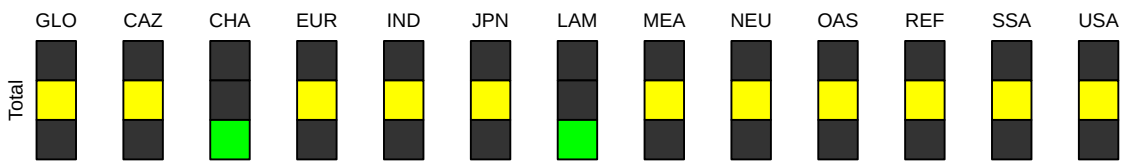


Figure 502: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.3	0.9	0.8	1.0	0.5	-0.0	0.0	0.0	-0.0	-0.0	0.0
CAZ	1.1	1.5	1.3	1.4	2.0	3.1	3.5	5.7	6.6	5.8	5.0
CHA	-0.2	-0.2	-0.2	-0.6	-0.8	-0.4	-0.2	0.0	0.2	0.5	0.8
EUR	2.3	2.1	1.9	2.3	2.6	3.4	3.2	5.2	8.9	13.9	18.0
IND	0.0	0.0	0.1	0.0	0.8	-1.6	-0.4	-4.1	-7.3	-9.8	-12.3
JPN	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.0
LAM	-0.9	-0.7	-0.3	-0.5	-0.8	-1.2	-1.6	-1.3	-2.4	-1.6	-0.0
MEA	-0.6	-0.7	-0.8	-0.9	-1.2	-1.6	-2.0	-2.4	-2.9	-3.4	-3.9
NEU	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.9	1.1	1.3
OAS	-0.8	-0.8	-0.9	-1.1	-1.7	-2.3	-3.0	-4.0	-5.1	-6.3	-7.4
REF	0.1	0.2	0.4	0.3	0.2	0.1	-0.1	-0.1	0.2	-0.3	-0.7
SSA	-0.3	-0.2	-0.3	-0.4	-0.6	-0.9	-1.4	-2.1	-3.1	-4.3	-5.6
USA	-0.3	-0.1	-0.1	0.3	0.4	1.3	1.7	2.6	4.0	4.4	4.9

Table 1905: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

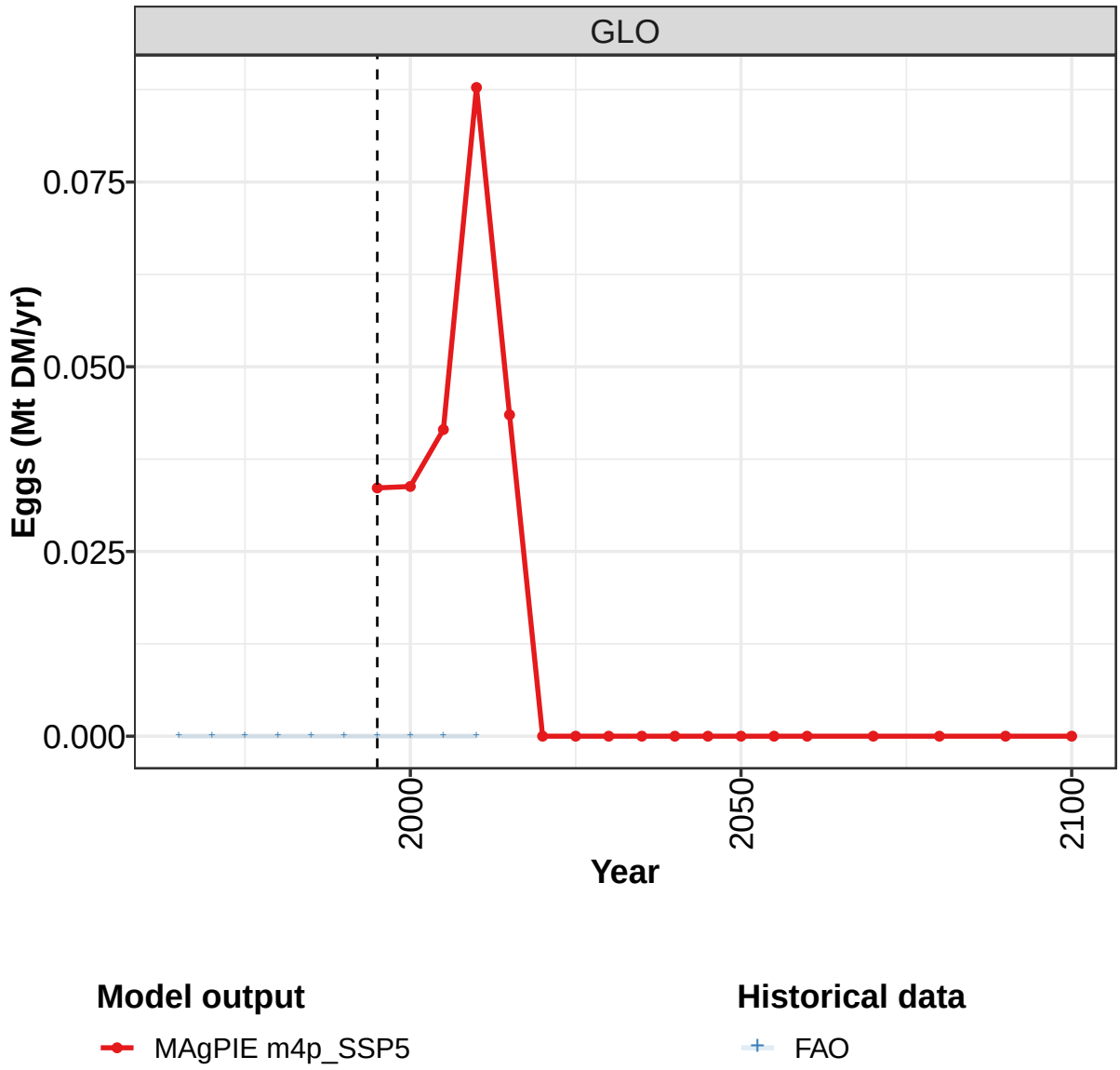
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0
CAZ	4.8	5.1	5.1	4.6	2.8	1.7	1.5
CHA	1.0	1.0	0.9	0.9	0.8	0.7	0.6
EUR	19.7	20.8	21.0	20.4	16.2	13.7	13.6
IND	-14.8	-15.2	-15.4	-15.4	-14.7	-13.7	-12.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.8	2.8	2.8	2.7	2.5	2.3	2.1
MEA	-4.4	-4.5	-4.7	-4.8	-4.7	-4.5	-4.3
NEU	1.5	1.5	1.5	1.5	1.4	1.3	1.2
OAS	-8.5	-8.9	-9.1	-9.0	-4.6	-1.0	-0.1
REF	-0.9	-0.8	0.0	1.9	3.8	3.2	1.2
SSA	-7.0	-7.8	-8.5	-9.5	-10.0	-10.1	-10.0
USA	5.8	6.1	6.3	6.7	6.5	6.5	6.7

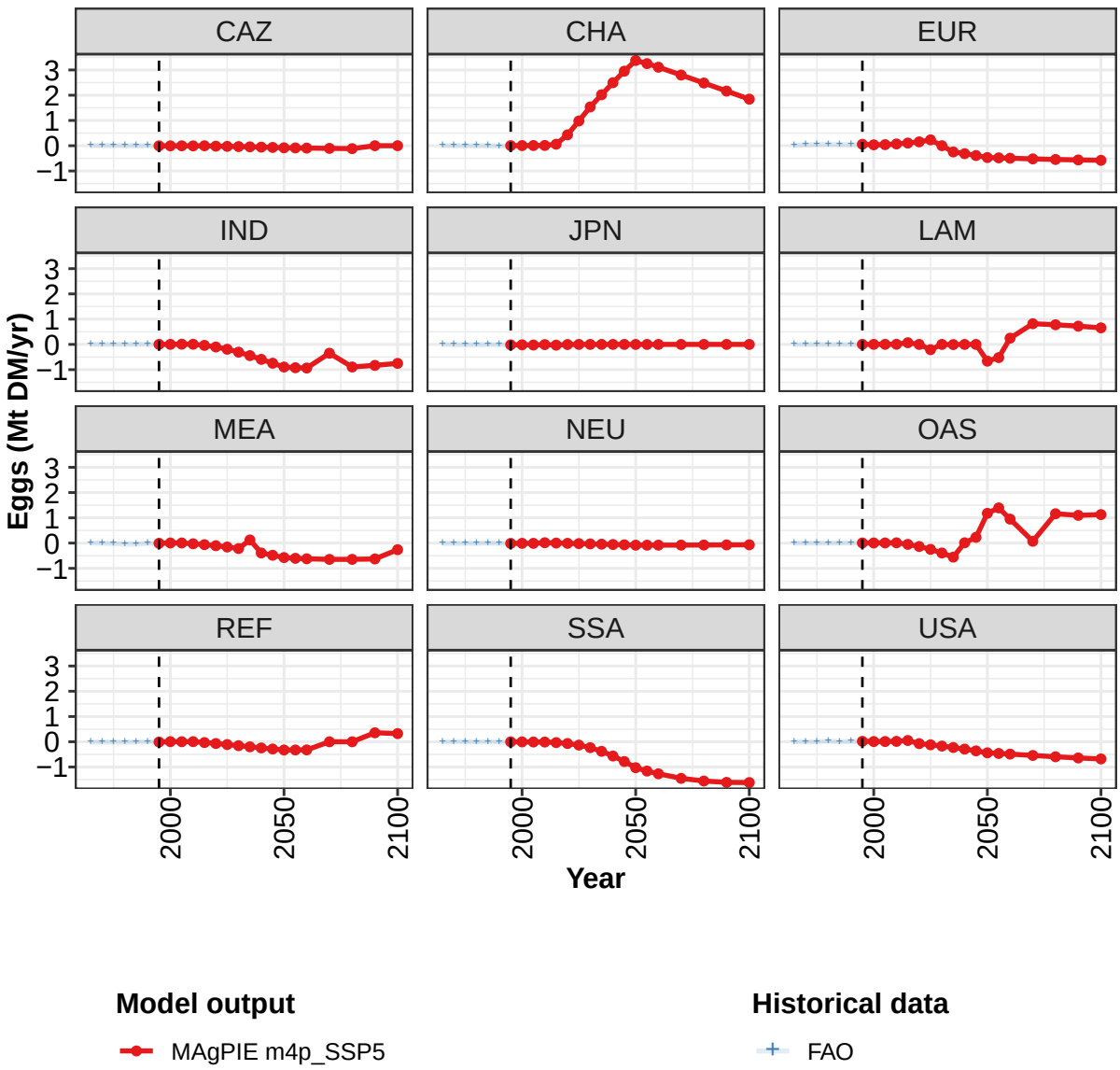
Table 1906: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Dairy (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.83	0.96	0.89	1.01	1.18	0.98	1.49	1.98	1.89	2.05
CHA	-0.02	-0.03	-0.06	-0.09	-0.13	-0.14	-0.17	-0.21	-0.21	-0.59
EUR	0.08	0.38	1.10	1.86	1.90	2.07	1.87	1.45	1.15	1.57
IND	-0.05	-0.04	-0.05	-0.04	-0.05	-0.00	-0.00	0.04	0.12	0.04
JPN	-0.10	-0.10	-0.13	-0.27	-0.27	-0.24	-0.31	-0.27	-0.24	-0.22
LAM	-0.33	-0.34	-0.44	-0.84	-0.61	-0.63	-0.94	-0.82	-0.49	-0.67
MEA	-0.14	-0.16	-0.34	-0.64	-0.89	-0.80	-0.68	-0.79	-0.90	-0.92
NEU	-0.03	0.01	0.00	0.05	0.06	0.01	0.02	-0.01	-0.01	-0.02
OAS	-0.28	-0.30	-0.42	-0.50	-0.40	-0.47	-0.82	-1.03	-1.06	-1.23
REF	-0.12	-0.14	-0.16	-0.22	-0.21	-0.27	0.14	0.19	0.29	0.05
SSA	-0.17	-0.13	-0.36	-0.32	-0.30	-0.18	-0.32	-0.42	-0.46	-0.56
USA	0.32	-0.10	-0.03	-0.01	-0.28	-0.34	-0.29	-0.10	-0.08	0.50

Table 1907: FAO — Trade—Net-Trade—Livestock products—Dairy (Mt DM/yr)

58.3.2 Eggs


GLO
Eggs (Mt DM/yr)
0.075
0.050
0.025
0.000
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



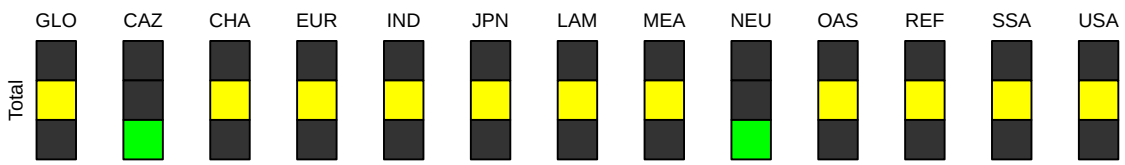


Figure 503: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.03	0.03	0.04	0.09	0.04	0.00	-0.00	0.00	0.00	-0.00	0.00
CAZ	-0.00	-0.00	-0.00	-0.01	-0.00	-0.02	-0.03	-0.03	-0.04	-0.06	-0.07
CHA	0.00	0.01	0.01	0.01	0.06	0.43	0.98	1.54	2.02	2.50	2.95
EUR	0.06	0.04	0.04	0.07	0.11	0.15	0.23	0.00	-0.25	-0.31	-0.39
IND	0.00	0.00	0.01	0.01	-0.04	-0.10	-0.19	-0.31	-0.44	-0.59	-0.74
JPN	-0.02	-0.02	-0.02	-0.01	-0.03	-0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.01	0.07	0.00	-0.21	0.00	-0.01	0.00	0.00
MEA	-0.01	0.00	0.00	-0.03	-0.06	-0.10	-0.16	-0.22	0.12	-0.39	-0.48
NEU	-0.01	-0.01	-0.01	0.01	0.00	-0.01	-0.02	-0.03	-0.04	-0.06	-0.07
OAS	0.01	0.01	0.01	0.01	-0.05	-0.14	-0.25	-0.39	-0.56	0.01	0.23
REF	-0.01	0.00	0.00	0.00	-0.03	-0.07	-0.11	-0.15	-0.20	-0.24	-0.29
SSA	-0.00	-0.00	-0.01	-0.01	-0.03	-0.07	-0.13	-0.23	-0.38	-0.56	-0.78
USA	0.02	0.01	0.01	0.02	0.05	-0.07	-0.12	-0.17	-0.23	-0.29	-0.36

Table 1908: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

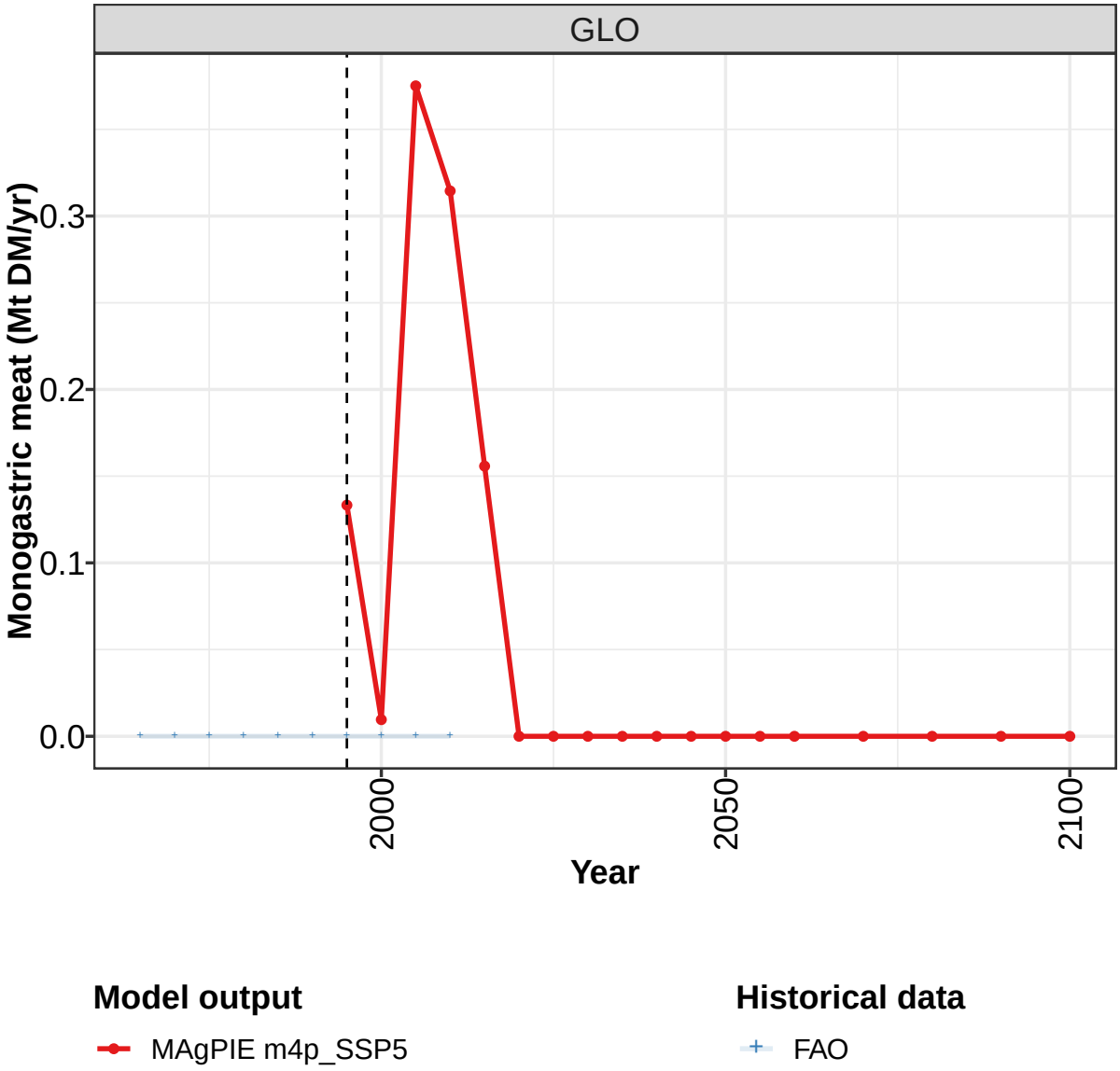
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.08	-0.09	-0.09	-0.11	-0.12	0.00	0.00
CHA	3.38	3.25	3.11	2.80	2.48	2.16	1.84
EUR	-0.47	-0.48	-0.49	-0.52	-0.54	-0.56	-0.58
IND	-0.90	-0.92	-0.93	-0.35	-0.89	-0.83	-0.75
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	-0.66	-0.52	0.25	0.82	0.78	0.72	0.66
MEA	-0.57	-0.60	-0.62	-0.65	-0.64	-0.63	-0.26
NEU	-0.08	-0.08	-0.08	-0.08	-0.08	-0.07	-0.07
OAS	1.18	1.39	0.95	0.07	1.16	1.10	1.13
REF	-0.33	-0.32	-0.32	0.00	0.00	0.36	0.32
SSA	-1.03	-1.16	-1.27	-1.45	-1.55	-1.61	-1.62
USA	-0.44	-0.46	-0.49	-0.54	-0.59	-0.64	-0.68

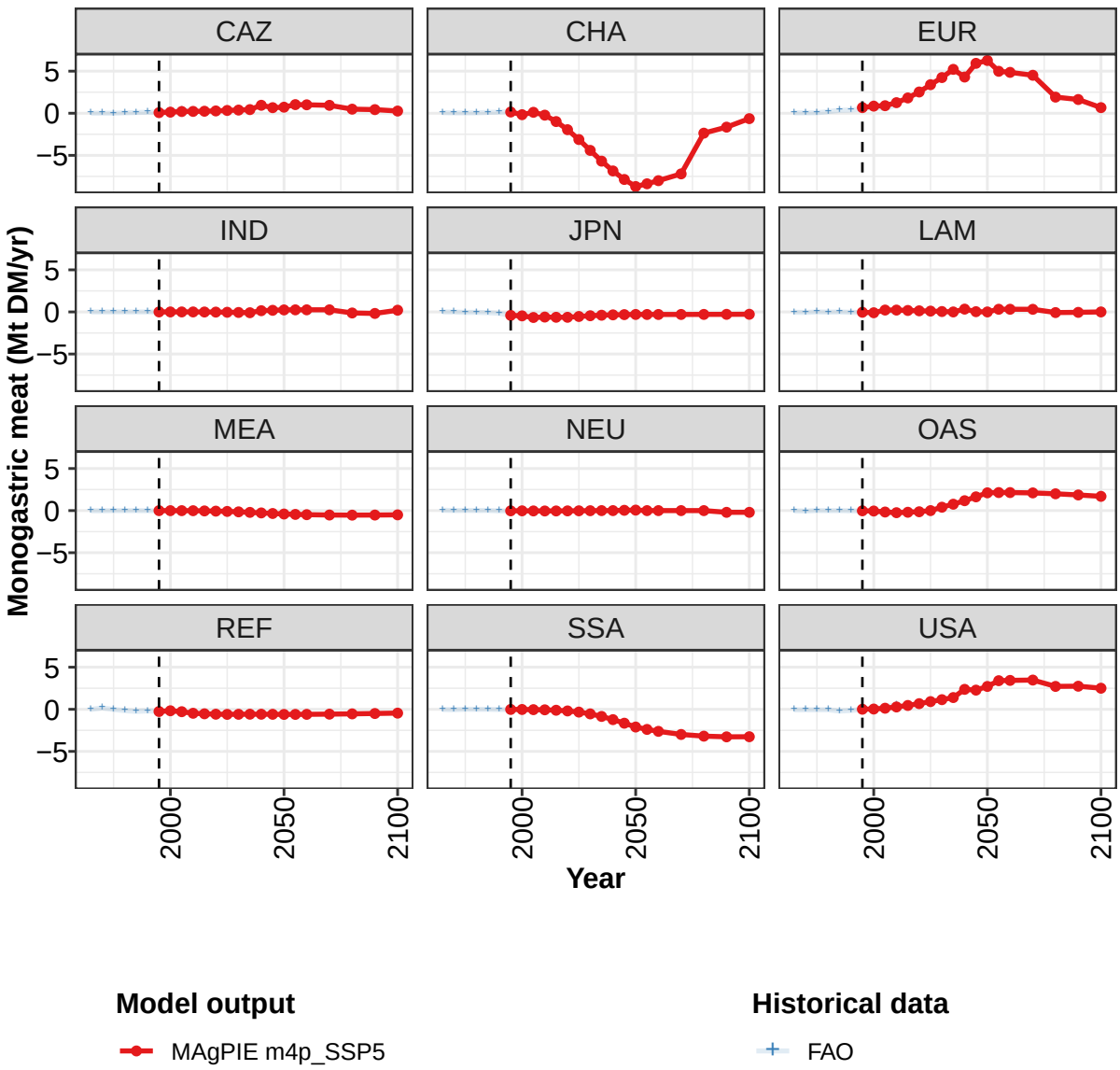
Table 1909: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0022	0.0067	0.0044	0.0028	-0.0010	-0.0037	-0.0054	-0.0055	-0.0053	-0.0094
CHA	0.0062	-0.0003	-0.0020	-0.0028	-0.0060	-0.0145	-0.0205	-0.0071	-0.0013	0.0000
EUR	0.0218	0.0422	0.0452	0.0647	0.0515	0.0447	0.0450	0.0191	0.0078	0.0076
IND	0.0000	0.0000	-0.0001	0.0007	0.0000	0.0012	0.0054	0.0084	0.0285	0.0209
JPN	-0.0003	-0.0120	-0.0127	-0.0104	-0.0069	-0.0095	-0.0129	-0.0133	-0.0245	-0.0114
LAM	-0.0036	-0.0033	-0.0003	-0.0046	-0.0003	-0.0083	-0.0098	-0.0146	-0.0121	-0.0152
MEA	0.0007	-0.0073	-0.0212	-0.0454	-0.0413	-0.0088	-0.0112	-0.0046	-0.0060	-0.0400
NEU	-0.0100	-0.0117	-0.0091	-0.0116	0.0032	-0.0143	-0.0159	-0.0133	-0.0136	0.0229
OAS	-0.0023	-0.0015	0.0016	-0.0029	0.0043	0.0047	0.0027	0.0099	0.0091	0.0040
REF	-0.0186	-0.0116	-0.0140	-0.0151	-0.0084	0.0010	-0.0069	0.0007	-0.0025	0.0012
SSA	-0.0004	0.0004	0.0048	-0.0021	0.0006	-0.0057	-0.0092	-0.0113	-0.0199	-0.0325
USA	0.0044	-0.0015	0.0034	0.0267	0.0041	0.0133	0.0387	0.0313	0.0399	0.0519

Table 1910: FAO — Trade—Net-Trade—Livestock products—Eggs (Mt DM/yr)

58.3.3 Monogastric meat





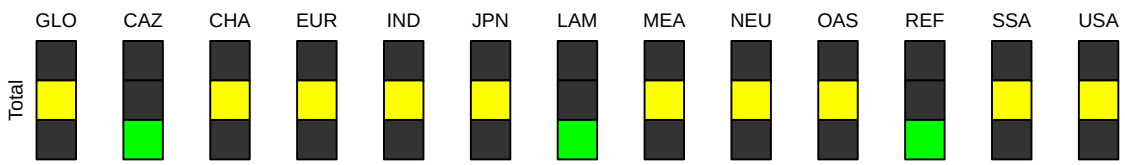


Figure 504: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.13	0.01	0.38	0.31	0.16	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.07	0.13	0.21	0.22	0.24	0.28	0.33	0.38	0.44	0.95	0.66
CHA	0.15	-0.17	0.11	-0.23	-0.98	-1.95	-3.12	-4.41	-5.69	-6.85	-7.86
EUR	0.67	0.85	0.90	1.26	1.82	2.53	3.40	4.24	5.21	4.30	5.93
IND	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.04	-0.06	-0.09	0.15	0.19
JPN	-0.41	-0.47	-0.66	-0.61	-0.63	-0.64	-0.54	-0.45	-0.39	-0.35	-0.32
LAM	-0.04	-0.10	0.22	0.22	0.18	0.13	0.10	0.05	-0.00	0.33	0.03
MEA	-0.00	-0.00	-0.01	-0.01	-0.04	-0.06	-0.10	-0.15	-0.21	-0.27	-0.34
NEU	-0.02	-0.02	-0.04	-0.04	-0.04	-0.03	-0.02	-0.01	0.00	0.00	0.04
OAS	-0.02	-0.05	-0.17	-0.24	-0.19	-0.14	0.00	0.40	0.76	1.18	1.64
REF	-0.26	-0.17	-0.28	-0.47	-0.53	-0.58	-0.60	-0.59	-0.58	-0.58	-0.59
SSA	-0.02	-0.02	-0.04	-0.06	-0.11	-0.19	-0.33	-0.54	-0.85	-1.23	-1.65
USA	0.01	0.03	0.13	0.28	0.46	0.67	0.92	1.14	1.40	2.37	2.28

Table 1911: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

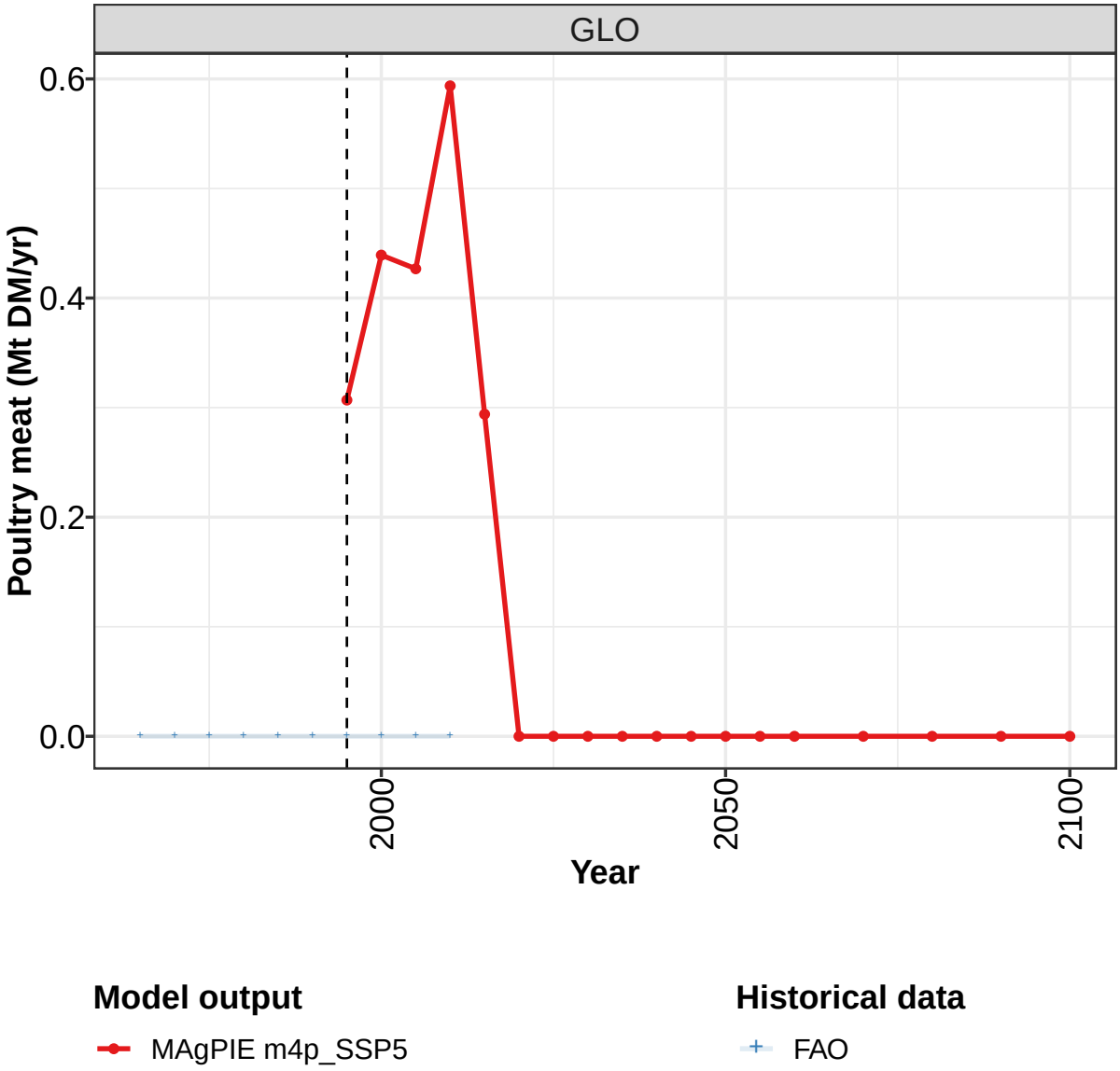
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.72	1.03	1.00	0.94	0.49	0.43	0.26
CHA	-8.70	-8.38	-8.00	-7.20	-2.36	-1.65	-0.64
EUR	6.27	4.98	4.86	4.51	1.92	1.63	0.67
IND	0.24	0.25	0.25	0.25	-0.12	-0.18	0.20
JPN	-0.30	-0.30	-0.30	-0.30	-0.29	-0.29	-0.28
LAM	0.00	0.32	0.32	0.31	-0.08	-0.05	0.00
MEA	-0.40	-0.45	-0.48	-0.52	-0.54	-0.53	-0.50
NEU	0.06	0.00	0.00	0.00	0.00	-0.20	-0.20
OAS	2.12	2.15	2.14	2.10	2.00	1.86	1.69
REF	-0.61	-0.60	-0.60	-0.58	-0.54	-0.50	-0.45
SSA	-2.10	-2.39	-2.62	-2.99	-3.19	-3.27	-3.26
USA	2.71	3.40	3.43	3.47	2.72	2.74	2.50

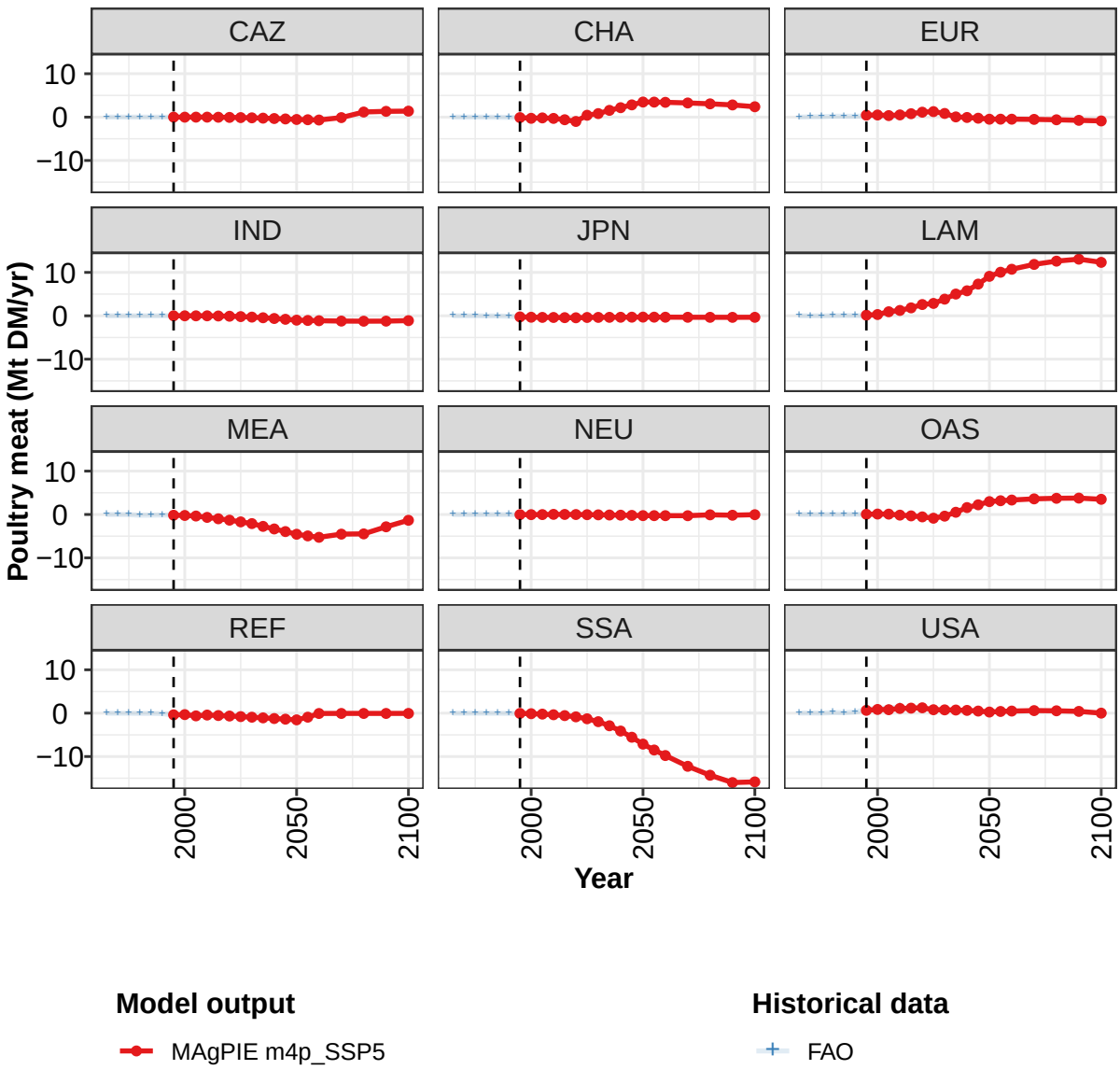
Table 1912: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Monogastric meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.006	0.008	-0.001	0.049	0.084	0.122	0.139	0.252	0.381	0.328
CHA	0.075	0.038	0.038	0.046	0.095	0.137	0.210	-0.143	0.080	-0.199
EUR	0.052	0.048	0.055	0.196	0.348	0.385	0.527	0.669	0.537	0.962
IND	-0.001	-0.001	0.000	0.000	0.000	-0.000	0.000	-0.000	-0.001	-0.001
JPN	-0.001	-0.009	-0.061	-0.054	-0.093	-0.167	-0.405	-0.469	-0.658	-0.605
LAM	-0.039	-0.068	0.005	-0.023	-0.003	-0.051	-0.064	-0.087	0.168	-0.048
MEA	-0.012	-0.023	0.003	-0.002	0.001	-0.011	-0.014	-0.005	-0.038	-0.037
NEU	0.051	0.006	0.024	0.012	0.027	-0.032	-0.034	-0.024	-0.061	-0.064
OAS	-0.025	-0.052	0.010	-0.001	0.006	-0.024	-0.047	-0.056	-0.229	-0.290
REF	-0.022	0.168	-0.021	-0.165	-0.254	-0.186	-0.273	-0.177	-0.309	-0.480
SSA	-0.025	-0.055	0.009	-0.004	0.000	-0.031	-0.042	-0.024	-0.115	-0.128
USA	-0.061	-0.060	-0.062	-0.053	-0.211	-0.144	0.003	0.063	0.244	0.562

Table 1913: FAO — Trade—Net-Trade—Livestock products—Monogastric meat (Mt DM/yr)

58.3.4 Poultry meat





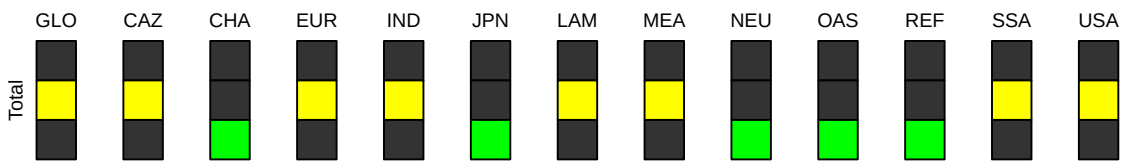


Figure 505: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.3	0.4	0.4	0.6	0.3	0.0	-0.0	-0.0	0.0	-0.0	-0.0
CAZ	0.0	-0.0	0.0	0.0	-0.0	-0.1	-0.1	-0.2	-0.2	-0.3	-0.4
CHA	-0.1	-0.3	-0.2	-0.3	-0.6	-1.0	0.4	0.8	1.6	2.2	2.8
EUR	0.5	0.5	0.4	0.5	0.8	1.1	1.3	0.9	0.1	-0.1	-0.3
IND	0.0	0.0	0.0	0.0	-0.0	-0.1	-0.2	-0.3	-0.4	-0.6	-0.8
JPN	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3
LAM	0.1	0.3	0.9	1.2	1.8	2.6	2.9	3.8	5.0	5.8	7.3
MEA	-0.2	-0.2	-0.4	-0.7	-1.0	-1.3	-1.7	-2.1	-2.7	-3.3	-3.9
NEU	-0.0	-0.0	-0.0	0.0	0.0	-0.0	-0.0	-0.1	-0.1	-0.2	-0.2
OAS	0.1	0.1	0.1	-0.1	-0.3	-0.5	-0.9	-0.4	0.5	1.6	2.2
REF	-0.4	-0.3	-0.6	-0.4	-0.5	-0.7	-0.8	-0.9	-1.1	-1.2	-1.4
SSA	-0.1	-0.1	-0.2	-0.4	-0.6	-0.8	-1.3	-2.0	-2.9	-4.1	-5.5
USA	0.7	0.9	0.8	1.1	1.2	1.2	0.8	0.8	0.7	0.6	0.5

Table 1914: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

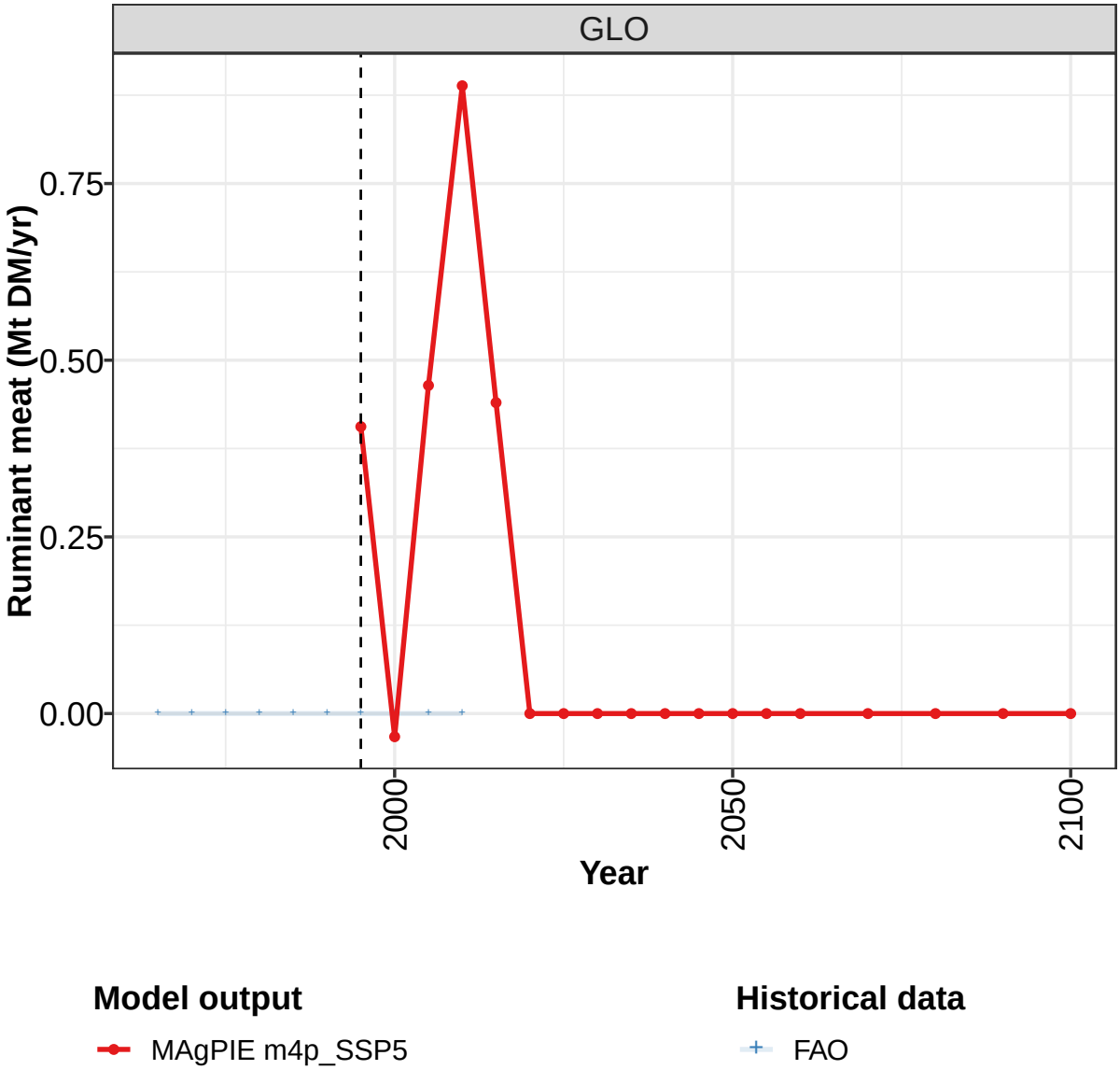
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	-0.0	0.0	-0.0	0.0	0.0
CAZ	-0.5	-0.6	-0.7	-0.1	1.2	1.3	1.4
CHA	3.5	3.5	3.4	3.3	3.1	2.8	2.4
EUR	-0.5	-0.5	-0.5	-0.5	-0.6	-0.7	-0.9
IND	-1.0	-1.1	-1.1	-1.2	-1.2	-1.2	-1.1
JPN	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3
LAM	9.1	10.0	10.7	11.8	12.6	13.1	12.3
MEA	-4.6	-4.9	-5.3	-4.5	-4.5	-2.8	-1.3
NEU	-0.3	-0.3	-0.3	-0.3	-0.1	-0.2	-0.0
OAS	3.0	3.2	3.3	3.6	3.7	3.8	3.5
REF	-1.5	-0.9	-0.1	-0.1	-0.1	-0.1	-0.1
SSA	-7.1	-8.5	-9.8	-12.2	-14.3	-16.0	-15.8
USA	0.3	0.4	0.5	0.6	0.5	0.4	0.0

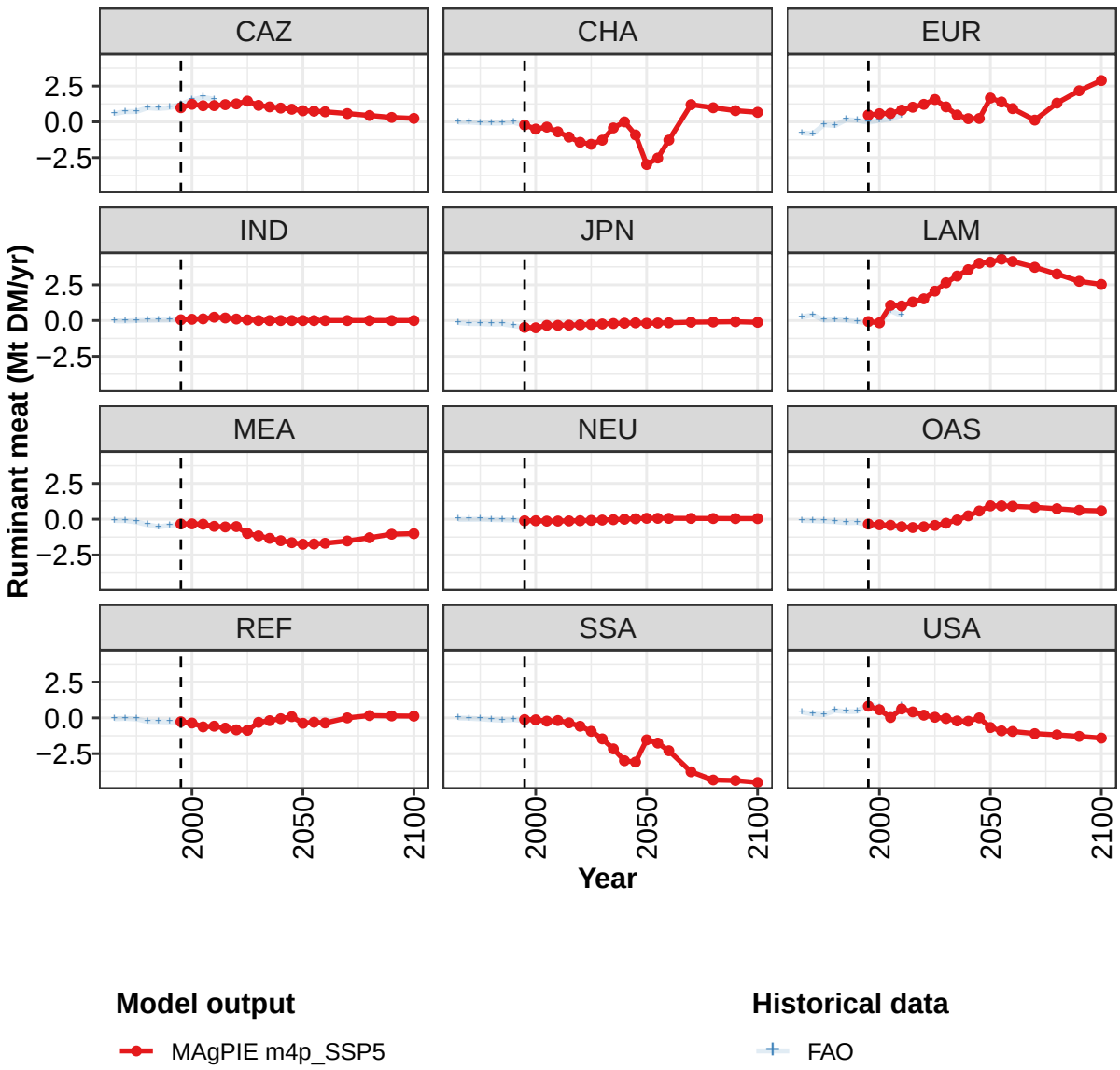
Table 1915: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Poultry meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.00	0.00	-0.01	-0.00	-0.01	-0.01	-0.01	-0.01	-0.00	-0.02
CHA	-0.00	-0.01	-0.00	-0.01	-0.03	-0.05	-0.11	-0.28	-0.16	-0.27
EUR	0.00	0.06	0.09	0.19	0.20	0.18	0.30	0.30	0.01	0.22
IND	0.00	-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
JPN	-0.00	-0.00	-0.01	-0.03	-0.04	-0.12	-0.25	-0.33	-0.37	-0.39
LAM	-0.00	-0.02	-0.02	0.02	0.06	0.05	-0.01	0.06	0.80	0.95
MEA	-0.00	-0.01	-0.03	-0.19	-0.17	-0.13	-0.19	-0.26	-0.40	-0.72
NEU	-0.01	-0.02	-0.02	-0.03	-0.02	-0.04	-0.05	-0.06	-0.05	-0.04
OAS	-0.00	-0.01	-0.00	-0.01	-0.01	0.03	-0.01	-0.01	-0.04	-0.25
REF	-0.01	-0.03	-0.02	-0.07	-0.06	-0.12	-0.39	-0.35	-0.64	-0.46
SSA	0.00	-0.01	0.00	-0.02	-0.03	-0.05	-0.12	-0.21	-0.30	-0.48
USA	0.03	0.04	0.01	0.14	0.10	0.26	0.84	1.16	1.16	1.46

Table 1916: FAO — Trade—Net-Trade—Livestock products—Poultry meat (Mt DM/yr)

58.3.5 Ruminant meat





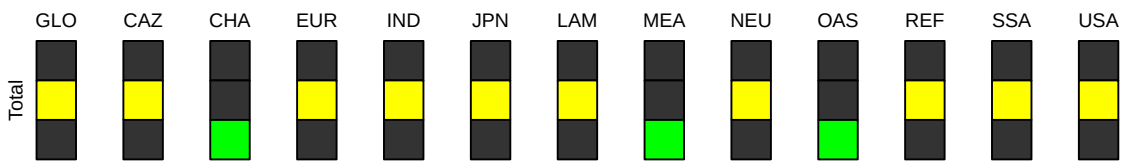


Figure 506: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.41	-0.03	0.46	0.89	0.44	0.00	0.00	-0.00	0.00	-0.00	0.00
CAZ	0.99	1.23	1.13	1.14	1.20	1.25	1.45	1.15	1.05	0.96	0.88
CHA	-0.22	-0.51	-0.37	-0.70	-1.06	-1.43	-1.57	-1.28	-0.42	0.00	-0.91
EUR	0.48	0.57	0.59	0.82	1.02	1.22	1.56	1.05	0.48	0.22	0.24
IND	0.06	0.09	0.12	0.23	0.18	0.11	0.05	-0.00	0.00	-0.00	0.00
JPN	-0.48	-0.51	-0.34	-0.34	-0.32	-0.30	-0.27	-0.24	-0.21	-0.19	-0.16
LAM	-0.07	-0.16	1.07	1.02	1.30	1.52	2.06	2.65	3.11	3.55	4.00
MEA	-0.33	-0.32	-0.35	-0.50	-0.54	-0.52	-0.99	-1.16	-1.34	-1.50	-1.64
NEU	-0.11	-0.11	-0.13	-0.13	-0.12	-0.10	-0.08	-0.06	-0.03	0.00	0.03
OAS	-0.34	-0.39	-0.42	-0.52	-0.58	-0.53	-0.43	-0.28	-0.05	0.24	0.57
REF	-0.27	-0.36	-0.63	-0.58	-0.71	-0.84	-0.87	-0.31	-0.19	-0.06	0.09
SSA	-0.12	-0.14	-0.23	-0.18	-0.35	-0.58	-0.94	-1.47	-2.17	-2.99	-3.09
USA	0.82	0.57	0.03	0.63	0.42	0.19	0.04	-0.05	-0.21	-0.24	0.00

Table 1917: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

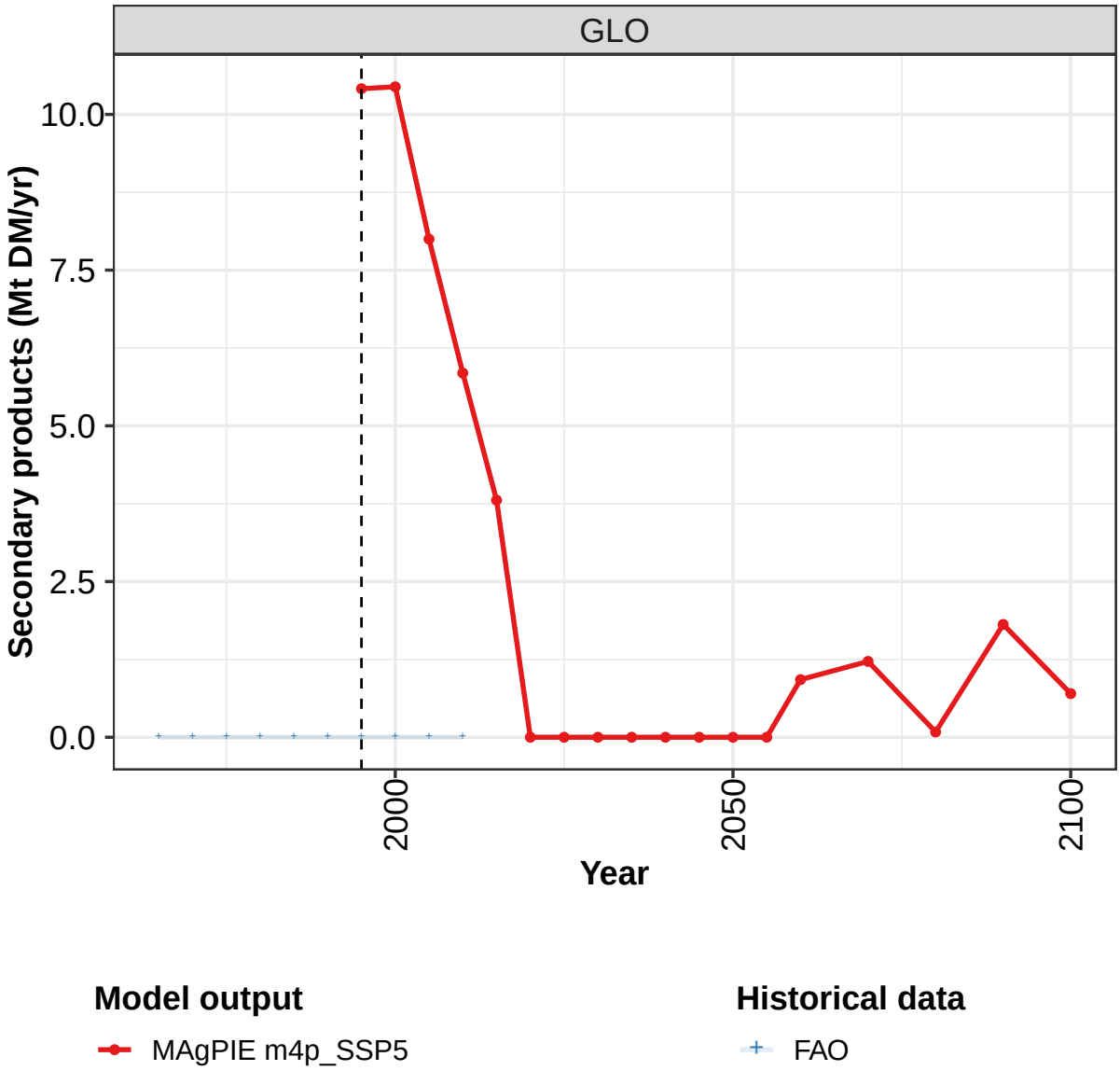
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	-0.00	0.00	0.00	-0.00
CAZ	0.78	0.75	0.70	0.58	0.45	0.31	0.24
CHA	-2.98	-2.53	-1.28	1.20	0.99	0.78	0.67
EUR	1.66	1.39	0.93	0.12	1.31	2.17	2.89
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	-0.19	-0.17	-0.16	-0.12	-0.10	-0.08	-0.13
LAM	4.08	4.29	4.12	3.72	3.25	2.74	2.52
MEA	-1.75	-1.73	-1.68	-1.52	-1.29	-1.05	-1.01
NEU	0.06	0.06	0.06	0.06	0.05	0.04	0.04
OAS	0.93	0.92	0.90	0.83	0.73	0.62	0.58
REF	-0.38	-0.31	-0.36	0.00	0.16	0.14	0.12
SSA	-1.54	-1.76	-2.29	-3.77	-4.35	-4.38	-4.52
USA	-0.67	-0.91	-0.95	-1.10	-1.19	-1.29	-1.41

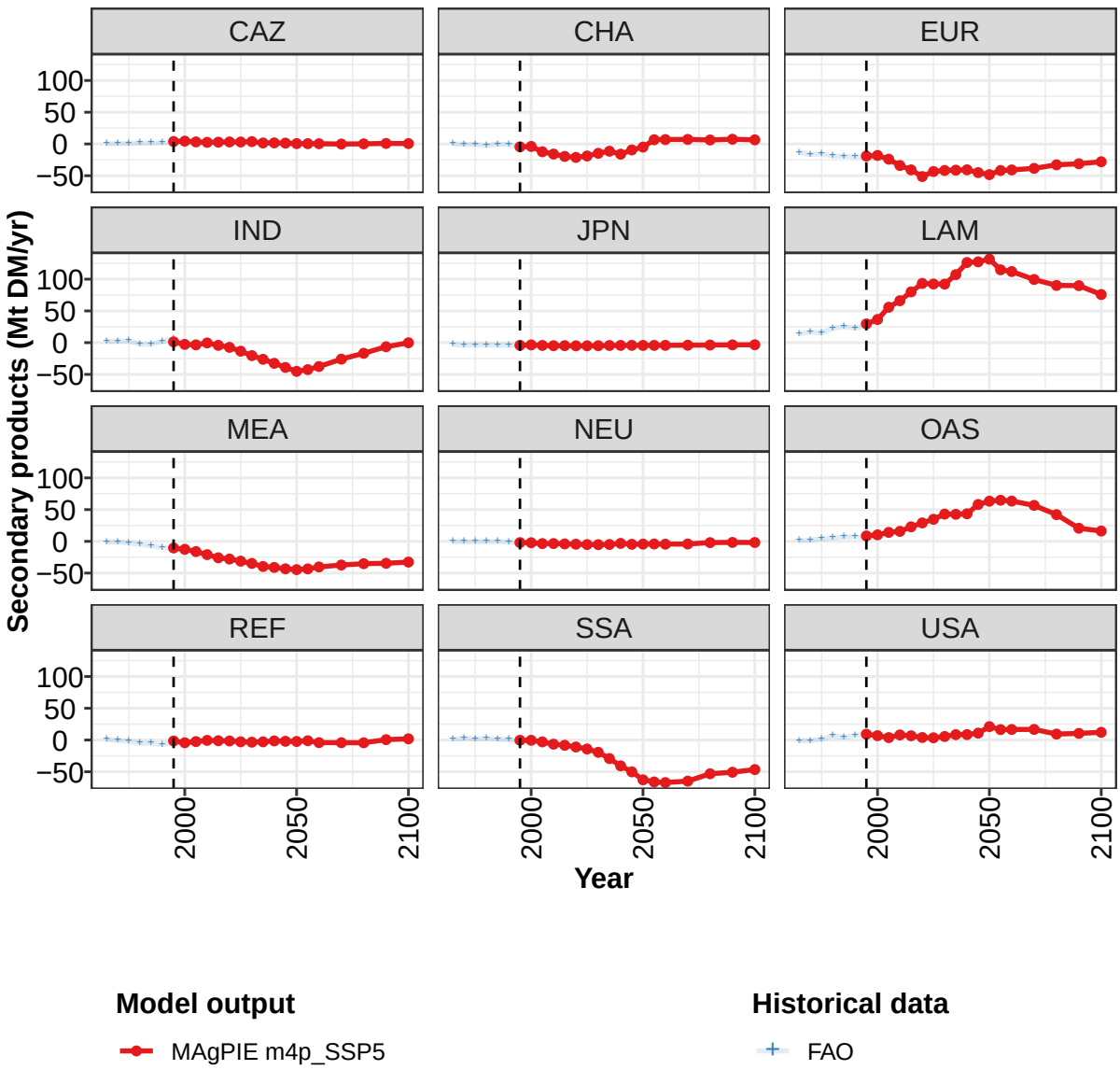
Table 1918: MAgPIE m4p_SSP5 — Trade—Net-Trade—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.58	0.71	0.72	0.99	0.93	0.99	1.22	1.53	1.71	1.57
CHA	-0.03	-0.02	-0.07	-0.09	-0.08	-0.03	-0.24	-0.50	-0.40	-0.74
EUR	-0.77	-0.84	-0.20	-0.26	0.15	0.10	-0.03	0.09	0.20	0.47
IND	-0.02	-0.03	-0.00	0.01	0.02	0.03	0.07	0.12	0.19	0.32
JPN	-0.14	-0.21	-0.22	-0.25	-0.23	-0.35	-0.48	-0.51	-0.34	-0.34
LAM	0.25	0.39	0.02	0.06	0.02	-0.07	-0.15	-0.16	0.69	0.35
MEA	-0.09	-0.10	-0.20	-0.39	-0.54	-0.42	-0.36	-0.32	-0.38	-0.57
NEU	-0.01	-0.01	-0.00	-0.03	-0.04	-0.07	-0.14	-0.10	-0.16	-0.19
OAS	-0.09	-0.10	-0.14	-0.18	-0.25	-0.22	-0.42	-0.39	-0.52	-0.72
REF	-0.07	-0.04	-0.08	-0.25	-0.26	-0.29	-0.27	-0.37	-0.65	-0.63
SSA	-0.01	-0.03	-0.07	-0.13	-0.16	-0.12	-0.20	-0.13	-0.34	-0.37
USA	0.41	0.28	0.23	0.52	0.44	0.45	1.00	0.73	0.01	0.84

Table 1919: FAO — Trade—Net-Trade—Livestock products—Ruminant meat (Mt DM/yr)

58.4 Secondary products





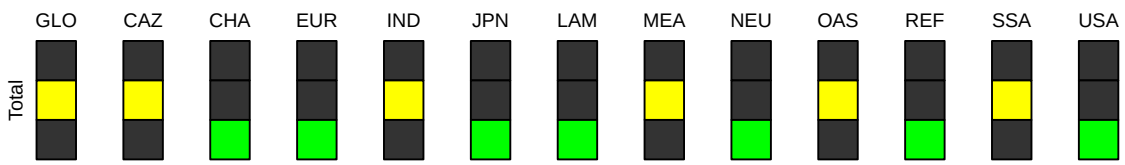


Figure 507: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10	10	8	6	4	0	-0	0	-0	-0	-0
CAZ	4	4	3	3	3	3	3	4	2	2	1
CHA	-4	-4	-12	-16	-20	-21	-19	-15	-11	-16	-9
EUR	-19	-18	-24	-34	-41	-51	-43	-42	-41	-41	-45
IND	1	-3	-3	-0	-4	-7	-13	-20	-26	-33	-39
JPN	-4	-3	-4	-5	-5	-5	-5	-5	-4	-4	-4
LAM	30	36	56	66	80	93	92	92	107	126	127
MEA	-10	-13	-16	-21	-26	-28	-31	-35	-40	-41	-43
NEU	-2	-2	-4	-3	-4	-4	-5	-5	-5	-3	-5
OAS	9	10	14	16	23	29	35	43	43	43	58
REF	-1	-4	-2	-1	-1	-1	-3	-3	-3	-1	-2
SSA	-0	-0	-3	-7	-8	-11	-14	-19	-29	-41	-50
USA	9	7	4	8	7	4	3	6	8	9	11

Table 1920: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products (Mt DM/yr) [PART 1/2]

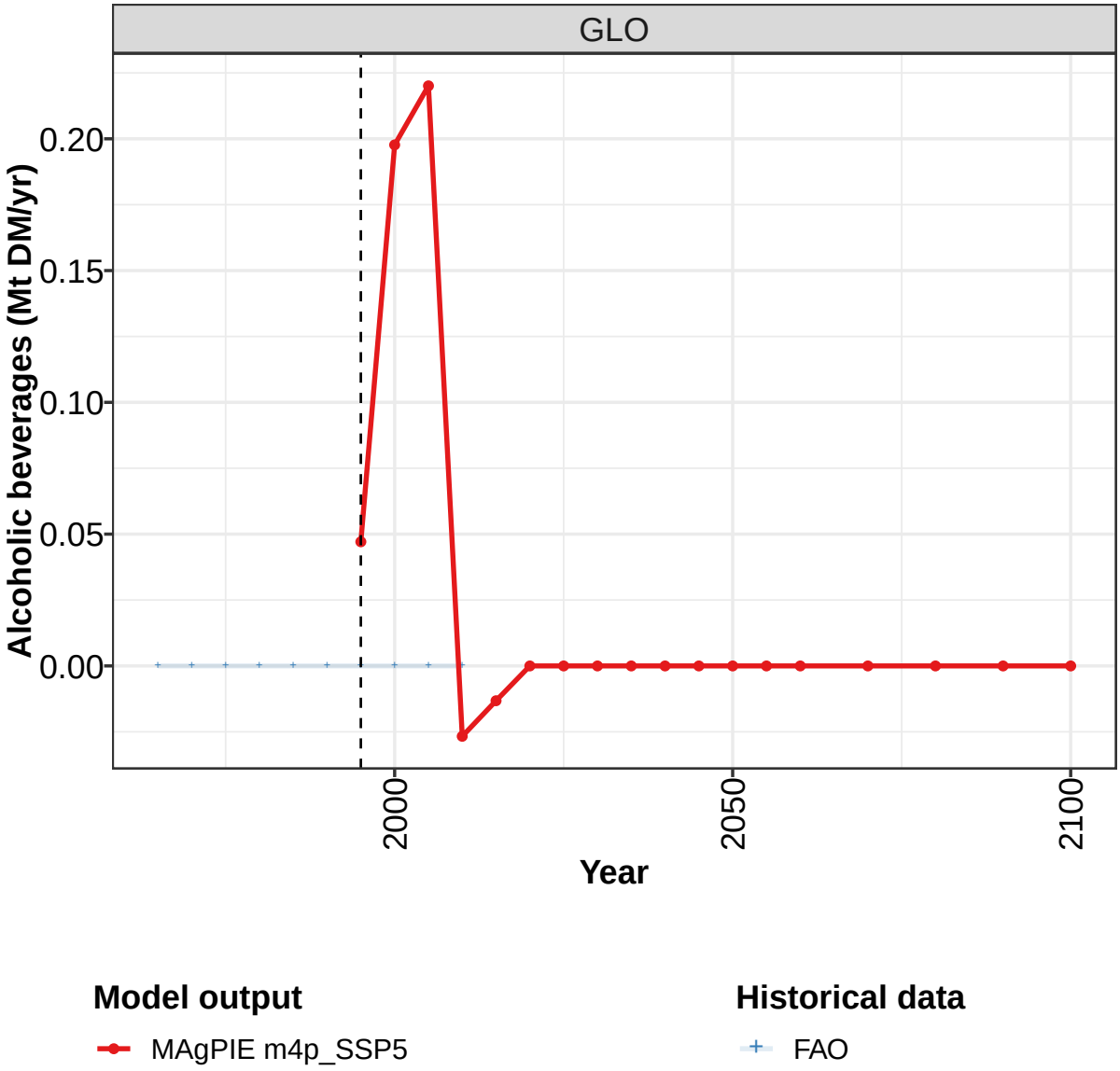
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	1	1	0	2	1
CAZ	1	1	0	-0	0	1	1
CHA	-5	7	7	7	6	7	6
EUR	-48	-42	-41	-38	-33	-31	-28
IND	-45	-42	-38	-26	-17	-6	-0
JPN	-4	-4	-4	-4	-4	-3	-3
LAM	132	115	112	100	90	90	76
MEA	-45	-43	-40	-37	-35	-35	-33
NEU	-4	-4	-4	-4	-2	-2	-2
OAS	63	65	63	57	42	21	16
REF	-2	-1	-4	-4	-4	1	2
SSA	-63	-66	-67	-65	-53	-51	-47
USA	21	16	17	17	9	10	12

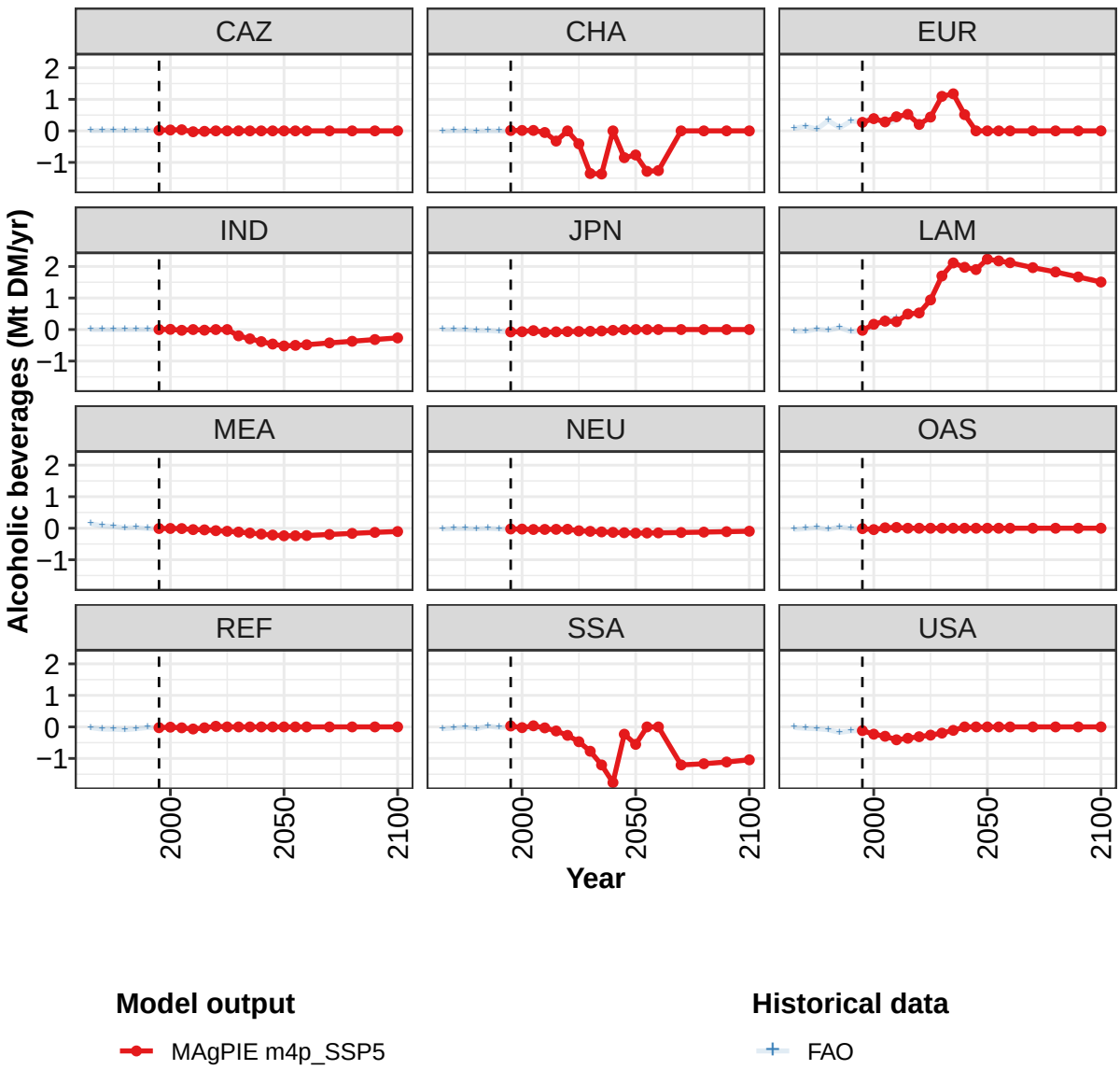
Table 1921: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.2	0.8	0.9	1.7	1.6	2.2	3.3	4.0	2.1	2.2
CHA	0.4	-0.4	-0.8	-2.8	-0.2	-1.1	-4.8	-4.4	-12.7	-15.8
EUR	-13.4	-16.5	-15.7	-19.1	-19.3	-19.6	-21.8	-21.3	-28.1	-34.7
IND	1.7	2.5	2.7	-2.4	-2.8	2.1	5.5	-1.1	-3.8	0.0
JPN	-3.0	-4.6	-3.9	-4.0	-4.0	-4.5	-4.2	-3.6	-4.4	-4.8
LAM	13.9	16.7	15.5	22.3	24.9	23.0	26.9	33.6	57.7	62.8
MEA	-1.1	-0.8	-2.6	-4.7	-7.1	-9.7	-11.8	-13.7	-16.8	-21.8
NEU	-0.6	-0.6	-0.6	-0.3	-0.4	-1.2	-2.8	-3.2	-3.9	-3.9
OAS	1.3	2.0	4.0	5.4	6.9	7.6	5.1	8.6	12.0	15.7
REF	0.9	-0.7	-2.3	-5.0	-5.2	-7.2	-2.3	-5.2	-2.9	-1.2
SSA	1.3	2.7	1.8	2.1	1.3	1.2	-3.4	-2.7	-4.6	-8.4
USA	-1.4	-1.1	1.1	6.8	4.2	7.2	10.1	8.9	5.4	10.0

Table 1922: FAO — Trade—Net-Trade—Secondary products (Mt DM/yr)

58.4.1 Alcoholic beverages





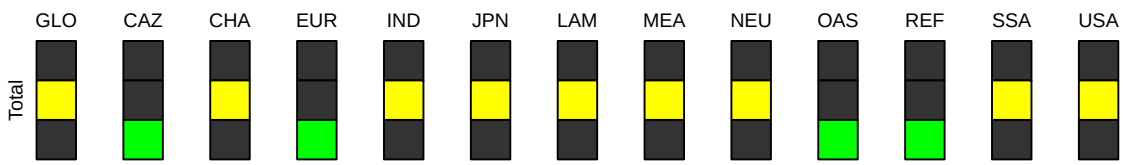


Figure 508: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.05	0.20	0.22	-0.03	-0.01	0.00	0.00	0.00	-0.00	-0.00	-0.00
CAZ	0.02	0.03	0.04	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.01	0.01	0.01	-0.05	-0.32	0.00	-0.41	-1.35	-1.37	0.00	-0.85
EUR	0.27	0.39	0.28	0.45	0.53	0.20	0.44	1.10	1.18	0.51	0.00
IND	0.00	0.01	-0.02	0.00	-0.02	0.00	-0.00	-0.20	-0.29	-0.38	-0.46
JPN	-0.07	-0.07	-0.03	-0.09	-0.07	-0.06	-0.06	-0.06	-0.04	-0.03	-0.00
LAM	-0.02	0.17	0.27	0.25	0.49	0.53	0.94	1.70	2.11	1.97	1.90
MEA	-0.01	-0.01	-0.01	-0.04	-0.05	-0.08	-0.10	-0.12	-0.15	-0.19	-0.22
NEU	-0.02	-0.03	-0.04	-0.04	-0.03	-0.03	-0.08	-0.10	-0.12	-0.13	-0.14
OAS	-0.01	-0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	-0.02	-0.01	-0.03	-0.07	-0.03	0.02	0.00	0.00	0.00	0.00	0.00
SSA	0.03	-0.02	0.04	-0.03	-0.13	-0.27	-0.47	-0.77	-1.21	-1.76	-0.23
USA	-0.12	-0.23	-0.30	-0.41	-0.36	-0.31	-0.26	-0.20	-0.11	0.00	0.00

Table 1923: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

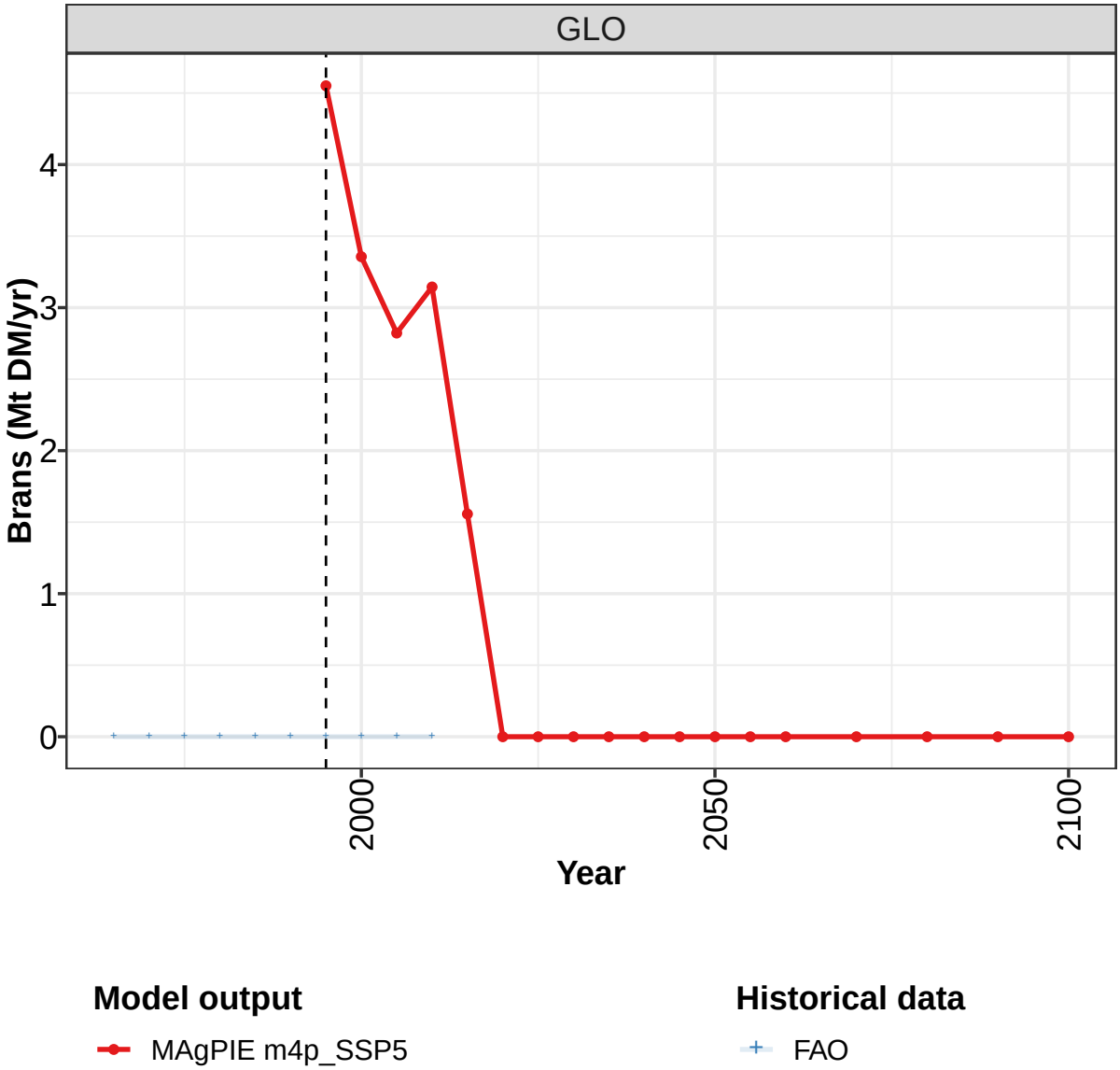
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.00	0.00	0.00	0.00	0.00	-0.00	0.00
CHA	-0.76	-1.28	-1.26	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	-0.52	-0.50	-0.48	-0.42	-0.37	-0.32	-0.26
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	2.23	2.18	2.12	1.96	1.83	1.67	1.51
MEA	-0.24	-0.24	-0.23	-0.20	-0.16	-0.13	-0.10
NEU	-0.15	-0.15	-0.15	-0.14	-0.12	-0.11	-0.09
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	-0.55	0.00	0.00	-1.21	-1.17	-1.11	-1.04
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

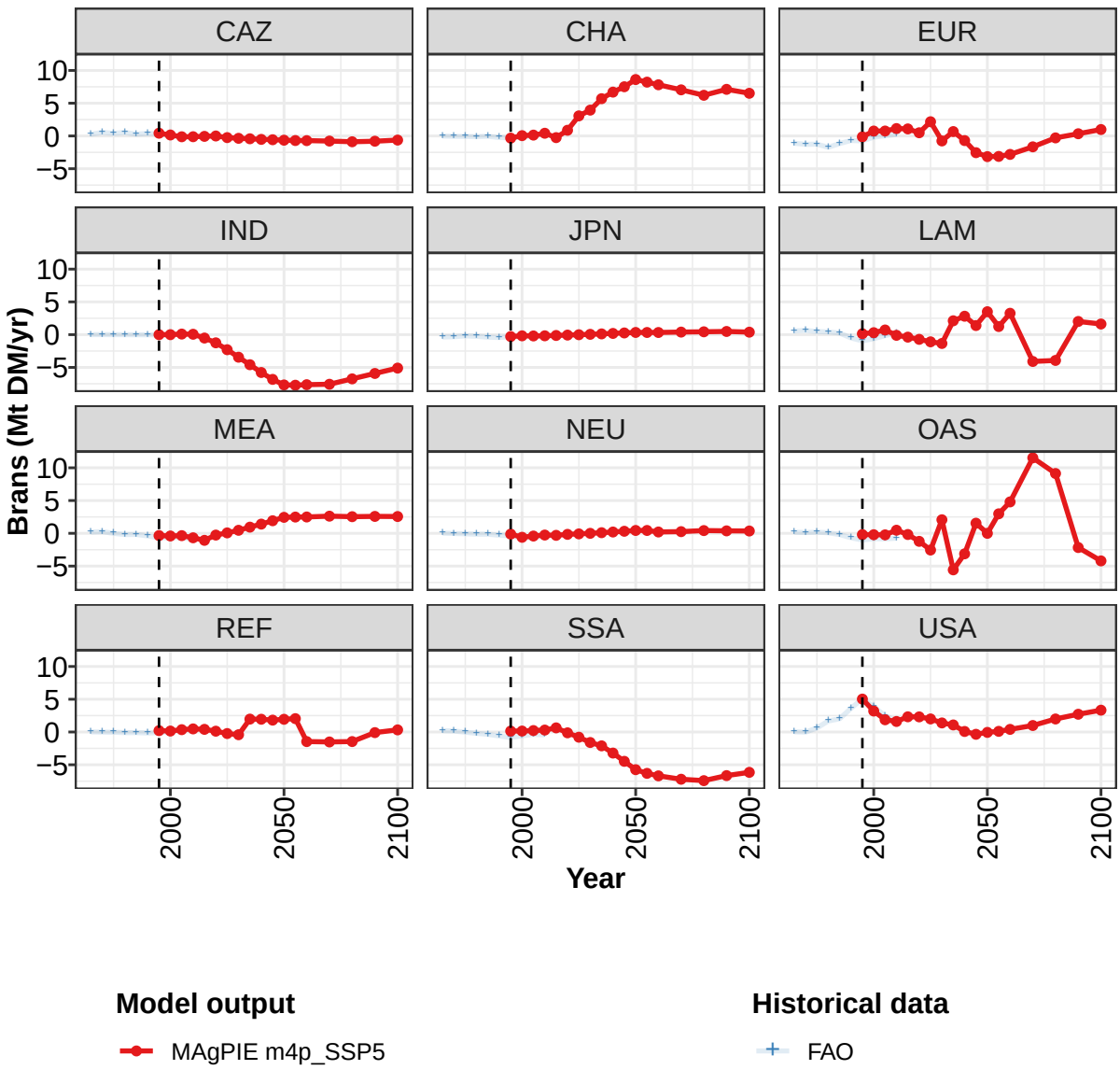
Table 1924: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.005	0.012	0.016	0.014	0.014	0.018	0.022	0.020	0.038	-0.029
CHA	-0.006	-0.003	-0.001	-0.009	0.002	-0.003	-0.009	-0.013	-0.012	-0.029
EUR	0.079	0.145	0.056	0.325	0.100	0.309	0.299	0.426	0.205	0.343
IND	-0.001	-0.000	0.000	-0.001	0.001	0.002	0.001	0.006	-0.023	0.000
JPN	-0.001	-0.001	-0.004	-0.030	-0.031	-0.053	-0.078	-0.069	-0.033	-0.089
LAM	-0.054	-0.054	0.012	-0.022	0.062	-0.066	-0.036	0.088	0.318	0.364
MEA	0.141	0.077	0.057	0.007	0.020	-0.010	-0.011	-0.023	-0.030	-0.041
NEU	-0.025	-0.014	-0.014	-0.016	-0.008	-0.021	-0.026	-0.038	-0.054	-0.034
OAS	-0.037	-0.014	0.016	-0.037	0.042	-0.010	-0.020	-0.082	-0.018	0.001
REF	-0.024	-0.070	-0.075	-0.089	-0.058	-0.019	-0.027	-0.018	-0.036	-0.065
SSA	-0.060	-0.033	-0.006	-0.053	0.028	-0.020	-0.003	-0.060	-0.049	-0.026
USA	-0.019	-0.046	-0.057	-0.088	-0.171	-0.126	-0.112	-0.237	-0.305	-0.396

Table 1925: FAO — Trade—Net-Trade—Secondary products—Alcoholic beverages (Mt DM/yr)

58.4.2 Brans


GLO
Brans (Mt DM/yr)
0
1
2
3
4
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



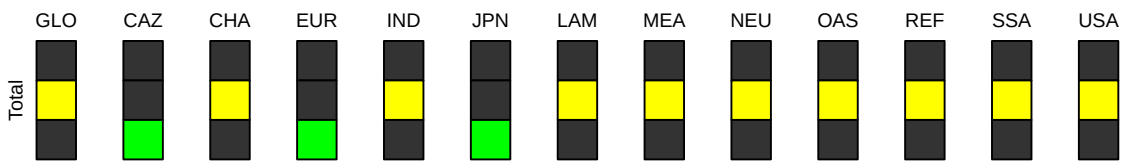


Figure 509: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.6	3.4	2.8	3.1	1.6	-0.0	0.0	0.0	0.0	-0.0	0.0
CAZ	0.4	0.2	-0.1	-0.1	-0.1	-0.0	-0.2	-0.4	-0.4	-0.5	-0.6
CHA	-0.3	0.1	0.1	0.4	-0.3	0.9	3.1	3.9	5.7	6.7	7.5
EUR	-0.1	0.8	0.8	1.1	1.1	0.5	2.2	-0.8	0.7	-0.7	-2.5
IND	0.0	-0.0	0.1	0.1	-0.5	-1.2	-2.3	-3.4	-4.6	-5.8	-6.8
JPN	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.0	0.0	0.1	0.2	0.3
LAM	0.1	0.3	0.7	-0.1	-0.4	-0.7	-1.1	-1.3	2.1	2.8	1.4
MEA	-0.3	-0.4	-0.4	-0.7	-1.1	-0.3	0.1	0.5	0.9	1.4	1.9
NEU	-0.1	-0.6	-0.4	-0.3	-0.3	-0.2	-0.1	0.0	0.1	0.2	0.3
OAS	-0.2	-0.2	-0.2	0.5	-0.2	-1.2	-2.5	2.1	-5.6	-3.1	1.5
REF	0.2	0.2	0.4	0.5	0.4	0.1	-0.2	-0.4	2.0	1.9	1.8
SSA	0.1	0.2	0.2	0.3	0.6	-0.1	-0.8	-1.6	-2.1	-3.2	-4.5
USA	5.0	3.2	1.9	1.6	2.3	2.3	2.0	1.4	1.1	0.1	-0.3

Table 1926: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Brans (Mt DM/yr) [PART 1/2]

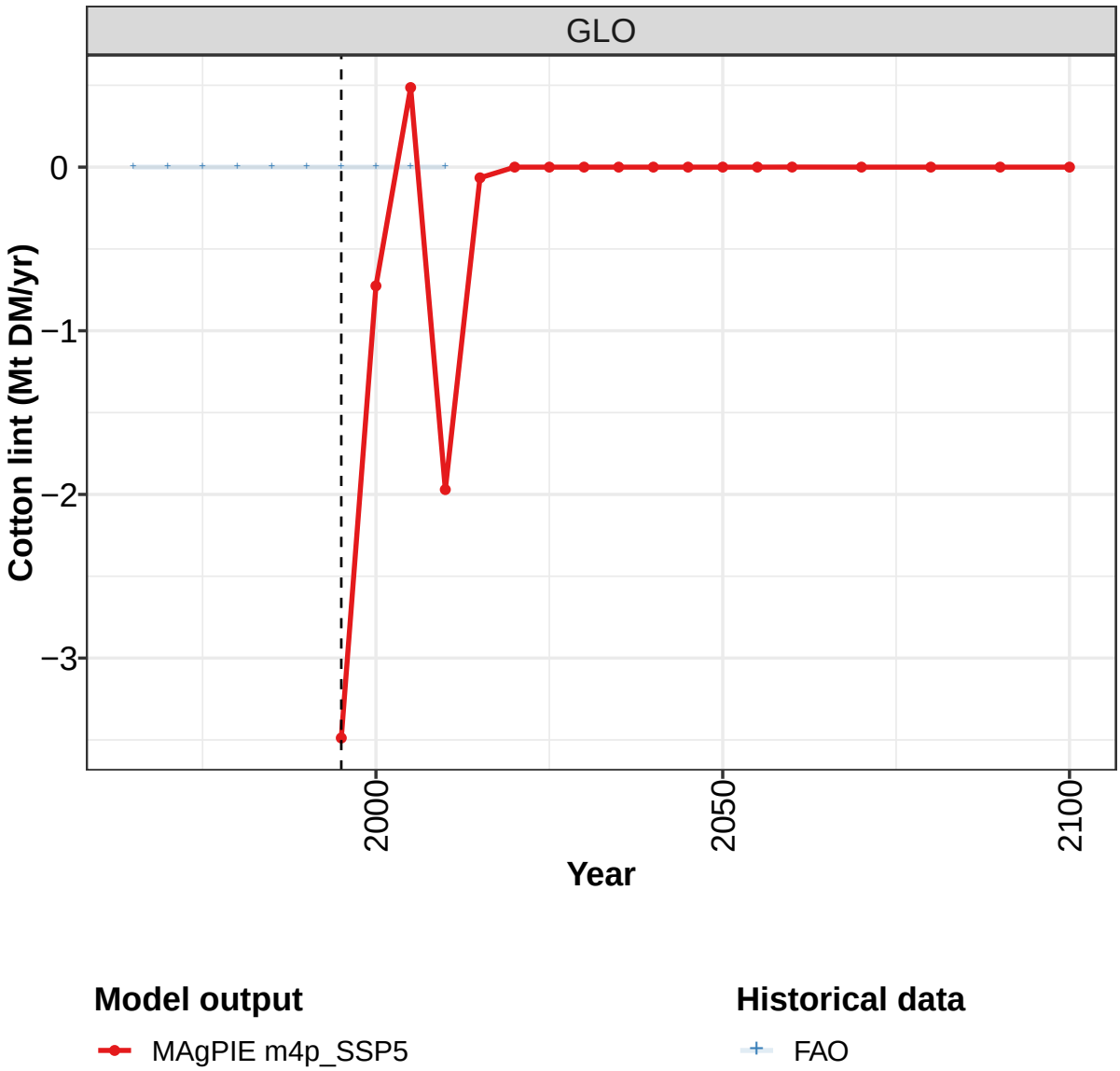
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	-0.0	0.0	0.0	0.0	0.0	-0.0
CAZ	-0.6	-0.7	-0.7	-0.8	-0.9	-0.8	-0.6
CHA	8.6	8.2	7.8	7.0	6.2	7.1	6.5
EUR	-3.1	-3.1	-2.8	-1.7	-0.3	0.3	1.0
IND	-7.7	-7.7	-7.6	-7.6	-6.7	-5.9	-5.1
JPN	0.3	0.3	0.3	0.4	0.4	0.5	0.4
LAM	3.5	1.2	3.3	-4.1	-3.9	2.0	1.6
MEA	2.4	2.5	2.5	2.6	2.5	2.6	2.6
NEU	0.4	0.4	0.2	0.3	0.4	0.4	0.4
OAS	-0.0	3.0	4.8	11.5	9.1	-2.2	-4.2
REF	1.9	2.0	-1.5	-1.5	-1.5	-0.1	0.3
SSA	-5.7	-6.3	-6.7	-7.2	-7.4	-6.7	-6.2
USA	-0.1	0.1	0.4	1.0	2.0	2.7	3.3

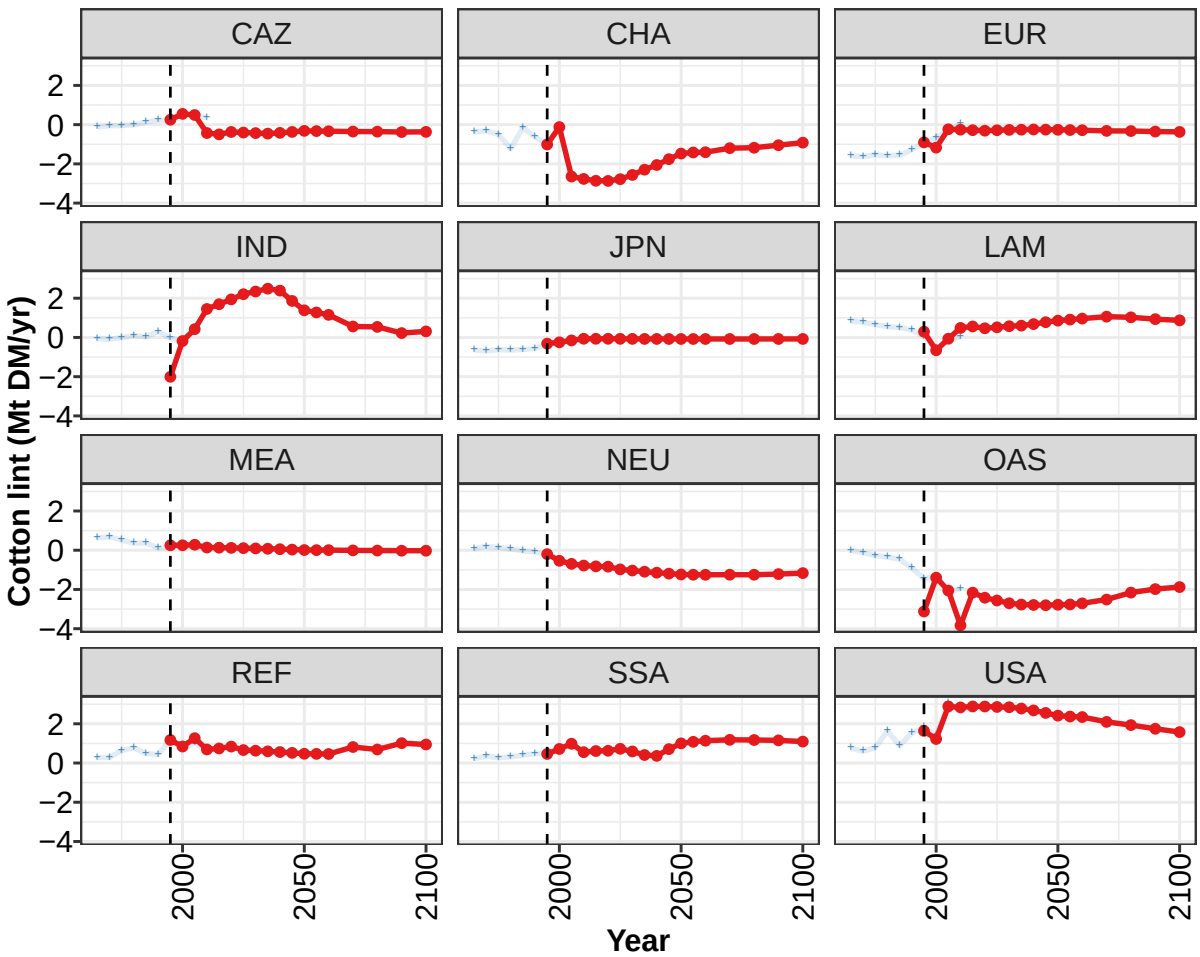
Table 1927: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Brans (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.26	0.54	0.39	0.54	0.28	0.39	0.31	0.05	-0.17	-0.17
CHA	-0.01	-0.06	-0.08	-0.11	-0.04	-0.24	-0.28	-0.12	0.00	0.34
EUR	-1.11	-1.28	-1.25	-1.73	-1.16	-0.69	-0.76	-0.19	0.04	0.23
IND	0.00	0.01	-0.00	-0.01	-0.02	-0.02	-0.02	-0.00	0.10	0.04
JPN	-0.37	-0.32	-0.19	-0.25	-0.39	-0.44	-0.30	-0.20	-0.21	-0.19
LAM	0.57	0.64	0.47	0.42	0.25	-0.51	-0.95	-0.61	-0.16	0.29
MEA	0.18	0.26	-0.00	-0.19	-0.17	-0.40	-0.71	-0.67	-0.61	-0.97
NEU	0.03	-0.02	-0.07	-0.14	-0.14	-0.29	-0.39	-0.73	-0.57	-0.46
OAS	0.17	0.12	0.17	0.09	-0.18	-0.67	-1.03	-0.81	-0.85	-0.73
REF	0.02	-0.02	-0.03	-0.09	-0.09	-0.16	-0.09	0.01	0.33	0.31
SSA	0.21	0.15	-0.02	-0.20	-0.35	-0.61	-0.86	-0.58	-0.36	-0.44
USA	0.04	-0.02	0.61	1.68	2.02	3.61	5.07	3.86	2.46	1.75

Table 1928: FAO — Trade—Net-Trade—Secondary products—Brans (Mt DM/yr)

58.4.3 Cotton lint





Model output

MAgPIE m4p_SSP5

Historical data

FAO

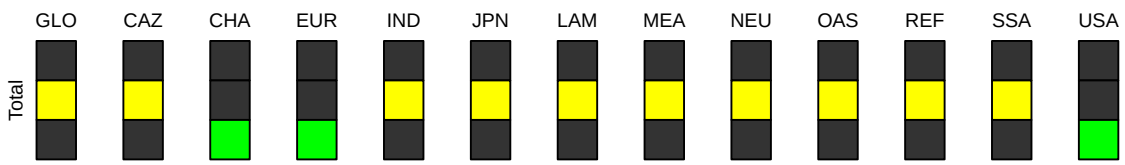


Figure 510: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Cotton lint (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-3.49	-0.73	0.49	-1.97	-0.07	-0.00	0.00	-0.00	0.00	-0.00	0.00
CAZ	0.25	0.55	0.49	-0.43	-0.50	-0.37	-0.40	-0.43	-0.46	-0.42	-0.37
CHA	-1.01	-0.12	-2.64	-2.77	-2.86	-2.87	-2.78	-2.56	-2.29	-2.06	-1.76
EUR	-0.90	-1.17	-0.24	-0.26	-0.28	-0.31	-0.28	-0.27	-0.26	-0.25	-0.25
IND	-2.01	-0.18	0.42	1.45	1.69	1.94	2.21	2.34	2.49	2.39	1.86
JPN	-0.31	-0.25	-0.15	-0.07	-0.07	-0.07	-0.07	-0.07	-0.08	-0.08	-0.08
LAM	0.29	-0.66	-0.07	0.48	0.56	0.47	0.52	0.57	0.60	0.68	0.78
MEA	0.25	0.25	0.28	0.14	0.13	0.12	0.11	0.09	0.07	0.05	0.03
NEU	-0.20	-0.54	-0.69	-0.78	-0.82	-0.84	-0.98	-1.03	-1.09	-1.14	-1.19
OAS	-3.12	-1.40	-2.06	-3.83	-2.16	-2.42	-2.56	-2.70	-2.77	-2.79	-2.80
REF	1.18	0.84	1.27	0.69	0.74	0.84	0.66	0.63	0.60	0.56	0.52
SSA	0.46	0.72	0.98	0.55	0.61	0.63	0.72	0.59	0.41	0.37	0.71
USA	1.64	1.22	2.88	2.84	2.88	2.88	2.86	2.85	2.78	2.68	2.56

Table 1929: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

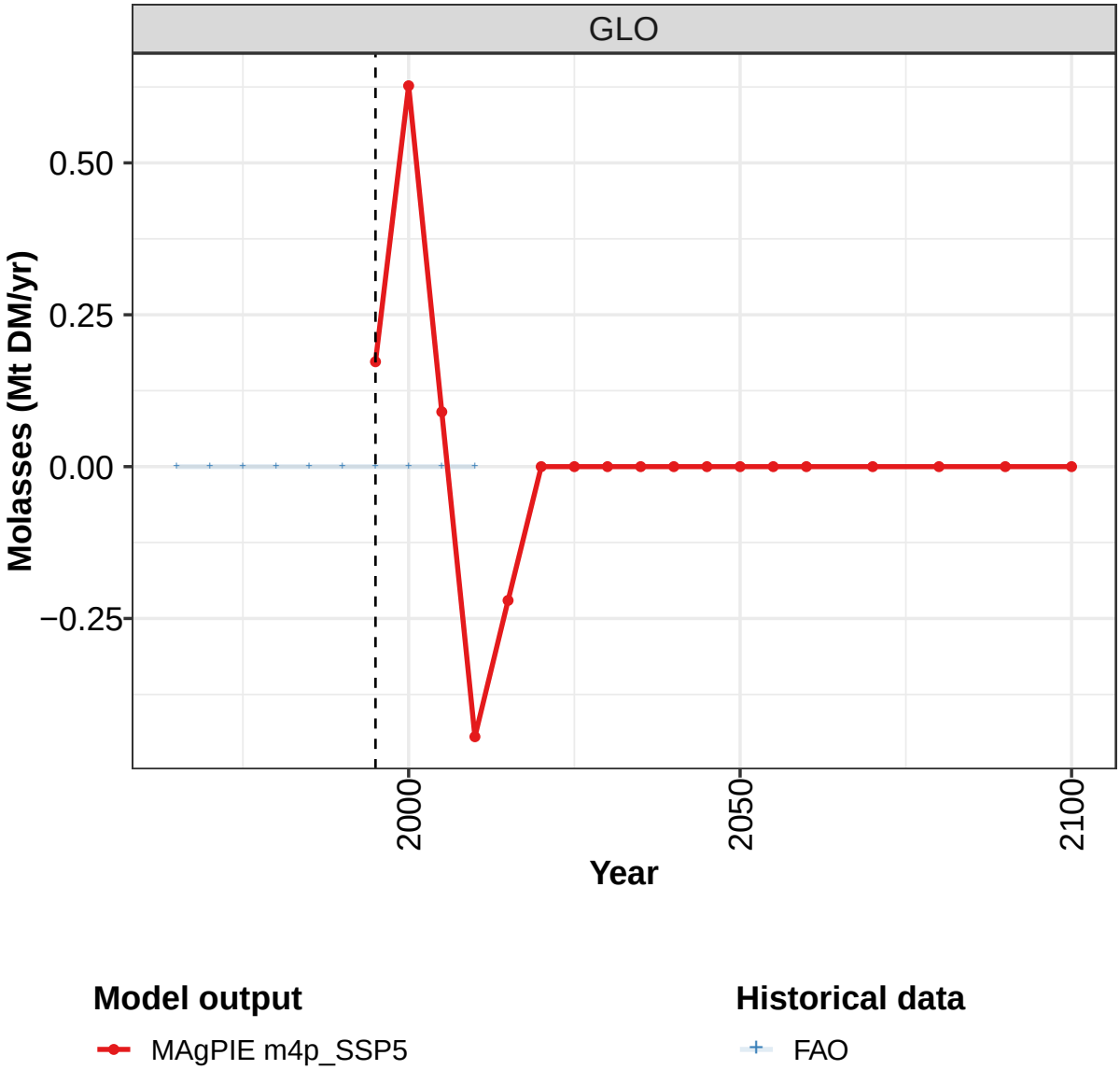
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	-0.00	0.00	-0.00	-0.00	-0.00	0.00
CAZ	-0.32	-0.33	-0.34	-0.35	-0.36	-0.38	-0.37
CHA	-1.47	-1.42	-1.41	-1.20	-1.18	-1.05	-0.92
EUR	-0.26	-0.27	-0.28	-0.32	-0.33	-0.35	-0.37
IND	1.38	1.27	1.15	0.56	0.54	0.22	0.31
JPN	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
LAM	0.86	0.91	0.96	1.06	1.03	0.93	0.87
MEA	0.01	0.01	0.01	-0.01	-0.02	-0.02	-0.02
NEU	-1.24	-1.25	-1.25	-1.25	-1.25	-1.22	-1.17
OAS	-2.78	-2.76	-2.71	-2.51	-2.16	-1.98	-1.88
REF	0.47	0.47	0.46	0.82	0.69	1.01	0.95
SSA	1.00	1.08	1.14	1.18	1.17	1.15	1.09
USA	2.42	2.37	2.34	2.10	1.93	1.75	1.58

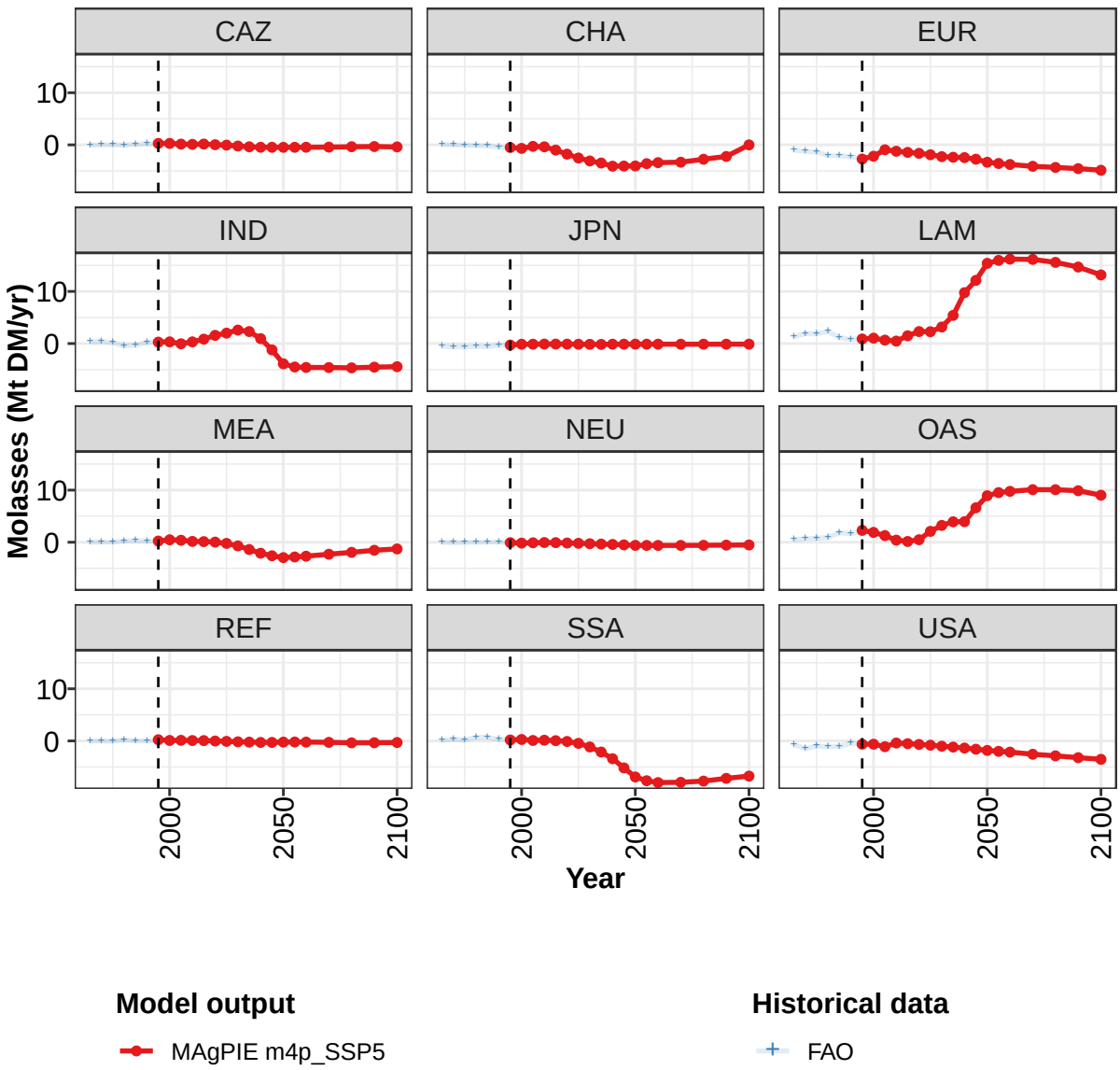
Table 1930: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Cotton lint (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.12	-0.05	-0.04	-0.01	0.14	0.23	0.22	0.58	0.51	0.35
CHA	-0.36	-0.32	-0.50	-1.23	-0.16	-0.62	-1.02	-0.12	-2.62	-2.76
EUR	-1.60	-1.62	-1.54	-1.58	-1.56	-1.27	-0.92	-0.66	-0.30	0.04
IND	-0.07	-0.09	-0.01	0.10	0.03	0.30	-0.04	-0.18	0.46	1.38
JPN	-0.63	-0.69	-0.62	-0.65	-0.61	-0.56	-0.31	-0.25	-0.15	-0.07
LAM	0.83	0.78	0.65	0.55	0.51	0.37	0.05	-0.58	-0.17	0.04
MEA	0.64	0.68	0.52	0.36	0.36	0.12	0.16	0.24	0.17	0.01
NEU	0.07	0.20	0.14	0.07	-0.02	-0.09	-0.21	-0.50	-0.71	-0.77
OAS	-0.01	-0.13	-0.27	-0.34	-0.46	-0.92	-1.43	-1.35	-2.14	-1.96
REF	0.28	0.28	0.64	0.77	0.48	0.44	1.20	0.66	1.05	0.57
SSA	0.22	0.37	0.26	0.32	0.40	0.48	0.48	0.80	0.85	0.50
USA	0.76	0.60	0.77	1.64	0.89	1.53	1.84	1.36	3.05	2.67

Table 1931: FAO — Trade—Net-Trade—Secondary products—Cotton lint (Mt DM/yr)

58.4.4 Molasses





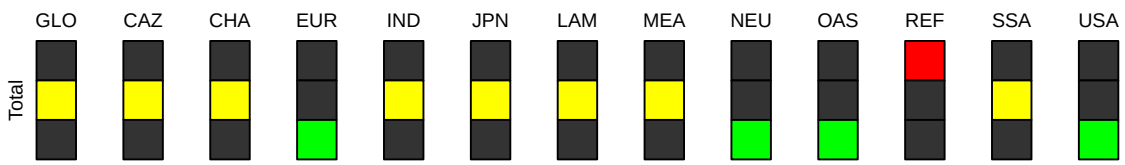


Figure 511: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.2	0.6	0.1	-0.4	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.3	0.3	0.1	0.1	0.2	0.0	-0.0	-0.2	-0.4	-0.5	-0.5
CHA	-0.5	-0.7	-0.3	-0.4	-1.0	-1.8	-2.5	-3.1	-3.5	-4.1	-4.1
EUR	-2.7	-2.2	-0.9	-1.2	-1.4	-1.6	-1.9	-2.3	-2.4	-2.4	-2.7
IND	0.3	0.3	-0.0	0.3	0.8	1.6	2.0	2.6	2.3	0.9	-1.2
JPN	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1
LAM	0.9	1.0	0.7	0.5	1.5	2.3	2.3	3.2	5.4	9.8	12.1
MEA	0.2	0.5	0.4	0.2	0.1	0.0	-0.2	-0.7	-1.4	-2.1	-2.6
NEU	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.3	-0.3	-0.4	-0.5
OAS	2.3	1.9	1.3	0.4	0.1	0.5	2.1	3.2	3.9	3.9	6.6
REF	0.2	0.1	0.1	0.1	0.1	-0.0	-0.1	-0.2	-0.2	-0.3	-0.3
SSA	0.2	0.3	0.1	0.1	0.1	-0.1	-0.5	-1.2	-2.1	-3.4	-5.2
USA	-0.6	-0.6	-1.1	-0.4	-0.5	-0.7	-0.8	-1.0	-1.2	-1.4	-1.6

Table 1932: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

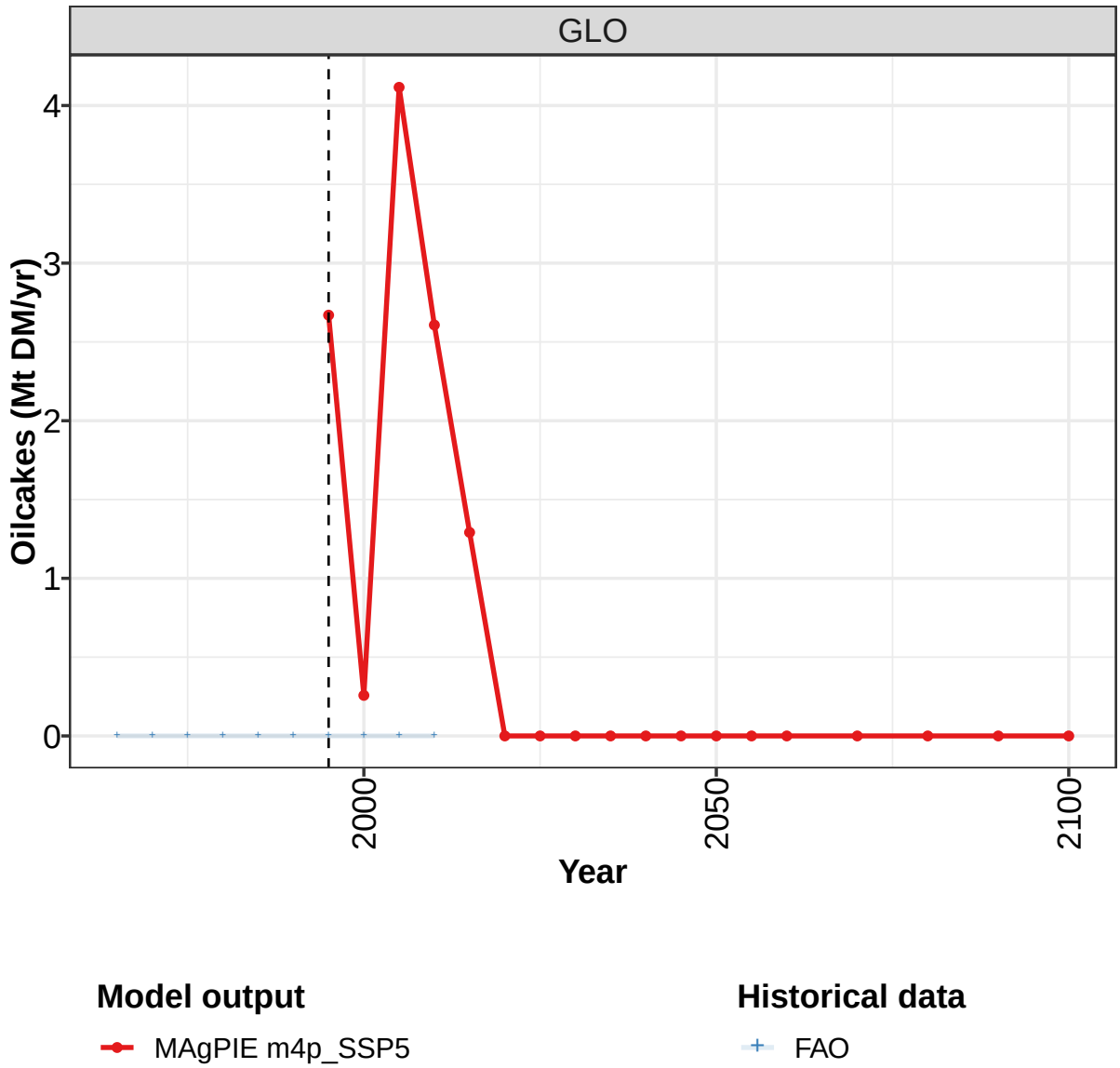
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	0.0	-0.0	0.0
CAZ	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.4
CHA	-4.0	-3.6	-3.4	-3.3	-2.8	-2.2	0.0
EUR	-3.3	-3.6	-3.8	-4.1	-4.3	-4.6	-4.9
IND	-3.9	-4.5	-4.6	-4.6	-4.7	-4.5	-4.4
JPN	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LAM	15.4	16.0	16.2	16.1	15.6	14.7	13.2
MEA	-2.9	-2.8	-2.7	-2.3	-1.9	-1.5	-1.3
NEU	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5
OAS	8.9	9.5	9.8	10.1	10.1	9.9	9.0
REF	-0.2	-0.2	-0.2	-0.3	-0.4	-0.3	-0.3
SSA	-6.9	-7.6	-8.0	-7.9	-7.7	-7.2	-6.7
USA	-1.8	-2.0	-2.1	-2.6	-2.9	-3.2	-3.5

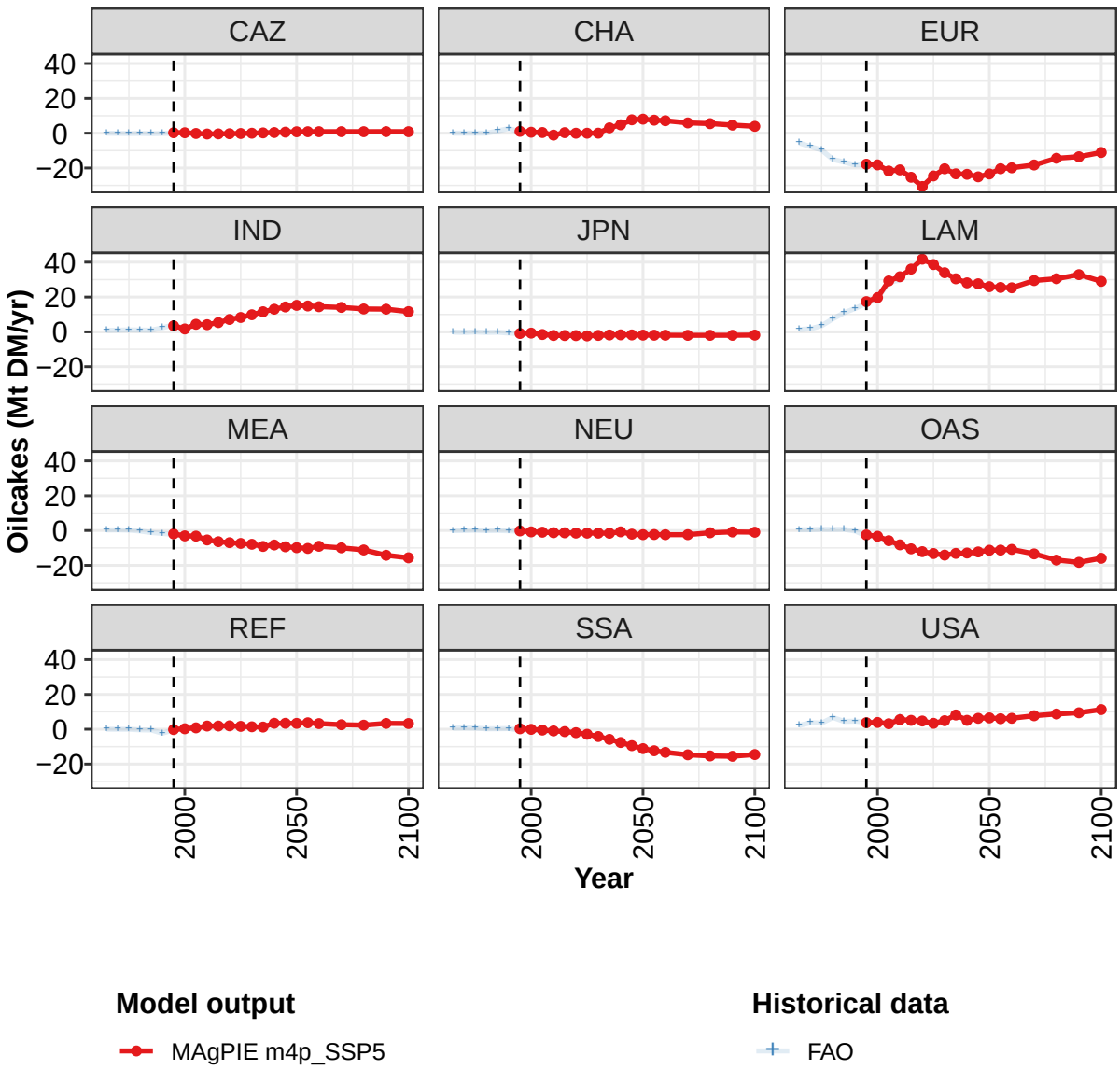
Table 1933: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Molasses (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.08	0.01	0.02	-0.03	0.13	0.21	0.17	0.08	0.09	0.04
CHA	0.08	0.01	-0.03	-0.13	-0.19	-0.44	-0.51	-0.69	-0.30	-0.37
EUR	-0.97	-1.27	-1.36	-2.02	-2.05	-2.27	-2.66	-2.14	-0.87	-1.15
IND	0.32	0.44	0.17	-0.45	-0.34	0.27	0.33	0.29	-0.05	0.57
JPN	-0.55	-0.61	-0.60	-0.57	-0.57	-0.35	-0.28	-0.14	-0.12	-0.09
LAM	1.32	1.91	1.90	2.30	1.16	0.78	0.99	0.77	0.93	0.80
MEA	0.02	0.04	0.04	0.25	0.31	0.24	0.23	0.39	0.51	0.17
NEU	-0.02	-0.06	-0.02	0.01	0.04	0.06	-0.08	-0.19	-0.10	-0.02
OAS	0.51	0.68	0.74	0.92	1.84	1.67	2.08	2.06	0.74	0.15
REF	-0.03	-0.03	-0.04	0.20	0.03	0.00	0.06	0.01	0.17	0.17
SSA	0.12	0.34	0.19	0.66	0.69	0.31	0.31	0.17	0.10	0.16
USA	-0.72	-1.46	-1.00	-1.13	-1.04	-0.48	-0.63	-0.62	-1.10	-0.42

Table 1934: FAO — Trade—Net-Trade—Secondary products—Molasses (Mt DM/yr)

58.4.5 Oilcakes





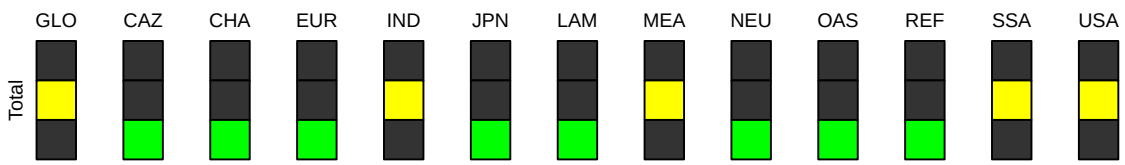


Figure 512: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.7	0.3	4.1	2.6	1.3	0.0	0.0	-0.0	-0.0	0.0	-0.0
CAZ	0.3	0.3	-0.2	-0.5	-0.4	-0.3	-0.2	-0.0	0.2	0.4	0.6
CHA	1.1	0.6	0.4	-1.1	0.3	0.0	0.0	0.0	3.1	4.8	7.7
EUR	-17.8	-18.2	-21.7	-21.1	-25.3	-30.6	-24.5	-20.4	-23.3	-23.6	-25.1
IND	3.5	1.7	4.3	4.1	5.3	7.1	8.3	9.8	11.6	13.0	14.3
JPN	-0.9	-0.7	-1.5	-2.1	-2.1	-2.1	-2.3	-2.0	-1.8	-1.7	-1.8
LAM	17.4	19.7	29.3	31.7	36.1	41.8	38.7	34.0	30.5	28.1	27.6
MEA	-1.9	-3.1	-3.2	-5.4	-6.4	-7.0	-7.4	-7.9	-9.1	-8.3	-9.3
NEU	-0.2	-0.8	-0.9	-1.2	-1.3	-1.4	-1.5	-1.5	-1.6	-0.7	-2.1
OAS	-2.5	-3.3	-5.8	-8.2	-10.5	-12.1	-13.2	-14.1	-13.1	-12.9	-12.3
REF	-0.2	0.3	0.8	1.8	1.8	2.0	1.6	1.4	1.2	3.4	3.4
SSA	0.3	-0.1	-0.5	-1.0	-1.4	-2.0	-2.9	-4.2	-5.8	-7.6	-9.4
USA	3.7	3.9	3.2	5.5	5.1	4.7	3.4	4.9	8.2	5.1	6.3

Table 1935: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

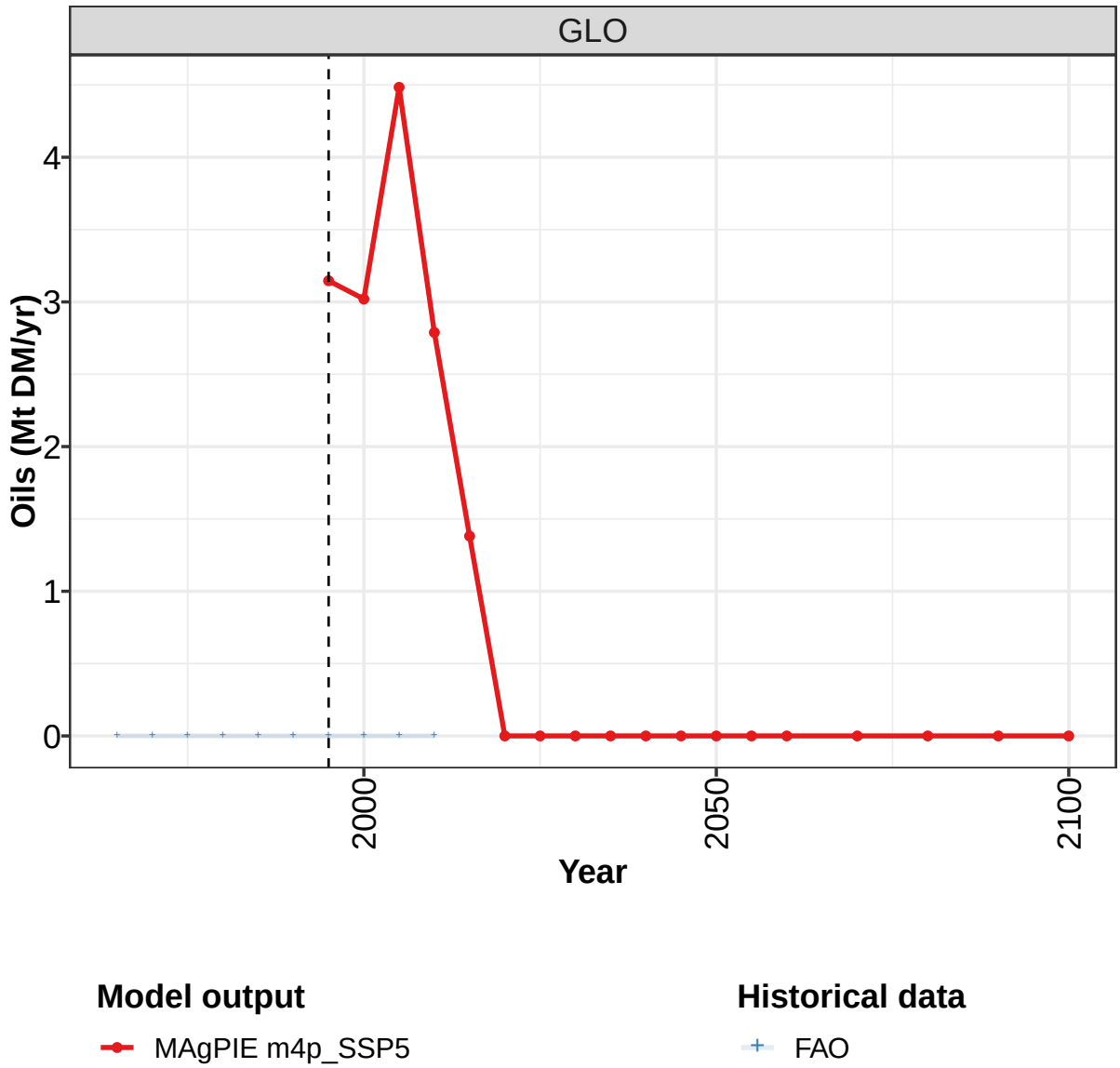
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	-0.0	0.0	0.0	0.0	0.0
CAZ	0.8	0.9	0.9	0.9	0.9	0.9	0.9
CHA	8.1	7.5	7.2	5.9	5.5	4.7	3.9
EUR	-23.4	-20.4	-19.9	-18.3	-14.4	-13.5	-11.1
IND	15.2	14.9	14.5	14.1	13.2	13.1	11.6
JPN	-1.9	-1.9	-1.9	-2.0	-2.0	-2.0	-1.8
LAM	26.0	25.5	25.3	29.5	30.5	32.9	29.0
MEA	-9.9	-10.3	-9.0	-10.0	-11.2	-14.2	-15.7
NEU	-2.4	-2.3	-2.4	-2.4	-1.3	-0.8	-1.0
OAS	-11.3	-11.2	-10.8	-13.4	-17.0	-18.3	-15.9
REF	3.4	3.7	3.2	2.6	2.3	3.3	3.3
SSA	-11.2	-12.4	-13.3	-14.7	-15.3	-15.5	-14.5
USA	6.5	6.0	6.3	7.7	8.8	9.5	11.3

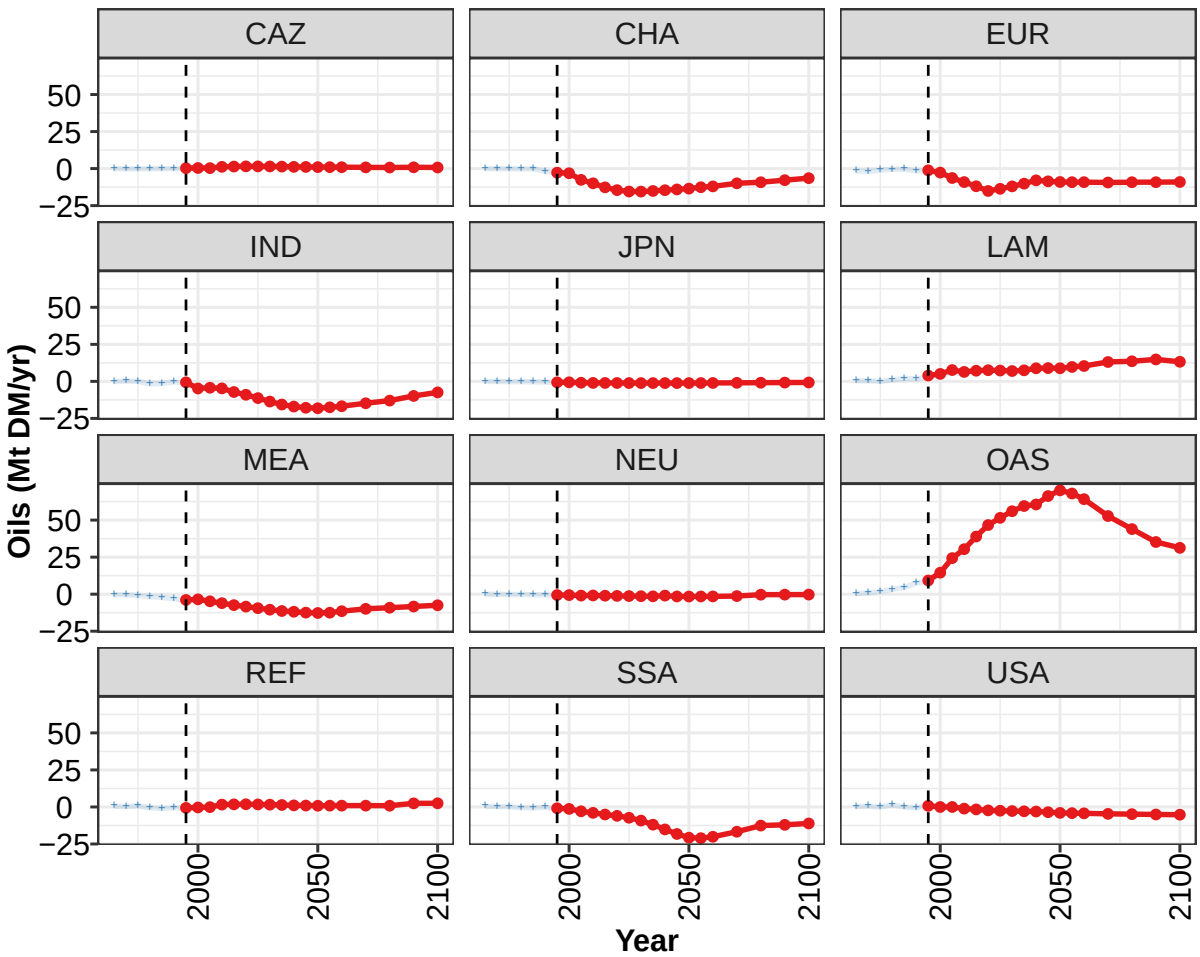
Table 1936: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Oilcakes (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.0	-0.1	-0.2	-0.1	-0.3	-0.2	-0.0	0.3	-0.2	-0.5
CHA	0.0	0.0	0.0	0.0	1.3	2.7	0.8	0.3	-0.0	-1.0
EUR	-5.6	-7.7	-9.7	-15.0	-16.6	-18.2	-18.0	-18.2	-22.0	-21.1
IND	0.8	1.0	1.1	1.0	0.9	2.3	4.0	2.0	4.0	4.6
JPN	-0.1	-0.3	-0.1	-0.3	-0.2	-0.7	-0.9	-0.7	-1.5	-2.0
LAM	1.4	1.8	3.5	7.5	10.9	13.5	16.4	19.1	28.5	29.7
MEA	0.3	0.4	0.2	-0.3	-1.1	-1.7	-2.2	-3.1	-3.6	-5.8
NEU	-0.1	0.0	0.2	-0.0	0.0	-0.1	-0.4	-0.7	-1.2	-1.4
OAS	0.5	0.5	0.7	0.6	0.7	-0.3	-3.1	-3.4	-6.7	-9.0
REF	0.0	-0.0	-0.0	-0.4	-0.4	-2.3	-0.3	0.2	0.5	1.6
SSA	0.6	0.7	0.6	0.3	0.3	0.4	-0.5	-0.1	-1.3	-1.5
USA	2.2	3.8	3.5	6.8	4.5	4.6	4.1	4.3	3.5	6.5

Table 1937: FAO — Trade—Net-Trade—Secondary products—Oilcakes (Mt DM/yr)

58.4.6 Oils


GLO
Oils (Mt DM/yr)
0
1
2
3
4
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

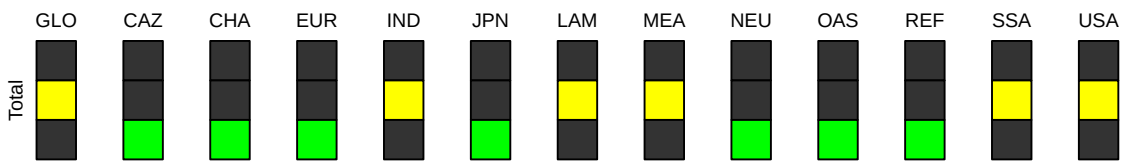


Figure 513: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.1	3.0	4.5	2.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.3	0.4	0.3	1.2	1.4	1.5	1.5	1.4	1.3	1.2	1.1
CHA	-2.7	-3.1	-7.6	-9.9	-12.6	-14.5	-15.5	-15.5	-15.1	-14.6	-14.1
EUR	-1.2	-2.7	-6.3	-9.1	-11.9	-15.1	-13.7	-12.0	-10.2	-7.9	-8.6
IND	-0.7	-4.8	-4.3	-4.7	-7.2	-9.0	-11.3	-13.6	-15.6	-17.0	-17.8
JPN	-0.7	-0.6	-0.9	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
LAM	3.9	5.0	7.7	6.4	7.2	7.5	7.3	7.0	7.5	8.8	9.0
MEA	-3.9	-3.5	-4.8	-6.1	-7.4	-8.4	-9.4	-10.5	-11.4	-11.8	-12.4
NEU	-0.6	-0.6	-0.9	-0.9	-1.0	-1.2	-1.3	-1.4	-1.4	-1.0	-1.5
OAS	9.3	14.5	24.4	30.4	38.9	46.7	51.5	56.0	59.5	60.5	66.3
REF	-0.6	-0.3	-0.1	1.6	1.8	1.8	1.7	1.6	1.4	1.1	1.0
SSA	-0.9	-1.3	-2.9	-4.0	-5.1	-6.0	-7.3	-9.2	-11.9	-15.1	-18.2
USA	0.8	0.0	0.0	-1.1	-1.6	-2.3	-2.5	-2.8	-2.9	-3.1	-3.5

Table 1938: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Oils (Mt DM/yr) [PART 1/2]

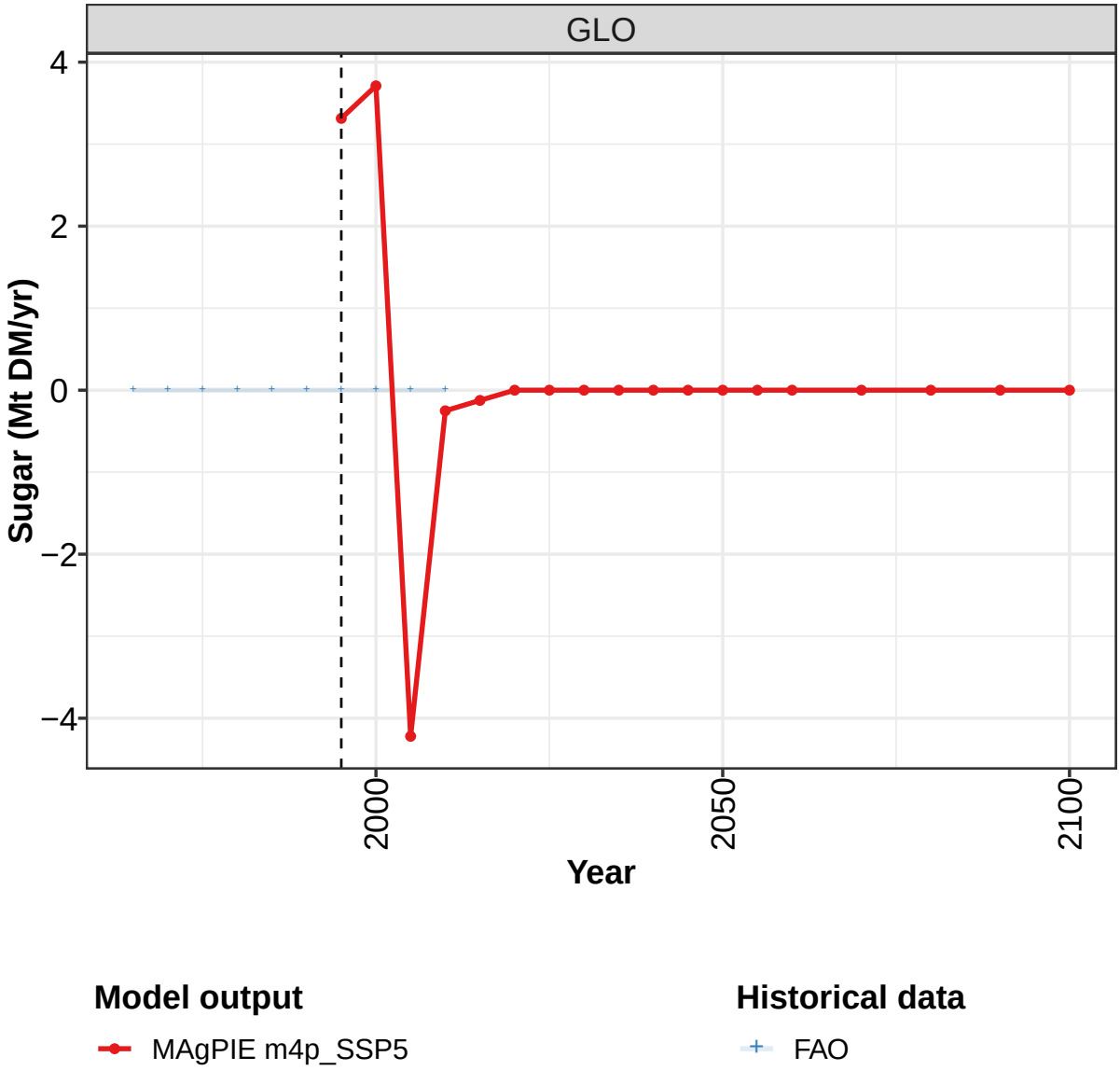
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	-0.0	-0.0	0.0
CAZ	1.0	1.0	1.0	0.8	0.7	0.9	0.7
CHA	-13.5	-12.6	-12.0	-9.9	-9.2	-7.8	-6.5
EUR	-9.0	-9.2	-9.1	-9.4	-9.2	-9.2	-9.0
IND	-18.1	-17.5	-16.8	-14.8	-13.0	-9.8	-7.4
JPN	-1.1	-1.1	-1.1	-1.0	-0.9	-0.8	-0.7
LAM	8.9	9.7	10.4	13.1	13.6	14.8	13.2
MEA	-12.7	-12.5	-11.5	-9.9	-9.1	-8.3	-7.5
NEU	-1.6	-1.5	-1.5	-1.3	-0.3	-0.3	-0.3
OAS	70.1	68.0	64.2	52.8	44.0	35.2	31.3
REF	0.8	0.9	0.9	0.9	0.9	2.4	2.5
SSA	-20.7	-21.1	-20.1	-16.7	-12.6	-12.1	-11.1
USA	-4.0	-4.2	-4.3	-4.7	-4.9	-5.1	-5.2

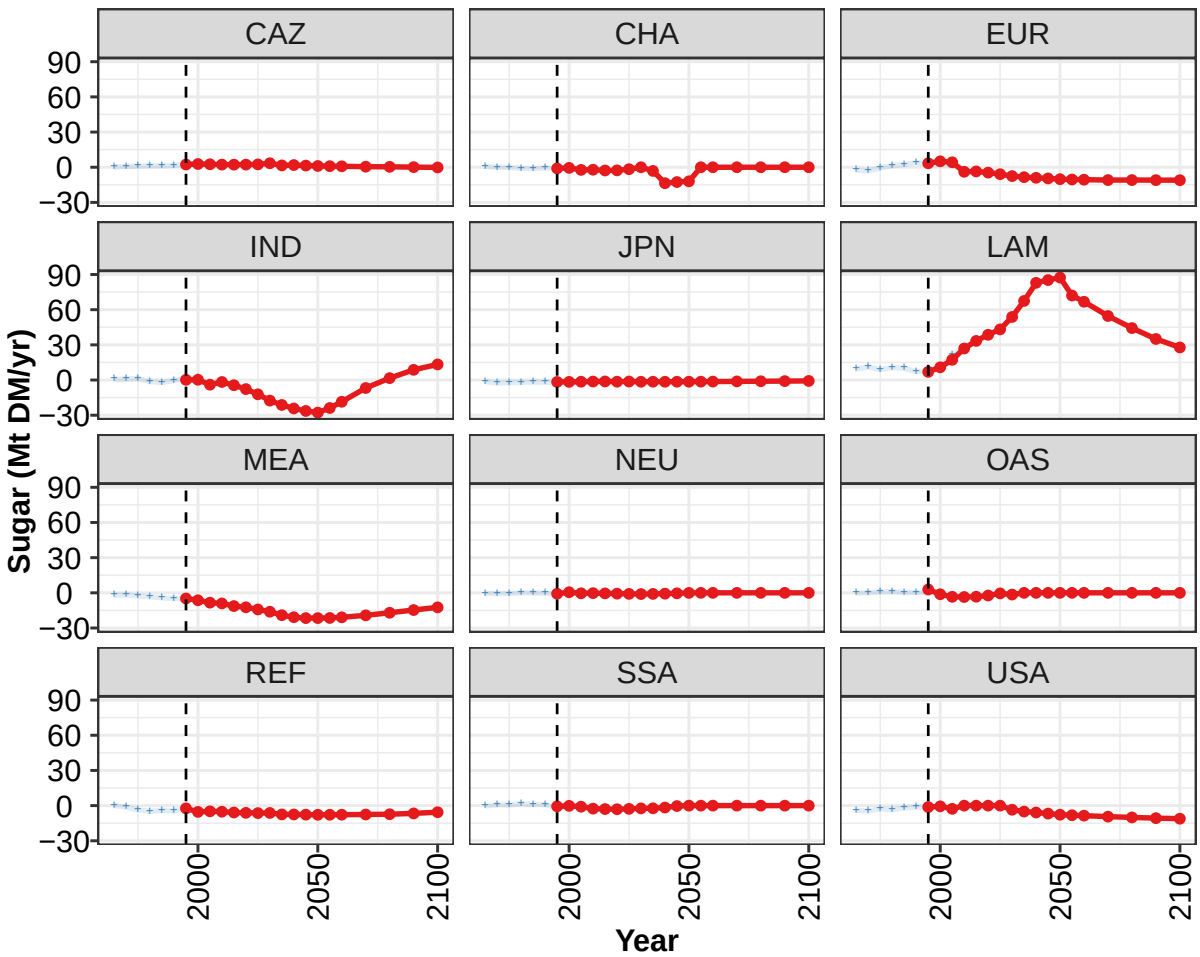
Table 1939: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Oils (Mt DM/yr) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	-0.1	-0.1	-0.2	-0.1	-0.0	-0.1	0.2	0.3	0.2	1.3
CHA	0.0	-0.0	-0.1	-0.3	0.0	-1.8	-2.8	-3.2	-7.6	-9.9
EUR	-1.6	-1.9	-1.1	-0.5	-0.5	-1.5	-1.6	-3.0	-7.0	-9.3
IND	-0.2	0.2	0.0	-1.7	-1.3	-0.5	-0.6	-4.8	-4.3	-4.8
JPN	-0.0	-0.0	-0.2	-0.2	-0.3	-0.5	-0.7	-0.6	-0.9	-1.0
LAM	0.5	0.4	-0.1	1.0	1.9	1.7	2.9	3.5	6.4	4.7
MEA	-0.3	-0.5	-0.9	-1.5	-2.3	-3.0	-4.2	-3.8	-5.2	-6.3
NEU	-0.1	-0.1	-0.3	-0.2	-0.4	-0.4	-0.8	-0.8	-1.2	-1.1
OAS	0.4	0.9	1.9	3.2	4.6	7.5	8.6	14.0	23.3	30.7
REF	0.5	0.3	0.8	-0.6	-1.0	-0.6	-0.7	-0.5	-0.3	1.4
SSA	0.5	0.3	0.2	-0.4	-0.7	-0.2	-1.5	-1.9	-3.8	-4.6
USA	0.4	0.6	-0.0	1.5	-0.1	-0.5	1.2	0.7	0.5	-1.1

Table 1940: FAO — Trade—Net-Trade—Secondary products—Oils (Mt DM/yr)

58.4.7 Sugar


GLO
4
2
0
−2
−4
Sugar (Mt DM/yr)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



Model output

MAgPIE m4p_SSP5

Historical data

FAO

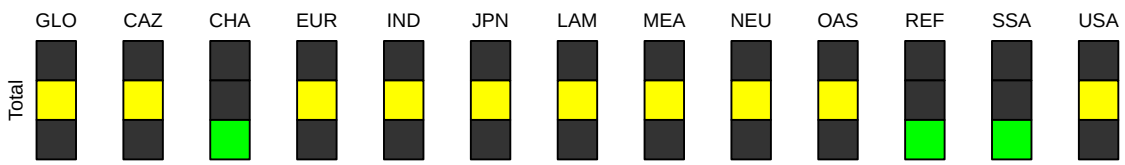


Figure 514: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.3	3.7	-4.2	-0.3	-0.1	-0.0	-0.0	0.0	-0.0	0.0	-0.0
CAZ	2.3	2.8	2.5	2.3	2.2	2.2	2.4	3.4	1.6	1.9	1.5
CHA	-1.0	-0.5	-2.3	-2.1	-2.8	-2.6	-1.6	0.0	-3.1	-13.6	-12.6
EUR	3.4	5.1	4.2	-3.9	-3.6	-4.6	-5.9	-7.5	-8.5	-9.0	-9.5
IND	0.2	0.3	-4.0	-1.7	-4.4	-7.7	-12.2	-17.5	-21.3	-24.2	-26.4
JPN	-1.6	-1.6	-1.4	-1.3	-1.2	-1.4	-1.2	-1.5	-1.4	-1.5	-1.5
LAM	7.0	10.9	17.3	26.9	33.4	38.6	43.2	53.8	67.5	82.9	85.3
MEA	-4.8	-6.3	-8.4	-9.0	-11.3	-12.3	-14.2	-16.1	-19.1	-20.8	-21.6
NEU	-0.8	0.5	-0.4	-0.2	-0.5	-0.7	-0.9	-1.0	-0.9	-0.7	-0.4
OAS	2.9	-1.2	-3.4	-3.5	-3.3	-2.3	-0.5	-1.5	0.0	0.0	0.0
REF	-2.3	-5.3	-4.9	-5.2	-5.8	-6.1	-6.4	-6.2	-7.5	-7.5	-7.7
SSA	-0.6	-0.2	-0.9	-2.5	-2.9	-3.1	-2.8	-2.3	-2.3	-1.6	-0.4
USA	-1.2	-0.6	-2.7	0.0	0.0	0.0	0.0	-3.5	-5.1	-5.9	-6.8

Table 1941: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	1.1	0.9	0.8	0.5	0.4	0.1	-0.2
CHA	-12.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	-10.2	-10.4	-10.6	-10.9	-10.9	-11.0	-11.0
IND	-27.7	-23.9	-18.5	-6.8	1.6	8.7	13.3
JPN	-1.4	-1.4	-1.3	-1.2	-1.0	-0.9	-0.8
LAM	87.4	72.1	66.8	54.6	44.3	35.0	27.8
MEA	-21.5	-21.4	-20.9	-19.2	-17.0	-14.7	-12.4
NEU	-0.0	0.0	0.0	0.0	0.0	-0.0	0.0
OAS	0.0	0.0	0.0	0.0	0.0	-0.0	0.0
REF	-7.8	-7.8	-7.7	-7.6	-7.3	-6.6	-5.6
SSA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	-7.8	-8.2	-8.5	-9.4	-10.1	-10.7	-11.2

Table 1942: MAgPIE m4p_SSP5 — Trade—Net-Trade—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

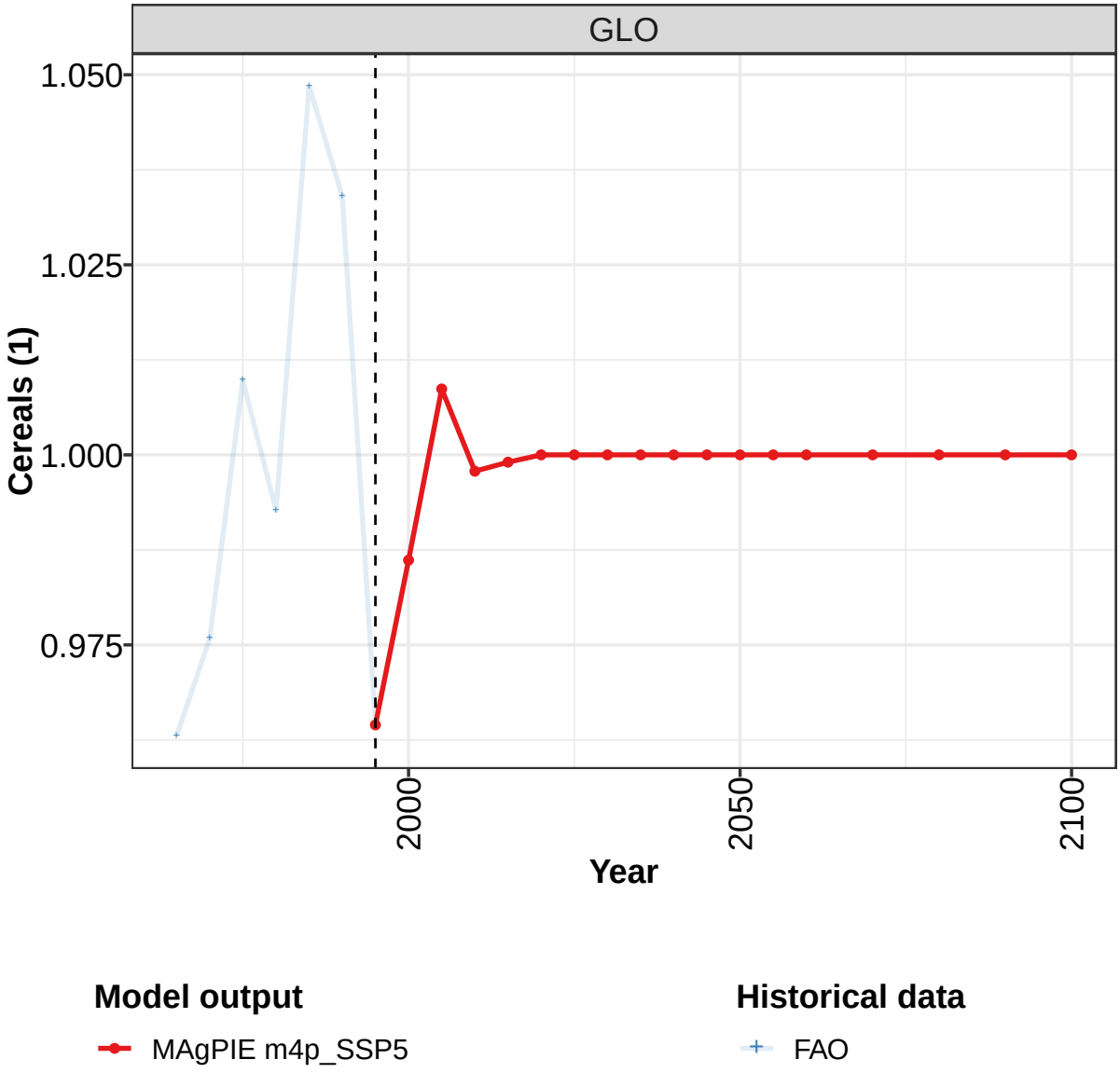
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.2	0.6	0.9	1.3	1.4	1.6	2.4	2.6	1.7	1.2
CHA	0.7	-0.1	-0.1	-1.0	-1.1	-0.6	-1.0	-0.6	-2.2	-2.1
EUR	-2.5	-2.9	-0.8	1.5	2.4	4.1	1.9	2.4	1.9	-3.8
IND	0.7	1.0	1.4	-1.4	-2.0	-0.3	1.9	1.6	-4.0	-1.8
JPN	-1.3	-2.6	-2.2	-2.0	-1.8	-1.9	-1.7	-1.6	-1.4	-1.3
LAM	9.4	11.2	9.0	10.6	10.1	7.3	7.6	11.3	21.9	27.0
MEA	-2.1	-1.7	-2.6	-3.3	-4.2	-5.0	-5.1	-6.7	-8.1	-8.9
NEU	-0.6	-0.6	-0.5	0.1	0.0	-0.2	-1.0	-0.2	-0.1	-0.2
OAS	-0.2	0.0	0.8	1.0	0.3	0.3	0.0	-1.9	-2.3	-3.5
REF	0.1	-1.2	-3.6	-4.8	-4.1	-4.6	-2.4	-5.6	-4.6	-5.2
SSA	-0.4	0.8	0.6	1.6	1.0	0.9	-1.3	-1.0	0.0	-2.5
USA	-4.1	-4.6	-2.7	-3.5	-1.9	-1.4	-1.3	-0.6	-2.8	1.0

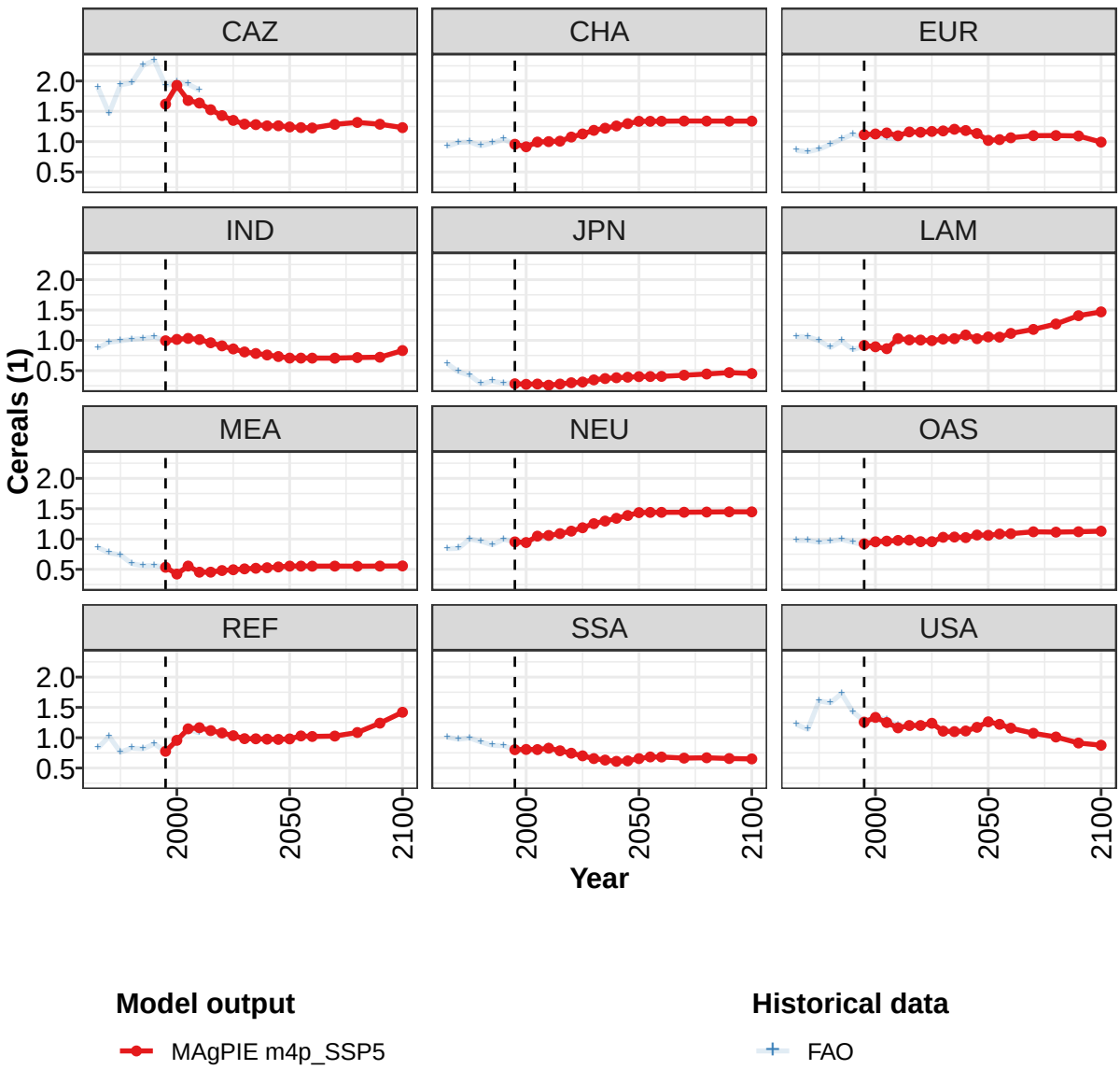
Table 1943: FAO — Trade—Net-Trade—Secondary products—Sugar (Mt DM/yr)

59 Self-sufficiency

59.1 Crops

59.1.1 Cereals





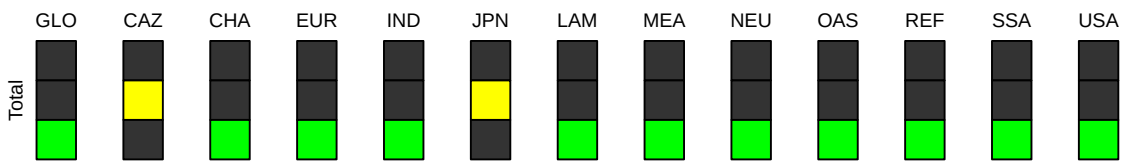


Figure 515: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.96	0.99	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.62	1.93	1.68	1.64	1.53	1.43	1.35	1.29	1.28	1.26	1.26
CHA	0.96	0.92	0.99	1.00	1.01	1.08	1.13	1.19	1.22	1.26	1.30
EUR	1.11	1.13	1.14	1.10	1.16	1.15	1.17	1.18	1.20	1.18	1.13
IND	0.99	1.02	1.03	1.01	0.96	0.91	0.86	0.81	0.78	0.76	0.73
JPN	0.28	0.27	0.28	0.26	0.28	0.30	0.31	0.35	0.37	0.38	0.39
LAM	0.92	0.89	0.86	1.03	1.01	1.00	0.99	1.02	1.03	1.09	1.03
MEA	0.53	0.42	0.55	0.45	0.45	0.48	0.49	0.51	0.52	0.53	0.54
NEU	0.95	0.94	1.05	1.06	1.09	1.13	1.19	1.25	1.30	1.34	1.39
OAS	0.92	0.95	0.97	0.98	0.98	0.96	0.96	1.03	1.03	1.02	1.07
REF	0.78	0.96	1.15	1.16	1.12	1.08	1.03	0.98	0.98	0.98	0.97
SSA	0.80	0.81	0.80	0.83	0.78	0.74	0.70	0.66	0.63	0.61	0.62
USA	1.26	1.33	1.25	1.16	1.20	1.20	1.24	1.11	1.10	1.11	1.17

Table 1944: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals (1) [PART 1/2]

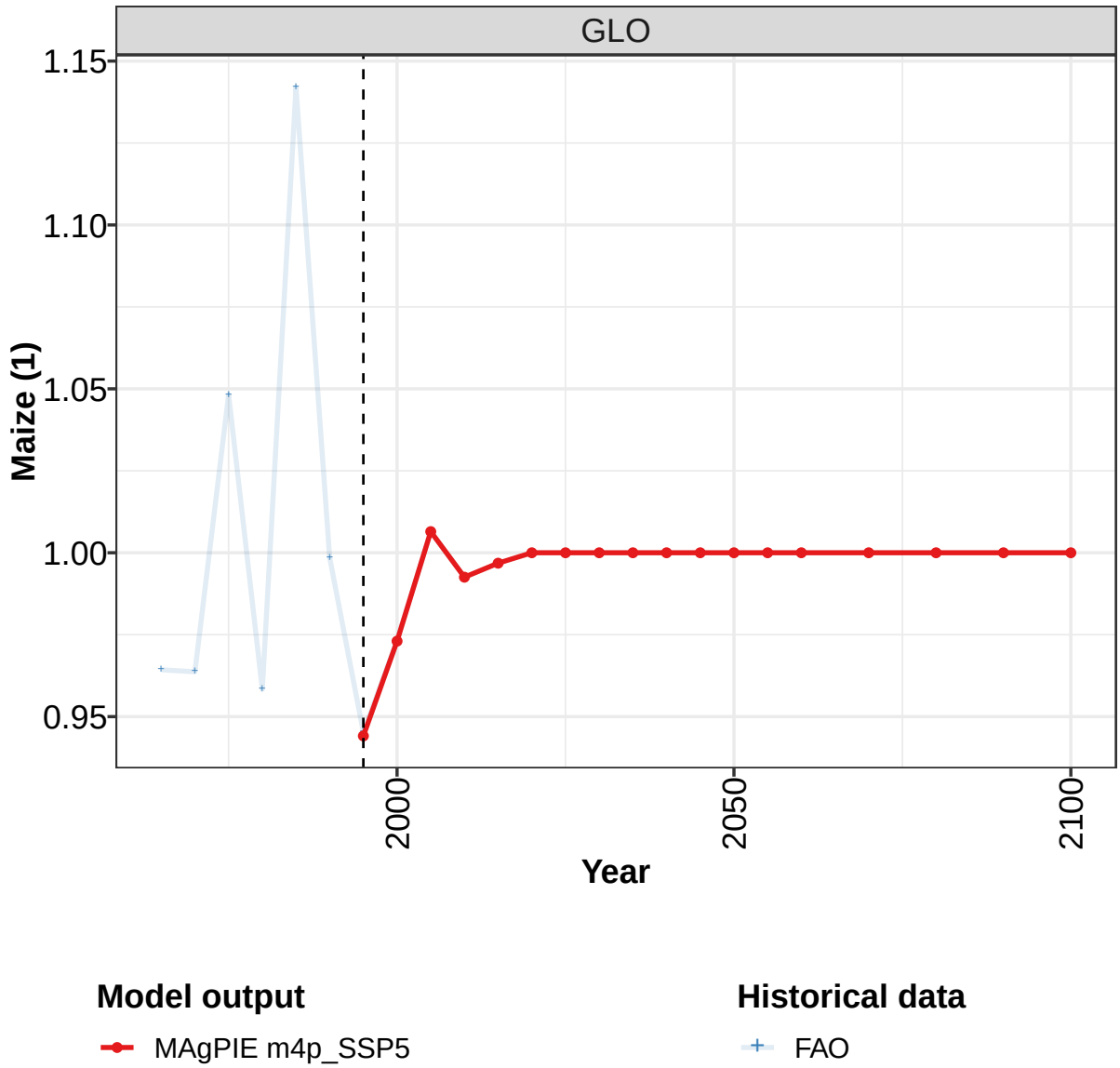
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.24	1.23	1.23	1.29	1.32	1.29	1.23
CHA	1.34	1.34	1.34	1.34	1.34	1.34	1.34
EUR	1.02	1.03	1.06	1.10	1.10	1.09	0.99
IND	0.71	0.71	0.71	0.71	0.72	0.72	0.83
JPN	0.40	0.40	0.41	0.42	0.45	0.47	0.45
LAM	1.06	1.05	1.11	1.18	1.27	1.41	1.47
MEA	0.55	0.55	0.55	0.55	0.55	0.55	0.56
NEU	1.44	1.44	1.44	1.44	1.44	1.45	1.45
OAS	1.06	1.08	1.09	1.12	1.11	1.12	1.13
REF	0.98	1.03	1.02	1.03	1.09	1.24	1.42
SSA	0.66	0.68	0.68	0.66	0.67	0.66	0.65
USA	1.26	1.22	1.16	1.07	1.01	0.91	0.88

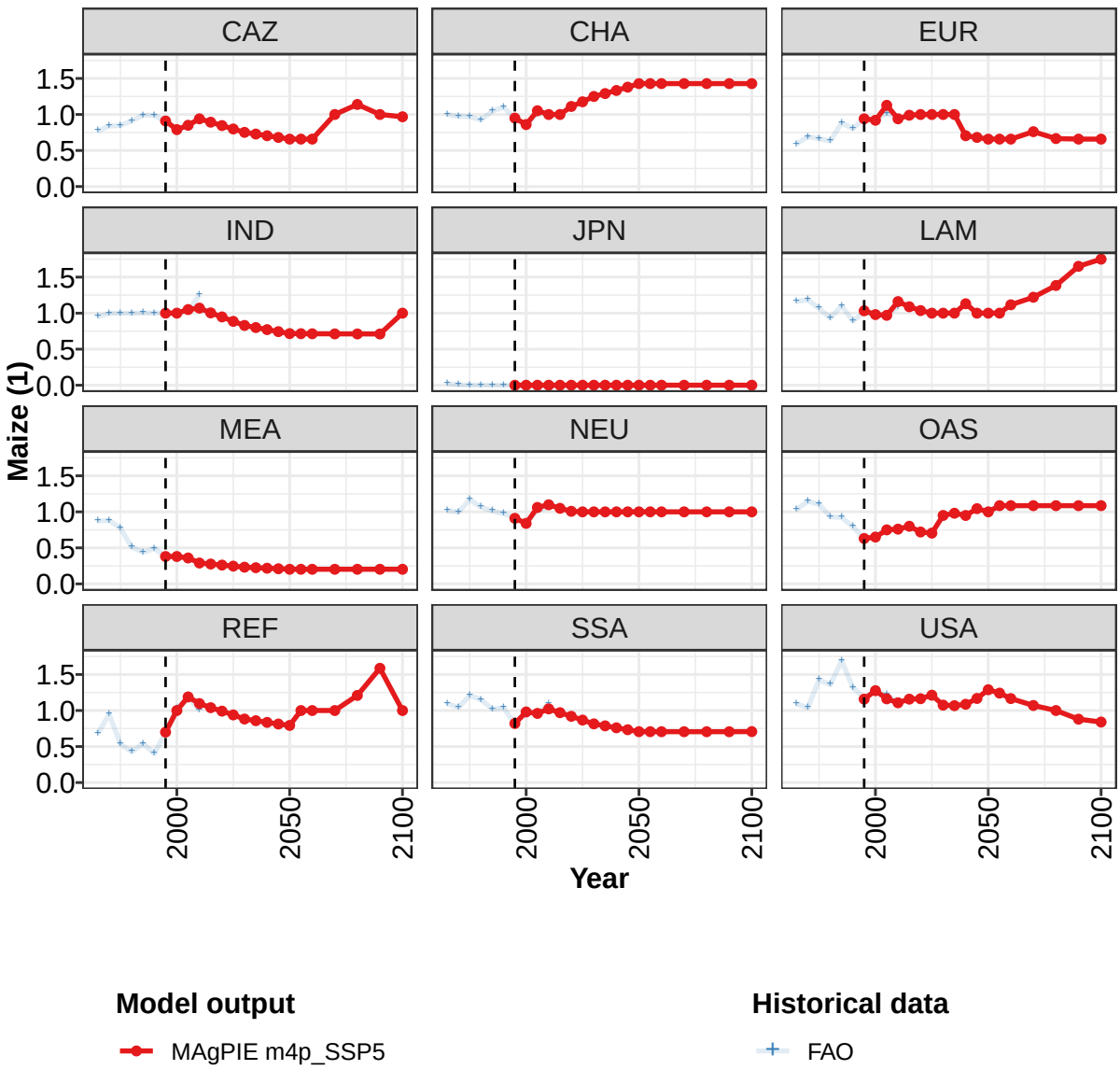
Table 1945: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.96	0.98	1.01	0.99	1.05	1.03	0.96	0.99	1.01	1.00
CAZ	1.89	1.47	1.94	1.97	2.26	2.34	1.93	1.98	1.95	1.85
CHA	0.92	0.99	0.99	0.93	0.98	1.04	0.96	0.92	0.98	1.01
EUR	0.85	0.84	0.88	0.95	1.04	1.12	1.06	1.10	1.06	1.04
IND	0.87	0.97	0.99	1.02	1.03	1.05	1.00	1.03	1.03	1.03
JPN	0.62	0.48	0.42	0.28	0.33	0.29	0.29	0.27	0.28	0.26
LAM	1.06	1.06	1.00	0.88	0.99	0.85	0.90	0.89	0.86	0.99
MEA	0.86	0.77	0.74	0.59	0.56	0.56	0.53	0.42	0.56	0.46
NEU	0.84	0.85	1.00	0.97	0.91	0.99	0.95	0.94	1.02	1.01
OAS	0.98	0.98	0.95	0.96	0.99	0.95	0.90	0.94	0.96	0.98
REF	0.83	1.02	0.76	0.83	0.82	0.90	0.78	0.96	1.14	1.08
SSA	1.01	0.98	1.00	0.93	0.87	0.87	0.80	0.81	0.81	0.85
USA	1.22	1.14	1.61	1.57	1.73	1.43	1.27	1.34	1.30	1.20

Table 1946: FAO — Trade—Self-sufficiency—Crops—Cereals (1)

59.1.2 Cereals—Maize





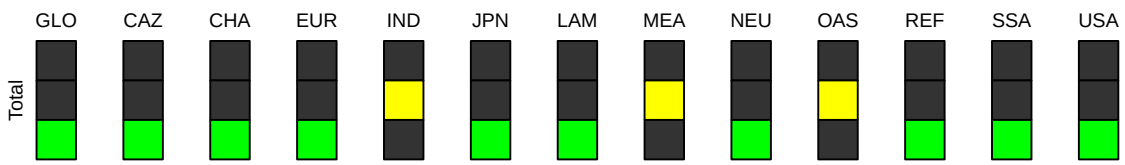


Figure 516: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Maize (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.94	0.97	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.91	0.79	0.85	0.94	0.89	0.85	0.80	0.75	0.73	0.70	0.68
CHA	0.95	0.86	1.05	1.00	1.00	1.11	1.18	1.25	1.29	1.33	1.38
EUR	0.94	0.92	1.13	0.94	0.99	1.00	1.00	1.00	1.00	0.70	0.68
IND	1.00	1.00	1.05	1.07	1.00	0.95	0.89	0.83	0.80	0.77	0.74
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.03	0.98	0.97	1.16	1.09	1.04	1.00	1.00	1.00	1.13	1.00
MEA	0.38	0.38	0.36	0.29	0.28	0.26	0.25	0.23	0.22	0.22	0.21
NEU	0.91	0.84	1.06	1.10	1.05	1.01	1.00	1.00	1.00	1.00	1.00
OAS	0.63	0.65	0.75	0.76	0.80	0.72	0.70	0.95	0.98	0.95	1.04
REF	0.70	1.00	1.19	1.10	1.04	0.99	0.94	0.88	0.86	0.84	0.81
SSA	0.82	0.98	0.96	1.02	0.97	0.92	0.87	0.81	0.79	0.76	0.73
USA	1.16	1.28	1.16	1.11	1.16	1.16	1.21	1.07	1.07	1.09	1.17

Table 1947: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Maize (1) [PART 1/2]

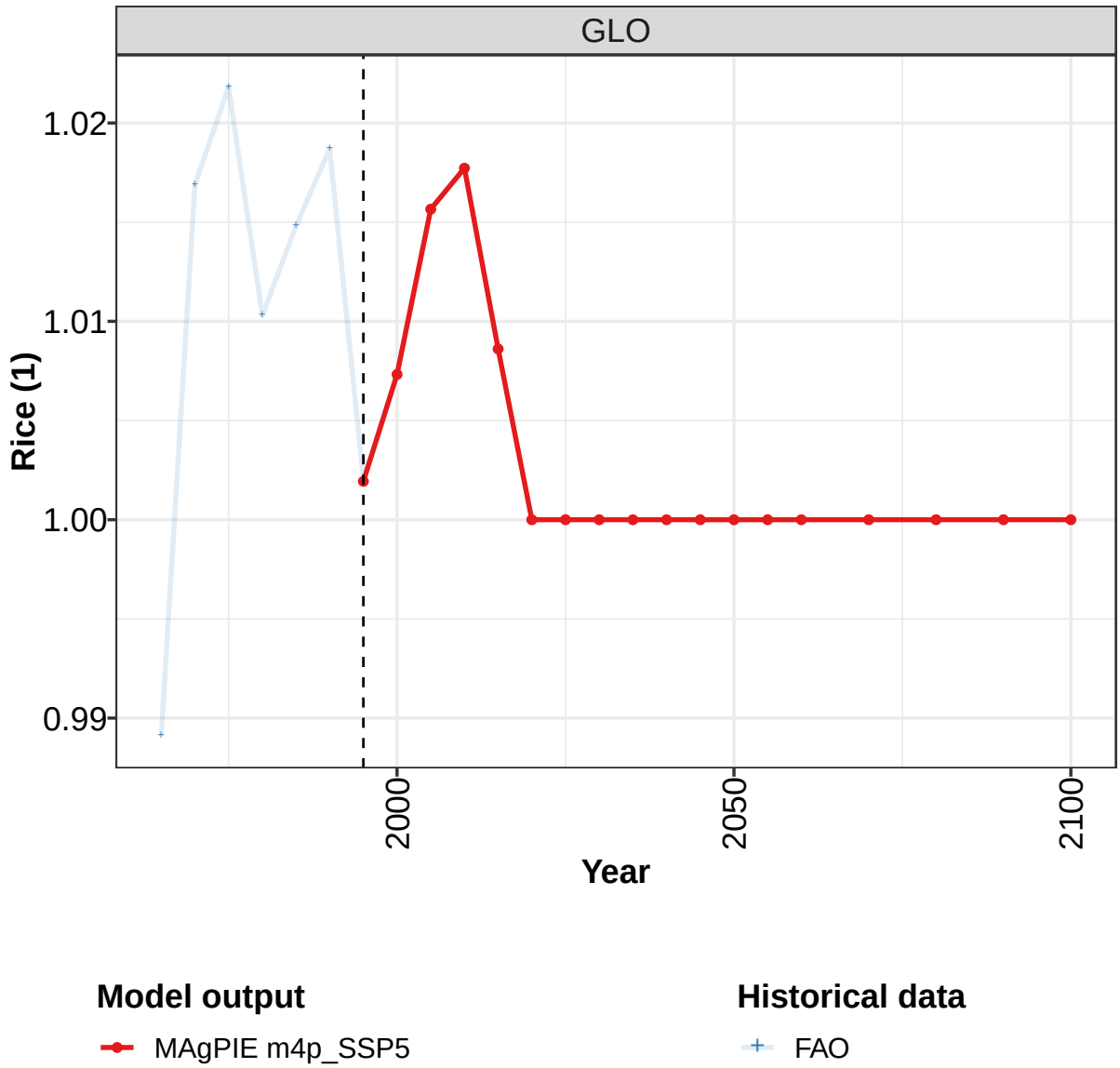
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.66	0.66	0.66	1.00	1.14	1.00	0.97
CHA	1.43	1.43	1.43	1.43	1.43	1.43	1.43
EUR	0.66	0.66	0.66	0.76	0.67	0.66	0.66
IND	0.72	0.72	0.71	0.71	0.71	0.71	1.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.00	1.00	1.12	1.22	1.38	1.65	1.75
MEA	0.20	0.20	0.20	0.20	0.20	0.20	0.20
NEU	1.00	1.00	1.00	1.00	1.00	1.00	1.00
OAS	1.00	1.09	1.09	1.09	1.09	1.09	1.09
REF	0.79	1.00	1.00	1.00	1.21	1.59	1.00
SSA	0.71	0.71	0.71	0.71	0.71	0.71	0.71
USA	1.29	1.24	1.17	1.07	1.00	0.88	0.84

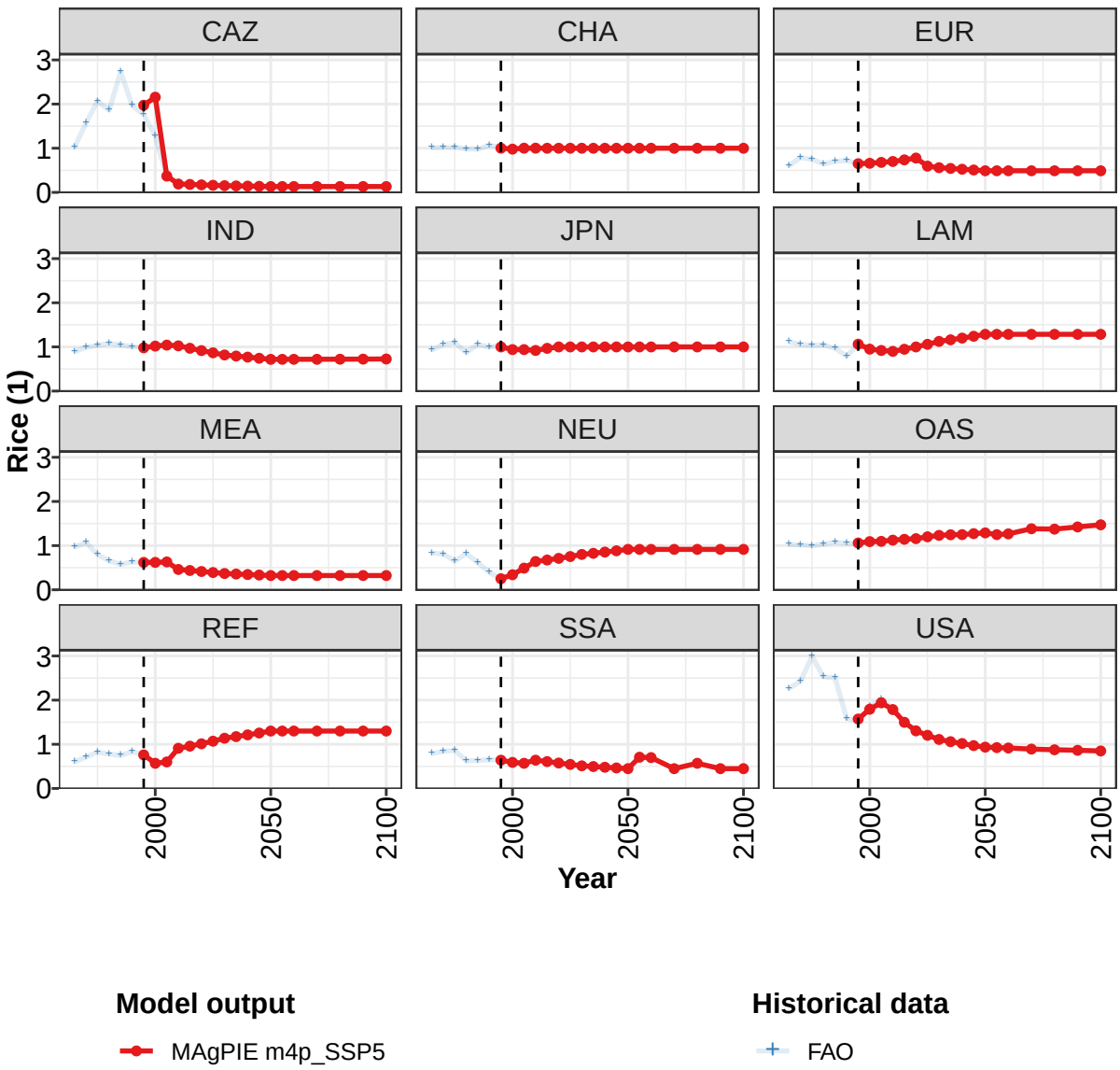
Table 1948: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Maize (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.96	0.96	1.05	0.96	1.14	1.00	0.95	0.97	1.01	0.99
CAZ	0.77	0.84	0.85	0.91	0.99	0.99	0.91	0.79	0.85	0.94
CHA	1.00	0.98	0.97	0.93	1.05	1.10	0.95	0.86	1.01	1.01
EUR	0.59	0.69	0.67	0.63	0.89	0.80	0.94	0.92	1.02	0.94
IND	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.03	1.25
JPN	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.16	1.18	1.07	0.93	1.10	0.89	1.01	0.98	0.97	1.09
MEA	0.87	0.88	0.77	0.51	0.44	0.49	0.38	0.38	0.36	0.29
NEU	1.02	1.00	1.17	1.06	1.01	0.97	0.91	0.84	1.02	1.06
OAS	1.03	1.15	1.10	0.93	0.92	0.79	0.63	0.65	0.75	0.76
REF	0.68	0.95	0.54	0.43	0.54	0.40	0.70	1.03	1.19	1.01
SSA	1.10	1.04	1.21	1.15	1.02	1.04	0.82	0.98	0.96	1.09
USA	1.09	1.04	1.43	1.36	1.69	1.32	1.17	1.27	1.22	1.11

Table 1949: FAO — Trade—Self-sufficiency—Crops—Cereals—Maize (1)

59.1.3 Cereals—Rice





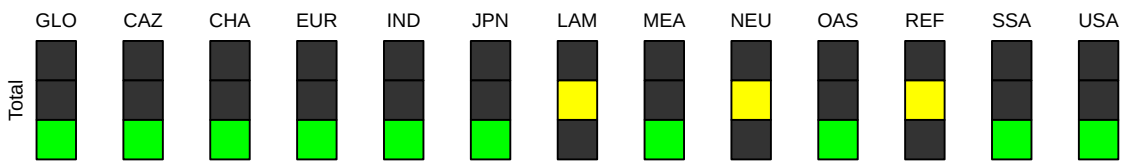


Figure 517: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Rice (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.01	1.02	1.02	1.01	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.97	2.16	0.37	0.19	0.18	0.17	0.16	0.15	0.15	0.14	0.14
CHA	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.65	0.66	0.68	0.70	0.74	0.78	0.60	0.56	0.54	0.53	0.51
IND	0.98	1.02	1.04	1.02	0.97	0.92	0.87	0.82	0.79	0.77	0.74
JPN	1.00	0.94	0.94	0.92	0.97	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.06	0.95	0.92	0.90	0.95	1.00	1.06	1.12	1.16	1.20	1.24
MEA	0.62	0.62	0.63	0.46	0.44	0.41	0.39	0.37	0.36	0.35	0.33
NEU	0.25	0.34	0.49	0.64	0.67	0.71	0.75	0.80	0.83	0.85	0.88
OAS	1.06	1.09	1.10	1.12	1.14	1.16	1.20	1.23	1.25	1.25	1.27
REF	0.76	0.57	0.60	0.91	0.96	1.01	1.07	1.14	1.17	1.21	1.26
SSA	0.64	0.59	0.57	0.64	0.61	0.58	0.54	0.51	0.50	0.48	0.46
USA	1.57	1.79	1.94	1.79	1.50	1.30	1.20	1.11	1.06	1.02	0.97

Table 1950: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Rice (1) [PART 1/2]

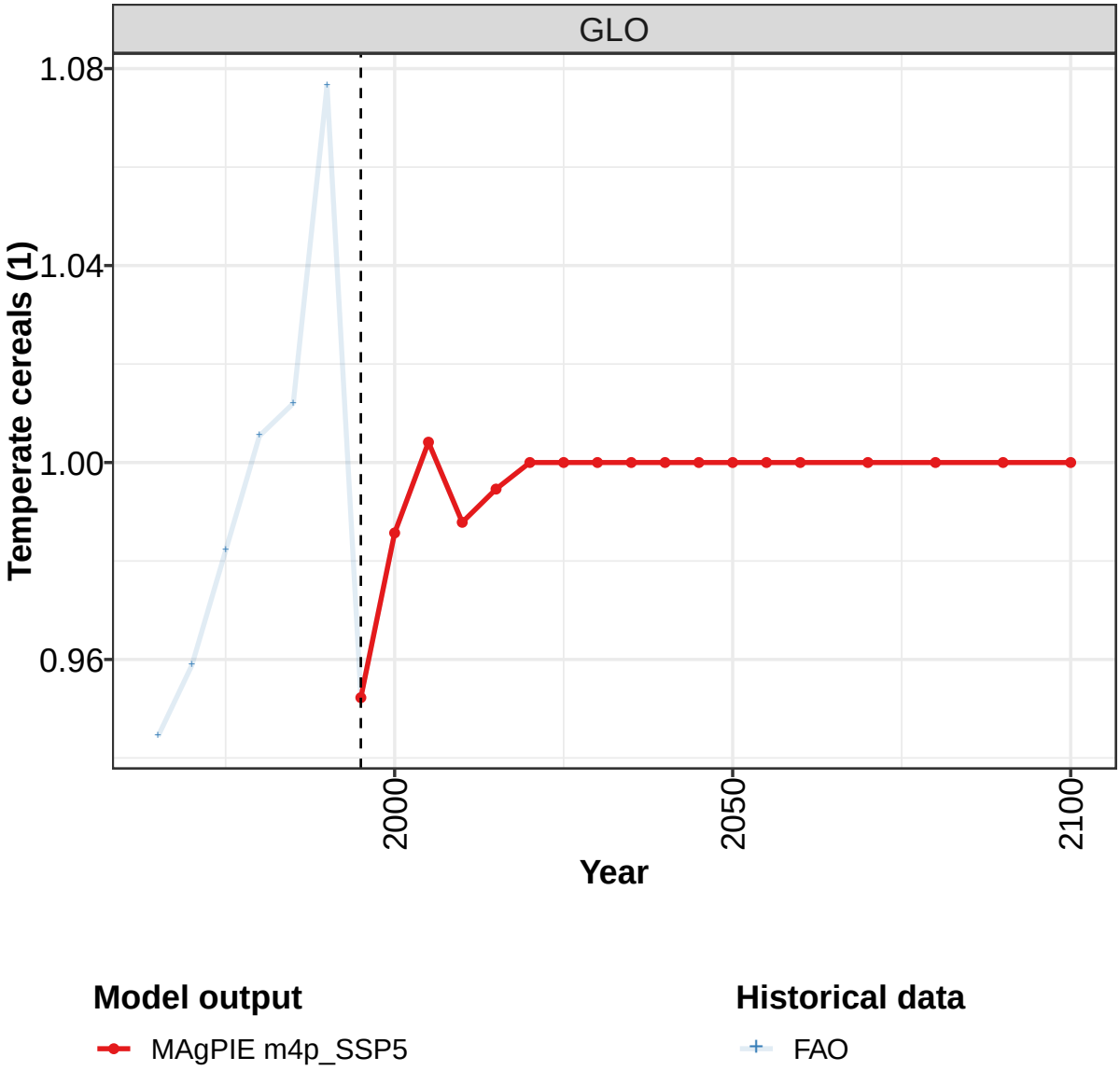
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.13	0.13	0.13	0.13	0.13	0.13	0.13
CHA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.49	0.49	0.49	0.49	0.49	0.49	0.49
IND	0.72	0.72	0.72	0.72	0.72	0.72	0.73
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.29	1.29	1.29	1.29	1.29	1.29	1.29
MEA	0.32	0.32	0.32	0.32	0.32	0.32	0.32
NEU	0.91	0.91	0.91	0.91	0.91	0.91	0.91
OAS	1.29	1.25	1.27	1.38	1.37	1.42	1.47
REF	1.30	1.30	1.30	1.30	1.30	1.30	1.30
SSA	0.45	0.71	0.70	0.45	0.57	0.45	0.45
USA	0.94	0.92	0.92	0.89	0.88	0.86	0.85

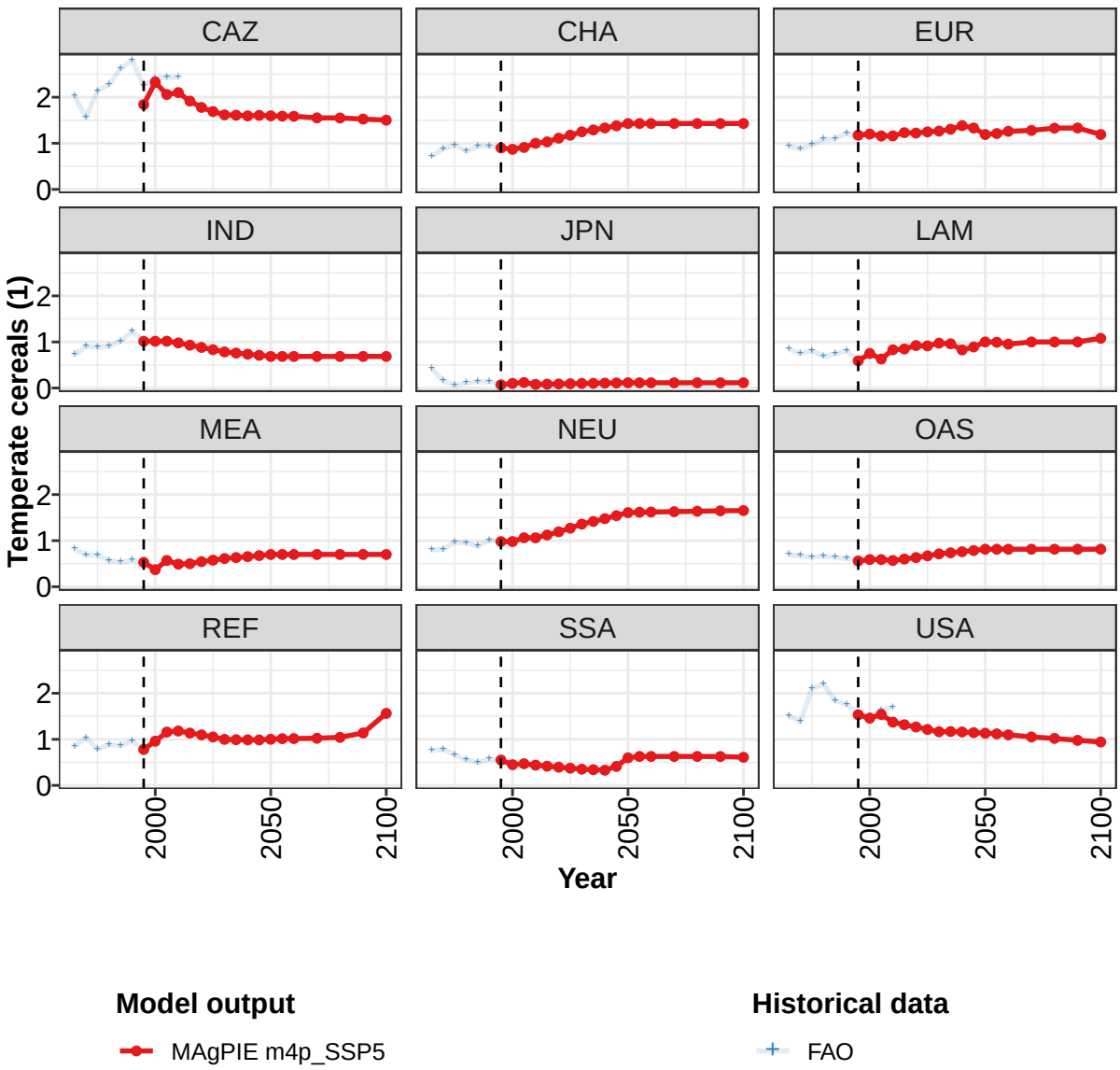
Table 1951: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Rice (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.99	1.02	1.02	1.01	1.01	1.02	1.00	1.01	1.02	1.02
CAZ	1.01	1.57	2.07	1.86	2.73	1.97	1.76	1.28	0.37	0.19
CHA	1.01	1.02	1.02	0.99	0.98	1.07	1.02	0.98	1.00	1.00
EUR	0.60	0.79	0.75	0.64	0.70	0.73	0.65	0.66	0.68	0.70
IND	0.89	0.99	1.04	1.08	1.05	1.00	0.98	1.03	1.05	1.02
JPN	0.93	1.06	1.09	0.87	1.06	1.00	1.04	0.94	0.94	0.92
LAM	1.11	1.06	1.04	1.04	0.97	0.79	1.06	0.95	0.92	0.90
MEA	0.97	1.07	0.80	0.66	0.58	0.63	0.62	0.62	0.63	0.46
NEU	0.83	0.81	0.65	0.82	0.62	0.39	0.25	0.34	0.49	0.64
OAS	1.03	1.02	1.00	1.03	1.08	1.05	1.04	1.09	1.09	1.13
REF	0.60	0.71	0.82	0.78	0.75	0.83	0.76	0.56	0.60	0.91
SSA	0.79	0.84	0.86	0.63	0.63	0.65	0.64	0.59	0.57	0.64
USA	2.26	2.43	2.99	2.53	2.50	1.59	1.53	1.85	2.02	1.80

Table 1952: FAO — Trade—Self-sufficiency—Crops—Cereals—Rice (1)

59.1.4 Cereals—Temperate cereals





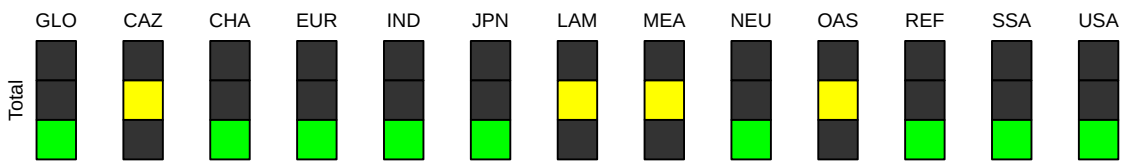


Figure 518: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Temperate cereals (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.95	0.99	1.00	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.84	2.33	2.06	2.10	1.92	1.78	1.69	1.62	1.61	1.59	1.61
CHA	0.90	0.87	0.91	1.00	1.03	1.11	1.18	1.25	1.29	1.33	1.38
EUR	1.18	1.20	1.16	1.16	1.23	1.22	1.25	1.27	1.31	1.38	1.33
IND	1.01	1.02	1.02	0.98	0.93	0.88	0.83	0.78	0.76	0.73	0.71
JPN	0.07	0.10	0.12	0.08	0.08	0.09	0.09	0.10	0.10	0.11	0.11
LAM	0.59	0.75	0.63	0.83	0.85	0.92	0.92	0.97	0.96	0.83	0.89
MEA	0.53	0.37	0.57	0.49	0.50	0.54	0.58	0.61	0.63	0.65	0.68
NEU	0.98	0.98	1.06	1.06	1.12	1.19	1.27	1.36	1.42	1.48	1.54
OAS	0.56	0.59	0.59	0.57	0.60	0.63	0.67	0.71	0.74	0.76	0.79
REF	0.78	0.96	1.16	1.18	1.14	1.10	1.05	1.00	0.99	0.99	0.99
SSA	0.55	0.45	0.47	0.44	0.42	0.40	0.37	0.35	0.34	0.33	0.41
USA	1.53	1.46	1.54	1.37	1.32	1.27	1.21	1.16	1.17	1.16	1.15

Table 1953: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Temperate cereals (1) [PART 1/2]

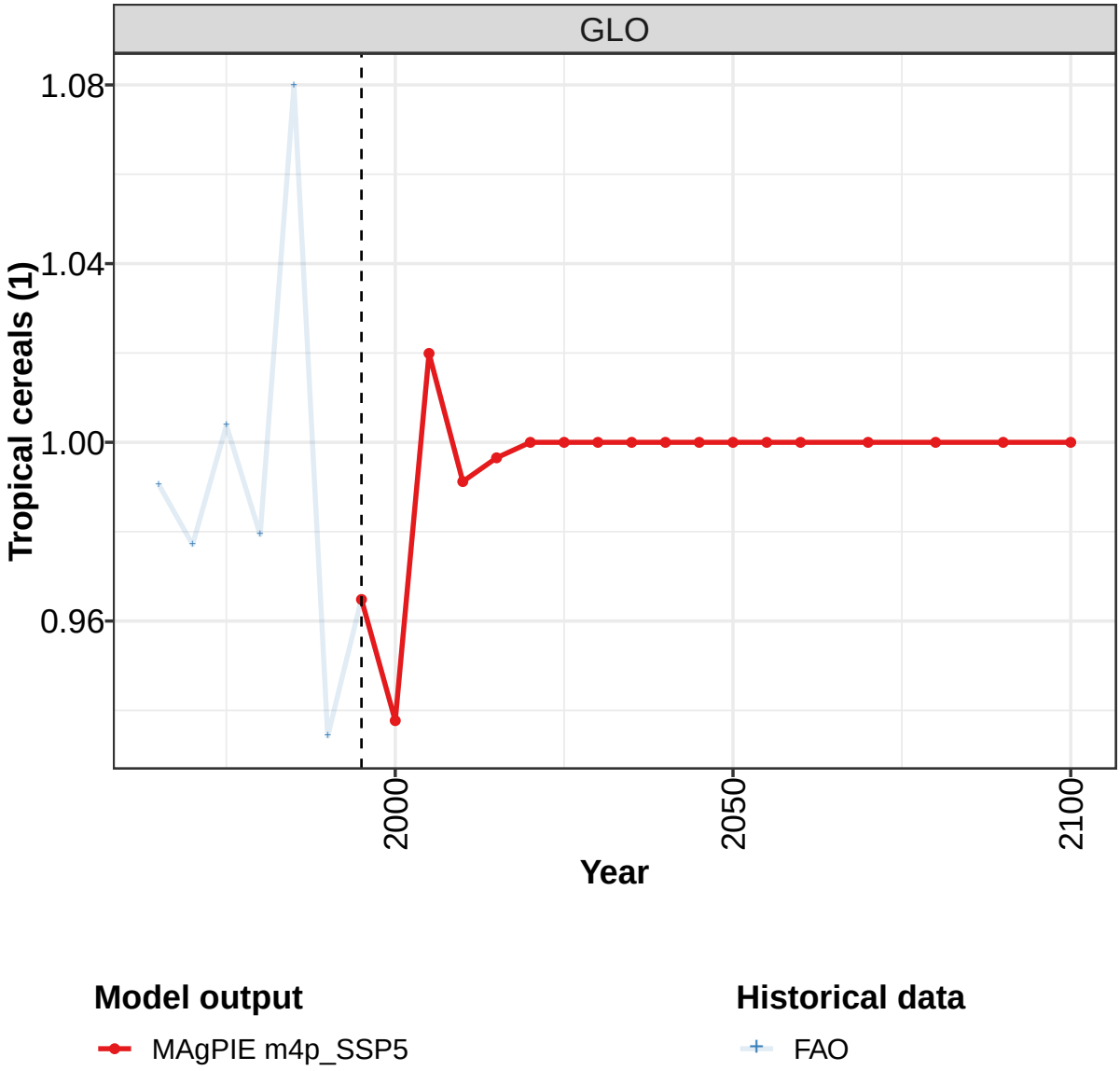
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.60	1.59	1.59	1.55	1.55	1.53	1.50
CHA	1.43	1.43	1.43	1.43	1.43	1.43	1.43
EUR	1.19	1.21	1.26	1.28	1.33	1.33	1.19
IND	0.69	0.69	0.69	0.69	0.69	0.69	0.69
JPN	0.11	0.11	0.11	0.11	0.11	0.11	0.11
LAM	1.00	0.99	0.95	1.00	1.00	1.00	1.08
MEA	0.70	0.70	0.70	0.70	0.70	0.70	0.70
NEU	1.61	1.62	1.62	1.63	1.64	1.65	1.65
OAS	0.81	0.81	0.81	0.81	0.81	0.81	0.81
REF	1.00	1.01	1.02	1.02	1.04	1.14	1.56
SSA	0.60	0.63	0.63	0.63	0.63	0.63	0.61
USA	1.13	1.12	1.10	1.05	1.02	0.98	0.94

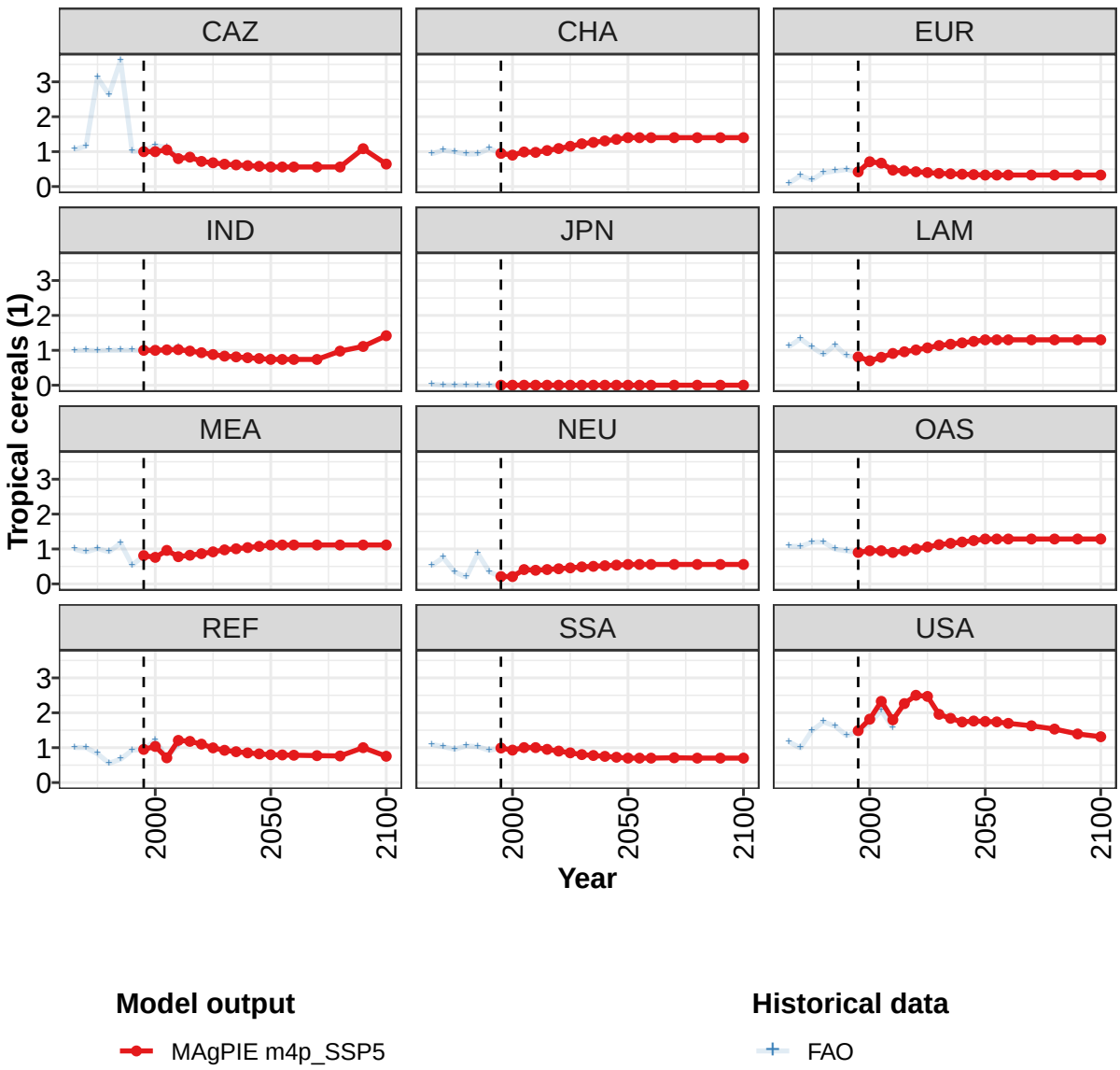
Table 1954: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Temperate cereals (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.94	0.96	0.98	1.01	1.01	1.08	0.95	0.99	1.00	0.99
CAZ	2.03	1.56	2.14	2.28	2.62	2.80	2.25	2.42	2.43	2.43
CHA	0.72	0.88	0.96	0.83	0.94	0.94	0.90	0.87	0.91	1.02
EUR	0.94	0.88	0.96	1.09	1.10	1.21	1.11	1.16	1.08	1.09
IND	0.72	0.90	0.89	0.91	1.02	1.23	1.03	1.03	1.00	0.98
JPN	0.43	0.16	0.06	0.11	0.14	0.14	0.07	0.10	0.12	0.08
LAM	0.84	0.75	0.81	0.69	0.74	0.81	0.59	0.75	0.63	0.83
MEA	0.82	0.69	0.68	0.57	0.53	0.57	0.53	0.37	0.57	0.49
NEU	0.80	0.81	0.97	0.95	0.88	1.01	0.98	0.98	1.04	1.00
OAS	0.69	0.68	0.64	0.66	0.64	0.61	0.56	0.59	0.59	0.57
REF	0.84	1.03	0.78	0.89	0.86	0.96	0.78	0.96	1.15	1.10
SSA	0.75	0.78	0.67	0.55	0.50	0.57	0.55	0.45	0.47	0.44
USA	1.50	1.38	2.10	2.20	1.84	1.76	1.57	1.50	1.63	1.70

Table 1955: FAO — Trade—Self-sufficiency—Crops—Cereals—Temperate cereals (1)

59.1.5 Cereals—Tropical cereals





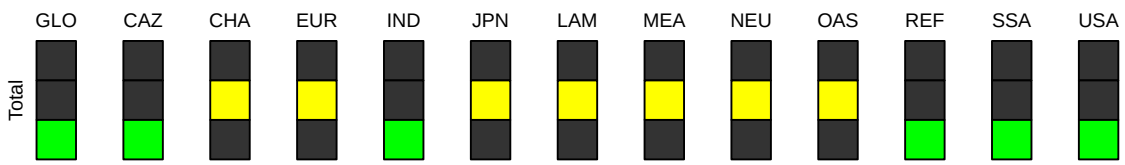


Figure 519: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Tropical cereals (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.96	0.94	1.02	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.05	0.80	0.84	0.72	0.68	0.64	0.62	0.60	0.58
CHA	0.95	0.90	0.99	0.98	1.03	1.09	1.15	1.23	1.26	1.31	1.35
EUR	0.42	0.71	0.67	0.47	0.45	0.42	0.40	0.38	0.36	0.35	0.34
IND	1.00	1.00	1.01	1.02	0.98	0.93	0.88	0.83	0.81	0.79	0.77
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.81	0.70	0.80	0.91	0.96	1.01	1.07	1.14	1.17	1.21	1.26
MEA	0.81	0.76	0.96	0.78	0.82	0.87	0.92	0.98	1.01	1.04	1.08
NEU	0.21	0.21	0.41	0.39	0.41	0.43	0.46	0.49	0.50	0.52	0.54
OAS	0.90	0.95	0.95	0.90	0.95	1.00	1.06	1.12	1.16	1.20	1.24
REF	0.95	1.04	0.71	1.21	1.18	1.10	0.99	0.92	0.88	0.85	0.82
SSA	0.99	0.93	1.00	1.00	0.95	0.90	0.85	0.80	0.78	0.75	0.73
USA	1.49	1.82	2.33	1.80	2.26	2.50	2.47	1.96	1.84	1.74	1.76

Table 1956: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Tropical cereals (1) [PART 1/2]

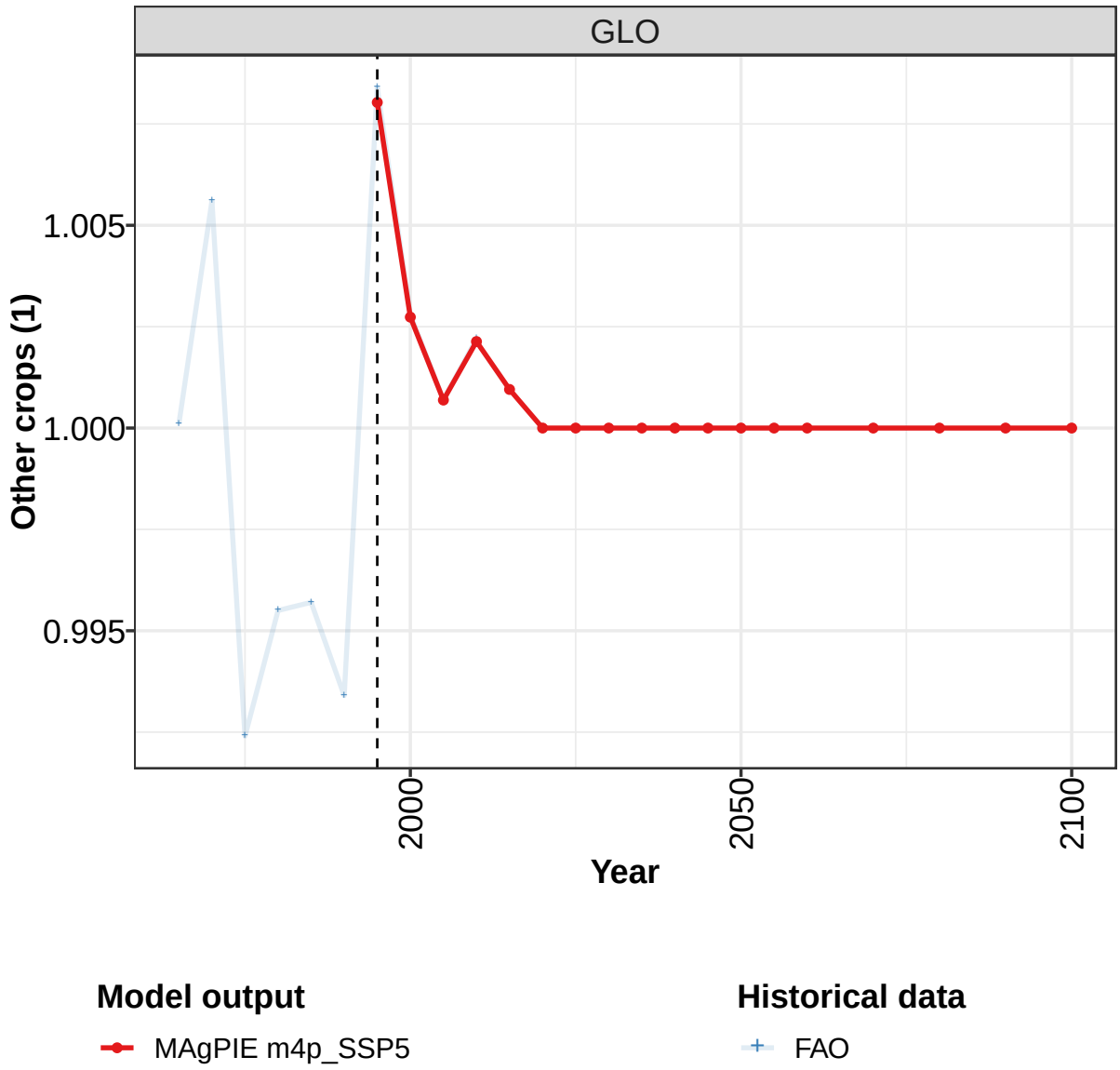
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.56	0.56	0.56	0.56	0.56	1.08	0.64
CHA	1.40	1.40	1.40	1.40	1.40	1.40	1.40
EUR	0.33	0.33	0.33	0.33	0.33	0.33	0.33
IND	0.74	0.74	0.74	0.74	0.98	1.11	1.42
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.30	1.30	1.30	1.30	1.30	1.30	1.30
MEA	1.11	1.11	1.11	1.11	1.11	1.11	1.11
NEU	0.56	0.56	0.56	0.56	0.56	0.56	0.56
OAS	1.29	1.29	1.29	1.29	1.29	1.29	1.29
REF	0.80	0.79	0.78	0.77	0.76	1.00	0.75
SSA	0.70	0.70	0.70	0.71	0.70	0.70	0.70
USA	1.75	1.74	1.70	1.63	1.53	1.39	1.31

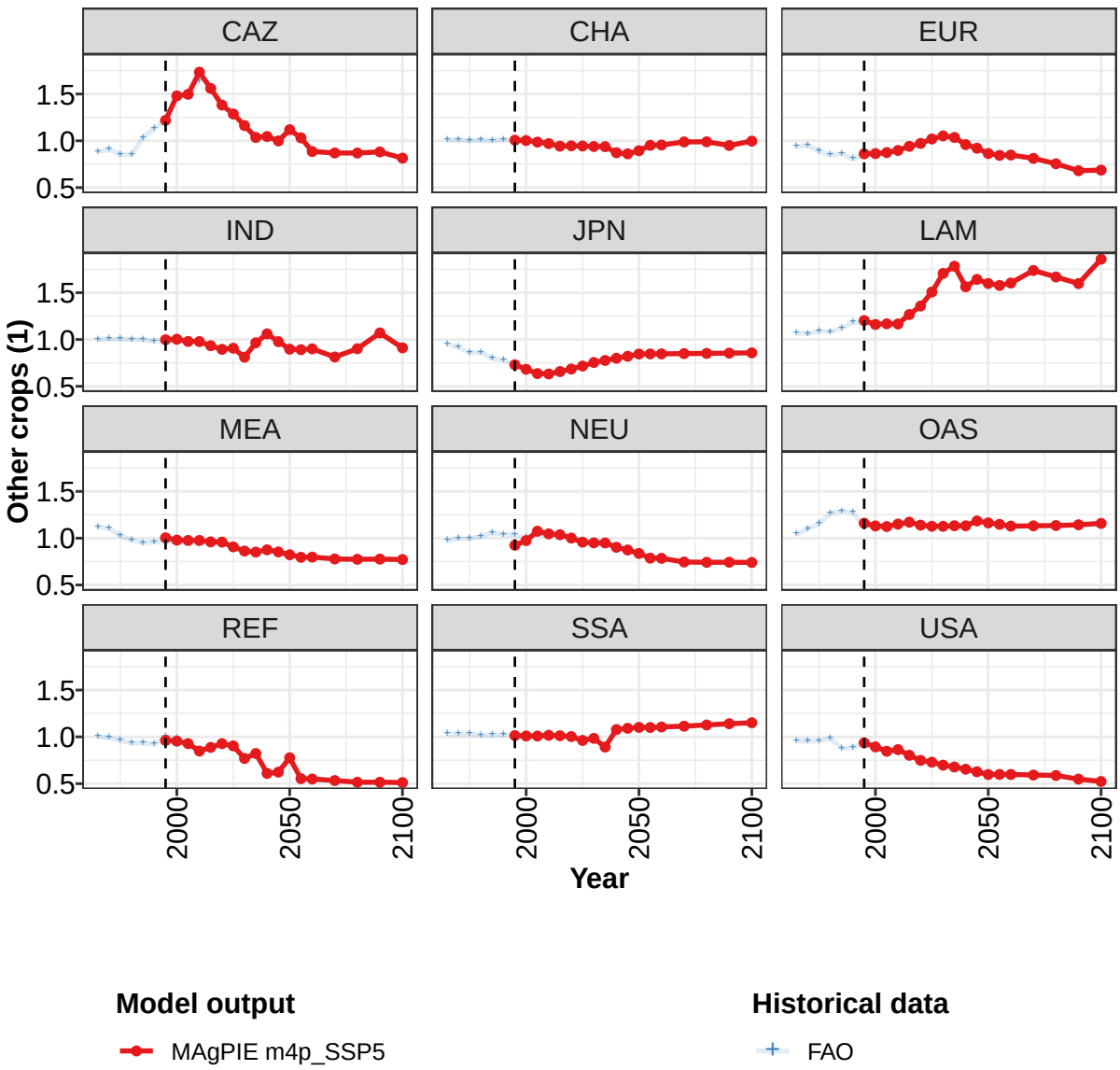
Table 1957: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Cereals—Tropical cereals (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.99	0.98	1.00	0.98	1.08	0.93	0.96	0.94	1.02	0.99
CAZ	1.07	1.15	3.12	2.63	3.61	1.00	1.03	1.18	1.12	0.80
CHA	0.94	1.04	0.99	0.93	0.94	1.09	0.95	0.91	0.99	0.98
EUR	0.09	0.31	0.19	0.40	0.44	0.49	0.42	0.71	0.67	0.47
IND	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.01	1.10
JPN	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.11	1.33	1.09	0.88	1.15	0.84	0.81	0.70	0.80	0.91
MEA	0.99	0.92	1.01	0.92	1.17	0.53	0.81	0.76	0.96	0.78
NEU	0.52	0.75	0.34	0.19	0.87	0.34	0.21	0.21	0.41	0.39
OAS	1.08	1.07	1.20	1.20	0.99	0.95	0.90	0.95	0.95	0.90
REF	1.00	1.00	0.83	0.55	0.67	0.93	0.95	1.21	0.71	1.09
SSA	1.09	1.03	0.95	1.05	1.03	0.92	0.99	0.93	1.04	1.00
USA	1.17	0.99	1.49	1.74	1.62	1.34	1.46	1.72	2.06	1.57

Table 1958: FAO — Trade—Self-sufficiency—Crops—Cereals—Tropical cereals (1)

59.1.6 Other crops





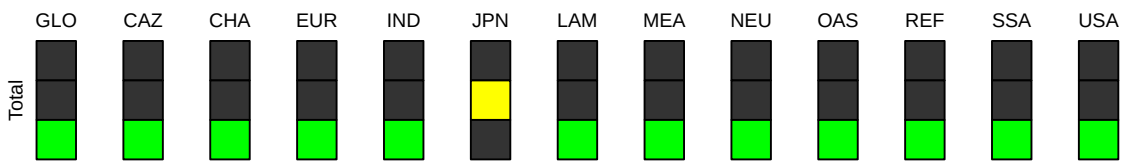


Figure 520: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.22	1.48	1.50	1.73	1.56	1.38	1.29	1.16	1.04	1.05	1.00
CHA	1.01	1.00	0.99	0.97	0.94	0.95	0.94	0.94	0.94	0.87	0.86
EUR	0.86	0.86	0.87	0.90	0.94	0.97	1.02	1.05	1.04	0.96	0.92
IND	1.00	1.00	0.98	0.98	0.93	0.90	0.91	0.81	0.97	1.06	0.98
JPN	0.73	0.68	0.64	0.63	0.66	0.68	0.72	0.75	0.78	0.80	0.82
LAM	1.20	1.16	1.17	1.17	1.27	1.36	1.51	1.71	1.78	1.56	1.64
MEA	1.00	0.98	0.98	0.98	0.96	0.96	0.91	0.86	0.85	0.88	0.85
NEU	0.92	0.97	1.07	1.05	1.04	1.00	0.96	0.95	0.95	0.90	0.87
OAS	1.16	1.13	1.12	1.15	1.17	1.14	1.13	1.13	1.13	1.13	1.18
REF	0.96	0.95	0.93	0.85	0.89	0.93	0.90	0.77	0.82	0.61	0.62
SSA	1.01	1.01	1.01	1.02	1.01	1.00	0.96	0.98	0.89	1.08	1.09
USA	0.94	0.89	0.85	0.86	0.80	0.75	0.73	0.70	0.68	0.65	0.63

Table 1959: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops (1) [PART 1/2]

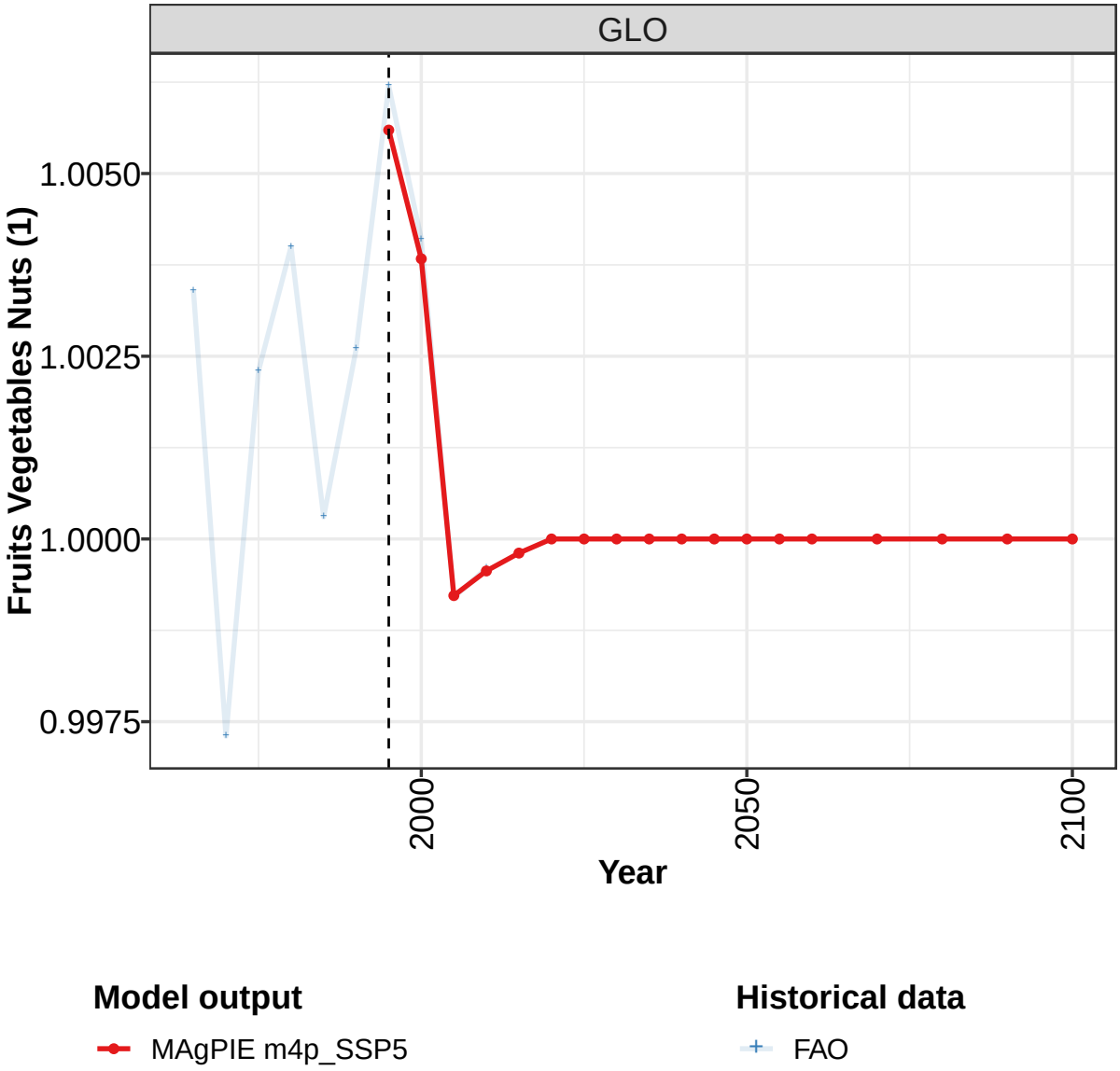
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.12	1.03	0.89	0.87	0.87	0.88	0.81
CHA	0.89	0.95	0.96	0.99	0.99	0.95	1.00
EUR	0.86	0.84	0.85	0.81	0.75	0.68	0.69
IND	0.90	0.89	0.90	0.81	0.90	1.07	0.91
JPN	0.84	0.85	0.85	0.85	0.85	0.85	0.86
LAM	1.60	1.58	1.60	1.74	1.67	1.60	1.86
MEA	0.82	0.80	0.80	0.78	0.77	0.78	0.77
NEU	0.84	0.79	0.78	0.75	0.74	0.74	0.74
OAS	1.16	1.15	1.13	1.13	1.13	1.14	1.16
REF	0.78	0.55	0.55	0.53	0.52	0.52	0.51
SSA	1.10	1.10	1.11	1.11	1.13	1.14	1.15
USA	0.60	0.60	0.60	0.59	0.59	0.55	0.52

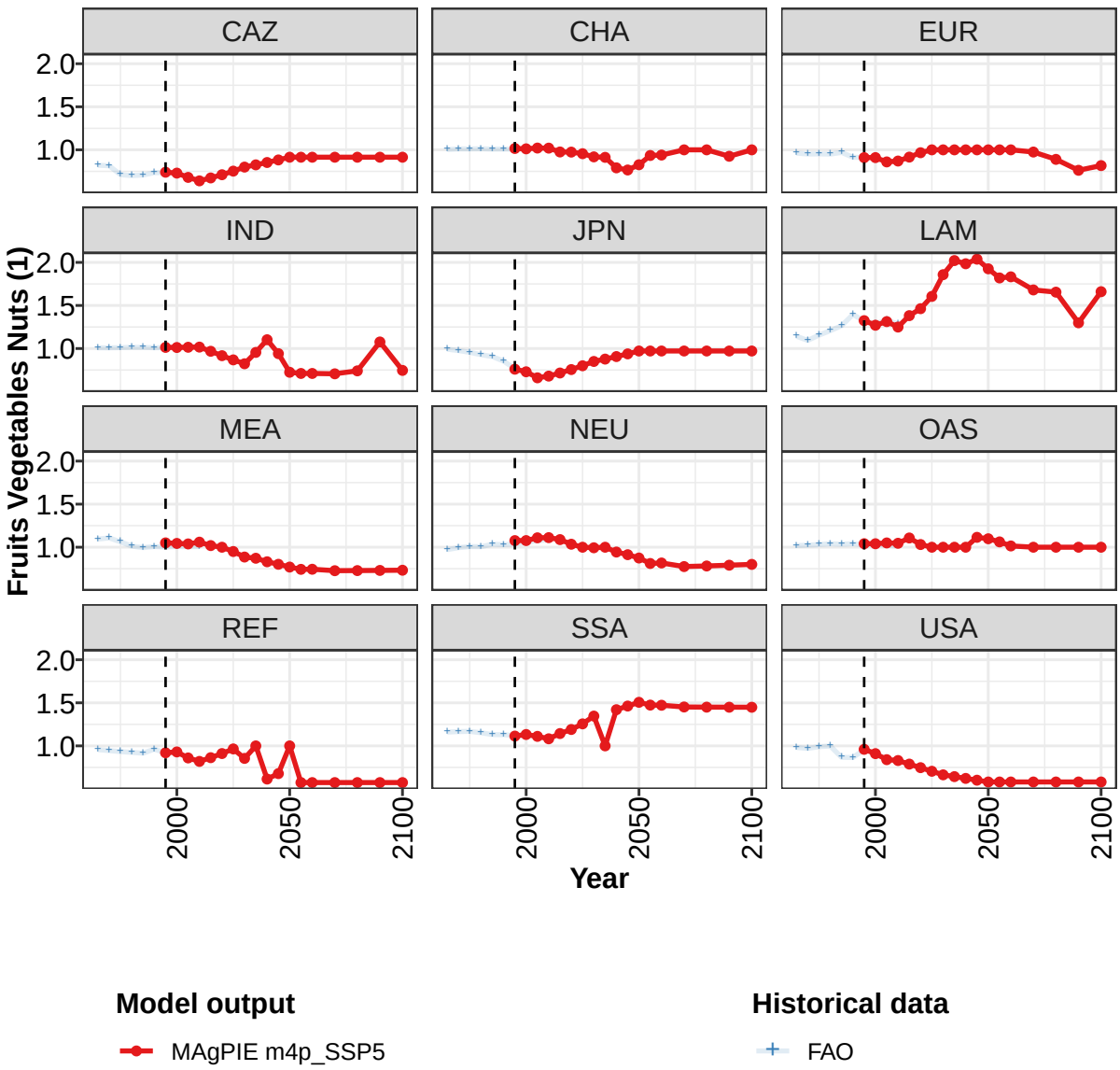
Table 1960: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.01	0.99	1.00	1.00	0.99	1.01	1.00	1.00	1.00
CAZ	0.88	0.91	0.85	0.85	1.04	1.13	1.23	1.48	1.47	1.64
CHA	1.01	1.01	1.00	1.01	1.00	1.01	1.00	1.00	0.99	0.97
EUR	0.94	0.95	0.89	0.85	0.86	0.81	0.85	0.84	0.87	0.90
IND	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98	0.98
JPN	0.95	0.91	0.86	0.86	0.80	0.78	0.73	0.68	0.64	0.63
LAM	1.07	1.06	1.09	1.08	1.12	1.18	1.18	1.16	1.17	1.17
MEA	1.12	1.10	1.03	0.98	0.95	0.96	0.97	0.95	0.95	0.94
NEU	0.97	1.00	1.00	1.02	1.06	1.04	1.04	1.00	1.04	1.03
OAS	1.04	1.10	1.15	1.26	1.29	1.27	1.14	1.12	1.11	1.11
REF	1.01	0.99	0.96	0.93	0.94	0.92	1.00	0.99	0.94	0.85
SSA	1.03	1.03	1.03	1.02	1.02	1.02	1.01	1.01	1.01	1.04
USA	0.96	0.96	0.96	0.98	0.88	0.88	0.94	0.90	0.85	0.86

Table 1961: FAO — Trade—Self-sufficiency—Crops—Other crops (1)

59.1.7 Other crops—Fruits Vegetables Nuts





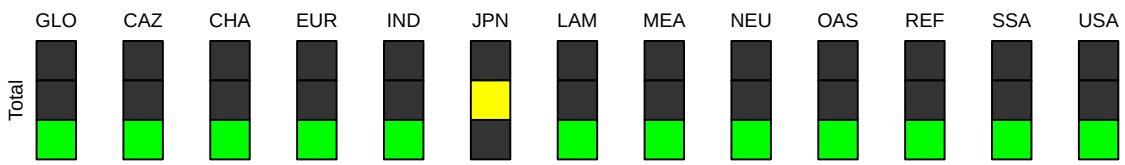


Figure 521: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Fruits Vegetables Nuts (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.74	0.73	0.68	0.64	0.67	0.71	0.75	0.80	0.83	0.85	0.88
CHA	1.02	1.01	1.02	1.02	0.98	0.97	0.96	0.92	0.91	0.79	0.77
EUR	0.91	0.91	0.86	0.87	0.92	0.97	1.00	1.00	1.00	1.00	1.00
IND	1.01	1.01	1.01	1.02	0.97	0.92	0.87	0.82	0.96	1.10	0.94
JPN	0.76	0.73	0.66	0.68	0.72	0.76	0.80	0.85	0.88	0.91	0.94
LAM	1.32	1.27	1.31	1.25	1.38	1.46	1.61	1.86	2.02	1.98	2.04
MEA	1.05	1.04	1.04	1.06	1.02	1.00	0.95	0.89	0.87	0.83	0.80
NEU	1.08	1.08	1.11	1.11	1.09	1.03	1.00	0.99	1.00	0.94	0.91
OAS	1.04	1.04	1.05	1.05	1.11	1.03	1.00	1.00	1.00	1.00	1.11
REF	0.92	0.93	0.86	0.82	0.86	0.91	0.96	0.85	1.00	0.61	0.68
SSA	1.11	1.13	1.11	1.08	1.14	1.19	1.26	1.35	1.00	1.42	1.46
USA	0.96	0.91	0.84	0.83	0.79	0.75	0.71	0.66	0.64	0.62	0.60

Table 1962: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Fruits Vegetables Nuts (1) [PART 1/2]

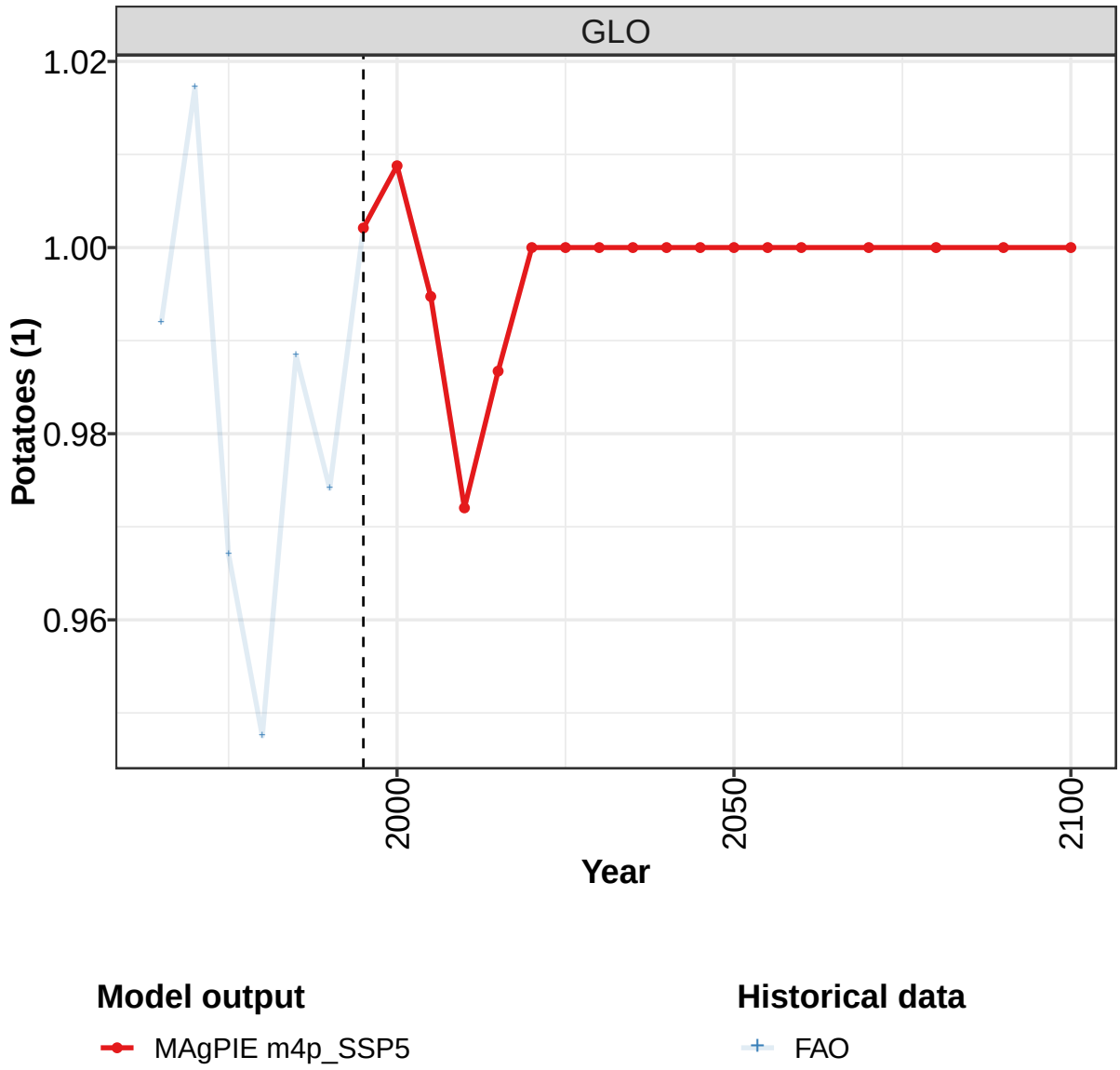
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.91	0.91	0.91	0.91	0.91	0.91	0.91
CHA	0.83	0.93	0.94	1.00	1.00	0.93	1.00
EUR	1.00	1.00	1.00	0.97	0.89	0.76	0.82
IND	0.72	0.71	0.71	0.71	0.74	1.08	0.75
JPN	0.97	0.97	0.97	0.97	0.97	0.97	0.97
LAM	1.93	1.82	1.83	1.68	1.65	1.30	1.66
MEA	0.77	0.74	0.74	0.73	0.73	0.73	0.73
NEU	0.87	0.81	0.82	0.78	0.78	0.79	0.80
OAS	1.10	1.06	1.01	1.00	1.00	1.00	1.00
REF	1.00	0.57	0.57	0.57	0.57	0.57	0.57
SSA	1.51	1.47	1.47	1.45	1.45	1.45	1.45
USA	0.58	0.58	0.58	0.58	0.58	0.58	0.58

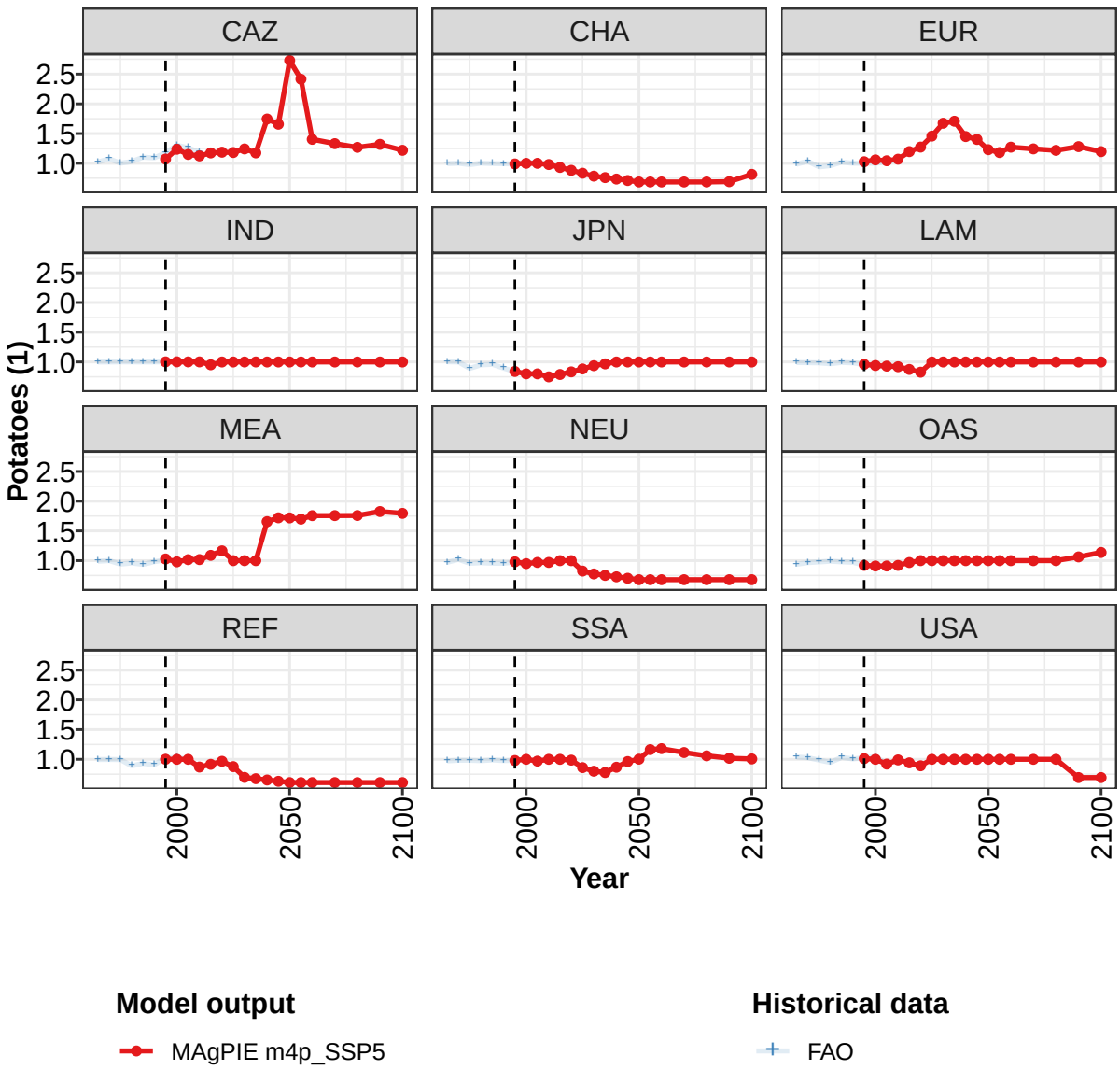
Table 1963: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Fruits Vegetables Nuts (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.00
CAZ	0.82	0.82	0.71	0.70	0.71	0.73	0.74	0.73	0.68	0.64
CHA	1.00	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.02
EUR	0.96	0.95	0.95	0.95	0.97	0.91	0.91	0.91	0.86	0.87
IND	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.02
JPN	0.99	0.98	0.96	0.93	0.91	0.85	0.76	0.73	0.66	0.68
LAM	1.14	1.09	1.16	1.21	1.26	1.40	1.32	1.29	1.33	1.28
MEA	1.09	1.11	1.06	1.01	0.99	1.01	1.00	1.01	1.00	1.01
NEU	0.97	0.99	1.01	1.01	1.03	1.03	1.04	1.06	1.08	1.09
OAS	1.02	1.02	1.03	1.04	1.03	1.04	1.03	1.03	1.02	1.01
REF	0.96	0.95	0.93	0.92	0.92	0.96	0.92	0.93	0.86	0.82
SSA	1.16	1.17	1.17	1.15	1.13	1.13	1.12	1.12	1.11	1.08
USA	0.98	0.97	0.99	1.00	0.87	0.86	0.96	0.91	0.84	0.83

Table 1964: FAO — Trade—Self-sufficiency—Crops—Other crops—Fruits Vegetables Nuts (1)

59.1.8 Other crops—Potatoes





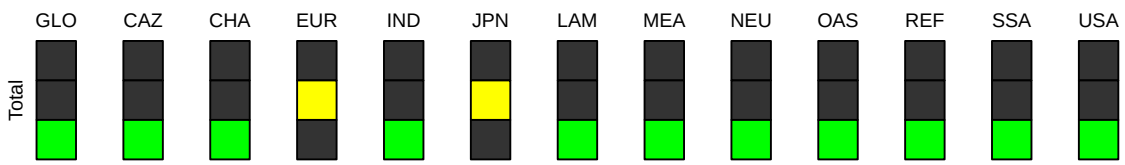


Figure 522: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Potatoes (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.01	0.99	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.07	1.24	1.15	1.12	1.17	1.19	1.18	1.24	1.18	1.75	1.66
CHA	0.99	1.00	1.00	0.98	0.93	0.88	0.83	0.78	0.76	0.73	0.71
EUR	1.03	1.06	1.04	1.07	1.20	1.27	1.46	1.67	1.71	1.45	1.40
IND	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
JPN	0.84	0.80	0.80	0.75	0.79	0.83	0.88	0.94	0.97	1.00	1.00
LAM	0.96	0.94	0.93	0.92	0.87	0.83	1.00	1.00	1.00	1.00	1.00
MEA	1.03	0.98	1.02	1.02	1.09	1.16	1.00	1.00	1.00	1.66	1.72
NEU	0.98	0.95	0.97	0.97	1.00	1.00	0.82	0.78	0.75	0.73	0.70
OAS	0.92	0.91	0.91	0.92	0.97	1.00	1.00	1.00	1.00	1.00	1.00
REF	1.00	1.00	1.00	0.87	0.92	0.97	0.88	0.70	0.67	0.65	0.63
SSA	0.98	1.00	0.97	1.00	1.00	0.99	0.86	0.80	0.78	0.87	0.96
USA	1.01	1.00	0.92	0.99	0.94	0.89	1.00	1.00	1.00	1.00	1.00

Table 1965: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Potatoes (1) [PART 1/2]

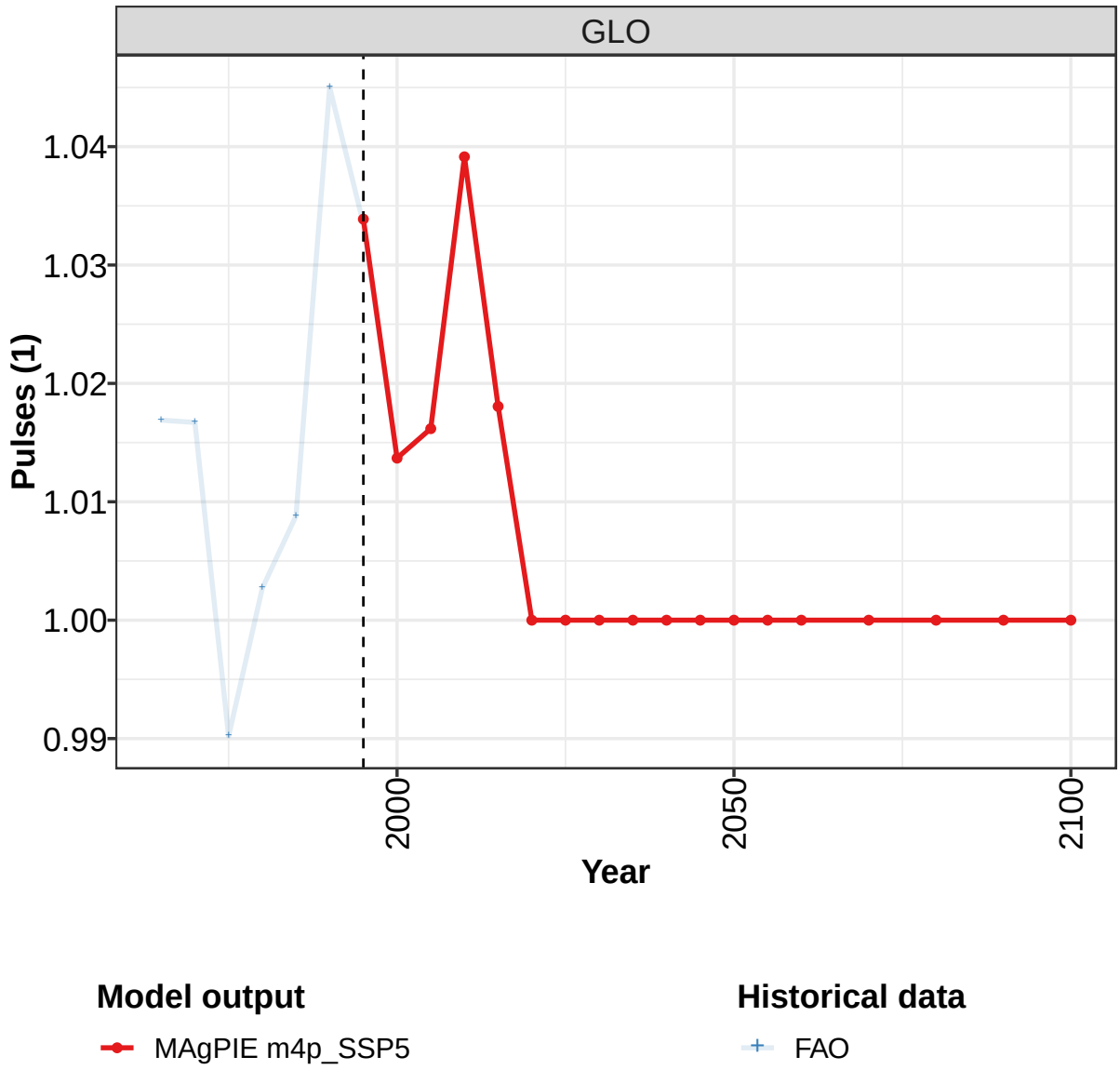
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	2.73	2.41	1.40	1.33	1.27	1.32	1.22
CHA	0.69	0.69	0.69	0.69	0.69	0.69	0.81
EUR	1.23	1.18	1.27	1.24	1.22	1.28	1.20
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MEA	1.72	1.70	1.76	1.76	1.76	1.83	1.80
NEU	0.68	0.68	0.68	0.68	0.68	0.68	0.68
OAS	1.00	1.00	1.00	1.00	1.00	1.06	1.14
REF	0.61	0.61	0.61	0.61	0.61	0.61	0.61
SSA	1.00	1.16	1.18	1.11	1.06	1.02	1.01
USA	1.00	1.00	1.00	1.00	1.00	0.69	0.69

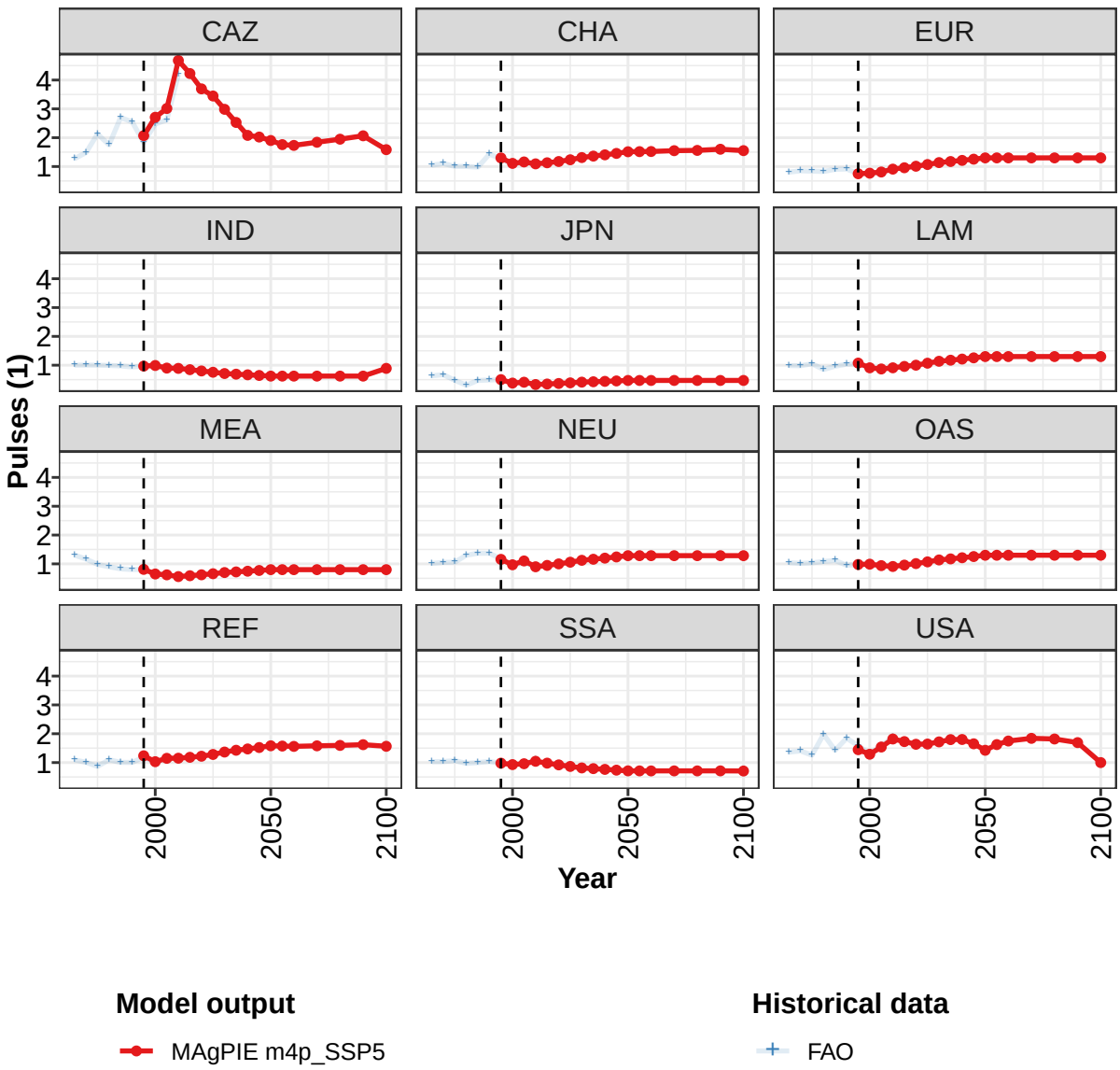
Table 1966: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Potatoes (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.99	1.02	0.97	0.95	0.99	0.97	1.00	1.01	0.99	0.97
CAZ	1.02	1.08	1.00	1.03	1.10	1.09	1.18	1.30	1.26	1.18
CHA	1.00	1.00	0.98	1.00	1.00	0.99	0.99	1.02	1.01	0.98
EUR	0.98	1.04	0.94	0.96	1.02	1.00	1.00	1.00	1.02	1.06
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01
JPN	1.00	1.00	0.89	0.95	0.96	0.90	0.84	0.80	0.80	0.75
LAM	0.99	0.99	0.99	0.97	0.99	0.99	0.96	0.94	0.93	0.92
MEA	0.99	1.00	0.94	0.96	0.94	0.98	1.01	0.98	1.01	1.00
NEU	0.97	1.02	0.95	0.96	0.96	0.96	0.98	0.95	0.97	0.97
OAS	0.94	0.97	0.98	0.99	0.98	0.97	0.92	0.91	0.91	0.92
REF	1.00	1.00	1.00	0.89	0.93	0.91	1.02	1.03	1.00	0.87
SSA	0.97	0.98	0.98	0.98	0.99	0.98	0.98	1.00	0.97	1.01
USA	1.04	1.03	0.99	0.95	1.03	1.01	1.02	1.05	0.92	0.99

Table 1967: FAO — Trade—Self-sufficiency—Crops—Other crops—Potatoes (1)

59.1.9 Other crops—Pulses





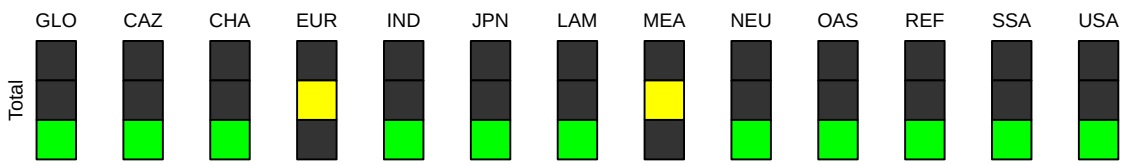


Figure 523: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Pulses (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.03	1.01	1.02	1.04	1.02	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	2.07	2.71	3.01	4.68	4.23	3.69	3.45	2.99	2.53	2.08	2.02
CHA	1.30	1.11	1.16	1.09	1.13	1.17	1.24	1.31	1.36	1.41	1.46
EUR	0.75	0.77	0.81	0.91	0.96	1.01	1.07	1.14	1.17	1.21	1.26
IND	0.97	0.99	0.90	0.89	0.85	0.80	0.76	0.71	0.69	0.67	0.65
JPN	0.50	0.38	0.41	0.33	0.35	0.37	0.39	0.41	0.43	0.44	0.46
LAM	1.07	0.91	0.87	0.91	0.96	1.00	1.07	1.14	1.17	1.21	1.26
MEA	0.81	0.65	0.62	0.56	0.59	0.62	0.66	0.70	0.72	0.75	0.77
NEU	1.16	0.97	1.10	0.90	0.95	1.00	1.06	1.12	1.16	1.20	1.24
OAS	0.98	0.99	0.94	0.91	0.96	1.01	1.07	1.14	1.17	1.21	1.26
REF	1.24	1.03	1.15	1.15	1.18	1.22	1.28	1.37	1.43	1.47	1.52
SSA	0.98	0.93	0.96	1.05	0.98	0.92	0.87	0.81	0.79	0.76	0.74
USA	1.45	1.29	1.54	1.82	1.73	1.63	1.64	1.72	1.80	1.80	1.65

Table 1968: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Pulses (1) [PART 1/2]

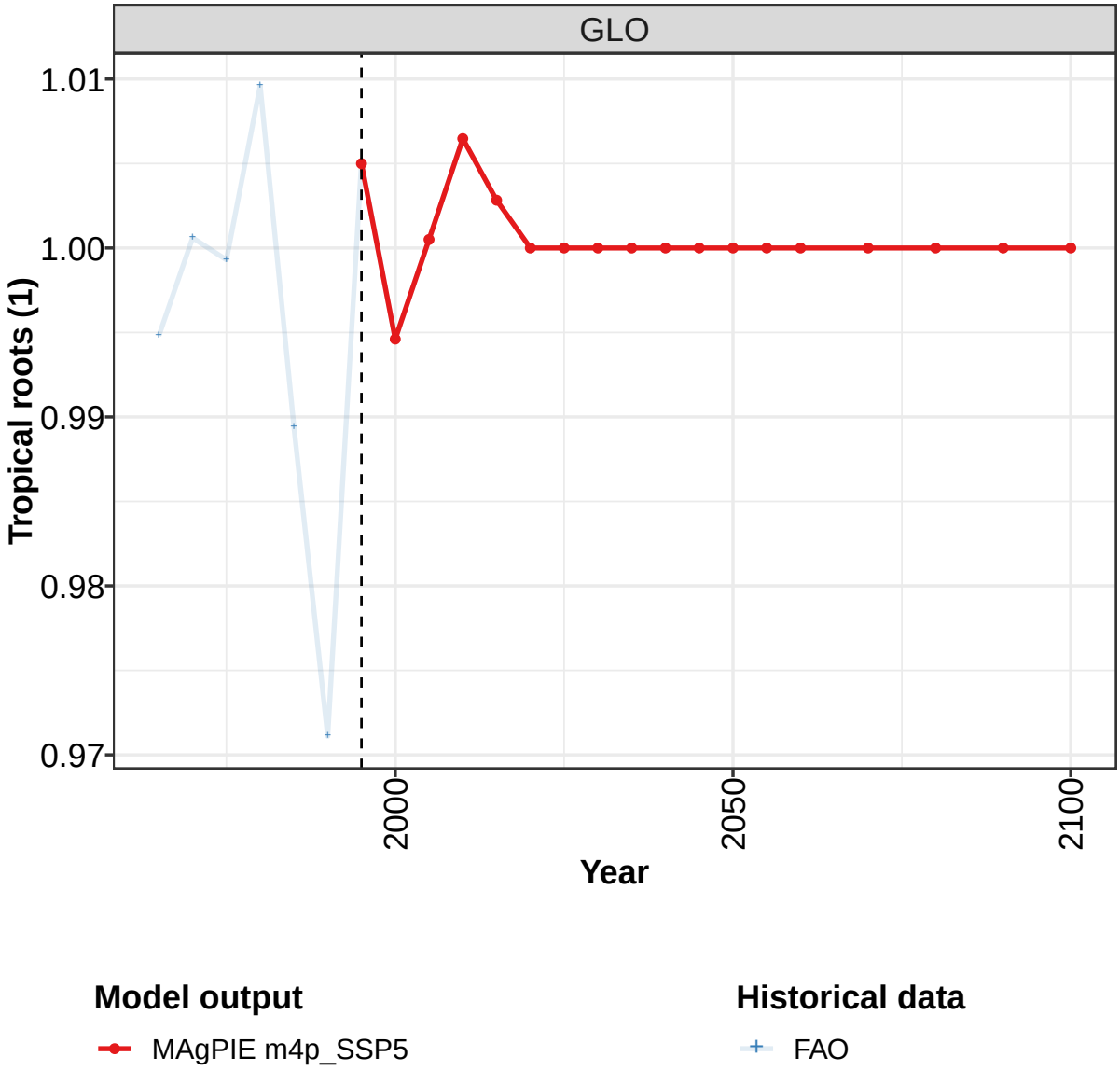
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.90	1.76	1.73	1.84	1.95	2.07	1.59
CHA	1.51	1.52	1.52	1.55	1.56	1.60	1.55
EUR	1.30	1.30	1.30	1.30	1.30	1.30	1.30
IND	0.62	0.62	0.62	0.62	0.62	0.62	0.89
JPN	0.47	0.47	0.47	0.47	0.47	0.47	0.47
LAM	1.30	1.30	1.30	1.30	1.30	1.30	1.30
MEA	0.80	0.80	0.80	0.80	0.80	0.80	0.80
NEU	1.29	1.29	1.29	1.29	1.29	1.29	1.29
OAS	1.30	1.30	1.30	1.30	1.30	1.30	1.30
REF	1.58	1.57	1.56	1.58	1.59	1.62	1.56
SSA	0.71	0.71	0.71	0.71	0.71	0.71	0.71
USA	1.43	1.62	1.75	1.84	1.82	1.69	1.00

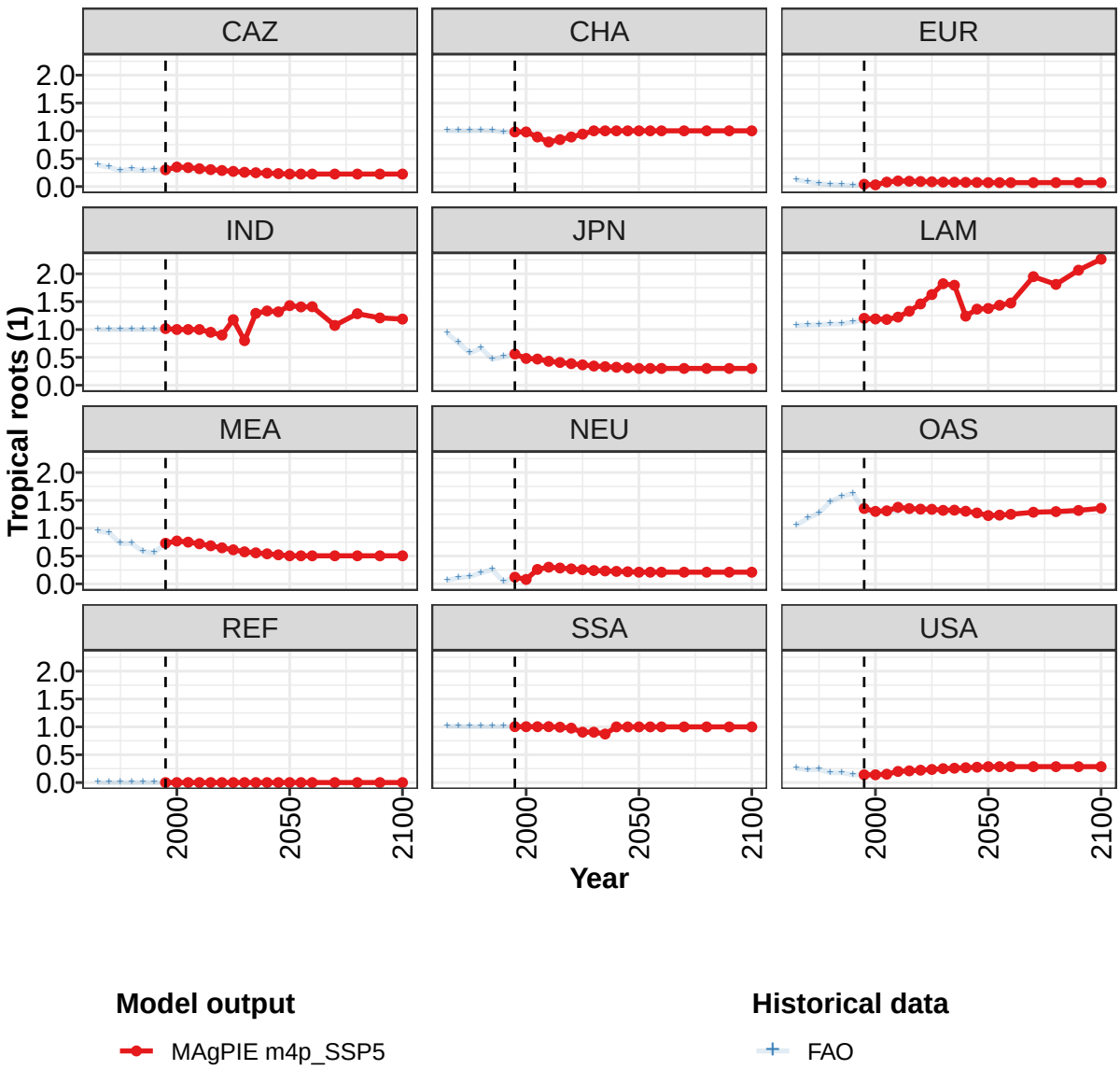
Table 1969: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Pulses (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.02	1.02	0.99	1.00	1.01	1.04	1.03	1.01	1.02	1.04
CAZ	1.27	1.48	2.13	1.75	2.70	2.55	1.84	2.48	2.62	4.19
CHA	1.05	1.10	1.01	1.00	0.98	1.43	1.27	1.06	1.16	1.07
EUR	0.81	0.85	0.84	0.83	0.90	0.91	0.75	0.77	0.81	0.91
IND	1.00	1.00	1.00	0.99	0.98	0.94	0.97	0.99	0.90	0.89
JPN	0.63	0.67	0.48	0.31	0.47	0.49	0.50	0.38	0.41	0.33
LAM	0.99	0.98	1.05	0.85	0.96	1.03	1.05	0.91	0.87	0.91
MEA	1.31	1.17	0.98	0.90	0.83	0.80	0.81	0.65	0.62	0.56
NEU	1.02	1.05	1.06	1.30	1.37	1.37	1.17	0.97	1.03	0.90
OAS	1.05	1.02	1.04	1.08	1.12	0.95	0.98	0.99	0.94	0.91
REF	1.09	1.01	0.87	1.10	1.01	1.00	1.19	1.00	1.15	1.15
SSA	1.03	1.03	1.07	0.97	1.00	1.04	0.98	0.93	0.96	1.09
USA	1.36	1.40	1.26	1.98	1.43	1.84	1.59	1.30	1.59	1.87

Table 1970: FAO — Trade—Self-sufficiency—Crops—Other crops—Pulses (1)

59.1.10 Other crops—Tropical roots





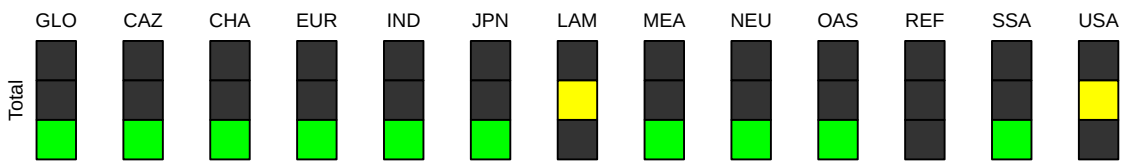


Figure 524: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Tropical roots (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	0.99	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.30	0.35	0.34	0.32	0.30	0.29	0.27	0.26	0.25	0.24	0.23
CHA	0.98	0.98	0.89	0.80	0.84	0.89	0.94	1.00	1.00	1.00	1.00
EUR	0.04	0.03	0.08	0.10	0.10	0.09	0.09	0.08	0.08	0.08	0.07
IND	1.02	1.00	1.00	1.00	0.95	0.90	1.18	0.80	1.29	1.33	1.32
JPN	0.56	0.48	0.47	0.43	0.41	0.39	0.37	0.34	0.33	0.32	0.31
LAM	1.20	1.19	1.18	1.22	1.33	1.46	1.63	1.82	1.79	1.24	1.37
MEA	0.73	0.77	0.75	0.72	0.68	0.65	0.61	0.58	0.56	0.54	0.52
NEU	0.12	0.08	0.26	0.30	0.29	0.27	0.26	0.24	0.23	0.23	0.22
OAS	1.35	1.30	1.31	1.38	1.35	1.34	1.34	1.32	1.32	1.31	1.27
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.00	1.00	1.00	1.00	0.99	0.98	0.91	0.91	0.87	1.00	1.00
USA	0.14	0.14	0.15	0.20	0.21	0.22	0.24	0.25	0.26	0.27	0.28

Table 1971: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Tropical roots (1) [PART 1/2]

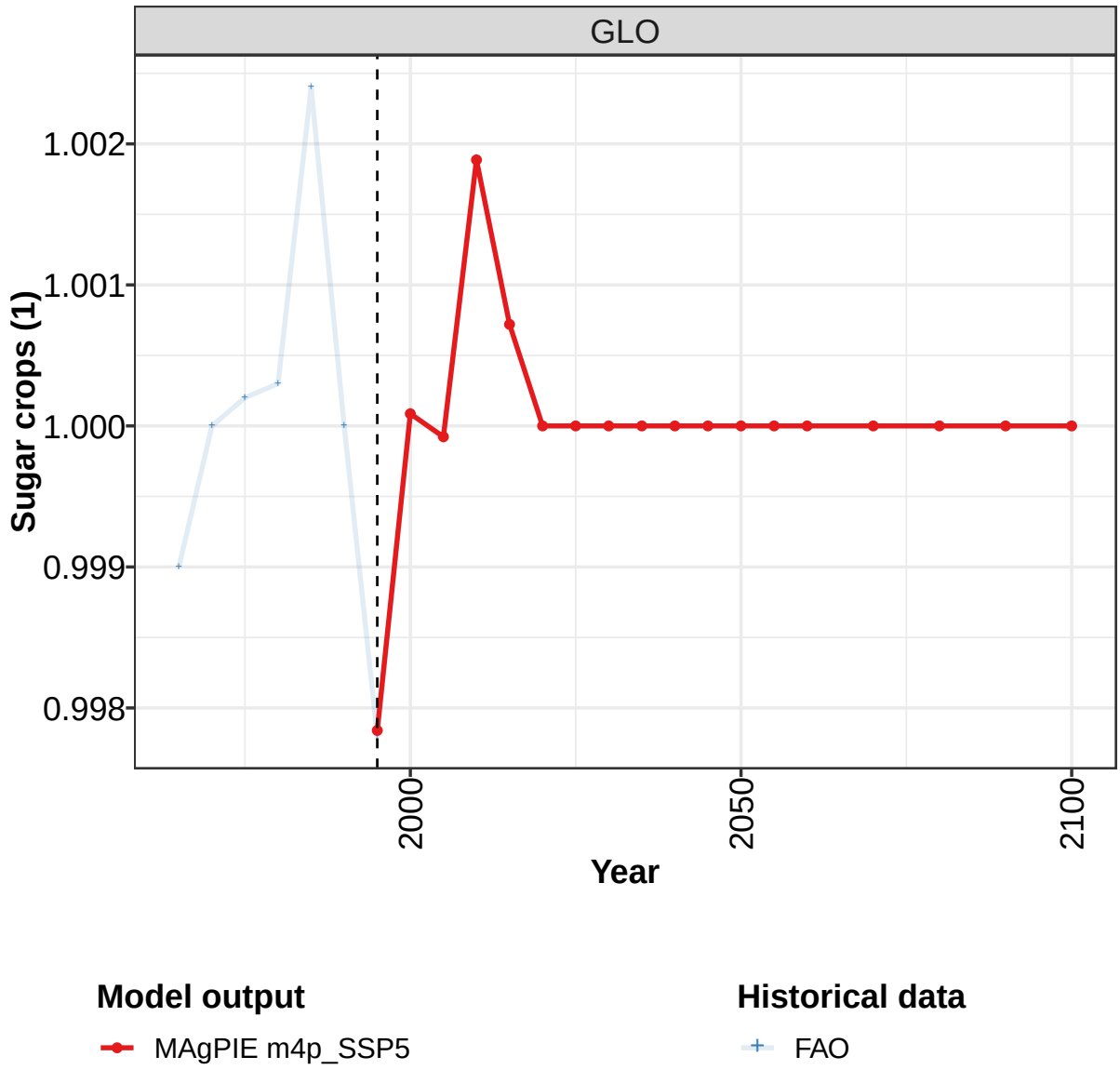
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.22	0.22	0.22	0.22	0.22	0.22	0.22
CHA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.07	0.07	0.07	0.07	0.07	0.07	0.07
IND	1.43	1.41	1.41	1.07	1.28	1.21	1.19
JPN	0.30	0.30	0.30	0.30	0.30	0.30	0.30
LAM	1.38	1.44	1.48	1.95	1.81	2.07	2.26
MEA	0.50	0.50	0.50	0.50	0.50	0.50	0.50
NEU	0.21	0.21	0.21	0.21	0.21	0.21	0.21
OAS	1.23	1.23	1.25	1.29	1.30	1.32	1.36
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
USA	0.29	0.29	0.29	0.29	0.29	0.29	0.29

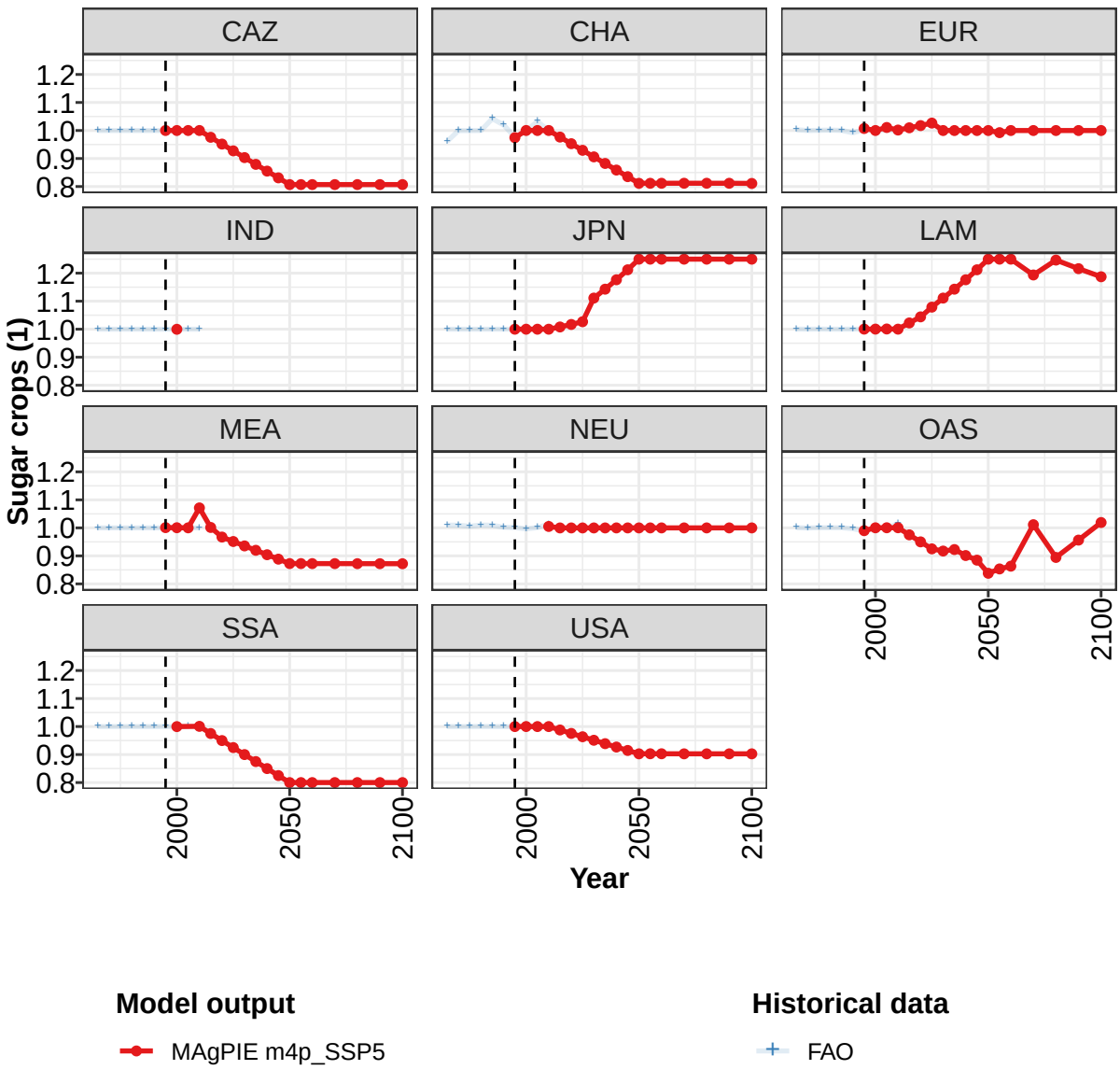
Table 1972: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Other crops—Tropical roots (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.99	1.00	1.00	1.01	0.99	0.97	1.01	0.99	1.00	1.01
CAZ	0.39	0.35	0.28	0.31	0.29	0.30	0.30	0.35	0.34	0.32
CHA	1.00	1.00	1.00	1.01	1.00	0.98	0.98	0.98	0.89	0.80
EUR	0.12	0.09	0.05	0.04	0.03	0.02	0.04	0.03	0.08	0.10
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.00
JPN	0.93	0.76	0.58	0.67	0.47	0.51	0.56	0.48	0.47	0.43
LAM	1.08	1.08	1.09	1.10	1.10	1.13	1.17	1.18	1.18	1.21
MEA	0.95	0.91	0.72	0.72	0.58	0.56	0.73	0.77	0.75	0.72
NEU	0.06	0.11	0.13	0.20	0.25	0.04	0.12	0.08	0.26	0.30
OAS	1.06	1.18	1.28	1.47	1.57	1.62	1.31	1.29	1.30	1.31
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.01	1.01	1.01	1.00	1.01	1.01	1.00	1.00	1.00	1.03
USA	0.25	0.23	0.23	0.18	0.18	0.14	0.14	0.14	0.15	0.20

Table 1973: FAO — Trade—Self-sufficiency—Crops—Other crops—Tropical roots (1)

59.1.11 Sugar crops





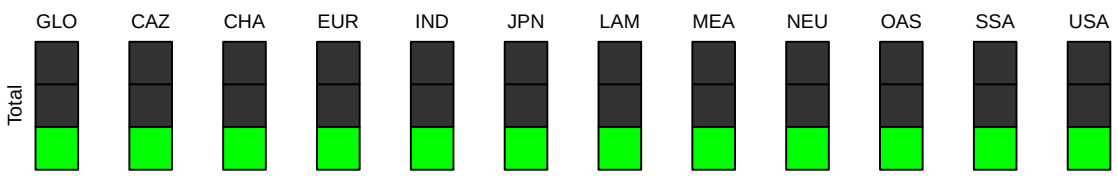


Figure 525: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1	1	1	1	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1	1	1	1	1
EUR	1	1	1	1	1	1	1	1	1	1	1
IND		1									
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU				1	1	1	1	1	1	1	1
OAS	1	1	1	1	1	1	1	1	1	1	1
SSA		1		1	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1	1	1	1	1

Table 1974: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops (1) [PART 1/2]

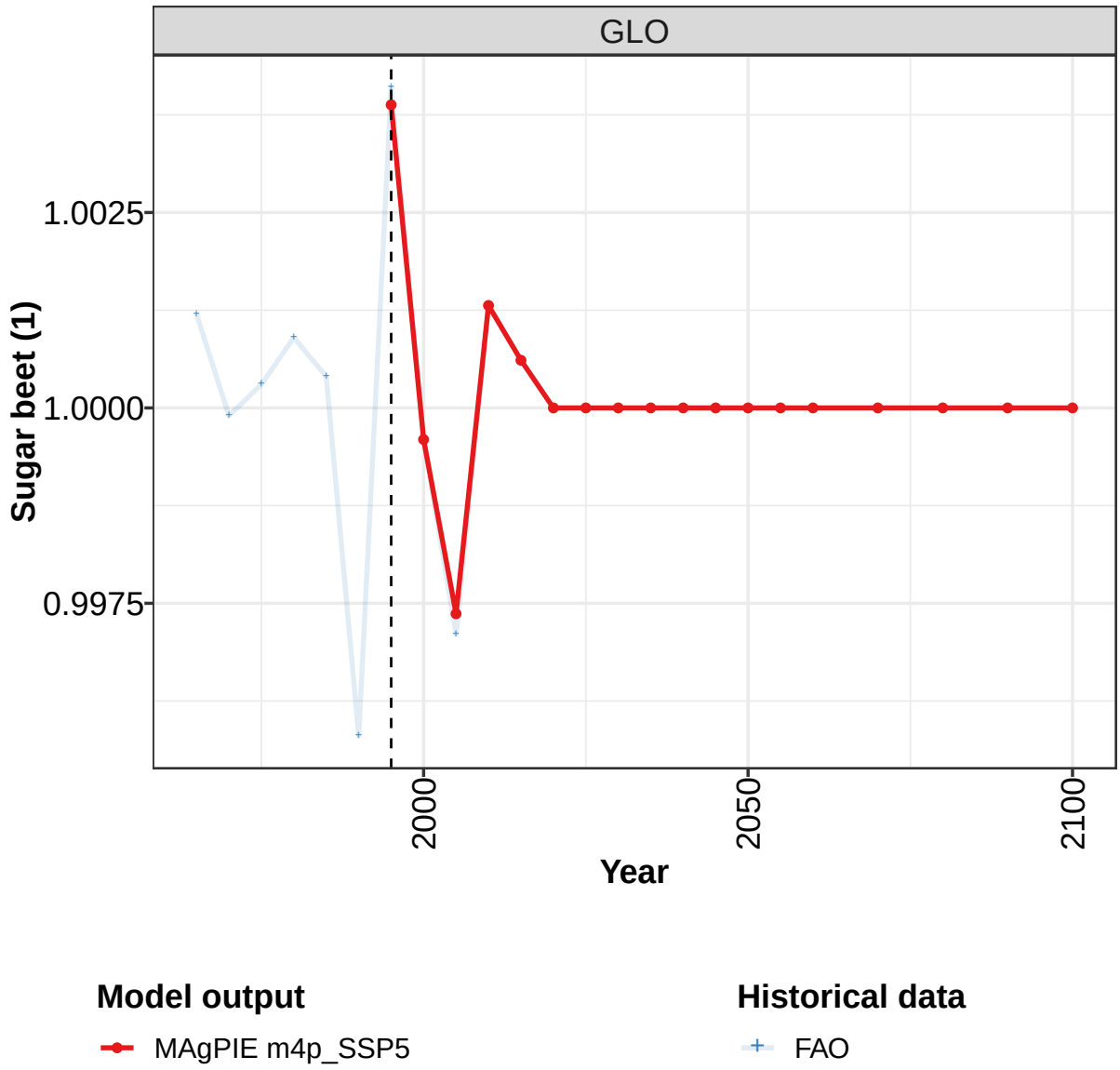
	2050	2055	2060	2070	2080	2090	2100
GLO	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1
EUR	1	1	1	1	1	1	1
IND							
JPN	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1
OAS	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1

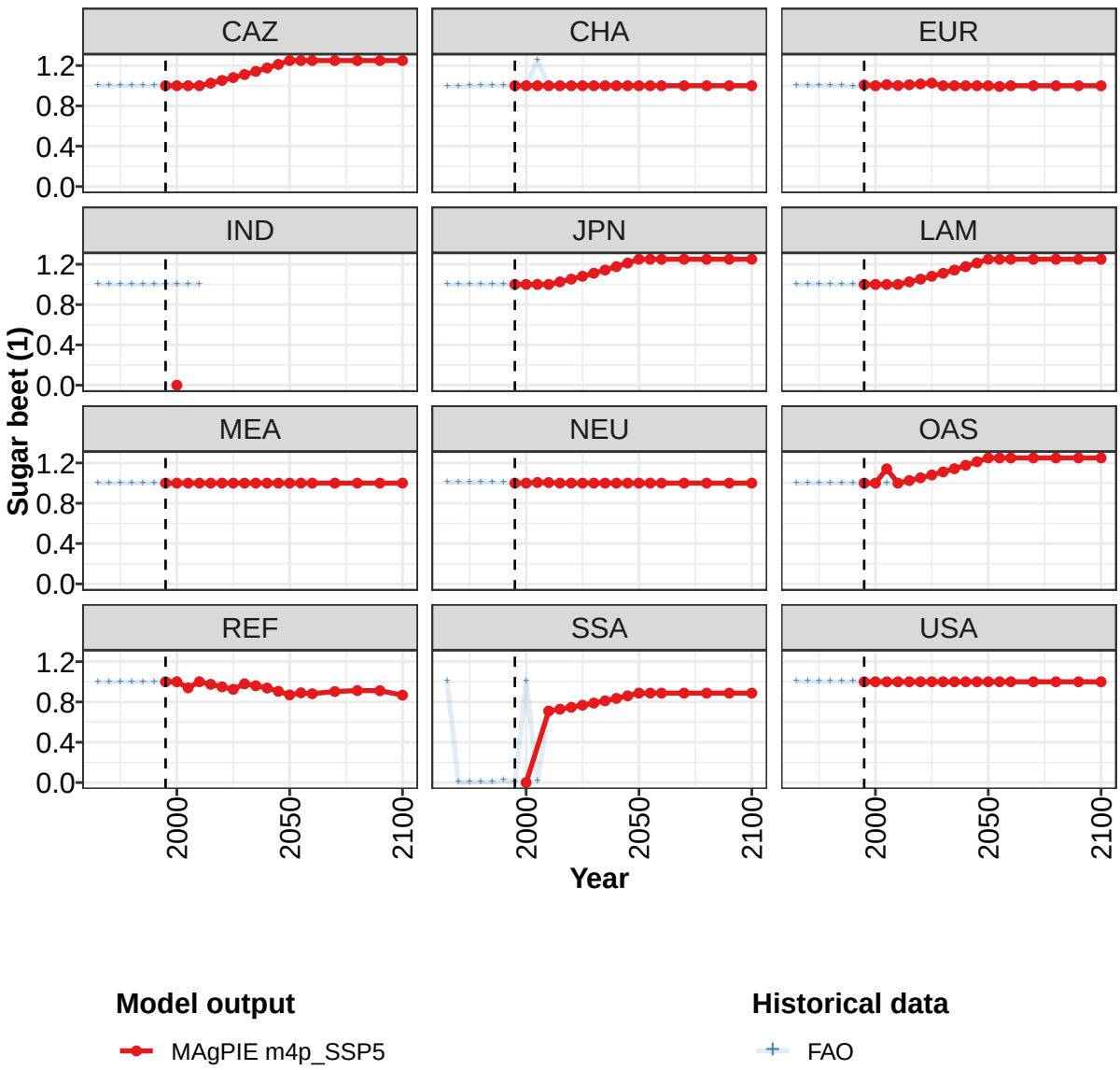
Table 1975: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CHA	0.96	1.00	1.00	1.00	1.04	1.02	0.98	1.00	1.03	1.00
EUR	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MEA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NEU	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.01
OAS	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.01
SSA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table 1976: FAO — Trade—Self-sufficiency—Crops—Sugar crops (1)

59.1.12 Sugar crops—Sugar beet





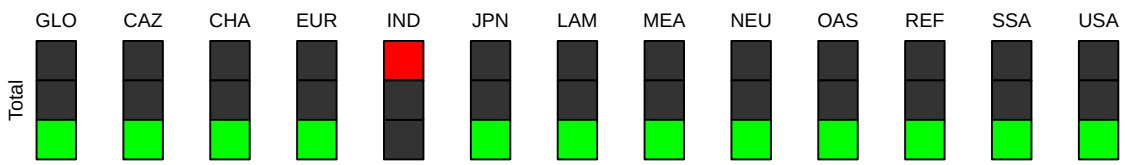


Figure 526: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar beet (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1	1	1	1	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1	1	1	1	1
EUR	1	1	1	1	1	1	1	1	1	1	1
IND		0									
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1
SSA		0		1	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1	1	1	1	1

Table 1977: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar beet (1) [PART 1/2]

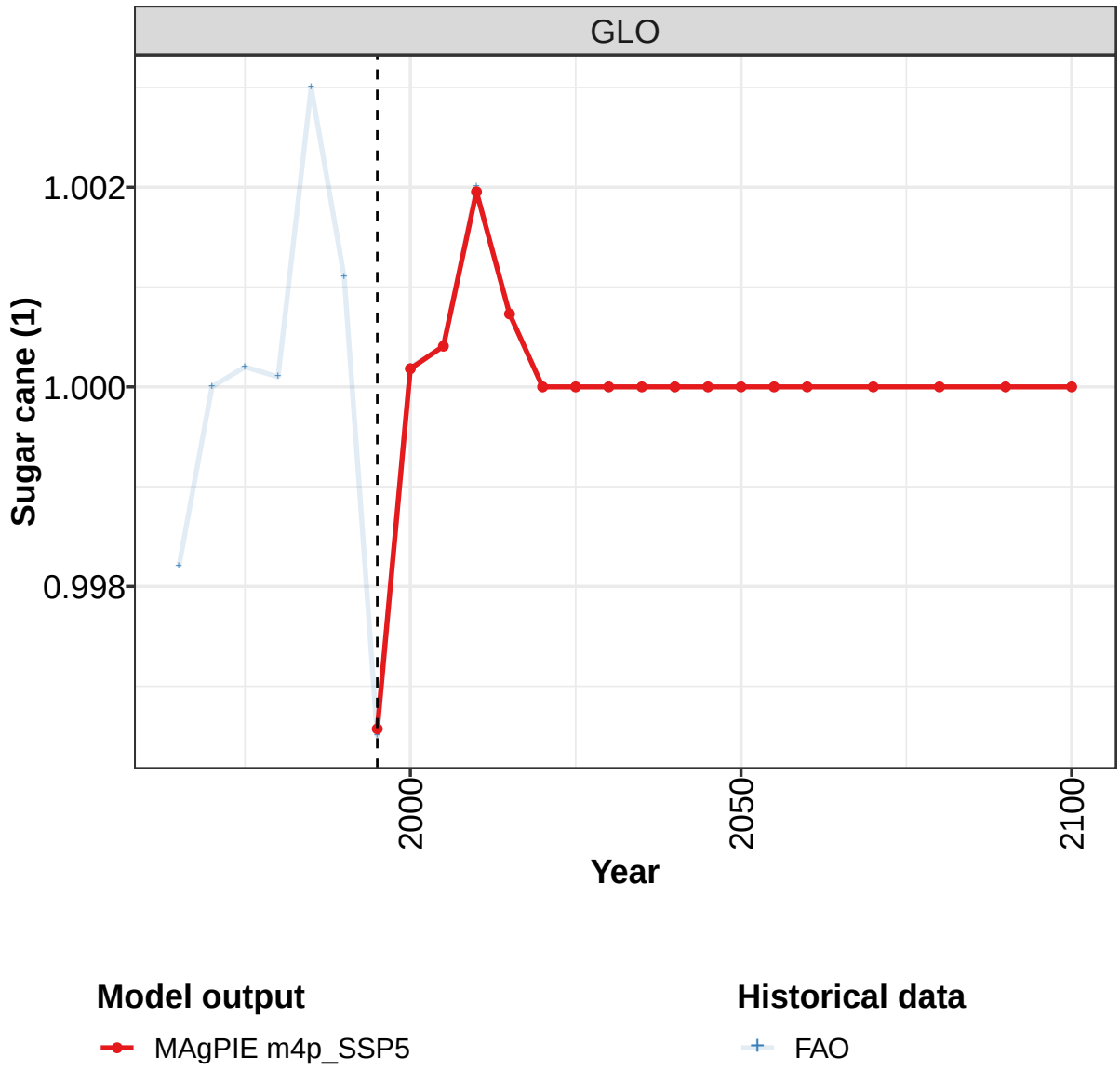
	2050	2055	2060	2070	2080	2090	2100
GLO	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1
EUR	1	1	1	1	1	1	1
IND							
JPN	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1
OAS	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1

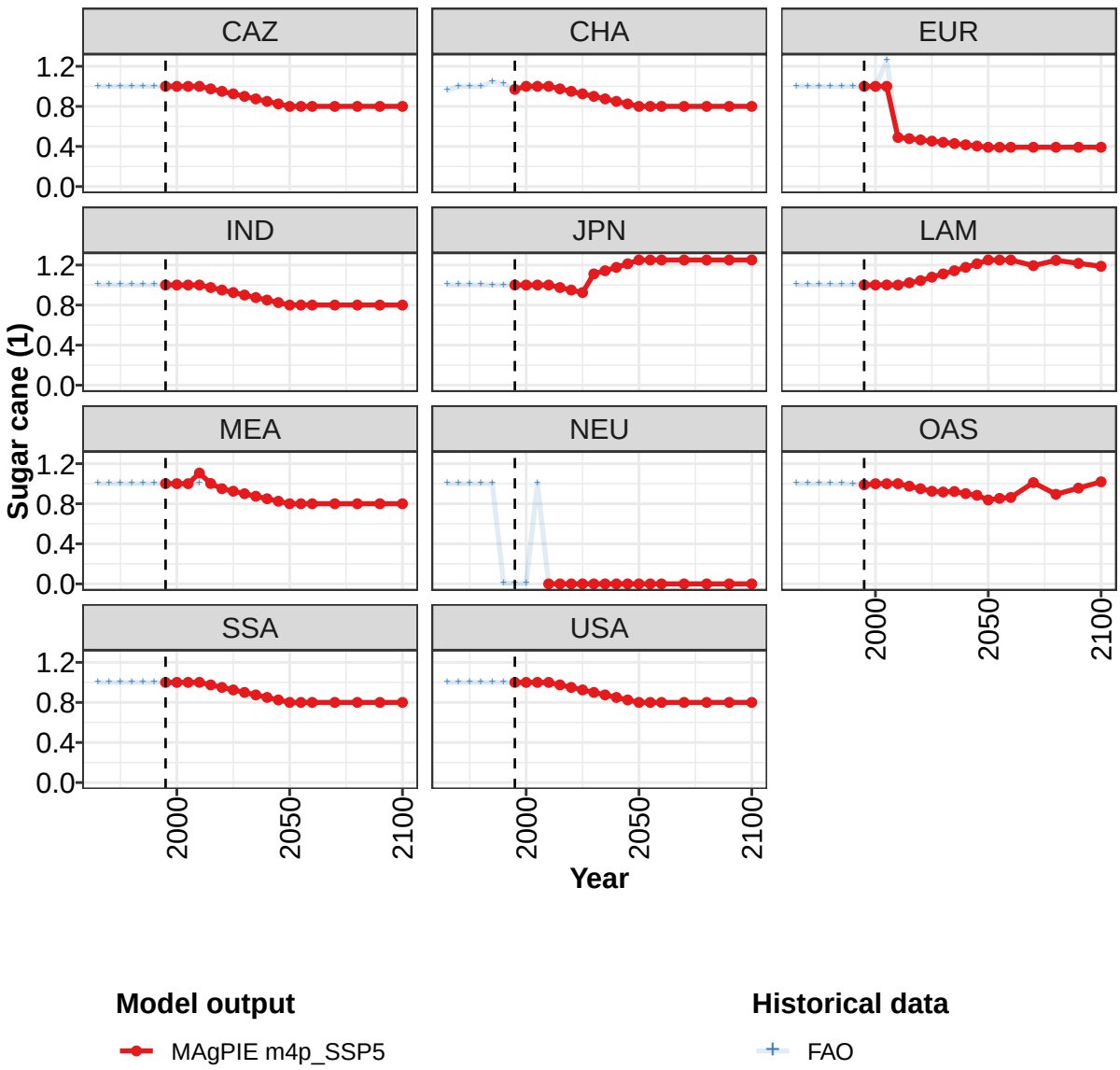
Table 1978: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar beet (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CHA	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00
EUR	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MEA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NEU	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.01
OAS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
REF	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.01	0.94	1.01
SSA	1.00	0.00	0.00	0.01	0.00	0.02	0.00	1.00	0.01	0.71
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table 1979: FAO — Trade—Self-sufficiency—Crops—Sugar crops—Sugar beet (1)

59.1.13 Sugar crops—Sugar cane





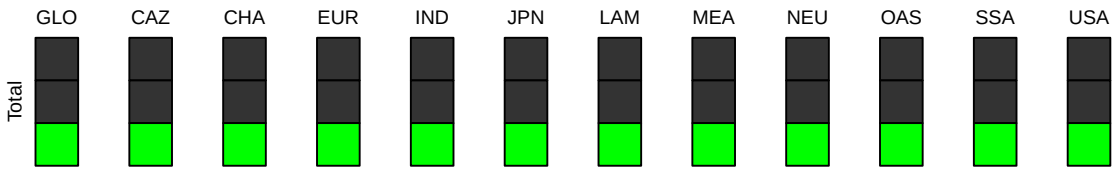


Figure 527: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar cane (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1	1	1	1	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1	1	1	1	1
EUR	1	1	1	0	0	0	0	0	0	0	0
IND	1	1	1	1	1	1	1	1	1	1	1
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU				0	0	0	0	0	0	0	0
OAS	1	1	1	1	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1	1	1	1	1

Table 1980: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar cane (1) [PART 1/2]

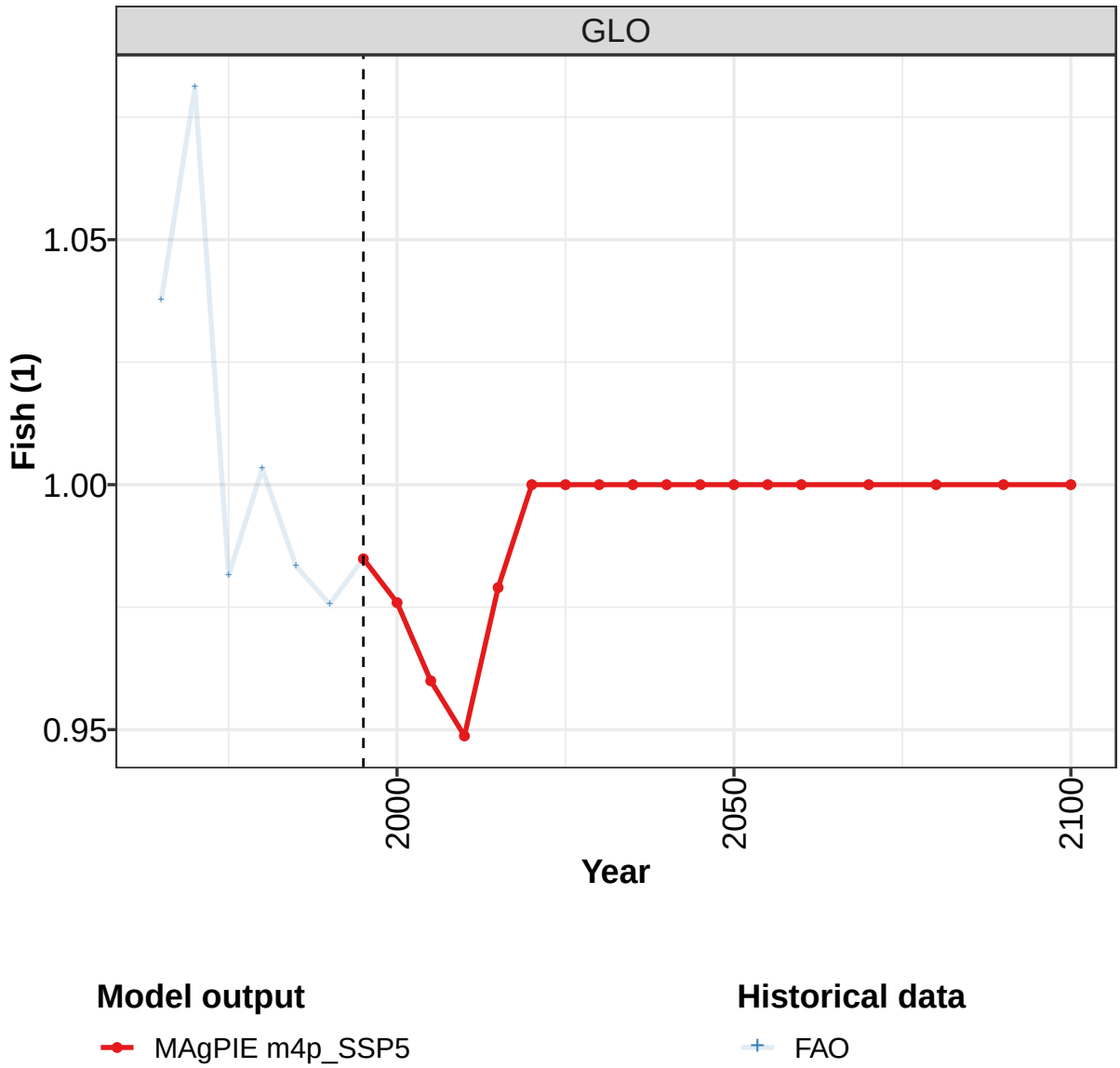
	2050	2055	2060	2070	2080	2090	2100
GLO	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1
EUR	0	0	0	0	0	0	0
IND	1	1	1	1	1	1	1
JPN	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1
NEU	0	0	0	0	0	0	0
OAS	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1

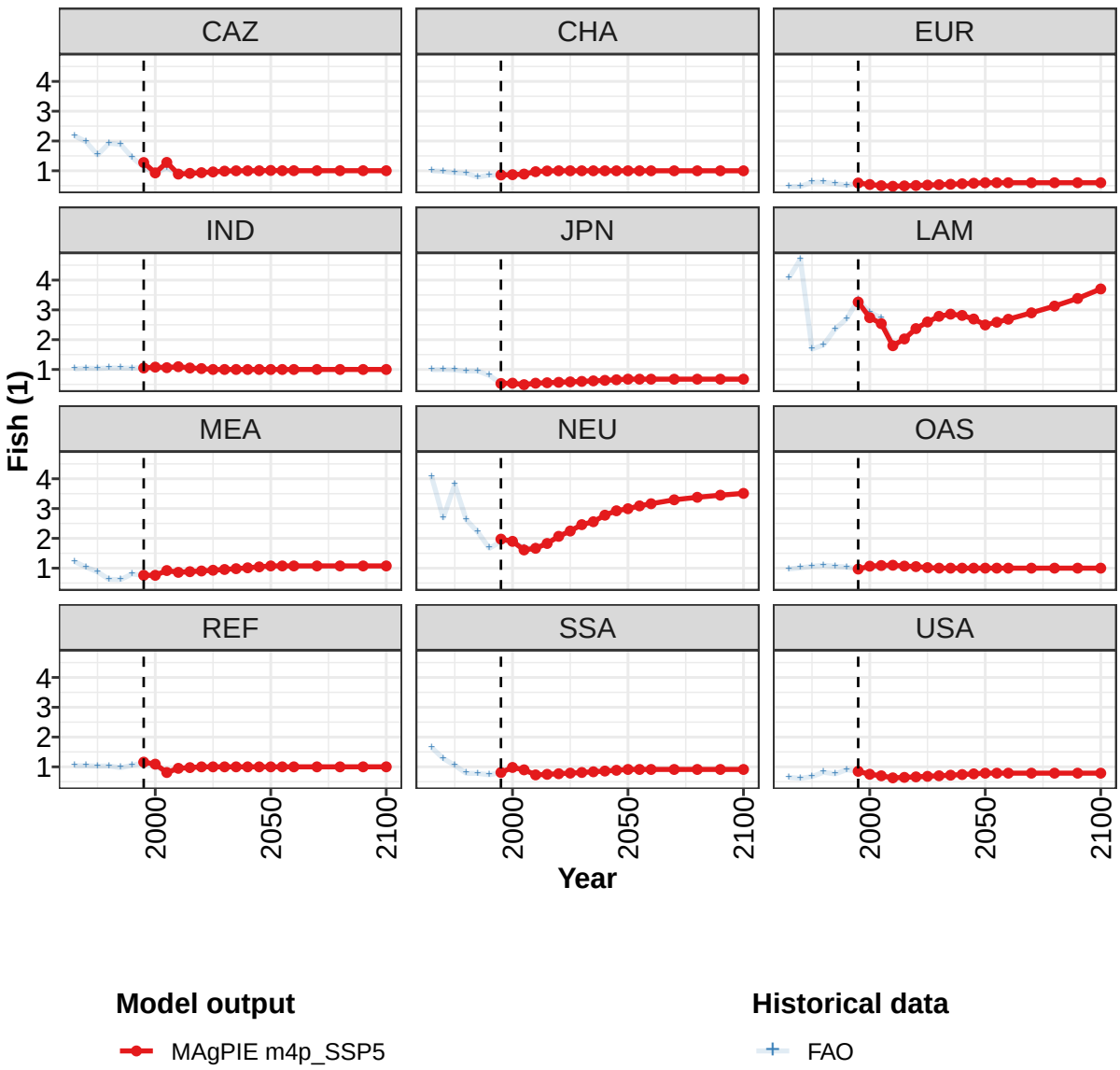
Table 1981: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar cane (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CHA	0.96	1.00	1.00	1.00	1.05	1.02	0.97	1.00	1.02	1.00
EUR	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.26	0.49
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MEA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NEU	1.00	1.00	1.00	1.00	1.00	0.01	0.01	0.00	1.00	0.00
OAS	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.01
SSA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table 1982: FAO — Trade—Self-sufficiency—Crops—Sugar crops—Sugar cane (1)

59.2 Fish


GLO
Fish (1)
1.05
1.00
0.95
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



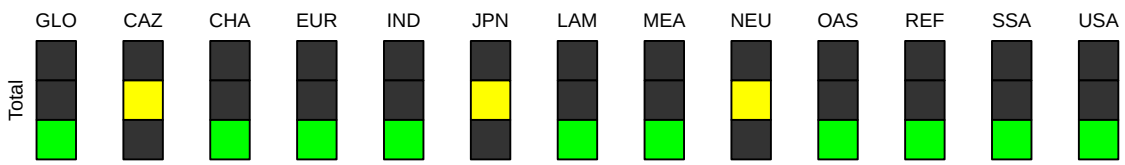


Figure 528: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Fish (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.98	0.98	0.96	0.95	0.98	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.28	0.93	1.28	0.89	0.91	0.94	0.96	0.99	1.00	1.00	1.00
CHA	0.86	0.87	0.89	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.59	0.54	0.50	0.48	0.49	0.51	0.52	0.53	0.55	0.56	0.58
IND	1.05	1.08	1.06	1.09	1.05	1.03	1.00	1.00	1.00	1.00	1.00
JPN	0.53	0.54	0.49	0.54	0.55	0.57	0.58	0.60	0.62	0.64	0.65
LAM	3.26	2.74	2.54	1.80	2.03	2.37	2.59	2.78	2.86	2.81	2.69
MEA	0.76	0.76	0.92	0.86	0.88	0.91	0.93	0.96	0.98	1.01	1.04
NEU	1.97	1.90	1.61	1.67	1.83	2.07	2.25	2.46	2.56	2.78	2.93
OAS	0.97	1.07	1.09	1.10	1.07	1.05	1.02	1.00	1.00	1.00	1.00
REF	1.16	1.09	0.81	0.95	0.97	1.00	1.00	1.00	1.00	1.00	1.00
SSA	0.81	0.98	0.90	0.73	0.75	0.77	0.79	0.81	0.83	0.86	0.88
USA	0.85	0.75	0.70	0.63	0.65	0.66	0.68	0.70	0.72	0.74	0.76

Table 1983: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Fish (1) [PART 1/2]

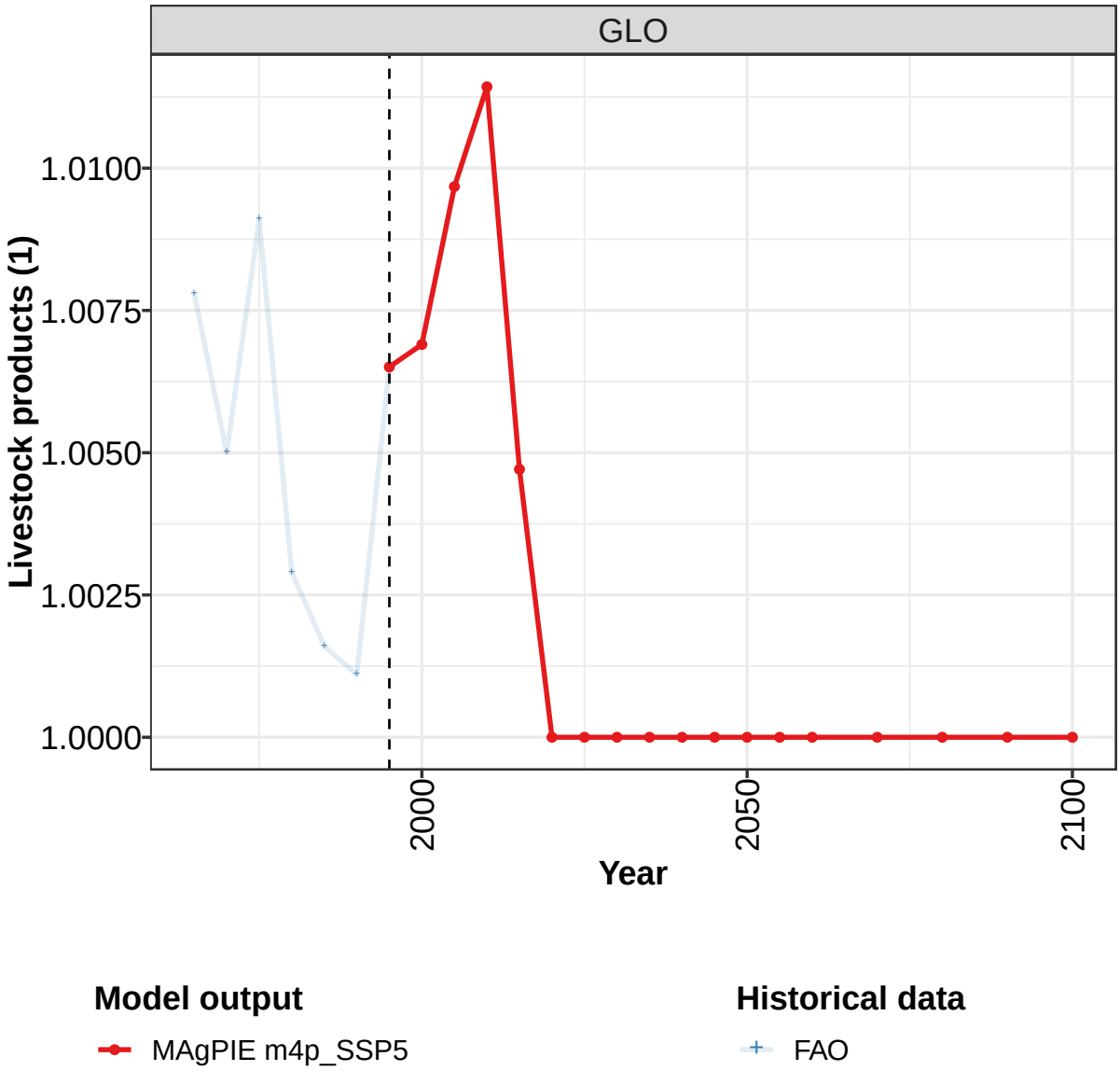
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.01	1.00	1.00	1.00	1.00	1.00	1.00
CHA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.60	0.60	0.60	0.60	0.60	0.60	0.60
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	0.68	0.68	0.68	0.68	0.68	0.68	0.68
LAM	2.49	2.59	2.69	2.90	3.13	3.38	3.70
MEA	1.07	1.07	1.07	1.07	1.07	1.07	1.07
NEU	2.99	3.09	3.16	3.29	3.38	3.45	3.51
OAS	1.00	1.00	1.00	1.00	1.00	1.00	1.00
REF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SSA	0.91	0.91	0.91	0.91	0.91	0.91	0.91
USA	0.79	0.79	0.79	0.79	0.79	0.79	0.79

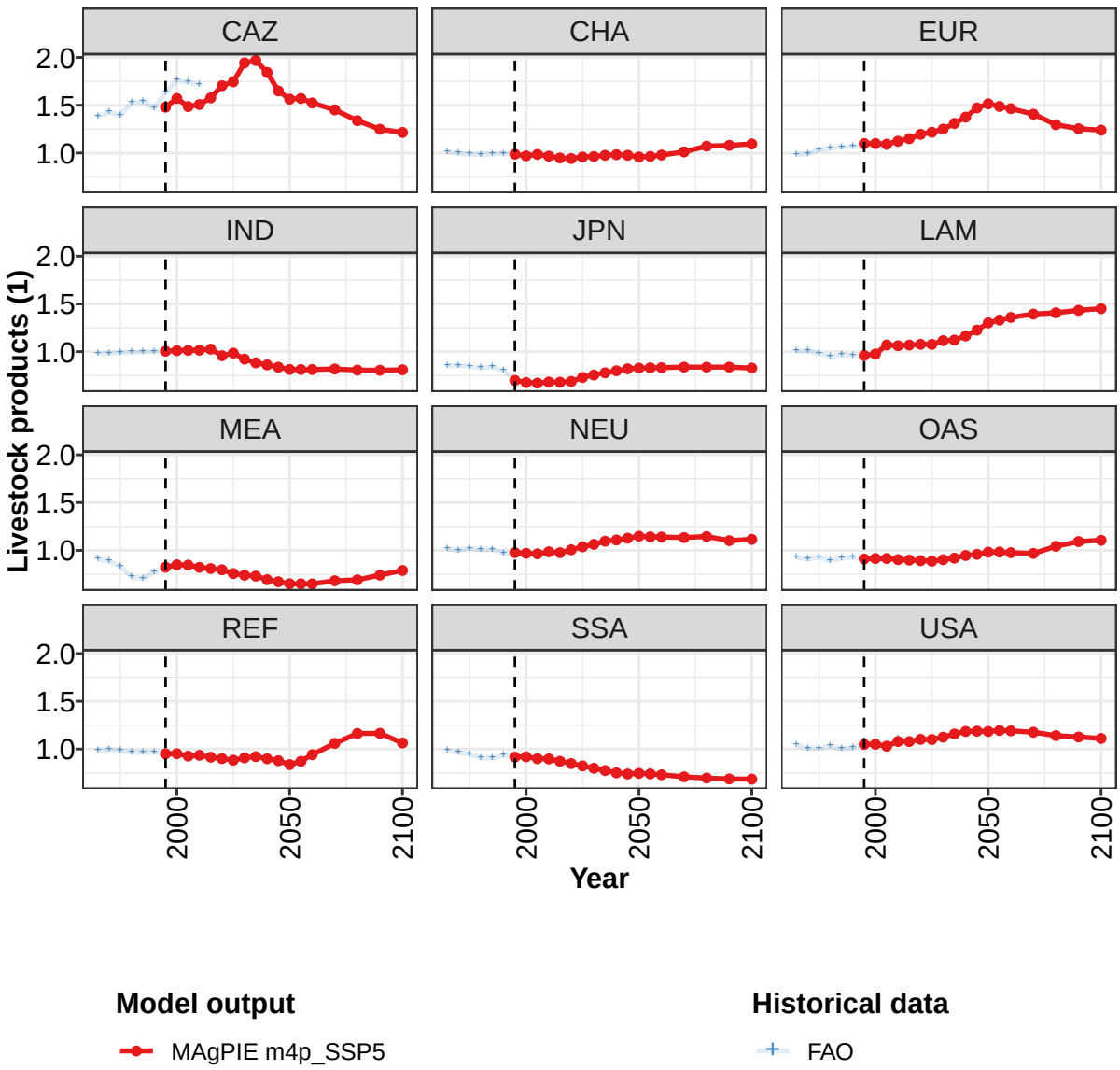
Table 1984: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Fish (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.04	1.08	0.98	1.00	0.98	0.98	0.98	0.98	0.96	0.95
CAZ	2.18	1.98	1.53	1.92	1.88	1.45	1.12	0.93	1.10	0.89
CHA	1.00	0.98	0.93	0.92	0.79	0.85	0.86	0.87	0.89	0.97
EUR	0.47	0.47	0.62	0.62	0.57	0.51	0.59	0.54	0.50	0.48
IND	1.02	1.04	1.03	1.05	1.05	1.04	1.07	1.10	1.07	1.12
JPN	0.99	1.00	0.98	0.95	0.95	0.80	0.53	0.54	0.49	0.54
LAM	4.07	4.70	1.68	1.82	2.36	2.70	3.34	2.91	2.73	1.81
MEA	1.22	1.04	0.87	0.62	0.62	0.80	0.76	0.76	0.92	0.86
NEU	4.07	2.69	3.81	2.62	2.21	1.67	1.89	1.92	1.67	1.70
OAS	0.97	1.01	1.06	1.10	1.06	1.04	0.97	1.02	1.04	1.09
REF	1.04	1.04	1.02	1.03	0.97	1.05	1.14	1.03	0.81	0.95
SSA	1.65	1.28	1.05	0.78	0.78	0.73	0.81	0.98	0.90	0.73
USA	0.64	0.61	0.67	0.82	0.76	0.90	0.85	0.75	0.70	0.63

Table 1985: FAO — Trade—Self-sufficiency—Fish (1)

59.3 Livestock products





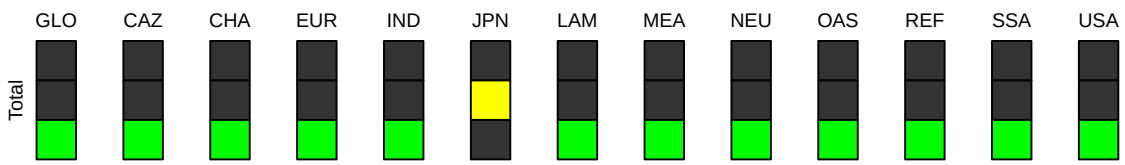


Figure 529: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.48	1.57	1.49	1.51	1.58	1.70	1.75	1.94	1.97	1.84	1.65
CHA	0.99	0.97	0.99	0.97	0.95	0.94	0.96	0.96	0.98	0.98	0.98
EUR	1.10	1.10	1.09	1.12	1.15	1.20	1.22	1.25	1.31	1.38	1.47
IND	1.01	1.01	1.01	1.02	1.03	0.96	0.98	0.92	0.88	0.86	0.84
JPN	0.70	0.68	0.67	0.68	0.68	0.69	0.73	0.76	0.78	0.80	0.82
LAM	0.96	0.98	1.07	1.06	1.07	1.08	1.08	1.12	1.12	1.16	1.23
MEA	0.82	0.85	0.85	0.82	0.81	0.80	0.76	0.74	0.73	0.69	0.67
NEU	0.98	0.97	0.96	0.98	0.98	1.01	1.04	1.06	1.10	1.11	1.13
OAS	0.91	0.91	0.91	0.90	0.90	0.89	0.89	0.90	0.92	0.95	0.96
REF	0.95	0.95	0.93	0.93	0.91	0.90	0.88	0.91	0.92	0.90	0.88
SSA	0.92	0.92	0.90	0.90	0.87	0.85	0.82	0.80	0.78	0.75	0.74
USA	1.05	1.05	1.03	1.08	1.08	1.10	1.10	1.12	1.16	1.18	1.19

Table 1986: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products (1) [PART 1/2]

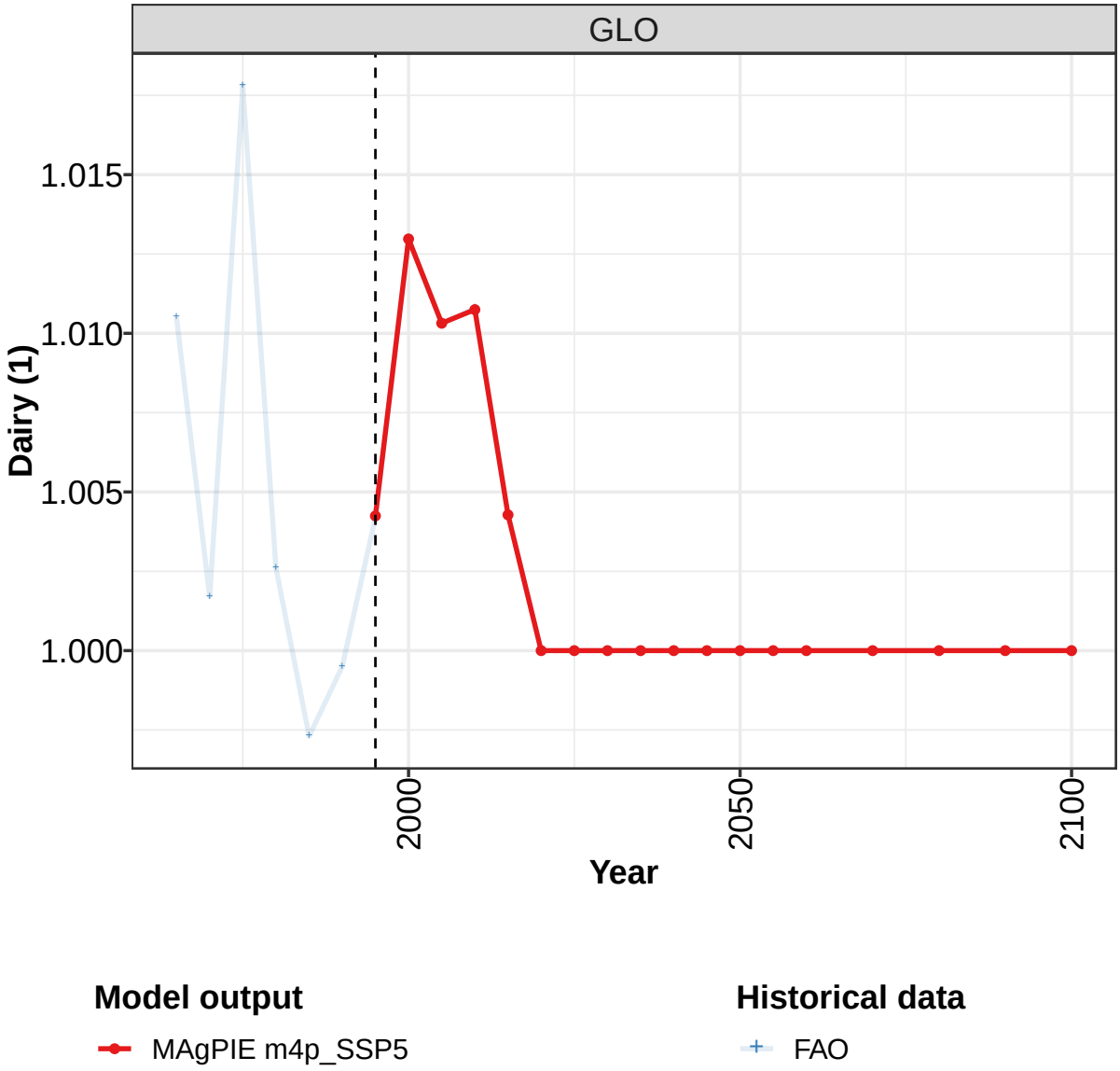
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.56	1.57	1.52	1.45	1.34	1.25	1.22
CHA	0.96	0.96	0.98	1.01	1.07	1.08	1.09
EUR	1.51	1.49	1.46	1.41	1.30	1.25	1.24
IND	0.81	0.81	0.81	0.82	0.81	0.81	0.81
JPN	0.83	0.83	0.83	0.84	0.84	0.84	0.83
LAM	1.30	1.33	1.36	1.39	1.41	1.43	1.45
MEA	0.65	0.65	0.65	0.68	0.69	0.74	0.79
NEU	1.15	1.14	1.14	1.13	1.15	1.10	1.12
OAS	0.98	0.98	0.98	0.97	1.04	1.09	1.11
REF	0.84	0.87	0.94	1.06	1.16	1.16	1.06
SSA	0.75	0.74	0.73	0.71	0.70	0.69	0.69
USA	1.18	1.19	1.19	1.18	1.14	1.13	1.11

Table 1987: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.01	1.00	1.01	1.00	1.00	1.00	1.01	1.01	1.01	1.01
CAZ	1.38	1.43	1.40	1.52	1.54	1.47	1.63	1.76	1.74	1.72
CHA	1.01	1.00	0.99	0.98	0.99	0.99	0.99	0.97	0.98	0.97
EUR	0.98	0.99	1.03	1.05	1.06	1.07	1.07	1.07	1.05	1.09
IND	0.98	0.98	0.99	0.99	1.00	1.00	1.01	1.01	1.02	1.02
JPN	0.85	0.86	0.85	0.83	0.84	0.80	0.70	0.68	0.67	0.68
LAM	1.00	1.01	0.98	0.95	0.97	0.96	0.96	0.97	1.06	1.04
MEA	0.91	0.89	0.83	0.72	0.71	0.77	0.83	0.85	0.85	0.82
NEU	1.01	1.00	1.02	1.01	1.01	0.97	0.97	0.97	0.96	0.98
OAS	0.93	0.91	0.92	0.89	0.92	0.93	0.91	0.91	0.91	0.91
REF	0.99	1.00	0.99	0.97	0.96	0.97	0.95	0.95	0.92	0.92
SSA	0.98	0.97	0.94	0.91	0.91	0.93	0.92	0.92	0.90	0.90
USA	1.04	1.01	1.01	1.03	1.00	1.01	1.06	1.07	1.05	1.11

Table 1988: FAO — Trade—Self-sufficiency—Livestock products (1)

59.3.1 Dairy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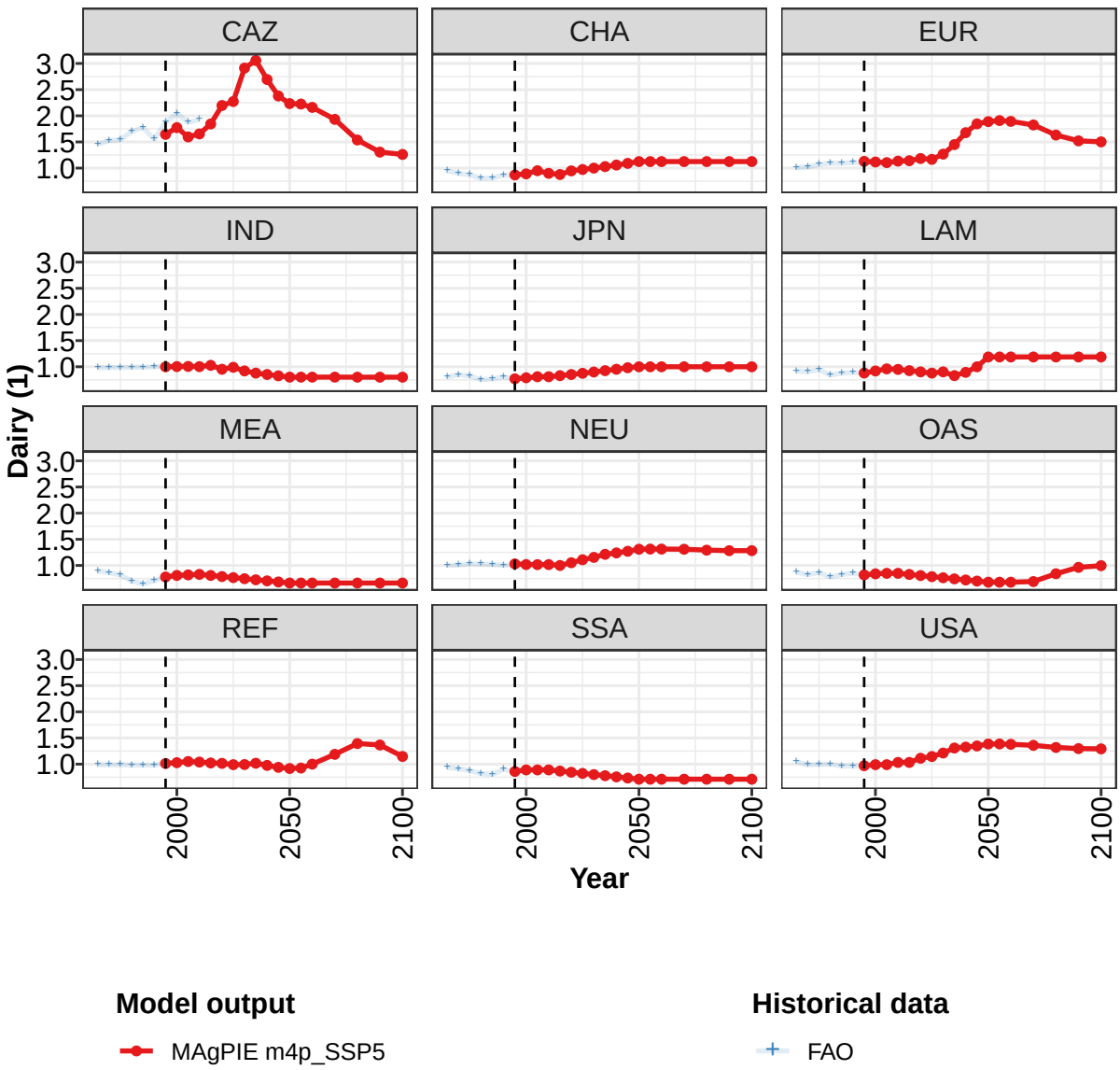
1.010
1.005
1.000
Dairy (1)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



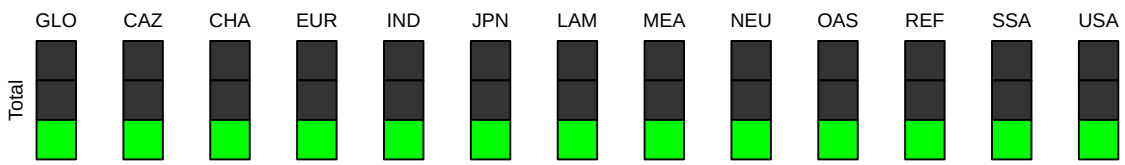


Figure 530: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Dairy (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.64	1.77	1.60	1.65	1.84	2.20	2.27	2.91	3.06	2.69	2.38
CHA	0.87	0.89	0.95	0.90	0.88	0.95	0.97	1.00	1.03	1.06	1.09
EUR	1.13	1.12	1.11	1.13	1.14	1.18	1.17	1.27	1.45	1.68	1.85
IND	1.00	1.00	1.01	1.00	1.03	0.95	0.99	0.92	0.88	0.85	0.83
JPN	0.77	0.79	0.81	0.81	0.83	0.85	0.88	0.90	0.93	0.95	0.98
LAM	0.88	0.92	0.96	0.95	0.93	0.90	0.88	0.90	0.83	0.89	1.00
MEA	0.78	0.81	0.82	0.83	0.81	0.79	0.77	0.75	0.73	0.71	0.68
NEU	1.03	1.02	1.02	1.02	1.00	1.05	1.11	1.15	1.21	1.24	1.27
OAS	0.82	0.84	0.85	0.85	0.83	0.81	0.79	0.77	0.74	0.72	0.70
REF	1.01	1.03	1.05	1.04	1.02	1.02	0.99	0.99	1.02	0.98	0.94
SSA	0.86	0.89	0.89	0.89	0.87	0.85	0.82	0.80	0.78	0.76	0.73
USA	0.97	0.99	0.99	1.03	1.03	1.11	1.15	1.21	1.31	1.33	1.35

Table 1989: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Dairy (1) [PART 1/2]

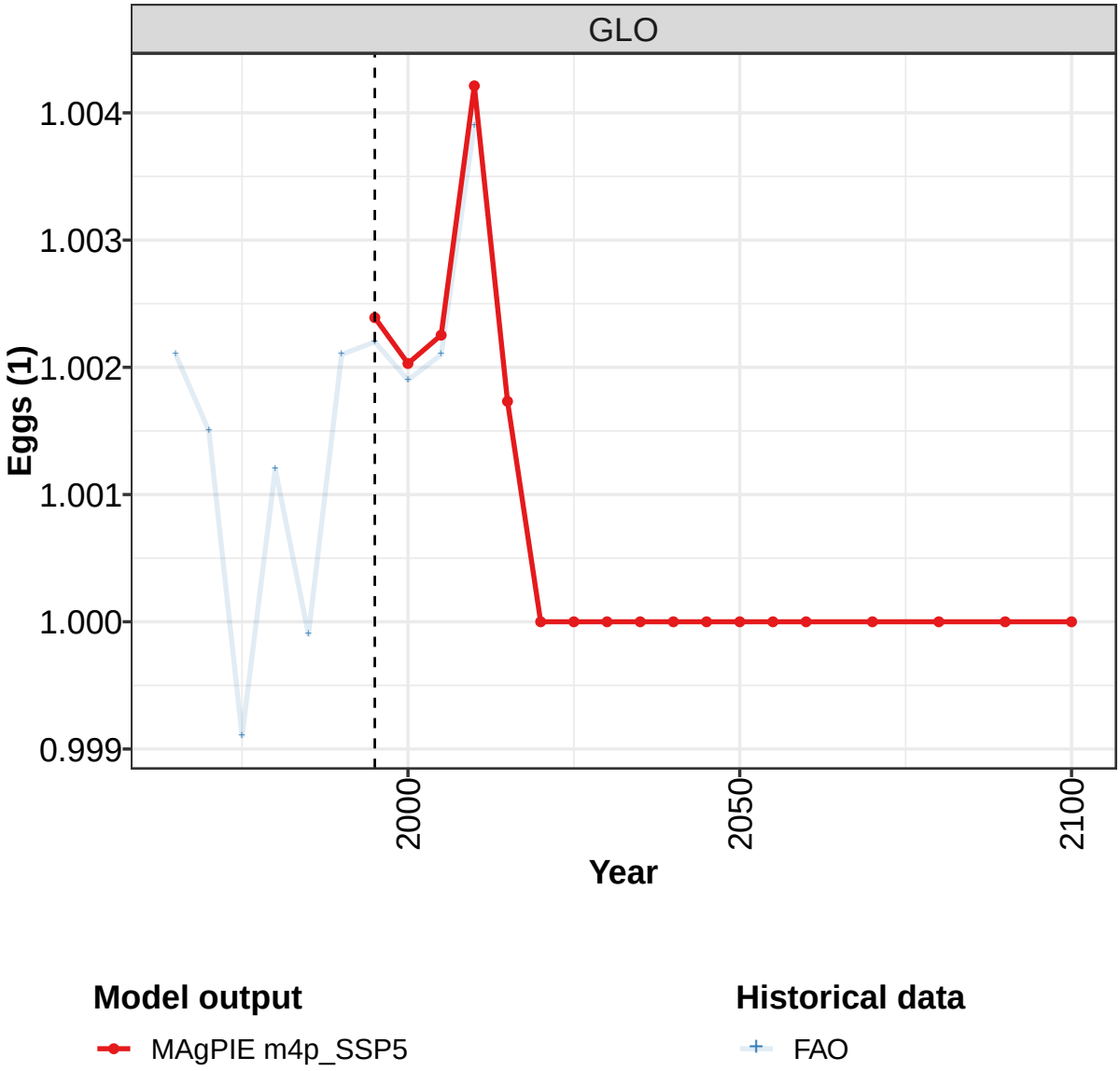
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	2.23	2.22	2.16	1.93	1.54	1.31	1.26
CHA	1.12	1.12	1.12	1.12	1.12	1.12	1.12
EUR	1.89	1.91	1.89	1.82	1.63	1.52	1.50
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.19	1.19	1.19	1.19	1.19	1.19	1.19
MEA	0.66	0.66	0.66	0.66	0.66	0.66	0.66
NEU	1.31	1.31	1.31	1.31	1.29	1.28	1.28
OAS	0.68	0.68	0.68	0.69	0.84	0.96	1.00
REF	0.92	0.93	1.00	1.19	1.39	1.37	1.15
SSA	0.71	0.71	0.71	0.71	0.71	0.71	0.71
USA	1.38	1.39	1.38	1.36	1.32	1.30	1.29

Table 1990: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Dairy (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.01	1.00	1.02	1.00	1.00	1.00	1.00	1.01	1.01	1.01
CAZ	1.46	1.53	1.54	1.70	1.77	1.55	1.87	2.04	1.87	1.92
CHA	0.95	0.90	0.87	0.80	0.82	0.86	0.87	0.89	0.95	0.90
EUR	1.01	1.02	1.07	1.10	1.09	1.11	1.11	1.09	1.07	1.10
IND	0.98	0.99	0.99	0.99	0.99	1.00	1.00	1.00	1.01	1.00
JPN	0.81	0.85	0.82	0.75	0.77	0.80	0.77	0.79	0.81	0.81
LAM	0.92	0.90	0.94	0.84	0.88	0.89	0.88	0.92	0.96	0.95
MEA	0.90	0.86	0.82	0.70	0.65	0.71	0.78	0.81	0.82	0.83
NEU	1.00	1.01	1.03	1.03	1.02	1.00	1.02	1.02	1.02	1.02
OAS	0.87	0.83	0.86	0.78	0.83	0.85	0.82	0.84	0.85	0.85
REF	0.99	0.99	0.99	0.98	0.98	0.98	1.02	1.03	1.04	1.01
SSA	0.94	0.91	0.88	0.82	0.81	0.90	0.86	0.89	0.89	0.89
USA	1.05	0.98	1.00	1.00	0.97	0.96	0.97	0.99	0.99	1.05

Table 1991: FAO — Trade—Self-sufficiency—Livestock products—Dairy (1)

59.3.2 Eggs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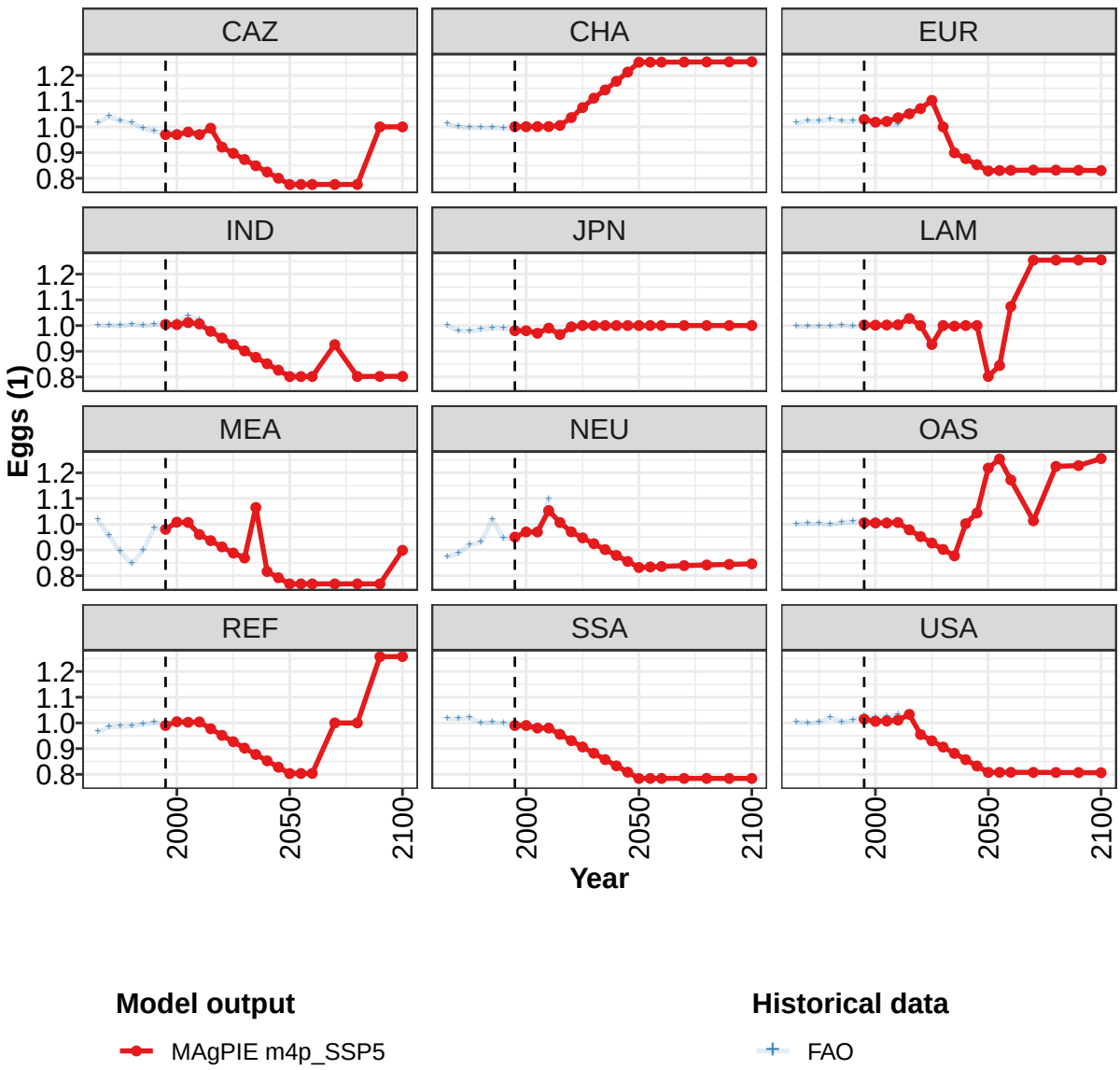
1.004
1.003
1.002
1.001
1.000
0.999
Eggs (1)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



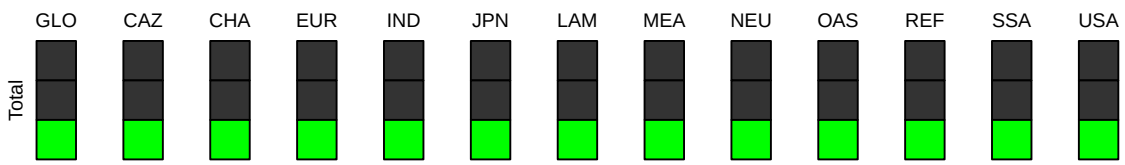


Figure 531: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Eggs (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.97	0.97	0.98	0.97	0.99	0.92	0.90	0.87	0.85	0.82	0.80
CHA	1.00	1.00	1.00	1.00	1.01	1.04	1.08	1.11	1.14	1.18	1.21
EUR	1.03	1.02	1.02	1.04	1.05	1.07	1.10	1.00	0.90	0.88	0.85
IND	1.00	1.00	1.01	1.01	0.98	0.95	0.93	0.90	0.88	0.85	0.83
JPN	0.98	0.98	0.97	0.99	0.97	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.00	1.00	1.00	1.00	1.03	1.00	0.93	1.00	1.00	1.00	1.00
MEA	0.98	1.01	1.01	0.96	0.94	0.91	0.89	0.87	1.07	0.82	0.79
NEU	0.95	0.97	0.97	1.05	1.01	0.97	0.95	0.92	0.90	0.88	0.86
OAS	1.01	1.01	1.00	1.01	0.98	0.95	0.93	0.90	0.88	1.00	1.04
REF	0.99	1.00	1.00	1.00	0.98	0.95	0.93	0.90	0.88	0.85	0.83
SSA	0.99	0.99	0.98	0.98	0.96	0.93	0.91	0.88	0.86	0.83	0.81
USA	1.01	1.01	1.01	1.01	1.03	0.95	0.93	0.91	0.88	0.86	0.83

Table 1992: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Eggs (1) [PART 1/2]

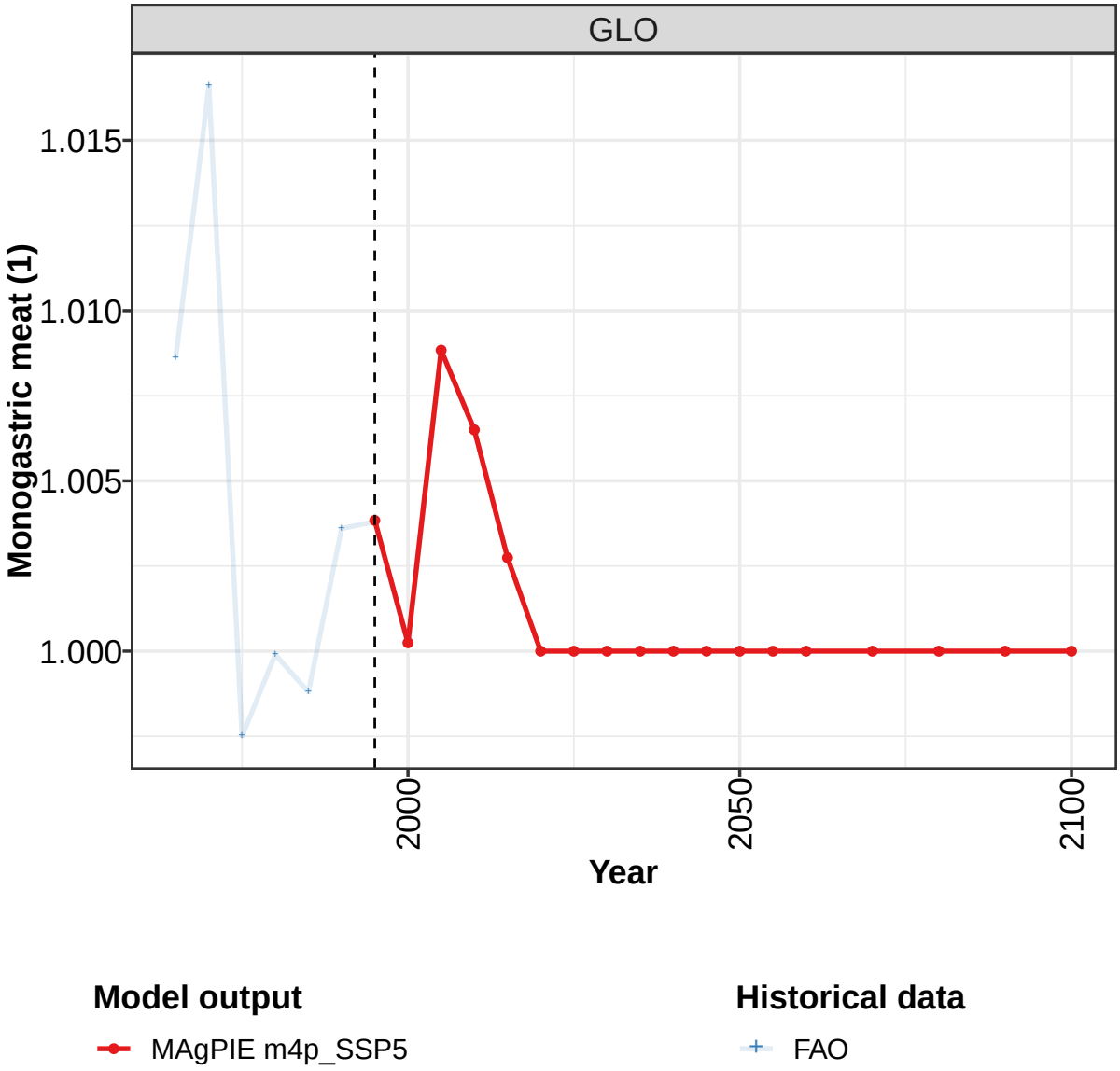
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.78	0.78	0.78	0.78	0.78	1.00	1.00
CHA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
EUR	0.83	0.83	0.83	0.83	0.83	0.83	0.83
IND	0.80	0.80	0.80	0.93	0.80	0.80	0.80
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	0.80	0.84	1.07	1.25	1.25	1.25	1.26
MEA	0.77	0.77	0.77	0.77	0.77	0.77	0.90
NEU	0.83	0.83	0.84	0.84	0.84	0.84	0.85
OAS	1.22	1.25	1.17	1.01	1.23	1.23	1.26
REF	0.80	0.80	0.80	1.00	1.00	1.26	1.26
SSA	0.78	0.78	0.78	0.78	0.78	0.78	0.78
USA	0.81	0.81	0.81	0.81	0.81	0.81	0.81

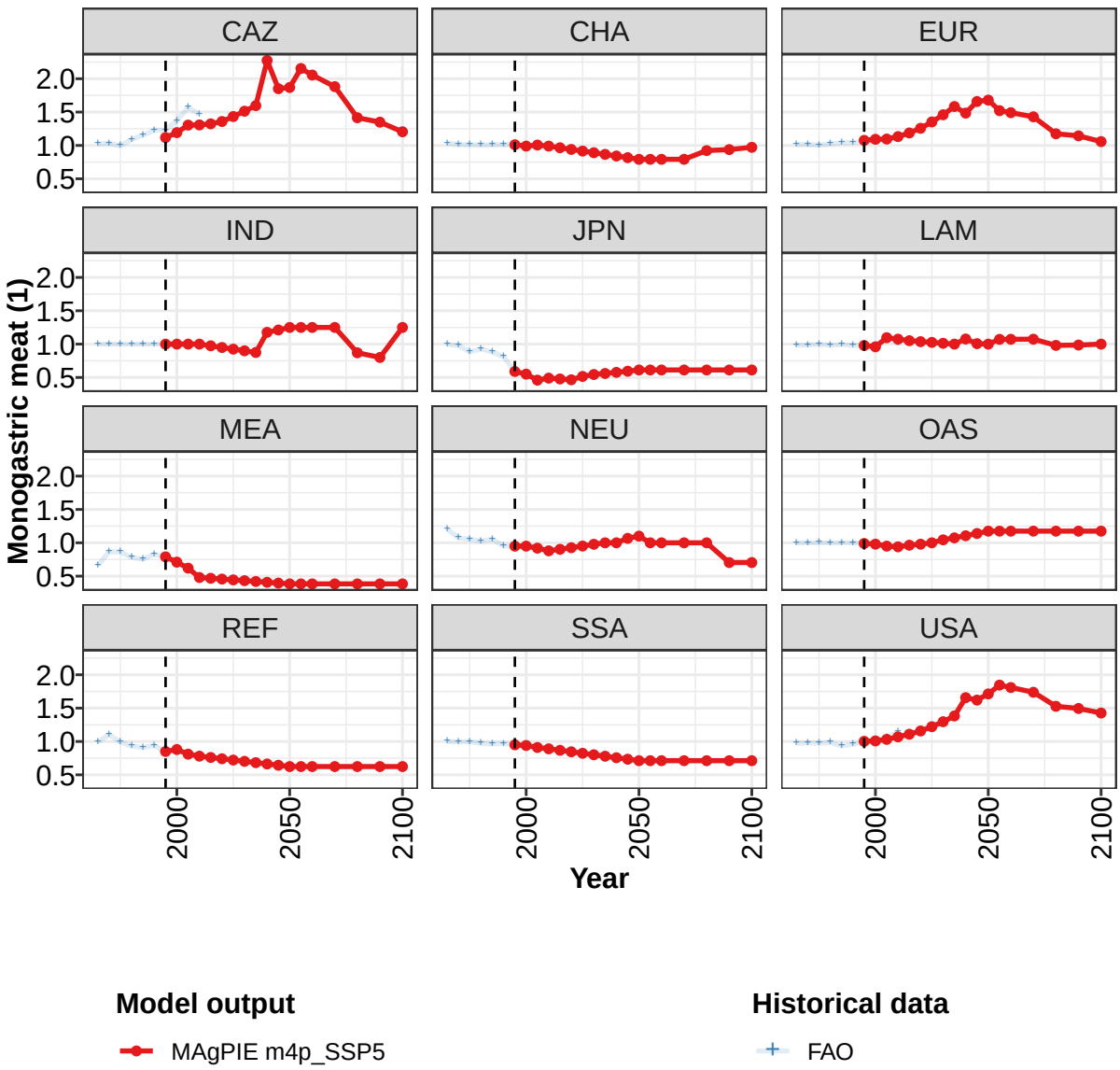
Table 1993: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Eggs (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.02	1.04	1.02	1.02	0.99	0.98	0.97	0.97	0.98	0.97
CHA	1.01	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
EUR	1.01	1.02	1.02	1.03	1.02	1.02	1.02	1.01	1.01	1.01
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.01	1.04	1.02
JPN	1.00	0.98	0.98	0.98	0.99	0.99	0.98	0.98	0.97	0.99
LAM	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MEA	1.02	0.95	0.89	0.85	0.90	0.98	0.98	1.00	1.00	0.96
NEU	0.87	0.89	0.92	0.93	1.02	0.94	0.95	0.97	0.97	1.10
OAS	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01
REF	0.97	0.98	0.99	0.99	0.99	1.00	0.99	1.00	1.00	1.00
SSA	1.02	1.02	1.02	1.00	1.00	1.00	0.99	0.99	0.98	0.98
USA	1.00	1.00	1.00	1.02	1.00	1.01	1.03	1.02	1.02	1.03

Table 1994: FAO — Trade—Self-sufficiency—Livestock products—Eggs (1)

59.3.3 Monogastric meat





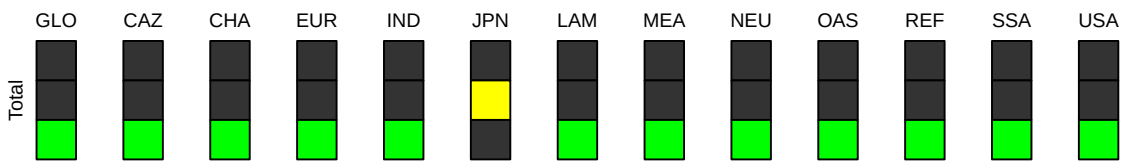


Figure 532: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Monogastric meat (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.00	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.12	1.19	1.30	1.31	1.32	1.36	1.43	1.51	1.60	2.27	1.85
CHA	1.01	0.99	1.01	0.99	0.97	0.94	0.92	0.89	0.87	0.84	0.82
EUR	1.08	1.09	1.10	1.13	1.19	1.26	1.35	1.46	1.58	1.48	1.66
IND	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	1.18	1.21
JPN	0.59	0.55	0.46	0.49	0.48	0.47	0.52	0.54	0.56	0.58	0.59
LAM	0.98	0.96	1.10	1.07	1.05	1.04	1.03	1.01	1.00	1.08	1.01
MEA	0.79	0.71	0.62	0.48	0.47	0.46	0.44	0.43	0.42	0.41	0.40
NEU	0.95	0.95	0.92	0.88	0.90	0.93	0.95	0.98	1.00	1.00	1.07
OAS	0.99	0.98	0.95	0.94	0.96	0.98	1.00	1.04	1.07	1.11	1.14
REF	0.85	0.88	0.81	0.78	0.76	0.74	0.72	0.70	0.68	0.66	0.64
SSA	0.95	0.94	0.91	0.89	0.87	0.85	0.82	0.80	0.78	0.76	0.73
USA	1.00	1.01	1.03	1.07	1.11	1.16	1.22	1.30	1.38	1.66	1.62

Table 1995: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Monogastric meat (1) [PART 1/2]

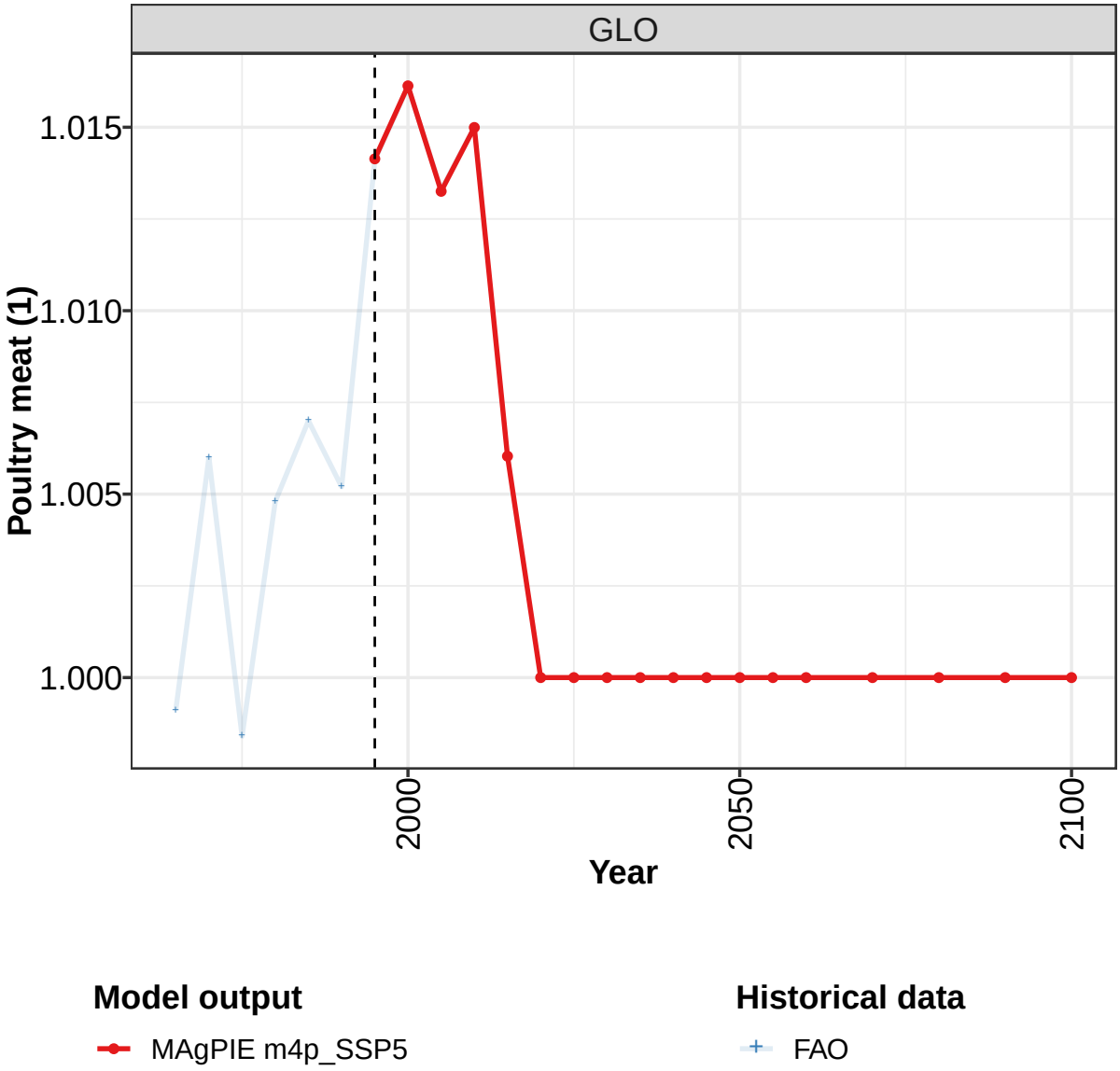
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.87	2.15	2.06	1.88	1.42	1.35	1.20
CHA	0.79	0.79	0.79	0.79	0.92	0.94	0.97
EUR	1.68	1.52	1.49	1.43	1.17	1.14	1.06
IND	1.25	1.25	1.25	1.25	0.87	0.80	1.25
JPN	0.61	0.61	0.61	0.61	0.61	0.61	0.61
LAM	1.00	1.07	1.07	1.07	0.98	0.99	1.00
MEA	0.38	0.38	0.38	0.38	0.38	0.38	0.38
NEU	1.10	1.00	1.00	1.00	1.00	0.70	0.70
OAS	1.17	1.18	1.17	1.17	1.18	1.18	1.17
REF	0.62	0.62	0.62	0.62	0.62	0.62	0.62
SSA	0.71	0.71	0.71	0.71	0.71	0.71	0.71
USA	1.71	1.85	1.81	1.74	1.53	1.49	1.43

Table 1996: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Monogastric meat (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.01	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.01
CAZ	1.03	1.03	1.00	1.09	1.15	1.23	1.23	1.37	1.57	1.47
CHA	1.03	1.02	1.01	1.01	1.01	1.01	1.02	0.99	1.00	0.99
EUR	1.01	1.01	1.01	1.02	1.04	1.04	1.06	1.07	1.06	1.11
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	1.00	0.98	0.88	0.93	0.88	0.81	0.59	0.55	0.46	0.49
LAM	0.98	0.99	1.00	0.98	0.99	0.98	0.98	0.96	1.11	1.01
MEA	0.66	0.87	0.86	0.78	0.75	0.83	0.79	0.71	0.62	0.48
NEU	1.21	1.07	1.06	1.03	1.05	0.95	0.95	0.95	0.92	0.88
OAS	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.98	0.95	0.94
REF	0.99	1.10	0.99	0.93	0.91	0.94	0.85	0.88	0.81	0.78
SSA	1.00	0.99	1.00	0.97	0.96	0.97	0.95	0.94	0.91	0.89
USA	0.97	0.98	0.97	0.98	0.94	0.96	1.00	1.02	1.06	1.14

Table 1997: FAO — Trade—Self-sufficiency—Livestock products—Monogastric meat (1)

59.3.4 Poultry meat



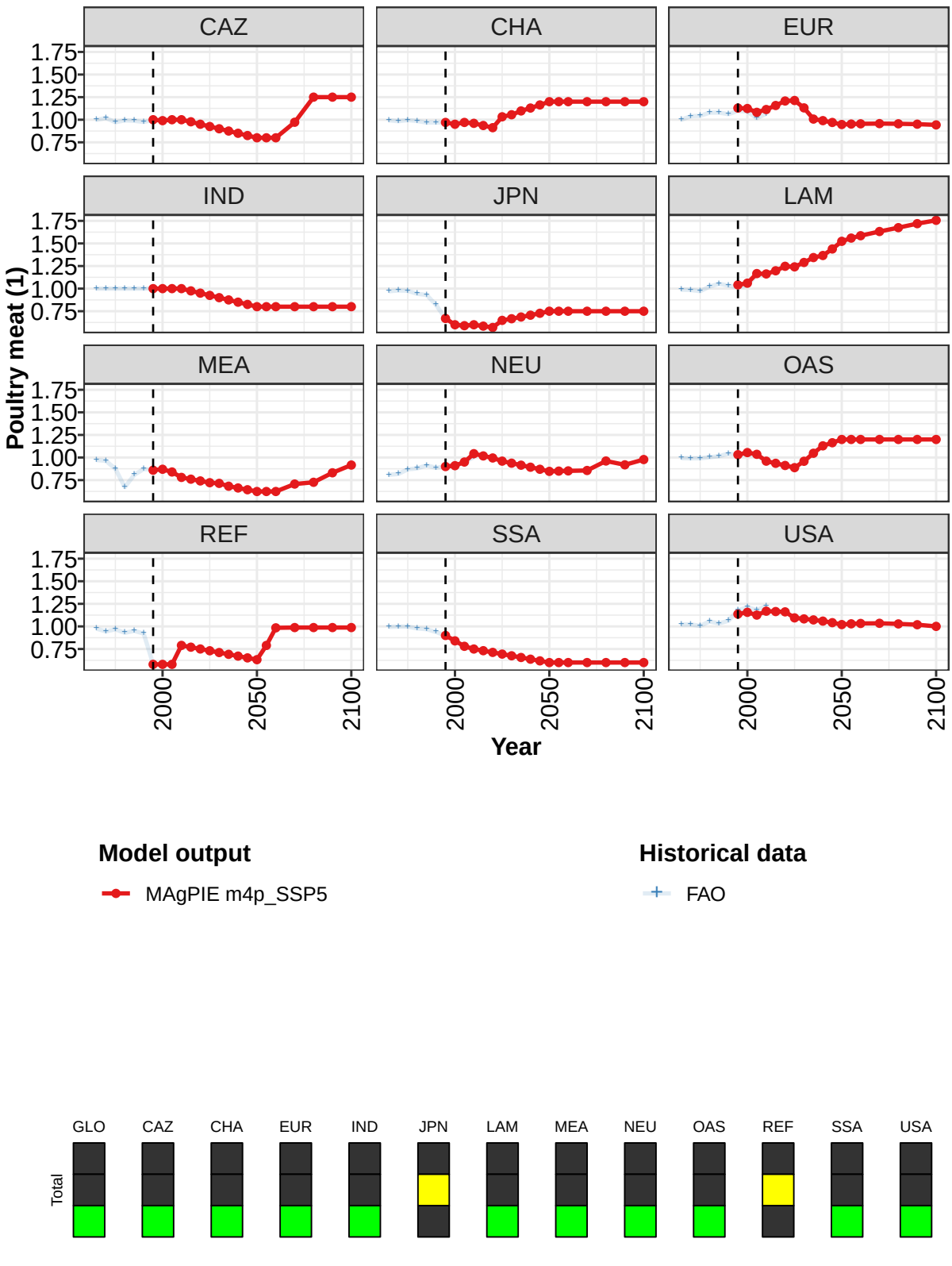


Figure 533: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Poultry meat (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.01	1.02	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	0.99	1.00	1.00	0.98	0.95	0.93	0.90	0.88	0.85	0.82
CHA	0.97	0.95	0.97	0.96	0.94	0.91	1.03	1.06	1.10	1.13	1.16
EUR	1.13	1.12	1.08	1.11	1.16	1.21	1.21	1.13	1.01	0.99	0.97
IND	1.00	1.00	1.00	1.00	0.98	0.95	0.93	0.90	0.87	0.85	0.82
JPN	0.67	0.60	0.59	0.60	0.58	0.57	0.65	0.67	0.69	0.71	0.73
LAM	1.04	1.06	1.17	1.16	1.20	1.25	1.24	1.29	1.34	1.37	1.44
MEA	0.86	0.87	0.84	0.78	0.76	0.74	0.72	0.71	0.68	0.66	0.64
NEU	0.90	0.91	0.95	1.04	1.02	1.00	0.96	0.94	0.92	0.89	0.87
OAS	1.03	1.05	1.04	0.96	0.94	0.91	0.89	0.96	1.05	1.13	1.16
REF	0.58	0.58	0.58	0.79	0.77	0.75	0.73	0.71	0.69	0.67	0.65
SSA	0.90	0.84	0.78	0.75	0.73	0.71	0.69	0.68	0.66	0.64	0.62
USA	1.14	1.16	1.13	1.17	1.16	1.16	1.09	1.08	1.07	1.06	1.04

Table 1998: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Poultry meat (1) [PART 1/2]

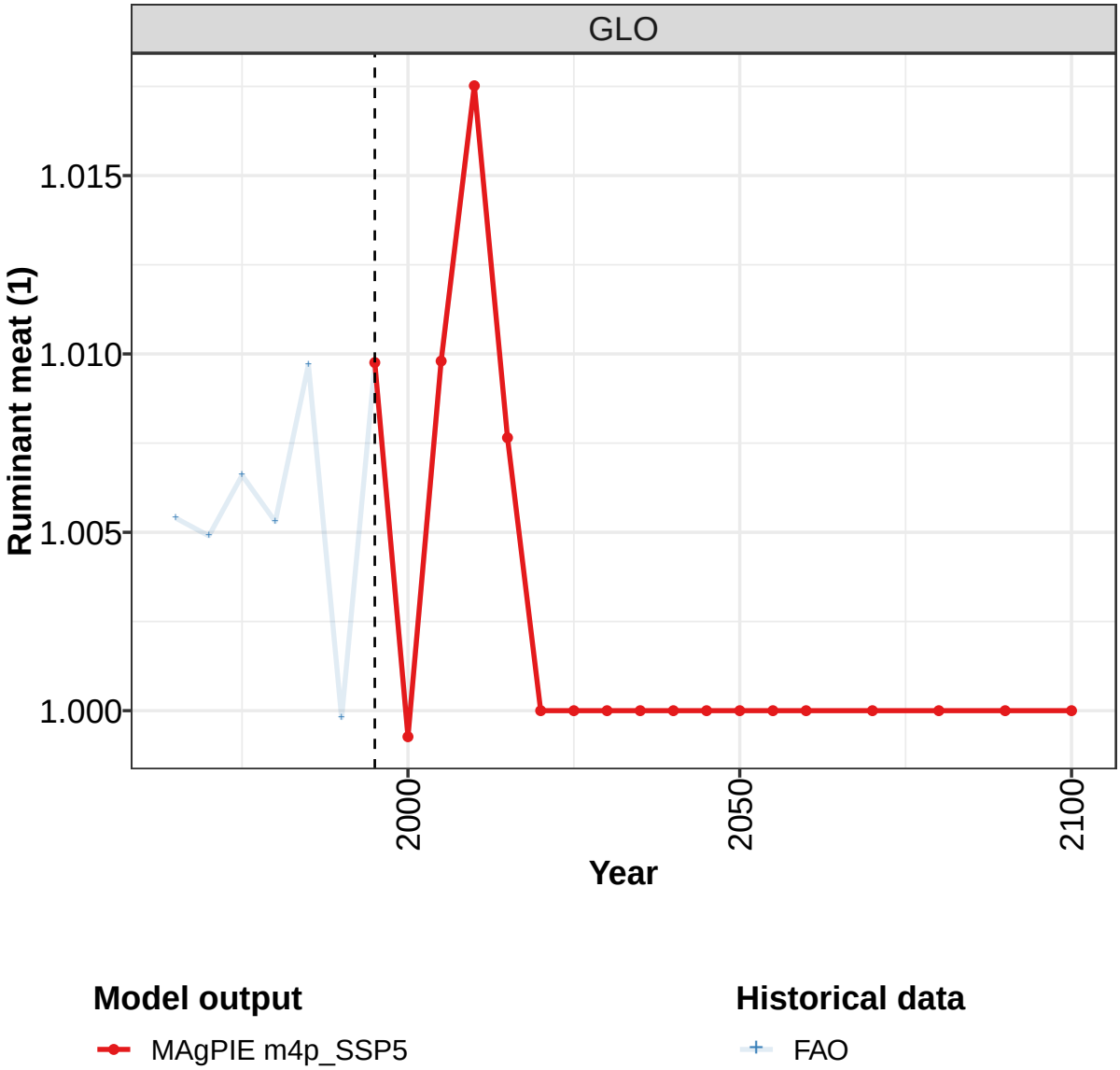
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.80	0.80	0.80	0.97	1.25	1.25	1.25
CHA	1.20	1.20	1.20	1.20	1.20	1.20	1.20
EUR	0.95	0.95	0.95	0.96	0.95	0.95	0.94
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	0.75	0.75	0.75	0.75	0.75	0.75	0.75
LAM	1.52	1.56	1.59	1.63	1.67	1.72	1.76
MEA	0.62	0.62	0.62	0.71	0.73	0.83	0.92
NEU	0.85	0.85	0.85	0.86	0.96	0.92	0.98
OAS	1.20	1.20	1.20	1.20	1.20	1.20	1.20
REF	0.63	0.79	0.98	0.99	0.99	0.99	0.99
SSA	0.60	0.60	0.60	0.60	0.60	0.60	0.60
USA	1.02	1.03	1.03	1.03	1.03	1.02	1.00

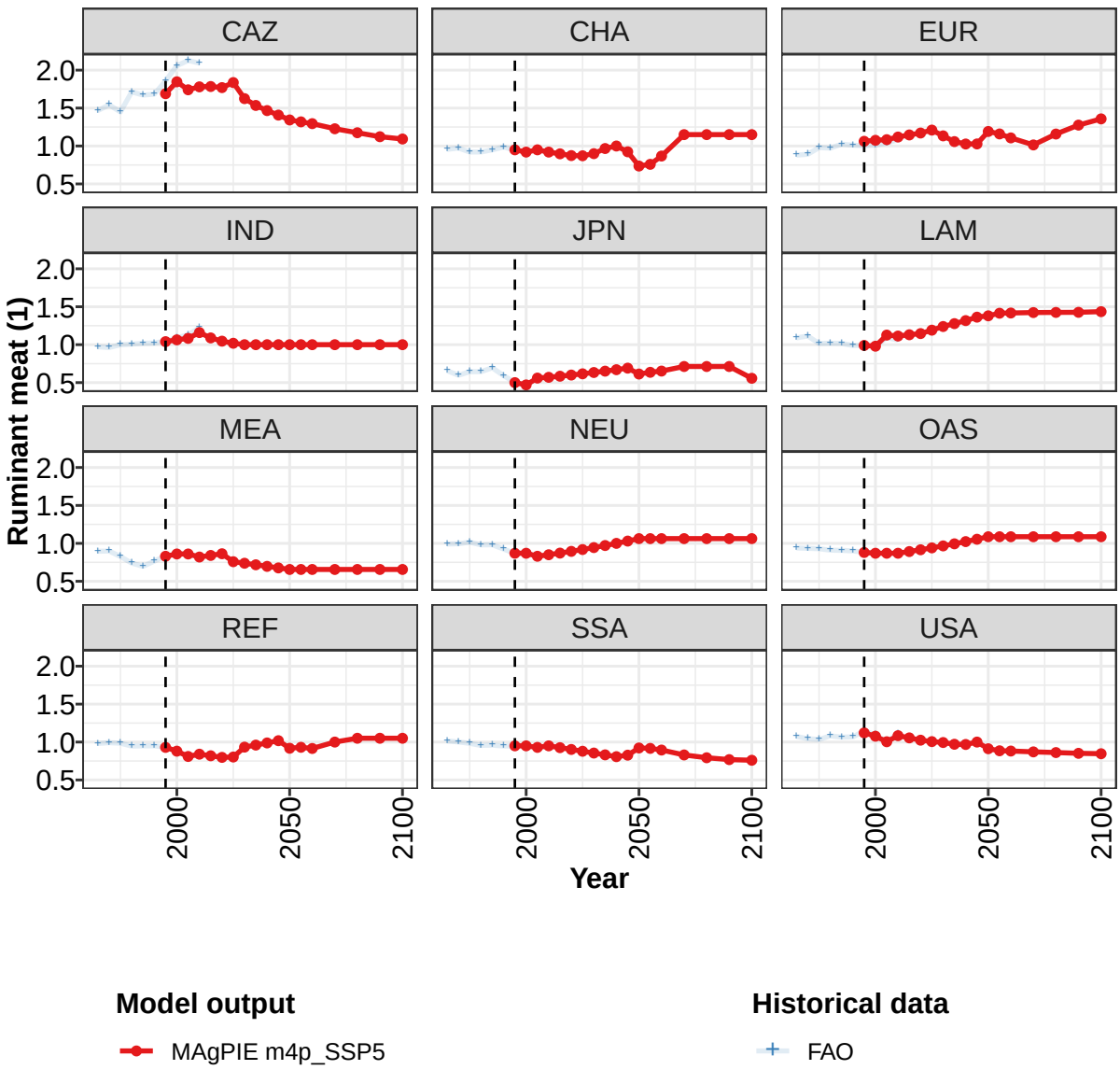
Table 1999: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Poultry meat (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.01	1.00	1.00	1.01	1.01	1.01	1.02	1.01	1.01
CAZ	1.00	1.02	0.97	0.99	0.99	0.98	1.00	0.99	1.00	1.00
CHA	0.99	0.98	1.00	0.99	0.97	0.97	0.97	0.95	0.97	0.96
EUR	1.00	1.04	1.04	1.08	1.08	1.06	1.10	1.09	1.02	1.07
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	0.97	0.98	0.98	0.94	0.93	0.82	0.67	0.60	0.58	0.60
LAM	0.99	0.98	0.97	1.02	1.05	1.03	1.02	1.03	1.16	1.14
MEA	0.97	0.96	0.88	0.67	0.81	0.87	0.86	0.87	0.84	0.78
NEU	0.81	0.82	0.87	0.88	0.91	0.89	0.90	0.91	0.95	1.00
OAS	0.99	0.99	0.99	1.00	1.01	1.04	1.03	1.04	1.02	0.96
REF	0.98	0.94	0.97	0.93	0.95	0.92	0.58	0.58	0.58	0.79
SSA	0.99	1.00	1.00	0.98	0.97	0.94	0.90	0.84	0.78	0.75
USA	1.02	1.02	1.01	1.05	1.03	1.06	1.18	1.21	1.18	1.23

Table 2000: FAO — Trade—Self-sufficiency—Livestock products—Poultry meat (1)

59.3.5 Ruminant meat





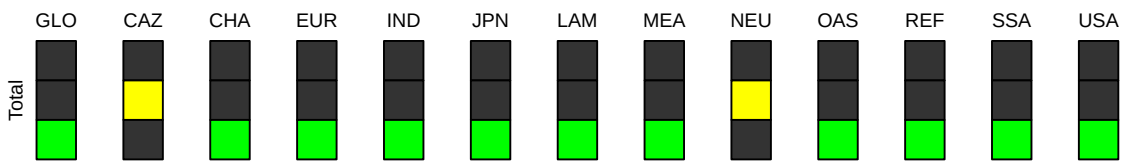


Figure 534: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Ruminant meat (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.01	1.00	1.01	1.02	1.01	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.69	1.85	1.74	1.78	1.78	1.77	1.84	1.62	1.53	1.47	1.41
CHA	0.95	0.92	0.95	0.92	0.90	0.87	0.87	0.90	0.97	1.00	0.92
EUR	1.06	1.08	1.08	1.12	1.15	1.17	1.21	1.13	1.06	1.03	1.03
IND	1.04	1.06	1.08	1.16	1.09	1.05	1.02	1.00	1.00	1.00	1.00
JPN	0.50	0.47	0.56	0.57	0.58	0.60	0.62	0.63	0.65	0.67	0.69
LAM	0.99	0.98	1.13	1.11	1.13	1.15	1.19	1.24	1.28	1.32	1.36
MEA	0.83	0.86	0.86	0.82	0.84	0.86	0.76	0.74	0.72	0.70	0.68
NEU	0.87	0.87	0.83	0.85	0.87	0.89	0.92	0.94	0.97	1.00	1.03
OAS	0.88	0.87	0.87	0.87	0.89	0.92	0.94	0.97	0.99	1.02	1.05
REF	0.93	0.88	0.81	0.84	0.82	0.80	0.80	0.93	0.96	0.99	1.02
SSA	0.95	0.95	0.93	0.95	0.93	0.90	0.88	0.85	0.83	0.81	0.83
USA	1.12	1.08	1.00	1.08	1.05	1.02	1.01	0.99	0.97	0.97	1.00

Table 2001: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Ruminant meat (1) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.34	1.32	1.29	1.23	1.17	1.12	1.09
CHA	0.74	0.76	0.87	1.15	1.15	1.15	1.15
EUR	1.19	1.16	1.11	1.01	1.16	1.28	1.36
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	0.61	0.64	0.65	0.71	0.71	0.71	0.56
LAM	1.38	1.41	1.42	1.42	1.43	1.43	1.44
MEA	0.66	0.66	0.66	0.66	0.66	0.66	0.66
NEU	1.06	1.06	1.06	1.06	1.06	1.06	1.06
OAS	1.09	1.09	1.09	1.09	1.09	1.09	1.09
REF	0.92	0.93	0.92	1.00	1.05	1.05	1.05
SSA	0.92	0.92	0.89	0.83	0.79	0.77	0.76
USA	0.91	0.89	0.88	0.87	0.86	0.85	0.85

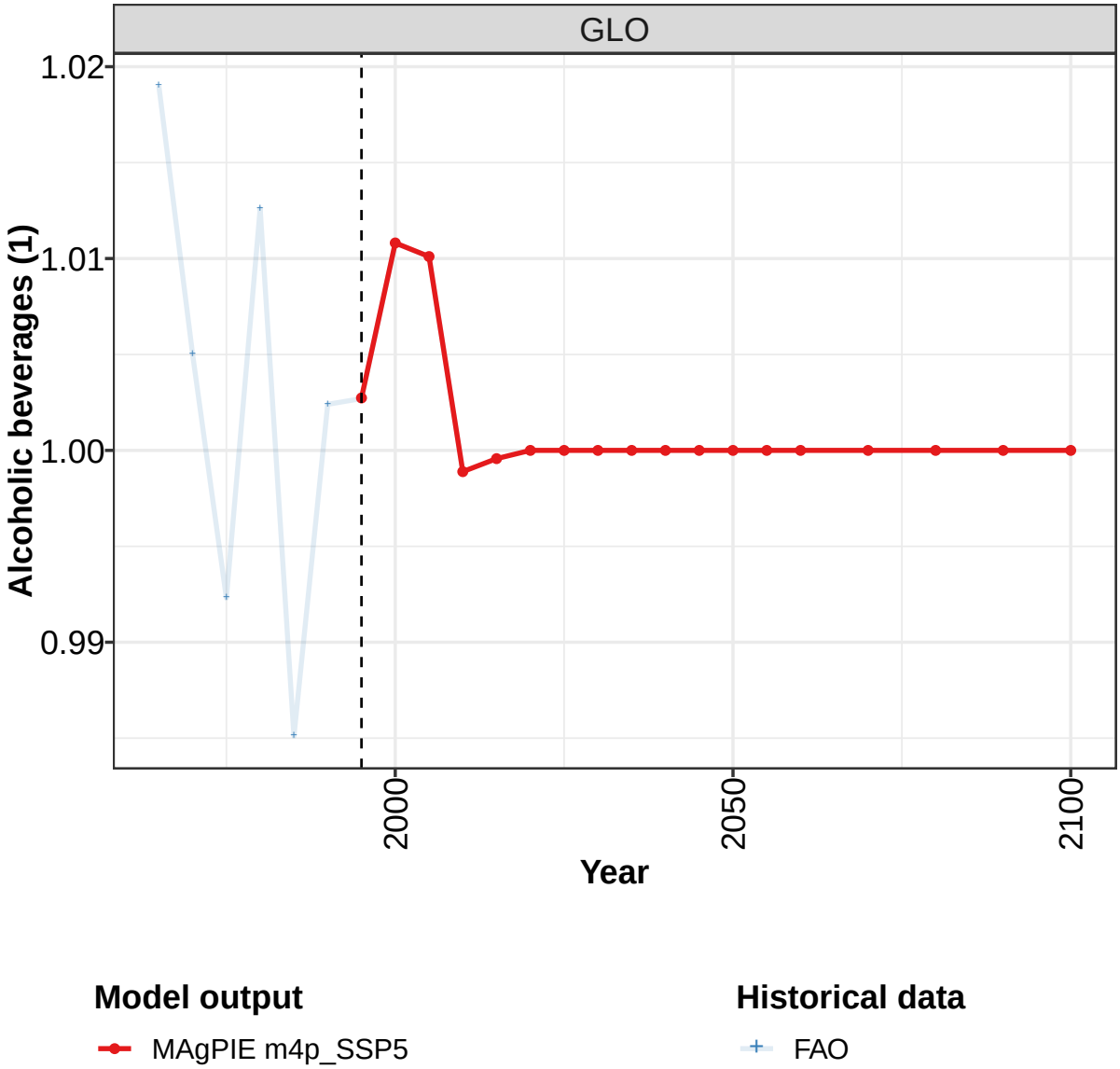
Table 2002: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Livestock products—Ruminant meat (1) [PART 2/2]

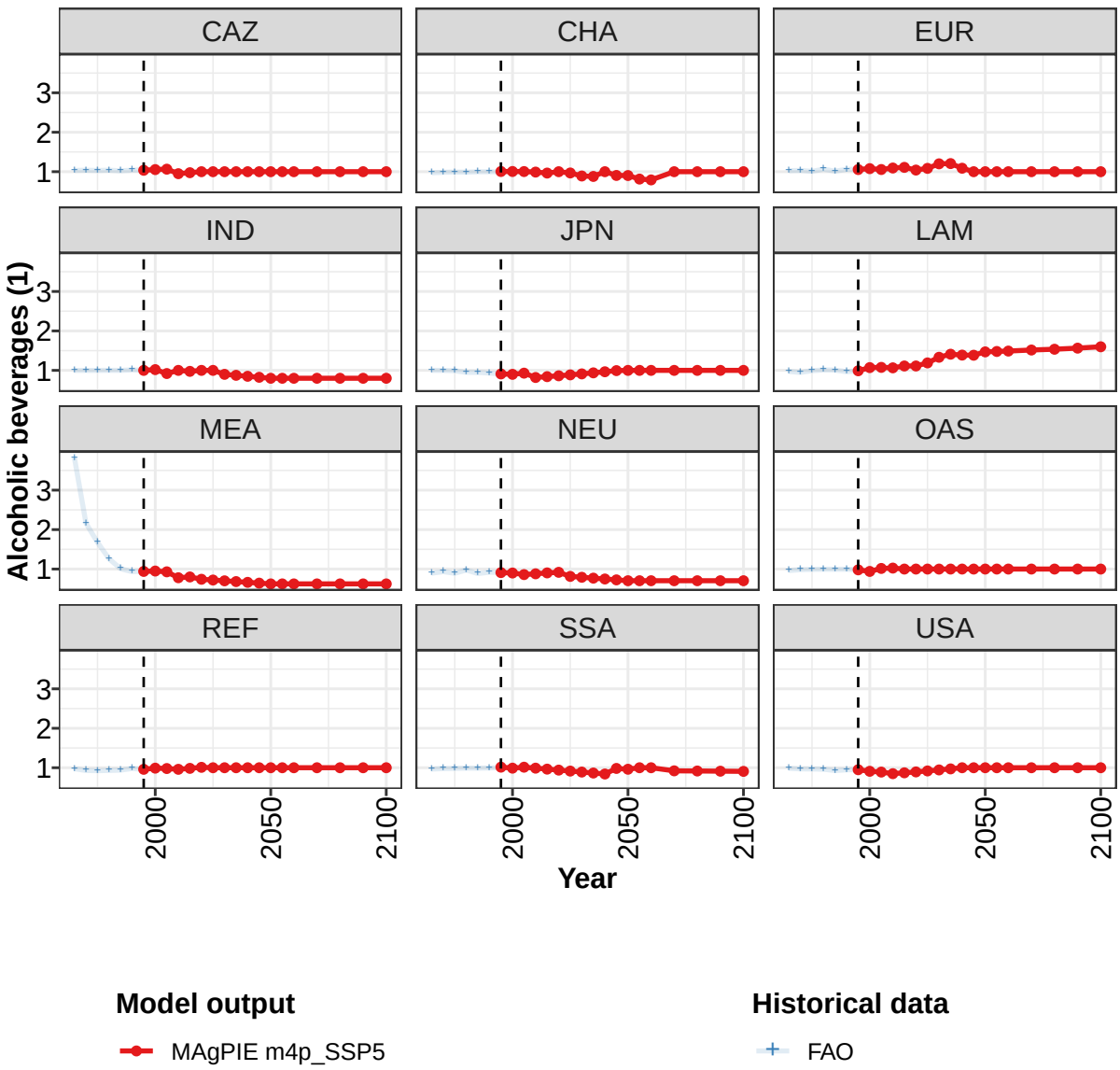
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.01	1.00	1.01	1.01	1.01	1.00	1.01	1.00	1.01	1.02
CAZ	1.47	1.54	1.45	1.71	1.67	1.68	1.86	2.06	2.13	2.09
CHA	0.96	0.97	0.92	0.92	0.95	0.99	0.95	0.92	0.95	0.92
EUR	0.88	0.89	0.98	0.97	1.02	1.01	1.00	1.01	1.04	1.08
IND	0.97	0.96	1.00	1.01	1.02	1.02	1.05	1.09	1.13	1.22
JPN	0.66	0.60	0.64	0.64	0.70	0.59	0.50	0.47	0.56	0.57
LAM	1.09	1.11	1.02	1.02	1.02	0.99	0.99	0.98	1.09	1.06
MEA	0.90	0.90	0.83	0.74	0.70	0.77	0.83	0.86	0.86	0.82
NEU	0.99	0.99	1.02	0.98	0.98	0.92	0.87	0.87	0.83	0.85
OAS	0.94	0.93	0.93	0.91	0.91	0.90	0.88	0.87	0.87	0.87
REF	0.98	0.99	0.98	0.95	0.95	0.95	0.93	0.88	0.81	0.84
SSA	1.01	1.00	0.98	0.96	0.96	0.95	0.95	0.95	0.93	0.95
USA	1.07	1.04	1.03	1.08	1.06	1.07	1.15	1.10	1.00	1.11

Table 2003: FAO — Trade—Self-sufficiency—Livestock products—Ruminant meat (1)

59.4 Secondary products

59.4.1 Alcoholic beverages





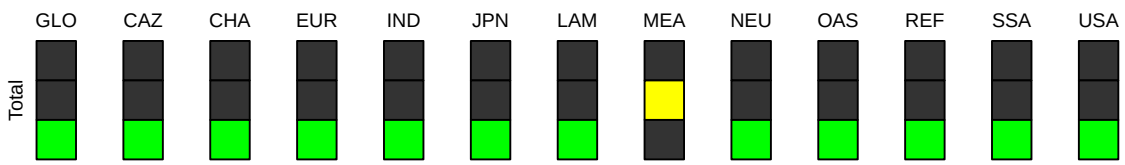


Figure 535: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Alcoholic beverages (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.04	1.05	1.06	0.95	0.97	1.00	1.00	1.00	1.00	1.00	1.00
CHA	1.01	1.01	1.00	0.99	0.97	1.00	0.97	0.89	0.88	1.00	0.91
EUR	1.05	1.08	1.06	1.09	1.11	1.04	1.08	1.20	1.21	1.09	1.00
IND	1.00	1.02	0.92	1.00	0.97	1.00	1.00	0.90	0.88	0.85	0.82
JPN	0.91	0.90	0.93	0.82	0.84	0.86	0.89	0.91	0.94	0.96	0.99
LAM	0.99	1.07	1.08	1.06	1.11	1.11	1.19	1.33	1.41	1.39	1.38
MEA	0.94	0.95	0.93	0.78	0.80	0.74	0.72	0.70	0.68	0.66	0.64
NEU	0.91	0.90	0.86	0.88	0.90	0.92	0.81	0.79	0.77	0.75	0.73
OAS	0.98	0.94	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00
REF	0.96	0.99	0.98	0.96	0.98	1.01	1.00	1.00	1.00	1.00	1.00
SSA	1.02	0.99	1.01	0.99	0.97	0.94	0.92	0.89	0.87	0.84	0.98
USA	0.95	0.91	0.89	0.85	0.87	0.89	0.92	0.94	0.97	1.00	1.00

Table 2004: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Alcoholic beverages (1) [PART 1/2]

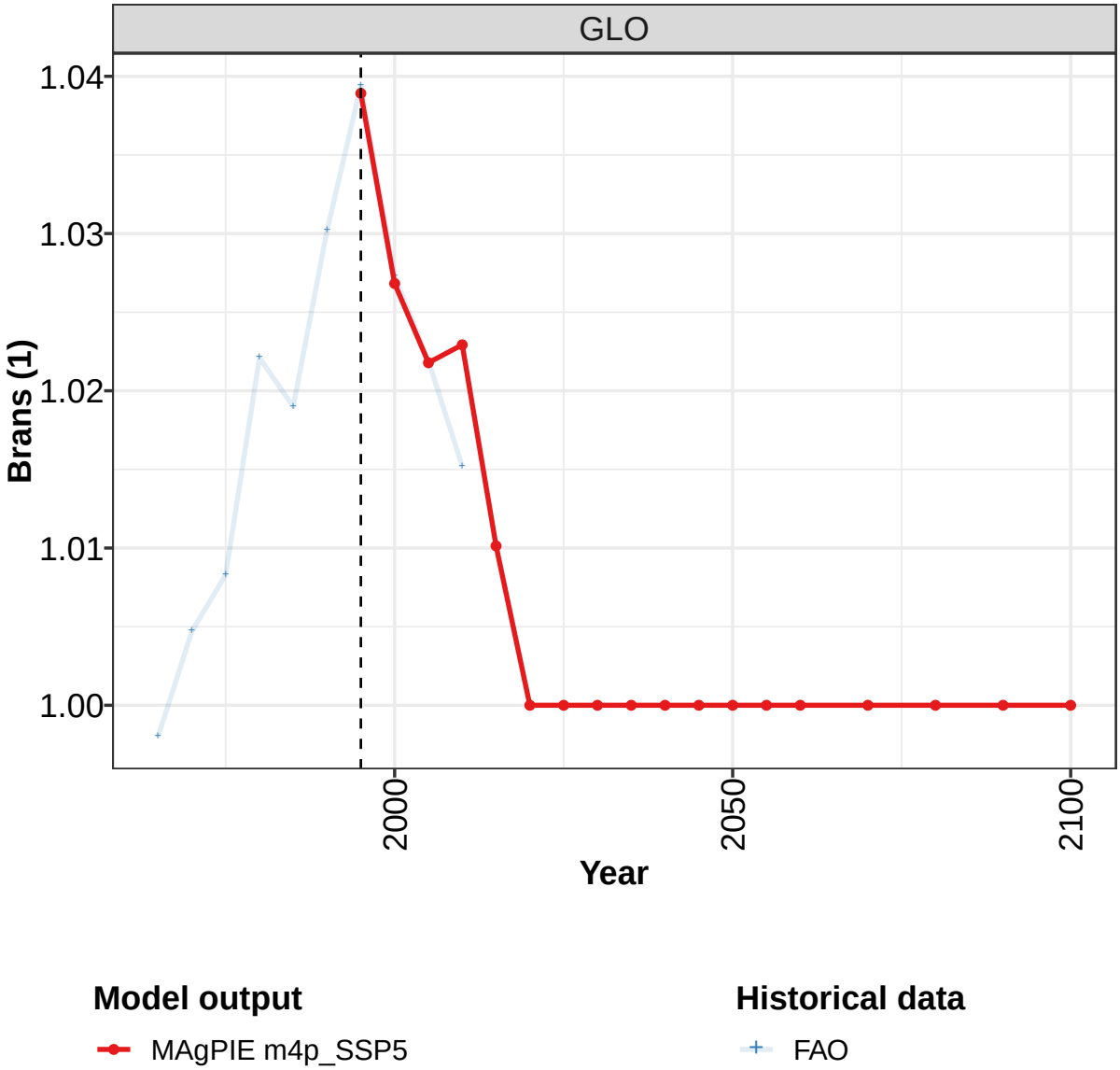
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CHA	0.90	0.81	0.79	1.00	1.00	1.00	1.00
EUR	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.47	1.48	1.49	1.52	1.54	1.56	1.60
MEA	0.62	0.62	0.62	0.62	0.62	0.62	0.62
NEU	0.70	0.70	0.70	0.70	0.70	0.70	0.70
OAS	1.00	1.00	1.00	1.00	1.00	1.00	1.00
REF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SSA	0.96	1.00	1.00	0.92	0.92	0.91	0.91
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00

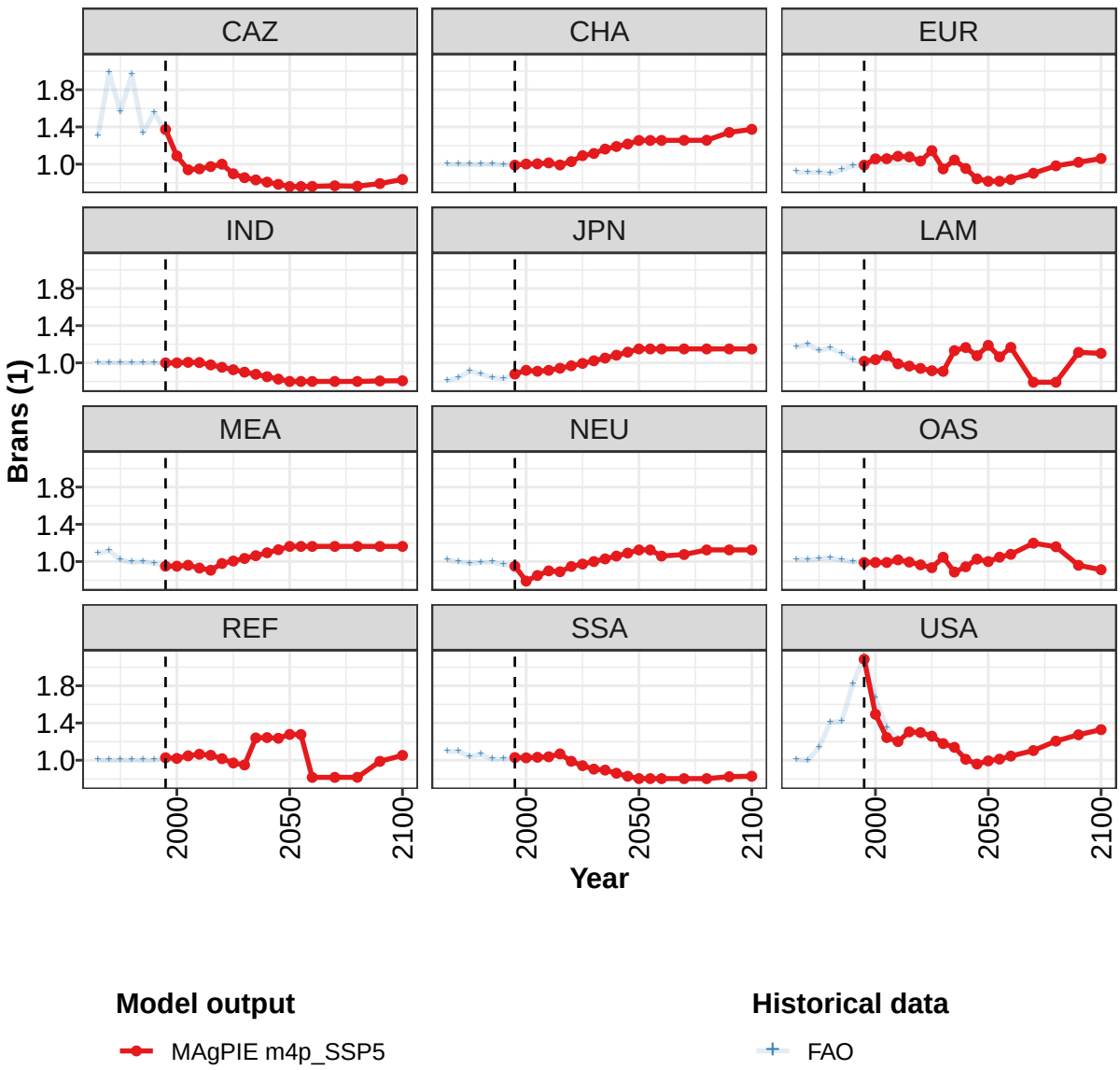
Table 2005: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Alcoholic beverages (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.02	1.00	0.99	1.01	0.99	1.00	1.00	1.01	1.01	1.00
CAZ	1.03	1.04	1.03	1.04	1.02	1.04	1.05	1.05	1.08	0.95
CHA	0.97	0.98	0.99	0.99	1.00	1.00	1.00	1.00	1.00	0.99
EUR	1.02	1.03	1.01	1.06	1.01	1.06	1.06	1.09	1.05	1.07
IND	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.02	0.92	1.00
JPN	1.00	1.00	0.99	0.95	0.95	0.93	0.91	0.90	0.93	0.82
LAM	0.97	0.95	0.99	1.01	1.01	0.97	0.99	1.06	1.10	1.09
MEA	3.82	2.16	1.68	1.26	1.01	0.93	0.94	0.95	0.93	0.78
NEU	0.90	0.93	0.89	0.98	0.89	0.92	0.91	0.90	0.86	0.88
OAS	0.96	0.98	0.99	1.00	0.99	1.00	0.98	0.94	1.03	1.00
REF	0.98	0.93	0.93	0.93	0.94	0.98	0.96	0.99	0.98	0.96
SSA	0.97	0.98	0.98	0.99	0.99	0.99	1.00	0.99	1.00	0.99
USA	0.99	0.97	0.97	0.96	0.93	0.95	0.95	0.91	0.89	0.85

Table 2006: FAO — Trade—Self-sufficiency—Secondary products—Alcoholic beverages (1)

59.4.2 Brans


GLO
1.04
1.03
1.02
1.01
1.00
Brans (1)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



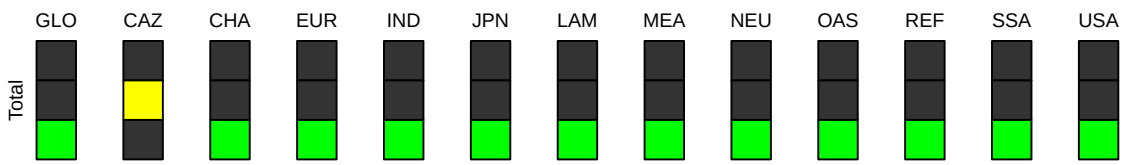


Figure 536: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Brans (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.04	1.03	1.02	1.02	1.01	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.37	1.09	0.94	0.95	0.97	1.00	0.90	0.85	0.83	0.81	0.78
CHA	0.99	1.00	1.00	1.01	0.99	1.03	1.09	1.12	1.16	1.19	1.22
EUR	0.99	1.06	1.06	1.09	1.08	1.03	1.15	0.95	1.04	0.95	0.84
IND	1.00	1.00	1.01	1.00	0.98	0.95	0.93	0.90	0.88	0.85	0.83
JPN	0.88	0.92	0.91	0.92	0.94	0.97	0.99	1.02	1.05	1.08	1.12
LAM	1.02	1.04	1.08	0.99	0.97	0.94	0.92	0.91	1.13	1.16	1.08
MEA	0.95	0.95	0.96	0.93	0.91	0.98	1.01	1.03	1.06	1.09	1.13
NEU	0.95	0.79	0.85	0.90	0.89	0.95	0.97	1.00	1.03	1.06	1.09
OAS	0.99	0.99	0.99	1.02	0.99	0.96	0.93	1.05	0.89	0.94	1.03
REF	1.03	1.02	1.05	1.06	1.05	1.02	0.97	0.95	1.24	1.24	1.24
SSA	1.03	1.03	1.03	1.04	1.07	0.99	0.94	0.90	0.89	0.86	0.83
USA	2.08	1.49	1.24	1.20	1.30	1.30	1.26	1.18	1.14	1.01	0.96

Table 2007: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Brans (1) [PART 1/2]

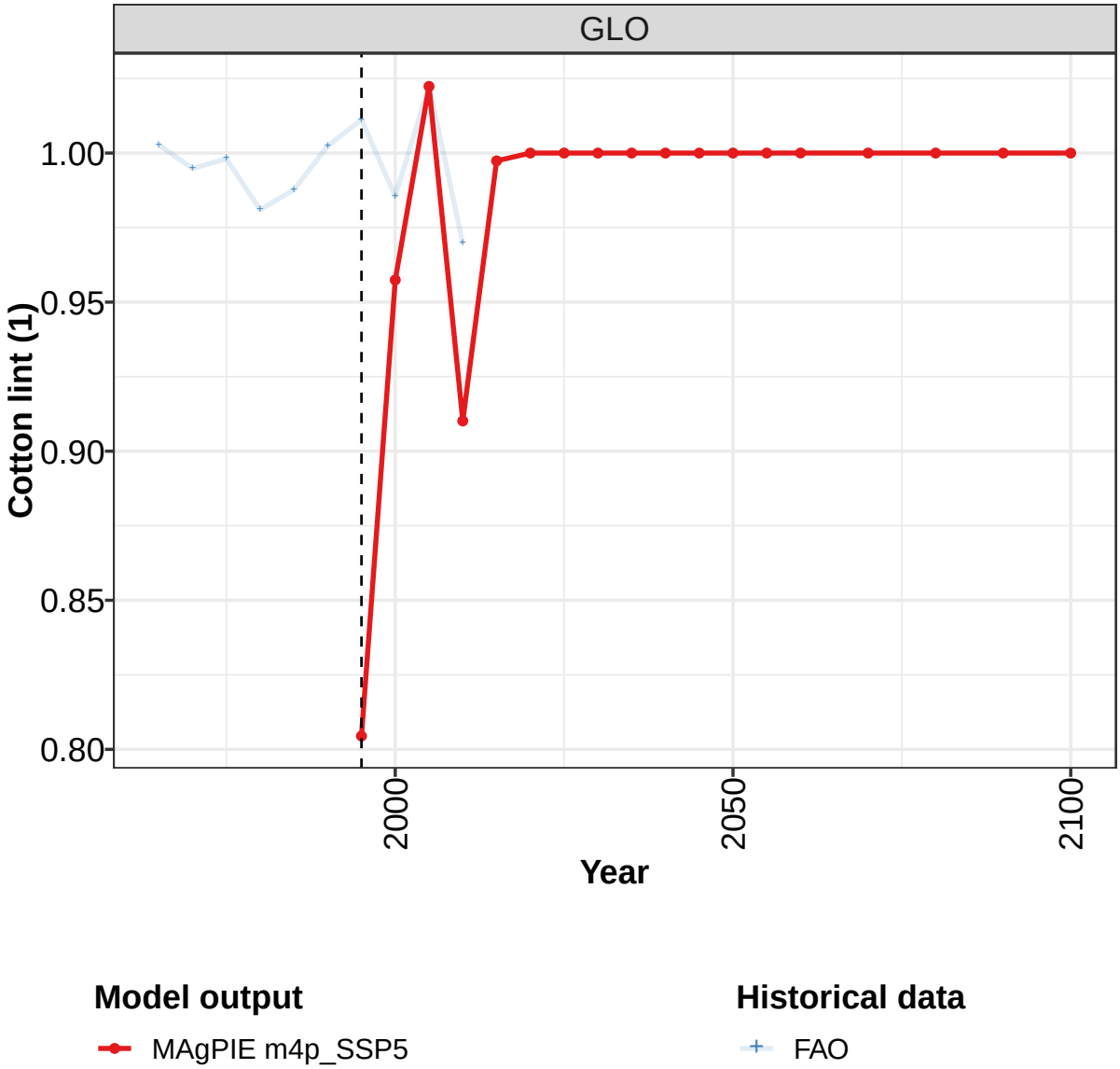
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.76	0.76	0.76	0.77	0.76	0.79	0.84
CHA	1.25	1.26	1.26	1.26	1.26	1.34	1.37
EUR	0.82	0.82	0.84	0.90	0.98	1.02	1.06
IND	0.80	0.80	0.80	0.80	0.80	0.81	0.81
JPN	1.15	1.15	1.15	1.15	1.15	1.15	1.15
LAM	1.19	1.06	1.17	0.79	0.79	1.11	1.10
MEA	1.16	1.16	1.16	1.16	1.16	1.16	1.16
NEU	1.13	1.12	1.06	1.08	1.12	1.12	1.12
OAS	1.00	1.05	1.08	1.20	1.16	0.96	0.91
REF	1.28	1.28	0.82	0.82	0.82	0.99	1.05
SSA	0.80	0.80	0.80	0.80	0.80	0.82	0.83
USA	0.99	1.01	1.04	1.10	1.21	1.27	1.33

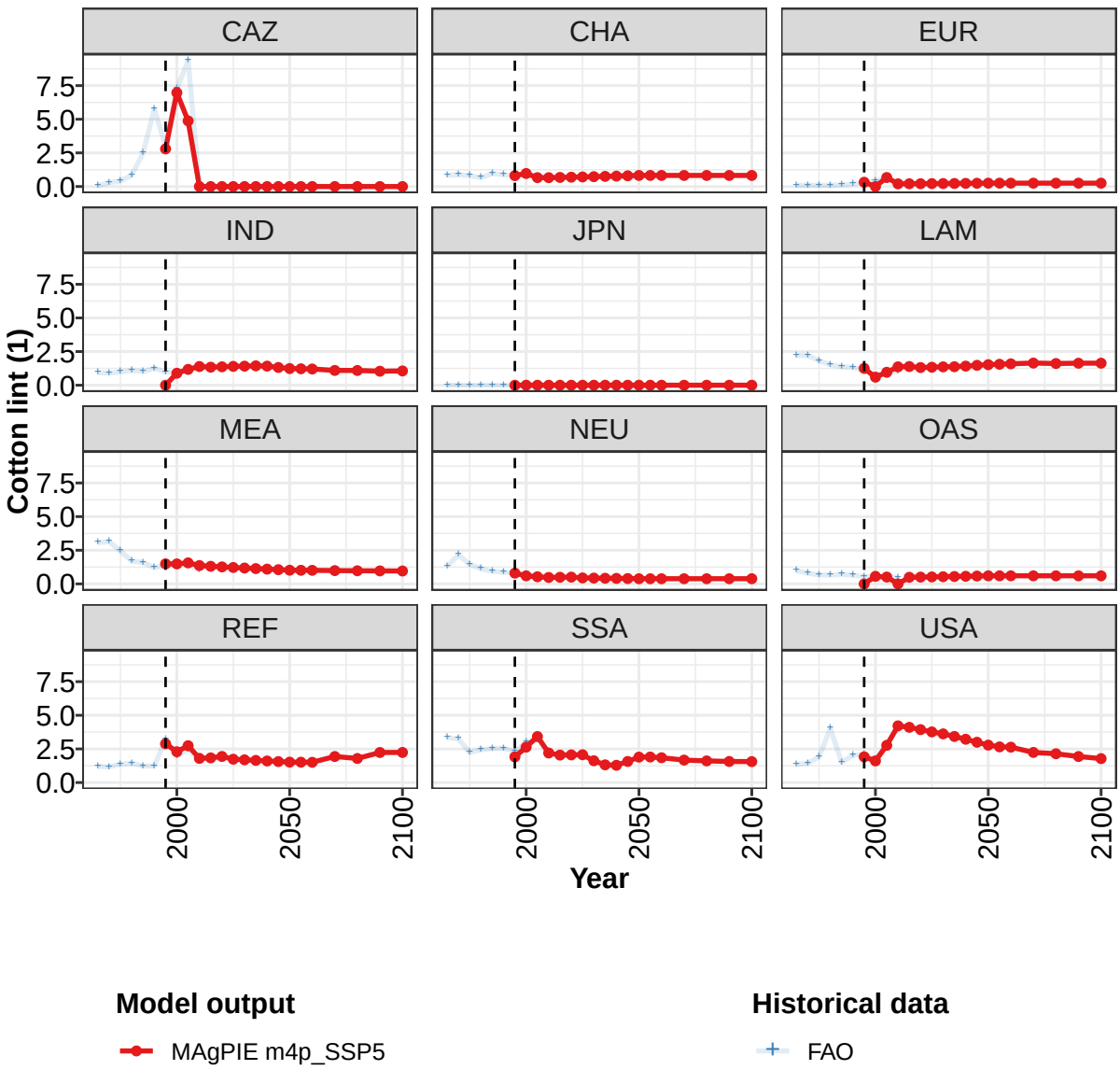
Table 2008: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Brans (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	1.00	1.01	1.02	1.02	1.03	1.04	1.03	1.02	1.02
CAZ	1.30	1.98	1.56	1.96	1.34	1.56	1.34	1.07	0.94	0.95
CHA	1.00	1.00	1.00	1.00	1.00	0.99	0.99	1.00	1.00	1.01
EUR	0.92	0.91	0.91	0.90	0.94	0.98	0.99	1.02	1.03	1.05
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
JPN	0.81	0.84	0.91	0.88	0.84	0.83	0.88	0.92	0.91	0.92
LAM	1.17	1.20	1.13	1.16	1.10	1.03	1.00	1.01	1.05	0.99
MEA	1.09	1.12	1.02	0.99	1.00	0.98	0.95	0.95	0.96	0.93
NEU	1.02	1.00	0.98	0.99	0.99	0.97	0.95	0.79	0.85	0.90
OAS	1.02	1.02	1.03	1.04	1.01	1.00	0.99	0.99	0.99	1.00
REF	1.00	1.00	1.00	1.00	1.00	1.00	1.02	1.02	1.06	1.06
SSA	1.09	1.10	1.04	1.06	1.01	1.01	1.02	1.02	1.03	1.03
USA	1.01	1.00	1.14	1.41	1.42	1.82	2.11	1.66	1.35	1.22

Table 2009: FAO — Trade—Self-sufficiency—Secondary products—Brans (1)

59.4.3 Cotton lint





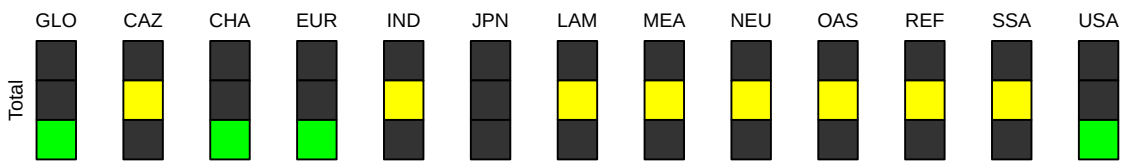


Figure 537: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Cotton lint (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.80	0.96	1.02	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	2.80	6.97	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.81	0.97	0.66	0.66	0.68	0.69	0.71	0.73	0.75	0.78	0.80
EUR	0.32	0.00	0.67	0.20	0.21	0.21	0.22	0.22	0.23	0.24	0.24
IND	0.00	0.89	1.18	1.39	1.34	1.37	1.40	1.42	1.44	1.42	1.32
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.25	0.60	0.96	1.37	1.39	1.31	1.34	1.36	1.38	1.42	1.48
MEA	1.49	1.49	1.56	1.37	1.31	1.26	1.22	1.18	1.14	1.10	1.06
NEU	0.80	0.60	0.53	0.48	0.49	0.50	0.44	0.43	0.42	0.41	0.40
OAS	0.00	0.56	0.51	0.00	0.49	0.51	0.52	0.53	0.55	0.56	0.58
REF	2.88	2.29	2.74	1.80	1.84	1.94	1.74	1.69	1.65	1.61	1.56
SSA	1.91	2.63	3.42	2.20	2.04	2.06	2.07	1.62	1.32	1.28	1.57
USA	1.91	1.61	2.77	4.22	4.11	3.94	3.77	3.62	3.43	3.22	3.00

Table 2010: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Cotton lint (1) [PART 1/2]

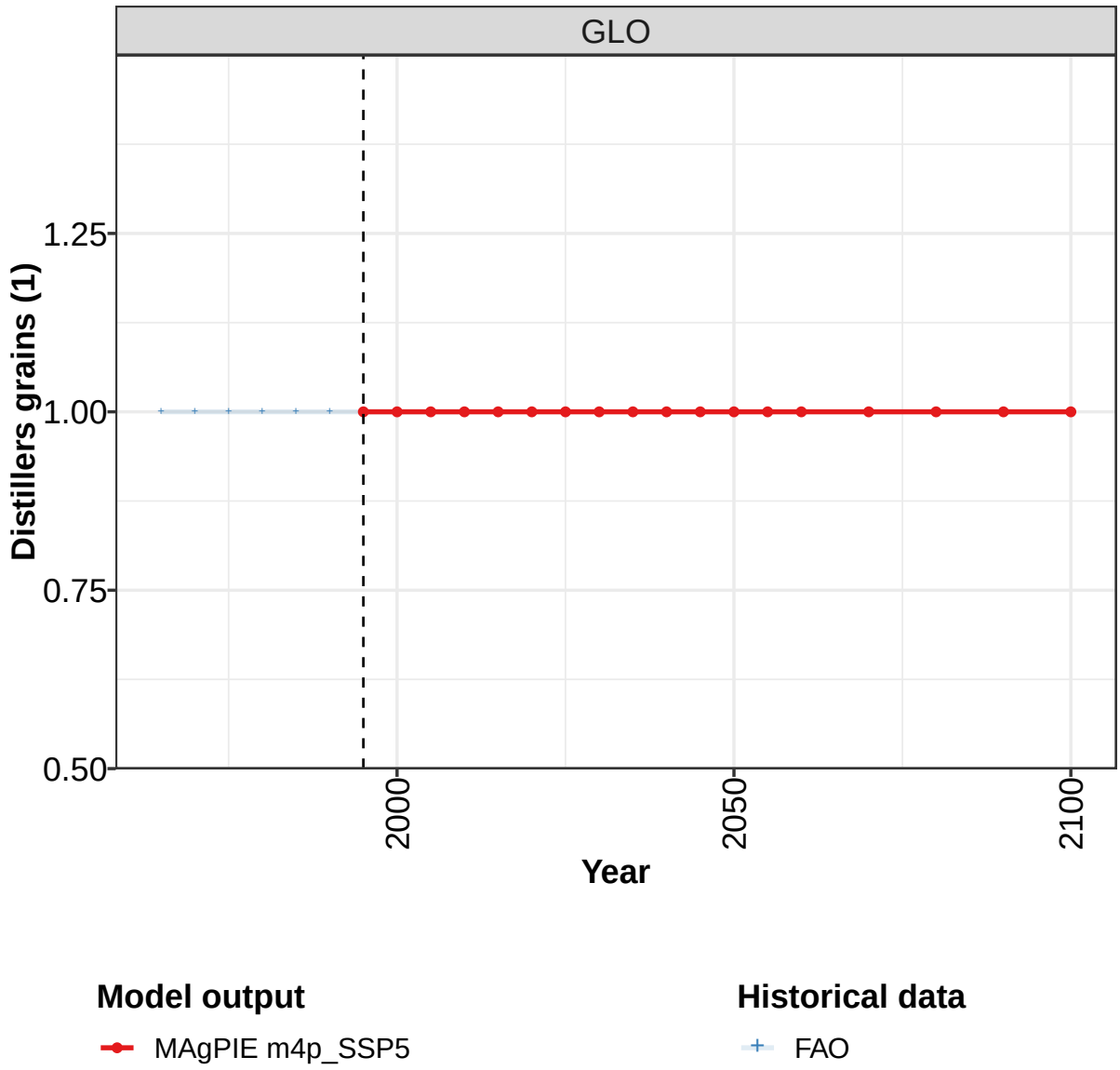
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.82	0.83	0.83	0.82	0.83	0.82	0.83
EUR	0.25	0.25	0.25	0.25	0.25	0.25	0.25
IND	1.24	1.22	1.20	1.10	1.10	1.04	1.06
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.53	1.56	1.59	1.65	1.61	1.63	1.64
MEA	1.02	1.01	1.01	0.99	0.97	0.97	0.96
NEU	0.38	0.38	0.38	0.38	0.38	0.38	0.38
OAS	0.60	0.60	0.60	0.60	0.60	0.60	0.60
REF	1.52	1.51	1.51	1.94	1.79	2.24	2.24
SSA	1.89	1.90	1.85	1.67	1.61	1.57	1.56
USA	2.78	2.65	2.63	2.24	2.14	1.94	1.78

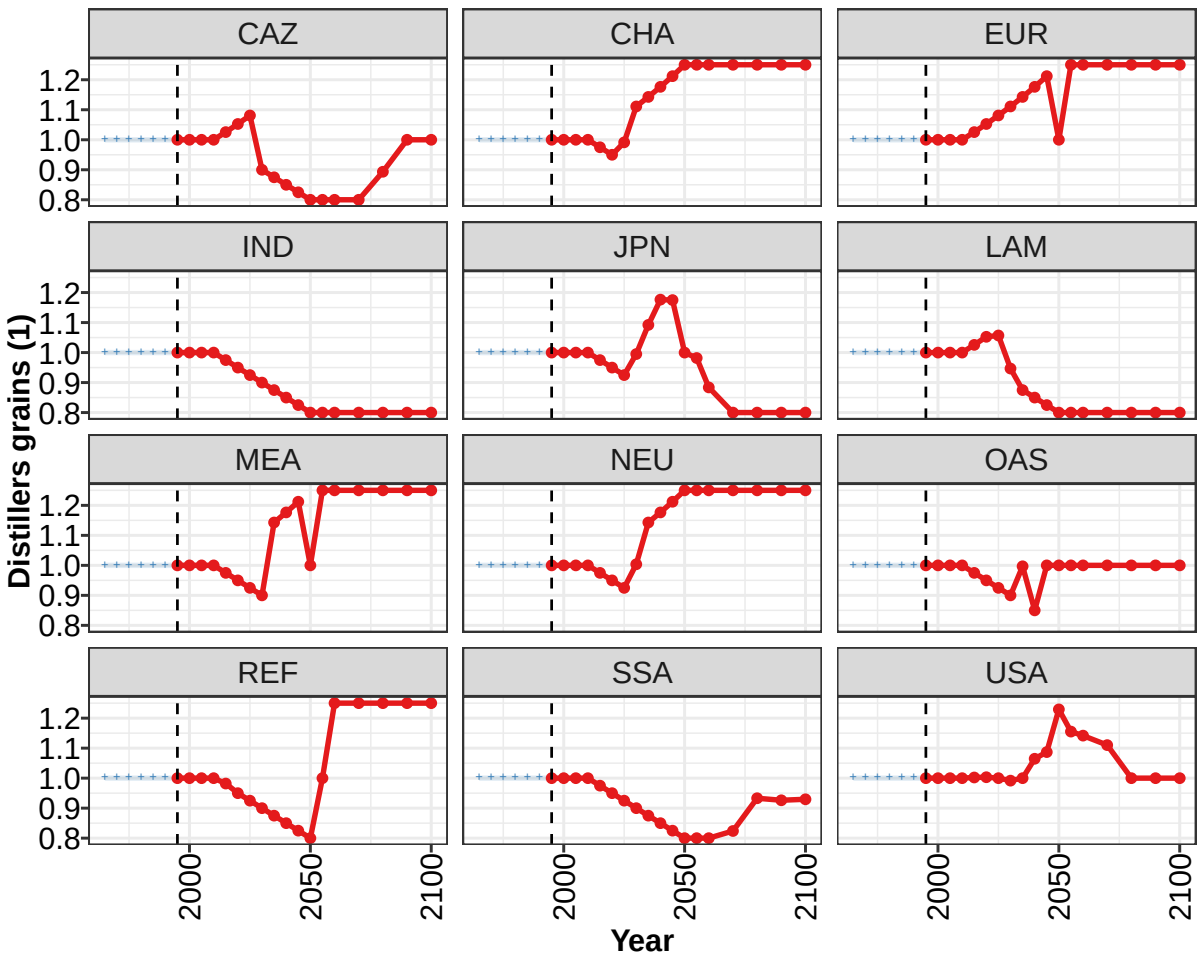
Table 2011: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Cotton lint (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.00	0.99	1.00	0.98	0.99	1.00	1.01	0.99	1.02	0.97
CAZ	0.06	0.28	0.41	0.84	2.47	5.75	2.98	7.25	9.37	0.00
CHA	0.84	0.87	0.81	0.66	0.96	0.87	0.81	0.97	0.66	0.66
EUR	0.09	0.09	0.09	0.09	0.12	0.18	0.32	0.41	0.67	0.20
IND	0.92	0.90	0.99	1.09	1.02	1.25	0.98	0.89	1.20	1.37
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	2.21	2.20	1.82	1.52	1.37	1.33	1.08	0.60	0.96	1.01
MEA	3.08	3.13	2.44	1.70	1.59	1.20	1.34	1.41	1.43	1.00
NEU	1.31	2.16	1.45	1.13	0.94	0.87	0.80	0.60	0.53	0.48
OAS	0.99	0.79	0.67	0.66	0.71	0.63	0.55	0.56	0.51	0.48
REF	1.19	1.17	1.37	1.43	1.23	1.23	3.22	1.99	2.48	1.65
SSA	3.34	3.25	2.23	2.44	2.53	2.55	2.30	2.99	3.32	2.09
USA	1.35	1.43	1.91	4.02	1.51	2.01	2.10	1.68	2.88	4.02

Table 2012: FAO — Trade—Self-sufficiency—Secondary products—Cotton lint (1)

59.4.4 Distillers grains





Model output

MAgPIE m4p_SSP5

Historical data

FAO

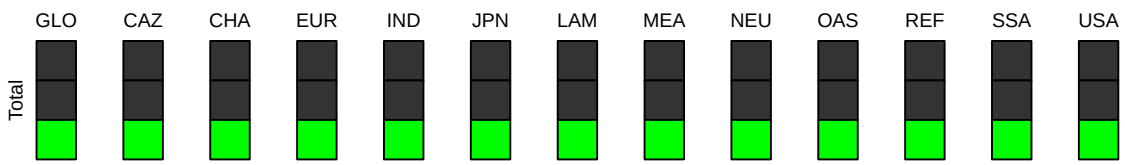


Figure 538: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Distillers grains (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.00	1.00	1.03	1.05	1.08	0.90	0.88	0.85	0.82
CHA	1.00	1.00	1.00	1.00	0.97	0.95	0.99	1.11	1.14	1.18	1.21
EUR	1.00	1.00	1.00	1.00	1.03	1.05	1.08	1.11	1.14	1.18	1.21
IND	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	0.85	0.82
JPN	1.00	1.00	1.00	1.00	0.97	0.95	0.93	1.00	1.09	1.18	1.18
LAM	1.00	1.00	1.00	1.00	1.03	1.05	1.06	0.95	0.87	0.85	0.83
MEA	1.00	1.00	1.00	1.00	0.97	0.95	0.92	0.90	1.14	1.18	1.21
NEU	1.00	1.00	1.00	1.00	0.98	0.95	0.93	1.00	1.14	1.18	1.21
OAS	1.00	1.00	1.00	1.00	0.98	0.95	0.93	0.90	1.00	0.85	1.00
REF	1.00	1.00	1.00	1.00	0.98	0.95	0.93	0.90	0.88	0.85	0.83
SSA	1.00	1.00	1.00	1.00	0.98	0.95	0.93	0.90	0.88	0.85	0.82
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.06	1.09

Table 2013: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Distillers grains (1) [PART 1/2]

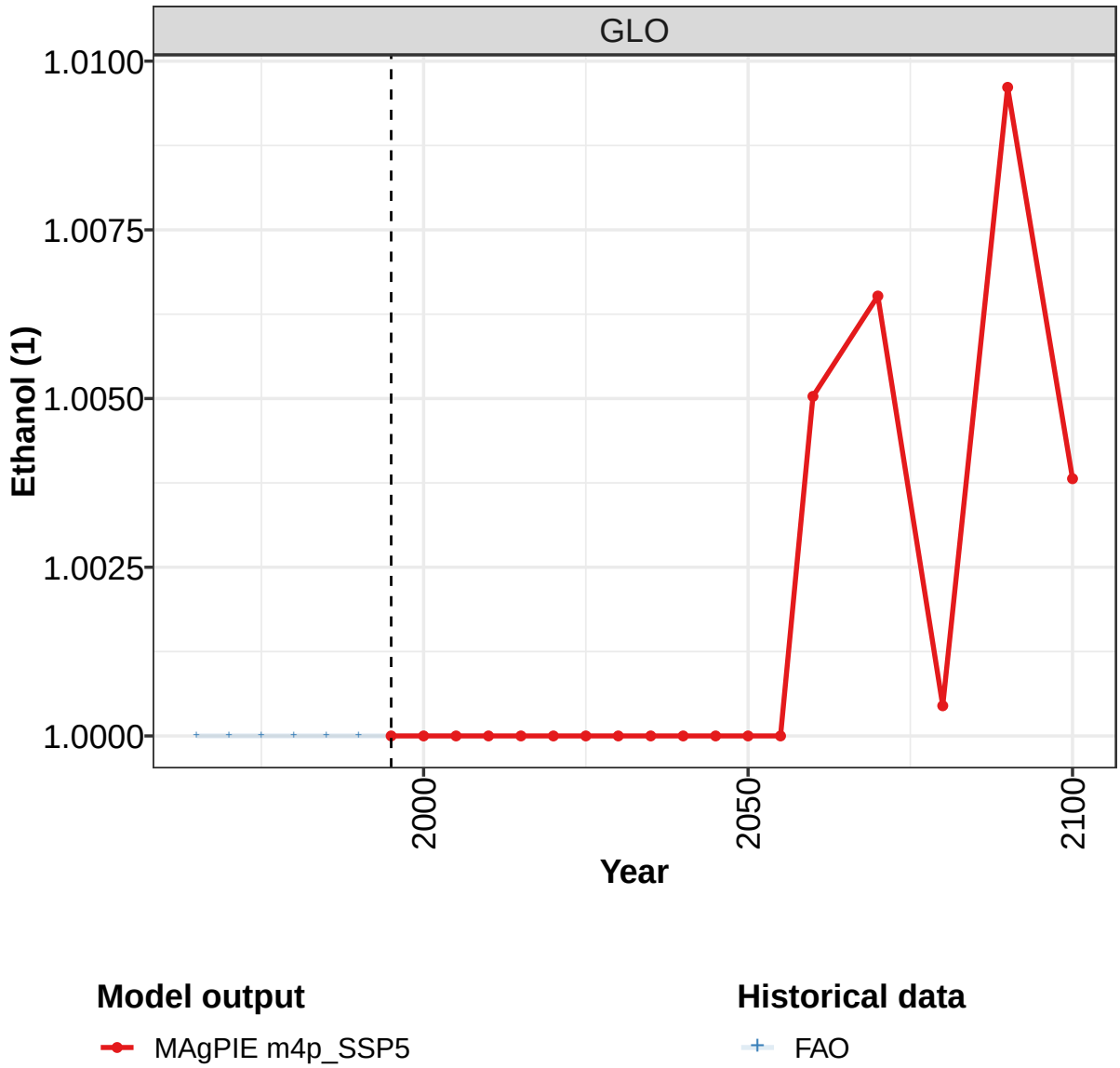
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.80	0.80	0.80	0.80	0.89	1.00	1.00
CHA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
EUR	1.00	1.25	1.25	1.25	1.25	1.25	1.25
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	1.00	0.98	0.88	0.80	0.80	0.80	0.80
LAM	0.80	0.80	0.80	0.80	0.80	0.80	0.80
MEA	1.00	1.25	1.25	1.25	1.25	1.25	1.25
NEU	1.25	1.25	1.25	1.25	1.25	1.25	1.25
OAS	1.00	1.00	1.00	1.00	1.00	1.00	1.00
REF	0.80	1.00	1.25	1.25	1.25	1.25	1.25
SSA	0.80	0.80	0.80	0.82	0.93	0.93	0.93
USA	1.23	1.16	1.14	1.11	1.00	1.00	1.00

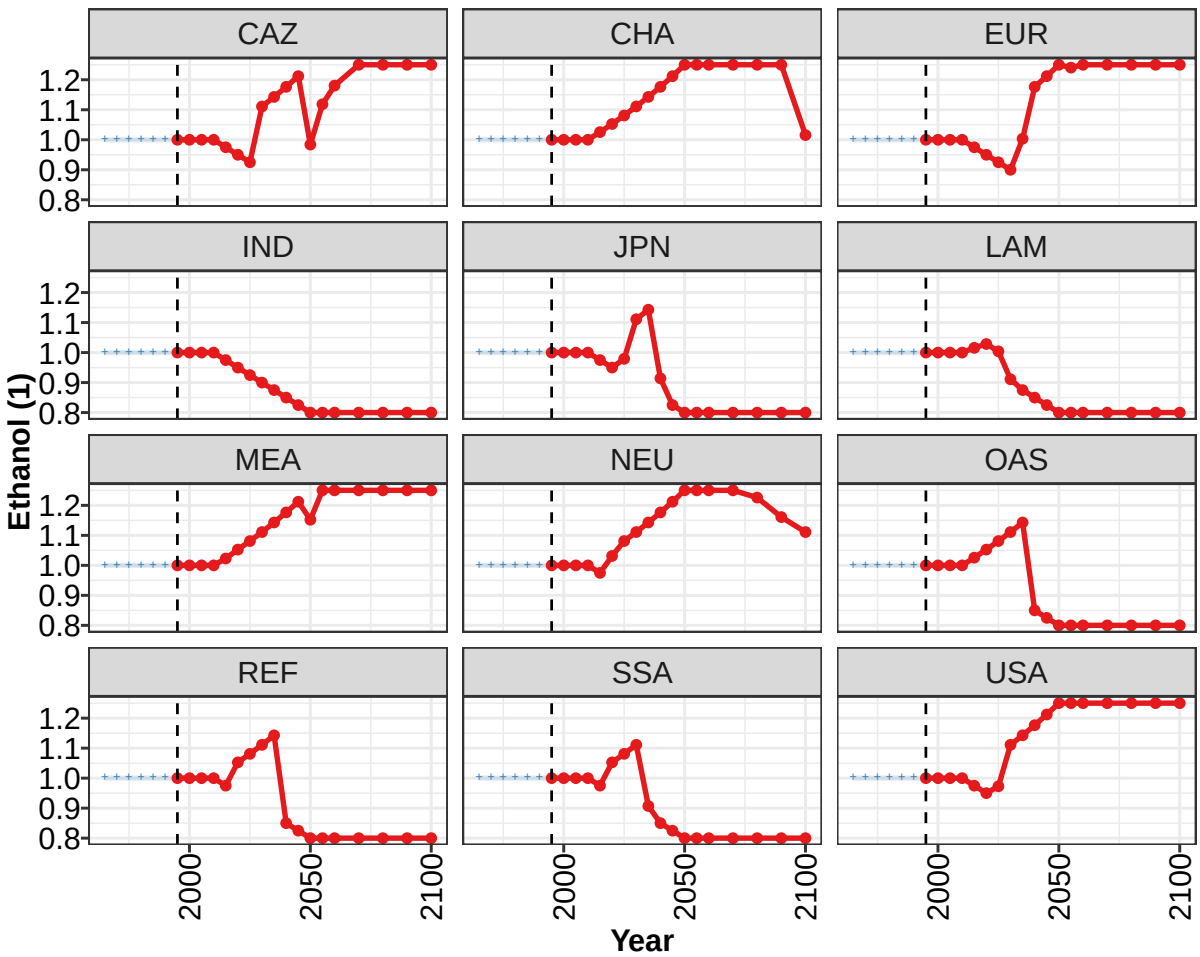
Table 2014: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Distillers grains (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CAZ	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CHA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
EUR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IND	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
JPN	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LAM	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MEA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NEU	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
OAS	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
REF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
SSA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
USA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table 2015: FAO — Trade—Self-sufficiency—Secondary products—Distillers grains (1)

59.4.5 Ethanol





Model output

MAgPIE m4p_SSP5

Historical data

FAO

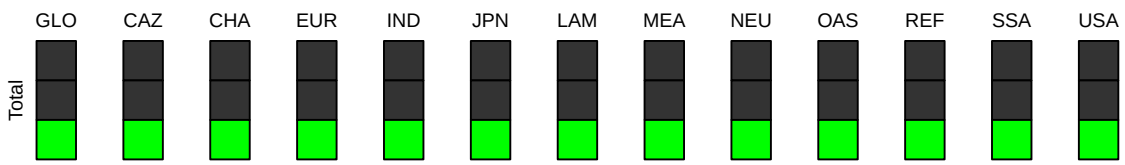


Figure 539: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Ethanol (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.00	1.00	0.97	0.95	0.93	1.11	1.14	1.18	1.21
CHA	1.00	1.00	1.00	1.00	1.03	1.05	1.08	1.11	1.14	1.18	1.21
EUR	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	1.00	1.18	1.21
IND	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	0.85	0.82
JPN	1.00	1.00	1.00	1.00	0.98	0.95	0.98	1.11	1.14	0.91	0.82
LAM	1.00	1.00	1.00	1.00	1.02	1.03	1.00	0.91	0.88	0.85	0.82
MEA	1.00	1.00	1.00	1.00	1.02	1.05	1.08	1.11	1.14	1.18	1.21
NEU	1.00	1.00	1.00	1.00	0.97	1.03	1.08	1.11	1.14	1.18	1.21
OAS	1.00	1.00	1.00	1.00	1.03	1.05	1.08	1.11	1.14	0.85	0.83
REF	1.00	1.00	1.00	1.00	0.97	1.05	1.08	1.11	1.14	0.85	0.83
SSA	1.00	1.00	1.00	1.00	0.97	1.05	1.08	1.11	0.91	0.85	0.82
USA	1.00	1.00	1.00	1.00	0.97	0.95	0.97	1.11	1.14	1.18	1.21

Table 2016: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Ethanol (1) [PART 1/2]

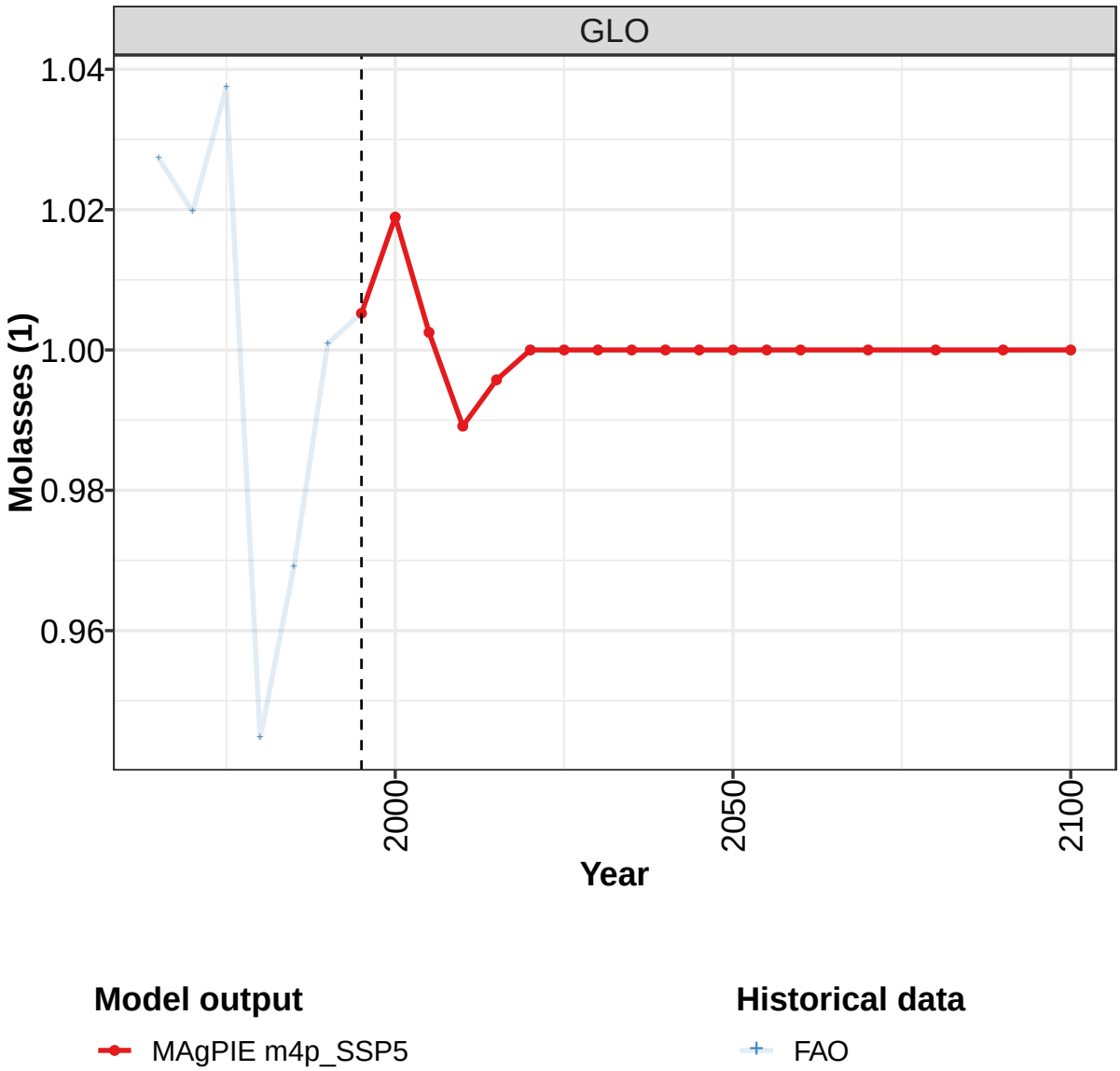
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.01	1.01	1.00	1.01	1.00
CAZ	0.98	1.12	1.18	1.25	1.25	1.25	1.25
CHA	1.25	1.25	1.25	1.25	1.25	1.25	1.02
EUR	1.25	1.24	1.25	1.25	1.25	1.25	1.25
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	0.80	0.80	0.80	0.80	0.80	0.80	0.80
LAM	0.80	0.80	0.80	0.80	0.80	0.80	0.80
MEA	1.15	1.25	1.25	1.25	1.25	1.25	1.25
NEU	1.25	1.25	1.25	1.25	1.23	1.16	1.11
OAS	0.80	0.80	0.80	0.80	0.80	0.80	0.80
REF	0.80	0.80	0.80	0.80	0.80	0.80	0.80
SSA	0.80	0.80	0.80	0.80	0.80	0.80	0.80
USA	1.25	1.25	1.25	1.25	1.25	1.25	1.25

Table 2017: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Ethanol (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CAZ	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CHA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
EUR	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IND	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
JPN	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
LAM	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
MEA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
NEU	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
OAS	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
REF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
SSA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
USA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table 2018: FAO — Trade—Self-sufficiency—Secondary products—Ethanol (1)

59.4.6 Molasses



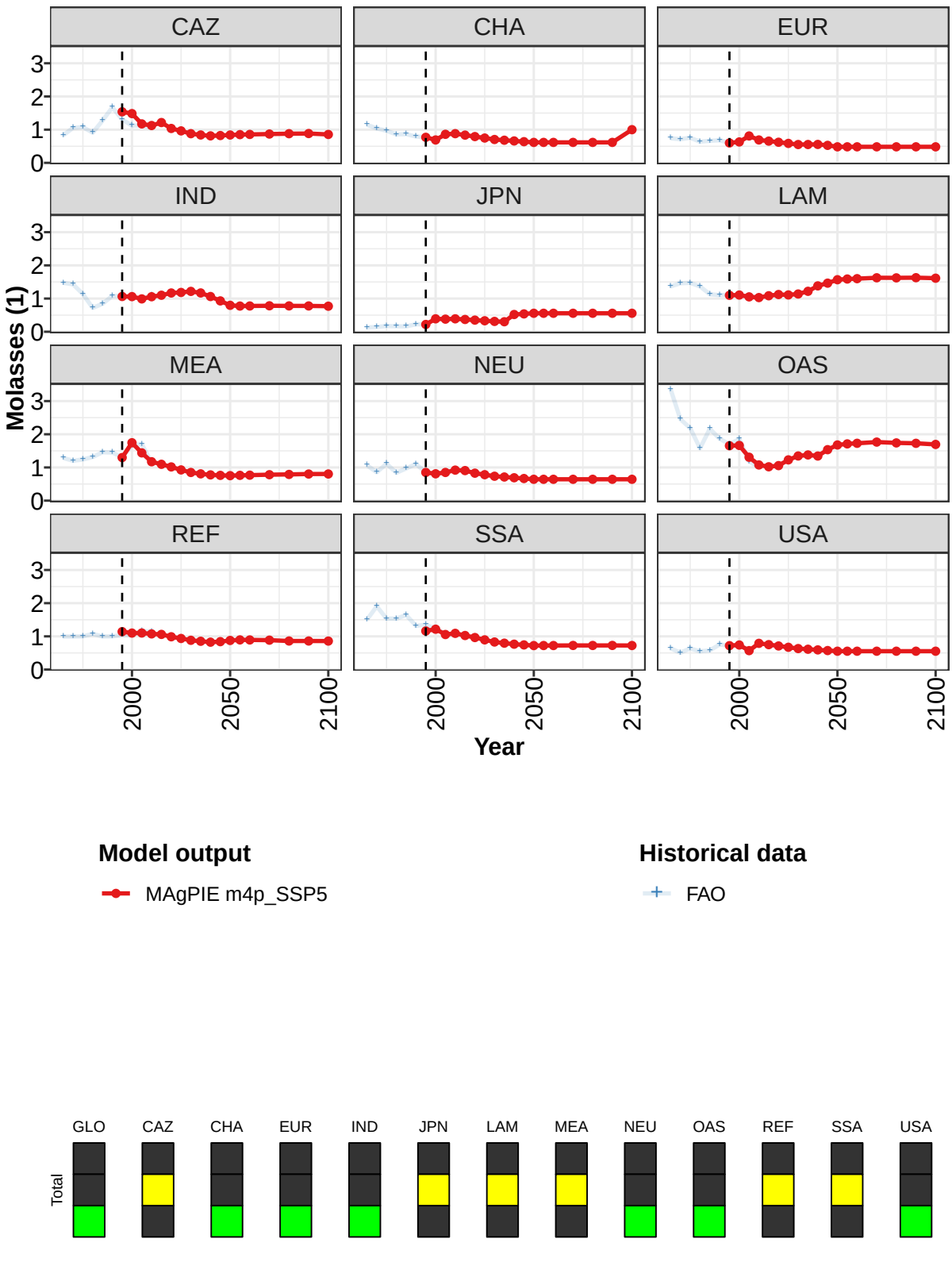


Figure 540: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Molasses (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.01	1.02	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.54	1.48	1.17	1.12	1.21	1.04	0.96	0.88	0.84	0.81	0.82
CHA	0.77	0.69	0.86	0.88	0.84	0.79	0.75	0.70	0.68	0.66	0.64
EUR	0.60	0.63	0.81	0.69	0.66	0.62	0.59	0.55	0.55	0.56	0.53
IND	1.06	1.06	0.99	1.06	1.10	1.17	1.18	1.22	1.17	1.06	0.93
JPN	0.22	0.39	0.38	0.39	0.37	0.35	0.33	0.31	0.30	0.52	0.54
LAM	1.10	1.11	1.05	1.03	1.08	1.12	1.11	1.14	1.22	1.38	1.46
MEA	1.30	1.75	1.44	1.17	1.10	1.02	0.93	0.85	0.81	0.78	0.76
NEU	0.85	0.81	0.85	0.92	0.91	0.83	0.78	0.74	0.71	0.69	0.67
OAS	1.65	1.66	1.31	1.08	1.02	1.06	1.23	1.35	1.38	1.34	1.54
REF	1.14	1.10	1.10	1.07	1.06	0.99	0.94	0.88	0.85	0.83	0.84
SSA	1.16	1.22	1.06	1.09	1.03	0.96	0.89	0.83	0.79	0.76	0.74
USA	0.72	0.74	0.57	0.79	0.75	0.71	0.67	0.63	0.61	0.59	0.57

Table 2019: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Molasses (1) [PART 1/2]

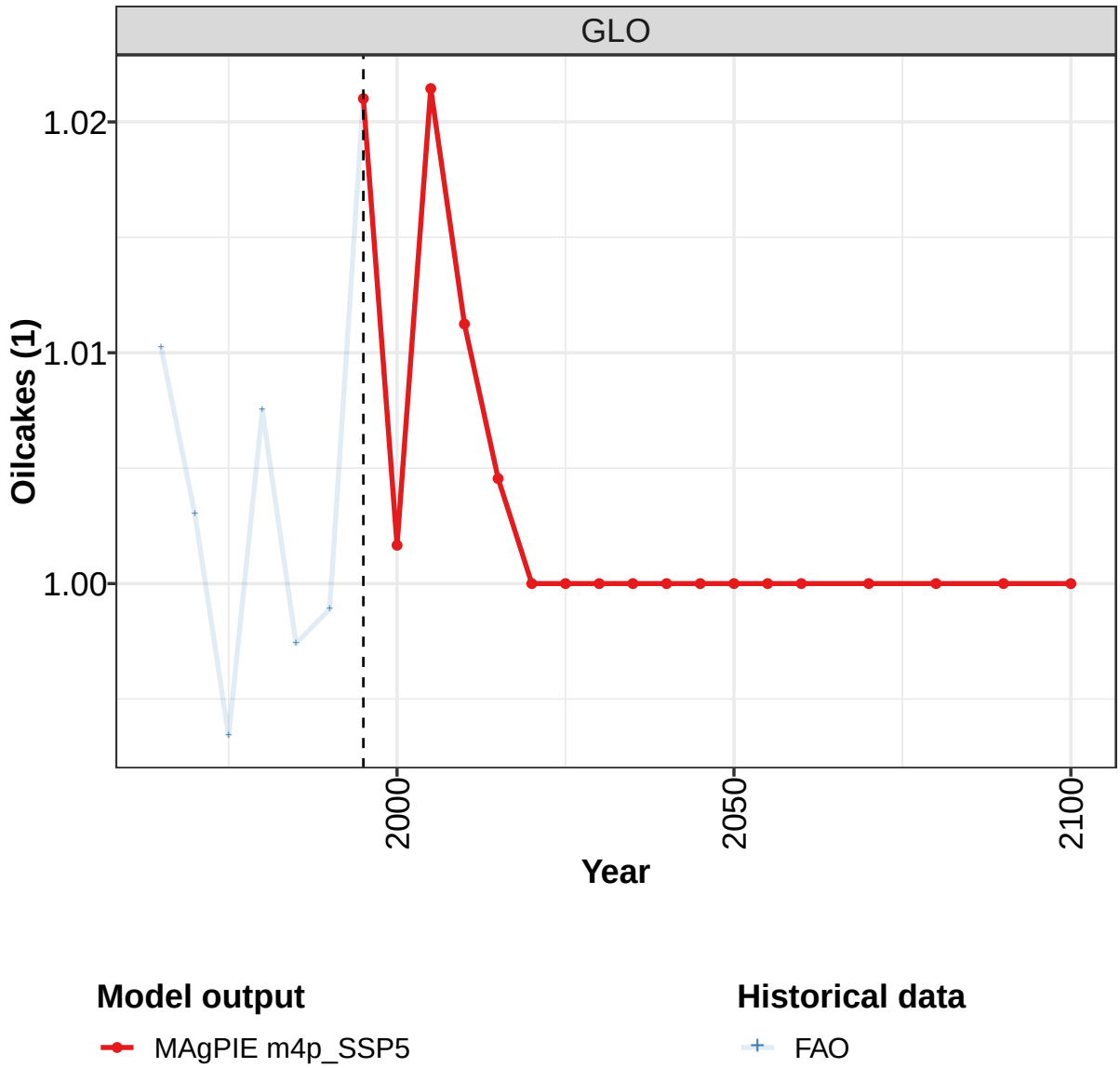
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.84	0.85	0.86	0.87	0.88	0.88	0.86
CHA	0.62	0.62	0.62	0.62	0.62	0.62	1.00
EUR	0.48	0.48	0.48	0.48	0.48	0.48	0.48
IND	0.80	0.77	0.78	0.78	0.78	0.78	0.77
JPN	0.56	0.56	0.56	0.56	0.56	0.56	0.56
LAM	1.57	1.59	1.60	1.63	1.62	1.63	1.61
MEA	0.75	0.76	0.77	0.78	0.79	0.80	0.80
NEU	0.64	0.64	0.64	0.64	0.64	0.64	0.64
OAS	1.68	1.71	1.73	1.77	1.74	1.73	1.69
REF	0.88	0.89	0.89	0.89	0.86	0.86	0.86
SSA	0.72	0.72	0.72	0.73	0.73	0.73	0.72
USA	0.55	0.55	0.55	0.55	0.55	0.55	0.55

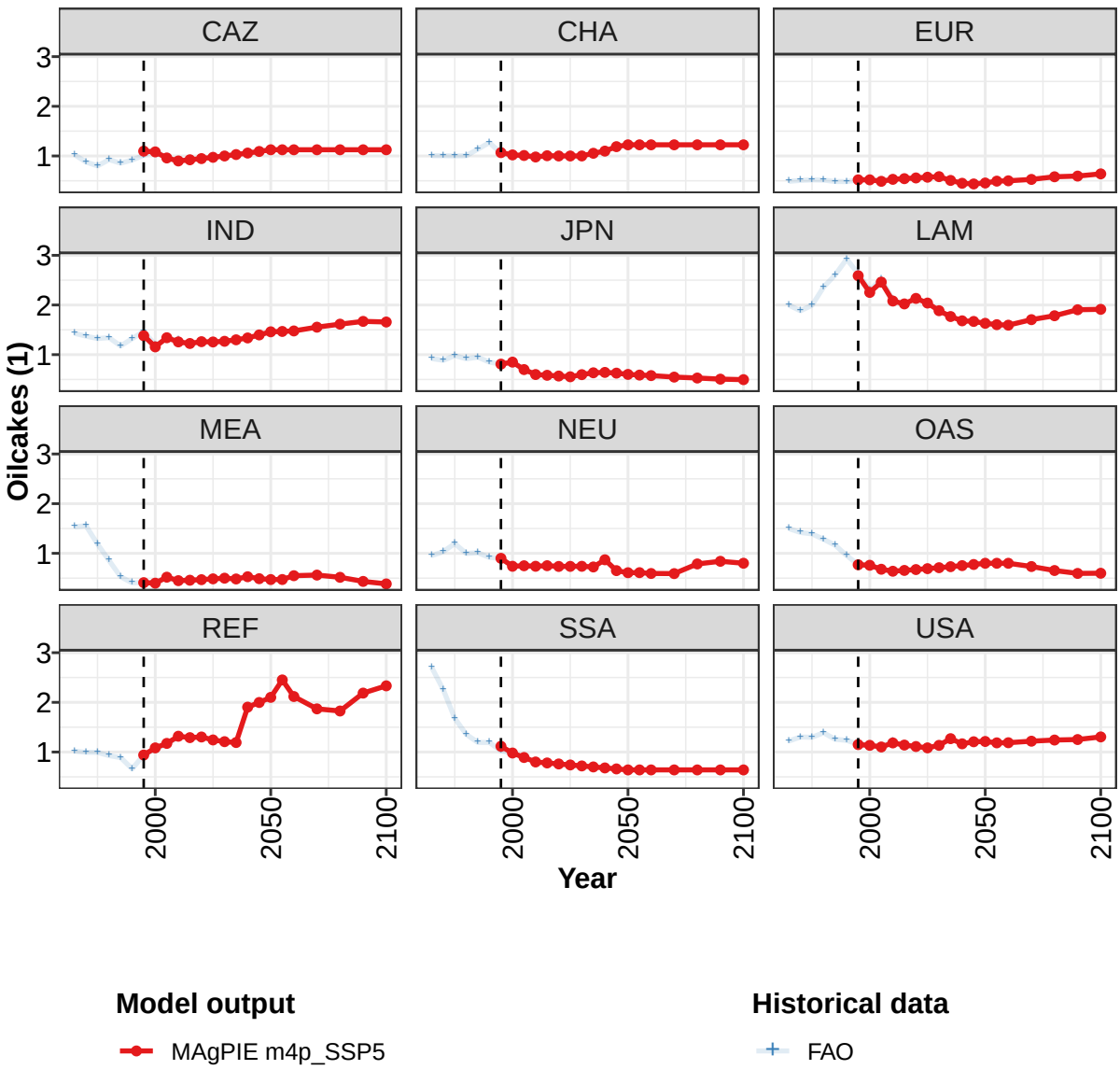
Table 2020: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Molasses (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.03	1.02	1.04	0.94	0.97	1.00	1.01	1.02	1.00	0.99
CAZ	0.83	1.05	1.08	0.91	1.27	1.67	1.31	1.12	1.13	1.05
CHA	1.15	1.04	0.97	0.86	0.86	0.79	0.77	0.69	0.86	0.88
EUR	0.74	0.71	0.76	0.64	0.66	0.68	0.60	0.63	0.81	0.69
IND	1.47	1.43	1.13	0.72	0.84	1.08	1.08	1.05	0.99	1.10
JPN	0.13	0.14	0.17	0.17	0.16	0.22	0.22	0.39	0.38	0.39
LAM	1.37	1.46	1.47	1.37	1.13	1.10	1.11	1.09	1.07	1.05
MEA	1.29	1.20	1.24	1.31	1.46	1.45	1.31	1.67	1.70	1.14
NEU	1.07	0.85	1.11	0.84	0.97	1.10	0.85	0.81	0.85	0.92
OAS	3.36	2.46	2.18	1.58	2.16	1.86	1.70	1.85	1.18	1.01
REF	0.99	0.99	1.00	1.08	1.00	1.00	1.04	1.04	1.16	1.15
SSA	1.50	1.90	1.54	1.53	1.64	1.32	1.35	1.23	1.08	1.04
USA	0.64	0.51	0.63	0.55	0.58	0.75	0.72	0.74	0.57	0.79

Table 2021: FAO — Trade—Self-sufficiency—Secondary products—Molasses (1)

59.4.7 Oilcakes





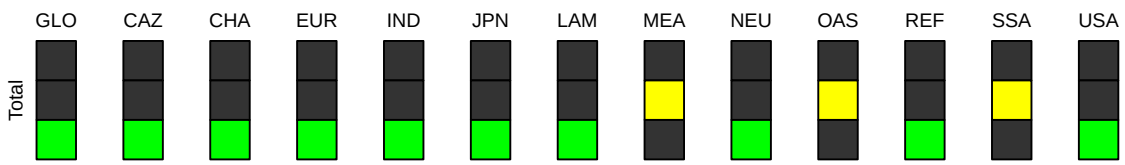


Figure 541: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Oilcakes (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.02	1.00	1.02	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.10	1.08	0.96	0.90	0.92	0.95	0.97	1.00	1.03	1.06	1.09
CHA	1.07	1.02	1.01	0.98	1.01	1.00	1.00	1.00	1.05	1.10	1.19
EUR	0.52	0.52	0.49	0.53	0.54	0.56	0.57	0.58	0.51	0.45	0.44
IND	1.38	1.16	1.34	1.26	1.22	1.26	1.26	1.27	1.30	1.34	1.40
JPN	0.81	0.85	0.70	0.60	0.58	0.57	0.56	0.60	0.64	0.64	0.63
LAM	2.59	2.25	2.46	2.08	2.02	2.13	2.04	1.89	1.77	1.68	1.67
MEA	0.41	0.40	0.52	0.45	0.46	0.47	0.49	0.50	0.48	0.53	0.49
NEU	0.90	0.74	0.75	0.74	0.75	0.74	0.74	0.74	0.73	0.87	0.65
OAS	0.77	0.76	0.68	0.64	0.66	0.67	0.69	0.71	0.73	0.75	0.78
REF	0.94	1.08	1.17	1.32	1.29	1.30	1.24	1.21	1.19	1.90	2.00
SSA	1.12	0.98	0.89	0.80	0.78	0.76	0.74	0.72	0.70	0.68	0.66
USA	1.15	1.13	1.10	1.18	1.14	1.11	1.08	1.13	1.27	1.17	1.21

Table 2022: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Oilcakes (1) [PART 1/2]

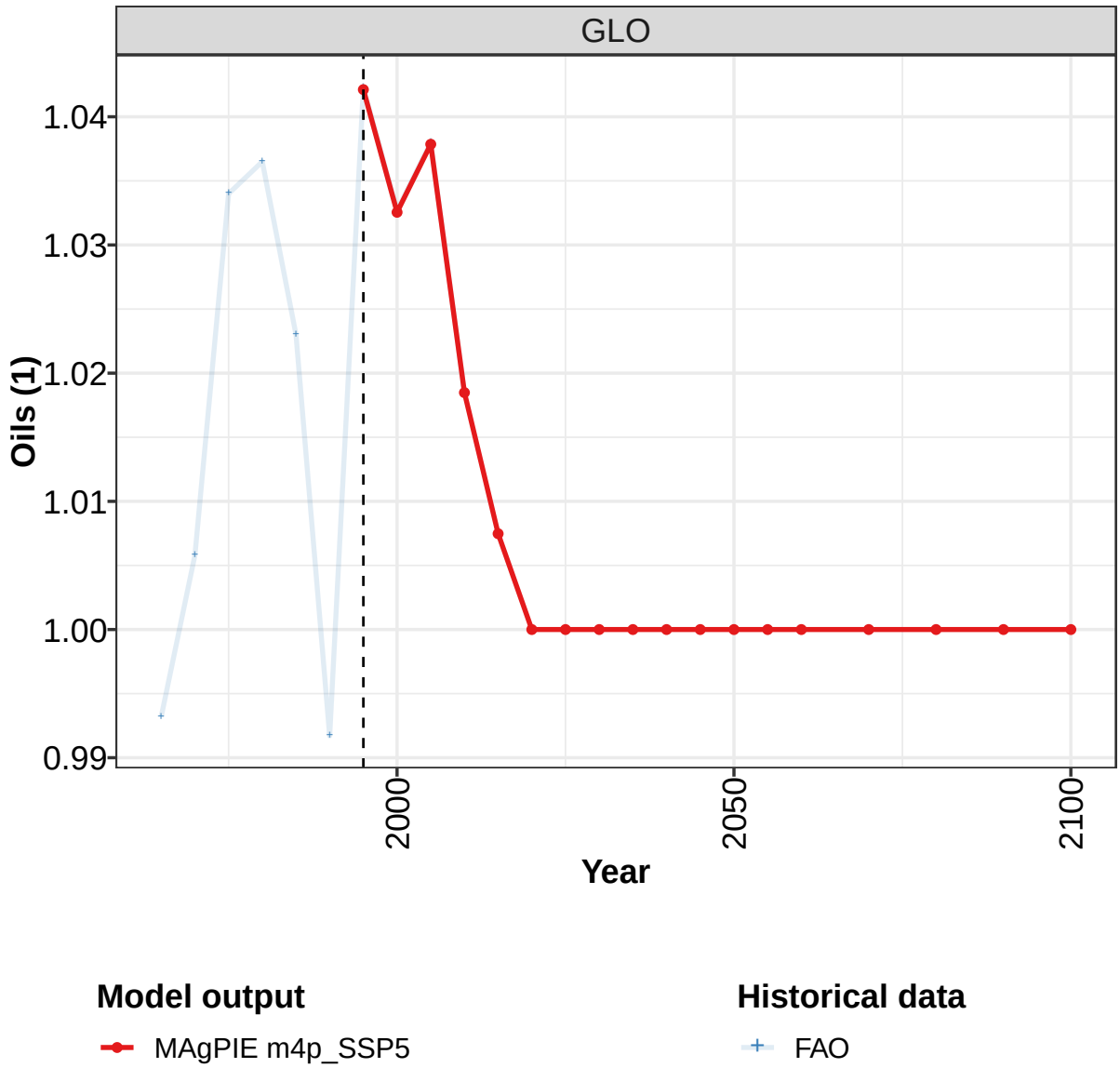
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.12	1.12	1.12	1.12	1.12	1.13	1.12
CHA	1.23	1.22	1.23	1.23	1.23	1.22	1.22
EUR	0.46	0.49	0.50	0.53	0.58	0.60	0.64
IND	1.46	1.47	1.48	1.55	1.61	1.67	1.66
JPN	0.60	0.59	0.58	0.55	0.53	0.51	0.50
LAM	1.63	1.60	1.59	1.70	1.78	1.90	1.91
MEA	0.47	0.47	0.55	0.56	0.52	0.43	0.39
NEU	0.61	0.61	0.59	0.59	0.79	0.84	0.80
OAS	0.80	0.80	0.80	0.73	0.65	0.60	0.60
REF	2.10	2.45	2.12	1.87	1.83	2.19	2.33
SSA	0.64	0.64	0.64	0.64	0.64	0.64	0.64
USA	1.21	1.18	1.19	1.22	1.24	1.25	1.30

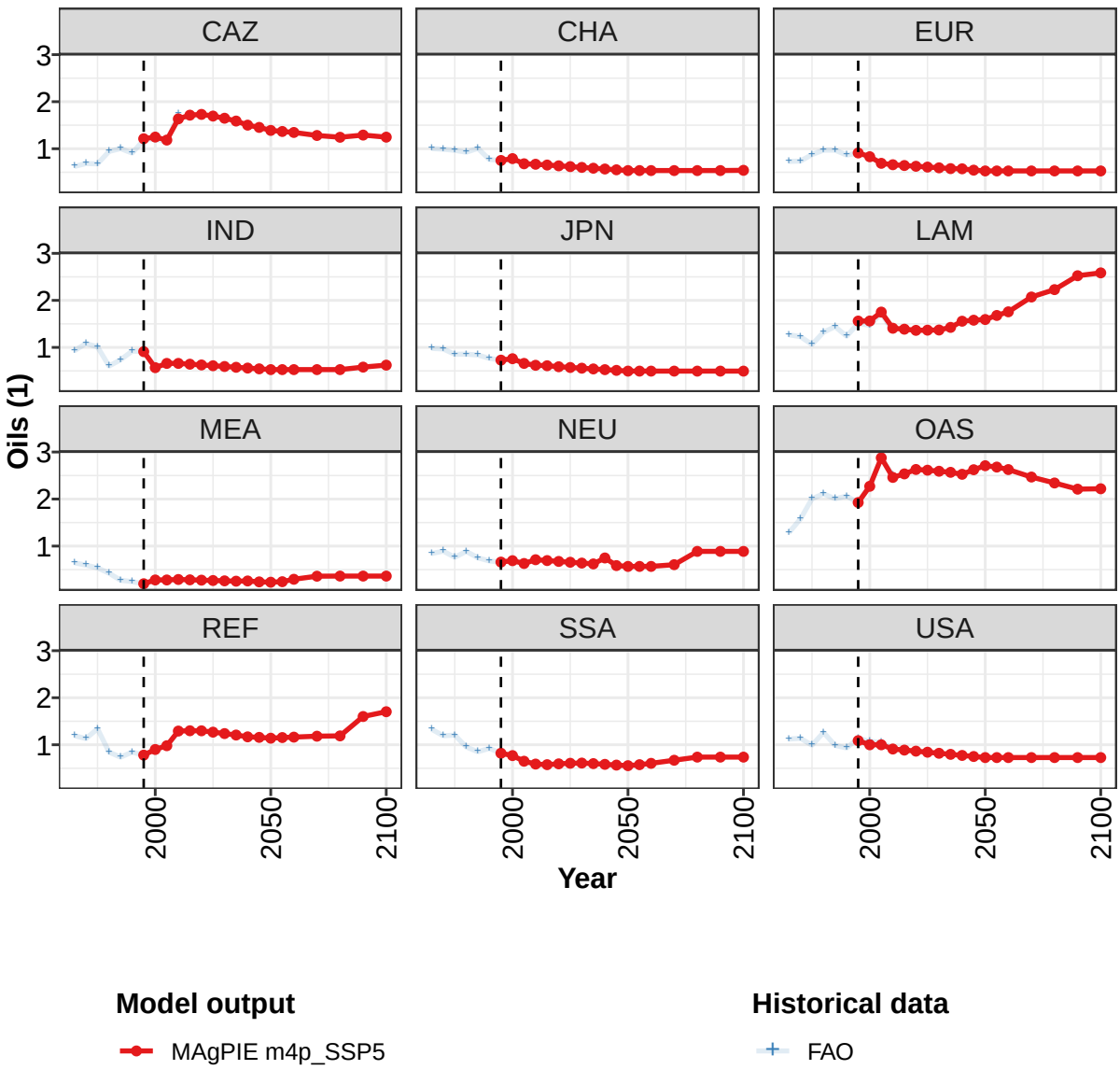
Table 2023: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Oilcakes (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.01	1.00	0.99	1.01	1.00	1.00	1.02	1.00	1.02	1.01
CAZ	1.03	0.88	0.80	0.93	0.86	0.92	1.01	1.11	0.96	0.90
CHA	1.01	1.00	1.00	1.00	1.14	1.27	1.06	1.01	1.00	0.98
EUR	0.49	0.51	0.52	0.51	0.49	0.48	0.52	0.52	0.49	0.53
IND	1.43	1.37	1.32	1.34	1.18	1.32	1.47	1.20	1.31	1.29
JPN	0.92	0.89	0.98	0.92	0.95	0.85	0.81	0.85	0.70	0.60
LAM	2.00	1.88	1.99	2.36	2.60	2.92	2.63	2.30	2.52	2.10
MEA	1.53	1.56	1.19	0.86	0.53	0.41	0.41	0.40	0.52	0.45
NEU	0.95	1.03	1.20	1.00	1.01	0.92	0.90	0.74	0.75	0.74
OAS	1.50	1.42	1.39	1.28	1.16	0.96	0.77	0.76	0.68	0.64
REF	1.02	0.99	0.99	0.93	0.89	0.66	0.94	1.06	1.16	1.30
SSA	2.70	2.26	1.68	1.35	1.19	1.19	1.02	0.98	0.89	0.80
USA	1.22	1.30	1.30	1.39	1.26	1.23	1.16	1.14	1.11	1.22

Table 2024: FAO — Trade—Self-sufficiency—Secondary products—Oilcakes (1)

59.4.8 Oils


GLO
1.04
1.03
1.02
1.01
1.00
0.99
Oils (1)
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



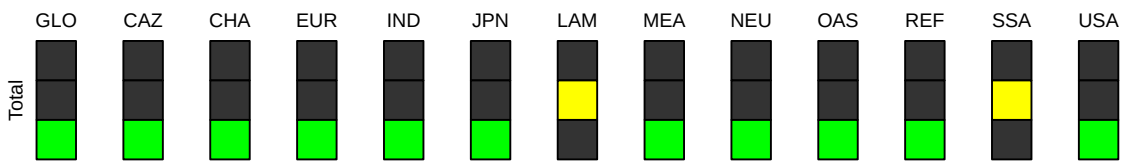


Figure 542: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Oils (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.04	1.03	1.04	1.02	1.01	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.21	1.25	1.18	1.63	1.71	1.73	1.69	1.65	1.59	1.50	1.45
CHA	0.75	0.79	0.68	0.67	0.65	0.64	0.62	0.60	0.59	0.57	0.55
EUR	0.91	0.83	0.69	0.66	0.64	0.63	0.61	0.59	0.58	0.57	0.54
IND	0.91	0.57	0.66	0.66	0.64	0.63	0.61	0.59	0.58	0.56	0.54
JPN	0.73	0.76	0.66	0.62	0.61	0.59	0.57	0.56	0.54	0.53	0.51
LAM	1.56	1.56	1.75	1.41	1.39	1.36	1.37	1.37	1.43	1.56	1.58
MEA	0.20	0.28	0.28	0.29	0.28	0.28	0.27	0.26	0.25	0.26	0.24
NEU	0.66	0.69	0.63	0.71	0.69	0.67	0.66	0.64	0.62	0.75	0.59
OAS	1.93	2.27	2.88	2.46	2.53	2.63	2.61	2.59	2.57	2.53	2.62
REF	0.78	0.90	0.98	1.29	1.30	1.30	1.27	1.24	1.21	1.17	1.16
SSA	0.82	0.77	0.65	0.59	0.58	0.59	0.61	0.61	0.60	0.58	0.57
USA	1.09	1.00	1.00	0.91	0.89	0.86	0.84	0.82	0.80	0.77	0.75

Table 2025: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Oils (1) [PART 1/2]

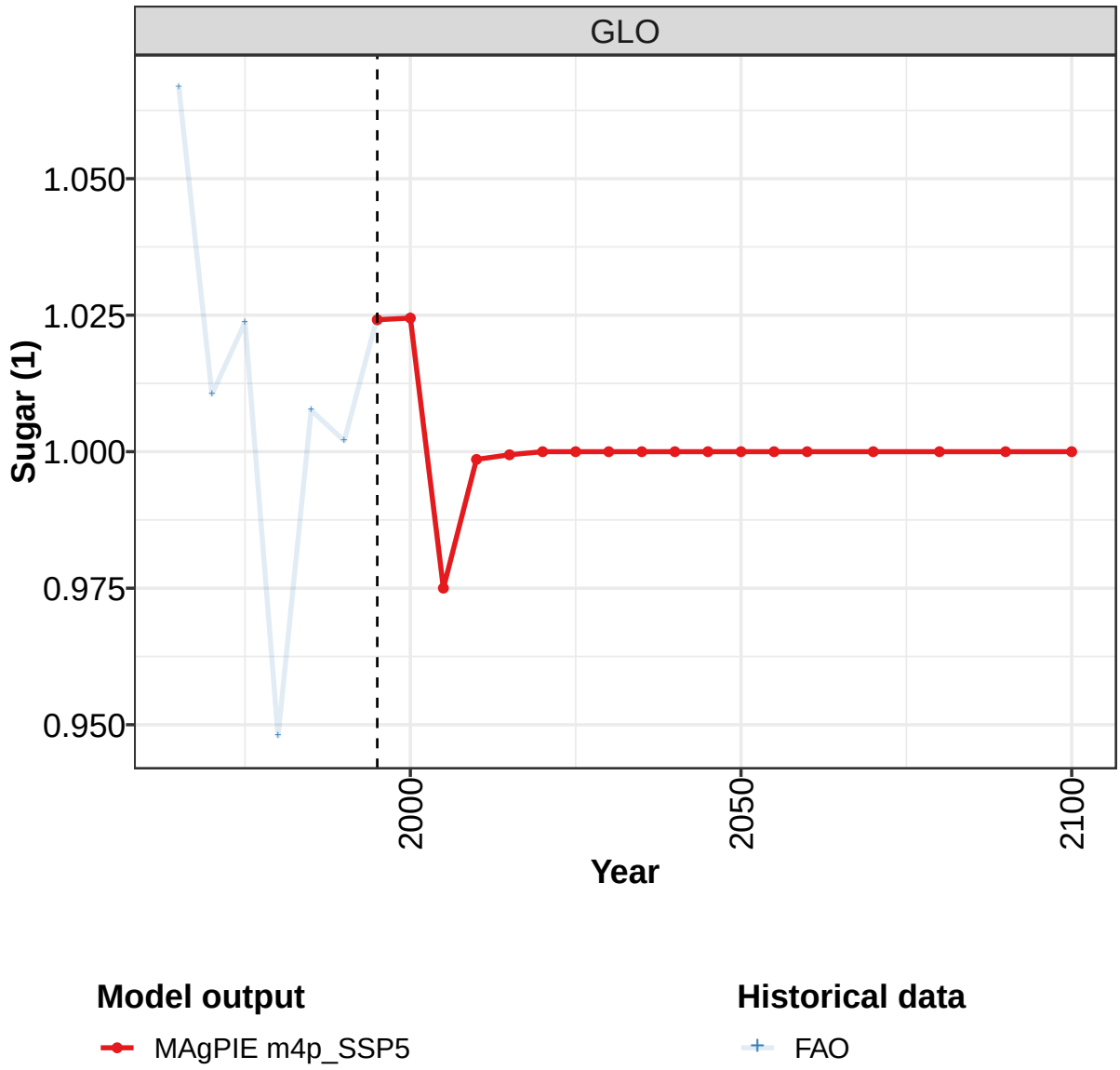
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.39	1.37	1.35	1.28	1.24	1.29	1.25
CHA	0.54	0.54	0.54	0.54	0.54	0.54	0.54
EUR	0.53	0.53	0.53	0.53	0.53	0.53	0.53
IND	0.53	0.53	0.53	0.53	0.53	0.58	0.62
JPN	0.50	0.50	0.50	0.50	0.50	0.50	0.50
LAM	1.59	1.68	1.76	2.07	2.23	2.52	2.58
MEA	0.23	0.24	0.29	0.36	0.36	0.36	0.36
NEU	0.57	0.57	0.57	0.60	0.89	0.89	0.89
OAS	2.71	2.68	2.63	2.47	2.34	2.21	2.22
REF	1.14	1.15	1.16	1.18	1.19	1.60	1.70
SSA	0.56	0.58	0.60	0.67	0.74	0.74	0.74
USA	0.73	0.73	0.73	0.73	0.73	0.73	0.73

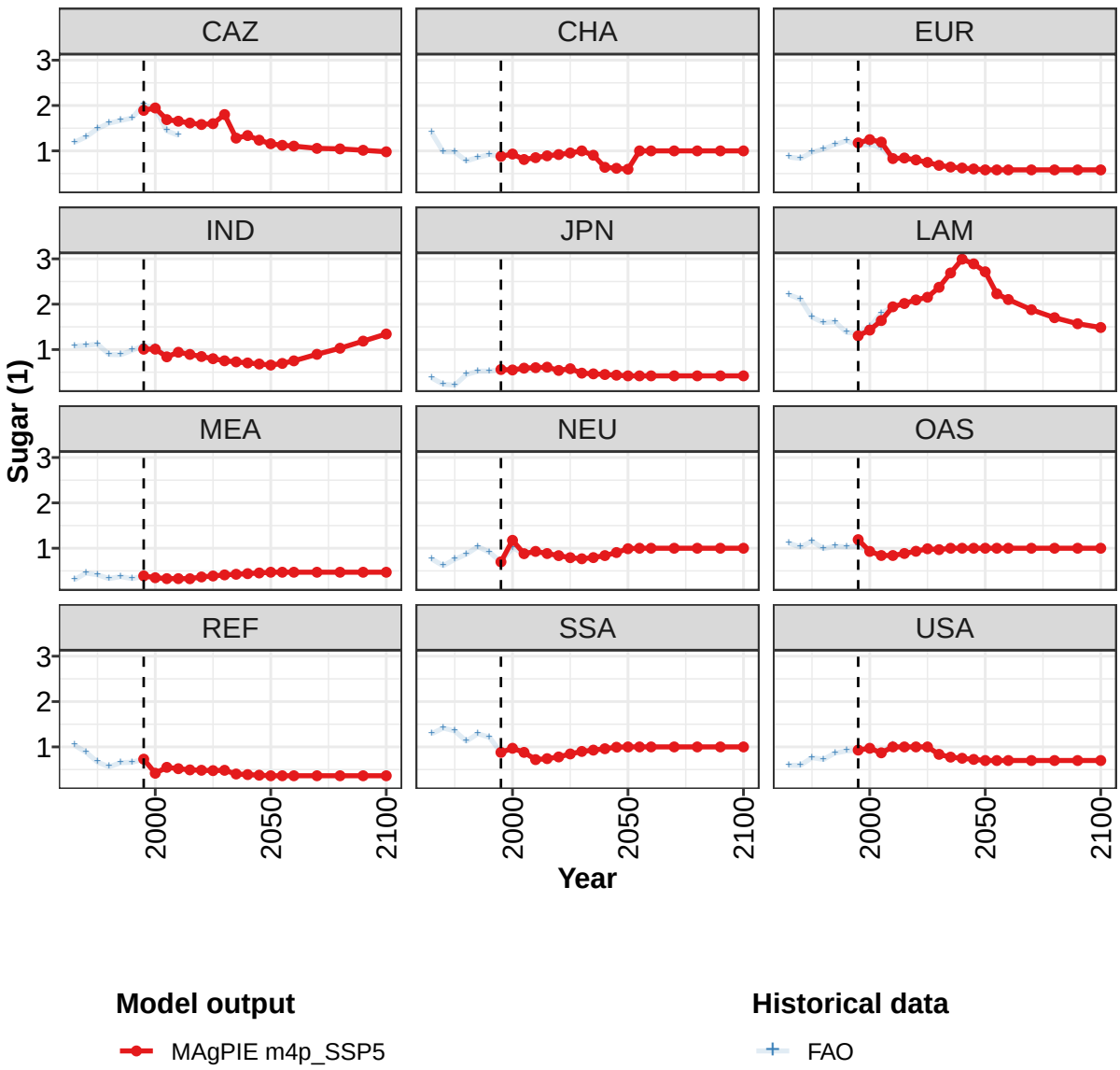
Table 2026: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Oils (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.99	1.01	1.03	1.04	1.02	0.99	1.04	1.03	1.04	1.02
CAZ	0.62	0.69	0.68	0.94	1.00	0.91	1.19	1.21	1.14	1.75
CHA	1.00	0.99	0.97	0.93	1.01	0.77	0.75	0.79	0.68	0.67
EUR	0.73	0.74	0.88	0.97	0.97	0.86	0.91	0.83	0.69	0.66
IND	0.93	1.08	1.01	0.60	0.74	0.92	0.91	0.57	0.66	0.66
JPN	0.98	0.97	0.85	0.86	0.84	0.77	0.73	0.76	0.66	0.62
LAM	1.27	1.23	1.06	1.32	1.44	1.24	1.51	1.47	1.73	1.34
MEA	0.65	0.59	0.54	0.42	0.27	0.24	0.20	0.28	0.28	0.29
NEU	0.84	0.89	0.76	0.89	0.75	0.68	0.66	0.69	0.63	0.71
OAS	1.28	1.58	2.01	2.11	2.01	2.06	1.93	2.29	2.86	2.50
REF	1.19	1.13	1.34	0.84	0.74	0.84	0.78	0.90	0.98	1.27
SSA	1.33	1.19	1.21	0.95	0.85	0.92	0.82	0.77	0.65	0.59
USA	1.12	1.14	0.99	1.26	0.99	0.93	1.14	1.07	1.05	0.91

Table 2027: FAO — Trade—Self-sufficiency—Secondary products—Oils (1)

59.4.9 Sugar


GLO
Sugar (1)
1.050
1.025
1.000
0.975
0.950
2000
2050
2100
Year
Model output
MAgPIE m4p_SSP5
Historical data
FAO



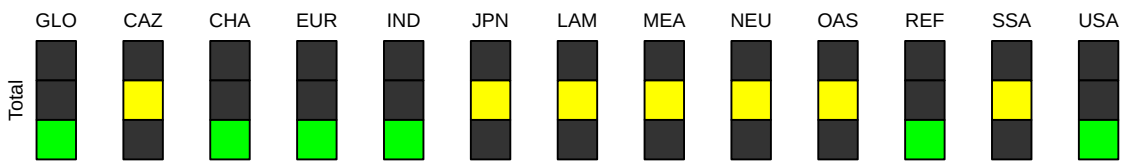


Figure 543: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Sugar (1)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.02	1.02	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.89	1.95	1.69	1.65	1.61	1.58	1.60	1.80	1.28	1.34	1.24
CHA	0.88	0.93	0.81	0.85	0.89	0.92	0.95	1.00	0.90	0.64	0.62
EUR	1.18	1.25	1.19	0.83	0.84	0.80	0.75	0.68	0.64	0.62	0.60
IND	1.01	1.01	0.84	0.94	0.89	0.85	0.80	0.75	0.73	0.70	0.68
JPN	0.56	0.55	0.59	0.60	0.61	0.54	0.58	0.48	0.46	0.45	0.43
LAM	1.30	1.43	1.64	1.94	2.02	2.09	2.15	2.37	2.69	2.99	2.89
MEA	0.39	0.35	0.33	0.33	0.33	0.37	0.39	0.41	0.43	0.44	0.46
NEU	0.70	1.17	0.88	0.93	0.88	0.84	0.79	0.77	0.79	0.84	0.90
OAS	1.19	0.93	0.84	0.84	0.88	0.93	0.99	0.97	1.00	1.00	1.00
REF	0.73	0.42	0.55	0.52	0.49	0.49	0.48	0.49	0.40	0.39	0.38
SSA	0.88	0.97	0.88	0.72	0.74	0.78	0.85	0.90	0.93	0.96	0.99
USA	0.93	0.97	0.87	1.00	1.00	1.00	1.00	0.84	0.78	0.75	0.72

Table 2028: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Sugar (1) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.16	1.12	1.11	1.05	1.04	1.01	0.98
CHA	0.59	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.58	0.58	0.58	0.58	0.58	0.58	0.58
IND	0.66	0.69	0.75	0.90	1.03	1.19	1.34
JPN	0.42	0.42	0.42	0.42	0.42	0.42	0.42
LAM	2.71	2.23	2.10	1.88	1.70	1.57	1.49
MEA	0.47	0.47	0.47	0.47	0.47	0.47	0.47
NEU	0.99	1.00	1.00	1.00	1.00	1.00	1.00
OAS	1.00	1.00	1.00	1.00	1.00	1.00	1.00
REF	0.36	0.36	0.36	0.36	0.36	0.36	0.36
SSA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
USA	0.70	0.70	0.70	0.70	0.70	0.70	0.70

Table 2029: MAgPIE m4p_SSP5 — Trade—Self-sufficiency—Secondary products—Sugar (1) [PART 2/2]

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.07	1.01	1.02	0.95	1.01	1.00	1.02	1.02	0.97	1.00
CAZ	1.19	1.31	1.49	1.61	1.67	1.73	2.02	1.93	1.44	1.34
CHA	1.40	0.98	0.98	0.78	0.86	0.92	0.88	0.93	0.81	0.85
EUR	0.86	0.83	0.97	1.04	1.14	1.22	1.12	1.14	1.06	0.83
IND	1.08	1.09	1.12	0.89	0.89	0.98	1.09	1.06	0.84	0.94
JPN	0.38	0.24	0.21	0.45	0.52	0.52	0.56	0.55	0.59	0.60
LAM	2.21	2.11	1.71	1.60	1.61	1.38	1.37	1.50	1.80	1.94
MEA	0.30	0.45	0.42	0.33	0.38	0.33	0.39	0.35	0.33	0.33
NEU	0.76	0.61	0.76	0.87	1.04	0.91	0.70	1.01	0.88	0.93
OAS	1.11	1.03	1.16	0.99	1.04	1.03	1.04	0.93	0.84	0.84
REF	1.04	0.88	0.67	0.56	0.65	0.66	0.73	0.42	0.55	0.52
SSA	1.29	1.42	1.35	1.13	1.29	1.21	0.88	0.97	0.88	0.72
USA	0.59	0.60	0.76	0.73	0.87	0.91	0.93	0.97	0.87	1.05

Table 2030: FAO — Trade—Self-sufficiency—Secondary products—Sugar (1)

Part XVI
Trade Value

60 Exports

61 Imports

62 Net-Exports

Part XVII
Statistics

63 Traffic Lights

63.1 Total

	green	yellow	red	NA.
total	275	244	13	11
relative	51%	45%	2%	2%

Table 2031: Global

	green	yellow	red	NA.
total	2946	2796	136	470
relative	46%	44%	2%	7%

Table 2032: Regional

63.2 Trend

	green	yellow	red	NA.
total	243	141	148	11
relative	45%	26%	27%	2%

Table 2033: Global

	green	yellow	red	NA.
total	2692	1529	1648	479
relative	42%	24%	26%	8%

Table 2034: Regional

63.3 Overlap

	green	yellow	red	NA.
total	480	48	4	11
relative	88%	9%	1%	2%

Table 2035: Global

	green	yellow	red	NA.
total	5128	572	110	538
relative	81%	9%	2%	8%

Table 2036: Regional

63.4 Level

	green	yellow	red	NA.
total	313	130	83	17
relative	58%	24%	15%	3%

Table 2037: Global

	green	yellow	red	NA.
total	2999	1956	785	608
relative	47%	31%	12%	10%

Table 2038: Regional

64 Ignored data

Variables of data and validation data that only contain a mix of 0 and NA values and are ignored.

```
## Demand|Agricultural Supply Chain Loss|Crop residues (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Crop residues|Straw (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Fish (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Forage (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Forest products (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Forest products|Wood fuel (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Pasture (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Bioenergy|Crops (Mt DM/yr)
## Demand|Bioenergy|Crops|Cereals (Mt DM/yr)
## Demand|Bioenergy|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Bioenergy|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Bioenergy|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Bioenergy|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Bioenergy|Crops|Oil crops (Mt DM/yr)
## Demand|Bioenergy|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Bioenergy|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Bioenergy|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Bioenergy|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
## Demand|Bioenergy|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Bioenergy|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Bioenergy|Crops|Other crops (Mt DM/yr)
## Demand|Bioenergy|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Bioenergy|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Bioenergy|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Bioenergy|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Bioenergy|Crops|Sugar crops (Mt DM/yr)
## Demand|Bioenergy|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Bioenergy|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Bioenergy|Fish (Mt DM/yr)
## Demand|Bioenergy|Forage (Mt DM/yr)
## Demand|Bioenergy|Forest products (Mt DM/yr)
## Demand|Bioenergy|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Bioenergy|Forest products|Wood fuel (Mt DM/yr)
## Demand|Bioenergy|Livestock products (Mt DM/yr)
## Demand|Bioenergy|Livestock products|Dairy (Mt DM/yr)
## Demand|Bioenergy|Livestock products|Eggs (Mt DM/yr)
## Demand|Bioenergy|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Bioenergy|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Bioenergy|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Bioenergy|Pasture (Mt DM/yr)
## Demand|Bioenergy|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Bioenergy|Secondary products|Brans (Mt DM/yr)
## Demand|Bioenergy|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Bioenergy|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Bioenergy|Secondary products|Microbial protein (Mt DM/yr)
```

```
## Demand|Bioenergy|Secondary products|Molasses (Mt DM/yr)
## Demand|Bioenergy|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Bioenergy|Secondary products|Sugar (Mt DM/yr)
## Demand|Domestic Balanceflow|Bioenergy crops (Mt DM/yr)
## Demand|Domestic Balanceflow|Crop residues (Mt DM/yr)
## Demand|Domestic Balanceflow|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Domestic Balanceflow|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Domestic Balanceflow|Crop residues|Straw (Mt DM/yr)
## Demand|Domestic Balanceflow|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Domestic Balanceflow|Forage (Mt DM/yr)
## Demand|Domestic Balanceflow|Forest products (Mt DM/yr)
## Demand|Domestic Balanceflow|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Domestic Balanceflow|Forest products|Wood fuel (Mt DM/yr)
## Demand|Domestic Balanceflow|Pasture (Mt DM/yr)
## Demand|Domestic Balanceflow|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Domestic Balanceflow|Secondary products|Ethanol (Mt DM/yr)
## Demand|Domestic Balanceflow|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Feed|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Forest products (Mt DM/yr)
## Demand|Feed|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Feed|Forest products|Wood fuel (Mt DM/yr)
## Demand|Feed|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Feed|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Feed|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Food|Bioenergy crops (Mt DM/yr)
## Demand|Food|Crop residues (Mt DM/yr)
## Demand|Food|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Food|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Food|Crop residues|Straw (Mt DM/yr)
## Demand|Food|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Food|Forage (Mt DM/yr)
## Demand|Food|Forest products (Mt DM/yr)
## Demand|Food|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Food|Forest products|Wood fuel (Mt DM/yr)
## Demand|Food|Pasture (Mt DM/yr)
## Demand|Food|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Food|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Food|Secondary products|Ethanol (Mt DM/yr)
## Demand|Food|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Food|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Material|Bioenergy crops (Mt DM/yr)
## Demand|Material|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Material|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Material|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Material|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Material|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Material|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Material|Forage (Mt DM/yr)
## Demand|Material|Pasture (Mt DM/yr)
## Demand|Material|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Material|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Processing|Bioenergy crops (Mt DM/yr)
## Demand|Processing|Crop residues (Mt DM/yr)
## Demand|Processing|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Processing|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Processing|Crop residues|Straw (Mt DM/yr)
## Demand|Processing|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Processing|Fish (Mt DM/yr)
## Demand|Processing|Forage (Mt DM/yr)
## Demand|Processing|Forest products (Mt DM/yr)
```

```
## Demand|Processing|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Processing|Forest products|Wood fuel (Mt DM/yr)
## Demand|Processing|Livestock products (Mt DM/yr)
## Demand|Processing|Livestock products|Dairy (Mt DM/yr)
## Demand|Processing|Livestock products|Eggs (Mt DM/yr)
## Demand|Processing|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Processing|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Processing|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Processing|Pasture (Mt DM/yr)
## Demand|Processing|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Processing|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Processing|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Processing|Secondary products|Ethanol (Mt DM/yr)
## Demand|Processing|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Processing|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Seed|Crop residues (Mt DM/yr)
## Demand|Seed|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Seed|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Seed|Crop residues|Straw (Mt DM/yr)
## Demand|Seed|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Seed|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Seed|Forage (Mt DM/yr)
## Demand|Seed|Forest products (Mt DM/yr)
## Demand|Seed|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Seed|Forest products|Wood fuel (Mt DM/yr)
## Demand|Seed|Pasture (Mt DM/yr)
## Demand|Seed|Secondary products (Mt DM/yr)
## Demand|Seed|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Seed|Secondary products|Brans (Mt DM/yr)
## Demand|Seed|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Seed|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Seed|Secondary products|Ethanol (Mt DM/yr)
## Demand|Seed|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Seed|Secondary products|Molasses (Mt DM/yr)
## Demand|Seed|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Seed|Secondary products|Oils (Mt DM/yr)
## Demand|Seed|Secondary products|Sugar (Mt DM/yr)
## Emissions|NH3|Land|Agriculture|Agricultural Soils|Decay of Crop Residues (Mt NH3/yr)
## Emissions|NH3|Land|Agriculture|Agricultural Soils|Soil Organic Matter Loss (Mt NH3/yr)
## Emissions|NO2|Land|Agriculture|Agricultural Soils|Decay of Crop Residues (Mt NO2/yr)
## Emissions|NO2|Land|Agriculture|Agricultural Soils|Soil Organic Matter Loss (Mt NO2/yr)
## Production|Secondary products|Microbial protein (Mt DM/yr)
## Trade|Net-Trade|Secondary products|Microbial protein (Mt DM/yr)
```

Data contains only a mix of 0 and NA values and is ignored, but validation data contains other values.

```
## Costs|MainSolve|GHG Emissions (million US$05/yr)
## Costs|MainSolve|P Fertilizer (million US$05/yr)
## Costs|MainSolve|Reward for Afforestation (million US$05/yr)
## Demand|Domestic Balanceflow|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Domestic Balanceflow|Secondary products|Molasses (Mt DM/yr)
## Demand|Feed|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Food|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Seed|Fish (Mt DM/yr)
## Demand|Seed|Livestock products (Mt DM/yr)
## Demand|Seed|Livestock products|Dairy (Mt DM/yr)
## Demand|Seed|Livestock products|Eggs (Mt DM/yr)
## Demand|Seed|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Seed|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Seed|Livestock products|Ruminant meat (Mt DM/yr)
```

```
## Emissions|N2O|Land|Agriculture|Agricultural Soils|Soil Organic Matter Loss (Mt N2O/yr)
## Emissions|NO3Land|Agriculture|Agricultural Soils|Soil Organic Matter Loss (Mt NO3-/yr)
## Food Consumption Value|Bioenergy crops (million US$05/yr)
## Food Consumption Value|Crop residues (million US$05/yr)
## Food Consumption Value|Forage (million US$05/yr)
## Food Consumption Value|Pasture (million US$05/yr)
## Food Expenditure Share|Bioenergy crops (% of GDP)
## Food Expenditure Share|Crop residues (% of GDP)
## Food Expenditure Share|Forage (% of GDP)
## Food Expenditure Share|Pasture (% of GDP)
## Prices|GHG Emission|CH4 (US$2005/tCH4)
## Prices|GHG Emission|CO2 (US$2005/tCO2)
## Prices|GHG Emission|N2O (US$2005/tN2O)
## Production|Forest products (Mt DM/yr)
## Production|Forest products|Industrial roundwood (Mt DM/yr)
## Production|Forest products|Wood fuel (Mt DM/yr)
## Resources|Land Cover|Cropland|Bioenergy crops|irrigated (million ha)
## Resources|Land Cover Change|Forest|Plantations|Forestry (million ha wrt 1995)
## Resources|Land Cover Change|Urban Area (million ha wrt 1995)
## Resources|Nitrogen|Cropland Budget|Balance|Soil Organic Matter Loss (Mt Nr/yr)
```

Validation data contains only a mix of 0 and NA values and is ignored, but data contains other values.

```
## Demand|Agricultural Supply Chain Loss|Bioenergy crops (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Secondary products|Ethanol (Mt DM/yr)
## Demand|Agricultural Supply Chain Loss|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Bioenergy|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Feed|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Feed|Secondary products|Ethanol (Mt DM/yr)
## Demand|Processing|Secondary products|Oils (Mt DM/yr)
## Demand|Seed|Bioenergy crops (Mt DM/yr)
## Production|Bioenergy crops (Mt DM/yr)
## Productivity|Yield|Bioenergy crops (t DM/ha)
## Trade|Net-Trade|Bioenergy crops (Mt DM/yr)
## Trade|Net-Trade|Secondary products|Distillers grains (Mt DM/yr)
## Trade|Net-Trade|Secondary products|Ethanol (Mt DM/yr)
```

65 Non-Matching Data

65.1 Model outputs

```
## Household Expenditure|Food|Food Expenditure Share (USD/USD)
## Resources|Land Cover|Forest|Plantations|Forestry (million ha)
## Resources|Land Cover|Forest|Plantations|Afforestation (million ha)
## Resources|Land Cover Change|Forest|Plantations|Forestry (million ha wrt 1995)
## Resources|Land Cover Change|Forest|Plantations|Afforestation (million ha wrt 1995)
## Resources|Land Cover|Forest|Natural Forest|Primary Forest|Protected (million ha)
## Resources|Land Cover|Forest|Natural Forest|Secondary Forest|Protected (million ha)
## Resources|Land Cover|Other Land|Protected (million ha)
## Resources|Land Cover|Cropland|Crops|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|Maize|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|Maize|irrigated (million ha)
```

```
## Resources|Land Cover|Cropland|Crops|Cereals|Rice|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|Rice|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|Temperate cereals|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|Temperate cereals|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|Tropical cereals|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Cereals|Tropical cereals|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Cotton seed|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Cotton seed|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Groundnuts|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Groundnuts|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Oilpalms|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Oilpalms|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Other oil crops (incl rapeseed)|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Other oil crops (incl rapeseed)|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Soybean|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Soybean|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Sunflower|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Oil crops|Sunflower|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Sugar crops|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Sugar crops|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Sugar crops|Sugar beet|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Sugar crops|Sugar beet|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Sugar crops|Sugar cane|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Sugar crops|Sugar cane|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Tropical roots|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Tropical roots|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Fruits Vegetables Nuts|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Fruits Vegetables Nuts|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Potatoes|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Potatoes|irrigated (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Pulses|rainfed (million ha)
## Resources|Land Cover|Cropland|Crops|Other crops|Pulses|irrigated (million ha)
## Resources|Land Cover|Cropland|Bioenergy crops|rainfed (million ha)
## Resources|Land Cover|Cropland|Bioenergy crops|irrigated (million ha)
## Resources|Land Cover|Cropland|Forage|rainfed (million ha)
## Resources|Land Cover|Cropland|Forage|irrigated (million ha)
## Resources|Nitrogen|Cropland Budget|Inputs|Manure From Stubble Grazing (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Other Land (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Anaerobic lagoon (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Liquid slurry (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Solid storage (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Dry lot (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Daily spread (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Anaerobic digester (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Pit storage longer than a month (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Pit storage less than a month (Mt Nr/yr)
## Productivity|Yield|Crops|rainfed (t DM/ha)
## Productivity|Yield|Crops|irrigated (t DM/ha)
## Productivity|Yield|Crops|Cereals|rainfed (t DM/ha)
## Productivity|Yield|Crops|Cereals|irrigated (t DM/ha)
## Productivity|Yield|Crops|Cereals|Maize|rainfed (t DM/ha)
## Productivity|Yield|Crops|Cereals|Maize|irrigated (t DM/ha)
## Productivity|Yield|Crops|Cereals|Rice|rainfed (t DM/ha)
## Productivity|Yield|Crops|Cereals|Rice|irrigated (t DM/ha)
## Productivity|Yield|Crops|Cereals|Temperate cereals|rainfed (t DM/ha)
## Productivity|Yield|Crops|Cereals|Temperate cereals|irrigated (t DM/ha)
```

```
## Productivity|Yield|Crops|Cereals|Tropical cereals|rainfed (t DM/ha)
## Productivity|Yield|Crops|Cereals|Tropical cereals|irrigated (t DM/ha)
## Productivity|Yield|Crops|Oil crops|rainfed (t DM/ha)
## Productivity|Yield|Crops|Oil crops|irrigated (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Cotton seed|rainfed (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Cotton seed|irrigated (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Groundnuts|rainfed (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Groundnuts|irrigated (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Oilpalms|rainfed (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Oilpalms|irrigated (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Other oil crops (incl rapeseed)|rainfed (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Other oil crops (incl rapeseed)|irrigated (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Soybean|rainfed (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Soybean|irrigated (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Sunflower|rainfed (t DM/ha)
## Productivity|Yield|Crops|Oil crops|Sunflower|irrigated (t DM/ha)
## Productivity|Yield|Crops|Sugar crops|rainfed (t DM/ha)
## Productivity|Yield|Crops|Sugar crops|irrigated (t DM/ha)
## Productivity|Yield|Crops|Sugar crops|Sugar beet|rainfed (t DM/ha)
## Productivity|Yield|Crops|Sugar crops|Sugar beet|irrigated (t DM/ha)
## Productivity|Yield|Crops|Sugar crops|Sugar cane|rainfed (t DM/ha)
## Productivity|Yield|Crops|Sugar crops|Sugar cane|irrigated (t DM/ha)
## Productivity|Yield|Crops|Other crops|rainfed (t DM/ha)
## Productivity|Yield|Crops|Other crops|irrigated (t DM/ha)
## Productivity|Yield|Crops|Other crops|Tropical roots|rainfed (t DM/ha)
## Productivity|Yield|Crops|Other crops|Tropical roots|irrigated (t DM/ha)
## Productivity|Yield|Crops|Other crops|Fruits Vegetables Nuts|rainfed (t DM/ha)
## Productivity|Yield|Crops|Other crops|Fruits Vegetables Nuts|irrigated (t DM/ha)
## Productivity|Yield|Crops|Other crops|Potatoes|rainfed (t DM/ha)
## Productivity|Yield|Crops|Other crops|Potatoes|irrigated (t DM/ha)
## Productivity|Yield|Crops|Other crops|Pulses|rainfed (t DM/ha)
## Productivity|Yield|Crops|Other crops|Pulses|irrigated (t DM/ha)
## Productivity|Yield|Bioenergy crops|rainfed (t DM/ha)
## Productivity|Yield|Forage|rainfed (t DM/ha)
## Productivity|Yield|Forage|irrigated (t DM/ha)
## Productivity|Yield-increasing technological change (%/yr)
## Emissions|CO2|Land (Mt CO2/yr)
## Emissions|CO2|Land|Land-use Change|Positive (Mt CO2/yr)
## Emissions|CO2|Land|Land-use Change|Negative (Mt CO2/yr)
## Emissions|CO2|Land|Climate Change (Mt CO2/yr)
## Emissions|CO2|Land|Cumulative (Gt CO2)
## Emissions|CO2|Land|Cumulative|Land-use Change (Gt CO2)
## Emissions|CO2|Land|Cumulative|Land-use Change|Positive (Gt CO2)
## Emissions|CO2|Land|Cumulative|Land-use Change|Negative (Gt CO2)
## Emissions|CO2|Land|Cumulative|Climate Change (Gt CO2)
## Emissions|CH4|Land|Agriculture|Enteric fermentation (Mt CH4/yr)
## Costs|MainSolve (million US$05/yr)
## Costs|MainSolve|Input Factors (million US$05/yr)
## Costs|MainSolve|Land Conversion (million US$05/yr)
## Costs|MainSolve|Transport (million US$05/yr)
## Costs|MainSolve|TC (million US$05/yr)
## Costs|MainSolve|N Fertilizer (million US$05/yr)
## Costs|MainSolve|P Fertilizer (million US$05/yr)
## Costs|MainSolve|GHG Emissions (million US$05/yr)
## Costs|MainSolve|Reward for Afforestation (million US$05/yr)
## Costs|MainSolve|MACCS (million US$05/yr)
## Costs|MainSolve|AEI (million US$05/yr)
## Costs|MainSolve|Trade (million US$05/yr)
## Costs|MainSolve|Forestry (million US$05/yr)
## Costs|MainSolve w/o GHG Emissions (million US$05/yr)
```

```
## Prices|Land|Cropland (US$05/ha)
## Prices|Water|Agriculture (Index 2005=100)
## Trade Value|Net-Exports|Crops|Cereals (million US$05/yr)
## Trade Value|Net-Exports|Crops|Sugar crops (million US$05/yr)
## Trade Value|Net-Exports|Crops|Other crops (million US$05/yr)
## Trade Value|Net-Exports|Bioenergy crops (million US$05/yr)
## Trade Value|Net-Exports|Secondary products (million US$05/yr)
## Trade Value|Net-Exports|Livestock products (million US$05/yr)
## Trade Value|Net-Exports|Fish (million US$05/yr)
## Trade Value|Exports|Crops|Cereals (million US$05/yr)
## Trade Value|Exports|Crops|Sugar crops (million US$05/yr)
## Trade Value|Exports|Crops|Other crops (million US$05/yr)
## Trade Value|Exports|Bioenergy crops (million US$05/yr)
## Trade Value|Exports|Secondary products (million US$05/yr)
## Trade Value|Exports|Livestock products (million US$05/yr)
## Trade Value|Exports|Fish (million US$05/yr)
## Trade Value|Imports|Crops|Cereals (million US$05/yr)
## Trade Value|Imports|Crops|Sugar crops (million US$05/yr)
## Trade Value|Imports|Crops|Other crops (million US$05/yr)
## Trade Value|Imports|Bioenergy crops (million US$05/yr)
## Trade Value|Imports|Secondary products (million US$05/yr)
## Trade Value|Imports|Livestock products (million US$05/yr)
## Trade Value|Imports|Fish (million US$05/yr)
## Food Consumption Value|Crops (million US$05/yr)
## Food Consumption Value|Crops|Cereals (million US$05/yr)
## Food Consumption Value|Crops|Oil crops (million US$05/yr)
## Food Consumption Value|Crops|Sugar crops (million US$05/yr)
## Food Consumption Value|Crops|Other crops (million US$05/yr)
## Food Consumption Value|Bioenergy crops (million US$05/yr)
## Food Consumption Value|Forage (million US$05/yr)
## Food Consumption Value|Pasture (million US$05/yr)
## Food Consumption Value|Secondary products (million US$05/yr)
## Food Consumption Value|Crop residues (million US$05/yr)
## Food Consumption Value|Livestock products (million US$05/yr)
## Food Consumption Value|Fish (million US$05/yr)
## Food Expenditure Share|Crops (% of GDP)
## Food Expenditure Share|Crops|Cereals (% of GDP)
## Food Expenditure Share|Crops|Oil crops (% of GDP)
## Food Expenditure Share|Crops|Sugar crops (% of GDP)
## Food Expenditure Share|Crops|Other crops (% of GDP)
## Food Expenditure Share|Bioenergy crops (% of GDP)
## Food Expenditure Share|Forage (% of GDP)
## Food Expenditure Share|Pasture (% of GDP)
## Food Expenditure Share|Secondary products (% of GDP)
## Food Expenditure Share|Crop residues (% of GDP)
## Food Expenditure Share|Livestock products (% of GDP)
## Food Expenditure Share|Fish (% of GDP)
```

65.2 Validation data

```
## Emissions|CH4|Land|Land-use Change (Mt CH4/yr)
## Emissions|CO2|Land|Agriculture (Mt CO2/yr)
## Emissions|N2O|Land|Land-use Change (Mt N2O/yr)
## Resources|Carbon Stocks|Litter Carbon (Mt C)
## Resources|Carbon Stocks|Soil Carbon in top 30 cm (Mt C)
## Resources|Carbon Stocks|Vegetation Carbon (Mt C)
## Income (US$05 MER/cap/yr)
## Income (million US$05 MER/yr)
```

```
## Income (million US$05 PPP/yr)
## Nutrition|Calorie Supply (NA)
## Nutrition|Calorie Supply|Bioenergy crops (NA)
## Nutrition|Calorie Supply|Crop residues (NA)
## Nutrition|Calorie Supply|Crops (NA)
## Nutrition|Calorie Supply|Fish (NA)
## Nutrition|Calorie Supply|Forage (NA)
## Nutrition|Calorie Supply|Forest products (NA)
## Nutrition|Calorie Supply|Livestock products (NA)
## Nutrition|Calorie Supply|Pasture (NA)
## Nutrition|Calorie Supply|Secondary products (NA)
## Nutrition|Calorie Supply|Crop residues|Non fibrous crop residues (NA)
## Nutrition|Calorie Supply|Crop residues|Other fibrous crop residues (NA)
## Nutrition|Calorie Supply|Crop residues|Straw (NA)
## Nutrition|Calorie Supply|Crops|Cereals (NA)
## Nutrition|Calorie Supply|Crops|Oil crops (NA)
## Nutrition|Calorie Supply|Crops|Other crops (NA)
## Nutrition|Calorie Supply|Crops|Sugar crops (NA)
## Nutrition|Calorie Supply|Crops|Cereals|Maize (NA)
## Nutrition|Calorie Supply|Crops|Cereals|Rice (NA)
## Nutrition|Calorie Supply|Crops|Cereals|Temperate cereals (NA)
## Nutrition|Calorie Supply|Crops|Cereals|Tropical cereals (NA)
## Nutrition|Calorie Supply|Crops|Oil crops|Cotton seed (NA)
## Nutrition|Calorie Supply|Crops|Oil crops|Groundnuts (NA)
## Nutrition|Calorie Supply|Crops|Oil crops|Oilpalms (NA)
## Nutrition|Calorie Supply|Crops|Oil crops|Other oil crops (incl rapeseed)
## Nutrition|Calorie Supply|Crops|Oil crops|Soybean (NA)
## Nutrition|Calorie Supply|Crops|Oil crops|Sunflower (NA)
## Nutrition|Calorie Supply|Crops|Other crops|Fruits Vegetables Nuts (NA)
## Nutrition|Calorie Supply|Crops|Other crops|Potatoes (NA)
## Nutrition|Calorie Supply|Crops|Other crops|Pulses (NA)
## Nutrition|Calorie Supply|Crops|Other crops|Tropical roots (NA)
## Nutrition|Calorie Supply|Crops|Sugar crops|Sugar beet (NA)
## Nutrition|Calorie Supply|Crops|Sugar crops|Sugar cane (NA)
## Nutrition|Calorie Supply|Forest products|Industrial roundwood (NA)
## Nutrition|Calorie Supply|Forest products|Wood fuel (NA)
## Nutrition|Calorie Supply|Livestock products|Dairy (NA)
## Nutrition|Calorie Supply|Livestock products|Eggs (NA)
## Nutrition|Calorie Supply|Livestock products|Monogastric meat (NA)
## Nutrition|Calorie Supply|Livestock products|Poultry meat (NA)
## Nutrition|Calorie Supply|Livestock products|Ruminant meat (NA)
## Nutrition|Calorie Supply|Secondary products|Alcoholic beverages (NA)
## Nutrition|Calorie Supply|Secondary products|Brans (NA)
## Nutrition|Calorie Supply|Secondary products|Cotton lint (NA)
## Nutrition|Calorie Supply|Secondary products|Distillers grains (NA)
## Nutrition|Calorie Supply|Secondary products|Ethanol (NA)
## Nutrition|Calorie Supply|Secondary products|Microbial protein (NA)
## Nutrition|Calorie Supply|Secondary products|Molasses (NA)
## Nutrition|Calorie Supply|Secondary products|Oilcakes (NA)
## Nutrition|Calorie Supply|Secondary products|Oils (NA)
## Nutrition|Calorie Supply|Secondary products|Sugar (NA)
## Resources|Carbon Stocks|Soil Carbon in top 30 cm|Cropland Soils (Mt C)
## Resources|Carbon Stocks|Soil Carbon in top 30 cm|Noncropland Soils (Mt C)
## Emissions|CH4|Land|Agriculture|Enteric Fermentation (Mt CH4/yr)
## Emissions|N2O|Agriculture (Mt N2O/yr)
## Emissions|N2O|Agriculture|Agricultural Soils (Mt N2O/yr)
## Emissions|N2O|Agriculture|Animal waste management (Mt N2O/yr)
## Emissions|N2O|Agriculture|Agricultural Soils|Decay of crop residues (Mt N2O/yr)
## Emissions|N2O|Agriculture|Agricultural Soils|Inorganic Fertilizers (Mt N2O/yr)
## Emissions|N2O|Agriculture|Agricultural Soils|Manure applied to Croplands (Mt N2O/yr)
```

```
## Emissions|N2O|Agriculture|Agricultural Soils|Pasture (Mt N2O/yr)
## Emissions|N2O|Agriculture|Agricultural Soils|Soil organic matter loss (Mt N2O/yr)
## Nutrition|Calorie Supply|Crops|Cereals|Maize (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Cereals|Rice (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Cereals|Temperate cereals (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Cereals|Tropical cereals (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Oil crops|Groundnuts (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Oil crops|Other oil crops (incl rapeseed) (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Oil crops|Soybean (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Oil crops|Sunflower (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Other crops|Fruits Vegetables Nuts (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Other crops|Potatoes (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Other crops|Pulses (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Other crops|Tropical roots (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Sugar crops|Sugar beet (kcal/capita/day)
## Nutrition|Calorie Supply|Crops|Sugar crops|Sugar cane (kcal/capita/day)
## Nutrition|Calorie Supply|Livestock products|Dairy (kcal/capita/day)
## Nutrition|Calorie Supply|Livestock products|Eggs (kcal/capita/day)
## Nutrition|Calorie Supply|Livestock products|Monogastric meat (kcal/capita/day)
## Nutrition|Calorie Supply|Livestock products|Poultry meat (kcal/capita/day)
## Nutrition|Calorie Supply|Livestock products|Ruminant meat (kcal/capita/day)
## Nutrition|Calorie Supply|Secondary products|Alcoholic beverages (kcal/capita/day)
## Nutrition|Calorie Supply|Secondary products|Brans (kcal/capita/day)
## Nutrition|Calorie Supply|Secondary products|Molasses (kcal/capita/day)
## Nutrition|Calorie Supply|Secondary products|Oils (kcal/capita/day)
## Nutrition|Calorie Supply|Secondary products|Sugar (kcal/capita/day)
## Nutrition|Dietary Composition|Vegetables Fruits and Nuts Share (kcal/kcal)
## Household Expenditure|Food|Expenditure Share (USD/USD)
## Household Expenditure|Food|Expenditure Share|Crops (USD/USD)
## Household Expenditure|Food|Expenditure Share|Crops|Cereals (USD/USD)
## Household Expenditure|Food|Expenditure Share|Crops|Oil crops (USD/USD)
## Household Expenditure|Food|Expenditure Share|Crops|Other crops (USD/USD)
## Household Expenditure|Food|Expenditure Share|Crops|Sugar crops (USD/USD)
## Household Expenditure|Food|Expenditure Share|Fish (USD/USD)
## Household Expenditure|Food|Expenditure Share|Livestock products (USD/USD)
## Household Expenditure|Food|Expenditure Share|Secondary products (USD/USD)
## Trade|Net-Trade|Crop residues (Mt DM/yr)
## Trade|Net-Trade|Forage (Mt DM/yr)
## Trade|Net-Trade|Forest products (Mt DM/yr)
## Trade|Net-Trade|Pasture (Mt DM/yr)
## Trade|Net-Trade|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Trade|Net-Trade|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Trade|Net-Trade|Crop residues|Straw (Mt DM/yr)
## Trade|Net-Trade|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Trade|Net-Trade|Forest products|Industrial roundwood (Mt DM/yr)
## Trade|Net-Trade|Forest products|Wood fuel (Mt DM/yr)
## Trade|Self-sufficiency|Bioenergy crops (1)
## Trade|Self-sufficiency|Forest products (1)
## Trade|Self-sufficiency|Forest products|Industrial roundwood (1)
## Trade|Self-sufficiency|Forest products|Wood fuel (1)
## Trade|Self-sufficiency|Secondary products (1)
## Trade|Self-sufficiency|Secondary products|Microbial protein (1)
## Demand|Feed|Feed for Aquaculture (Mt DM/yr)
## Demand|Feed|Feed for Dairy (Mt DM/yr)
## Demand|Feed|Feed for Eggs (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crop residues (Mt DM/yr)
```

```
## Demand|Feed|Feed for Aquaculture|Crops (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Fish (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Forage (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Forest products (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Livestock products (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Pasture (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crop residues|Straw (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Cereals (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Oil crops (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Other crops (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Sugar crops (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Forest products|Wood fuel (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Livestock products|Dairy (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Livestock products|Eggs (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Brans (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Ethanol (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Molasses (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Oils (Mt DM/yr)
## Demand|Feed|Feed for Aquaculture|Secondary products|Sugar (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crop residues (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Fish (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Forage (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Forest products (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Livestock products (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Pasture (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crop residues|Straw (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Cereals (Mt DM/yr)
```

```
## Demand|Feed|Feed for Dairy|Crops|Oil crops (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Other crops (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Sugar crops (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Forest products|Wood fuel (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Livestock products|Dairy (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Livestock products|Eggs (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Brans (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Ethanol (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Molasses (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Oils (Mt DM/yr)
## Demand|Feed|Feed for Dairy|Secondary products|Sugar (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crop residues (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Fish (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Forage (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Forest products (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Livestock products (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Pasture (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crop residues|Straw (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Cereals (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Oil crops (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Other crops (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Sugar crops (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
```

```
## Demand|Feed|Feed for Eggs|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Forest products|Wood fuel (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Livestock products|Dairy (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Livestock products|Eggs (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Brans (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Ethanol (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Molasses (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Oils (Mt DM/yr)
## Demand|Feed|Feed for Eggs|Secondary products|Sugar (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crop residues (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Fish (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Forage (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Forest products (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Livestock products (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Pasture (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crop residues|Straw (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Cereals (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Oil crops (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Other crops (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Sugar crops (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Forest products|Wood fuel (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Livestock products|Dairy (Mt DM/yr)
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## Demand|Feed|Feed for Monogastric meat|Livestock products|Eggs (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Brans (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Ethanol (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Molasses (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Oils (Mt DM/yr)
## Demand|Feed|Feed for Monogastric meat|Secondary products|Sugar (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crop residues (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Fish (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Forage (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Forest products (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Livestock products (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Pasture (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crop residues|Straw (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Cereals (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Oil crops (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Other crops (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Sugar crops (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Forest products|Wood fuel (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Livestock products|Dairy (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Livestock products|Eggs (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Brans (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Ethanol (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Molasses (Mt DM/yr)
```

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## Demand|Feed|Feed for Poultry meat|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Oils (Mt DM/yr)
## Demand|Feed|Feed for Poultry meat|Secondary products|Sugar (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Bioenergy crops (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crop residues (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Fish (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Forage (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Forest products (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Livestock products (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Pasture (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crop residues|Non fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crop residues|Other fibrous crop residues (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crop residues|Straw (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Cereals (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Oil crops (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Other crops (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Sugar crops (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Other crops|Pulses (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Forest products|Industrial roundwood (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Forest products|Wood fuel (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Livestock products|Dairy (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Livestock products|Eggs (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Livestock products|Monogastric meat (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Livestock products|Poultry meat (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Livestock products|Ruminant meat (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Alcoholic beverages (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Brans (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Cotton lint (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Distillers grains (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Ethanol (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Microbial protein (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Molasses (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Oilcakes (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Oils (Mt DM/yr)
## Demand|Feed|Feed for Ruminant meat|Secondary products|Sugar (Mt DM/yr)
## Demand|Processing|Distiilling (Mt DM/yr)
## Demand|Processing|Extracting (Mt DM/yr)
## Demand|Processing|Fermentation (Mt DM/yr)
## Demand|Processing|Refining (Mt DM/yr)
## Demand|Processing|Distiilling|Crops (Mt DM/yr)
## Demand|Processing|Distiilling|Crops|Cereals (Mt DM/yr)
## Demand|Processing|Distiilling|Crops|Sugar crops (Mt DM/yr)
## Demand|Processing|Distiilling|Crops|Cereals|Maize (Mt DM/yr)
```

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## Demand|Processing|Distiilling|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Processing|Distiilling|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Demand|Processing|Extracting|Crops (Mt DM/yr)
## Demand|Processing|Extracting|Crops|Oil crops (Mt DM/yr)
## Demand|Processing|Extracting|Crops|Oil crops|Cotton seed (Mt DM/yr)
## Demand|Processing|Extracting|Crops|Oil crops|Groundnuts (Mt DM/yr)
## Demand|Processing|Extracting|Crops|Oil crops|Oilpalms (Mt DM/yr)
## Demand|Processing|Extracting|Crops|Oil crops|Other oil crops (incl rapeseed) (Mt DM/yr)
## Demand|Processing|Extracting|Crops|Oil crops|Soybean (Mt DM/yr)
## Demand|Processing|Extracting|Crops|Oil crops|Sunflower (Mt DM/yr)
## Demand|Processing|Fermentation|Crops (Mt DM/yr)
## Demand|Processing|Fermentation|Secondary products (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Cereals (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Other crops (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Cereals|Rice (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Cereals|Temperate cereals (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Cereals|Tropical cereals (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Other crops|Fruits Vegetables Nuts (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Other crops|Potatoes (Mt DM/yr)
## Demand|Processing|Fermentation|Crops|Other crops|Tropical roots (Mt DM/yr)
## Demand|Processing|Fermentation|Secondary products|Brans (Mt DM/yr)
## Demand|Processing|Fermentation|Secondary products|Molasses (Mt DM/yr)
## Demand|Processing|Fermentation|Secondary products|Sugar (Mt DM/yr)
## Demand|Processing|Refining|Crops (Mt DM/yr)
## Demand|Processing|Refining|Crops|Cereals (Mt DM/yr)
## Demand|Processing|Refining|Crops|Sugar crops (Mt DM/yr)
## Demand|Processing|Refining|Crops|Cereals|Maize (Mt DM/yr)
## Demand|Processing|Refining|Crops|Sugar crops|Sugar beet (Mt DM/yr)
## Demand|Processing|Refining|Crops|Sugar crops|Sugar cane (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Brans (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Fruits Vegetables Nuts (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Molasses (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Potatoes (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Rice (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Sugar (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Temperate cereals (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Tropical cereals (Mt DM/yr)
## Production|Secondary Products|Alcoholic beverages|Tropical roots (Mt DM/yr)
## Production|Secondary Products|Brans|Maize (Mt DM/yr)
## Production|Secondary Products|Brans|Rice (Mt DM/yr)
## Production|Secondary Products|Brans|Temperate cereals (Mt DM/yr)
## Production|Secondary Products|Brans|Tropical cereals (Mt DM/yr)
## Production|Secondary Products|Distillers grains|Maize (Mt DM/yr)
## Production|Secondary Products|Distillers grains|Temperate cereals (Mt DM/yr)
## Production|Secondary Products|Ethanol|Maize (Mt DM/yr)
## Production|Secondary Products|Ethanol|Sugar cane (Mt DM/yr)
## Production|Secondary Products|Ethanol|Temperate cereals (Mt DM/yr)
## Production|Secondary Products|Molasses|Sugar beet (Mt DM/yr)
## Production|Secondary Products|Molasses|Sugar cane (Mt DM/yr)
## Production|Secondary Products|Oilcakes|Cotton seed (Mt DM/yr)
## Production|Secondary Products|Oilcakes|Groundnuts (Mt DM/yr)
## Production|Secondary Products|Oilcakes|Oilpalms (Mt DM/yr)
## Production|Secondary Products|Oilcakes|Other oil crops (incl rapeseed) (Mt DM/yr)
## Production|Secondary Products|Oilcakes|Soybean (Mt DM/yr)
## Production|Secondary Products|Oilcakes|Sunflower (Mt DM/yr)
## Production|Secondary Products|Oils|Cotton seed (Mt DM/yr)
## Production|Secondary Products|Oils|Groundnuts (Mt DM/yr)
## Production|Secondary Products|Oils|Maize (Mt DM/yr)
## Production|Secondary Products|Oils|Oilpalms (Mt DM/yr)
## Production|Secondary Products|Oils|Other oil crops (incl rapeseed) (Mt DM/yr)
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## Production|Secondary Products|Oils|Rice (Mt DM/yr)
## Production|Secondary Products|Oils|Soybean (Mt DM/yr)
## Production|Secondary Products|Oils|Sunflower (Mt DM/yr)
## Production|Secondary Products|Sugar|Maize (Mt DM/yr)
## Production|Secondary Products|Sugar|Sugar beet (Mt DM/yr)
## Production|Secondary Products|Sugar|Sugar cane (Mt DM/yr)
## Resources|Land Cover (million ha wrt 1995)
## Resources|Nitrogen|Cropland Budget|Inputs|Manure From Grazing (Mt Nr/yr)
## Resources|Nitrogen|Pasture Budget|Balance|Balanceflow (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure Collected As Fuel|Dairy (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure Collected As Fuel|Eggs (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure Collected As Fuel|Monogastric meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure Collected As Fuel|Poultry meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure Collected As Fuel|Ruminant meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Grazing|Dairy (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Grazing|Eggs (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Grazing|Monogastric meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Grazing|Poultry meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Grazing|Ruminant meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Stubble Grazing|Dairy (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Stubble Grazing|Eggs (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Stubble Grazing|Monogastric meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Stubble Grazing|Poultry meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure From Stubble Grazing|Ruminant meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Dairy (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Eggs (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Monogastric meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Poultry meat (Mt Nr/yr)
## Resources|Nitrogen|Manure|Manure In Confinements|Ruminant meat (Mt Nr/yr)
## Emissions|BC|Land| (Mt BC/yr)
## Emissions|BC|Land|Agriculture (Mt BC/yr)
## Emissions|BC|Land|Biomass Burning (Mt BC/yr)
## Emissions|BC|Land|Agriculture|Agricultural Soils (Mt BC/yr)
## Emissions|BC|Land|Agriculture|Animal Waste Management (Mt BC/yr)
## Emissions|BC|Land|Agriculture|Enteric Fermentation (Mt BC/yr)
## Emissions|BC|Land|Agriculture|Other (Mt BC/yr)
## Emissions|BC|Land|Agriculture|Rice (Mt BC/yr)
## Emissions|BC|Land|Biomass Burning|Agricultural Waste Burning (Mt BC/yr)
## Emissions|BC|Land|Biomass Burning|Deforestation Fires (Mt BC/yr)
## Emissions|BC|Land|Biomass Burning|Forest Fires (Mt BC/yr)
## Emissions|BC|Land|Biomass Burning|Peat Fires (Mt BC/yr)
## Emissions|BC|Land|Biomass Burning|Savannah Fires (Mt BC/yr)
## Emissions|CO|Land| (Mt CO/yr)
## Emissions|CO|Land|Agriculture (Mt CO/yr)
## Emissions|CO|Land|Biomass Burning (Mt CO/yr)
## Emissions|CO|Land|Agriculture|Agricultural Soils (Mt CO/yr)
## Emissions|CO|Land|Agriculture|Animal Waste Management (Mt CO/yr)
## Emissions|CO|Land|Agriculture|Enteric Fermentation (Mt CO/yr)
## Emissions|CO|Land|Agriculture|Other (Mt CO/yr)
## Emissions|CO|Land|Agriculture|Rice (Mt CO/yr)
## Emissions|CO|Land|Biomass Burning|Agricultural Waste Burning (Mt CO/yr)
## Emissions|CO|Land|Biomass Burning|Deforestation Fires (Mt CO/yr)
## Emissions|CO|Land|Biomass Burning|Forest Fires (Mt CO/yr)
## Emissions|CO|Land|Biomass Burning|Peat Fires (Mt CO/yr)
## Emissions|CO|Land|Biomass Burning|Savannah Fires (Mt CO/yr)
## Emissions|NH3-N|Land| (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Agriculture (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Biomass Burning (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Agriculture|Agricultural Soils (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Agriculture|Animal Waste Management (Mt NH3-N/yr)
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## Emissions|NH3-N|Land|Agriculture|Enteric Fermentation (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Agriculture|Other (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Agriculture|Rice (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Biomass Burning|Agricultural Waste Burning (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Biomass Burning|Deforestation Fires (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Biomass Burning|Forest Fires (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Biomass Burning|Peat Fires (Mt NH3-N/yr)
## Emissions|NH3-N|Land|Biomass Burning|Savannah Fires (Mt NH3-N/yr)
## Emissions|NH3|Land| (Mt NH3/yr)
## Emissions|NH3|Land|Biomass Burning (Mt NH3/yr)
## Emissions|NH3|Land|Agriculture|Enteric Fermentation (Mt NH3/yr)
## Emissions|NH3|Land|Agriculture|Other (Mt NH3/yr)
## Emissions|NH3|Land|Agriculture|Rice (Mt NH3/yr)
## Emissions|NH3|Land|Biomass Burning|Agricultural Waste Burning (Mt NH3/yr)
## Emissions|NH3|Land|Biomass Burning|Deforestation Fires (Mt NH3/yr)
## Emissions|NH3|Land|Biomass Burning|Forest Fires (Mt NH3/yr)
## Emissions|NH3|Land|Biomass Burning|Peat Fires (Mt NH3/yr)
## Emissions|NH3|Land|Biomass Burning|Savannah Fires (Mt NH3/yr)
## Emissions|NMHC|Land| (Mt NMHC/yr)
## Emissions|NMHC|Land|Agriculture (Mt NMHC/yr)
## Emissions|NMHC|Land|Biomass Burning (Mt NMHC/yr)
## Emissions|NMHC|Land|Agriculture|Agricultural Soils (Mt NMHC/yr)
## Emissions|NMHC|Land|Agriculture|Animal Waste Management (Mt NMHC/yr)
## Emissions|NMHC|Land|Agriculture|Enteric Fermentation (Mt NMHC/yr)
## Emissions|NMHC|Land|Agriculture|Other (Mt NMHC/yr)
## Emissions|NMHC|Land|Agriculture|Rice (Mt NMHC/yr)
## Emissions|NMHC|Land|Biomass Burning|Agricultural Waste Burning (Mt NMHC/yr)
## Emissions|NMHC|Land|Biomass Burning|Deforestation Fires (Mt NMHC/yr)
## Emissions|NMHC|Land|Biomass Burning|Forest Fires (Mt NMHC/yr)
## Emissions|NMHC|Land|Biomass Burning|Peat Fires (Mt NMHC/yr)
## Emissions|NMHC|Land|Biomass Burning|Savannah Fires (Mt NMHC/yr)
## Emissions|NO2-N|Land| (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Agriculture (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Biomass Burning (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Agriculture|Agricultural Soils (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Agriculture|Animal Waste Management (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Agriculture|Enteric Fermentation (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Agriculture|Other (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Agriculture|Rice (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Biomass Burning|Agricultural Waste Burning (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Biomass Burning|Deforestation Fires (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Biomass Burning|Forest Fires (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Biomass Burning|Peat Fires (Mt NO2-N/yr)
## Emissions|NO2-N|Land|Biomass Burning|Savannah Fires (Mt NO2-N/yr)
## Emissions|NO2|Land| (Mt NO2/yr)
## Emissions|NO2|Land|Biomass Burning (Mt NO2/yr)
## Emissions|NO2|Land|Agriculture|Enteric Fermentation (Mt NO2/yr)
## Emissions|NO2|Land|Agriculture|Other (Mt NO2/yr)
## Emissions|NO2|Land|Agriculture|Rice (Mt NO2/yr)
## Emissions|NO2|Land|Biomass Burning|Agricultural Waste Burning (Mt NO2/yr)
## Emissions|NO2|Land|Biomass Burning|Deforestation Fires (Mt NO2/yr)
## Emissions|NO2|Land|Biomass Burning|Forest Fires (Mt NO2/yr)
## Emissions|NO2|Land|Biomass Burning|Peat Fires (Mt NO2/yr)
## Emissions|NO2|Land|Biomass Burning|Savannah Fires (Mt NO2/yr)
## Emissions|NO3-N|Land| (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Agriculture (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Biomass Burning (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Agriculture|Agricultural Soils (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Agriculture|Animal Waste Management (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Agriculture|Enteric Fermentation (Mt NO3-N/yr)
```

```
## Emissions|NO3-N|Land|Agriculture|Other (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Agriculture|Rice (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Biomass Burning|Agricultural Waste Burning (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Biomass Burning|Deforestation Fires (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Biomass Burning|Forest Fires (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Biomass Burning|Peat Fires (Mt NO3-N/yr)
## Emissions|NO3-N|Land|Biomass Burning|Savannah Fires (Mt NO3-N/yr)
## Emissions|NO3Land| (Mt NO3-/yr)
## Emissions|NO3Land|Biomass Burning (Mt NO3-/yr)
## Emissions|NO3Land|Agriculture|Enteric Fermentation (Mt NO3-/yr)
## Emissions|NO3Land|Agriculture|Other (Mt NO3-/yr)
## Emissions|NO3Land|Agriculture|Rice (Mt NO3-/yr)
## Emissions|NO3Land|Biomass Burning|Agricultural Waste Burning (Mt NO3-/yr)
## Emissions|NO3Land|Biomass Burning|Deforestation Fires (Mt NO3-/yr)
## Emissions|NO3Land|Biomass Burning|Forest Fires (Mt NO3-/yr)
## Emissions|NO3Land|Biomass Burning|Peat Fires (Mt NO3-/yr)
## Emissions|NO3Land|Biomass Burning|Savannah Fires (Mt NO3-/yr)
## Emissions|OC|Land| (Mt OC/yr)
## Emissions|OC|Land|Agriculture (Mt OC/yr)
## Emissions|OC|Land|Biomass Burning (Mt OC/yr)
## Emissions|OC|Land|Agriculture|Agricultural Soils (Mt OC/yr)
## Emissions|OC|Land|Agriculture|Animal Waste Management (Mt OC/yr)
## Emissions|OC|Land|Agriculture|Enteric Fermentation (Mt OC/yr)
## Emissions|OC|Land|Agriculture|Other (Mt OC/yr)
## Emissions|OC|Land|Agriculture|Rice (Mt OC/yr)
## Emissions|OC|Land|Biomass Burning|Agricultural Waste Burning (Mt OC/yr)
## Emissions|OC|Land|Biomass Burning|Deforestation Fires (Mt OC/yr)
## Emissions|OC|Land|Biomass Burning|Forest Fires (Mt OC/yr)
## Emissions|OC|Land|Biomass Burning|Peat Fires (Mt OC/yr)
## Emissions|OC|Land|Biomass Burning|Savannah Fires (Mt OC/yr)
## Emissions|SO2|Land| (Mt SO2/yr)
## Emissions|SO2|Land|Agriculture (Mt SO2/yr)
## Emissions|SO2|Land|Biomass Burning (Mt SO2/yr)
## Emissions|SO2|Land|Agriculture|Agricultural Soils (Mt SO2/yr)
## Emissions|SO2|Land|Agriculture|Animal Waste Management (Mt SO2/yr)
## Emissions|SO2|Land|Agriculture|Enteric Fermentation (Mt SO2/yr)
## Emissions|SO2|Land|Agriculture|Other (Mt SO2/yr)
## Emissions|SO2|Land|Agriculture|Rice (Mt SO2/yr)
## Emissions|SO2|Land|Biomass Burning|Agricultural Waste Burning (Mt SO2/yr)
## Emissions|SO2|Land|Biomass Burning|Deforestation Fires (Mt SO2/yr)
## Emissions|SO2|Land|Biomass Burning|Forest Fires (Mt SO2/yr)
## Emissions|SO2|Land|Biomass Burning|Peat Fires (Mt SO2/yr)
## Emissions|SO2|Land|Biomass Burning|Savannah Fires (Mt SO2/yr)
## Emissions|N2O|Land|Land Use Change (Mt N2O/yr)
## Emissions|NH3|Land|Land Use Change (Mt NH3/yr)
## Emissions|NO2|Land|Land Use Change (Mt NO2/yr)
## Emissions|NO3Land|Land Use Change (Mt NO3-/yr)
## Emissions|CO2|Land|Land Use Change (Mt CO2/yr)
## Resources|Land Cover|Other Natural Land (million ha)
## Resources|Land Cover|Forest|Forestry|Harvested Area (million ha)
## Resources|Land Cover|Other Arable Land (million ha)
## Resources|Land Cover (million ha wrt 2005)
## Resources|Land Cover Change|Cropland (million ha wrt 2005)
## Resources|Land Cover Change|Forest (million ha wrt 2005)
## Resources|Land Cover Change|Other Land (million ha wrt 2005)
## Resources|Land Cover Change|Pastures and Rangelands (million ha wrt 2005)
## Resources|Land Cover Change|Cropland|Bioenergy crops (million ha wrt 2005)
## Resources|Land Cover Change|Forest|Managed Forest (million ha wrt 2005)
## Resources|Land Cover Change|Forest|Natural Forest (million ha wrt 2005)
## Resources|Land Cover Change|Other Natural Land (million ha wrt 2005)
```

```
## Resources|Land Cover Change|Urban Area (million ha wrt 2005)
## Resources|Land Cover Change|Forest|Forestry|Harvested Area (million ha wrt 2005)
## Resources|Land Cover Change|Other Arable Land (million ha wrt 2005)
## Prices|Agriculture|Microbial protein (US$05/tDM)
## Prices|Agriculture|Industrial roundwood (US$05/tDM)
## Prices|Agriculture|Short rotation trees (US$05/tDM)
## Prices|Agriculture|Wood fuel (US$05/tDM)
```

Part XVIII
Run Information

66 Calibration

66.1 Yield calibration factors

	CAZ	CHA	EUR	IND	JPN	LAM	MEA	NEU	OAS	REF	SSA	USA
crops	0.32	0.86	0.73	0.84	0.83	0.57	0.66	0.72	0.70	0.85	0.63	0.60
pasture	0.96	1.00	1.06	0.96	0.99	1.03	1.01	1.07	1.00	1.17	1.02	0.98

66.2 Land use change in 1995 (reshuffling)

Table 2039: Land use change cropland 1995 (Mio. ha)

	CAZ	CHA	EUR	IND	JPN	LAM	MEA	NEU	OAS	REF	SSA	USA	GLO
expansion	6.10	1.54	9.78	3.62	0.00	11.50	0.02	0.00	12.19	0.00	0.00	1.90	46.64
contraction	-6.31	-5.09	-23.96	-4.37	-0.57	-12.52	-15.38	-3.31	-15.78	-0.40	-0.24	-3.97	-91.89
net changes	-0.22	-3.56	-14.18	-0.75	-0.57	-1.02	-15.36	-3.31	-3.60	-0.40	-0.24	-2.07	-45.25
gross changes	12.41	6.63	33.74	8.00	0.57	24.01	15.39	3.31	27.97	0.40	0.24	5.87	138.53

67 Model settings

67.1 Code settings

```
## ### GIT revision ###
## 9a5e1b3d6ec7db76820f503de06ebcda9e4dd6cc
##
## ### Modifications ###
##
## On branch magpie4paper
## Your branch is up-to-date with jpd/magpie4paper.
##
## Changes not staged for commit:
##
##   (use "git add <file>..." to update what will be committed)
##
##   (use "git checkout -- <file>..." to discard changes in working directory)
##
##
##  modified:   main.gms
##  modified:   modules/09_drivers/aug17/input.gms
##
##  modified:   modules/12_interest_rate/glo_jan16/input.gms
##
##  modified:   modules/12_interest_rate/reg_feb18/input.gms
```

```
##
##  modified:   modules/15_food/anthropometrics_jan18/input.gms
##
##  modified:   modules/21_trade/selfsuff_reduced/input.gms
##
##  modified:   modules/42_water_demand/agr_sector_aug13/input.gms
##
##  modified:   modules/42_water_demand/all_sectors_aug13/input.gms
##
##  modified:   modules/50_nr_soil_budget/exoeff_aug16/input.gms
##
##  modified:   modules/60_bioenergy/standard_flexreg_may17/input.gms
##
##  modified:   modules/70_livestock/fbask_jan16/input.gms
##
## Untracked files:
##
##   (use "git add <file>..." to include in what will be committed)
##
##
##  log_out-11157596.err
##  log_out-11157597.err
##
##
## no changes added to commit (use "git add" and/or "git commit -a")
##
##
##
## ### MODULE SETUP ###
## $setglobal drivers  aug17
## $setglobal land  feb15
##
## $setglobal costs  default
## $setglobal interest_rate  reg_feb18
##
## $setglobal tc  endo_jun18
## $setglobal yields  dynamic_aug18
##
## $setglobal food  anthropometrics_jan18
## $setglobal demand  sector_may15
##
## $setglobal production  flexreg_apr16
## $setglobal residues  flexreg_apr16
##
## $setglobal processing  coupleproducts_feb17
## $setglobal trade  selfsuff_reduced
##
## $setglobal crop  endo_jun13
## $setglobal past  endo_jun13
##
## $setglobal forestry  affore_vegc_dec16
## $setglobal urban  static
##
## $setglobal natveg  dynamic_may18
## $setglobal factor_costs  mixed_feb17
##
## $setglobal landconversion  global_static_aug18
## $setglobal transport  gtap_nov12
##
## $setglobal area_equipped_for_irrigation  endo_apr13
```

```
##
## $setglobal water_demand  agr_sector_aug13
##
## $setglobal water_availability  total_water_aug13
## $setglobal climate  static
##
## $setglobal nr_soil_budget  exoeff_aug16
## $setglobal nitrogen  ipcc2006_sep16
##
## $setglobal carbon  normal_dec17
## $setglobal methane  ipcc2006_flexreg_apr16
##
## $setglobal phosphorus  off
## $setglobal awms  ipcc2006_aug16
##
## $setglobal ghg_policy  price_sep16
## $setglobal maccs  on_sep16
##
## $setglobal carbon_removal  off_sep16
## $setglobal som  off
##
## $setglobal bioenergy  standard_flexreg_may17
## $setglobal material  exo_flexreg_apr16
##
## $setglobal livestock  fbask_jan16
## $setglobal disagg_lvst  foragebased_aug18
##
## $setglobal optimization  nlp_apr17
```

67.2 Dataset

```
##
##
## Used data set: isimip_rcp-IPSL_CM5A_LR-rcp2p6-co2_rev34_c200_690d3718e151be1b450b394c1064b1c5.tgz
##
## md5sum: b88ddae2ac42d76603bd988337115c64
##
## Repository: /p/projects/landuse/data/input/archive
##
##
## Used data set: rev4.14_690d3718e151be1b450b394c1064b1c5_magpie.tgz
##
## md5sum: a049d482a1a9766c843b671a1b69b9f1
##
## Repository: /p/projects/rd3mod/inputdata/output
##
##
## Used data set: rev4.14_690d3718e151be1b450b394c1064b1c5_validation.tgz
##
## md5sum: 9d67c5c2f80429f00967e9a2e6d9c34f
##
## Repository: /p/projects/rd3mod/inputdata/output
##
##
## Used data set: additional_data_rev3.58.tgz
## md5sum: 75798c6d2670497a92ae2a3fb5a7e6ee
##
## Repository: /p/projects/landuse/data/input/archive
##
```

```
##
## Used data set: calibration_H12_c200_12Sep18.tgz
##
## md5sum: 0a7d88e902918eb6a5263faaf066cc5d
##
## Repository: /p/projects/landuse/data/input/calibration
##
## Low resolution: c200
##
## High resolution: 0.5
##
## Total number of cells: 200
##
## Number of cells per region:
##
##   CAZ  CHA  EUR  IND  JPN  LAM  MEA  NEU  OAS  REF  SSA  USA
##
##    28   24   10    7    3   53   17    8   22    7   11   10
##
##
## Regionscode: 690d3718e151be1b450b394c1064b1c5
##
## Regions data revision: 4.14
##
##
## lpj2magpie settings:
##
## * LPJmL data folder: /p/projects/landuse/data/input/lpj_input/isimip_rcp/IPSL_CM5A_LR/rcp2p6/co2
##
## * Additional input folder: /p/projects/landuse/data/input/other/rev34
## * Revision: 34
##
## * Call: lpj2magpie(input_folder = path(cfg$lpj_input_folder, gsub("-",     "/", cfg$input)), input2_
##
##
## aggregation settings:
## * Input resolution: 0.5
## * Output resolution: c200
##
## * Input file: /p/projects/landuse/data/input/archive/isimip_rcp-IPSL_CM5A_LR-rcp2p6-co2_rev34_0.5.tg
##
## * Output file: /p/projects/landuse/data/input/archive/isimip_rcp-IPSL_CM5A_LR-rcp2p6-co2_rev34_c200_
##
## * Regionscode: 690d3718e151be1b450b394c1064b1c5
## * (clustering) n-repeat: 5
##
## * (clustering) n-redistribute: 0
##
## * Call: aggregation(input_file = lpj2magpie_file, regionmapping = paste0("../",     cfg$regionmappin
##
##
##
##
## Last modification (input data): Tue Oct 16 16:46:11 2018
```

67.3 R Information

```
## R version 3.3.2 (2016-10-31)
## Platform: x86_64-pc-linux-gnu (64-bit)
## Running under: SUSE Linux Enterprise Server 12 SP2
##
## locale:
## [1] C
##
## attached base packages:
## [1] methods   grid      stats     graphics  grDevices utils     datasets  base
##
## other attached packages:
## [1] luscale_2.13.1  lucode_2.136.0  magclass_4.87.9
##
## loaded via a namespace (and not attached):
##  [1] spam_1.4-0         tidyselect_0.2.4   Rook_1.1-1         purrr_0.2.4
##  [5] reshape2_1.4.3     colorspace_1.3-2   htmltools_0.3.6    viridisLite_0.3.0
##  [9] XML_3.98-1.5       rlang_0.2.0        pillar_1.2.3       glue_1.2.0
## [13] RColorBrewer_1.1-2 bindrcpp_0.2.2     bindr_0.1.1        plyr_1.8.4
## [17] stringr_1.3.1      munsell_0.4.3      gtable_0.2.0       data.tree_0.7.4
## [21] visNetwork_2.0.4   htmlwidgets_1.2    httpuv_1.3.5       DiagrammeR_1.0.0
## [25] curl_2.3           Rcpp_0.12.18       xtable_1.8-2       readr_1.1.1
## [29] scales_0.5.0       jsonlite_1.5       abind_1.4-5        rgexf_0.15.3
## [33] mime_0.5           gridExtra_2.2.1    brew_1.0-6         ggplot2_3.0.0
## [37] hms_0.4.2          digest_0.6.15      stringi_1.2.2      dplyr_0.7.6
## [41] shiny_1.0.5        influenceR_0.1.0   tools_3.3.2        magrittr_1.5
## [45] lazyeval_0.2.1     tibble_1.4.2       tidyr_0.8.1        pkgconfig_2.0.1
## [49] data.table_1.11.4  downloader_0.4     assertthat_0.2.0   rstudioapi_0.7
## [53] viridis_0.5.1      R6_2.2.2           igraph_1.2.1
```

```
## [1] "/p/projects/rd3mod/R/libraries/main"
## [2] "/p/system/packages/R/3.3.2/lib64/R/library"
```

```
##                BBmisc                    BH            BatchJobs        BiocInstaller
##                "1.11"           "1.66.0-1"                "1.6"             "1.24.0"
##                  CVST                   DBI             DEoptimR                  DRR
##               "0.2-1"              "1.0.0"              "1.0-8"              "0.0.3"
##                    DT            DiagrammeR             EnvStats                  FNN
##                 "0.4"              "1.0.0"              "2.3.0"                "1.1"
##            FactoMineR              Formula               GGally               Gmisc
##                "1.36"              "1.2-3"              "1.4.0"              "1.4.1"
##                 Hmisc              IDPmisc             ISOcodes               Lahman
##               "4.0-2"             "1.1.18"         "2018.06.29"              "6.0-0"
##              LandMark            LearnBayes             Lmoments                 MASS
##               "1.1.0"             "2.15.1"              "1.2-3"             "7.3-50"
##                   NLP                   NMF             PIKTools             R.matlab
##              "0.1-10"             "0.20.6"                "1.1"              "3.6.1"
##           R.methodsS3                 R.oo              R.utils                   R6
##               "1.7.1"             "1.21.0"              "2.5.0"              "2.2.2"
##                  RANN                RCurl               RISmed              RJSONIO
##               "2.5.1"           "1.95-4.8"              "2.1.7"              "1.3-0"
##               RSQLite             RSpectra         RandomFields    RandomFieldsUtils
##               "2.1.1"             "0.13-1"             "3.1.50"             "0.3.25"
##                  Rcpp        RcppArmadillo           RcppOctave         RcppParallel
##             "0.12.18"        "0.7.700.0.0"             "0.18.1"             "4.3.20"
##              RcppRoll                 Rook                 Rtsne             Rttf2pt1
```

```
##              "0.2.2"              "1.1-1"               "0.13"              "1.3.7"
##             SDMTools                 SPEI              SQUAREM            SnowballC
##            "1.1-221"               "1.6"          "2017.10-1"              "0.5.1"
##           SpatialPack             TH.data                  WDI                  XML
##                "0.3"             "1.0-8"                "2.5"           "3.98-1.5"
##               abind               aqfig              ar5data             areaplot
##              "1.4-5"               "0.8"              "1.7.1"              "1.2-0"
##                  arm             assertr           assertthat              automap
##              "1.9-3"               "2.5"              "0.2.0"             "1.0-14"
##            backports               bfast         bibliometrix               bibtex
##              "1.1.2"             "1.5.7"              "2.0.0"              "0.4.2"
##               bindr            bindrcpp                bit64                 blob
##              "0.1.1"             "0.2.2"              "0.9-7"              "1.1.1"
##                brew               broom        burdensharing                callr
##              "1.0-6"             "0.4.2"             "1.4.25"              "1.0.0"
##               caret           cellranger             citation             classInt
##             "6.0-80"             "1.1.0"              "0.2.1"             "0.1-23"
##                 cli               clipr                 coda                 coin
##              "1.0.0"             "0.4.0"             "0.19-1"              "1.2-2"
##           colorRamps          commonmark              compare              corpcor
##               "2.3"               "1.5"              "0.2-6"              "1.6.9"
##             corrplot         countrycode                 covr              cowplot
##               "0.84"            "1.00.0"              "3.1.0"              "0.9.2"
##               cowsay              crayon            crosstalk                 curl
##              "0.6.0"             "1.3.4"              "1.0.0"               "2.3"
##            d3Network          data.table            data.tree              dbplyr
##            "0.5.2.1"           "1.11.4"              "0.7.4"              "1.2.1"
##             ddalpha              deldir             demystas           dendextend
##              "1.3.3"            "0.1-15"              "1.3.5"              "1.5.2"
##                 desc            devtools               digest              dimRed
##              "1.2.0"            "1.13.3"             "0.6.15"              "0.1.0"
##             diptest                 doMC                doMPI              doSNOW
##             "0.75-7"             "1.3.5"              "0.2.2"             "1.0.16"
##            dotCall64          downloader               dplyr              dtplyr
##            "0.9-5.2"               "0.4"              "0.7.6"              "0.0.2"
##              dummies               e1071             easyNCDF             ellipse
##              "1.5.6"             "1.6-8"              "0.0.4"              "0.4.1"
##         estimability            evaluate                 expm            extrafont
##                "1.3"            "0.10.1"            "0.999-2"               "0.17"
##          extrafontdb          factoextra                 fail              faodata
##                "1.0"             "1.0.4"                "1.3"               "1.09"
##              fdrtool              fields        fitdistrplus           flashClust
##             "1.2.15"              "8.10"              "1.0-9"             "1.01-2"
##              flexmix             forcats            forecast           forestplot
##             "2.3-14"             "0.2.0"                "8.0"              "1.7.2"
##              formatR            fortunes                 fpc             fracdiff
##                "1.5"             "1.5-4"             "2.1-10"              "1.4-2"
##        futile.logger       futile.options               gclus                gdata
##              "1.4.3"             "1.0.1"              "1.3.1"             "2.18.0"
##            gdistance                 gdx              gdxrrw                 geoR
##              "1.2-2"            "1.49.0"              "1.0.2"            "1.7-5.2"
##              geodata            geometry           geosphere              ggforce
##               "1.56"             "0.3-6"              "1.5-7"              "0.1.3"
##                  ggm             ggplot2              ggpubr               ggraph
##                "2.3"             "3.0.0"              "0.1.4"              "1.0.2"
##              ggrepel               ggsci            ggsignif               git2r
##              "0.8.0"               "2.9"              "0.4.0"             "0.21.0"
##            givemeall              glasso             glodato                 glue
##               "0.02"               "1.8"              "1.12"              "1.2.0"
##              gmodels                 gmp             goftest               gower
```

```
##              "2.16.2"            "0.5-13.1"               "1.1-1"               "0.1.2"
##               goxygen                gplots              gridBase                 gstat
##              "0.21.2"               "3.0.1"               "0.4-7"               "1.1-5"
##                   gsw                 guidr                 gvlma                 haven
##               "1.0-5"          "0.0.5.0000"             "1.0.0.2"               "1.1.0"
##                   hms             htmlTable             htmltools           htmlwidgets
##               "0.4.2"               "1.12"               "0.3.6"                 "1.2"
##                httpuv                 httr                  huge              hydroGOF
##               "1.3.5"               "1.3.1"               "1.2.7"              "0.3-10"
##              hydroTSM                 iamc                igraph             influenceR
##               "0.5-1"              "0.24.0"               "1.2.1"               "0.1.0"
##             intervals                 inum                 ipred                 irlba
##              "0.15.1"               "1.0-0"               "0.9-6"               "2.3.2"
##                  jpeg              jsonlite               kernlab                 knitr
##               "0.1-8"                "1.5"              "0.9-26"                "1.20"
##                    ks              lambda.r                 later               lattice
##              "1.11.2"               "1.1.9"               "0.7.2"             "0.20-35"
##                  lava                lavaan              lazyeval               leaflet
##               "1.6.1"               "0.6-1"               "0.2.1"               "1.1.0"
##                 leaps               libcoin                 limes                  lme4
##                 "3.0"               "1.0-1"              "0.3.60"              "1.1-17"
##                lmomco                lmtest               lpSolve              lpjclass
##               "2.2.7"              "0.9-36"              "5.6.13"                "1.13"
##               lsmeans                lubase             lubridate                lucode
##              "2.25-5"                "1.06"               "1.7.1"             "2.136.0"
##                ludata          luplayground                luplot               luscale
##              "1.43.3"                "1.05"              "3.49.0"              "2.13.1"
##              lusweave               mFilter                madrat              magclass
##              "1.45.0"               "0.1-3"              "1.52.0"              "4.87.9"
##                 magic                magpie               magpie4         magpieflexreg
##               "1.5-8"            "0.2266.1"              "1.26.0"              "0.0036"
##             magpiesets              magrittr               mapdata              markdown
##              "0.33.3"                 "1.5"               "2.3.0"                 "0.8"
##                matlab            matrixcalc                mclust               memoise
##               "1.0.2"               "1.0-3"                 "5.3"               "1.0.0"
##                  mgcv                    mi                  mice        microbenchmark
##              "1.8-23"                 "1.0"                "2.30"               "1.4-4"
##                   mip                misc3d                mlapi                mnormt
##             "0.108.0"               "0.8-4"               "0.1.0"               "1.5-5"
##                modelr            modeltools               moinput                mrfood
##               "0.1.1"              "0.2-21"             "9.137.0"               "0.7.3"
##           mrregression          mrvalidation               multcomp             multicool
##              "3.11.0"              "1.31.0"               "1.4-8"              "0.1-10"
##               mvtnorm                 ncdf4               network              nitrogen
##               "1.0-7"                "1.15"              "1.13.0"               "1.0.3"
##               nleqslv                  nnls             nonparaeff               nortest
##               "3.3.2"                 "1.4"               "0.5-8"               "1.0-4"
##              numDeriv          nycflights13                   oce               openssl
##             "2016.8-1"               "0.2.2"              "0.9-23"               "0.9.6"
##              openxlsx                 osmar                  pROC                   pan
##               "4.0.0"               "1.1-7"              "1.12.1"                "1.4"
##                pander                 party              partykit               pastecs
##               "0.6.0"               "1.2-4"               "1.2-0"              "1.3-18"
##               pbapply              pbivnorm                  piam             pikcluster
##               "1.3-4"               "0.6.0"               "0.8.2"                "0.04"
##                pillar             pkgconfig              pkgmaker                 plogr
##               "1.2.3"               "2.0.1"                "0.22"               "0.2.0"
##                plot3D                plotly               plotrix                   png
##                 "1.1"               "4.5.6"               "3.6-4"               "0.1-7"
##              polspline              polyclip              prabclus           prettyunits
```

```
##              "1.1.12"               "1.6-1"               "2.2-6"               "1.0.2"
##              processx               prodlim               profvis              progress
##               "3.1.0"          "2018.04.18"               "0.3.3"               "1.1.2"
##                 proto                   pse                 psych                 purrr
##               "1.0.0"               "0.4.7"              "1.6.12"               "0.2.4"
##                   pwt               qgraph              quadprog                 qualV
##               "7.1-1"               "1.4.2"               "1.5-5"               "0.3-2"
##              quanteda                quitte          randomForest randomForestExplainer
##               "1.3.4"            "0.3072.0"              "4.6-14"                 "0.9"
##                raster             rasterVis                readr           readstata13
##               "2.5-8"                "0.41"               "1.1.1"               "0.9.0"
##                readxl               recipes              registry               rematch
##               "1.0.0"               "0.1.2"                 "0.3"               "1.0.1"
##                remind             remulator                reprex               reshape
##             "36.55.0"             "1.15.0"               "0.1.1"               "0.8.7"
##              reshape2            reticulate             rfPermute                 rgdal
##               "1.4.3"                "1.10"               "2.1.5"               "1.2-5"
##               rgenoud                 rgeos                rgexf                 rhdf5
##            "5.7-12.4"             "0.3-17"              "0.15.3"              "2.18.0"
##                 rjson                rlang             rmarkdown                   rms
##              "0.2.15"               "0.2.0"                 "1.9"               "5.1-0"
##               rmsfact              rngtools            robustbase             rootSolve
##               "0.0.3"               "1.2.4"              "0.92-7"                 "1.7"
##              roxygen2                rpart            rpart.plot             rprojroot
##               "6.0.1"              "4.1-13"               "2.1.2"               "1.3-2"
##               rscopus                  rsm            rstudioapi                 rvest
##              "0.5.11"                "2.8"                 "0.7"               "0.3.2"
##             rworldmap            rworldxtra              sandwich             satellite
##               "1.3-6"               "1.01"               "2.4-0"               "0.2.0"
##                scales         scatterplot3d               selectr                   sem
##               "0.5.0"              "0.3-38"               "0.3-1"               "3.1-8"
##             sendmailR           sensitivity               sfsmisc                 shiny
##               "1.2-1"              "1.15.0"               "1.1-2"               "1.0.5"
##       shinycssloaders          shinyresults           shinythemes                  slam
##               "0.2.0"              "0.16.0"               "1.1.1"              "0.1-40"
##                   sna                  snow           soiltexture           sourcetools
##                 "2.4"               "0.4-2"               "1.4.1"               "0.1.5"
##                spData             spacetime                spacyr                  spam
##             "0.2.8.3"               "1.2-0"              "0.9.91"               "1.4-0"
##              sparsepp              spatstat         spatstat.data        spatstat.utils
##               "0.2.0"              "1.55-1"               "1.2-0"               "1.8-0"
##                 spdep               splancs        statnet.common             stopwords
##              "0.6-11"             "2.01-40"               "3.3.0"               "0.9.0"
##             stringdist               stringi               stringr           strucchange
##             "0.9.4.4"               "1.2.2"               "1.3.1"               "1.5-1"
##             swfscMisc                tensor              testthat              text2vec
##                 "1.2"                 "1.5"               "2.0.0"               "0.4.0"
##                tibble                 tidyr            tidyselect             tidyverse
##               "1.4.2"               "0.8.1"               "0.2.4"               "1.2.1"
##                  tiff              timeDate               tinytex                    tm
##               "0.1-5"            "3012.100"                 "0.5"               "0.7-1"
##           trafficlight               trefoil            trimcluster               tseries
##              "1.11.1"                "0.01"               "0.1-2"             "0.10-38"
##                tweenr               txtplot              udunits2                 units
##               "0.1.5"               "1.0-3"                "0.13"               "0.6-1"
##                  urca                 uroot                  utf8            validation
##               "1.3-0"               "2.0-9"               "1.1.4"               "1.195"
##                   vcd               viridis            viridisLite             visNetwork
##               "1.4-3"               "0.5.1"               "0.3.0"               "2.0.4"
##               webshot               weights               whisker                 withr
```

```
##              "0.4.0"               "0.85"              "0.3-2"              "2.1.2"
##                 xml2               xtable                  xts             yaImpute
##              "1.1.1"              "1.8-2"             "0.9-7"             "1.0-29"
##                 yaml                  zip             zlibbioc                  zoo
##             "2.1.19"              "1.0.0"            "1.20.0"              "1.8-1"
##                   BH              Formula           KernSmooth                 MASS
##           "1.62.0-1"              "1.2-1"           "2.23-15"             "7.3-45"
##               Matrix          MatrixModels         ModelMetrics                   R6
##              "1.2-8"              "0.4-1"             "1.1.0"             "2.2.0"
##          RColorBrewer                 Rcpp           RcppEigen                Rmpi
##              "1.1-2"            "0.12.10"         "0.3.2.9.1"             "0.6-6"
##              SparseM              TH.data               abind             acepack
##               "1.76"              "1.0-8"             "1.4-5"             "1.4.1"
##            assertthat             backports                base           base64enc
##                "0.1"              "1.0.5"             "3.3.2"             "0.1-3"
##             bdsmatrix                  bit              bitops                boot
##              "1.3-2"             "1.1-12"             "1.0-6"            "1.3-18"
##              caTools                  car              cffdrs           checkmate
##             "1.17.1"              "2.1-4"             "1.7.5"             "1.8.2"
##               chron                class             cluster           codetools
##             "2.3-50"             "7.3-14"             "2.0.6"            "0.2-15"
##            colorspace             compiler              crayon          data.table
##              "1.3-2"              "3.3.2"             "1.3.2"            "1.10.4"
##              datasets            dichromat              digest               doMPI
##              "3.3.2"              "2.0-0"            "0.6.12"             "0.2.1"
##            doParallel             evaluate           fastmatch             foreach
##             "1.0.10"               "0.10"             "1.1-0"             "1.4.3"
##              foreign              fwi.fbp             gdtools       ggplot2movies
##             "0.8-67"                "1.7"             "0.1.4"             "0.0.1"
##             grDevices             graphics                grid           gridExtra
##              "3.3.2"              "3.3.2"             "3.3.2"             "2.2.1"
##               gtable               gtools              hexbin               highr
##              "0.2.0"              "3.5.0"            "1.27.1"               "0.6"
##             htmlTable            htmltools          htmlwidgets           iterators
##                "1.9"              "0.3.5"               "0.8"             "1.0.8"
##              jsonlite                knitr            labeling             lattice
##                "1.3"             "1.15.1"               "0.3"           "0.20-35"
##          latticeExtra             lazyeval               lme4            magrittr
##             "0.6-28"              "0.2.0"           "1.1-12"               "1.5"
##              mapproj                 maps            maptools            markdown
##              "1.2-4"              "3.1.1"             "0.9-2"             "0.7.7"
##              methods                 mgcv               mime               minqa
##              "3.3.2"             "1.8-17"               "0.5"             "1.2.4"
##              mlbench                 mmap            multcomp            munsell
##              "2.1-1"             "0.6-12"             "1.4-6"             "0.4.3"
##              mvtnorm                ncdf4               nlme              nloptr
##              "1.0-6"              "1.15"            "3.1-131"             "1.0.4"
##                 nnet             parallel            pbkrtest                plyr
##             "7.3-12"              "3.3.2"             "0.4-7"             "1.8.4"
##               praise             quantreg              raster            reshape2
##              "1.0.0"               "5.29"             "2.5-8"             "1.4.2"
##                  rex            rmarkdown               rpart           rprojroot
##              "1.1.1"                "1.4"           "4.1-10"               "1.2"
##             sandwich               scales                 sp             spatial
##              "2.3-4"              "0.4.1"             "1.2-4"            "7.3-11"
##         spatial.tools              splines              stats              stats4
##              "1.4.8"              "3.3.2"             "3.3.2"             "3.3.2"
##              stringi              stringr            survival             svglite
##              "1.1.3"              "1.2.0"            "2.41-2"             "1.2.0"
##                tcltk             testthat              tibble               tools
```

```
##               "3.3.2"               "1.0.2"               "1.3.0"               "3.3.2"
##                 utils                 withr                  yaml                   zoo
##               "3.3.2"               "1.0.2"              "2.1.14"              "1.7-14"
```

start_functions

```
## R version 3.3.2 (2016-10-31)
## Platform: x86_64-pc-linux-gnu (64-bit)
## Running under: SUSE Linux Enterprise Server 12 SP2
##
## locale:
## [1] C
##
## attached base packages:
## [1] grid      methods   stats     graphics  grDevices utils     datasets  base
##
## other attached packages:
## [1] magpie4_1.26.0  gdx_1.49.0      gdxrrw_1.0.2    lucode_2.136.0  magclass_4.87.9
##
## loaded via a namespace (and not attached):
##  [1] viridis_0.5.1       httr_1.3.1          maps_3.1.1          tidyr_0.8.1
##  [5] jsonlite_1.5        viridisLite_0.3.0   splines_3.3.2       Formula_1.2-3
##  [9] shiny_1.0.5         assertthat_0.2.0    sp_1.2-4            rworldmap_1.3-6
## [13] latticeExtra_0.6-28 lusweave_1.45.0     nonparaeff_0.5-8    qualV_0.3-2
## [17] pillar_1.2.3        backports_1.1.2     lattice_0.20-35     downloader_0.4
## [21] glue_1.2.0          luscale_2.13.1      digest_0.6.15       RColorBrewer_1.1-2
## [25] checkmate_1.8.2     colorspace_1.3-2    htmltools_0.3.6     httpuv_1.3.5
## [29] Matrix_1.2-8        plyr_1.8.4          XML_3.98-1.5        pkgconfig_2.0.1
## [33] DiagrammeR_1.0.0    trafficlight_1.11.1 purrr_0.2.4         xtable_1.8-2
## [37] scales_0.5.0        brew_1.0-6          htmlTable_1.12      tibble_1.4.2
## [41] ggplot2_3.0.0       influenceR_0.1.0    nnet_7.3-12         lazyeval_0.2.1
## [45] rgexf_0.15.3        survival_2.41-2     magrittr_1.5        mime_0.5
## [49] maptools_0.9-2      data.tree_0.7.4     xml2_1.1.1          foreign_0.8-67
## [53] mip_0.108.0         Rook_1.1-1          tools_3.3.2         data.table_1.11.4
## [57] hms_0.4.2           stringr_1.3.1       plotly_4.5.6        munsell_0.4.3
## [61] cluster_2.0.6       bindrcpp_0.2.2      luplot_3.49.0       rlang_0.2.0
## [65] quitte_0.3072.0     rstudioapi_0.7      visNetwork_2.0.4    htmlwidgets_1.2
## [69] spam_1.4-0          igraph_1.2.1        base64enc_0.1-3     gtable_0.2.0
## [73] reshape2_1.4.3      R6_2.2.2            gridExtra_2.2.1     knitr_1.20
## [77] dplyr_0.7.6         magpiesets_0.33.3   bindr_0.1.1         Hmisc_4.0-2
## [81] readr_1.1.1         KernSmooth_2.23-15  stringi_1.2.2       Rcpp_0.12.18
## [85] fields_8.10         rpart_4.1-13        acepack_1.4.1       tidyselect_0.2.4
```

```
## [1] "/p/projects/rd3mod/R/libraries/main"
## [2] "/p/system/packages/R/3.3.2/lib64/R/library"
```

```
##                BBmisc                    BH             BatchJobs         BiocInstaller
##                "1.11"            "1.66.0-1"                "1.6"              "1.24.0"
##                  CVST                   DBI              DEoptimR                   DRR
##               "0.2-1"               "1.0.0"              "1.0-8"               "0.0.3"
##                    DT            DiagrammeR              EnvStats                   FNN
##                 "0.4"               "1.0.0"              "2.3.0"                 "1.1"
##            FactoMineR               Formula                GGally                 Gmisc
##                "1.36"               "1.2-3"              "1.4.0"               "1.4.1"
```

```
##                Hmisc              IDPmisc             ISOcodes               Lahman
##              "4.0-2"             "1.1.18"         "2018.06.29"              "6.0-0"
##             LandMark            LearnBayes             Lmoments                 MASS
##              "1.1.0"             "2.15.1"              "1.2-3"             "7.3-50"
##                  NLP                  NMF             PIKTools             R.matlab
##             "0.1-10"            "0.20.6"                "1.1"              "3.6.1"
##          R.methodsS3                 R.oo              R.utils                   R6
##              "1.7.1"            "1.21.0"              "2.5.0"             "2.2.2"
##                RANN               RCurl               RISmed             RJSONIO
##              "2.5.1"           "1.95-4.8"              "2.1.7"             "1.3-0"
##              RSQLite             RSpectra         RandomFields    RandomFieldsUtils
##              "2.1.1"            "0.13-1"             "3.1.50"            "0.3.25"
##                 Rcpp        RcppArmadillo           RcppOctave         RcppParallel
##            "0.12.18"       "0.7.700.0.0"             "0.18.1"            "4.3.20"
##             RcppRoll                 Rook                Rtsne            Rttf2pt1
##              "0.2.2"              "1.1-1"               "0.13"             "1.3.7"
##             SDMTools                 SPEI             SQUAREM           SnowballC
##            "1.1-221"               "1.6"          "2017.10-1"             "0.5.1"
##          SpatialPack             TH.data                  WDI                  XML
##                "0.3"             "1.0-8"                "2.5"           "3.98-1.5"
##               abind               aqfig              ar5data           areaplot
##              "1.4-5"               "0.8"              "1.7.1"             "1.2-0"
##                  arm             assertr           assertthat             automap
##              "1.9-3"               "2.5"             "0.2.0"            "1.0-14"
##            backports               bfast        bibliometrix              bibtex
##              "1.1.2"             "1.5.7"             "2.0.0"             "0.4.2"
##               bindr             bindrcpp               bit64                blob
##              "0.1.1"             "0.2.2"             "0.9-7"             "1.1.1"
##                brew               broom       burdensharing              callr
##              "1.0-6"             "0.4.2"            "1.4.25"             "1.0.0"
##               caret           cellranger            citation            classInt
##             "6.0-80"             "1.1.0"             "0.2.1"            "0.1-23"
##                 cli               clipr                coda                coin
##              "1.0.0"             "0.4.0"           "0.19-1"             "1.2-2"
##           colorRamps          commonmark             compare             corpcor
##               "2.3"               "1.5"             "0.2-6"             "1.6.9"
##             corrplot         countrycode                covr             cowplot
##               "0.84"            "1.00.0"             "3.1.0"             "0.9.2"
##               cowsay              crayon           crosstalk                curl
##              "0.6.0"             "1.3.4"             "1.0.0"              "2.3"
##            d3Network          data.table           data.tree             dbplyr
##            "0.5.2.1"           "1.11.4"             "0.7.4"             "1.2.1"
##              ddalpha              deldir            demystas          dendextend
##              "1.3.3"            "0.1-15"             "1.3.5"             "1.5.2"
##                 desc            devtools              digest              dimRed
##              "1.2.0"            "1.13.3"            "0.6.15"             "0.1.0"
##             diptest                 doMC               doMPI              doSNOW
##             "0.75-7"             "1.3.5"             "0.2.2"            "1.0.16"
##            dotCall64          downloader               dplyr              dtplyr
##            "0.9-5.2"               "0.4"             "0.7.6"             "0.0.2"
##              dummies               e1071            easyNCDF             ellipse
##              "1.5.6"             "1.6-8"             "0.0.4"             "0.4.1"
##        estimability            evaluate                expm           extrafont
##                "1.3"            "0.10.1"           "0.999-2"              "0.17"
##         extrafontdb          factoextra                fail             faodata
##                "1.0"             "1.0.4"              "1.3"              "1.09"
##              fdrtool              fields        fitdistrplus          flashClust
##             "1.2.15"              "8.10"             "1.0-9"            "1.01-2"
##              flexmix             forcats            forecast          forestplot
##             "2.3-14"             "0.2.0"               "8.0"             "1.7.2"
```

```
##              formatR             fortunes                  fpc             fracdiff
##                "1.5"              "1.5-4"             "2.1-10"              "1.4-2"
##        futile.logger       futile.options                gclus                gdata
##              "1.4.3"              "1.0.1"              "1.3.1"             "2.18.0"
##            gdistance                  gdx               gdxrrw                 geoR
##              "1.2-2"            "1.49.0"              "1.0.2"            "1.7-5.2"
##              geodata            geometry            geosphere              ggforce
##               "1.56"             "0.3-6"              "1.5-7"              "0.1.3"
##                  ggm             ggplot2              ggpubr               ggraph
##                "2.3"             "3.0.0"              "0.1.4"              "1.0.2"
##              ggrepel               ggsci            ggsignif                git2r
##              "0.8.0"               "2.9"              "0.4.0"             "0.21.0"
##            givemeall              glasso             glodato                 glue
##               "0.02"               "1.8"              "1.12"              "1.2.0"
##              gmodels                 gmp             goftest                gower
##             "2.16.2"          "0.5-13.1"             "1.1-1"              "0.1.2"
##              goxygen              gplots            gridBase                gstat
##             "0.21.2"              "3.0.1"             "0.4-7"              "1.1-5"
##                  gsw               guidr               gvlma                haven
##              "1.0-5"         "0.0.5.0000"           "1.0.0.2"              "1.1.0"
##                  hms            htmlTable           htmltools          htmlwidgets
##              "0.4.2"              "1.12"             "0.3.6"                "1.2"
##               httpuv                 httr                huge             hydroGOF
##              "1.3.5"              "1.3.1"             "1.2.7"             "0.3-10"
##             hydroTSM                 iamc              igraph           influenceR
##              "0.5-1"            "0.24.0"             "1.2.1"              "0.1.0"
##            intervals                 inum              ipred                irlba
##             "0.15.1"              "1.0-0"             "0.9-6"              "2.3.2"
##                 jpeg             jsonlite             kernlab                knitr
##              "0.1-8"               "1.5"            "0.9-26"              "1.20"
##                   ks            lambda.r              later              lattice
##             "1.11.2"              "1.1.9"             "0.7.2"            "0.20-35"
##                 lava              lavaan            lazyeval              leaflet
##              "1.6.1"              "0.6-1"             "0.2.1"              "1.1.0"
##                leaps             libcoin              limes                 lme4
##                "3.0"              "1.0-1"            "0.3.60"            "1.1-17"
##               lmomco              lmtest             lpSolve             lpjclass
##              "2.2.7"             "0.9-36"            "5.6.13"              "1.13"
##              lsmeans              lubase           lubridate              lucode
##             "2.25-5"              "1.06"             "1.7.1"            "2.136.0"
##               ludata        luplayground              luplot             luscale
##             "1.43.3"              "1.05"            "3.49.0"            "2.13.1"
##             lusweave             mFilter              madrat            magclass
##             "1.45.0"              "0.1-3"            "1.52.0"            "4.87.9"
##                magic              magpie             magpie4       magpieflexreg
##              "1.5-8"           "0.2266.1"            "1.26.0"            "0.0036"
##           magpiesets             magrittr             mapdata            markdown
##             "0.33.3"               "1.5"              "2.3.0"               "0.8"
##               matlab           matrixcalc              mclust             memoise
##              "1.0.2"              "1.0-3"               "5.3"             "1.0.0"
##                 mgcv                  mi                mice       microbenchmark
##             "1.8-23"               "1.0"             "2.30"              "1.4-4"
##                  mip              misc3d              mlapi               mnormt
##            "0.108.0"              "0.8-4"             "0.1.0"              "1.5-5"
##               modelr           modeltools             moinput              mrfood
##              "0.1.1"             "0.2-21"           "9.137.0"              "0.7.3"
##          mrregression        mrvalidation             multcomp           multicool
##             "3.11.0"             "1.31.0"             "1.4-8"            "0.1-10"
##              mvtnorm                ncdf4             network            nitrogen
##              "1.0-7"              "1.15"            "1.13.0"              "1.0.3"
```

```
##              nleqslv                nnls           nonparaeff              nortest
##              "3.3.2"               "1.4"              "0.5-8"             "1.0-4"
##             numDeriv         nycflights13                 oce              openssl
##            "2016.8-1"             "0.2.2"            "0.9-23"             "0.9.6"
##             openxlsx               osmar                pROC                 pan
##              "4.0.0"              "1.1-7"           "1.12.1"               "1.4"
##               pander               party            partykit             pastecs
##              "0.6.0"             "1.2-4"             "1.2-0"            "1.3-18"
##              pbapply            pbivnorm                piam          pikcluster
##              "1.3-4"             "0.6.0"            "0.8.2"              "0.04"
##               pillar           pkgconfig            pkgmaker               plogr
##              "1.2.3"             "2.0.1"              "0.22"             "0.2.0"
##               plot3D              plotly             plotrix                png
##                "1.1"             "4.5.6"             "3.6-4"             "0.1-7"
##            polspline            polyclip            prabclus         prettyunits
##             "1.1.12"             "1.6-1"             "2.2-6"             "1.0.2"
##             processx            prodlim             profvis            progress
##              "3.1.0"        "2018.04.18"             "0.3.3"             "1.1.2"
##                proto                pse               psych               purrr
##              "1.0.0"             "0.4.7"           "1.6.12"             "0.2.4"
##                  pwt              qgraph            quadprog               qualV
##              "7.1-1"             "1.4.2"             "1.5-5"             "0.3-2"
##             quanteda              quitte        randomForest randomForestExplainer
##              "1.3.4"           "0.3072.0"            "4.6-14"               "0.9"
##               raster           rasterVis               readr         readstata13
##              "2.5-8"              "0.41"             "1.1.1"             "0.9.0"
##               readxl             recipes            registry             rematch
##              "1.0.0"             "0.1.2"               "0.3"             "1.0.1"
##               remind           remulator              reprex             reshape
##             "36.55.0"            "1.15.0"             "0.1.1"             "0.8.7"
##             reshape2           reticulate           rfPermute               rgdal
##              "1.4.3"              "1.10"             "2.1.5"             "1.2-5"
##              rgenoud               rgeos               rgexf               rhdf5
##            "5.7-12.4"            "0.3-17"            "0.15.3"            "2.18.0"
##                rjson              rlang           rmarkdown                 rms
##             "0.2.15"             "0.2.0"               "1.9"             "5.1-0"
##              rmsfact            rngtools          robustbase           rootSolve
##              "0.0.3"             "1.2.4"            "0.92-7"               "1.7"
##             roxygen2              rpart           rpart.plot           rprojroot
##              "6.0.1"            "4.1-13"             "2.1.2"             "1.3-2"
##              rscopus                rsm           rstudioapi               rvest
##             "0.5.11"               "2.8"               "0.7"             "0.3.2"
##            rworldmap          rworldxtra             sandwich           satellite
##              "1.3-6"              "1.01"             "2.4-0"             "0.2.0"
##               scales       scatterplot3d              selectr                 sem
##              "0.5.0"            "0.3-38"             "0.3-1"             "3.1-8"
##            sendmailR         sensitivity              sfsmisc               shiny
##              "1.2-1"            "1.15.0"             "1.1-2"             "1.0.5"
##      shinycssloaders         shinyresults          shinythemes                slam
##              "0.2.0"            "0.16.0"             "1.1.1"            "0.1-40"
##                 sna               snow          soiltexture         sourcetools
##               "2.4"             "0.4-2"             "1.4.1"             "0.1.5"
##               spData           spacetime              spacyr                spam
##            "0.2.8.3"             "1.2-0"            "0.9.91"             "1.4-0"
##             sparsepp            spatstat        spatstat.data       spatstat.utils
##              "0.2.0"            "1.55-1"             "1.2-0"             "1.8-0"
##                spdep             splancs       statnet.common           stopwords
##             "0.6-11"           "2.01-40"             "3.3.0"             "0.9.0"
##            stringdist             stringi              stringr          strucchange
##             "0.9.4.4"             "1.2.2"             "1.3.1"             "1.5-1"
```

```
##            swfscMisc               tensor             testthat              text2vec
##                "1.2"                "1.5"              "2.0.0"              "0.4.0"
##               tibble                tidyr            tidyselect             tidyverse
##              "1.4.2"              "0.8.1"              "0.2.4"              "1.2.1"
##                 tiff             timeDate              tinytex                   tm
##              "0.1-5"            "3012.100"                "0.5"              "0.7-1"
##         trafficlight              trefoil           trimcluster              tseries
##             "1.11.1"               "0.01"              "0.1-2"            "0.10-38"
##               tweenr              txtplot             udunits2                units
##              "0.1.5"              "1.0-3"              "0.13"              "0.6-1"
##                 urca                uroot                 utf8            validation
##              "1.3-0"              "2.0-9"              "1.1.4"              "1.195"
##                  vcd              viridis           viridisLite            visNetwork
##              "1.4-3"              "0.5.1"              "0.3.0"              "2.0.4"
##              webshot              weights              whisker                withr
##              "0.4.0"               "0.85"              "0.3-2"              "2.1.2"
##                 xml2               xtable                  xts             yaImpute
##              "1.1.1"              "1.8-2"              "0.9-7"             "1.0-29"
##                 yaml                  zip             zlibbioc                  zoo
##             "2.1.19"              "1.0.0"             "1.20.0"              "1.8-1"
##                   BH              Formula            KernSmooth                MASS
##           "1.62.0-1"              "1.2-1"             "2.23-15"             "7.3-45"
##               Matrix          MatrixModels          ModelMetrics                   R6
##              "1.2-8"              "0.4-1"              "1.1.0"              "2.2.0"
##          RColorBrewer                 Rcpp            RcppEigen                Rmpi
##              "1.1-2"            "0.12.10"          "0.3.2.9.1"              "0.6-6"
##              SparseM              TH.data                abind              acepack
##               "1.76"              "1.0-8"              "1.4-5"              "1.4.1"
##            assertthat             backports                 base            base64enc
##                 "0.1"              "1.0.5"              "3.3.2"              "0.1-3"
##             bdsmatrix                  bit               bitops                 boot
##              "1.3-2"             "1.1-12"              "1.0-6"             "1.3-18"
##              caTools                  car               cffdrs            checkmate
##             "1.17.1"              "2.1-4"              "1.7.5"              "1.8.2"
##                chron                class              cluster            codetools
##             "2.3-50"             "7.3-14"              "2.0.6"             "0.2-15"
##            colorspace             compiler               crayon           data.table
##              "1.3-2"              "3.3.2"              "1.3.2"             "1.10.4"
##              datasets            dichromat               digest               doMPI
##              "3.3.2"              "2.0-0"             "0.6.12"              "0.2.1"
##            doParallel             evaluate            fastmatch              foreach
##             "1.0.10"               "0.10"              "1.1-0"              "1.4.3"
##               foreign              fwi.fbp              gdtools        ggplot2movies
##             "0.8-67"                "1.7"              "0.1.4"              "0.0.1"
##             grDevices             graphics                 grid            gridExtra
##              "3.3.2"              "3.3.2"              "3.3.2"              "2.2.1"
##                gtable               gtools               hexbin                highr
##              "0.2.0"              "3.5.0"             "1.27.1"               "0.6"
##             htmlTable            htmltools           htmlwidgets            iterators
##                 "1.9"              "0.3.5"                "0.8"              "1.0.8"
##              jsonlite                knitr              labeling              lattice
##                 "1.3"             "1.15.1"               "0.3"             "0.20-35"
##          latticeExtra             lazyeval                 lme4             magrittr
##             "0.6-28"              "0.2.0"             "1.1-12"                "1.5"
##               mapproj                 maps             maptools             markdown
##              "1.2-4"              "3.1.1"              "0.9-2"              "0.7.7"
##               methods                 mgcv                 mime                minqa
##              "3.3.2"             "1.8-17"               "0.5"              "1.2.4"
##               mlbench                 mmap             multcomp              munsell
##              "2.1-1"             "0.6-12"              "1.4-6"              "0.4.3"
```

```
##              mvtnorm                ncdf4                 nlme               nloptr
##              "1.0-6"               "1.15"            "3.1-131"              "1.0.4"
##                 nnet             parallel             pbkrtest                 plyr
##             "7.3-12"              "3.3.2"              "0.4-7"              "1.8.4"
##               praise             quantreg               raster             reshape2
##              "1.0.0"               "5.29"              "2.5-8"              "1.4.2"
##                  rex            rmarkdown                rpart            rprojroot
##              "1.1.1"                "1.4"             "4.1-10"                "1.2"
##             sandwich               scales                   sp              spatial
##              "2.3-4"              "0.4.1"              "1.2-4"             "7.3-11"
##        spatial.tools              splines                stats               stats4
##              "1.4.8"              "3.3.2"              "3.3.2"              "3.3.2"
##              stringi              stringr             survival              svglite
##              "1.1.3"              "1.2.0"             "2.41-2"              "1.2.0"
##                tcltk             testthat               tibble                tools
##              "3.3.2"              "1.0.2"              "1.3.0"              "3.3.2"
##                utils                withr                 yaml                  zoo
##              "3.3.2"              "1.0.2"             "2.1.14"            "1.7-14"
```

model_run

68 Runtime information

```
## magpie.gms          :  0h 29m  3s
```