

# MAGPIE run analysis

Aperture Science Enrichment Center

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<b>28 Fish</b>	<b>949</b>
<b>29 Forage</b>	<b>949</b>
<b>30 Livestock products</b>	<b>949</b>
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36.24	Poultry meat . . . . .	1125
36.25	Pulses . . . . .	1133
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36.27	Ruminant meat . . . . .	1147
36.28	Short rotation grasses . . . . .	1155
36.29	Soybean . . . . .	1157
36.30	Straw . . . . .	1165
36.31	Sugar . . . . .	1167
36.32	Sugar beet . . . . .	1175
36.33	Sugar cane . . . . .	1181
36.34	Sunflower . . . . .	1186
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44.2.3	Oilpalms . . . . .	1274
44.2.4	Other oil crops (incl rapeseed) . . . . .	1277
44.2.5	Soybean . . . . .	1280
44.2.6	Sunflower . . . . .	1283
44.3	Other crops . . . . .	1288
44.3.1	Fruits Vegetables Nuts . . . . .	1291
44.3.2	Potatoes . . . . .	1294
44.3.3	Pulses . . . . .	1297
44.3.4	Tropical roots . . . . .	1300
44.4	Sugar crops . . . . .	1305
44.4.1	Sugar beet . . . . .	1308
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<b>45 Fish</b>	<b>1314</b>
<b>46 Forage</b>	<b>1317</b>
<b>47 Forest products</b>	<b>1320</b>
<b>48 Livestock products</b>	<b>1322</b>
48.1 Dairy . . . . .	1327
48.2 Eggs . . . . .	1330
48.3 Monogastric meat . . . . .	1333
48.4 Poultry meat . . . . .	1336
48.5 Ruminant meat . . . . .	1339
<b>49 Pasture</b>	<b>1342</b>
<b>50 Secondary products</b>	<b>1345</b>
50.1 Alcoholic beverages . . . . .	1350
50.2 Brans . . . . .	1353
50.3 Cotton lint . . . . .	1356
50.4 Distillers grains . . . . .	1359
50.5 Ethanol . . . . .	1362
50.6 Molasses . . . . .	1365
50.7 Oilcakes . . . . .	1368
50.8 Oils . . . . .	1371
50.9 Sugar . . . . .	1374
<b>XIII Productivity</b>	<b>1377</b>
<b>51 Landuse Intensity Indicator Tau</b>	<b>1377</b>
<b>52 Yield</b>	<b>1382</b>
52.1 Crops . . . . .	1386
52.1.1 Cereals . . . . .	1389
52.1.2 Cereals—Maize . . . . .	1392
52.1.3 Cereals—Rice . . . . .	1395
52.1.4 Cereals—Temperate cereals . . . . .	1398
52.1.5 Cereals—Tropical cereals . . . . .	1401
52.1.6 Oil crops . . . . .	1404
52.1.7 Oil crops—Cotton seed . . . . .	1407
52.1.8 Oil crops—Groundnuts . . . . .	1410
52.1.9 Oil crops—Oilpalms . . . . .	1413
52.1.10 Oil crops—Other oil crops (incl rapeseed) . . . . .	1416
52.1.11 Oil crops—Soybean . . . . .	1419
52.1.12 Oil crops—Sunflower . . . . .	1422
52.1.13 Other crops . . . . .	1425
52.1.14 Other crops—Fruits Vegetables Nuts . . . . .	1428
52.1.15 Other crops—Potatoes . . . . .	1431
52.1.16 Other crops—Pulses . . . . .	1434
52.1.17 Other crops—Tropical roots . . . . .	1437
52.1.18 Sugar crops . . . . .	1440
52.1.19 Sugar crops—Sugar beet . . . . .	1443
52.1.20 Sugar crops—Sugar cane . . . . .	1446
52.2 Forage . . . . .	1449
52.3 Pasture . . . . .	1452
<b>53 Yield-increasing technological change</b>	<b>1454</b>
<b>XIV Resources</b>	<b>1455</b>

<b>54 Land Cover</b>	<b>1455</b>
54.1 Cropland . . . . .	1462
54.1.1 Area actually irrigated . . . . .	1466
54.1.2 Area equipped for irrigation . . . . .	1470
54.1.3 Bioenergy crops . . . . .	1474
54.1.4 Crops . . . . .	1477
54.1.5 Crops—Cereals . . . . .	1480
54.1.6 Crops—Cereals—Maize . . . . .	1483
54.1.7 Crops—Cereals—Rice . . . . .	1486
54.1.8 Crops—Cereals—Temperate cereals . . . . .	1489
54.1.9 Crops—Cereals—Tropical cereals . . . . .	1492
54.1.10 Crops—Oil crops . . . . .	1495
54.1.11 Crops—Oil crops—Cotton seed . . . . .	1498
54.1.12 Crops—Oil crops—Groundnuts . . . . .	1501
54.1.13 Crops—Oil crops—Oilpalms . . . . .	1504
54.1.14 Crops—Oil crops—Other oil crops (incl rapeseed) . . . . .	1507
54.1.15 Crops—Oil crops—Soybean . . . . .	1510
54.1.16 Crops—Oil crops—Sunflower . . . . .	1513
54.1.17 Crops—Other crops . . . . .	1516
54.1.18 Crops—Other crops—Fruits Vegetables Nuts . . . . .	1519
54.1.19 Crops—Other crops—Potatoes . . . . .	1522
54.1.20 Crops—Other crops—Pulses . . . . .	1525
54.1.21 Crops—Other crops—Tropical roots . . . . .	1528
54.1.22 Crops—Sugar crops . . . . .	1531
54.1.23 Crops—Sugar crops—Sugar beet . . . . .	1534
54.1.24 Crops—Sugar crops—Sugar cane . . . . .	1537
54.1.25 Forage . . . . .	1540
54.2 Forest . . . . .	1545
54.2.1 Managed Forest . . . . .	1549
54.2.2 Natural Forest . . . . .	1552
54.2.3 Natural Forest—Primary Forest . . . . .	1555
54.2.4 Natural Forest—Secondary Forest . . . . .	1558
54.3 Other Land . . . . .	1561
54.4 Pastures and Rangelands . . . . .	1565
54.5 Urban Area . . . . .	1569
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55.1 Cropland . . . . .	1575
55.2 Forest . . . . .	1581
55.2.1 Managed Forest . . . . .	1585
55.2.2 Natural Forest . . . . .	1588
55.2.3 Natural Forest—Primary Forest . . . . .	1591
55.2.4 Natural Forest—Secondary Forest . . . . .	1594
55.3 Other Land . . . . .	1597
55.4 Pastures and Rangelands . . . . .	1601
<b>56 Nitrogen</b>	<b>1605</b>
56.1 Cropland Budget . . . . .	1605
56.1.1 Balance . . . . .	1605
56.1.2 Balance—Balanceflow . . . . .	1608
56.1.3 Balance—Nutrient Surplus . . . . .	1611
56.1.4 Inputs . . . . .	1614
56.1.5 Inputs—Ash from Burned Crop Residues . . . . .	1617
56.1.6 Inputs—Atmospheric Deposition . . . . .	1620
56.1.7 Inputs—Biological Fixation Freelifving Microorganisms . . . . .	1625
56.1.8 Inputs—Biological Fixation Symbiotic Crops . . . . .	1628
56.1.9 Inputs—Fertilizer . . . . .	1633
56.1.10 Inputs—Manure Recycled from Confinements . . . . .	1639
56.1.11 Inputs—Recycled Aboveground Crop Residues . . . . .	1645
56.1.12 Inputs—Recycled Belowground Crop Residues . . . . .	1649
56.1.13 Inputs—Seed . . . . .	1652

56.1.14 Withdrawals . . . . .	1655
56.1.15 Withdrawals—Aboveground Crop Residues . . . . .	1658
56.1.16 Withdrawals—Belowground Crop Residues . . . . .	1661
56.1.17 Withdrawals—Harvested Crops . . . . .	1664
56.2 Manure . . . . .	1673
56.2.1 Dairy . . . . .	1676
56.2.2 Eggs . . . . .	1680
56.2.3 Manure Collected As Fuel . . . . .	1684
56.2.4 Manure From Grazing . . . . .	1687
56.2.5 Manure From Stubble Grazing . . . . .	1690
56.2.6 Manure In Confinements . . . . .	1693
56.2.7 Monogastric meat . . . . .	1696
56.2.8 Poultry meat . . . . .	1700
56.2.9 Ruminant meat . . . . .	1704
56.3 Pasture Budget . . . . .	1708
56.3.1 Balance . . . . .	1708
56.3.2 Balance—Nutrient Surplus . . . . .	1711
56.3.3 Inputs . . . . .	1714
56.3.4 Inputs—Atmospheric Deposition . . . . .	1717
56.3.5 Inputs—Biological Fixation Freelifving Microorganisms . . . . .	1720
56.3.6 Inputs—Fertilizer . . . . .	1723
56.3.7 Inputs—Manure From Grazing . . . . .	1726
56.3.8 Withdrawals . . . . .	1729
56.3.9 Withdrawals—Harvested Crops . . . . .	1732

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57.1 Withdrawal . . . . .	1735
57.1.1 Agriculture . . . . .	1735

## **XV Trade 1737**

<b>58 Net-Trade</b>	<b>1737</b>
58.1 Crops . . . . .	1744
58.1.1 Cereals . . . . .	1747
58.1.2 Cereals—Maize . . . . .	1750
58.1.3 Cereals—Rice . . . . .	1753
58.1.4 Cereals—Temperate cereals . . . . .	1756
58.1.5 Cereals—Tropical cereals . . . . .	1759
58.1.6 Oil crops . . . . .	1762
58.1.7 Oil crops—Cotton seed . . . . .	1765
58.1.8 Oil crops—Groundnuts . . . . .	1768
58.1.9 Oil crops—Other oil crops (incl rapeseed) . . . . .	1771
58.1.10 Oil crops—Soybean . . . . .	1774
58.1.11 Oil crops—Sunflower . . . . .	1777
58.1.12 Other crops . . . . .	1780
58.1.13 Other crops—Fruits Vegetables Nuts . . . . .	1783
58.1.14 Other crops—Potatoes . . . . .	1786
58.1.15 Other crops—Pulses . . . . .	1789
58.1.16 Other crops—Tropical roots . . . . .	1792
58.1.17 Sugar crops . . . . .	1795
58.1.18 Sugar crops—Sugar beet . . . . .	1798
58.1.19 Sugar crops—Sugar cane . . . . .	1801
58.2 Fish . . . . .	1804
58.3 Livestock products . . . . .	1807
58.3.1 Dairy . . . . .	1810
58.3.2 Eggs . . . . .	1813
58.3.3 Monogastric meat . . . . .	1816
58.3.4 Poultry meat . . . . .	1819
58.3.5 Ruminant meat . . . . .	1822
58.4 Secondary products . . . . .	1825

58.4.1	Alcoholic beverages . . . . .	1828
58.4.2	Brans . . . . .	1831
58.4.3	Cotton lint . . . . .	1834
58.4.4	Molasses . . . . .	1837
58.4.5	Oilcakes . . . . .	1840
58.4.6	Oils . . . . .	1843
58.4.7	Sugar . . . . .	1846
<b>59</b>	<b>Self-sufficiency</b>	<b>1849</b>
59.1	Crops . . . . .	1849
59.1.1	Cereals . . . . .	1849
59.1.2	Cereals—Maize . . . . .	1852
59.1.3	Cereals—Rice . . . . .	1855
59.1.4	Cereals—Temperate cereals . . . . .	1858
59.1.5	Cereals—Tropical cereals . . . . .	1861
59.1.6	Other crops . . . . .	1864
59.1.7	Other crops—Fruits Vegetables Nuts . . . . .	1867
59.1.8	Other crops—Potatoes . . . . .	1870
59.1.9	Other crops—Pulses . . . . .	1873
59.1.10	Other crops—Tropical roots . . . . .	1876
59.1.11	Sugar crops . . . . .	1879
59.1.12	Sugar crops—Sugar beet . . . . .	1882
59.1.13	Sugar crops—Sugar cane . . . . .	1885
59.2	Fish . . . . .	1888
59.3	Livestock products . . . . .	1891
59.3.1	Dairy . . . . .	1894
59.3.2	Eggs . . . . .	1897
59.3.3	Monogastric meat . . . . .	1900
59.3.4	Poultry meat . . . . .	1903
59.3.5	Ruminant meat . . . . .	1906
59.4	Secondary products . . . . .	1909
59.4.1	Alcoholic beverages . . . . .	1909
59.4.2	Brans . . . . .	1912
59.4.3	Cotton lint . . . . .	1915
59.4.4	Distillers grains . . . . .	1918
59.4.5	Ethanol . . . . .	1921
59.4.6	Molasses . . . . .	1924
59.4.7	Oilcakes . . . . .	1927
59.4.8	Oils . . . . .	1930
59.4.9	Sugar . . . . .	1933
<b>XVI</b>	<b>Trade Value</b>	<b>1936</b>
<b>60</b>	<b>Exports</b>	<b>1936</b>
<b>61</b>	<b>Imports</b>	<b>1936</b>
<b>62</b>	<b>Net-Exports</b>	<b>1936</b>
<b>XVII</b>	<b>Statistics</b>	<b>1937</b>
<b>63</b>	<b>Traffic Lights</b>	<b>1937</b>
63.1	Total . . . . .	1937
63.2	Trend . . . . .	1937
63.3	Overlap . . . . .	1937
63.4	Level . . . . .	1937
<b>64</b>	<b>Ignored data</b>	<b>1938</b>



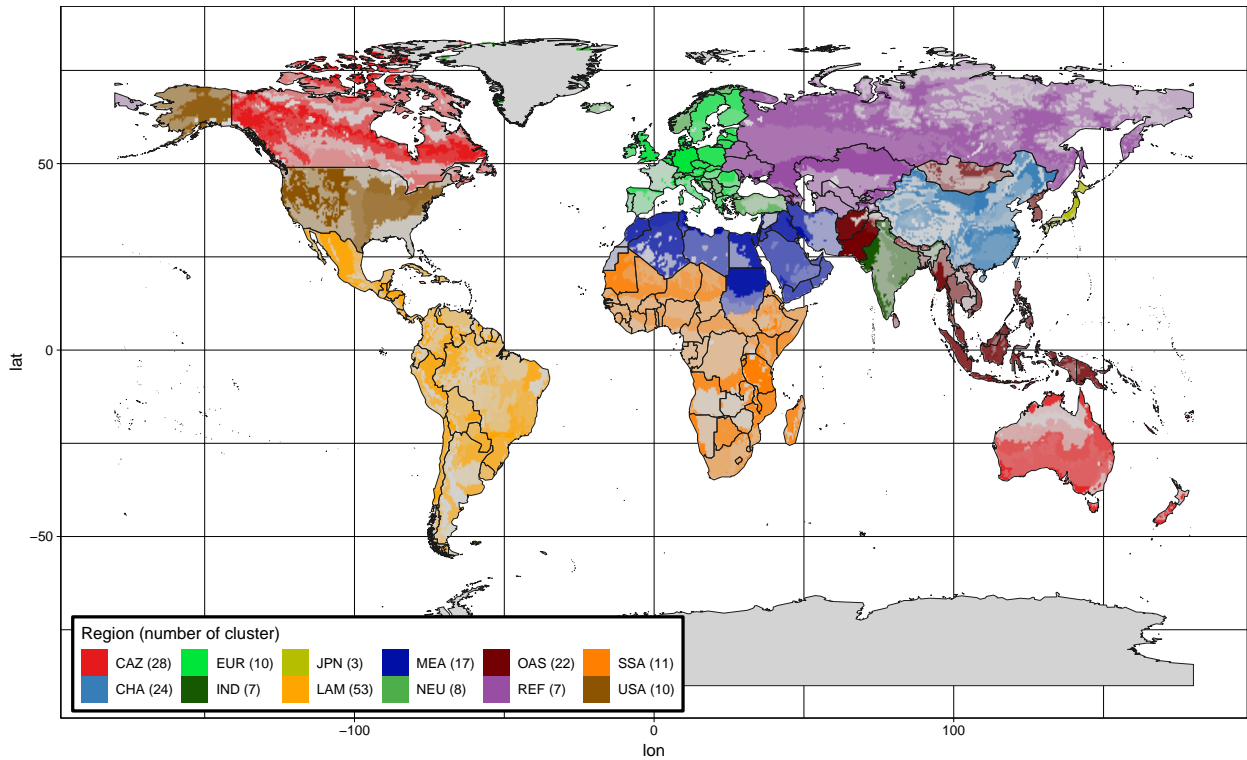
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<b>65 Non-Matching Data</b>	<b>1941</b>
65.1 Model outputs . . . . .	1941
65.2 Validation data . . . . .	1944
 <b>XVIII Run Information</b>	 <b>1956</b>
<b>66 Calibration</b>	<b>1956</b>
66.1 Yield calibration factors . . . . .	1956
66.2 Land use change in 1995 (reshuffling) . . . . .	1956
 <b>67 Model settings</b>	 <b>1956</b>
67.1 Code settings . . . . .	1956
67.2 Dataset . . . . .	1958
67.3 R Information . . . . .	1959
 <b>68 Runtime information</b>	 <b>1970</b>

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

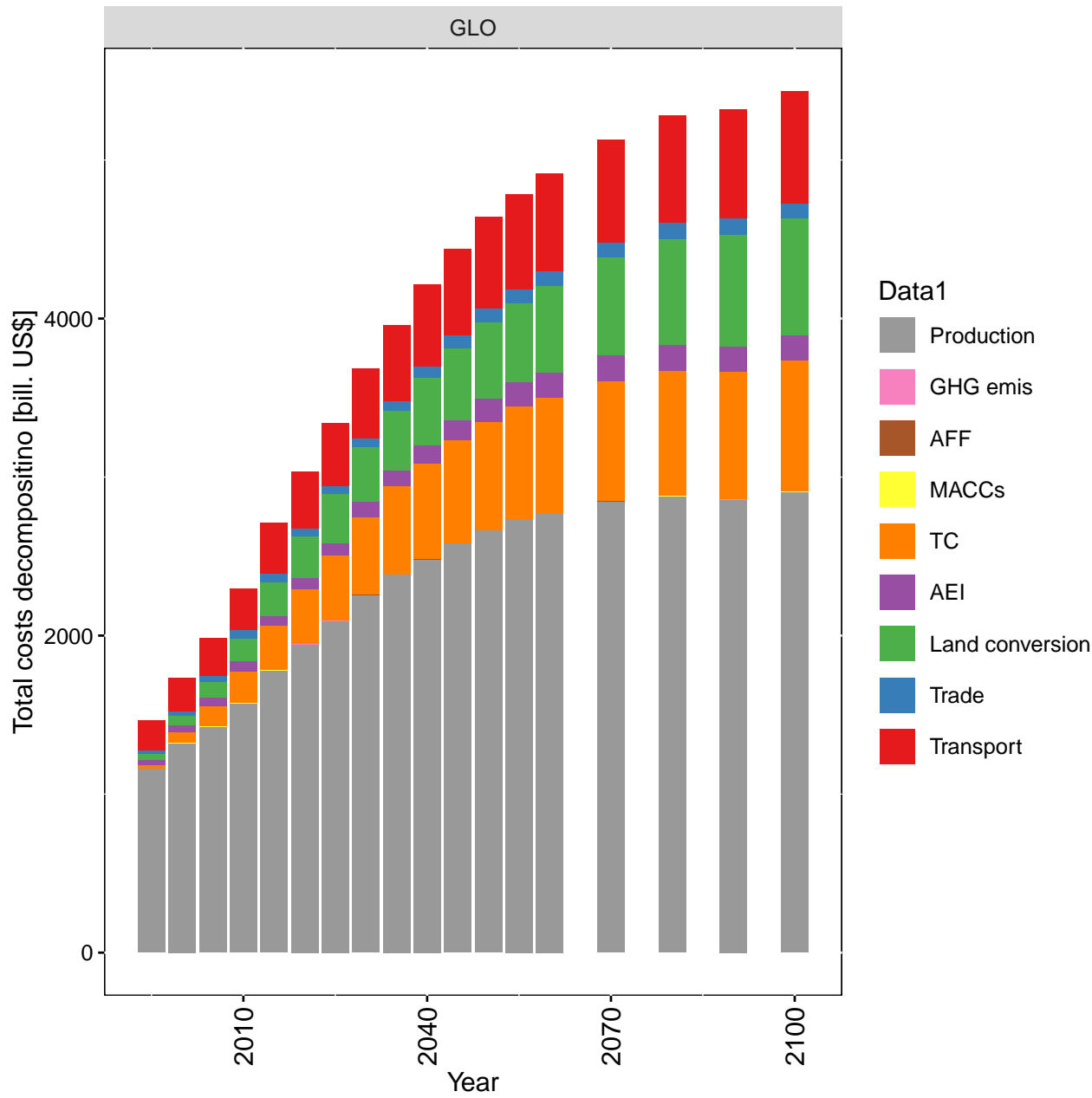
	convergence (limit = 0.005)	iterations (limit = 5)
y1995	0.24	1.00
y2000	0.28	1.00
y2005	0.05	1.00
y2010	0.03	1.00
y2015	0.00	3.00
y2020	0.00	4.00
y2025	0.00	2.00
y2030	0.00	2.00
y2035	0.00	3.00
y2040	0.00	3.00
y2045	0.00	3.00
y2050	0.00	3.00
y2055	0.00	3.00
y2060	0.00	3.00
y2070	0.00	2.00
y2080	0.00	3.00
y2090	0.00	1.00
y2100	0.00	1.00

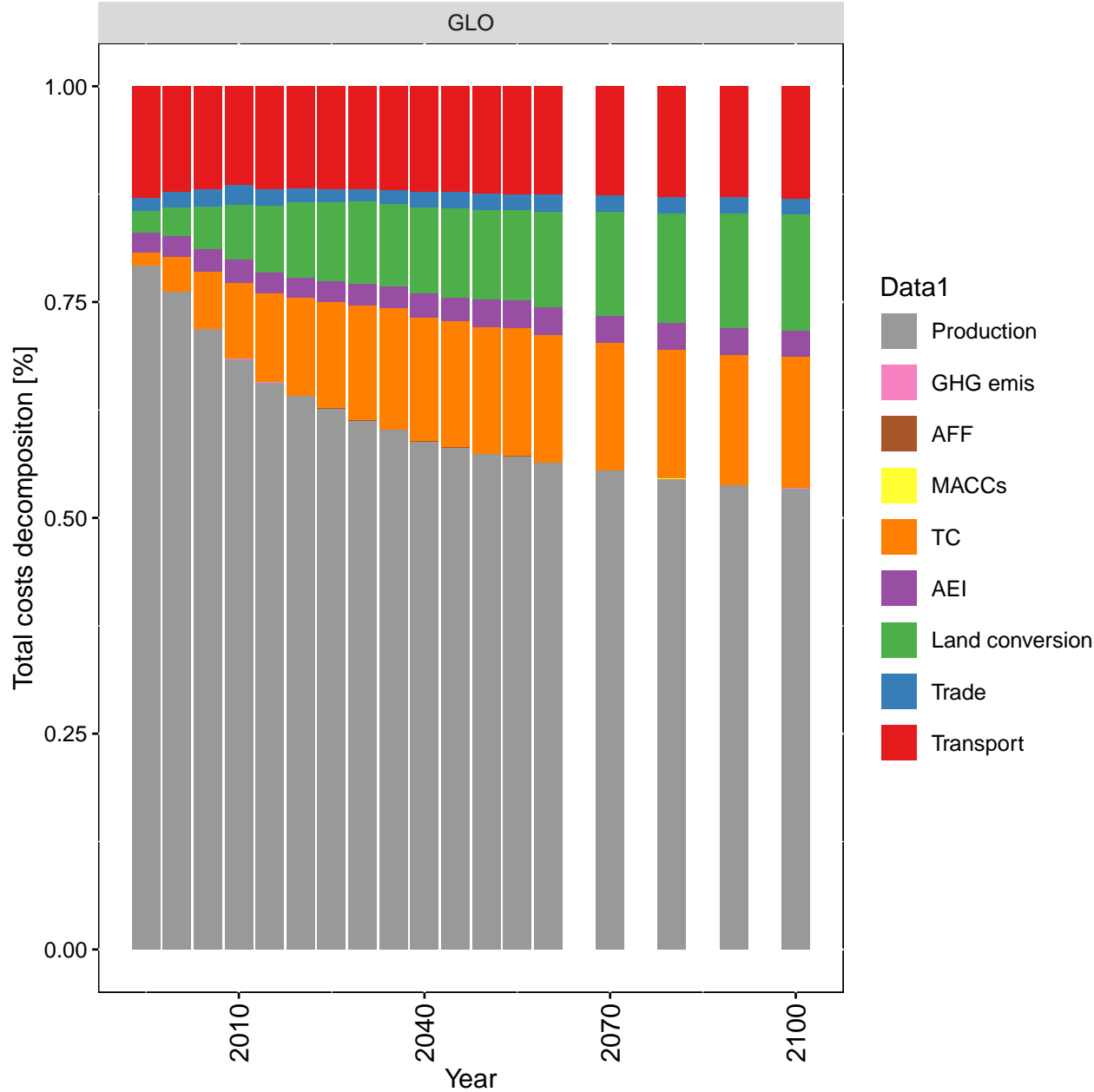
## 0.4 Goal function value

Table 3: Global costs (billion USD)

	GLO
y1995	1766.16
y2000	2063.26
y2005	2365.80
y2010	2740.46
y2015	3268.24
y2020	3675.73
y2025	4040.72
y2030	4434.60
y2035	4745.65
y2040	5023.98
y2045	5263.18
y2050	5472.07
y2055	5618.87
y2060	5754.13
y2070	5974.26
y2080	6132.34
y2090	6165.17
y2100	6291.34

0.4.1 Total costs decomposition





## Part II

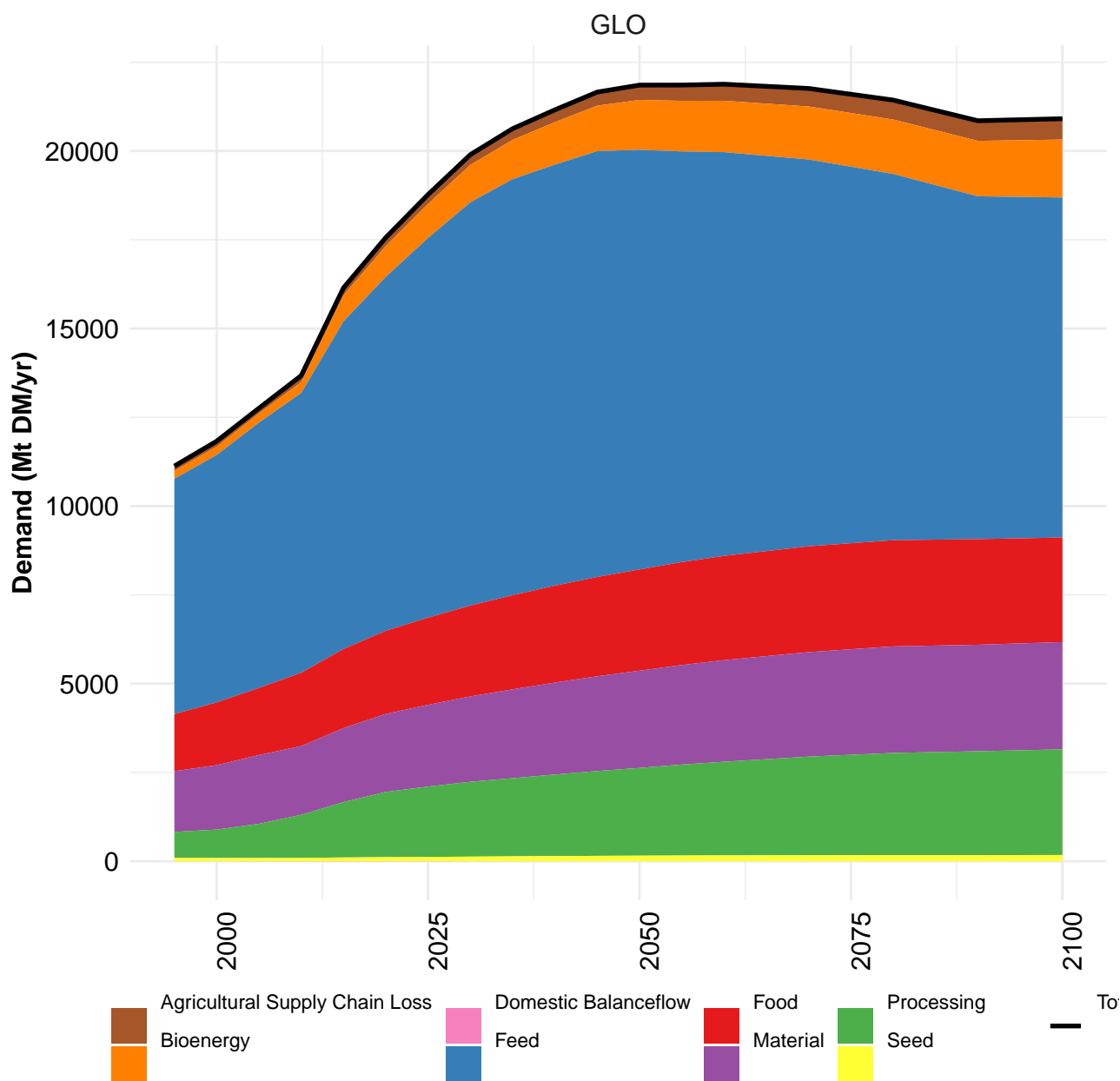
# Costs

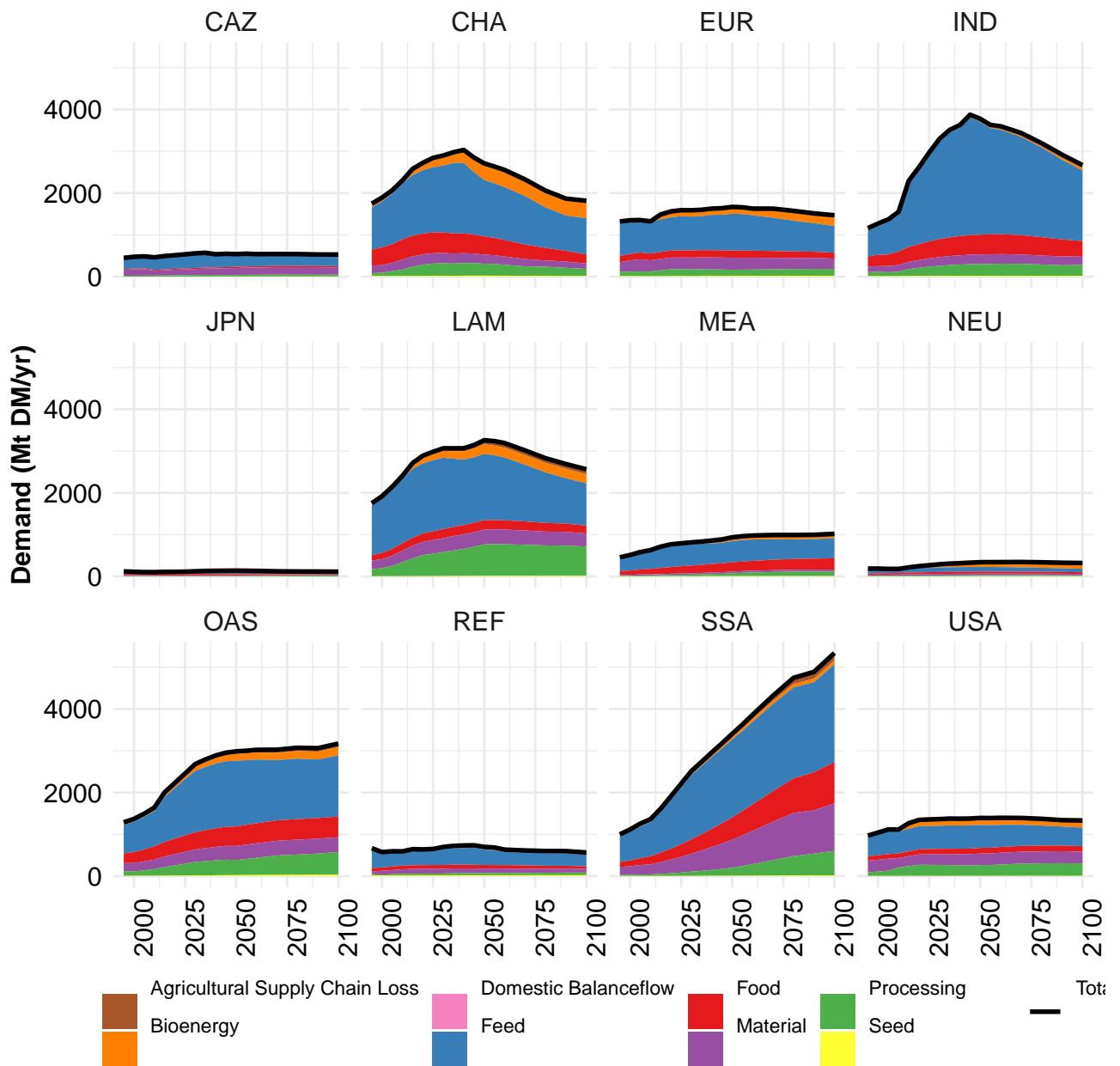
### 1 MainSolve

### 2 MainSolve w/o GHG Emissions

Part III

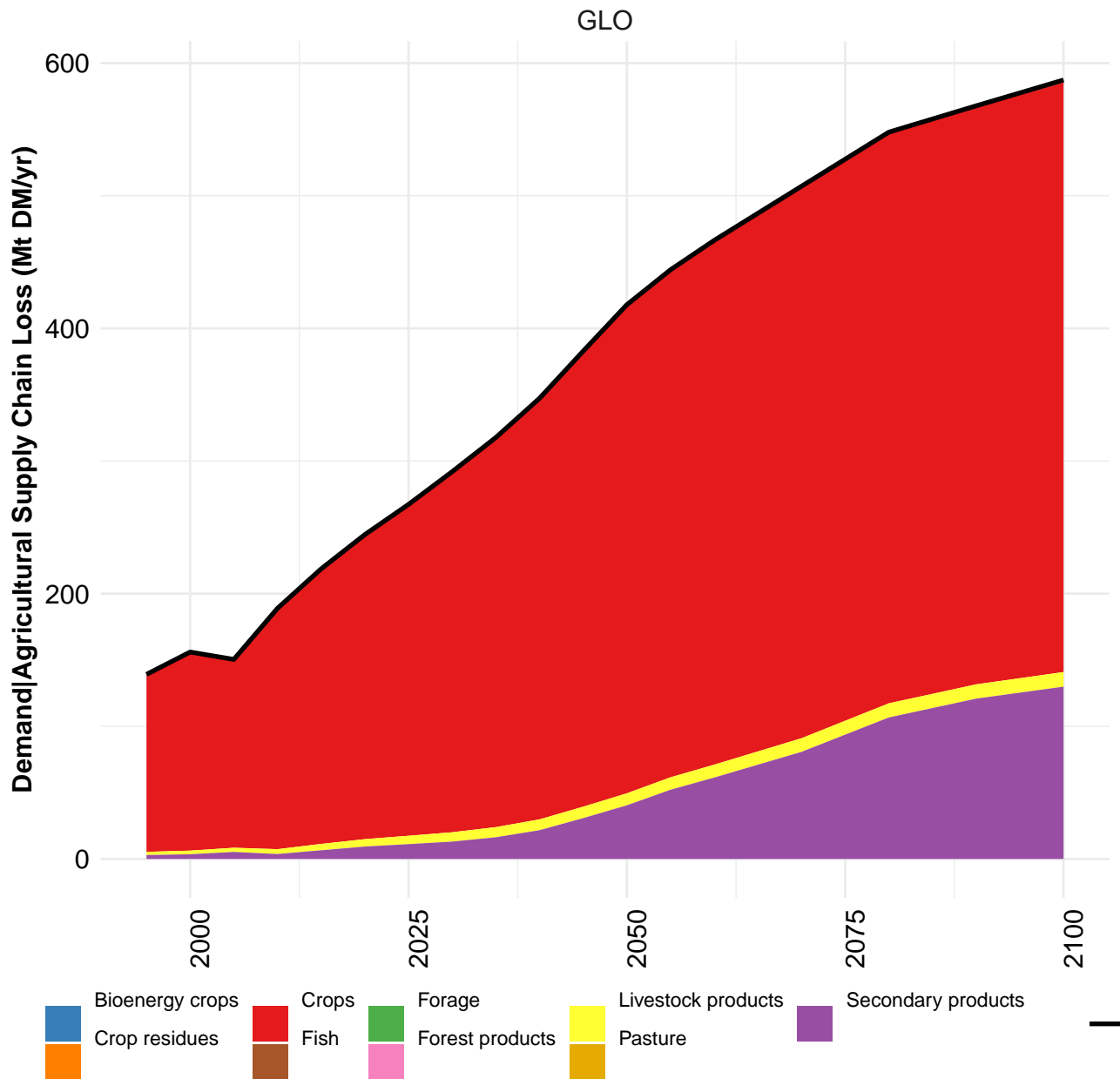
# Demand

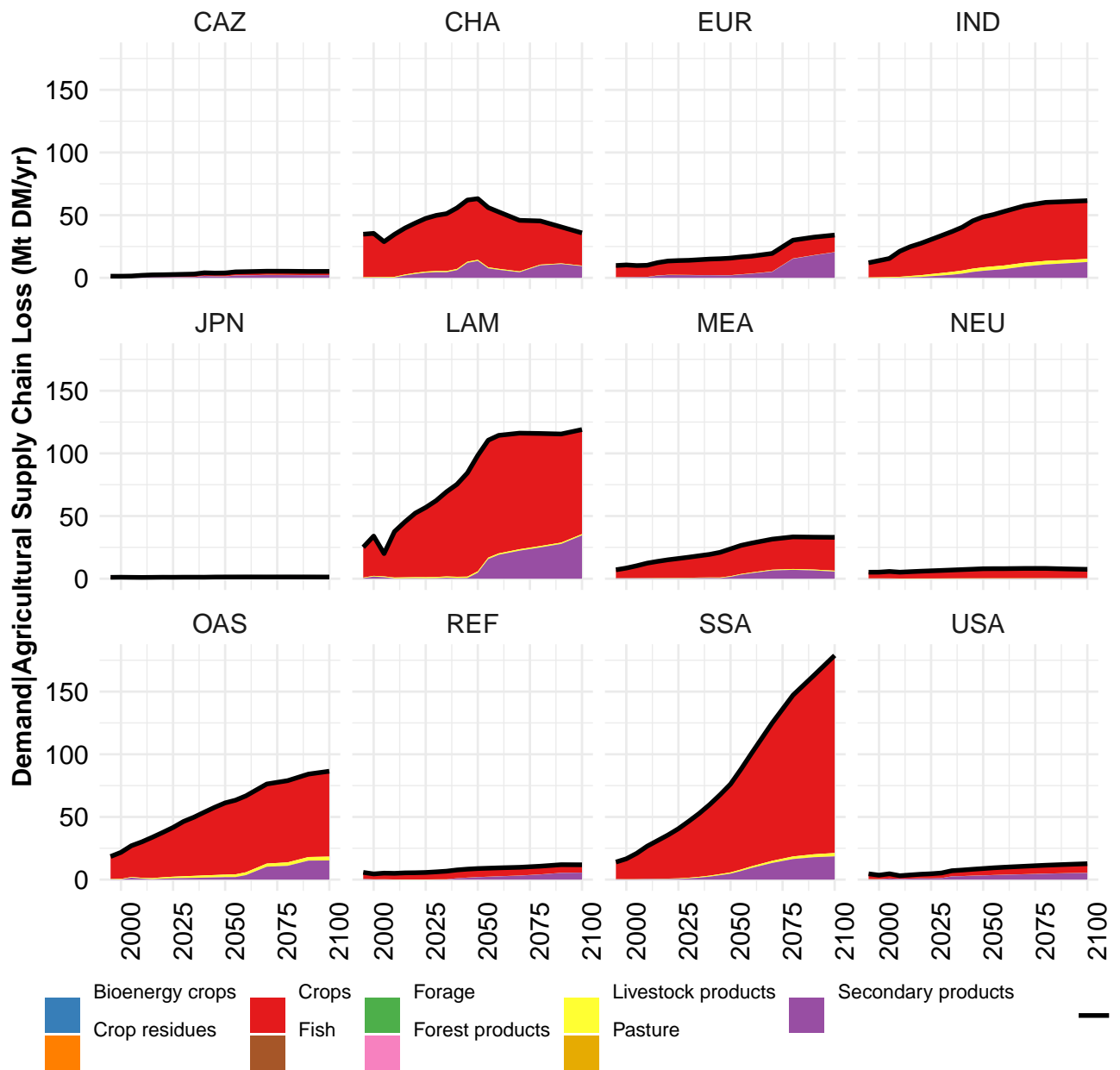


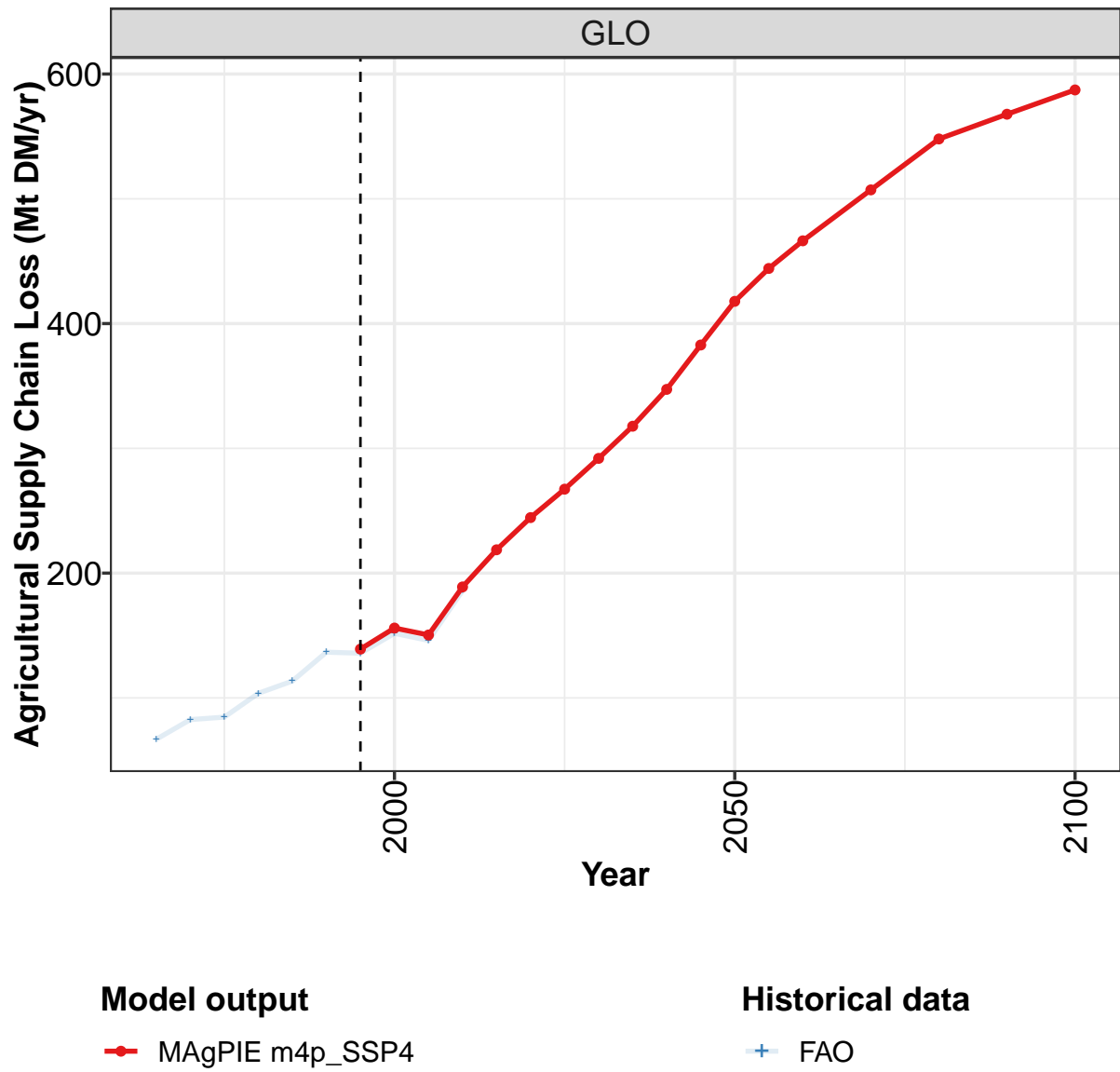




### 3 Agricultural Supply Chain Loss







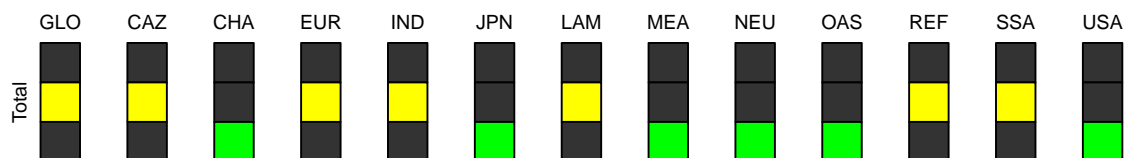
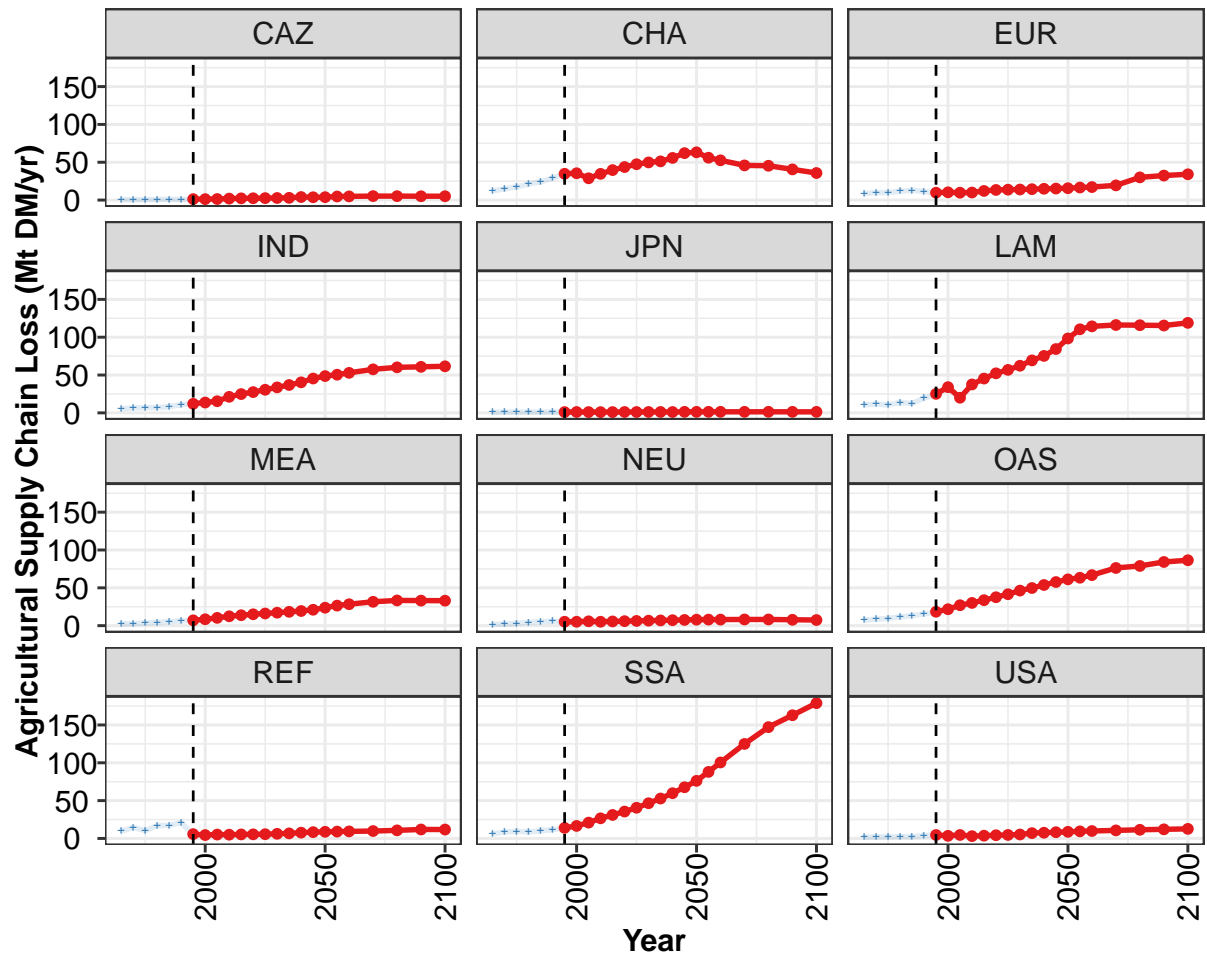


Figure 1: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	139	156	150	189	219	245	267	292	318	347	383
CAZ	1	1	1	2	2	2	3	3	3	4	4
CHA	35	35	29	35	40	44	47	50	51	56	62
EUR	10	10	10	10	12	13	14	14	14	15	15
IND	12	14	15	21	25	27	31	34	37	40	45
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	25	34	20	38	45	52	57	62	69	75	84
MEA	7	8	10	12	14	15	16	17	18	19	21
NEU	5	5	6	5	6	6	6	7	7	7	8
OAS	18	22	27	30	34	38	42	46	50	54	58
REF	6	5	5	5	5	5	6	6	7	8	8
SSA	14	17	21	27	31	36	41	47	53	60	68
USA	5	4	5	3	4	4	5	5	7	8	8

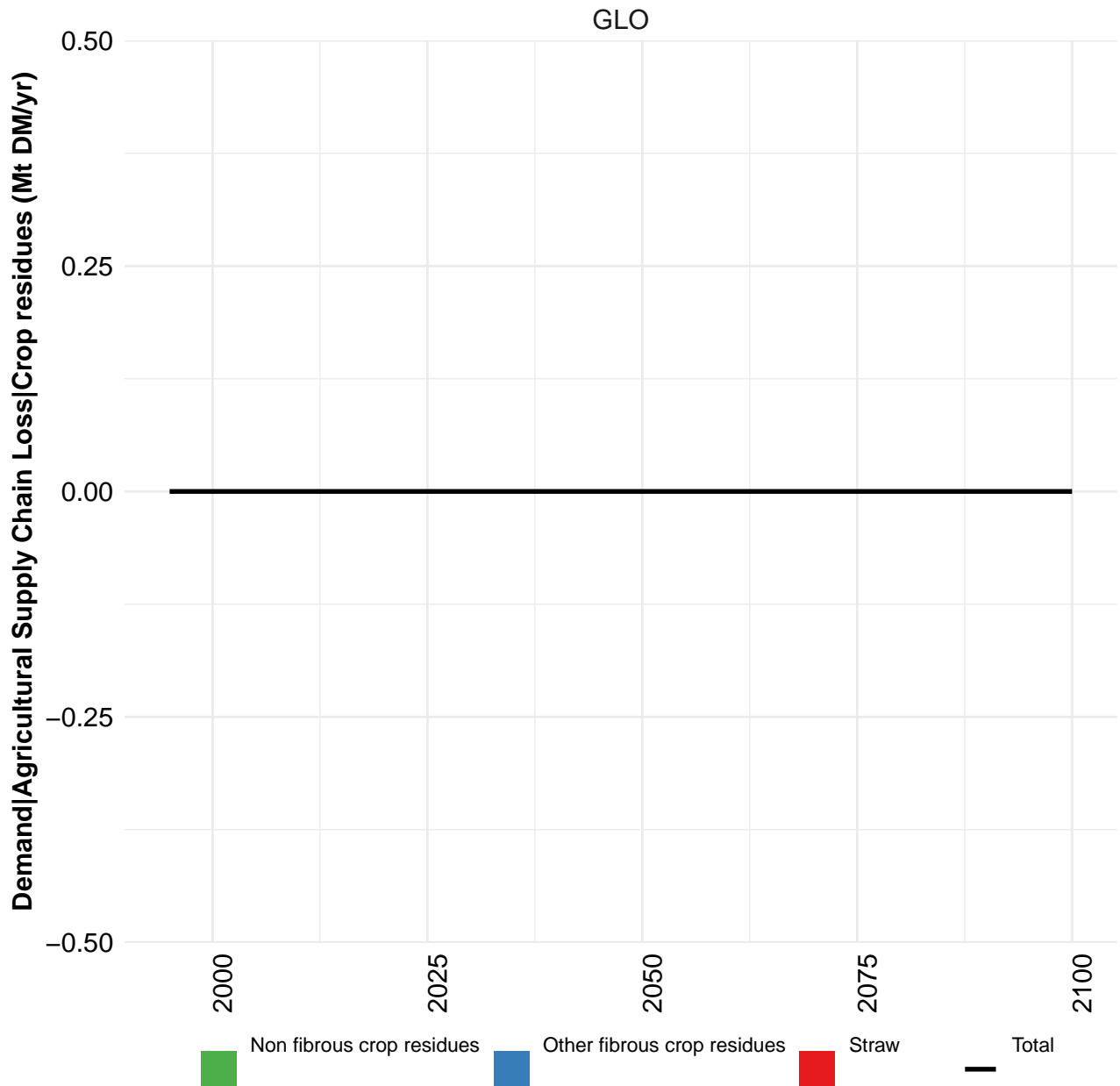
Table 4: MAgPIE m4p-SSP4 — Demand—Agricultural Supply Chain Loss (Mt DM/yr) [PART 1/2]

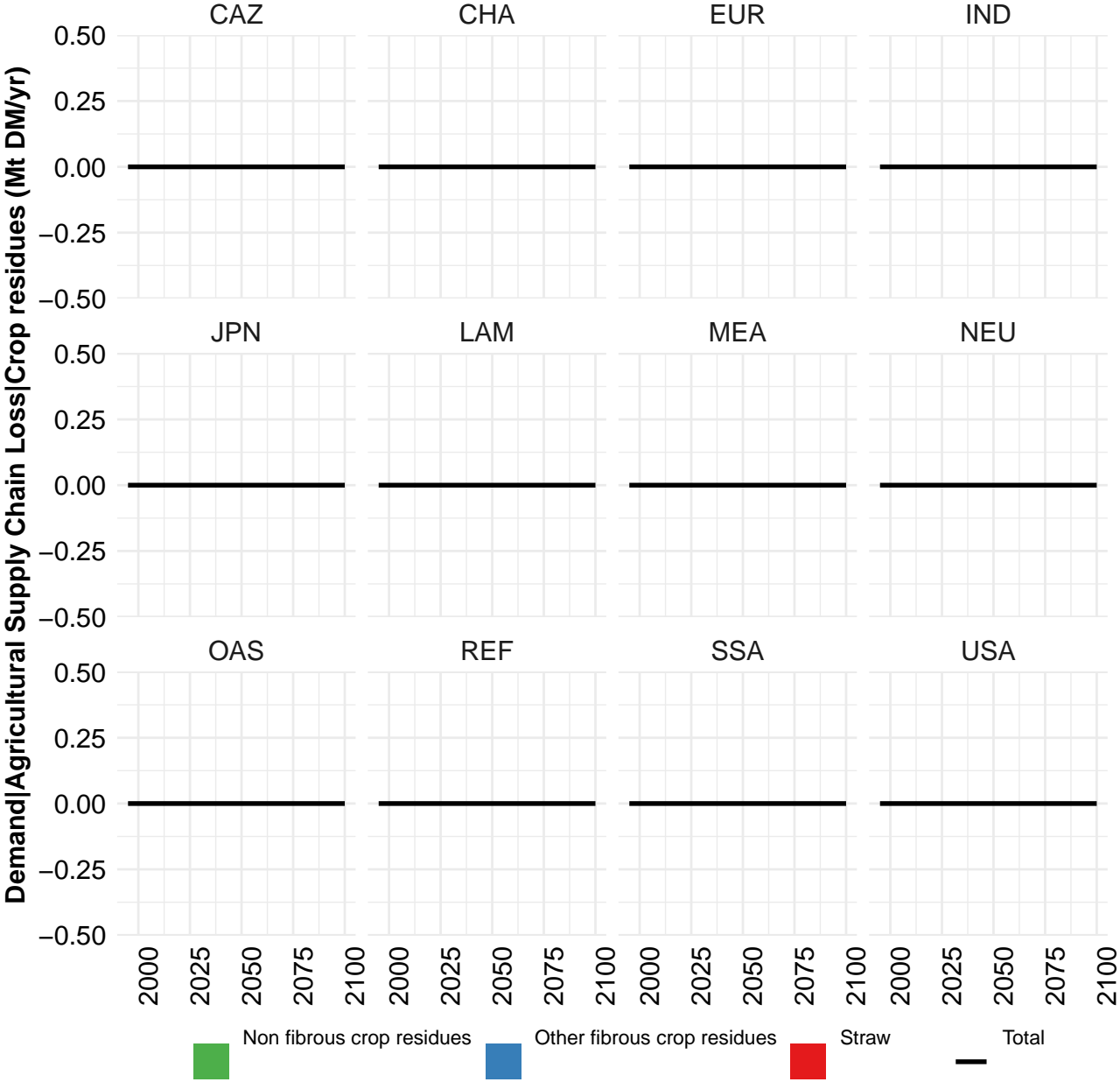
	2050	2055	2060	2070	2080	2090	2100
GLO	418	444	466	507	548	568	587
CAZ	4	5	5	5	5	5	5
CHA	63	56	53	46	45	41	36
EUR	16	17	17	19	30	32	34
IND	49	50	53	58	60	61	62
JPN	1	1	1	1	1	1	1
LAM	98	111	114	116	116	115	119
MEA	24	27	28	32	33	33	33
NEU	8	8	8	8	8	8	7
OAS	61	63	67	76	79	84	86
REF	9	9	9	10	11	12	12
SSA	76	88	100	125	147	163	179
USA	9	9	10	11	11	12	13

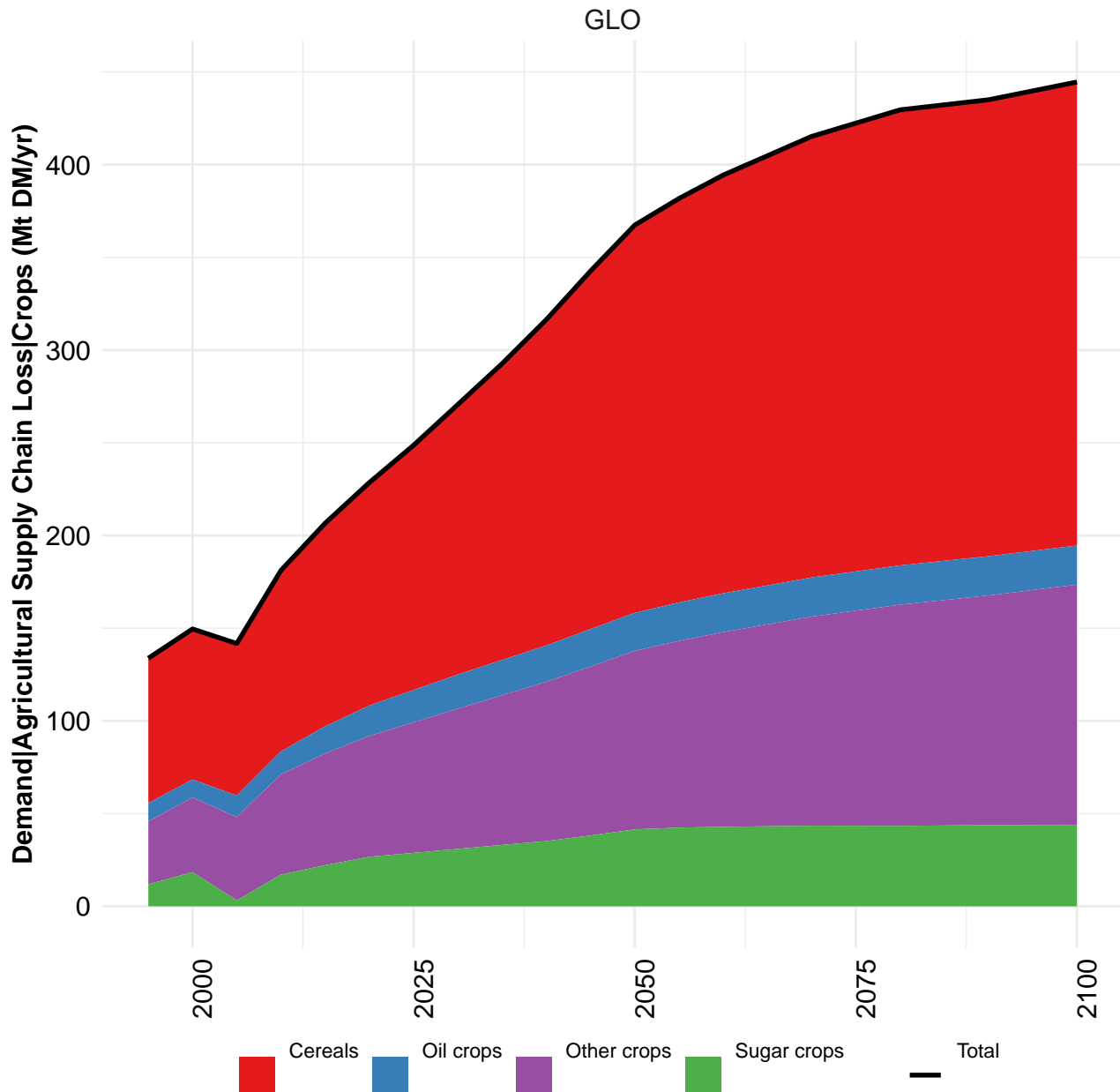
Table 5: MAgPIE m4p-SSP4 — Demand—Agricultural Supply Chain Loss (Mt DM/yr) [PART 2/2]

	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

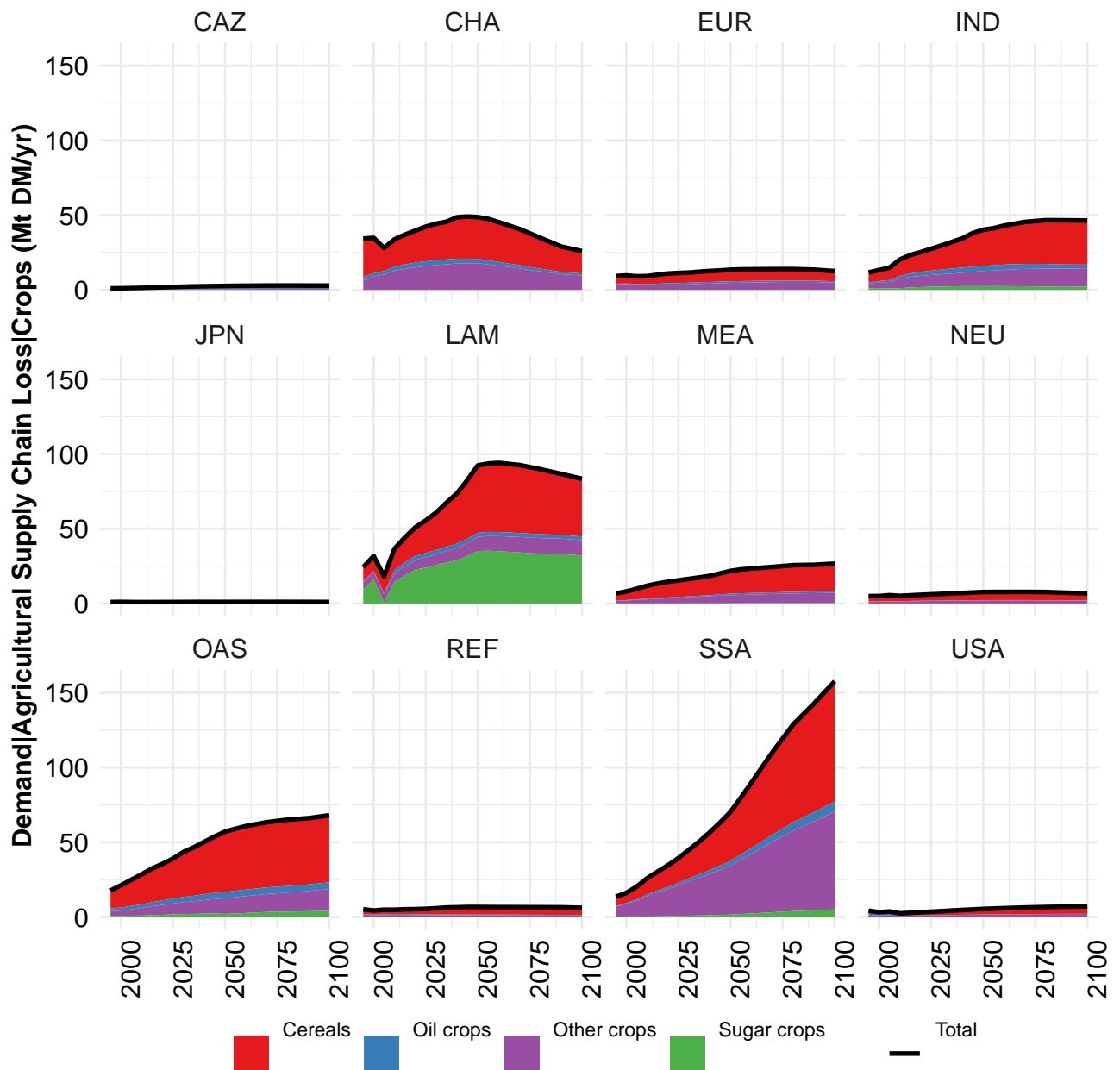
Table 6: FAO — Demand—Agricultural Supply Chain Loss (Mt DM/yr)



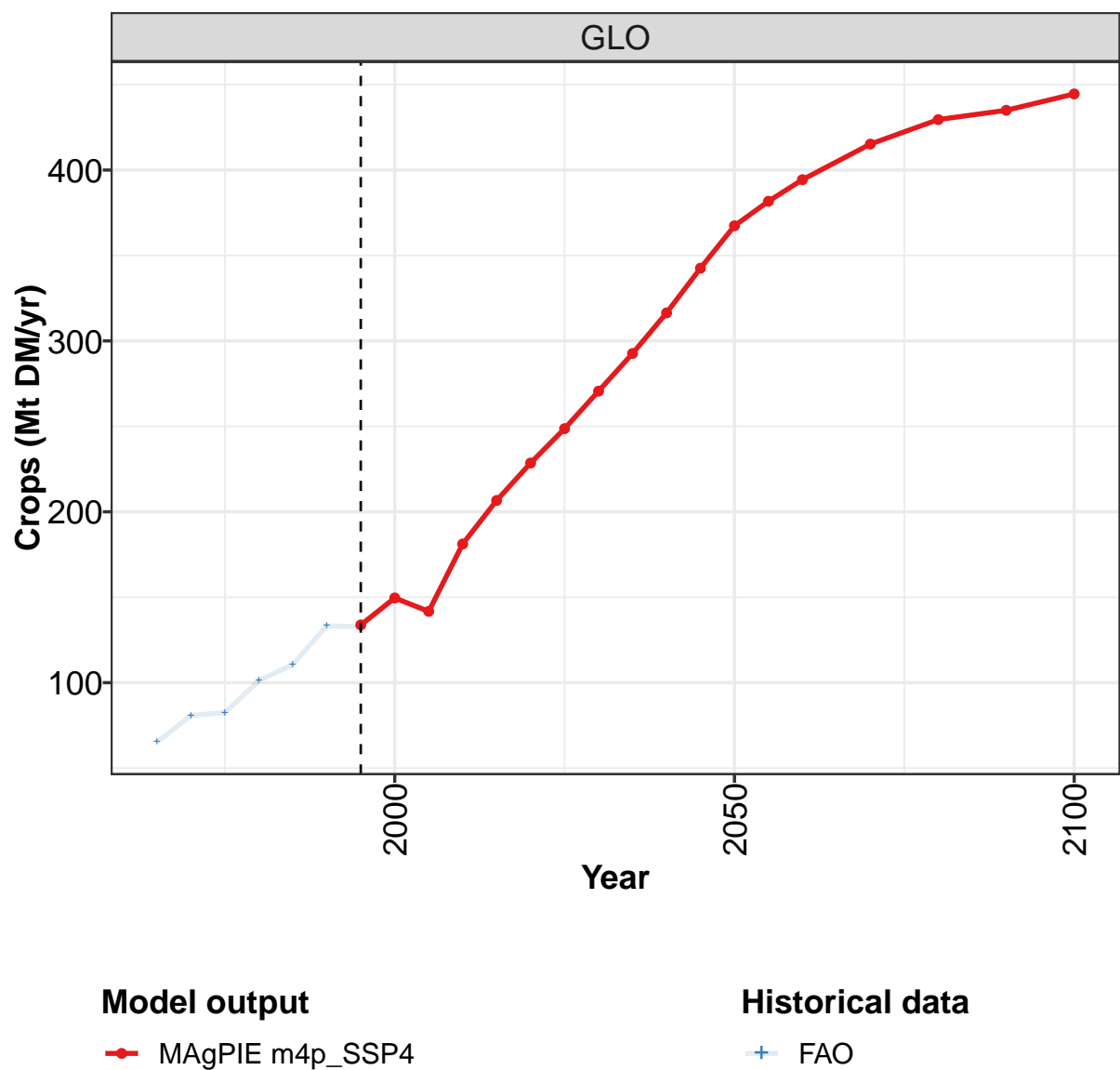








3.1 Crops



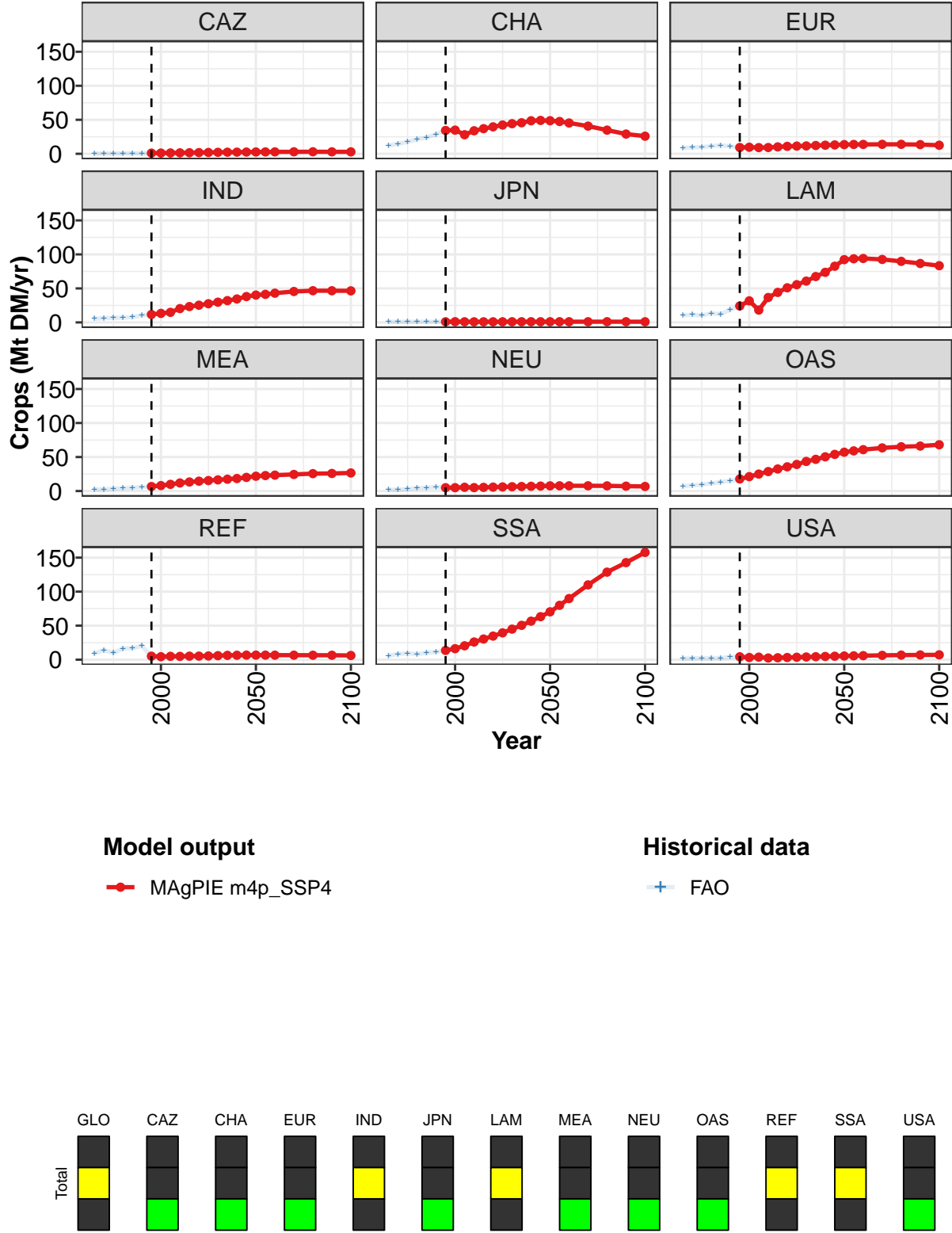


Figure 2: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	134	150	142	181	207	229	249	271	293	316	343
CAZ	1	1	1	1	2	2	2	2	2	2	3
CHA	34	35	28	34	37	40	42	44	46	49	49
EUR	9	10	9	9	10	11	11	12	12	13	13
IND	12	13	15	20	23	25	28	30	32	34	38
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	24	32	18	37	44	51	55	61	67	74	83
MEA	7	8	10	12	13	14	15	16	17	18	20
NEU	5	5	6	5	5	6	6	6	7	7	7
OAS	18	21	25	29	32	36	39	44	47	50	54
REF	5	4	5	5	5	5	5	6	6	6	7
SSA	14	16	20	26	30	35	39	45	50	57	63
USA	4	3	4	2	3	3	4	4	4	5	5

Table 7: MAgPIE m4p-SSP4 — Demand—Agricultural Supply Chain Loss—Crops (Mt DM/yr) [PART 1/2]

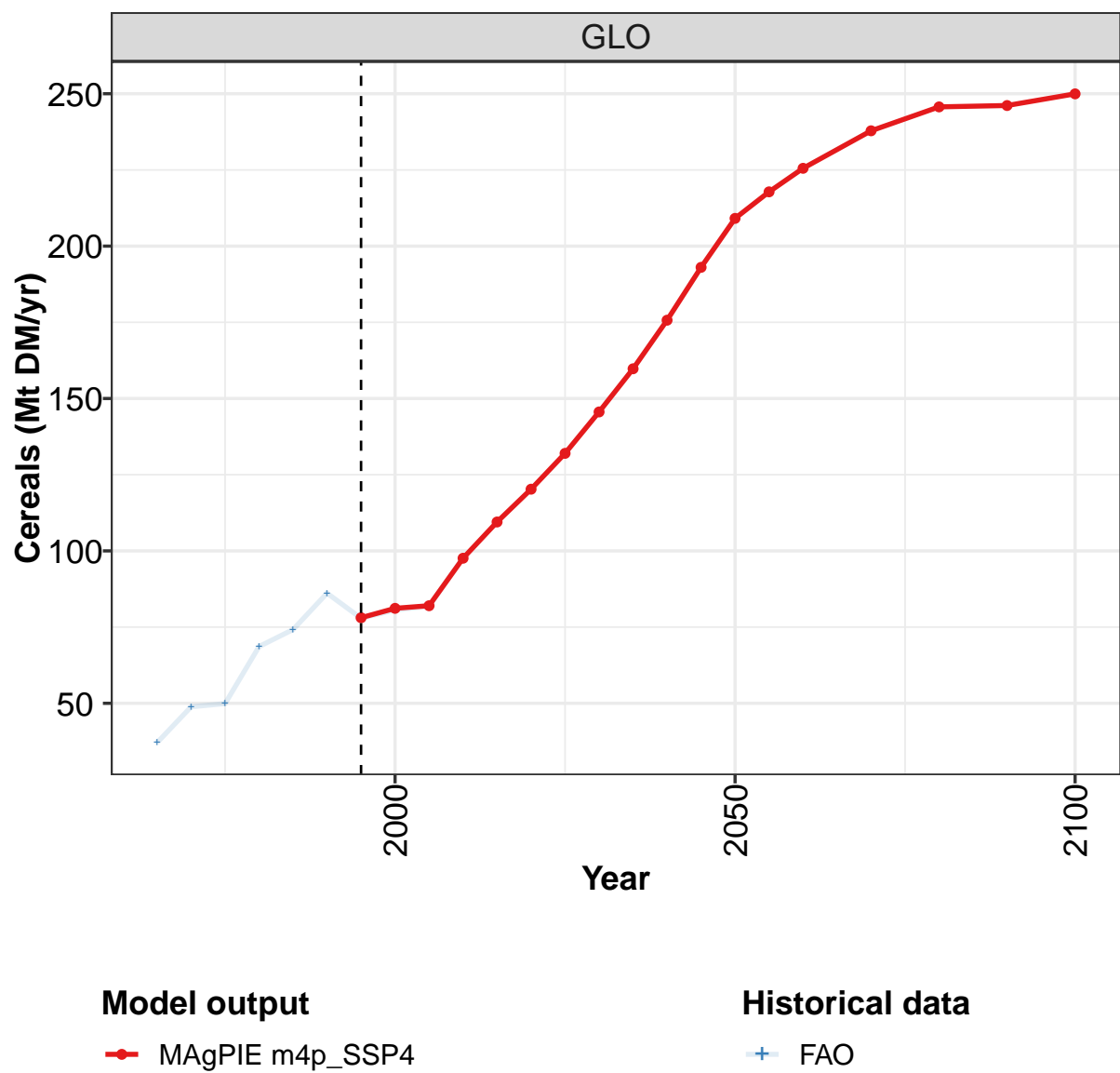
	2050	2055	2060	2070	2080	2090	2100
GLO	367	382	394	415	430	435	445
CAZ	3	3	3	3	3	3	3
CHA	49	48	45	41	35	29	26
EUR	13	14	14	14	14	14	13
IND	40	41	43	45	47	47	46
JPN	1	1	1	1	1	1	1
LAM	92	94	94	93	90	87	83
MEA	22	23	23	24	26	26	27
NEU	8	8	8	8	8	7	7
OAS	57	59	61	63	65	66	68
REF	7	7	7	7	7	6	6
SSA	70	80	90	110	129	143	158
USA	5	6	6	6	7	7	7

Table 8: MAgPIE m4p-SSP4 — 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



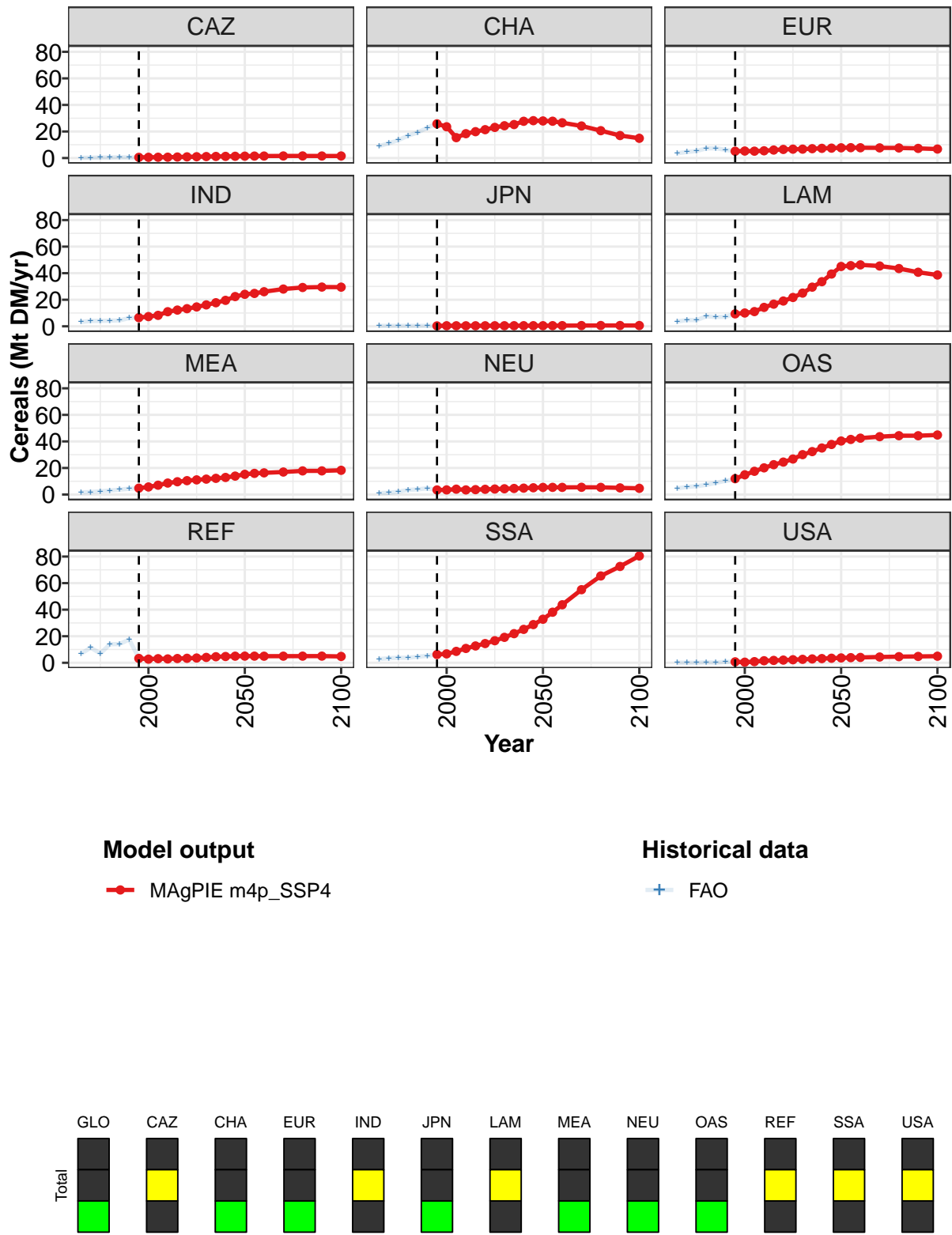


Figure 3: MAGPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	78	81	82	98	109	120	132	146	160	176	193
CAZ	1	1	1	1	1	1	1	1	1	1	1
CHA	26	24	15	18	20	21	23	24	25	28	28
EUR	5	5	5	5	6	6	7	7	7	7	7
IND	7	7	8	11	12	13	15	16	18	20	22
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	9	10	11	14	17	19	22	25	29	34	39
MEA	5	6	7	9	10	10	11	12	12	13	14
NEU	3	4	4	3	4	4	4	4	5	5	5
OAS	12	15	18	20	22	24	27	30	32	35	38
REF	3	3	3	3	3	3	4	4	5	5	5
SSA	6	7	9	11	13	14	17	19	22	25	29
USA	1	0	1	2	2	2	2	3	3	3	3

Table 10: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals (Mt DM/yr)  
[PART 1/2]

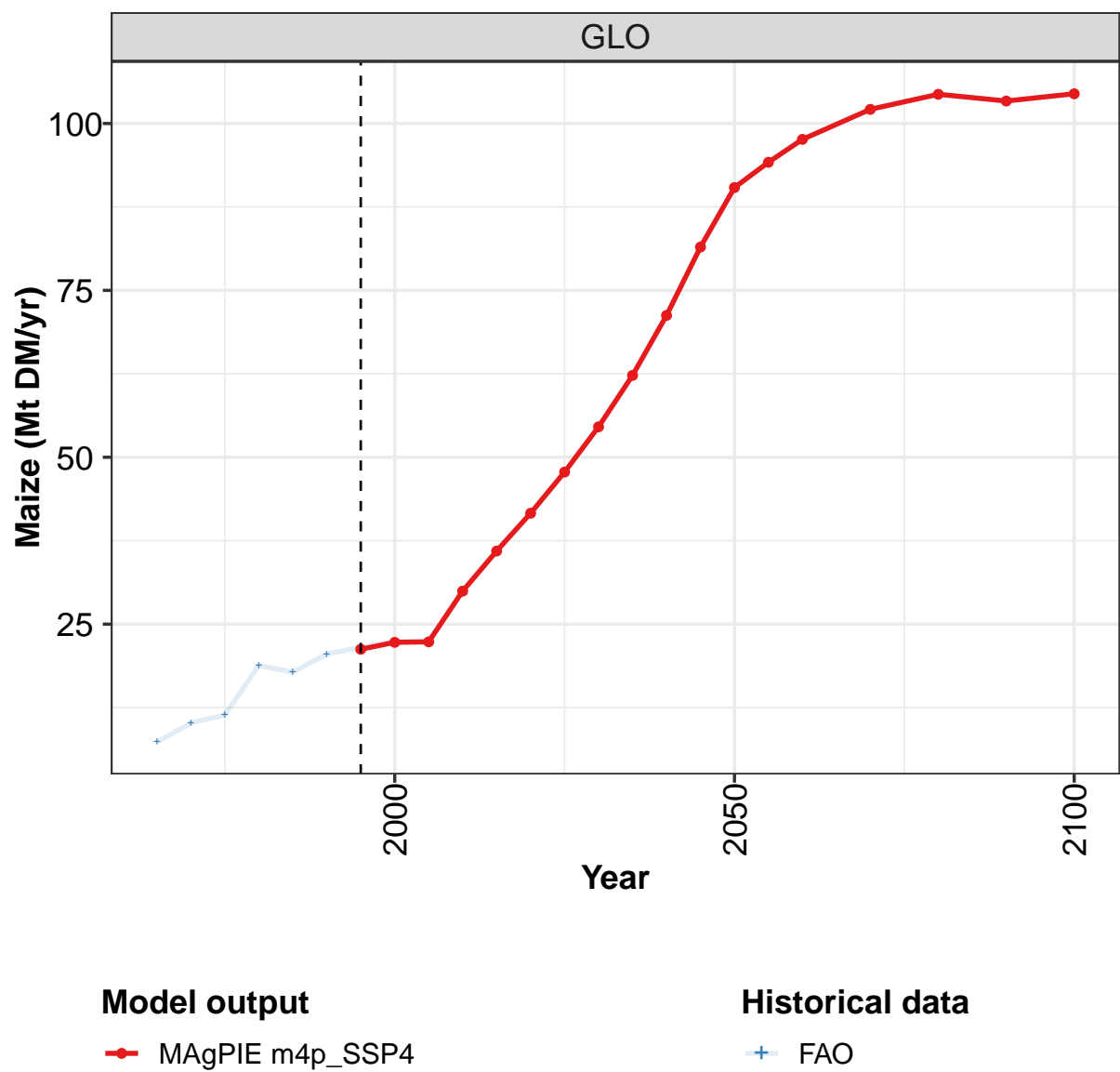
	2050	2055	2060	2070	2080	2090	2100
GLO	209	218	226	238	246	246	250
CAZ	1	1	2	2	2	2	2
CHA	28	28	27	24	21	17	15
EUR	8	8	8	8	8	7	7
IND	24	25	26	28	29	30	29
JPN	0	0	1	1	1	1	1
LAM	45	46	46	45	43	41	39
MEA	15	16	16	17	18	18	18
NEU	5	5	5	5	5	5	5
OAS	40	42	42	44	44	44	45
REF	5	5	5	5	5	5	5
SSA	33	38	44	55	65	73	80
USA	4	4	4	4	5	5	5

Table 11: MAgPIE m4p\_SSP4 — 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





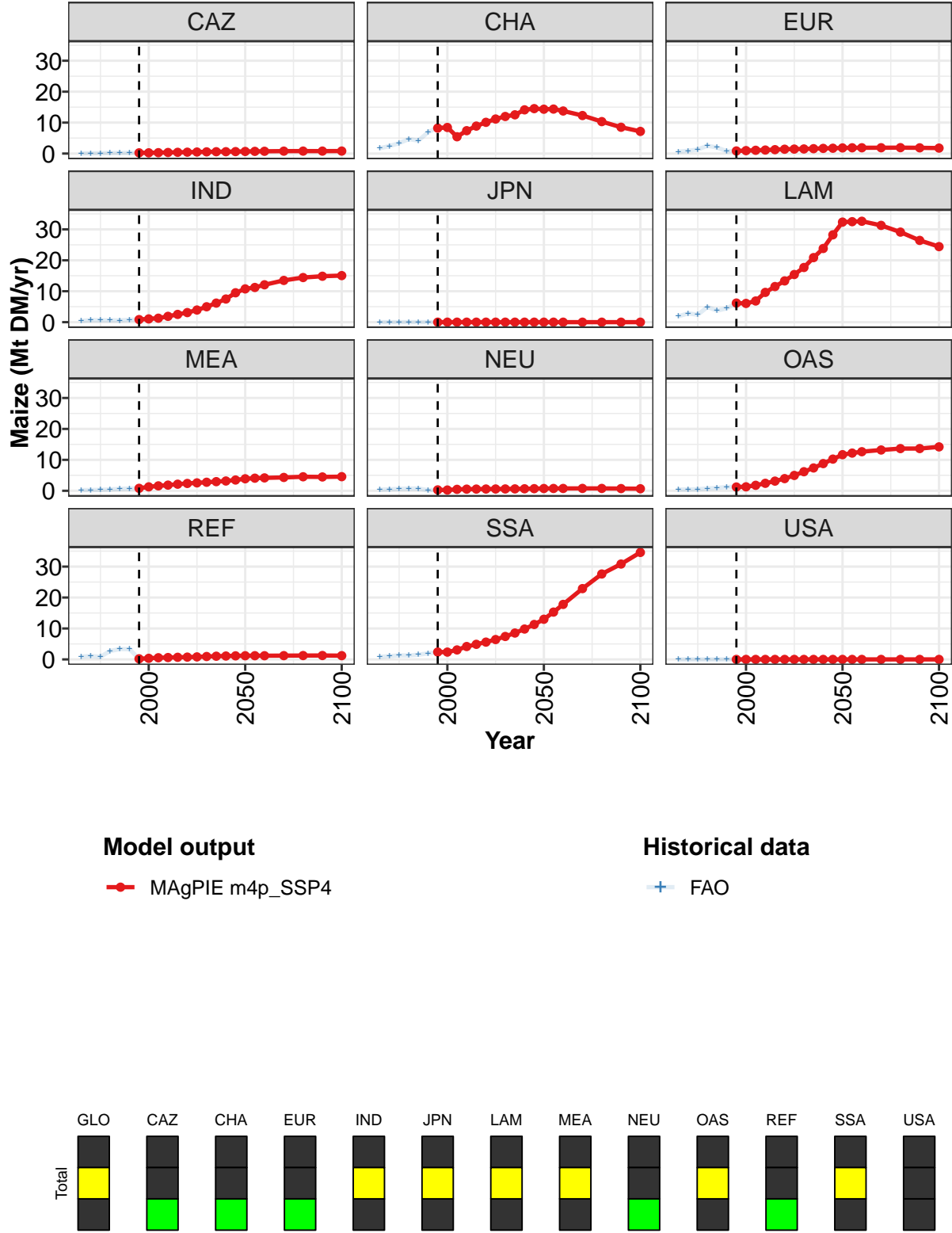


Figure 4: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21	22	22	30	36	42	48	55	62	71	81
CAZ	0	0	0	0	0	0	0	1	1	1	1
CHA	8	8	5	7	9	10	11	12	13	14	15
EUR	1	1	1	1	1	1	1	1	2	2	2
IND	1	1	1	2	3	3	4	5	6	7	10
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	6	7	10	12	13	15	18	21	24	28
MEA	1	1	2	2	2	2	3	3	3	3	3
NEU	0	0	0	1	1	1	1	1	1	1	1
OAS	1	1	2	2	3	4	5	6	7	9	10
REF	0	0	1	1	1	1	1	1	1	1	1
SSA	2	2	3	4	5	6	6	7	9	10	11
USA	0	0	0	0	0	0	0	0	0	0	0

Table 13: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

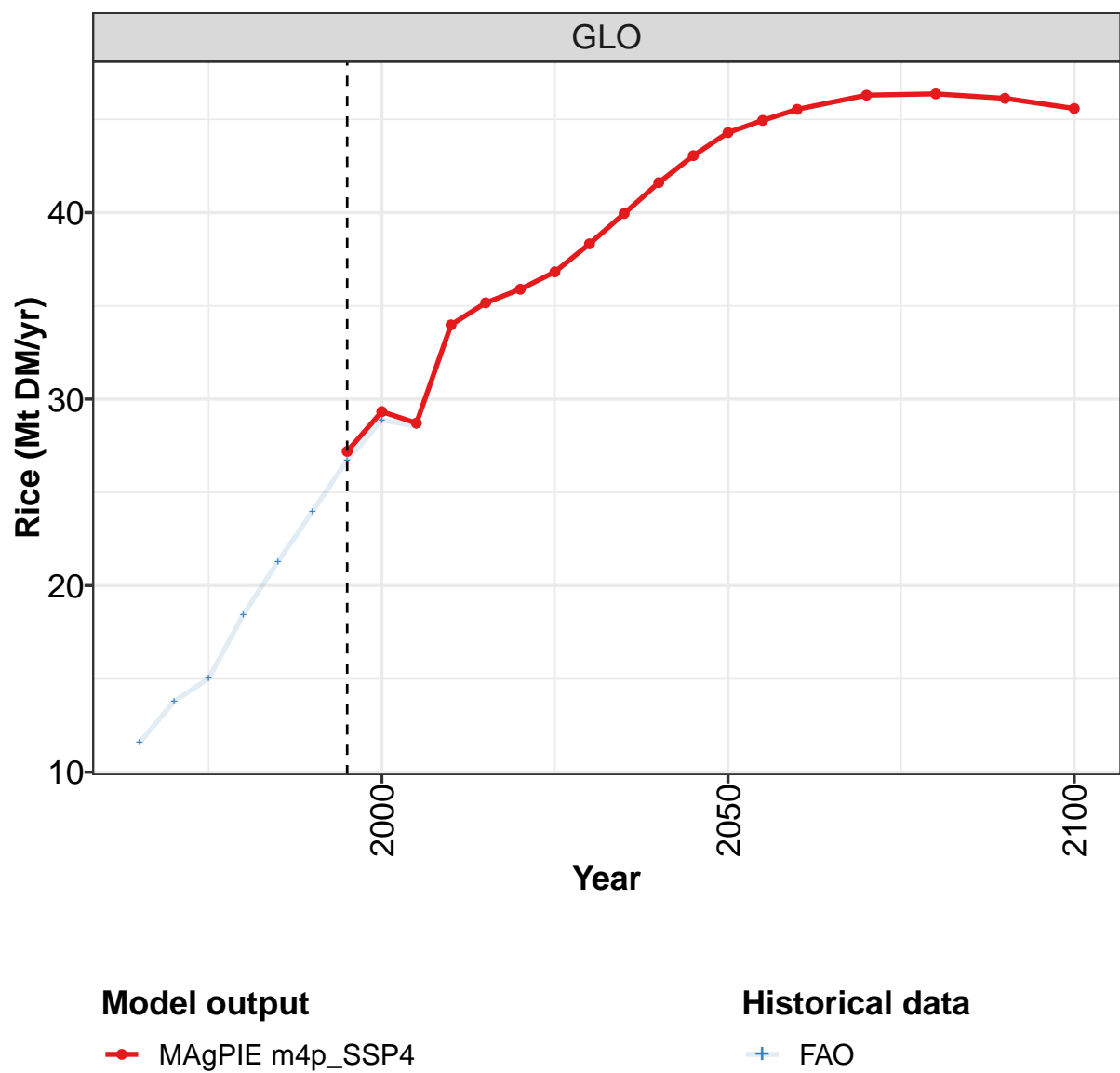
	2050	2055	2060	2070	2080	2090	2100
GLO	90	94	98	102	104	103	104
CAZ	1	1	1	1	1	1	1
CHA	14	14	14	12	10	9	7
EUR	2	2	2	2	2	2	2
IND	11	11	12	13	14	15	15
JPN	0	0	0	0	0	0	0
LAM	32	32	33	31	29	26	24
MEA	4	4	4	4	5	4	5
NEU	1	1	1	1	1	1	1
OAS	12	12	13	13	14	14	14
REF	1	1	1	1	1	1	1
SSA	13	15	18	23	28	31	35
USA	0	0	0	0	0	0	0

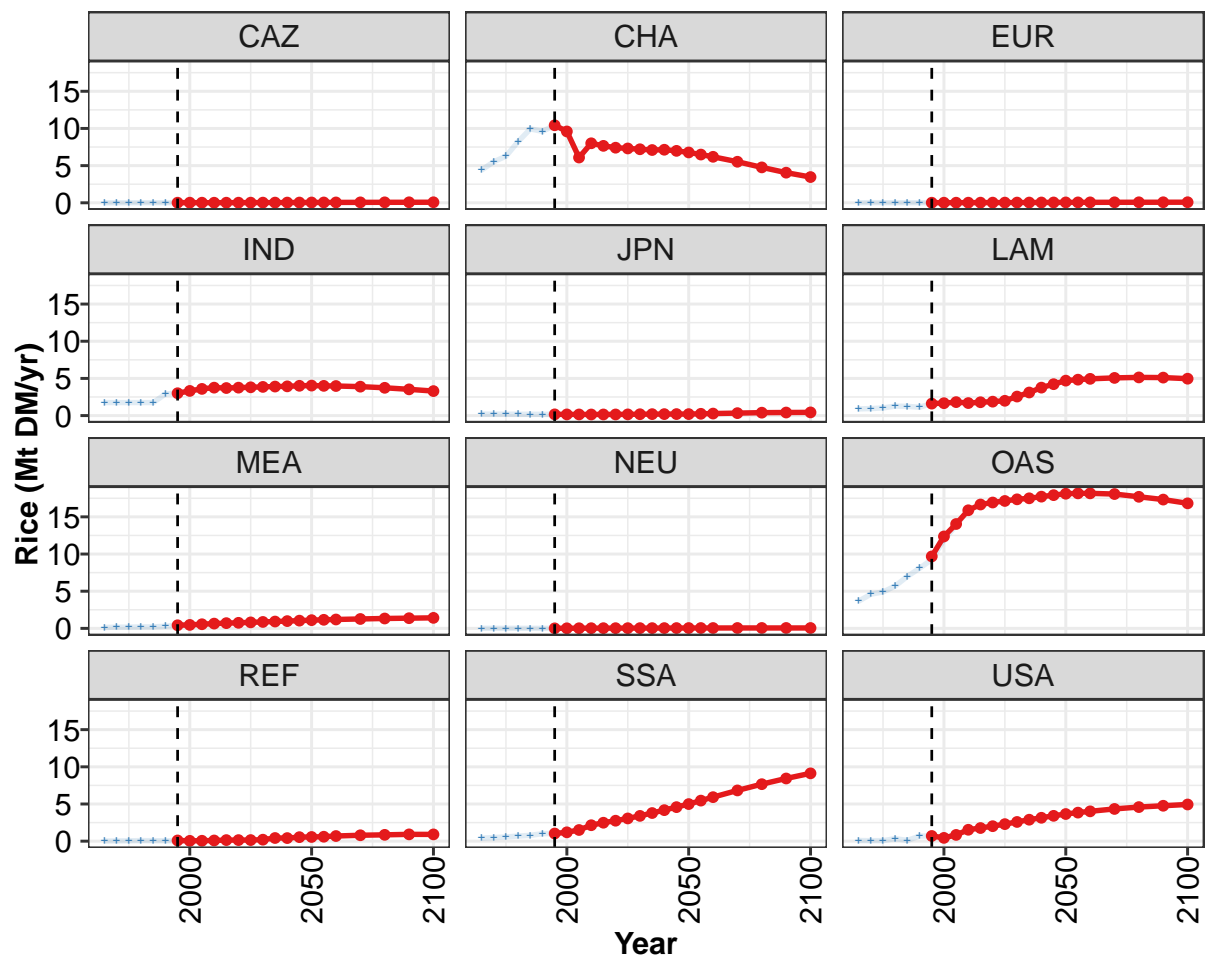
Table 14: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	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





**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

—+— FAO

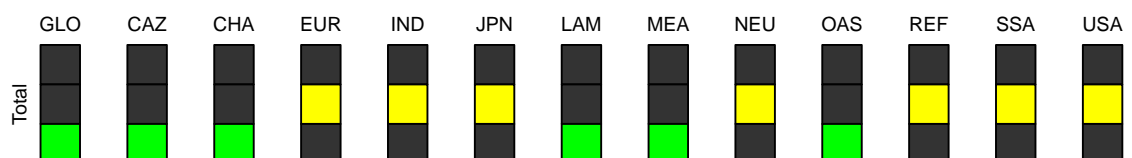


Figure 5: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	27.2	29.3	28.7	34.0	35.2	35.9	36.8	38.3	40.0	41.6	43.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	10.4	9.6	6.1	8.0	7.7	7.4	7.3	7.2	7.1	7.1	7.0
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	3.3	3.6	3.8	3.7	3.8	3.8	3.9	3.9	3.9	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	2.6	3.1	3.8	4.2
MEA	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0	1.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	9.7	12.4	14.0	15.9	16.7	16.9	17.1	17.4	17.5	17.7	17.9
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.4	0.5
SSA	1.0	1.2	1.5	2.1	2.5	2.8	3.1	3.4	3.8	4.2	4.6
USA	0.7	0.4	0.8	1.5	1.8	2.0	2.3	2.6	2.9	3.2	3.4

Table 16: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

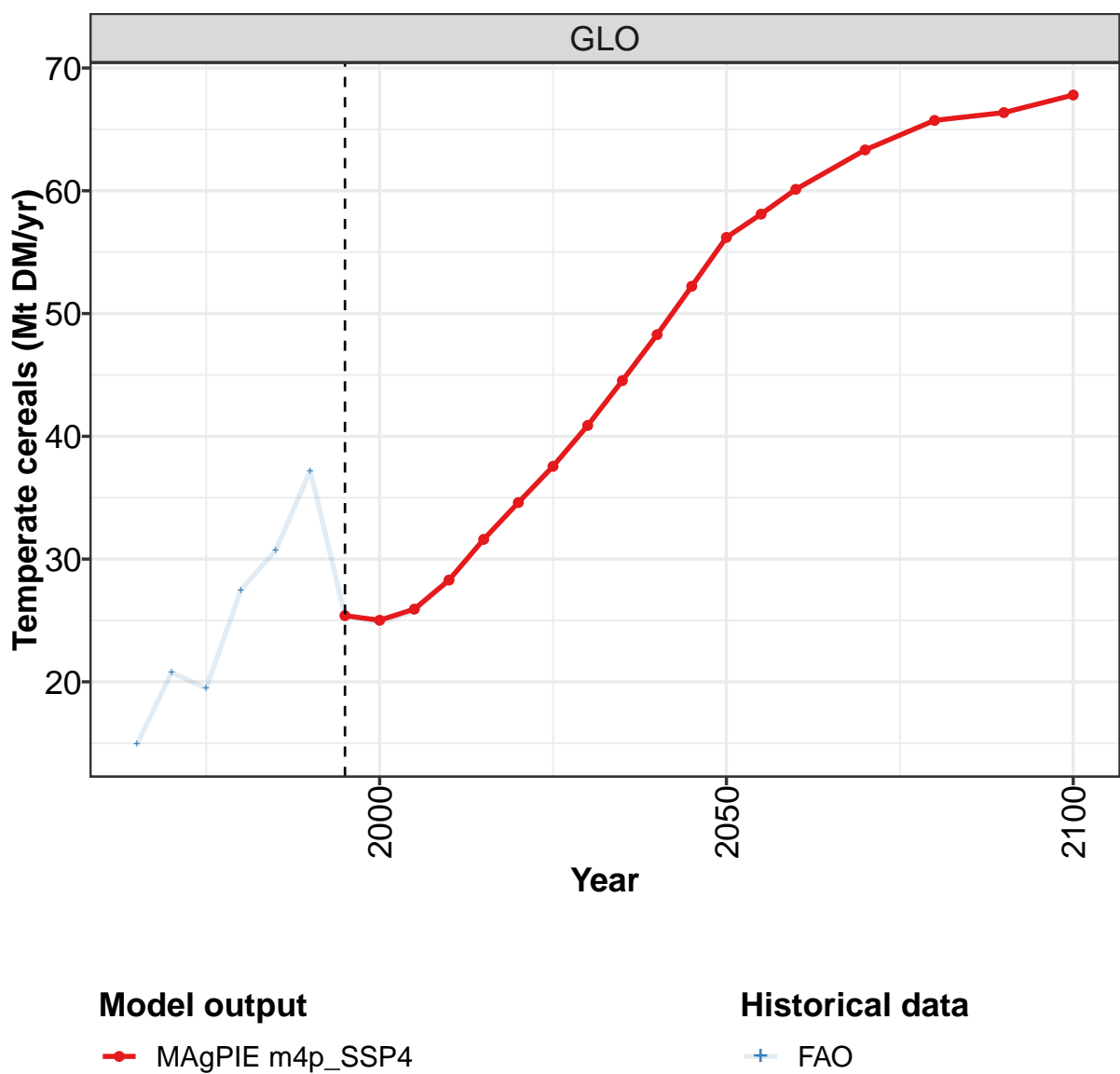
	2050	2055	2060	2070	2080	2090	2100
GLO	44.3	44.9	45.5	46.3	46.4	46.1	45.6
CAZ	0.0	0.0	0.1	0.1	0.1	0.1	0.1
CHA	6.8	6.5	6.2	5.5	4.8	4.1	3.5
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	4.0	4.0	4.0	3.9	3.7	3.5	3.3
JPN	0.2	0.2	0.3	0.3	0.4	0.4	0.4
LAM	4.7	4.8	4.9	5.1	5.1	5.1	5.0
MEA	1.1	1.2	1.2	1.3	1.3	1.4	1.4
NEU	0.0	0.1	0.1	0.1	0.1	0.1	0.1
OAS	18.1	18.2	18.2	18.1	17.7	17.3	16.8
REF	0.6	0.6	0.7	0.8	0.9	0.9	0.9
SSA	5.0	5.5	5.9	6.8	7.7	8.4	9.1
USA	3.7	3.8	4.0	4.3	4.6	4.8	4.9

Table 17: MAgPIE m4p\_SSP4 — 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



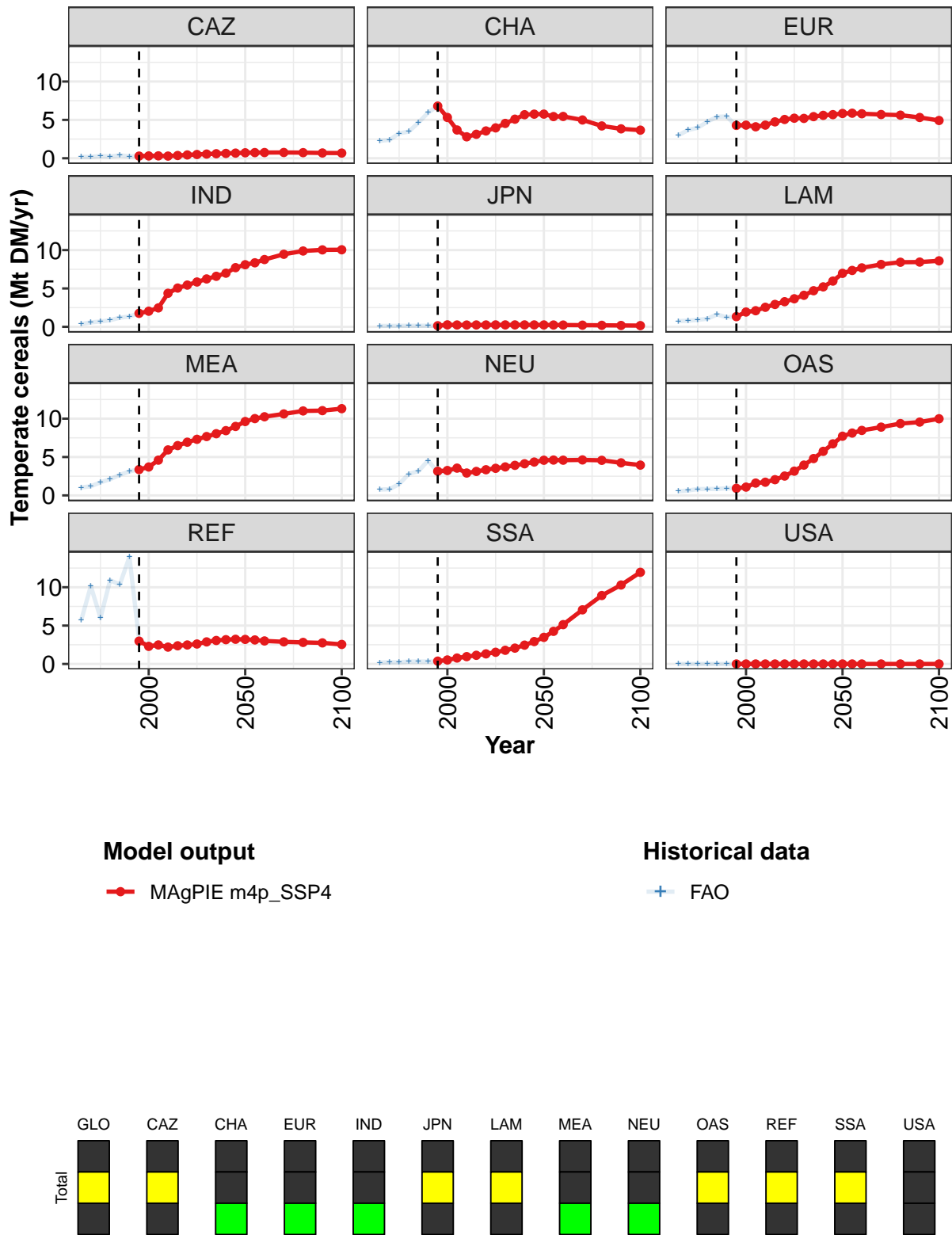


Figure 6: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	25.4	25.0	25.9	28.3	31.6	34.6	37.6	40.9	44.5	48.3	52.2
CAZ	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7
CHA	6.8	5.3	3.7	2.8	3.1	3.6	4.0	4.5	5.1	5.7	5.7
EUR	4.3	4.3	4.1	4.3	4.7	5.1	5.2	5.2	5.4	5.6	5.7
IND	1.8	2.0	2.5	4.4	5.1	5.4	5.8	6.2	6.6	7.0	7.7
JPN	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2
LAM	1.3	1.9	2.1	2.5	2.9	3.3	3.7	4.1	4.7	5.2	6.0
MEA	3.4	3.7	4.6	5.9	6.5	6.9	7.3	7.7	8.0	8.4	9.0
NEU	3.1	3.2	3.6	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3
OAS	0.9	1.1	1.6	1.7	2.0	2.5	3.2	3.9	4.8	5.7	6.7
REF	3.0	2.3	2.5	2.2	2.4	2.5	2.6	2.9	3.1	3.2	3.2
SSA	0.4	0.5	0.8	1.0	1.1	1.3	1.5	1.8	2.1	2.5	2.9
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	56.2	58.1	60.1	63.3	65.7	66.4	67.8
CAZ	0.7	0.7	0.7	0.8	0.7	0.7	0.7
CHA	5.8	5.4	5.5	5.0	4.2	3.8	3.7
EUR	5.8	5.9	5.8	5.7	5.6	5.3	4.9
IND	8.1	8.3	8.8	9.5	9.9	10.0	10.0
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	7.0	7.3	7.7	8.1	8.4	8.4	8.6
MEA	9.6	10.0	10.2	10.6	11.0	11.0	11.3
NEU	4.6	4.6	4.6	4.6	4.6	4.2	3.9
OAS	7.7	8.1	8.5	8.9	9.4	9.6	10.0
REF	3.2	3.1	3.0	2.9	2.8	2.7	2.5
SSA	3.5	4.3	5.1	7.1	8.9	10.3	11.9
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

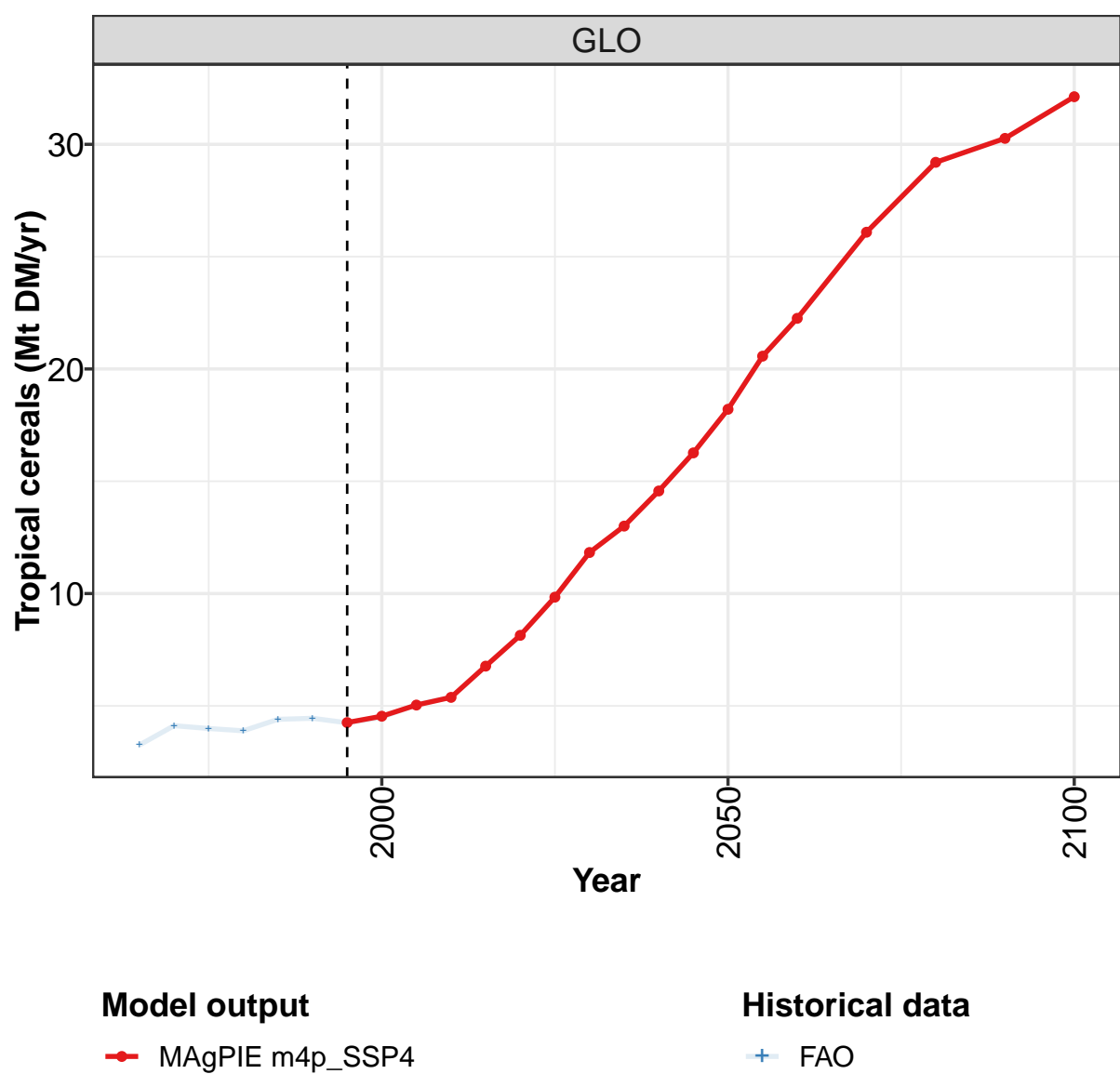
Table 20: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	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



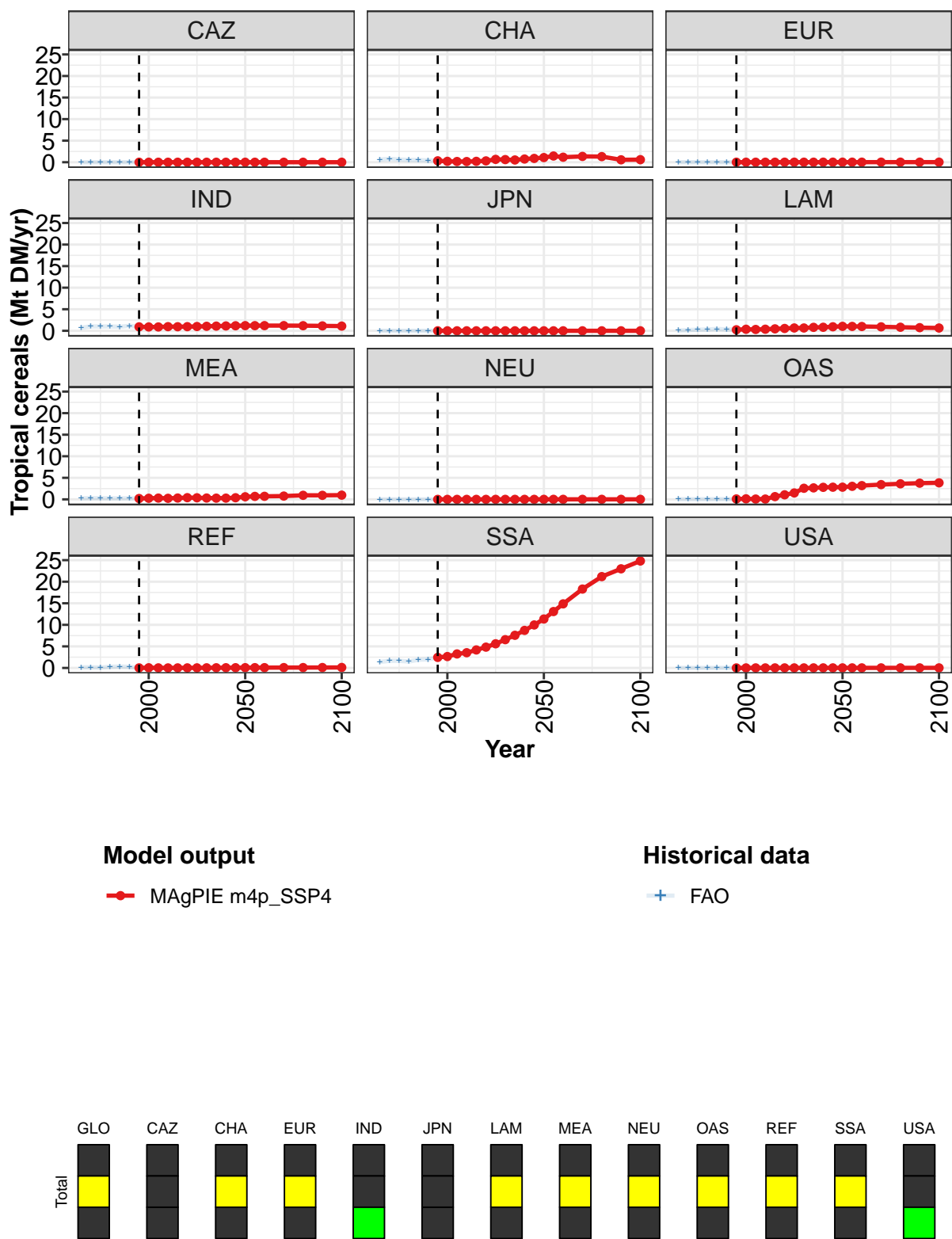


Figure 7: MAGPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.3	4.5	5.0	5.4	6.8	8.1	9.8	11.8	13.0	14.6	16.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.3	0.2	0.2	0.2	0.2	0.3	0.7	0.6	0.5	0.7	0.9
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.9	0.9	0.9	1.0	0.9	1.0	1.0	1.0	1.1	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	0.5	0.5	0.7	0.7	0.8	0.8	0.9
MEA	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	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	0.1	0.1	0.1	0.1	0.6	1.1	1.5	2.6	2.7	2.8	2.8
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
SSA	2.4	2.6	3.3	3.5	4.2	4.8	5.6	6.6	7.6	8.7	10.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 22: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

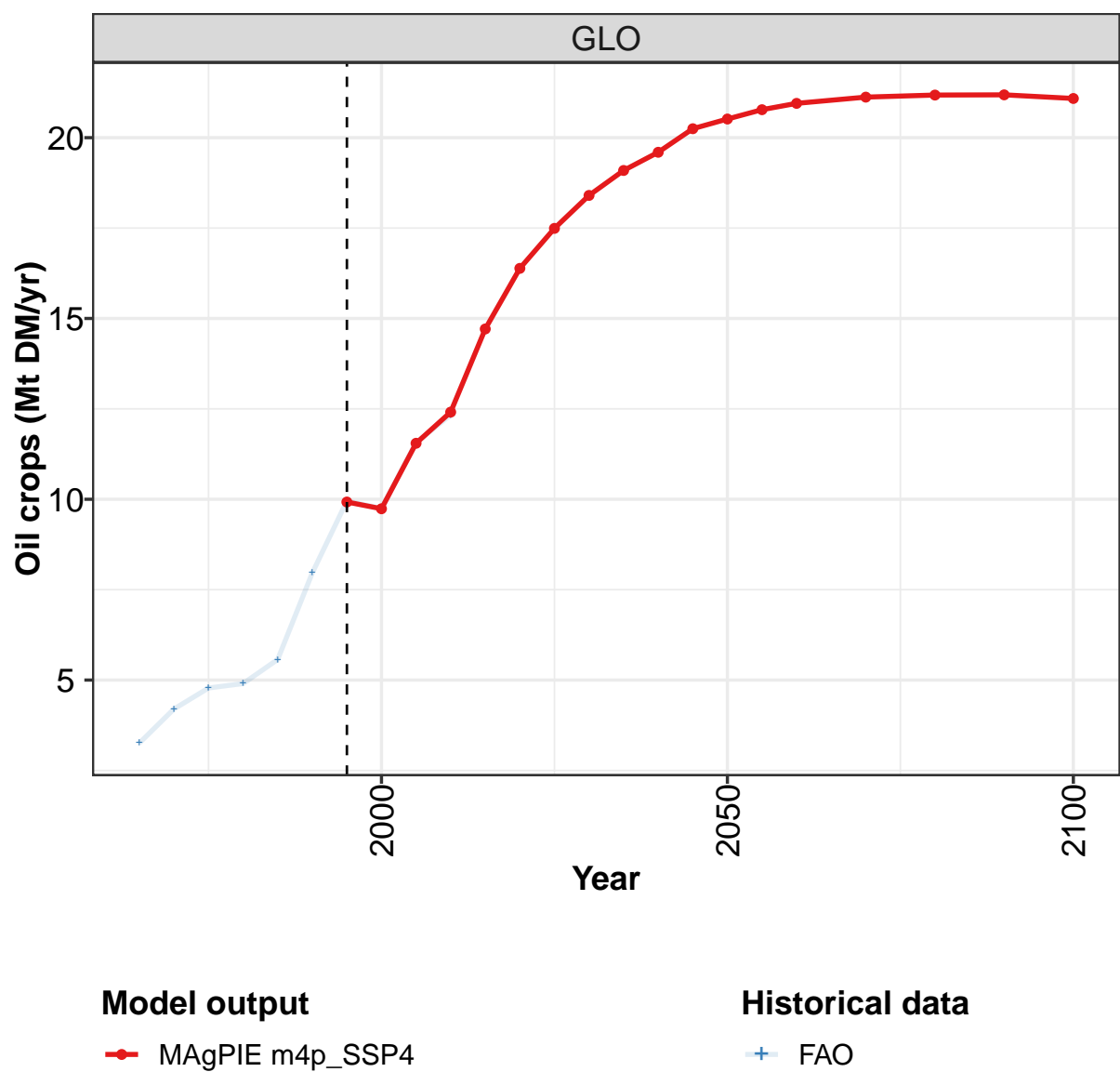
	2050	2055	2060	2070	2080	2090	2100
GLO	18.2	20.6	22.3	26.1	29.2	30.3	32.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.1	1.4	1.2	1.3	1.3	0.6	0.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	1.2	1.2	1.2	1.2	1.2	1.1	1.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.0	1.0	1.0	0.9	0.8	0.7	0.6
MEA	0.6	0.7	0.7	0.8	0.9	0.9	1.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.8	3.0	3.2	3.4	3.6	3.8	3.8
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	11.4	13.1	14.9	18.3	21.2	23.0	24.8
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 23: MAgPIE m4p\_SSP4 — 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



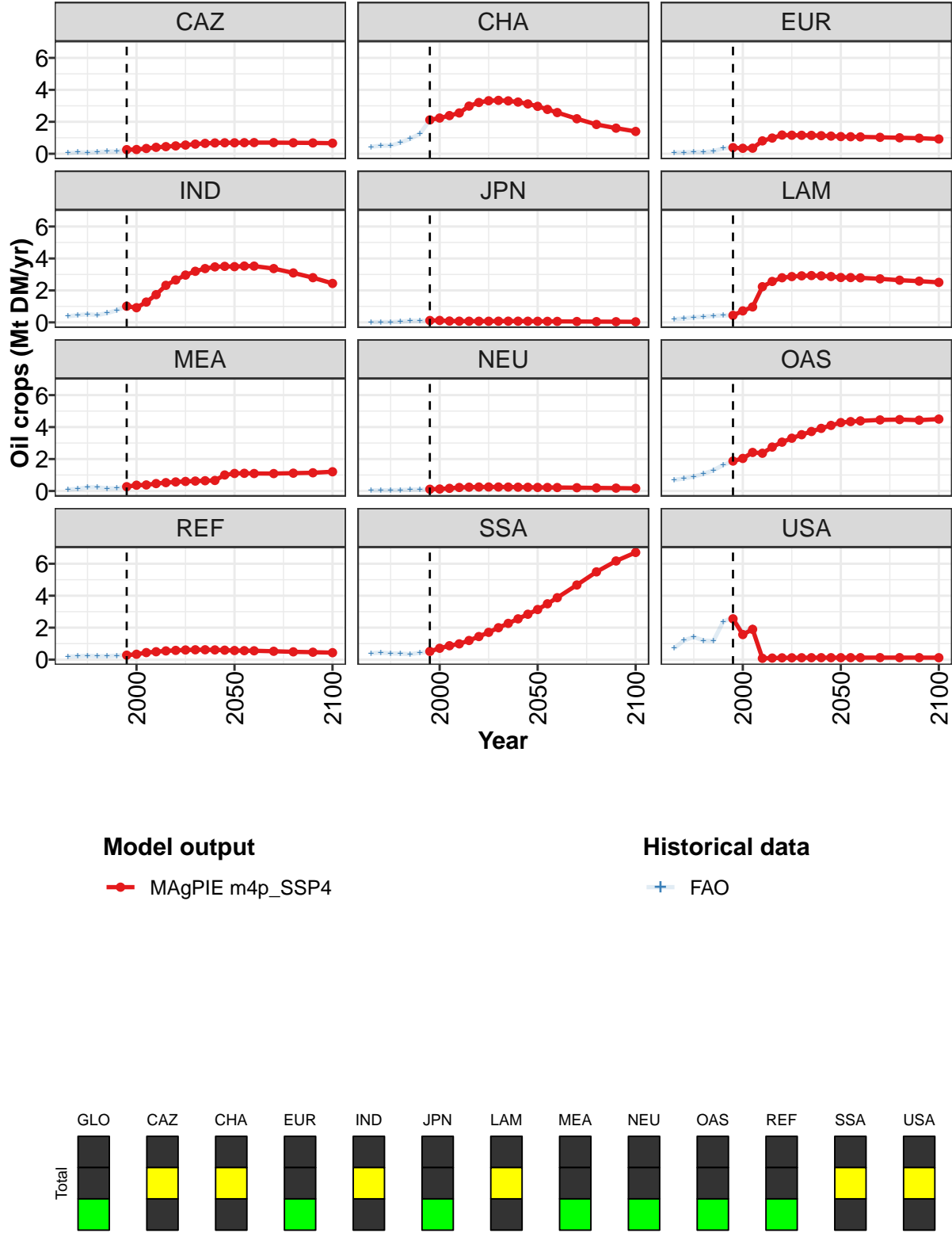


Figure 8: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.9	9.7	11.5	12.4	14.7	16.4	17.5	18.4	19.1	19.6	20.2
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	3.1
EUR	0.4	0.3	0.3	0.8	1.0	1.2	1.2	1.2	1.1	1.1	1.1
IND	1.0	0.9	1.3	1.7	2.3	2.7	3.0	3.2	3.4	3.5	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	2.9	2.9	2.9	2.9	2.9
MEA	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.7	1.0
NEU	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
OAS	1.9	2.0	2.4	2.4	2.7	3.1	3.3	3.5	3.7	3.9	4.1
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	2.6	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\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops (Mt DM/yr)  
[PART 1/2]

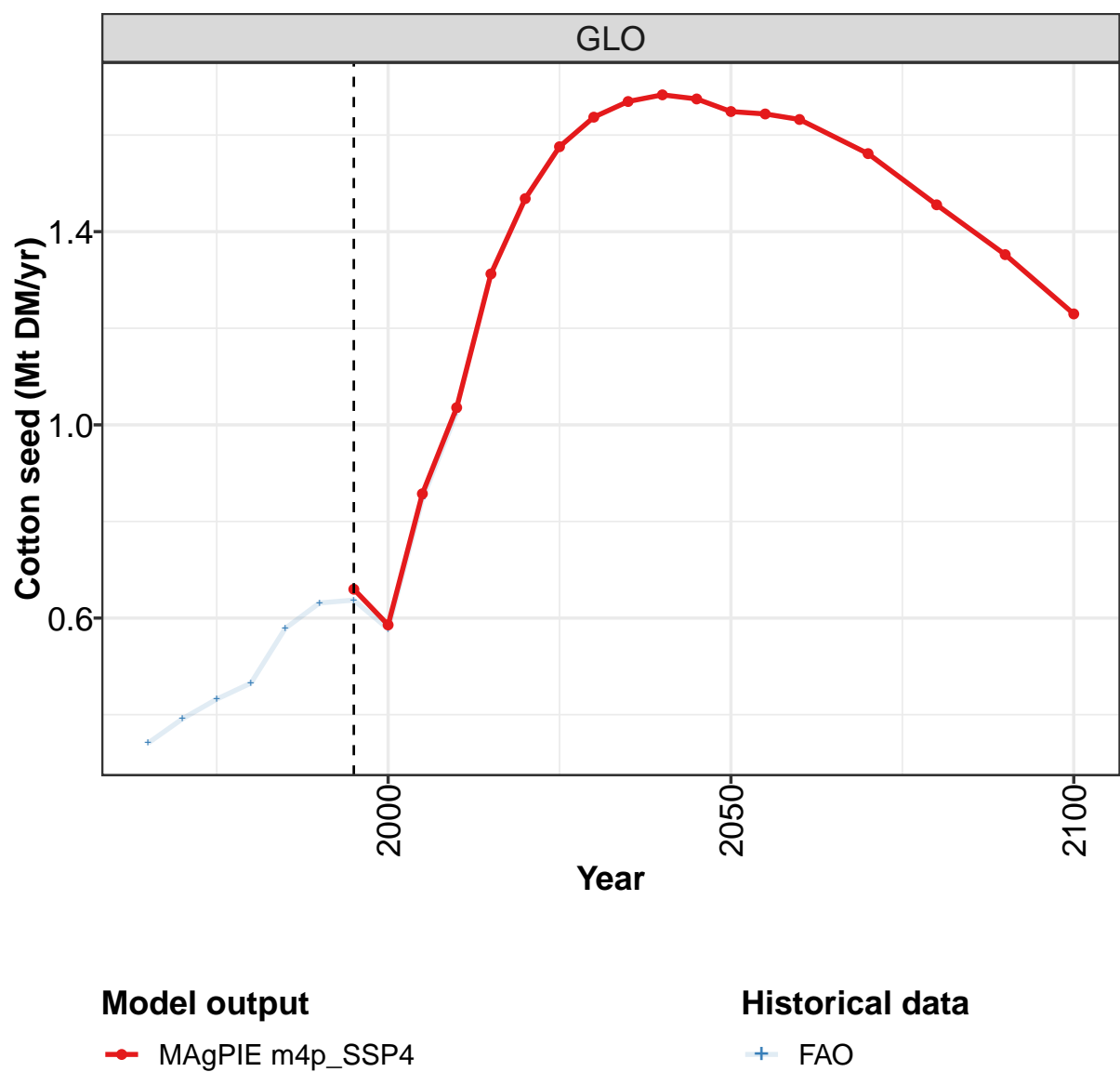
	2050	2055	2060	2070	2080	2090	2100
GLO	20.5	20.8	20.9	21.1	21.2	21.2	21.1
CAZ	0.7	0.7	0.7	0.7	0.7	0.7	0.7
CHA	3.0	2.8	2.6	2.2	1.8	1.6	1.4
EUR	1.1	1.1	1.1	1.0	1.0	1.0	0.9
IND	3.5	3.5	3.5	3.4	3.1	2.8	2.4
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	2.8	2.8	2.8	2.7	2.6	2.6	2.5
MEA	1.1	1.1	1.1	1.1	1.1	1.1	1.2
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	4.3	4.3	4.4	4.4	4.5	4.4	4.5
REF	0.6	0.6	0.6	0.5	0.5	0.5	0.4
SSA	3.1	3.5	3.9	4.7	5.5	6.2	6.7
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 26: MAgPIE m4p\_SSP4 — 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



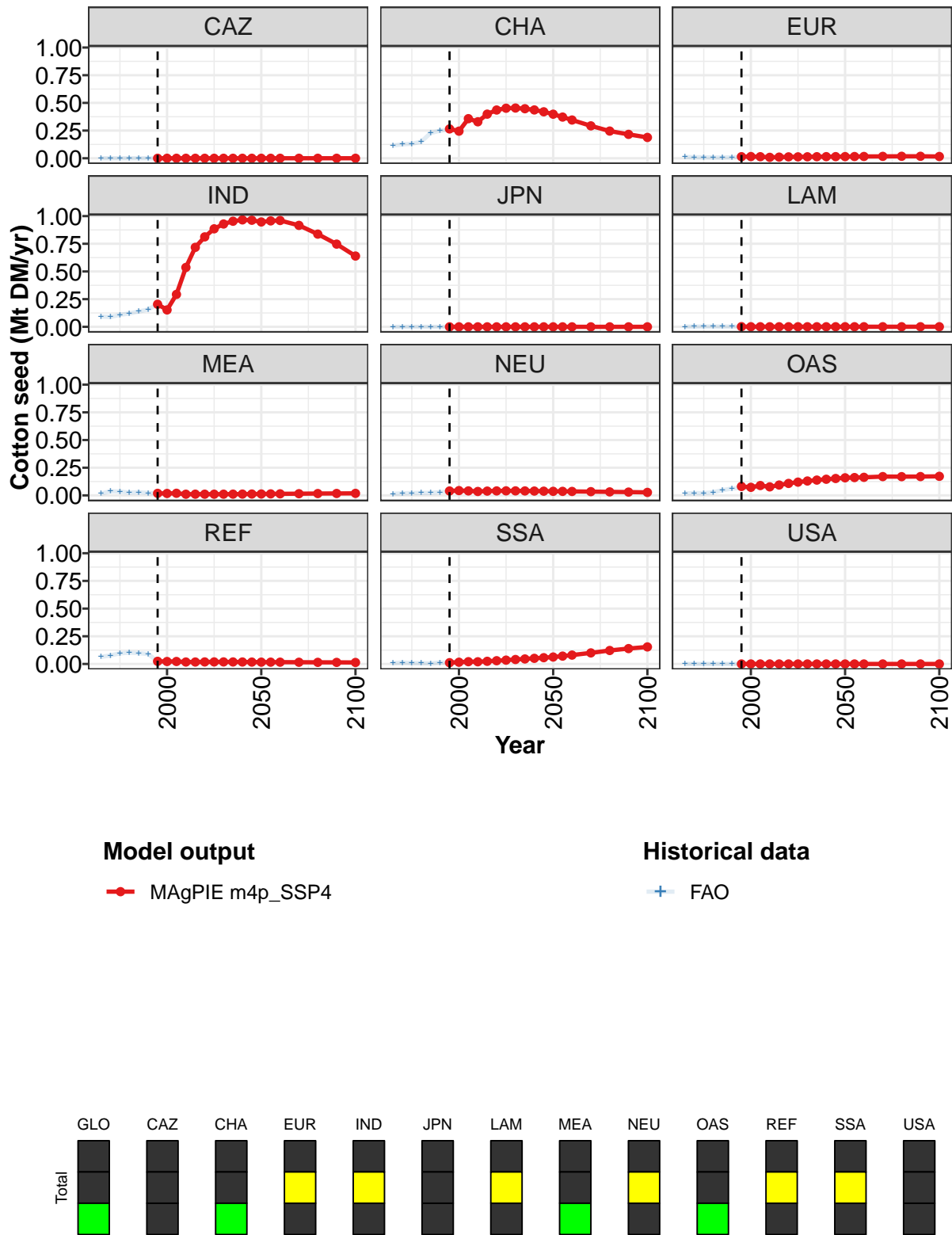


Figure 9: MAGPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Cotton seed (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.66	0.59	0.86	1.04	1.31	1.47	1.58	1.64	1.67	1.68	1.67
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	0.45	0.45	0.45	0.44	0.42
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	0.72	0.81	0.89	0.93	0.95	0.97	0.96
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	0.04	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	0.05	0.06
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

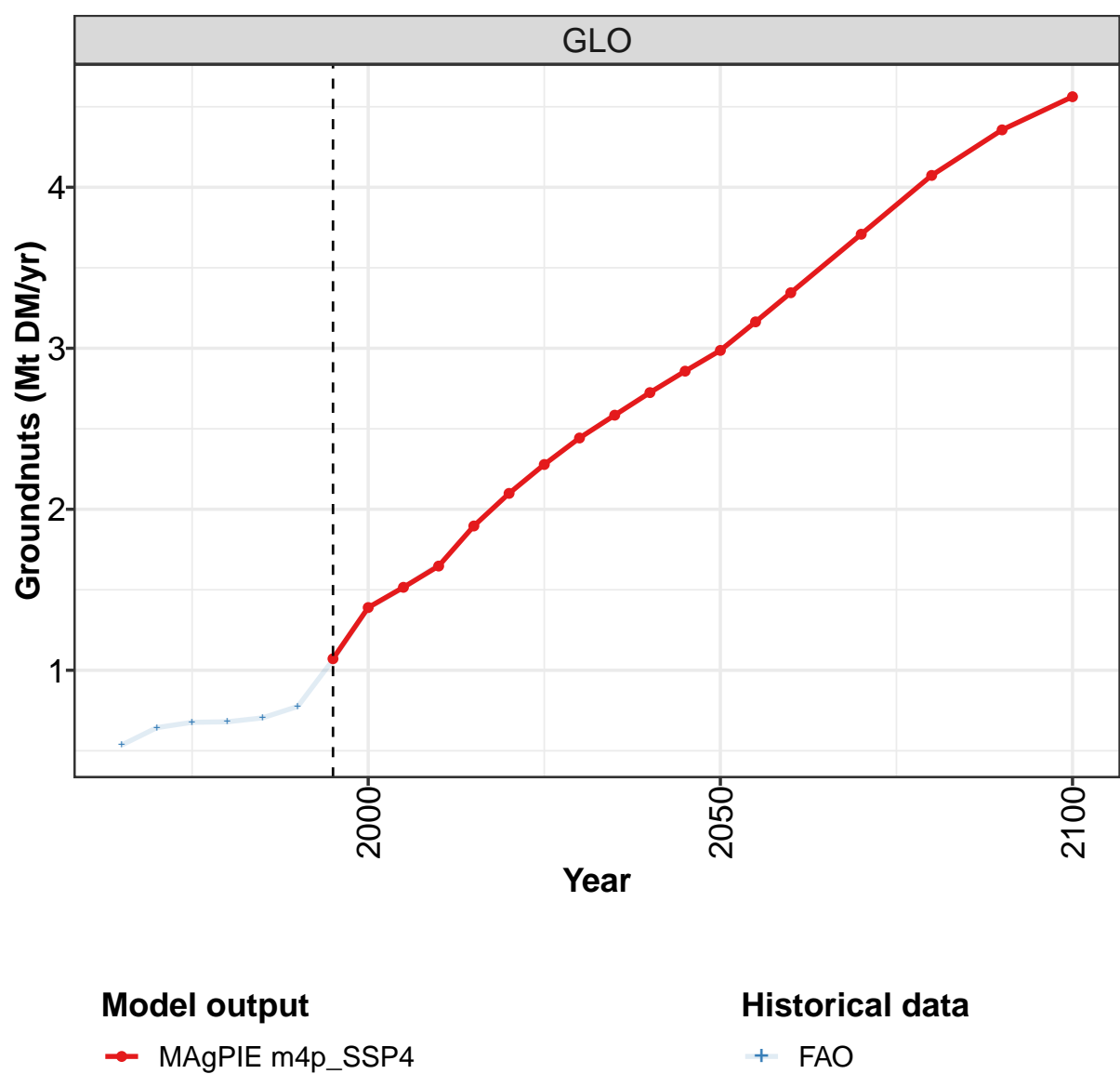
	2050	2055	2060	2070	2080	2090	2100
GLO	1.65	1.64	1.63	1.56	1.46	1.35	1.23
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.40	0.37	0.35	0.29	0.25	0.22	0.19
EUR	0.02	0.02	0.02	0.02	0.02	0.02	0.02
IND	0.95	0.96	0.96	0.92	0.84	0.75	0.64
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.01	0.01	0.01	0.02	0.02	0.02	0.02
NEU	0.04	0.04	0.04	0.03	0.03	0.03	0.03
OAS	0.16	0.16	0.16	0.17	0.17	0.17	0.17
REF	0.02	0.02	0.02	0.02	0.01	0.01	0.01
SSA	0.06	0.07	0.08	0.10	0.12	0.14	0.15
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 29: MAgPIE m4p\_SSP4 — 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



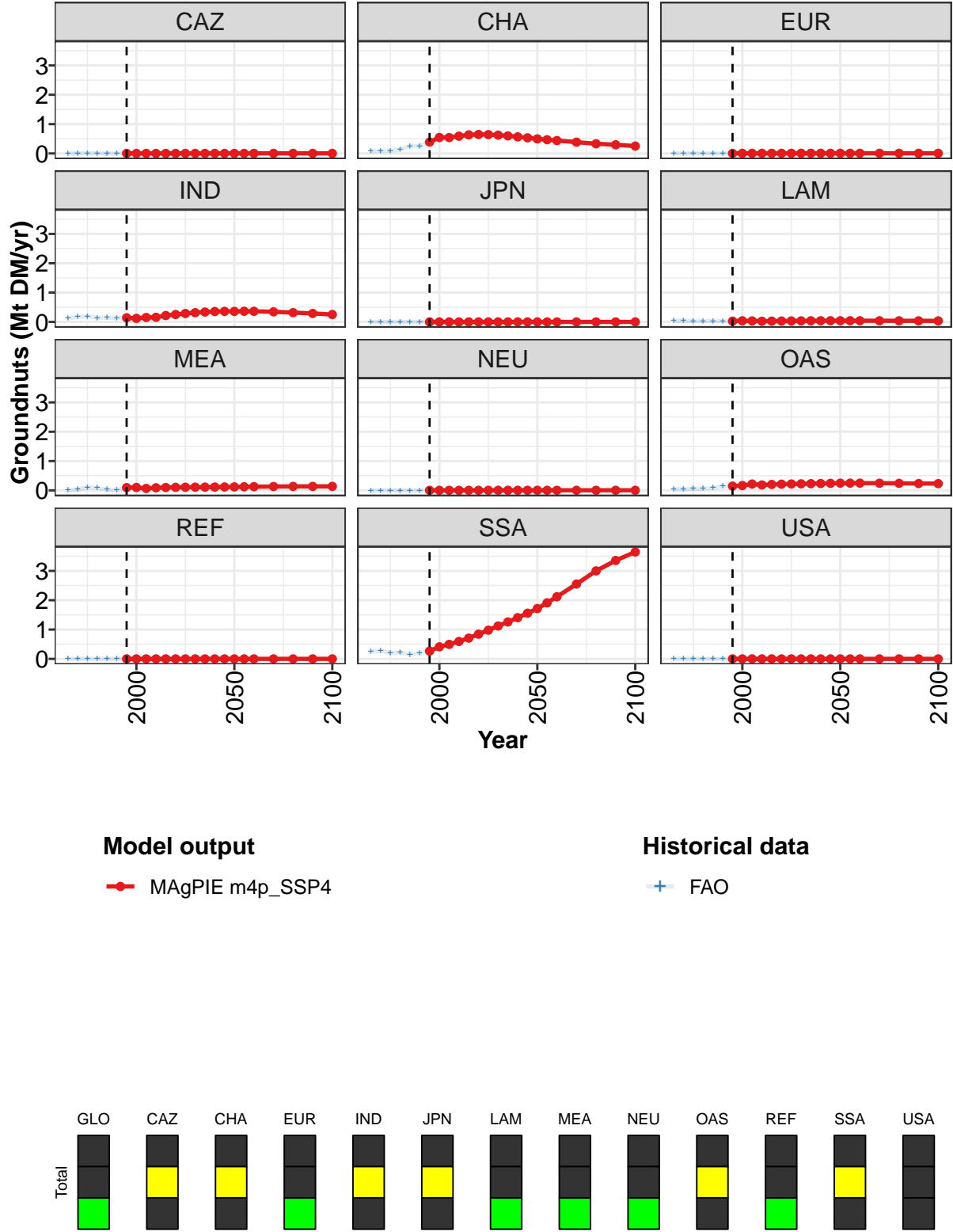


Figure 10: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.07	1.39	1.52	1.65	1.90	2.10	2.28	2.44	2.58	2.72	2.86
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	0.60	0.57	0.53
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
IND	0.14	0.12	0.15	0.16	0.22	0.25	0.29	0.32	0.34	0.35	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	0.04	0.04	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	0.12
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.15	0.17	0.22	0.19	0.20	0.21	0.22	0.22	0.23	0.23	0.24
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	0.71	0.84	0.98	1.12	1.26	1.41	1.56
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

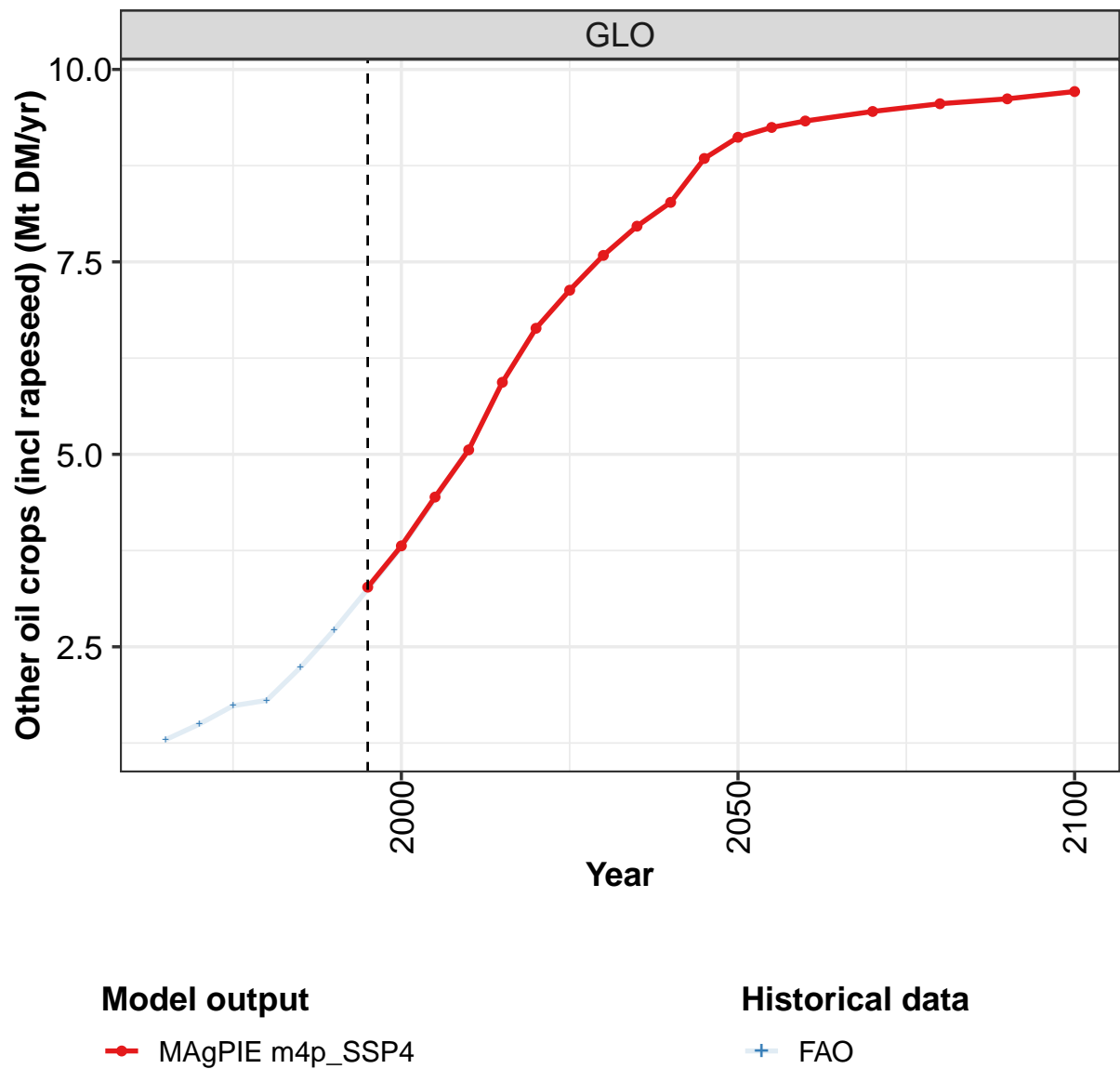
	2050	2055	2060	2070	2080	2090	2100
GLO	2.99	3.16	3.34	3.71	4.07	4.36	4.56
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.50	0.47	0.44	0.38	0.33	0.30	0.25
EUR	0.01	0.01	0.01	0.01	0.01	0.00	0.00
IND	0.36	0.36	0.36	0.34	0.32	0.29	0.25
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MEA	0.12	0.12	0.13	0.13	0.14	0.14	0.14
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.25	0.25	0.25	0.24	0.24	0.23	0.23
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.72	1.91	2.12	2.55	3.00	3.35	3.64
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 32: MAgPIE m4p\_SSP4 — 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)



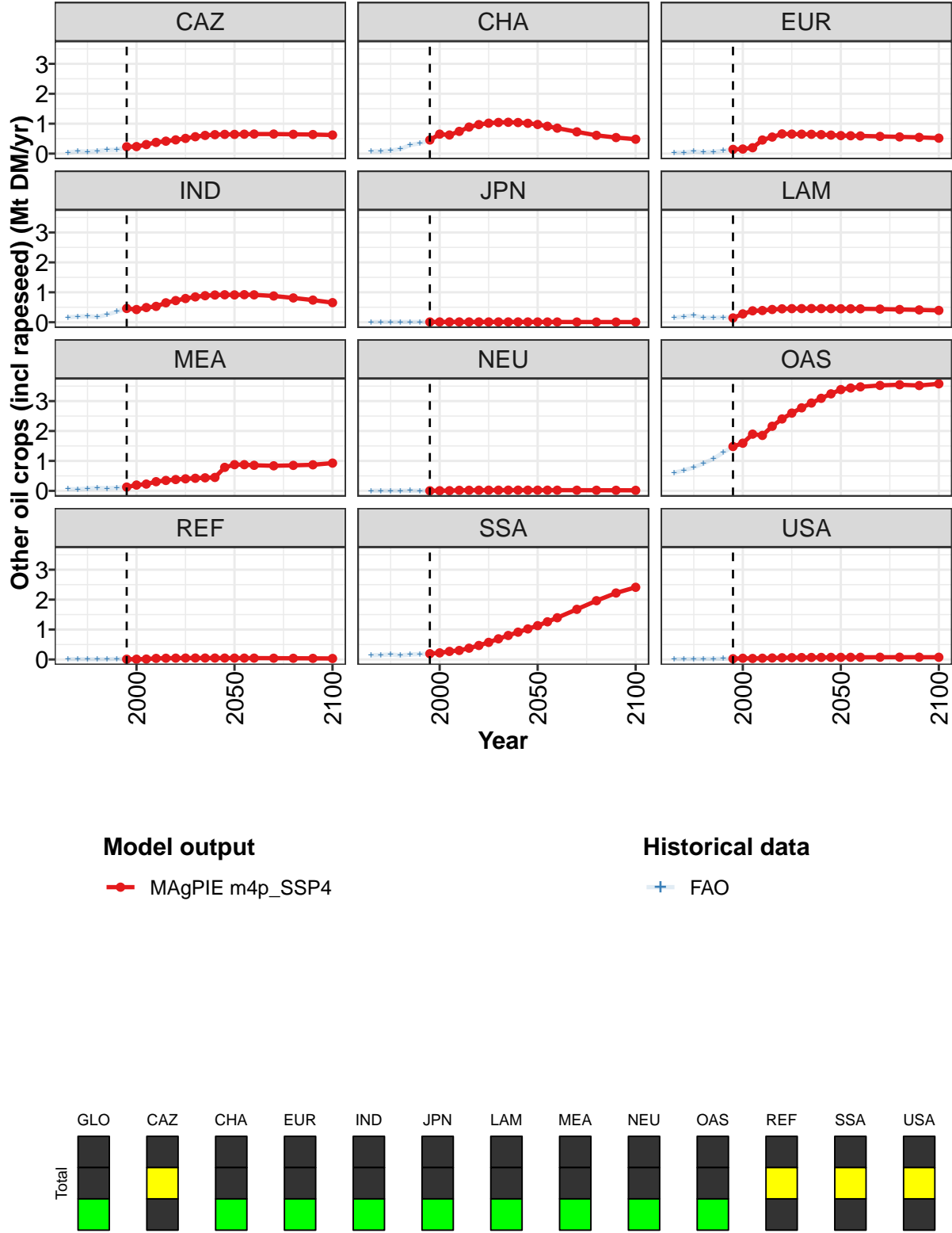


Figure 11: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.27	3.81	4.45	5.06	5.94	6.64	7.13	7.58	7.96	8.27	8.84
CAZ	0.23	0.23	0.30	0.38	0.42	0.46	0.51	0.56	0.61	0.63	0.64
CHA	0.45	0.65	0.62	0.74	0.89	0.97	1.02	1.04	1.05	1.04	1.01
EUR	0.14	0.15	0.20	0.45	0.55	0.66	0.65	0.65	0.65	0.63	0.62
IND	0.46	0.42	0.49	0.53	0.65	0.72	0.79	0.85	0.89	0.91	0.92
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	0.45	0.45	0.46	0.46	0.45
MEA	0.13	0.19	0.23	0.31	0.35	0.38	0.40	0.42	0.44	0.45	0.78
NEU	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	1.48	1.59	1.89	1.85	2.16	2.40	2.60	2.77	2.93	3.09	3.24
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	0.47	0.57	0.69	0.80	0.91	1.02
USA	0.02	0.04	0.03	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07

Table 34: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

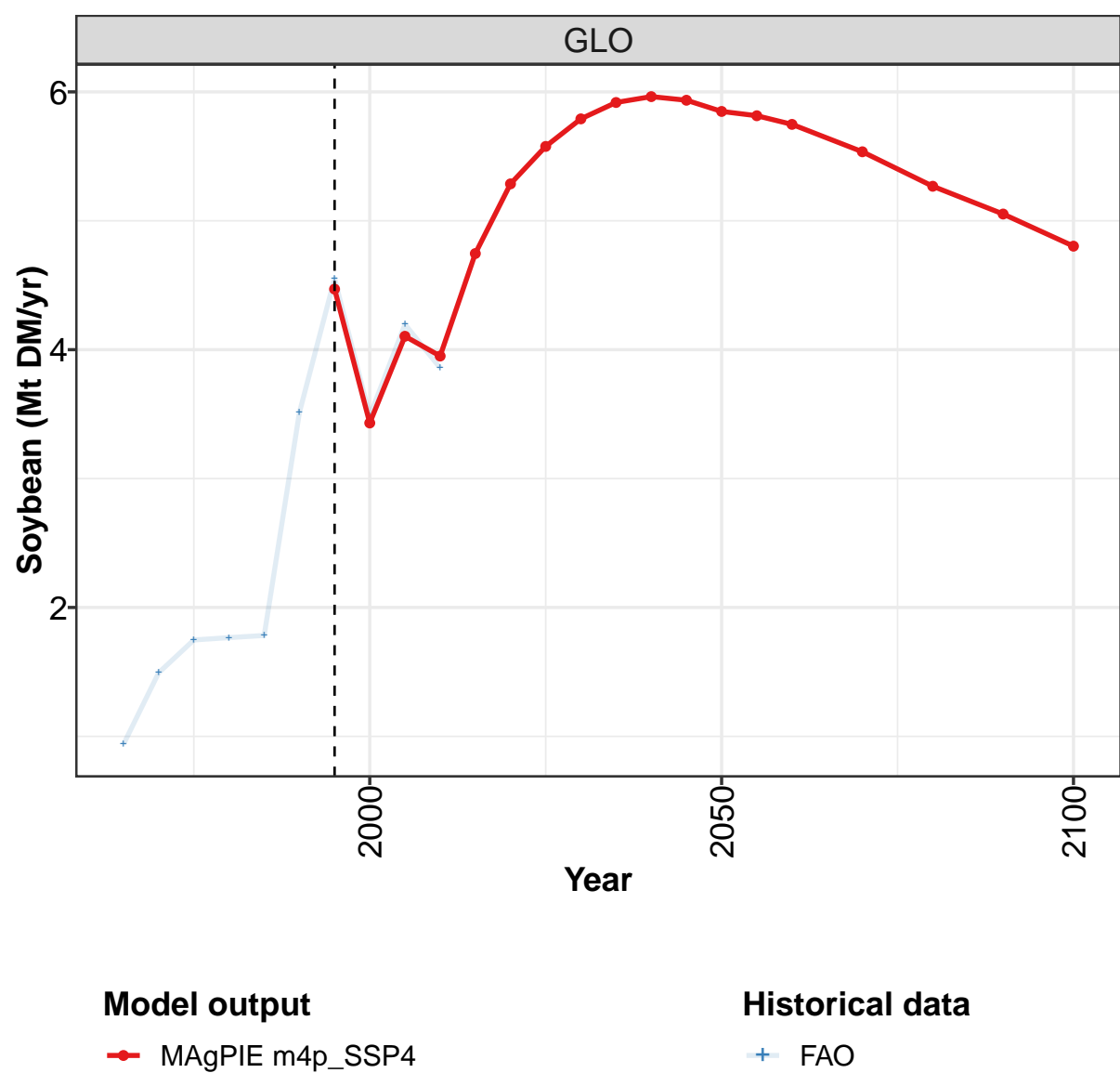
	2050	2055	2060	2070	2080	2090	2100
GLO	9.12	9.25	9.33	9.45	9.55	9.62	9.71
CAZ	0.64	0.65	0.65	0.65	0.64	0.64	0.62
CHA	0.97	0.91	0.85	0.73	0.61	0.54	0.48
EUR	0.60	0.60	0.59	0.57	0.56	0.54	0.52
IND	0.91	0.92	0.92	0.88	0.81	0.74	0.65
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.00
LAM	0.45	0.45	0.45	0.44	0.43	0.41	0.39
MEA	0.88	0.87	0.85	0.84	0.85	0.87	0.93
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	3.38	3.44	3.48	3.52	3.55	3.52	3.58
REF	0.05	0.04	0.04	0.04	0.04	0.04	0.03
SSA	1.13	1.26	1.39	1.68	1.96	2.22	2.41
USA	0.07	0.07	0.07	0.07	0.08	0.08	0.07

Table 35: MAgPIE m4p\_SSP4 — 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





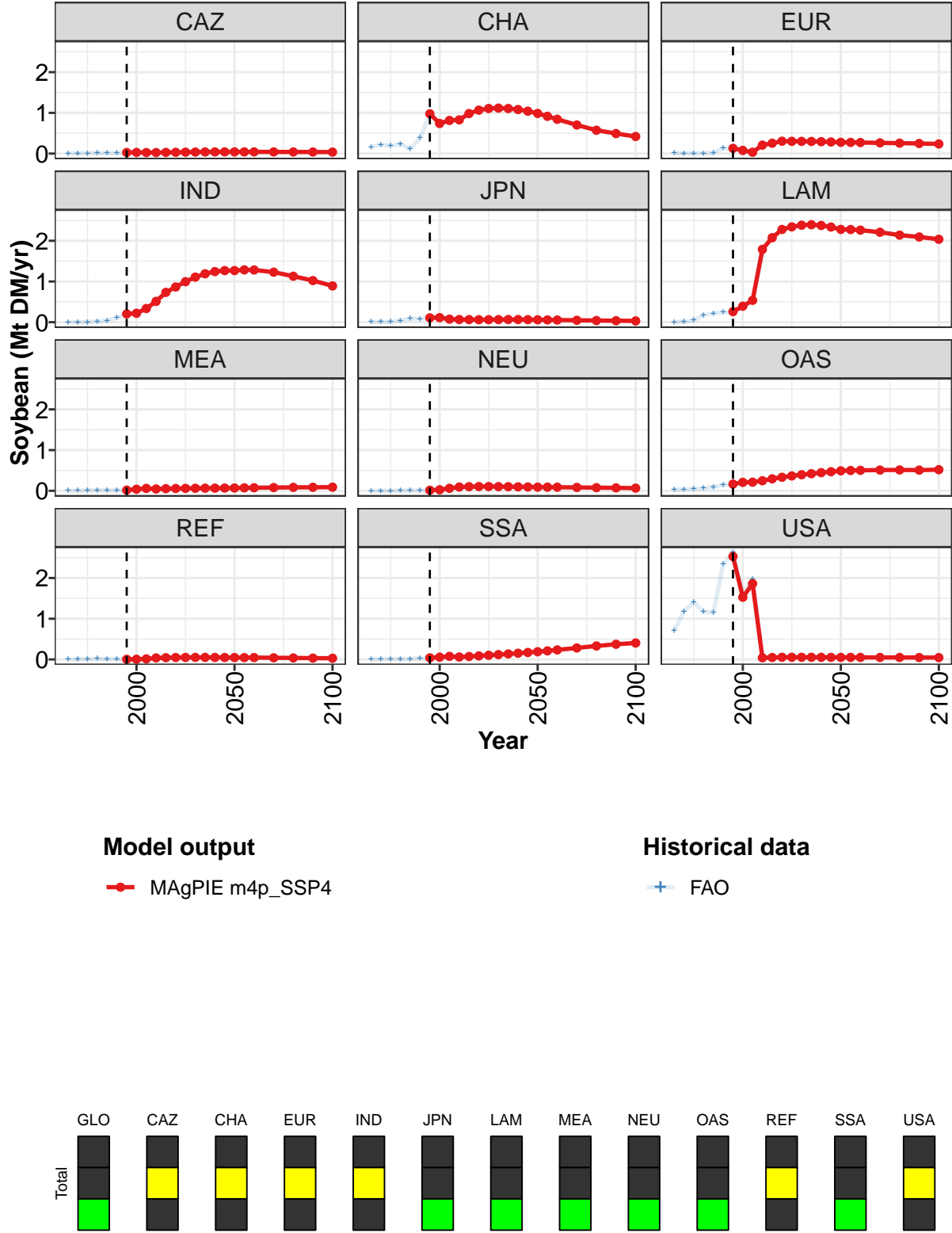


Figure 12: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.47	3.43	4.10	3.95	4.75	5.29	5.58	5.79	5.92	5.96	5.94
CAZ	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
CHA	0.98	0.74	0.81	0.83	0.98	1.07	1.11	1.12	1.11	1.08	1.04
EUR	0.13	0.08	0.03	0.21	0.25	0.30	0.30	0.30	0.30	0.29	0.29
IND	0.20	0.22	0.34	0.51	0.73	0.86	0.99	1.11	1.19	1.24	1.27
JPN	0.11	0.11	0.07	0.07	0.06	0.06	0.06	0.06	0.07	0.06	0.06
LAM	0.26	0.39	0.54	1.79	2.07	2.28	2.34	2.38	2.39	2.38	2.34
MEA	0.02	0.04	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07
NEU	0.01	0.03	0.06	0.09	0.10	0.10	0.11	0.10	0.10	0.10	0.09
OAS	0.17	0.21	0.21	0.25	0.29	0.33	0.37	0.40	0.42	0.45	0.47
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	0.09	0.10	0.12	0.13	0.15	0.17
USA	2.53	1.53	1.86	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Table 37: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

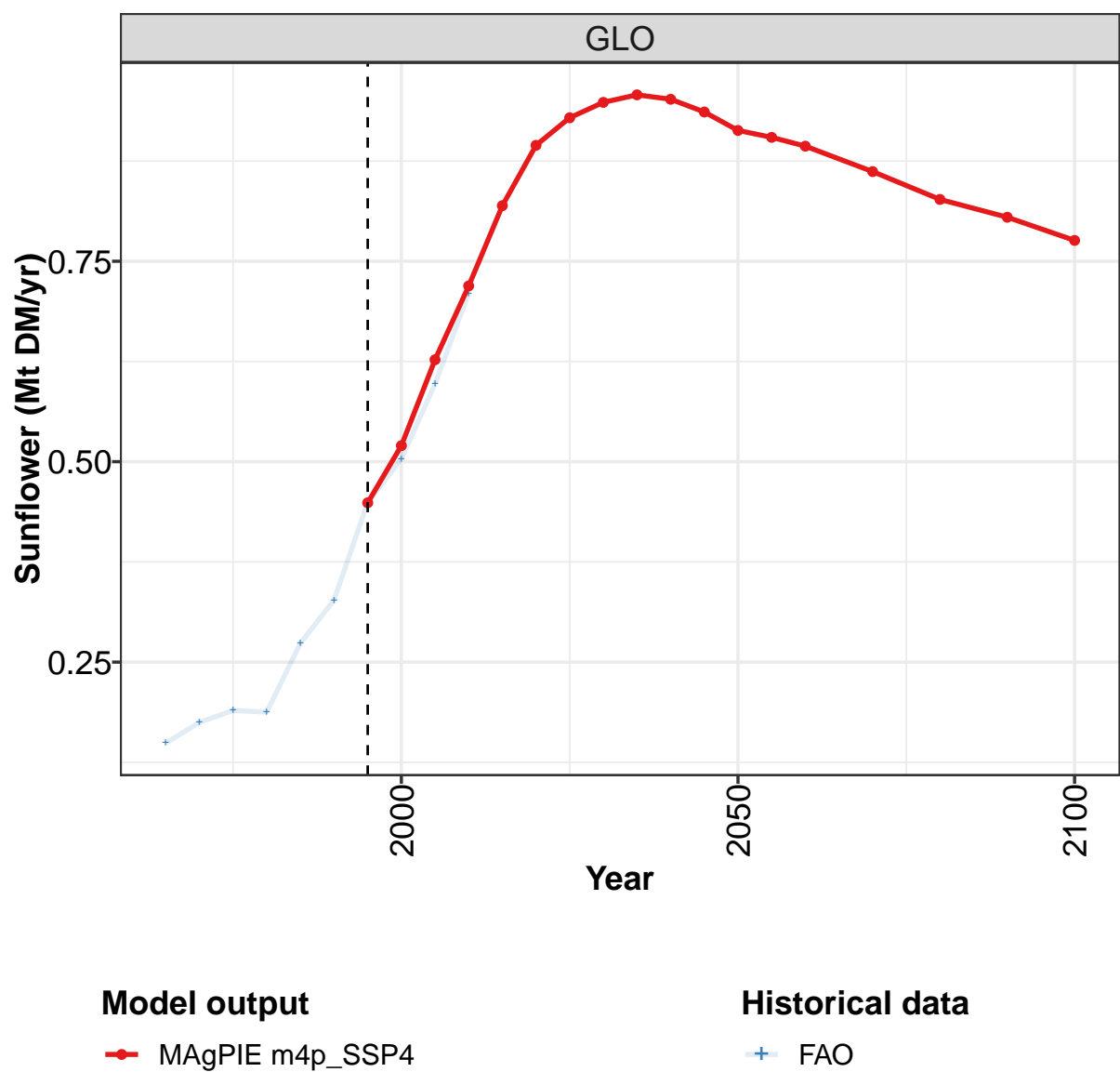
	2050	2055	2060	2070	2080	2090	2100
GLO	5.85	5.82	5.75	5.54	5.27	5.05	4.80
CAZ	0.04	0.04	0.04	0.04	0.04	0.04	0.04
CHA	0.99	0.92	0.84	0.70	0.57	0.49	0.42
EUR	0.28	0.27	0.27	0.26	0.26	0.25	0.24
IND	1.27	1.29	1.28	1.23	1.13	1.02	0.89
JPN	0.06	0.06	0.05	0.05	0.04	0.04	0.03
LAM	2.28	2.28	2.26	2.21	2.14	2.09	2.04
MEA	0.07	0.07	0.08	0.08	0.08	0.09	0.09
NEU	0.09	0.09	0.09	0.08	0.08	0.07	0.07
OAS	0.49	0.50	0.50	0.51	0.51	0.51	0.52
REF	0.05	0.04	0.05	0.04	0.04	0.03	0.03
SSA	0.19	0.21	0.23	0.28	0.33	0.37	0.40
USA	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Table 38: MAgPIE m4p\_SSP4 — 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



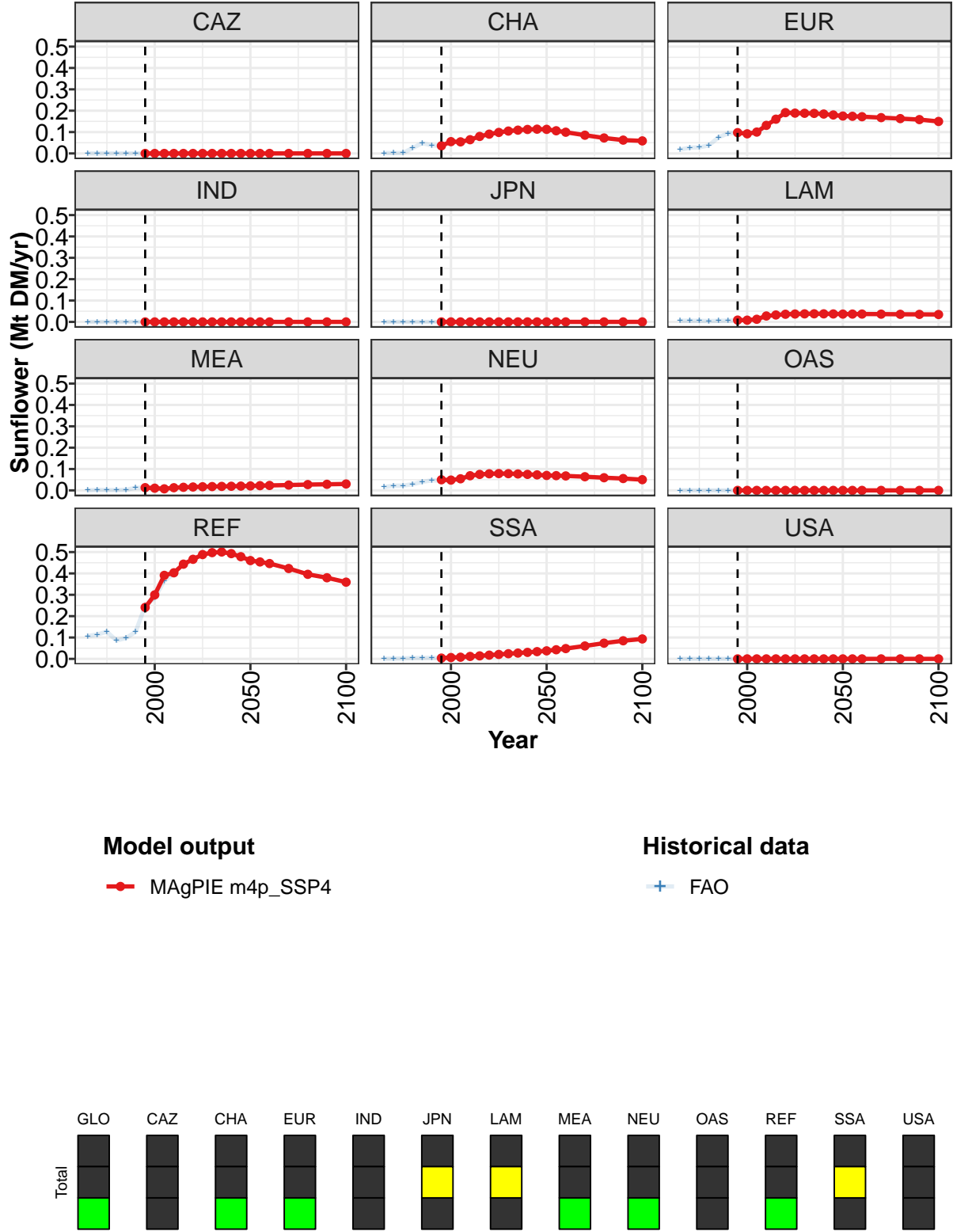


Figure 13: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.449	0.520	0.627	0.719	0.819	0.895	0.929	0.948	0.958	0.952	0.936
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	0.090	0.098	0.105	0.109	0.112	0.114
EUR	0.097	0.092	0.100	0.131	0.160	0.191	0.189	0.188	0.187	0.184	0.180
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	0.037	0.038	0.038	0.038	0.037
MEA	0.013	0.010	0.007	0.013	0.015	0.016	0.017	0.018	0.019	0.019	0.020
NEU	0.050	0.048	0.054	0.069	0.075	0.078	0.079	0.078	0.077	0.075	0.073
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	0.443	0.466	0.488	0.497	0.500	0.493	0.478
SSA	0.004	0.006	0.008	0.012	0.014	0.018	0.021	0.024	0.027	0.030	0.034
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

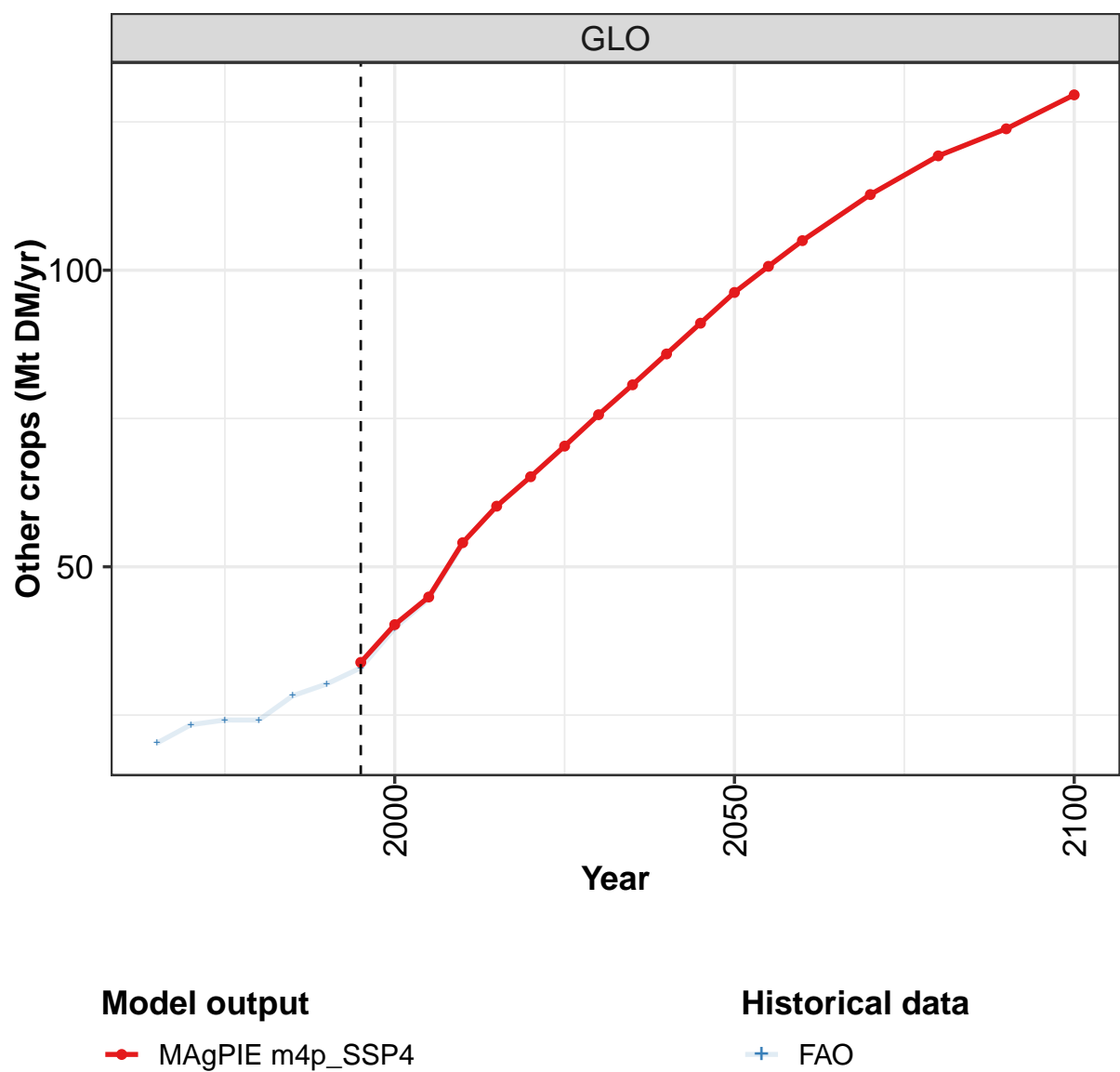
	2050	2055	2060	2070	2080	2090	2100
GLO	0.913	0.905	0.894	0.862	0.827	0.805	0.776
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.113	0.106	0.099	0.085	0.072	0.062	0.059
EUR	0.175	0.174	0.172	0.168	0.163	0.158	0.150
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.037	0.037	0.037	0.036	0.036	0.035	0.035
MEA	0.021	0.022	0.023	0.025	0.027	0.029	0.030
NEU	0.070	0.069	0.068	0.064	0.059	0.056	0.050
OAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
REF	0.460	0.454	0.446	0.423	0.396	0.380	0.359
SSA	0.038	0.043	0.048	0.060	0.074	0.085	0.093
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 41: MAgPIE m4p\_SSP4 — 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



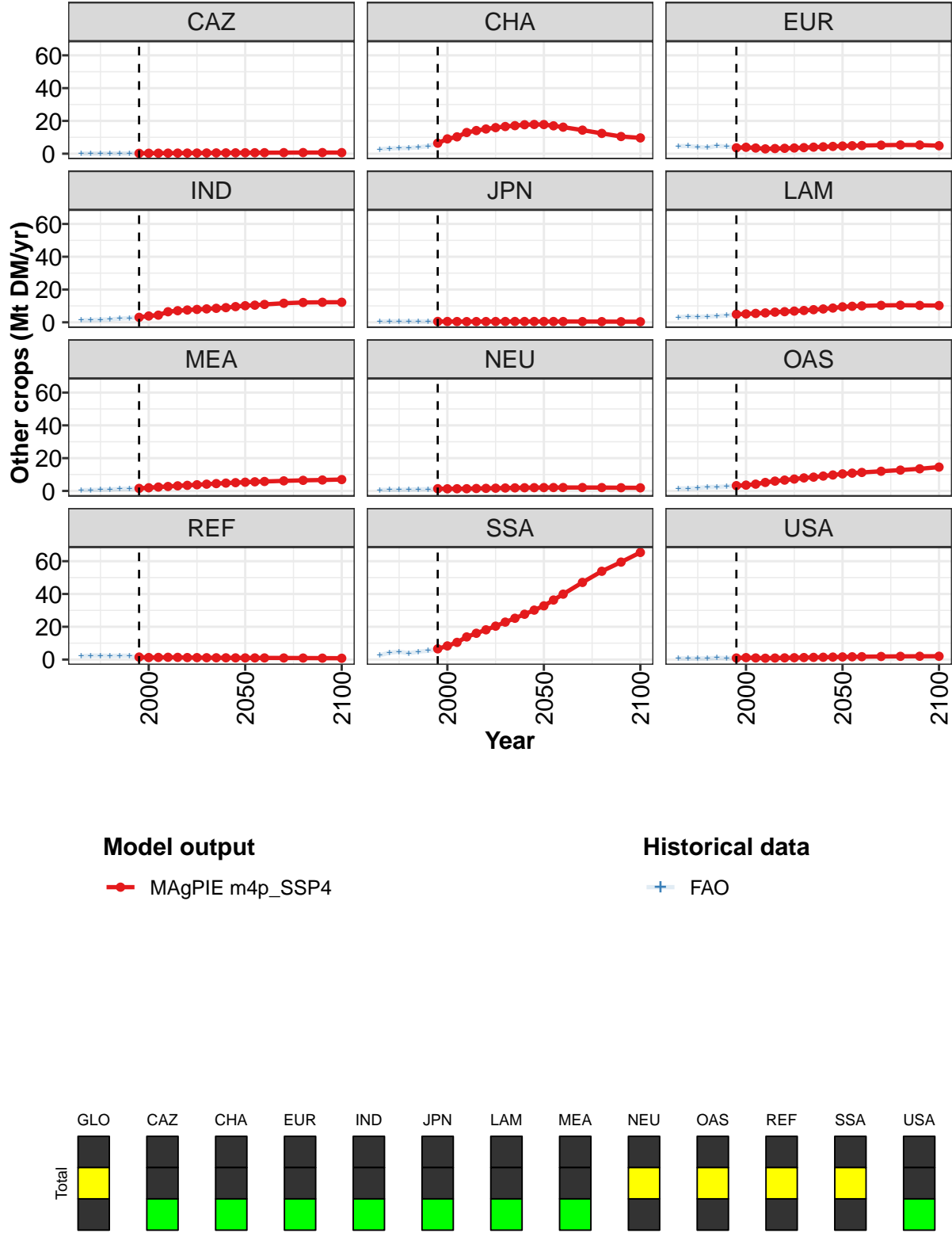


Figure 14: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34	40	45	54	60	65	70	76	81	86	91
CAZ	0	0	0	0	0	0	0	0	0	1	1
CHA	6	9	10	13	14	15	16	17	17	18	18
EUR	4	4	3	3	3	3	3	4	4	4	4
IND	3	4	4	6	7	8	8	8	9	9	10
JPN	1	1	0	0	0	0	0	0	0	0	0
LAM	5	5	5	6	6	6	7	7	8	8	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	7	7	8	8	9	10
REF	2	1	1	1	1	1	1	1	1	1	1
SSA	7	8	10	14	16	18	20	23	25	28	30
USA	1	1	1	1	1	1	1	1	1	1	2

Table 43: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops (Mt DM/yr)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	96	101	105	113	119	124	130
CAZ	1	1	1	1	1	1	1
CHA	18	17	16	14	12	10	10
EUR	5	5	5	5	5	5	5
IND	10	10	11	12	12	12	12
JPN	0	0	0	0	0	0	0
LAM	9	10	10	10	10	10	10
MEA	5	6	6	6	6	7	7
NEU	2	2	2	2	2	2	2
OAS	10	11	11	12	13	14	15
REF	1	1	1	1	1	1	1
SSA	33	36	40	47	54	59	65
USA	2	2	2	2	2	2	2

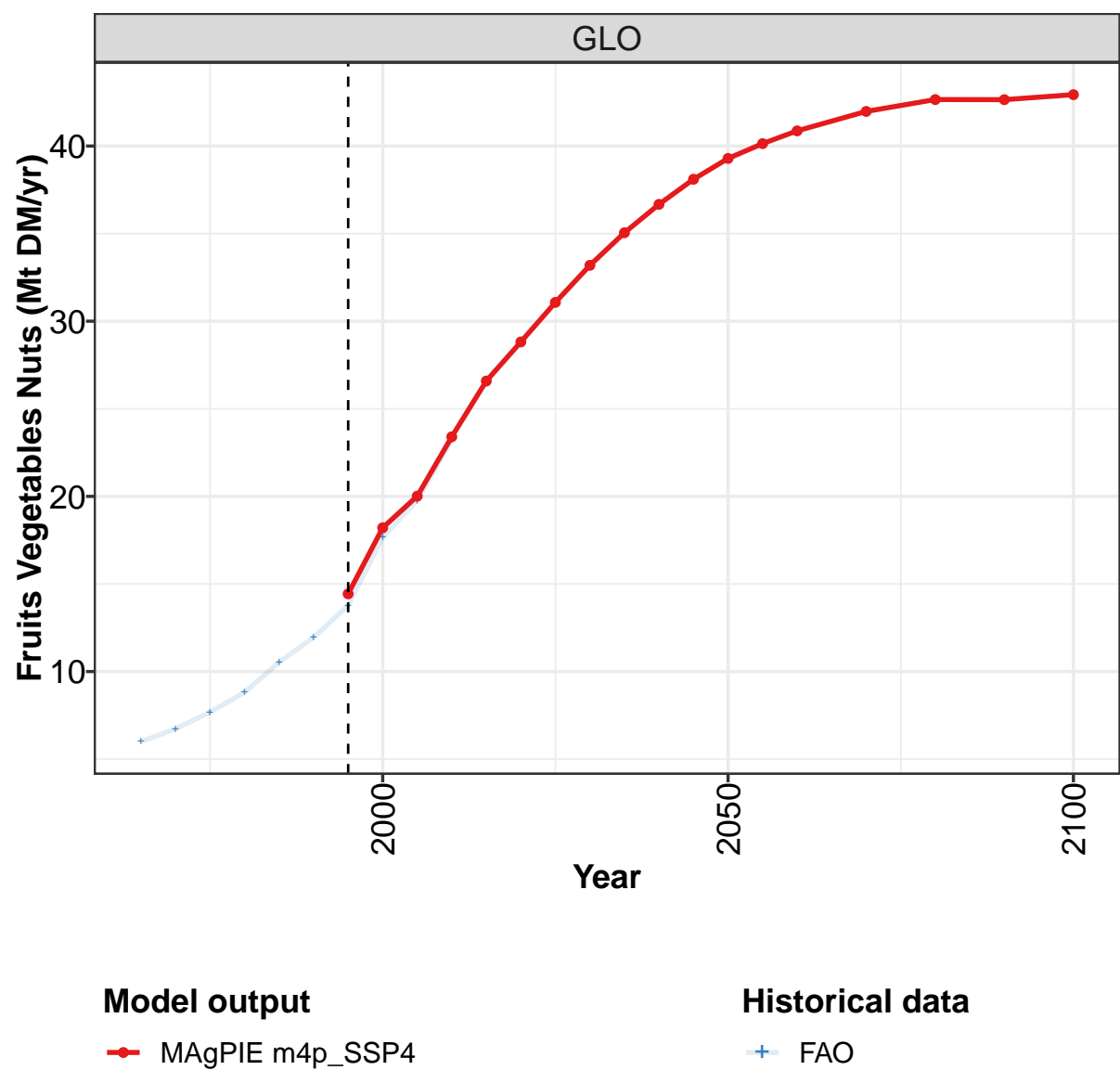
Table 44: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops (Mt DM/yr)  
[PART 2/2]

	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



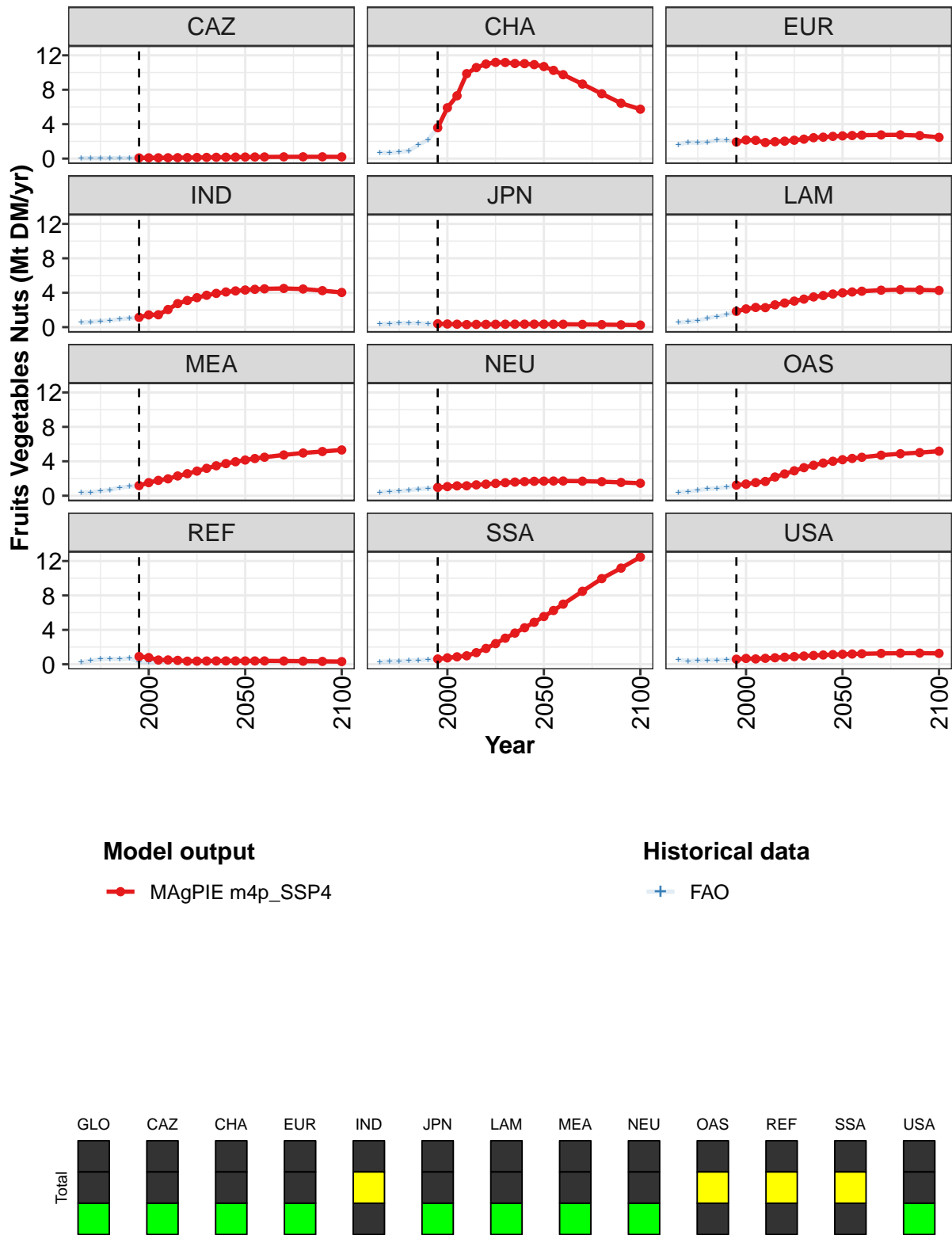


Figure 15: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.4	18.2	20.0	23.4	26.6	28.8	31.1	33.2	35.1	36.7	38.1
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
CHA	3.6	5.9	7.3	9.9	10.6	11.0	11.2	11.2	11.1	11.0	10.9
EUR	1.9	2.2	2.1	1.9	2.0	2.0	2.1	2.3	2.4	2.5	2.6
IND	1.1	1.4	1.4	2.0	2.7	3.1	3.4	3.7	3.9	4.1	4.2
JPN	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	1.8	2.1	2.3	2.3	2.6	2.8	3.0	3.3	3.5	3.7	3.9
MEA	1.2	1.5	1.8	2.0	2.3	2.6	2.9	3.2	3.5	3.7	3.9
NEU	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7
OAS	1.2	1.4	1.5	1.7	2.2	2.5	2.9	3.3	3.5	3.8	4.0
REF	0.9	0.8	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
SSA	0.6	0.7	0.9	1.0	1.4	1.8	2.4	3.0	3.6	4.2	4.9
USA	0.6	0.7	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.1

Table 46: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

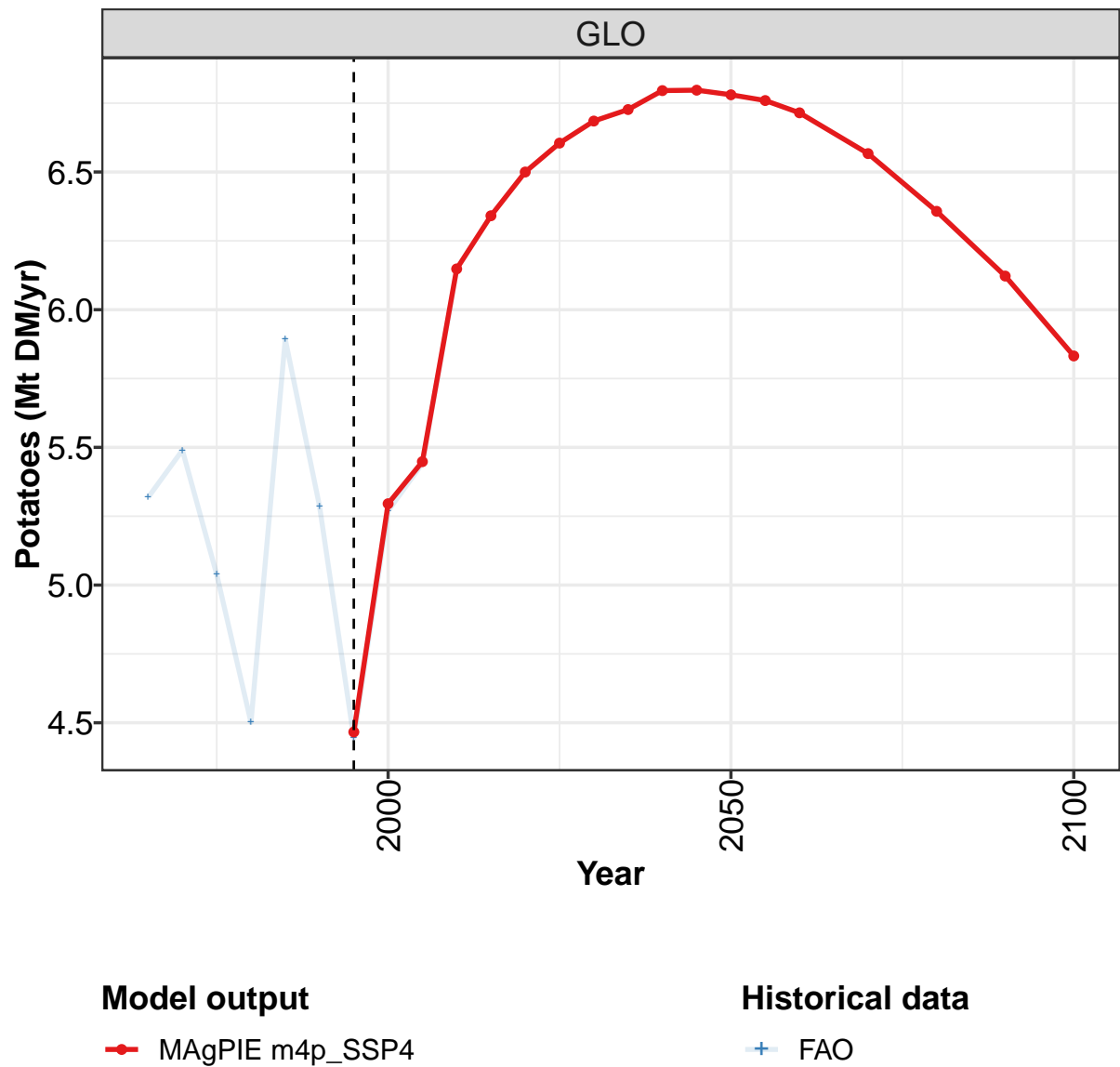
	2050	2055	2060	2070	2080	2090	2100
GLO	39.3	40.1	40.9	42.0	42.7	42.6	42.9
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	10.7	10.2	9.7	8.7	7.5	6.4	5.7
EUR	2.6	2.7	2.7	2.7	2.8	2.7	2.5
IND	4.3	4.4	4.5	4.5	4.4	4.2	4.0
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.2
LAM	4.0	4.1	4.2	4.3	4.4	4.3	4.3
MEA	4.1	4.3	4.5	4.7	5.0	5.1	5.3
NEU	1.7	1.7	1.7	1.7	1.6	1.5	1.4
OAS	4.2	4.3	4.5	4.7	4.9	5.0	5.2
REF	0.4	0.4	0.4	0.4	0.4	0.3	0.3
SSA	5.6	6.3	7.0	8.5	10.0	11.2	12.5
USA	1.2	1.2	1.2	1.3	1.3	1.3	1.3

Table 47: MAgPIE m4p\_SSP4 — 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



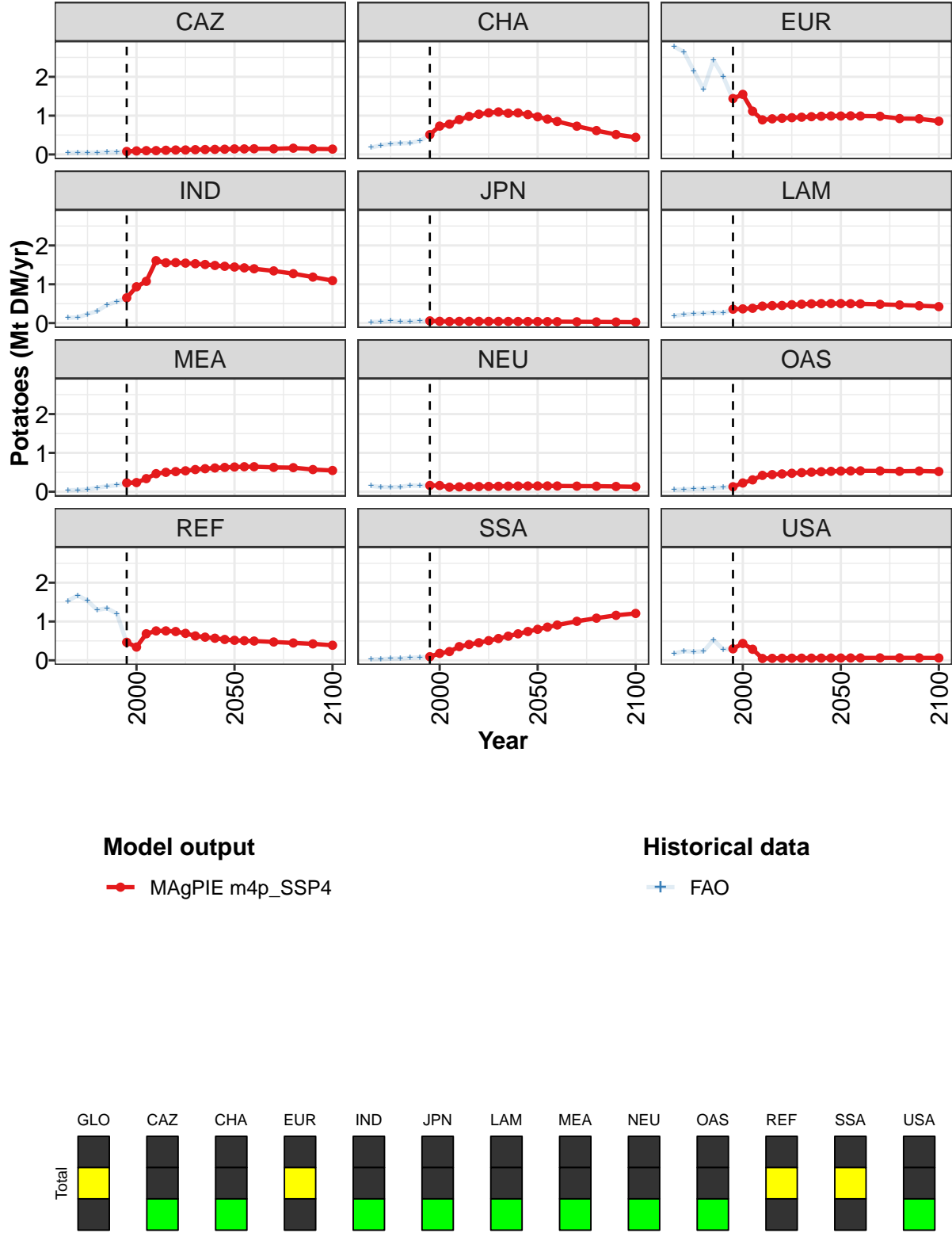


Figure 16: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.47	5.30	5.45	6.15	6.34	6.50	6.61	6.69	6.73	6.80	6.80
CAZ	0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.13	0.13	0.14
CHA	0.51	0.73	0.78	0.90	0.98	1.04	1.07	1.10	1.06	1.07	1.03
EUR	1.44	1.55	1.12	0.89	0.92	0.93	0.95	0.96	0.97	0.98	0.99
IND	0.65	0.94	1.08	1.61	1.55	1.56	1.55	1.53	1.51	1.48	1.46
JPN	0.06	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LAM	0.36	0.37	0.38	0.44	0.45	0.45	0.47	0.49	0.50	0.50	0.50
MEA	0.23	0.24	0.34	0.47	0.50	0.52	0.54	0.57	0.59	0.61	0.63
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	0.47	0.49	0.50	0.52	0.52
REF	0.47	0.34	0.68	0.76	0.76	0.74	0.69	0.63	0.60	0.57	0.54
SSA	0.09	0.18	0.23	0.35	0.41	0.45	0.51	0.56	0.62	0.68	0.74
USA	0.30	0.43	0.28	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06

Table 49: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

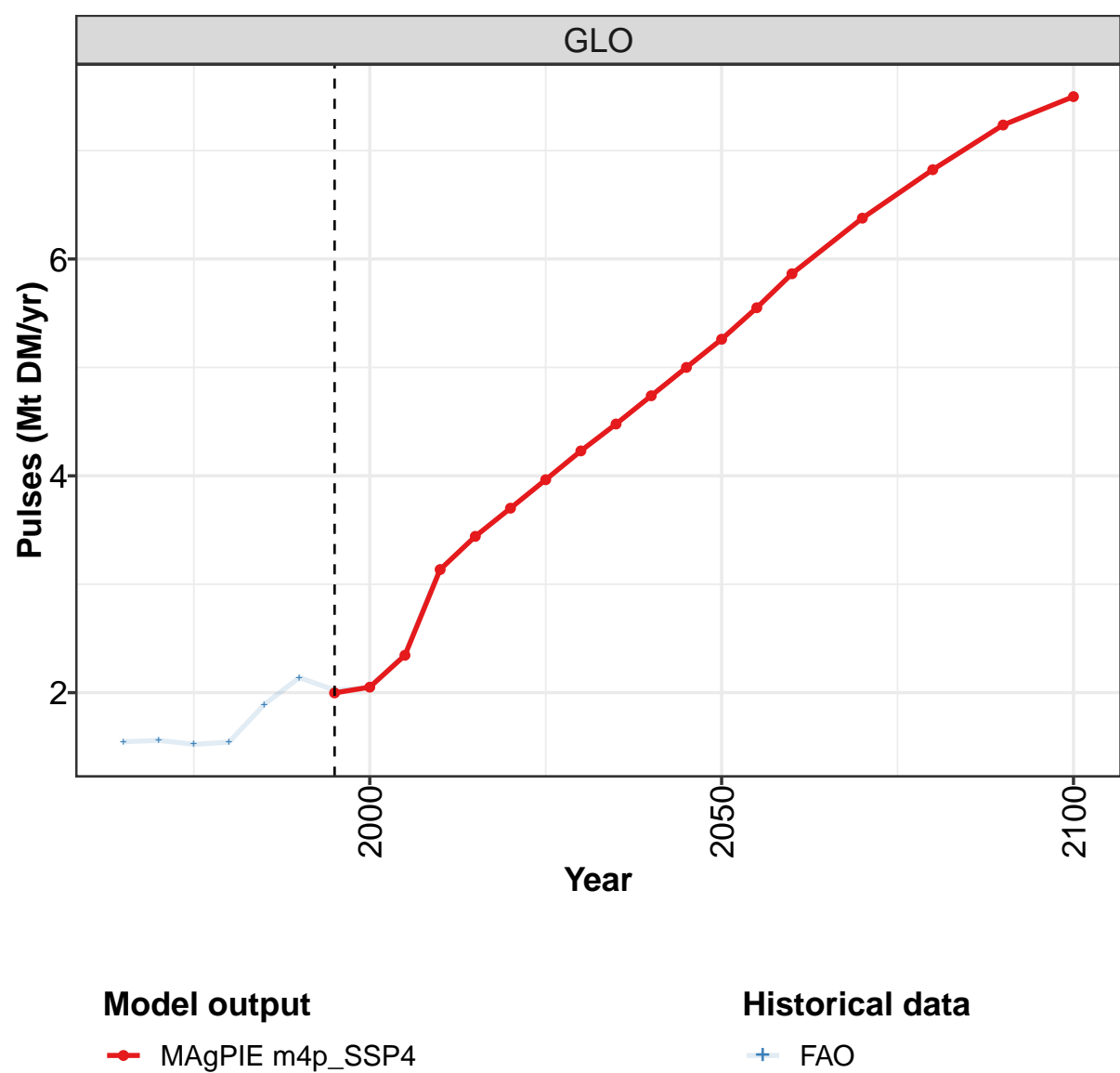
	2050	2055	2060	2070	2080	2090	2100
GLO	6.78	6.76	6.71	6.57	6.36	6.12	5.83
CAZ	0.14	0.14	0.15	0.15	0.16	0.14	0.14
CHA	0.97	0.91	0.85	0.73	0.61	0.51	0.44
EUR	0.99	0.99	0.99	0.98	0.92	0.92	0.86
IND	1.44	1.42	1.40	1.34	1.27	1.19	1.09
JPN	0.04	0.04	0.04	0.03	0.03	0.03	0.02
LAM	0.50	0.50	0.50	0.48	0.47	0.45	0.42
MEA	0.64	0.64	0.64	0.63	0.62	0.57	0.55
NEU	0.15	0.15	0.15	0.14	0.14	0.14	0.13
OAS	0.53	0.54	0.54	0.53	0.53	0.53	0.52
REF	0.52	0.51	0.50	0.47	0.45	0.42	0.39
SSA	0.80	0.86	0.91	1.01	1.09	1.16	1.21
USA	0.06	0.06	0.06	0.06	0.06	0.06	0.06

Table 50: MAgPIE m4p\_SSP4 — 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



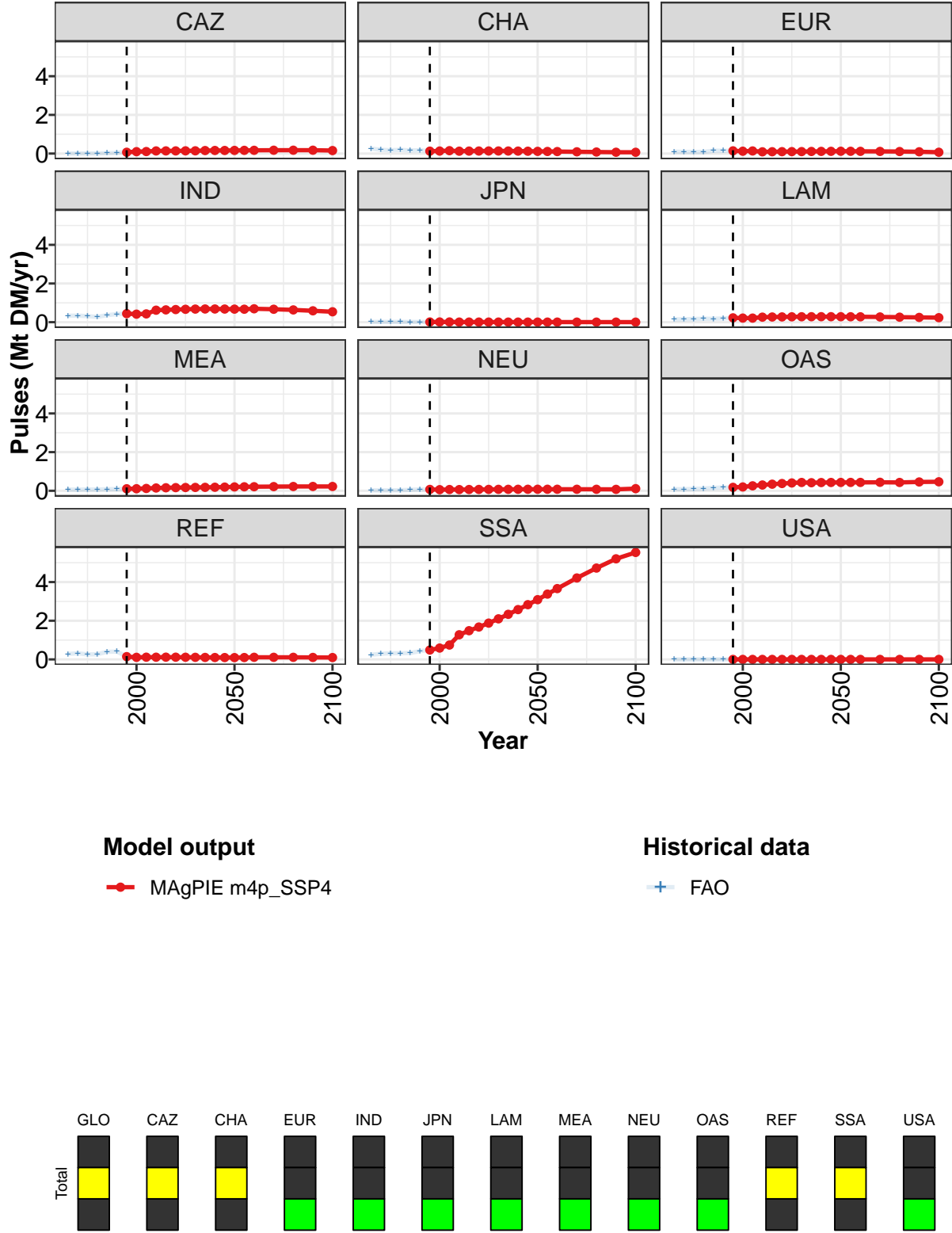


Figure 17: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Pulses (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.00	2.05	2.34	3.14	3.44	3.70	3.96	4.23	4.48	4.74	5.00
CAZ	0.07	0.10	0.10	0.14	0.14	0.14	0.14	0.14	0.16	0.16	0.16
CHA	0.12	0.13	0.15	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.12
EUR	0.14	0.12	0.13	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.12
IND	0.44	0.42	0.43	0.62	0.64	0.65	0.67	0.68	0.68	0.68	0.68
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
LAM	0.22	0.21	0.21	0.26	0.27	0.27	0.28	0.28	0.28	0.28	0.28
MEA	0.11	0.11	0.12	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.19
NEU	0.07	0.06	0.07	0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.08
OAS	0.18	0.20	0.26	0.30	0.34	0.38	0.41	0.43	0.42	0.43	0.43
REF	0.14	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.10	0.10	0.10
SSA	0.49	0.59	0.74	1.28	1.49	1.68	1.88	2.10	2.33	2.58	2.83
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

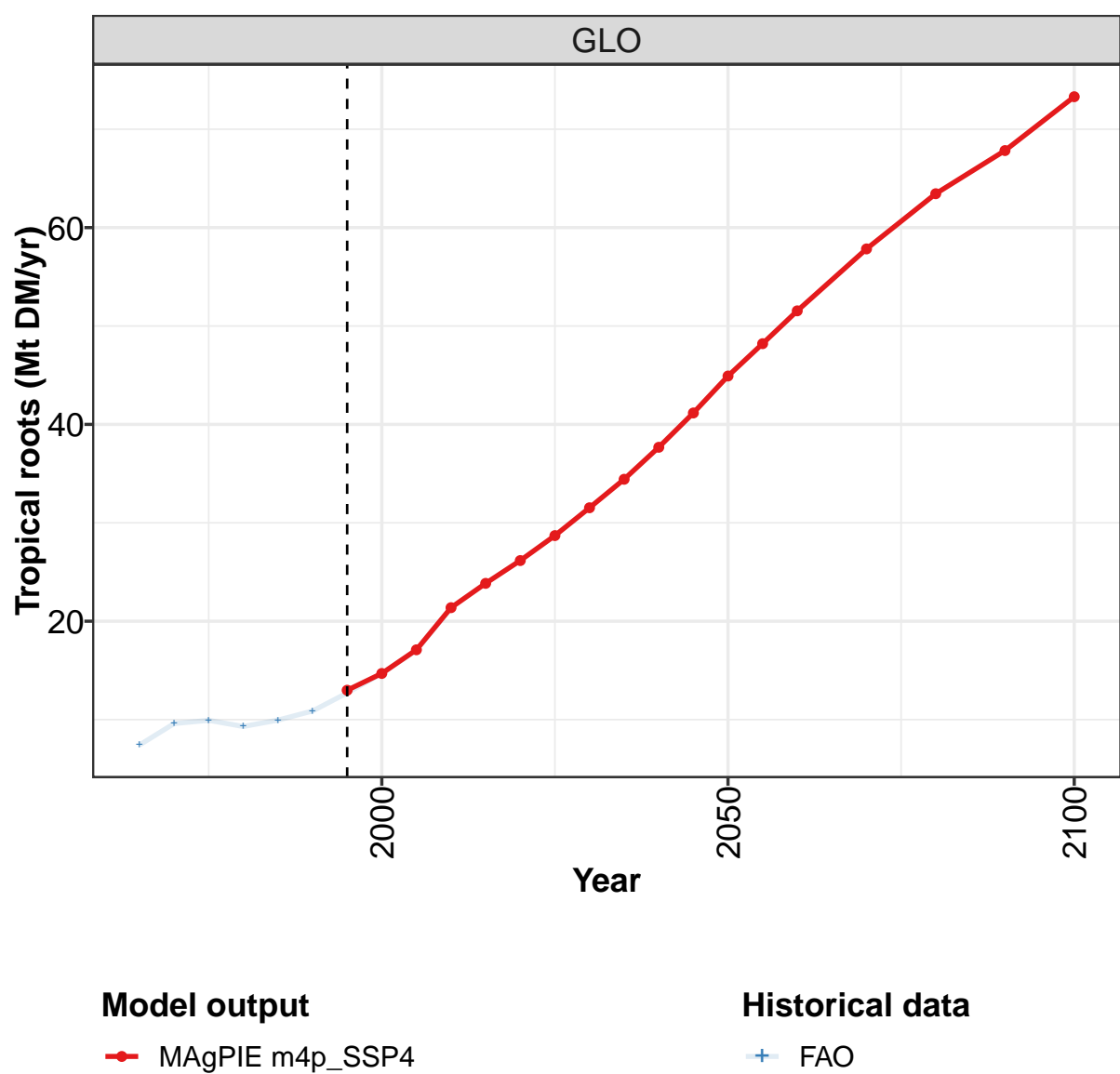
	2050	2055	2060	2070	2080	2090	2100
GLO	5.26	5.55	5.86	6.38	6.82	7.24	7.50
CAZ	0.16	0.17	0.17	0.17	0.17	0.17	0.16
CHA	0.11	0.11	0.10	0.09	0.08	0.07	0.07
EUR	0.12	0.12	0.12	0.11	0.10	0.09	0.07
IND	0.68	0.67	0.69	0.67	0.63	0.59	0.54
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.28	0.28	0.28	0.27	0.26	0.25	0.23
MEA	0.20	0.21	0.21	0.22	0.22	0.22	0.22
NEU	0.08	0.08	0.08	0.08	0.08	0.07	0.11
OAS	0.43	0.43	0.43	0.44	0.43	0.46	0.47
REF	0.09	0.10	0.11	0.11	0.11	0.10	0.10
SSA	3.09	3.38	3.66	4.21	4.72	5.20	5.53
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 53: MAgPIE m4p\_SSP4 — 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



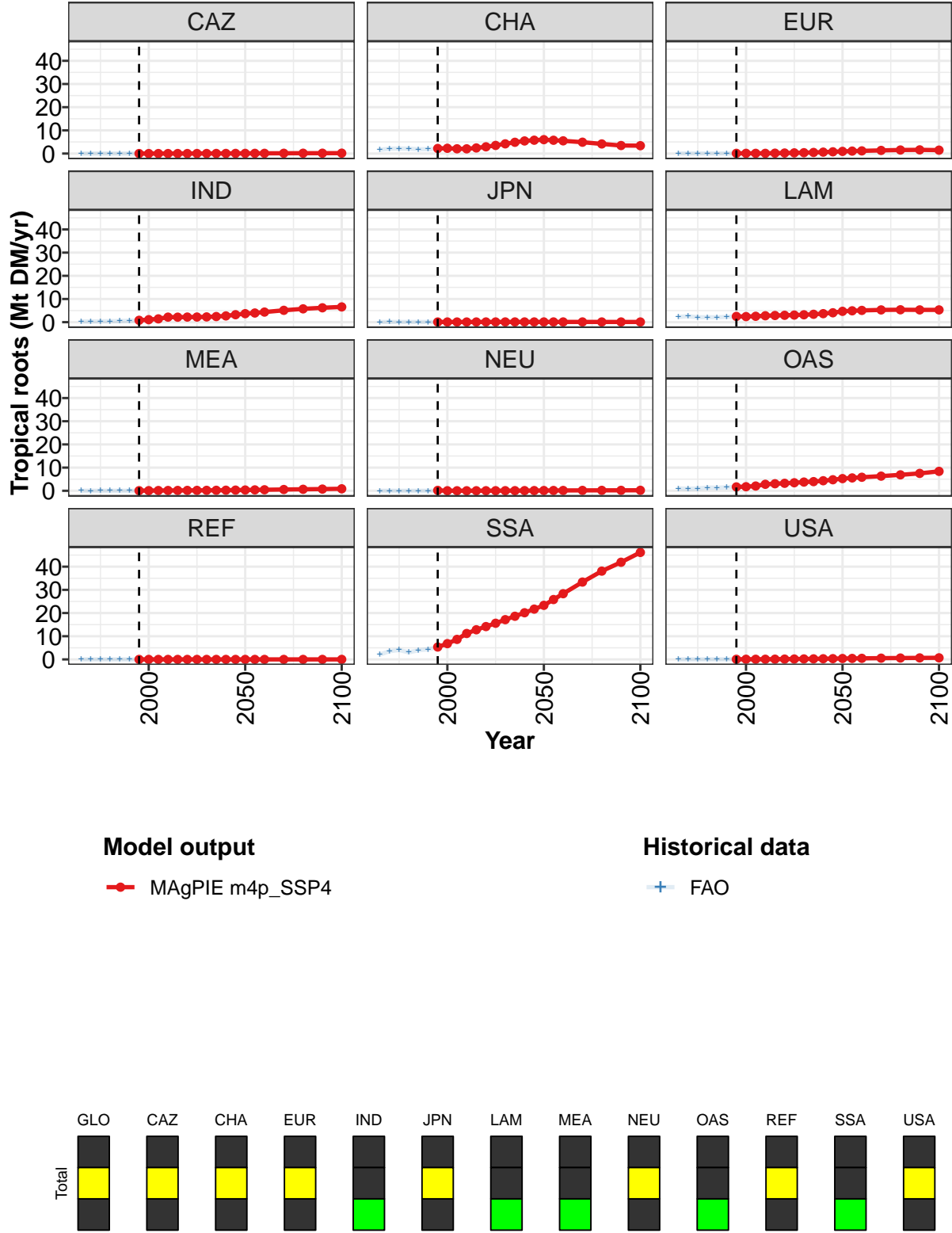


Figure 18: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.0	14.7	17.1	21.4	23.8	26.2	28.7	31.5	34.4	37.7	41.2
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	3.5	4.2	4.9	5.4	5.8
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	2.2	2.3	2.4	2.7	3.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.5	2.4	2.5	2.8	2.9	3.0	3.1	3.2	3.4	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	4.0	4.3	4.8
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	5.3	6.8	8.6	11.2	12.8	14.2	15.6	17.1	18.6	20.1	21.7
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3

Table 55: MAgPIE m4p.SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

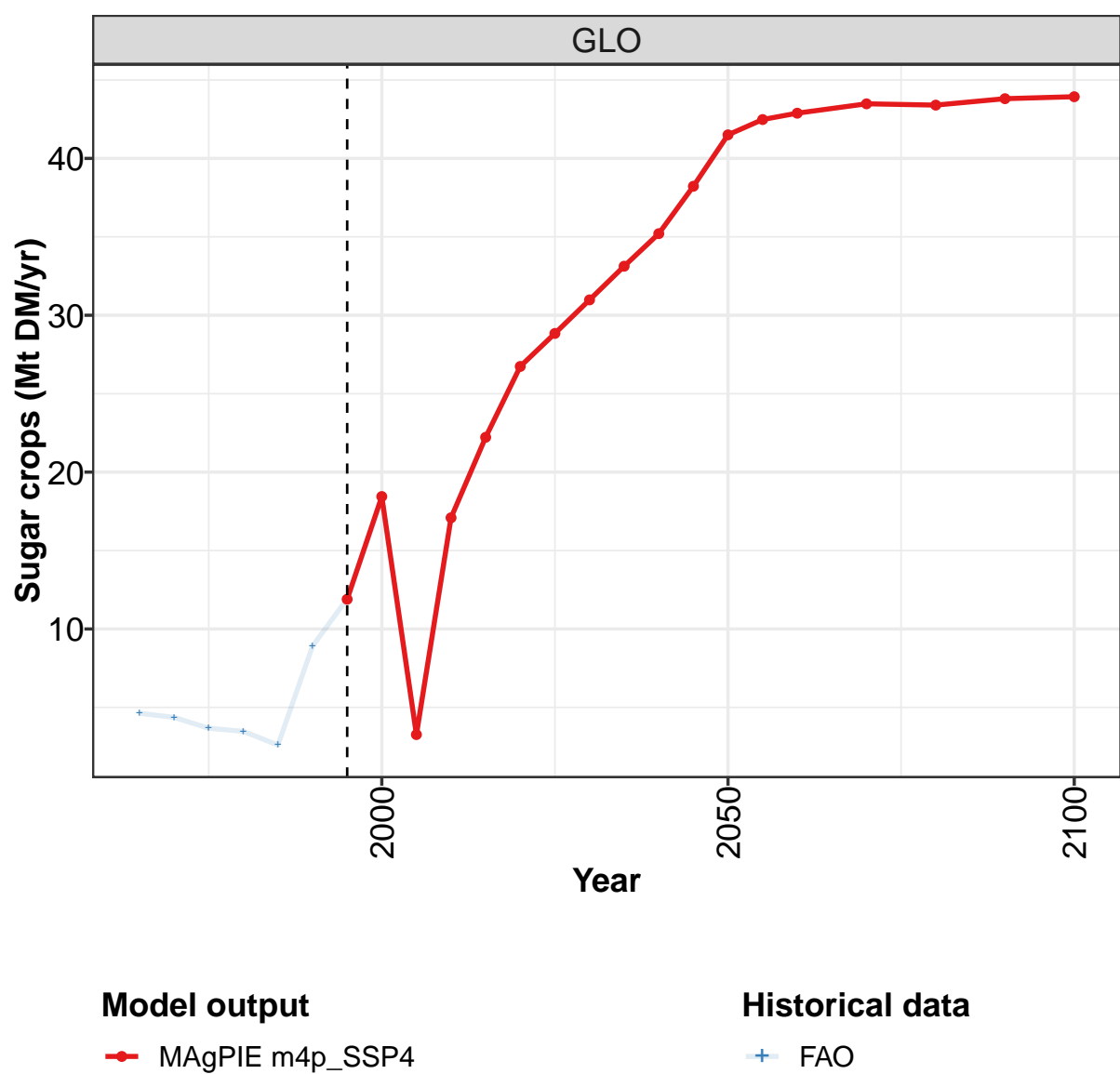
	2050	2055	2060	2070	2080	2090	2100
GLO	44.9	48.2	51.5	57.8	63.4	67.8	73.3
CAZ	0.1	0.1	0.1	0.1	0.1	0.2	0.2
CHA	6.0	5.7	5.5	4.9	4.2	3.5	3.4
EUR	0.9	1.1	1.2	1.4	1.5	1.6	1.5
IND	3.7	4.0	4.4	5.1	5.7	6.2	6.6
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	4.7	4.9	5.1	5.3	5.4	5.3	5.3
MEA	0.3	0.4	0.4	0.6	0.7	0.7	0.9
NEU	0.1	0.1	0.1	0.2	0.2	0.2	0.2
OAS	5.3	5.6	5.8	6.3	6.9	7.5	8.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	23.3	25.8	28.3	33.4	38.1	41.9	46.1
USA	0.4	0.4	0.5	0.5	0.6	0.7	0.7

Table 56: MAgPIE m4p.SSP4 — 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



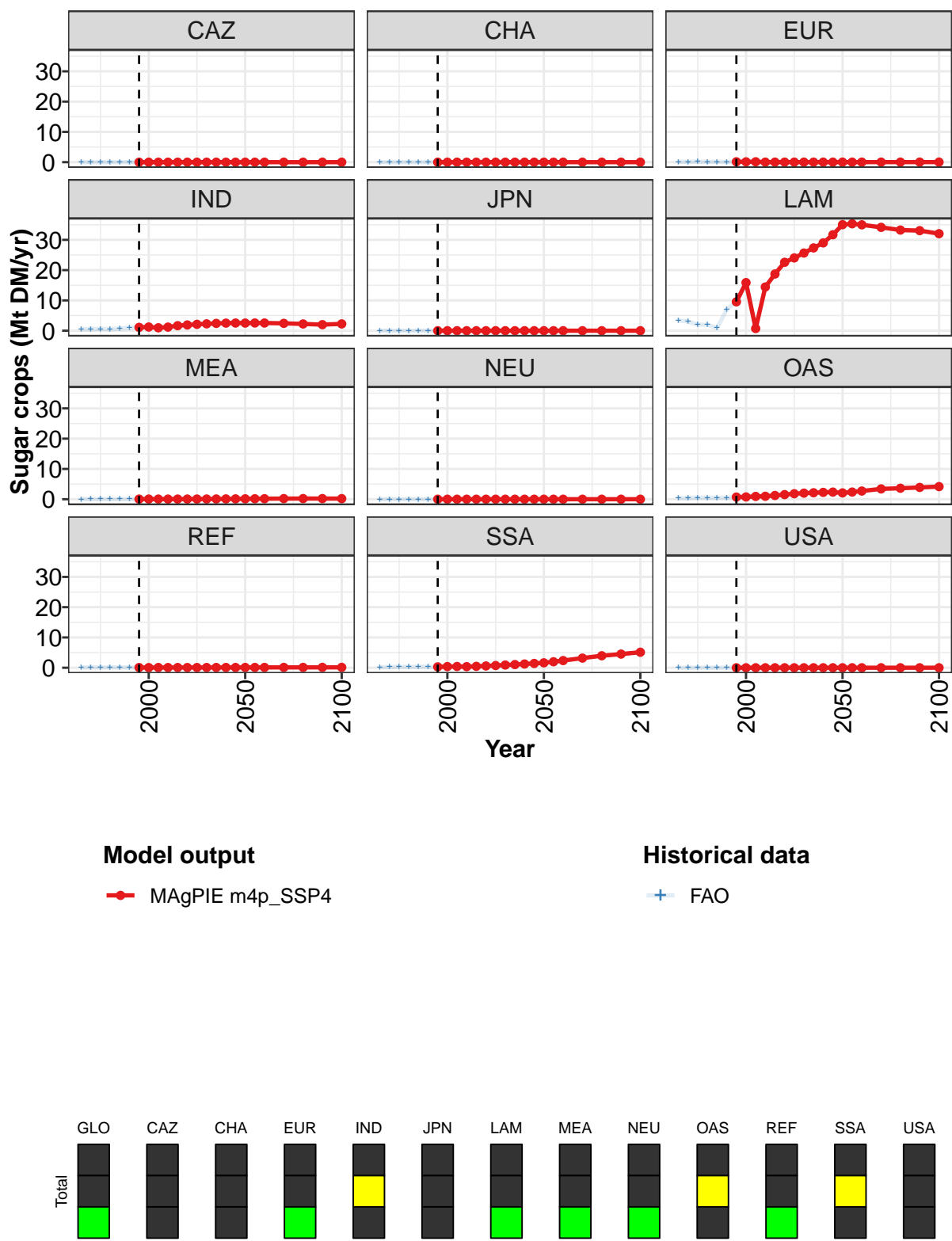


Figure 19: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.9	18.4	3.3	17.1	22.2	26.7	28.8	31.0	33.1	35.2	38.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	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	2.1	2.3	2.4	2.5	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	18.7	22.6	24.0	25.7	27.3	29.0	31.7
MEA	0.0	0.0	0.0	0.0	0.0	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	0.7	0.8	0.9	1.0	1.2	1.5	1.8	2.0	2.1	2.3	2.4
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	0.7	0.9	1.1	1.2	1.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 58: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops (Mt DM/yr)  
[PART 1/2]

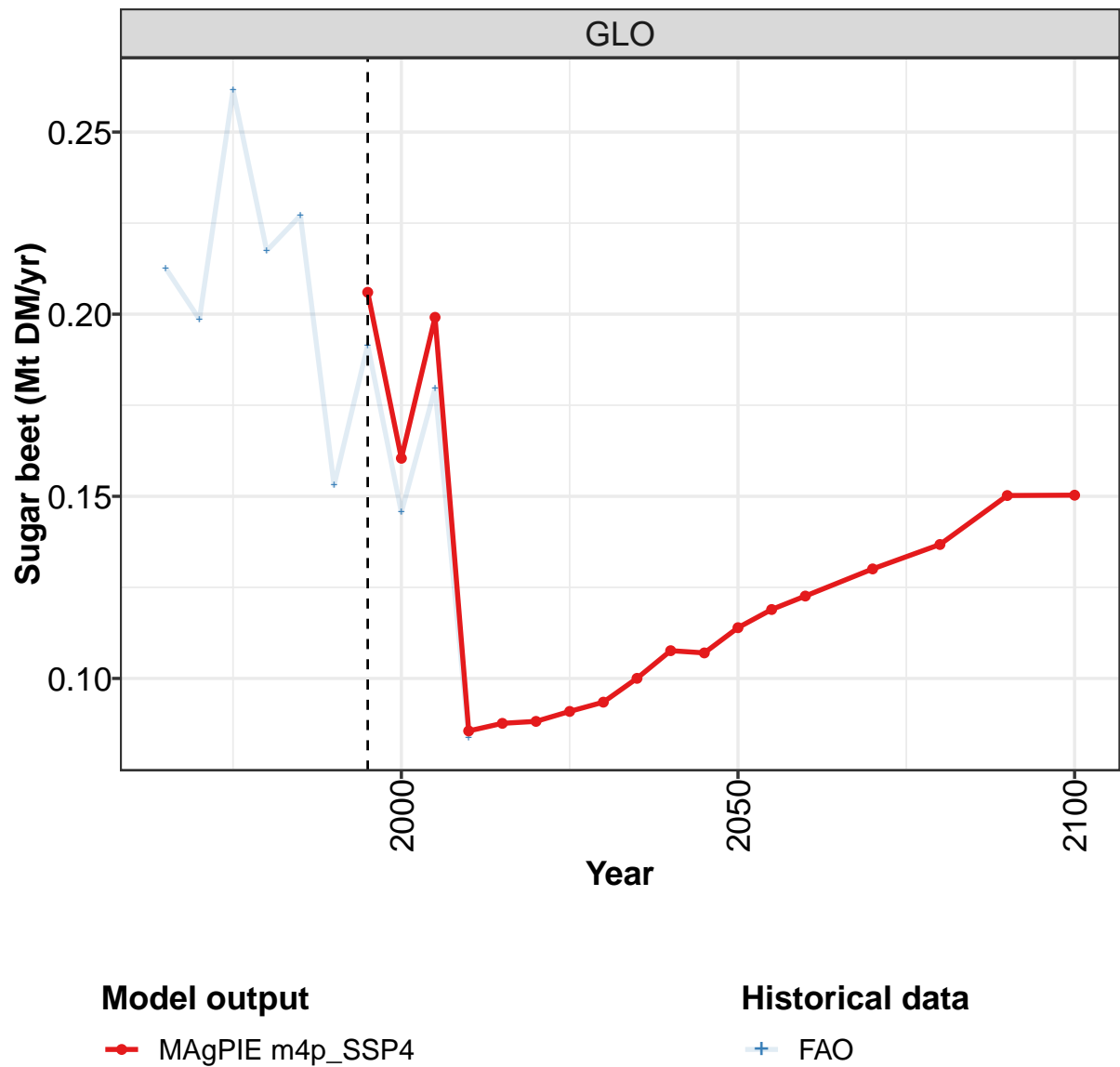
	2050	2055	2060	2070	2080	2090	2100
GLO	41.5	42.5	42.9	43.5	43.4	43.8	43.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.5	2.5	2.5	2.4	2.2	2.0	2.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	35.0	35.3	35.0	34.1	33.2	33.1	32.0
MEA	0.1	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.1	2.4	2.7	3.4	3.6	3.9	4.2
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	1.6	2.0	2.4	3.2	4.0	4.5	5.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 59: MAgPIE m4p\_SSP4 — 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





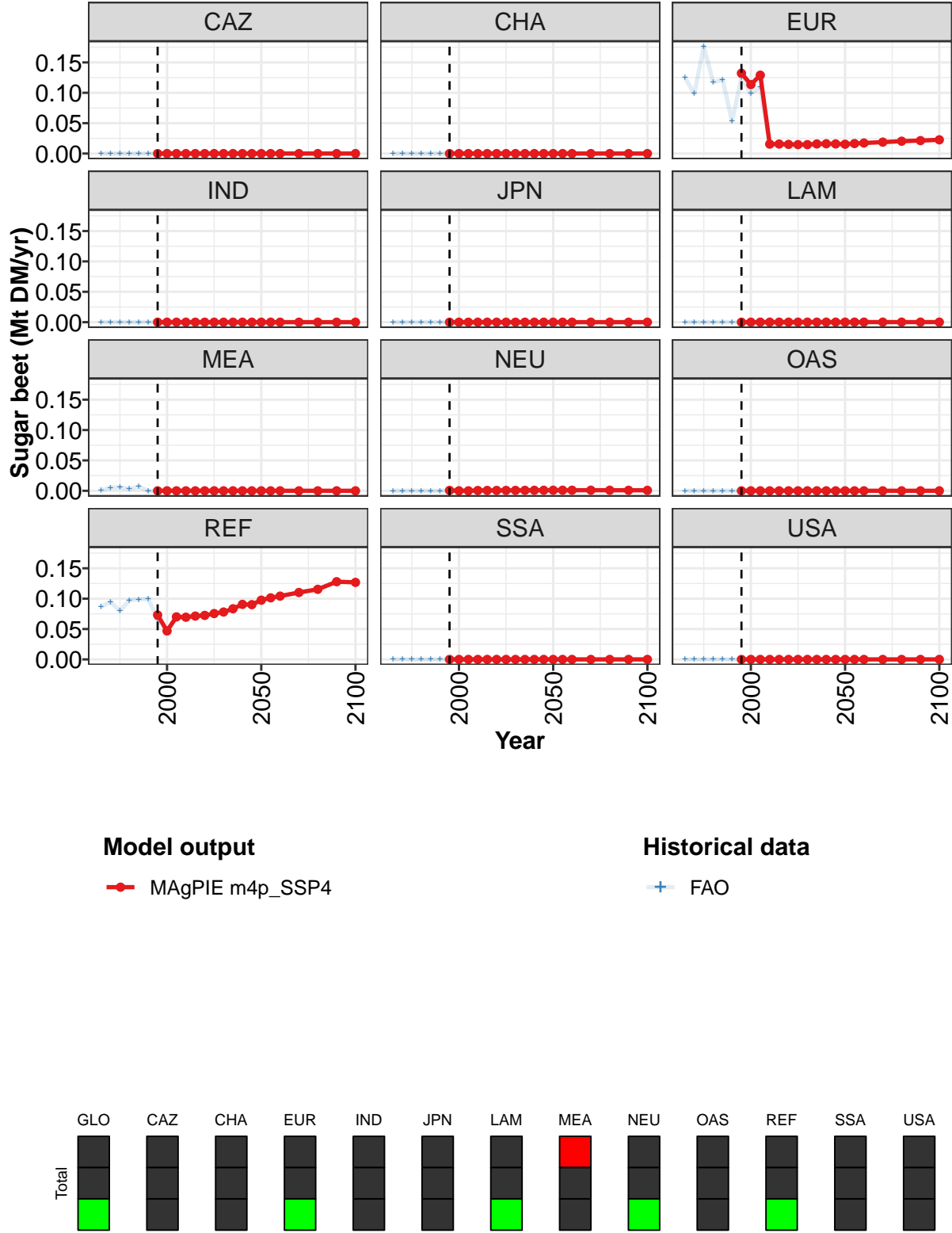


Figure 20: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.206	0.160	0.199	0.086	0.088	0.088	0.091	0.093	0.100	0.108	0.107
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	0.015	0.015	0.016	0.016	0.016
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	0.072	0.075	0.078	0.083	0.091	0.090
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

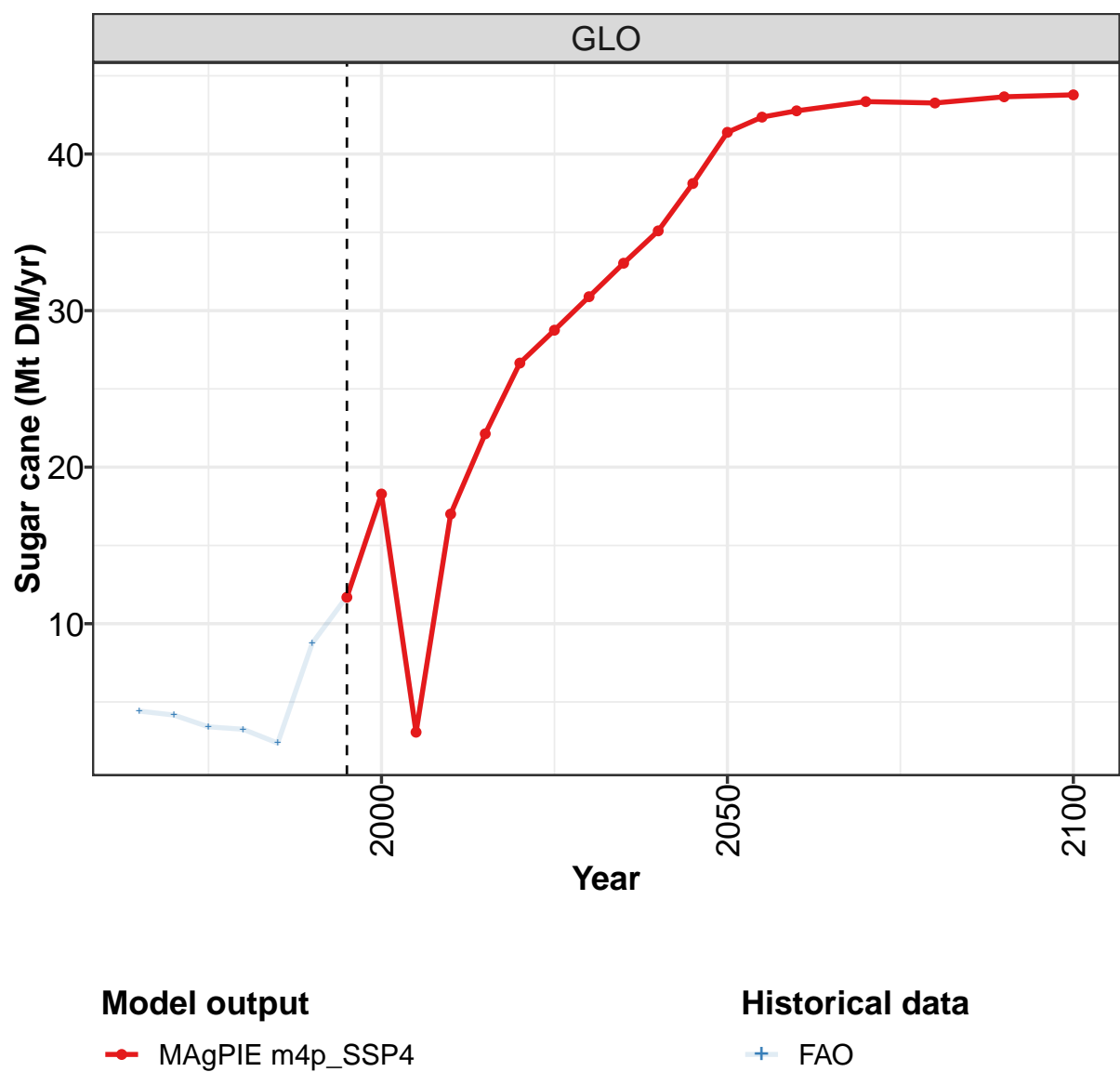
	2050	2055	2060	2070	2080	2090	2100
GLO	0.114	0.119	0.123	0.130	0.137	0.150	0.150
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.015	0.016	0.017	0.019	0.020	0.021	0.023
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	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	0.098	0.101	0.104	0.110	0.115	0.128	0.127
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\_SSP4 — 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



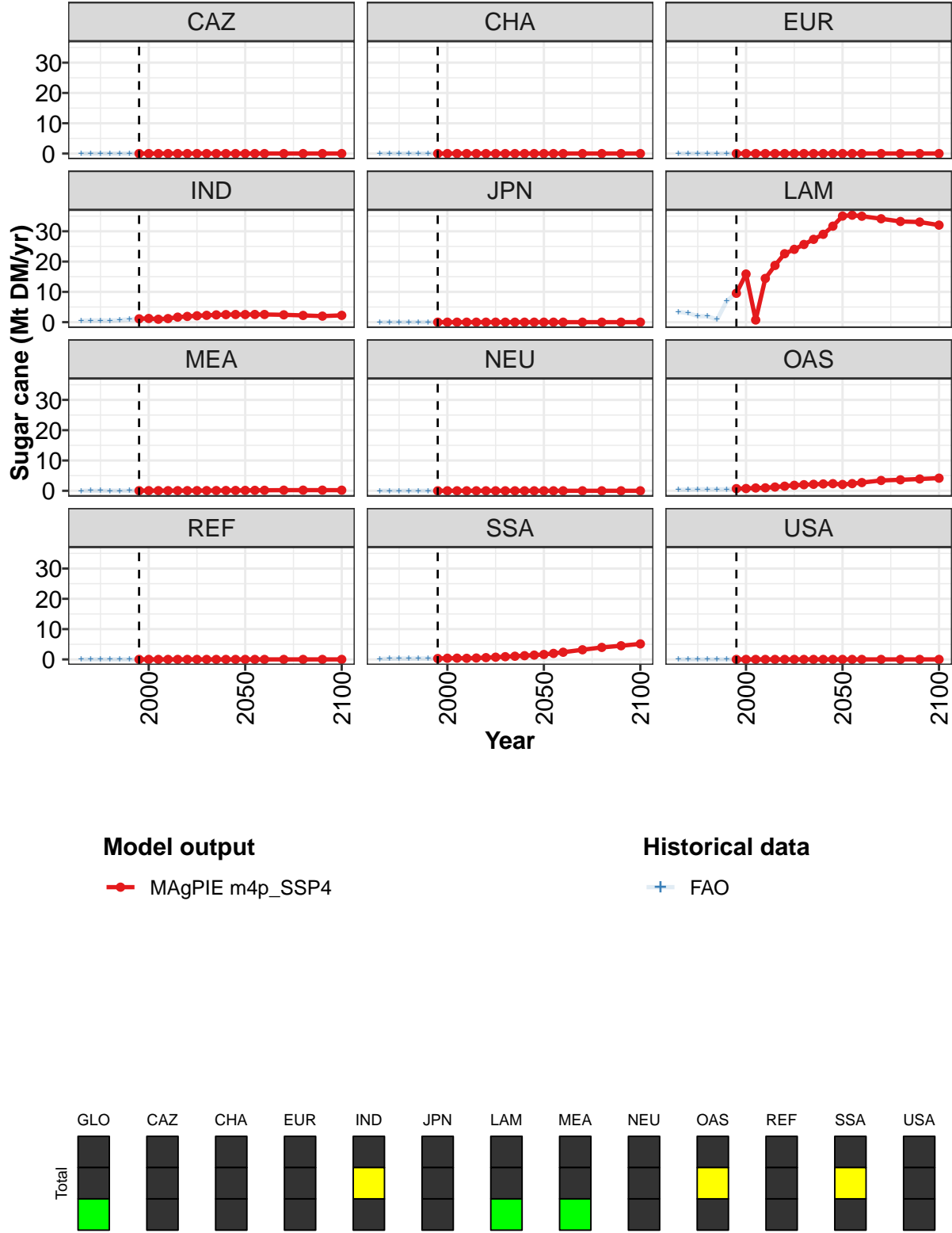


Figure 21: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.7	18.3	3.1	17.0	22.1	26.6	28.8	30.9	33.0	35.1	38.1
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	1.1	1.2	1.0	1.2	1.7	1.9	2.1	2.3	2.4	2.5	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	18.7	22.6	24.0	25.7	27.3	29.0	31.7
MEA	0.0	0.0	0.0	0.0	0.0	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	0.7	0.8	0.9	1.0	1.2	1.5	1.8	2.0	2.1	2.3	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	0.3	0.4	0.4	0.4	0.5	0.6	0.7	0.9	1.1	1.2	1.4
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

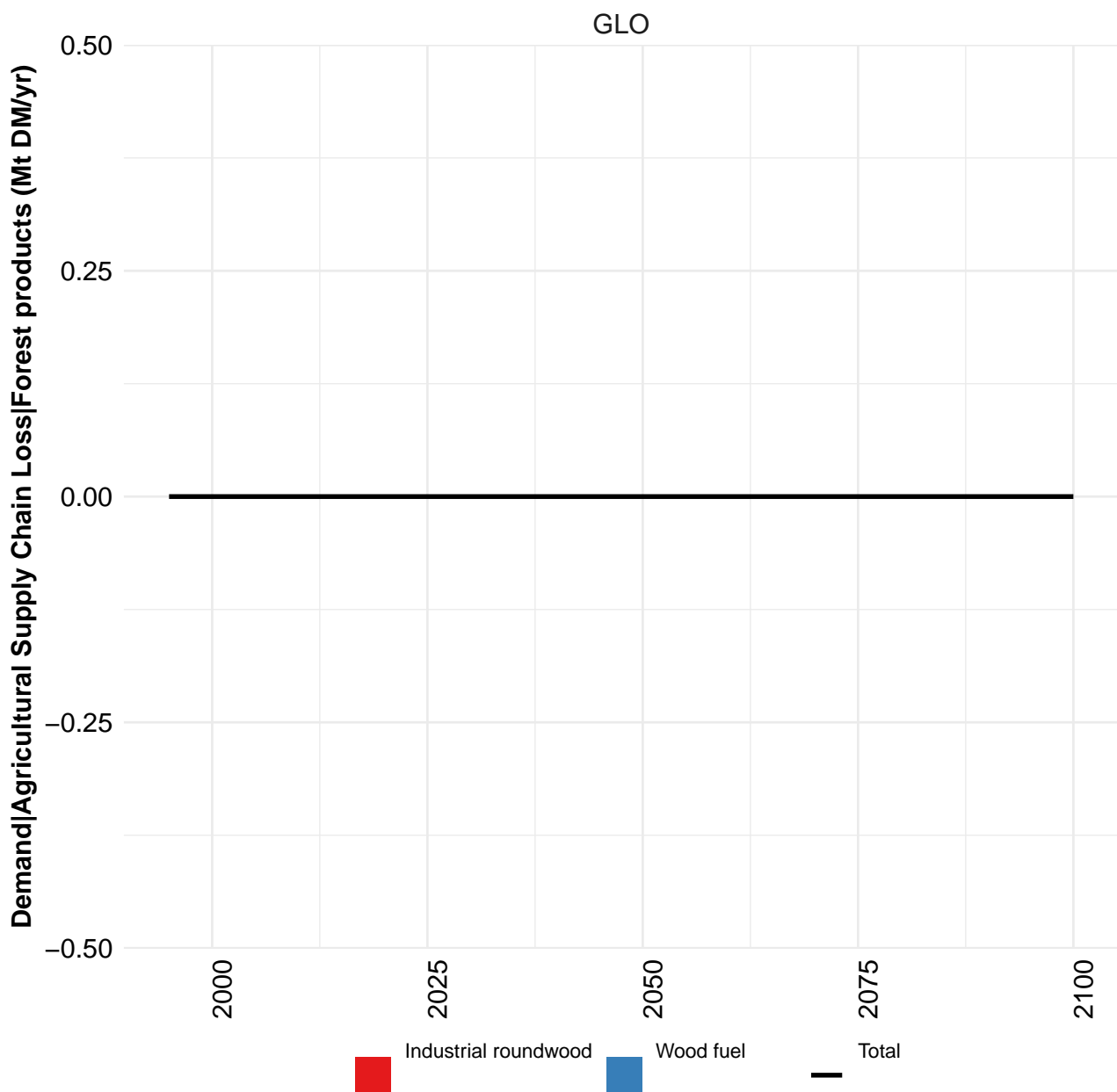
Table 64: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

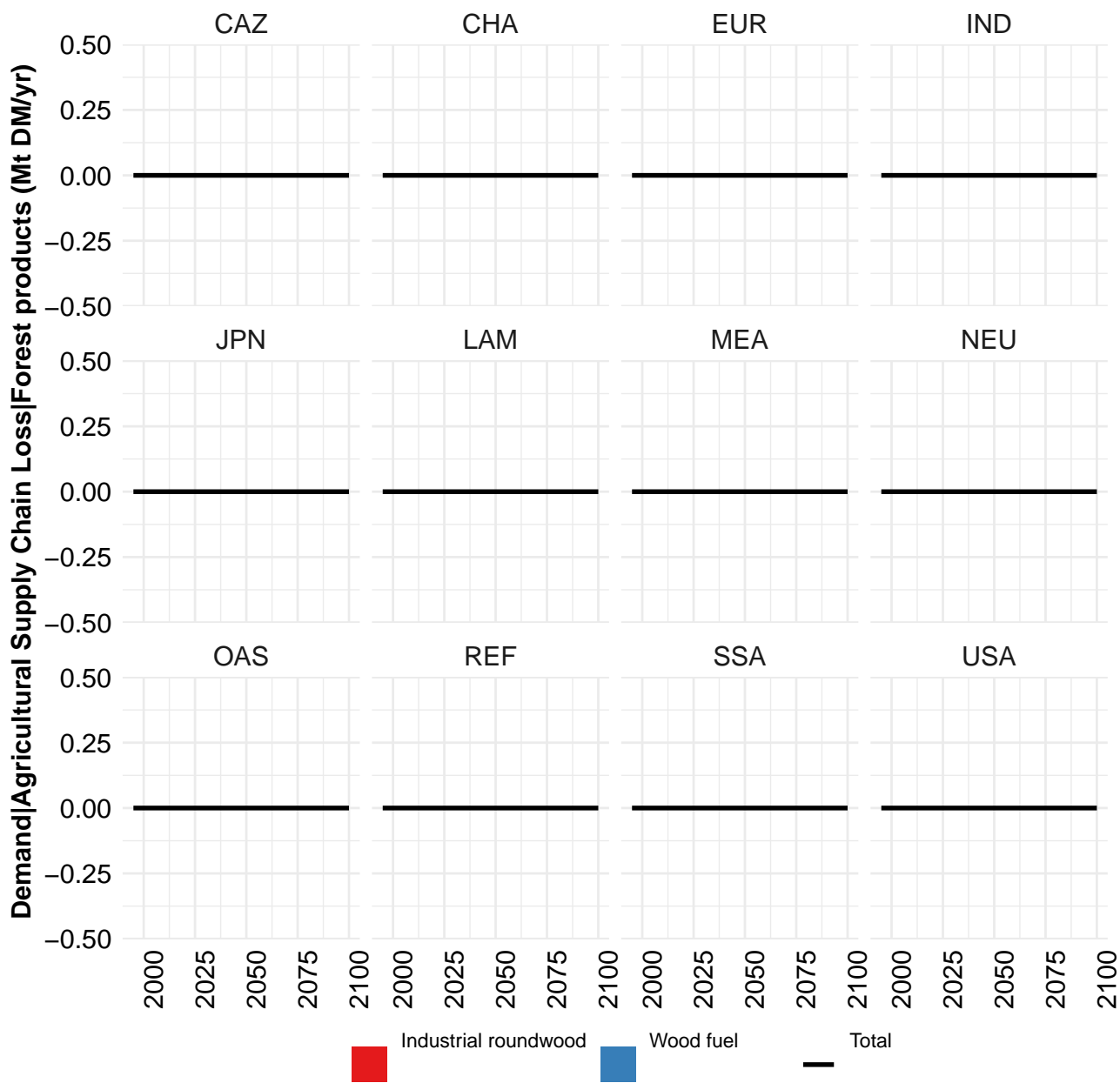
	2050	2055	2060	2070	2080	2090	2100
GLO	41.4	42.4	42.8	43.4	43.3	43.7	43.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.5	2.5	2.5	2.4	2.2	2.0	2.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	35.0	35.3	35.0	34.1	33.2	33.1	32.0
MEA	0.1	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.1	2.4	2.7	3.4	3.6	3.9	4.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.6	2.0	2.4	3.2	4.0	4.5	5.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

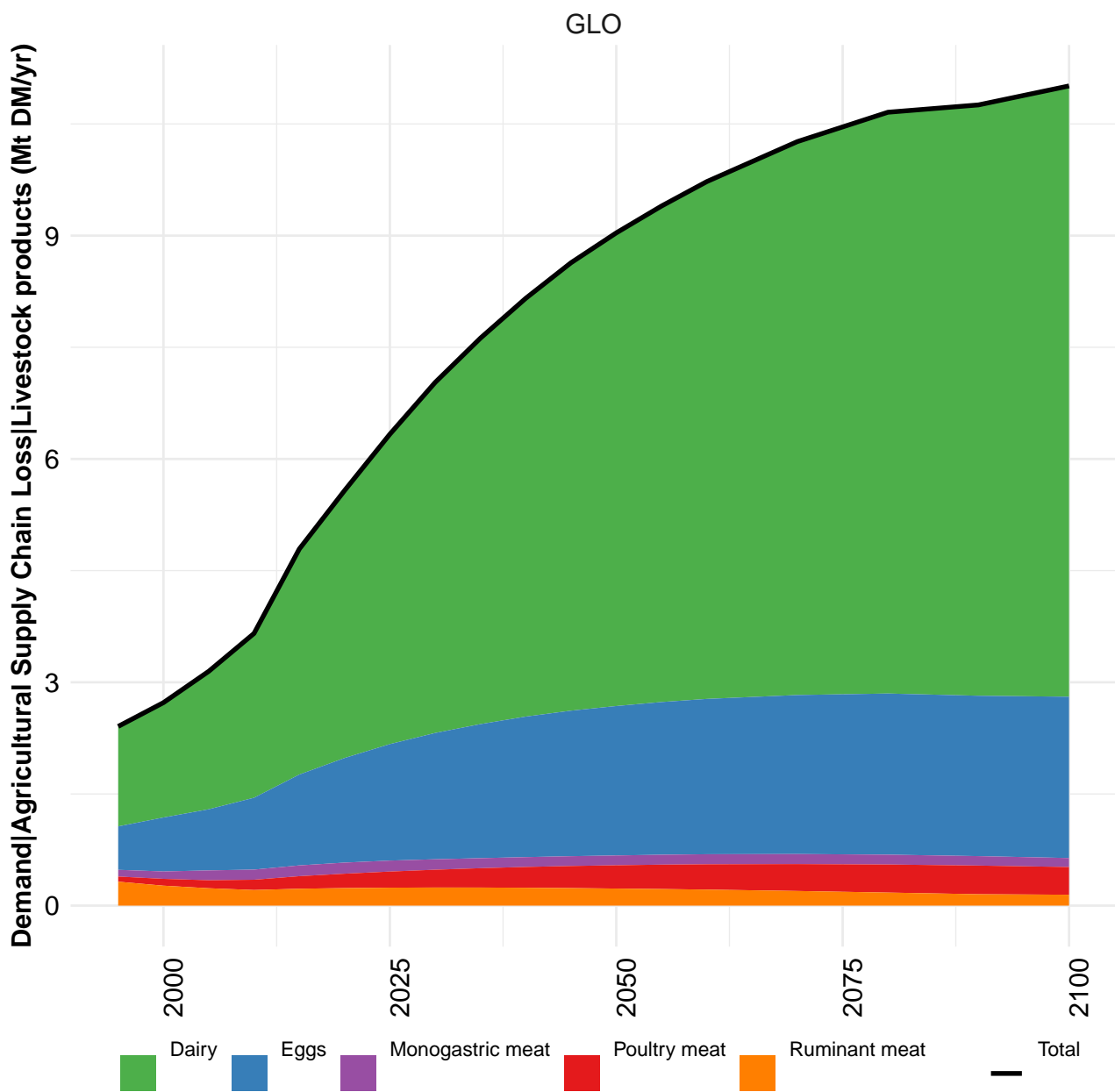
Table 65: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

	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

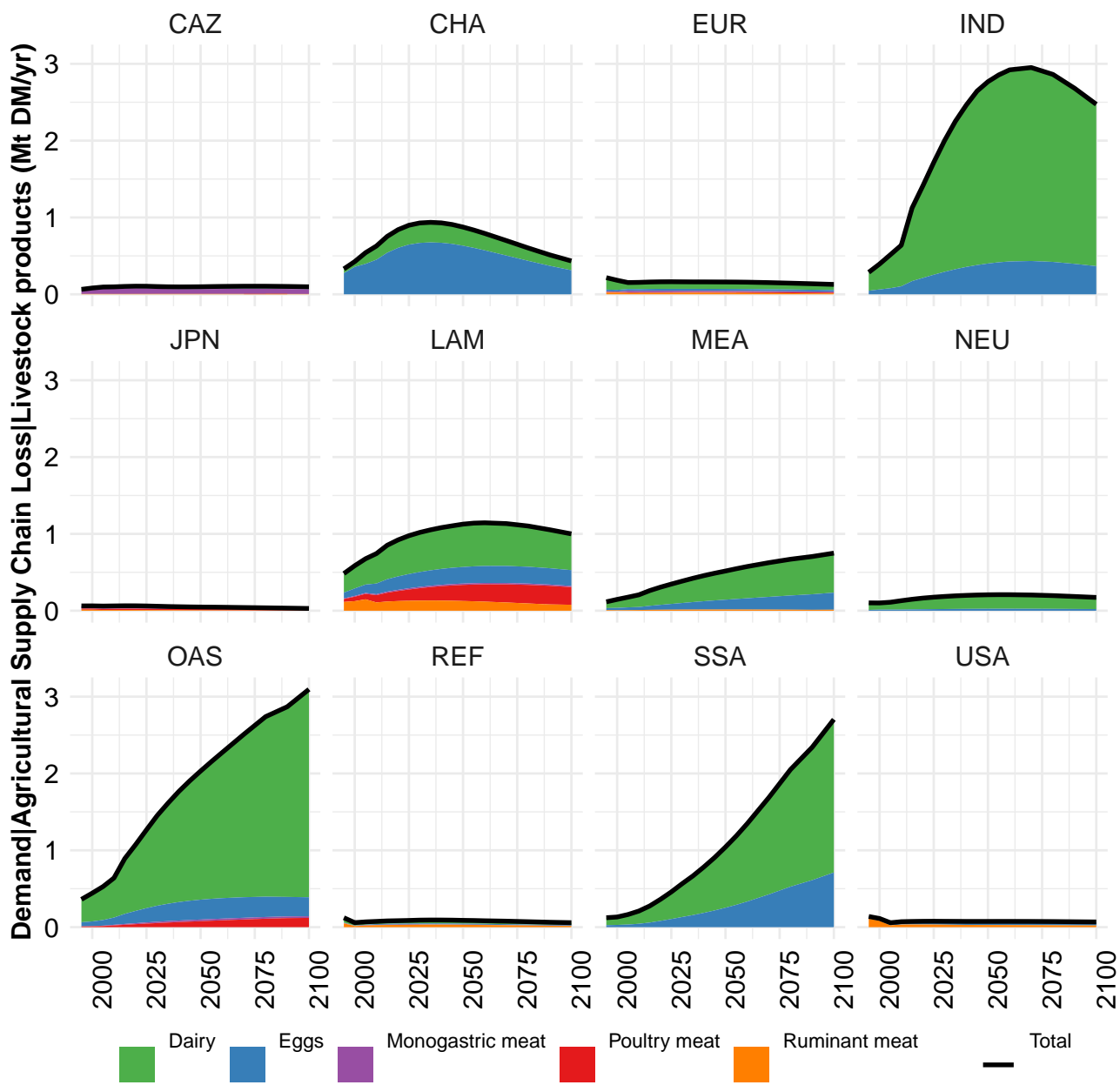
Table 66: FAO — Demand—Agricultural Supply Chain Loss—Crops—Sugar crops—Sugar cane (Mt DM/yr)



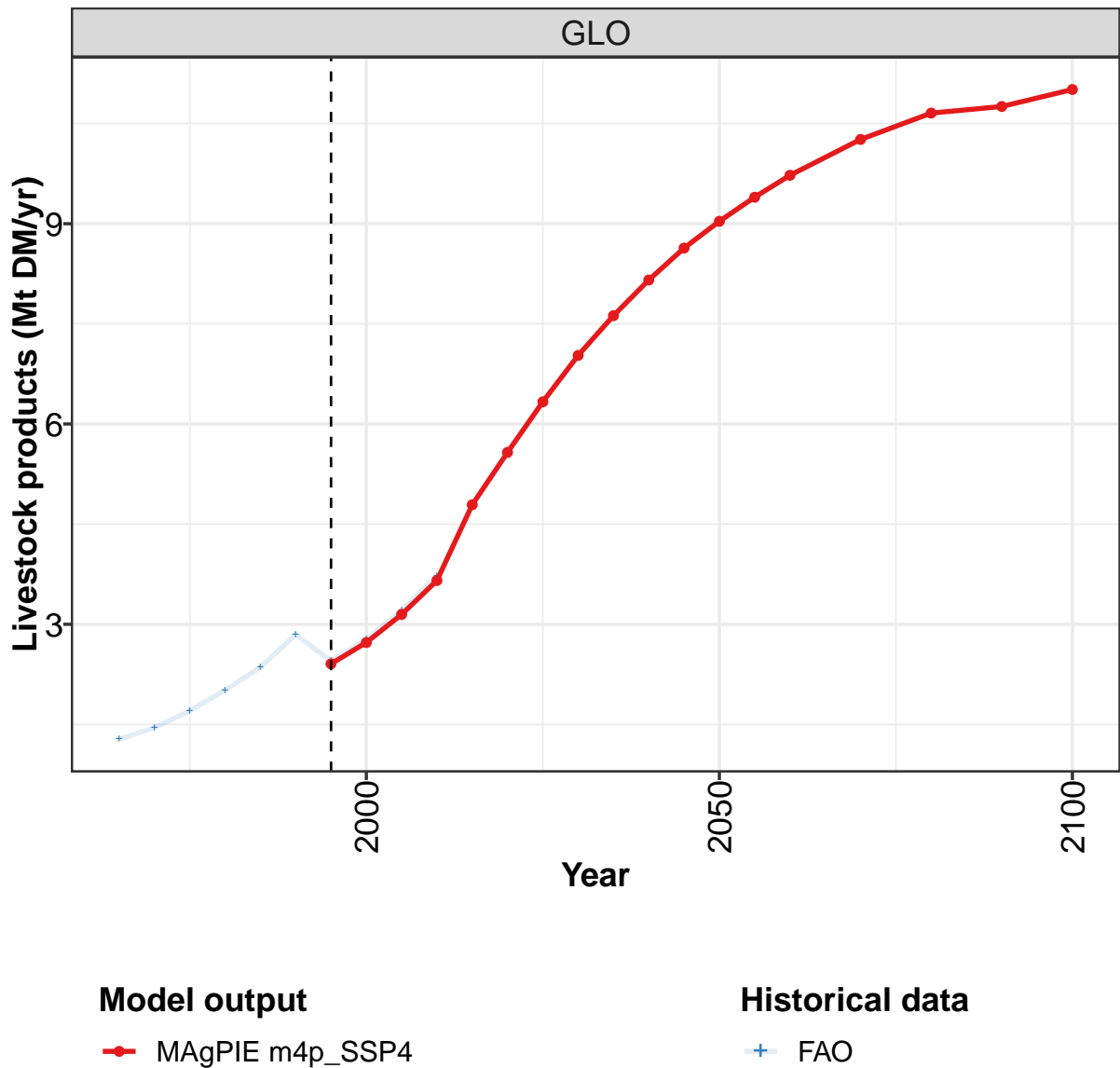








3.2 Livestock products



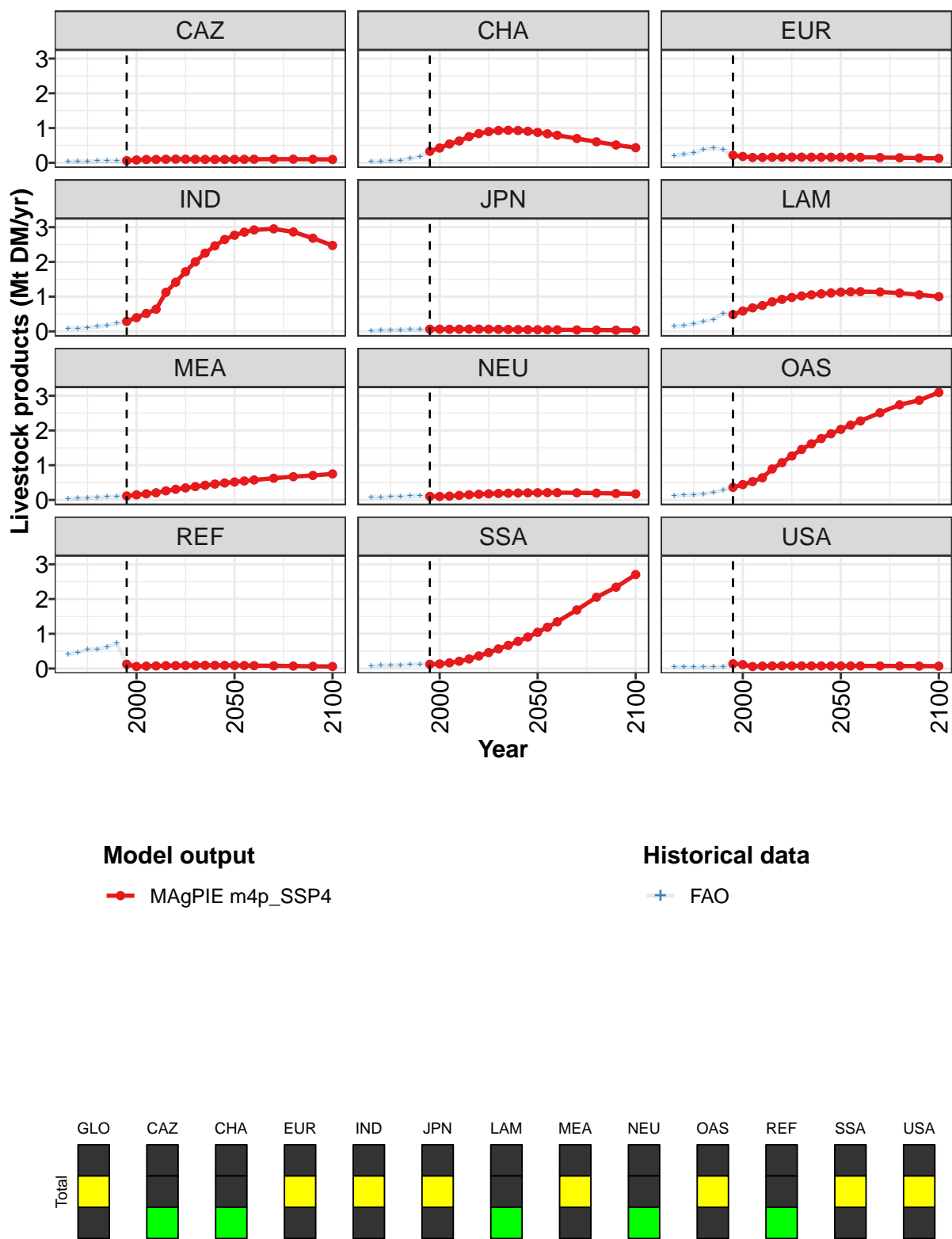


Figure 22: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.4	2.7	3.1	3.7	4.8	5.6	6.3	7.0	7.6	8.2	8.6
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.3	0.4	0.5	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.9
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	1.7	2.0	2.3	2.5	2.6
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
LAM	0.5	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	0.3	0.4	0.4	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	1.6	1.8	1.9
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	0.6	0.7	0.8	0.9
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products (Mt DM/yr)  
[PART 1/2]

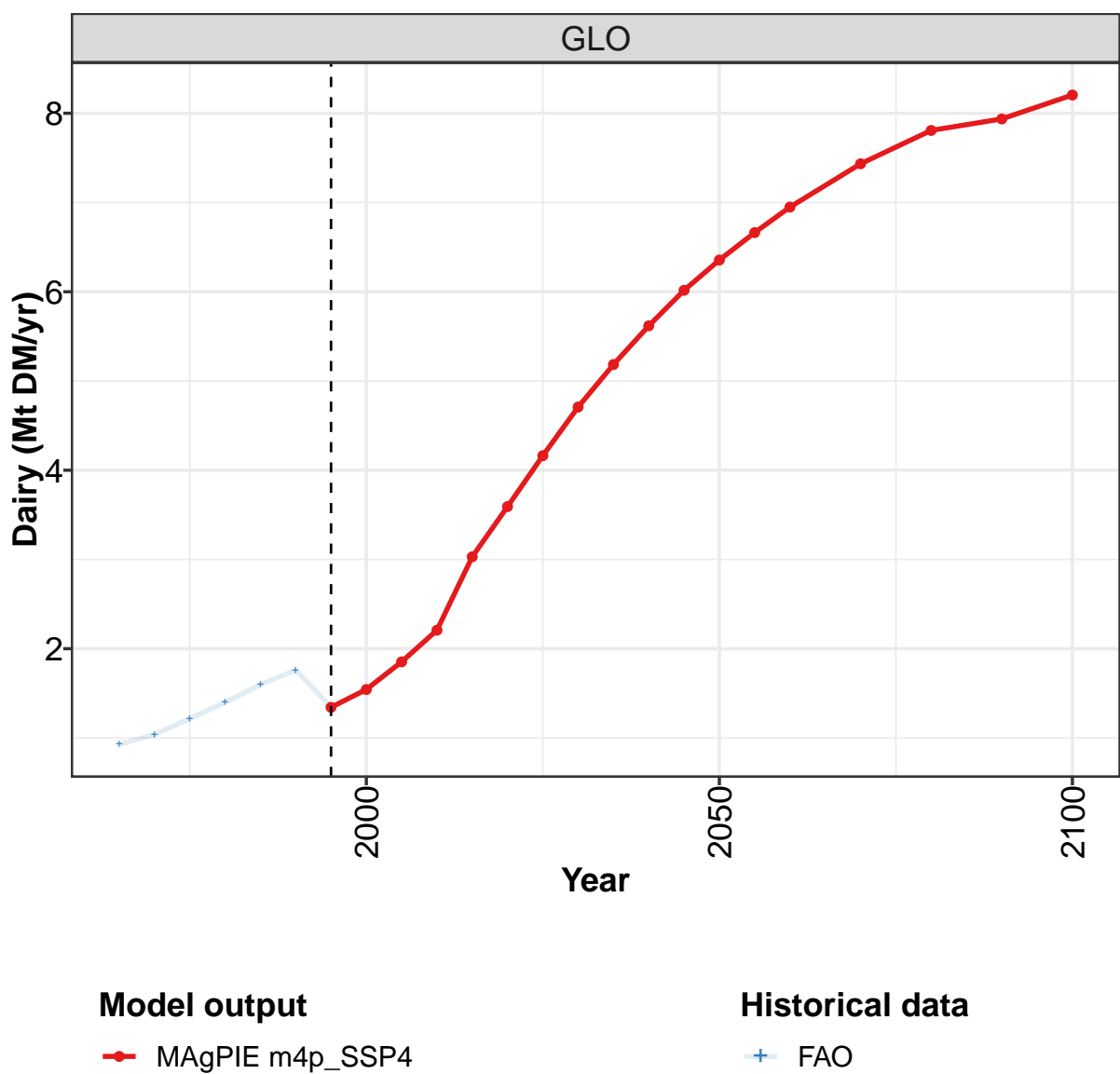
	2050	2055	2060	2070	2080	2090	2100
GLO	9.0	9.4	9.7	10.3	10.7	10.8	11.0
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.9	0.8	0.8	0.7	0.6	0.5	0.4
EUR	0.2	0.2	0.2	0.2	0.1	0.1	0.1
IND	2.8	2.9	2.9	3.0	2.9	2.7	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.1	1.1	1.1	1.1	1.1	1.1	1.0
MEA	0.5	0.5	0.6	0.6	0.7	0.7	0.7
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	2.0	2.2	2.3	2.5	2.7	2.9	3.1
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	1.0	1.2	1.3	1.7	2.1	2.3	2.7
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 68: MAgPIE m4p\_SSP4 — 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



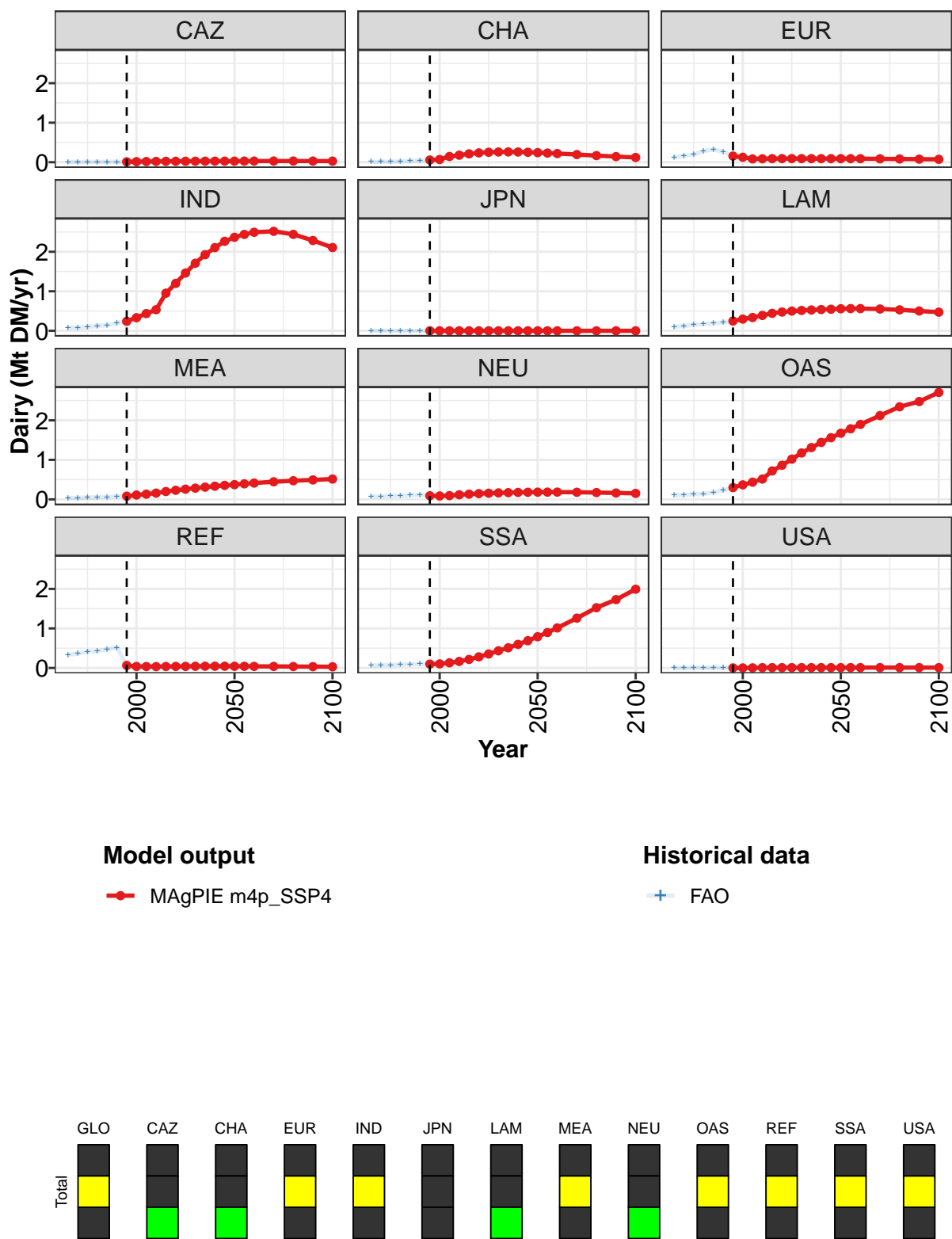


Figure 23: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.34	1.54	1.85	2.21	3.03	3.59	4.16	4.71	5.18	5.62	6.02
CAZ	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
CHA	0.06	0.07	0.14	0.18	0.21	0.24	0.25	0.26	0.26	0.26	0.25
EUR	0.16	0.13	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
IND	0.24	0.33	0.44	0.53	0.95	1.20	1.46	1.71	1.93	2.11	2.26
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	0.48	0.50	0.52	0.53	0.54	0.55
MEA	0.08	0.11	0.13	0.16	0.20	0.23	0.26	0.28	0.31	0.33	0.35
NEU	0.09	0.09	0.10	0.12	0.13	0.15	0.16	0.16	0.17	0.18	0.18
OAS	0.30	0.37	0.44	0.52	0.72	0.86	1.02	1.17	1.31	1.44	1.56
REF	0.06	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
SSA	0.10	0.10	0.13	0.17	0.22	0.28	0.35	0.43	0.51	0.60	0.69
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

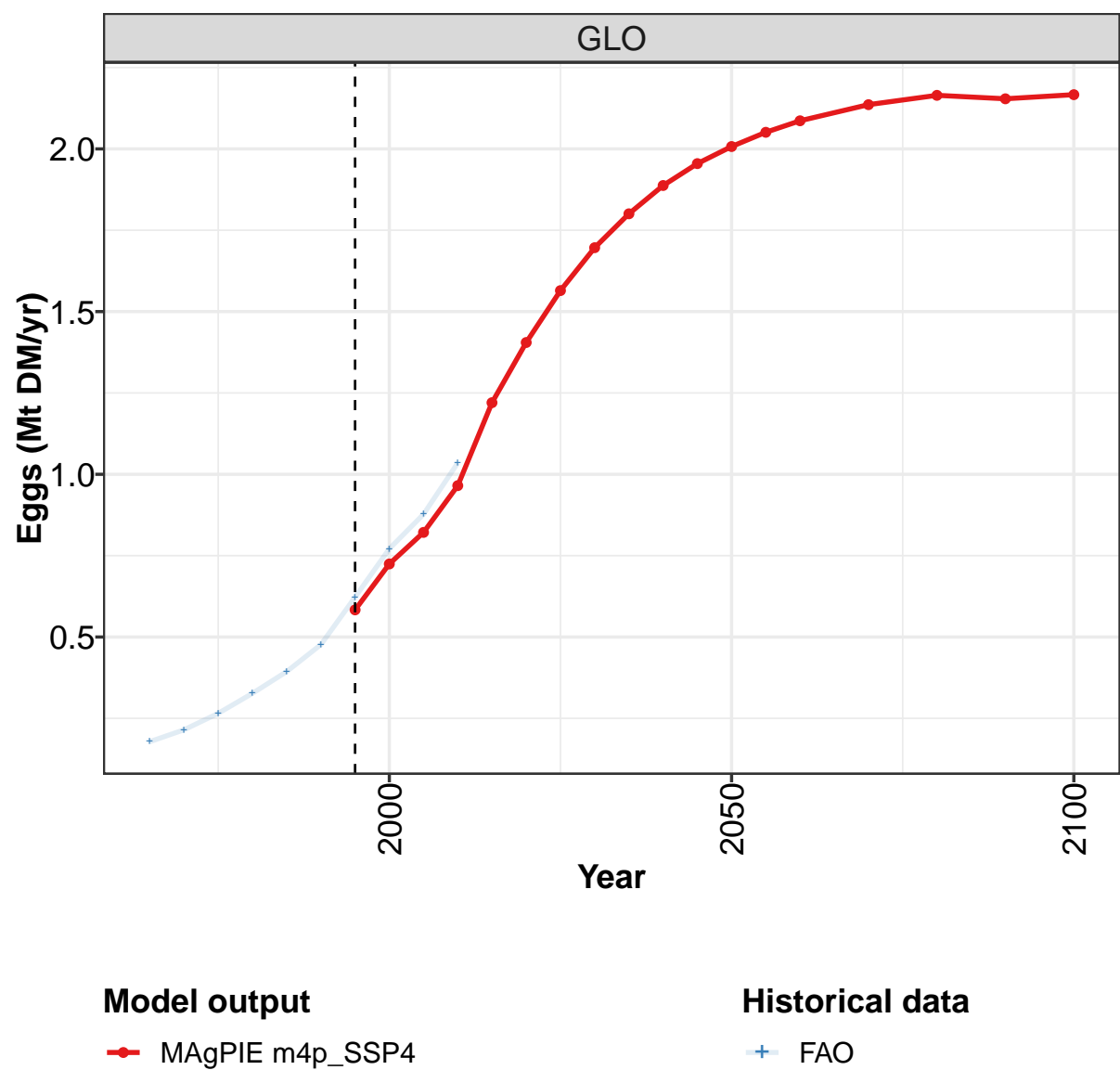
	2050	2055	2060	2070	2080	2090	2100
GLO	6.36	6.66	6.95	7.43	7.81	7.94	8.20
CAZ	0.03	0.03	0.03	0.03	0.03	0.03	0.03
CHA	0.24	0.23	0.22	0.19	0.17	0.14	0.12
EUR	0.09	0.09	0.09	0.09	0.08	0.08	0.07
IND	2.37	2.44	2.49	2.52	2.44	2.29	2.11
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.56	0.56	0.56	0.55	0.53	0.50	0.47
MEA	0.37	0.39	0.41	0.45	0.47	0.49	0.51
NEU	0.18	0.18	0.18	0.18	0.17	0.16	0.15
OAS	1.67	1.79	1.90	2.12	2.34	2.48	2.71
REF	0.04	0.04	0.04	0.04	0.04	0.03	0.03
SSA	0.79	0.90	1.01	1.26	1.52	1.73	1.99
USA	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Table 71: MAgPIE m4p\_SSP4 — 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





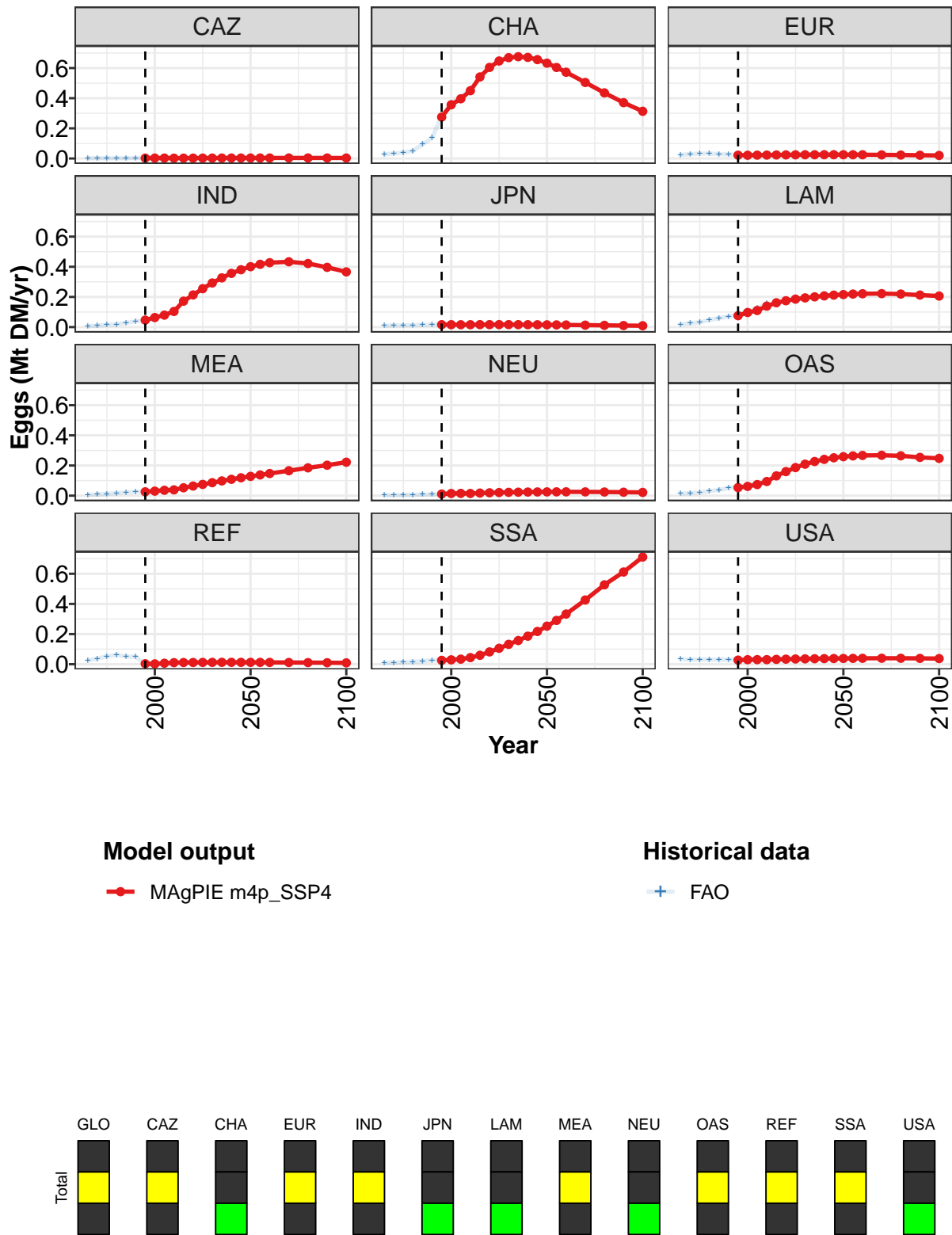


Figure 24: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.58	0.72	0.82	0.97	1.22	1.41	1.56	1.70	1.80	1.89	1.95
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	0.60	0.65	0.67	0.68	0.67	0.66
EUR	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
IND	0.05	0.06	0.08	0.10	0.17	0.21	0.25	0.29	0.33	0.36	0.38
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	0.19	0.20	0.21	0.21
MEA	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12
NEU	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.05	0.06	0.07	0.09	0.13	0.16	0.19	0.21	0.23	0.24	0.25
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	0.11	0.13	0.16	0.19	0.22
USA	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04

Table 73: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

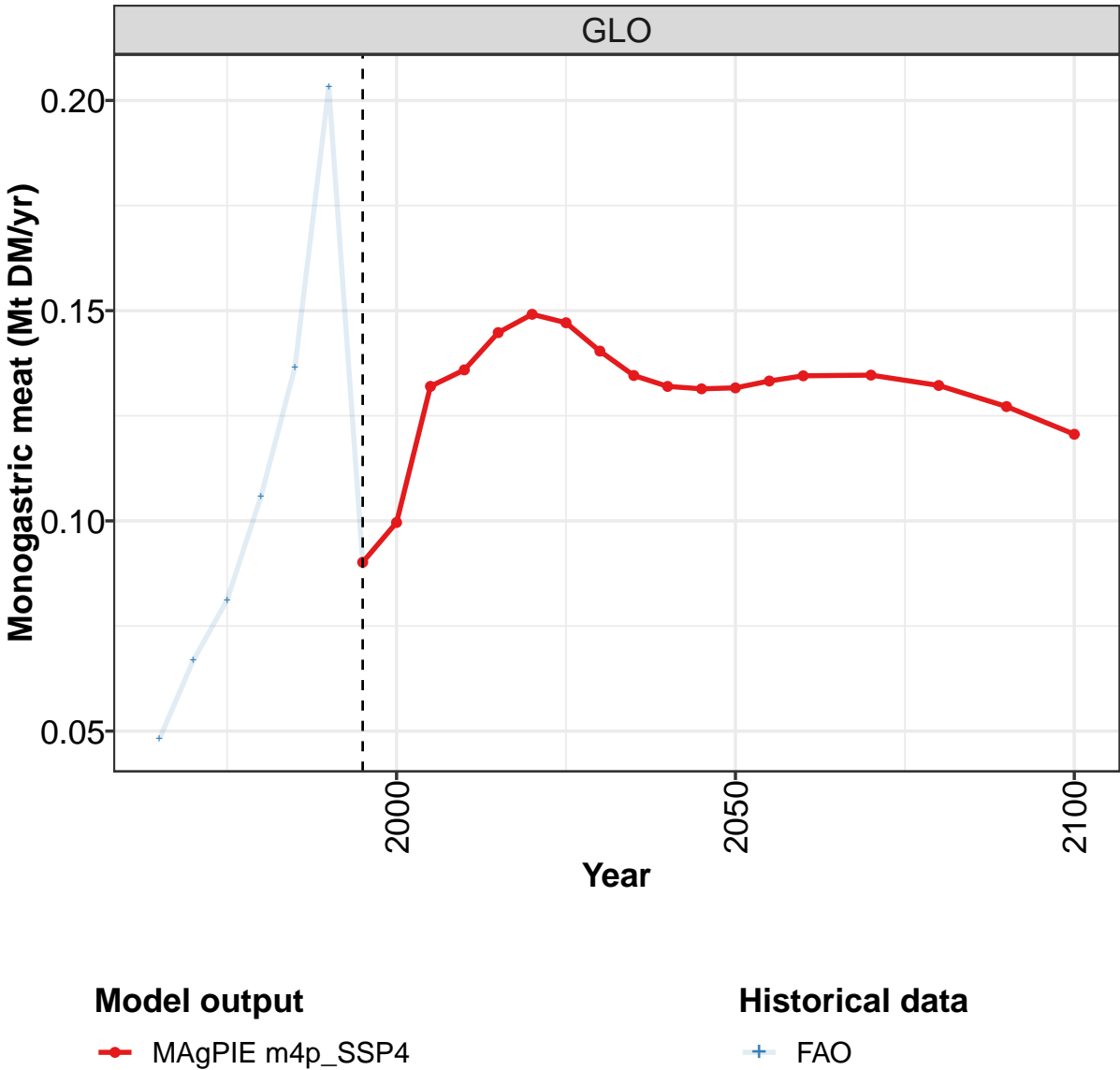
	2050	2055	2060	2070	2080	2090	2100
GLO	2.01	2.05	2.09	2.14	2.16	2.15	2.17
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.63	0.60	0.57	0.50	0.44	0.37	0.31
EUR	0.03	0.03	0.02	0.02	0.02	0.02	0.02
IND	0.40	0.42	0.43	0.43	0.42	0.40	0.37
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.22	0.22	0.22	0.22	0.22	0.21	0.21
MEA	0.13	0.14	0.15	0.17	0.18	0.20	0.22
NEU	0.03	0.03	0.03	0.03	0.02	0.02	0.02
OAS	0.26	0.26	0.27	0.27	0.26	0.25	0.25
REF	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SSA	0.25	0.29	0.33	0.43	0.53	0.61	0.71
USA	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Table 74: MAgPIE m4p\_SSP4 — 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



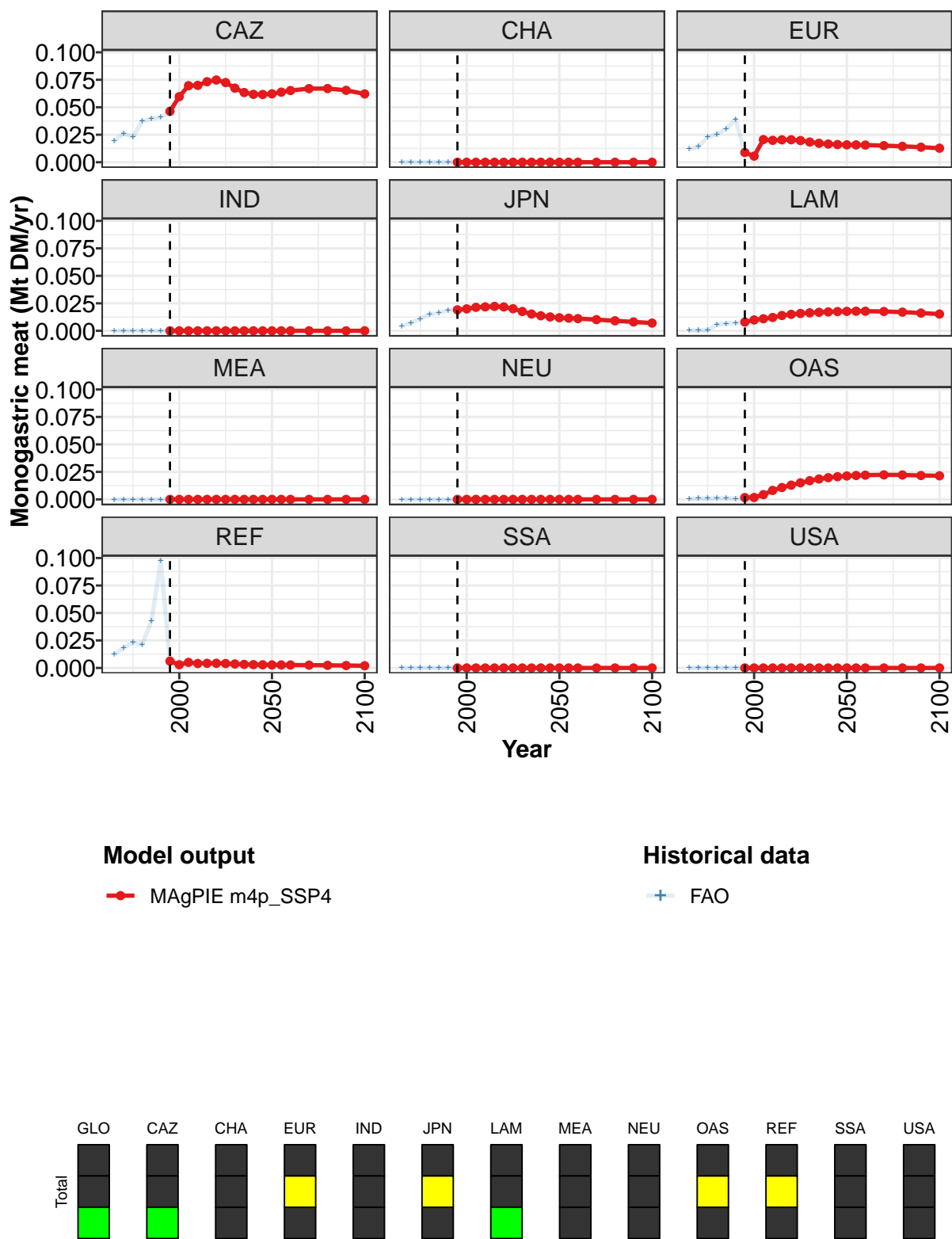


Figure 25: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.090	0.100	0.132	0.136	0.145	0.149	0.147	0.140	0.135	0.132	0.131
CAZ	0.046	0.060	0.070	0.070	0.073	0.075	0.072	0.067	0.063	0.062	0.062
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	0.020	0.020	0.018	0.017	0.017	0.016
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	0.015	0.014	0.013
LAM	0.008	0.010	0.011	0.012	0.014	0.015	0.016	0.016	0.017	0.017	0.017
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	0.015	0.017	0.019	0.020	0.021
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

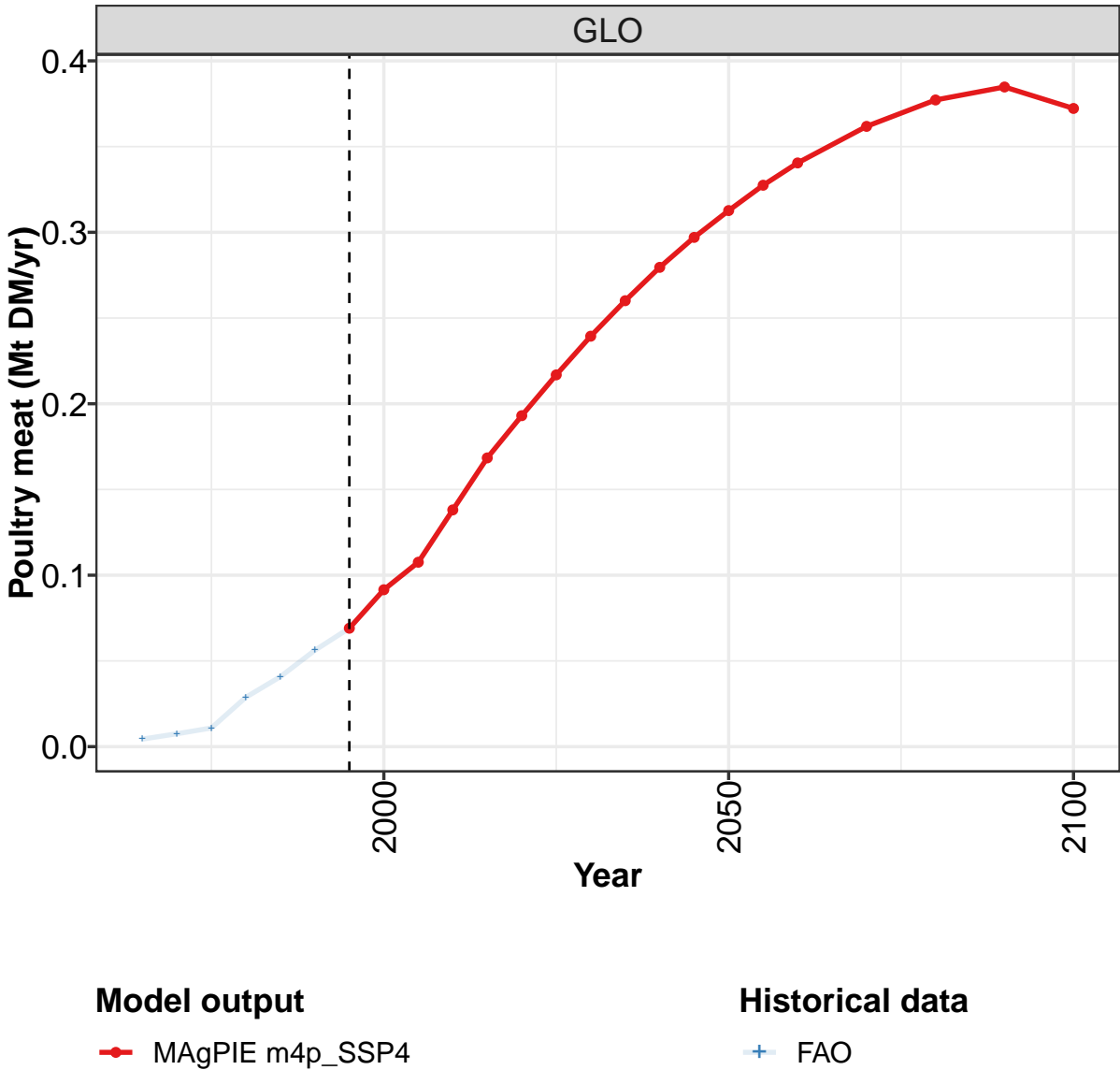
	2050	2055	2060	2070	2080	2090	2100
GLO	0.132	0.133	0.135	0.135	0.132	0.127	0.121
CAZ	0.062	0.064	0.065	0.067	0.067	0.065	0.062
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.016	0.016	0.016	0.015	0.014	0.014	0.013
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.012	0.012	0.011	0.010	0.009	0.008	0.007
LAM	0.018	0.018	0.018	0.018	0.017	0.016	0.015
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	0.021	0.022	0.022	0.022	0.022	0.022	0.021
REF	0.003	0.003	0.003	0.003	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 77: MAgPIE m4p\_SSP4 — 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



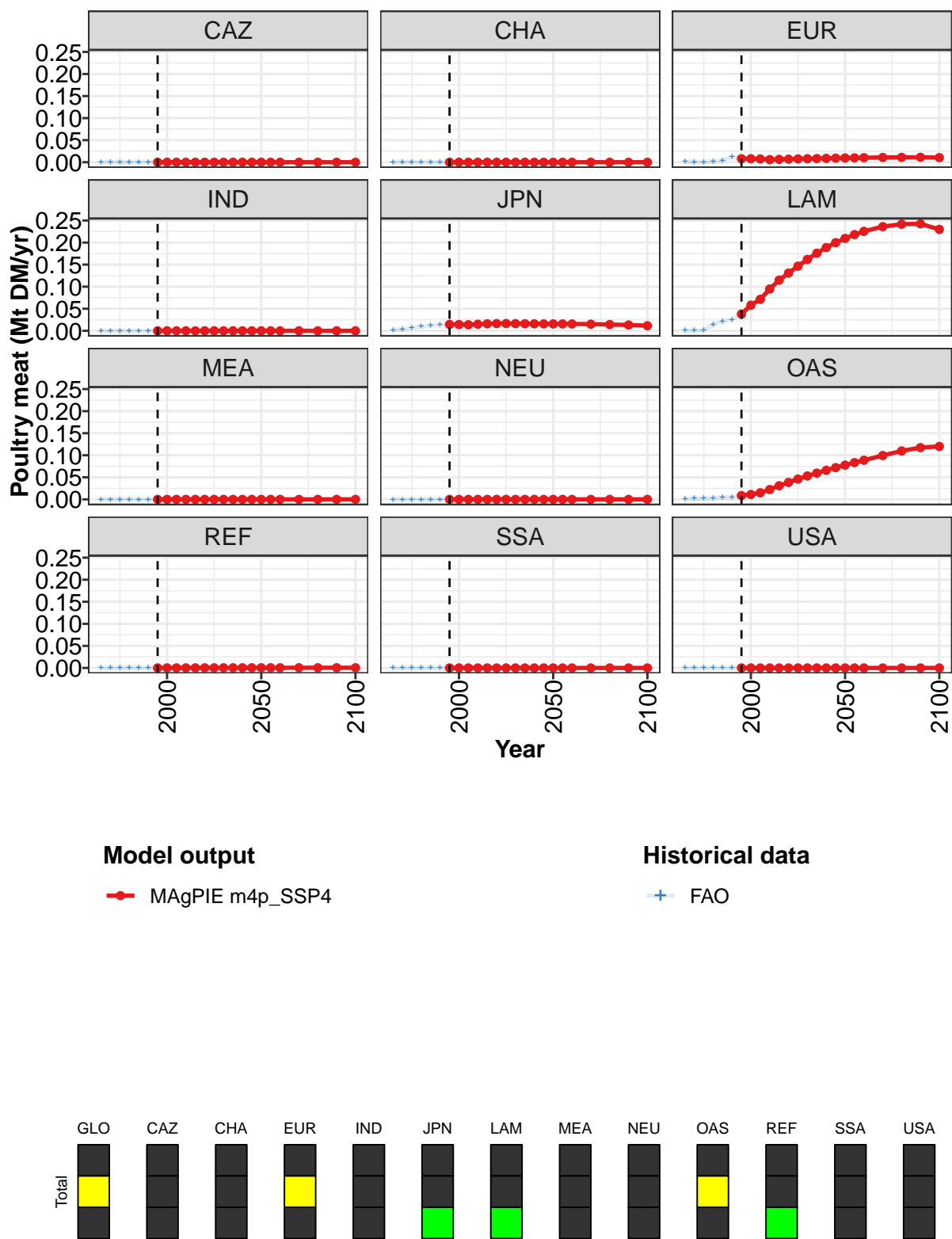


Figure 26: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.069	0.092	0.108	0.138	0.168	0.193	0.217	0.239	0.260	0.280	0.297
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	0.008	0.009	0.009
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	0.016	0.016	0.016	0.016
LAM	0.038	0.058	0.071	0.095	0.115	0.131	0.147	0.162	0.176	0.189	0.200
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	0.038	0.046	0.053	0.060	0.066	0.072
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.313	0.327	0.340	0.362	0.377	0.385	0.372
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	0.010	0.010	0.010	0.011	0.011	0.011	0.010
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.016	0.016	0.016	0.015	0.014	0.013	0.012
LAM	0.209	0.218	0.225	0.236	0.242	0.242	0.230
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	0.078	0.083	0.089	0.099	0.110	0.117	0.120
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

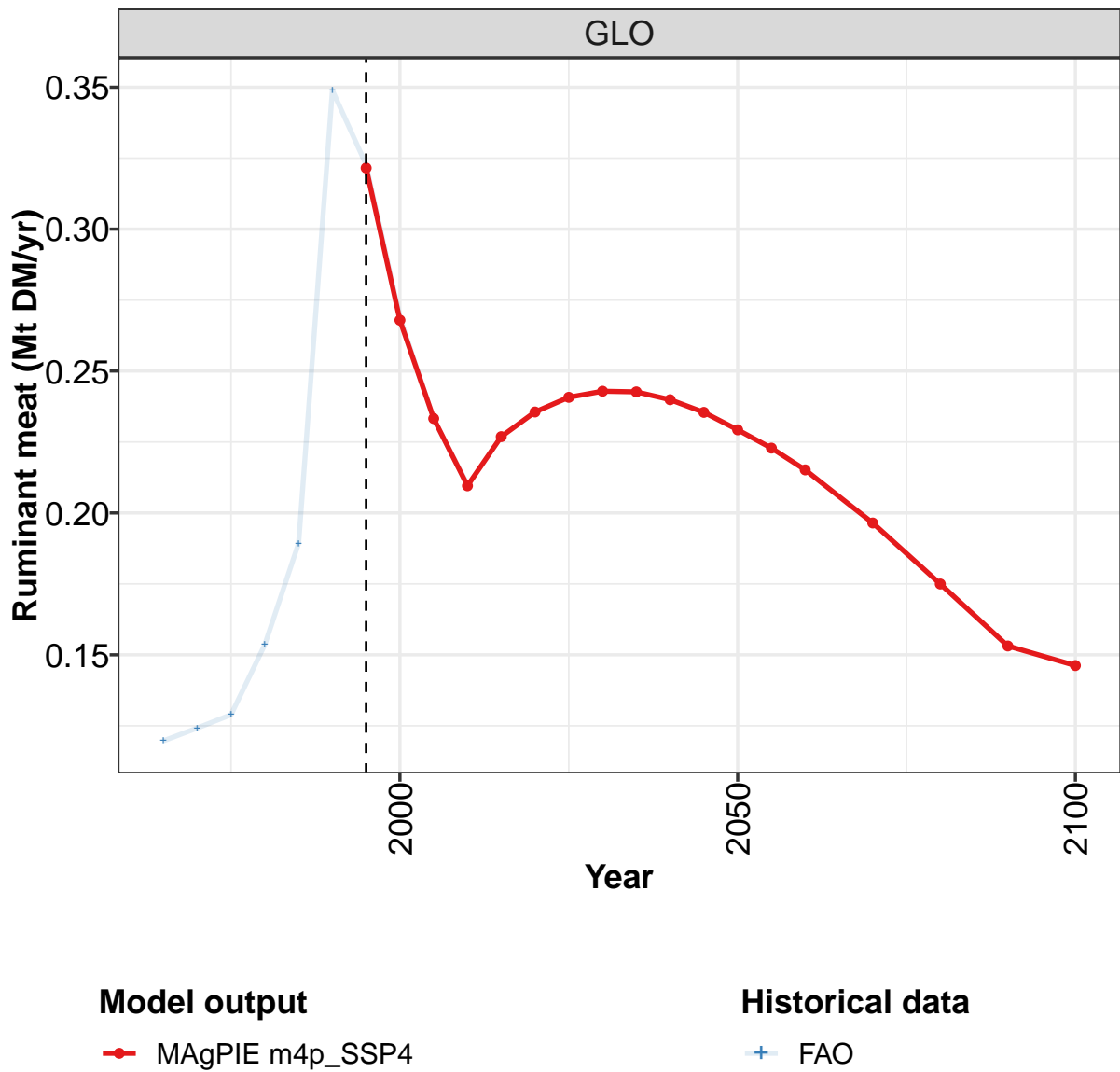
Table 80: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Poultry meat (Mt DM/yr) [PART 2/2]

	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



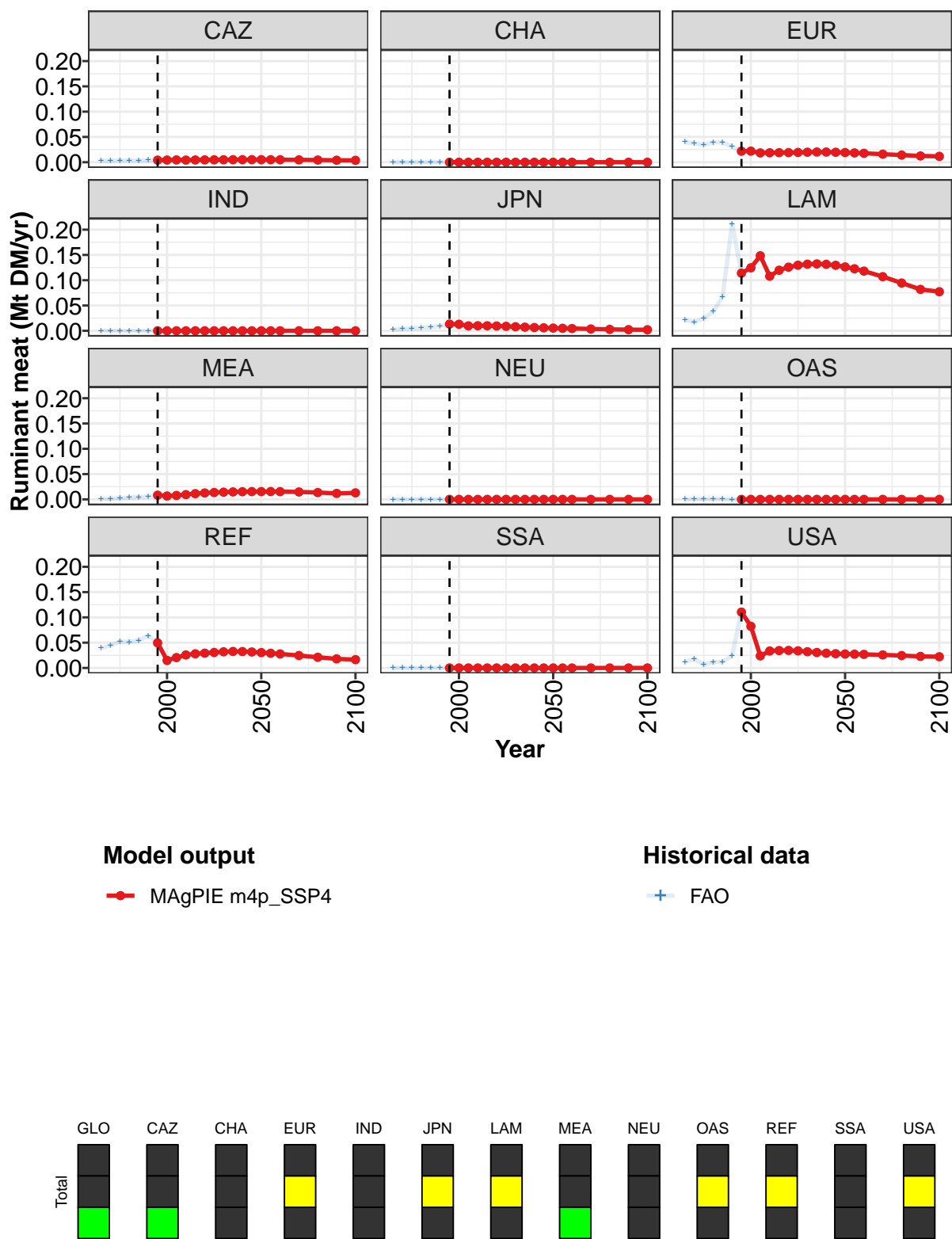


Figure 27: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.322	0.268	0.233	0.210	0.227	0.236	0.241	0.243	0.243	0.240	0.235
CAZ	0.004	0.004	0.005	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005
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	0.019	0.020	0.020	0.020	0.020
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	0.007	0.007	0.006
LAM	0.114	0.125	0.148	0.108	0.120	0.126	0.130	0.132	0.132	0.132	0.130
MEA	0.008	0.007	0.008	0.009	0.011	0.013	0.014	0.014	0.015	0.015	0.015
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	0.032	0.033	0.032	0.032
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	0.034	0.032	0.031	0.029	0.028

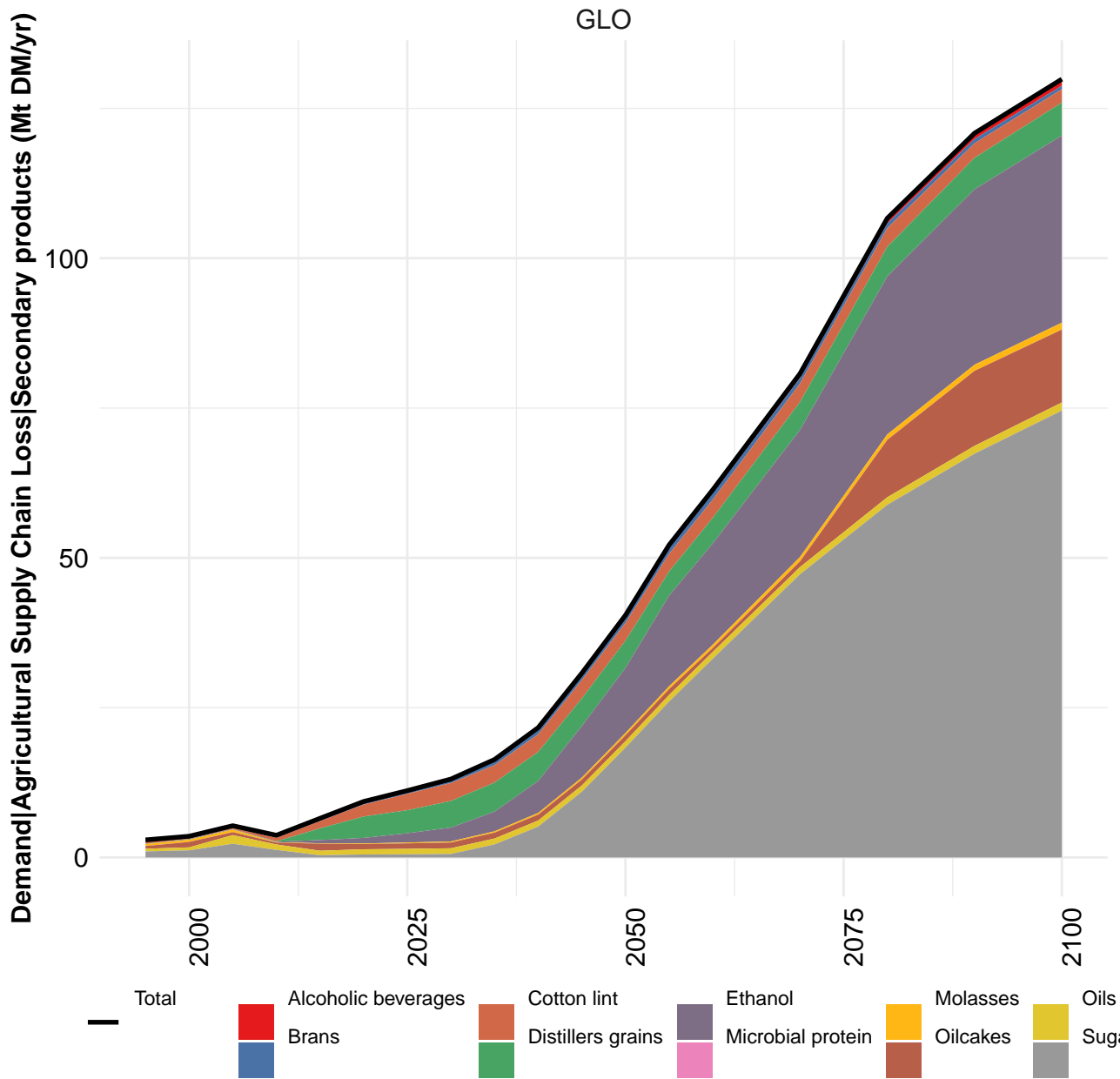
Table 82: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

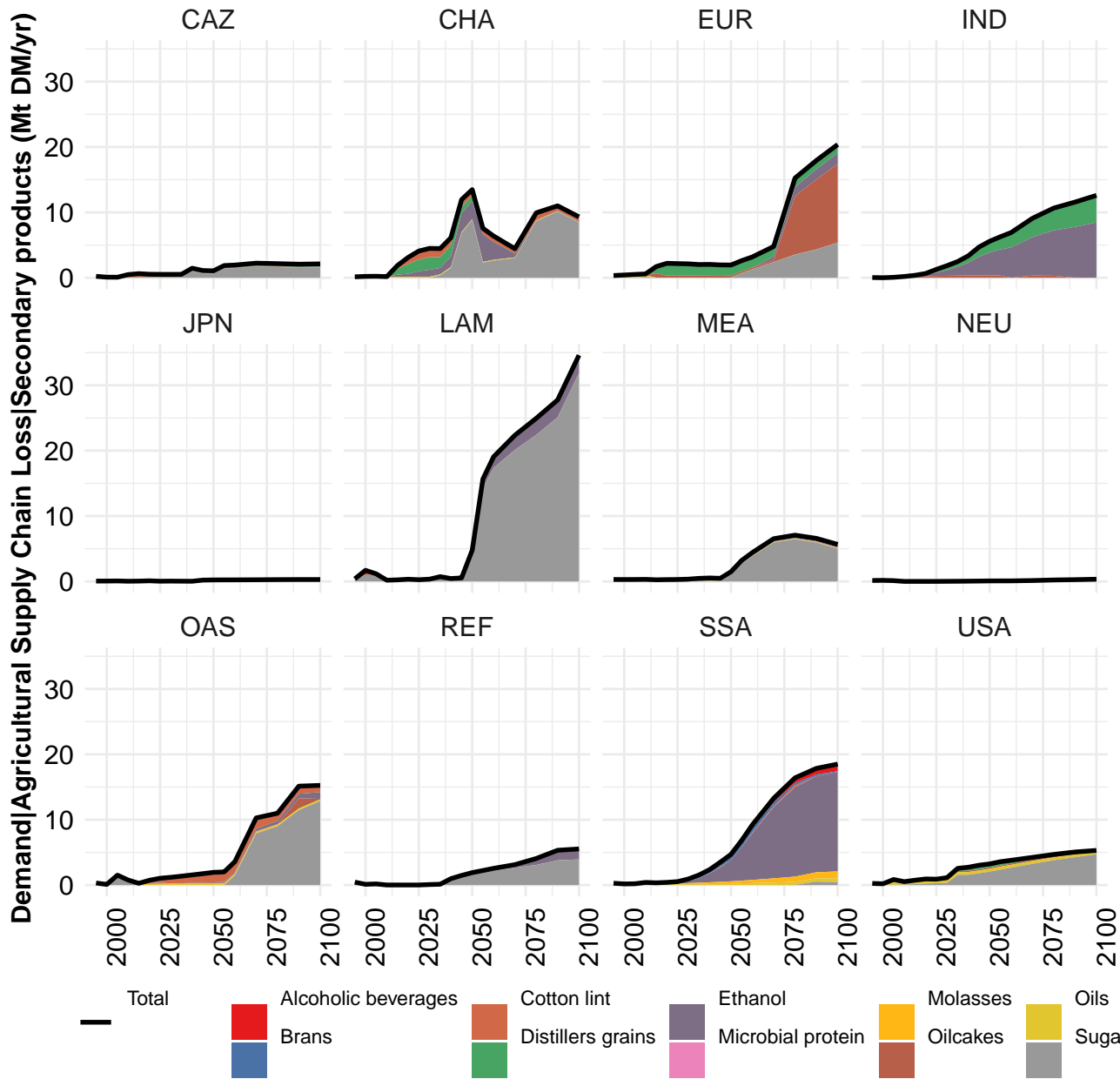
	2050	2055	2060	2070	2080	2090	2100
GLO	0.229	0.223	0.215	0.196	0.175	0.153	0.146
CAZ	0.005	0.005	0.005	0.005	0.004	0.004	0.004
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.019	0.018	0.018	0.016	0.014	0.012	0.012
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.005	0.005	0.005	0.004	0.003	0.002	0.002
LAM	0.126	0.123	0.118	0.107	0.094	0.082	0.077
MEA	0.015	0.015	0.015	0.015	0.014	0.012	0.013
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	0.030	0.029	0.028	0.025	0.021	0.018	0.016
SSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USA	0.028	0.027	0.027	0.026	0.024	0.023	0.022

Table 83: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

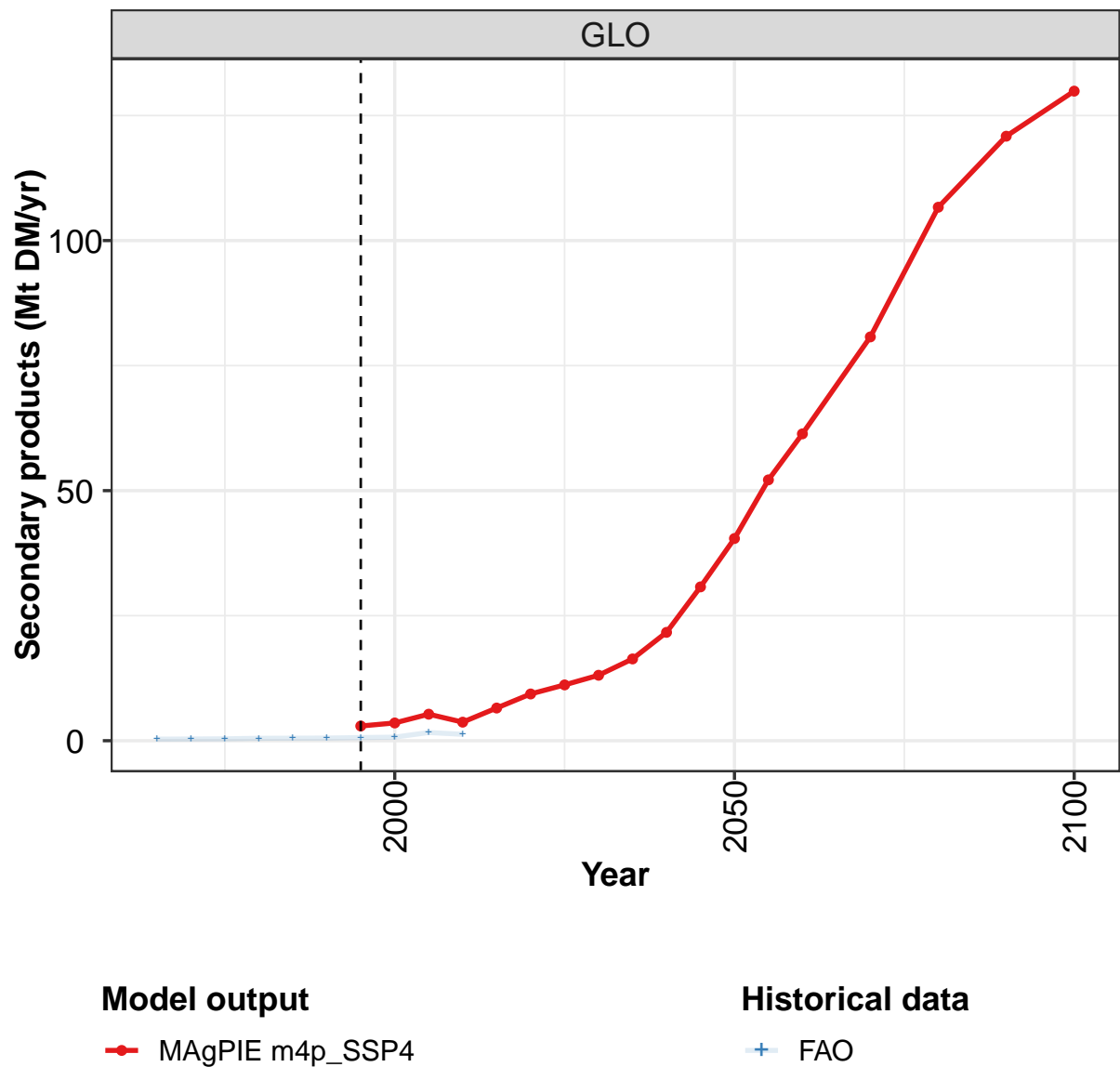
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.120	0.124	0.129	0.154	0.189	0.349	0.323	0.269	0.233	0.210
CAZ	0.003	0.003	0.004	0.004	0.003	0.004	0.004	0.004	0.005	0.004
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.040	0.037	0.035	0.039	0.039	0.031	0.022	0.022	0.018	0.019
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)





3.3 Secondary products



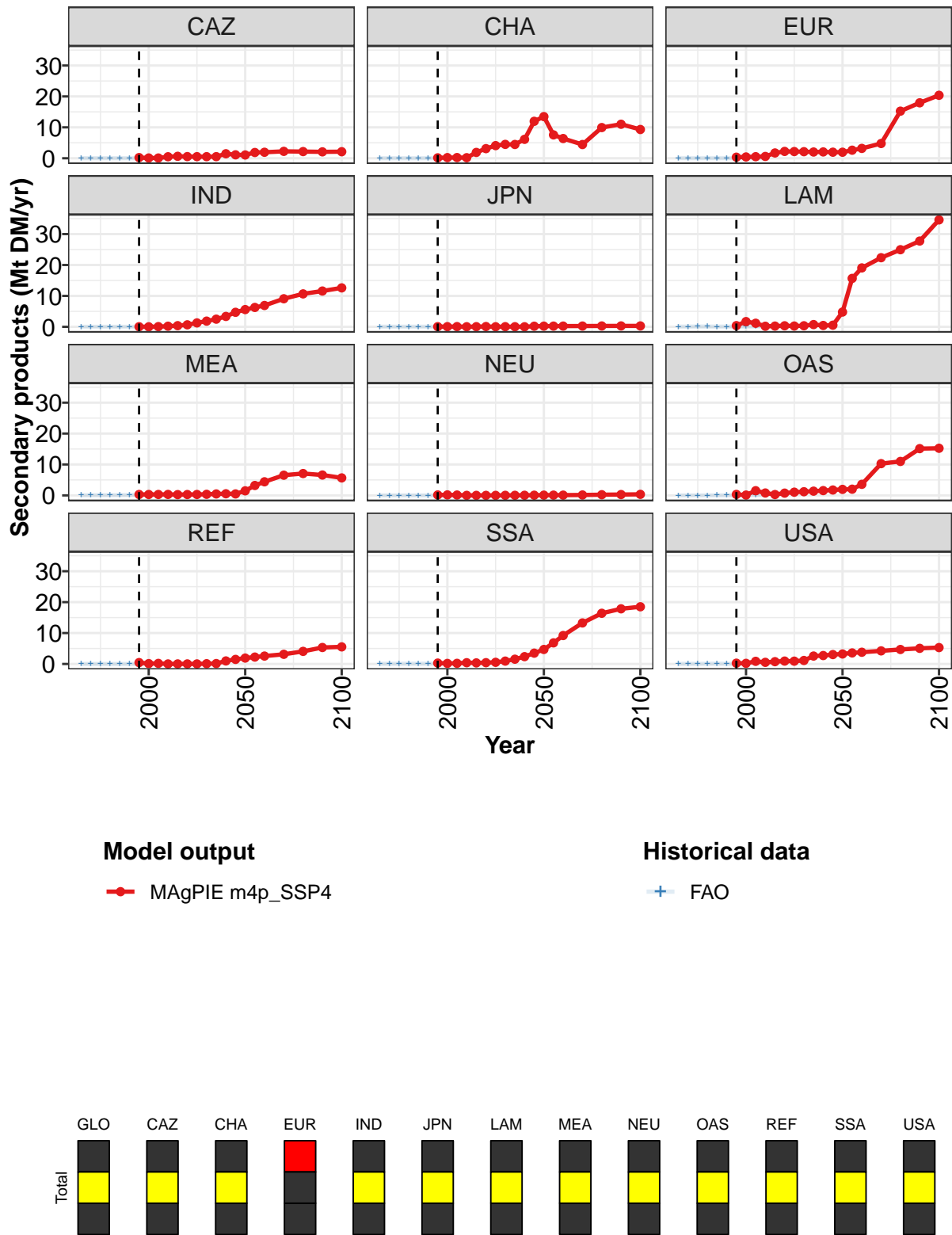


Figure 28: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3	4	5	4	7	9	11	13	16	22	31
CAZ	0	0	0	0	1	1	1	1	1	1	1
CHA	0	0	0	0	2	3	4	4	4	6	12
EUR	0	0	1	1	2	2	2	2	2	2	2
IND	0	0	0	0	0	1	1	2	2	3	5
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	0	2	1	0	0	0	0	0	1	0	1
MEA	0	0	0	0	0	0	0	0	0	1	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	0	0	2	1	0	1	1	1	1	2	2
REF	0	0	0	0	0	0	0	0	0	1	1
SSA	0	0	0	0	0	0	1	1	2	2	4
USA	0	0	1	1	1	1	1	1	3	3	3

Table 85: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products (Mt DM/yr)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	40	52	61	81	107	121	130
CAZ	1	2	2	2	2	2	2
CHA	13	8	6	4	10	11	9
EUR	2	3	3	5	15	18	20
IND	6	6	7	9	11	12	13
JPN	0	0	0	0	0	0	0
LAM	5	16	19	22	25	28	35
MEA	1	3	4	7	7	7	6
NEU	0	0	0	0	0	0	0
OAS	2	2	4	10	11	15	15
REF	2	2	3	3	4	5	6
SSA	5	7	9	13	16	18	19
USA	3	4	4	4	5	5	5

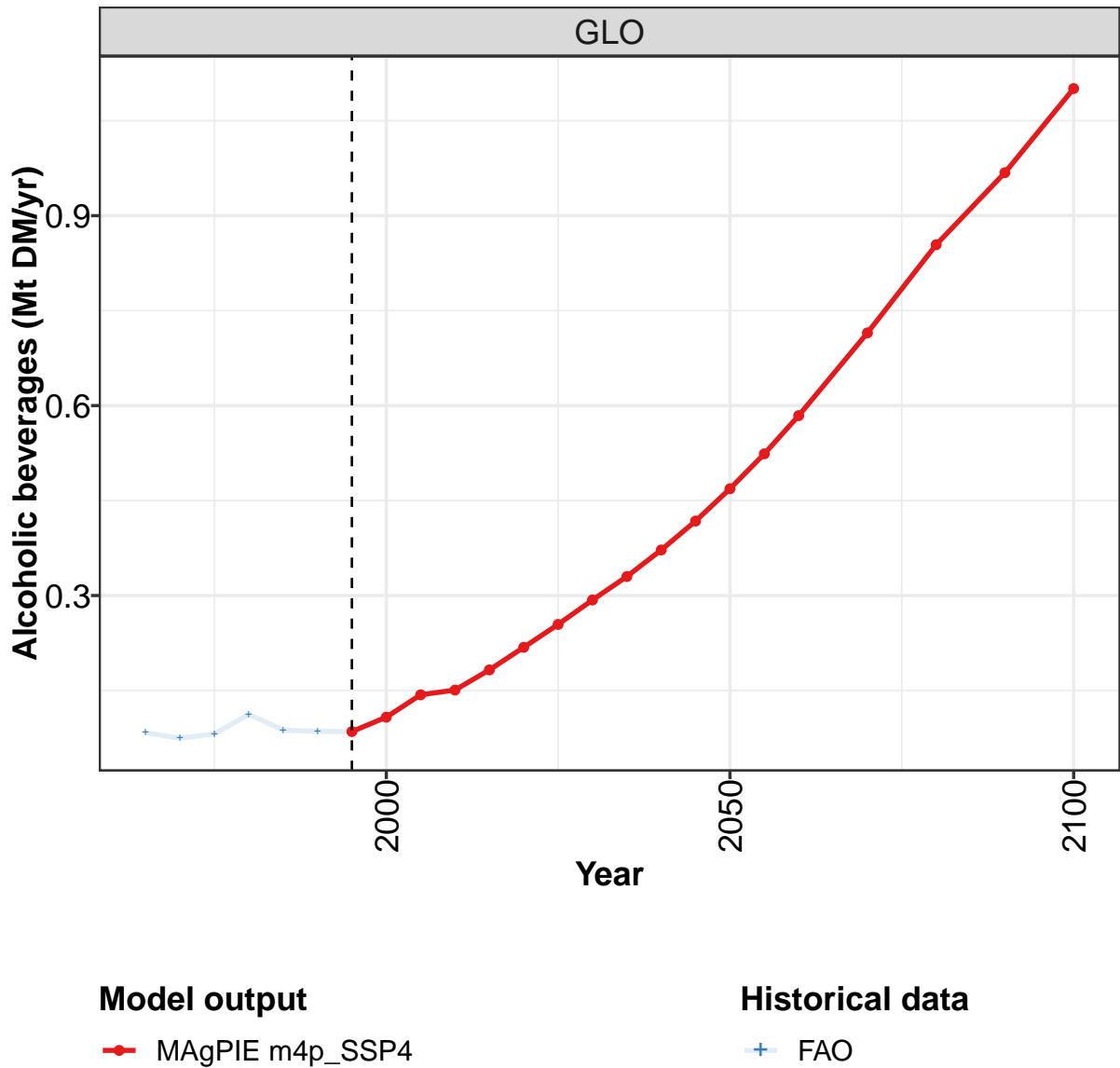
Table 86: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products (Mt DM/yr)  
[PART 2/2]

	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



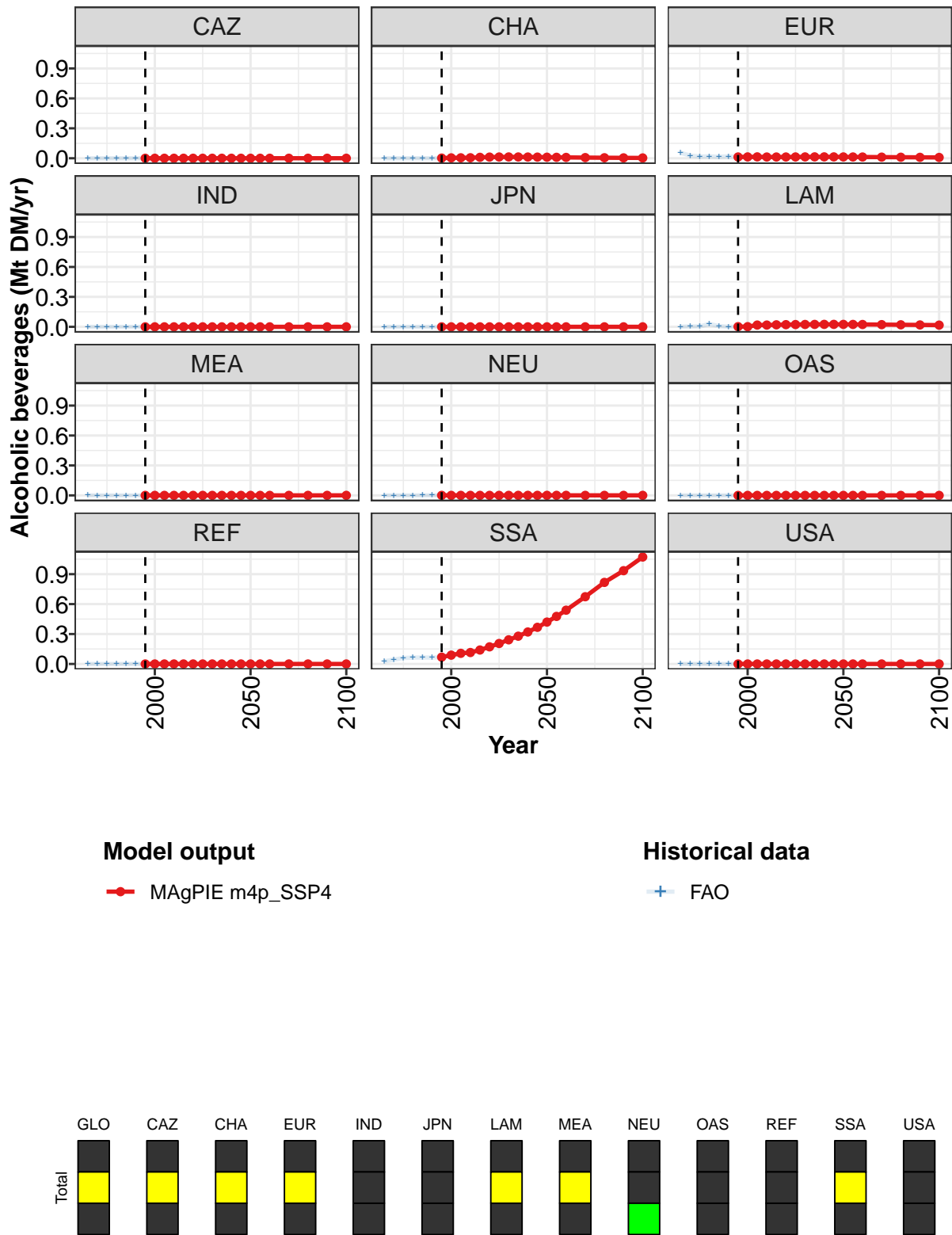


Figure 29: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.09	0.11	0.14	0.15	0.18	0.22	0.25	0.29	0.33	0.37	0.42
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	0.01	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	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	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.07	0.09	0.11	0.11	0.14	0.17	0.21	0.24	0.28	0.32	0.37
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 88: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

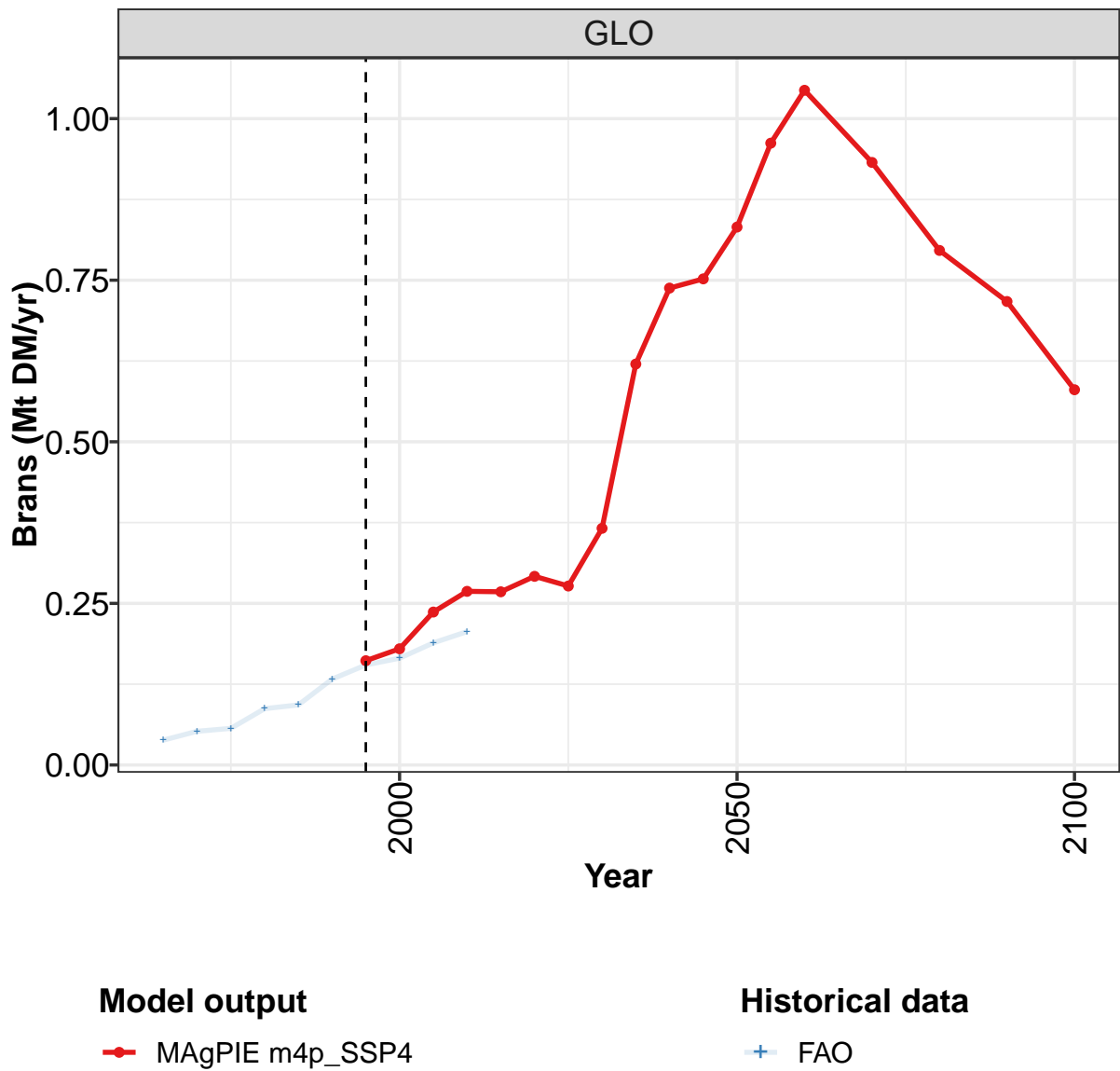
	2050	2055	2060	2070	2080	2090	2100
GLO	0.47	0.52	0.58	0.71	0.85	0.97	1.10
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.01	0.01	0.01	0.01	0.01	0.00	0.00
EUR	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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	0.42	0.48	0.54	0.67	0.82	0.93	1.07
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 89: MAgPIE m4p\_SSP4 — 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



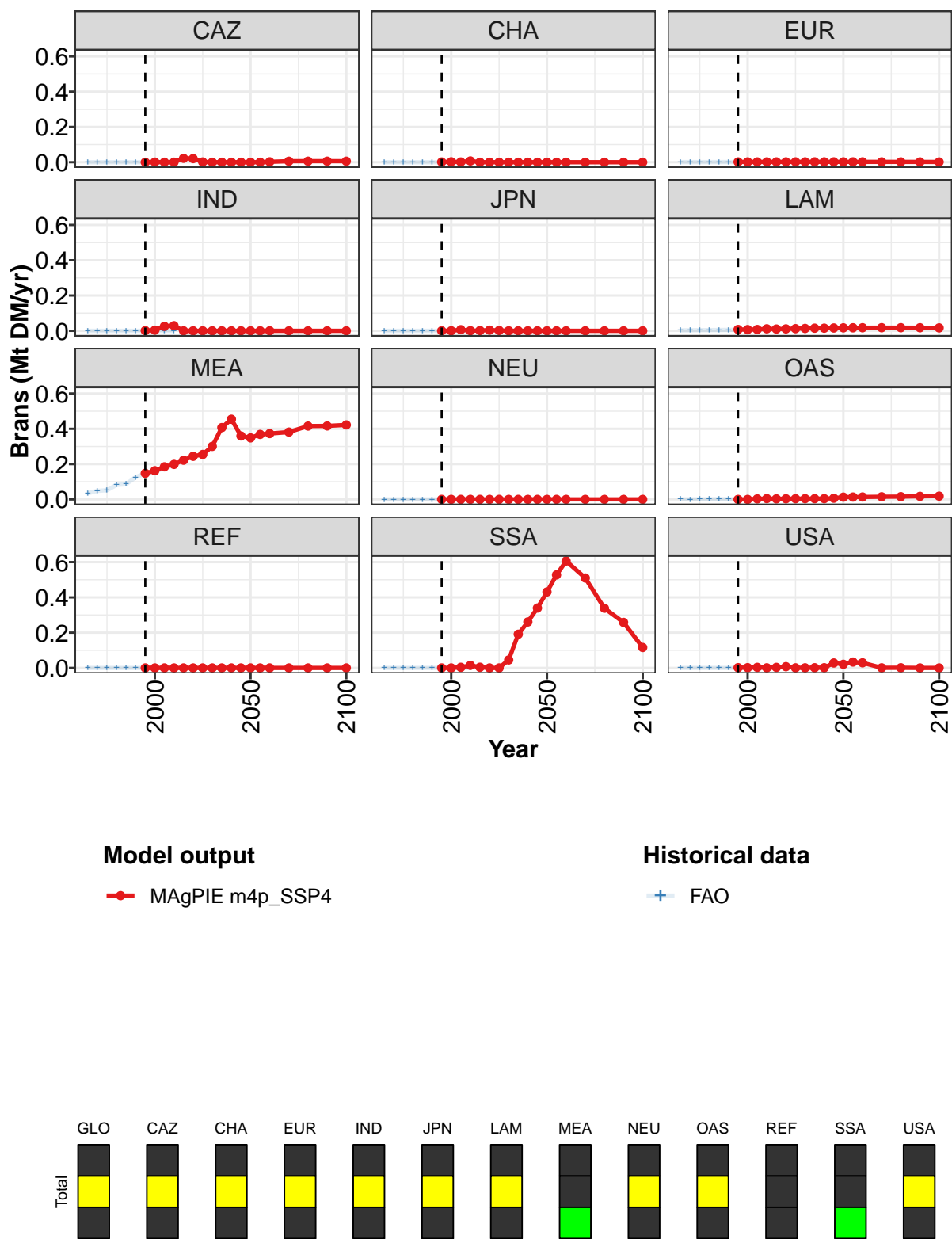


Figure 30: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.16	0.18	0.24	0.27	0.27	0.29	0.28	0.37	0.62	0.74	0.75
CAZ	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.01	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	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.01	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	0.02
MEA	0.15	0.16	0.18	0.20	0.22	0.24	0.25	0.30	0.41	0.45	0.36
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	0.01
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	0.01	0.00	0.00	0.00	0.05	0.19	0.26	0.34
USA	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03

Table 91: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Brans (Mt DM/yr) [PART 1/2]

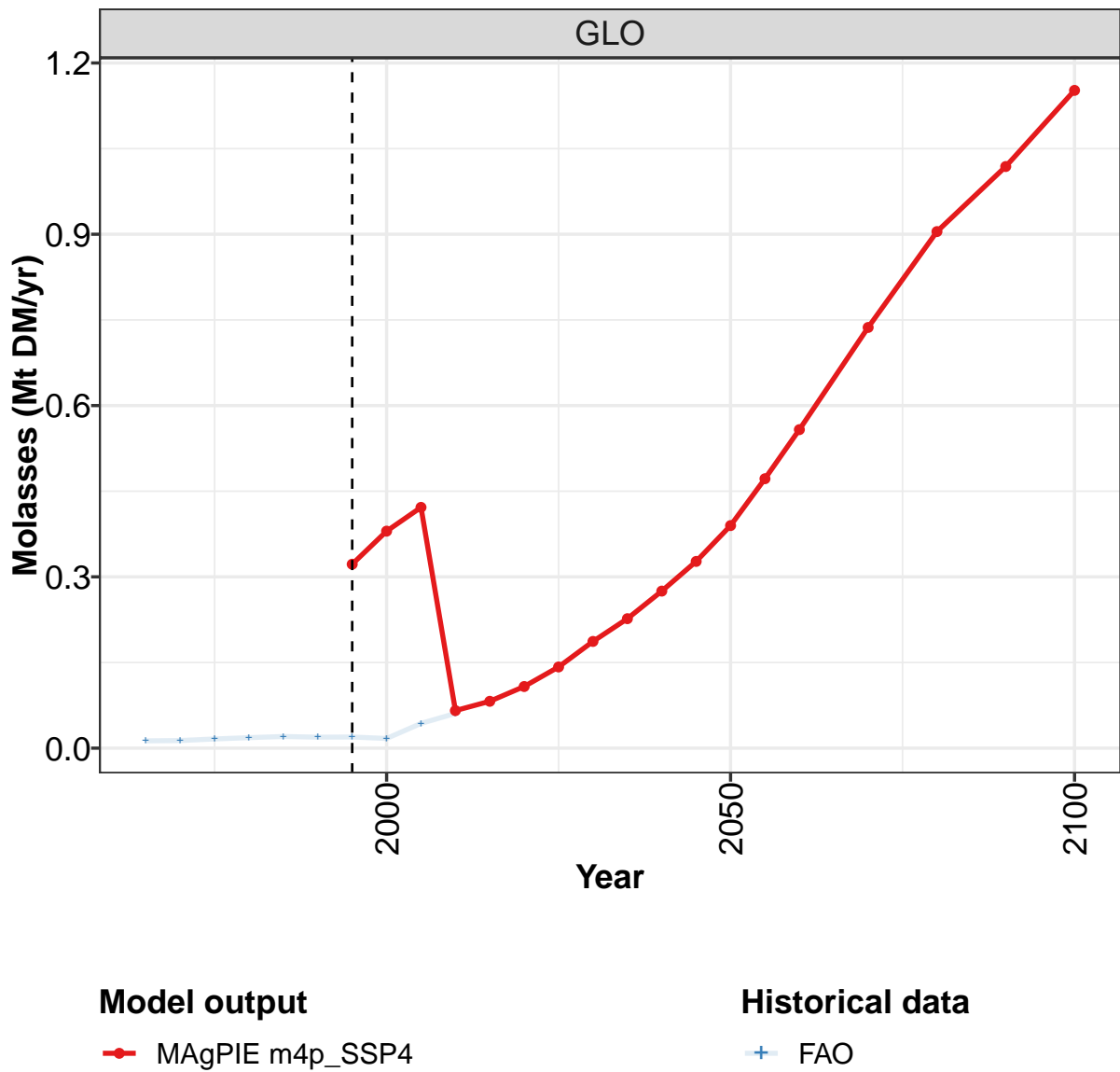
	2050	2055	2060	2070	2080	2090	2100
GLO	0.83	0.96	1.04	0.93	0.80	0.72	0.58
CAZ	0.00	0.00	0.00	0.01	0.01	0.01	0.01
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MEA	0.35	0.37	0.37	0.38	0.42	0.42	0.42
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.01	0.01	0.01	0.01	0.02	0.02	0.02
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.43	0.53	0.61	0.51	0.34	0.26	0.12
USA	0.02	0.03	0.03	0.00	0.00	0.00	0.00

Table 92: MAgPIE m4p\_SSP4 — 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



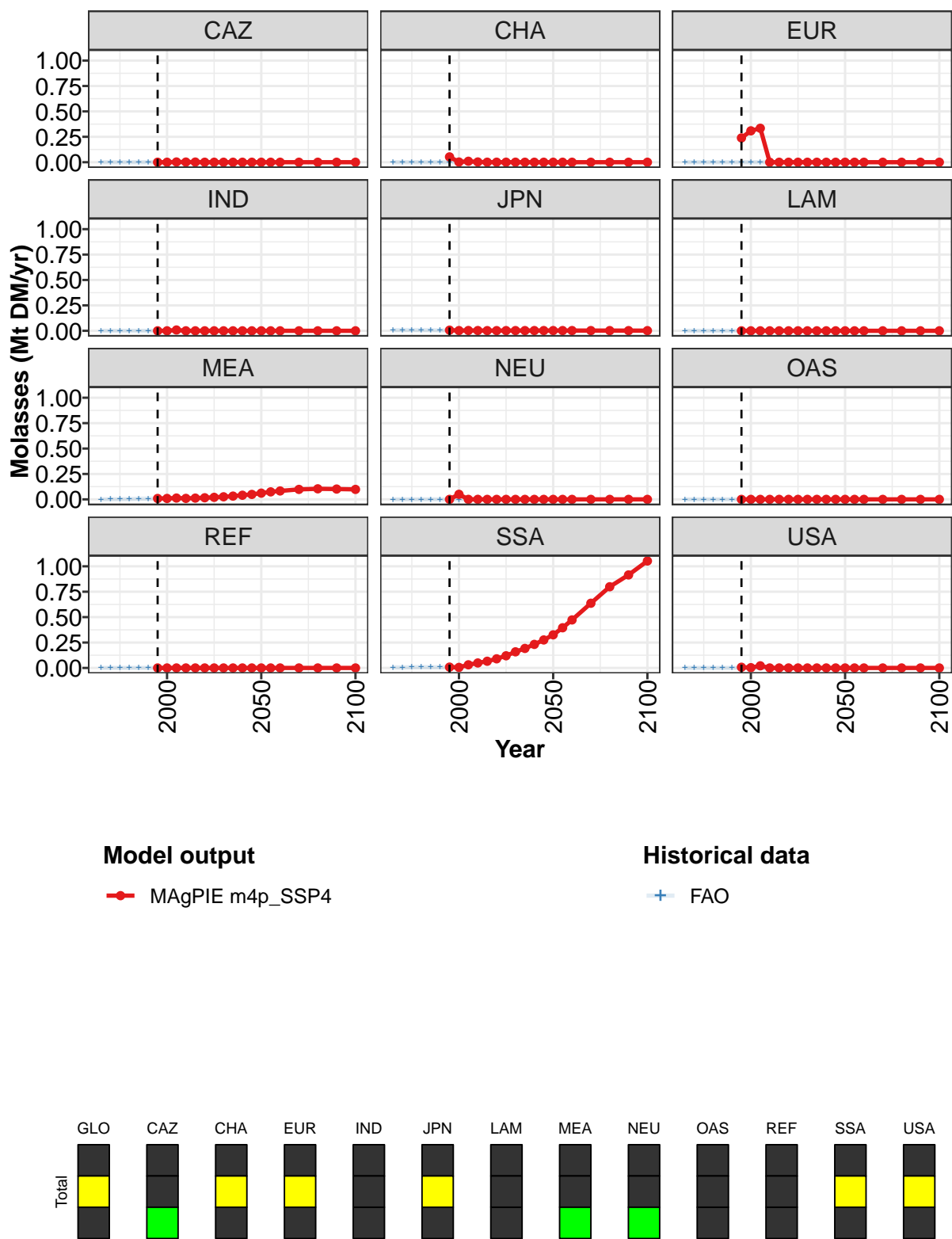


Figure 31: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Molasses (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.32	0.38	0.42	0.07	0.08	0.11	0.14	0.19	0.23	0.28	0.33
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	0.02	0.03	0.03	0.04	0.05
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	0.12	0.16	0.19	0.23	0.28
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\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

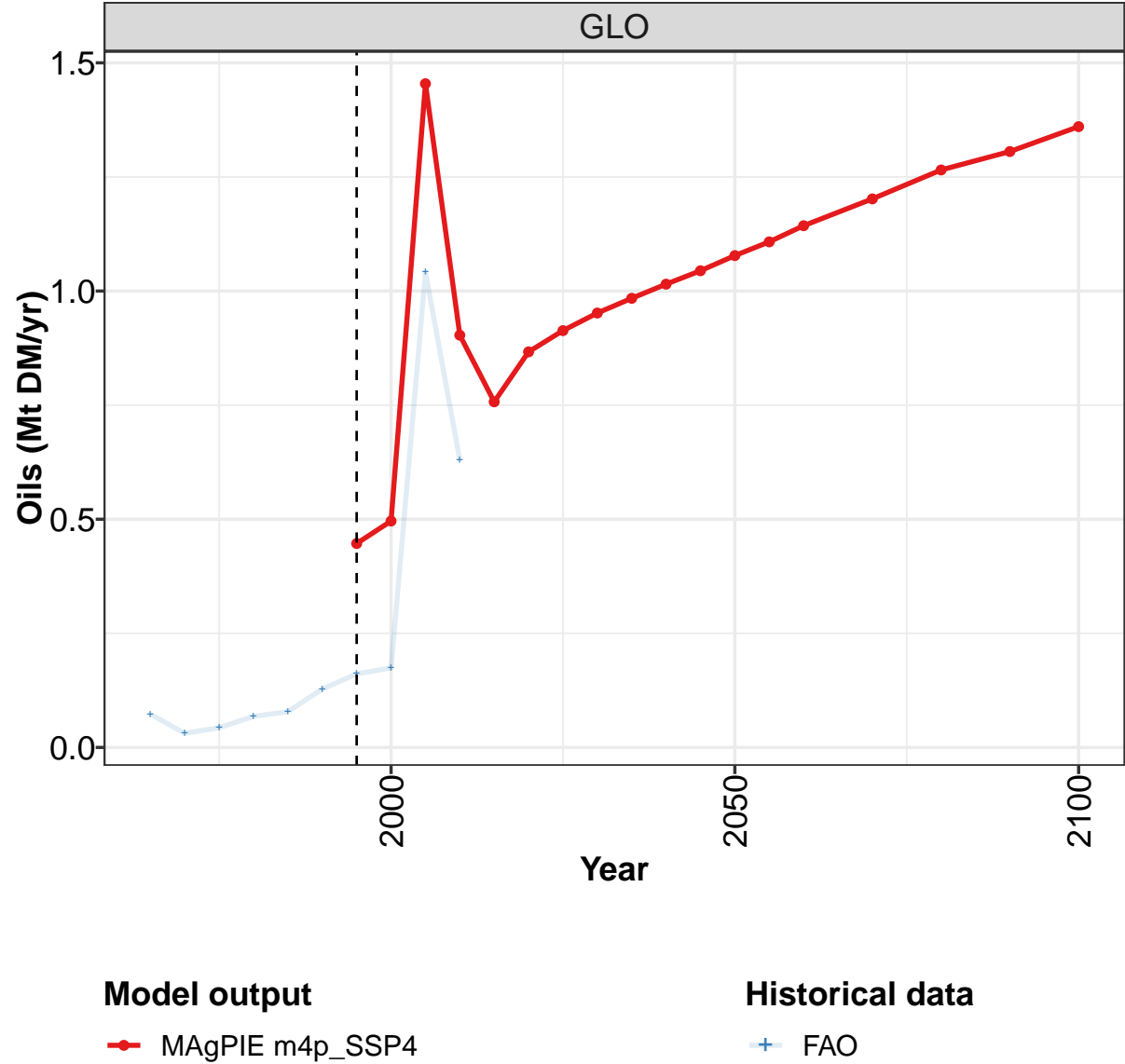
	2050	2055	2060	2070	2080	2090	2100
GLO	0.39	0.47	0.56	0.74	0.90	1.02	1.15
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.06	0.07	0.08	0.10	0.10	0.10	0.10
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	0.33	0.40	0.47	0.64	0.80	0.92	1.05
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 95: MAgPIE m4p\_SSP4 — 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



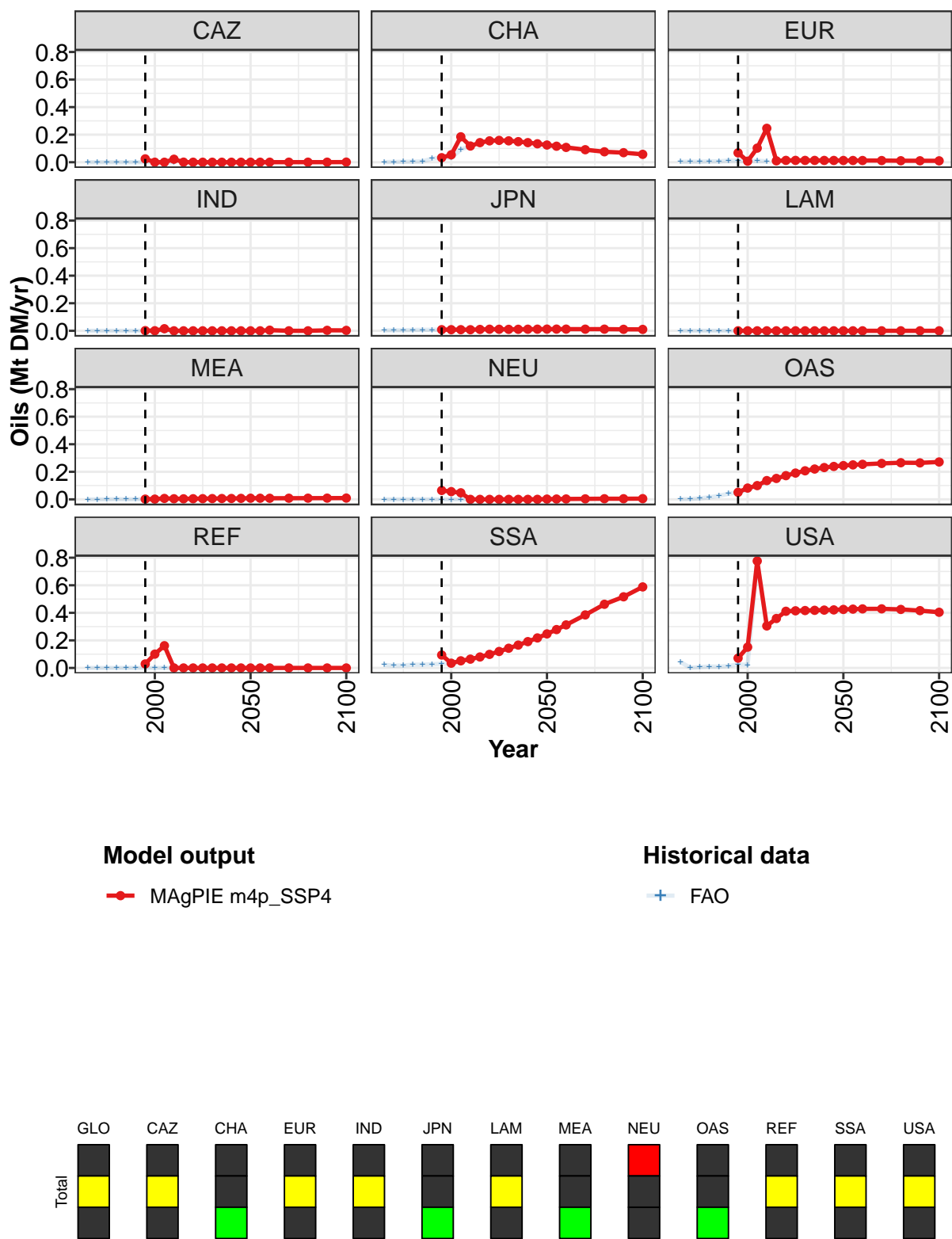


Figure 32: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.45	0.50	1.45	0.90	0.76	0.87	0.91	0.95	0.98	1.02	1.04
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	0.16	0.15	0.14	0.13
EUR	0.07	0.01	0.10	0.25	0.01	0.01	0.01	0.01	0.01	0.01	0.01
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	0.22	0.23	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	0.14	0.17	0.19	0.22
USA	0.07	0.15	0.78	0.30	0.36	0.41	0.41	0.42	0.42	0.42	0.42

Table 97: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Oils (Mt DM/yr) [PART 1/2]

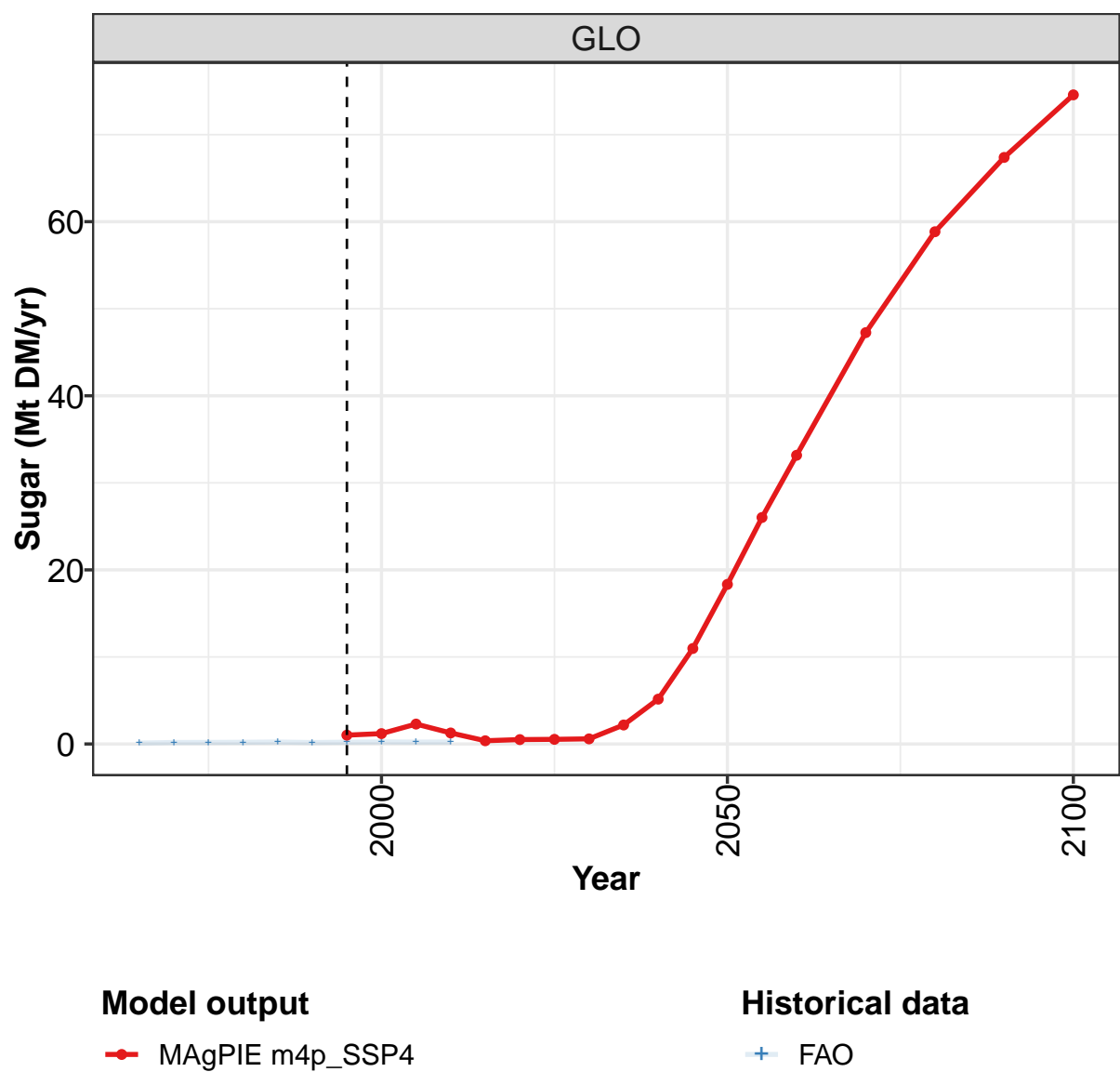
	2050	2055	2060	2070	2080	2090	2100
GLO	1.08	1.11	1.14	1.20	1.27	1.31	1.36
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.12	0.12	0.11	0.09	0.08	0.07	0.06
EUR	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.01
OAS	0.25	0.25	0.25	0.26	0.27	0.26	0.27
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.25	0.28	0.31	0.38	0.46	0.52	0.59
USA	0.42	0.43	0.43	0.43	0.42	0.42	0.40

Table 98: MAgPIE m4p\_SSP4 — 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



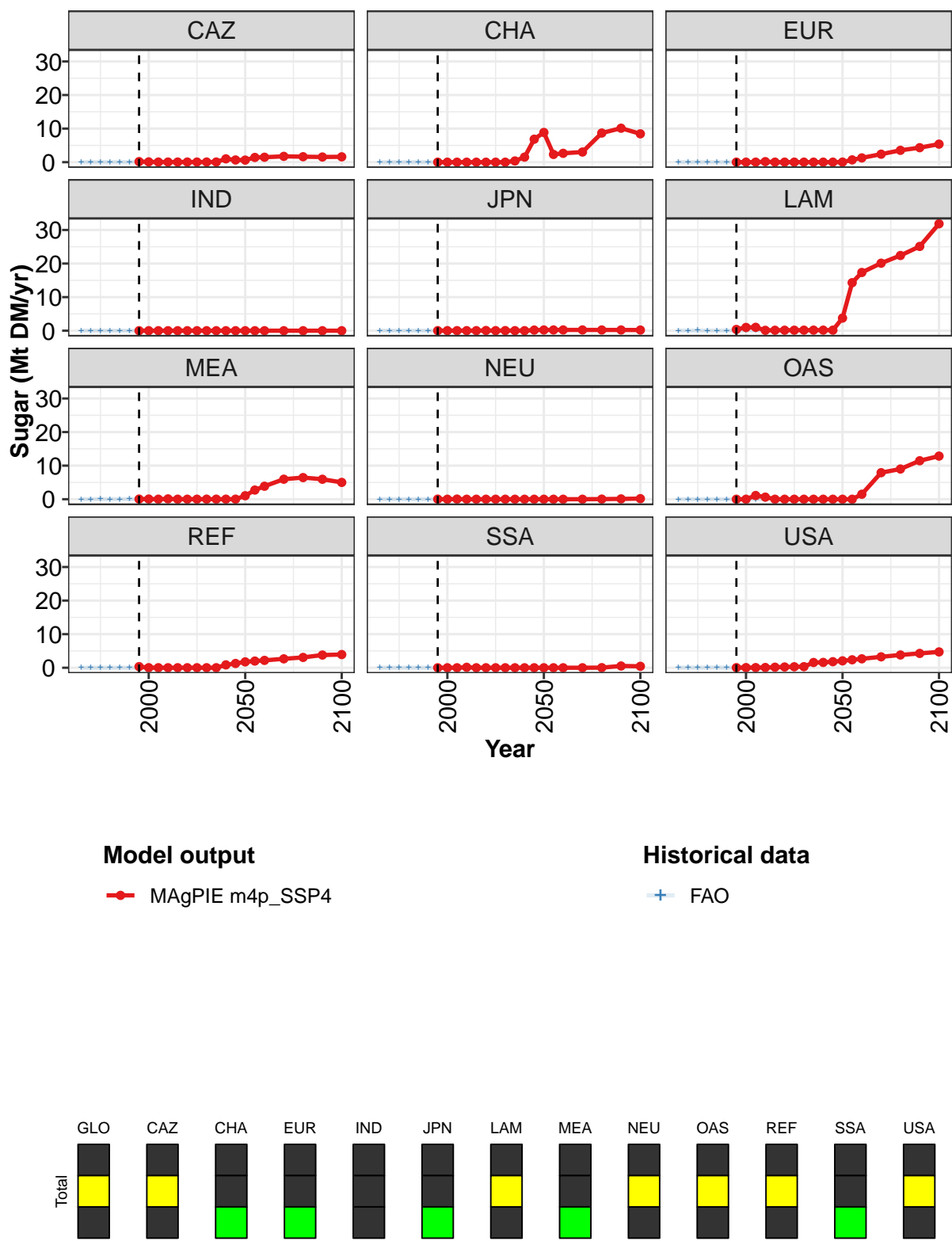


Figure 33: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.0	1.2	2.3	1.3	0.4	0.5	0.5	0.6	2.2	5.2	11.0
CAZ	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.7
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.5	6.8
EUR	0.0	0.0	0.0	0.2	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	0.1	0.0	0.0	0.0	0.0	0.2
LAM	0.4	1.0	1.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
MEA	0.0	0.0	0.0	0.1	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	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REF	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.3
SSA	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3	1.6	1.6	1.8

Table 100: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

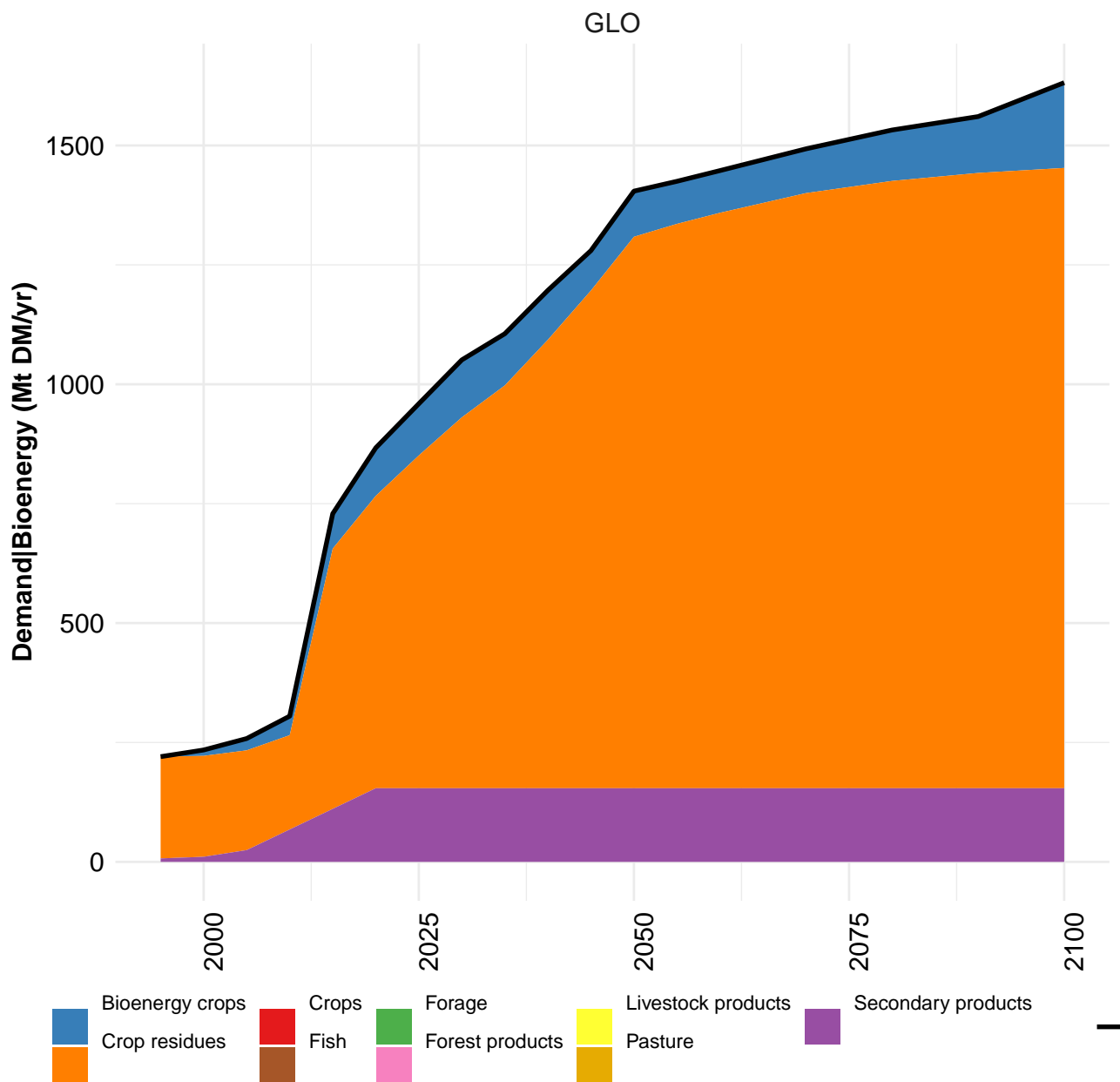
	2050	2055	2060	2070	2080	2090	2100
GLO	18.3	26.0	33.2	47.3	58.8	67.4	74.6
CAZ	0.6	1.4	1.5	1.7	1.6	1.5	1.6
CHA	8.9	2.3	2.6	3.0	8.7	10.1	8.4
EUR	0.0	0.7	1.3	2.4	3.5	4.3	5.4
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	3.8	14.3	17.3	20.1	22.4	25.1	31.8
MEA	1.0	2.7	3.9	6.0	6.4	5.9	5.0
NEU	0.0	0.0	0.0	0.0	0.0	0.1	0.2
OAS	0.0	0.0	1.5	7.9	9.0	11.5	12.8
REF	1.7	2.0	2.2	2.7	3.1	3.8	3.9
SSA	0.0	0.0	0.0	0.0	0.0	0.5	0.4
USA	2.1	2.4	2.7	3.3	3.8	4.3	4.7

Table 101: MAgPIE m4p\_SSP4 — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

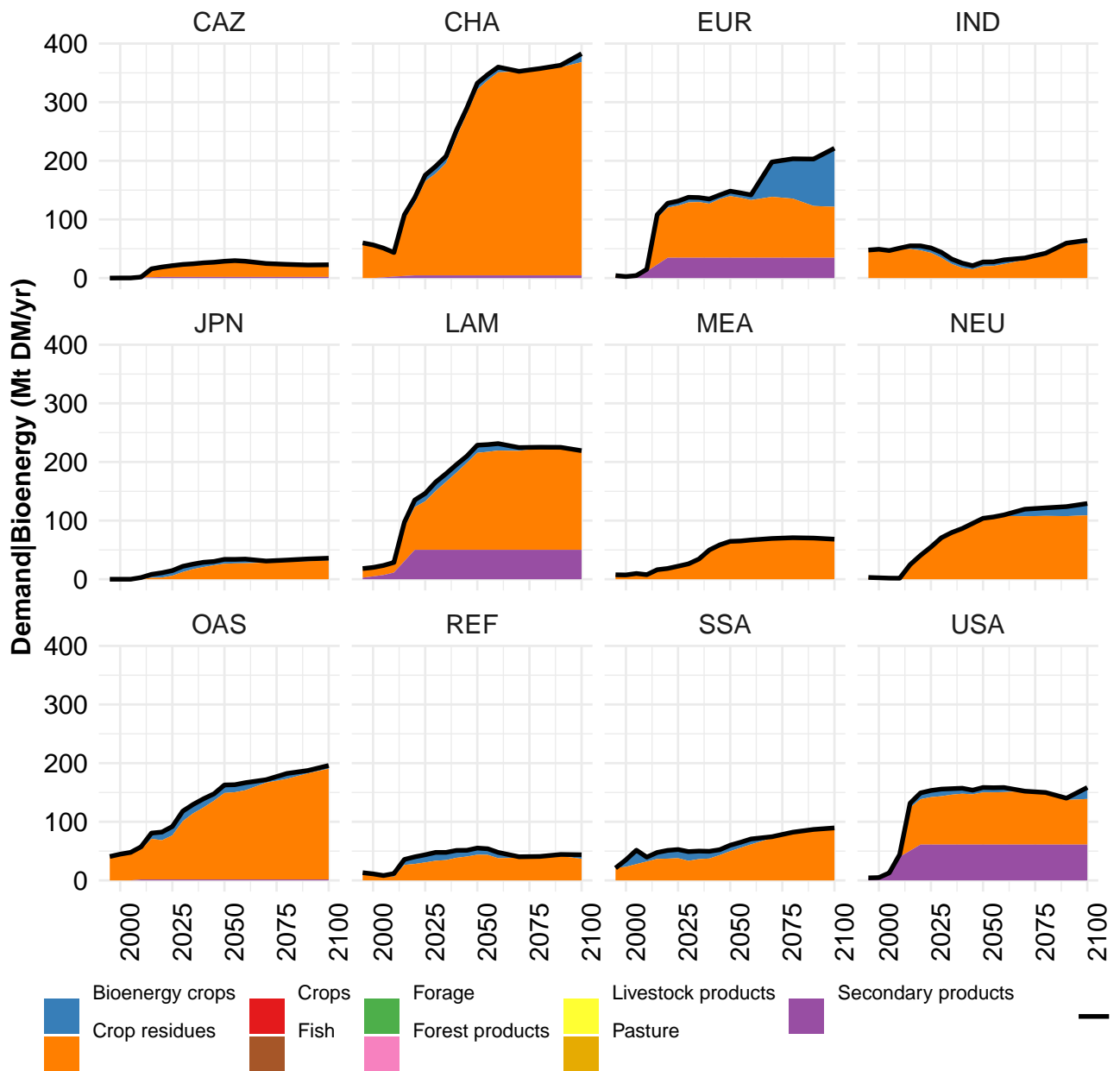
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.104	0.174	0.180	0.196	0.225	0.164	0.208	0.244	0.214	0.230
CAZ	0.014	0.021	0.016	0.021	0.017	0.017	0.020	0.033	0.035	0.038
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
EUR	0.007	0.008	0.011	0.022	0.018	0.014	0.008	0.009	0.010	0.007
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

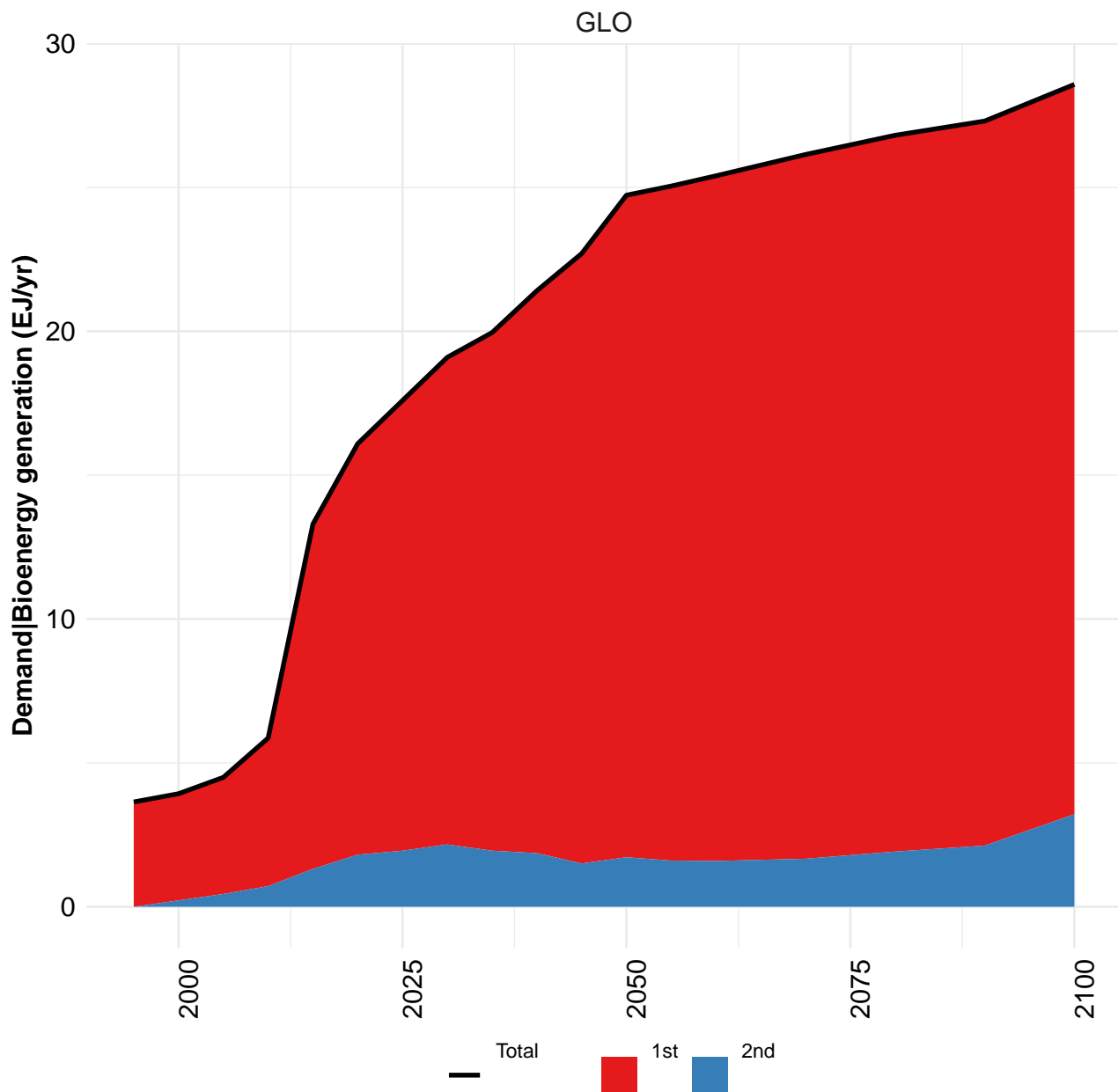
Table 102: FAO — Demand—Agricultural Supply Chain Loss—Secondary products—Sugar (Mt DM/yr)

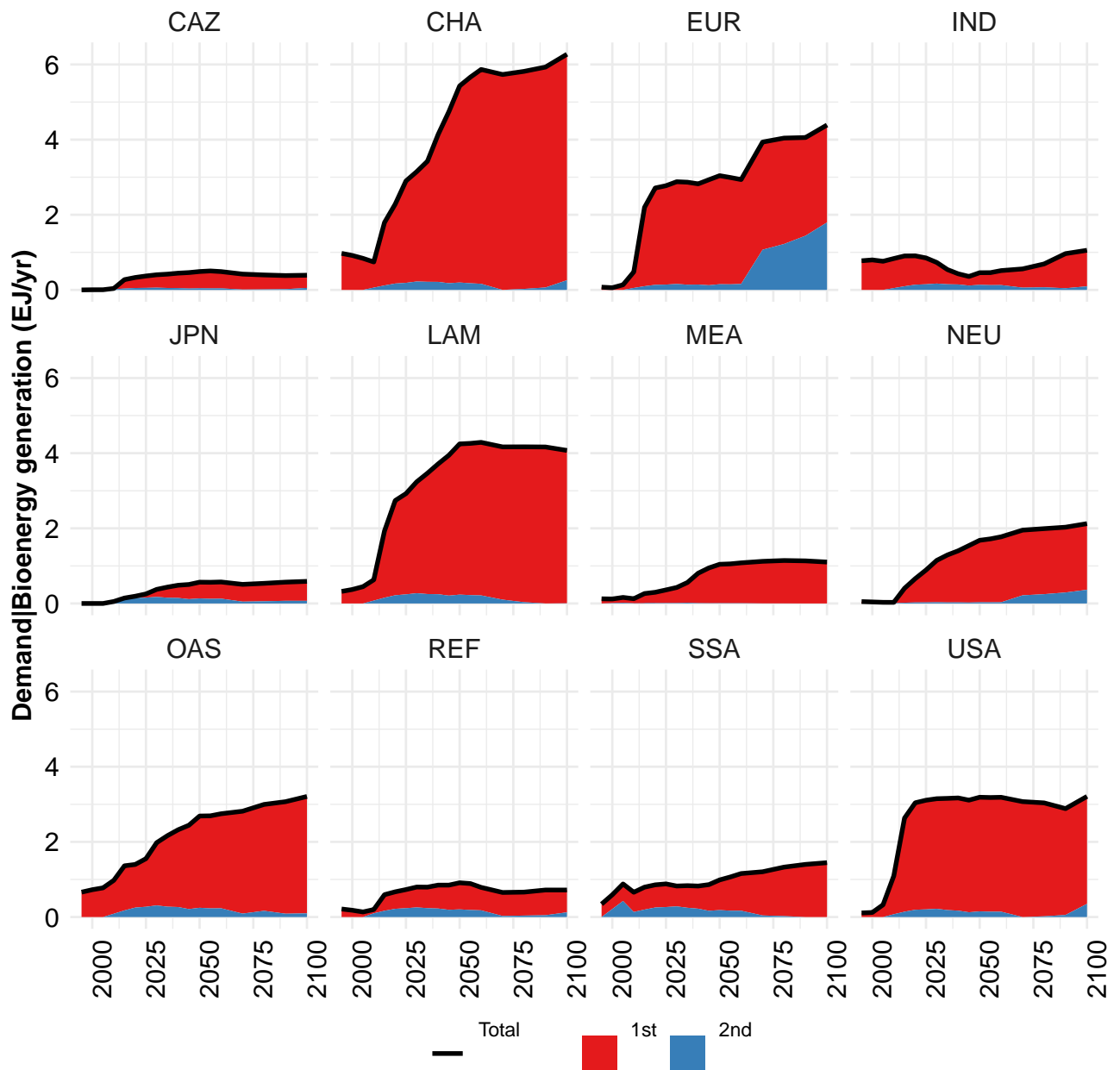
## 4 Bioenergy

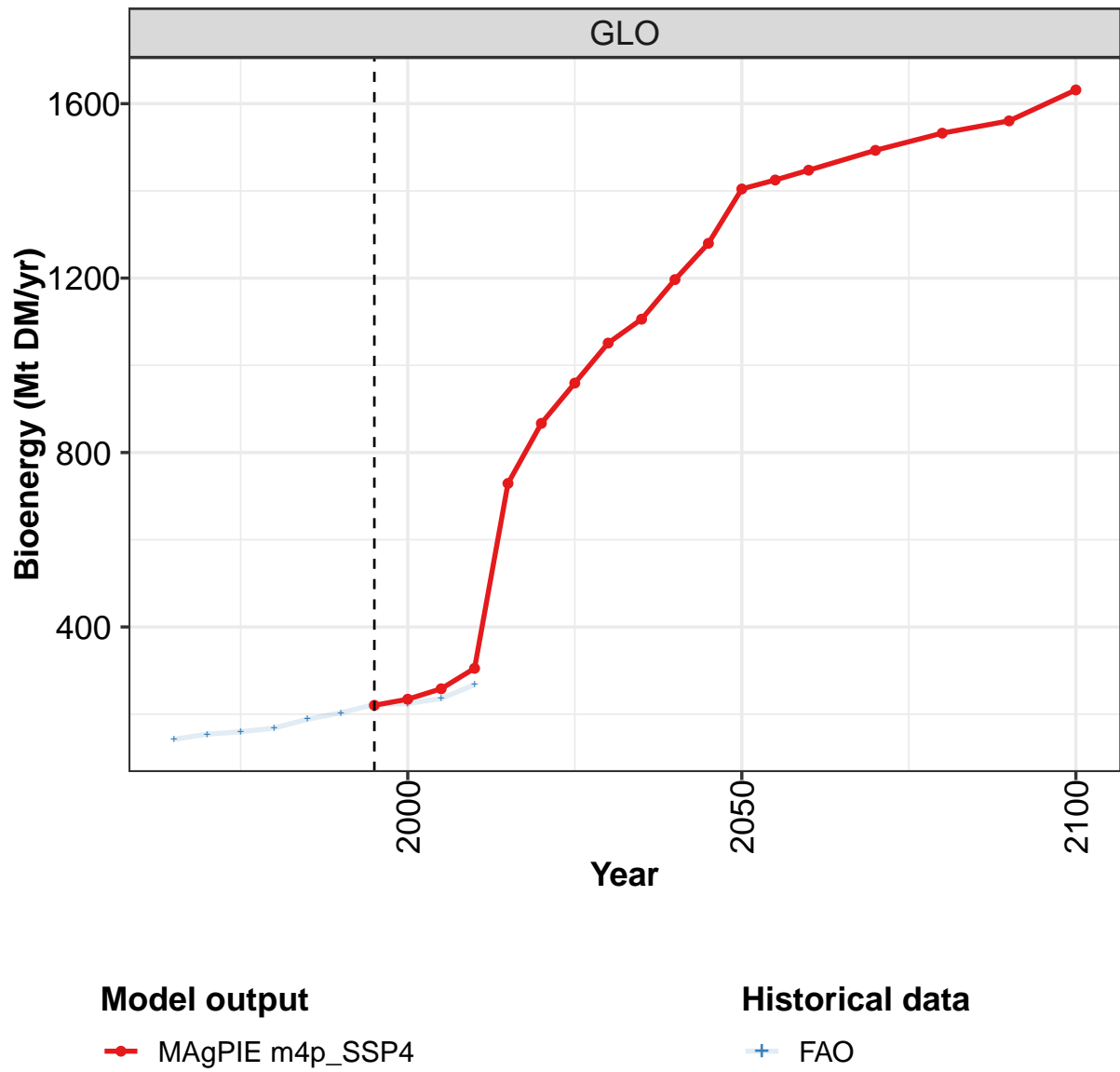












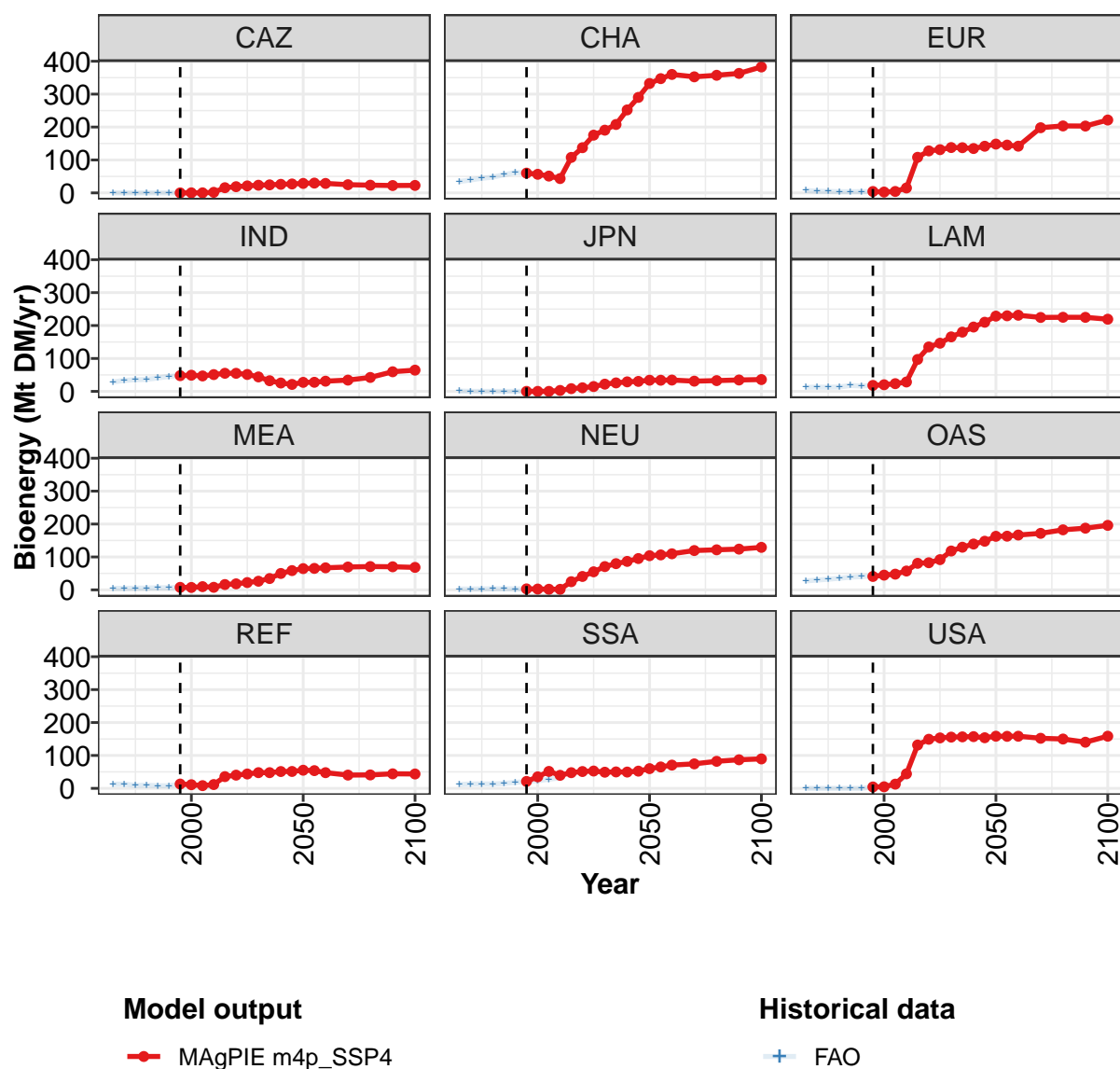


Figure 34: MAgPIE m4p\_SSP4 — Demand—Bioenergy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	220	234	258	305	729	867	959	1051	1106	1197	1280
CAZ	0	0	0	2	16	19	21	23	24	26	27
CHA	60	57	51	44	108	137	175	191	208	252	290
EUR	4	3	4	15	108	128	131	138	137	135	142
IND	48	49	47	51	55	55	51	44	32	25	21
JPN	0	0	0	3	8	11	15	22	26	29	30
LAM	18	20	24	29	97	135	146	166	180	196	210
MEA	8	7	10	8	16	18	22	26	34	50	59
NEU	3	2	2	2	25	41	55	71	80	87	95
OAS	41	45	48	57	81	82	92	118	130	139	148
REF	13	11	8	12	36	40	44	48	48	51	51
SSA	21	35	52	40	48	51	53	49	50	50	52
USA	4	5	13	44	132	149	153	156	156	157	154

Table 103: MAgPIE m4p\_SSP4 — Demand—Bioenergy (Mt DM/yr) [PART 1/2]

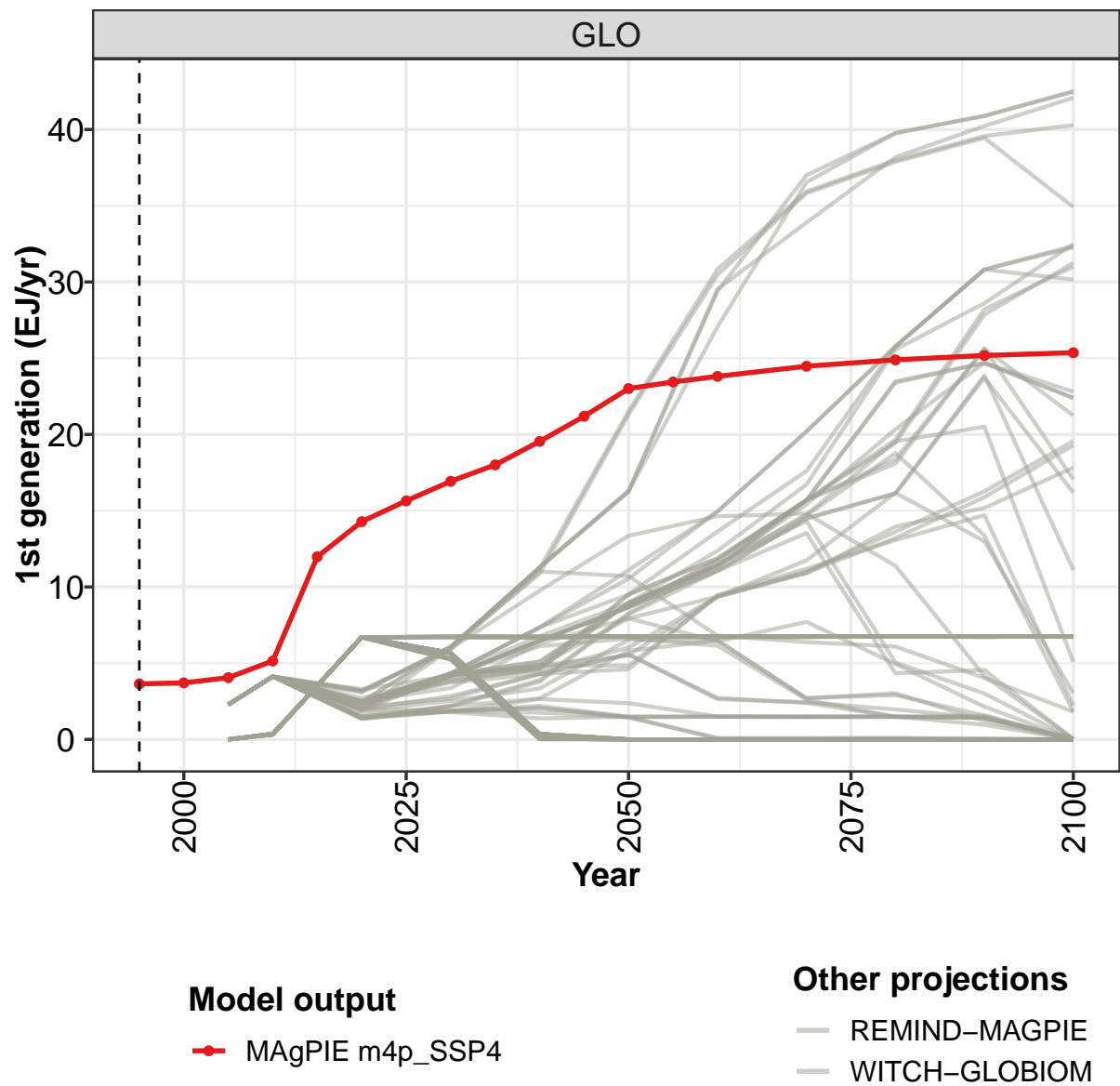
	2050	2055	2060	2070	2080	2090	2100
GLO	1404	1425	1447	1493	1532	1561	1632
CAZ	29	30	29	25	23	22	23
CHA	332	347	360	353	357	363	383
EUR	148	145	142	198	203	203	221
IND	27	28	31	34	42	60	65
JPN	34	34	34	31	33	35	36
LAM	229	230	231	225	225	225	219
MEA	65	65	67	69	71	70	68
NEU	104	106	110	119	122	124	129
OAS	163	163	167	172	182	187	196
REF	55	54	48	40	41	44	44
SSA	60	65	71	74	82	87	90
USA	158	158	158	152	150	140	158

Table 104: MAgPIE m4p\_SSP4 — 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



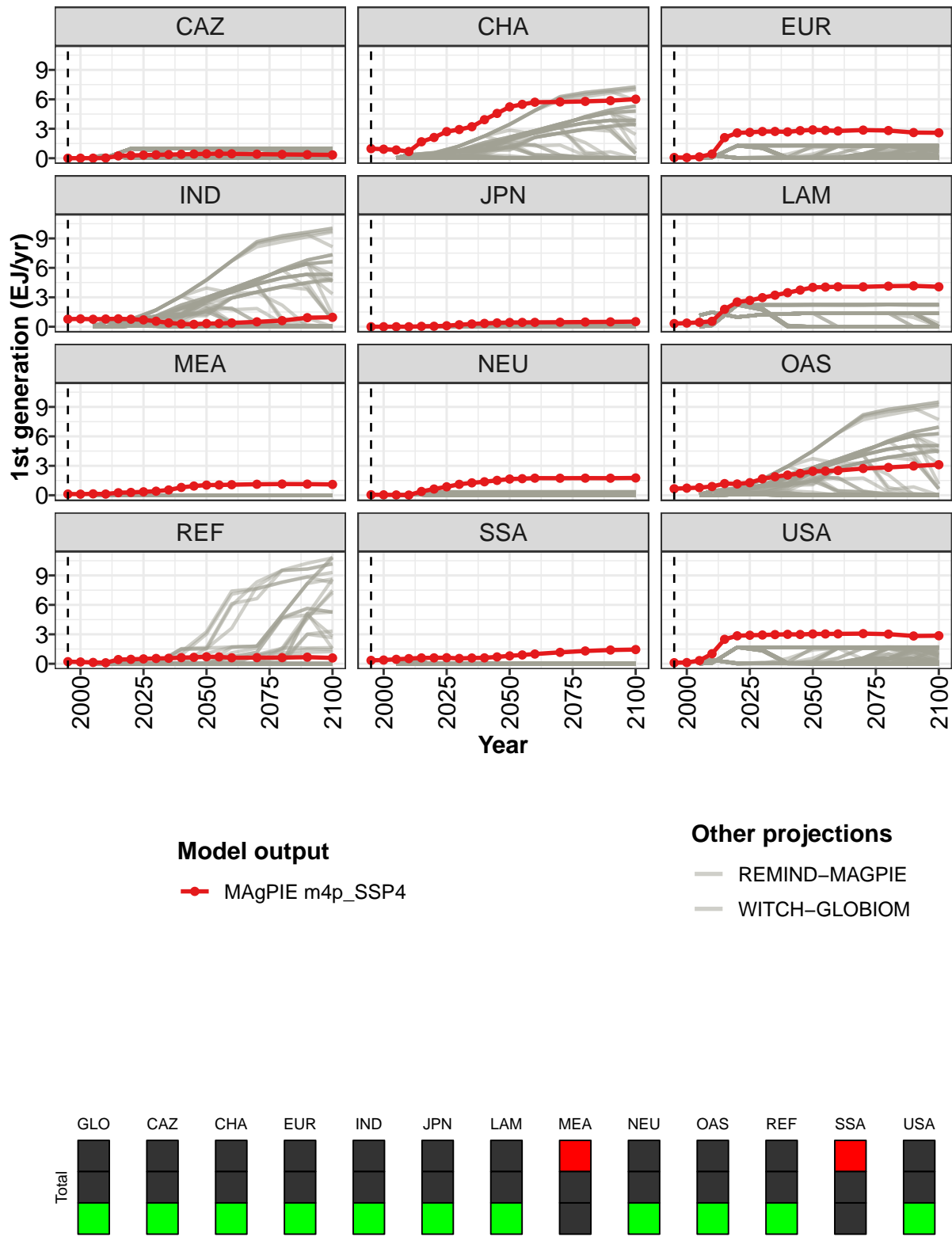


Figure 35: MAgPIE m4p-SSP4 — Demand—Bioenergy—1st generation (EJ/yr)



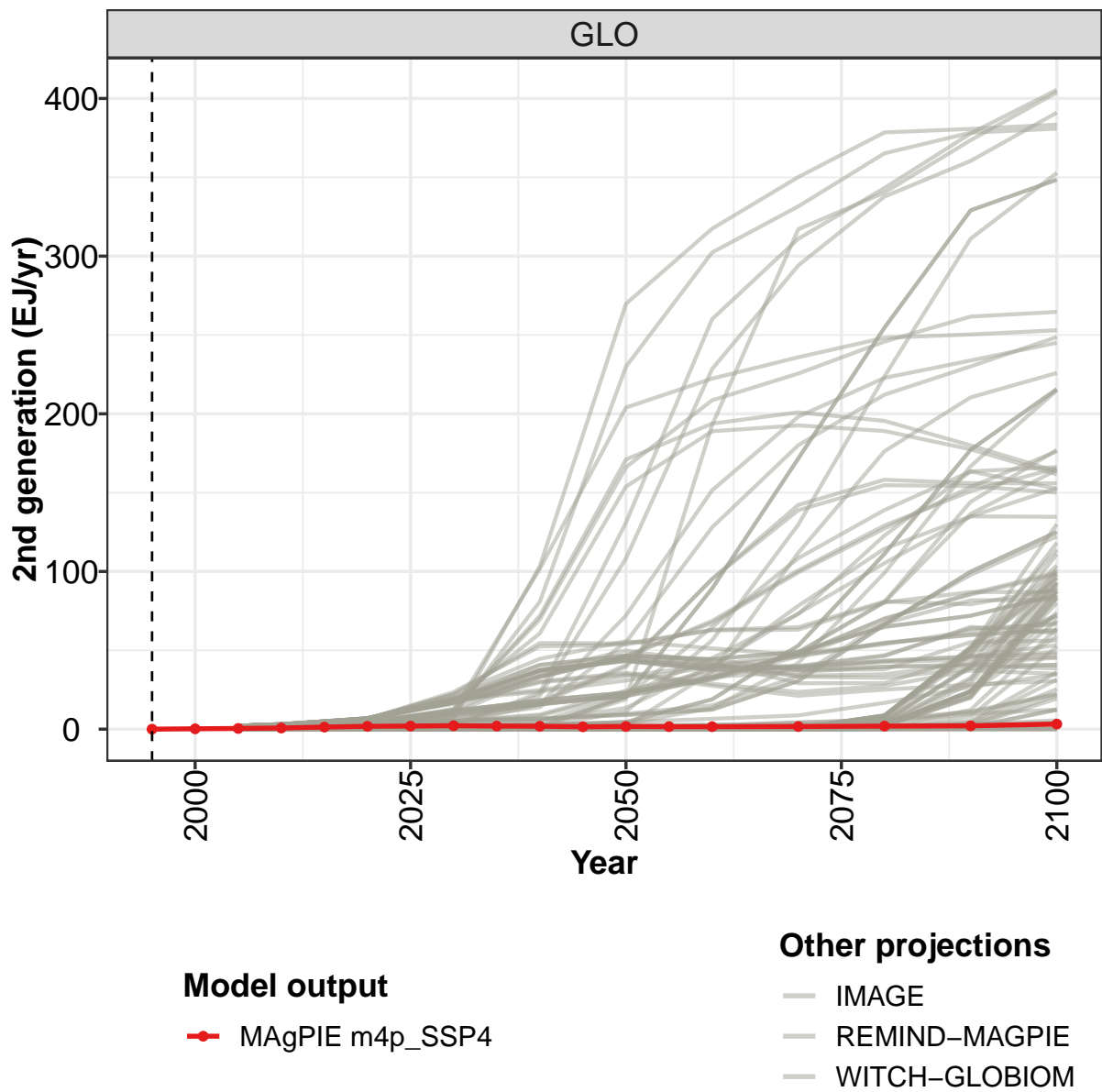
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.6	3.7	4.1	5.1	12.0	14.3	15.6	16.9	18.0	19.5	21.2
CAZ	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.4	0.4	0.4
CHA	1.0	0.9	0.8	0.7	1.7	2.1	2.7	2.9	3.2	3.9	4.6
EUR	0.1	0.1	0.1	0.4	2.1	2.6	2.6	2.7	2.7	2.7	2.8
IND	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.4	0.3	0.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.4
LAM	0.3	0.4	0.4	0.6	1.8	2.5	2.7	3.0	3.2	3.5	3.7
MEA	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.4	0.5	0.8	0.9
NEU	0.0	0.0	0.0	0.0	0.4	0.6	0.9	1.1	1.3	1.4	1.5
OAS	0.7	0.7	0.8	0.9	1.2	1.1	1.3	1.7	1.9	2.1	2.2
REF	0.2	0.2	0.1	0.1	0.4	0.5	0.5	0.5	0.6	0.6	0.7
SSA	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.7
USA	0.1	0.1	0.3	1.0	2.5	2.8	2.9	2.9	3.0	3.0	3.0

Table 106: MAgPIE m4p-SSP4 — Demand—Bioenergy—1st generation (EJ/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	23.0	23.4	23.8	24.5	24.9	25.2	25.4
CAZ	0.4	0.5	0.4	0.4	0.4	0.4	0.3
CHA	5.2	5.5	5.7	5.7	5.8	5.9	6.0
EUR	2.9	2.8	2.8	2.9	2.8	2.6	2.6
IND	0.3	0.3	0.4	0.5	0.6	0.9	1.0
JPN	0.4	0.4	0.4	0.5	0.5	0.5	0.5
LAM	4.0	4.0	4.1	4.1	4.1	4.2	4.1
MEA	1.0	1.0	1.1	1.1	1.1	1.1	1.1
NEU	1.7	1.7	1.7	1.7	1.7	1.7	1.8
OAS	2.4	2.5	2.5	2.7	2.8	3.0	3.1
REF	0.7	0.7	0.6	0.6	0.6	0.7	0.6
SSA	0.8	0.9	1.0	1.2	1.3	1.4	1.4
USA	3.0	3.0	3.0	3.1	3.0	2.8	2.9

Table 107: MAgPIE m4p-SSP4 — Demand—Bioenergy—1st generation (EJ/yr) [PART 2/2]

4.2 2nd generation



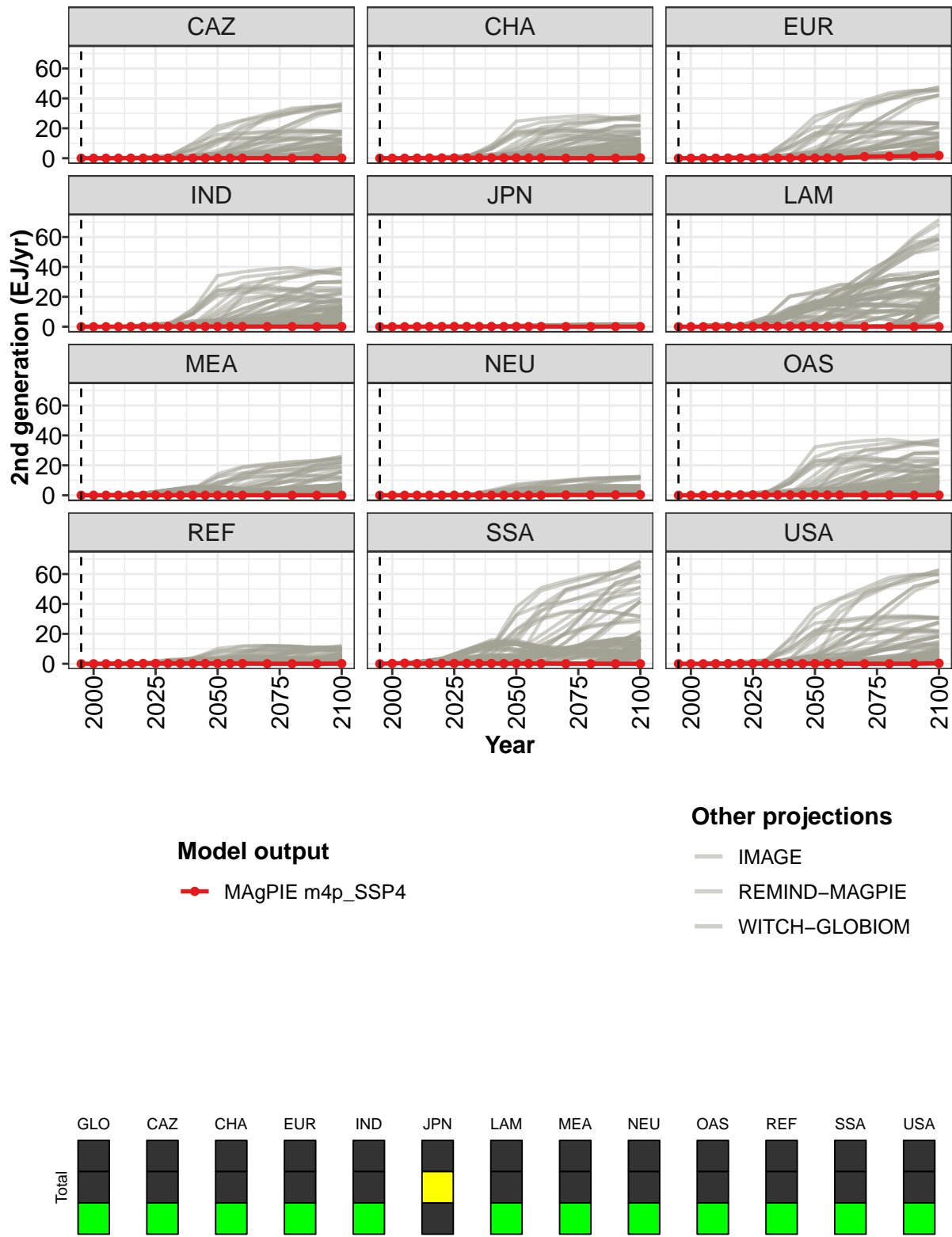


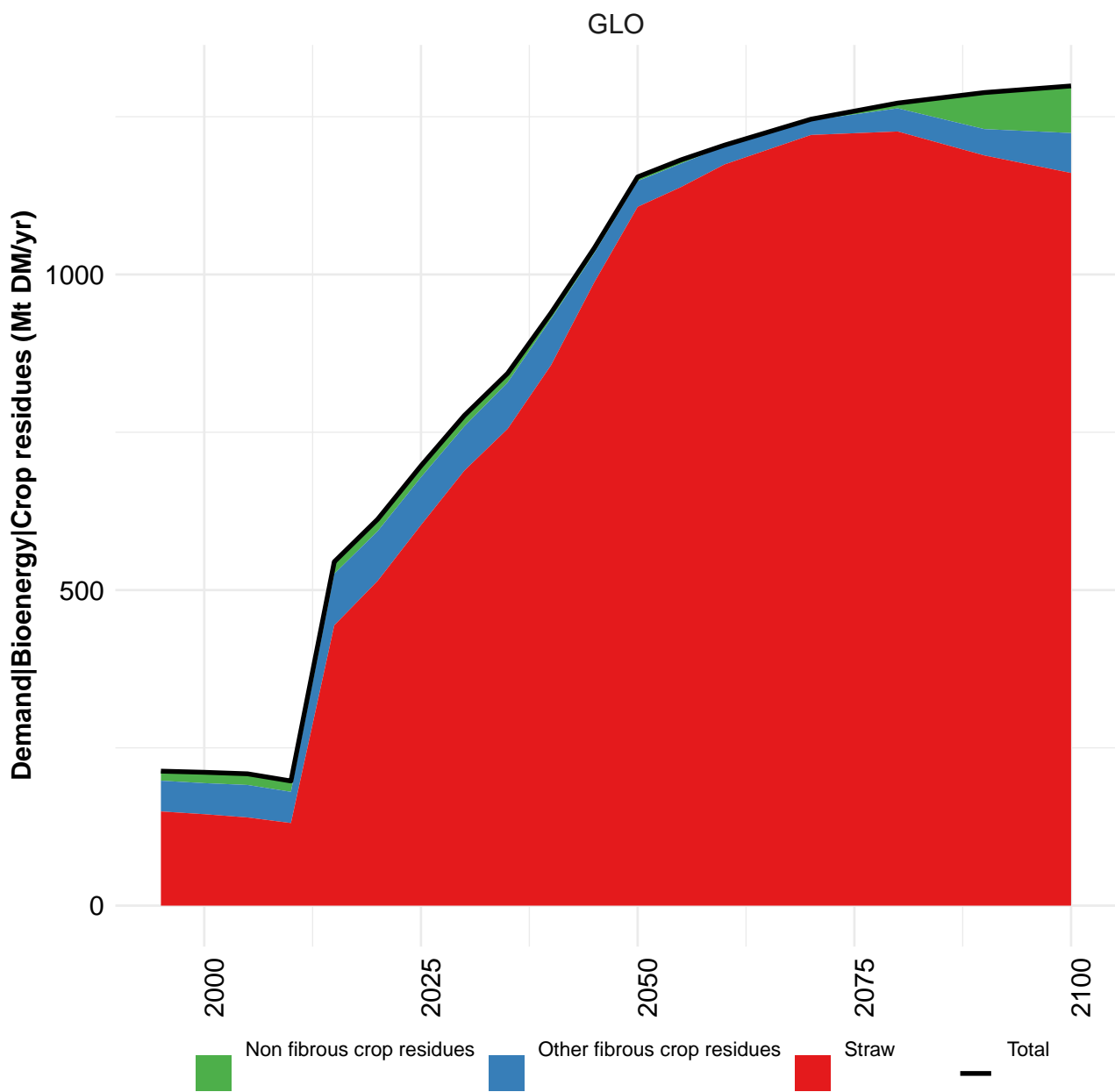
Figure 36: MAgPIE m4p\_SSP4 — Demand—Bioenergy—2nd generation (EJ/yr)

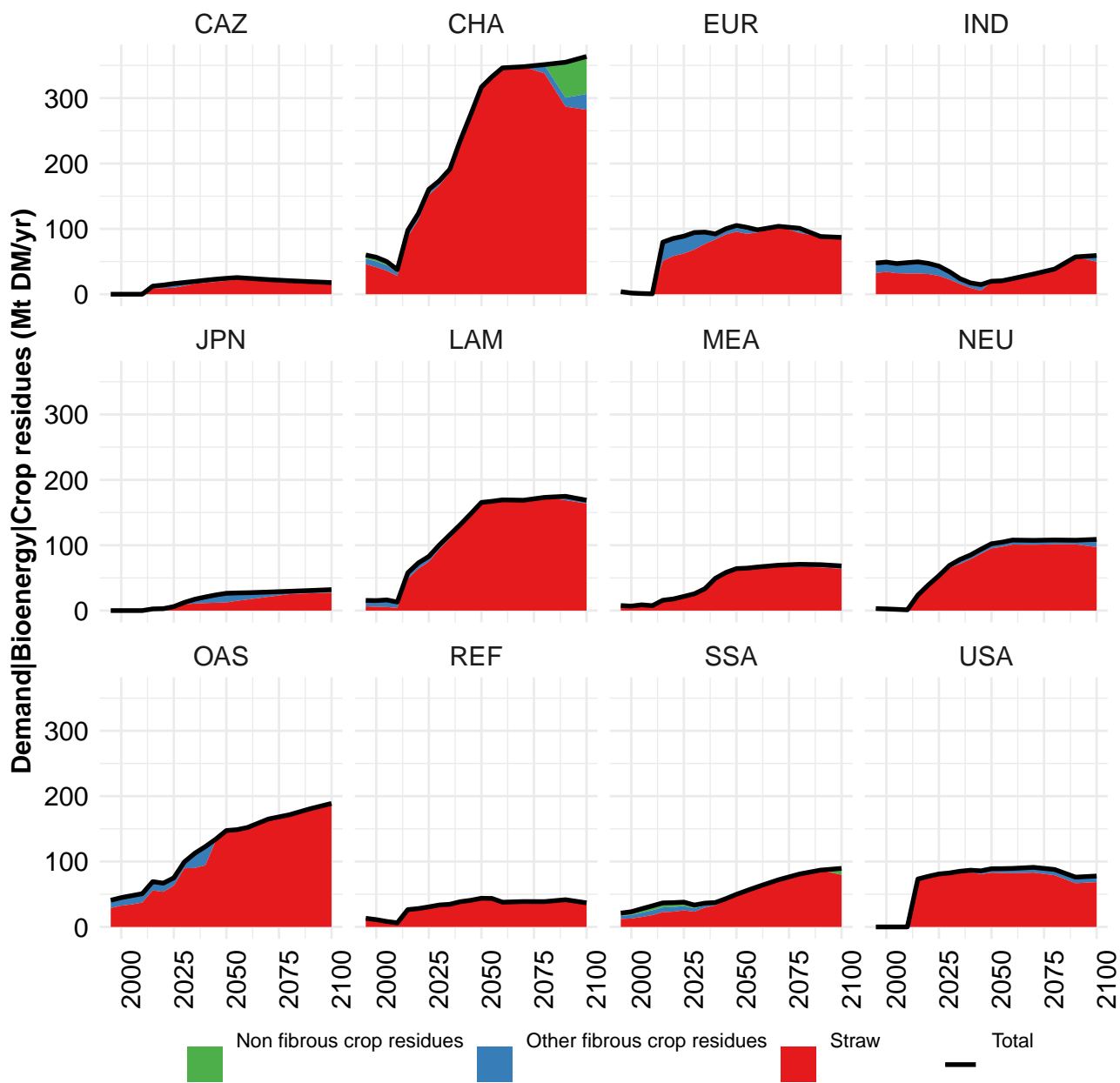
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00	0.22	0.45	0.72	1.32	1.81	1.95	2.17	1.95	1.86	1.51
CAZ	0.00	0.00	0.00	0.02	0.04	0.05	0.05	0.06	0.05	0.05	0.04
CHA	0.00	0.00	0.00	0.06	0.12	0.17	0.19	0.22	0.22	0.21	0.18
EUR	0.00	0.00	0.00	0.05	0.10	0.14	0.14	0.16	0.14	0.14	0.12
IND	0.00	0.00	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\_SSP4 — Demand—Bioenergy—2nd generation (EJ/yr) [PART 1/2]

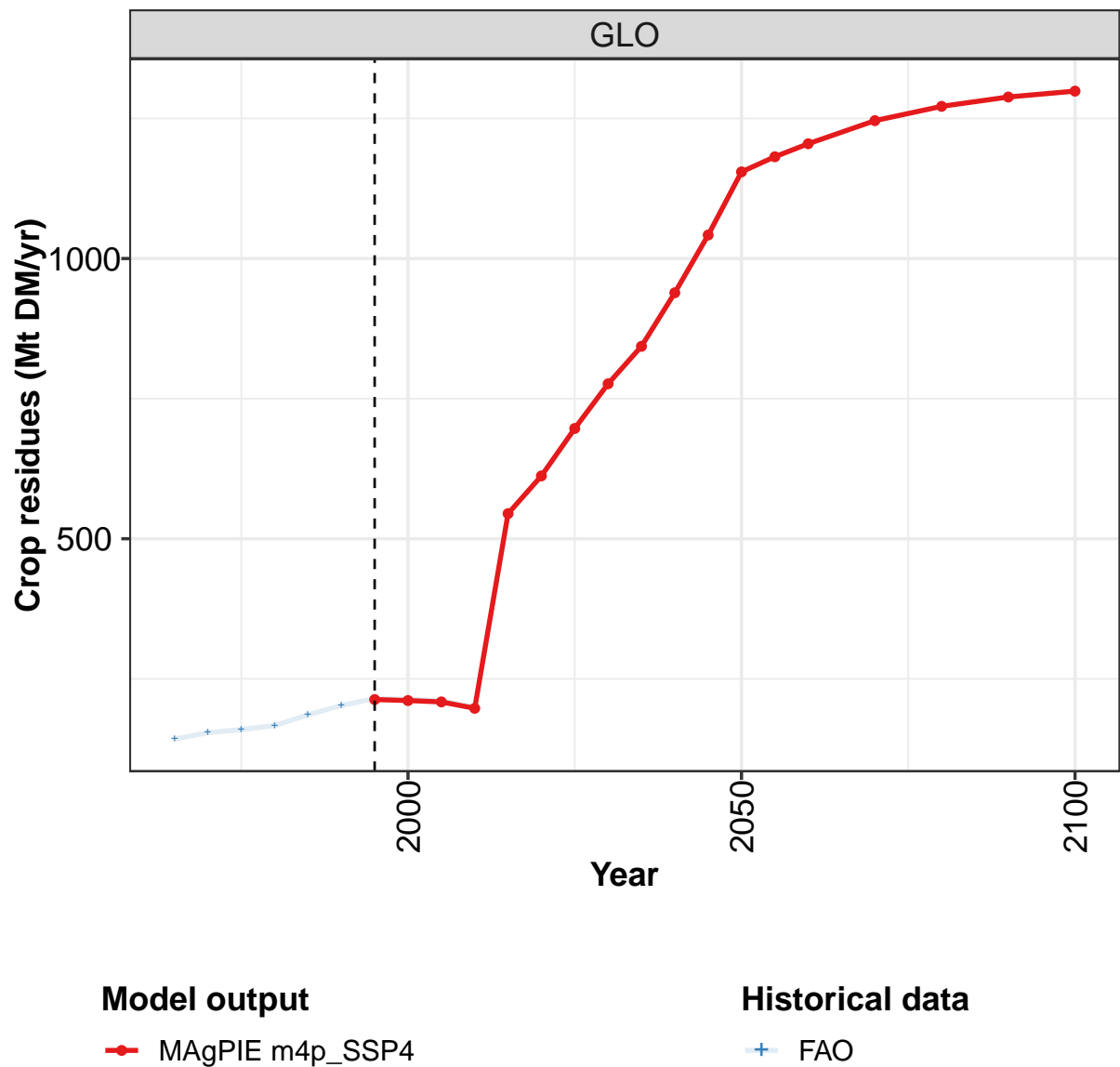
	2050	2055	2060	2070	2080	2090	2100
GLO	1.72	1.61	1.59	1.67	1.92	2.13	3.22
CAZ	0.04	0.04	0.04	0.01	0.01	0.02	0.05
CHA	0.20	0.18	0.16	0.00	0.03	0.06	0.26
EUR	0.15	0.15	0.16	1.07	1.22	1.44	1.80
IND	0.14	0.13	0.13	0.06	0.07	0.04	0.10
JPN	0.13	0.12	0.13	0.05	0.06	0.07	0.07
LAM	0.24	0.22	0.21	0.10	0.03	0.00	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\_SSP4 — Demand—Bioenergy—2nd generation (EJ/yr) [PART 2/2]





4.3 Crop residues



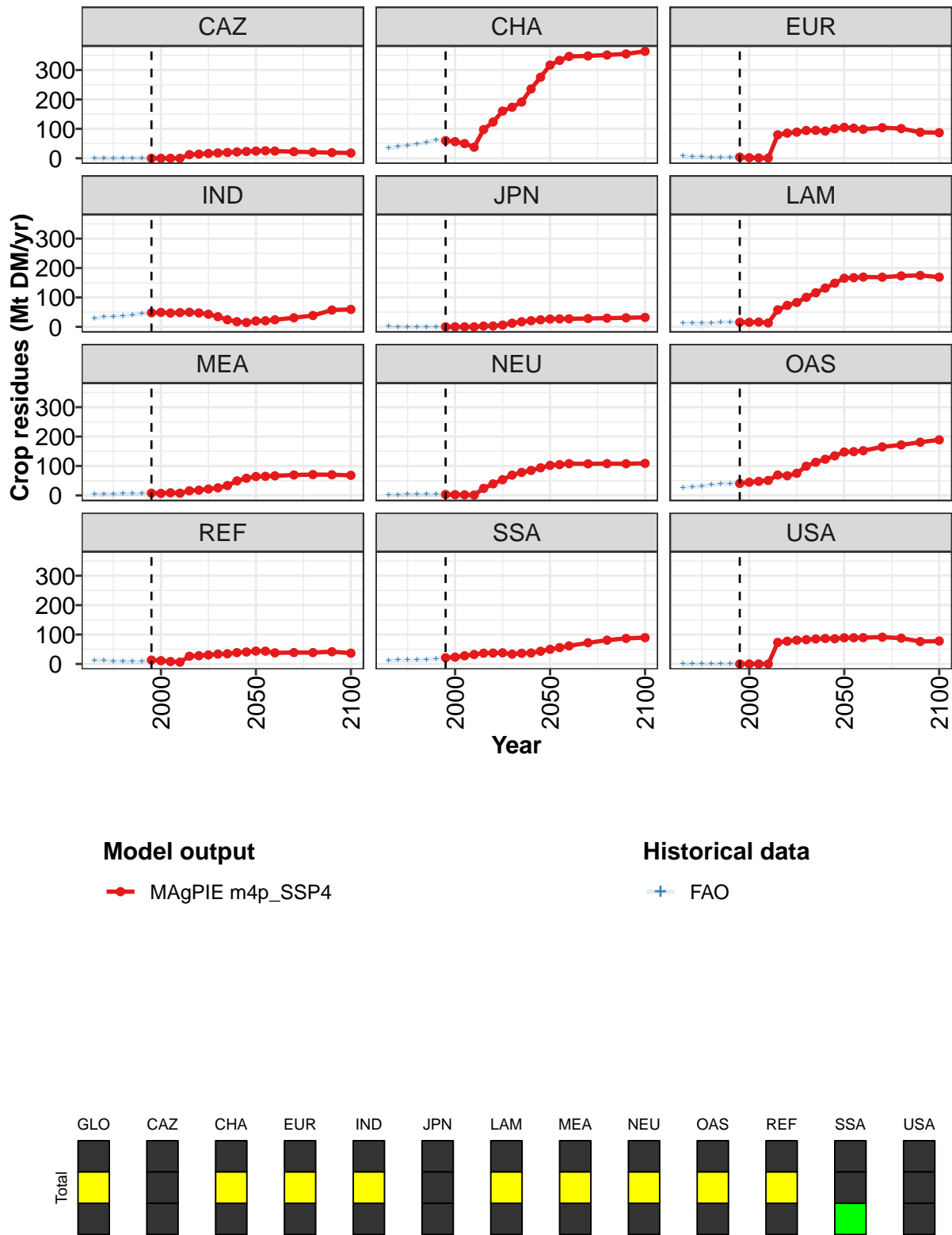


Figure 37: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	213	211	209	197	545	612	697	777	843	939	1042
CAZ	0	0	0	0	12	14	16	18	20	21	23
CHA	60	57	50	38	98	123	160	174	191	236	276
EUR	4	2	1	1	80	85	89	94	95	92	100
IND	48	49	47	48	50	47	43	34	24	17	15
JPN	0	0	0	0	3	3	6	12	17	21	24
LAM	16	15	16	13	58	73	83	100	116	132	148
MEA	8	7	9	7	16	18	22	26	33	49	58
NEU	3	2	2	1	24	39	53	69	78	85	94
OAS	41	45	48	51	69	67	75	99	113	123	134
REF	13	11	8	6	26	28	31	34	35	39	41
SSA	21	23	28	32	37	37	38	33	36	37	43
USA	0	0	0	0	73	77	81	83	85	87	86

Table 110: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues (Mt DM/yr) [PART 1/2]

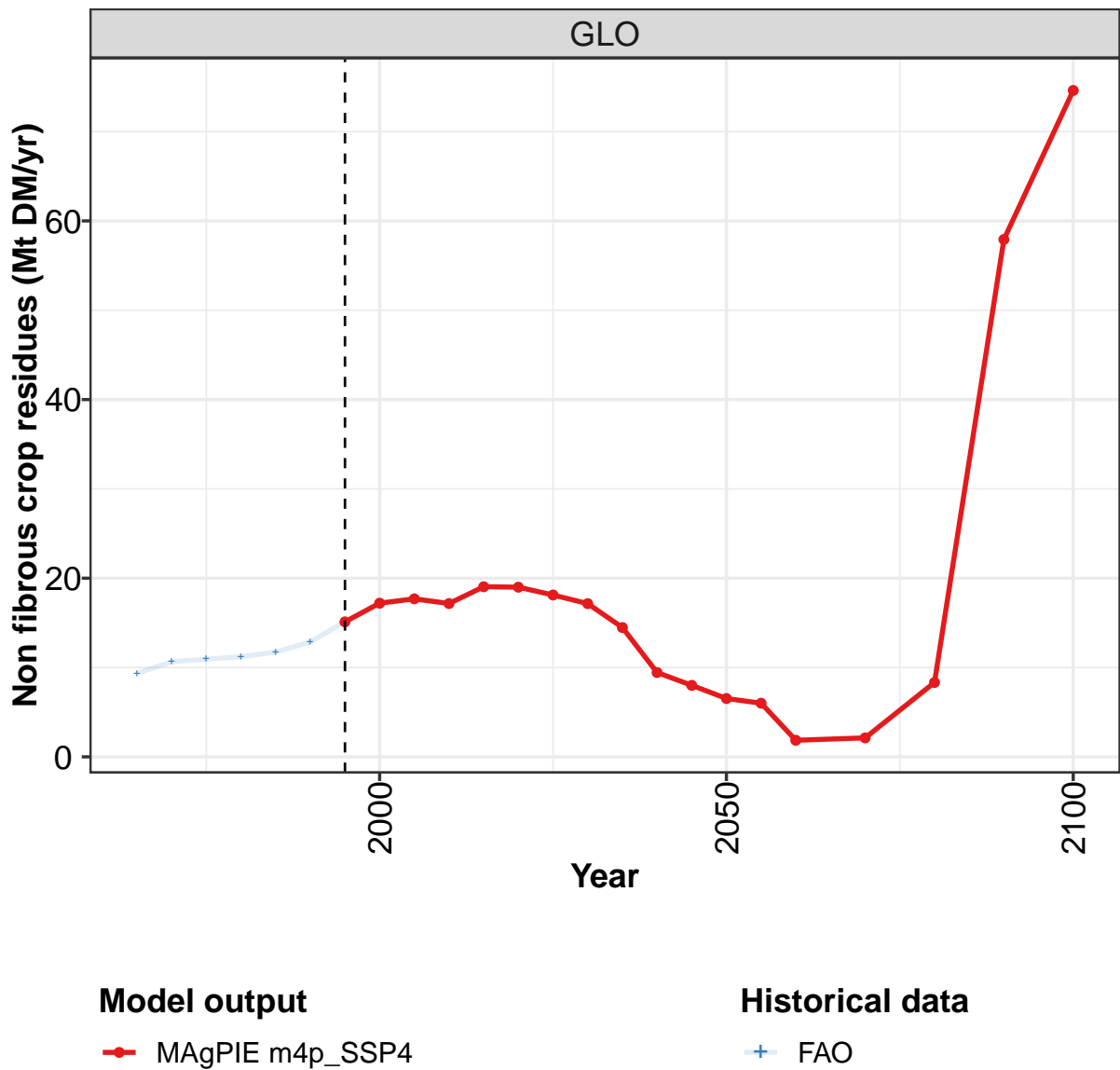
	2050	2055	2060	2070	2080	2090	2100
GLO	1155	1182	1205	1246	1272	1288	1299
CAZ	24	25	24	22	21	19	18
CHA	317	333	346	348	351	355	364
EUR	105	102	98	104	101	88	87
IND	20	21	24	31	38	57	59
JPN	26	27	27	28	29	31	32
LAM	165	167	169	169	173	175	169
MEA	64	65	67	69	71	70	68
NEU	102	105	108	107	108	108	109
OAS	147	149	152	165	172	181	189
REF	44	44	38	39	39	42	37
SSA	50	56	61	72	81	87	90
USA	89	89	89	91	88	76	78

Table 111: MAgPIE m4p\_SSP4 — 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



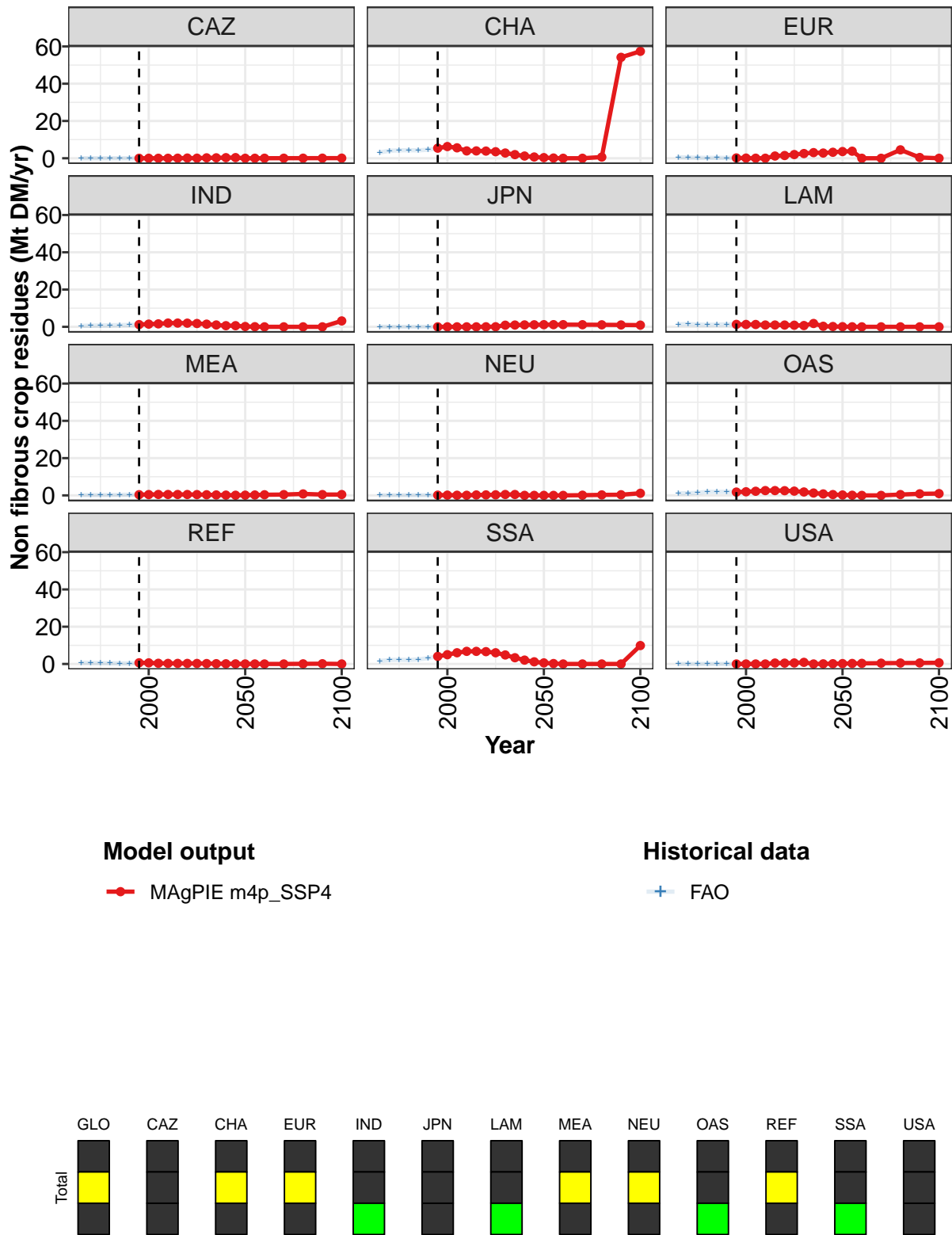


Figure 38: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues—Non fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.1	17.2	17.7	17.2	19.0	19.0	18.1	17.2	14.5	9.4	8.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.3	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	1.2	1.5	2.0	2.5	3.0	2.8	3.2
IND	1.2	1.5	1.6	2.0	2.0	2.0	1.8	1.4	1.0	0.6	0.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	1.0	1.1
LAM	1.3	1.3	1.3	1.0	1.0	0.9	0.9	0.7	1.8	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	0.3	0.3	0.5	0.5	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	0.5	0.5	0.5	0.9	0.0	0.1	0.1

Table 113: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues—Non fibrous crop residues (Mt DM/yr)  
[PART 1/2]

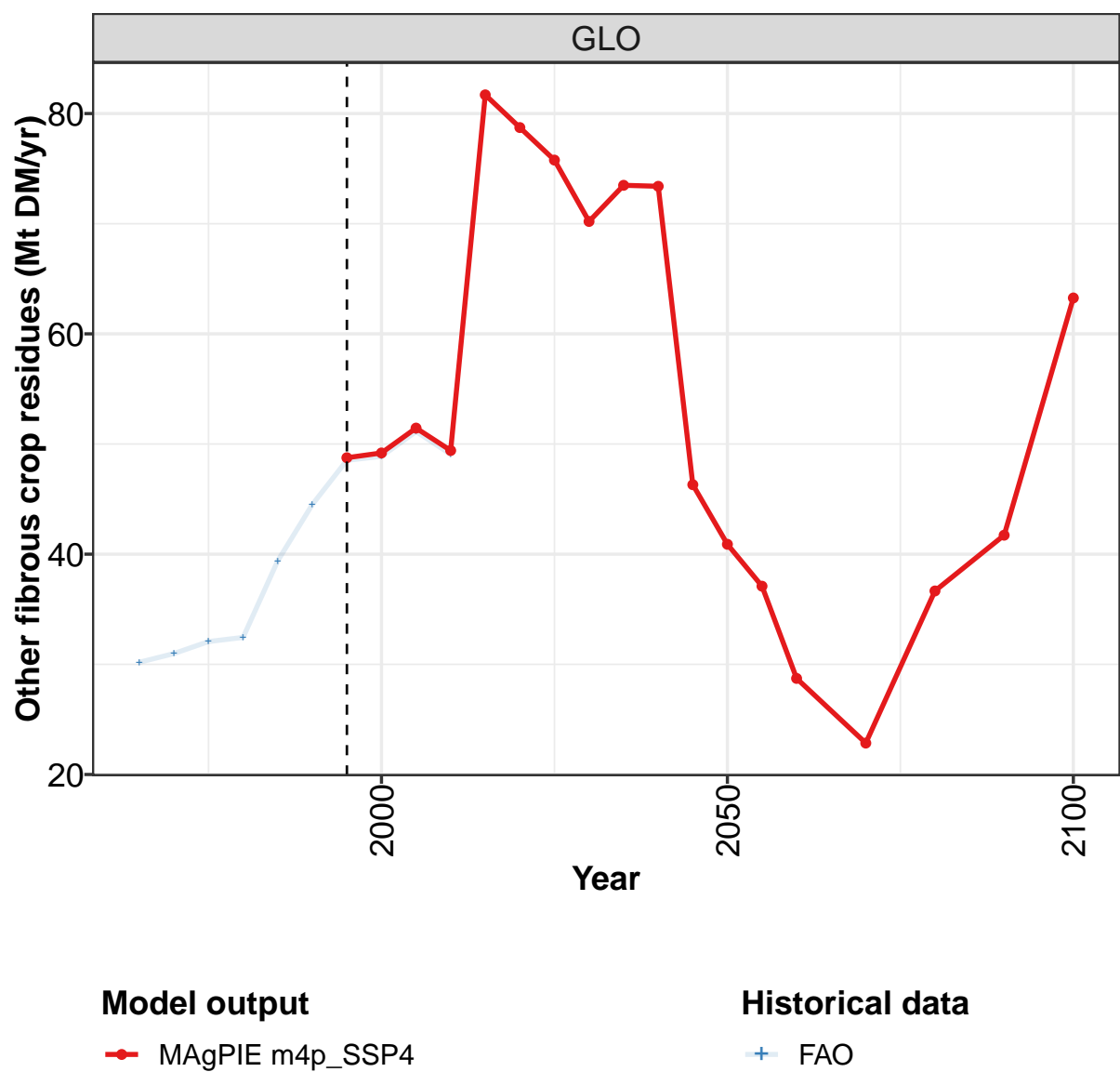
	2050	2055	2060	2070	2080	2090	2100
GLO	6.5	6.0	1.9	2.1	8.3	57.9	74.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.1
CHA	0.3	0.1	0.0	0.0	0.6	54.2	57.4
EUR	3.6	3.8	0.0	0.0	4.5	0.4	0.0
IND	0.2	0.1	0.0	0.0	0.0	0.0	3.2
JPN	1.2	1.2	1.2	1.1	1.1	1.0	0.9
LAM	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.1	0.2	0.3	0.4	0.8	0.4	0.4
NEU	0.0	0.0	0.0	0.1	0.3	0.3	1.1
OAS	0.2	0.1	0.0	0.0	0.4	0.8	1.0
REF	0.0	0.0	0.0	0.0	0.1	0.1	0.0
SSA	0.6	0.2	0.0	0.0	0.0	0.0	9.9
USA	0.2	0.3	0.3	0.4	0.5	0.6	0.6

Table 114: MAgPIE m4p\_SSP4 — 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



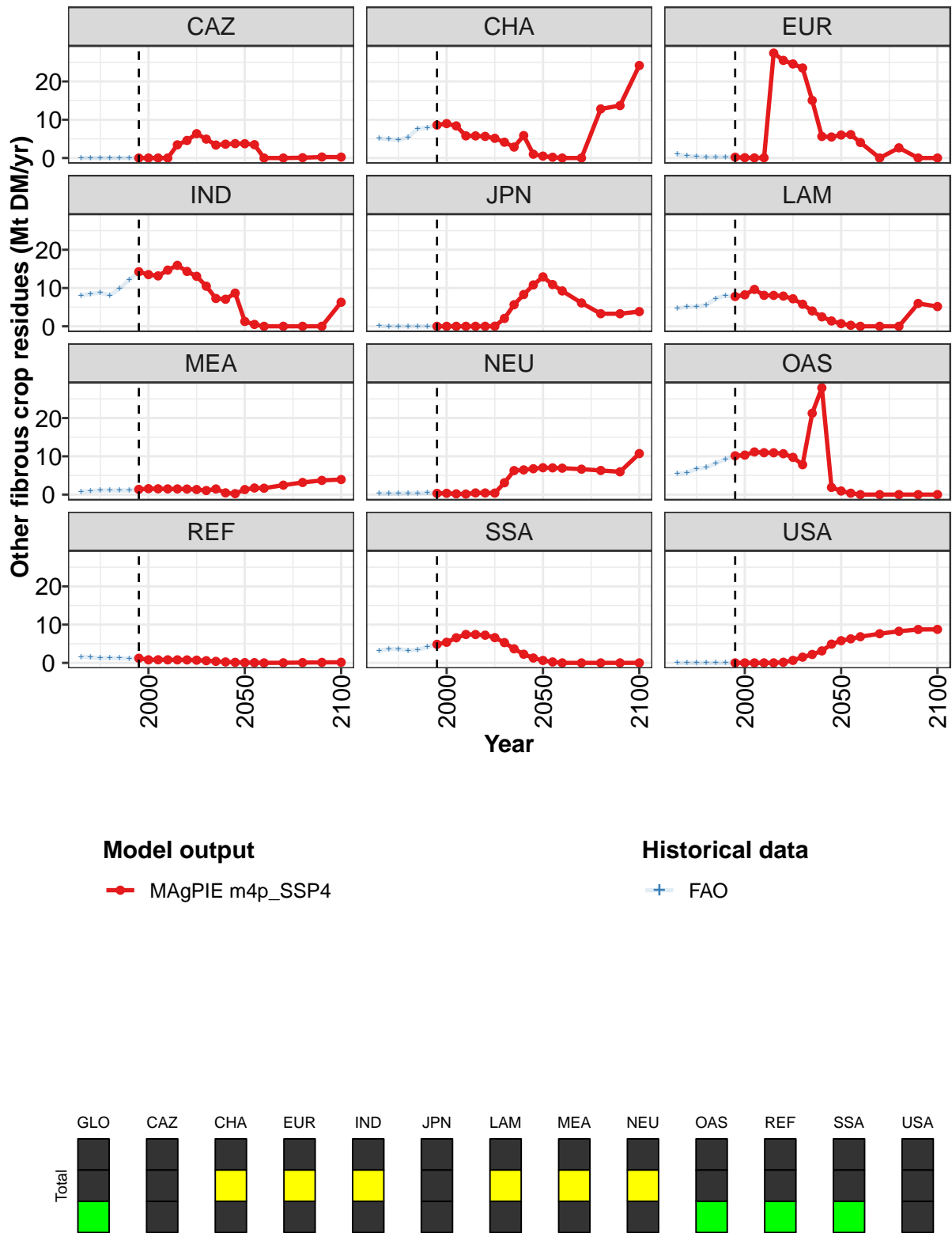


Figure 39: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues—Other fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	48.8	49.2	51.4	49.4	81.7	78.7	75.8	70.2	73.5	73.4	46.3
CAZ	0.0	0.0	0.0	0.0	3.4	4.6	6.4	4.9	3.4	3.6	3.8
CHA	8.6	9.0	8.4	5.8	5.8	5.7	5.1	4.1	2.9	5.9	1.0
EUR	0.2	0.1	0.0	0.1	27.4	25.5	24.6	23.5	15.1	5.6	5.5
IND	14.3	13.5	13.2	14.7	15.9	14.3	13.1	10.5	7.3	7.1	8.7
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.6	8.3	10.8
LAM	7.8	8.2	9.6	8.1	8.1	7.9	7.2	5.8	4.0	2.5	1.4
MEA	1.4	1.5	1.5	1.5	1.5	1.4	1.3	1.1	1.5	0.5	0.3
NEU	0.3	0.3	0.2	0.1	0.4	0.4	0.4	3.1	6.3	6.5	6.8
OAS	10.1	10.3	11.1	10.9	10.9	10.7	9.7	7.8	21.3	27.9	1.9
REF	1.2	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.4	0.2	0.1
SSA	4.9	5.4	6.6	7.4	7.4	7.2	6.6	5.3	3.7	2.3	1.3
USA	0.0	0.0	0.0	0.0	0.0	0.2	0.7	1.5	2.2	3.1	4.9

Table 116: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues—Other fibrous crop residues (Mt DM/yr) [PART 1/2]

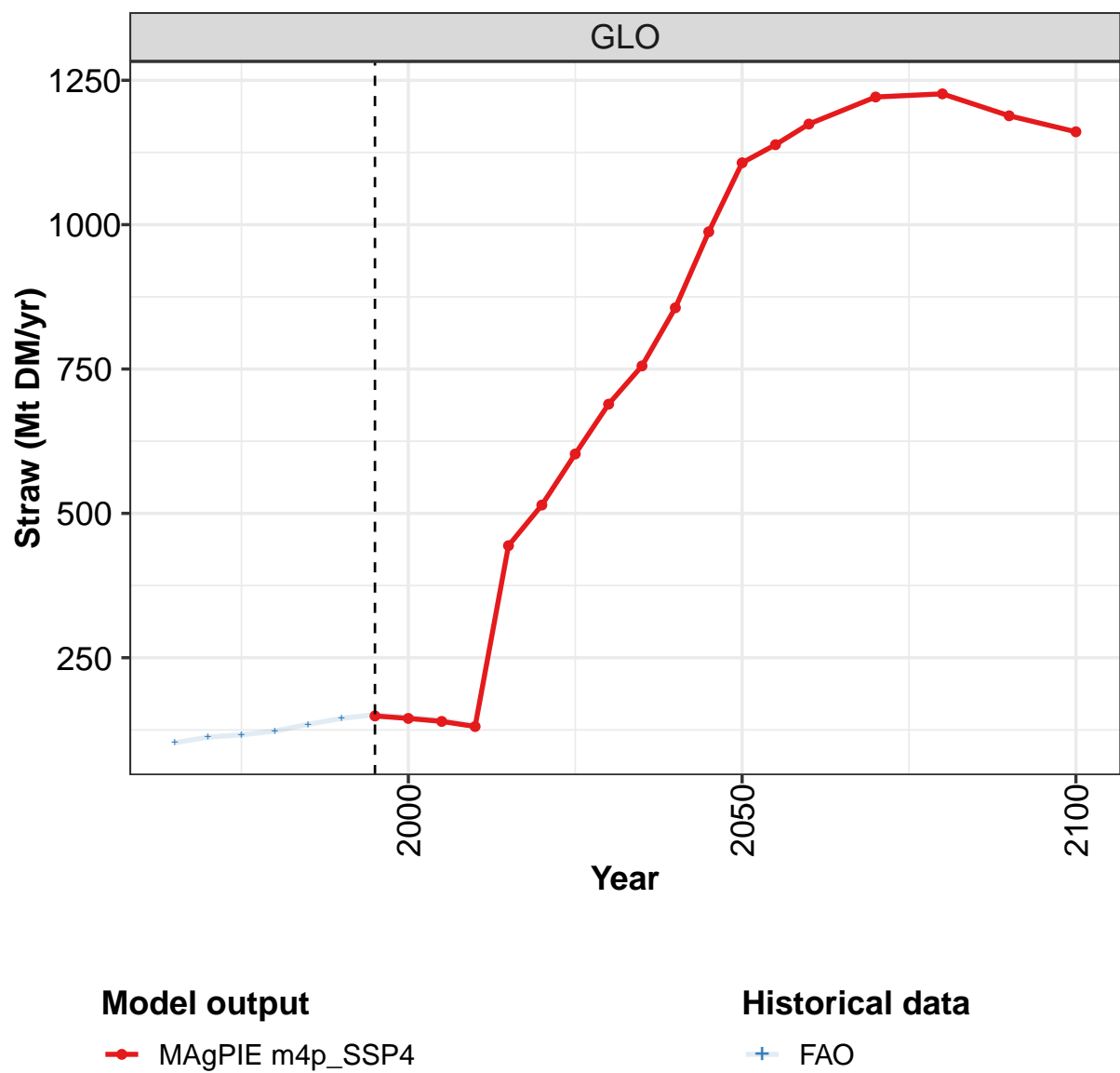
	2050	2055	2060	2070	2080	2090	2100
GLO	40.9	37.1	28.7	22.9	36.7	41.7	63.3
CAZ	3.7	3.5	0.0	0.0	0.1	0.3	0.2
CHA	0.5	0.2	0.0	0.0	12.8	13.7	24.2
EUR	6.0	6.1	4.1	0.0	2.7	0.0	0.0
IND	1.3	0.5	0.0	0.0	0.0	0.0	6.3
JPN	12.9	10.9	9.2	6.1	3.3	3.3	3.8
LAM	0.7	0.3	0.0	0.0	0.0	6.0	5.2
MEA	1.3	1.7	1.7	2.5	3.2	3.7	3.9
NEU	7.0	7.0	6.9	6.6	6.3	6.0	10.7
OAS	0.9	0.4	0.0	0.0	0.0	0.0	0.0
REF	0.1	0.1	0.0	0.0	0.1	0.1	0.2
SSA	0.6	0.2	0.0	0.0	0.0	0.0	0.0
USA	5.8	6.3	6.8	7.6	8.3	8.7	8.8

Table 117: MAgPIE m4p\_SSP4 — 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





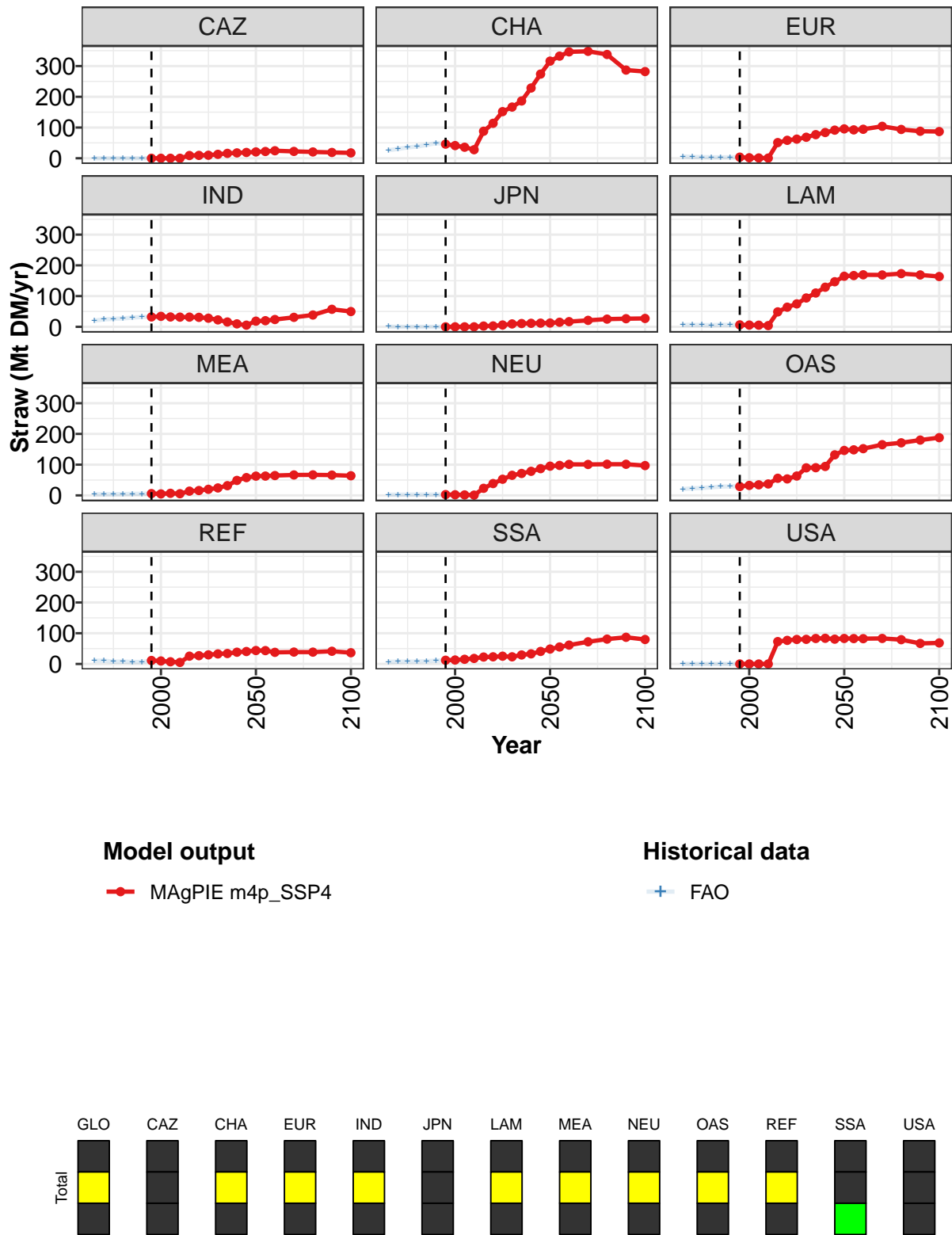


Figure 40: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	149	145	140	131	444	514	603	689	755	856	988
CAZ	0	0	0	0	9	9	10	13	16	17	19
CHA	46	41	36	28	88	114	152	167	186	229	274
EUR	4	2	1	1	51	58	62	68	77	84	91
IND	32	34	32	32	32	31	28	23	16	10	5
JPN	0	0	0	0	3	3	6	9	11	11	12
LAM	6	6	5	4	49	64	75	94	110	129	147
MEA	6	5	7	5	14	16	20	24	32	49	58
NEU	3	2	2	1	23	39	53	65	71	78	87
OAS	29	33	34	37	56	54	63	90	90	94	132
REF	11	10	7	5	25	27	30	33	34	38	41
SSA	12	13	15	18	23	23	25	23	29	33	41
USA	0	0	0	0	73	77	80	80	83	84	81

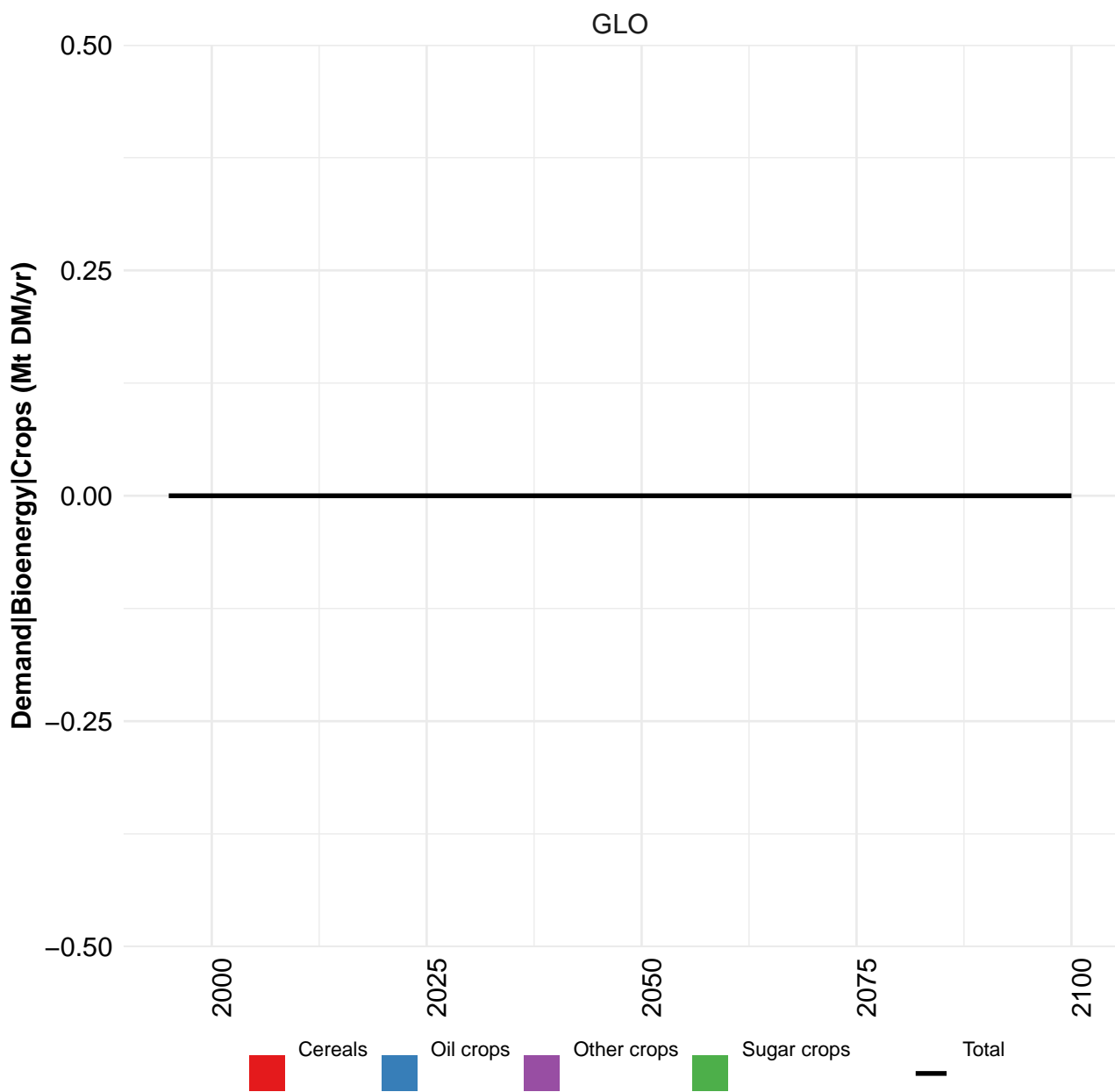
Table 119: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr) [PART 1/2]

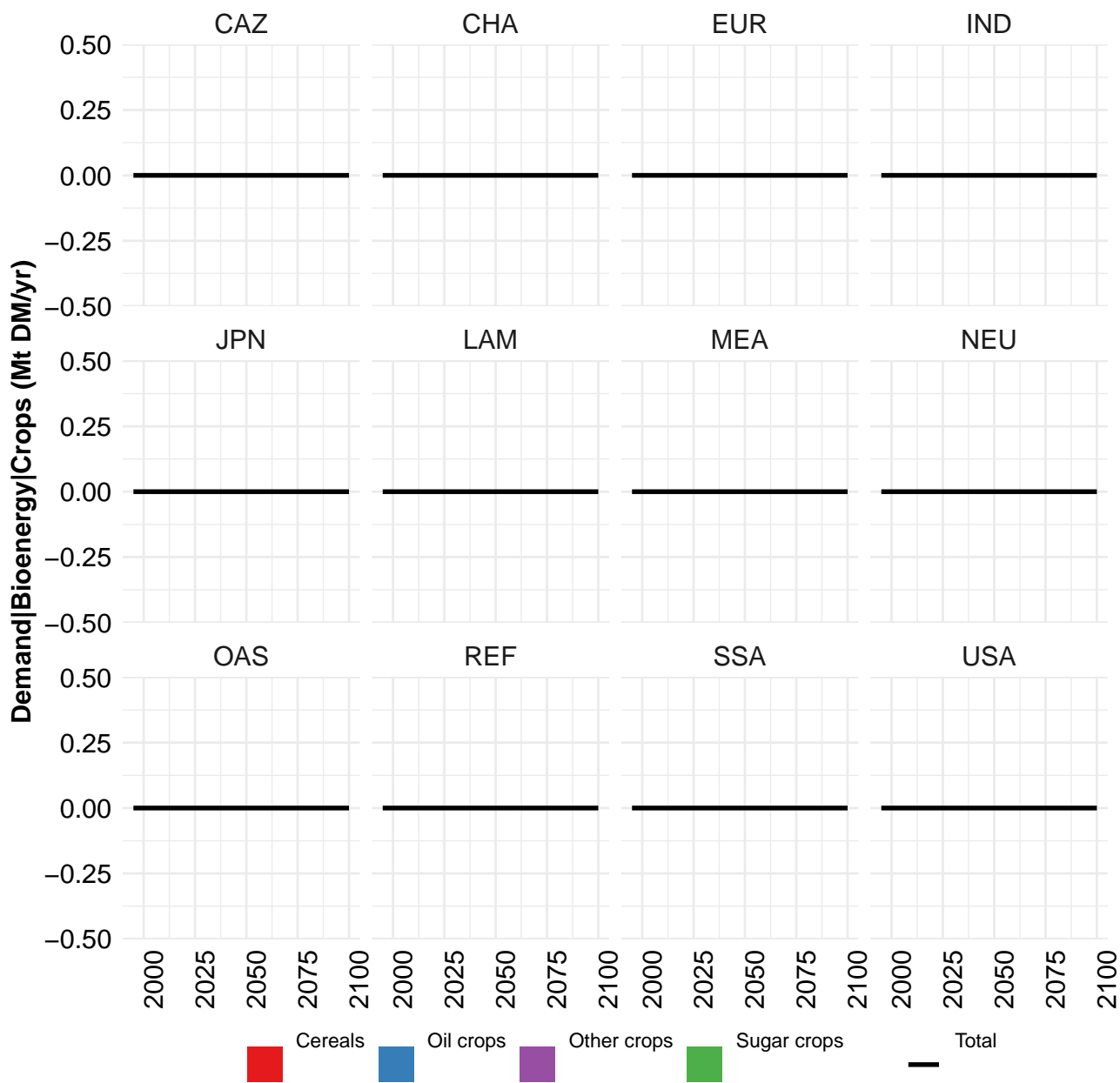
	2050	2055	2060	2070	2080	2090	2100
GLO	1107	1139	1174	1221	1227	1189	1161
CAZ	21	22	24	22	21	19	17
CHA	316	332	346	348	338	287	282
EUR	96	92	94	104	94	88	87
IND	18	20	24	31	38	57	50
JPN	12	15	17	21	25	26	27
LAM	165	167	169	169	173	169	164
MEA	63	63	65	67	67	66	64
NEU	95	98	101	101	101	101	97
OAS	146	148	152	165	171	180	188
REF	44	43	38	39	39	41	37
SSA	49	55	61	72	81	87	80
USA	83	83	82	83	79	67	68

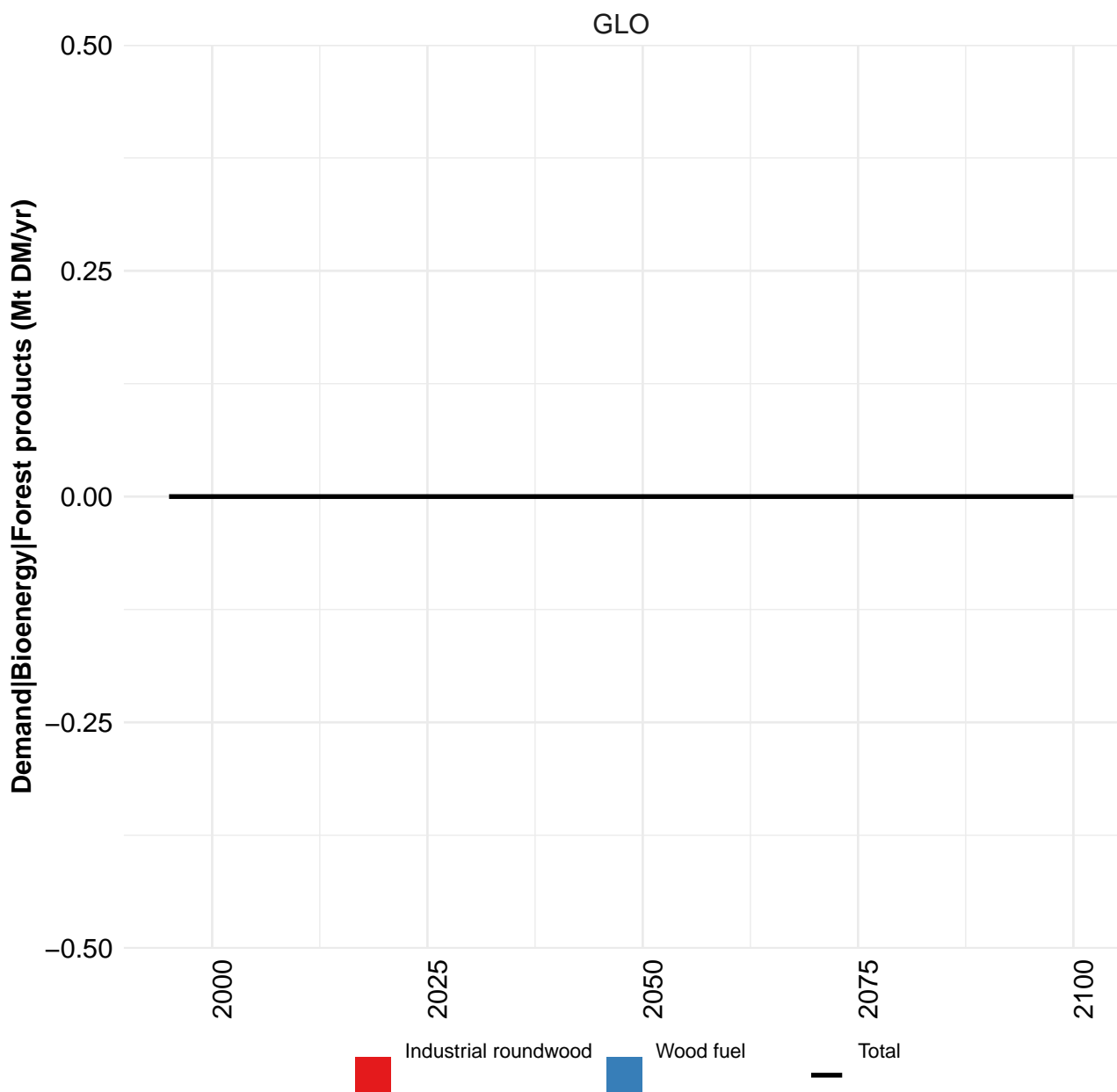
Table 120: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr) [PART 2/2]

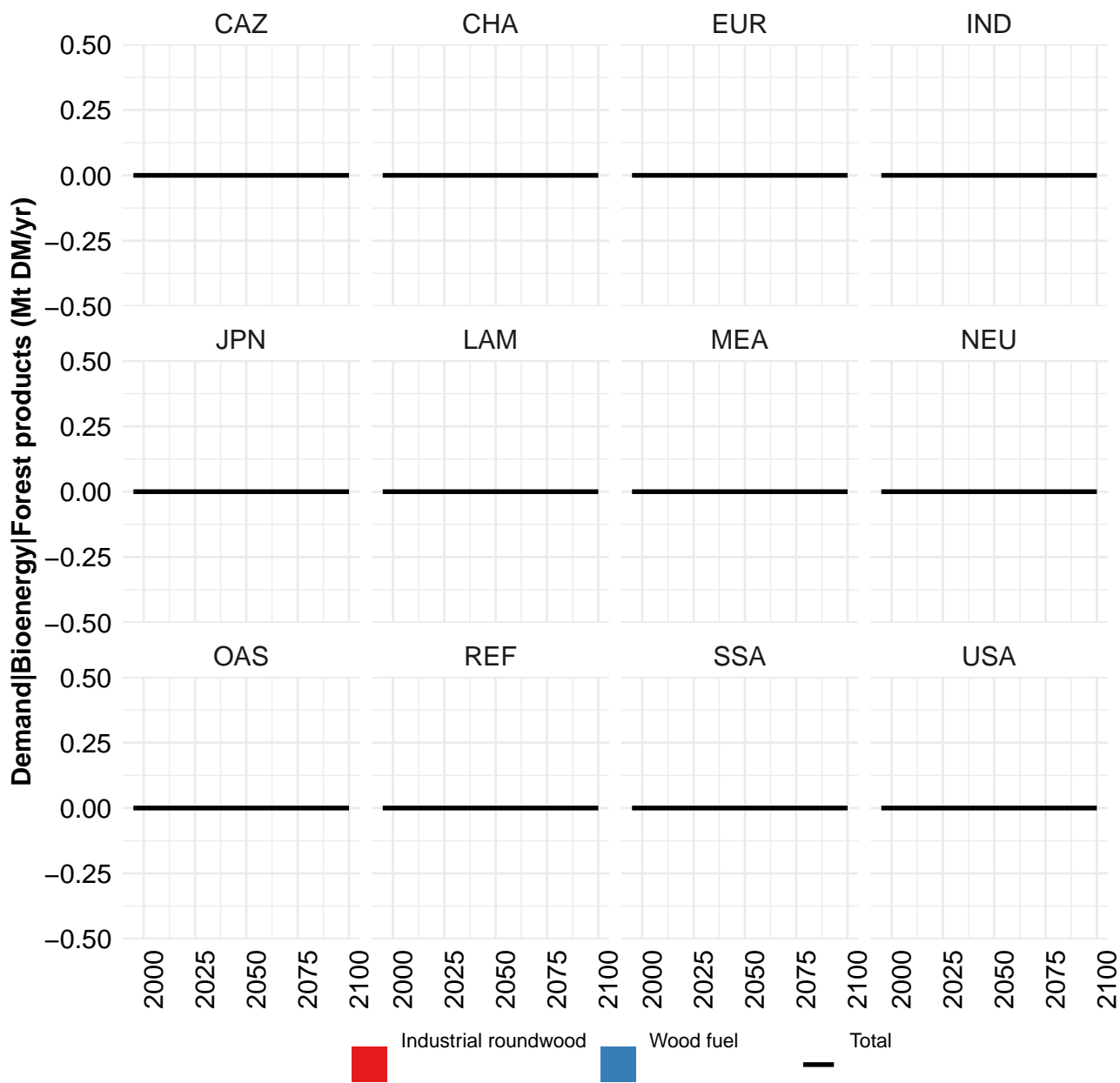
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	103	112	116	123	135	145	151	148	142	133
CAZ	0	0	0	0	0	0	0	0	0	0
CHA	26	30	35	38	43	49	47	42	36	28
EUR	6	4	4	3	3	3	3	2	1	1
IND	20	24	26	27	30	32	33	35	33	32
JPN	1	0	0	0	0	0	0	0	0	0
LAM	6	6	6	5	7	6	6	6	5	4
MEA	4	4	4	4	5	5	6	5	7	5
NEU	2	2	3	3	3	2	3	2	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

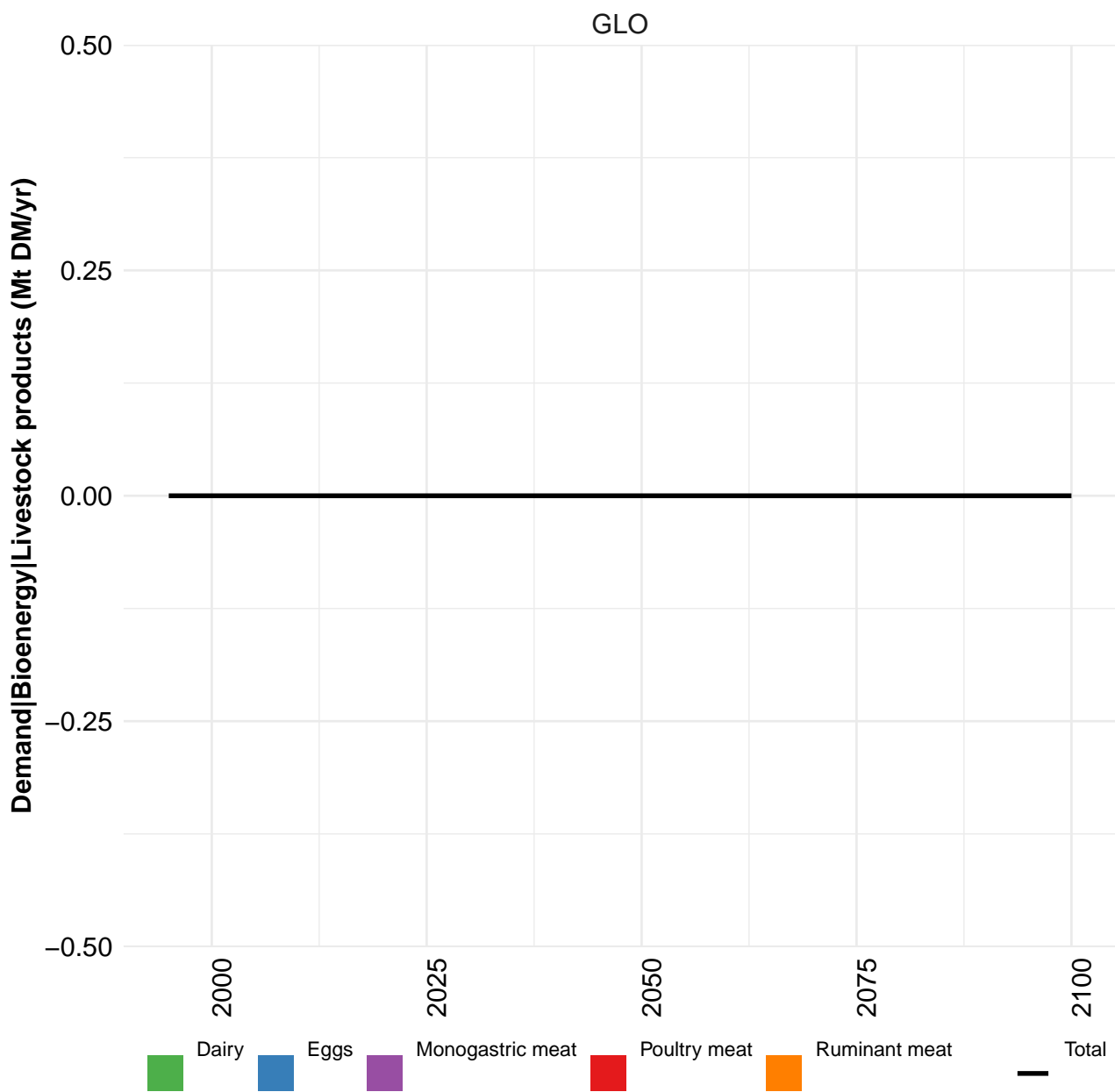
Table 121: FAO — Demand—Bioenergy—Crop residues—Straw (Mt DM/yr)

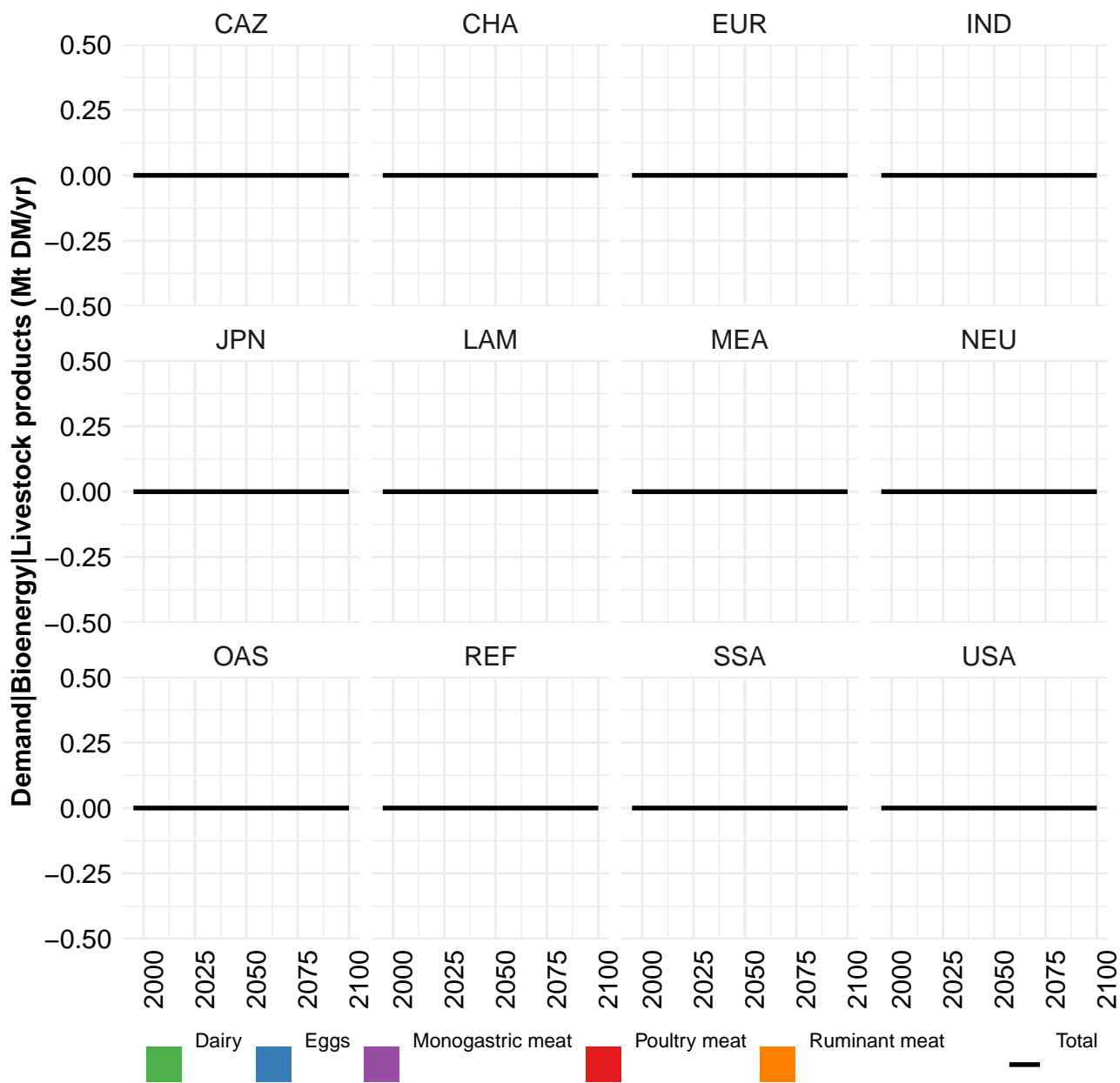




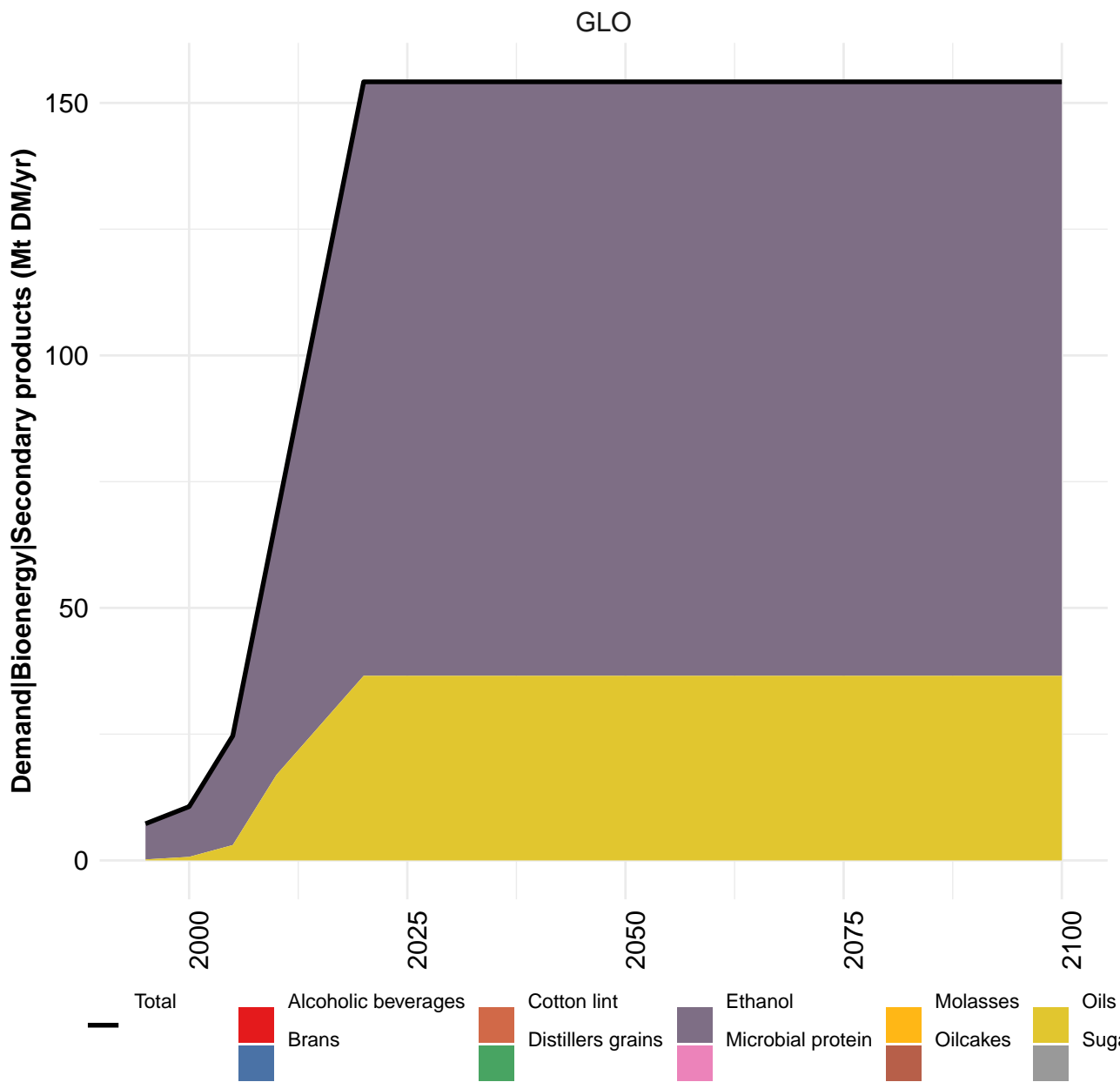


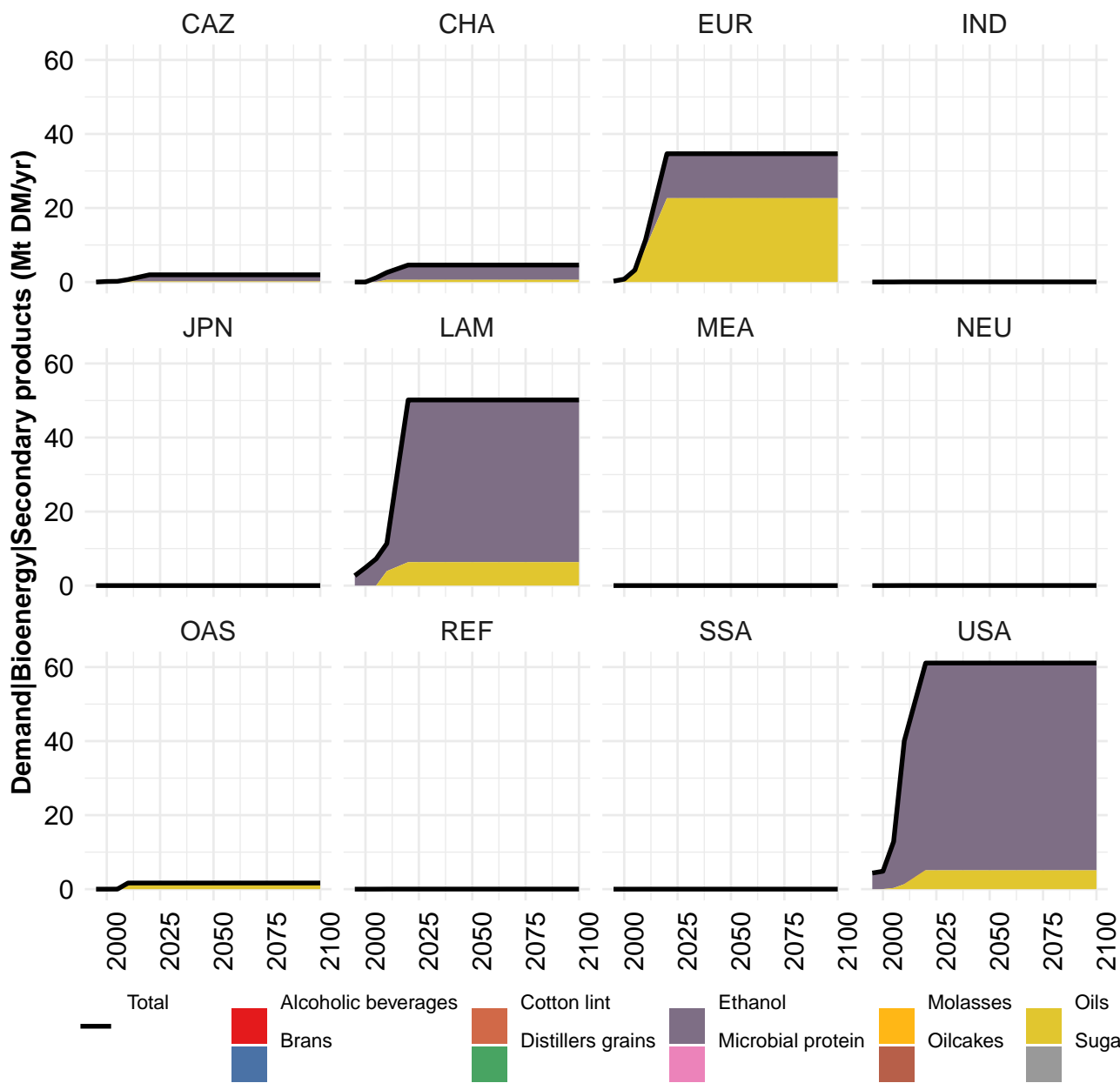




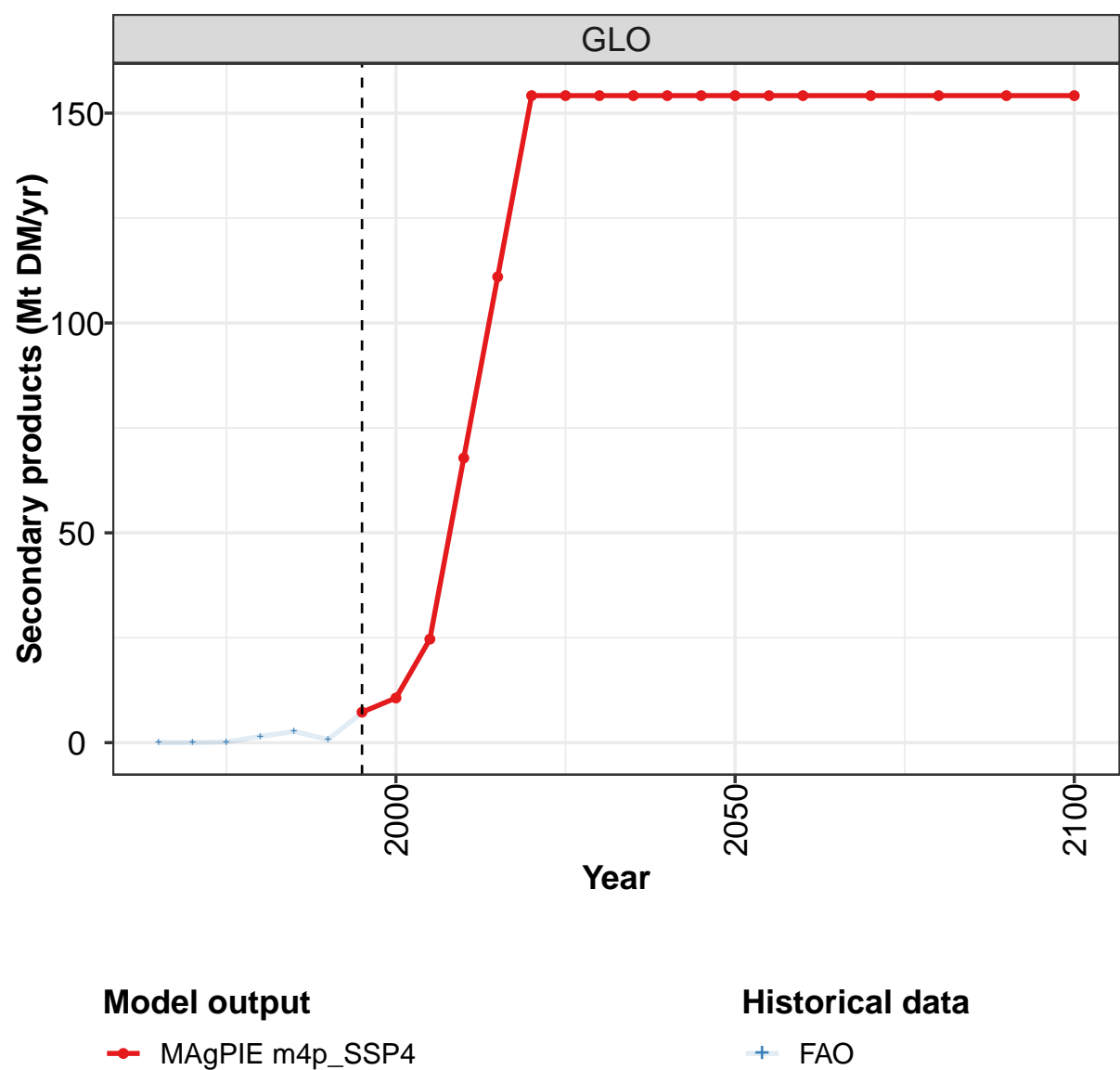








4.4 Secondary products



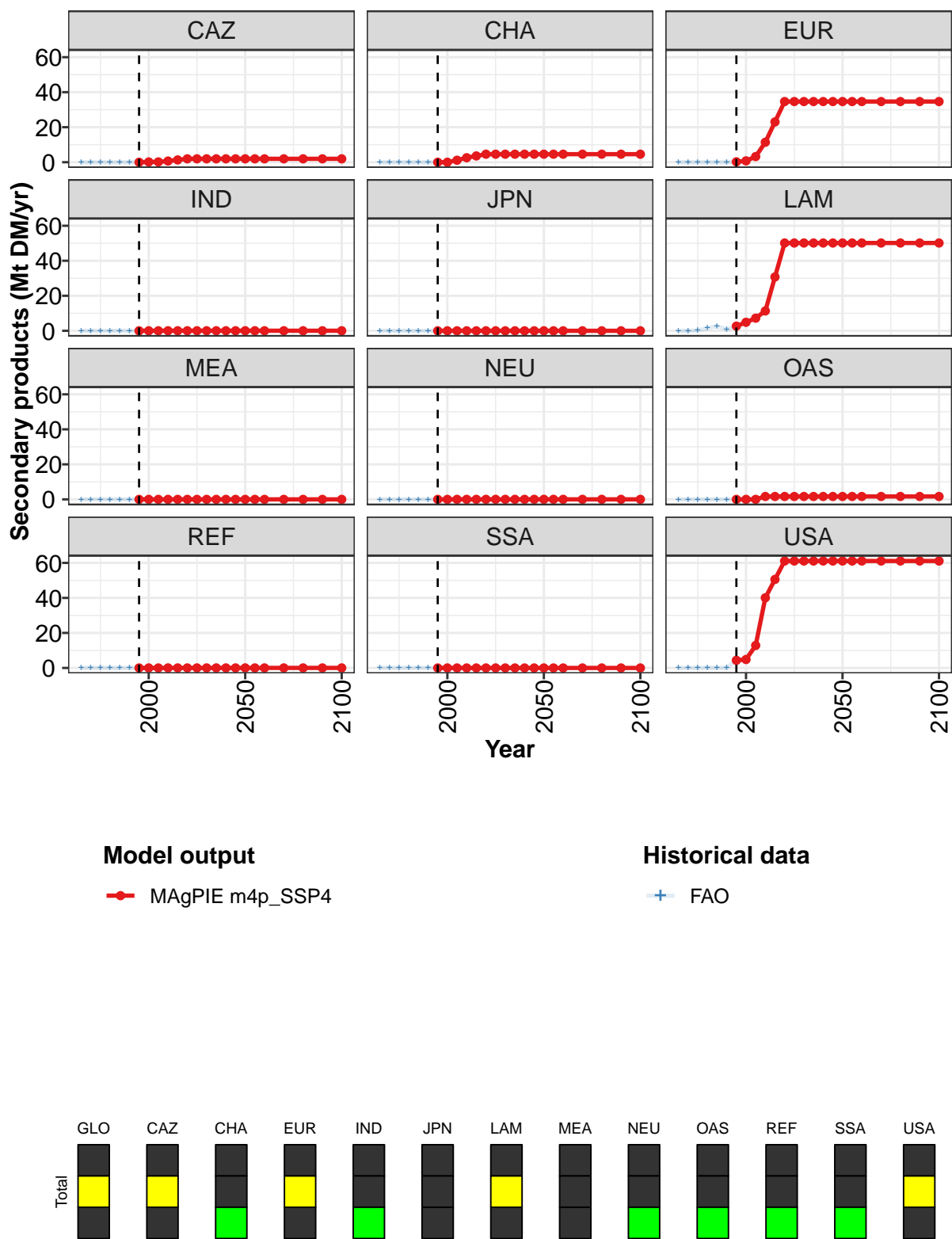


Figure 41: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7	11	25	68	111	154	154	154	154	154	154
CAZ	0	0	0	1	1	2	2	2	2	2	2
CHA	0	0	1	3	4	5	5	5	5	5	5
EUR	0	1	3	11	23	35	35	35	35	35	35
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	50	50	50	50	50
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	2	2	2	2	2
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	61	61	61	61	61

Table 122: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Secondary products (Mt DM/yr) [PART 1/2]

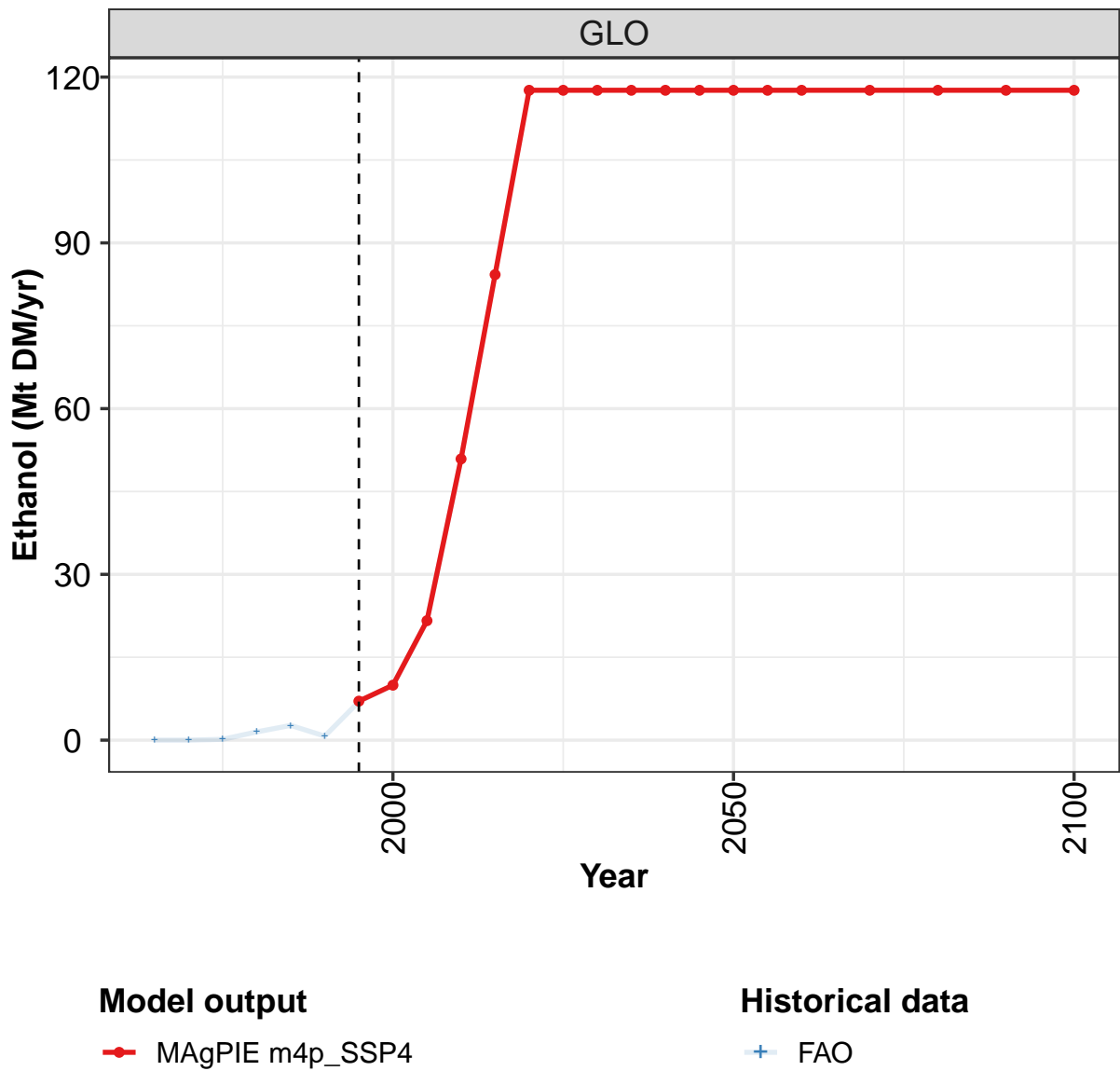
	2050	2055	2060	2070	2080	2090	2100
GLO	154	154	154	154	154	154	154
CAZ	2	2	2	2	2	2	2
CHA	5	5	5	5	5	5	5
EUR	35	35	35	35	35	35	35
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	50	50	50	50	50	50	50
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	2	2	2	2	2	2	2
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	61	61	61	61	61	61	61

Table 123: MAgPIE m4p\_SSP4 — 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



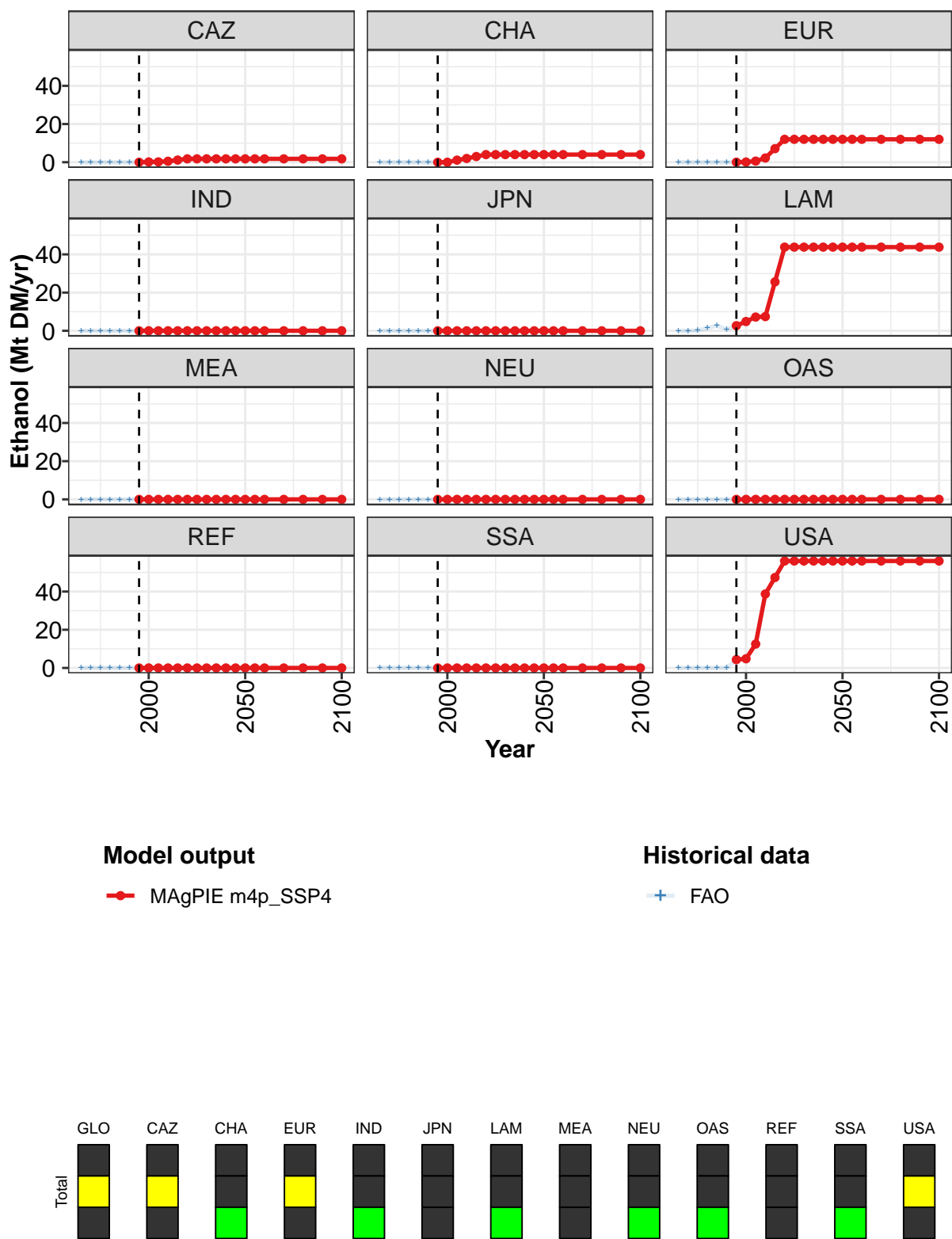


Figure 42: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Secondary products—Ethanol (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7	10	22	51	84	118	118	118	118	118	118
CAZ	0	0	0	1	1	2	2	2	2	2	2
CHA	0	0	1	2	3	4	4	4	4	4	4
EUR	0	0	1	2	7	12	12	12	12	12	12
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	44	44	44	44	44
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	56	56	56	56	56

Table 125: MAgPIE m4p-SSP4 — Demand—Bioenergy—Secondary products—Ethanol (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	118	118	118	118	118	118	118
CAZ	2	2	2	2	2	2	2
CHA	4	4	4	4	4	4	4
EUR	12	12	12	12	12	12	12
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	44	44	44	44	44	44	44
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	56	56	56	56	56	56	56

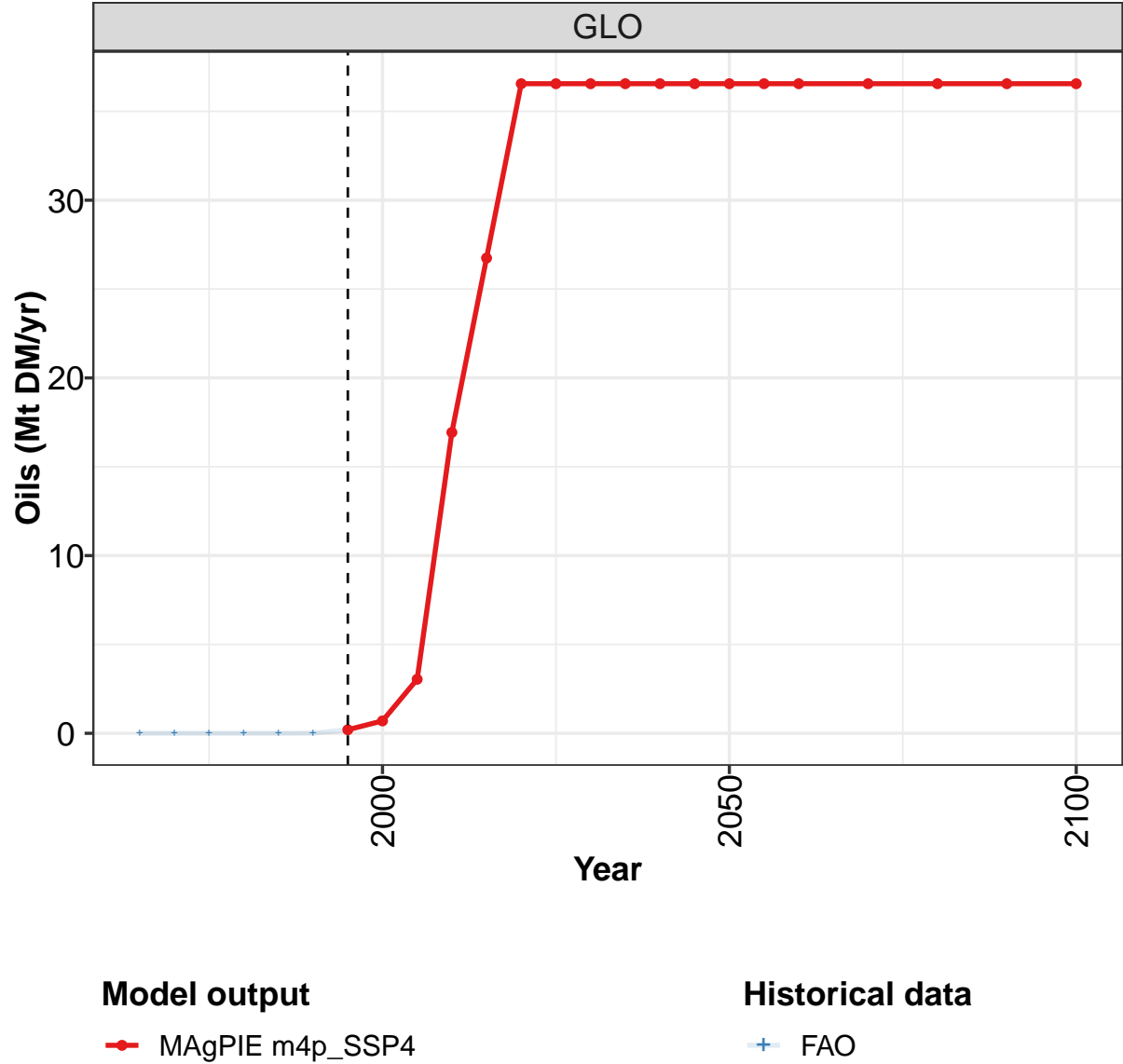
Table 126: MAgPIE m4p-SSP4 — Demand—Bioenergy—Secondary products—Ethanol (Mt DM/yr) [PART 2/2]

	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



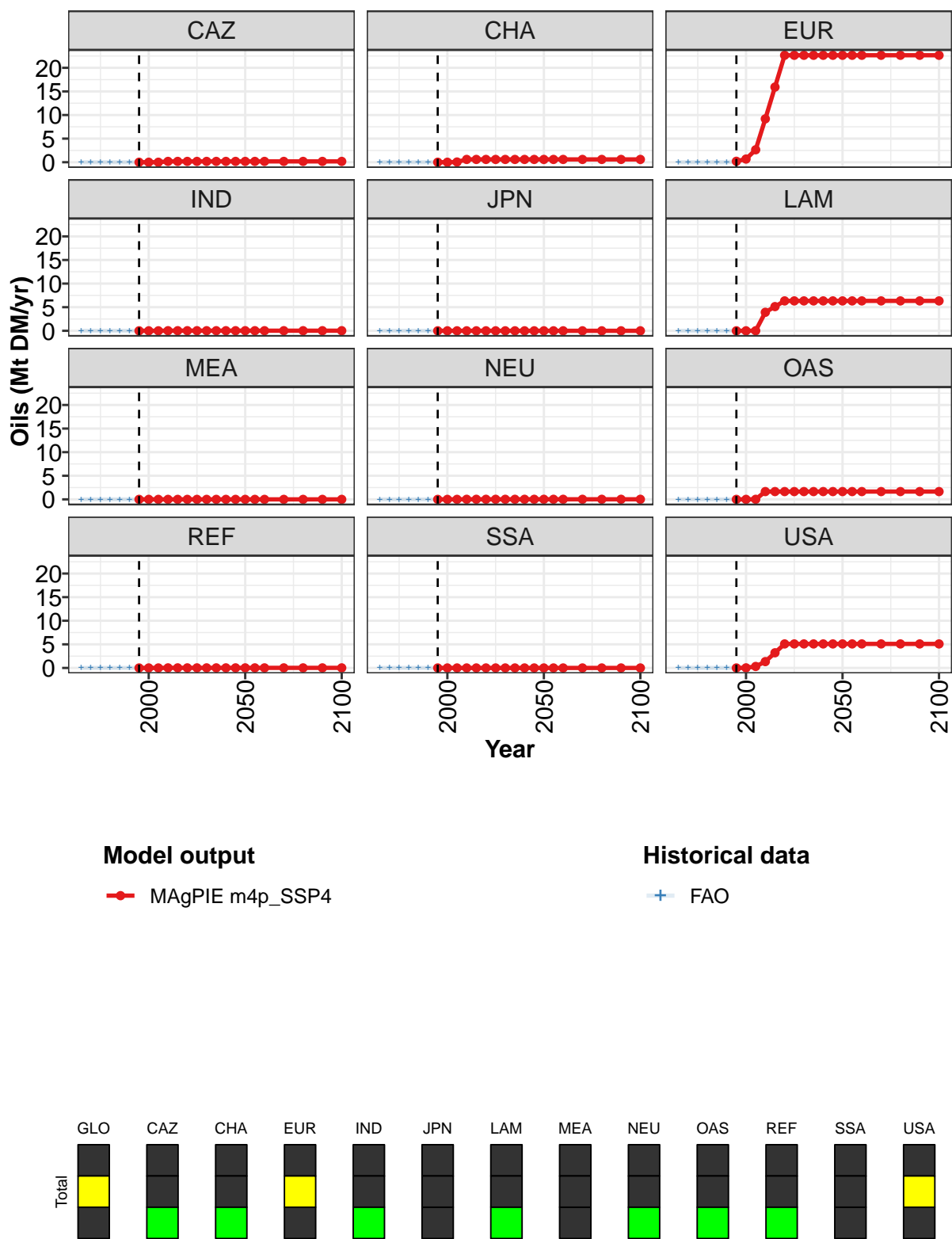


Figure 43: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.2	0.7	3.0	16.9	26.7	36.6	36.6	36.6	36.6	36.6	36.6
CAZ	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
EUR	0.2	0.7	2.6	9.2	15.9	22.7	22.7	22.7	22.7	22.7	22.7
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	6.3	6.3	6.3	6.3	6.3
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	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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	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	5.1	5.1	5.1	5.1	5.1

Table 128: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Secondary products—Oils (Mt DM/yr) [PART 1/2]

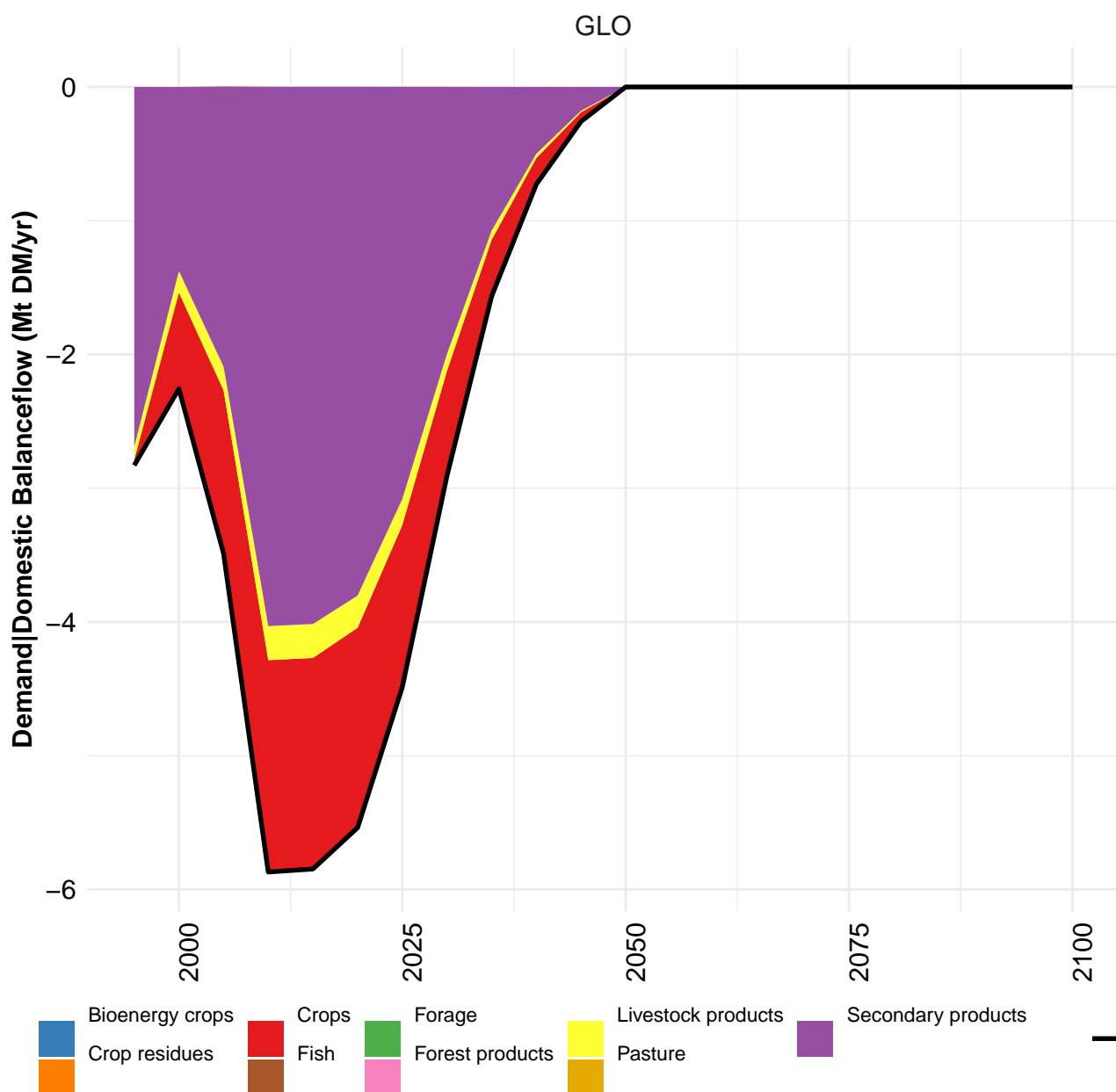
	2050	2055	2060	2070	2080	2090	2100
GLO	36.6	36.6	36.6	36.6	36.6	36.6	36.6
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	0.6	0.6	0.6	0.6	0.6	0.6	0.6
EUR	22.7	22.7	22.7	22.7	22.7	22.7	22.7
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	6.3	6.3	6.3	6.3	6.3	6.3	6.3
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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	5.1	5.1	5.1	5.1	5.1	5.1	5.1

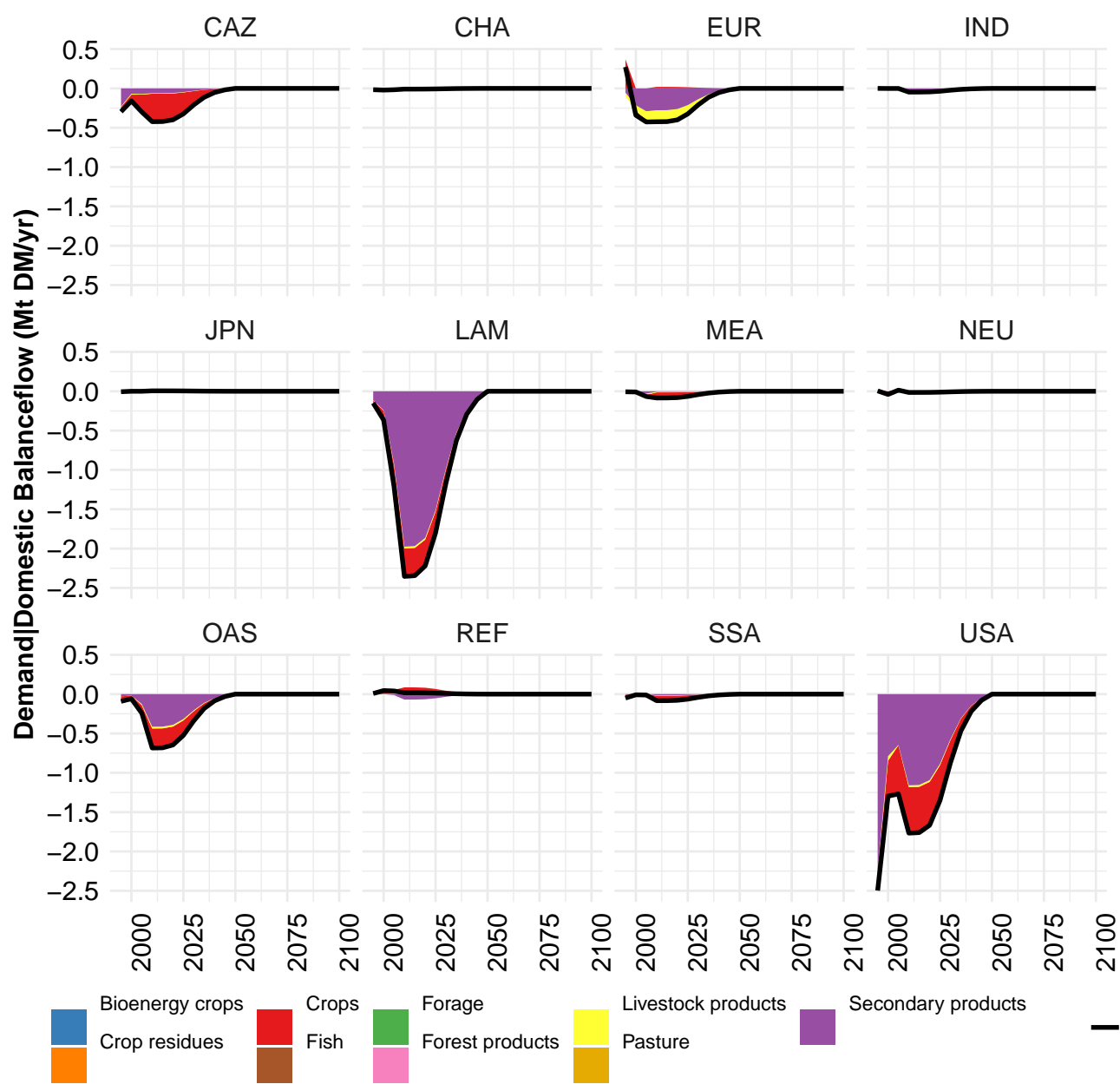
Table 129: MAgPIE m4p\_SSP4 — Demand—Bioenergy—Secondary products—Oils (Mt DM/yr) [PART 2/2]

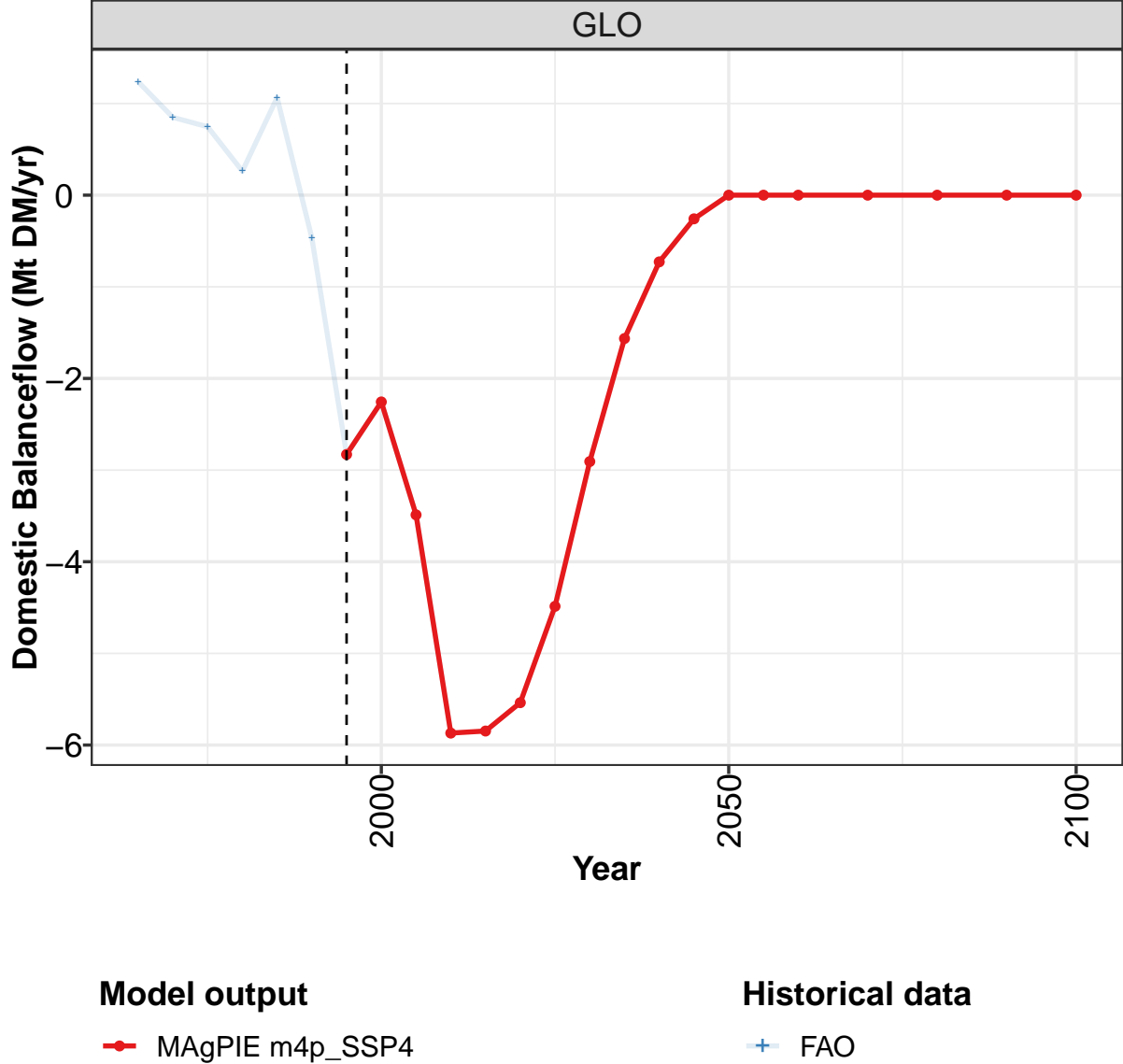
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	3.0	16.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	2.6	9.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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







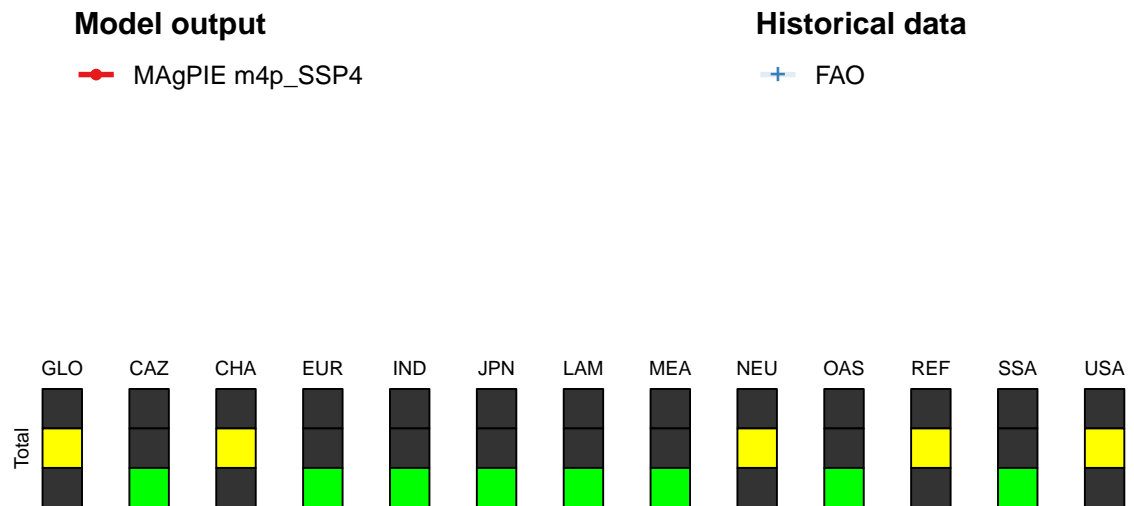
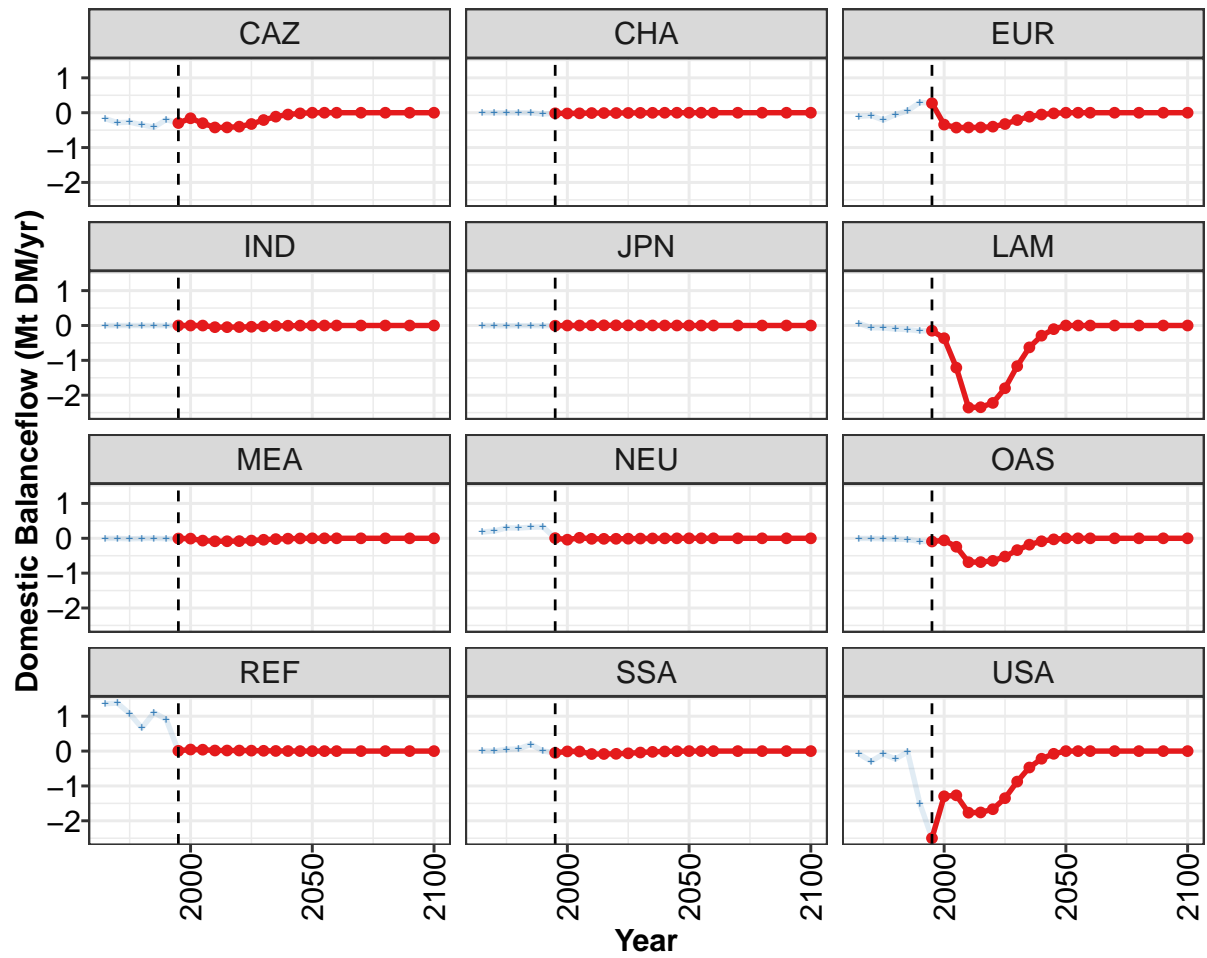


Figure 44: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow (Mt DM/yr) [PART 1/2]

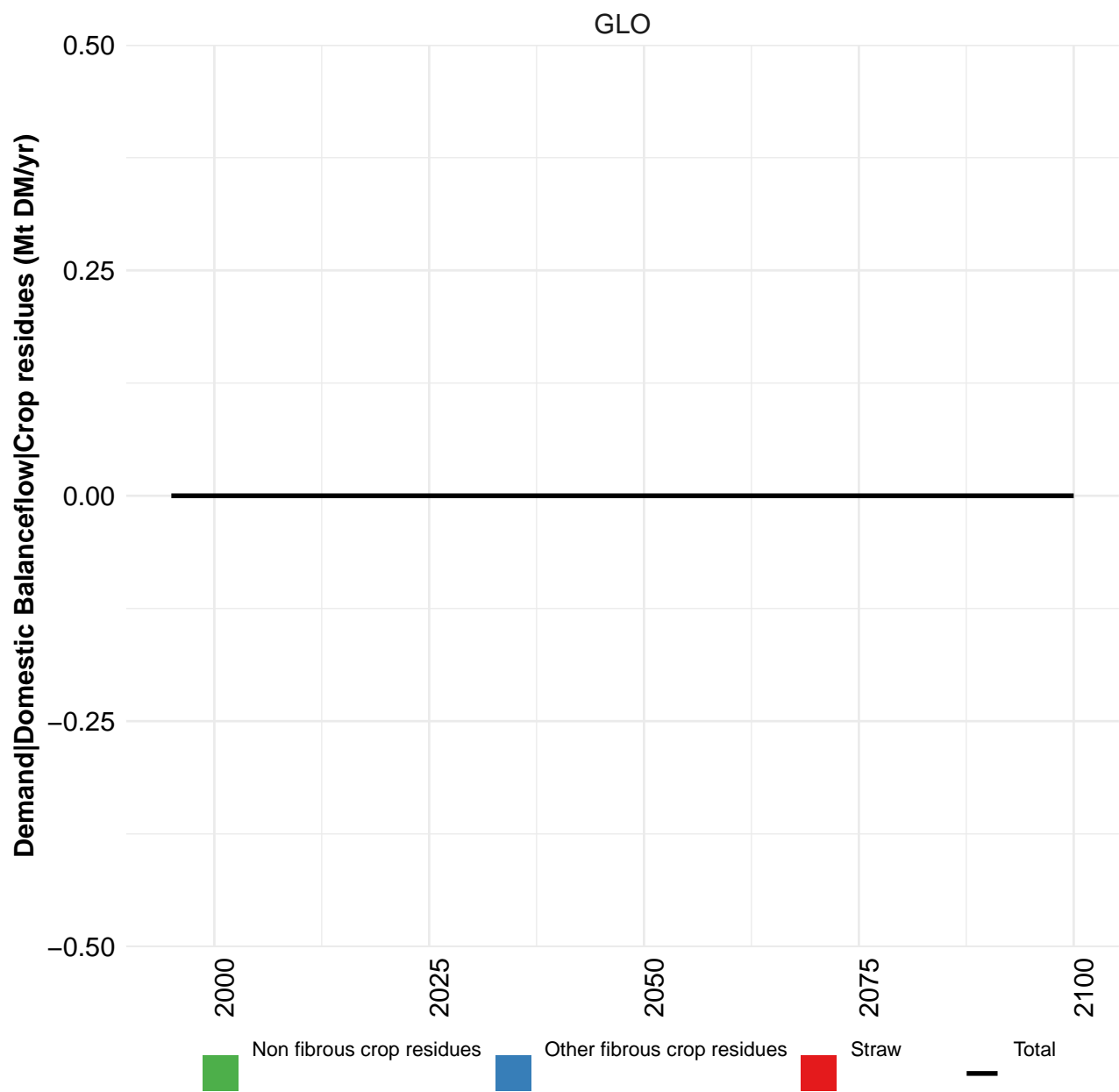
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	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

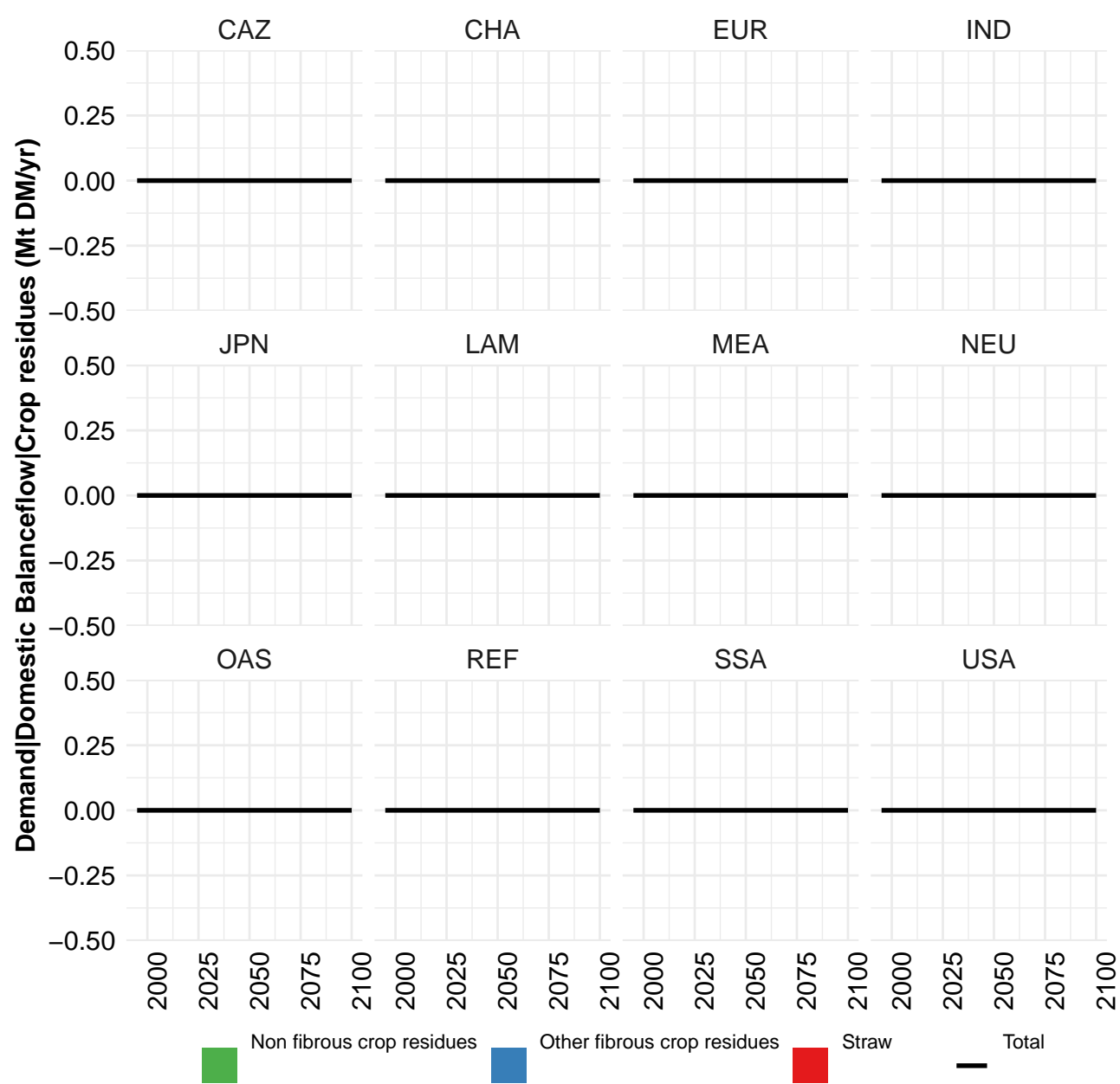
Table 132: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow (Mt DM/yr) [PART 2/2]

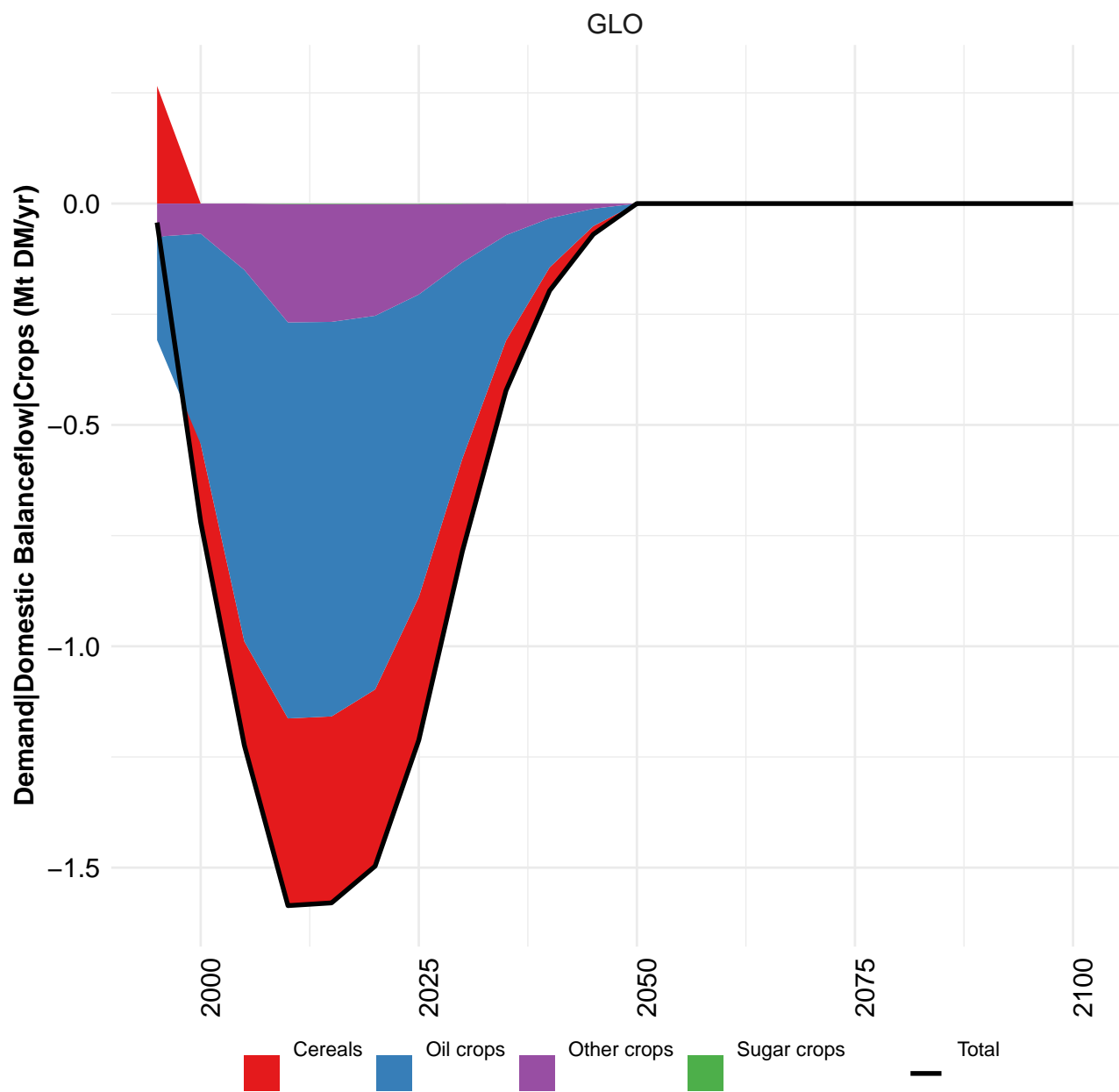
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.24	0.85	0.75	0.26	1.06	-0.47	-2.83	-2.26	-3.49	-5.87
CAZ	-0.17	-0.29	-0.27	-0.35	-0.42	-0.20	-0.30	-0.16	-0.30	-0.42
CHA	-0.00	-0.00	-0.00	-0.00	-0.00	-0.04	-0.02	-0.02	-0.02	-0.01
EUR	-0.10	-0.08	-0.21	-0.06	0.05	0.30	0.27	-0.34	-0.43	-0.42
IND	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

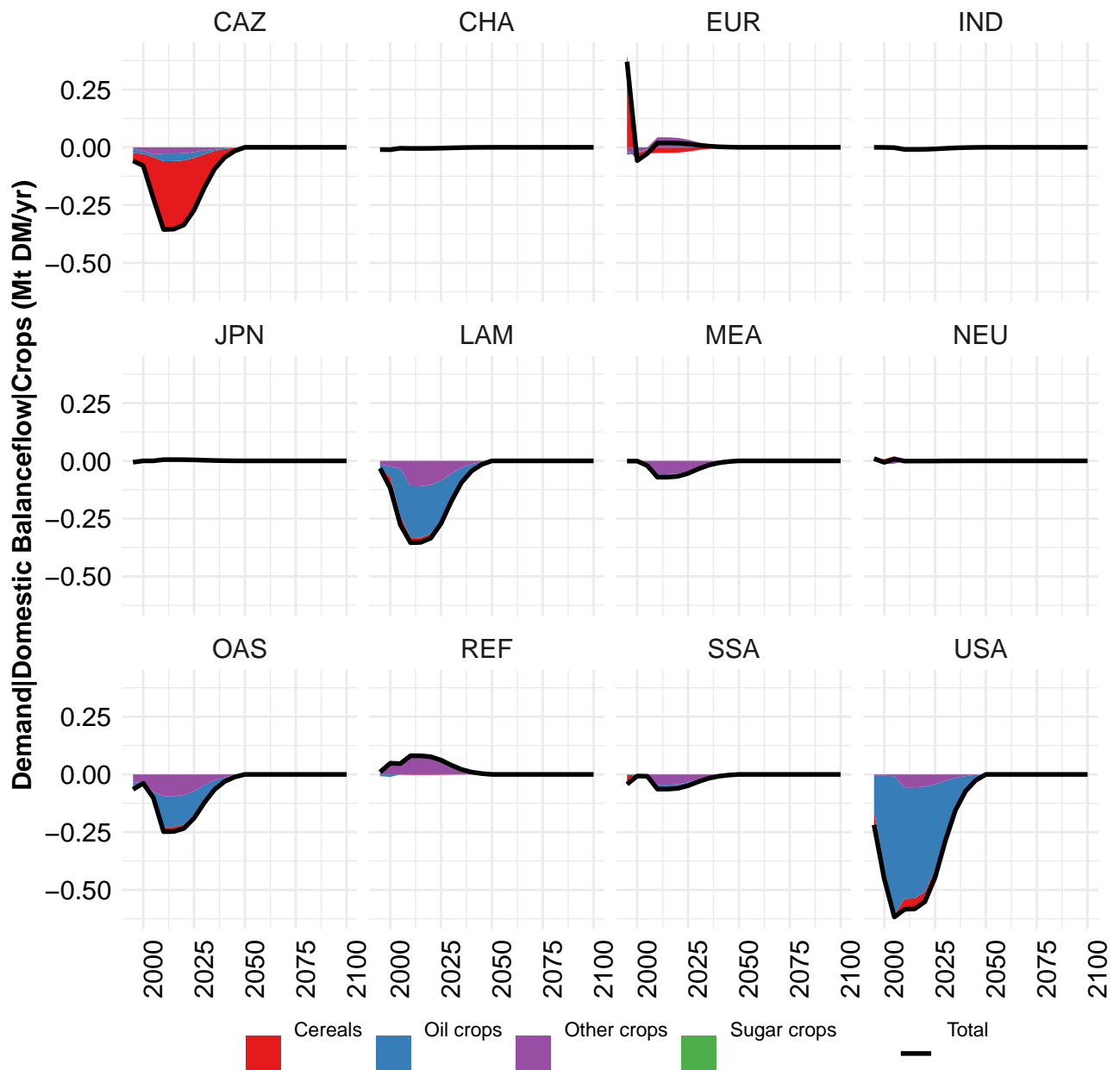
Table 133: FAO — Demand—Domestic Balanceflow (Mt DM/yr)



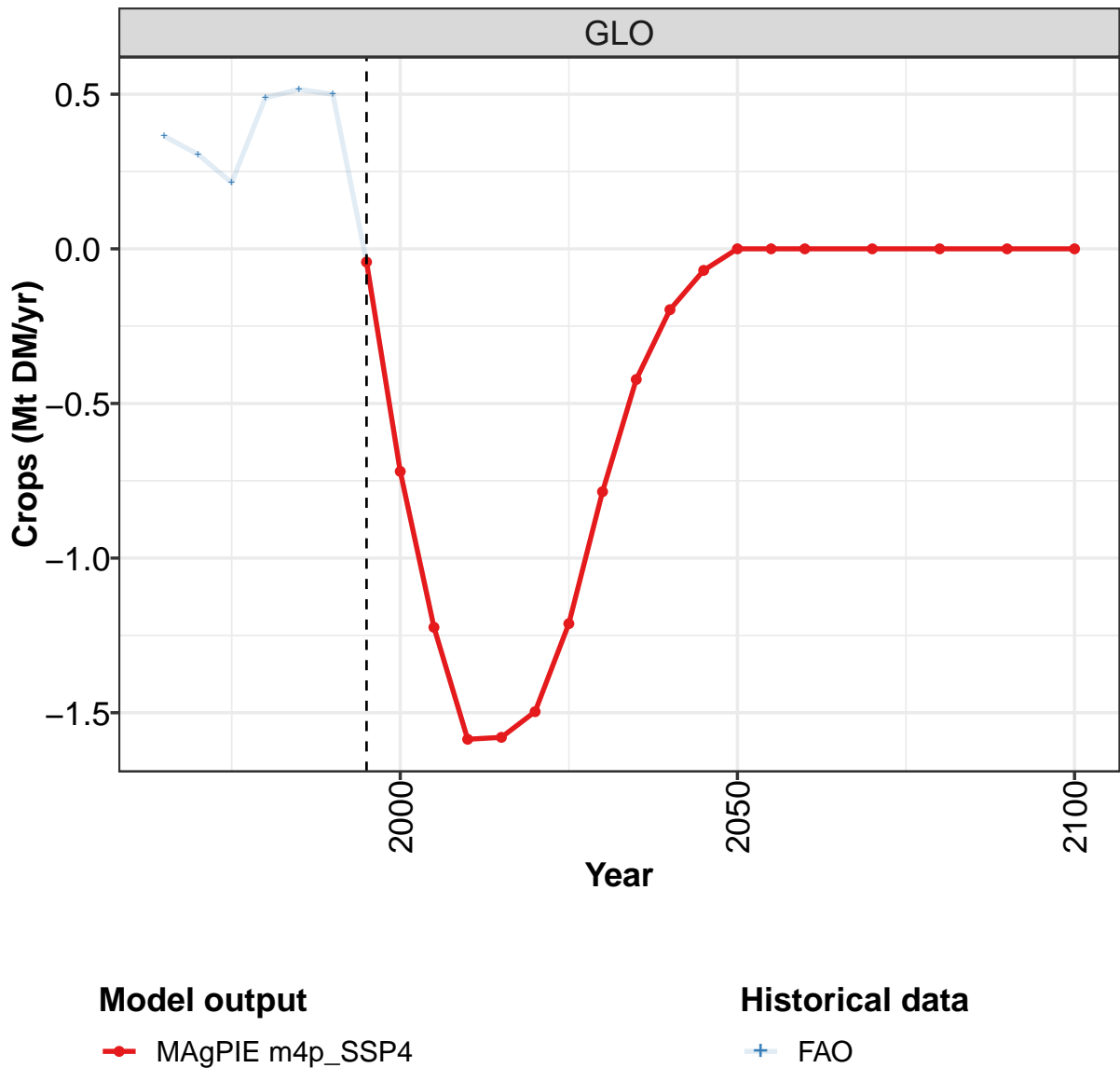








5.1 Crops



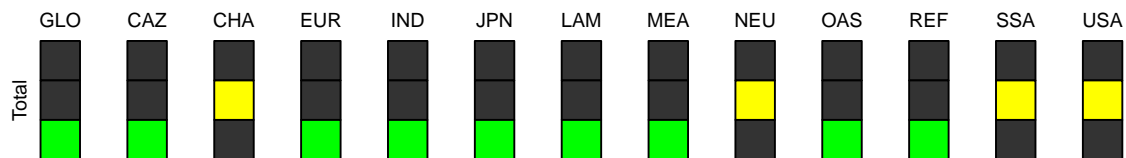
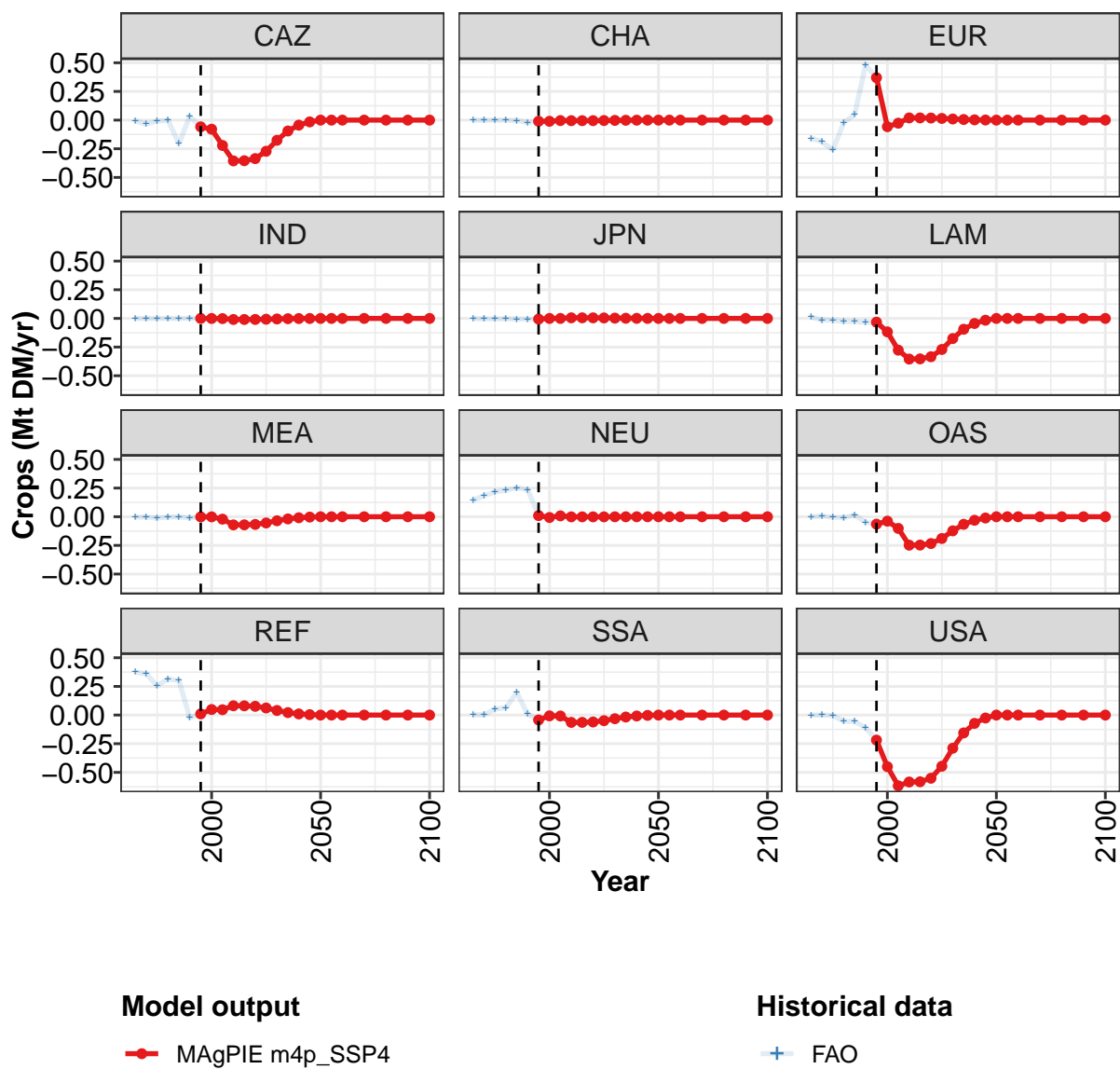


Figure 45: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops (Mt DM/yr) [PART 1/2]

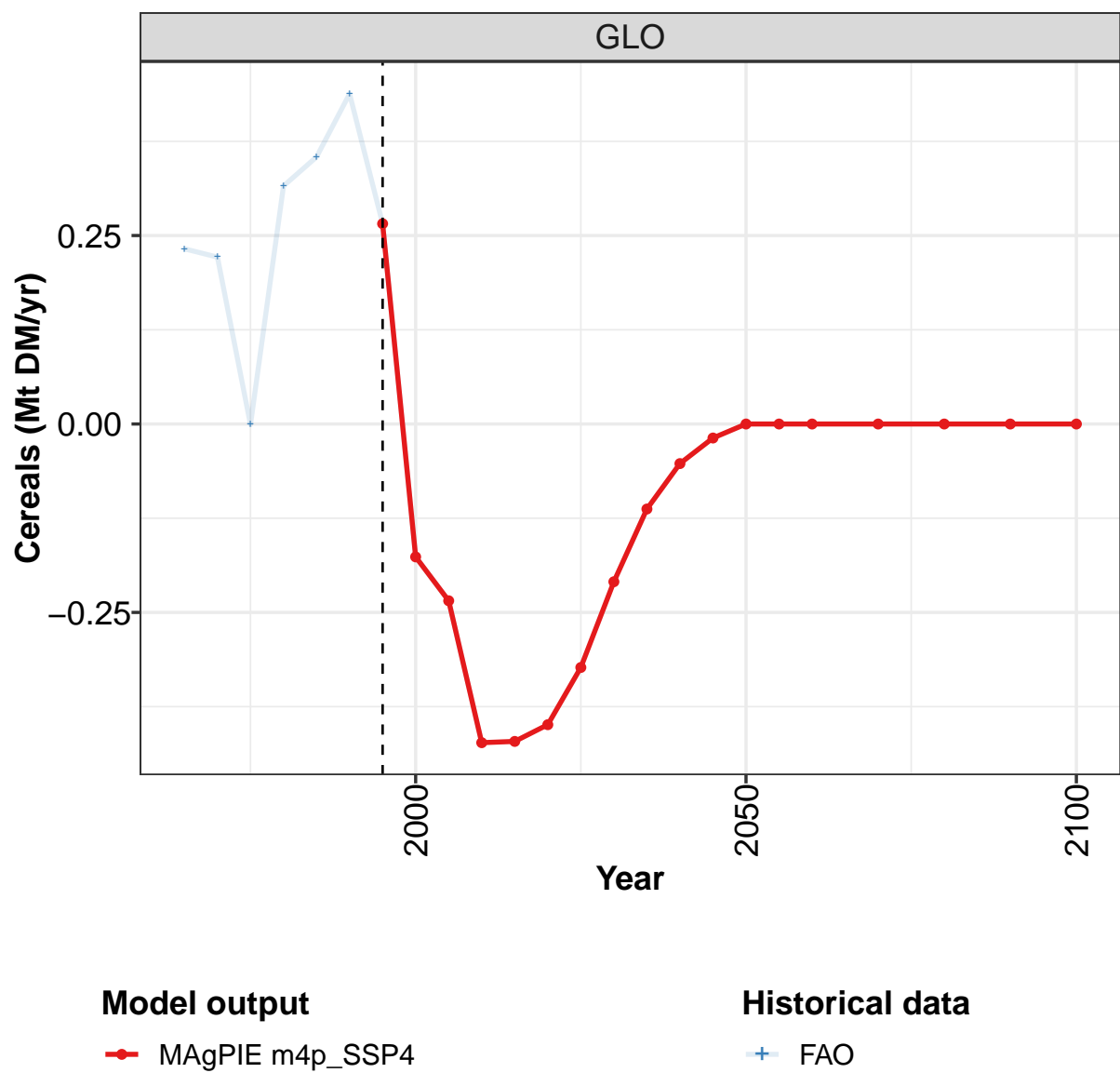
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	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\_SSP4 — 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





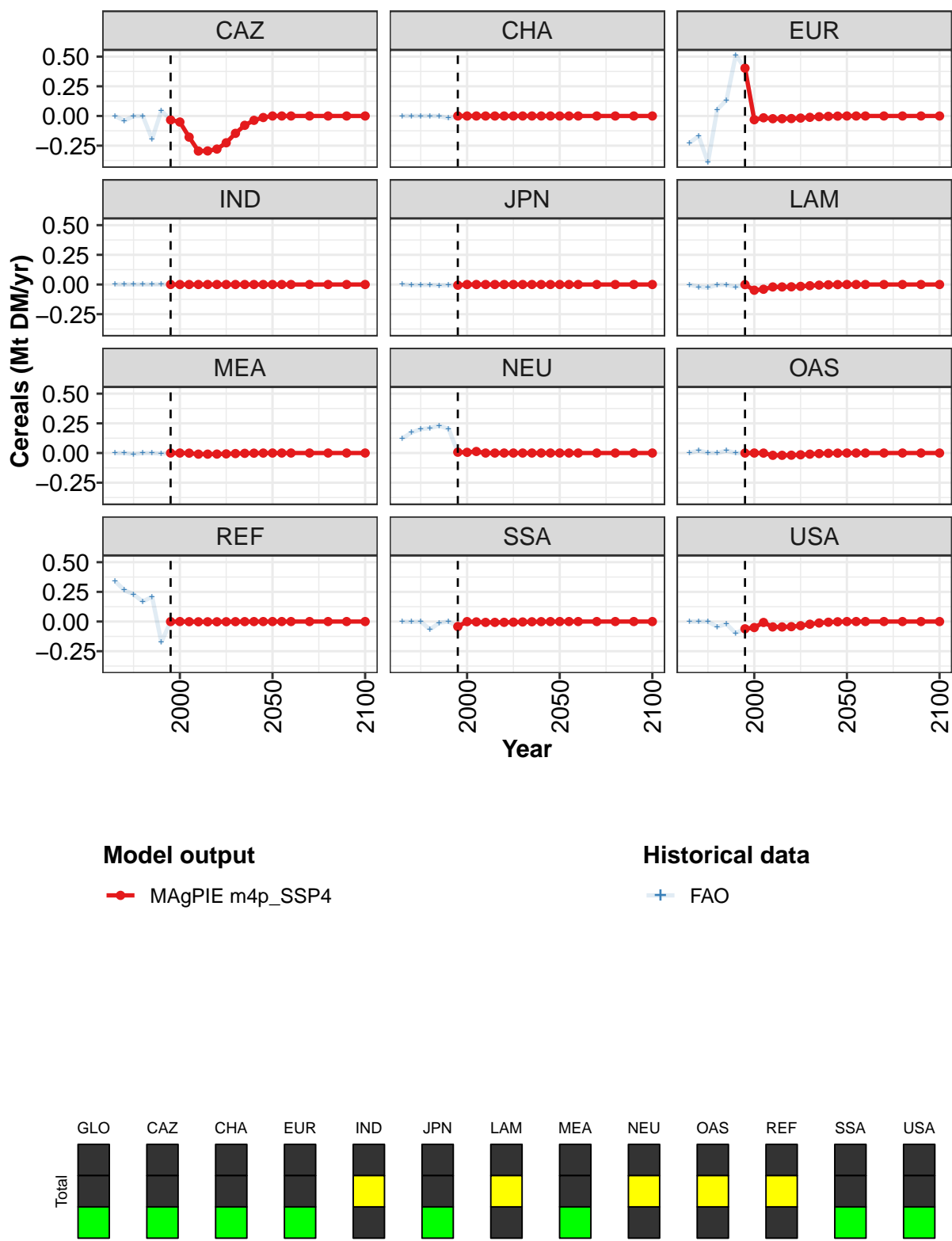


Figure 46: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals (Mt DM/yr) [PART 1/2]

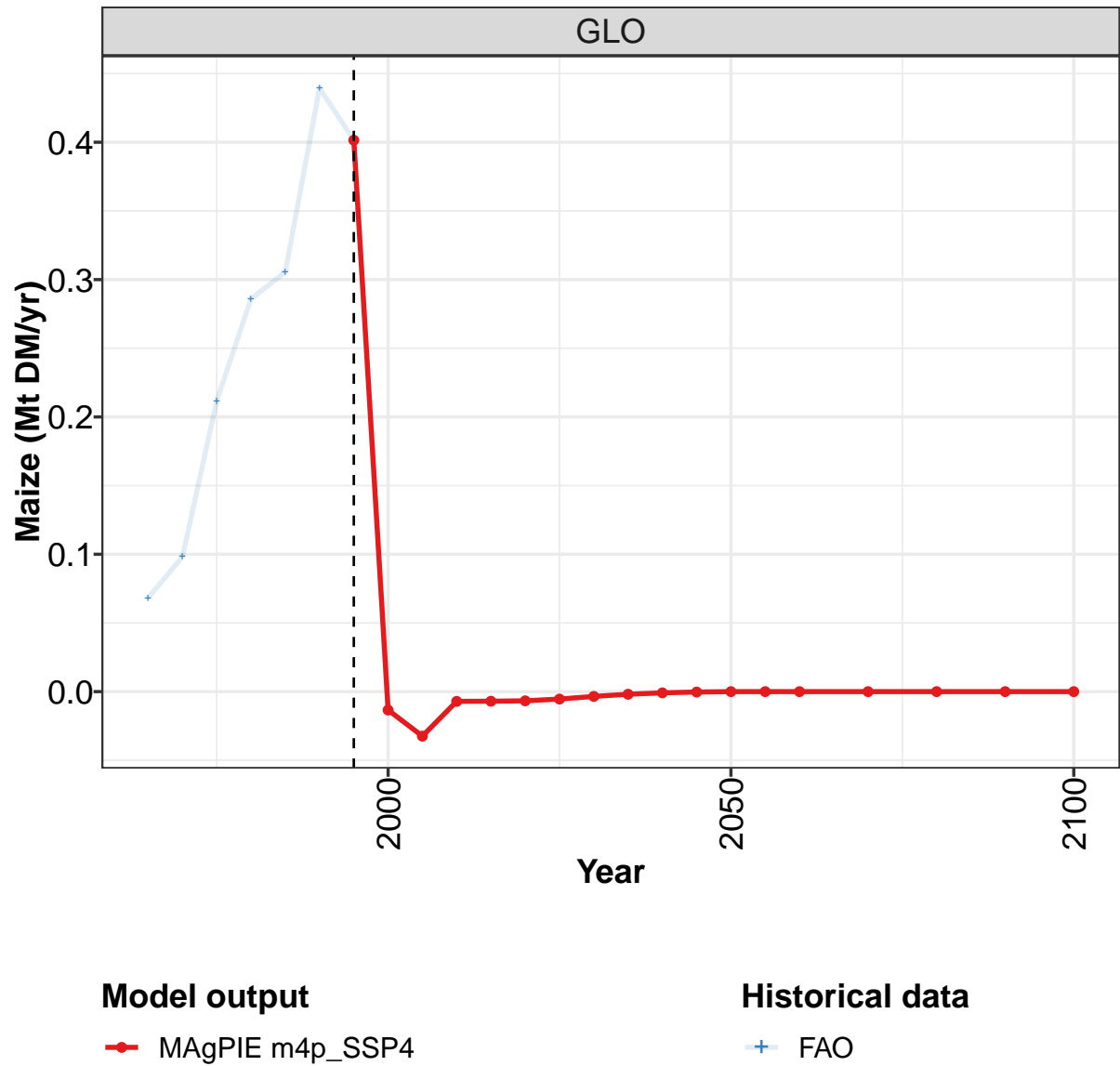
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	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\_SSP4 — 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



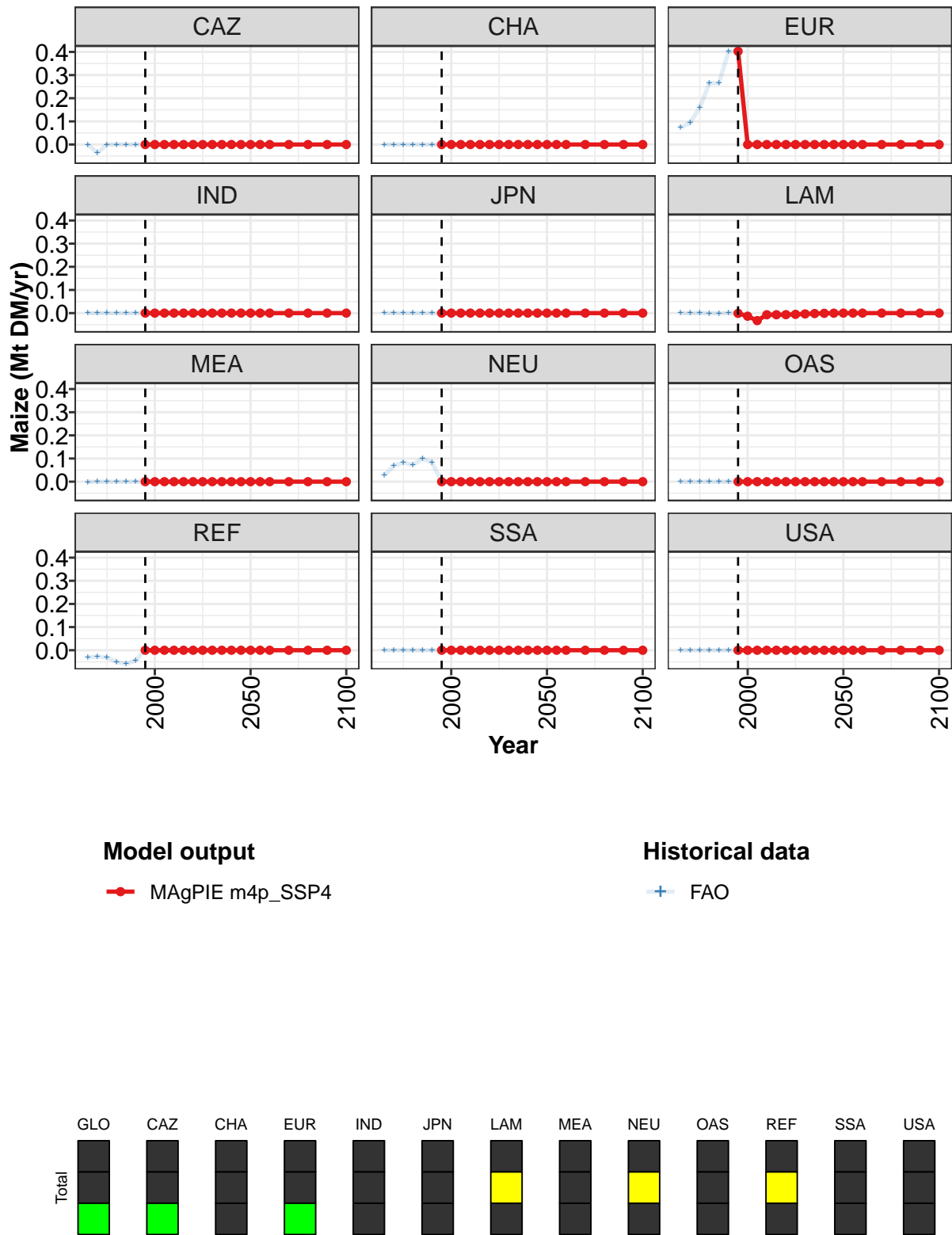


Figure 47: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Maize (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Maize (Mt DM/yr)  
[PART 1/2]

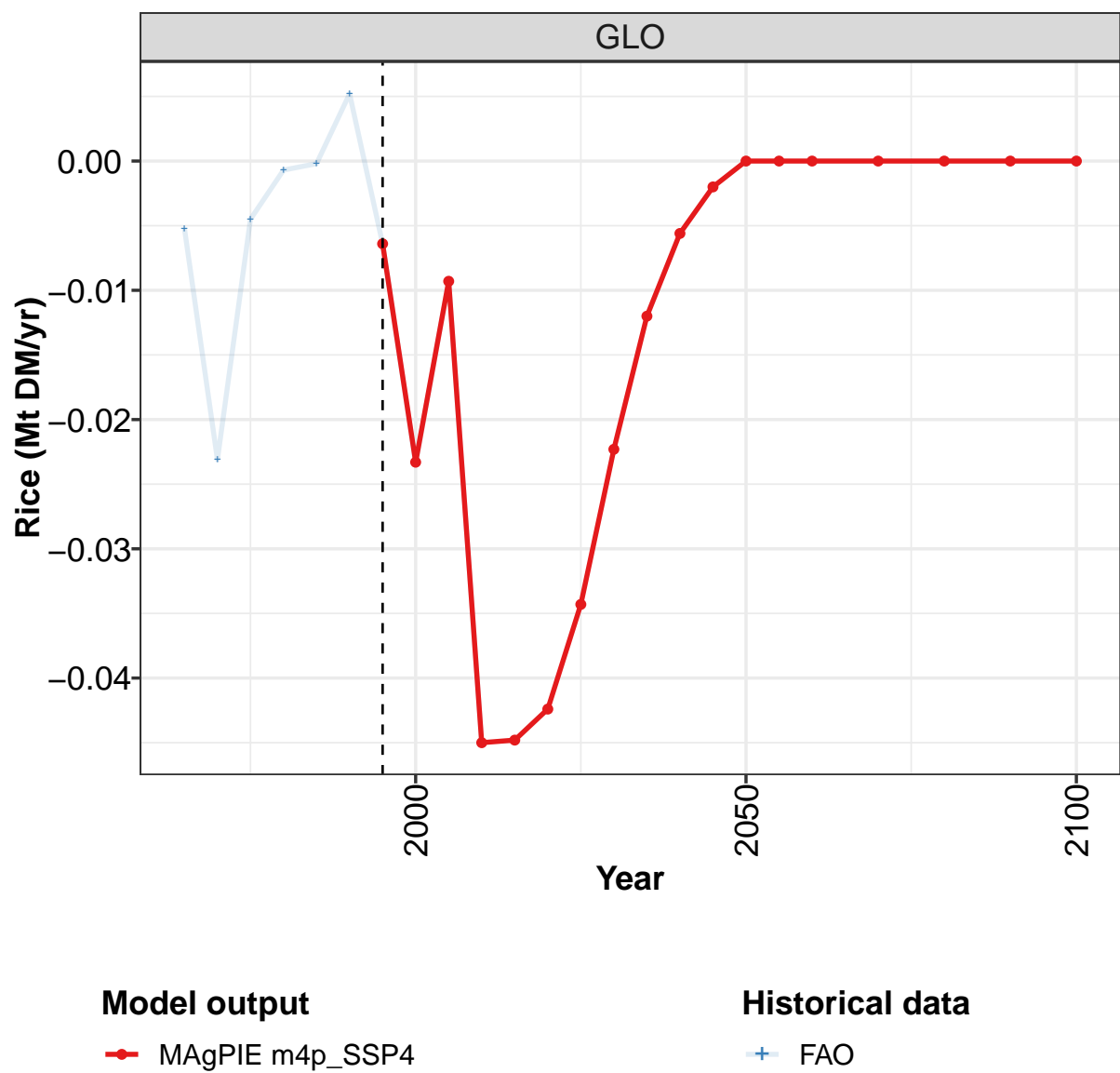
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	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\_SSP4 — 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



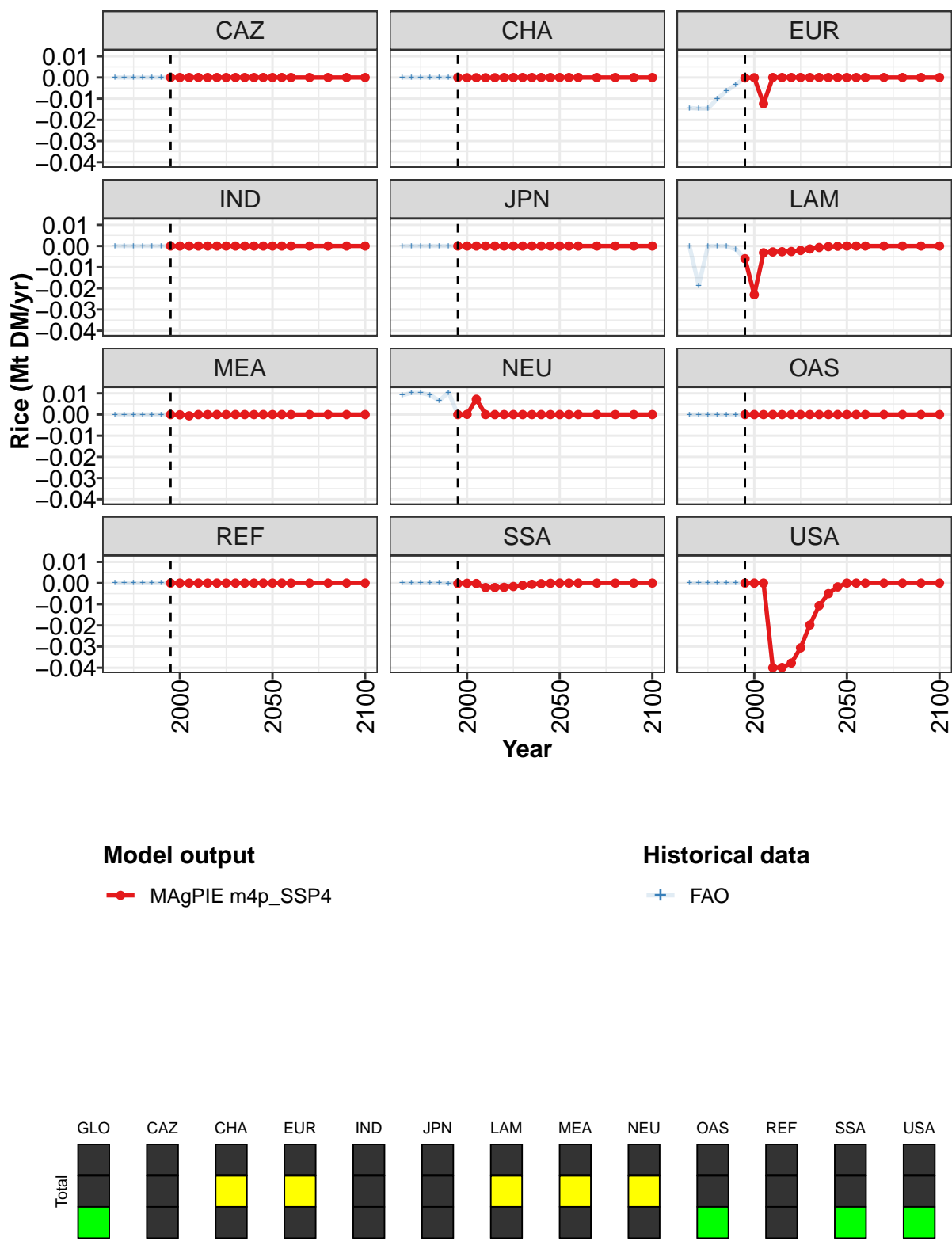


Figure 48: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.00640	-0.02330	-0.00930	-0.04500	-0.04480	-0.04240	-0.03430	-0.02230	-0.01200	-0.00560	-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	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	-0.00020	-0.00010	-0.01240	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	-0.00600	-0.02300	-0.00320	-0.00280	-0.00270	-0.00260	-0.00210	-0.00140	-0.00070	-0.00030	-0.00000
MEA	0.00000	-0.00010	-0.00060	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NEU	0.00000	0.00010	0.00720	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	-0.00020	-0.00010	-0.00020	-0.00210	-0.00210	-0.00200	-0.00160	-0.00110	-0.00060	-0.00030	-0.00000
USA	0.00000	0.00000	0.00000	-0.04000	-0.03990	-0.03780	-0.03060	-0.01980	-0.01070	-0.00500	-0.00000

Table 143: MAgPIE m4p\_SSP4 — 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

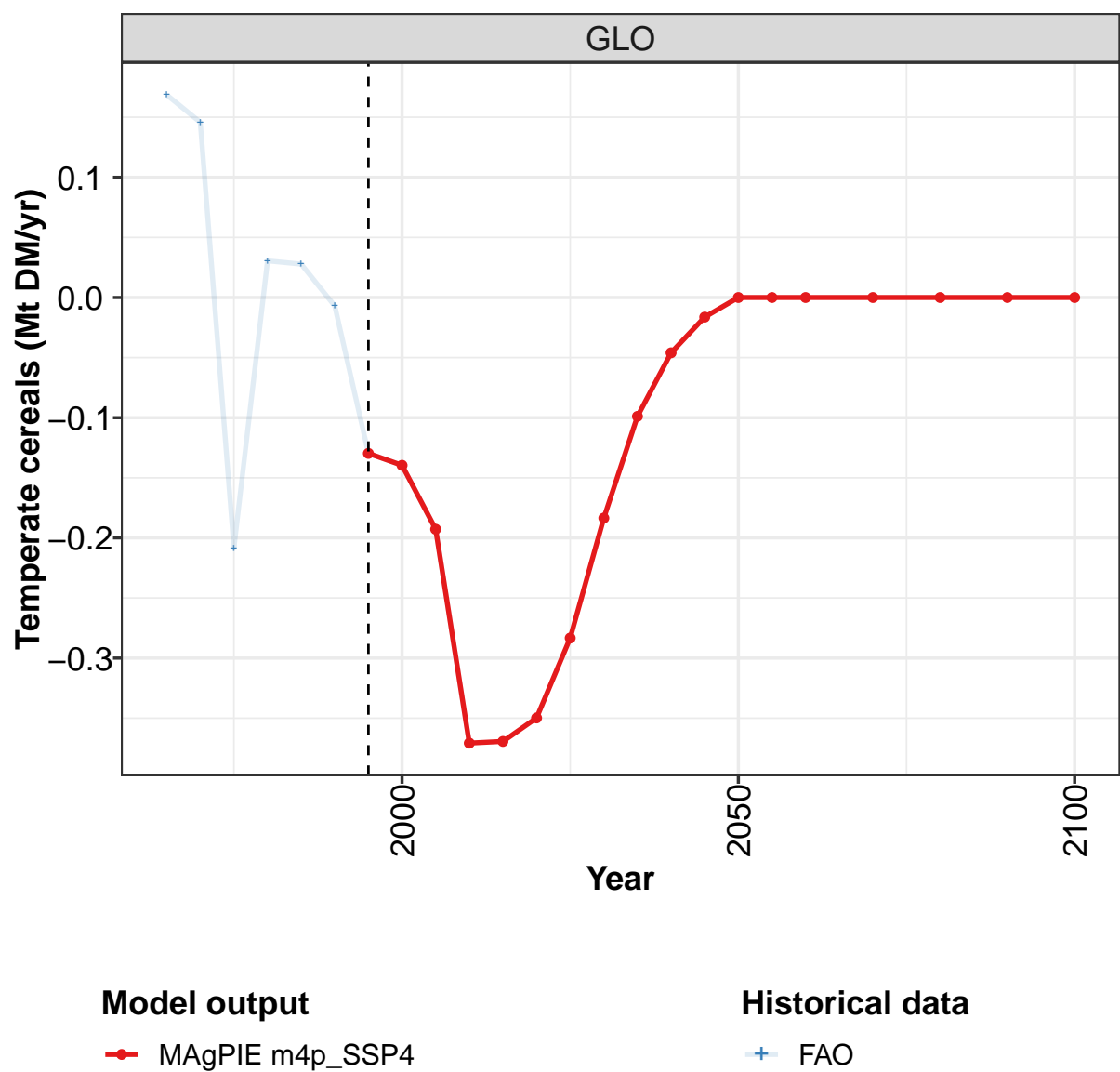
Table 144: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Rice (Mt DM/yr)  
[PART 2/2]

	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



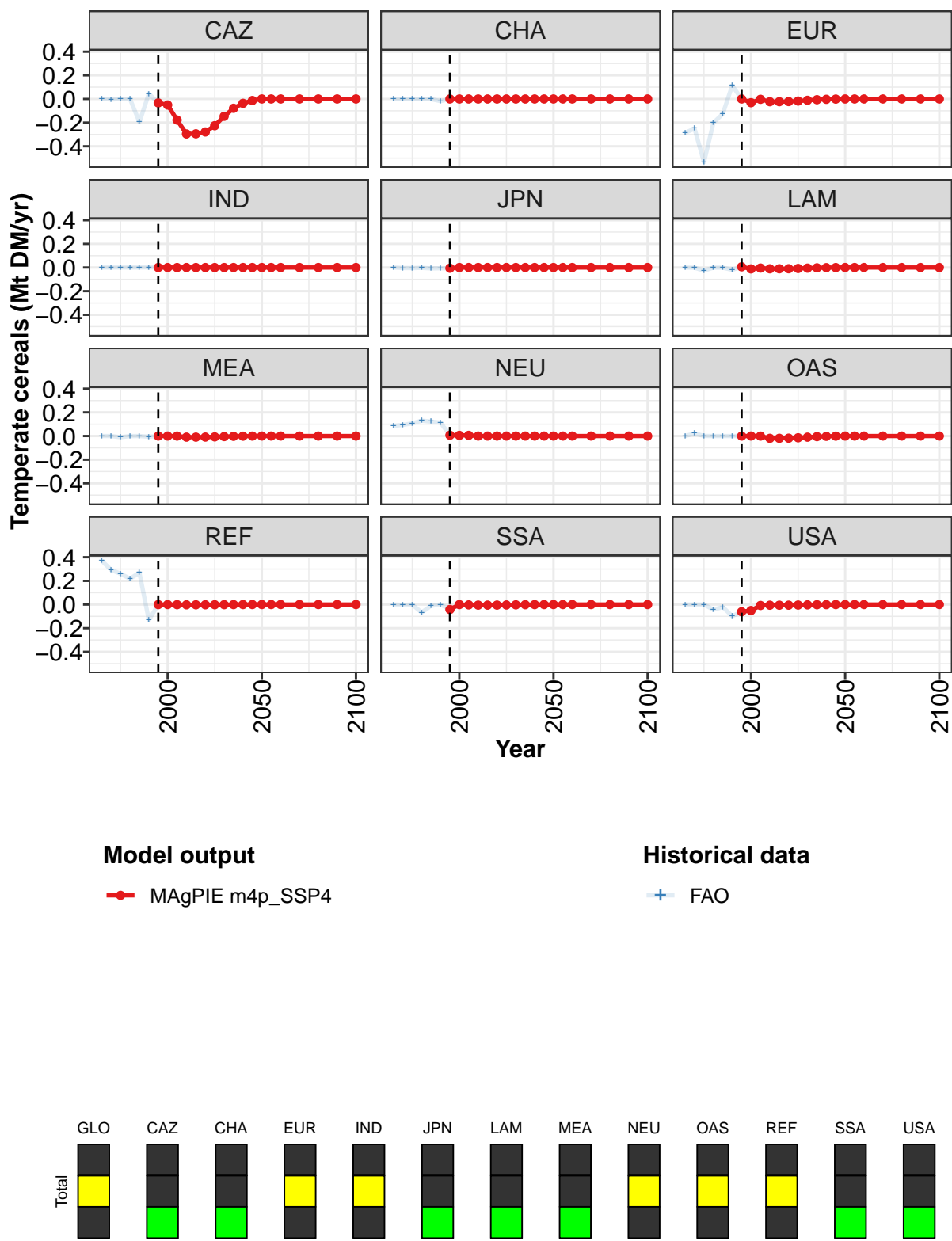


Figure 49: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.12970	-0.13960	-0.19280	-0.37070	-0.36930	-0.34980	-0.28330	-0.18350	-0.09890	-0.04600	-0.00000
CAZ	-0.03320	-0.05090	-0.17820	-0.29550	-0.29440	-0.27880	-0.22580	-0.14630	-0.07870	-0.03660	-0.00000
CHA	0.00000	-0.00010	0.00000	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.00000
EUR	0.00000	-0.03140	-0.00290	-0.02310	-0.02300	-0.02180	-0.01760	-0.01140	-0.00620	-0.00290	-0.00000
IND	0.00000	-0.00020	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000
JPN	-0.00590	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00610	-0.01170	-0.00450	-0.01080	-0.01070	-0.01010	-0.00820	-0.00530	-0.00290	-0.00130	-0.00000
MEA	0.00000	0.00000	-0.00040	-0.00930	-0.00930	-0.00880	-0.00710	-0.00460	-0.00250	-0.00120	-0.00000
NEU	0.00690	0.00570	0.00570	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	-0.00040	0.00000	-0.00060	-0.01930	-0.01920	-0.01820	-0.01480	-0.00960	-0.00510	-0.00240	-0.00000
REF	-0.00050	0.00000	-0.00110	-0.00210	-0.00210	-0.00200	-0.00160	-0.00100	-0.00060	-0.00030	-0.00000
SSA	-0.04160	-0.00040	-0.00290	-0.00480	-0.00480	-0.00460	-0.00370	-0.00240	-0.00130	-0.00060	-0.00000
USA	-0.06110	-0.05060	-0.00770	-0.00550	-0.00550	-0.00520	-0.00420	-0.00270	-0.00150	-0.00070	-0.00000

Table 146: MAGPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

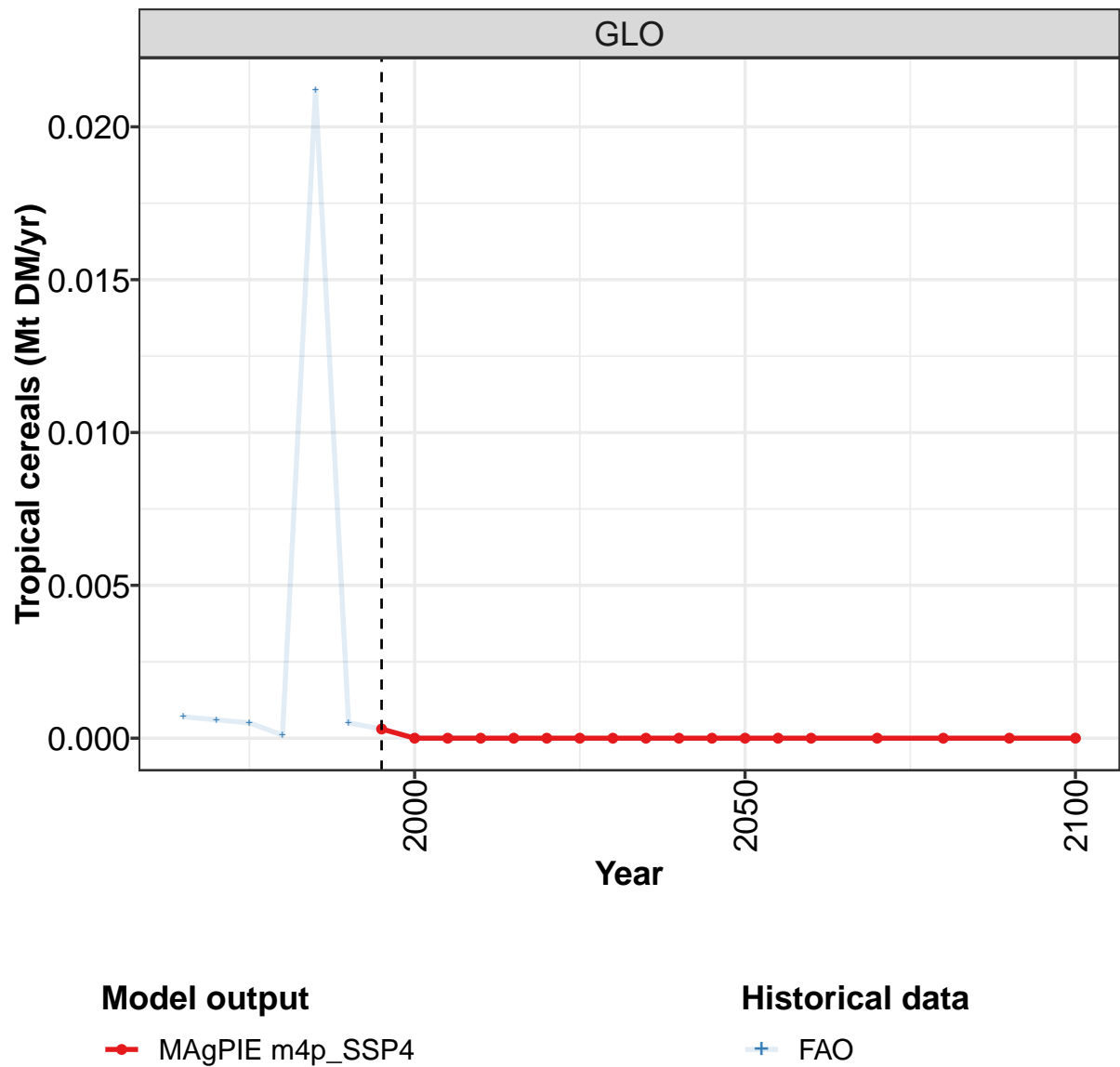
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



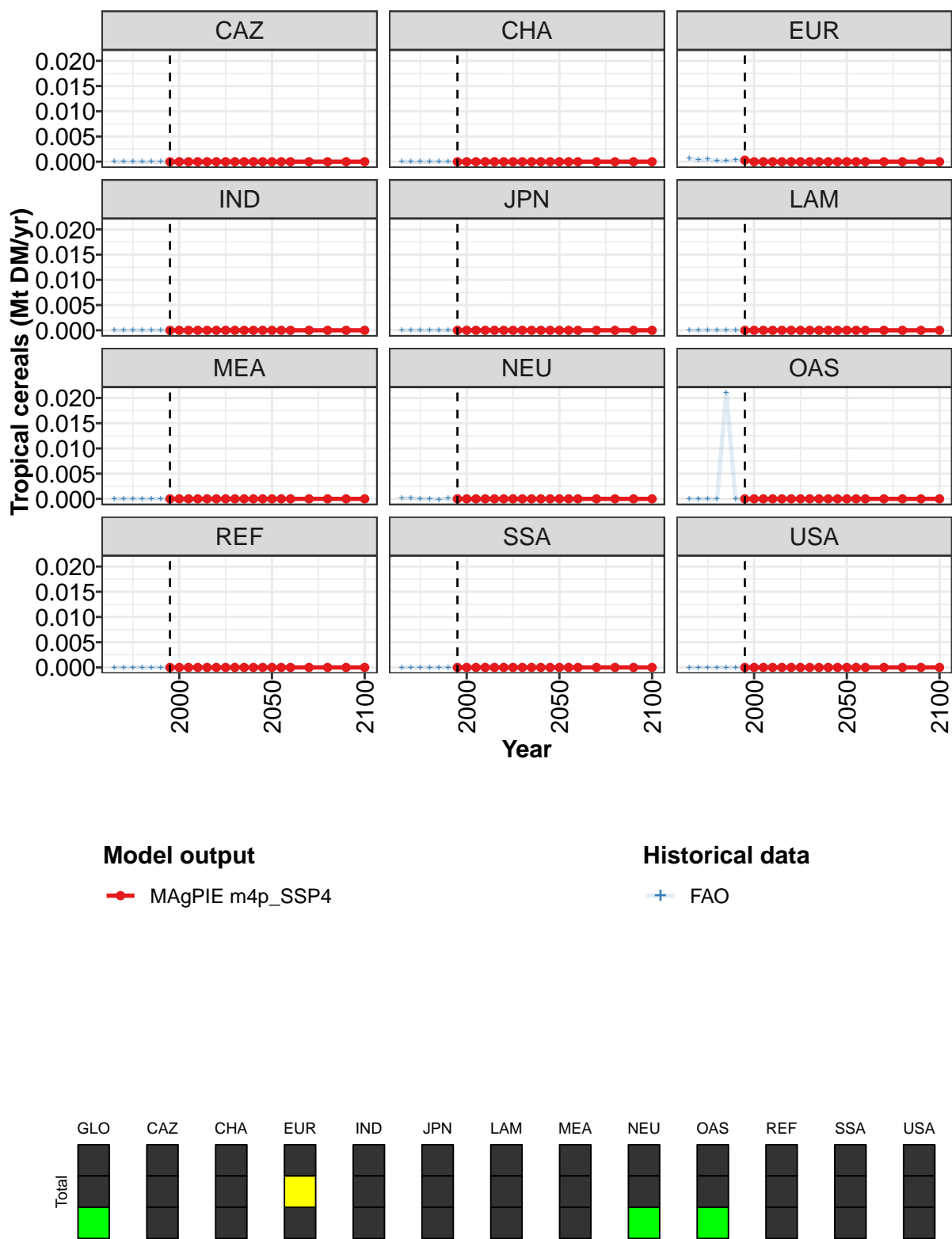


Figure 50: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Tropical cereals (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

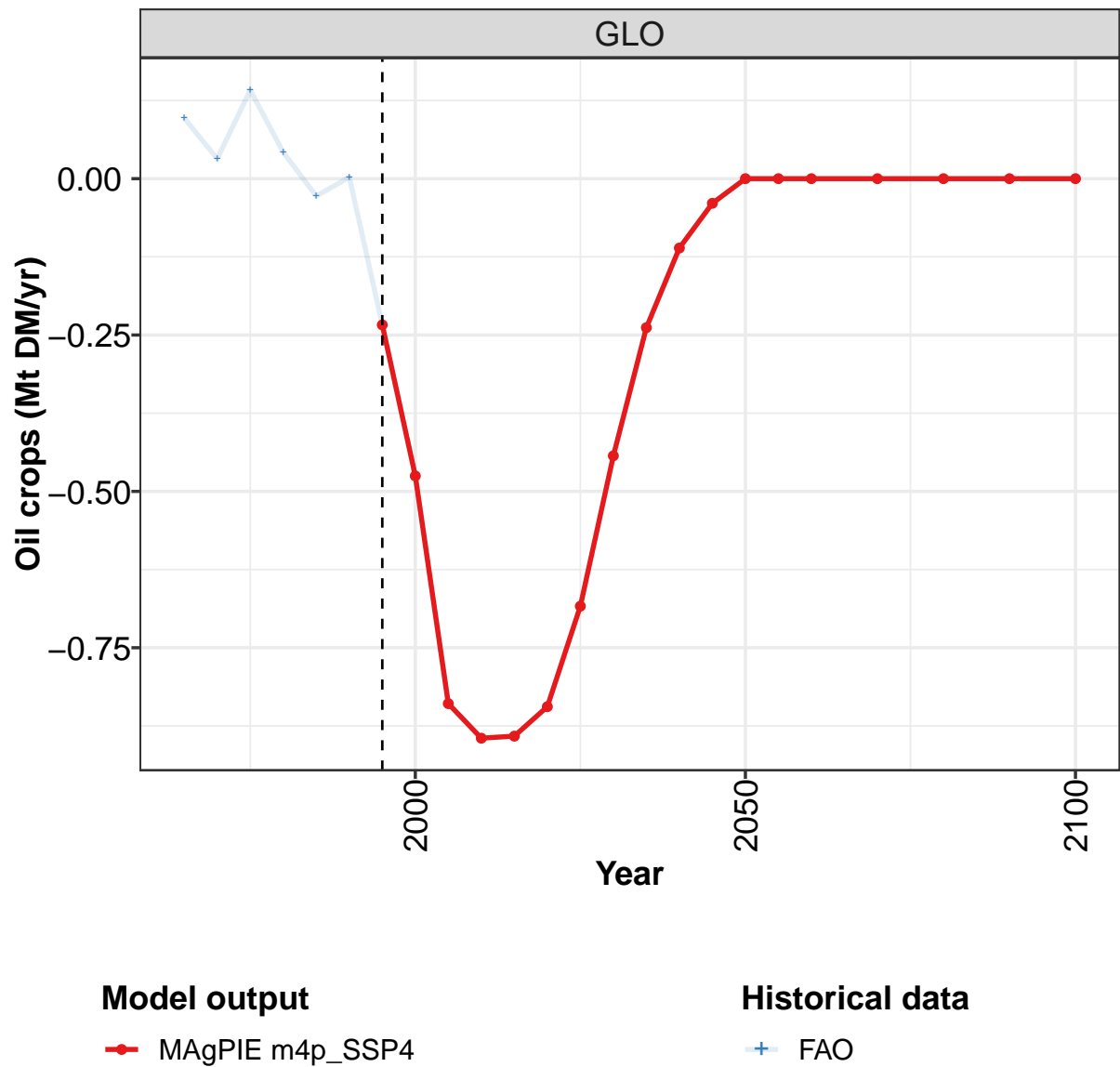
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CAZ	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
EUR	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
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\_SSP4 — 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



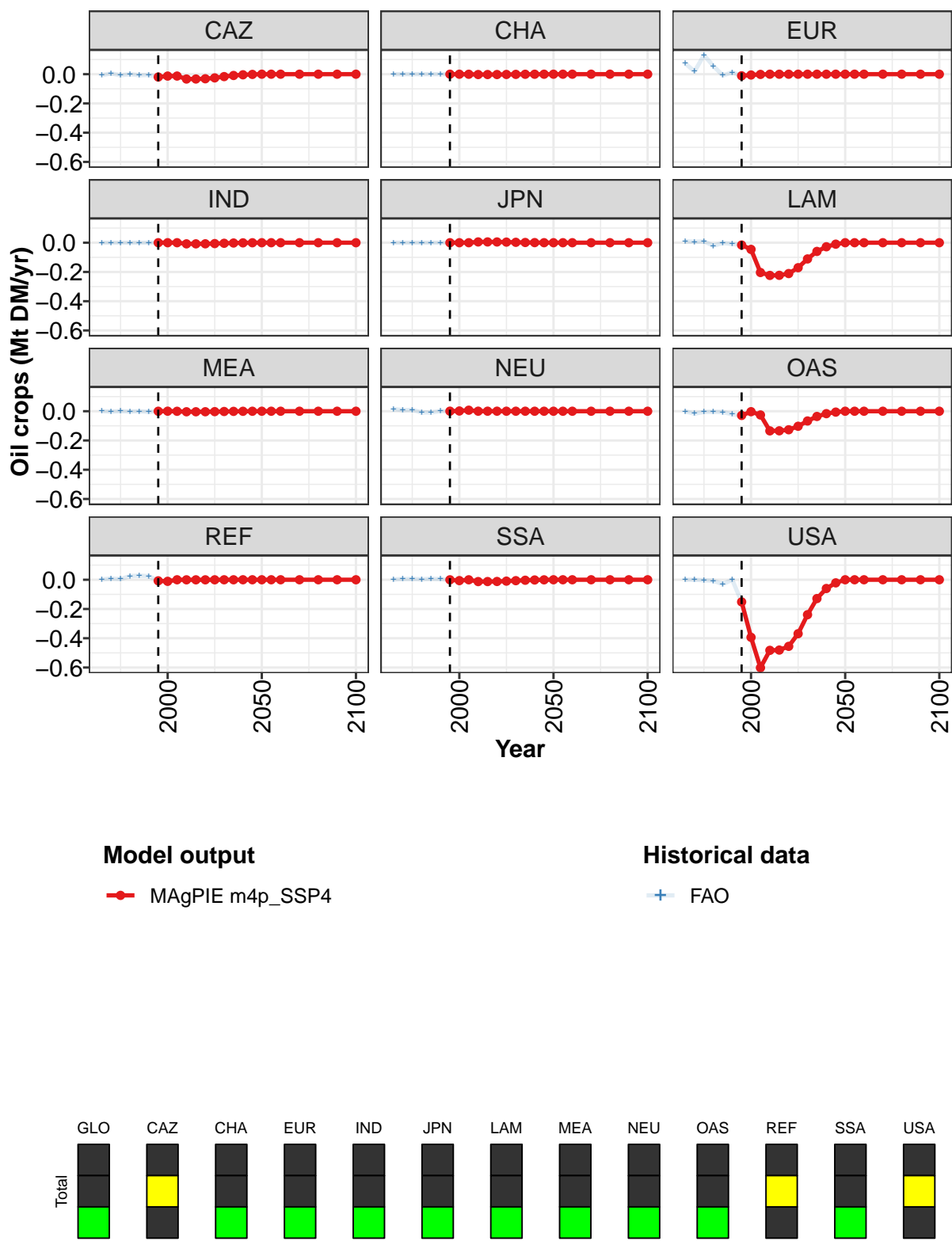


Figure 51: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.23380	-0.47530	-0.83930	-0.89460	-0.89130	-0.84420	-0.68360	-0.44310	-0.23820	-0.11090	-0.03190
CAZ	-0.01950	-0.01280	-0.01270	-0.03300	-0.03290	-0.03120	-0.02530	-0.01640	-0.00880	-0.00410	-0.00190
CHA	0.00000	-0.00010	-0.00040	-0.00240	-0.00240	-0.00230	-0.00180	-0.00120	-0.00060	-0.00030	-0.00010
EUR	-0.01110	-0.00550	-0.00160	-0.00010	-0.00010	-0.00010	0.00000	-0.00000	-0.00000	-0.00010	0.00000
IND	0.00000	0.00000	0.00000	-0.00780	-0.00780	-0.00740	-0.00600	-0.00390	-0.00210	-0.00100	-0.00050
JPN	0.00000	0.00000	0.00000	0.00540	0.00540	0.00510	0.00420	0.00270	0.00150	0.00070	0.00030
LAM	-0.01590	-0.04570	-0.20370	-0.22370	-0.22290	-0.21100	-0.17090	-0.11090	-0.05960	-0.02780	-0.01390
MEA	-0.00010	0.00030	-0.00040	-0.00360	-0.00360	-0.00350	-0.00280	-0.00180	-0.00090	-0.00040	-0.00020
NEU	0.00040	0.00170	0.00700	0.00030	0.00030	0.00030	0.00020	0.00020	0.00010	0.00000	0.00000
OAS	-0.02880	-0.00300	-0.02550	-0.13430	-0.13380	-0.12670	-0.10270	-0.06650	-0.03580	-0.01660	-0.00830
REF	-0.00730	-0.01080	-0.00010	-0.00040	-0.00040	-0.00040	-0.00030	-0.00010	-0.00010	0.00000	0.00000
SSA	-0.00020	-0.00580	-0.00020	-0.01240	-0.01230	-0.01170	-0.00940	-0.00620	-0.00330	-0.00150	-0.00070
USA	-0.15130	-0.39360	-0.60170	-0.48260	-0.48080	-0.45530	-0.36880	-0.23900	-0.12860	-0.05980	-0.02990

Table 152: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops (Mt DM/yr) [PART 1/2]

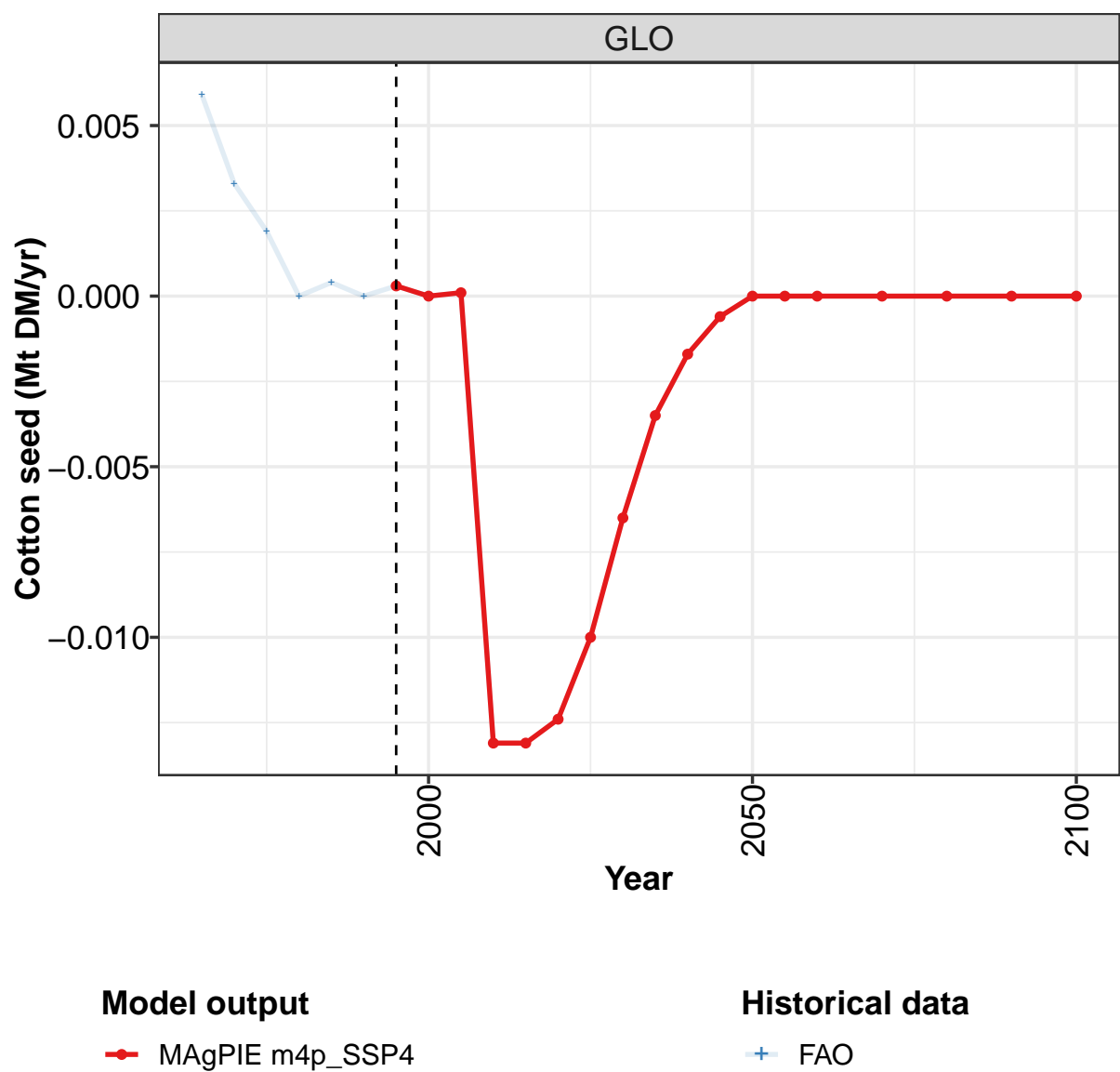
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



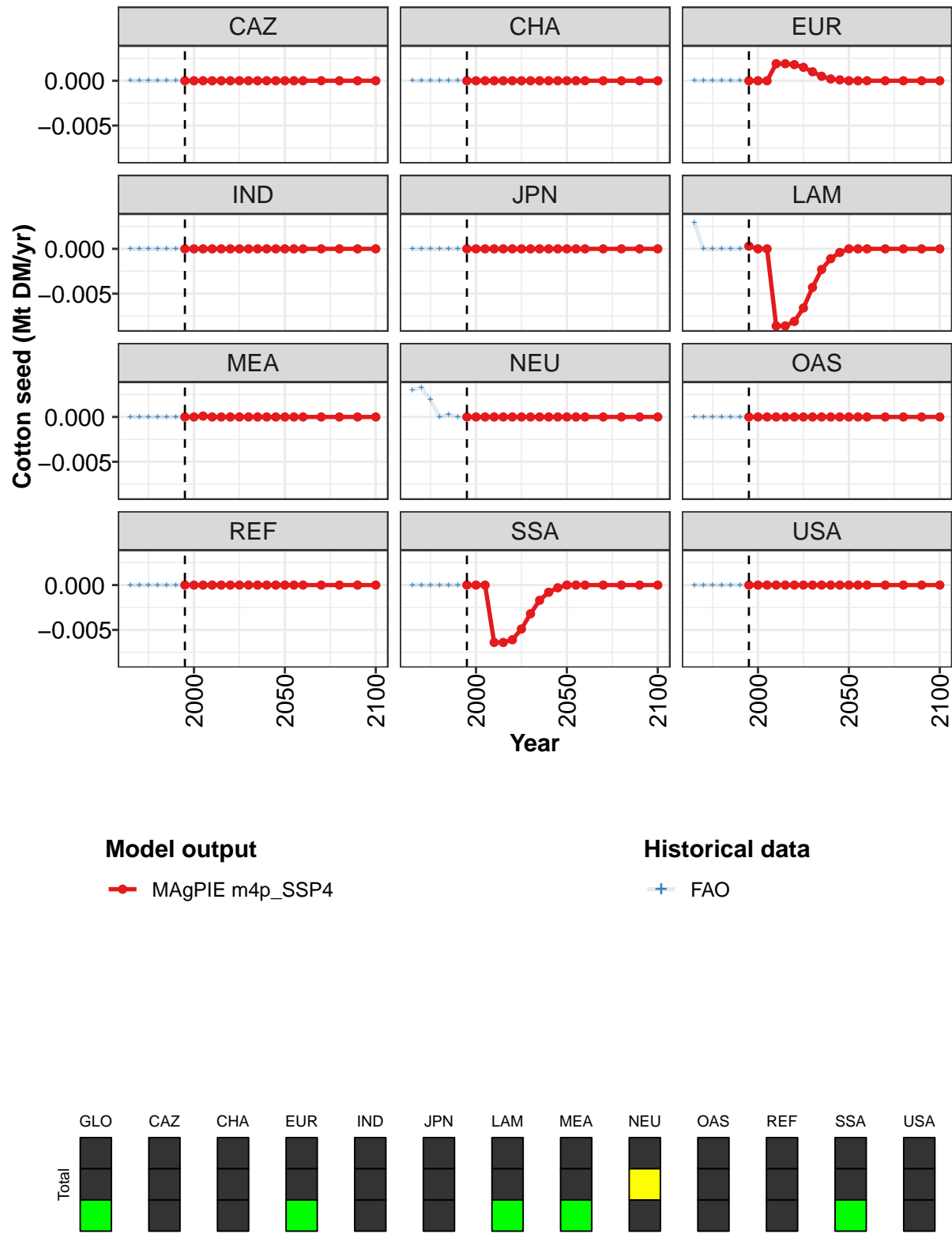


Figure 52: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00030	0.00000	0.00010	-0.01310	-0.01310	-0.01240	-0.01000	-0.00650	-0.00350	-0.00170	-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	0.00000	0.00000	0.00000	0.00190	0.00190	0.00180	0.00150	0.00100	0.00050	0.00020	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	0.00030	0.00000	0.00000	-0.00860	-0.00860	-0.00810	-0.00660	-0.00430	-0.00230	-0.00110	-0.00000
MEA	0.00000	0.00000	0.00010	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	-0.00640	-0.00640	-0.00610	-0.00490	-0.00320	-0.00170	-0.00080	-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 155: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

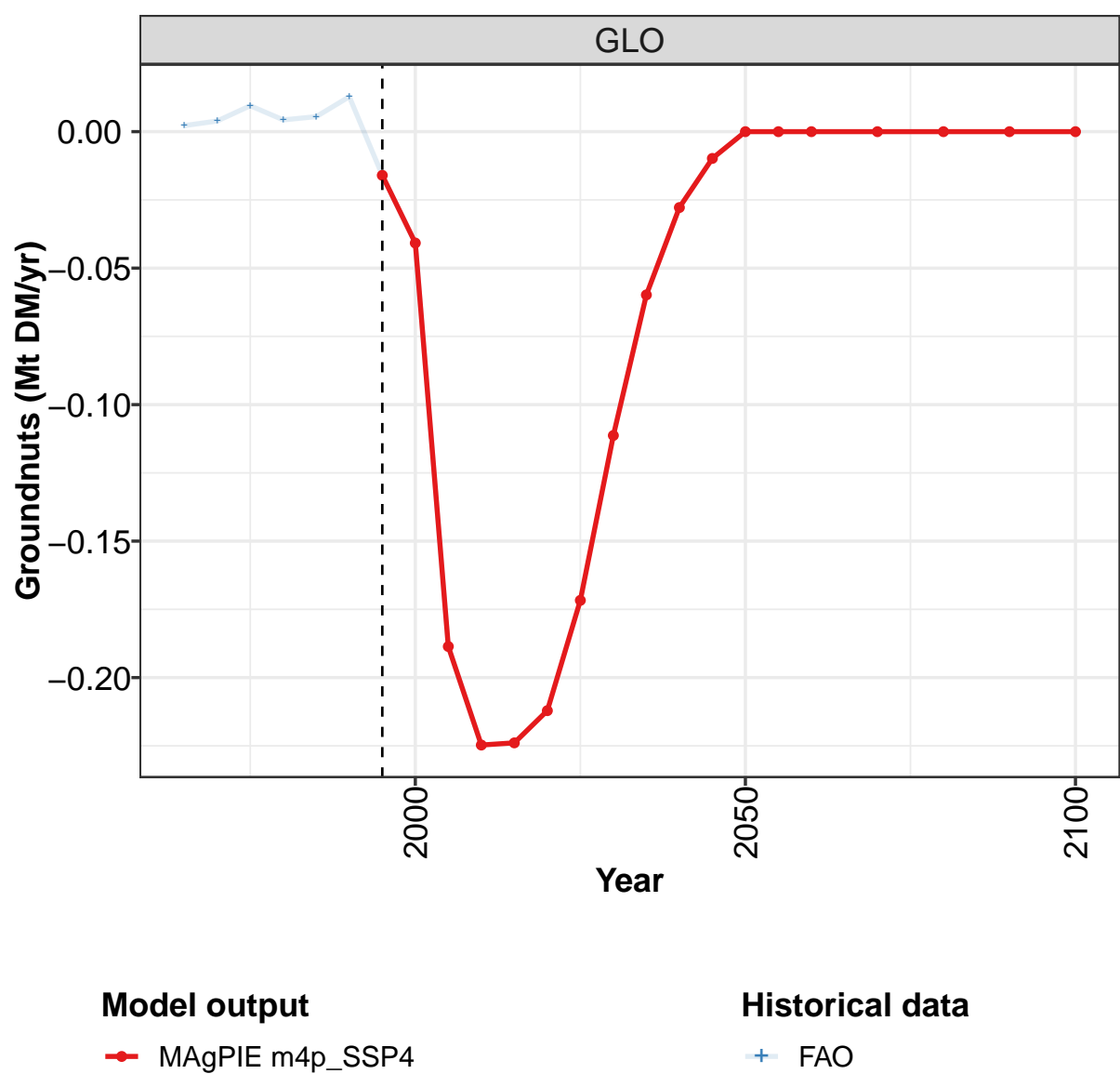
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



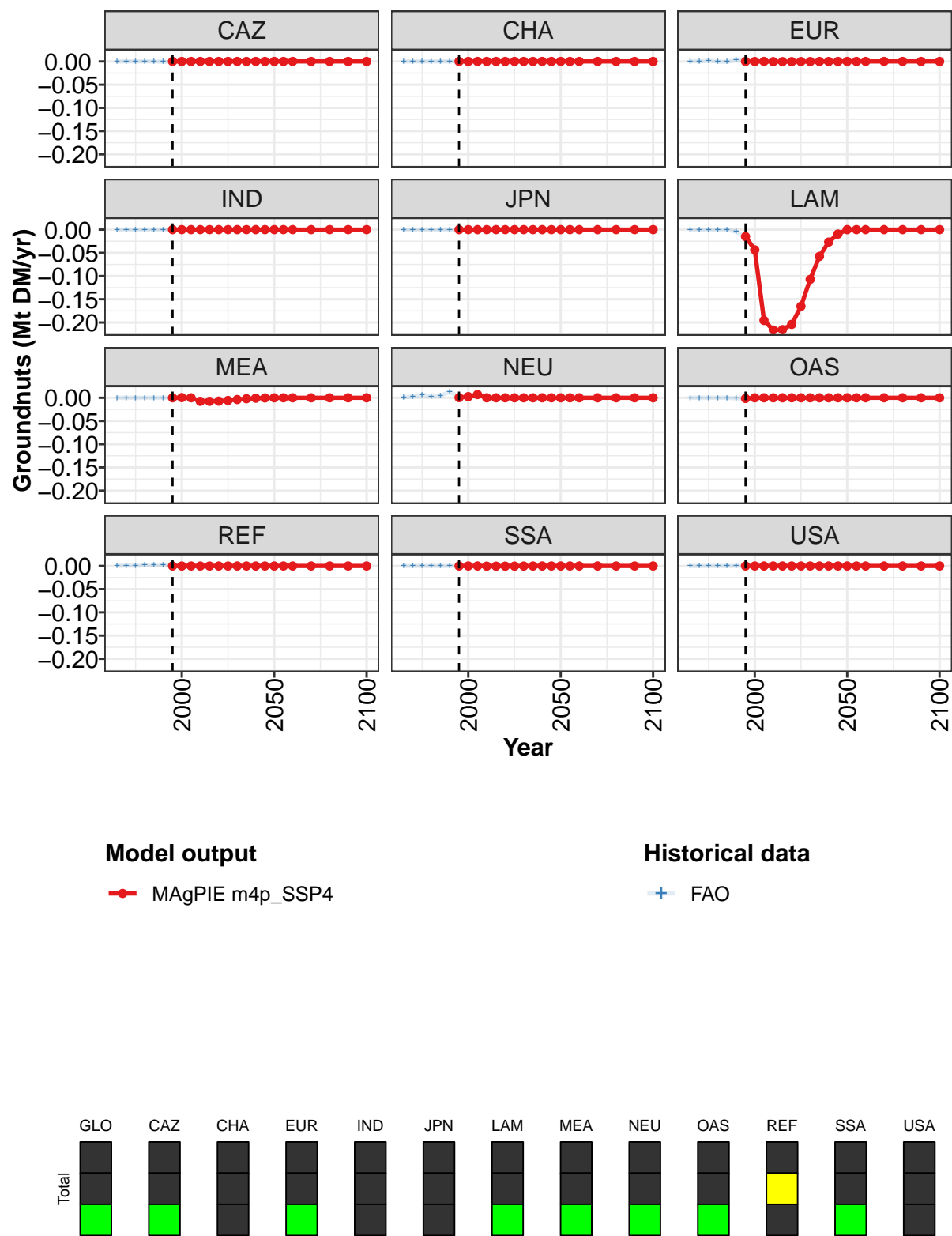


Figure 53: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.01600	-0.04080	-0.18860	-0.22470	-0.22390	-0.21210	-0.17170	-0.11130	-0.05980	-0.02780	-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	0.00000	-0.00010	0.00000	-0.00040	-0.00040	-0.00040	-0.00030	-0.00020	-0.00010	-0.00010	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	-0.01490	-0.04350	-0.19560	-0.21620	-0.21540	-0.20400	-0.16520	-0.10710	-0.05760	-0.02680	-0.00000
MEA	0.00000	0.00040	0.00000	-0.00760	-0.00760	-0.00720	-0.00580	-0.00380	-0.00200	-0.00090	-0.00000
NEU	0.00040	0.00250	0.00700	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	-0.00150	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	0.00000	-0.00010	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	0.00000	0.00000	-0.00040	-0.00040	-0.00040	-0.00030	-0.00020	-0.00010	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 158: MAGPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

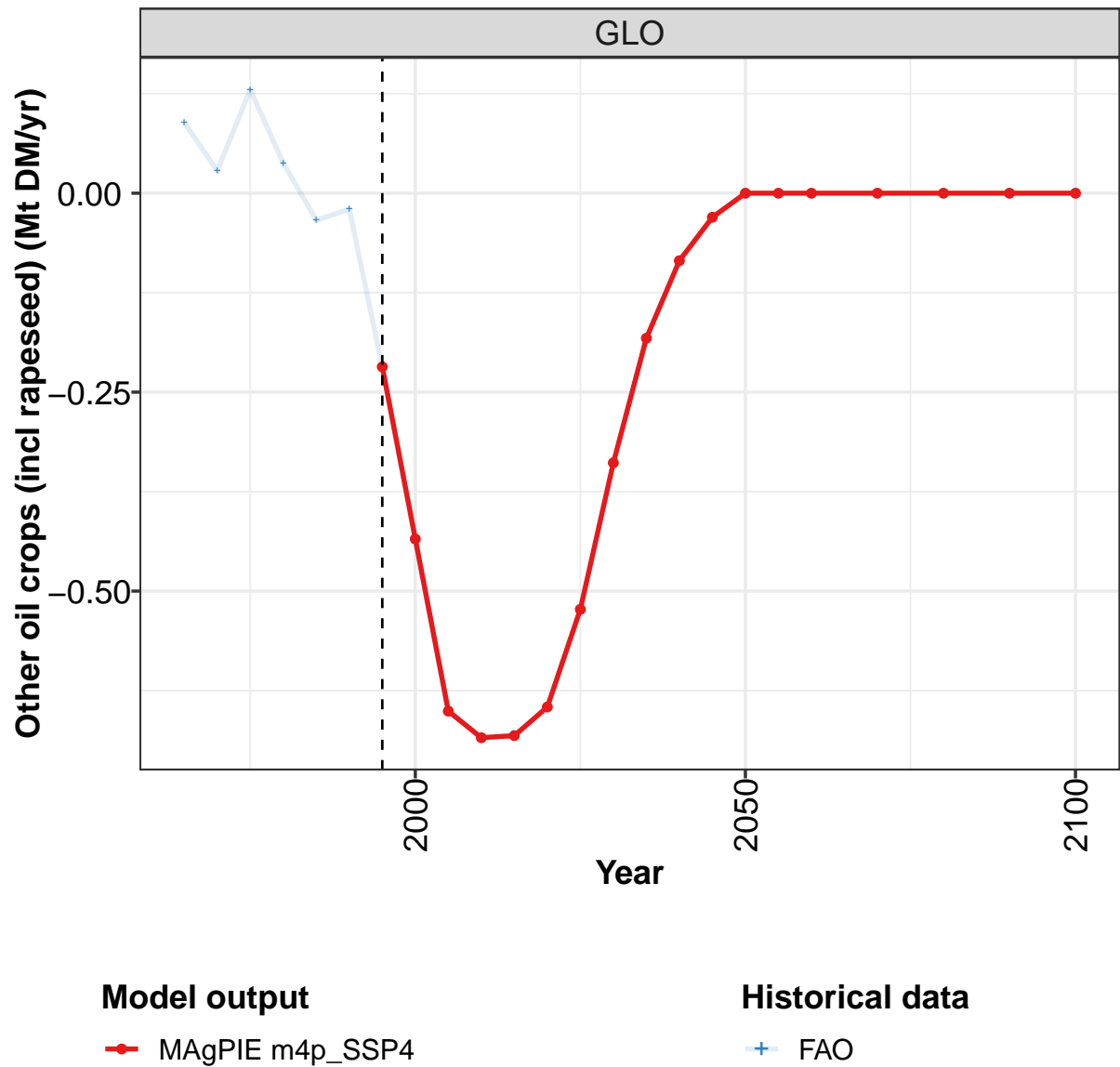
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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)





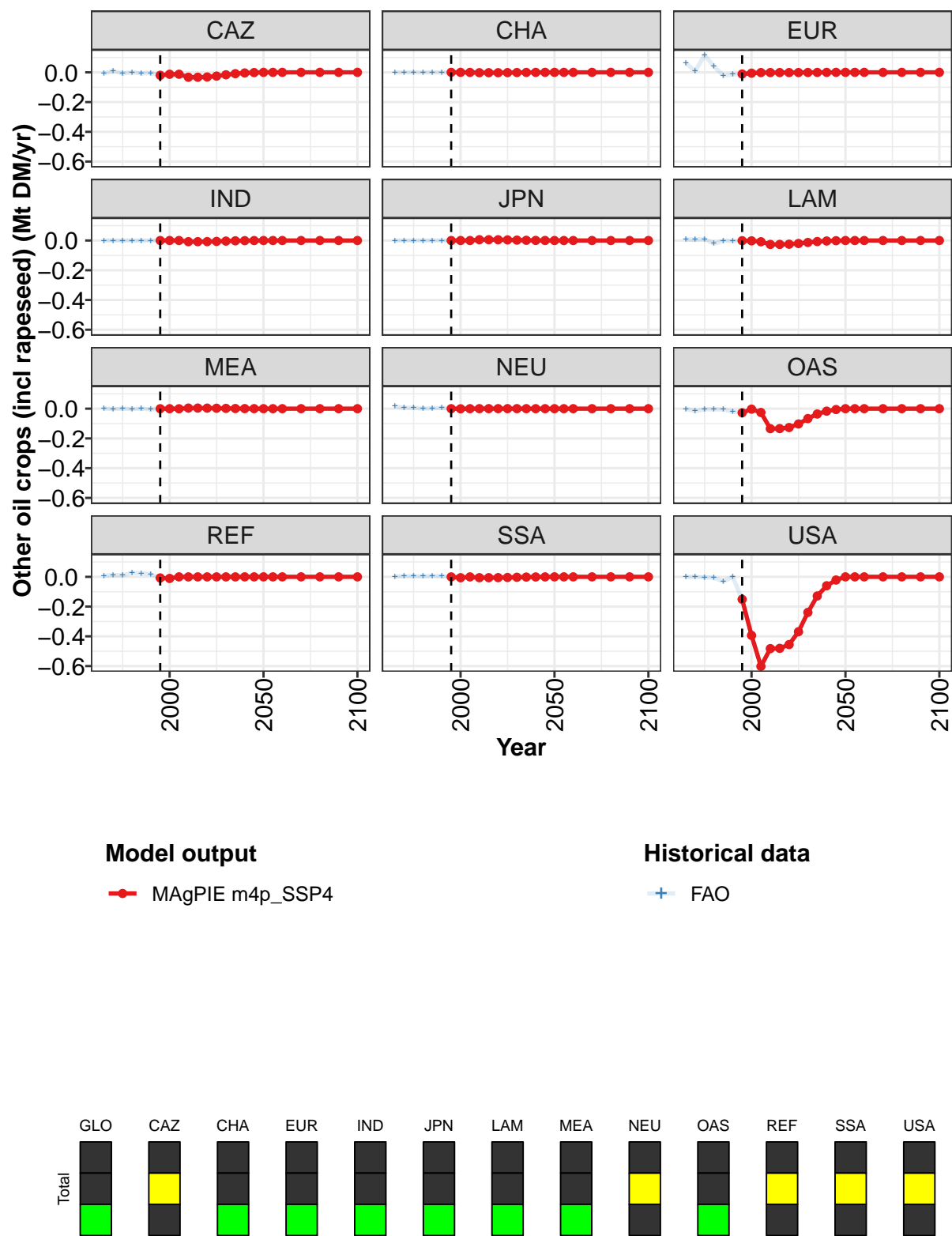


Figure 54: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.21810	-0.43450	-0.65080	-0.68420	-0.68160	-0.64560	-0.52290	-0.33880	-0.18220	-0.08480	-0.03120
CAZ	-0.01950	-0.01280	-0.01270	-0.03300	-0.03290	-0.03120	-0.02530	-0.01640	-0.00880	-0.00410	-0.00190
CHA	0.00000	-0.00010	-0.00040	-0.00240	-0.00240	-0.00230	-0.00180	-0.00120	-0.00060	-0.00030	-0.00010
EUR	-0.01110	-0.00540	-0.00160	-0.00160	-0.00160	-0.00150	-0.00120	-0.00080	-0.00040	-0.00020	-0.00010
IND	0.00000	0.00000	0.00000	-0.00780	-0.00780	-0.00740	-0.00600	-0.00390	-0.00210	-0.00100	-0.00050
JPN	0.00000	0.00000	0.00000	0.00540	0.00540	0.00510	0.00420	0.00270	0.00150	0.00070	0.00030
LAM	-0.00130	-0.00220	-0.00810	-0.02630	-0.02620	-0.02480	-0.02010	-0.01300	-0.00700	-0.00330	-0.00160
MEA	-0.00010	-0.00010	-0.00050	0.00400	0.00400	0.00370	0.00300	0.00200	0.00110	0.00050	0.00020
NEU	0.00000	-0.00080	0.00000	0.00030	0.00030	0.00030	0.00020	0.00020	0.00010	0.00000	0.00000
OAS	-0.02730	-0.00300	-0.02550	-0.13430	-0.13380	-0.12670	-0.10270	-0.06650	-0.03580	-0.01660	-0.00810
REF	-0.00730	-0.01070	-0.00010	-0.00030	-0.00030	-0.00030	-0.00020	-0.00010	-0.00010	0.00000	0.00000
SSA	-0.00020	-0.00580	-0.00020	-0.00560	-0.00550	-0.00520	-0.00420	-0.00280	-0.00150	-0.00070	-0.00030
USA	-0.15130	-0.39360	-0.60170	-0.48260	-0.48080	-0.45530	-0.36880	-0.23900	-0.12860	-0.05980	-0.02940

Table 161: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

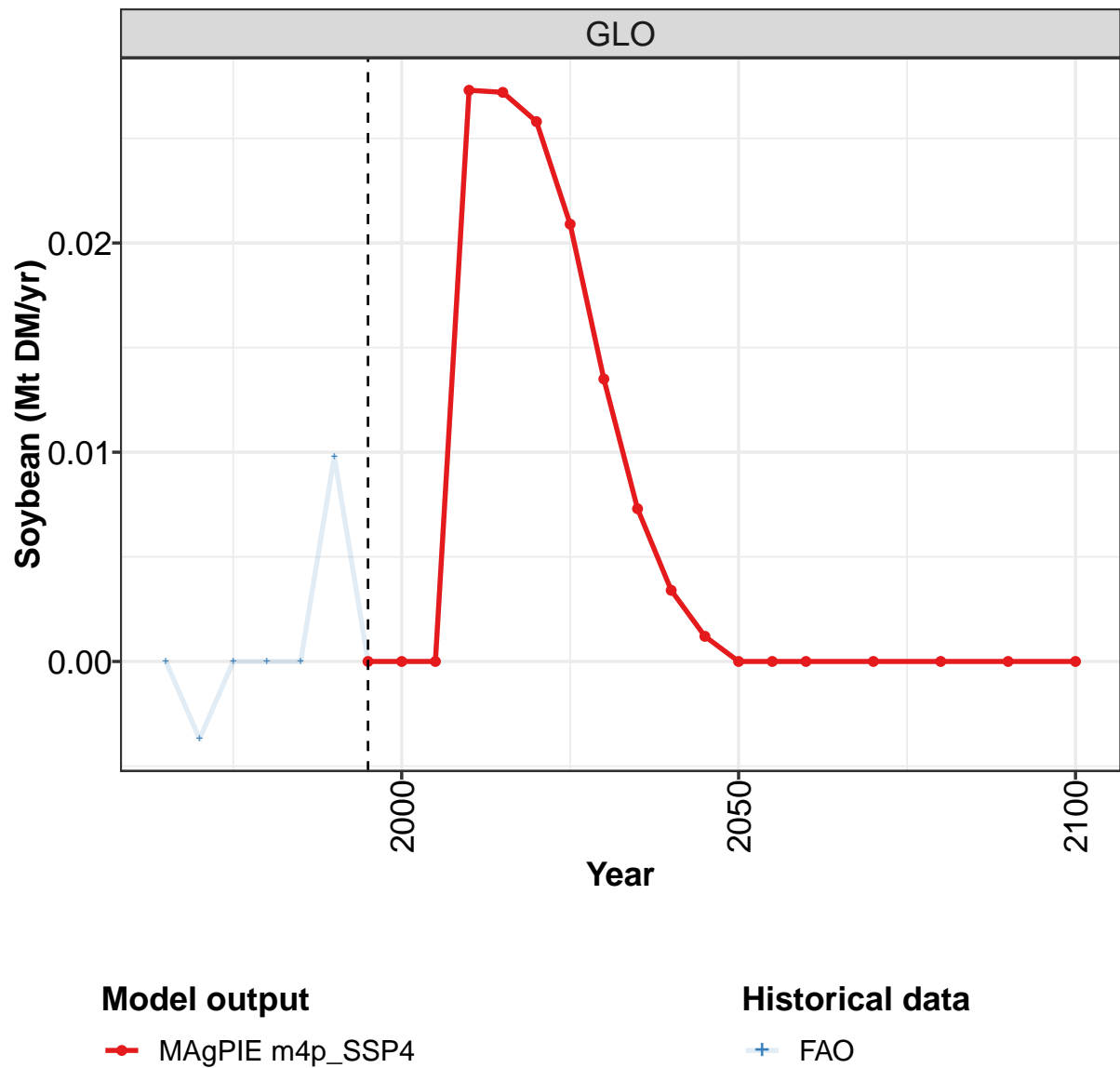
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



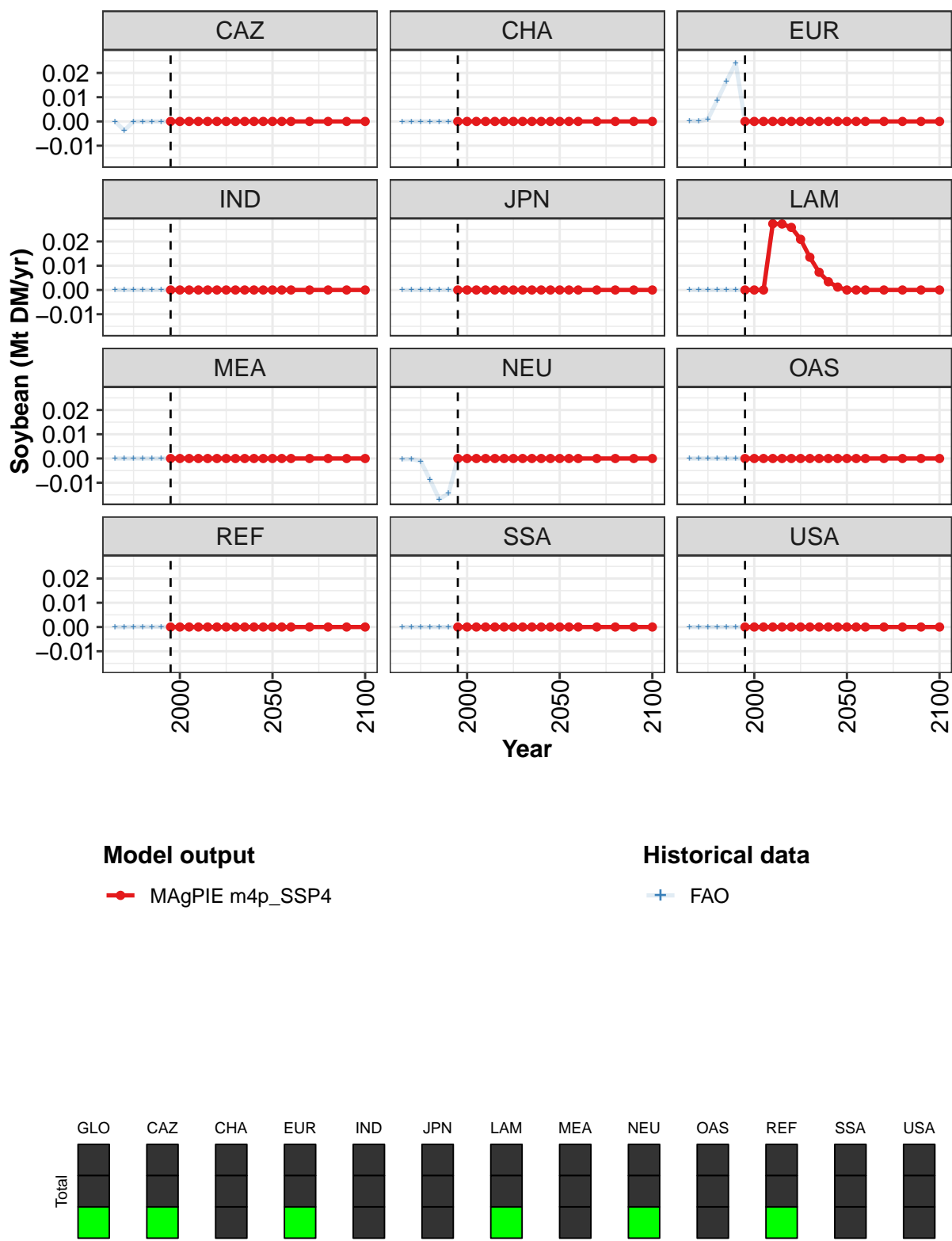


Figure 55: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Soybean (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Soybean (Mt DM/yr)  
[PART 1/2]

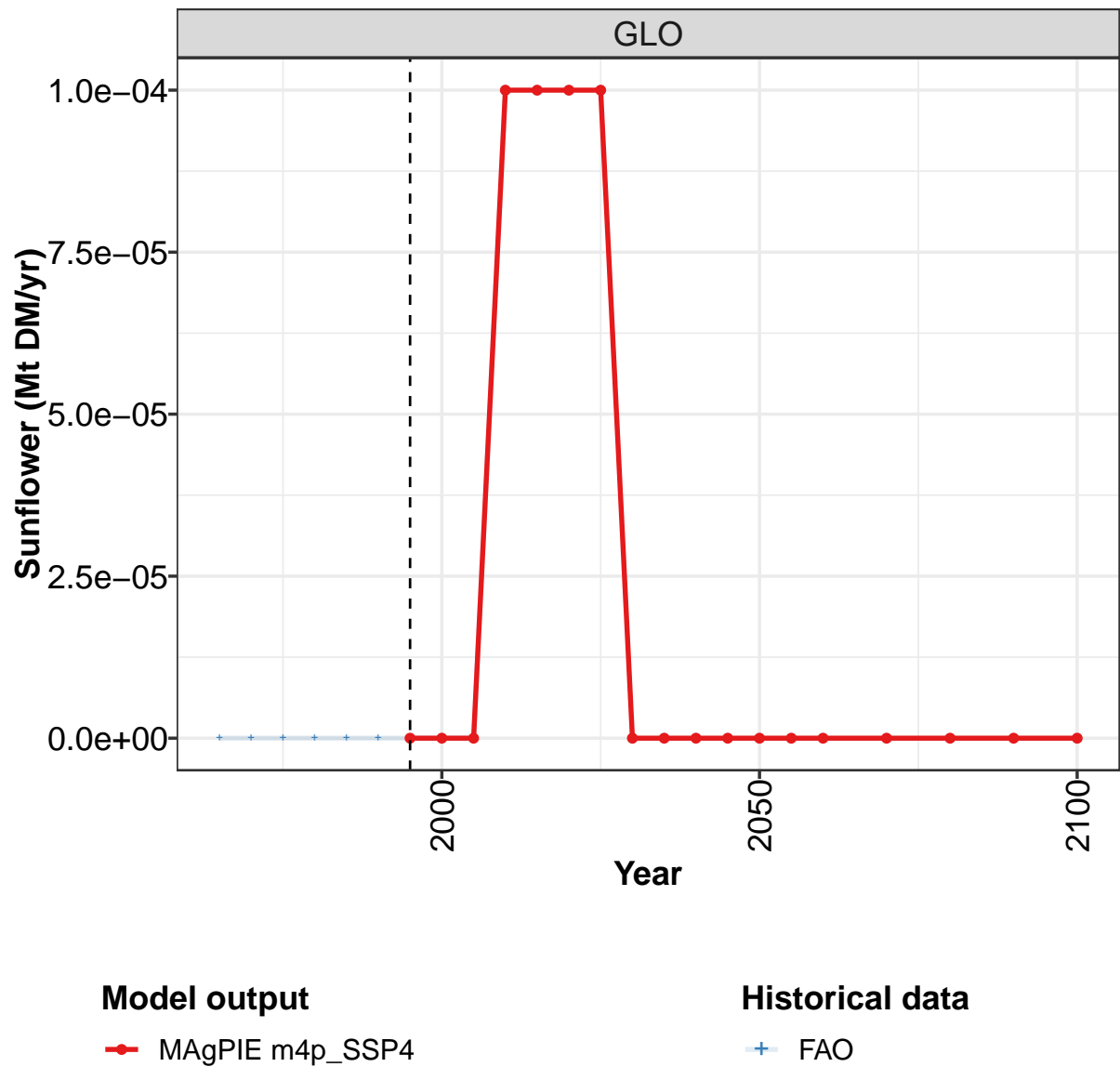
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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\_SSP4 — 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



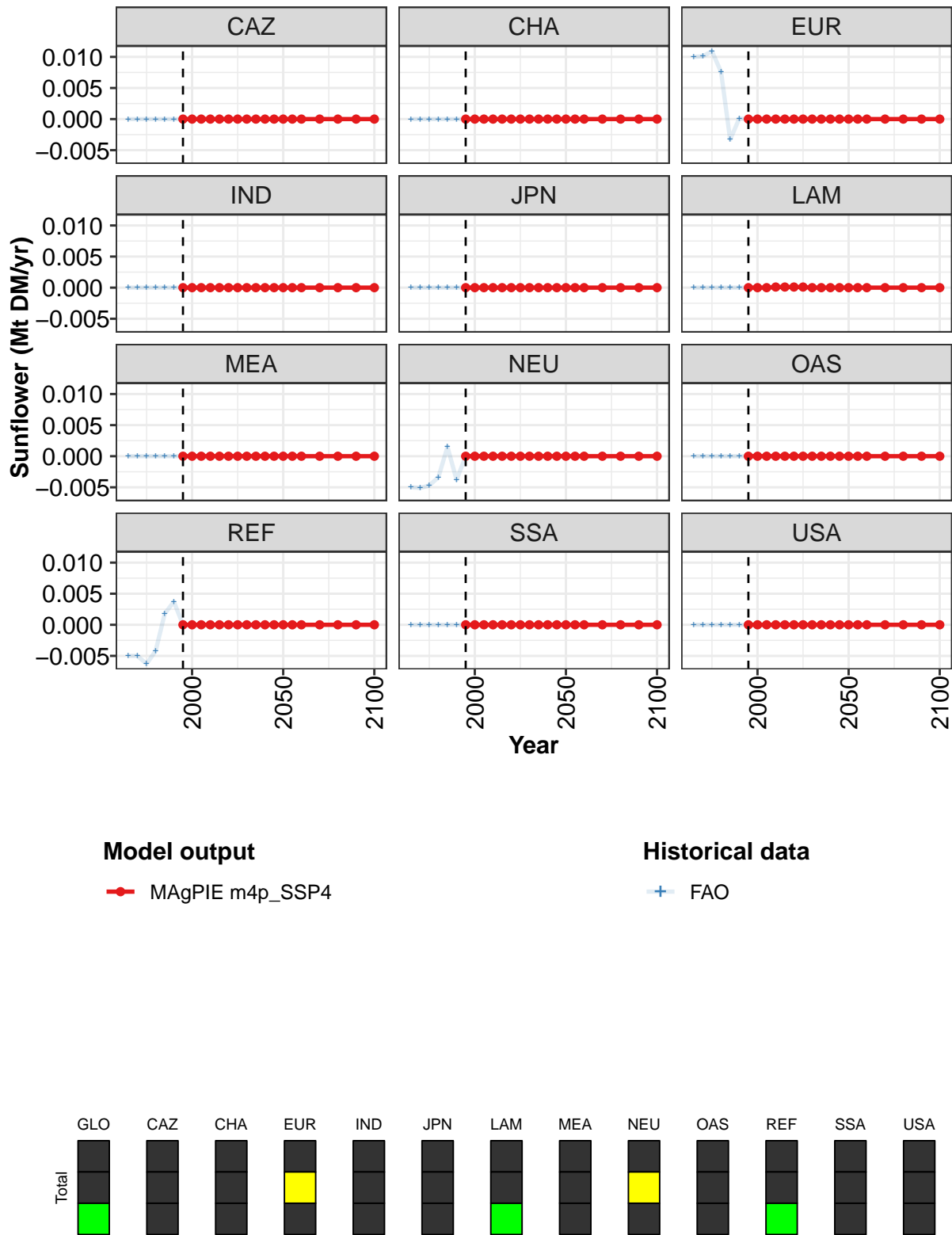


Figure 56: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Sunflower (Mt DM/yr)

	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\_SSP4 — 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

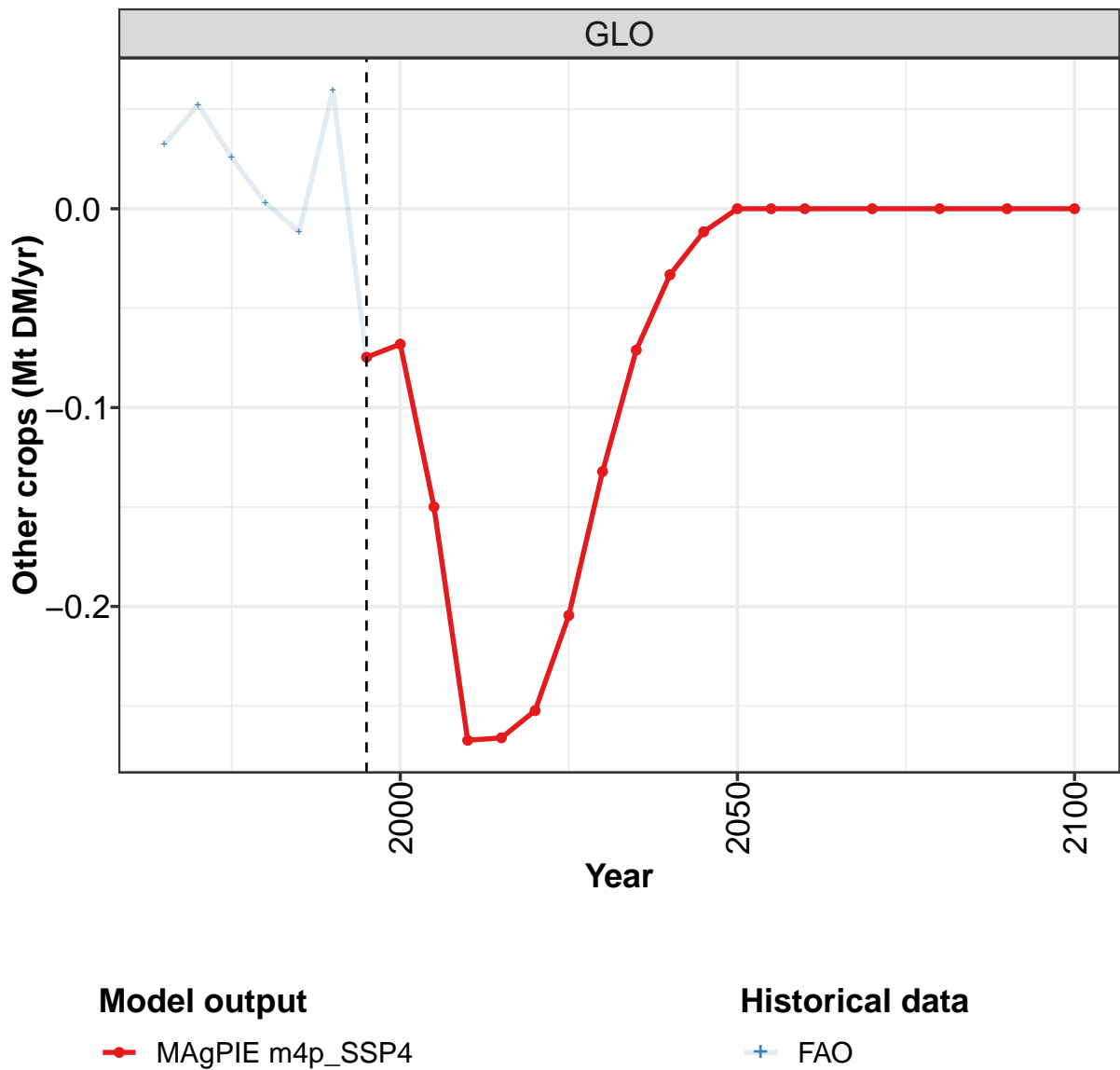
Table 168: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Oil crops—Sunflower (Mt DM/yr)  
[PART 2/2]

	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



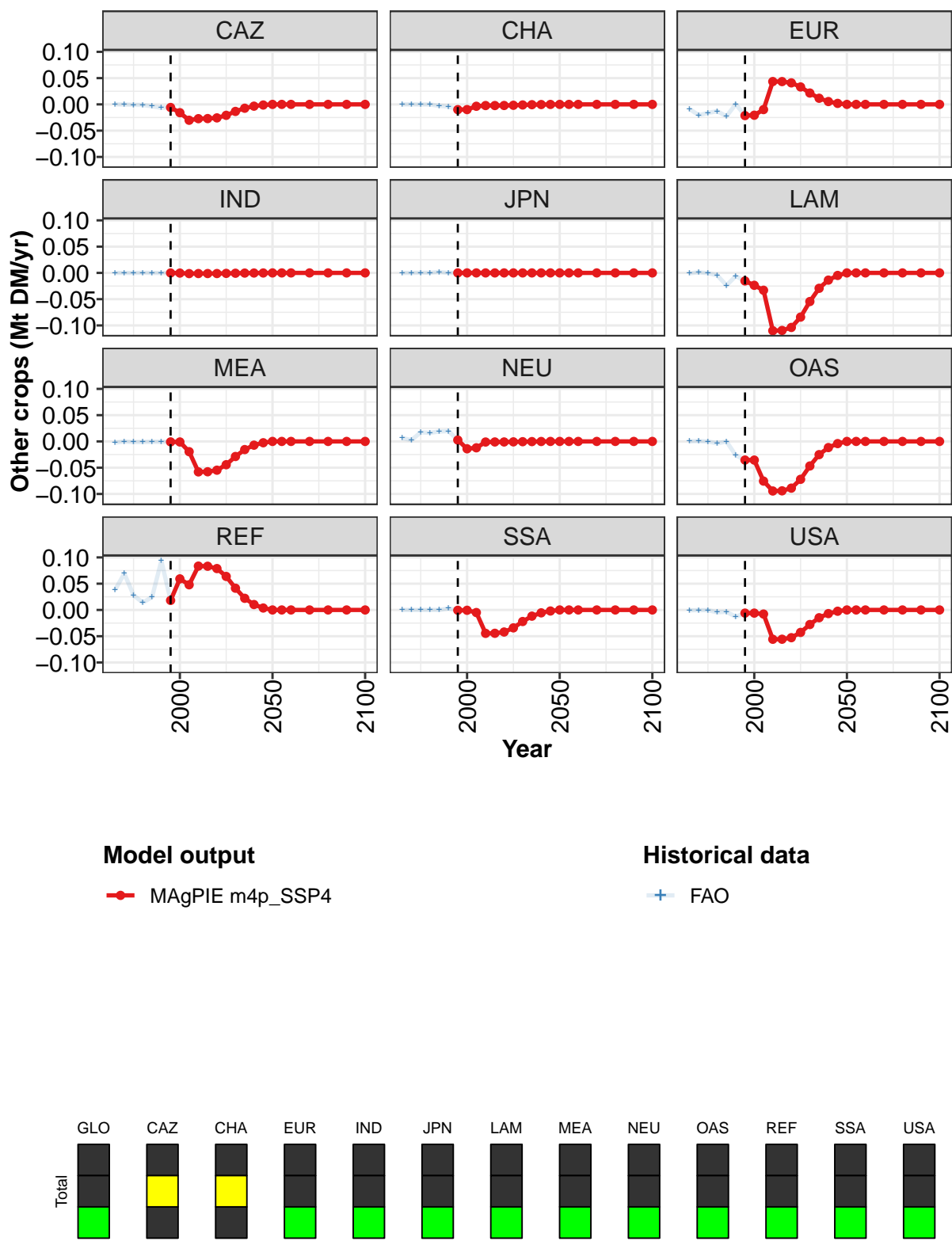


Figure 57: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops (Mt DM/yr) [PART 1/2]

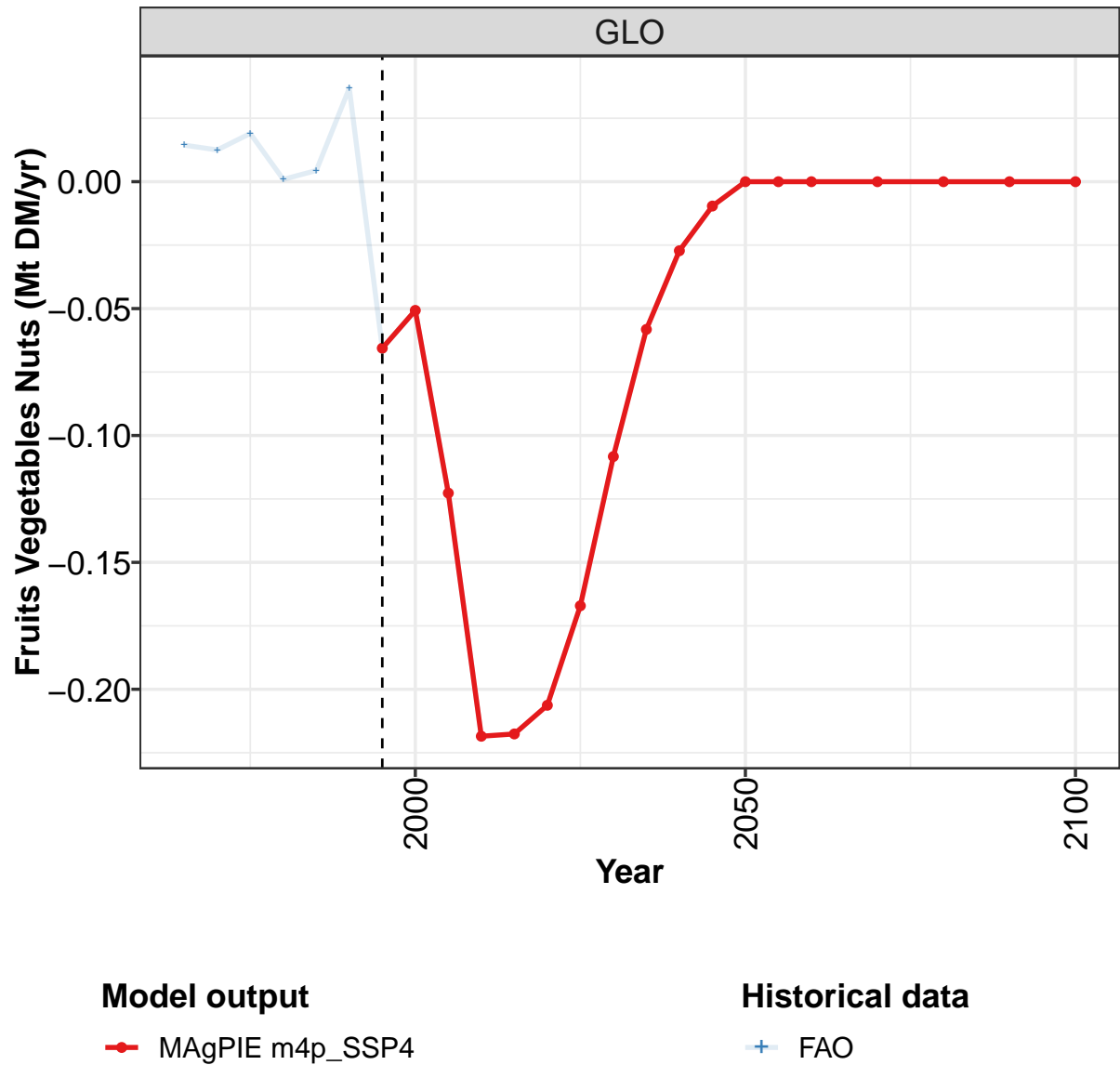
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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\_SSP4 — 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



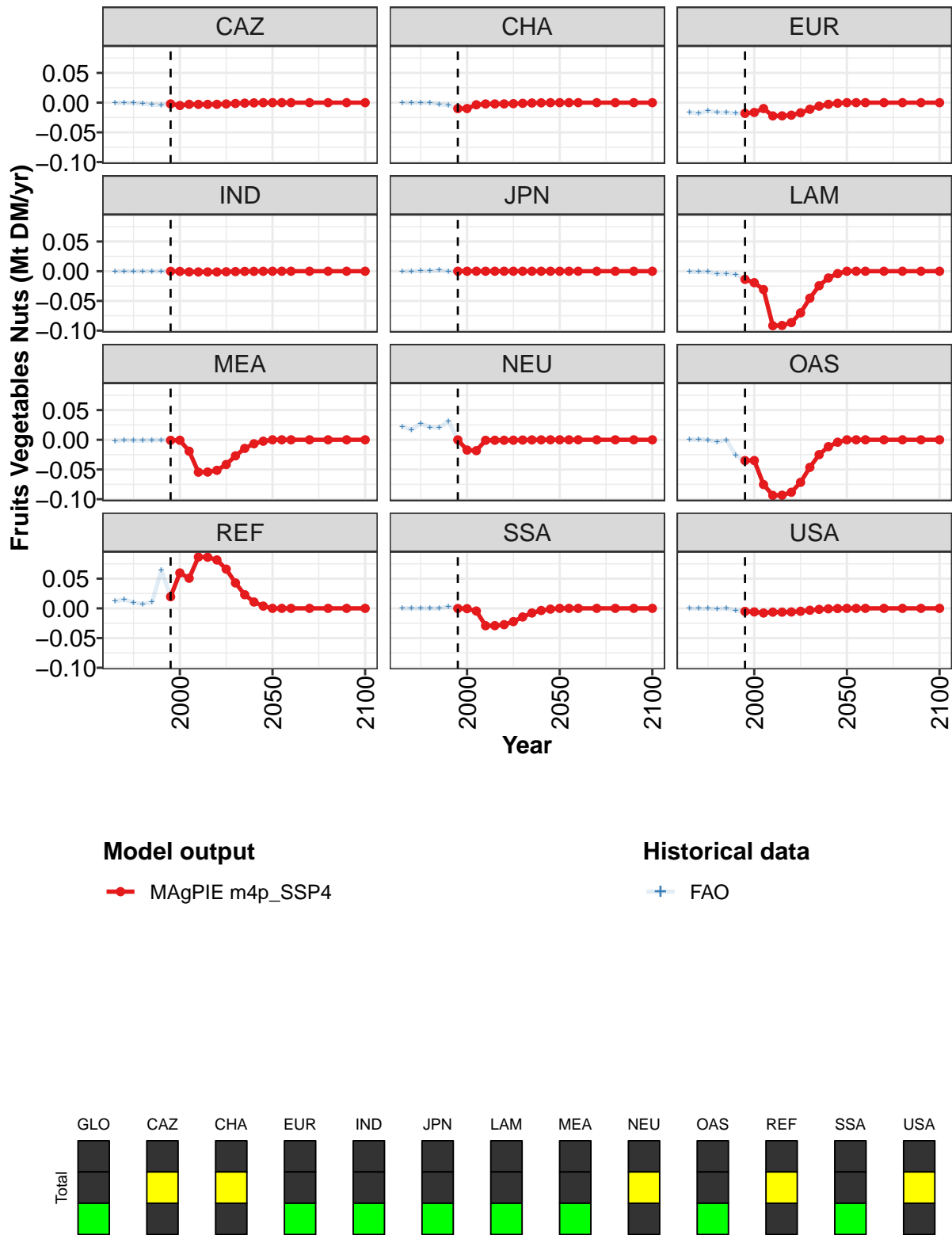


Figure 58: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

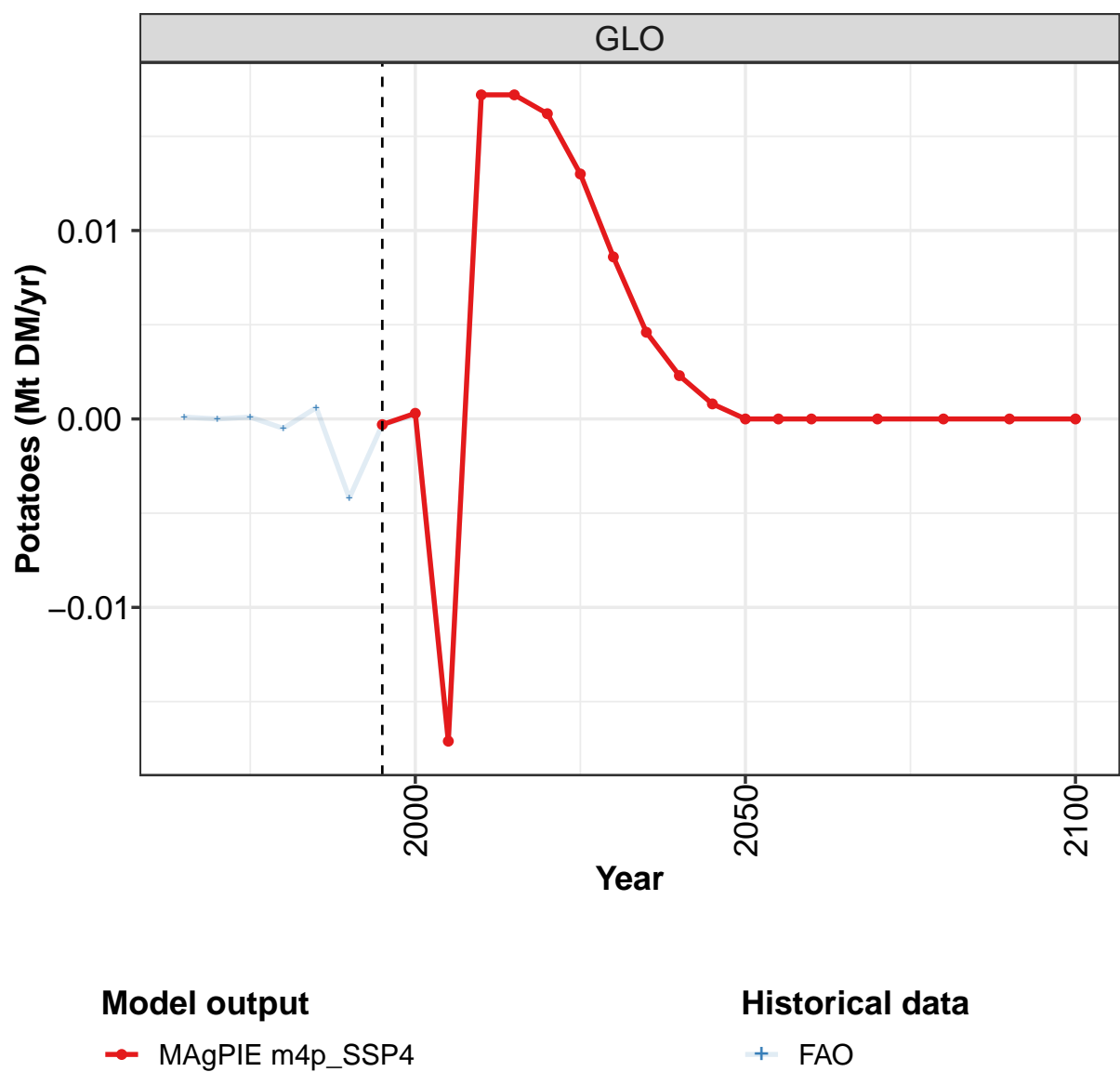
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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\_SSP4 — 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



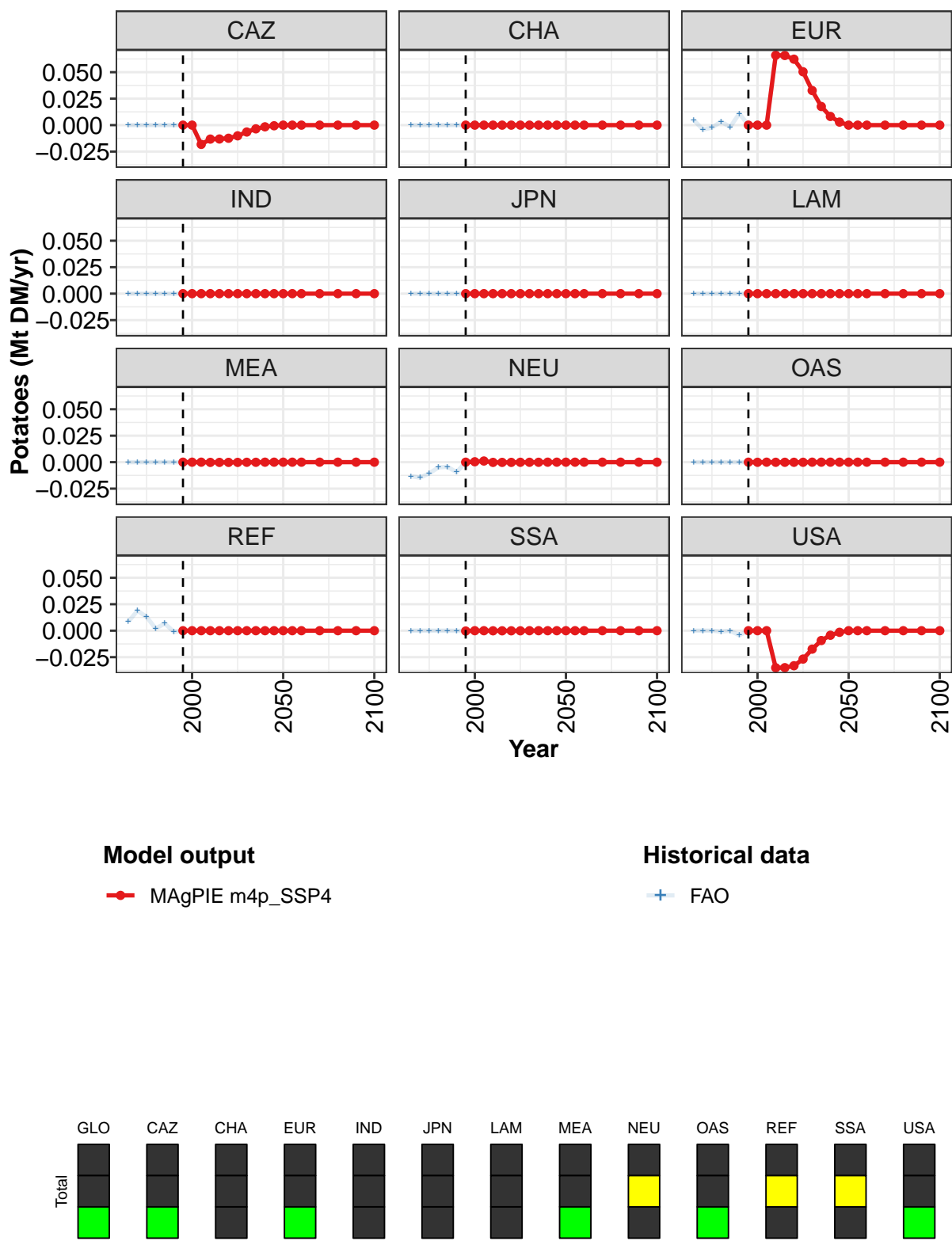


Figure 59: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Potatoes (Mt DM/yr)



	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

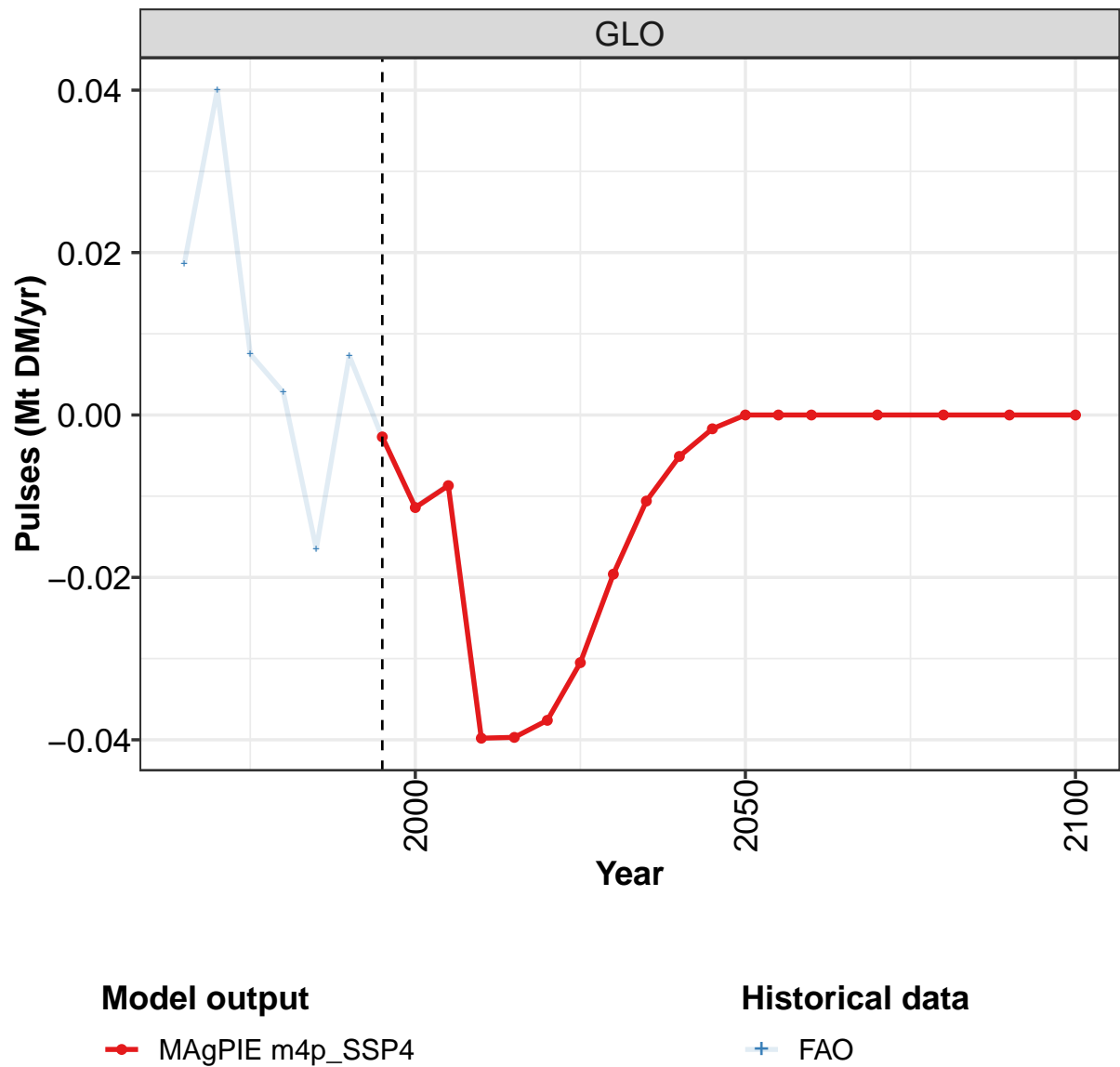
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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\_SSP4 — 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



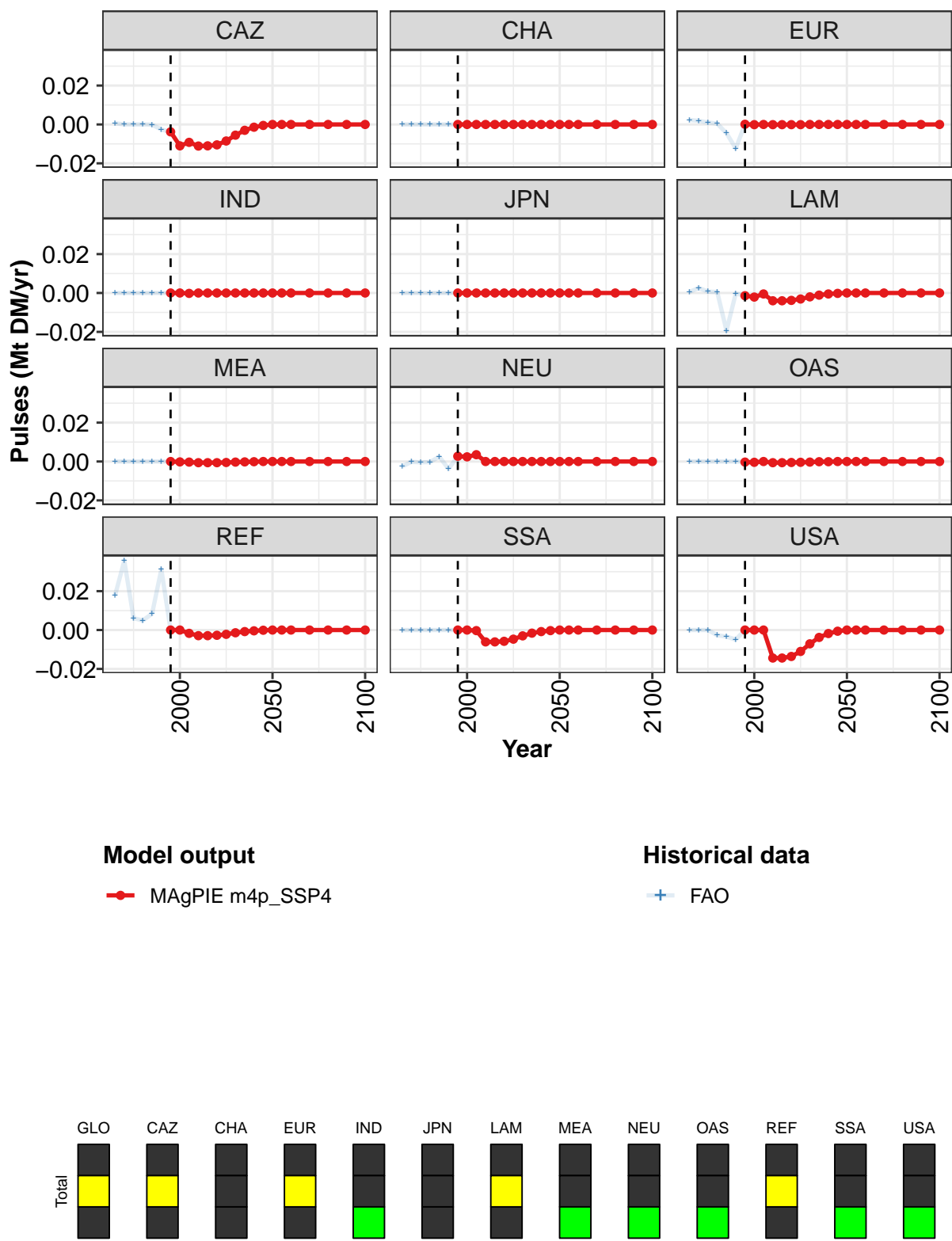


Figure 60: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.00270	-0.01140	-0.00870	-0.03980	-0.03970	-0.03760	-0.03050	-0.01960	-0.01060	-0.00510	-0.00000
CAZ	-0.00380	-0.01100	-0.00920	-0.01110	-0.01100	-0.01050	-0.00850	-0.00550	-0.00300	-0.00140	-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	0.00010	-0.00010	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	-0.00020	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	-0.00140	-0.00210	-0.00050	-0.00400	-0.00400	-0.00380	-0.00310	-0.00200	-0.00110	-0.00050	-0.00000
MEA	0.00000	-0.00020	-0.00030	-0.00060	-0.00060	-0.00060	-0.00050	-0.00030	-0.00020	-0.00010	0.00000
NEU	0.00270	0.00240	0.00350	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	-0.00030	-0.00040	0.00000	-0.00060	-0.00060	-0.00050	-0.00040	-0.00030	-0.00010	-0.00010	0.00000
REF	0.00000	0.00000	-0.00170	-0.00290	-0.00290	-0.00270	-0.00220	-0.00140	-0.00080	-0.00040	-0.00000
SSA	0.00000	0.00000	-0.00030	-0.00610	-0.00610	-0.00580	-0.00470	-0.00300	-0.00160	-0.00080	-0.00000
USA	0.00000	0.00000	0.00000	-0.01440	-0.01440	-0.01360	-0.01100	-0.00710	-0.00380	-0.00180	-0.00000

Table 179: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Pulses (Mt DM/yr)  
[PART 1/2]

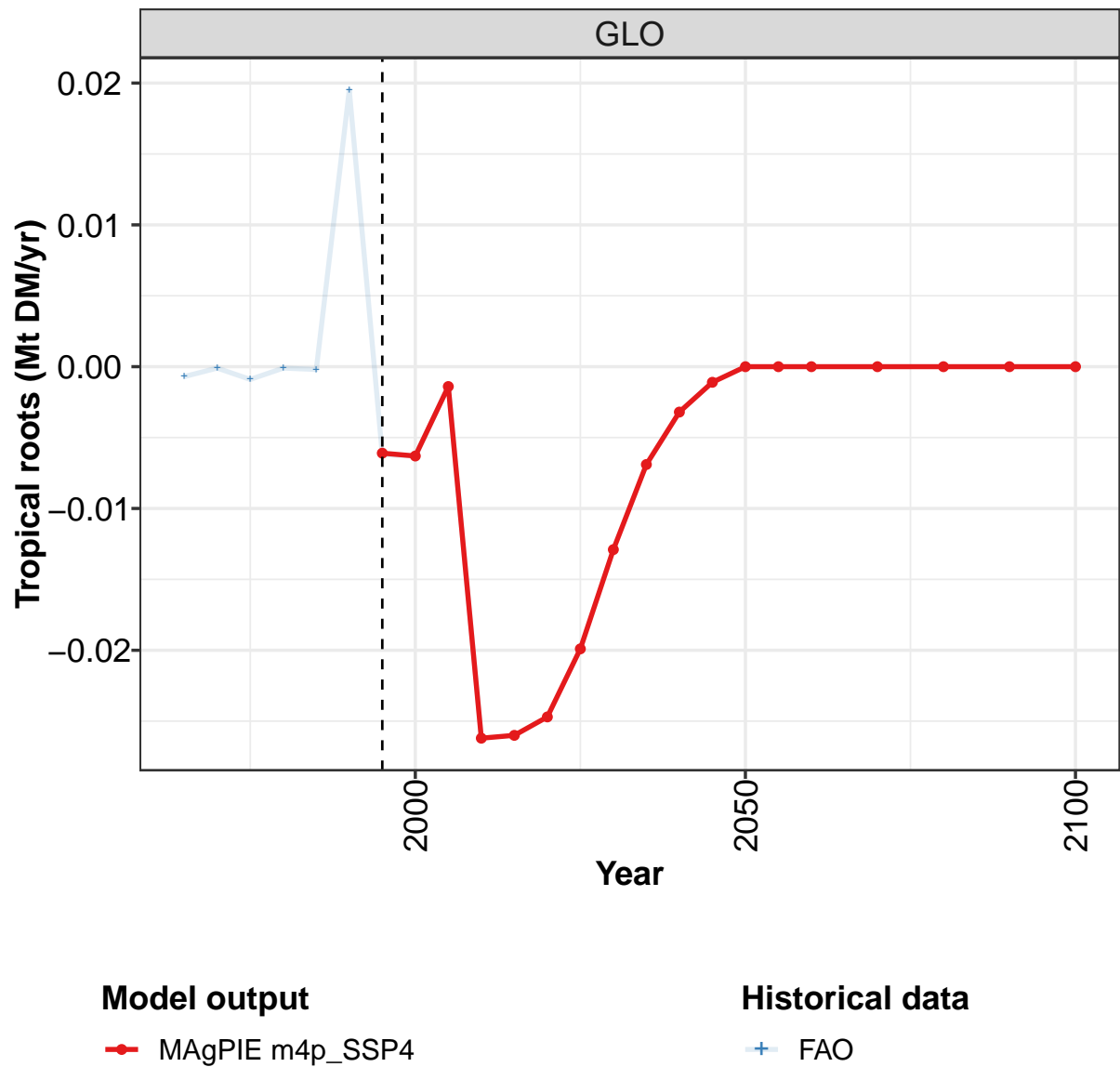
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



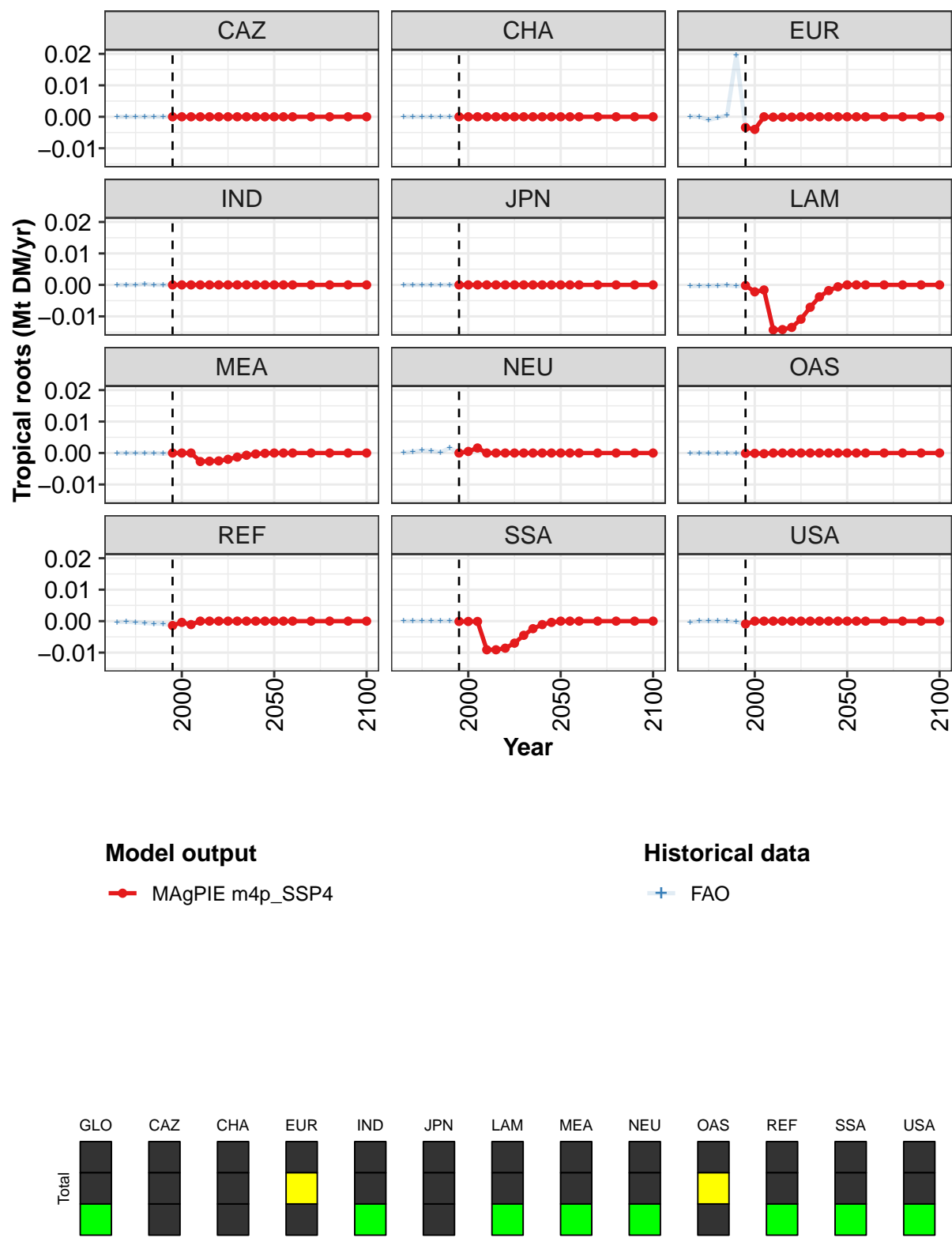


Figure 61: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.00610	-0.00630	-0.00140	-0.02620	-0.02600	-0.02470	-0.01990	-0.01290	-0.00690	-0.00320	-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	-0.00340	-0.00400	0.00000	-0.00010	-0.00010	-0.00010	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	-0.00020	-0.00220	-0.00160	-0.01430	-0.01420	-0.01350	-0.01090	-0.00710	-0.00380	-0.00180	-0.00000
MEA	0.00000	0.00000	0.00000	-0.00270	-0.00260	-0.00250	-0.00200	-0.00130	-0.00070	-0.00030	-0.00000
NEU	0.00000	0.00050	0.00160	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	-0.00010	-0.00010	-0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
REF	-0.00140	-0.00040	-0.00110	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	-0.00010	-0.00010	-0.00010	-0.00910	-0.00910	-0.00860	-0.00700	-0.00450	-0.00240	-0.00110	-0.00000
USA	-0.00090	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Table 182: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

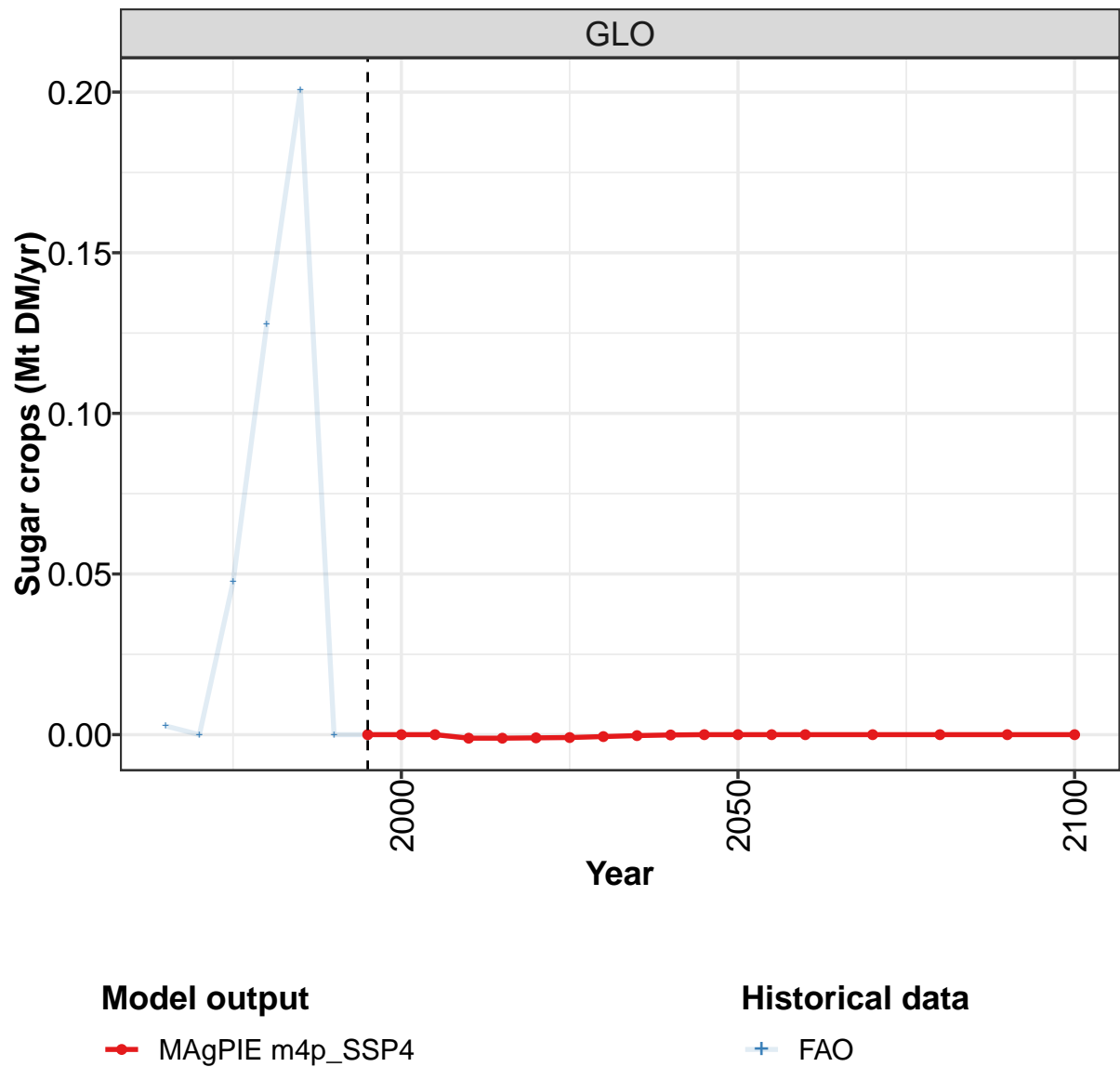
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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





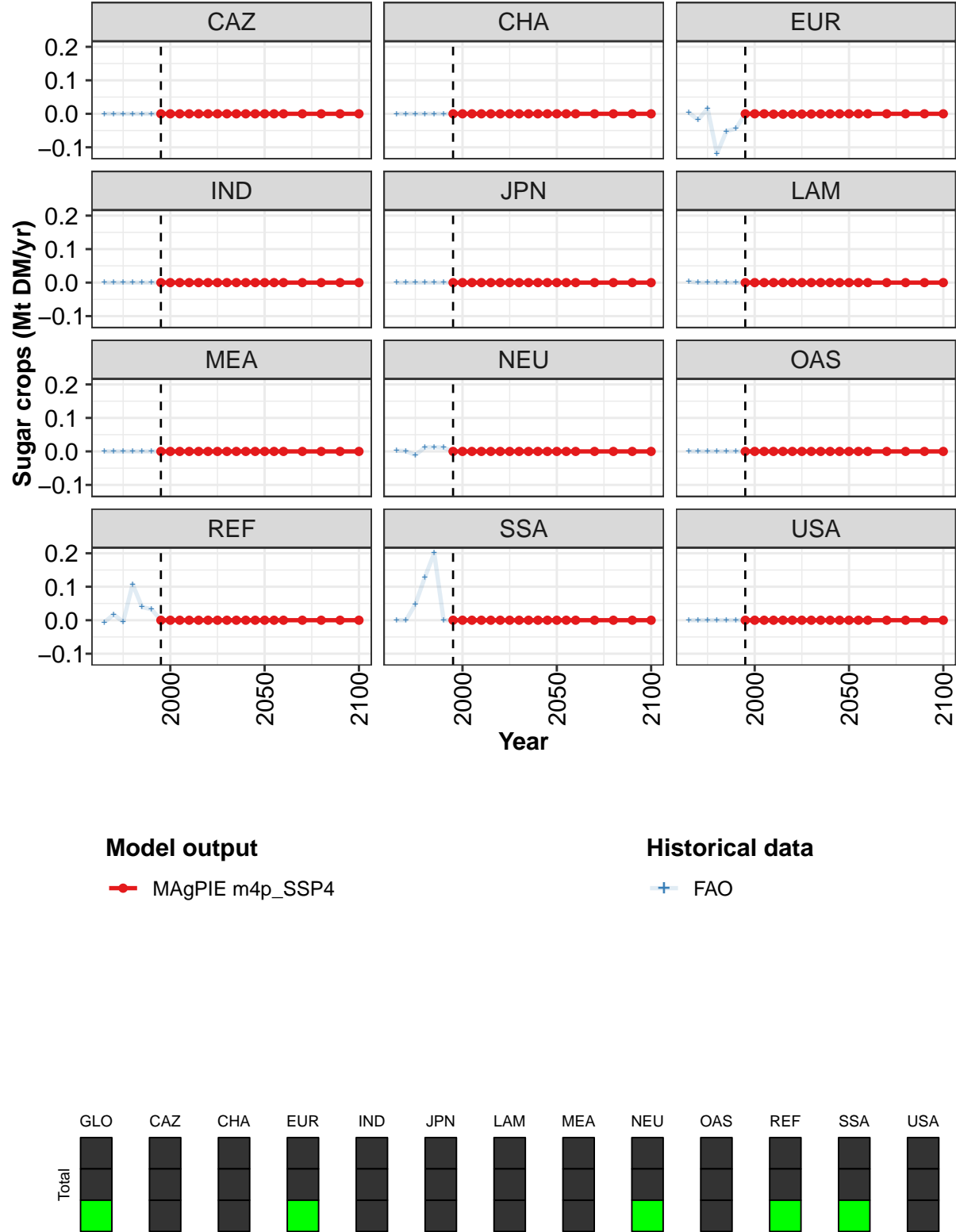


Figure 62: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Sugar crops (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

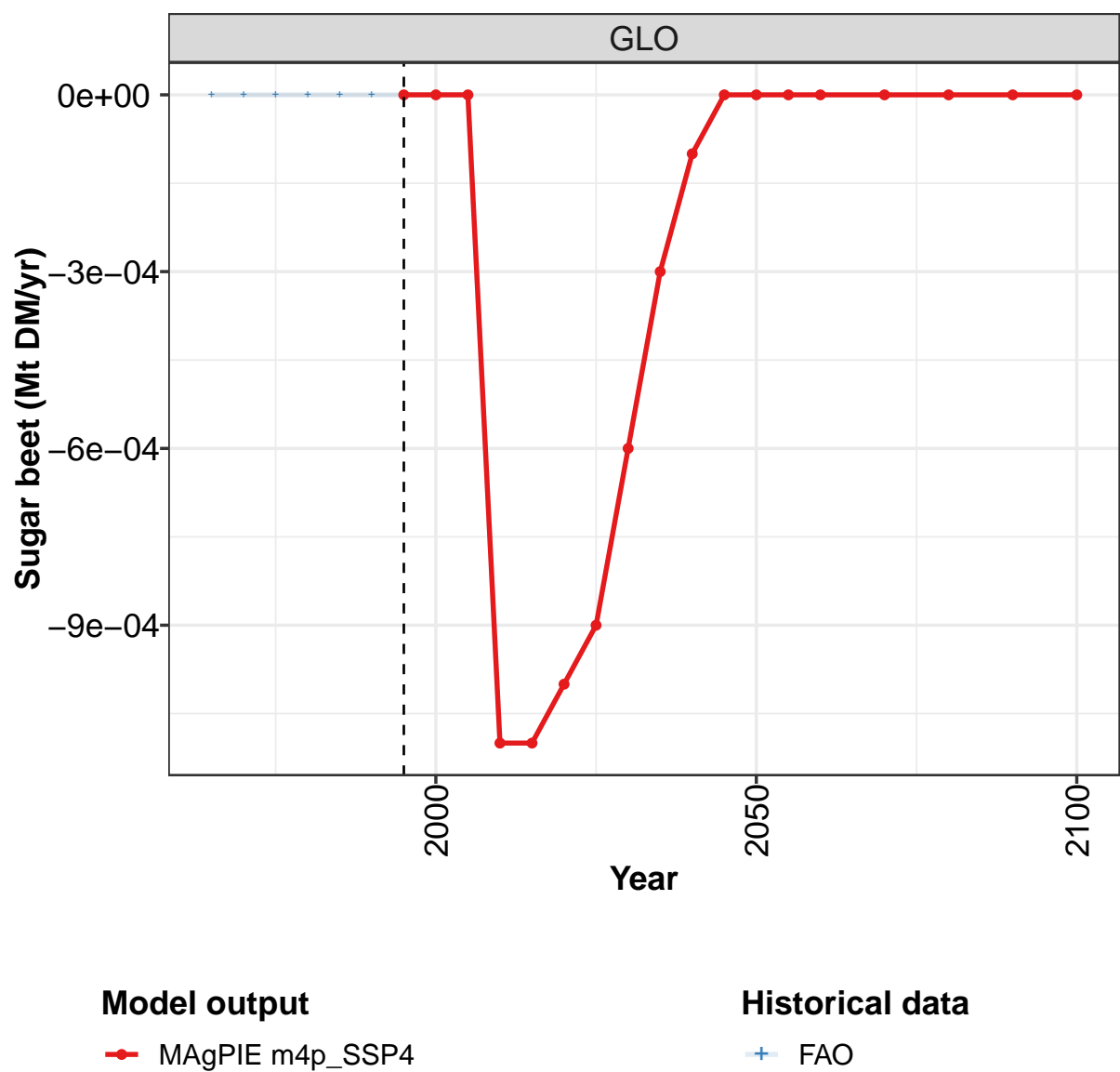
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

Table 186: MAgPIE m4p\_SSP4 — 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



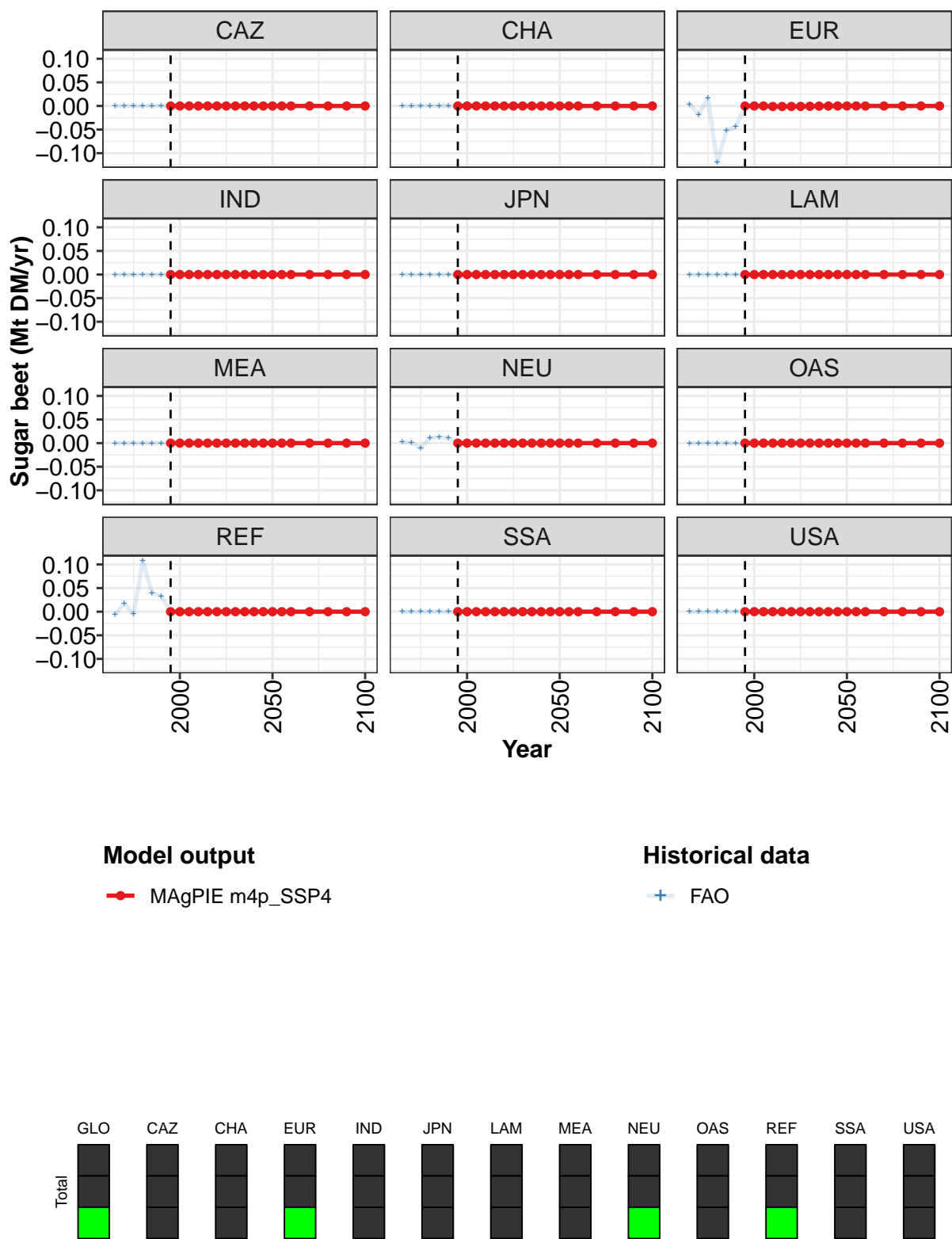


Figure 63: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

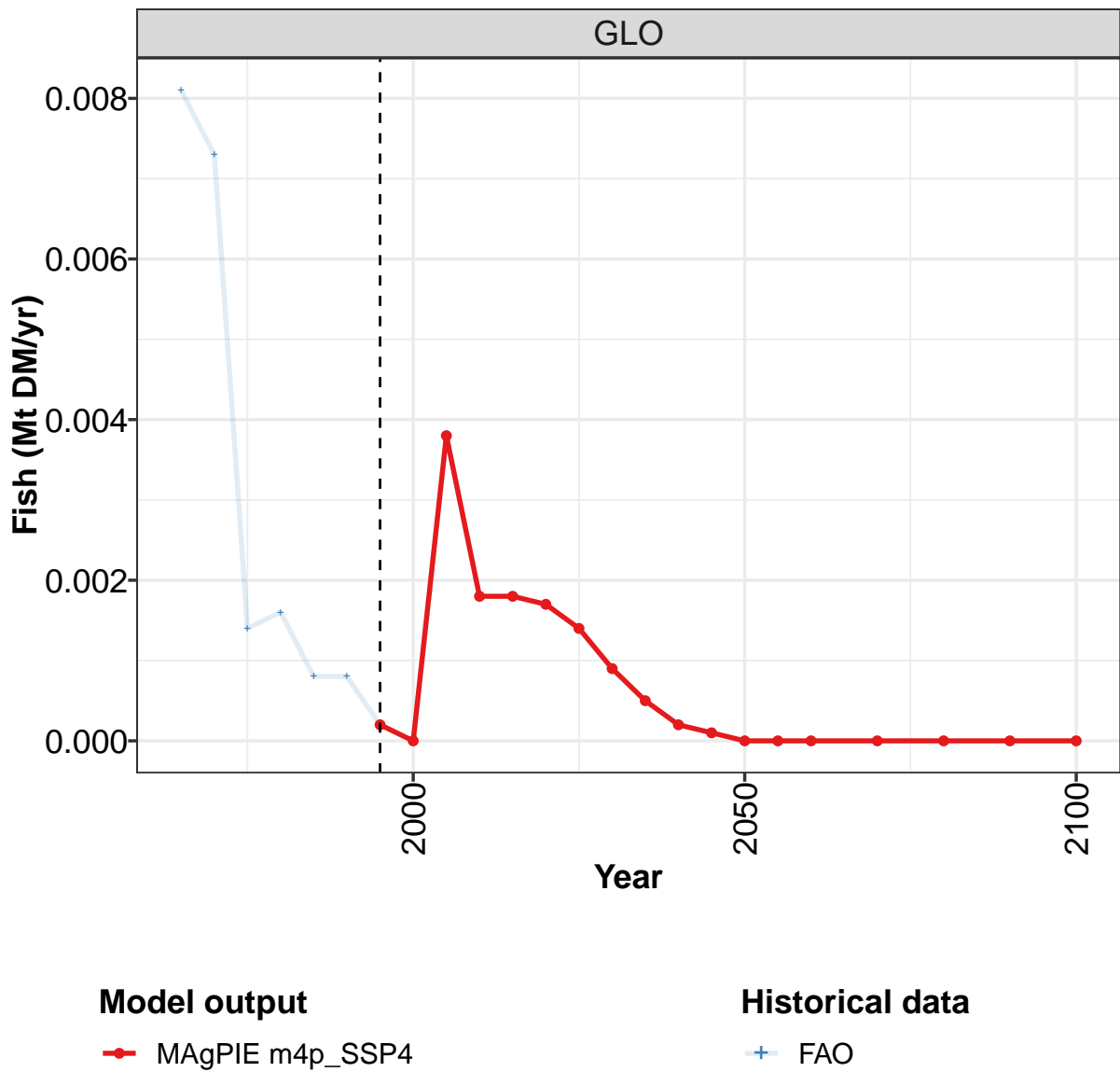
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

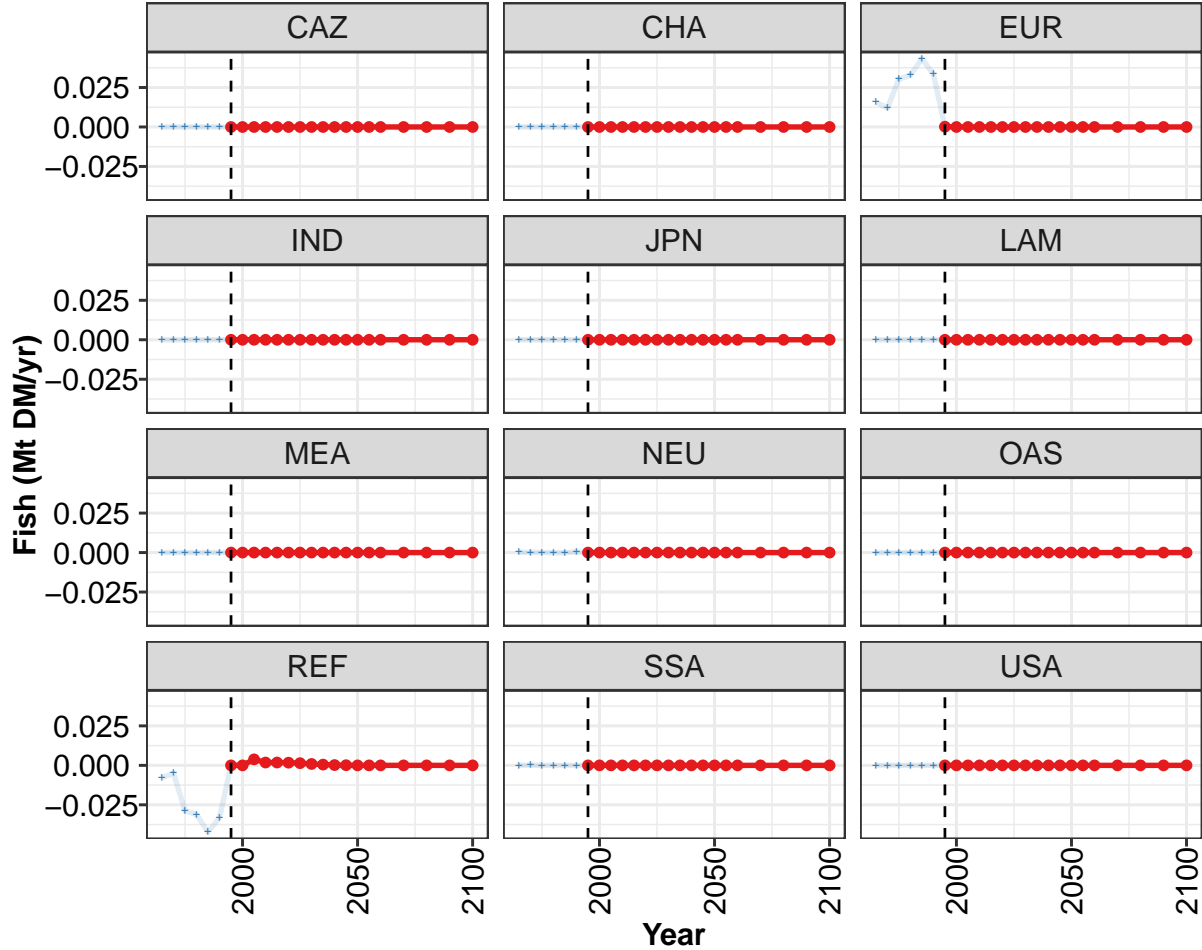
Table 189: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	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





Model output

MAgPIE m4p\_SSP4

Historical data

FAO

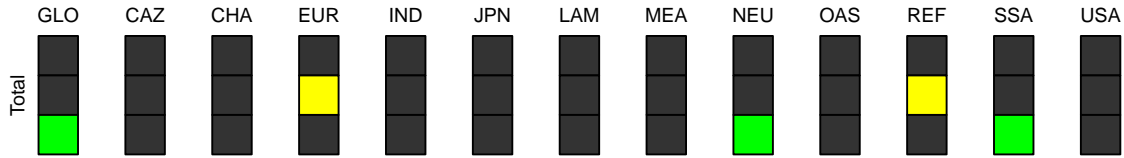


Figure 64: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Fish (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Fish (Mt DM/yr) [PART 1/2]

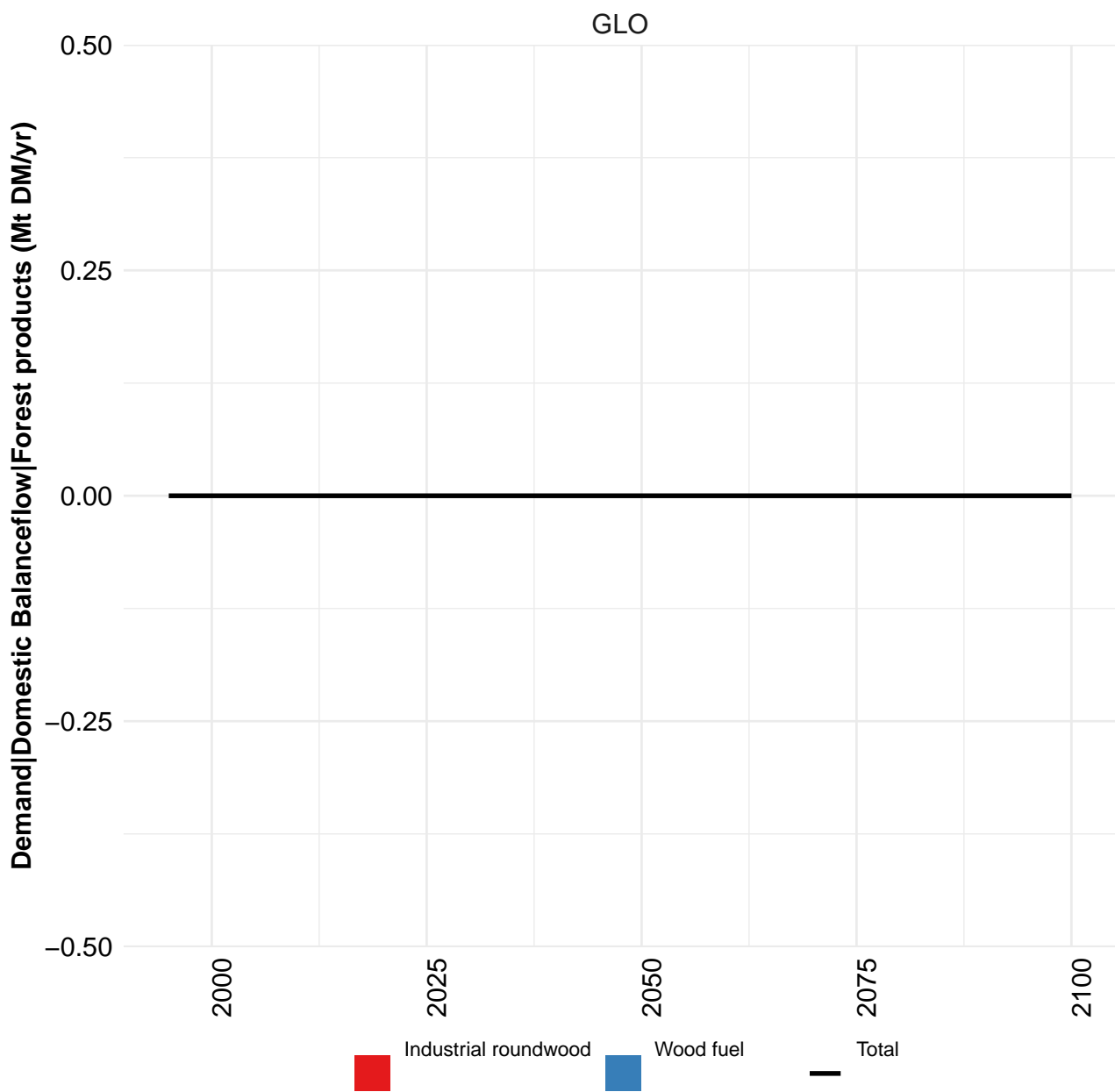
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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

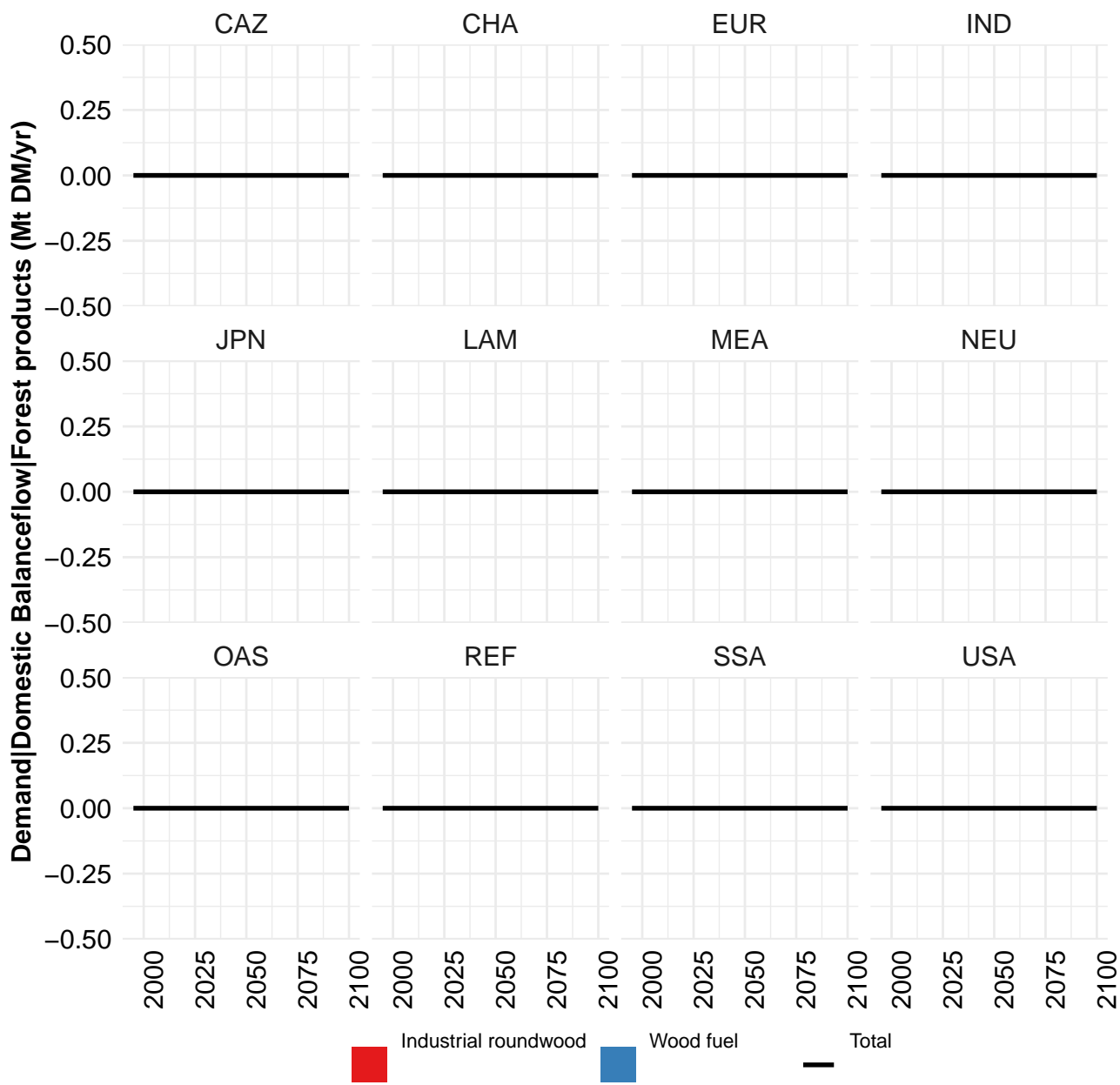
Table 192: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Fish (Mt DM/yr) [PART 2/2]

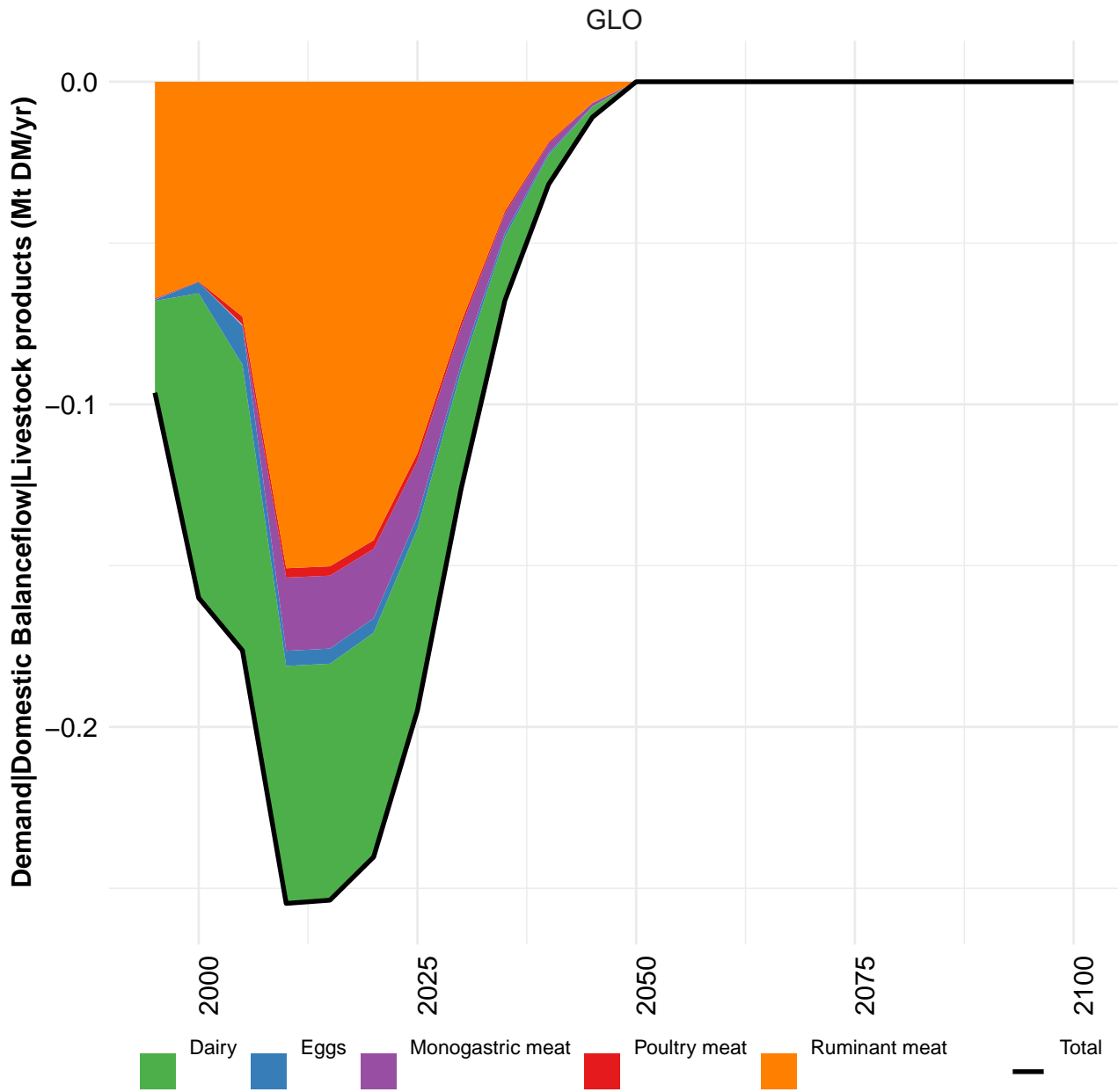
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0081	0.0073	0.0014	0.0016	0.0008	0.0008	0.0002	0.0000	0.0038	0.0018
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0157	0.0120	0.0303	0.0328	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

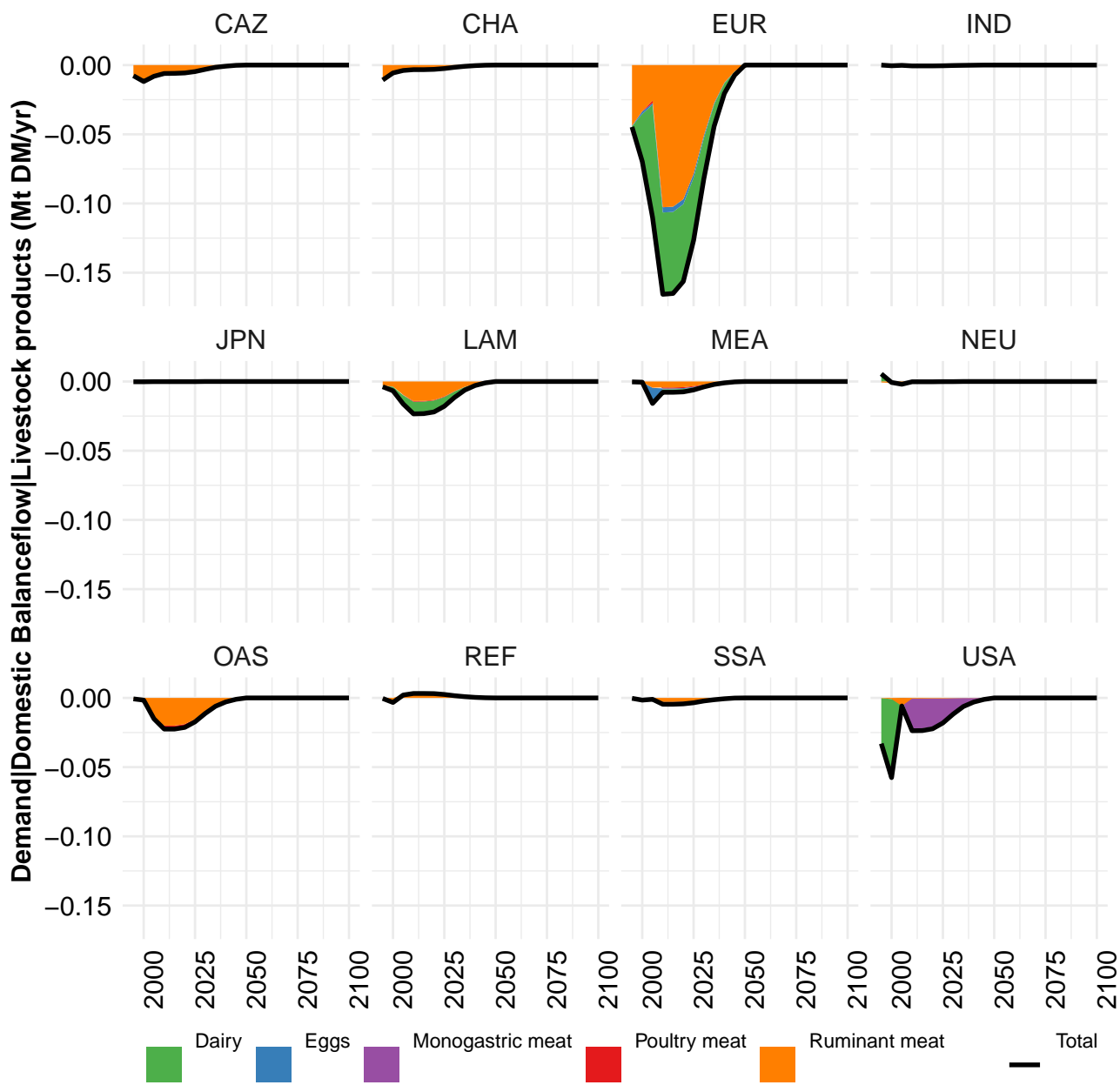
Table 193: FAO — Demand—Domestic Balanceflow—Fish (Mt DM/yr)



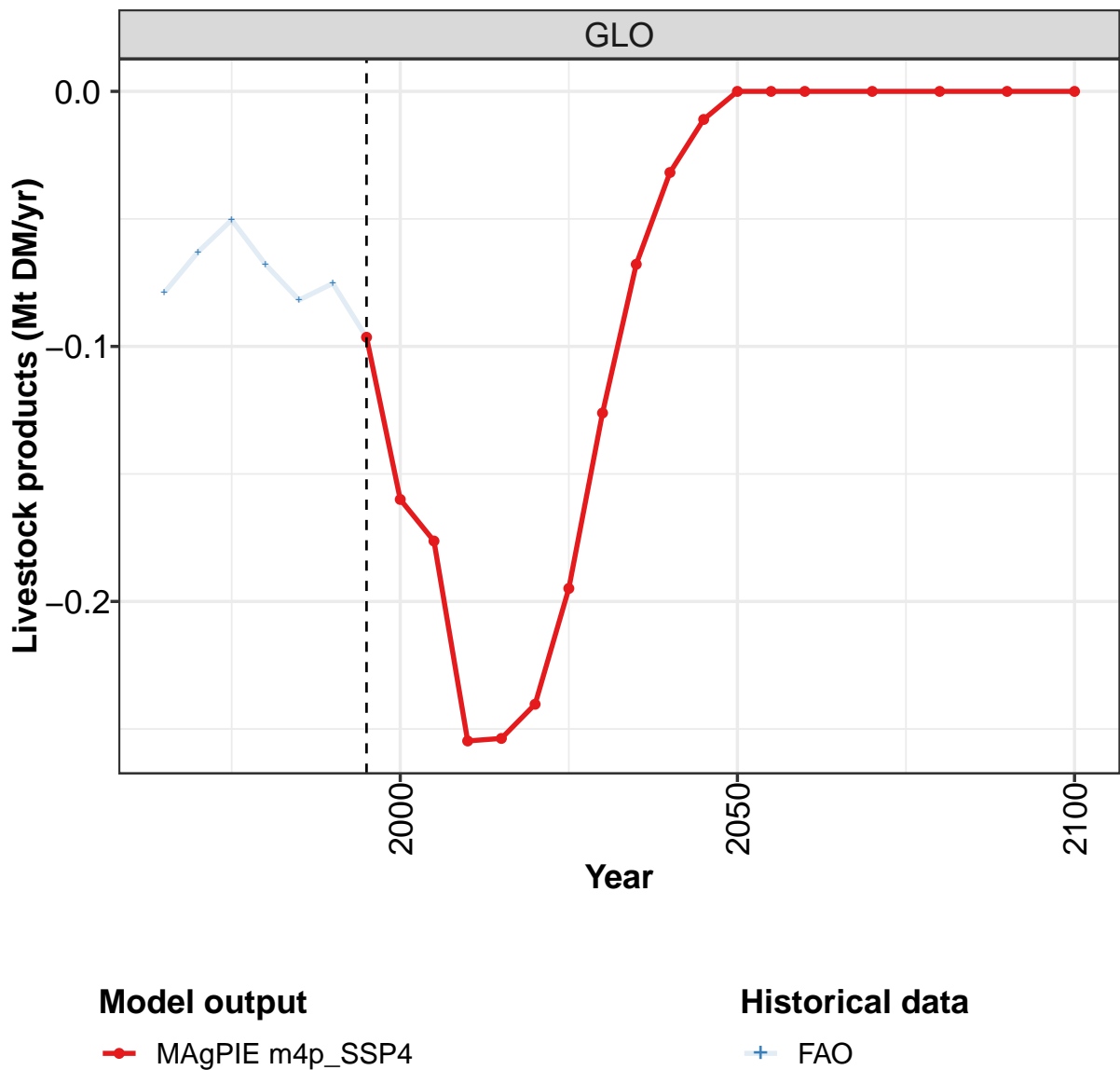








5.3 Livestock products



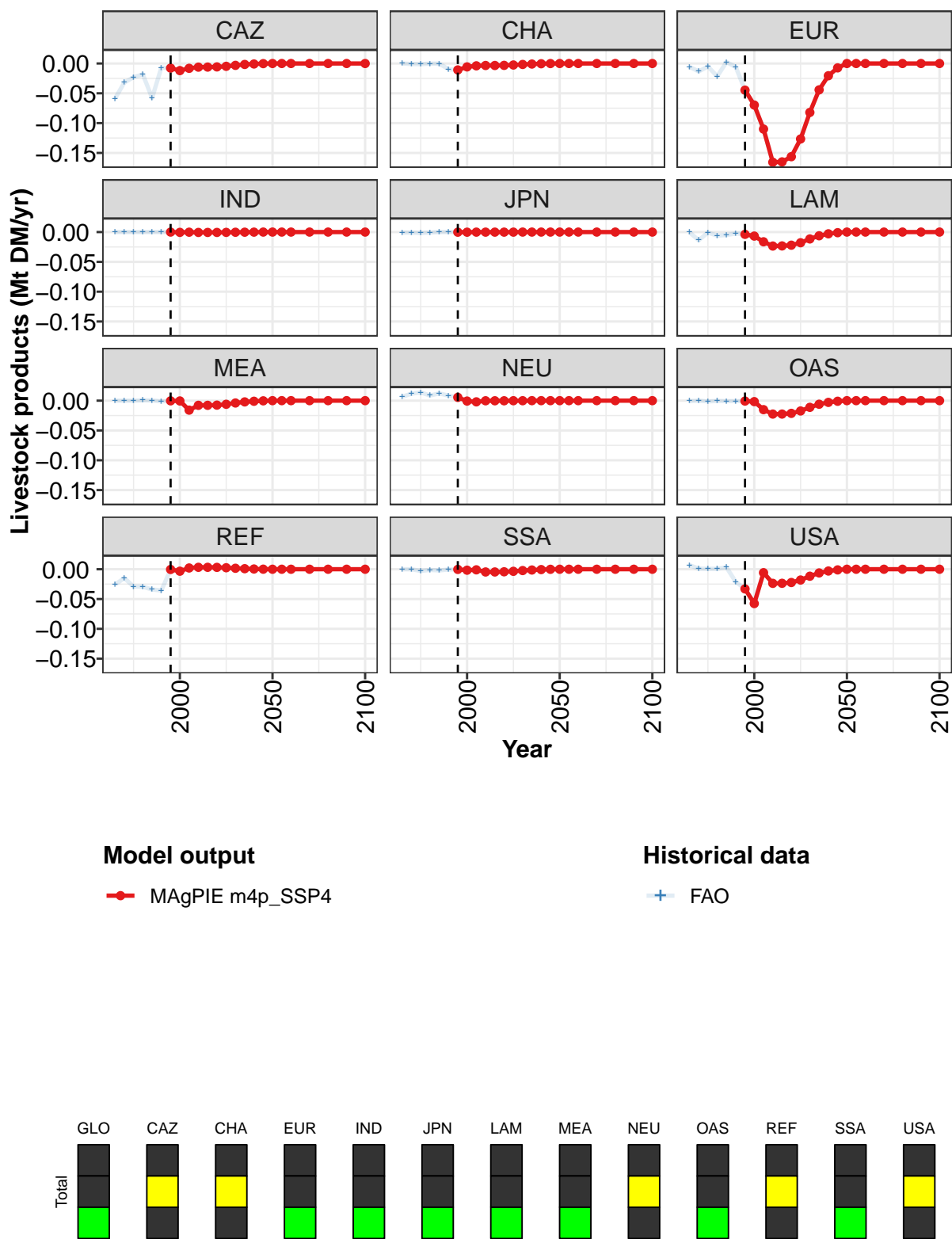


Figure 65: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.09640	-0.16000	-0.17630	-0.25470	-0.25370	-0.24030	-0.19490	-0.12610	-0.06780	-0.03180	-0.00000
CAZ	-0.00770	-0.01190	-0.00810	-0.00610	-0.00600	-0.00570	-0.00470	-0.00310	-0.00160	-0.00080	-0.00000
CHA	-0.01080	-0.00570	-0.00390	-0.00330	-0.00330	-0.00310	-0.00250	-0.00160	-0.00090	-0.00040	-0.00000
EUR	-0.04470	-0.06970	-0.11000	-0.16560	-0.16500	-0.15630	-0.12660	-0.08210	-0.04420	-0.02050	-0.00000
IND	0.00000	-0.00050	-0.00020	-0.00060	-0.00060	-0.00060	-0.00050	-0.00030	-0.00020	-0.00010	0.00000
JPN	-0.00020	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000
LAM	-0.00380	-0.00670	-0.01630	-0.02340	-0.02320	-0.02200	-0.01790	-0.01150	-0.00620	-0.00290	-0.00000
MEA	-0.00030	-0.00050	-0.01590	-0.00780	-0.00780	-0.00750	-0.00610	-0.00390	-0.00210	-0.00100	-0.00000
NEU	0.00550	-0.00070	-0.00200	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.00000	0.00000
OAS	-0.00070	-0.00160	-0.01510	-0.02250	-0.02250	-0.02130	-0.01730	-0.01120	-0.00600	-0.00290	-0.00000
REF	-0.00040	-0.00330	0.00210	0.00320	0.00320	0.00310	0.00250	0.00160	0.00090	0.00040	0.00000
SSA	-0.00030	-0.00160	-0.00100	-0.00460	-0.00460	-0.00430	-0.00350	-0.00220	-0.00130	-0.00060	-0.00000
USA	-0.03300	-0.05760	-0.00580	-0.02370	-0.02360	-0.02230	-0.01810	-0.01170	-0.00620	-0.00300	-0.00000

Table 194: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products (Mt DM/yr) [PART 1/2]

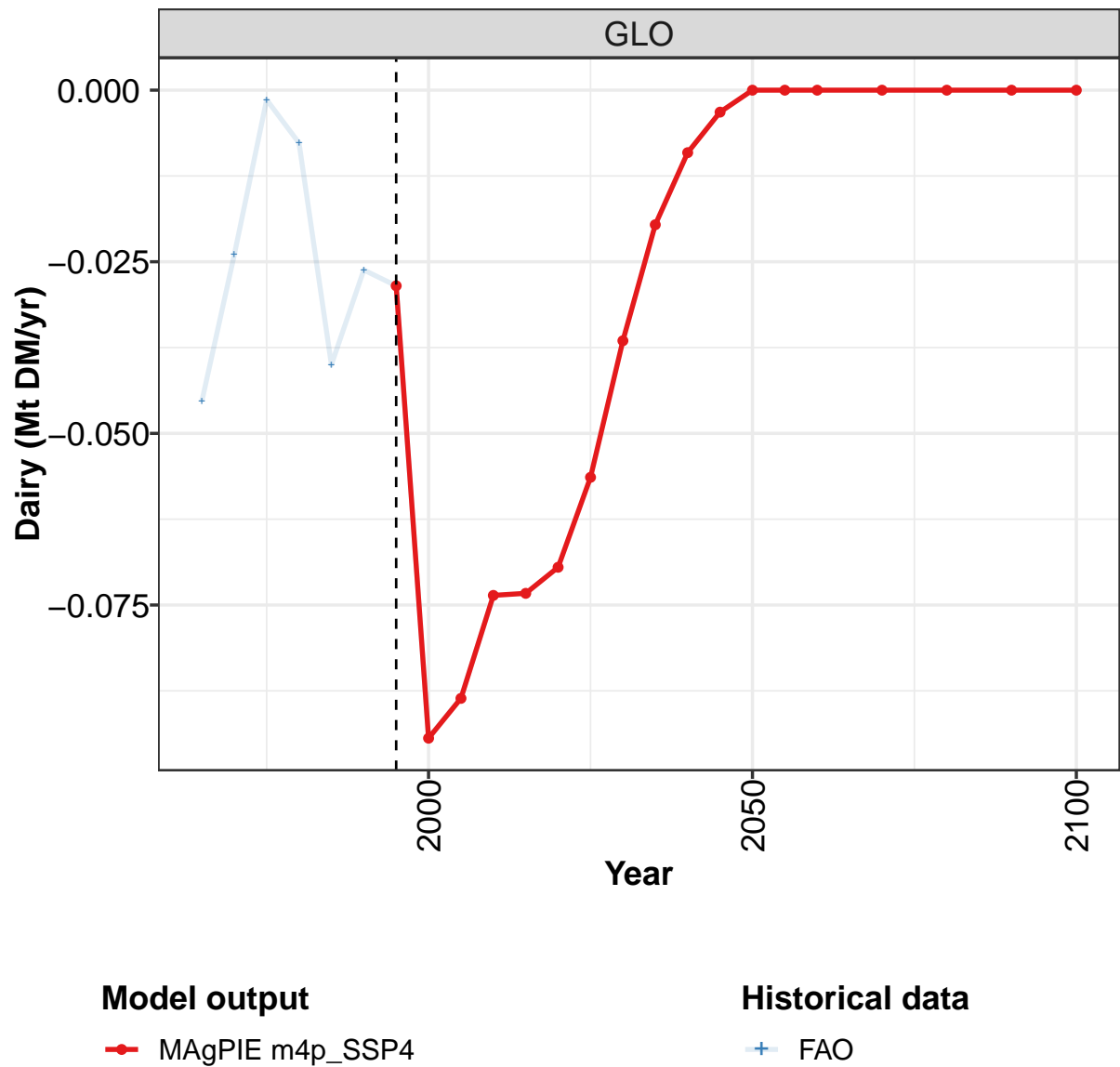
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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





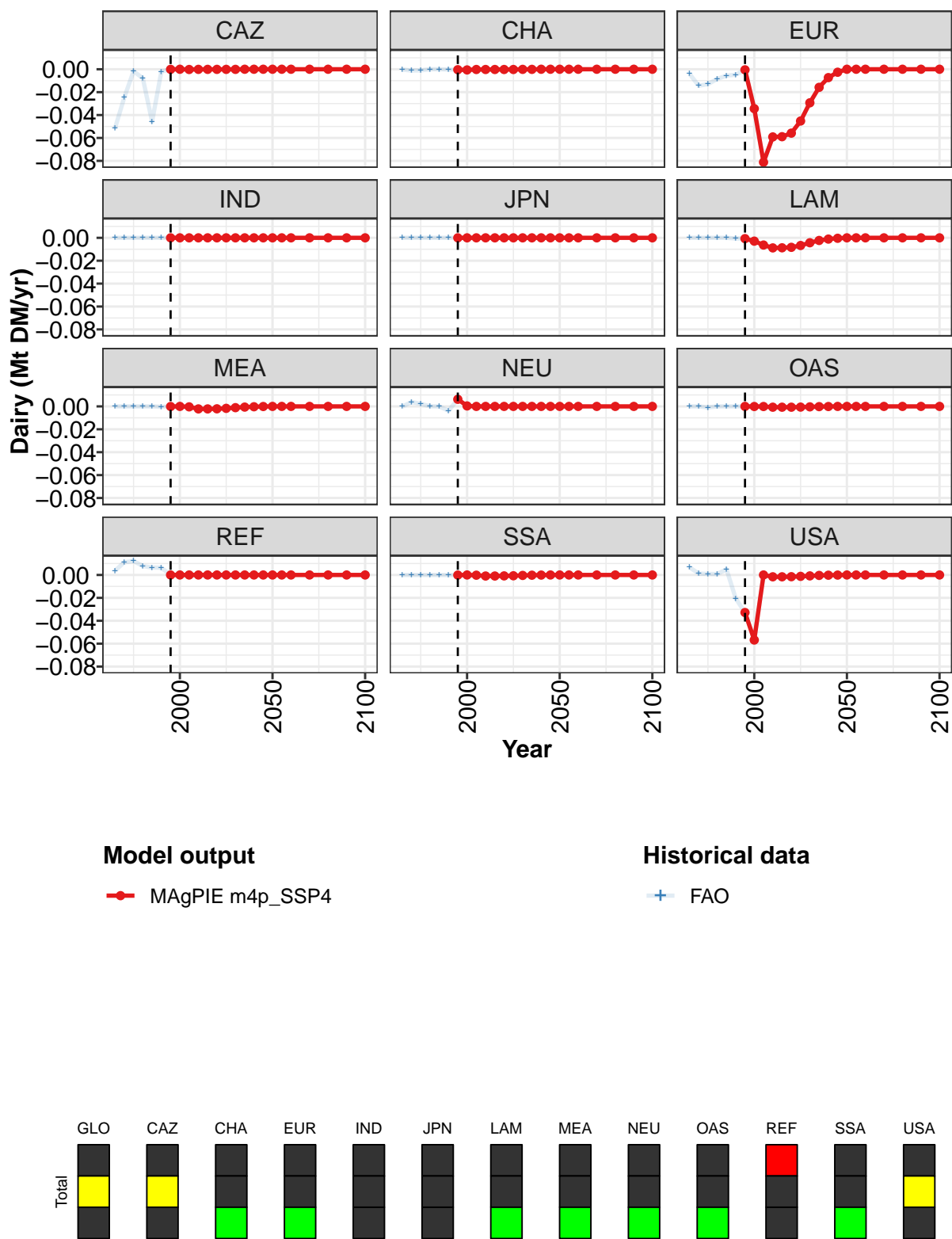


Figure 66: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.02850	-0.09440	-0.08860	-0.07360	-0.07330	-0.06950	-0.05640	-0.03650	-0.01960	-0.00910	-0.00000
CAZ	-0.00010	0.00000	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000
CHA	-0.00040	-0.00060	-0.00020	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	0.00000	0.00000
EUR	-0.00050	-0.03440	-0.08120	-0.05910	-0.05890	-0.05580	-0.04520	-0.02930	-0.01580	-0.00730	-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	-0.00070	-0.00290	-0.00630	-0.00880	-0.00870	-0.00830	-0.00670	-0.00430	-0.00230	-0.00110	-0.00000
MEA	-0.00010	0.00000	-0.00040	-0.00220	-0.00220	-0.00210	-0.00170	-0.00110	-0.00060	-0.00030	-0.00000
NEU	0.00620	0.00040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	-0.00010	-0.00010	-0.00070	-0.00070	-0.00070	-0.00060	-0.00040	-0.00020	-0.00010	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	-0.00010	0.00000	-0.00020	-0.00090	-0.00090	-0.00080	-0.00070	-0.00040	-0.00020	-0.00010	0.00000
USA	-0.03280	-0.05680	0.00000	-0.00160	-0.00160	-0.00150	-0.00120	-0.00080	-0.00040	-0.00020	-0.00000

Table 197: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Dairy (Mt DM/yr)  
[PART 1/2]

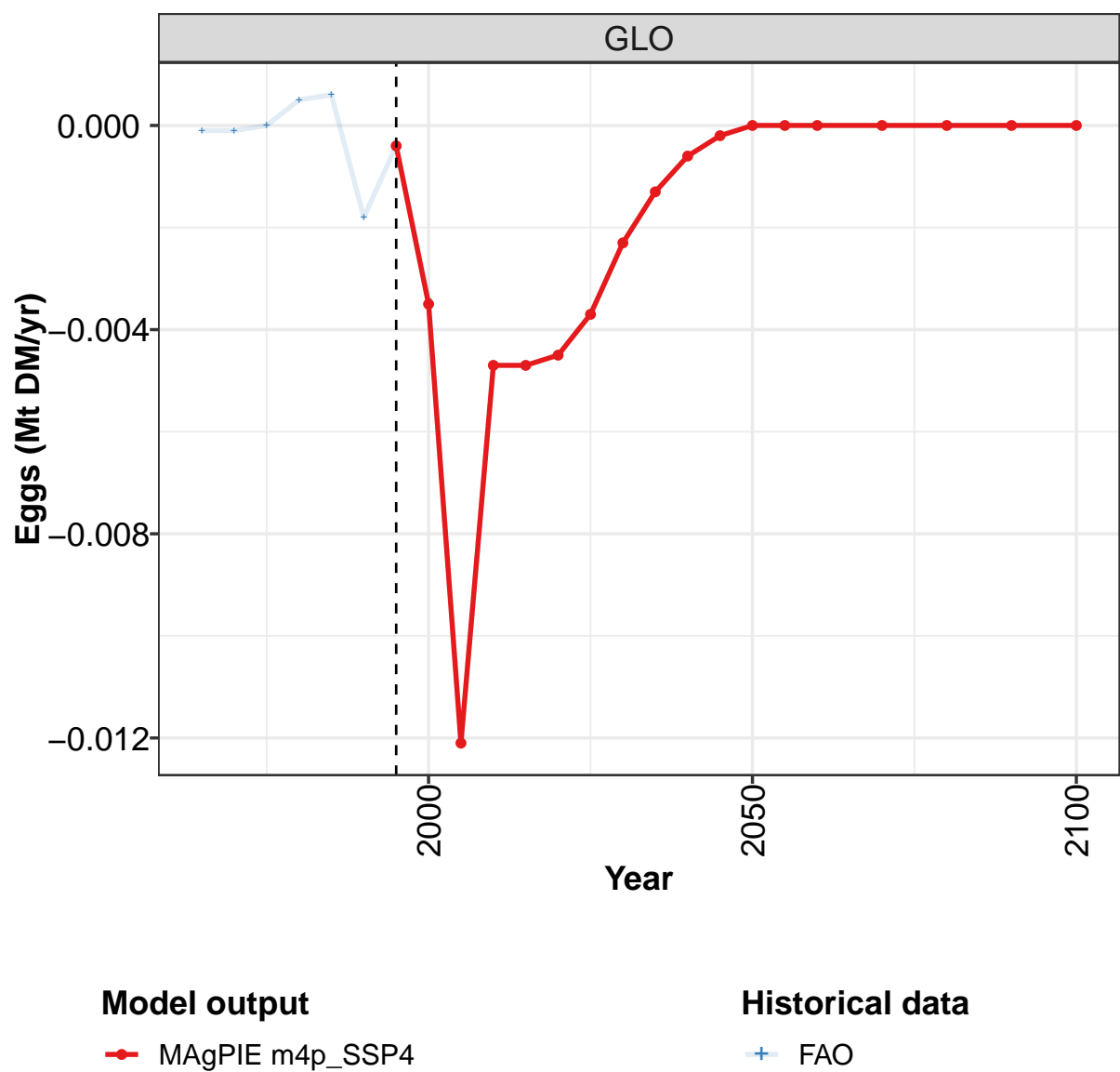
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



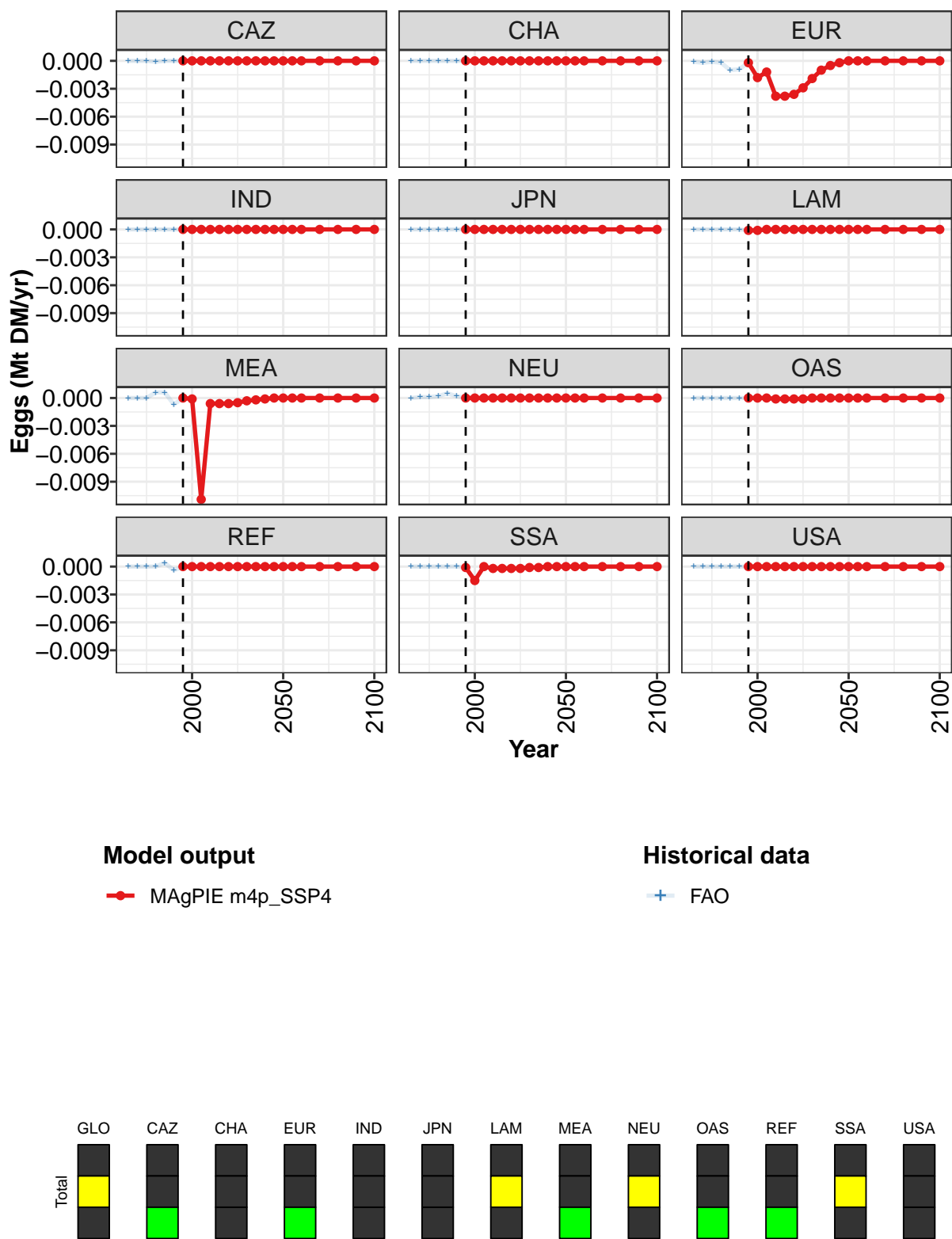


Figure 67: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Eggs (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Eggs (Mt DM/yr)  
[PART 1/2]

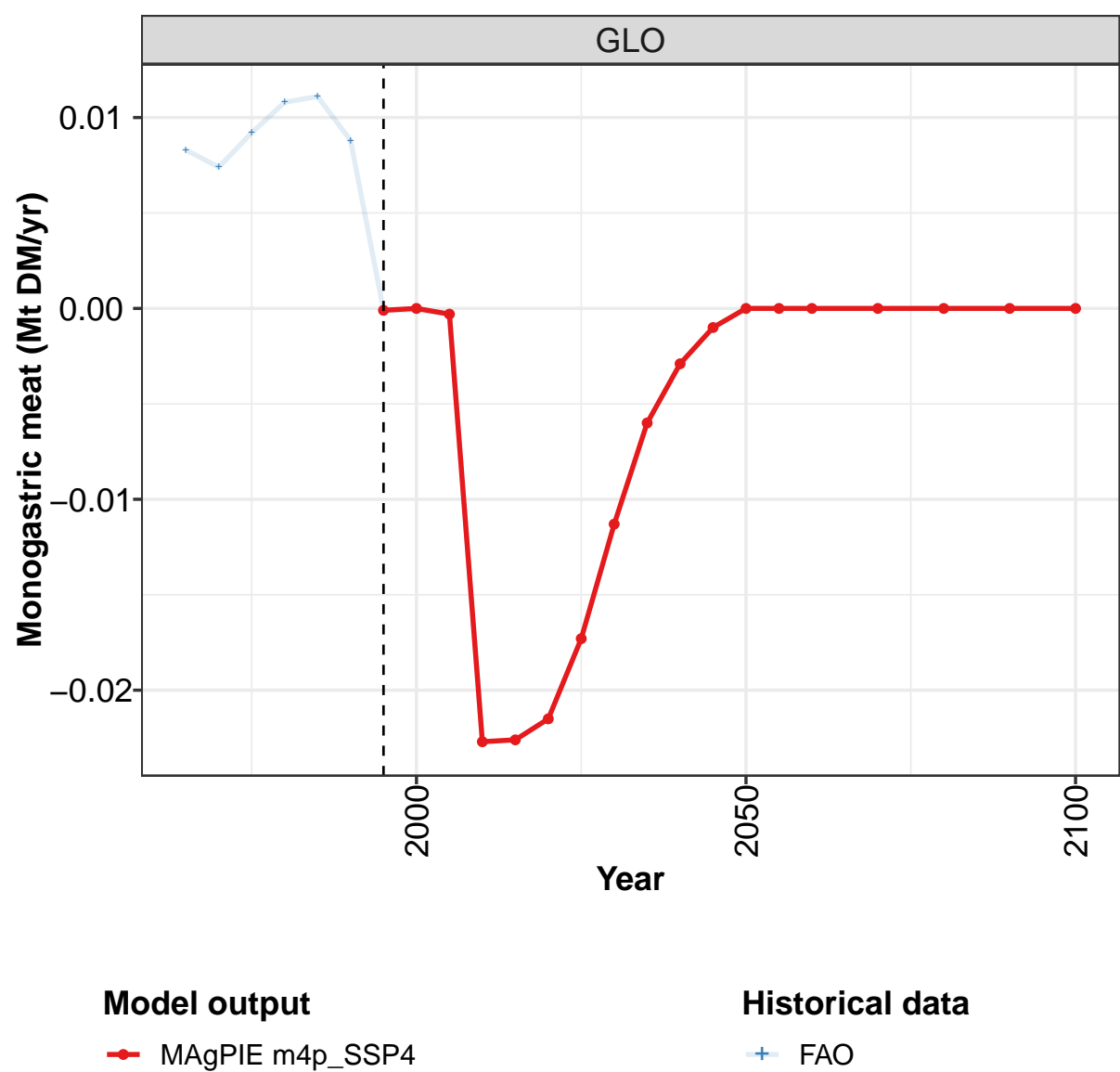
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

Table 201: MAgPIE m4p\_SSP4 — 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



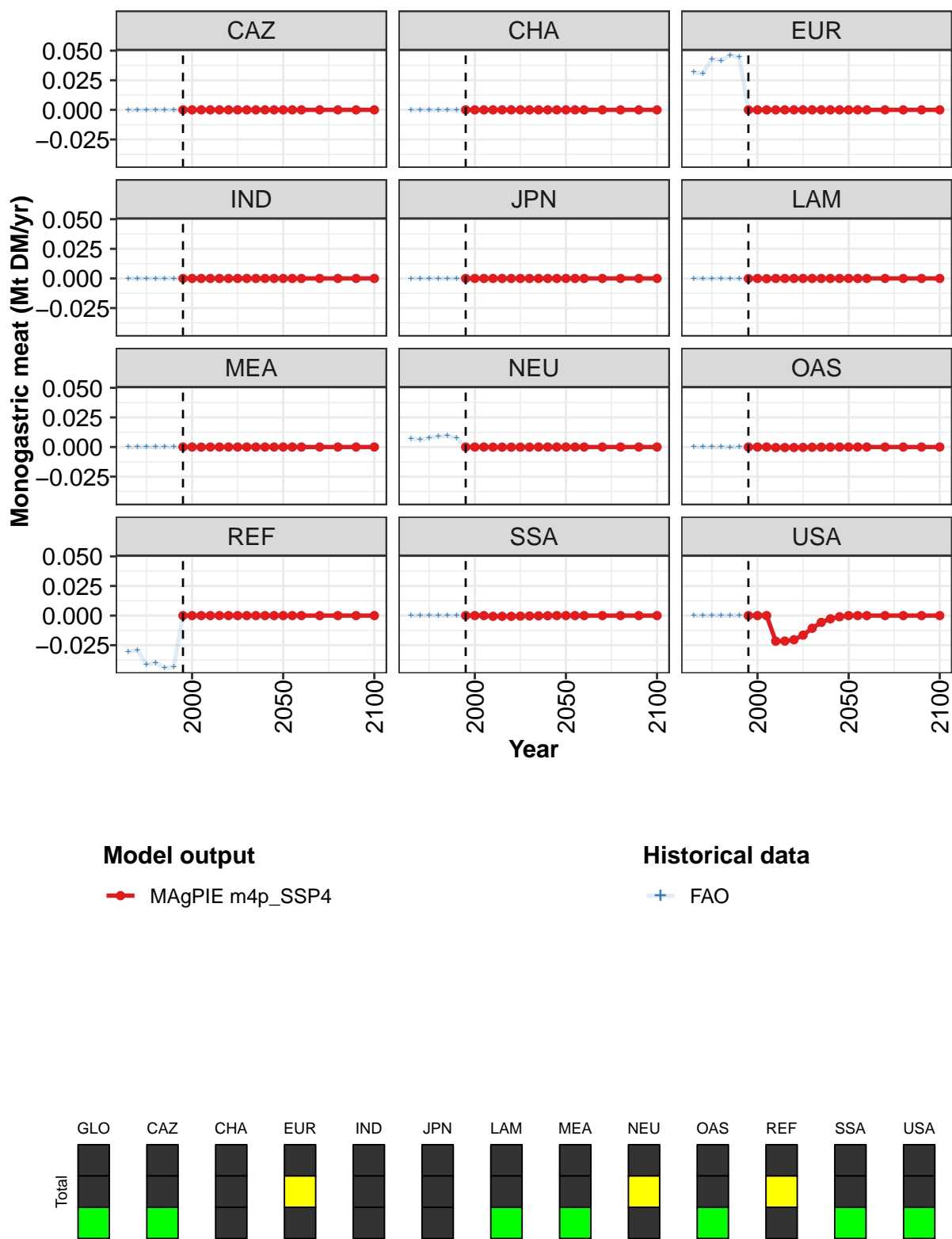


Figure 68: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Monogastric meat (Mt DM/yr)

	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\_SSP4 — 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

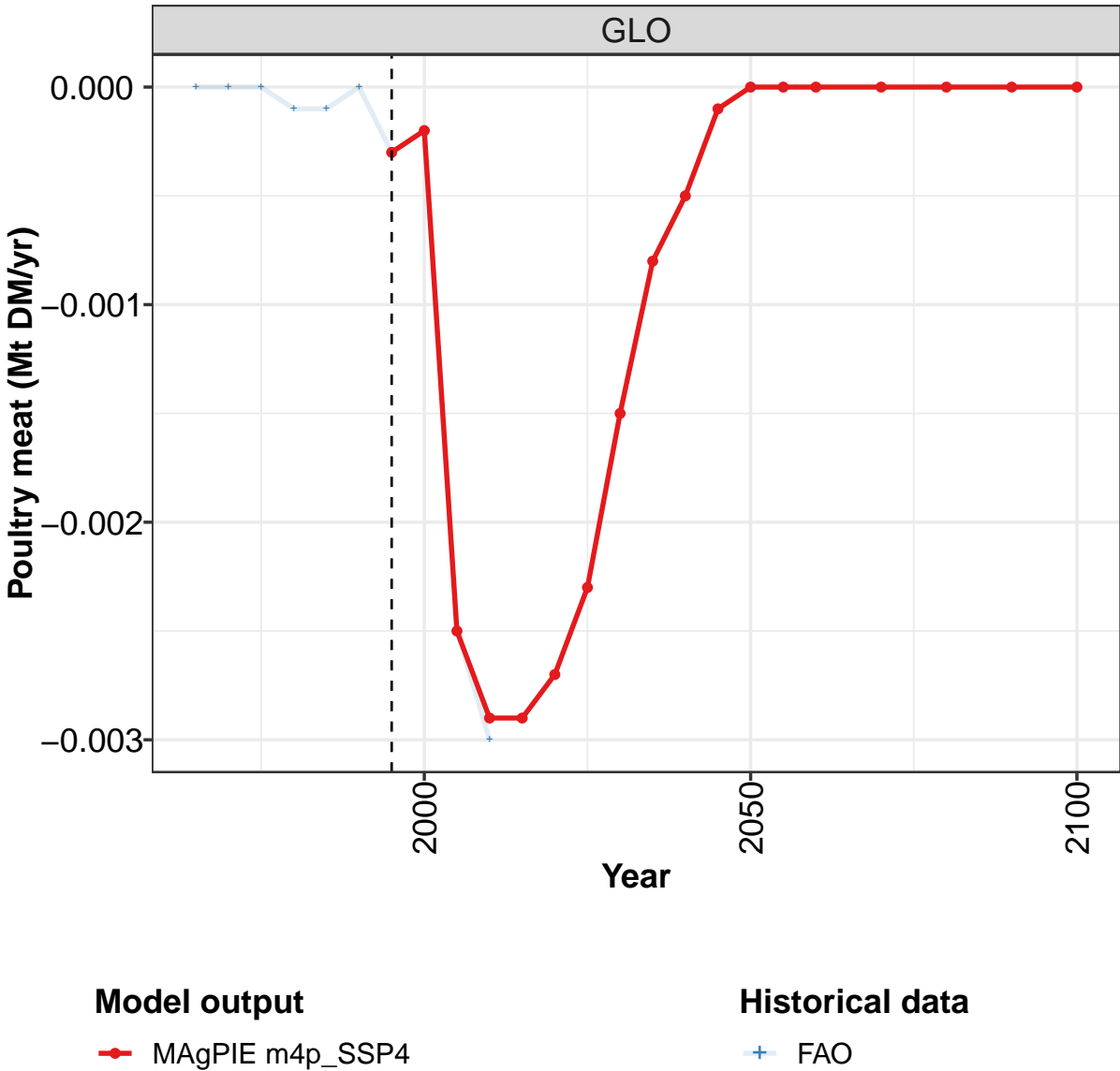
Table 204: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Monogastric meat (Mt DM/yr) [PART 2/2]

	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



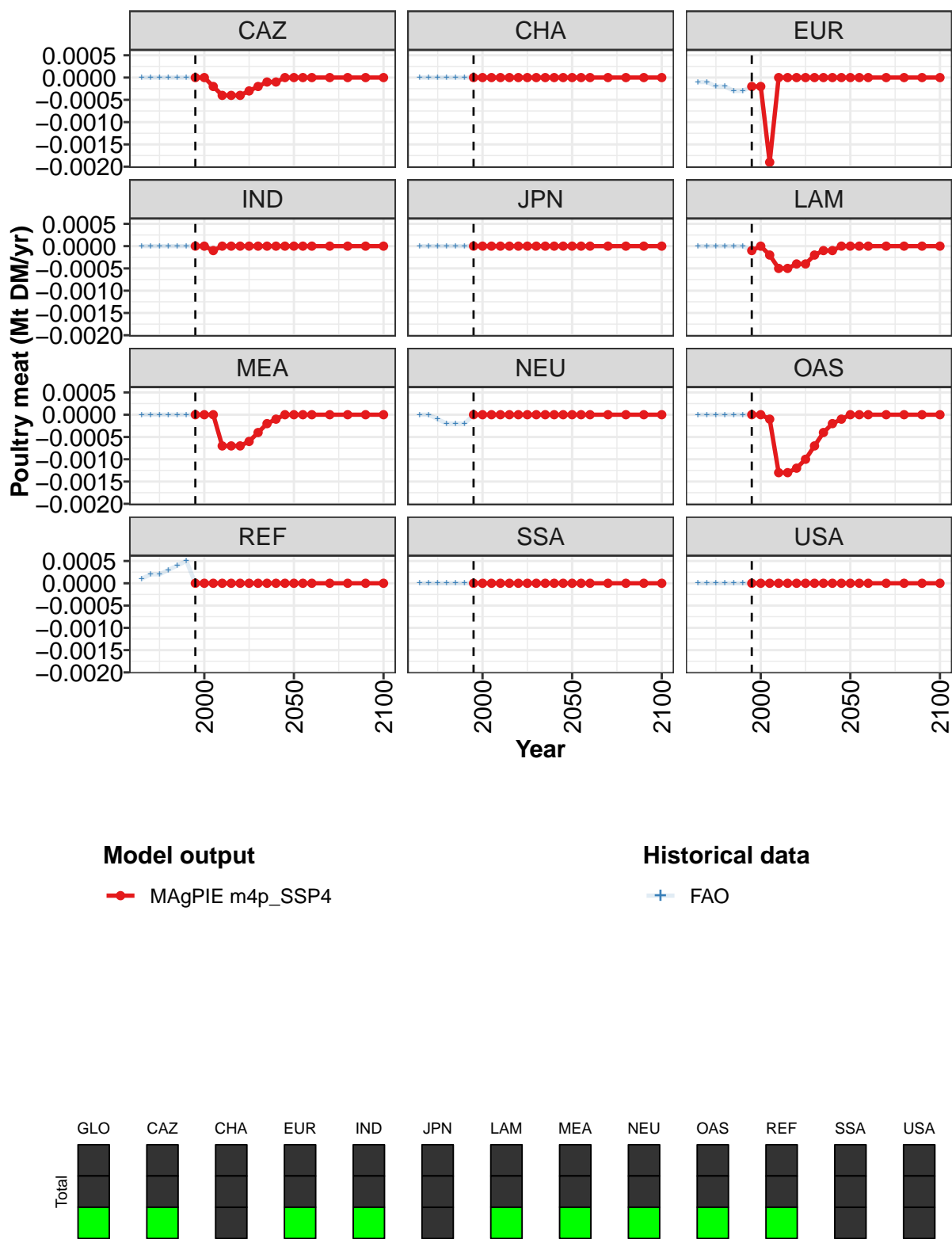


Figure 69: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Poultry meat (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

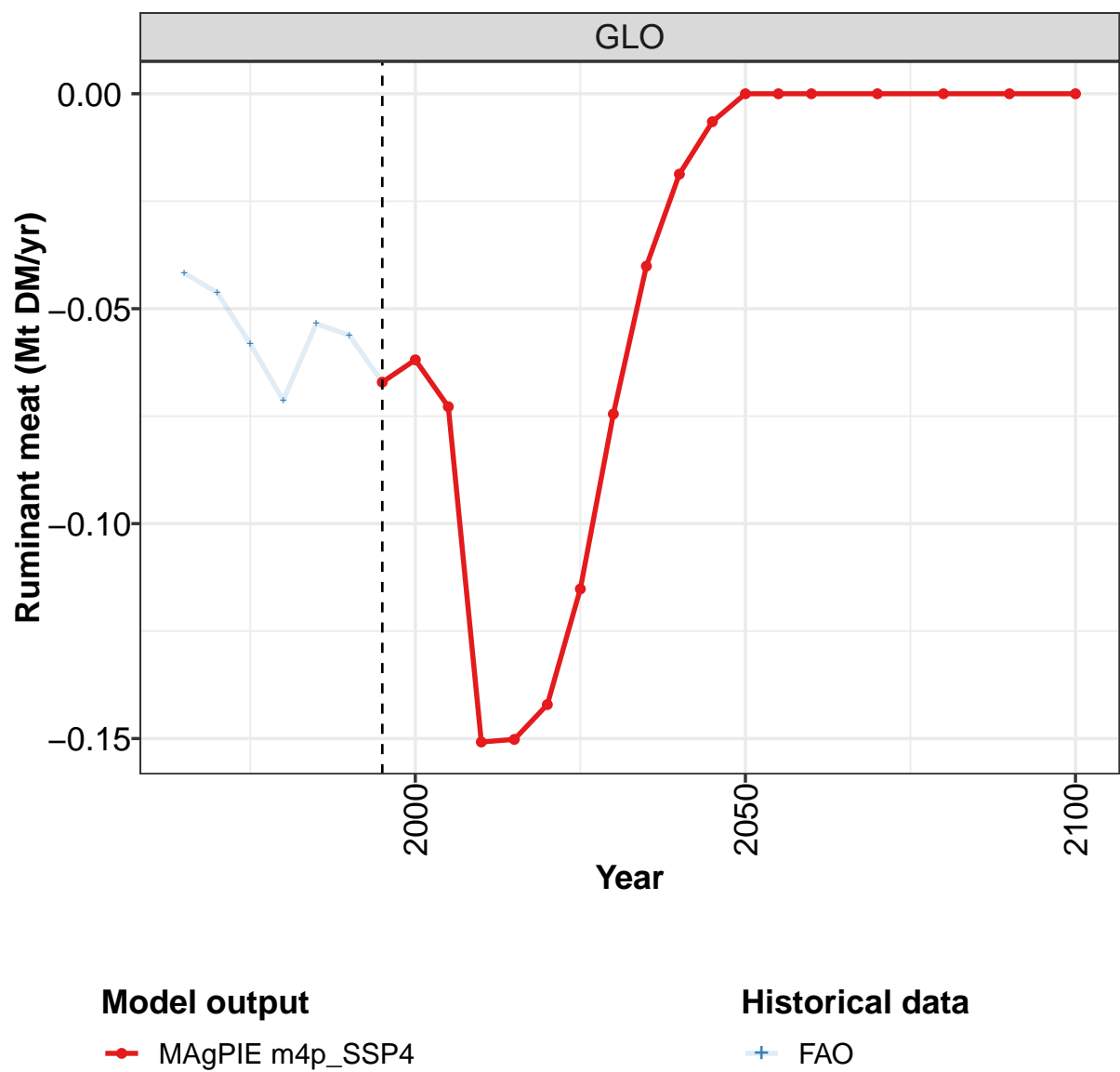
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	0	0	0
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0

Table 207: MAgPIE m4p\_SSP4 — 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



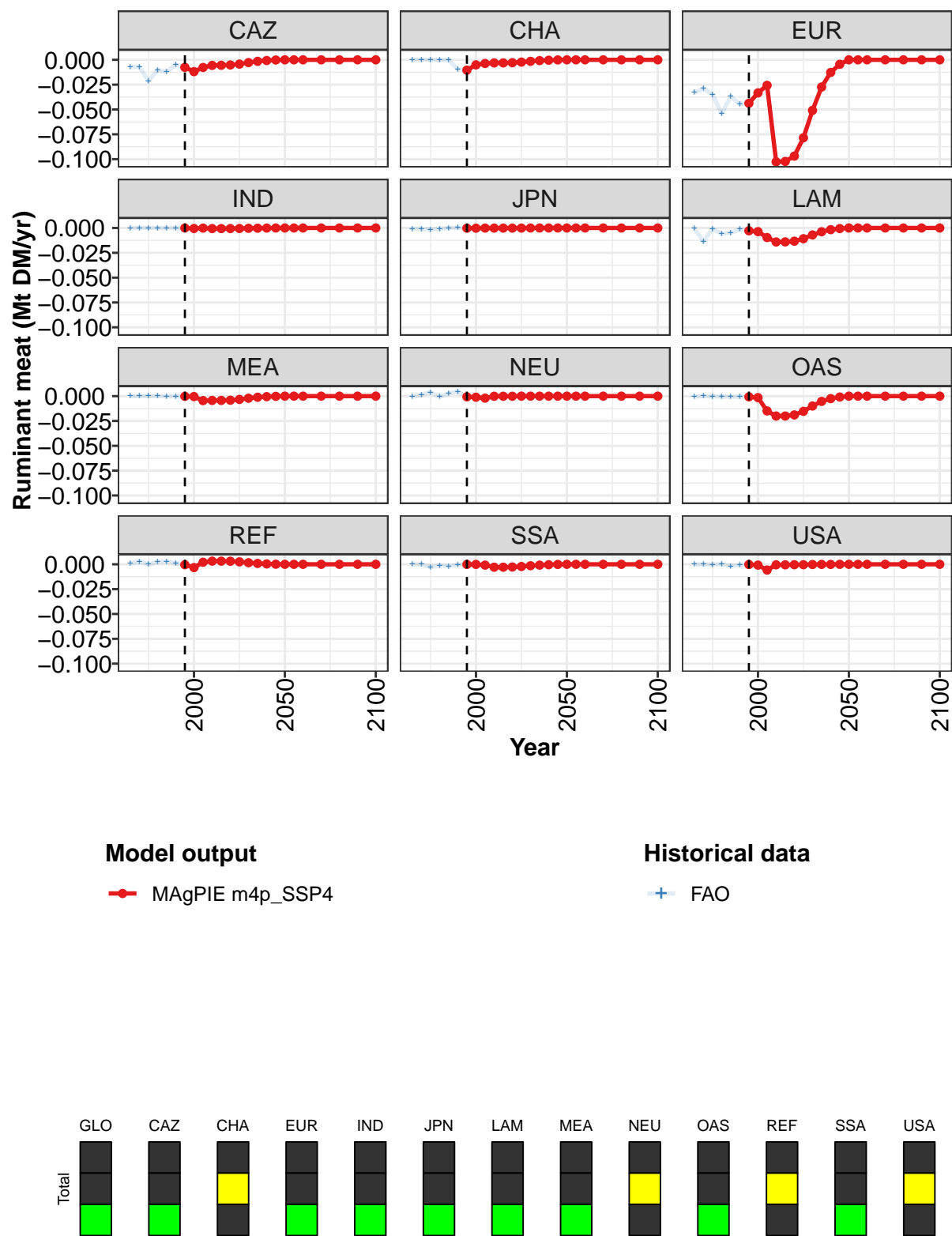


Figure 70: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.06710	-0.06190	-0.07280	-0.15080	-0.15020	-0.14210	-0.11520	-0.07450	-0.04010	-0.01870	-0.00000
CAZ	-0.00760	-0.01190	-0.00770	-0.00560	-0.00550	-0.00520	-0.00430	-0.00280	-0.00150	-0.00070	-0.00000
CHA	-0.01040	-0.00510	-0.00370	-0.00310	-0.00310	-0.00290	-0.00230	-0.00150	-0.00080	-0.00040	-0.00000
EUR	-0.04380	-0.03330	-0.02570	-0.10270	-0.10230	-0.09690	-0.07850	-0.05090	-0.02740	-0.01270	-0.00000
IND	0.00000	-0.00050	-0.00010	-0.00060	-0.00060	-0.00060	-0.00050	-0.00030	-0.00020	-0.00010	0.00000
JPN	-0.00020	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000
LAM	-0.00280	-0.00370	-0.00960	-0.01410	-0.01400	-0.01330	-0.01080	-0.00700	-0.00380	-0.00170	-0.00000
MEA	-0.00020	-0.00040	-0.00450	-0.00430	-0.00430	-0.00410	-0.00330	-0.00210	-0.00110	-0.00050	-0.00000
NEU	-0.00070	-0.00110	-0.00200	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	-0.00070	-0.00150	-0.01490	-0.02000	-0.02000	-0.01890	-0.01530	-0.00990	-0.00530	-0.00250	-0.00000
REF	-0.00040	-0.00330	0.00210	0.00320	0.00320	0.00310	0.00250	0.00160	0.00090	0.00040	0.00000
SSA	-0.00010	-0.00010	-0.00080	-0.00290	-0.00290	-0.00270	-0.00220	-0.00140	-0.00080	-0.00040	-0.00000
USA	-0.00020	-0.00080	-0.00580	-0.00050	-0.00050	-0.00040	-0.00040	-0.00020	-0.00010	-0.00010	0.00000

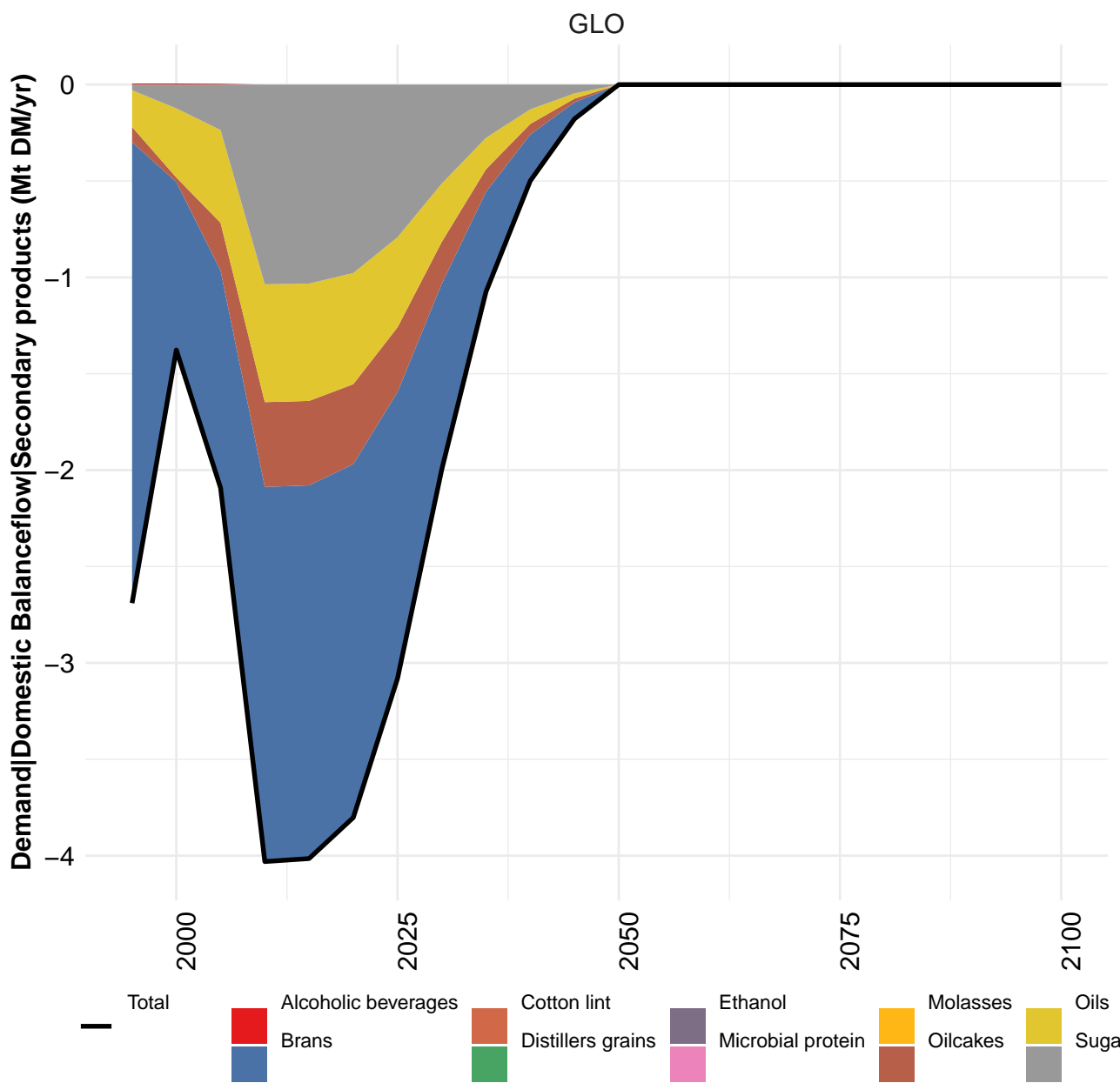
Table 209: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

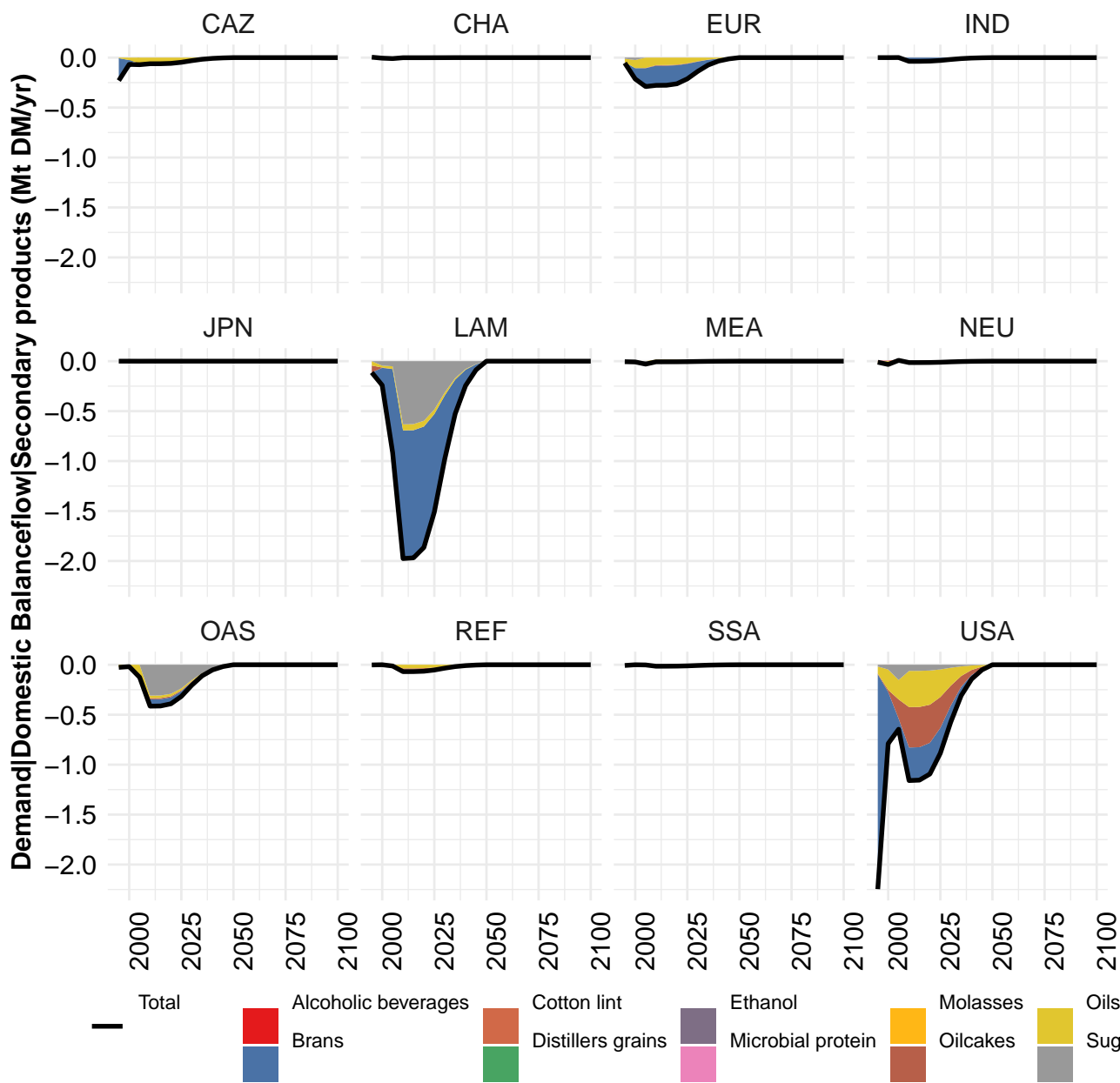
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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

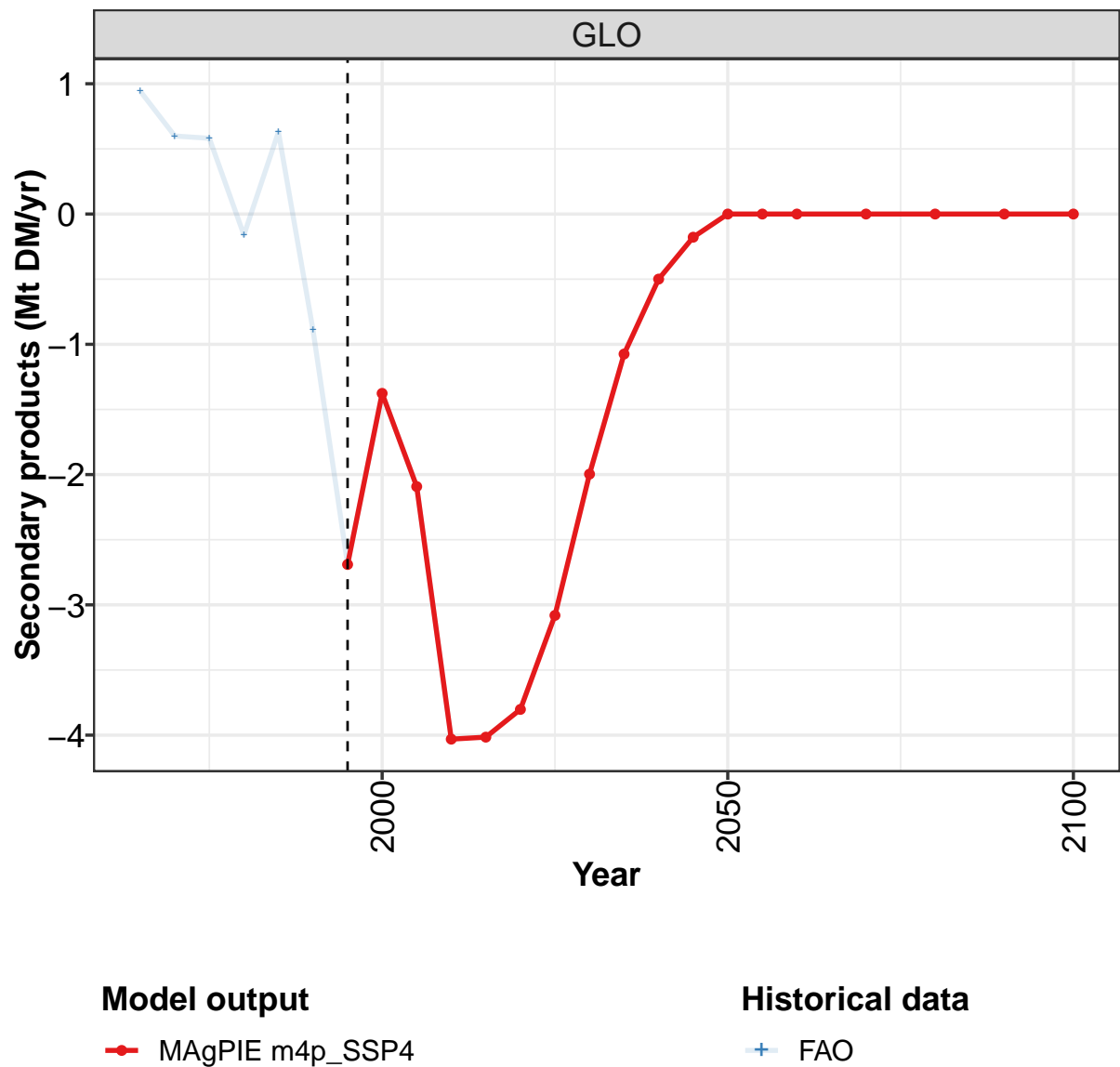
Table 211: FAO — Demand—Domestic Balanceflow—Livestock products—Ruminant meat (Mt DM/yr)







5.4 Secondary products



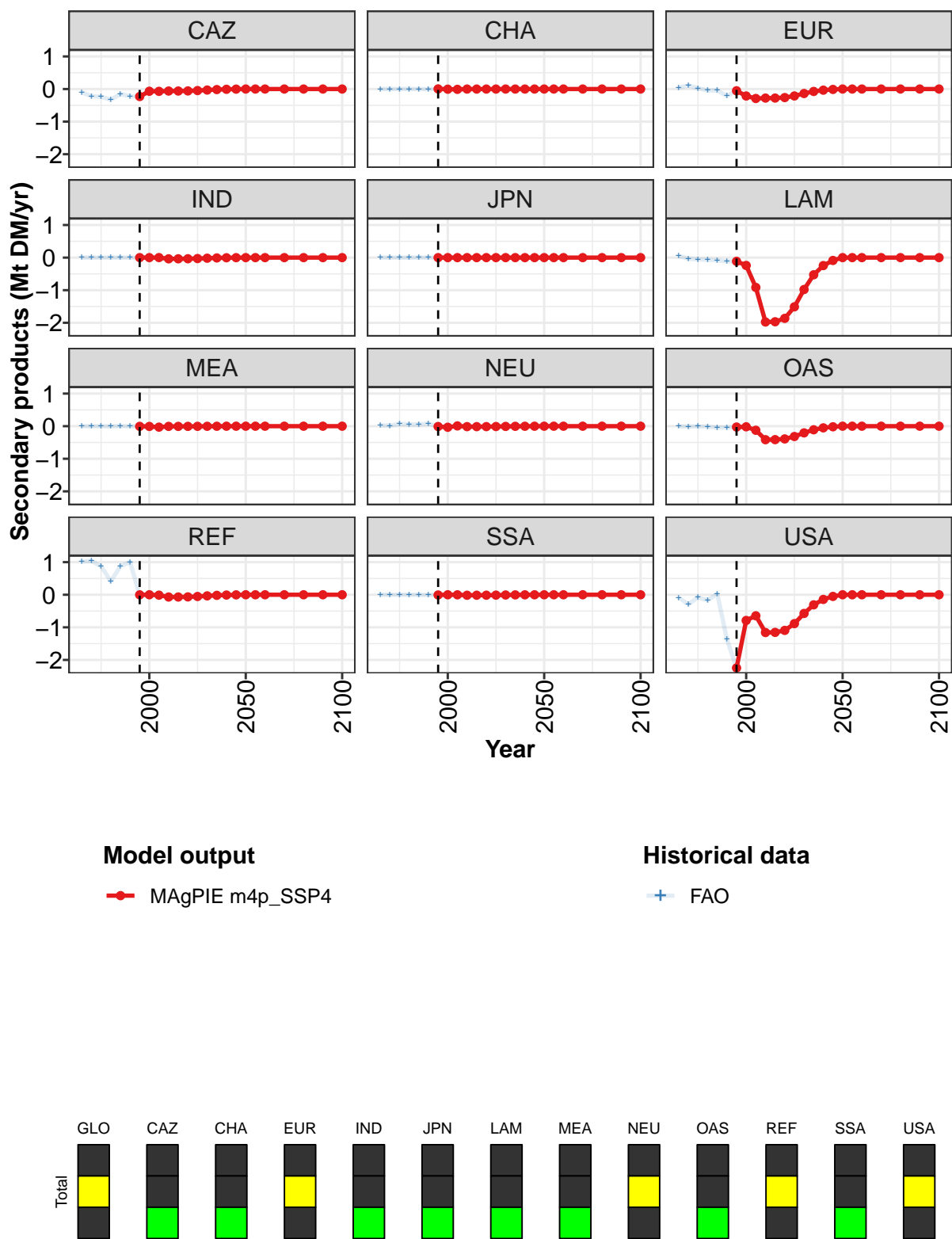


Figure 71: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-2.69000	-1.37650	-2.09200	-4.03080	-4.01540	-3.80250	-3.08080	-1.99630	-1.07450	-0.49940	-0.17450
CAZ	-0.23000	-0.06780	-0.07080	-0.06140	-0.06120	-0.05790	-0.04700	-0.03050	-0.01640	-0.00760	-0.00350
CHA	0.00420	-0.00550	-0.00960	-0.00090	-0.00090	-0.00090	-0.00070	-0.00050	-0.00020	-0.00020	0.00000
EUR	-0.05380	-0.21390	-0.28980	-0.27780	-0.27670	-0.26200	-0.21240	-0.13760	-0.07410	-0.03440	-0.01720
IND	0.00010	-0.00020	0.00090	-0.03720	-0.03710	-0.03510	-0.02850	-0.01850	-0.00990	-0.00460	-0.00230
JPN	0.00000	0.00000	-0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	-0.11360	-0.24080	-0.91570	-1.97580	-1.96850	-1.86410	-1.51020	-0.97860	-0.52670	-0.24460	-0.08950
MEA	-0.00520	-0.00770	-0.02940	-0.00630	-0.00620	-0.00600	-0.00480	-0.00310	-0.00180	-0.00080	-0.00040
NEU	-0.01010	-0.03280	0.00840	-0.01400	-0.01390	-0.01320	-0.01070	-0.00690	-0.00370	-0.00180	-0.00090
OAS	-0.02640	-0.01880	-0.12560	-0.41450	-0.41280	-0.39090	-0.31680	-0.20530	-0.11060	-0.05130	-0.02560
REF	-0.00200	0.00000	-0.01260	-0.06900	-0.06870	-0.06510	-0.05280	-0.03410	-0.01830	-0.00860	-0.00430
SSA	-0.00700	-0.00010	-0.00200	-0.01480	-0.01460	-0.01380	-0.01120	-0.00720	-0.00390	-0.00190	-0.00100
USA	-2.24620	-0.78890	-0.64570	-1.15910	-1.15480	-1.09350	-0.88570	-0.57400	-0.30890	-0.14360	-0.07180

Table 212: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products (Mt DM/yr) [PART 1/2]

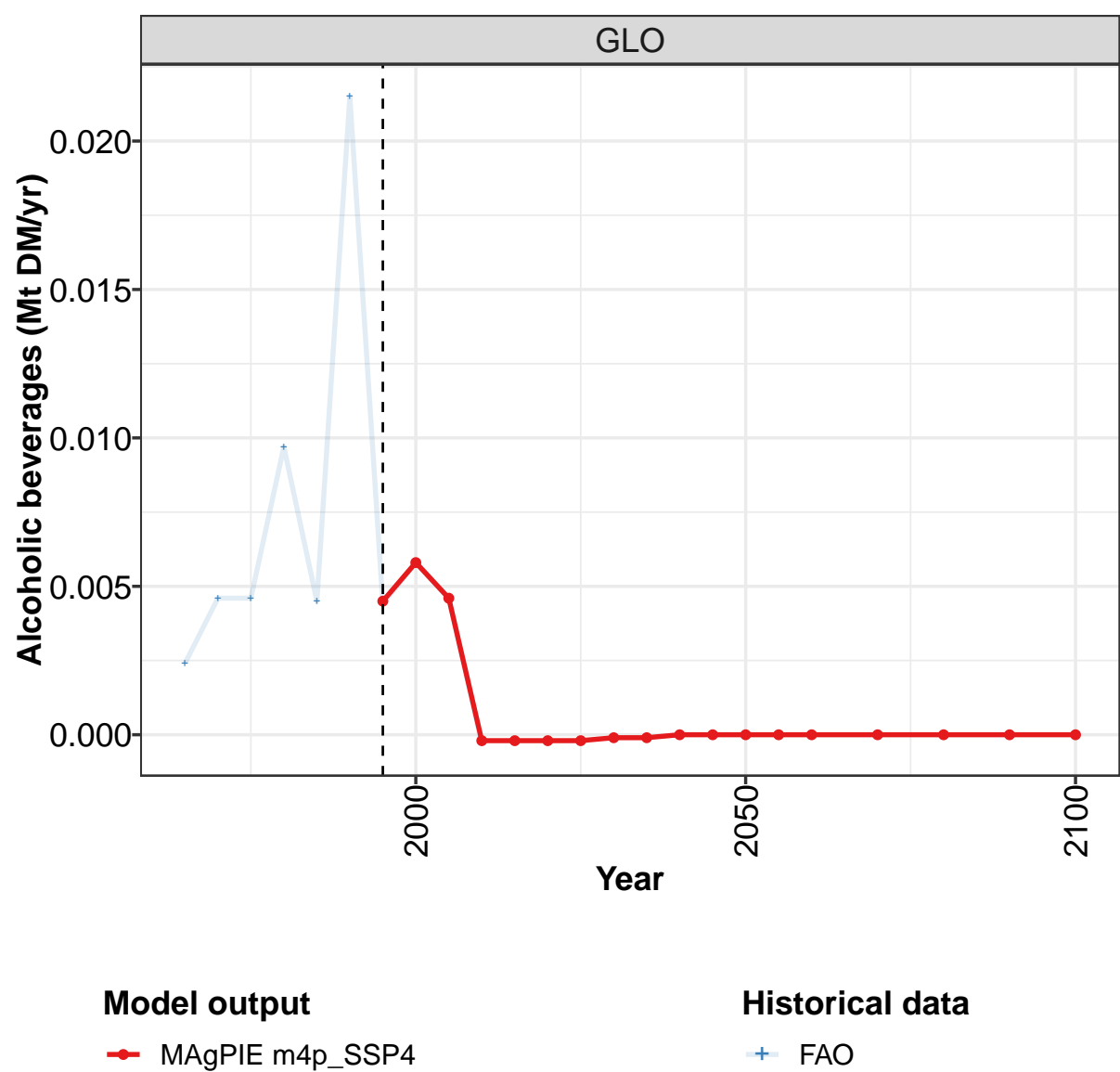
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



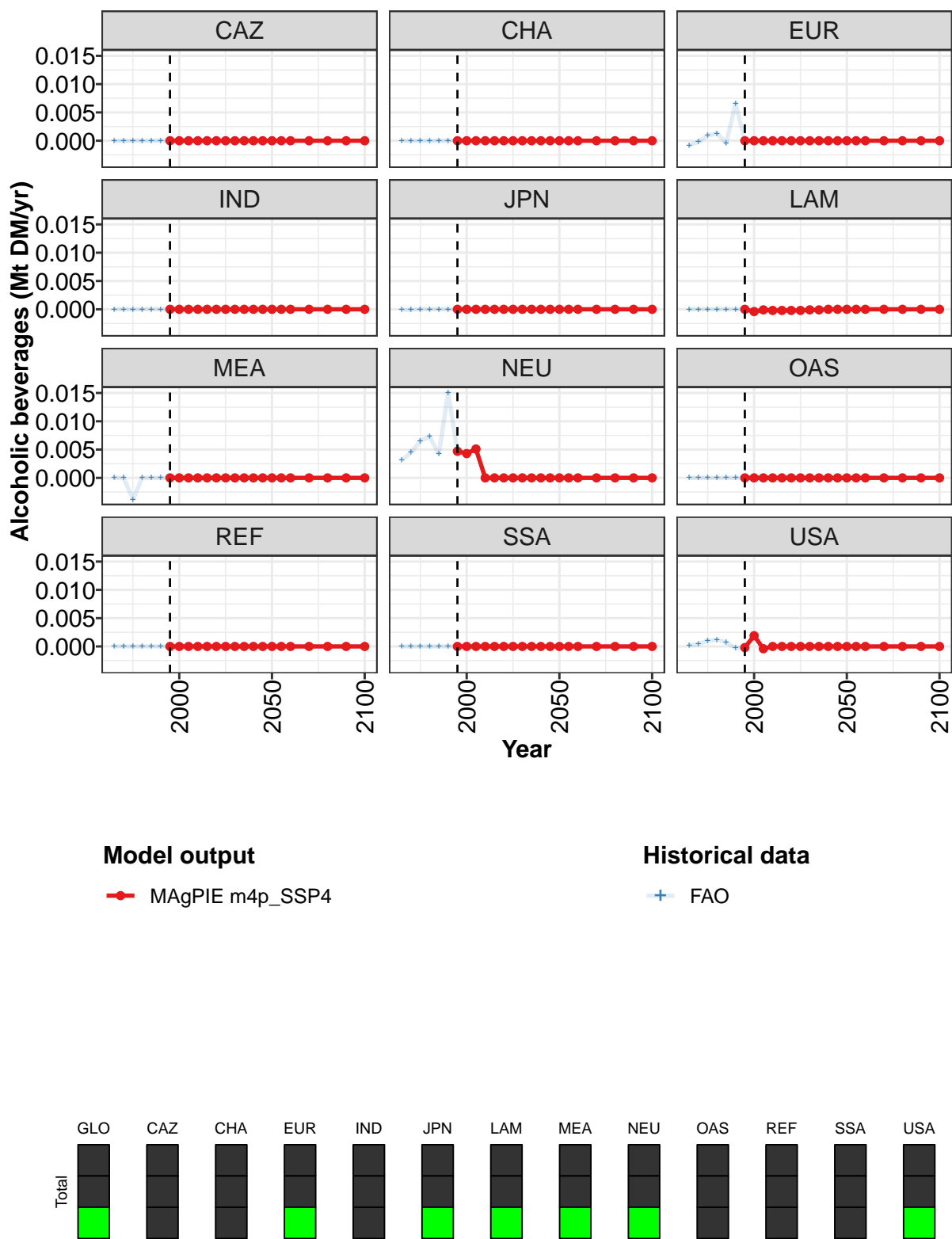


Figure 72: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00450	0.00580	0.00460	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	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	0.00000	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	-0.00040	-0.00010	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	-0.00010	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	0.00470	0.00430	0.00510	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	-0.00020	0.00190	-0.00040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Table 215: MAgPIE m4p.SSP4 — Demand—Domestic Balanceflow—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

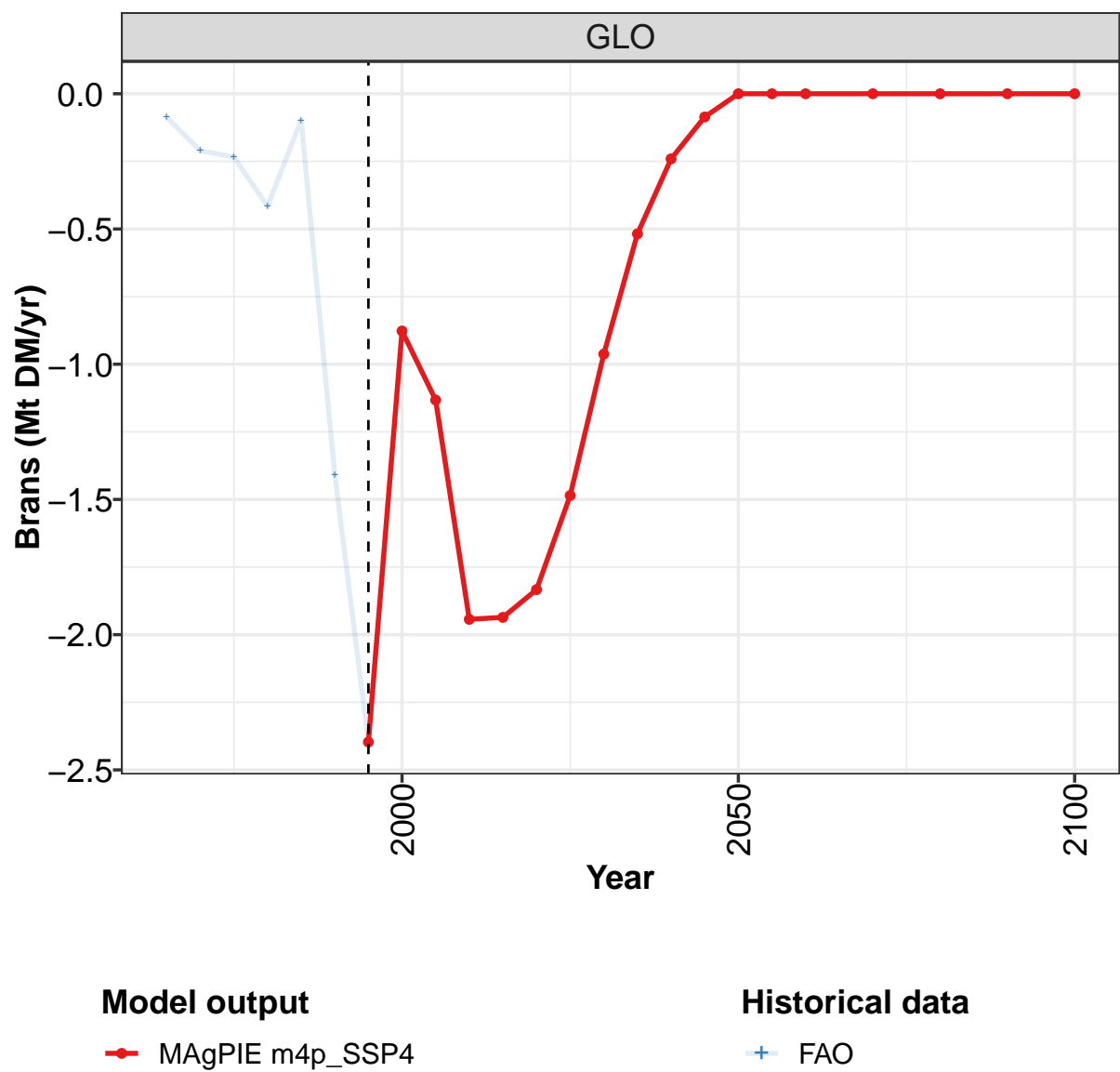
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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.SSP4 — 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



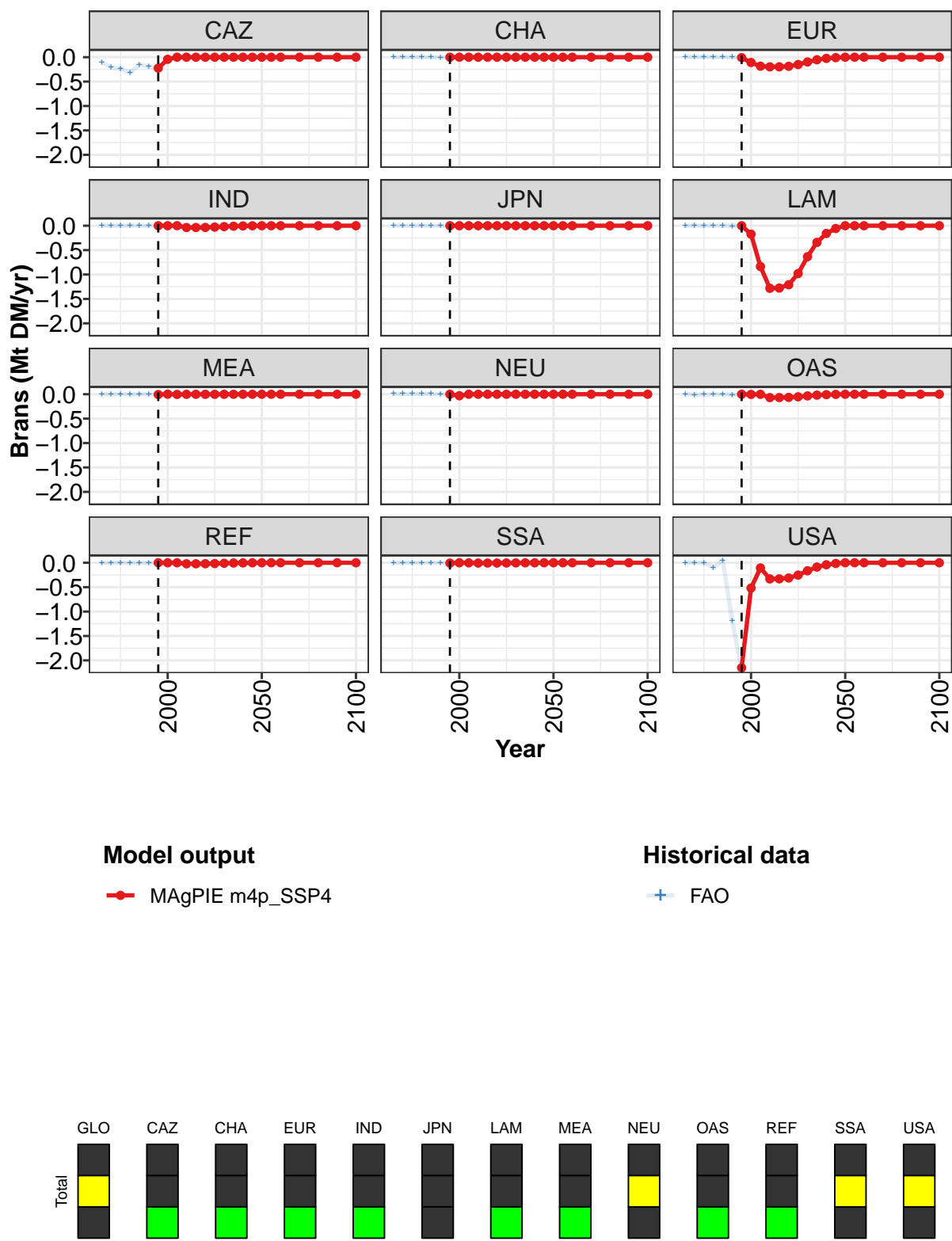


Figure 73: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Brans (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-2.39680	-0.87720	-1.13240	-1.94330	-1.93590	-1.83330	-1.48540	-0.96250	-0.51800	-0.24070	-0.03000
CAZ	-0.22410	-0.04330	0.00000	-0.00030	-0.00030	-0.00030	-0.00030	-0.00020	-0.00010	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	-0.00900	-0.10850	-0.18400	-0.19730	-0.19650	-0.18610	-0.15080	-0.09770	-0.05260	-0.02440	-0.00000
IND	0.00010	0.00010	0.00100	-0.03710	-0.03700	-0.03500	-0.02840	-0.01840	-0.00990	-0.00460	-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	-0.00040	-0.17390	-0.83620	-1.28170	-1.27690	-1.20920	-0.97960	-0.63480	-0.34160	-0.15870	-0.03000
MEA	-0.00580	0.00130	-0.00360	-0.00140	-0.00140	-0.00140	-0.00110	-0.00070	-0.00040	-0.00020	-0.00000
NEU	0.00000	-0.03080	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OAS	0.00000	-0.00380	-0.00120	-0.06850	-0.06820	-0.06460	-0.05240	-0.03390	-0.01830	-0.00850	-0.00000
REF	0.00000	0.00000	-0.00020	-0.02060	-0.02050	-0.01940	-0.01580	-0.01020	-0.00550	-0.00260	-0.00000
SSA	-0.00690	0.00000	-0.00180	-0.00570	-0.00560	-0.00530	-0.00430	-0.00280	-0.00150	-0.00070	-0.00000
USA	-2.15070	-0.51830	-0.10640	-0.33070	-0.32950	-0.31200	-0.25270	-0.16380	-0.08810	-0.04100	-0.00000

Table 218: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Brans (Mt DM/yr)  
[PART 1/2]

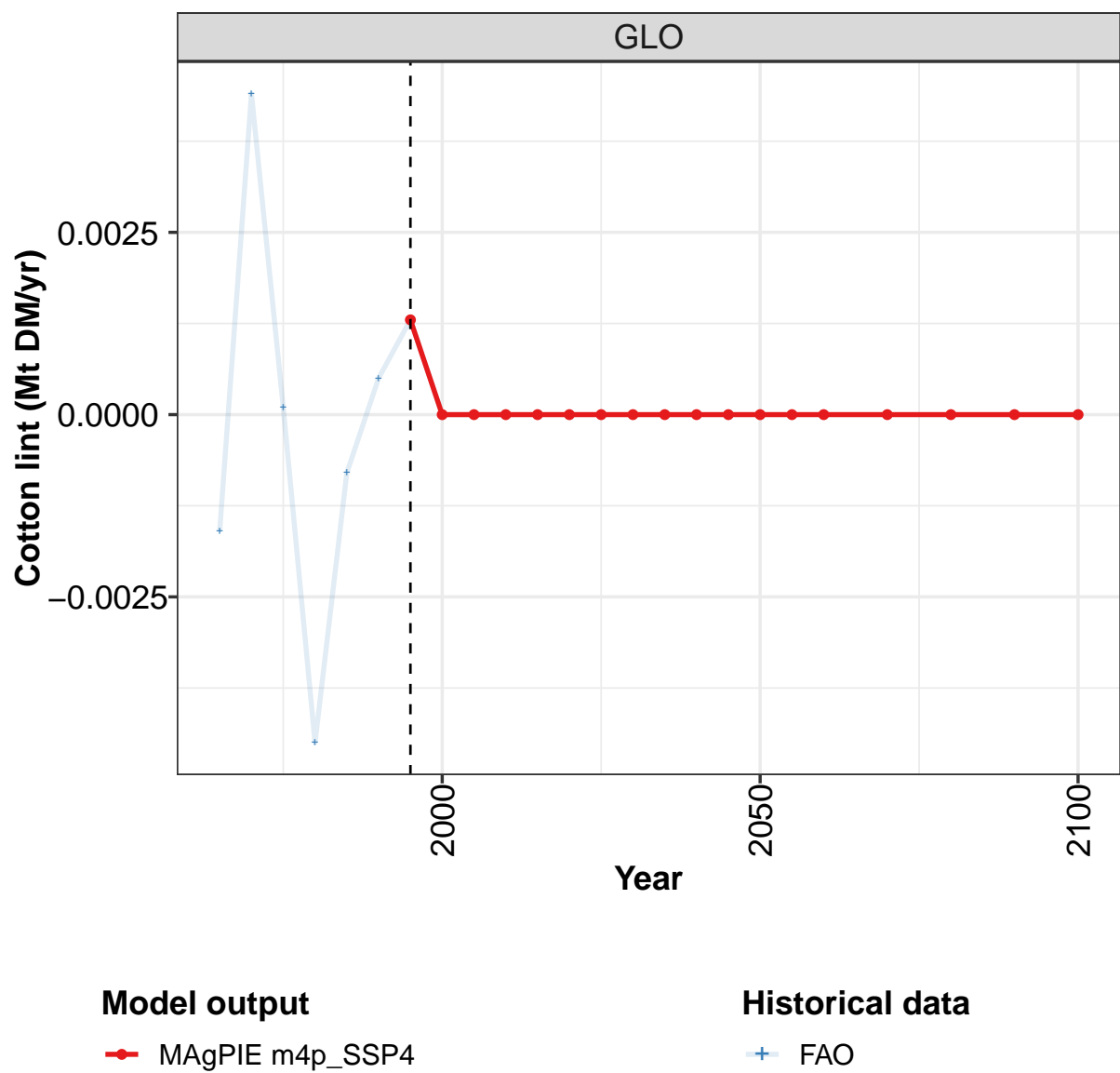
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



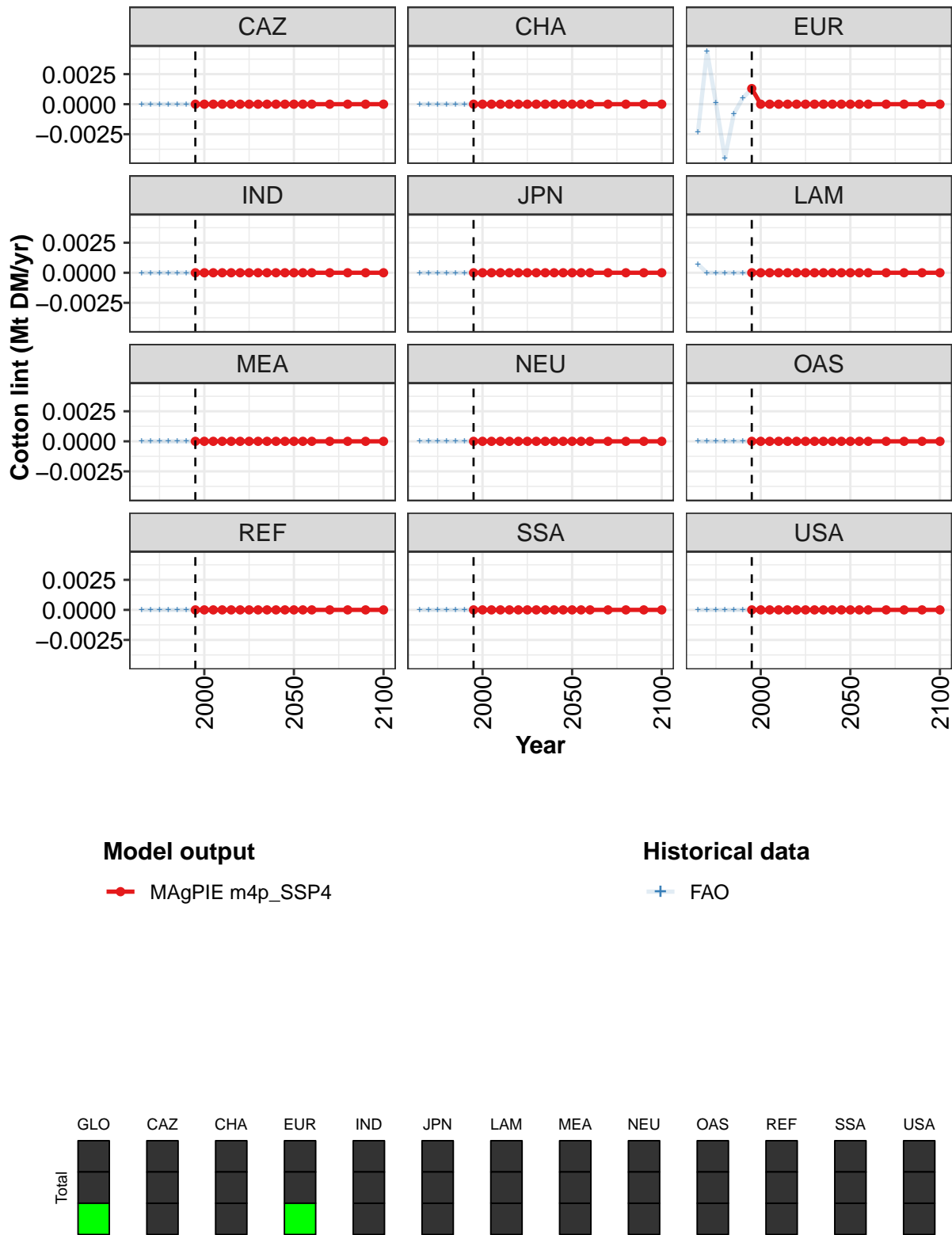


Figure 74: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Cotton lint (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

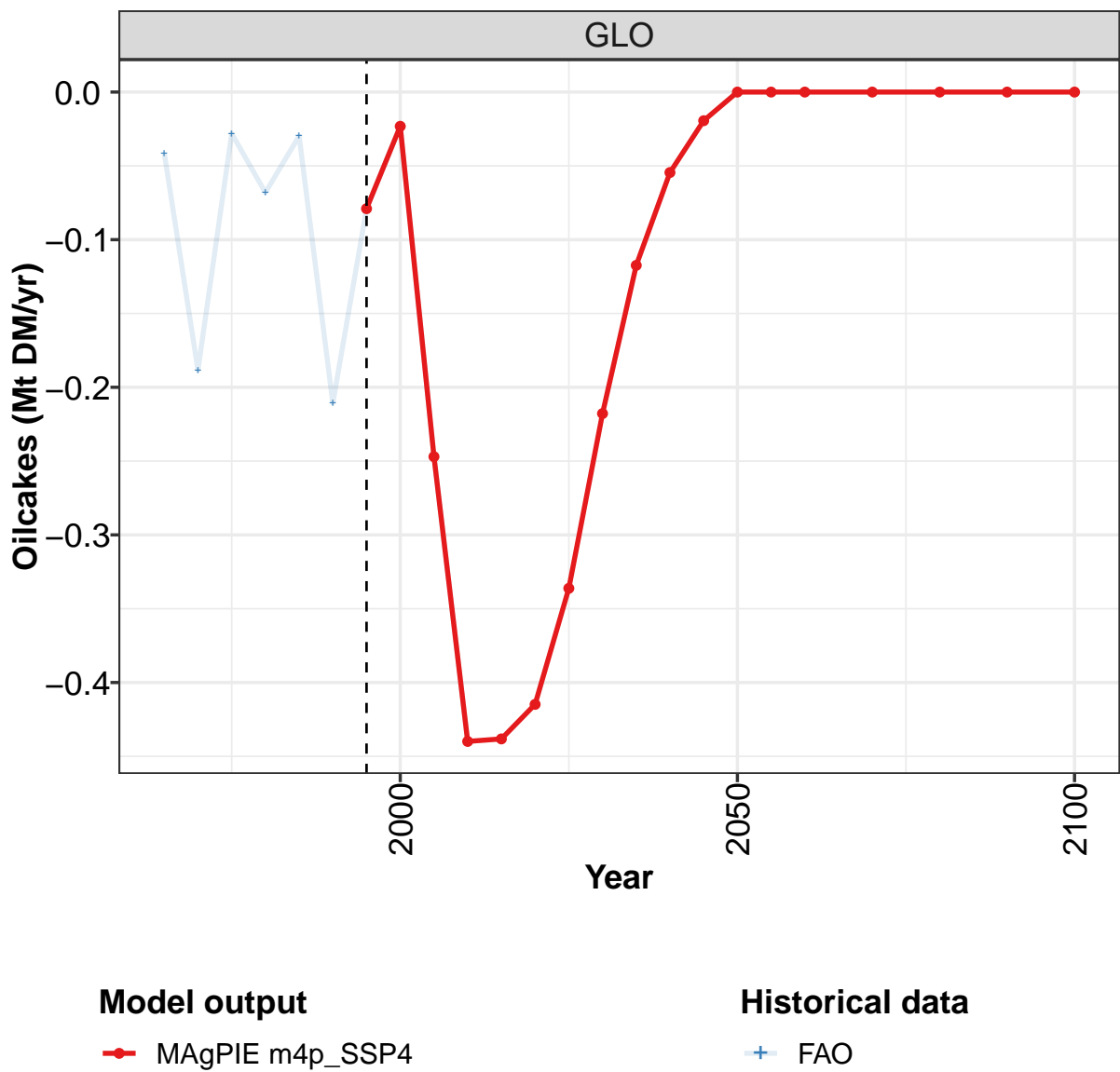
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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\_SSP4 — 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



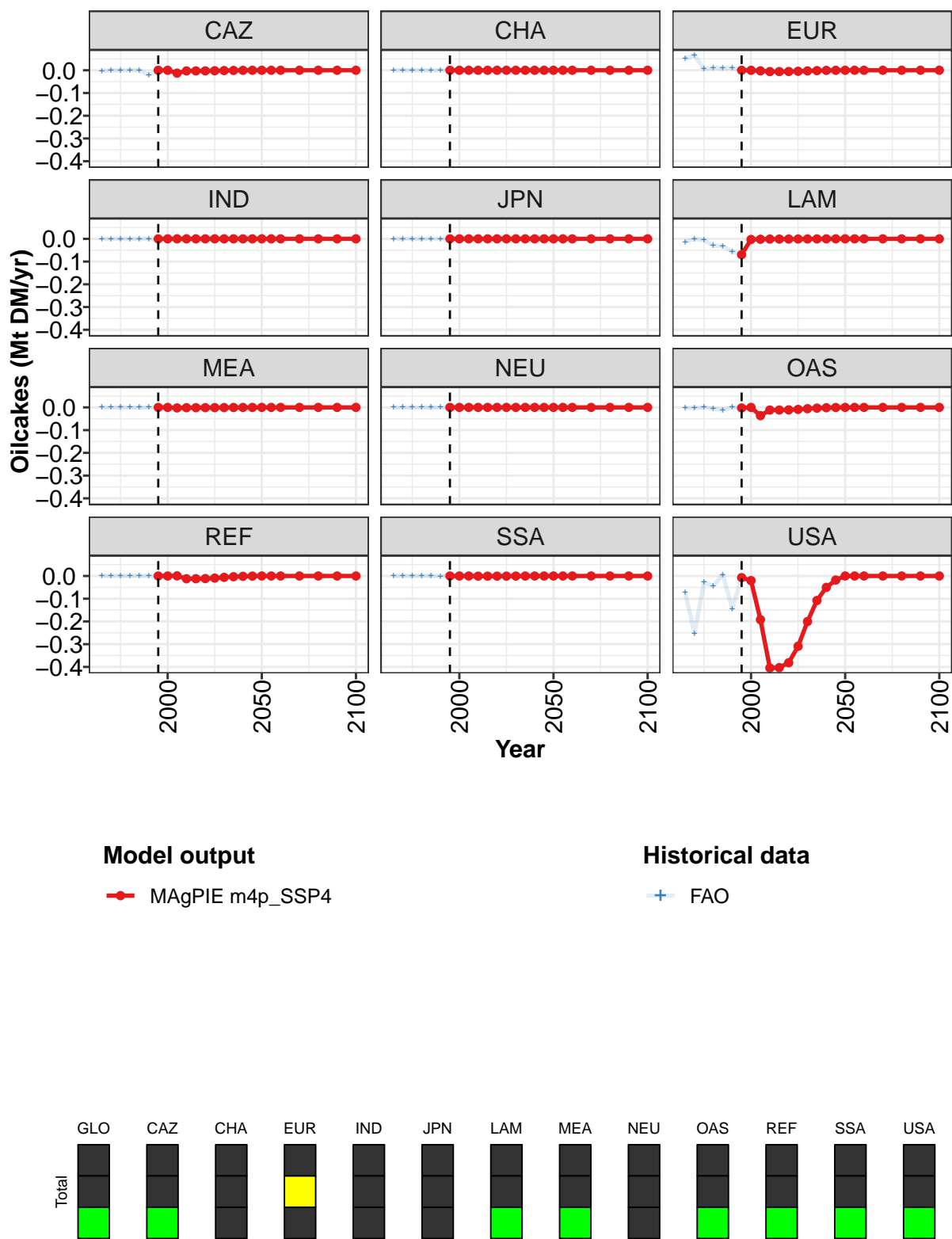


Figure 75: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Oilcakes (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

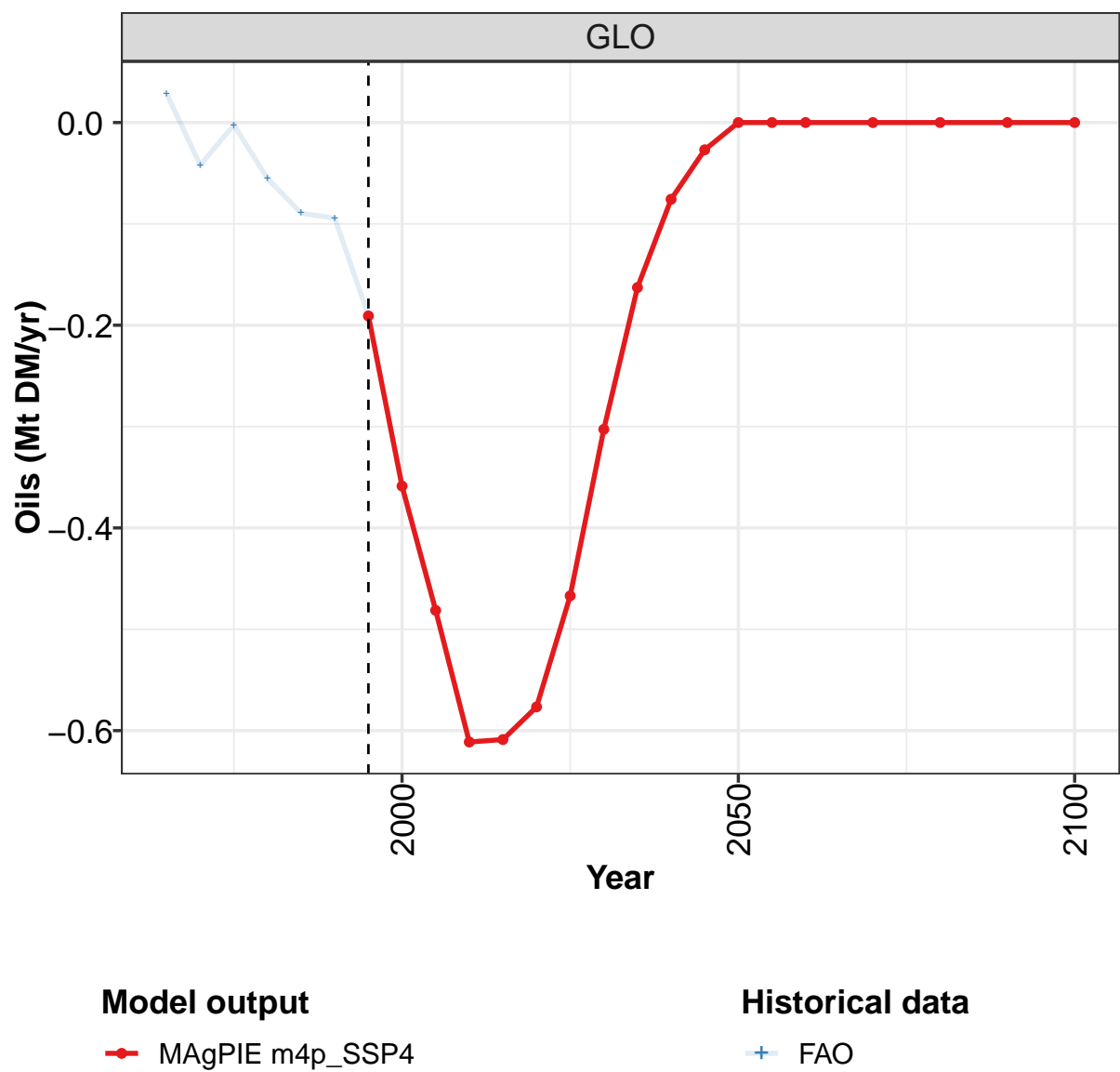
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CAZ	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
CHA	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
EUR	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
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\_SSP4 — 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





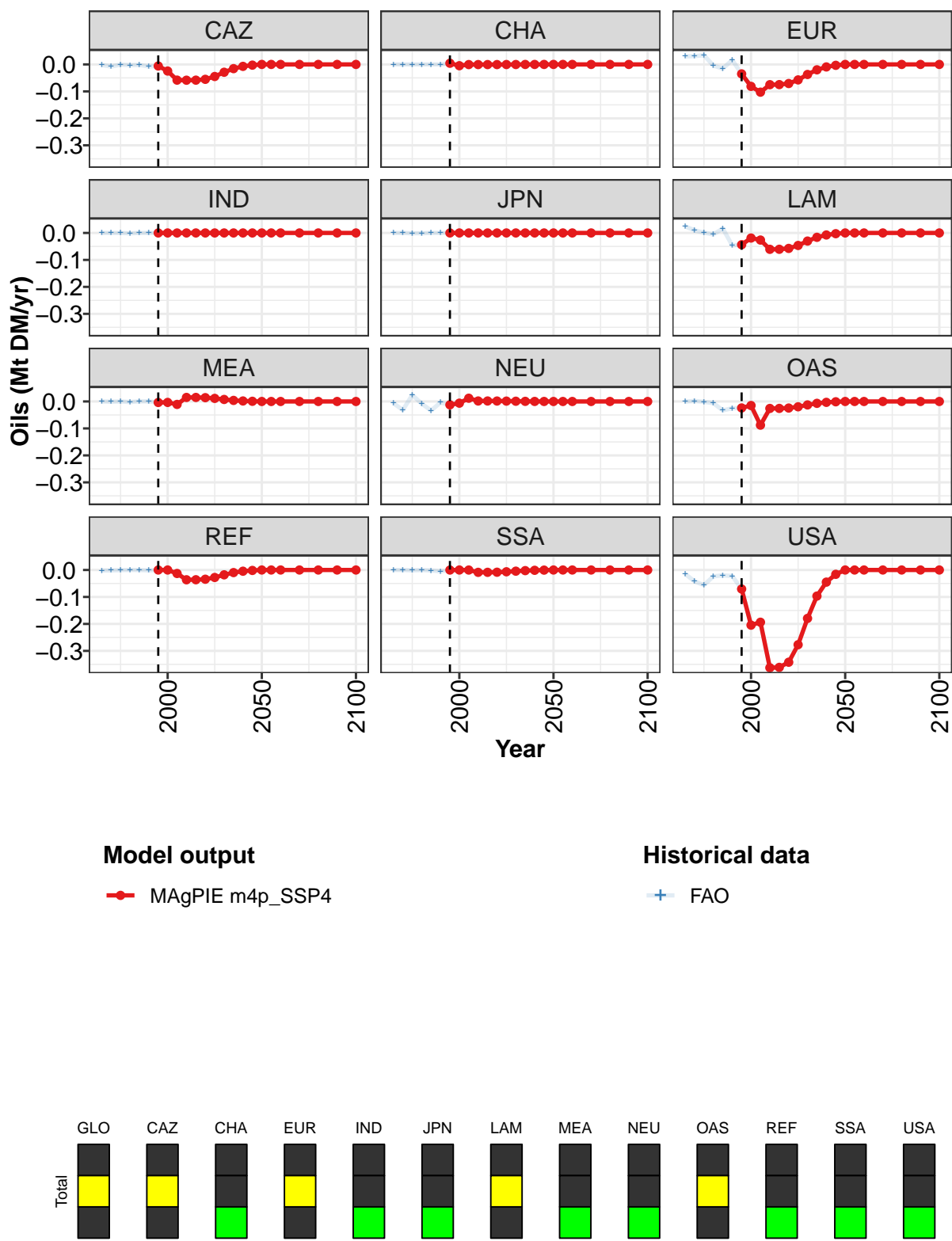


Figure 76: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Oils (Mt DM/yr)

	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\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Oils (Mt DM/yr)  
[PART 1/2]

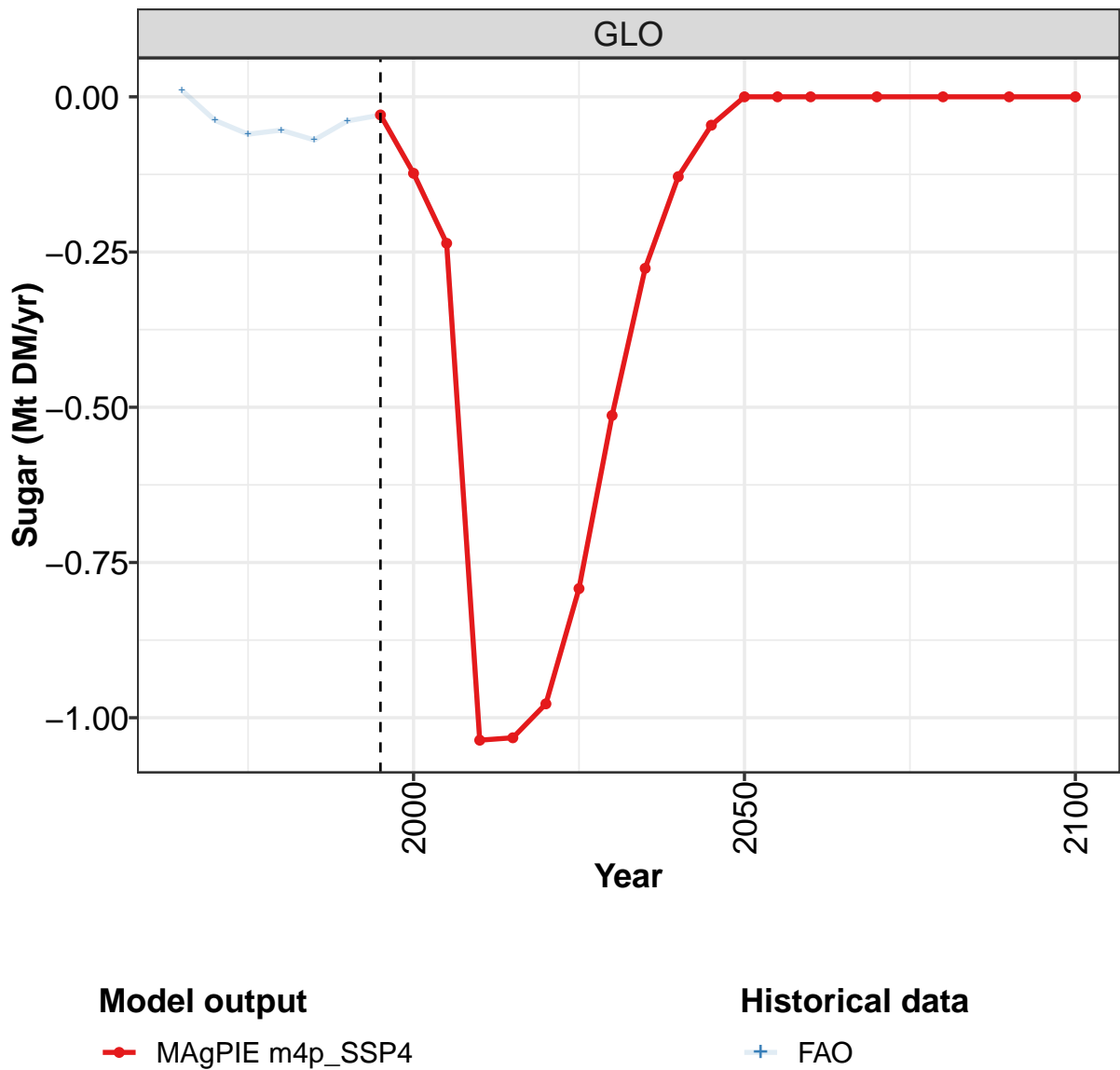
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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\_SSP4 — 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



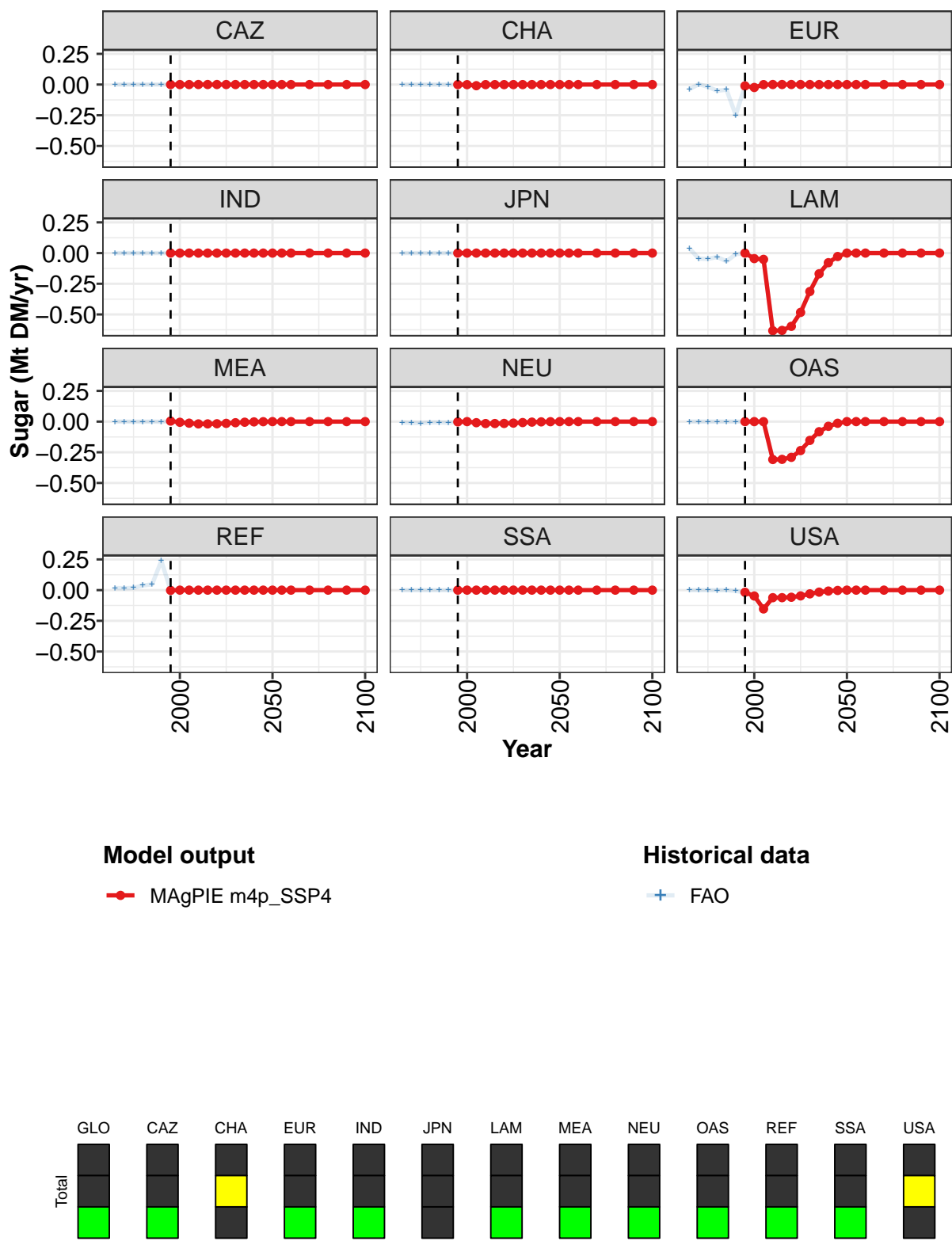


Figure 77: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-0.02920	-0.12320	-0.23590	-1.03620	-1.03230	-0.97760	-0.79200	-0.51320	-0.27620	-0.12850	-0.02850
CAZ	-0.00010	0.00000	0.00000	0.00030	0.00030	0.00030	0.00020	0.00010	0.00010	0.00000	0.00000
CHA	-0.00020	-0.00080	-0.00910	-0.00040	-0.00040	-0.00040	-0.00030	-0.00020	-0.00010	-0.00010	0.00000
EUR	-0.01100	-0.02380	-0.00040	0.00040	0.00040	0.00040	0.00030	0.00020	0.00010	0.00000	0.00000
IND	0.00000	-0.00030	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	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	-0.00020	-0.04490	-0.05130	-0.63220	-0.62990	-0.59650	-0.48320	-0.31310	-0.16850	-0.07830	-0.02850
MEA	0.00430	-0.00550	-0.01270	-0.01860	-0.01850	-0.01760	-0.01420	-0.00920	-0.00500	-0.00230	-0.00000
NEU	-0.00240	0.00000	-0.00880	-0.01580	-0.01570	-0.01490	-0.01210	-0.00780	-0.00420	-0.00200	-0.00000
OAS	0.00000	0.00000	-0.00050	-0.30870	-0.30750	-0.29120	-0.23590	-0.15290	-0.08230	-0.03820	-0.01850
REF	-0.00200	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SSA	0.00000	-0.00010	0.00000	0.00030	0.00030	0.00030	0.00020	0.00020	0.00010	0.00000	0.00000
USA	-0.01760	-0.04780	-0.15310	-0.06140	-0.06120	-0.05790	-0.04690	-0.03040	-0.01640	-0.00760	-0.00000

Table 230: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Sugar (Mt DM/yr)  
[PART 1/2]

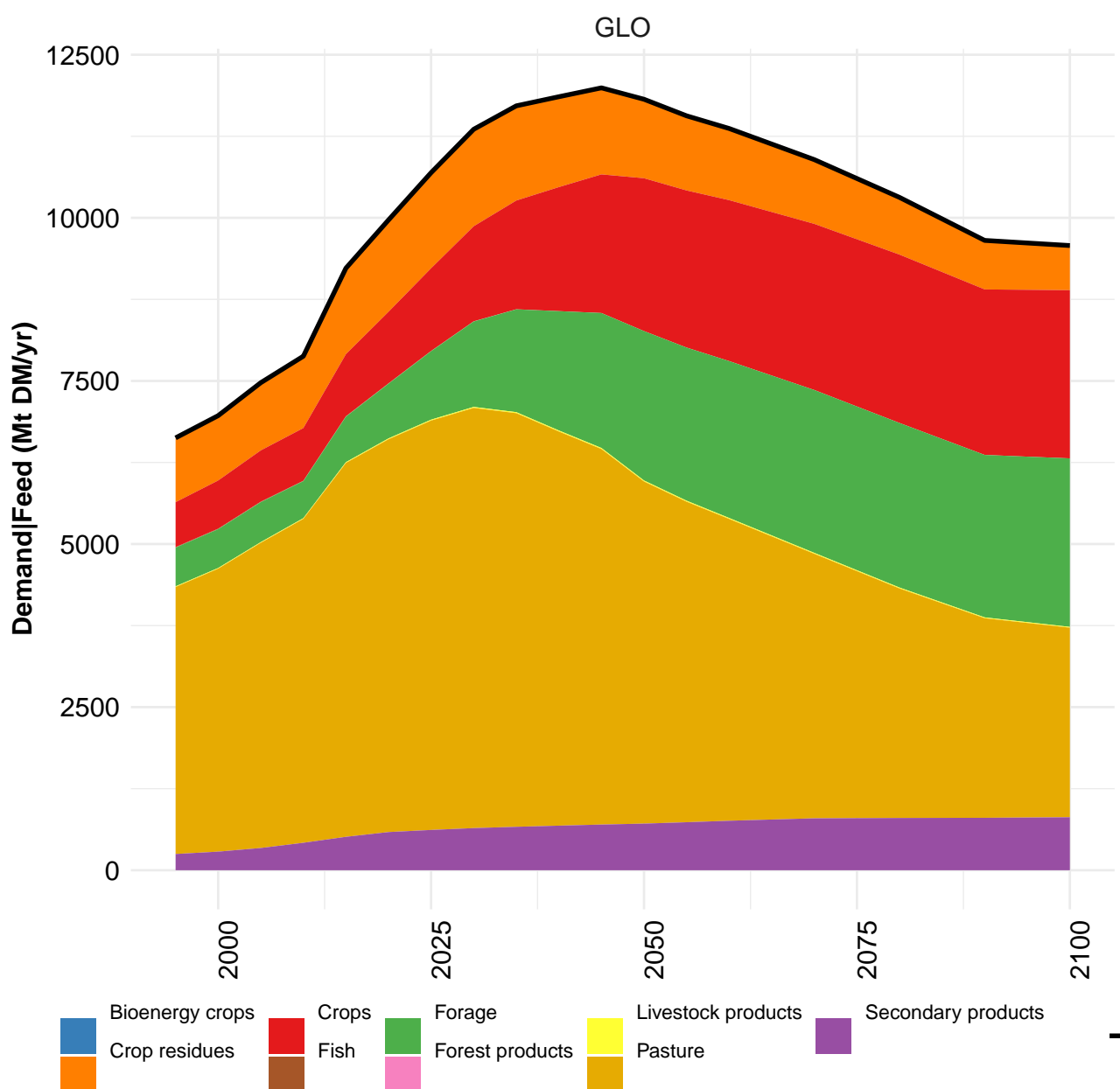
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	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

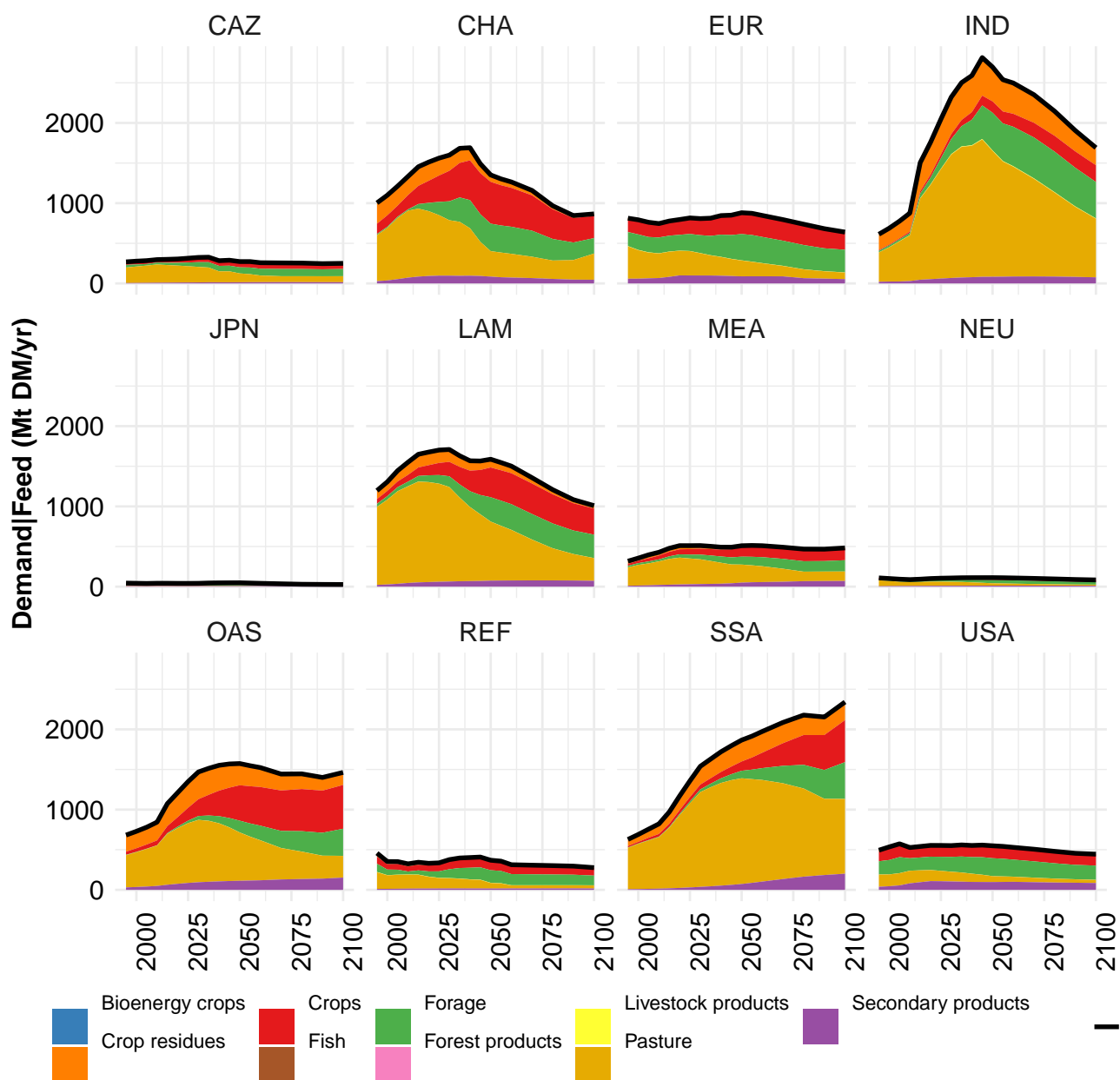
Table 231: MAgPIE m4p\_SSP4 — Demand—Domestic Balanceflow—Secondary products—Sugar (Mt DM/yr)  
[PART 2/2]

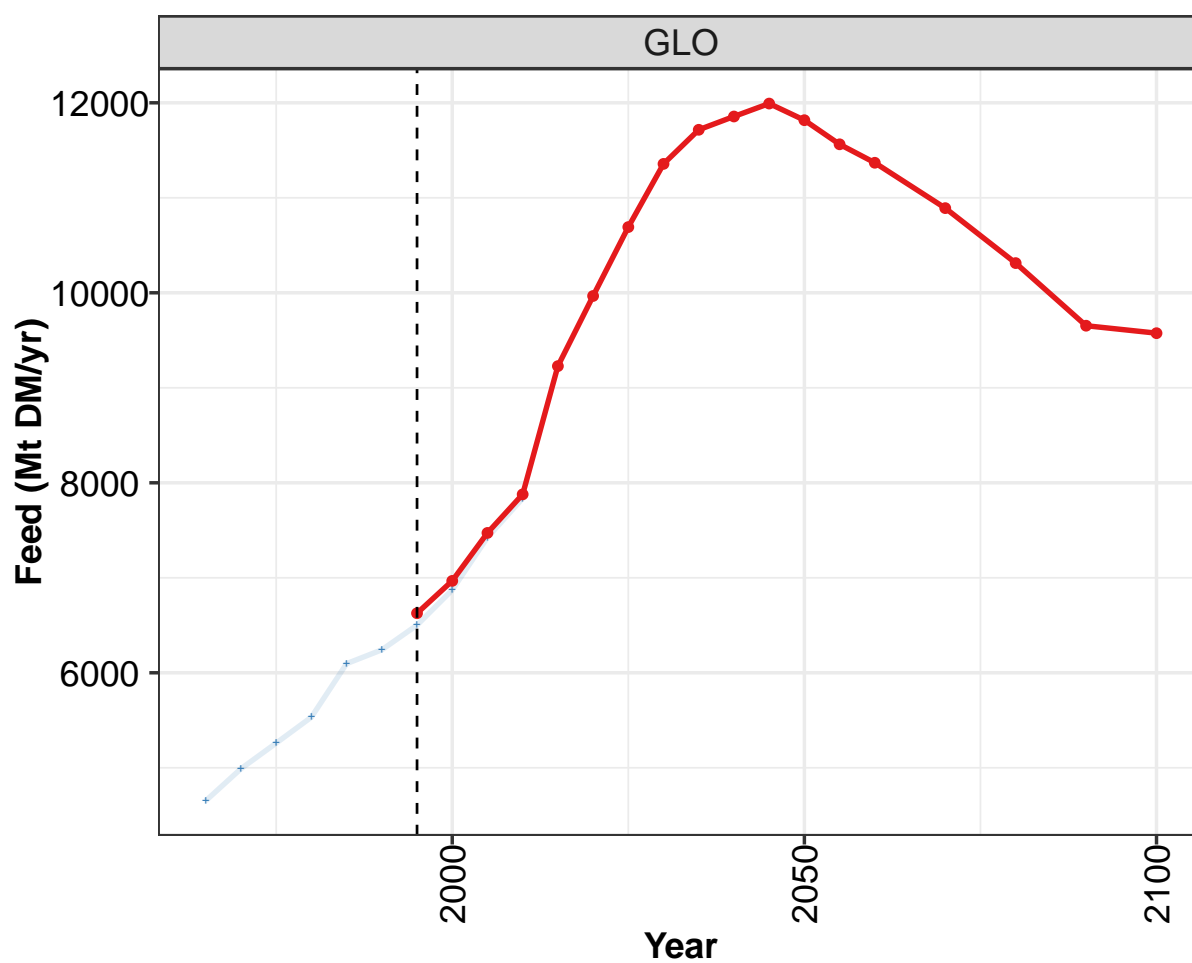
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.010	-0.038	-0.060	-0.054	-0.070	-0.039	-0.029	-0.123	-0.236	-1.036
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.001	-0.009	-0.000
EUR	-0.038	0.003	-0.018	-0.051	-0.042	-0.249	-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





**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

—+— FAO



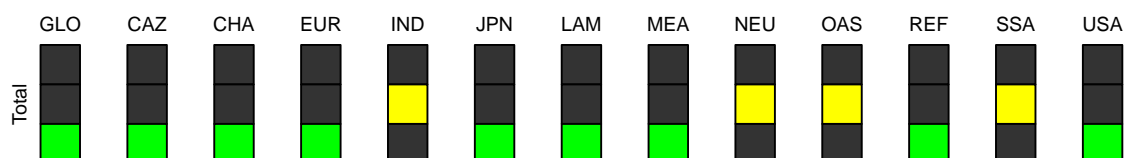
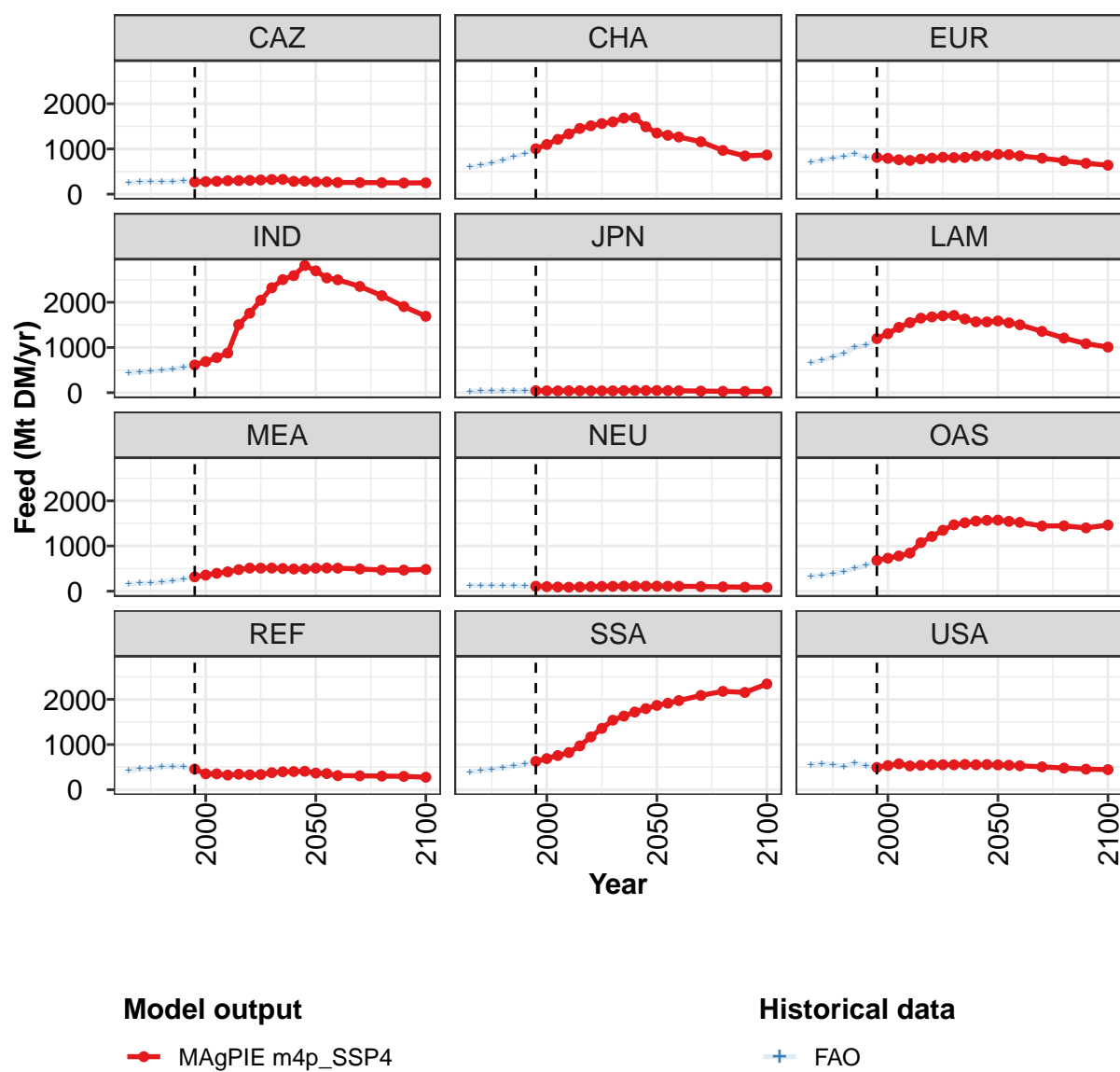


Figure 78: MAgPIE m4p\_SSP4 — Demand—Feed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6627	6968	7473	7879	9228	9967	10692	11357	11716	11856	11992
CAZ	269	277	284	297	300	305	314	324	327	283	289
CHA	1004	1099	1213	1333	1454	1512	1561	1599	1684	1691	1491
EUR	813	793	762	746	778	796	816	808	813	845	851
IND	613	688	776	876	1505	1759	2047	2321	2502	2590	2815
JPN	44	42	40	42	42	41	40	41	45	47	48
LAM	1197	1305	1445	1550	1649	1677	1702	1709	1631	1568	1566
MEA	317	355	396	428	478	511	511	512	503	492	491
NEU	109	101	93	88	93	101	105	108	111	112	112
OAS	682	729	781	844	1075	1212	1348	1469	1514	1552	1569
REF	457	353	352	324	344	331	336	377	397	403	409
SSA	628	690	756	822	970	1169	1358	1539	1630	1720	1796
USA	494	535	573	527	541	554	553	551	560	553	558

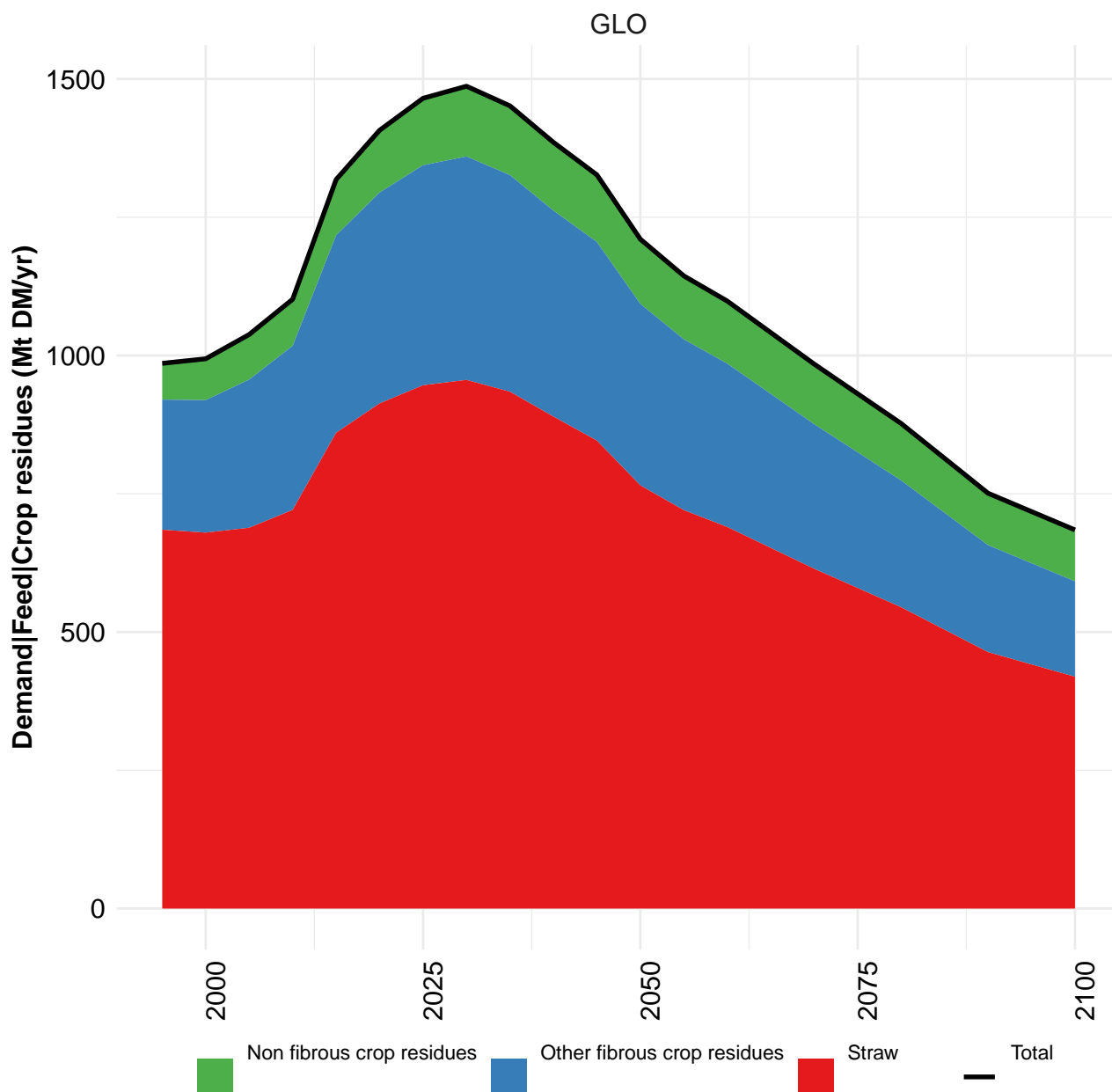
Table 233: MAgPIE m4p-SSP4 — Demand—Feed (Mt DM/yr) [PART 1/2]

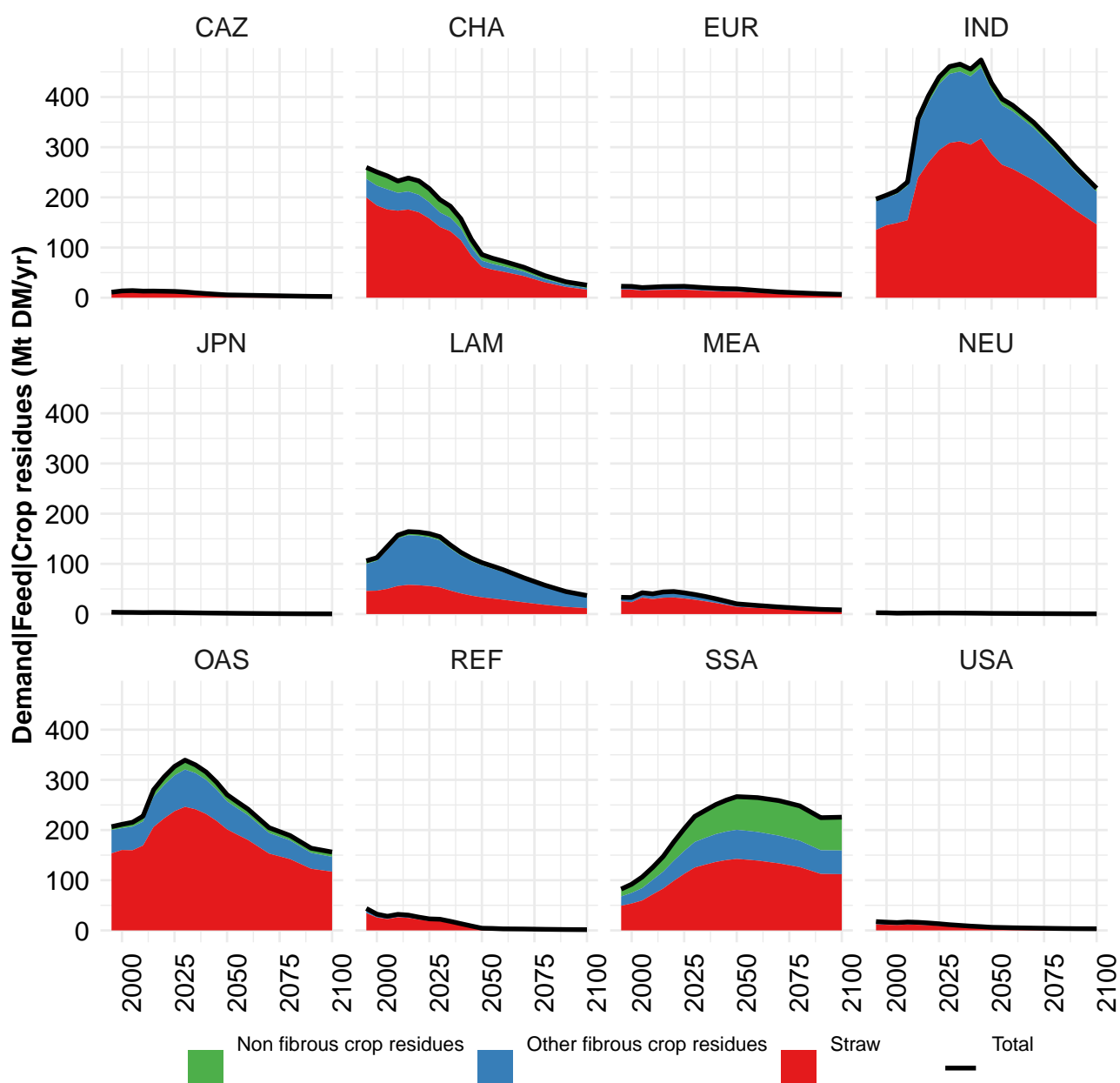
	2050	2055	2060	2070	2080	2090	2100
GLO	11817	11563	11369	10892	10313	9654	9575
CAZ	272	272	258	256	254	247	250
CHA	1352	1303	1264	1159	968	846	866
EUR	881	874	847	795	738	682	640
IND	2696	2539	2498	2352	2146	1906	1691
JPN	48	45	42	35	30	28	27
LAM	1587	1546	1502	1357	1208	1084	1009
MEA	510	513	510	491	468	467	483
NEU	112	111	108	103	96	89	84
OAS	1574	1547	1523	1443	1446	1401	1463
REF	369	358	313	307	302	296	277
SSA	1866	1915	1974	2086	2178	2154	2341
USA	549	542	530	506	480	456	445

Table 234: MAgPIE m4p-SSP4 — Demand—Feed (Mt DM/yr) [PART 2/2]

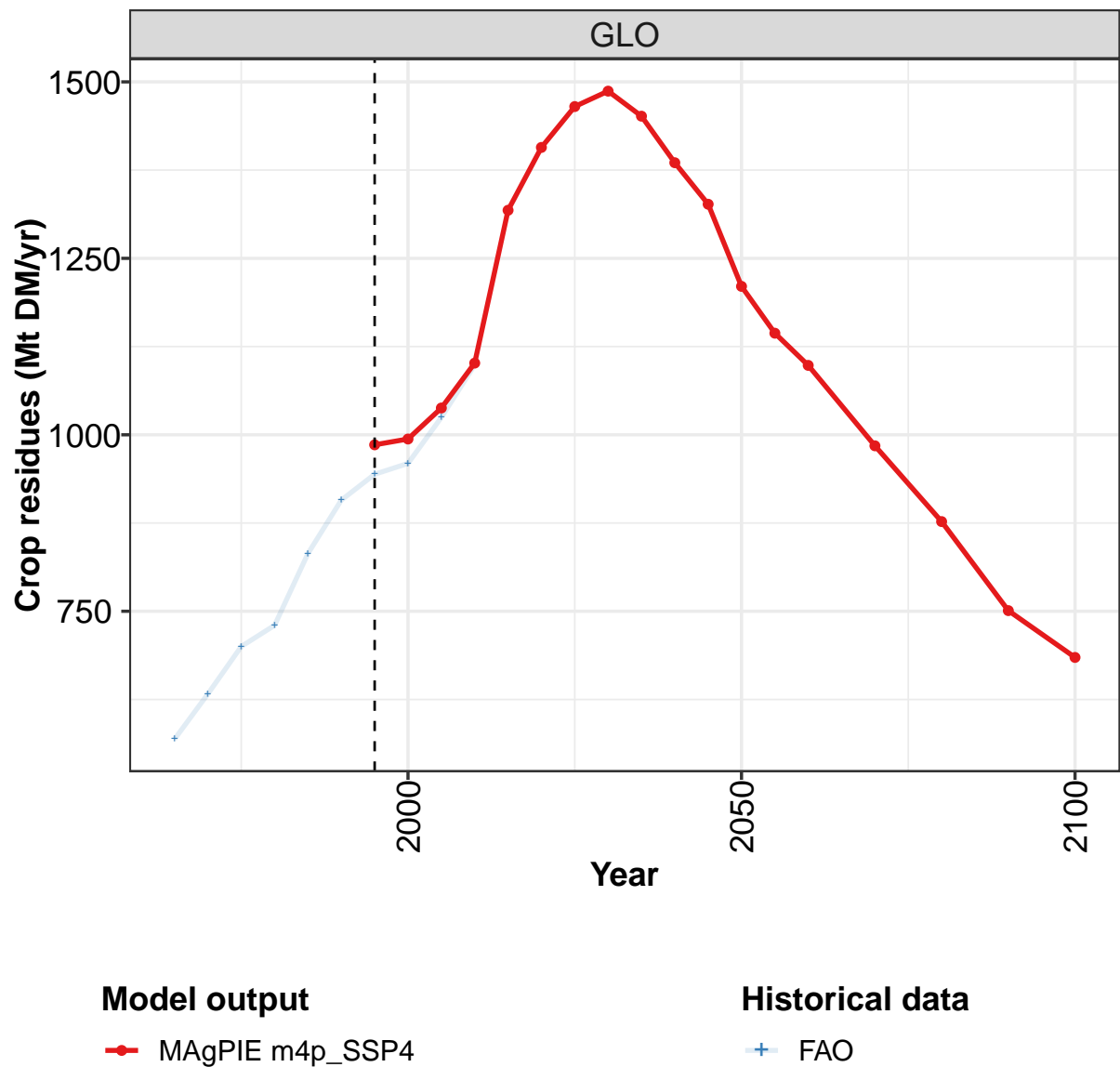
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4653	4990	5260	5533	6096	6242	6502	6872	7424	7836
CAZ	254	270	279	273	283	285	292	304	313	312
CHA	600	638	690	751	824	899	997	1101	1210	1332
EUR	706	757	800	831	902	821	779	756	733	723
IND	432	457	473	493	526	567	615	691	802	903
JPN	28	34	37	44	47	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)





6.1 Crop residues



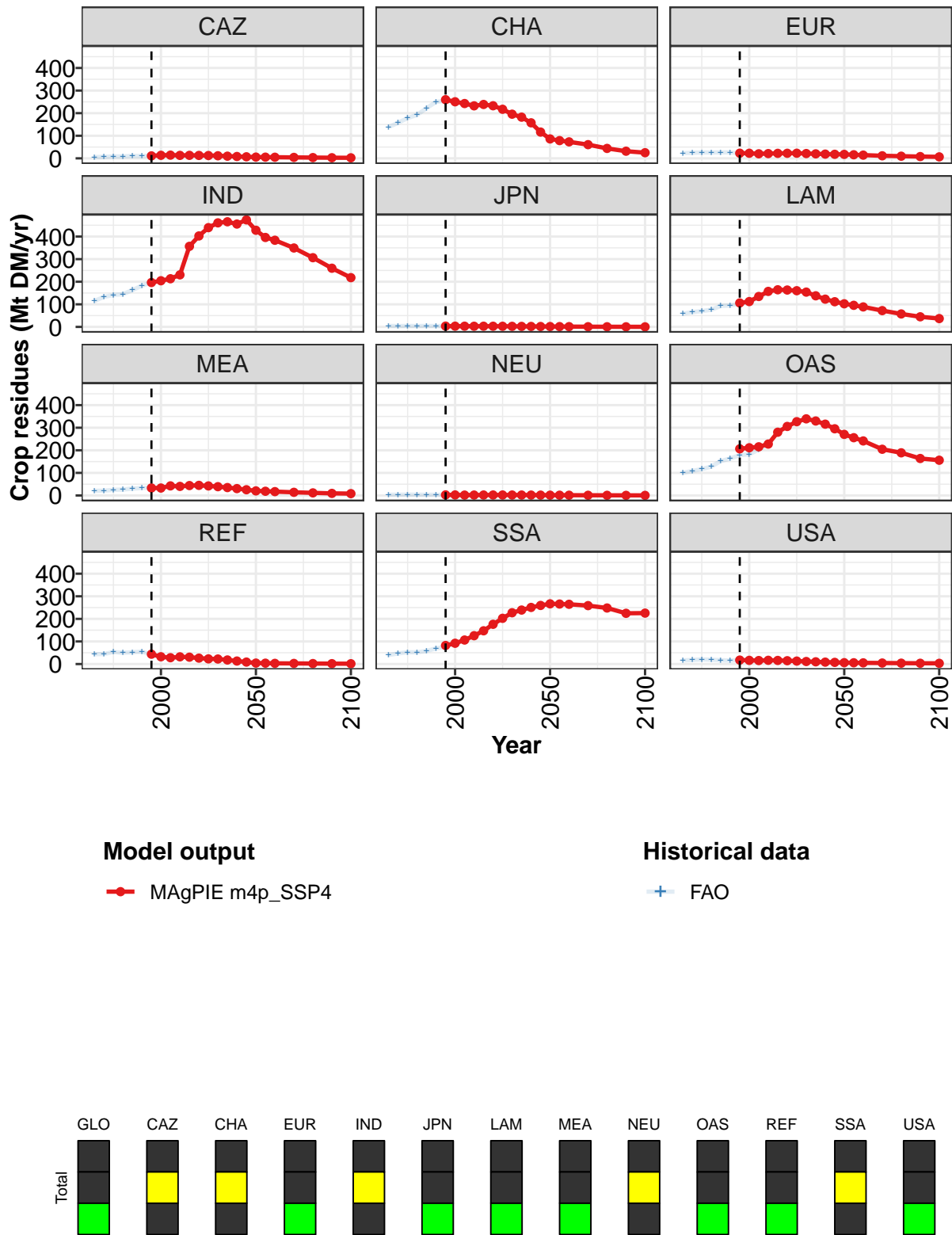


Figure 79: MAgPIE m4p\_SSP4 — Demand—Feed—Crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	986	994	1038	1102	1318	1407	1465	1487	1451	1385	1327
CAZ	11	13	14	13	13	13	13	11	10	8	7
CHA	260	251	243	233	239	233	217	196	182	157	116
EUR	23	23	20	21	22	22	23	21	20	19	18
IND	197	204	213	231	357	403	439	461	466	455	474
JPN	4	3	3	3	3	3	3	3	2	2	2
LAM	106	112	135	157	164	163	160	154	138	123	112
MEA	33	33	42	40	44	45	42	39	35	30	26
NEU	3	2	2	2	2	2	2	2	2	2	2
OAS	207	211	215	228	280	306	327	339	330	316	295
REF	44	32	28	32	30	26	23	22	18	13	9
SSA	82	92	106	126	147	176	203	227	239	251	260
USA	18	16	16	17	16	15	13	11	10	9	7

Table 236: MAgPIE m4p\_SSP4 — Demand—Feed—Crop residues (Mt DM/yr) [PART 1/2]

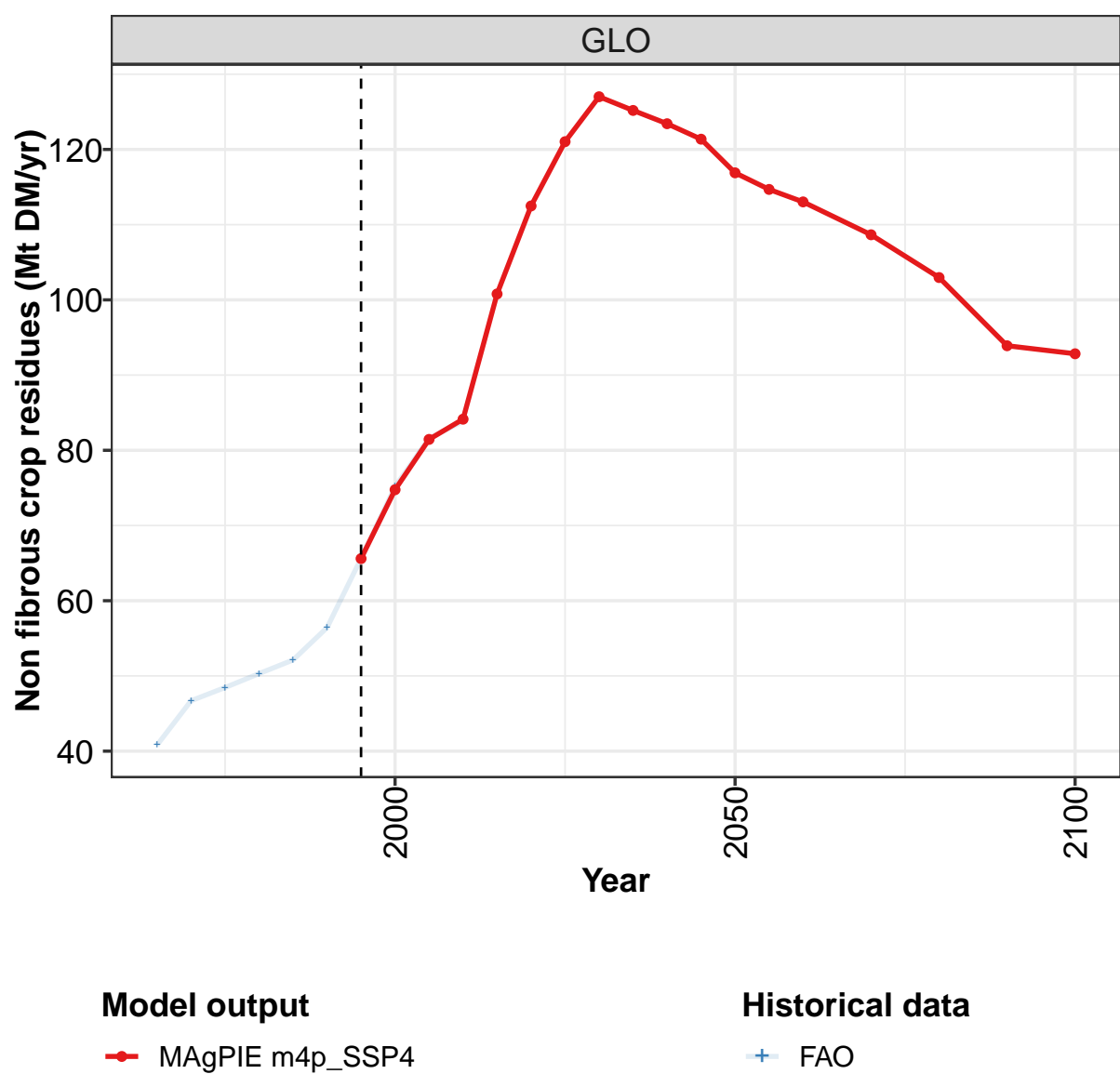
	2050	2055	2060	2070	2080	2090	2100
GLO	1210	1144	1098	984	877	751	685
CAZ	6	5	5	4	3	3	2
CHA	86	79	73	61	44	32	25
EUR	18	16	14	11	10	8	7
IND	428	396	384	349	306	260	218
JPN	2	1	1	1	1	0	0
LAM	102	96	89	72	57	45	37
MEA	20	19	17	14	12	9	8
NEU	1	1	1	1	1	1	0
OAS	270	256	242	205	189	164	156
REF	4	4	3	3	2	2	1
SSA	267	266	265	259	248	225	226
USA	6	6	5	5	4	3	3

Table 237: MAgPIE m4p\_SSP4 — 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





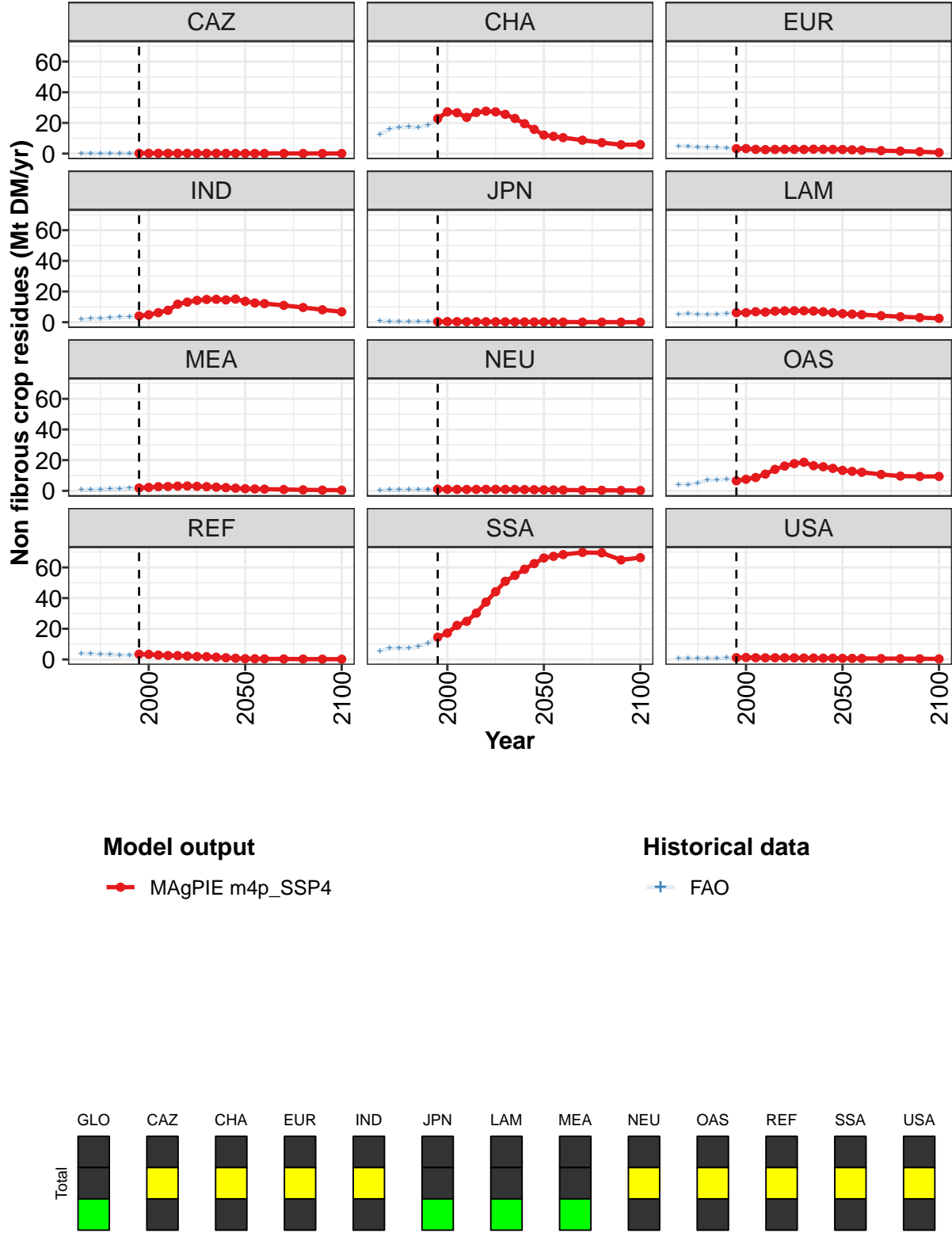


Figure 80: MAgPIE m4p\_SSP4 — Demand—Feed—Crop residues—Non fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	66	75	81	84	101	112	121	127	125	123	121
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	23	27	27	24	27	28	27	26	23	20	16
EUR	3	3	3	3	3	3	3	3	3	3	3
IND	4	5	6	8	12	13	14	15	15	15	15
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	6	7	7	7	7	7	7	7	7	6
MEA	2	2	3	3	3	3	3	3	2	2	2
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	7	8	9	11	14	16	18	19	16	16	15
REF	3	3	3	3	2	2	2	2	1	1	1
SSA	15	17	22	25	30	37	44	51	55	59	63
USA	1	1	1	1	1	1	1	1	1	1	1

Table 239: MAgPIE m4p\_SSP4 — Demand—Feed—Crop residues—Non fibrous crop residues (Mt DM/yr)  
[PART 1/2]

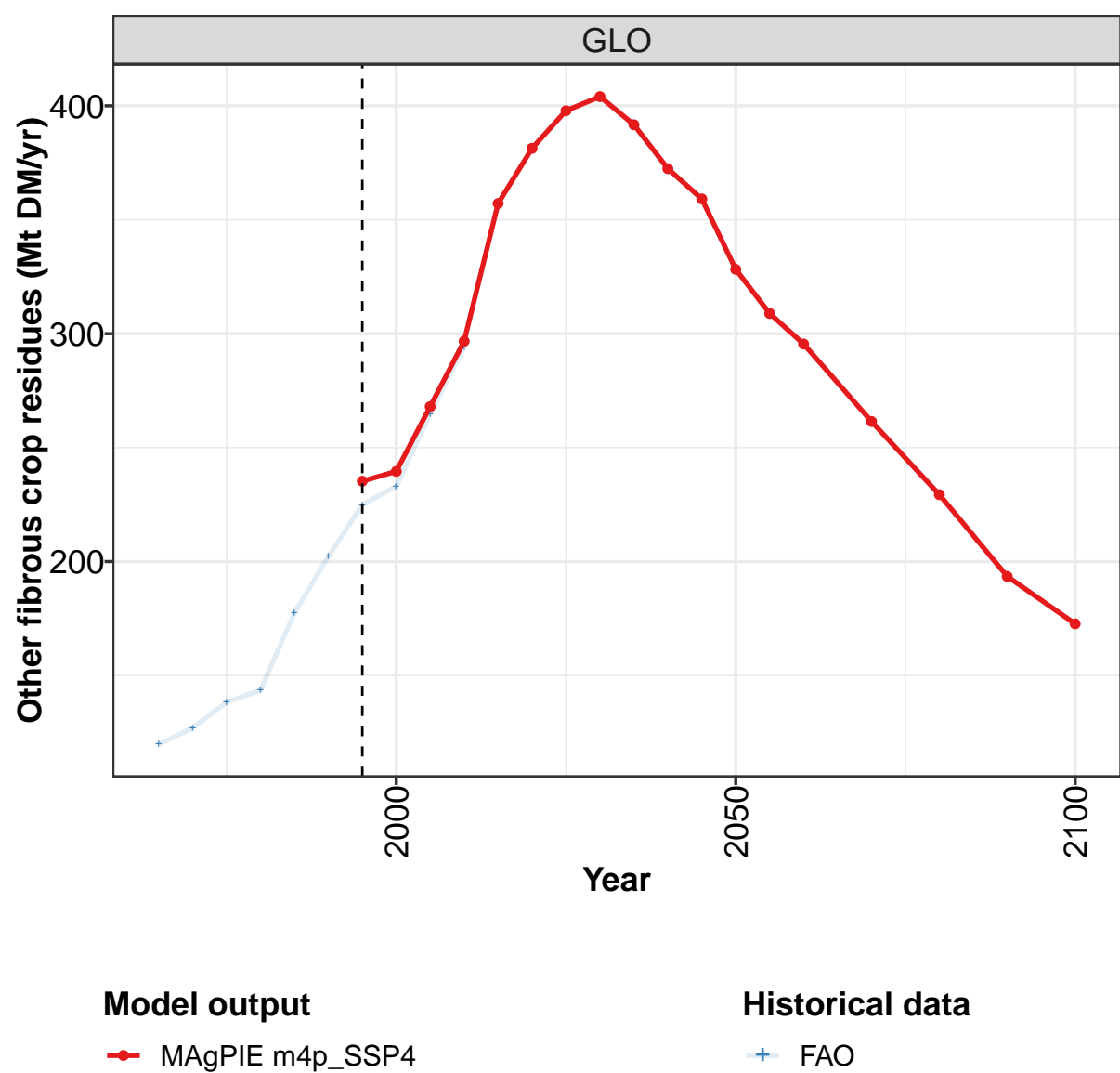
	2050	2055	2060	2070	2080	2090	2100
GLO	117	115	113	109	103	94	93
CAZ	0	0	0	0	0	0	0
CHA	12	11	10	9	7	6	6
EUR	3	2	2	2	2	1	1
IND	14	13	12	11	10	8	7
JPN	0	0	0	0	0	0	0
LAM	6	5	5	4	4	3	2
MEA	1	1	1	1	1	0	0
NEU	1	1	1	0	0	0	0
OAS	13	13	12	11	10	9	9
REF	0	0	0	0	0	0	0
SSA	66	67	68	70	70	65	66
USA	1	1	1	1	1	0	0

Table 240: MAgPIE m4p\_SSP4 — 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



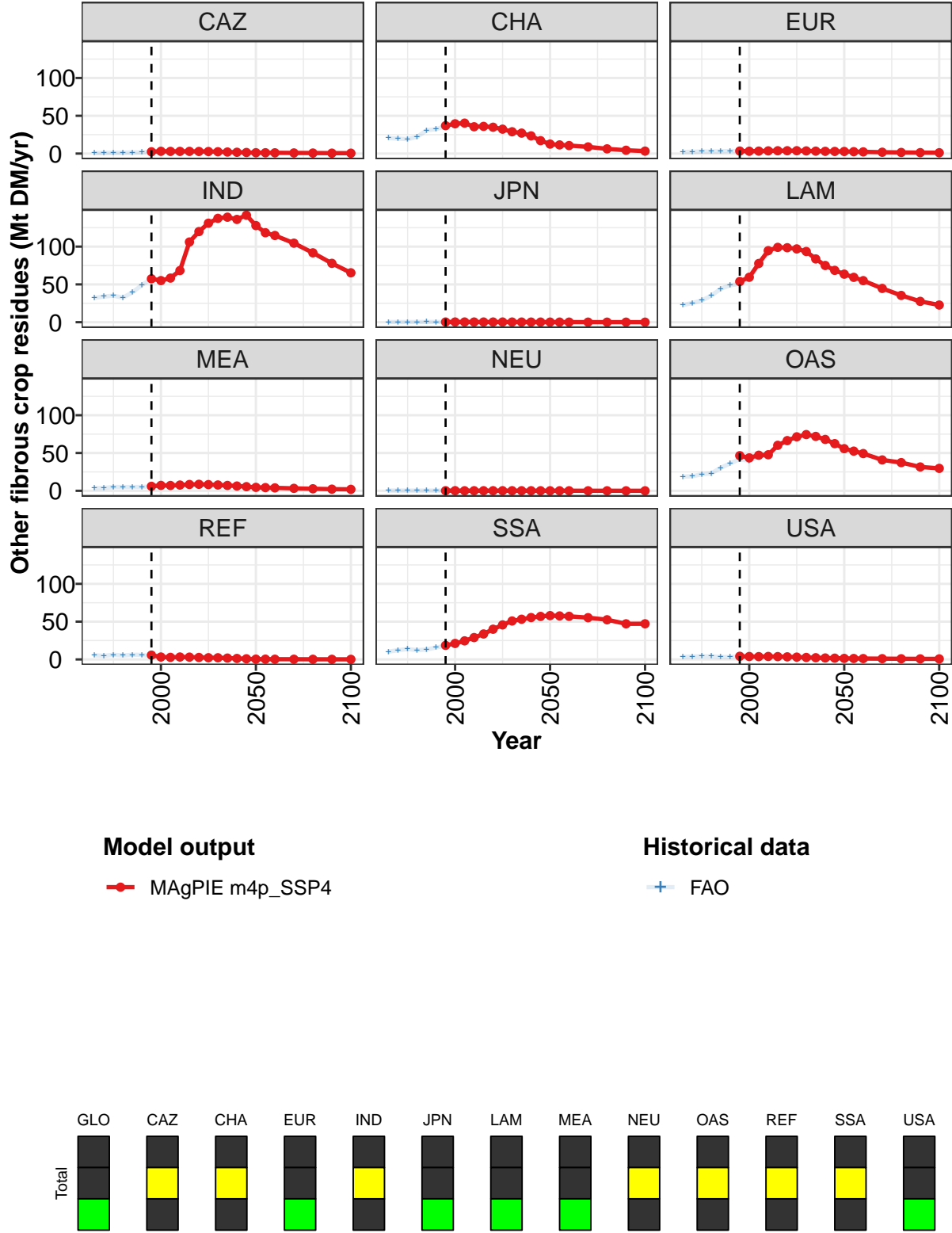


Figure 81: MAgPIE m4p\_SSP4 — Demand—Feed—Crop residues—Other fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	235	240	268	297	357	381	398	404	392	372	359
CAZ	2	3	3	3	3	3	3	2	2	2	1
CHA	37	39	40	35	36	35	32	29	27	23	17
EUR	3	3	3	4	4	4	4	4	3	3	3
IND	57	55	58	68	106	120	131	137	139	136	142
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	54	59	78	95	99	99	97	94	84	75	69
MEA	6	7	7	8	8	9	8	8	7	6	6
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	47	44	47	48	60	66	71	74	72	68	62
REF	6	3	3	3	3	3	2	2	2	1	1
SSA	19	21	25	29	34	40	46	51	53	55	57
USA	4	4	4	4	4	3	3	3	2	2	2

Table 242: MAgPIE m4p\_SSP4 — Demand—Feed—Crop residues—Other fibrous crop residues (Mt DM/yr)  
[PART 1/2]

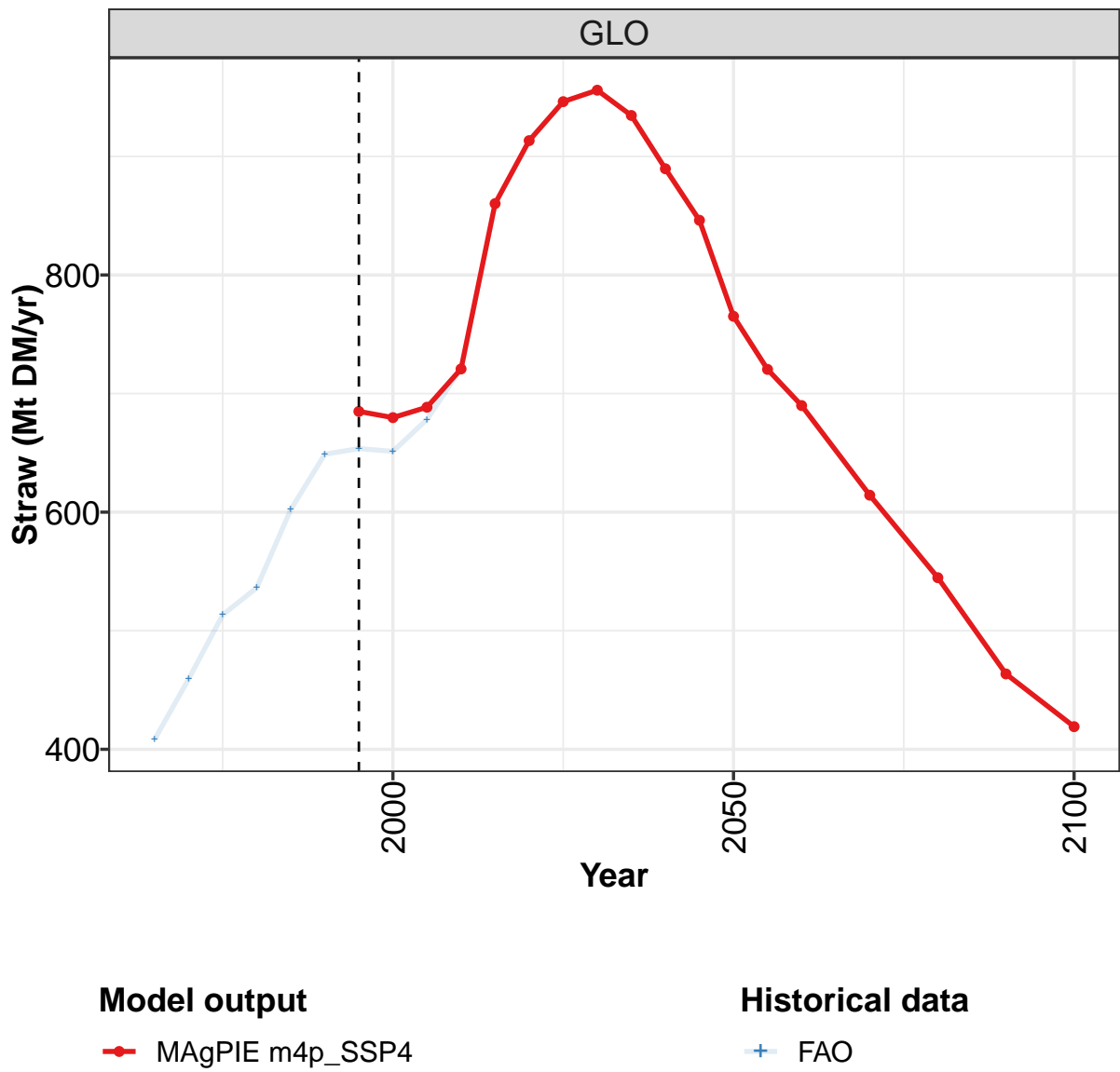
	2050	2055	2060	2070	2080	2090	2100
GLO	328	309	295	261	229	193	173
CAZ	1	1	1	1	1	1	1
CHA	13	11	11	9	6	4	3
EUR	3	3	2	2	1	1	1
IND	128	118	115	105	92	78	65
JPN	0	0	0	0	0	0	0
LAM	64	59	55	45	35	28	23
MEA	5	4	4	3	3	2	2
NEU	0	0	0	0	0	0	0
OAS	56	53	49	41	37	32	30
REF	0	0	0	0	0	0	0
SSA	58	58	57	55	53	47	47
USA	1	1	1	1	1	1	1

Table 243: MAgPIE m4p\_SSP4 — 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



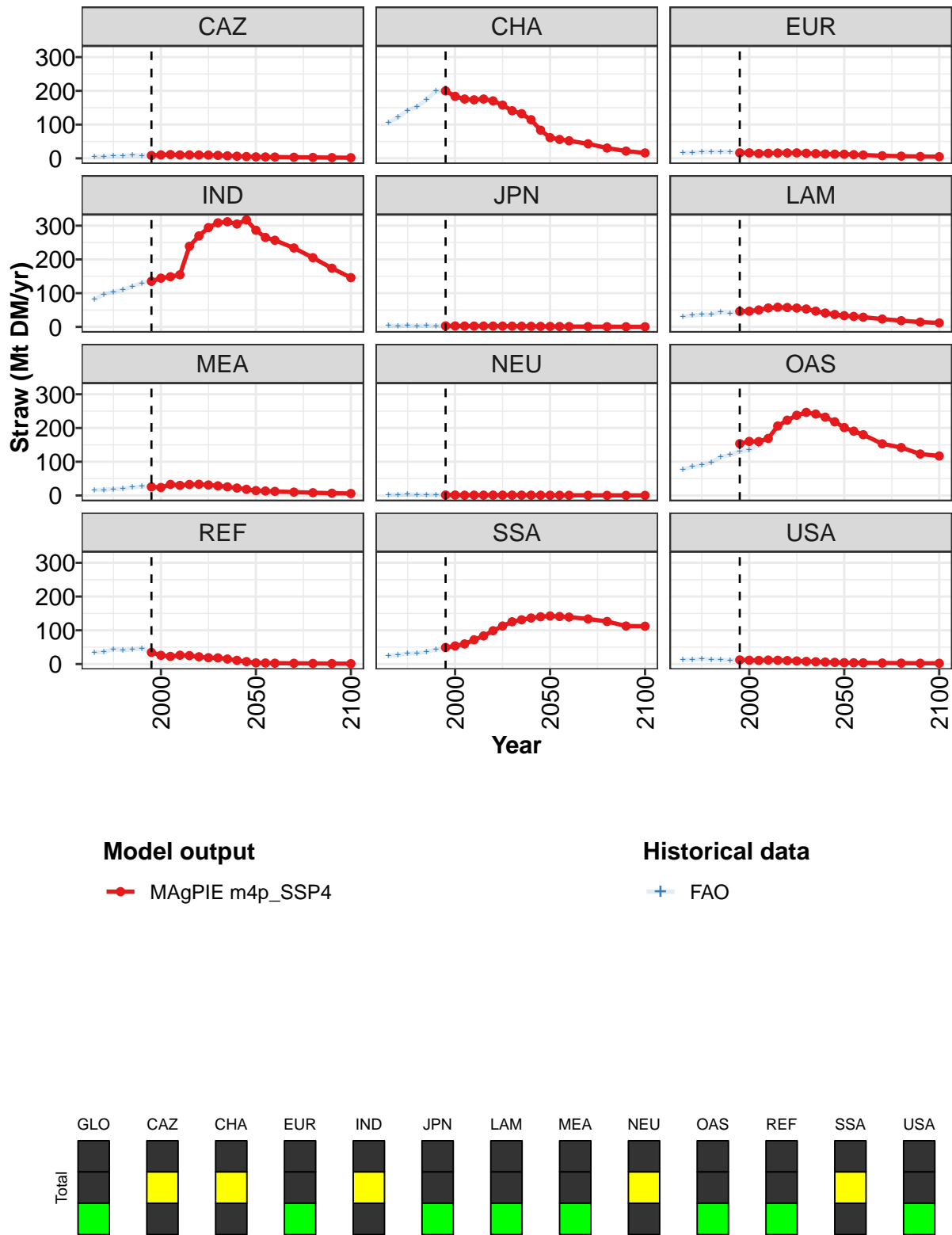


Figure 82: MAgPIE m4p\_SSP4 — Demand—Feed—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	685	680	688	721	860	913	946	956	935	890	846
CAZ	8	10	11	10	10	10	10	9	7	6	5
CHA	200	184	176	173	176	170	158	141	132	114	83
EUR	16	16	14	15	16	16	16	15	14	13	12
IND	135	144	149	154	239	270	294	308	312	305	317
JPN	3	3	3	2	3	3	2	2	2	2	2
LAM	46	47	50	56	58	57	56	53	47	41	37
MEA	26	24	33	30	33	33	31	29	26	22	18
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	154	160	160	169	206	223	238	246	241	232	218
REF	35	26	23	26	25	22	19	18	15	11	7
SSA	49	54	60	72	83	99	113	125	131	136	140
USA	12	11	11	12	11	10	9	8	7	6	5

Table 245: MAGPIE m4p\_SSP4 — Demand—Feed—Crop residues—Straw (Mt DM/yr) [PART 1/2]

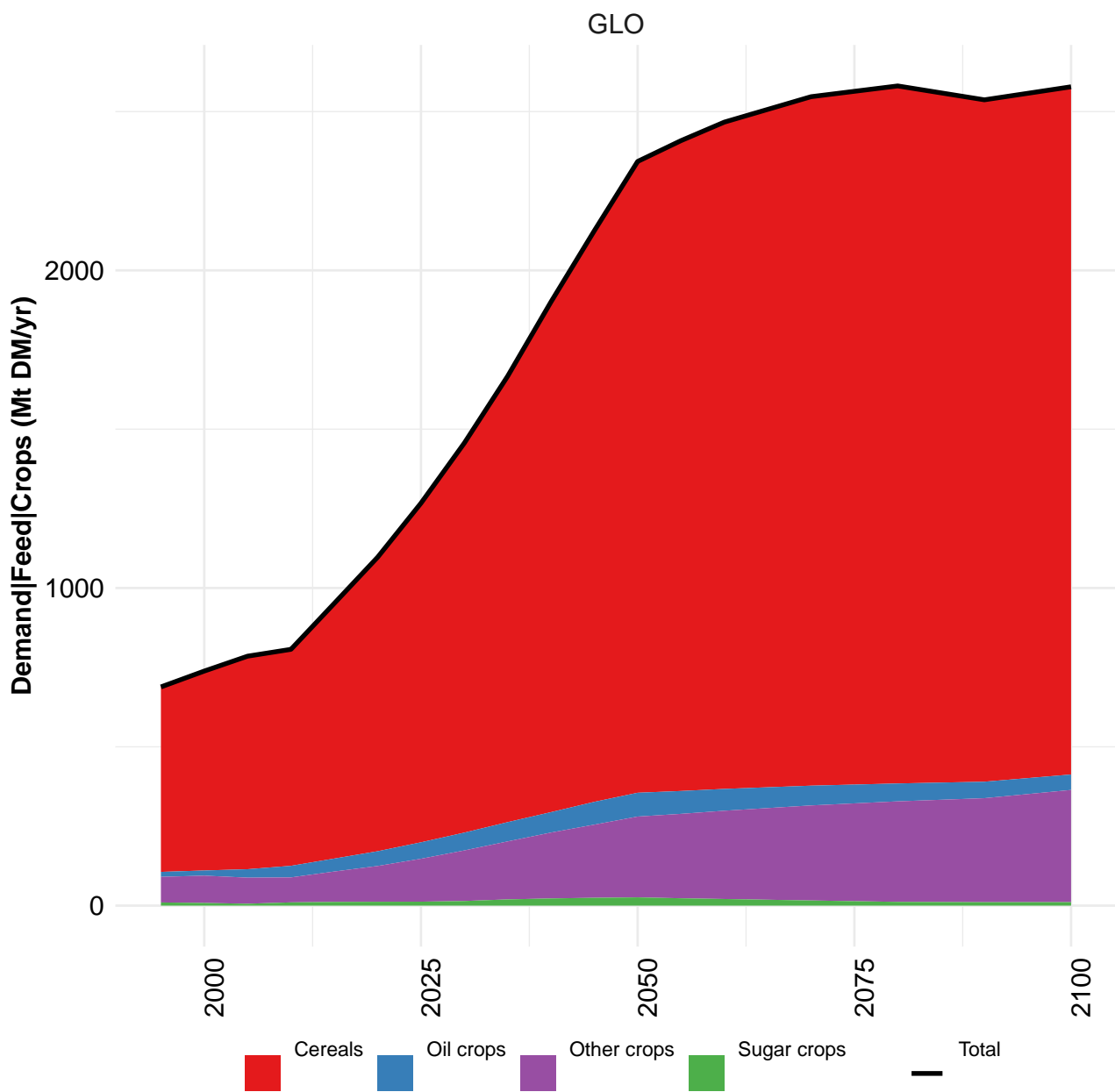
	2050	2055	2060	2070	2080	2090	2100
GLO	765	720	690	614	545	464	419
CAZ	4	4	4	3	3	2	2
CHA	61	56	52	43	31	21	16
EUR	12	11	10	8	6	5	5
IND	286	265	257	234	205	174	146
JPN	1	1	1	1	1	0	0
LAM	33	31	29	23	18	14	12
MEA	14	13	12	10	8	7	6
NEU	1	1	1	0	0	0	0
OAS	201	191	180	153	142	123	117
REF	3	3	2	2	2	1	1
SSA	142	141	139	134	126	113	112
USA	4	4	3	3	3	2	2

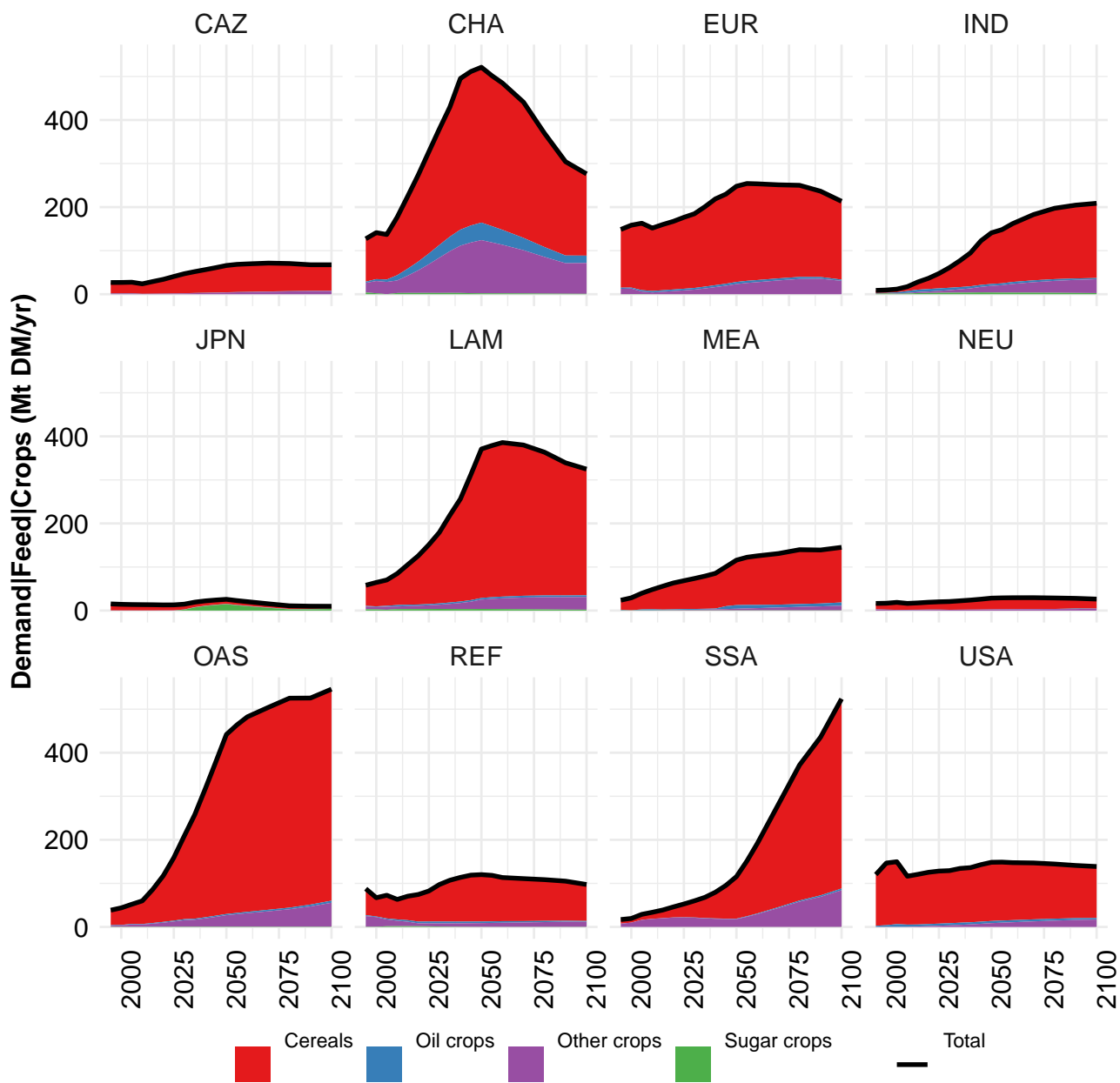
Table 246: MAGPIE m4p\_SSP4 — Demand—Feed—Crop residues—Straw (Mt DM/yr) [PART 2/2]

	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

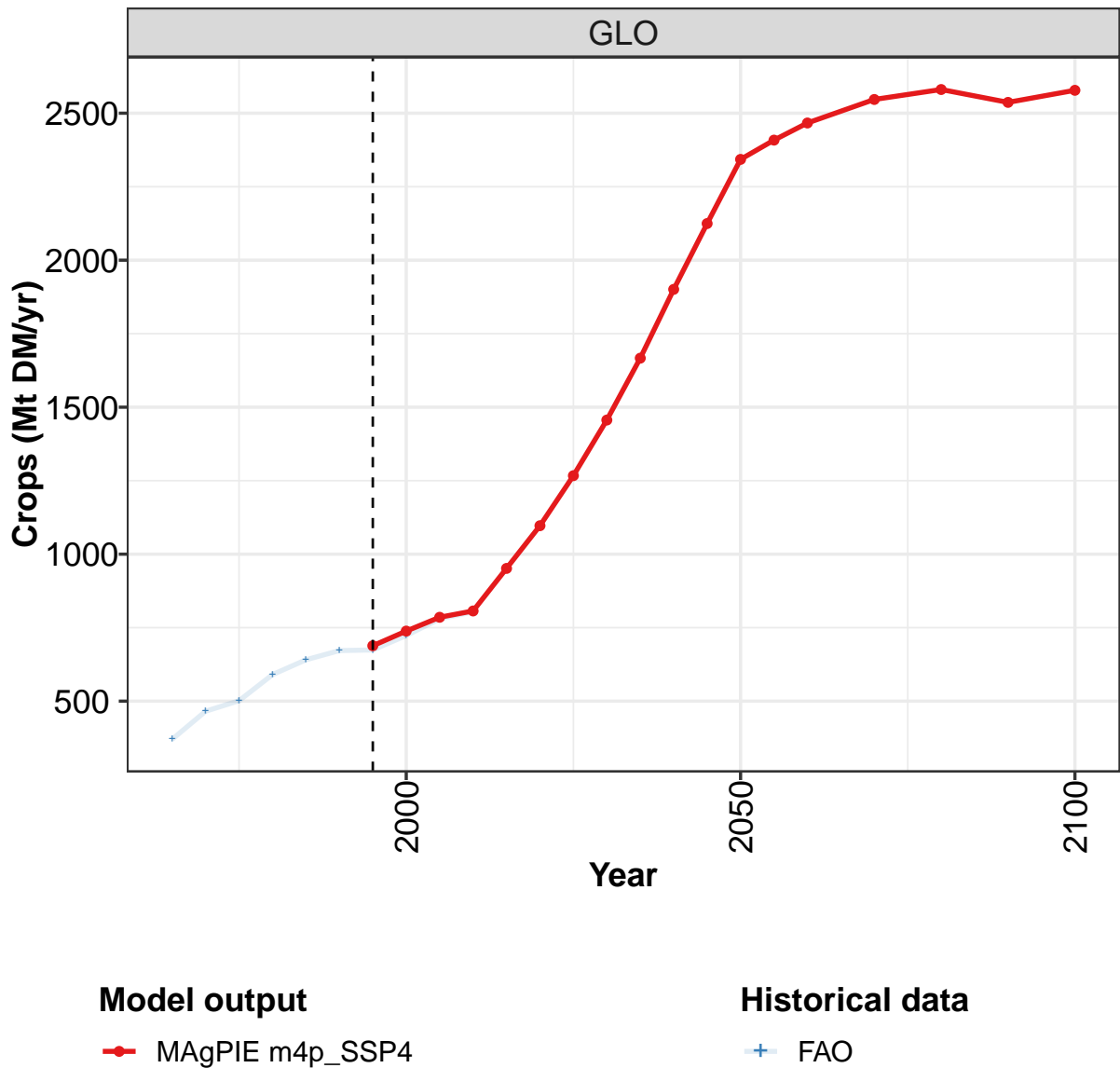
Table 247: FAO — Demand—Feed—Crop residues—Straw (Mt DM/yr)

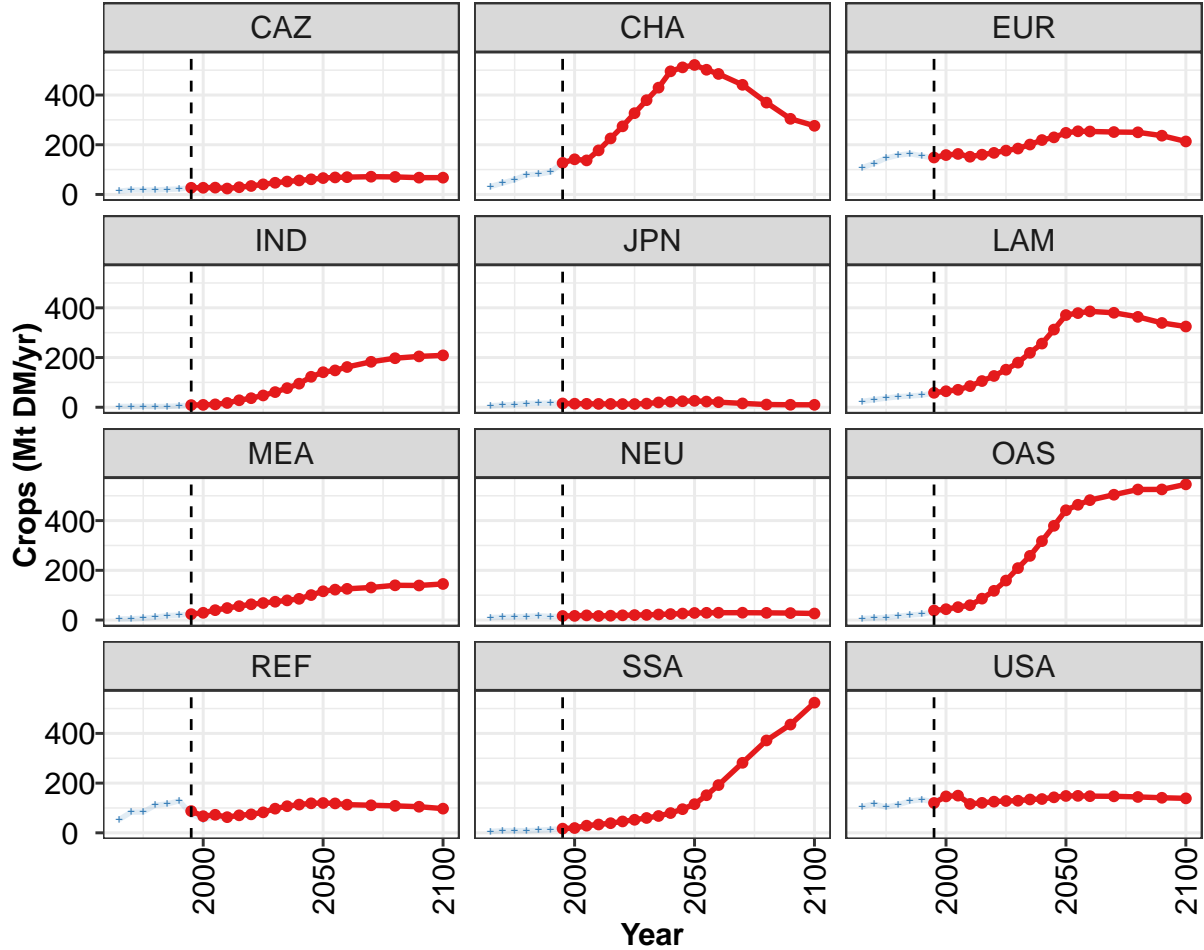






6.2 Crops





Model output

—●— MAgPIE m4p\_SSP4

Historical data

—+— FAO

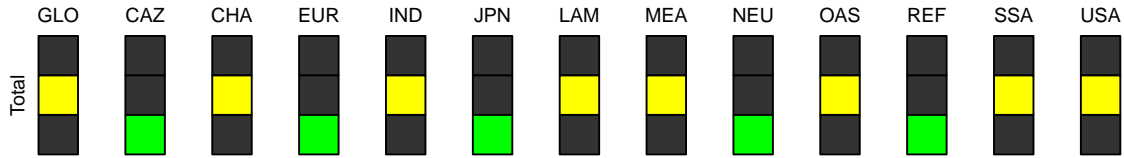


Figure 83: MAgPIE m4p\_SSP4 — Demand—Feed—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	689	738	785	807	952	1097	1267	1456	1667	1901	2125
CAZ	27	27	28	24	29	34	41	47	52	56	61
CHA	127	141	137	177	225	274	327	379	430	495	511
EUR	149	158	163	152	160	167	177	185	201	219	230
IND	9	10	12	17	28	36	48	61	77	95	123
JPN	15	14	14	14	13	13	13	15	19	22	24
LAM	58	65	70	85	106	126	151	179	219	256	313
MEA	24	29	40	48	56	63	69	74	79	85	101
NEU	16	17	19	16	18	19	20	21	22	24	26
OAS	38	44	52	60	86	118	159	209	258	318	379
REF	88	67	73	63	71	74	82	97	107	114	119
SSA	17	19	29	34	39	46	53	60	68	80	95
USA	120	147	150	116	121	125	128	129	134	136	143

Table 248: MAgPIE m4p\_SSP4 — Demand—Feed—Crops (Mt DM/yr) [PART 1/2]

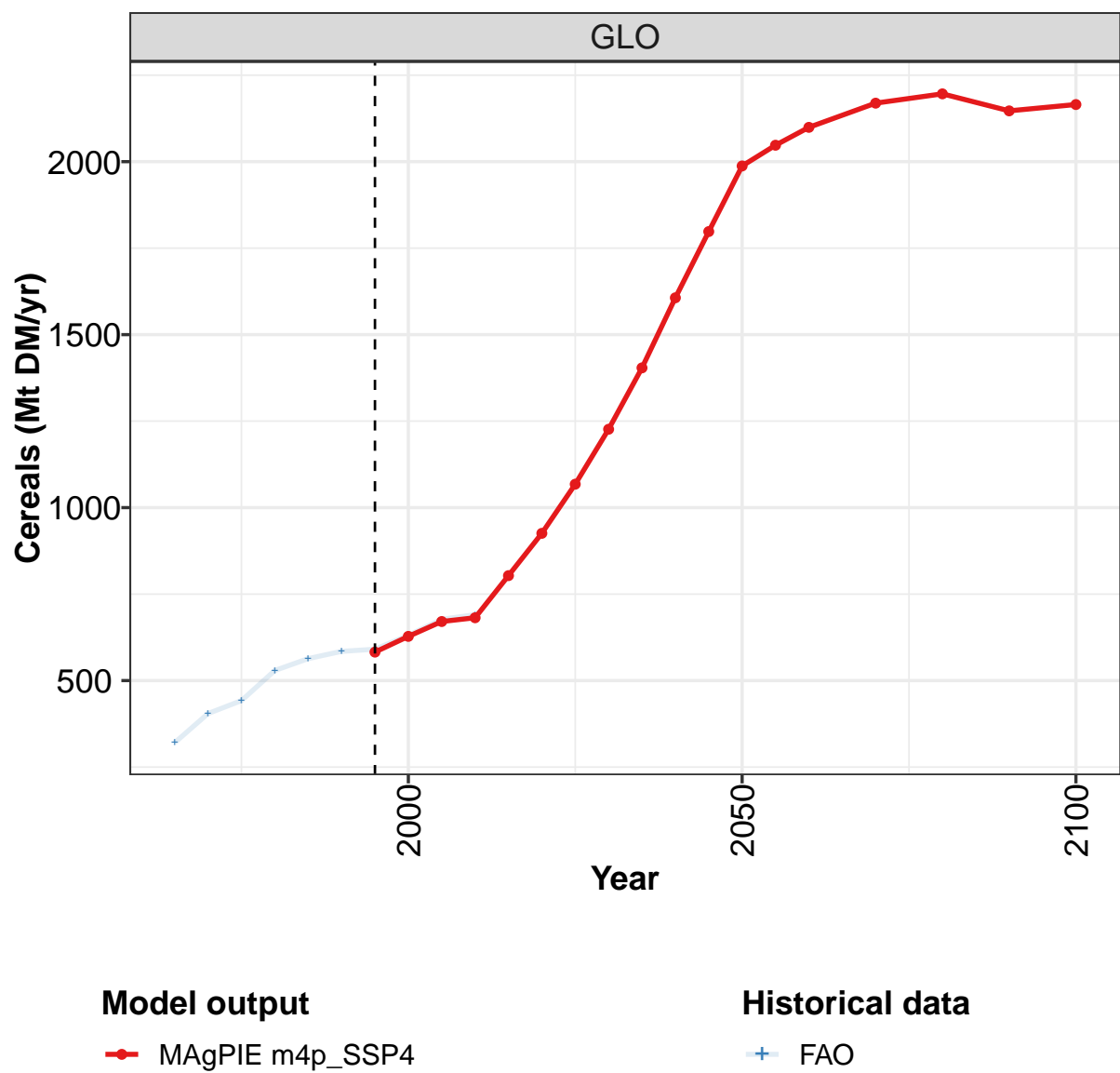
	2050	2055	2060	2070	2080	2090	2100
GLO	2343	2408	2467	2547	2581	2537	2578
CAZ	66	69	70	71	71	68	68
CHA	521	502	485	441	369	304	276
EUR	248	254	253	251	250	237	213
IND	141	148	162	183	197	205	209
JPN	26	23	20	15	11	10	10
LAM	371	379	386	380	364	339	325
MEA	116	122	126	131	140	139	145
NEU	29	29	29	30	29	28	26
OAS	442	464	482	504	525	526	546
REF	120	118	113	111	109	105	97
SSA	116	151	192	282	372	436	524
USA	148	149	148	147	144	141	139

Table 249: MAgPIE m4p\_SSP4 — 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



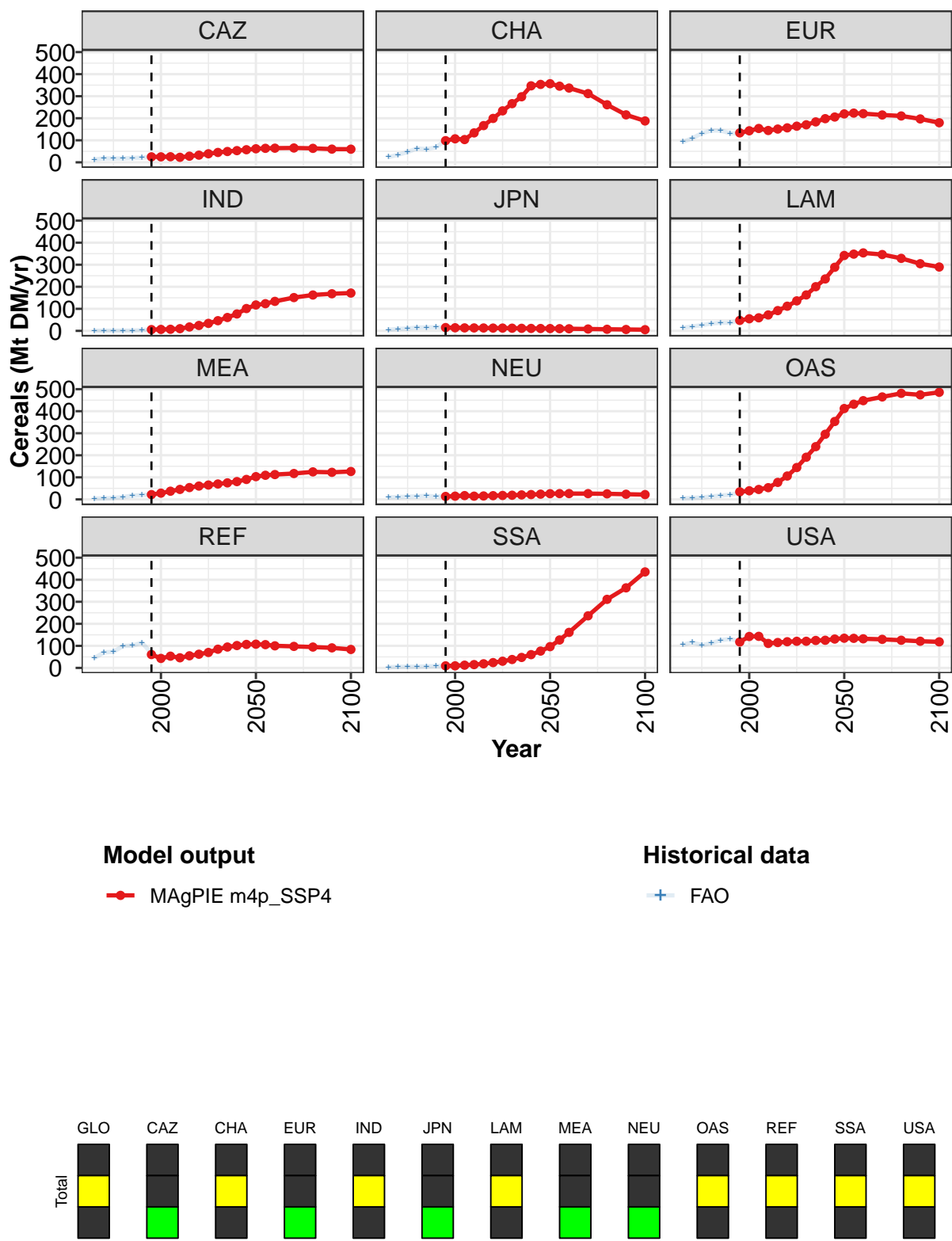


Figure 84: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	582	628	671	682	803	926	1068	1227	1404	1607	1798
CAZ	25	25	25	23	28	33	39	45	49	53	57
CHA	98	107	103	134	167	199	234	266	297	347	353
EUR	134	143	154	144	151	156	164	170	183	198	206
IND	6	7	7	10	18	24	34	46	61	77	101
JPN	15	14	14	13	13	13	13	12	12	11	11
LAM	47	55	59	72	92	112	136	163	200	235	288
MEA	22	28	37	45	54	61	65	70	75	81	90
NEU	13	15	17	15	16	17	18	19	20	22	24
OAS	34	39	45	53	77	106	144	191	239	295	353
REF	61	43	53	46	55	62	70	85	95	101	107
SSA	9	9	12	15	19	24	30	38	48	60	76
USA	118	143	143	111	115	119	121	121	125	125	131

Table 251: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1988	2048	2099	2169	2196	2147	2165
CAZ	62	64	64	65	63	60	60
CHA	357	346	337	312	261	215	188
EUR	220	223	221	215	210	197	180
IND	117	123	134	151	163	168	172
JPN	10	10	9	8	7	6	5
LAM	342	348	354	346	329	305	290
MEA	103	109	113	117	125	123	127
NEU	26	26	26	26	25	23	22
OAS	412	432	448	465	481	474	486
REF	108	106	100	98	95	91	84
SSA	96	127	161	236	311	363	435
USA	135	134	132	130	126	121	118

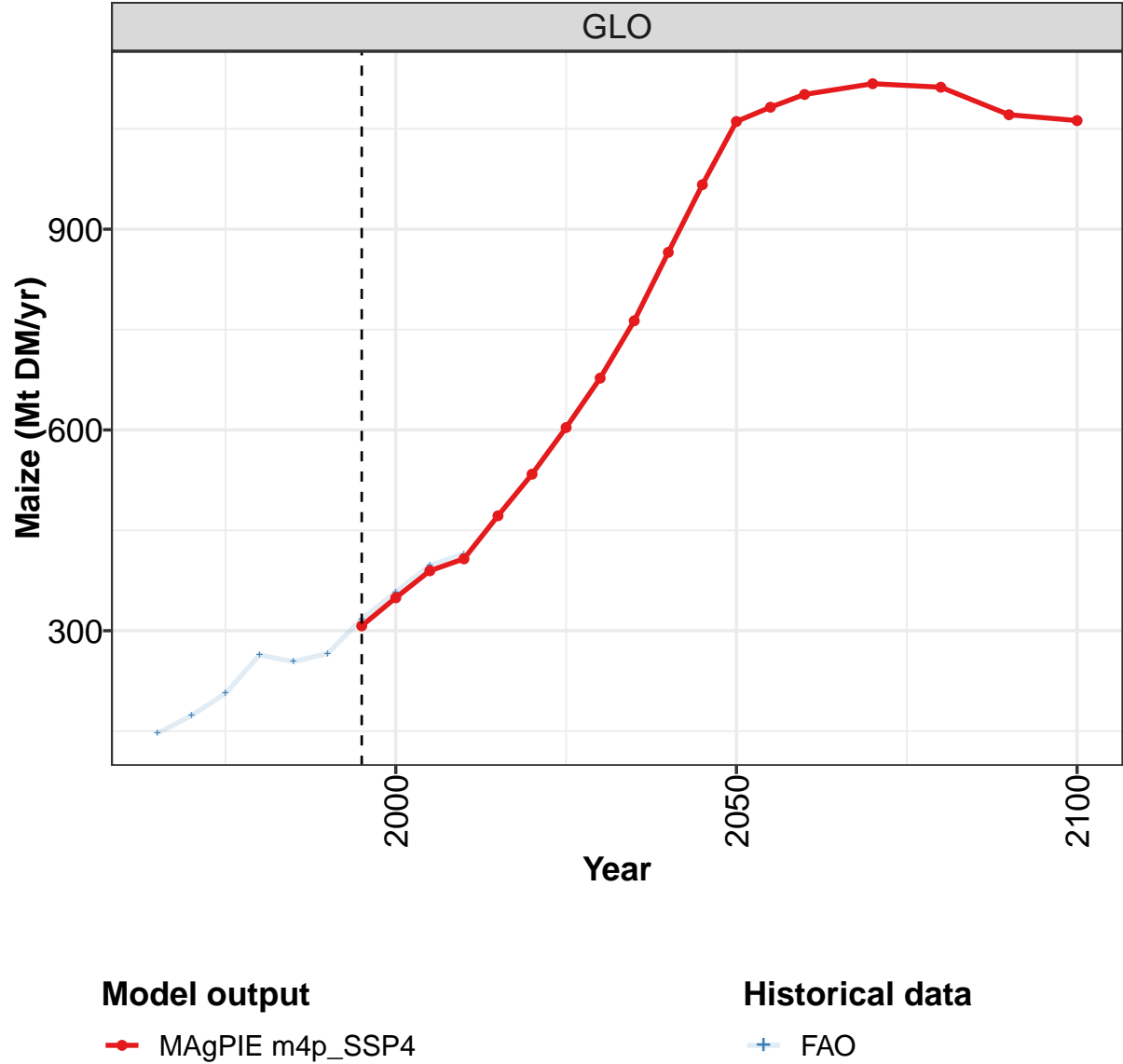
Table 252: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals (Mt DM/yr) [PART 2/2]

	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



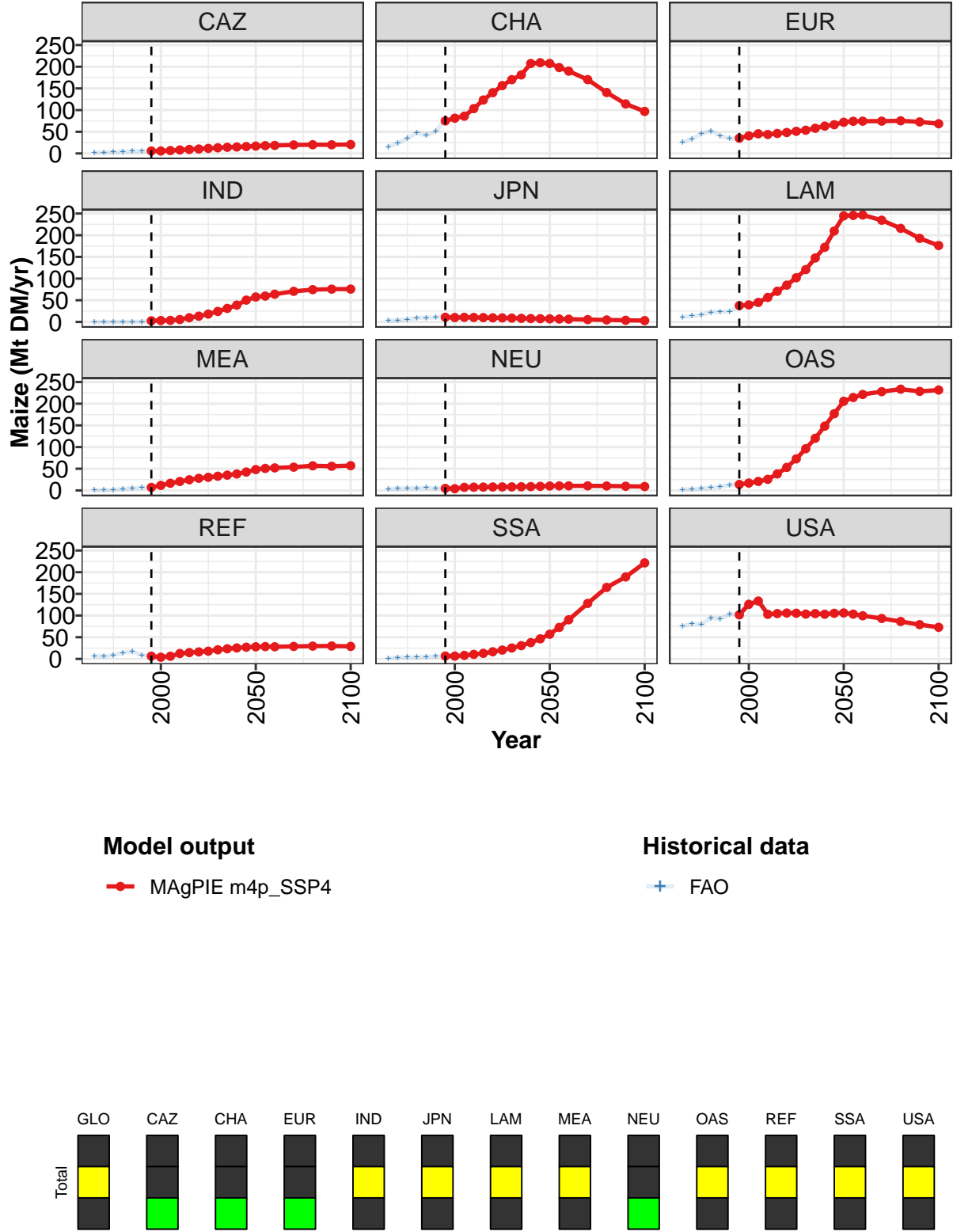


Figure 85: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	307	349	390	407	472	534	604	678	763	865	966
CAZ	6	6	7	8	9	10	12	13	14	15	16
CHA	75	81	86	104	123	140	157	170	181	207	209
EUR	35	41	45	44	46	48	51	54	58	63	66
IND	3	3	4	6	10	13	18	24	31	39	50
JPN	11	10	11	10	10	10	9	9	8	8	8
LAM	38	39	45	57	71	85	102	121	148	172	210
MEA	7	12	17	21	25	28	30	33	35	38	42
NEU	5	4	7	7	8	8	8	8	8	9	9
OAS	14	17	21	26	38	53	73	96	120	148	177
REF	6	4	6	13	15	16	18	21	23	25	27
SSA	7	6	8	10	13	16	20	25	31	38	46
USA	102	126	134	103	105	106	105	103	105	103	105

Table 254: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

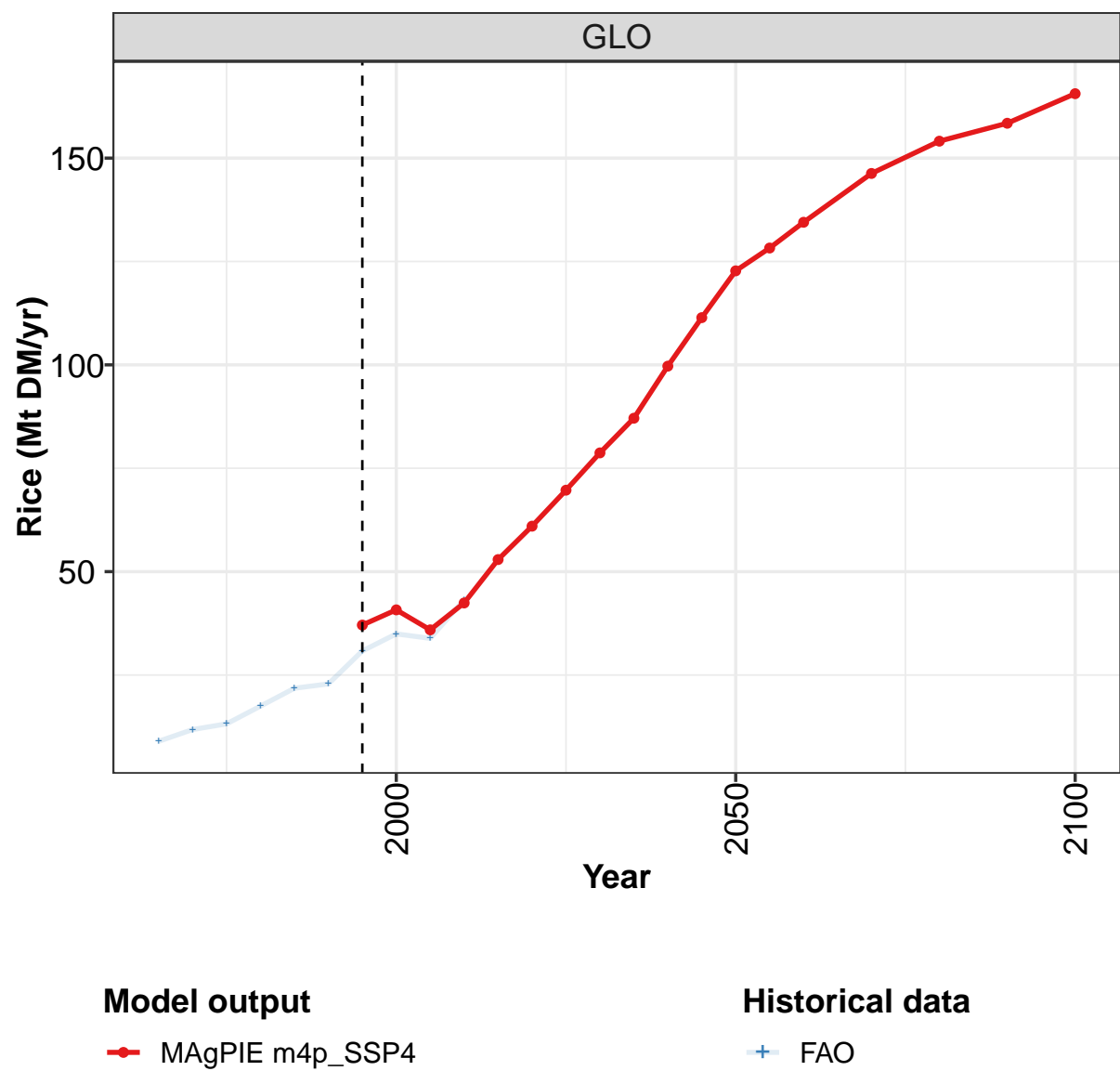
	2050	2055	2060	2070	2080	2090	2100
GLO	1061	1082	1101	1117	1112	1071	1062
CAZ	17	18	19	20	20	20	21
CHA	208	198	190	170	141	114	97
EUR	72	74	74	75	75	73	69
IND	58	60	64	71	74	76	76
JPN	7	7	6	5	5	4	3
LAM	245	246	247	235	216	193	176
MEA	48	51	52	54	57	56	57
NEU	10	10	11	11	10	10	9
OAS	206	214	221	228	234	228	232
REF	28	28	28	29	30	30	29
SSA	57	73	90	128	165	189	222
USA	106	103	100	93	86	79	73

Table 255: MAgPIE m4p\_SSP4 — 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



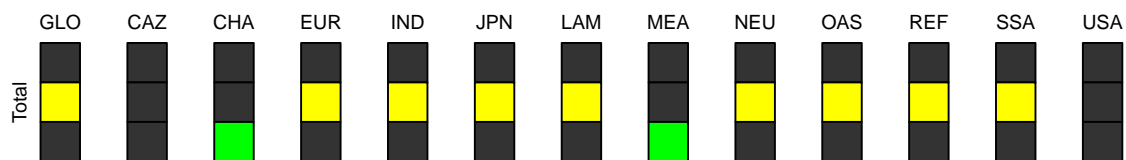
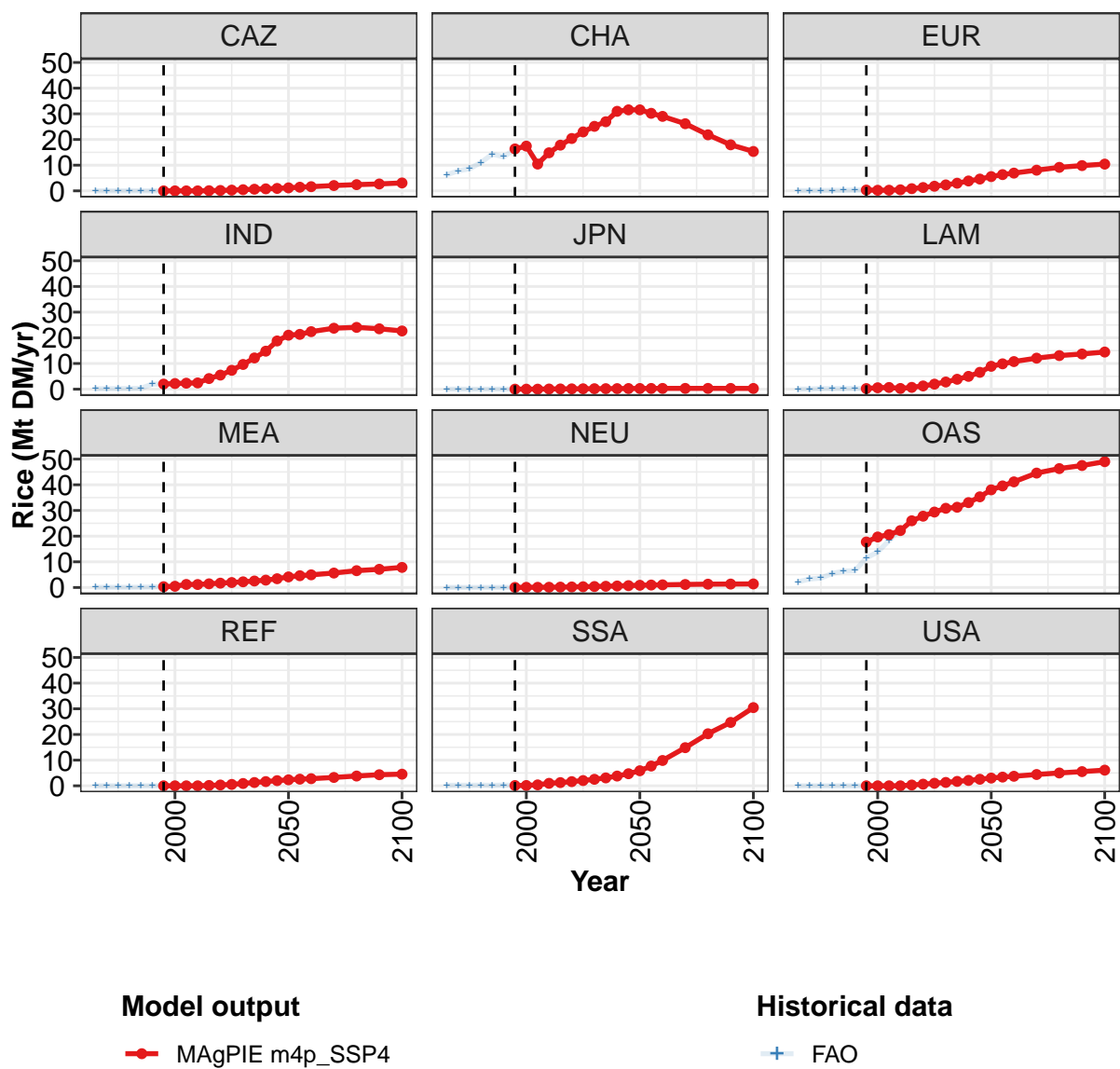


Figure 86: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	37	41	36	42	53	61	70	79	87	100	111
CAZ	0	0	0	0	0	0	0	0	1	1	1
CHA	16	17	10	15	18	20	23	25	27	31	32
EUR	0	0	0	0	1	1	2	2	3	4	5
IND	2	2	2	2	4	5	7	10	12	15	19
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	3
NEU	0	0	0	0	0	0	0	0	0	1	1
OAS	18	20	21	22	26	28	29	31	31	33	35
REF	0	0	0	0	0	0	1	1	1	2	2
SSA	0	0	0	1	1	2	2	3	3	4	5
USA	0	0	0	0	0	1	1	1	2	2	3

Table 257: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

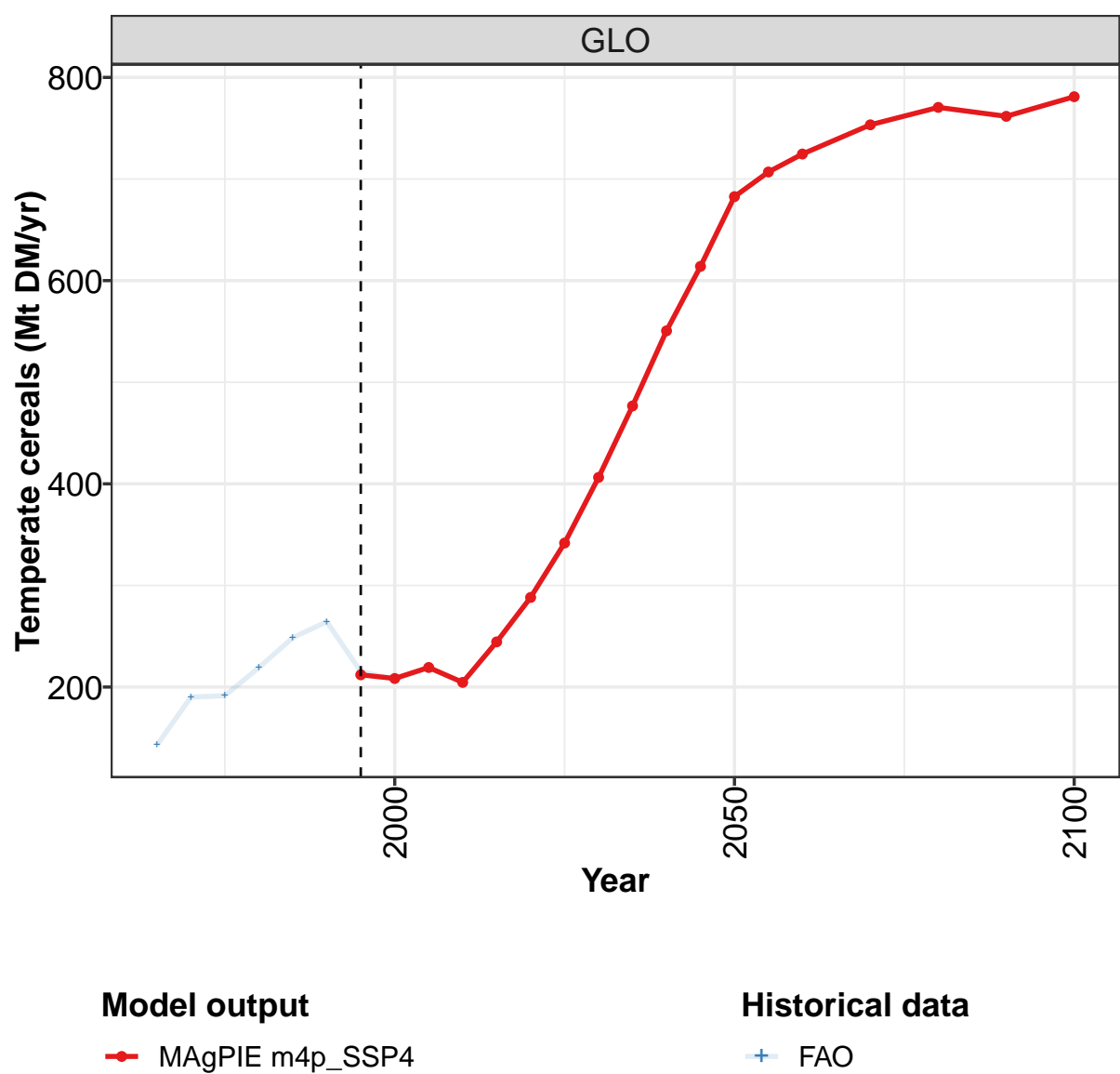
	2050	2055	2060	2070	2080	2090	2100
GLO	123	128	134	146	154	158	166
CAZ	1	1	2	2	2	3	3
CHA	32	30	29	26	22	18	15
EUR	6	6	7	8	9	10	10
IND	21	21	22	24	24	24	23
JPN	0	0	0	0	0	0	0
LAM	9	10	11	12	13	14	14
MEA	4	5	5	6	7	7	8
NEU	1	1	1	1	1	1	1
OAS	38	40	41	45	46	48	49
REF	2	3	3	3	4	4	5
SSA	6	8	10	15	20	25	30
USA	3	3	4	4	5	6	6

Table 258: MAgPIE m4p\_SSP4 — 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



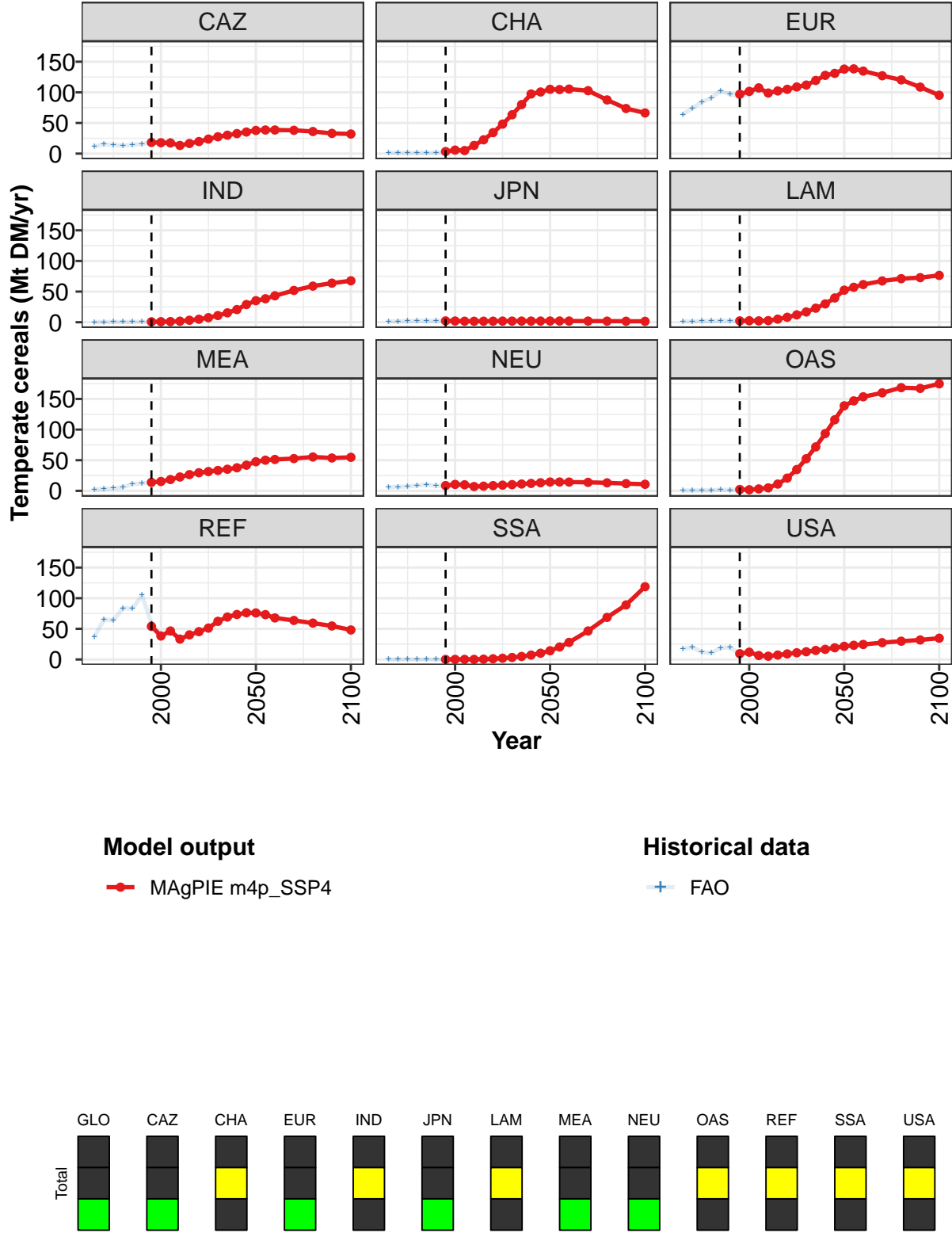


Figure 87: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Temperate cereals (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	212	208	219	205	244	288	342	406	477	551	614
CAZ	18	18	17	13	17	20	24	28	30	33	35
CHA	3	6	5	13	23	34	48	63	80	97	101
EUR	97	102	107	99	102	105	109	112	119	128	131
IND	1	1	1	2	3	5	7	11	15	21	29
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	2	2	2	3	5	8	12	17	23	30	40
MEA	14	15	18	23	26	30	31	33	35	38	42
NEU	9	11	10	7	8	9	9	10	11	12	13
OAS	2	2	3	5	11	21	35	52	72	93	116
REF	54	38	46	33	40	45	51	62	69	73	76
SSA	0	0	0	0	1	1	2	3	5	7	10
USA	9	12	6	5	7	9	11	13	15	17	19

Table 260: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

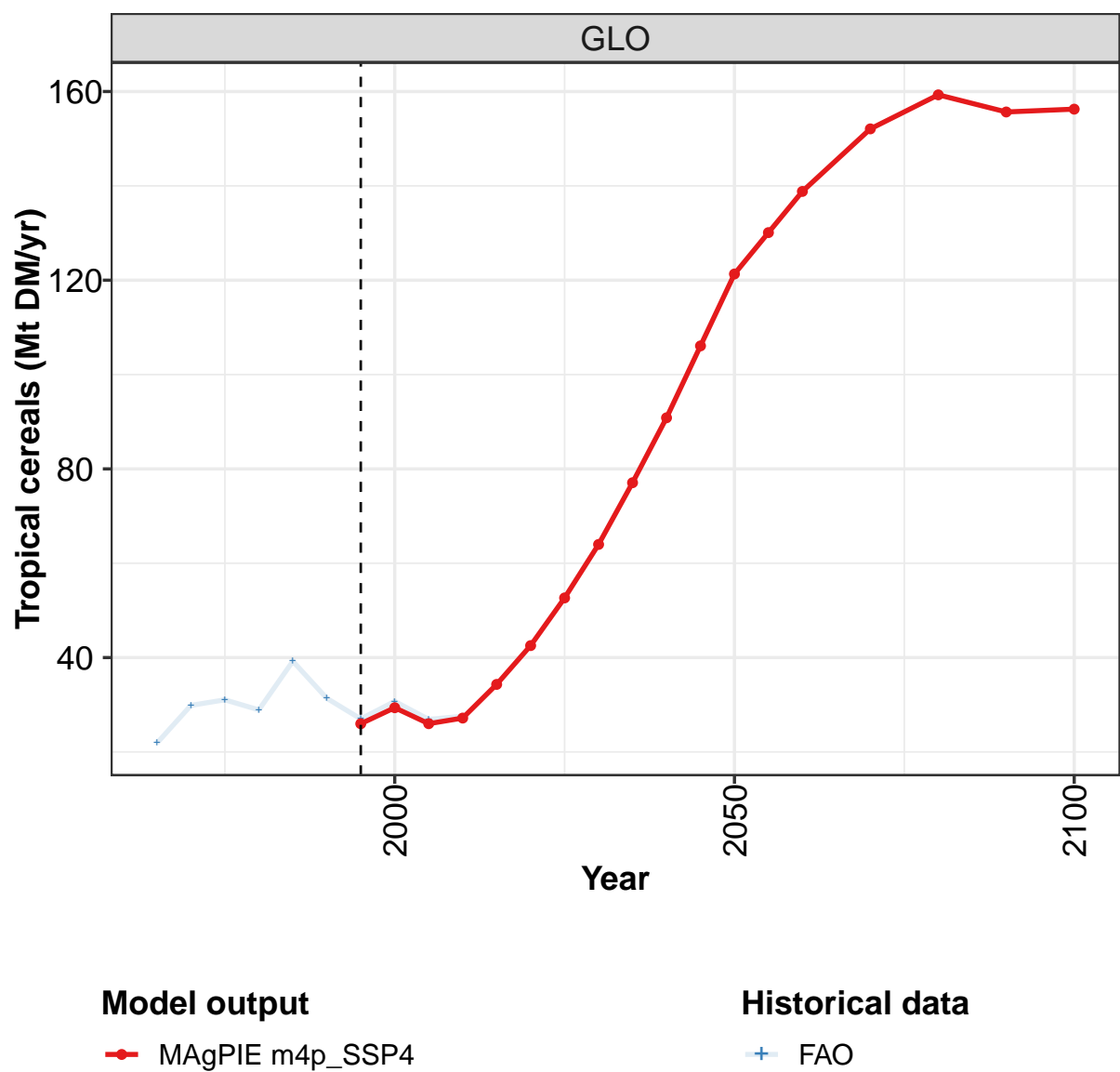
	2050	2055	2060	2070	2080	2090	2100
GLO	683	707	725	753	770	762	781
CAZ	38	39	39	38	36	33	32
CHA	105	105	105	103	88	74	66
EUR	138	138	135	127	120	109	95
IND	35	38	43	52	59	64	68
JPN	2	2	2	2	2	2	1
LAM	52	57	62	67	71	73	76
MEA	48	50	51	53	55	54	55
NEU	14	14	14	14	13	12	11
OAS	139	147	154	160	168	167	175
REF	76	73	68	64	59	55	48
SSA	14	20	28	47	69	89	119
USA	21	23	25	27	30	32	35

Table 261: MAgPIE m4p\_SSP4 — 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



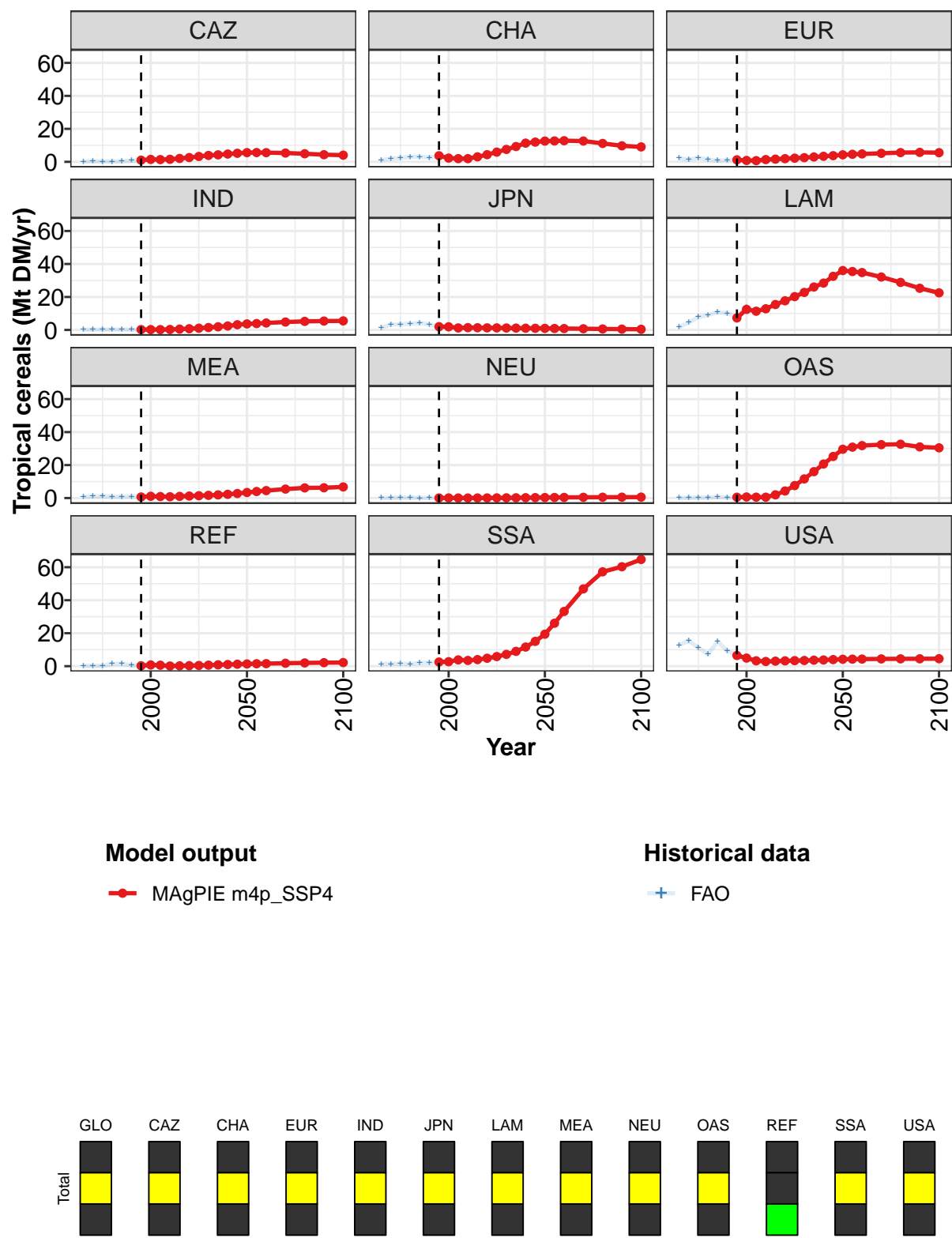


Figure 88: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26	29	26	27	34	43	53	64	77	91	106
CAZ	1	1	1	2	2	3	3	4	4	5	5
CHA	4	2	2	2	3	4	6	8	9	11	12
EUR	1	1	1	1	2	2	2	3	3	3	4
IND	0	0	0	0	1	1	1	1	2	2	3
JPN	2	2	1	1	1	1	1	1	1	1	1
LAM	7	12	11	13	15	18	20	23	26	28	33
MEA	1	1	1	1	1	1	1	2	2	2	3
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	1	1	1	1	2	4	8	12	16	21	25
REF	0	1	1	0	0	0	0	1	1	1	1
SSA	3	3	4	3	4	5	6	7	9	12	15
USA	6	5	3	3	3	3	3	3	4	4	4

Table 263: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

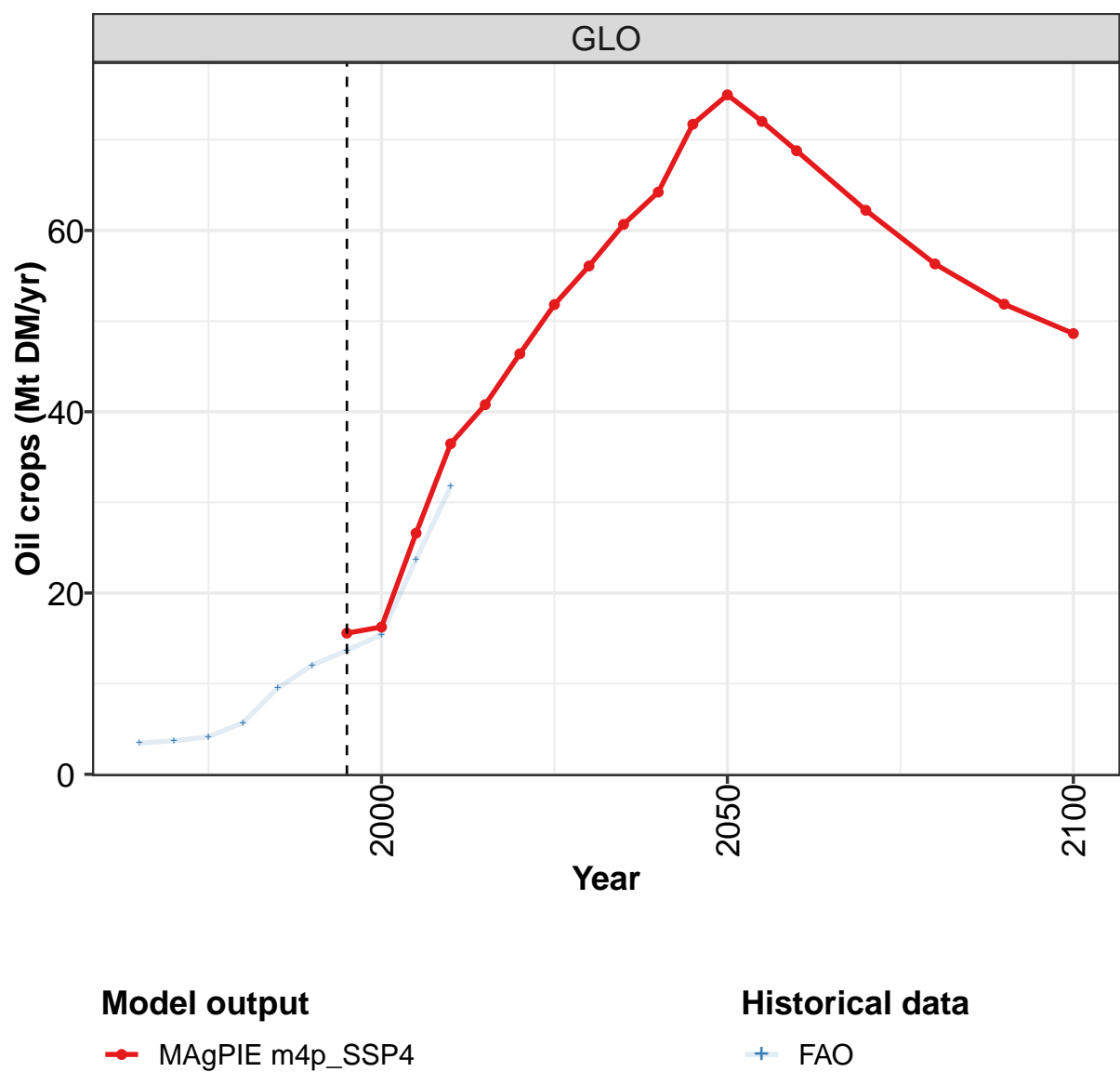
	2050	2055	2060	2070	2080	2090	2100
GLO	121	130	139	152	159	156	156
CAZ	6	6	6	5	5	4	4
CHA	13	13	13	13	11	10	9
EUR	4	5	5	5	6	6	6
IND	4	4	4	5	5	5	5
JPN	1	1	1	1	1	0	0
LAM	36	35	35	32	29	25	22
MEA	3	4	5	5	6	6	7
NEU	0	0	0	0	1	1	1
OAS	30	31	32	32	33	31	30
REF	1	1	2	2	2	2	2
SSA	19	26	33	47	57	60	65
USA	4	4	4	4	4	4	5

Table 264: MAgPIE m4p\_SSP4 — 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



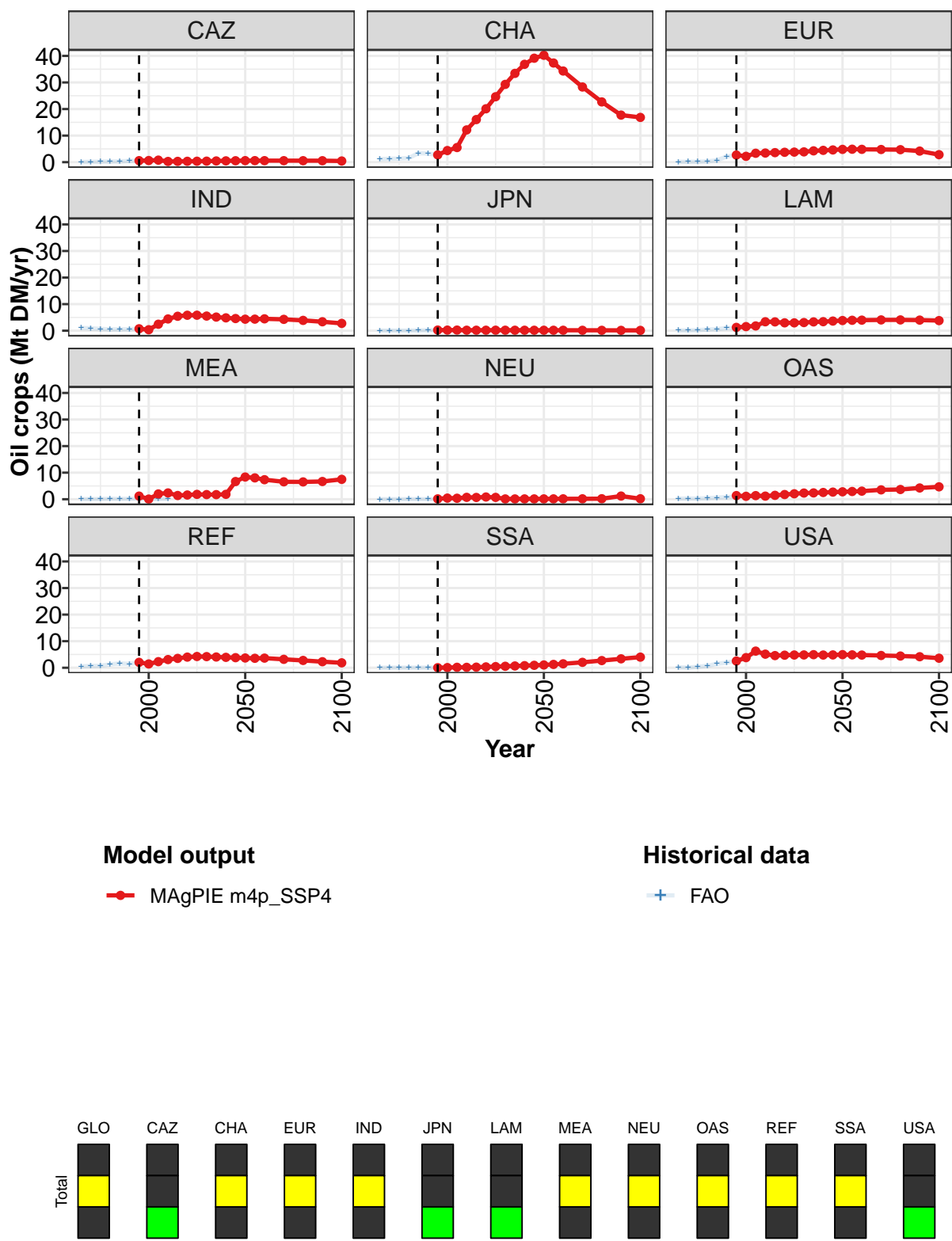


Figure 89: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.6	16.2	26.6	36.5	40.8	46.4	51.8	56.1	60.7	64.2	71.7
CAZ	0.6	0.6	0.8	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5
CHA	2.8	4.4	5.5	12.2	16.0	20.1	24.6	29.3	33.4	36.8	39.1
EUR	2.7	2.2	3.4	3.4	3.6	3.7	3.8	3.9	4.3	4.5	4.6
IND	0.7	0.4	2.4	4.4	5.4	5.8	5.8	5.5	5.1	4.8	4.6
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	3.0	3.0	3.1	3.3	3.4	3.6
MEA	1.2	0.1	2.0	2.4	1.4	1.6	1.8	1.7	1.7	1.8	6.7
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	1.5	1.8	2.1	2.3	2.4	2.5	2.7
REF	2.0	1.4	2.3	3.1	3.5	4.0	4.2	4.2	4.1	3.9	3.8
SSA	0.0	0.1	0.2	0.2	0.2	0.3	0.4	0.6	0.7	0.8	0.9
USA	2.5	3.8	6.3	5.1	4.6	4.7	4.8	4.8	4.9	4.8	4.8

Table 266: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops (Mt DM/yr) [PART 1/2]

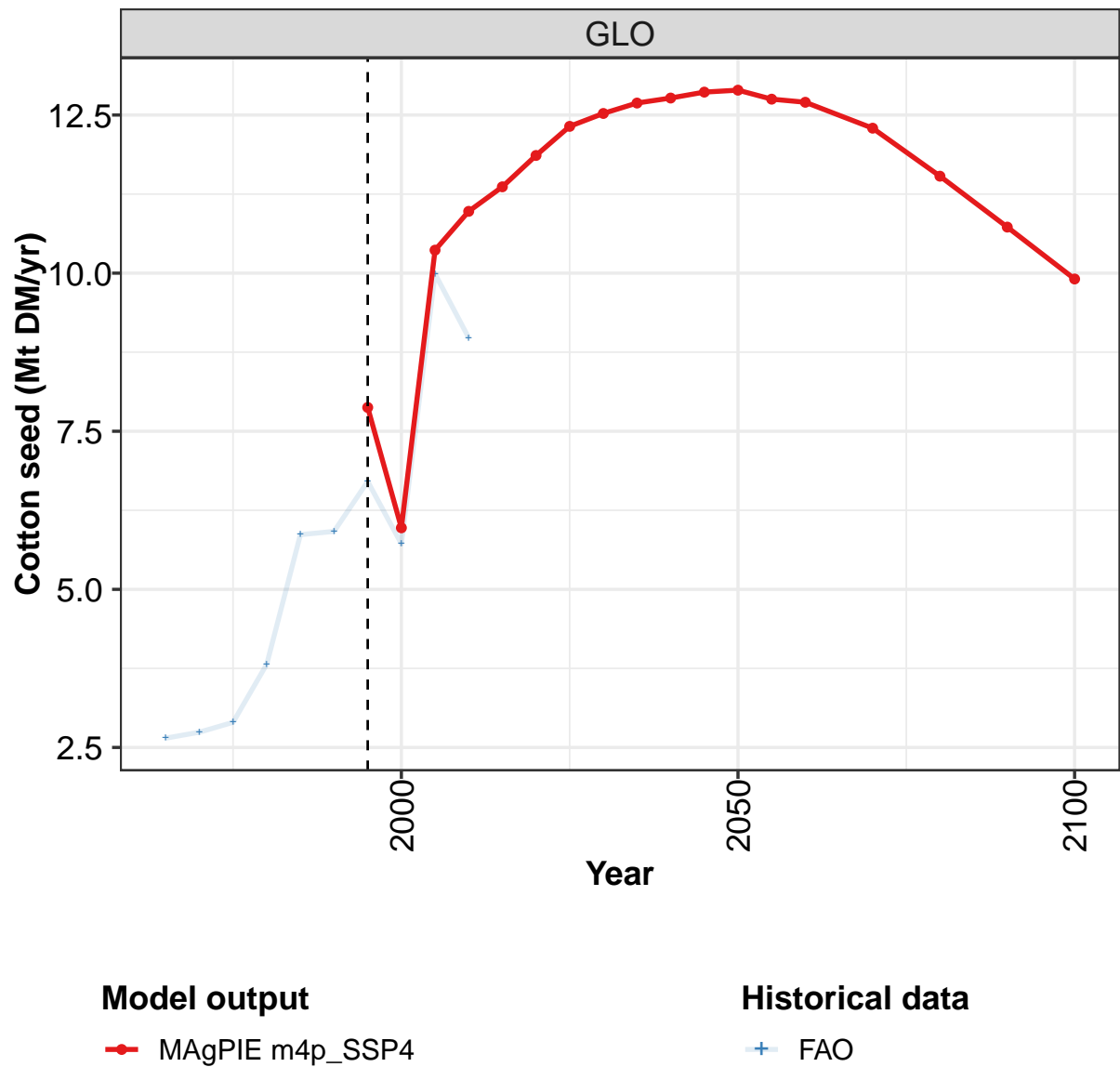
	2050	2055	2060	2070	2080	2090	2100
GLO	75.0	72.0	68.8	62.2	56.3	51.9	48.6
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.4
CHA	40.2	37.3	34.3	28.3	22.7	17.7	16.9
EUR	4.8	4.9	4.8	4.8	4.7	4.2	2.8
IND	4.3	4.4	4.5	4.3	3.9	3.4	2.8
JPN	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	3.8	3.9	4.0	4.1	4.1	4.0	3.8
MEA	8.4	8.0	7.4	6.6	6.5	6.7	7.5
NEU	0.1	0.1	0.2	0.2	0.2	1.2	0.2
OAS	2.8	2.9	3.0	3.5	3.7	4.2	4.7
REF	3.7	3.6	3.6	3.2	2.8	2.3	1.9
SSA	1.1	1.3	1.5	2.0	2.7	3.4	4.0
USA	4.9	4.9	4.8	4.6	4.4	4.2	3.6

Table 267: MAgPIE m4p\_SSP4 — 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





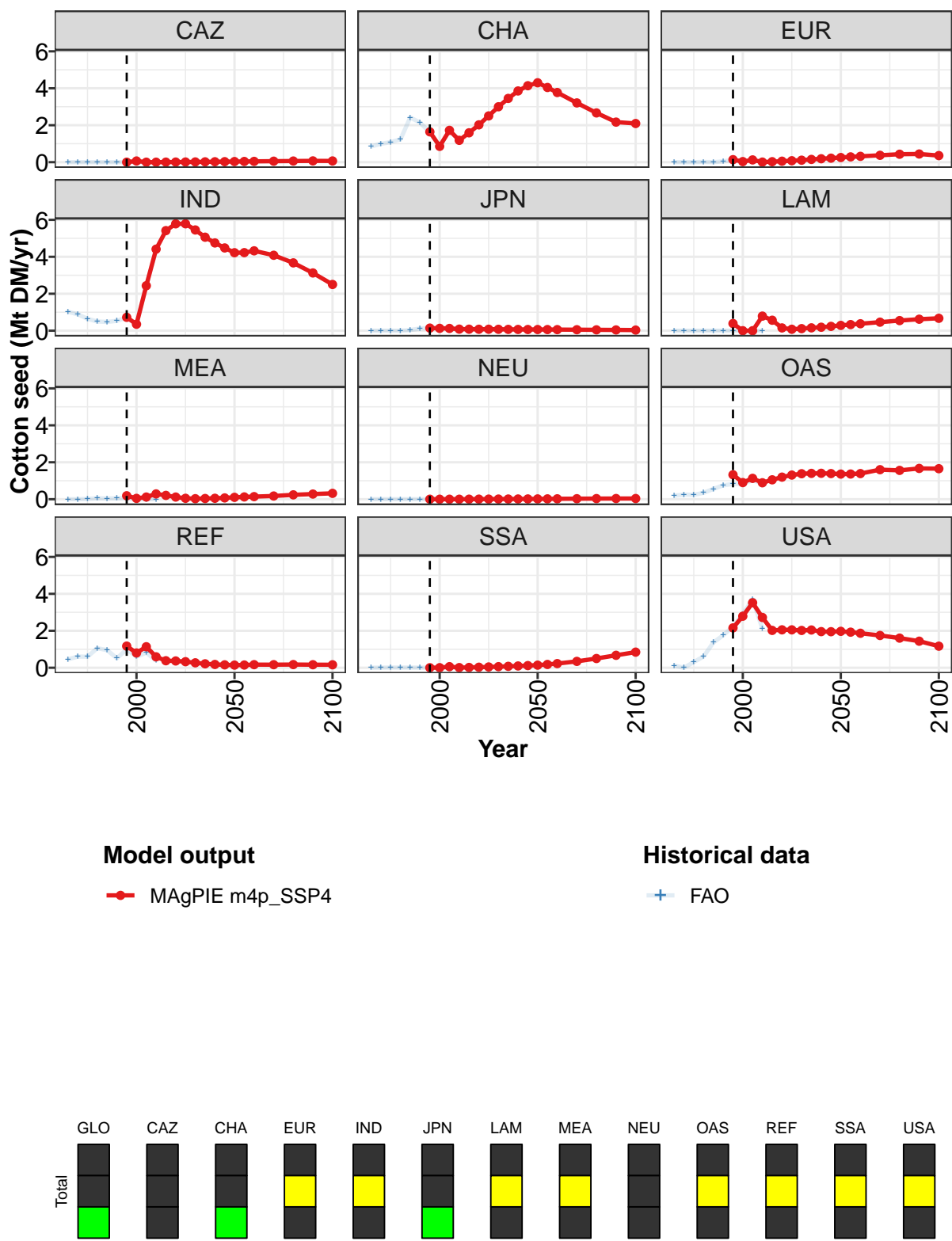


Figure 90: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.9	6.0	10.4	11.0	11.4	11.9	12.3	12.5	12.7	12.8	12.9
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	2.5	3.0	3.5	3.9	4.1
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	5.4	5.8	5.8	5.5	5.1	4.8	4.5
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	0.0	0.0	0.8	0.6	0.2	0.1	0.1	0.2	0.2	0.2
MEA	0.2	0.0	0.1	0.3	0.2	0.1	0.1	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	1.1	1.2	1.3	1.4	1.4	1.4	1.4
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	0.1
USA	2.2	2.8	3.5	2.7	2.0	2.1	2.1	2.0	2.0	2.0	2.0

Table 269: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

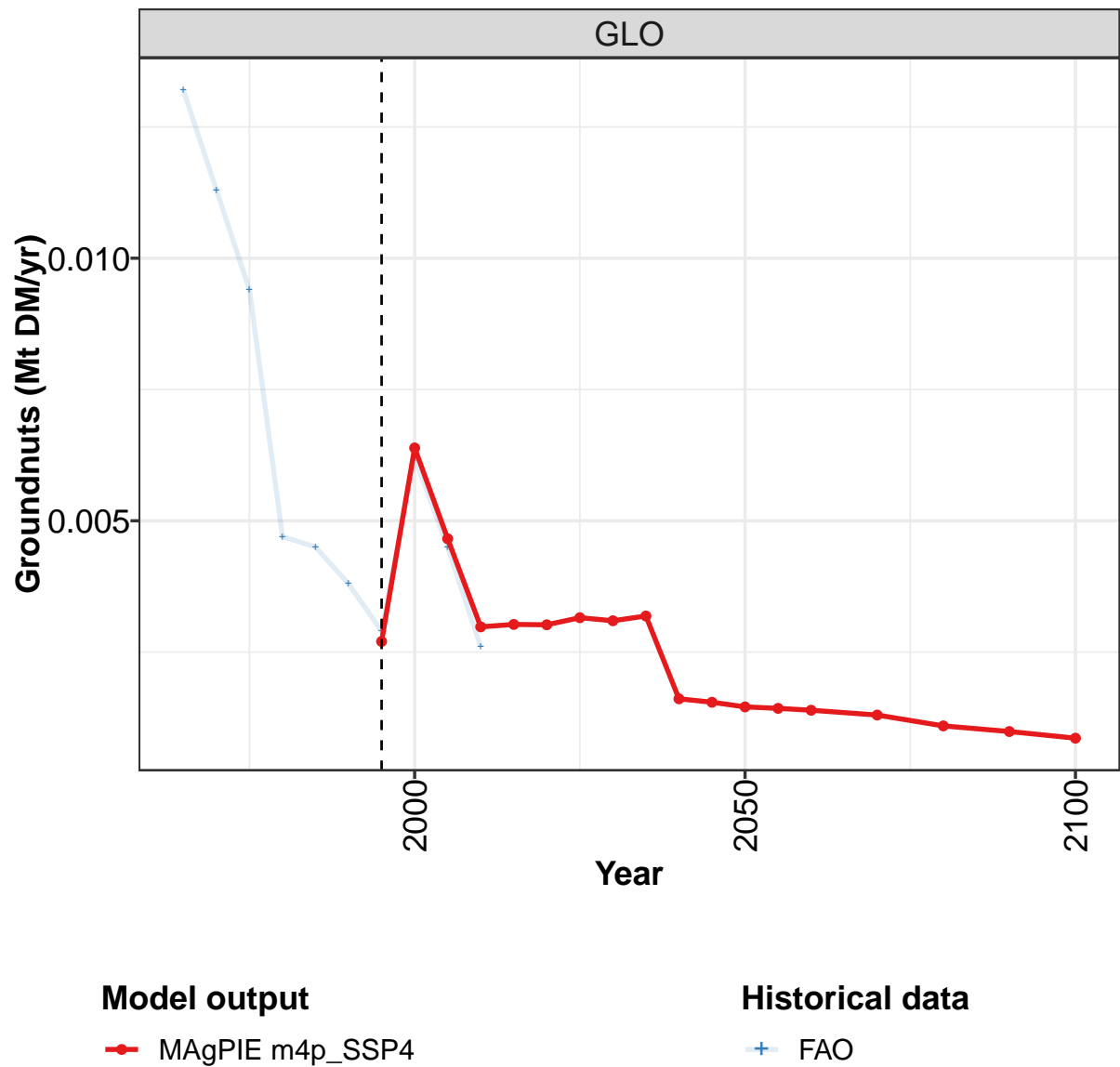
	2050	2055	2060	2070	2080	2090	2100
GLO	12.9	12.8	12.7	12.3	11.5	10.7	9.9
CAZ	0.0	0.0	0.0	0.1	0.1	0.1	0.1
CHA	4.3	4.0	3.8	3.2	2.7	2.2	2.1
EUR	0.3	0.3	0.3	0.4	0.4	0.4	0.4
IND	4.2	4.2	4.3	4.1	3.7	3.1	2.5
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	0.3	0.3	0.4	0.5	0.5	0.6	0.7
MEA	0.1	0.1	0.1	0.2	0.2	0.3	0.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.4	1.4	1.4	1.6	1.6	1.7	1.7
REF	0.1	0.1	0.2	0.2	0.2	0.2	0.2
SSA	0.1	0.2	0.2	0.3	0.5	0.7	0.8
USA	2.0	1.9	1.9	1.7	1.6	1.4	1.2

Table 270: MAgPIE m4p\_SSP4 — 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



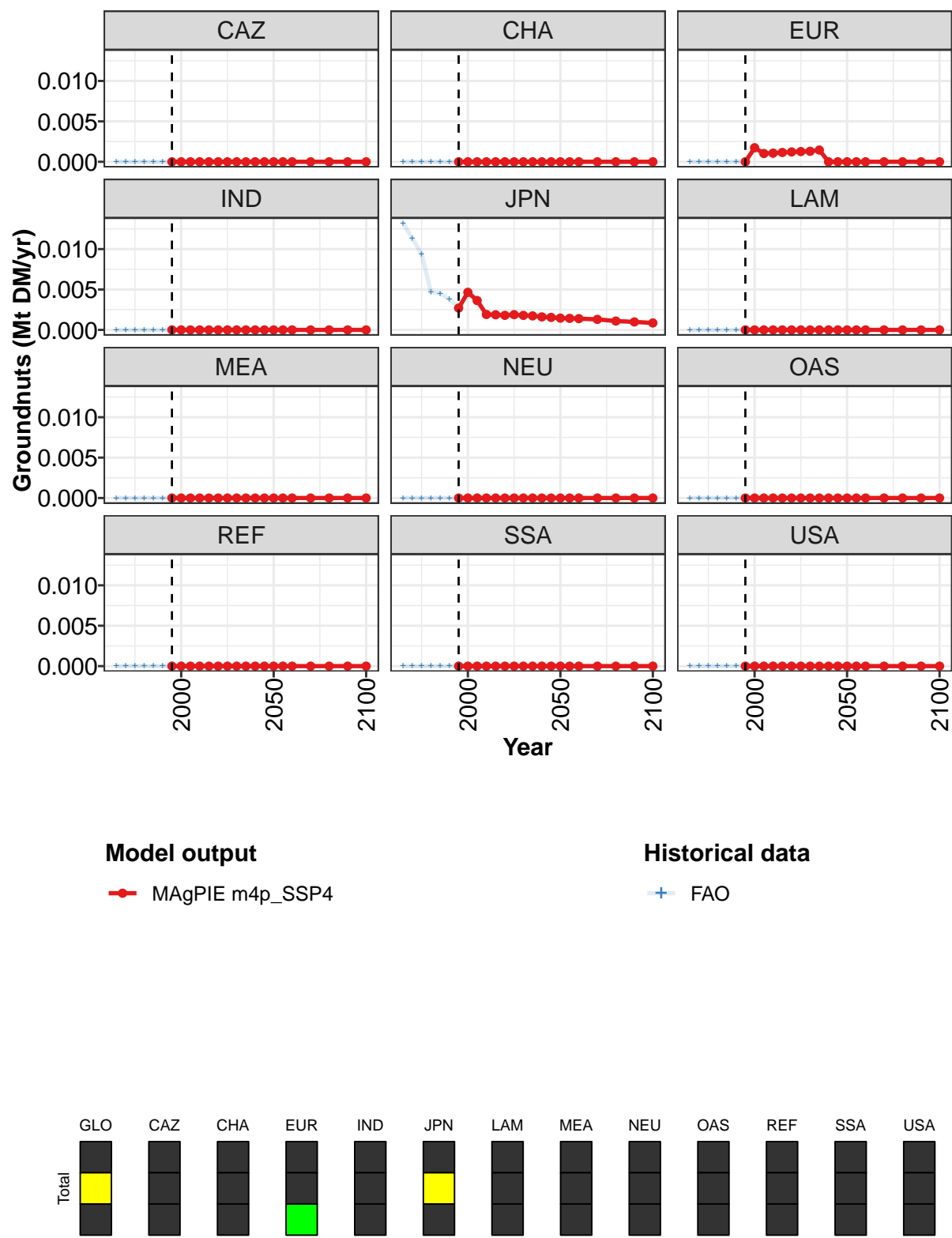


Figure 91: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00270	0.00639	0.00466	0.00298	0.00303	0.00302	0.00315	0.00310	0.00319	0.00161	0.00155
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	0.00122	0.00127	0.00130	0.00145	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	0.00180	0.00189	0.00180	0.00173	0.00161	0.00155
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\_SSP4 — Demand—Feed—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

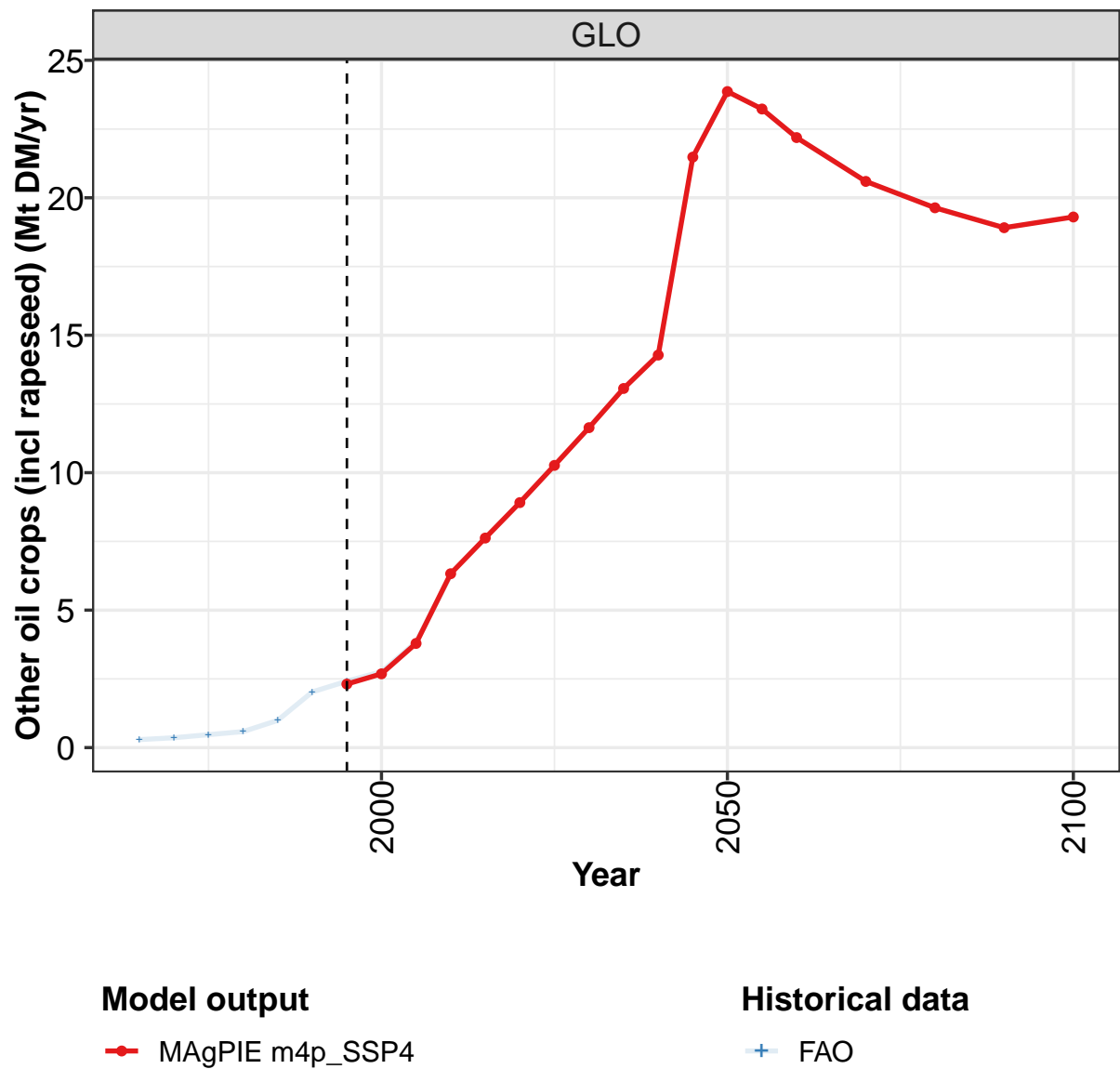
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00146	0.00143	0.00139	0.00130	0.00109	0.00099	0.00086
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00146	0.00143	0.00139	0.00130	0.00109	0.00099	0.00086
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\_SSP4 — 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)



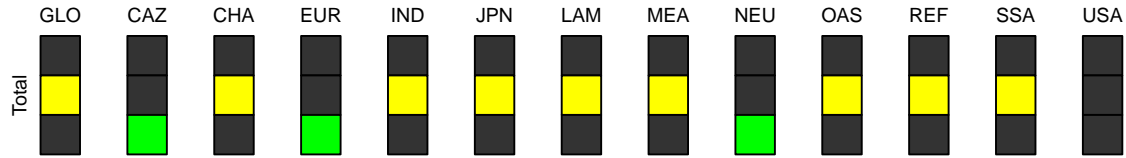
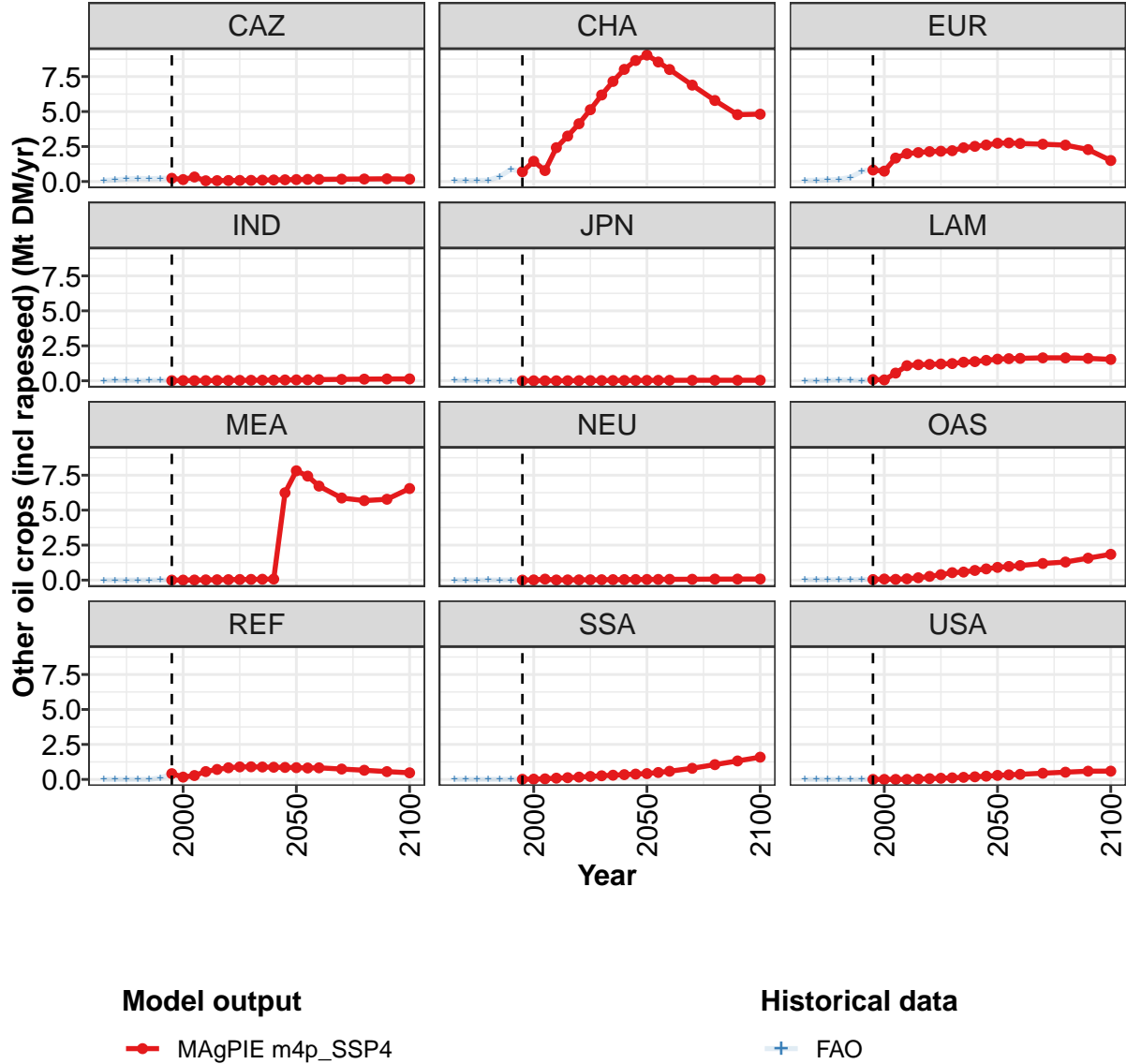


Figure 92: MAGPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.3	2.7	3.8	6.3	7.6	8.9	10.3	11.6	13.1	14.3	21.5
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	4.1	5.1	6.2	7.2	8.0	8.6
EUR	0.8	0.7	1.7	2.0	2.1	2.1	2.2	2.2	2.4	2.5	2.6
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	6.2
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	0.5	0.6	0.7	0.8
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	0.3	0.3	0.4
USA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2

Table 275: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	23.9	23.2	22.2	20.6	19.6	18.9	19.3
CAZ	0.1	0.1	0.2	0.2	0.2	0.2	0.2
CHA	9.0	8.5	8.0	6.9	5.8	4.8	4.8
EUR	2.7	2.8	2.7	2.7	2.6	2.3	1.5
IND	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
LAM	1.5	1.6	1.6	1.6	1.6	1.6	1.5
MEA	7.8	7.4	6.7	5.9	5.7	5.8	6.5
NEU	0.0	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.9	1.0	1.0	1.2	1.3	1.6	1.8
REF	0.8	0.8	0.8	0.7	0.7	0.6	0.5
SSA	0.4	0.5	0.6	0.8	1.1	1.3	1.6
USA	0.3	0.3	0.4	0.4	0.5	0.6	0.6

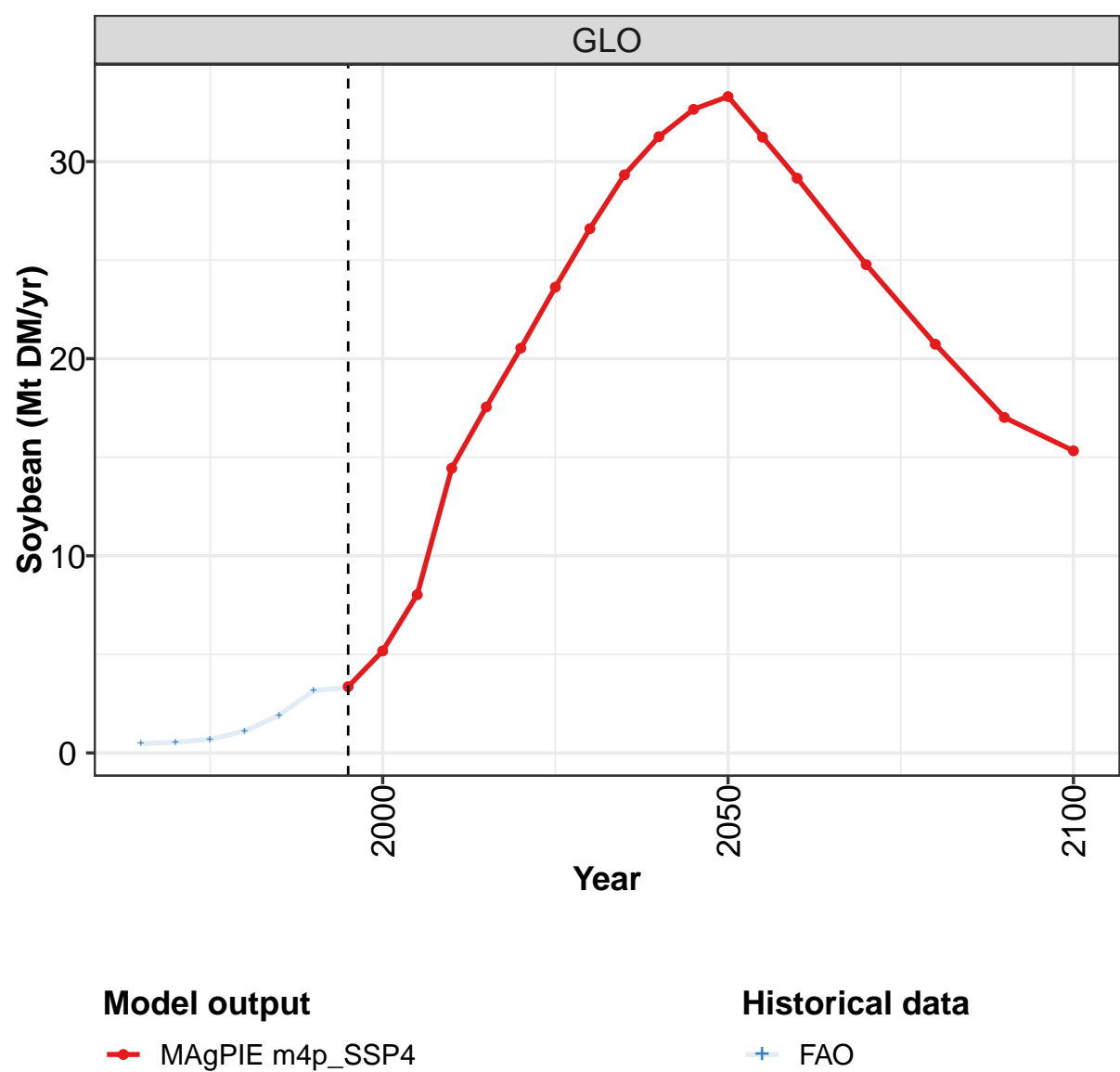
Table 276: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	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



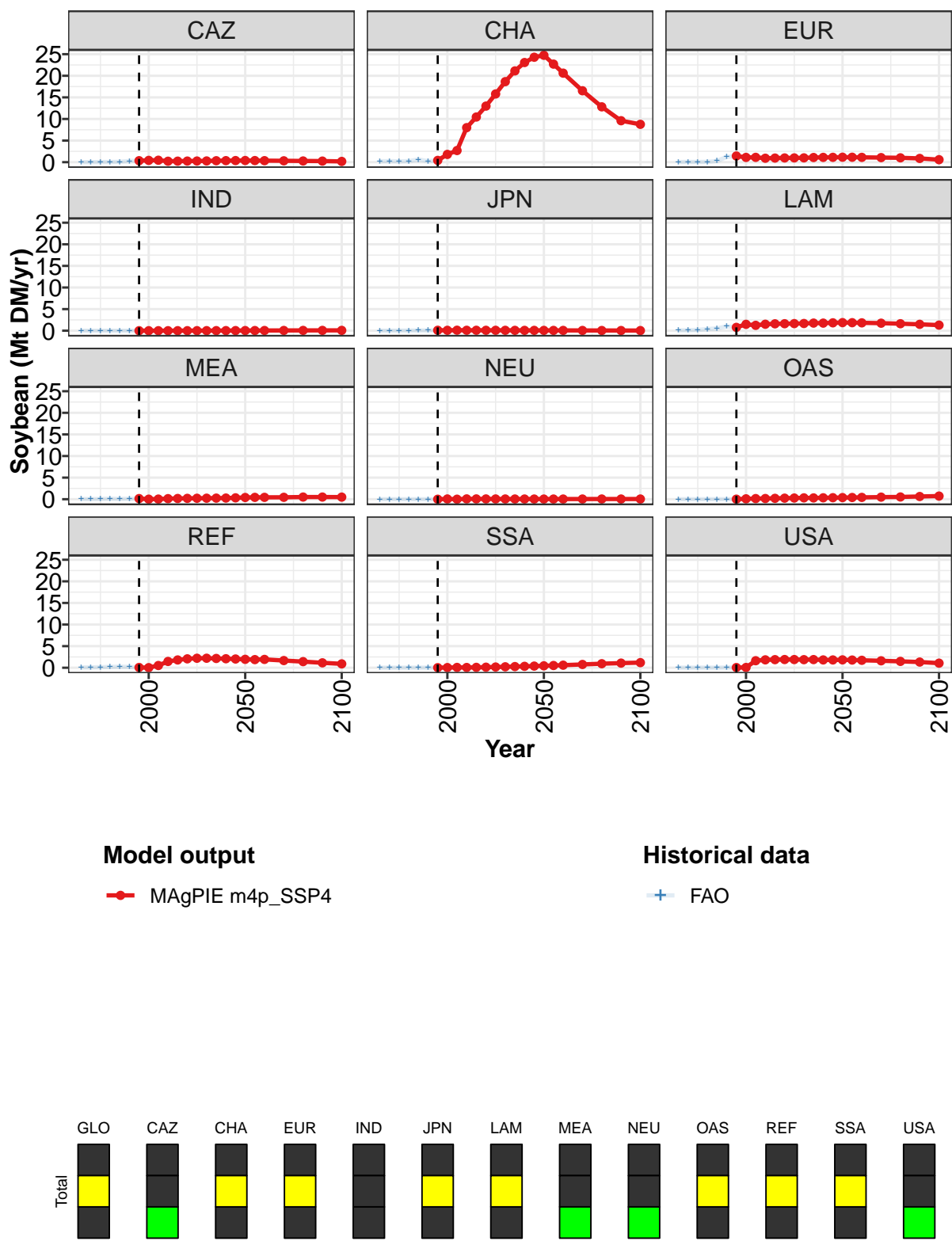


Figure 93: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.4	5.2	8.0	14.4	17.6	20.5	23.6	26.6	29.3	31.3	32.6
CAZ	0.3	0.4	0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4
CHA	0.4	1.8	2.7	8.0	10.5	13.0	15.8	18.6	21.1	23.1	24.3
EUR	1.4	1.1	1.1	0.9	1.0	1.0	1.0	1.0	1.1	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	1.5	1.2	1.5	1.6	1.6	1.6	1.7	1.8	1.8	1.8
MEA	0.2	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3
NEU	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
OAS	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4
REF	0.1	0.0	0.5	1.5	1.8	2.1	2.2	2.2	2.1	2.1	2.0
SSA	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4
USA	0.1	0.1	1.6	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8

Table 278: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

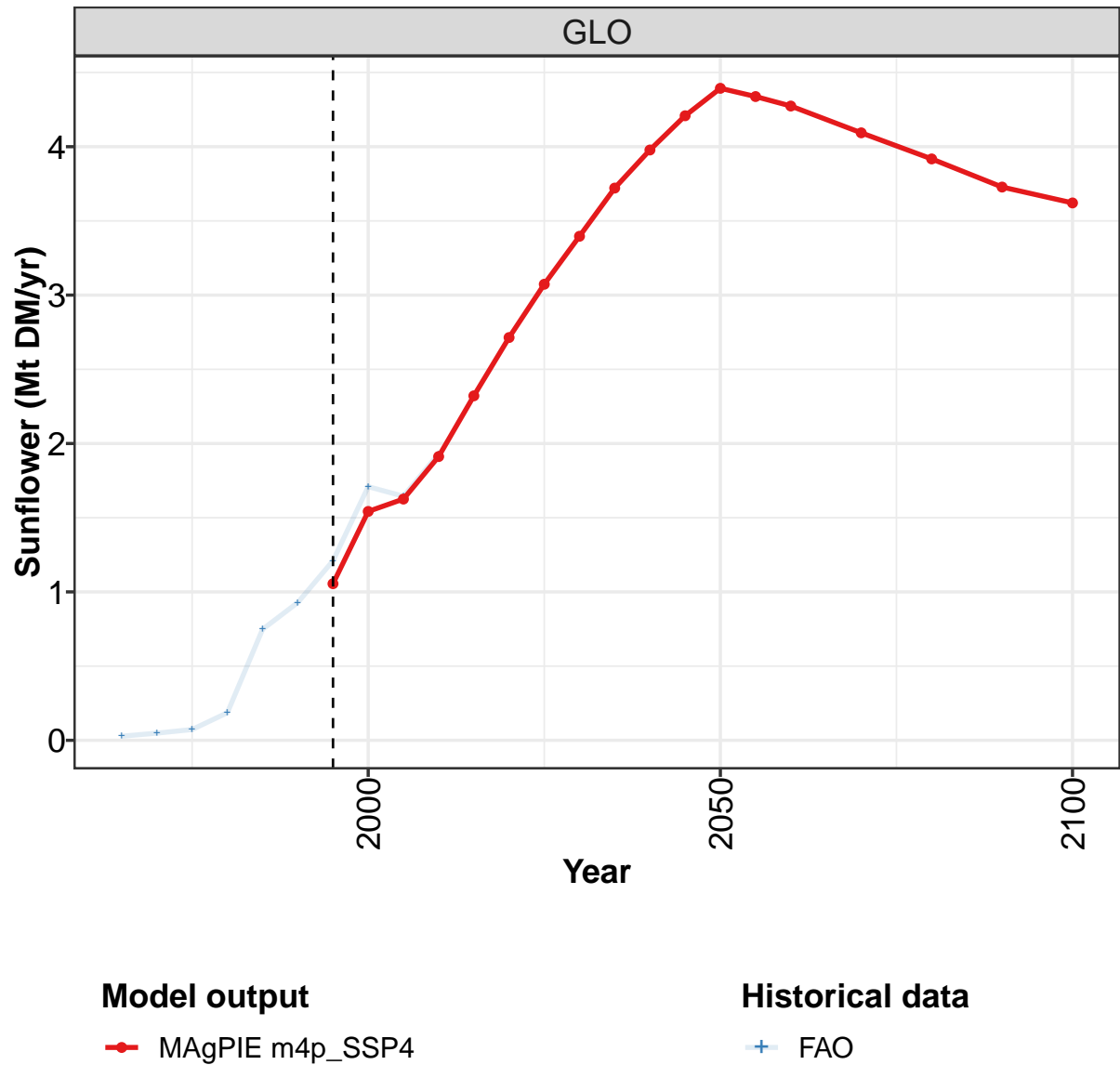
	2050	2055	2060	2070	2080	2090	2100
GLO	33.3	31.2	29.2	24.8	20.7	17.0	15.3
CAZ	0.4	0.4	0.3	0.3	0.3	0.2	0.2
CHA	24.8	22.7	20.6	16.5	12.8	9.6	8.8
EUR	1.2	1.1	1.1	1.1	1.0	0.9	0.6
IND	0.0	0.0	0.0	0.1	0.1	0.1	0.1
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	1.9	1.9	1.8	1.7	1.6	1.5	1.3
MEA	0.4	0.4	0.4	0.4	0.5	0.5	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.4	0.4	0.4	0.5	0.5	0.6	0.7
REF	1.9	1.9	1.9	1.7	1.4	1.1	0.9
SSA	0.4	0.5	0.6	0.8	0.9	1.1	1.2
USA	1.8	1.8	1.7	1.6	1.5	1.3	1.1

Table 279: MAgPIE m4p\_SSP4 — 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



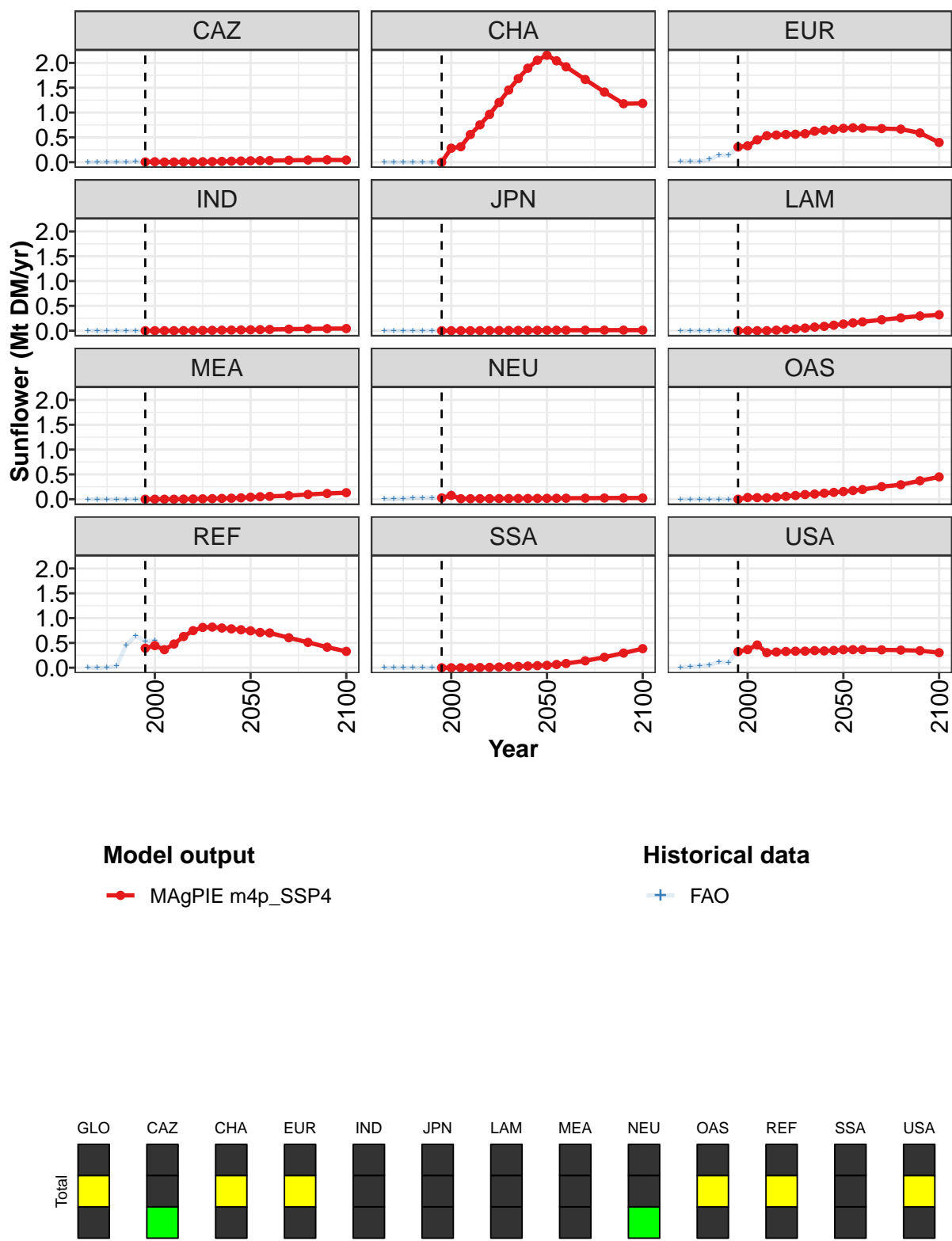


Figure 94: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.06	1.54	1.63	1.91	2.32	2.71	3.07	3.40	3.72	3.98	4.21
CAZ	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02
CHA	0.00	0.28	0.31	0.56	0.75	0.96	1.20	1.45	1.68	1.89	2.05
EUR	0.31	0.33	0.45	0.53	0.55	0.56	0.56	0.57	0.62	0.64	0.66
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	0.00	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	0.01	0.02	0.02
OAS	0.00	0.03	0.03	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.14
REF	0.39	0.45	0.36	0.48	0.63	0.75	0.81	0.82	0.80	0.78	0.77
SSA	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.03	0.04
USA	0.32	0.36	0.46	0.30	0.32	0.33	0.33	0.33	0.35	0.34	0.35

Table 281: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

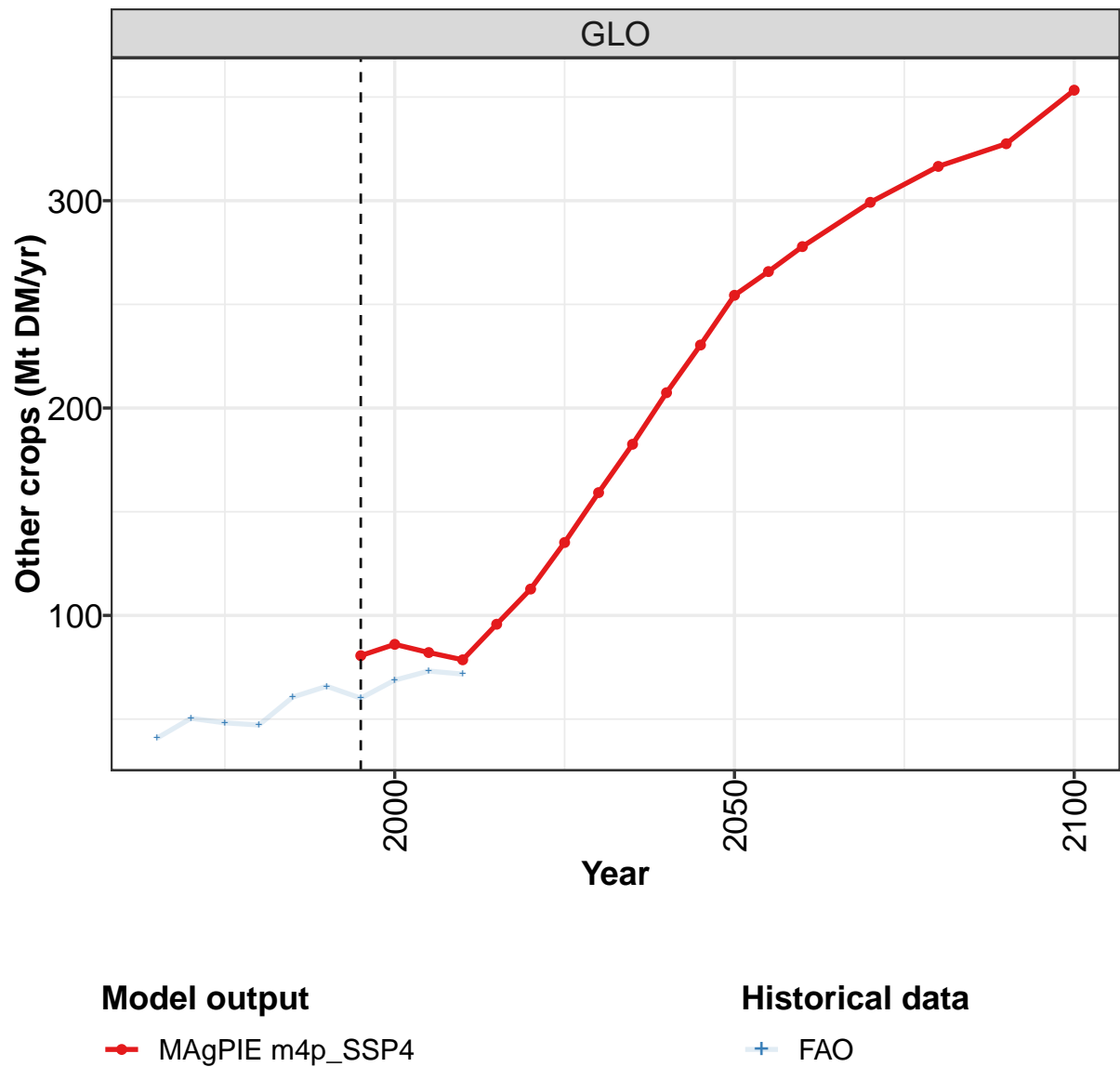
	2050	2055	2060	2070	2080	2090	2100
GLO	4.39	4.34	4.27	4.09	3.92	3.73	3.62
CAZ	0.03	0.03	0.03	0.04	0.04	0.05	0.04
CHA	2.15	2.04	1.92	1.67	1.41	1.18	1.18
EUR	0.68	0.69	0.69	0.68	0.67	0.59	0.40
IND	0.02	0.02	0.02	0.03	0.04	0.04	0.04
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.13	0.16	0.18	0.22	0.26	0.30	0.32
MEA	0.04	0.05	0.06	0.07	0.10	0.12	0.13
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.15	0.17	0.20	0.25	0.29	0.37	0.45
REF	0.74	0.71	0.70	0.60	0.51	0.41	0.33
SSA	0.05	0.07	0.09	0.14	0.21	0.30	0.38
USA	0.36	0.36	0.36	0.36	0.35	0.34	0.30

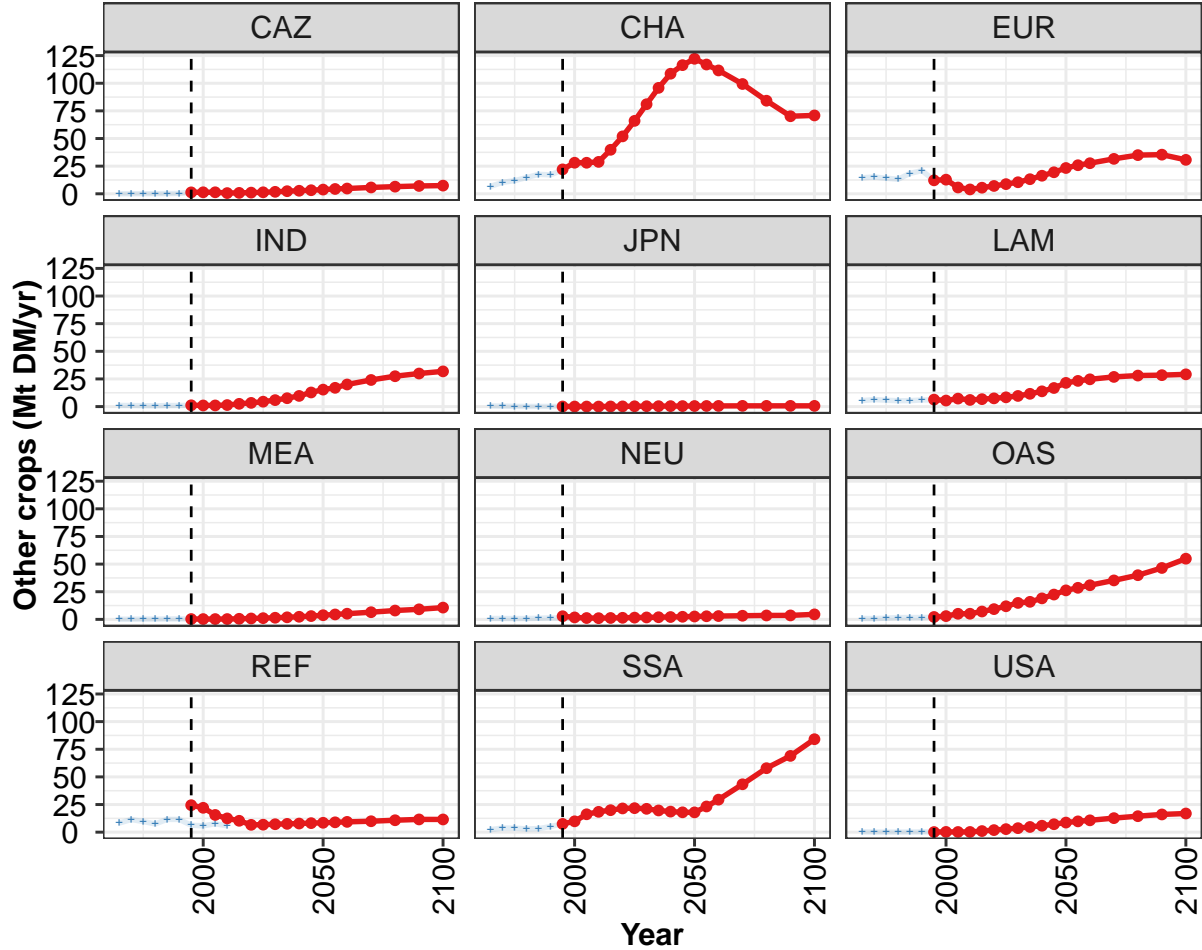
Table 282: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	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





Model output

MAgPIE m4p\_SSP4

Historical data

FAO

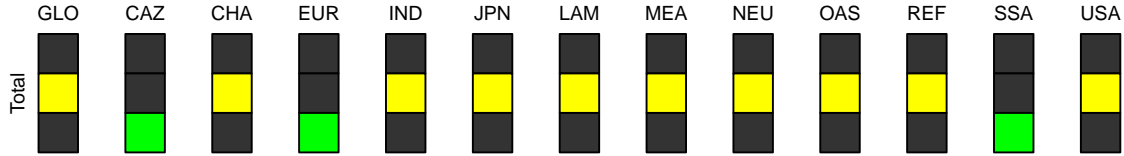


Figure 95: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	86	82	79	96	113	135	159	183	207	230
CAZ	1	1	1	1	1	1	1	2	2	3	3
CHA	22	28	28	29	40	52	66	81	96	109	116
EUR	12	13	6	4	6	7	9	10	13	16	19
IND	1	1	1	1	3	3	4	6	8	10	13
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	5	7	6	7	7	8	10	12	14	17
MEA	0	0	0	0	1	1	1	1	2	2	3
NEU	3	2	1	1	1	1	2	2	2	2	2
OAS	2	3	5	5	7	9	12	15	16	19	22
REF	24	22	16	12	10	7	7	7	8	8	8
SSA	8	10	16	18	20	21	22	21	20	19	18
USA	0	0	0	0	1	2	3	4	5	6	7

Table 284: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops (Mt DM/yr) [PART 1/2]

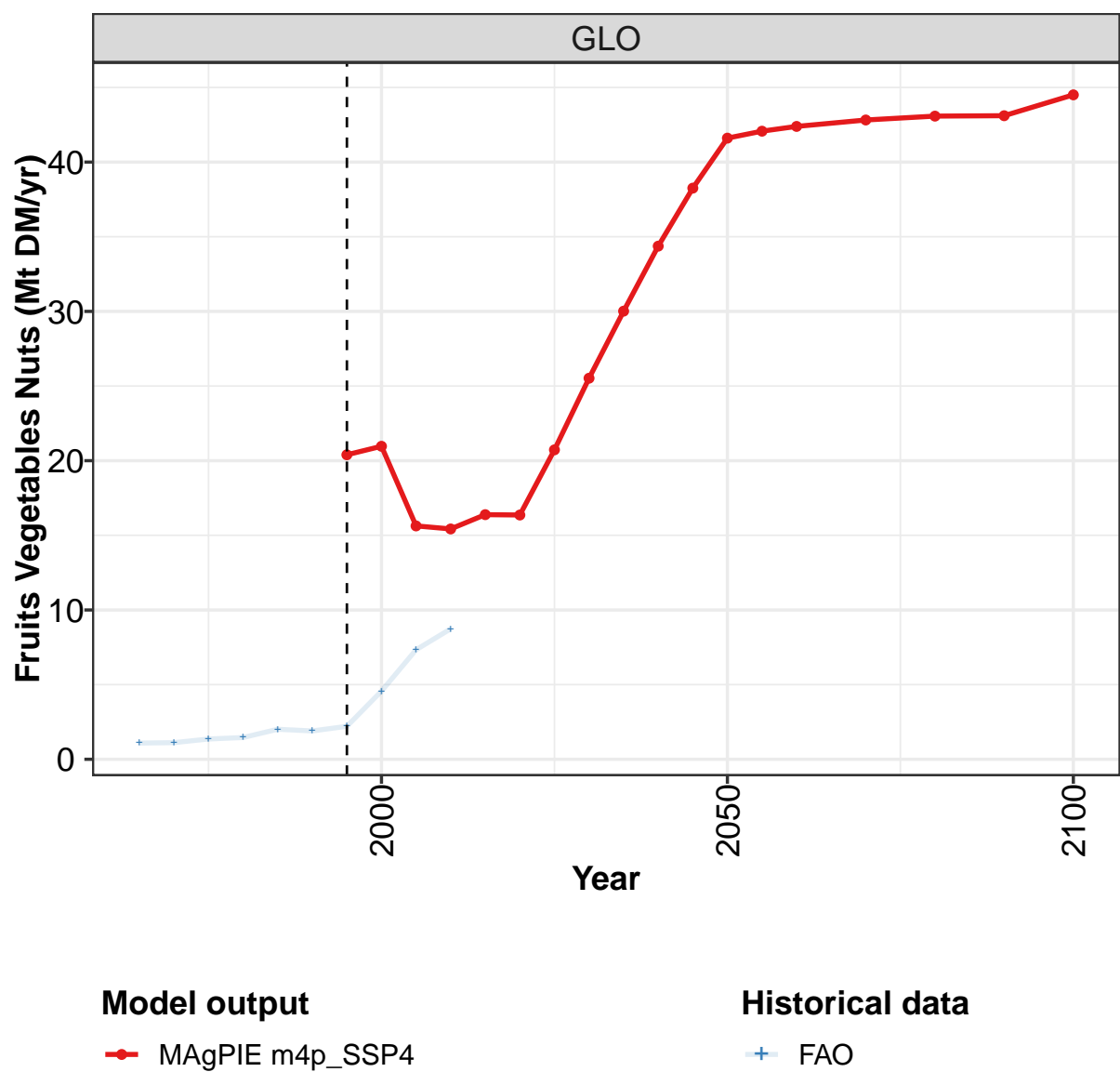
	2050	2055	2060	2070	2080	2090	2100
GLO	254	266	278	299	317	327	353
CAZ	4	4	5	6	6	7	7
CHA	122	117	112	99	84	70	71
EUR	23	26	28	32	35	35	31
IND	15	17	20	24	27	30	32
JPN	1	1	1	1	1	1	1
LAM	21	23	25	27	28	28	29
MEA	4	4	5	7	8	9	11
NEU	3	3	3	3	4	4	5
OAS	26	29	31	35	40	47	55
REF	9	9	9	10	11	12	12
SSA	18	23	29	43	58	69	84
USA	9	10	11	13	14	16	17

Table 285: MAgPIE m4p\_SSP4 — 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



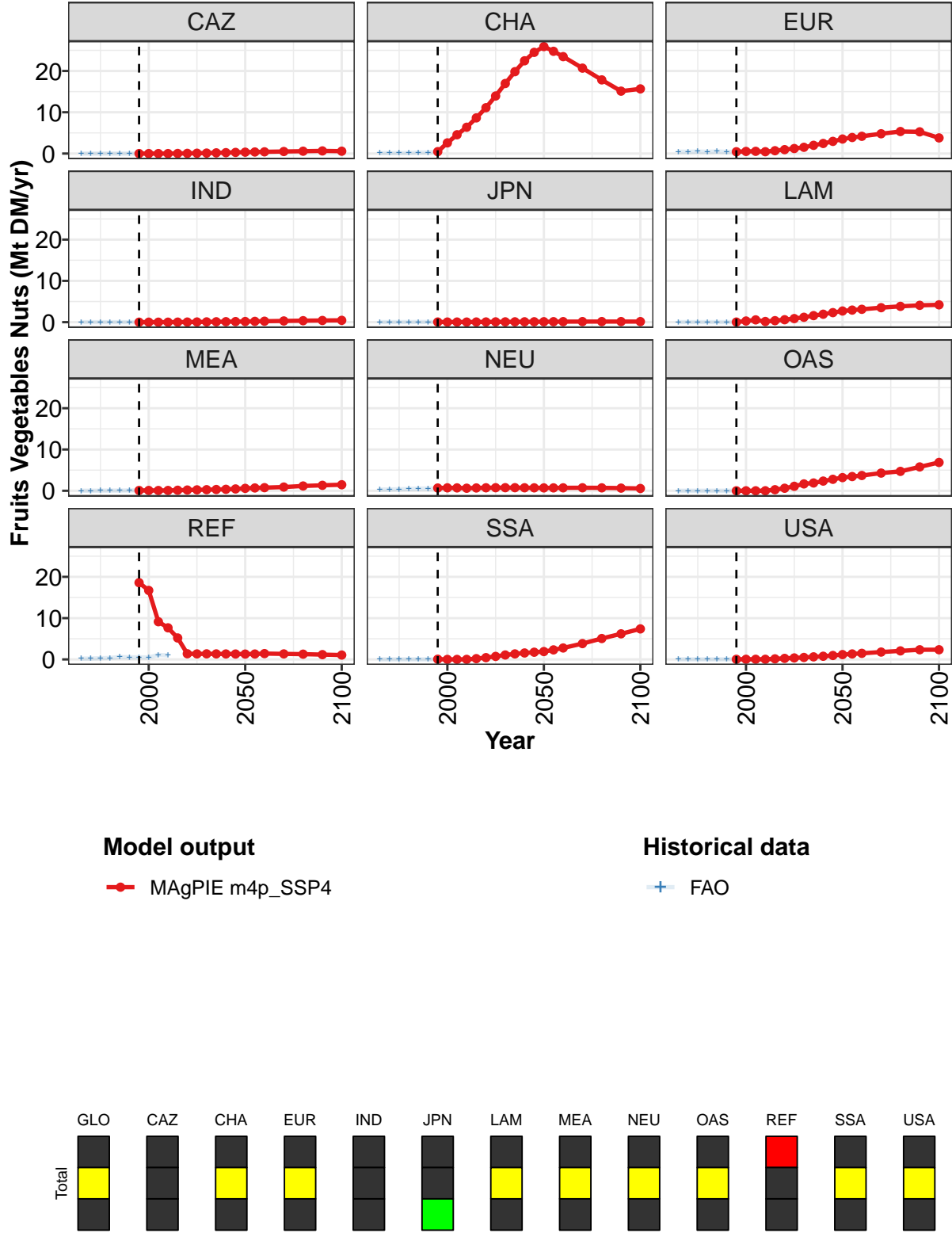


Figure 96: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	20.4	21.0	15.6	15.4	16.4	16.4	20.7	25.5	30.0	34.4	38.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3
CHA	0.5	2.6	4.6	6.4	8.6	11.1	13.9	17.0	19.8	22.5	24.5
EUR	0.4	0.5	0.5	0.5	0.7	0.9	1.2	1.5	2.0	2.4	2.9
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
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	1.9	2.3
MEA	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5
NEU	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.7
OAS	0.0	0.0	0.0	0.0	0.3	0.6	1.1	1.7	1.9	2.4	2.8
REF	18.6	16.7	9.1	7.7	5.2	1.4	1.3	1.3	1.3	1.3	1.3
SSA	0.1	0.0	0.0	0.0	0.2	0.4	0.7	1.1	1.3	1.6	1.7
USA	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.5	0.6	0.8	1.0

Table 287: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)  
[PART 1/2]

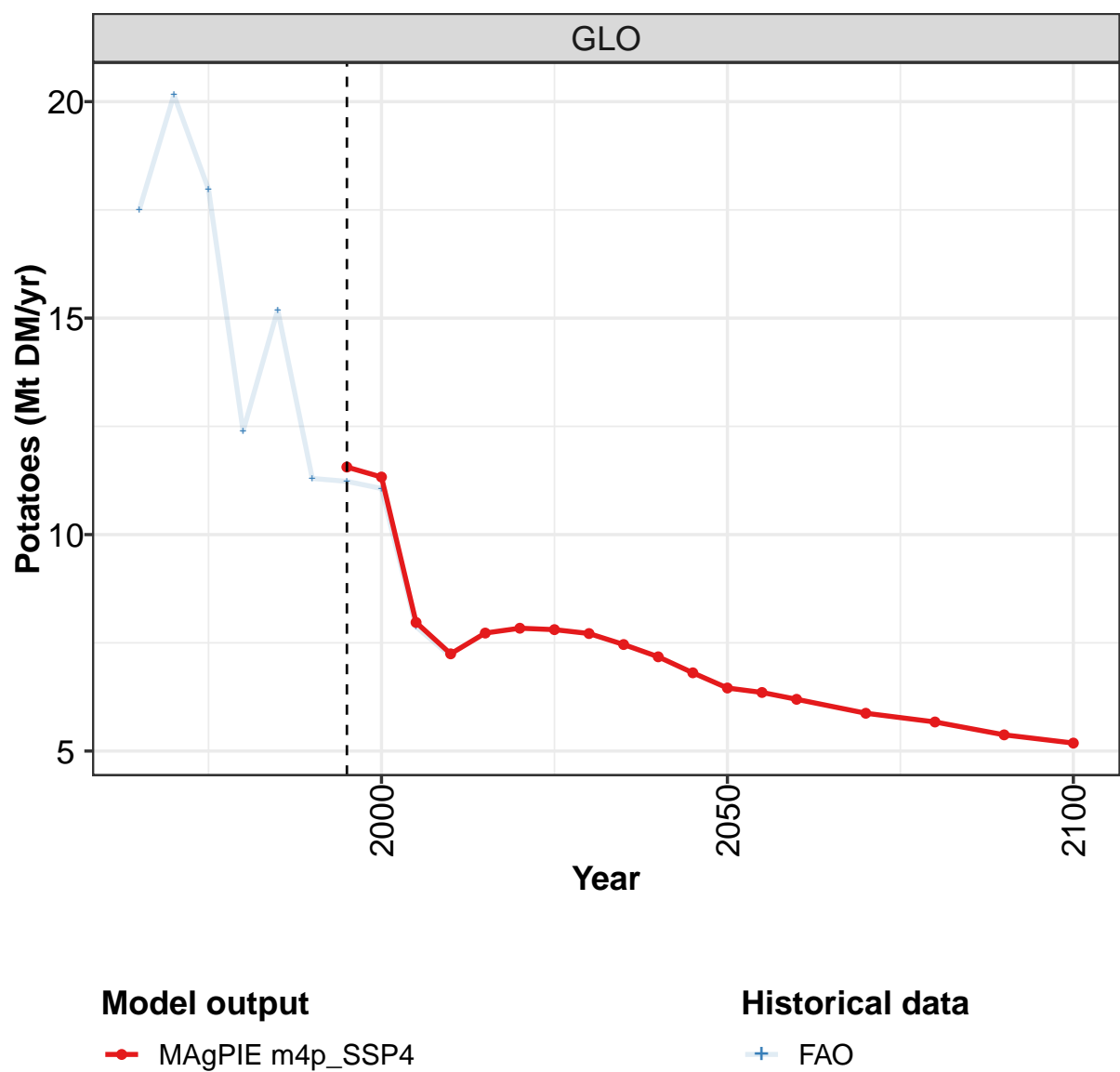
	2050	2055	2060	2070	2080	2090	2100
GLO	41.6	42.1	42.4	42.8	43.1	43.1	44.5
CAZ	0.3	0.4	0.4	0.5	0.6	0.6	0.6
CHA	25.9	24.8	23.5	20.7	17.8	15.1	15.7
EUR	3.5	3.9	4.2	4.8	5.3	5.3	3.8
IND	0.2	0.2	0.2	0.3	0.4	0.4	0.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.7	2.9	3.1	3.5	3.8	4.1	4.2
MEA	0.6	0.7	0.8	0.9	1.2	1.3	1.5
NEU	0.7	0.7	0.7	0.7	0.7	0.6	0.6
OAS	3.2	3.5	3.7	4.3	4.7	5.8	6.9
REF	1.3	1.3	1.4	1.3	1.3	1.2	1.1
SSA	1.9	2.3	2.8	3.8	5.1	6.2	7.4
USA	1.2	1.3	1.5	1.8	2.1	2.3	2.3

Table 288: MAgPIE m4p\_SSP4 — 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



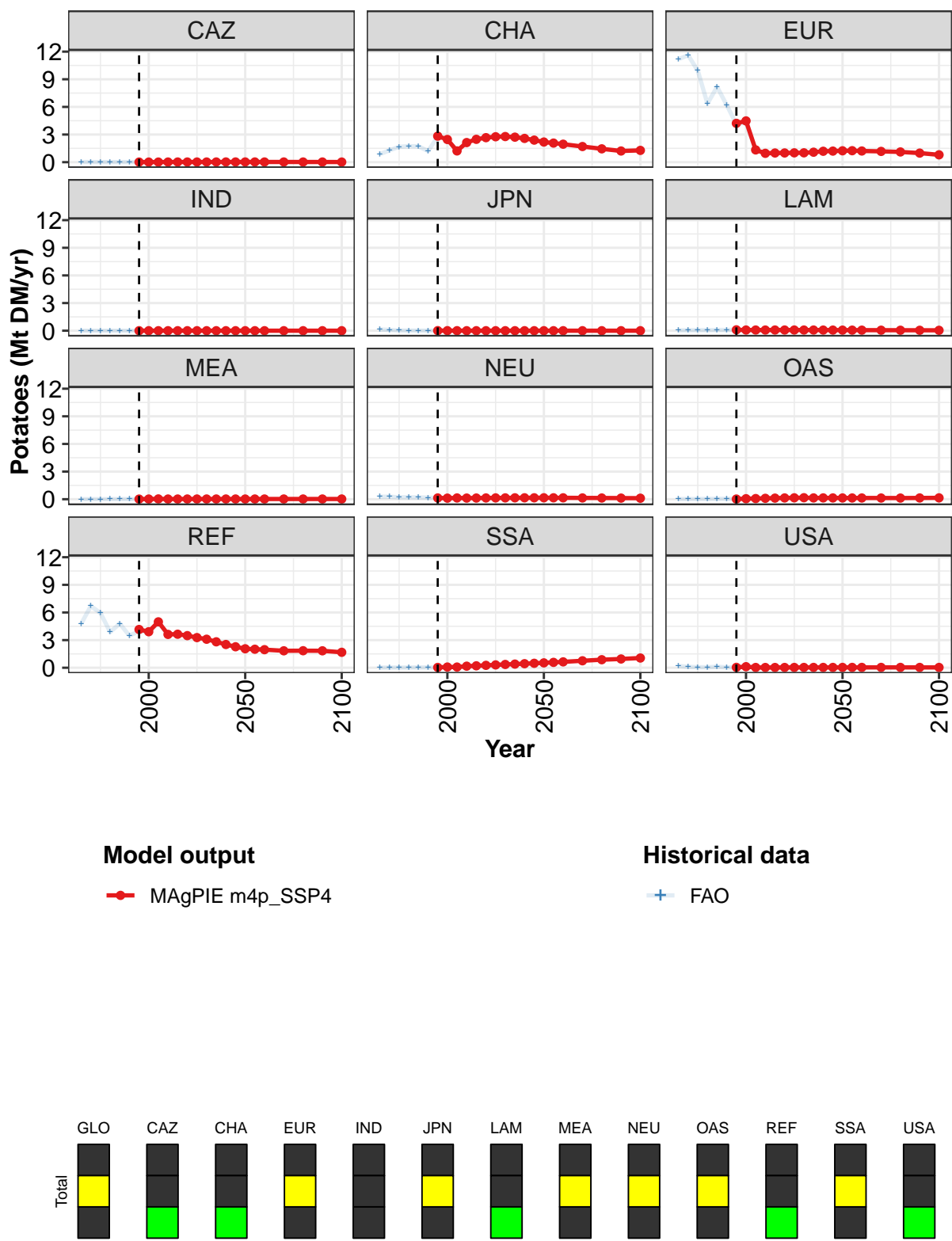


Figure 97: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.6	11.3	8.0	7.2	7.7	7.8	7.8	7.7	7.5	7.2	6.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.8	2.5	1.2	2.1	2.5	2.7	2.8	2.8	2.7	2.6	2.4
EUR	4.2	4.5	1.3	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.2
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	0.1	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	0.1	0.2	0.2	0.2
OAS	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1
REF	4.2	3.9	5.0	3.6	3.6	3.5	3.3	3.1	2.8	2.5	2.3
SSA	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5
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\_SSP4 — Demand—Feed—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

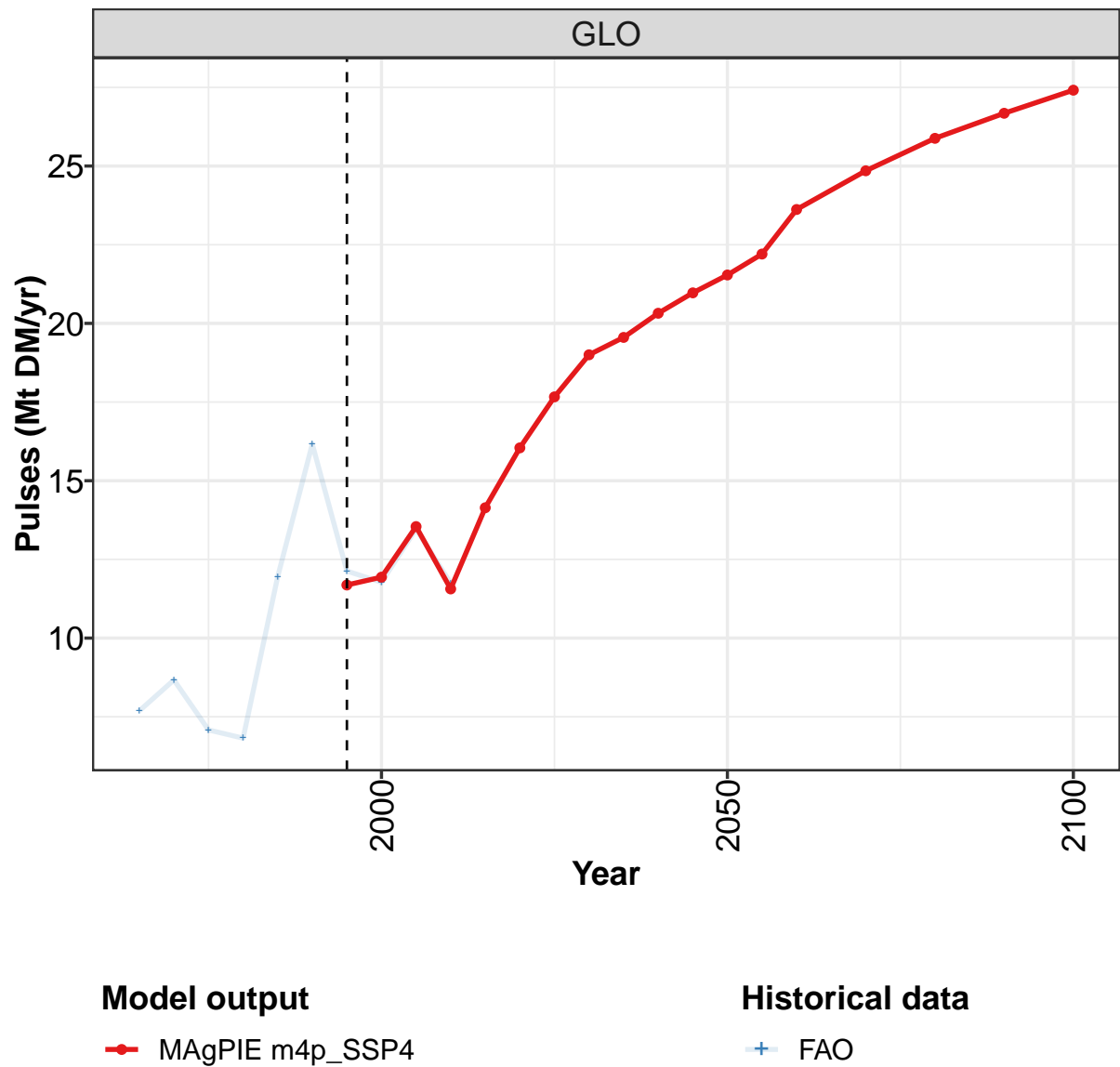
	2050	2055	2060	2070	2080	2090	2100
GLO	6.5	6.4	6.2	5.9	5.7	5.4	5.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.2	2.1	2.0	1.7	1.4	1.2	1.3
EUR	1.2	1.2	1.2	1.2	1.1	1.0	0.8
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.1	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.2	0.2	0.2	0.1	0.1	0.1	0.1
OAS	0.1	0.1	0.1	0.1	0.1	0.1	0.1
REF	2.1	2.0	2.0	1.8	1.8	1.8	1.7
SSA	0.5	0.6	0.6	0.8	0.9	1.0	1.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 291: MAgPIE m4p\_SSP4 — 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





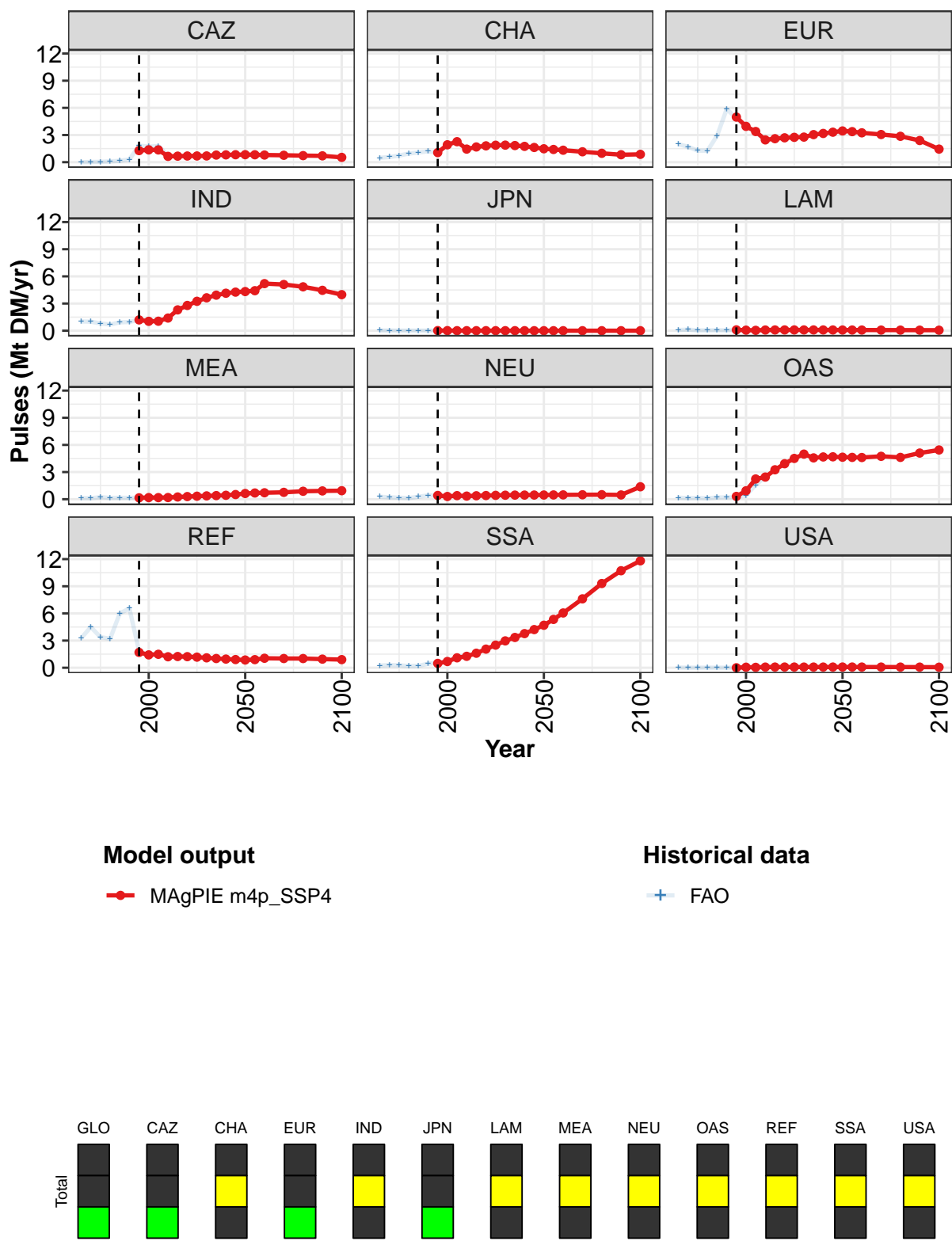


Figure 98: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.7	11.9	13.5	11.6	14.1	16.0	17.7	19.0	19.6	20.3	21.0
CAZ	1.3	1.4	1.4	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8
CHA	1.1	1.9	2.3	1.4	1.7	1.8	1.9	1.9	1.8	1.7	1.6
EUR	5.0	4.0	3.4	2.5	2.6	2.7	2.7	2.8	3.0	3.2	3.3
IND	1.2	1.0	1.0	1.4	2.3	2.8	3.2	3.6	3.9	4.1	4.3
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	0.2	0.3	0.3	0.4	0.4	0.4	0.5
NEU	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5
OAS	0.3	0.9	2.2	2.4	3.3	3.9	4.5	5.0	4.6	4.7	4.7
REF	1.7	1.4	1.5	1.2	1.2	1.2	1.2	1.1	1.0	1.0	0.9
SSA	0.5	0.7	1.1	1.3	1.6	2.1	2.5	3.0	3.3	3.8	4.2
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\_SSP4 — Demand—Feed—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

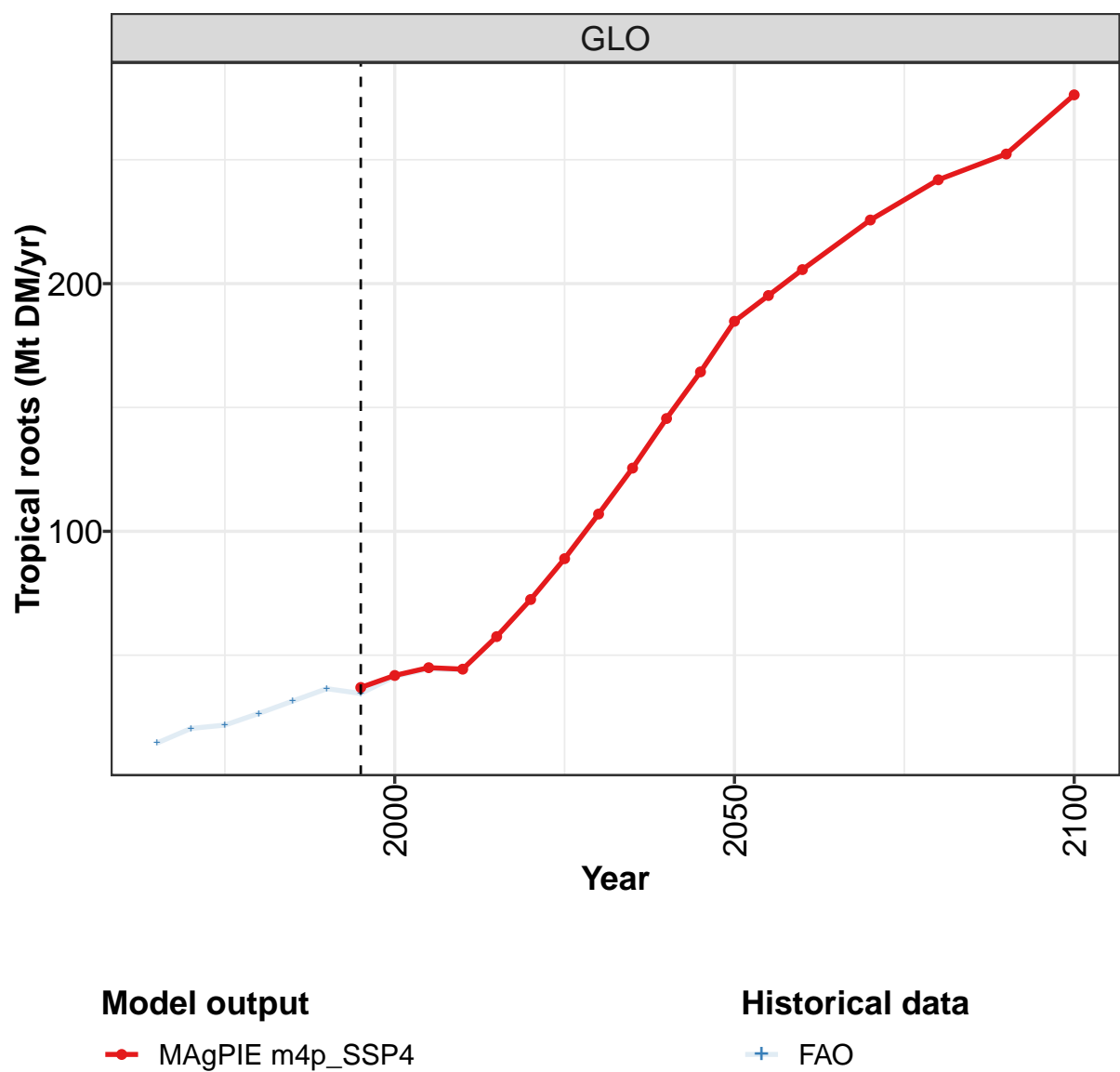
	2050	2055	2060	2070	2080	2090	2100
GLO	21.5	22.2	23.6	24.8	25.9	26.7	27.4
CAZ	0.8	0.8	0.8	0.8	0.7	0.7	0.5
CHA	1.5	1.4	1.3	1.2	1.0	0.8	0.9
EUR	3.4	3.4	3.2	3.1	2.9	2.4	1.4
IND	4.3	4.4	5.2	5.1	4.8	4.5	4.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MEA	0.6	0.7	0.7	0.8	0.9	0.9	0.9
NEU	0.5	0.5	0.5	0.5	0.5	0.5	1.4
OAS	4.6	4.6	4.6	4.7	4.6	5.1	5.4
REF	0.9	0.9	1.0	1.0	1.0	1.0	0.9
SSA	4.7	5.3	6.1	7.6	9.3	10.7	11.8
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 294: MAgPIE m4p\_SSP4 — 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



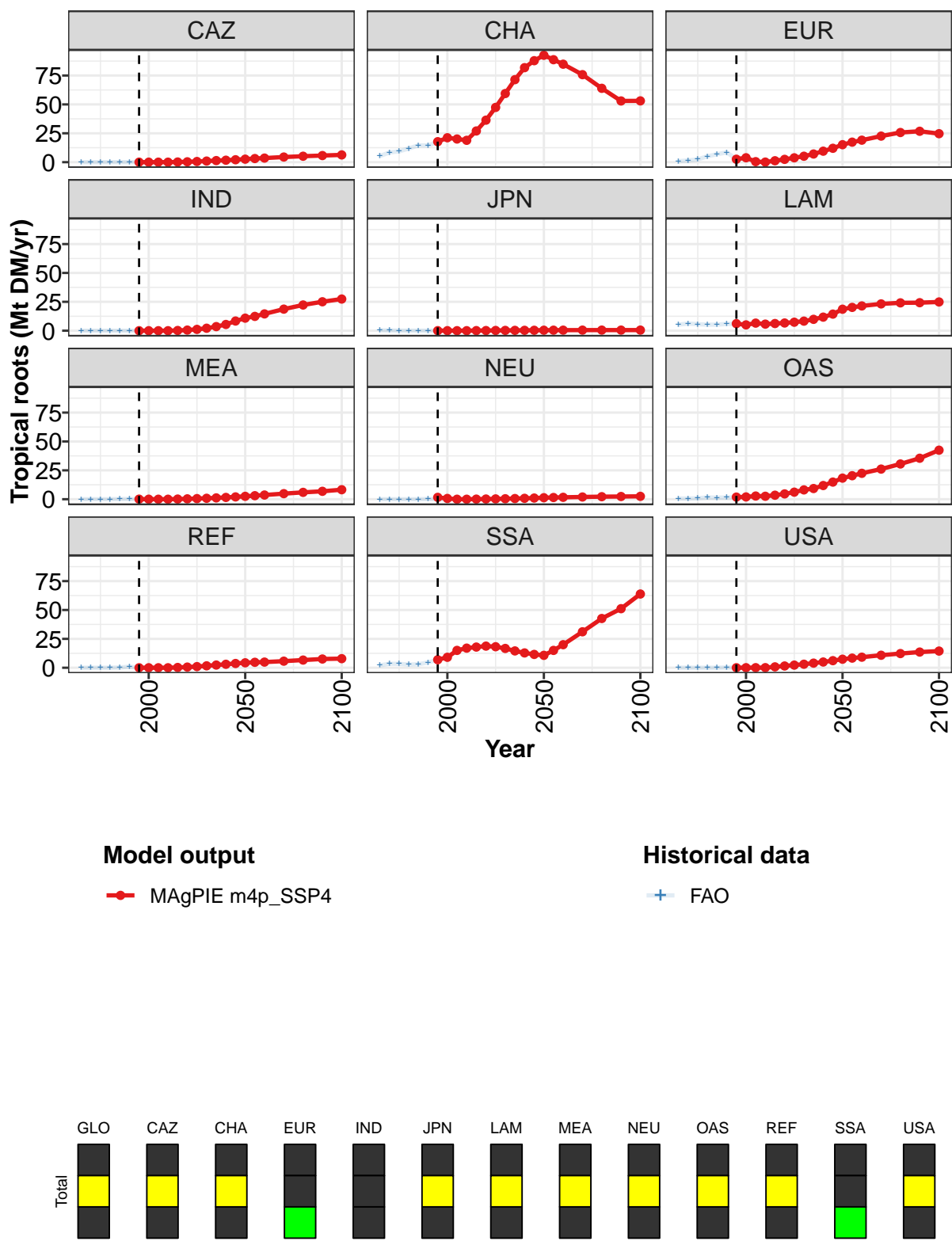


Figure 99: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	37	42	45	44	58	72	89	107	126	146	164
CAZ	0	0	0	0	0	0	1	1	1	2	2
CHA	18	21	20	19	27	36	47	59	71	82	88
EUR	3	4	0	0	1	2	4	5	7	10	12
IND	0	0	0	0	0	1	1	2	4	5	8
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	5	7	6	6	7	7	8	10	12	14
MEA	0	0	0	0	0	0	1	1	1	2	2
NEU	2	1	0	0	0	0	0	0	1	1	1
OAS	2	2	3	3	3	5	6	8	9	12	15
REF	0	0	0	0	0	1	1	2	2	3	4
SSA	7	9	15	17	18	19	18	17	15	13	12
USA	0	0	0	0	1	2	2	3	4	5	6

Table 296: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

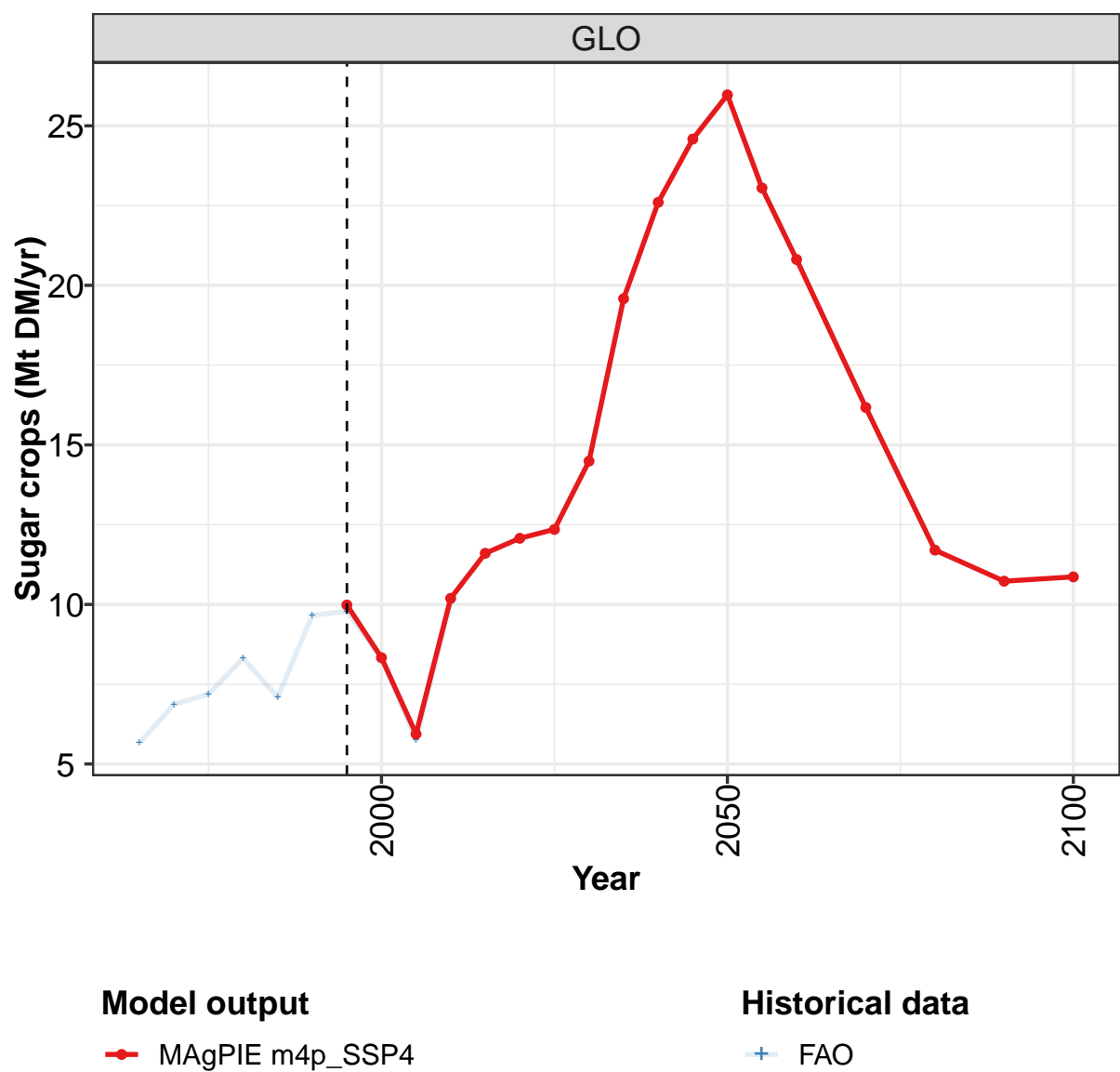
	2050	2055	2060	2070	2080	2090	2100
GLO	185	195	206	226	242	252	276
CAZ	3	3	4	4	5	6	6
CHA	93	89	85	76	64	53	53
EUR	15	17	19	23	26	27	25
IND	11	12	15	19	22	25	27
JPN	0	0	0	1	1	1	1
LAM	19	20	21	23	24	24	25
MEA	3	3	4	5	6	7	8
NEU	1	1	2	2	2	2	2
OAS	18	20	22	26	31	35	42
REF	4	5	5	6	7	8	8
SSA	11	15	20	31	43	51	64
USA	7	8	9	11	12	14	14

Table 297: MAgPIE m4p\_SSP4 — 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



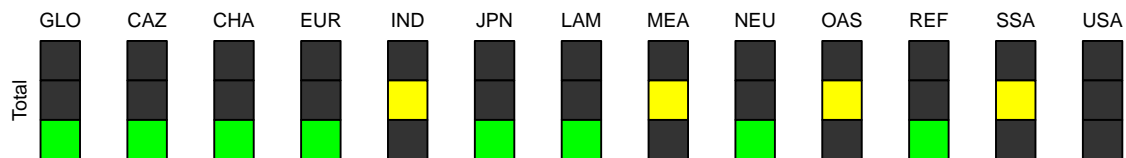
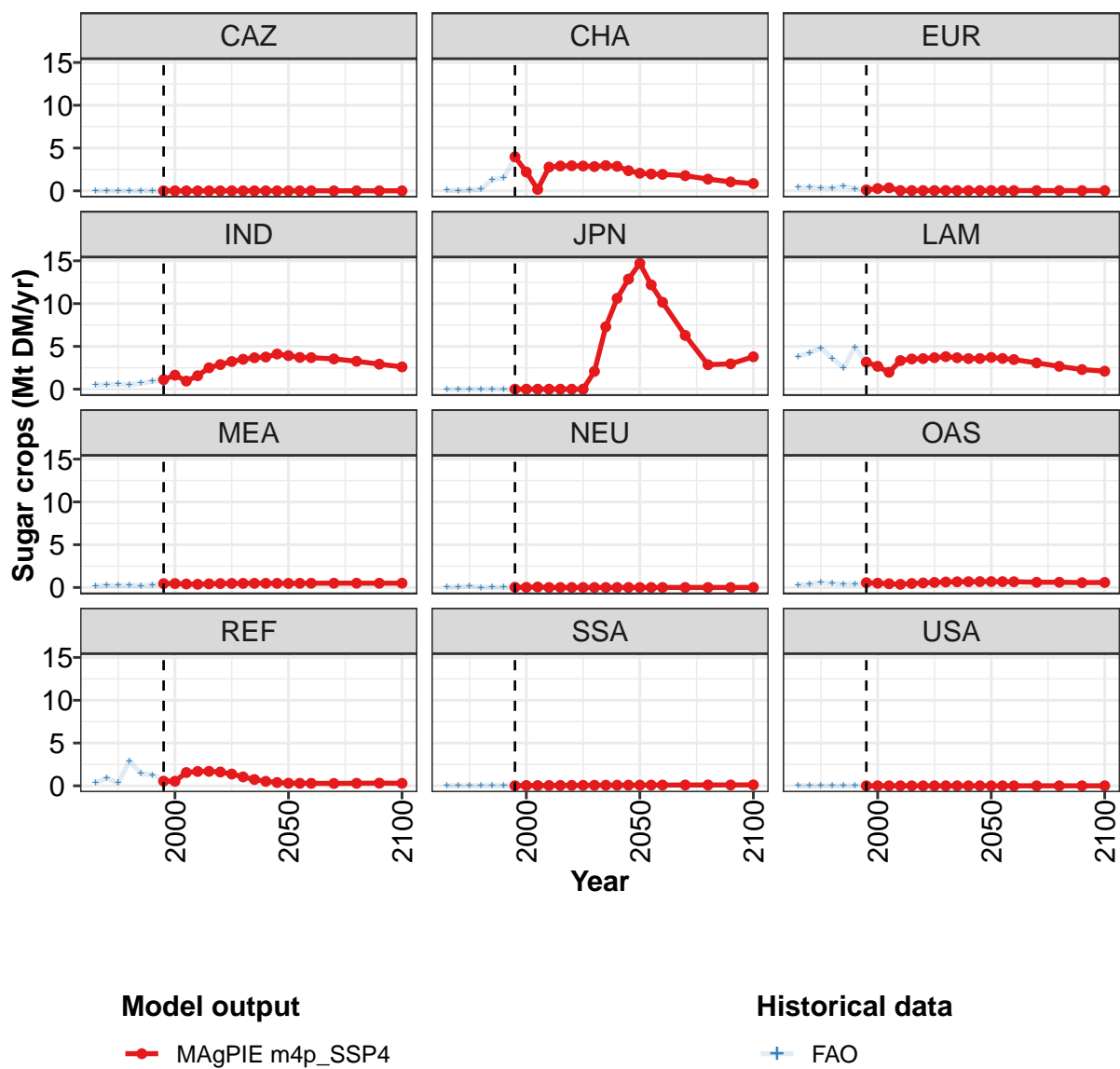


Figure 100: MAGPIE m4p\_SSP4 — Demand—Feed—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.0	8.3	5.9	10.2	11.6	12.1	12.4	14.5	19.6	22.6	24.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.0	2.2	0.2	2.8	2.9	2.9	2.9	2.8	2.9	2.9	2.4
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	2.5	2.9	3.2	3.5	3.7	3.8	4.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	7.3	10.6	12.9
LAM	3.2	2.7	2.0	3.3	3.5	3.6	3.7	3.8	3.7	3.6	3.6
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	0.6	0.7	0.7	0.7
REF	0.5	0.5	1.6	1.7	1.7	1.6	1.4	1.0	0.7	0.5	0.4
SSA	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0

Table 299: MAgPIE m4p-SSP4 — Demand—Feed—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	26.0	23.1	20.8	16.2	11.7	10.7	10.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.1	2.0	1.9	1.8	1.4	1.0	0.9
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.9	3.7	3.7	3.5	3.3	2.9	2.6
JPN	14.7	12.2	10.2	6.3	2.9	3.0	3.8
LAM	3.7	3.6	3.5	3.1	2.7	2.3	2.1
MEA	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.7	0.7	0.7	0.6	0.6	0.6	0.6
REF	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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

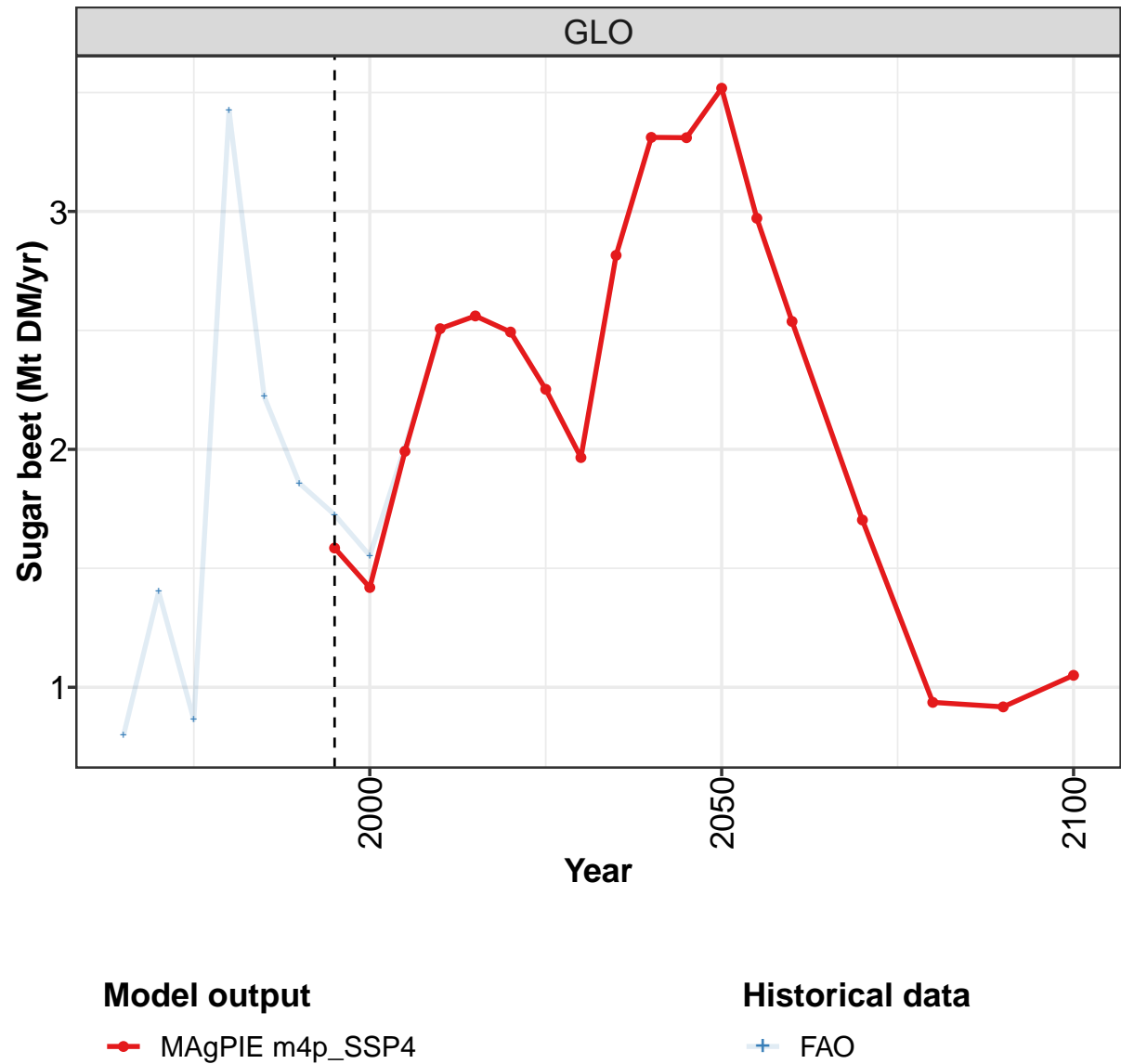
Table 300: MAgPIE m4p-SSP4 — Demand—Feed—Crops—Sugar crops (Mt DM/yr) [PART 2/2]

	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



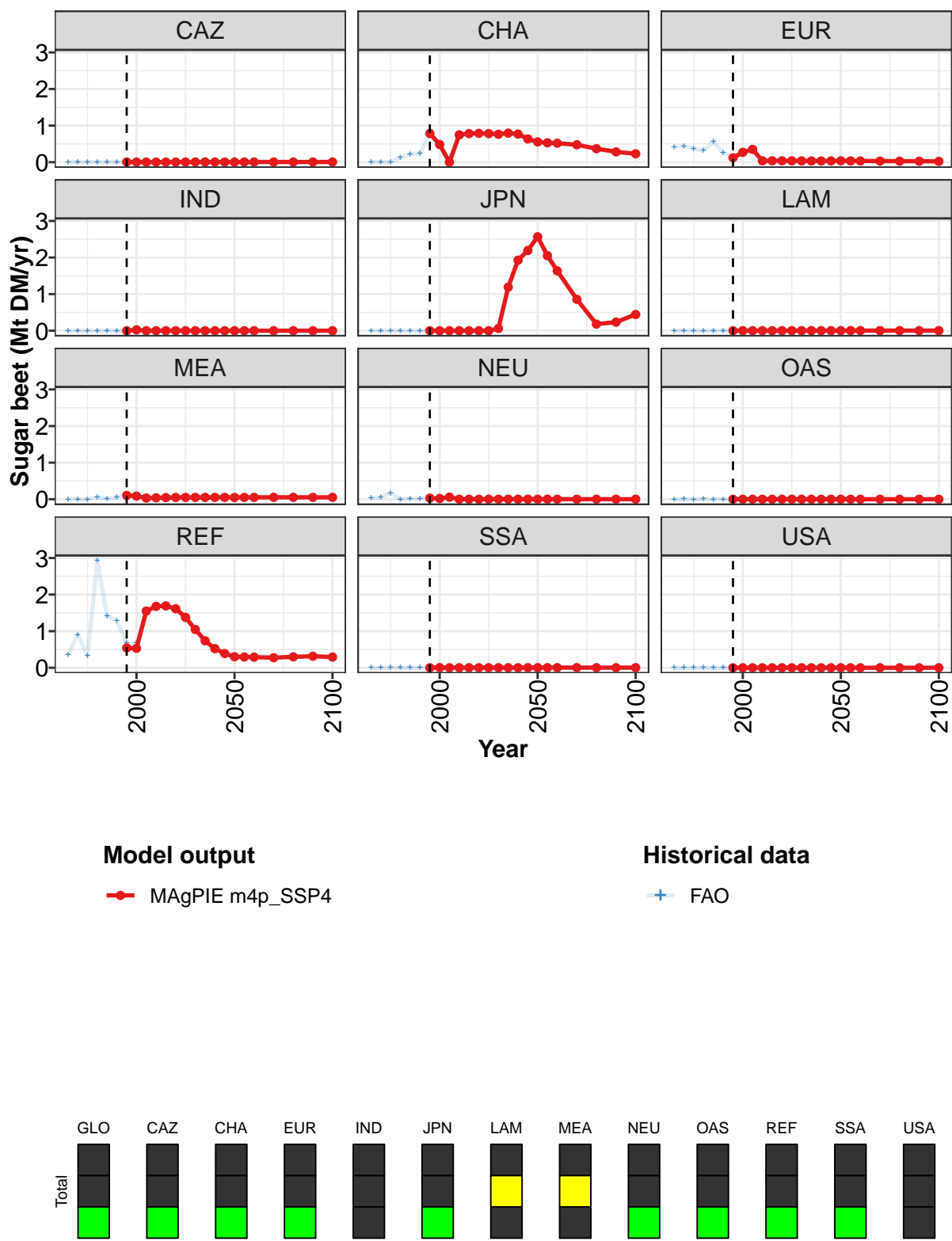


Figure 101: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.59	1.42	1.99	2.51	2.56	2.49	2.25	1.97	2.82	3.31	3.31
CAZ	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.78	0.48	0.00	0.75	0.78	0.79	0.78	0.76	0.79	0.77	0.64
EUR	0.12	0.27	0.35	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
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	0.06	1.19	1.93	2.19
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	0.04	0.05	0.05	0.05	0.05	0.05	0.05
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	1.69	1.61	1.38	1.05	0.74	0.52	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 302: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

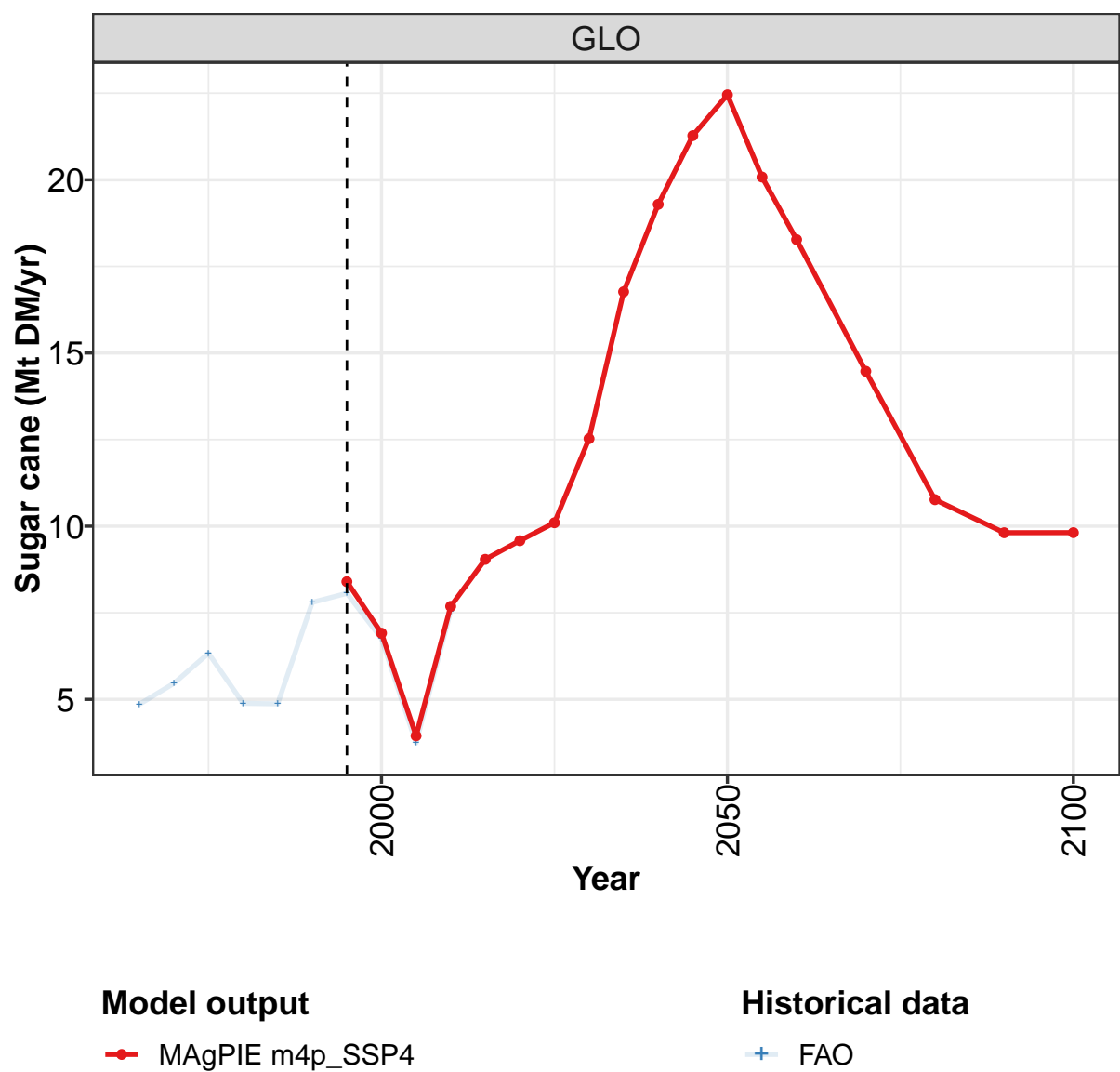
	2050	2055	2060	2070	2080	2090	2100
GLO	3.52	2.97	2.54	1.70	0.94	0.92	1.05
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.55	0.53	0.52	0.48	0.37	0.28	0.23
EUR	0.04	0.04	0.03	0.03	0.03	0.03	0.02
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	2.57	2.05	1.63	0.86	0.18	0.23	0.44
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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	0.30	0.29	0.29	0.27	0.30	0.31	0.29
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\_SSP4 — 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



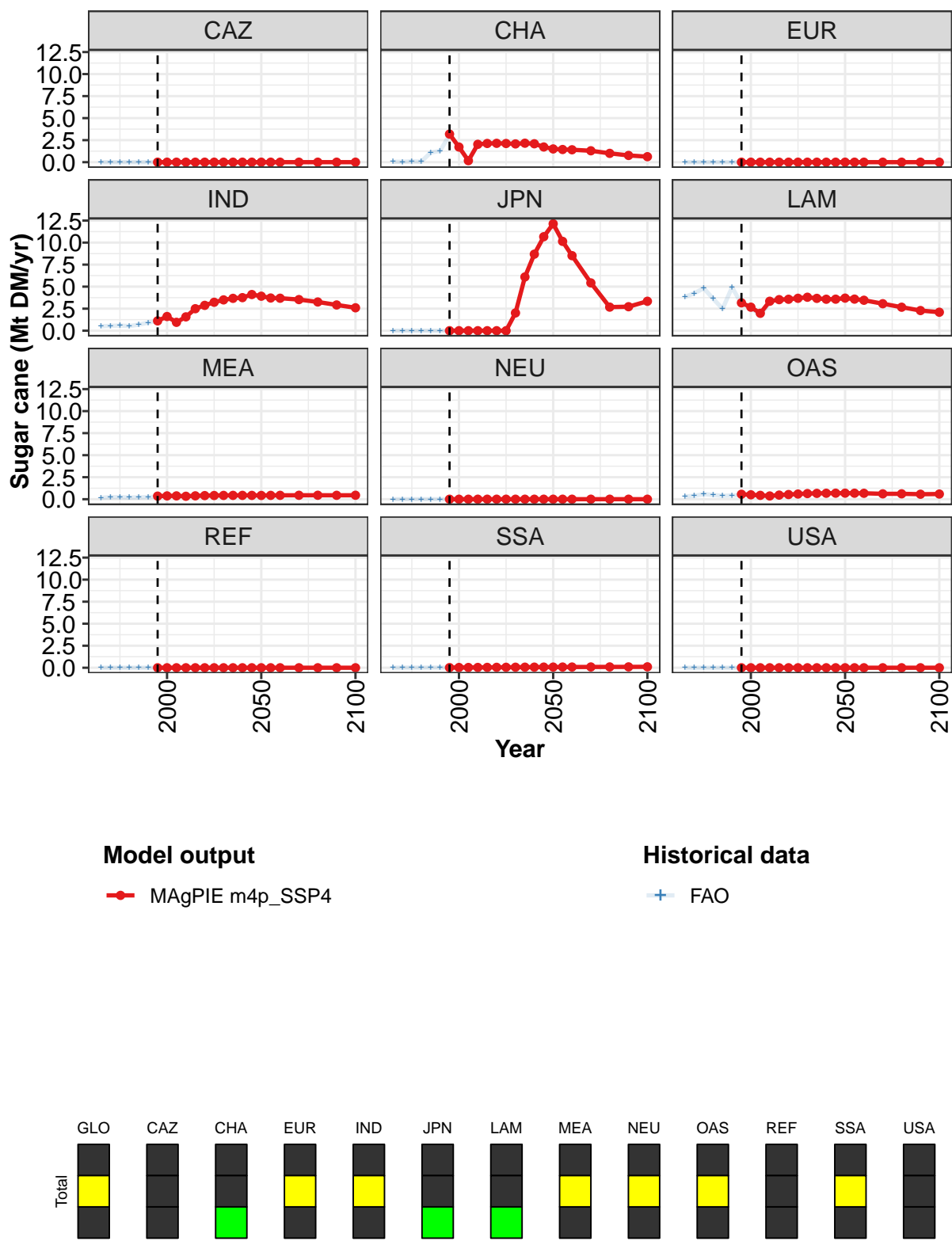


Figure 102: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8.4	6.9	3.9	7.7	9.0	9.6	10.1	12.5	16.8	19.3	21.3
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	2.1	2.2	2.1	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	1.1	1.6	1.0	1.6	2.5	2.9	3.2	3.5	3.7	3.8	4.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.1	8.7	10.7
LAM	3.2	2.7	2.0	3.3	3.5	3.6	3.7	3.8	3.7	3.6	3.6
MEA	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	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	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7
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	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0

Table 305: MAgPIE m4p\_SSP4 — Demand—Feed—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

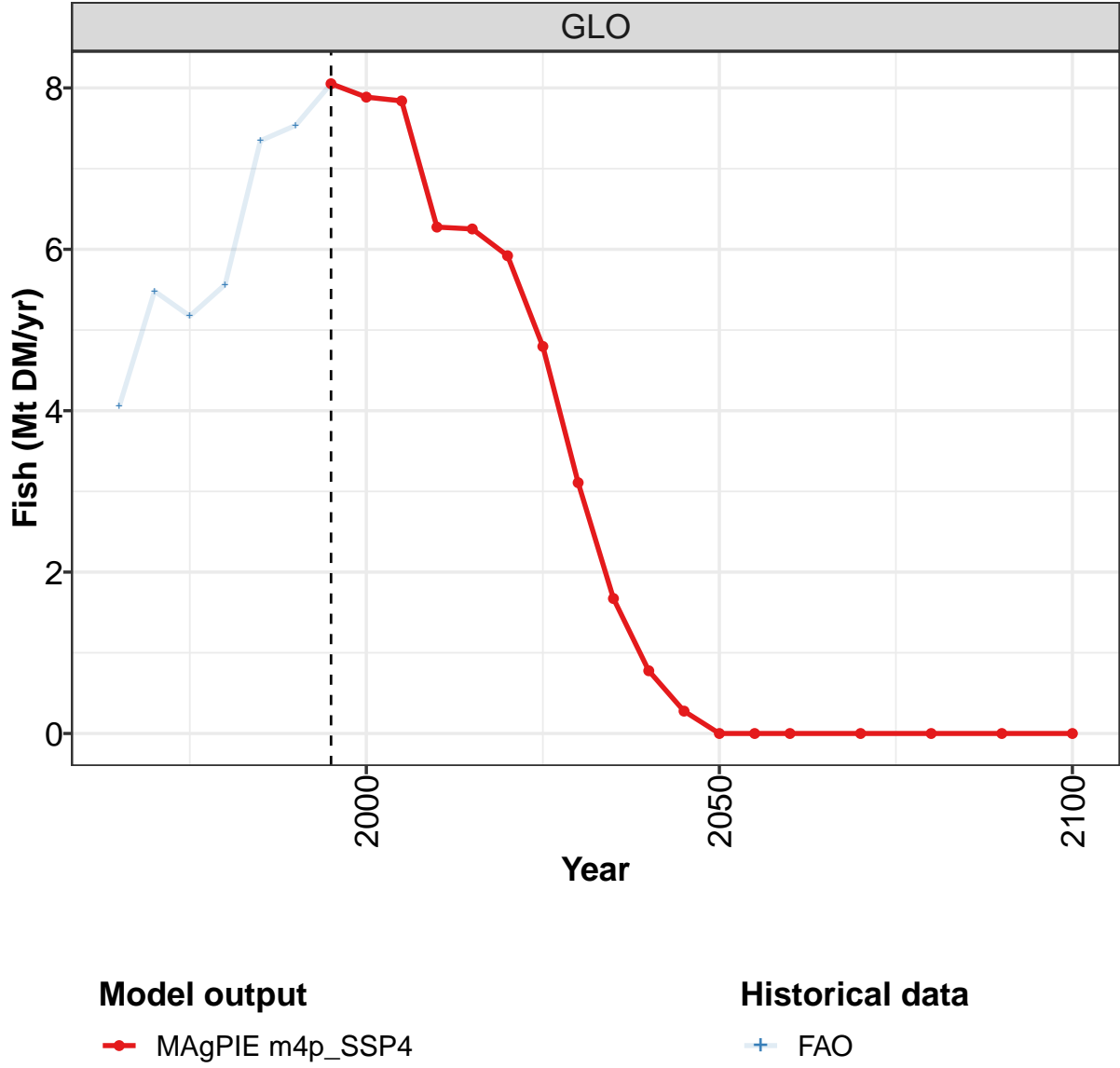
	2050	2055	2060	2070	2080	2090	2100
GLO	22.5	20.1	18.3	14.5	10.8	9.8	9.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.5	1.4	1.4	1.3	1.0	0.8	0.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3.9	3.7	3.7	3.5	3.3	2.9	2.6
JPN	12.1	10.1	8.5	5.4	2.7	2.7	3.3
LAM	3.7	3.6	3.5	3.1	2.7	2.3	2.1
MEA	0.4	0.4	0.4	0.5	0.5	0.4	0.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.7	0.7	0.7	0.6	0.6	0.6	0.6
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\_SSP4 — 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



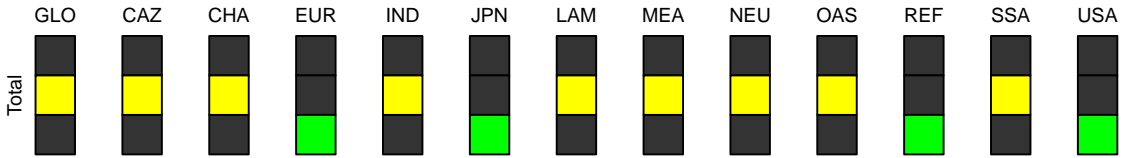
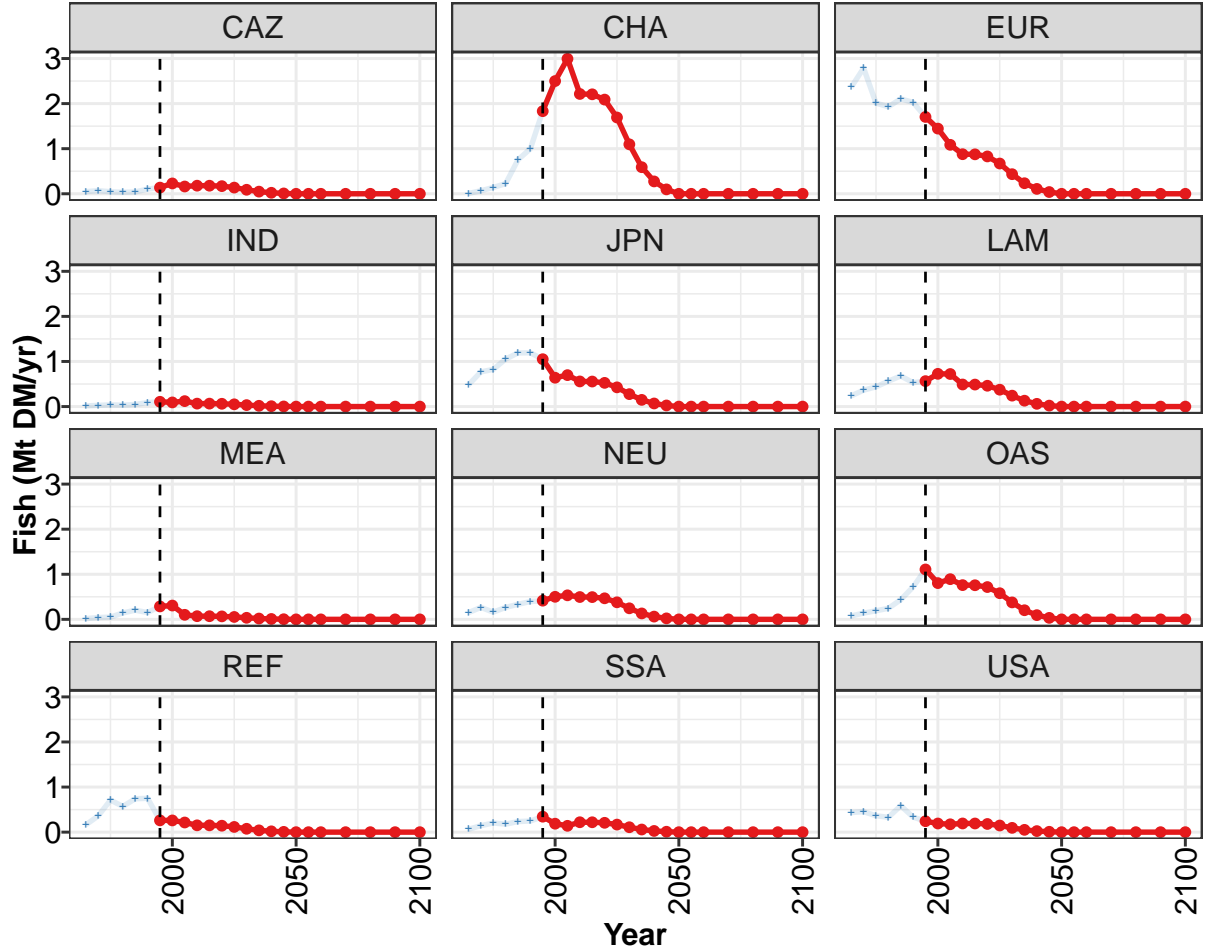


Figure 103: MAgPIE m4p\_SSP4 — Demand—Feed—Fish (Mt DM/yr)



	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\_SSP4 — Demand—Feed—Fish (Mt DM/yr) [PART 1/2]

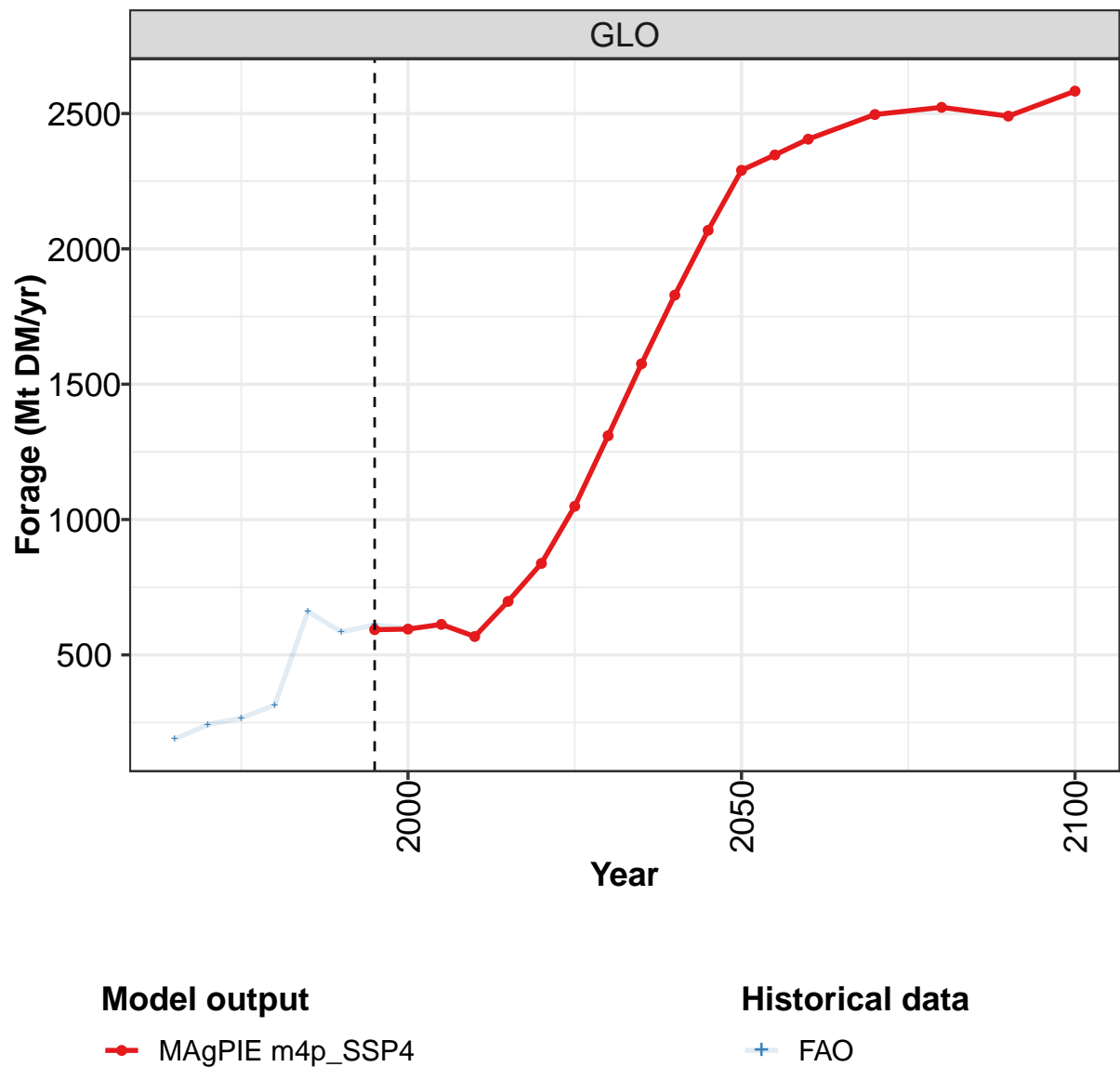
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	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

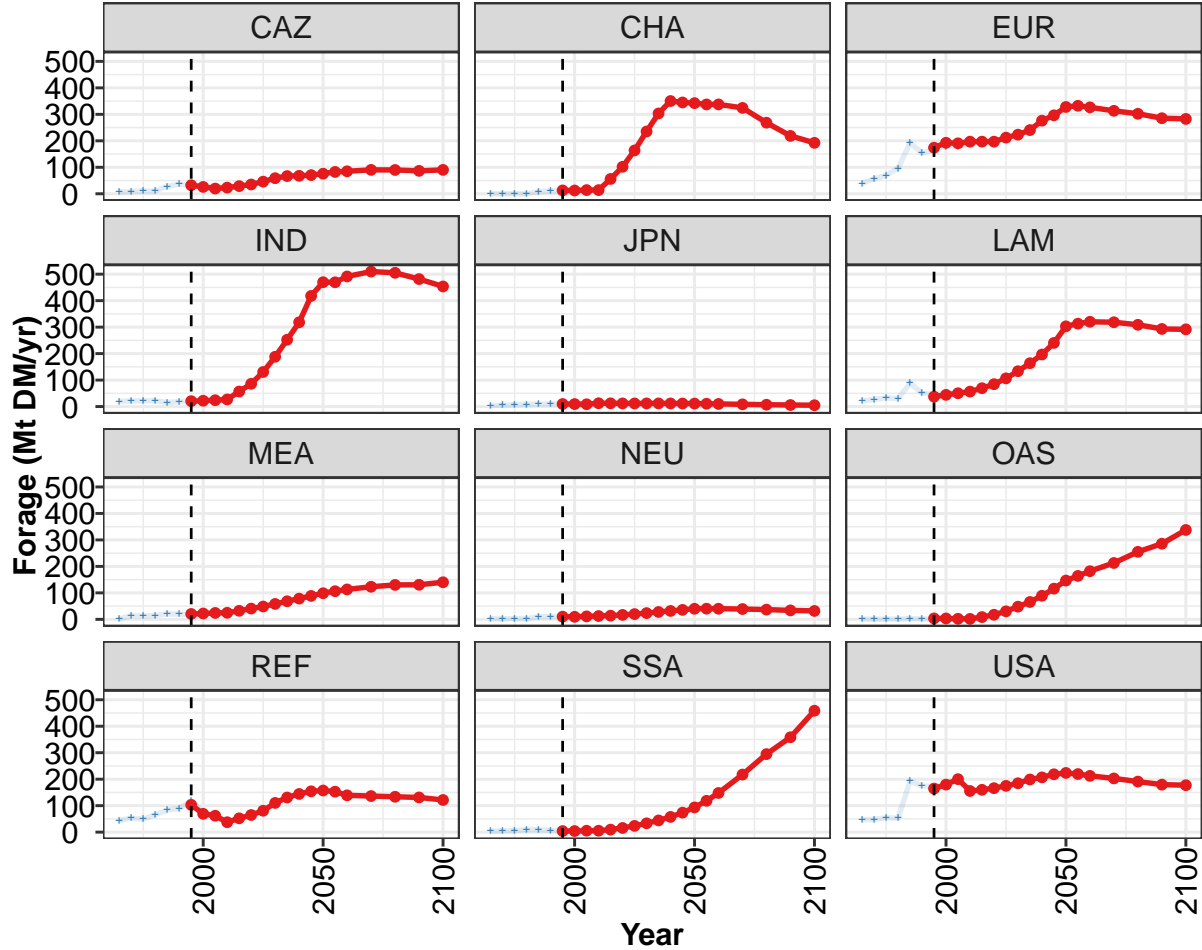
Table 309: MAgPIE m4p\_SSP4 — Demand—Feed—Fish (Mt DM/yr) [PART 2/2]

	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





Model output

MAgPIE m4p\_SSP4

Historical data

FAO

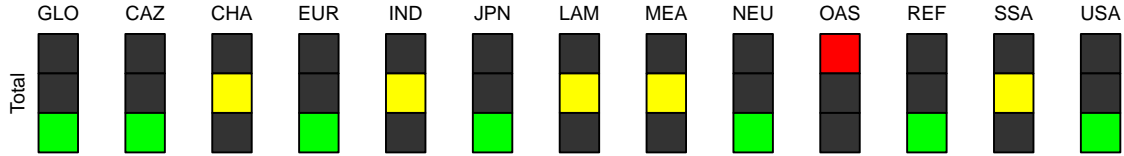


Figure 104: MAgPIE m4p\_SSP4 — Demand—Feed—Forage (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	593	595	613	568	698	838	1049	1310	1575	1829	2069
CAZ	32	26	20	23	29	35	46	59	67	68	71
CHA	13	12	14	14	56	102	164	235	303	350	345
EUR	174	193	191	197	197	197	212	223	241	276	296
IND	20	22	24	27	57	86	131	188	252	318	418
JPN	10	10	9	13	12	12	12	12	12	12	12
LAM	37	44	50	56	69	84	107	134	164	197	240
MEA	21	22	24	25	32	41	49	58	68	78	88
NEU	10	10	11	13	14	17	20	24	28	32	36
OAS	4	3	2	2	9	17	30	48	66	89	116
REF	103	69	62	38	52	65	81	110	131	144	154
SSA	4	4	5	5	10	16	24	33	44	58	74
USA	165	180	200	155	160	166	175	185	199	207	219

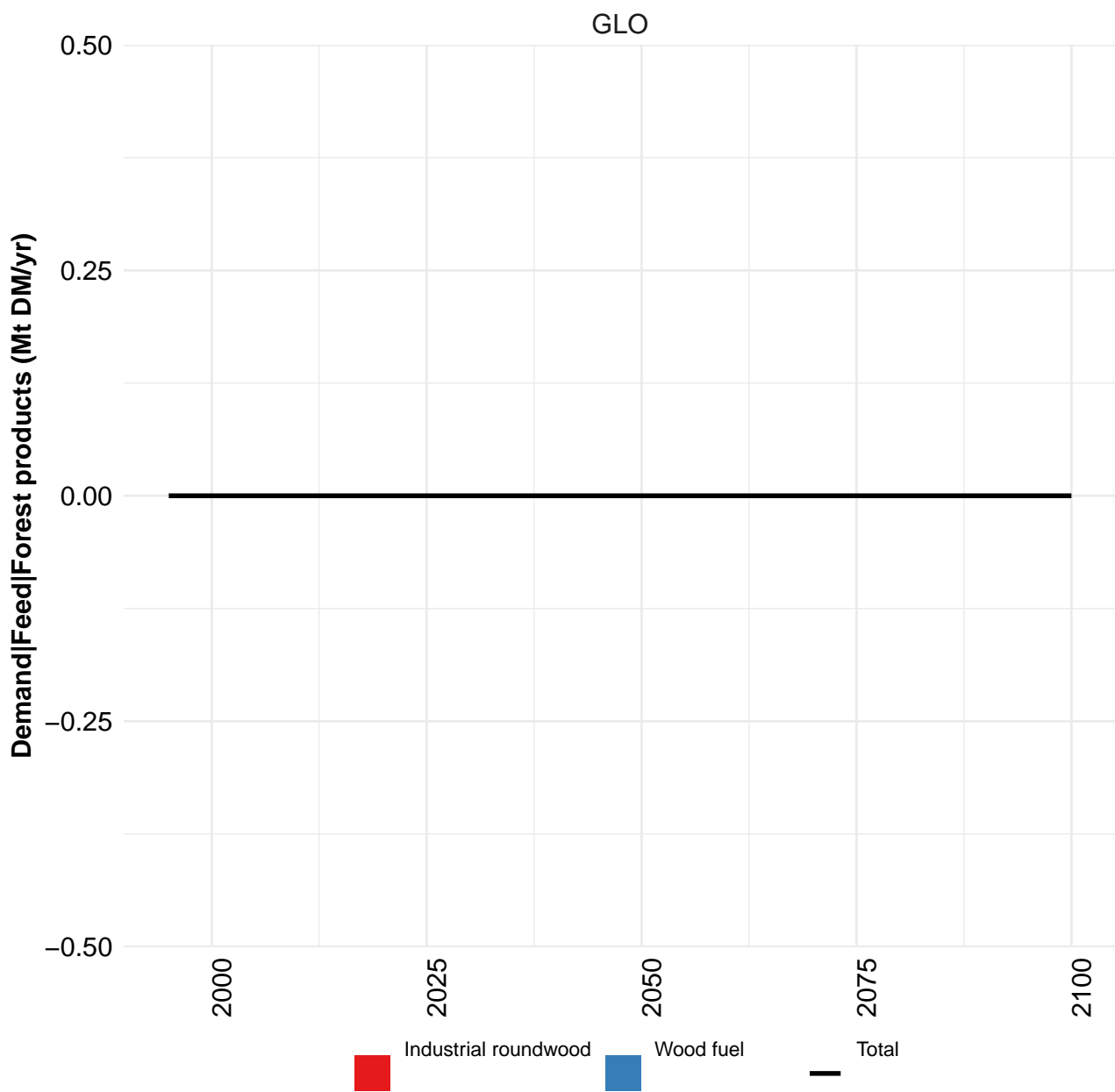
Table 311: MAgPIE m4p\_SSP4 — Demand—Feed—Forage (Mt DM/yr) [PART 1/2]

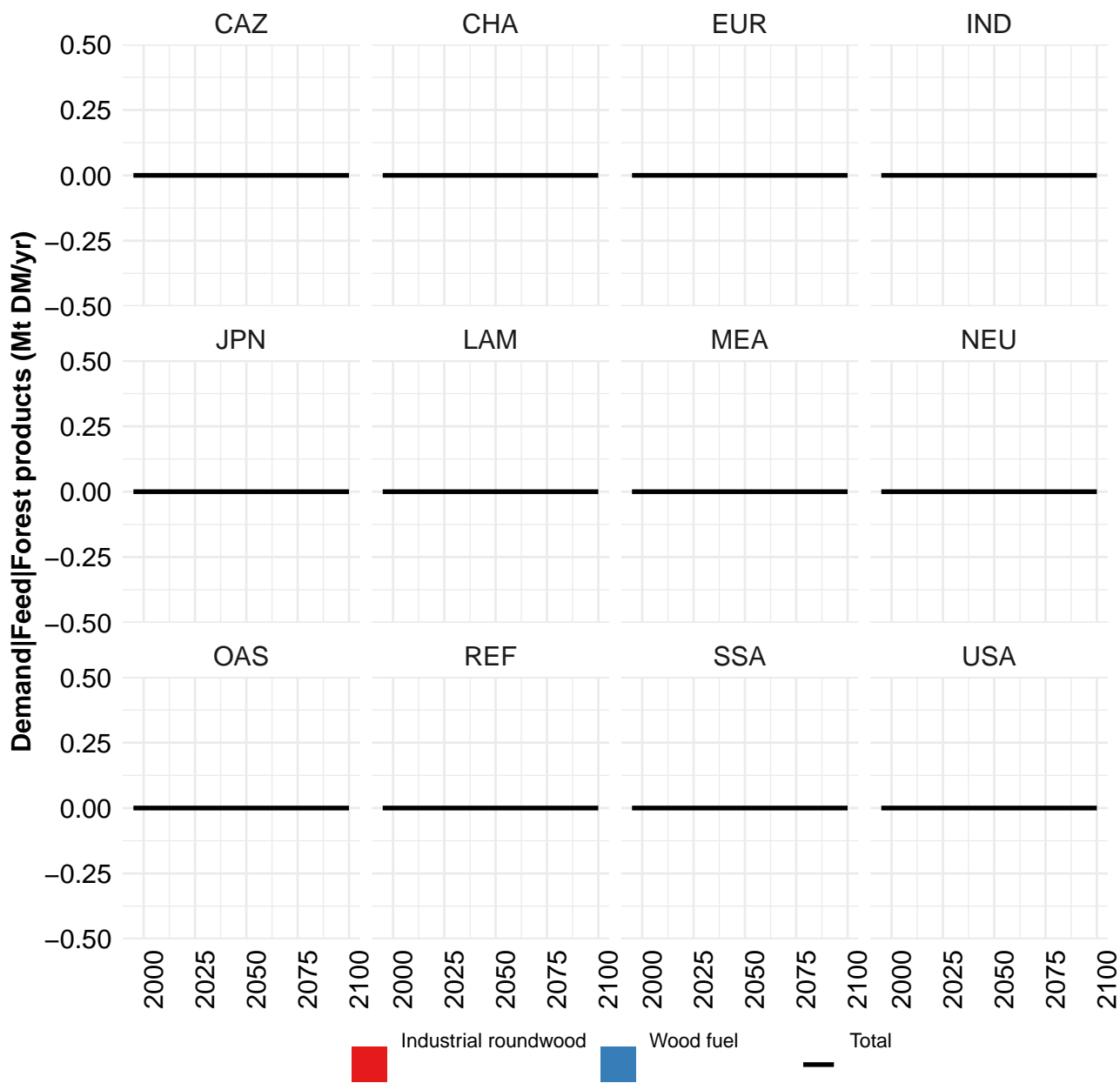
	2050	2055	2060	2070	2080	2090	2100
GLO	2290	2347	2405	2496	2523	2490	2583
CAZ	76	83	85	90	90	87	90
CHA	342	337	338	324	268	219	192
EUR	328	332	326	313	302	285	283
IND	470	469	491	510	505	482	454
JPN	11	11	10	8	7	6	5
LAM	303	313	320	318	309	293	292
MEA	99	106	113	123	130	131	140
NEU	40	40	40	39	37	34	32
OAS	147	164	182	213	255	286	338
REF	157	153	139	136	134	131	121
SSA	93	118	148	217	295	358	459
USA	224	219	213	203	191	179	177

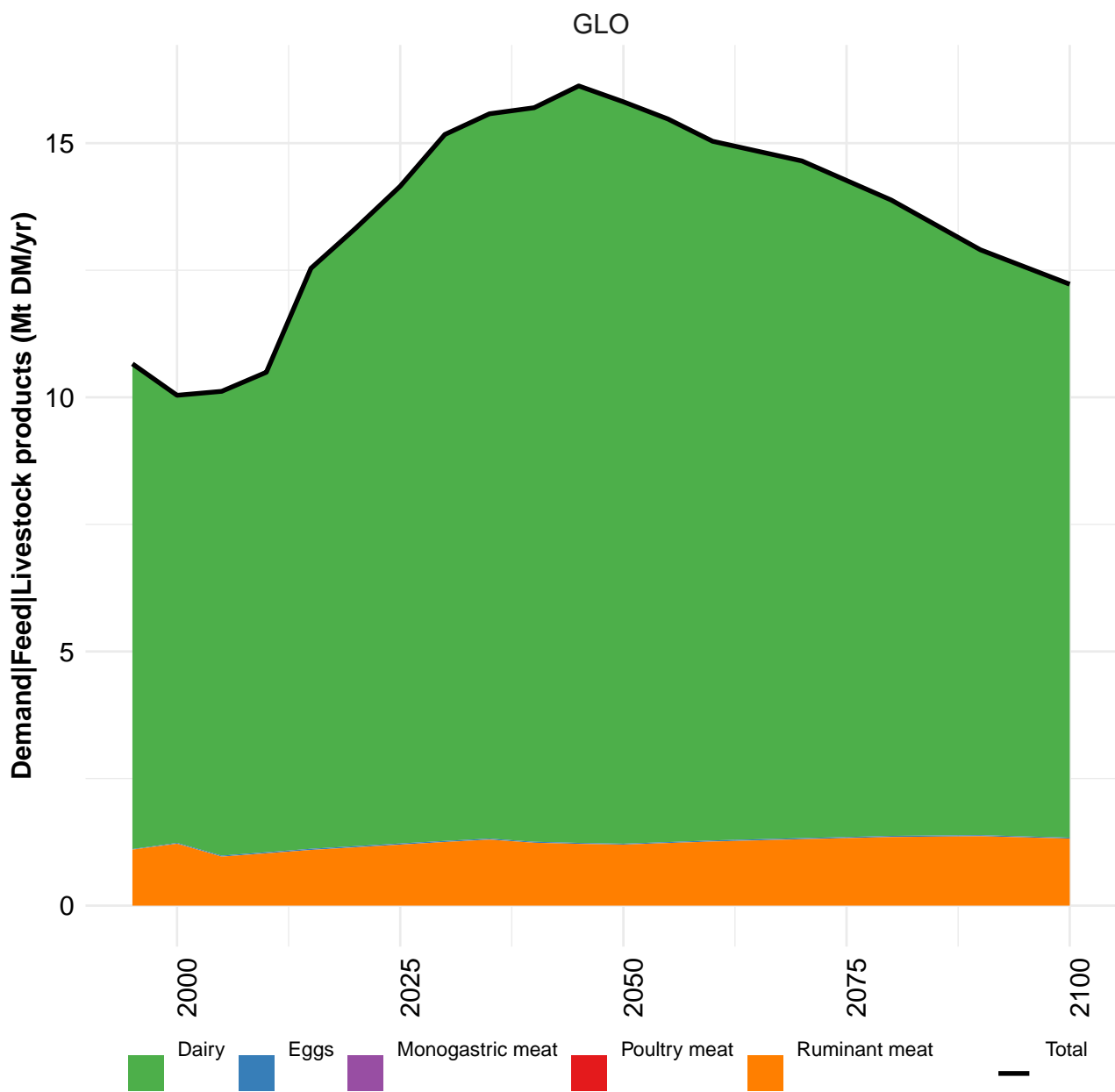
Table 312: MAgPIE m4p\_SSP4 — Demand—Feed—Forage (Mt DM/yr) [PART 2/2]

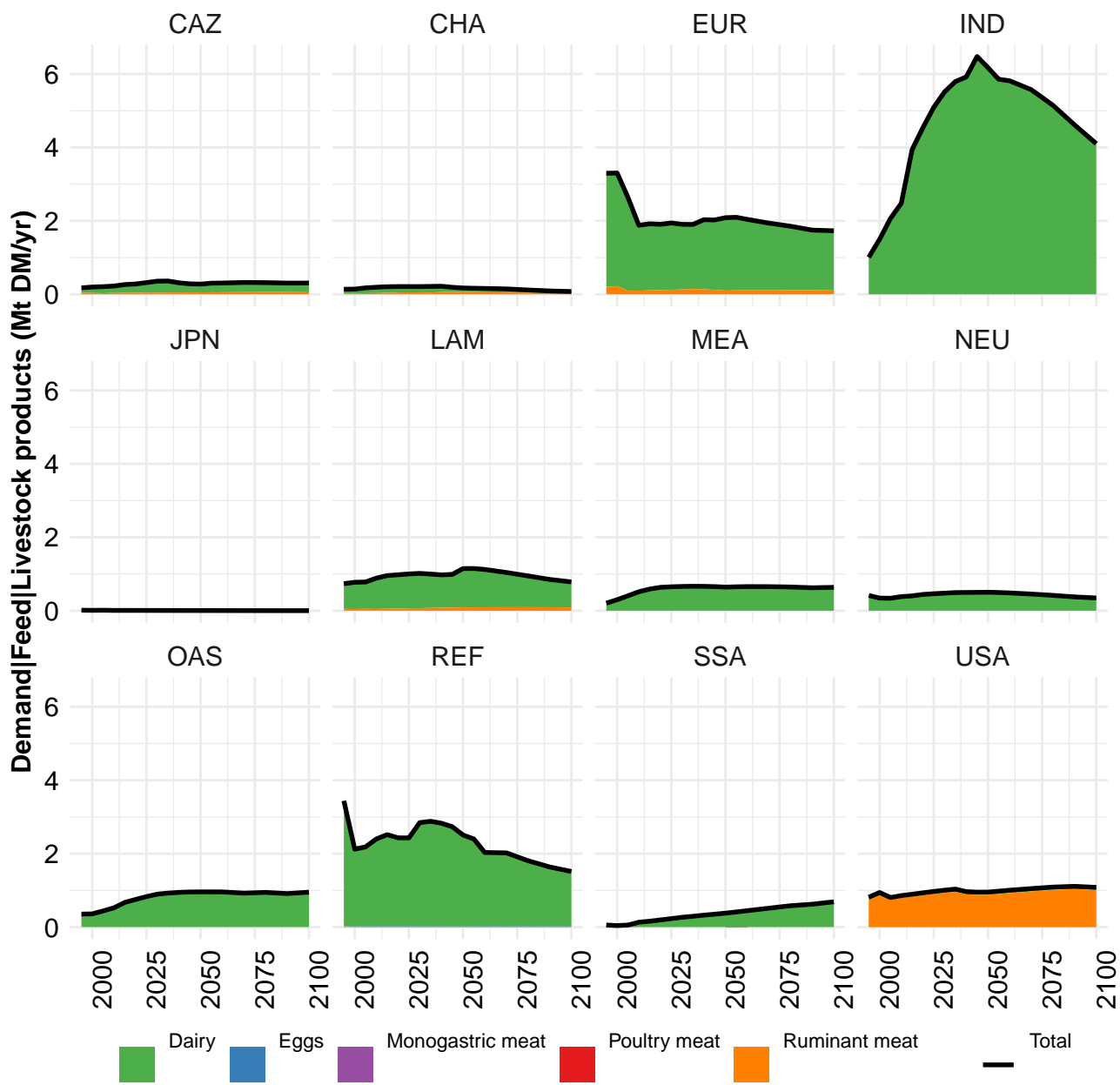
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	189	242	266	314	660	584	611	598	609	570
CAZ	7	9	10	10	28	36	32	30	26	29
CHA	0	0	0	0	8	10	11	12	13	14
EUR	39	56	70	96	192	155	167	178	179	189
IND	19	21	21	22	15	18	20	22	25	28
JPN	3	6	7	9	10	10	10	9	9	13
LAM	21	27	33	31	88	51	46	50	51	54
MEA	2	14	13	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)



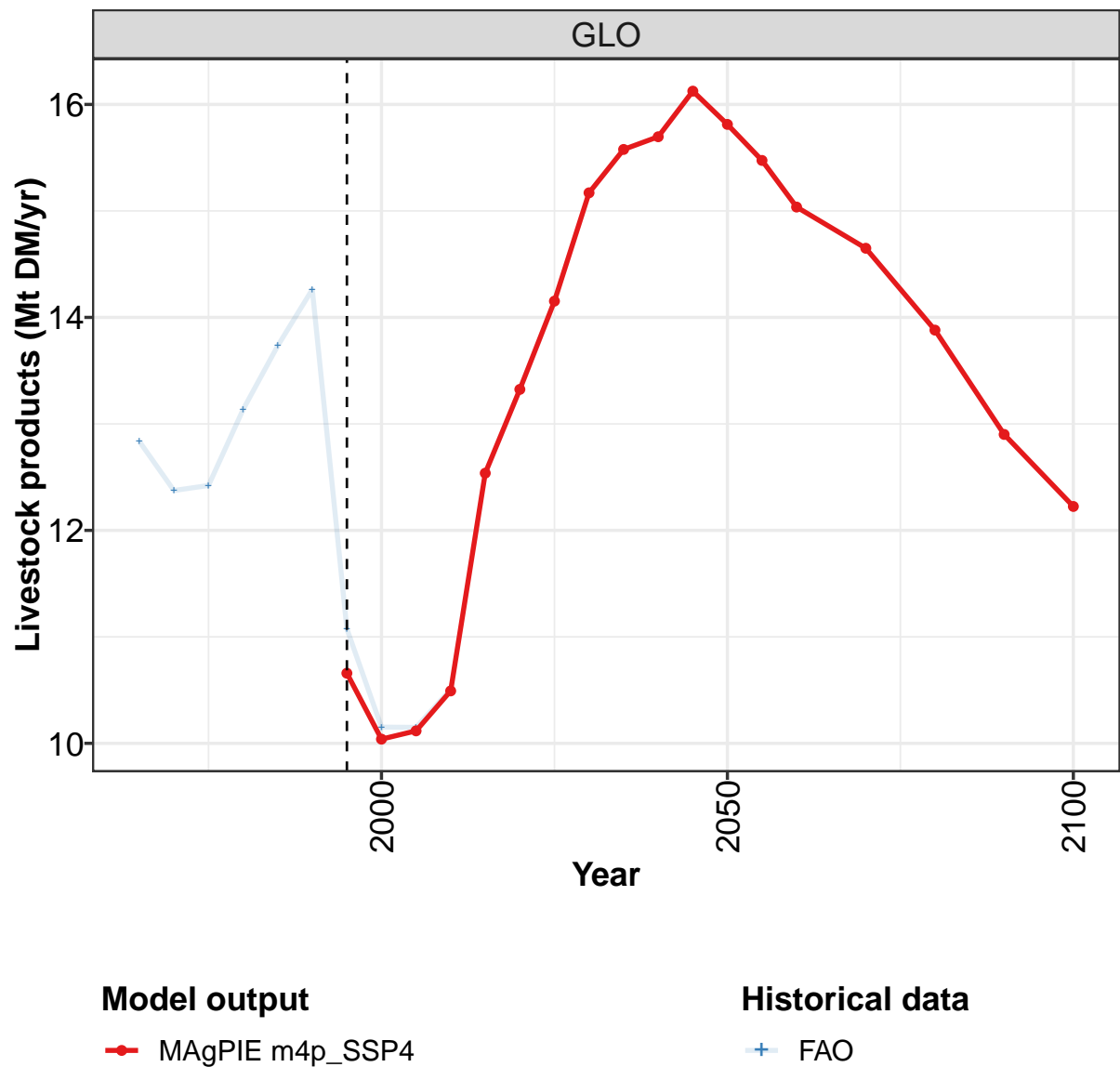


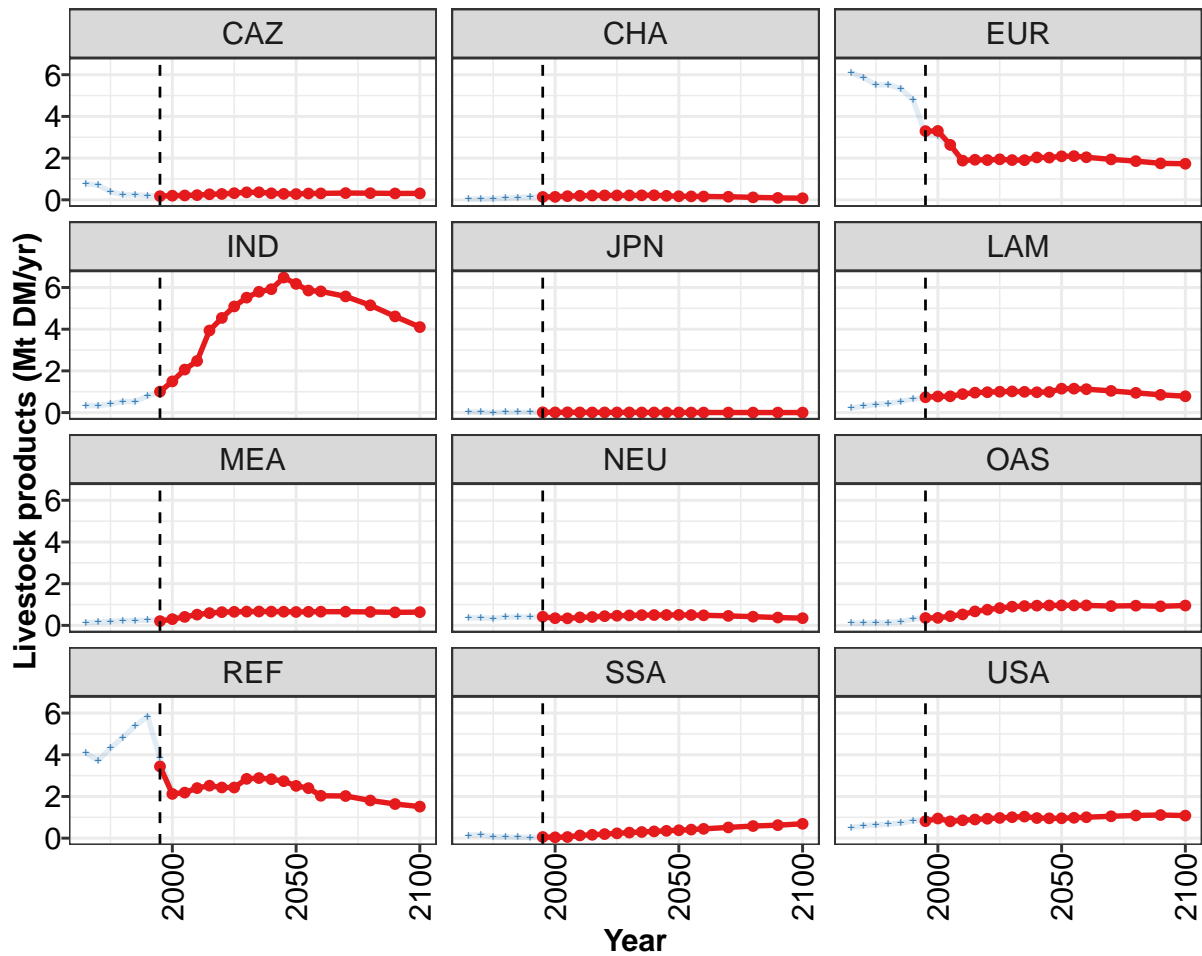






6.5
Livestock products





Model output

MAgPIE m4p\_SSP4

Historical data

FAO

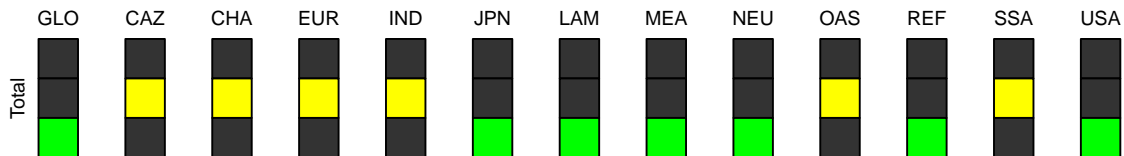


Figure 105: MAgPIE m4p\_SSP4 — Demand—Feed—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.7	10.0	10.1	10.5	12.5	13.3	14.2	15.2	15.6	15.7	16.1
CAZ	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3
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	1.9	1.9	1.9	2.0	2.0
IND	1.0	1.5	2.1	2.5	3.9	4.5	5.1	5.5	5.8	5.9	6.5
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	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEA	0.2	0.3	0.4	0.5	0.6	0.6	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	0.7	0.8	0.8	0.9	0.9	0.9	1.0
REF	3.4	2.1	2.2	2.4	2.5	2.4	2.4	2.8	2.9	2.8	2.7
SSA	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4
USA	0.8	0.9	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0

Table 314: MAgPIE m4p-SSP4 — Demand—Feed—Livestock products (Mt DM/yr) [PART 1/2]

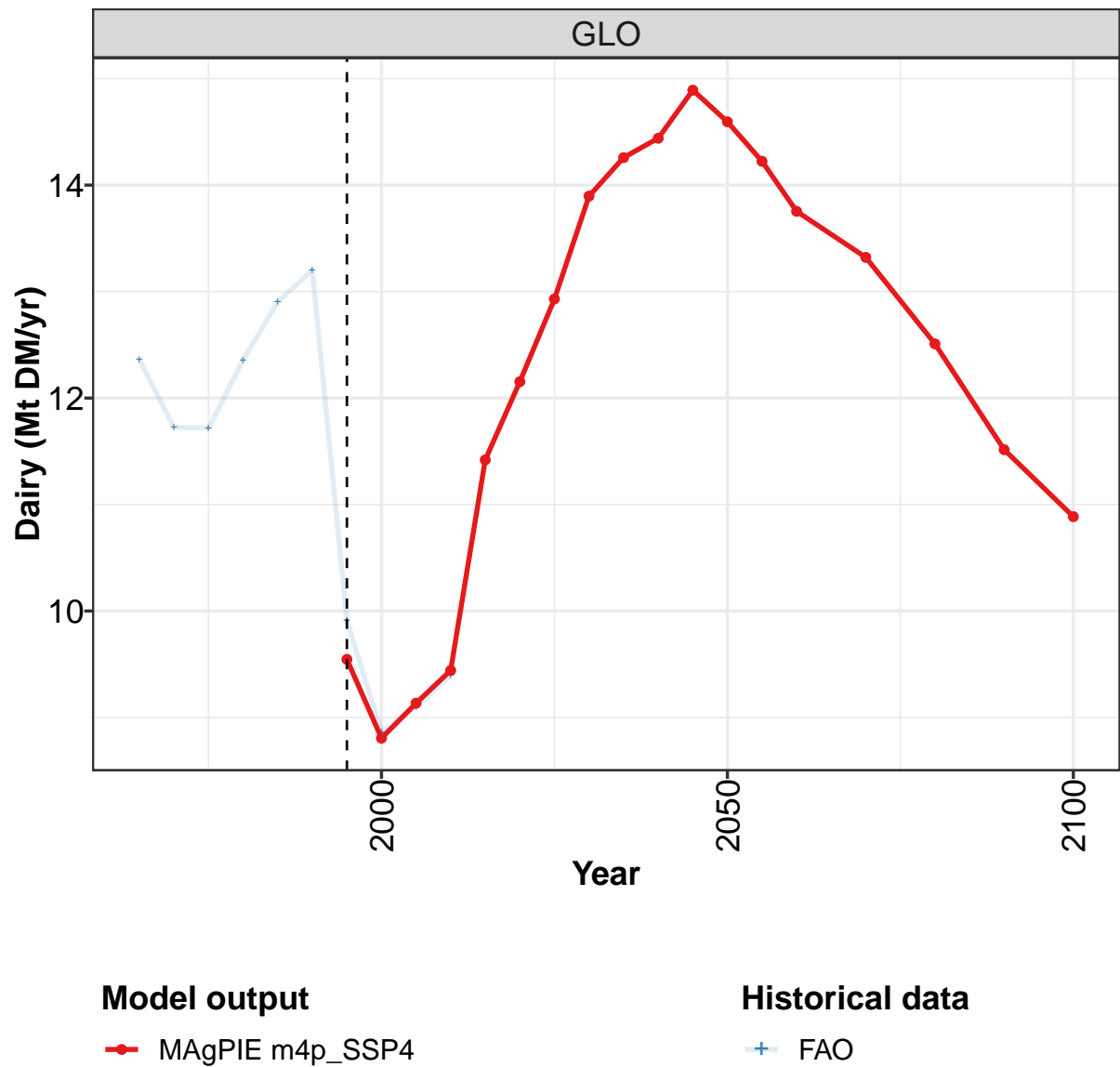
	2050	2055	2060	2070	2080	2090	2100
GLO	15.8	15.5	15.0	14.6	13.9	12.9	12.2
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	0.2	0.2	0.2	0.1	0.1	0.1	0.1
EUR	2.1	2.1	2.0	1.9	1.9	1.7	1.7
IND	6.2	5.9	5.8	5.6	5.1	4.6	4.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.1	1.1	1.1	1.0	0.9	0.9	0.8
MEA	0.6	0.7	0.7	0.7	0.6	0.6	0.6
NEU	0.5	0.5	0.5	0.5	0.4	0.4	0.3
OAS	1.0	1.0	1.0	0.9	0.9	0.9	1.0
REF	2.5	2.4	2.0	2.0	1.8	1.6	1.5
SSA	0.4	0.4	0.4	0.5	0.6	0.6	0.7
USA	1.0	1.0	1.0	1.0	1.1	1.1	1.1

Table 315: MAgPIE m4p-SSP4 — 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



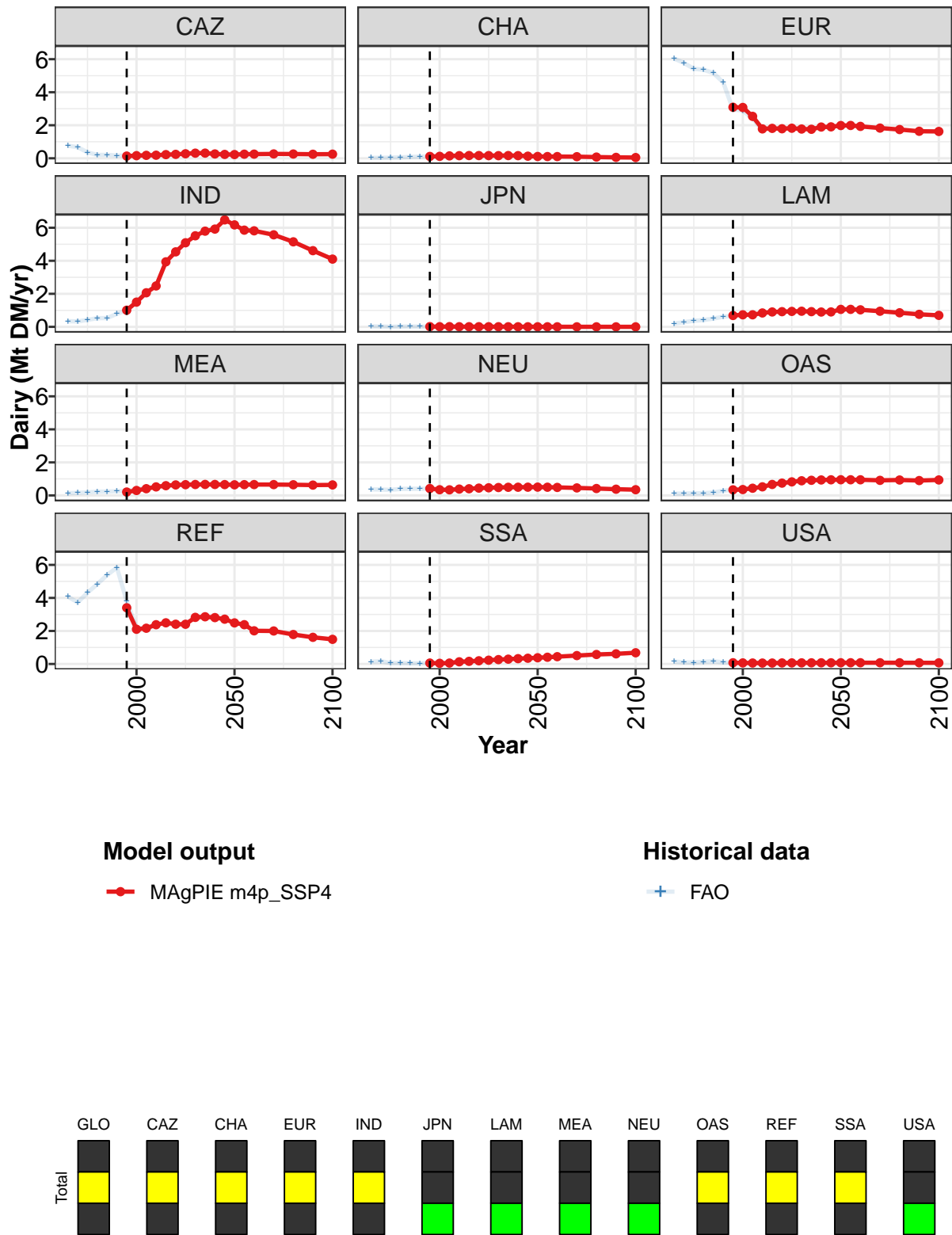


Figure 106: MAgPIE m4p\_SSP4 — Demand—Feed—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.5	8.8	9.1	9.4	11.4	12.2	12.9	13.9	14.3	14.4	14.9
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2
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	1.8	1.8	1.9	1.9
IND	1.0	1.5	2.1	2.5	3.9	4.5	5.1	5.5	5.8	5.9	6.5
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	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9
MEA	0.2	0.3	0.4	0.5	0.6	0.6	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	0.7	0.7	0.8	0.9	0.9	0.9	0.9
REF	3.4	2.1	2.2	2.4	2.5	2.4	2.4	2.8	2.9	2.8	2.7
SSA	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3
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\_SSP4 — Demand—Feed—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

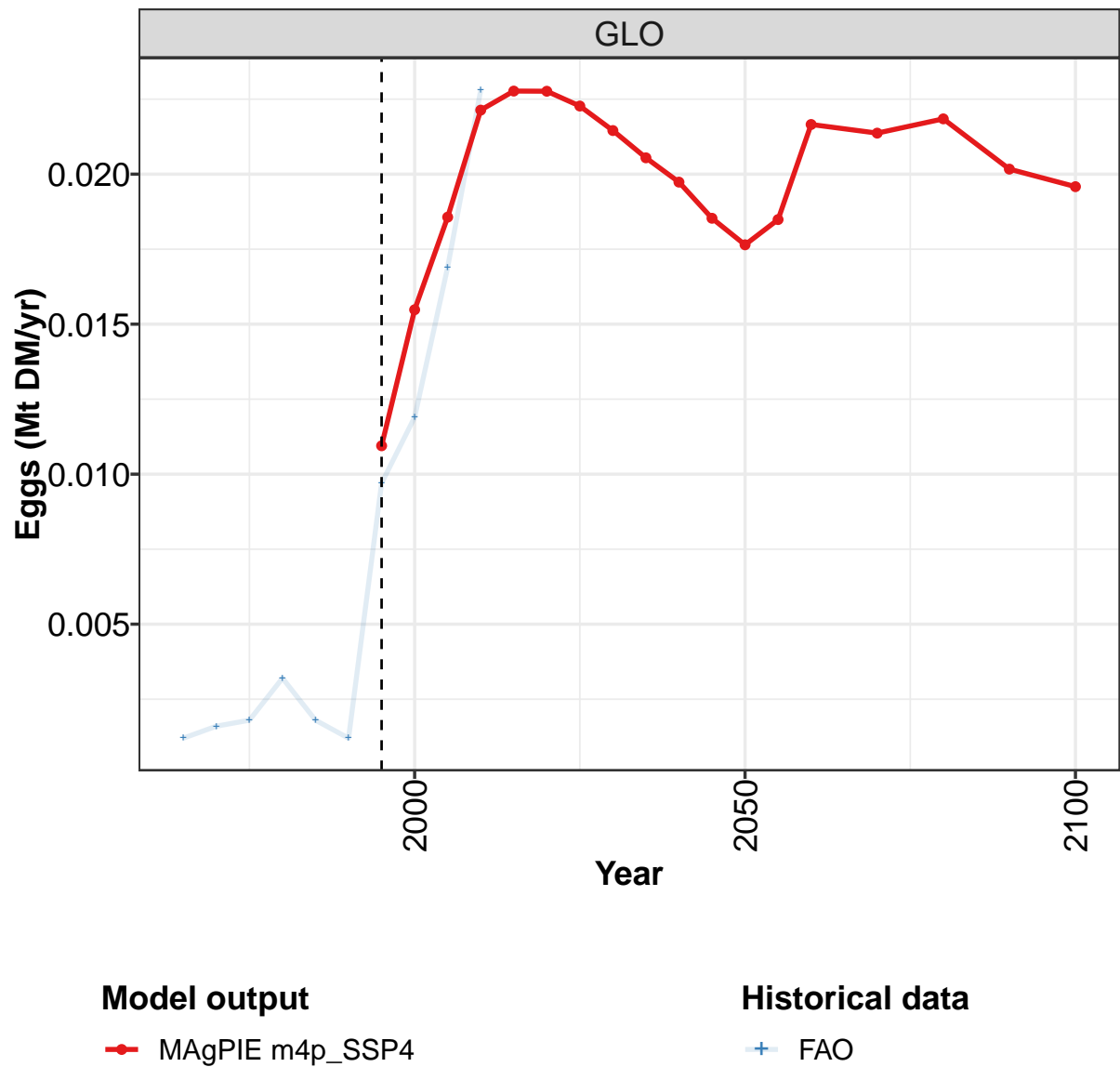
	2050	2055	2060	2070	2080	2090	2100
GLO	14.6	14.2	13.8	13.3	12.5	11.5	10.9
CAZ	0.2	0.2	0.3	0.3	0.3	0.2	0.3
CHA	0.1	0.1	0.1	0.1	0.1	0.1	0.0
EUR	2.0	2.0	1.9	1.8	1.7	1.6	1.6
IND	6.2	5.9	5.8	5.6	5.1	4.6	4.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.1	1.1	1.0	0.9	0.9	0.8	0.7
MEA	0.6	0.7	0.7	0.7	0.6	0.6	0.6
NEU	0.5	0.5	0.5	0.5	0.4	0.4	0.3
OAS	0.9	0.9	0.9	0.9	0.9	0.9	0.9
REF	2.5	2.4	2.0	2.0	1.8	1.6	1.5
SSA	0.4	0.4	0.4	0.5	0.6	0.6	0.7
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 318: MAgPIE m4p\_SSP4 — 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



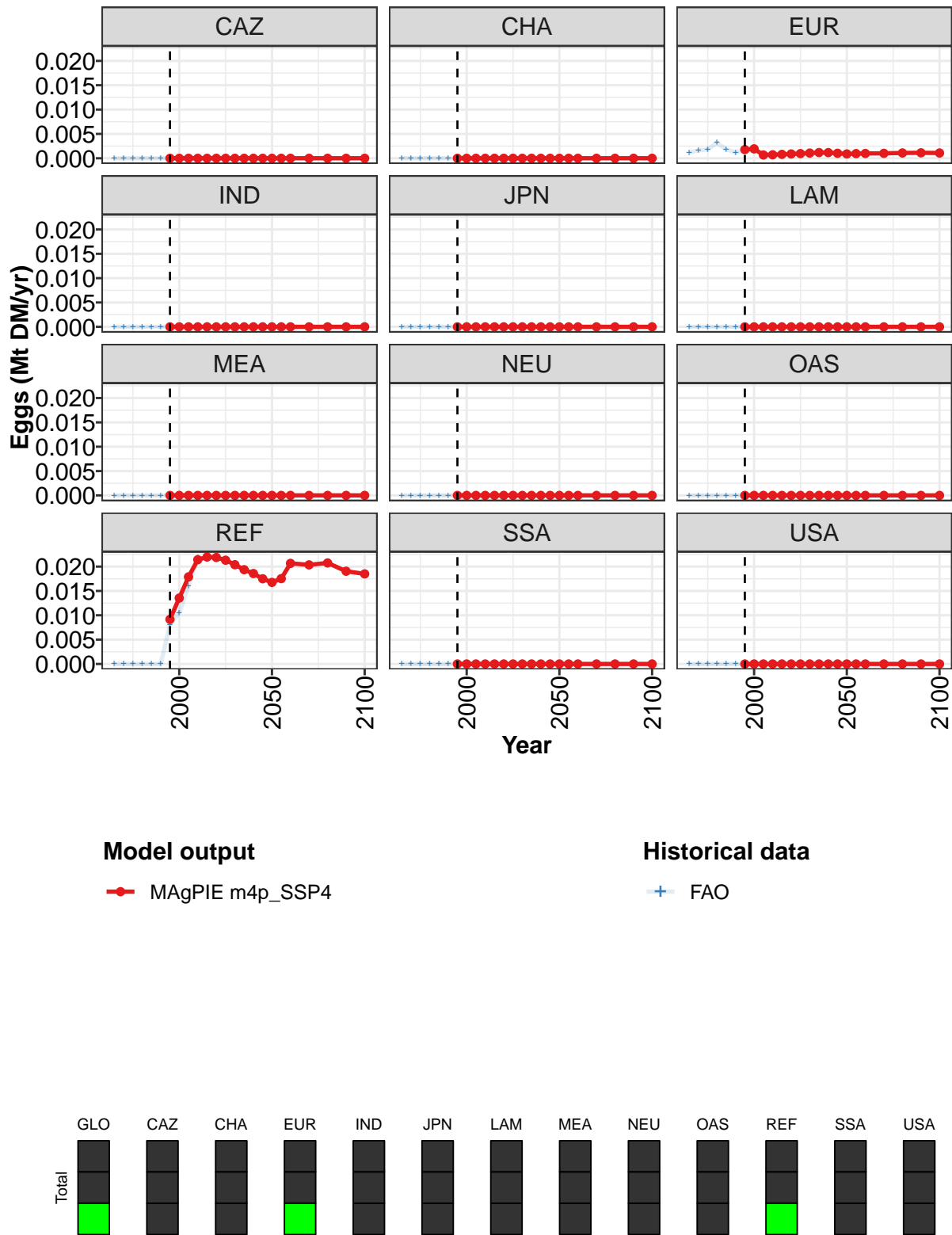


Figure 107: MAgPIE m4p\_SSP4 — Demand—Feed—Livestock products—Eggs (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0109	0.0155	0.0186	0.0221	0.0228	0.0228	0.0223	0.0215	0.0205	0.0197	0.0185
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	0.0011	0.0012	0.0012	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	0.0219	0.0213	0.0204	0.0194	0.0186	0.0175
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\_SSP4 — Demand—Feed—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

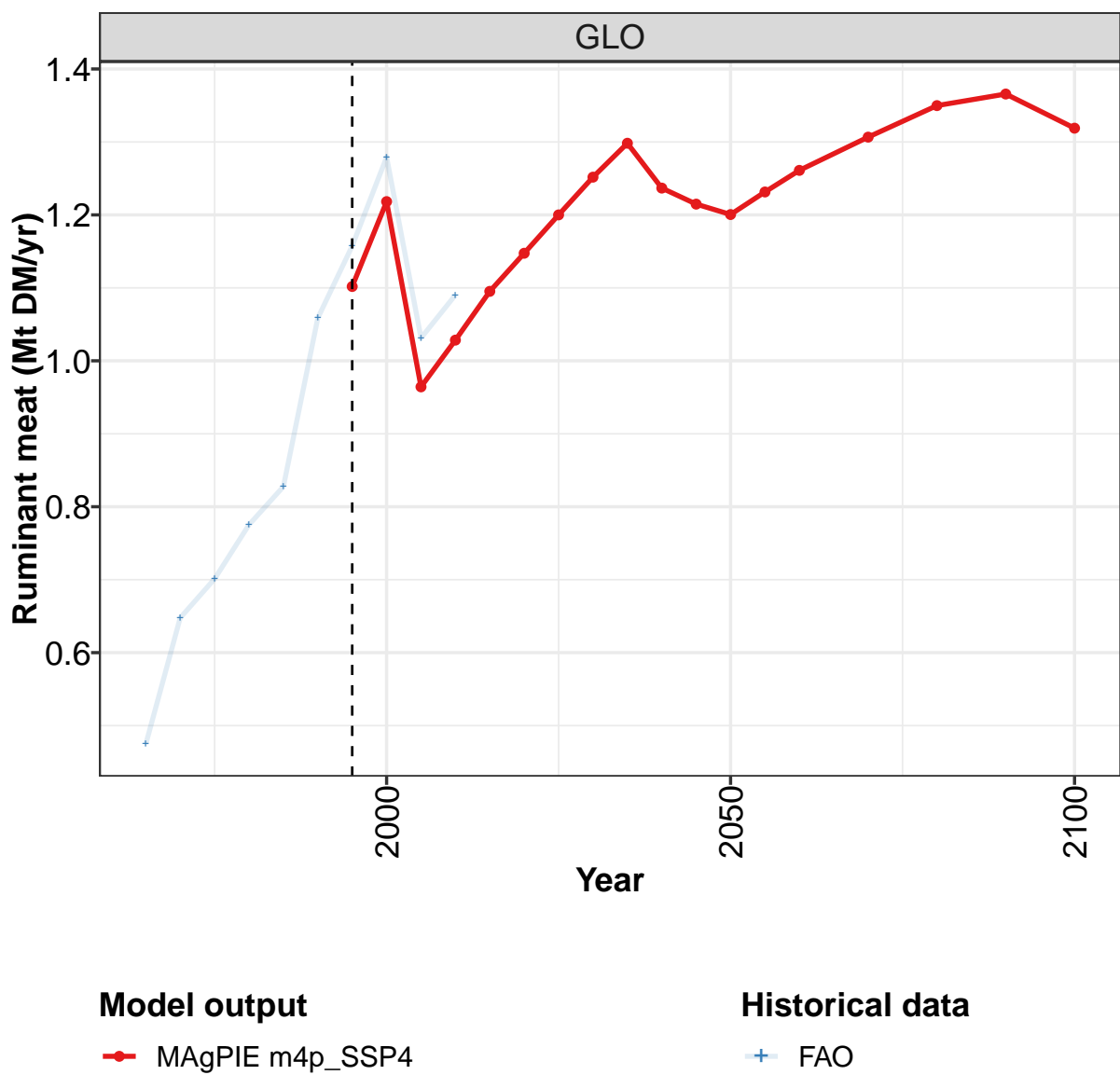
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0176	0.0185	0.0217	0.0214	0.0218	0.0202	0.0196
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0009	0.0010	0.0010	0.0010	0.0011	0.0011	0.0011
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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	0.0168	0.0175	0.0207	0.0204	0.0208	0.0191	0.0185
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\_SSP4 — 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



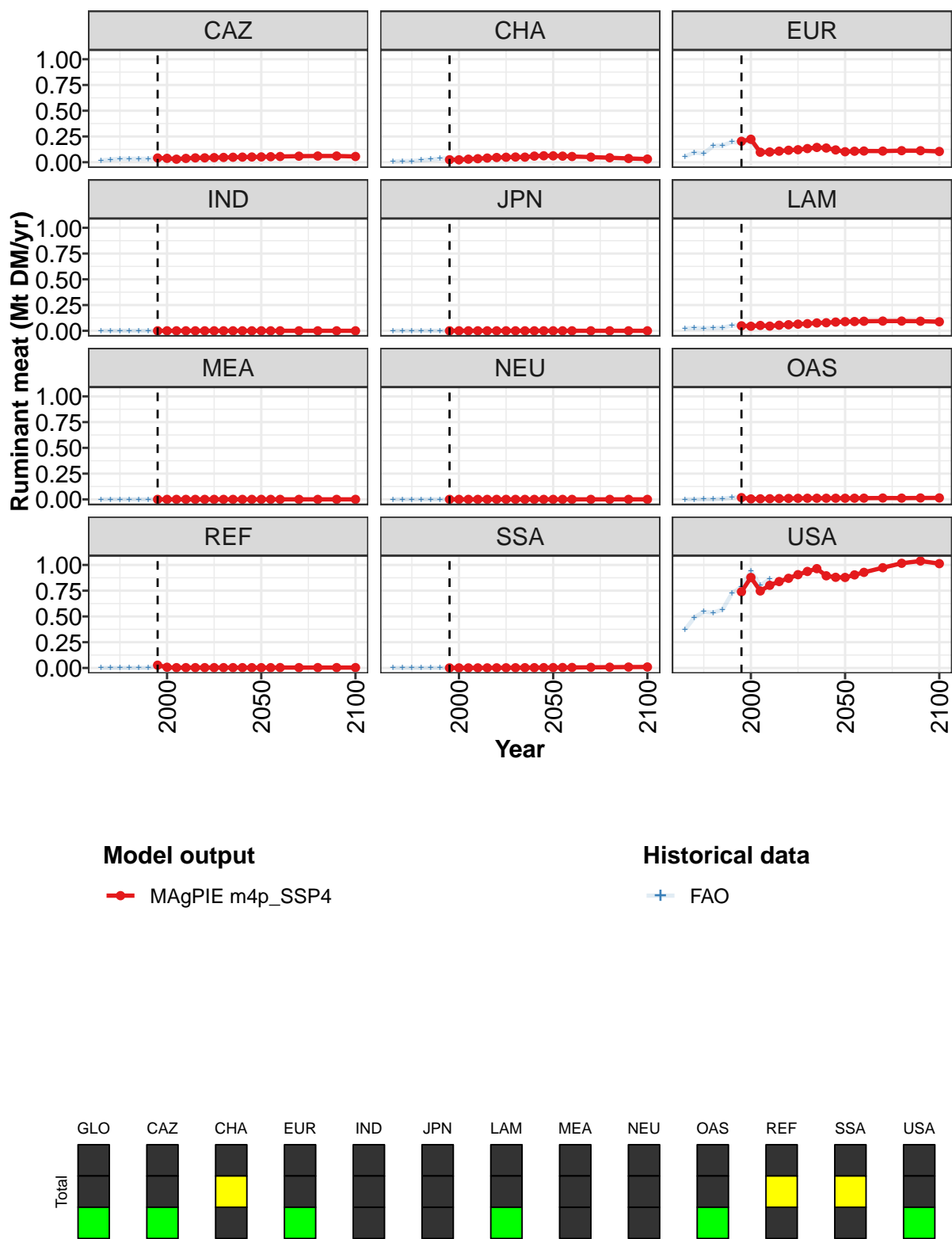


Figure 108: MAgPIE m4p\_SSP4 — Demand—Feed—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.10	1.22	0.96	1.03	1.10	1.15	1.20	1.25	1.30	1.24	1.21
CAZ	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05
CHA	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.05	0.05	0.06	0.06
EUR	0.20	0.22	0.10	0.10	0.11	0.12	0.12	0.13	0.14	0.14	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	0.08	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	0.01	0.01
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	0.87	0.91	0.94	0.96	0.89	0.88

Table 323: MAgPIE m4p\_SSP4 — Demand—Feed—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

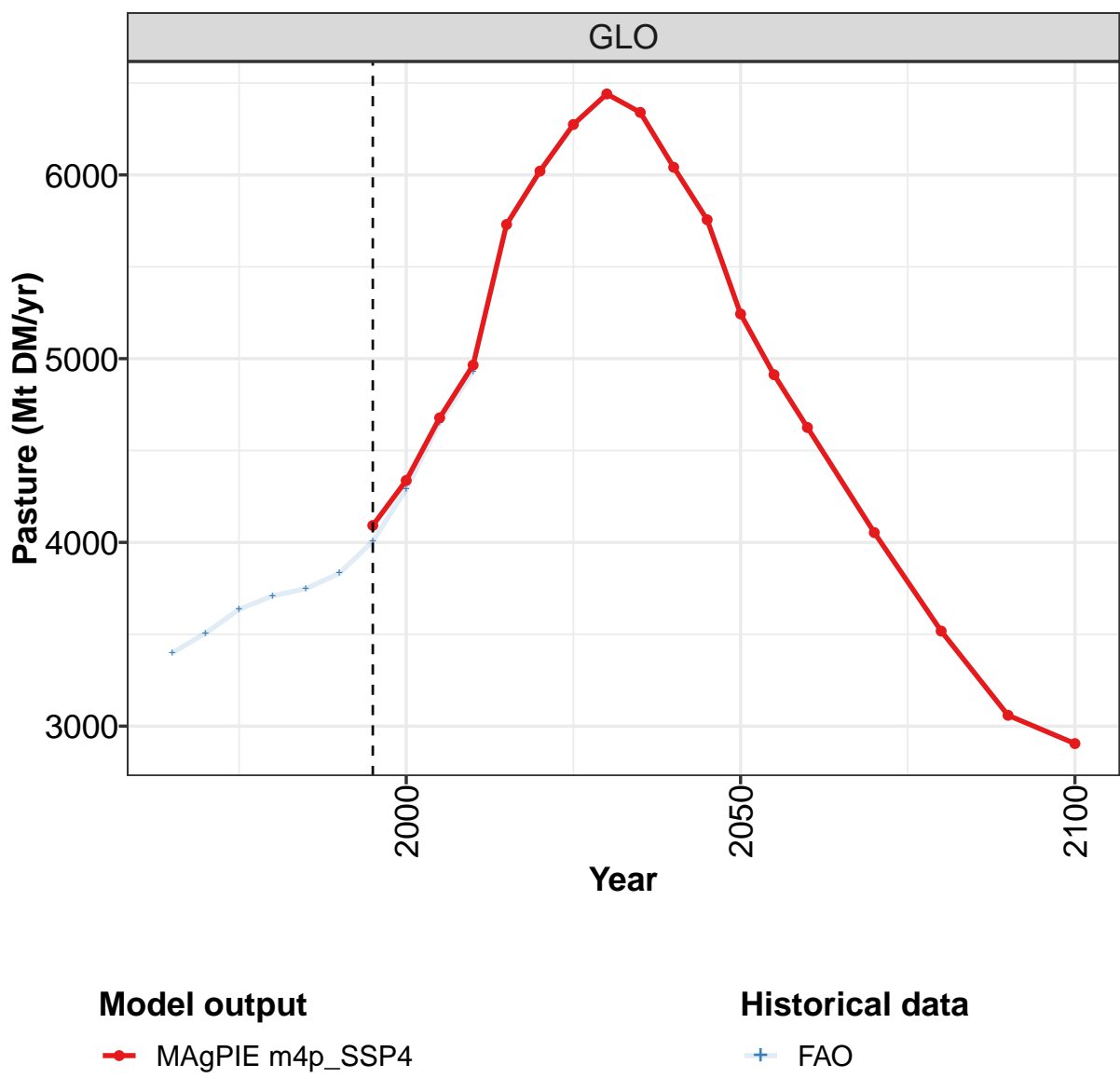
	2050	2055	2060	2070	2080	2090	2100
GLO	1.20	1.23	1.26	1.31	1.35	1.37	1.32
CAZ	0.05	0.05	0.06	0.06	0.06	0.06	0.06
CHA	0.06	0.06	0.06	0.05	0.04	0.04	0.03
EUR	0.10	0.11	0.11	0.11	0.11	0.11	0.10
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.09	0.09	0.09	0.09	0.09	0.09	0.09
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	0.01	0.01	0.01
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.01	0.01	0.01	0.01
USA	0.88	0.90	0.93	0.97	1.02	1.04	1.01

Table 324: MAgPIE m4p\_SSP4 — 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



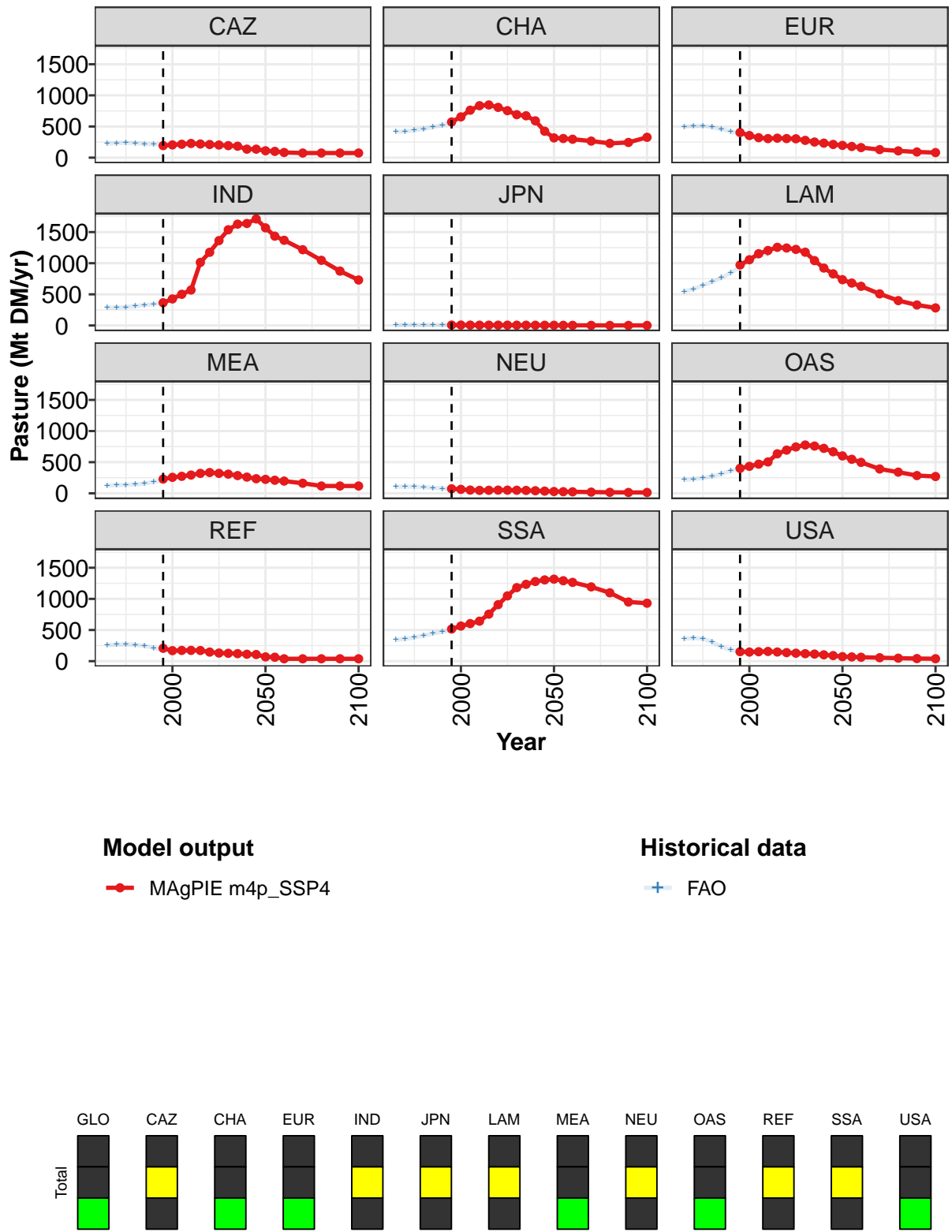


Figure 109: MAgPIE m4p\_SSP4 — Demand—Feed—Pasture (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4092	4337	4678	4965	5730	6021	6274	6441	6340	6041	5756
CAZ	193	205	215	228	219	211	203	193	184	137	137
CHA	573	655	762	835	846	807	754	690	672	591	424
EUR	404	355	321	306	313	306	303	277	251	233	212
IND	365	427	501	570	1013	1176	1363	1538	1628	1638	1711
JPN	7	7	6	5	5	5	5	5	5	4	4
LAM	972	1056	1153	1204	1255	1244	1222	1177	1042	922	829
MEA	228	257	273	294	321	334	321	308	285	261	234
NEU	73	64	52	47	49	52	51	50	46	41	35
OAS	401	434	468	504	635	694	745	776	759	722	667
REF	207	169	173	174	171	146	131	126	121	111	107
SSA	516	564	603	642	755	907	1048	1181	1234	1279	1305
USA	152	146	151	156	147	137	128	120	114	102	90

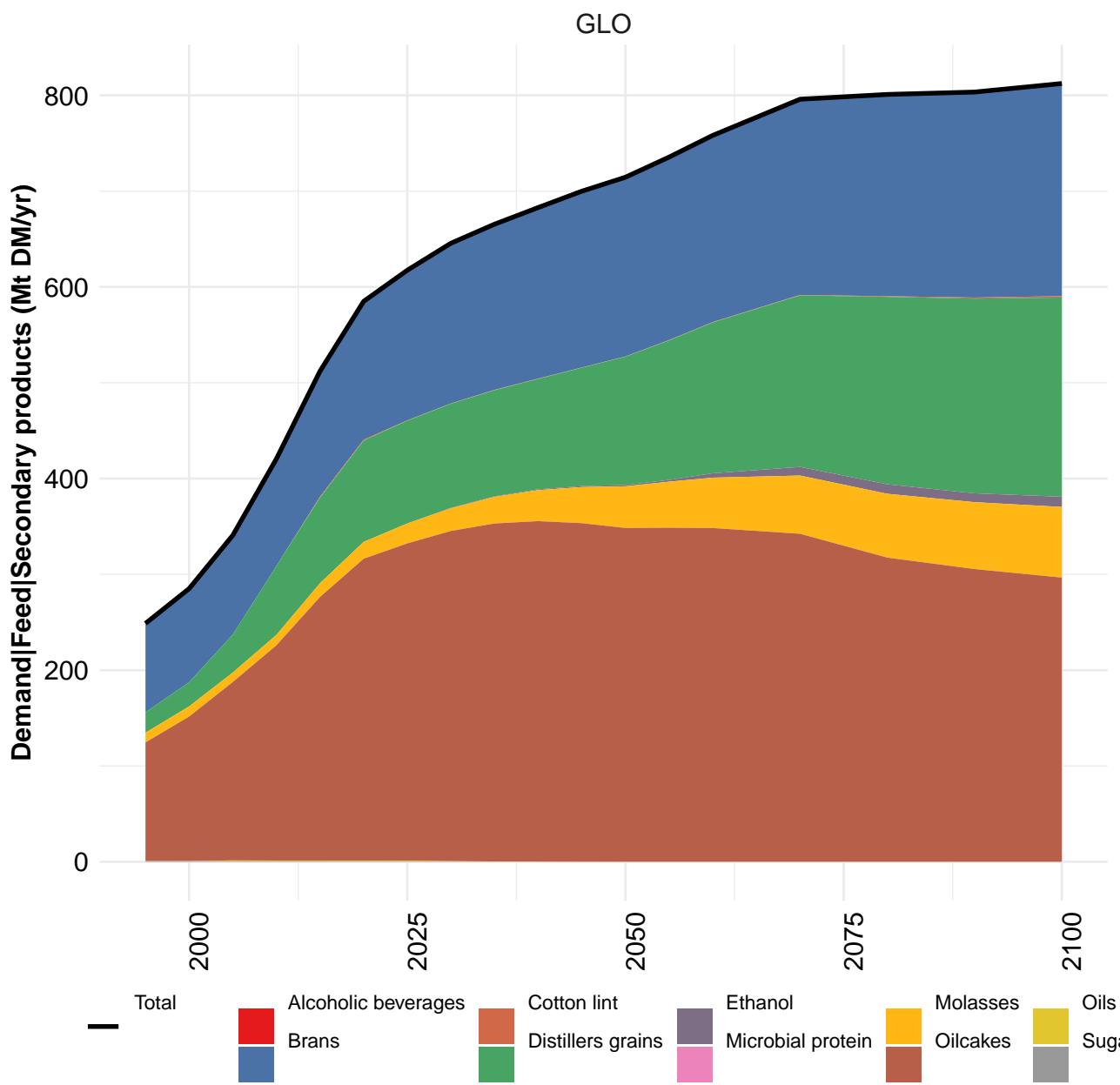
Table 326: MAgPIE m4p\_SSP4 — Demand—Feed—Pasture (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5243	4913	4625	4054	3518	3059	2905
CAZ	111	101	83	74	74	74	74
CHA	317	307	296	266	229	244	327
EUR	197	180	162	129	109	91	81
IND	1568	1435	1369	1217	1047	873	730
JPN	3	3	2	2	1	1	1
LAM	735	681	629	508	400	329	282
MEA	224	210	197	162	118	118	118
NEU	29	27	24	20	16	14	13
OAS	601	546	497	391	340	285	270
REF	69	63	38	38	38	38	38
SSA	1317	1292	1265	1193	1098	950	931
USA	73	68	63	55	48	42	39

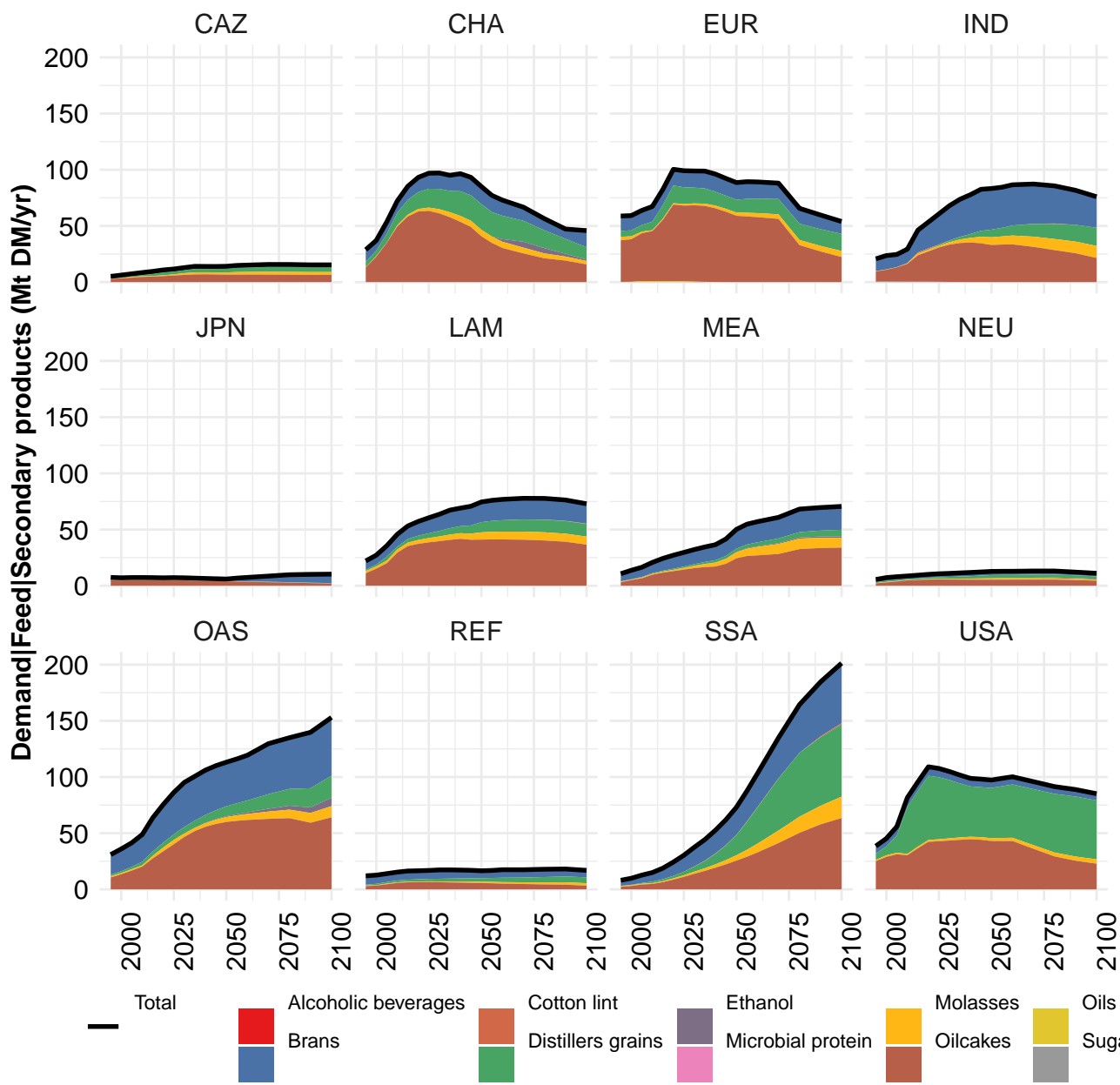
Table 327: MAgPIE m4p\_SSP4 — Demand—Feed—Pasture (Mt DM/yr) [PART 2/2]

	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

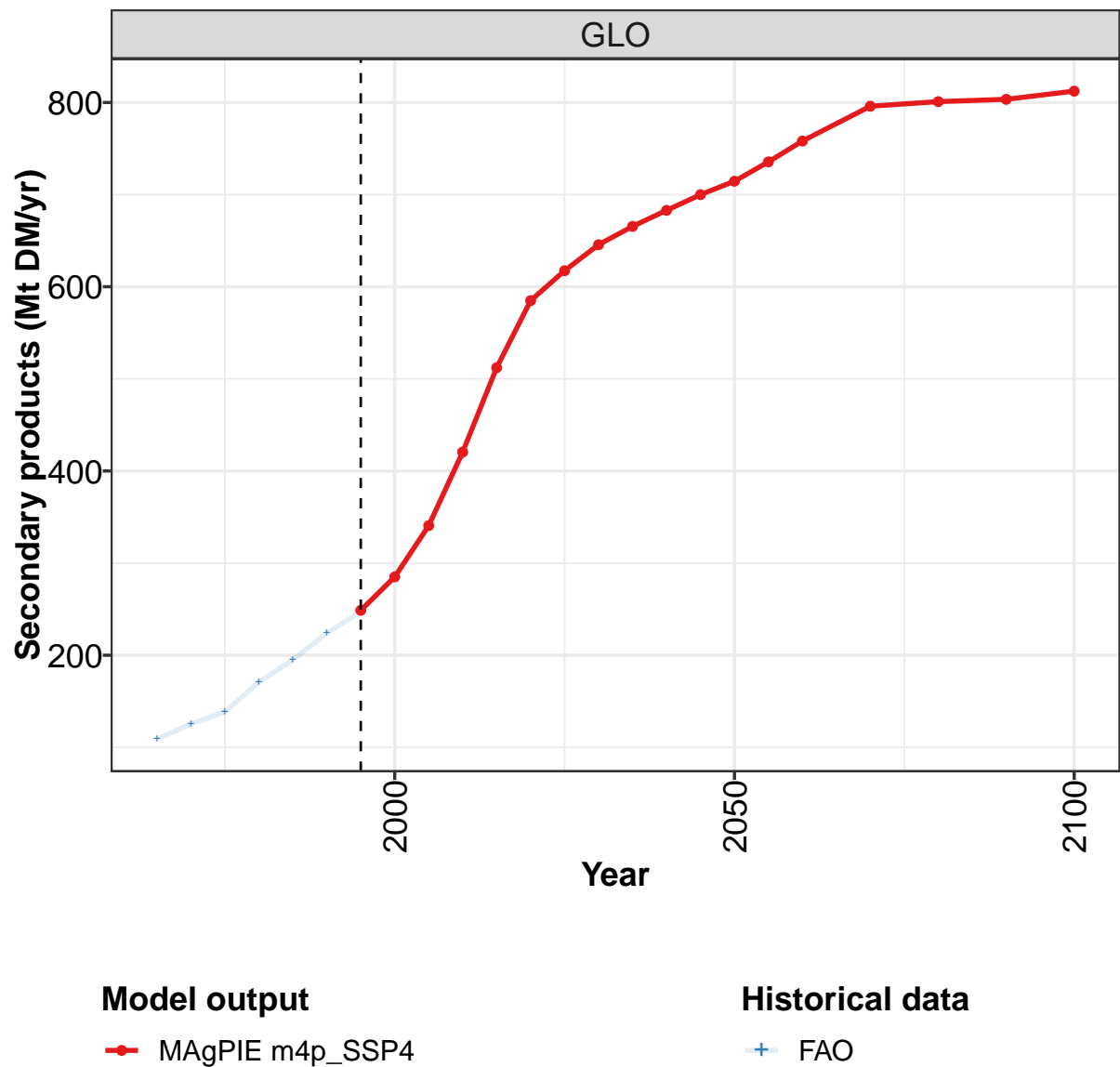
Table 328: FAO — Demand—Feed—Pasture (Mt DM/yr)







6.7 Secondary products



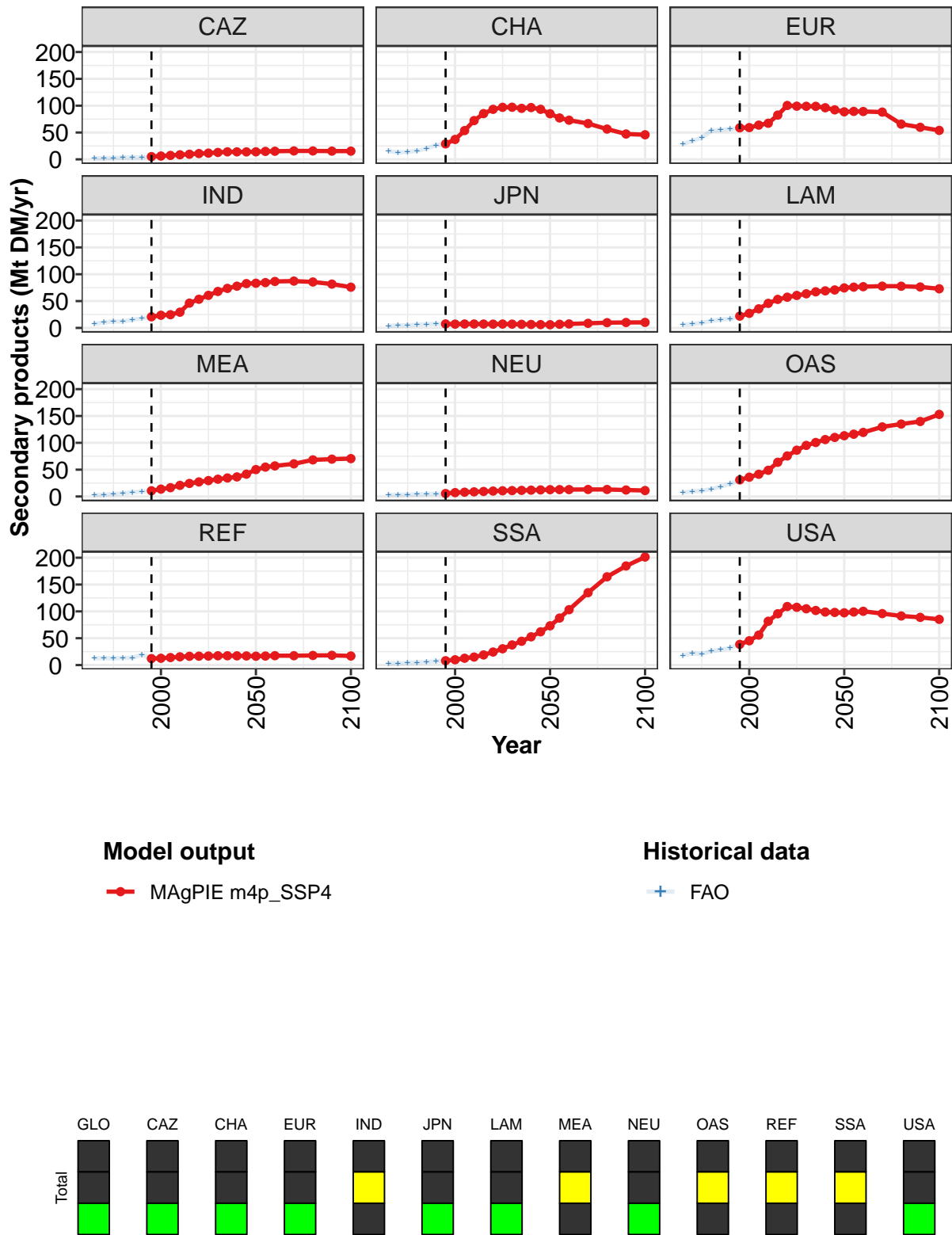


Figure 110: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	249	285	341	421	512	585	617	646	665	683	700
CAZ	5	6	7	9	10	11	12	13	14	14	14
CHA	29	37	54	72	85	93	97	97	95	96	93
EUR	59	59	64	67	82	100	99	99	99	96	92
IND	21	24	25	29	46	53	61	68	74	78	83
JPN	7	7	7	7	7	7	7	7	7	6	6
LAM	22	27	36	46	53	57	60	64	67	69	71
MEA	11	14	16	21	24	27	30	32	35	36	42
NEU	6	7	8	9	9	10	11	11	11	12	12
OAS	31	36	41	49	64	76	86	95	101	106	110
REF	12	13	14	15	16	17	17	17	17	17	17
SSA	8	10	13	15	19	24	30	38	44	53	62
USA	39	45	56	82	96	109	108	105	102	99	98

Table 329: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products (Mt DM/yr) [PART 1/2]

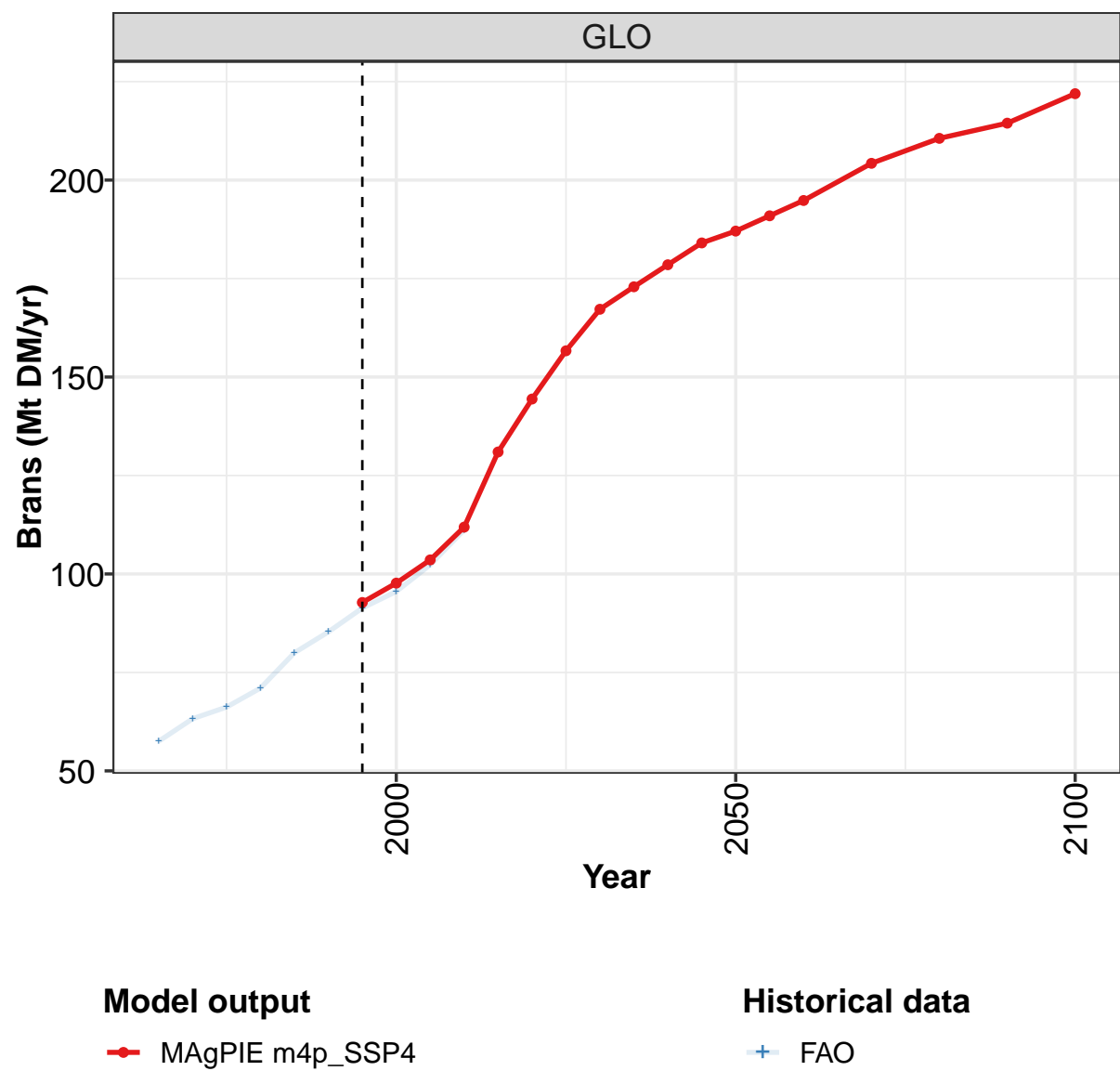
	2050	2055	2060	2070	2080	2090	2100
GLO	715	736	758	796	801	803	812
CAZ	14	15	15	16	16	15	15
CHA	85	77	73	67	56	47	46
EUR	89	89	89	88	66	60	54
IND	83	84	87	87	86	82	76
JPN	6	7	7	9	10	10	10
LAM	75	76	77	78	78	76	73
MEA	50	55	57	61	68	70	71
NEU	13	13	13	13	13	12	11
OAS	113	116	119	130	135	140	153
REF	17	17	17	17	18	18	17
SSA	73	88	103	135	164	185	201
USA	97	99	100	96	91	89	85

Table 330: MAgPIE m4p\_SSP4 — 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



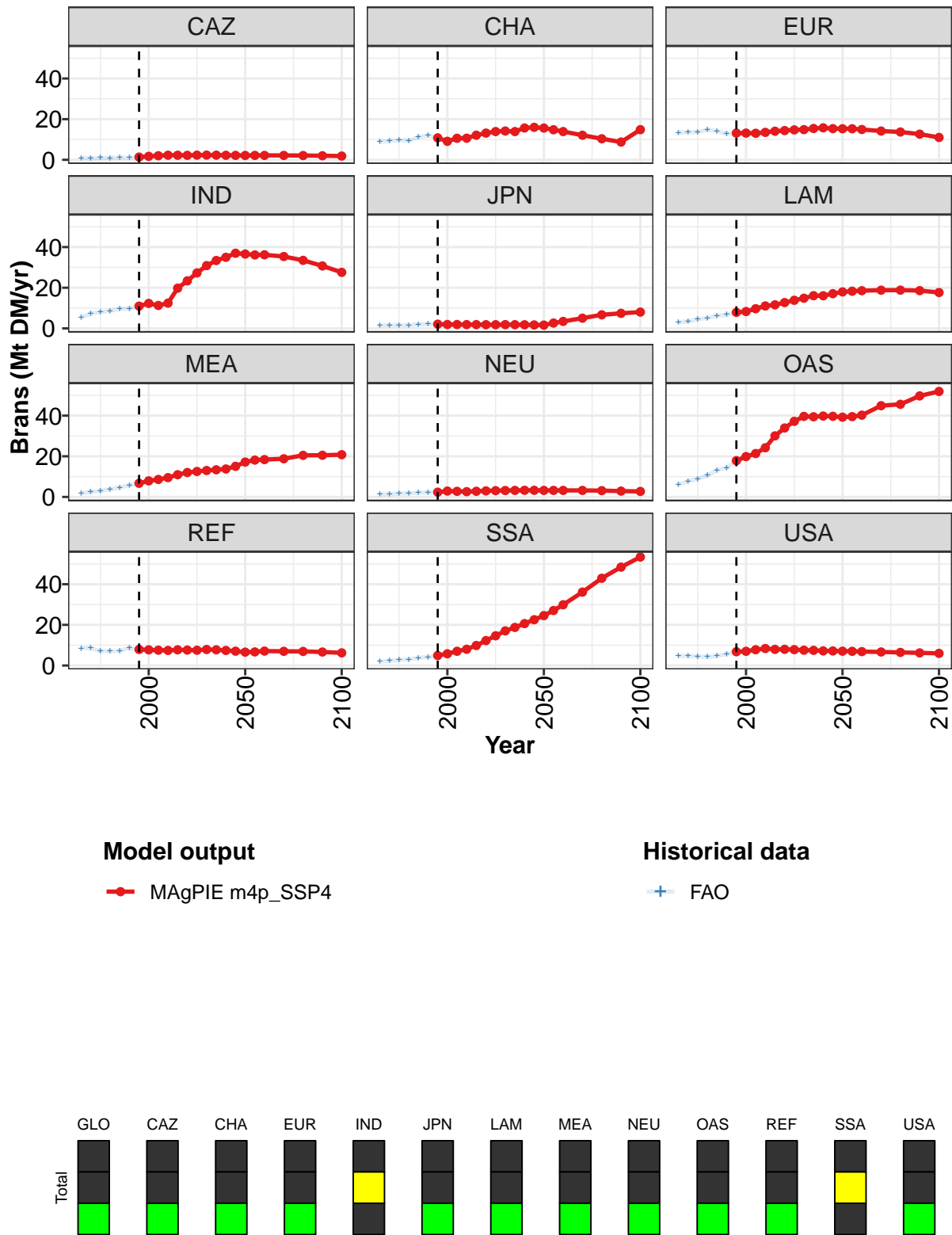


Figure 111: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	93	98	104	112	131	144	157	167	173	179	184
CAZ	1	2	2	2	2	2	2	2	2	2	2
CHA	11	9	11	11	12	13	14	14	14	16	16
EUR	13	13	13	14	14	14	15	15	15	16	15
IND	11	12	11	12	20	23	27	31	33	35	37
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	8	8	10	11	12	13	14	15	16	16	17
MEA	7	8	9	10	11	12	13	13	13	14	15
NEU	2	3	3	3	3	3	3	3	3	3	3
OAS	18	20	21	24	30	34	37	40	39	40	40
REF	8	8	8	7	8	8	8	8	8	7	7
SSA	5	6	7	8	10	12	15	17	19	21	23
USA	7	7	8	8	8	8	8	8	7	7	7

Table 332: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Brans (Mt DM/yr) [PART 1/2]

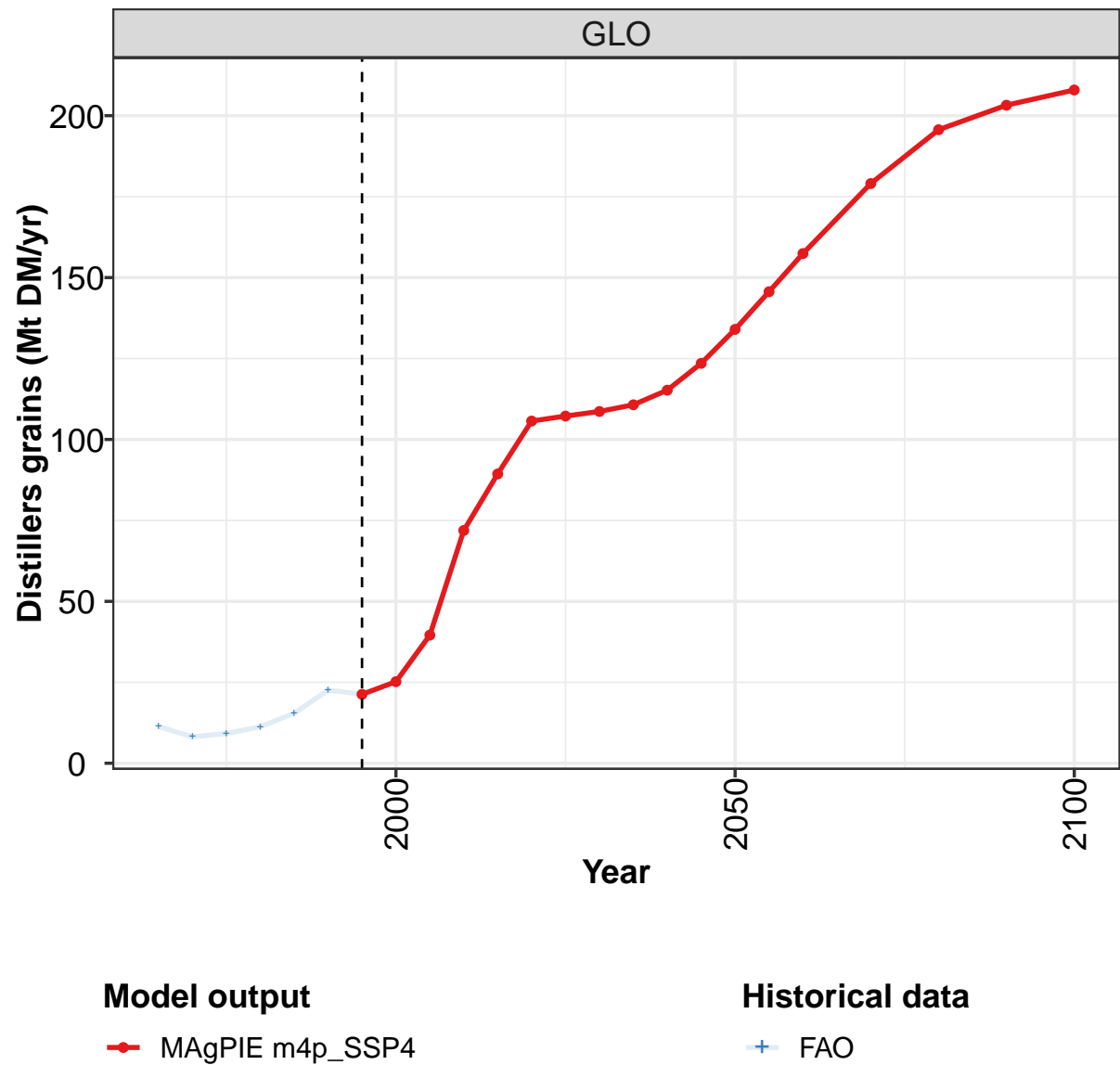
	2050	2055	2060	2070	2080	2090	2100
GLO	187	191	195	204	211	214	222
CAZ	2	2	2	2	2	2	2
CHA	16	15	14	12	10	9	15
EUR	15	15	15	14	14	13	11
IND	37	36	36	35	33	31	28
JPN	2	3	3	5	7	7	8
LAM	18	18	19	19	19	19	18
MEA	17	18	18	19	20	21	21
NEU	3	3	3	3	3	3	3
OAS	39	40	40	45	46	50	52
REF	7	7	7	7	7	7	6
SSA	25	27	30	36	43	48	53
USA	7	7	7	7	6	6	6

Table 333: MAgPIE m4p\_SSP4 — 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





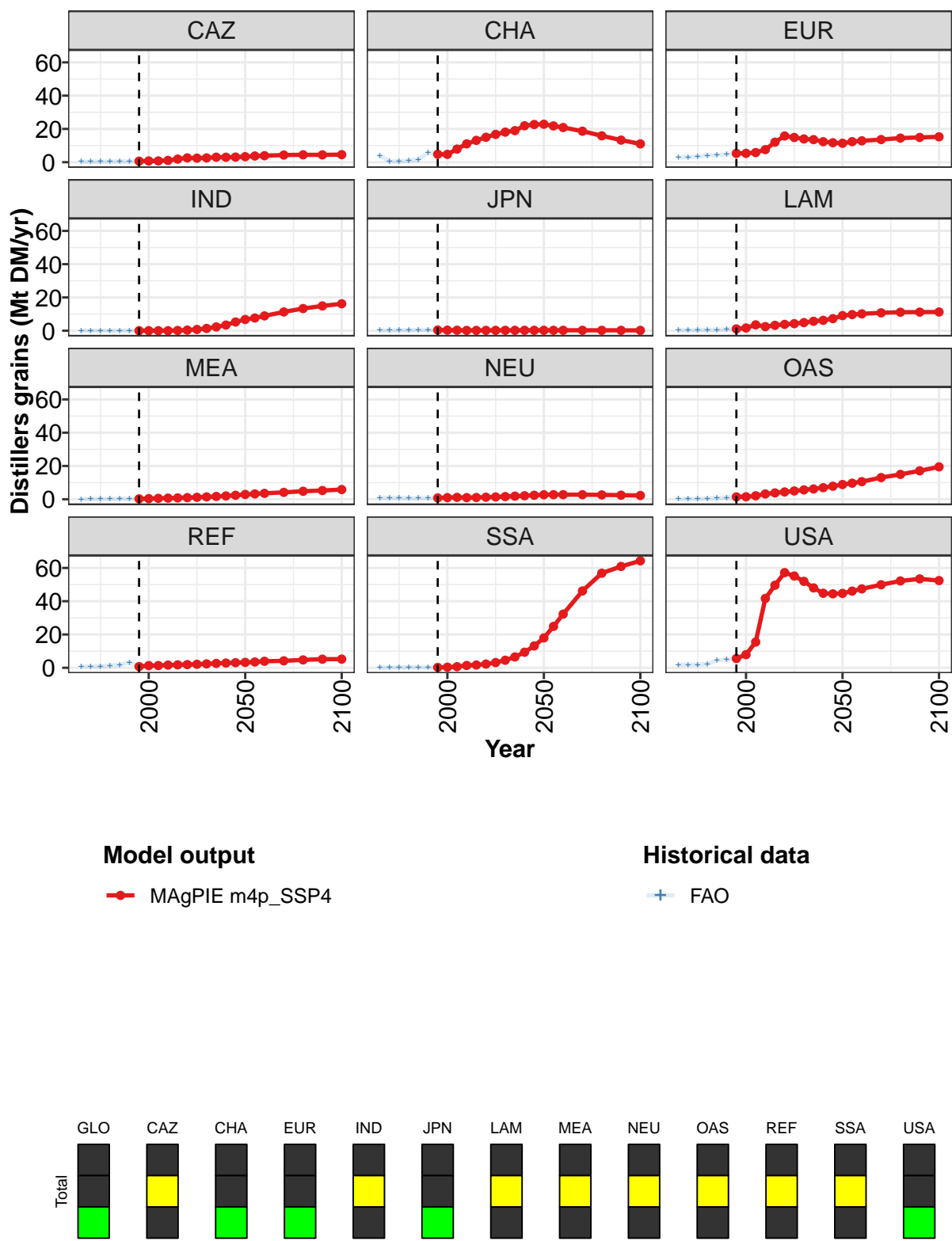


Figure 112: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Distillers grains (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21	25	40	72	89	106	107	109	111	115	124
CAZ	1	1	1	1	2	3	2	3	3	3	3
CHA	5	5	8	11	13	15	17	18	19	22	23
EUR	5	5	6	8	12	16	15	14	14	12	12
IND	0	0	0	0	0	0	1	1	2	3	5
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	4	2	3	4	4	5	6	6	7
MEA	0	0	1	1	1	1	1	1	2	2	2
NEU	1	1	1	1	1	1	1	2	2	2	2
OAS	1	2	2	3	4	4	5	6	6	7	8
REF	1	1	1	2	2	2	2	2	3	3	3
SSA	0	0	1	1	2	2	3	5	7	9	13
USA	6	8	15	42	50	57	55	52	48	45	44

Table 335: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Distillers grains (Mt DM/yr) [PART 1/2]

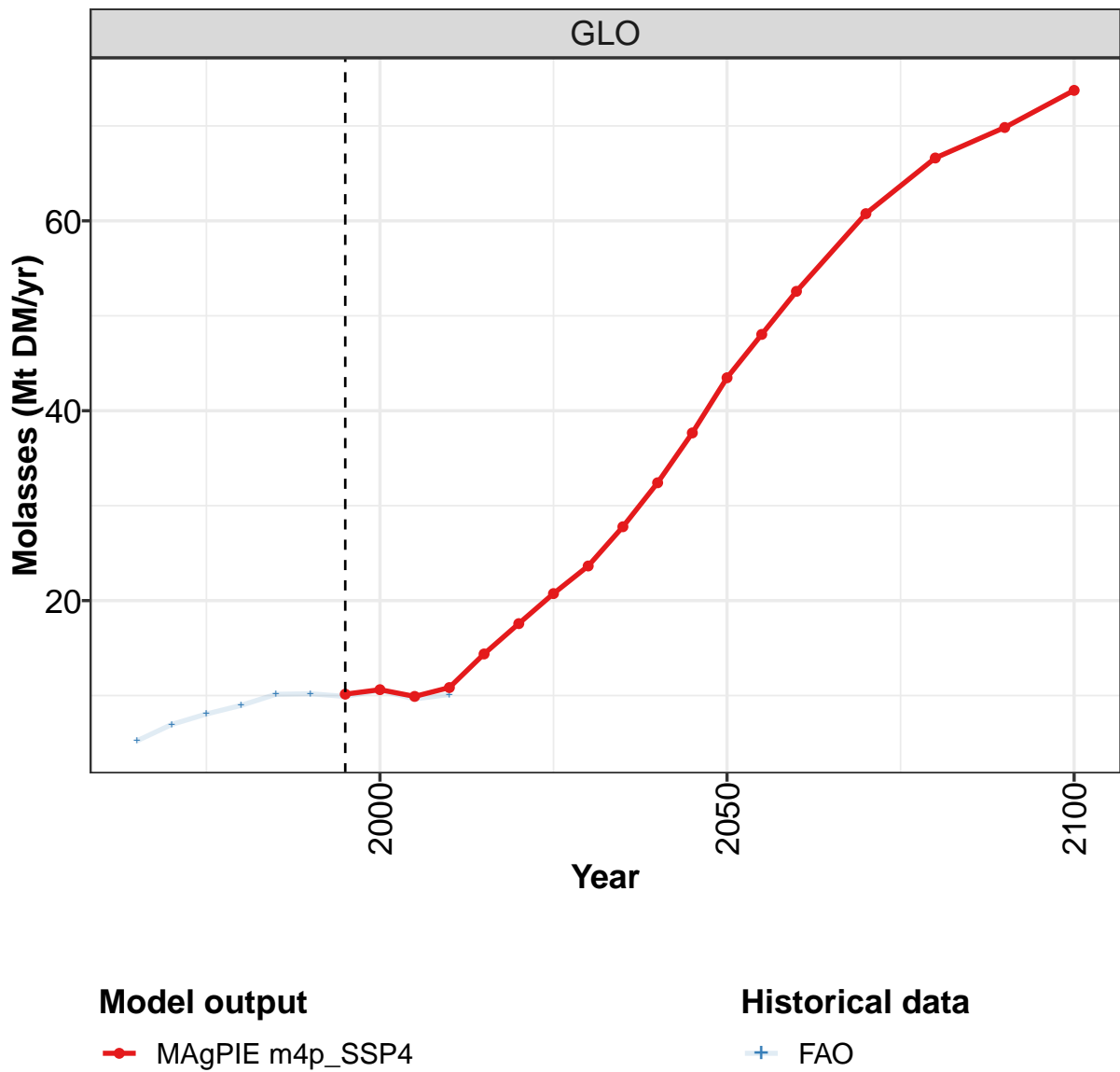
	2050	2055	2060	2070	2080	2090	2100
GLO	134	146	157	179	196	203	208
CAZ	3	4	4	4	4	4	5
CHA	23	22	21	19	16	13	11
EUR	11	12	13	14	14	15	15
IND	7	8	9	11	13	15	16
JPN	0	0	0	0	0	0	0
LAM	9	10	10	11	11	11	11
MEA	3	3	4	4	5	5	6
NEU	3	3	3	3	3	2	2
OAS	9	10	11	13	15	17	19
REF	3	3	4	4	5	5	5
SSA	18	25	32	46	57	61	64
USA	45	46	47	50	52	53	52

Table 336: MAgPIE m4p\_SSP4 — 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



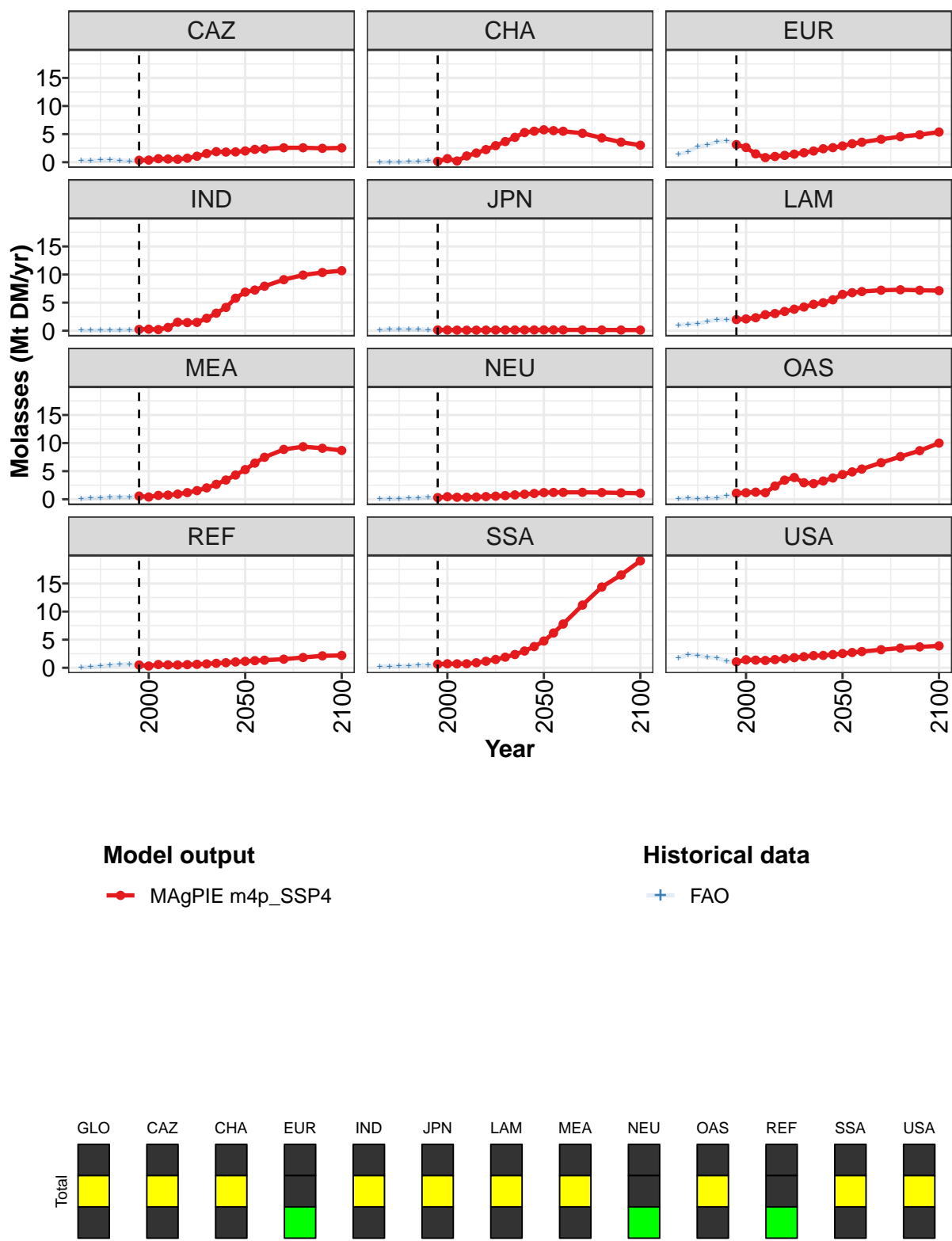


Figure 113: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.1	10.6	9.9	10.8	14.4	17.6	20.7	23.6	27.8	32.4	37.7
CAZ	0.3	0.4	0.6	0.6	0.5	0.7	1.1	1.5	1.9	1.8	1.8
CHA	0.2	0.6	0.2	1.1	1.6	2.2	2.9	3.7	4.4	5.3	5.5
EUR	3.1	2.6	1.5	0.8	1.0	1.2	1.4	1.7	2.0	2.4	2.6
IND	0.2	0.3	0.2	0.6	1.5	1.4	1.5	2.2	3.1	4.2	5.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.0	2.1	2.3	2.9	3.1	3.4	3.8	4.2	4.7	5.0	5.5
MEA	0.6	0.4	0.7	0.7	0.9	1.2	1.5	2.0	2.7	3.4	4.3
NEU	0.3	0.5	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.0
OAS	1.1	1.2	1.3	1.2	2.4	3.4	3.9	2.9	2.8	3.2	3.8
REF	0.5	0.3	0.6	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0
SSA	0.6	0.7	0.7	0.7	0.9	1.2	1.5	1.9	2.4	3.0	3.8
USA	1.1	1.4	1.4	1.3	1.5	1.6	1.8	2.0	2.2	2.2	2.4

Table 338: MAgPIE m4p-SSP4 — Demand—Feed—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

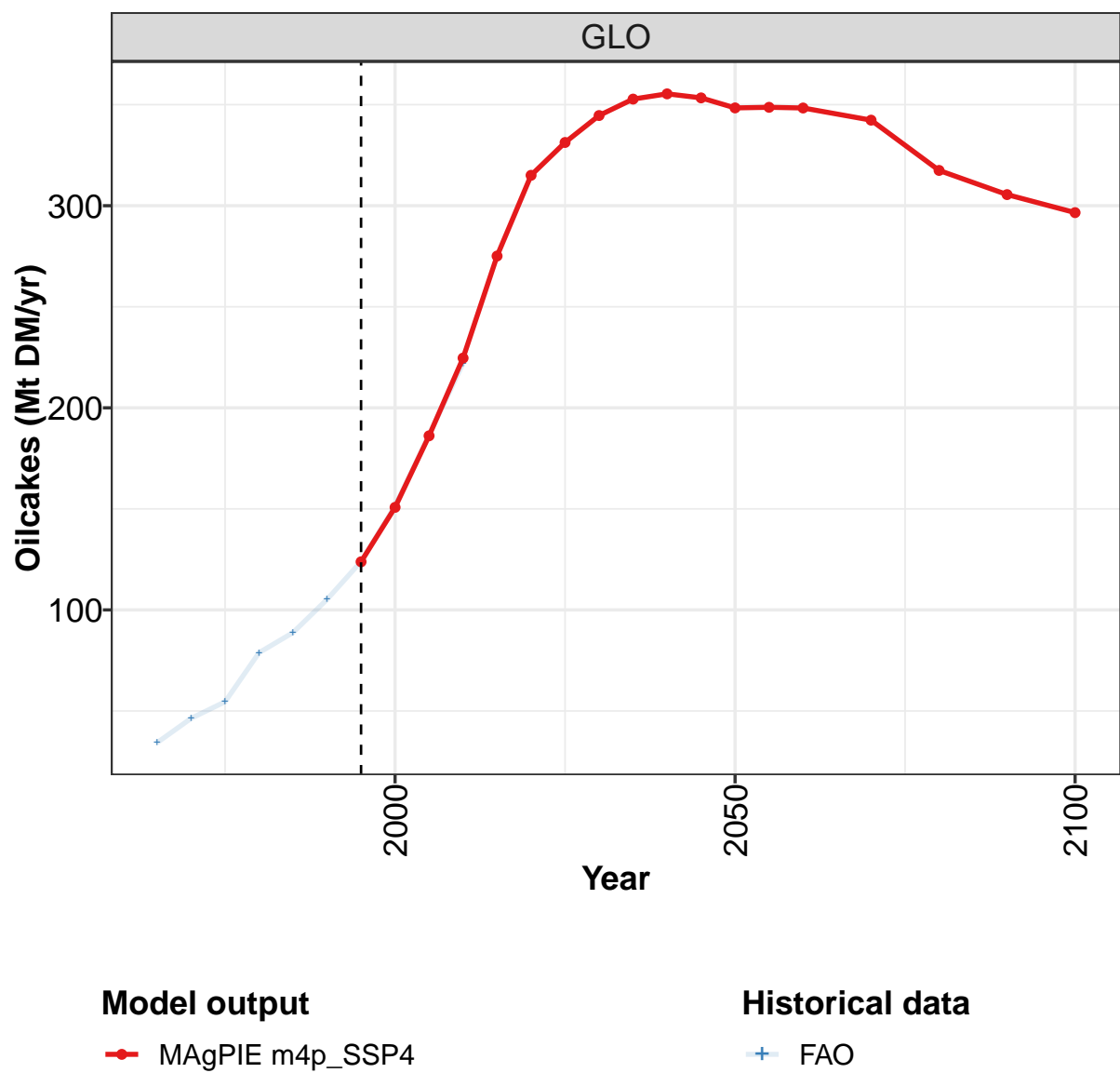
	2050	2055	2060	2070	2080	2090	2100
GLO	43.5	48.0	52.6	60.8	66.6	69.8	73.7
CAZ	2.0	2.3	2.4	2.6	2.6	2.5	2.5
CHA	5.8	5.6	5.5	5.1	4.3	3.6	3.0
EUR	2.9	3.3	3.6	4.1	4.6	4.9	5.4
IND	6.9	7.2	7.9	9.1	9.9	10.4	10.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	6.5	6.8	7.0	7.2	7.3	7.2	7.1
MEA	5.3	6.4	7.5	8.9	9.4	9.1	8.7
NEU	1.2	1.2	1.2	1.2	1.2	1.1	1.1
OAS	4.4	4.9	5.4	6.5	7.6	8.6	10.0
REF	1.2	1.3	1.4	1.5	1.8	2.1	2.2
SSA	4.8	6.2	7.8	11.2	14.4	16.5	19.0
USA	2.5	2.7	2.9	3.2	3.5	3.7	3.9

Table 339: MAgPIE m4p-SSP4 — 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



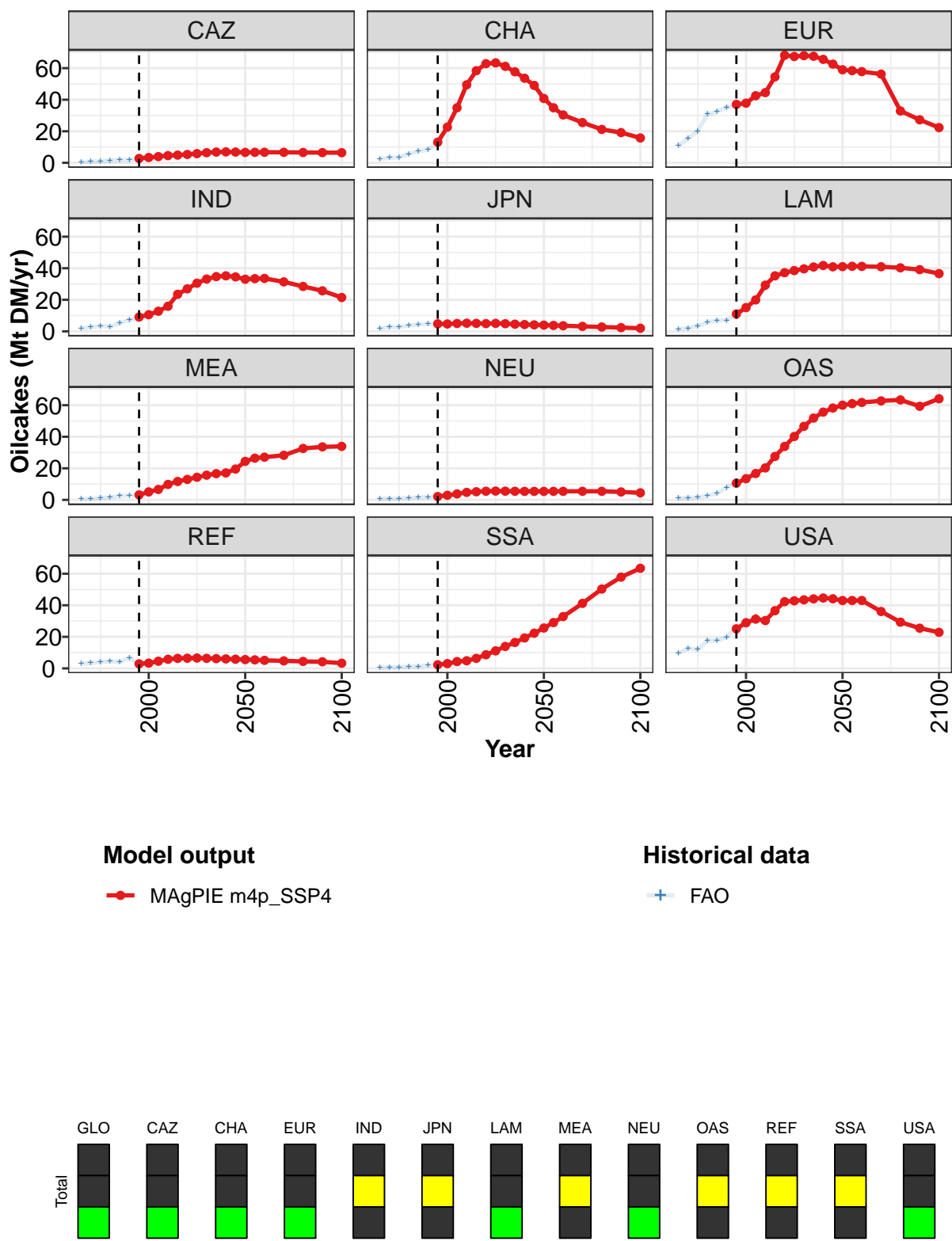


Figure 114: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	124	151	186	225	275	315	331	345	353	355	353
CAZ	3	3	4	5	5	5	6	6	7	7	7
CHA	13	23	35	49	58	63	63	61	58	54	49
EUR	37	38	43	45	54	68	67	68	68	66	63
IND	9	11	13	16	24	27	31	33	35	35	35
JPN	5	5	5	5	5	5	5	5	5	4	4
LAM	11	15	20	29	35	37	39	40	41	42	41
MEA	3	5	7	10	12	13	14	16	17	17	20
NEU	2	3	4	5	5	5	6	6	5	5	5
OAS	11	13	17	20	28	34	40	47	52	56	58
REF	3	3	5	6	6	6	7	6	6	6	6
SSA	2	3	4	5	6	9	11	14	16	19	22
USA	25	29	31	30	37	42	43	43	44	45	44

Table 341: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	348	349	348	342	317	306	297
CAZ	7	7	7	7	7	6	6
CHA	41	35	30	26	21	19	16
EUR	59	58	58	56	33	27	22
IND	33	33	34	31	28	26	21
JPN	4	4	4	3	3	2	2
LAM	41	41	41	41	40	39	37
MEA	24	26	27	28	33	34	34
NEU	5	5	5	5	5	5	4
OAS	60	61	62	63	63	59	64
REF	6	5	5	5	4	4	3
SSA	26	29	33	41	50	58	63
USA	43	43	43	36	29	25	23

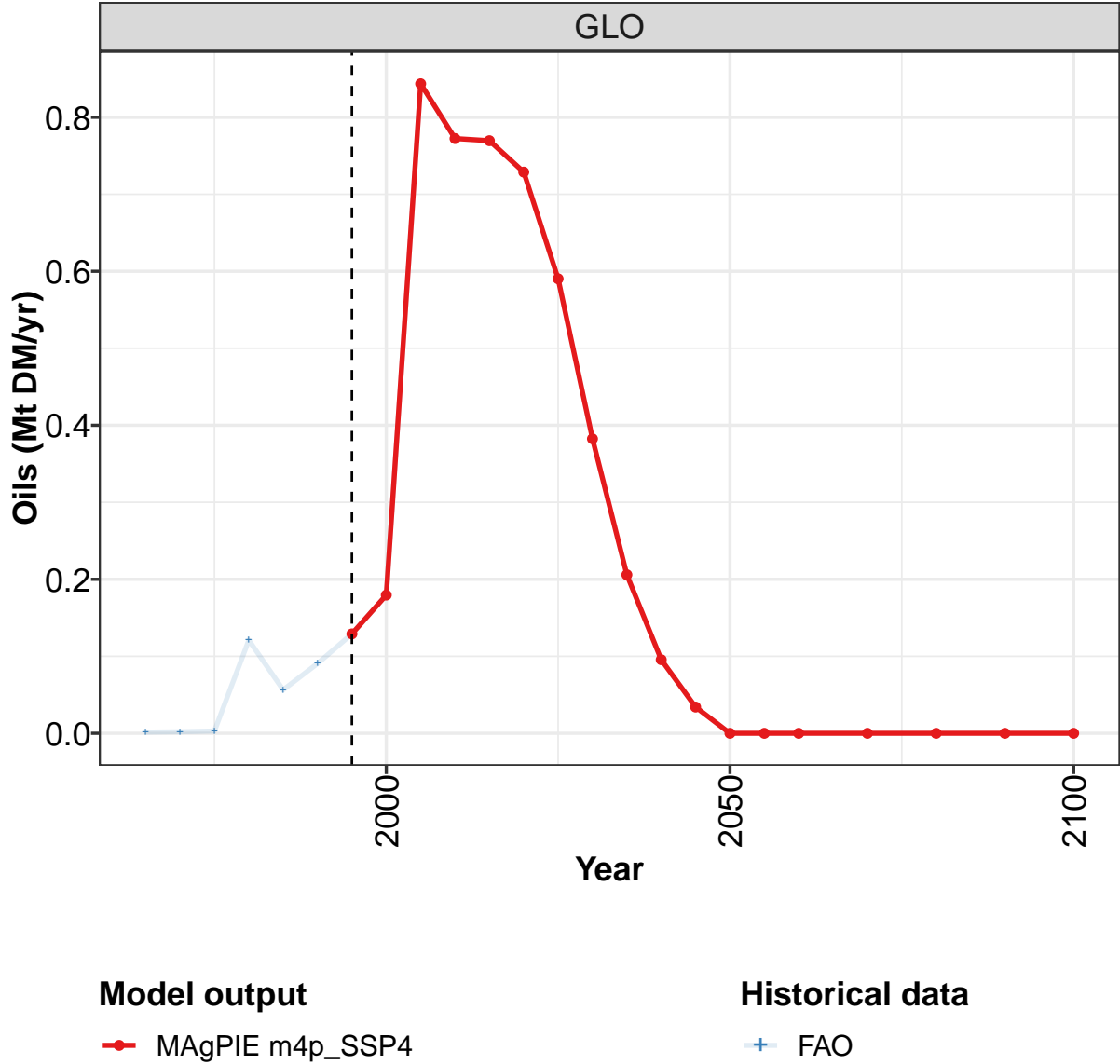
Table 342: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Oilcakes (Mt DM/yr) [PART 2/2]

	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



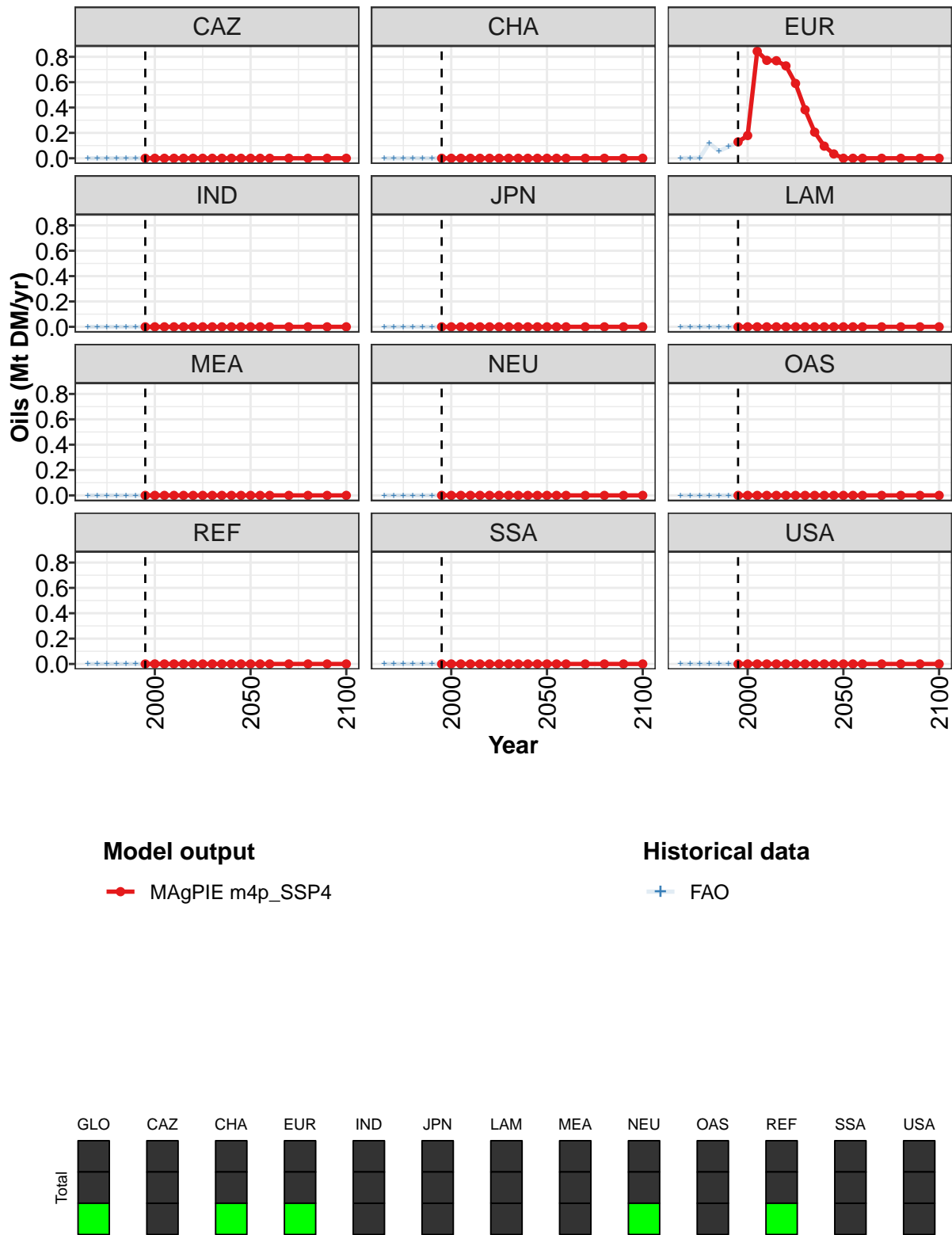


Figure 115: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Oils (Mt DM/yr)

	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\_SSP4 — Demand—Feed—Secondary products—Oils (Mt DM/yr) [PART 1/2]

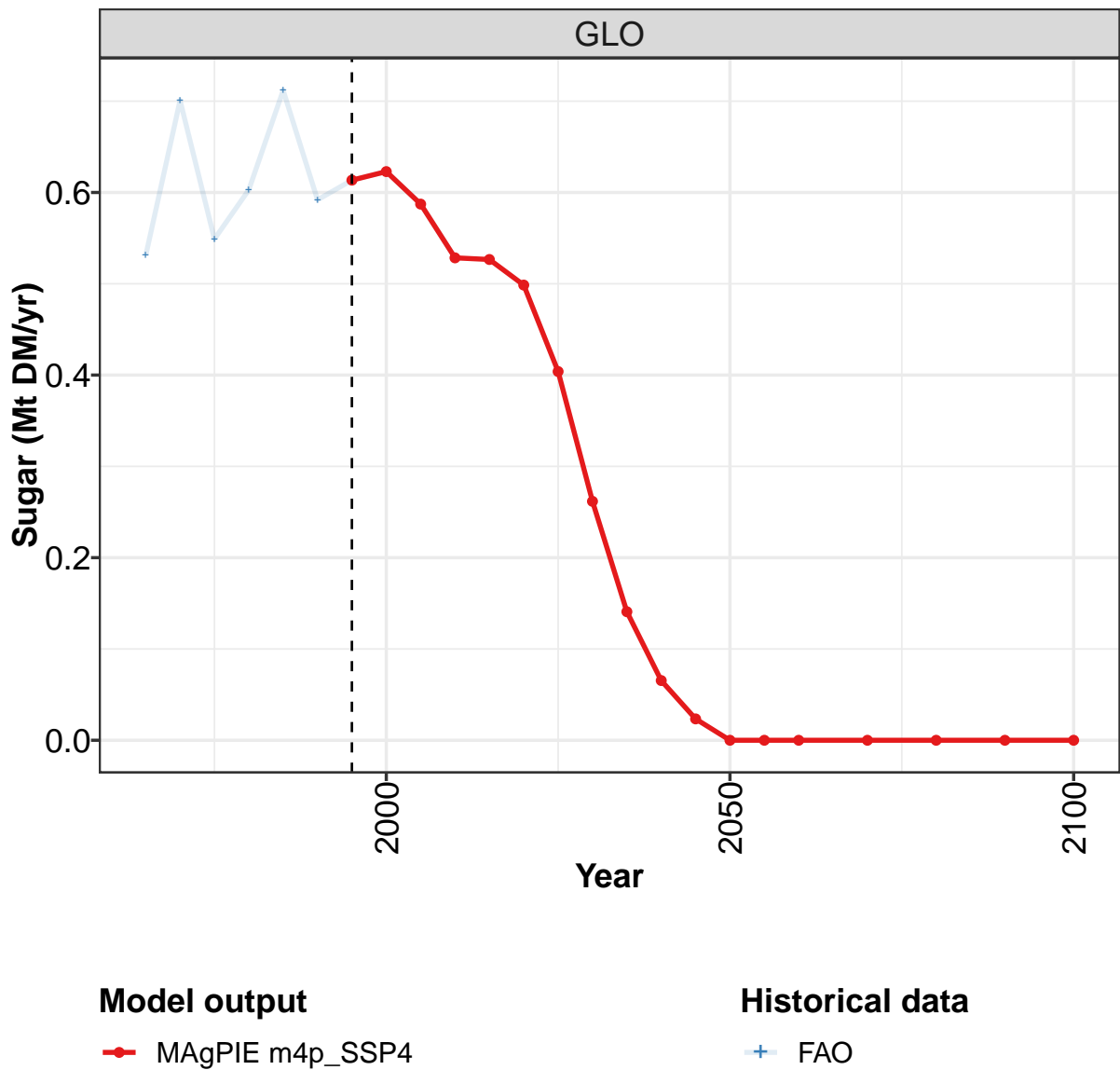
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	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\_SSP4 — 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



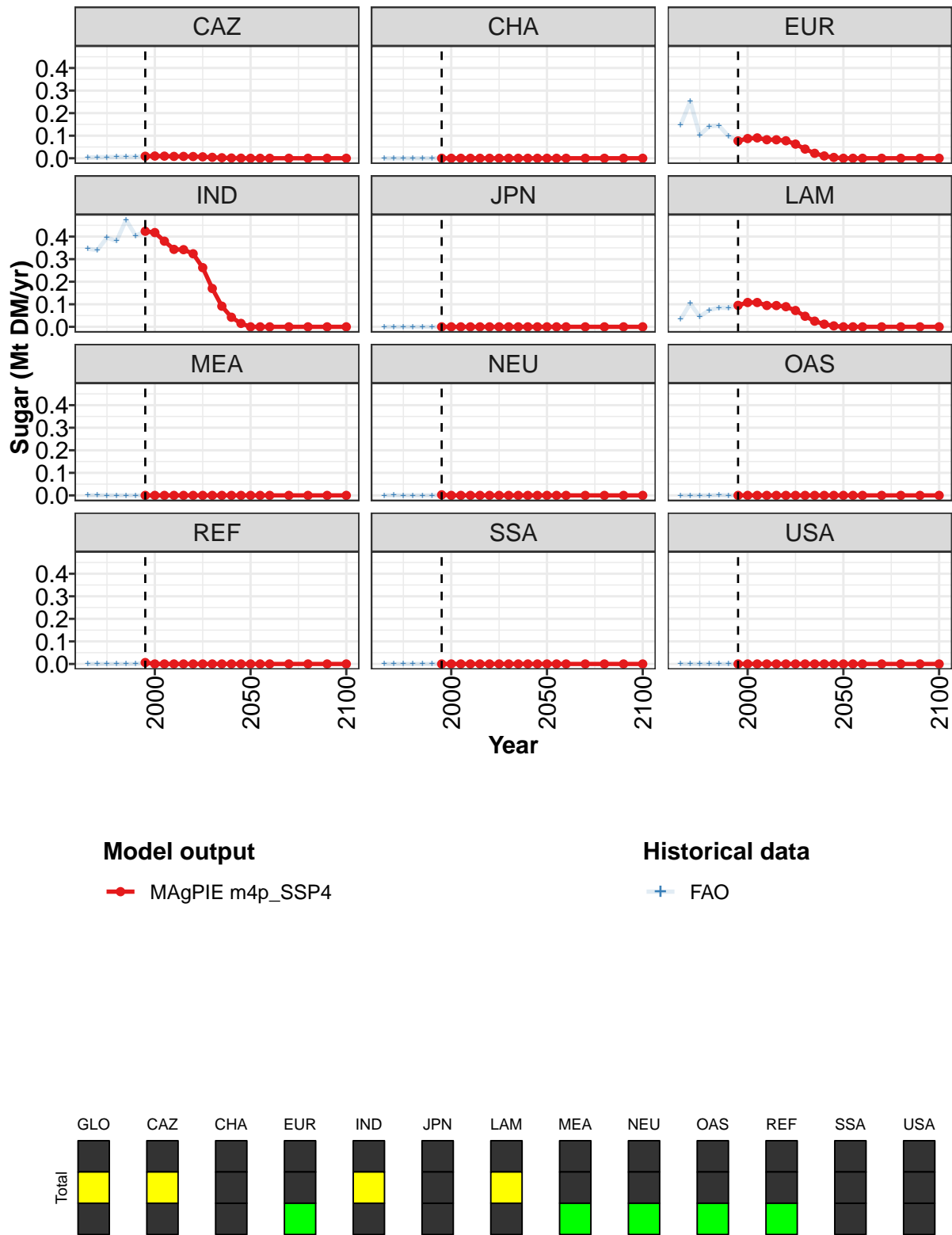


Figure 116: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Sugar (Mt DM/yr)

	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\_SSP4 — Demand—Feed—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

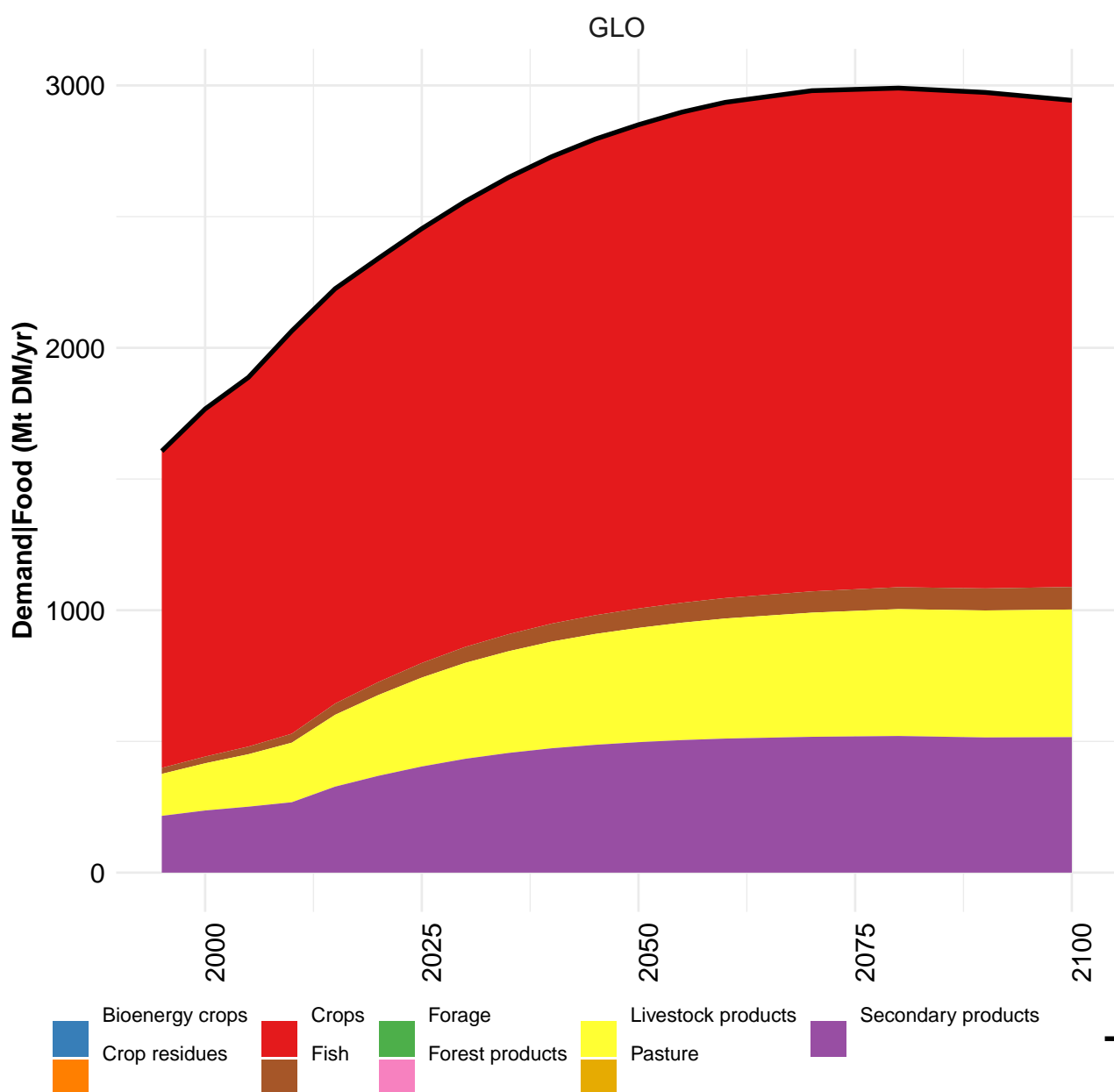
	2050	2055	2060	2070	2080	2090	2100
GLO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	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

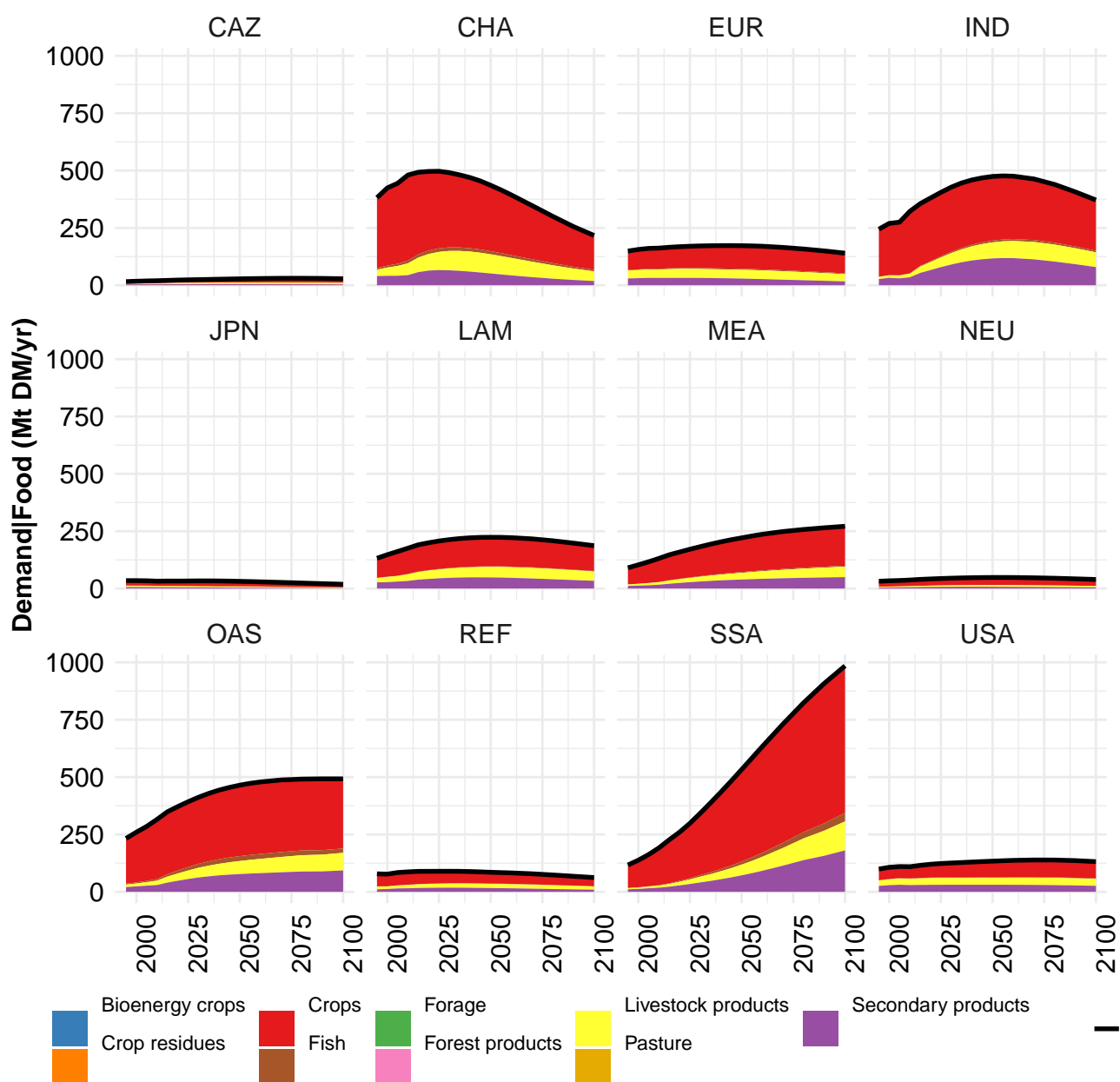
Table 348: MAgPIE m4p\_SSP4 — Demand—Feed—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

	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

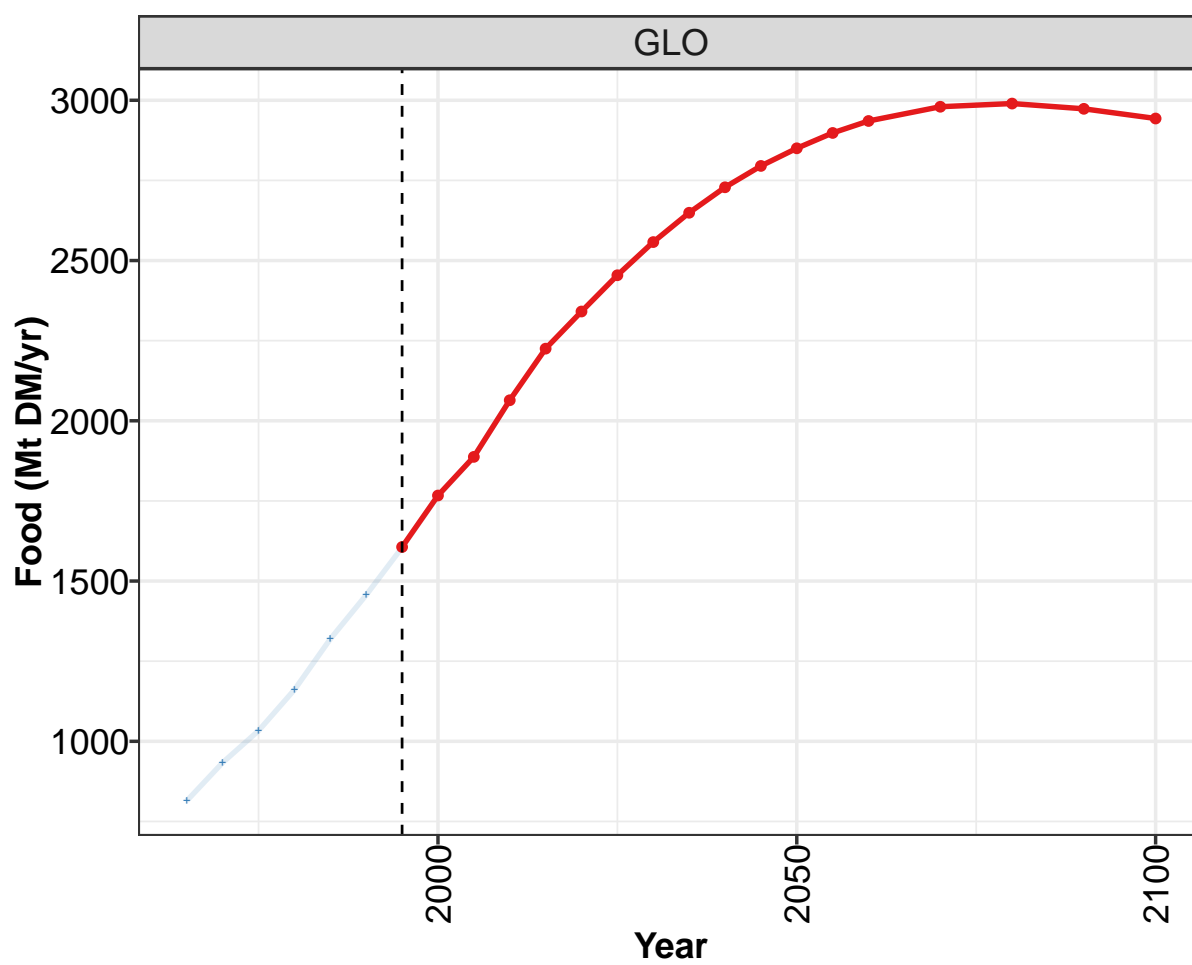
Table 349: FAO — Demand—Feed—Secondary products—Sugar (Mt DM/yr)

## 7 Food







**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

+— FAO

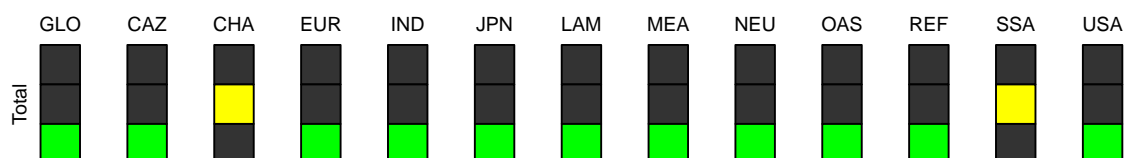
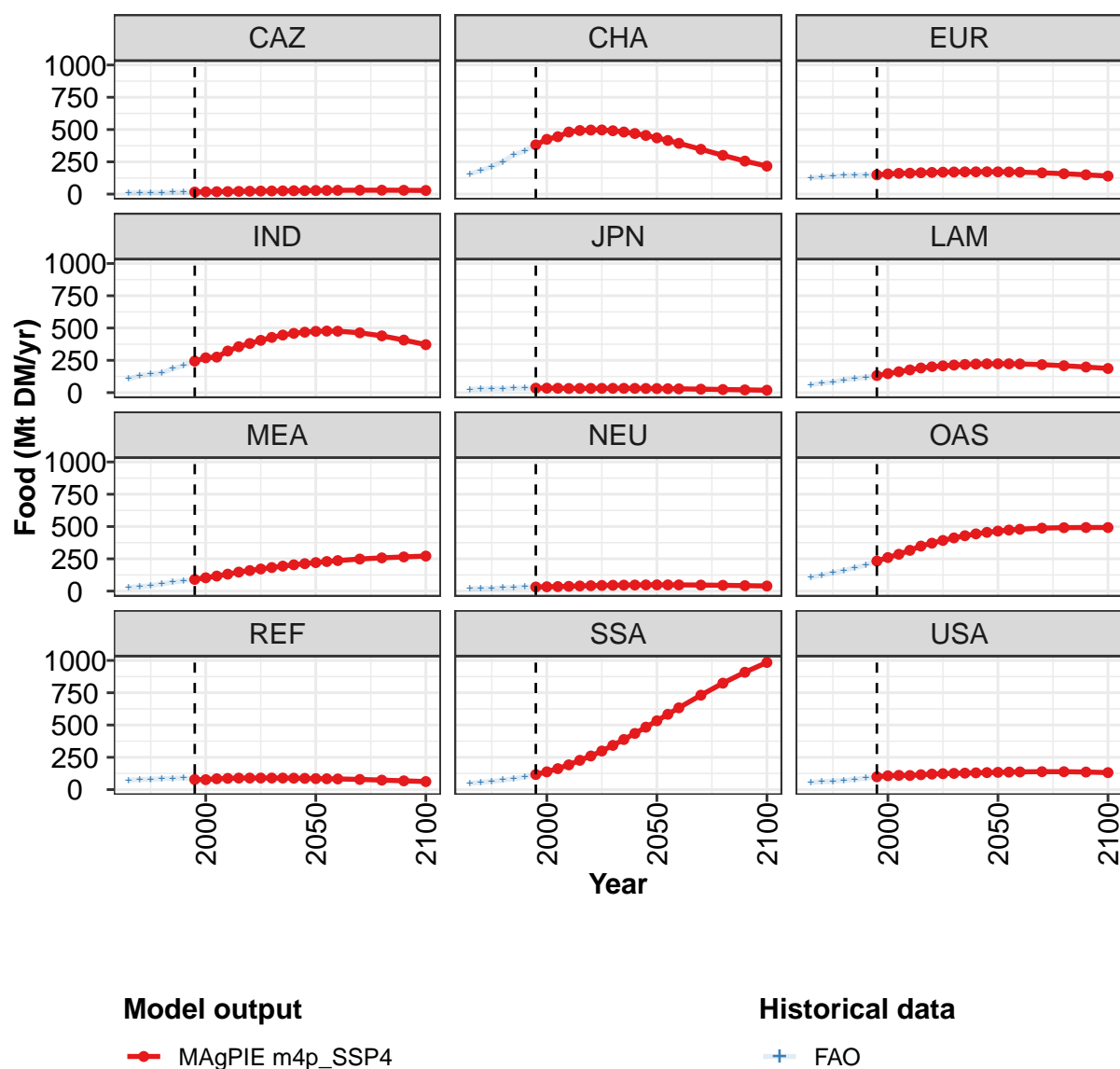


Figure 117: MAgPIE m4p\_SSP4 — Demand—Food (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1606	1767	1888	2064	2225	2341	2454	2558	2649	2729	2795
CAZ	16	18	19	20	21	23	24	24	25	26	27
CHA	382	424	444	481	493	496	497	491	481	469	454
EUR	149	156	161	162	165	168	170	171	172	173	173
IND	244	270	275	322	356	380	405	427	446	459	468
JPN	35	34	34	32	33	33	33	33	33	33	32
LAM	132	147	162	176	191	200	207	213	218	221	223
MEA	90	103	117	131	147	159	171	183	193	203	213
NEU	32	34	35	37	40	42	44	45	46	47	48
OAS	233	260	285	316	349	371	392	412	429	443	455
REF	78	77	84	87	89	89	89	90	89	88	87
SSA	117	138	162	192	227	260	299	343	388	435	483
USA	99	107	110	109	115	120	123	126	128	130	132

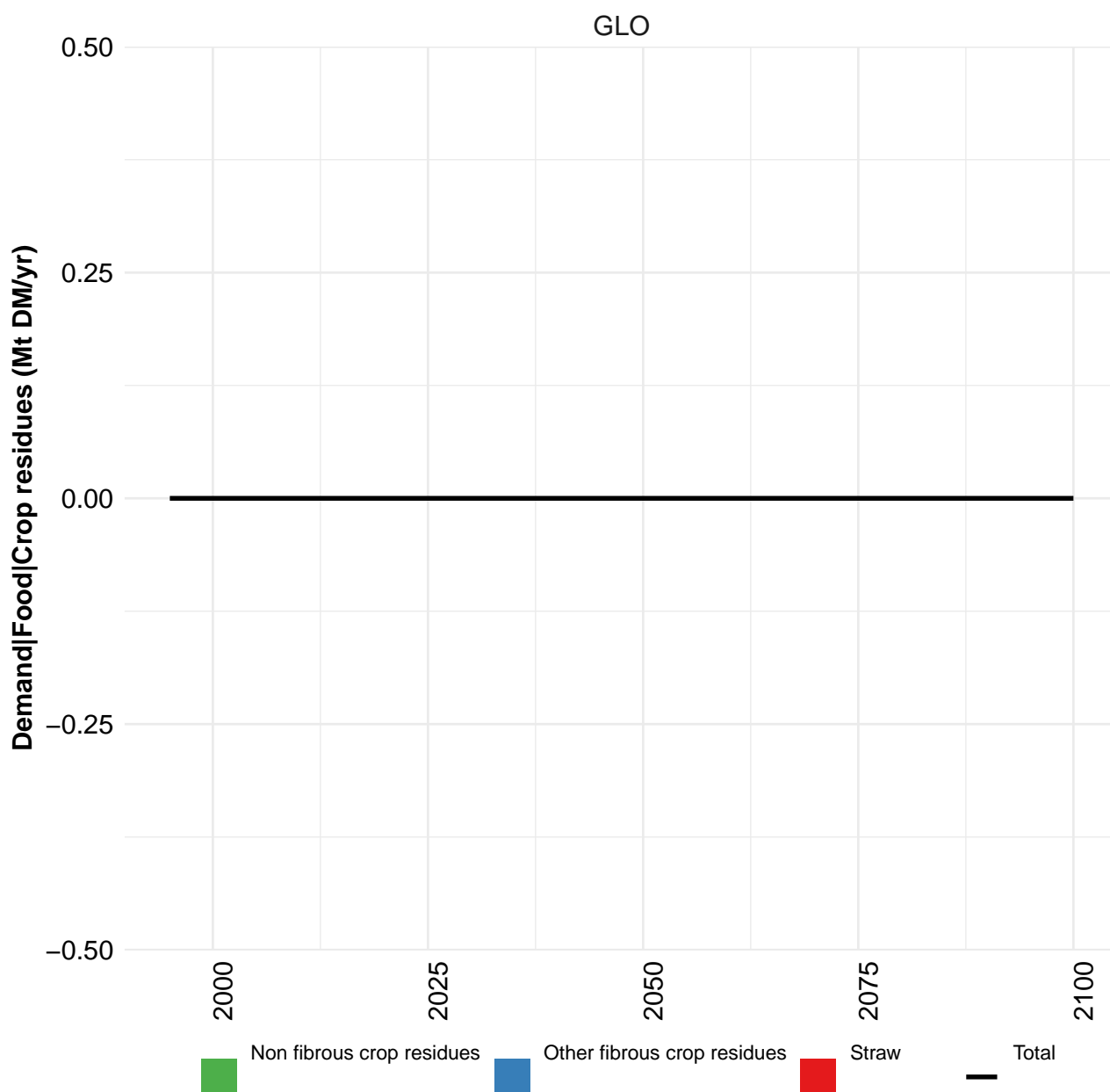
Table 350: MAgPIE m4p-SSP4 — Demand—Food (Mt DM/yr) [PART 1/2]

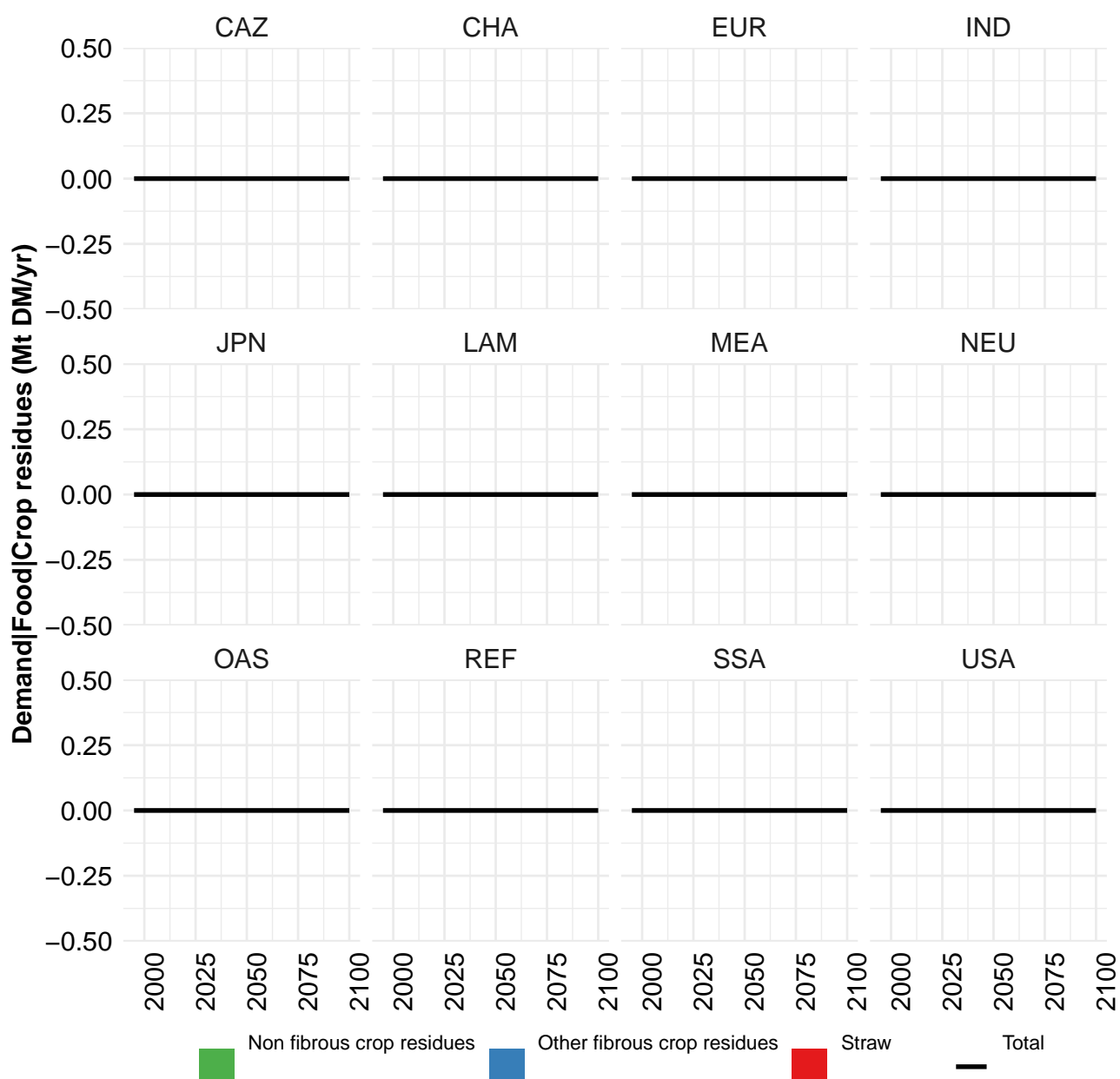
	2050	2055	2060	2070	2080	2090	2100
GLO	2850	2898	2935	2980	2990	2973	2943
CAZ	28	29	29	30	30	30	28
CHA	436	415	394	347	300	256	217
EUR	172	171	170	165	158	150	140
IND	474	477	475	463	439	407	371
JPN	31	30	29	27	24	21	19
LAM	223	223	222	216	208	198	187
MEA	221	229	236	248	257	265	271
NEU	48	48	48	47	45	42	39
OAS	465	473	479	488	491	492	492
REF	85	84	82	79	73	68	62
SSA	533	583	633	731	824	909	985
USA	134	135	137	139	139	136	132

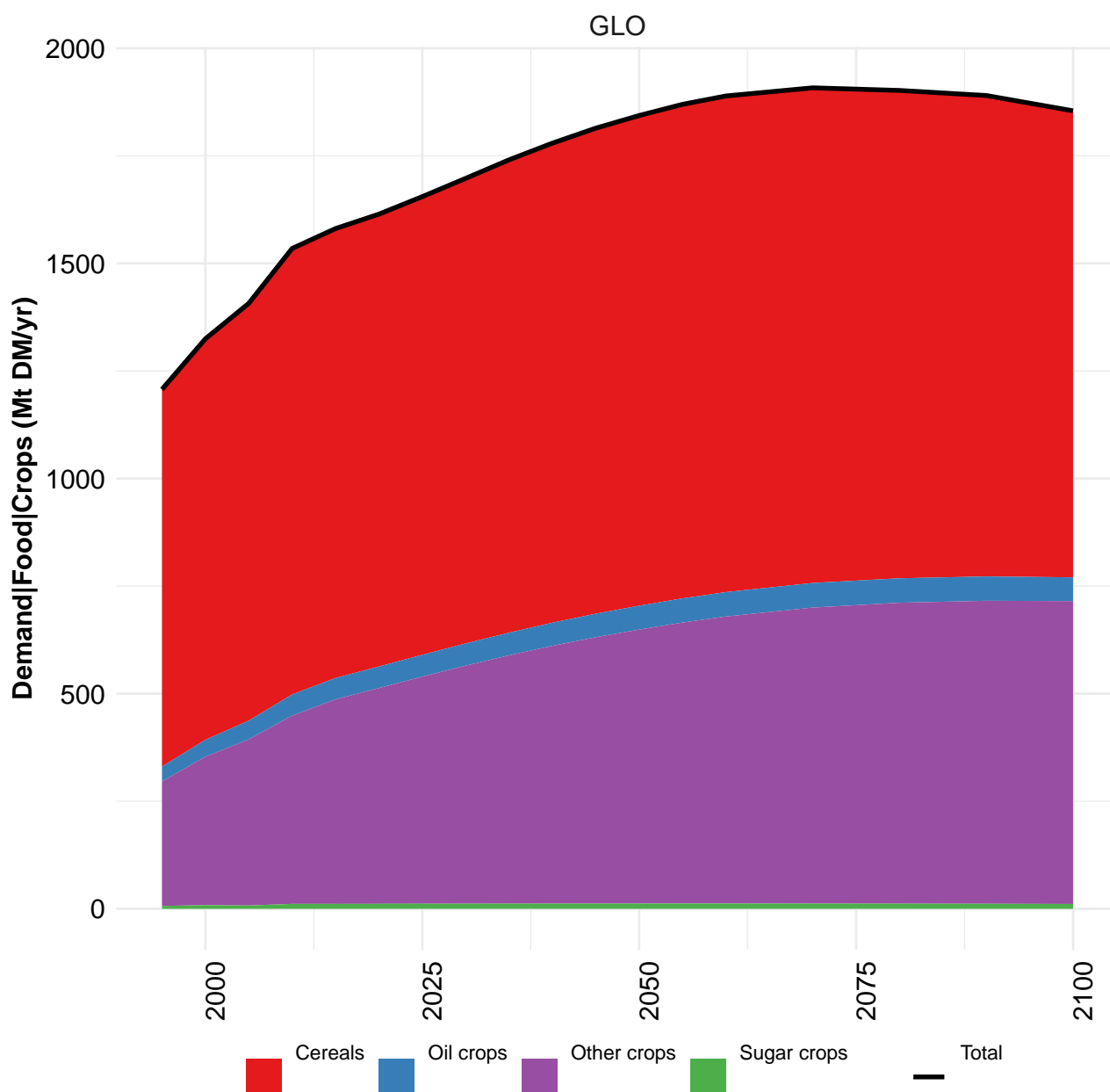
Table 351: MAgPIE m4p-SSP4 — Demand—Food (Mt DM/yr) [PART 2/2]

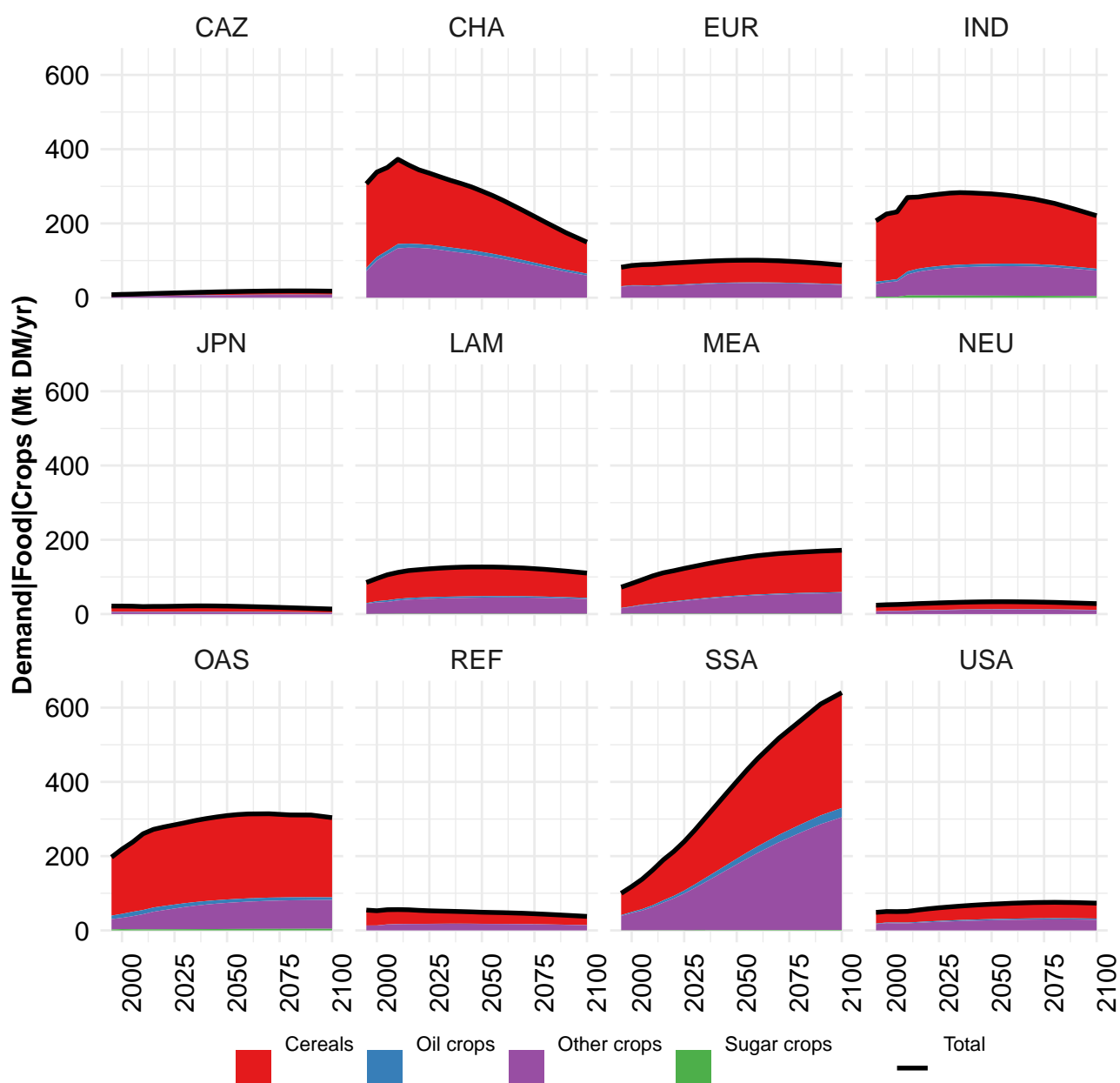
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	815	934	1033	1161	1319	1456	1605	1765	1888	2064
CAZ	10	11	12	12	13	14	16	17	19	20
CHA	156	183	212	251	303	336	381	424	444	481
EUR	126	133	137	143	147	149	149	156	161	162
IND	107	131	143	154	185	211	243	268	275	322
JPN	26	29	30	32	34	35	35	34	34	32
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)

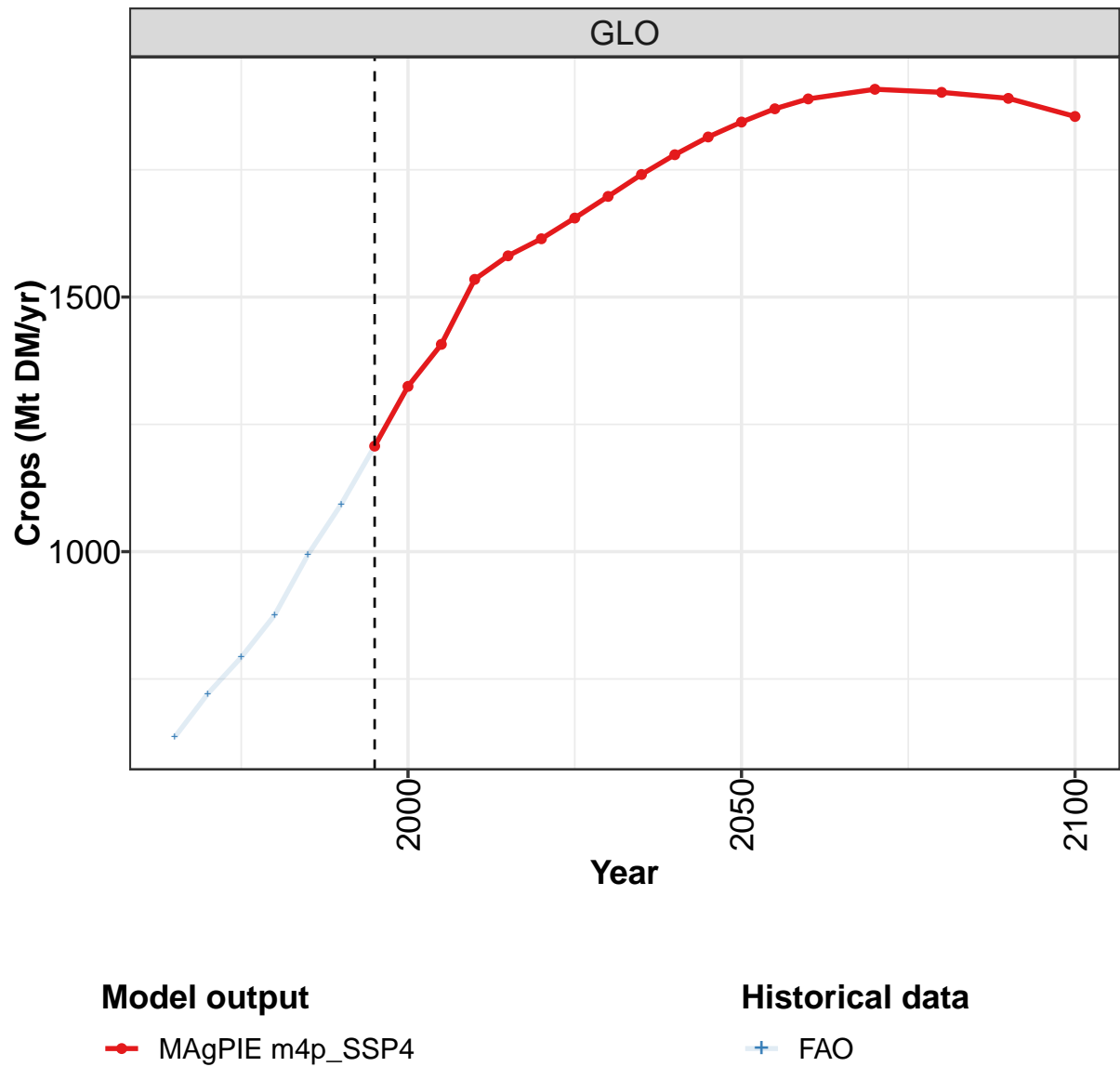








7.1
Crops





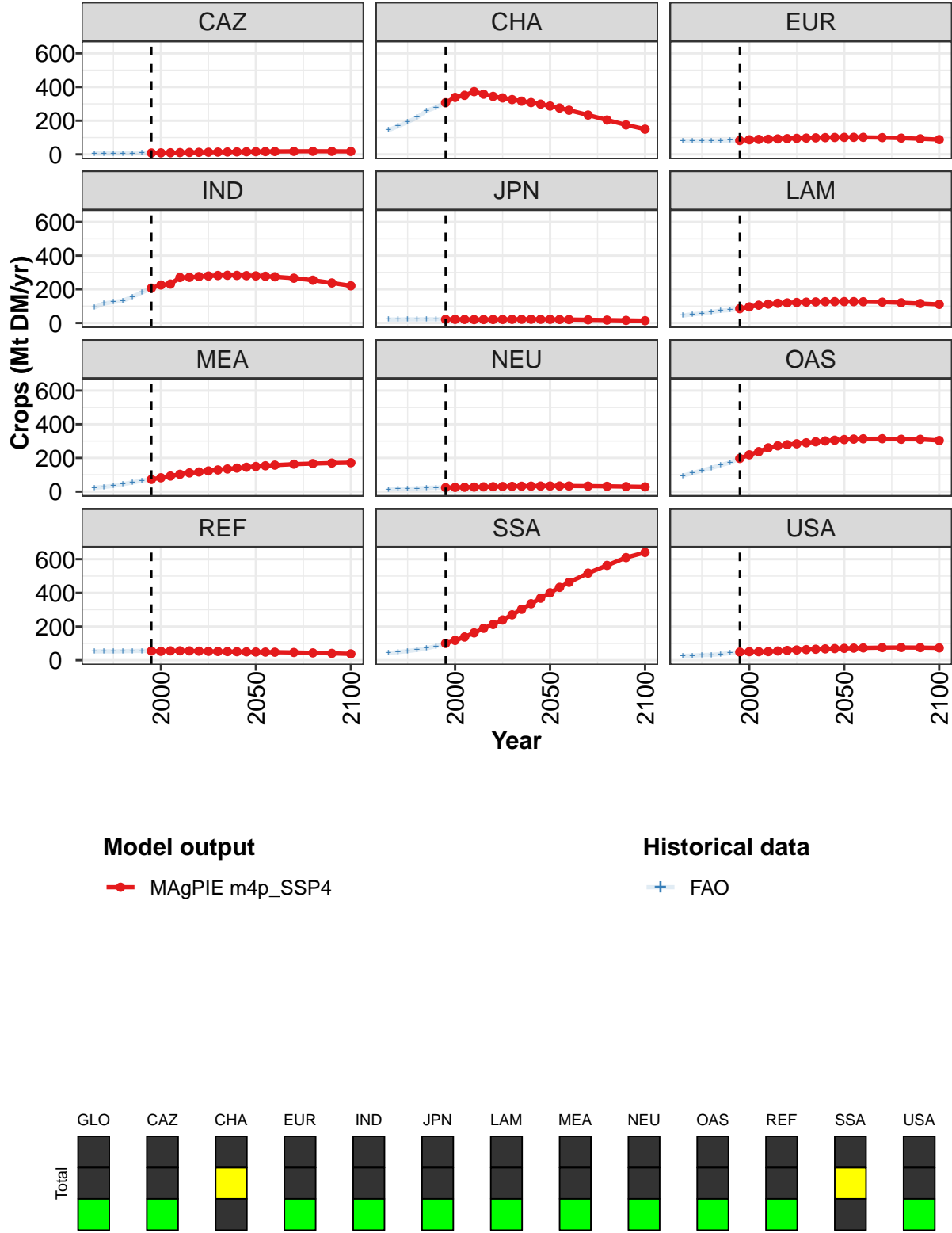


Figure 118: MAgPIE m4p\_SSP4 — Demand—Food—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1207	1325	1407	1535	1581	1614	1655	1698	1741	1780	1814
CAZ	8	9	10	10	11	12	13	14	14	15	16
CHA	307	338	351	373	358	344	335	326	316	308	298
EUR	82	87	89	90	92	94	95	97	98	99	100
IND	207	225	231	270	271	275	279	282	283	282	281
JPN	22	21	21	20	21	21	21	22	22	22	22
LAM	85	96	106	112	117	119	122	124	125	126	127
MEA	73	82	92	103	111	117	123	129	134	140	145
NEU	24	25	26	27	28	29	30	31	32	32	33
OAS	197	219	238	260	272	279	284	290	296	301	305
REF	55	53	56	56	56	54	53	52	51	51	50
SSA	100	118	138	163	190	212	239	270	303	335	368
USA	49	51	51	51	55	58	61	63	65	67	69

Table 353: MAgPIE m4p-SSP4 — Demand—Food—Crops (Mt DM/yr) [PART 1/2]

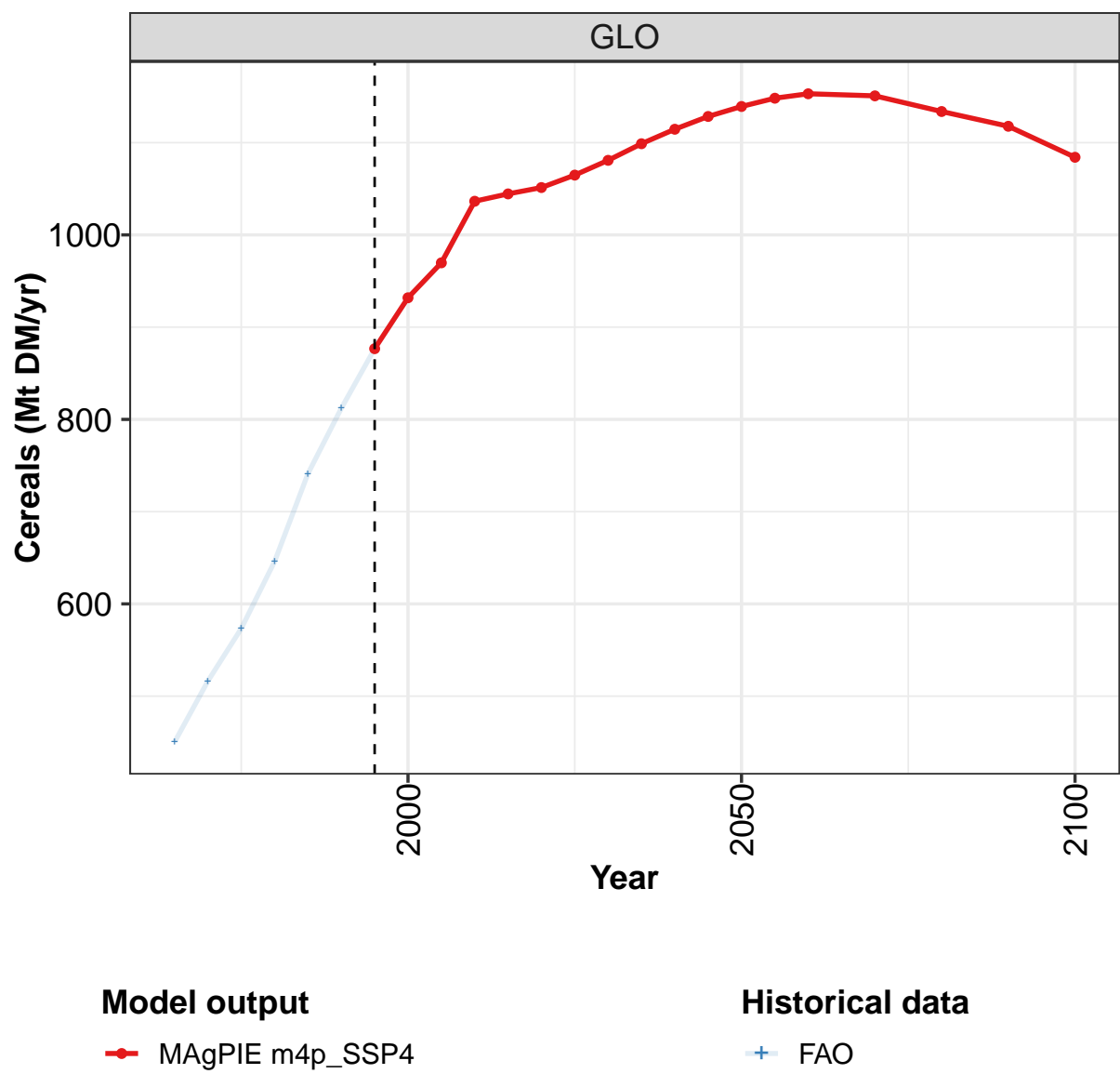
	2050	2055	2060	2070	2080	2090	2100
GLO	1844	1870	1889	1908	1902	1890	1855
CAZ	16	17	17	18	18	18	18
CHA	287	275	262	234	204	175	150
EUR	101	101	101	100	97	93	88
IND	280	277	274	266	254	238	221
JPN	21	21	20	19	17	15	14
LAM	127	127	126	124	120	116	110
MEA	149	154	157	163	167	170	172
NEU	33	33	33	33	31	30	28
OAS	309	312	314	314	311	311	304
REF	49	48	48	46	44	41	38
SSA	401	433	463	517	563	610	640
USA	71	72	73	75	76	75	73

Table 354: MAgPIE m4p-SSP4 — 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



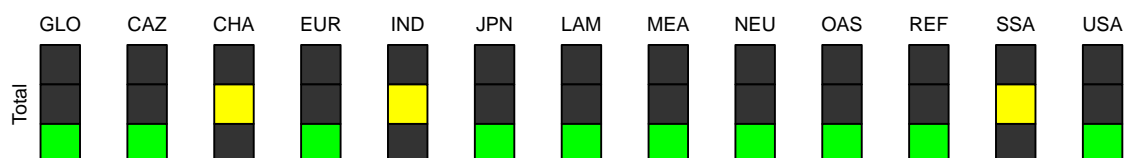
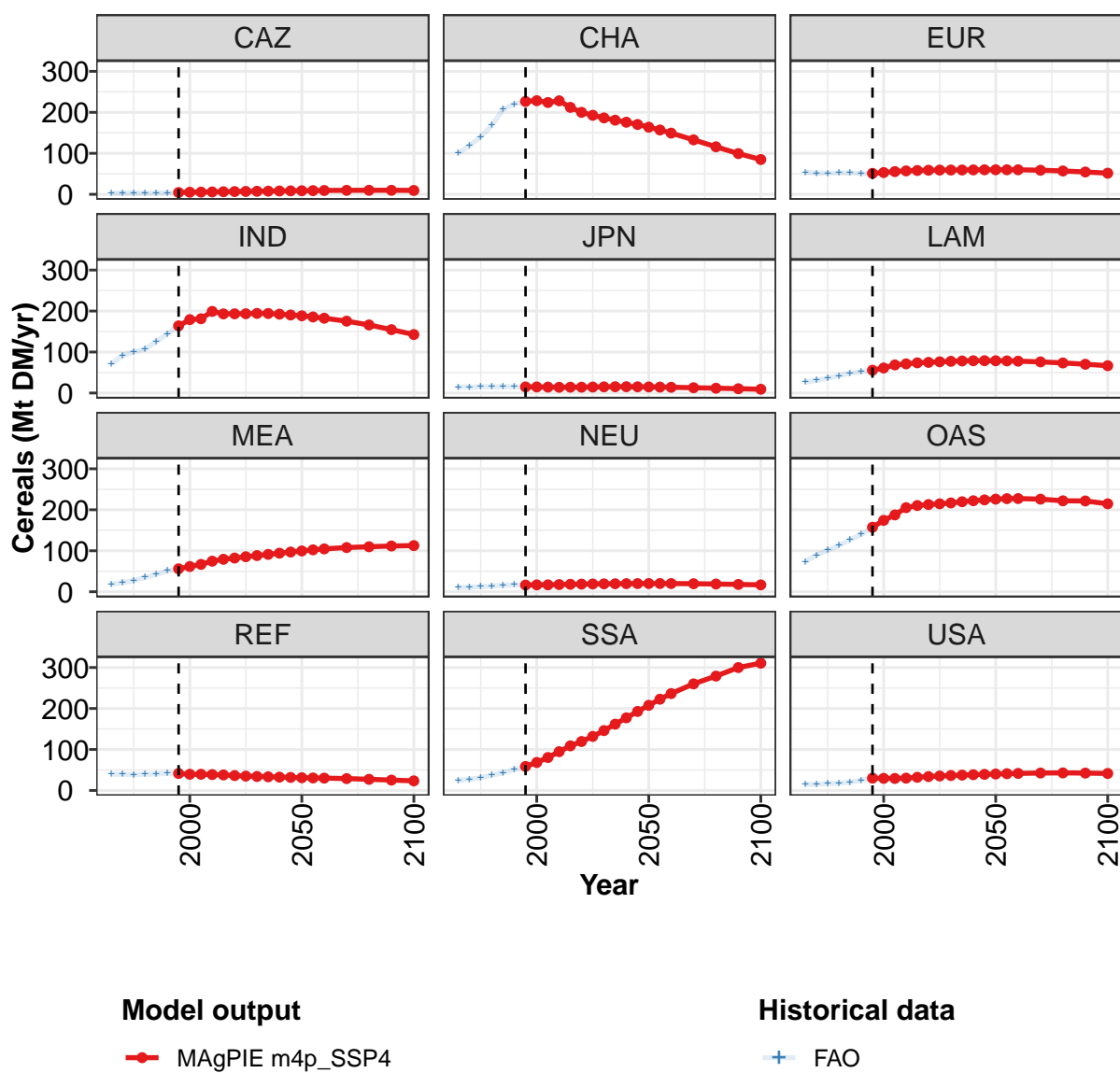


Figure 119: MAGPIE m4p\_SSP4 — Demand—Food—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	877	932	970	1036	1044	1051	1065	1081	1099	1115	1128
CAZ	4	5	5	6	6	7	7	7	8	8	8
CHA	227	228	224	228	212	200	193	187	181	176	170
EUR	51	53	55	57	58	59	59	59	59	60	60
IND	164	179	181	199	193	193	193	194	194	192	190
JPN	15	15	14	14	14	14	15	15	15	15	15
LAM	56	61	69	71	74	75	76	77	78	79	79
MEA	56	62	67	75	79	82	86	88	91	94	97
NEU	16	17	17	18	18	19	19	19	20	20	20
OAS	157	174	187	205	210	213	215	217	220	222	224
REF	41	40	40	39	38	36	35	34	33	33	32
SSA	59	68	80	95	109	119	132	146	162	177	193
USA	30	30	29	30	32	34	35	36	37	38	39

Table 356: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals (Mt DM/yr) [PART 1/2]

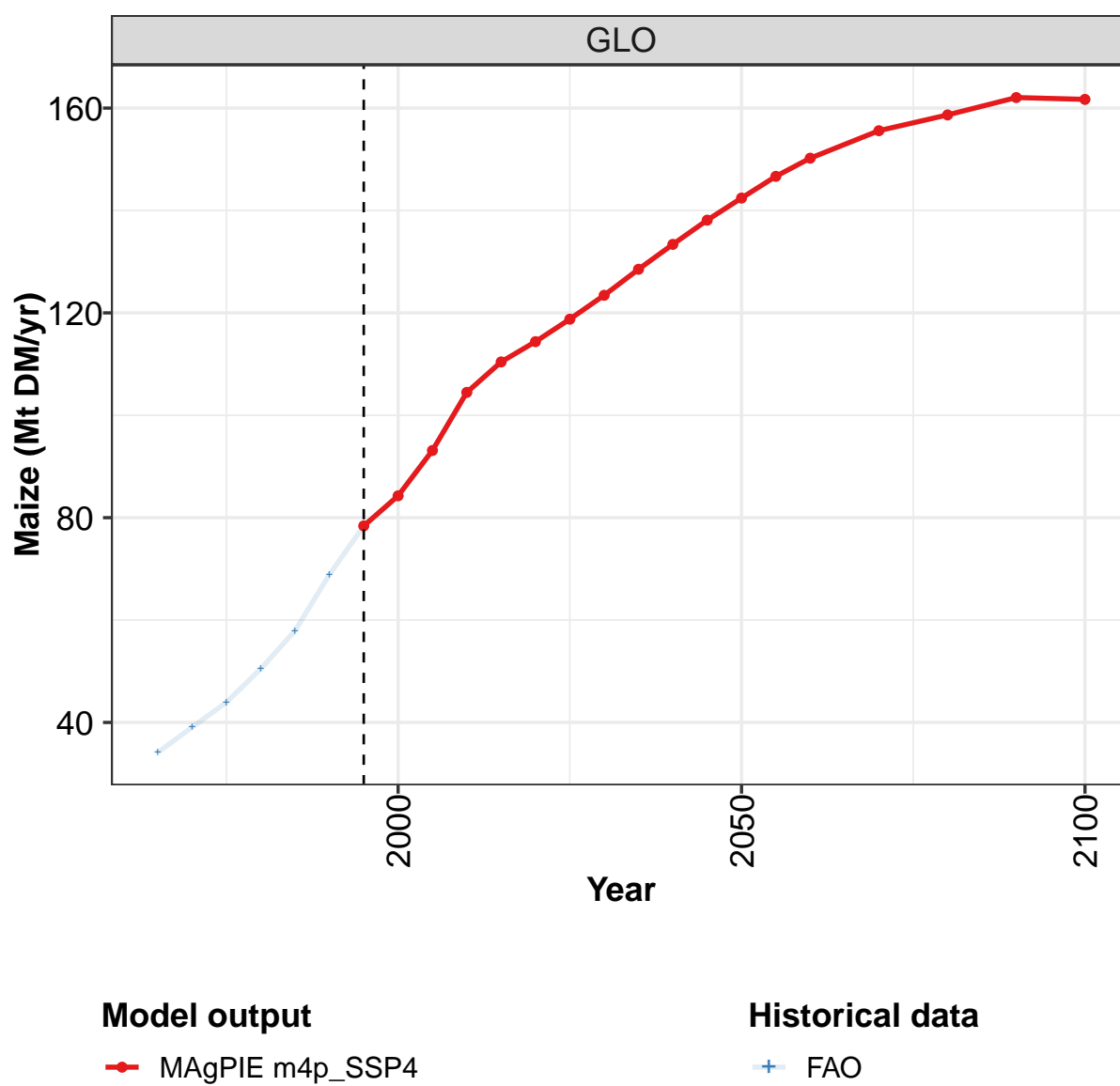
	2050	2055	2060	2070	2080	2090	2100
GLO	1139	1148	1153	1151	1134	1118	1084
CAZ	9	9	9	10	10	10	9
CHA	164	157	149	133	116	99	85
EUR	60	60	60	59	57	54	52
IND	188	186	183	175	166	155	143
JPN	15	15	14	13	12	11	9
LAM	79	78	78	76	73	70	67
MEA	100	102	105	108	110	112	113
NEU	20	20	20	20	19	18	17
OAS	226	227	227	226	222	221	215
REF	31	31	30	29	27	25	23
SSA	208	223	236	260	279	300	311
USA	40	41	42	43	43	42	41

Table 357: MAgPIE m4p\_SSP4 — 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



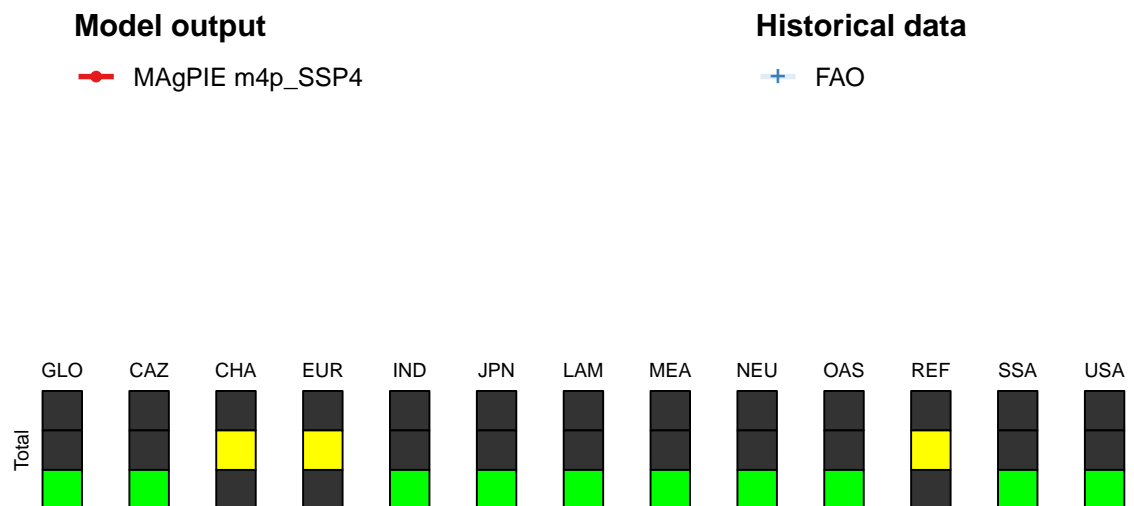
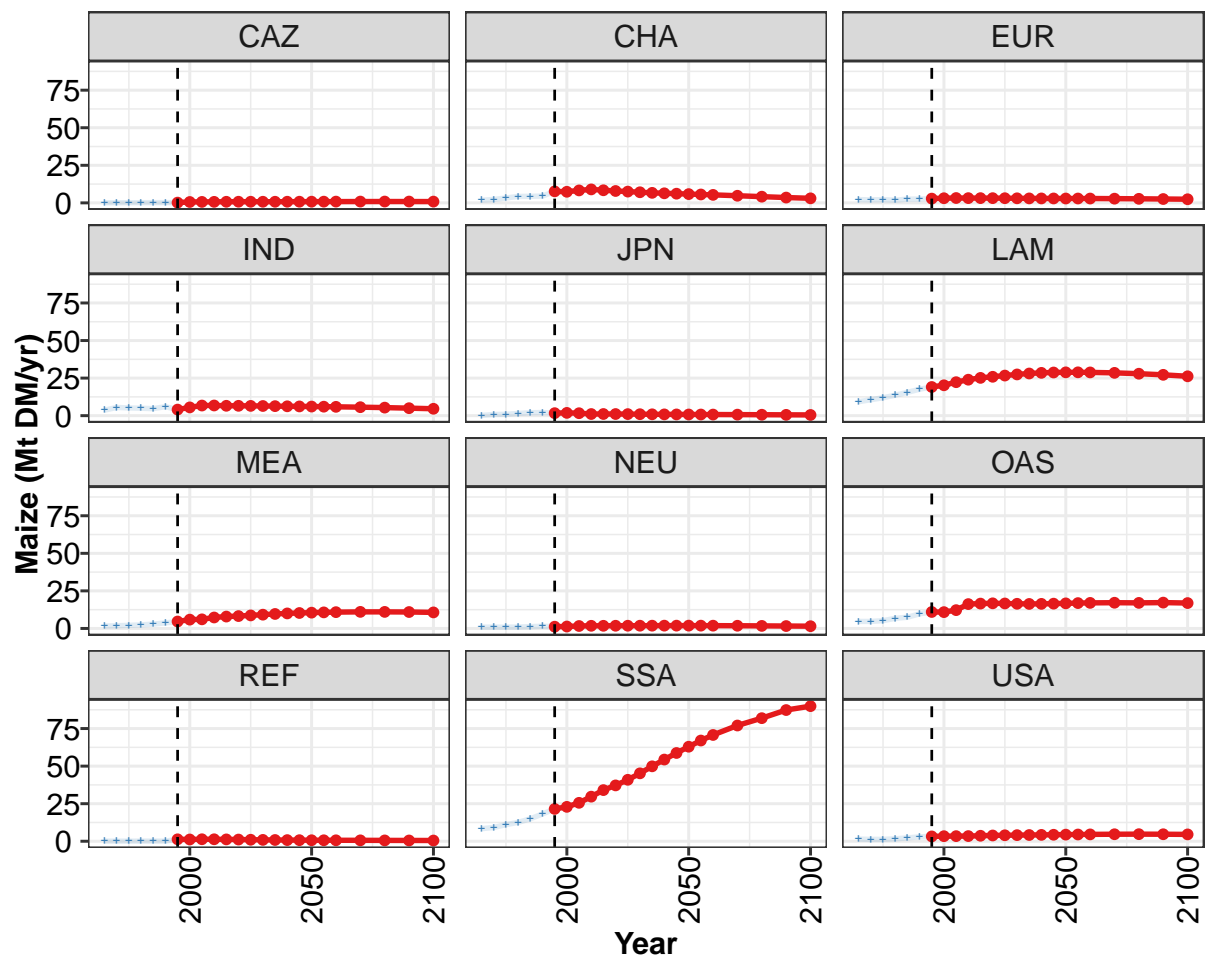


Figure 120: MAGPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	78	84	93	104	110	114	119	123	129	133	138
CAZ	0	1	1	1	1	1	1	1	1	1	1
CHA	8	7	8	9	8	8	8	7	7	6	6
EUR	3	3	3	3	3	3	3	3	3	3	3
IND	4	6	7	7	7	7	7	6	6	6	6
JPN	2	2	2	1	1	1	1	1	1	1	1
LAM	19	20	22	24	25	26	27	27	28	28	29
MEA	5	6	6	7	8	8	9	9	10	10	10
NEU	1	1	2	2	2	2	2	2	2	2	2
OAS	11	11	12	16	17	17	17	16	16	16	17
REF	1	1	1	1	1	1	1	1	1	1	1
SSA	22	23	26	30	34	37	41	45	50	54	59
USA	3	3	3	3	4	4	4	4	4	4	4

Table 359: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	142	147	150	156	159	162	162
CAZ	1	1	1	1	1	1	1
CHA	6	6	5	5	4	4	3
EUR	3	3	3	3	3	3	2
IND	6	6	6	6	5	5	5
JPN	1	1	1	1	1	1	0
LAM	29	29	29	28	28	27	26
MEA	11	11	11	11	11	11	11
NEU	2	2	2	2	2	2	2
OAS	17	17	17	17	17	17	17
REF	1	1	1	1	1	1	0
SSA	63	67	71	77	82	87	90
USA	4	4	5	5	5	5	5

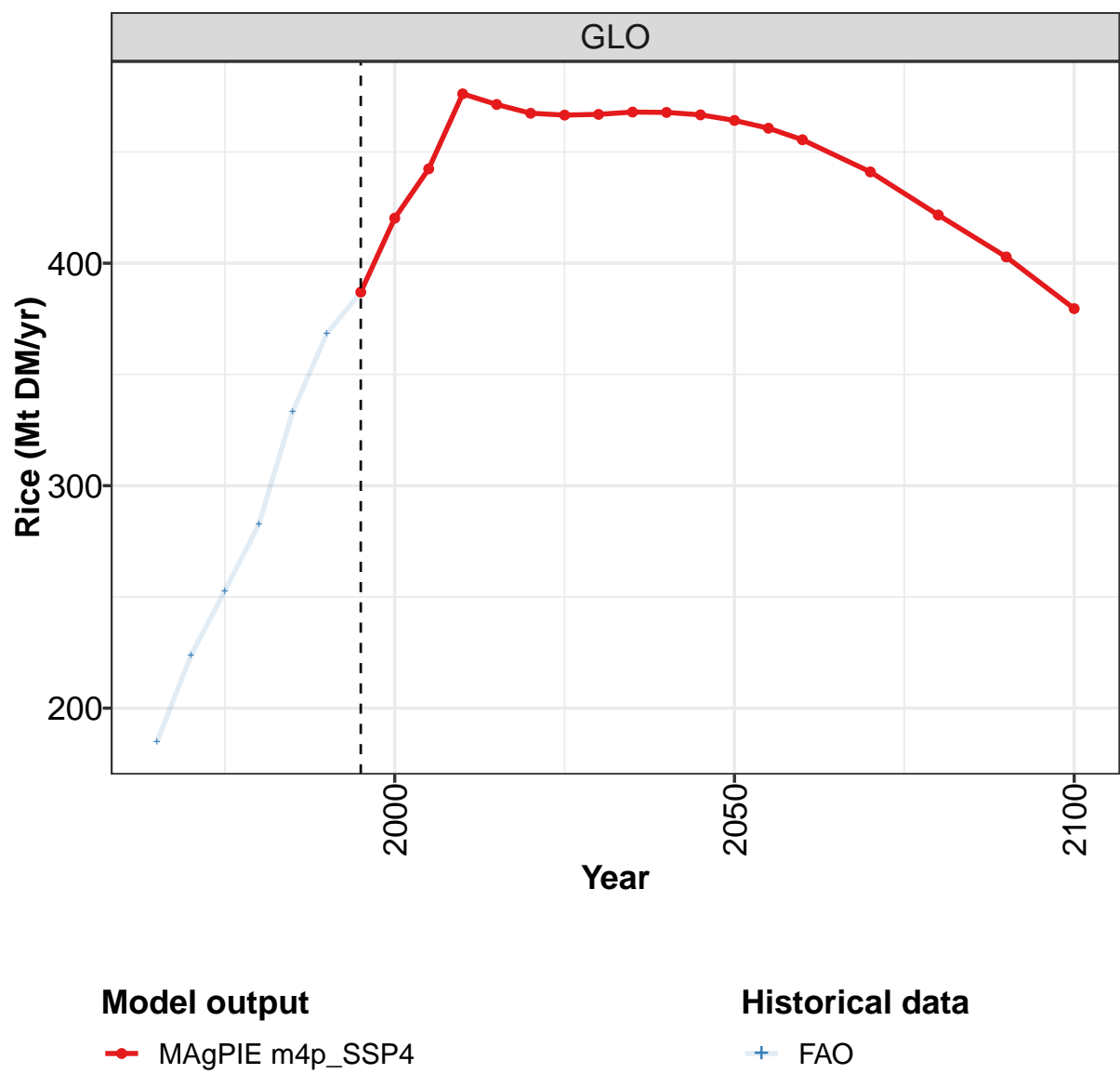
Table 360: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	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



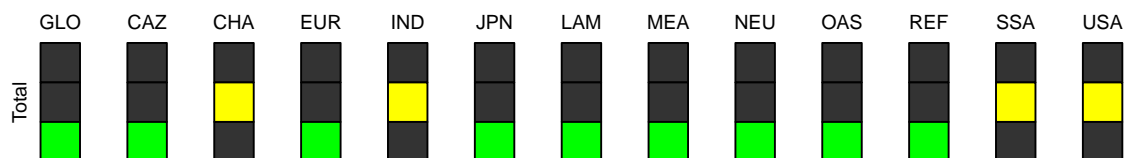
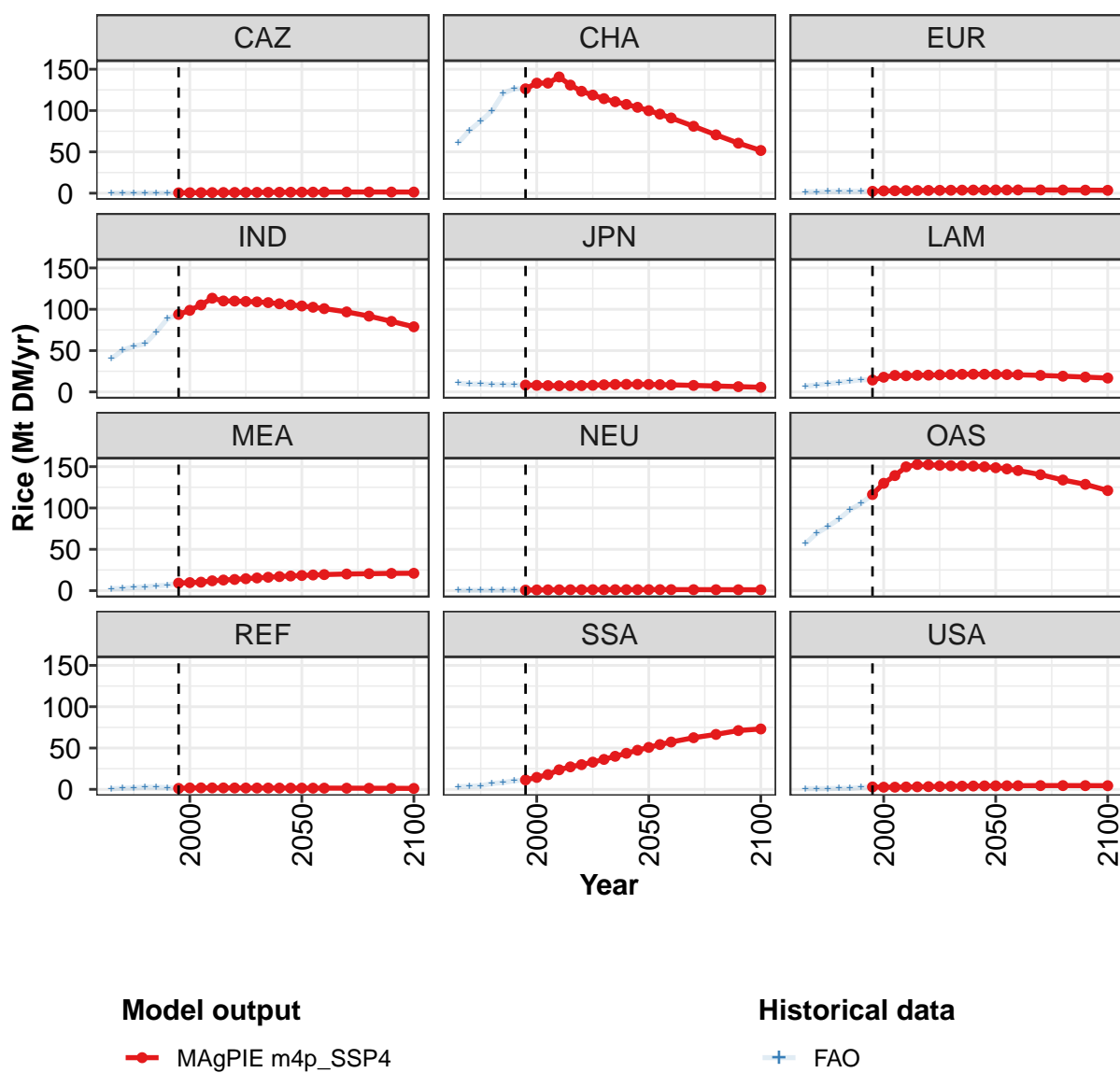


Figure 121: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	387	420	442	476	471	467	467	467	468	468	467
CAZ	0	1	1	1	1	1	1	1	1	1	1
CHA	126	133	133	141	131	123	119	114	111	107	104
EUR	2	3	3	3	3	3	3	4	4	4	4
IND	94	99	105	113	110	110	109	109	108	107	105
JPN	8	8	8	7	8	8	8	9	9	9	9
LAM	14	18	20	20	20	20	21	21	21	21	21
MEA	9	10	10	12	13	14	14	15	16	17	18
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	116	130	139	150	153	152	152	151	151	151	150
REF	1	2	2	2	2	2	2	2	2	2	2
SSA	11	14	18	24	27	30	33	36	40	44	47
USA	3	3	3	3	3	3	4	4	4	4	4

Table 362: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

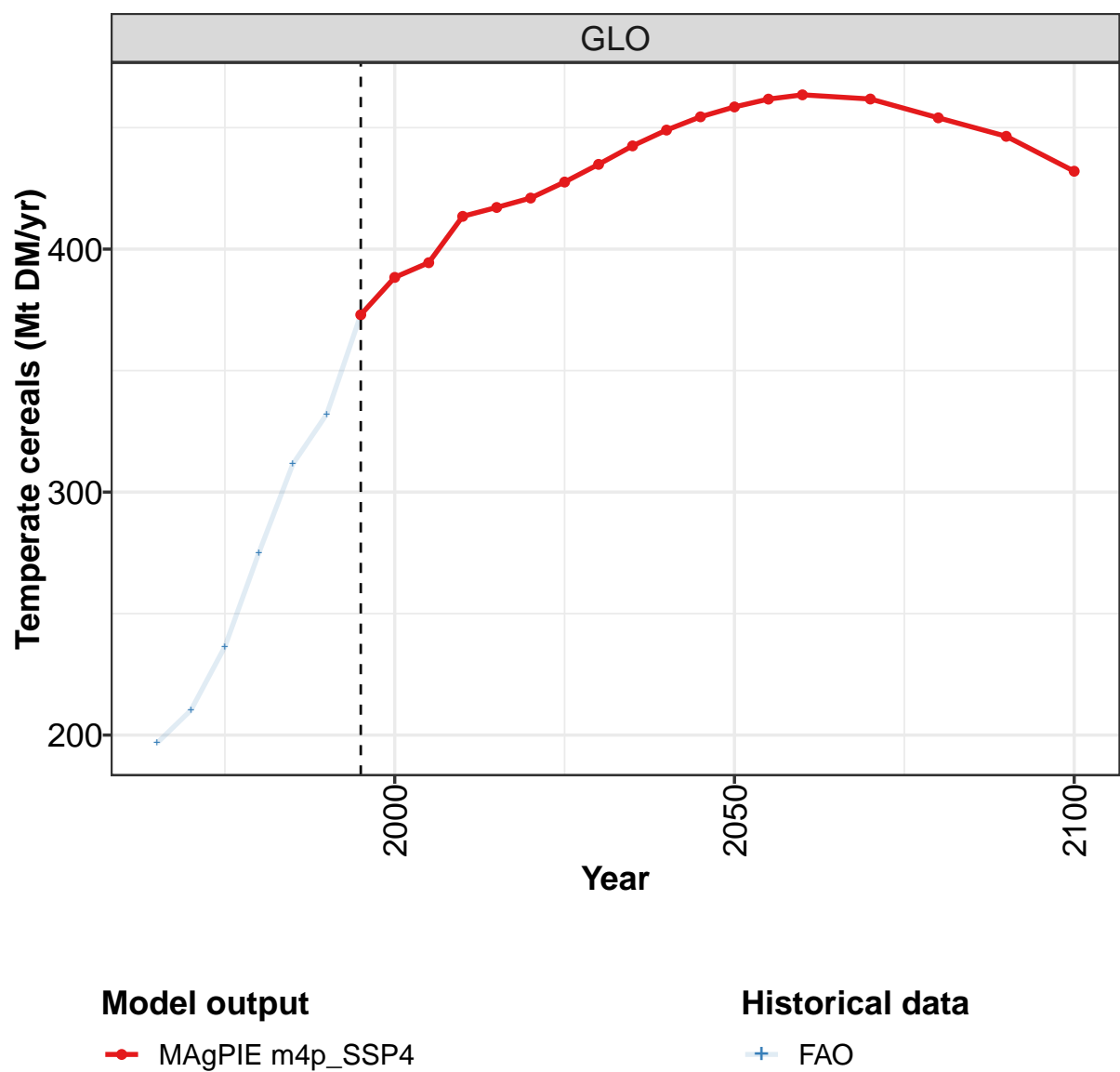
	2050	2055	2060	2070	2080	2090	2100
GLO	464	461	455	441	422	403	380
CAZ	1	1	1	1	1	1	1
CHA	100	96	91	81	71	61	52
EUR	4	4	4	4	4	4	4
IND	104	102	101	97	92	85	79
JPN	9	9	9	8	7	6	6
LAM	21	21	21	20	19	18	17
MEA	18	19	19	20	21	21	21
NEU	1	1	1	1	1	1	1
OAS	149	147	145	140	134	129	121
REF	2	1	1	1	1	1	1
SSA	51	54	57	62	66	71	73
USA	4	4	4	5	5	5	4

Table 363: MAgPIE m4p\_SSP4 — 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



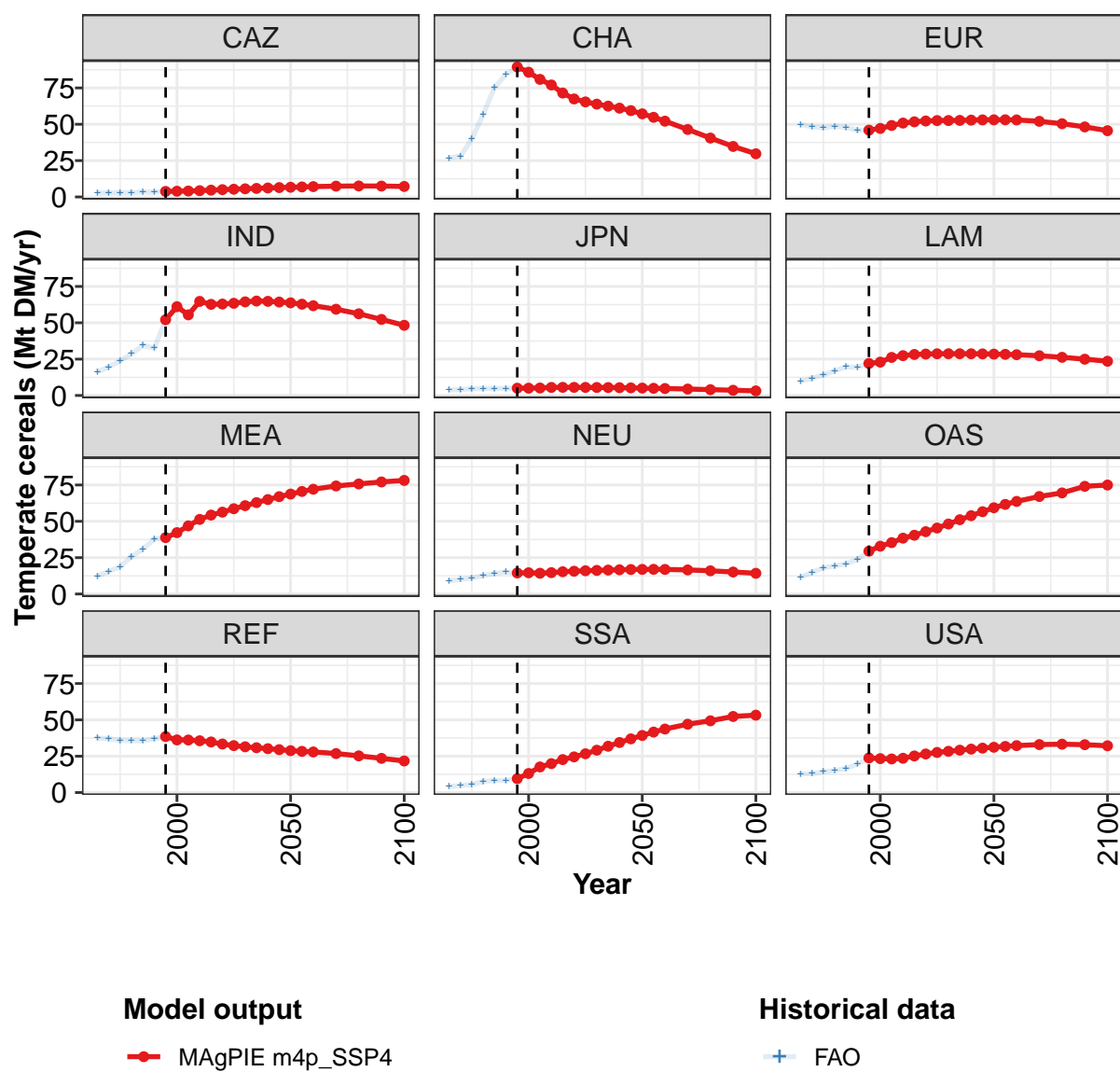


Figure 122: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	373	388	394	413	417	421	428	435	442	449	454
CAZ	4	4	4	4	5	5	5	6	6	6	6
CHA	89	86	81	77	71	67	65	64	62	61	59
EUR	46	47	49	51	52	52	53	53	53	53	53
IND	52	61	55	65	63	63	63	64	65	65	64
JPN	5	5	5	6	6	6	6	6	5	5	5
LAM	22	23	26	27	28	28	29	29	29	29	29
MEA	39	42	47	51	54	56	59	61	63	65	67
NEU	14	15	14	15	15	16	16	16	16	17	17
OAS	29	33	35	38	40	43	45	48	51	54	57
REF	39	36	36	36	35	33	32	31	31	30	30
SSA	10	13	18	20	23	25	27	29	32	34	37
USA	24	23	23	24	25	27	28	28	29	30	31

Table 365: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

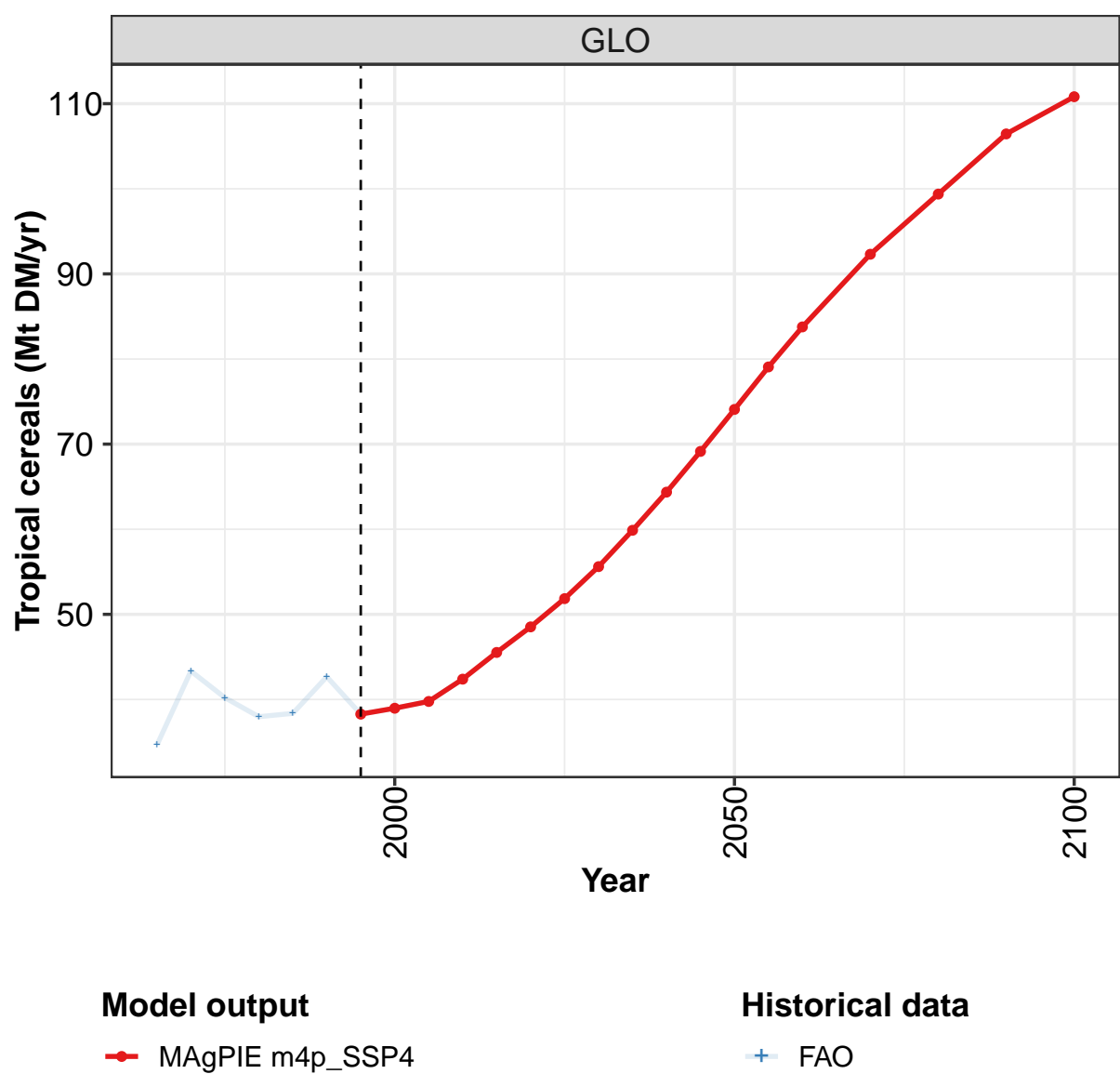
	2050	2055	2060	2070	2080	2090	2100
GLO	459	462	464	462	454	446	432
CAZ	7	7	7	7	8	7	7
CHA	57	55	52	46	41	35	30
EUR	53	53	53	52	50	48	46
IND	64	63	62	59	56	52	48
JPN	5	5	5	4	4	4	3
LAM	28	28	28	27	26	25	24
MEA	69	71	72	74	76	77	78
NEU	17	17	17	17	16	15	14
OAS	59	62	64	67	70	74	75
REF	29	28	28	27	25	24	22
SSA	39	42	44	47	49	52	53
USA	31	32	32	33	33	33	32

Table 366: MAgPIE m4p\_SSP4 — 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



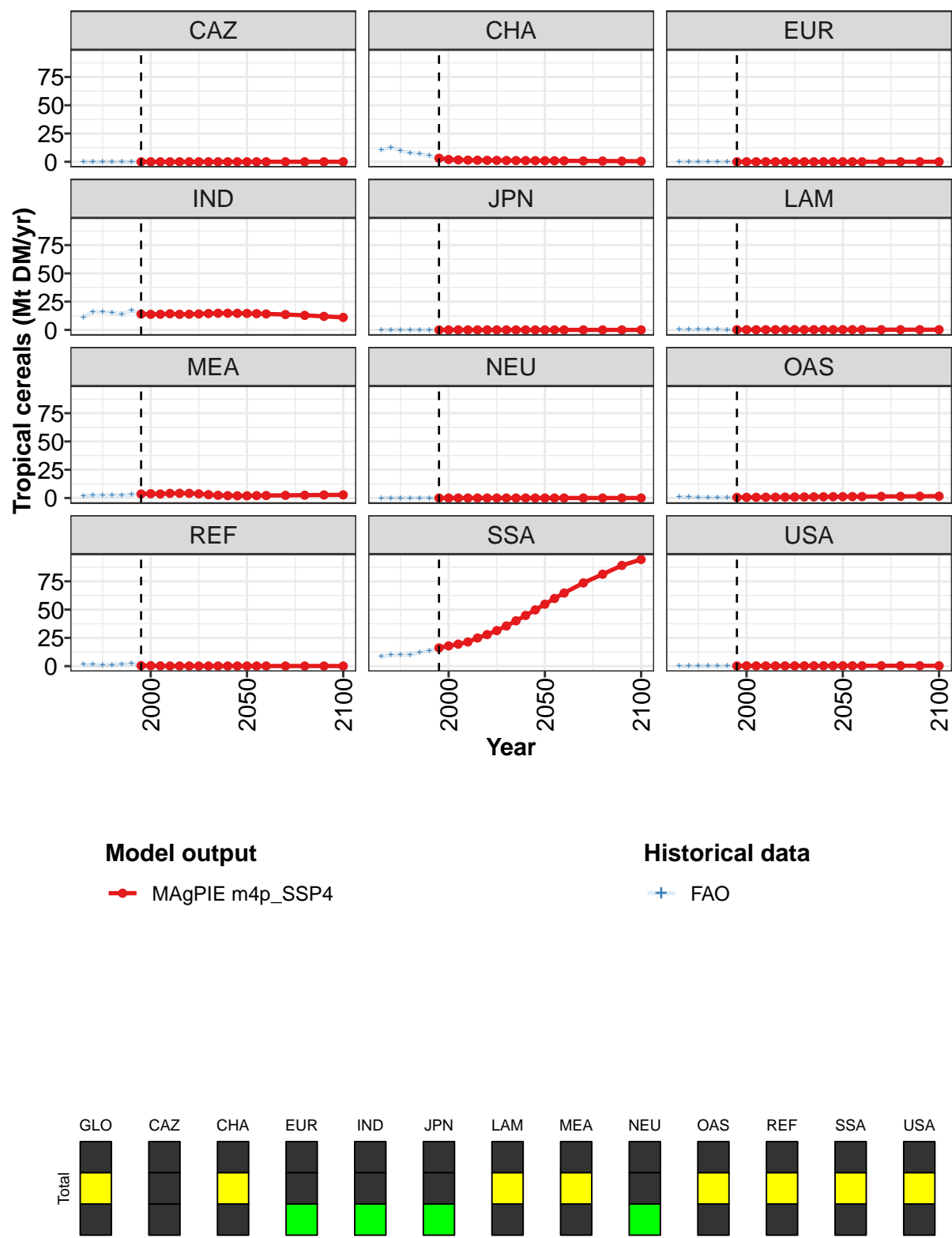


Figure 123: MAGPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Tropical cereals (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	38	39	40	42	46	49	52	56	60	64	69
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	3	2	2	1	1	1	1	1	1	1	1
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	14	14	14	14	14	14	14	14	15	15	15
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	4	4	4	4	4	4	4	3	2	2	2
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	0	0	0	0	0	0	0	0	0	0	0
SSA	16	18	19	21	25	28	31	36	40	45	50
USA	0	0	0	0	0	0	0	0	0	0	0

Table 368: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

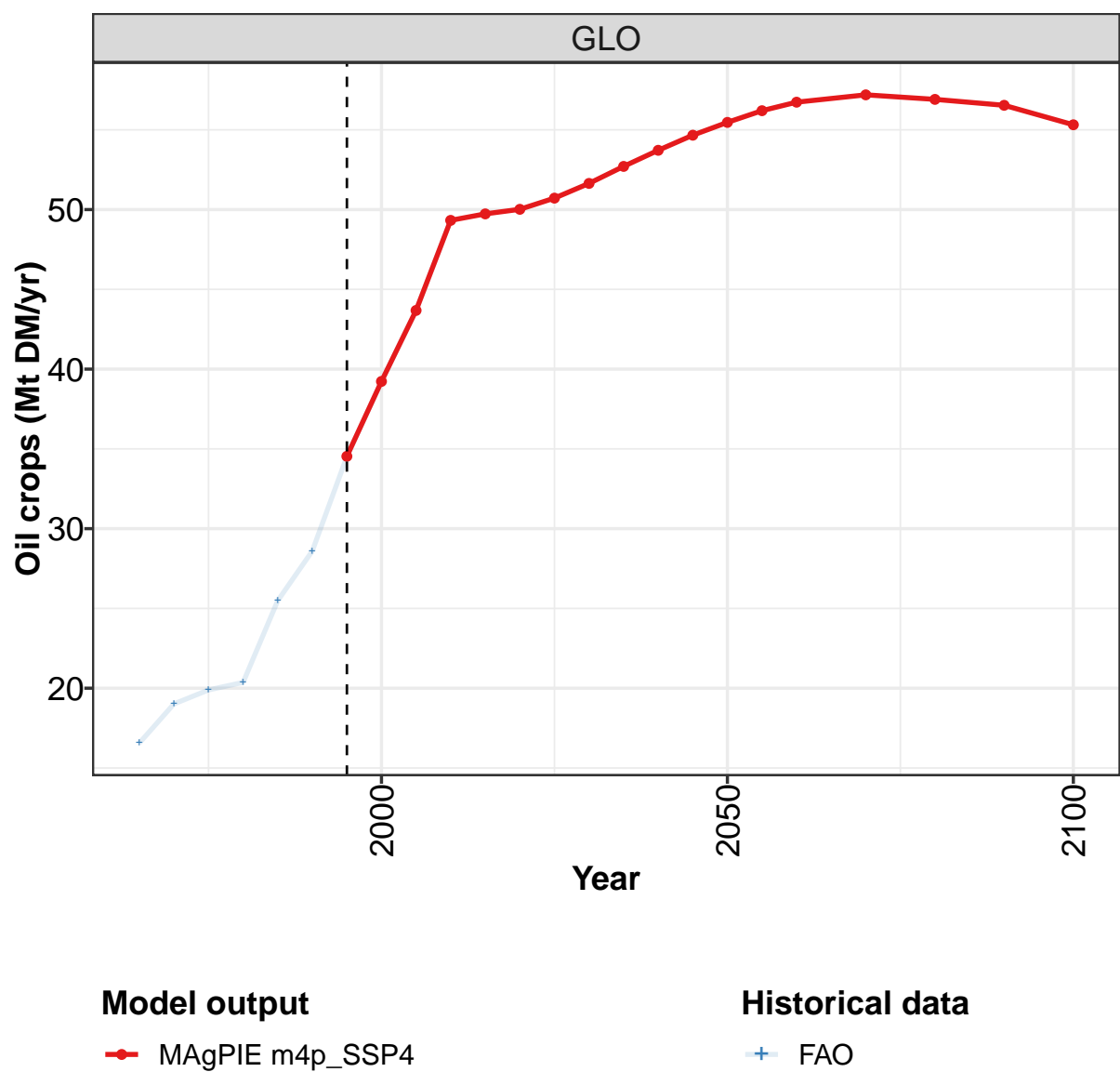
	2050	2055	2060	2070	2080	2090	2100
GLO	74	79	84	92	99	106	111
CAZ	0	0	0	0	0	0	0
CHA	1	1	1	1	1	1	0
EUR	0	0	0	0	0	0	0
IND	15	14	14	14	13	12	11
JPN	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0
MEA	2	2	2	2	3	3	3
NEU	0	0	0	0	0	0	0
OAS	1	1	1	1	1	2	2
REF	0	0	0	0	0	0	0
SSA	55	60	65	74	81	89	94
USA	0	0	0	0	0	0	0

Table 369: MAgPIE m4p\_SSP4 — 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



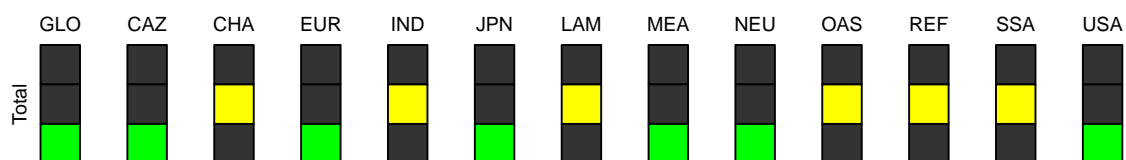
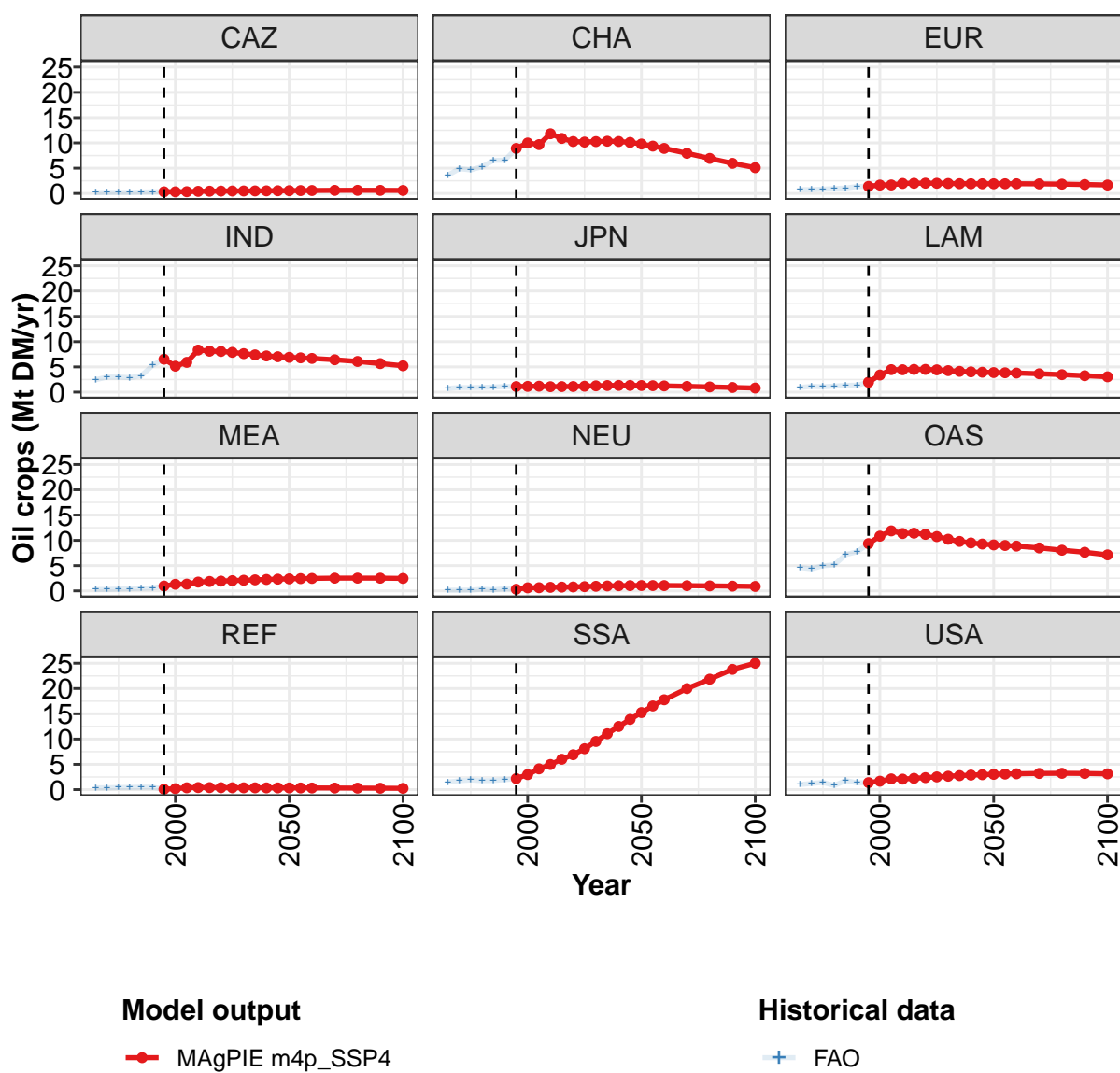


Figure 124: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.5	39.2	43.7	49.3	49.7	50.0	50.7	51.6	52.7	53.7	54.7
CAZ	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
CHA	8.9	10.0	9.7	11.8	10.9	10.3	10.2	10.3	10.3	10.3	10.1
EUR	1.4	1.7	1.7	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9
IND	6.5	5.1	5.9	8.3	8.1	8.1	7.9	7.6	7.4	7.2	7.0
JPN	1.1	1.1	1.2	1.1	1.1	1.1	1.2	1.3	1.3	1.3	1.3
LAM	2.0	3.4	4.5	4.4	4.5	4.5	4.4	4.3	4.1	4.0	3.9
MEA	1.0	1.3	1.3	1.7	1.9	1.9	2.0	2.1	2.2	2.3	2.3
NEU	0.3	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.0
OAS	9.4	10.8	11.9	11.4	11.4	11.2	10.8	10.2	9.8	9.5	9.3
REF	0.1	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
SSA	2.2	3.0	4.1	5.0	6.0	6.9	8.1	9.5	11.1	12.5	13.9
USA	1.4	1.7	2.1	2.1	2.2	2.4	2.5	2.7	2.8	2.9	3.0

Table 371: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops (Mt DM/yr) [PART 1/2]

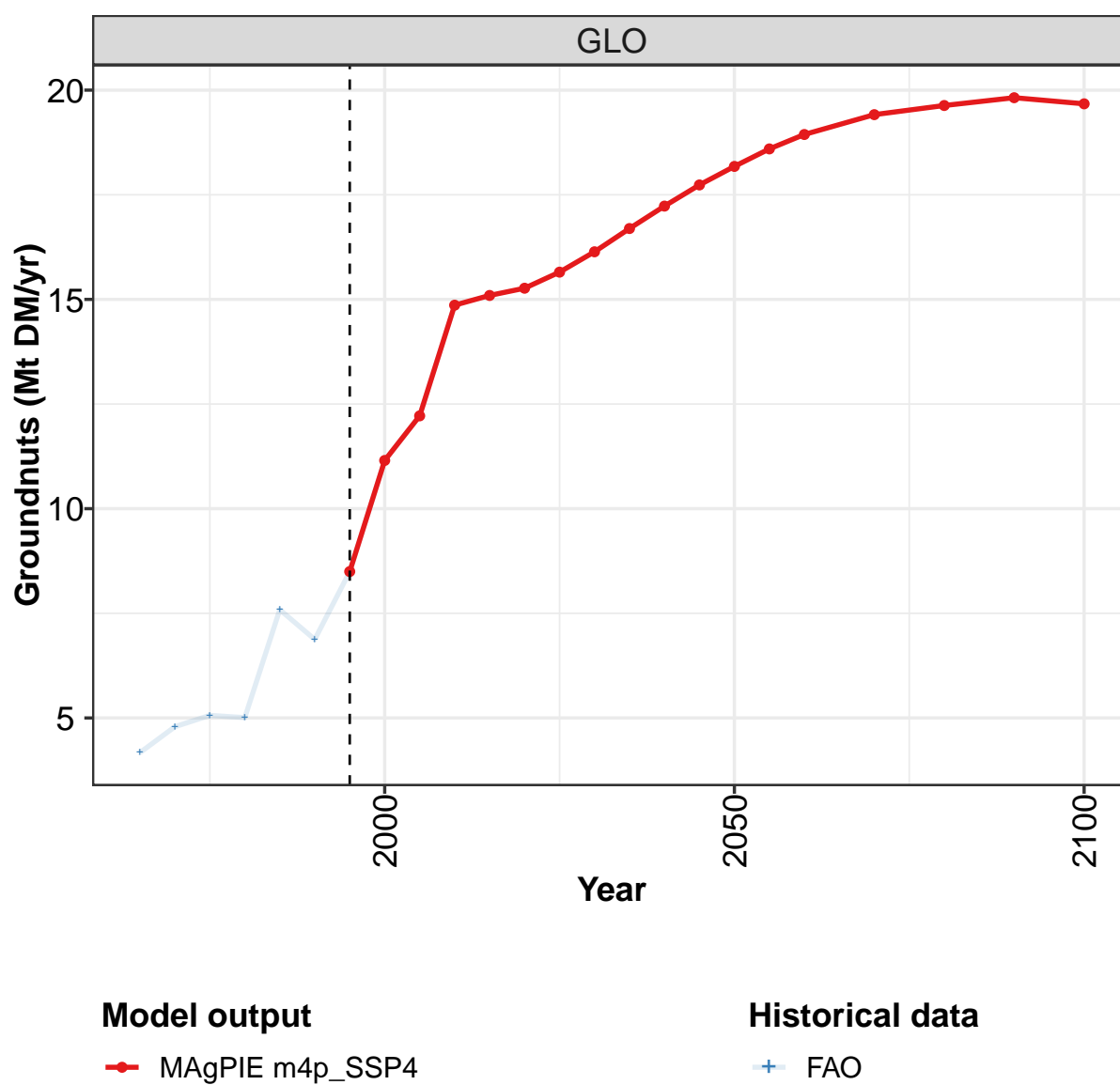
	2050	2055	2060	2070	2080	2090	2100
GLO	55.5	56.2	56.7	57.2	56.9	56.5	55.3
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	9.8	9.4	8.9	7.9	6.9	6.0	5.1
EUR	1.9	1.9	1.9	1.9	1.8	1.8	1.7
IND	6.9	6.8	6.7	6.4	6.1	5.7	5.2
JPN	1.3	1.3	1.2	1.1	1.0	0.9	0.8
LAM	3.9	3.8	3.8	3.6	3.5	3.3	3.0
MEA	2.4	2.4	2.5	2.5	2.5	2.5	2.5
NEU	1.1	1.1	1.1	1.0	1.0	0.9	0.9
OAS	9.1	9.0	8.9	8.5	8.1	7.6	7.1
REF	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SSA	15.2	16.6	17.8	20.0	21.8	23.8	25.0
USA	3.0	3.1	3.1	3.2	3.2	3.2	3.1

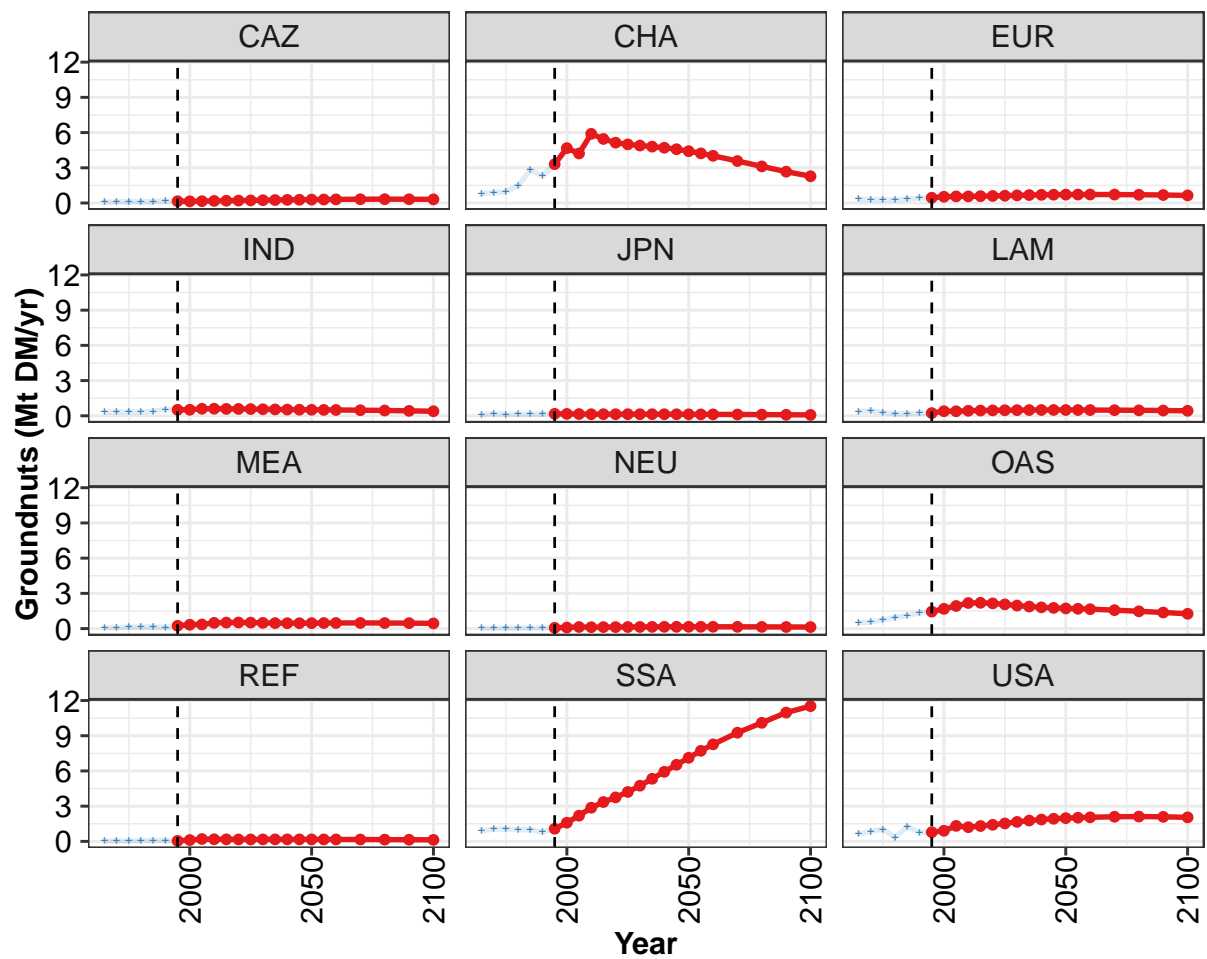
Table 372: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops (Mt DM/yr) [PART 2/2]

	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





**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

+— FAO

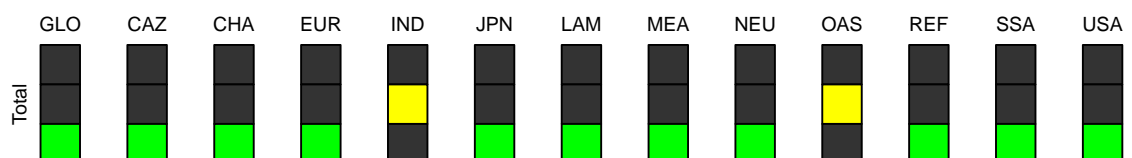


Figure 125: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8.5	11.2	12.2	14.9	15.1	15.3	15.7	16.1	16.7	17.2	17.7
CAZ	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
CHA	3.3	4.7	4.2	5.9	5.5	5.1	5.0	4.9	4.8	4.7	4.6
EUR	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
IND	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	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	0.5	0.5	0.5
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
OAS	1.4	1.7	1.9	2.2	2.2	2.1	2.1	2.0	1.9	1.8	1.8
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	4.2	4.7	5.3	5.9	6.5
USA	0.8	0.9	1.3	1.2	1.3	1.4	1.5	1.7	1.8	1.9	1.9

Table 374: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

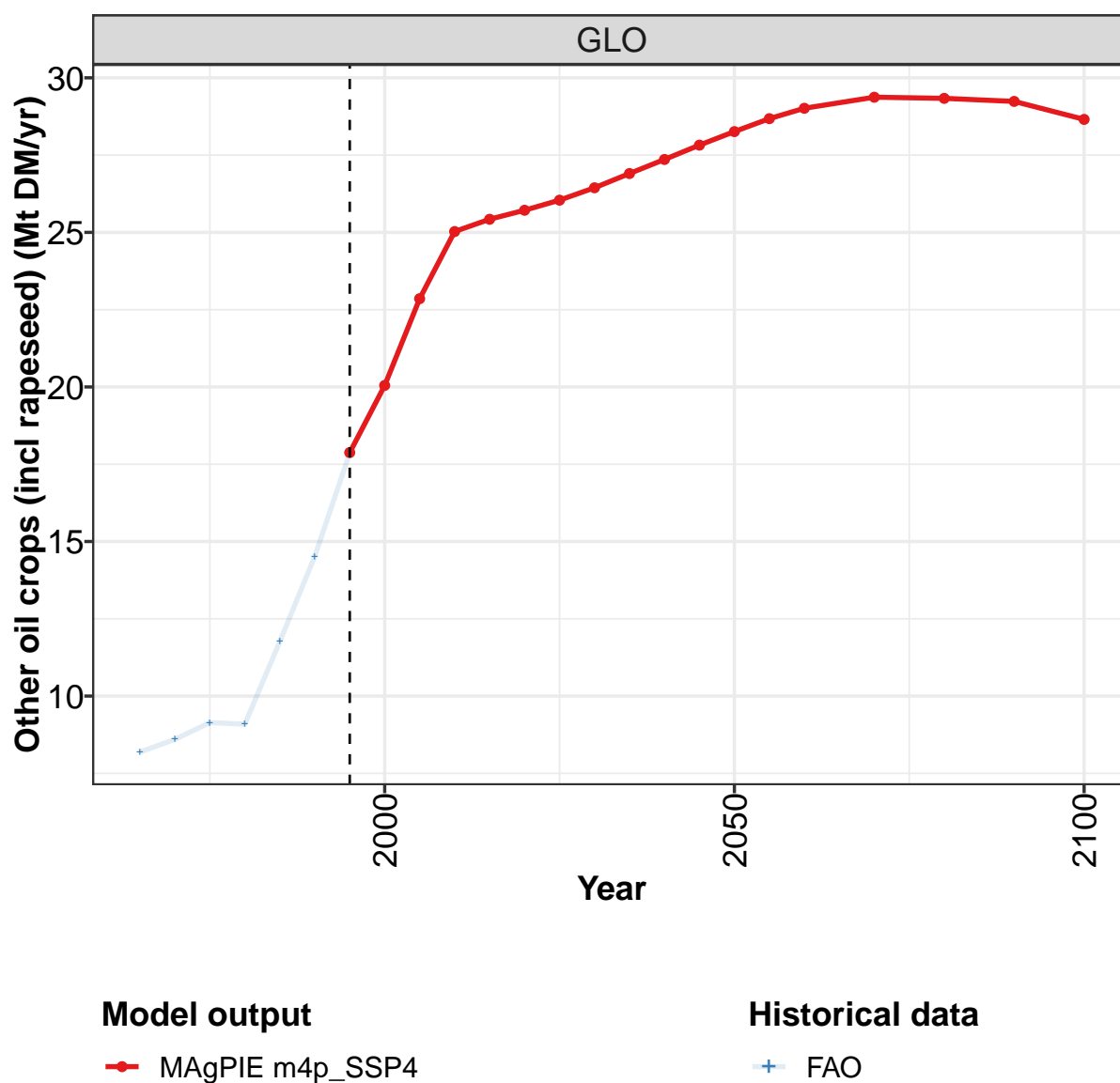
	2050	2055	2060	2070	2080	2090	2100
GLO	18.2	18.6	18.9	19.4	19.6	19.8	19.7
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	4.4	4.2	4.0	3.6	3.1	2.7	2.3
EUR	0.7	0.7	0.7	0.7	0.7	0.7	0.6
IND	0.5	0.5	0.5	0.5	0.5	0.4	0.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.5	0.5	0.5	0.5	0.5	0.4	0.4
MEA	0.5	0.5	0.5	0.5	0.5	0.5	0.4
NEU	0.2	0.2	0.2	0.2	0.1	0.1	0.1
OAS	1.7	1.7	1.7	1.6	1.5	1.4	1.3
REF	0.2	0.2	0.2	0.2	0.2	0.1	0.1
SSA	7.1	7.7	8.3	9.3	10.1	11.0	11.5
USA	2.0	2.0	2.1	2.1	2.1	2.1	2.0

Table 375: MAgPIE m4p\_SSP4 — 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)





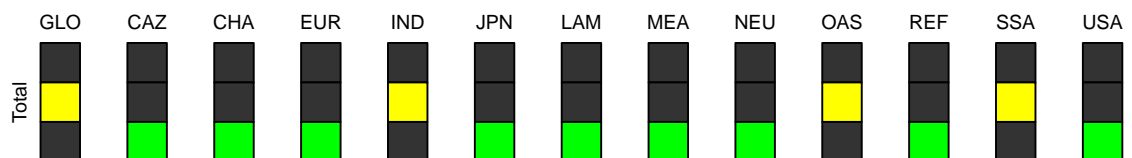
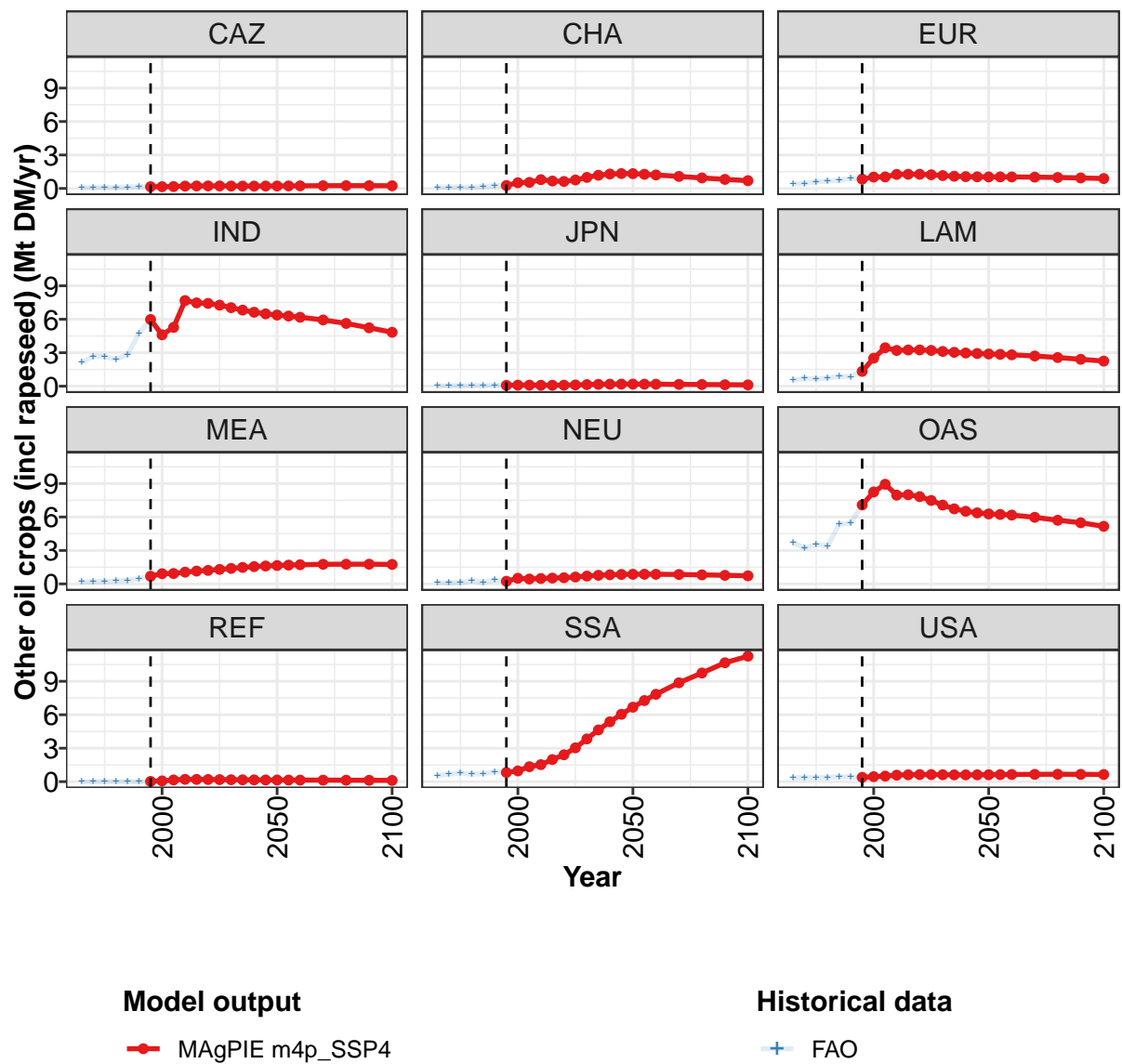


Figure 126: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.9	20.0	22.9	25.0	25.4	25.7	26.0	26.4	26.9	27.4	27.8
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	0.3	0.5	0.5	0.8	0.7	0.6	0.8	1.0	1.2	1.3	1.3
EUR	0.8	1.0	1.0	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0
IND	6.0	4.6	5.3	7.7	7.5	7.4	7.3	7.0	6.8	6.6	6.5
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	3.2	3.3	3.2	3.1	3.0	3.0	2.9
MEA	0.7	0.9	0.9	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.6
NEU	0.2	0.5	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.9
OAS	7.1	8.2	8.9	8.0	8.0	7.8	7.5	7.1	6.7	6.5	6.4
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	3.0	3.8	4.6	5.4	6.0
USA	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6

Table 377: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

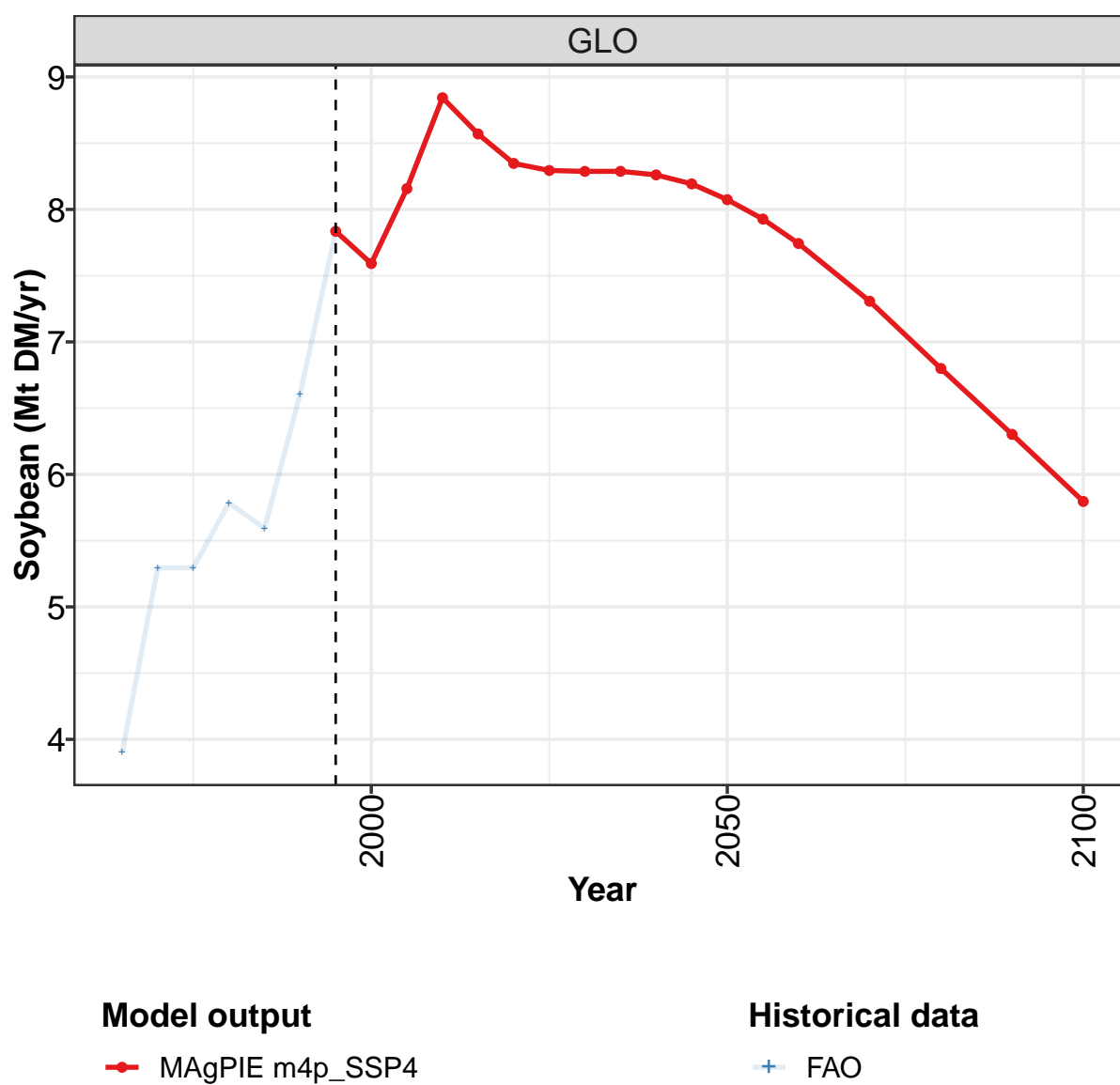
	2050	2055	2060	2070	2080	2090	2100
GLO	28.3	28.7	29.0	29.4	29.3	29.2	28.7
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	1.3	1.3	1.2	1.1	0.9	0.8	0.7
EUR	1.0	1.0	1.0	1.0	1.0	0.9	0.9
IND	6.4	6.3	6.2	5.9	5.6	5.2	4.8
JPN	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	2.9	2.9	2.8	2.7	2.6	2.4	2.2
MEA	1.6	1.7	1.7	1.8	1.8	1.8	1.7
NEU	0.9	0.9	0.9	0.8	0.8	0.8	0.7
OAS	6.3	6.2	6.2	6.0	5.7	5.5	5.2
REF	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SSA	6.7	7.3	7.8	8.9	9.7	10.7	11.3
USA	0.6	0.6	0.6	0.7	0.7	0.7	0.6

Table 378: MAgPIE m4p\_SSP4 — 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



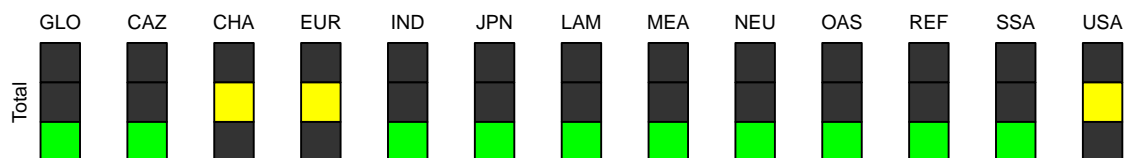
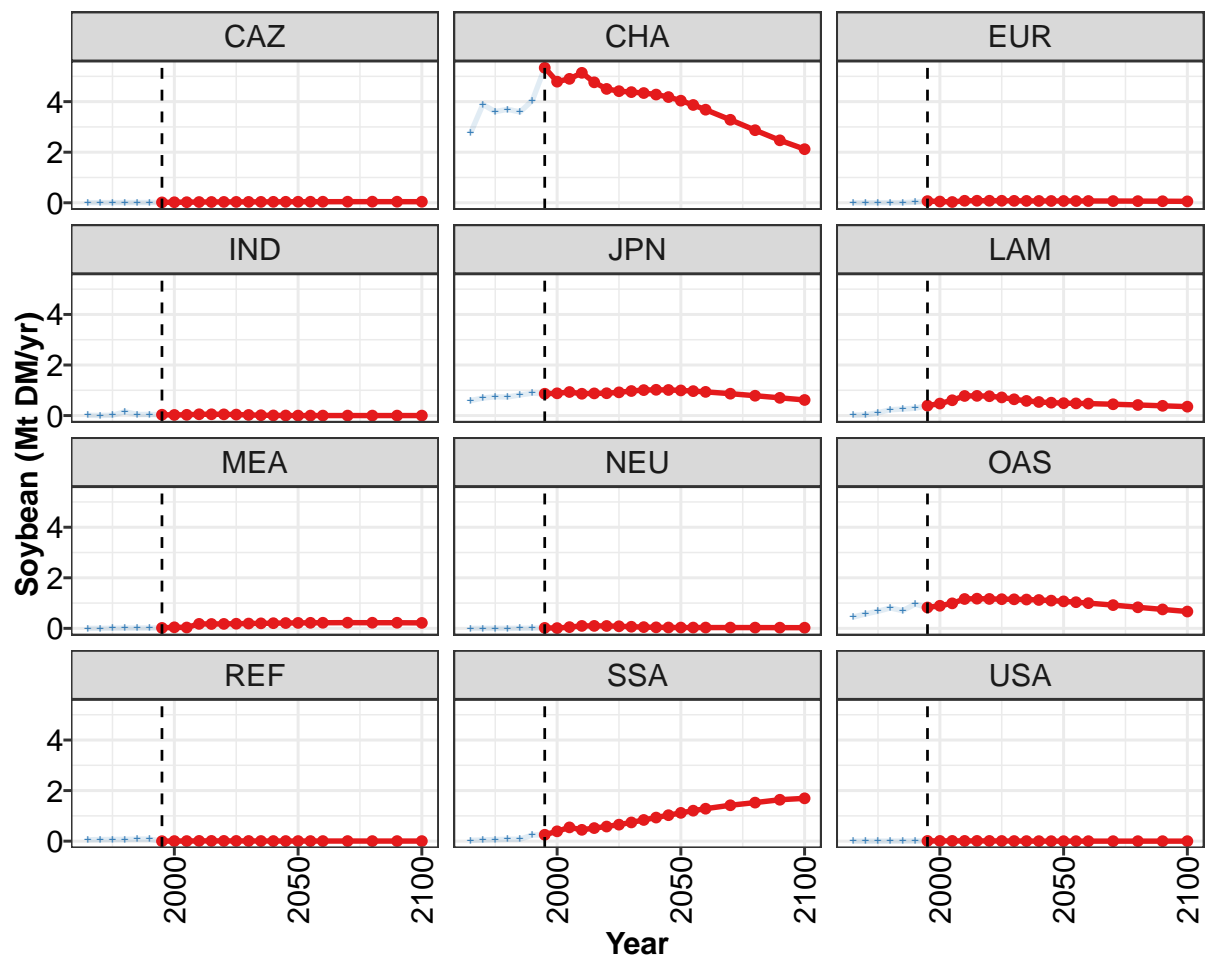


Figure 127: MAGPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.83	7.59	8.16	8.84	8.57	8.35	8.29	8.29	8.29	8.26	8.19
CAZ	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
CHA	5.34	4.79	4.90	5.14	4.76	4.50	4.41	4.38	4.34	4.28	4.18
EUR	0.07	0.05	0.03	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07
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	0.88	0.88	0.92	0.97	1.01	1.02	1.01
LAM	0.39	0.47	0.61	0.78	0.78	0.77	0.72	0.64	0.58	0.54	0.51
MEA	0.02	0.04	0.03	0.18	0.17	0.18	0.18	0.19	0.20	0.20	0.21
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	1.17	1.16	1.15	1.15	1.14	1.12	1.10
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	0.58	0.65	0.74	0.84	0.93	1.03
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\_SSP4 — Demand—Food—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

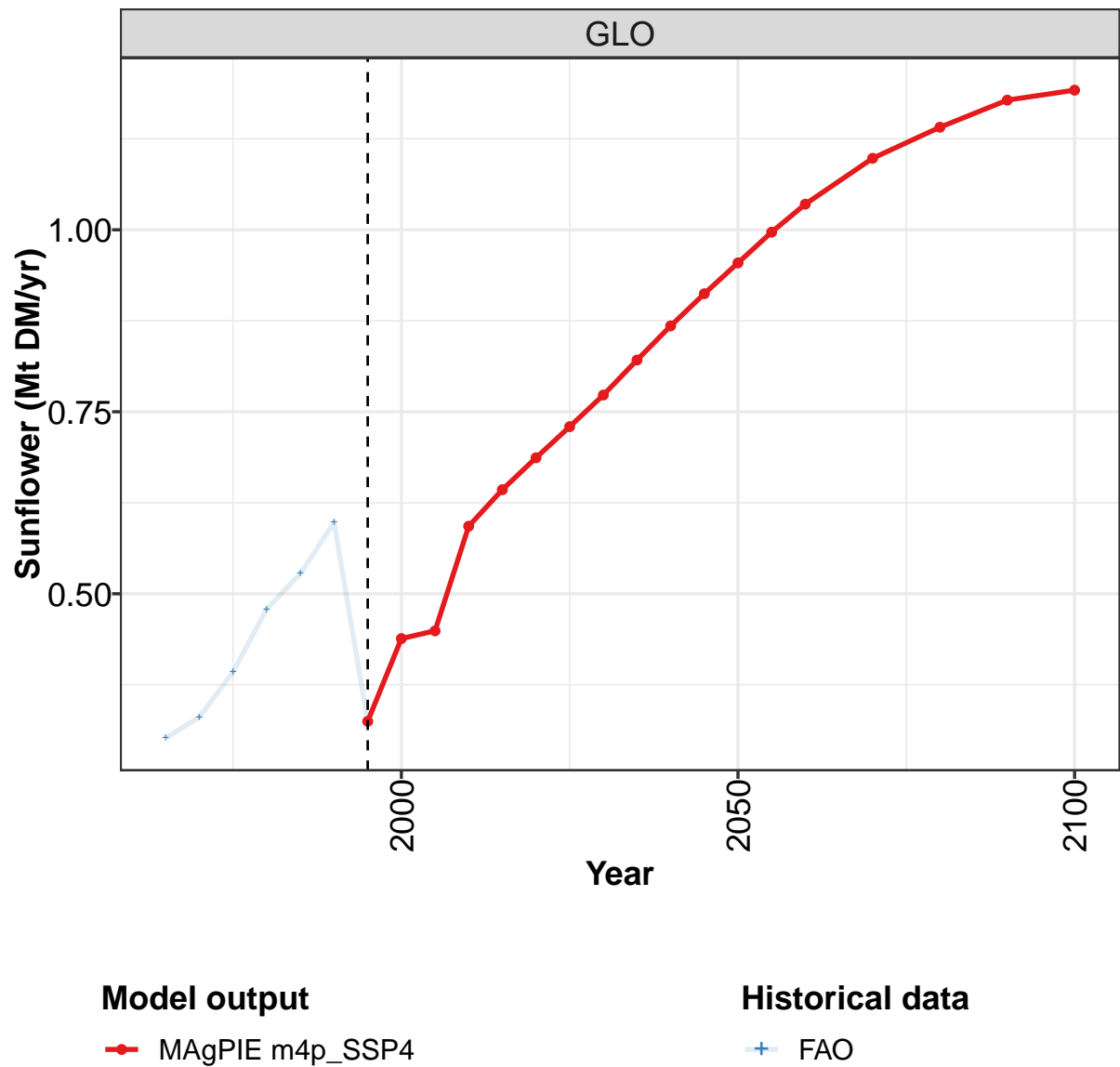
	2050	2055	2060	2070	2080	2090	2100
GLO	8.07	7.93	7.74	7.31	6.80	6.30	5.80
CAZ	0.04	0.04	0.04	0.04	0.04	0.04	0.04
CHA	4.04	3.87	3.68	3.28	2.87	2.47	2.12
EUR	0.07	0.07	0.07	0.07	0.06	0.06	0.06
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.99	0.97	0.94	0.87	0.79	0.70	0.62
LAM	0.49	0.48	0.47	0.45	0.42	0.39	0.35
MEA	0.22	0.22	0.22	0.22	0.22	0.22	0.22
NEU	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OAS	1.07	1.03	1.00	0.92	0.83	0.75	0.67
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.12	1.21	1.28	1.42	1.52	1.64	1.69
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 381: MAgPIE m4p\_SSP4 — 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



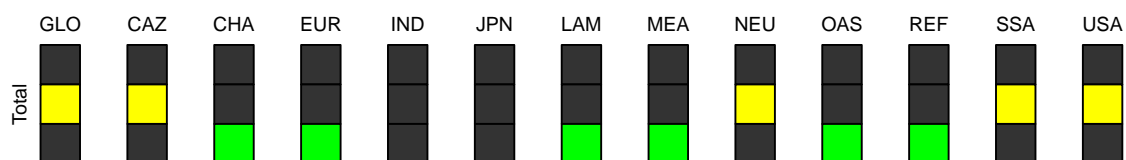
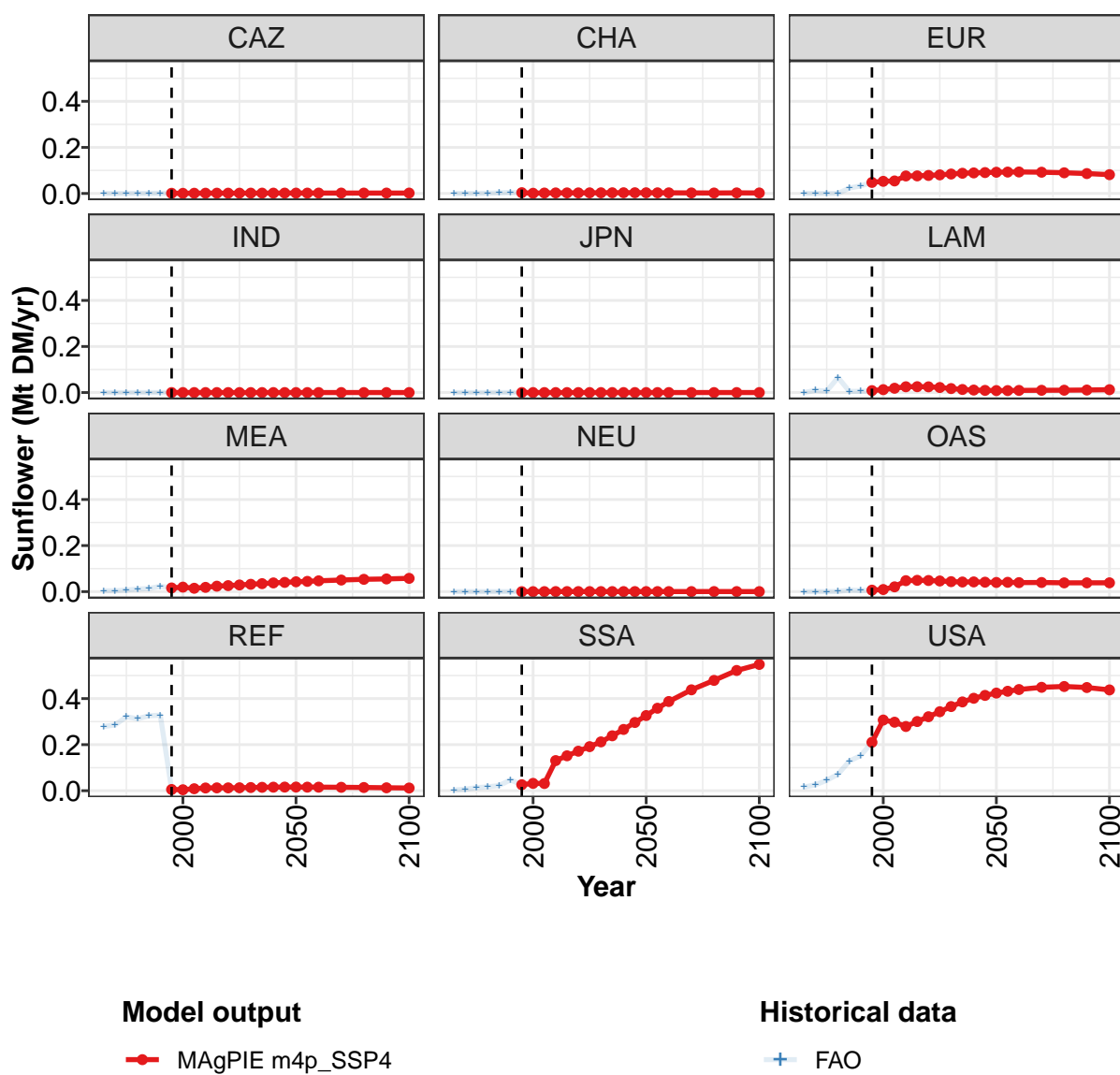


Figure 128: MAGPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.32	0.44	0.45	0.59	0.64	0.69	0.73	0.77	0.82	0.87	0.91
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	0.08	0.09	0.09	0.09
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	0.05	0.04	0.04	0.04	0.04
REF	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
SSA	0.03	0.03	0.03	0.13	0.15	0.17	0.19	0.21	0.24	0.27	0.30
USA	0.21	0.31	0.30	0.28	0.30	0.32	0.34	0.37	0.39	0.40	0.41

Table 383: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.95	1.00	1.04	1.10	1.14	1.18	1.19
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	0.09	0.09	0.09	0.09	0.09	0.09	0.08
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	0.05	0.05	0.05	0.06	0.06
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.04	0.04	0.04	0.04	0.04	0.04	0.04
REF	0.02	0.02	0.02	0.01	0.01	0.01	0.01
SSA	0.33	0.36	0.39	0.44	0.48	0.52	0.55
USA	0.42	0.43	0.44	0.45	0.45	0.45	0.44

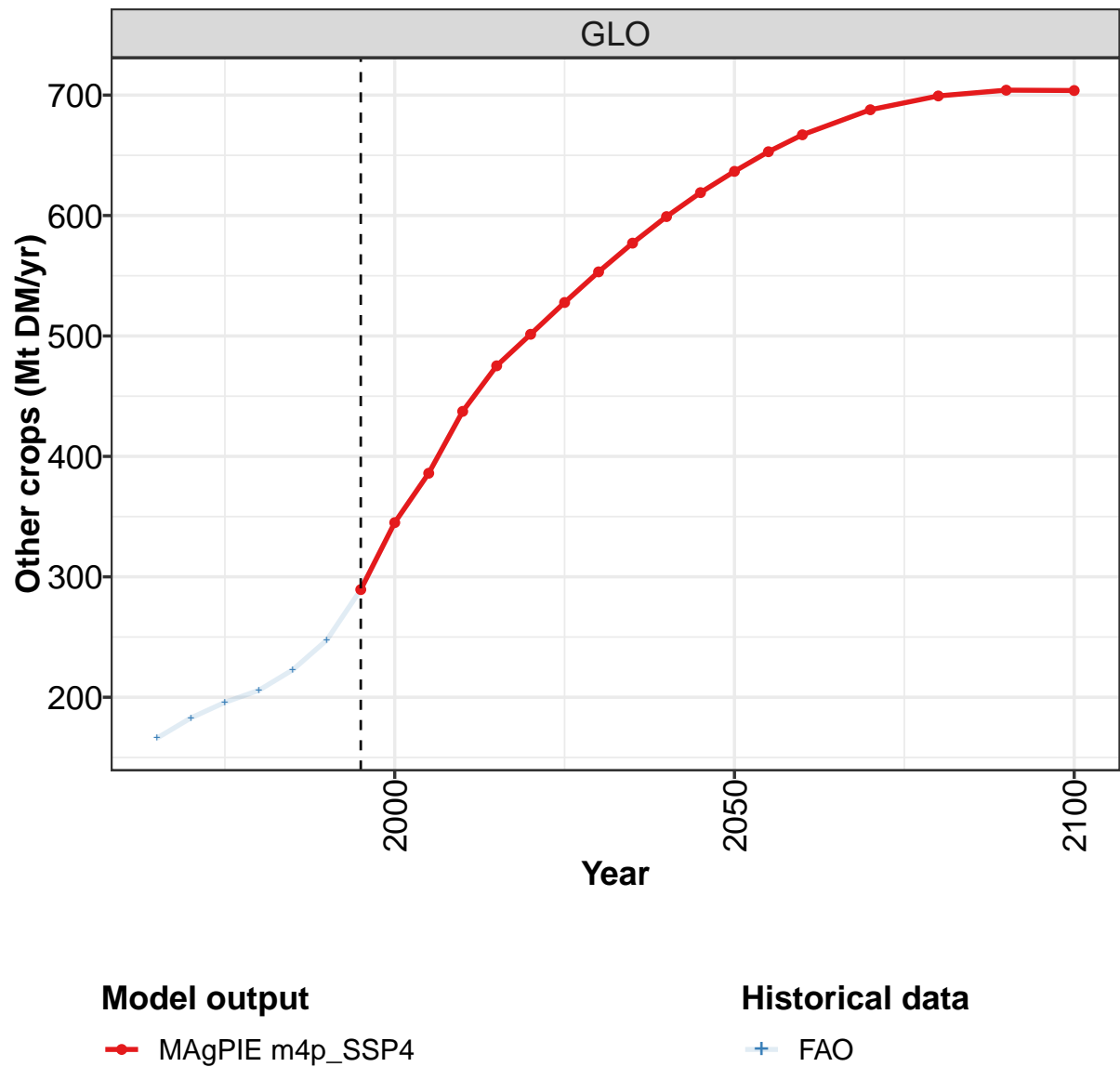
Table 384: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

	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



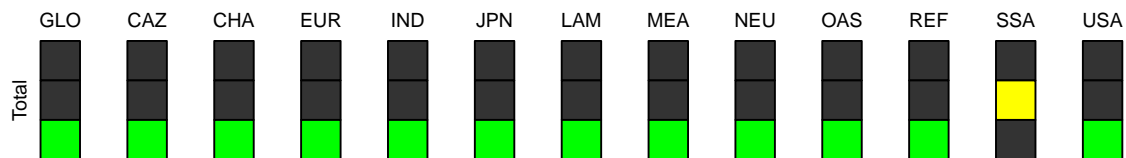
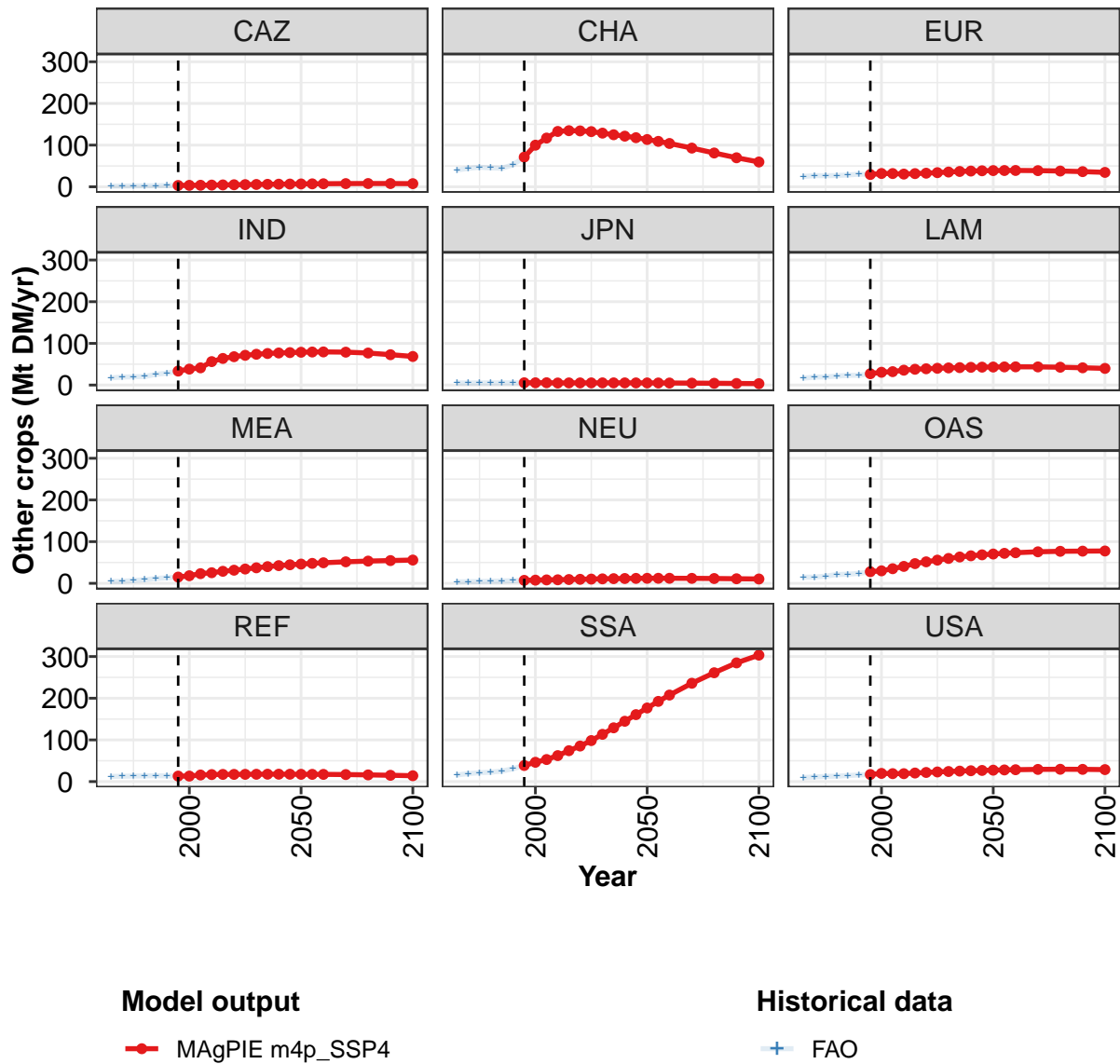


Figure 129: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	289	345	386	437	475	501	528	553	577	599	619
CAZ	3	4	4	4	5	5	5	6	6	6	7
CHA	71	100	117	133	135	134	132	129	125	122	118
EUR	29	32	32	31	32	33	34	35	37	38	39
IND	34	38	41	56	64	68	71	74	76	77	78
JPN	6	5	6	5	5	5	5	5	5	5	5
LAM	27	31	32	36	38	39	40	41	42	43	43
MEA	15	18	23	25	29	31	34	37	40	42	44
NEU	7	8	8	9	9	10	10	11	11	12	12
OAS	28	30	35	41	47	52	56	60	63	66	68
REF	13	13	16	17	17	17	17	18	18	18	18
SSA	39	46	53	62	74	85	98	113	129	145	161
USA	17	20	19	19	21	22	23	24	25	26	27

Table 386: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops (Mt DM/yr) [PART 1/2]

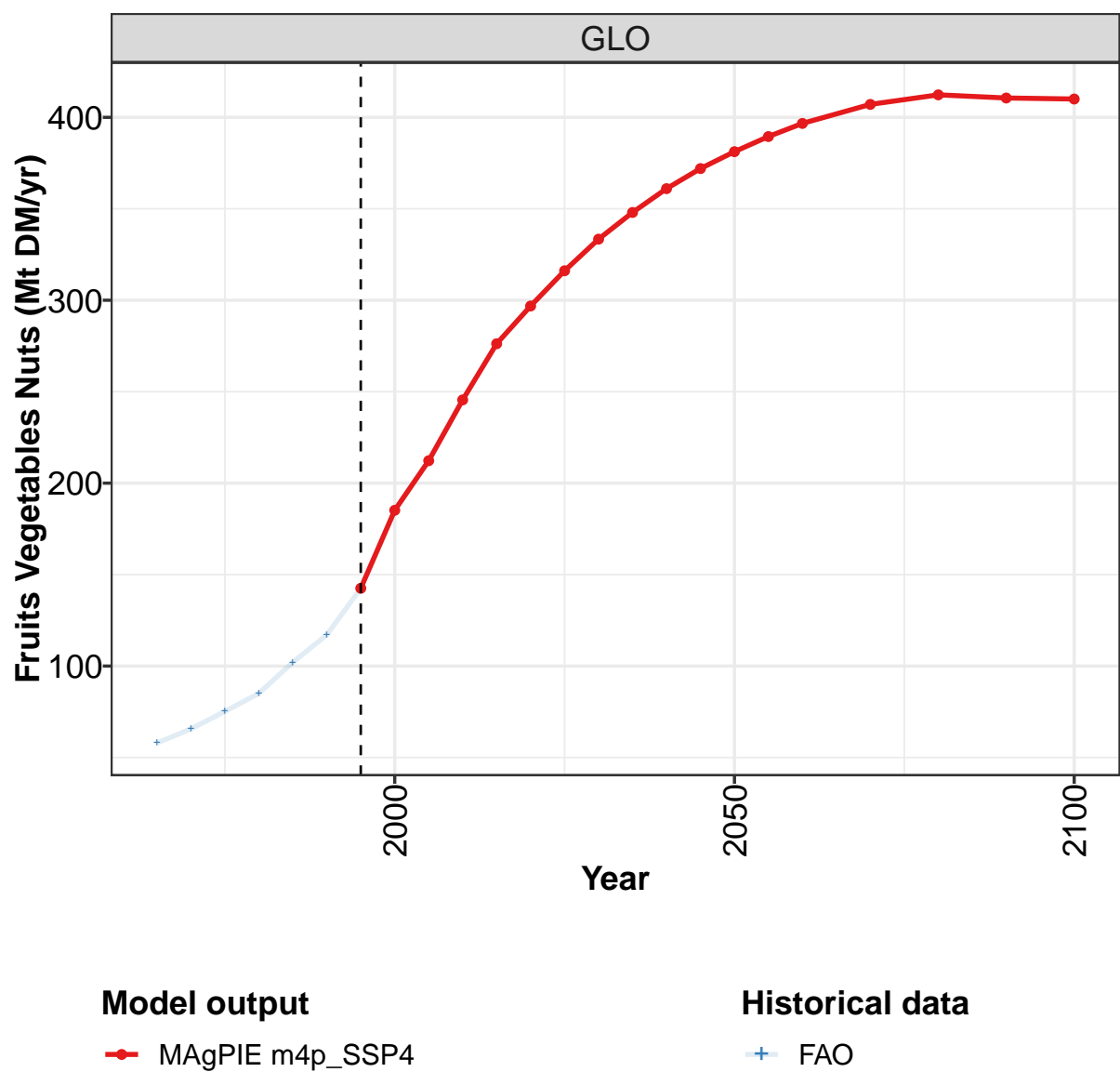
	2050	2055	2060	2070	2080	2090	2100
GLO	637	653	667	688	699	704	704
CAZ	7	7	7	8	8	8	8
CHA	113	109	104	93	81	70	60
EUR	39	39	39	39	38	36	35
IND	79	79	80	79	77	73	69
JPN	5	5	5	5	4	4	3
LAM	43	44	44	44	43	41	40
MEA	46	48	49	52	53	55	56
NEU	12	12	12	12	12	11	10
OAS	70	72	73	76	77	77	78
REF	17	17	17	17	16	15	14
SSA	177	192	208	236	261	285	303
USA	27	28	28	29	30	29	29

Table 387: MAgPIE m4p\_SSP4 — 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



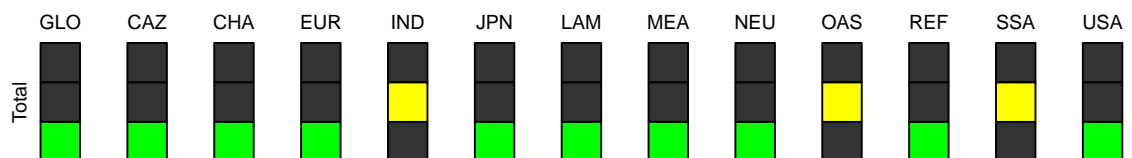
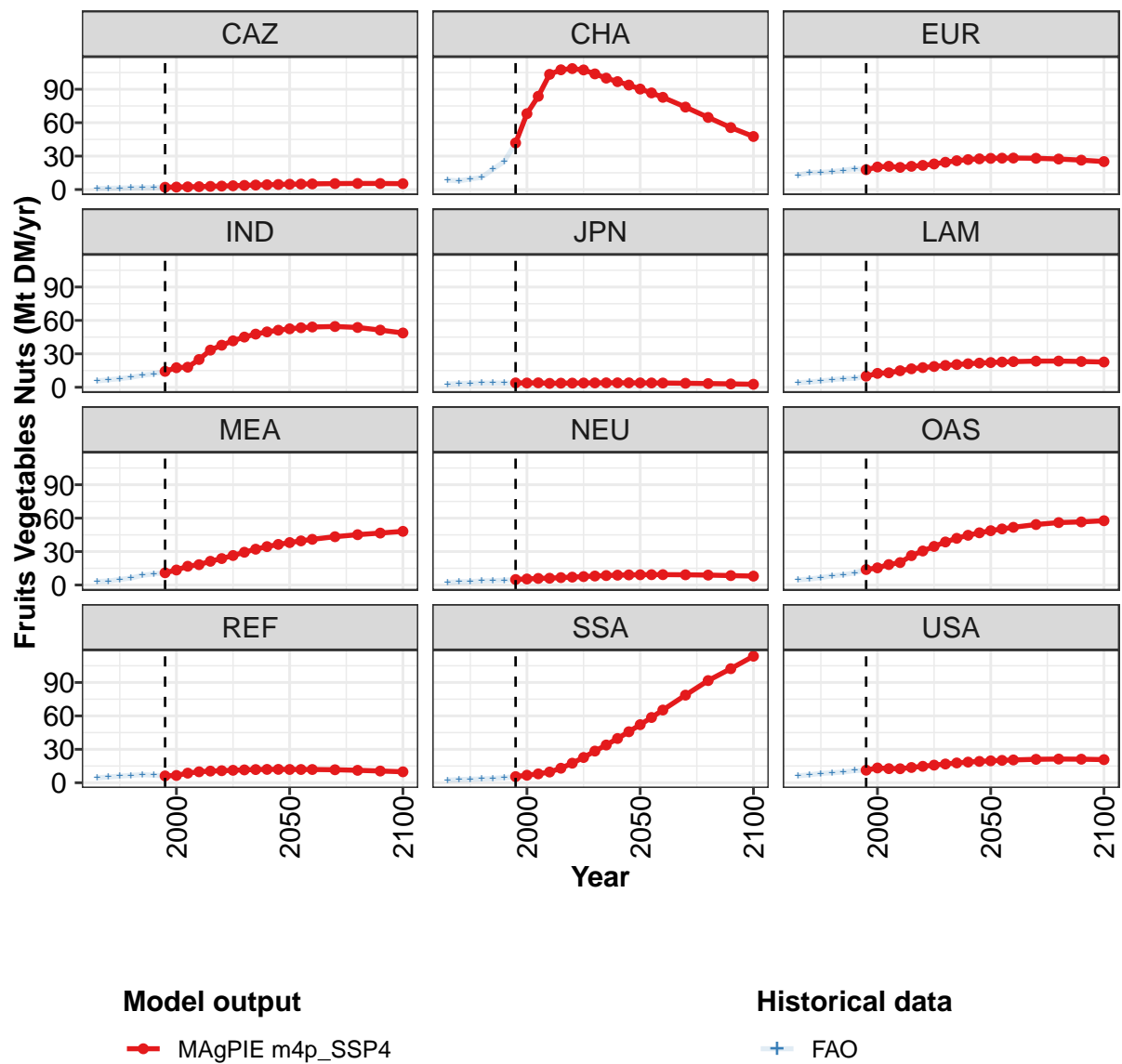


Figure 130: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	143	185	212	246	276	297	316	333	348	361	372
CAZ	2	2	2	3	3	3	3	4	4	4	5
CHA	42	68	84	103	107	109	107	104	100	97	94
EUR	18	20	21	20	21	22	23	24	26	27	28
IND	14	18	18	25	33	38	42	45	48	50	51
JPN	4	4	4	3	4	4	4	4	4	4	4
LAM	10	12	13	15	17	18	19	20	20	21	22
MEA	11	13	17	18	21	24	26	29	32	34	36
NEU	5	5	6	6	7	7	8	8	9	9	9
OAS	14	15	18	20	26	31	35	39	42	45	47
REF	6	7	9	10	10	11	11	12	12	12	12
SSA	6	7	8	10	13	18	23	28	34	40	46
USA	11	13	13	13	14	15	16	17	18	19	19

Table 389: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)  
[PART 1/2]

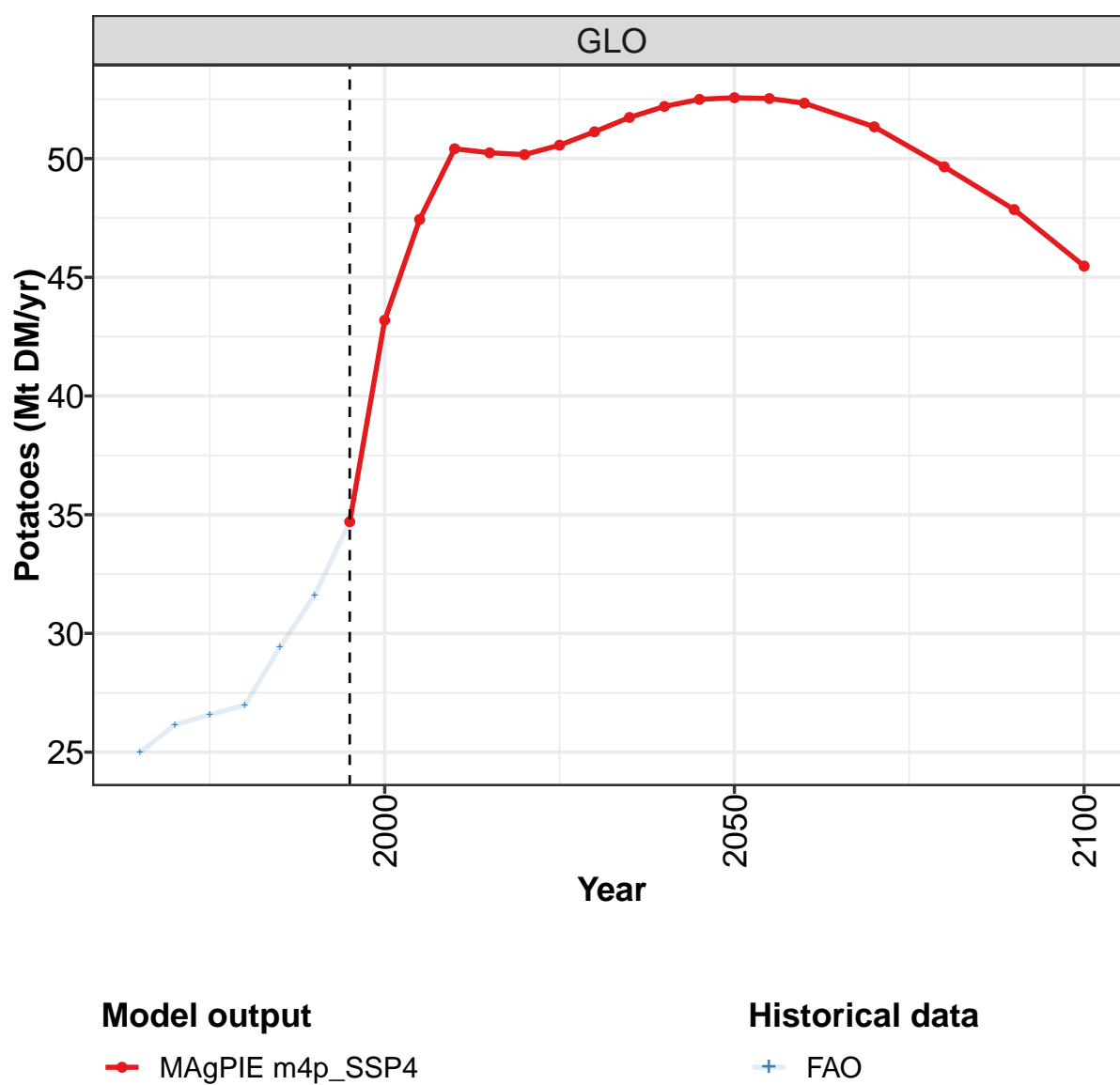
	2050	2055	2060	2070	2080	2090	2100
GLO	381	390	397	407	412	411	410
CAZ	5	5	5	5	5	5	5
CHA	90	87	83	74	65	56	48
EUR	28	28	28	28	27	26	25
IND	52	53	54	55	54	51	49
JPN	4	4	4	4	3	3	3
LAM	22	23	23	23	24	23	23
MEA	38	40	41	43	45	47	48
NEU	9	9	9	9	9	8	8
OAS	49	50	52	54	56	57	58
REF	12	12	12	12	11	11	10
SSA	52	59	65	79	92	102	114
USA	20	20	20	21	21	21	21

Table 390: MAgPIE m4p\_SSP4 — 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



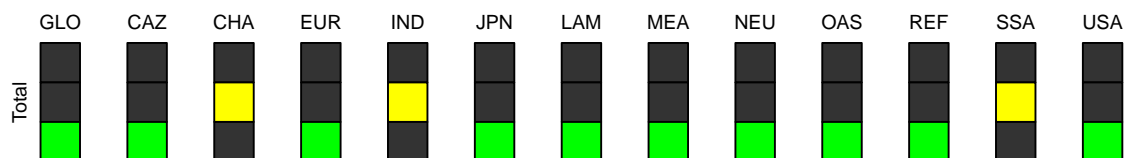
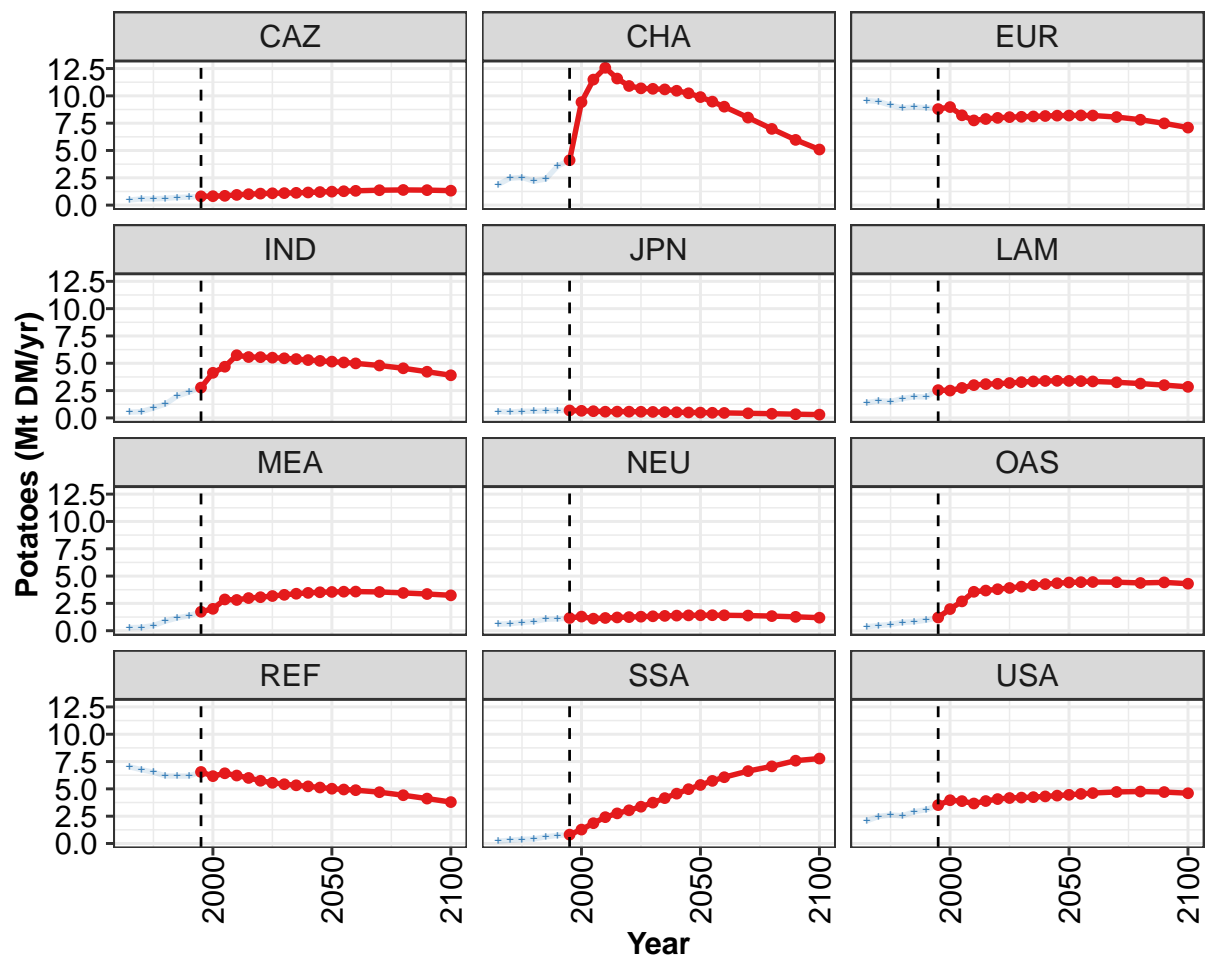


Figure 131: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Potatoes (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.7	43.2	47.4	50.4	50.2	50.2	50.6	51.1	51.7	52.2	52.5
CAZ	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.2	1.2
CHA	4.1	9.4	11.5	12.6	11.6	10.9	10.7	10.6	10.6	10.5	10.2
EUR	8.8	9.0	8.2	7.8	7.9	8.0	8.1	8.1	8.1	8.2	8.2
IND	2.8	4.1	4.7	5.7	5.6	5.6	5.5	5.5	5.4	5.3	5.2
JPN	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
LAM	2.5	2.5	2.7	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.4
MEA	1.7	2.0	2.9	2.8	3.0	3.1	3.2	3.3	3.4	3.5	3.5
NEU	1.2	1.3	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.4
OAS	1.2	2.0	2.7	3.6	3.7	3.8	3.9	4.0	4.2	4.3	4.3
REF	6.5	6.2	6.4	6.2	6.0	5.7	5.6	5.4	5.3	5.2	5.1
SSA	0.8	1.3	1.9	2.4	2.8	3.0	3.4	3.7	4.2	4.6	5.0
USA	3.5	4.0	3.9	3.7	3.9	4.1	4.2	4.2	4.2	4.3	4.4

Table 392: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

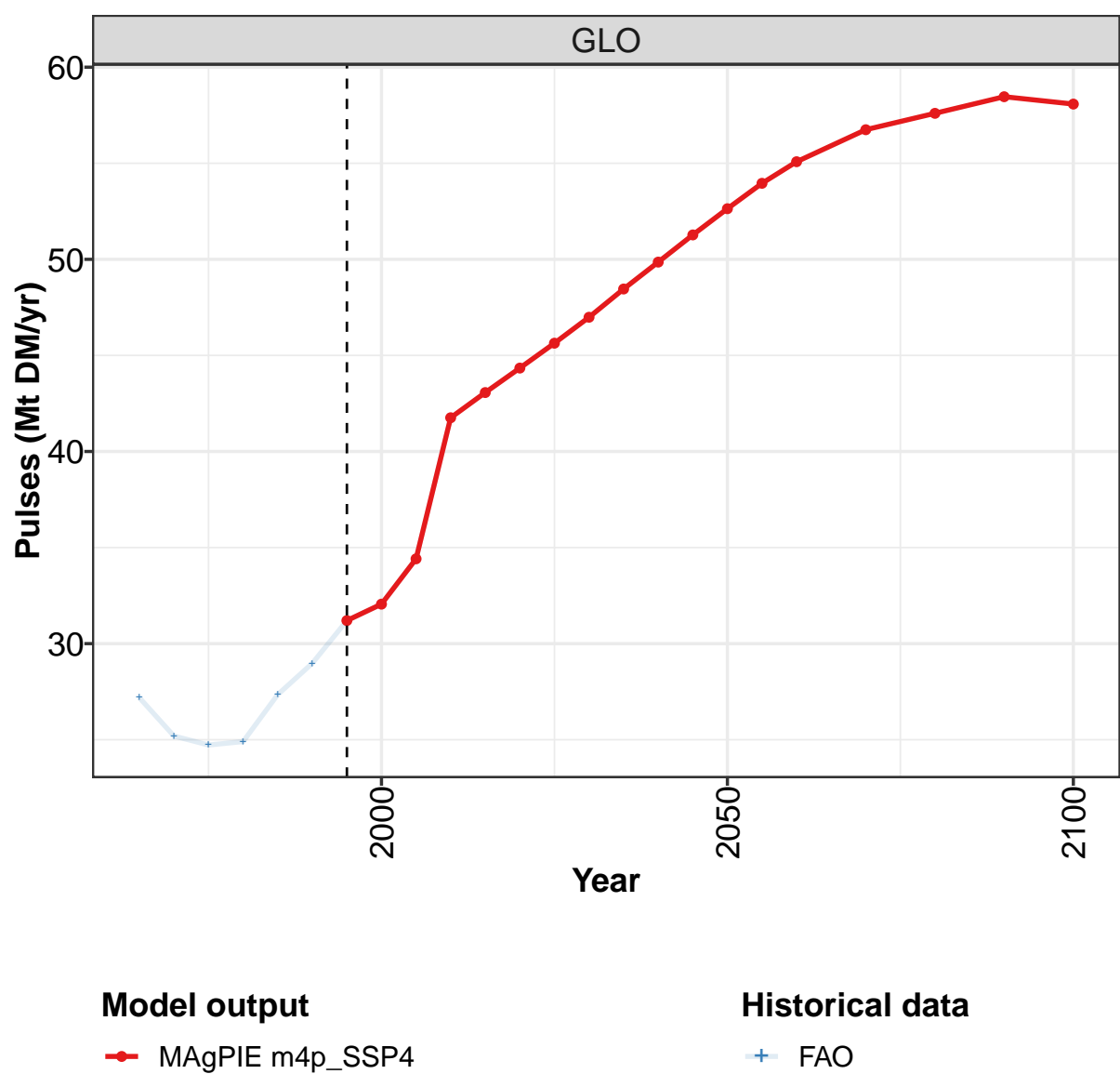
	2050	2055	2060	2070	2080	2090	2100
GLO	52.6	52.5	52.3	51.3	49.7	47.9	45.5
CAZ	1.2	1.3	1.3	1.4	1.4	1.4	1.3
CHA	9.9	9.5	9.0	8.0	7.0	6.0	5.1
EUR	8.2	8.2	8.2	8.1	7.8	7.5	7.1
IND	5.2	5.1	5.0	4.8	4.5	4.2	3.9
JPN	0.5	0.5	0.5	0.4	0.4	0.3	0.3
LAM	3.4	3.4	3.3	3.3	3.1	3.0	2.8
MEA	3.5	3.6	3.6	3.5	3.5	3.4	3.2
NEU	1.4	1.4	1.4	1.4	1.3	1.3	1.2
OAS	4.4	4.4	4.5	4.4	4.4	4.4	4.3
REF	5.0	4.9	4.9	4.7	4.4	4.1	3.8
SSA	5.4	5.7	6.1	6.6	7.1	7.6	7.8
USA	4.5	4.5	4.6	4.7	4.8	4.7	4.6

Table 393: MAgPIE m4p\_SSP4 — 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



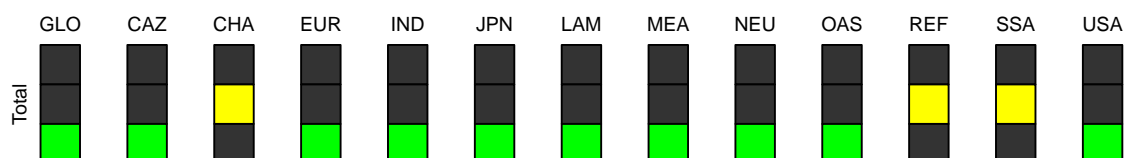
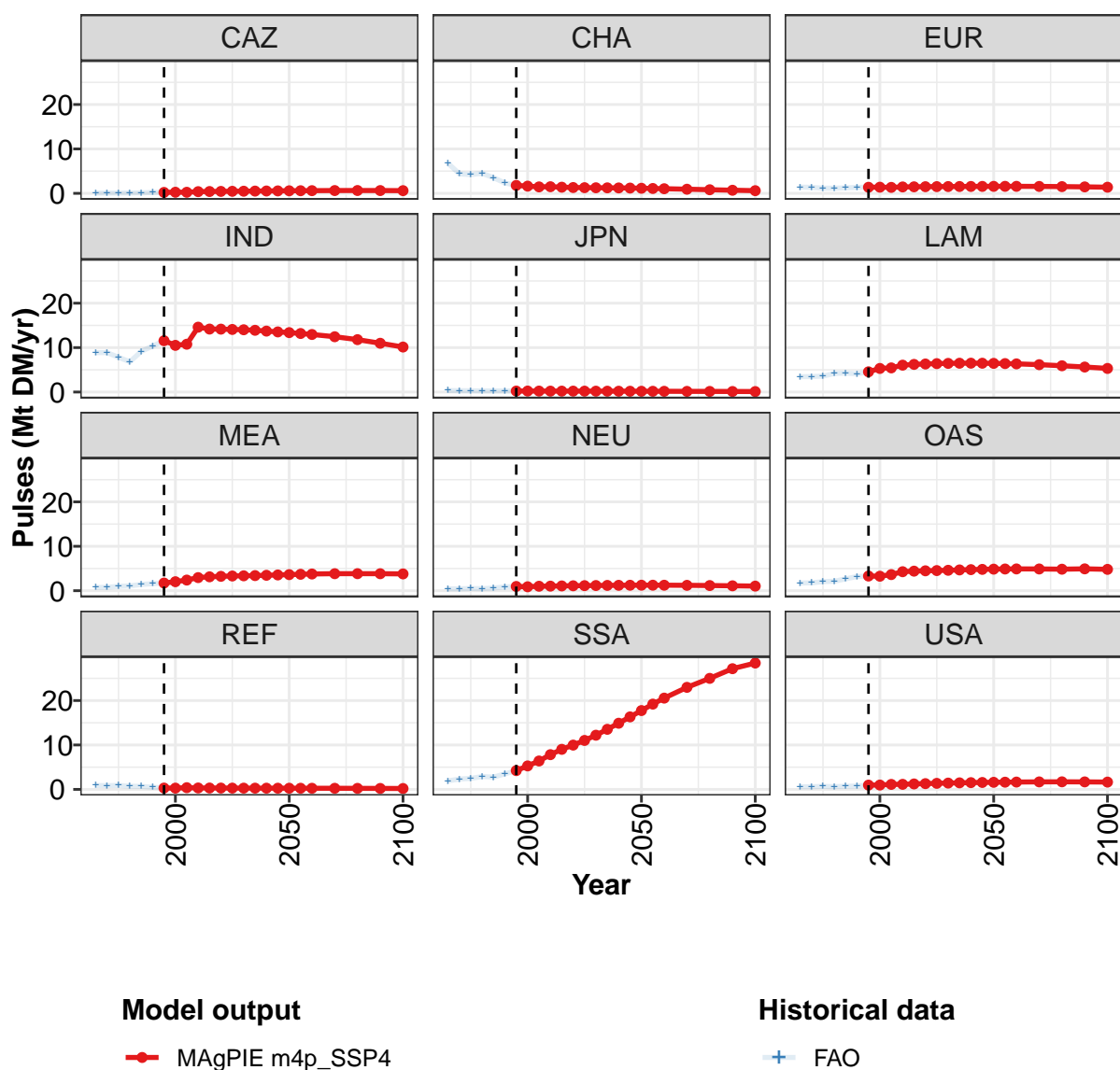


Figure 132: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	31.2	32.1	34.4	41.8	43.1	44.3	45.6	47.0	48.5	49.9	51.3
CAZ	0.2	0.3	0.2	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6
CHA	1.8	1.6	1.5	1.5	1.4	1.3	1.3	1.3	1.2	1.2	1.2
EUR	1.4	1.4	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6
IND	11.6	10.5	10.8	14.6	14.2	14.2	14.1	14.0	13.9	13.7	13.5
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	6.4	6.5	6.5	6.5	6.5
MEA	1.7	2.0	2.4	3.0	3.1	3.2	3.3	3.4	3.4	3.5	3.6
NEU	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2
OAS	3.3	3.3	3.6	4.3	4.4	4.5	4.5	4.6	4.7	4.7	4.8
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	9.0	10.0	11.0	12.2	13.5	14.9	16.3
USA	1.0	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.6

Table 395: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

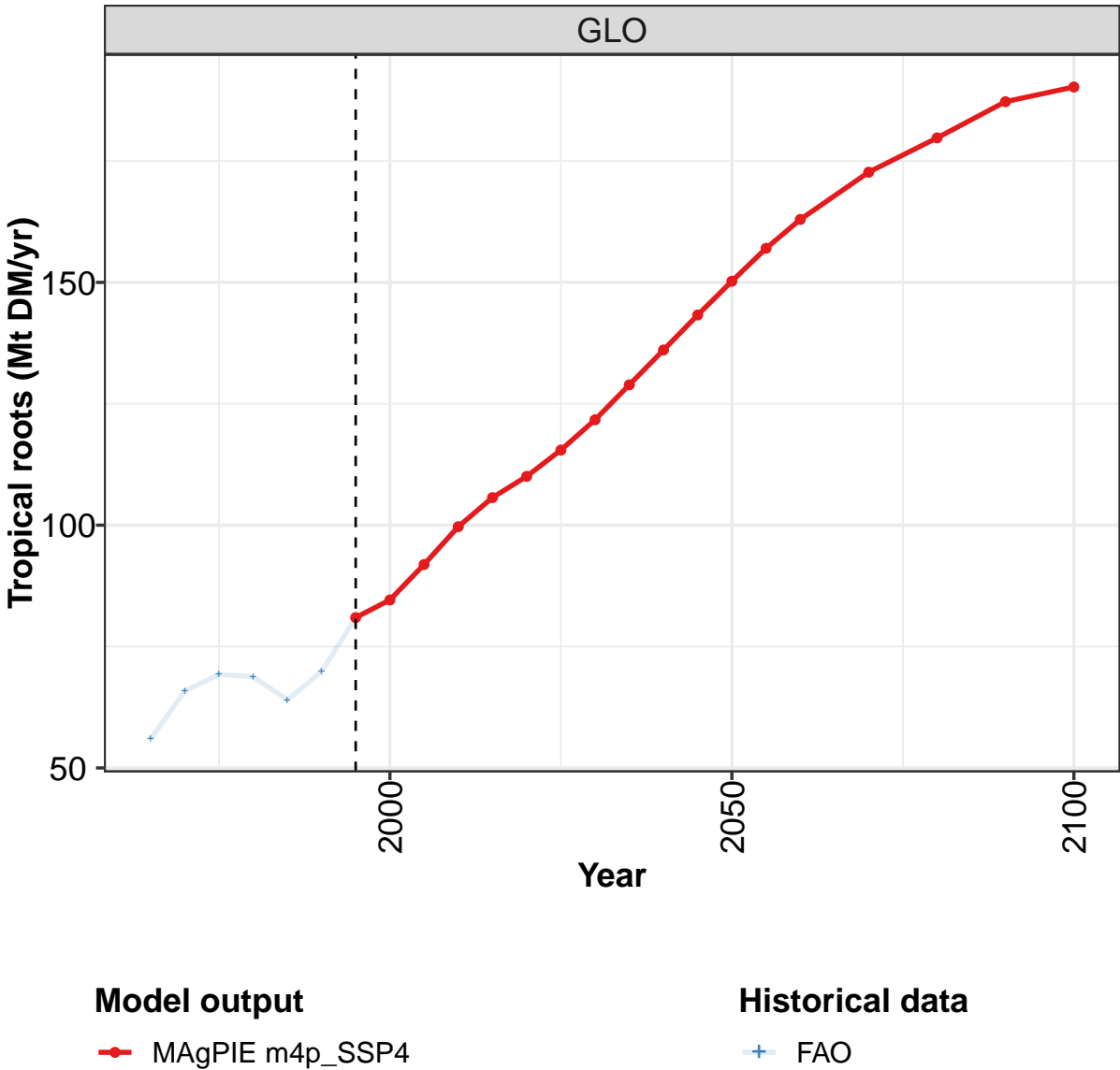
	2050	2055	2060	2070	2080	2090	2100
GLO	52.6	54.0	55.1	56.7	57.6	58.5	58.1
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	1.1	1.1	1.0	0.9	0.8	0.7	0.6
EUR	1.6	1.6	1.6	1.6	1.5	1.5	1.4
IND	13.4	13.2	13.0	12.5	11.8	11.0	10.1
JPN	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	6.5	6.4	6.3	6.2	5.9	5.6	5.3
MEA	3.6	3.7	3.8	3.8	3.8	3.8	3.8
NEU	1.2	1.2	1.2	1.2	1.2	1.1	1.0
OAS	4.9	4.9	4.9	4.9	4.8	4.9	4.8
REF	0.3	0.3	0.3	0.2	0.2	0.2	0.2
SSA	17.8	19.2	20.6	23.0	25.0	27.2	28.4
USA	1.6	1.6	1.7	1.7	1.7	1.7	1.6

Table 396: MAgPIE m4p\_SSP4 — 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



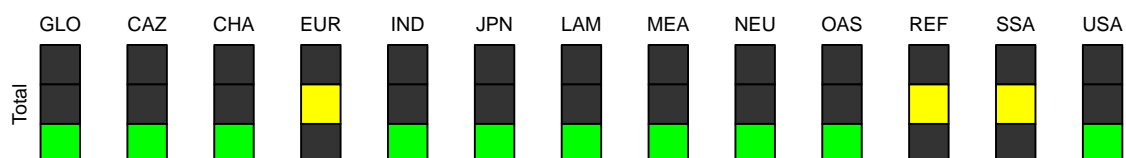
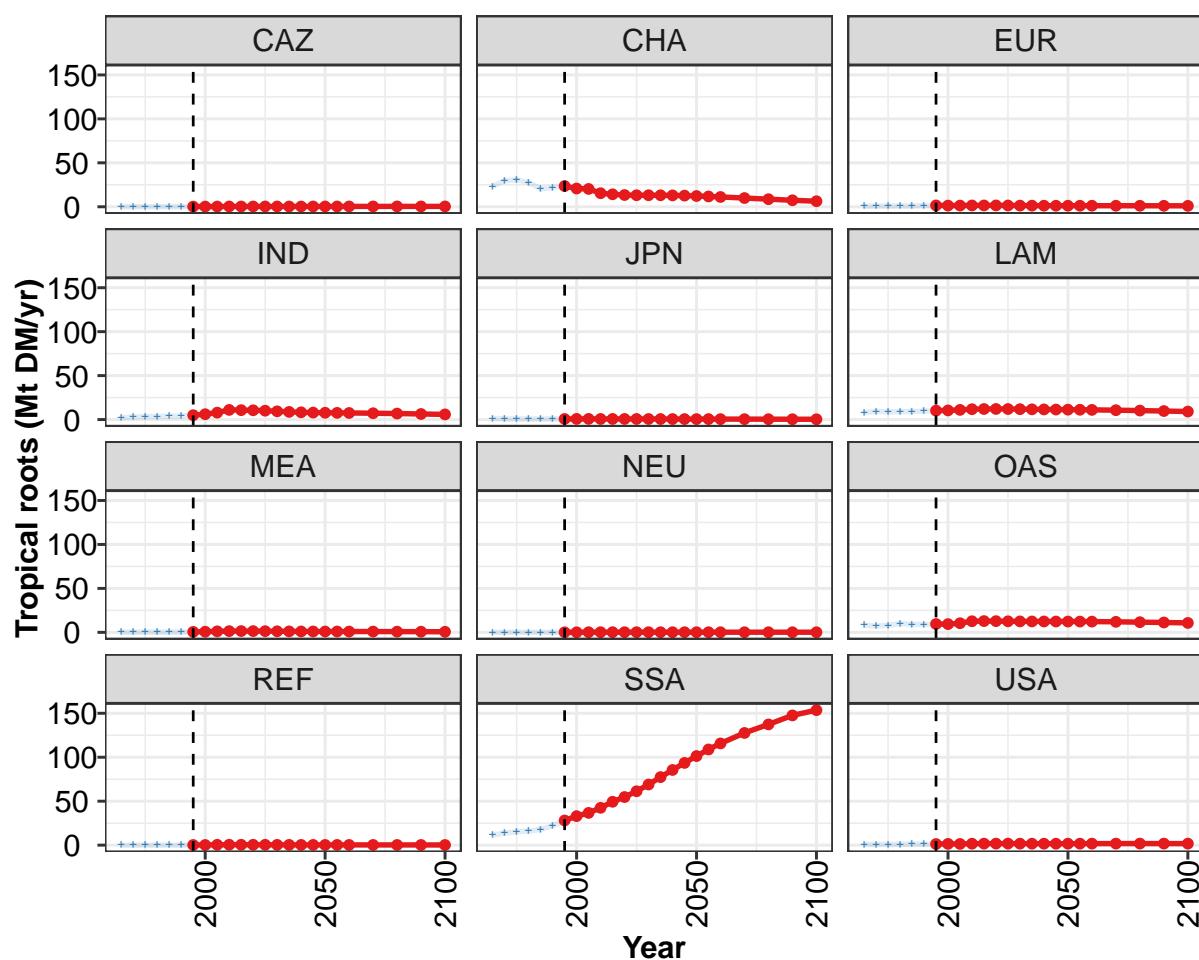


Figure 133: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	85	92	100	106	110	115	122	129	136	143
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	24	21	20	15	14	13	13	13	13	13	13
EUR	2	1	1	2	2	2	1	1	1	1	1
IND	5	6	8	11	11	11	10	9	9	8	8
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	10	10	11	12	12	12	12	12	12	12	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	13	12	12	12	12
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	28	33	37	42	49	55	61	69	77	86	94
USA	1	1	1	2	2	2	2	2	2	2	2

Table 398: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

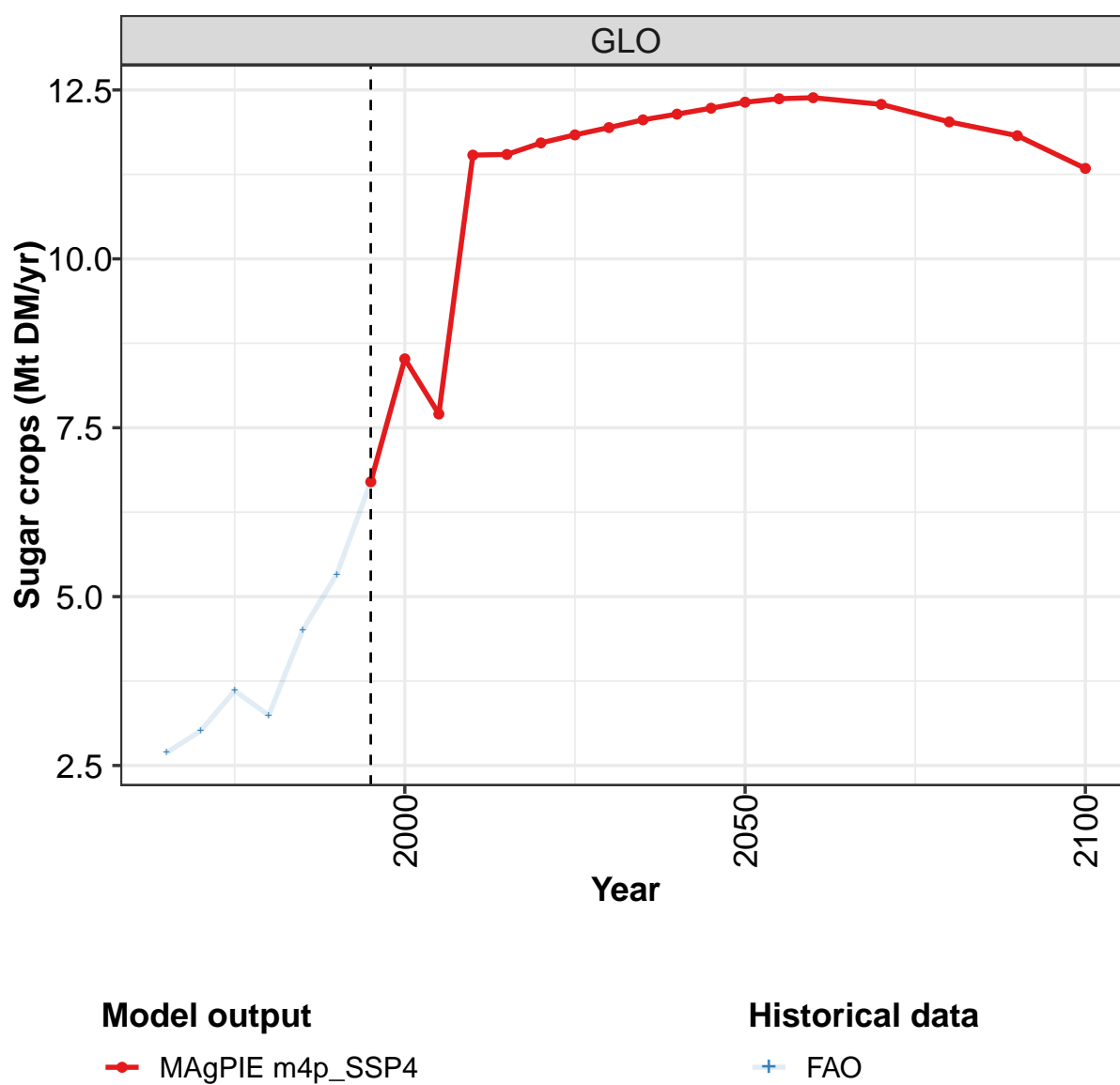
	2050	2055	2060	2070	2080	2090	2100
GLO	150	157	163	173	180	187	190
CAZ	0	0	0	0	0	0	0
CHA	12	12	11	10	9	7	6
EUR	1	1	1	1	1	1	1
IND	8	8	8	7	7	6	6
JPN	1	1	1	0	0	0	0
LAM	11	11	11	11	10	10	9
MEA	1	1	1	1	1	1	1
NEU	0	0	0	0	0	0	0
OAS	12	12	12	12	12	11	11
REF	0	0	0	0	0	0	0
SSA	101	109	116	128	137	148	154
USA	2	2	2	2	2	2	2

Table 399: MAgPIE m4p\_SSP4 — 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





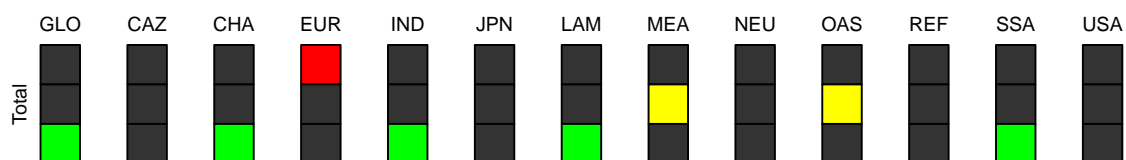
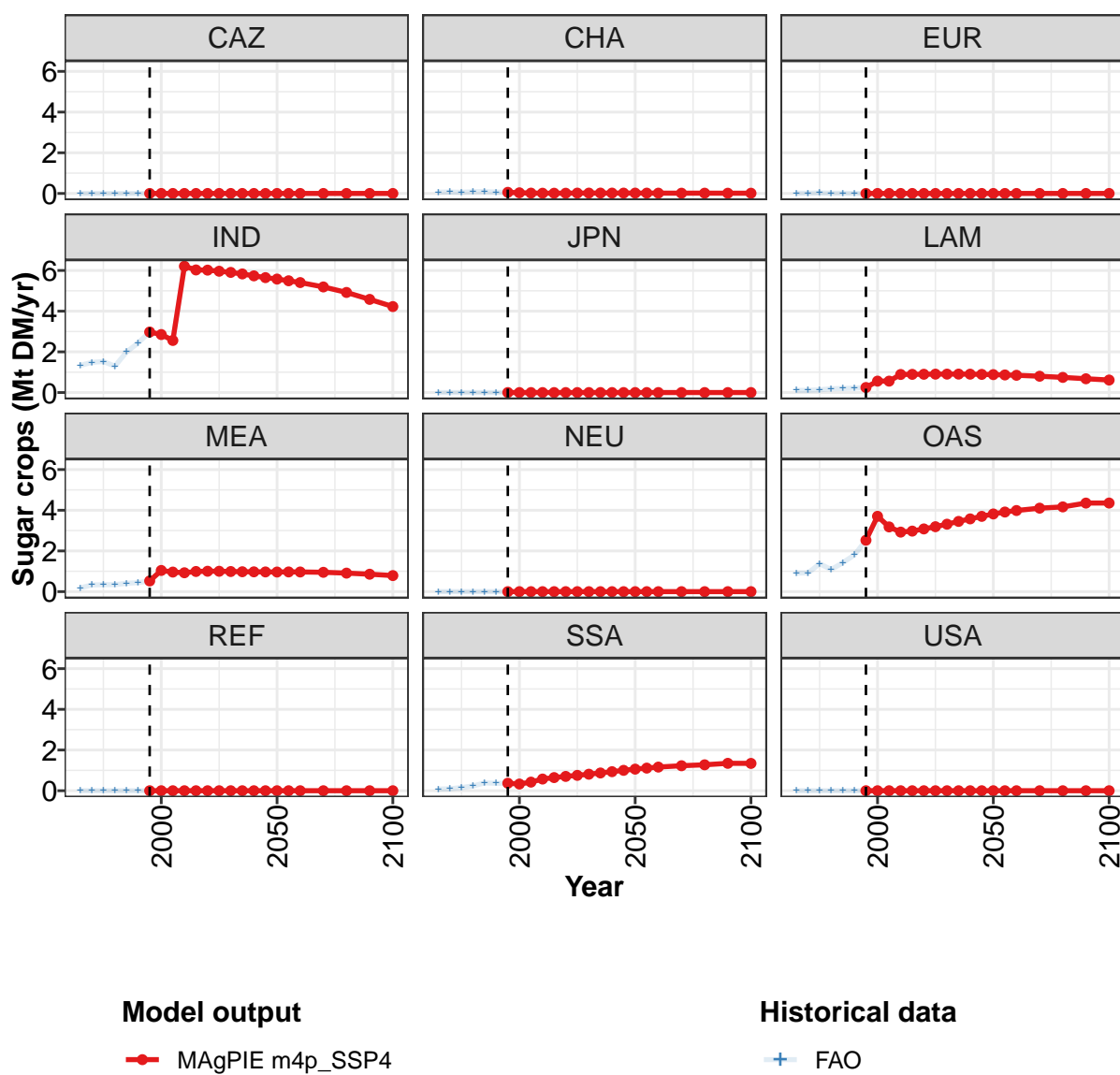


Figure 134: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.7	8.5	7.7	11.5	11.5	11.7	11.8	11.9	12.1	12.1	12.2
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	0.0	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	6.0	6.0	6.0	5.9	5.8	5.7	5.6
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	0.6	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	1.0	1.0	1.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	3.7	3.2	2.9	3.0	3.1	3.2	3.3	3.5	3.6	3.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.4	0.3	0.4	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 401: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

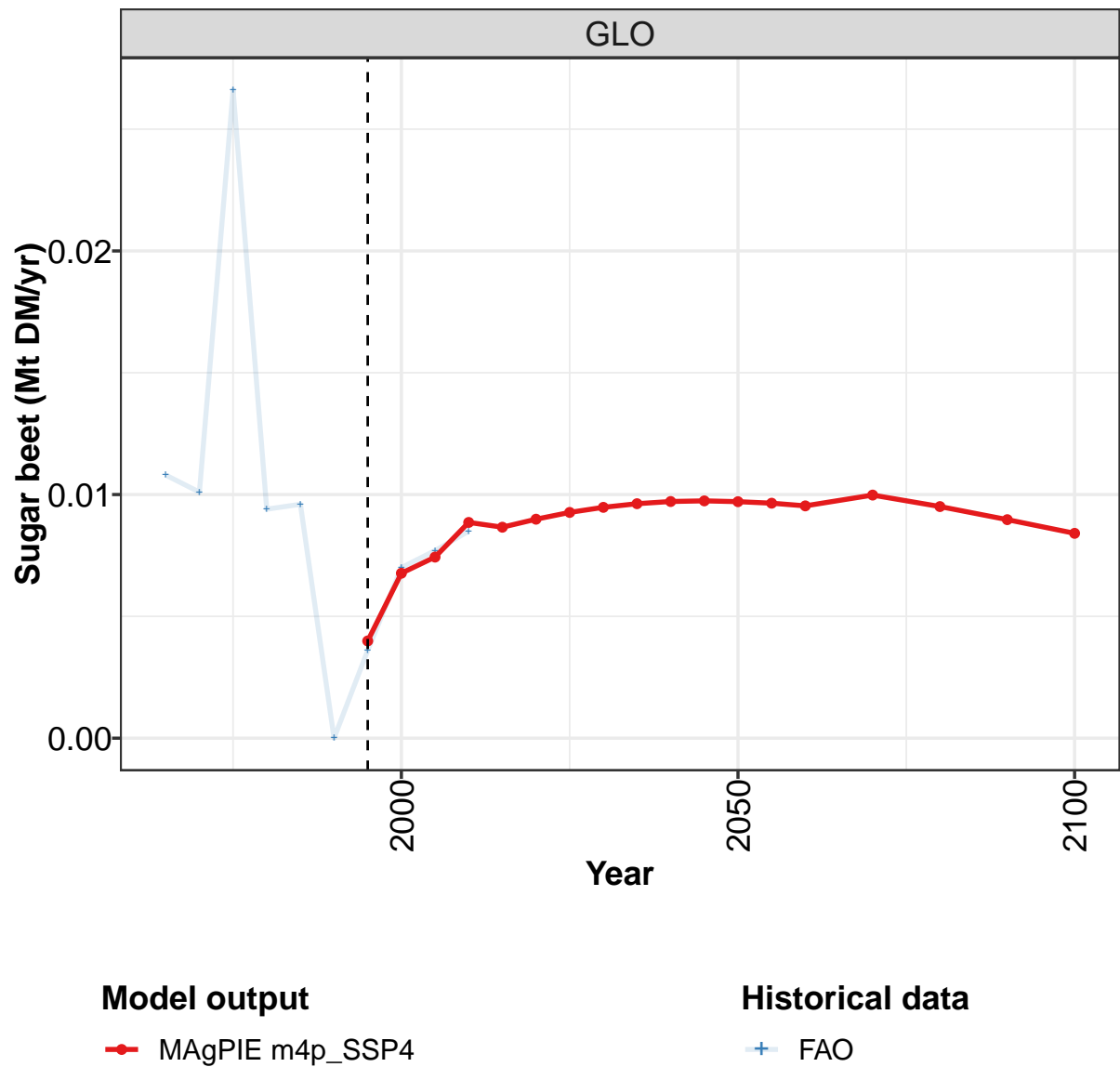
	2050	2055	2060	2070	2080	2090	2100
GLO	12.3	12.4	12.4	12.3	12.0	11.8	11.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	5.6	5.5	5.4	5.2	4.9	4.6	4.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.8	0.8	0.7	0.7	0.6
MEA	1.0	1.0	1.0	1.0	0.9	0.9	0.8
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	3.8	3.9	4.0	4.1	4.2	4.4	4.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.1	1.1	1.2	1.2	1.3	1.3	1.3
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 402: MAgPIE m4p\_SSP4 — 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



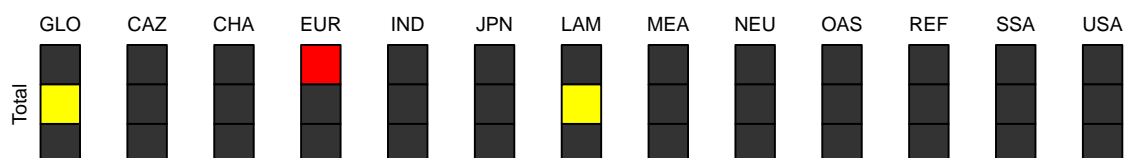
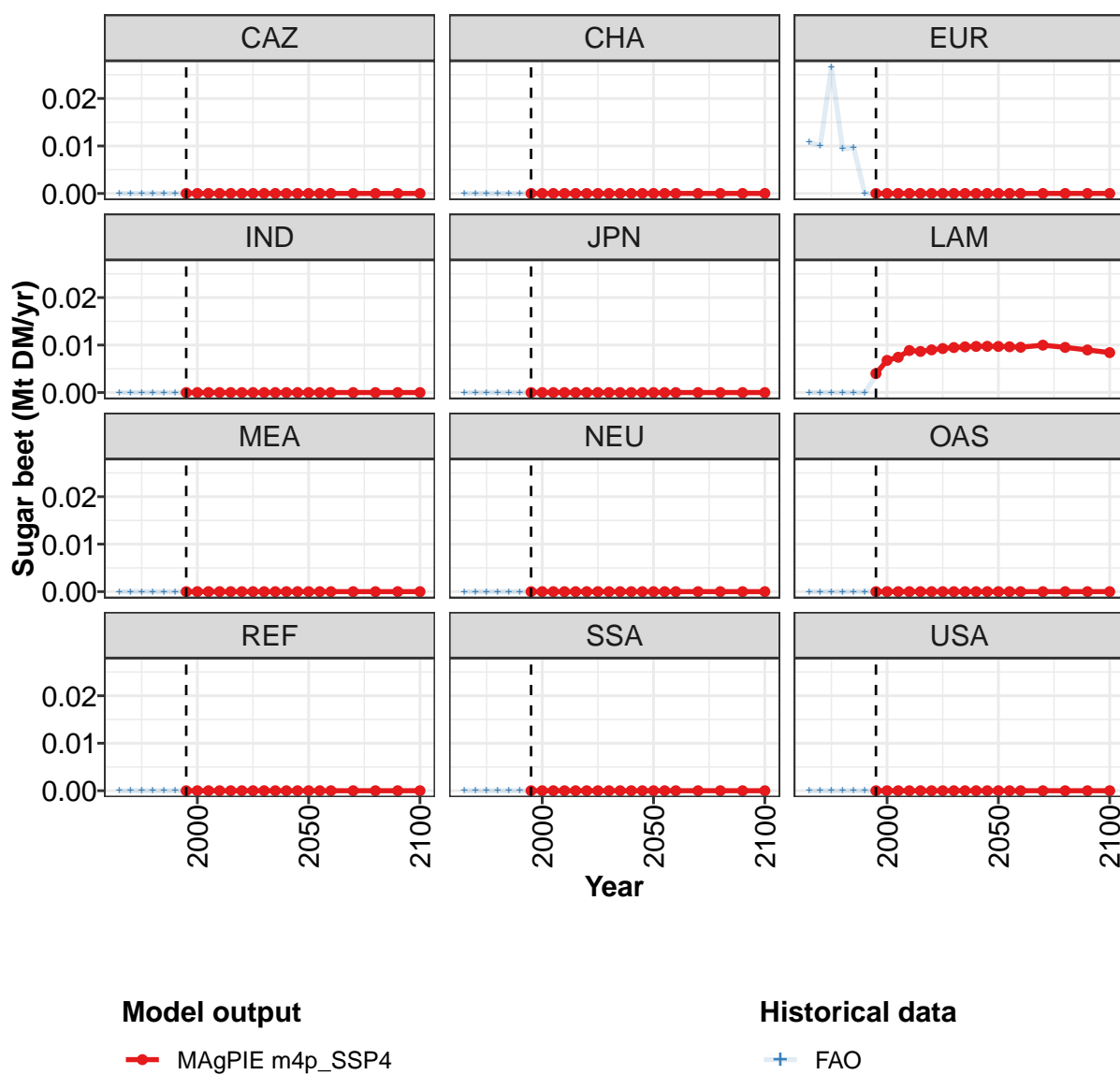


Figure 135: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00399	0.00677	0.00743	0.00886	0.00866	0.00899	0.00927	0.00948	0.00963	0.00972	0.00974
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	0.00000	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	0.00399	0.00677	0.00743	0.00886	0.00866	0.00899	0.00927	0.00948	0.00963	0.00972	0.00974
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 404: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

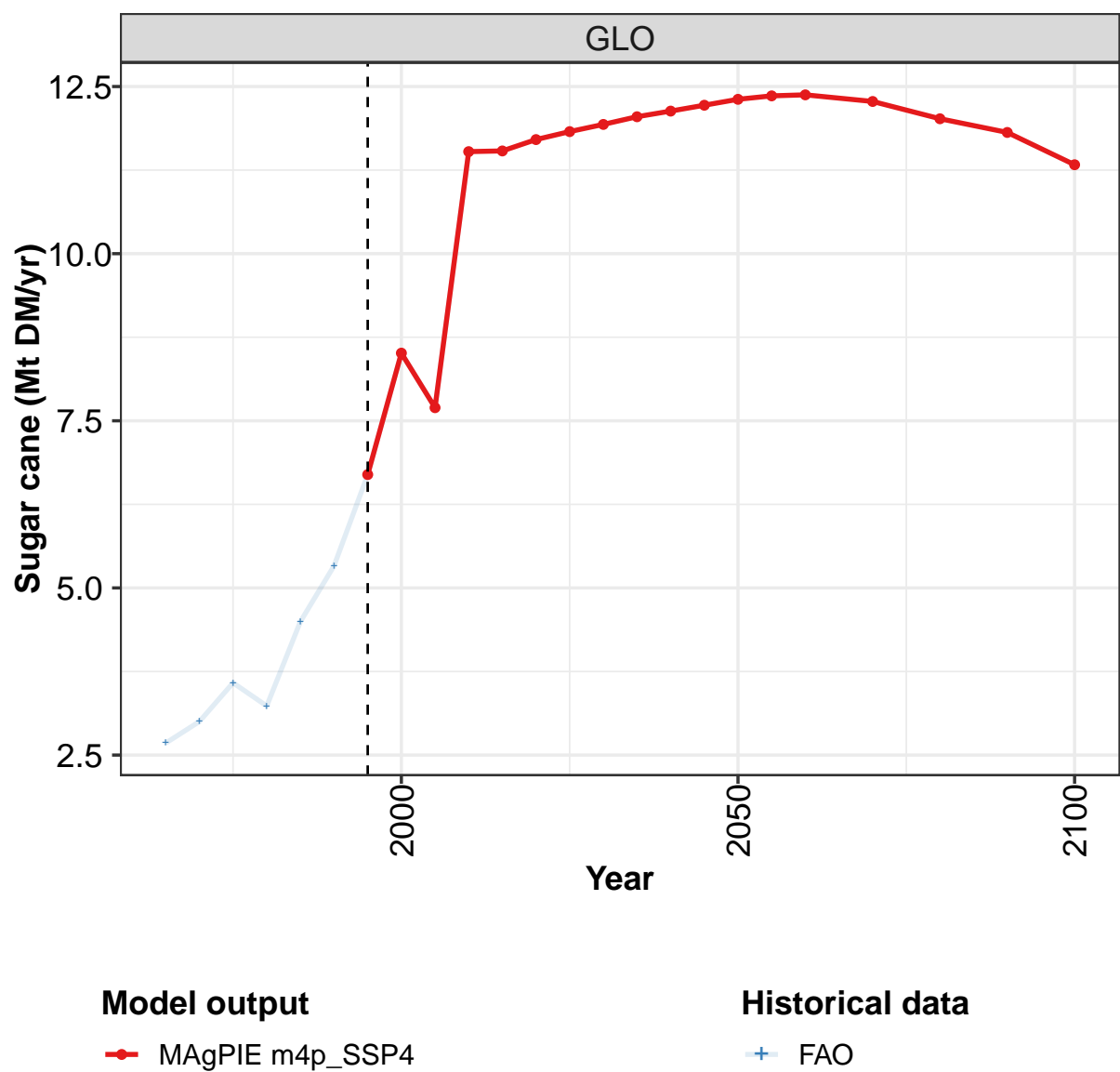
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00971	0.00965	0.00954	0.00998	0.00951	0.00897	0.00841
CAZ	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CHA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EUR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
IND	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
JPN	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
LAM	0.00971	0.00965	0.00954	0.00998	0.00951	0.00897	0.00841
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 405: MAgPIE m4p\_SSP4 — 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



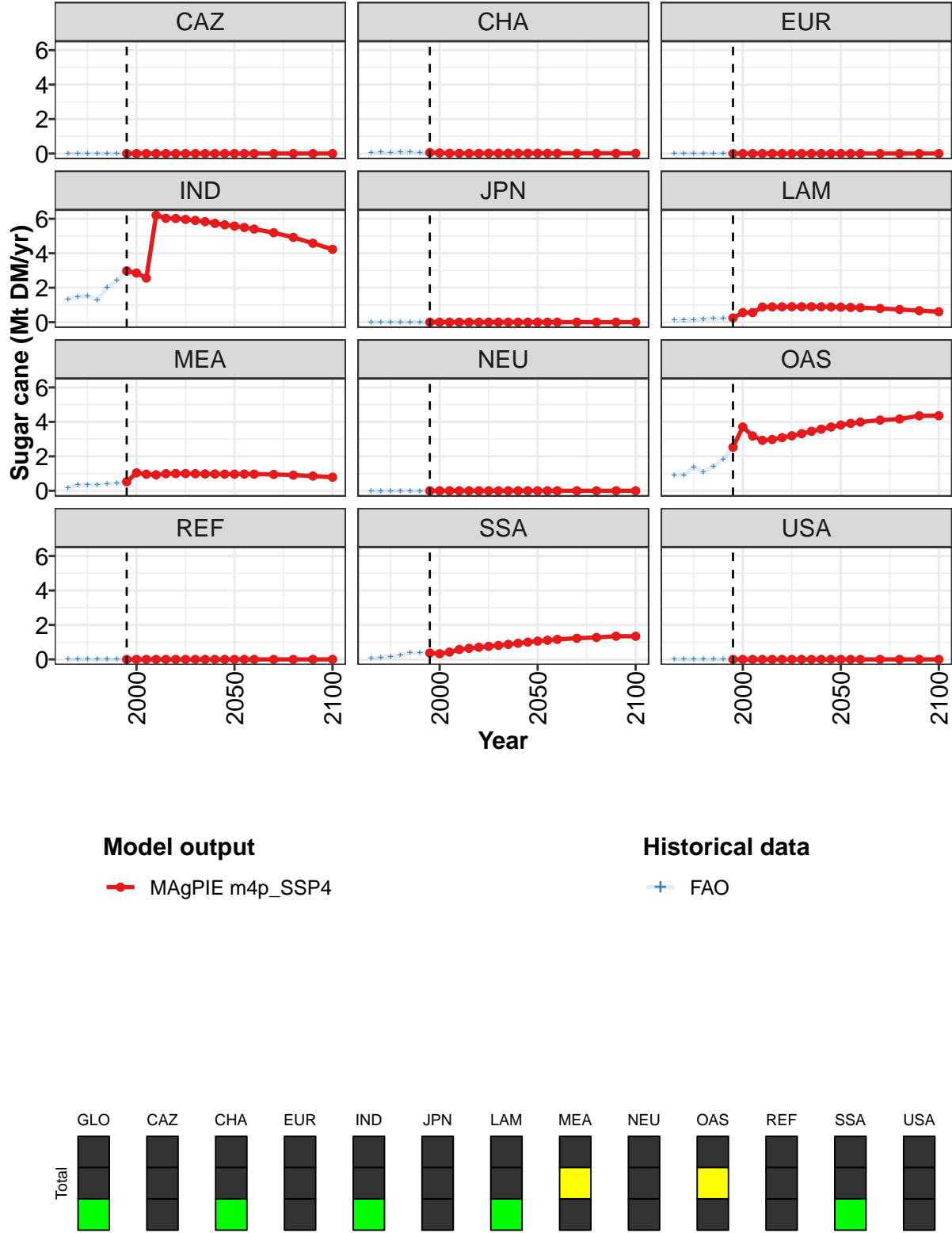


Figure 136: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.7	8.5	7.7	11.5	11.5	11.7	11.8	11.9	12.0	12.1	12.2
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	0.0	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	6.0	6.0	6.0	5.9	5.8	5.7	5.6
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	0.6	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	1.0	1.0	1.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	3.7	3.2	2.9	3.0	3.1	3.2	3.3	3.5	3.6	3.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.4	0.3	0.4	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 407: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	12.3	12.4	12.4	12.3	12.0	11.8	11.3
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	5.6	5.5	5.4	5.2	4.9	4.6	4.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.8	0.8	0.7	0.7	0.6
MEA	1.0	1.0	1.0	1.0	0.9	0.9	0.8
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	3.8	3.9	4.0	4.1	4.2	4.4	4.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.1	1.1	1.2	1.2	1.3	1.3	1.3
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

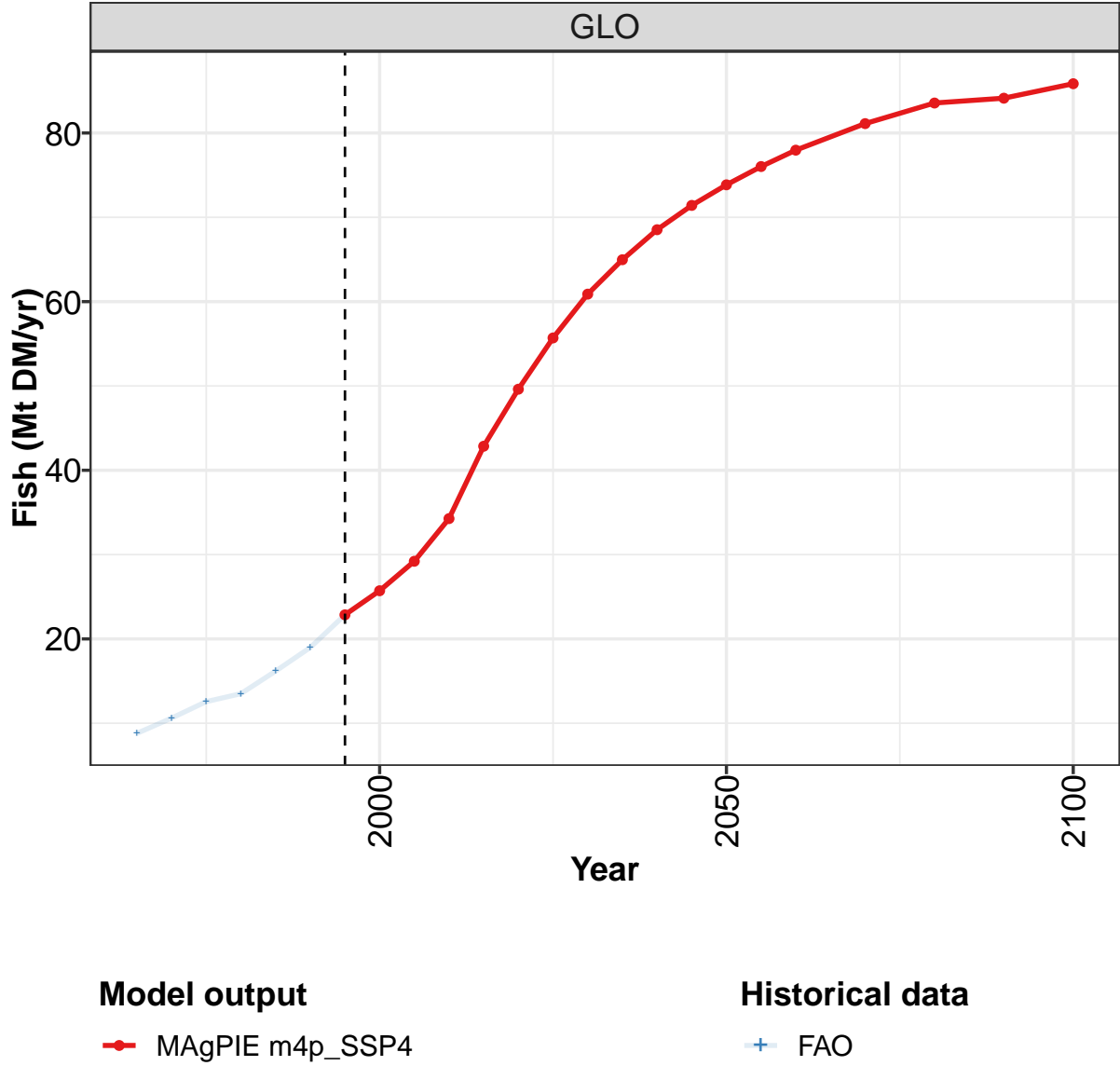
Table 408: MAgPIE m4p\_SSP4 — Demand—Food—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

	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



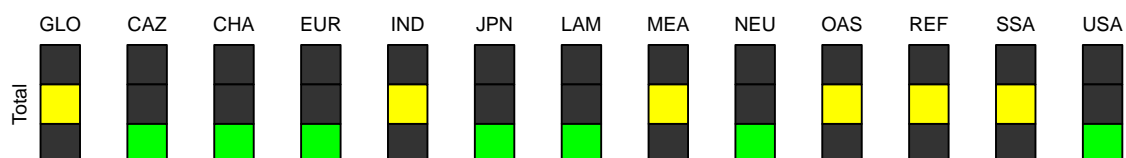
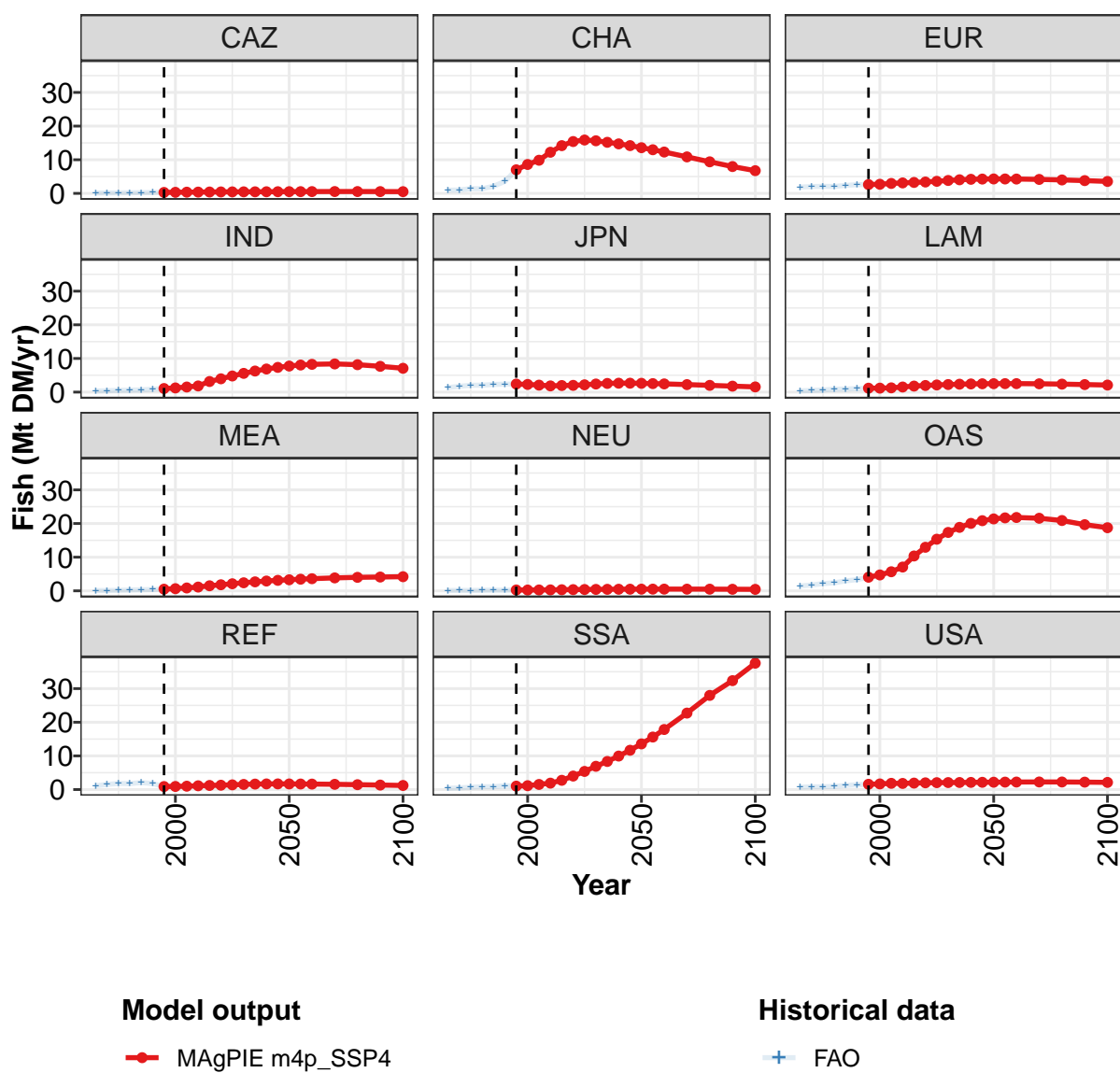


Figure 137: MAgPIE m4p\_SSP4 — Demand—Food—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22.9	25.7	29.2	34.3	42.9	49.6	55.7	60.9	65.0	68.5	71.4
CAZ	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
CHA	7.0	8.6	9.9	12.2	14.2	15.4	15.9	15.6	15.2	14.7	14.2
EUR	2.6	2.7	3.0	3.1	3.3	3.4	3.6	3.8	4.1	4.2	4.3
IND	1.1	1.2	1.5	1.8	3.2	4.0	4.8	5.6	6.3	6.9	7.3
JPN	2.4	2.3	2.1	1.9	2.0	2.0	2.2	2.4	2.6	2.6	2.6
LAM	1.2	1.2	1.3	1.5	1.8	2.0	2.1	2.3	2.4	2.4	2.5
MEA	0.5	0.6	0.9	1.1	1.5	1.8	2.1	2.4	2.7	2.9	3.1
NEU	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5
OAS	4.0	4.7	5.7	7.1	10.4	13.0	15.3	17.4	18.9	20.0	20.8
REF	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7
SSA	1.0	1.2	1.5	1.9	2.8	4.0	5.4	6.9	8.4	10.0	11.7
USA	1.6	1.7	1.9	1.8	1.9	2.0	2.1	2.1	2.1	2.1	2.2

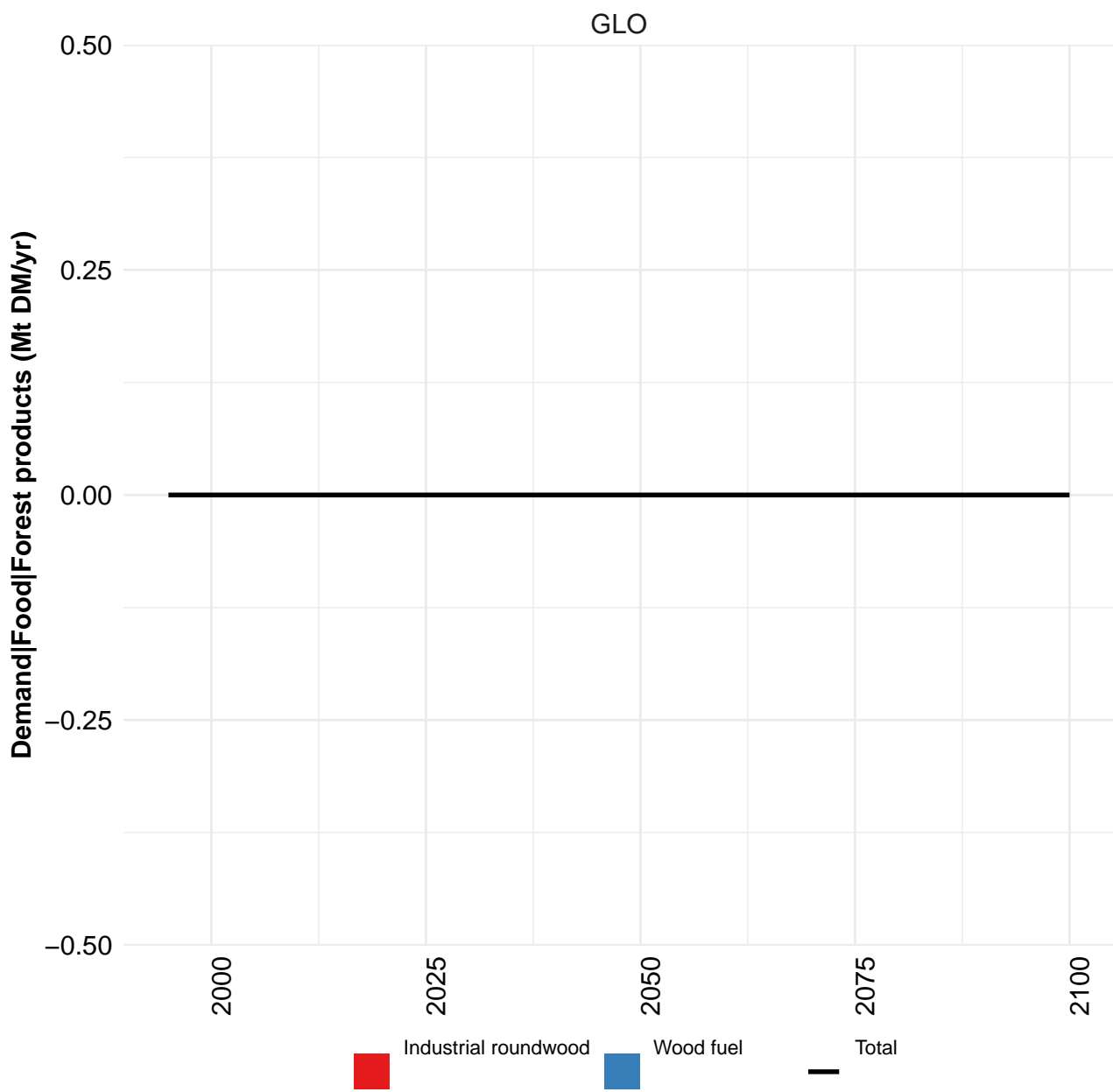
Table 410: MAgPIE m4p\_SSP4 — Demand—Food—Fish (Mt DM/yr) [PART 1/2]

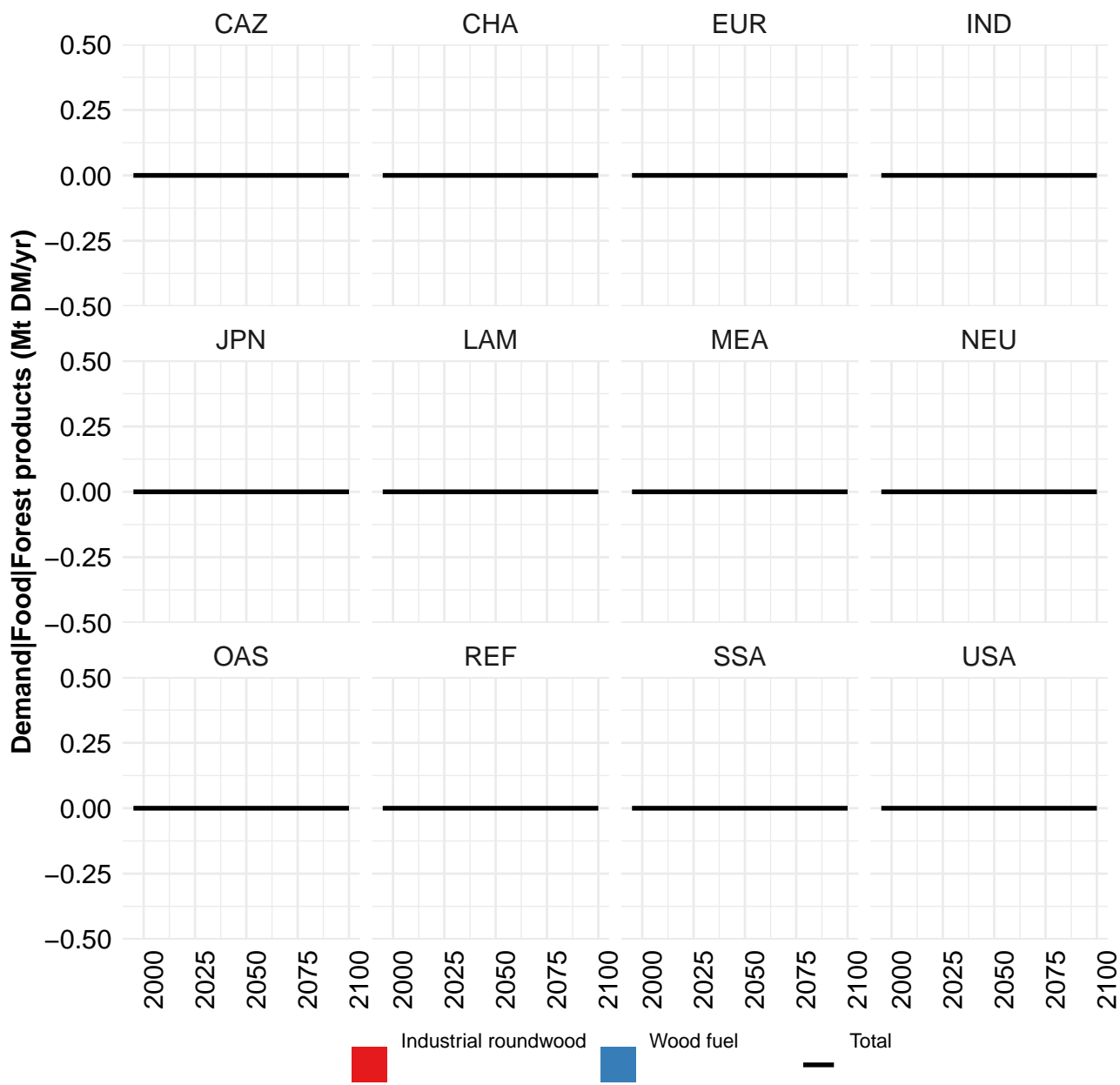
	2050	2055	2060	2070	2080	2090	2100
GLO	73.9	76.0	78.0	81.1	83.6	84.1	85.8
CAZ	0.5	0.5	0.5	0.6	0.6	0.5	0.5
CHA	13.6	13.0	12.3	10.9	9.4	8.0	6.8
EUR	4.3	4.3	4.3	4.2	4.0	3.8	3.6
IND	7.7	8.1	8.3	8.4	8.1	7.7	7.1
JPN	2.6	2.5	2.4	2.2	2.0	1.8	1.5
LAM	2.5	2.5	2.5	2.5	2.4	2.2	2.1
MEA	3.3	3.5	3.6	3.8	4.0	4.1	4.2
NEU	0.5	0.5	0.5	0.5	0.5	0.5	0.4
OAS	21.4	21.7	21.8	21.6	20.9	19.7	18.8
REF	1.7	1.6	1.6	1.6	1.4	1.3	1.2
SSA	13.6	15.6	17.9	22.7	28.0	32.4	37.6
USA	2.2	2.2	2.2	2.3	2.2	2.2	2.1

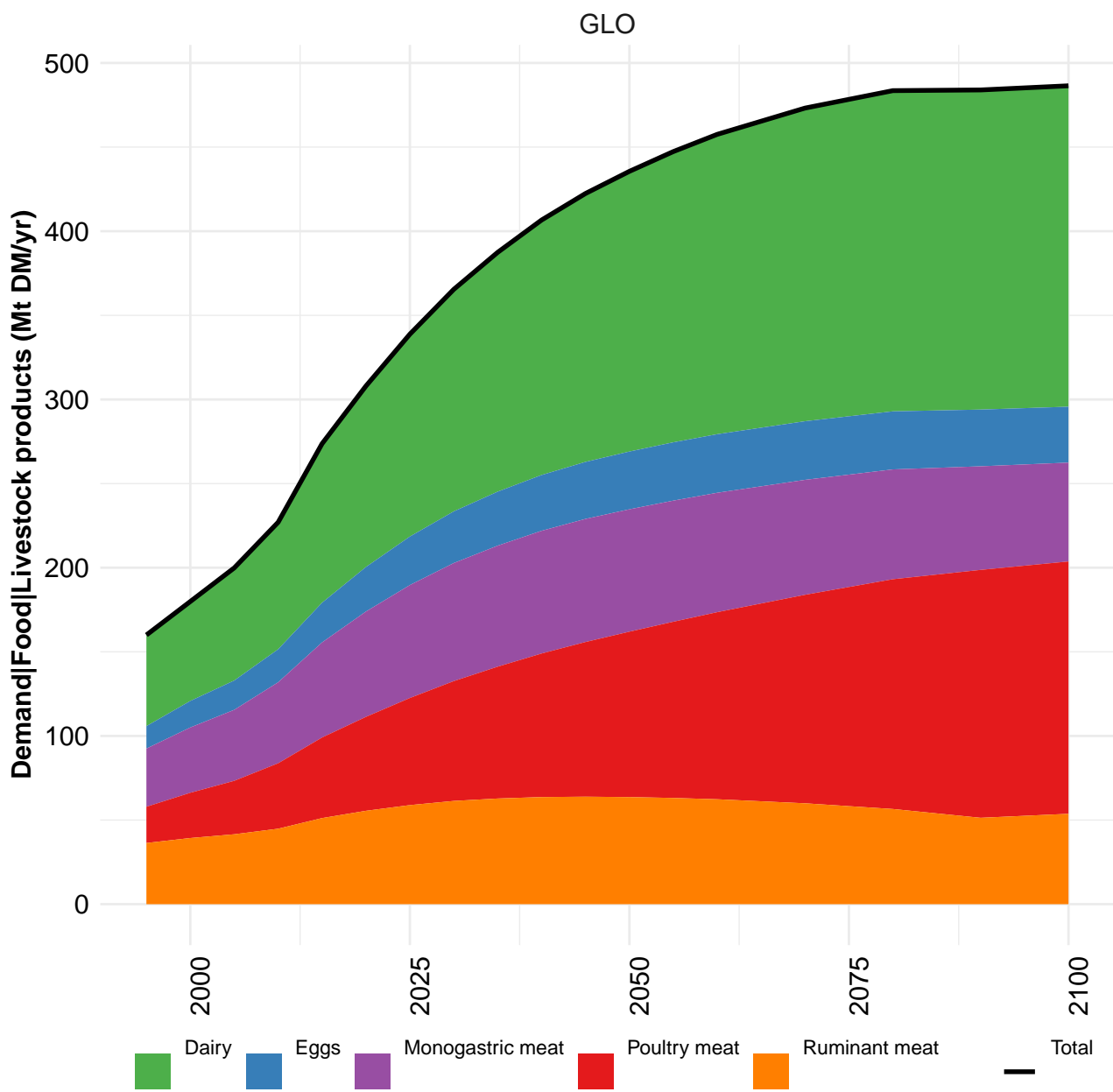
Table 411: MAgPIE m4p\_SSP4 — Demand—Food—Fish (Mt DM/yr) [PART 2/2]

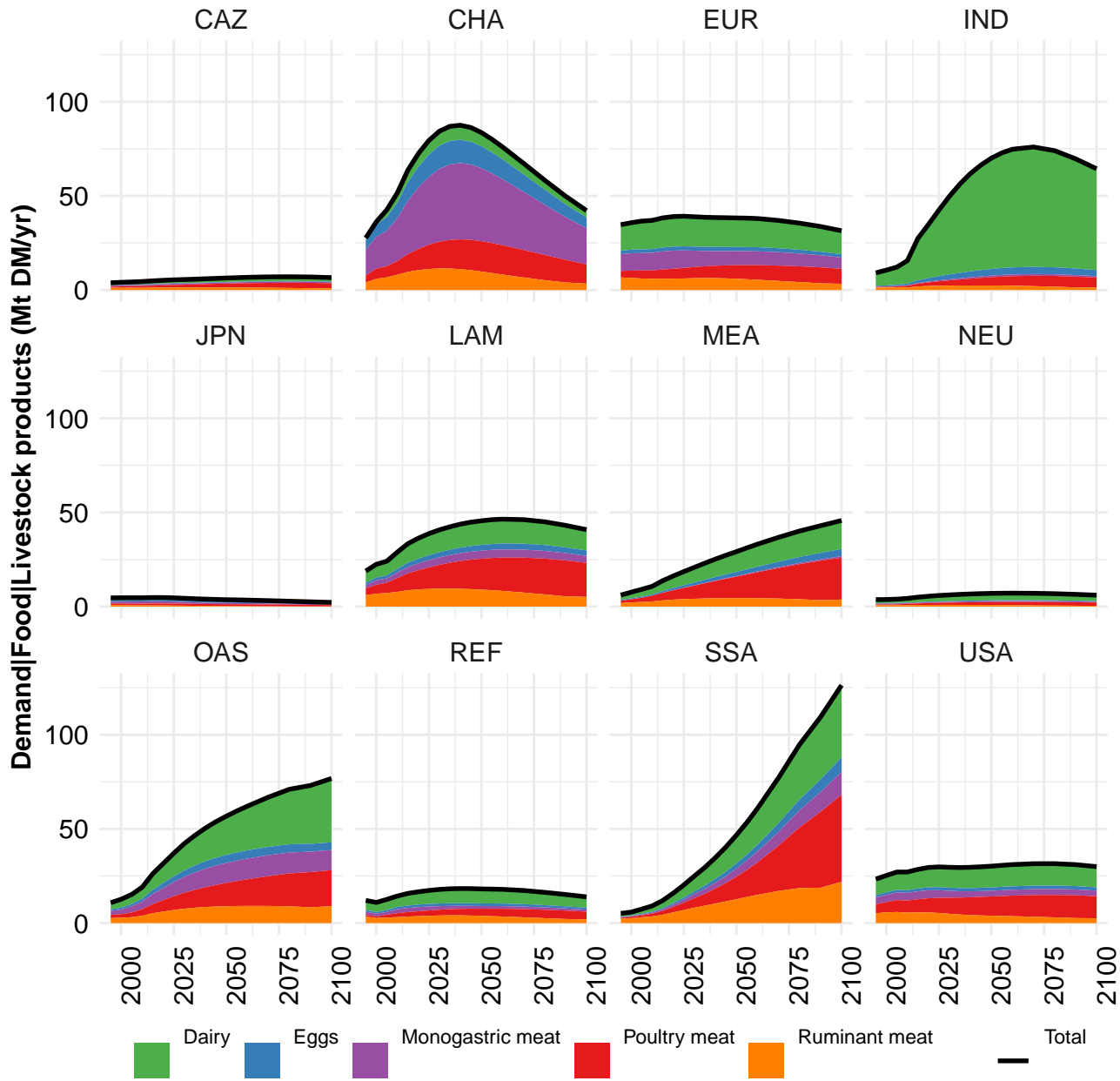
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.8	10.6	12.6	13.5	16.2	19.0	22.9	25.7	29.2	34.3
CAZ	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4
CHA	1.0	1.0	1.4	1.4	2.1	3.6	7.0	8.6	9.9	12.2
EUR	1.9	2.0	2.1	2.1	2.4	2.6	2.6	2.7	3.0	3.1
IND	0.3	0.4	0.5	0.6	0.7	0.9	1.1	1.2	1.5	1.8
JPN	1.4	1.7	2.0	2.1	2.3	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)

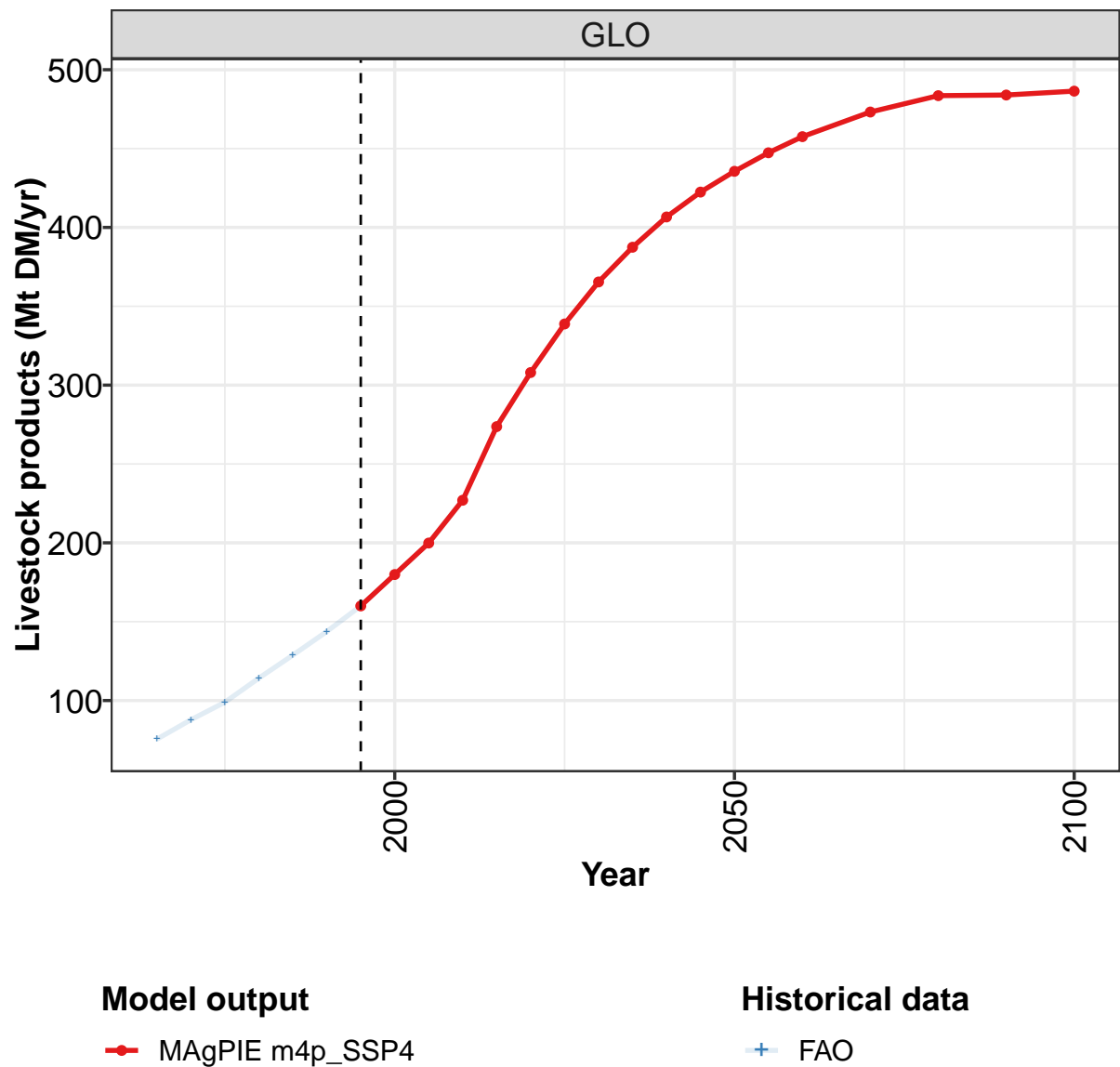








7.3 Livestock products





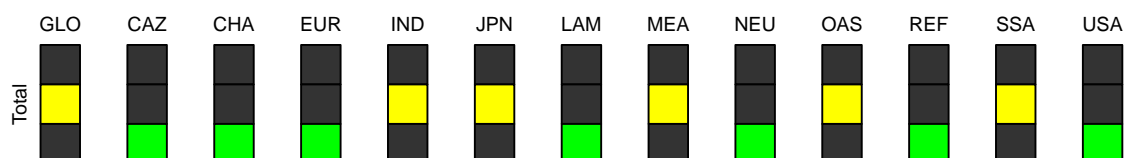
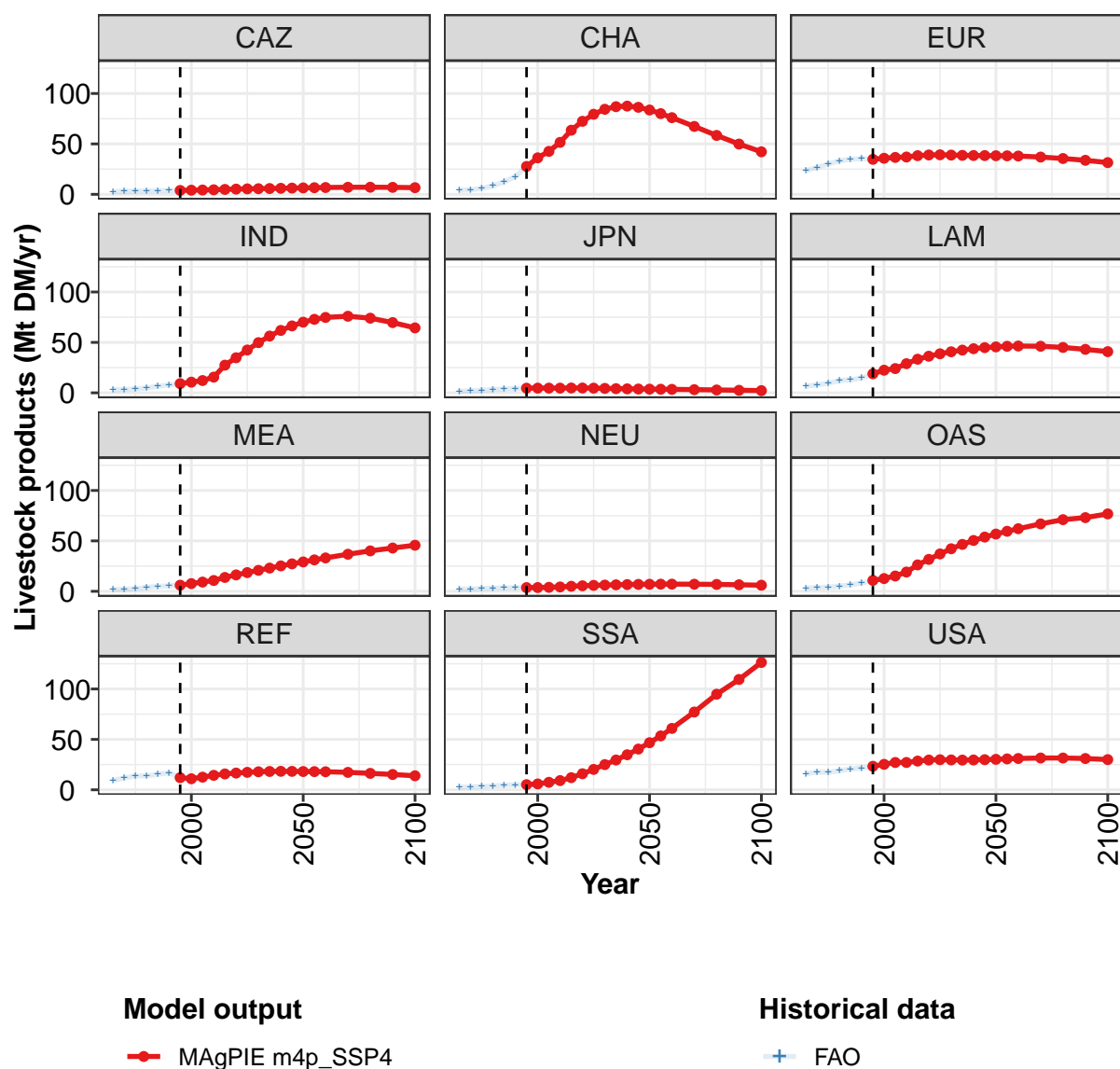


Figure 138: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	160	180	200	227	274	308	339	365	387	407	422
CAZ	4	4	4	5	5	5	5	6	6	6	6
CHA	28	36	43	52	64	72	79	84	87	87	86
EUR	35	36	37	37	38	39	39	39	39	38	38
IND	9	11	12	16	27	35	42	50	56	62	66
JPN	5	5	5	5	5	5	5	4	4	4	4
LAM	19	22	24	29	33	36	39	41	42	44	45
MEA	6	8	9	11	14	16	19	21	23	25	27
NEU	4	4	4	4	5	5	6	6	6	7	7
OAS	11	13	15	19	26	32	37	42	47	50	54
REF	12	11	13	14	16	17	17	18	18	18	18
SSA	5	6	7	9	12	16	20	25	30	35	40
USA	23	25	27	27	29	30	30	30	29	30	30

Table 413: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products (Mt DM/yr) [PART 1/2]

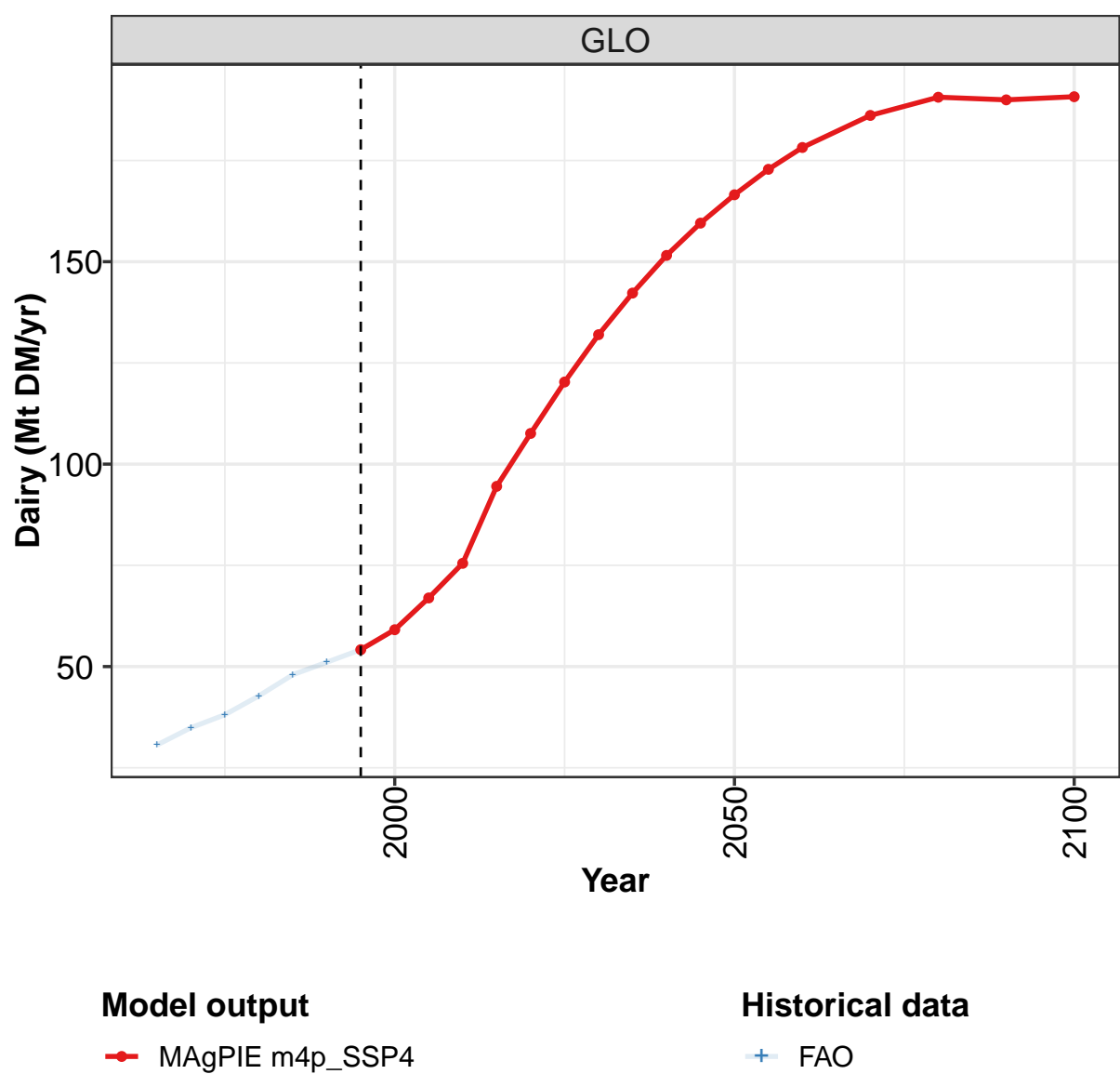
	2050	2055	2060	2070	2080	2090	2100
GLO	436	447	458	473	484	484	486
CAZ	6	7	7	7	7	7	7
CHA	84	80	76	67	58	50	42
EUR	38	38	38	37	36	34	31
IND	70	73	75	76	74	70	64
JPN	4	4	3	3	3	3	2
LAM	46	46	46	46	45	43	41
MEA	29	31	33	37	40	43	46
NEU	7	7	7	7	7	6	6
OAS	57	60	62	67	71	73	77
REF	18	18	18	17	16	15	14
SSA	47	53	61	77	95	109	126
USA	30	31	31	32	32	31	30

Table 414: MAgPIE m4p\_SSP4 — 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



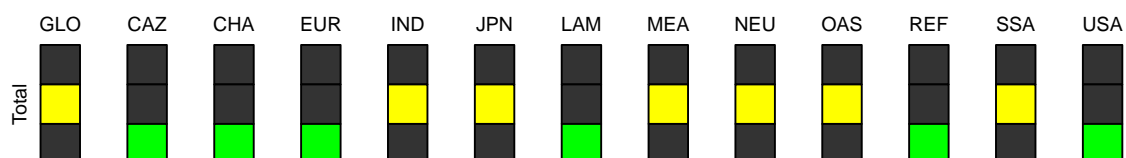
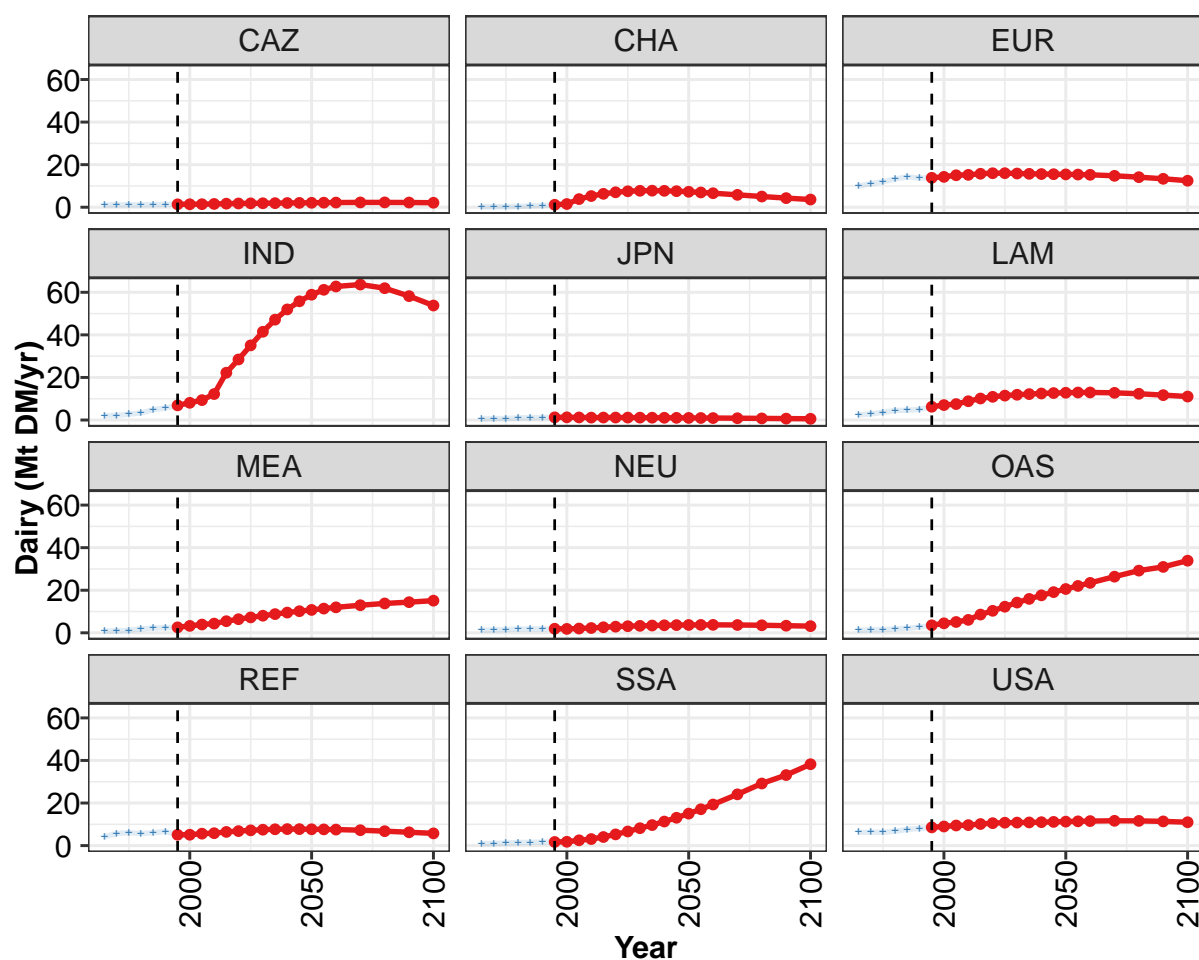


Figure 139: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	54	59	67	75	95	108	120	132	142	152	160
CAZ	1	1	1	2	2	2	2	2	2	2	2
CHA	1	2	4	5	6	7	8	8	8	8	8
EUR	14	14	15	15	16	16	16	16	16	16	16
IND	7	8	9	12	22	28	35	41	47	52	56
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	6	7	8	9	10	11	11	12	12	12	13
MEA	3	3	4	4	5	6	7	8	9	10	10
NEU	2	2	2	2	3	3	3	3	3	4	4
OAS	4	4	5	6	9	10	12	14	16	18	19
REF	5	5	6	6	6	7	7	7	8	8	8
SSA	2	2	3	3	4	5	7	8	10	11	13
USA	9	9	9	10	10	11	11	11	11	11	11

Table 416: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

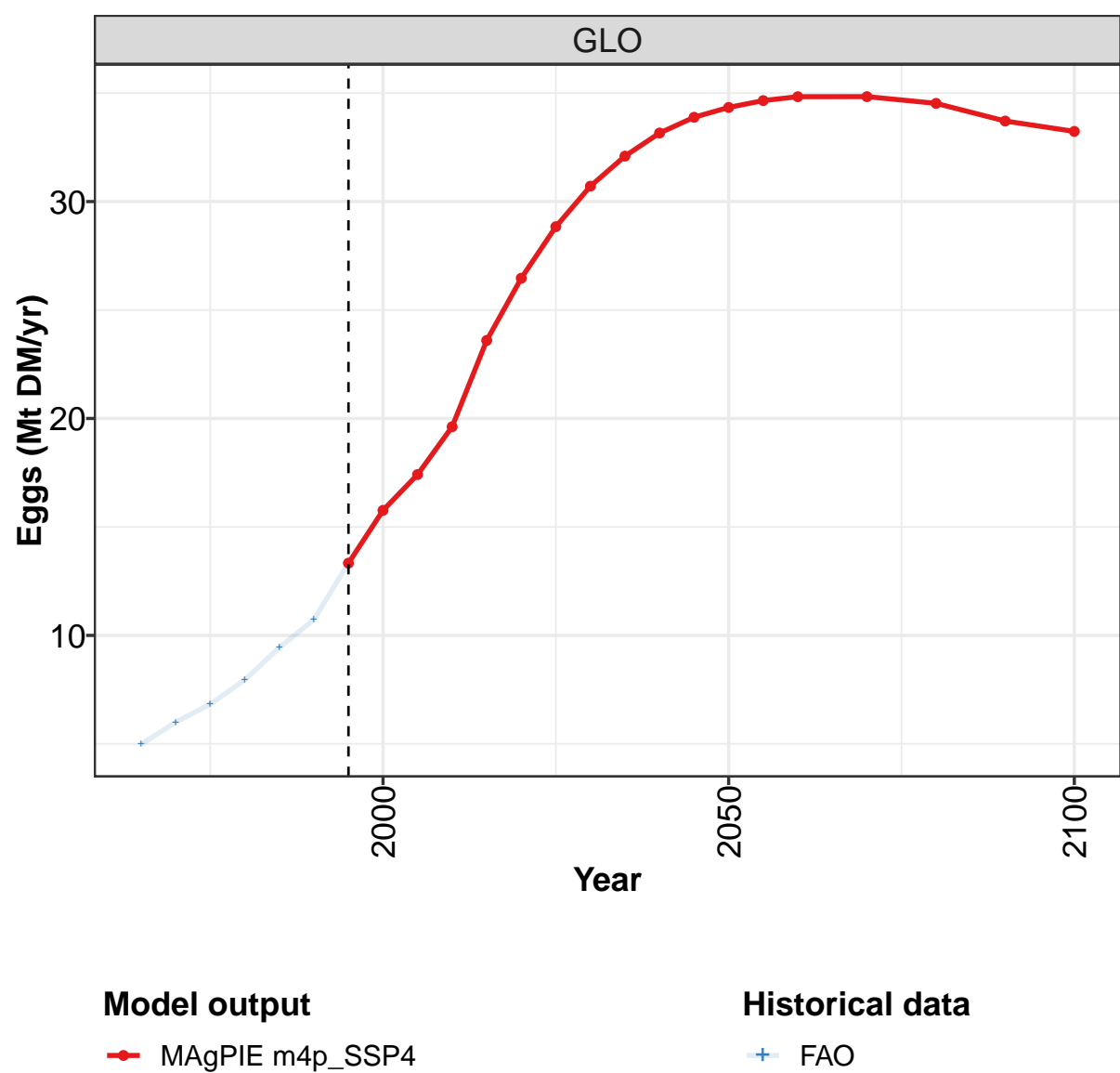
	2050	2055	2060	2070	2080	2090	2100
GLO	167	173	178	186	191	190	191
CAZ	2	2	2	2	2	2	2
CHA	7	7	7	6	5	4	4
EUR	15	15	15	15	14	13	12
IND	59	61	63	64	62	58	54
JPN	1	1	1	1	1	1	1
LAM	13	13	13	13	12	12	11
MEA	11	11	12	13	14	14	15
NEU	4	4	4	4	4	3	3
OAS	21	22	23	26	29	31	34
REF	8	8	8	7	7	6	6
SSA	15	17	19	24	29	33	38
USA	11	11	12	12	12	11	11

Table 417: MAgPIE m4p\_SSP4 — 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



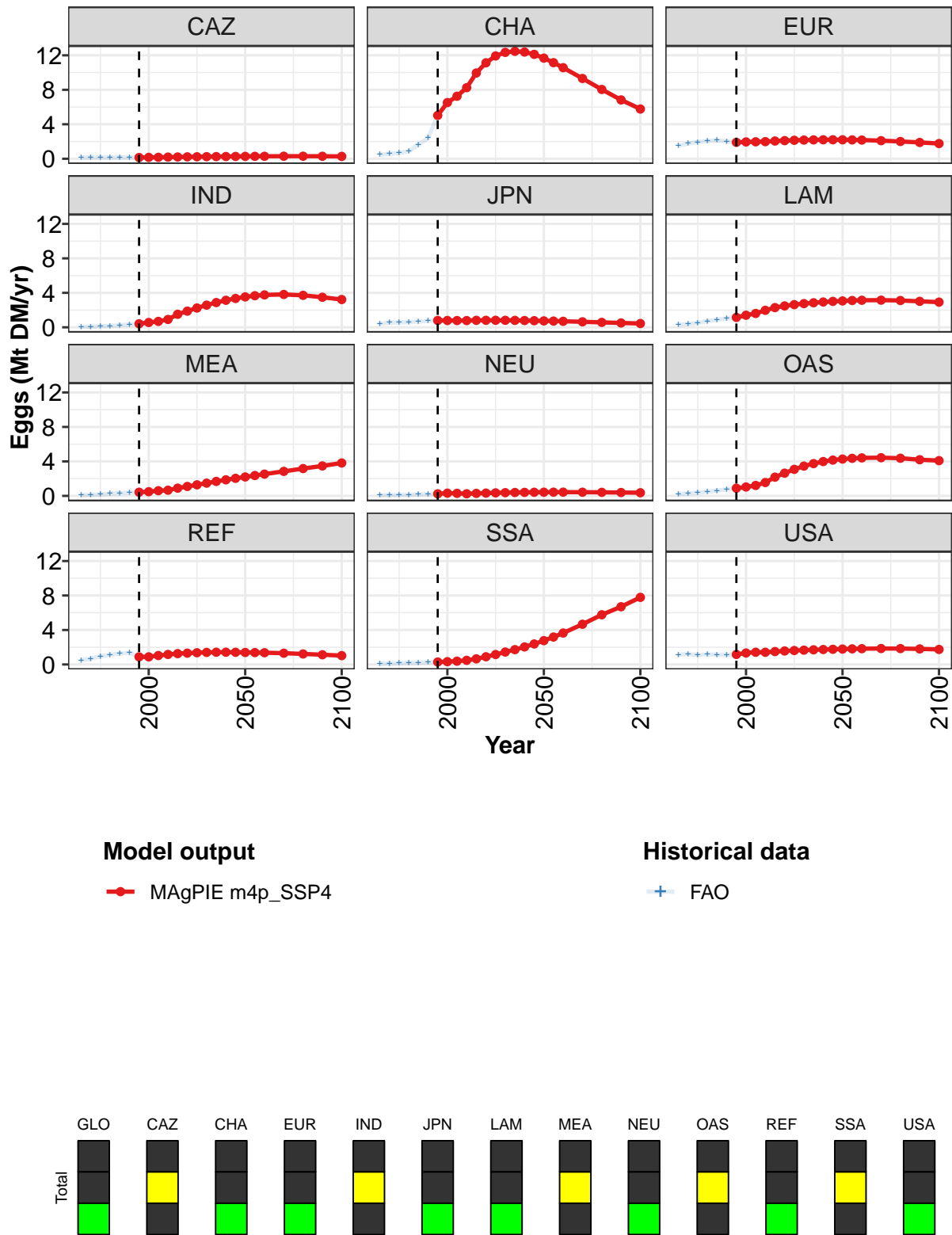


Figure 140: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.3	15.8	17.4	19.6	23.6	26.5	28.8	30.7	32.1	33.2	33.9
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
CHA	5.0	6.5	7.3	8.3	10.0	11.1	11.9	12.3	12.5	12.4	12.1
EUR	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2
IND	0.4	0.6	0.7	0.9	1.5	1.9	2.2	2.6	2.9	3.1	3.4
JPN	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
LAM	1.2	1.4	1.6	2.0	2.3	2.5	2.6	2.8	2.9	2.9	3.0
MEA	0.4	0.5	0.6	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.0
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	2.6	3.1	3.5	3.7	4.0	4.2
REF	0.9	0.9	1.0	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4
SSA	0.3	0.3	0.4	0.5	0.7	0.9	1.2	1.4	1.7	2.0	2.4
USA	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.7	1.7	1.8

Table 419: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	34.3	34.7	34.8	34.8	34.5	33.7	33.2
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	11.7	11.2	10.6	9.3	8.0	6.8	5.8
EUR	2.2	2.2	2.2	2.1	2.0	1.9	1.8
IND	3.5	3.7	3.8	3.8	3.7	3.5	3.2
JPN	0.7	0.7	0.7	0.6	0.6	0.5	0.4
LAM	3.1	3.1	3.1	3.2	3.1	3.0	2.9
MEA	2.2	2.4	2.5	2.8	3.2	3.5	3.8
NEU	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OAS	4.3	4.4	4.4	4.4	4.4	4.2	4.1
REF	1.4	1.4	1.4	1.3	1.2	1.1	1.0
SSA	2.8	3.2	3.6	4.7	5.8	6.7	7.8
USA	1.8	1.8	1.8	1.8	1.8	1.8	1.7

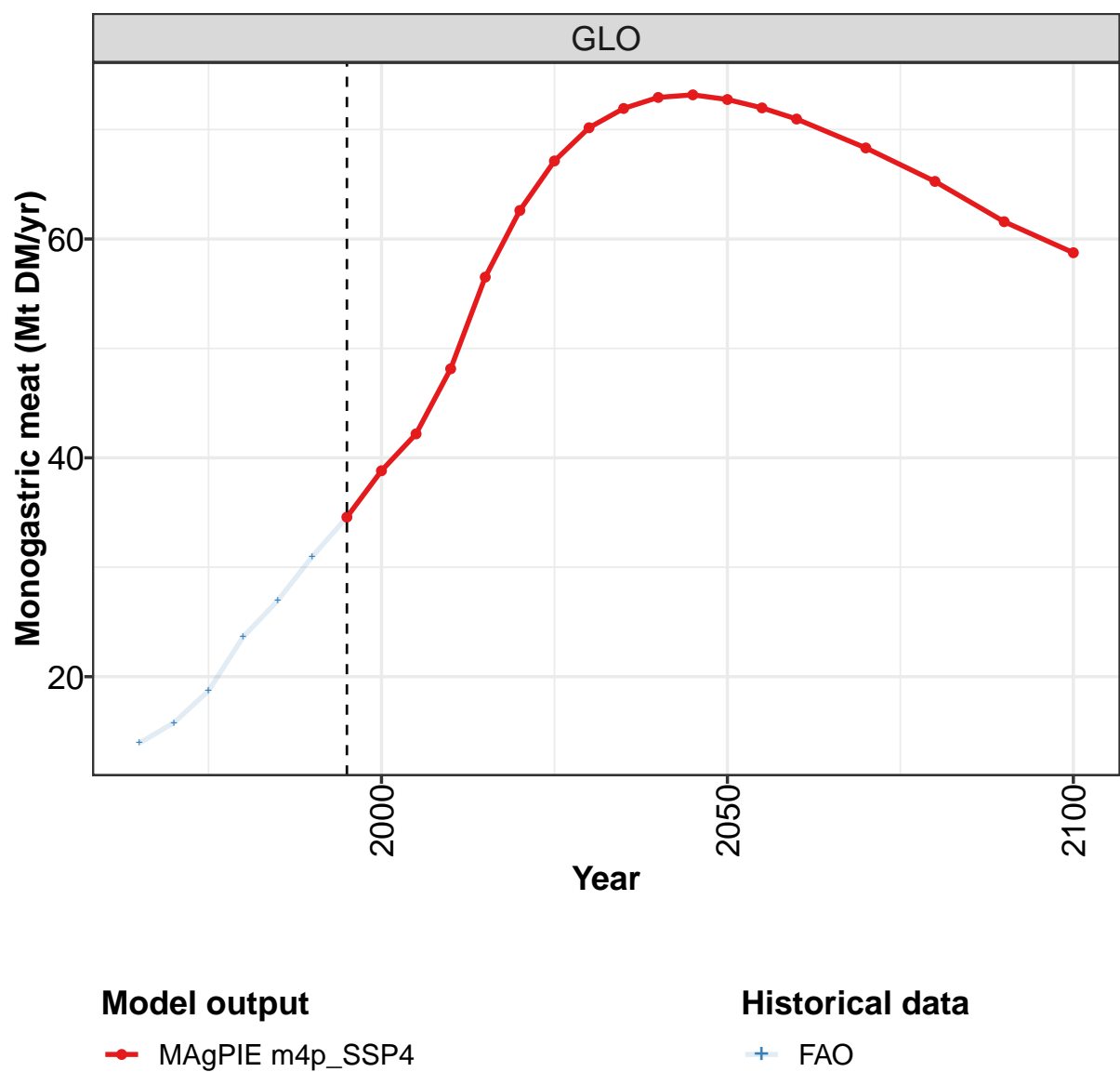
Table 420: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	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



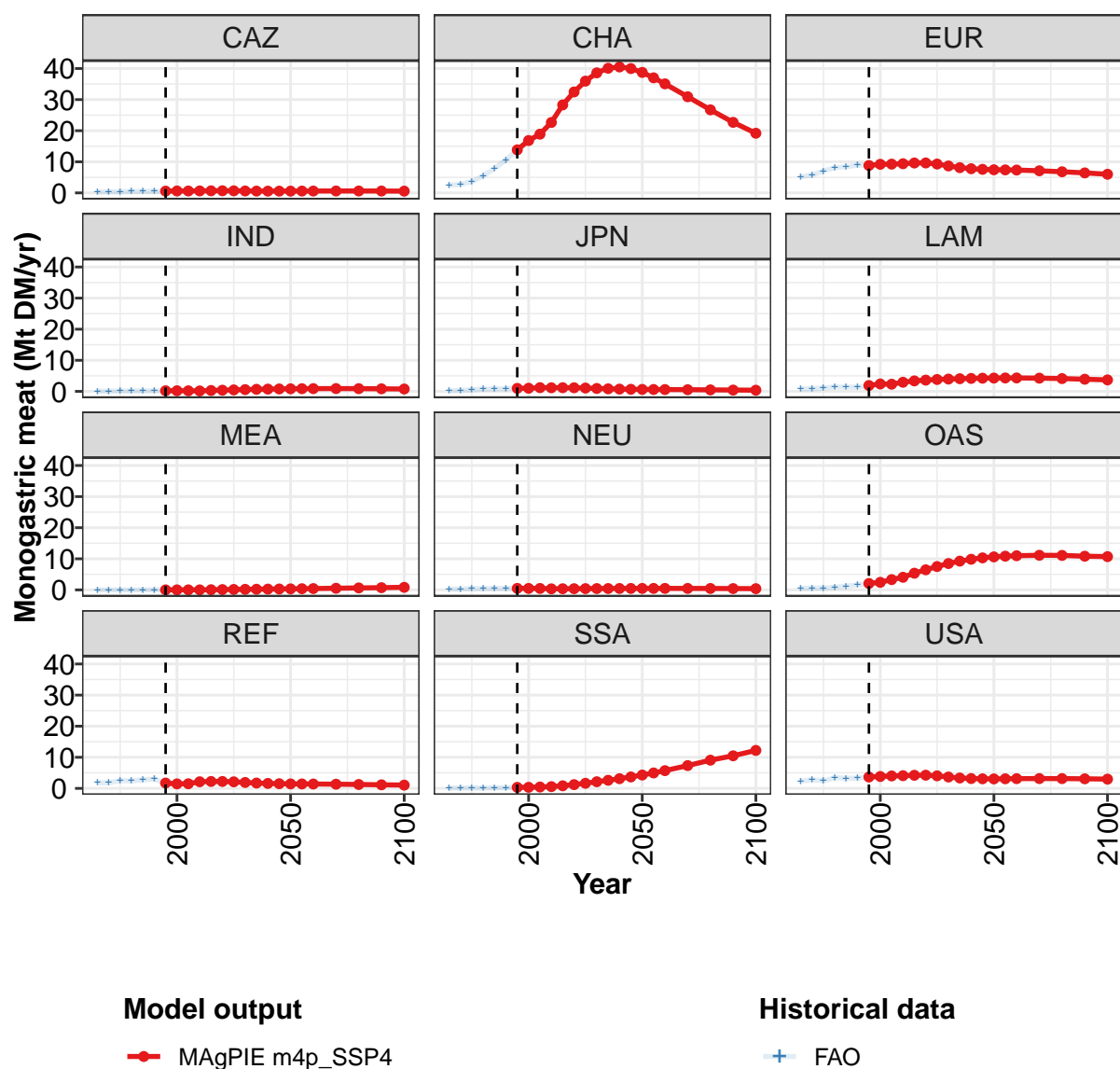


Figure 141: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.6	38.8	42.2	48.1	56.5	62.6	67.1	70.2	71.9	72.9	73.2
CAZ	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6
CHA	13.8	16.8	18.9	22.7	28.3	32.5	35.9	38.6	40.1	40.5	40.0
EUR	8.8	9.2	9.3	9.4	9.6	9.6	9.3	8.7	8.1	7.8	7.6
IND	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.8
JPN	1.0	1.0	1.2	1.2	1.2	1.2	1.1	0.9	0.8	0.7	0.7
LAM	1.9	2.4	2.3	2.9	3.4	3.6	3.8	4.0	4.1	4.2	4.2
MEA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3
NEU	0.5	0.5	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5
OAS	2.1	2.4	3.3	4.1	5.4	6.5	7.5	8.5	9.2	9.9	10.3
REF	1.7	1.5	1.5	2.1	2.2	2.2	2.1	1.9	1.7	1.6	1.5
SSA	0.3	0.3	0.4	0.6	0.8	1.2	1.6	2.1	2.6	3.1	3.7
USA	3.7	3.8	4.0	4.1	4.2	4.2	4.0	3.7	3.3	3.2	3.1

Table 422: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Monogastric meat (Mt DM/yr)  
[PART 1/2]

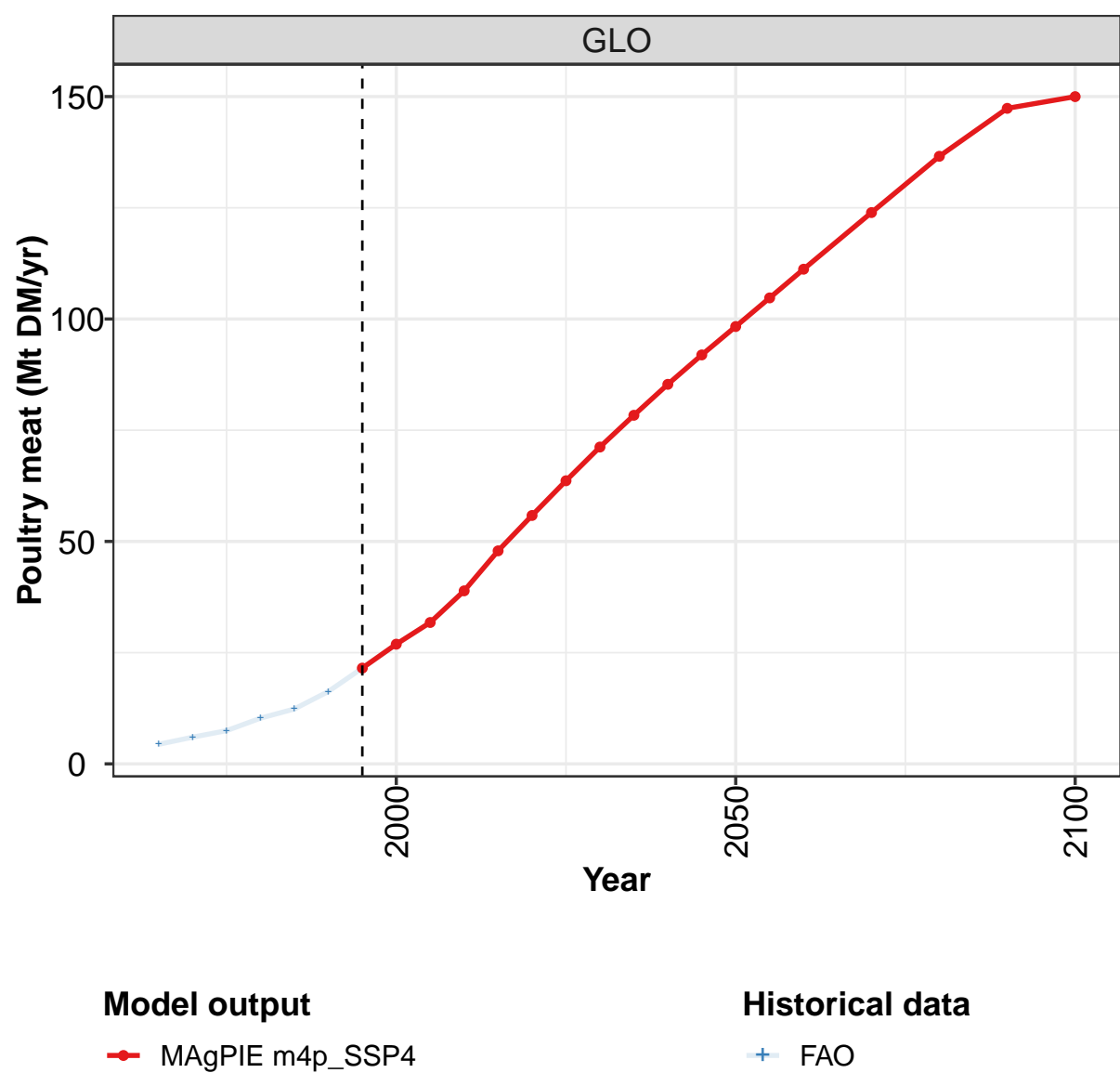
	2050	2055	2060	2070	2080	2090	2100
GLO	72.7	72.0	71.0	68.3	65.3	61.6	58.7
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	38.7	37.0	35.1	30.9	26.7	22.7	19.2
EUR	7.4	7.4	7.3	7.1	6.8	6.4	6.0
IND	0.8	0.9	0.9	0.9	0.9	0.8	0.8
JPN	0.6	0.6	0.6	0.5	0.5	0.4	0.4
LAM	4.3	4.3	4.3	4.3	4.1	3.9	3.7
MEA	0.3	0.4	0.4	0.5	0.6	0.7	0.8
NEU	0.5	0.5	0.5	0.5	0.5	0.4	0.4
OAS	10.6	10.8	11.0	11.1	11.1	10.8	10.7
REF	1.4	1.4	1.4	1.3	1.3	1.2	1.1
SSA	4.3	5.0	5.7	7.3	9.1	10.5	12.2
USA	3.1	3.1	3.1	3.2	3.1	3.1	3.0

Table 423: MAgPIE m4p\_SSP4 — 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



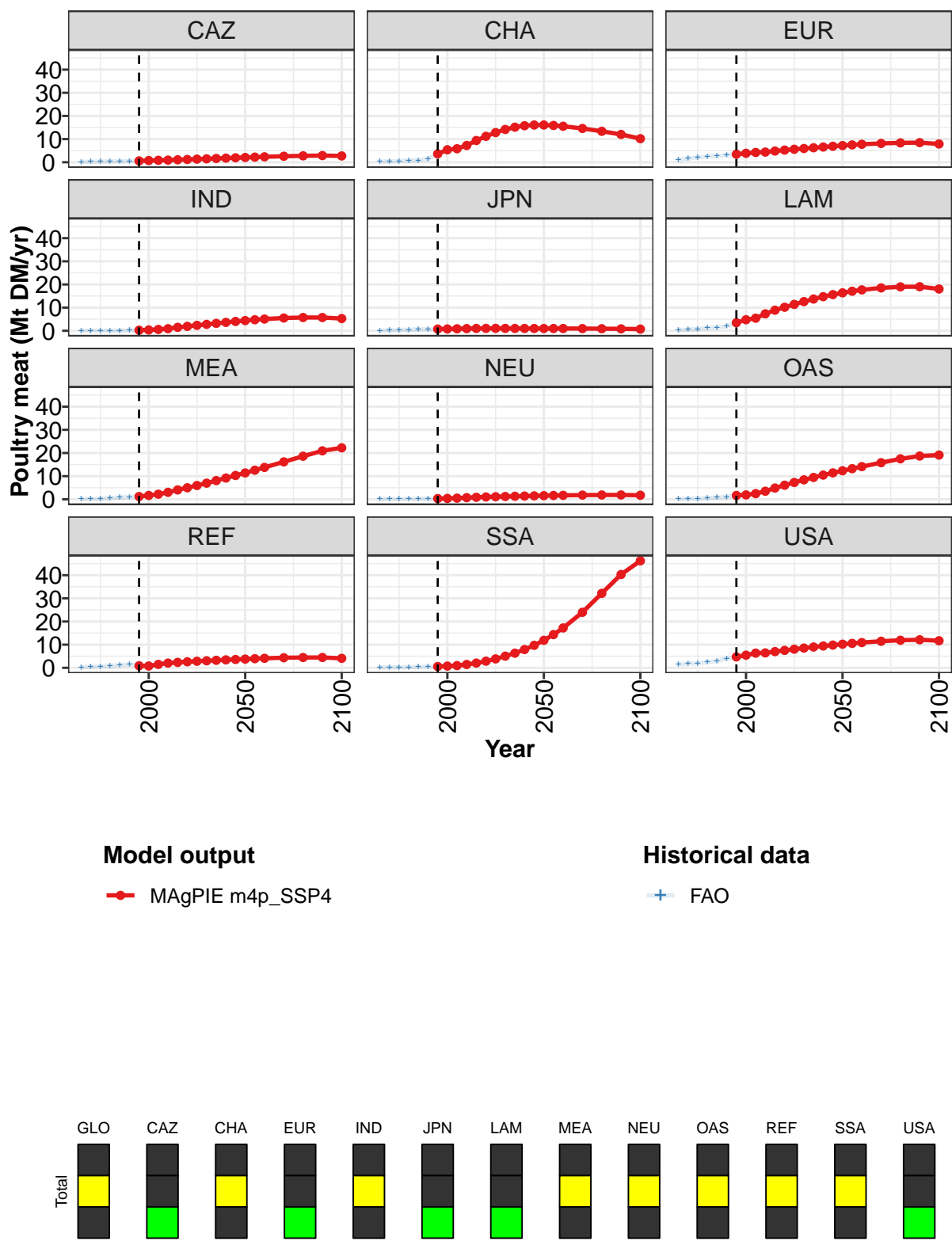


Figure 142: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	27	32	39	48	56	64	71	78	85	92
CAZ	1	1	1	1	1	1	1	1	2	2	2
CHA	4	5	6	7	9	11	13	14	15	16	16
EUR	3	4	4	4	5	5	6	6	6	7	7
IND	0	0	1	1	1	2	2	3	3	4	4
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	8	9	10
NEU	0	0	1	1	1	1	1	1	1	1	1
OAS	2	2	2	3	5	6	7	8	9	10	11
REF	1	1	1	2	2	3	3	3	3	3	4
SSA	1	1	1	1	2	3	4	5	6	8	10
USA	5	5	6	6	7	8	8	9	9	9	10

Table 425: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

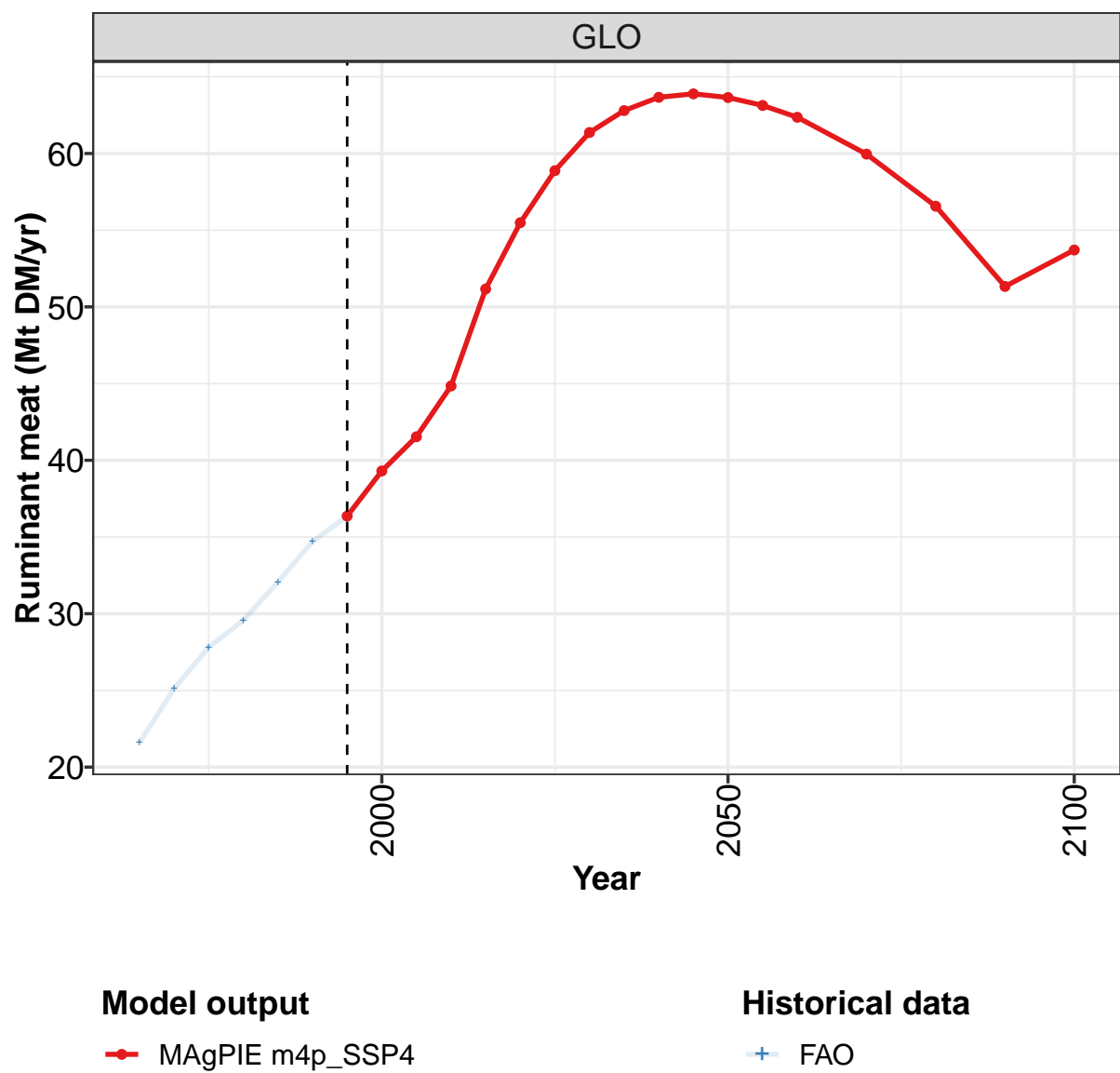
	2050	2055	2060	2070	2080	2090	2100
GLO	98	105	111	124	137	147	150
CAZ	2	2	2	3	3	3	3
CHA	16	16	16	15	13	12	10
EUR	7	7	8	8	8	8	8
IND	4	5	5	6	6	6	5
JPN	1	1	1	1	1	1	1
LAM	16	17	18	19	19	19	18
MEA	11	13	14	16	19	21	22
NEU	2	2	2	2	2	2	2
OAS	12	13	14	16	17	19	19
REF	4	4	4	4	4	4	4
SSA	12	14	17	24	32	40	46
USA	10	11	11	11	12	12	12

Table 426: MAgPIE m4p\_SSP4 — 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



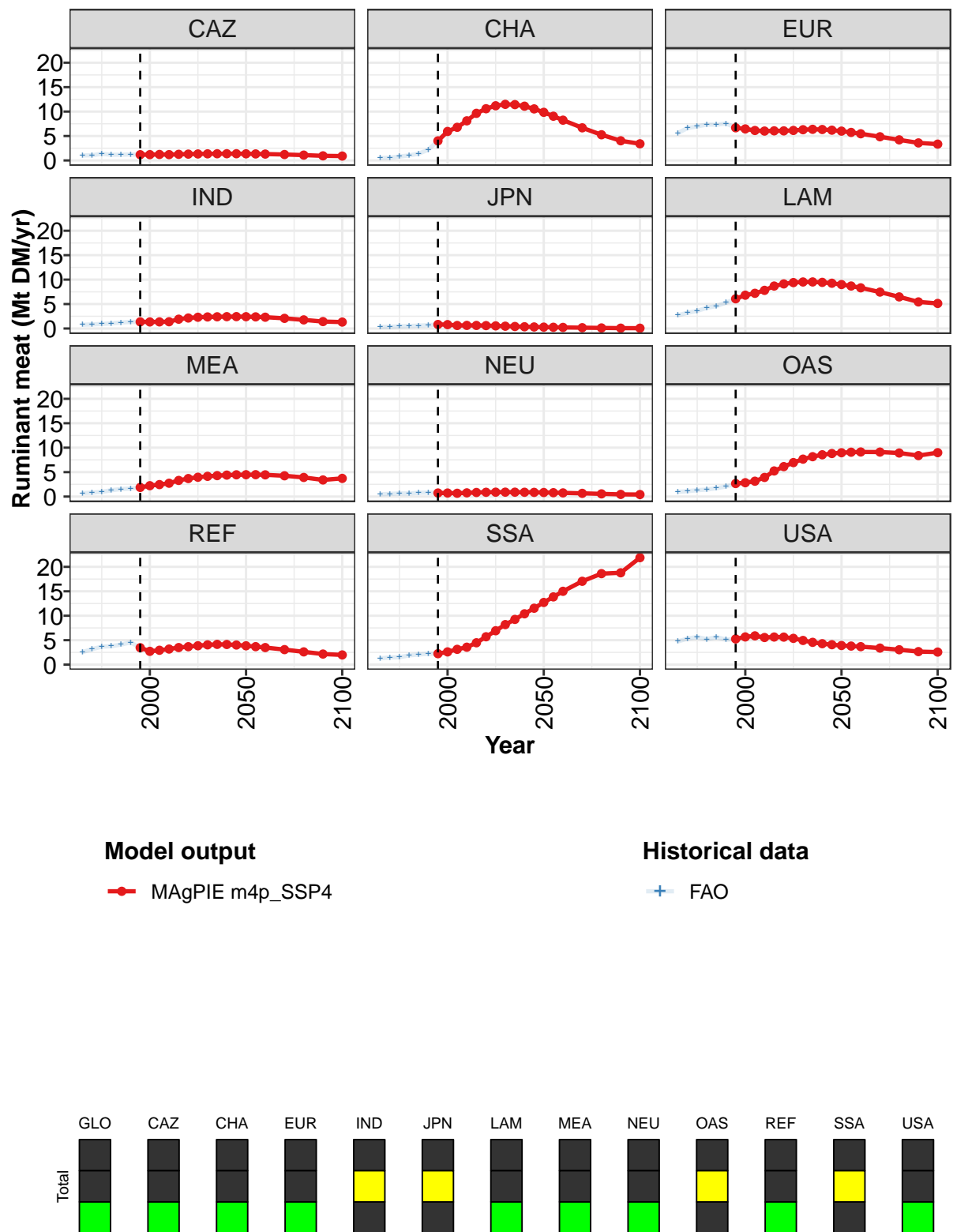


Figure 143: MAGPIE m4p\_SSP4 — Demand—Food—Livestock products—Ruminant meat (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	36.4	39.3	41.5	44.8	51.2	55.5	58.9	61.4	62.8	63.7	63.9
CAZ	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4
CHA	4.0	5.9	6.8	8.1	9.6	10.6	11.2	11.5	11.4	11.1	10.6
EUR	6.7	6.5	6.1	6.0	6.1	6.1	6.1	6.3	6.4	6.3	6.2
IND	1.4	1.3	1.4	1.4	1.9	2.1	2.3	2.4	2.4	2.4	2.4
JPN	0.8	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3
LAM	6.1	6.8	7.2	7.8	8.7	9.1	9.4	9.5	9.5	9.4	9.3
MEA	1.9	2.2	2.4	2.7	3.3	3.7	4.0	4.1	4.3	4.4	4.5
NEU	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9
OAS	2.7	2.8	3.1	3.9	5.2	6.1	7.0	7.7	8.2	8.5	8.8
REF	3.5	2.7	2.9	3.2	3.5	3.7	3.9	4.0	4.1	4.1	4.0
SSA	2.2	2.6	3.1	3.6	4.5	5.7	6.9	8.2	9.2	10.4	11.5
USA	5.3	5.7	5.9	5.5	5.6	5.6	5.4	4.9	4.6	4.3	4.1

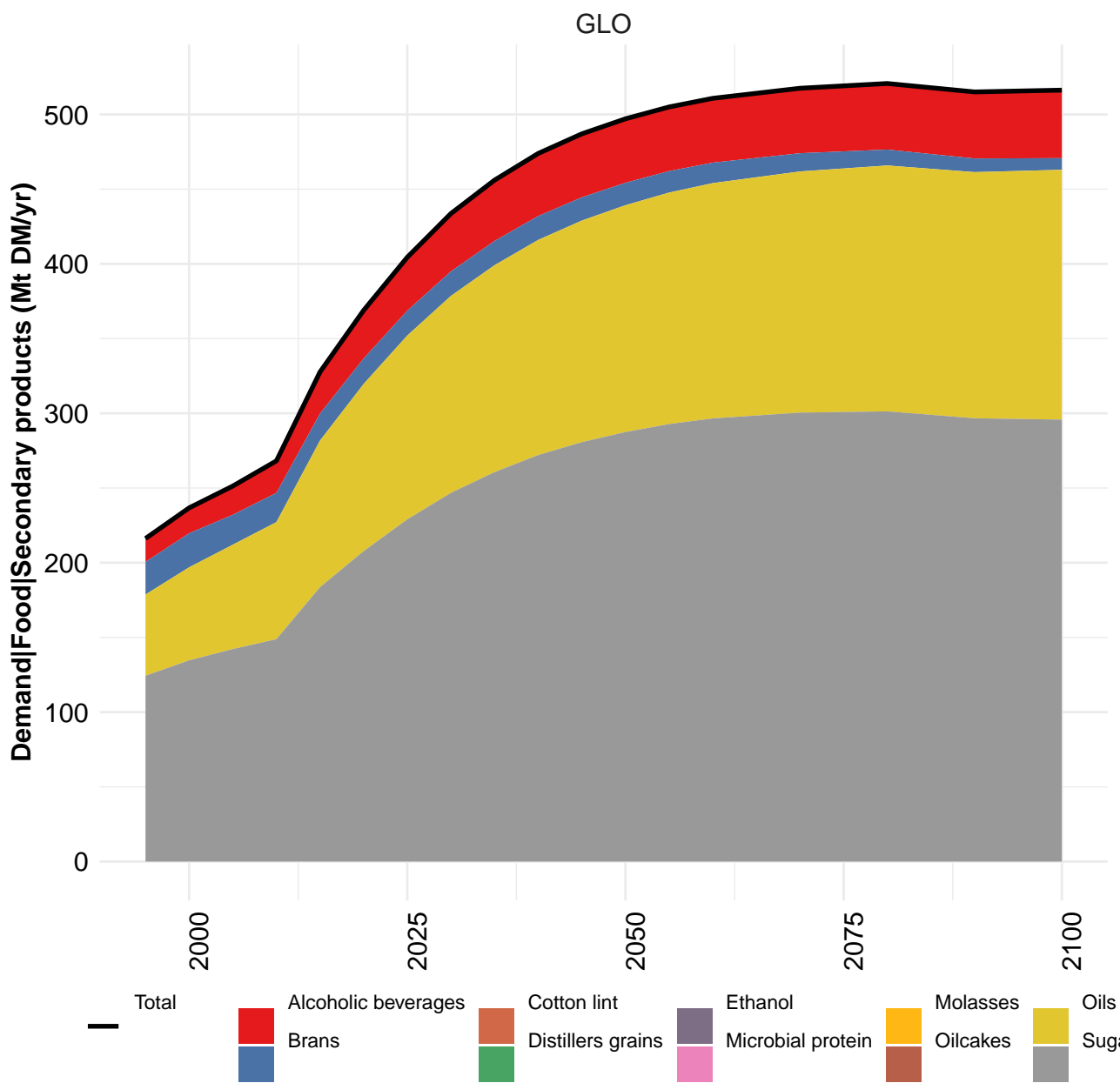
Table 428: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

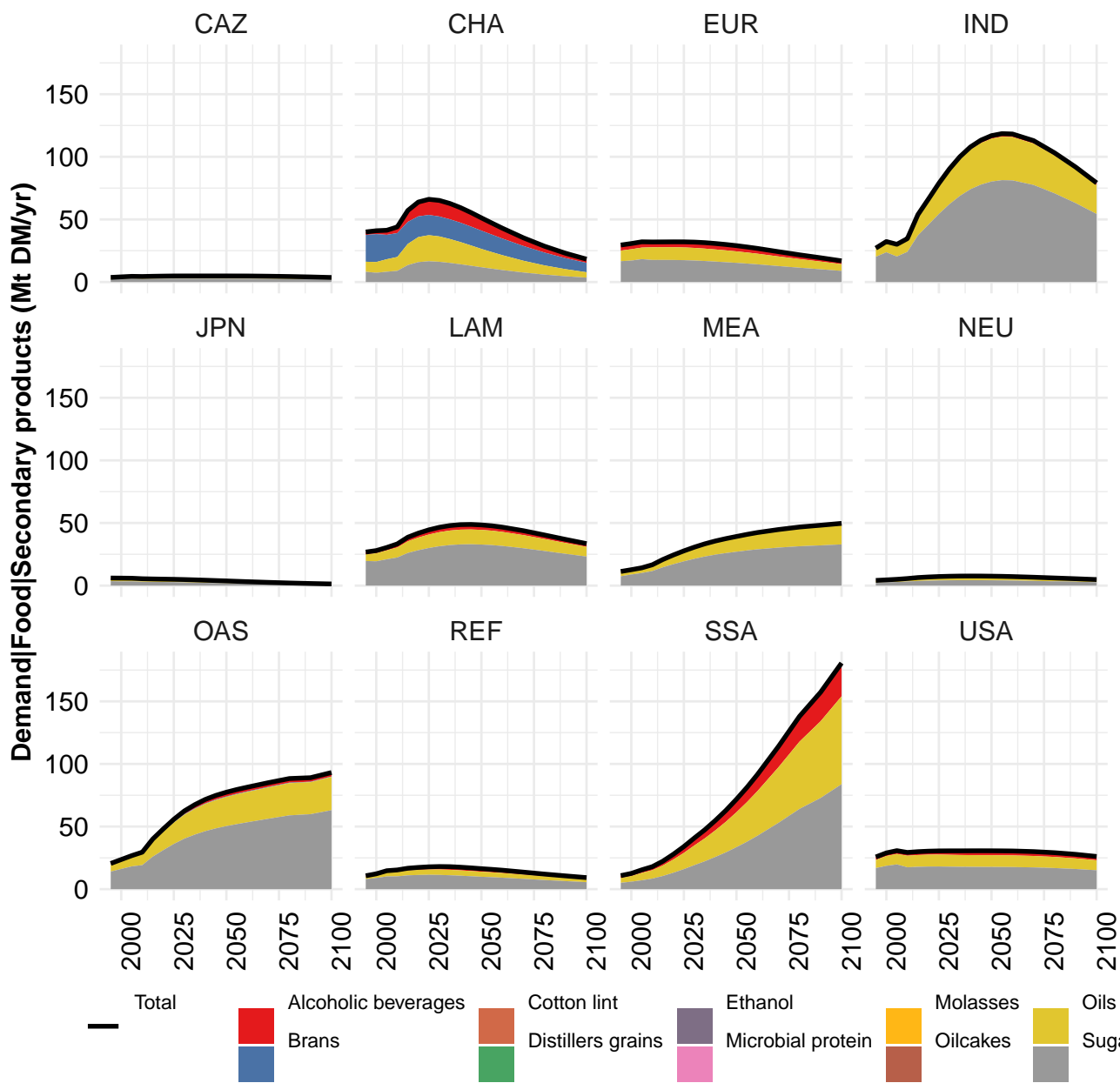
	2050	2055	2060	2070	2080	2090	2100
GLO	63.6	63.1	62.4	60.0	56.6	51.3	53.7
CAZ	1.4	1.3	1.3	1.2	1.1	0.9	0.9
CHA	9.8	9.1	8.2	6.7	5.3	4.0	3.4
EUR	6.0	5.7	5.5	4.8	4.2	3.6	3.3
IND	2.4	2.4	2.3	2.1	1.8	1.4	1.3
JPN	0.3	0.3	0.2	0.2	0.1	0.1	0.1
LAM	9.0	8.7	8.3	7.5	6.5	5.4	5.1
MEA	4.5	4.5	4.4	4.3	3.9	3.4	3.7
NEU	0.8	0.8	0.8	0.7	0.6	0.4	0.4
OAS	9.0	9.1	9.1	9.1	8.9	8.4	9.0
REF	3.9	3.7	3.5	3.1	2.6	2.2	2.0
SSA	12.7	13.9	15.0	17.0	18.6	18.8	21.9
USA	3.9	3.8	3.7	3.4	3.0	2.7	2.6

Table 429: MAgPIE m4p\_SSP4 — Demand—Food—Livestock products—Ruminant meat (Mt DM/yr) [PART 2/2]

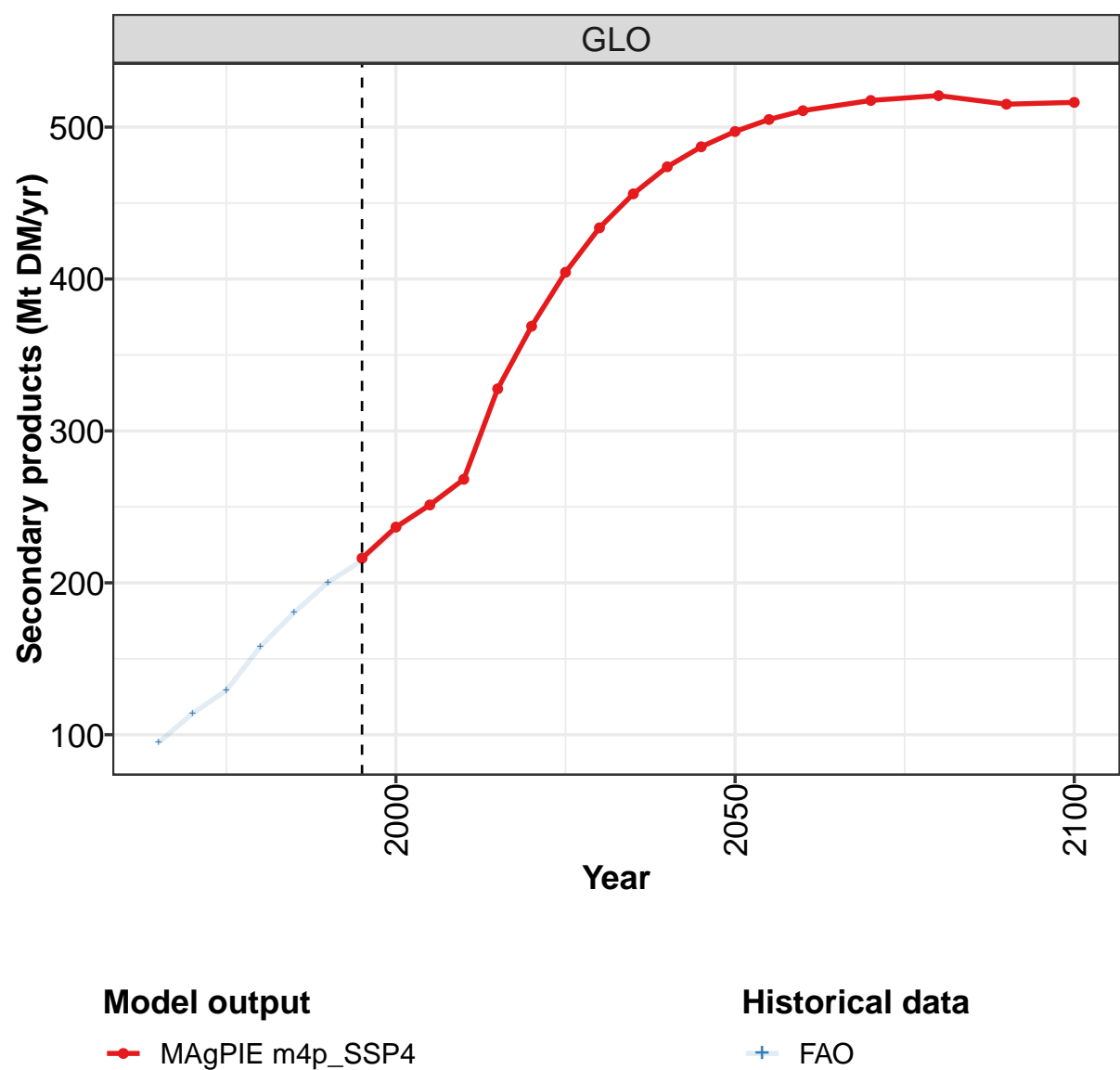
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	21.6	25.1	27.8	29.6	32.1	34.7	36.4	39.3	41.5	44.8
CAZ	1.0	1.1	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2
CHA	0.5	0.6	0.8	1.0	1.4	2.2	4.0	5.9	6.8	8.1
EUR	5.6	6.6	7.0	7.4	7.3	7.6	6.7	6.5	6.1	6.0
IND	0.8	0.8	0.9	1.0	1.2	1.3	1.4	1.3	1.4	1.4
JPN	0.3	0.3	0.4	0.5	0.6	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)





7.4 Secondary products



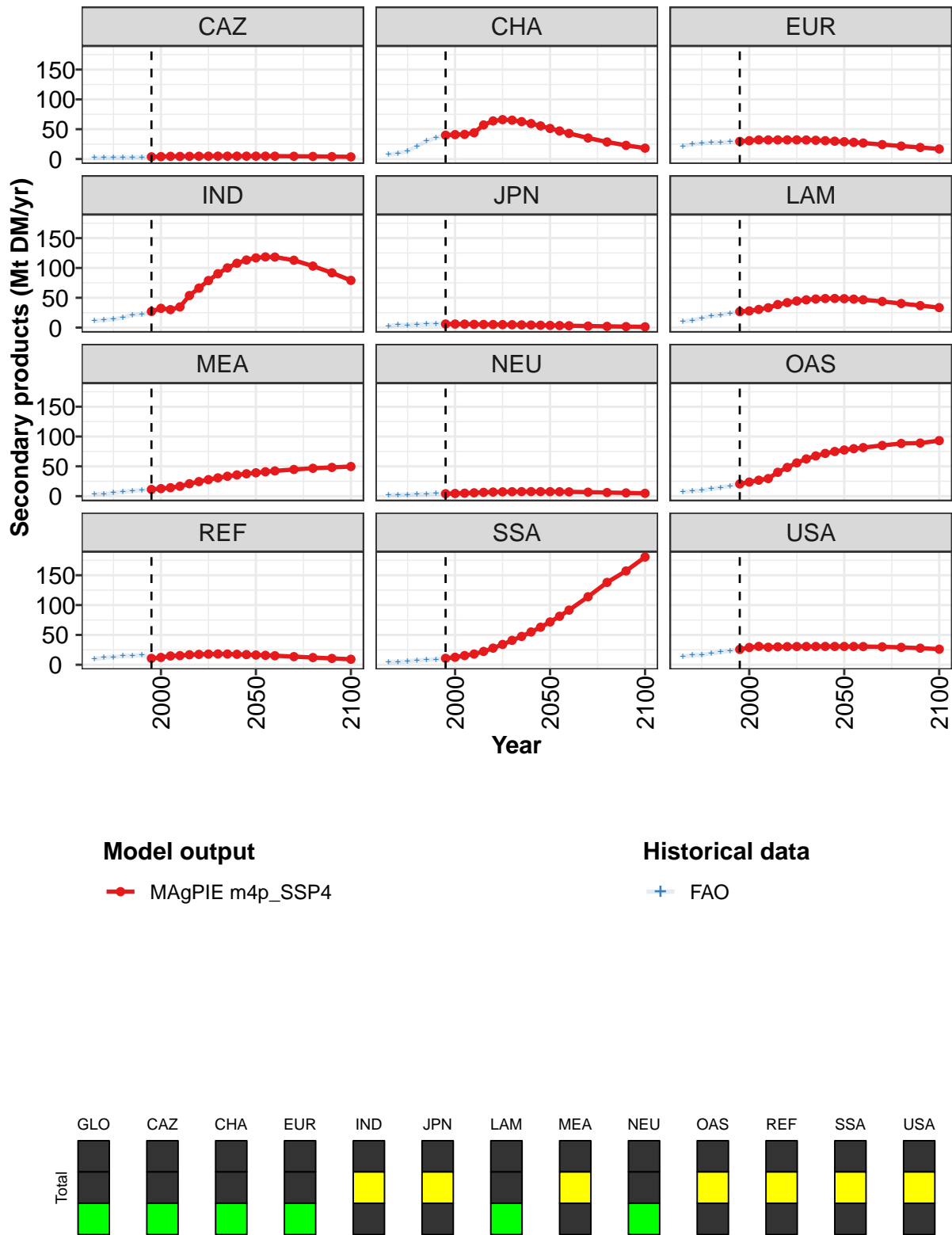


Figure 144: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	216	237	251	268	328	369	404	434	456	474	487
CAZ	4	4	5	4	5	5	5	5	5	5	5
CHA	40	41	41	44	57	64	66	65	63	59	56
EUR	30	31	32	32	32	32	32	32	31	31	30
IND	27	32	30	35	54	66	79	90	100	108	113
JPN	6	6	6	5	5	5	5	5	5	4	4
LAM	27	28	30	33	39	42	45	47	48	49	49
MEA	11	13	14	17	21	24	28	31	33	36	38
NEU	4	5	5	6	6	7	7	7	8	8	8
OAS	21	24	27	30	40	48	56	62	67	72	75
REF	11	12	15	15	17	17	18	18	18	18	17
SSA	11	13	15	18	22	28	34	41	47	55	63
USA	26	29	31	29	30	30	31	31	31	31	31

Table 431: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products (Mt DM/yr) [PART 1/2]

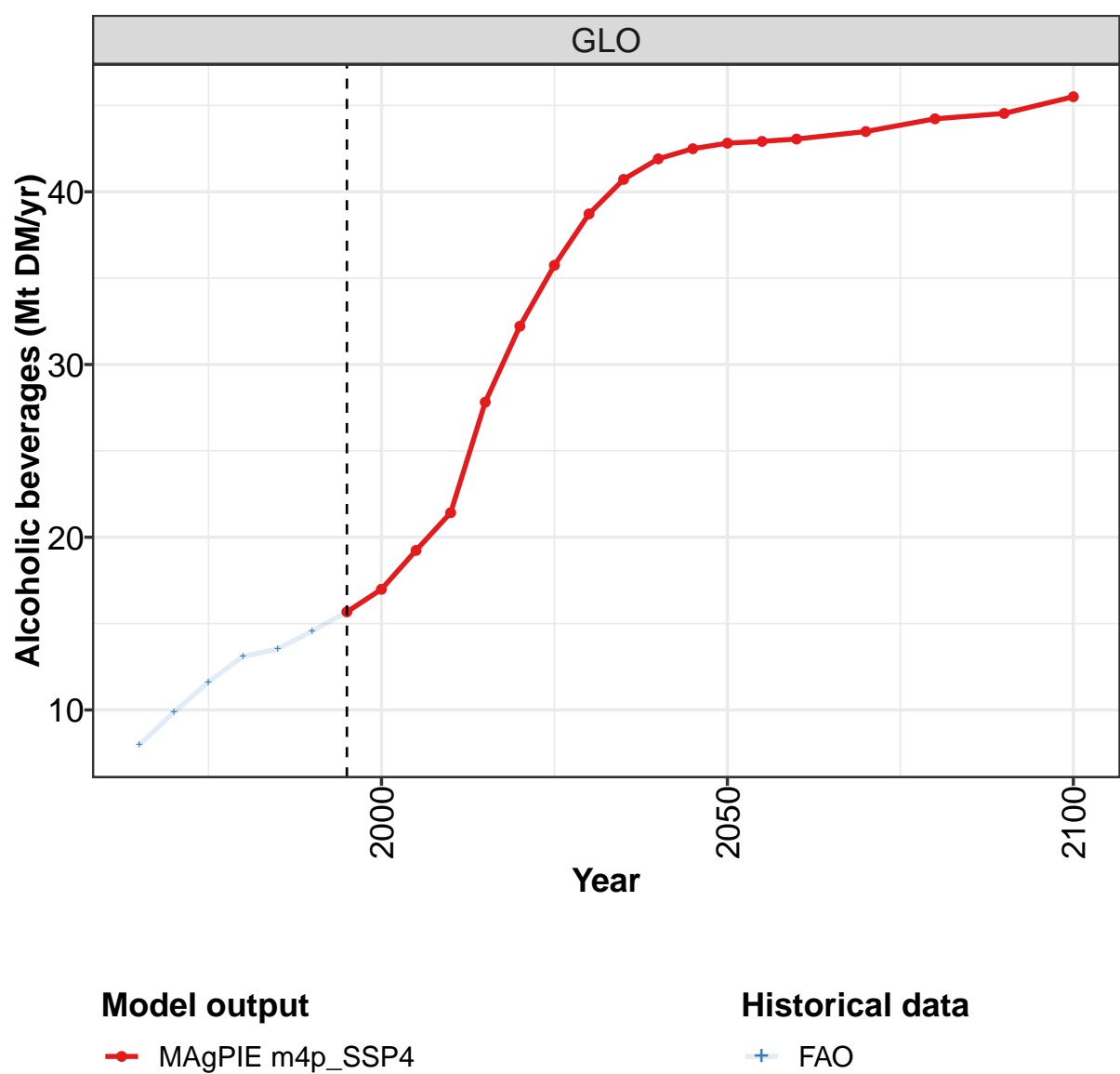
	2050	2055	2060	2070	2080	2090	2100
GLO	497	505	511	518	521	515	516
CAZ	5	5	5	5	4	4	4
CHA	51	47	43	35	29	23	18
EUR	29	28	27	24	22	19	17
IND	117	119	118	113	103	92	79
JPN	4	3	3	3	2	2	1
LAM	48	48	47	44	40	37	34
MEA	39	41	42	45	47	48	50
NEU	8	7	7	7	6	5	5
OAS	77	80	81	85	88	89	93
REF	16	16	15	14	12	11	9
SSA	72	81	92	114	138	157	181
USA	31	31	30	30	29	28	26

Table 432: MAgPIE m4p\_SSP4 — 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



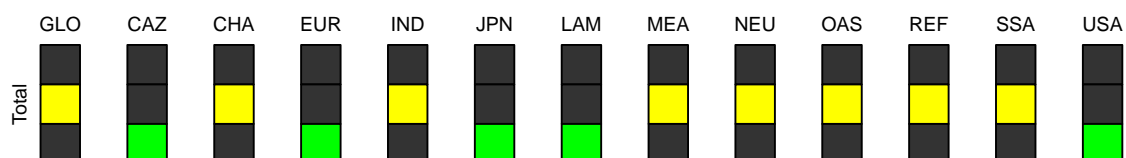
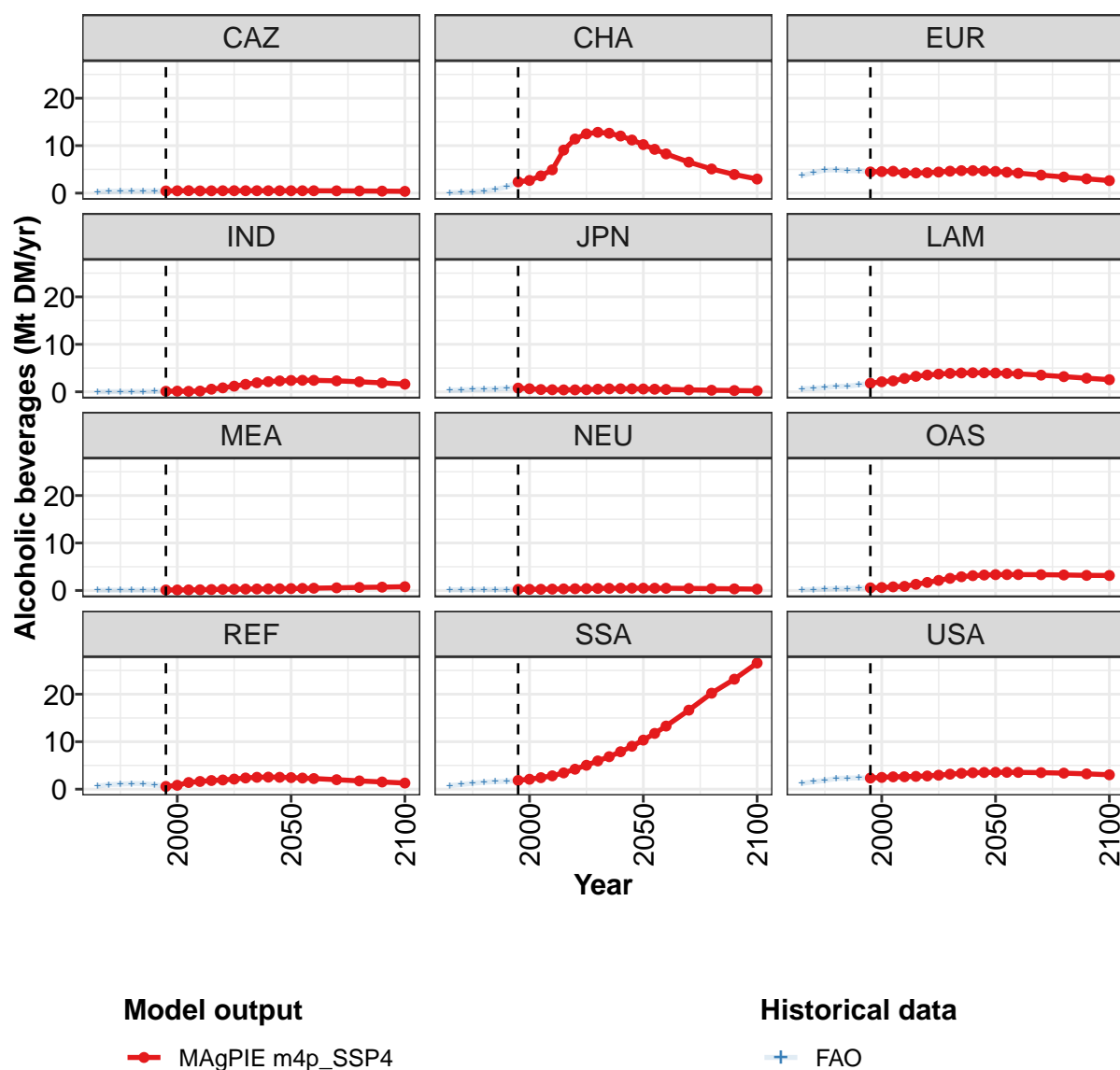


Figure 145: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products—Alcoholic beverages (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.7	17.0	19.2	21.4	27.8	32.2	35.7	38.7	40.7	41.9	42.5
CAZ	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CHA	2.4	2.7	3.6	4.9	9.1	11.4	12.5	12.8	12.6	12.0	11.2
EUR	4.5	4.5	4.6	4.2	4.2	4.3	4.4	4.6	4.7	4.7	4.7
IND	0.1	0.1	0.1	0.2	0.6	0.8	1.2	1.6	1.9	2.1	2.3
JPN	0.8	0.6	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6
LAM	1.8	2.1	2.3	2.8	3.3	3.5	3.7	3.9	4.0	4.0	4.0
MEA	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4
NEU	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5
OAS	0.6	0.6	0.8	0.9	1.3	1.7	2.1	2.6	2.9	3.1	3.3
REF	0.6	0.8	1.4	1.6	1.8	1.9	2.1	2.4	2.5	2.5	2.5
SSA	1.8	2.1	2.4	2.8	3.4	4.2	5.0	5.9	6.8	7.9	9.0
USA	2.3	2.5	2.6	2.6	2.7	2.8	2.9	3.2	3.3	3.5	3.5

Table 434: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products—Alcoholic beverages (Mt DM/yr)  
[PART 1/2]

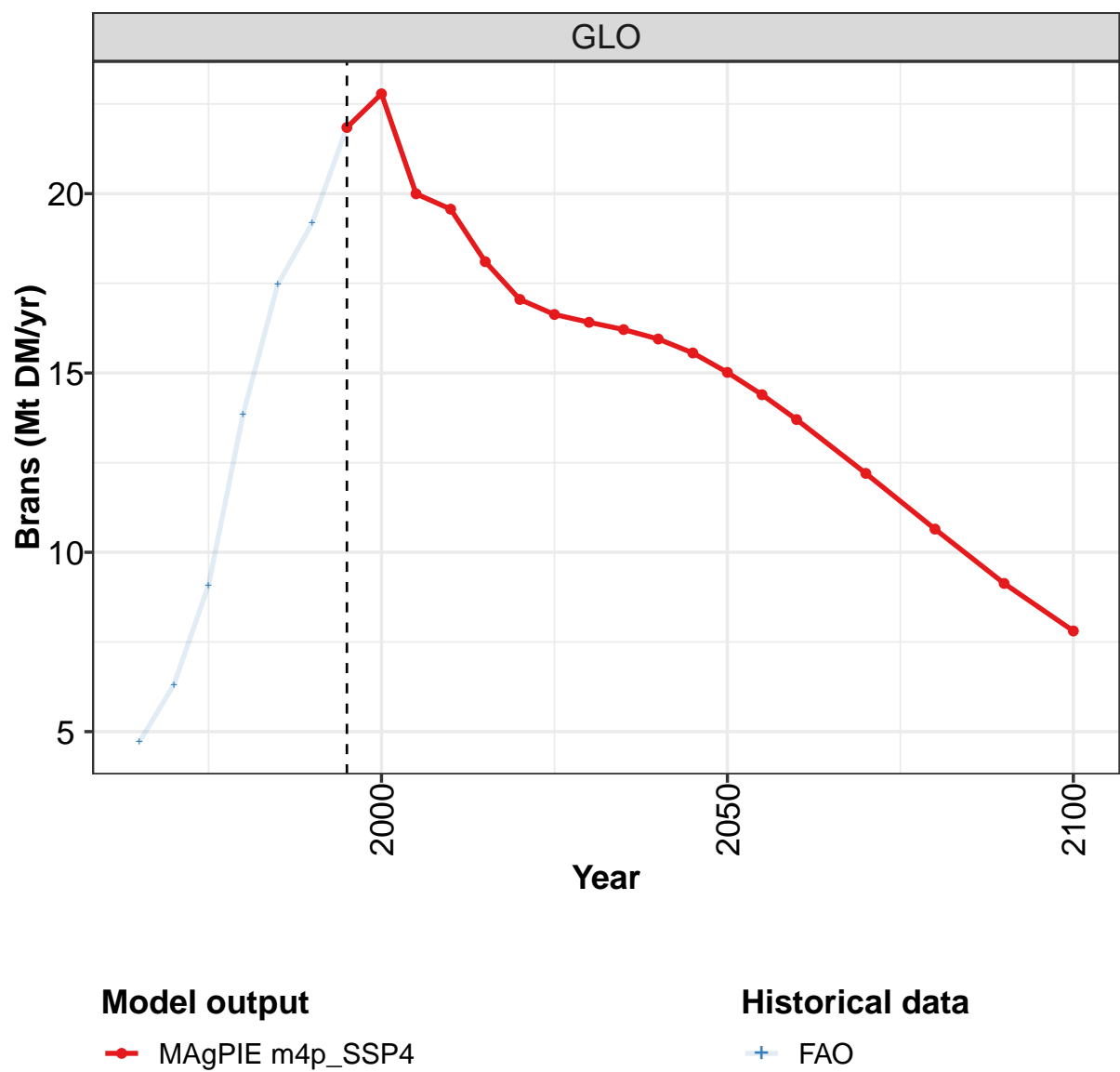
	2050	2055	2060	2070	2080	2090	2100
GLO	42.8	42.9	43.1	43.5	44.2	44.5	45.5
CAZ	0.5	0.5	0.5	0.5	0.5	0.4	0.4
CHA	10.2	9.2	8.3	6.5	5.1	3.9	3.0
EUR	4.6	4.4	4.2	3.8	3.4	3.0	2.6
IND	2.4	2.4	2.4	2.3	2.1	1.9	1.6
JPN	0.6	0.6	0.5	0.4	0.3	0.3	0.2
LAM	4.0	3.9	3.8	3.5	3.2	2.9	2.6
MEA	0.4	0.4	0.5	0.6	0.6	0.7	0.8
NEU	0.5	0.5	0.5	0.4	0.4	0.3	0.3
OAS	3.3	3.4	3.4	3.3	3.3	3.2	3.2
REF	2.4	2.3	2.2	2.0	1.7	1.5	1.3
SSA	10.3	11.7	13.3	16.6	20.2	23.2	26.6
USA	3.6	3.6	3.5	3.5	3.4	3.2	3.0

Table 435: MAgPIE m4p\_SSP4 — 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



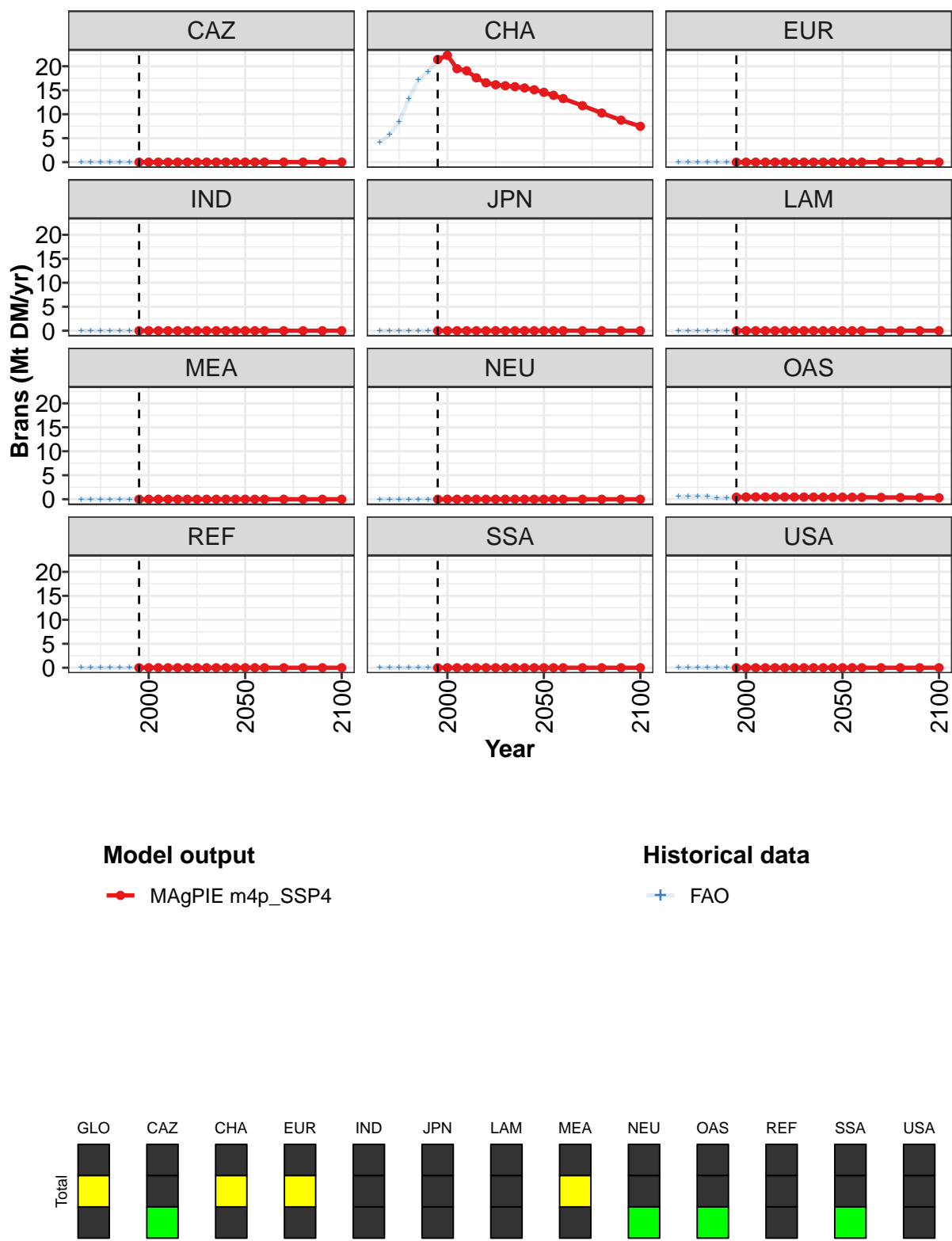


Figure 146: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21.8	22.8	20.0	19.6	18.1	17.1	16.6	16.4	16.2	15.9	15.6
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	21.4	22.3	19.5	19.1	17.6	16.6	16.1	15.9	15.7	15.5	15.1
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-SSP4 — Demand—Food—Secondary products—Brans (Mt DM/yr) [PART 1/2]

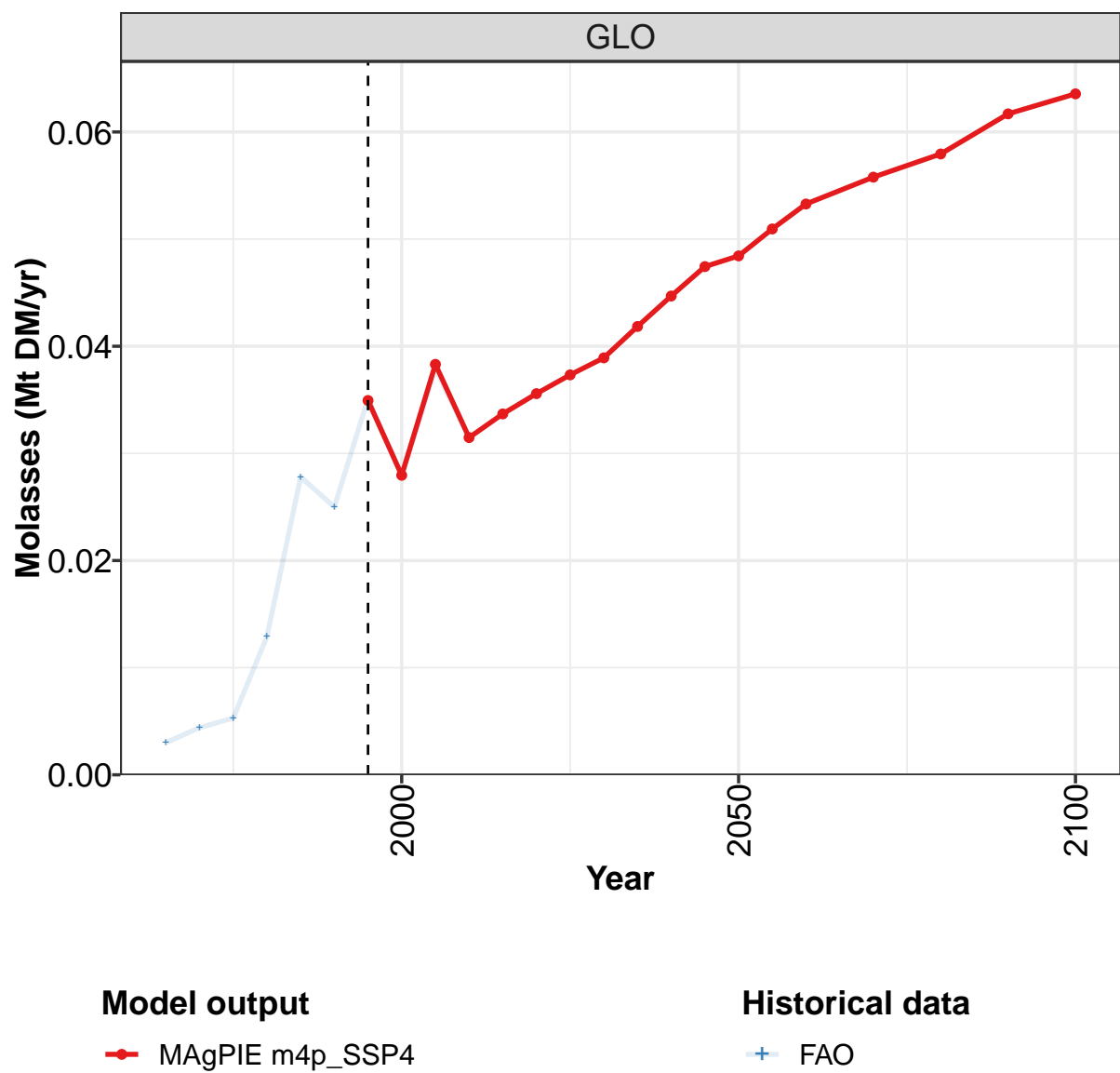
	2050	2055	2060	2070	2080	2090	2100
GLO	15.0	14.4	13.7	12.2	10.6	9.1	7.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	14.6	13.9	13.3	11.8	10.3	8.8	7.5
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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-SSP4 — 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



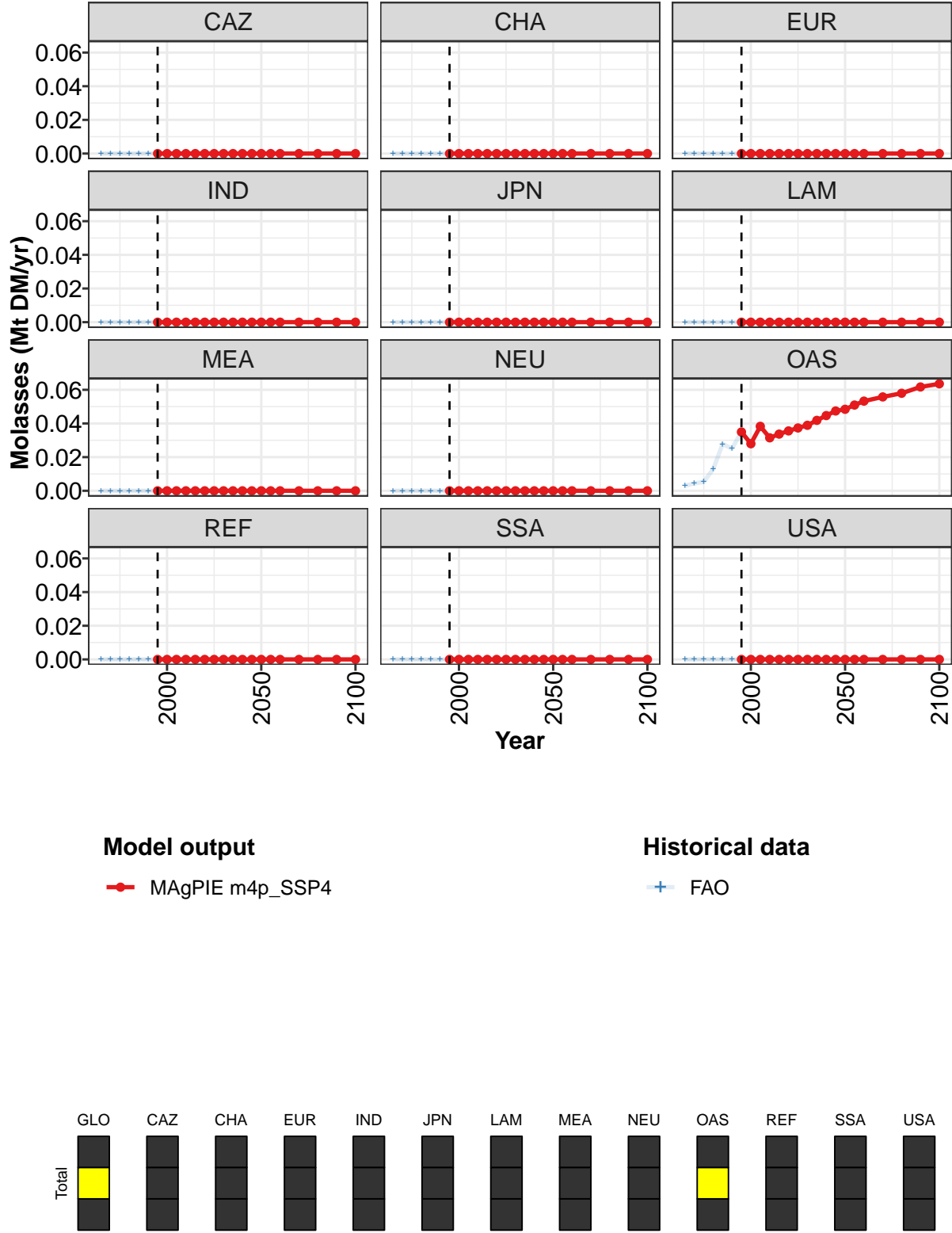


Figure 147: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0349	0.0280	0.0383	0.0315	0.0337	0.0356	0.0373	0.0389	0.0418	0.0447	0.0474
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	0.0356	0.0373	0.0389	0.0418	0.0447	0.0474
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\_SSP4 — Demand—Food—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

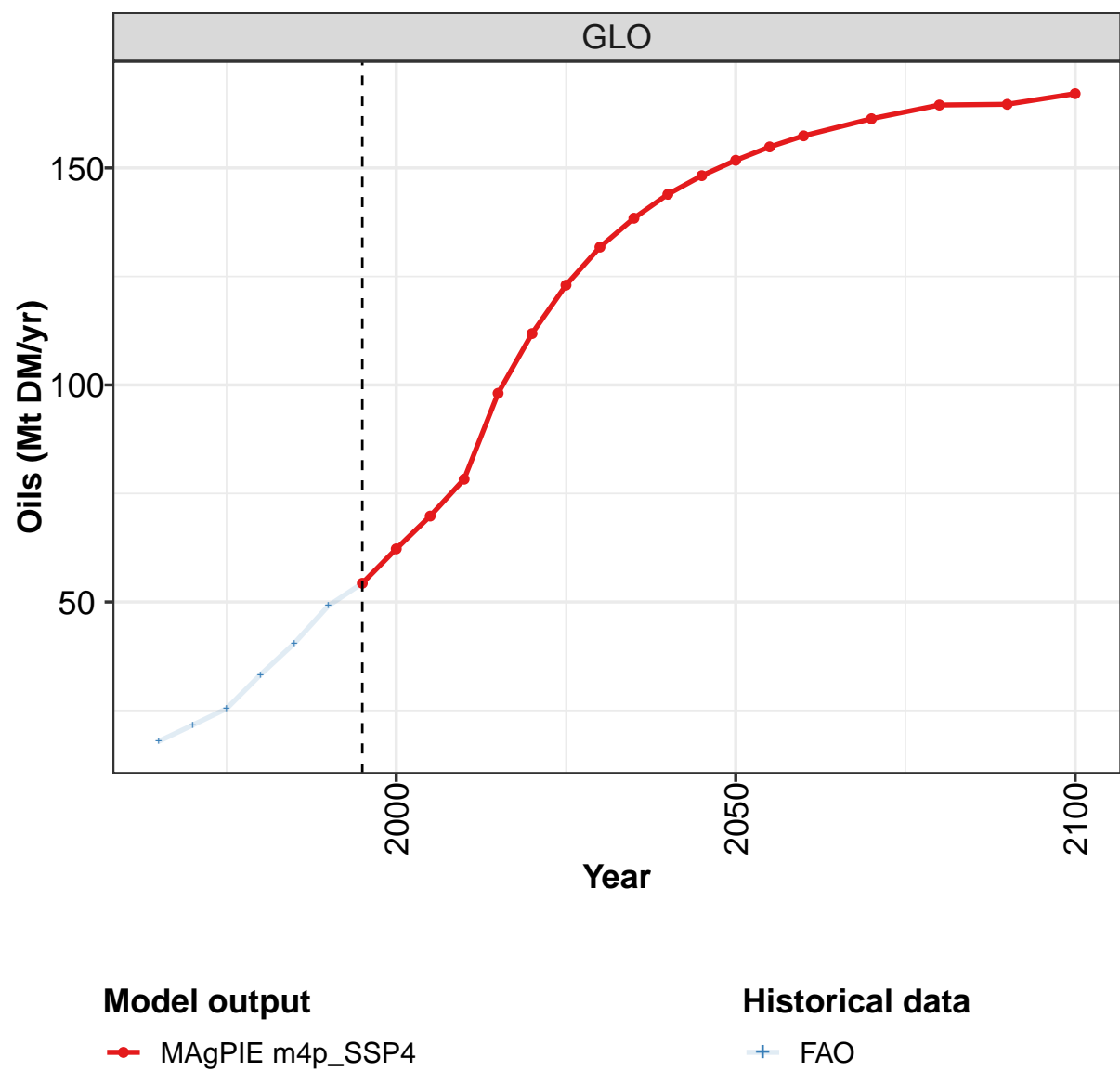
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0484	0.0509	0.0533	0.0558	0.0579	0.0617	0.0636
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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	0.0484	0.0509	0.0533	0.0558	0.0579	0.0617	0.0636
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\_SSP4 — 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





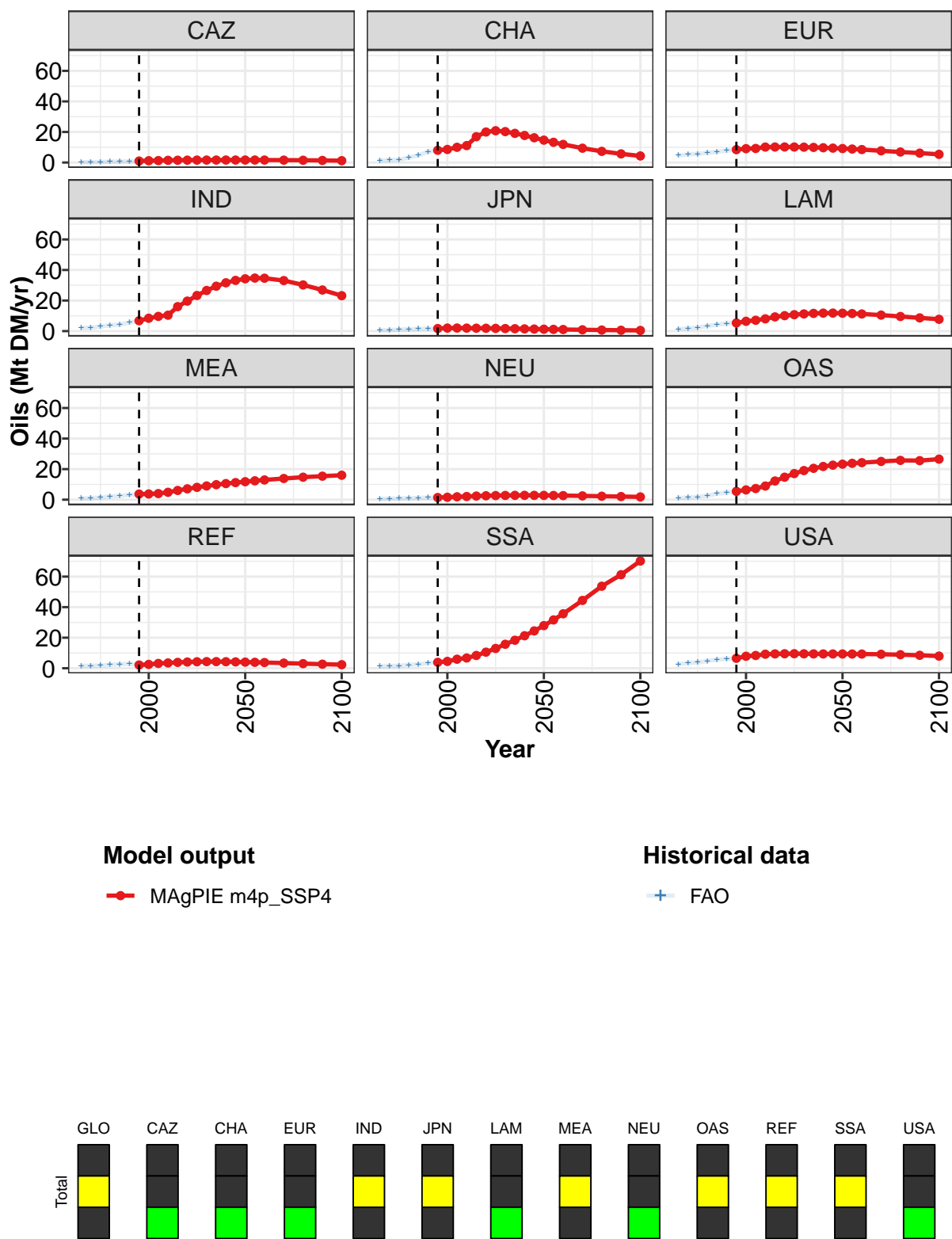


Figure 148: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	54	62	70	78	98	112	123	132	138	144	148
CAZ	1	1	1	1	2	2	2	2	2	2	2
CHA	8	9	10	11	17	20	21	20	19	18	16
EUR	8	9	9	10	10	10	10	10	10	10	9
IND	7	8	10	10	16	20	23	27	29	32	33
JPN	2	2	2	2	2	2	2	2	2	1	1
LAM	5	6	7	8	9	10	11	11	12	12	12
MEA	4	4	4	5	6	7	8	9	10	11	11
NEU	1	2	2	2	2	3	3	3	3	3	3
OAS	5	6	7	9	12	15	17	19	21	22	23
REF	2	3	3	3	4	4	4	4	4	4	4
SSA	4	5	6	7	8	11	13	16	18	21	24
USA	7	8	8	9	9	10	10	9	9	9	9

Table 443: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products—Oils (Mt DM/yr) [PART 1/2]

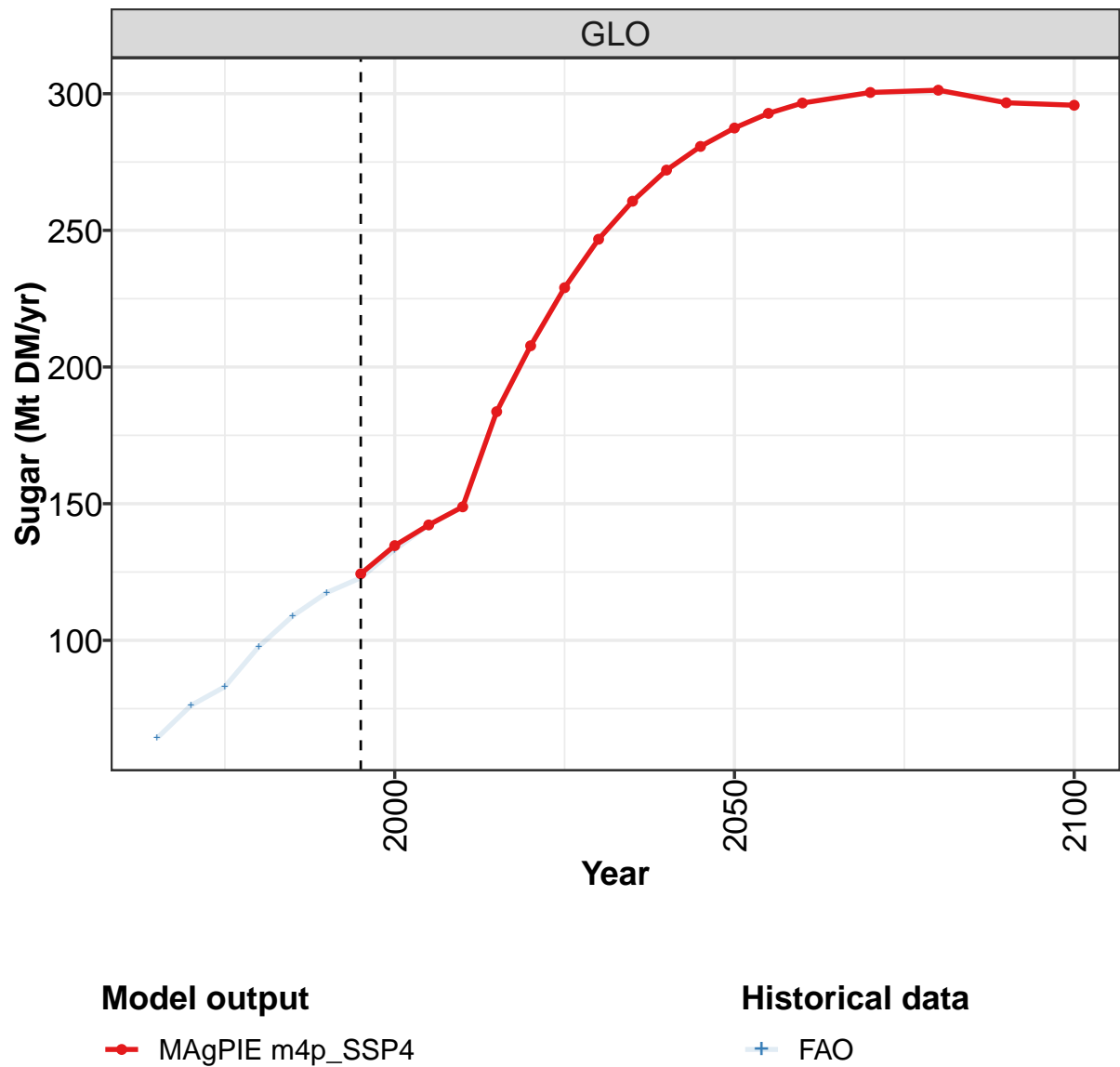
	2050	2055	2060	2070	2080	2090	2100
GLO	152	155	157	161	164	165	167
CAZ	2	2	2	2	1	1	1
CHA	15	13	12	9	7	6	4
EUR	9	9	8	8	7	6	5
IND	34	35	35	33	30	27	23
JPN	1	1	1	1	1	1	0
LAM	12	12	11	10	10	9	8
MEA	12	12	13	14	15	15	16
NEU	3	3	3	2	2	2	2
OAS	23	24	24	25	26	26	27
REF	4	4	4	3	3	3	2
SSA	28	32	36	44	54	61	70
USA	9	9	9	9	9	8	8

Table 444: MAgPIE m4p\_SSP4 — 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



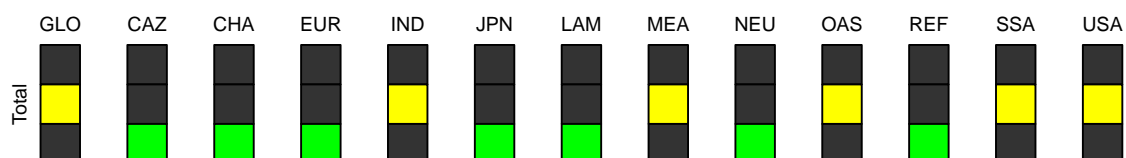
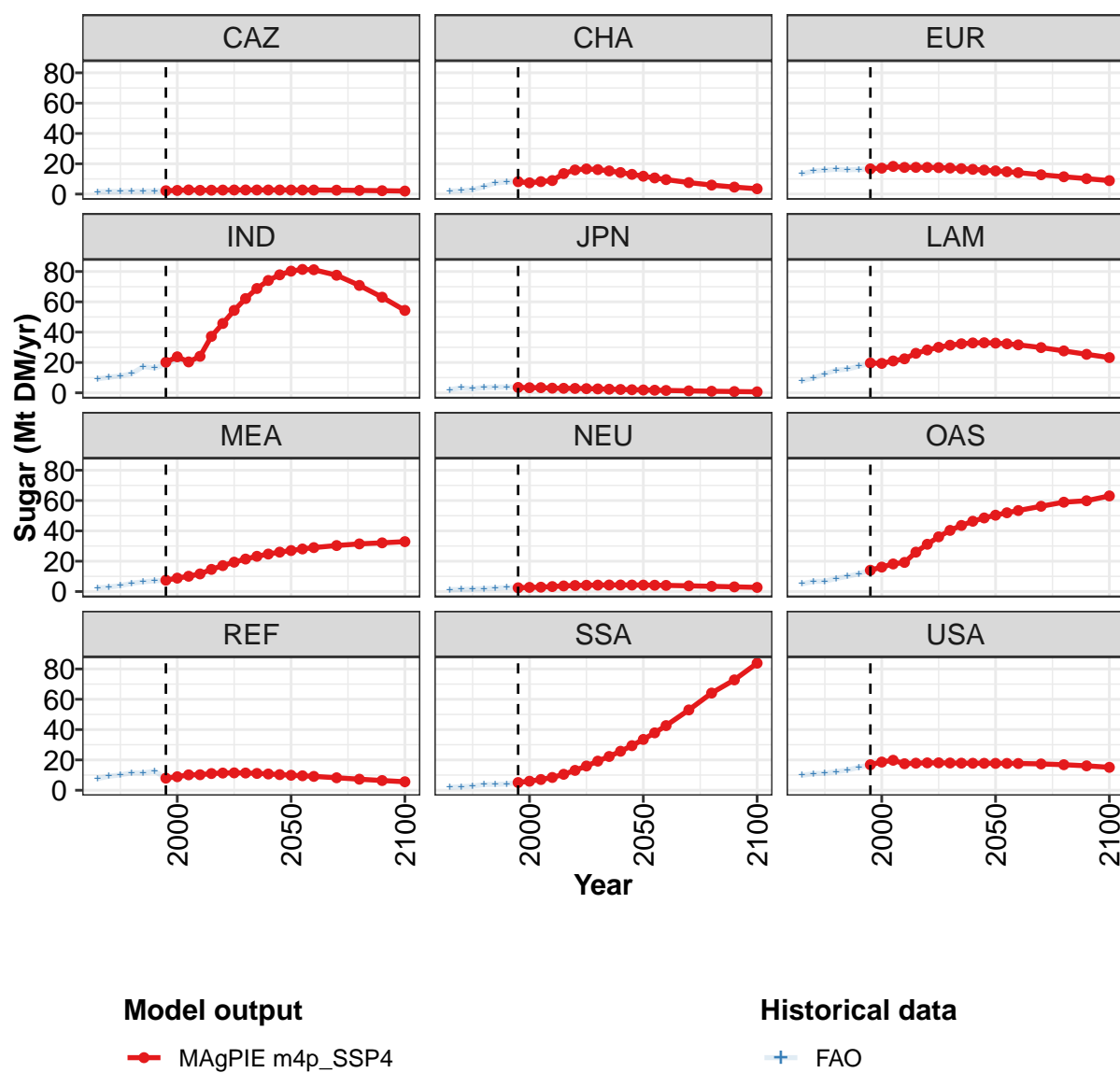


Figure 149: MAgPIE m4p\_SSP4 — Demand—Food—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	124	135	142	149	184	208	229	247	261	272	281
CAZ	2	2	3	2	3	3	3	3	3	3	3
CHA	8	7	8	9	14	16	17	16	15	14	13
EUR	17	17	18	18	18	18	17	17	17	16	16
IND	20	24	20	24	37	46	54	62	69	74	78
JPN	4	3	3	3	3	3	3	3	2	2	2
LAM	20	19	21	22	26	28	30	31	32	33	33
MEA	7	9	10	12	15	17	19	21	23	25	26
NEU	2	3	3	3	4	4	4	4	4	4	4
OAS	14	16	18	19	26	31	36	40	44	46	49
REF	8	9	10	10	11	11	11	11	11	11	10
SSA	5	6	7	8	11	13	16	19	22	26	29
USA	17	19	20	17	18	18	18	18	18	18	18

Table 446: MAgPIE m4p-SSP4 — Demand—Food—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

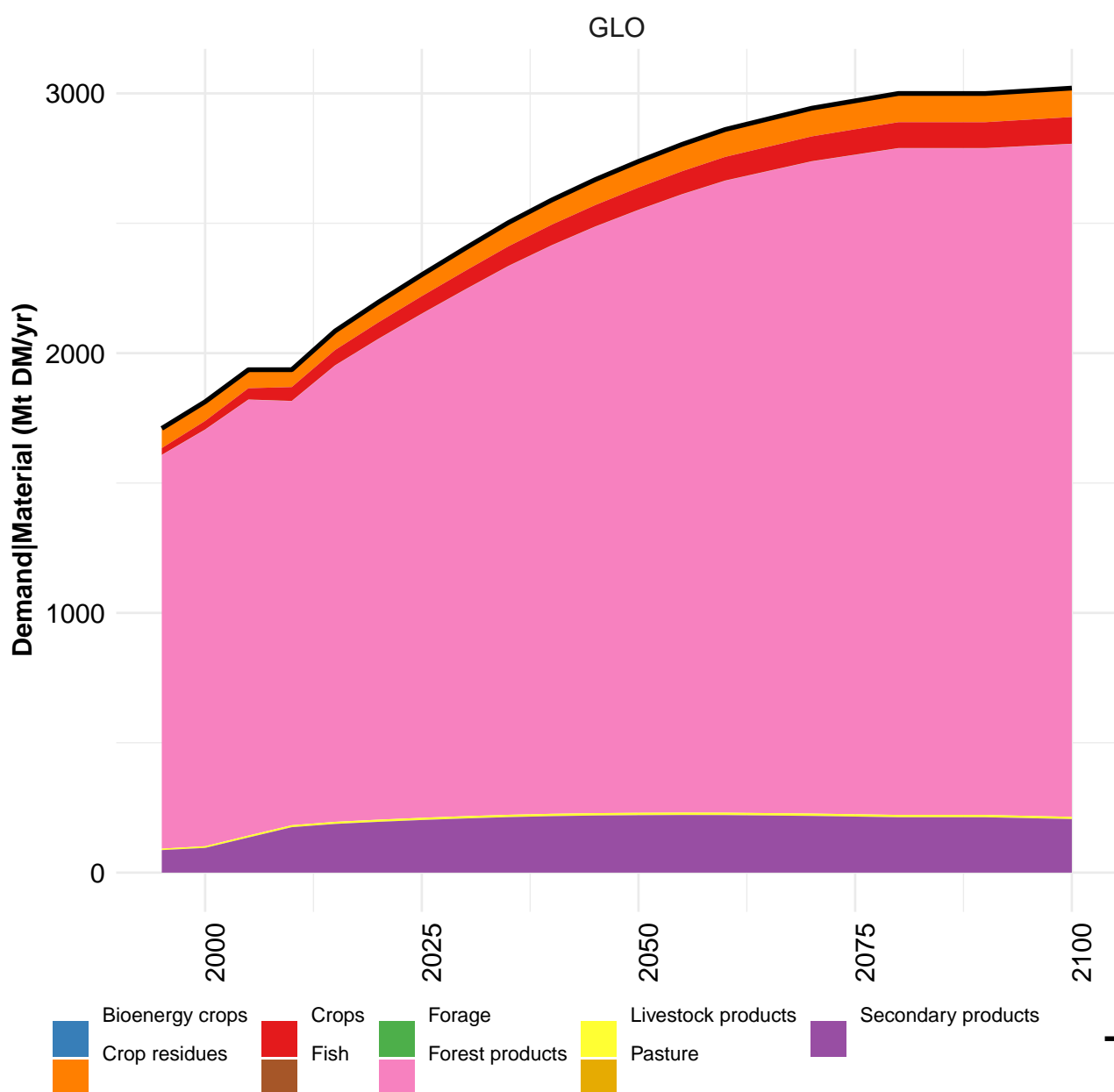
	2050	2055	2060	2070	2080	2090	2100
GLO	287	293	297	300	301	297	296
CAZ	3	3	3	3	2	2	2
CHA	12	11	10	8	6	5	4
EUR	15	15	14	13	11	10	9
IND	80	81	81	78	71	63	54
JPN	2	2	2	1	1	1	1
LAM	33	32	32	30	28	25	23
MEA	27	28	29	30	31	32	33
NEU	4	4	4	4	3	3	3
OAS	50	52	53	56	59	60	63
REF	10	10	9	8	7	6	6
SSA	34	38	43	53	64	73	84
USA	18	18	18	17	17	16	15

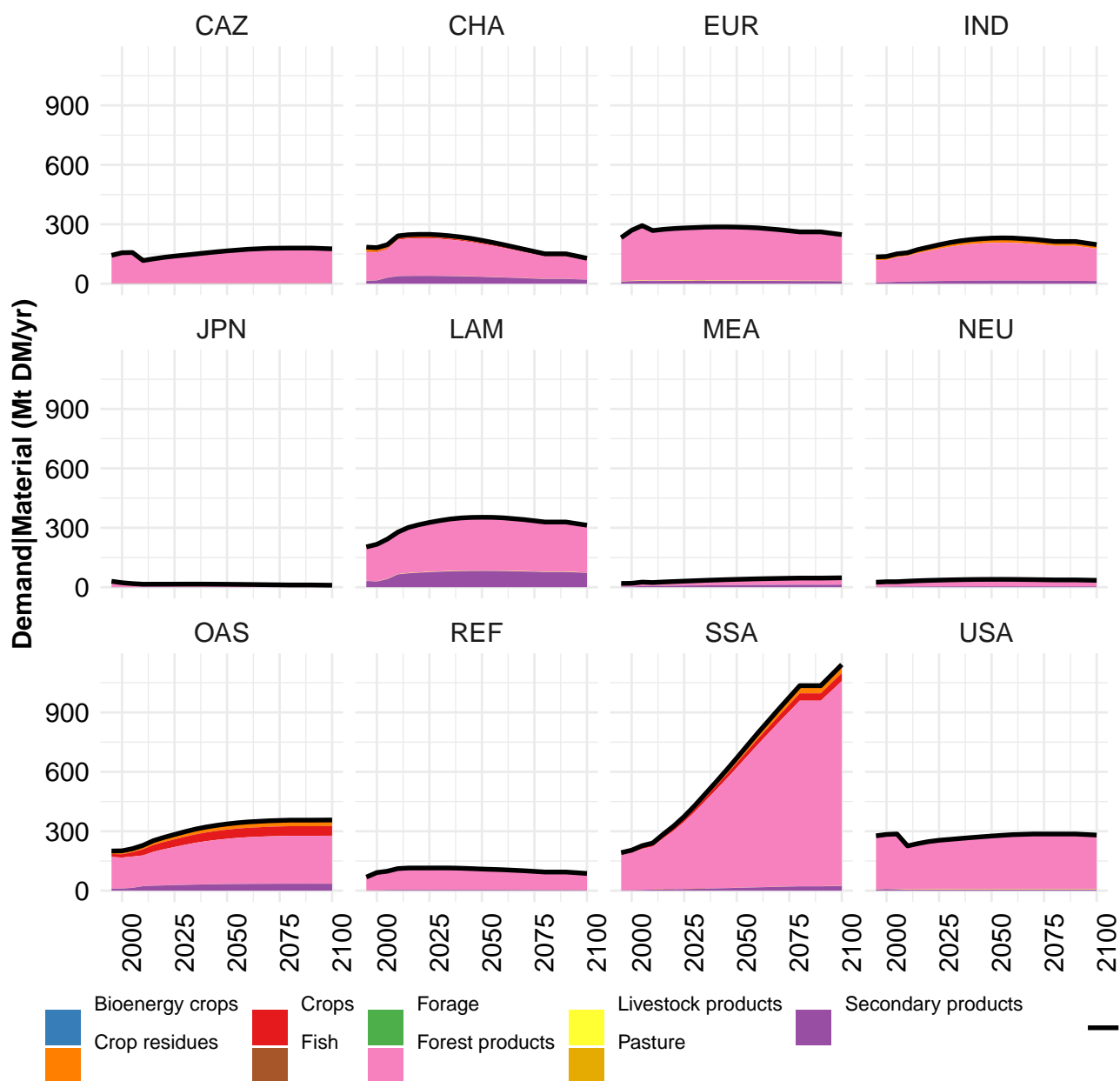
Table 447: MAgPIE m4p-SSP4 — Demand—Food—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

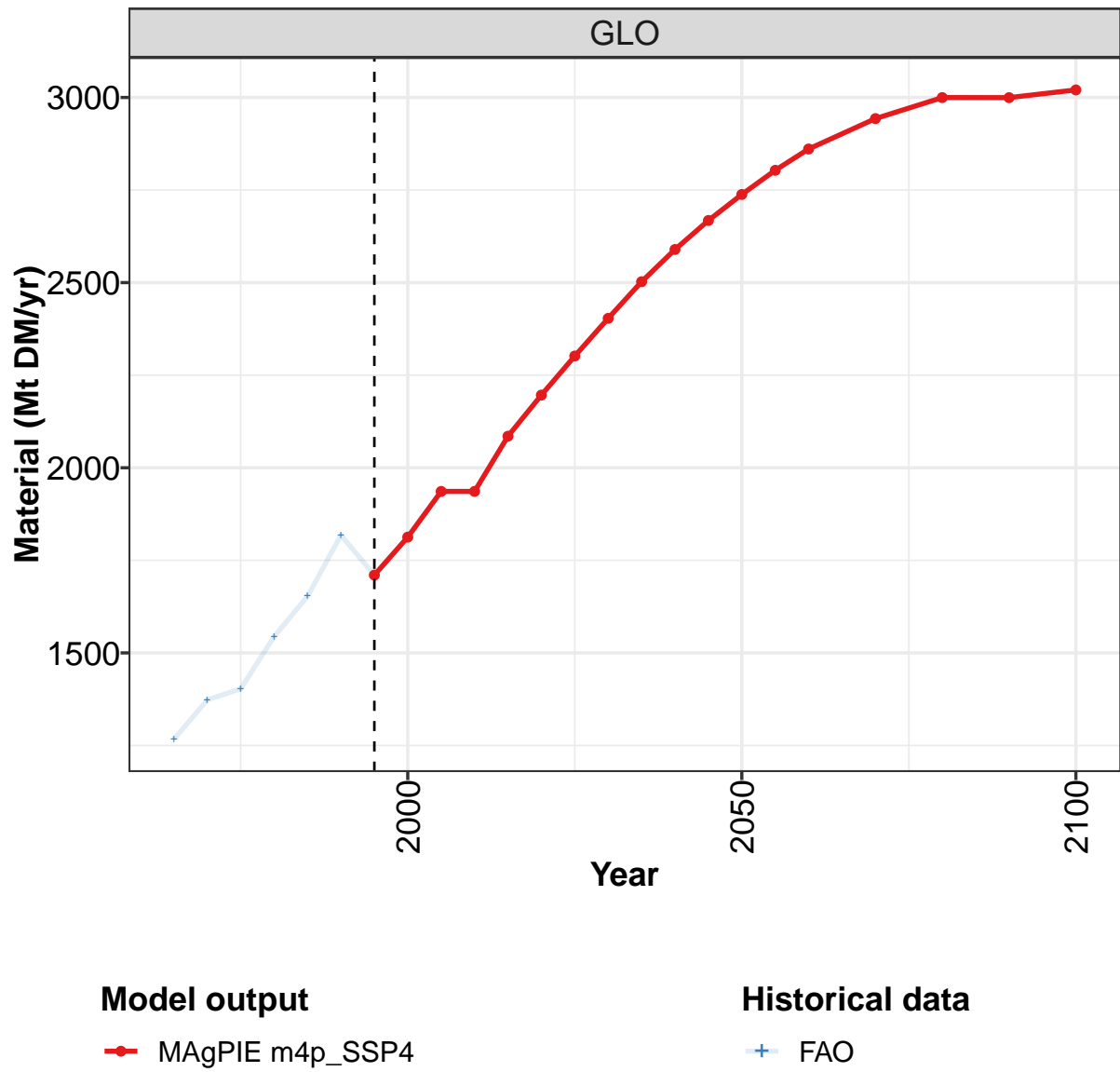
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	64	76	83	98	109	117	123	133	142	149
CAZ	2	2	2	2	2	2	2	2	3	2
CHA	2	2	3	5	7	8	8	7	8	9
EUR	13	15	16	16	16	16	17	17	18	18
IND	9	10	11	13	17	16	19	22	20	24
JPN	2	3	3	4	4	4	4	3	3	3
LAM	8	10	12	15	16	18	20	19	21	22
MEA	2	3	4	5	6	7	7	9	10	12
NEU	1	1	2	2	2	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









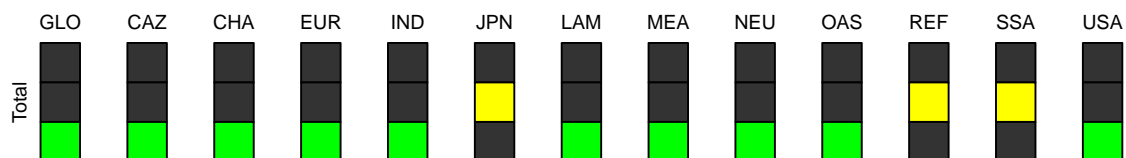
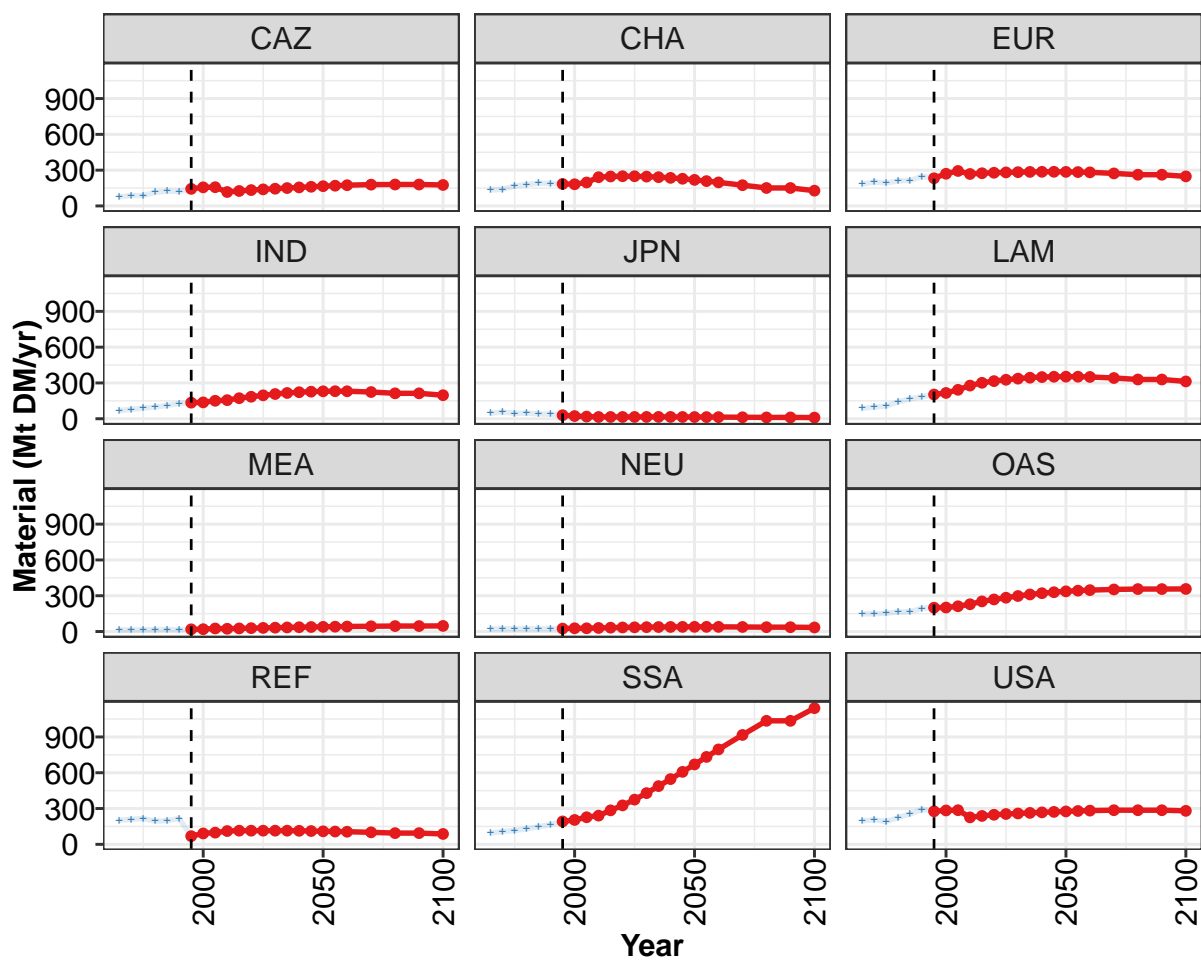


Figure 150: MAgPIE m4p\_SSP4 — Demand—Material (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1710	1813	1936	1936	2085	2196	2302	2403	2503	2590	2668
CAZ	143	156	157	117	126	133	139	145	150	156	161
CHA	184	182	197	241	247	249	249	246	241	236	228
EUR	233	270	293	268	274	278	281	283	285	286	287
IND	135	137	151	156	172	184	197	208	216	223	227
JPN	30	23	18	15	15	15	15	16	16	15	15
LAM	203	216	243	278	301	315	327	336	344	349	352
MEA	19	20	26	23	26	28	31	33	35	36	38
NEU	25	27	28	30	33	34	36	37	38	39	39
OAS	200	201	212	229	253	269	284	298	311	321	330
REF	69	91	98	112	114	115	115	115	115	113	111
SSA	192	204	227	241	285	326	375	429	488	547	607
USA	277	284	286	226	238	248	254	259	263	268	272

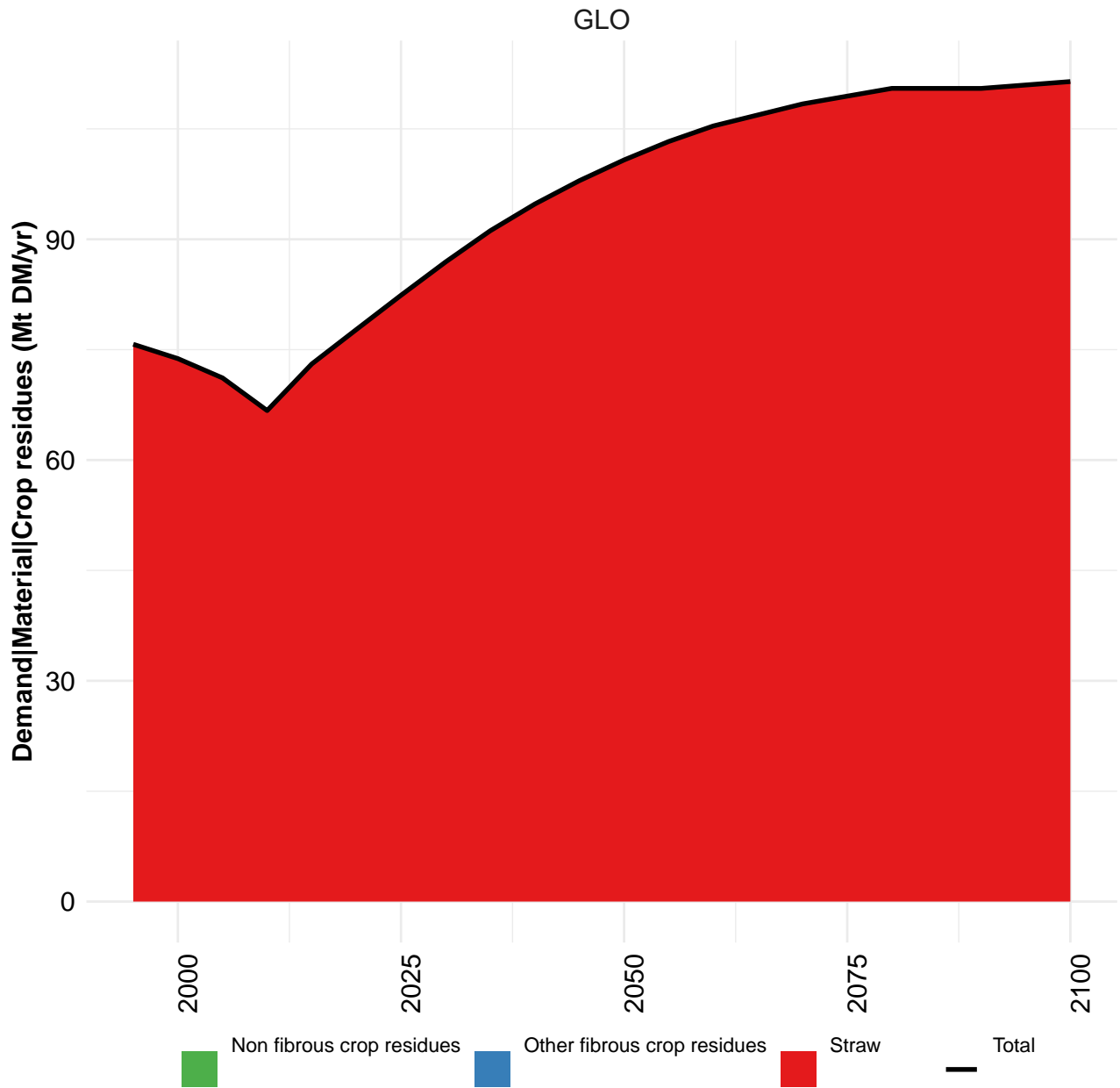
Table 449: MAgPIE m4p\_SSP4 — Demand—Material (Mt DM/yr) [PART 1/2]

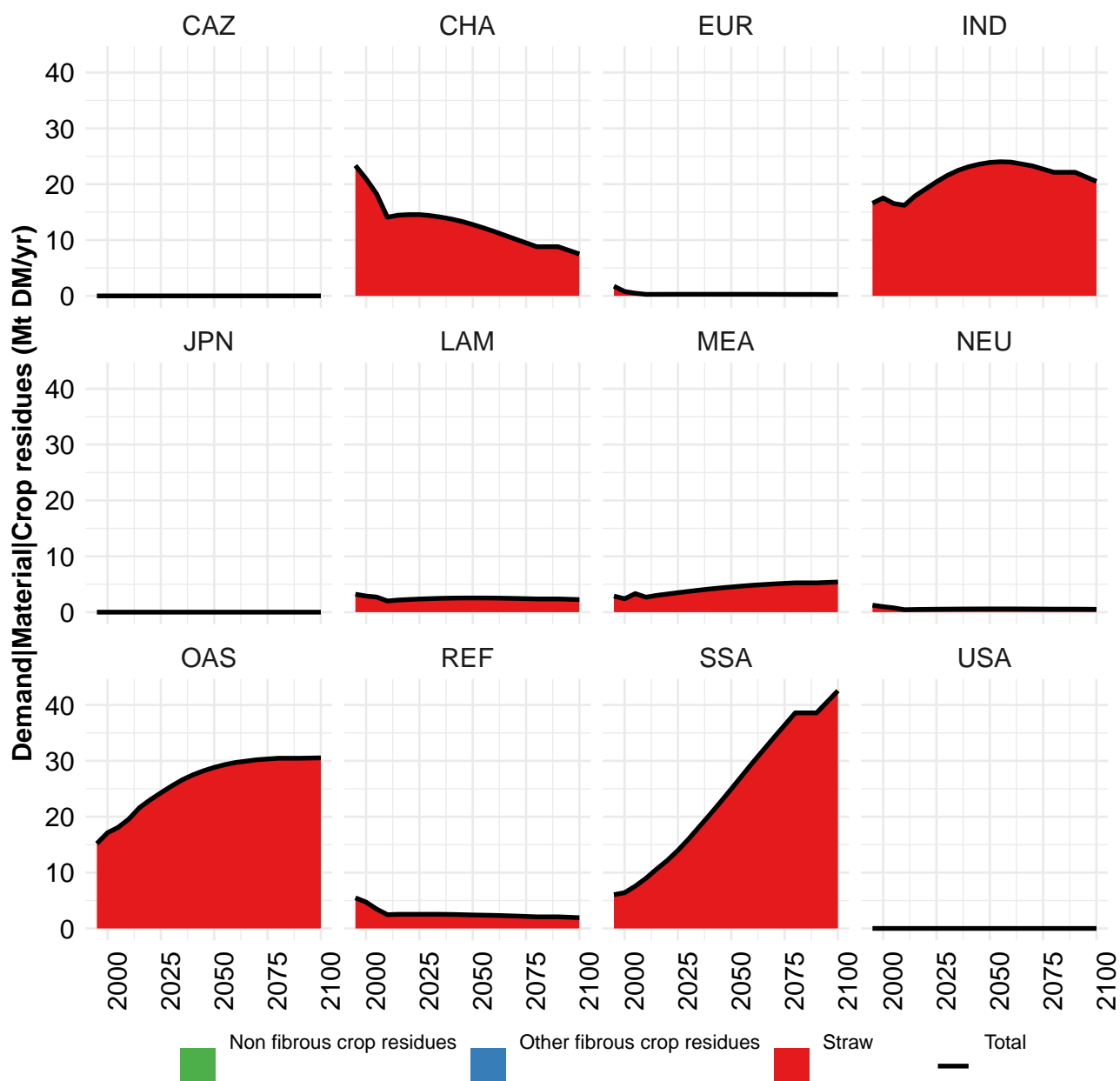
	2050	2055	2060	2070	2080	2090	2100
GLO	2738	2803	2861	2943	3000	3000	3020
CAZ	166	170	174	179	180	180	176
CHA	219	209	198	174	151	151	128
EUR	286	284	282	273	262	262	248
IND	230	231	231	224	213	213	197
JPN	15	14	14	12	11	11	10
LAM	353	353	350	341	329	329	313
MEA	39	41	42	44	46	46	47
NEU	39	40	39	38	37	37	35
OAS	337	343	347	353	356	356	357
REF	109	108	106	101	94	94	87
SSA	670	733	796	917	1035	1035	1141
USA	276	280	283	286	286	286	281

Table 450: MAgPIE m4p\_SSP4 — Demand—Material (Mt DM/yr) [PART 2/2]

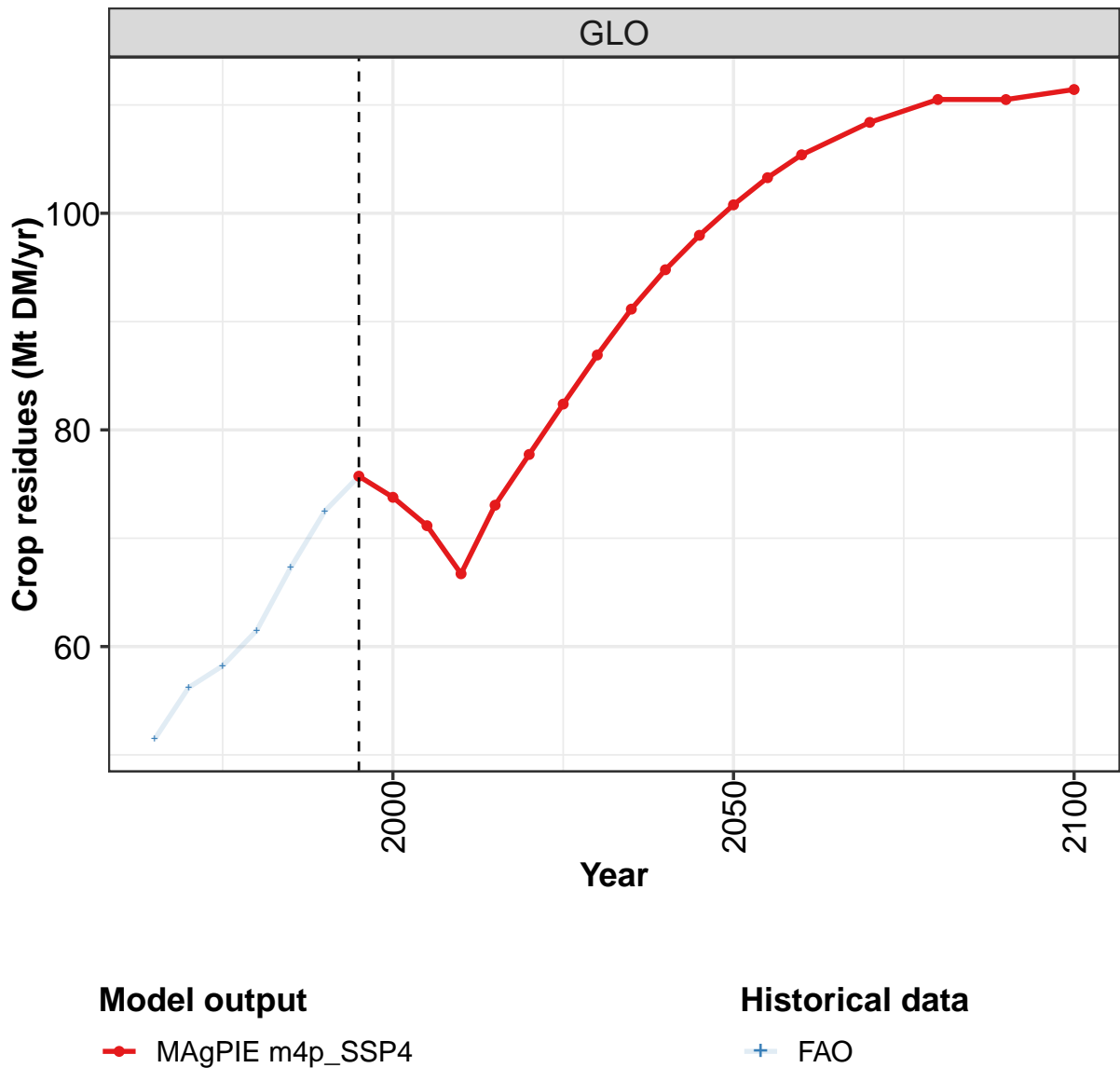
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1267	1373	1403	1544	1653	1818	1710	1813	1936	1936
CAZ	75	87	88	115	124	121	143	156	157	117
CHA	134	140	168	179	191	189	184	182	197	241
EUR	182	202	192	210	213	248	233	270	293	268
IND	68	79	89	99	111	128	135	137	151	156
JPN	46	57	46	47	41	38	30	23	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)





8.1 Crop residues



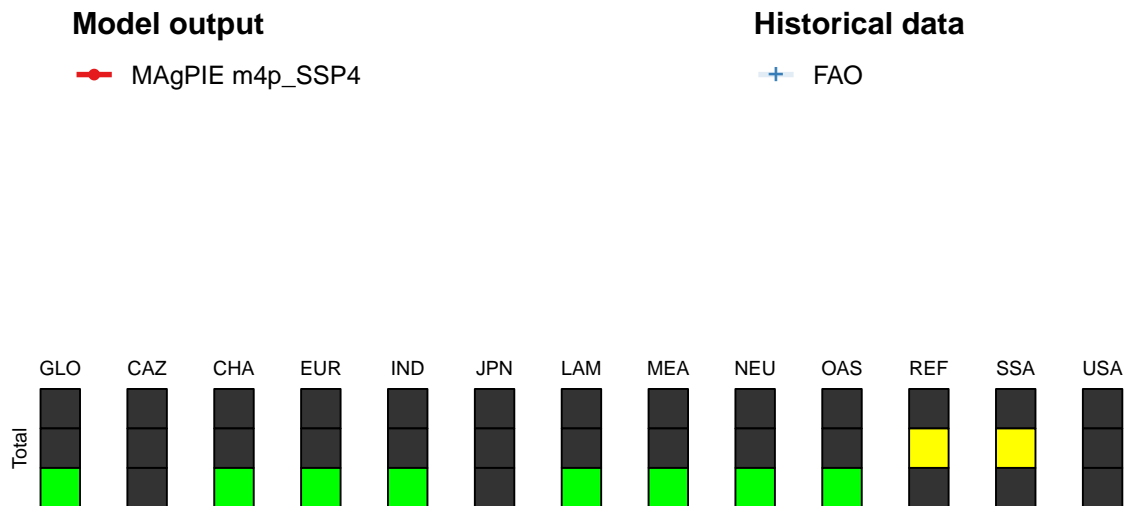
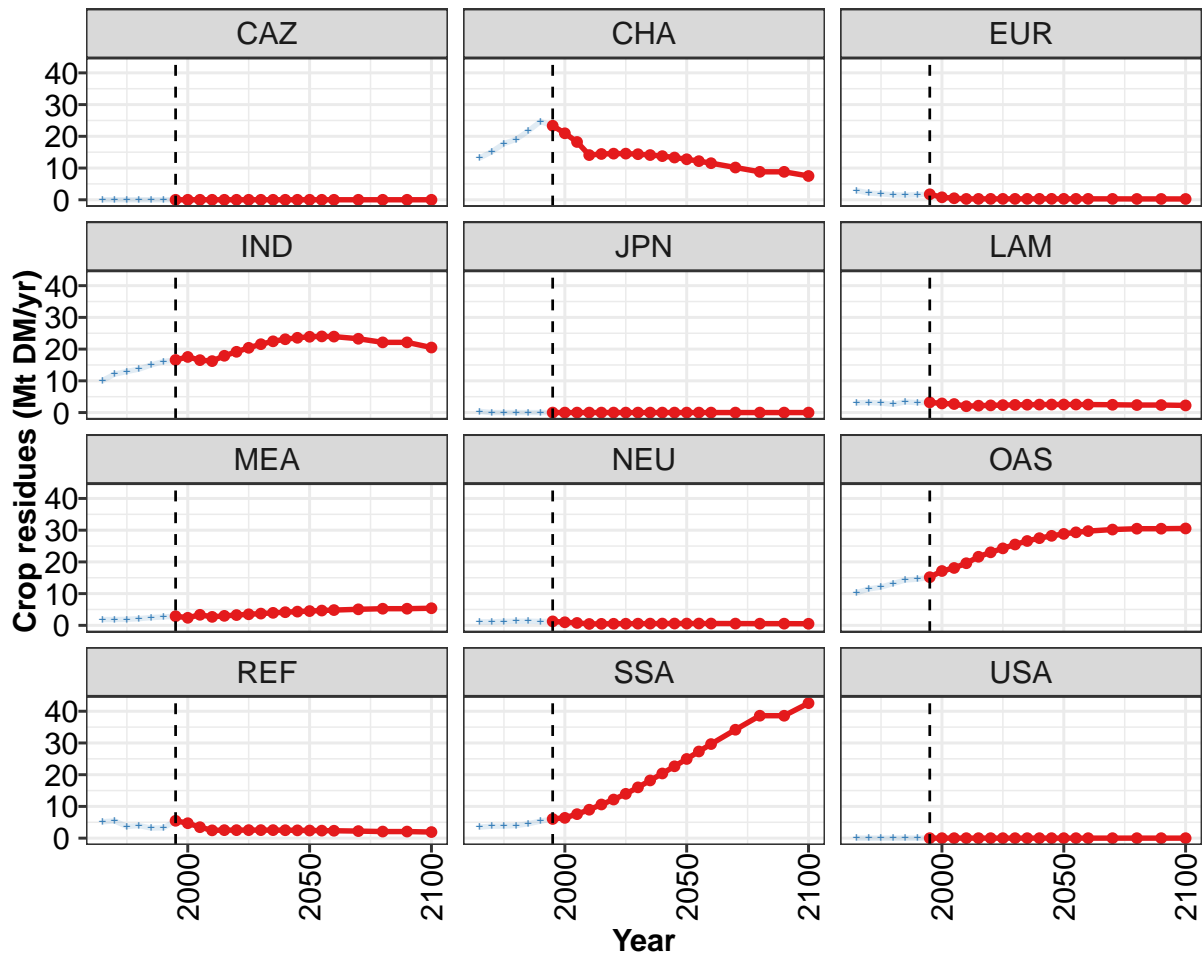


Figure 151: MAgPIE m4p\_SSP4 — Demand—Material—Crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	76	74	71	67	73	78	82	87	91	95	98
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	23	21	18	14	14	15	15	14	14	14	13
EUR	2	1	0	0	0	0	0	0	0	0	0
IND	17	18	17	16	18	19	20	22	22	23	24
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	3	3	2	2	2	2	2	2	3	3
MEA	3	2	3	3	3	3	3	4	4	4	4
NEU	1	1	1	0	0	1	1	1	1	1	1
OAS	15	17	18	20	22	23	24	25	27	27	28
REF	5	5	3	2	3	3	3	3	3	3	2
SSA	6	6	8	9	11	12	14	16	18	20	23
USA	0	0	0	0	0	0	0	0	0	0	0

Table 452: MAgPIE m4p\_SSP4 — Demand—Material—Crop residues (Mt DM/yr) [PART 1/2]

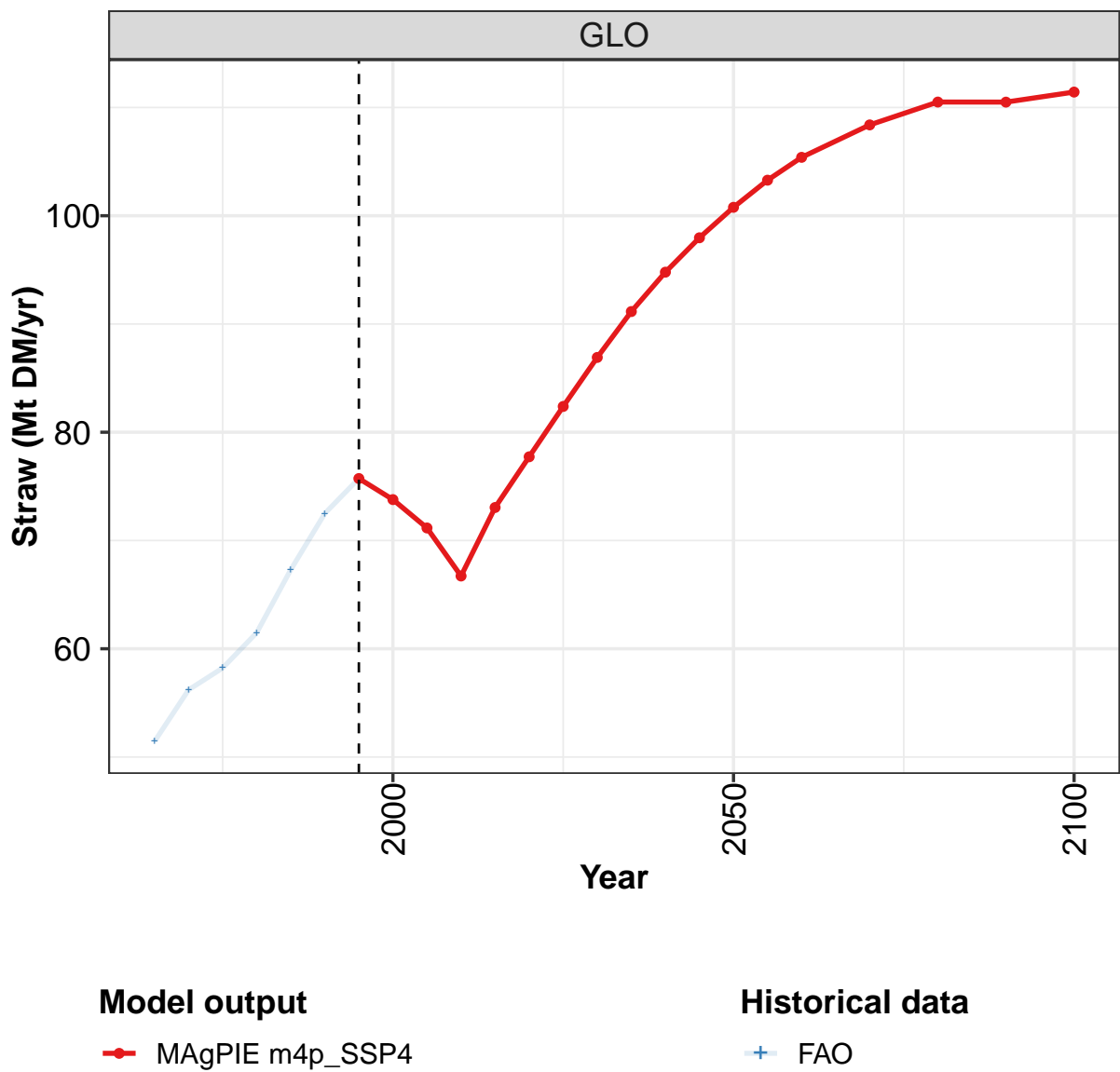
	2050	2055	2060	2070	2080	2090	2100
GLO	101	103	105	108	111	110	111
CAZ	0	0	0	0	0	0	0
CHA	13	12	12	10	9	9	7
EUR	0	0	0	0	0	0	0
IND	24	24	24	23	22	22	20
JPN	0	0	0	0	0	0	0
LAM	3	3	3	2	2	2	2
MEA	5	5	5	5	5	5	5
NEU	1	1	1	1	1	1	1
OAS	29	29	30	30	30	30	31
REF	2	2	2	2	2	2	2
SSA	25	27	30	34	39	39	43
USA	0	0	0	0	0	0	0

Table 453: MAgPIE m4p\_SSP4 — 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





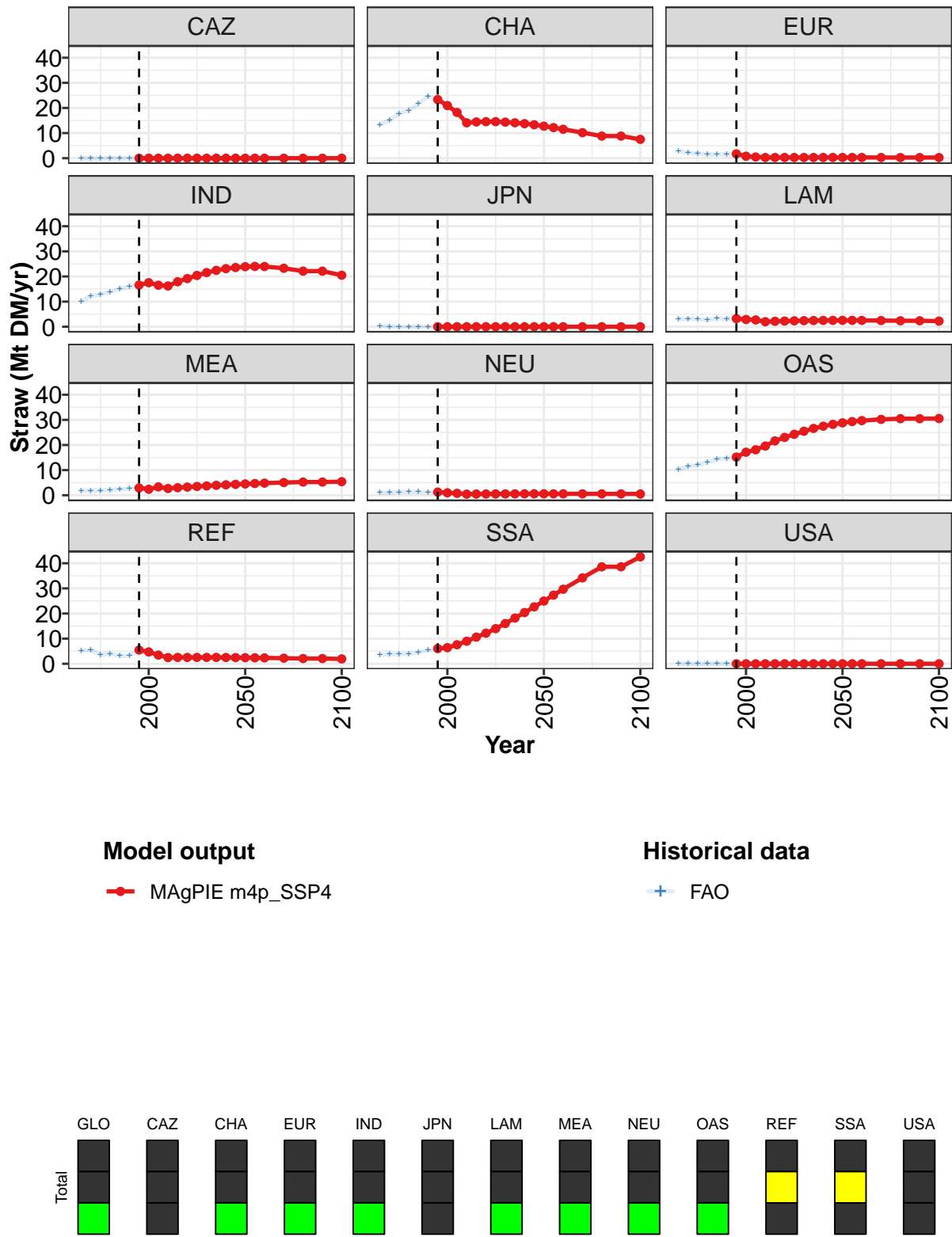


Figure 152: MAgPIE m4p\_SSP4 — Demand—Material—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	76	74	71	67	73	78	82	87	91	95	98
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	23	21	18	14	14	15	15	14	14	14	13
EUR	2	1	0	0	0	0	0	0	0	0	0
IND	17	18	17	16	18	19	20	22	22	23	24
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	3	3	2	2	2	2	2	2	3	3
MEA	3	2	3	3	3	3	3	4	4	4	4
NEU	1	1	1	0	0	1	1	1	1	1	1
OAS	15	17	18	20	22	23	24	25	27	27	28
REF	5	5	3	2	3	3	3	3	3	3	2
SSA	6	6	8	9	11	12	14	16	18	20	23
USA	0	0	0	0	0	0	0	0	0	0	0

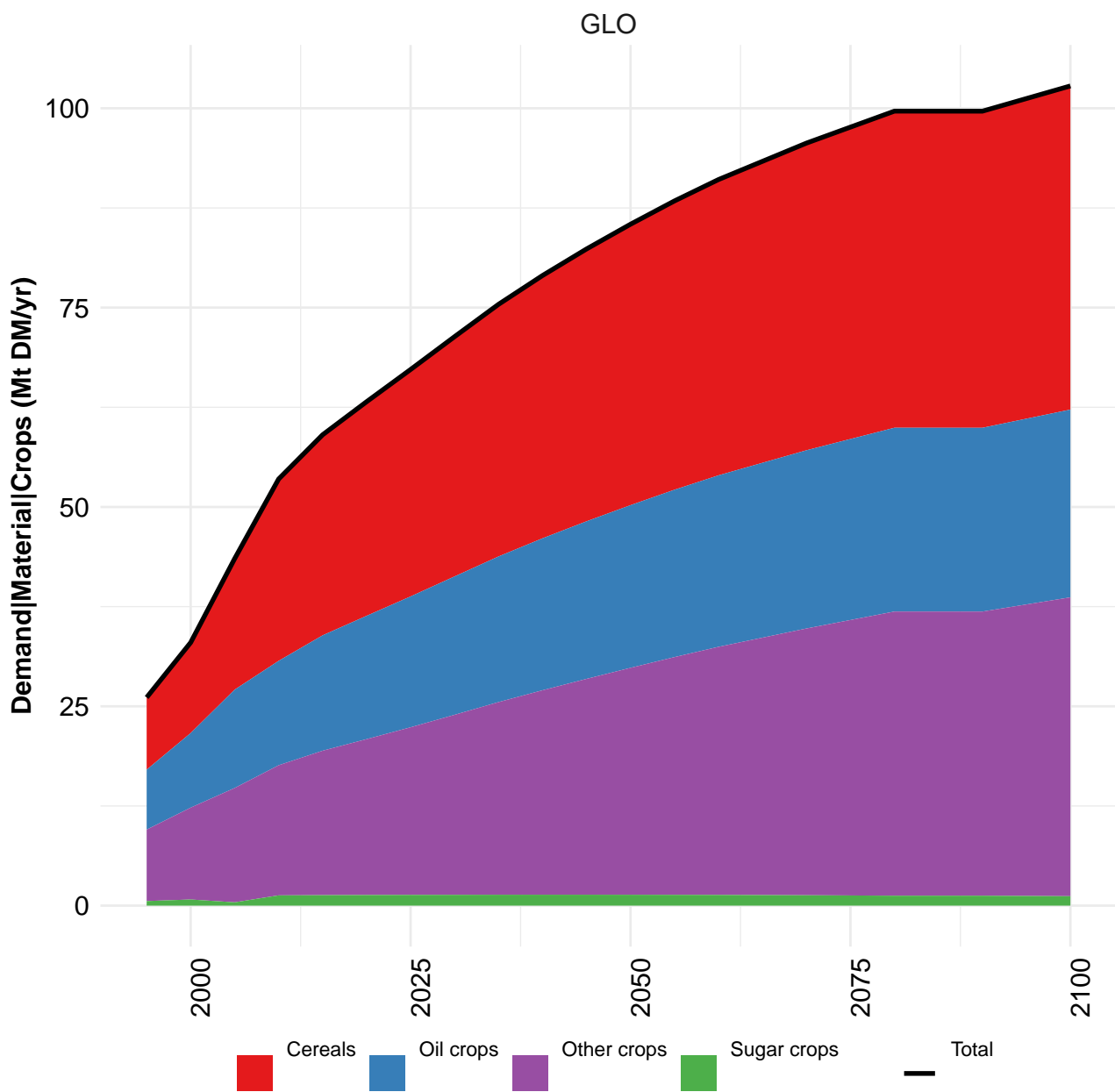
Table 455: MAgPIE m4p\_SSP4 — Demand—Material—Crop residues—Straw (Mt DM/yr) [PART 1/2]

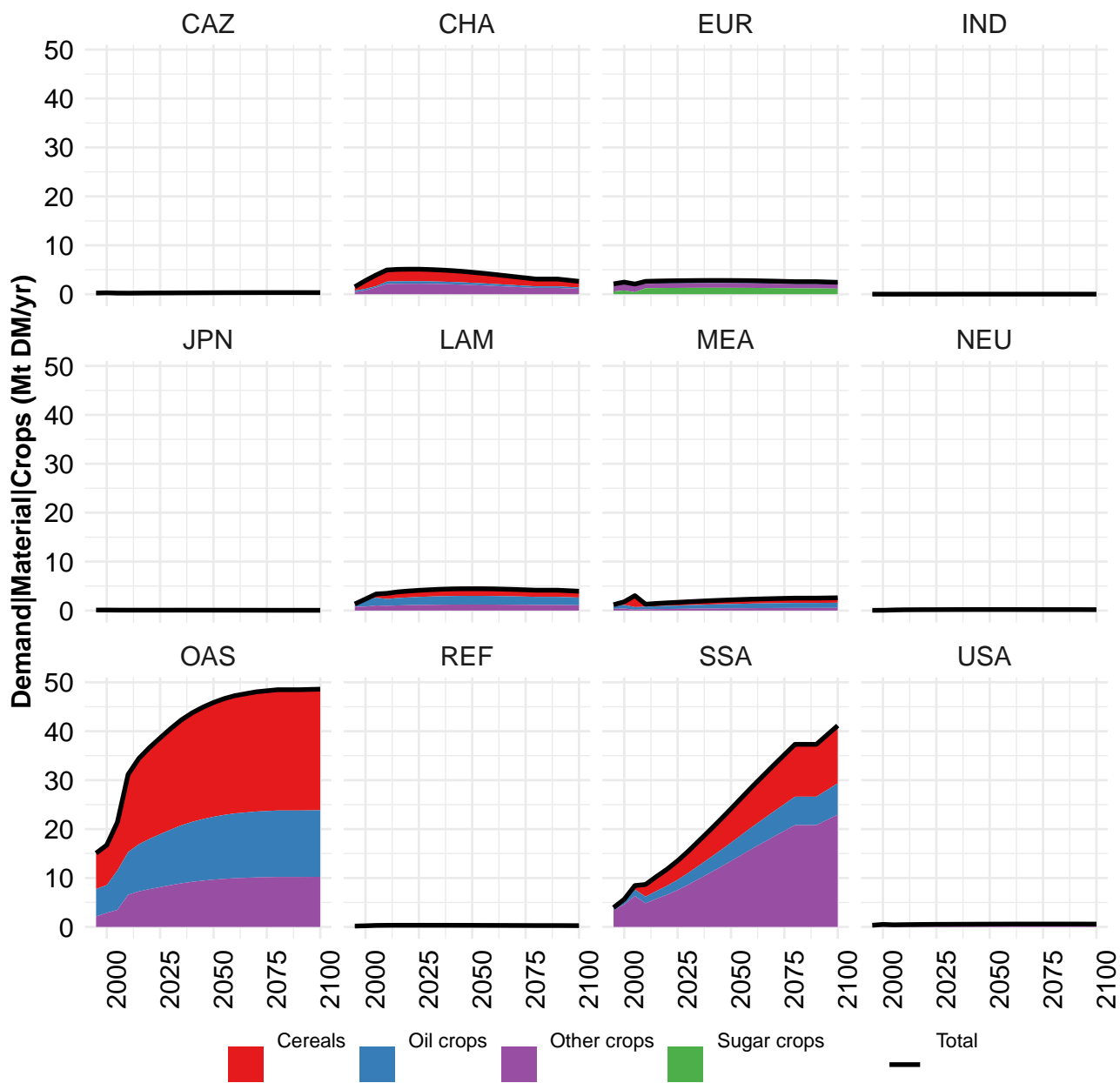
	2050	2055	2060	2070	2080	2090	2100
GLO	101	103	105	108	111	110	111
CAZ	0	0	0	0	0	0	0
CHA	13	12	12	10	9	9	7
EUR	0	0	0	0	0	0	0
IND	24	24	24	23	22	22	20
JPN	0	0	0	0	0	0	0
LAM	3	3	3	2	2	2	2
MEA	5	5	5	5	5	5	5
NEU	1	1	1	1	1	1	1
OAS	29	29	30	30	30	30	31
REF	2	2	2	2	2	2	2
SSA	25	27	30	34	39	39	43
USA	0	0	0	0	0	0	0

Table 456: MAgPIE m4p\_SSP4 — Demand—Material—Crop residues—Straw (Mt DM/yr) [PART 2/2]

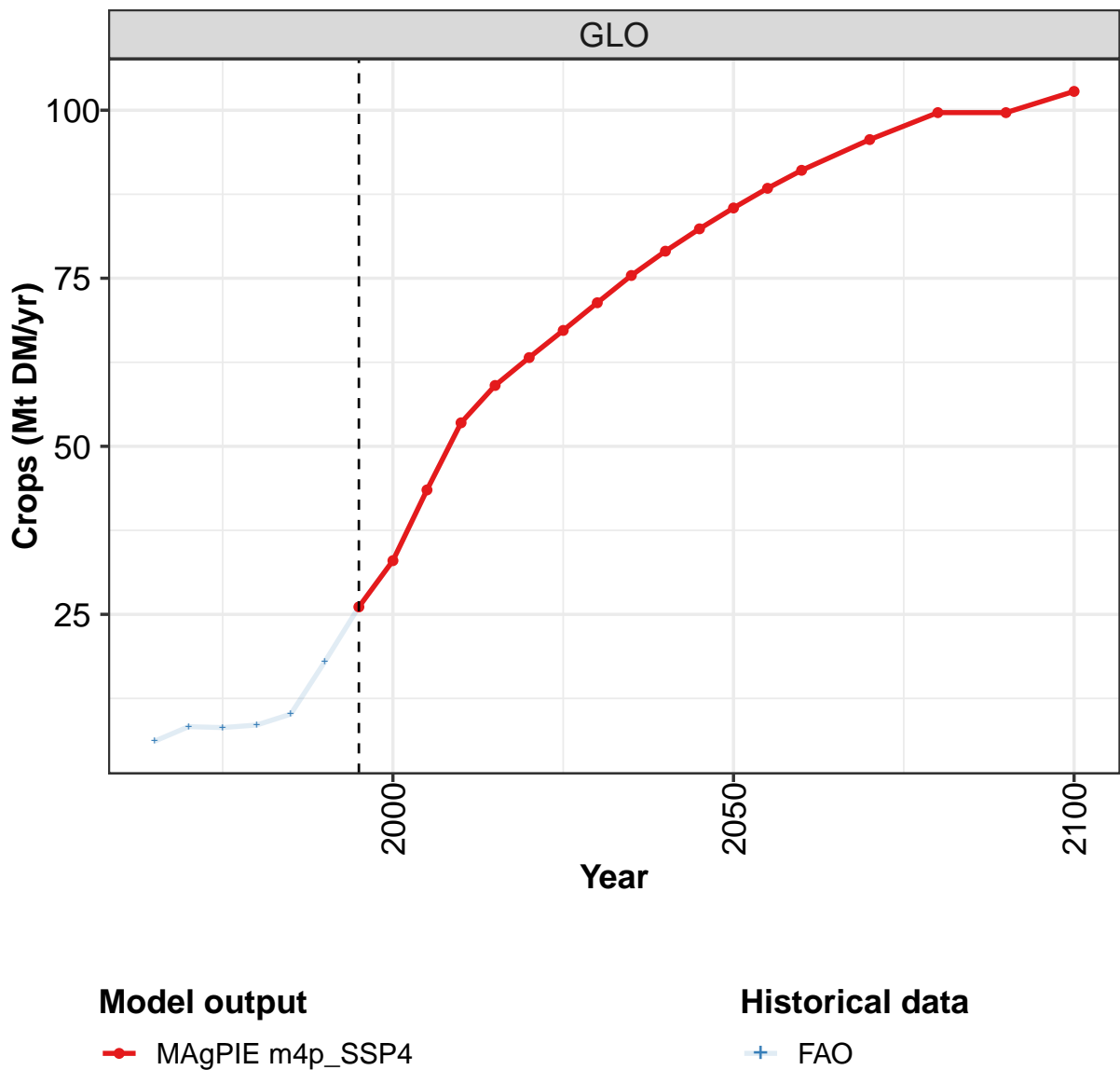
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	51.4	56.2	58.2	61.5	67.3	72.5	75.7	73.8	71.2	66.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	13.2	15.1	17.7	19.1	21.7	24.7	23.3	21.0	18.2	14.1
EUR	2.9	2.1	1.9	1.5	1.5	1.6	1.7	0.8	0.5	0.3
IND	10.1	12.1	12.9	13.7	15.0	16.1	16.6	17.5	16.5	16.2
JPN	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)





8.2 Crops



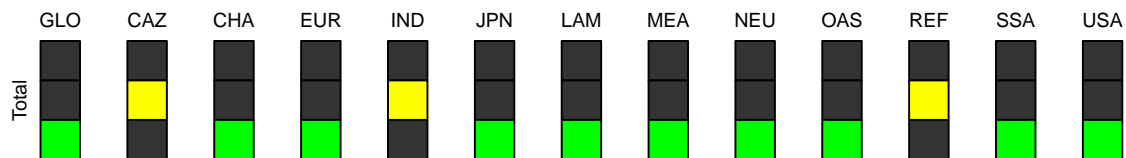
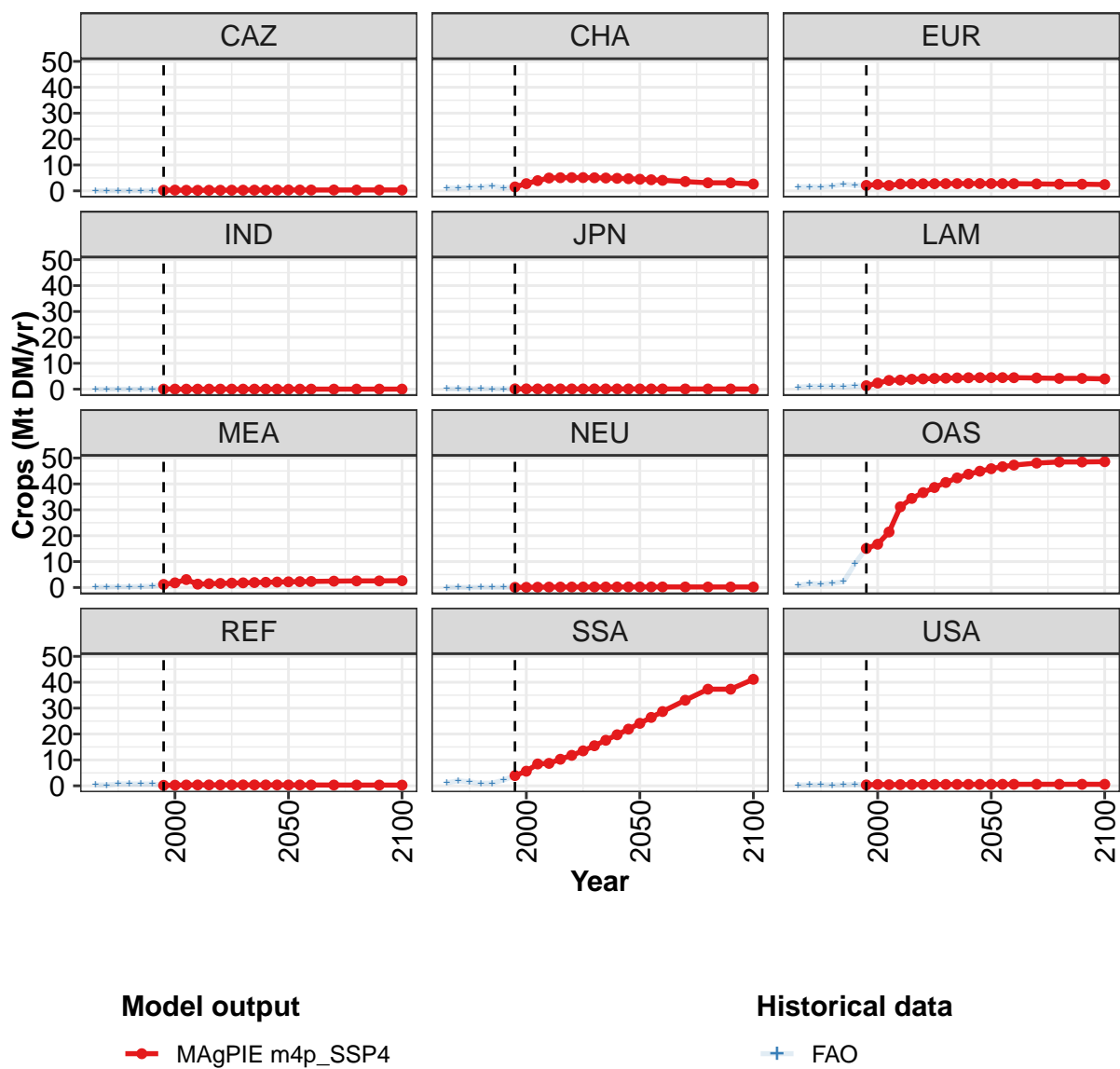


Figure 153: MAgPIE m4p\_SSP4 — Demand—Material—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26	33	44	54	59	63	67	71	75	79	82
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	2	3	4	5	5	5	5	5	5	5	5
EUR	2	2	2	3	3	3	3	3	3	3	3
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	3	4	4	4	4	4	4	4	4
MEA	1	2	3	1	1	2	2	2	2	2	2
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	15	17	21	31	34	37	39	41	42	44	45
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	4	6	8	9	10	12	14	15	18	20	22
USA	0	1	0	0	0	1	1	1	1	1	1

Table 458: MAgPIE m4p\_SSP4 — Demand—Material—Crops (Mt DM/yr) [PART 1/2]

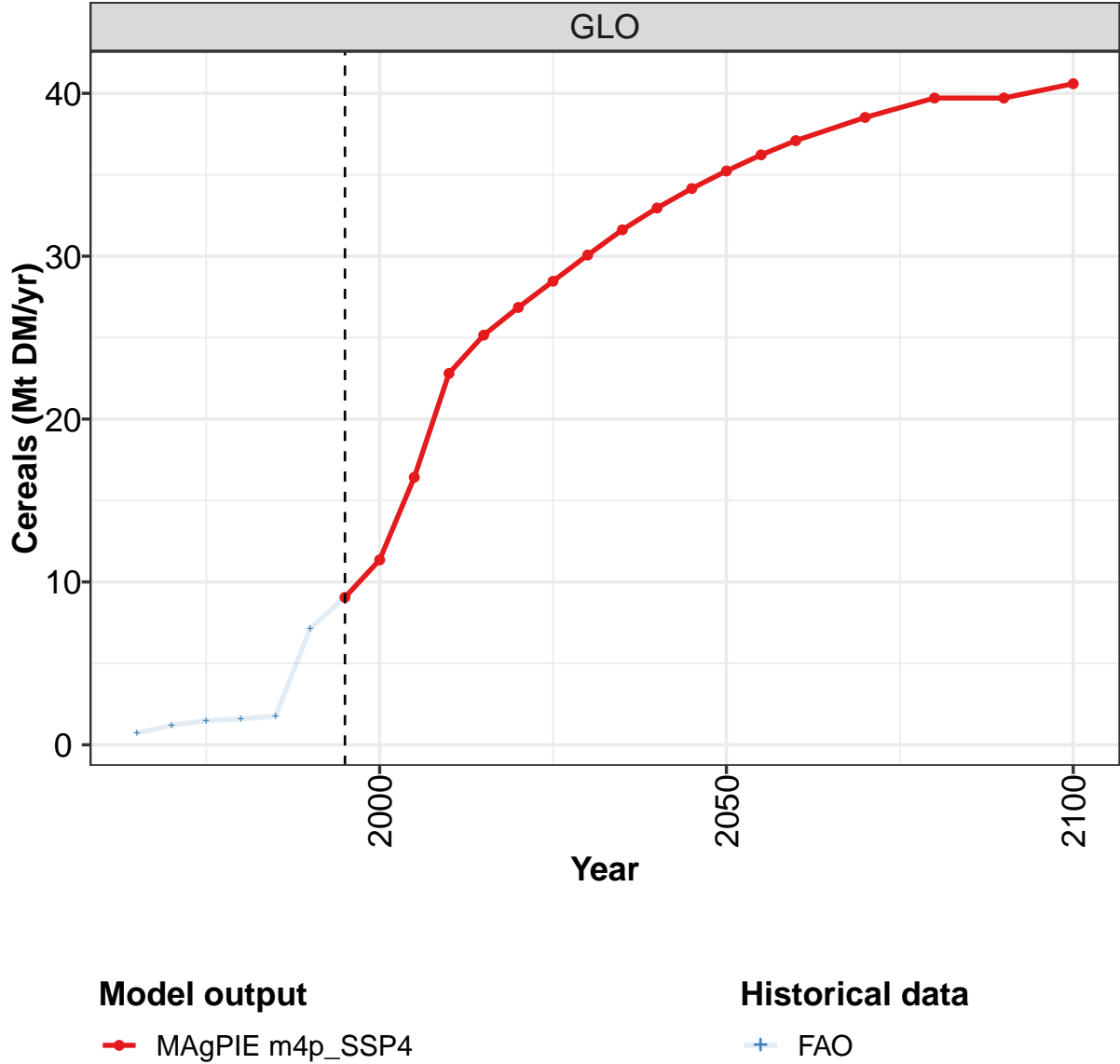
	2050	2055	2060	2070	2080	2090	2100
GLO	85	88	91	96	100	100	103
CAZ	0	0	0	0	0	0	0
CHA	4	4	4	4	3	3	3
EUR	3	3	3	3	3	3	2
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	4	4	4	4	4	4	4
MEA	2	2	2	2	3	3	3
NEU	0	0	0	0	0	0	0
OAS	46	47	47	48	48	48	49
REF	0	0	0	0	0	0	0
SSA	24	26	29	33	37	37	41
USA	1	1	1	1	1	1	1

Table 459: MAgPIE m4p\_SSP4 — 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





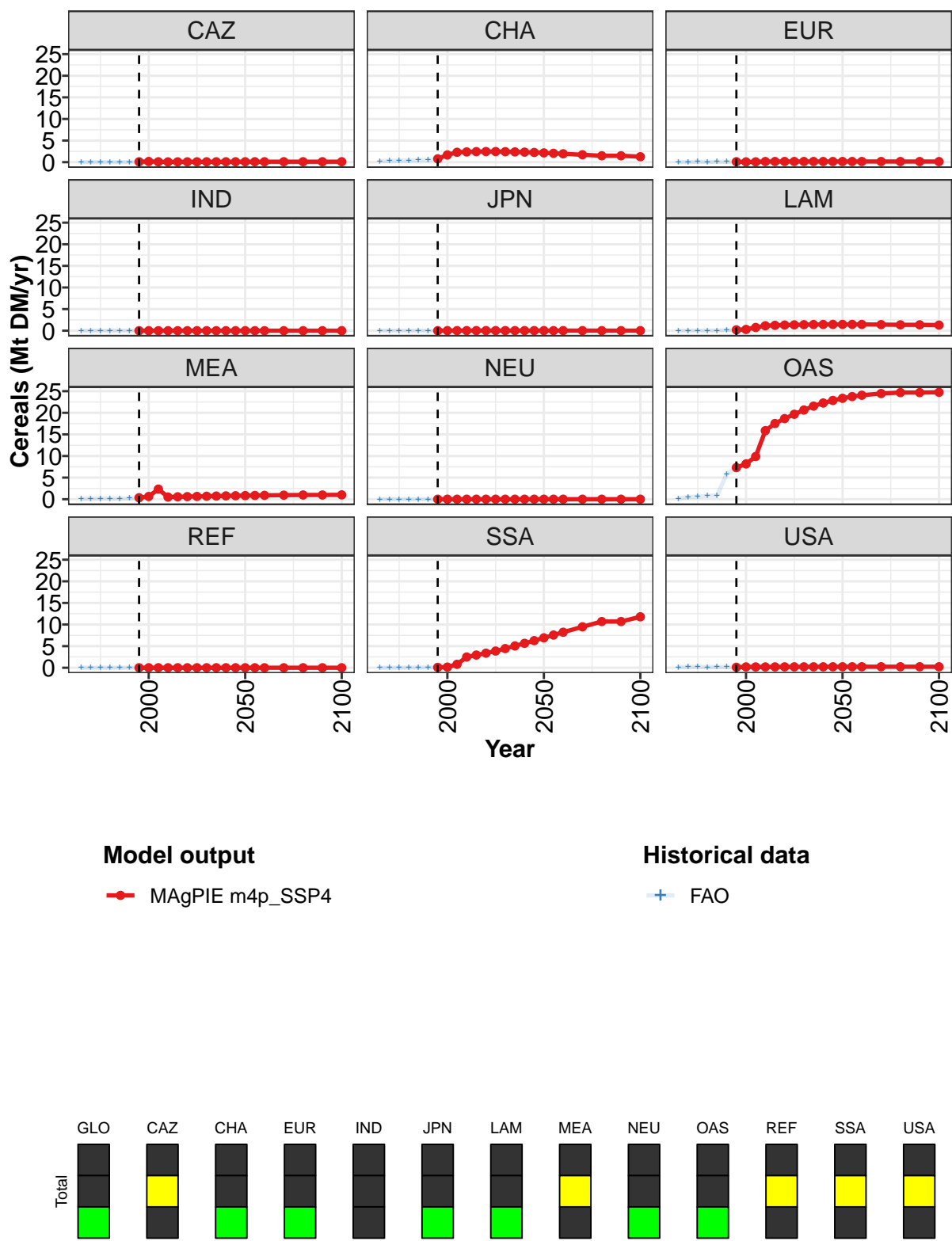


Figure 154: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.1	11.4	16.4	22.8	25.2	26.9	28.5	30.1	31.6	33.0	34.2
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	2.4	2.4	2.3	2.2
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	1.4	1.4	1.4	1.4	1.5
MEA	0.3	0.6	2.3	0.5	0.6	0.6	0.7	0.7	0.7	0.8	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	18.7	19.7	20.6	21.6	22.3	22.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.8	2.5	2.9	3.4	3.9	4.4	5.0	5.7	6.3
USA	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 461: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Cereals (Mt DM/yr) [PART 1/2]

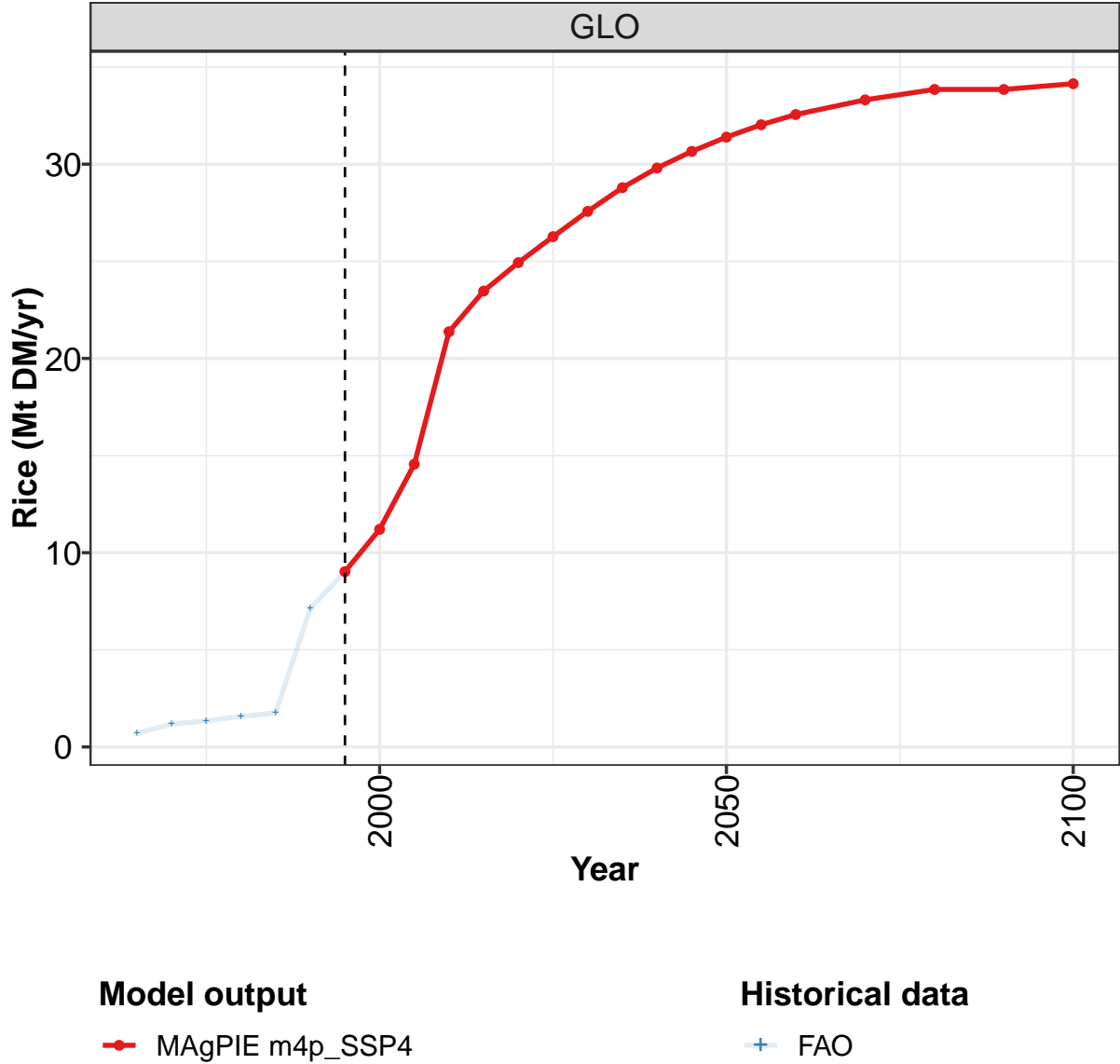
	2050	2055	2060	2070	2080	2090	2100
GLO	35.2	36.2	37.1	38.5	39.7	39.7	40.6
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	2.2	2.1	1.9	1.7	1.5	1.5	1.3
EUR	0.2	0.2	0.2	0.2	0.1	0.1	0.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.5	1.5	1.4	1.4	1.4	1.4	1.3
MEA	0.8	0.9	0.9	0.9	1.0	1.0	1.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	23.4	23.8	24.1	24.5	24.7	24.7	24.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	6.9	7.6	8.2	9.5	10.7	10.7	11.8
USA	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 462: MAgPIE m4p\_SSP4 — 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



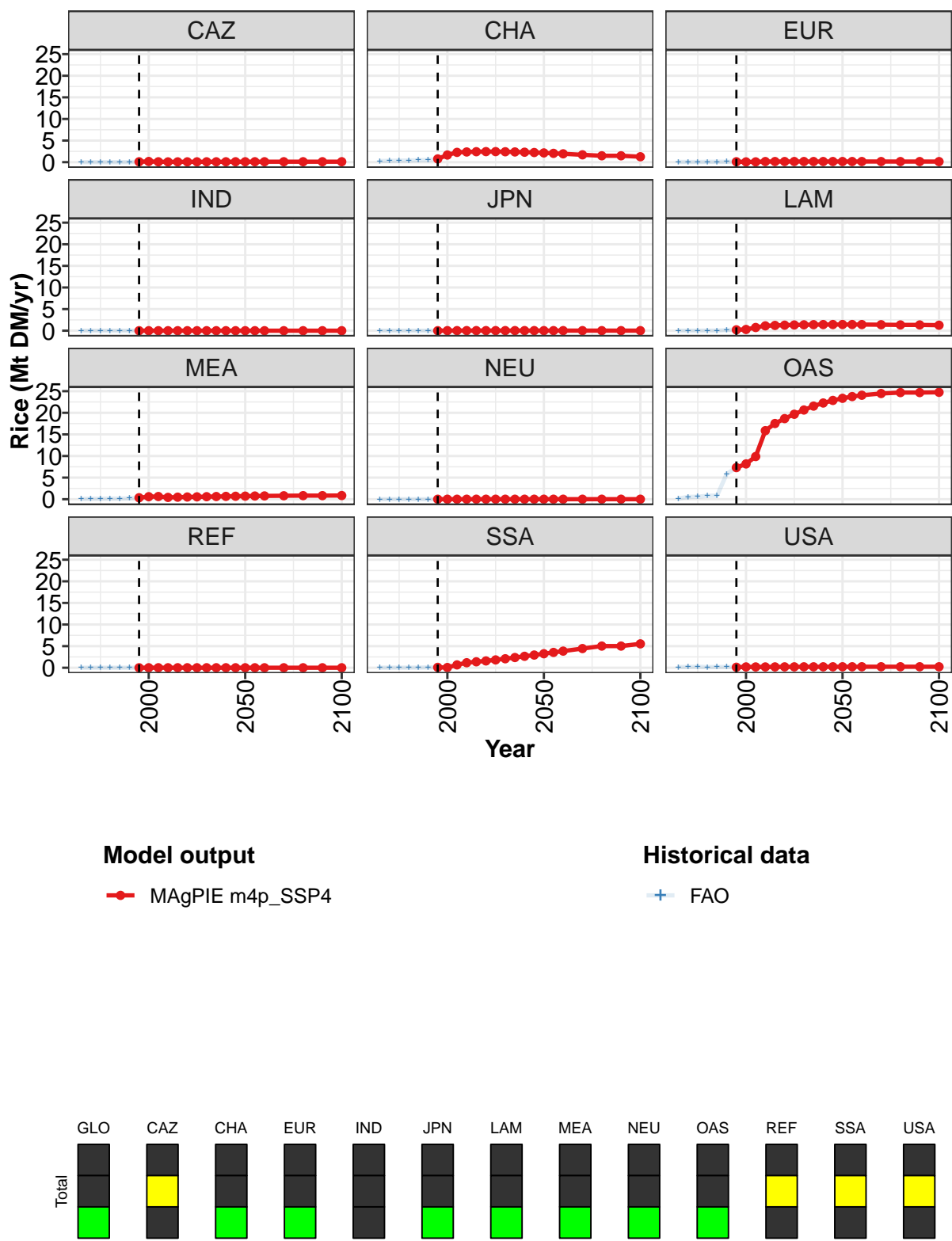


Figure 155: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.0	11.2	14.6	21.4	23.5	24.9	26.3	27.6	28.8	29.8	30.7
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	2.4	2.4	2.4	2.3	2.2
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	1.4	1.4	1.4	1.4
MEA	0.3	0.6	0.6	0.4	0.5	0.5	0.6	0.6	0.6	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	7.3	8.2	9.9	15.9	17.5	18.7	19.7	20.6	21.6	22.3	22.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.7	1.2	1.4	1.6	1.8	2.1	2.4	2.6	2.9
USA	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 464: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

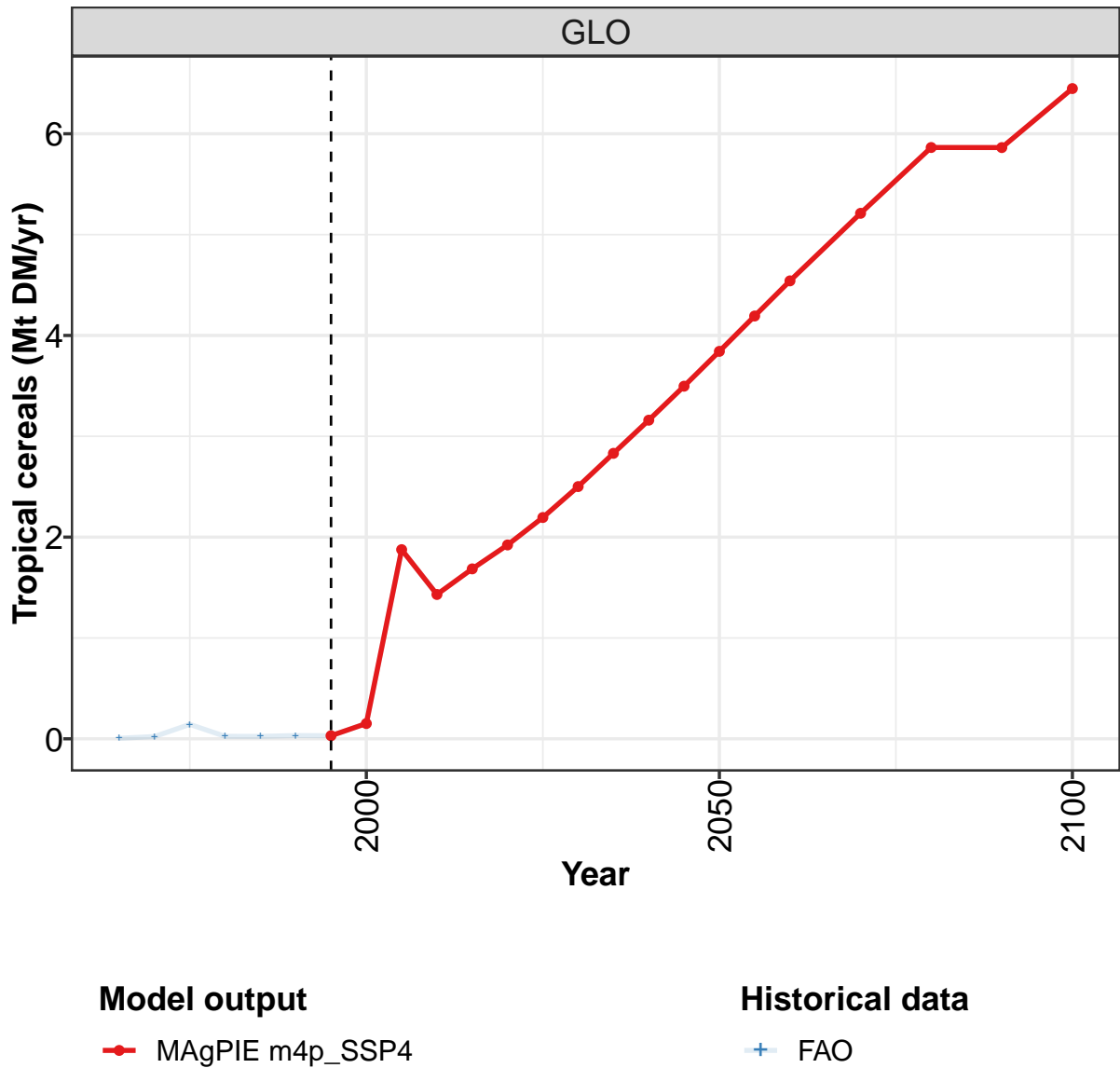
	2050	2055	2060	2070	2080	2090	2100
GLO	31.4	32.0	32.6	33.3	33.8	33.8	34.1
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	2.1	2.0	1.9	1.7	1.5	1.5	1.3
EUR	0.2	0.2	0.2	0.1	0.1	0.1	0.1
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	1.4	1.4	1.4	1.3	1.3	1.3
MEA	0.7	0.7	0.8	0.8	0.8	0.8	0.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	23.4	23.8	24.1	24.5	24.7	24.7	24.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	3.2	3.5	3.9	4.4	5.0	5.0	5.5
USA	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 465: MAgPIE m4p\_SSP4 — 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



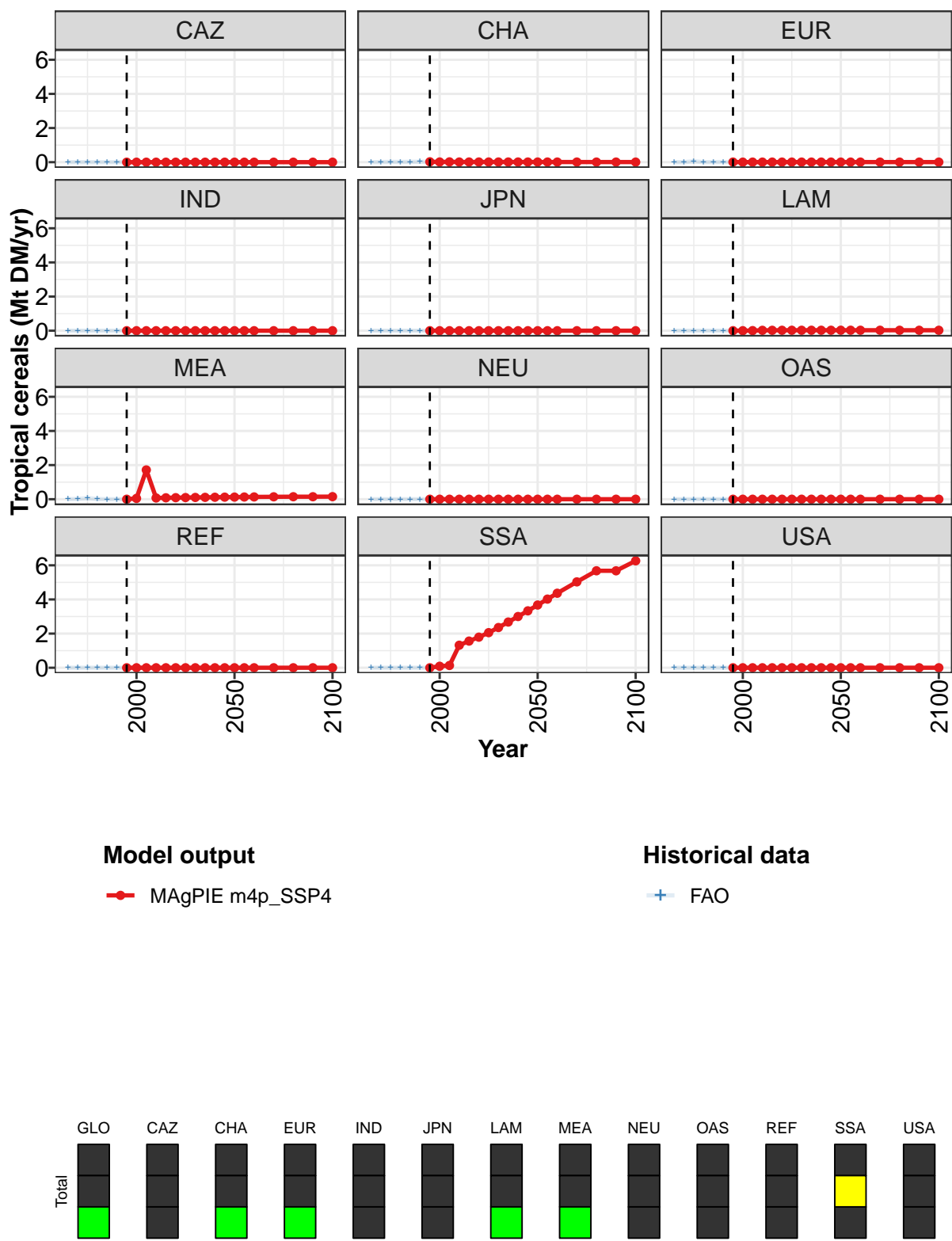


Figure 156: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.03	0.15	1.88	1.43	1.69	1.92	2.19	2.50	2.83	3.16	3.50
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	0.00	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	0.12	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	1.56	1.79	2.06	2.36	2.68	3.00	3.33
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\_SSP4 — Demand—Material—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	3.84	4.19	4.54	5.21	5.86	5.86	6.45
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	0.00	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	0.03	0.03	0.03	0.03	0.03	0.03	0.02
MEA	0.13	0.13	0.13	0.14	0.15	0.15	0.15
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	3.67	4.02	4.37	5.03	5.68	5.68	6.26
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

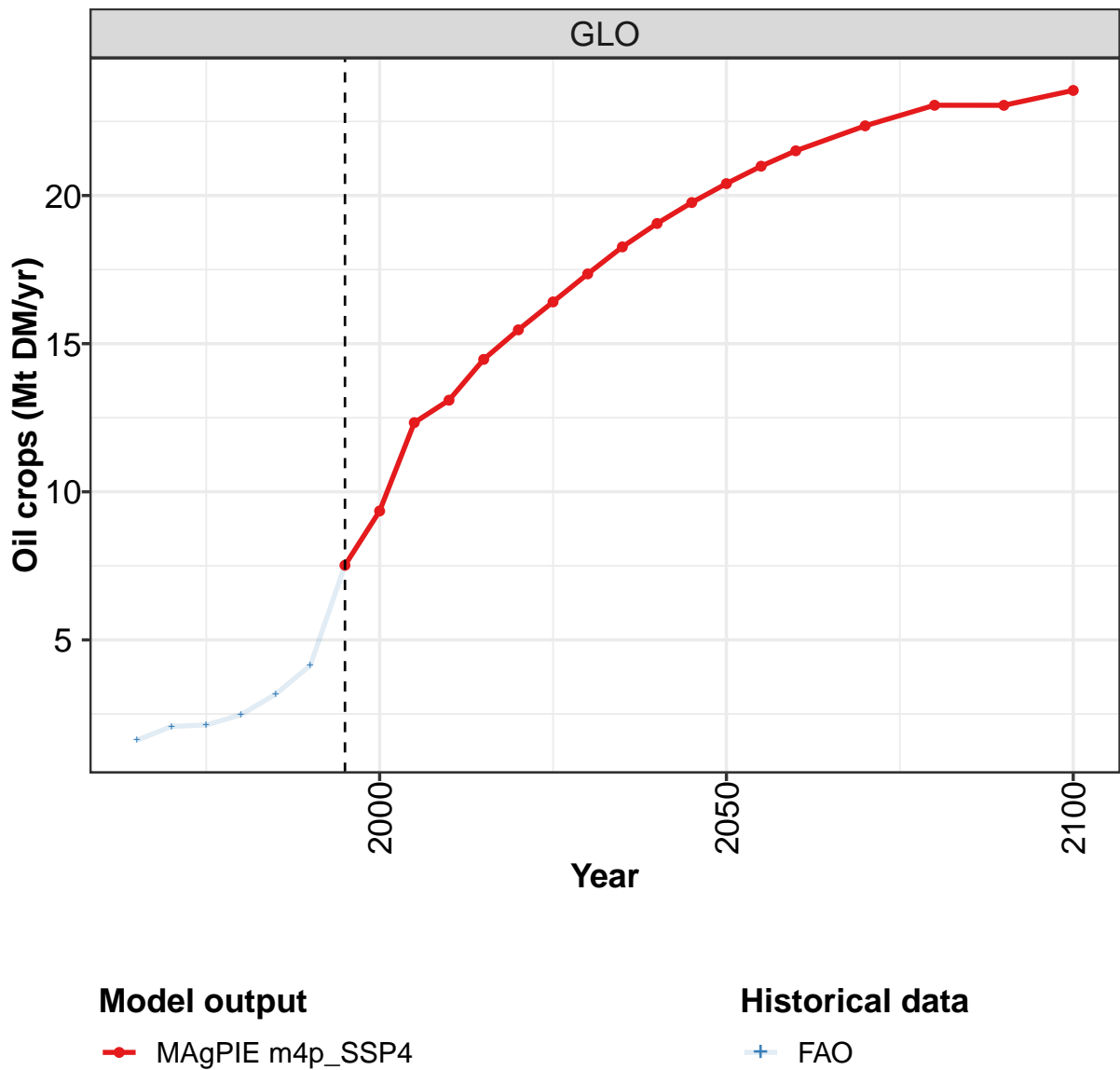
Table 468: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	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



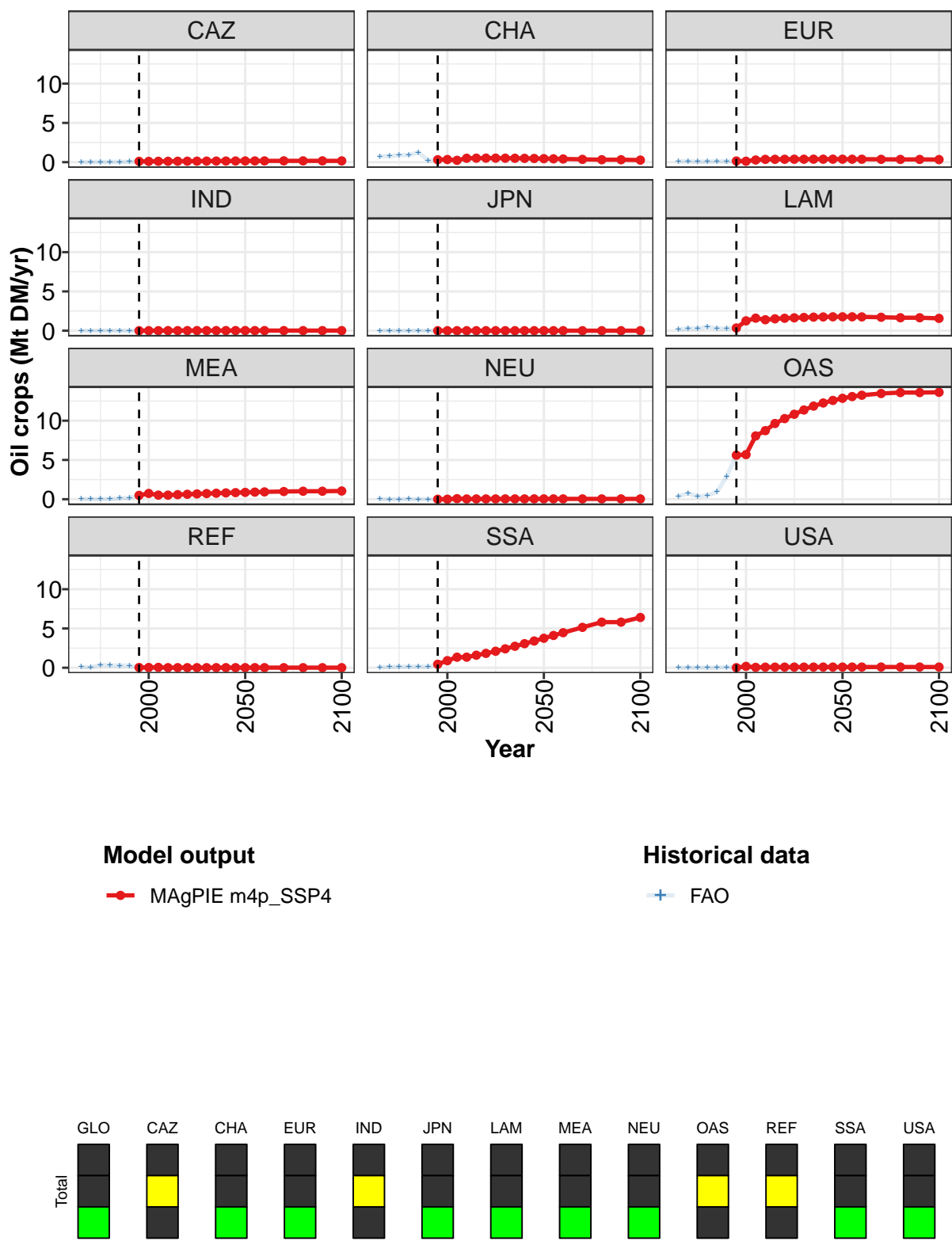


Figure 157: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.5	9.4	12.3	13.1	14.5	15.5	16.4	17.4	18.3	19.1	19.8
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.4
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	1.8	1.8
MEA	0.5	0.7	0.5	0.5	0.6	0.6	0.7	0.7	0.8	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	9.6	10.3	10.8	11.4	11.9	12.3	12.6
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	2.1	2.4	2.7	3.1	3.4
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\_SSP4 — Demand—Material—Crops—Oil crops (Mt DM/yr) [PART 1/2]

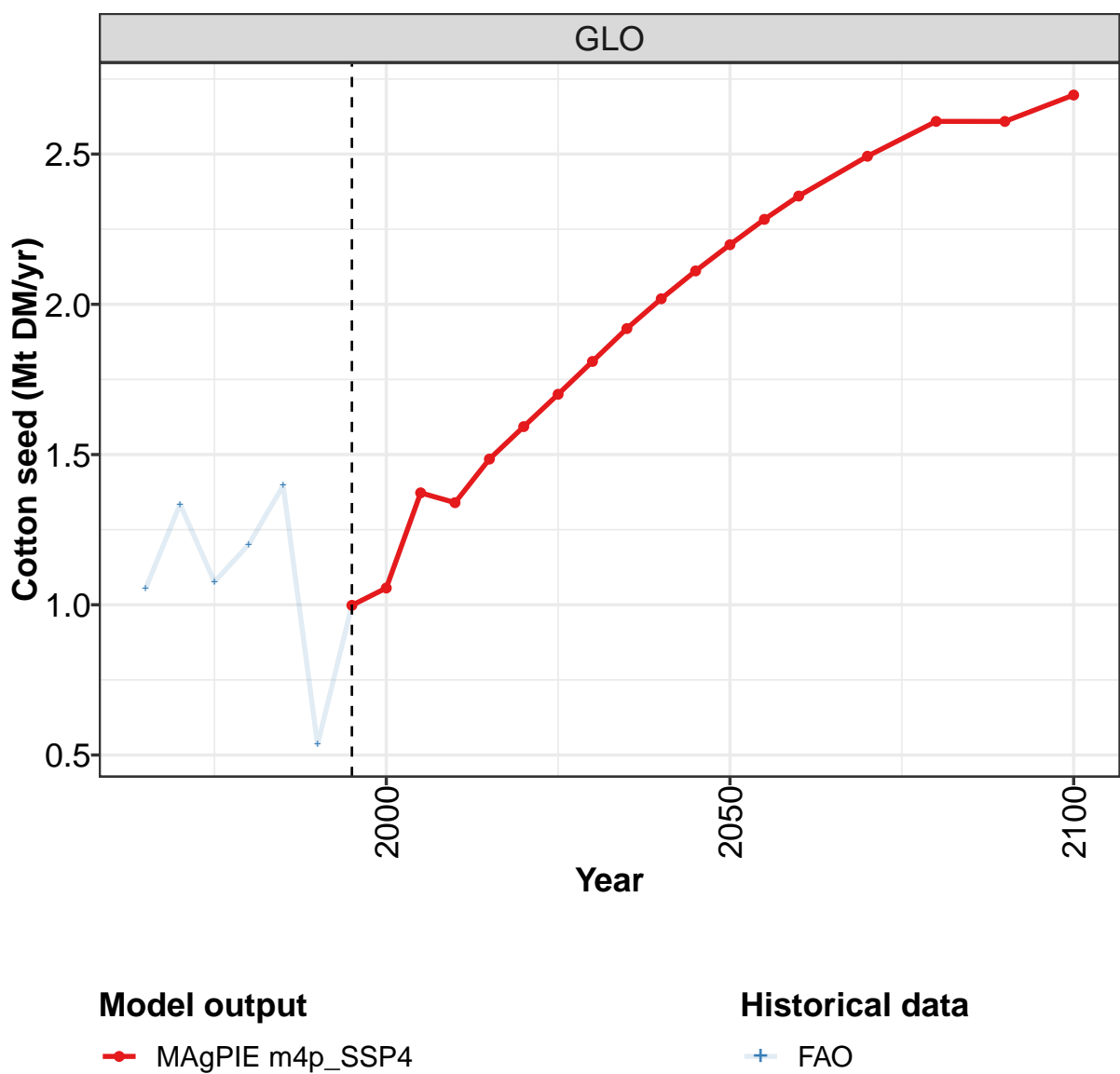
	2050	2055	2060	2070	2080	2090	2100
GLO	20.4	21.0	21.5	22.4	23.0	23.0	23.5
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	0.5	0.4	0.4	0.4	0.3	0.3	0.3
EUR	0.4	0.4	0.4	0.4	0.4	0.4	0.3
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.8	1.8	1.8	1.7	1.7	1.7	1.6
MEA	0.9	0.9	0.9	1.0	1.0	1.0	1.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	12.9	13.1	13.2	13.5	13.6	13.6	13.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	3.8	4.1	4.5	5.1	5.8	5.8	6.4
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 471: MAgPIE m4p\_SSP4 — 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



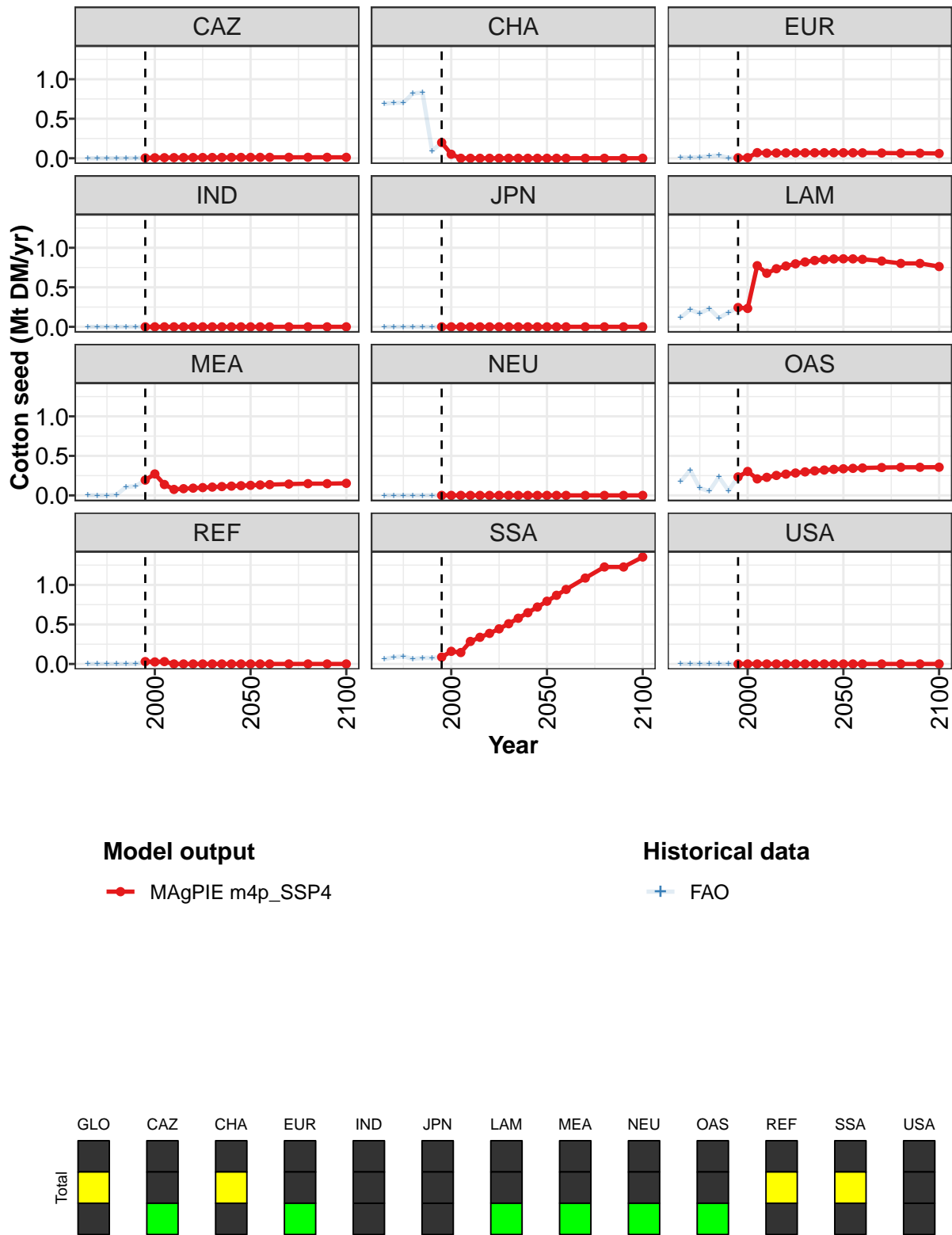


Figure 158: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.06	1.37	1.34	1.48	1.59	1.70	1.81	1.92	2.02	2.11
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	0.07	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	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	0.73	0.77	0.80	0.82	0.84	0.85	0.86
MEA	0.19	0.27	0.14	0.08	0.08	0.09	0.10	0.11	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	0.00
OAS	0.23	0.30	0.21	0.23	0.25	0.27	0.28	0.30	0.31	0.32	0.33
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	0.39	0.44	0.51	0.58	0.65	0.72
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\_SSP4 — Demand—Material—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

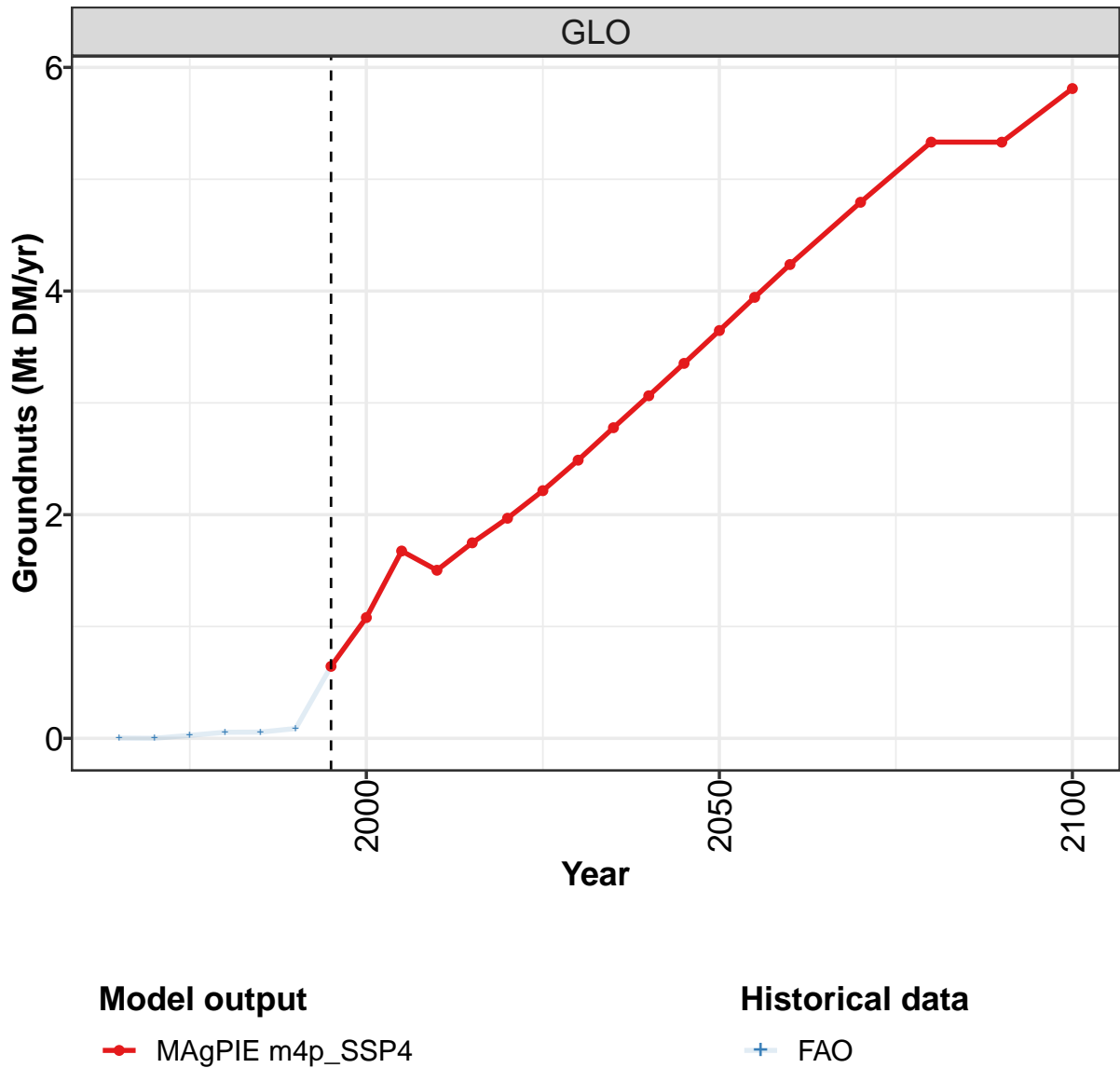
	2050	2055	2060	2070	2080	2090	2100
GLO	2.20	2.28	2.36	2.49	2.61	2.61	2.70
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.07	0.07	0.07	0.07	0.06	0.06	0.06
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.86	0.86	0.85	0.83	0.80	0.80	0.76
MEA	0.13	0.13	0.14	0.14	0.15	0.15	0.15
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.34	0.34	0.35	0.35	0.36	0.36	0.36
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.79	0.87	0.94	1.09	1.23	1.23	1.35
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 474: MAgPIE m4p\_SSP4 — 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



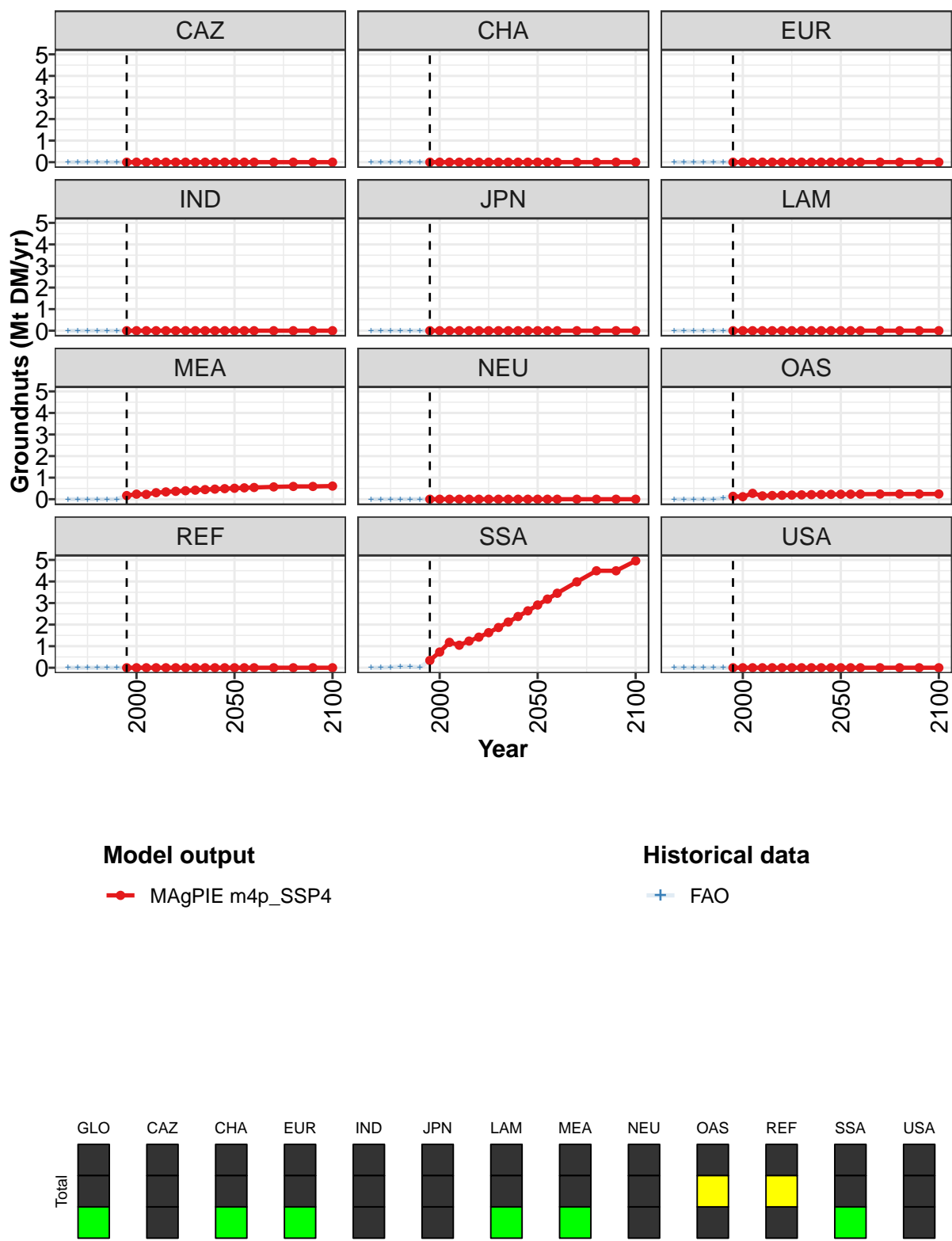


Figure 159: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Oil crops—Groundnuts (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.64	1.08	1.68	1.50	1.75	1.97	2.22	2.49	2.78	3.06	3.35
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	0.37	0.39	0.42	0.45	0.47	0.49
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	0.21	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	0.34	0.73	1.18	1.04	1.24	1.42	1.63	1.86	2.12	2.38	2.64
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\_SSP4 — Demand—Material—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

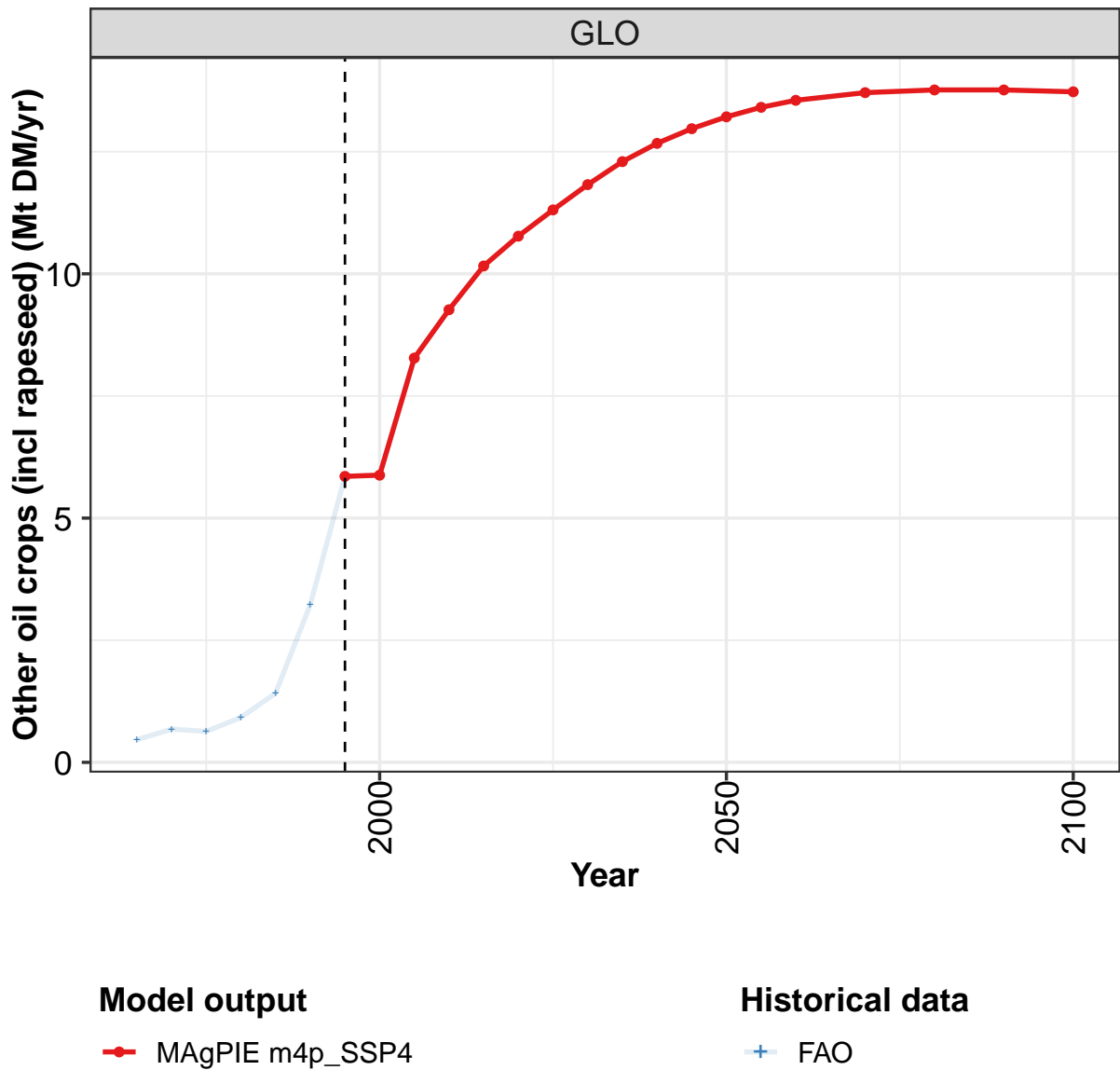
	2050	2055	2060	2070	2080	2090	2100
GLO	3.65	3.94	4.24	4.79	5.33	5.33	5.81
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	0.51	0.53	0.54	0.57	0.59	0.59	0.61
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.23	0.23	0.24	0.24	0.24	0.24	0.24
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	2.91	3.18	3.46	3.98	4.50	4.50	4.96
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 477: MAgPIE m4p\_SSP4 — 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)



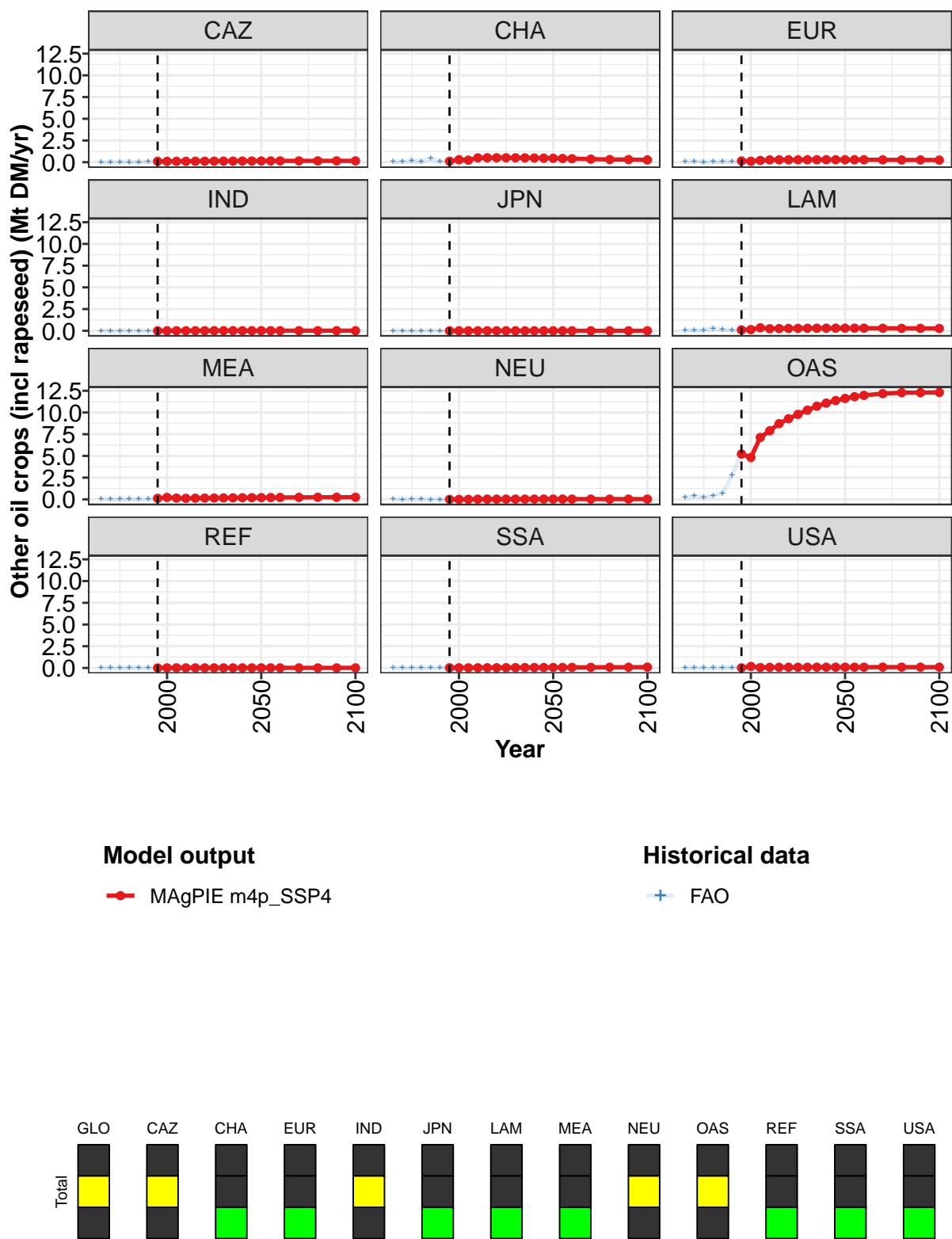


Figure 160: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.9	5.9	8.3	9.3	10.2	10.8	11.3	11.8	12.3	12.7	13.0
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	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	9.3	9.8	10.3	10.7	11.1	11.4
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	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 479: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

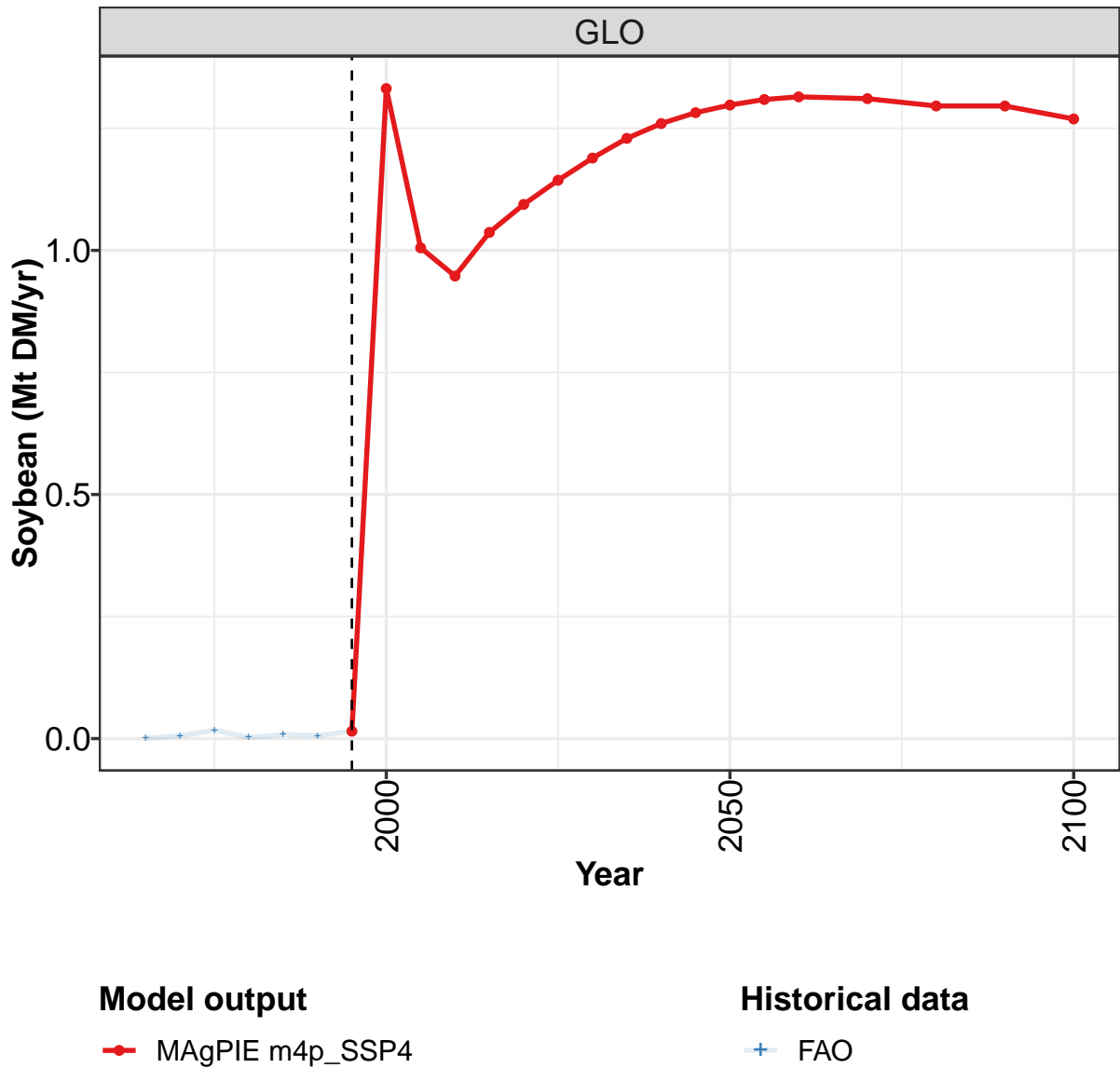
	2050	2055	2060	2070	2080	2090	2100
GLO	13.2	13.4	13.6	13.7	13.8	13.8	13.7
CAZ	0.1	0.1	0.2	0.2	0.2	0.2	0.2
CHA	0.5	0.4	0.4	0.4	0.3	0.3	0.3
EUR	0.3	0.3	0.3	0.3	0.3	0.3	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	11.6	11.8	12.0	12.2	12.3	12.3	12.3
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	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 480: MAgPIE m4p\_SSP4 — 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



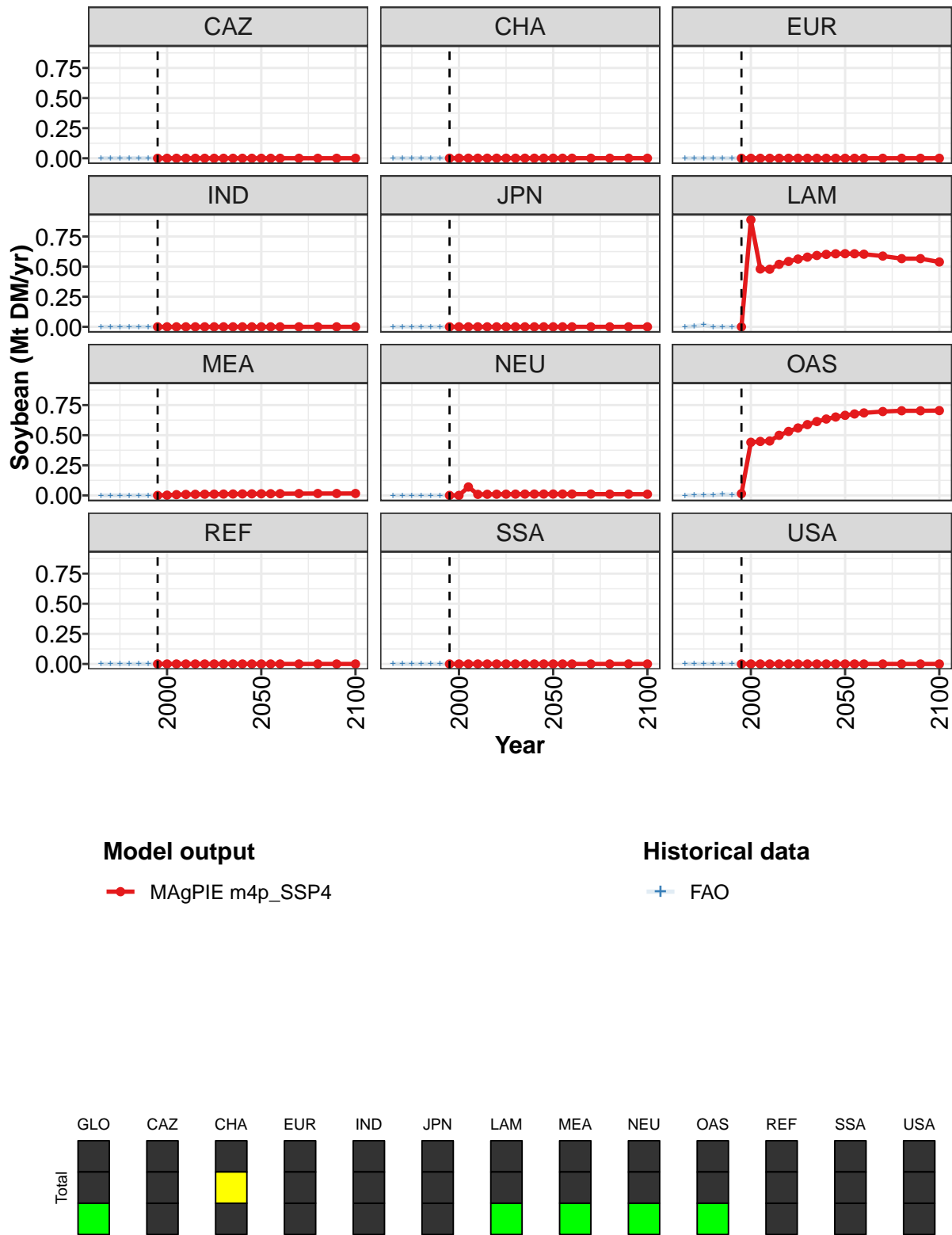


Figure 161: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.02	1.33	1.01	0.95	1.04	1.09	1.14	1.19	1.23	1.26	1.28
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	0.58	0.59	0.60	0.61
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	0.56	0.59	0.61	0.63	0.65
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\_SSP4 — Demand—Material—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

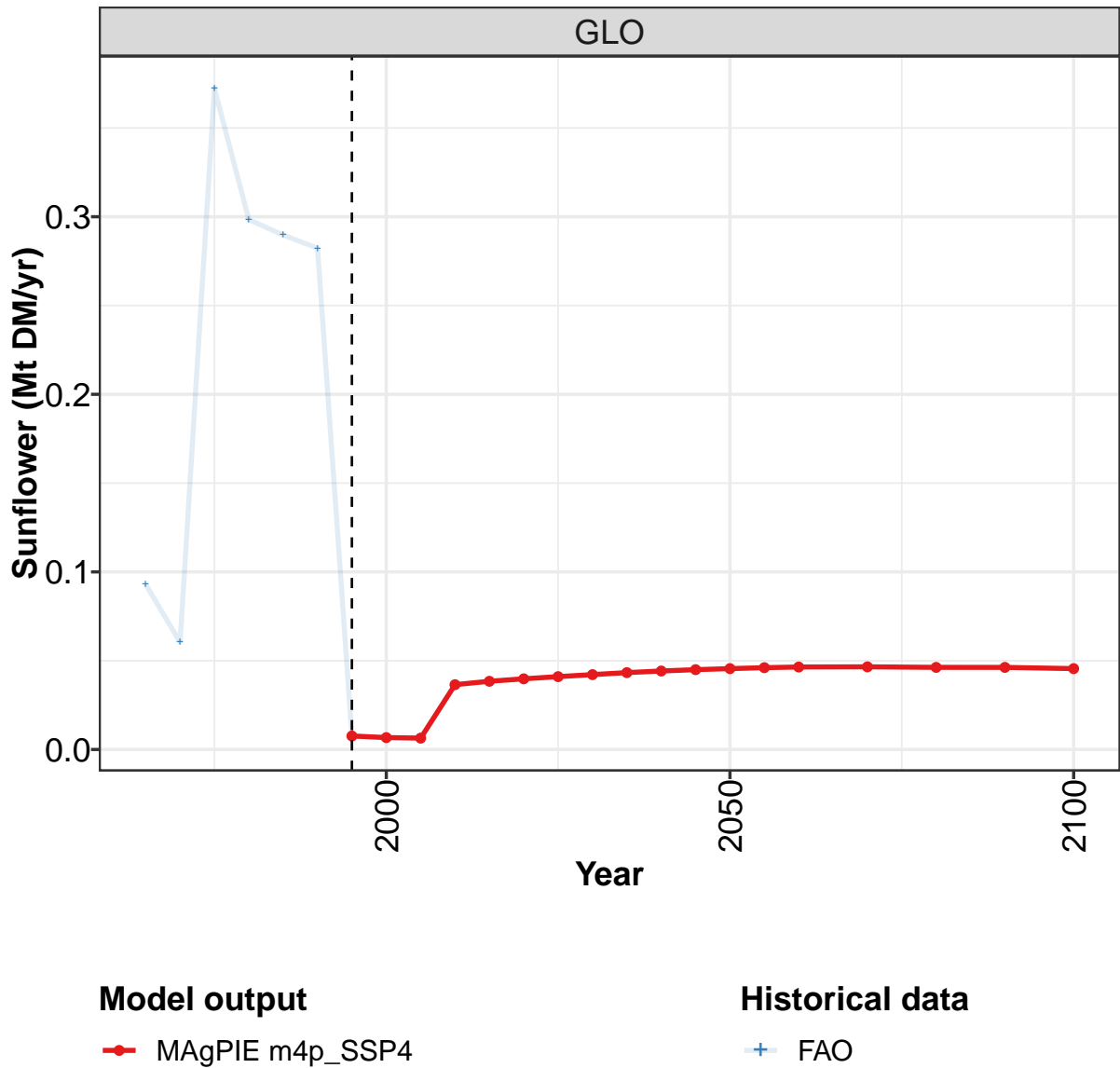
	2050	2055	2060	2070	2080	2090	2100
GLO	1.30	1.31	1.31	1.31	1.30	1.30	1.27
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.61	0.61	0.60	0.59	0.57	0.57	0.54
MEA	0.01	0.01	0.01	0.02	0.02	0.02	0.02
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.66	0.68	0.69	0.70	0.70	0.70	0.70
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\_SSP4 — 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





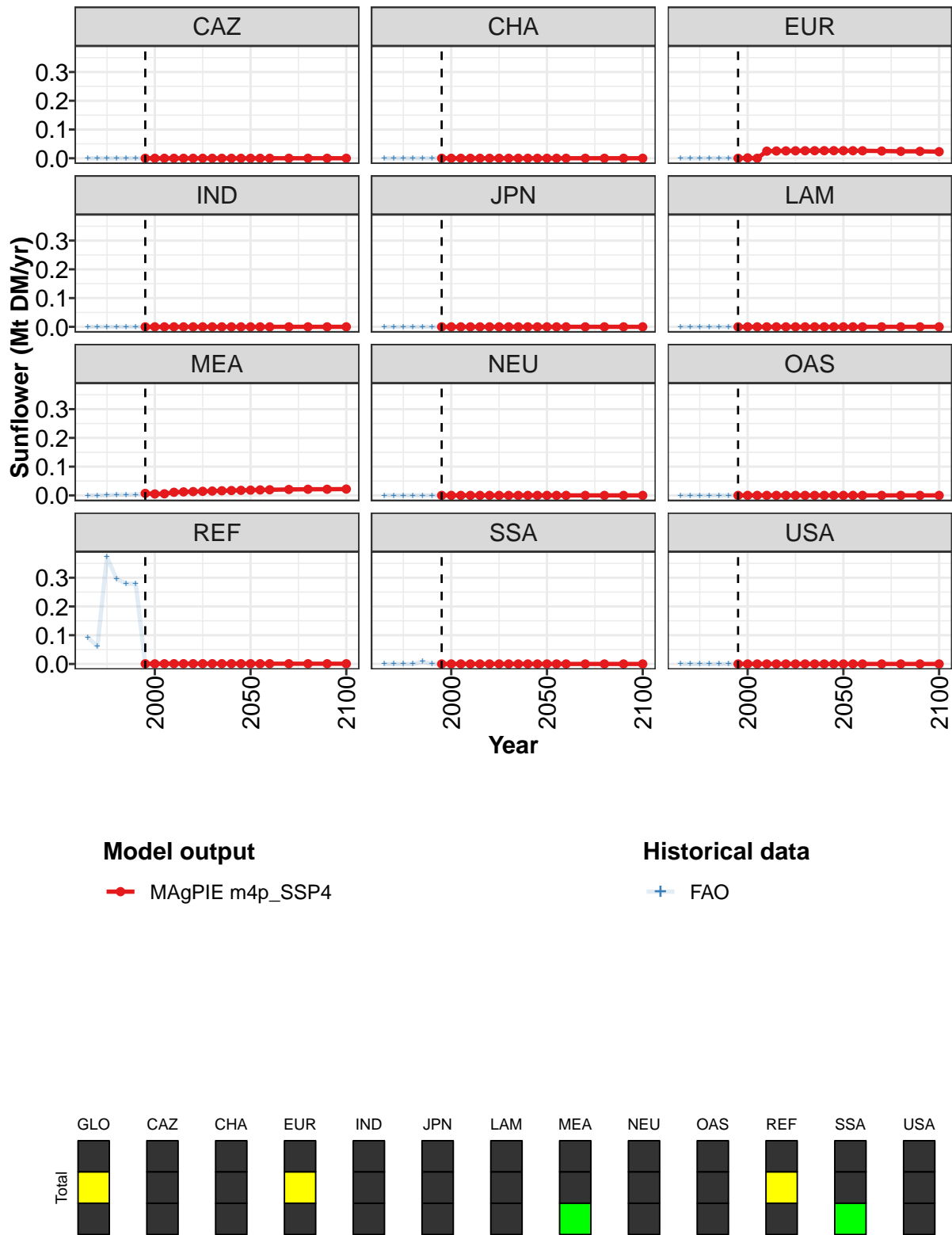


Figure 162: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0076	0.0067	0.0064	0.0365	0.0384	0.0398	0.0410	0.0422	0.0433	0.0442	0.0450
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	0.0253	0.0256	0.0259	0.0261	0.0263	0.0264	0.0264
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	0.0122	0.0132	0.0142	0.0151	0.0161	0.0169	0.0177
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	0.0009	0.0009	0.0009
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\_SSP4 — Demand—Material—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

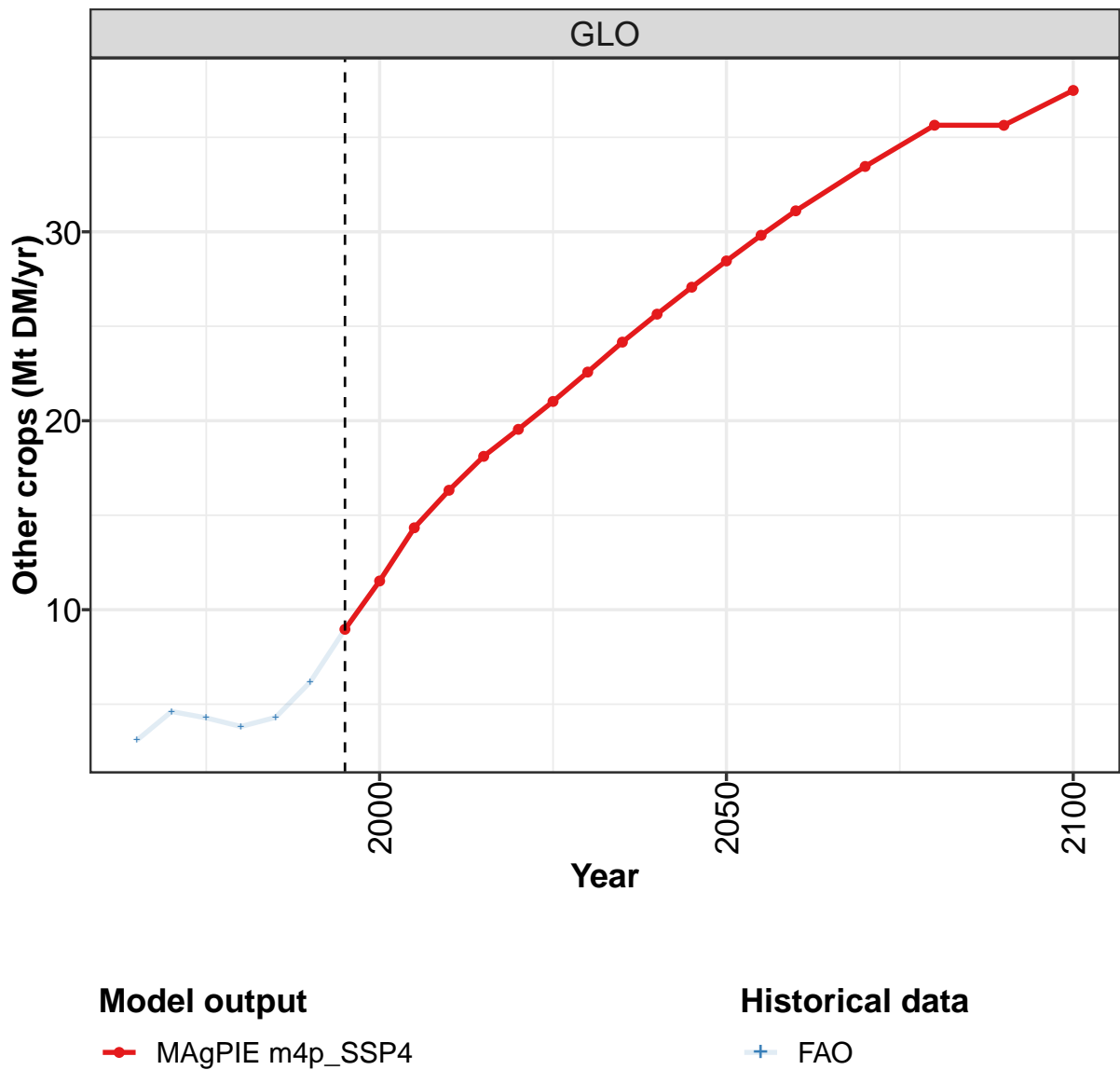
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0455	0.0461	0.0464	0.0465	0.0462	0.0462	0.0455
CAZ	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0263	0.0262	0.0260	0.0251	0.0241	0.0241	0.0228
IND	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
JPN	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	0.0183	0.0190	0.0196	0.0206	0.0214	0.0214	0.0220
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	0.0008	0.0008	0.0008	0.0007
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\_SSP4 — 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



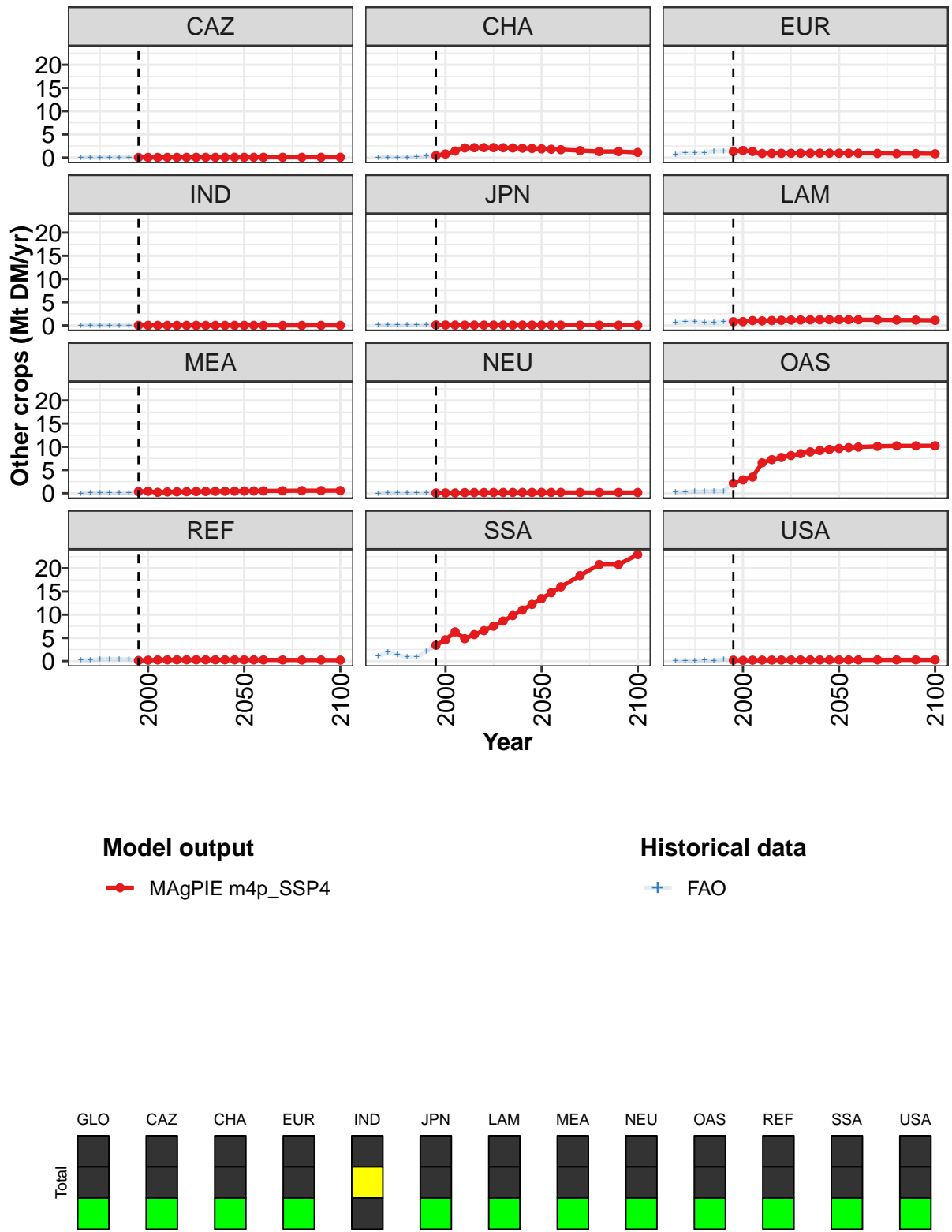


Figure 163: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.0	11.5	14.3	16.3	18.1	19.5	21.0	22.6	24.2	25.6	27.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
CHA	0.4	0.8	1.4	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0
EUR	1.3	1.5	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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	0.5
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	8.1	8.5	8.9	9.2	9.5
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	5.7	6.6	7.5	8.6	9.8	11.0	12.2
USA	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table 488: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops (Mt DM/yr) [PART 1/2]

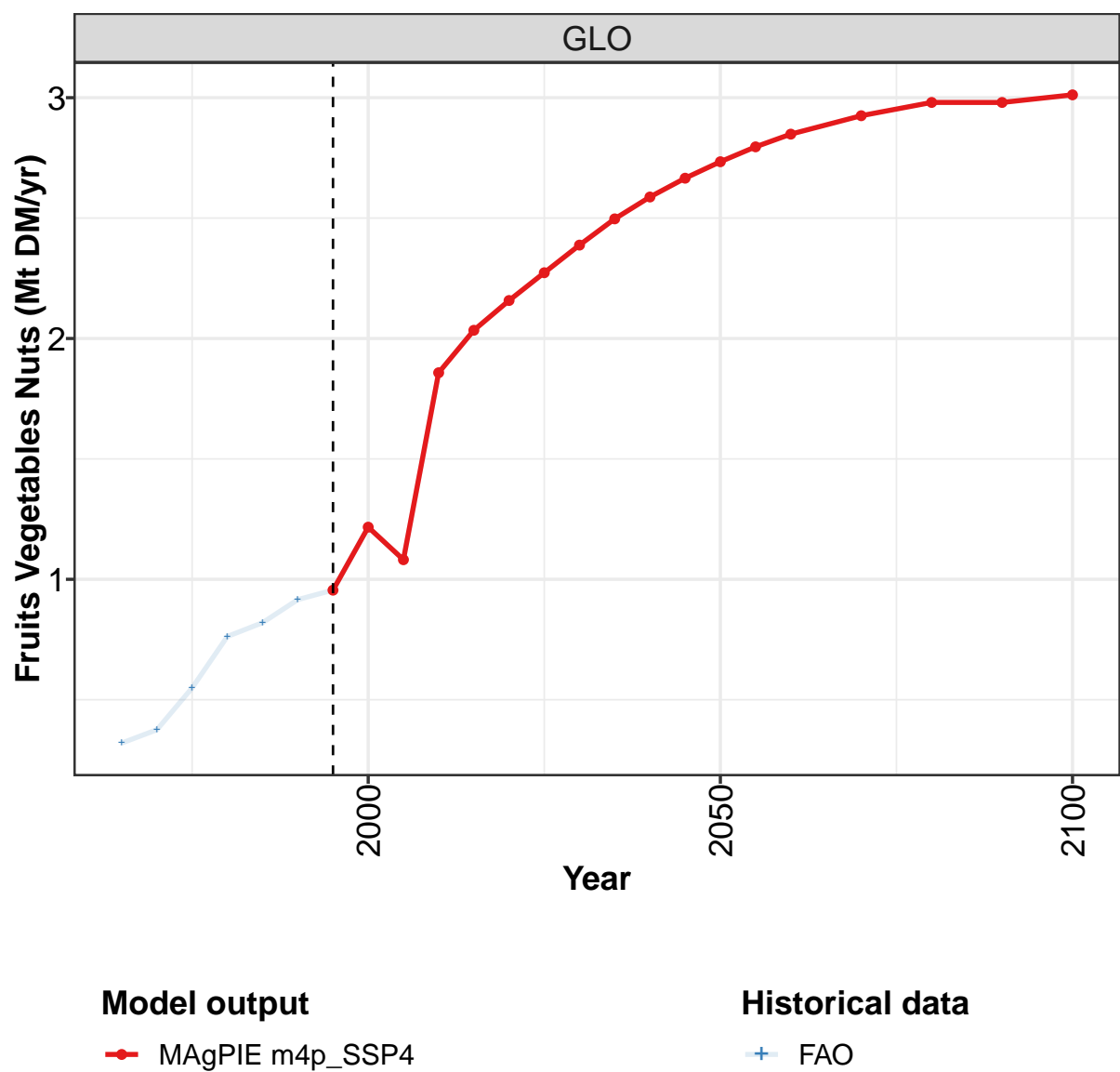
	2050	2055	2060	2070	2080	2090	2100
GLO	28.5	29.8	31.1	33.5	35.6	35.6	37.5
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	1.9	1.8	1.7	1.5	1.3	1.3	1.1
EUR	0.9	0.9	0.9	0.9	0.9	0.9	0.8
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	1.2	1.2	1.2	1.2	1.1	1.1	1.1
MEA	0.5	0.5	0.5	0.5	0.5	0.5	0.6
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.1
OAS	9.7	9.8	10.0	10.1	10.2	10.2	10.2
REF	0.3	0.3	0.3	0.2	0.2	0.2	0.2
SSA	13.5	14.7	16.0	18.4	20.8	20.8	23.0
USA	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Table 489: MAgPIE m4p\_SSP4 — 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



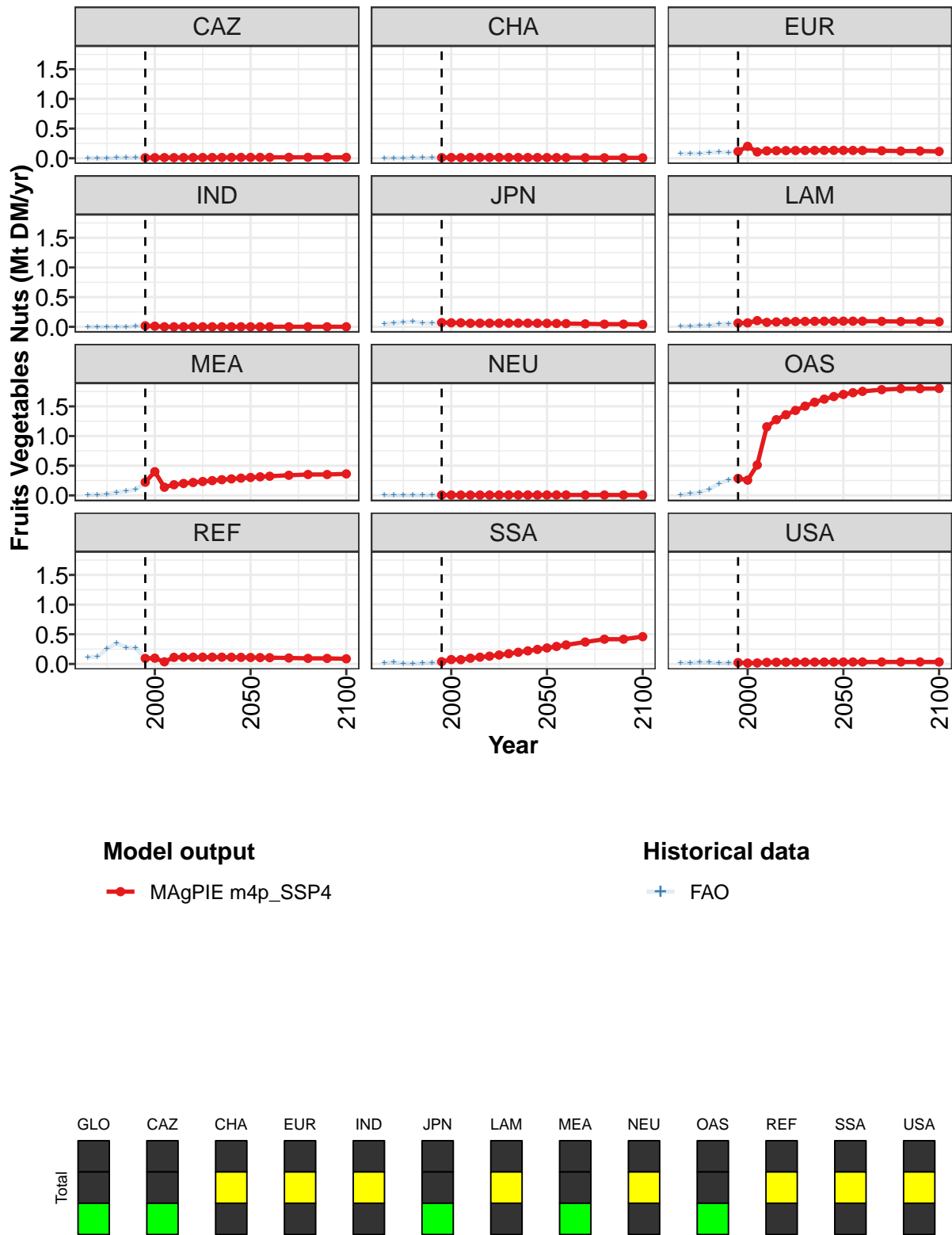


Figure 164: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.95	1.22	1.08	1.86	2.03	2.16	2.27	2.39	2.50	2.59	2.67
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
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	0.13	0.13	0.13	0.13
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	0.06	0.06	0.06	0.06
LAM	0.06	0.07	0.10	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10
MEA	0.22	0.40	0.14	0.18	0.20	0.22	0.23	0.25	0.26	0.28	0.29
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	1.36	1.43	1.50	1.57	1.62	1.66
REF	0.09	0.10	0.04	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
SSA	0.04	0.07	0.07	0.10	0.11	0.13	0.15	0.17	0.20	0.22	0.24
USA	0.02	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

Table 491: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2.73	2.80	2.85	2.93	2.98	2.98	3.01
CAZ	0.01	0.01	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
EUR	0.13	0.13	0.13	0.13	0.12	0.12	0.11
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.06	0.06	0.05	0.05	0.04	0.04	0.04
LAM	0.10	0.10	0.09	0.09	0.09	0.09	0.08
MEA	0.30	0.31	0.32	0.34	0.35	0.35	0.36
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	1.70	1.73	1.75	1.78	1.80	1.80	1.80
REF	0.11	0.11	0.11	0.10	0.09	0.09	0.09
SSA	0.27	0.30	0.32	0.37	0.42	0.42	0.46
USA	0.03	0.03	0.03	0.03	0.03	0.03	0.03

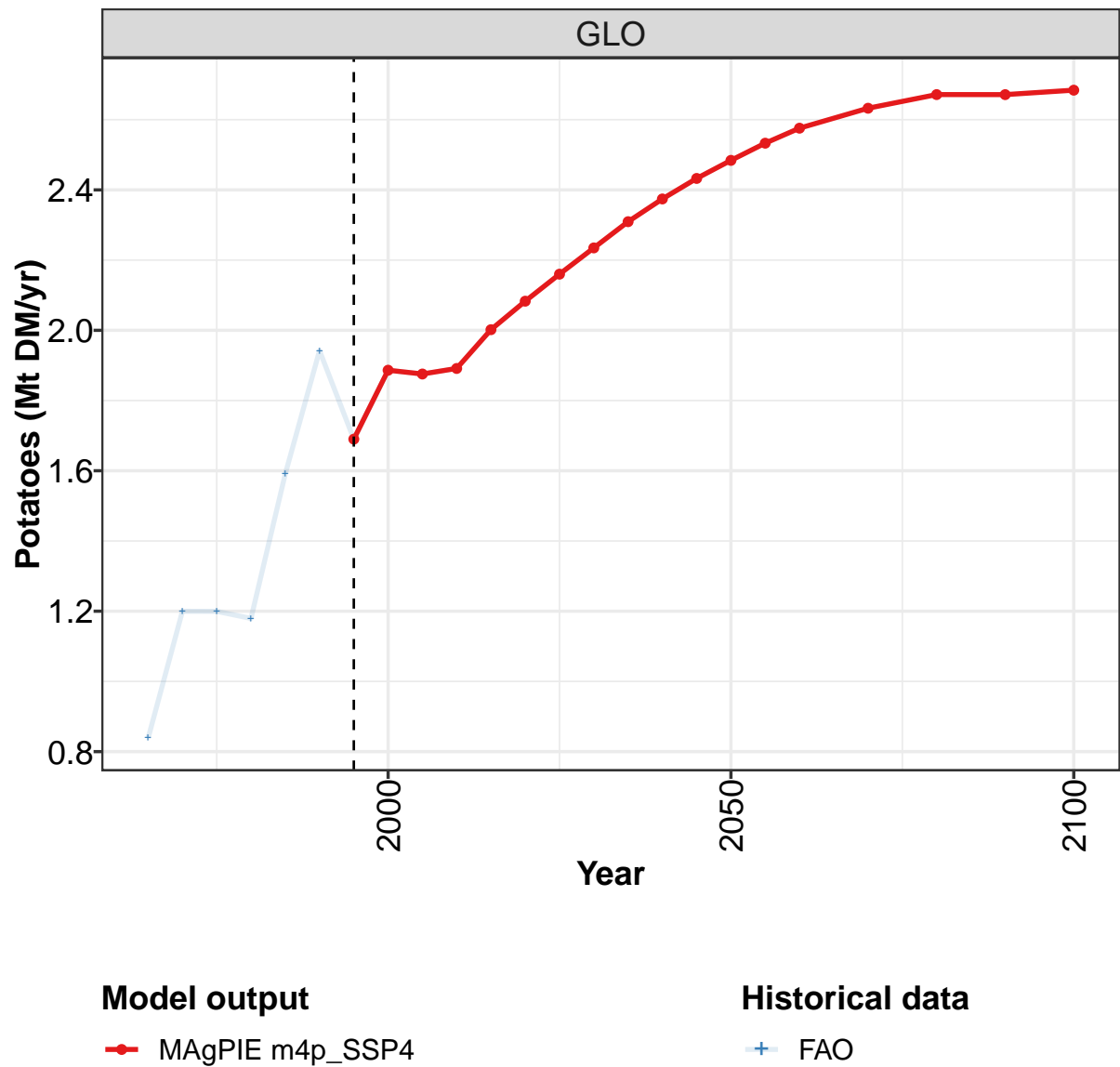
Table 492: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 2/2]

	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



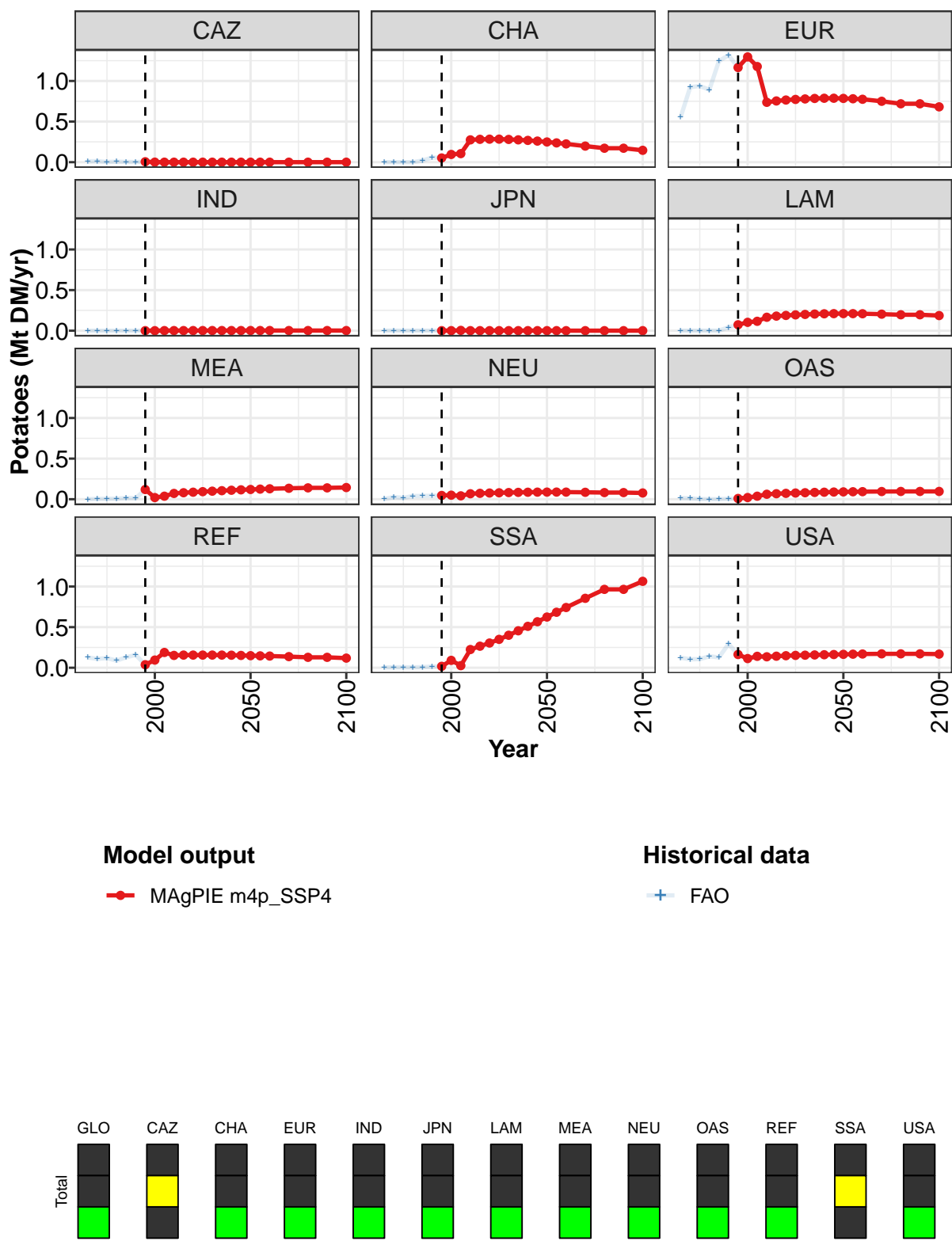


Figure 165: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.69	1.89	1.88	1.89	2.00	2.08	2.16	2.23	2.31	2.37	2.43
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	0.28	0.28	0.27	0.27	0.26
EUR	1.17	1.30	1.18	0.74	0.75	0.77	0.77	0.78	0.78	0.79	0.79
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	0.21	0.21	0.21
MEA	0.12	0.02	0.04	0.07	0.08	0.09	0.09	0.10	0.11	0.11	0.12
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	0.09	0.09
REF	0.04	0.09	0.19	0.15	0.16	0.16	0.16	0.16	0.16	0.15	0.15
SSA	0.02	0.09	0.03	0.22	0.27	0.30	0.35	0.40	0.46	0.51	0.57
USA	0.16	0.11	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.16

Table 494: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

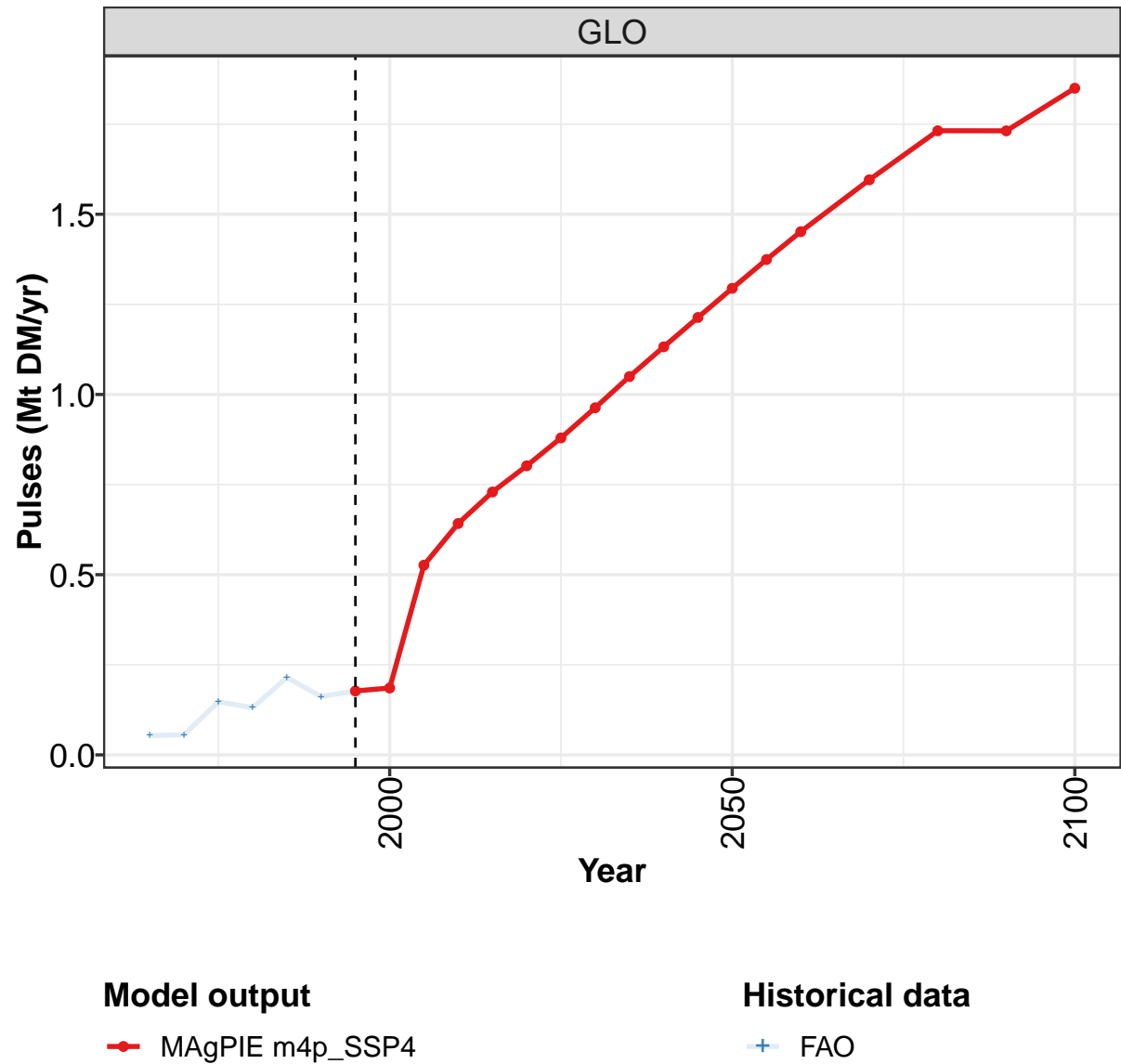
	2050	2055	2060	2070	2080	2090	2100
GLO	2.48	2.53	2.58	2.63	2.67	2.67	2.68
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.25	0.24	0.22	0.20	0.17	0.17	0.15
EUR	0.79	0.78	0.77	0.75	0.72	0.72	0.68
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.21	0.21	0.21	0.20	0.20	0.20	0.19
MEA	0.12	0.12	0.13	0.13	0.14	0.14	0.14
NEU	0.09	0.09	0.09	0.09	0.08	0.08	0.08
OAS	0.09	0.09	0.09	0.09	0.10	0.10	0.10
REF	0.15	0.15	0.14	0.14	0.13	0.13	0.12
SSA	0.62	0.68	0.74	0.85	0.97	0.97	1.06
USA	0.17	0.17	0.17	0.17	0.17	0.17	0.17

Table 495: MAgPIE m4p\_SSP4 — 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



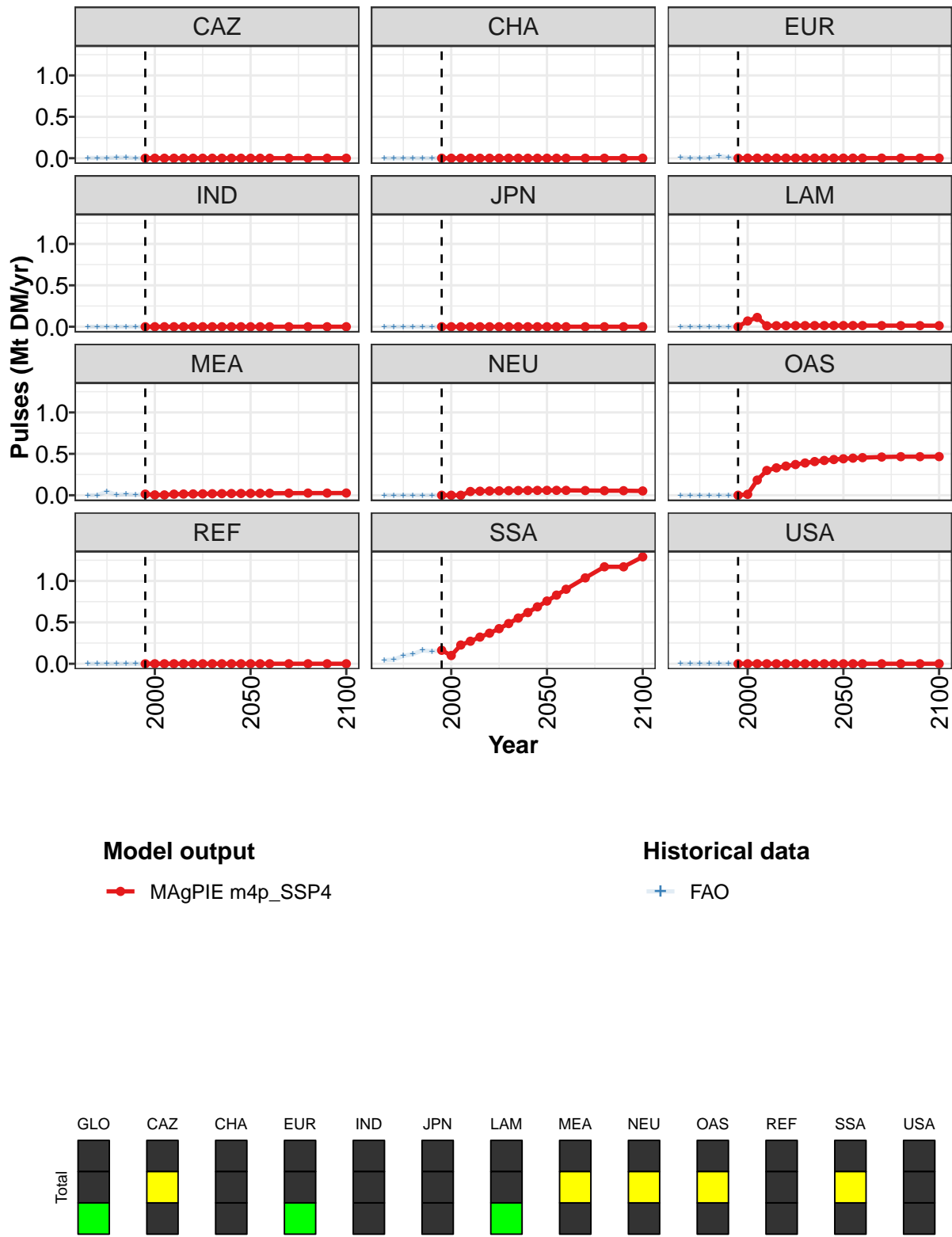


Figure 166: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.18	0.19	0.53	0.64	0.73	0.80	0.88	0.96	1.05	1.13	1.21
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	0.39	0.41	0.42	0.43
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	0.32	0.37	0.42	0.49	0.55	0.62	0.69
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\_SSP4 — Demand—Material—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

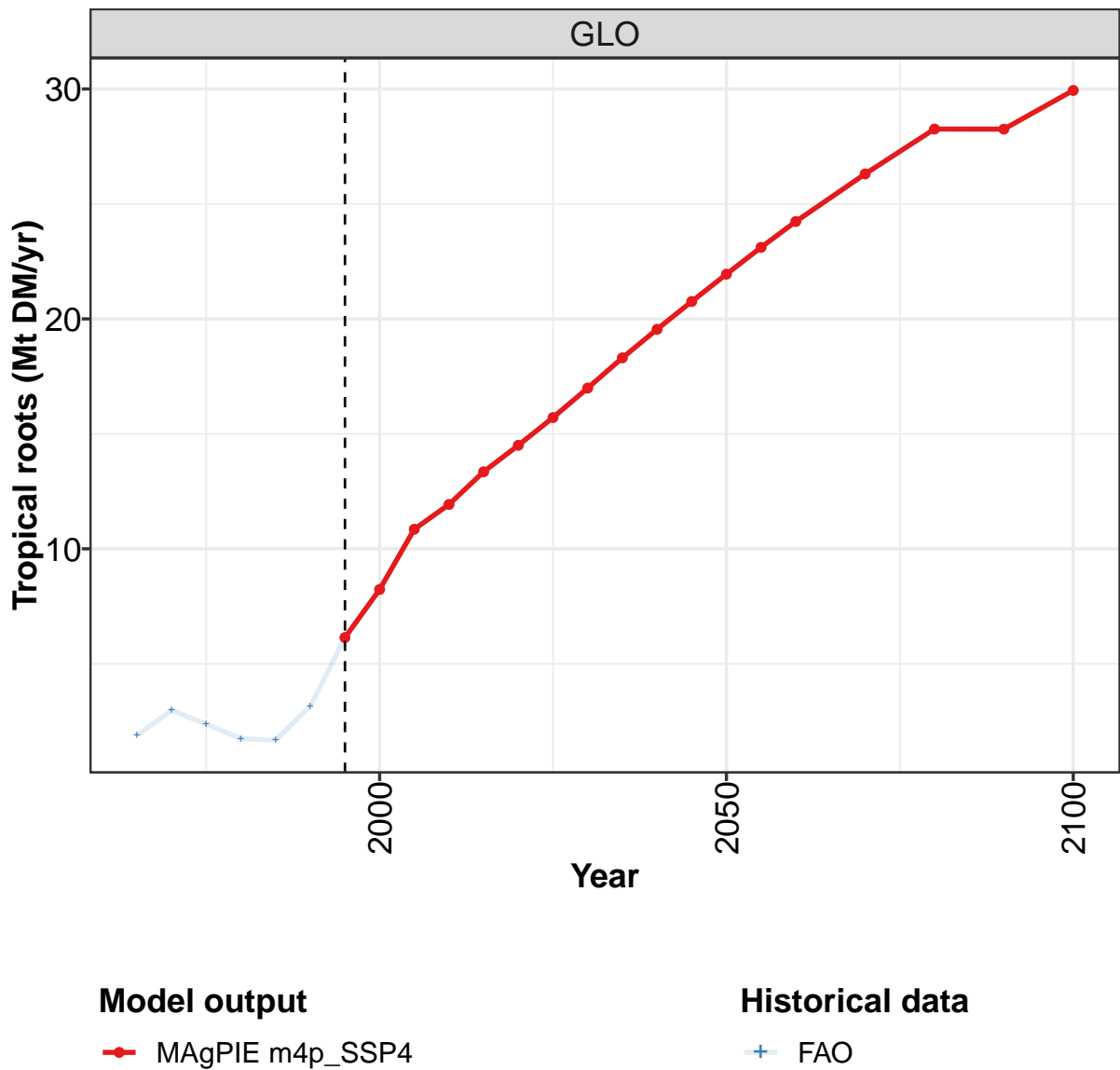
	2050	2055	2060	2070	2080	2090	2100
GLO	1.29	1.37	1.45	1.60	1.73	1.73	1.85
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.02	0.02	0.02	0.03	0.03	0.03	0.03
NEU	0.06	0.06	0.06	0.06	0.05	0.05	0.05
OAS	0.44	0.45	0.45	0.46	0.47	0.47	0.47
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.76	0.83	0.90	1.04	1.17	1.17	1.29
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 498: MAgPIE m4p\_SSP4 — 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



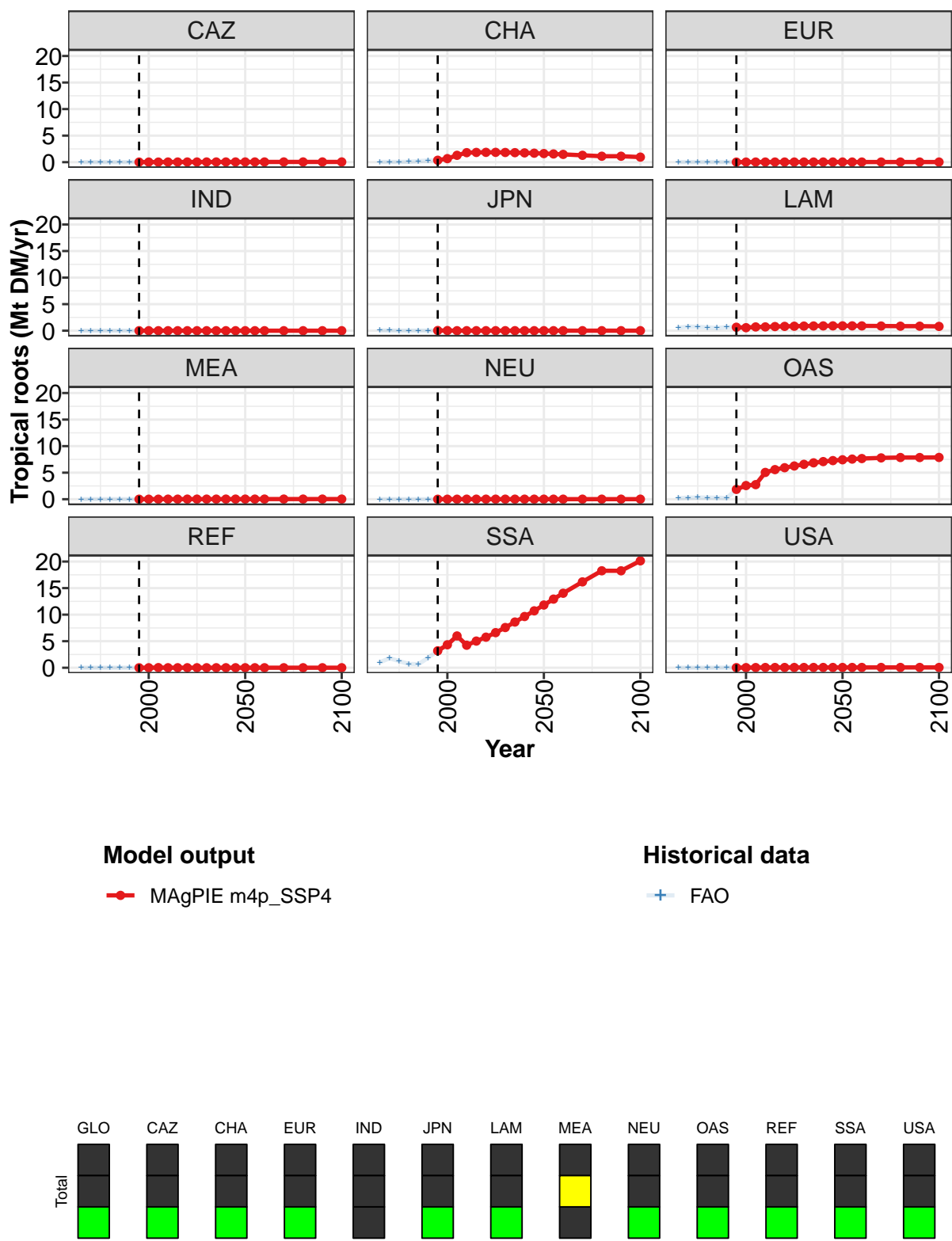


Figure 167: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Tropical roots (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.1	8.2	10.9	11.9	13.4	14.5	15.7	17.0	18.3	19.5	20.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.4	0.7	1.3	1.8	1.8	1.9	1.9	1.8	1.8	1.8	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	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	6.3	6.6	6.9	7.1	7.3
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	5.0	5.8	6.6	7.6	8.6	9.6	10.7
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1

Table 500: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Other crops—Tropical roots (Mt DM/yr)  
[PART 1/2]

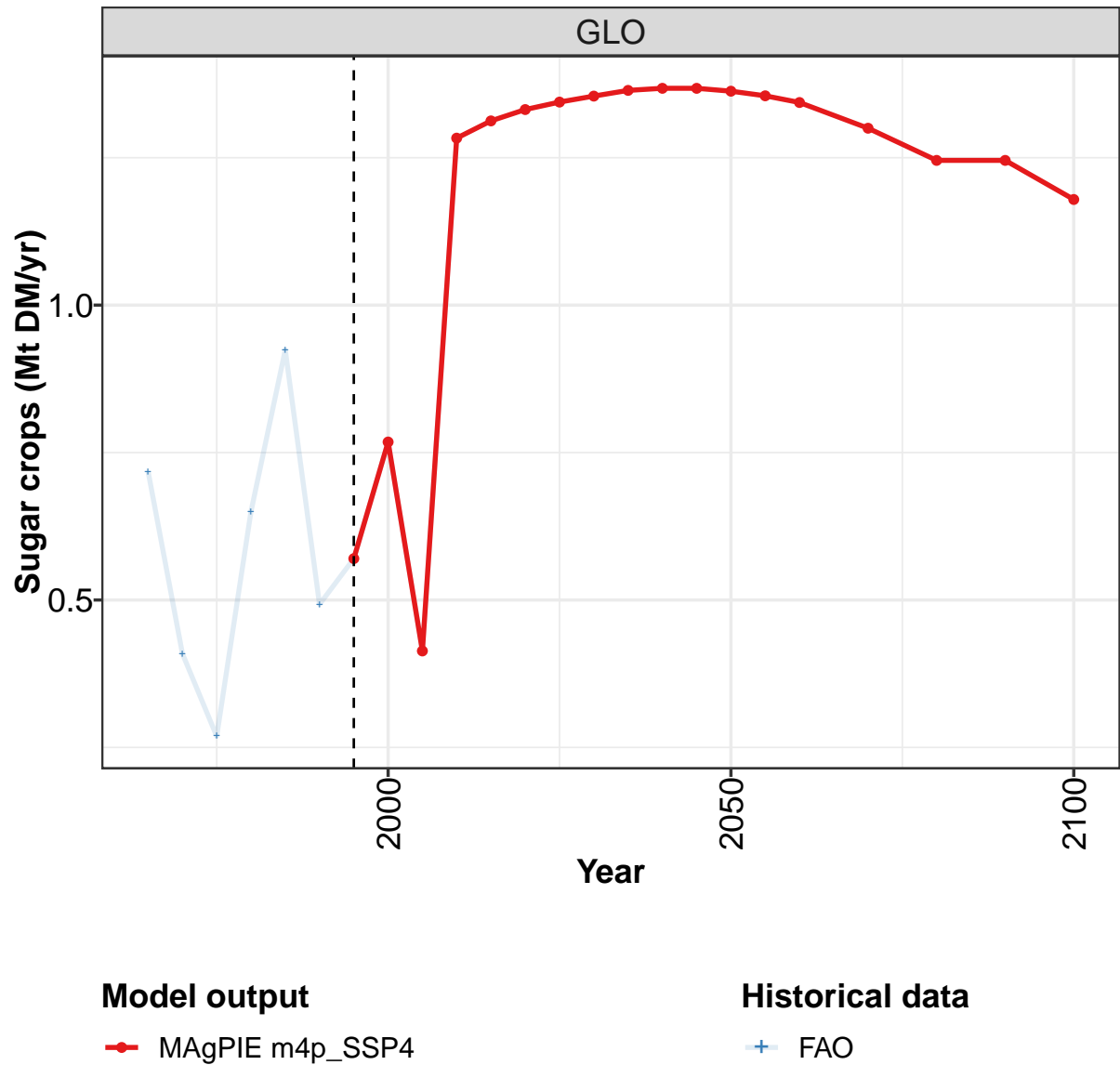
	2050	2055	2060	2070	2080	2090	2100
GLO	21.9	23.1	24.2	26.3	28.3	28.3	29.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	1.6	1.5	1.5	1.3	1.1	1.1	1.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.9	0.9	0.9	0.9	0.9	0.8
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	7.4	7.6	7.7	7.8	7.9	7.9	7.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	11.8	12.9	14.0	16.2	18.3	18.3	20.1
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 501: MAgPIE m4p\_SSP4 — 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*



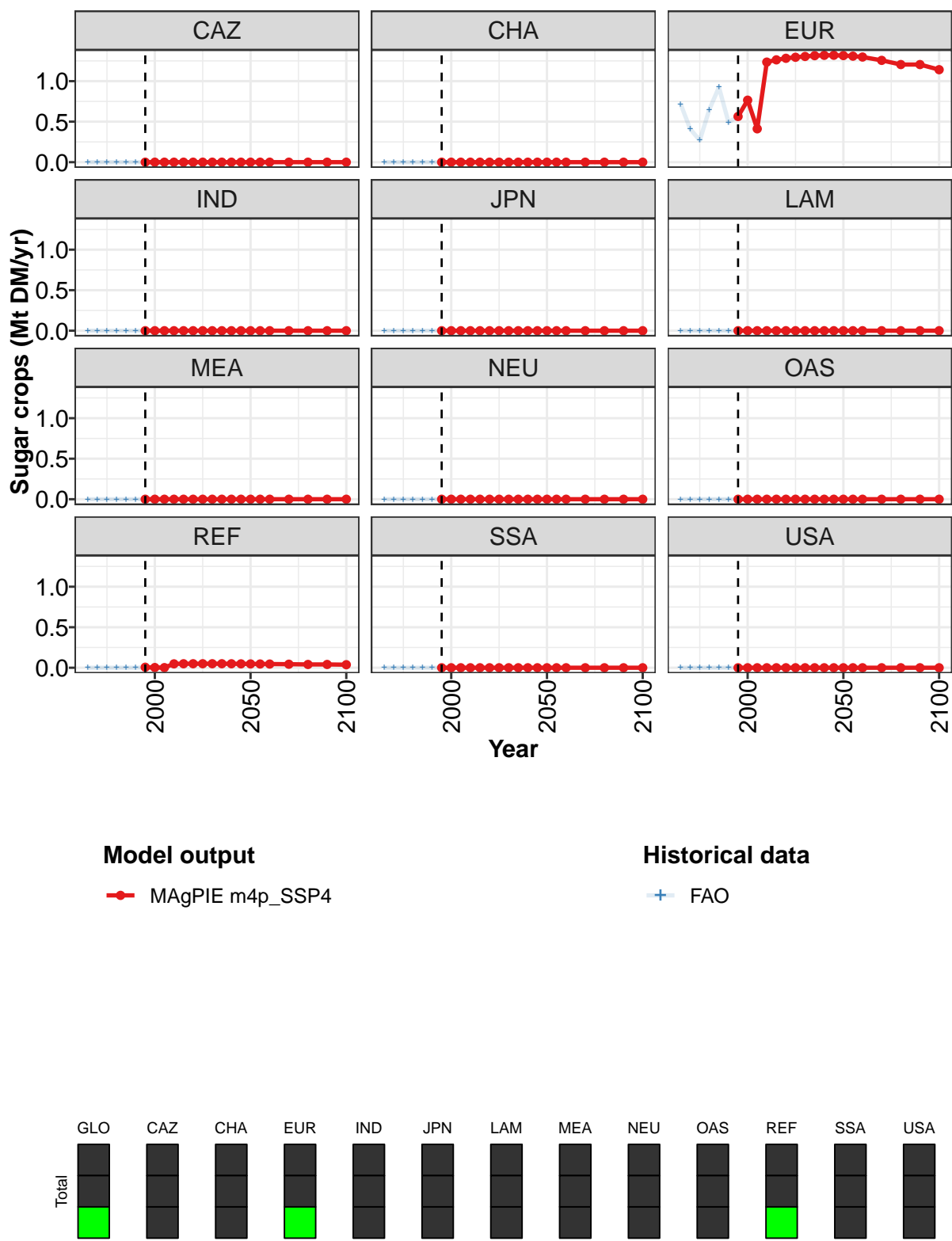


Figure 168: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.57	0.77	0.41	1.28	1.31	1.33	1.34	1.35	1.36	1.37	1.37
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	1.28	1.29	1.30	1.31	1.32	1.32
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\_SSP4 — Demand—Material—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

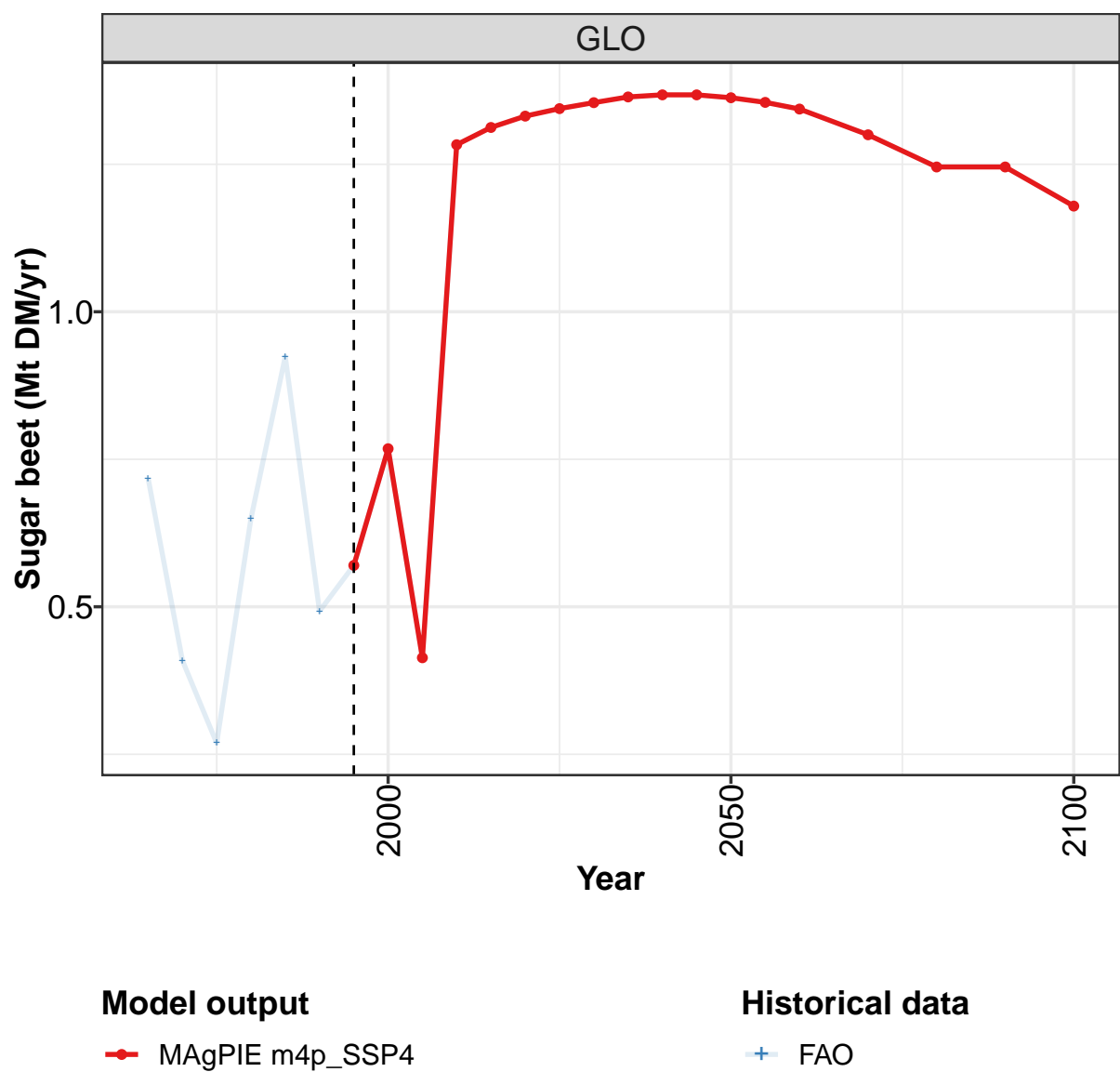
	2050	2055	2060	2070	2080	2090	2100
GLO	1.36	1.35	1.34	1.30	1.25	1.25	1.18
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	1.32	1.31	1.30	1.26	1.20	1.20	1.14
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	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	0.04	0.04	0.04	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\_SSP4 — 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



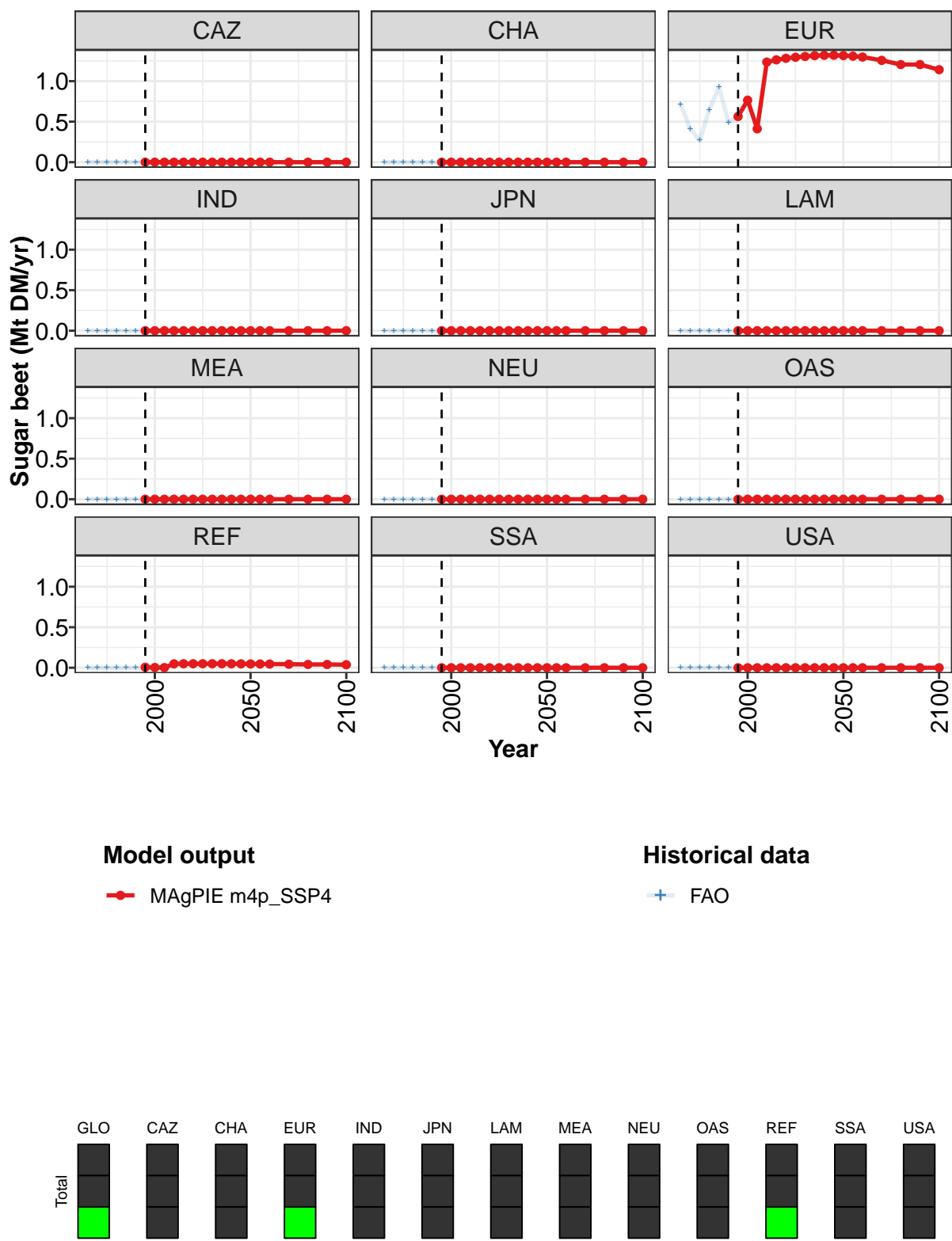


Figure 169: MAgPIE m4p\_SSP4 — Demand—Material—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.57	0.77	0.41	1.28	1.31	1.33	1.34	1.35	1.36	1.37	1.37
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	1.28	1.29	1.30	1.31	1.32	1.32
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\_SSP4 — Demand—Material—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

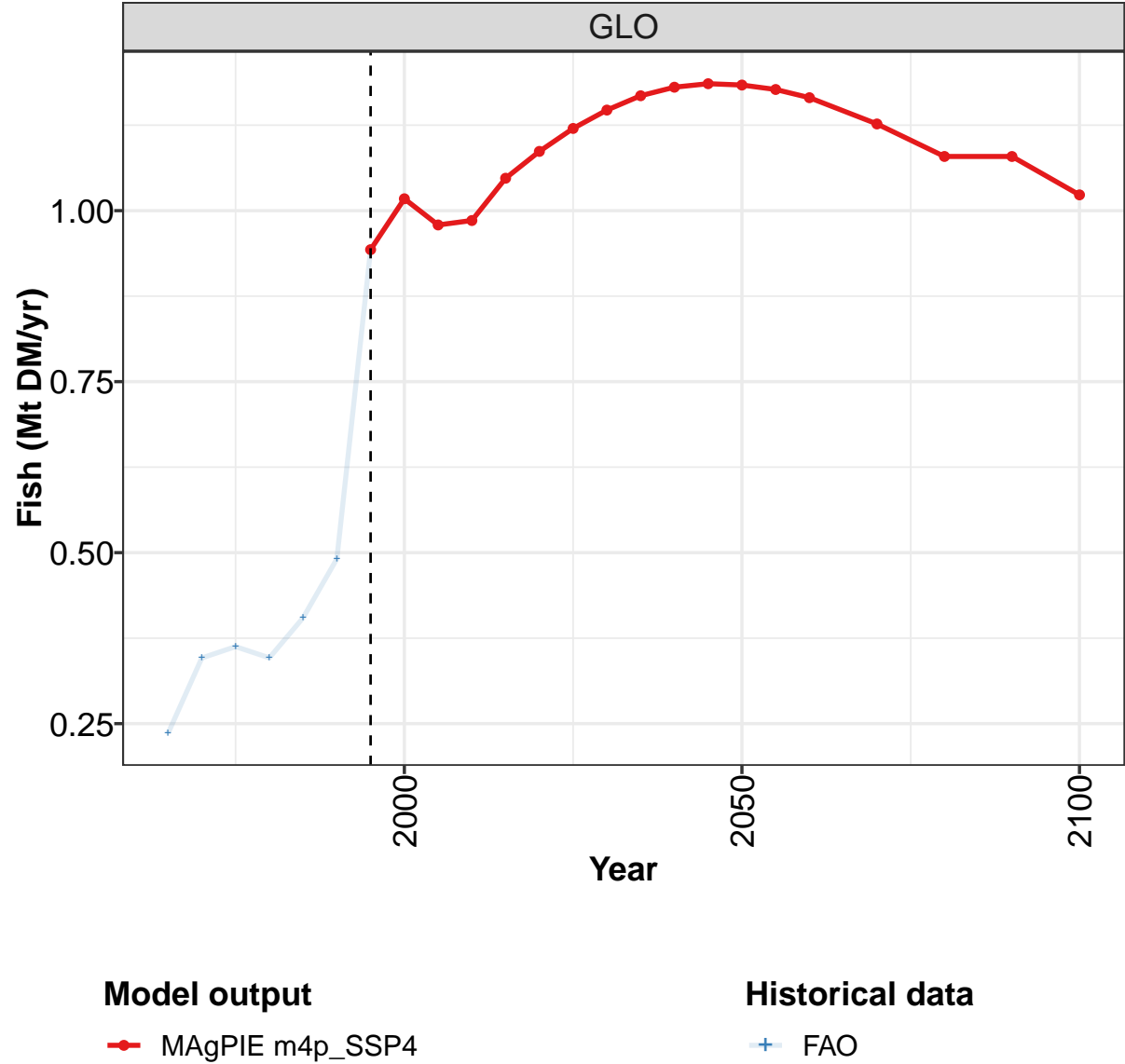
	2050	2055	2060	2070	2080	2090	2100
GLO	1.36	1.35	1.34	1.30	1.25	1.25	1.18
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	1.32	1.31	1.30	1.26	1.20	1.20	1.14
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	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	0.04	0.04	0.04	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\_SSP4 — Demand—Material—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

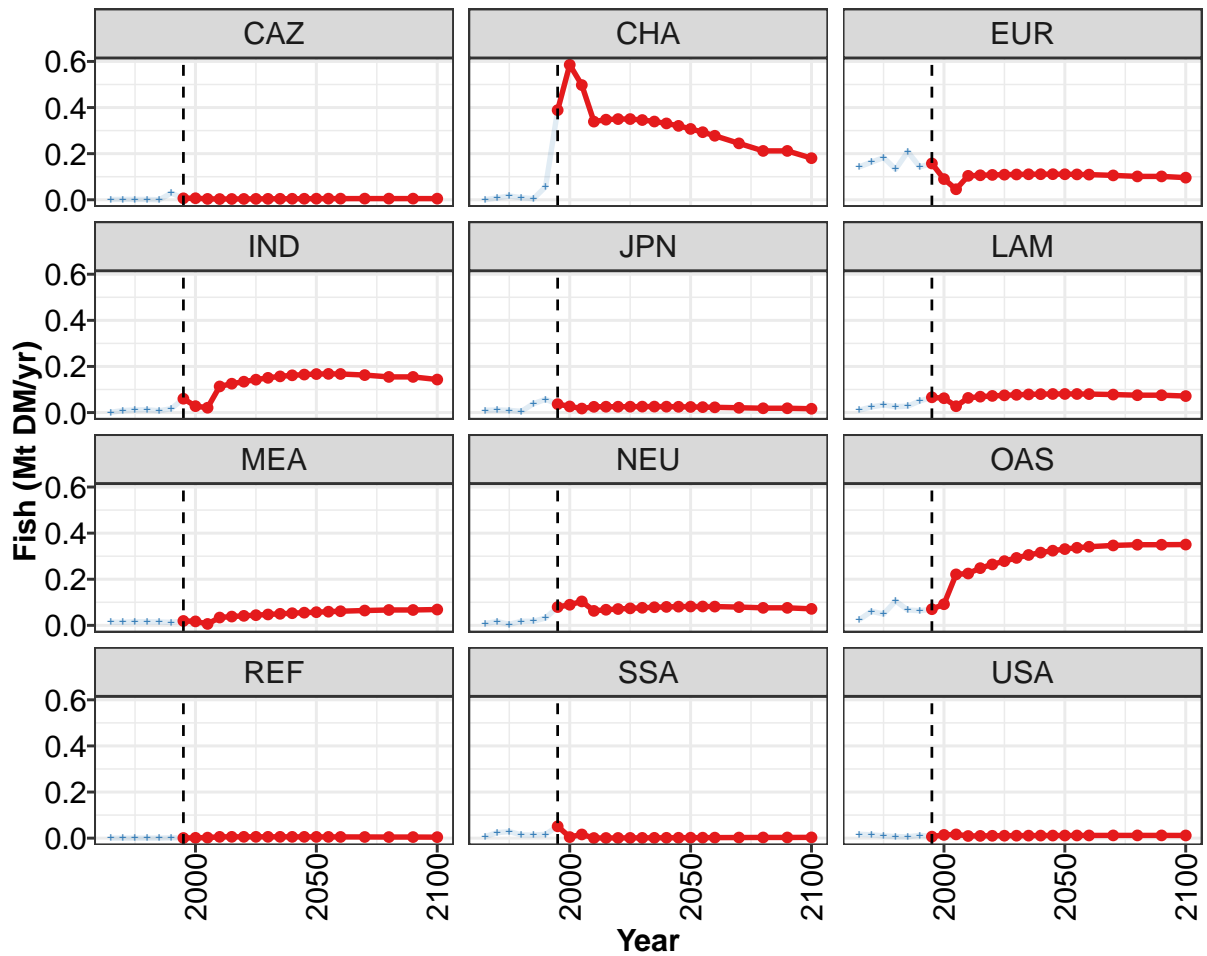
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.72	0.41	0.27	0.65	0.92	0.49	0.57	0.77	0.41	1.28
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.72	0.41	0.27	0.65	0.92	0.49	0.56	0.77	0.41	1.24
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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







Model output

MAgPIE m4p\_SSP4

Historical data

FAO

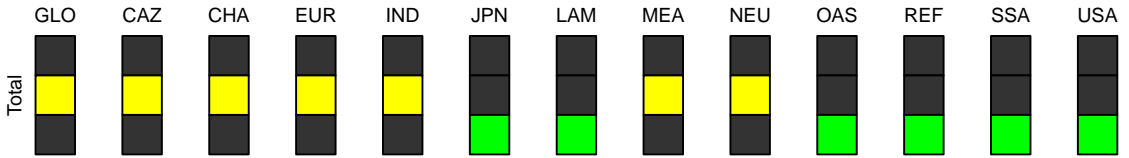


Figure 170: MAgPIE m4p\_SSP4 — Demand—Material—Fish (Mt DM/yr)

	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	1.17	1.18	1.19
CAZ	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.39	0.59	0.50	0.34	0.35	0.35	0.35	0.35	0.34	0.33	0.32
EUR	0.16	0.09	0.05	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IND	0.06	0.03	0.02	0.11	0.13	0.13	0.14	0.15	0.16	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	0.06
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	0.28	0.29	0.31	0.32	0.32
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

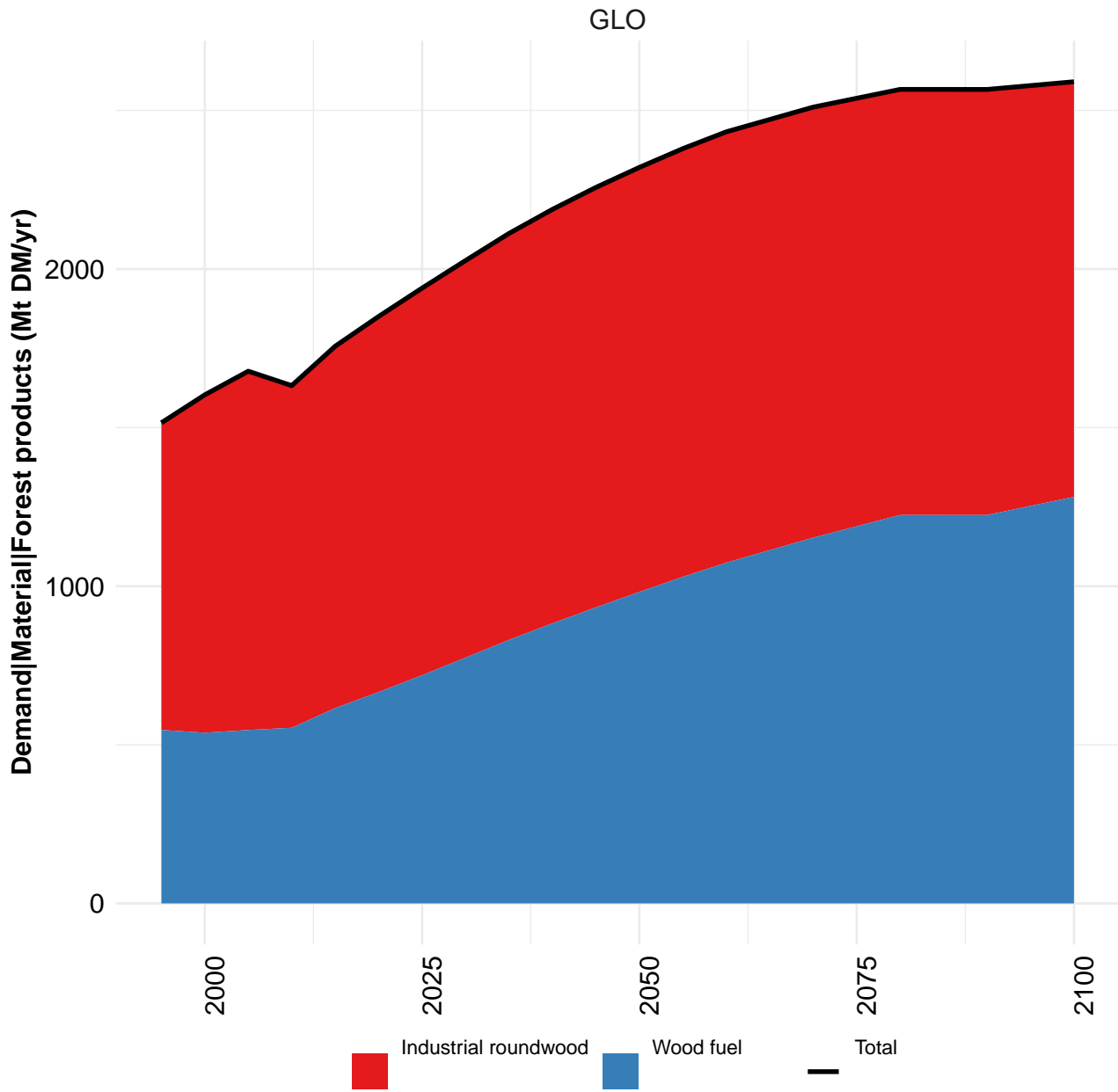
Table 509: MAgPIE m4p\_SSP4 — Demand—Material—Fish (Mt DM/yr) [PART 1/2]

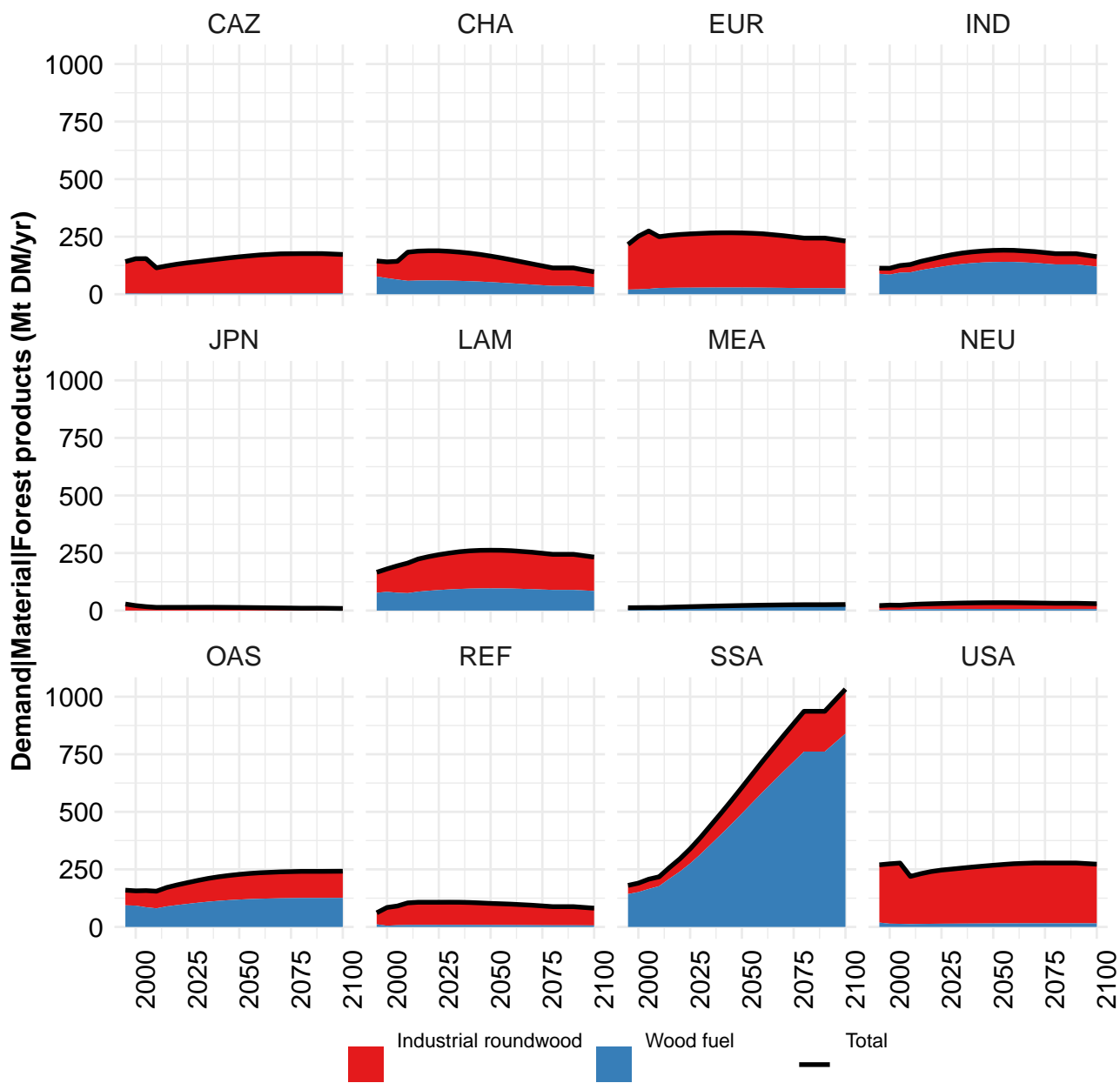
	2050	2055	2060	2070	2080	2090	2100
GLO	1.18	1.18	1.17	1.13	1.08	1.08	1.02
CAZ	0.00	0.00	0.00	0.01	0.01	0.01	0.00
CHA	0.31	0.29	0.28	0.24	0.21	0.21	0.18
EUR	0.11	0.11	0.11	0.11	0.10	0.10	0.10
IND	0.17	0.17	0.17	0.16	0.15	0.15	0.14
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.08	0.08	0.08	0.08	0.08	0.08	0.07
MEA	0.06	0.06	0.06	0.06	0.07	0.07	0.07
NEU	0.08	0.08	0.08	0.08	0.08	0.08	0.07
OAS	0.33	0.34	0.34	0.35	0.35	0.35	0.35
REF	0.01	0.01	0.01	0.01	0.00	0.00	0.00
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Table 510: MAgPIE m4p\_SSP4 — Demand—Material—Fish (Mt DM/yr) [PART 2/2]

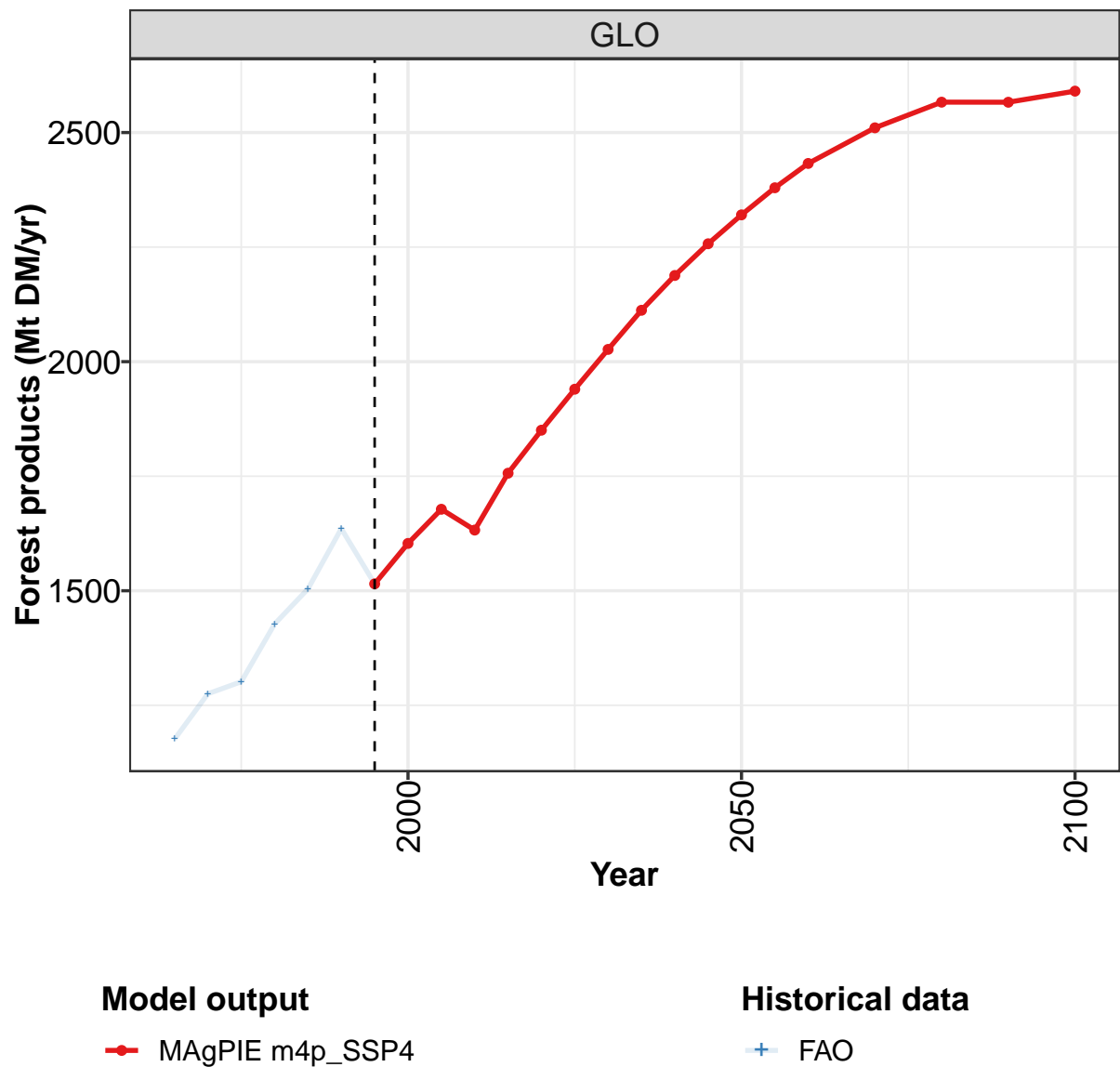
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.24	0.35	0.36	0.35	0.40	0.49	0.94	1.02	0.98	0.99
CAZ	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.01	0.00	0.00
CHA	0.00	0.01	0.02	0.01	0.00	0.06	0.39	0.59	0.50	0.34
EUR	0.14	0.16	0.18	0.13	0.21	0.14	0.16	0.09	0.05	0.10
IND	0.00	0.01	0.01	0.01	0.01	0.02	0.06	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)





8.4 Forest products



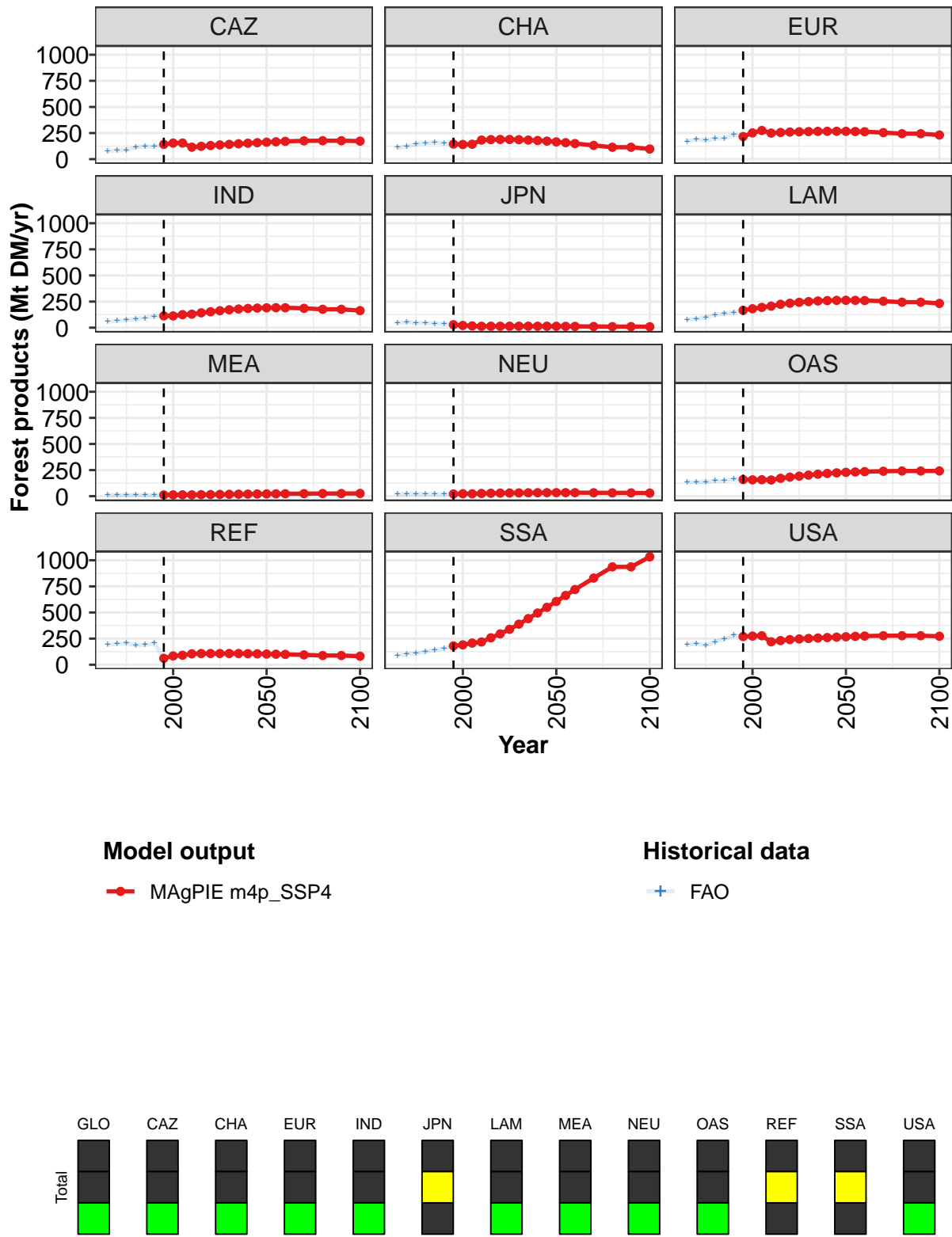


Figure 171: MAgPIE m4p\_SSP4 — Demand—Material—Forest products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1515	1603	1678	1632	1757	1850	1940	2027	2112	2188	2257
CAZ	142	154	155	115	123	131	137	142	147	153	158
CHA	144	141	143	183	187	189	189	186	183	178	173
EUR	216	252	275	250	256	259	262	264	266	267	267
IND	113	113	125	129	143	153	163	172	179	184	188
JPN	28	22	17	14	14	14	14	14	14	14	14
LAM	166	181	194	206	224	234	243	250	256	259	262
MEA	13	13	13	13	15	16	17	18	19	20	21
NEU	22	24	23	26	28	30	31	32	33	33	34
OAS	160	157	158	155	171	182	192	202	211	218	224
REF	61	84	91	104	107	107	107	107	107	106	104
SSA	180	190	207	218	258	295	339	388	442	495	550
USA	270	274	277	219	231	241	247	251	256	260	264

Table 512: MAgPIE m4p\_SSP4 — Demand—Material—Forest products (Mt DM/yr) [PART 1/2]

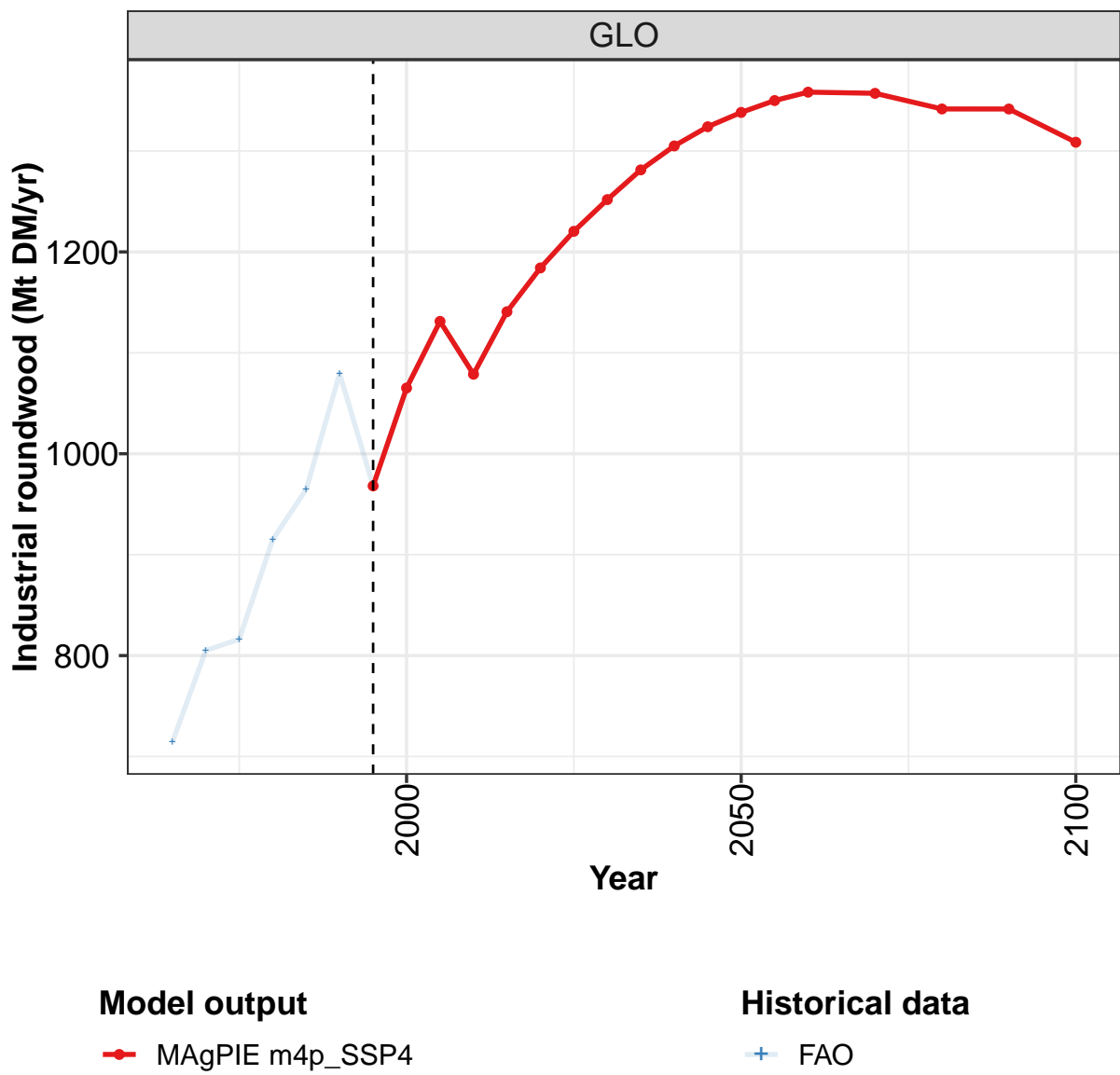
	2050	2055	2060	2070	2080	2090	2100
GLO	2320	2380	2433	2510	2566	2566	2590
CAZ	163	167	171	175	176	176	173
CHA	166	158	150	132	114	114	97
EUR	266	265	263	254	244	244	231
IND	190	191	191	185	176	176	163
JPN	14	13	13	12	10	10	9
LAM	262	262	260	254	244	244	232
MEA	22	23	23	25	26	26	26
NEU	34	34	34	33	32	32	30
OAS	228	232	235	239	241	241	242
REF	102	101	99	94	88	88	81
SSA	606	663	720	830	937	937	1033
USA	268	271	275	278	278	278	272

Table 513: MAgPIE m4p\_SSP4 — 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





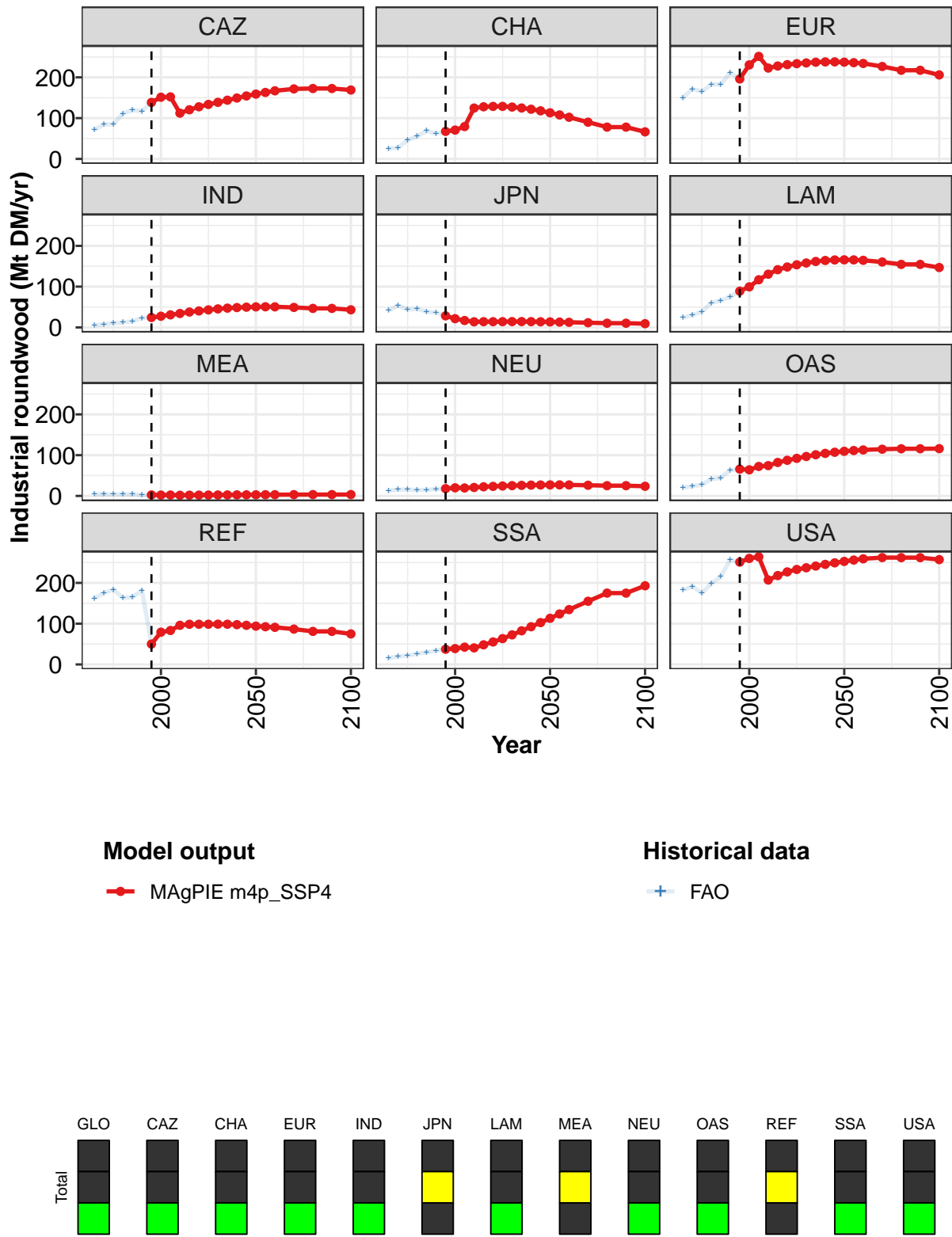


Figure 172: MAgPIE m4p\_SSP4 — Demand—Material—Forest products—Industrial roundwood (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	968	1065	1131	1079	1141	1184	1220	1252	1281	1305	1324
CAZ	138	151	152	112	121	128	134	139	144	149	154
CHA	67	71	79	125	128	129	129	127	125	122	118
EUR	196	230	251	223	228	231	234	235	237	238	238
IND	24	27	31	34	38	40	43	45	47	49	50
JPN	28	21	17	14	14	14	14	14	14	14	14
LAM	89	99	117	131	142	148	154	158	162	164	165
MEA	3	2	2	2	2	2	2	2	2	3	3
NEU	18	20	20	21	22	23	24	25	26	26	27
OAS	66	64	72	74	82	87	92	97	101	104	107
REF	50	79	83	96	99	99	99	99	99	98	96
SSA	37	39	42	41	48	55	63	73	83	92	103
USA	251	260	264	207	218	227	233	237	241	245	249

Table 515: MAgPIE m4p\_SSP4 — Demand—Material—Forest products—Industrial roundwood (Mt DM/yr)  
[PART 1/2]

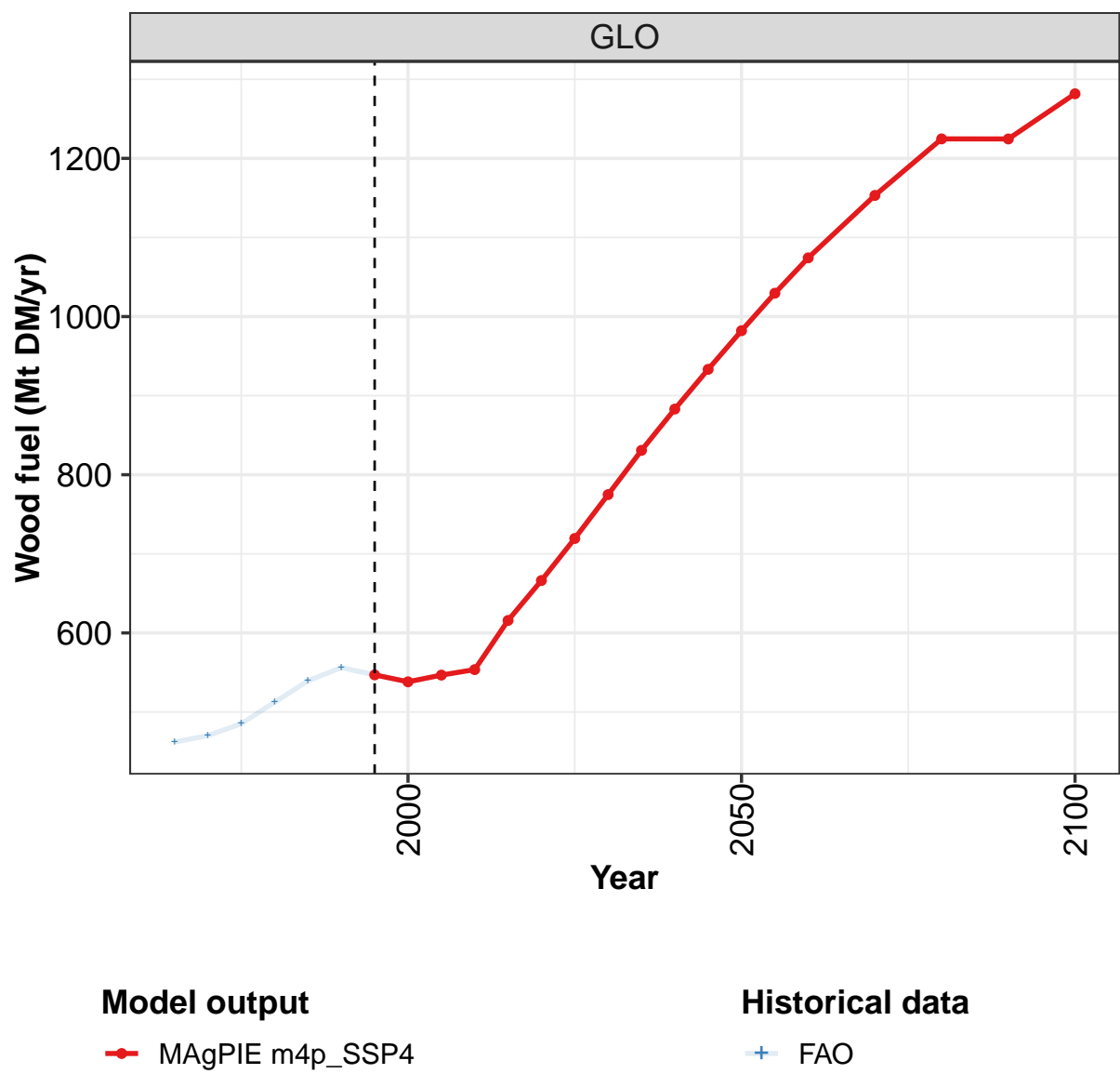
	2050	2055	2060	2070	2080	2090	2100
GLO	1338	1350	1358	1357	1342	1342	1309
CAZ	159	163	167	172	173	173	169
CHA	113	108	102	90	78	78	66
EUR	237	236	234	227	217	217	206
IND	50	51	50	49	47	47	43
JPN	14	13	13	11	10	10	9
LAM	166	166	165	160	155	155	147
MEA	3	3	3	3	3	3	3
NEU	27	27	27	26	25	25	24
OAS	109	111	113	115	116	116	116
REF	94	93	91	87	81	81	75
SSA	113	124	135	155	175	175	193
USA	253	256	259	262	262	262	257

Table 516: MAgPIE m4p\_SSP4 — 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



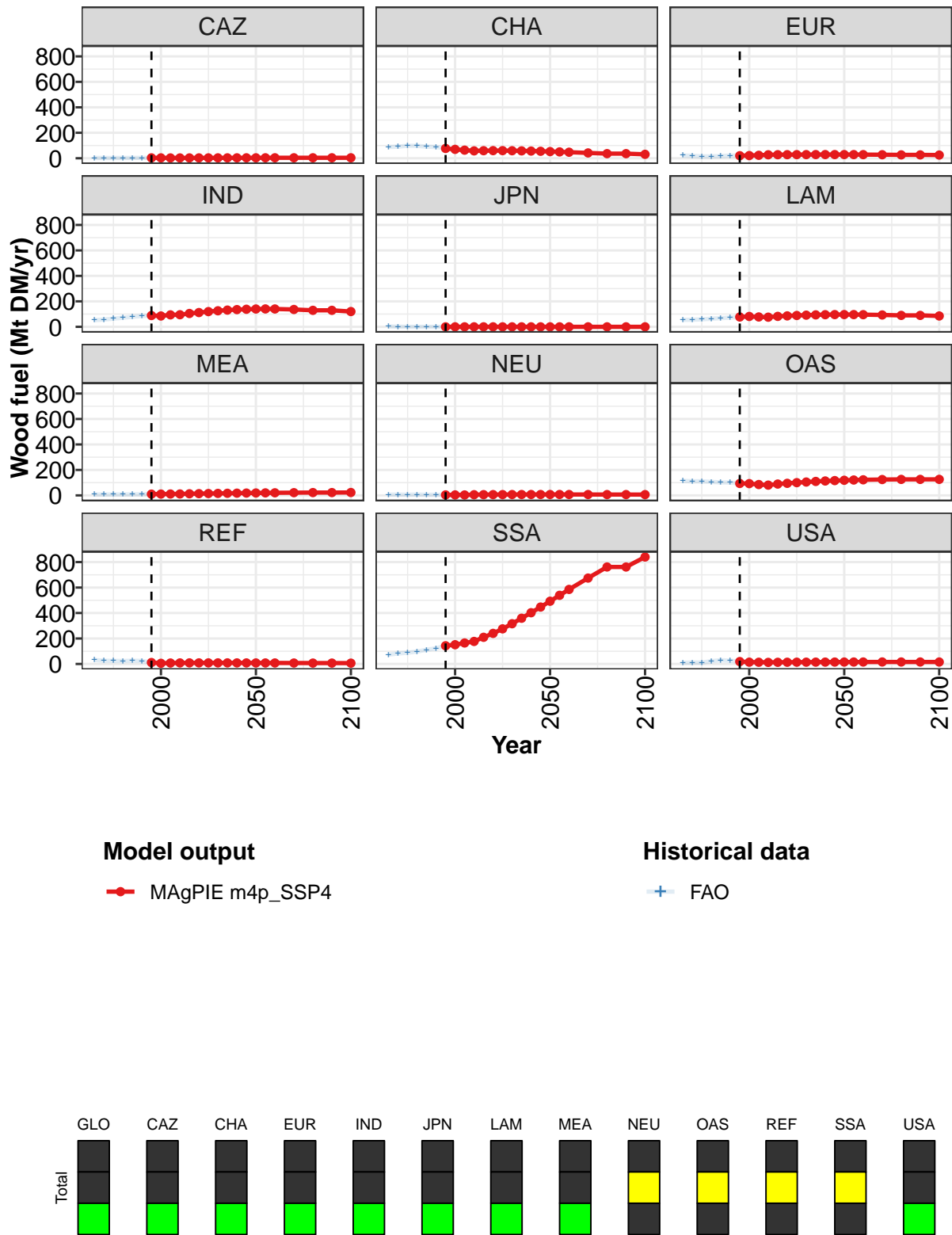


Figure 173: MAgPIE m4p\_SSP4 — Demand—Material—Forest products—Wood fuel (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	547	538	547	554	616	666	719	775	831	883	933
CAZ	3	3	3	2	3	3	3	3	3	3	3
CHA	77	70	64	58	59	60	60	59	58	57	55
EUR	20	21	23	27	28	28	29	29	29	29	29
IND	89	85	94	95	105	112	120	126	131	135	138
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	77	82	78	76	82	86	89	92	94	95	96
MEA	10	10	11	11	13	14	15	16	17	18	18
NEU	4	4	4	5	6	6	6	7	7	7	7
OAS	94	92	85	81	89	95	100	105	110	113	116
REF	11	5	7	8	9	9	9	9	9	8	8
SSA	143	151	165	177	210	240	276	316	359	402	447
USA	19	14	13	12	13	14	14	14	14	15	15

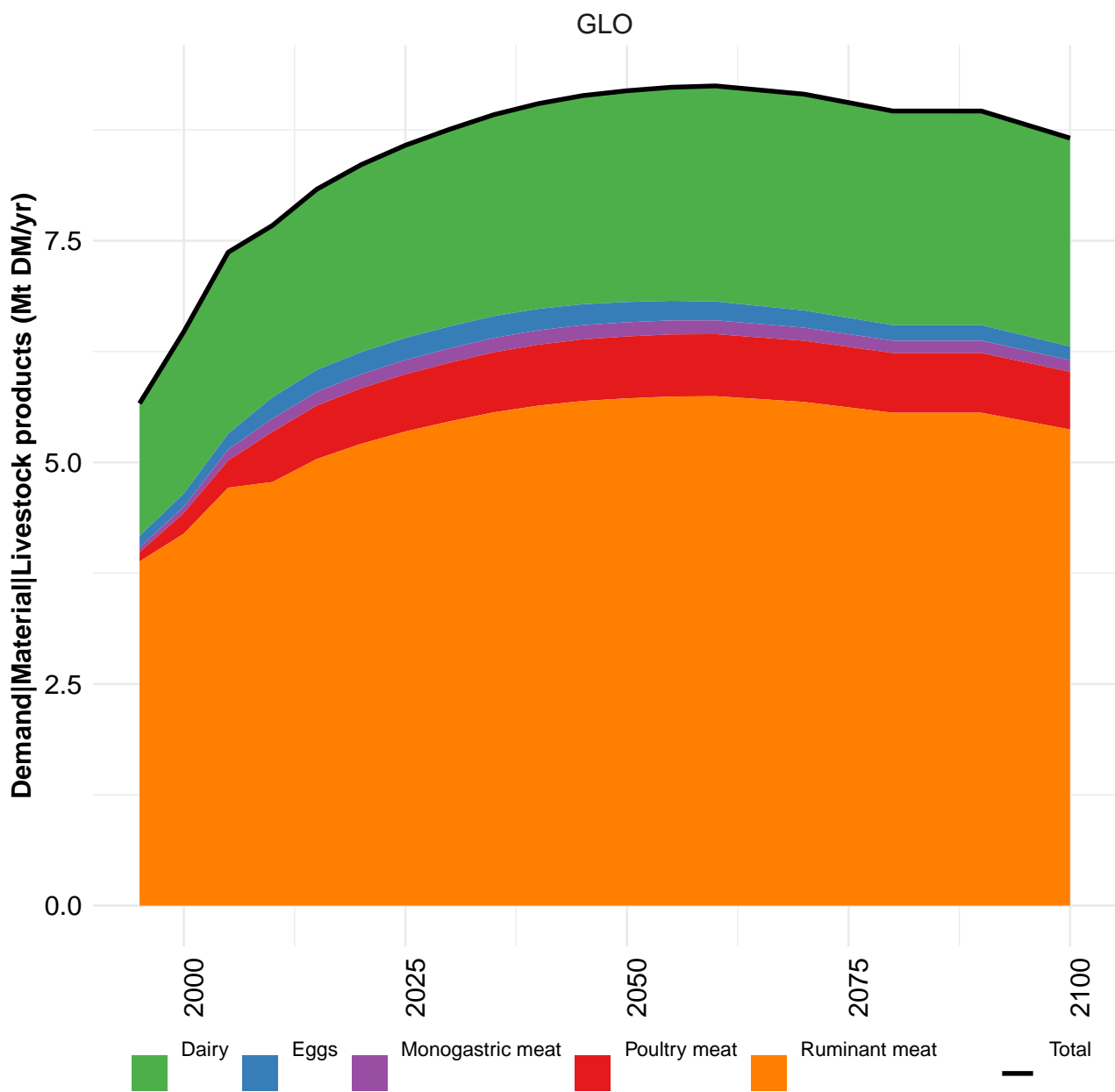
Table 518: MAgPIE m4p\_SSP4 — Demand—Material—Forest products—Wood fuel (Mt DM/yr) [PART 1/2]

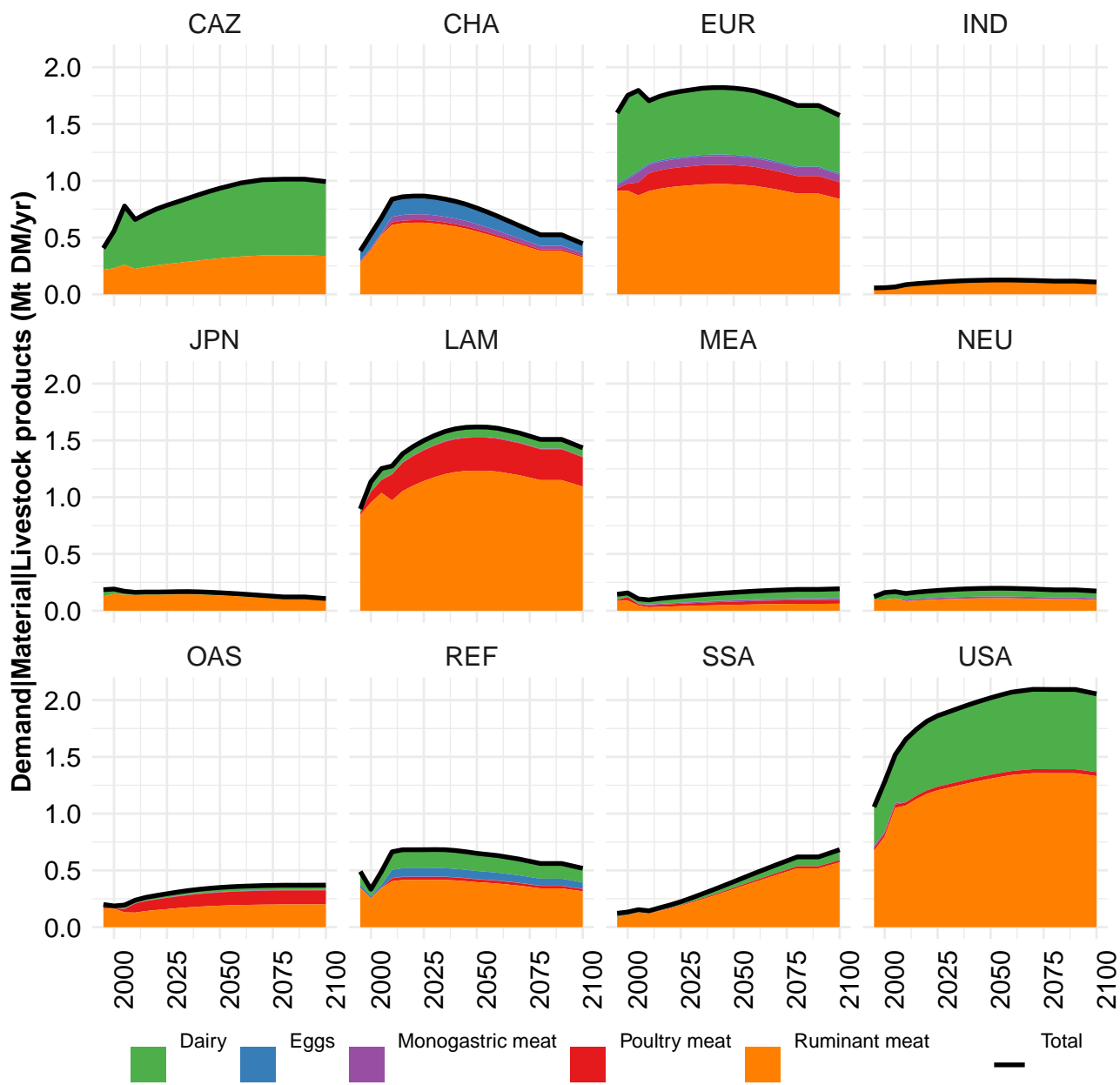
	2050	2055	2060	2070	2080	2090	2100
GLO	982	1030	1074	1153	1225	1225	1282
CAZ	4	4	4	4	4	4	4
CHA	53	50	47	42	36	36	31
EUR	29	29	29	28	27	27	25
IND	140	141	140	136	130	130	120
JPN	0	0	0	0	0	0	0
LAM	96	96	96	93	90	90	85
MEA	19	20	20	21	22	22	23
NEU	7	7	7	7	7	7	6
OAS	119	121	122	124	126	126	126
REF	8	8	8	8	7	7	6
SSA	493	539	585	675	762	762	840
USA	15	15	15	16	16	16	15

Table 519: MAgPIE m4p\_SSP4 — Demand—Material—Forest products—Wood fuel (Mt DM/yr) [PART 2/2]

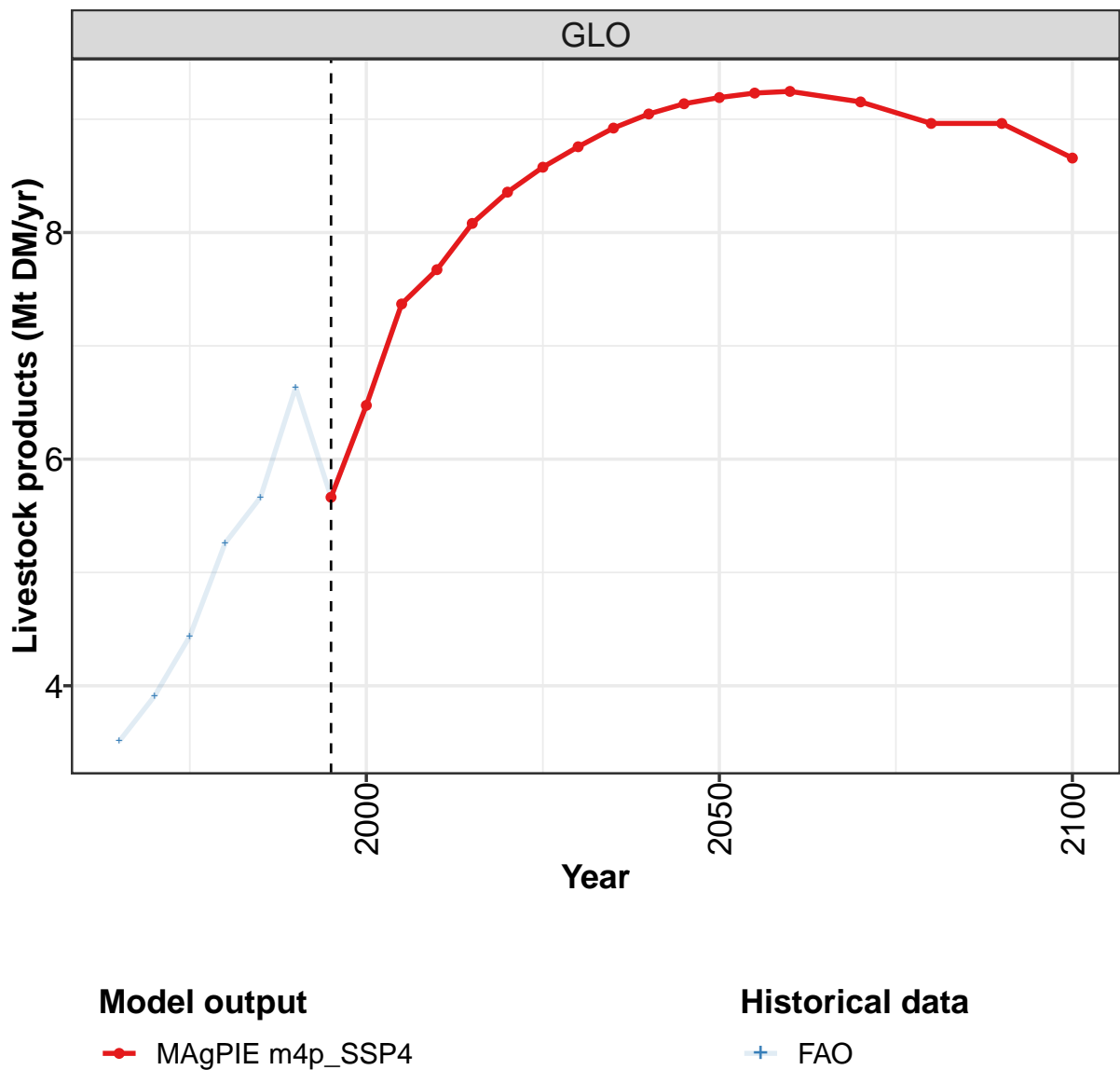
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	462	470	485	512	539	556	547	538	547	554
CAZ	3	2	2	2	3	3	3	3	3	2
CHA	88	91	98	97	91	88	77	70	64	58
EUR	22	19	15	15	17	21	20	21	23	27
IND	52	58	64	71	79	85	89	85	94	95
JPN	3	1	0	0	0	0	0	0	0	0
LAM	54	55	59	64	68	72	77	82	78	76
MEA	7	7	7	8	8	9	10	10	11	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)





8.5 Livestock products





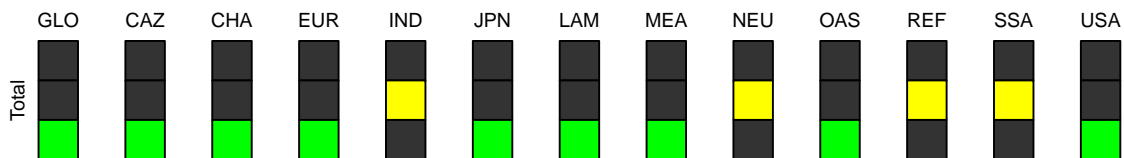
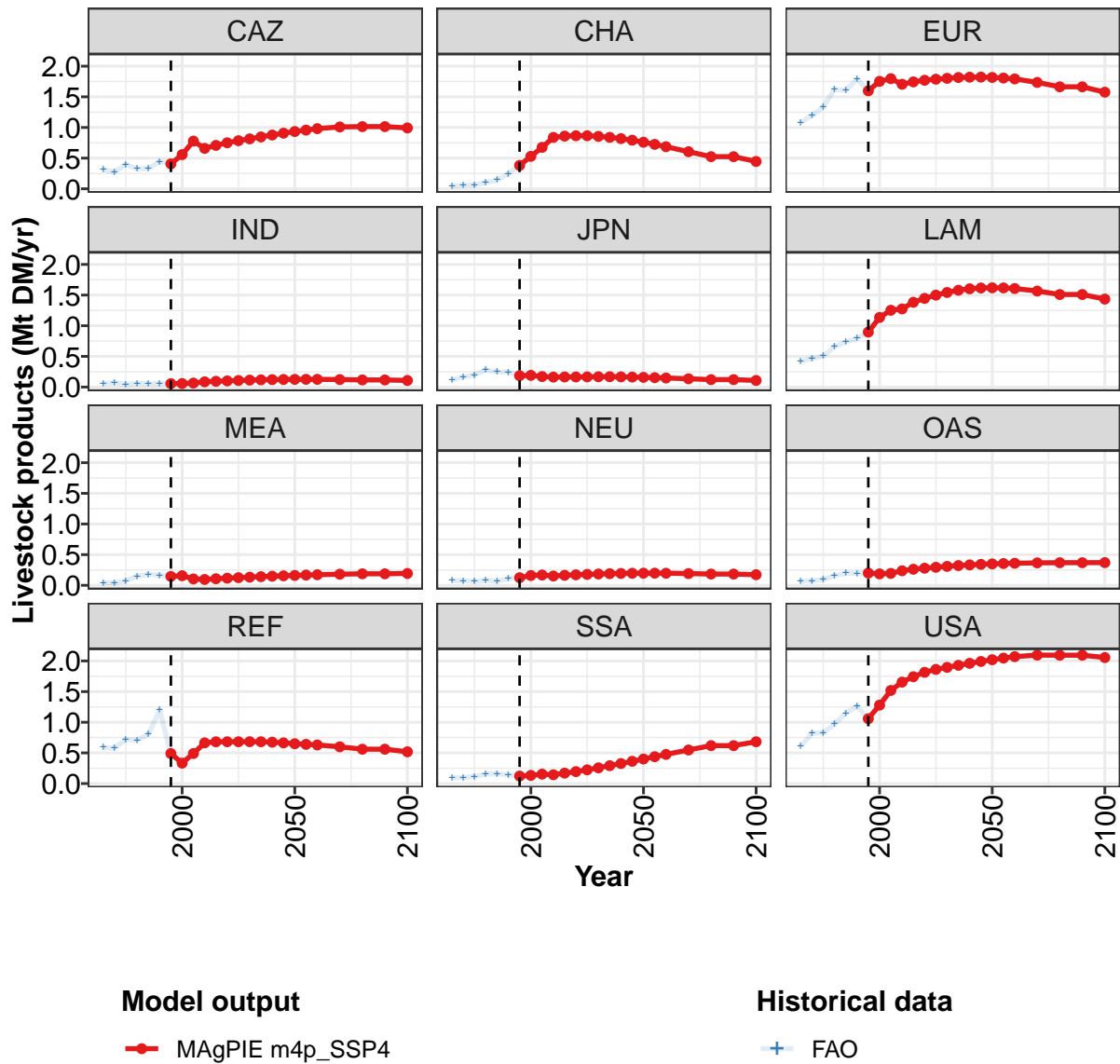


Figure 174: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.66	6.47	7.37	7.67	8.08	8.36	8.58	8.76	8.92	9.05	9.14
CAZ	0.41	0.56	0.78	0.66	0.71	0.75	0.78	0.81	0.85	0.88	0.91
CHA	0.38	0.53	0.68	0.84	0.86	0.87	0.87	0.86	0.84	0.82	0.79
EUR	1.60	1.75	1.80	1.71	1.74	1.77	1.79	1.80	1.82	1.82	1.82
IND	0.06	0.06	0.07	0.09	0.09	0.10	0.11	0.11	0.12	0.12	0.12
JPN	0.19	0.19	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.16
LAM	0.90	1.14	1.25	1.27	1.38	1.45	1.50	1.54	1.58	1.60	1.62
MEA	0.15	0.16	0.10	0.10	0.11	0.12	0.12	0.13	0.14	0.15	0.16
NEU	0.12	0.16	0.17	0.15	0.16	0.17	0.18	0.18	0.19	0.19	0.20
OAS	0.20	0.19	0.19	0.24	0.26	0.28	0.29	0.31	0.32	0.33	0.34
REF	0.49	0.33	0.49	0.66	0.68	0.68	0.68	0.68	0.68	0.67	0.66
SSA	0.12	0.13	0.15	0.14	0.17	0.20	0.22	0.26	0.29	0.33	0.36
USA	1.06	1.28	1.52	1.65	1.74	1.81	1.86	1.90	1.93	1.96	1.99

Table 521: MAgPIE m4p-SSP4 — Demand—Material—Livestock products (Mt DM/yr) [PART 1/2]

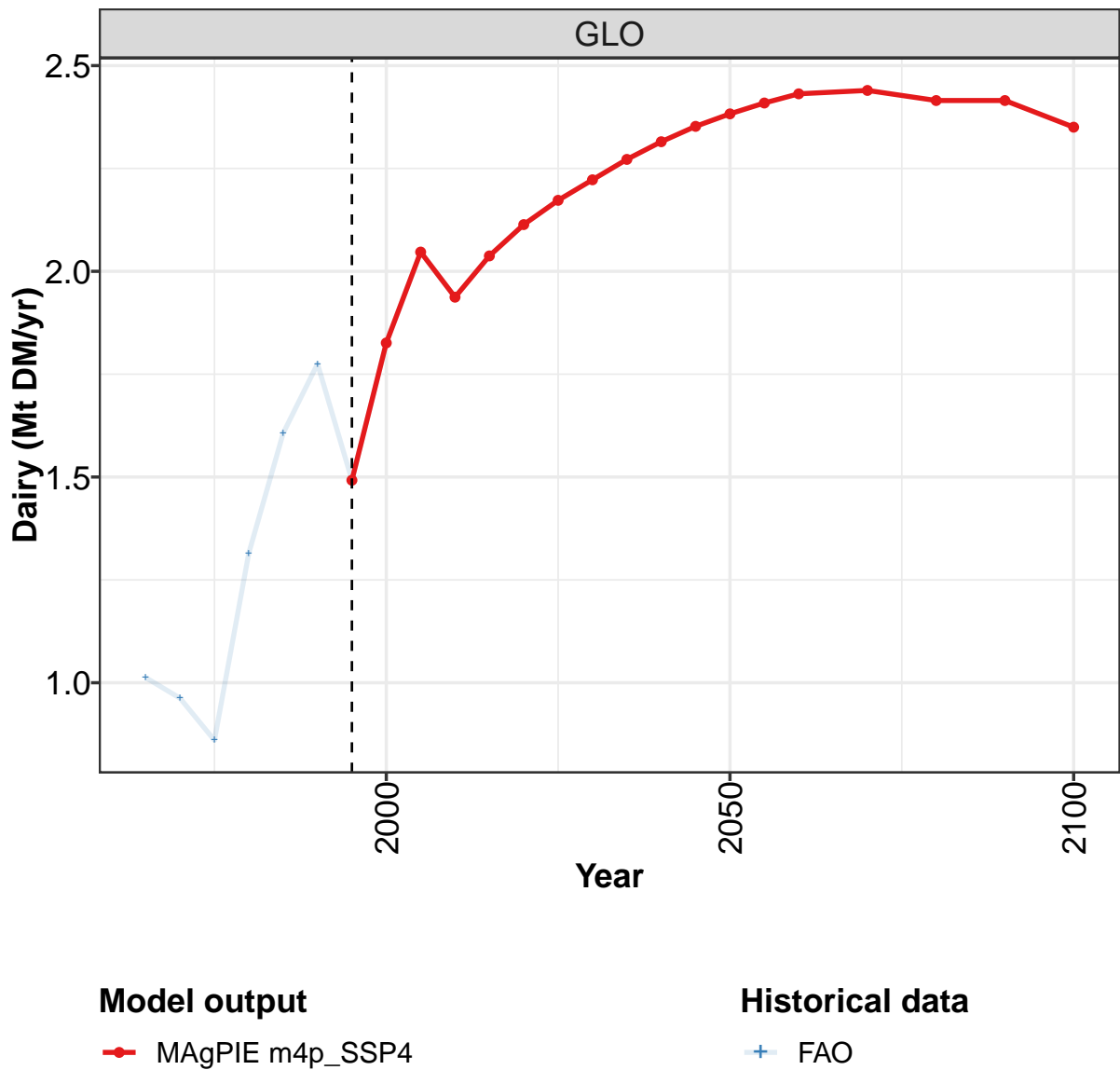
	2050	2055	2060	2070	2080	2090	2100
GLO	9.19	9.23	9.25	9.15	8.96	8.96	8.66
CAZ	0.93	0.96	0.98	1.01	1.01	1.01	0.99
CHA	0.76	0.72	0.69	0.61	0.52	0.52	0.45
EUR	1.82	1.81	1.79	1.73	1.66	1.66	1.58
IND	0.13	0.13	0.13	0.12	0.12	0.12	0.11
JPN	0.16	0.15	0.15	0.13	0.12	0.12	0.11
LAM	1.62	1.62	1.61	1.57	1.51	1.51	1.43
MEA	0.16	0.17	0.17	0.18	0.19	0.19	0.19
NEU	0.20	0.20	0.20	0.19	0.18	0.18	0.17
OAS	0.35	0.36	0.36	0.37	0.37	0.37	0.37
REF	0.65	0.64	0.63	0.60	0.56	0.56	0.52
SSA	0.40	0.44	0.48	0.55	0.62	0.62	0.68
USA	2.02	2.05	2.07	2.10	2.09	2.09	2.06

Table 522: MAgPIE m4p-SSP4 — 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



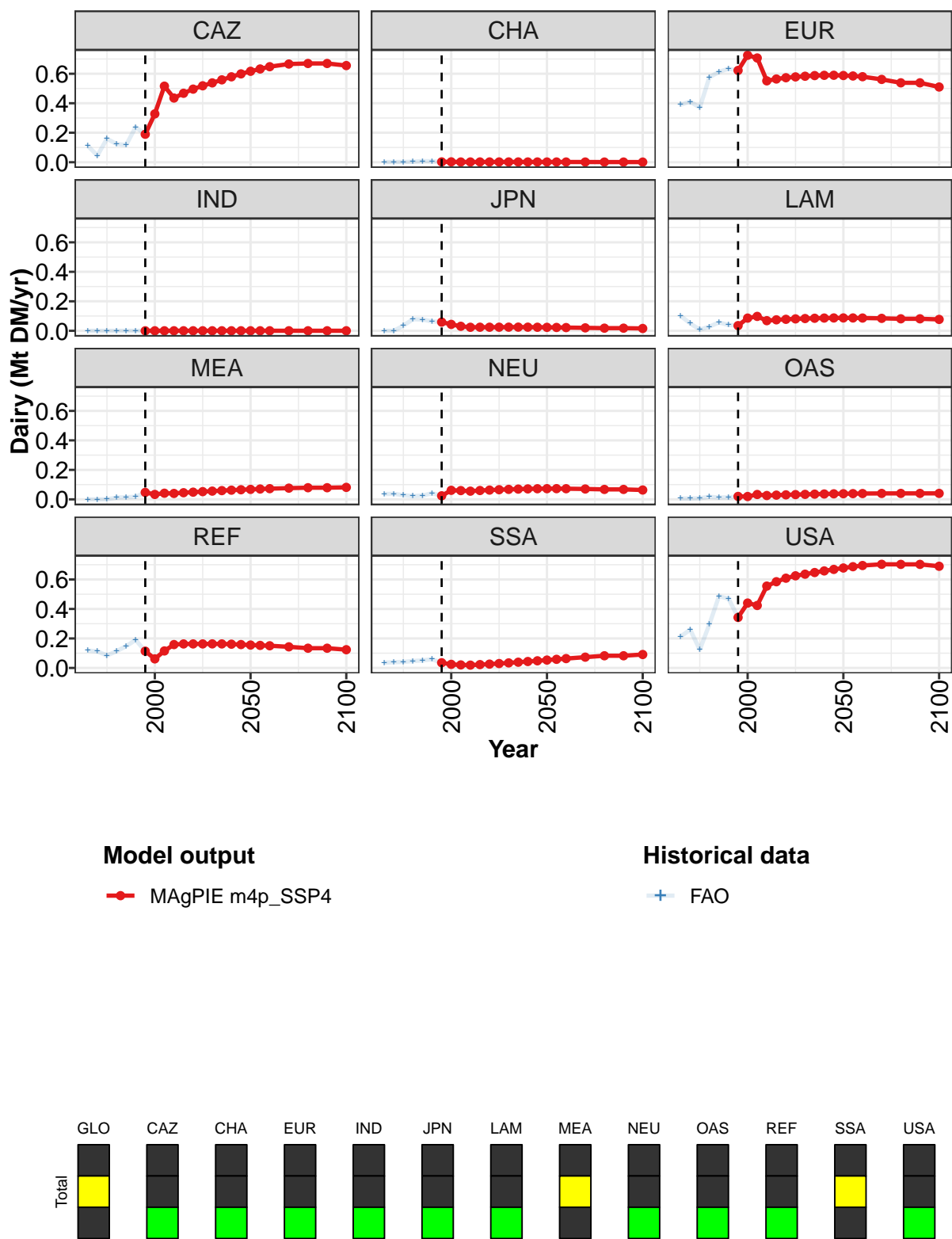


Figure 175: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Dairy (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.49	1.83	2.05	1.94	2.04	2.11	2.17	2.22	2.27	2.32	2.35
CAZ	0.19	0.33	0.52	0.44	0.47	0.50	0.52	0.54	0.56	0.58	0.60
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	0.57	0.58	0.58	0.59	0.59	0.59
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	0.02	0.02	0.02	0.02	0.02
LAM	0.04	0.09	0.10	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.09
MEA	0.05	0.03	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.07
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	0.04	0.04	0.04
REF	0.11	0.06	0.12	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
SSA	0.04	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05
USA	0.34	0.44	0.42	0.56	0.58	0.61	0.62	0.64	0.65	0.66	0.67

Table 524: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

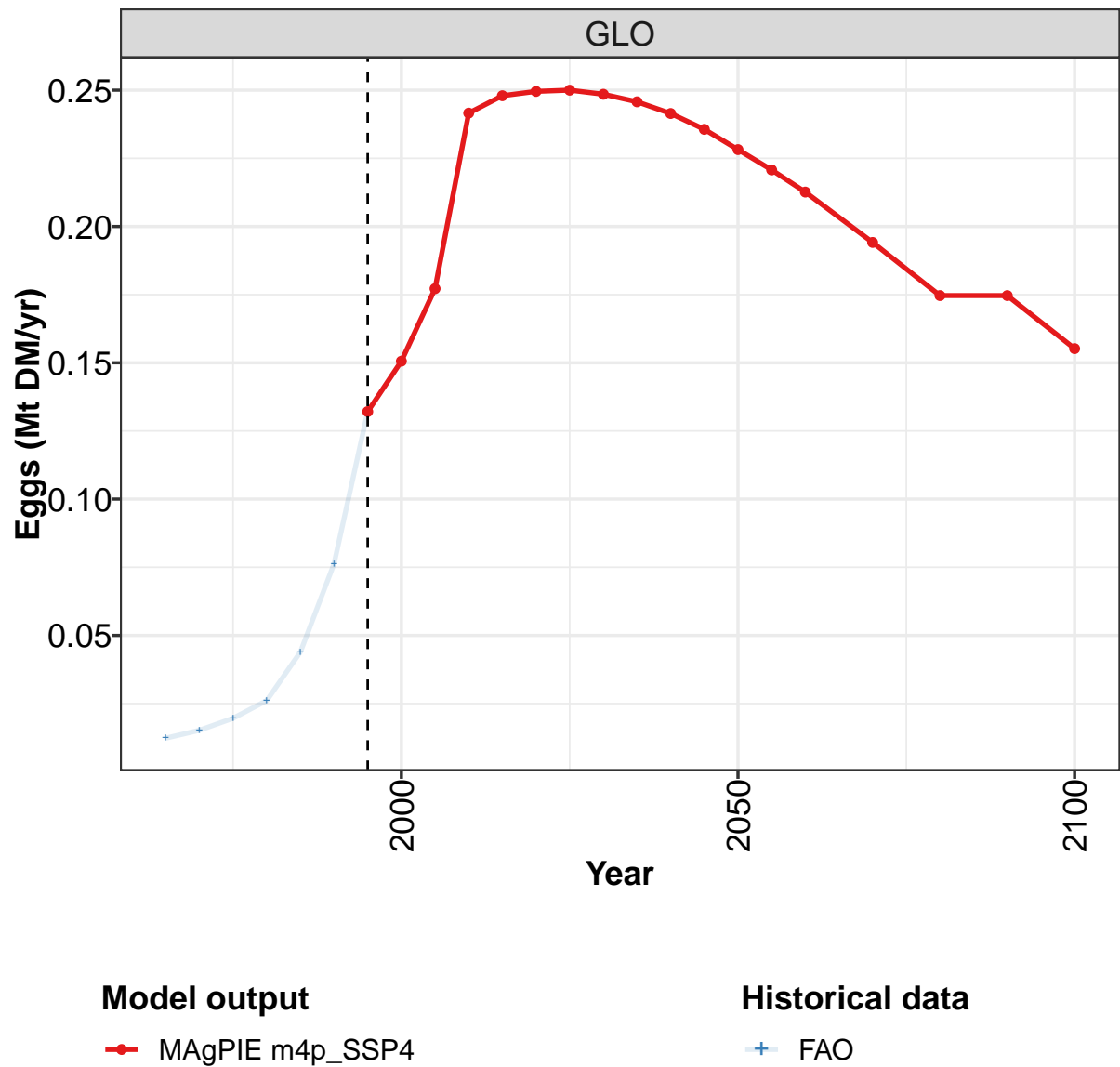
	2050	2055	2060	2070	2080	2090	2100
GLO	2.38	2.41	2.43	2.44	2.42	2.42	2.35
CAZ	0.62	0.63	0.65	0.67	0.67	0.67	0.66
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.59	0.58	0.58	0.56	0.54	0.54	0.51
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.09	0.09	0.09	0.08	0.08	0.08	0.08
MEA	0.07	0.07	0.07	0.08	0.08	0.08	0.08
NEU	0.07	0.07	0.07	0.07	0.07	0.07	0.06
OAS	0.04	0.04	0.04	0.04	0.04	0.04	0.04
REF	0.16	0.15	0.15	0.14	0.13	0.13	0.12
SSA	0.05	0.06	0.06	0.07	0.08	0.08	0.09
USA	0.68	0.69	0.69	0.70	0.70	0.70	0.69

Table 525: MAgPIE m4p\_SSP4 — 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



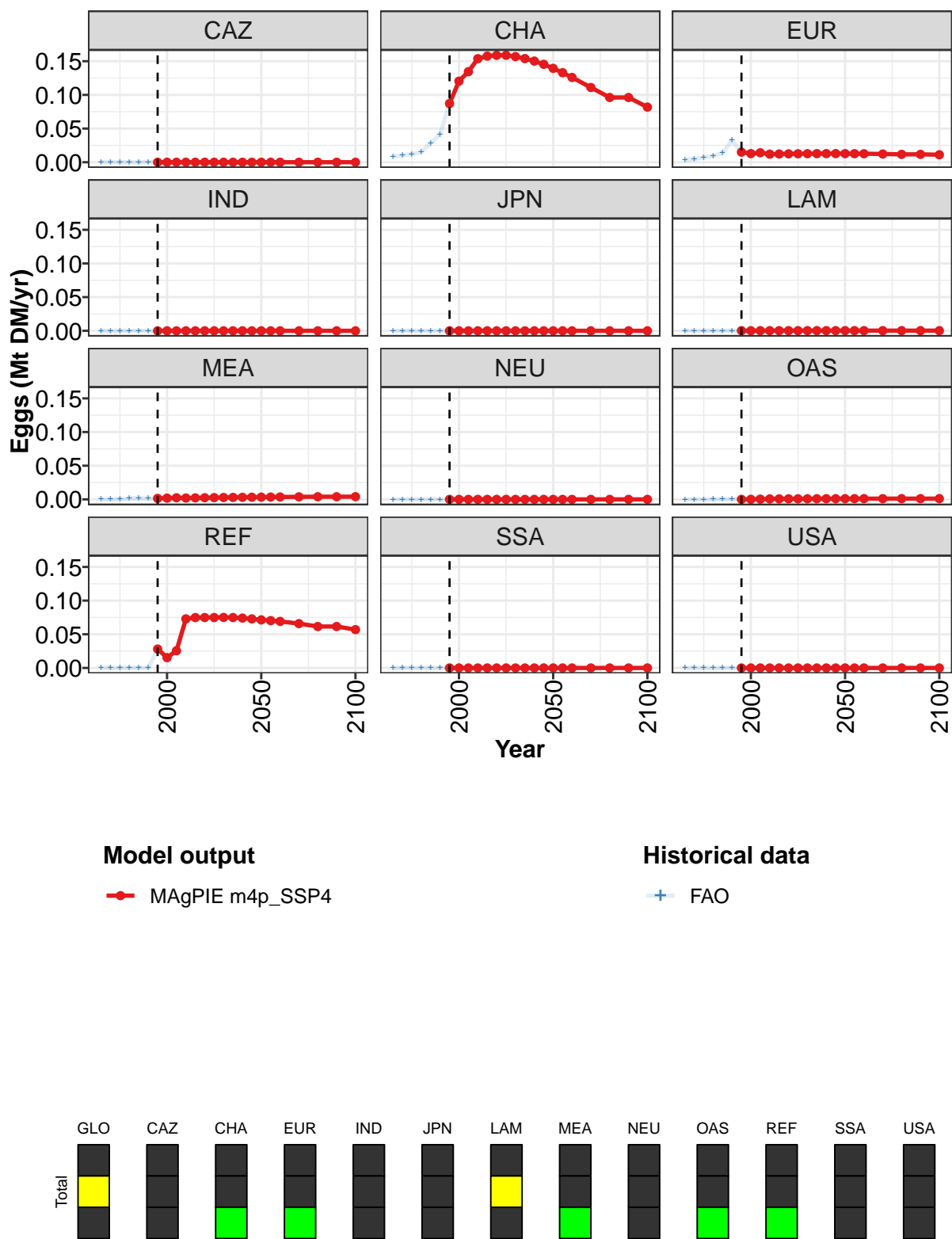


Figure 176: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.132	0.151	0.177	0.242	0.248	0.250	0.250	0.249	0.246	0.241	0.236
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	0.159	0.157	0.154	0.150	0.145
EUR	0.015	0.013	0.014	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.013
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	0.075	0.075	0.075	0.074	0.073
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\_SSP4 — Demand—Material—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.228	0.221	0.213	0.194	0.175	0.175	0.155
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.139	0.133	0.126	0.111	0.096	0.096	0.082
EUR	0.013	0.013	0.013	0.012	0.012	0.012	0.011
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	0.004	0.004	0.004	0.004	0.004
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	0.071	0.070	0.069	0.066	0.062	0.062	0.057
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

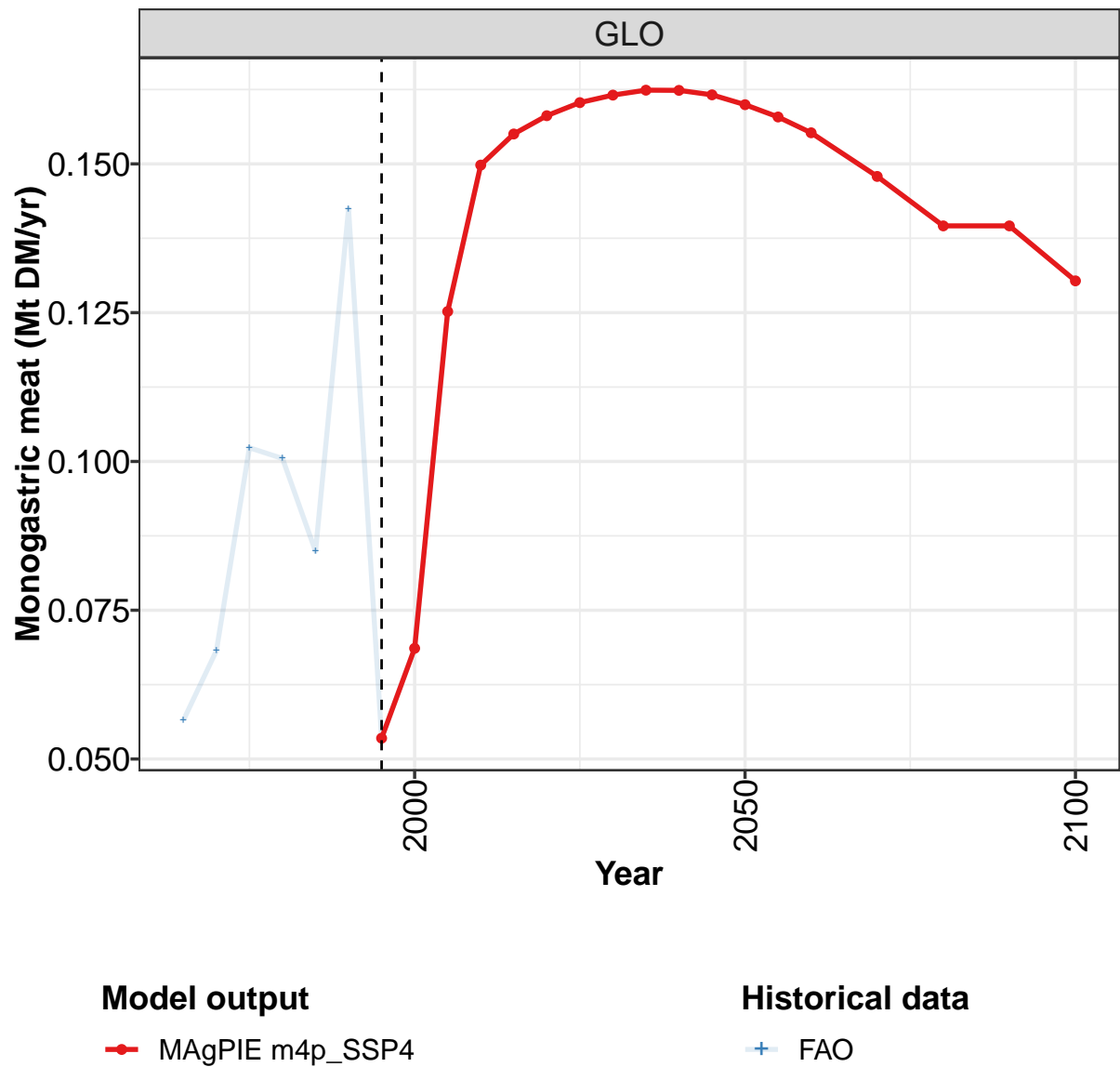
Table 528: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Eggs (Mt DM/yr) [PART 2/2]

	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



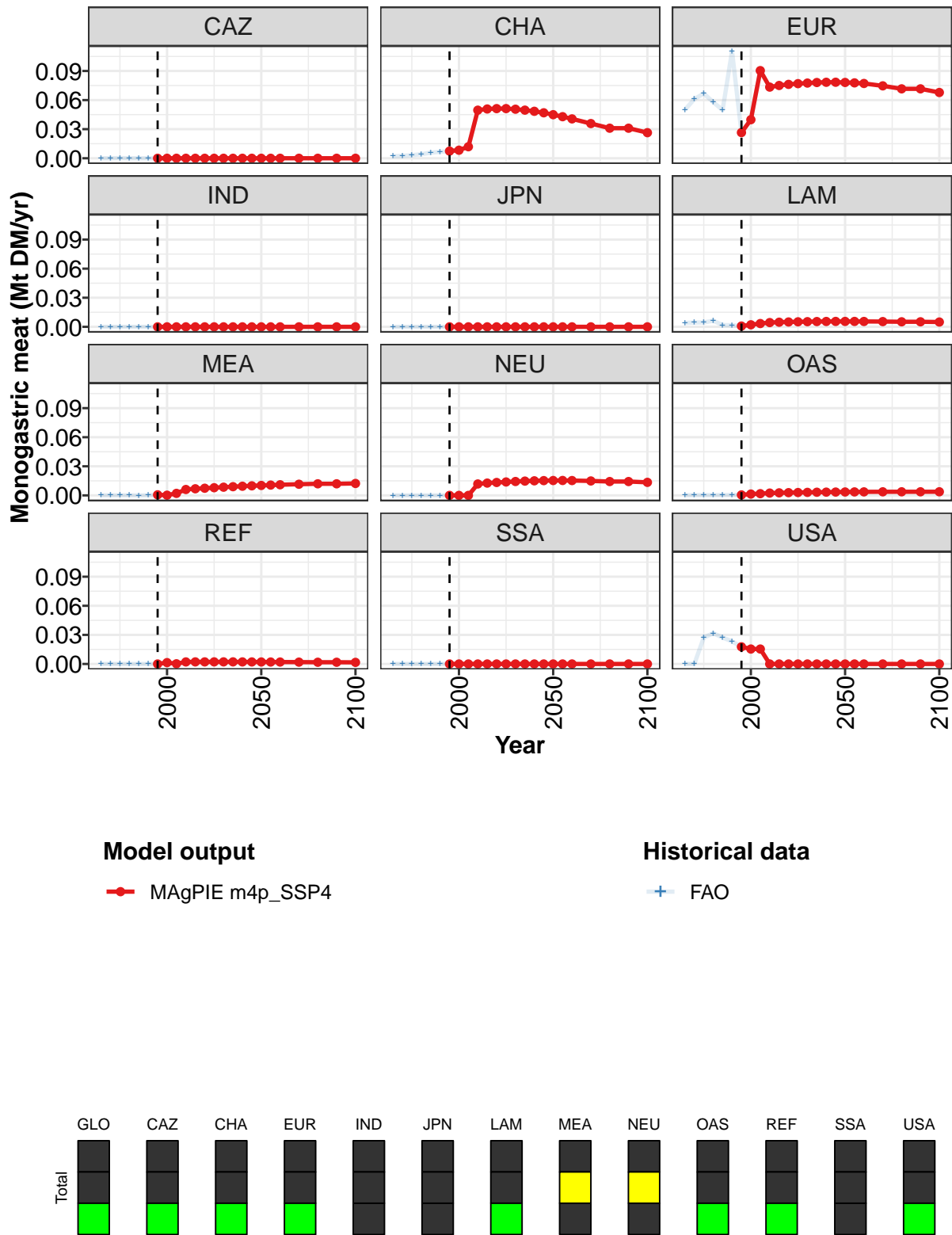


Figure 177: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.053	0.069	0.125	0.150	0.155	0.158	0.160	0.162	0.162	0.162	0.162
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	0.051	0.051	0.050	0.048	0.047
EUR	0.026	0.040	0.090	0.073	0.075	0.076	0.077	0.078	0.078	0.078	0.078
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	0.006	0.006
MEA	0.001	0.000	0.002	0.006	0.007	0.007	0.008	0.008	0.009	0.009	0.010
NEU	0.000	0.000	0.000	0.012	0.013	0.013	0.014	0.014	0.015	0.015	0.015
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\_SSP4 — Demand—Material—Livestock products—Monogastric meat (Mt DM/yr)  
[PART 1/2]

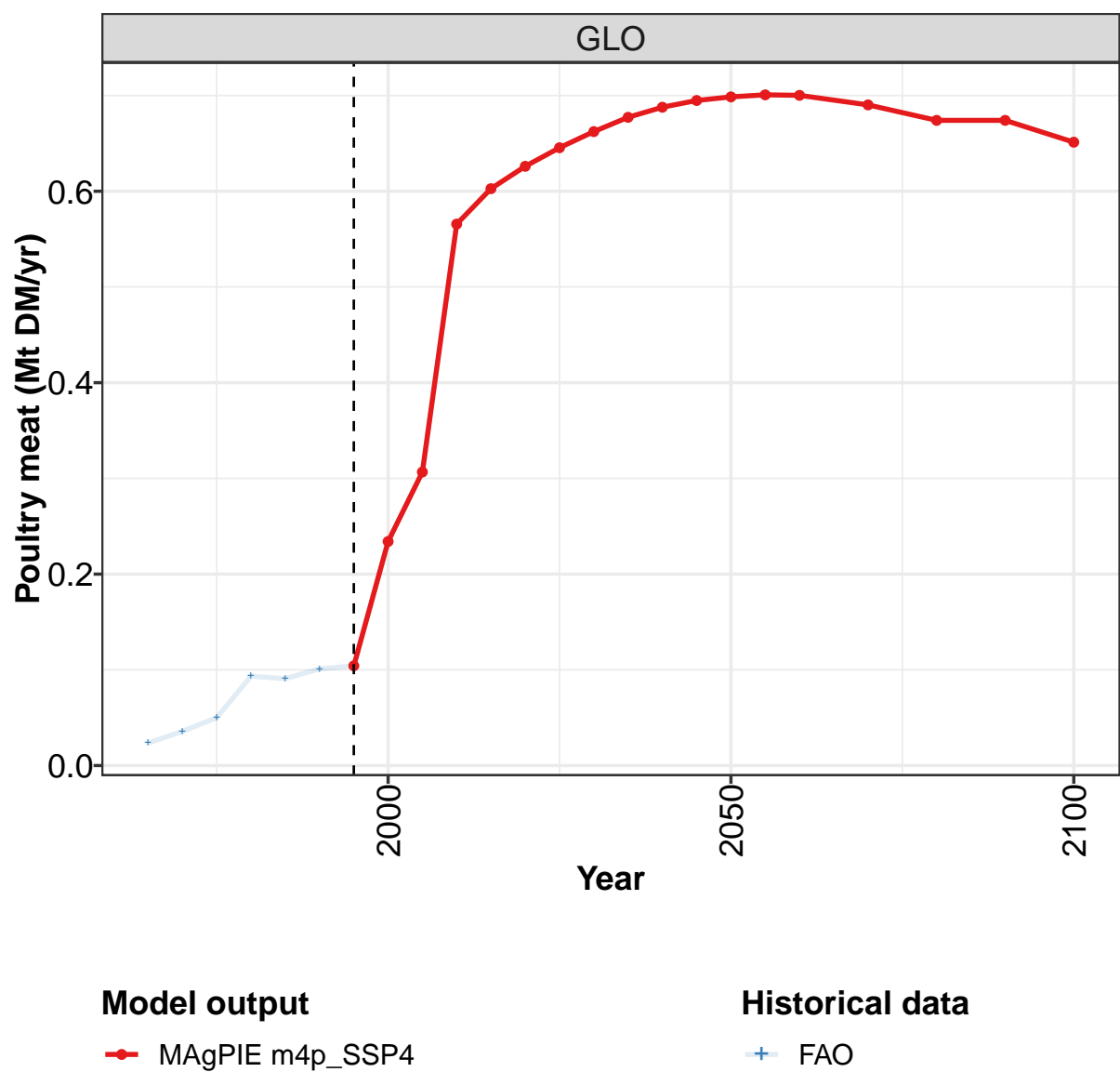
	2050	2055	2060	2070	2080	2090	2100
GLO	0.160	0.158	0.155	0.148	0.140	0.140	0.130
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.045	0.043	0.041	0.036	0.031	0.031	0.026
EUR	0.078	0.078	0.077	0.075	0.072	0.072	0.068
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.006	0.006	0.006	0.005	0.005	0.005	0.005
MEA	0.010	0.011	0.011	0.012	0.012	0.012	0.012
NEU	0.015	0.015	0.015	0.015	0.014	0.014	0.013
OAS	0.004	0.004	0.004	0.004	0.004	0.004	0.004
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\_SSP4 — 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



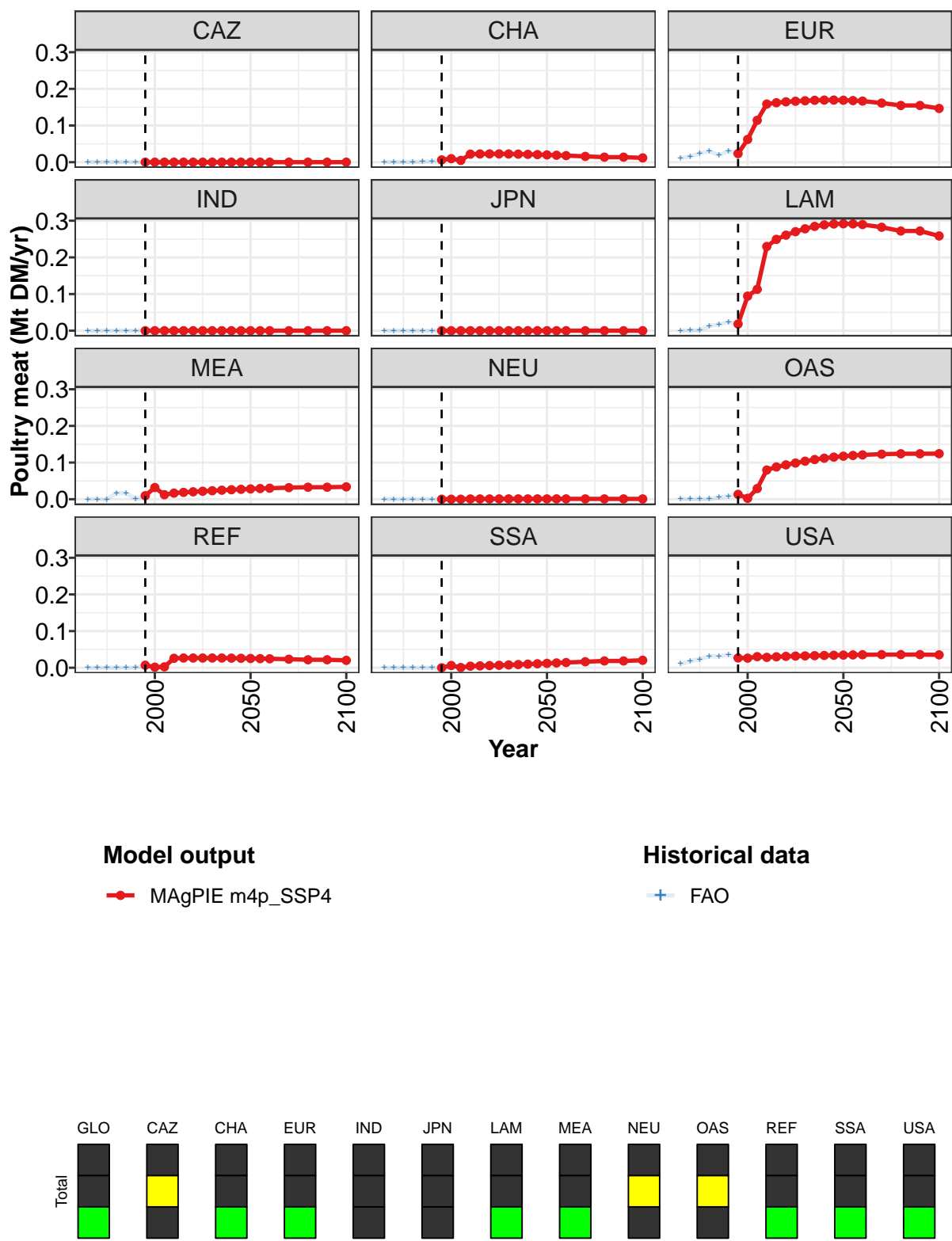


Figure 178: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.104	0.234	0.307	0.566	0.603	0.626	0.645	0.662	0.677	0.688	0.695
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	0.022	0.022	0.021	0.021
EUR	0.023	0.062	0.114	0.159	0.162	0.165	0.166	0.168	0.169	0.169	0.169
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	0.249	0.261	0.270	0.278	0.285	0.289	0.291
MEA	0.010	0.032	0.012	0.017	0.019	0.020	0.022	0.023	0.025	0.026	0.027
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	0.094	0.099	0.104	0.108	0.112	0.115
REF	0.007	0.001	0.003	0.026	0.026	0.026	0.027	0.027	0.027	0.026	0.026
SSA	0.000	0.006	0.001	0.004	0.005	0.006	0.007	0.008	0.009	0.010	0.011
USA	0.027	0.026	0.030	0.028	0.030	0.031	0.032	0.032	0.033	0.034	0.034

Table 533: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

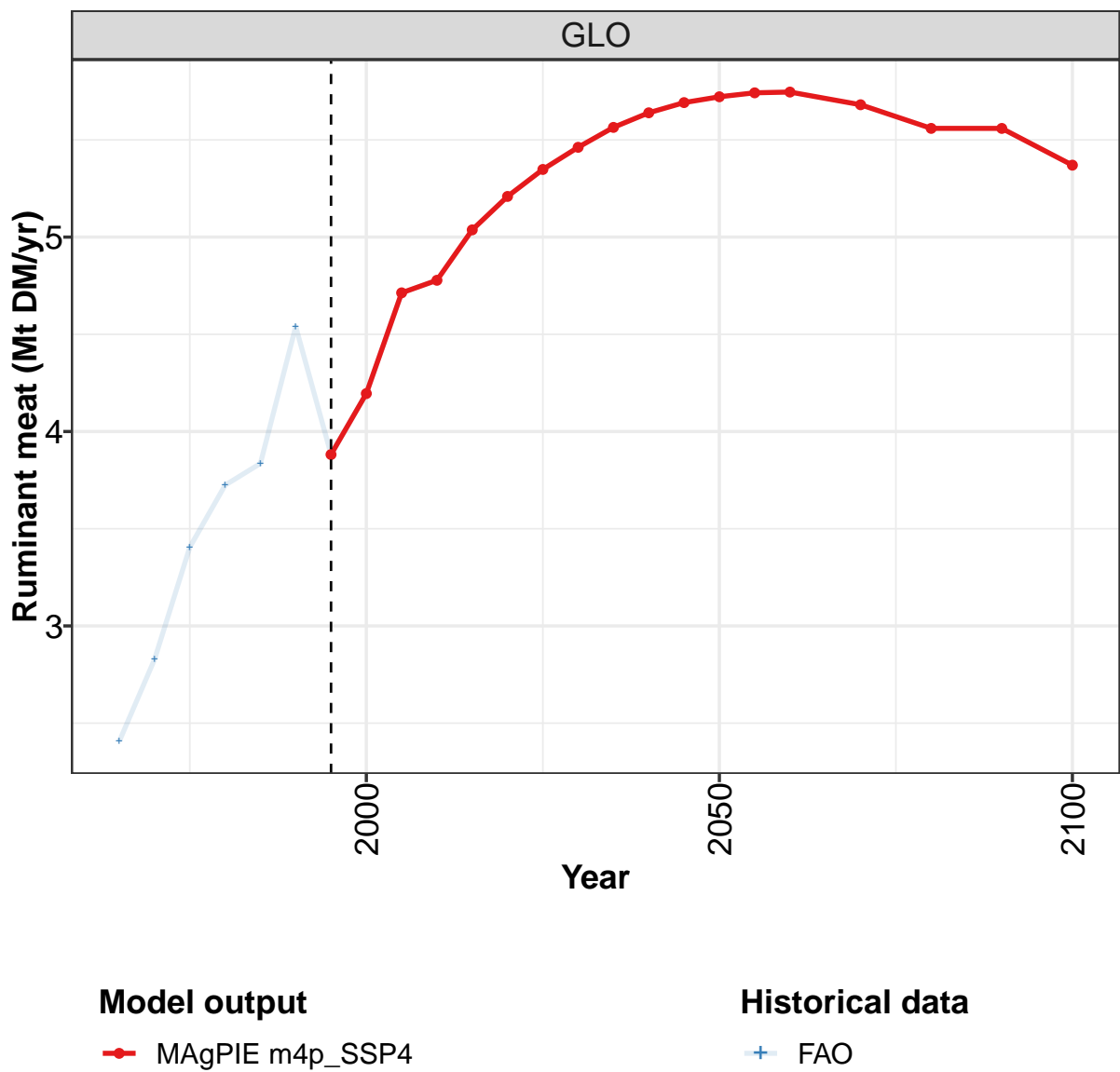
	2050	2055	2060	2070	2080	2090	2100
GLO	0.699	0.701	0.700	0.690	0.674	0.674	0.651
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.020	0.019	0.018	0.016	0.014	0.014	0.012
EUR	0.169	0.168	0.167	0.161	0.155	0.155	0.147
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.292	0.291	0.290	0.282	0.272	0.272	0.259
MEA	0.028	0.029	0.030	0.032	0.033	0.033	0.034
NEU	0.001	0.001	0.001	0.001	0.001	0.001	0.001
OAS	0.117	0.119	0.121	0.123	0.124	0.124	0.124
REF	0.025	0.025	0.024	0.023	0.022	0.022	0.020
SSA	0.012	0.013	0.014	0.016	0.019	0.019	0.020
USA	0.035	0.035	0.035	0.036	0.036	0.036	0.035

Table 534: MAgPIE m4p\_SSP4 — 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



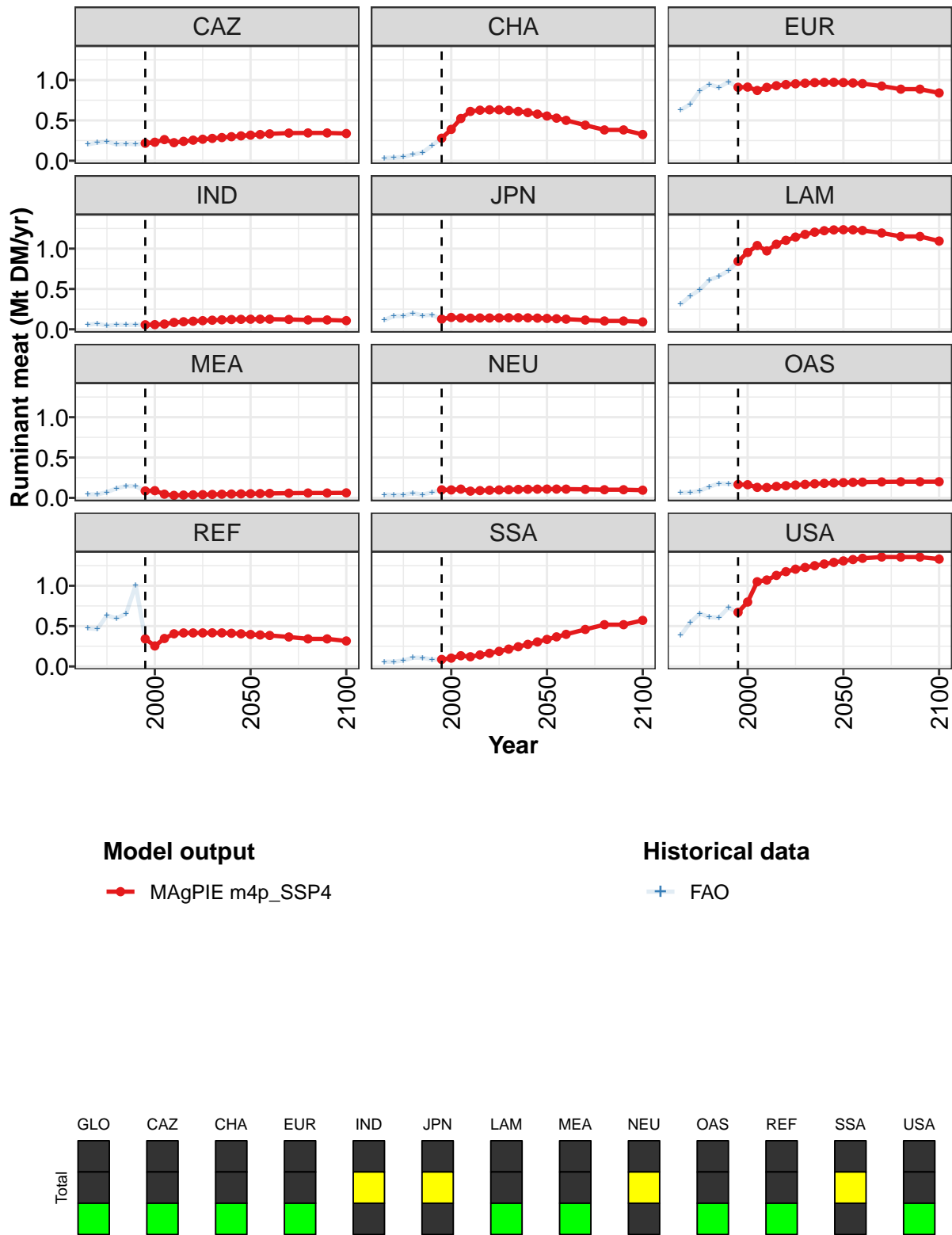


Figure 179: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Ruminant meat (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.88	4.20	4.71	4.78	5.04	5.21	5.35	5.46	5.56	5.64	5.69
CAZ	0.22	0.23	0.26	0.22	0.24	0.26	0.27	0.28	0.29	0.30	0.31
CHA	0.28	0.39	0.52	0.61	0.63	0.63	0.63	0.62	0.61	0.60	0.58
EUR	0.91	0.91	0.87	0.91	0.93	0.94	0.95	0.96	0.97	0.97	0.97
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	0.14	0.14	0.14	0.14	0.14
LAM	0.84	0.95	1.04	0.97	1.05	1.10	1.14	1.18	1.20	1.22	1.23
MEA	0.09	0.09	0.05	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05
NEU	0.10	0.10	0.11	0.08	0.09	0.09	0.10	0.10	0.10	0.11	0.11
OAS	0.17	0.16	0.13	0.13	0.14	0.15	0.16	0.17	0.17	0.18	0.19
REF	0.34	0.25	0.35	0.40	0.42	0.42	0.42	0.42	0.42	0.41	0.40
SSA	0.09	0.10	0.13	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30
USA	0.67	0.80	1.05	1.07	1.13	1.17	1.21	1.23	1.25	1.27	1.29

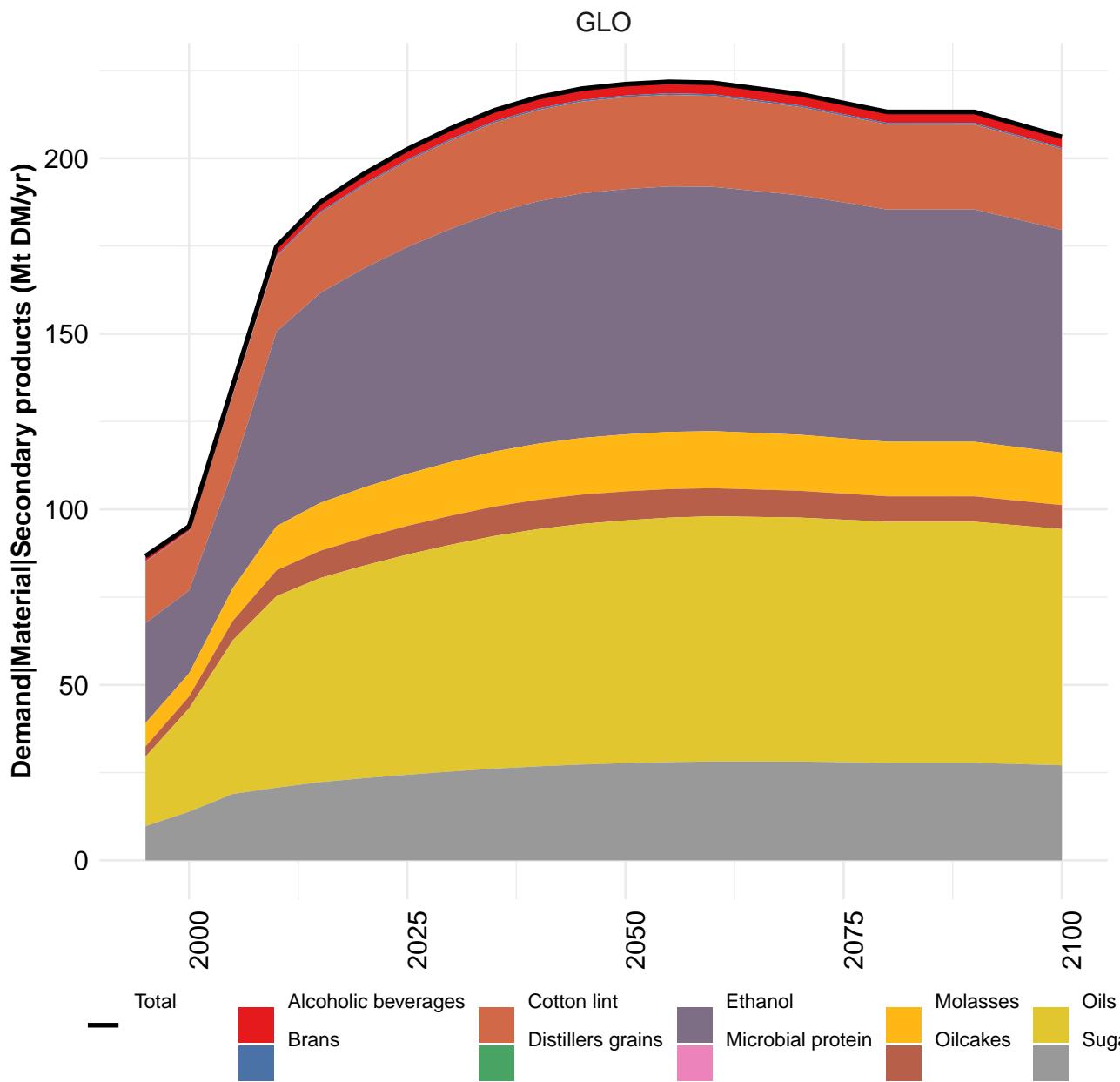
Table 536: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Ruminant meat (Mt DM/yr)  
[PART 1/2]

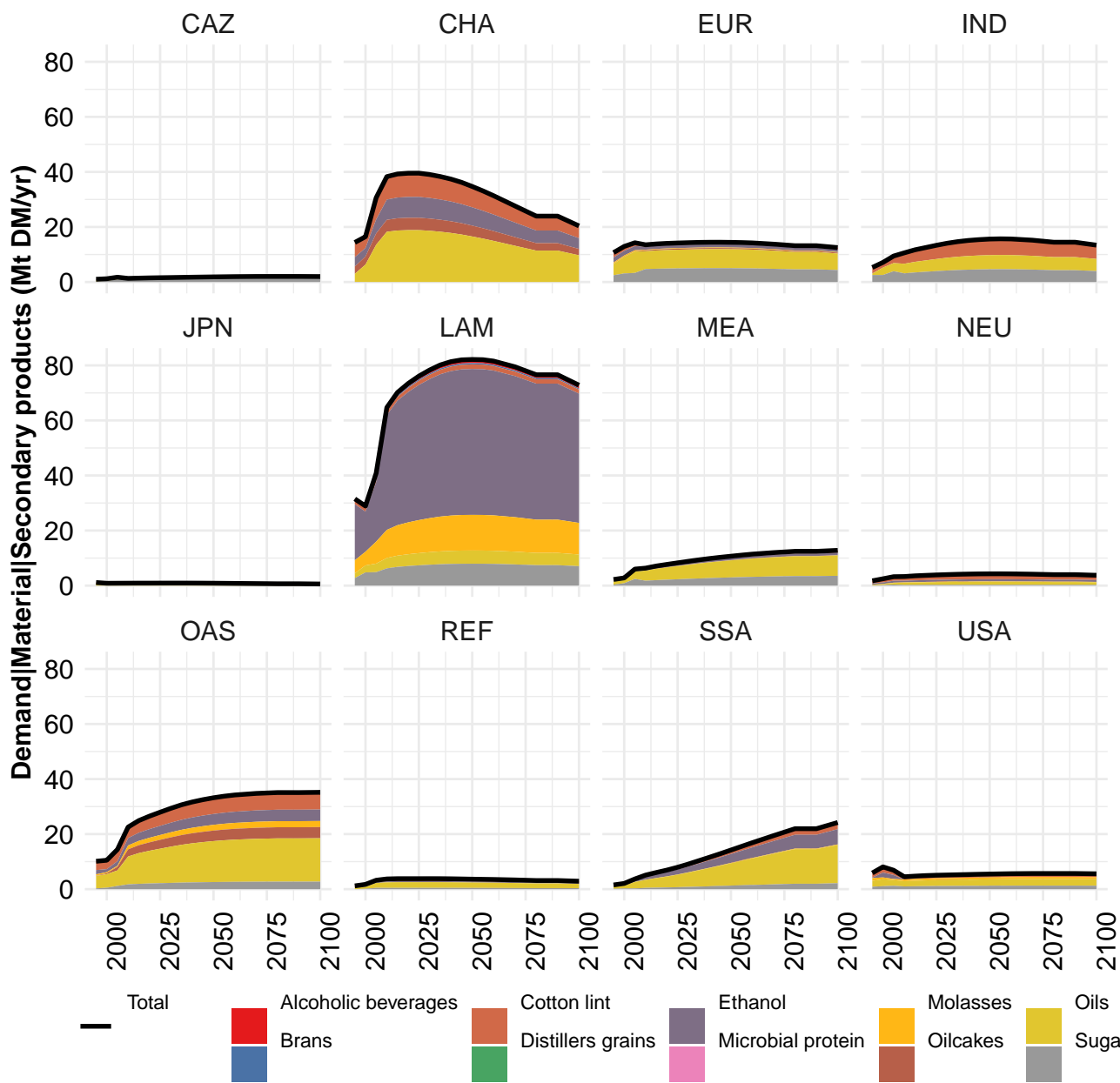
	2050	2055	2060	2070	2080	2090	2100
GLO	5.72	5.74	5.75	5.68	5.56	5.56	5.37
CAZ	0.32	0.33	0.33	0.34	0.34	0.34	0.34
CHA	0.55	0.53	0.50	0.44	0.38	0.38	0.33
EUR	0.97	0.96	0.96	0.93	0.89	0.89	0.84
IND	0.13	0.13	0.13	0.12	0.12	0.12	0.11
JPN	0.13	0.13	0.13	0.11	0.10	0.10	0.09
LAM	1.23	1.23	1.23	1.19	1.15	1.15	1.09
MEA	0.05	0.05	0.06	0.06	0.06	0.06	0.06
NEU	0.11	0.11	0.11	0.11	0.10	0.10	0.10
OAS	0.19	0.19	0.19	0.20	0.20	0.20	0.20
REF	0.40	0.39	0.38	0.37	0.34	0.34	0.32
SSA	0.33	0.37	0.40	0.46	0.52	0.52	0.57
USA	1.31	1.32	1.34	1.36	1.36	1.36	1.33

Table 537: MAgPIE m4p\_SSP4 — Demand—Material—Livestock products—Ruminant meat (Mt DM/yr)  
[PART 2/2]

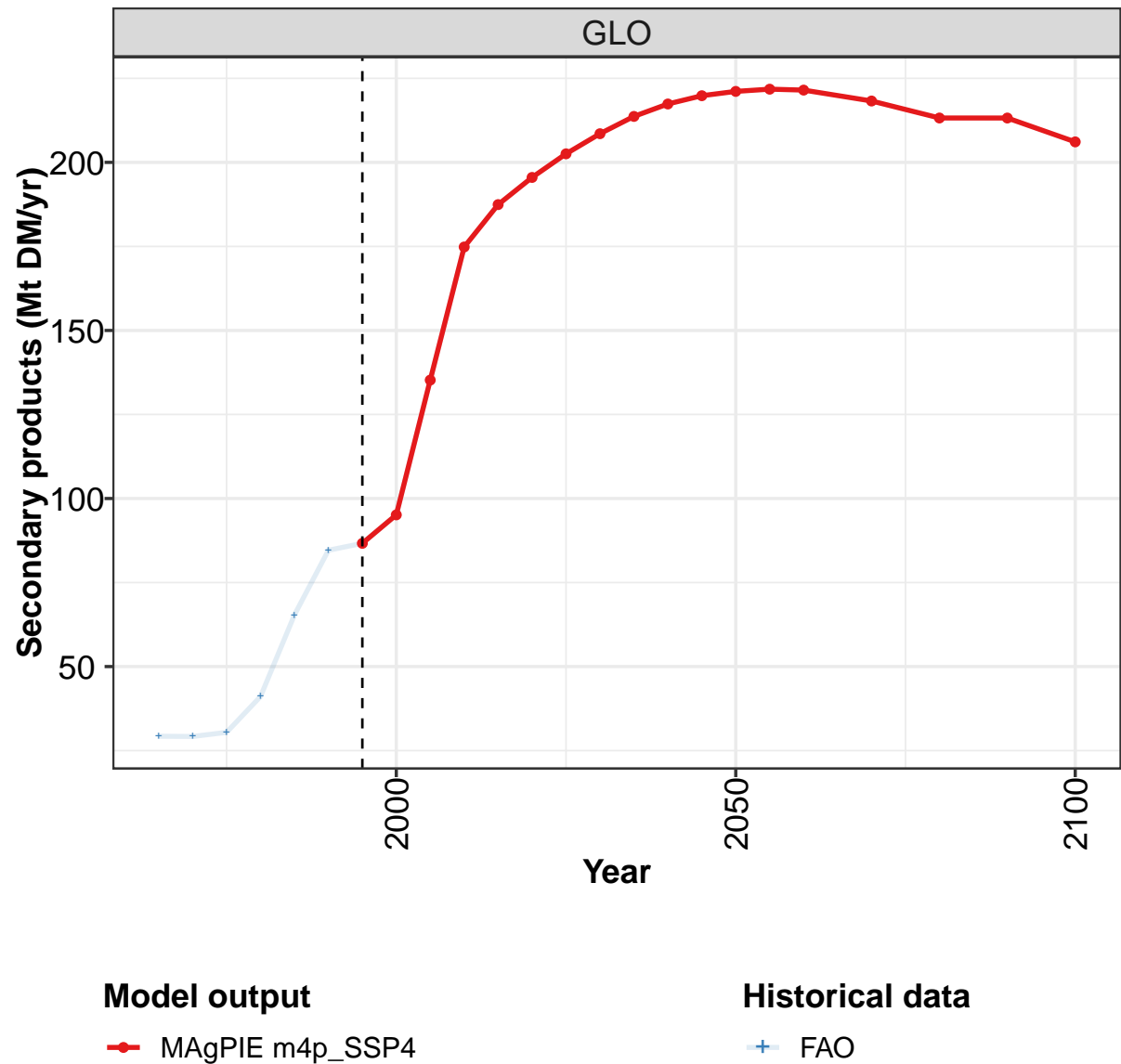
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.41	2.83	3.41	3.72	3.84	4.54	3.88	4.20	4.71	4.78
CAZ	0.20	0.23	0.24	0.20	0.21	0.20	0.22	0.23	0.26	0.22
CHA	0.04	0.04	0.05	0.08	0.10	0.19	0.28	0.39	0.52	0.61
EUR	0.63	0.70	0.87	0.95	0.91	0.98	0.91	0.91	0.87	0.91
IND	0.06	0.07	0.04	0.06	0.05	0.06	0.06	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)





8.6
Secondary products



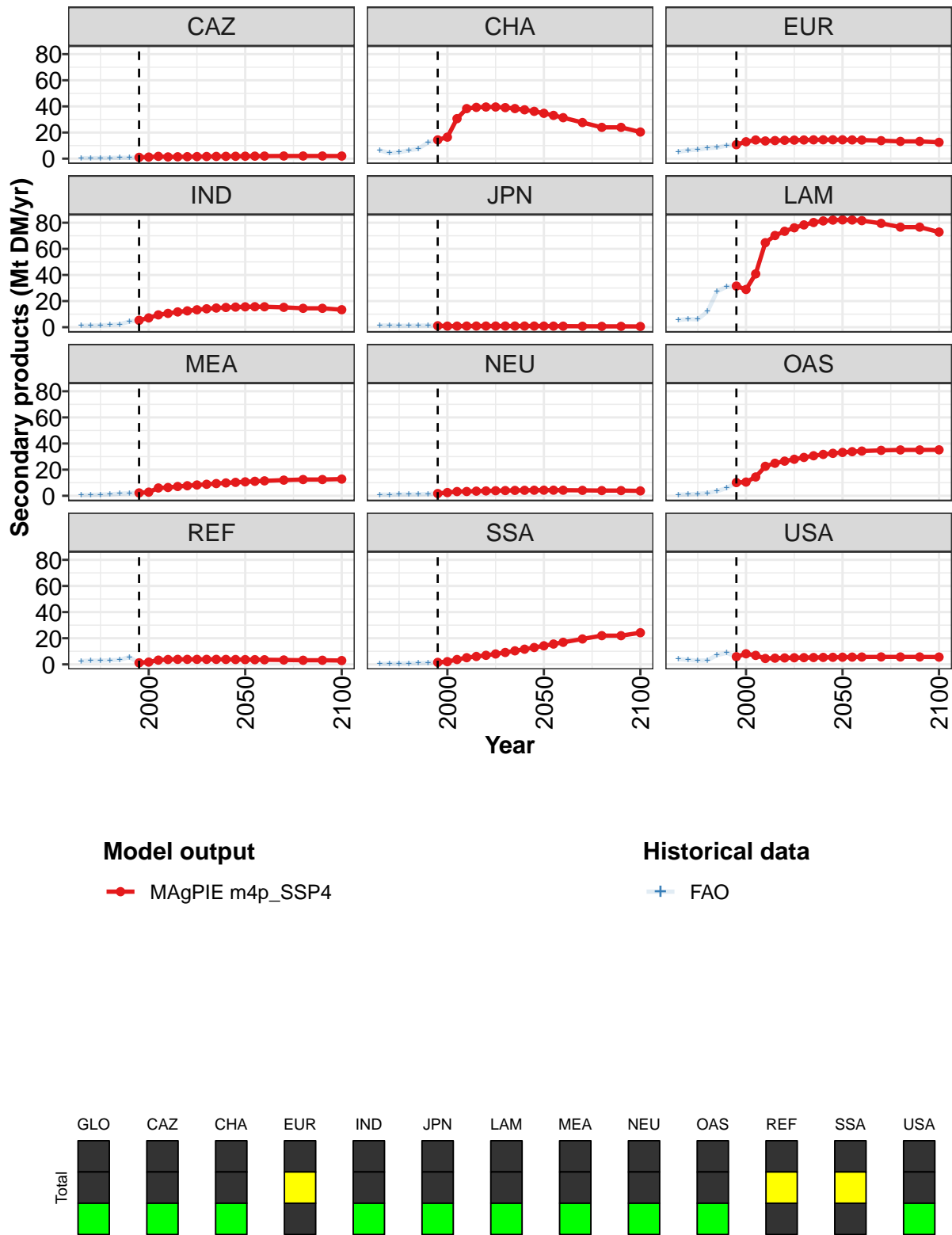


Figure 180: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	87	95	135	175	187	196	203	209	214	217	220
CAZ	1	1	2	1	1	2	2	2	2	2	2
CHA	14	16	31	38	39	40	40	39	38	37	36
EUR	11	13	14	14	14	14	14	14	14	14	14
IND	5	7	9	11	12	13	13	14	15	15	15
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	32	29	41	65	70	73	76	78	80	81	82
MEA	2	3	6	6	7	8	8	9	9	10	10
NEU	2	2	3	3	4	4	4	4	4	4	4
OAS	10	11	14	23	25	27	28	29	31	32	33
REF	1	2	3	4	4	4	4	4	4	4	4
SSA	2	2	4	5	6	7	8	9	10	12	13
USA	6	8	7	4	5	5	5	5	5	5	5

Table 539: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products (Mt DM/yr) [PART 1/2]

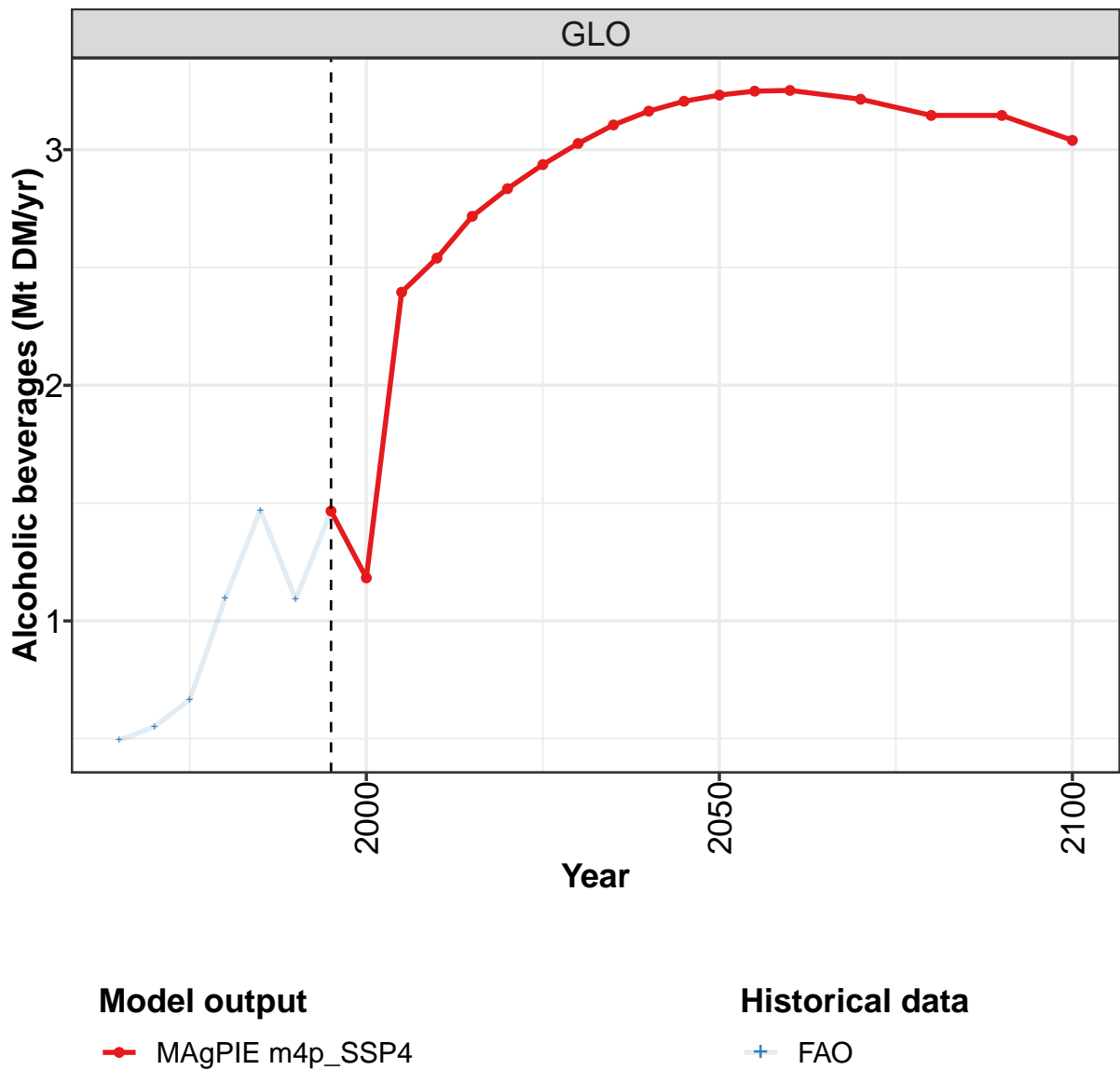
	2050	2055	2060	2070	2080	2090	2100
GLO	221	222	222	218	213	213	206
CAZ	2	2	2	2	2	2	2
CHA	35	33	31	28	24	24	20
EUR	14	14	14	14	13	13	13
IND	16	16	16	15	14	14	13
JPN	1	1	1	1	1	1	1
LAM	82	82	82	79	77	77	73
MEA	11	11	11	12	12	12	13
NEU	4	4	4	4	4	4	4
OAS	33	34	34	35	35	35	35
REF	4	4	4	3	3	3	3
SSA	14	16	17	19	22	22	24
USA	5	6	6	6	6	6	6

Table 540: MAgPIE m4p\_SSP4 — 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



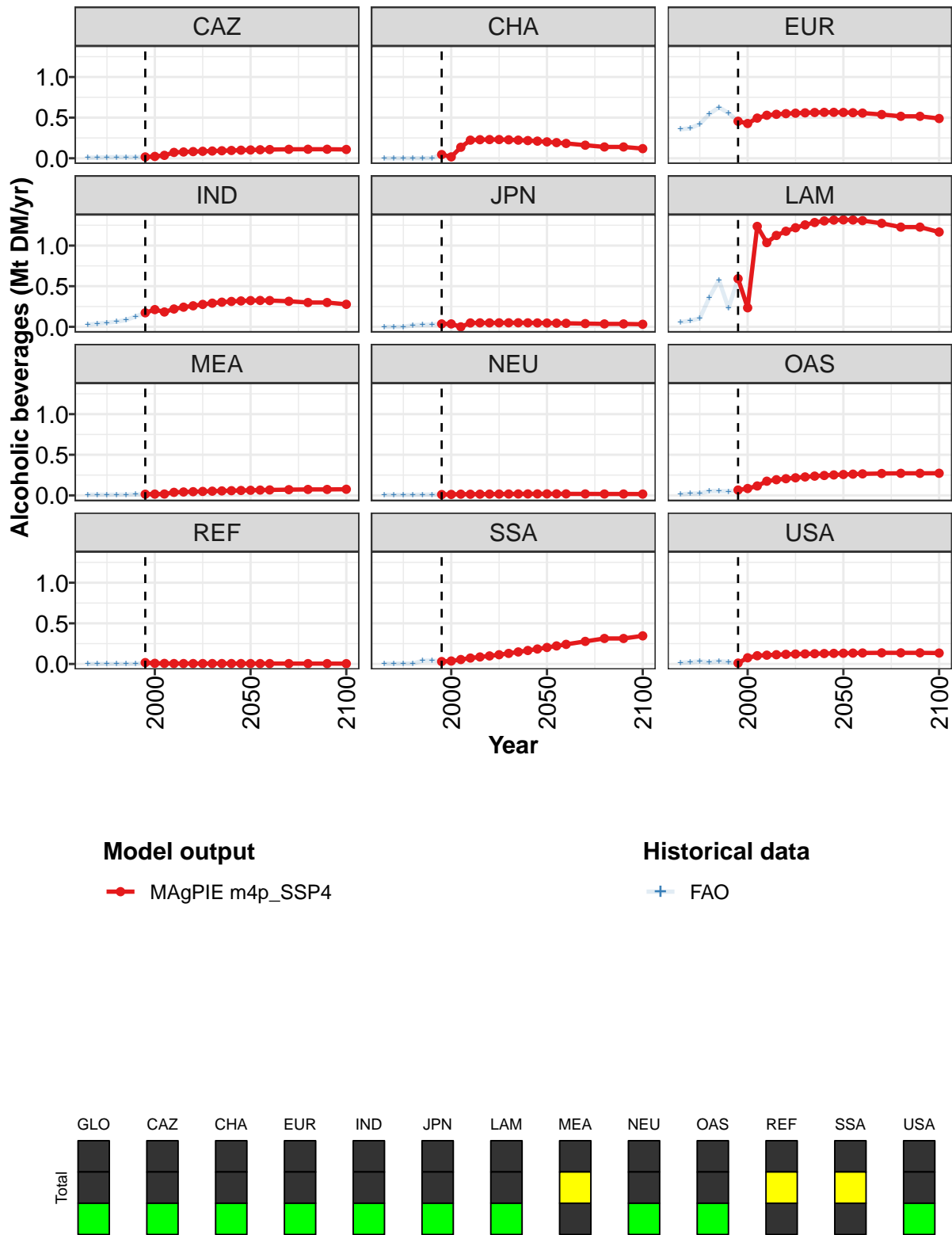


Figure 181: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Alcoholic beverages (Mt DM/yr)



	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	3.03	3.11	3.16	3.21
CAZ	0.02	0.02	0.04	0.07	0.08	0.08	0.09	0.09	0.09	0.10	0.10
CHA	0.05	0.02	0.14	0.22	0.23	0.23	0.23	0.23	0.22	0.22	0.21
EUR	0.46	0.43	0.49	0.53	0.54	0.55	0.55	0.56	0.56	0.56	0.57
IND	0.17	0.21	0.18	0.22	0.24	0.26	0.28	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	0.05
LAM	0.59	0.23	1.24	1.04	1.12	1.18	1.22	1.25	1.28	1.30	1.31
MEA	0.01	0.02	0.02	0.04	0.04	0.05	0.05	0.05	0.06	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	0.21	0.22	0.23	0.24	0.25	0.25
REF	0.02	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
SSA	0.03	0.04	0.05	0.07	0.09	0.10	0.11	0.13	0.15	0.17	0.18
USA	0.01	0.08	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13

Table 542: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Alcoholic beverages (Mt DM/yr)  
[PART 1/2]

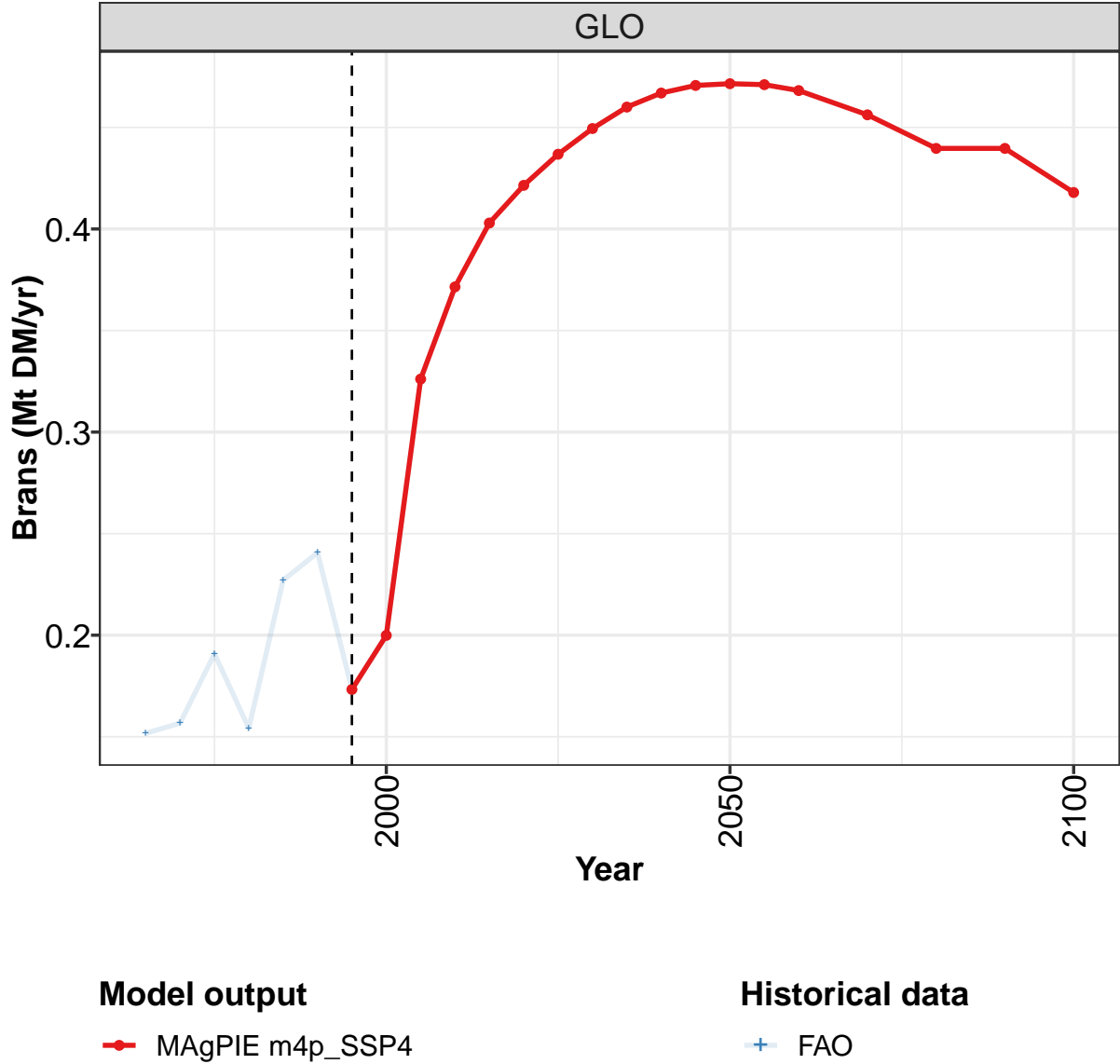
	2050	2055	2060	2070	2080	2090	2100
GLO	3.23	3.25	3.25	3.21	3.15	3.15	3.04
CAZ	0.10	0.10	0.11	0.11	0.11	0.11	0.11
CHA	0.20	0.19	0.18	0.16	0.14	0.14	0.12
EUR	0.56	0.56	0.56	0.54	0.52	0.52	0.49
IND	0.32	0.32	0.32	0.31	0.30	0.30	0.28
JPN	0.05	0.05	0.04	0.04	0.04	0.04	0.03
LAM	1.32	1.31	1.31	1.27	1.23	1.23	1.17
MEA	0.06	0.07	0.07	0.07	0.07	0.07	0.08
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.26	0.26	0.26	0.27	0.27	0.27	0.27
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.20	0.22	0.24	0.28	0.31	0.31	0.35
USA	0.13	0.13	0.14	0.14	0.14	0.14	0.13

Table 543: MAgPIE m4p\_SSP4 — 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



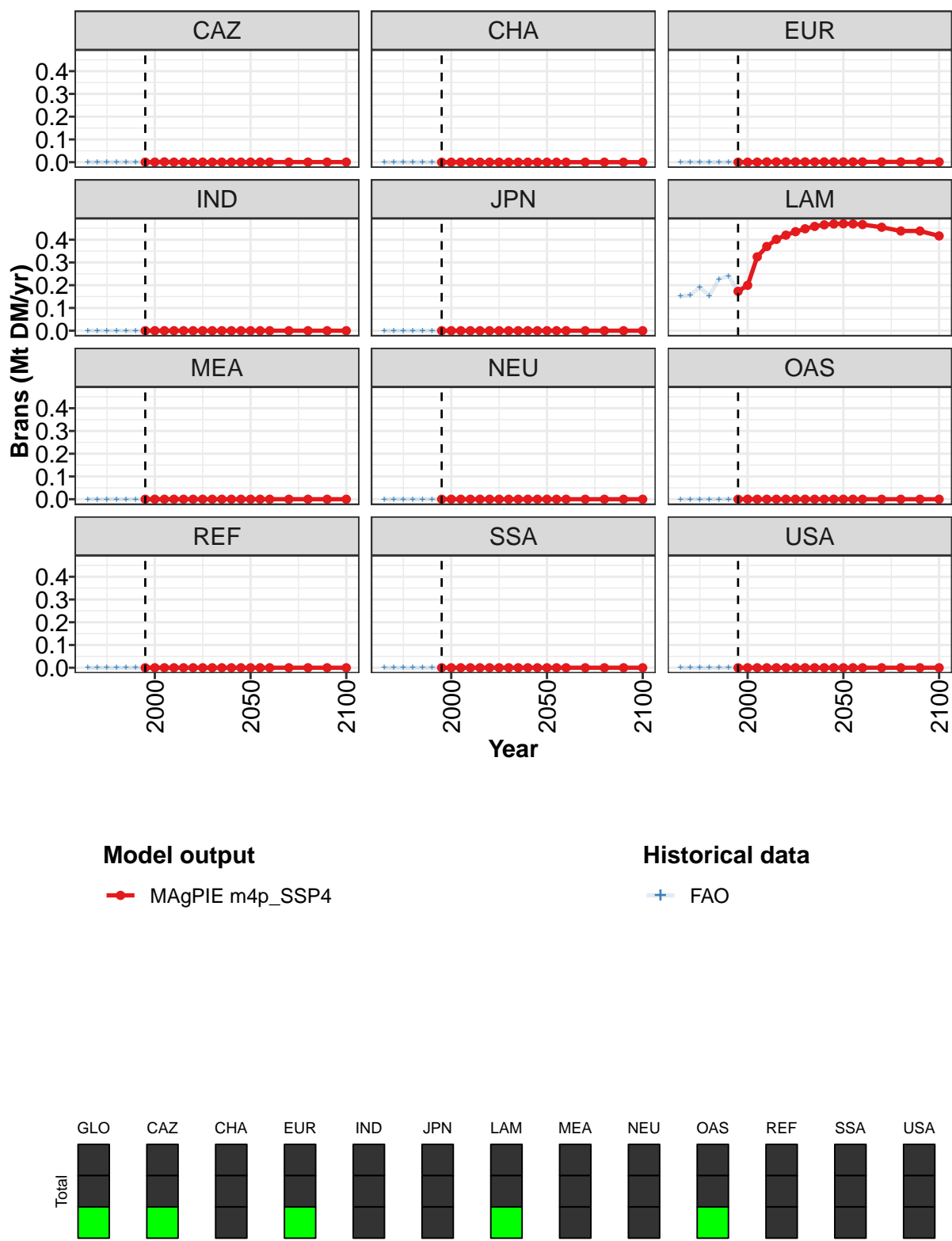


Figure 182: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.173	0.200	0.326	0.371	0.403	0.421	0.437	0.449	0.460	0.467	0.471
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	0.001
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	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	0.401	0.420	0.435	0.448	0.458	0.465	0.469
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\_SSP4 — Demand—Material—Secondary products—Brans (Mt DM/yr) [PART 1/2]

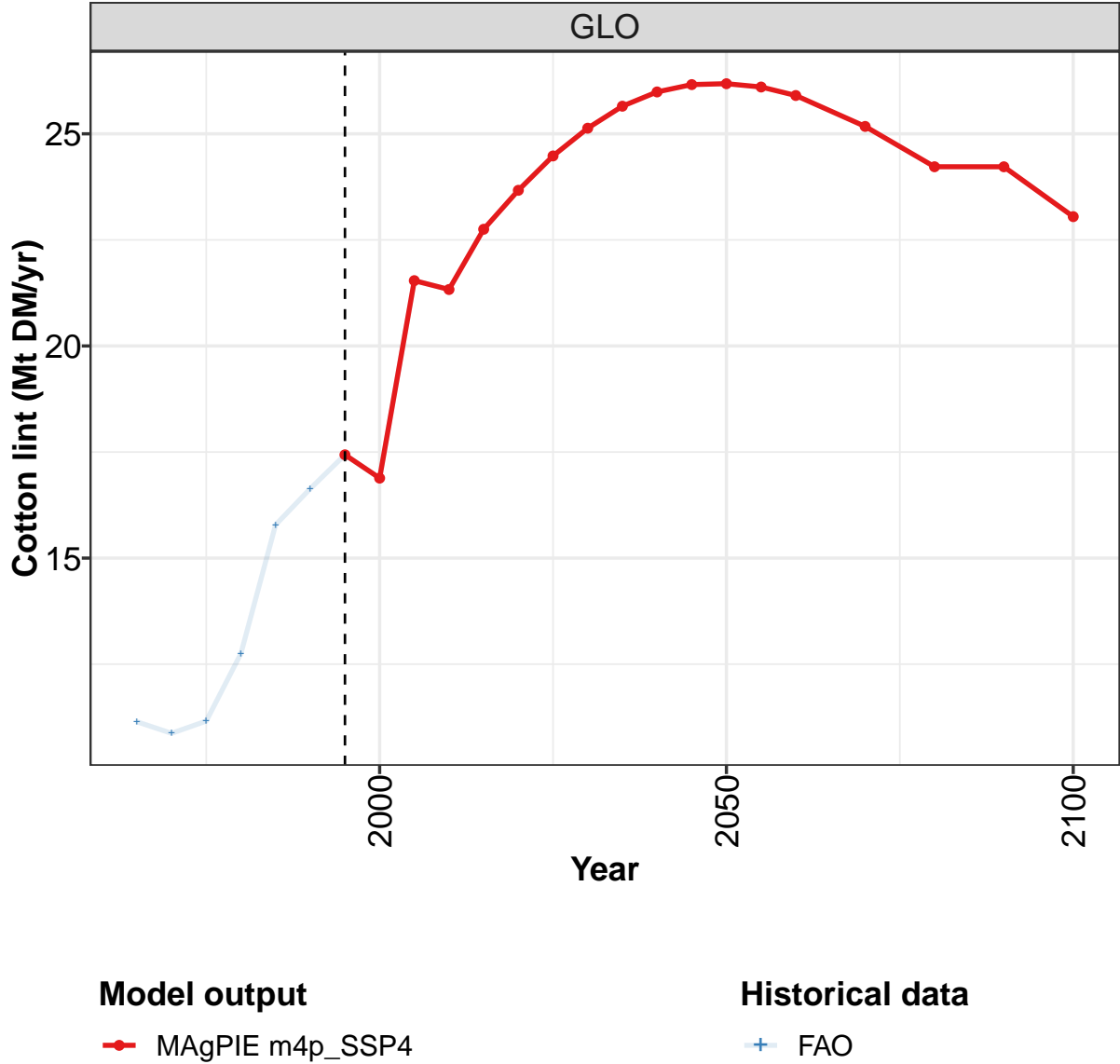
	2050	2055	2060	2070	2080	2090	2100
GLO	0.472	0.471	0.468	0.456	0.440	0.440	0.418
CAZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUR	0.001	0.001	0.001	0.001	0.001	0.001	0.001
IND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.470	0.469	0.467	0.455	0.438	0.438	0.417
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\_SSP4 — 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



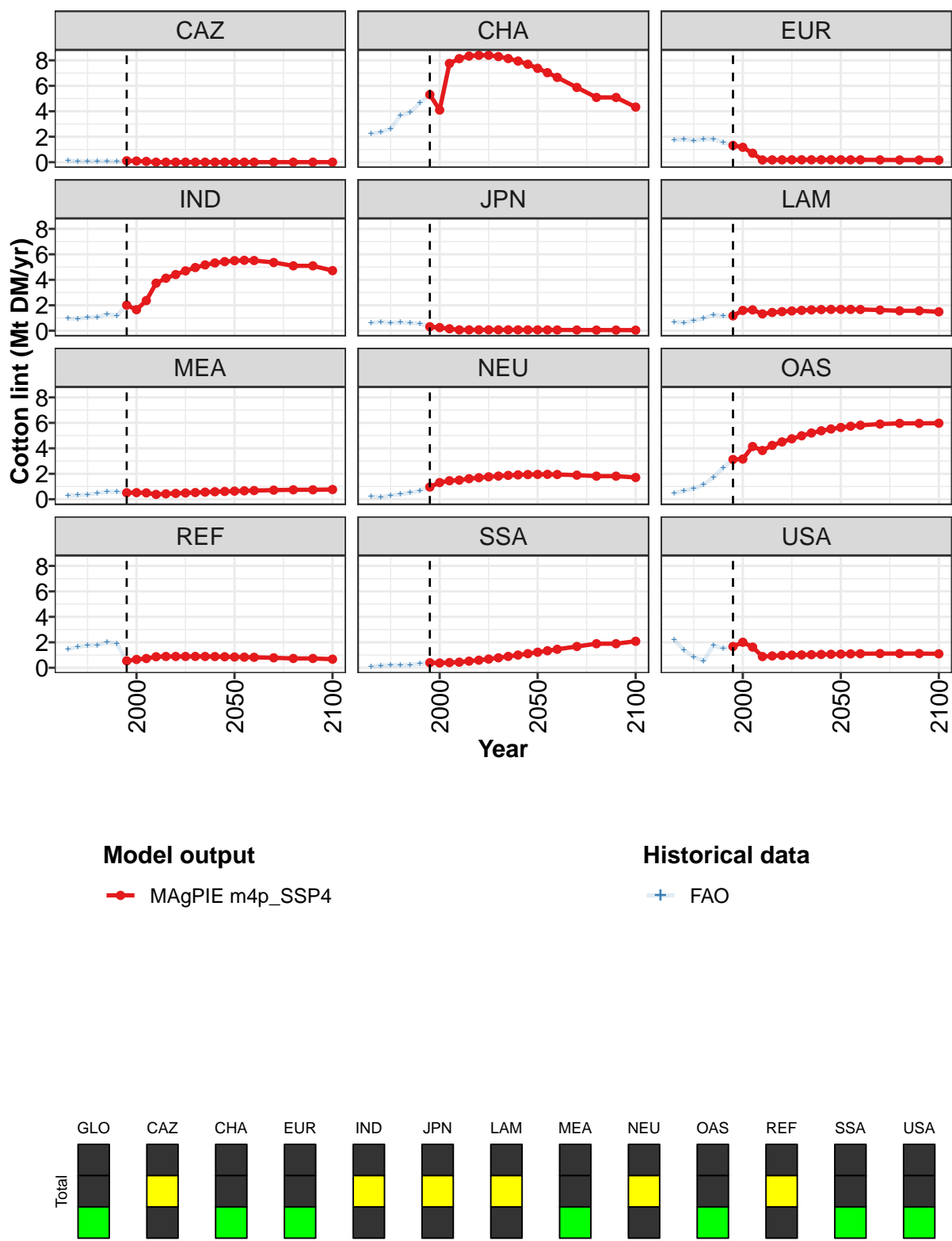


Figure 183: MAGPIE m4p\_SSP4 — Demand—Material—Secondary products—Cotton lint (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.4	16.9	21.5	21.3	22.8	23.7	24.5	25.1	25.7	26.0	26.2
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	8.4	8.3	8.1	7.9	7.7
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	4.7	5.0	5.2	5.3	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	1.6	1.6	1.6	1.7	1.7
MEA	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	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	1.9
OAS	3.1	3.2	4.1	3.8	4.2	4.5	4.7	5.0	5.2	5.4	5.5
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	0.8	0.9	1.0	1.1
USA	1.7	2.0	1.6	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1

Table 548: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

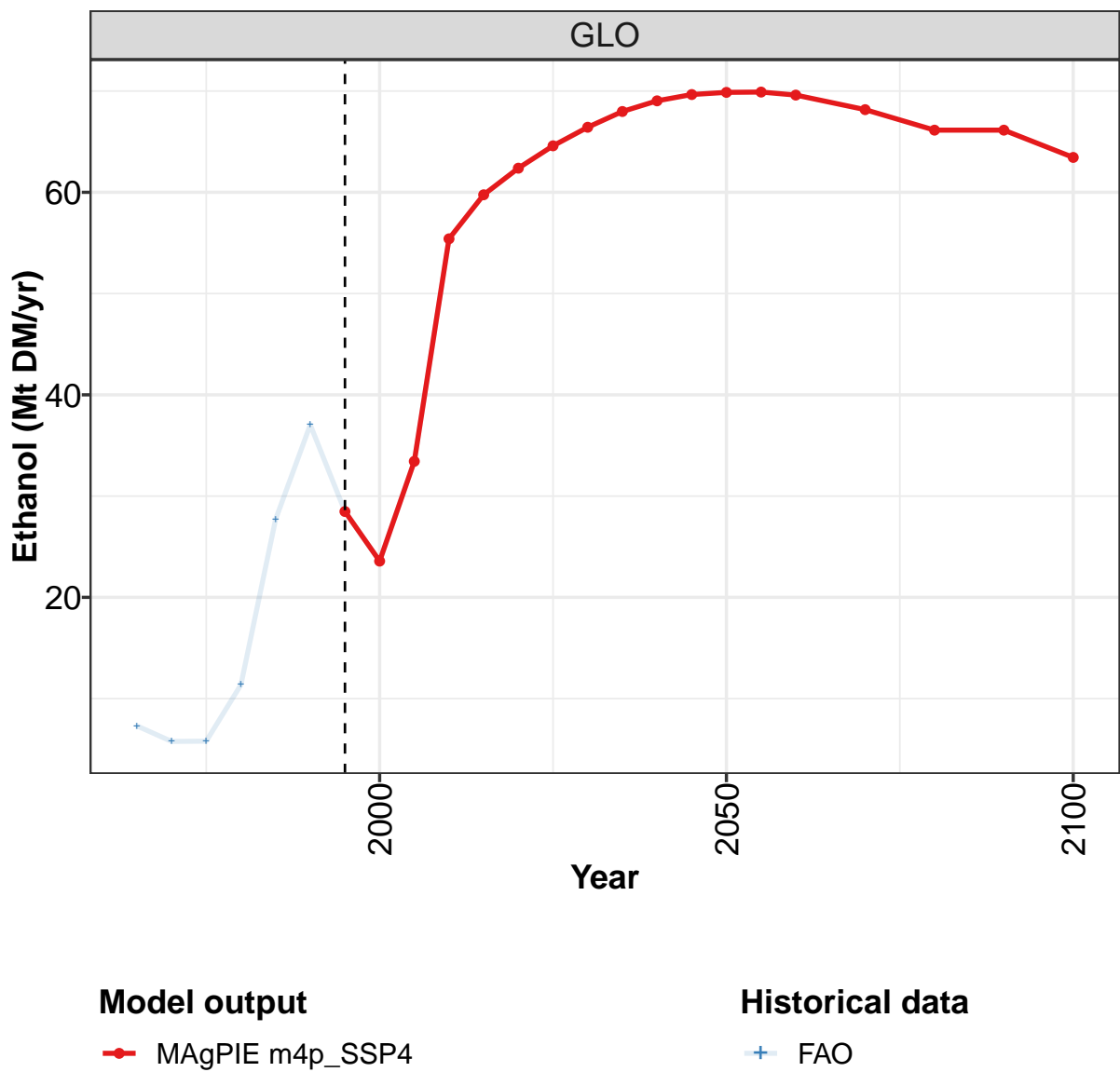
	2050	2055	2060	2070	2080	2090	2100
GLO	26.2	26.1	25.9	25.2	24.2	24.2	23.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	7.4	7.0	6.7	5.9	5.1	5.1	4.3
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	5.5	5.5	5.5	5.4	5.1	5.1	4.7
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	1.7	1.7	1.7	1.6	1.6	1.6	1.5
MEA	0.6	0.7	0.7	0.7	0.7	0.7	0.8
NEU	2.0	2.0	1.9	1.9	1.8	1.8	1.7
OAS	5.6	5.7	5.8	5.9	6.0	6.0	6.0
REF	0.8	0.8	0.8	0.8	0.7	0.7	0.7
SSA	1.2	1.3	1.5	1.7	1.9	1.9	2.1
USA	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Table 549: MAgPIE m4p\_SSP4 — 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





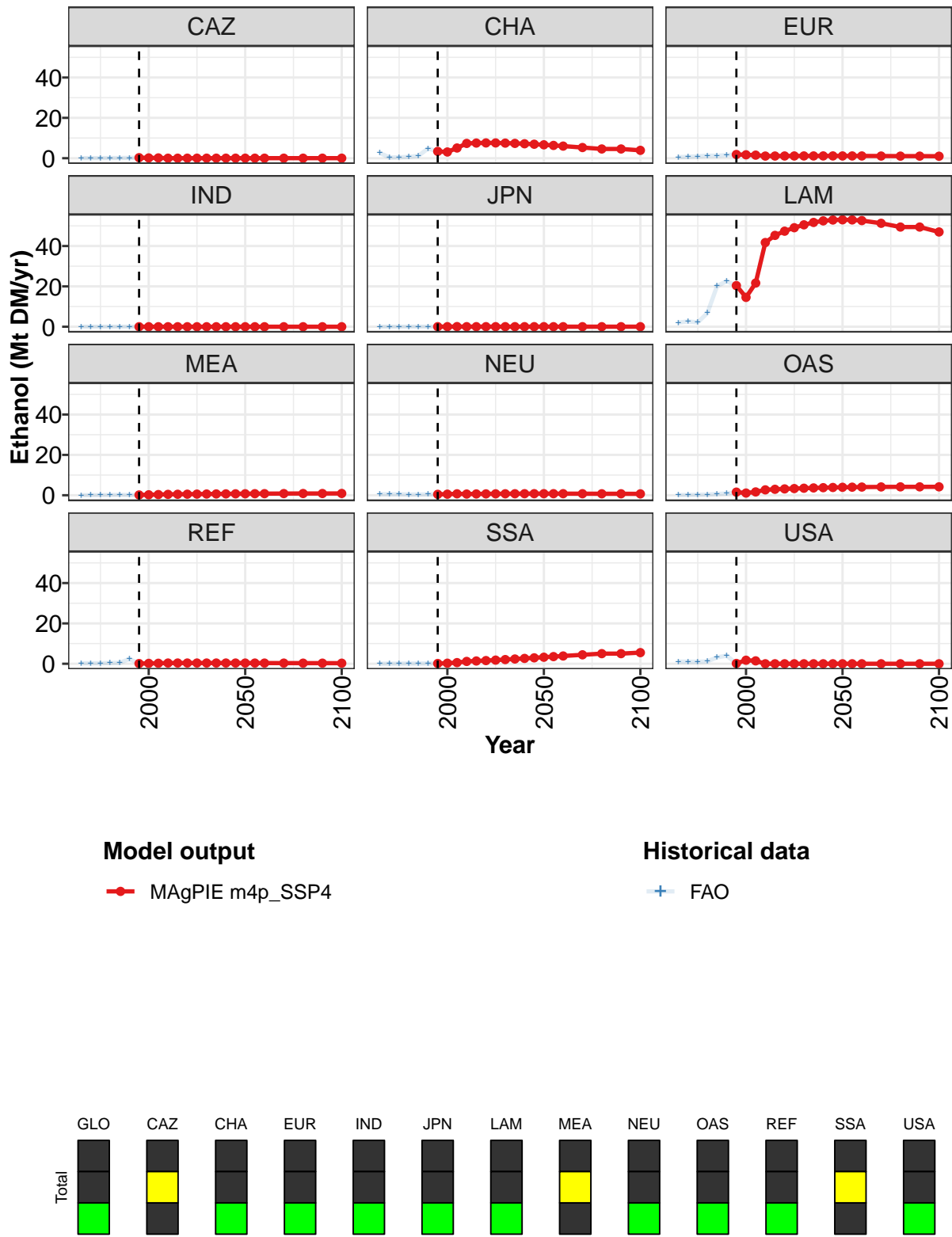


Figure 184: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Ethanol (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	28.5	23.6	33.4	55.4	59.8	62.4	64.6	66.4	68.0	69.0	69.7
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	7.6	7.5	7.3	7.2	6.9
EUR	1.8	1.7	1.5	1.1	1.1	1.1	1.1	1.1	1.1	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	0.0	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	47.4	49.1	50.5	51.7	52.5	52.9
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	3.5	3.6	3.8	3.9
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	2.1	2.4	2.6	2.9
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\_SSP4 — Demand—Material—Secondary products—Ethanol (Mt DM/yr) [PART 1/2]

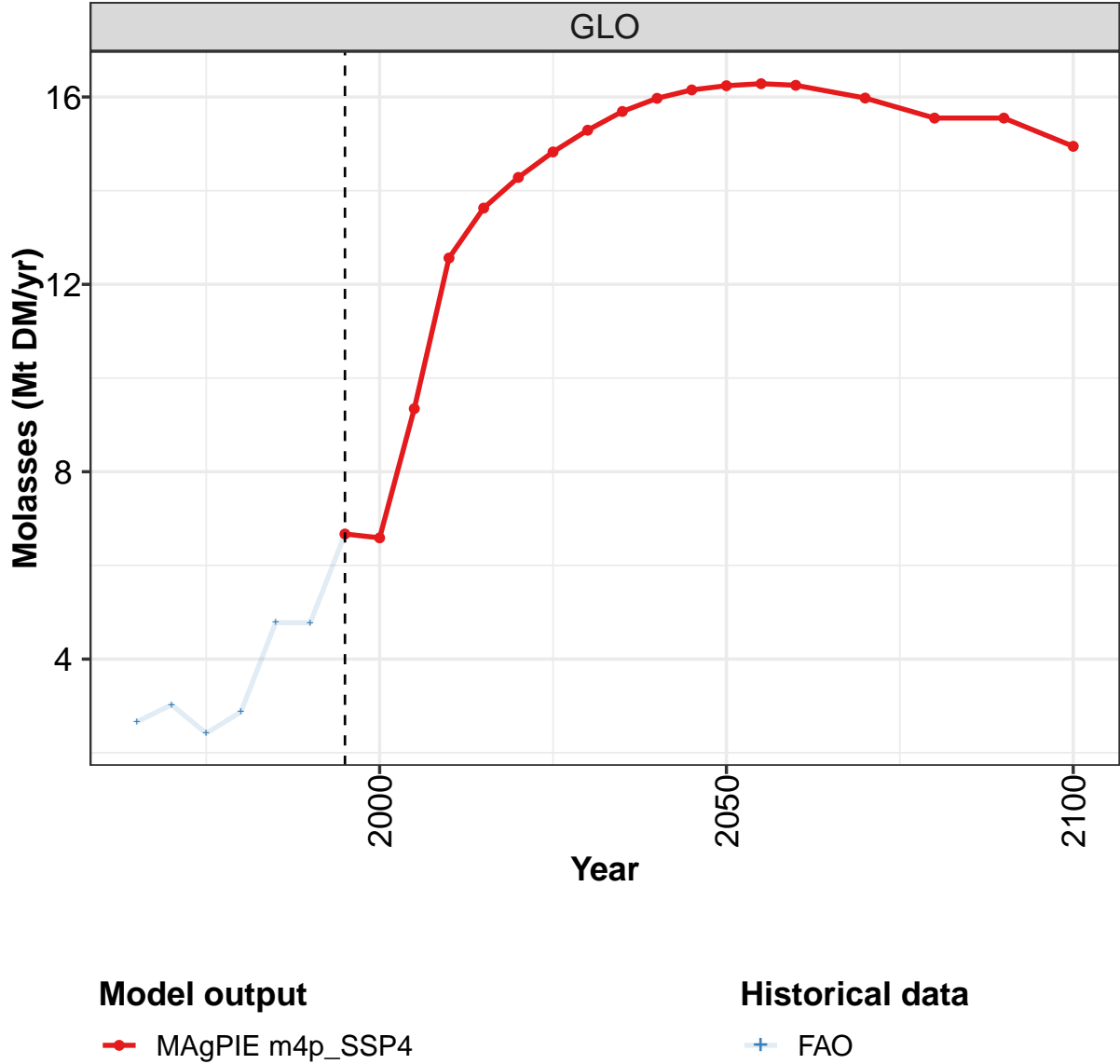
	2050	2055	2060	2070	2080	2090	2100
GLO	69.9	69.9	69.6	68.2	66.1	66.1	63.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.6	6.3	6.0	5.3	4.6	4.6	3.9
EUR	1.1	1.1	1.1	1.1	1.0	1.0	1.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	53.0	52.9	52.6	51.3	49.4	49.4	47.0
MEA	0.7	0.8	0.8	0.8	0.9	0.9	0.9
NEU	0.8	0.8	0.8	0.8	0.7	0.7	0.7
OAS	3.9	4.0	4.1	4.1	4.2	4.2	4.2
REF	0.4	0.3	0.3	0.3	0.3	0.3	0.3
SSA	3.2	3.5	3.9	4.4	5.0	5.0	5.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 552: MAgPIE m4p\_SSP4 — 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



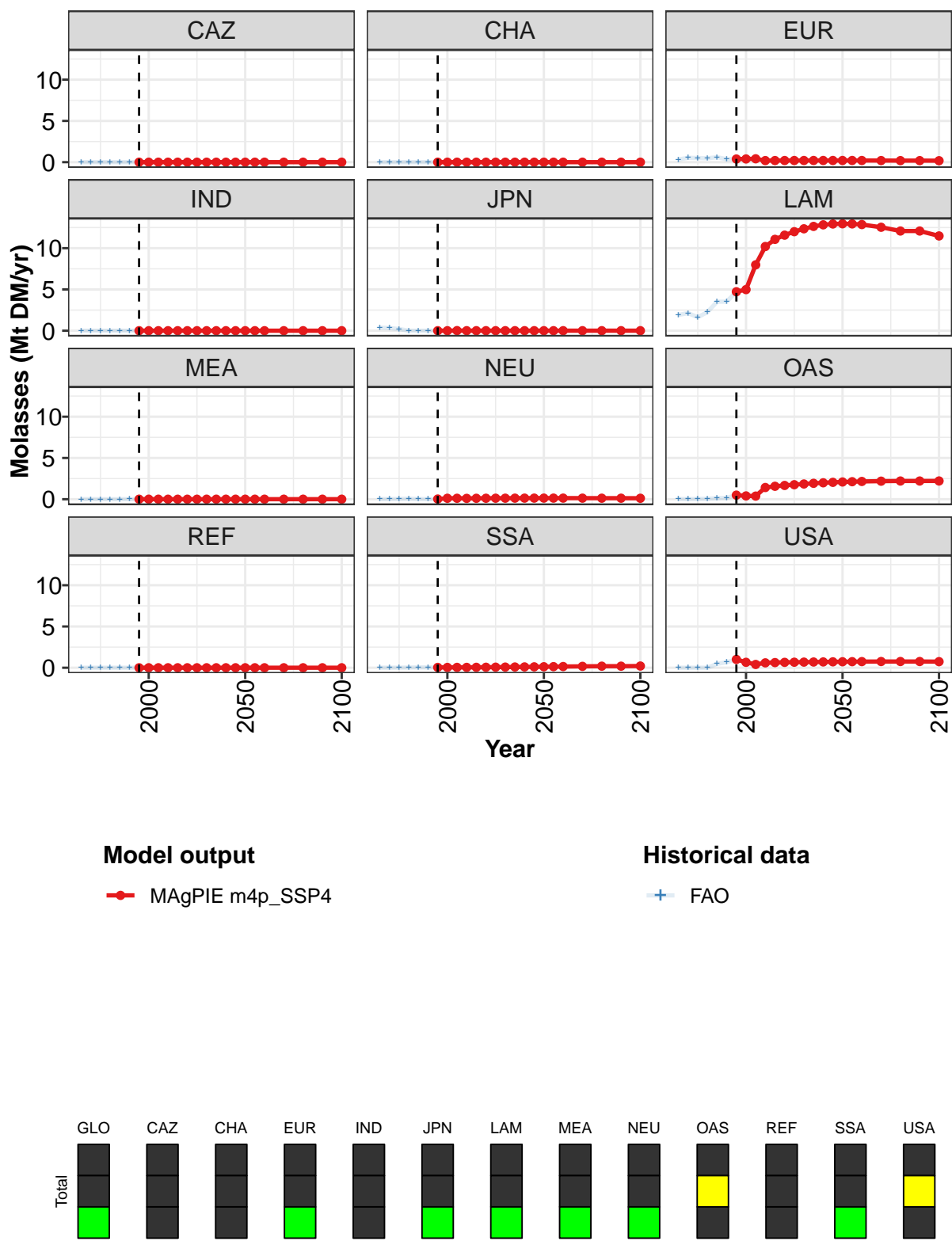


Figure 185: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.7	6.6	9.3	12.6	13.6	14.3	14.8	15.3	15.7	16.0	16.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	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	11.6	12.0	12.4	12.6	12.8	12.9
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	0.1	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	1.8	1.8	1.9	2.0	2.0
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	0.1	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	0.7	0.7	0.7

Table 554: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

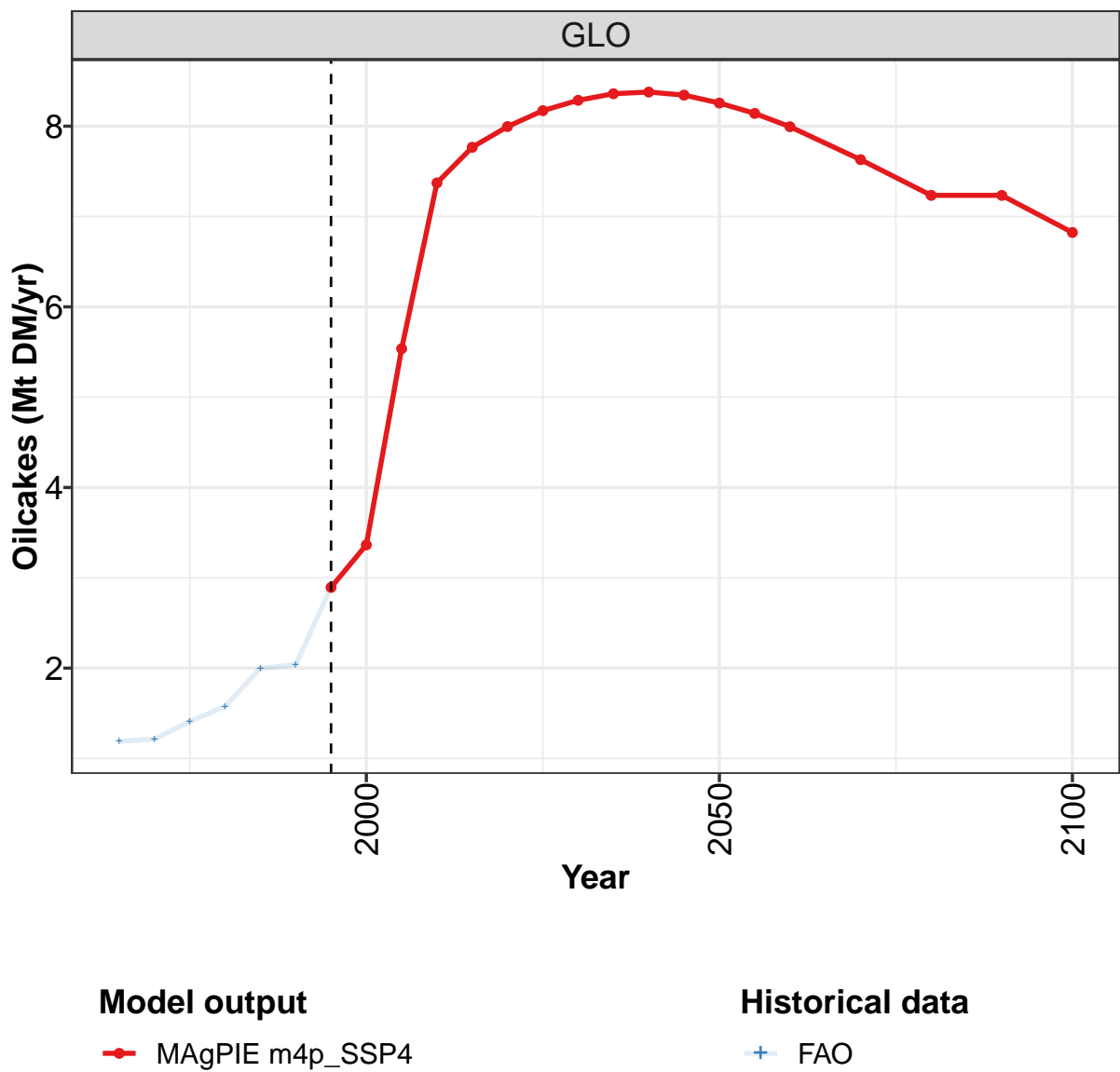
	2050	2055	2060	2070	2080	2090	2100
GLO	16.2	16.3	16.2	16.0	15.6	15.6	14.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	13.0	12.9	12.9	12.5	12.1	12.1	11.5
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	2.1	2.1	2.2	2.2	2.2	2.2	2.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.1	0.1	0.1	0.2	0.2	0.2	0.2
USA	0.7	0.7	0.7	0.8	0.8	0.8	0.7

Table 555: MAgPIE m4p\_SSP4 — 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



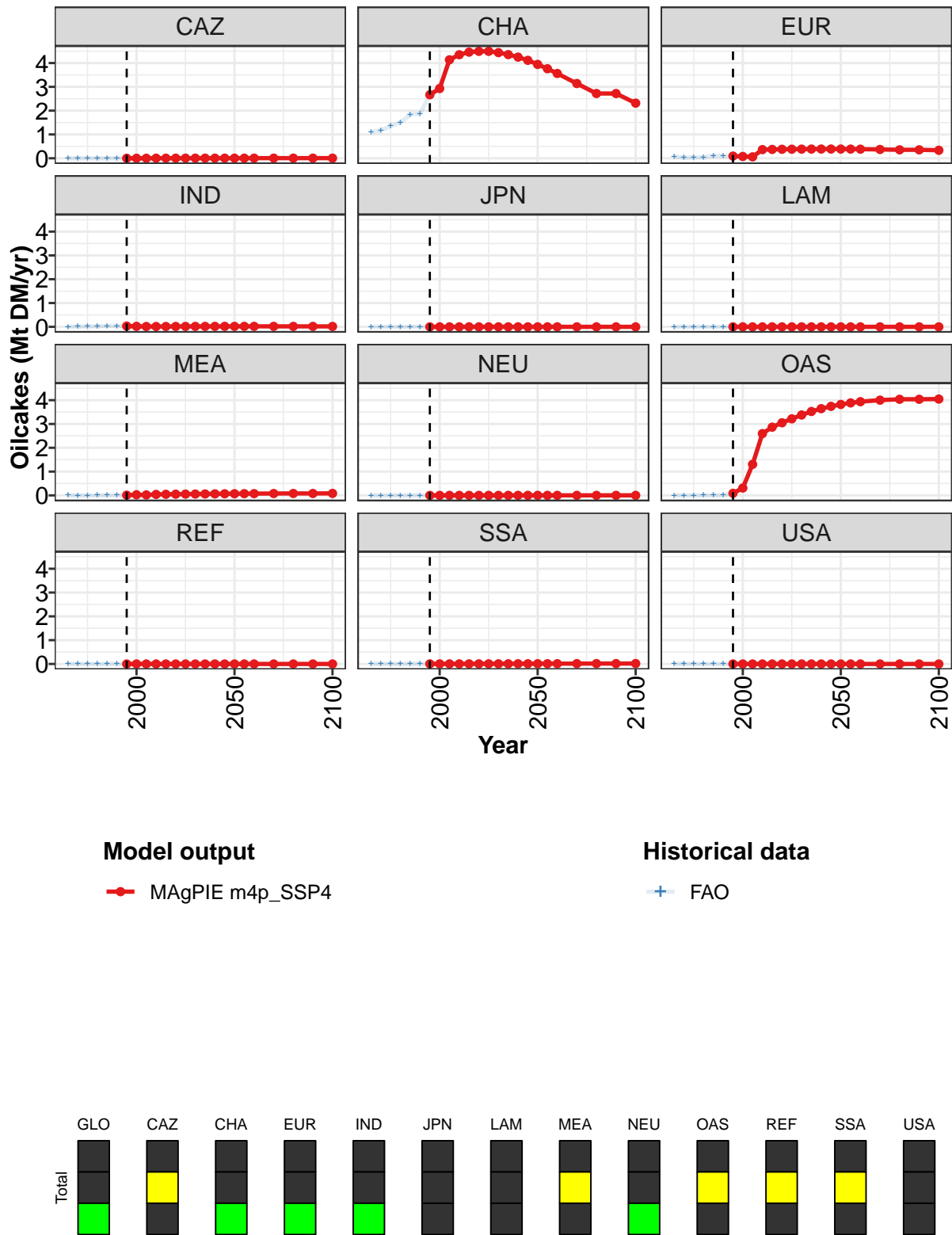


Figure 186: MAGPIE m4p\_SSP4 — Demand—Material—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.89	3.36	5.54	7.37	7.77	8.00	8.17	8.29	8.36	8.38	8.34
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	2.67	2.93	4.14	4.35	4.46	4.49	4.49	4.44	4.35	4.25	4.11
EUR	0.09	0.07	0.06	0.36	0.37	0.38	0.38	0.38	0.39	0.39	0.39
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	0.07
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.09	0.31	1.30	2.60	2.87	3.05	3.22	3.38	3.53	3.64	3.74
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	0.01	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	0.00	0.00	0.00	0.00

Table 557: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	8.26	8.14	7.99	7.63	7.23	7.23	6.82
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	3.94	3.76	3.56	3.14	2.72	2.72	2.32
EUR	0.39	0.38	0.38	0.37	0.35	0.35	0.34
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	0.08	0.08	0.08	0.08
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	3.82	3.89	3.94	4.00	4.04	4.04	4.05
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.01	0.01	0.01	0.01	0.02	0.02	0.02
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

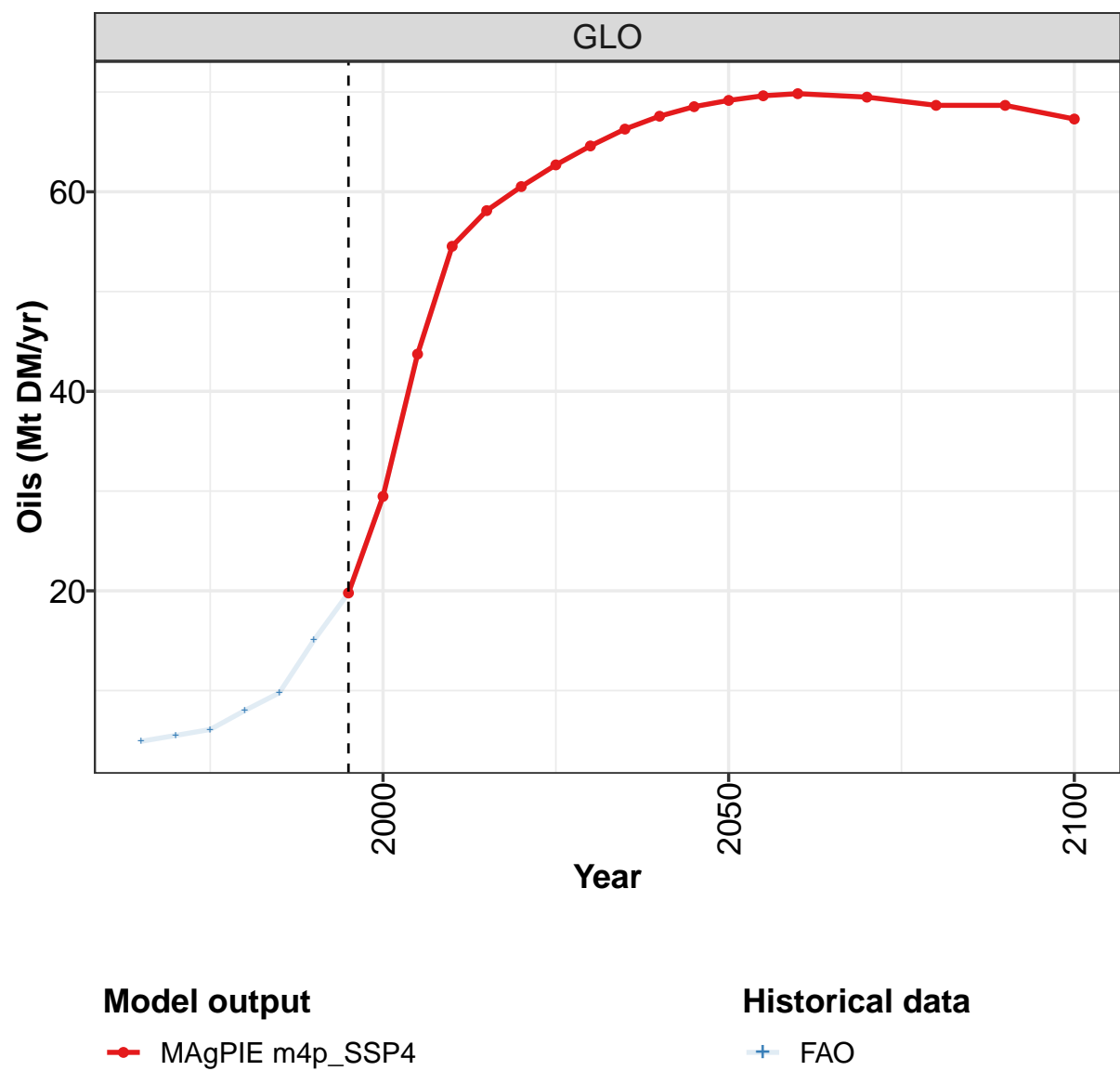
Table 558: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Oilcakes (Mt DM/yr) [PART 2/2]

	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



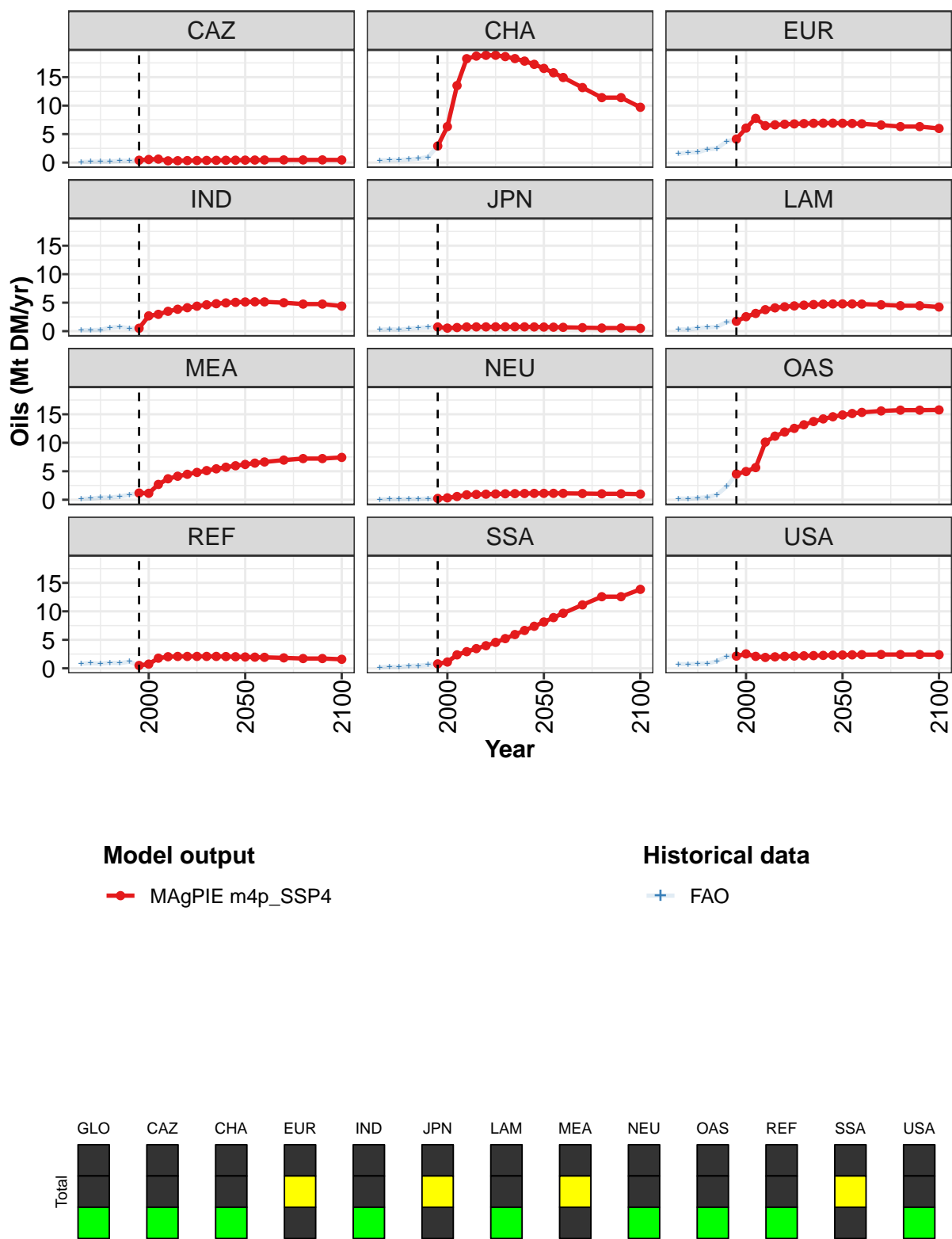


Figure 187: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	19.8	29.5	43.7	54.5	58.1	60.5	62.7	64.6	66.3	67.6	68.5
CAZ	0.4	0.5	0.6	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
CHA	2.9	6.3	13.5	18.2	18.7	18.8	18.8	18.6	18.3	17.8	17.3
EUR	4.1	6.1	7.8	6.5	6.6	6.7	6.8	6.8	6.9	6.9	6.9
IND	0.5	2.7	3.0	3.5	3.8	4.1	4.4	4.6	4.8	5.0	5.1
JPN	0.7	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7
LAM	1.7	2.5	3.1	3.8	4.1	4.3	4.4	4.6	4.7	4.7	4.8
MEA	1.2	1.1	2.7	3.7	4.1	4.5	4.8	5.1	5.4	5.7	6.0
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	11.9	12.5	13.2	13.7	14.2	14.6
REF	0.5	0.7	1.8	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0
SSA	0.8	1.1	2.4	2.9	3.5	4.0	4.6	5.2	5.9	6.6	7.4
USA	2.1	2.5	2.1	1.9	2.0	2.1	2.2	2.2	2.2	2.3	2.3

Table 560: MAgPIE m4p-SSP4 — Demand—Material—Secondary products—Oils (Mt DM/yr) [PART 1/2]

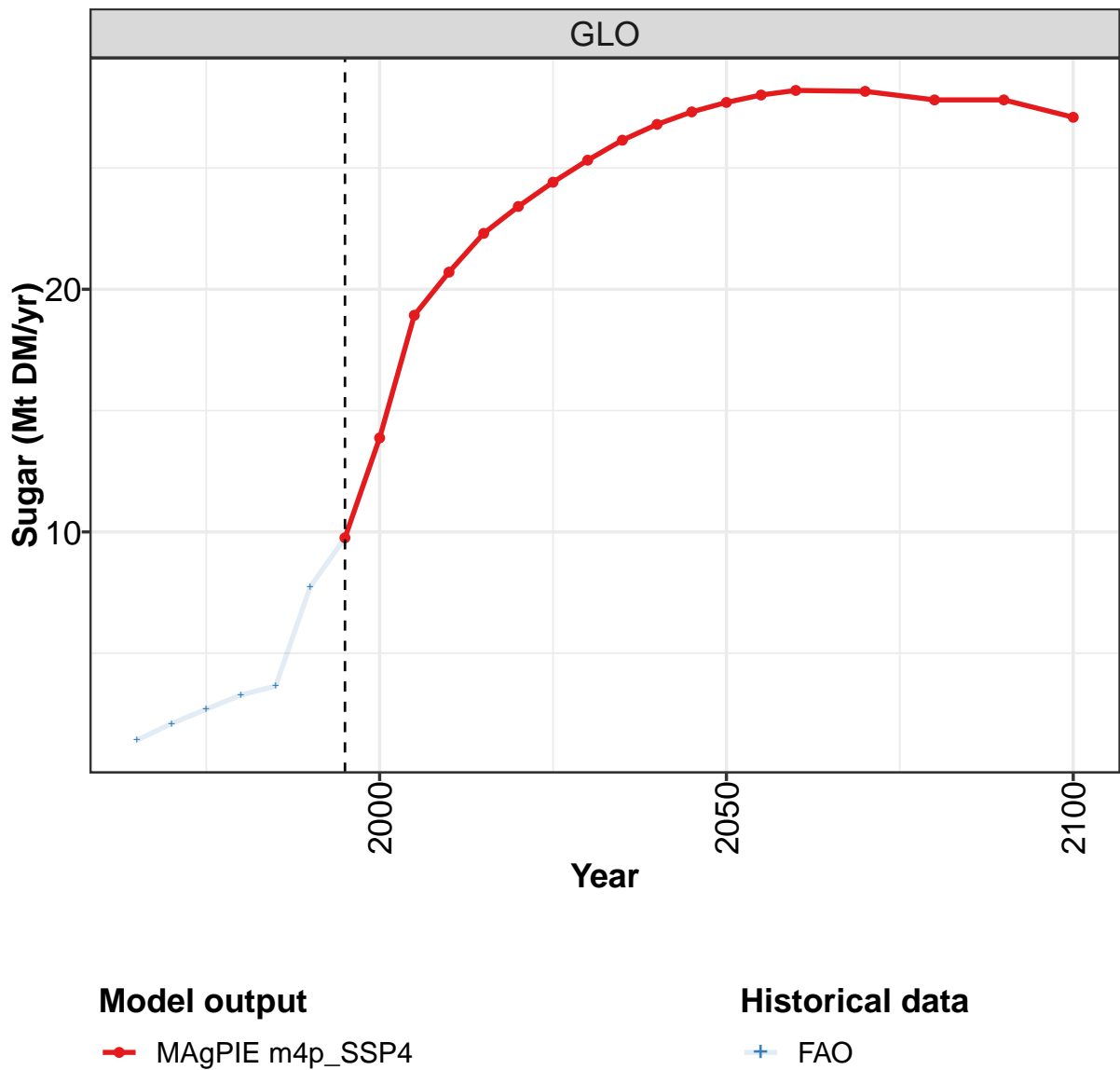
	2050	2055	2060	2070	2080	2090	2100
GLO	69.2	69.6	69.8	69.5	68.7	68.7	67.3
CAZ	0.4	0.4	0.5	0.5	0.5	0.5	0.5
CHA	16.5	15.8	14.9	13.2	11.4	11.4	9.7
EUR	6.9	6.9	6.8	6.6	6.3	6.3	6.0
IND	5.1	5.2	5.1	5.0	4.8	4.8	4.4
JPN	0.7	0.7	0.7	0.6	0.6	0.6	0.5
LAM	4.8	4.8	4.8	4.6	4.5	4.5	4.2
MEA	6.2	6.4	6.6	7.0	7.2	7.2	7.4
NEU	1.1	1.1	1.1	1.1	1.0	1.0	1.0
OAS	14.9	15.1	15.3	15.6	15.7	15.7	15.8
REF	2.0	2.0	1.9	1.8	1.7	1.7	1.6
SSA	8.1	8.9	9.7	11.1	12.6	12.6	13.9
USA	2.3	2.4	2.4	2.4	2.4	2.4	2.4

Table 561: MAgPIE m4p-SSP4 — 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



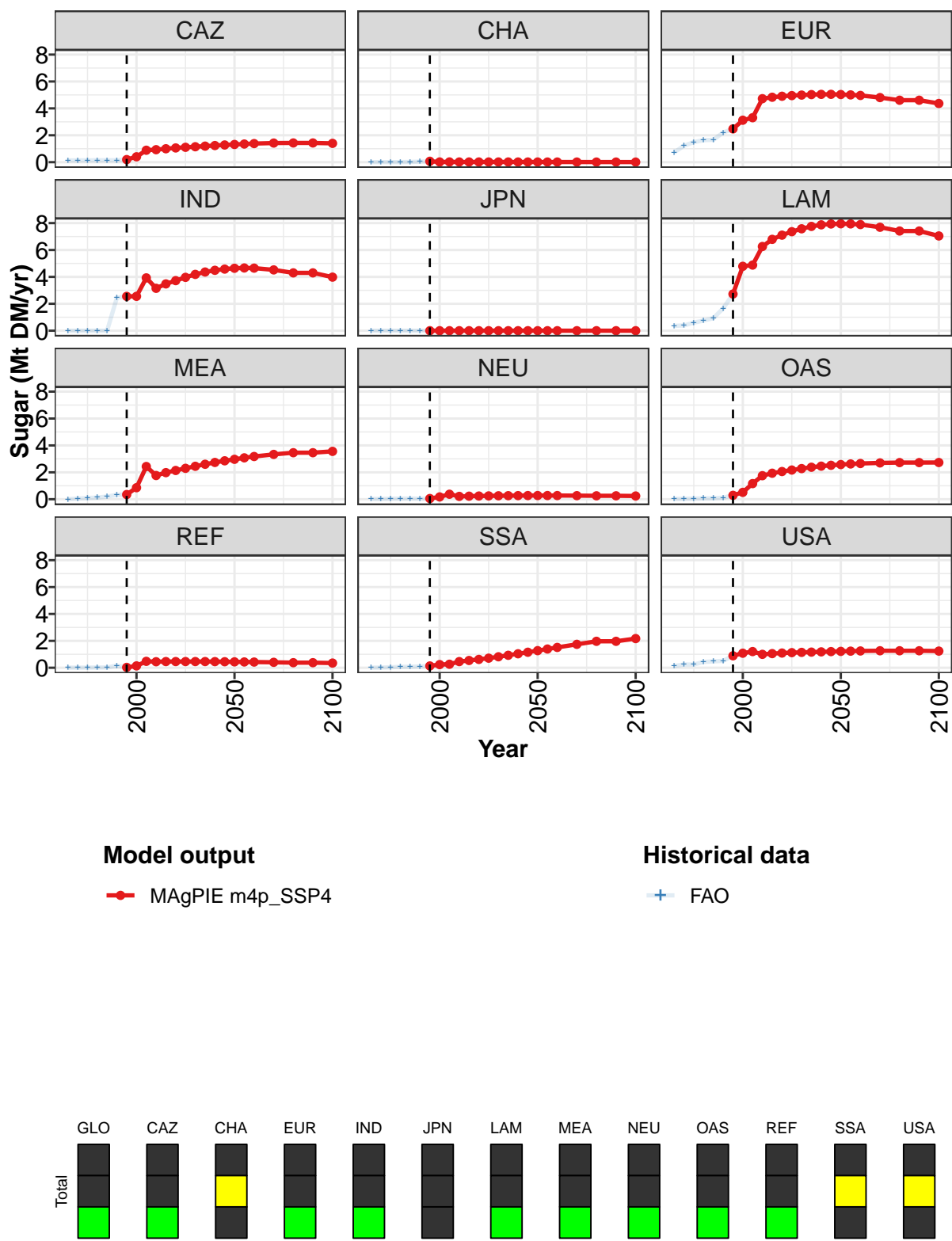


Figure 188: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.8	13.9	18.9	20.7	22.3	23.4	24.4	25.3	26.1	26.8	27.3
CAZ	0.2	0.4	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.2	1.3
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	4.9	5.0	5.0	5.0	5.0	5.0
IND	2.6	2.6	3.9	3.2	3.5	3.7	4.0	4.2	4.4	4.5	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	7.4	7.6	7.8	7.9	7.9
MEA	0.3	0.9	2.4	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9
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	2.1	2.2	2.3	2.4	2.5	2.5
REF	0.0	0.1	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4
SSA	0.1	0.2	0.3	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.2
USA	0.9	1.1	1.2	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2

Table 563: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

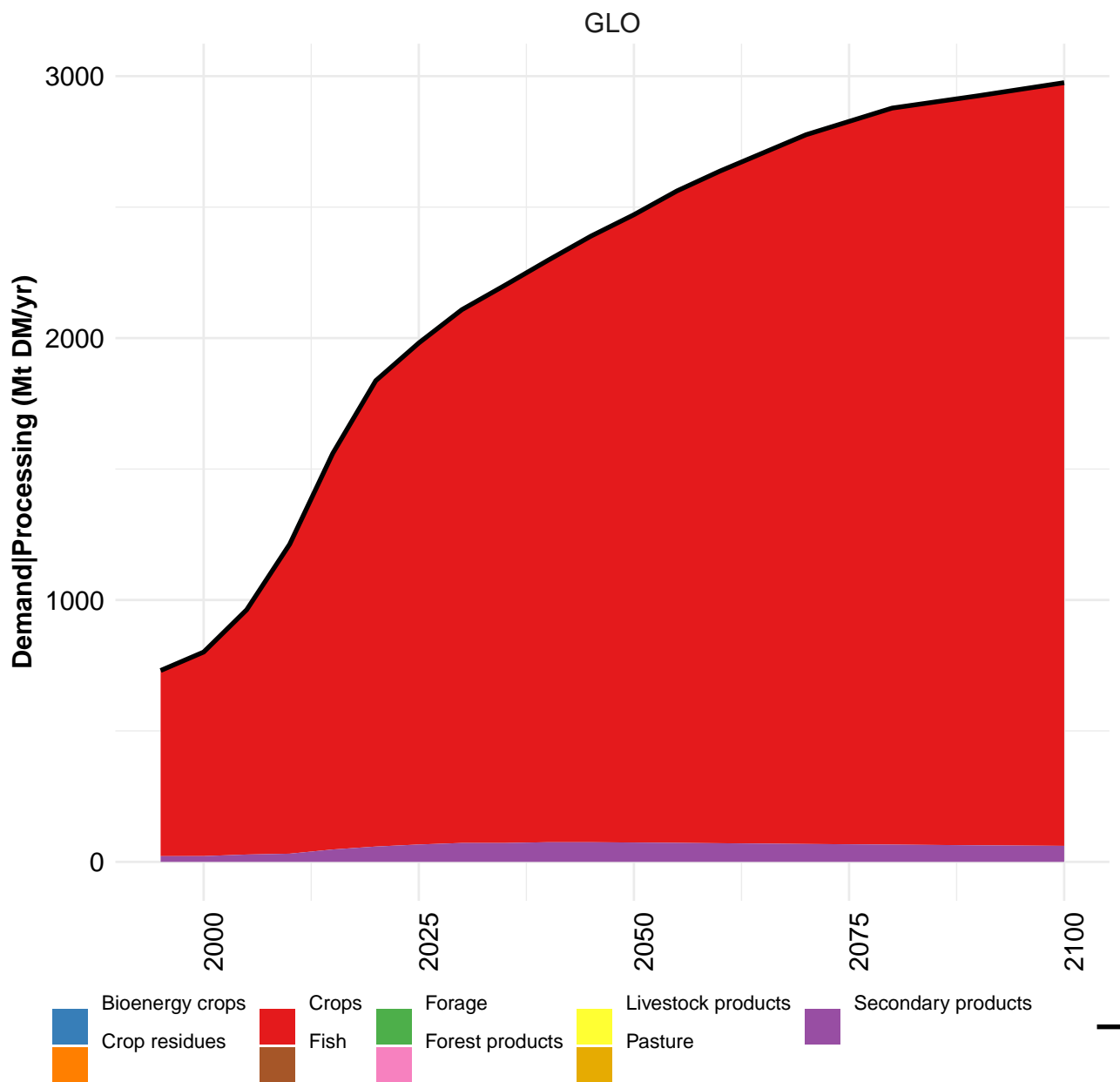
	2050	2055	2060	2070	2080	2090	2100
GLO	27.7	28.0	28.2	28.2	27.8	27.8	27.1
CAZ	1.3	1.4	1.4	1.4	1.4	1.4	1.4
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	5.0	5.0	5.0	4.8	4.6	4.6	4.4
IND	4.6	4.7	4.7	4.5	4.3	4.3	4.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	8.0	7.9	7.9	7.7	7.4	7.4	7.0
MEA	3.0	3.1	3.2	3.3	3.5	3.5	3.6
NEU	0.3	0.3	0.3	0.3	0.3	0.3	0.2
OAS	2.6	2.6	2.7	2.7	2.7	2.7	2.7
REF	0.4	0.4	0.4	0.4	0.4	0.4	0.3
SSA	1.3	1.4	1.5	1.7	2.0	2.0	2.2
USA	1.2	1.2	1.2	1.3	1.3	1.3	1.2

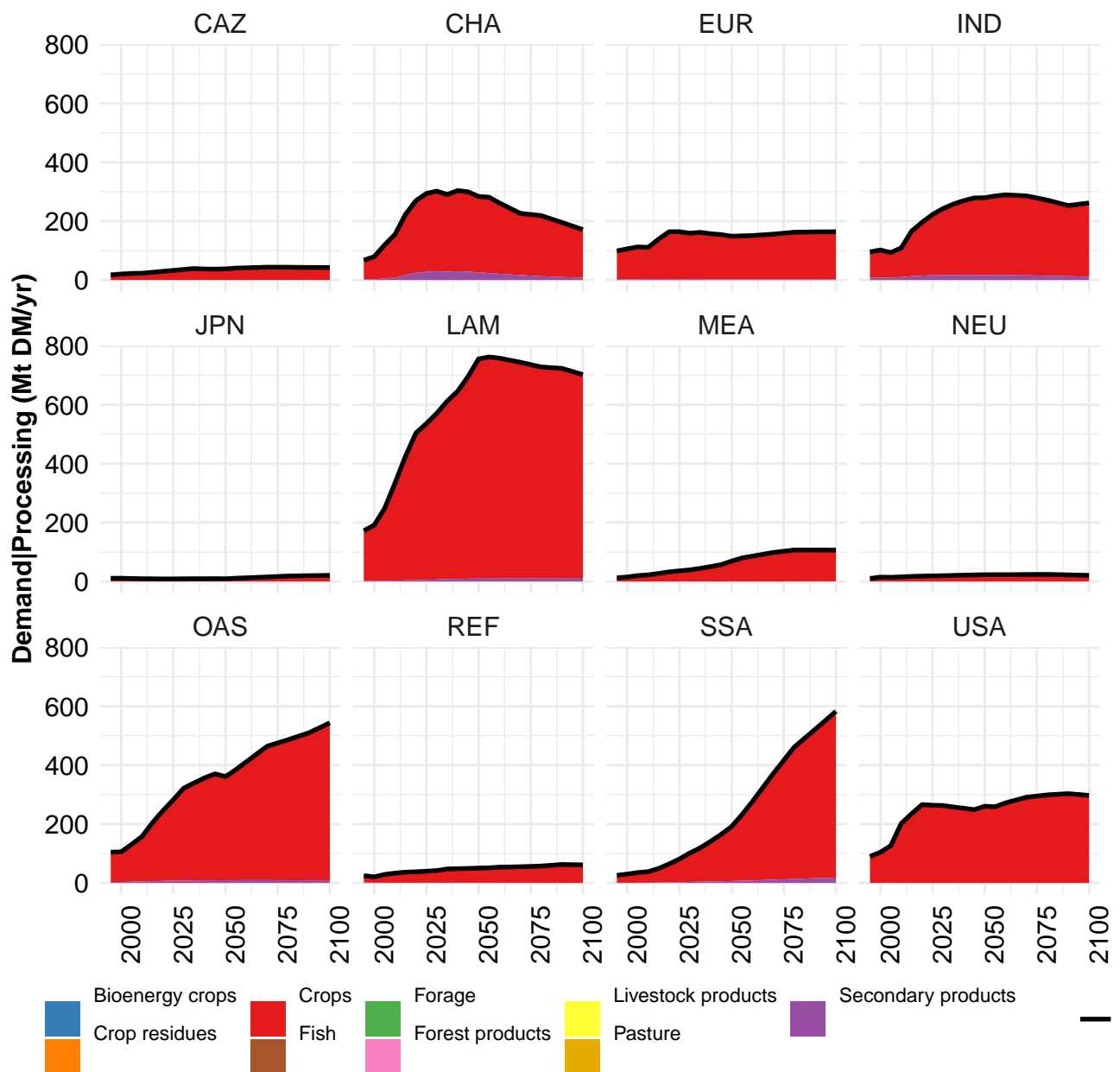
Table 564: MAgPIE m4p\_SSP4 — Demand—Material—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

	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

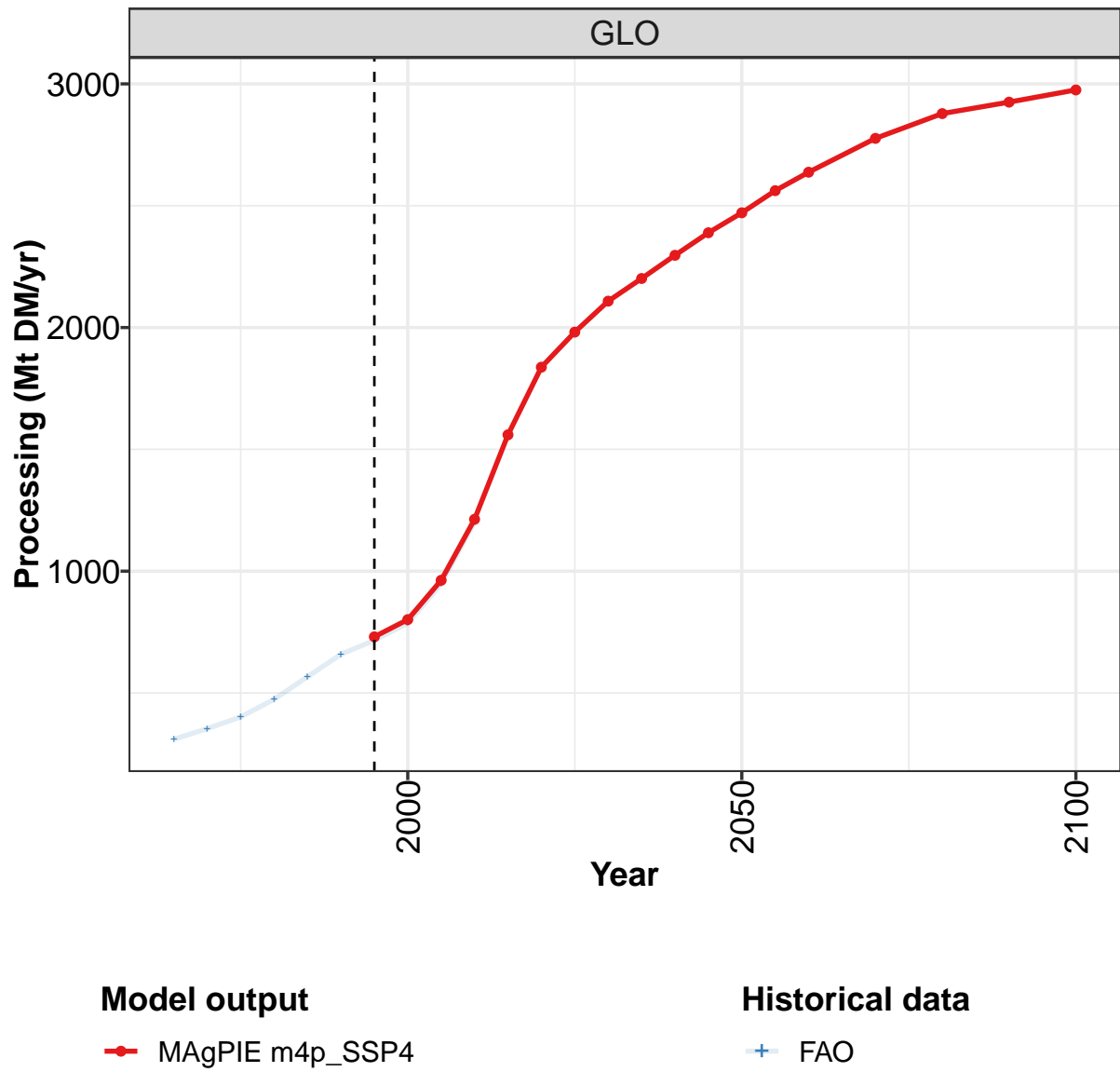
Table 565: FAO — Demand—Material—Secondary products—Sugar (Mt DM/yr)

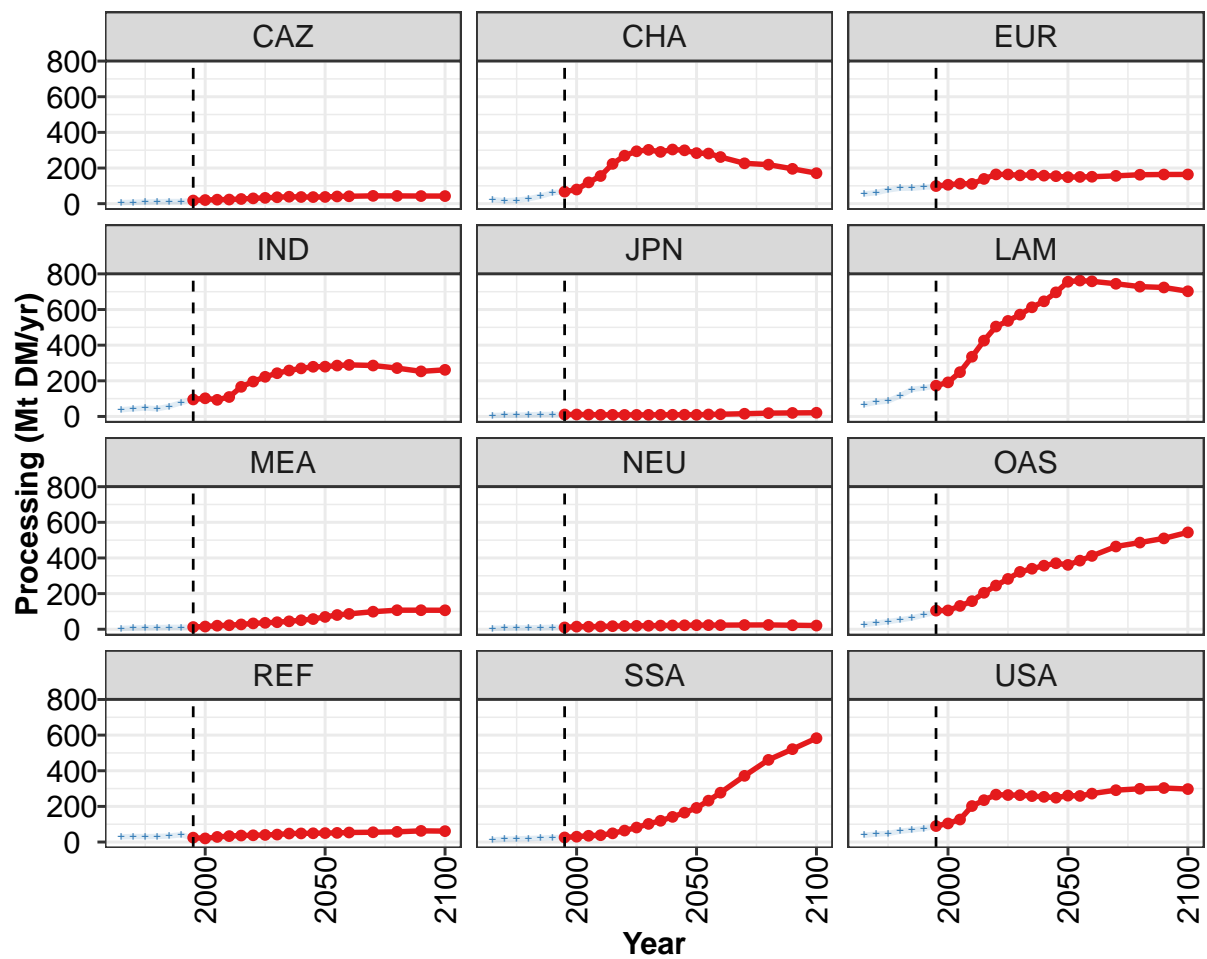
## 9 Processing











**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

+— FAO

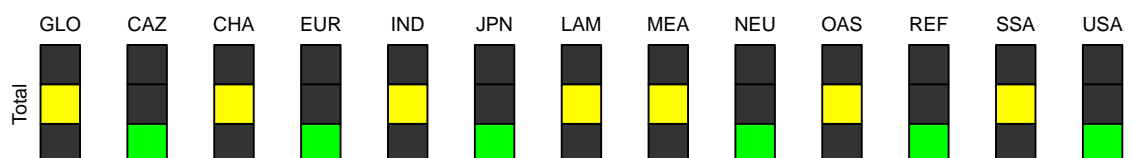


Figure 189: MAgPIE m4p\_SSP4 — Demand—Processing (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	731	801	963	1213	1560	1837	1981	2108	2201	2297	2389
CAZ	18	20	23	23	26	30	33	36	39	37	37
CHA	67	79	120	155	223	269	294	302	291	304	299
EUR	99	106	112	111	139	164	164	159	162	157	154
IND	95	102	93	109	166	196	223	243	258	270	279
JPN	11	11	10	9	9	9	9	9	9	9	10
LAM	173	191	249	335	426	504	536	571	613	646	696
MEA	12	15	20	23	27	33	36	40	45	51	57
NEU	10	15	14	16	17	18	19	20	21	22	22
OAS	105	106	131	158	205	245	283	322	340	357	370
REF	25	21	29	33	37	38	40	42	48	48	49
SSA	26	30	35	38	49	64	81	102	119	141	165
USA	90	104	127	202	235	266	264	263	258	254	249

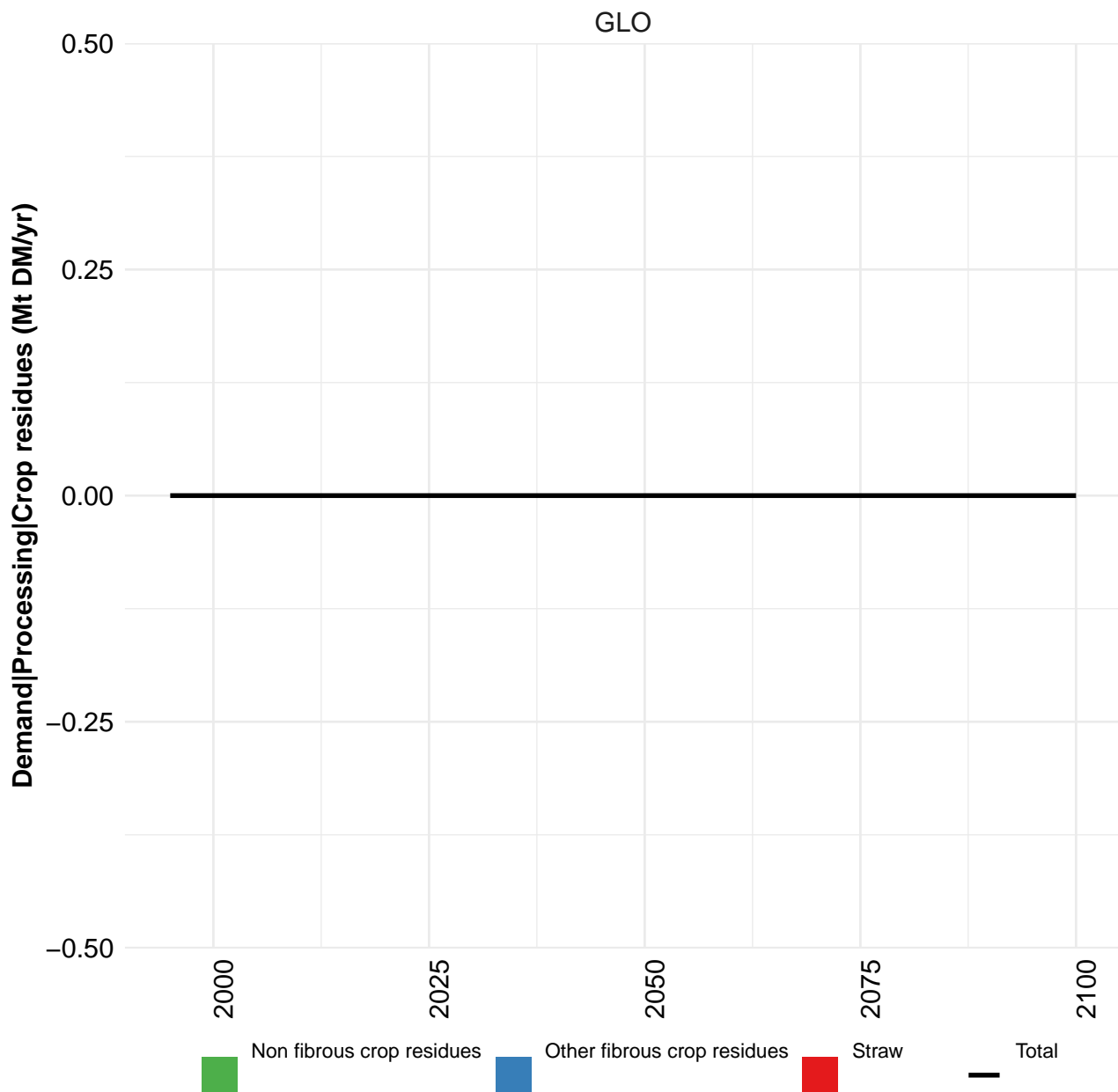
Table 566: MAgPIE m4p\_SSP4 — Demand—Processing (Mt DM/yr) [PART 1/2]

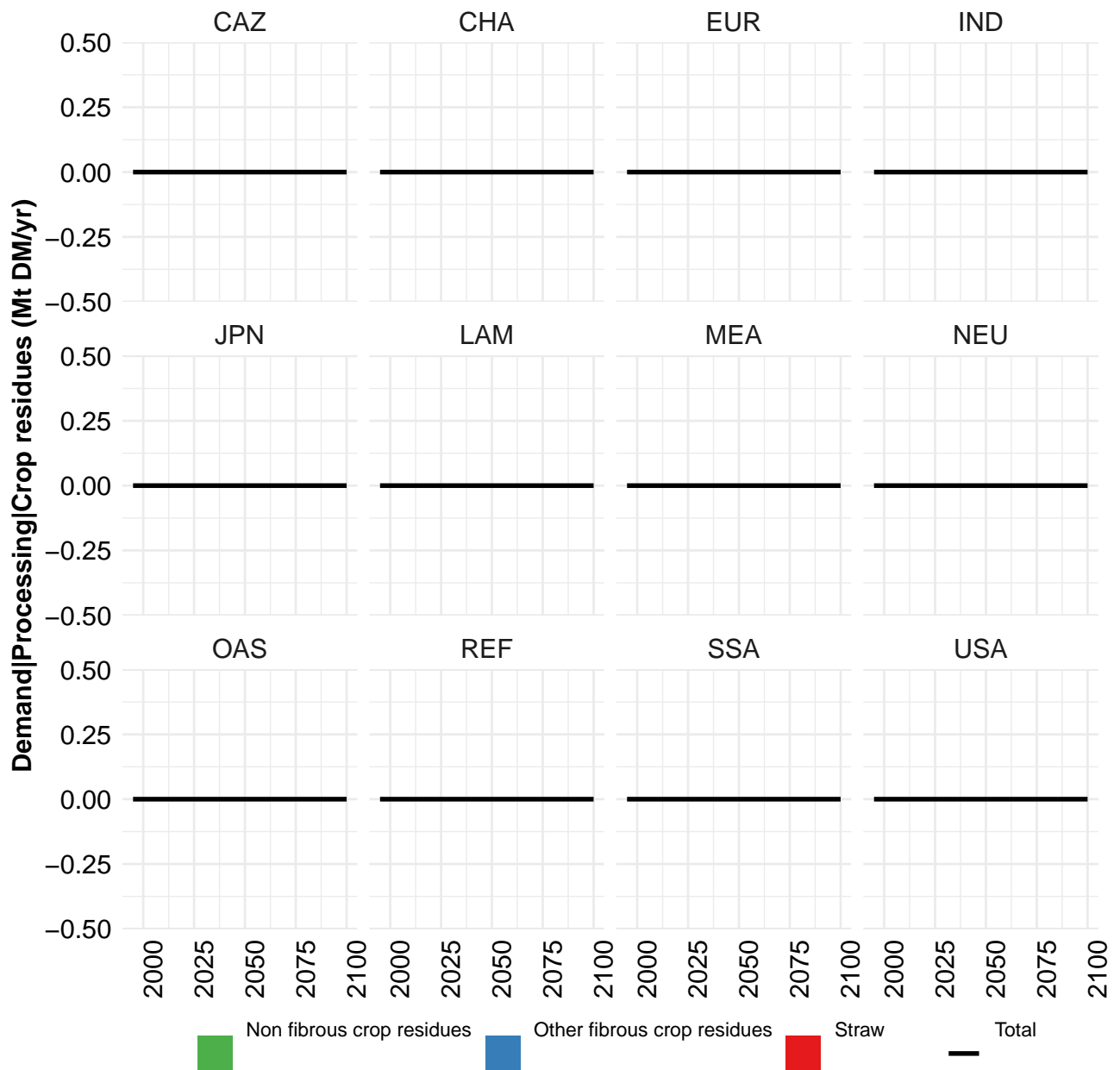
	2050	2055	2060	2070	2080	2090	2100
GLO	2471	2562	2638	2776	2878	2925	2975
CAZ	38	41	41	44	44	43	43
CHA	284	281	262	226	219	195	171
EUR	149	150	151	156	162	164	164
IND	279	286	289	286	271	253	262
JPN	9	11	13	15	19	20	21
LAM	756	763	758	744	728	724	702
MEA	69	80	86	99	107	107	107
NEU	23	23	23	24	24	22	21
OAS	361	385	412	464	486	510	544
REF	50	51	54	55	57	63	61
SSA	192	232	277	372	461	521	583
USA	260	259	272	291	299	303	297

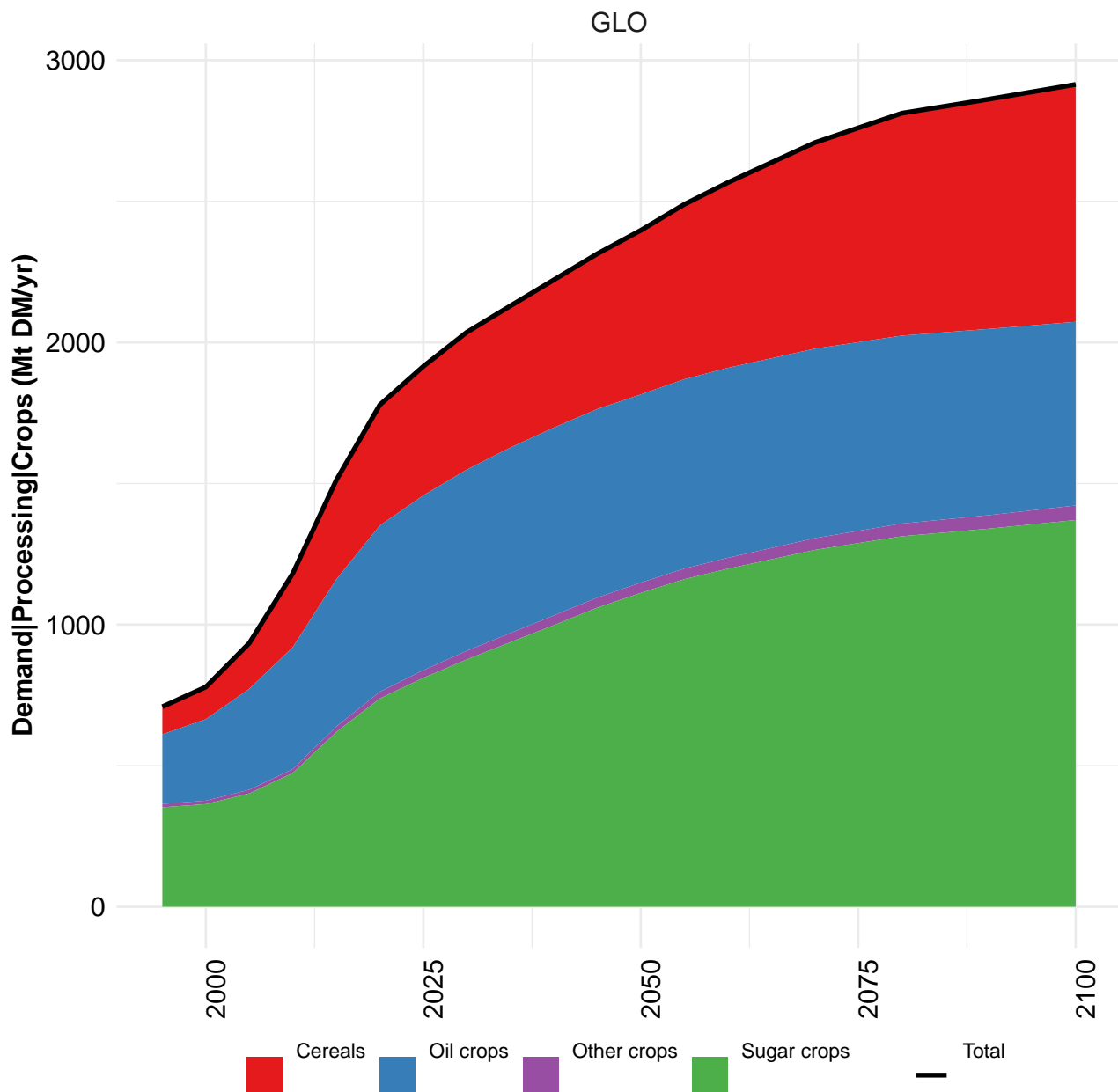
Table 567: MAgPIE m4p\_SSP4 — Demand—Processing (Mt DM/yr) [PART 2/2]

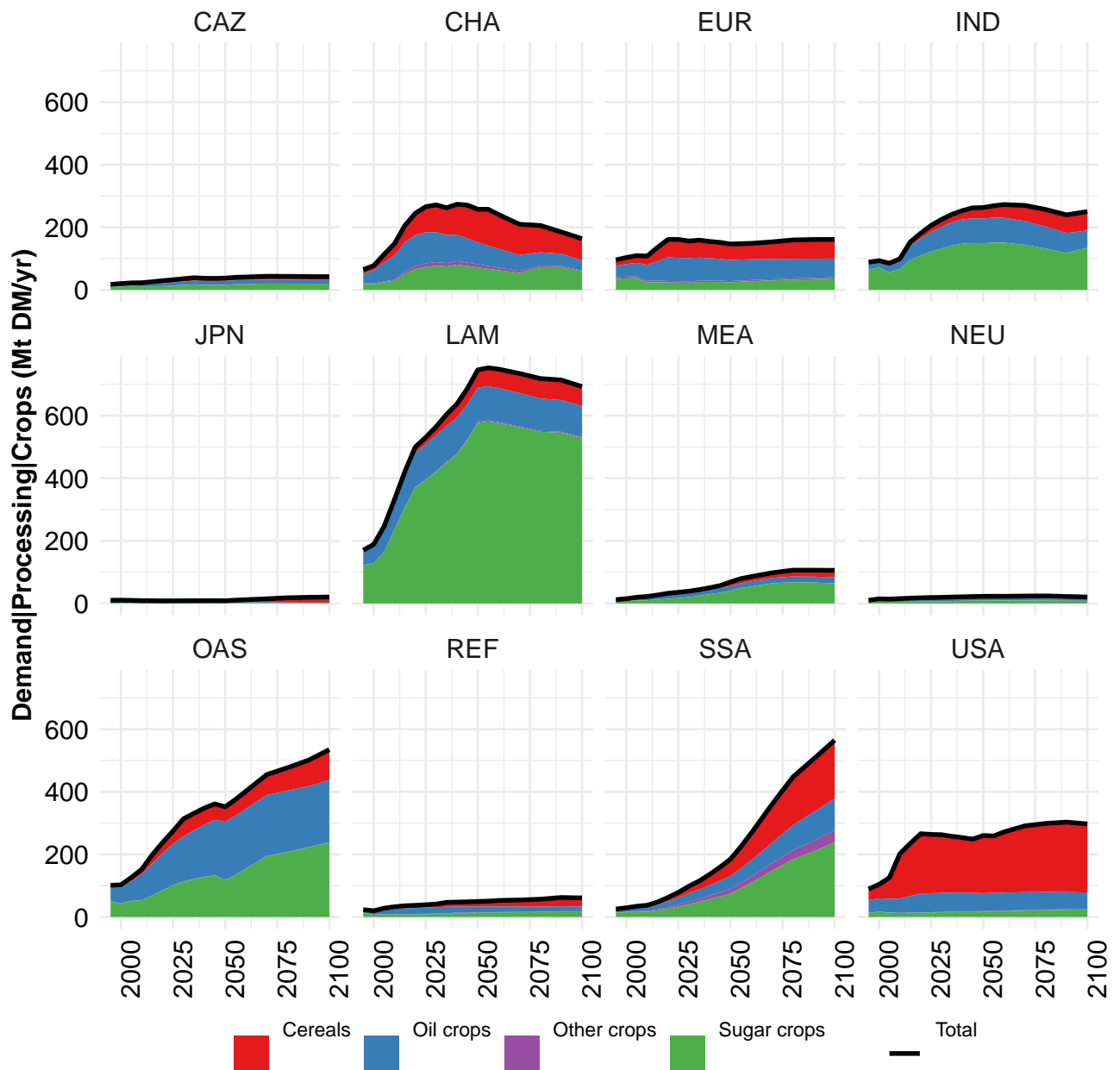
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	310	354	402	474	567	659	716	786	948	1201
CAZ	6	8	10	11	12	12	17	20	20	21
CHA	23	16	19	27	42	62	67	79	119	156
EUR	54	62	77	86	87	93	95	99	103	108
IND	38	43	47	43	57	78	96	102	93	109
JPN	5	7	7	9	11	11	11	11	10	9
LAM	67	80	86	116	152	160	173	186	253	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)

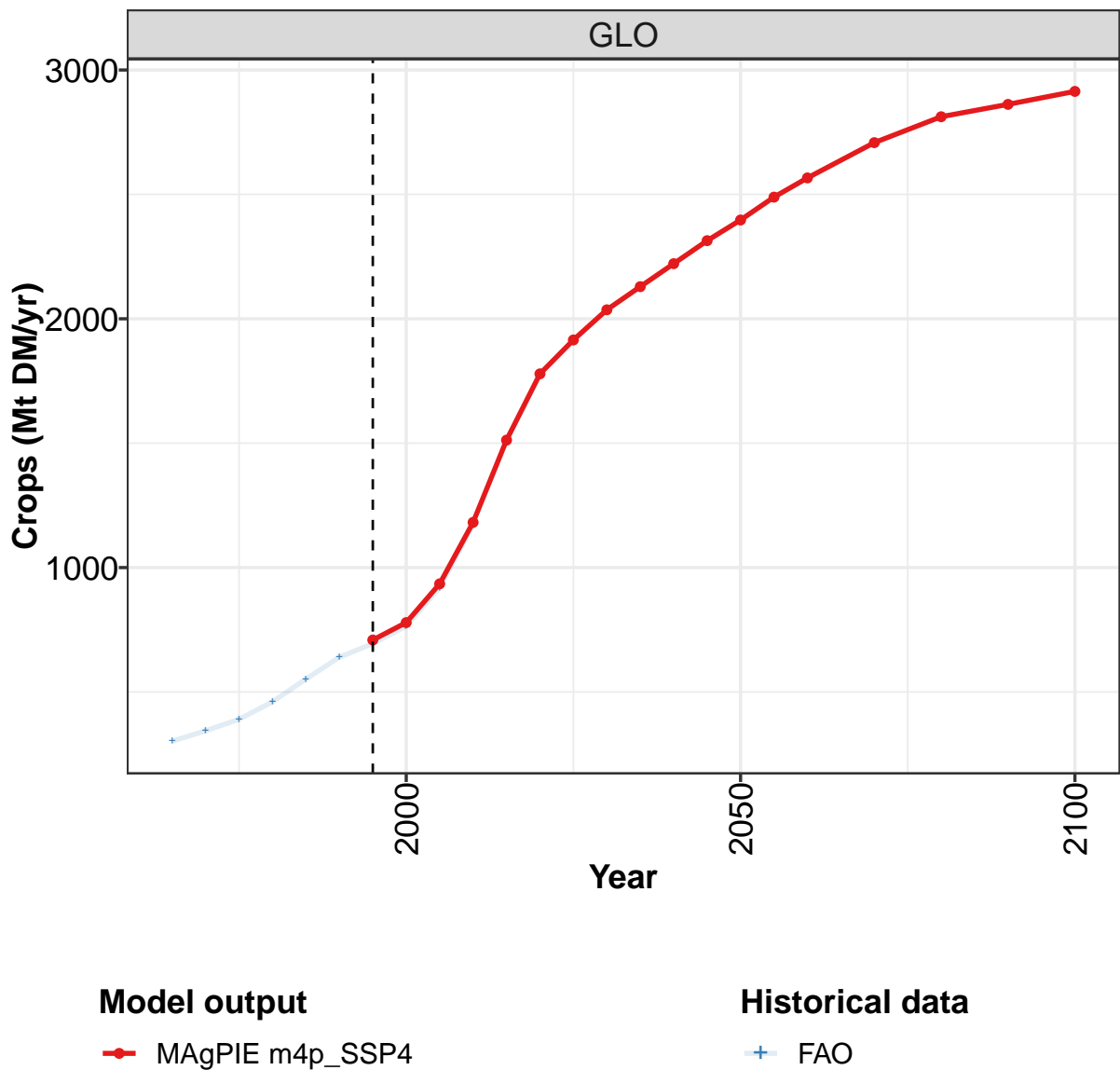




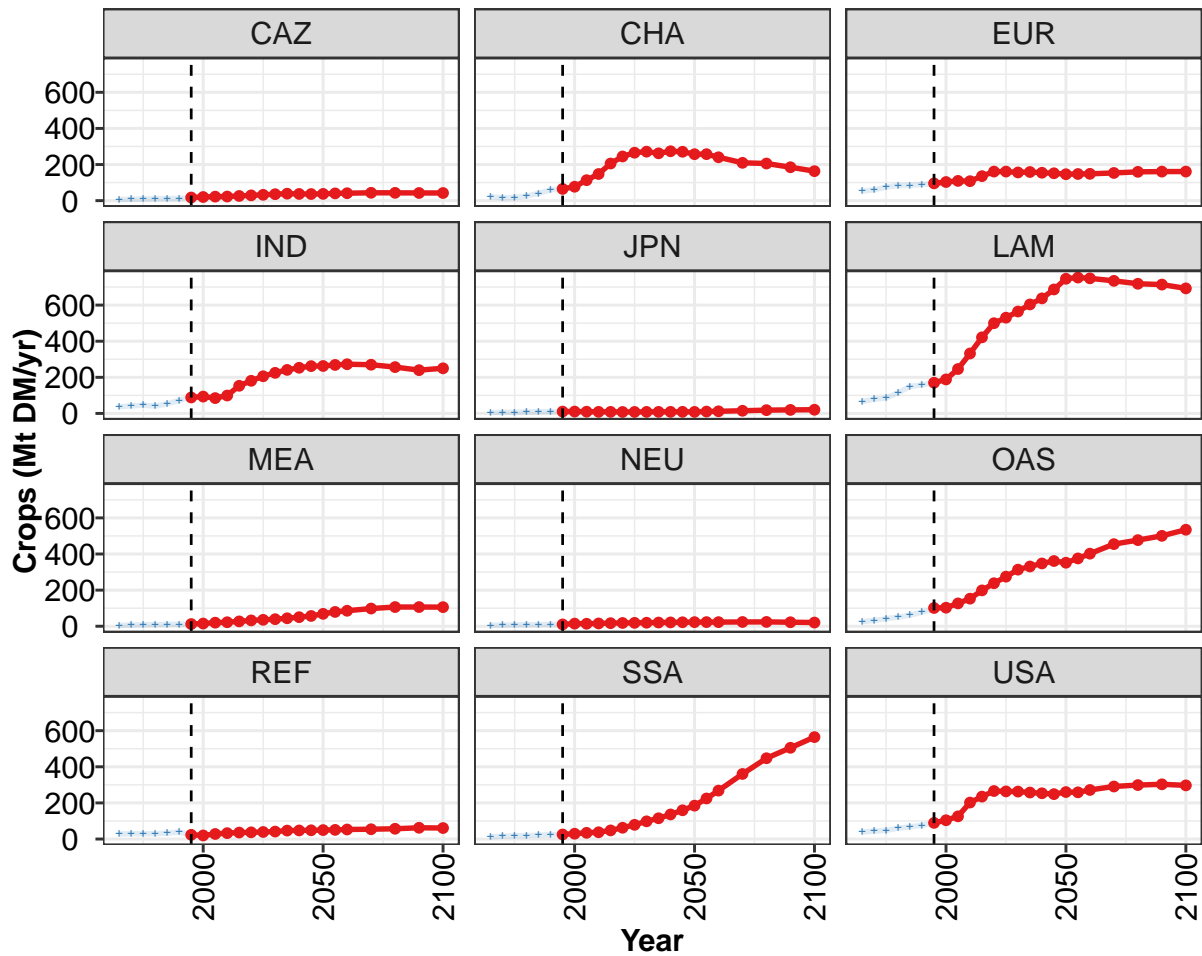




9.1 Crops







Model output

MAgPIE m4p\_SSP4

Historical data

FAO

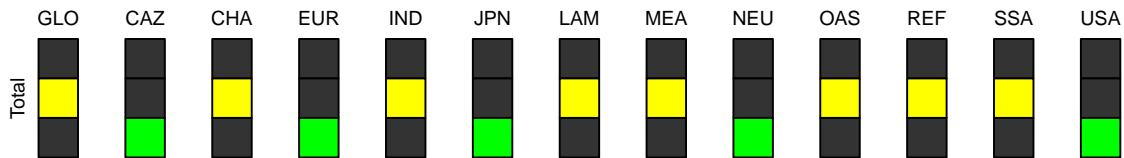


Figure 190: MAgPIE m4p\_SSP4 — Demand—Processing—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	709	779	935	1182	1512	1779	1915	2036	2129	2222	2314
CAZ	18	20	22	23	26	29	32	36	39	37	37
CHA	65	77	113	148	206	245	266	271	262	274	271
EUR	96	103	110	108	136	161	161	156	159	155	152
IND	88	93	85	99	153	181	206	225	241	253	262
JPN	10	11	10	9	9	8	8	9	9	9	9
LAM	170	189	246	332	422	500	531	564	604	637	687
MEA	12	15	20	22	27	32	36	39	44	50	57
NEU	10	15	14	15	17	18	19	19	20	21	22
OAS	101	103	126	153	199	238	275	314	331	348	361
REF	23	20	28	33	36	37	39	41	47	48	49
SSA	25	29	34	38	48	62	79	98	115	136	159
USA	90	104	126	202	235	266	264	263	258	254	249

Table 569: MAgPIE m4p-SSP4 — Demand—Processing—Crops (Mt DM/yr) [PART 1/2]

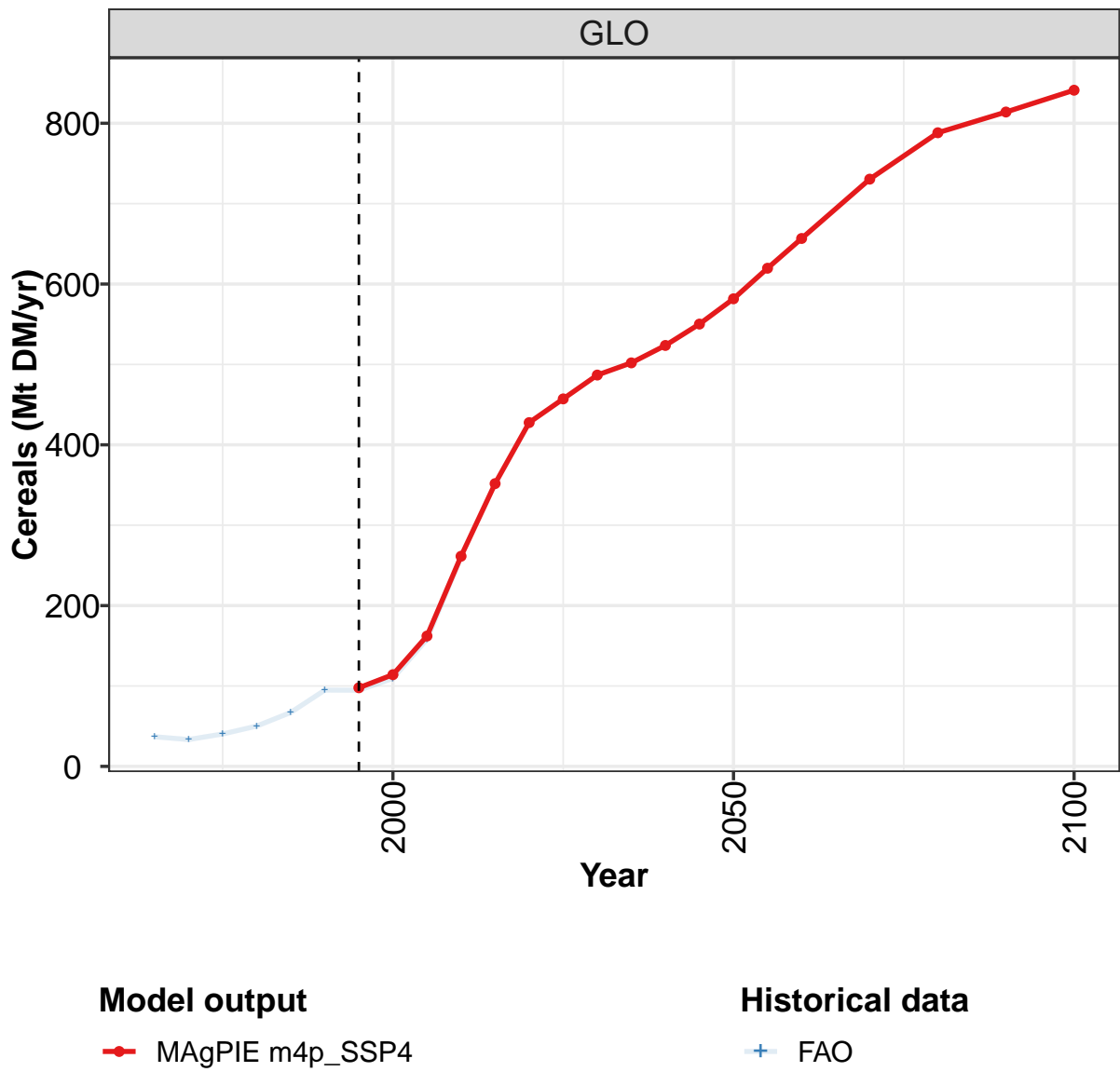
	2050	2055	2060	2070	2080	2090	2100
GLO	2397	2489	2566	2708	2812	2862	2914
CAZ	38	40	41	44	43	43	42
CHA	257	257	240	210	206	185	163
EUR	146	148	149	153	160	161	161
IND	263	269	273	270	257	240	250
JPN	9	11	12	15	18	20	21
LAM	746	753	748	734	718	714	693
MEA	69	79	86	98	106	106	106
NEU	23	23	23	24	24	22	21
OAS	352	376	402	455	477	501	535
REF	50	51	53	54	57	62	61
SSA	185	225	268	361	447	505	565
USA	260	259	272	291	299	303	297

Table 570: MAgPIE m4p-SSP4 — 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



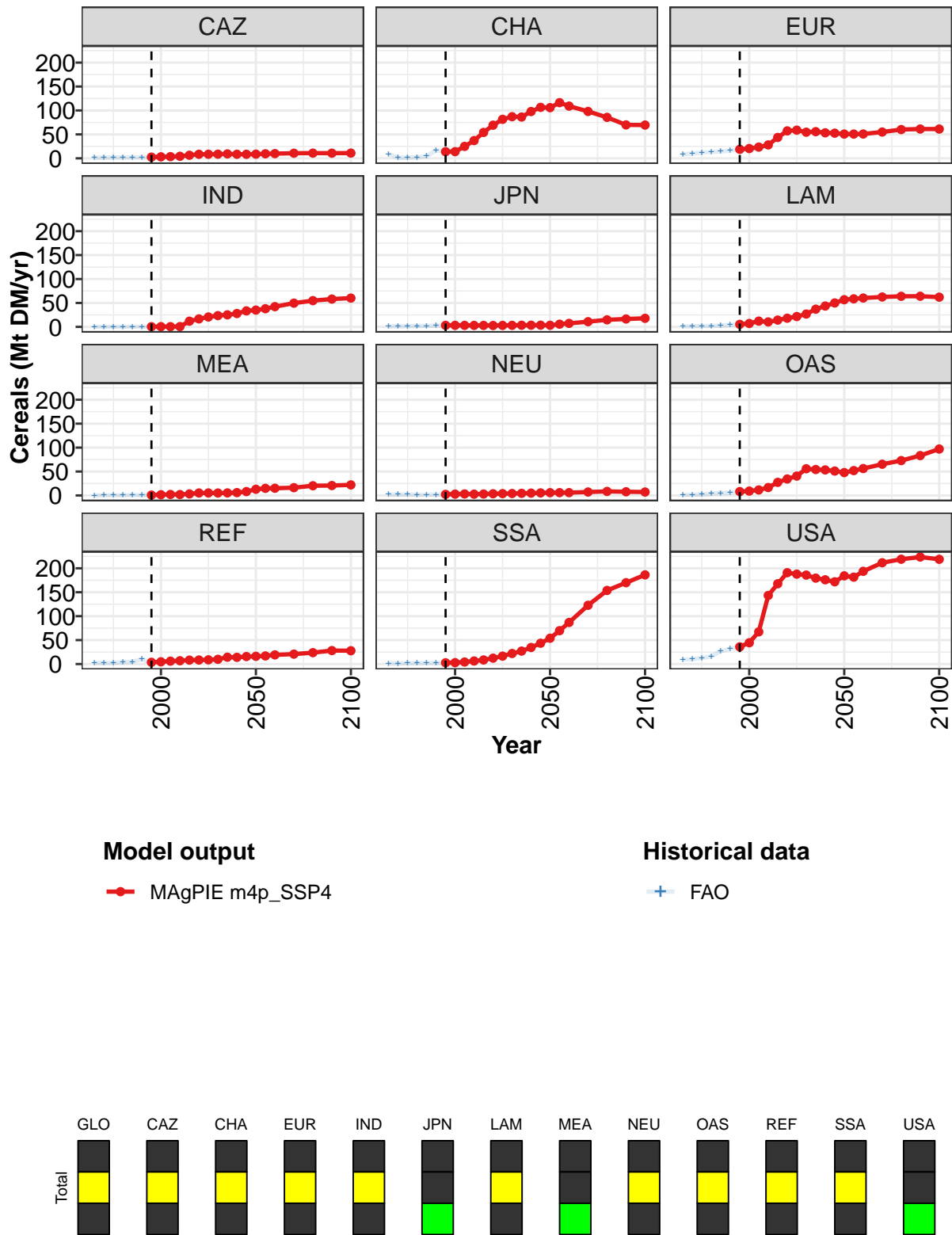


Figure 191: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	98	114	162	261	352	428	457	487	502	524	550
CAZ	3	3	4	4	6	8	9	9	9	9	8
CHA	14	14	25	37	54	69	81	87	86	98	107
EUR	19	20	23	28	44	57	59	55	56	53	53
IND	0	1	1	1	12	17	21	24	25	28	33
JPN	3	3	3	3	3	3	3	3	3	4	4
LAM	5	7	12	10	14	18	22	27	37	44	50
MEA	1	2	2	2	3	5	5	5	5	6	8
NEU	2	3	3	3	3	4	4	4	4	5	5
OAS	8	9	12	17	27	34	41	56	54	53	51
REF	4	5	6	7	8	8	9	10	14	14	16
SSA	3	3	4	6	9	12	17	22	27	35	44
USA	36	44	67	143	168	191	188	186	180	176	172

Table 572: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals (Mt DM/yr) [PART 1/2]

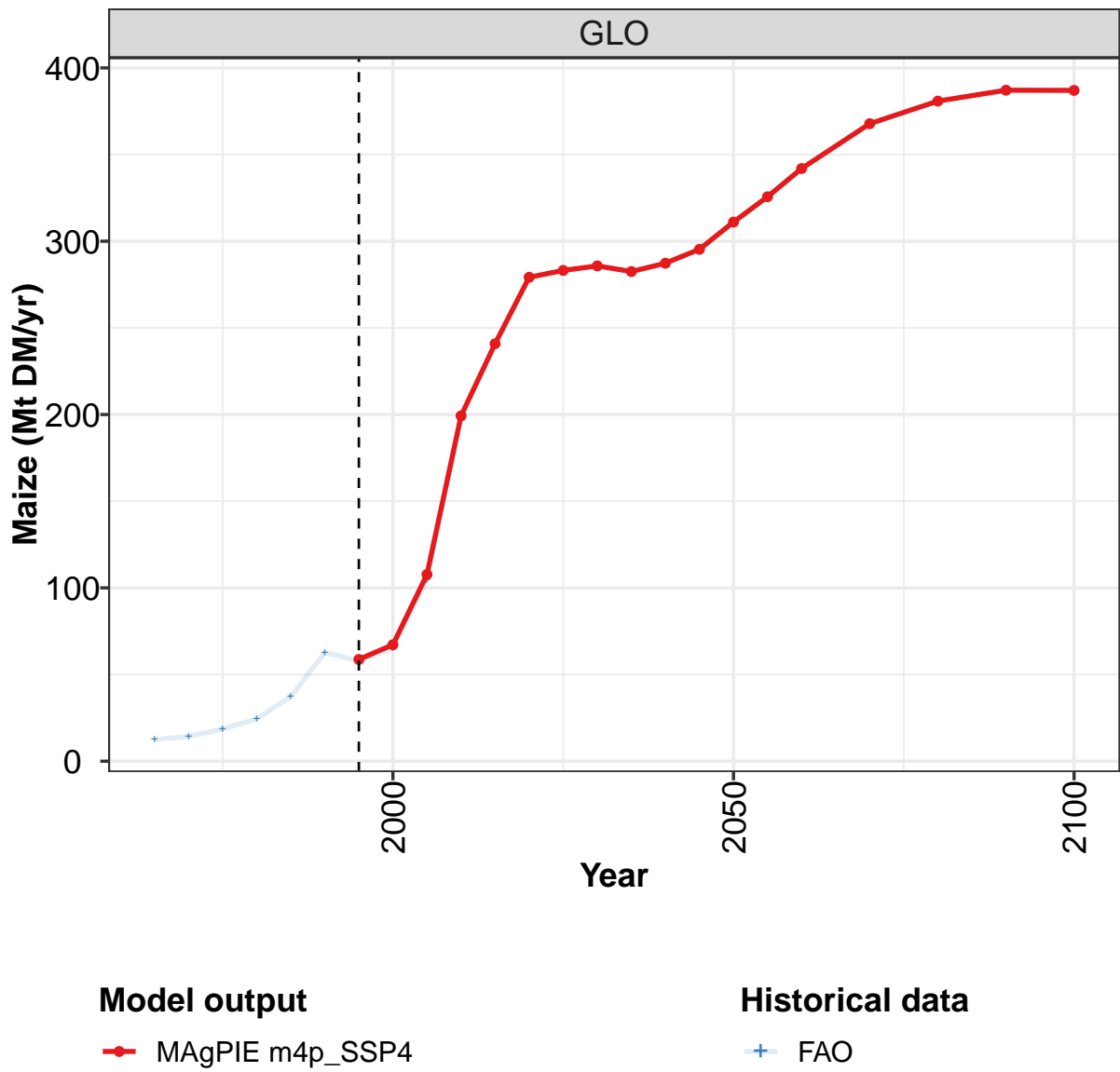
	2050	2055	2060	2070	2080	2090	2100
GLO	582	620	657	730	788	814	841
CAZ	9	9	10	11	11	11	11
CHA	106	116	109	98	86	70	70
EUR	51	51	51	55	60	61	61
IND	35	38	42	50	55	58	60
JPN	3	6	7	11	15	17	18
LAM	57	59	60	62	64	64	62
MEA	13	15	15	16	20	21	22
NEU	6	6	6	7	8	8	7
OAS	48	52	56	65	73	83	97
REF	16	17	19	21	24	28	28
SSA	54	70	87	123	154	170	186
USA	184	182	194	212	219	224	219

Table 573: MAgPIE m4p\_SSP4 — 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



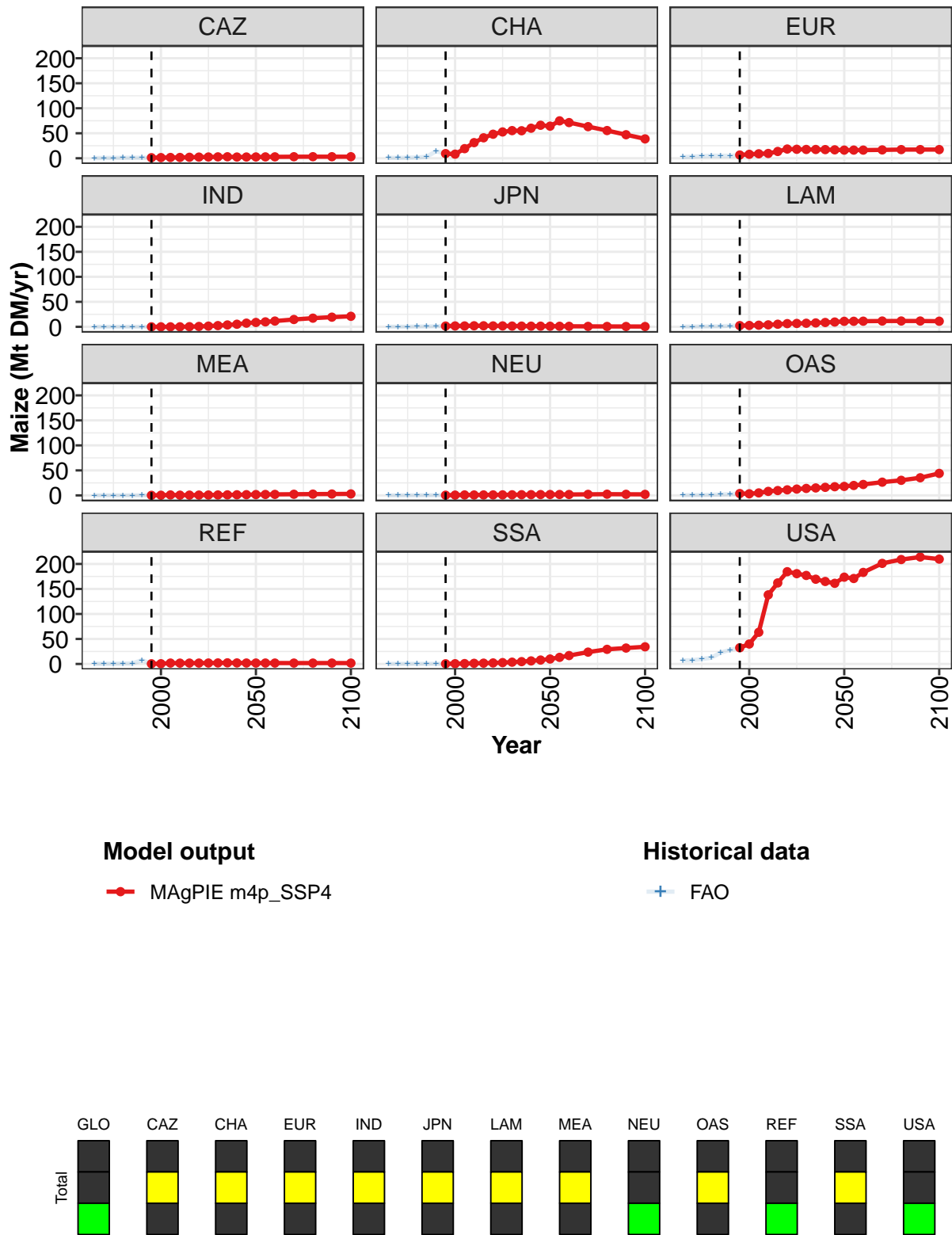


Figure 192: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	59	67	108	199	241	279	283	286	283	287	295
CAZ	1	1	2	2	2	2	3	3	3	2	3
CHA	9	8	19	31	41	48	53	55	55	60	66
EUR	7	8	9	10	14	18	18	18	18	17	17
IND	0	0	0	0	0	1	1	2	4	5	7
JPN	2	2	2	2	2	2	2	2	1	1	1
LAM	2	3	3	4	5	6	7	7	8	9	10
MEA	0	0	1	0	1	1	1	1	1	1	1
NEU	0	1	1	1	1	1	1	1	1	2	2
OAS	4	3	5	8	10	11	13	14	15	16	17
REF	0	0	2	2	2	2	2	2	2	2	2
SSA	0	1	1	1	2	2	3	4	5	6	8
USA	32	40	63	138	162	185	181	177	169	165	161

Table 575: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	311	326	342	368	381	387	387
CAZ	3	3	3	3	3	3	3
CHA	64	75	71	63	55	47	39
EUR	16	16	16	17	17	17	17
IND	9	10	12	15	17	19	21
JPN	1	1	1	1	1	1	1
LAM	11	11	11	12	12	12	11
MEA	2	2	2	2	3	3	3
NEU	2	2	2	2	2	2	2
OAS	18	20	22	26	30	35	44
REF	2	2	2	2	2	2	2
SSA	10	13	17	24	29	32	34
USA	174	171	183	201	209	214	210

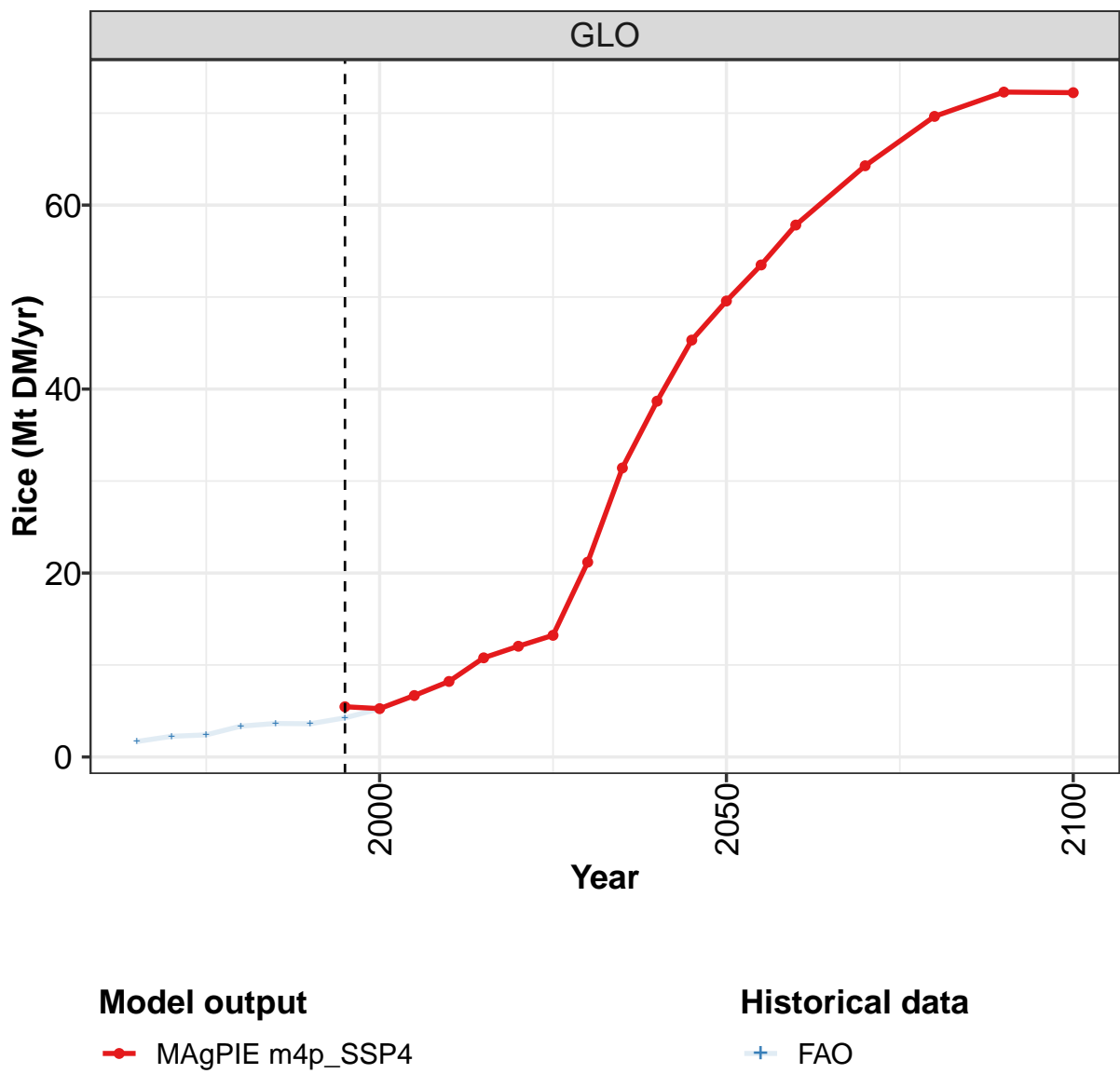
Table 576: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	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



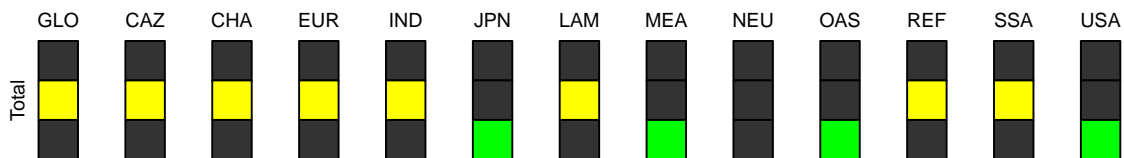
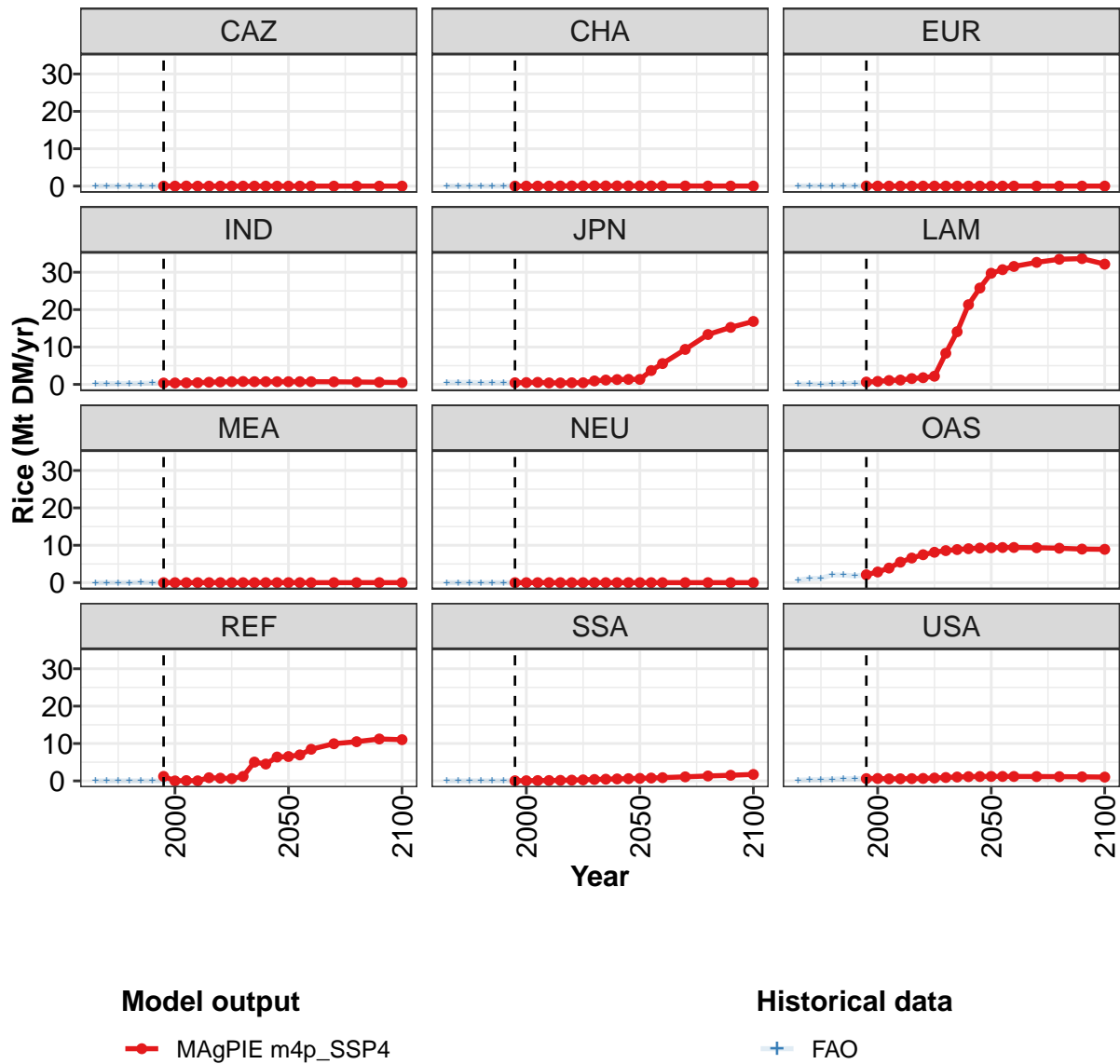


Figure 193: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.5	5.3	6.7	8.2	10.8	12.0	13.2	21.2	31.4	38.7	45.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
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	0.8	0.7	0.7	0.7
JPN	0.4	0.5	0.6	0.4	0.4	0.4	0.4	0.9	1.2	1.3	1.3
LAM	0.6	0.8	1.0	1.2	1.6	1.8	2.2	8.3	14.1	21.3	25.8
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	8.1	8.6	8.8	9.1	9.2
REF	1.2	0.0	0.1	0.0	0.9	0.7	0.6	1.2	5.0	4.5	6.4
SSA	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.5	0.6
USA	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2

Table 578: MAgPIE m4p-SSP4 — Demand—Processing—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

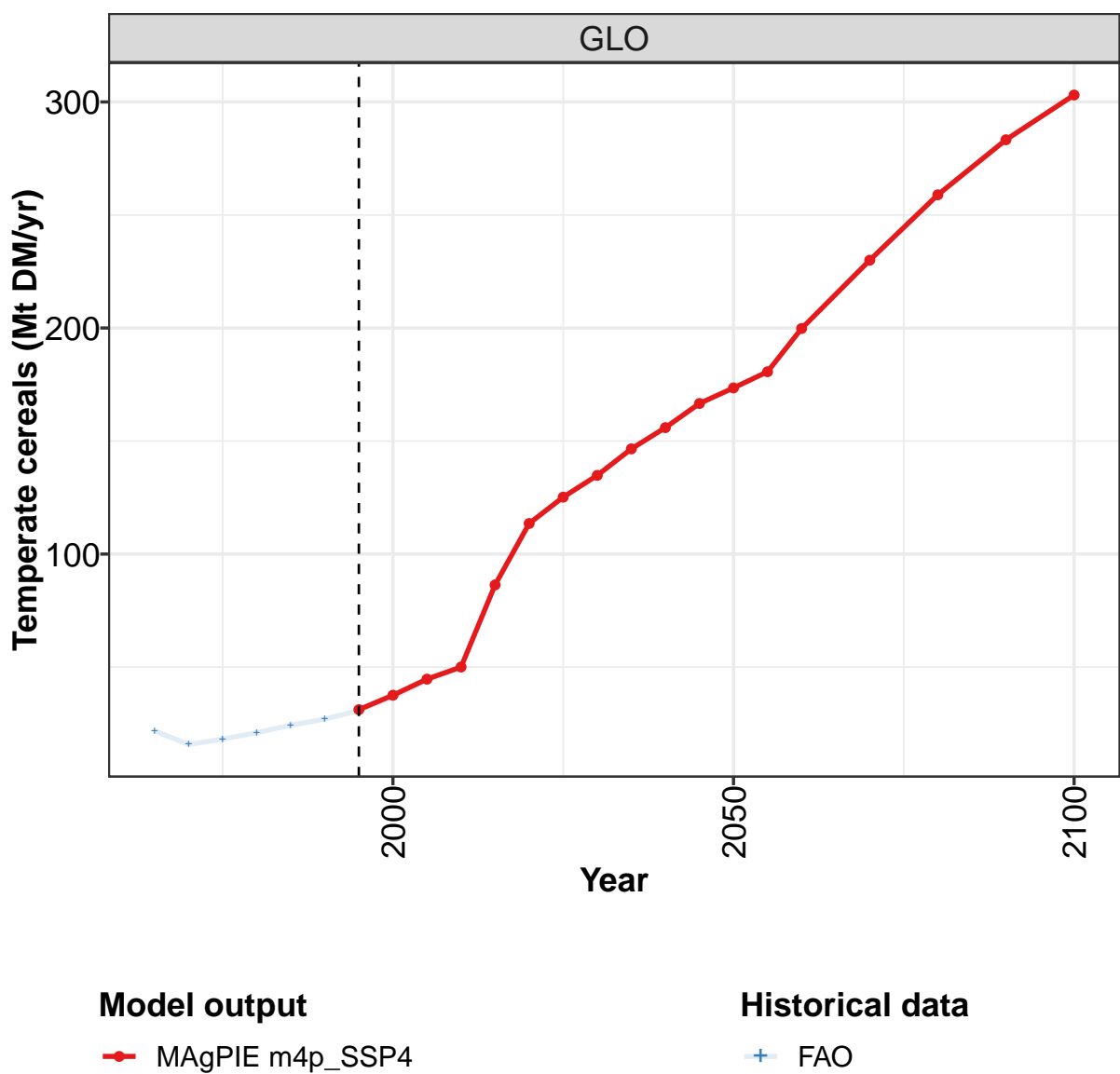
	2050	2055	2060	2070	2080	2090	2100
GLO	49.6	53.5	57.8	64.3	69.6	72.3	72.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.7	0.7	0.7	0.7	0.6	0.6	0.5
JPN	1.3	3.7	5.6	9.4	13.3	15.3	16.8
LAM	29.7	30.7	31.5	32.6	33.5	33.6	32.2
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	9.3	9.4	9.4	9.3	9.2	9.0	8.9
REF	6.5	7.0	8.5	9.9	10.5	11.2	11.0
SSA	0.7	0.8	0.9	1.1	1.3	1.5	1.7
USA	1.2	1.2	1.2	1.2	1.1	1.1	1.0

Table 579: MAgPIE m4p-SSP4 — 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



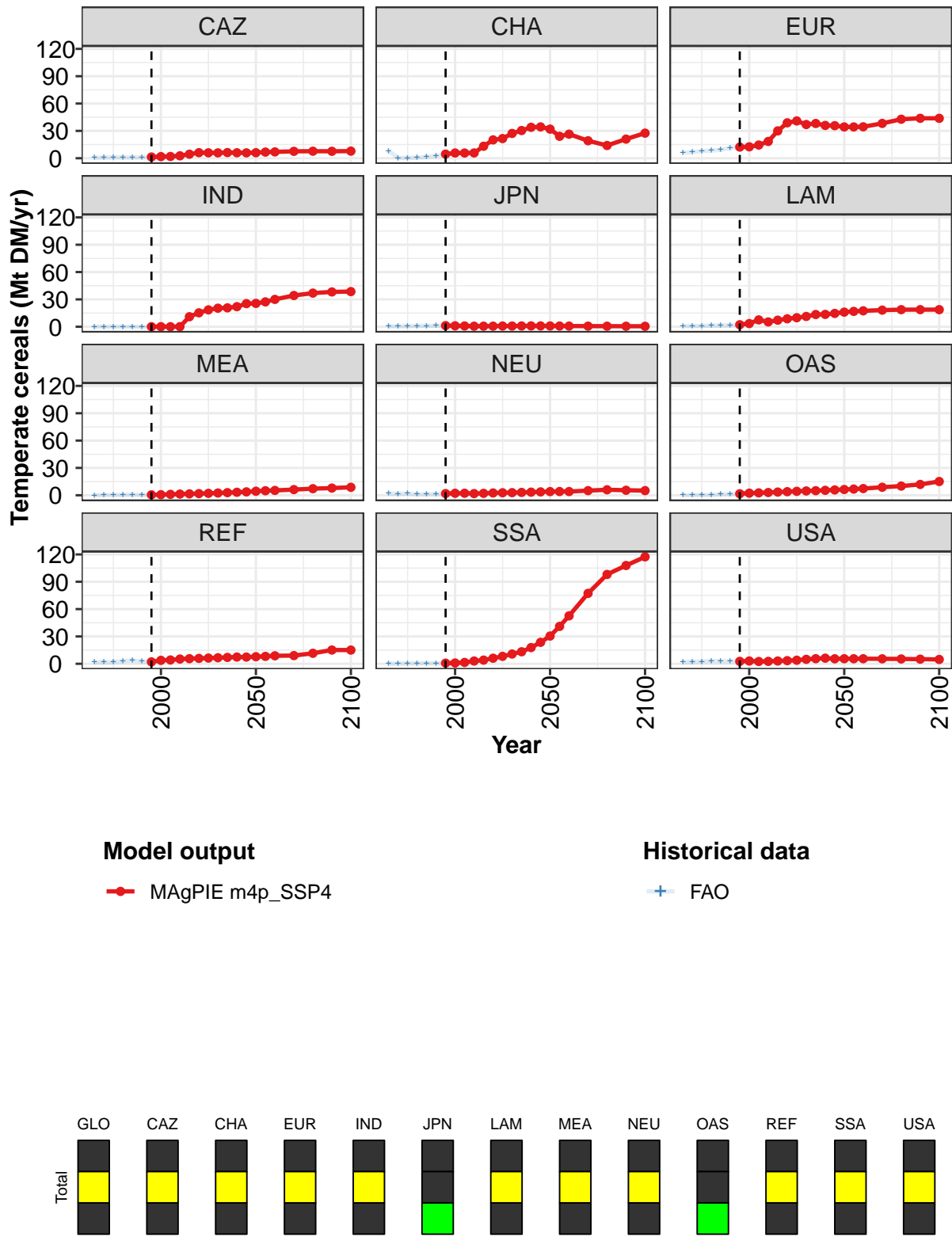


Figure 194: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	31	38	45	50	86	114	125	135	147	156	167
CAZ	1	2	2	3	4	6	6	6	6	6	6
CHA	5	6	6	6	13	20	22	27	30	34	34
EUR	12	13	14	18	30	39	41	37	38	36	36
IND	0	0	0	0	11	15	19	20	21	22	25
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	2	4	8	5	7	9	10	11	13	14	15
MEA	1	1	1	1	2	2	2	2	3	3	4
NEU	2	2	2	2	2	3	3	3	3	3	4
OAS	2	2	3	3	4	4	4	5	5	5	6
REF	2	4	4	5	6	6	6	7	7	7	7
SSA	1	1	1	3	4	6	8	11	13	18	24
USA	3	3	3	3	3	3	4	5	6	6	5

Table 581: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Temperate cereals (Mt DM/yr)  
[PART 1/2]

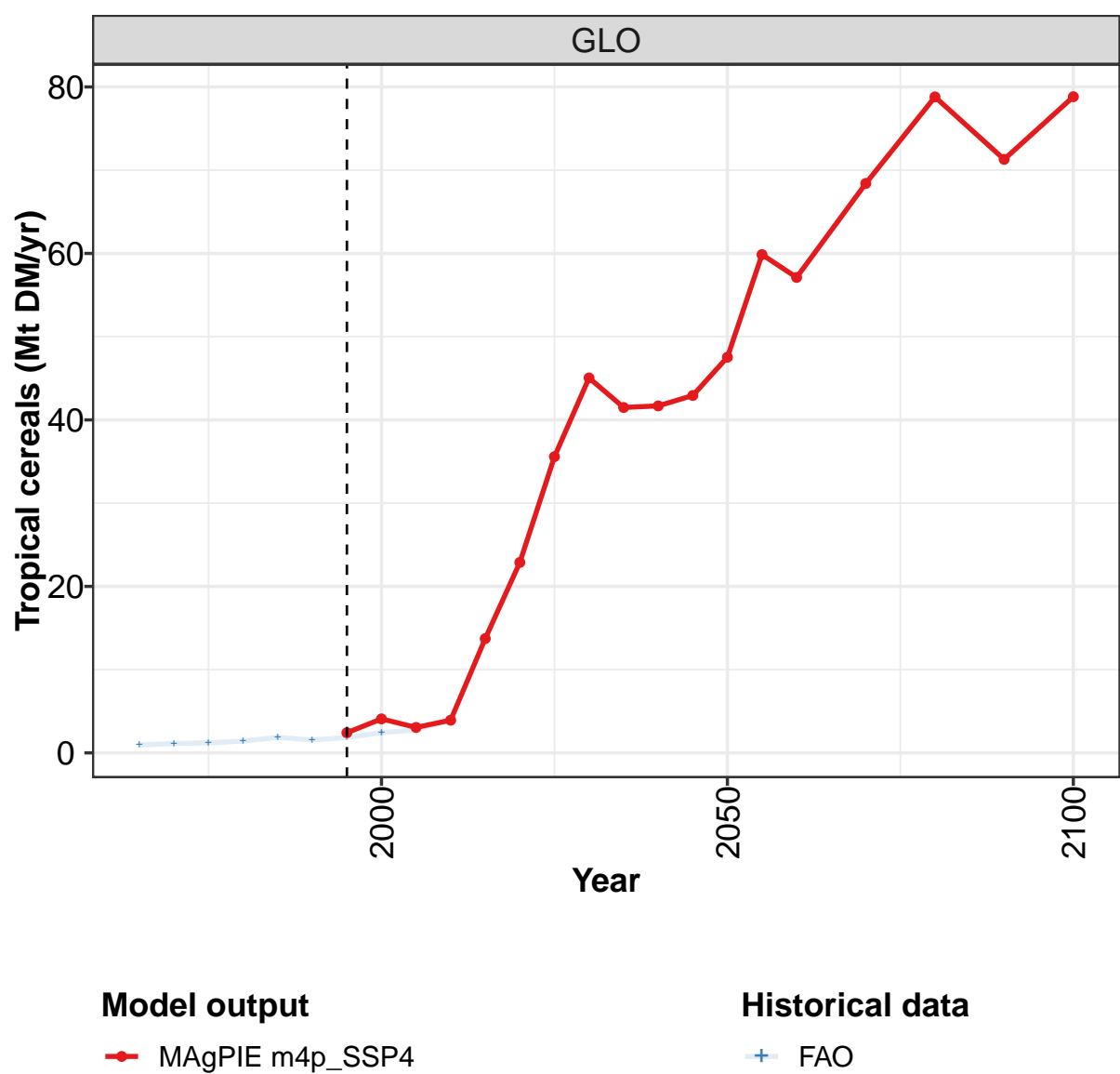
	2050	2055	2060	2070	2080	2090	2100
GLO	173	181	200	230	259	283	303
CAZ	6	7	7	8	8	8	8
CHA	32	24	26	19	14	21	28
EUR	34	34	34	38	43	44	44
IND	26	27	30	34	37	38	39
JPN	1	1	1	1	1	1	1
LAM	16	17	17	18	19	19	19
MEA	4	5	5	6	7	8	9
NEU	4	4	4	5	6	5	5
OAS	6	7	7	9	10	12	15
REF	8	8	9	9	12	15	15
SSA	30	41	53	77	98	108	117
USA	6	6	6	5	5	5	5

Table 582: MAgPIE m4p\_SSP4 — 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



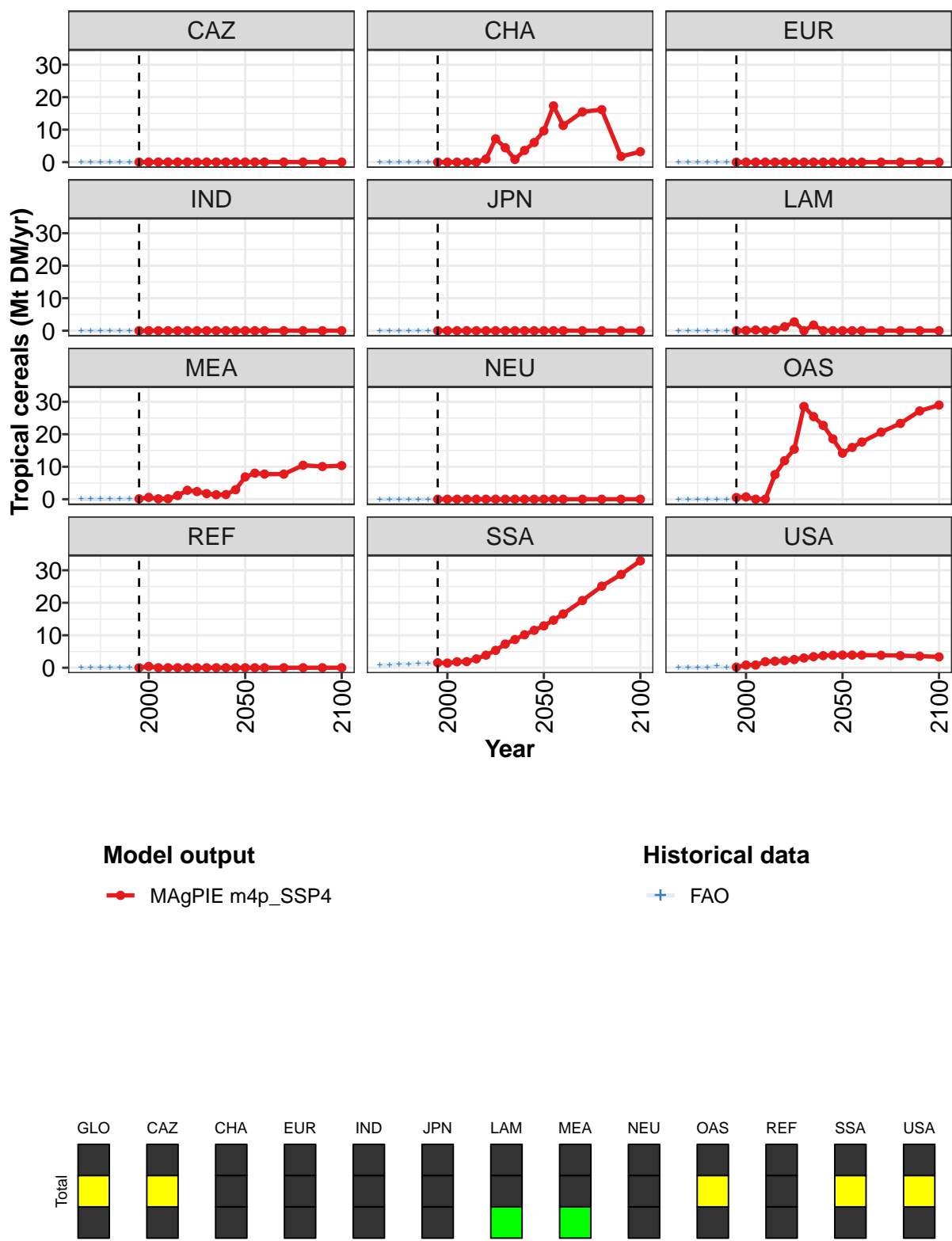


Figure 195: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Tropical cereals (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.4	4.1	3.1	3.9	13.7	22.9	35.6	45.0	41.5	41.7	42.9
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	1.0	7.2	4.4	0.8	3.6	6.1
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	0.1	0.2	0.0	0.3	1.2	2.7	0.0	1.7	0.0	0.0
MEA	0.1	0.6	0.1	0.1	1.1	2.7	2.4	1.7	1.4	1.4	2.9
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.5	0.7	0.0	0.0	7.6	11.9	15.4	28.6	25.4	22.7	18.6
REF	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.5	1.4	1.8	1.9	2.7	3.9	5.4	7.3	8.7	10.1	11.5
USA	0.2	0.8	0.8	1.9	2.0	2.2	2.5	3.0	3.4	3.7	3.8

Table 584: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Cereals—Tropical cereals (Mt DM/yr)  
[PART 1/2]

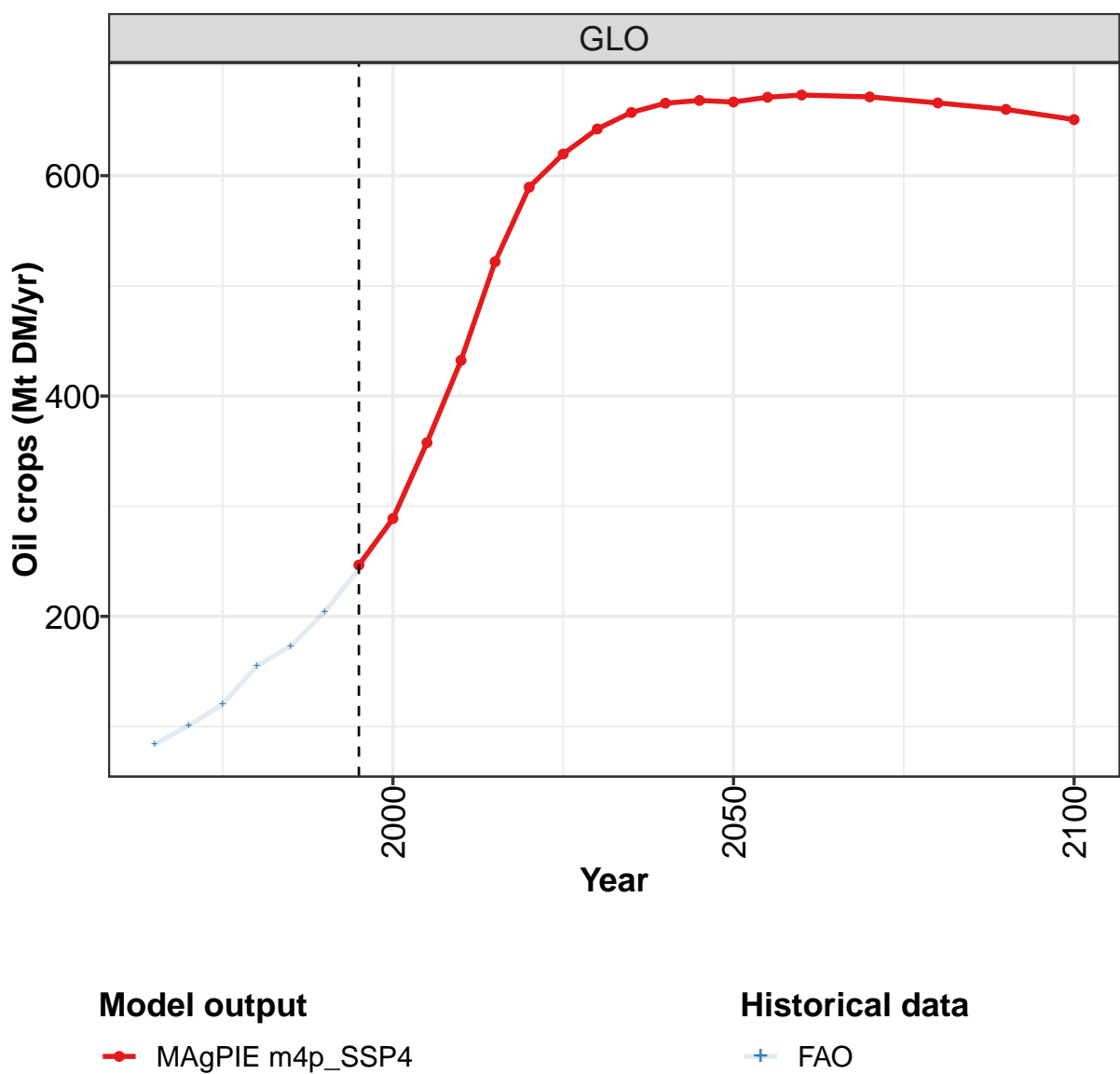
	2050	2055	2060	2070	2080	2090	2100
GLO	47.5	59.9	57.1	68.4	78.8	71.3	78.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	9.7	17.3	11.3	15.5	16.2	1.8	3.2
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	6.9	8.0	7.7	7.7	10.5	10.1	10.3
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	14.2	15.9	17.6	20.6	23.3	27.2	29.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	12.9	14.6	16.6	20.7	25.1	28.7	32.9
USA	3.9	3.9	3.9	3.8	3.7	3.6	3.3

Table 585: MAgPIE m4p\_SSP4 — 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



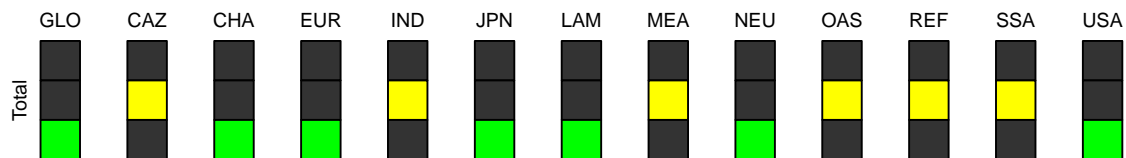
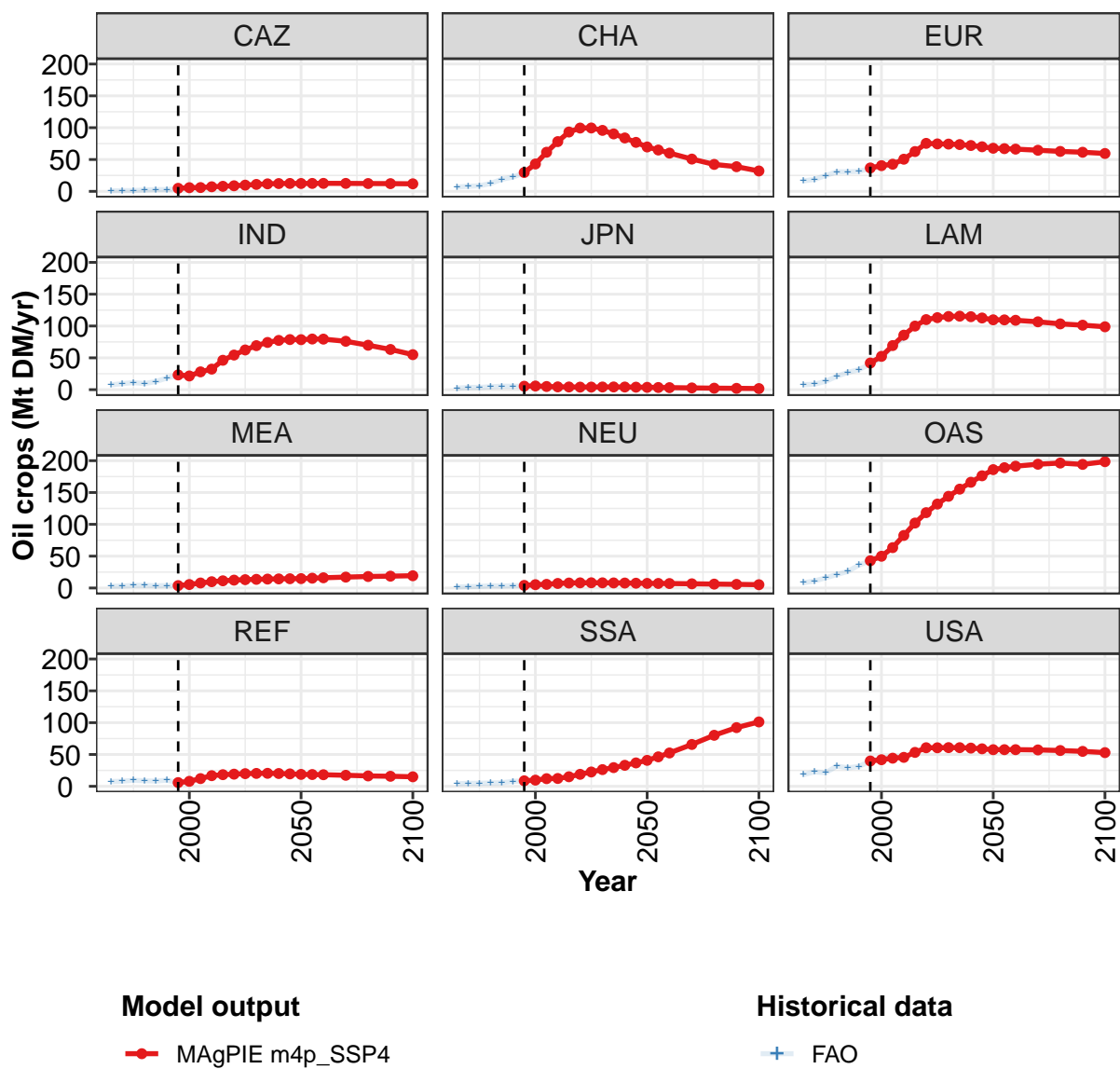


Figure 196: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	247	289	358	432	522	590	620	642	657	666	668
CAZ	5	6	6	7	8	9	10	11	12	12	12
CHA	30	43	61	78	93	99	100	96	90	84	77
EUR	37	40	43	51	63	75	75	74	74	72	70
IND	23	22	28	32	46	54	62	69	74	77	79
JPN	5	6	5	4	4	4	4	4	4	4	4
LAM	42	52	69	86	100	110	113	115	115	115	113
MEA	4	5	8	10	11	12	13	14	14	14	15
NEU	4	5	6	7	8	8	8	8	8	8	8
OAS	43	50	63	83	102	118	132	144	155	166	176
REF	6	8	12	17	18	19	20	20	20	20	20
SSA	9	10	12	12	15	19	23	26	29	33	37
USA	40	42	44	45	53	61	61	61	61	60	59

Table 587: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops (Mt DM/yr) [PART 1/2]

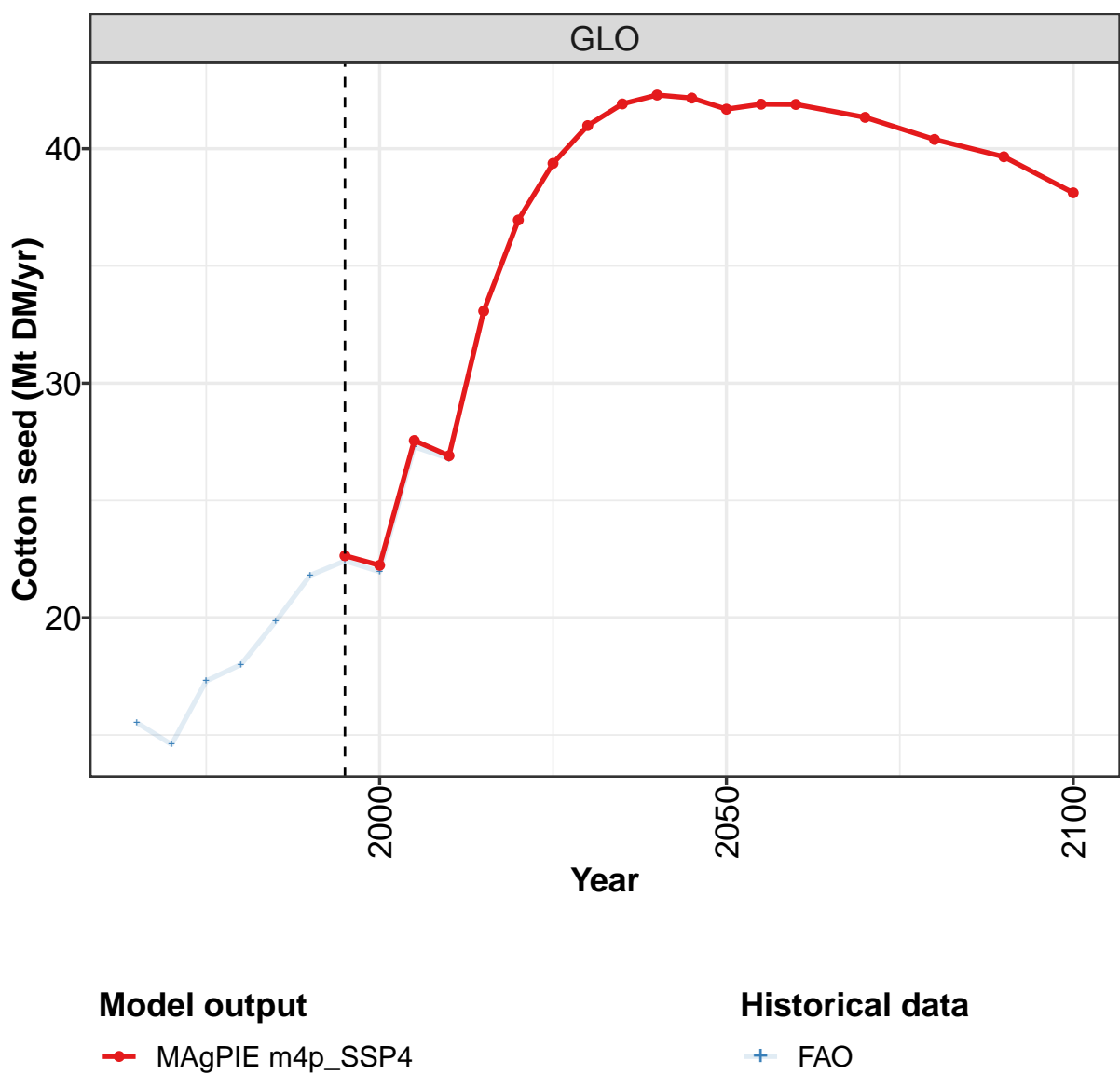
	2050	2055	2060	2070	2080	2090	2100
GLO	667	671	673	671	666	660	651
CAZ	12	12	13	12	12	12	12
CHA	70	65	60	51	42	39	32
EUR	68	67	66	65	63	61	59
IND	79	80	79	76	70	63	55
JPN	4	3	3	3	2	2	2
LAM	110	110	109	107	103	101	99
MEA	15	15	16	17	18	19	19
NEU	7	7	7	7	6	6	5
OAS	186	189	191	194	196	194	198
REF	19	19	18	17	16	16	15
SSA	41	46	52	66	80	92	101
USA	58	58	58	57	56	55	53

Table 588: MAgPIE m4p\_SSP4 — 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



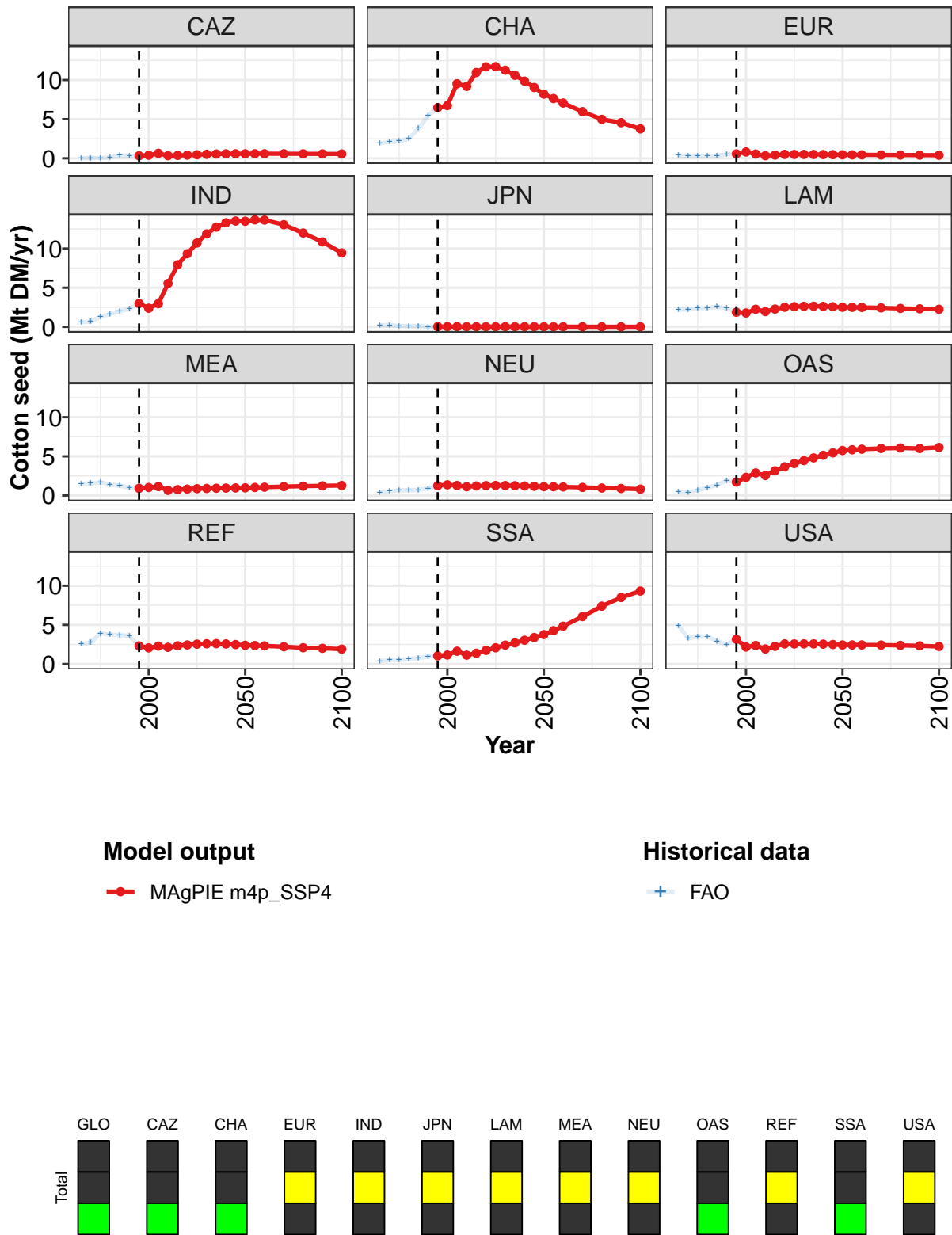


Figure 197: MAGPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22.6	22.2	27.6	26.9	33.1	37.0	39.4	41.0	41.9	42.3	42.2
CAZ	0.3	0.4	0.6	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6
CHA	6.5	6.7	9.5	9.2	11.0	11.7	11.7	11.3	10.6	9.9	9.0
EUR	0.6	0.8	0.5	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5
IND	3.0	2.4	3.0	5.5	7.9	9.3	10.7	11.9	12.7	13.3	13.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.9	1.8	2.3	2.0	2.3	2.5	2.6	2.6	2.6	2.6	2.6
MEA	0.9	1.0	1.1	0.7	0.7	0.8	0.9	0.9	0.9	0.9	1.0
NEU	1.2	1.4	1.3	1.1	1.2	1.3	1.3	1.3	1.2	1.2	1.2
OAS	1.7	2.3	2.9	2.6	3.2	3.7	4.1	4.5	4.8	5.1	5.4
REF	2.3	2.1	2.3	2.1	2.3	2.4	2.5	2.6	2.6	2.6	2.5
SSA	1.0	1.2	1.6	1.1	1.4	1.7	2.1	2.4	2.7	3.0	3.4
USA	3.2	2.2	2.4	1.9	2.3	2.6	2.6	2.6	2.6	2.5	2.5

Table 590: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

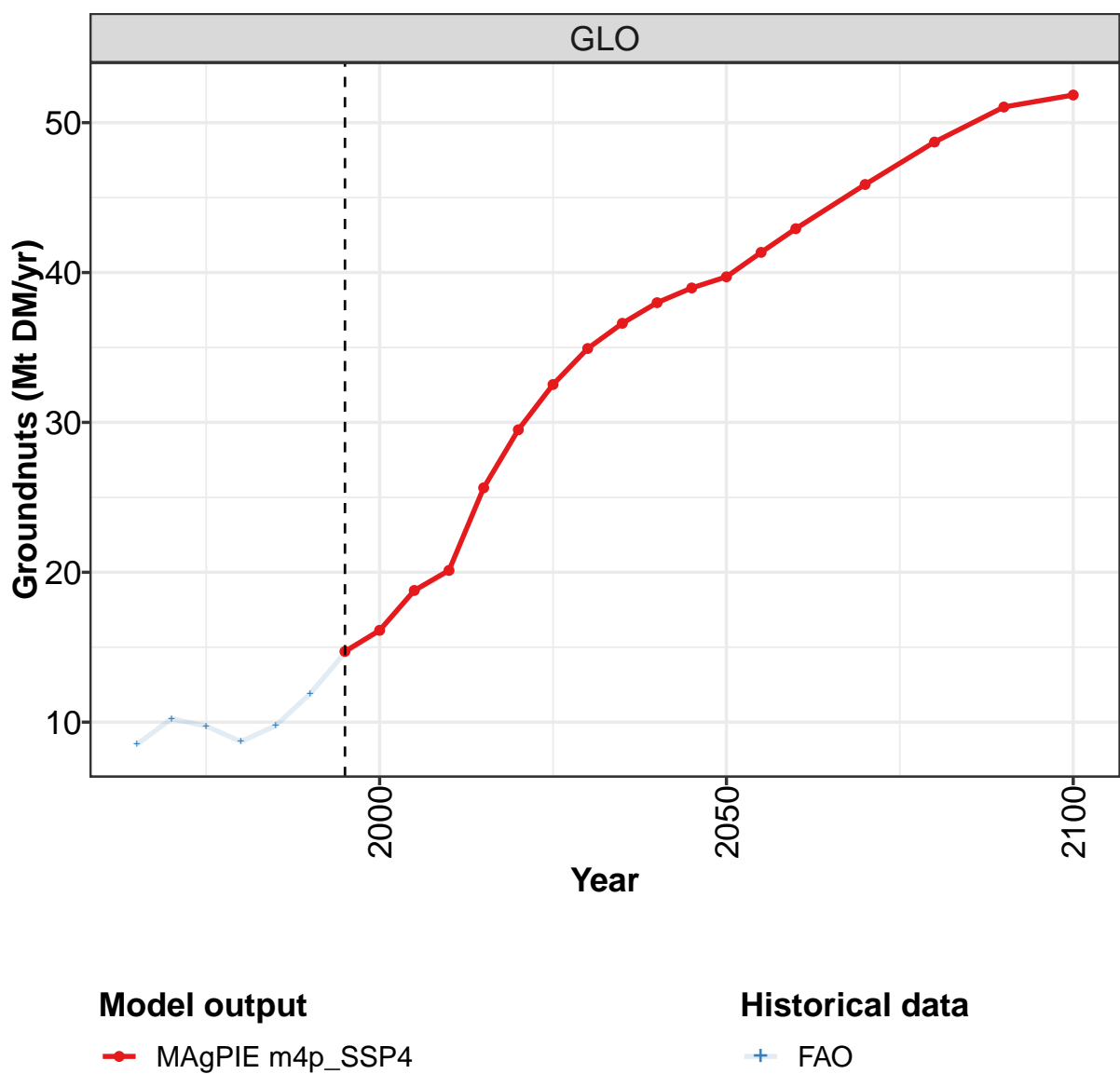
	2050	2055	2060	2070	2080	2090	2100
GLO	41.7	41.9	41.9	41.3	40.4	39.7	38.1
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	8.2	7.6	7.1	6.0	5.0	4.6	3.8
EUR	0.5	0.4	0.4	0.4	0.4	0.4	0.4
IND	13.5	13.7	13.6	13.1	12.0	10.8	9.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.5	2.5	2.5	2.4	2.4	2.3	2.3
MEA	1.0	1.0	1.1	1.1	1.2	1.2	1.3
NEU	1.1	1.1	1.1	1.0	1.0	0.9	0.8
OAS	5.7	5.8	5.9	6.0	6.1	6.0	6.1
REF	2.4	2.4	2.3	2.2	2.1	2.0	1.9
SSA	3.8	4.3	4.8	6.1	7.4	8.5	9.3
USA	2.4	2.4	2.4	2.4	2.4	2.3	2.2

Table 591: MAgPIE m4p\_SSP4 — 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





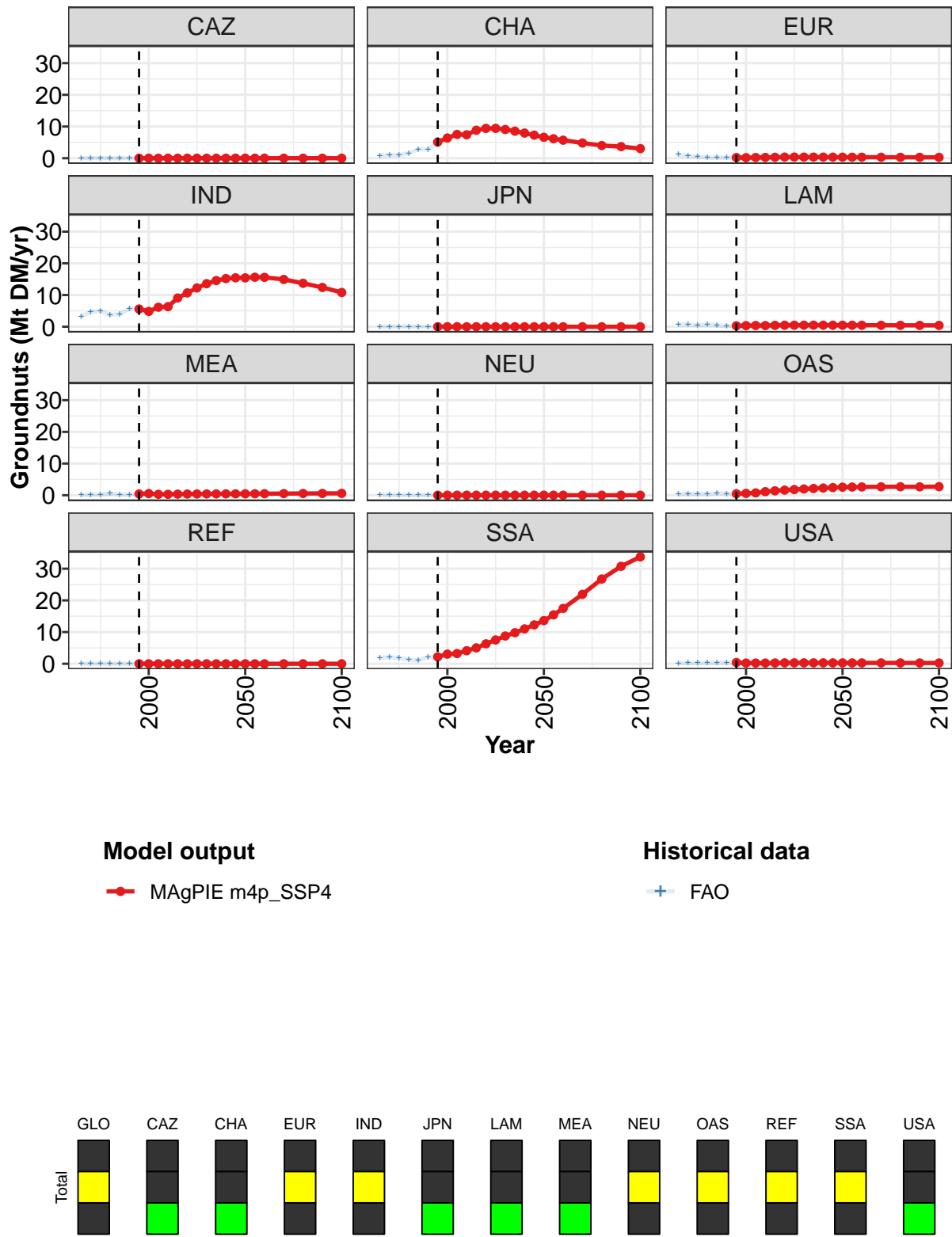


Figure 198: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Groundnuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.7	16.1	18.8	20.1	25.6	29.5	32.5	34.9	36.6	38.0	39.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.1	6.4	7.5	7.4	8.8	9.4	9.4	9.1	8.5	7.9	7.3
EUR	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3
IND	5.6	4.8	6.2	6.3	9.1	10.7	12.2	13.6	14.6	15.2	15.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
MEA	0.4	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	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	2.0	2.1	2.3	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	2.2	3.0	3.2	4.1	5.0	6.3	7.5	8.8	9.8	11.0	12.3
USA	0.4	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Table 593: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

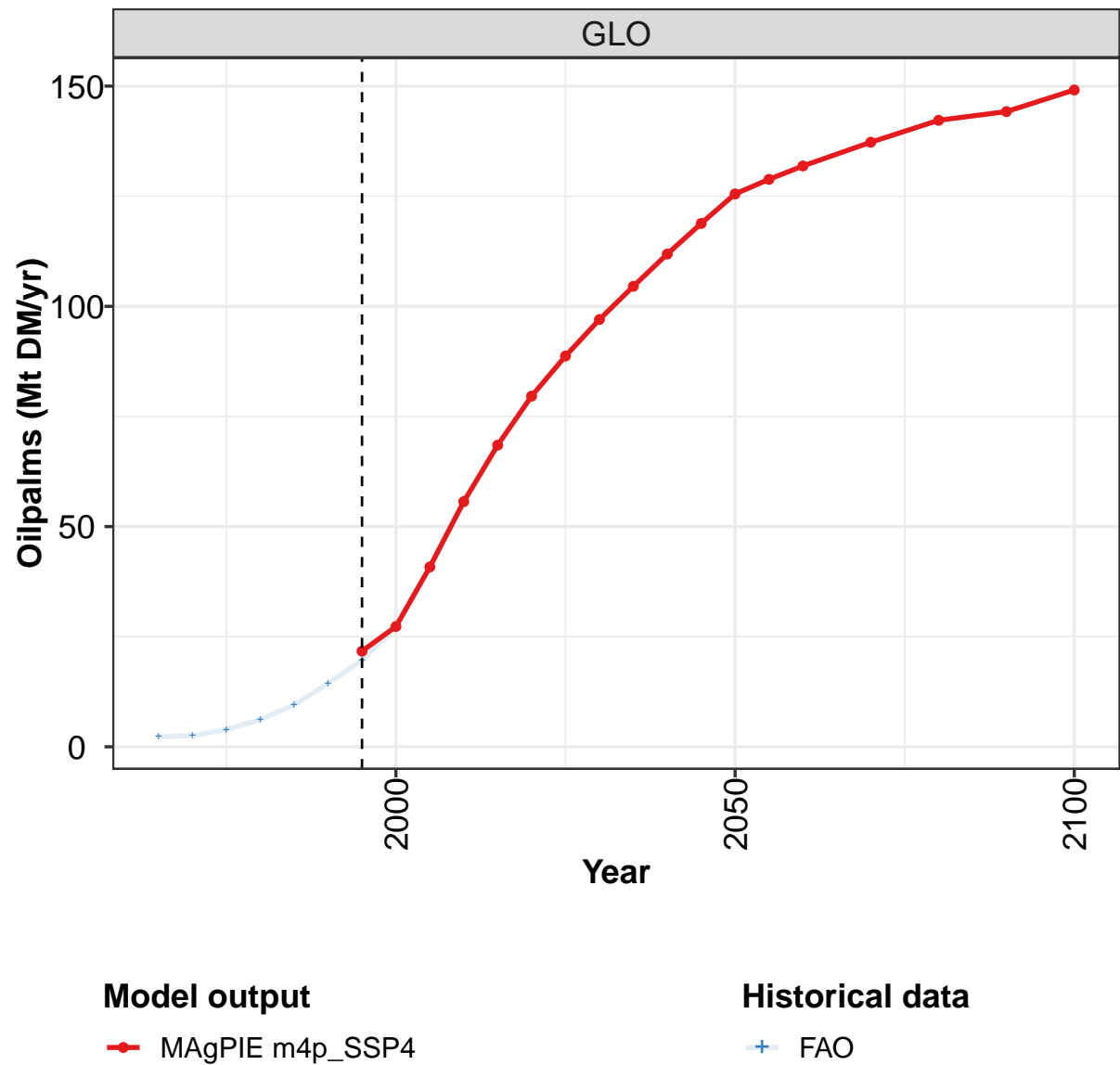
	2050	2055	2060	2070	2080	2090	2100
GLO	39.7	41.3	42.9	45.9	48.7	51.0	51.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.6	6.1	5.7	4.8	4.0	3.7	3.0
EUR	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IND	15.4	15.6	15.6	14.9	13.7	12.4	10.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.5	0.5	0.5	0.5	0.4	0.4	0.4
MEA	0.5	0.5	0.5	0.5	0.6	0.6	0.6
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.5	2.6	2.6	2.7	2.7	2.7	2.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	13.6	15.4	17.5	21.9	26.7	30.8	33.7
USA	0.3	0.3	0.3	0.3	0.3	0.3	0.2

Table 594: MAgPIE m4p\_SSP4 — 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



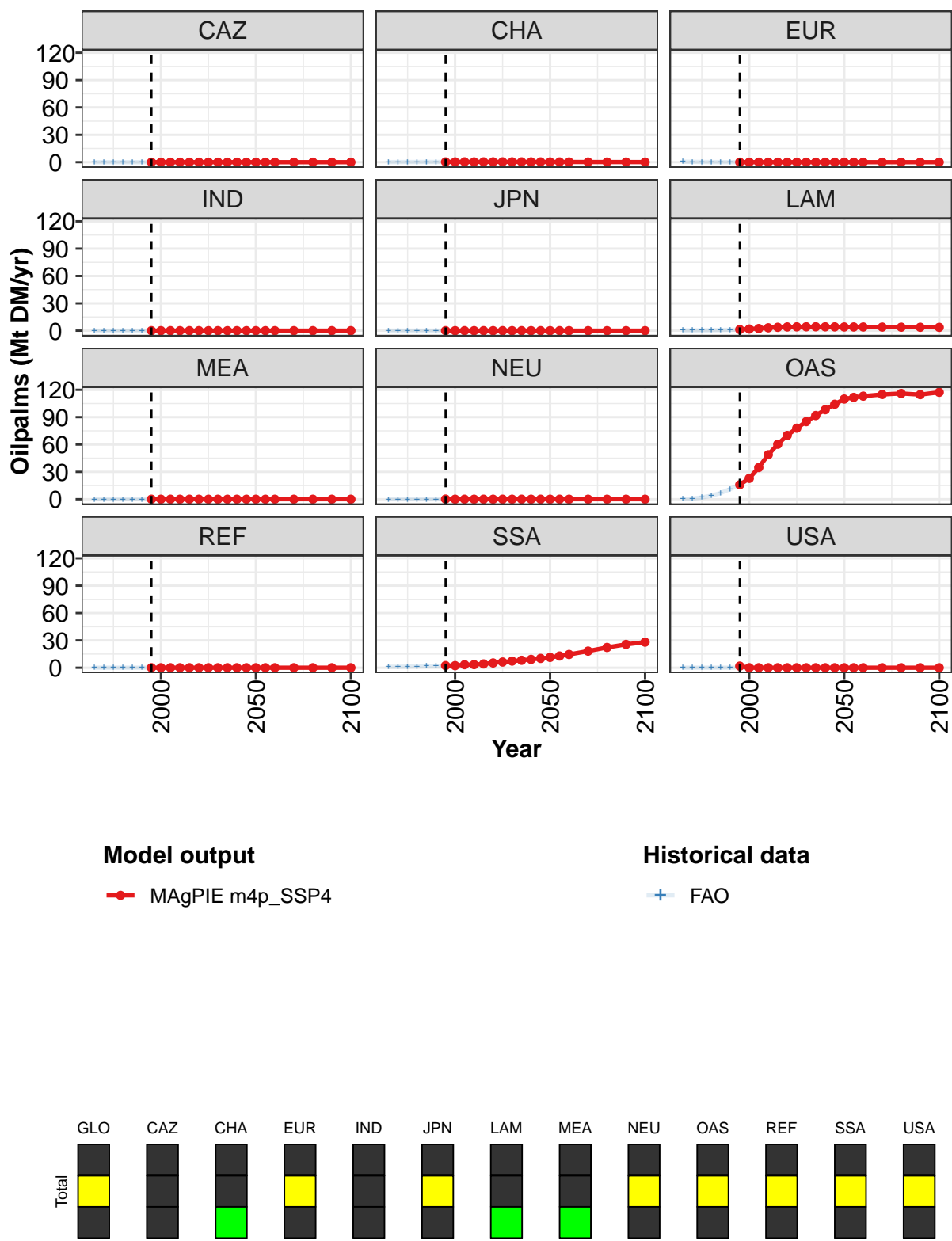


Figure 199: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Oilpalms (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	27	41	56	68	80	89	97	105	112	119
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	60	70	78	85	92	98	104
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	2	2	3	3	4	5	6	7	8	9	10
USA	2	0	0	0	0	0	0	0	0	0	0

Table 596: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Oilpalms (Mt DM/yr) [PART 1/2]

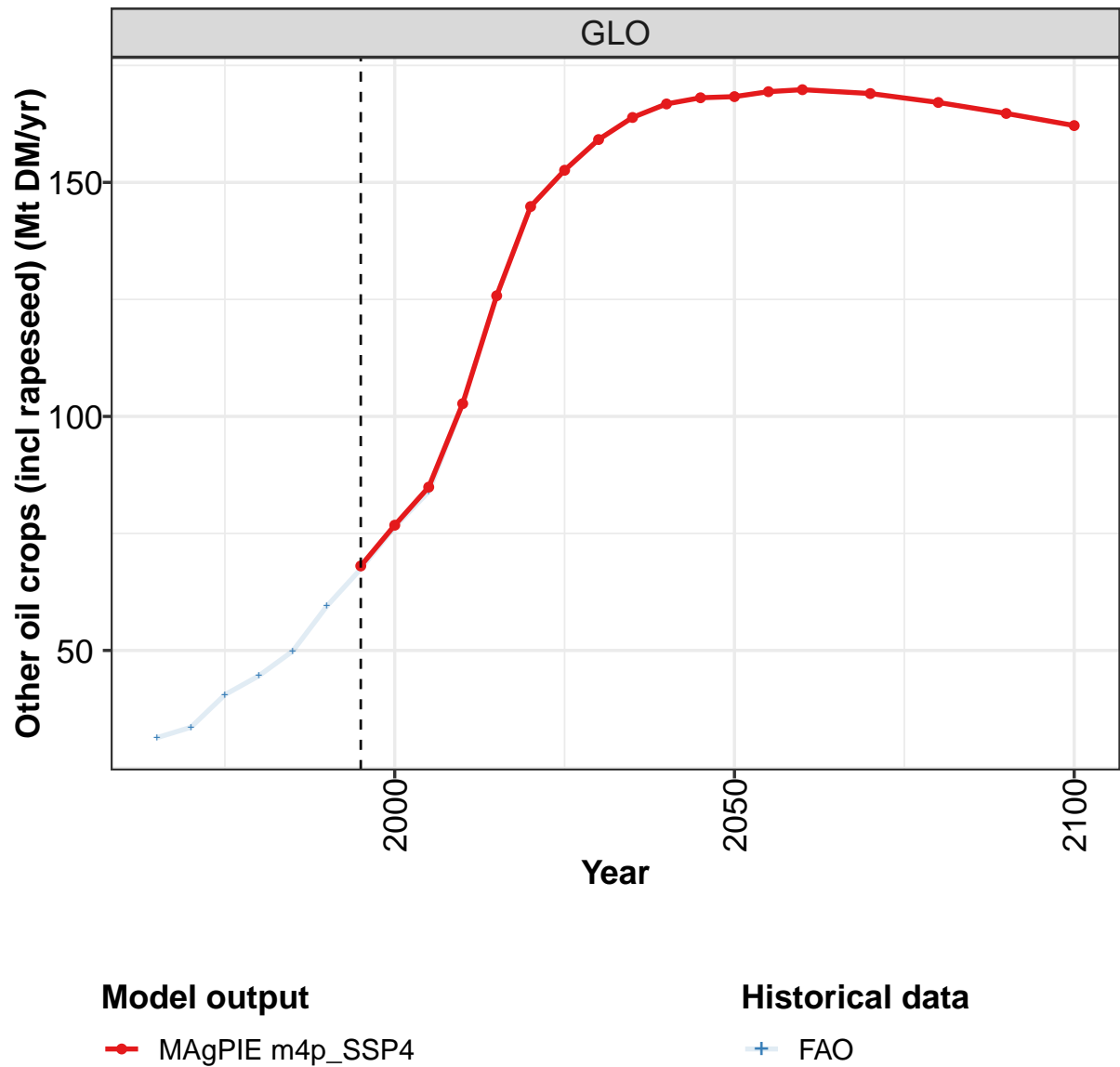
	2050	2055	2060	2070	2080	2090	2100
GLO	126	129	132	137	142	144	149
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	4	4	4	4	4	4	4
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	0	0
OAS	110	112	113	115	116	115	117
REF	0	0	0	0	0	0	0
SSA	11	13	15	18	22	26	28
USA	0	0	0	0	0	0	0

Table 597: MAgPIE m4p\_SSP4 — 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)



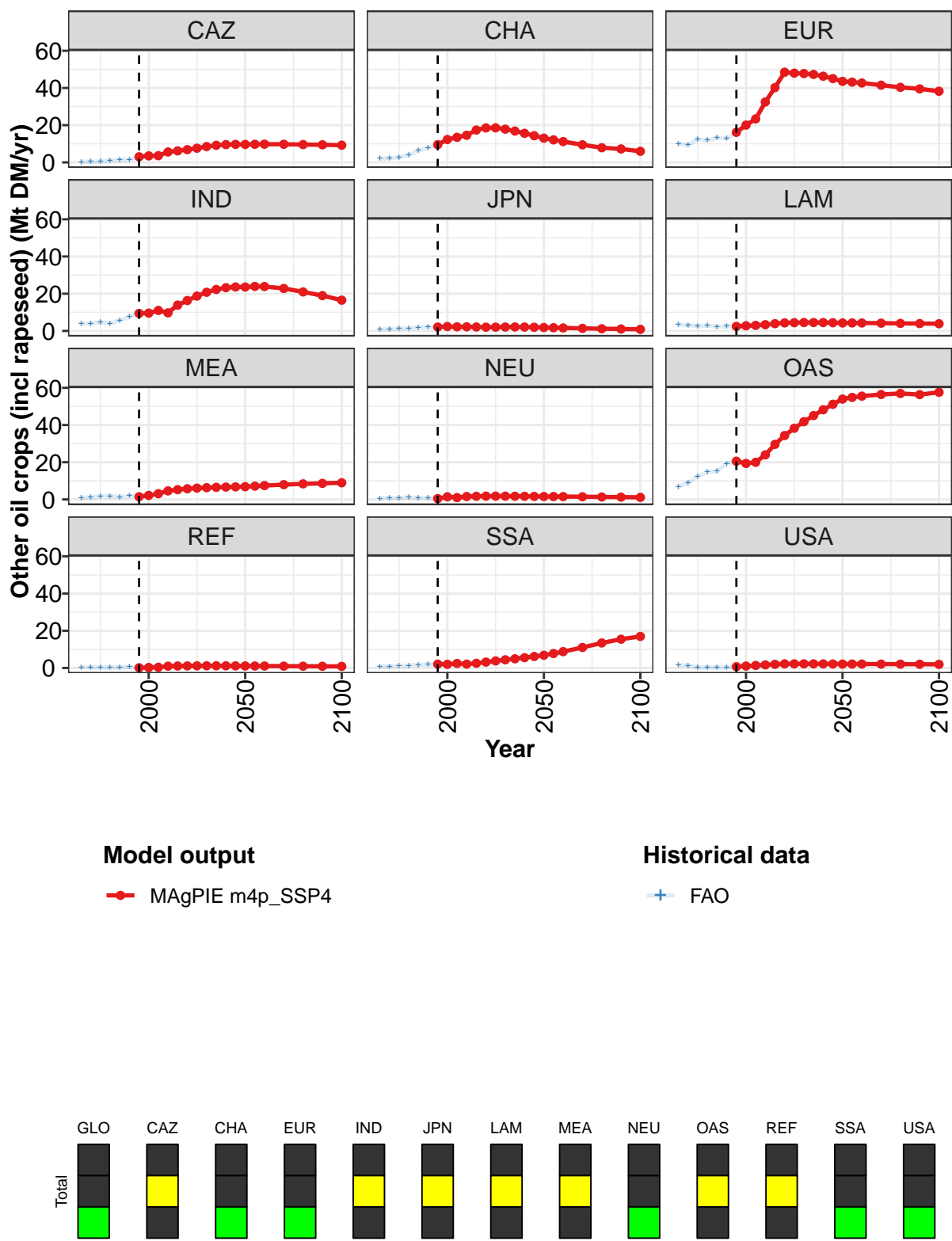


Figure 200: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	68	77	85	103	126	145	153	159	164	167	168
CAZ	3	4	4	6	6	7	8	9	9	10	10
CHA	10	12	13	15	17	19	19	18	17	16	14
EUR	16	20	23	32	40	48	48	48	47	46	45
IND	9	10	11	10	14	16	19	21	22	23	24
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	2	3	3	3	4	4	4	4	5	4	4
MEA	1	2	3	5	5	6	6	6	7	7	7
NEU	0	1	1	2	2	2	2	2	2	2	2
OAS	21	19	20	24	30	34	38	42	45	48	51
REF	0	0	0	1	1	1	1	1	1	1	1
SSA	2	2	2	2	3	3	4	4	5	6	6
USA	1	1	1	2	2	2	2	2	2	2	2

Table 599: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	168	169	170	169	167	165	162
CAZ	10	10	10	10	10	9	9
CHA	13	12	11	9	8	7	6
EUR	44	43	43	42	40	40	38
IND	24	24	24	23	21	19	17
JPN	2	2	2	1	1	1	1
LAM	4	4	4	4	4	4	4
MEA	7	7	7	8	8	9	9
NEU	2	2	2	1	1	1	1
OAS	54	55	56	56	57	56	58
REF	1	1	1	1	1	1	1
SSA	7	8	9	11	13	15	17
USA	2	2	2	2	2	2	2

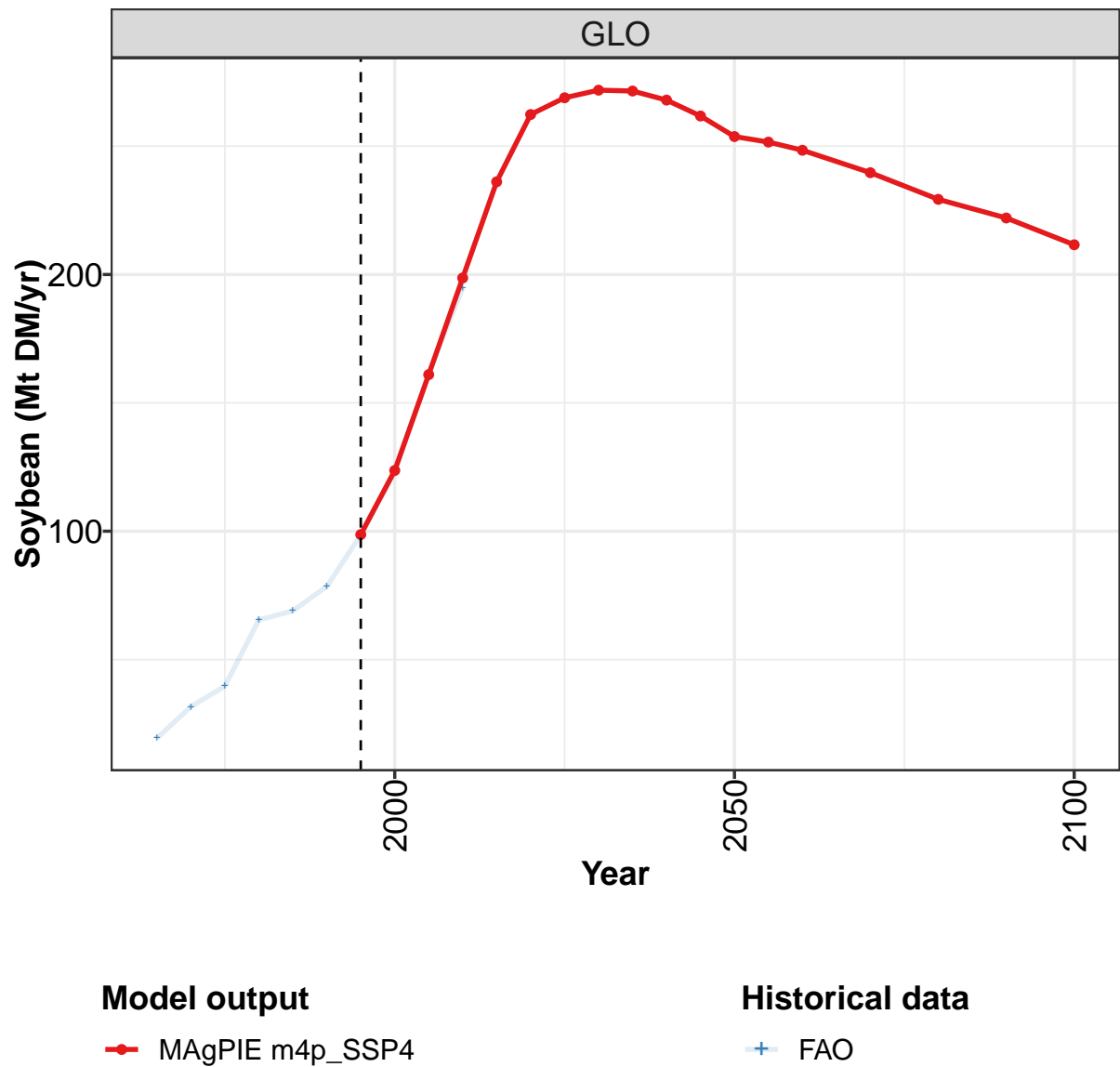
Table 600: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 2/2]

	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



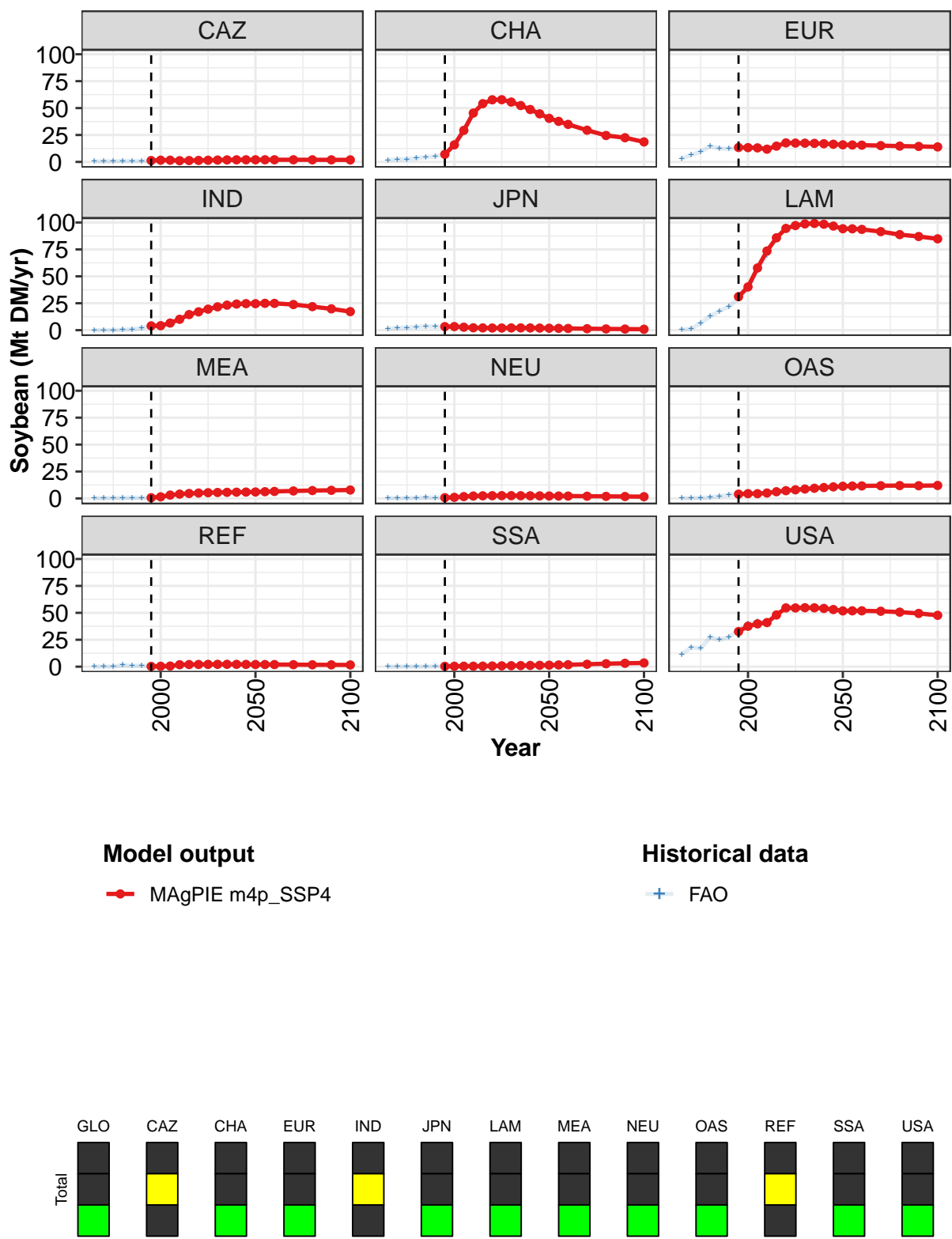


Figure 201: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	99	124	161	199	236	262	269	272	271	268	262
CAZ	1	2	2	1	1	1	2	2	2	2	2
CHA	7	16	29	45	54	58	58	56	52	49	45
EUR	13	13	13	12	15	18	17	17	17	17	16
IND	4	4	7	10	14	17	20	22	23	24	25
JPN	3	3	3	2	2	2	2	2	2	2	2
LAM	31	40	58	74	86	95	97	99	99	98	97
MEA	1	1	3	4	5	5	5	6	6	6	6
NEU	1	1	2	2	2	3	3	3	3	2	2
OAS	4	4	4	5	6	7	8	9	9	10	11
REF	0	0	1	2	2	2	2	2	2	2	2
SSA	0	0	0	0	1	1	1	1	1	1	1
USA	33	38	40	41	48	55	55	55	55	54	53

Table 602: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

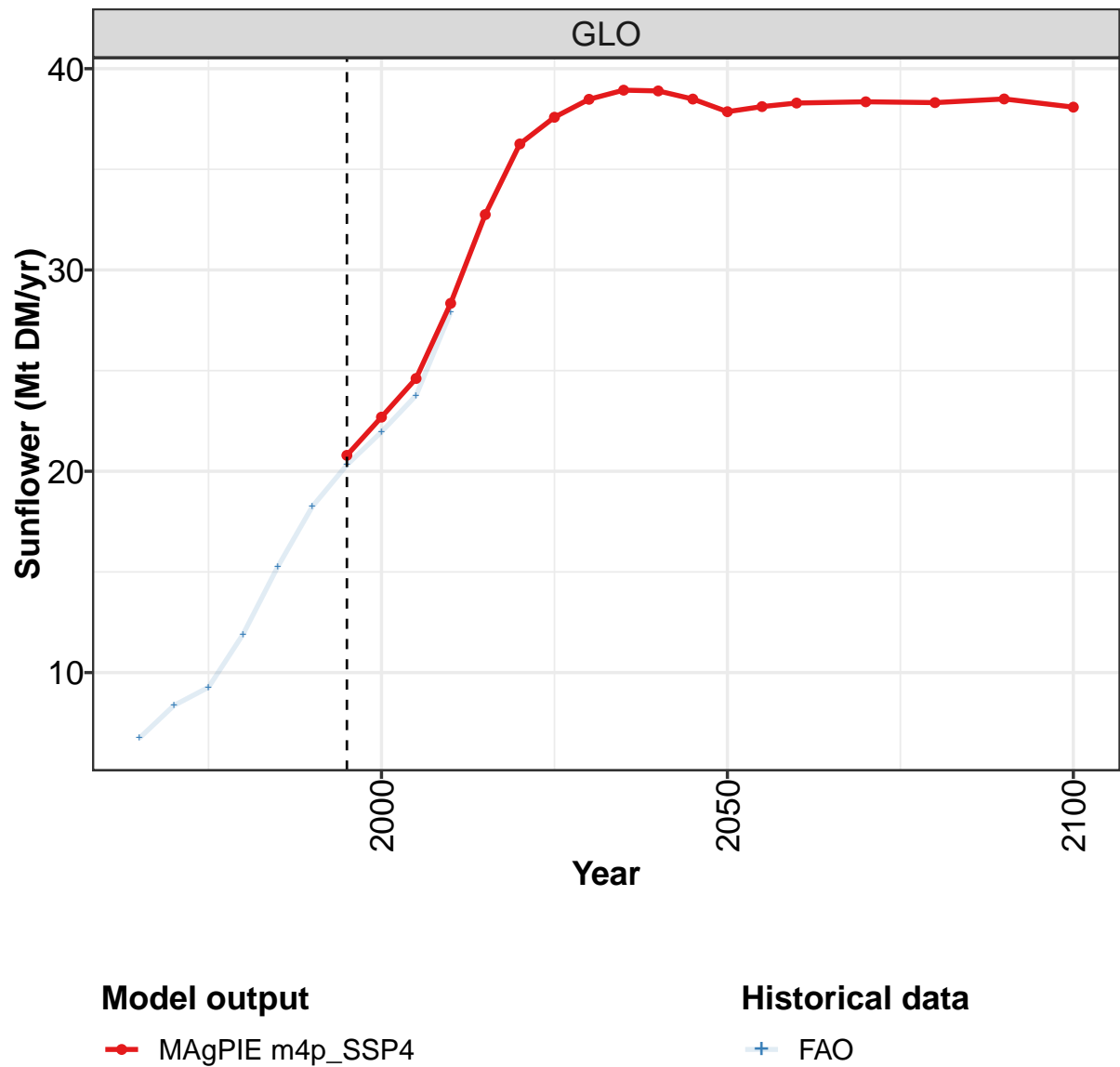
	2050	2055	2060	2070	2080	2090	2100
GLO	254	252	248	240	229	222	212
CAZ	2	2	2	2	2	2	2
CHA	40	38	35	29	25	22	19
EUR	16	16	16	15	15	14	14
IND	25	25	25	24	22	20	17
JPN	2	2	2	1	1	1	1
LAM	94	94	94	92	89	87	85
MEA	6	6	6	7	7	8	8
NEU	2	2	2	2	2	2	2
OAS	11	11	12	12	12	12	12
REF	2	2	2	2	2	2	2
SSA	1	2	2	2	3	3	3
USA	52	52	52	51	51	49	48

Table 603: MAgPIE m4p\_SSP4 — 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



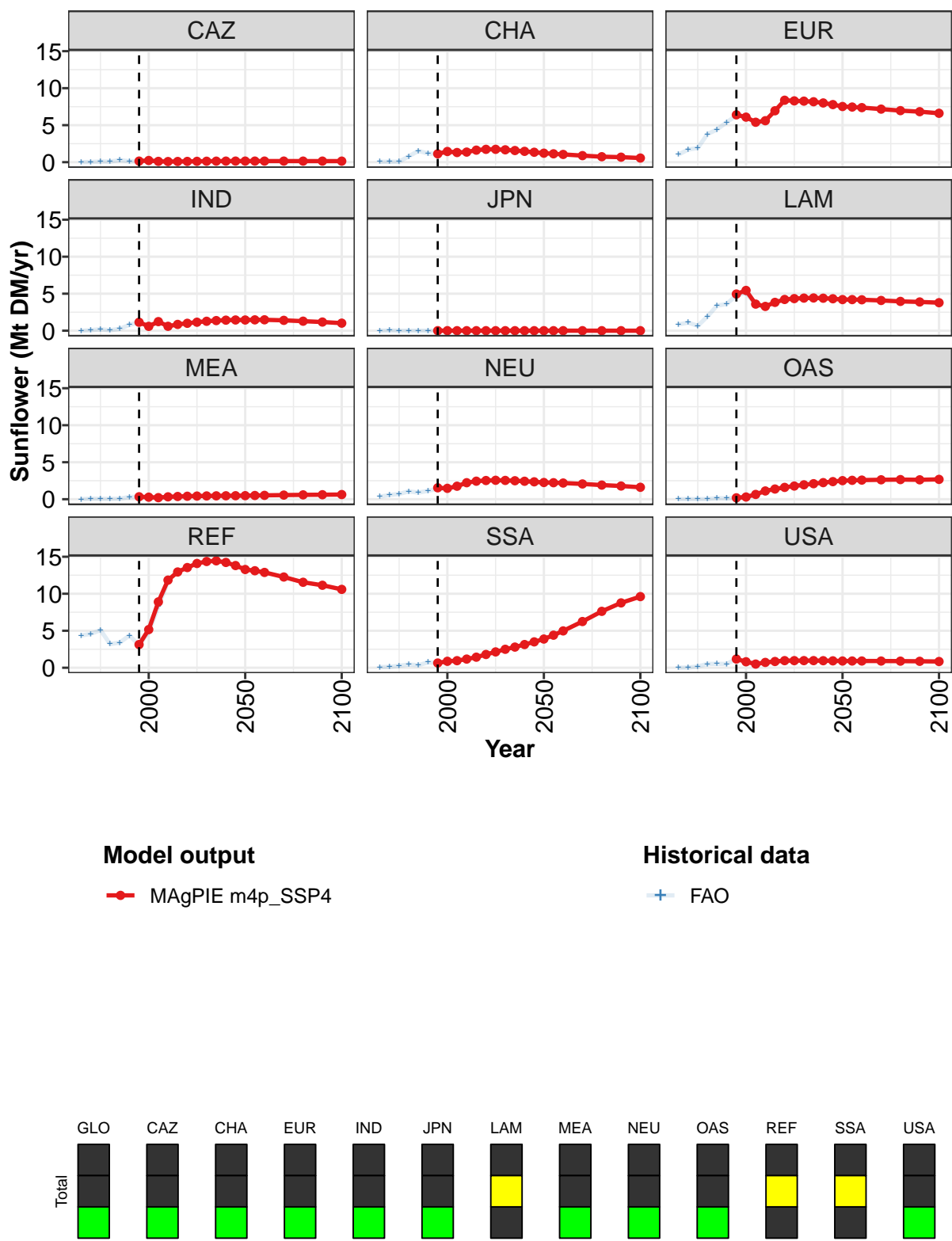


Figure 202: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	20.8	22.7	24.6	28.3	32.8	36.3	37.6	38.5	38.9	38.9	38.5
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	1.7	1.6	1.5	1.3
EUR	6.4	6.1	5.4	5.6	6.9	8.4	8.3	8.2	8.2	8.0	7.8
IND	1.1	0.6	1.2	0.6	0.9	1.0	1.1	1.3	1.4	1.4	1.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	5.0	5.4	3.6	3.3	3.8	4.2	4.3	4.4	4.4	4.4	4.3
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	2.5	2.4	2.4
OAS	0.2	0.3	0.6	1.1	1.4	1.6	1.8	1.9	2.1	2.2	2.4
REF	3.1	5.2	8.9	11.8	12.9	13.5	14.1	14.4	14.4	14.2	13.8
SSA	0.6	0.9	1.0	1.2	1.4	1.8	2.1	2.5	2.8	3.1	3.5
USA	1.2	0.8	0.5	0.7	0.8	1.0	1.0	1.0	1.0	1.0	0.9

Table 605: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

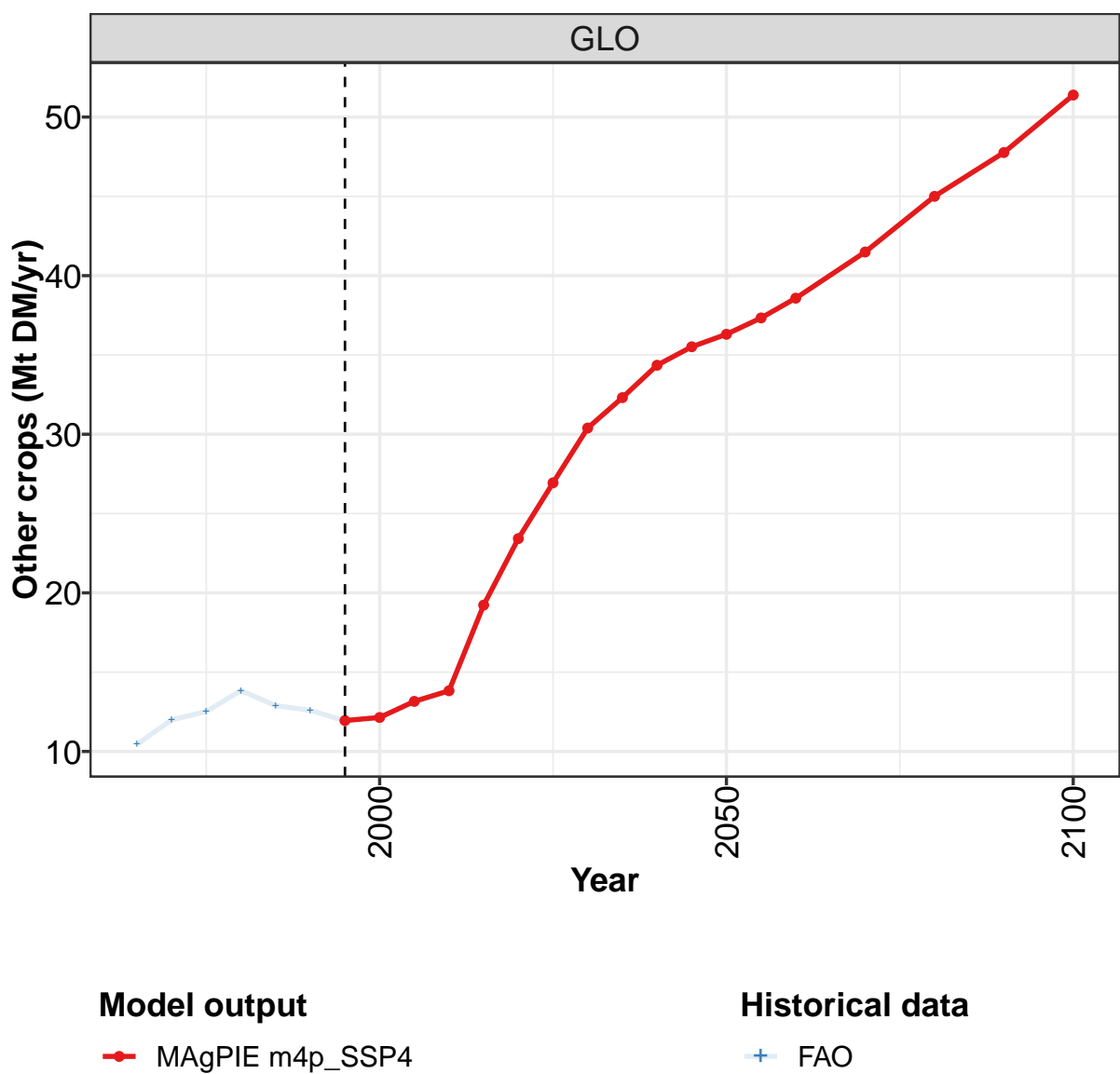
	2050	2055	2060	2070	2080	2090	2100
GLO	37.9	38.1	38.3	38.4	38.3	38.5	38.1
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	1.2	1.1	1.0	0.9	0.7	0.7	0.6
EUR	7.5	7.5	7.4	7.2	7.0	6.8	6.6
IND	1.4	1.5	1.5	1.4	1.3	1.2	1.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	4.2	4.2	4.2	4.1	4.0	3.9	3.8
MEA	0.5	0.5	0.5	0.6	0.6	0.6	0.6
NEU	2.3	2.2	2.2	2.1	1.9	1.8	1.6
OAS	2.5	2.6	2.6	2.6	2.7	2.6	2.7
REF	13.3	13.1	12.9	12.3	11.5	11.1	10.6
SSA	3.9	4.4	5.0	6.2	7.6	8.8	9.6
USA	0.9	0.9	0.9	0.9	0.9	0.9	0.8

Table 606: MAgPIE m4p\_SSP4 — 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



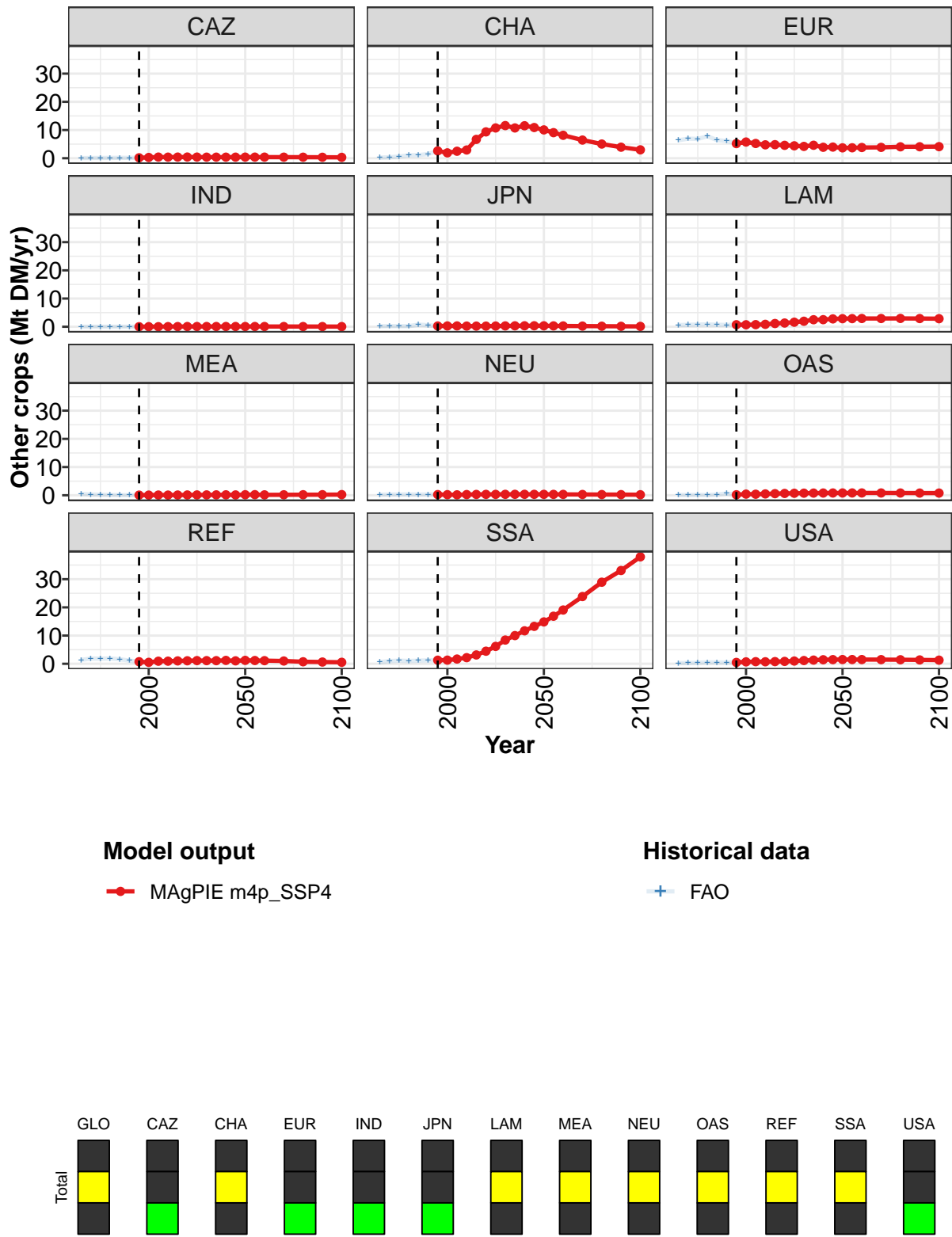


Figure 203: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Other crops (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.9	12.1	13.2	13.8	19.2	23.4	26.9	30.4	32.3	34.4	35.5
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	9.3	10.7	11.6	10.7	11.5	10.9
EUR	5.2	5.7	5.2	4.8	4.8	4.6	4.4	4.2	4.6	3.9	4.0
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	0.3	0.3
LAM	0.7	0.7	0.8	0.9	1.2	1.3	1.6	2.0	2.5	2.5	2.8
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
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	0.7	0.8	0.8	0.8
REF	0.7	0.5	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.2	1.0
SSA	1.3	1.3	1.7	2.2	3.1	4.5	6.2	8.4	10.0	11.7	13.3
USA	0.5	0.7	0.8	0.7	0.8	0.8	1.0	1.2	1.3	1.4	1.5

Table 608: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Other crops (Mt DM/yr) [PART 1/2]

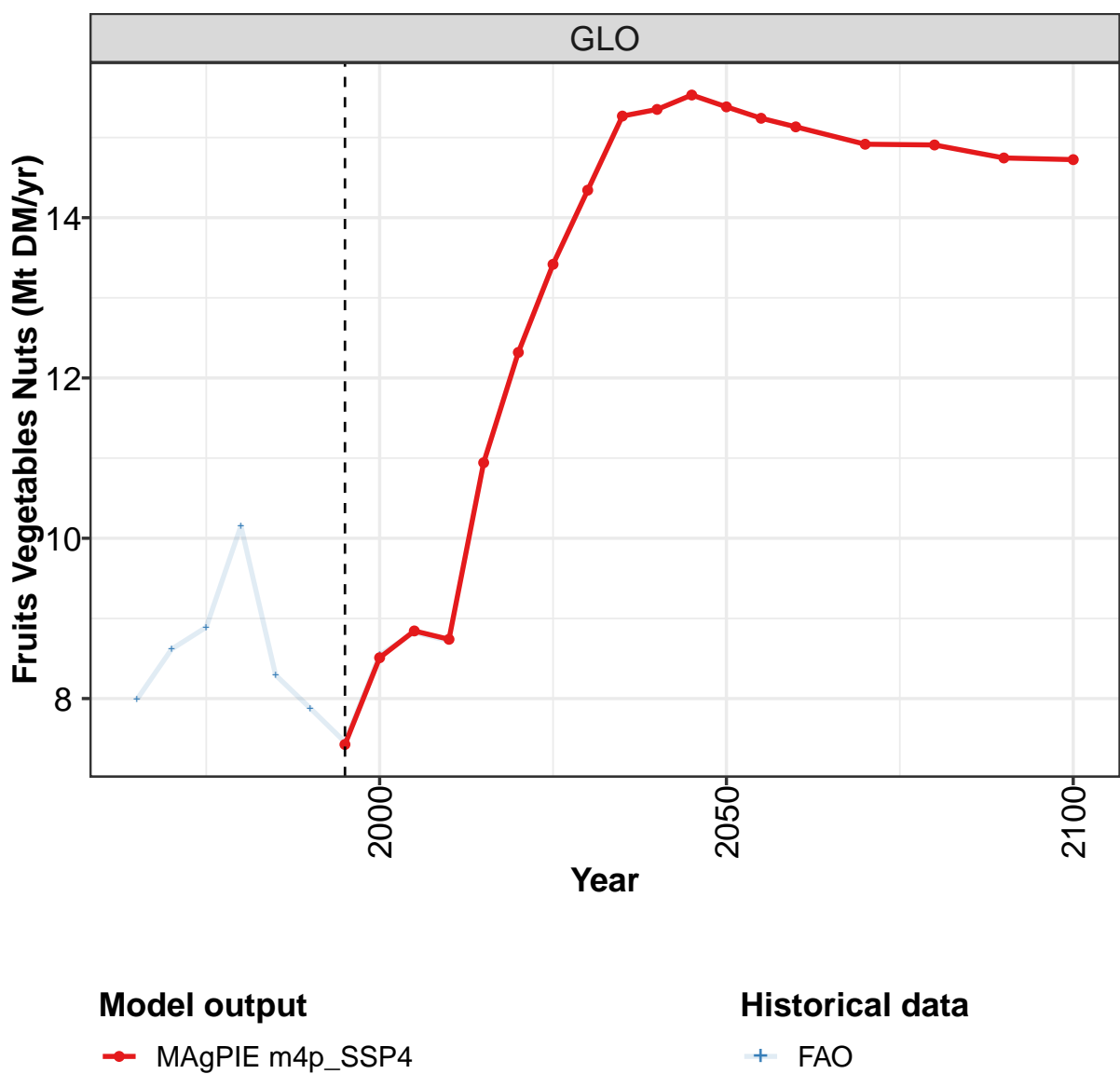
	2050	2055	2060	2070	2080	2090	2100
GLO	36.3	37.3	38.6	41.5	45.0	47.8	51.4
CAZ	0.4	0.4	0.4	0.4	0.4	0.3	0.3
CHA	10.0	9.1	8.1	6.4	5.0	3.9	3.0
EUR	3.7	3.7	3.8	3.9	4.1	4.1	4.1
IND	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.3	0.3	0.3	0.2	0.2	0.2	0.1
LAM	2.9	2.9	2.9	2.9	3.0	2.9	2.9
MEA	0.2	0.2	0.1	0.2	0.2	0.2	0.2
NEU	0.3	0.3	0.3	0.3	0.3	0.2	0.2
OAS	0.8	0.8	0.8	0.8	0.8	0.8	0.8
REF	1.2	1.2	1.1	1.0	0.7	0.6	0.5
SSA	14.9	16.9	19.1	23.8	28.9	33.1	37.9
USA	1.5	1.5	1.5	1.5	1.4	1.4	1.3

Table 609: MAgPIE m4p\_SSP4 — 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



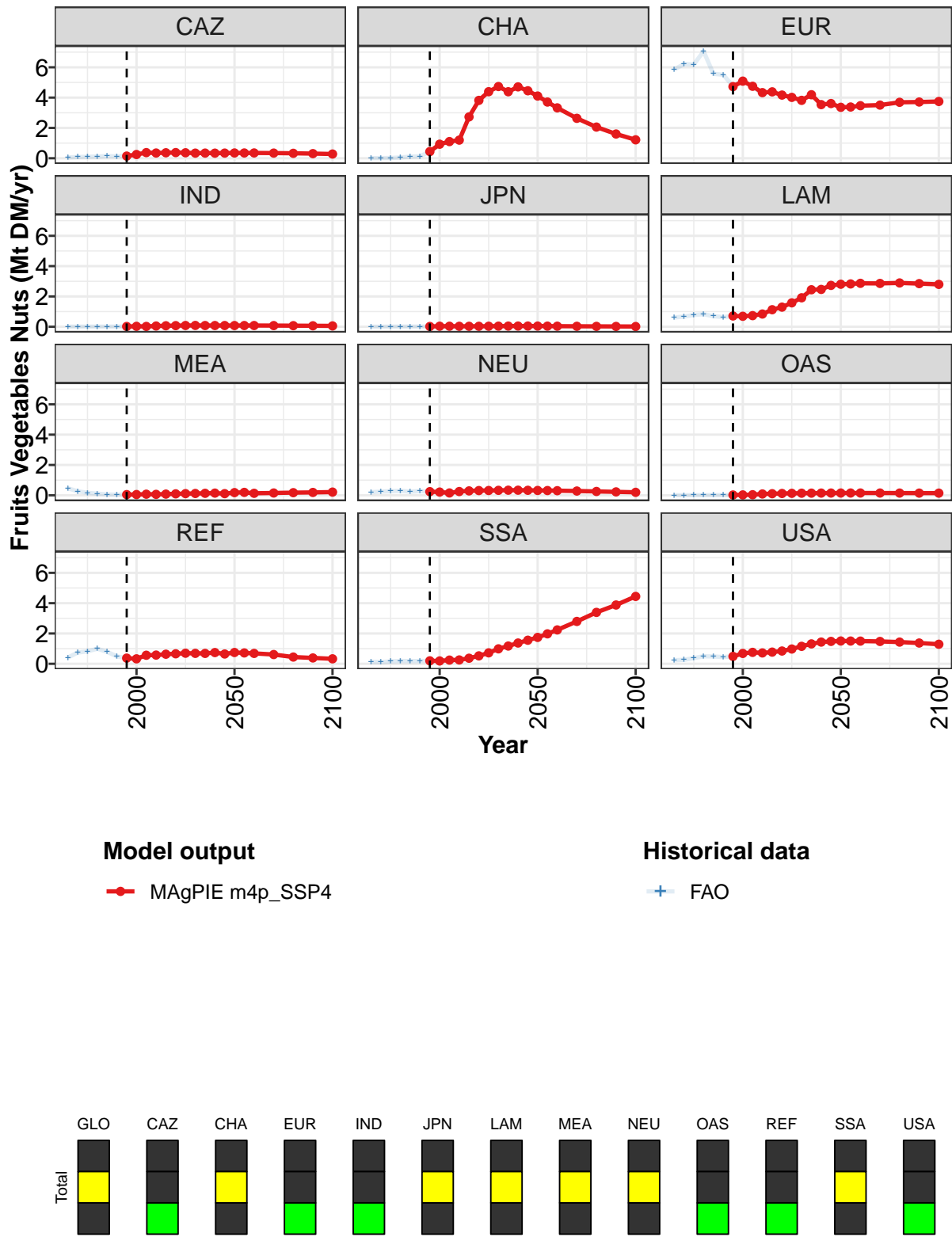


Figure 204: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.4	8.5	8.8	8.7	10.9	12.3	13.4	14.3	15.3	15.4	15.5
CAZ	0.1	0.2	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3
CHA	0.4	0.9	1.1	1.2	2.7	3.8	4.4	4.7	4.4	4.7	4.5
EUR	4.7	5.1	4.7	4.3	4.4	4.2	4.0	3.8	4.2	3.5	3.6
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	0.0	0.0
LAM	0.7	0.7	0.7	0.8	1.1	1.3	1.6	1.9	2.4	2.5	2.7
MEA	0.0	0.0	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	0.3	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	0.1	0.1	0.1
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	0.7	1.0	1.2	1.4	1.6
USA	0.5	0.7	0.8	0.7	0.8	0.8	1.0	1.2	1.3	1.4	1.5

Table 611: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

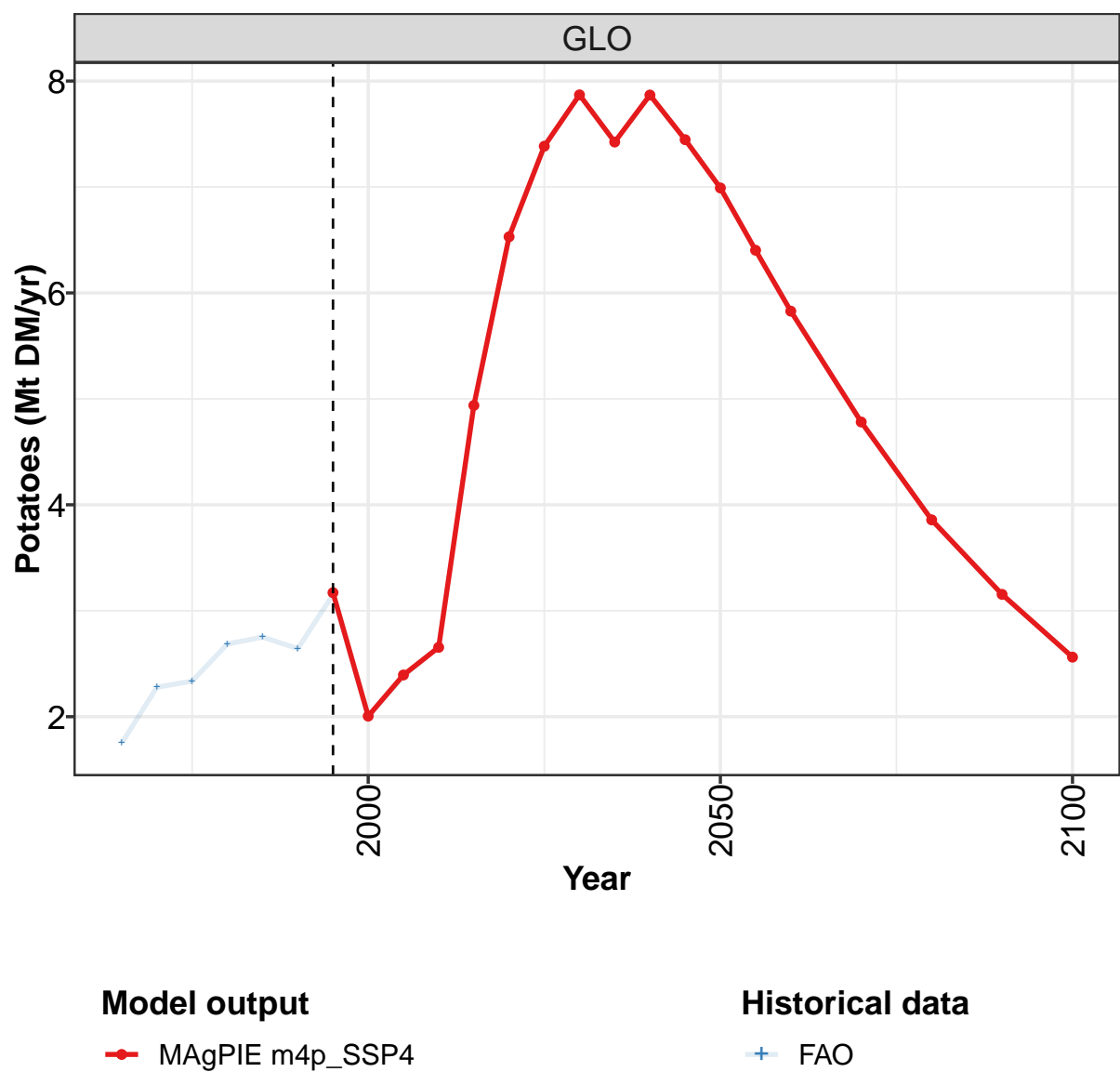
	2050	2055	2060	2070	2080	2090	2100
GLO	15.4	15.2	15.1	14.9	14.9	14.7	14.7
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	4.1	3.7	3.3	2.6	2.1	1.6	1.2
EUR	3.4	3.4	3.5	3.5	3.7	3.7	3.7
IND	0.1	0.1	0.1	0.1	0.1	0.1	0.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.8	2.8	2.9	2.9	2.9	2.8	2.8
MEA	0.2	0.2	0.1	0.2	0.2	0.2	0.2
NEU	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	0.7	0.7	0.7	0.6	0.4	0.4	0.3
SSA	1.7	2.0	2.2	2.8	3.4	3.9	4.4
USA	1.5	1.5	1.5	1.5	1.4	1.4	1.3

Table 612: MAgPIE m4p\_SSP4 — 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



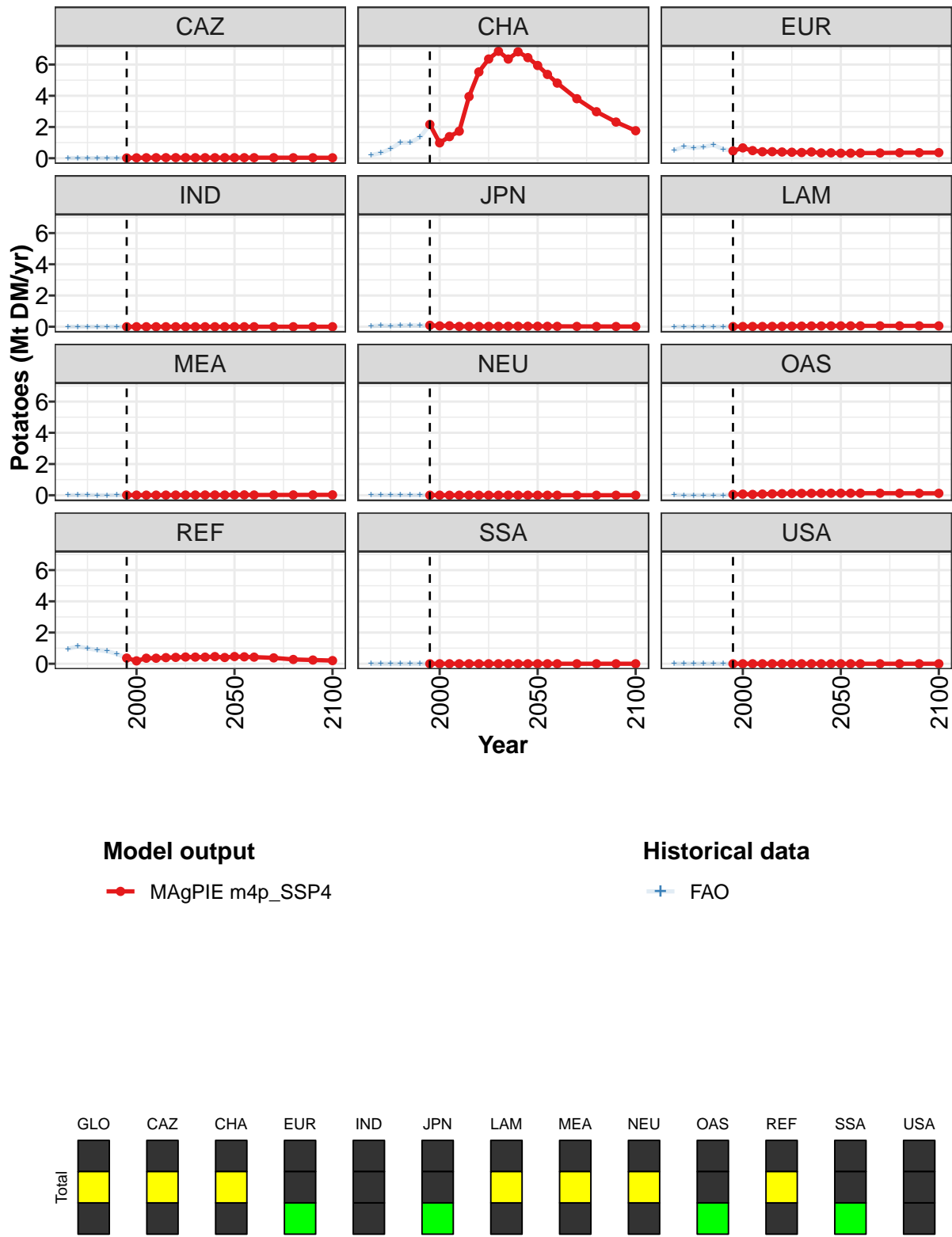


Figure 205: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.17	2.01	2.39	2.65	4.94	6.53	7.38	7.87	7.42	7.87	7.45
CAZ	0.02	0.02	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03
CHA	2.16	0.98	1.38	1.73	3.95	5.53	6.36	6.85	6.35	6.82	6.44
EUR	0.46	0.66	0.49	0.41	0.42	0.40	0.38	0.36	0.40	0.34	0.34
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	0.02	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	0.05	0.07	0.05	0.08	0.09	0.10	0.11	0.12	0.12	0.13	0.13
REF	0.36	0.19	0.36	0.36	0.39	0.41	0.43	0.43	0.42	0.46	0.40
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\_SSP4 — Demand—Processing—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

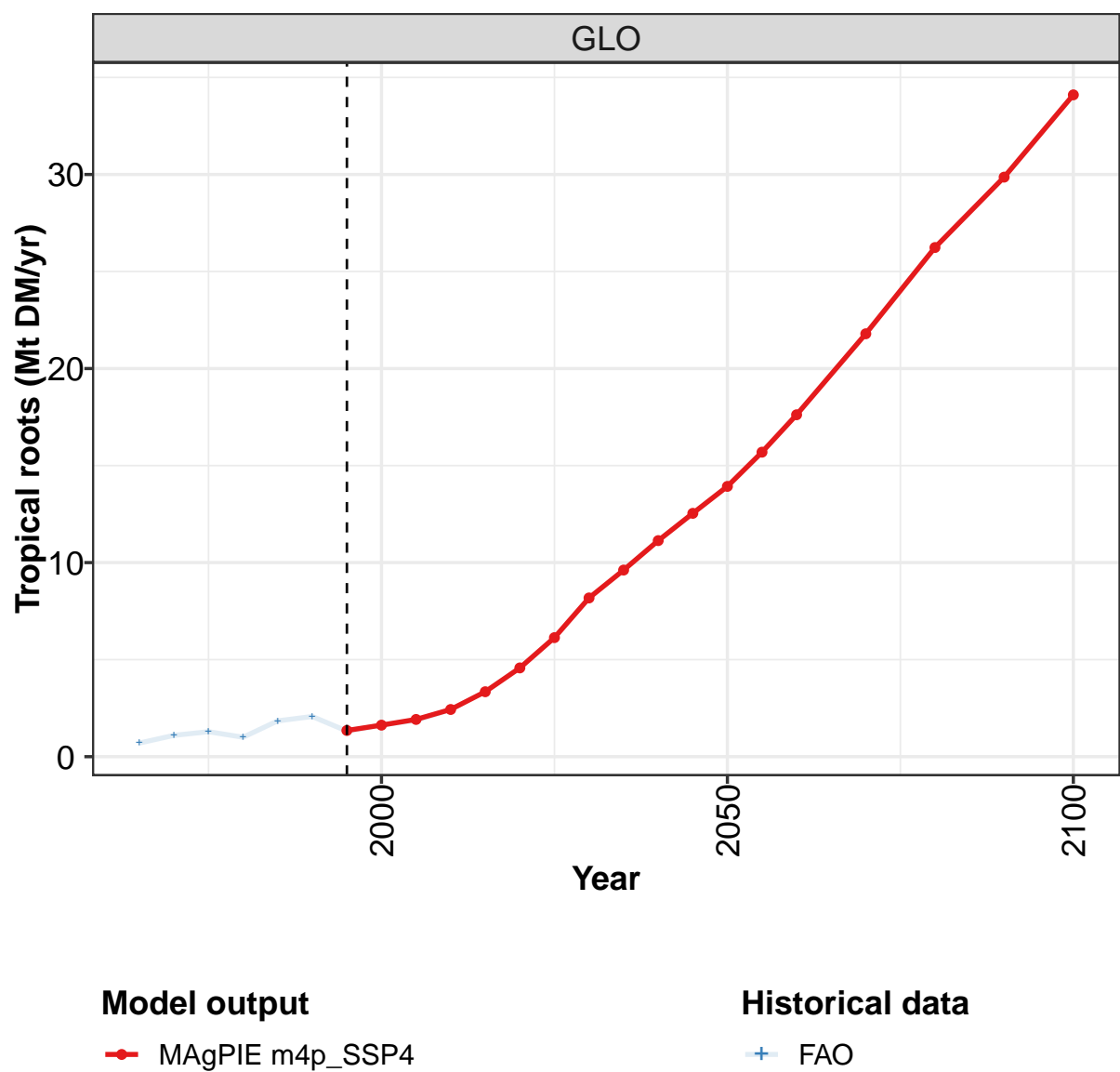
	2050	2055	2060	2070	2080	2090	2100
GLO	6.99	6.40	5.83	4.78	3.86	3.15	2.56
CAZ	0.03	0.03	0.03	0.03	0.03	0.03	0.03
CHA	5.94	5.37	4.81	3.81	2.98	2.32	1.76
EUR	0.32	0.32	0.33	0.33	0.35	0.35	0.36
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.03	0.03	0.02	0.02	0.02	0.01	0.01
LAM	0.05	0.05	0.06	0.06	0.06	0.06	0.05
MEA	0.02	0.02	0.02	0.02	0.02	0.02	0.02
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.13	0.13	0.13	0.13	0.13	0.12	0.12
REF	0.46	0.44	0.42	0.38	0.28	0.24	0.20
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\_SSP4 — 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





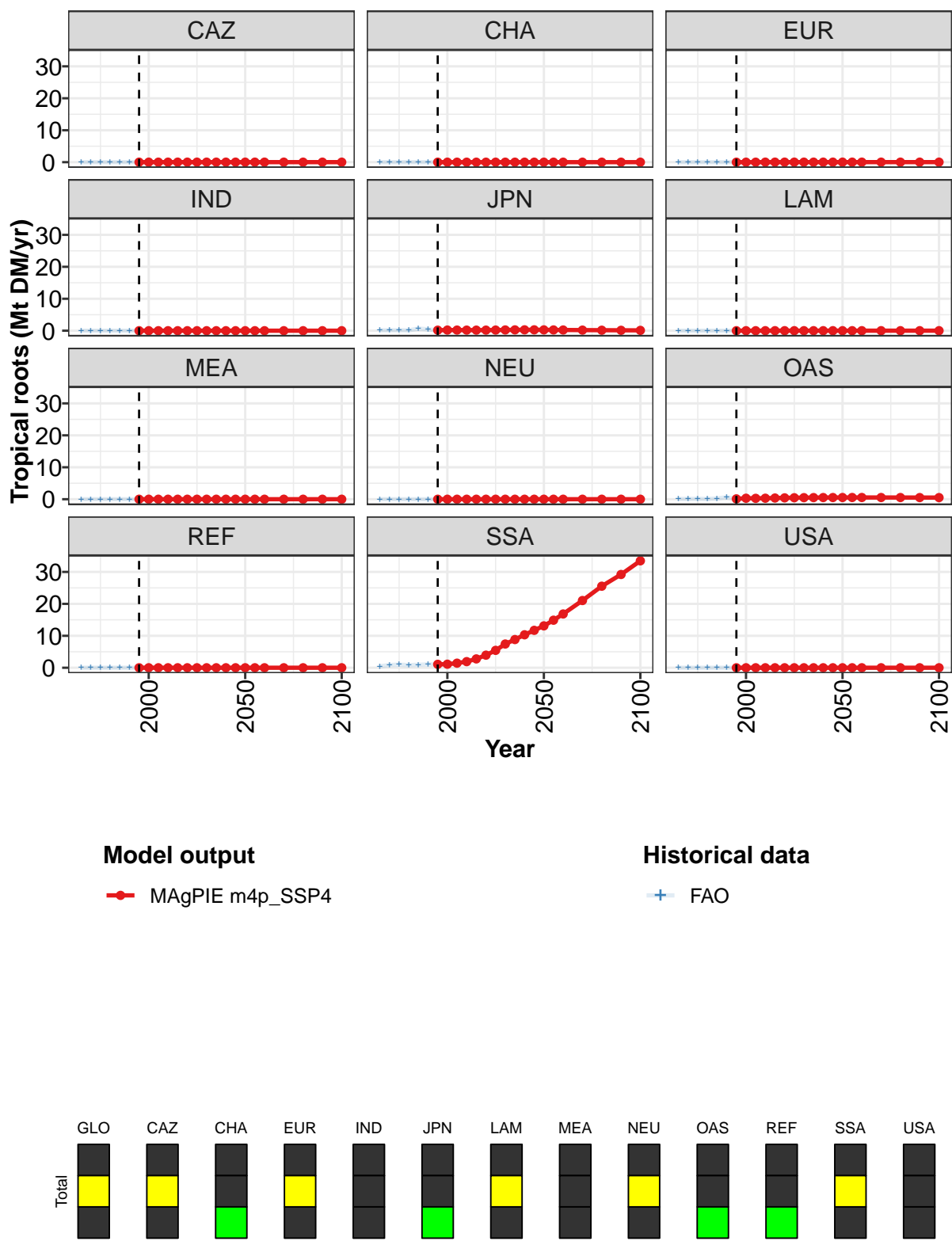


Figure 206: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.4	1.6	1.9	2.4	3.3	4.6	6.1	8.2	9.6	11.1	12.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	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	0.5	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	0.0
SSA	1.1	1.1	1.4	1.9	2.8	3.9	5.4	7.4	8.8	10.3	11.7
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 617: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Other crops—Tropical roots (Mt DM/yr)  
[PART 1/2]

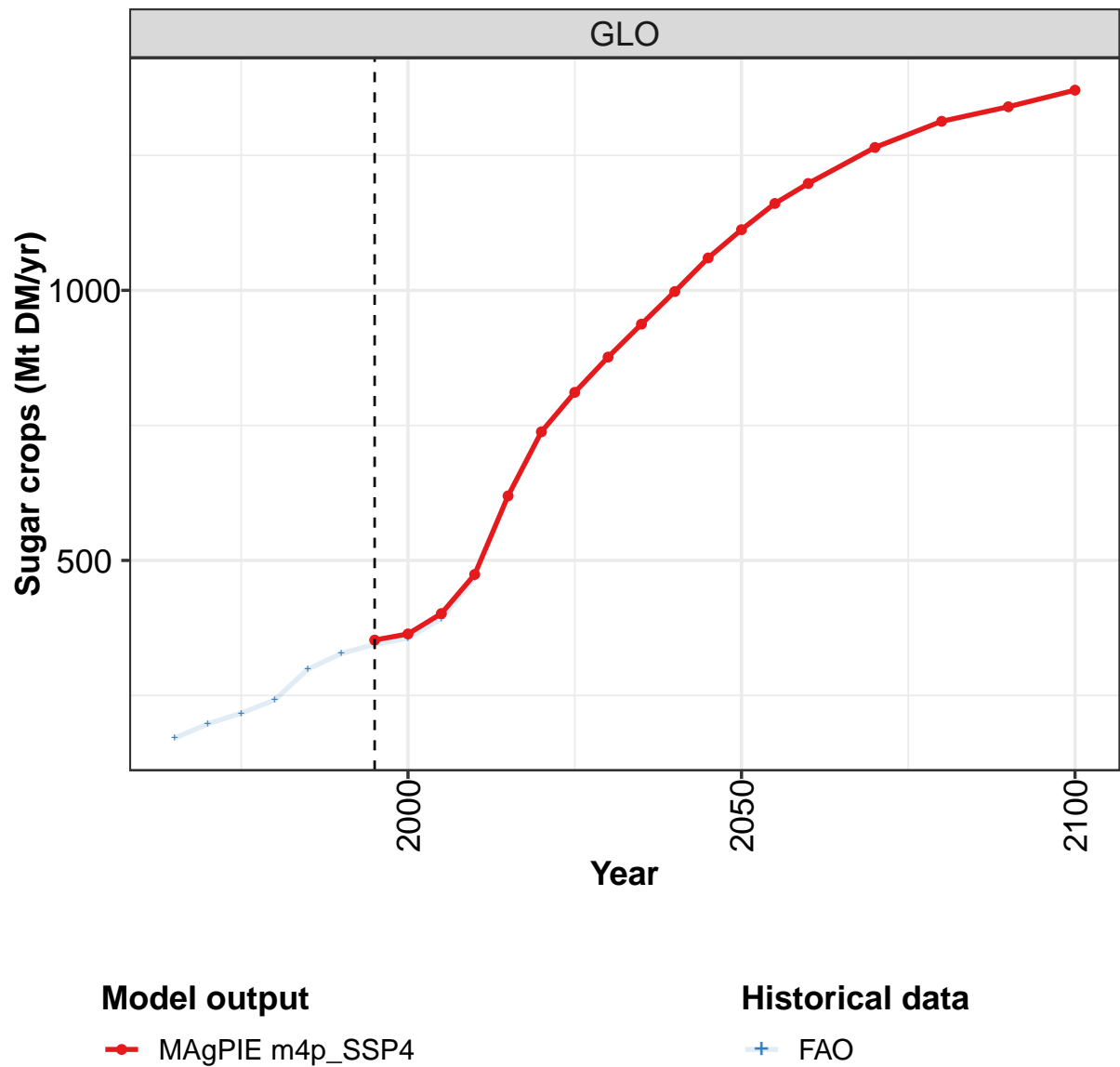
	2050	2055	2060	2070	2080	2090	2100
GLO	13.9	15.7	17.6	21.8	26.2	29.9	34.1
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.3	0.2	0.2	0.2	0.1	0.1	0.1
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	0.5	0.5	0.5	0.5	0.5	0.5	0.5
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	13.1	14.9	16.8	21.0	25.5	29.2	33.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 618: MAgPIE m4p\_SSP4 — 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



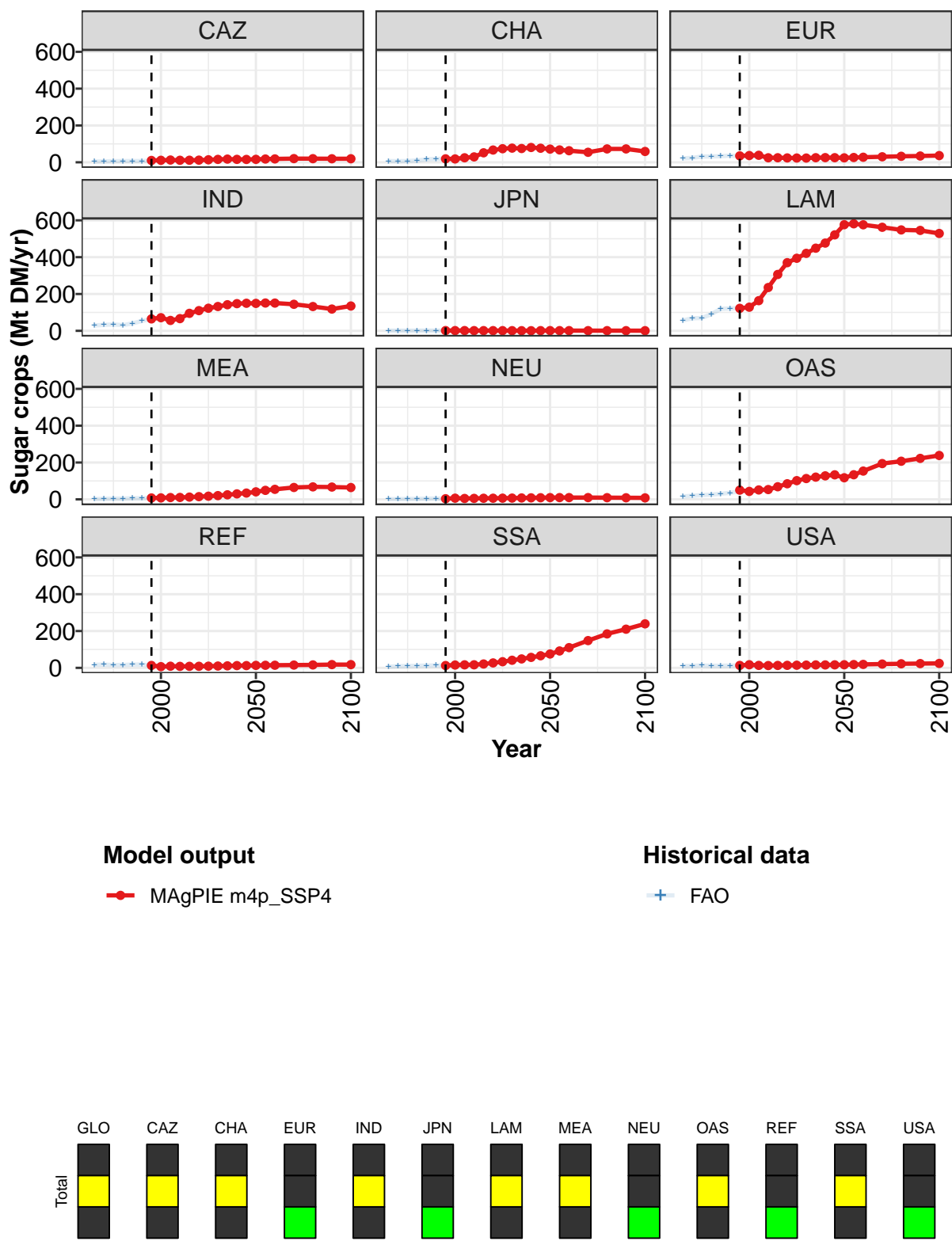


Figure 207: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	353	364	402	474	619	738	811	876	938	998	1060
CAZ	10	11	12	11	11	12	14	16	17	16	16
CHA	19	18	25	29	52	67	74	77	75	80	76
EUR	35	37	38	25	25	24	23	23	25	25	25
IND	65	71	56	66	95	110	123	132	142	148	150
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	122	128	164	235	306	370	394	421	449	477	521
MEA	8	8	10	10	12	15	17	20	25	30	34
NEU	3	6	5	5	6	6	6	7	8	8	9
OAS	50	43	51	53	69	85	102	113	121	128	133
REF	13	7	9	8	8	9	9	10	11	12	12
SSA	13	16	17	17	21	27	33	41	49	57	66
USA	13	17	13	13	13	14	14	15	16	16	17

Table 620: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

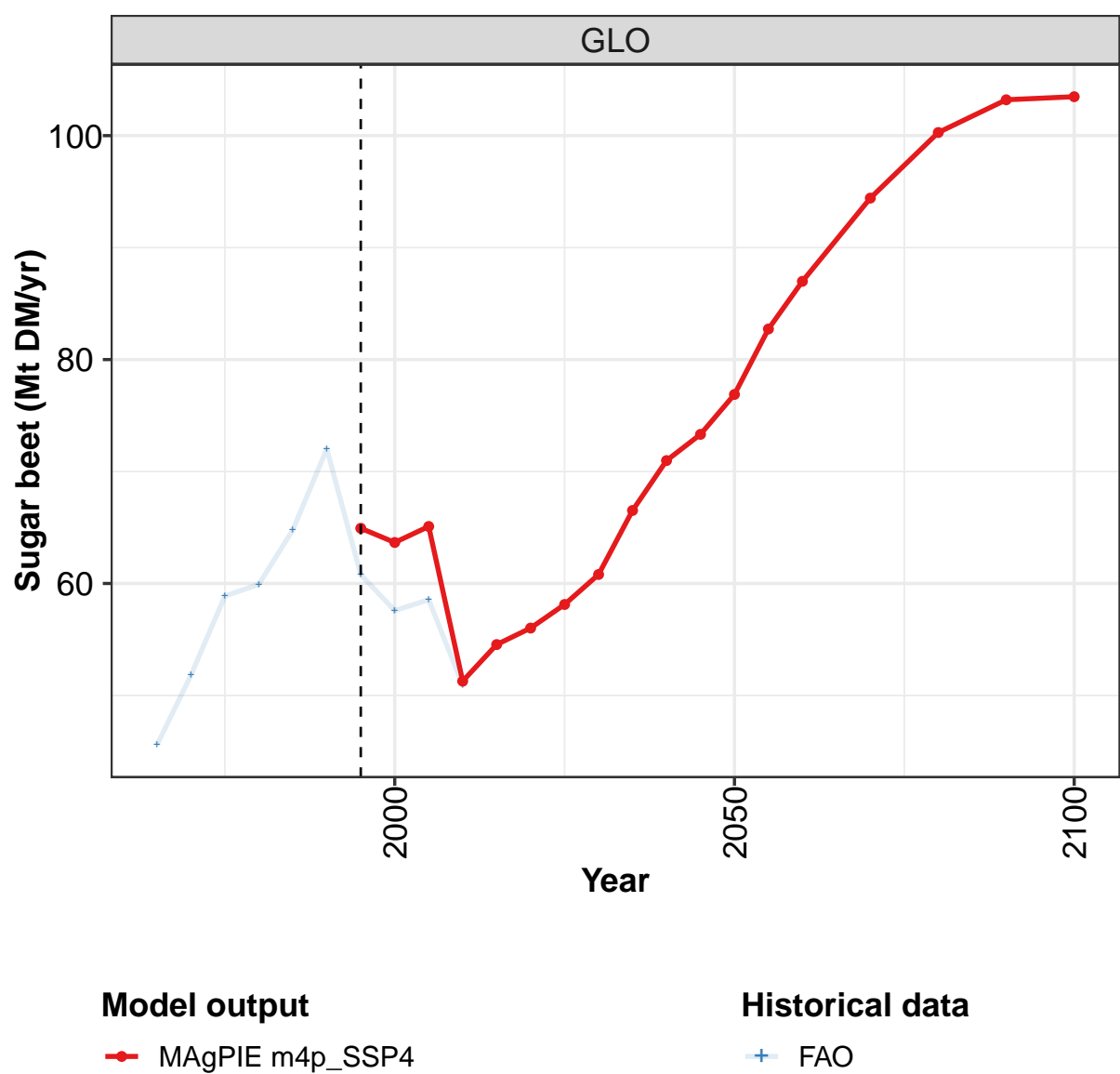
	2050	2055	2060	2070	2080	2090	2100
GLO	1112	1161	1198	1265	1313	1340	1371
CAZ	16	18	18	20	20	19	19
CHA	72	67	63	54	73	73	59
EUR	24	26	28	30	33	34	37
IND	149	151	151	144	132	118	135
JPN	1	1	1	1	1	1	1
LAM	576	581	576	562	548	545	529
MEA	41	49	54	65	68	67	64
NEU	9	10	10	10	9	9	8
OAS	117	134	154	194	207	222	238
REF	13	14	14	15	16	18	18
SSA	75	92	110	148	185	210	239
USA	17	18	19	21	22	23	24

Table 621: MAgPIE m4p\_SSP4 — 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



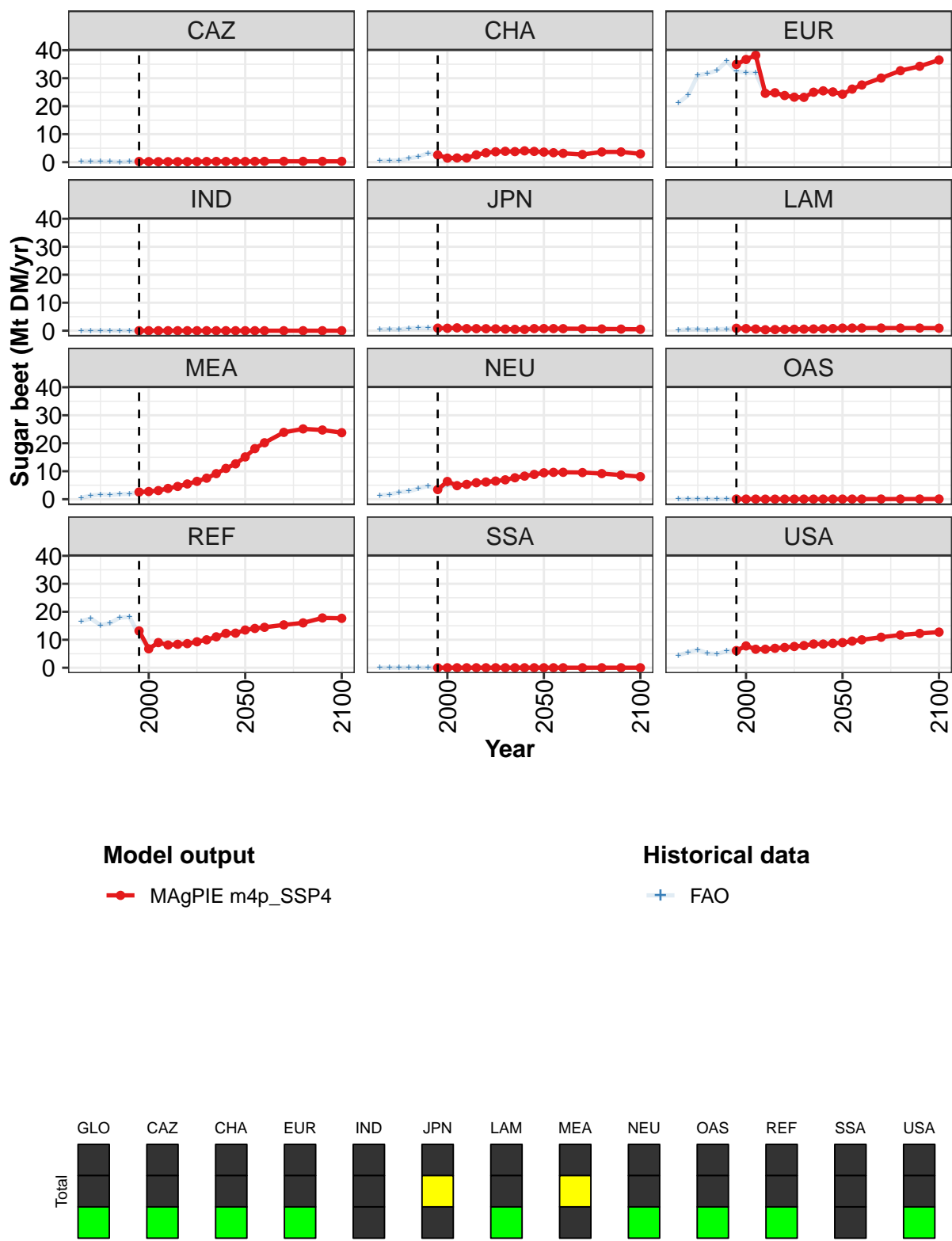


Figure 208: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	65	64	65	51	55	56	58	61	67	71	73
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	3	1	2	1	3	3	4	4	4	4	4
EUR	35	37	38	25	25	24	23	23	25	25	25
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	1	1	1	1	1	1	1	1	0	0	1
LAM	1	1	1	0	0	0	1	1	1	1	1
MEA	3	3	3	4	5	5	6	8	9	11	13
NEU	3	6	5	5	6	6	6	7	8	8	9
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	13	7	9	8	8	9	9	10	11	12	12
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	6	8	7	7	7	7	8	8	8	8	9

Table 623: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	77	83	87	94	100	103	103
CAZ	0	0	0	0	0	0	0
CHA	4	3	3	3	4	4	3
EUR	24	26	28	30	33	34	37
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	15	18	20	24	25	25	24
NEU	9	10	10	10	9	9	8
OAS	0	0	0	0	0	0	0
REF	13	14	14	15	16	18	18
SSA	0	0	0	0	0	0	0
USA	9	10	10	11	12	12	13

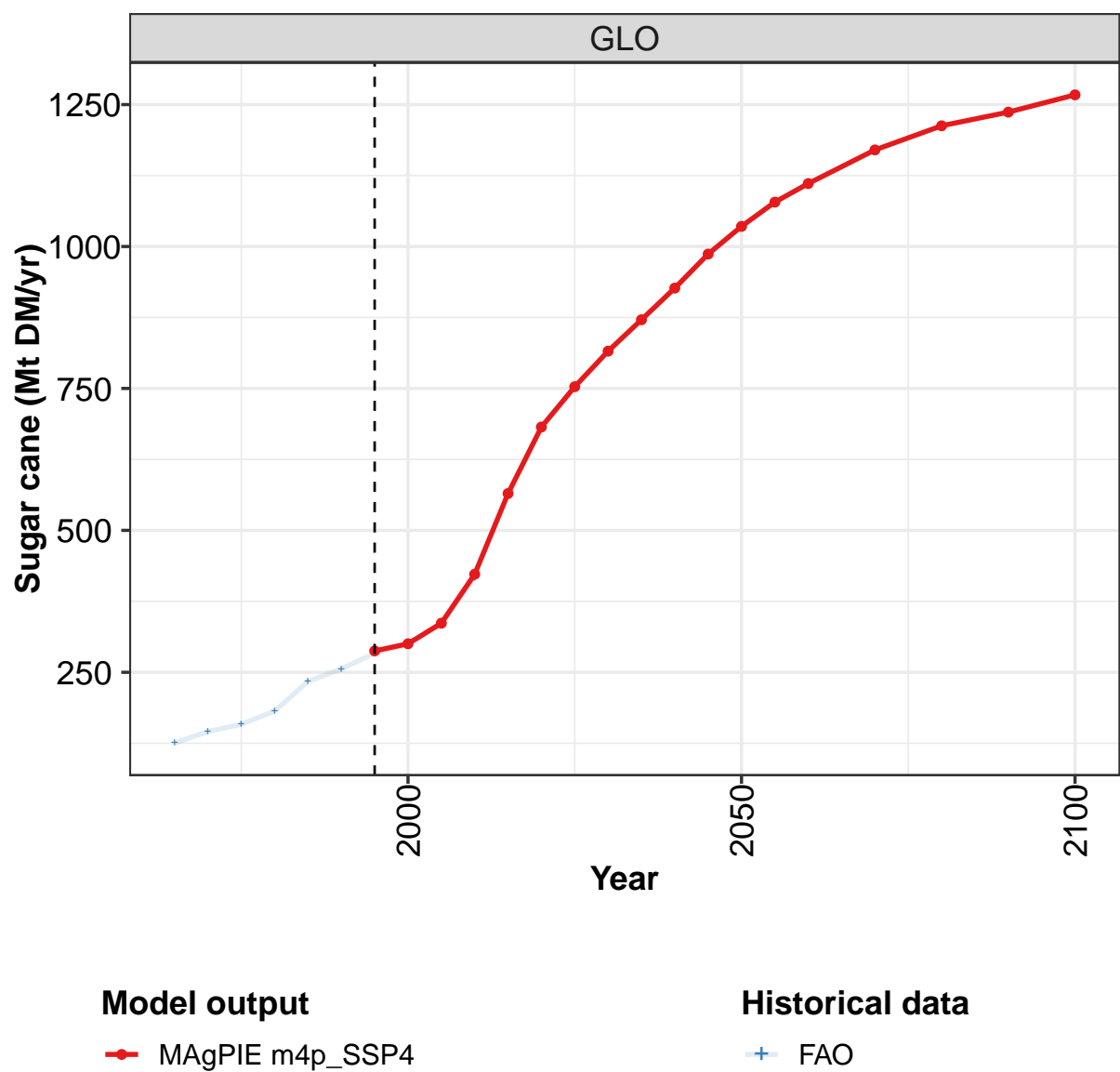
Table 624: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	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



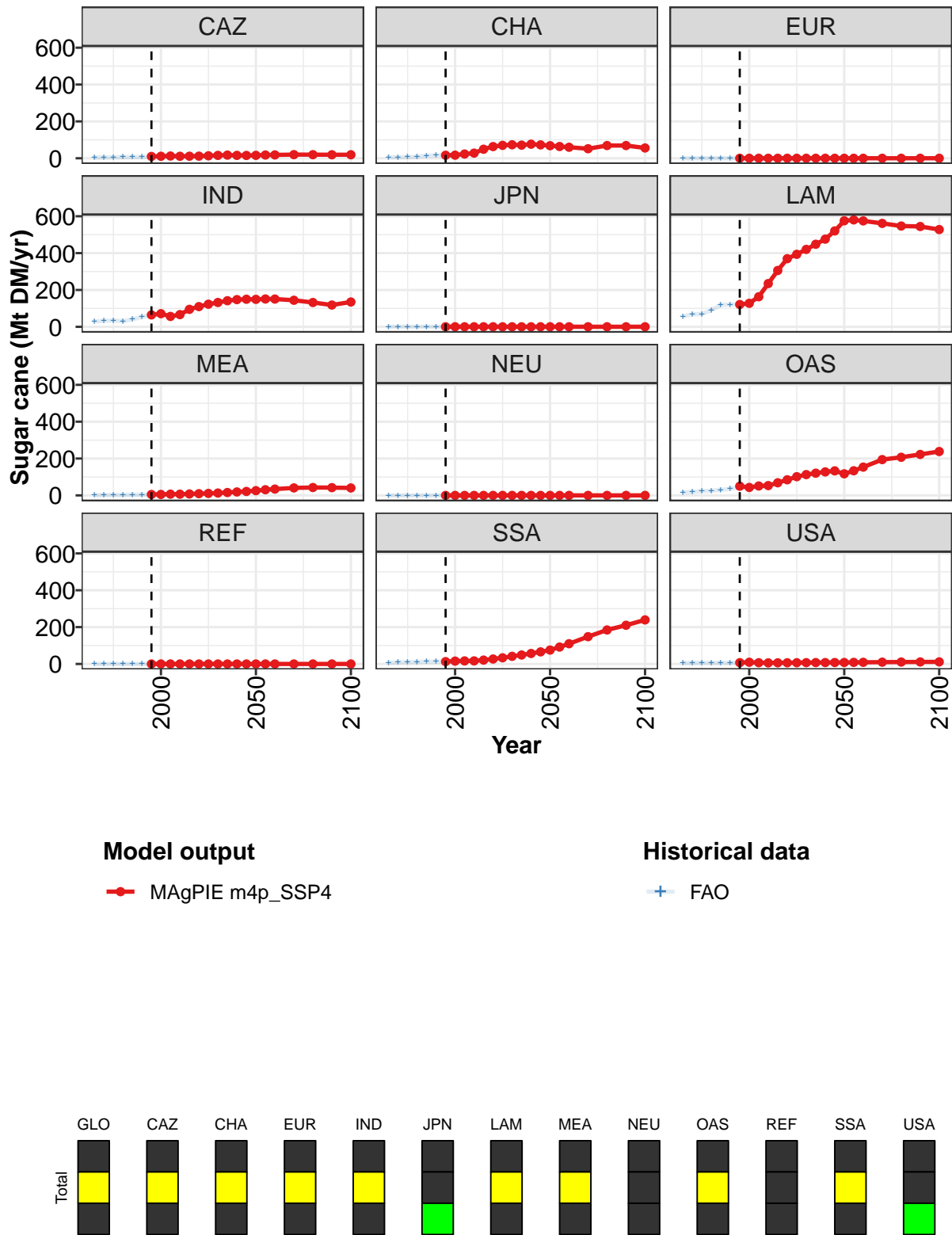


Figure 209: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	288	300	337	423	565	682	753	816	871	927	987
CAZ	10	11	12	11	11	12	13	16	17	16	15
CHA	16	17	23	28	49	63	70	73	71	76	73
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	65	71	56	66	95	110	123	132	142	148	150
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	121	128	163	235	306	370	394	420	448	476	520
MEA	5	5	7	7	8	9	11	13	16	19	21
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	50	43	51	53	68	85	102	113	121	128	133
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	13	16	17	17	21	27	33	41	49	57	66
USA	7	9	7	6	6	6	7	7	8	8	8

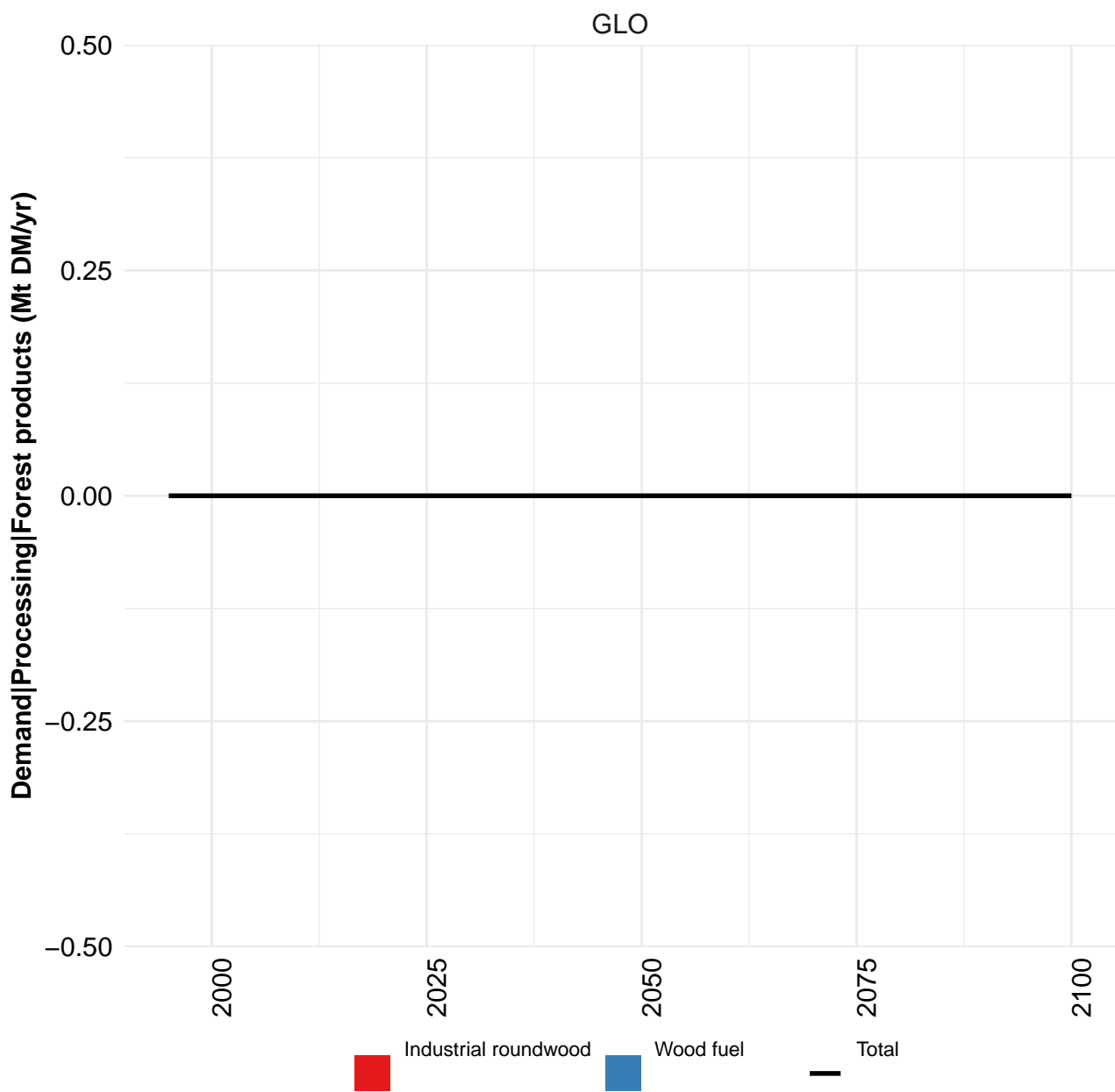
Table 626: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

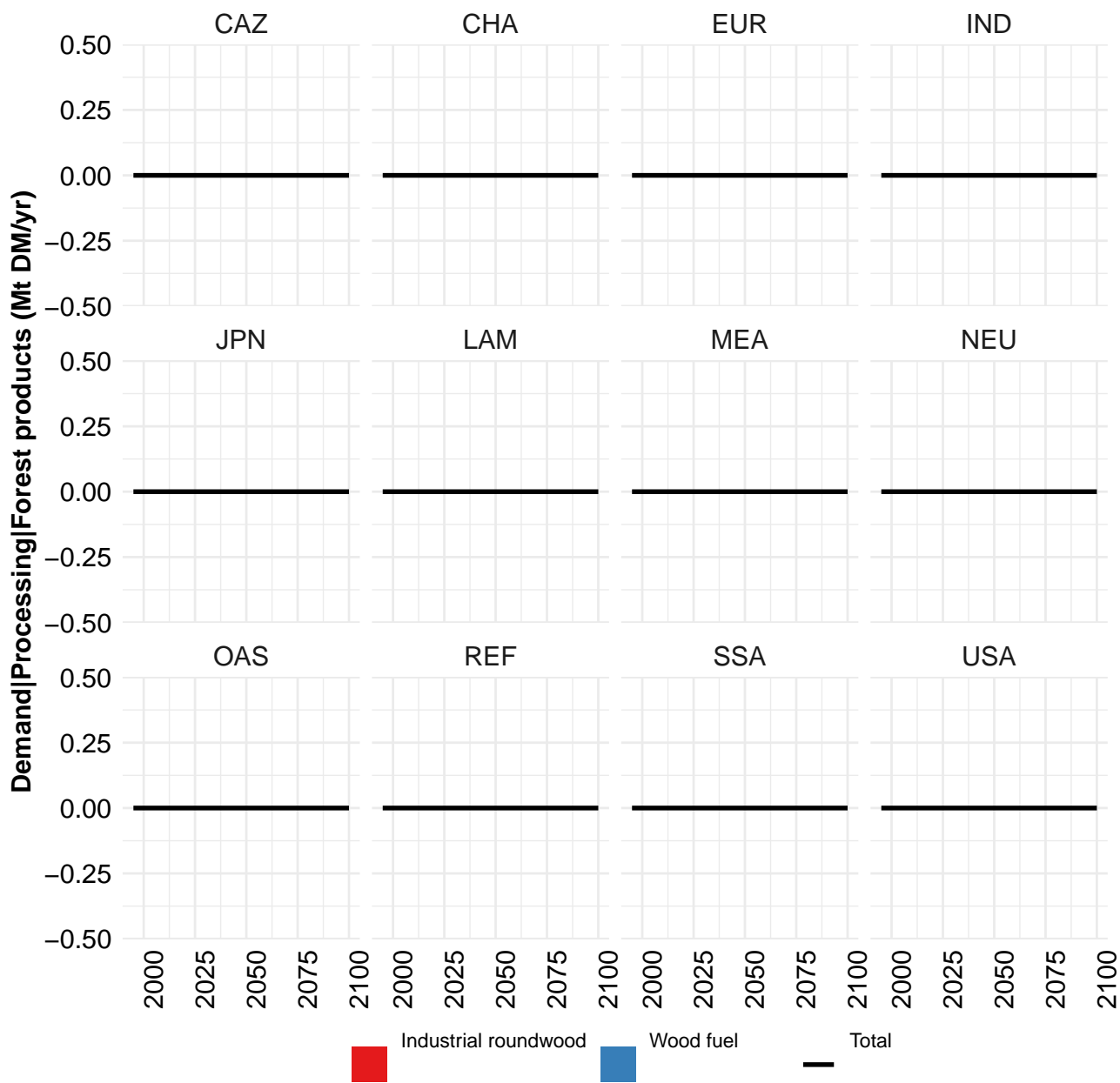
	2050	2055	2060	2070	2080	2090	2100
GLO	1035	1078	1111	1170	1213	1237	1267
CAZ	16	18	18	20	19	19	19
CHA	68	64	60	52	69	69	56
EUR	0	0	0	0	0	0	0
IND	149	151	151	144	132	118	135
JPN	0	0	0	0	0	0	0
LAM	576	580	575	561	547	544	528
MEA	26	31	34	41	43	42	40
NEU	0	0	0	0	0	0	0
OAS	117	134	154	194	207	222	238
REF	0	0	0	0	0	0	0
SSA	75	92	110	148	185	210	239
USA	8	9	9	10	10	11	11

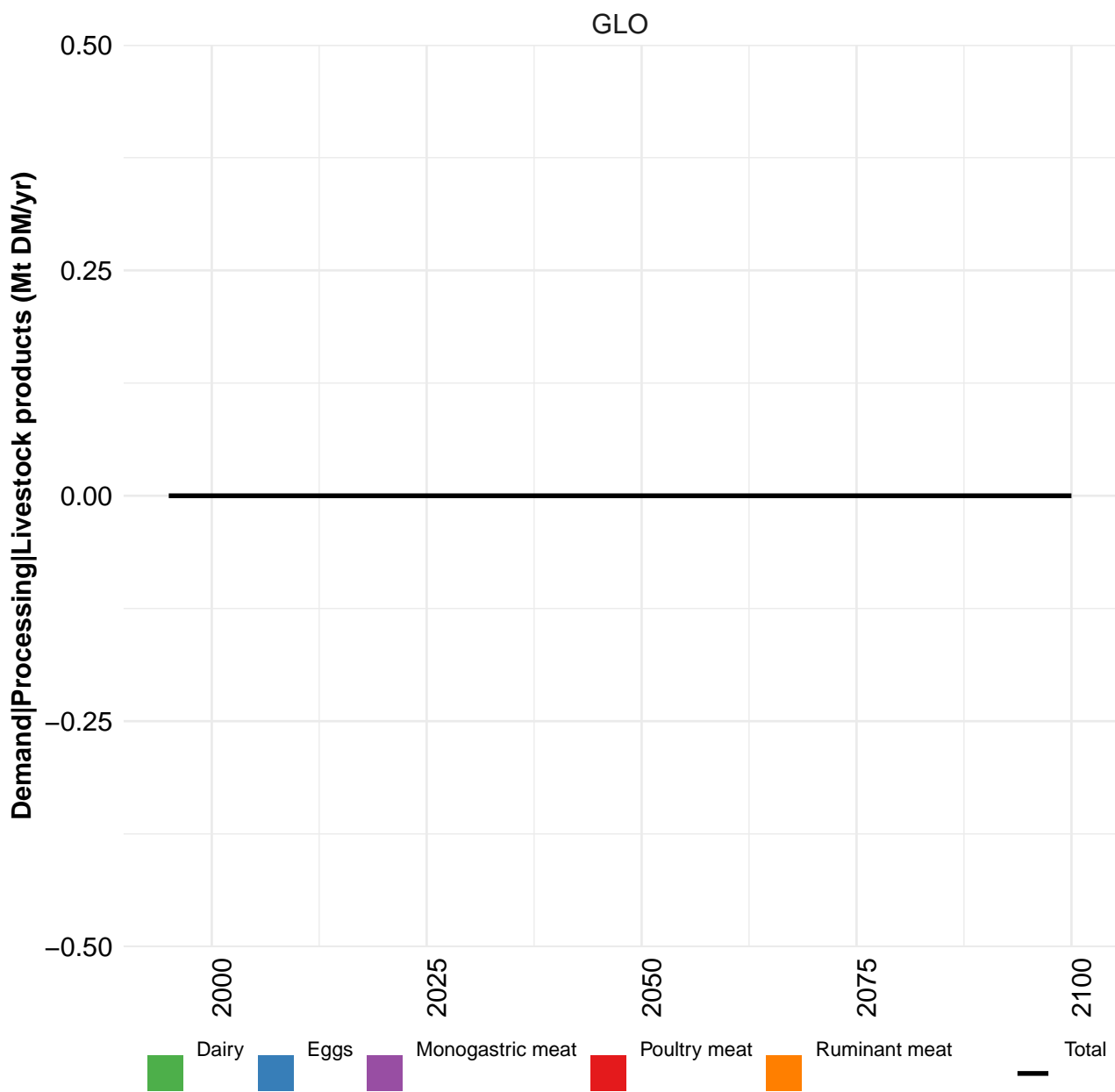
Table 627: MAgPIE m4p\_SSP4 — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

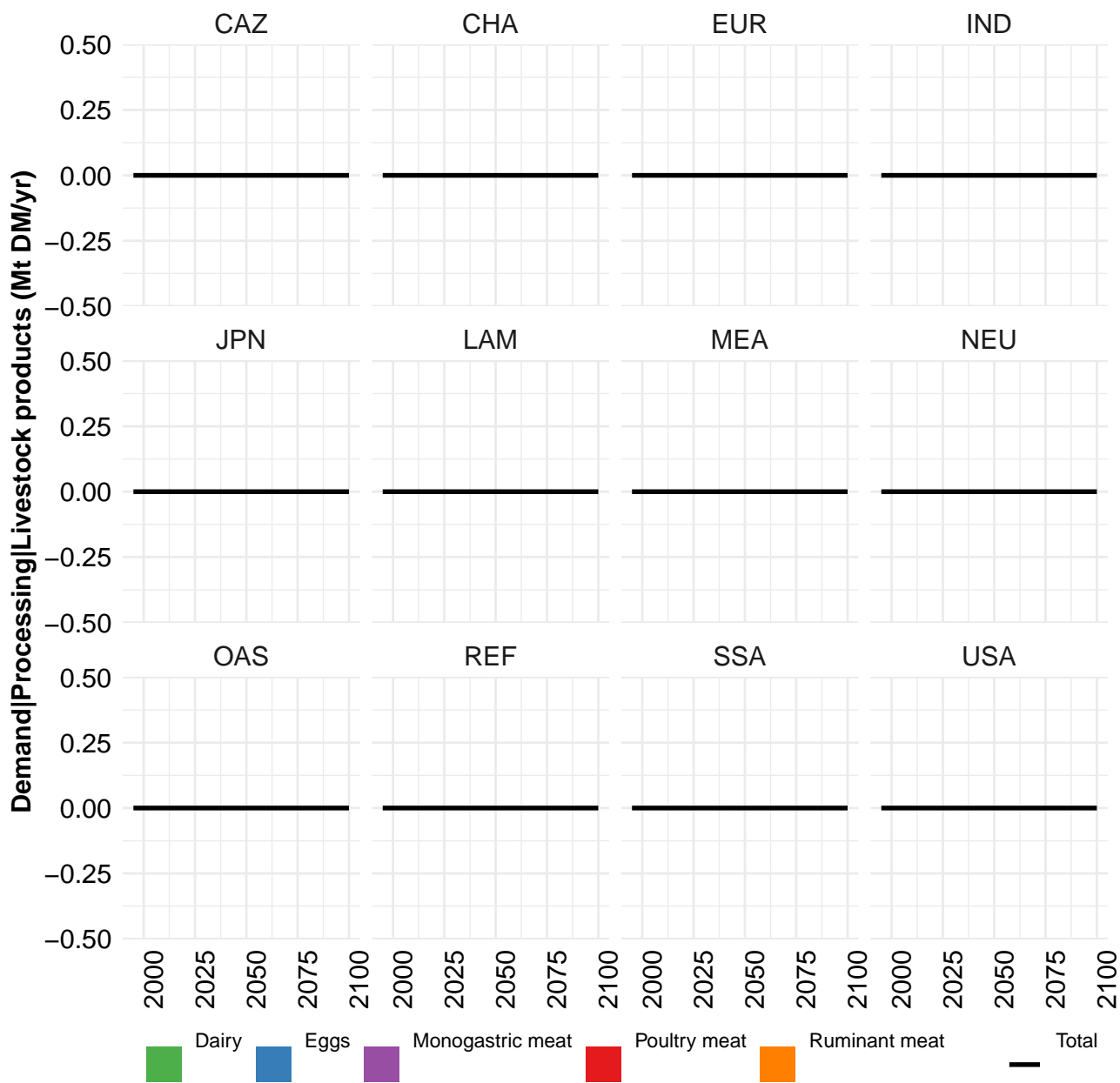
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	125	146	158	182	234	256	284	298	334	417
CAZ	4	5	6	6	7	7	9	10	10	8
CHA	6	5	6	8	14	15	16	17	23	28
EUR	0	0	0	0	0	0	0	0	0	0
IND	29	32	34	31	40	54	65	71	56	66
JPN	1	1	1	1	1	1	0	0	0	0
LAM	56	68	69	90	119	121	123	126	168	235
MEA	1	2	2	3	4	4	5	5	7	6
NEU	0	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

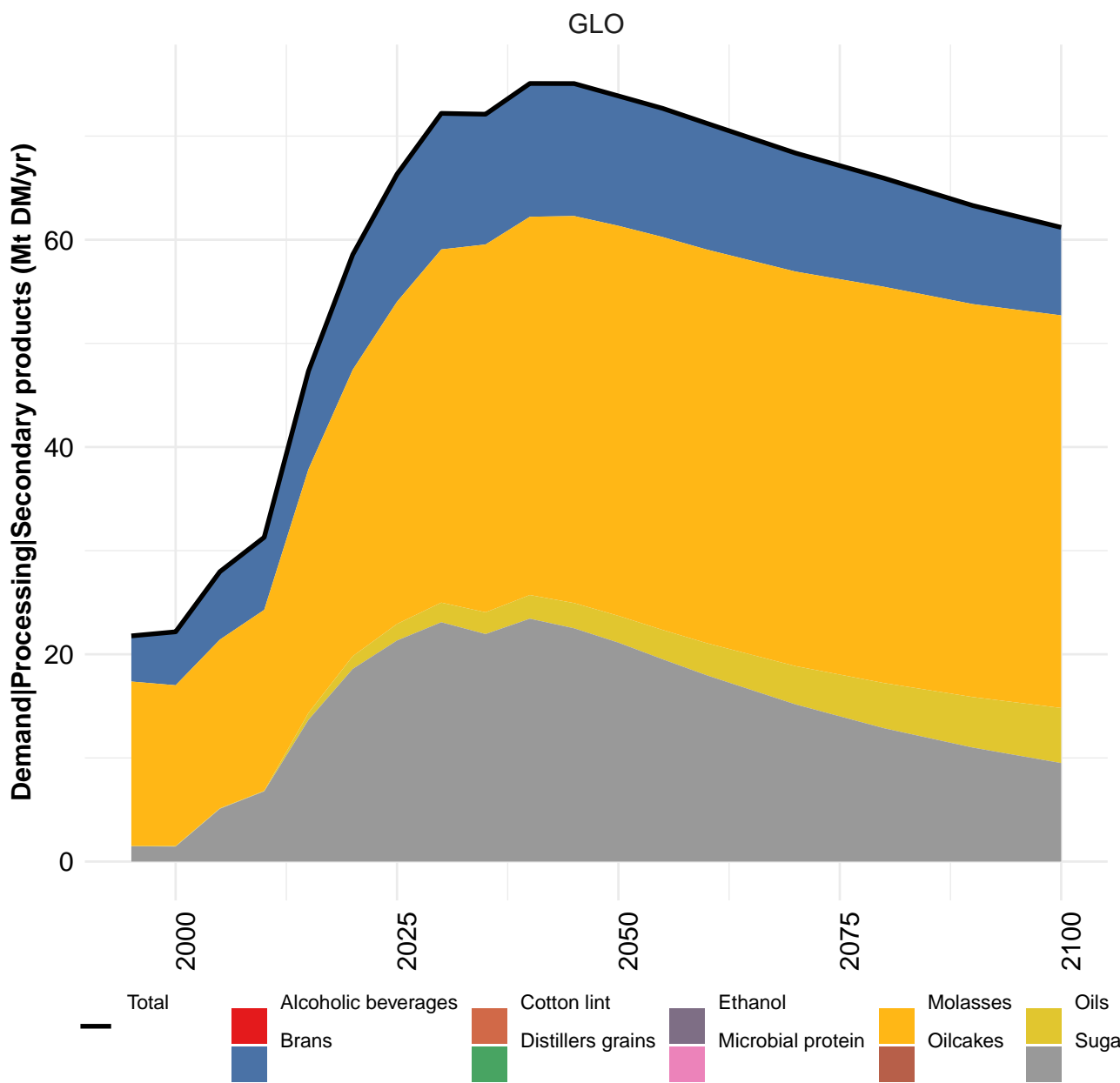
Table 628: FAO — Demand—Processing—Crops—Sugar crops—Sugar cane (Mt DM/yr)



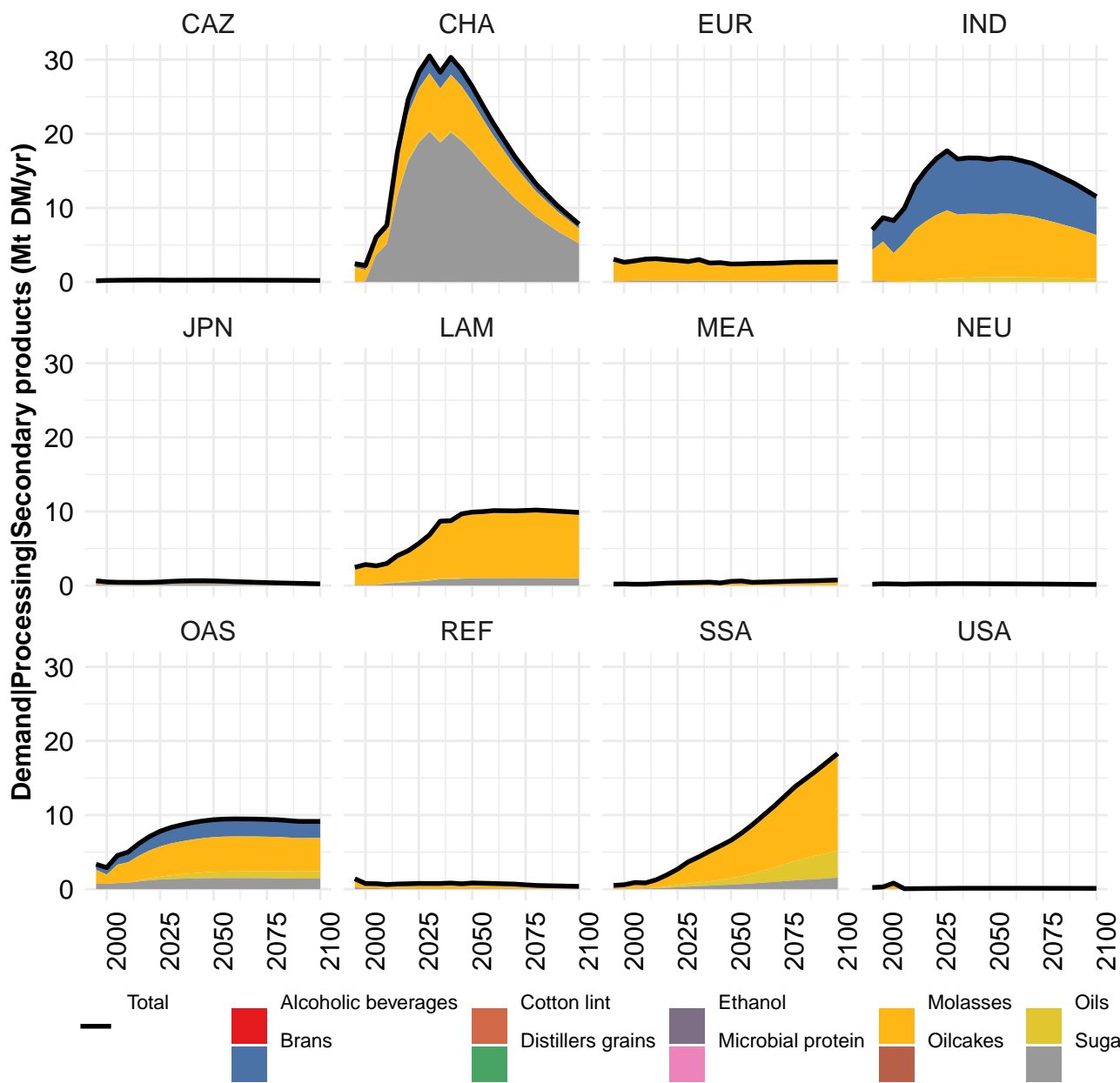




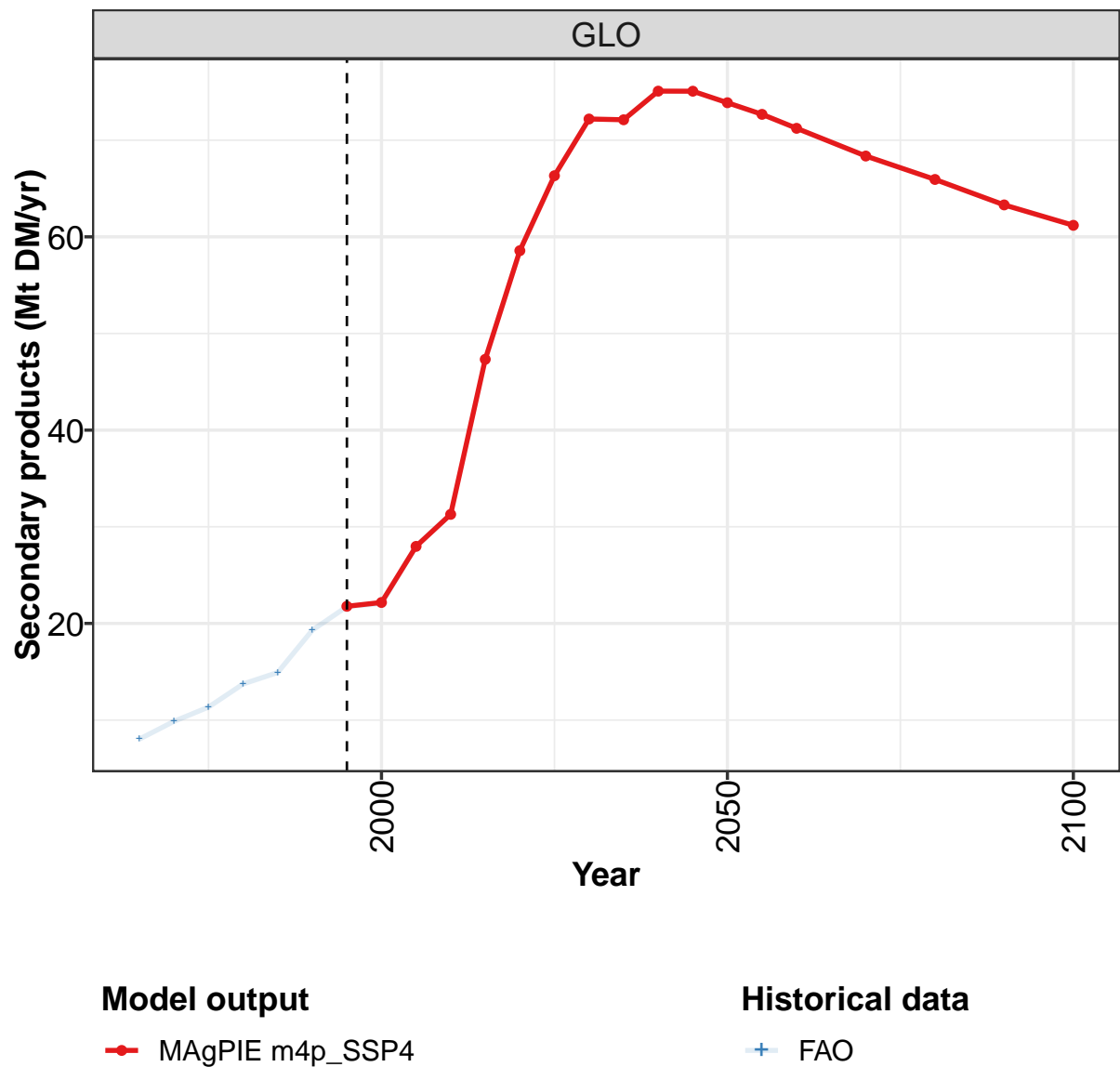








9.2 Secondary products



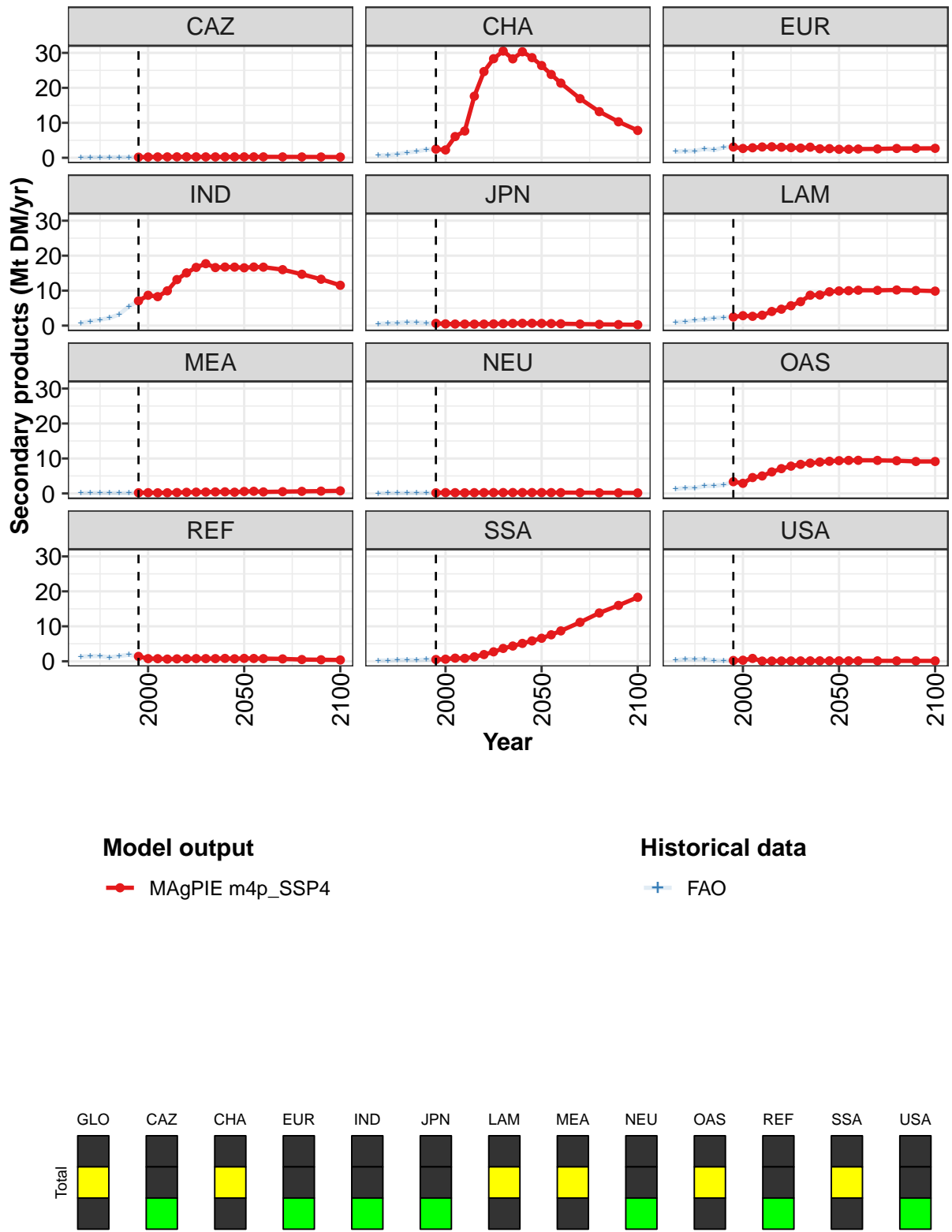


Figure 210: MAgPIE m4p\_SSP4 — Demand—Processing—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21.8	22.2	28.0	31.3	47.3	58.6	66.3	72.2	72.1	75.1	75.1
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	24.6	28.3	30.5	28.3	30.3	28.6
EUR	3.1	2.7	2.9	3.1	3.1	3.0	2.9	2.8	3.0	2.6	2.6
IND	7.1	8.7	8.3	9.9	13.2	15.1	16.6	17.7	16.6	16.8	16.7
JPN	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7
LAM	2.5	2.8	2.7	3.0	4.0	4.7	5.7	6.9	8.7	8.8	9.7
MEA	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.4
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
OAS	3.4	2.9	4.5	5.0	6.1	7.1	7.8	8.3	8.7	9.0	9.2
REF	1.4	0.8	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7
SSA	0.5	0.6	0.9	0.8	1.3	1.9	2.7	3.7	4.4	5.1	5.8
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\_SSP4 — Demand—Processing—Secondary products (Mt DM/yr) [PART 1/2]

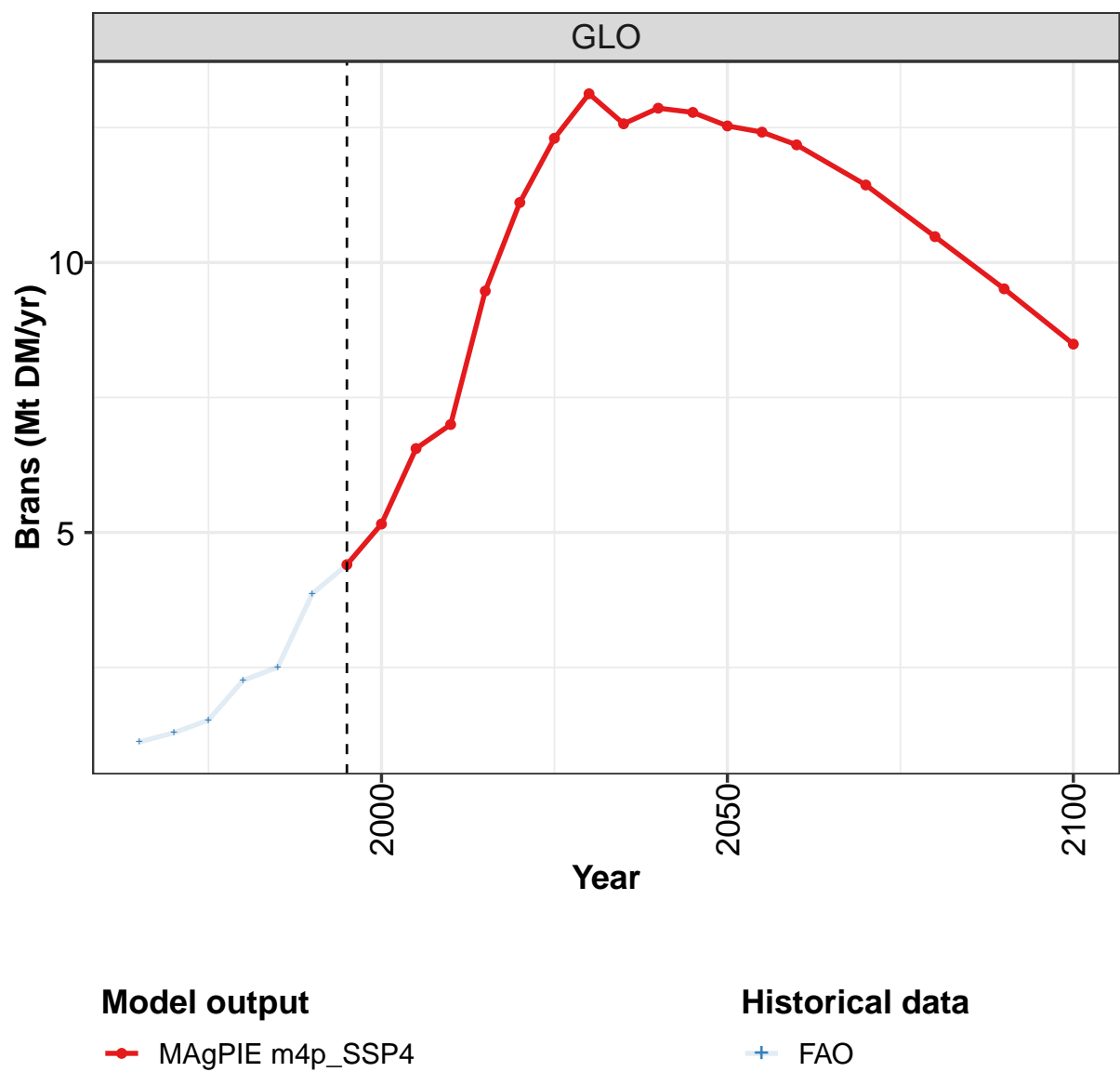
	2050	2055	2060	2070	2080	2090	2100
GLO	73.9	72.7	71.2	68.4	65.9	63.3	61.2
CAZ	0.3	0.3	0.3	0.3	0.2	0.2	0.2
CHA	26.4	23.8	21.4	16.9	13.2	10.3	7.8
EUR	2.4	2.4	2.5	2.5	2.7	2.7	2.7
IND	16.5	16.8	16.7	16.0	14.7	13.3	11.5
JPN	0.6	0.6	0.5	0.4	0.4	0.3	0.2
LAM	9.9	10.0	10.1	10.1	10.2	10.0	9.9
MEA	0.6	0.6	0.4	0.5	0.6	0.7	0.8
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	9.4	9.5	9.5	9.5	9.4	9.1	9.1
REF	0.8	0.8	0.8	0.7	0.5	0.4	0.4
SSA	6.6	7.6	8.7	11.1	13.8	16.0	18.3
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 630: MAgPIE m4p\_SSP4 — 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



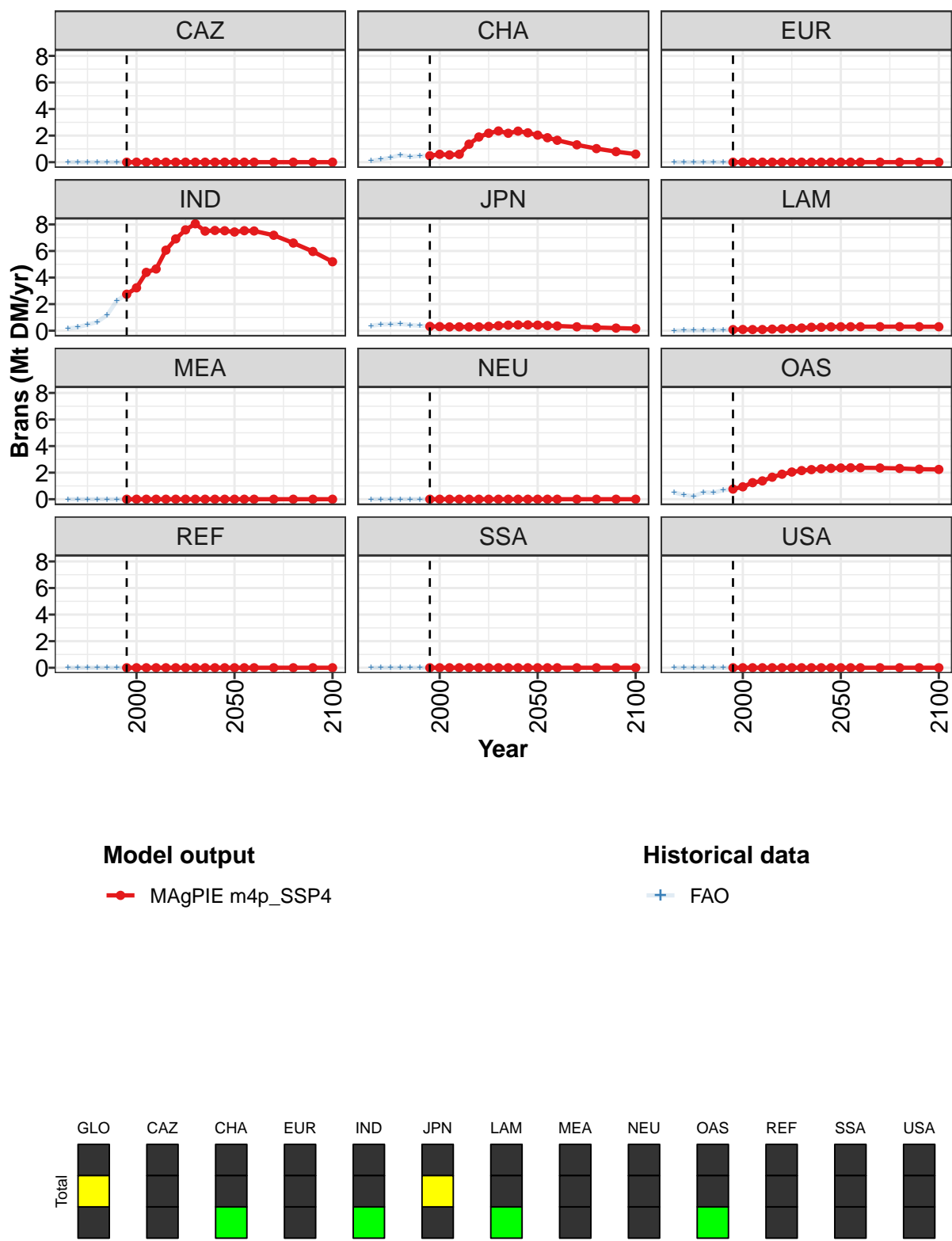


Figure 211: MAgPIE m4p\_SSP4 — Demand—Processing—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.4	5.2	6.6	7.0	9.5	11.1	12.3	13.1	12.6	12.9	12.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.5	0.6	0.5	0.6	1.4	1.9	2.2	2.3	2.2	2.3	2.2
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	6.1	6.9	7.6	8.0	7.5	7.5	7.5
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
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	2.0	2.2	2.2	2.3	2.3
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\_SSP4 — Demand—Processing—Secondary products—Brans (Mt DM/yr) [PART 1/2]

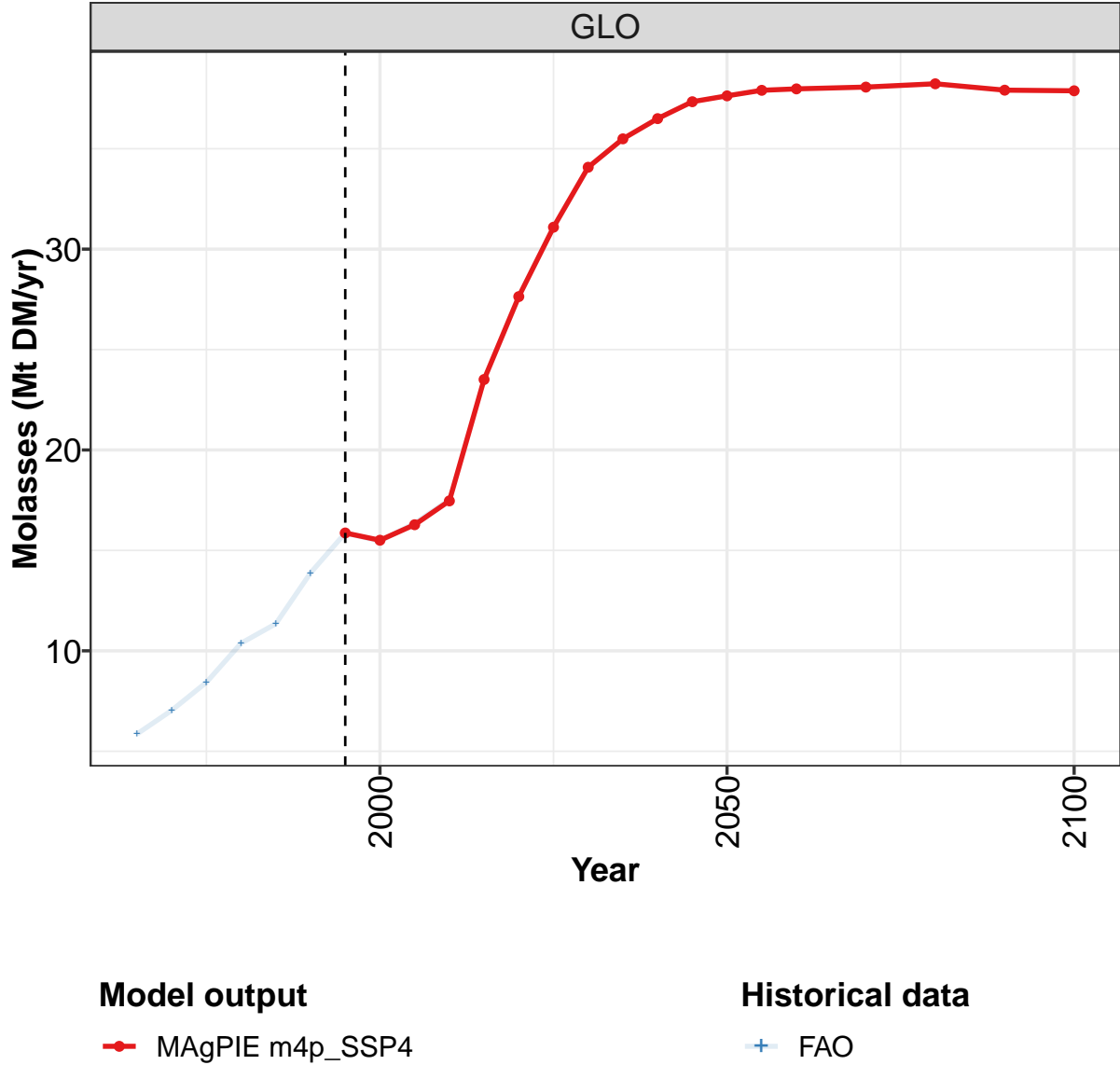
	2050	2055	2060	2070	2080	2090	2100
GLO	12.5	12.4	12.2	11.4	10.5	9.5	8.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.0	1.8	1.6	1.3	1.0	0.8	0.6
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	7.4	7.5	7.5	7.2	6.6	6.0	5.2
JPN	0.4	0.4	0.4	0.3	0.2	0.2	0.2
LAM	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.4	2.4	2.4	2.4	2.3	2.3	2.2
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 633: MAgPIE m4p\_SSP4 — 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





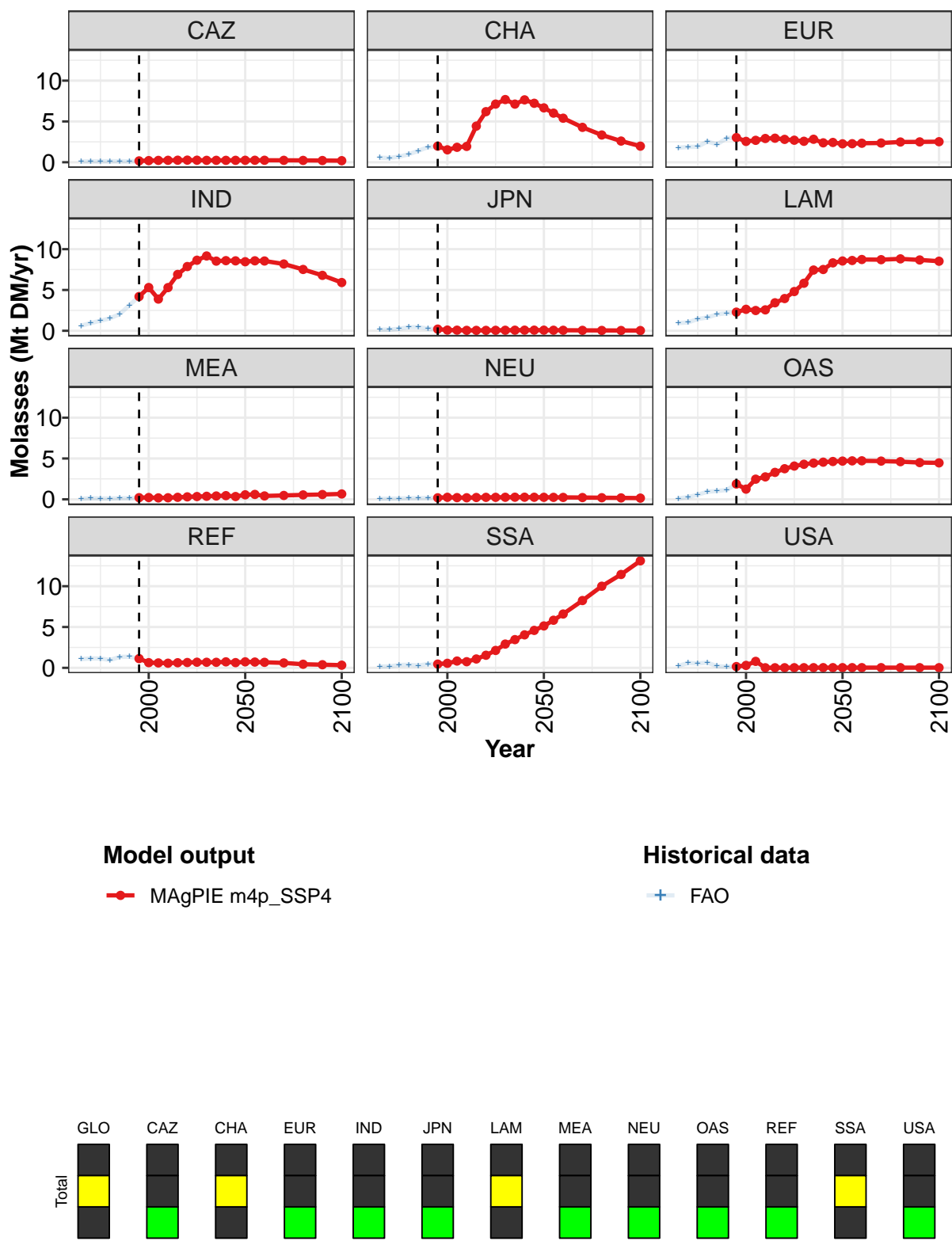


Figure 212: MAgPIE m4p\_SSP4 — Demand—Processing—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.9	15.5	16.3	17.5	23.5	27.6	31.1	34.1	35.5	36.5	37.3
CAZ	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2
CHA	2.0	1.5	1.8	1.9	4.4	6.2	7.1	7.7	7.1	7.6	7.2
EUR	3.0	2.6	2.7	2.9	2.9	2.8	2.7	2.6	2.8	2.4	2.4
IND	4.2	5.3	3.9	5.3	6.9	7.9	8.6	9.2	8.5	8.6	8.6
JPN	0.2	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	2.5	2.6	3.4	4.0	4.8	5.8	7.4	7.5	8.3
MEA	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3
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	3.7	4.1	4.3	4.4	4.6	4.6
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	2.1	2.9	3.5	4.0	4.6
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\_SSP4 — Demand—Processing—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

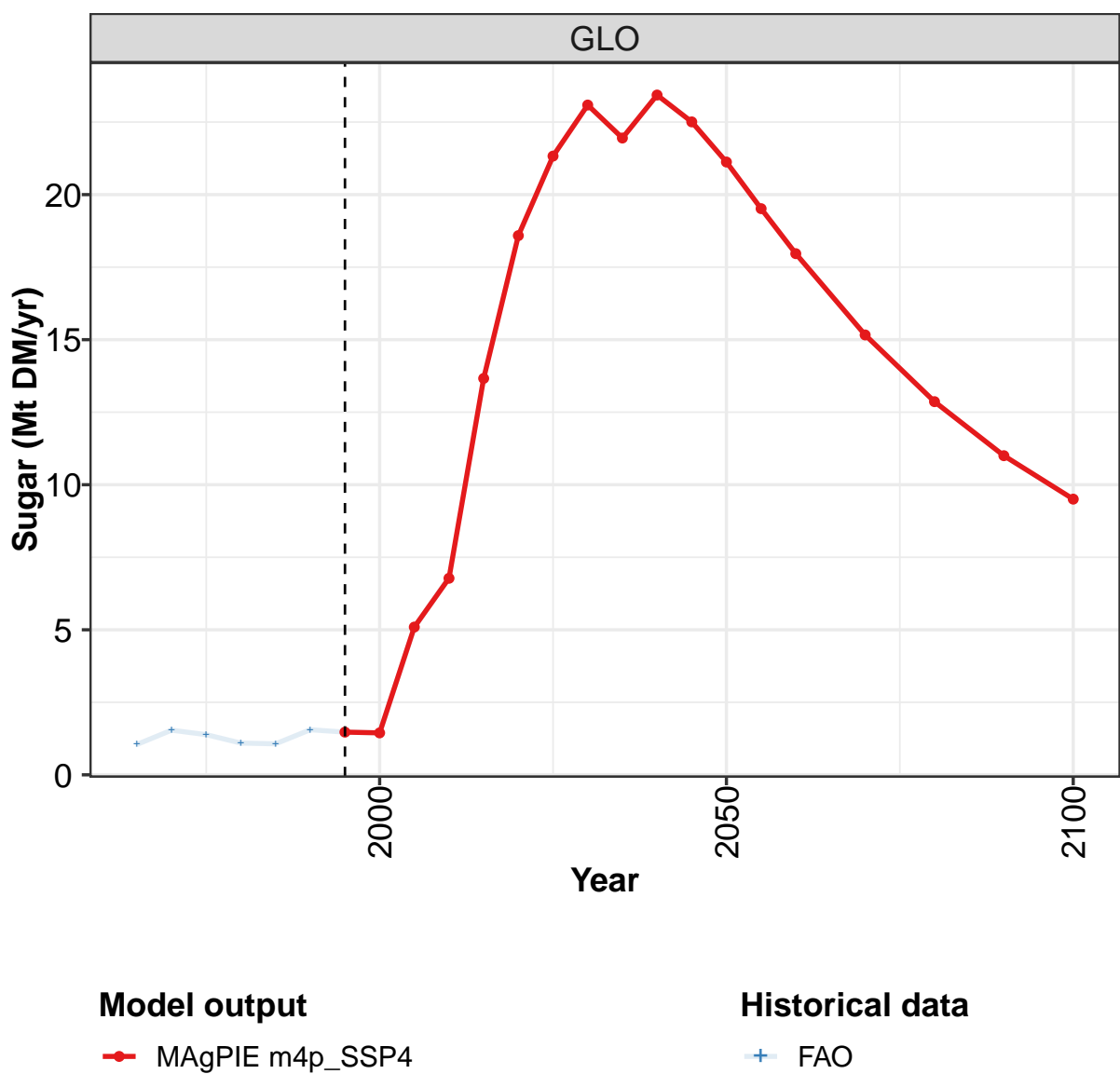
	2050	2055	2060	2070	2080	2090	2100
GLO	37.6	37.9	38.0	38.1	38.2	37.9	37.9
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	6.7	6.0	5.4	4.3	3.3	2.6	2.0
EUR	2.3	2.3	2.3	2.4	2.5	2.5	2.5
IND	8.5	8.6	8.6	8.2	7.5	6.8	5.9
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	8.6	8.6	8.7	8.7	8.8	8.7	8.5
MEA	0.6	0.6	0.4	0.5	0.5	0.6	0.7
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	4.7	4.7	4.7	4.7	4.6	4.5	4.5
REF	0.7	0.7	0.7	0.6	0.4	0.4	0.3
SSA	5.1	5.8	6.6	8.2	10.0	11.4	13.1
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 636: MAgPIE m4p\_SSP4 — 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



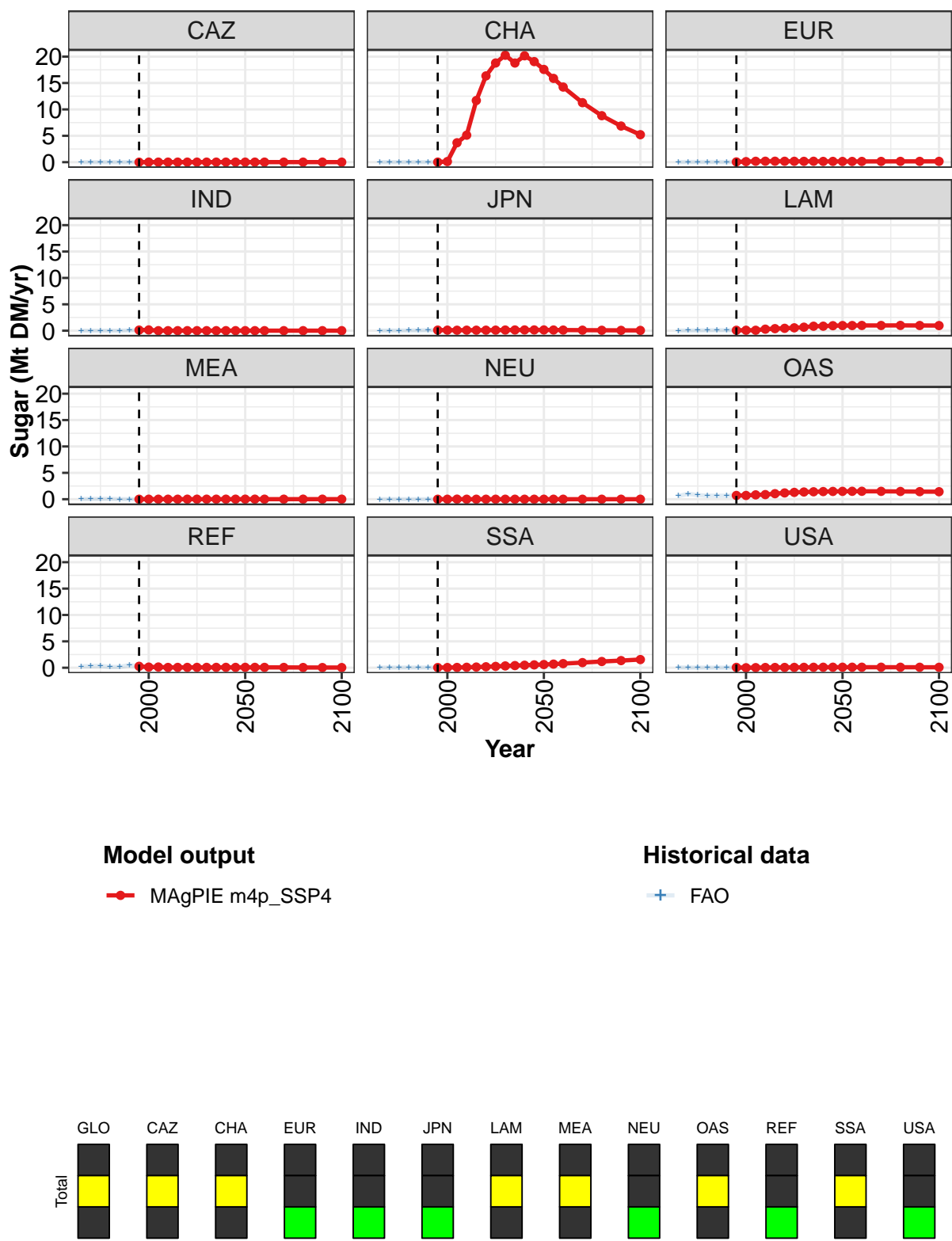


Figure 213: MAgPIE m4p\_SSP4 — Demand—Processing—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.5	1.4	5.1	6.8	13.7	18.6	21.3	23.1	22.0	23.4	22.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.1	3.7	5.1	11.7	16.3	18.8	20.3	18.8	20.2	19.1
EUR	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
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	0.1	0.1
LAM	0.1	0.1	0.1	0.3	0.4	0.4	0.5	0.7	0.8	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	1.4	1.4	1.5	1.5
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	0.3	0.4	0.5	0.5
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\_SSP4 — Demand—Processing—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

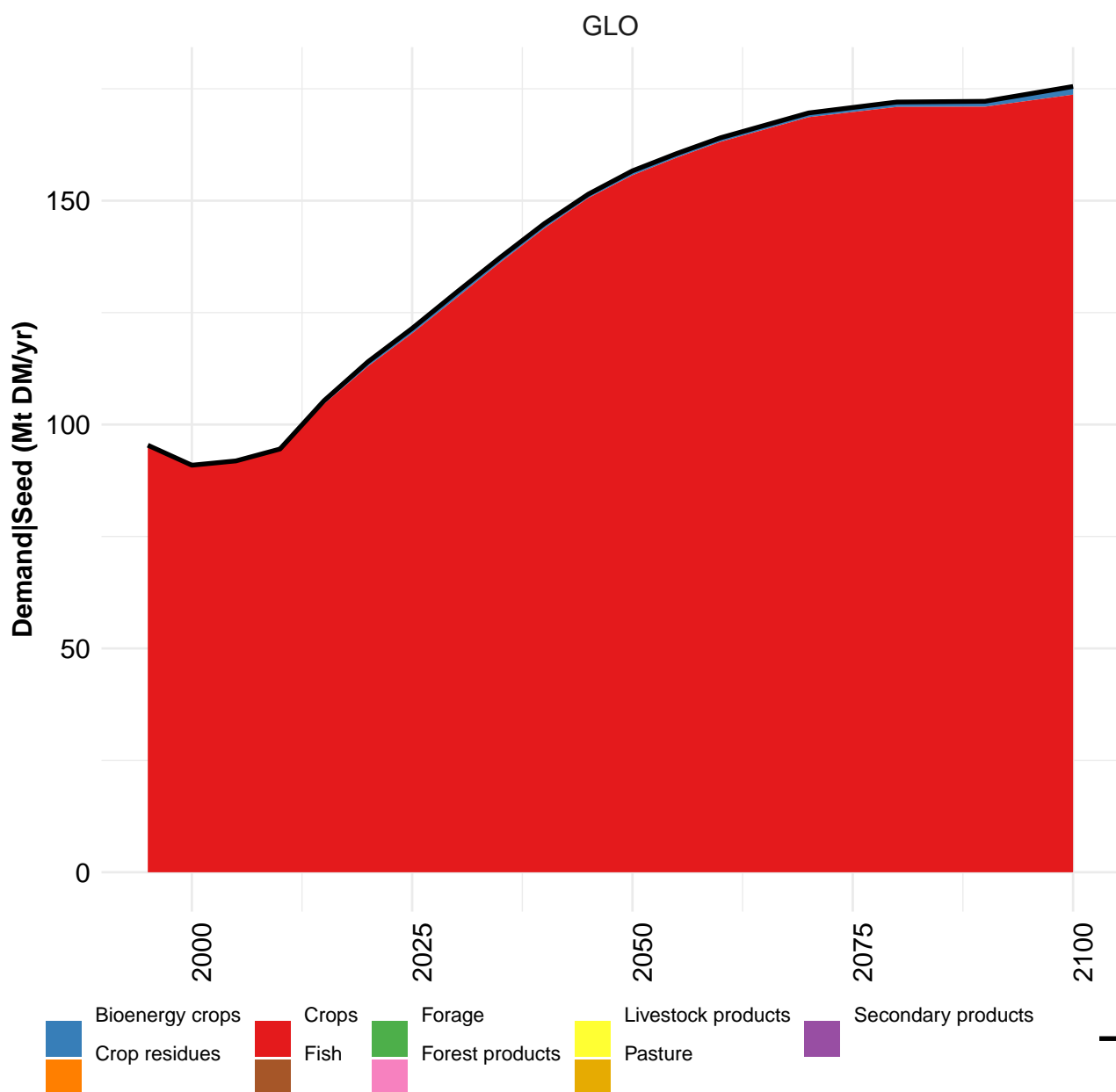
	2050	2055	2060	2070	2080	2090	2100
GLO	21.1	19.5	18.0	15.2	12.9	11.0	9.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	17.6	15.9	14.2	11.3	8.8	6.9	5.2
EUR	0.1	0.1	0.1	0.1	0.2	0.2	0.2
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.0	1.0	1.0	1.0	1.0	1.0	1.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.5	1.5	1.5	1.5	1.5	1.4	1.4
REF	0.1	0.1	0.1	0.1	0.0	0.0	0.0
SSA	0.6	0.7	0.8	1.0	1.2	1.4	1.6
USA	0.1	0.1	0.1	0.1	0.1	0.1	0.1

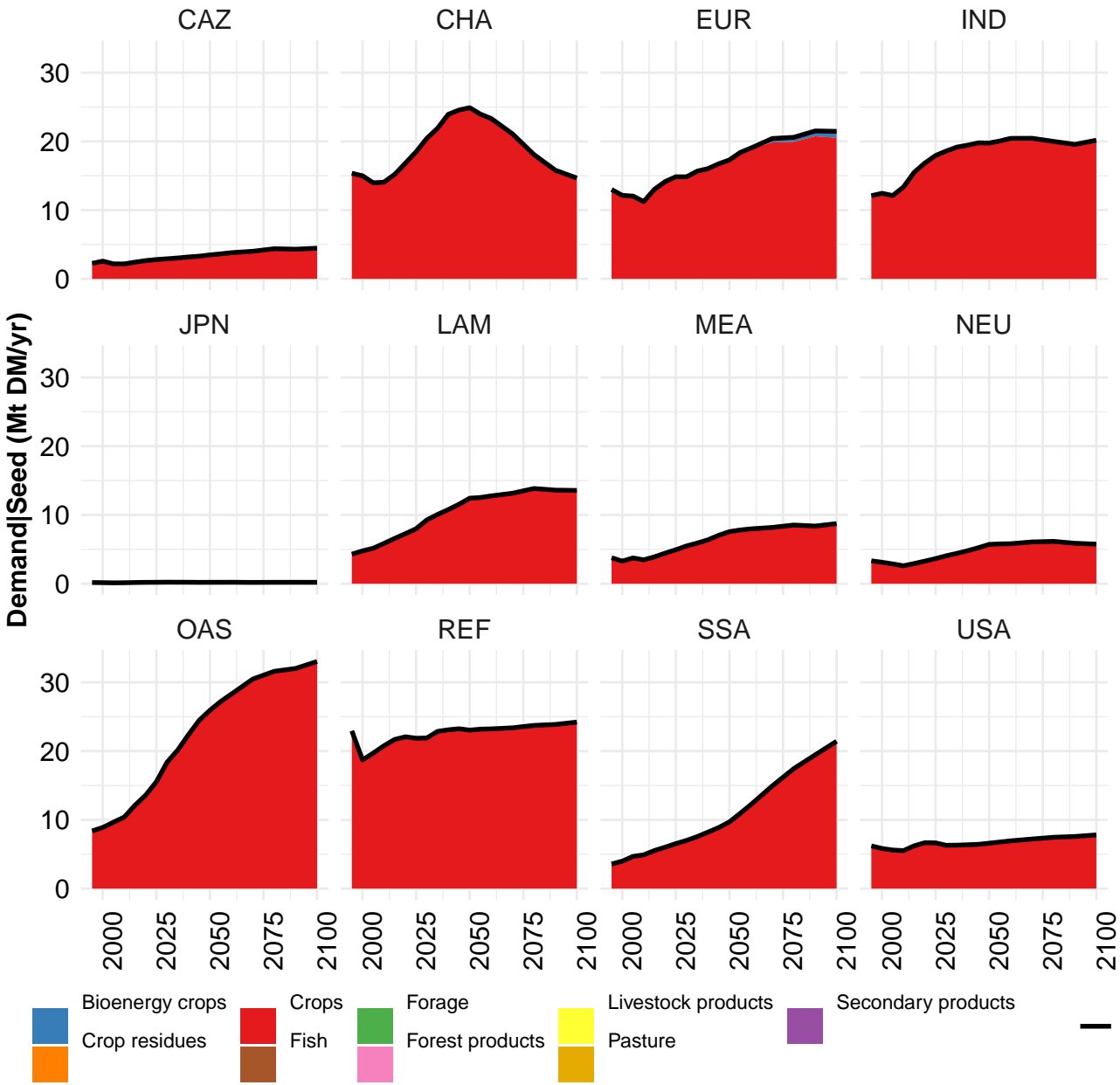
Table 639: MAgPIE m4p\_SSP4 — Demand—Processing—Secondary products—Sugar (Mt DM/yr) [PART 2/2]

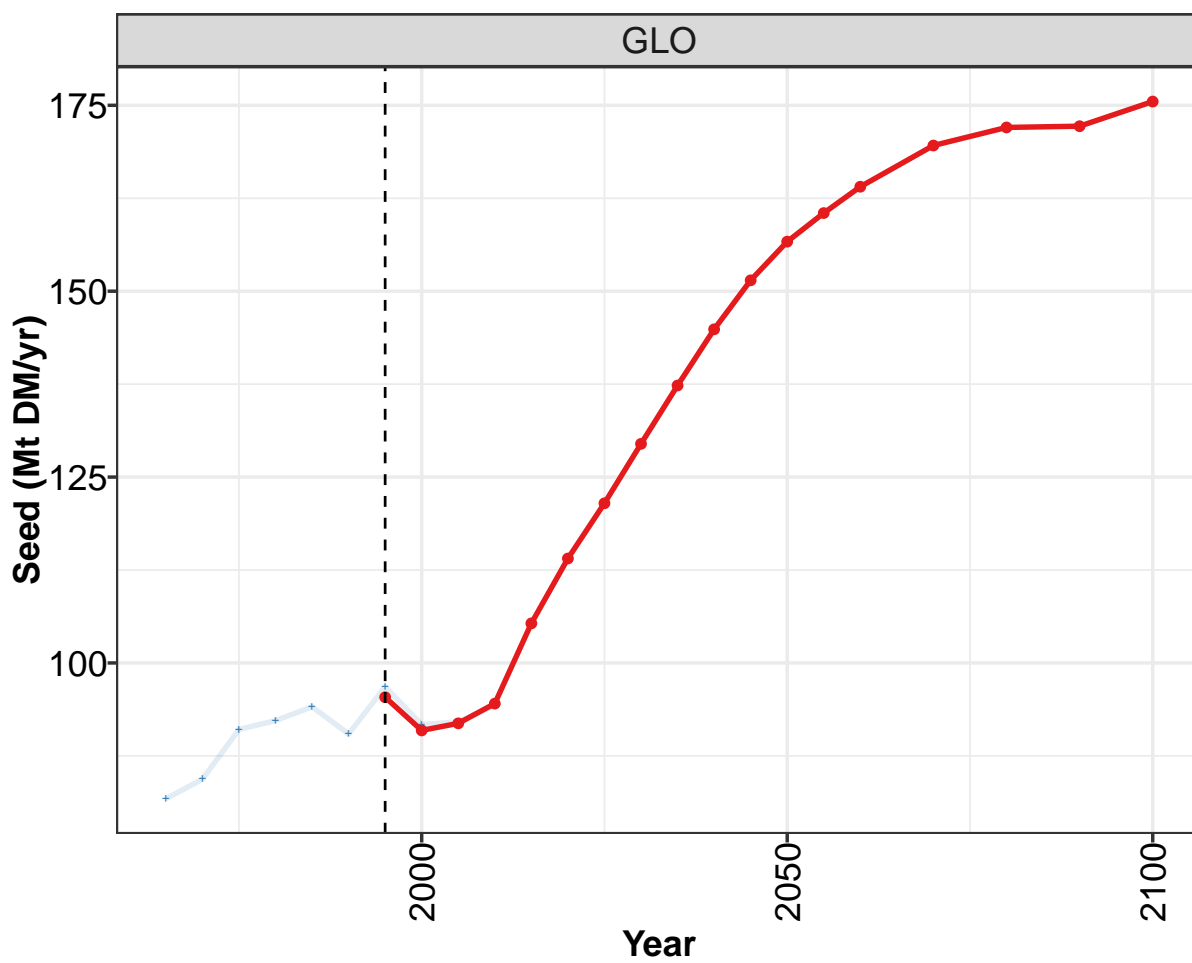
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.05	1.54	1.39	1.09	1.07	1.55	1.47	1.44	5.07	6.81
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
CHA	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.12	3.65	5.16
EUR	0.01	0.04	0.03	0.02	0.03	0.02	0.05	0.11	0.16	0.17
IND	0.00	0.00	0.00	0.00	0.00	0.08	0.12	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





**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

—+— FAO



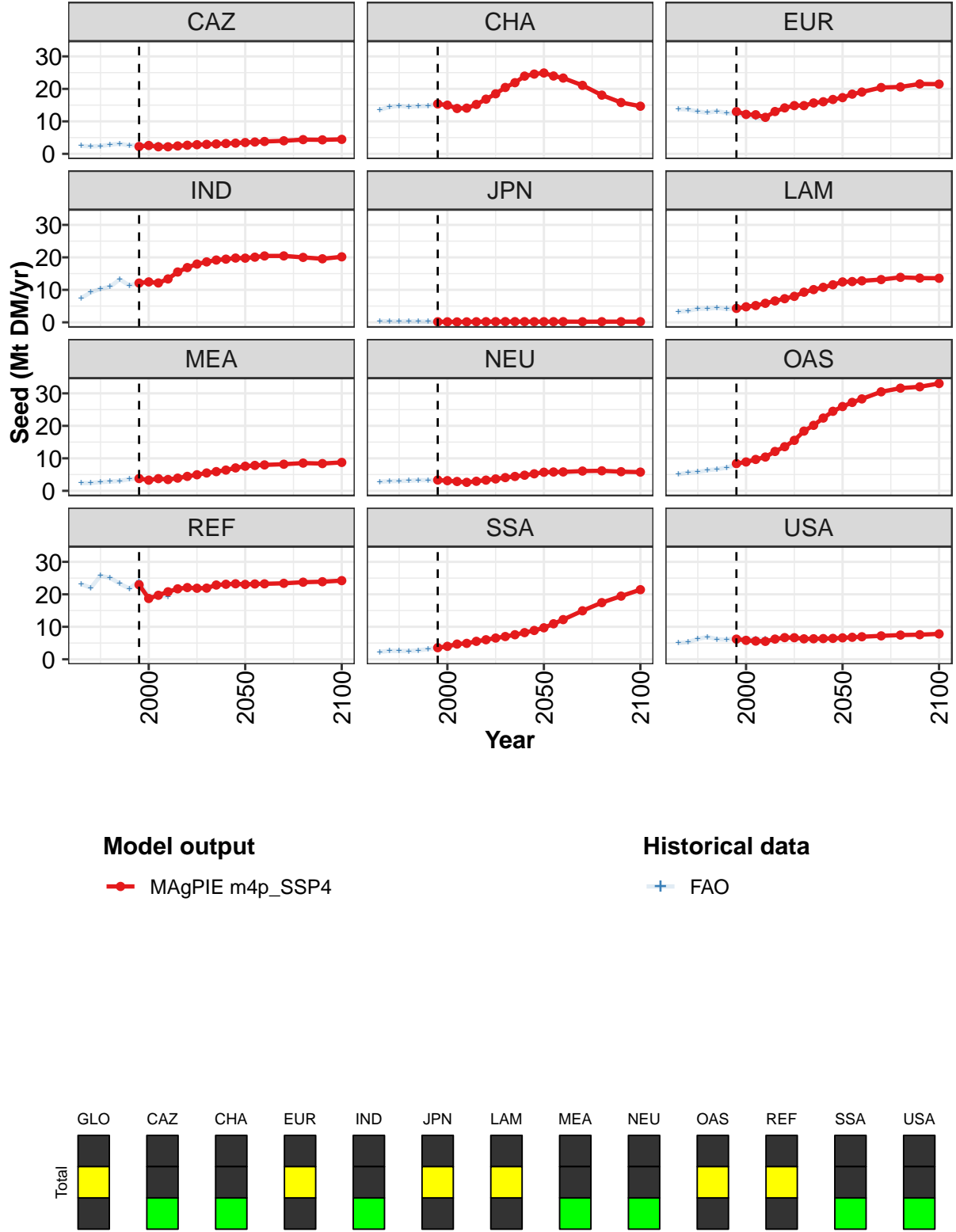


Figure 214: MAgPIE m4p\_SSP4 — Demand—Seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	95	91	92	95	105	114	121	129	137	145	151
CAZ	2	3	2	2	2	3	3	3	3	3	3
CHA	15	15	14	14	15	17	18	20	22	24	25
EUR	13	12	12	11	13	14	15	15	16	16	17
IND	12	12	12	13	15	17	18	19	19	19	20
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	4	5	5	6	7	7	8	9	10	11	12
MEA	4	3	4	3	4	4	5	5	6	6	7
NEU	3	3	3	3	3	3	4	4	4	5	5
OAS	8	9	10	10	12	14	16	18	20	22	24
REF	23	19	20	21	22	22	22	22	23	23	23
SSA	4	4	5	5	6	6	7	7	8	8	9
USA	6	6	6	6	6	7	7	6	6	6	6

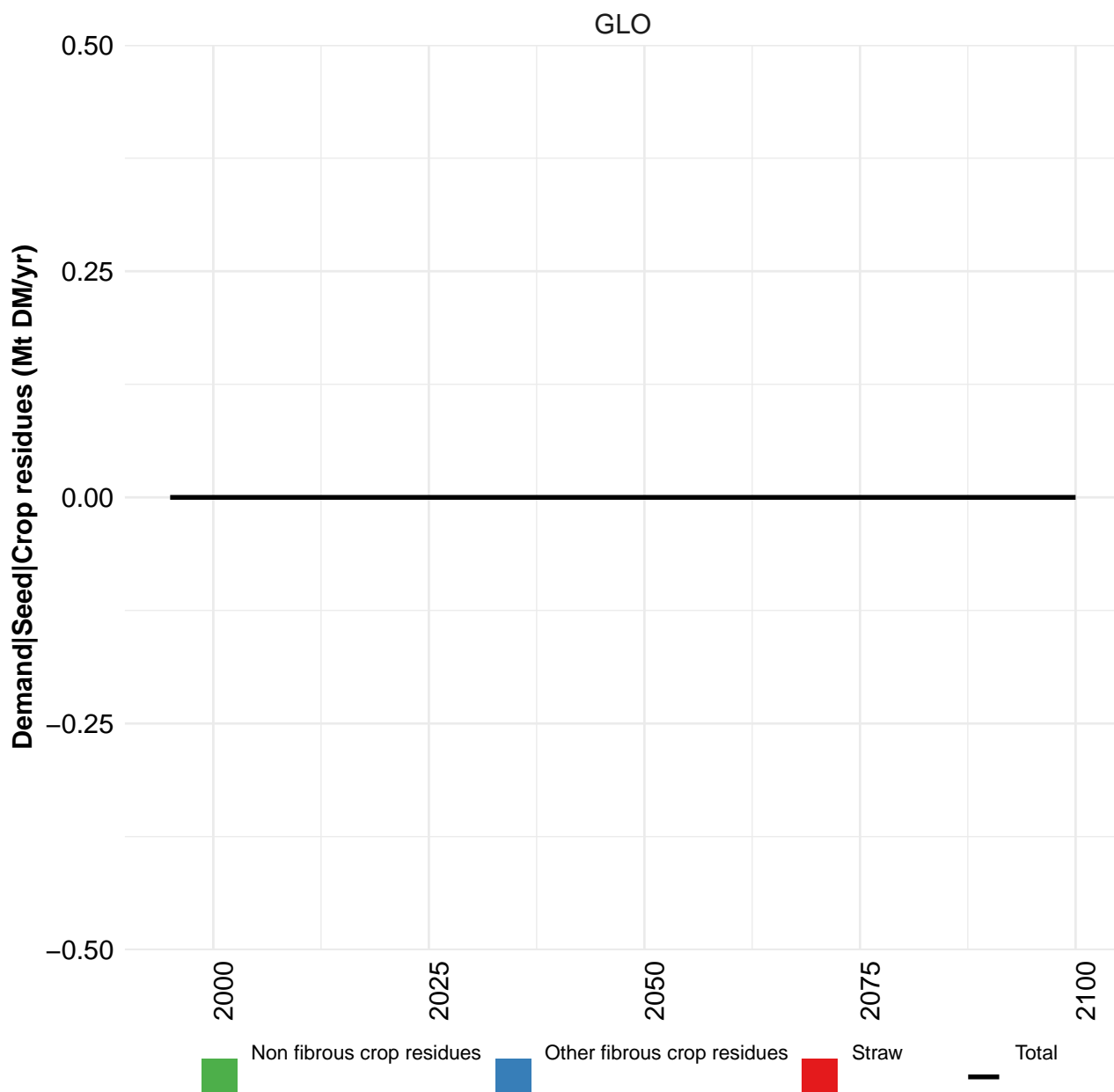
Table 641: MAgPIE m4p\_SSP4 — Demand—Seed (Mt DM/yr) [PART 1/2]

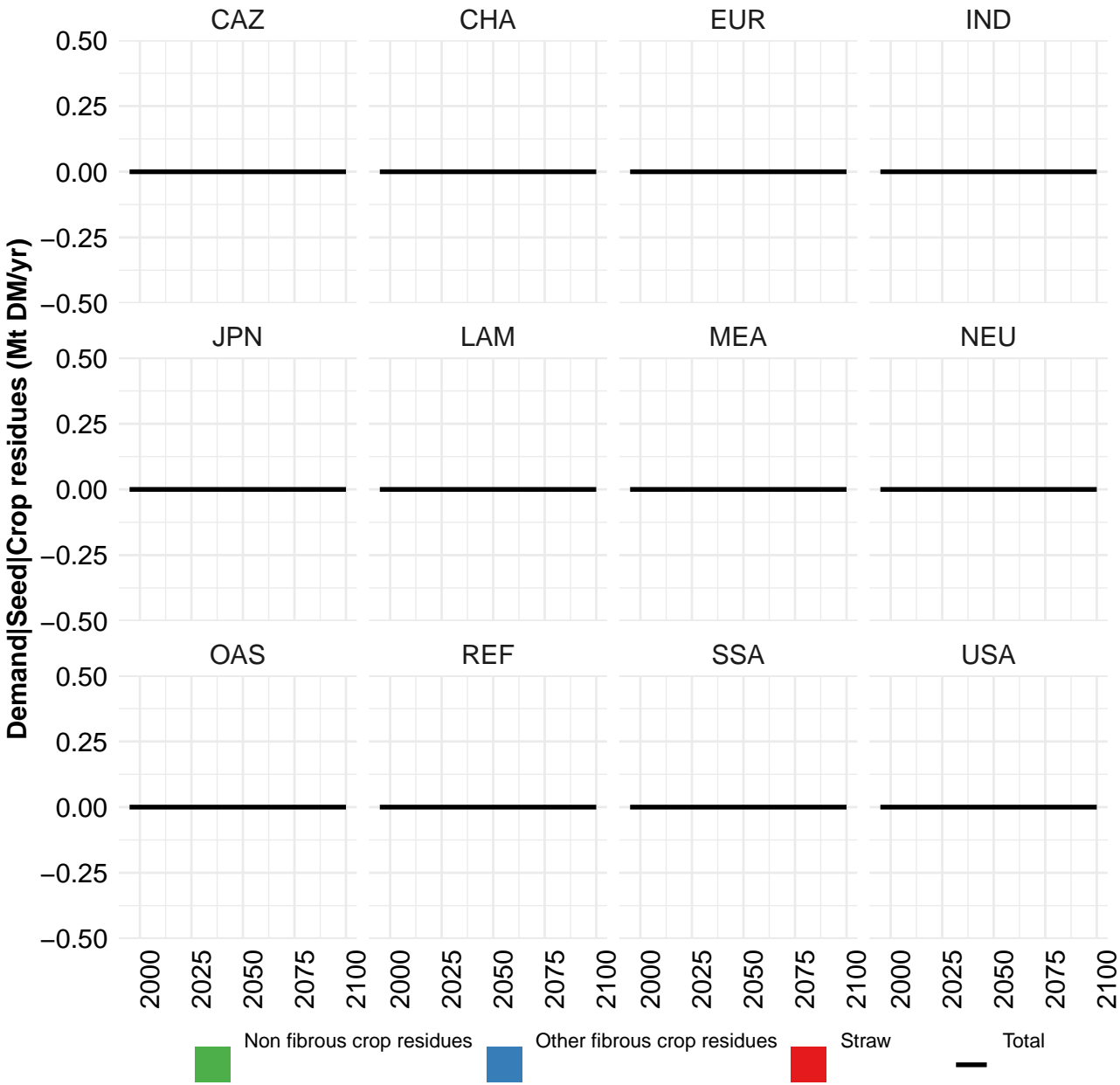
	2050	2055	2060	2070	2080	2090	2100
GLO	157	161	164	170	172	172	176
CAZ	3	4	4	4	4	4	4
CHA	25	24	23	21	18	16	15
EUR	17	18	19	20	21	22	21
IND	20	20	20	20	20	20	20
JPN	0	0	0	0	0	0	0
LAM	12	13	13	13	14	14	14
MEA	8	8	8	8	9	8	9
NEU	6	6	6	6	6	6	6
OAS	26	27	28	30	32	32	33
REF	23	23	23	23	24	24	24
SSA	10	11	12	15	17	19	21
USA	7	7	7	7	7	8	8

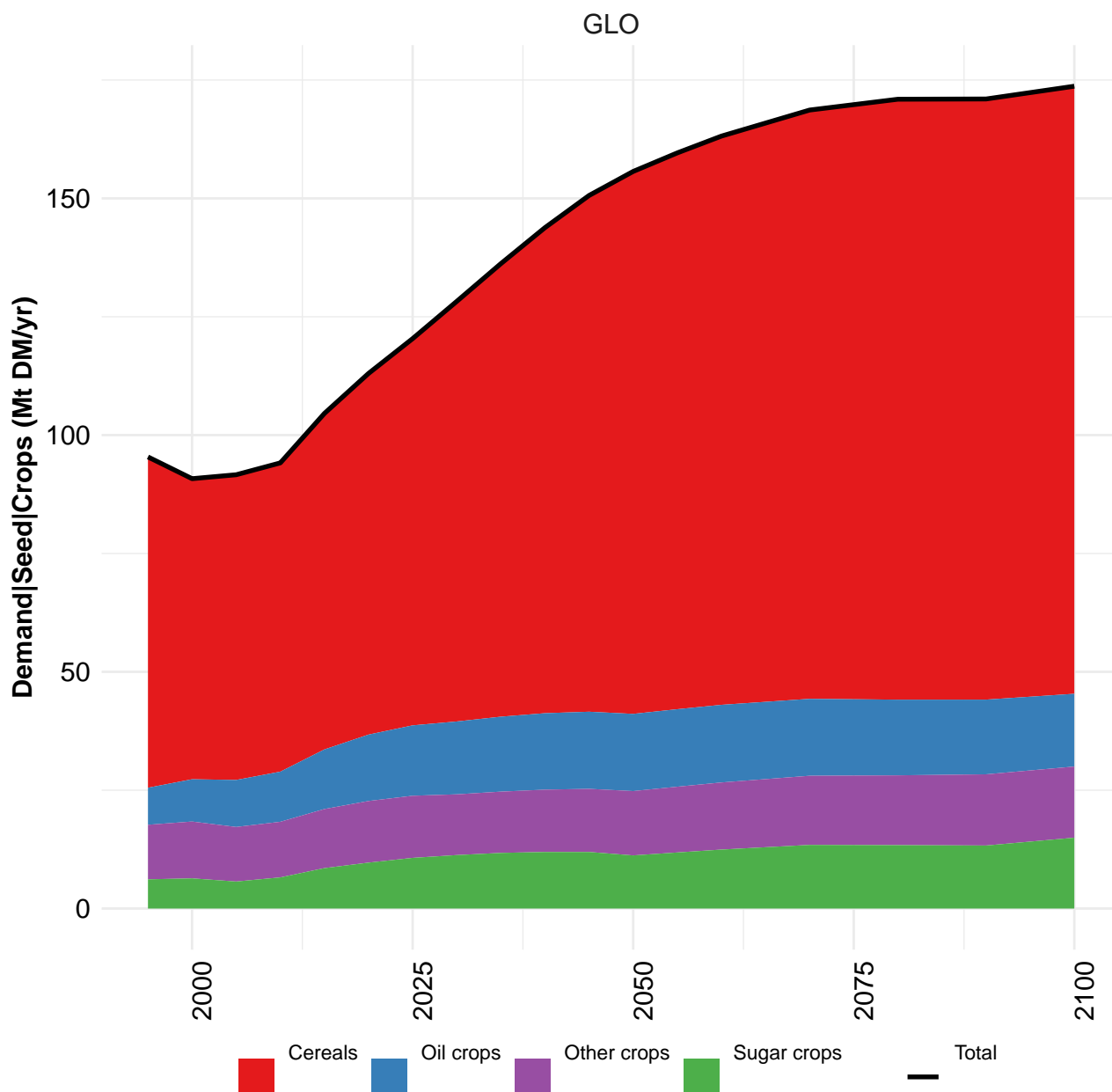
Table 642: MAgPIE m4p\_SSP4 — Demand—Seed (Mt DM/yr) [PART 2/2]

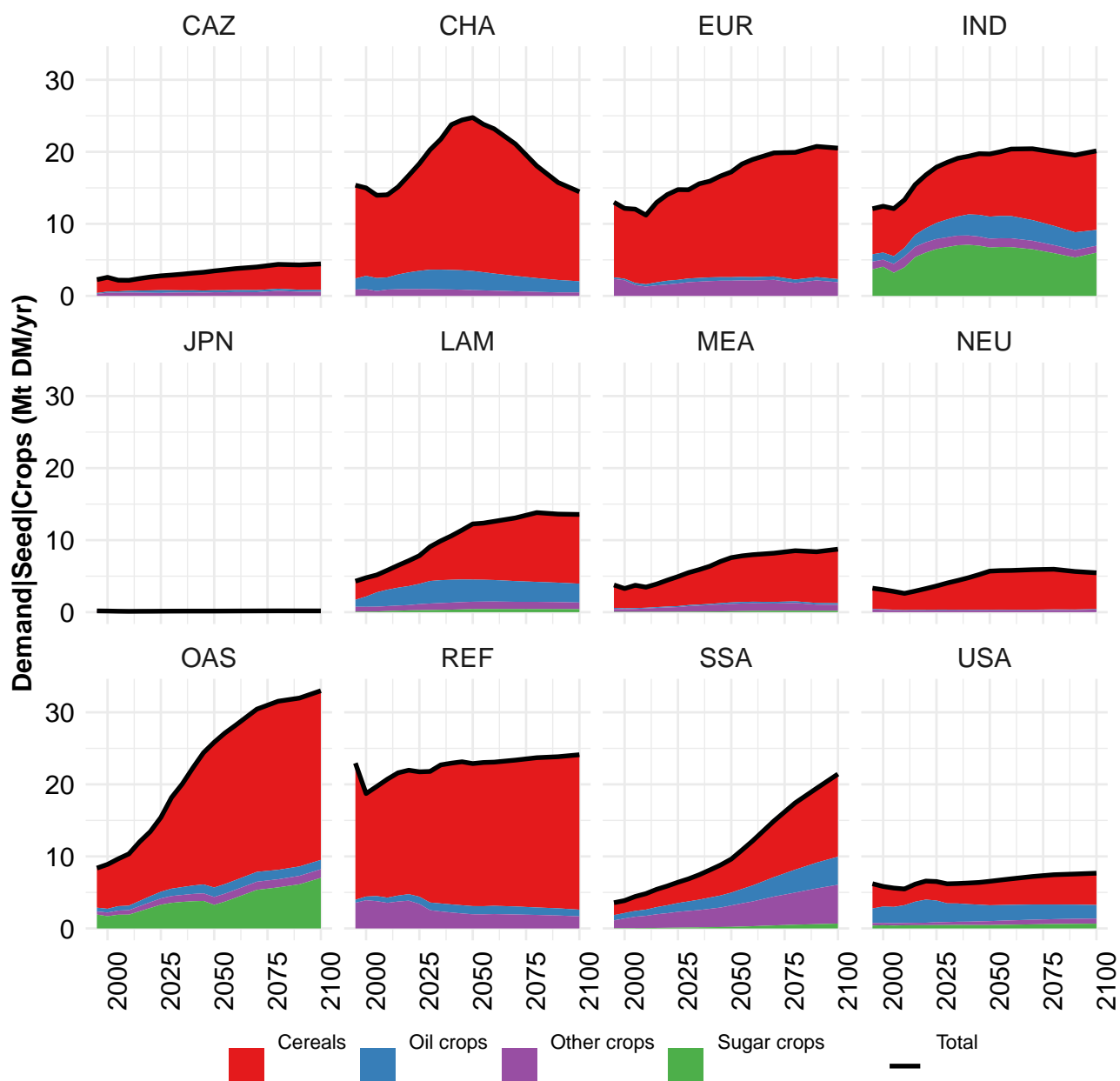
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	81.7	84.4	91.1	92.2	94.1	90.4	96.8	91.7	92.1	94.3
CAZ	2.5	2.3	2.4	2.8	3.1	2.6	2.8	2.9	2.8	2.6
CHA	13.6	14.4	14.8	14.5	14.7	14.7	15.6	15.3	14.1	14.4
EUR	13.8	13.7	13.0	12.7	13.1	12.6	12.2	11.6	11.2	10.6
IND	7.4	9.2	10.3	11.0	13.2	11.3	12.2	12.5	12.1	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)

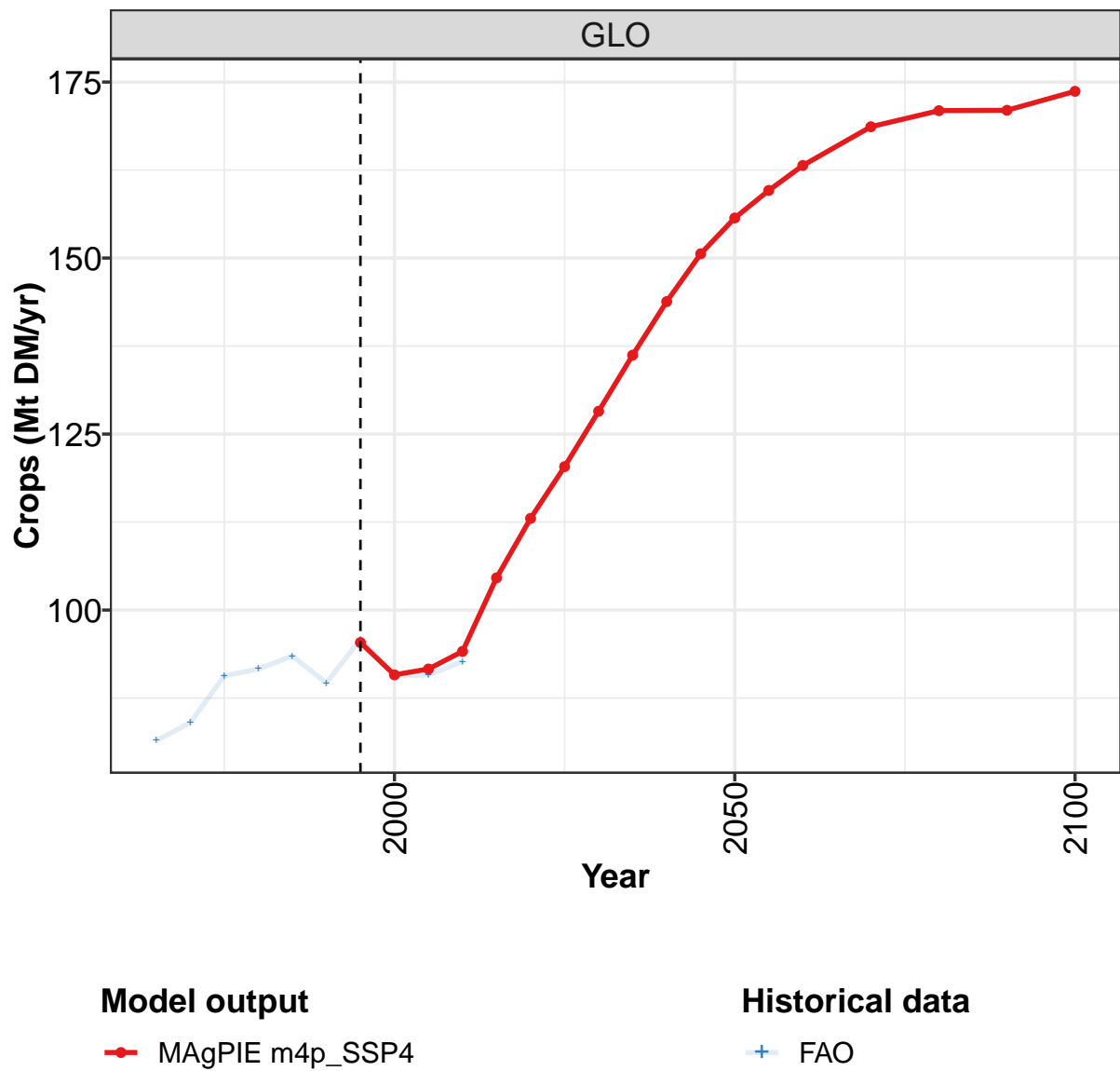


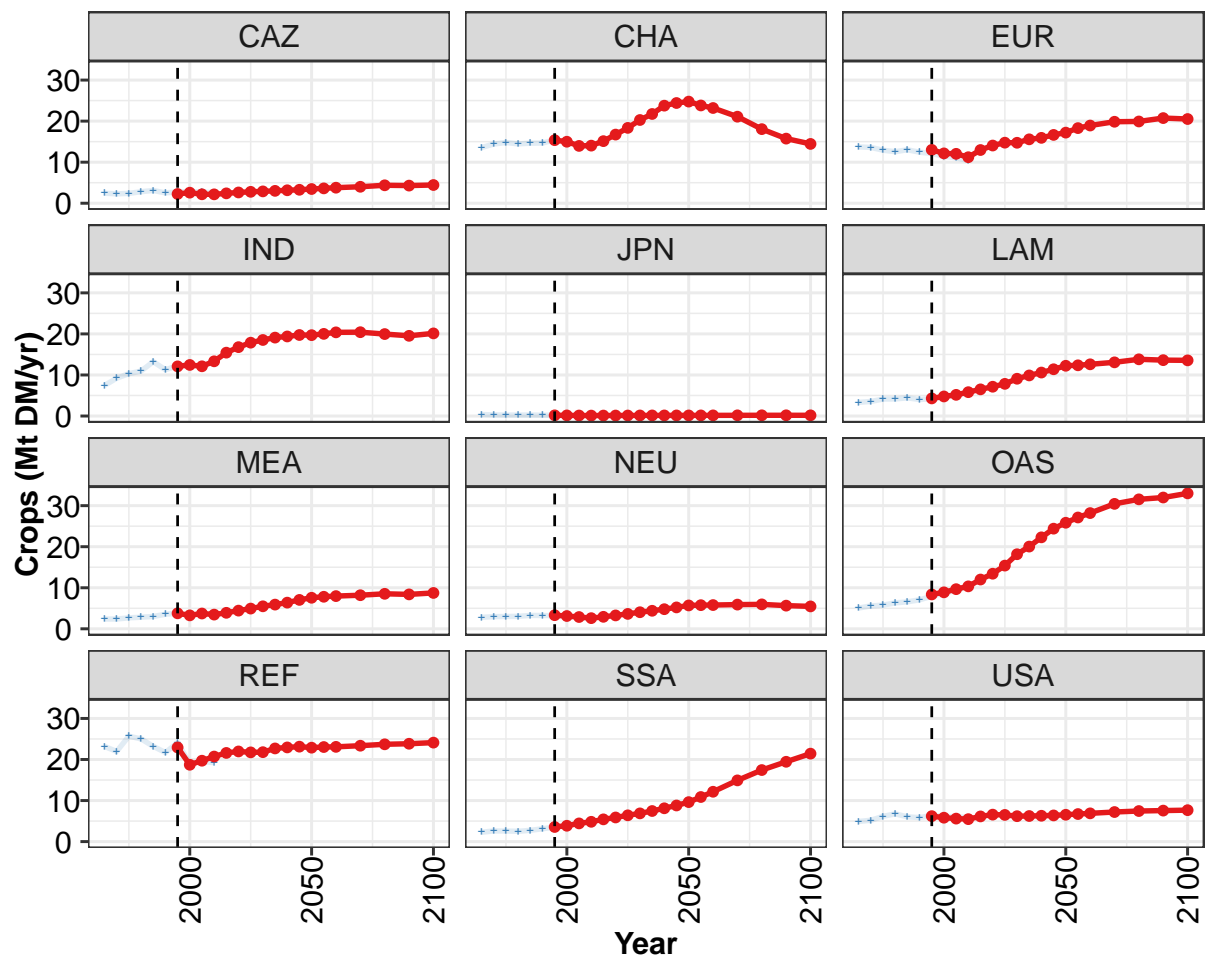






## 10.1 Crops





**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

+— FAO

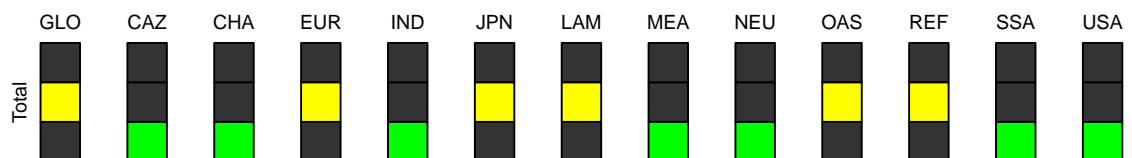


Figure 215: MAgPIE m4p\_SSP4 — Demand—Seed—Crops (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	95	91	92	94	105	113	120	128	136	144	151
CAZ	2	3	2	2	2	3	3	3	3	3	3
CHA	15	15	14	14	15	17	18	20	22	24	24
EUR	13	12	12	11	13	14	15	15	16	16	17
IND	12	12	12	13	15	17	18	19	19	19	20
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	4	5	5	6	6	7	8	9	10	11	11
MEA	4	3	4	3	4	4	5	5	6	6	7
NEU	3	3	3	3	3	3	4	4	4	5	5
OAS	8	9	10	10	12	13	15	18	20	22	24
REF	23	19	20	21	22	22	22	22	23	23	23
SSA	4	4	4	5	5	6	6	7	7	8	9
USA	6	6	6	5	6	7	7	6	6	6	6

Table 644: MAgPIE m4p.SSP4 — Demand—Seed—Crops (Mt DM/yr) [PART 1/2]

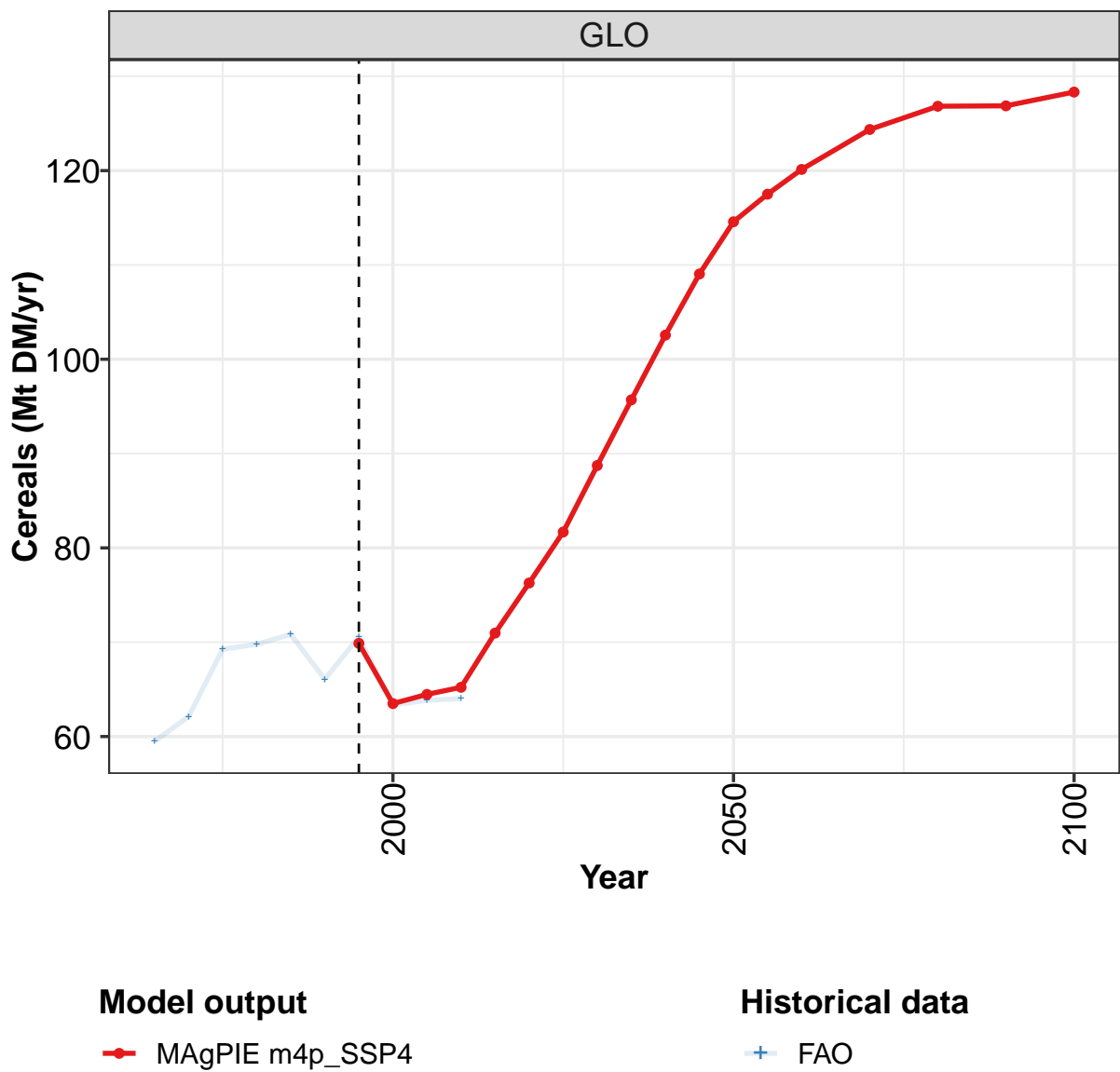
	2050	2055	2060	2070	2080	2090	2100
GLO	156	160	163	169	171	171	174
CAZ	3	4	4	4	4	4	4
CHA	25	24	23	21	18	16	14
EUR	17	18	19	20	20	21	21
IND	20	20	20	20	20	20	20
JPN	0	0	0	0	0	0	0
LAM	12	12	13	13	14	14	14
MEA	8	8	8	8	9	8	9
NEU	6	6	6	6	6	6	5
OAS	26	27	28	30	32	32	33
REF	23	23	23	23	24	24	24
SSA	10	11	12	15	17	19	21
USA	7	7	7	7	7	8	8

Table 645: MAgPIE m4p.SSP4 — 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



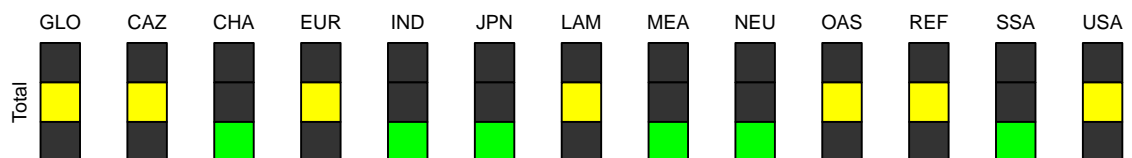
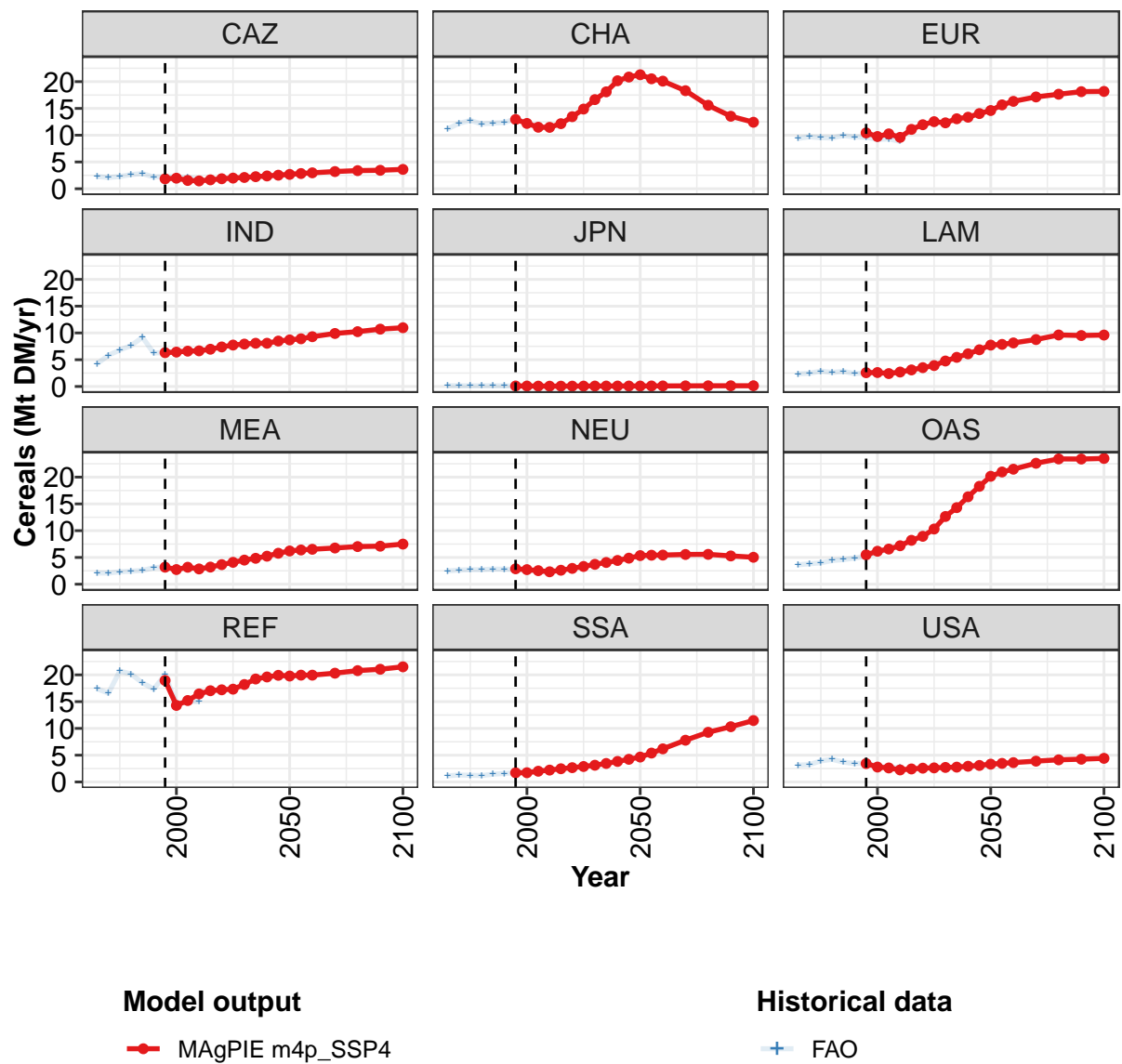


Figure 216: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	70	63	64	65	71	76	82	89	96	103	109
CAZ	2	2	2	1	2	2	2	2	2	2	3
CHA	13	12	11	11	12	13	15	17	18	20	21
EUR	10	10	10	10	11	12	13	12	13	13	14
IND	6	6	7	7	7	7	8	8	8	8	8
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	3	2	3	3	4	4	5	5	6	7
MEA	3	3	3	3	3	4	4	5	5	5	6
NEU	3	3	3	2	3	3	3	4	4	4	5
OAS	5	6	7	7	8	9	10	13	14	16	18
REF	19	14	15	16	17	17	17	18	19	20	20
SSA	2	2	2	2	2	3	3	3	3	4	4
USA	3	3	3	2	2	3	3	3	3	3	3

Table 647: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals (Mt DM/yr) [PART 1/2]

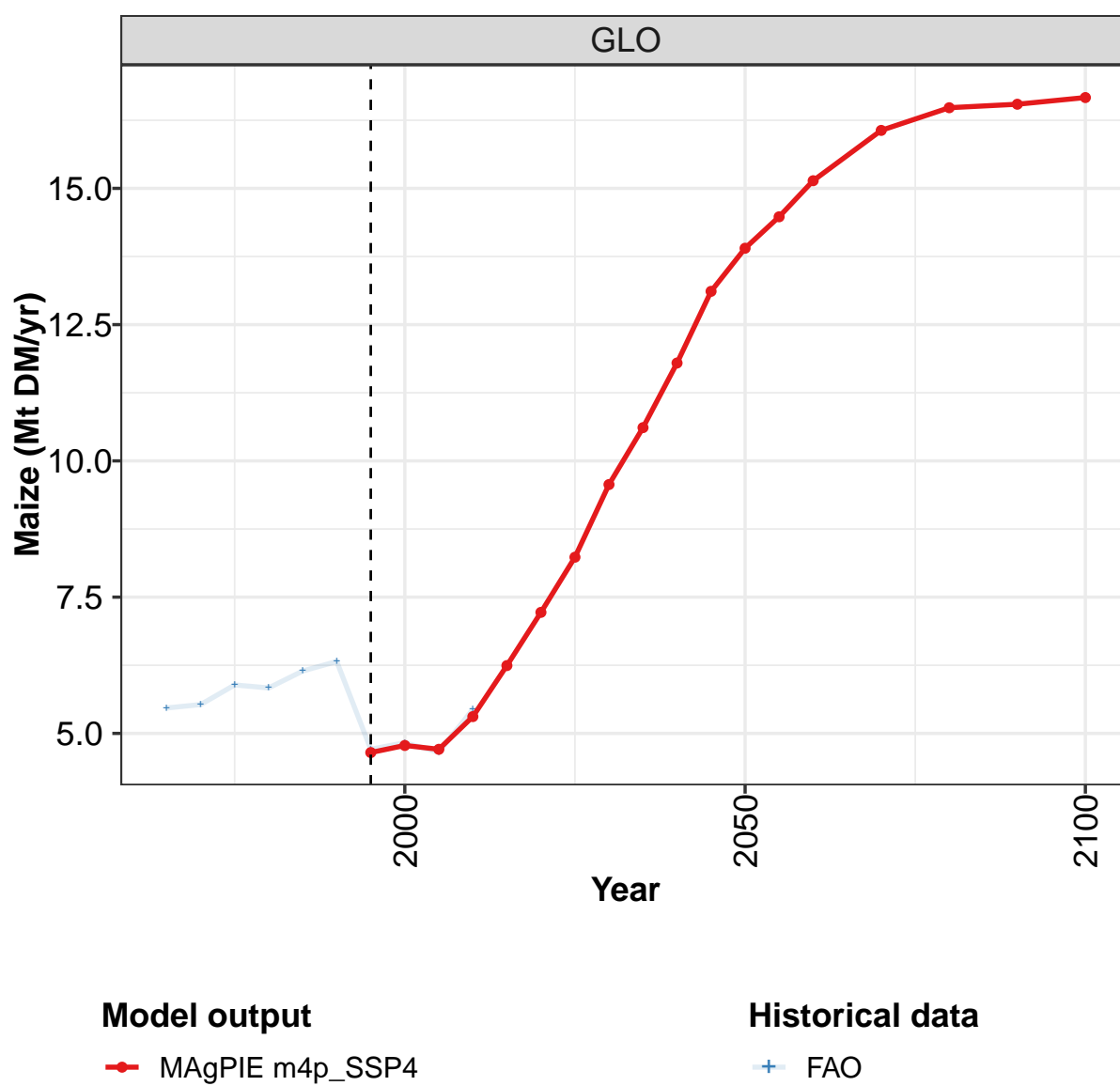
	2050	2055	2060	2070	2080	2090	2100
GLO	115	118	120	124	127	127	128
CAZ	3	3	3	3	3	3	4
CHA	21	21	20	18	16	14	12
EUR	15	16	16	17	18	18	18
IND	9	9	9	10	10	11	11
JPN	0	0	0	0	0	0	0
LAM	8	8	8	9	10	10	10
MEA	6	6	7	7	7	7	7
NEU	5	5	5	6	6	5	5
OAS	20	21	21	23	23	23	23
REF	20	20	20	20	21	21	22
SSA	5	5	6	8	9	10	11
USA	3	3	4	4	4	4	4

Table 648: MAgPIE m4p\_SSP4 — 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



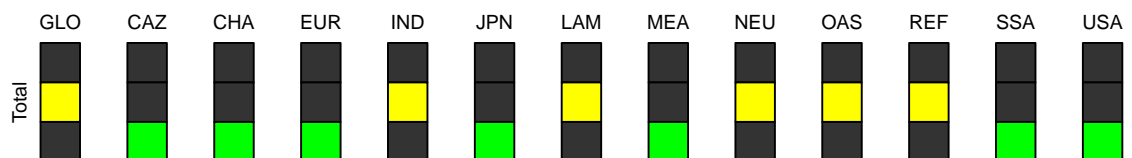
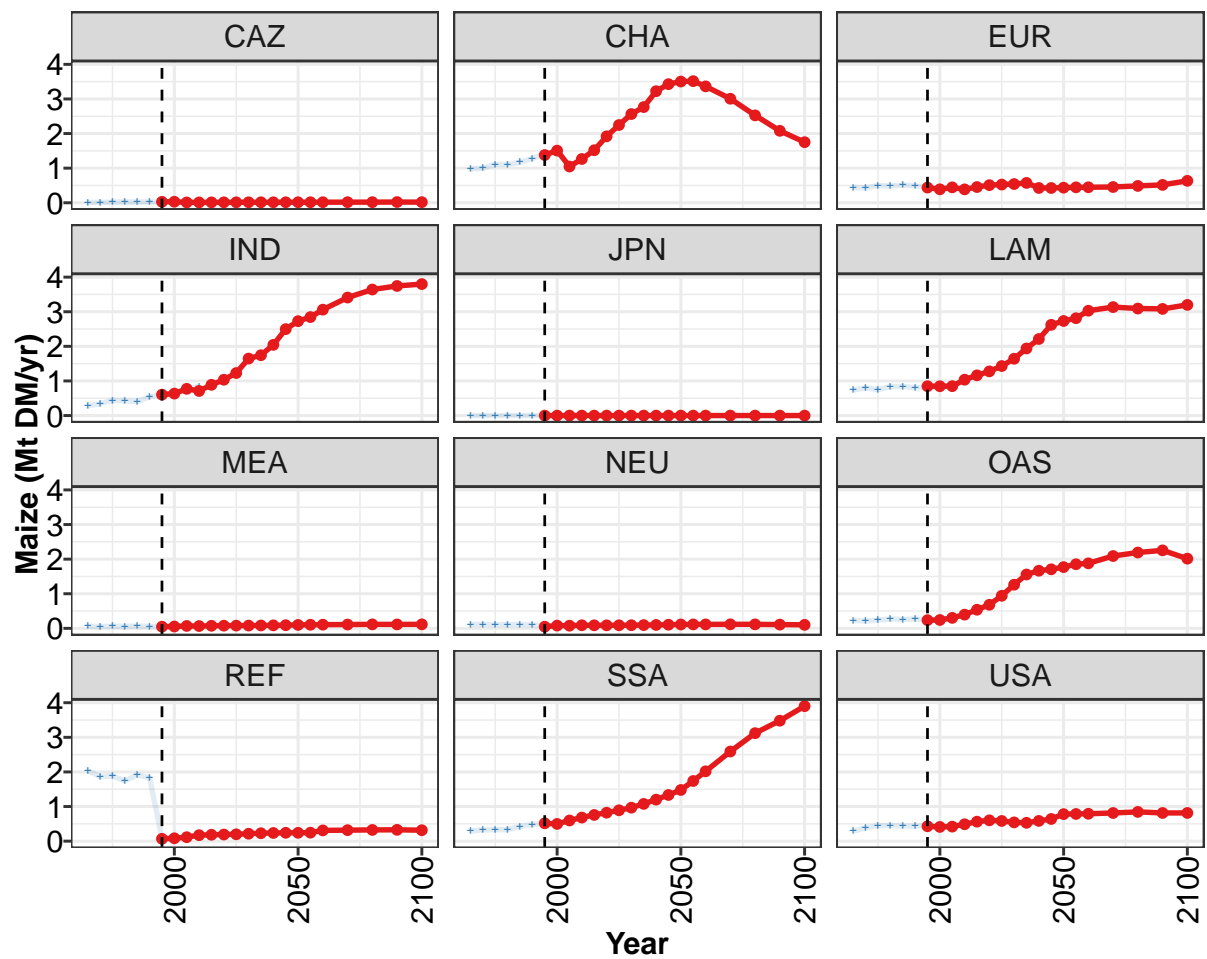


Figure 217: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.6	4.8	4.7	5.3	6.2	7.2	8.2	9.6	10.6	11.8	13.1
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	2.2	2.6	2.8	3.2	3.4
EUR	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.4	0.4
IND	0.6	0.6	0.8	0.7	0.9	1.0	1.2	1.6	1.7	2.0	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	0.8	0.8	0.8	1.0	1.2	1.3	1.4	1.6	1.9	2.2	2.6
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	0.5	0.7	0.9	1.3	1.6	1.7	1.7
REF	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SSA	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3
USA	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.6

Table 650: MAGPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

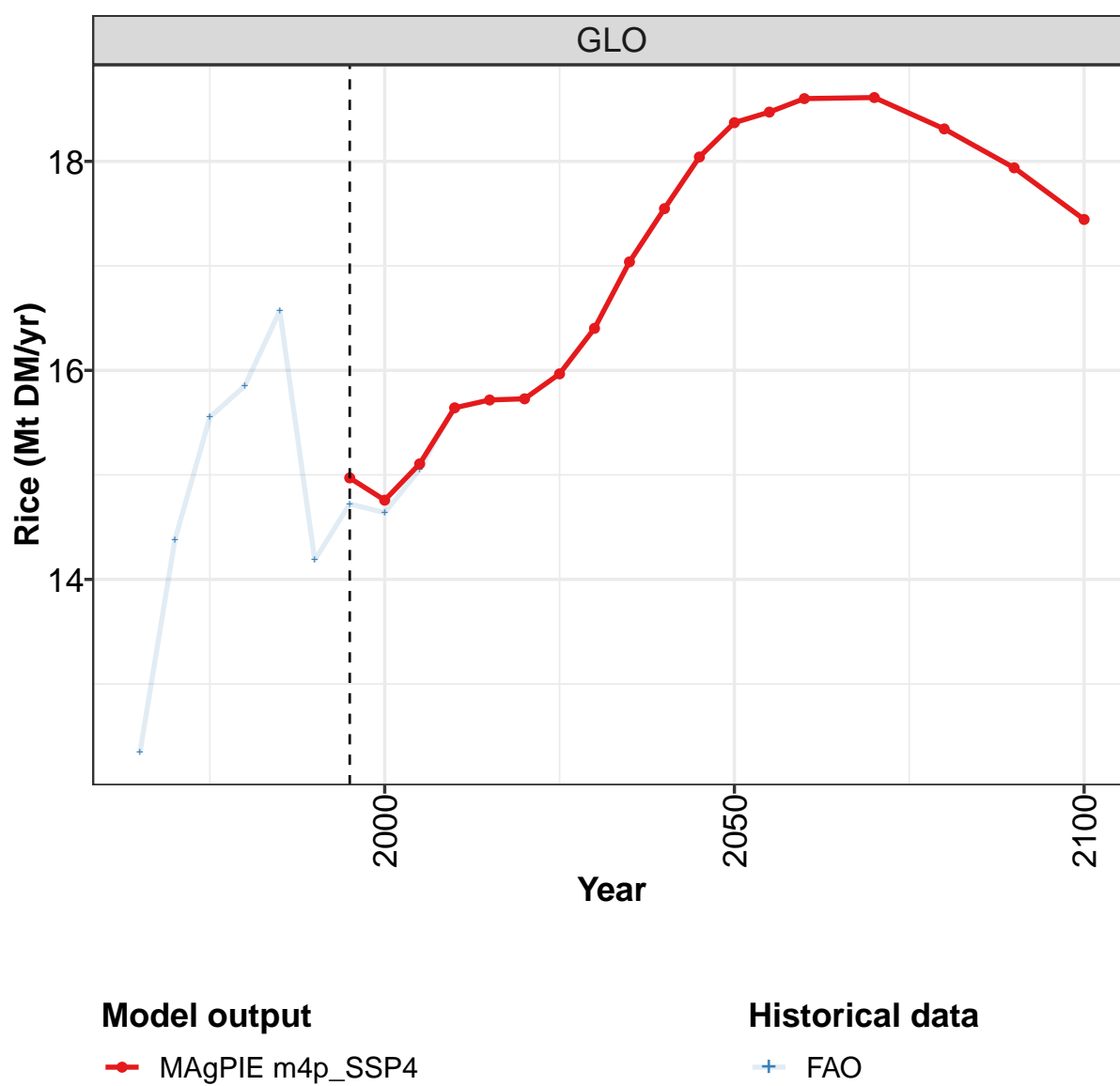
	2050	2055	2060	2070	2080	2090	2100
GLO	13.9	14.5	15.1	16.1	16.5	16.5	16.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.5	3.5	3.4	3.0	2.5	2.1	1.8
EUR	0.4	0.4	0.4	0.5	0.5	0.5	0.6
IND	2.7	2.8	3.1	3.4	3.6	3.7	3.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.7	2.8	3.0	3.1	3.1	3.1	3.2
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.8	1.9	1.9	2.1	2.2	2.3	2.0
REF	0.2	0.2	0.3	0.3	0.3	0.3	0.3
SSA	1.5	1.7	2.0	2.6	3.1	3.5	3.9
USA	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Table 651: MAGPIE m4p\_SSP4 — 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





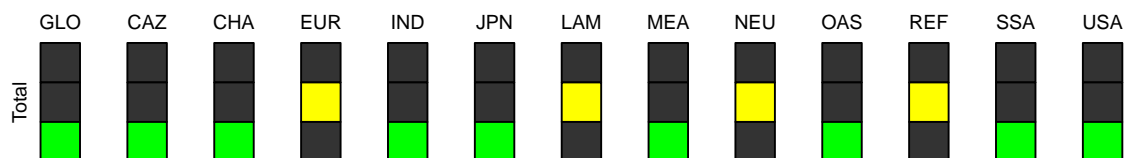
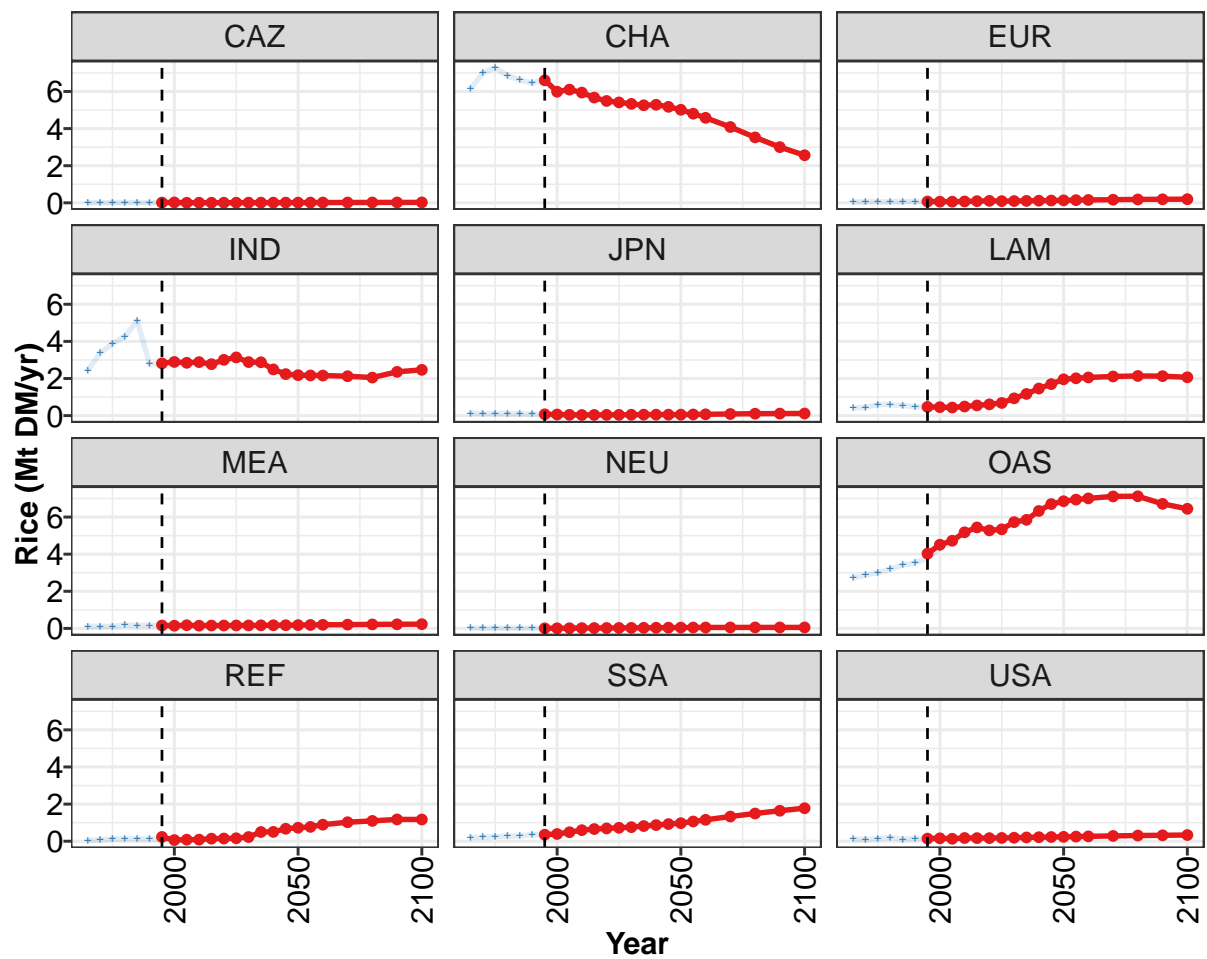


Figure 218: MAGPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.0	14.8	15.1	15.6	15.7	15.7	16.0	16.4	17.0	17.5	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	6.6	6.0	6.1	5.9	5.7	5.5	5.4	5.3	5.3	5.3	5.2
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	2.8	3.0	3.1	2.9	2.9	2.5	2.2
JPN	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
LAM	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.9	1.2	1.5	1.7
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	5.4	5.3	5.3	5.7	5.9	6.3	6.7
REF	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.5	0.5	0.7
SSA	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.9
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\_SSP4 — Demand—Seed—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

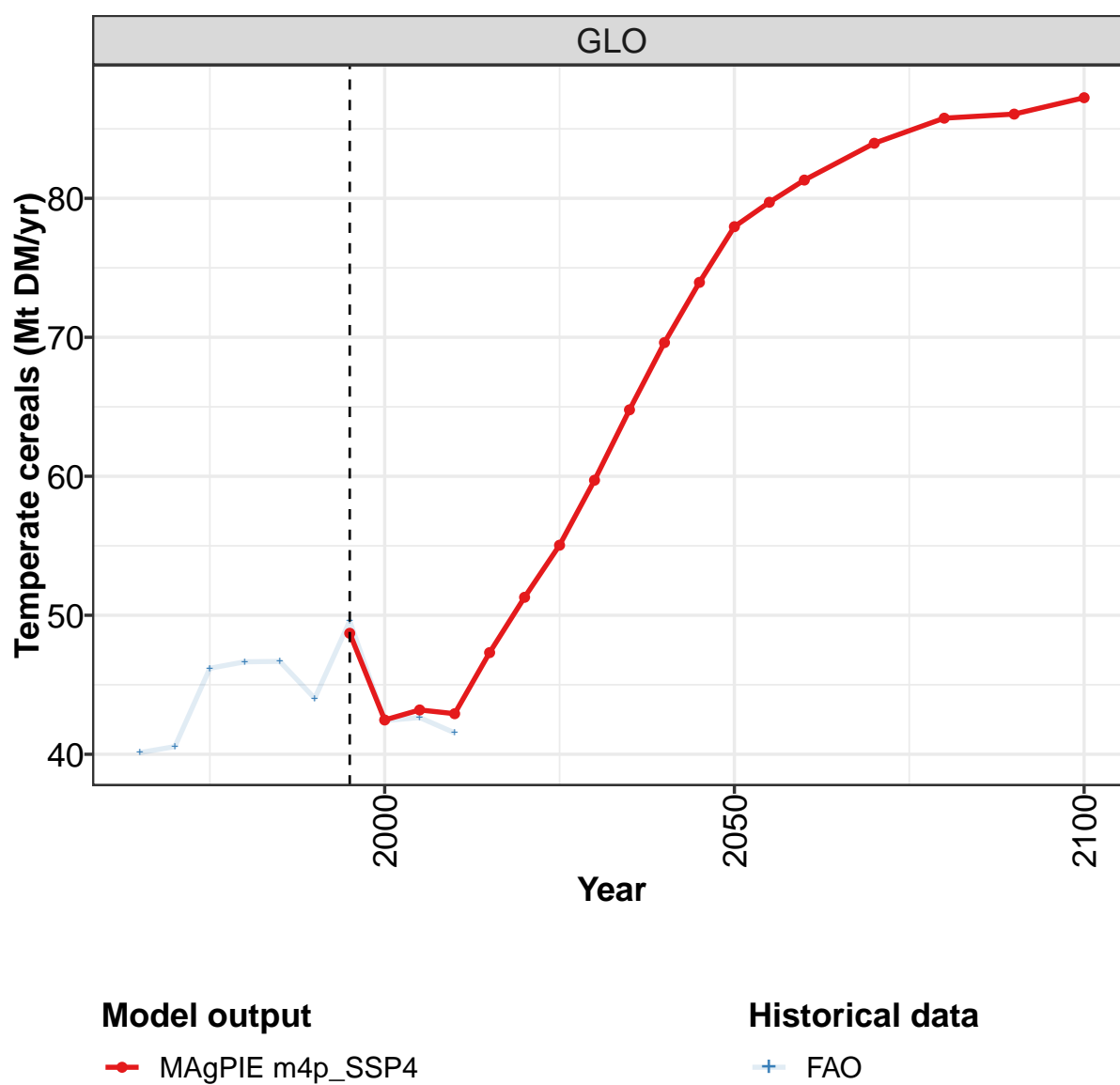
	2050	2055	2060	2070	2080	2090	2100
GLO	18.4	18.5	18.6	18.6	18.3	17.9	17.4
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	5.0	4.8	4.6	4.1	3.5	3.0	2.6
EUR	0.1	0.1	0.2	0.2	0.2	0.2	0.2
IND	2.2	2.2	2.2	2.1	2.1	2.4	2.5
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.0	2.0	2.1	2.1	2.1	2.1	2.1
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.1	0.1	0.1	0.1	0.1
OAS	6.9	6.9	7.0	7.1	7.1	6.7	6.4
REF	0.7	0.8	0.9	1.0	1.1	1.2	1.2
SSA	1.0	1.1	1.2	1.3	1.5	1.6	1.8
USA	0.2	0.2	0.3	0.3	0.3	0.3	0.3

Table 654: MAgPIE m4p\_SSP4 — 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



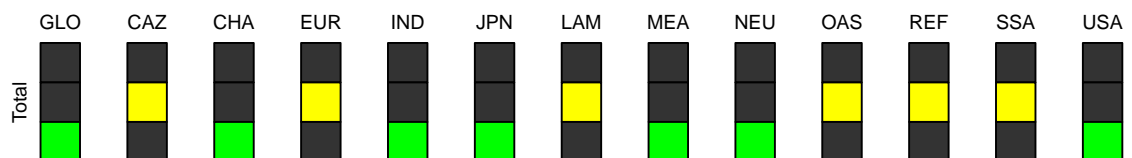
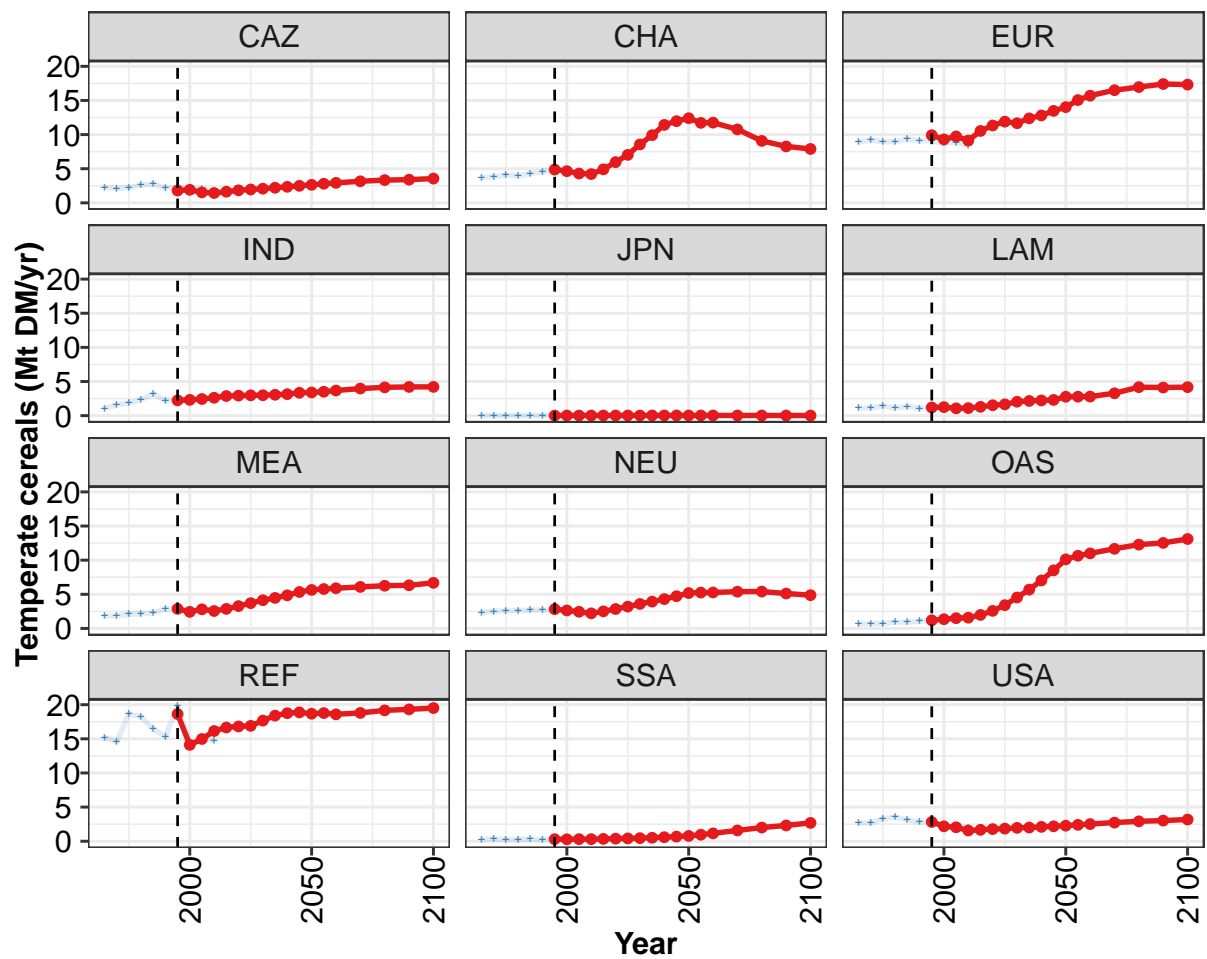


Figure 219: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	48.7	42.5	43.2	42.9	47.3	51.3	55.0	59.7	64.8	69.6	74.0
CAZ	1.8	1.9	1.5	1.4	1.6	1.8	2.0	2.1	2.2	2.4	2.5
CHA	4.9	4.6	4.3	4.2	4.9	6.0	7.0	8.6	9.9	11.4	12.0
EUR	9.9	9.3	9.7	9.1	10.5	11.3	11.9	11.7	12.4	12.8	13.5
IND	2.2	2.3	2.4	2.6	2.9	2.9	3.0	3.0	3.1	3.1	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	1.2	1.2	1.1	1.1	1.3	1.5	1.7	2.0	2.2	2.2	2.3
MEA	2.9	2.4	2.8	2.6	2.9	3.3	3.7	4.1	4.5	4.9	5.3
NEU	2.8	2.6	2.4	2.2	2.5	2.8	3.2	3.6	3.9	4.3	4.7
OAS	1.2	1.4	1.5	1.6	2.0	2.6	3.4	4.5	5.7	7.0	8.5
REF	18.6	14.1	15.0	16.1	16.7	16.8	16.9	17.7	18.4	18.8	18.9
SSA	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7
USA	2.8	2.2	2.0	1.6	1.7	1.8	1.8	2.0	2.0	2.1	2.2

Table 656: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

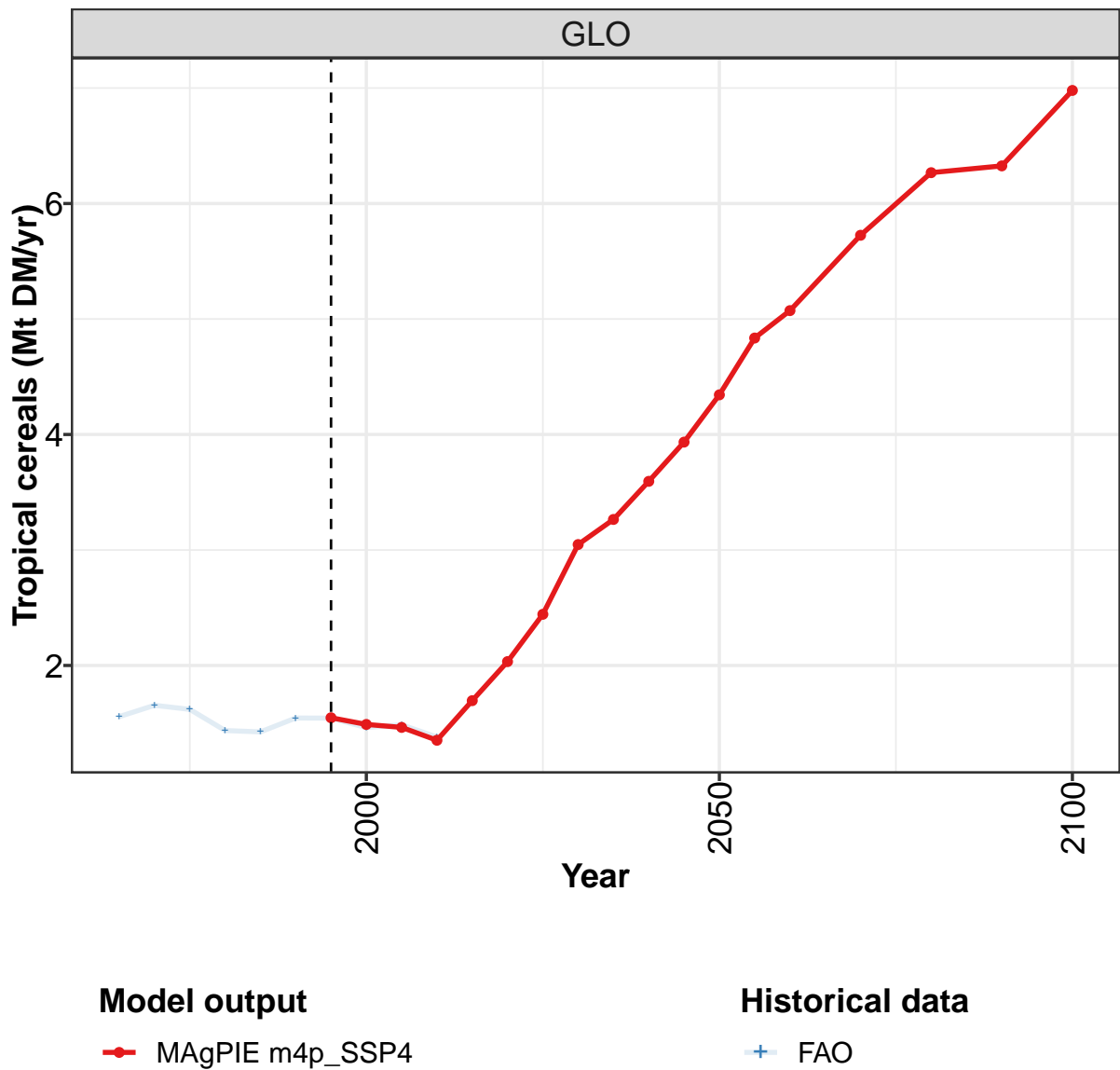
	2050	2055	2060	2070	2080	2090	2100
GLO	78.0	79.7	81.3	84.0	85.8	86.1	87.2
CAZ	2.6	2.8	2.9	3.2	3.3	3.4	3.6
CHA	12.4	11.7	11.8	10.8	9.1	8.3	7.9
EUR	14.0	15.1	15.7	16.5	17.0	17.4	17.3
IND	3.4	3.5	3.7	4.0	4.1	4.2	4.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.8	2.8	2.8	3.3	4.2	4.1	4.2
MEA	5.6	5.8	5.9	6.1	6.3	6.3	6.7
NEU	5.2	5.3	5.3	5.4	5.4	5.1	4.9
OAS	10.1	10.7	11.0	11.7	12.3	12.5	13.1
REF	18.7	18.8	18.6	18.8	19.2	19.3	19.5
SSA	0.8	1.0	1.2	1.6	2.0	2.3	2.7
USA	2.3	2.4	2.5	2.7	2.9	3.0	3.2

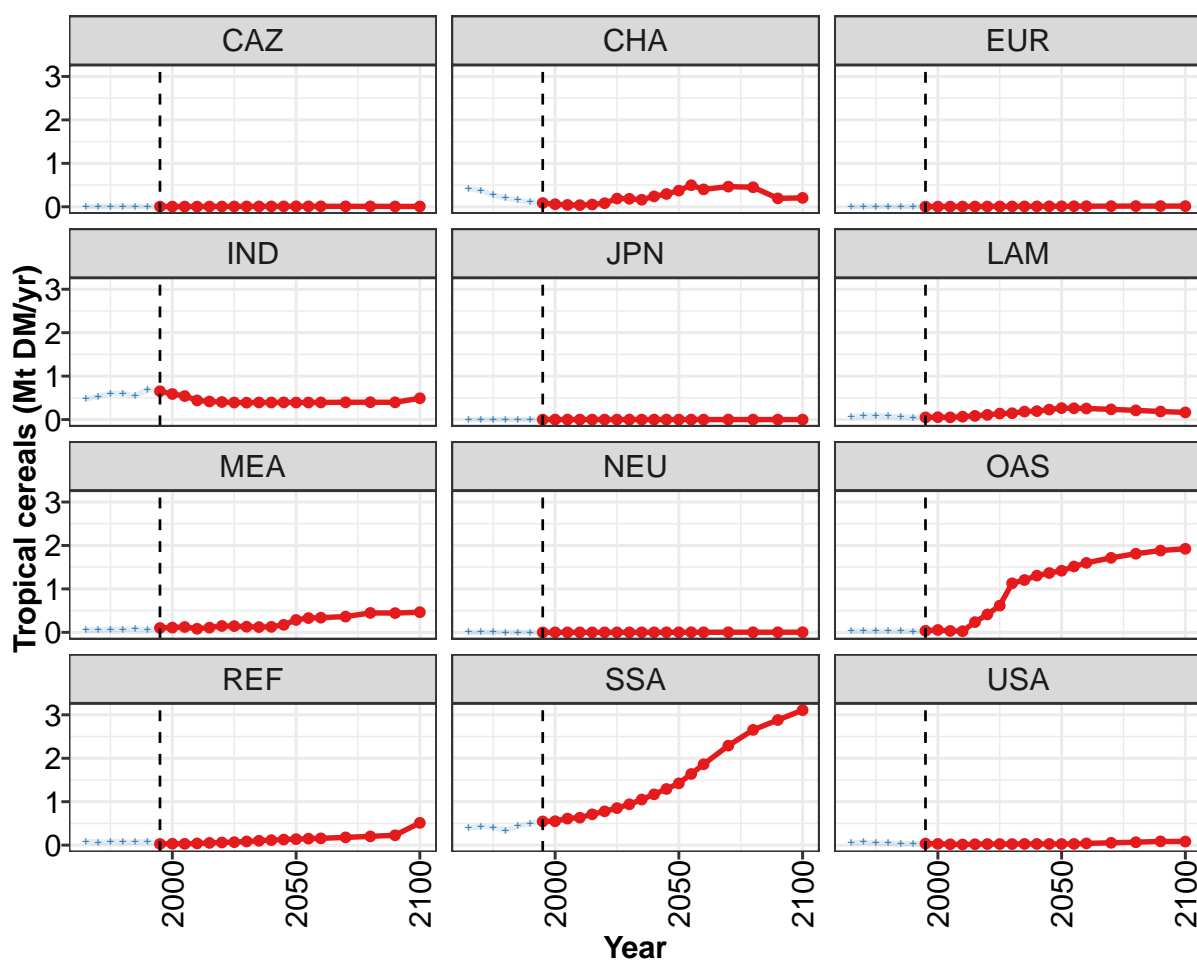
Table 657: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 2/2]

	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





**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

+— FAO

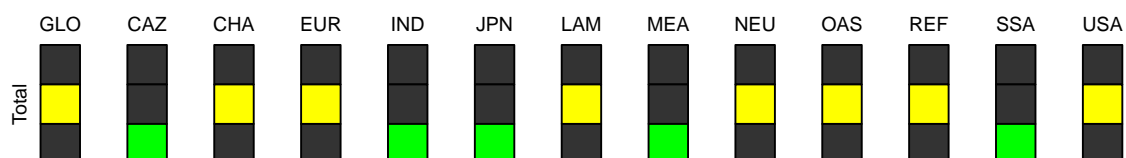


Figure 220: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.55	1.49	1.46	1.35	1.70	2.03	2.44	3.05	3.26	3.59	3.93
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	0.08	0.19	0.18	0.16	0.24	0.29
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	0.39	0.39	0.39	0.40
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	0.14	0.15	0.18	0.19	0.23
MEA	0.10	0.11	0.12	0.08	0.11	0.15	0.14	0.13	0.12	0.13	0.17
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	0.24	0.41	0.62	1.13	1.21	1.31	1.37
REF	0.03	0.03	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.13
SSA	0.55	0.55	0.61	0.63	0.71	0.78	0.85	0.94	1.05	1.17	1.29
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\_SSP4 — Demand—Seed—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4.34	4.84	5.07	5.73	6.27	6.33	6.98
CAZ	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHA	0.37	0.50	0.40	0.46	0.45	0.19	0.20
EUR	0.01	0.01	0.01	0.01	0.02	0.02	0.02
IND	0.39	0.39	0.40	0.40	0.40	0.40	0.49
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.26	0.26	0.25	0.23	0.21	0.19	0.17
MEA	0.29	0.33	0.34	0.36	0.45	0.44	0.46
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	1.42	1.52	1.60	1.72	1.81	1.88	1.92
REF	0.14	0.15	0.16	0.18	0.20	0.23	0.51
SSA	1.42	1.64	1.86	2.29	2.65	2.88	3.11
USA	0.03	0.03	0.04	0.05	0.07	0.09	0.08

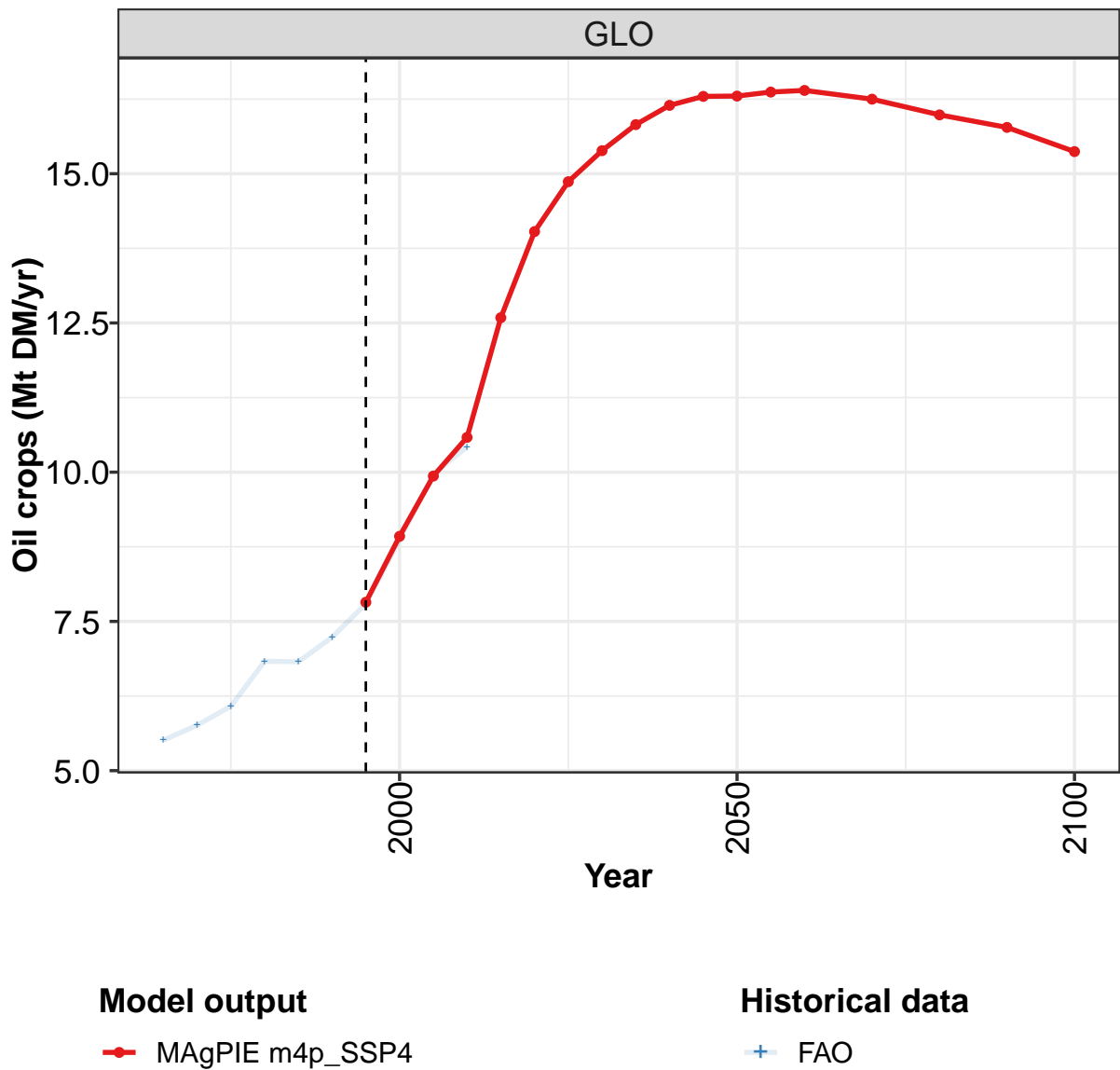
Table 660: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 2/2]

	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



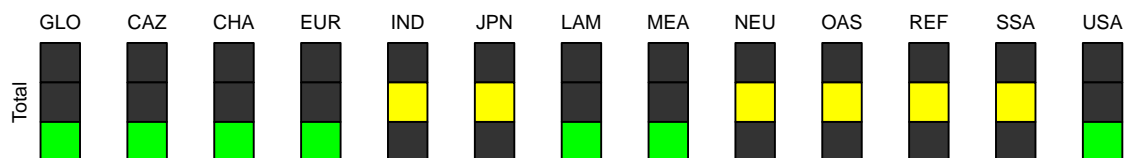
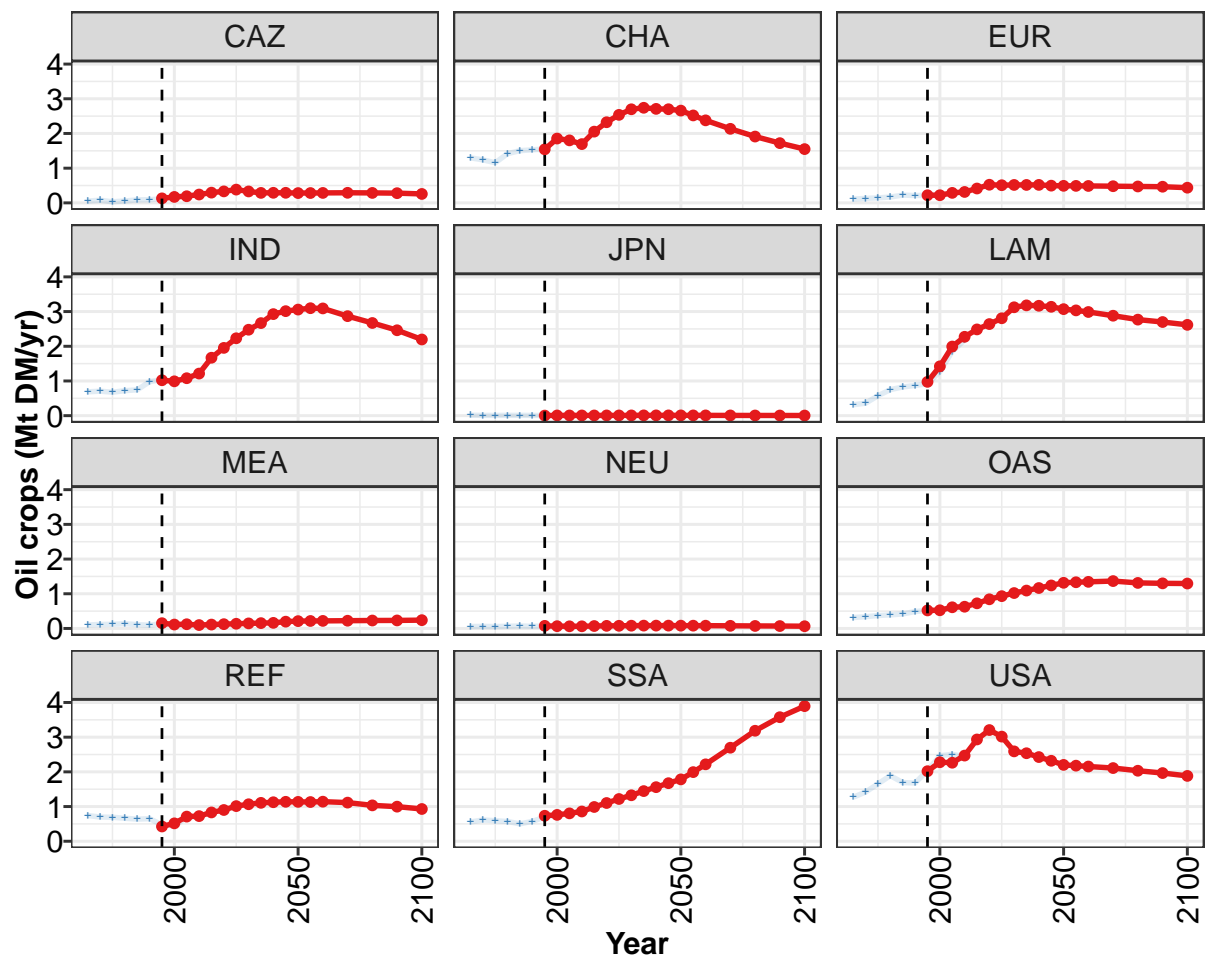


Figure 221: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.8	8.9	9.9	10.6	12.6	14.0	14.9	15.4	15.8	16.1	16.3
CAZ	0.1	0.2	0.2	0.2	0.3	0.3	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	2.7	2.7	2.7
EUR	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5
IND	1.0	1.0	1.1	1.2	1.7	2.0	2.2	2.5	2.7	2.9	3.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.0	1.4	2.0	2.3	2.5	2.6	2.8	3.1	3.2	3.2	3.1
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	1.2	1.2
REF	0.4	0.5	0.7	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.1
SSA	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.6	1.7
USA	2.0	2.3	2.3	2.5	2.9	3.2	3.0	2.6	2.5	2.4	2.3

Table 662: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops (Mt DM/yr) [PART 1/2]

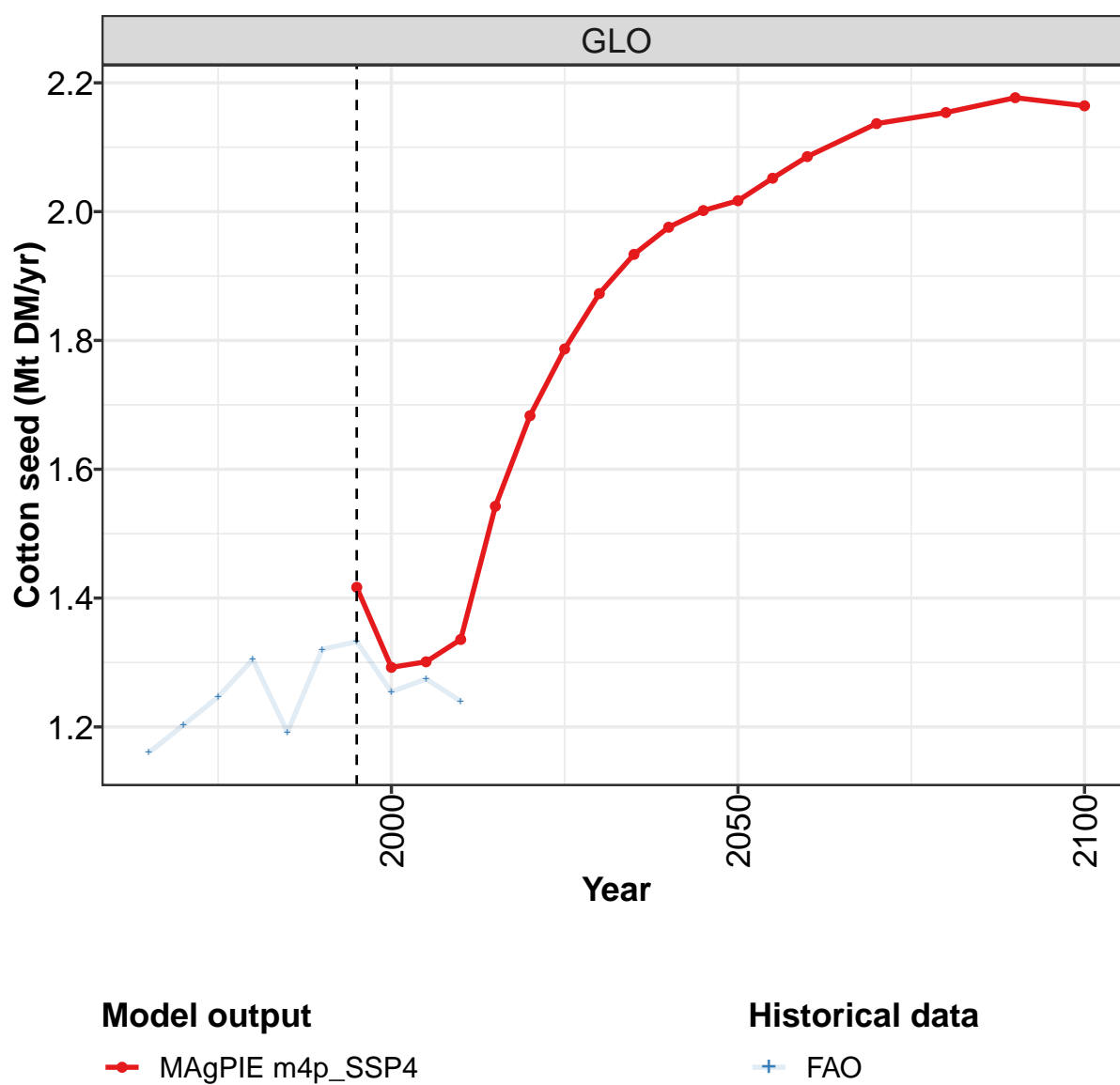
	2050	2055	2060	2070	2080	2090	2100
GLO	16.3	16.4	16.4	16.2	16.0	15.8	15.4
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	2.7	2.5	2.4	2.1	1.9	1.7	1.6
EUR	0.5	0.5	0.5	0.5	0.5	0.5	0.4
IND	3.1	3.1	3.1	2.9	2.7	2.5	2.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.1	3.0	3.0	2.9	2.8	2.7	2.6
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.3	1.3	1.3	1.4	1.3	1.3	1.3
REF	1.1	1.1	1.1	1.1	1.0	1.0	0.9
SSA	1.8	2.0	2.2	2.7	3.2	3.6	3.9
USA	2.2	2.2	2.2	2.1	2.0	2.0	1.9

Table 663: MAgPIE m4p\_SSP4 — 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



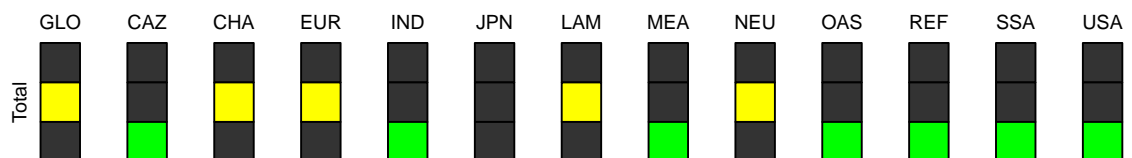
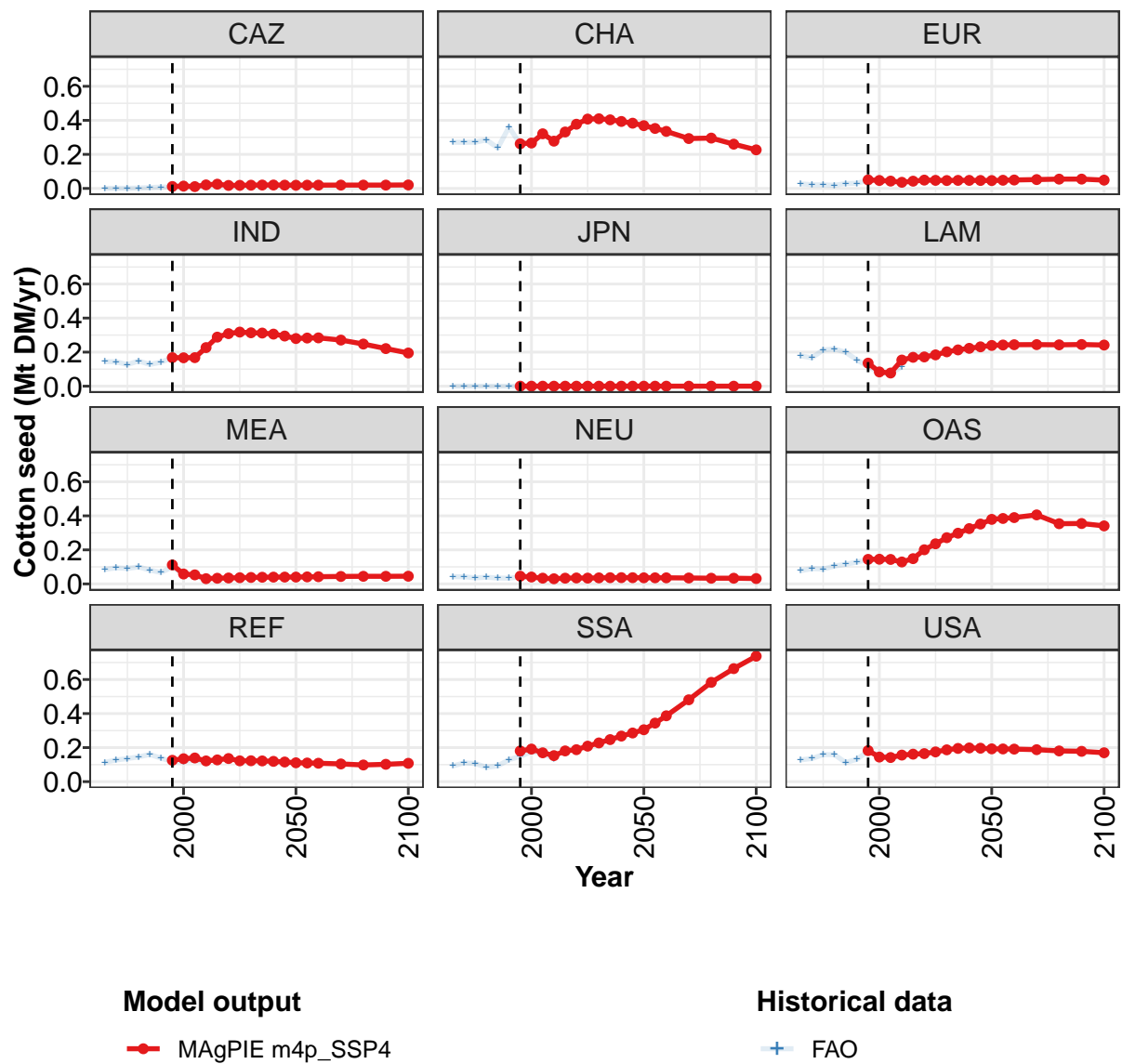


Figure 222: MAGPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.42	1.29	1.30	1.34	1.54	1.68	1.79	1.87	1.93	1.98	2.00
CAZ	0.01	0.01	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.26	0.27	0.32	0.28	0.33	0.38	0.41	0.41	0.40	0.39	0.38
EUR	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
IND	0.17	0.17	0.17	0.23	0.29	0.31	0.32	0.31	0.31	0.31	0.29
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	0.18	0.20	0.21	0.22	0.23
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	0.03	0.03	0.04	0.04	0.04	0.04
OAS	0.14	0.15	0.14	0.13	0.15	0.20	0.24	0.27	0.30	0.32	0.35
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	0.19	0.21	0.23	0.25	0.27	0.29
USA	0.18	0.14	0.14	0.16	0.16	0.16	0.17	0.19	0.20	0.20	0.20

Table 665: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

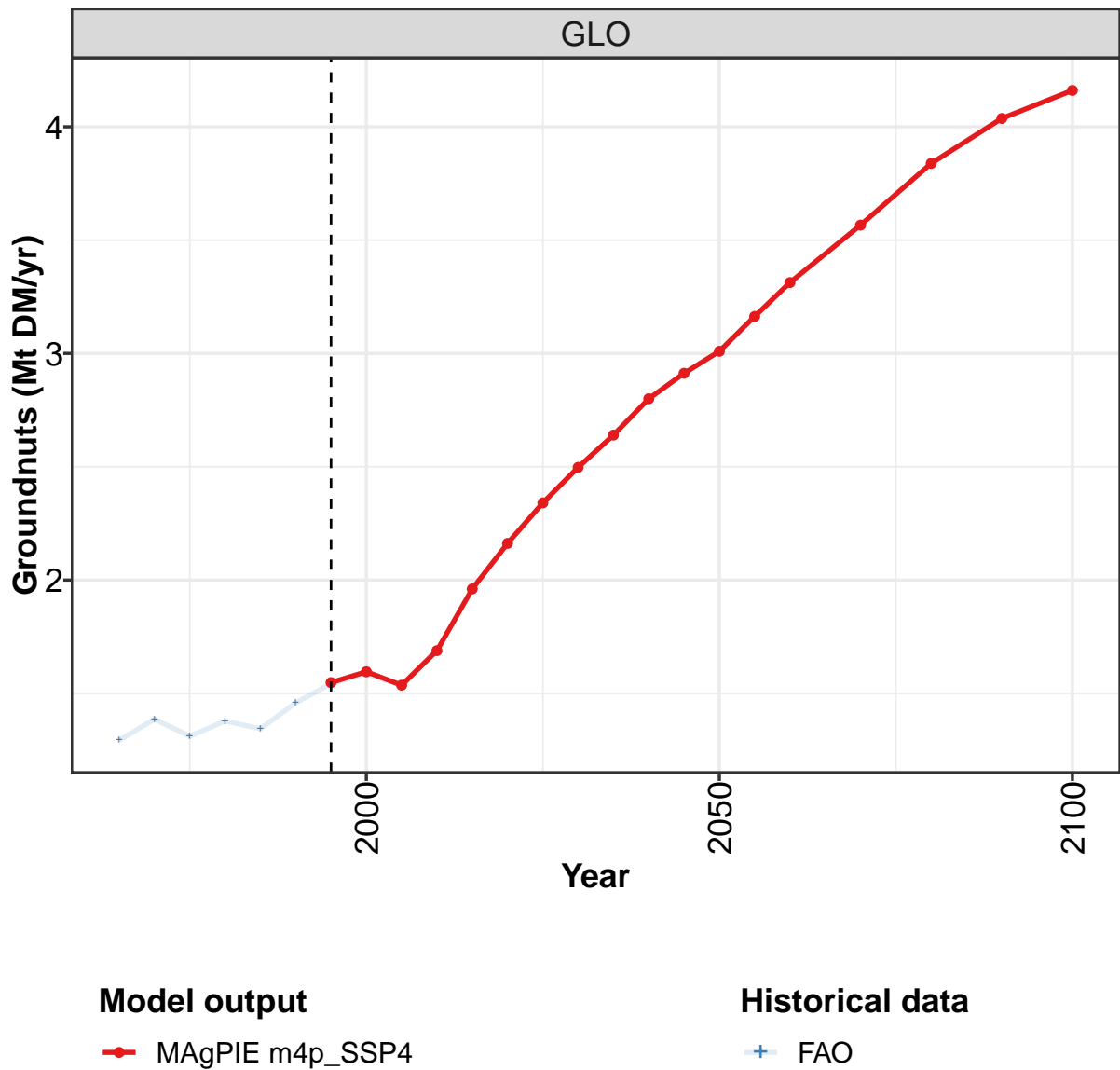
	2050	2055	2060	2070	2080	2090	2100
GLO	2.02	2.05	2.09	2.14	2.15	2.18	2.16
CAZ	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.37	0.35	0.34	0.29	0.30	0.26	0.23
EUR	0.05	0.05	0.05	0.05	0.05	0.05	0.05
IND	0.28	0.28	0.28	0.27	0.25	0.22	0.19
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.24	0.24	0.24	0.24	0.24	0.24	0.24
MEA	0.04	0.04	0.04	0.04	0.04	0.04	0.05
NEU	0.04	0.04	0.04	0.03	0.03	0.03	0.03
OAS	0.38	0.38	0.39	0.41	0.35	0.35	0.34
REF	0.11	0.11	0.11	0.10	0.10	0.10	0.11
SSA	0.31	0.34	0.39	0.48	0.58	0.66	0.74
USA	0.19	0.19	0.19	0.19	0.18	0.18	0.17

Table 666: MAgPIE m4p\_SSP4 — 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



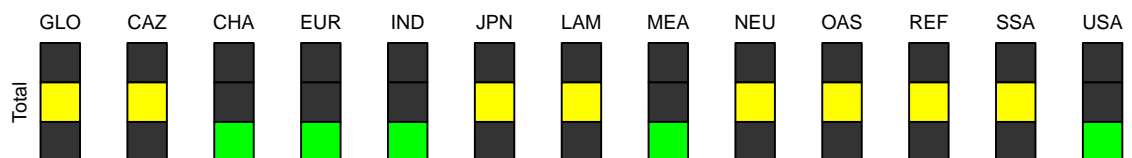
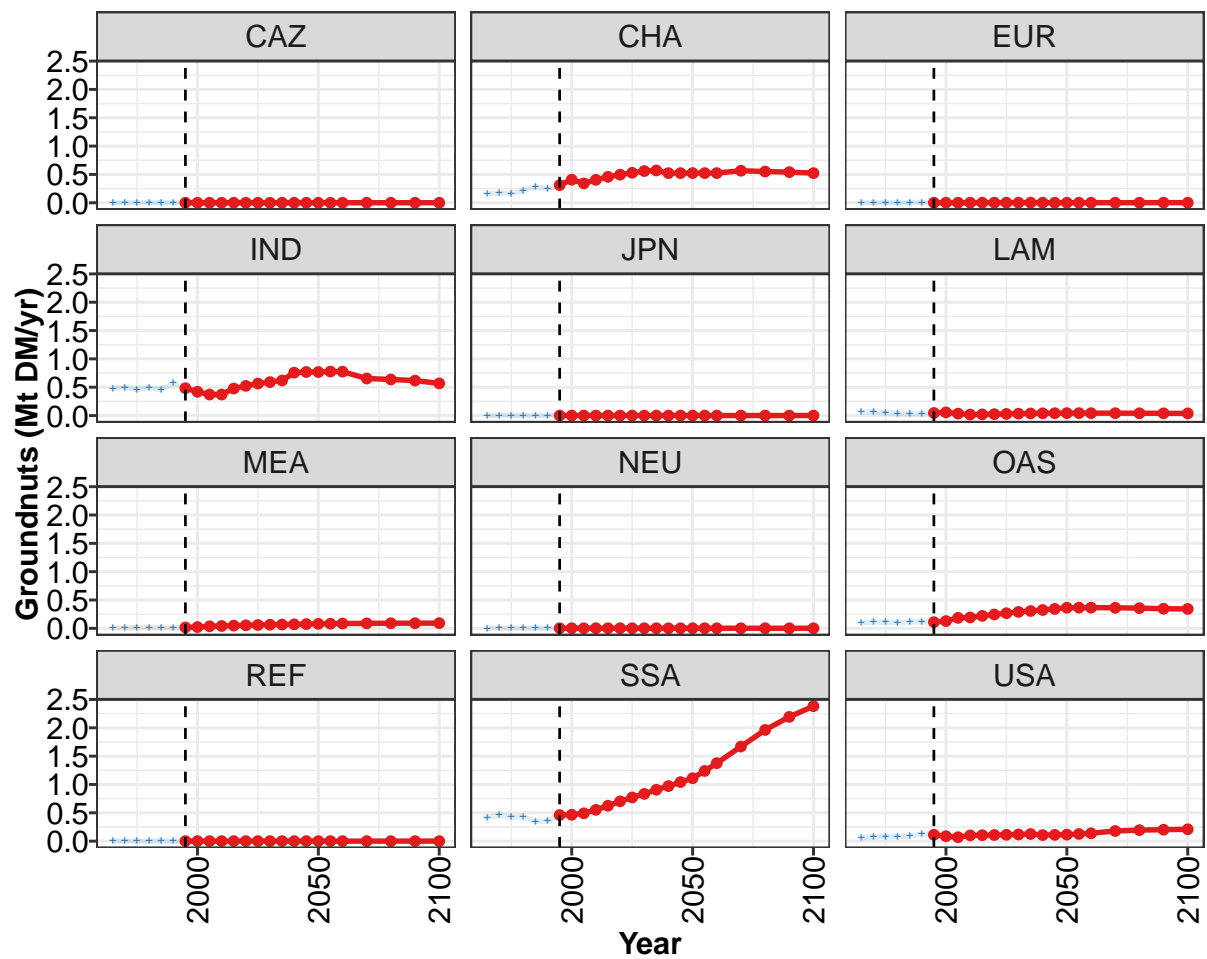


Figure 223: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Groundnuts (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.55	1.60	1.54	1.69	1.96	2.16	2.34	2.50	2.64	2.80	2.91
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	0.56	0.57	0.52	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	0.48	0.42	0.37	0.37	0.48	0.52	0.56	0.59	0.62	0.76	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	0.05	0.06	0.03	0.02	0.02	0.03	0.03	0.03	0.04	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	0.08
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	0.24	0.27	0.29	0.31	0.32	0.34
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	0.70	0.77	0.83	0.91	0.97	1.04
USA	0.11	0.09	0.07	0.10	0.11	0.11	0.11	0.12	0.13	0.11	0.11

Table 668: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

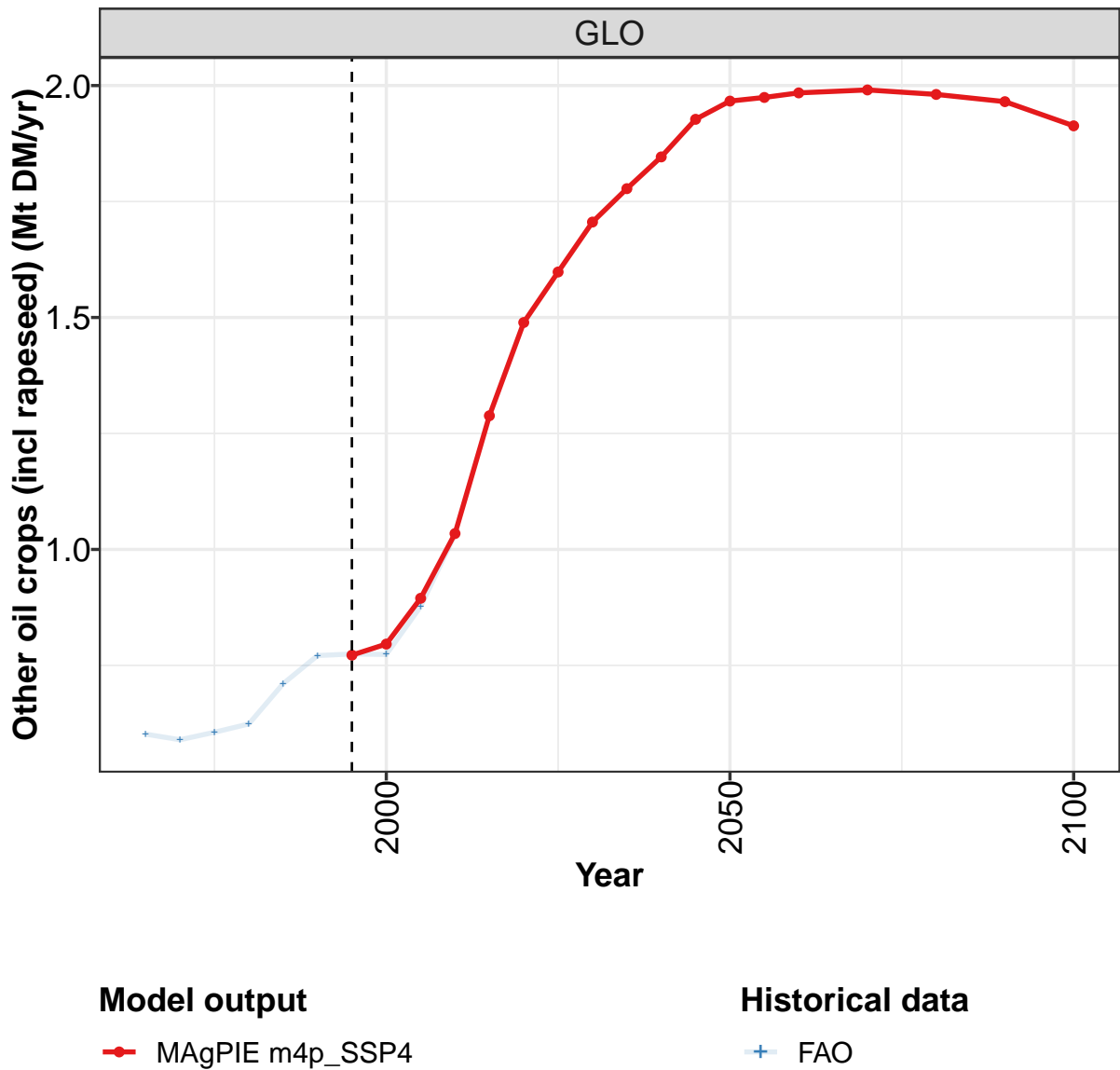
	2050	2055	2060	2070	2080	2090	2100
GLO	3.01	3.16	3.31	3.57	3.84	4.04	4.16
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.52	0.52	0.52	0.57	0.55	0.54	0.52
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.77	0.78	0.77	0.65	0.64	0.62	0.57
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MEA	0.08	0.08	0.08	0.09	0.09	0.09	0.09
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.36	0.37	0.37	0.36	0.36	0.35	0.34
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.11	1.24	1.38	1.67	1.96	2.19	2.38
USA	0.12	0.13	0.14	0.18	0.19	0.20	0.21

Table 669: MAgPIE m4p\_SSP4 — 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)



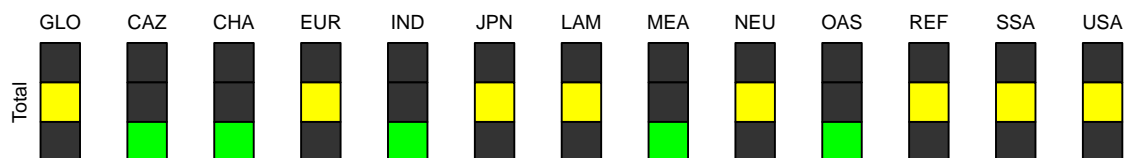
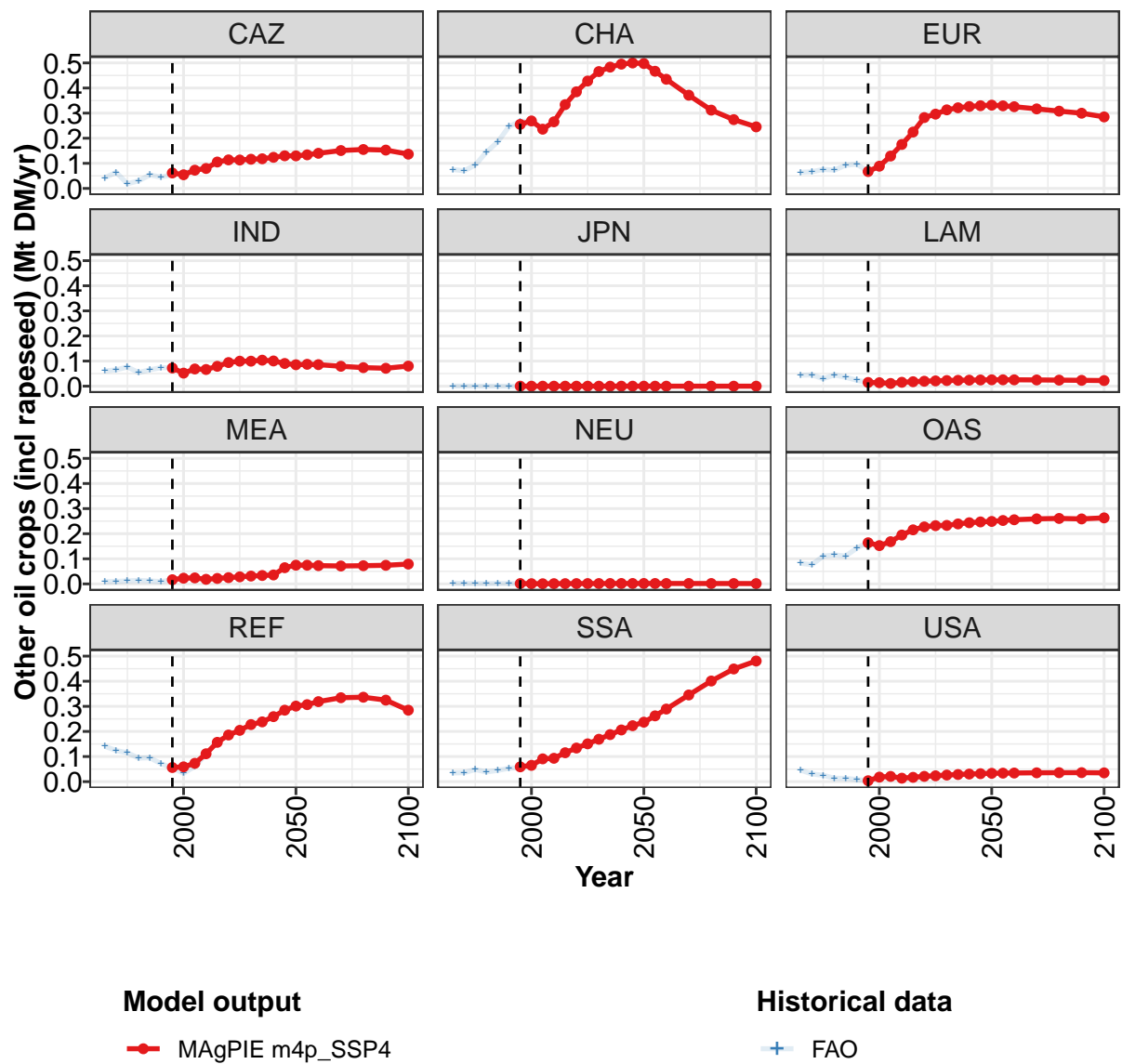


Figure 224: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.77	0.80	0.89	1.03	1.29	1.49	1.60	1.71	1.78	1.85	1.93
CAZ	0.06	0.05	0.07	0.08	0.11	0.11	0.11	0.12	0.12	0.12	0.13
CHA	0.26	0.27	0.24	0.27	0.33	0.39	0.43	0.47	0.48	0.50	0.50
EUR	0.07	0.09	0.13	0.18	0.22	0.28	0.30	0.31	0.32	0.33	0.33
IND	0.07	0.05	0.07	0.07	0.08	0.09	0.10	0.10	0.10	0.10	0.09
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	0.06
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.16	0.15	0.17	0.19	0.22	0.23	0.23	0.23	0.24	0.24	0.25
REF	0.06	0.06	0.07	0.11	0.16	0.19	0.20	0.23	0.24	0.26	0.28
SSA	0.06	0.07	0.09	0.09	0.12	0.13	0.15	0.17	0.19	0.21	0.22
USA	0.00	0.02	0.02	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.03

Table 671: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

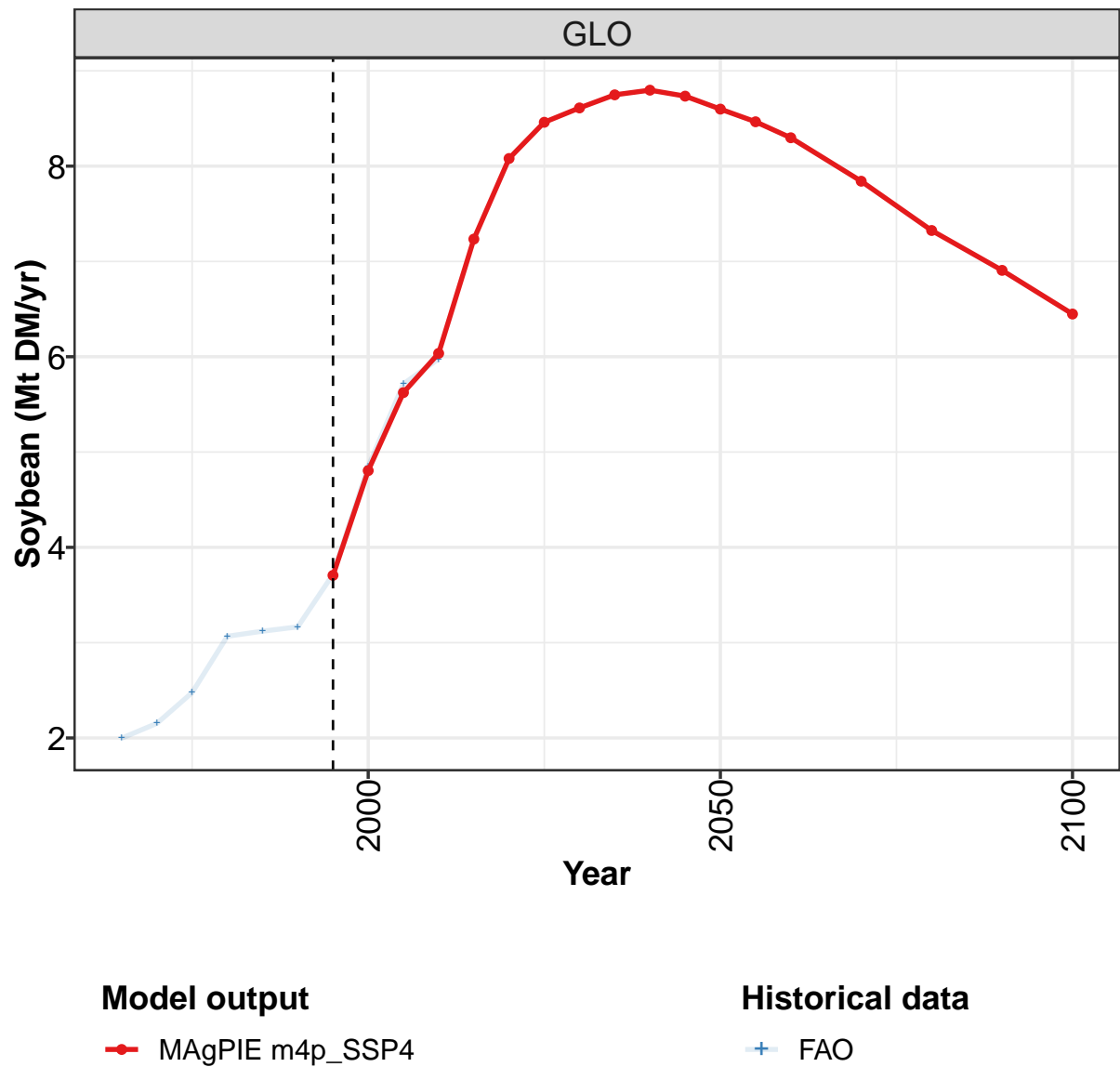
	2050	2055	2060	2070	2080	2090	2100
GLO	1.97	1.97	1.98	1.99	1.98	1.97	1.91
CAZ	0.13	0.13	0.14	0.15	0.16	0.15	0.14
CHA	0.50	0.47	0.43	0.37	0.31	0.27	0.25
EUR	0.33	0.33	0.33	0.32	0.31	0.30	0.29
IND	0.09	0.09	0.09	0.08	0.07	0.07	0.08
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.03	0.03	0.03	0.02	0.02	0.02	0.02
MEA	0.07	0.07	0.07	0.07	0.07	0.07	0.08
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.25	0.25	0.26	0.26	0.26	0.26	0.26
REF	0.30	0.31	0.32	0.33	0.34	0.32	0.28
SSA	0.24	0.26	0.29	0.35	0.40	0.45	0.48
USA	0.03	0.03	0.03	0.04	0.04	0.04	0.03

Table 672: MAgPIE m4p\_SSP4 — 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



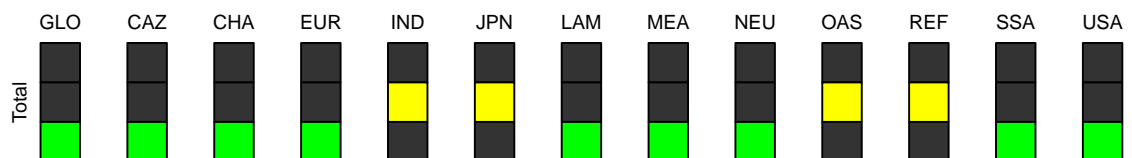
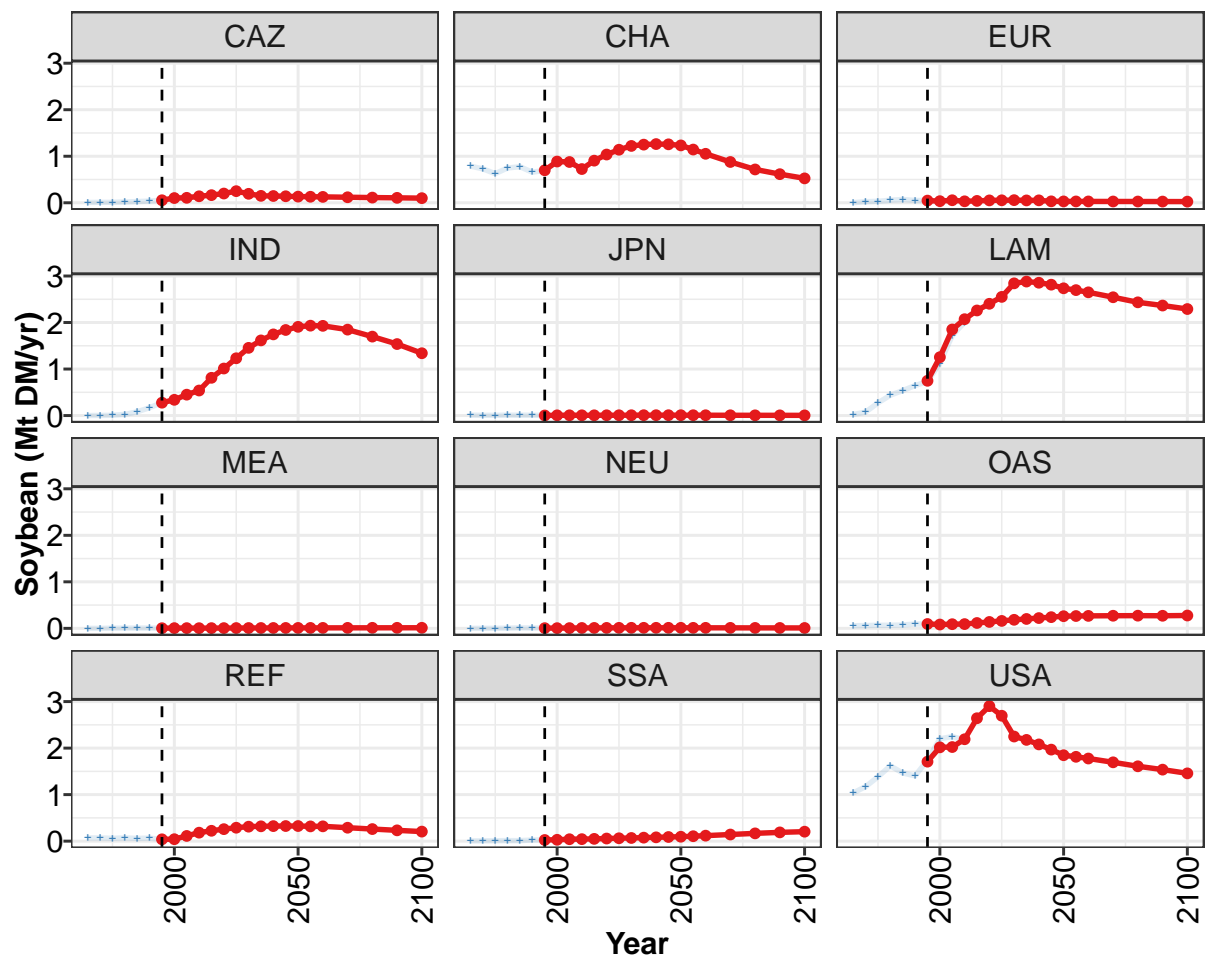


Figure 225: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.71	4.81	5.62	6.04	7.23	8.08	8.46	8.61	8.75	8.80	8.73
CAZ	0.05	0.10	0.11	0.14	0.16	0.20	0.25	0.19	0.15	0.15	0.14
CHA	0.70	0.89	0.88	0.73	0.91	1.04	1.14	1.22	1.25	1.26	1.26
EUR	0.05	0.04	0.05	0.03	0.04	0.05	0.05	0.06	0.05	0.05	0.03
IND	0.28	0.34	0.45	0.54	0.81	1.01	1.23	1.46	1.62	1.75	1.84
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	2.40	2.55	2.84	2.88	2.86	2.81
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	0.22	0.24
REF	0.04	0.04	0.11	0.18	0.22	0.26	0.29	0.31	0.32	0.32	0.33
SSA	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.08	0.09
USA	1.71	2.02	2.02	2.19	2.64	2.90	2.70	2.25	2.18	2.08	1.97

Table 674: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

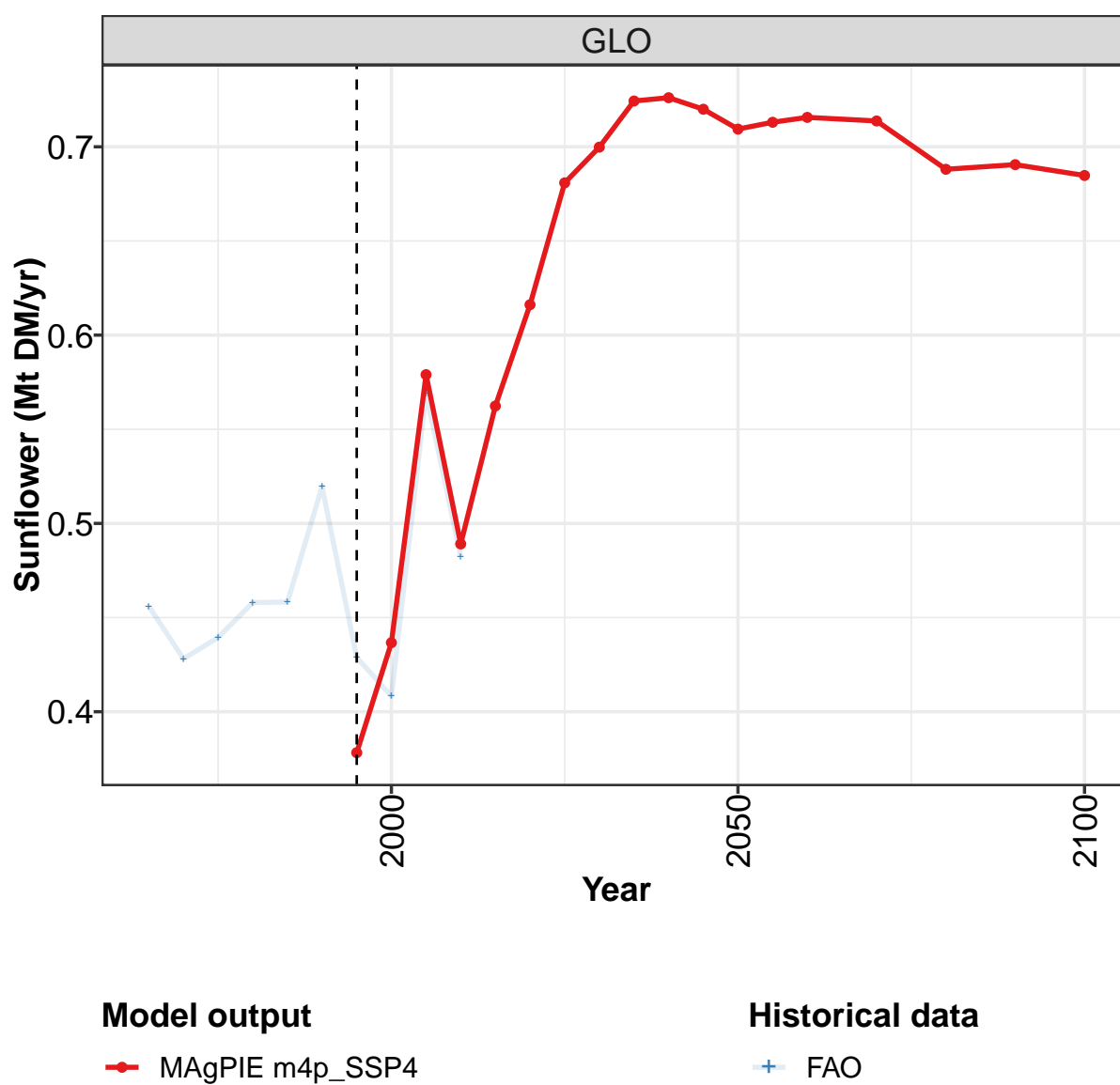
	2050	2055	2060	2070	2080	2090	2100
GLO	8.60	8.47	8.30	7.84	7.32	6.91	6.45
CAZ	0.13	0.13	0.13	0.12	0.11	0.11	0.10
CHA	1.23	1.14	1.05	0.88	0.72	0.62	0.52
EUR	0.03	0.03	0.03	0.03	0.03	0.03	0.03
IND	1.91	1.93	1.93	1.85	1.70	1.54	1.34
JPN	0.01	0.01	0.01	0.01	0.01	0.00	0.00
LAM	2.74	2.70	2.65	2.54	2.43	2.37	2.29
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	0.26	0.27	0.27	0.27	0.27	0.27	0.28
REF	0.33	0.32	0.32	0.29	0.26	0.23	0.21
SSA	0.10	0.11	0.12	0.14	0.17	0.19	0.20
USA	1.85	1.81	1.78	1.69	1.61	1.54	1.46

Table 675: MAgPIE m4p\_SSP4 — 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





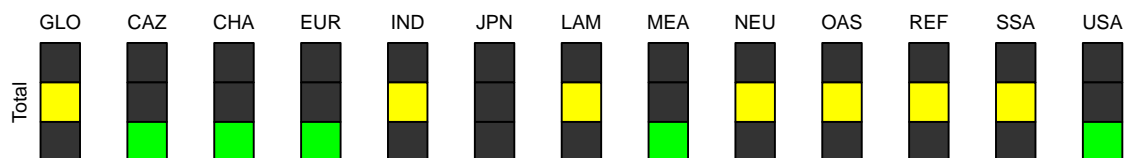
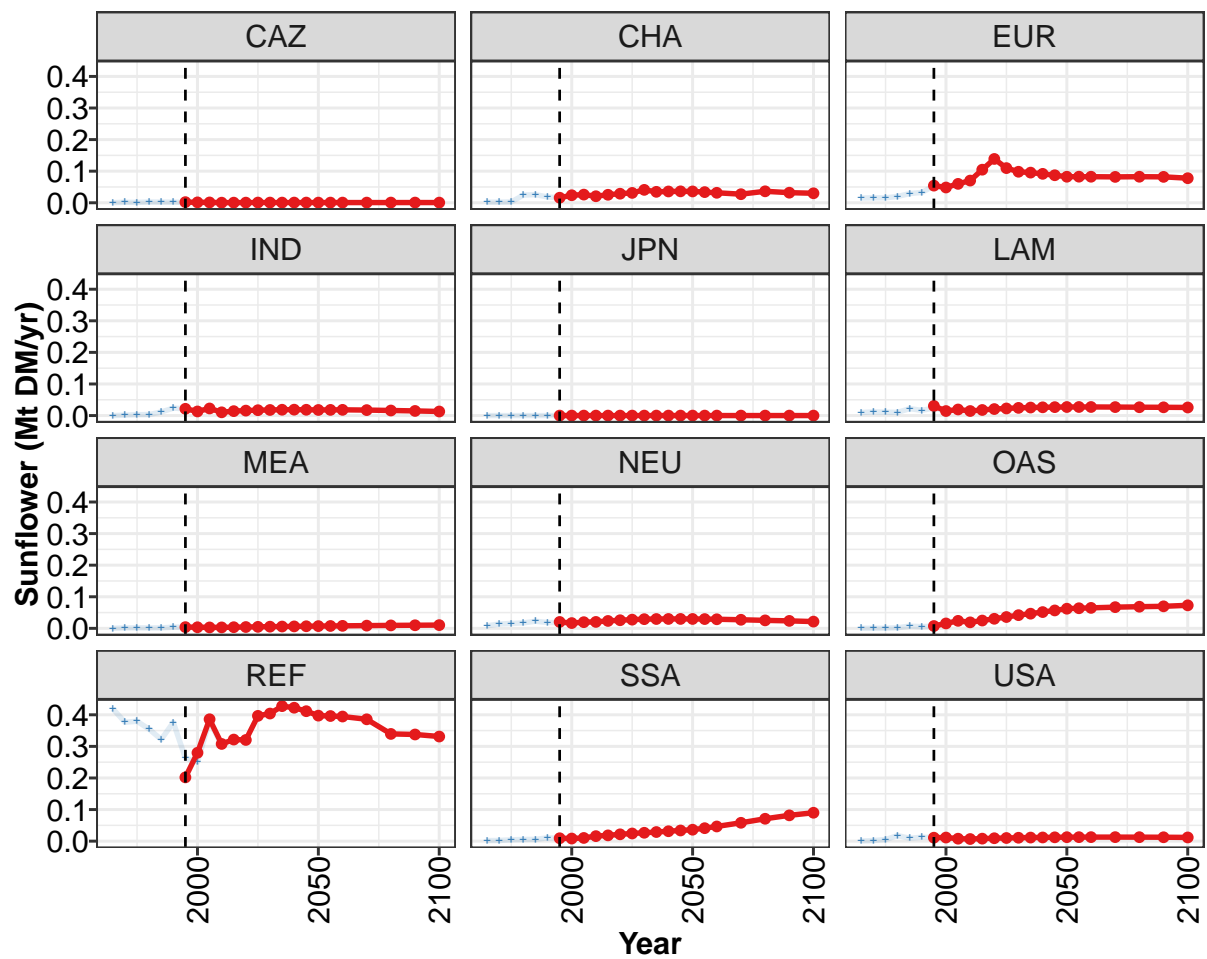


Figure 226: MAGPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.378	0.437	0.579	0.489	0.562	0.616	0.681	0.700	0.724	0.726	0.720
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	0.031	0.041	0.035	0.036	0.036
EUR	0.054	0.048	0.060	0.070	0.105	0.139	0.110	0.098	0.095	0.092	0.087
IND	0.021	0.013	0.023	0.010	0.014	0.016	0.017	0.018	0.018	0.019	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	0.023	0.024	0.025	0.026	0.027
MEA	0.004	0.004	0.003	0.003	0.004	0.004	0.005	0.005	0.006	0.006	0.007
NEU	0.020	0.017	0.020	0.020	0.023	0.026	0.028	0.029	0.030	0.030	0.030
OAS	0.007	0.016	0.024	0.019	0.025	0.030	0.036	0.042	0.047	0.052	0.057
REF	0.202	0.280	0.386	0.308	0.322	0.320	0.397	0.404	0.427	0.422	0.411
SSA	0.009	0.008	0.010	0.016	0.018	0.022	0.024	0.027	0.029	0.031	0.034
USA	0.011	0.011	0.008	0.007	0.008	0.009	0.010	0.011	0.011	0.012	0.012

Table 677: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

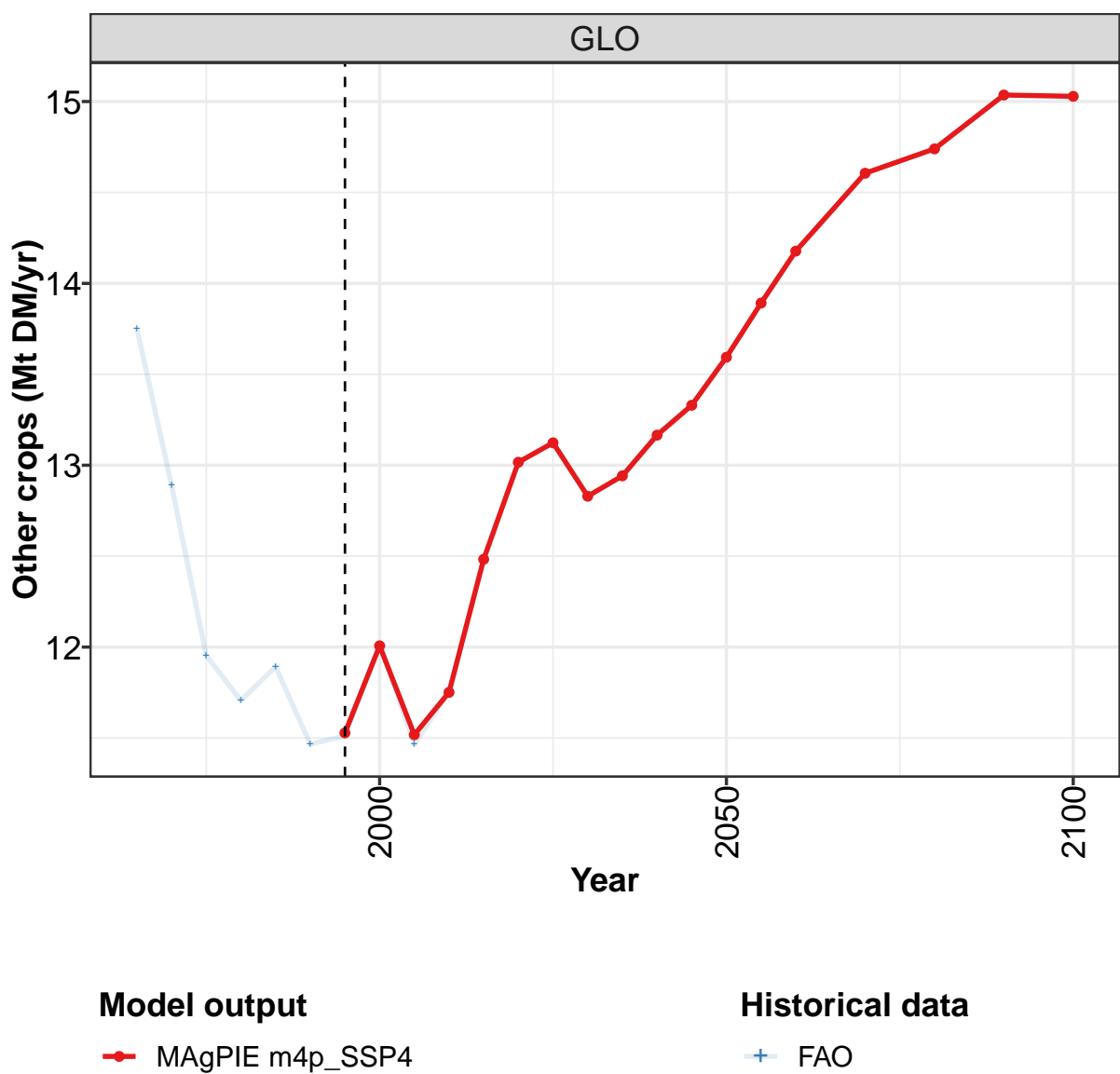
	2050	2055	2060	2070	2080	2090	2100
GLO	0.709	0.713	0.716	0.714	0.688	0.691	0.685
CAZ	0.001	0.001	0.001	0.001	0.001	0.001	0.001
CHA	0.036	0.034	0.032	0.027	0.036	0.032	0.030
EUR	0.083	0.083	0.083	0.082	0.082	0.082	0.078
IND	0.018	0.018	0.018	0.017	0.016	0.015	0.013
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.027	0.027	0.027	0.027	0.026	0.026	0.026
MEA	0.007	0.008	0.008	0.009	0.009	0.010	0.010
NEU	0.030	0.029	0.029	0.027	0.025	0.024	0.021
OAS	0.062	0.064	0.065	0.067	0.069	0.070	0.073
REF	0.397	0.396	0.395	0.386	0.339	0.338	0.331
SSA	0.036	0.041	0.046	0.058	0.071	0.082	0.090
USA	0.013	0.013	0.013	0.013	0.013	0.012	0.012

Table 678: MAgPIE m4p\_SSP4 — 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



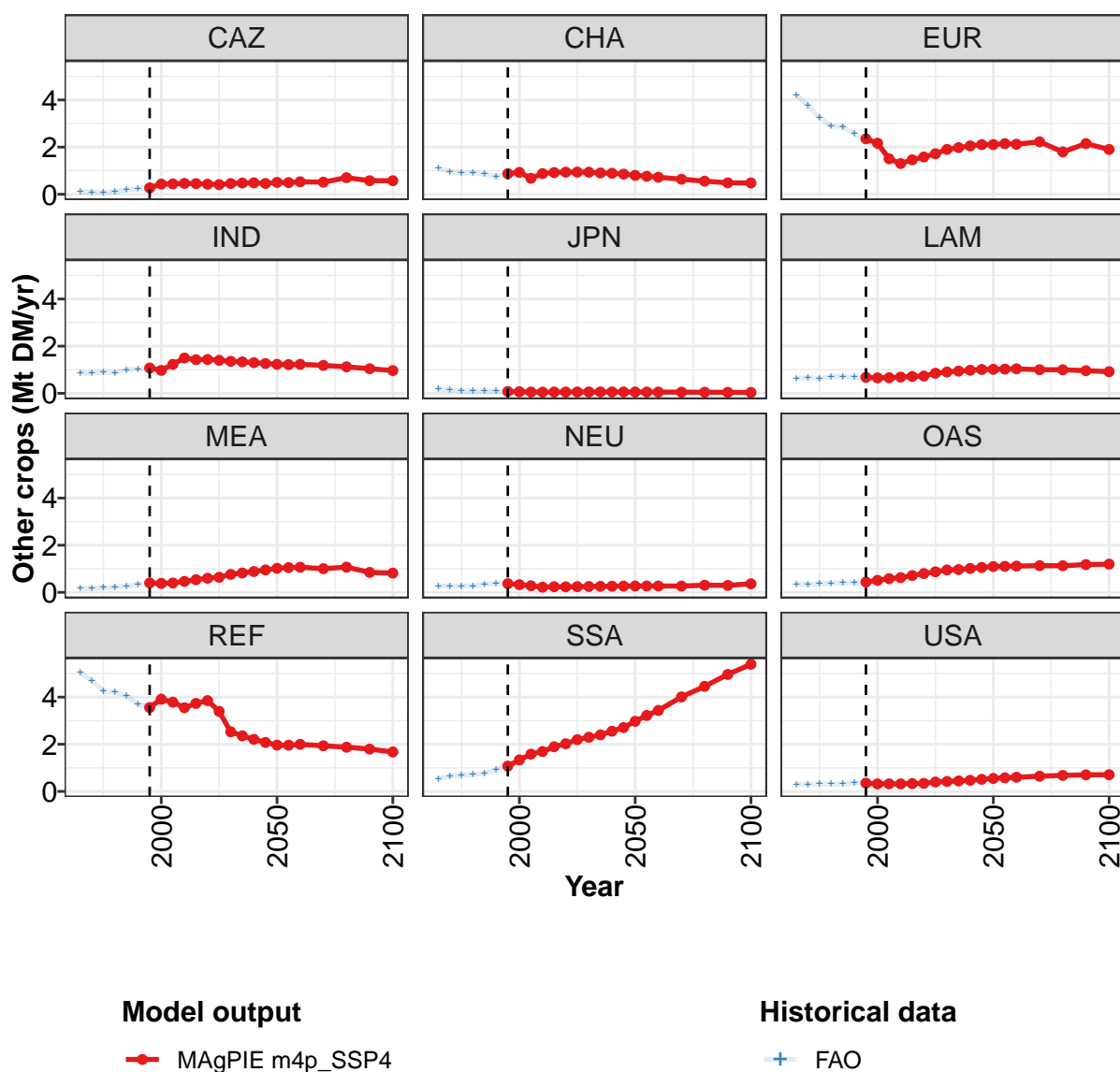


Figure 227: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.5	12.0	11.5	11.8	12.5	13.0	13.1	12.8	12.9	13.2	13.3
CAZ	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5
CHA	0.9	0.9	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
EUR	2.4	2.2	1.5	1.3	1.5	1.6	1.7	1.9	2.0	2.1	2.1
IND	1.1	1.0	1.2	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3
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	0.9	0.9	0.9	1.0	1.0
MEA	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.8	0.8	0.9	1.0
NEU	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
OAS	0.4	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.0	1.1
REF	3.6	3.9	3.8	3.5	3.7	3.9	3.4	2.5	2.4	2.2	2.1
SSA	1.1	1.3	1.6	1.7	1.9	2.0	2.2	2.3	2.4	2.6	2.7
USA	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5

Table 680: MAgPIE m4p-SSP4 — Demand—Seed—Crops—Other crops (Mt DM/yr) [PART 1/2]

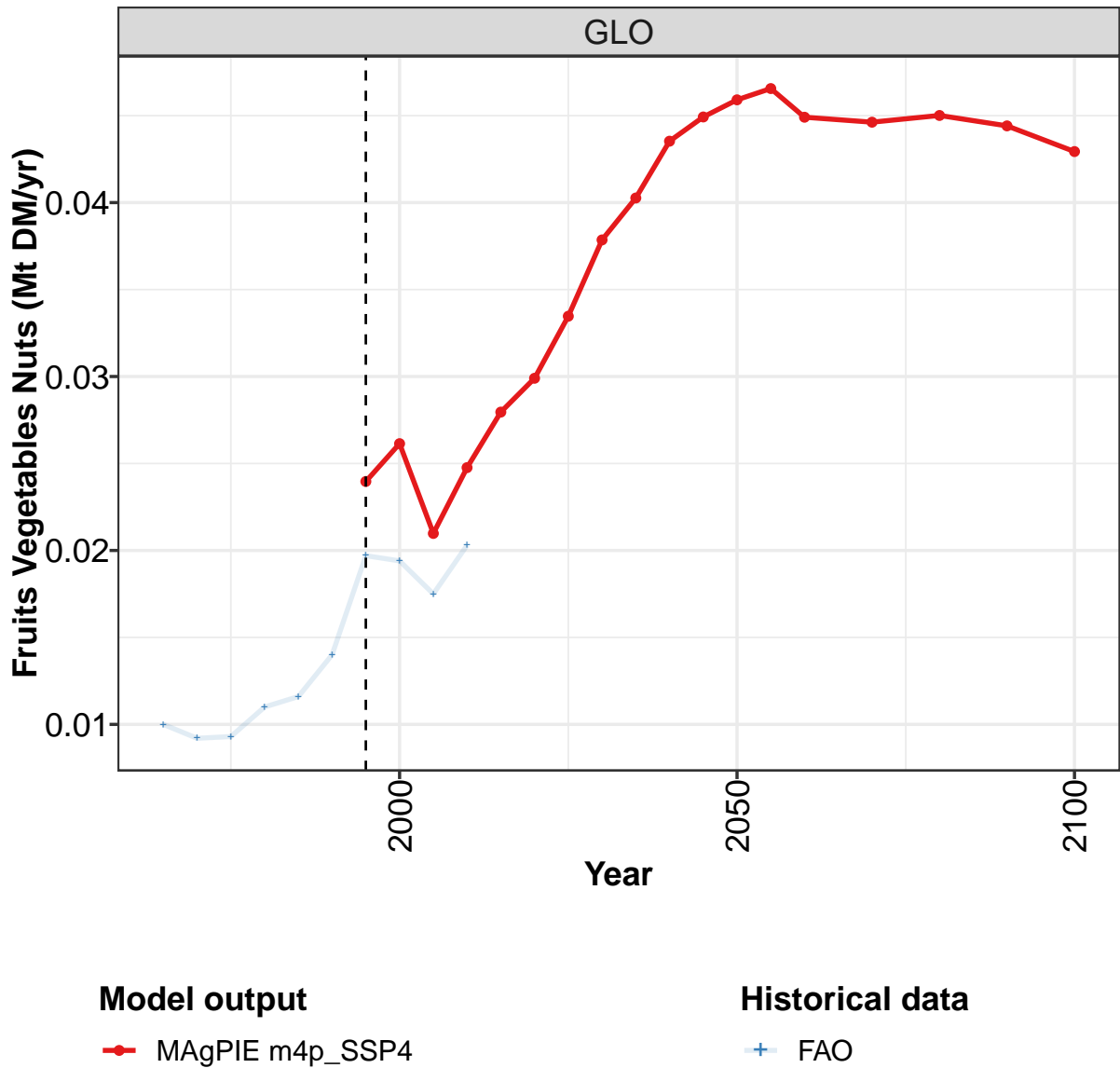
	2050	2055	2060	2070	2080	2090	2100
GLO	13.6	13.9	14.2	14.6	14.7	15.0	15.0
CAZ	0.5	0.5	0.5	0.5	0.7	0.6	0.6
CHA	0.8	0.8	0.7	0.6	0.6	0.5	0.5
EUR	2.1	2.1	2.1	2.2	1.8	2.1	1.9
IND	1.2	1.2	1.2	1.2	1.1	1.0	1.0
JPN	0.1	0.1	0.1	0.0	0.0	0.0	0.0
LAM	1.0	1.0	1.0	1.0	1.0	1.0	0.9
MEA	1.0	1.1	1.1	1.0	1.1	0.8	0.8
NEU	0.3	0.3	0.3	0.3	0.3	0.3	0.4
OAS	1.1	1.1	1.1	1.1	1.1	1.2	1.2
REF	2.0	2.0	2.0	1.9	1.9	1.8	1.7
SSA	3.0	3.2	3.4	4.0	4.5	5.0	5.4
USA	0.5	0.6	0.6	0.6	0.7	0.7	0.7

Table 681: MAgPIE m4p-SSP4 — 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



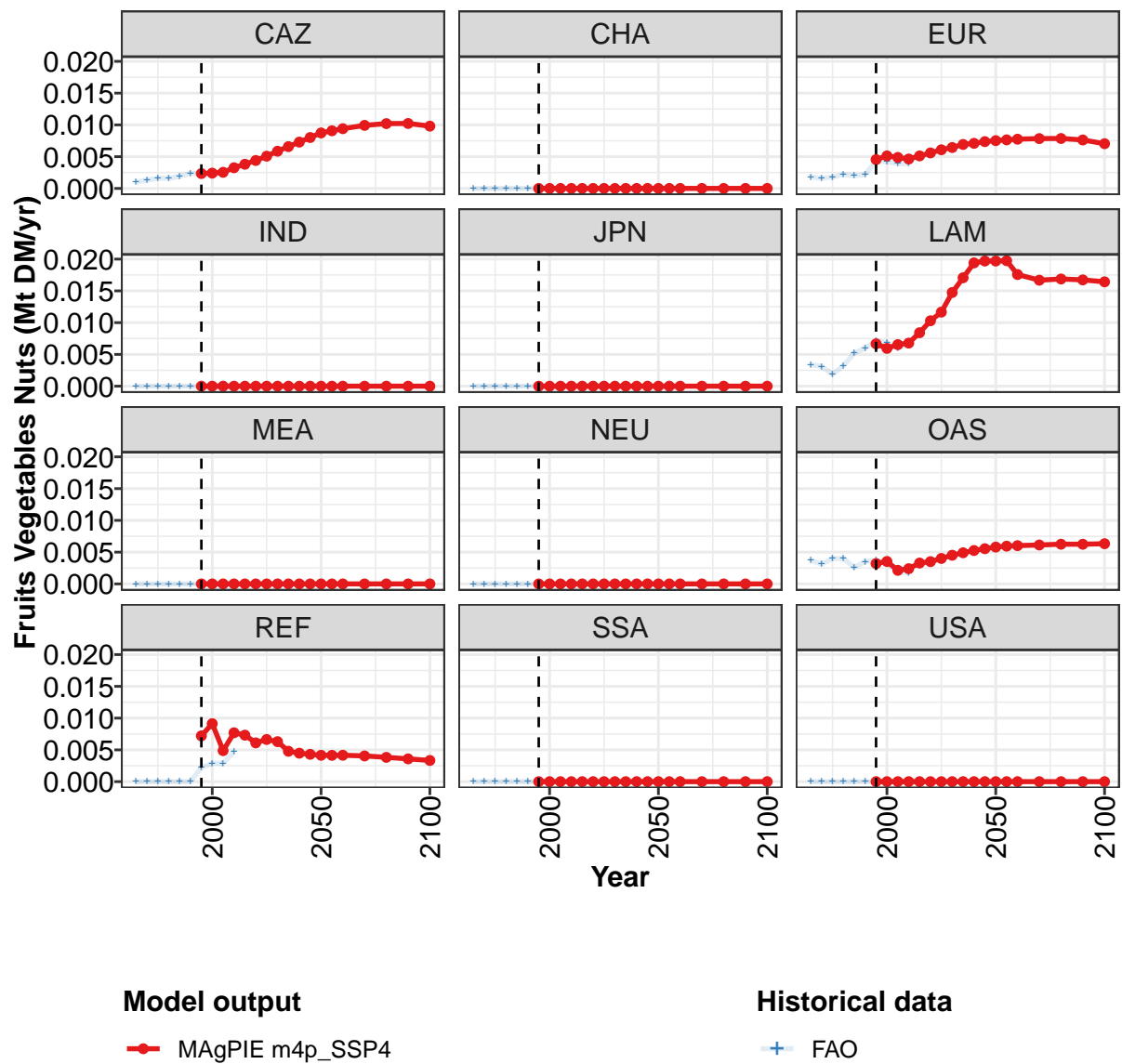


Figure 228: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0240	0.0261	0.0210	0.0248	0.0280	0.0299	0.0335	0.0379	0.0403	0.0435	0.0449
CAZ	0.0023	0.0024	0.0025	0.0033	0.0038	0.0044	0.0051	0.0059	0.0066	0.0073	0.0080
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	0.0051	0.0056	0.0061	0.0064	0.0069	0.0071	0.0074
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	0.0084	0.0103	0.0117	0.0147	0.0171	0.0194	0.0197
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	0.0033	0.0035	0.0040	0.0045	0.0049	0.0053	0.0055
REF	0.0072	0.0091	0.0049	0.0077	0.0073	0.0061	0.0066	0.0063	0.0048	0.0045	0.0043
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\_SSP4 — Demand—Seed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.0459	0.0466	0.0449	0.0446	0.0450	0.0444	0.0429
CAZ	0.0087	0.0091	0.0094	0.0099	0.0102	0.0102	0.0098
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0075	0.0076	0.0078	0.0078	0.0079	0.0076	0.0070
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	0.0197	0.0197	0.0176	0.0167	0.0169	0.0167	0.0164
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	0.0058	0.0059	0.0060	0.0061	0.0062	0.0062	0.0063
REF	0.0042	0.0041	0.0042	0.0040	0.0038	0.0036	0.0033
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

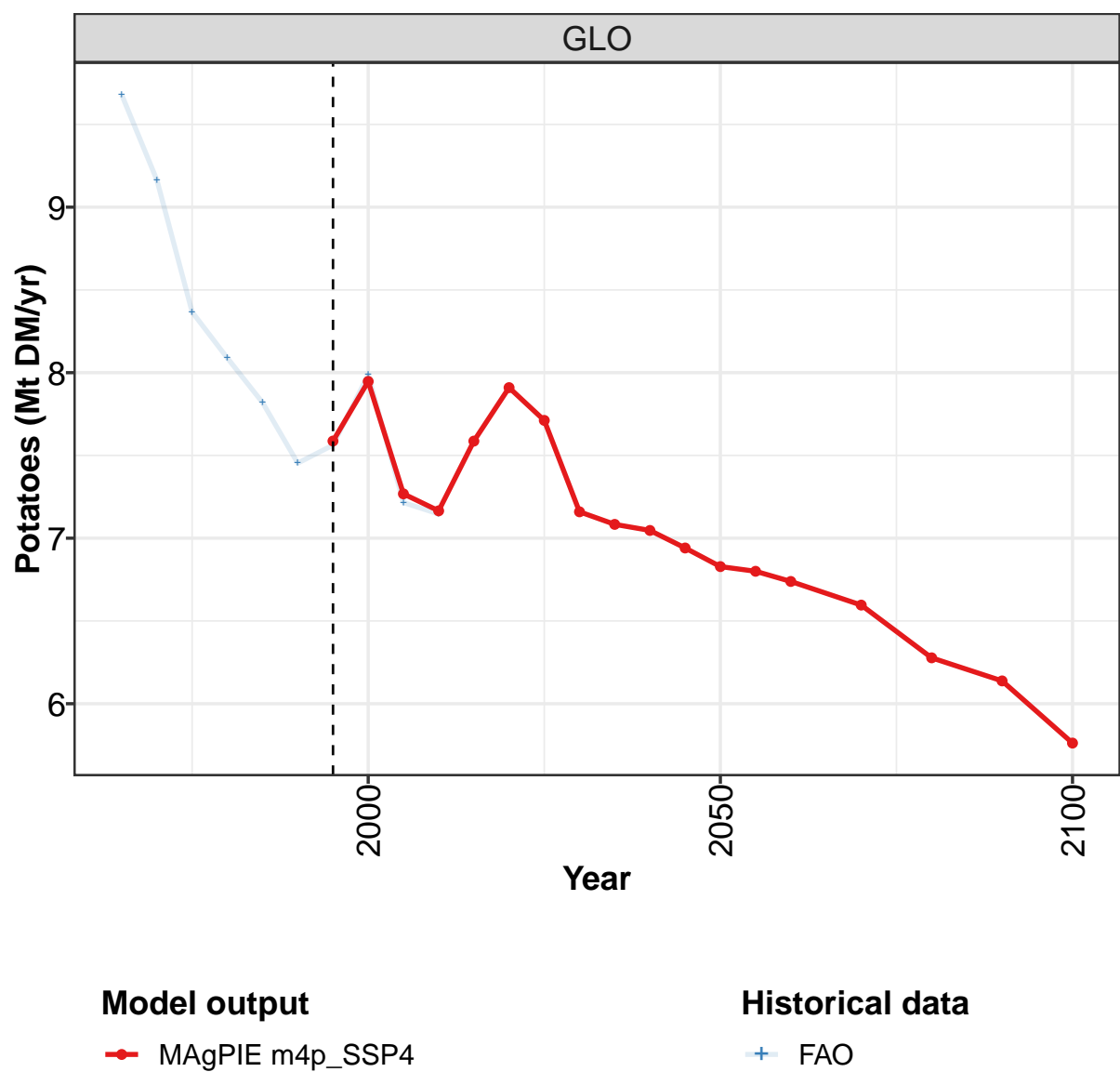
Table 684: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)  
[PART 2/2]

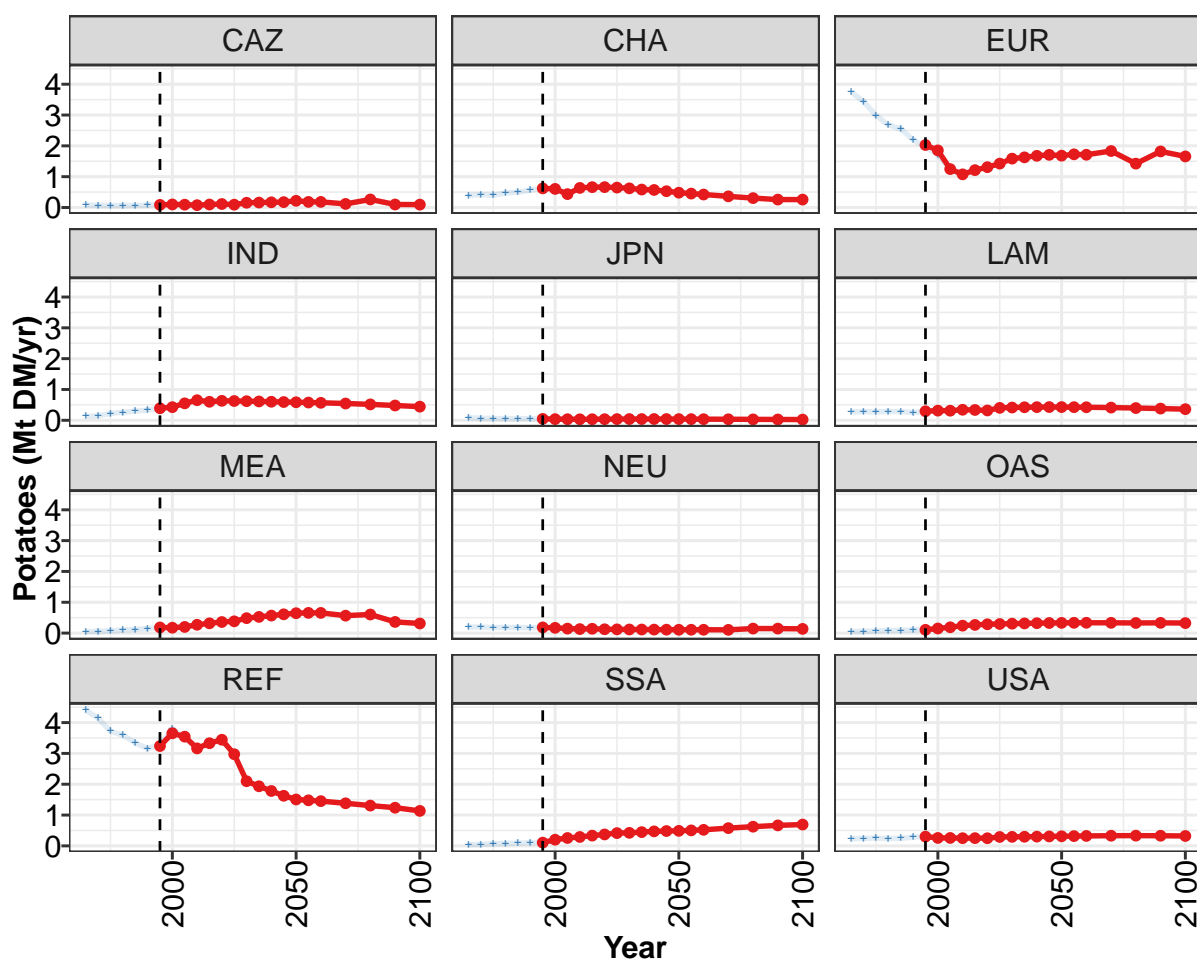
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.0100	0.0092	0.0093	0.0110	0.0116	0.0140	0.0197	0.0194	0.0175	0.0203
CAZ	0.0010	0.0013	0.0016	0.0016	0.0019	0.0024	0.0023	0.0024	0.0025	0.0033
CHA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EUR	0.0018	0.0016	0.0018	0.0022	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





**Model output**

— MAgPIE m4p\_SSP4

**Historical data**

+ FAO

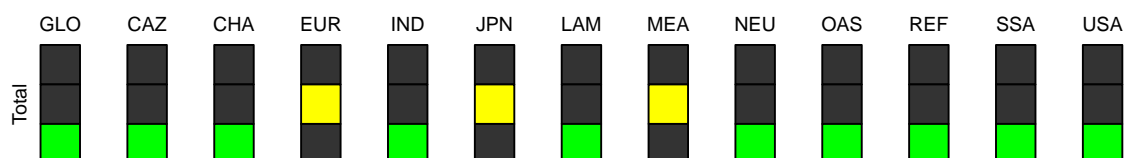


Figure 229: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7.59	7.95	7.27	7.17	7.59	7.91	7.71	7.16	7.08	7.05	6.94
CAZ	0.09	0.10	0.09	0.08	0.10	0.11	0.09	0.15	0.16	0.17	0.18
CHA	0.62	0.60	0.43	0.64	0.66	0.66	0.65	0.62	0.58	0.57	0.53
EUR	2.03	1.85	1.25	1.08	1.21	1.31	1.42	1.59	1.63	1.68	1.71
IND	0.39	0.43	0.55	0.65	0.60	0.63	0.63	0.62	0.61	0.60	0.59
JPN	0.05	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LAM	0.29	0.31	0.31	0.34	0.34	0.32	0.40	0.41	0.42	0.43	0.43
MEA	0.18	0.18	0.20	0.27	0.32	0.36	0.38	0.48	0.53	0.57	0.61
NEU	0.18	0.17	0.15	0.13	0.14	0.13	0.12	0.12	0.12	0.11	0.11
OAS	0.11	0.15	0.19	0.24	0.27	0.29	0.30	0.31	0.31	0.32	0.33
REF	3.24	3.65	3.54	3.16	3.33	3.44	2.97	2.10	1.93	1.78	1.63
SSA	0.11	0.20	0.26	0.29	0.33	0.37	0.42	0.42	0.45	0.47	0.48
USA	0.30	0.26	0.26	0.25	0.25	0.25	0.29	0.29	0.30	0.30	0.31

Table 686: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

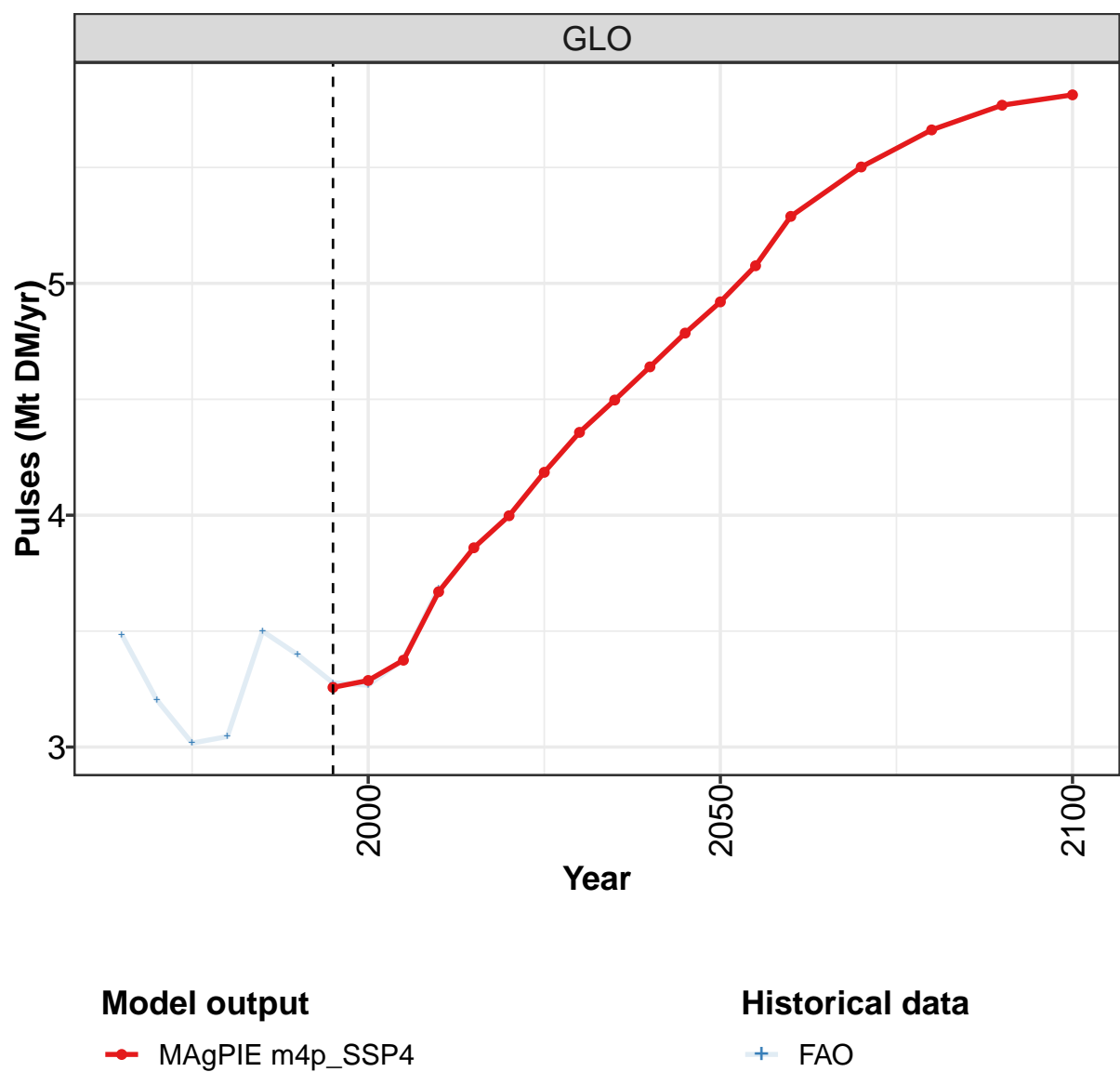
	2050	2055	2060	2070	2080	2090	2100
GLO	6.83	6.80	6.74	6.60	6.28	6.14	5.76
CAZ	0.22	0.18	0.18	0.12	0.26	0.10	0.09
CHA	0.48	0.45	0.42	0.36	0.31	0.26	0.26
EUR	1.68	1.73	1.71	1.83	1.42	1.82	1.66
IND	0.59	0.58	0.57	0.55	0.52	0.48	0.44
JPN	0.04	0.04	0.04	0.03	0.03	0.03	0.02
LAM	0.43	0.43	0.42	0.41	0.40	0.38	0.36
MEA	0.65	0.66	0.66	0.57	0.60	0.36	0.31
NEU	0.11	0.11	0.11	0.11	0.15	0.15	0.14
OAS	0.33	0.33	0.33	0.33	0.33	0.33	0.33
REF	1.51	1.48	1.45	1.38	1.31	1.24	1.14
SSA	0.49	0.50	0.52	0.58	0.62	0.66	0.69
USA	0.31	0.32	0.32	0.33	0.33	0.33	0.32

Table 687: MAgPIE m4p\_SSP4 — 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



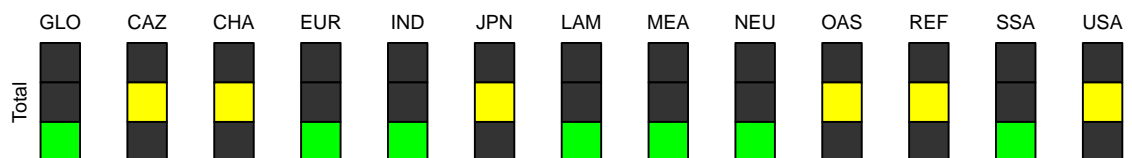
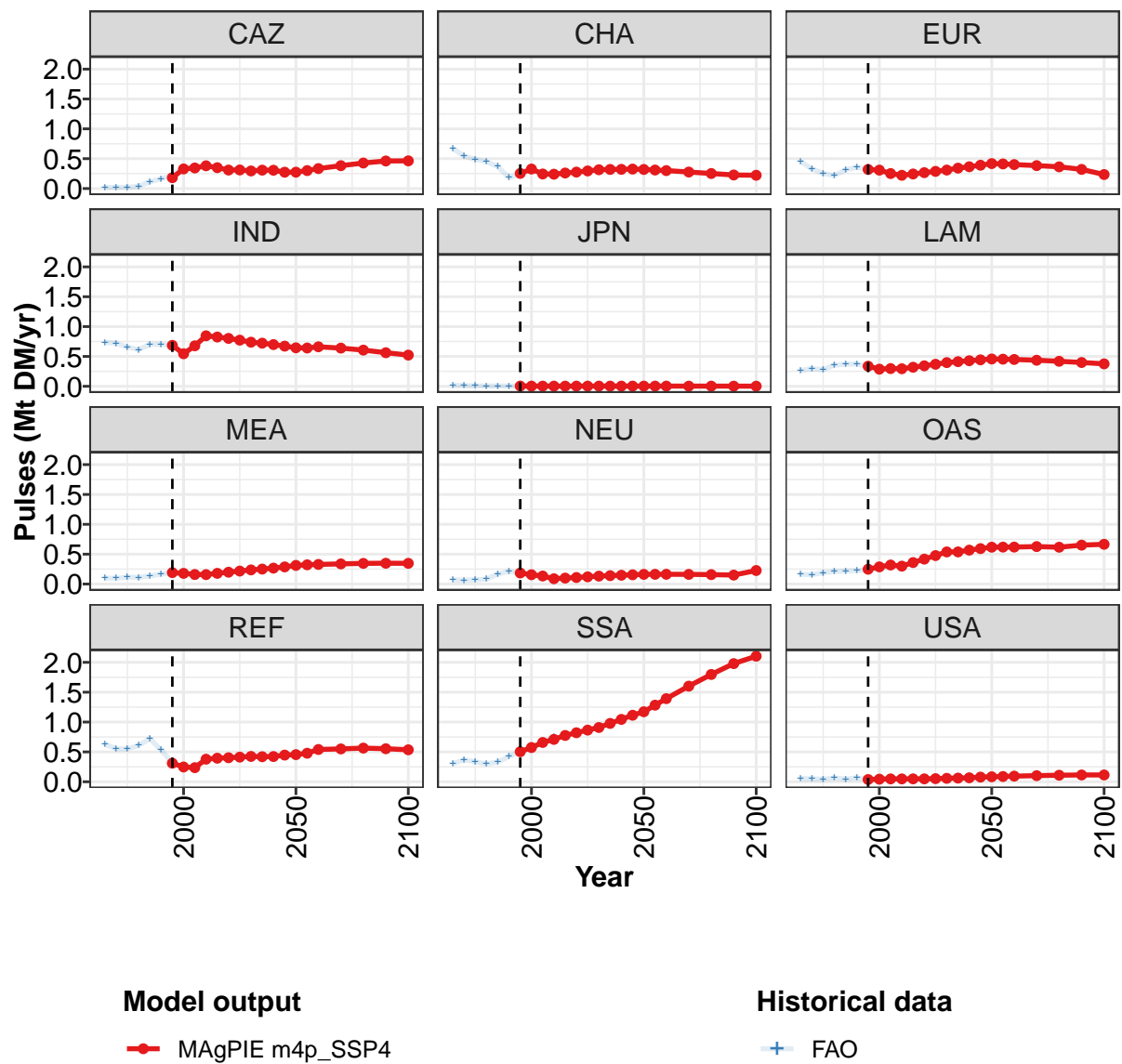


Figure 230: MAGPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.26	3.29	3.37	3.67	3.86	4.00	4.19	4.36	4.50	4.64	4.79
CAZ	0.18	0.33	0.34	0.38	0.35	0.31	0.31	0.30	0.31	0.31	0.27
CHA	0.25	0.33	0.24	0.24	0.26	0.28	0.30	0.31	0.32	0.32	0.33
EUR	0.32	0.31	0.25	0.22	0.24	0.27	0.29	0.31	0.34	0.37	0.39
IND	0.69	0.54	0.68	0.85	0.83	0.80	0.77	0.74	0.72	0.70	0.67
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	0.37	0.40	0.41	0.43	0.44
MEA	0.19	0.18	0.16	0.16	0.18	0.20	0.22	0.24	0.25	0.27	0.29
NEU	0.18	0.16	0.13	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.15
OAS	0.25	0.29	0.32	0.30	0.36	0.42	0.48	0.54	0.54	0.57	0.59
REF	0.31	0.25	0.24	0.38	0.39	0.40	0.41	0.42	0.42	0.42	0.45
SSA	0.50	0.57	0.66	0.71	0.78	0.82	0.87	0.91	0.98	1.04	1.11
USA	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.07	0.08

Table 689: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

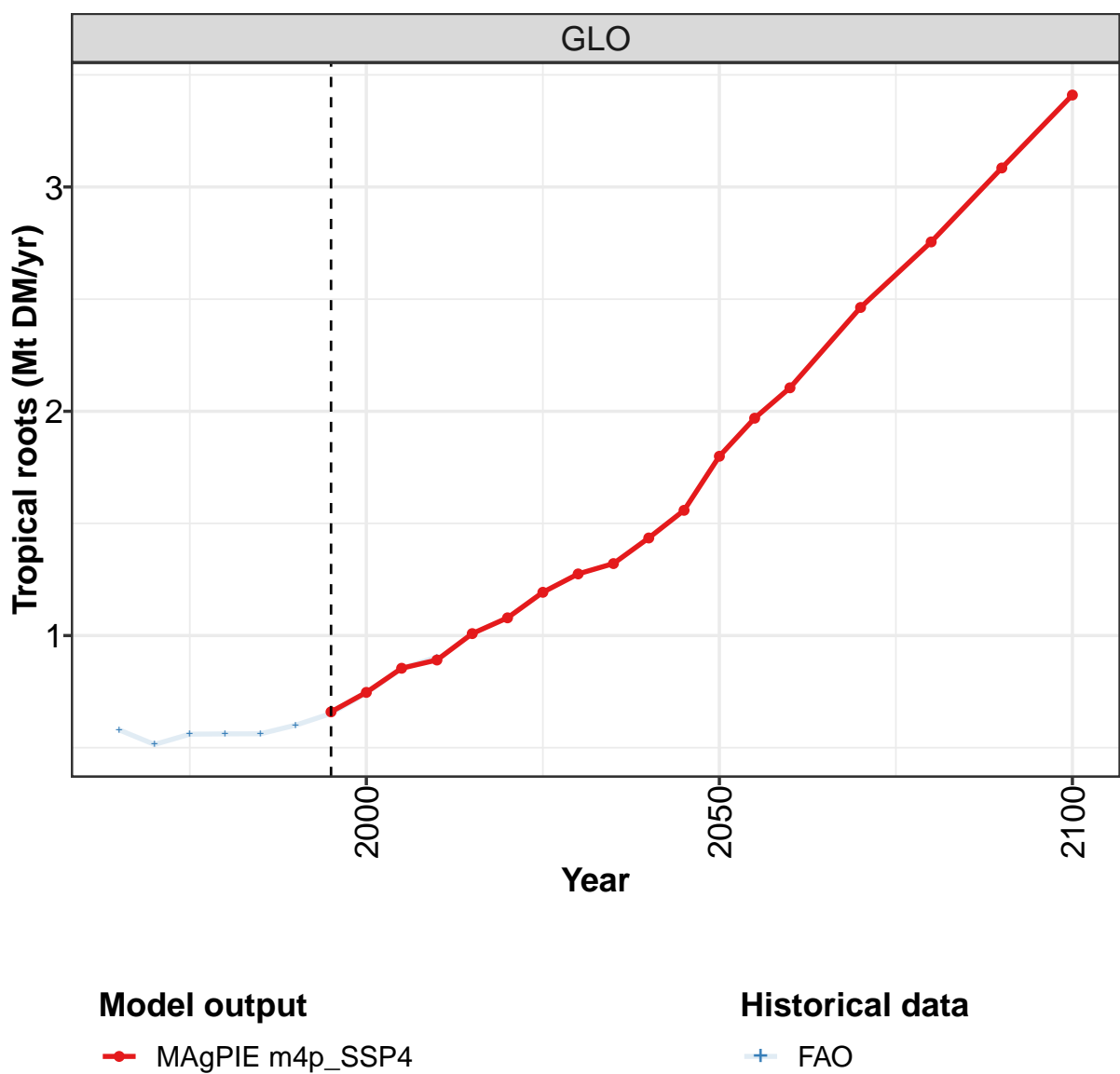
	2050	2055	2060	2070	2080	2090	2100
GLO	4.92	5.08	5.29	5.50	5.66	5.77	5.81
CAZ	0.27	0.30	0.33	0.38	0.43	0.46	0.46
CHA	0.32	0.31	0.30	0.28	0.25	0.23	0.22
EUR	0.42	0.41	0.40	0.38	0.36	0.32	0.24
IND	0.64	0.64	0.66	0.64	0.61	0.56	0.52
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.46	0.45	0.45	0.44	0.42	0.40	0.38
MEA	0.31	0.32	0.33	0.34	0.35	0.35	0.35
NEU	0.16	0.16	0.16	0.16	0.16	0.15	0.23
OAS	0.62	0.62	0.62	0.63	0.62	0.65	0.67
REF	0.45	0.48	0.54	0.55	0.56	0.55	0.54
SSA	1.17	1.28	1.39	1.60	1.80	1.98	2.10
USA	0.08	0.09	0.09	0.10	0.11	0.11	0.11

Table 690: MAgPIE m4p\_SSP4 — 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



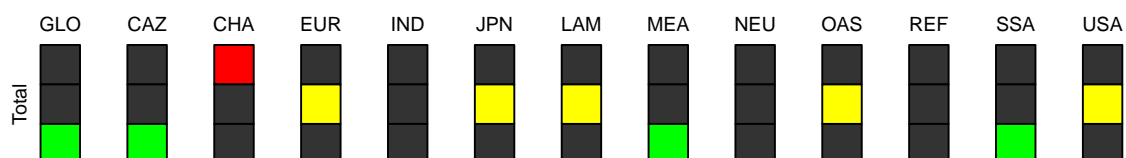
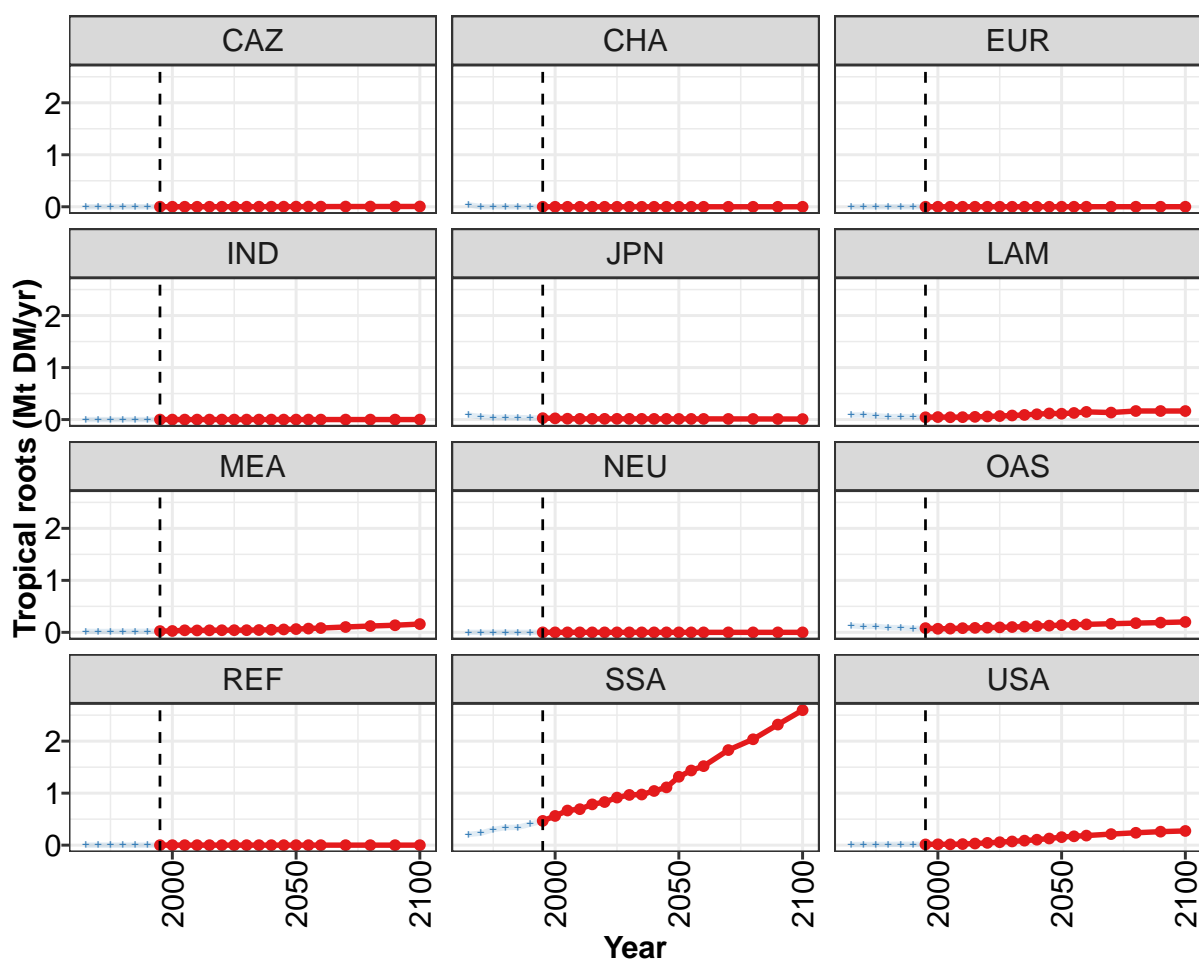


Figure 231: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Tropical roots (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.66	0.75	0.85	0.89	1.01	1.08	1.19	1.27	1.32	1.44	1.56
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	0.09	0.10	0.12
MEA	0.02	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	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	0.08	0.07	0.07	0.08	0.09	0.09	0.10	0.10	0.11	0.12	0.13
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	0.91	0.97	0.97	1.04	1.11
USA	0.01	0.02	0.02	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.13

Table 692: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

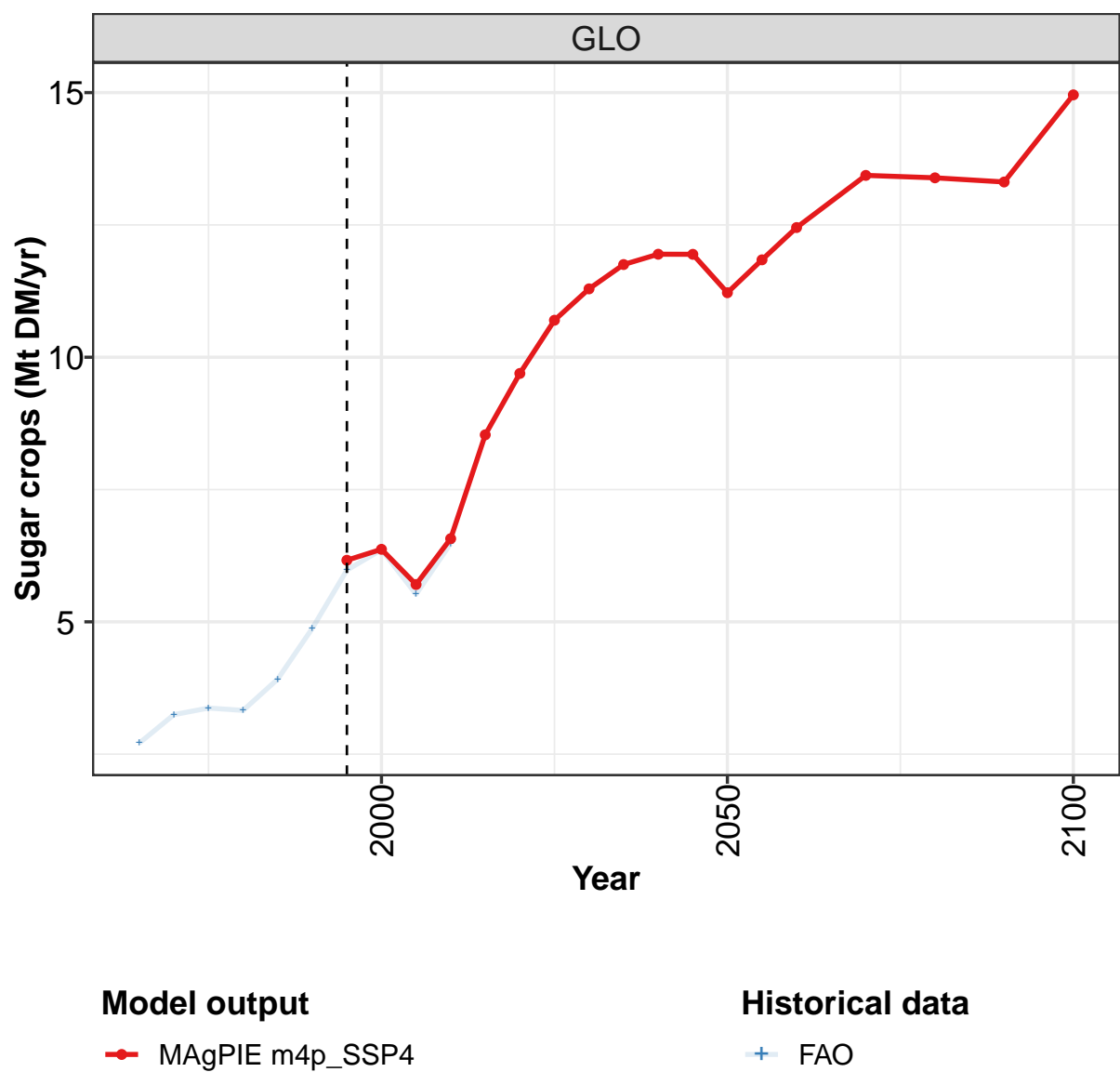
	2050	2055	2060	2070	2080	2090	2100
GLO	1.80	1.97	2.10	2.46	2.76	3.08	3.41
CAZ	0.00	0.00	0.00	0.00	0.00	0.01	0.01
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.11	0.13	0.15	0.13	0.16	0.16	0.16
MEA	0.06	0.07	0.08	0.10	0.12	0.14	0.16
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.14	0.15	0.15	0.17	0.18	0.19	0.20
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	1.32	1.44	1.52	1.83	2.04	2.32	2.60
USA	0.15	0.17	0.18	0.21	0.24	0.26	0.27

Table 693: MAgPIE m4p\_SSP4 — 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



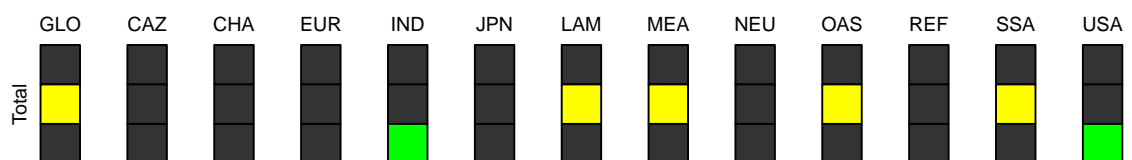
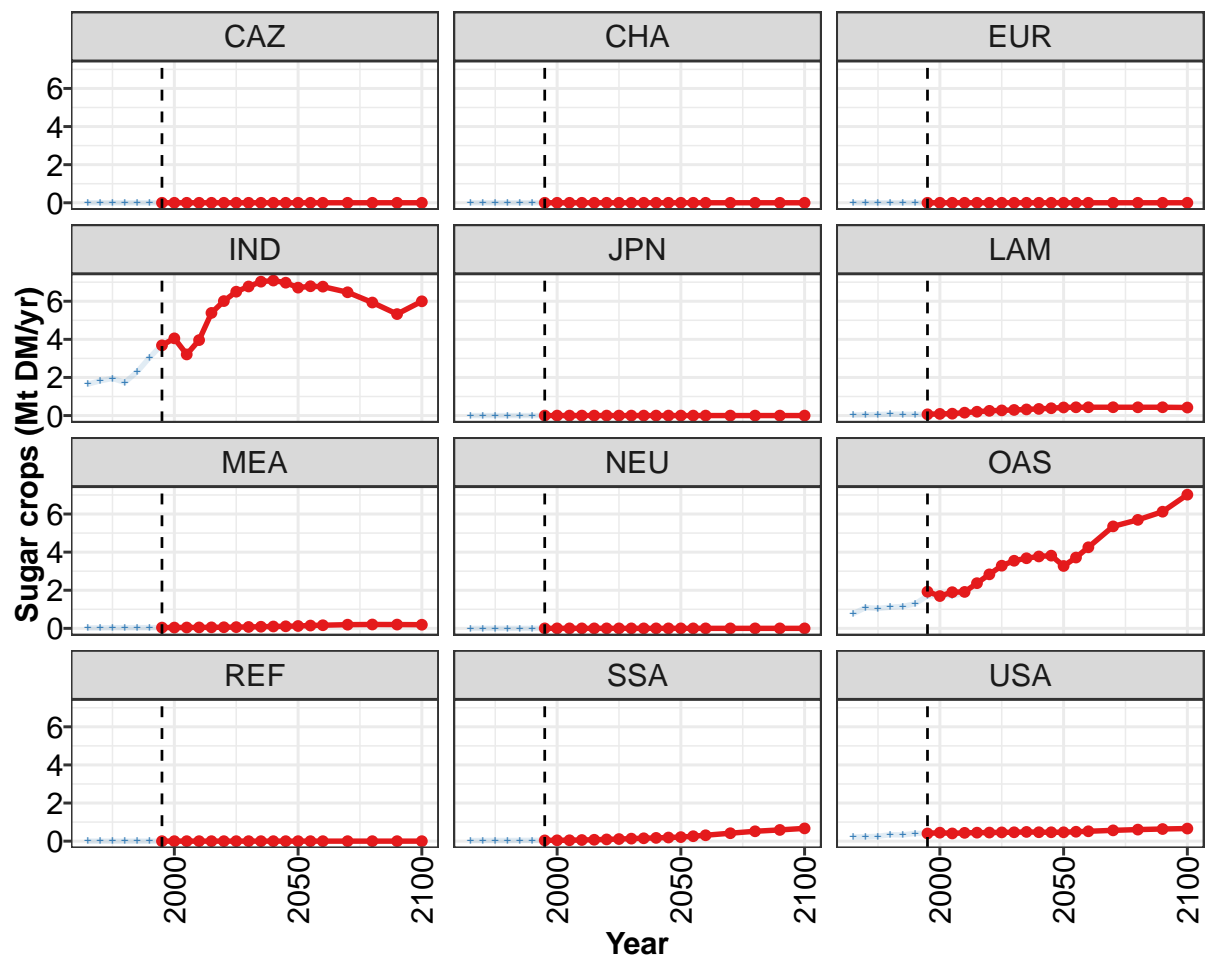


Figure 232: MAGPIE m4p\_SSP4 — Demand—Seed—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.2	6.4	5.7	6.6	8.5	9.7	10.7	11.3	11.8	11.9	11.9
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	6.5	6.8	7.0	7.1	7.0
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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4
MEA	0.0	0.0	0.0	0.0	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	1.9	1.7	1.9	1.9	2.4	2.8	3.3	3.5	3.7	3.8	3.8
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	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
USA	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5

Table 695: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

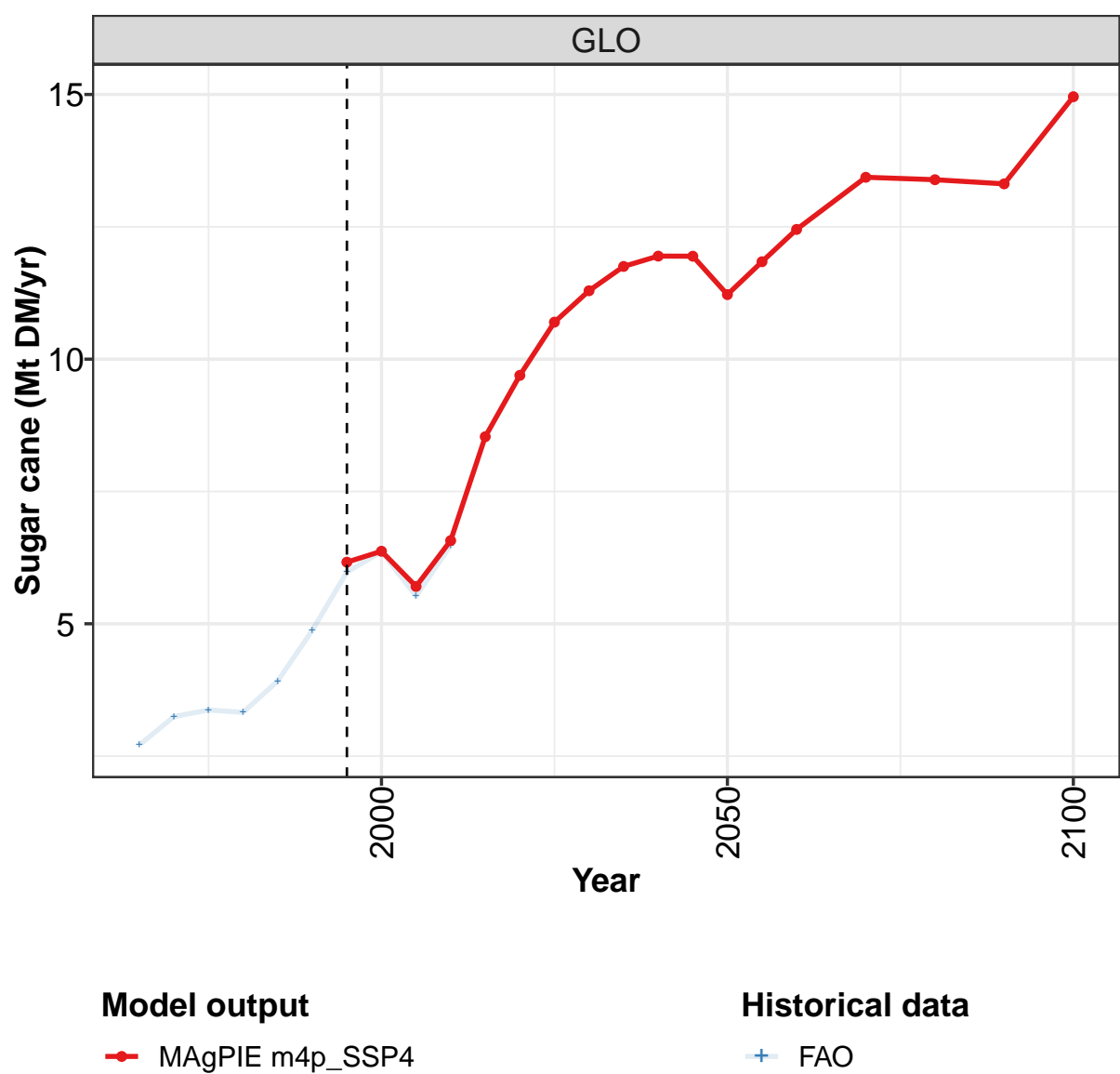
	2050	2055	2060	2070	2080	2090	2100
GLO	11.2	11.8	12.5	13.4	13.4	13.3	15.0
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	6.7	6.8	6.8	6.5	5.9	5.3	6.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.4	0.4	0.4	0.4	0.4	0.4	0.4
MEA	0.1	0.1	0.2	0.2	0.2	0.2	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	3.3	3.7	4.3	5.4	5.7	6.1	7.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.2	0.3	0.3	0.4	0.5	0.6	0.7
USA	0.5	0.5	0.5	0.6	0.6	0.6	0.7

Table 696: MAgPIE m4p\_SSP4 — 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



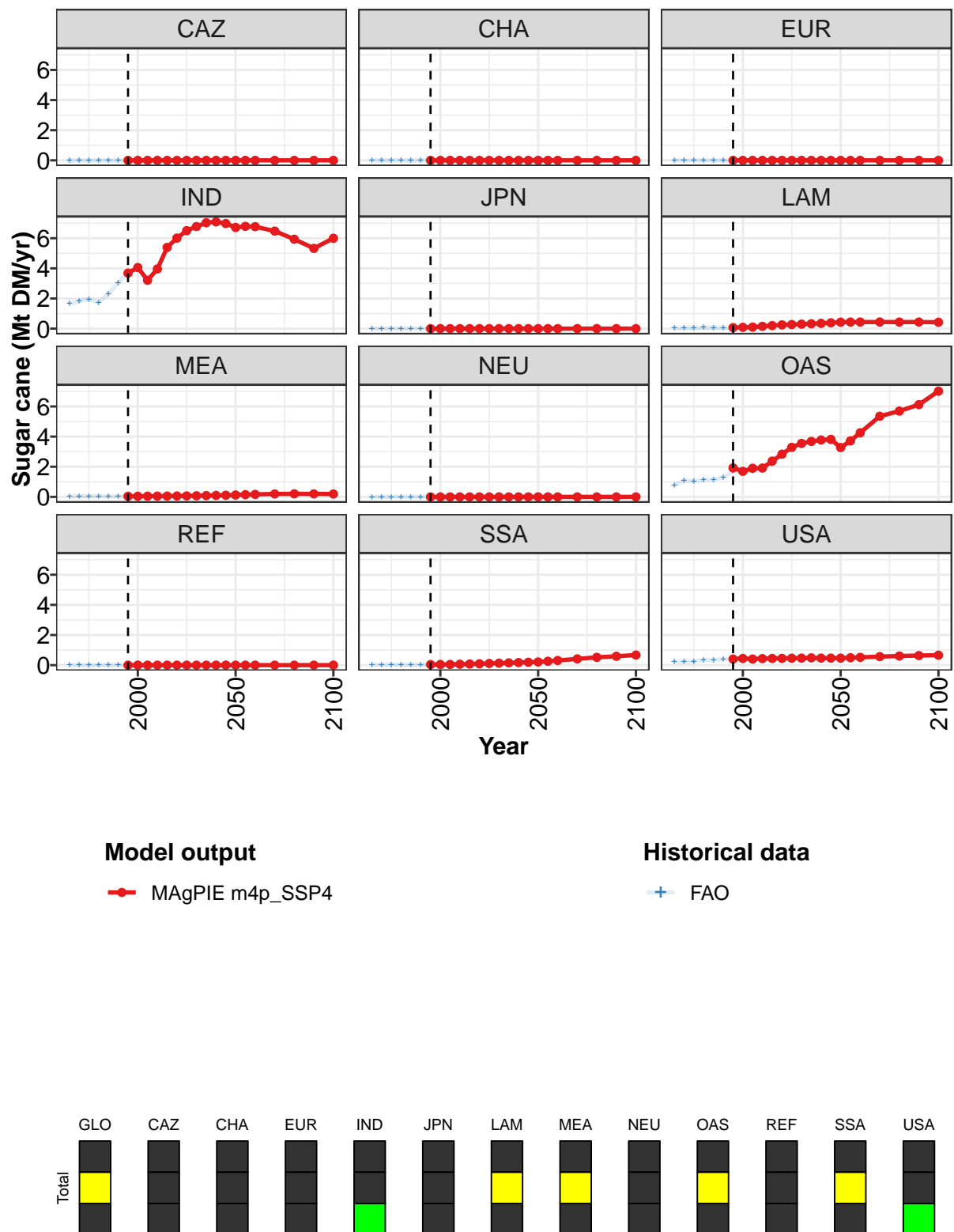


Figure 233: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.2	6.4	5.7	6.6	8.5	9.7	10.7	11.3	11.8	11.9	11.9
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	6.5	6.8	7.0	7.1	7.0
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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4
MEA	0.0	0.0	0.0	0.0	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	1.9	1.7	1.9	1.9	2.4	2.8	3.3	3.5	3.7	3.8	3.8
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	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
USA	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5

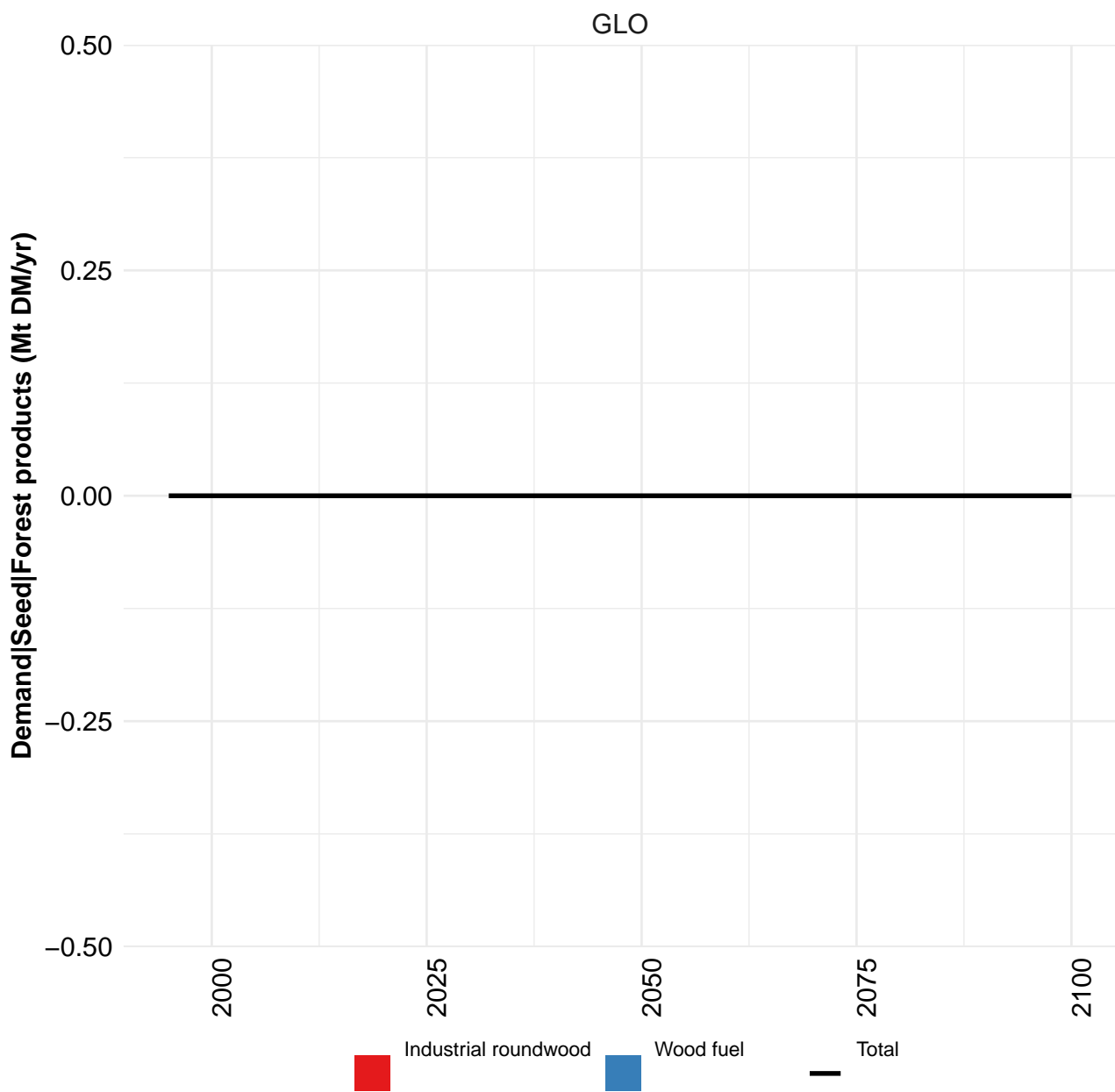
Table 698: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	11.2	11.8	12.5	13.4	13.4	13.3	15.0
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	6.7	6.8	6.8	6.5	5.9	5.3	6.0
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	0.1	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
OAS	3.3	3.7	4.3	5.4	5.7	6.1	7.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.2	0.3	0.3	0.4	0.5	0.6	0.7
USA	0.5	0.5	0.5	0.6	0.6	0.6	0.7

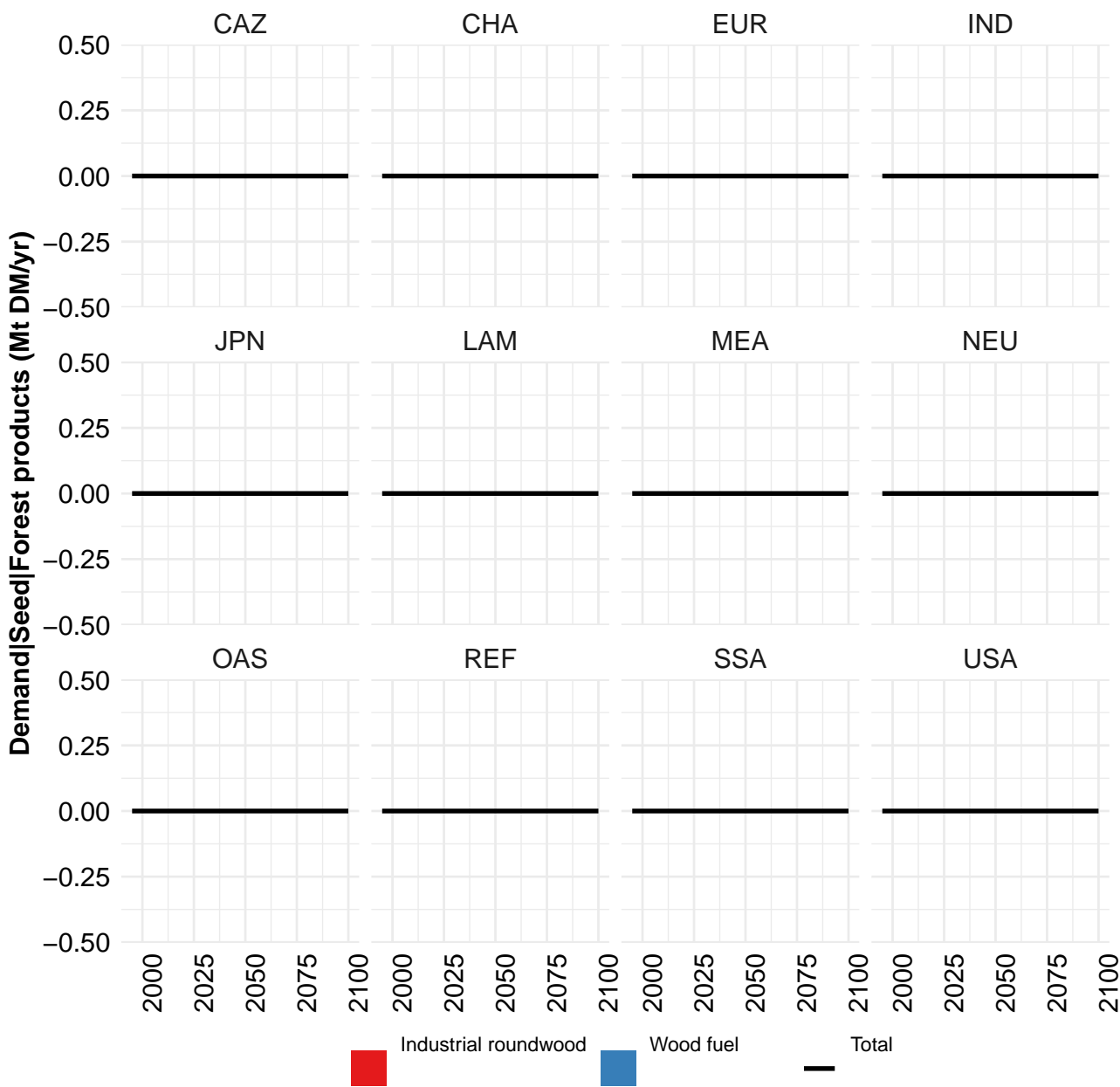
Table 699: MAgPIE m4p\_SSP4 — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

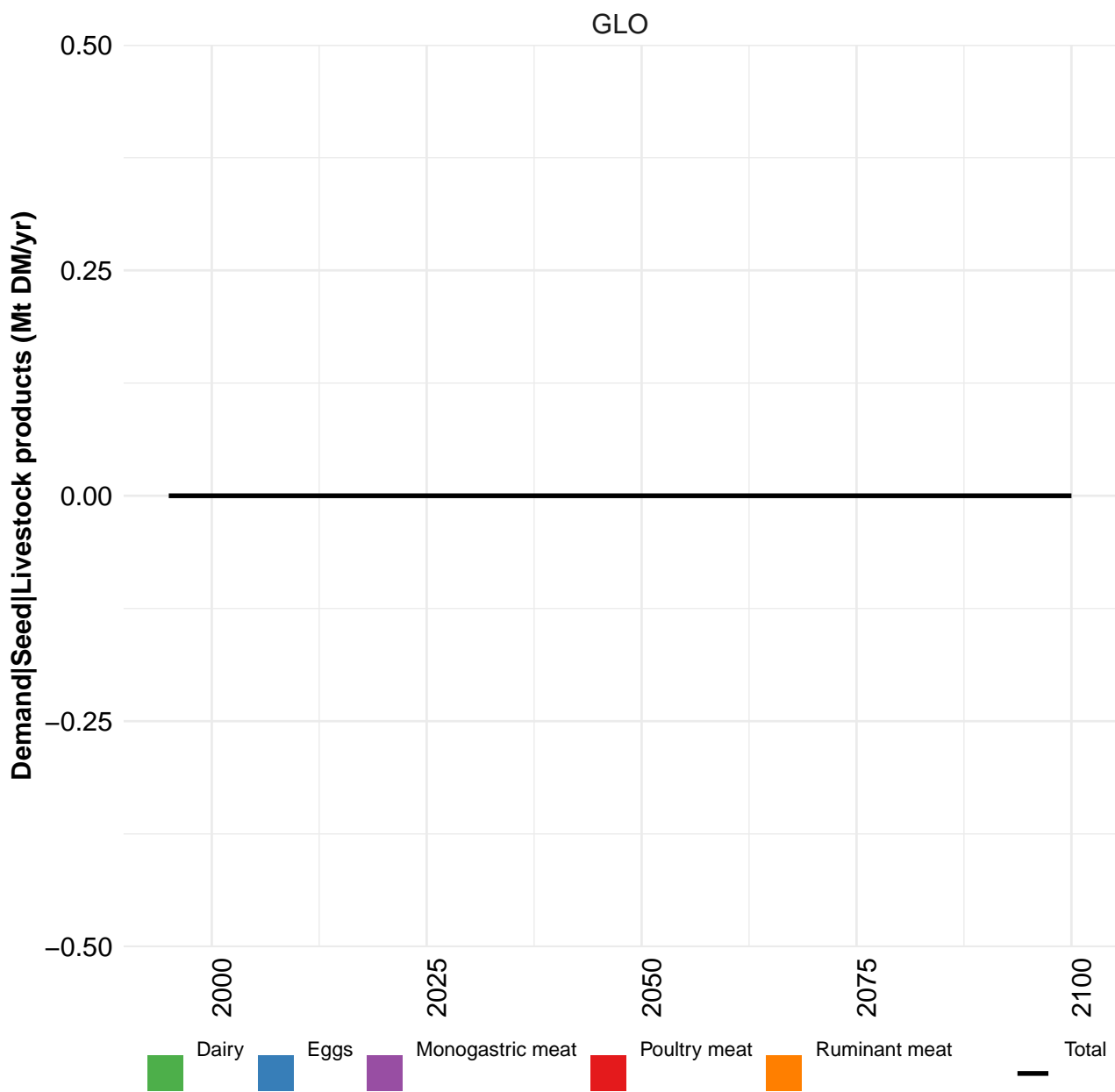
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.71	3.25	3.37	3.33	3.92	4.88	5.98	6.36	5.52	6.48
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	1.65	1.82	1.95	1.74	2.30	3.05	3.72	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

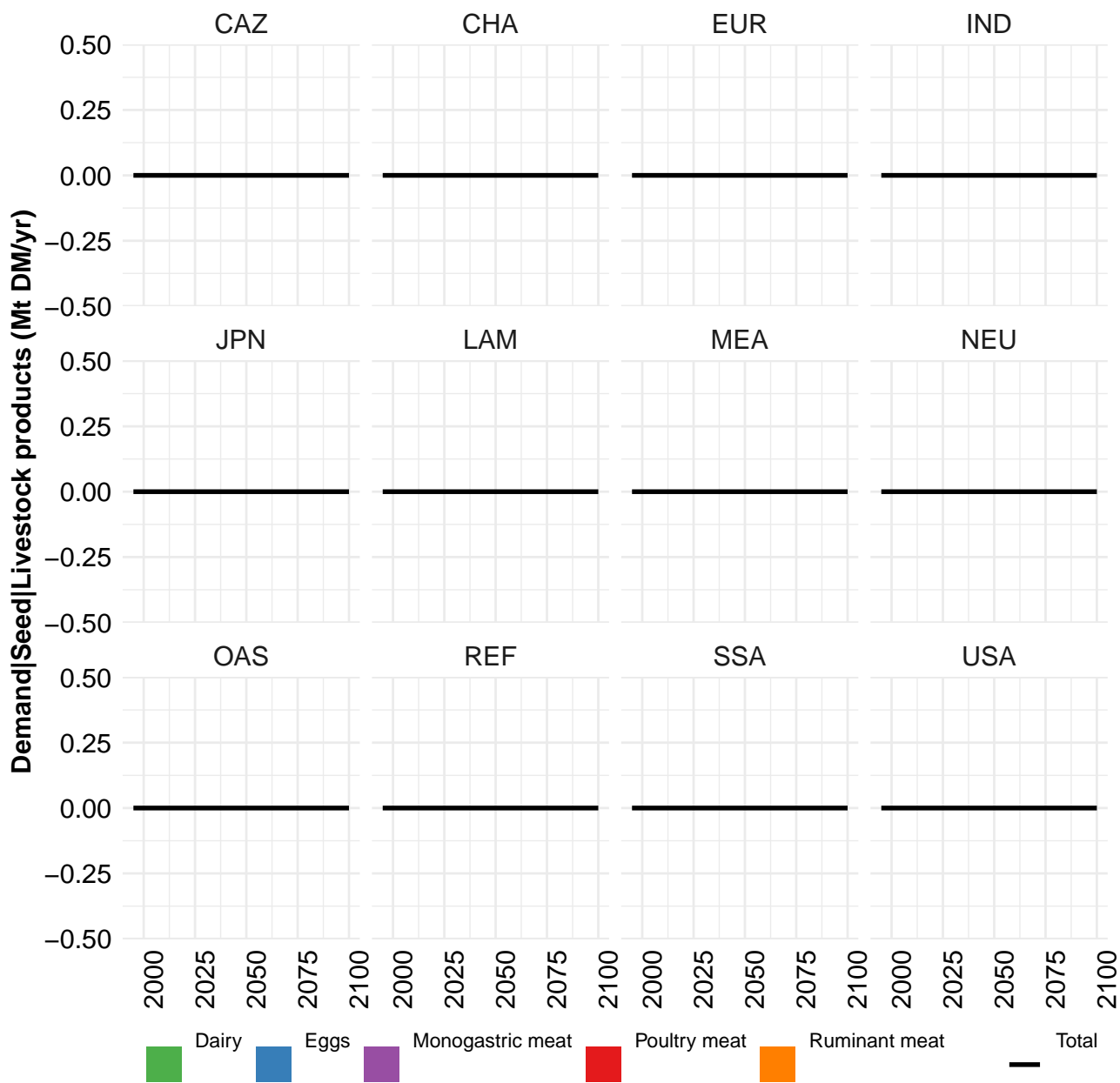
Table 700: FAO — Demand—Seed—Crops—Sugar crops—Sugar cane (Mt DM/yr)

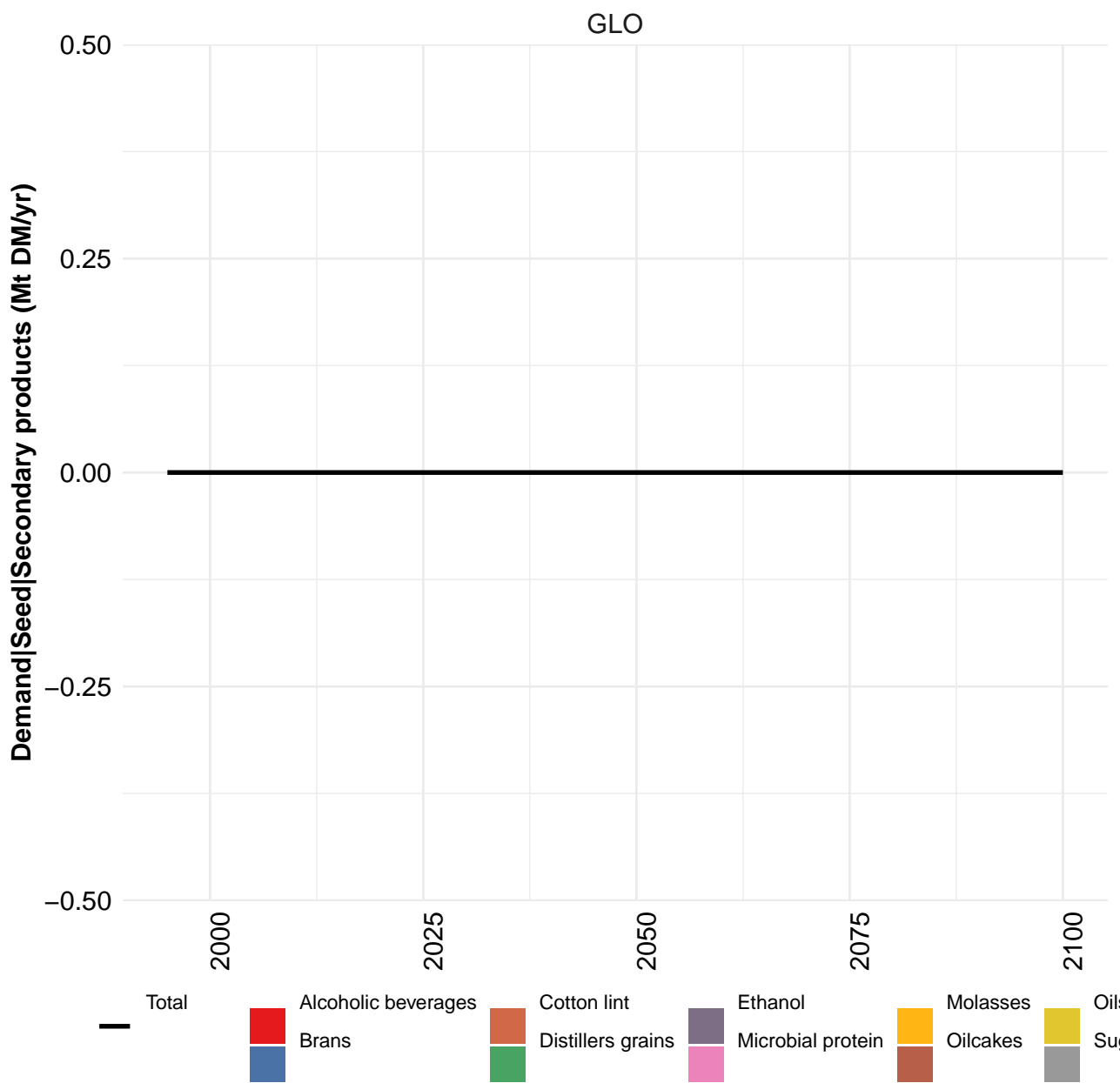


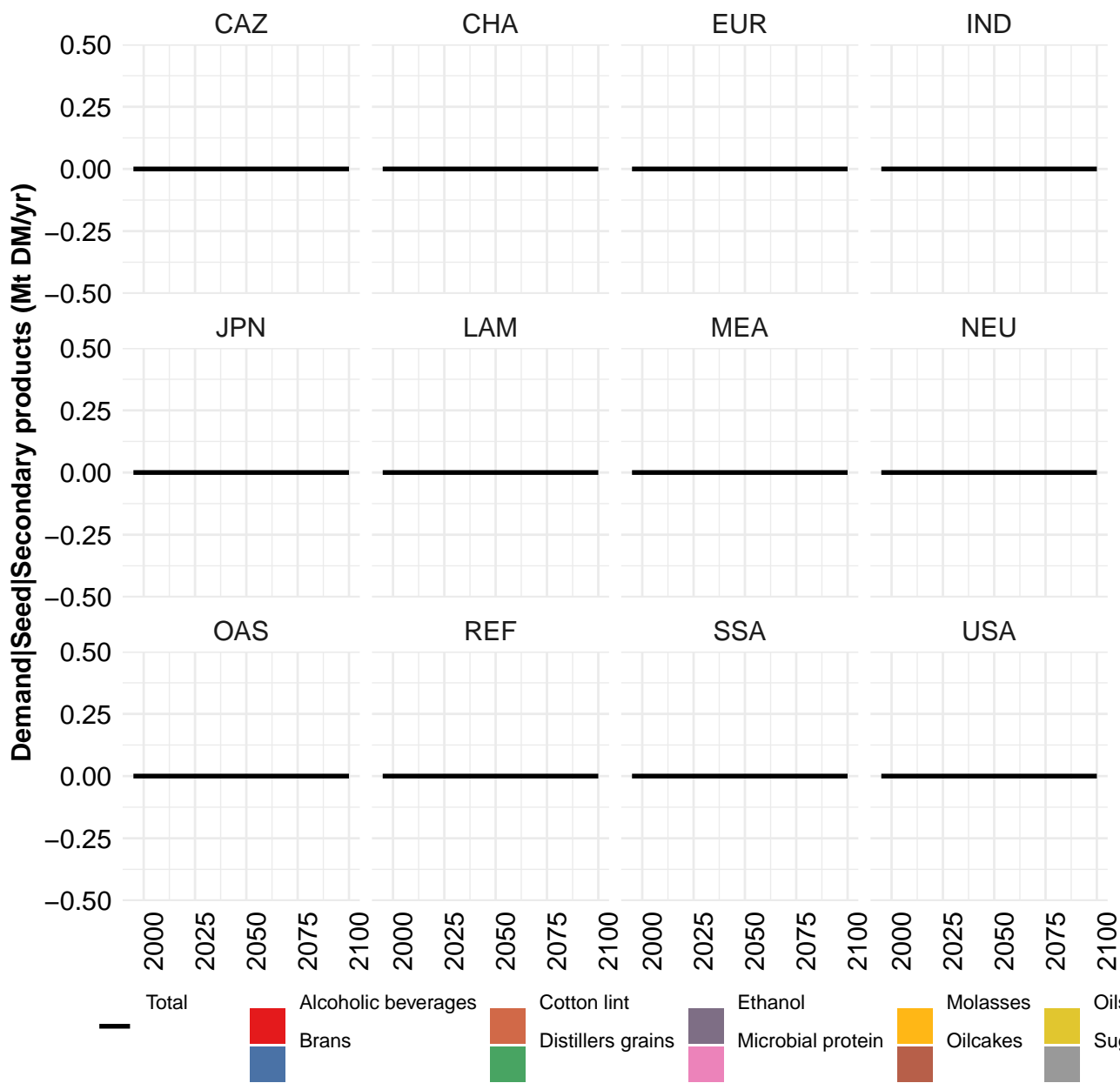








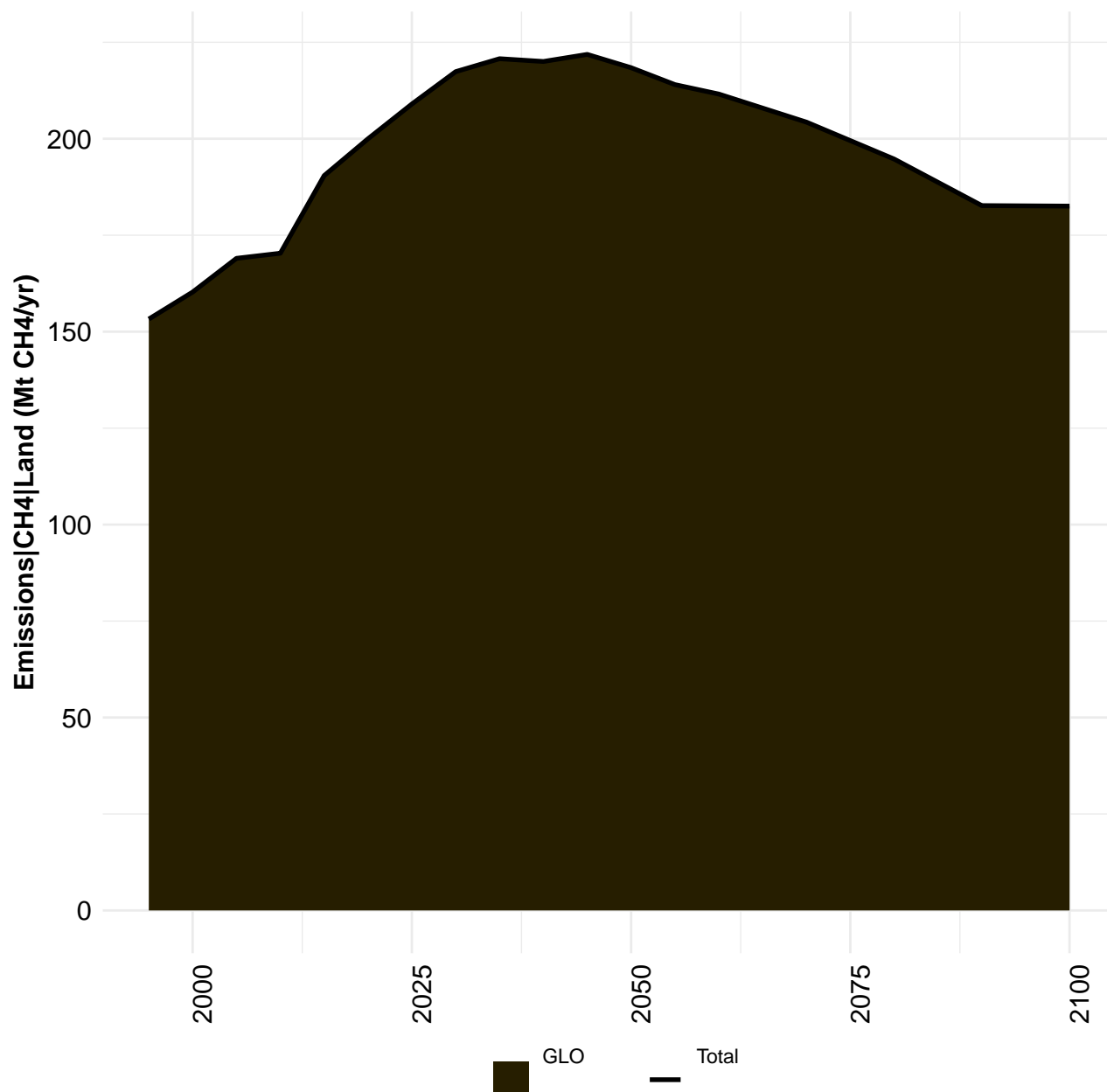


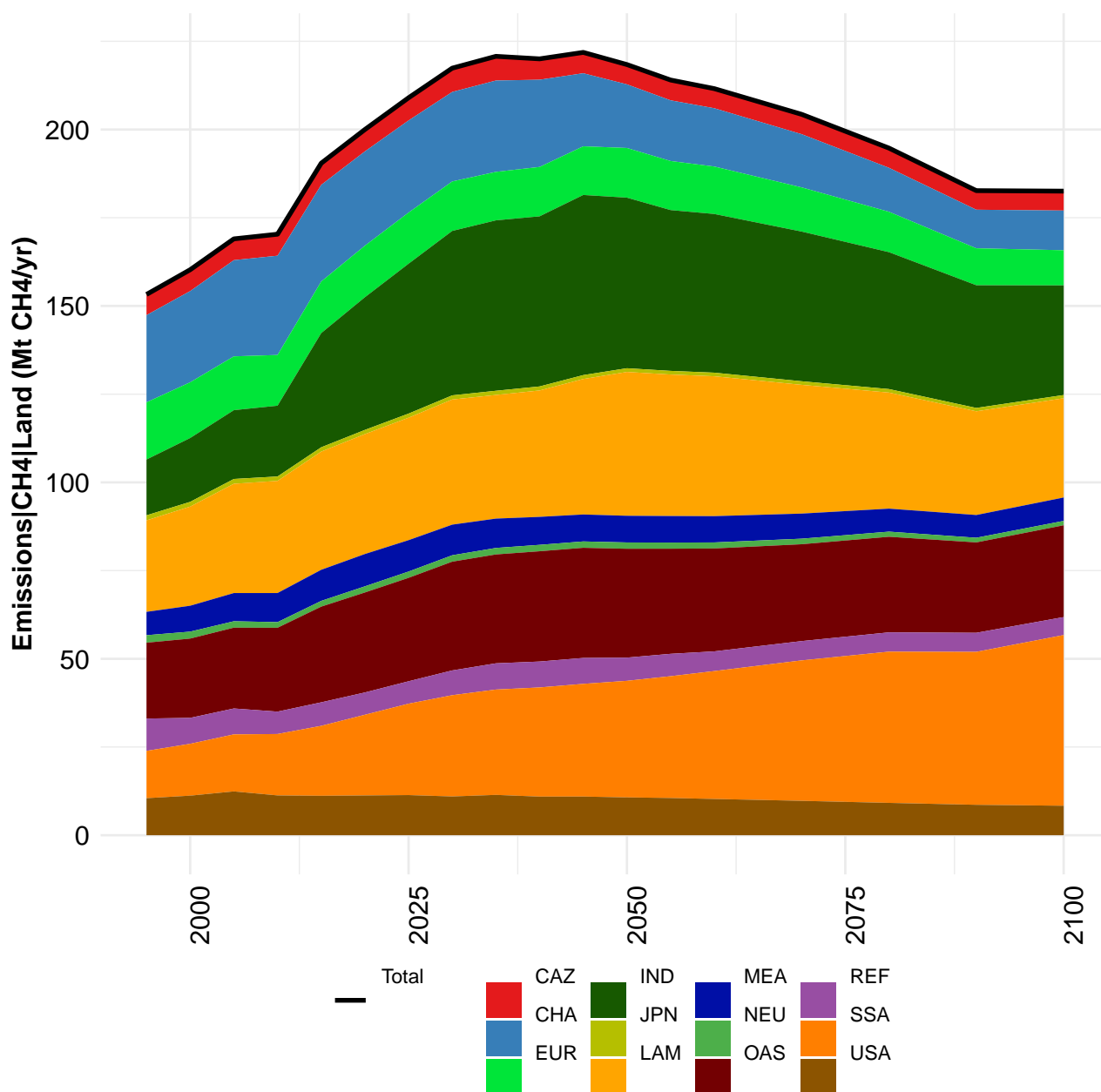


## Part IV

## Emissions

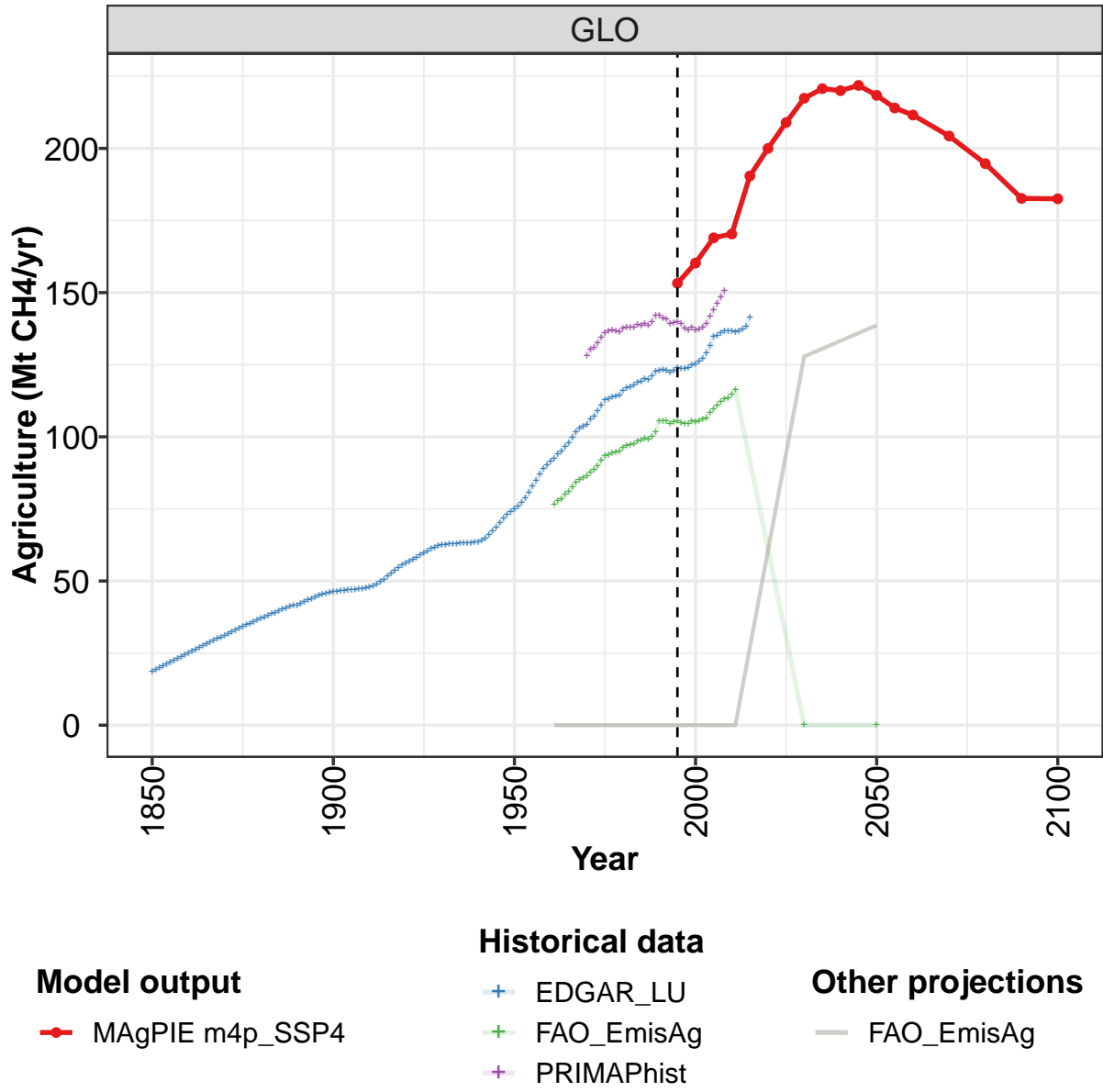
## 11 CH4





11.1 Land

11.1.1 Agriculture





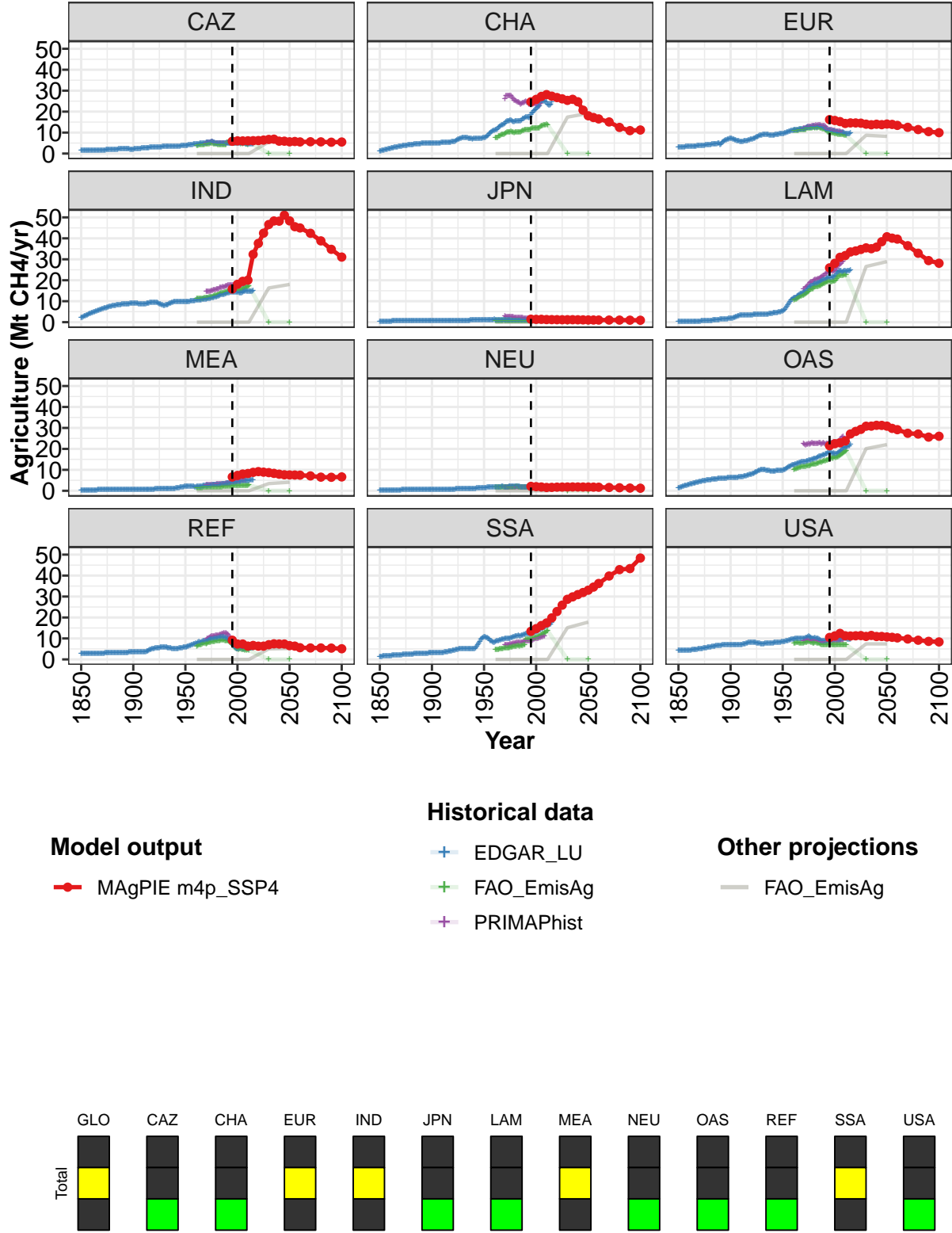


Figure 234: MAgPIE m4p\_SSP4 — Emissions—CH<sub>4</sub>—Land—Agriculture (Mt CH<sub>4</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	153	160	169	170	190	200	209	217	221	220	222
CAZ	6	6	6	6	6	6	6	7	7	6	6
CHA	25	26	27	28	27	27	26	25	26	25	21
EUR	16	16	15	14	15	15	15	14	14	14	14
IND	16	18	19	20	32	38	42	47	48	48	51
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	26	28	31	32	33	34	35	35	35	36	38
MEA	7	7	8	8	9	9	9	9	8	8	8
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	22	22	23	24	27	28	29	31	31	31	31
REF	9	7	7	6	7	6	6	7	7	7	7
SSA	13	15	16	17	20	23	26	29	30	31	32
USA	10	11	12	11	11	11	11	11	11	11	11

Table 701: MAgPIE m4p\_SSP4 — Emissions—CH4—Land—Agriculture (Mt CH4/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	218	214	212	204	195	183	183
CAZ	6	6	6	6	6	5	6
CHA	18	17	17	15	12	11	11
EUR	14	14	13	13	11	10	10
IND	48	46	45	42	39	35	31
JPN	1	1	1	1	1	1	1
LAM	41	40	40	36	33	29	28
MEA	8	8	7	7	7	6	7
NEU	2	2	2	2	1	1	1
OAS	31	30	29	27	27	26	26
REF	7	6	6	5	5	5	5
SSA	33	35	36	40	43	43	48
USA	11	11	10	10	9	9	8

Table 702: MAgPIE m4p\_SSP4 — 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]

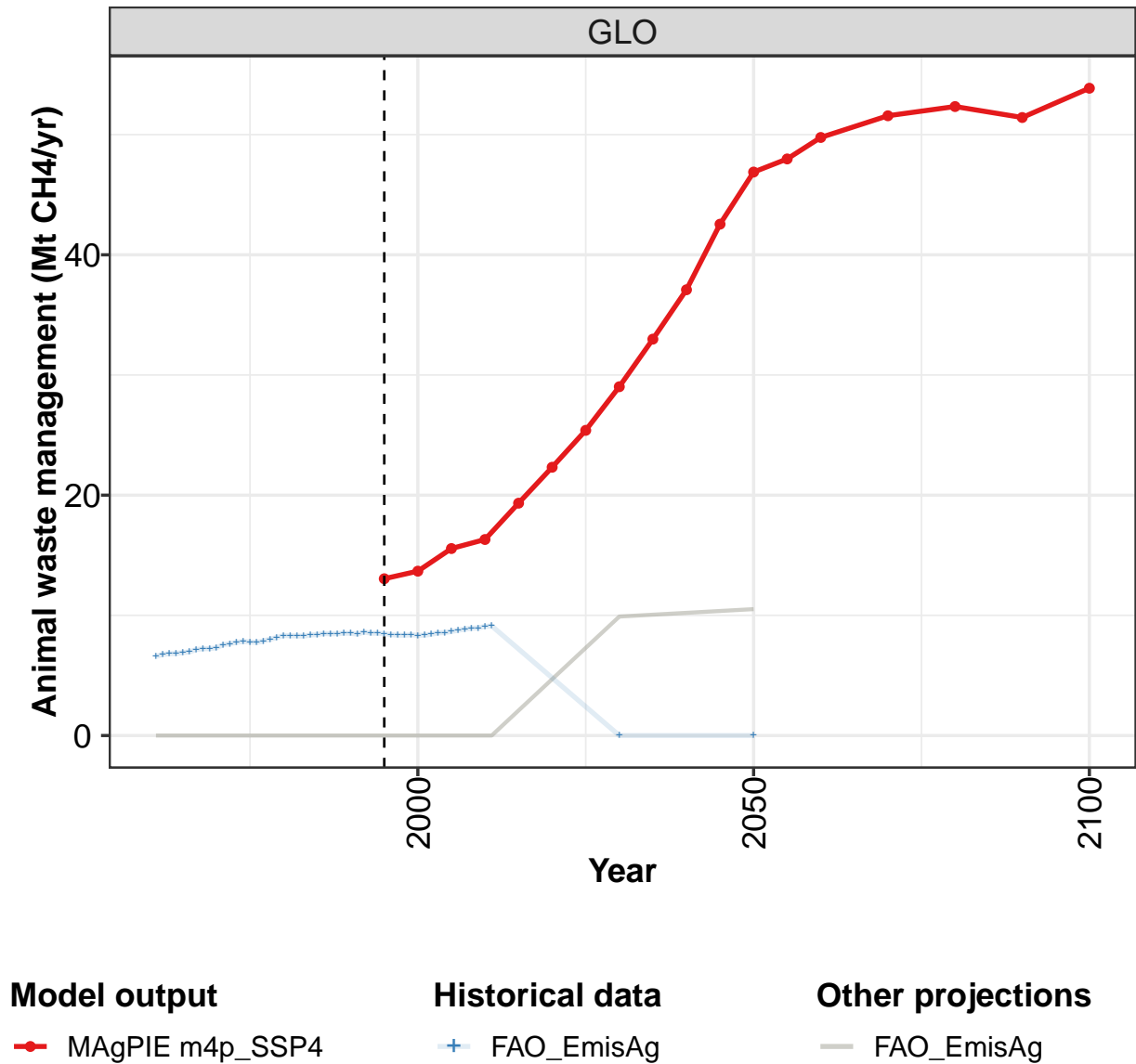
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
GLO	141	139	139	140	139	138	137	138	137	137	138
CAZ	5	5	5	5	5	5	5	5	5	5	5
CHA	24	23	23	24	24	23	24	24	23	23	23
EUR	12	12	11	11	11	11	11	11	11	11	11
IND	18	18	18	18	18	18	18	18	18	18	18
JPN	2	2	2	2	2	2	2	2	2	1	1
LAM	23	24	24	25	24	24	24	24	25	25	26
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



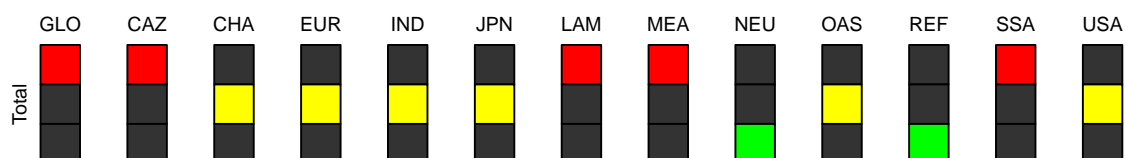
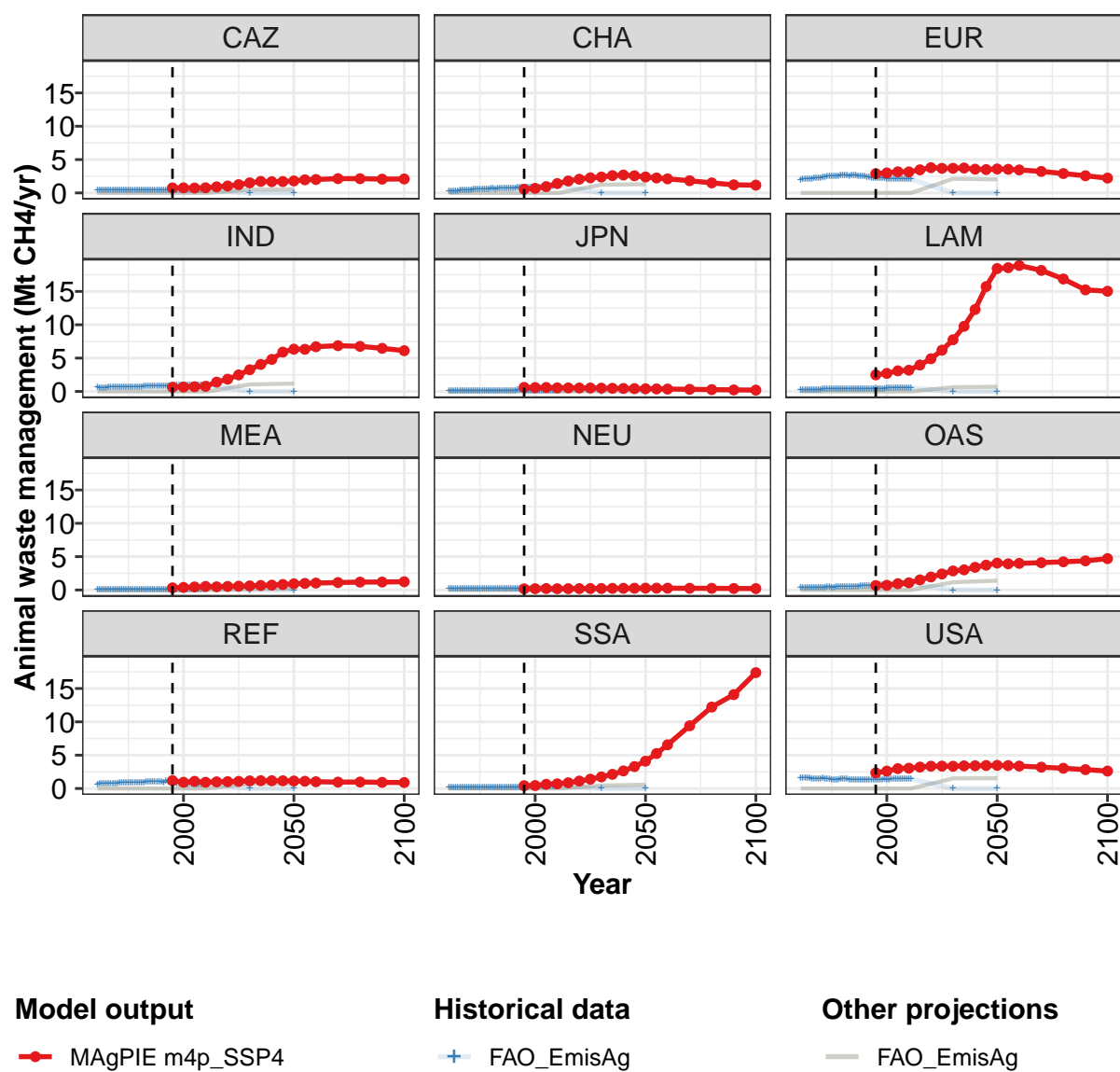


Figure 235: MAgPIE m4p\_SSP4 — Emissions—CH<sub>4</sub>—Land—Agriculture—Animal waste management (Mt CH<sub>4</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.0	13.7	15.6	16.3	19.3	22.3	25.4	29.0	33.0	37.1	42.6
CAZ	0.8	0.8	0.7	0.8	0.9	1.0	1.2	1.5	1.7	1.7	1.7
CHA	0.6	0.7	0.9	1.4	1.8	2.1	2.3	2.4	2.6	2.7	2.6
EUR	2.9	3.0	3.2	3.2	3.5	3.8	3.7	3.7	3.7	3.6	3.5
IND	0.6	0.7	0.7	0.8	1.4	1.8	2.5	3.3	4.1	4.8	5.9
JPN	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
LAM	2.5	2.7	3.1	3.2	4.0	4.9	6.2	7.8	9.8	12.3	15.7
MEA	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
OAS	0.7	0.7	0.9	1.1	1.5	1.9	2.4	2.9	3.0	3.4	3.7
REF	1.2	0.9	1.1	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2
SSA	0.4	0.4	0.6	0.7	0.9	1.1	1.4	1.7	2.1	2.6	3.3
USA	2.3	2.6	3.0	3.0	3.2	3.3	3.4	3.3	3.4	3.4	3.5

Table 728: MAgPIE m4p\_SSP4 — Emissions—CH4—Land—Agriculture—Animal waste management (Mt CH4/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	46.9	48.0	49.8	51.6	52.3	51.4	53.9
CAZ	1.8	2.0	2.0	2.1	2.1	2.1	2.1
CHA	2.4	2.2	2.1	1.8	1.5	1.2	1.2
EUR	3.6	3.5	3.5	3.2	2.9	2.6	2.2
IND	6.3	6.3	6.7	6.9	6.8	6.5	6.1
JPN	0.4	0.4	0.4	0.3	0.3	0.2	0.2
LAM	18.4	18.6	18.9	18.2	16.9	15.2	15.0
MEA	0.9	1.0	1.0	1.1	1.2	1.2	1.2
NEU	0.3	0.3	0.3	0.3	0.2	0.2	0.2
OAS	4.0	3.9	4.0	4.1	4.2	4.4	4.7
REF	1.1	1.1	1.0	1.0	1.0	0.9	0.9
SSA	4.1	5.2	6.6	9.4	12.2	14.1	17.4
USA	3.5	3.4	3.4	3.2	3.0	2.8	2.6

Table 729: MAgPIE m4p\_SSP4 — 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]

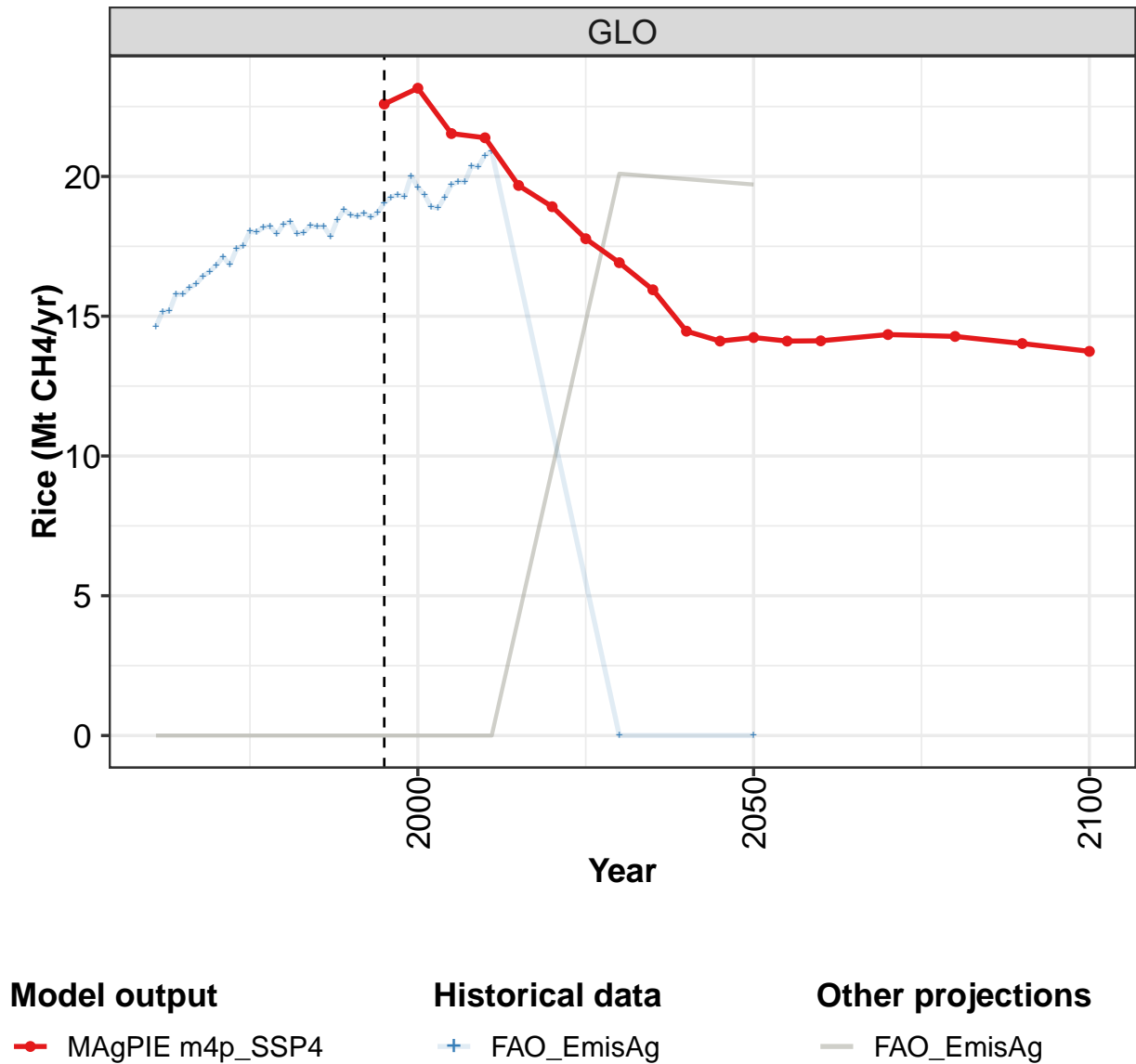
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	8.51	8.47	8.40	8.34	8.34	8.39	8.34	8.35	8.43	8.53	8.57
CAZ	0.42	0.43	0.44	0.44	0.45	0.45	0.45	0.47	0.48	0.48	0.48
CHA	0.80	0.81	0.83	0.83	0.83	0.85	0.87	0.88	0.89	0.90	0.93
EUR	2.25	2.22	2.19	2.19	2.17	2.19	2.17	2.14	2.13	2.12	2.11
IND	0.87	0.88	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]

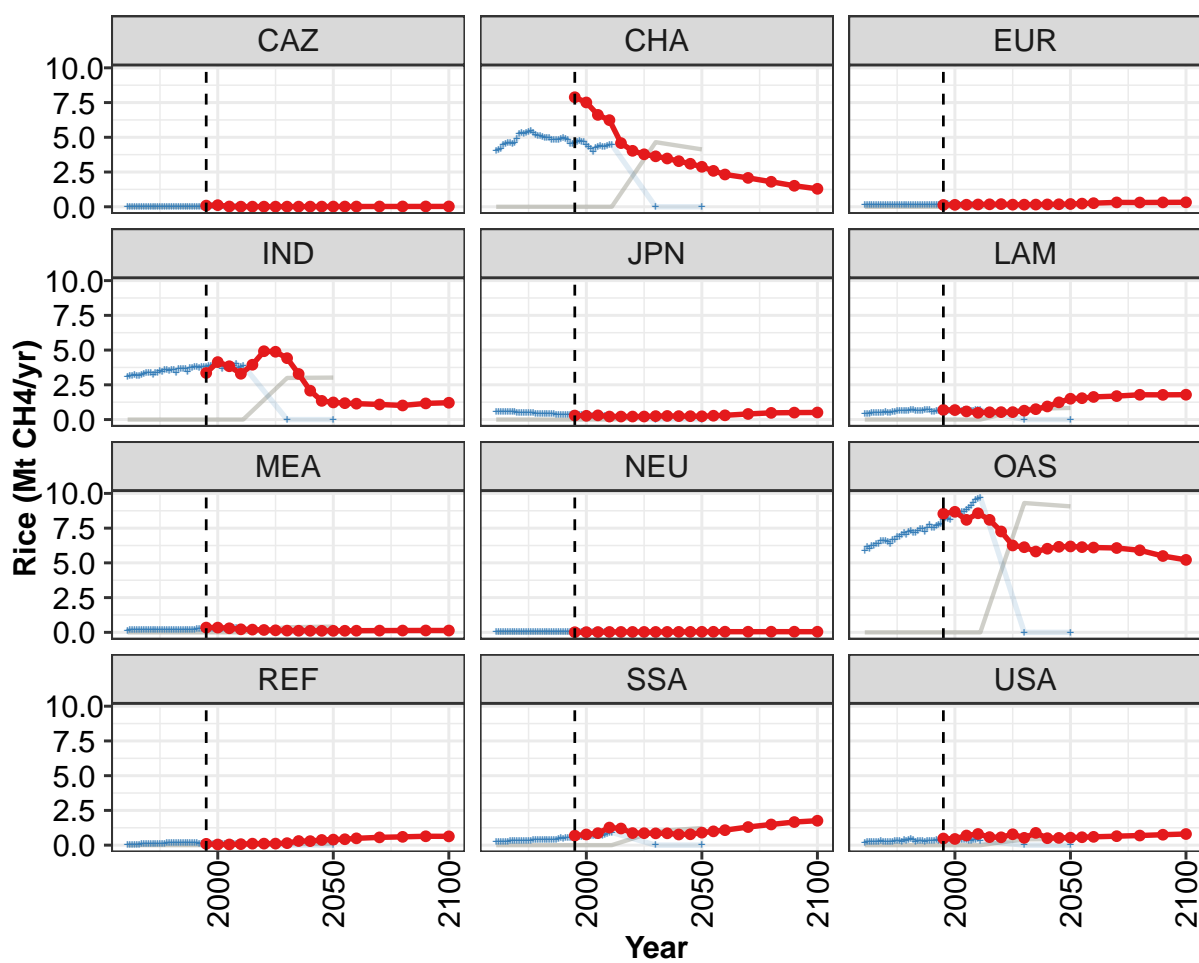
	2005	2006	2007	2008	2009	2010	2011	2030	2050
GLO	8.66	8.76	8.86	8.93	8.96	9.08	9.12	0.00	0.00
CAZ	0.48	0.48	0.47	0.45	0.45	0.44	0.45	0.00	0.00
CHA	0.96	0.99	1.01	1.02	1.05	1.10	1.09	0.00	0.00
EUR	2.11	2.09	2.10	2.08	2.06	2.07	2.05	0.00	0.00
IND	0.93	0.94	0.97	0.98	1.00	1.02	1.03	0.00	0.00
JPN	0.17	0.17	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





**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

—+— FAO\_EmisAg

**Other projections**

— FAO\_EmisAg

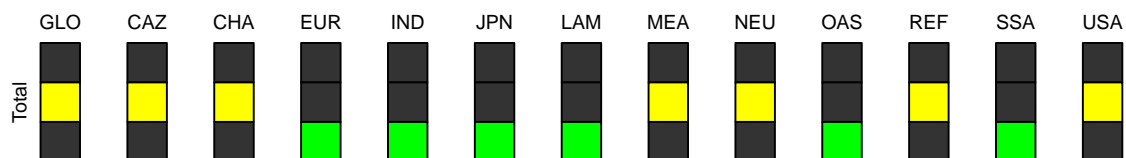


Figure 236: MAgPIE m4p\_SSP4 — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22.6	23.2	21.5	21.4	19.7	18.9	17.8	16.9	15.9	14.5	14.1
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	4.6	4.0	3.8	3.6	3.5	3.3	3.1
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	3.9	4.9	4.9	4.4	3.3	2.1	1.3
JPN	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
LAM	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.9	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	8.1	7.3	6.3	6.1	5.8	6.0	6.2
REF	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.4
SSA	0.7	0.8	0.9	1.3	1.2	0.9	0.9	0.8	0.9	0.8	0.8
USA	0.5	0.4	0.7	0.8	0.6	0.6	0.8	0.5	0.9	0.5	0.5

Table 735: MAgPIE m4p\_SSP4 — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	14.2	14.1	14.1	14.3	14.3	14.0	13.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.9	2.6	2.3	2.1	1.8	1.5	1.3
EUR	0.2	0.2	0.3	0.3	0.3	0.3	0.3
IND	1.2	1.2	1.1	1.1	1.0	1.2	1.2
JPN	0.2	0.3	0.3	0.4	0.5	0.5	0.5
LAM	1.5	1.5	1.6	1.7	1.8	1.8	1.8
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	6.2	6.1	6.1	6.1	5.9	5.5	5.2
REF	0.4	0.4	0.5	0.6	0.6	0.6	0.6
SSA	0.9	1.0	1.1	1.3	1.5	1.7	1.8
USA	0.5	0.6	0.6	0.6	0.7	0.8	0.8

Table 736: MAgPIE m4p\_SSP4 — 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]

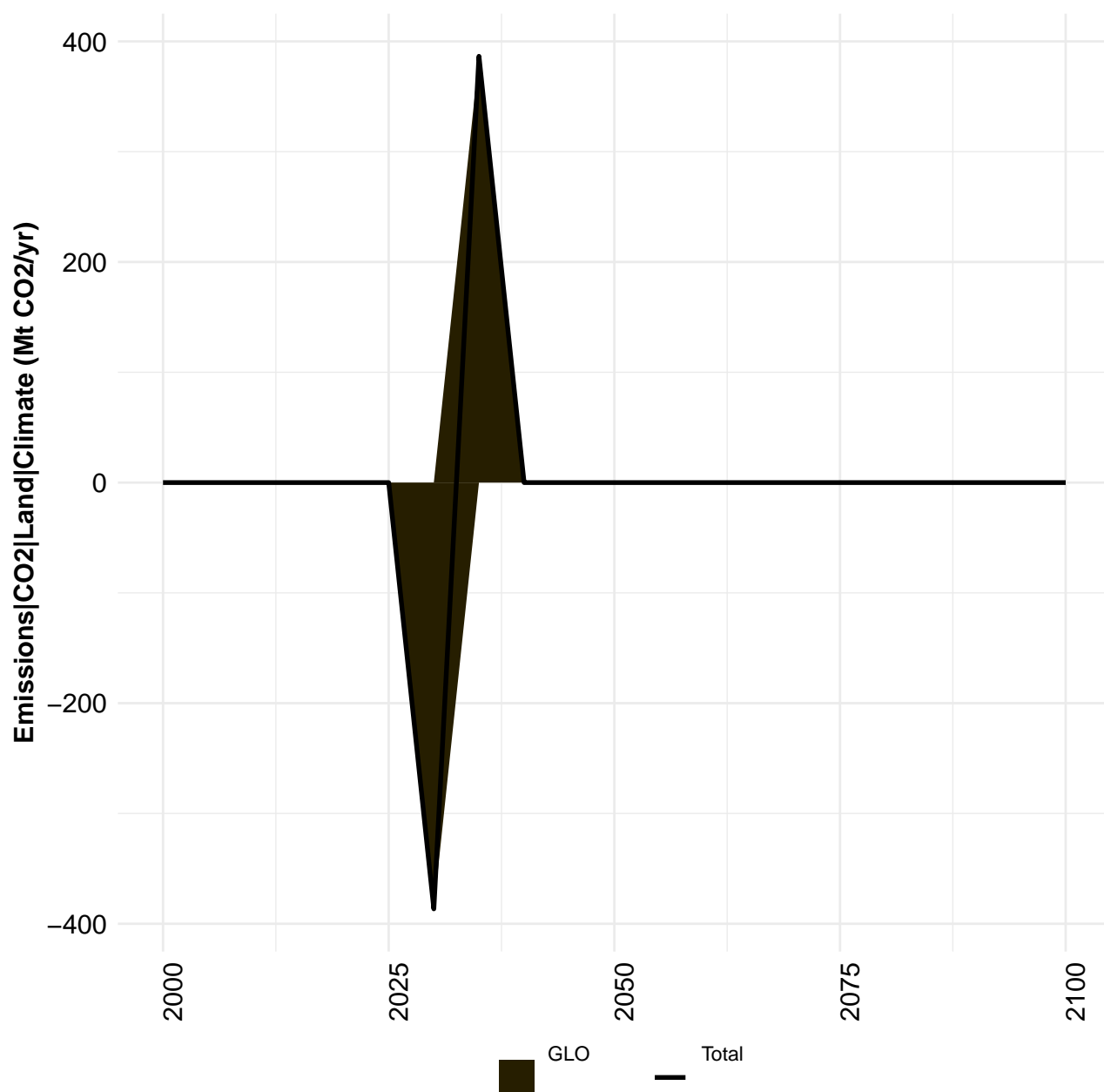
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	18.7	19.0	19.3	19.3	19.3	20.0	19.6	19.3	18.9	18.9	19.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	4.5	4.6	4.7	4.7	4.7	4.7	4.5	4.3	4.2	4.0	4.2
EUR	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IND	3.8	3.8	3.8	3.9	4.0	4.0	4.0	4.0	3.7	3.8	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

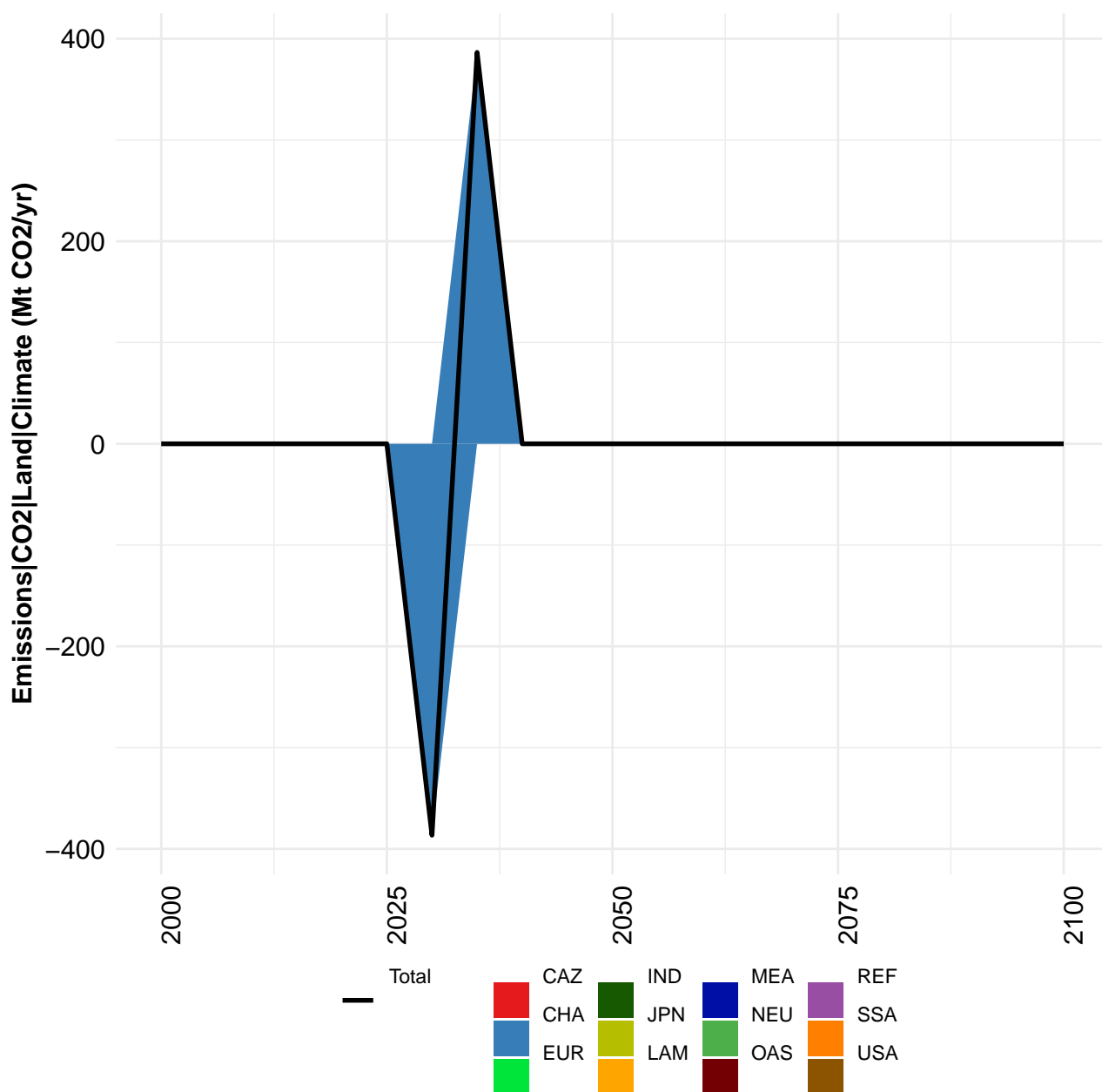
Table 740: FAO\_EmisAg — Emissions—CH4—Land—Agriculture—Rice (Mt CH4/yr) [PART 4/5]

	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]

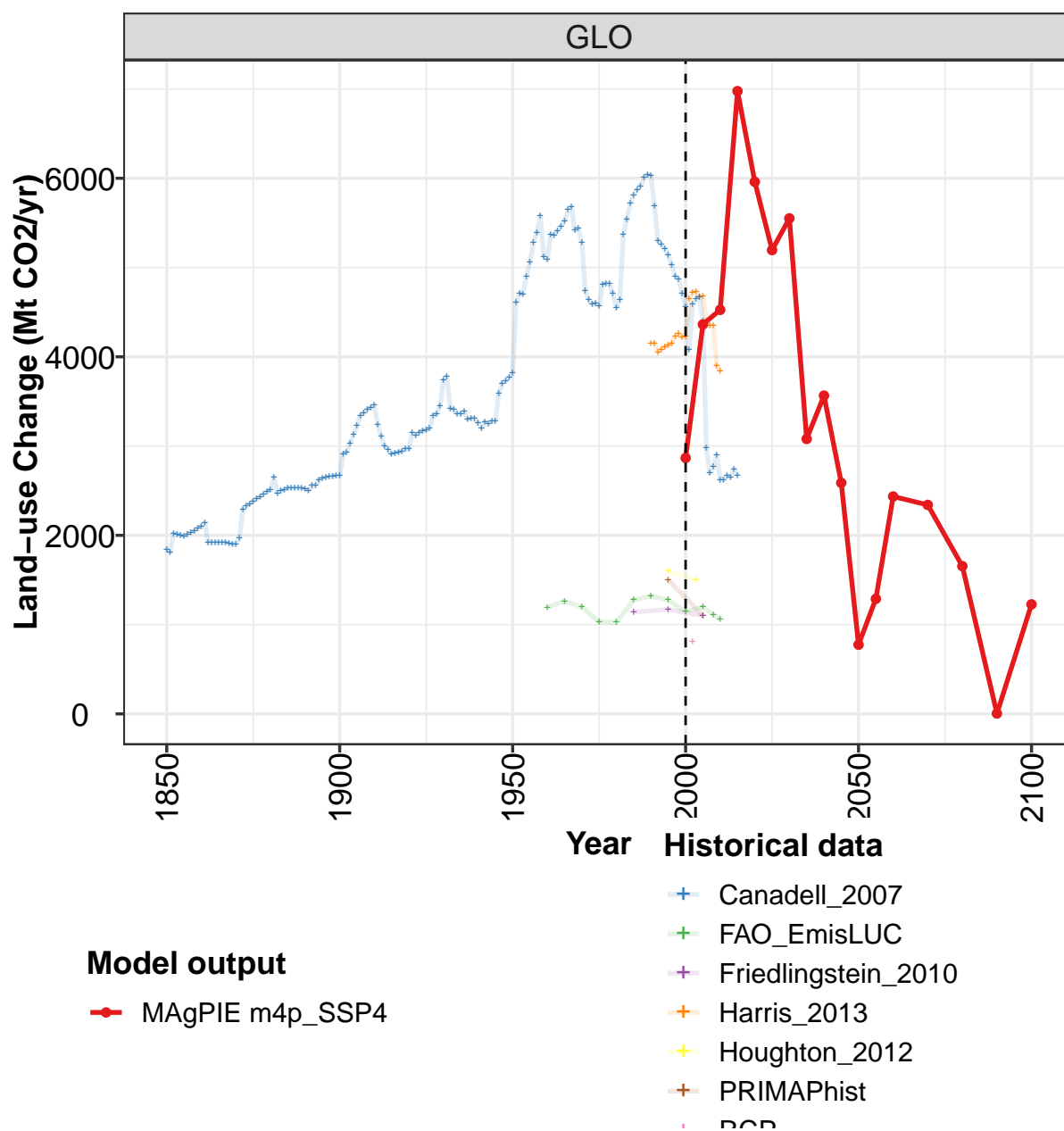
## 12 CO2

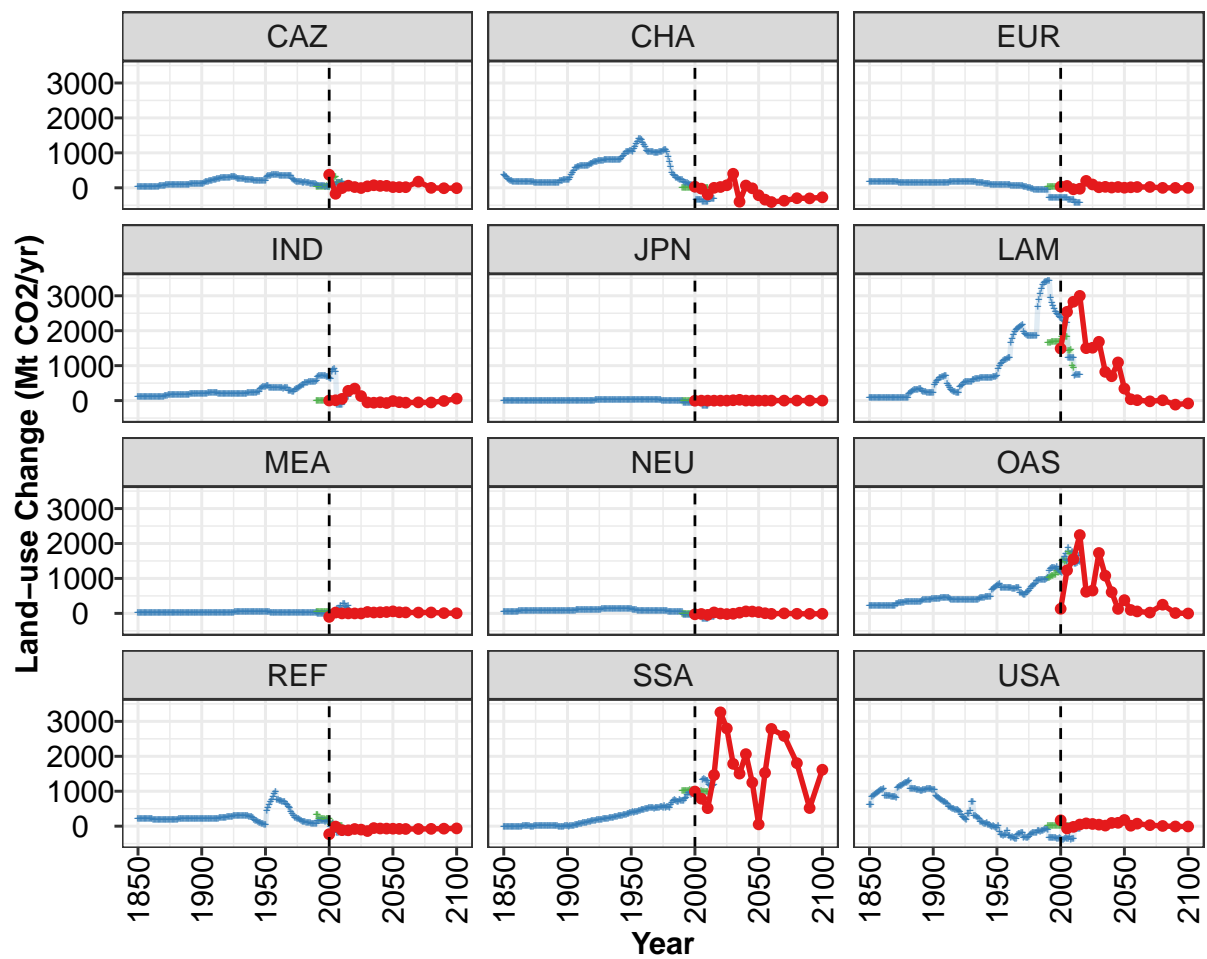




## 12.1 Land

## 12.1.1 Land-use Change





### Model output

—•— MAgPIE m4p\_SSP4

### Historical data

+ FAO\_EmisLUC  
+ PRIMAPhist

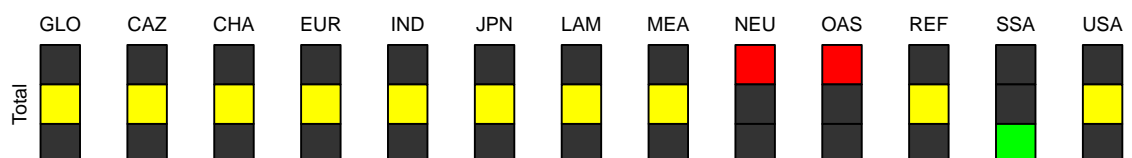


Figure 237: MAgPIE m4p\_SSP4 — Emissions—CO<sub>2</sub>—Land—Land-use Change (Mt CO<sub>2</sub>/yr)



	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
GLO	2867	4363	4526	6976	5960	5196	5551	3080	3566	2588	775
CAZ	374	-171	-8	61	22	-7	43	73	55	56	20
CHA	31	-24	-192	0	23	73	402	-398	66	-14	-212
EUR	34	54	-42	-27	198	96	16	27	7	23	3
IND	2	10	50	281	344	130	-52	-61	-48	-68	-12
JPN	-4	-1	-1	-1	-1	-0	10	23	1	0	0
LAM	1492	2540	2830	2997	1501	1512	1683	823	697	1093	344
MEA	-100	24	-0	-0	-1	-3	41	26	32	40	58
NEU	-26	-16	-42	27	-5	-20	-11	20	58	53	38
OAS	131	1234	1550	2243	619	653	1729	1079	609	129	380
REF	-229	-10	-114	-118	-80	-98	-139	-54	-67	-69	-72
SSA	991	787	516	1465	3259	2797	1785	1505	2063	1250	52
USA	169	-65	-20	48	81	63	44	17	93	96	178

Table 742: MAgPIE m4p\_SSP4 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr) [PART 1/2]

	2055	2060	2070	2080	2090	2100
GLO	1289	2435	2341	1655	4	1227
CAZ	19	18	176	-1	-12	-10
CHA	-339	-408	-370	-298	-302	-271
EUR	15	23	24	-2	-2	-2
IND	-45	-59	-50	-54	-11	56
JPN	0	-0	0	1	-0	-0
LAM	39	12	-21	9	-116	-81
MEA	32	27	24	27	9	5
NEU	5	-13	1	-11	-12	-12
OAS	98	57	24	249	10	-2
REF	-77	-79	-80	-77	-71	-63
SSA	1528	2784	2582	1804	519	1616
USA	13	72	29	7	-8	-8

Table 743: MAgPIE m4p\_SSP4 — 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)

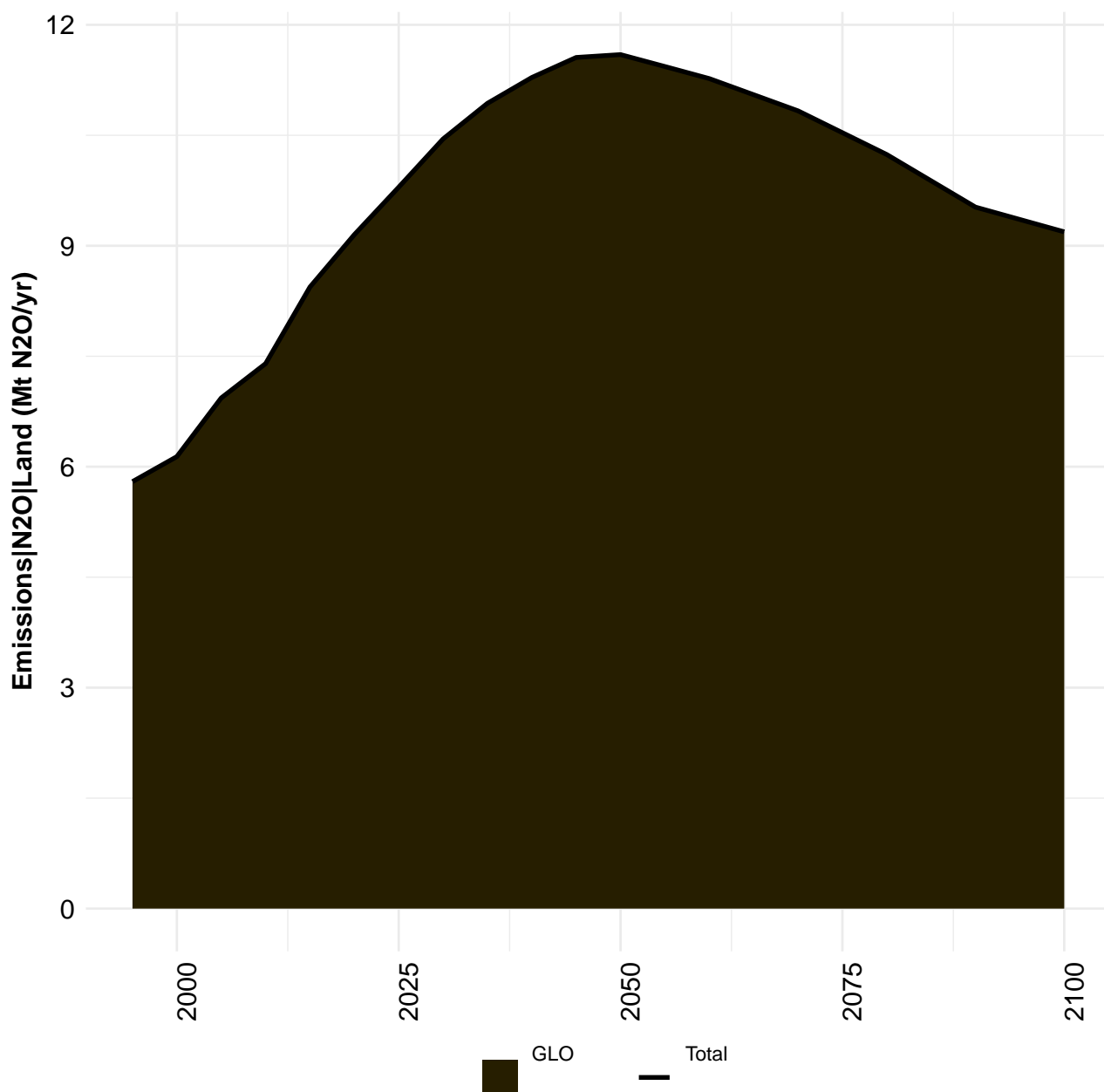


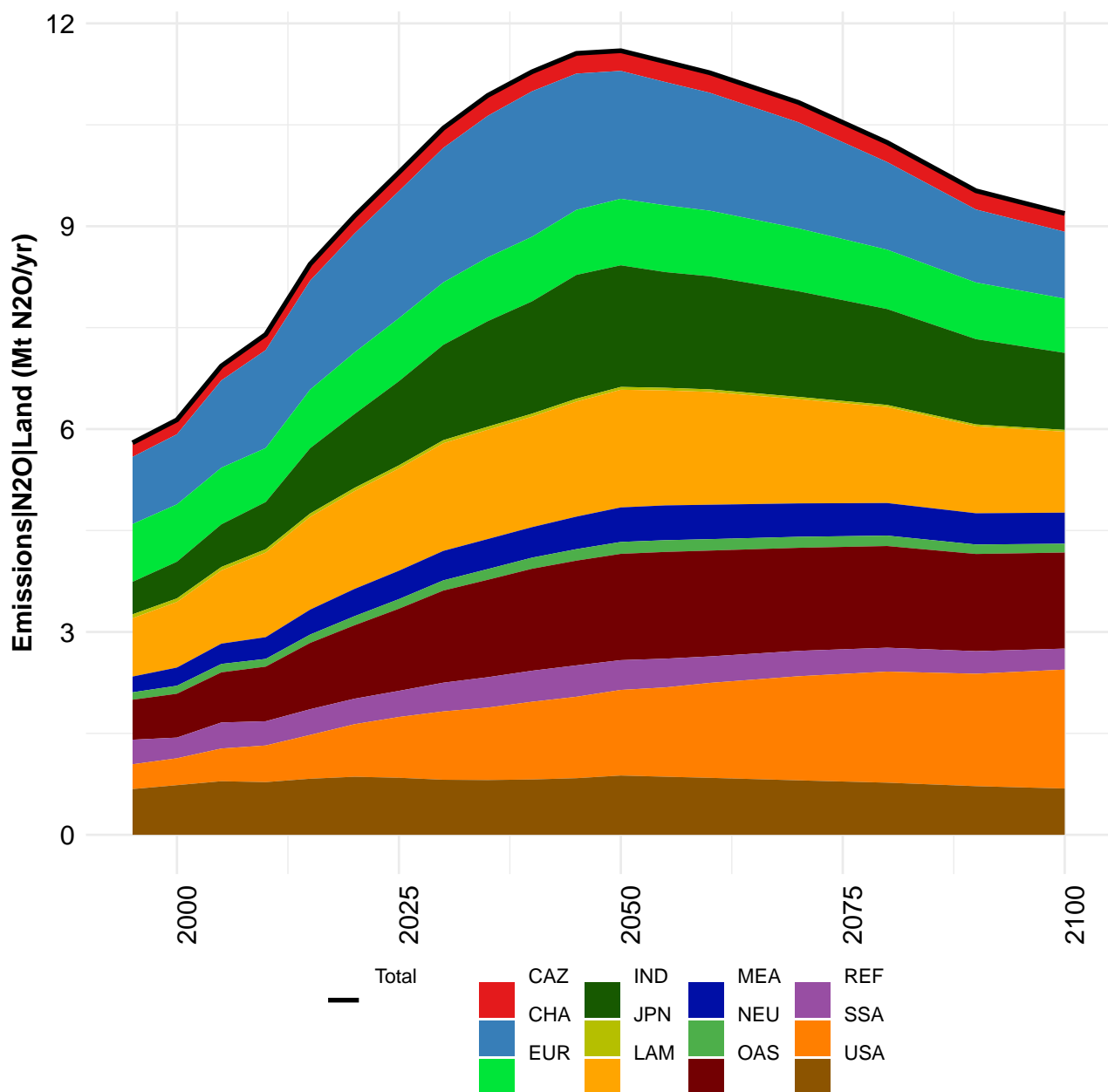
	1995	2005
GLO	1500	1100
CAZ		
CHA		
EUR		
IND		
JPN		
LAM		
MEA		
NEU		
OAS		
REF		
SSA		
USA		

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	

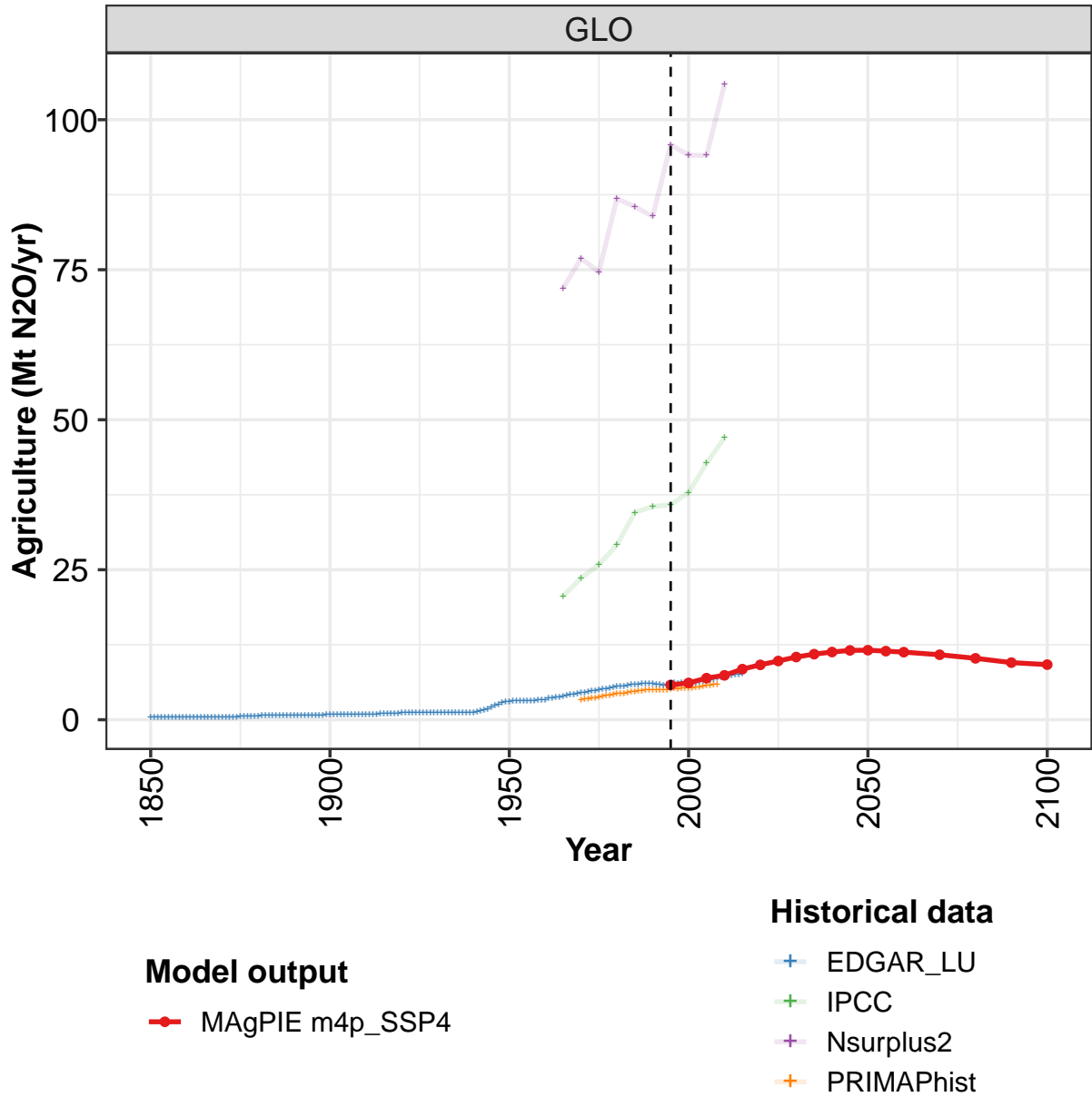
Table 767: Harris\_2013 — Emissions—CO2—Land—Land-use Change (Mt CO2/yr)

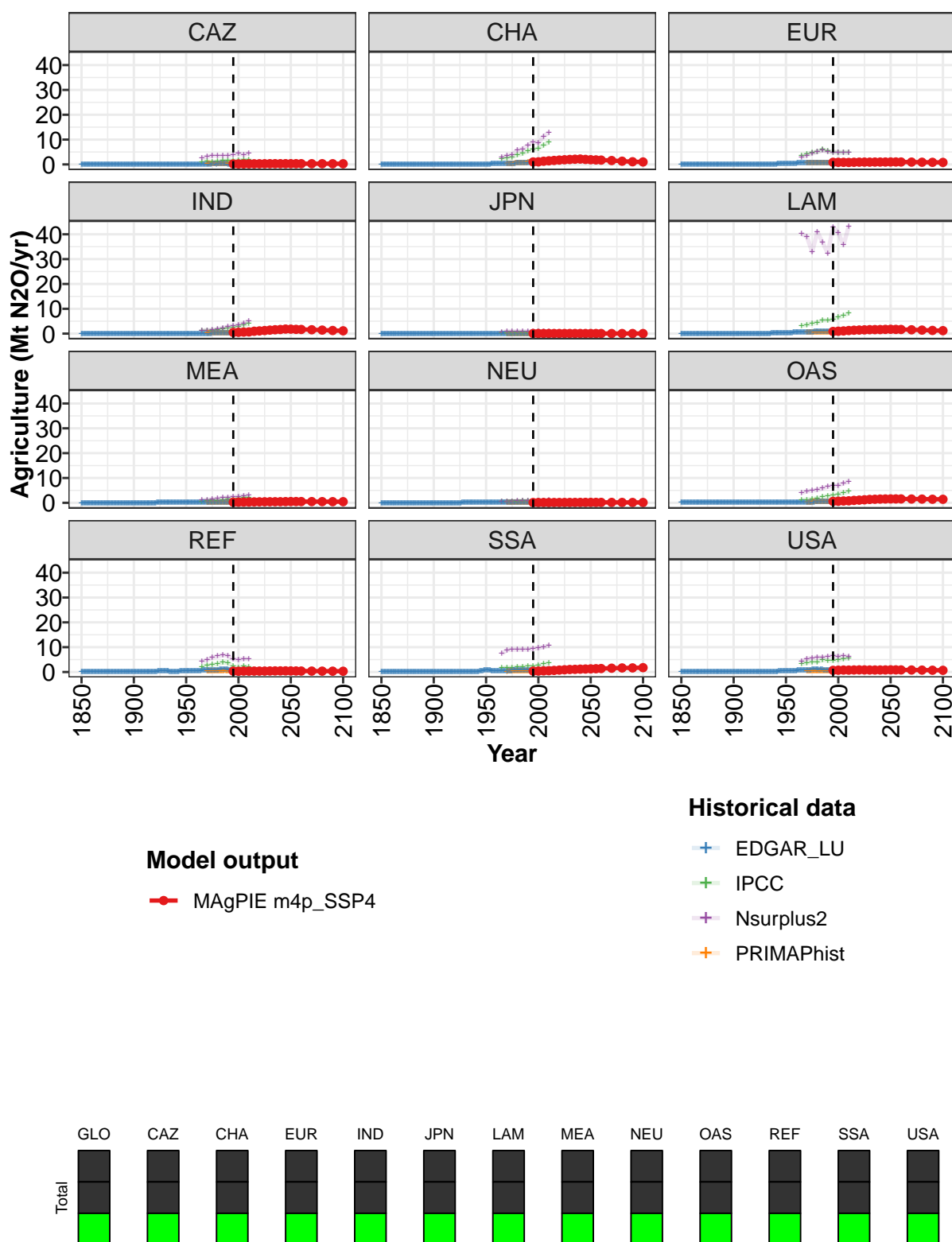
13 N<sub>2</sub>O



13.1 Land

13.1.1 Agriculture



Figure 238: MAgPIE m4p\_SSP4 — Emissions—N<sub>2</sub>O—Land—Agriculture (Mt N<sub>2</sub>O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.8	6.1	6.9	7.4	8.4	9.2	9.8	10.4	10.9	11.3	11.6
CAZ	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
CHA	1.0	1.0	1.3	1.4	1.6	1.8	1.9	2.0	2.1	2.2	2.0
EUR	0.9	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	1.0	1.0
IND	0.5	0.5	0.6	0.7	1.0	1.1	1.2	1.4	1.6	1.7	1.8
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	1.0	1.1	1.3	1.4	1.4	1.5	1.6	1.6	1.6	1.7
MEA	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5
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	1.4	1.5	1.5
REF	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
SSA	0.4	0.4	0.5	0.5	0.6	0.8	0.9	1.0	1.1	1.1	1.2
USA	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8

Table 768: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture (Mt N2O/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	11.6	11.4	11.3	10.8	10.2	9.5	9.2
CAZ	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CHA	1.9	1.8	1.7	1.6	1.3	1.1	1.0
EUR	1.0	1.0	1.0	0.9	0.9	0.8	0.8
IND	1.8	1.7	1.7	1.6	1.4	1.3	1.1
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.7	1.7	1.7	1.5	1.4	1.3	1.2
MEA	0.5	0.5	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	1.5	1.5	1.4	1.4
REF	0.4	0.4	0.4	0.4	0.4	0.3	0.3
SSA	1.3	1.3	1.4	1.5	1.6	1.7	1.8
USA	0.9	0.9	0.8	0.8	0.8	0.7	0.7

Table 769: MAgPIE m4p\_SSP4 — 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—N<sub>2</sub>O—Land—Agriculture (Mt N<sub>2</sub>O/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—N<sub>2</sub>O—Land—Agriculture (Mt N<sub>2</sub>O/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—N<sub>2</sub>O—Land—Agriculture (Mt N<sub>2</sub>O/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]

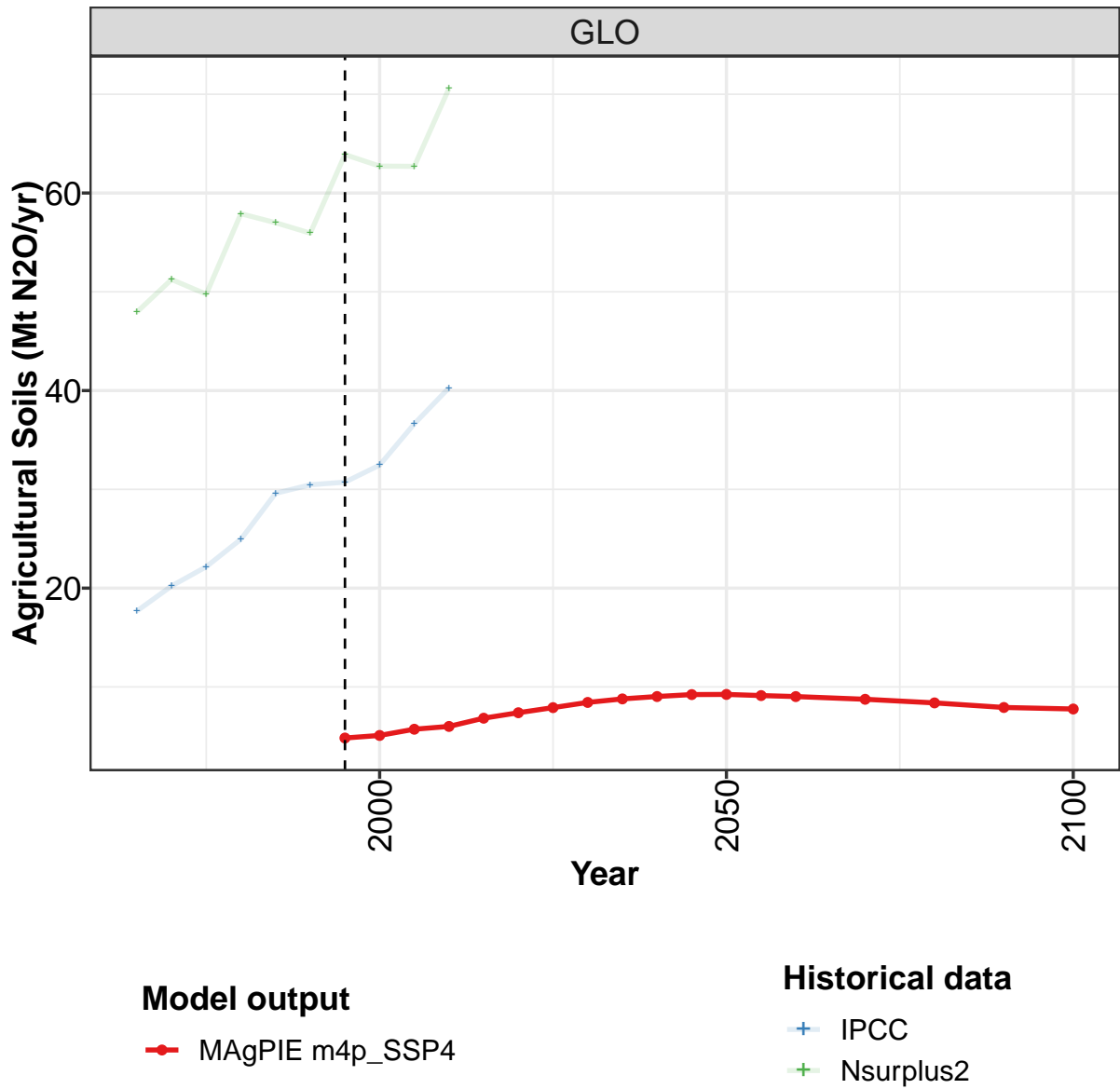
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
GLO	4.96	4.92	4.99	5.10	5.20	5.17	5.23	5.28	5.26	5.32	5.41
CAZ	0.21	0.21	0.22	0.22	0.23	0.23	0.23	0.24	0.24	0.24	0.24
CHA	0.85	0.82	0.86	0.98	1.02	0.94	0.96	1.00	0.98	0.99	1.07
EUR	0.65	0.63	0.64	0.63	0.64	0.65	0.64	0.64	0.62	0.62	0.61
IND	0.41	0.42	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



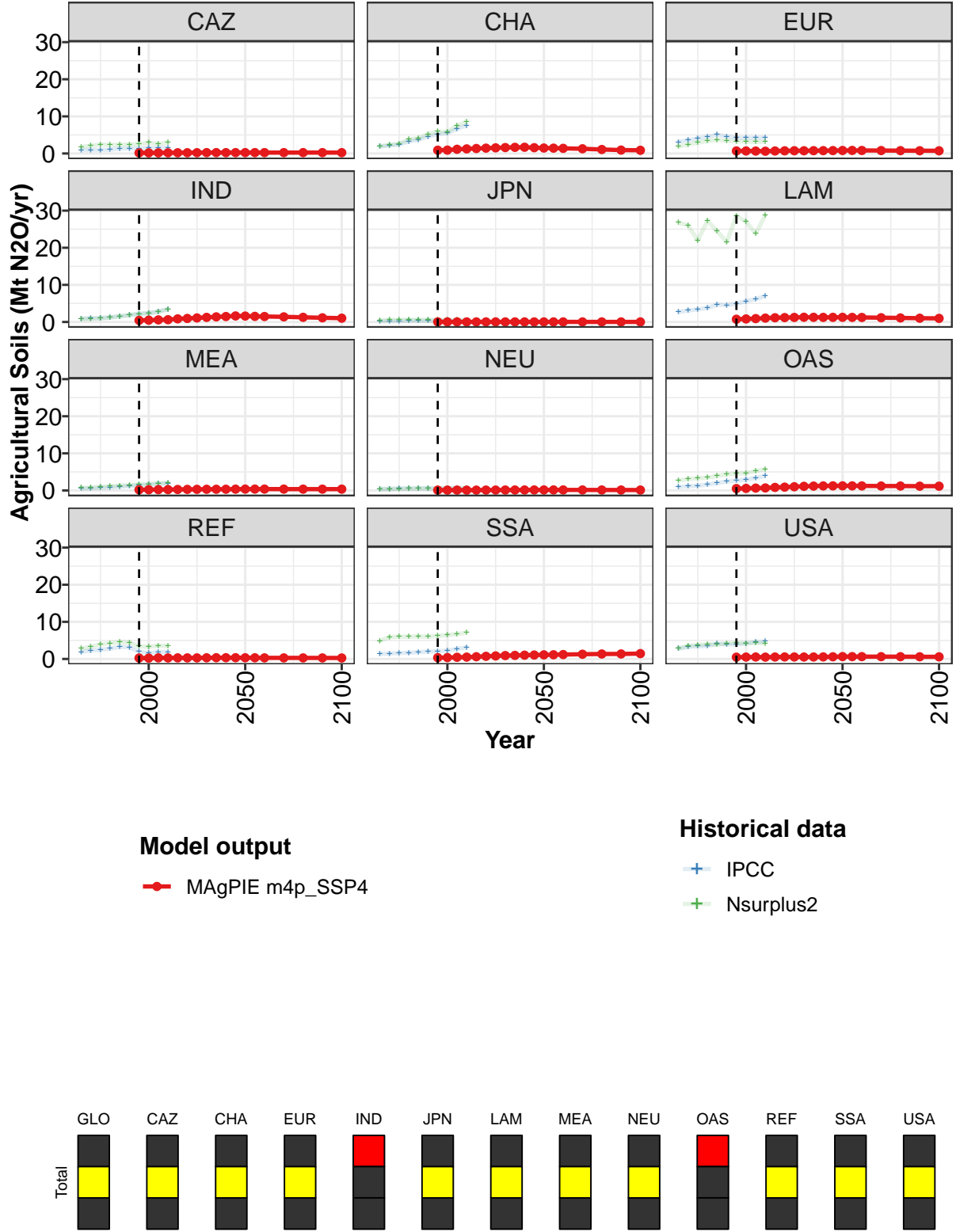


Figure 239: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.83	5.09	5.72	6.00	6.83	7.39	7.90	8.43	8.79	9.03	9.23
CAZ	0.17	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.23	0.24
CHA	0.89	0.92	1.14	1.24	1.35	1.44	1.52	1.60	1.66	1.68	1.57
EUR	0.69	0.68	0.66	0.62	0.68	0.72	0.75	0.74	0.76	0.77	0.79
IND	0.44	0.49	0.57	0.61	0.85	0.96	1.09	1.24	1.38	1.47	1.63
JPN	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
LAM	0.74	0.83	0.91	1.05	1.14	1.19	1.23	1.28	1.26	1.24	1.25
MEA	0.19	0.21	0.23	0.24	0.27	0.30	0.31	0.32	0.33	0.34	0.35
NEU	0.09	0.10	0.10	0.09	0.10	0.11	0.11	0.12	0.13	0.14	0.14
OAS	0.52	0.56	0.64	0.68	0.82	0.90	1.00	1.12	1.18	1.22	1.24
REF	0.25	0.23	0.29	0.28	0.29	0.28	0.29	0.31	0.33	0.33	0.34
SSA	0.34	0.37	0.45	0.50	0.60	0.71	0.82	0.91	0.96	1.02	1.06
USA	0.48	0.51	0.53	0.49	0.52	0.54	0.54	0.52	0.53	0.56	0.58

Table 792: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	9.24	9.12	9.02	8.75	8.38	7.92	7.77
CAZ	0.24	0.24	0.24	0.24	0.25	0.24	0.24
CHA	1.47	1.44	1.39	1.27	1.08	0.92	0.87
EUR	0.82	0.83	0.82	0.80	0.77	0.75	0.73
IND	1.60	1.52	1.48	1.38	1.26	1.13	1.03
JPN	0.03	0.03	0.02	0.02	0.02	0.02	0.02
LAM	1.26	1.24	1.22	1.15	1.09	1.02	0.97
MEA	0.37	0.37	0.37	0.37	0.36	0.35	0.36
NEU	0.15	0.15	0.14	0.14	0.13	0.12	0.12
OAS	1.25	1.24	1.23	1.20	1.19	1.16	1.16
REF	0.32	0.31	0.29	0.29	0.28	0.28	0.26
SSA	1.10	1.13	1.19	1.27	1.34	1.35	1.44
USA	0.64	0.63	0.63	0.62	0.61	0.59	0.57

Table 793: MAgPIE m4p\_SSP4 — 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

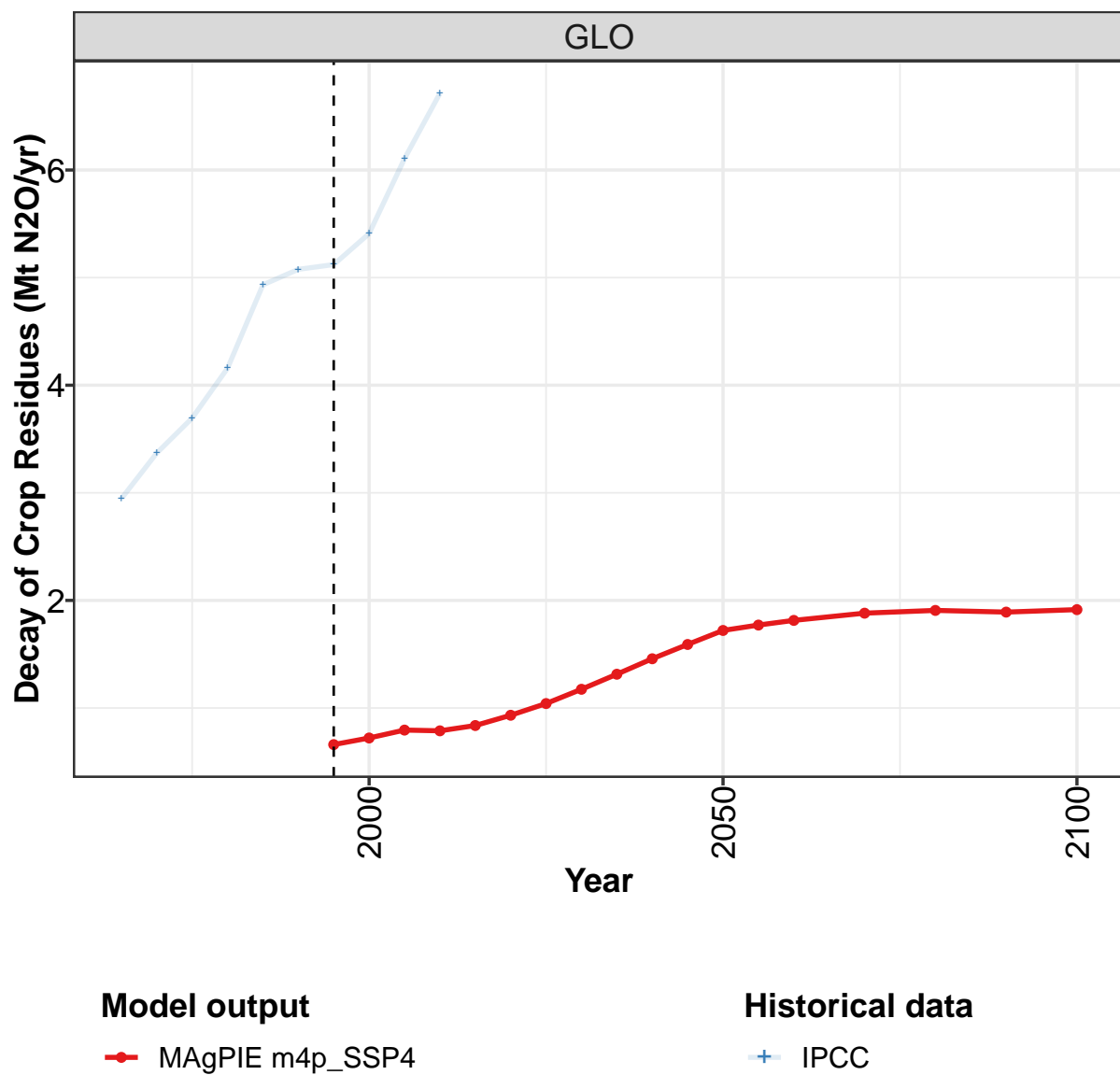
Table 794: IPCC — Emissions—N2O—Land—Agriculture—Agricultural Soils (Mt N2O/yr)

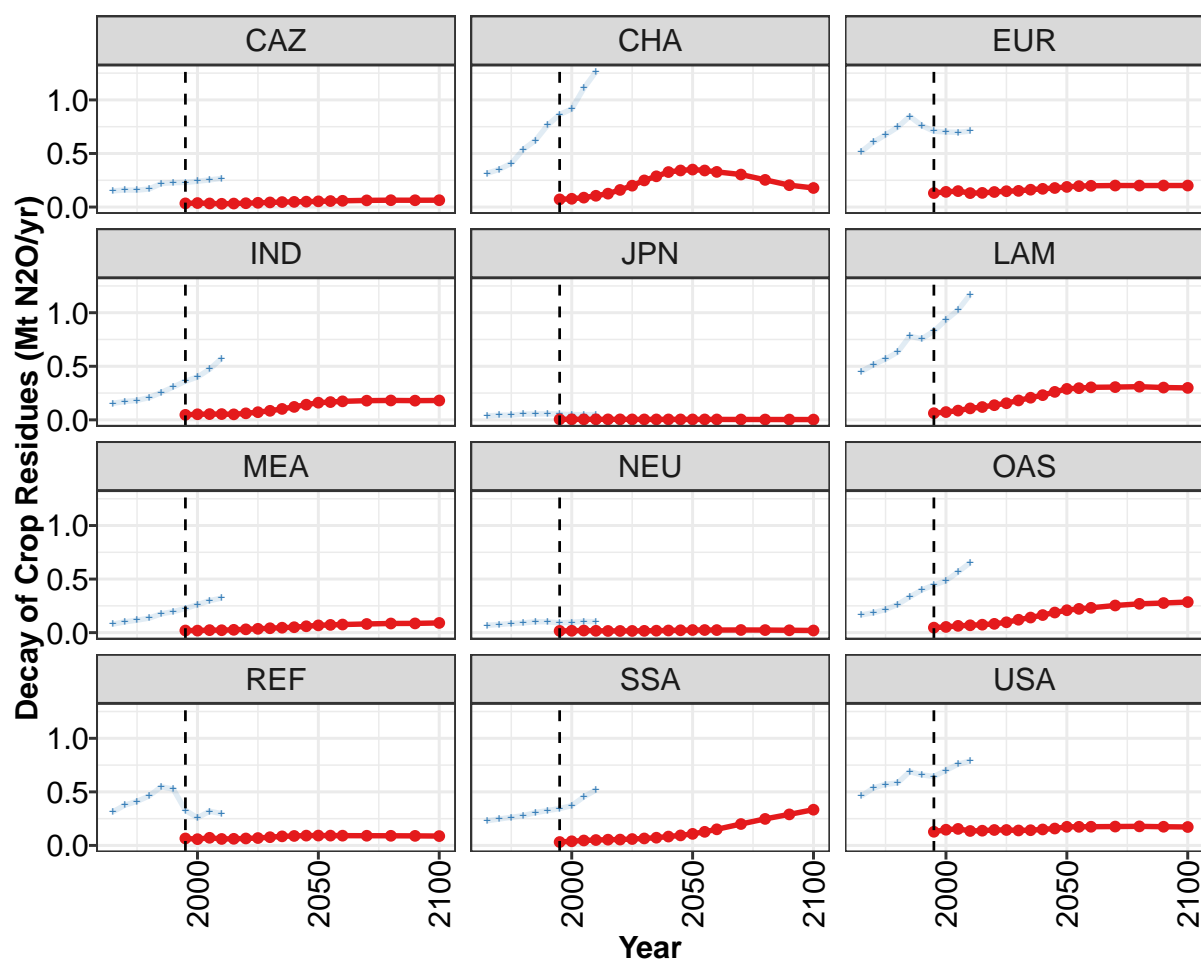


	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	47.9	51.2	49.8	57.9	57.0	55.9	63.9	62.7	62.7	70.6
CAZ	1.8	2.1	2.4	2.3	2.4	2.4	2.6	2.9	2.5	3.0
CHA	2.0	2.3	2.6	3.8	4.2	5.2	5.9	5.8	7.5	8.6
EUR	1.9	2.5	2.9	3.4	3.7	3.4	3.3	3.2	3.1	3.1
IND	0.8	0.9	0.9	1.2	1.5	1.8	2.2	2.3	2.8	3.4
JPN	0.4	0.5	0.6	0.6	0.6	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





**Model output**

—●— MAGPIE m4p\_SSP4

**Historical data**

—+— IPCC

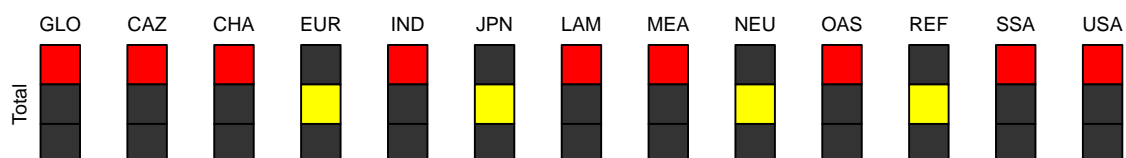


Figure 240: MAGPIE m4p\_SSP4 — Emissions—N<sub>2</sub>O—Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt N<sub>2</sub>O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.66	0.72	0.79	0.79	0.84	0.93	1.04	1.17	1.31	1.46	1.59
CAZ	0.03	0.04	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05
CHA	0.07	0.08	0.09	0.11	0.13	0.16	0.20	0.25	0.29	0.33	0.34
EUR	0.13	0.14	0.15	0.13	0.13	0.14	0.15	0.15	0.16	0.17	0.18
IND	0.05	0.05	0.05	0.05	0.05	0.06	0.07	0.08	0.10	0.12	0.14
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	0.07	0.09	0.11	0.12	0.14	0.16	0.18	0.21	0.23	0.26
MEA	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.05	0.05	0.06	0.07	0.07	0.08	0.10	0.12	0.14	0.16	0.19
REF	0.07	0.06	0.07	0.06	0.06	0.07	0.07	0.08	0.08	0.09	0.09
SSA	0.03	0.04	0.05	0.05	0.05	0.05	0.06	0.07	0.07	0.08	0.09
USA	0.13	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.16

Table 796: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt N2O/yr) [PART 1/2]

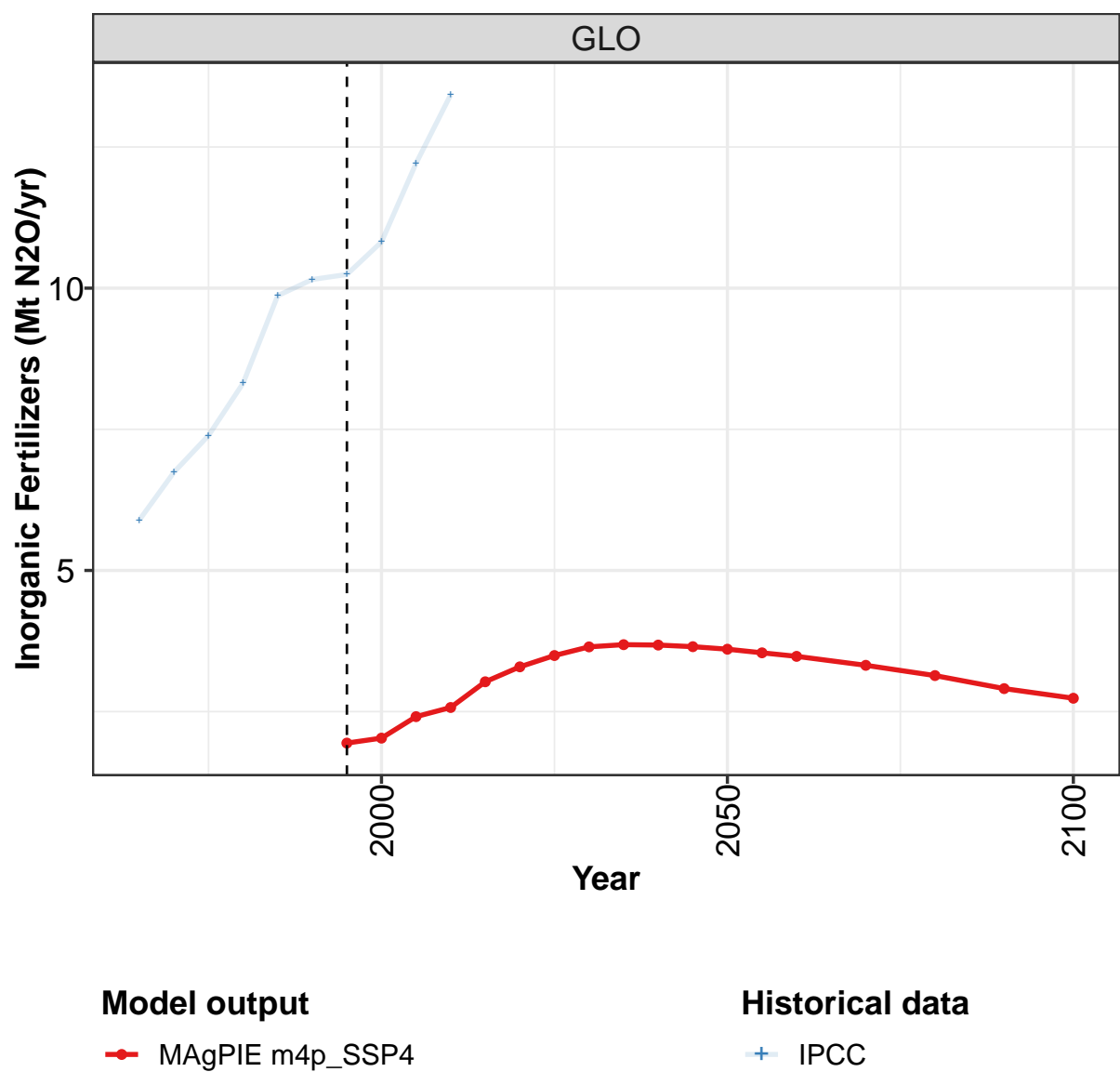
	2050	2055	2060	2070	2080	2090	2100
GLO	1.72	1.77	1.81	1.88	1.91	1.89	1.91
CAZ	0.05	0.06	0.06	0.06	0.06	0.06	0.06
CHA	0.35	0.34	0.33	0.30	0.25	0.20	0.18
EUR	0.19	0.20	0.20	0.20	0.20	0.20	0.20
IND	0.16	0.17	0.17	0.18	0.18	0.18	0.18
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.29	0.30	0.30	0.31	0.31	0.30	0.30
MEA	0.07	0.07	0.08	0.08	0.09	0.09	0.09
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.21	0.22	0.23	0.25	0.27	0.28	0.29
REF	0.09	0.09	0.09	0.09	0.09	0.09	0.09
SSA	0.11	0.13	0.15	0.20	0.25	0.29	0.33
USA	0.17	0.17	0.17	0.18	0.18	0.17	0.17

Table 797: MAgPIE m4p\_SSP4 — 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



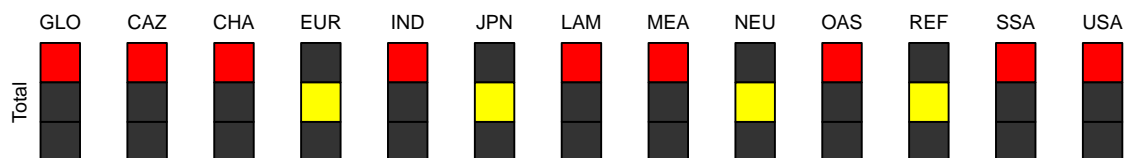
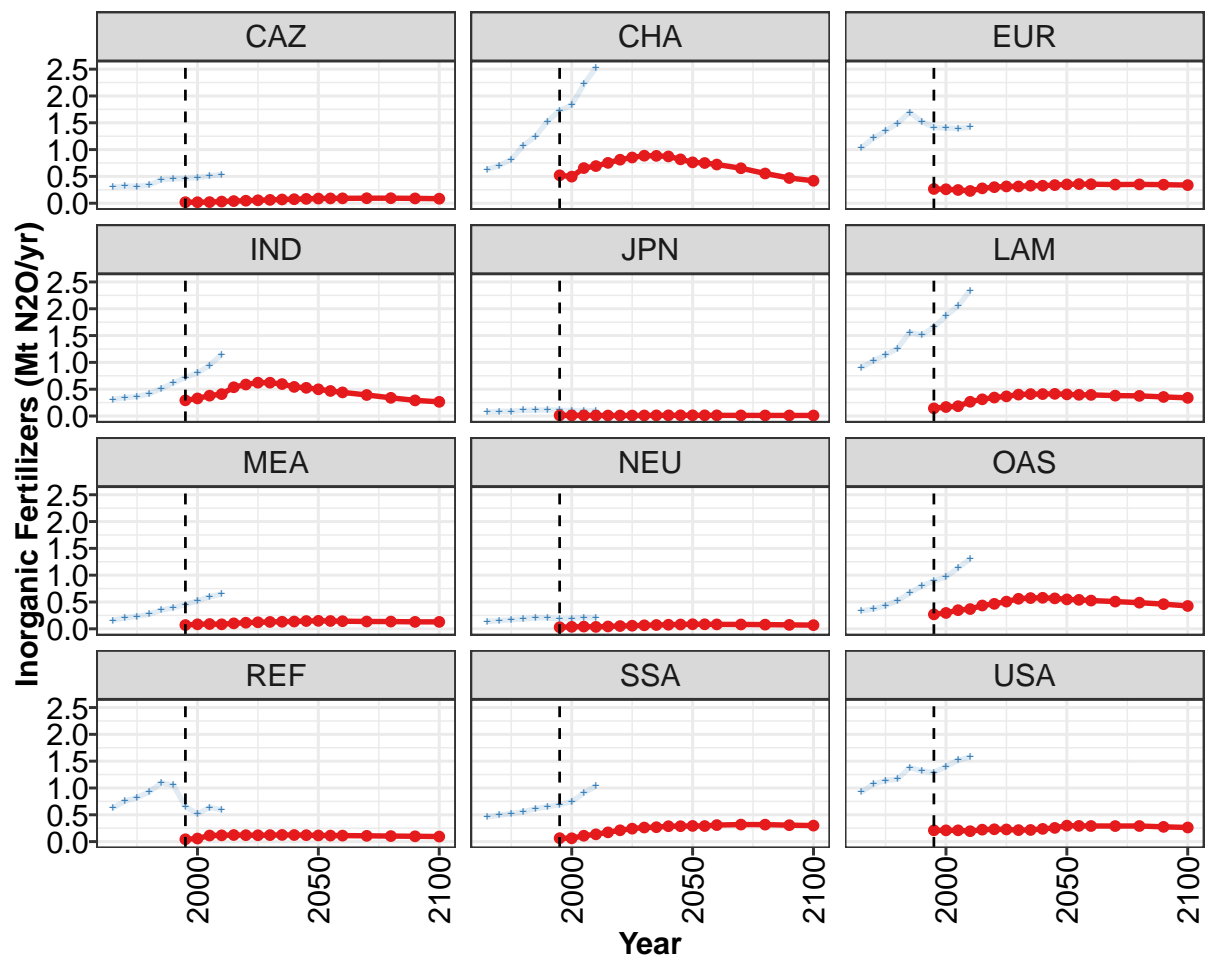


Figure 241: MAGPIE m4p\_SSP4 — Emissions—N<sub>2</sub>O—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt N<sub>2</sub>O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.94	2.03	2.41	2.57	3.03	3.29	3.49	3.65	3.69	3.68	3.65
CAZ	0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.08
CHA	0.52	0.50	0.66	0.69	0.75	0.81	0.85	0.89	0.88	0.87	0.82
EUR	0.27	0.26	0.25	0.23	0.28	0.30	0.31	0.31	0.33	0.33	0.34
IND	0.29	0.33	0.38	0.41	0.54	0.59	0.62	0.62	0.60	0.54	0.53
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	0.17	0.18	0.27	0.31	0.34	0.37	0.40	0.41	0.41	0.41
MEA	0.07	0.08	0.09	0.08	0.10	0.11	0.12	0.13	0.13	0.14	0.15
NEU	0.03	0.04	0.04	0.04	0.04	0.05	0.06	0.07	0.07	0.08	0.08
OAS	0.27	0.30	0.35	0.37	0.44	0.47	0.51	0.56	0.57	0.58	0.57
REF	0.04	0.06	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
SSA	0.06	0.06	0.11	0.14	0.17	0.21	0.24	0.26	0.27	0.29	0.29
USA	0.21	0.21	0.21	0.19	0.22	0.23	0.23	0.21	0.22	0.24	0.26

Table 799: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt N2O/yr) [PART 1/2]

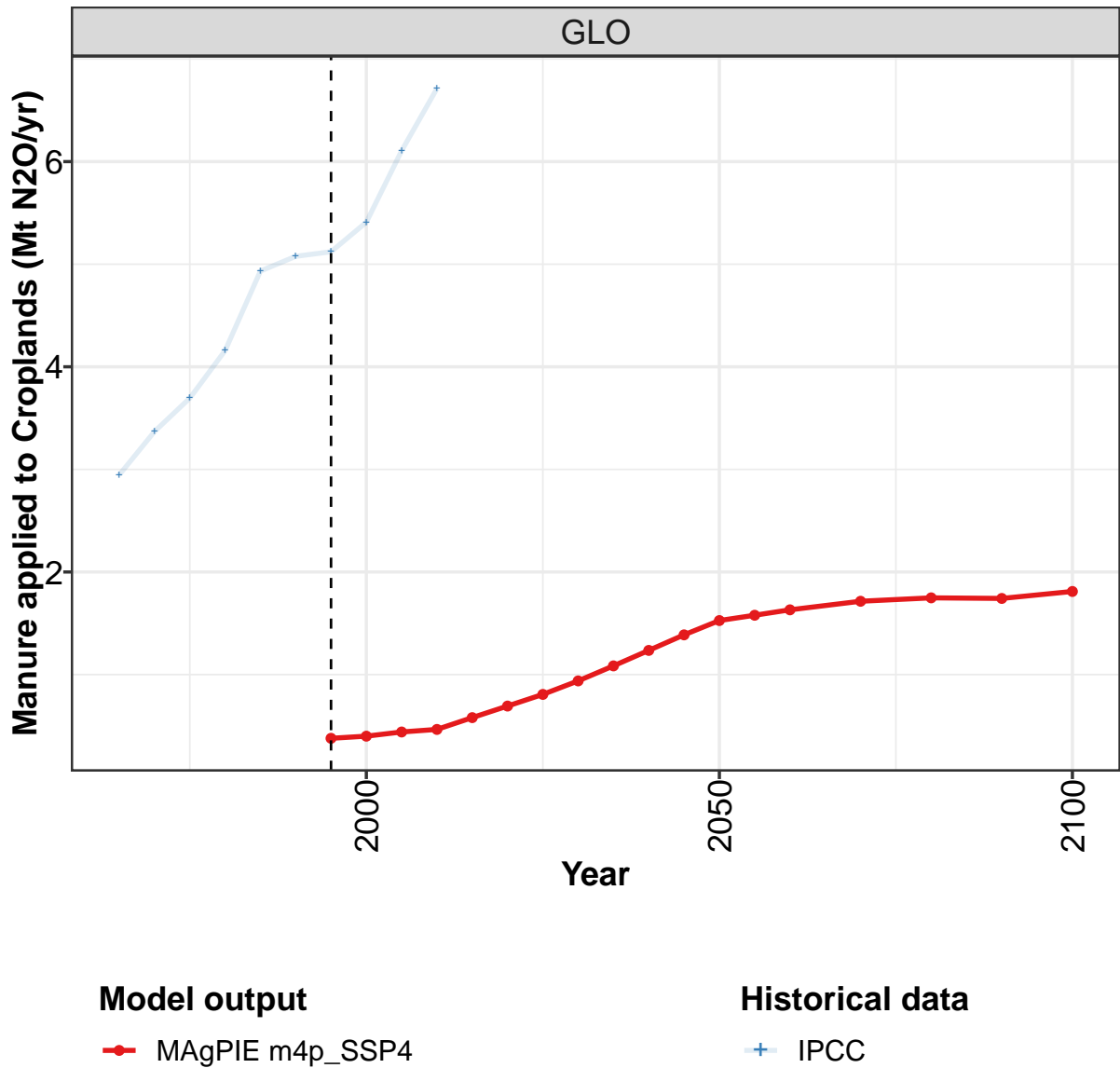
	2050	2055	2060	2070	2080	2090	2100
GLO	3.60	3.54	3.48	3.32	3.14	2.91	2.74
CAZ	0.09	0.09	0.09	0.09	0.09	0.09	0.08
CHA	0.76	0.75	0.72	0.65	0.56	0.47	0.42
EUR	0.35	0.36	0.35	0.35	0.35	0.35	0.34
IND	0.50	0.47	0.44	0.39	0.34	0.29	0.26
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.40	0.40	0.39	0.38	0.38	0.36	0.34
MEA	0.15	0.15	0.14	0.14	0.14	0.13	0.13
NEU	0.09	0.08	0.08	0.08	0.08	0.07	0.07
OAS	0.55	0.54	0.53	0.51	0.49	0.46	0.43
REF	0.12	0.11	0.11	0.11	0.10	0.10	0.09
SSA	0.29	0.29	0.31	0.32	0.32	0.31	0.30
USA	0.30	0.29	0.29	0.29	0.29	0.27	0.26

Table 800: MAgPIE m4p\_SSP4 — 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





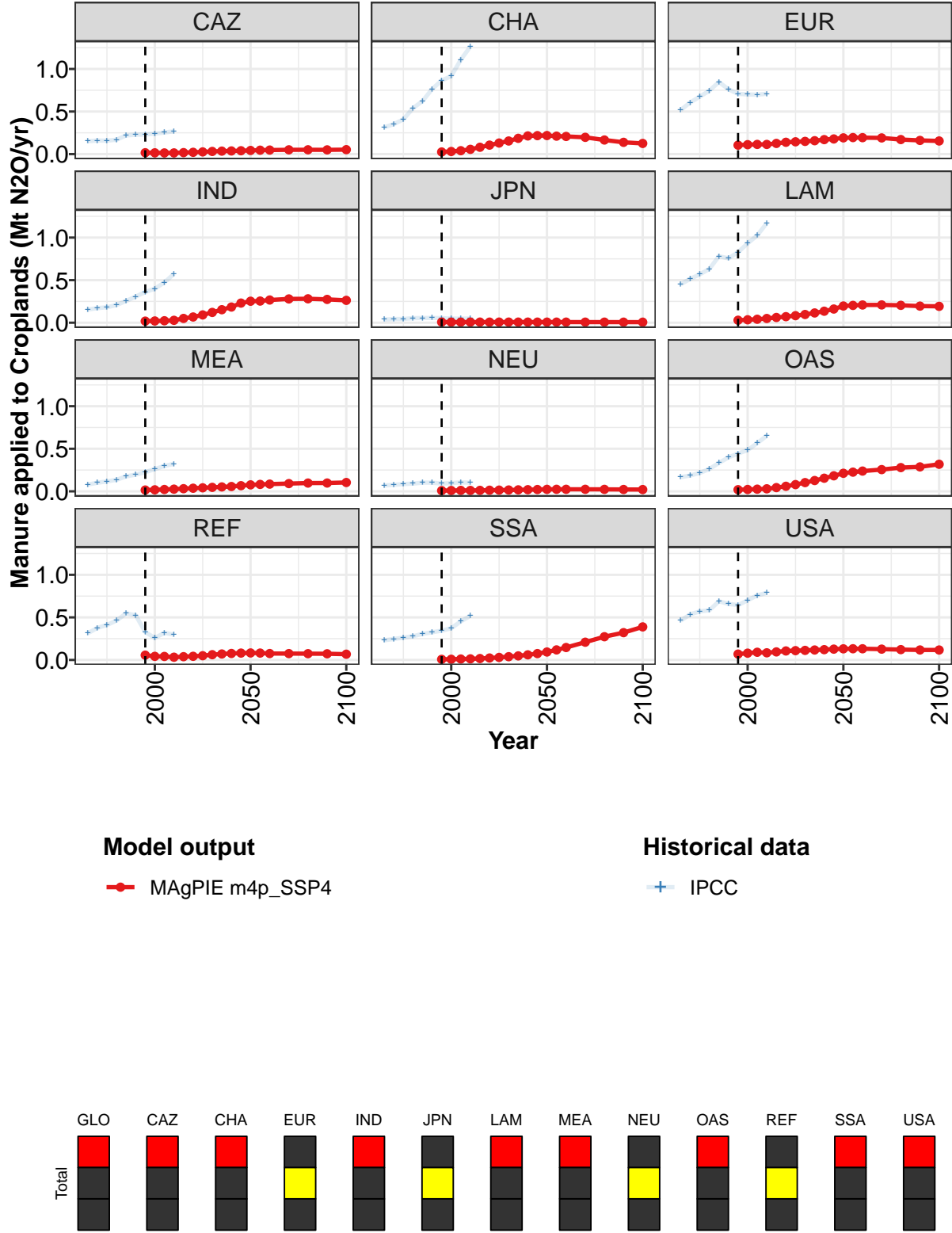


Figure 242: MAGPIE m4p\_SSP4 — Emissions—N<sub>2</sub>O—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt N<sub>2</sub>O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.38	0.40	0.44	0.47	0.58	0.69	0.81	0.94	1.09	1.24	1.39
CAZ	0.02	0.02	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.04
CHA	0.03	0.03	0.04	0.06	0.08	0.11	0.13	0.15	0.19	0.21	0.22
EUR	0.11	0.11	0.11	0.11	0.13	0.14	0.14	0.15	0.16	0.17	0.18
IND	0.02	0.02	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.18	0.23
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	0.11	0.14	0.16
MEA	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.07
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	0.10	0.13	0.15	0.18
REF	0.06	0.04	0.04	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.08
SSA	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.08
USA	0.07	0.08	0.09	0.08	0.09	0.11	0.11	0.11	0.12	0.12	0.13

Table 802: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt N2O/yr) [PART 1/2]

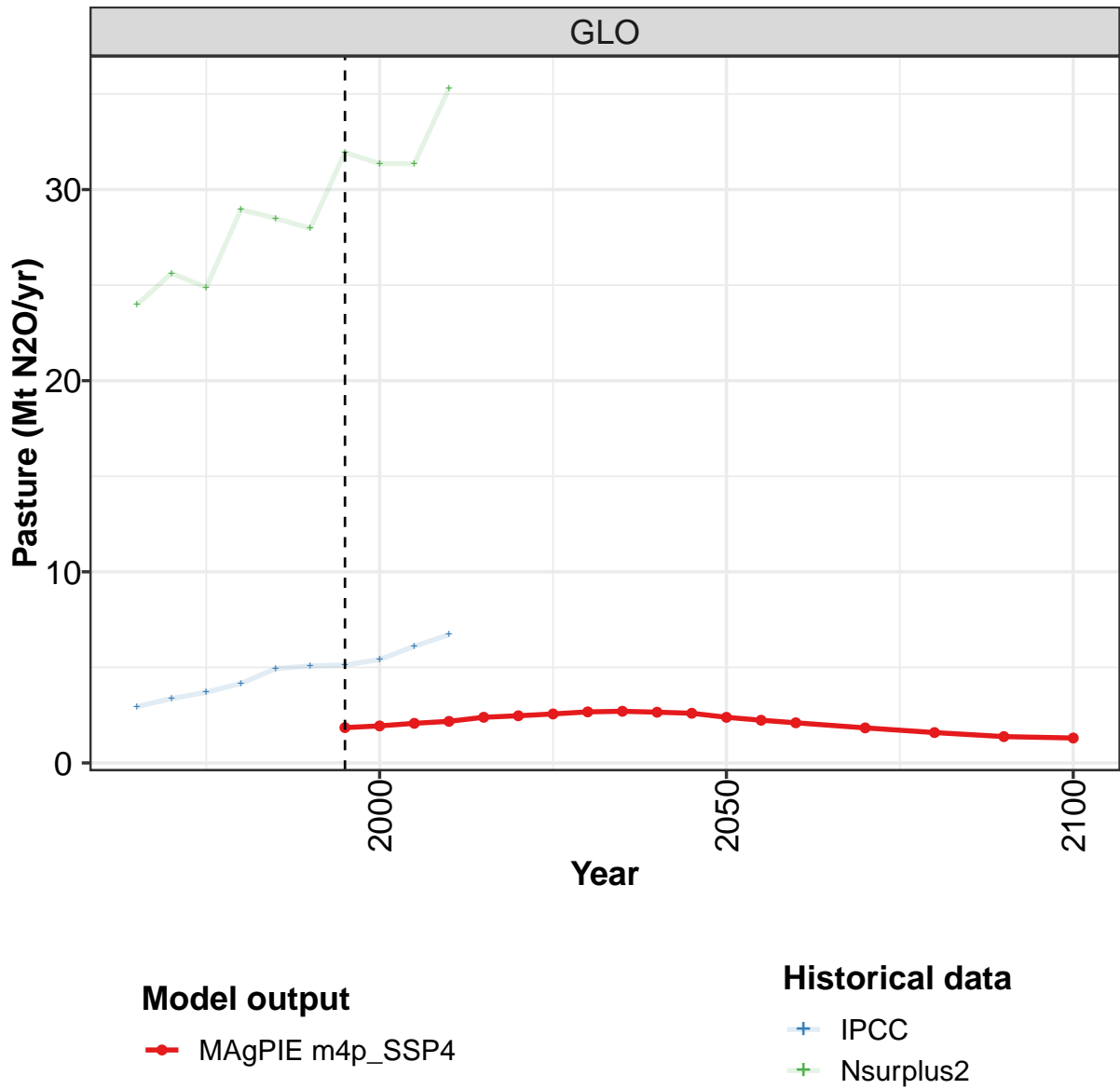
	2050	2055	2060	2070	2080	2090	2100
GLO	1.53	1.58	1.63	1.71	1.75	1.74	1.81
CAZ	0.04	0.05	0.05	0.05	0.05	0.05	0.05
CHA	0.22	0.21	0.21	0.20	0.17	0.14	0.13
EUR	0.19	0.19	0.19	0.19	0.17	0.16	0.15
IND	0.25	0.25	0.27	0.28	0.28	0.27	0.26
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.20	0.20	0.21	0.21	0.20	0.20	0.19
MEA	0.08	0.08	0.09	0.09	0.10	0.10	0.10
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OAS	0.21	0.23	0.24	0.26	0.28	0.29	0.32
REF	0.08	0.08	0.08	0.07	0.07	0.07	0.07
SSA	0.09	0.12	0.15	0.21	0.27	0.32	0.39
USA	0.13	0.13	0.13	0.13	0.12	0.12	0.12

Table 803: MAgPIE m4p\_SSP4 — 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



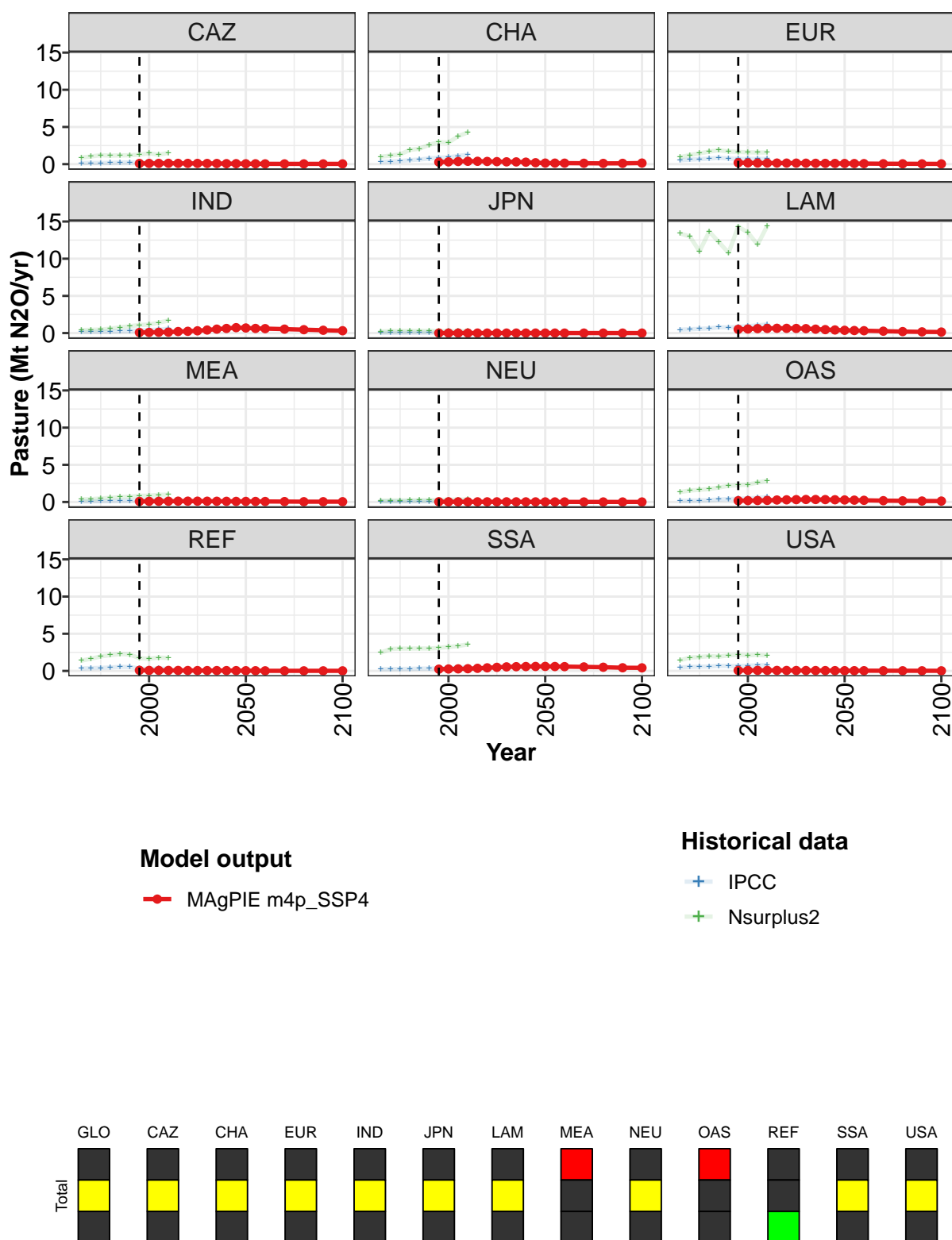


Figure 243: MAgPIE m4p\_SSP4 — Emissions—N<sub>2</sub>O—Land—Agriculture—Agricultural Soils—Pasture (Mt N<sub>2</sub>O/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.85	1.94	2.07	2.18	2.39	2.47	2.56	2.67	2.70	2.66	2.60
CAZ	0.10	0.10	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.07	0.07
CHA	0.28	0.31	0.36	0.39	0.39	0.37	0.34	0.31	0.30	0.27	0.19
EUR	0.19	0.17	0.15	0.14	0.15	0.14	0.14	0.13	0.11	0.11	0.10
IND	0.08	0.09	0.11	0.12	0.21	0.24	0.31	0.41	0.53	0.62	0.73
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	0.64	0.62	0.60	0.53	0.47	0.42
MEA	0.08	0.09	0.10	0.10	0.11	0.12	0.11	0.11	0.10	0.09	0.08
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	0.27	0.30	0.32	0.34	0.34	0.32	0.30
REF	0.08	0.07	0.07	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.04
SSA	0.24	0.26	0.28	0.30	0.35	0.42	0.49	0.55	0.57	0.59	0.60
USA	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.04

Table 805: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Pasture (Mt N2O/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2.39	2.23	2.10	1.83	1.59	1.38	1.30
CAZ	0.06	0.05	0.04	0.04	0.04	0.04	0.04
CHA	0.14	0.14	0.13	0.12	0.10	0.11	0.15
EUR	0.09	0.08	0.07	0.06	0.05	0.04	0.04
IND	0.69	0.63	0.60	0.53	0.46	0.38	0.32
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.37	0.34	0.32	0.26	0.20	0.16	0.14
MEA	0.08	0.07	0.07	0.06	0.04	0.04	0.04
NEU	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OAS	0.28	0.25	0.23	0.18	0.16	0.13	0.13
REF	0.03	0.03	0.02	0.02	0.02	0.02	0.02
SSA	0.61	0.59	0.58	0.54	0.50	0.43	0.42
USA	0.03	0.03	0.03	0.03	0.02	0.02	0.02

Table 806: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Agricultural Soils—Pasture (Mt N2O/yr) [PART 2/2]

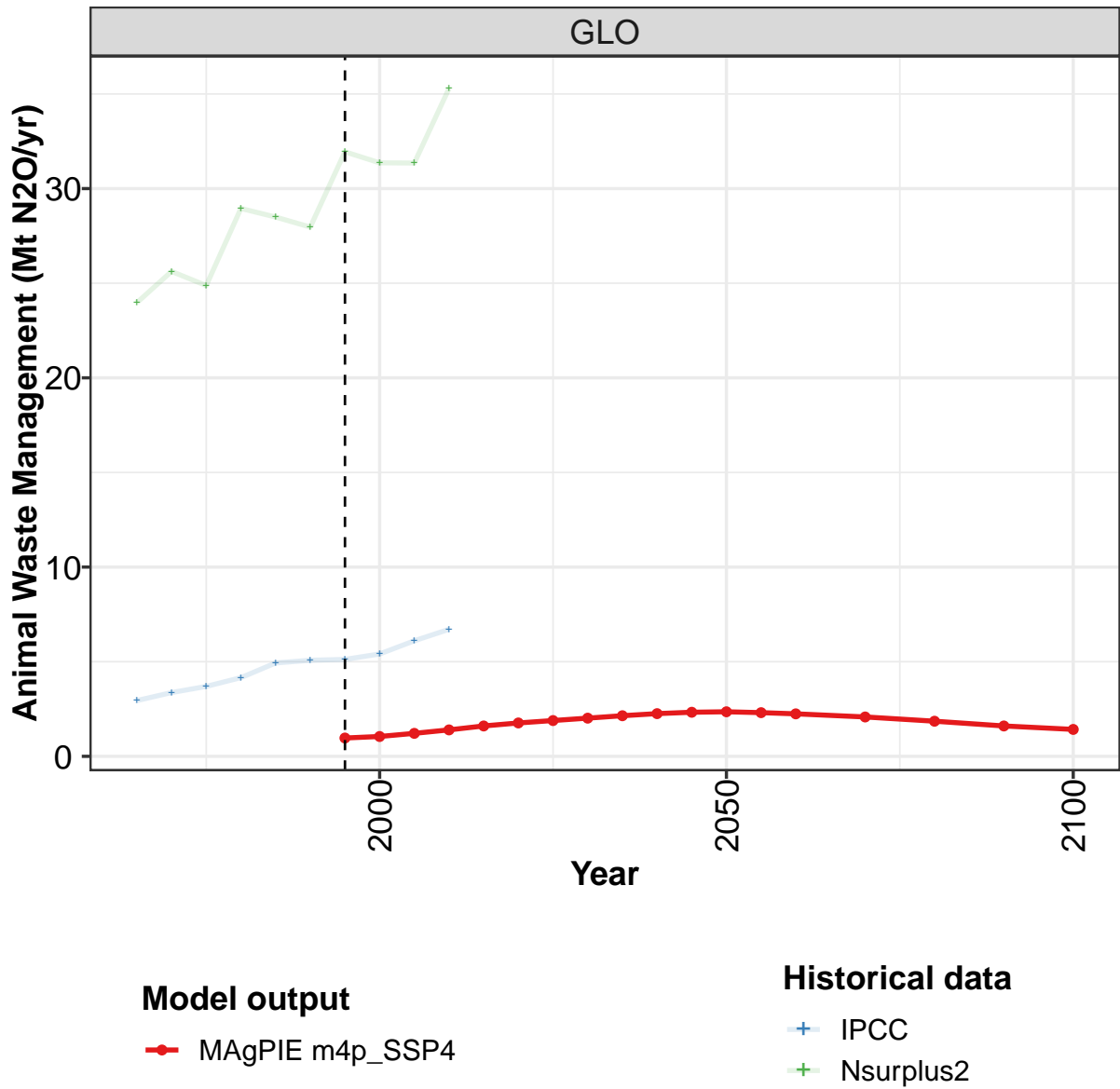
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.95	3.37	3.69	4.16	4.93	5.08	5.12	5.41	6.11	6.71
CAZ	0.15	0.16	0.16	0.17	0.22	0.23	0.23	0.24	0.25	0.27
CHA	0.32	0.35	0.41	0.54	0.62	0.76	0.86	0.92	1.11	1.26
EUR	0.52	0.61	0.67	0.74	0.85	0.76	0.71	0.70	0.70	0.71
IND	0.15	0.17	0.18	0.21	0.26	0.31	0.36	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



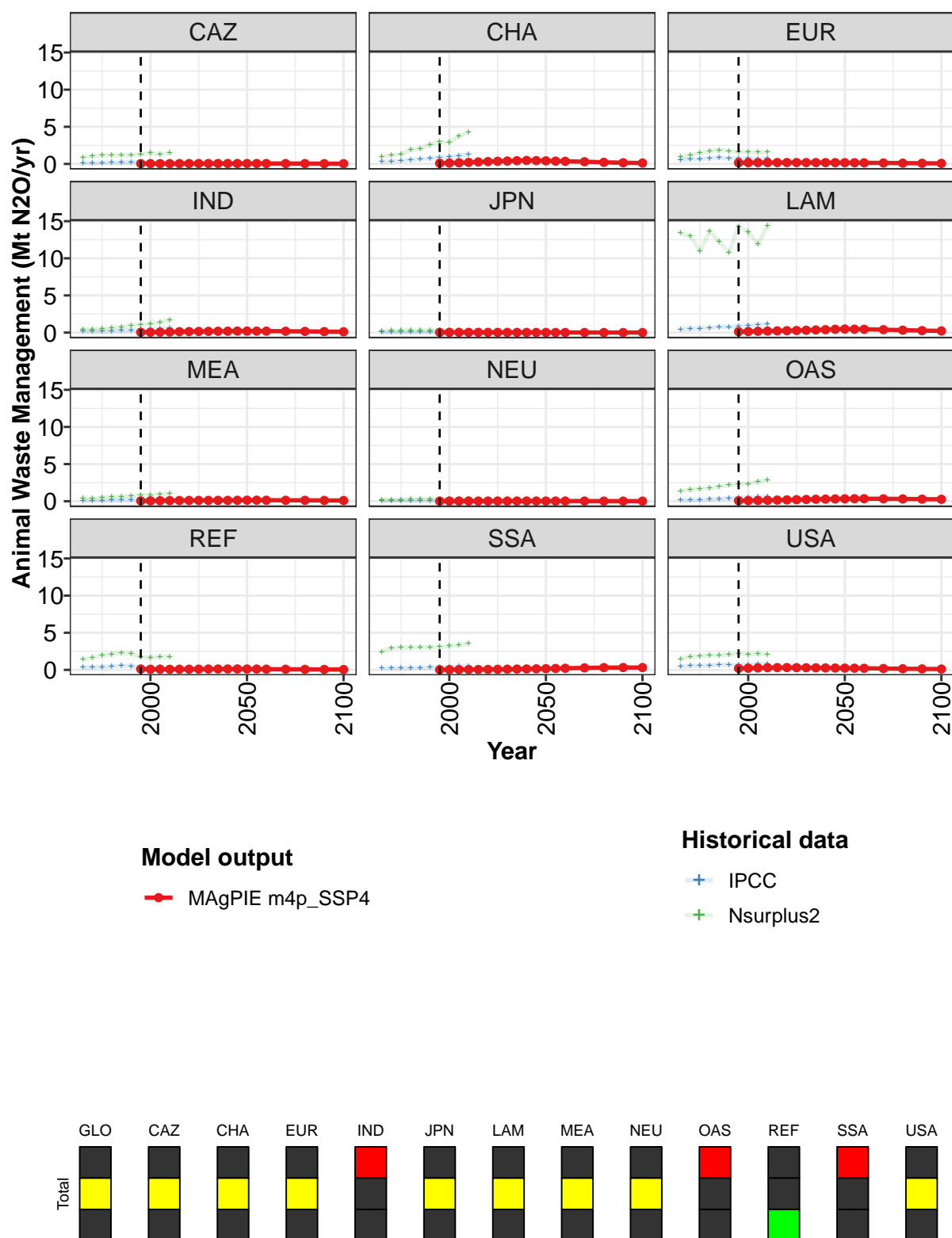


Figure 244: MAGPIE m4p\_SSP4 — Emissions—N<sub>2</sub>O—Land—Agriculture—Animal Waste Management (Mt N<sub>2</sub>O/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.97	1.05	1.21	1.40	1.60	1.76	1.89	2.02	2.15	2.26	2.33
CAZ	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06
CHA	0.10	0.12	0.15	0.21	0.27	0.32	0.36	0.39	0.43	0.47	0.45
EUR	0.16	0.17	0.18	0.18	0.19	0.19	0.19	0.18	0.18	0.18	0.17
IND	0.04	0.05	0.06	0.08	0.12	0.14	0.15	0.17	0.18	0.19	0.20
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	0.26	0.28	0.31	0.36	0.39	0.45
MEA	0.05	0.06	0.07	0.09	0.10	0.11	0.11	0.11	0.11	0.12	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	0.21	0.24	0.26	0.29	0.31
REF	0.11	0.08	0.09	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.13
SSA	0.02	0.03	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.13	0.14
USA	0.20	0.23	0.26	0.29	0.31	0.32	0.30	0.29	0.28	0.26	0.25

Table 809: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2.35	2.31	2.25	2.08	1.86	1.61	1.42
CAZ	0.06	0.06	0.06	0.05	0.04	0.04	0.03
CHA	0.42	0.38	0.35	0.30	0.22	0.16	0.12
EUR	0.16	0.16	0.15	0.13	0.11	0.09	0.07
IND	0.20	0.20	0.19	0.18	0.16	0.13	0.11
JPN	0.02	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.48	0.46	0.45	0.39	0.33	0.27	0.23
MEA	0.14	0.14	0.14	0.13	0.12	0.11	0.10
NEU	0.03	0.03	0.03	0.02	0.02	0.02	0.01
OAS	0.33	0.34	0.34	0.33	0.31	0.28	0.26
REF	0.12	0.11	0.10	0.09	0.07	0.06	0.05
SSA	0.16	0.19	0.22	0.27	0.31	0.32	0.32
USA	0.24	0.23	0.22	0.19	0.16	0.13	0.11

Table 810: MAgPIE m4p\_SSP4 — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr) [PART 2/2]

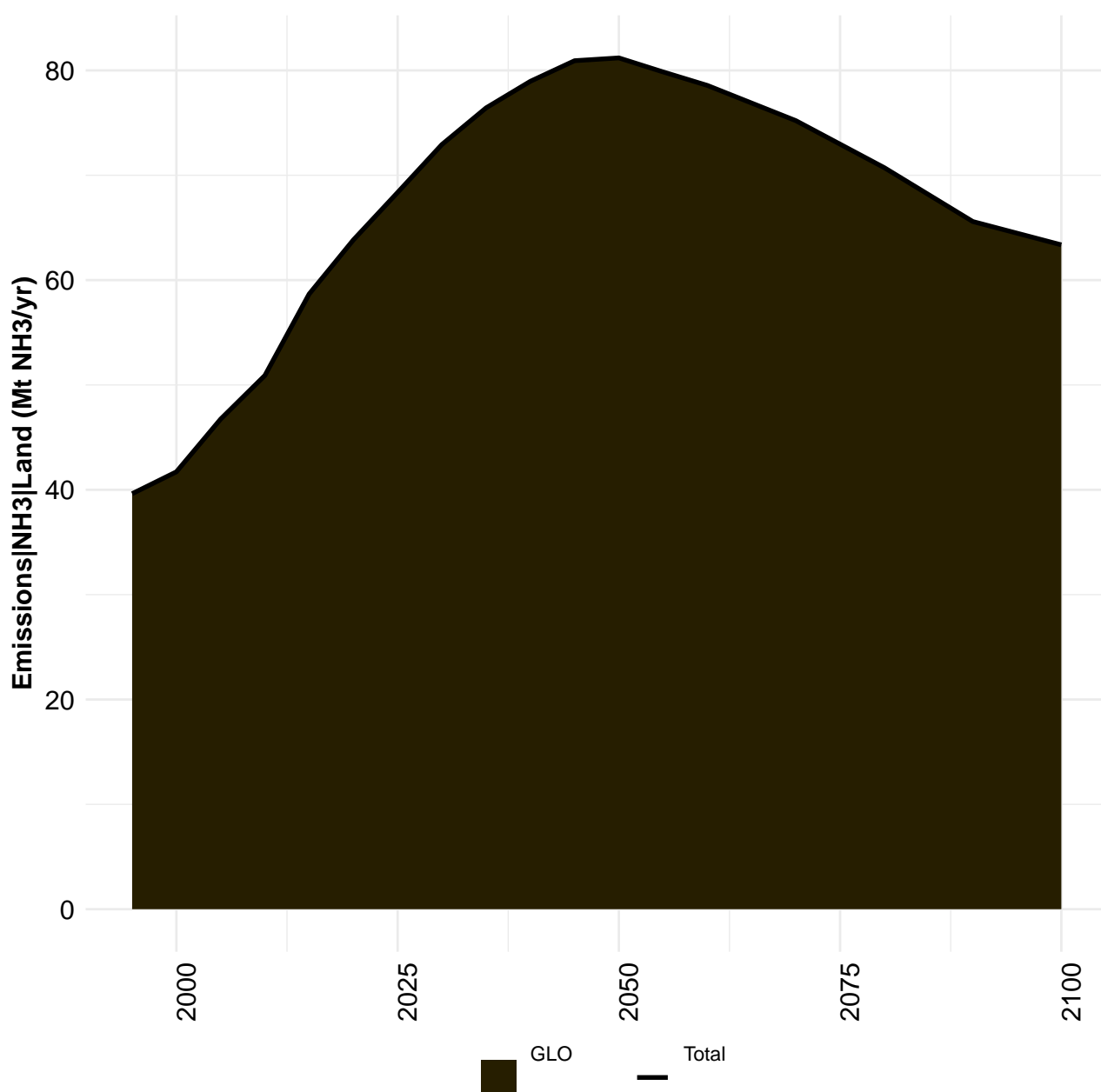
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	2.95	3.37	3.69	4.16	4.93	5.08	5.12	5.41	6.11	6.71
CAZ	0.15	0.16	0.16	0.17	0.22	0.23	0.23	0.24	0.25	0.27
CHA	0.32	0.35	0.41	0.54	0.62	0.76	0.86	0.92	1.11	1.26
EUR	0.52	0.61	0.67	0.74	0.85	0.76	0.71	0.70	0.70	0.71
IND	0.15	0.17	0.18	0.21	0.26	0.31	0.36	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

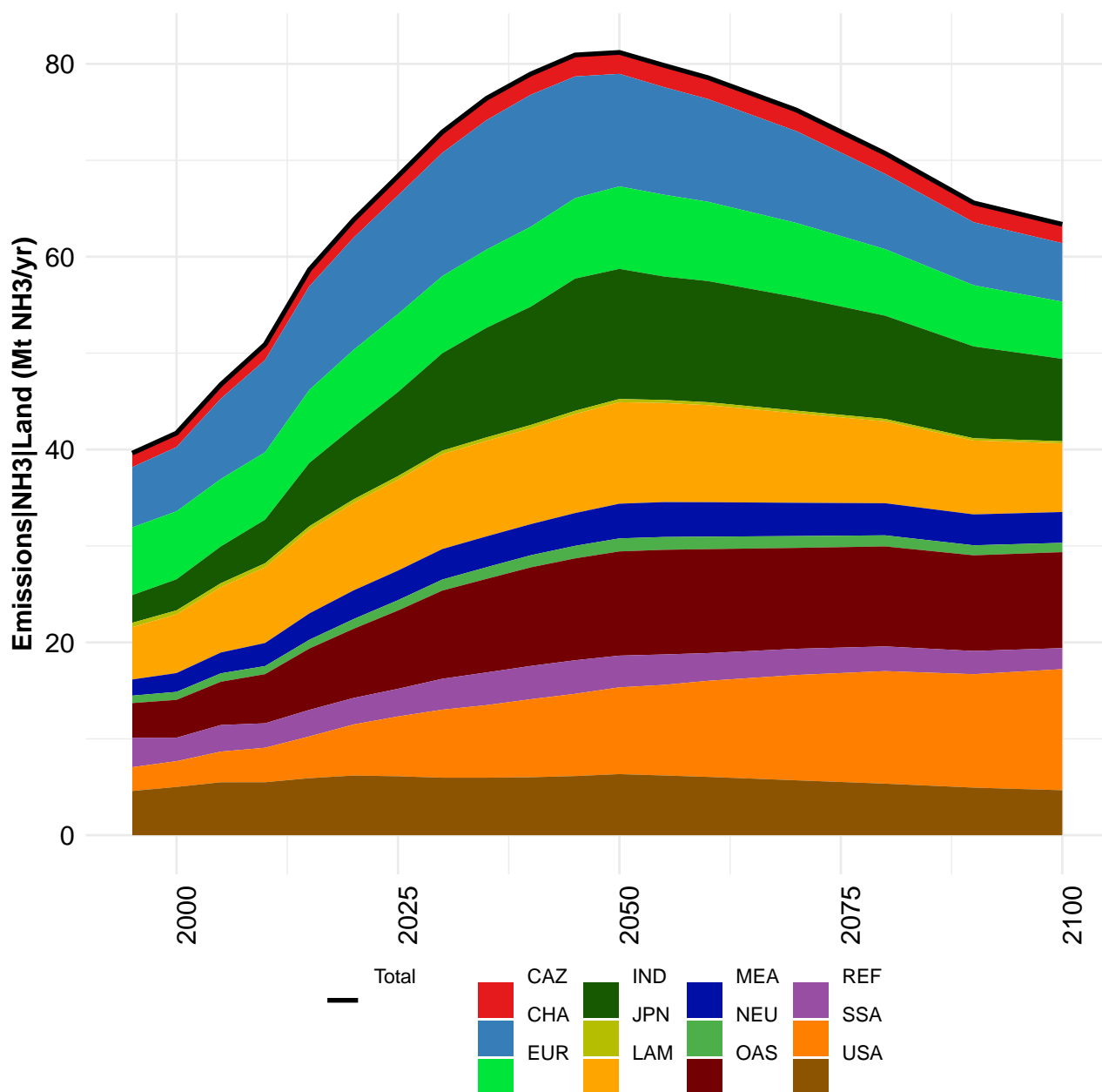
Table 811: IPCC — Emissions—N2O—Land—Agriculture—Animal Waste Management (Mt N2O/yr)

	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—N<sub>2</sub>O—Land—Agriculture—Animal Waste Management (Mt N<sub>2</sub>O/yr)

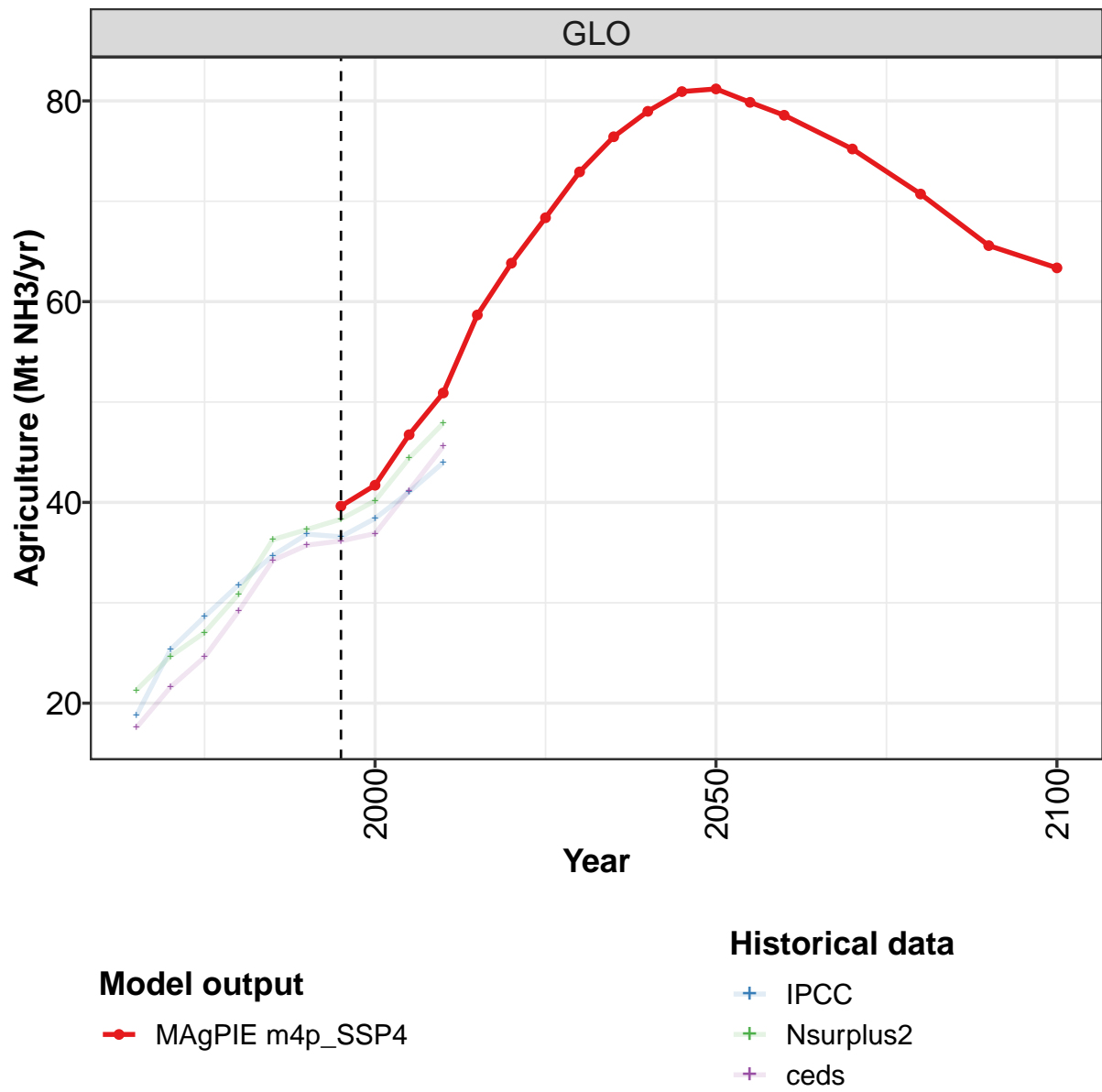
## 14 NH3





## 14.1 Land

## 14.1.1 Agriculture



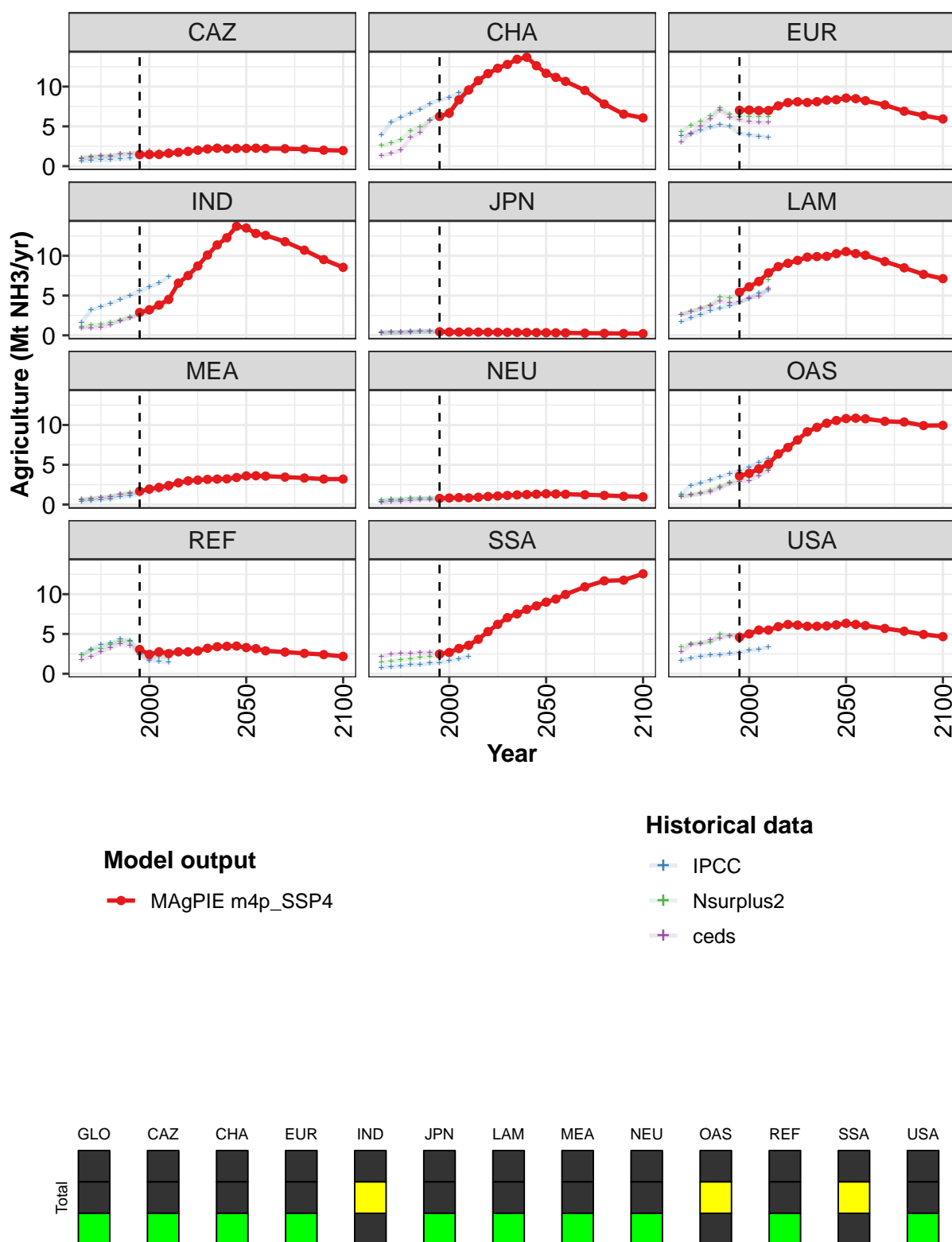


Figure 245: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	39.6	41.7	46.7	50.9	58.7	63.8	68.4	72.9	76.4	79.0	80.9
CAZ	1.5	1.5	1.5	1.6	1.7	1.9	2.0	2.2	2.3	2.2	2.2
CHA	6.2	6.7	8.3	9.6	10.7	11.6	12.3	12.8	13.4	13.7	12.6
EUR	7.0	7.1	7.0	7.0	7.6	8.0	8.1	8.0	8.1	8.3	8.3
IND	2.9	3.2	3.8	4.5	6.6	7.5	8.7	10.1	11.4	12.3	13.7
JPN	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
LAM	5.4	6.1	6.8	7.9	8.6	9.1	9.4	9.8	9.9	9.9	10.3
MEA	1.7	1.9	2.2	2.4	2.7	3.0	3.1	3.2	3.2	3.2	3.4
NEU	0.8	0.8	0.9	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.3
OAS	3.6	3.9	4.5	5.1	6.4	7.2	8.1	9.1	9.7	10.2	10.6
REF	3.1	2.4	2.8	2.5	2.8	2.8	2.9	3.2	3.4	3.5	3.5
SSA	2.5	2.7	3.2	3.6	4.3	5.3	6.2	7.1	7.5	8.1	8.5
USA	4.6	5.0	5.5	5.5	5.9	6.2	6.1	6.0	6.0	6.0	6.1

Table 813: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture (Mt NH3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	81.2	79.9	78.6	75.2	70.7	65.6	63.4
CAZ	2.2	2.3	2.2	2.2	2.1	2.0	2.0
CHA	11.7	11.2	10.7	9.5	7.8	6.5	6.1
EUR	8.6	8.5	8.2	7.7	6.9	6.3	5.9
IND	13.5	12.8	12.6	11.8	10.7	9.5	8.5
JPN	0.3	0.3	0.3	0.3	0.3	0.2	0.2
LAM	10.5	10.3	10.1	9.3	8.5	7.7	7.1
MEA	3.6	3.6	3.6	3.4	3.3	3.2	3.2
NEU	1.4	1.3	1.3	1.2	1.1	1.0	1.0
OAS	10.8	10.9	10.8	10.5	10.4	9.9	10.0
REF	3.3	3.2	2.9	2.7	2.6	2.4	2.2
SSA	9.0	9.4	10.0	10.9	11.7	11.8	12.6
USA	6.3	6.2	6.0	5.7	5.3	4.9	4.7

Table 814: MAgPIE m4p\_SSP4 — 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

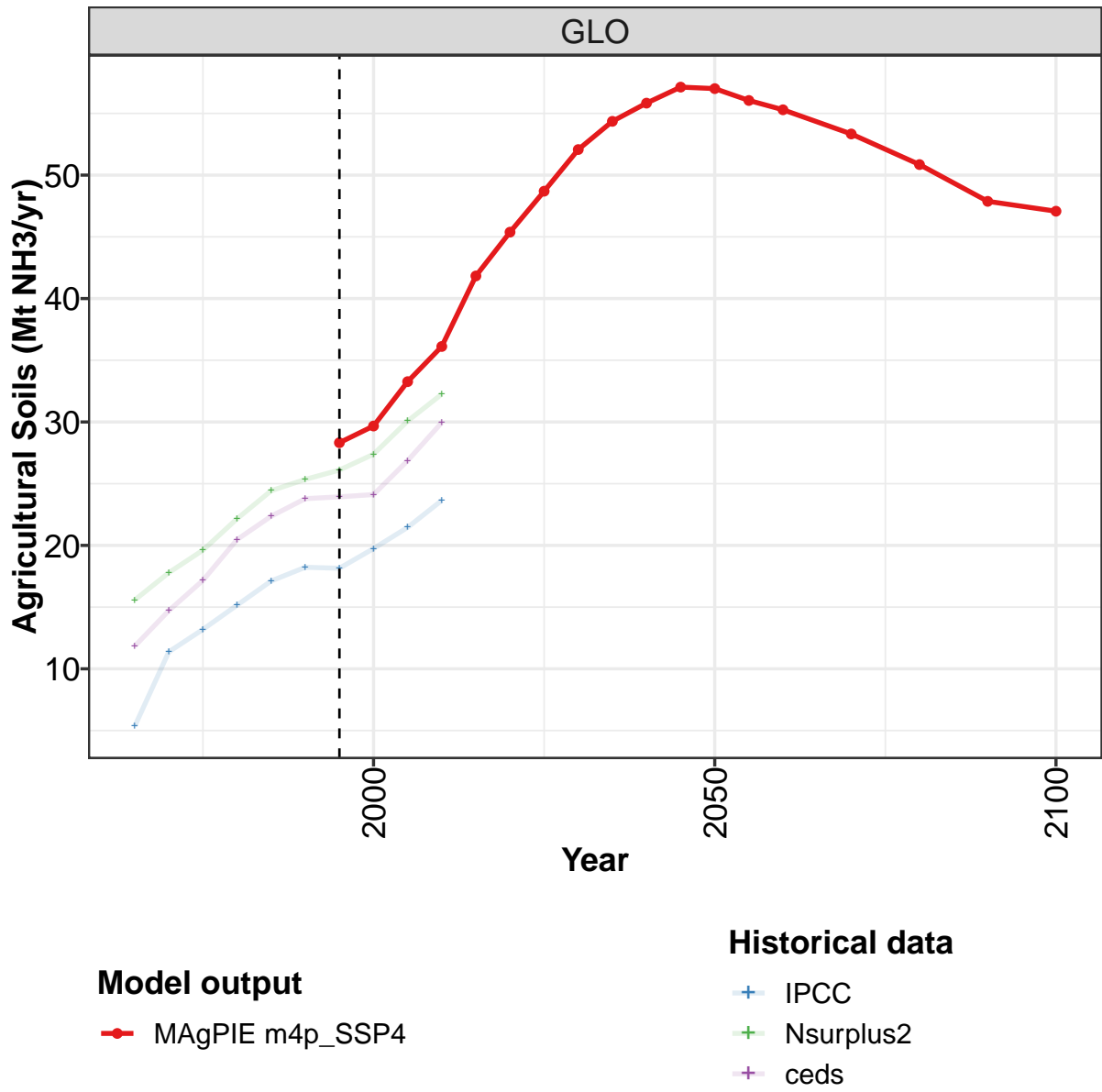
Table 816: IPCC — Emissions—NH3—Land—Agriculture (Mt NH3/yr)

	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



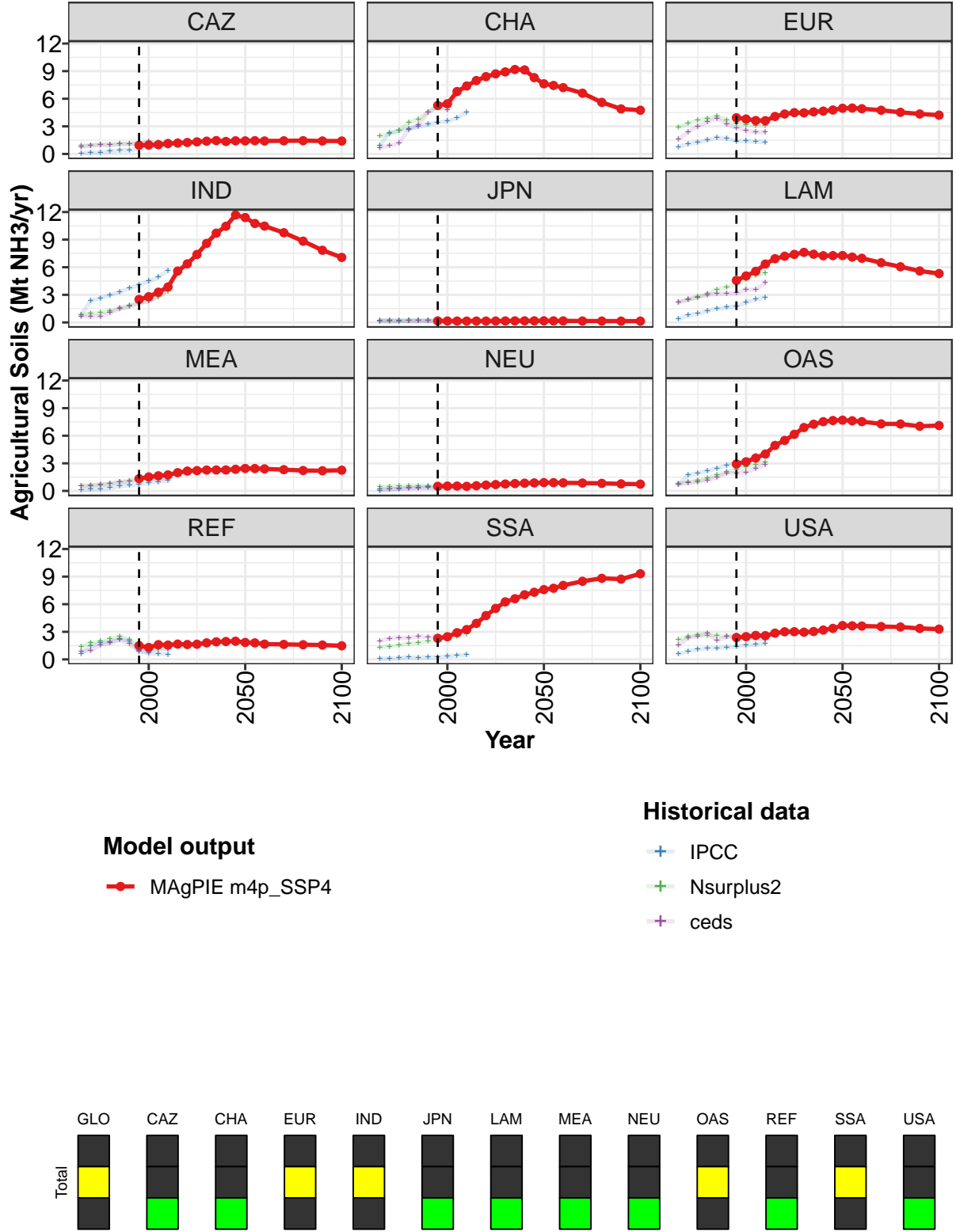


Figure 246: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	28.3	29.7	33.3	36.1	41.8	45.4	48.7	52.1	54.4	55.8	57.1
CAZ	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.4	1.4
CHA	5.3	5.5	6.8	7.4	8.0	8.4	8.7	8.9	9.2	9.1	8.3
EUR	3.9	3.8	3.6	3.6	4.1	4.3	4.5	4.5	4.6	4.7	4.8
IND	2.5	2.8	3.3	3.9	5.6	6.4	7.4	8.6	9.7	10.5	11.7
JPN	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2
LAM	4.6	5.1	5.6	6.3	6.9	7.2	7.4	7.6	7.4	7.3	7.3
MEA	1.3	1.5	1.6	1.7	2.0	2.2	2.2	2.3	2.3	2.3	2.4
NEU	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9
OAS	2.9	3.2	3.6	4.0	4.9	5.5	6.1	6.9	7.3	7.5	7.7
REF	1.5	1.3	1.6	1.6	1.7	1.6	1.7	1.8	1.9	1.9	2.0
SSA	2.3	2.5	2.9	3.2	3.9	4.8	5.5	6.3	6.6	7.0	7.3
USA	2.4	2.5	2.6	2.6	2.9	3.0	3.0	3.0	3.0	3.2	3.4

Table 818: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Agricultural Soils (Mt NH3/yr)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	57.0	56.0	55.3	53.3	50.9	47.9	47.1
CAZ	1.4	1.4	1.4	1.4	1.4	1.4	1.4
CHA	7.6	7.4	7.2	6.6	5.6	4.9	4.8
EUR	5.0	5.0	4.9	4.8	4.5	4.3	4.2
IND	11.4	10.8	10.5	9.8	8.8	7.8	7.1
JPN	0.2	0.2	0.2	0.2	0.1	0.1	0.1
LAM	7.3	7.1	7.0	6.5	6.1	5.6	5.3
MEA	2.4	2.4	2.4	2.3	2.2	2.2	2.3
NEU	0.9	0.9	0.9	0.9	0.8	0.8	0.7
OAS	7.7	7.6	7.5	7.3	7.3	7.0	7.1
REF	1.8	1.8	1.7	1.6	1.6	1.6	1.5
SSA	7.6	7.7	8.0	8.5	8.8	8.7	9.3
USA	3.7	3.6	3.6	3.6	3.5	3.4	3.3

Table 819: MAgPIE m4p\_SSP4 — 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)

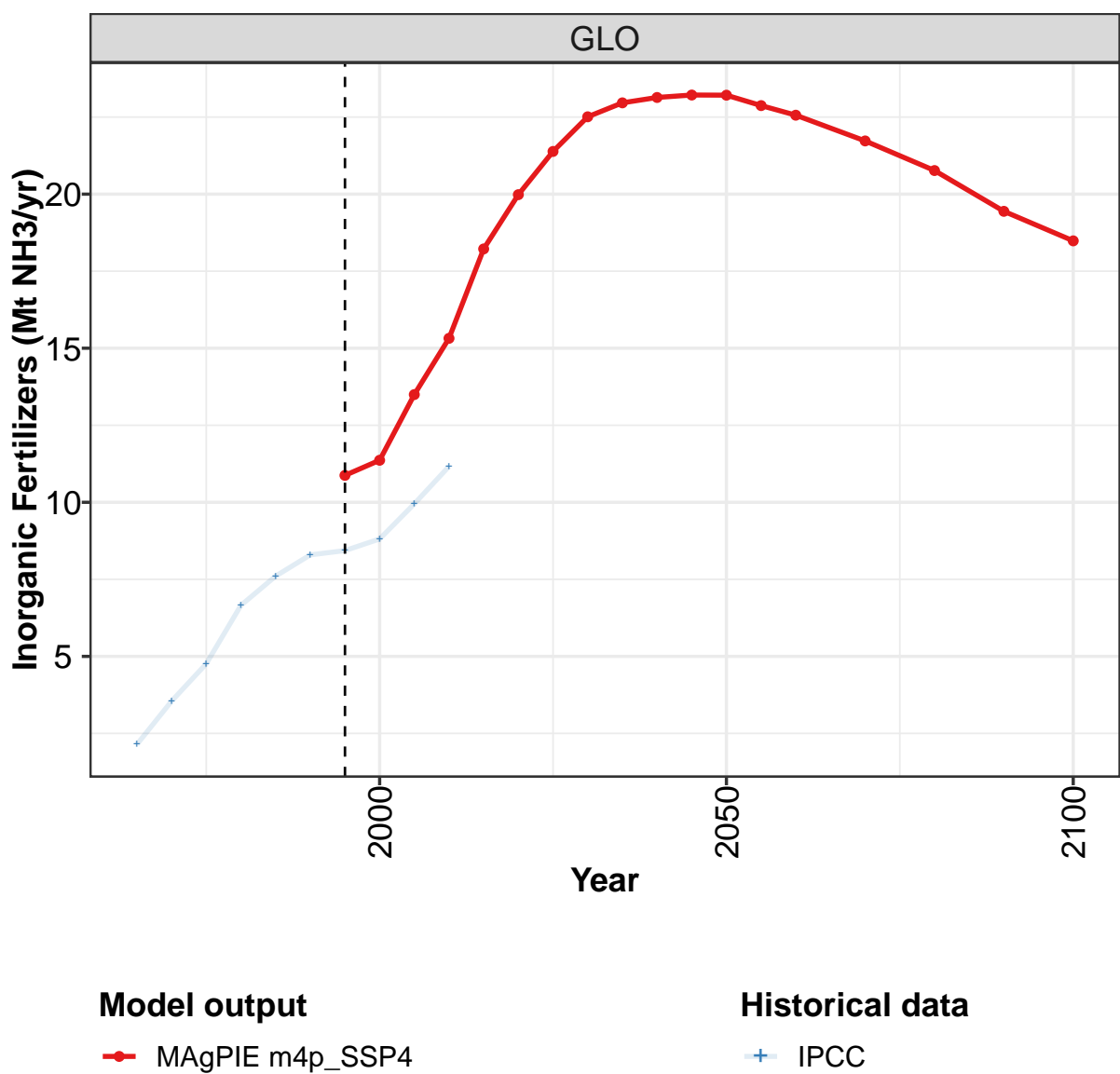
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	15.6	17.8	19.6	22.2	24.4	25.3	26.1	27.4	30.1	32.3
CAZ	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.3
CHA	1.9	2.2	2.5	3.4	3.8	4.6	5.2	5.4	6.6	7.3
EUR	2.9	3.3	3.6	3.9	4.1	3.6	3.3	3.2	3.1	3.1
IND	0.8	1.0	1.1	1.3	1.5	1.8	2.1	2.3	2.8	3.4
JPN	0.2	0.2	0.2	0.2	0.2	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



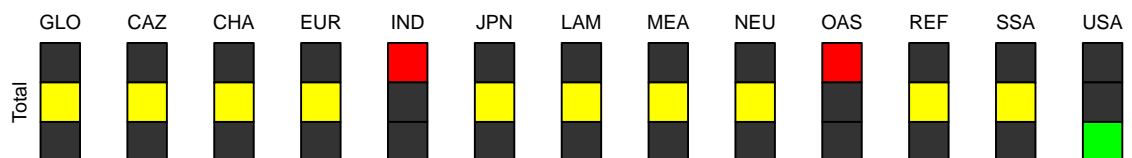
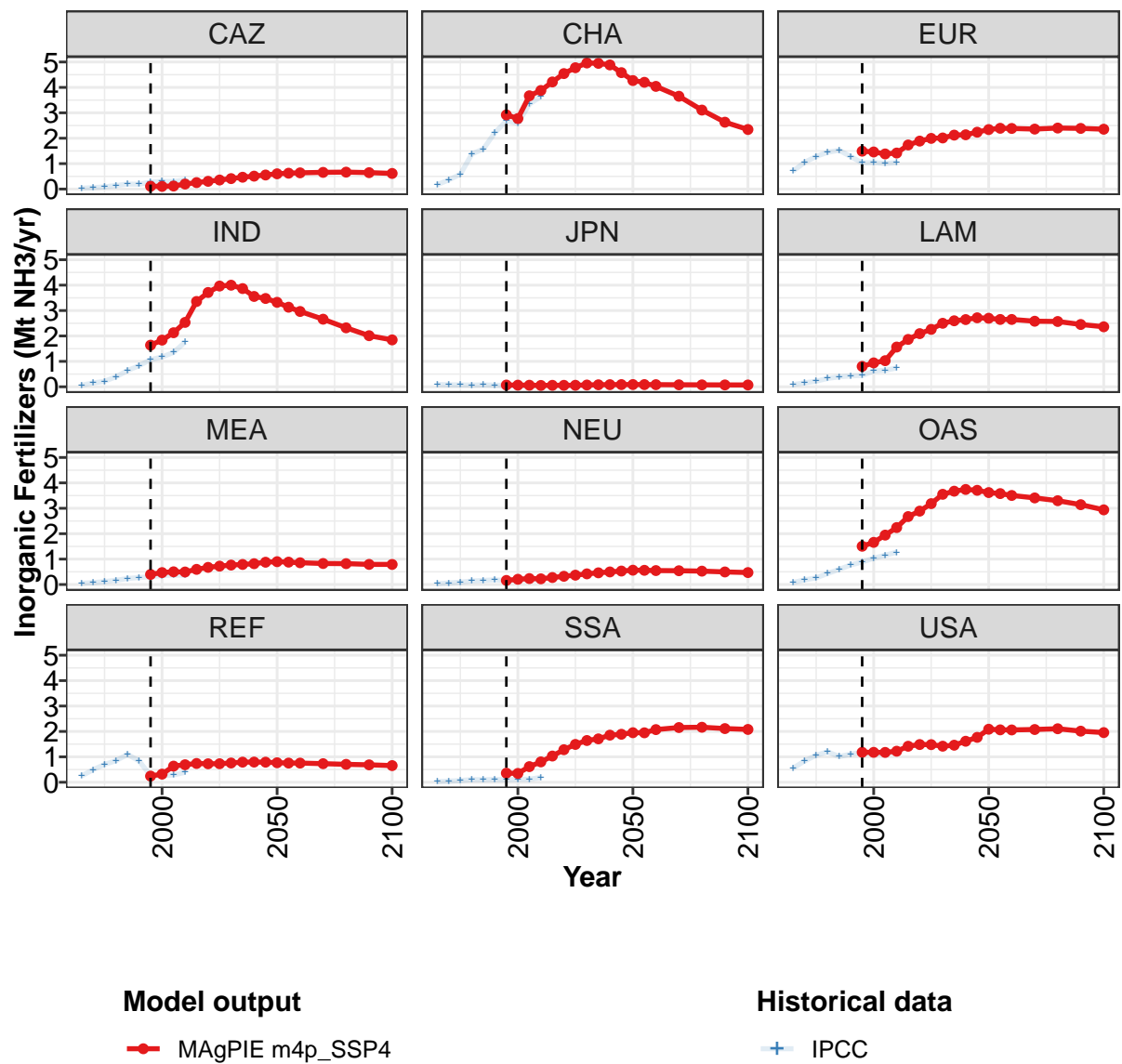


Figure 247: MAgPIE m4p\_SSP4 — Emissions—NH<sub>3</sub>—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NH<sub>3</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	10.9	11.4	13.5	15.3	18.2	20.0	21.4	22.5	23.0	23.1	23.2
CAZ	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6
CHA	2.9	2.8	3.7	3.9	4.2	4.5	4.8	5.0	4.9	4.9	4.6
EUR	1.5	1.5	1.4	1.4	1.7	1.9	2.0	2.0	2.1	2.1	2.2
IND	1.6	1.8	2.1	2.5	3.4	3.7	4.0	4.0	3.9	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	0.8	0.9	1.0	1.6	1.9	2.1	2.3	2.5	2.6	2.6	2.7
MEA	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.9
NEU	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5
OAS	1.5	1.7	1.9	2.2	2.7	2.9	3.2	3.6	3.7	3.7	3.7
REF	0.2	0.3	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
SSA	0.4	0.3	0.6	0.8	1.0	1.3	1.5	1.6	1.7	1.9	1.9
USA	1.2	1.2	1.2	1.2	1.4	1.5	1.5	1.4	1.5	1.6	1.8

Table 823: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NH3/yr) [PART 1/2]

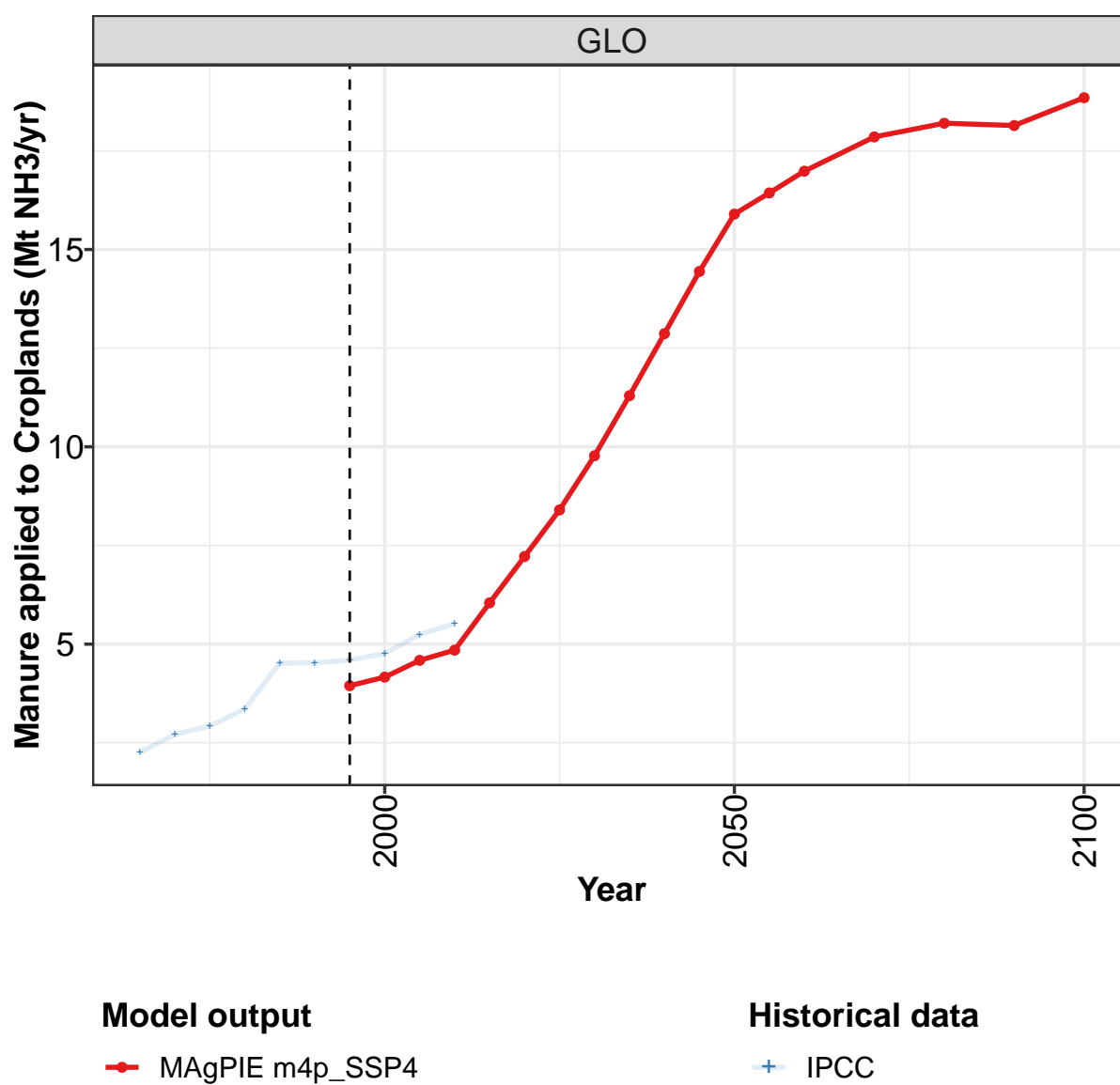
	2050	2055	2060	2070	2080	2090	2100
GLO	23.2	22.9	22.6	21.7	20.8	19.4	18.5
CAZ	0.6	0.6	0.6	0.7	0.7	0.6	0.6
CHA	4.3	4.2	4.0	3.7	3.1	2.6	2.3
EUR	2.3	2.4	2.4	2.4	2.4	2.4	2.4
IND	3.3	3.1	3.0	2.7	2.3	2.0	1.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.7	2.6	2.7	2.6	2.6	2.5	2.4
MEA	0.9	0.9	0.9	0.8	0.8	0.8	0.8
NEU	0.6	0.6	0.5	0.5	0.5	0.5	0.5
OAS	3.6	3.6	3.5	3.4	3.3	3.1	2.9
REF	0.8	0.8	0.8	0.7	0.7	0.7	0.7
SSA	2.0	1.9	2.1	2.2	2.2	2.1	2.1
USA	2.1	2.1	2.1	2.1	2.1	2.0	2.0

Table 824: MAgPIE m4p\_SSP4 — 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





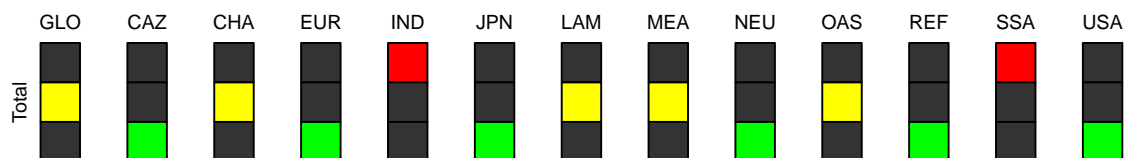
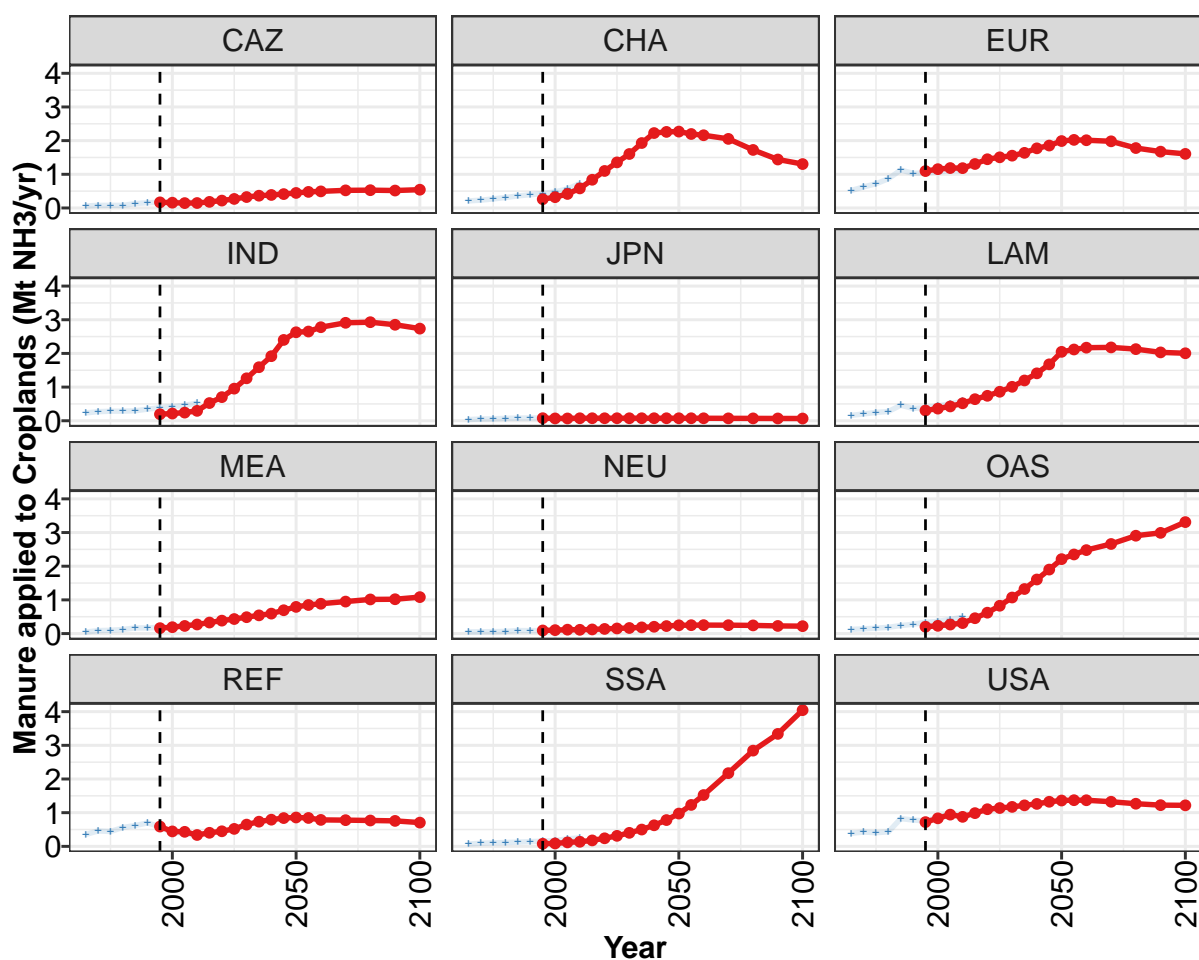


Figure 248: MAgPIE m4p\_SSP4 — Emissions—NH<sub>3</sub>—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NH<sub>3</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.9	4.2	4.6	4.8	6.0	7.2	8.4	9.8	11.3	12.9	14.4
CAZ	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4
CHA	0.3	0.3	0.4	0.6	0.8	1.1	1.4	1.6	1.9	2.2	2.3
EUR	1.1	1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.6	1.8	1.9
IND	0.2	0.2	0.2	0.3	0.5	0.7	1.0	1.3	1.6	1.9	2.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.3	0.4	0.4	0.5	0.6	0.7	0.9	1.0	1.2	1.4	1.7
MEA	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7
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	0.8	1.1	1.3	1.6	1.9
REF	0.6	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.8
SSA	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.8
USA	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3

Table 826: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NH3/yr) [PART 1/2]

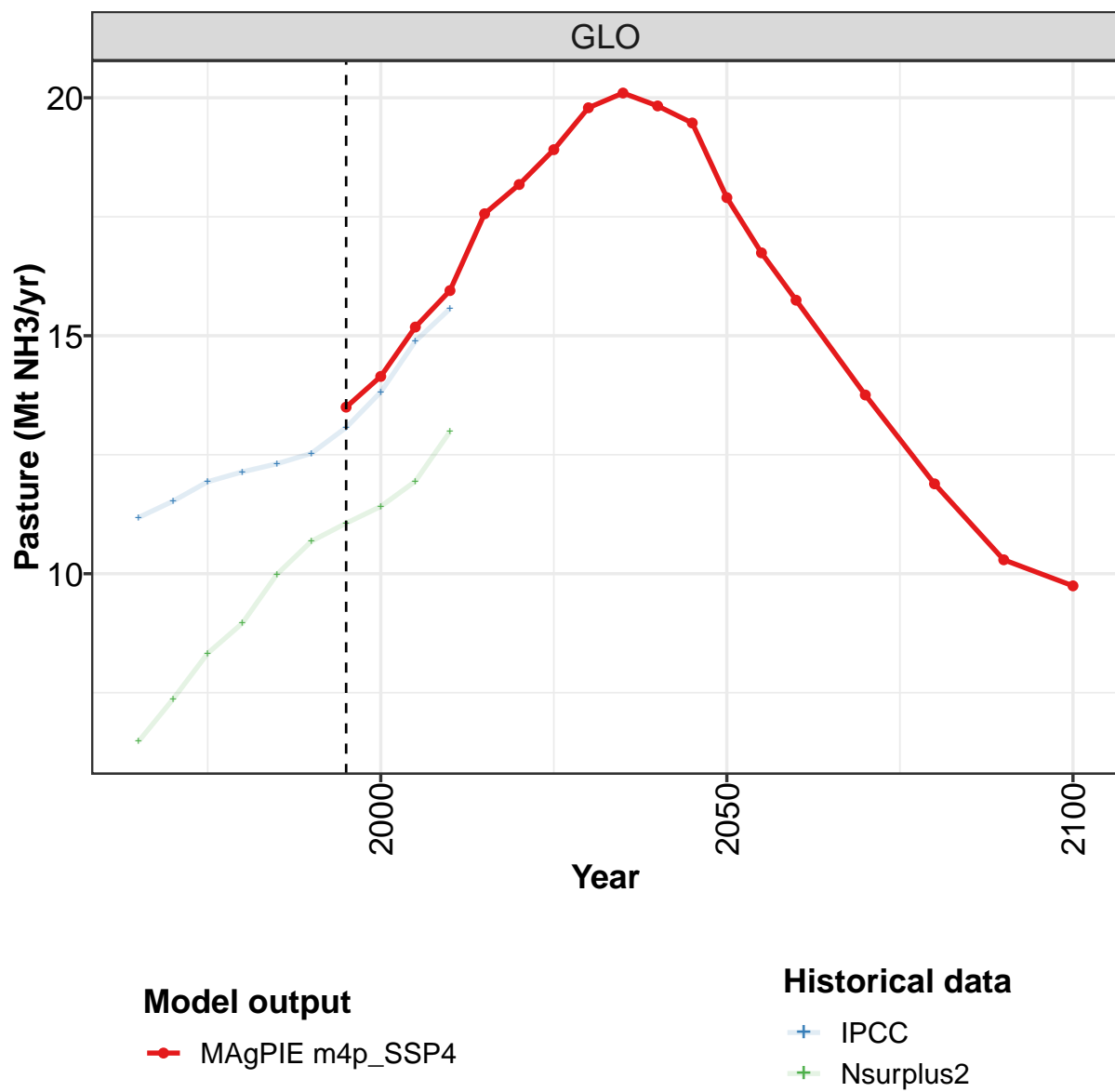
	2050	2055	2060	2070	2080	2090	2100
GLO	15.9	16.4	17.0	17.9	18.2	18.1	18.8
CAZ	0.4	0.5	0.5	0.5	0.5	0.5	0.5
CHA	2.3	2.2	2.2	2.1	1.7	1.4	1.3
EUR	2.0	2.0	2.0	2.0	1.8	1.7	1.6
IND	2.6	2.7	2.8	2.9	2.9	2.9	2.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.0	2.1	2.2	2.2	2.1	2.0	2.0
MEA	0.8	0.8	0.9	0.9	1.0	1.0	1.1
NEU	0.2	0.2	0.3	0.2	0.2	0.2	0.2
OAS	2.2	2.3	2.5	2.7	2.9	3.0	3.3
REF	0.9	0.8	0.8	0.8	0.8	0.8	0.7
SSA	1.0	1.2	1.5	2.2	2.8	3.3	4.0
USA	1.4	1.4	1.4	1.3	1.3	1.2	1.2

Table 827: MAgPIE m4p\_SSP4 — 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



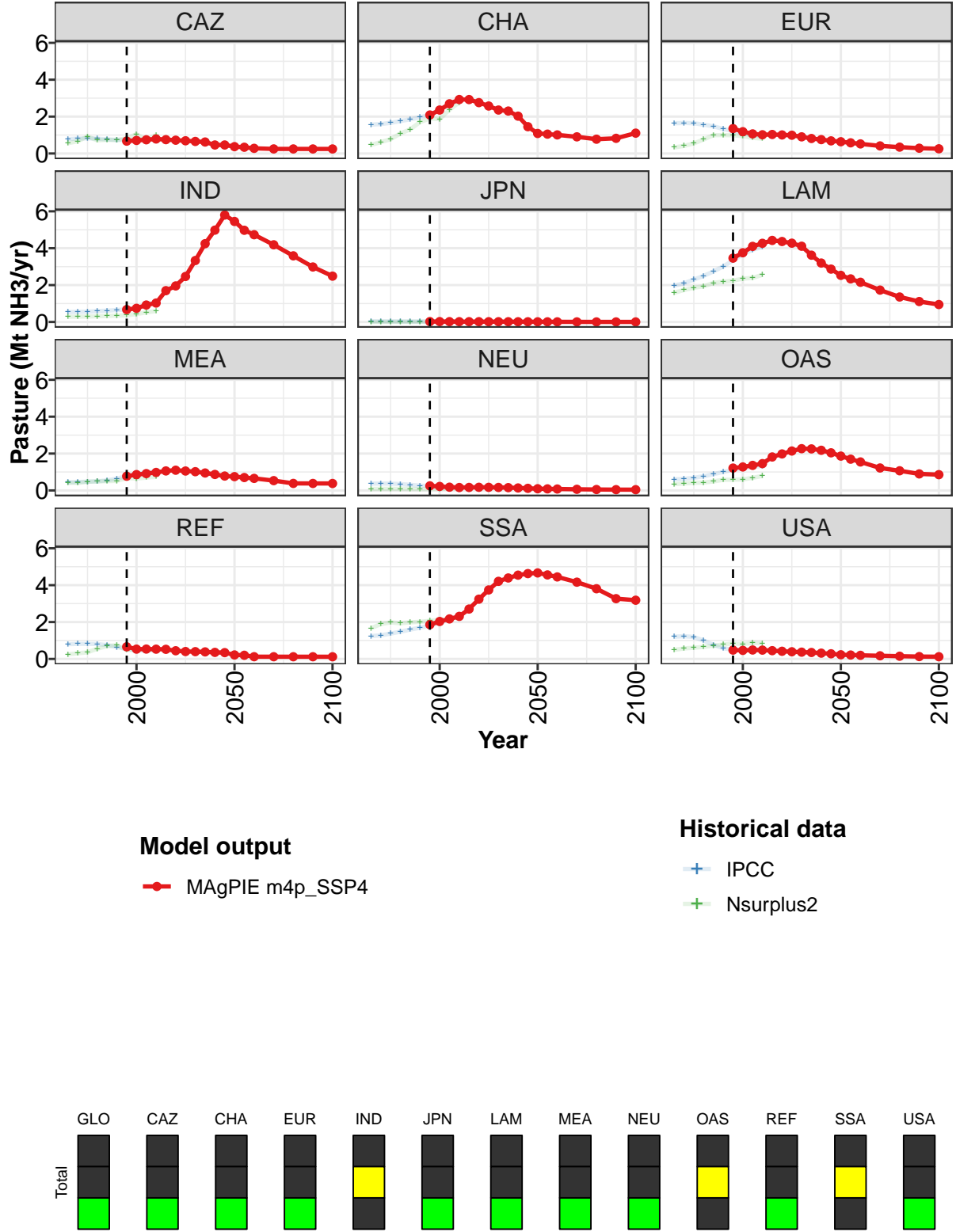


Figure 249: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.5	14.1	15.2	15.9	17.6	18.2	18.9	19.8	20.1	19.8	19.5
CAZ	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.5
CHA	2.1	2.4	2.7	2.9	2.9	2.8	2.6	2.4	2.3	2.0	1.5
EUR	1.3	1.2	1.1	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7
IND	0.7	0.7	0.9	1.0	1.7	2.0	2.5	3.3	4.2	5.0	5.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.5	3.8	4.1	4.3	4.4	4.4	4.3	4.1	3.6	3.2	2.9
MEA	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.0	0.9	0.9	0.8
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	1.8	2.0	2.1	2.3	2.3	2.2	2.0
REF	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3
SSA	1.9	2.0	2.2	2.3	2.7	3.2	3.7	4.2	4.4	4.5	4.6
USA	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3

Table 829: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	17.9	16.7	15.7	13.8	11.9	10.3	9.7
CAZ	0.4	0.3	0.3	0.2	0.2	0.2	0.2
CHA	1.1	1.1	1.0	0.9	0.8	0.8	1.1
EUR	0.6	0.6	0.5	0.4	0.3	0.3	0.3
IND	5.4	5.0	4.7	4.2	3.6	3.0	2.5
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.5	2.3	2.2	1.7	1.4	1.1	0.9
MEA	0.8	0.7	0.7	0.5	0.4	0.4	0.4
NEU	0.1	0.1	0.1	0.1	0.1	0.0	0.0
OAS	1.9	1.7	1.5	1.2	1.1	0.9	0.9
REF	0.2	0.2	0.1	0.1	0.1	0.1	0.1
SSA	4.7	4.6	4.4	4.2	3.8	3.3	3.2
USA	0.2	0.2	0.2	0.2	0.1	0.1	0.1

Table 830: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Agricultural Soils—Pasture (Mt NH3/yr) [PART 2/2]

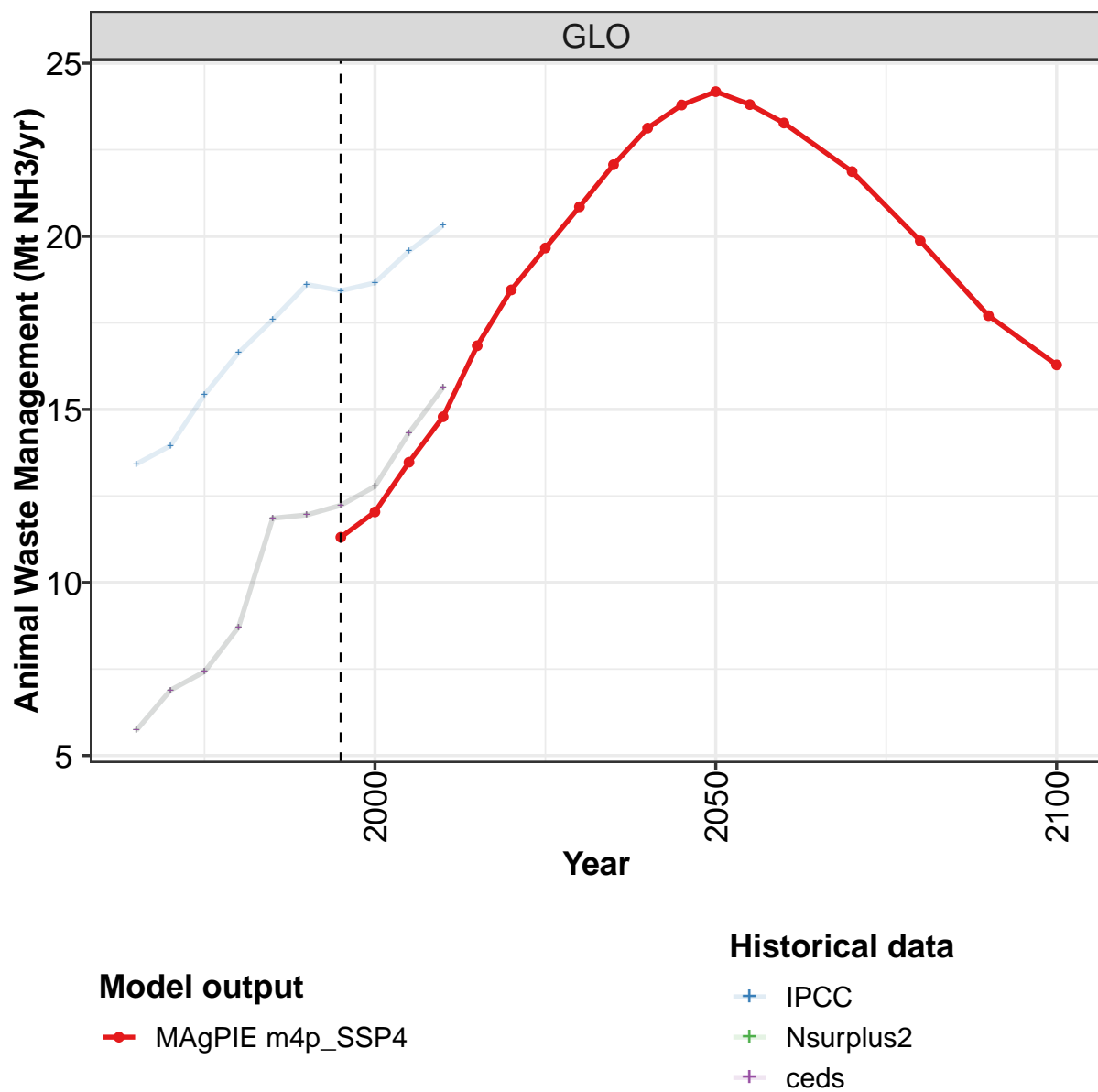
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	11.2	11.5	11.9	12.1	12.3	12.5	13.1	13.8	14.9	15.6
CAZ	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.8
CHA	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.4	2.7	2.9
EUR	1.6	1.7	1.6	1.6	1.5	1.3	1.2	1.1	1.0	0.9
IND	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	1.0	1.1
JPN	0.0	0.0	0.0	0.0	0.0	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



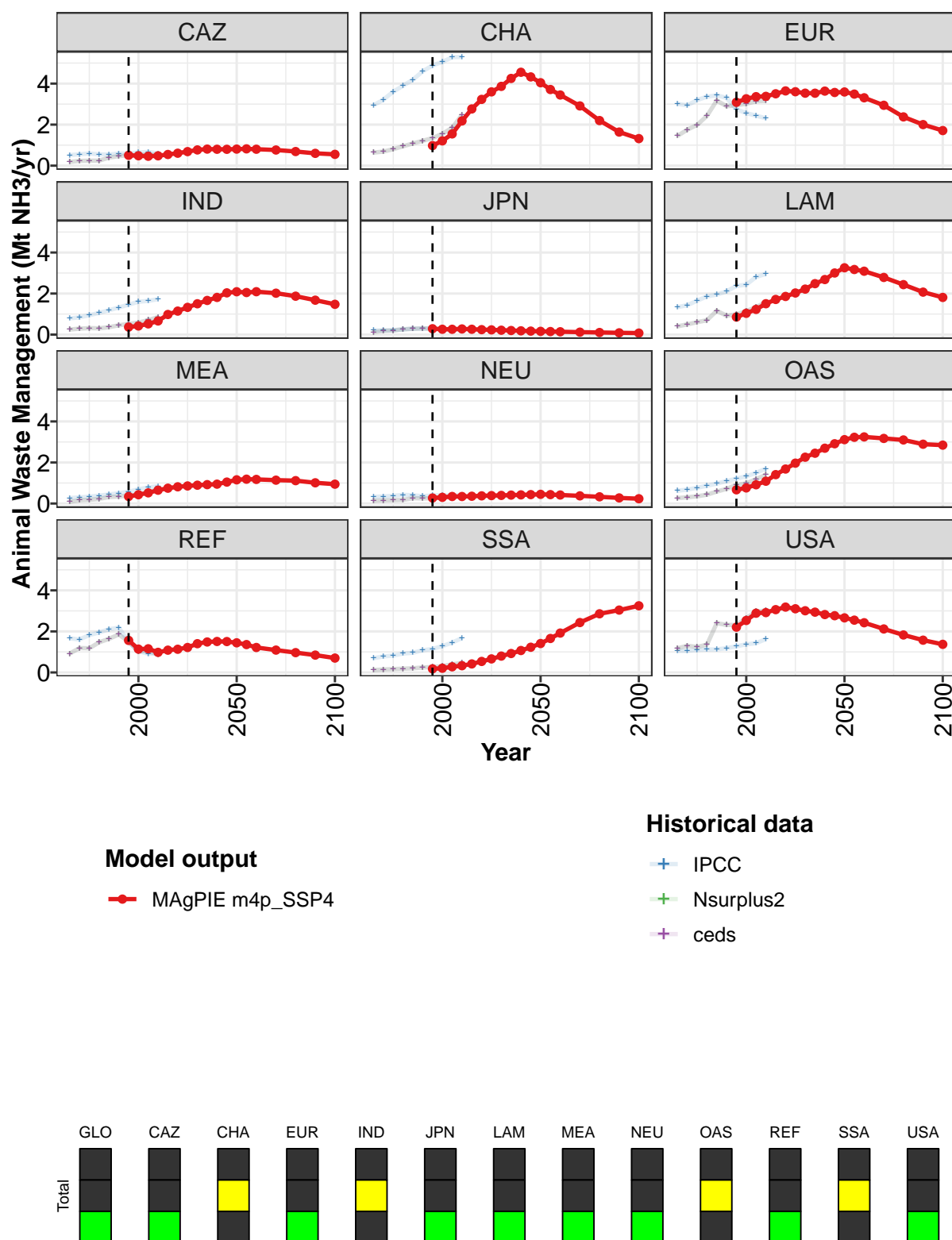


Figure 250: MAgPIE m4p\_SSP4 — Emissions—NH<sub>3</sub>—Land—Agriculture—Animal Waste Management (Mt NH<sub>3</sub>/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.3	12.0	13.5	14.8	16.8	18.5	19.7	20.9	22.1	23.1	23.8
CAZ	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.8	0.8	0.8
CHA	1.0	1.2	1.5	2.2	2.8	3.2	3.6	3.9	4.3	4.6	4.3
EUR	3.1	3.3	3.4	3.4	3.5	3.6	3.6	3.5	3.5	3.6	3.6
IND	0.4	0.4	0.5	0.7	1.0	1.1	1.3	1.5	1.7	1.8	2.0
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	2.7	3.0
MEA	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.9	1.0
NEU	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OAS	0.7	0.8	0.9	1.1	1.4	1.7	2.0	2.3	2.5	2.7	2.9
REF	1.6	1.1	1.2	1.0	1.1	1.1	1.2	1.4	1.5	1.5	1.5
SSA	0.2	0.2	0.3	0.3	0.4	0.5	0.7	0.8	0.9	1.1	1.2
USA	2.2	2.5	2.9	2.9	3.1	3.2	3.1	3.0	2.9	2.8	2.8

Table 833: MAgPIE m4p\_SSP4 — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	24.2	23.8	23.3	21.9	19.9	17.7	16.3
CAZ	0.8	0.8	0.8	0.8	0.7	0.6	0.6
CHA	4.0	3.7	3.4	2.9	2.2	1.6	1.3
EUR	3.6	3.5	3.3	2.9	2.4	2.0	1.7
IND	2.1	2.1	2.1	2.0	1.9	1.7	1.5
JPN	0.2	0.1	0.1	0.1	0.1	0.1	0.1
LAM	3.3	3.2	3.1	2.8	2.4	2.1	1.8
MEA	1.2	1.2	1.2	1.1	1.1	1.0	0.9
NEU	0.4	0.4	0.4	0.4	0.3	0.3	0.2
OAS	3.1	3.2	3.2	3.2	3.1	2.9	2.8
REF	1.4	1.4	1.2	1.1	1.0	0.8	0.7
SSA	1.4	1.7	1.9	2.4	2.9	3.0	3.2
USA	2.7	2.5	2.4	2.1	1.8	1.6	1.4

Table 834: MAgPIE m4p\_SSP4 — 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)

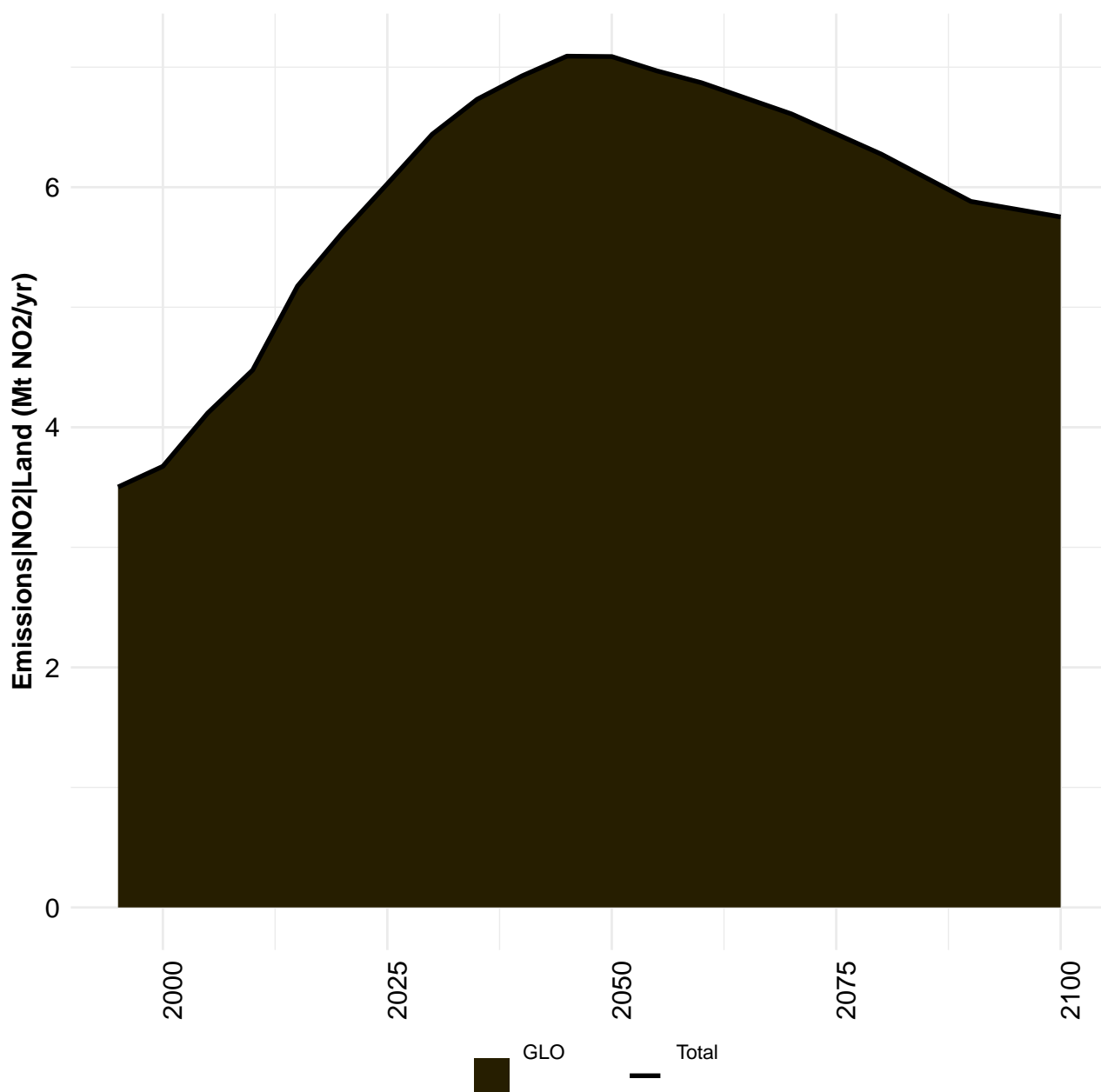
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	5.7	6.9	7.4	8.7	11.9	12.0	12.2	12.8	14.3	15.6
CAZ	0.2	0.2	0.2	0.2	0.4	0.5	0.5	0.5	0.5	0.5
CHA	0.6	0.7	0.8	0.9	1.1	1.2	1.3	1.6	1.8	2.5
EUR	1.4	1.8	2.0	2.4	3.2	2.9	2.9	3.0	3.1	3.2
IND	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.9
JPN	0.1	0.2	0.2	0.3	0.3	0.3	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

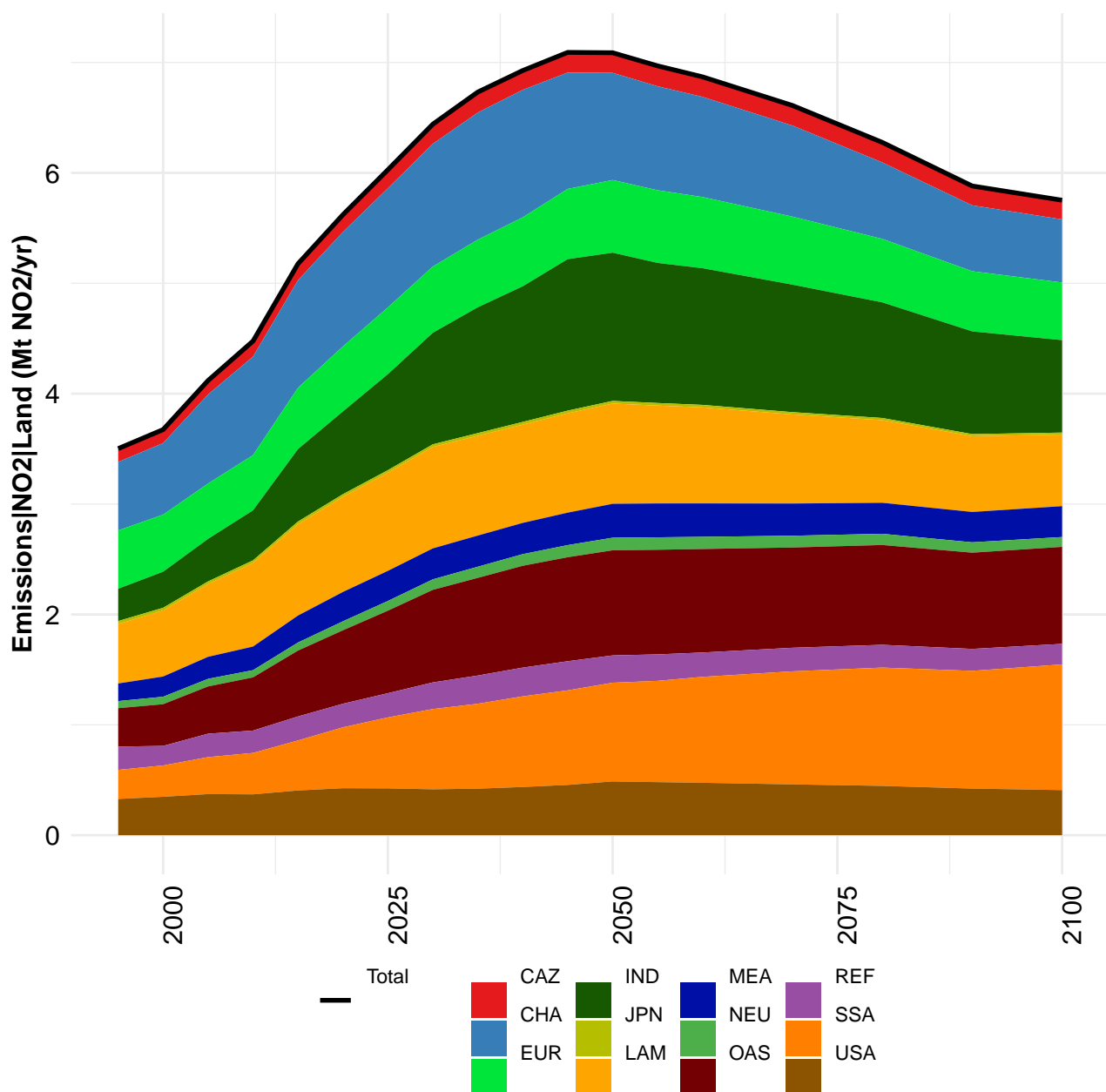
Table 836: IPCC — Emissions—NH3—Land—Agriculture—Animal Waste Management (Mt NH3/yr)

	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)

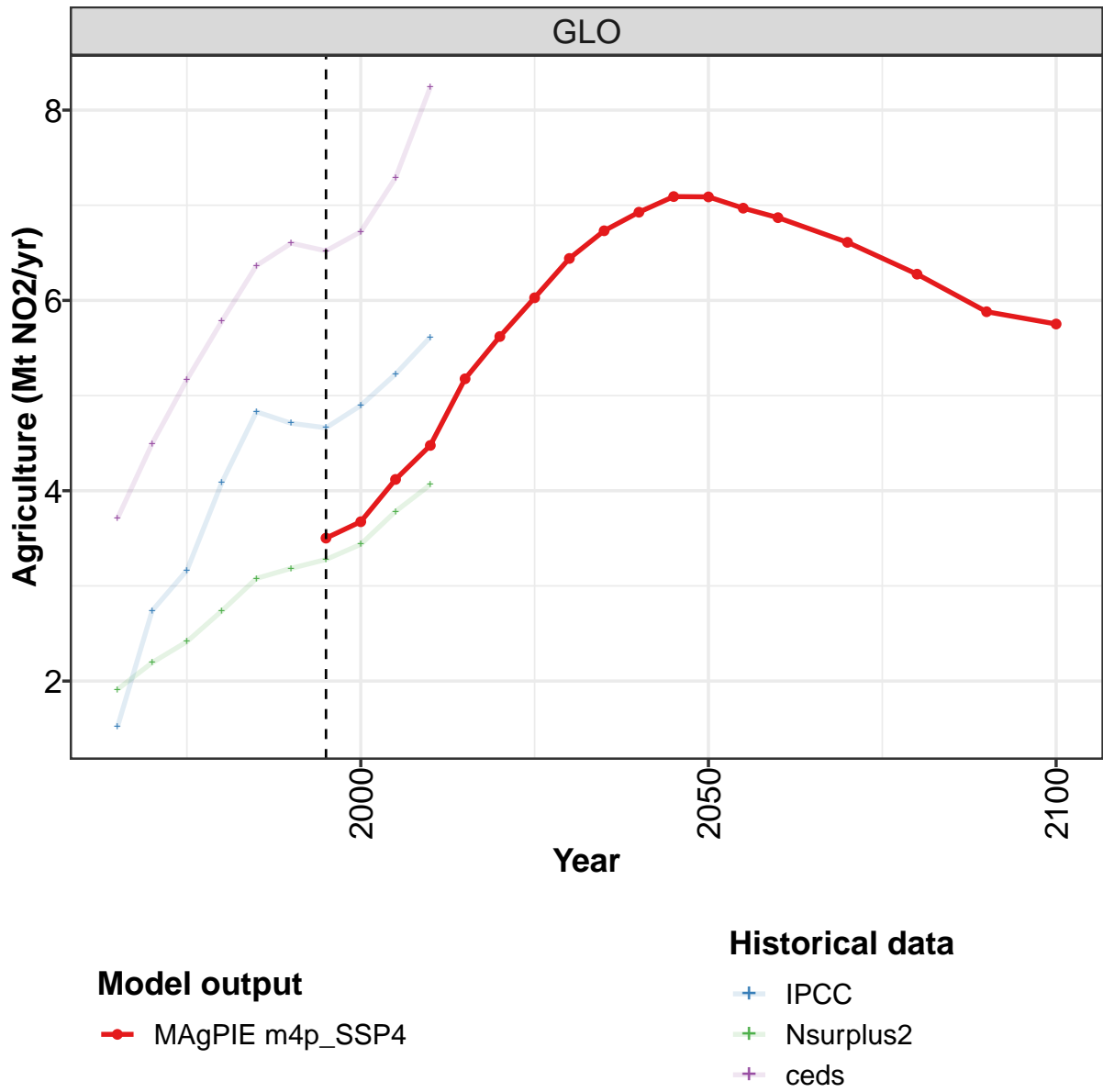
## 15 NO2

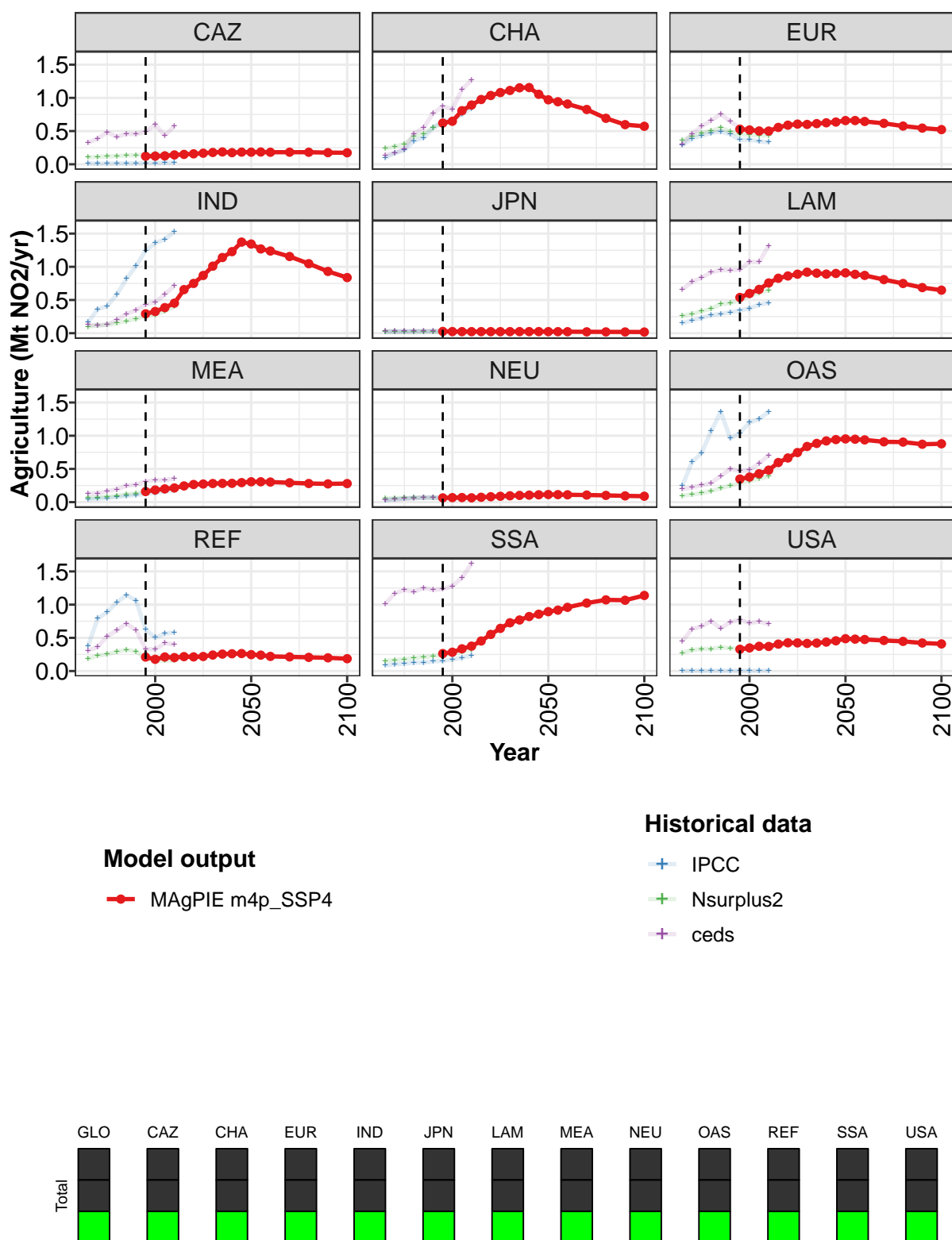




15.1 Land

15.1.1 Agriculture



Figure 251: MAgPIE m4p\_SSP4 — Emissions—NO<sub>2</sub>—Land—Agriculture (Mt NO<sub>2</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.50	3.67	4.12	4.48	5.18	5.62	6.03	6.44	6.73	6.93	7.09
CAZ	0.12	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.17	0.18
CHA	0.62	0.65	0.81	0.89	0.98	1.04	1.08	1.11	1.15	1.16	1.05
EUR	0.53	0.52	0.50	0.50	0.56	0.59	0.60	0.60	0.61	0.62	0.64
IND	0.29	0.33	0.39	0.45	0.66	0.75	0.87	1.01	1.14	1.23	1.37
JPN	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.54	0.60	0.66	0.76	0.83	0.86	0.89	0.92	0.90	0.89	0.90
MEA	0.16	0.18	0.20	0.21	0.24	0.27	0.27	0.28	0.28	0.28	0.29
NEU	0.06	0.07	0.07	0.07	0.07	0.08	0.09	0.10	0.10	0.11	0.11
OAS	0.35	0.38	0.43	0.48	0.60	0.66	0.75	0.84	0.88	0.92	0.94
REF	0.21	0.18	0.21	0.20	0.22	0.21	0.22	0.24	0.26	0.26	0.26
SSA	0.26	0.28	0.33	0.38	0.45	0.55	0.64	0.73	0.77	0.82	0.86
USA	0.33	0.35	0.37	0.37	0.41	0.43	0.42	0.42	0.42	0.44	0.46

Table 838: MAgPIE m4p\_SSP4 — Emissions—NO2—Land—Agriculture (Mt NO2/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	7.09	6.97	6.87	6.61	6.28	5.88	5.75
CAZ	0.18	0.18	0.18	0.18	0.18	0.18	0.17
CHA	0.97	0.94	0.91	0.82	0.69	0.60	0.57
EUR	0.66	0.66	0.64	0.62	0.58	0.54	0.52
IND	1.34	1.27	1.24	1.15	1.05	0.93	0.84
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.91	0.89	0.87	0.81	0.75	0.69	0.65
MEA	0.31	0.31	0.30	0.29	0.28	0.27	0.28
NEU	0.11	0.11	0.11	0.11	0.10	0.09	0.09
OAS	0.95	0.95	0.94	0.91	0.90	0.87	0.88
REF	0.25	0.24	0.22	0.21	0.21	0.20	0.19
SSA	0.89	0.92	0.96	1.02	1.07	1.07	1.14
USA	0.49	0.48	0.48	0.46	0.45	0.42	0.41

Table 839: MAgPIE m4p\_SSP4 — 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

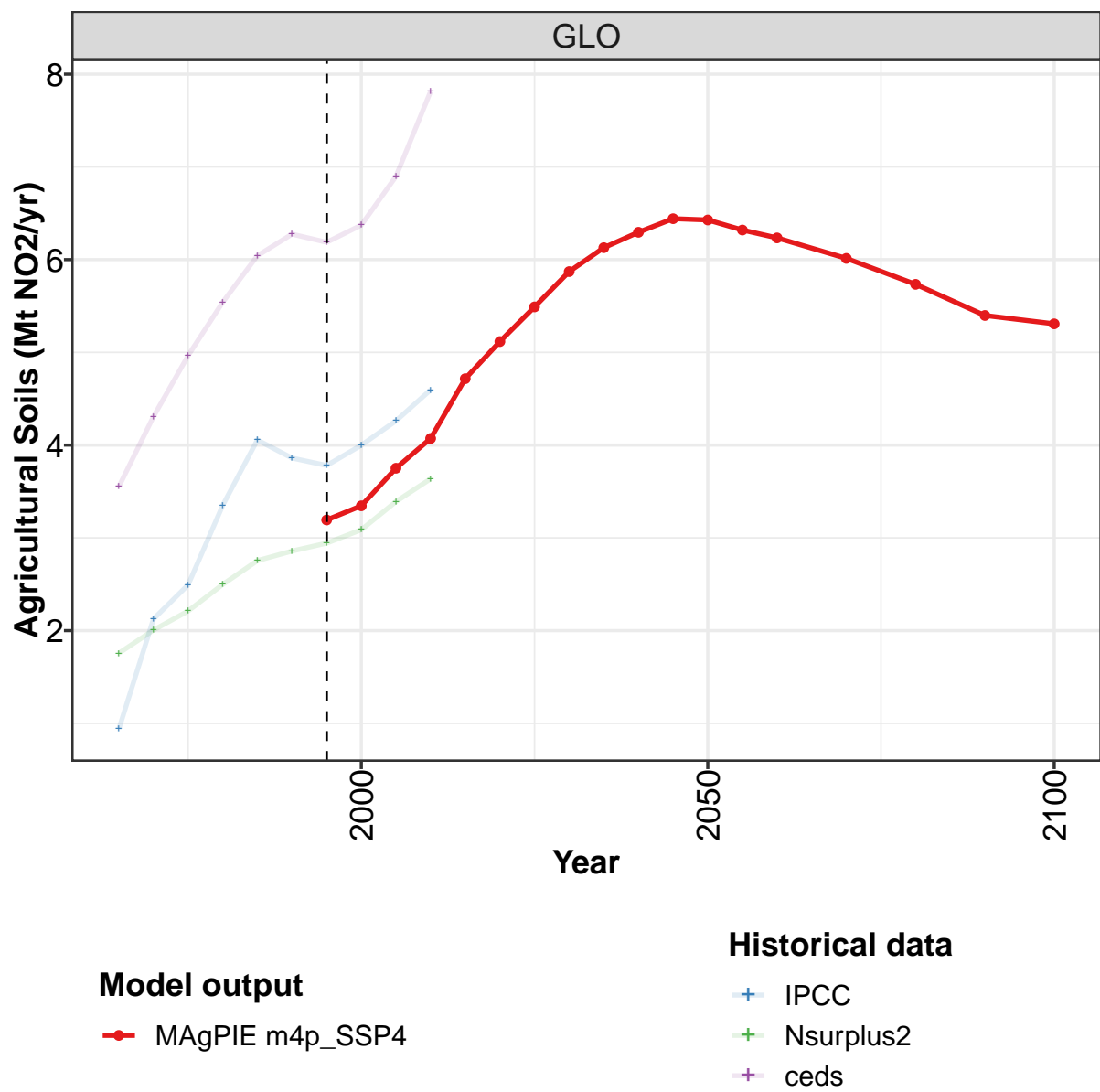
Table 841: IPCC — Emissions—NO2—Land—Agriculture (Mt NO2/yr)

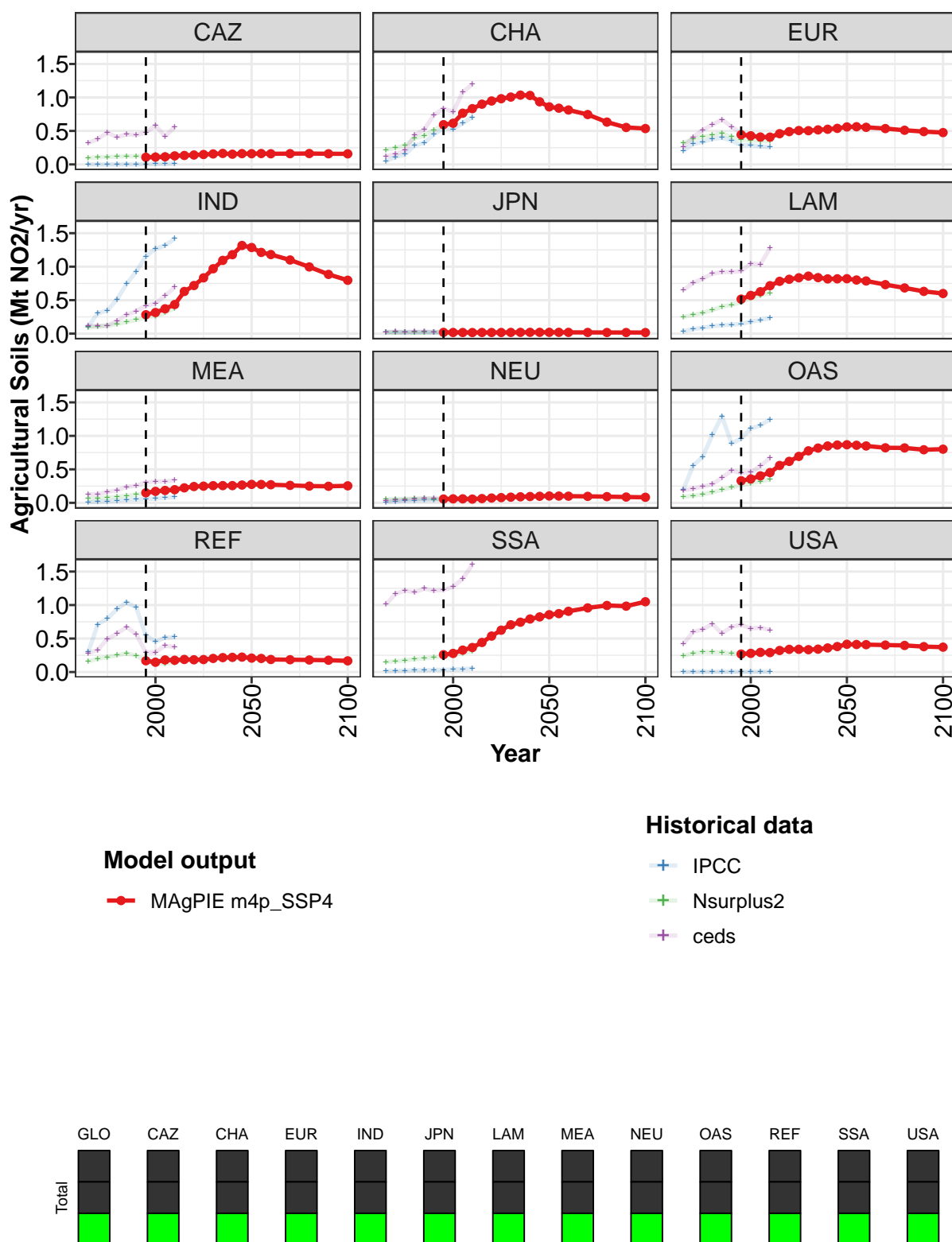
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3.71	4.50	5.17	5.78	6.37	6.60	6.52	6.72	7.29	8.24
CAZ	0.32	0.39	0.48	0.41	0.46	0.45	0.49	0.60	0.43	0.57
CHA	0.14	0.17	0.23	0.46	0.55	0.77	0.87	0.83	1.13	1.27
EUR	0.30	0.45	0.57	0.66	0.76	0.64	0.55	0.52	0.48	0.48
IND	0.13	0.12	0.13	0.20	0.29	0.35	0.43	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\_SSP4 — Emissions—NO<sub>2</sub>—Land—Agriculture—Agricultural Soils (Mt NO<sub>2</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.19	3.35	3.75	4.07	4.72	5.12	5.49	5.87	6.13	6.29	6.44
CAZ	0.11	0.11	0.11	0.13	0.13	0.14	0.15	0.16	0.16	0.15	0.16
CHA	0.59	0.61	0.76	0.83	0.90	0.95	0.98	1.01	1.03	1.03	0.94
EUR	0.44	0.43	0.41	0.41	0.46	0.49	0.51	0.50	0.52	0.53	0.54
IND	0.28	0.32	0.37	0.43	0.63	0.72	0.83	0.97	1.09	1.18	1.32
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.52	0.57	0.63	0.72	0.78	0.81	0.83	0.86	0.84	0.82	0.82
MEA	0.15	0.17	0.19	0.20	0.22	0.24	0.25	0.26	0.26	0.26	0.27
NEU	0.06	0.06	0.06	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.10
OAS	0.33	0.36	0.40	0.45	0.56	0.62	0.69	0.78	0.82	0.85	0.86
REF	0.17	0.15	0.18	0.18	0.19	0.18	0.19	0.20	0.22	0.22	0.22
SSA	0.26	0.28	0.33	0.37	0.44	0.54	0.62	0.71	0.74	0.79	0.82
USA	0.27	0.28	0.29	0.29	0.32	0.34	0.34	0.33	0.34	0.36	0.38

Table 843: MAgPIE m4p\_SSP4 — Emissions—NO2—Land—Agriculture—Agricultural Soils (Mt NO2/yr)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	6.43	6.32	6.23	6.01	5.73	5.40	5.31
CAZ	0.16	0.16	0.16	0.16	0.16	0.16	0.16
CHA	0.86	0.84	0.81	0.74	0.63	0.55	0.54
EUR	0.56	0.56	0.55	0.54	0.51	0.49	0.48
IND	1.29	1.21	1.18	1.10	1.00	0.88	0.80
JPN	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAM	0.82	0.80	0.79	0.73	0.68	0.63	0.60
MEA	0.28	0.27	0.27	0.26	0.25	0.25	0.25
NEU	0.10	0.10	0.10	0.10	0.09	0.09	0.08
OAS	0.87	0.86	0.85	0.82	0.82	0.79	0.80
REF	0.21	0.20	0.19	0.18	0.18	0.18	0.17
SSA	0.86	0.87	0.91	0.96	0.99	0.98	1.05
USA	0.41	0.41	0.41	0.40	0.40	0.38	0.37

Table 844: MAgPIE m4p\_SSP4 — 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)

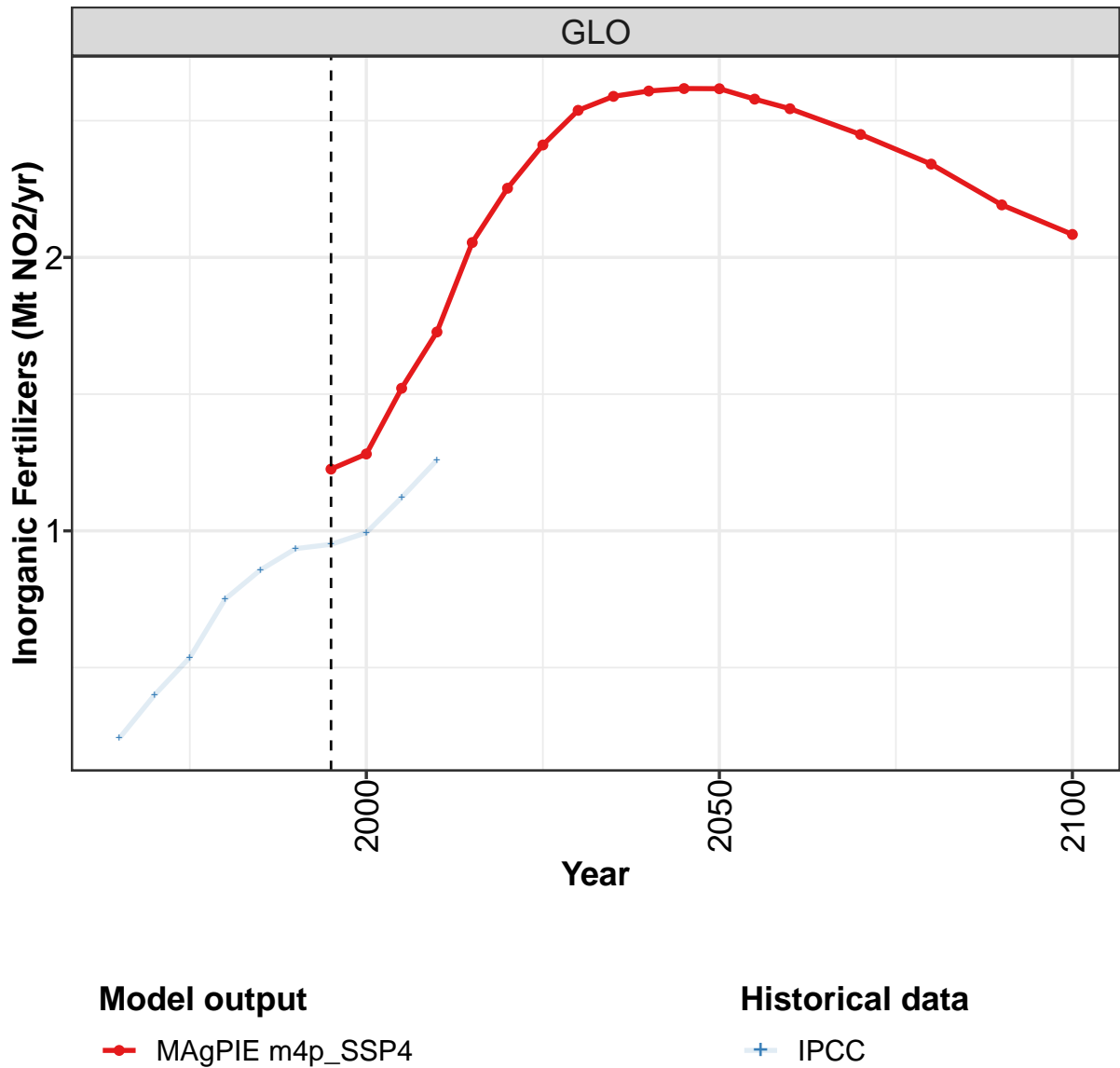
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.76	2.01	2.21	2.50	2.75	2.86	2.94	3.09	3.39	3.64
CAZ	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.14	0.14	0.15
CHA	0.22	0.25	0.28	0.39	0.43	0.52	0.59	0.61	0.74	0.82
EUR	0.32	0.38	0.41	0.44	0.47	0.41	0.37	0.36	0.35	0.35
IND	0.09	0.11	0.12	0.14	0.17	0.21	0.24	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



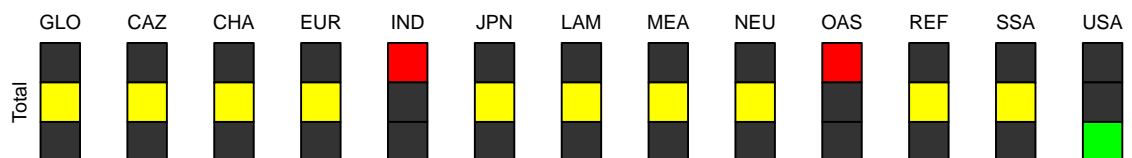
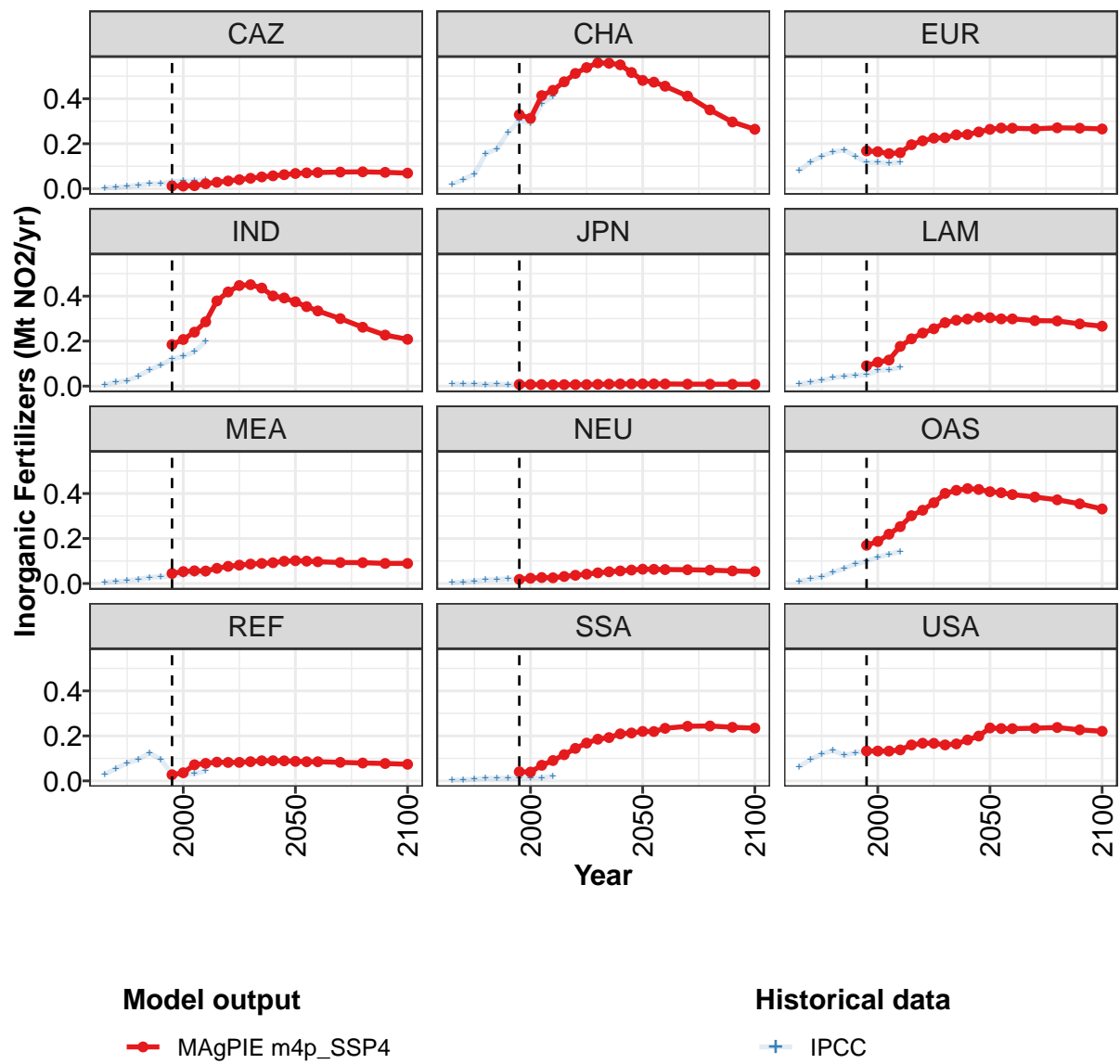


Figure 253: MAGPIE m4p\_SSP4 — Emissions—NO<sub>2</sub>—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO<sub>2</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.23	1.28	1.52	1.73	2.05	2.25	2.41	2.54	2.59	2.61	2.62
CAZ	0.01	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.06
CHA	0.33	0.31	0.41	0.44	0.48	0.51	0.54	0.56	0.56	0.55	0.52
EUR	0.17	0.16	0.16	0.16	0.20	0.21	0.22	0.23	0.24	0.24	0.25
IND	0.18	0.21	0.24	0.29	0.38	0.42	0.45	0.45	0.44	0.40	0.39
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.09	0.11	0.12	0.18	0.21	0.24	0.25	0.28	0.29	0.30	0.31
MEA	0.04	0.05	0.06	0.06	0.07	0.08	0.08	0.09	0.09	0.09	0.10
NEU	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06
OAS	0.17	0.19	0.22	0.25	0.30	0.33	0.36	0.40	0.41	0.42	0.42
REF	0.03	0.04	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
SSA	0.04	0.04	0.07	0.09	0.12	0.14	0.17	0.19	0.19	0.21	0.21
USA	0.13	0.13	0.13	0.14	0.16	0.17	0.17	0.16	0.16	0.18	0.20

Table 848: MAgPIE m4p\_SSP4 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO2/yr) [PART 1/2]

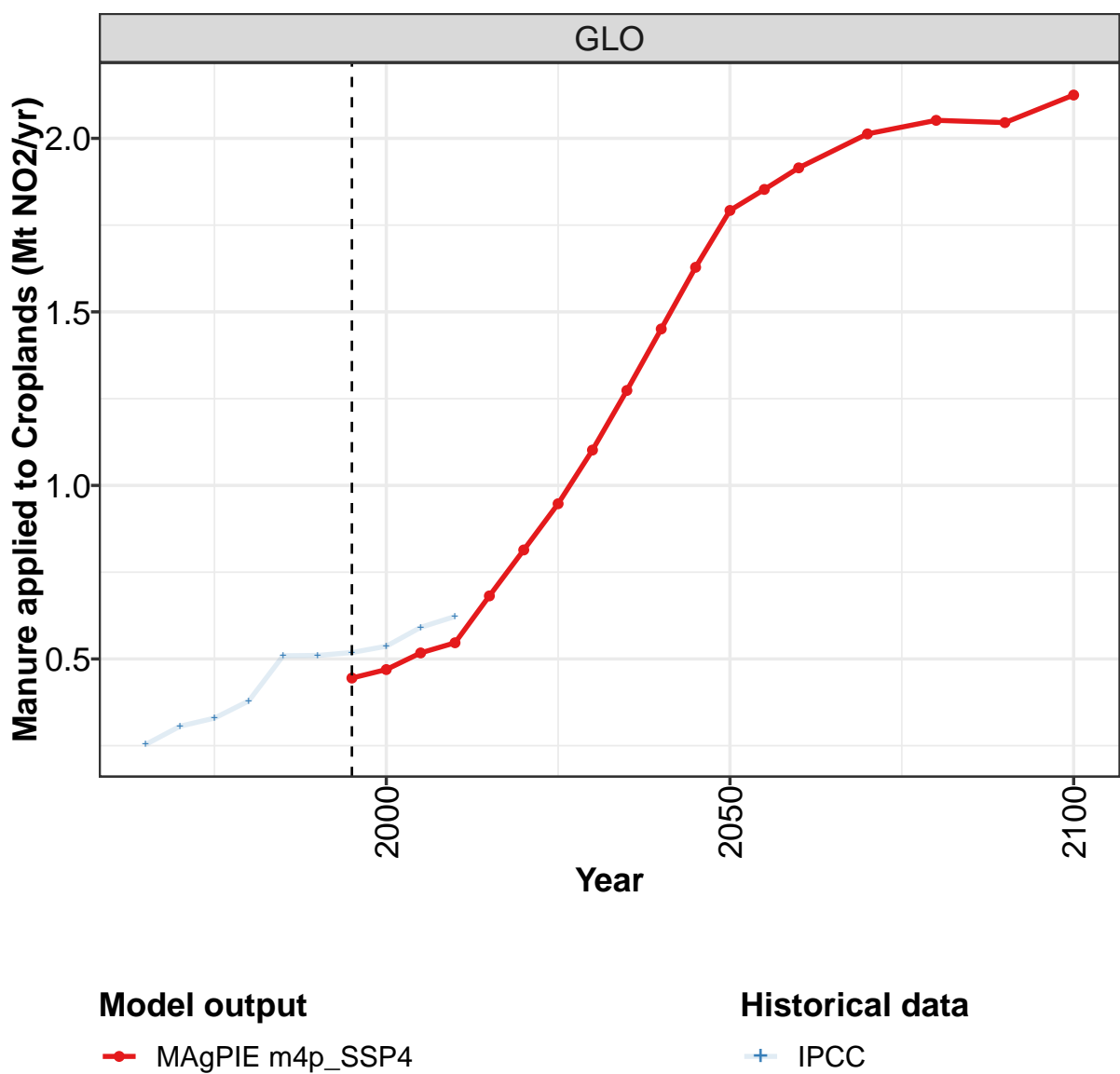
	2050	2055	2060	2070	2080	2090	2100
GLO	2.62	2.58	2.54	2.45	2.34	2.19	2.08
CAZ	0.07	0.07	0.07	0.07	0.08	0.07	0.07
CHA	0.48	0.47	0.46	0.41	0.35	0.30	0.26
EUR	0.26	0.27	0.27	0.27	0.27	0.27	0.27
IND	0.37	0.35	0.33	0.30	0.26	0.23	0.21
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.30	0.30	0.30	0.29	0.29	0.28	0.27
MEA	0.10	0.10	0.10	0.09	0.09	0.09	0.09
NEU	0.06	0.06	0.06	0.06	0.06	0.06	0.05
OAS	0.41	0.40	0.40	0.38	0.37	0.35	0.33
REF	0.09	0.09	0.09	0.08	0.08	0.08	0.07
SSA	0.22	0.22	0.23	0.24	0.24	0.24	0.23
USA	0.24	0.23	0.23	0.23	0.24	0.23	0.22

Table 849: MAgPIE m4p\_SSP4 — 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





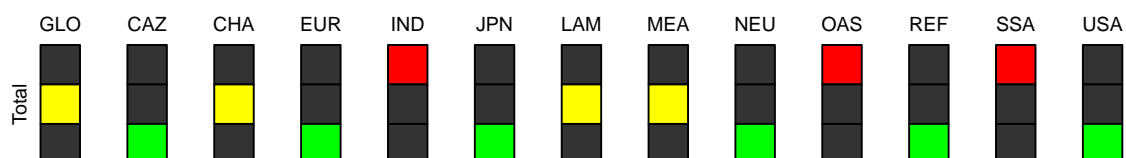
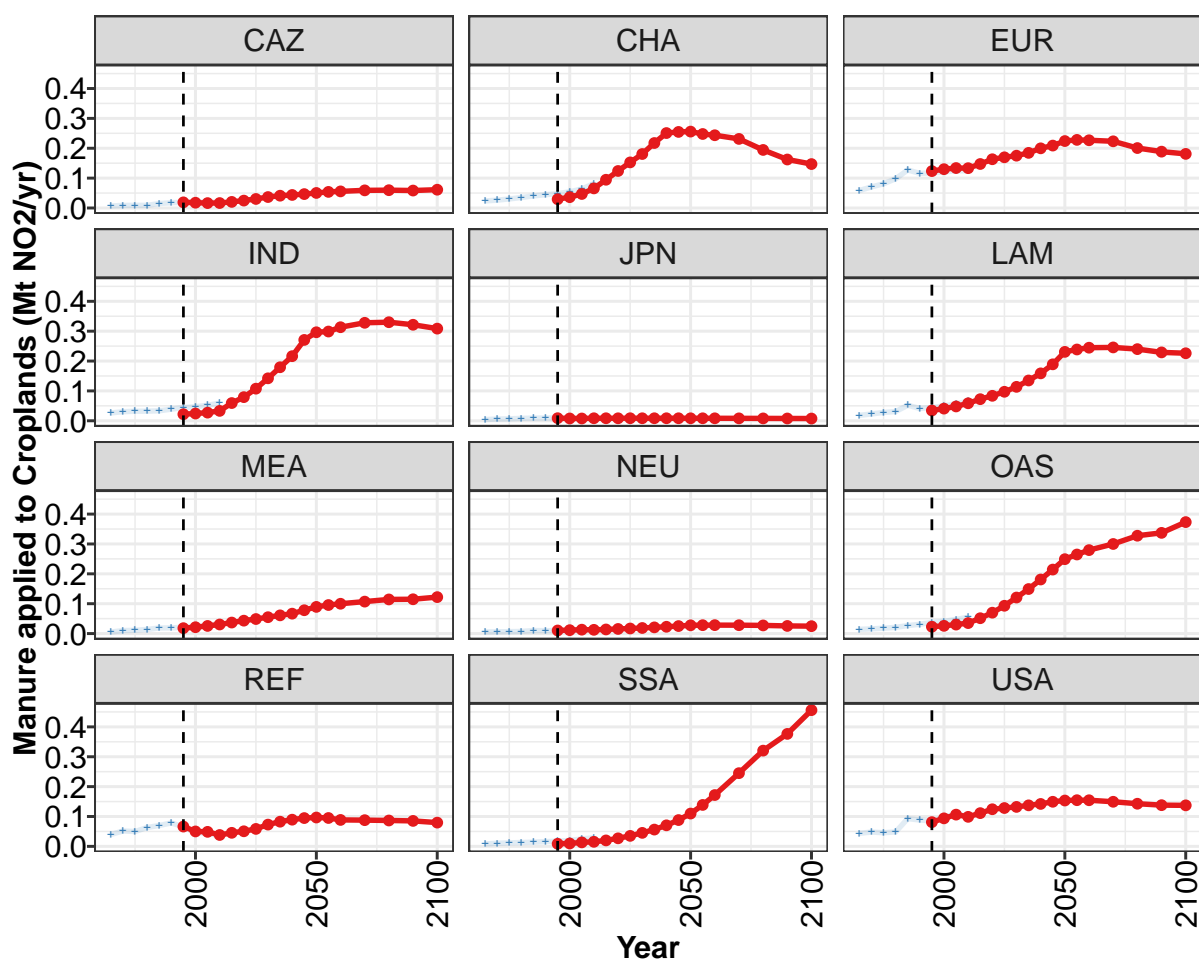


Figure 254: MAgPIE m4p\_SSP4 — Emissions—NO<sub>2</sub>—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO<sub>2</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.45	0.47	0.52	0.55	0.68	0.81	0.95	1.10	1.27	1.45	1.63
CAZ	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.04	0.04	0.05
CHA	0.03	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.22	0.25	0.25
EUR	0.12	0.13	0.13	0.13	0.15	0.16	0.17	0.18	0.18	0.20	0.21
IND	0.02	0.02	0.03	0.03	0.06	0.08	0.11	0.14	0.18	0.22	0.27
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	0.11	0.13	0.16	0.19
MEA	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.08
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	0.09	0.12	0.15	0.18	0.21
REF	0.07	0.05	0.05	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.09
SSA	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.09
USA	0.08	0.09	0.11	0.10	0.11	0.12	0.13	0.13	0.14	0.14	0.15

Table 851: MAgPIE m4p\_SSP4 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO2/yr) [PART 1/2]

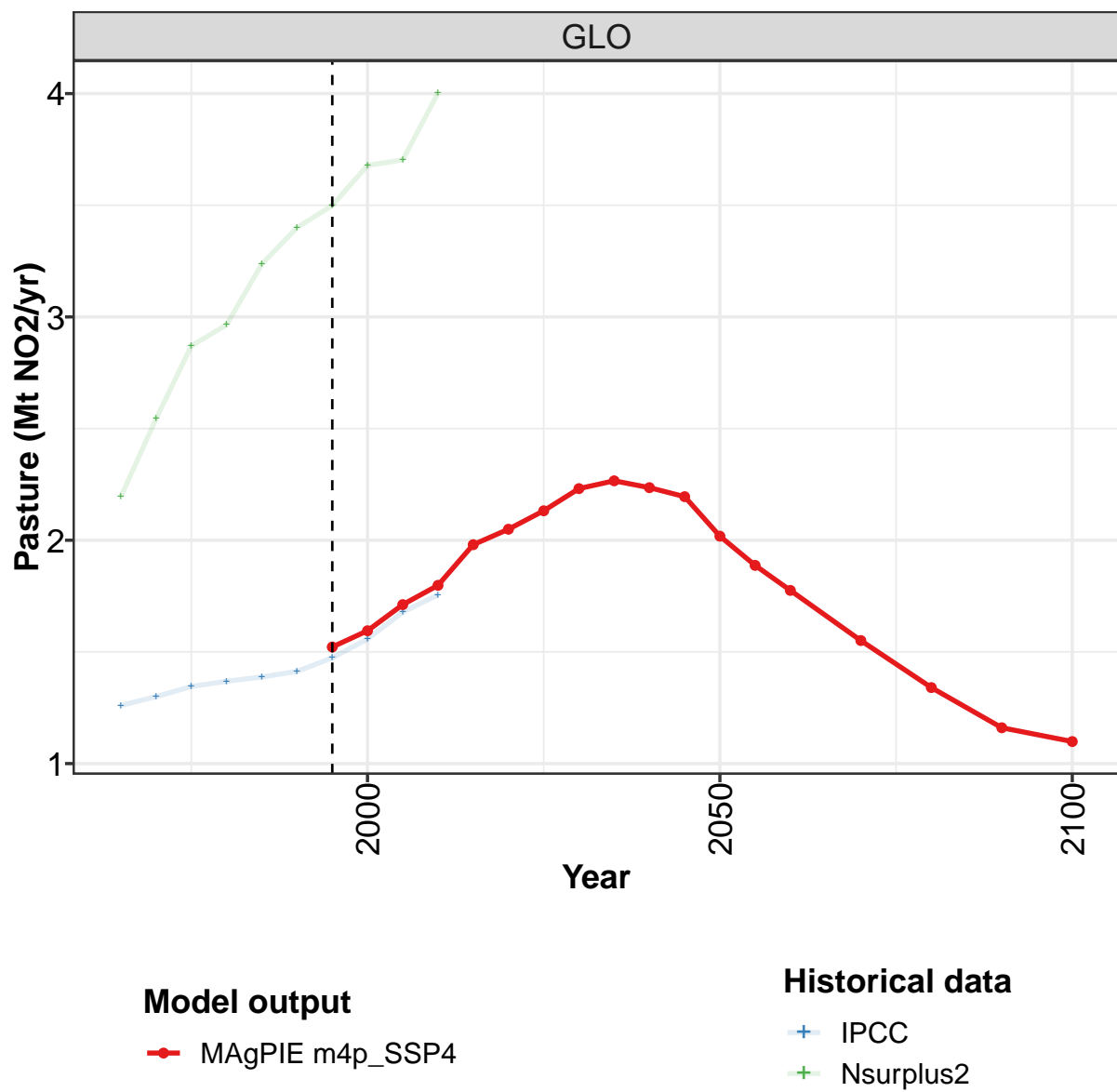
	2050	2055	2060	2070	2080	2090	2100
GLO	1.79	1.85	1.92	2.01	2.05	2.05	2.12
CAZ	0.05	0.05	0.06	0.06	0.06	0.06	0.06
CHA	0.26	0.25	0.24	0.23	0.19	0.16	0.15
EUR	0.22	0.23	0.23	0.22	0.20	0.19	0.18
IND	0.30	0.30	0.31	0.33	0.33	0.32	0.31
JPN	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAM	0.23	0.24	0.24	0.25	0.24	0.23	0.23
MEA	0.09	0.10	0.10	0.11	0.11	0.11	0.12
NEU	0.03	0.03	0.03	0.03	0.03	0.03	0.02
OAS	0.25	0.26	0.28	0.30	0.33	0.34	0.37
REF	0.10	0.10	0.09	0.09	0.09	0.09	0.08
SSA	0.11	0.14	0.17	0.25	0.32	0.38	0.46
USA	0.15	0.15	0.15	0.15	0.14	0.14	0.14

Table 852: MAgPIE m4p\_SSP4 — 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



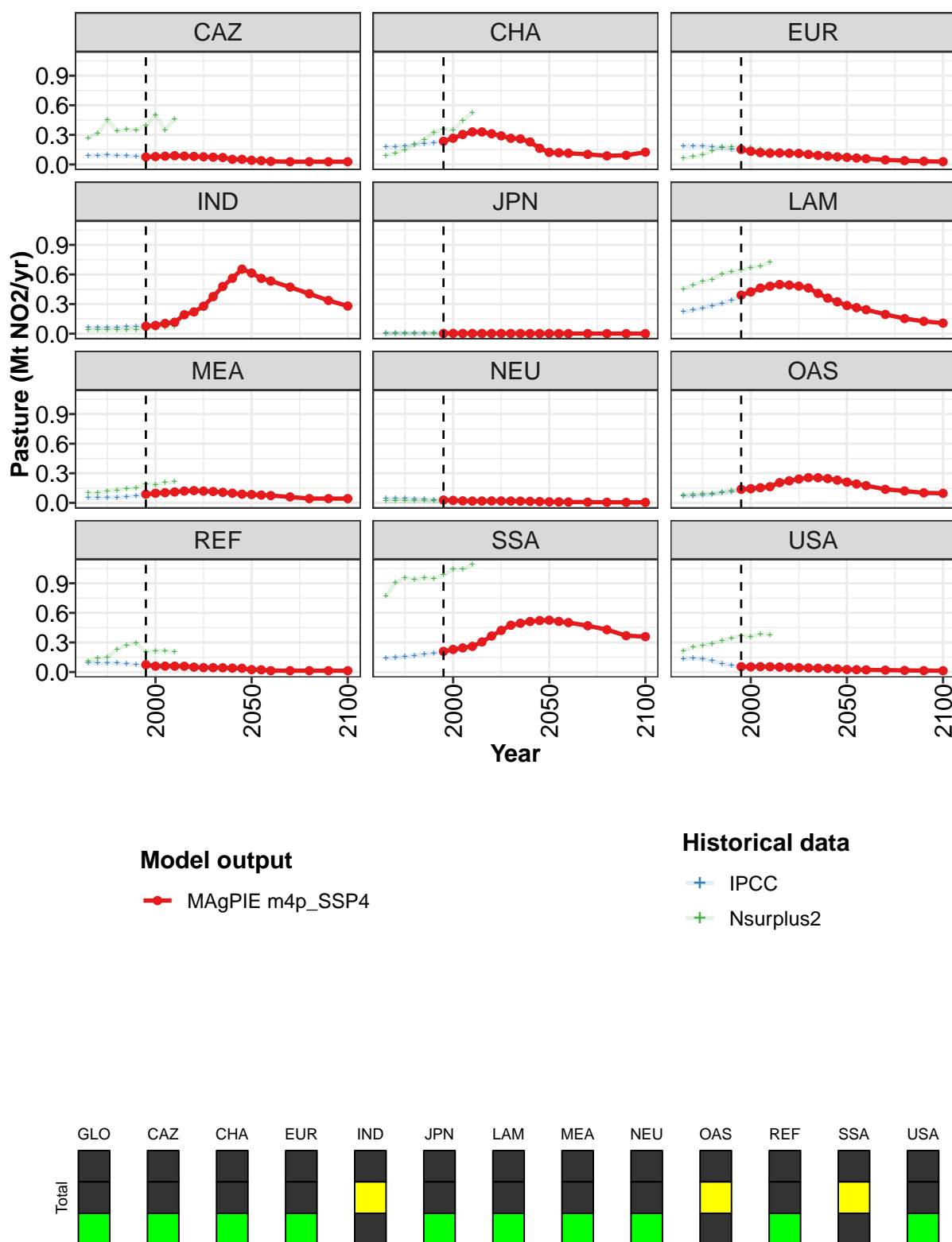


Figure 255: MAgPIE m4p\_SSP4 — Emissions—NO<sub>2</sub>—Land—Agriculture—Agricultural Soils—Pasture (Mt NO<sub>2</sub>/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.52	1.59	1.71	1.80	1.98	2.05	2.13	2.23	2.27	2.24	2.20
CAZ	0.08	0.08	0.08	0.09	0.08	0.08	0.08	0.07	0.07	0.05	0.05
CHA	0.24	0.27	0.30	0.33	0.33	0.31	0.29	0.27	0.26	0.23	0.16
EUR	0.15	0.13	0.12	0.11	0.12	0.11	0.11	0.10	0.09	0.08	0.08
IND	0.08	0.08	0.10	0.12	0.19	0.22	0.28	0.38	0.48	0.56	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	0.39	0.42	0.46	0.48	0.50	0.49	0.48	0.46	0.41	0.36	0.32
MEA	0.09	0.10	0.10	0.11	0.12	0.12	0.12	0.11	0.11	0.10	0.09
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	0.20	0.22	0.24	0.26	0.25	0.25	0.23
REF	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04
SSA	0.21	0.23	0.24	0.26	0.31	0.37	0.42	0.47	0.50	0.51	0.52
USA	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03

Table 854: MAgPIE m4p\_SSP4 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Pasture (Mt NO2/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2.02	1.89	1.78	1.55	1.34	1.16	1.10
CAZ	0.04	0.04	0.03	0.03	0.03	0.03	0.03
CHA	0.12	0.12	0.11	0.10	0.09	0.09	0.12
EUR	0.07	0.07	0.06	0.05	0.04	0.03	0.03
IND	0.61	0.56	0.53	0.47	0.40	0.34	0.28
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.29	0.26	0.24	0.20	0.15	0.13	0.11
MEA	0.08	0.08	0.07	0.06	0.04	0.04	0.04
NEU	0.01	0.01	0.01	0.01	0.01	0.00	0.00
OAS	0.21	0.19	0.17	0.14	0.12	0.10	0.10
REF	0.02	0.02	0.01	0.01	0.01	0.01	0.01
SSA	0.53	0.51	0.50	0.47	0.43	0.37	0.36
USA	0.03	0.02	0.02	0.02	0.02	0.01	0.01

Table 855: MAgPIE m4p\_SSP4 — Emissions—NO2—Land—Agriculture—Agricultural Soils—Pasture (Mt NO2/yr) [PART 2/2]

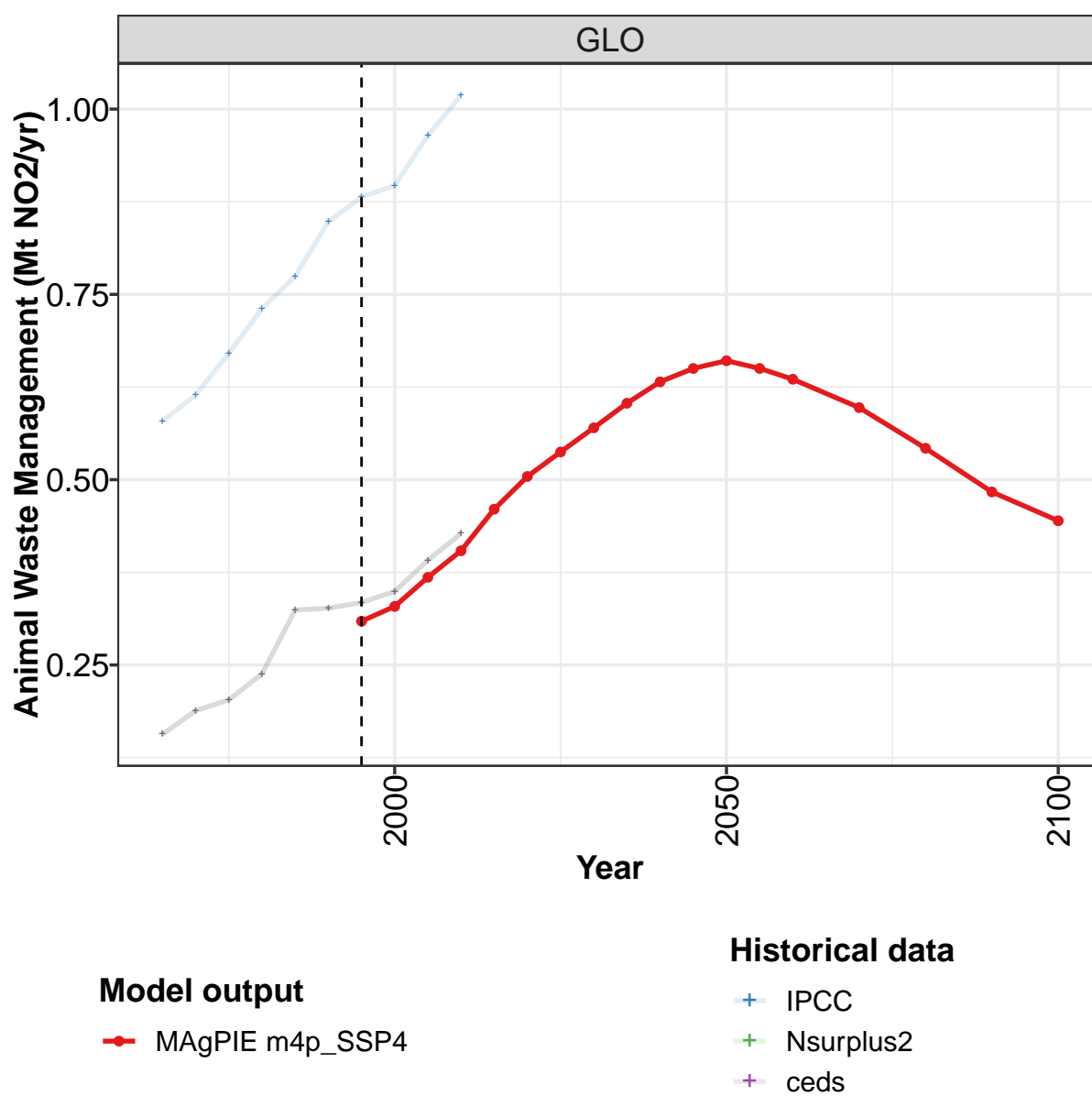
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.26	1.30	1.35	1.37	1.39	1.41	1.47	1.56	1.68	1.76
CAZ	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.09	0.09	0.09
CHA	0.18	0.18	0.19	0.20	0.21	0.22	0.24	0.27	0.30	0.33
EUR	0.18	0.19	0.18	0.18	0.17	0.15	0.14	0.12	0.11	0.11
IND	0.06	0.06	0.06	0.07	0.07	0.07	0.08	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



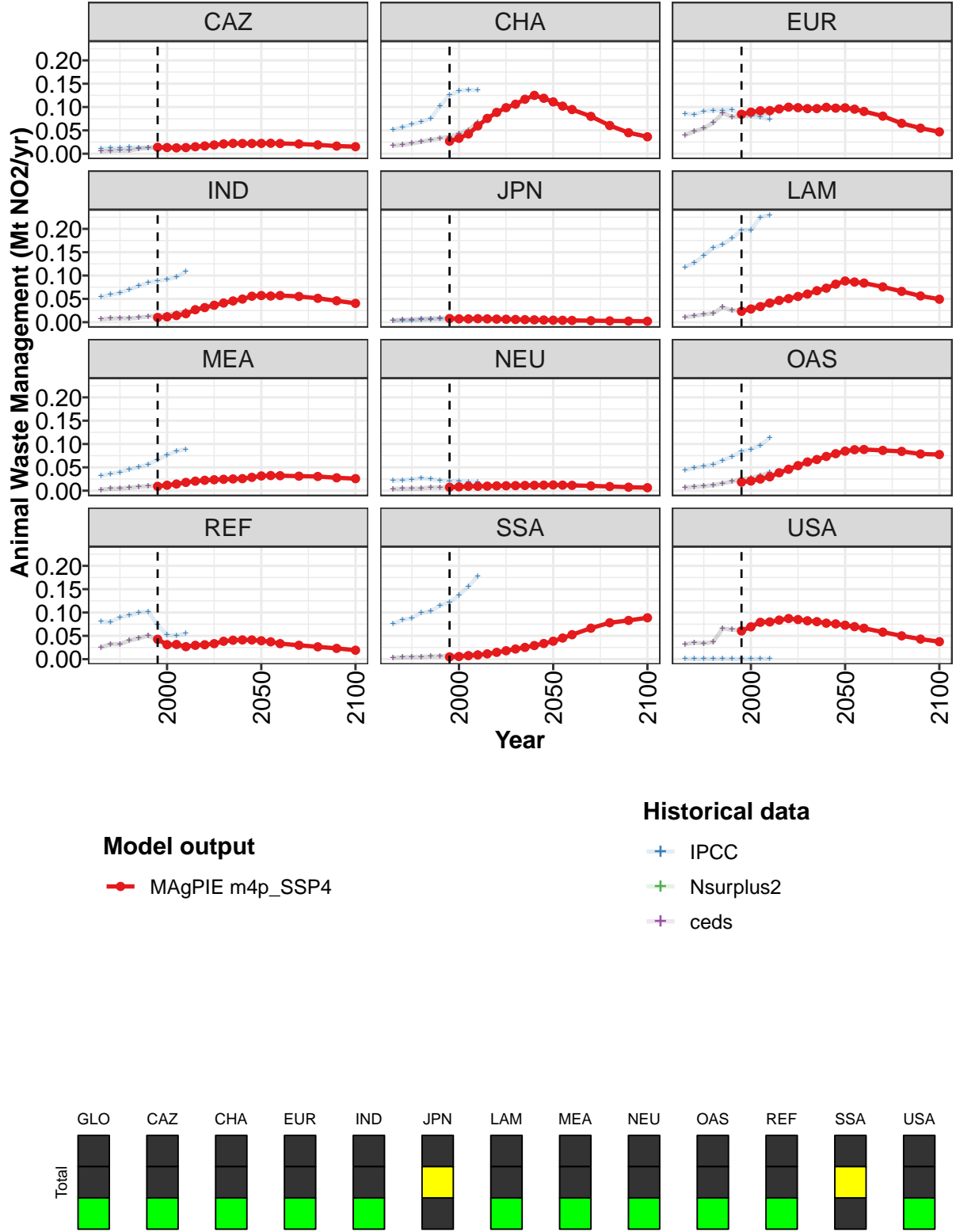


Figure 256: MAgPIE m4p\_SSP4 — Emissions—NO<sub>2</sub>—Land—Agriculture—Animal Waste Management (Mt NO<sub>2</sub>/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.309	0.329	0.368	0.404	0.460	0.504	0.537	0.570	0.603	0.632	0.650
CAZ	0.014	0.013	0.013	0.013	0.015	0.017	0.019	0.021	0.022	0.022	0.022
CHA	0.027	0.033	0.042	0.060	0.076	0.089	0.099	0.106	0.117	0.125	0.119
EUR	0.085	0.089	0.092	0.092	0.096	0.100	0.099	0.097	0.097	0.099	0.098
IND	0.010	0.012	0.014	0.018	0.027	0.031	0.036	0.041	0.046	0.050	0.056
JPN	0.008	0.007	0.007	0.008	0.007	0.007	0.006	0.006	0.005	0.005	0.005
LAM	0.023	0.028	0.033	0.041	0.047	0.051	0.055	0.060	0.067	0.073	0.081
MEA	0.009	0.012	0.014	0.018	0.020	0.022	0.023	0.024	0.025	0.026	0.029
NEU	0.007	0.008	0.009	0.009	0.010	0.010	0.011	0.011	0.011	0.012	0.012
OAS	0.018	0.021	0.025	0.030	0.038	0.046	0.054	0.062	0.067	0.073	0.079
REF	0.043	0.031	0.032	0.027	0.030	0.031	0.033	0.038	0.041	0.041	0.041
SSA	0.005	0.006	0.008	0.009	0.011	0.015	0.018	0.022	0.025	0.029	0.034
USA	0.060	0.069	0.079	0.080	0.084	0.087	0.085	0.082	0.080	0.077	0.076

Table 858: MAgPIE m4p\_SSP4 — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.661	0.650	0.636	0.597	0.542	0.483	0.445
CAZ	0.022	0.022	0.022	0.021	0.019	0.016	0.015
CHA	0.111	0.102	0.095	0.080	0.060	0.045	0.036
EUR	0.098	0.095	0.091	0.081	0.065	0.055	0.047
IND	0.057	0.056	0.057	0.055	0.051	0.046	0.040
JPN	0.004	0.004	0.004	0.003	0.003	0.002	0.002
LAM	0.088	0.086	0.084	0.076	0.066	0.056	0.049
MEA	0.032	0.032	0.032	0.031	0.030	0.028	0.026
NEU	0.012	0.012	0.011	0.010	0.009	0.007	0.006
OAS	0.085	0.088	0.088	0.086	0.084	0.079	0.077
REF	0.039	0.037	0.033	0.030	0.026	0.023	0.019
SSA	0.039	0.045	0.052	0.066	0.078	0.083	0.089
USA	0.073	0.070	0.066	0.058	0.050	0.043	0.037

Table 859: MAgPIE m4p\_SSP4 — 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

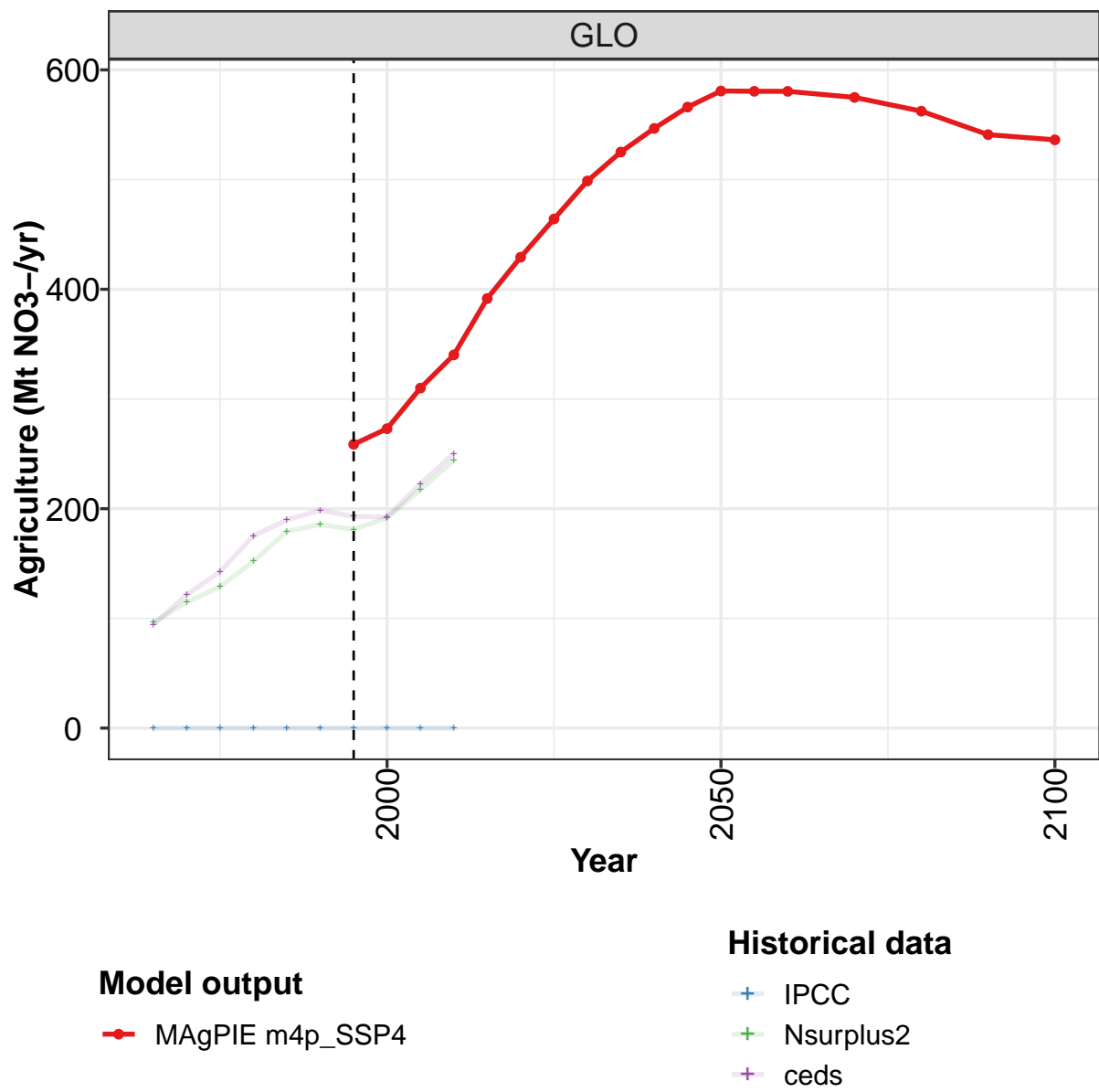
Table 861: IPCC — Emissions—NO2—Land—Agriculture—Animal Waste Management (Mt NO2/yr)

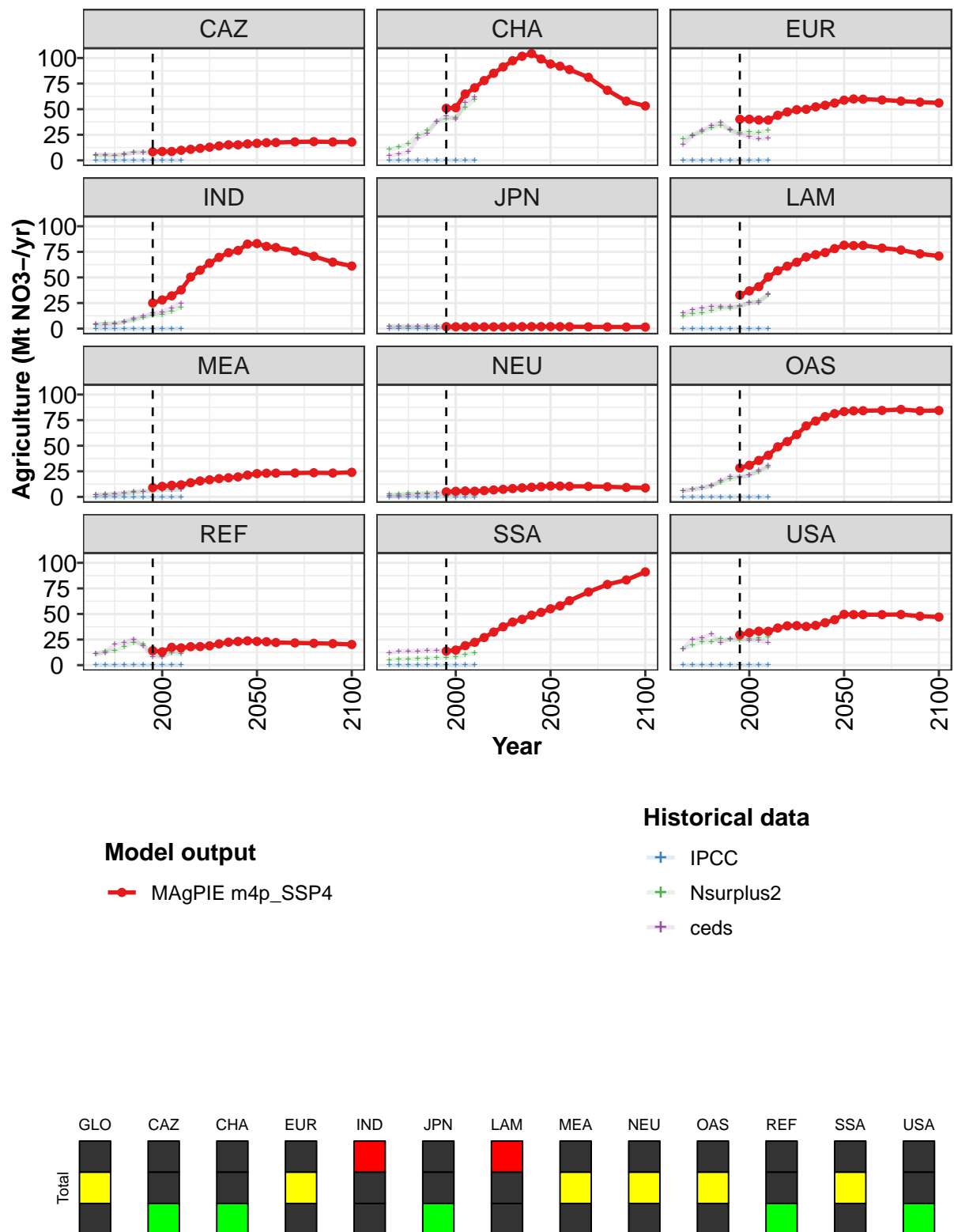
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0.157	0.188	0.203	0.238	0.324	0.327	0.334	0.349	0.391	0.427
CAZ	0.005	0.006	0.007	0.007	0.011	0.013	0.014	0.014	0.015	0.014
CHA	0.017	0.019	0.022	0.026	0.030	0.033	0.037	0.042	0.051	0.068
EUR	0.040	0.048	0.054	0.066	0.087	0.079	0.081	0.083	0.086	0.086
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\_SSP4 — Emissions—NO3Land—Agriculture (Mt NO<sub>3</sub>-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	259	273	310	340	392	429	464	499	525	547	566
CAZ	8	9	9	10	11	12	13	14	15	15	16
CHA	51	51	65	71	78	85	91	97	102	104	99
EUR	40	40	39	39	44	47	49	50	52	54	56
IND	25	28	32	38	50	57	64	70	74	76	83
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	33	37	41	50	57	61	65	70	72	74	78
MEA	9	10	11	12	14	16	17	18	19	20	21
NEU	5	5	6	6	6	7	7	8	9	9	10
OAS	28	31	36	41	49	54	61	69	74	78	81
REF	14	13	17	17	18	18	19	21	22	23	24
SSA	14	15	19	22	27	32	37	42	45	49	52
USA	30	32	33	33	36	38	39	38	39	41	44

Table 863: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	581	580	580	575	562	541	536
CAZ	17	17	17	18	18	18	18
CHA	94	92	89	81	68	58	53
EUR	59	60	60	59	58	57	56
IND	83	80	79	76	71	65	61
JPN	2	2	2	2	2	2	2
LAM	82	81	81	79	77	73	71
MEA	23	23	23	23	24	23	24
NEU	11	11	10	10	10	9	9
OAS	83	84	84	84	85	84	84
REF	23	23	22	22	21	21	20
SSA	55	58	63	71	79	83	91
USA	50	49	49	49	49	48	47

Table 864: MAgPIE m4p\_SSP4 — 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)

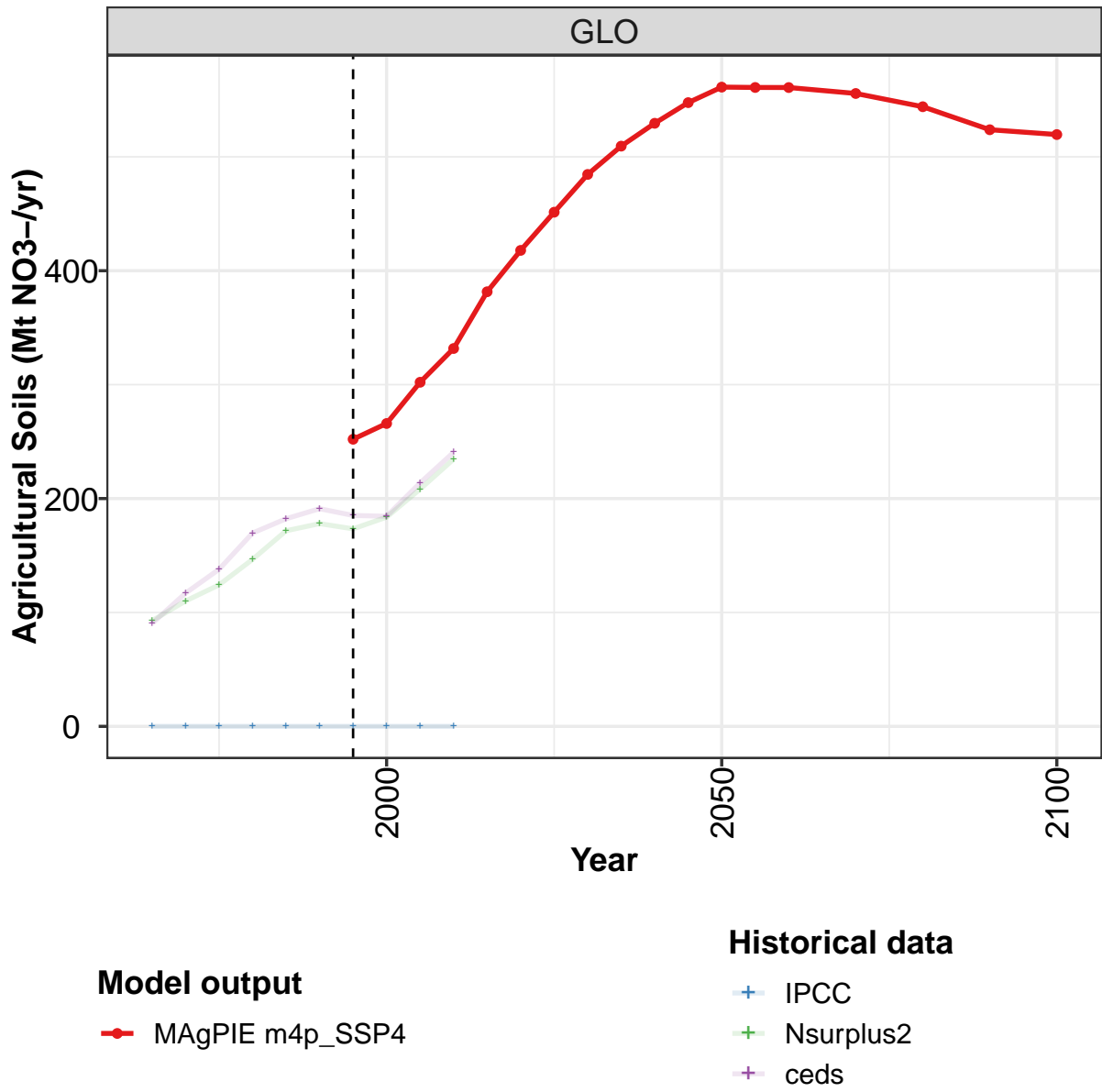
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	97	115	129	152	179	186	181	192	217	244
CAZ	5	5	5	5	8	8	8	8	9	10
CHA	11	13	16	25	29	37	40	42	51	59
EUR	21	24	28	32	34	29	27	28	27	29
IND	4	5	5	6	8	11	13	13	17	21
JPN	2	2	2	2	2	2	2	2	2	2
LAM	12	14	15	17	20	20	21	25	27	33
MEA	2	2	3	4	4	5	6	6	7	7
NEU	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

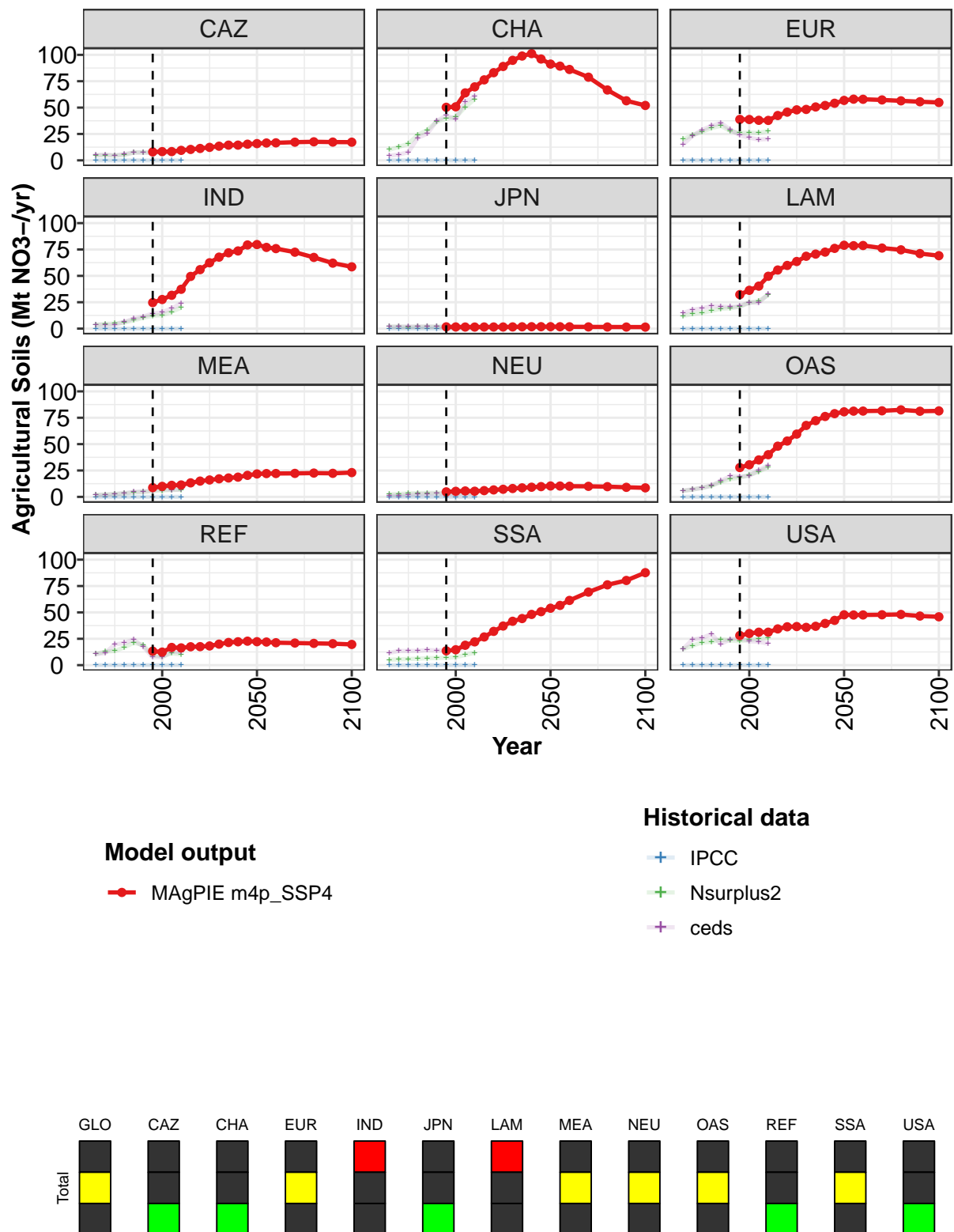
Table 866: IPCC — Emissions—NO3Land—Agriculture (Mt NO3-/yr)

	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\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO<sub>3</sub>-/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	252	266	302	332	382	418	451	485	509	529	548
CAZ	8	8	8	9	10	11	12	13	14	14	15
CHA	50	51	64	70	76	83	89	95	99	101	96
EUR	39	39	38	38	43	46	48	48	51	52	54
IND	25	28	32	37	49	56	62	68	72	74	79
JPN	2	2	2	1	2	2	2	2	2	2	2
LAM	32	36	40	50	56	60	64	69	71	73	76
MEA	9	10	11	11	13	15	16	17	18	19	20
NEU	5	5	6	5	6	7	7	8	9	9	10
OAS	28	30	35	40	48	53	60	68	72	76	79
REF	13	12	17	16	17	18	18	20	21	22	23
SSA	14	15	19	22	27	32	37	42	44	48	51
USA	28	30	31	31	34	36	37	36	37	40	42

Table 868: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils (Mt NO3-/yr)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	561	561	561	556	544	524	520
CAZ	16	16	17	17	18	17	17
CHA	91	89	86	79	67	56	52
EUR	57	58	58	57	56	56	55
IND	80	77	76	72	68	62	59
JPN	2	2	2	2	2	1	1
LAM	79	79	79	76	75	71	69
MEA	22	22	22	22	23	22	23
NEU	10	10	10	10	10	9	9
OAS	81	81	81	82	82	81	81
REF	22	22	21	21	21	20	20
SSA	54	57	61	69	76	80	88
USA	48	48	48	48	48	47	46

Table 869: MAgPIE m4p\_SSP4 — 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)

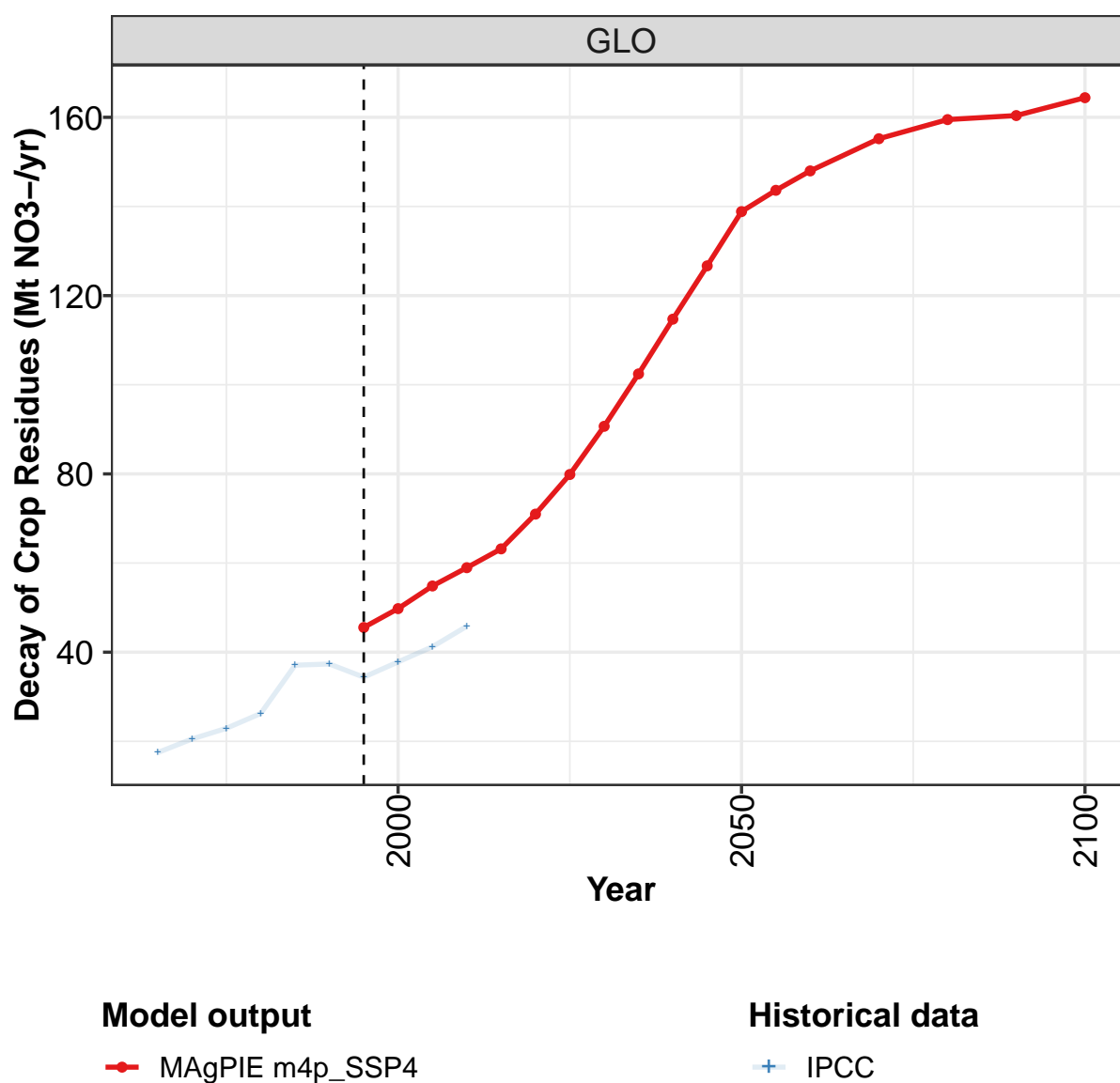
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	93	110	124	147	172	178	173	184	208	235
CAZ	5	5	5	5	7	8	7	8	8	10
CHA	10	13	16	24	29	37	39	41	50	58
EUR	20	24	27	31	33	28	26	26	26	28
IND	4	4	5	6	8	10	12	13	16	20
JPN	2	2	2	2	2	2	2	1	1	1
LAM	12	14	15	17	19	19	21	24	26	32
MEA	2	2	3	3	4	5	5	6	7	7
NEU	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



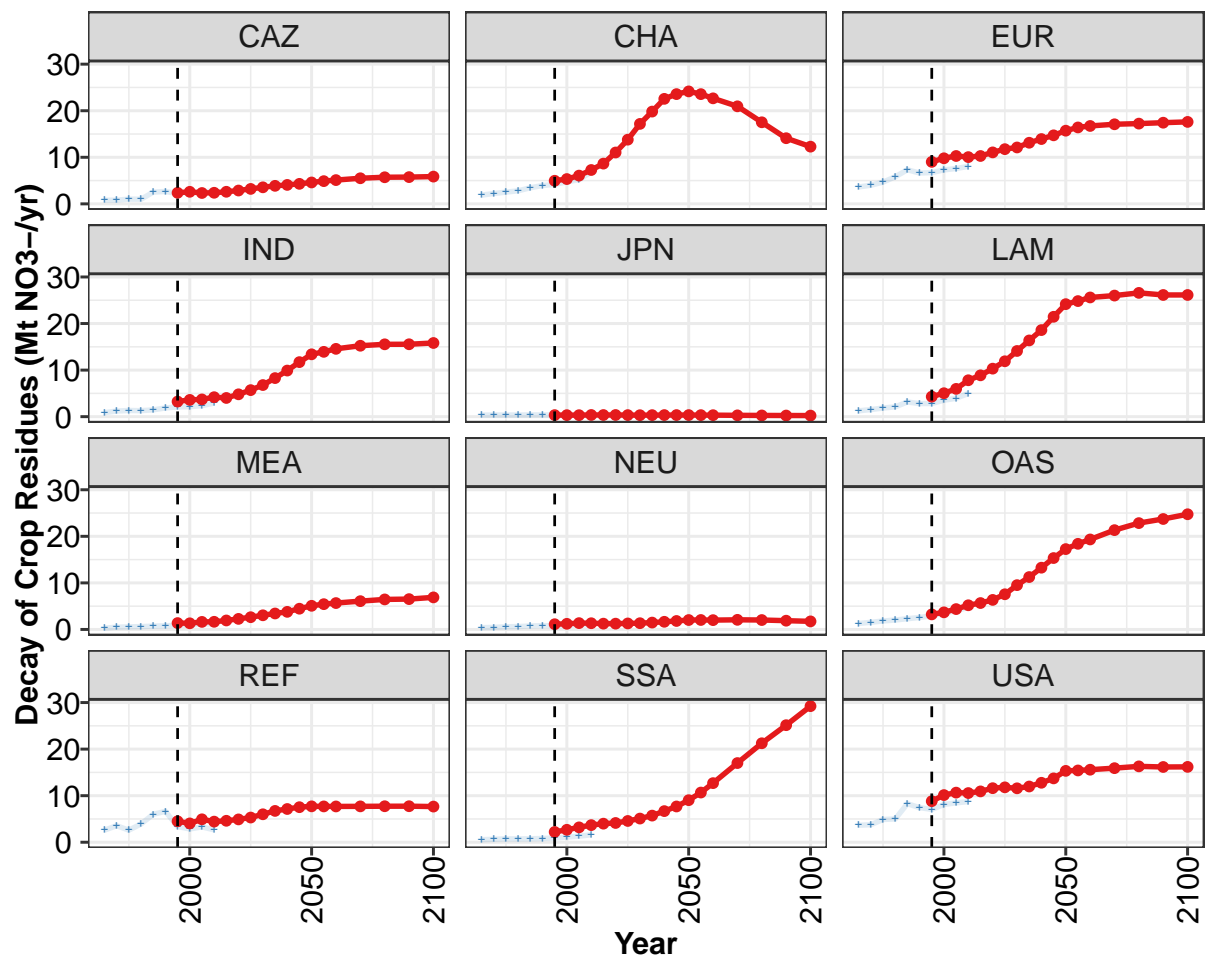


Figure 259: MAgPIE m4p\_SSP4 — Emissions—NO<sub>3</sub>Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt NO<sub>3</sub>-yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	46	50	55	59	63	71	80	91	102	115	127
CAZ	2	3	2	2	3	3	3	4	4	4	4
CHA	5	5	6	7	9	11	14	17	20	23	24
EUR	9	10	10	10	10	11	12	12	13	14	15
IND	3	4	4	4	4	5	6	7	8	10	12
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	4	5	6	8	9	10	12	14	16	19	21
MEA	1	1	2	2	2	2	3	3	3	4	4
NEU	1	1	1	1	1	1	1	1	1	2	2
OAS	3	4	4	5	6	6	8	10	11	13	15
REF	5	4	5	4	5	5	5	6	7	7	8
SSA	2	3	3	4	4	4	5	5	6	7	8
USA	9	10	11	11	11	12	12	12	12	13	14

Table 873: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils—Decay of Crop Residues (Mt NO3-/yr) [PART 1/2]

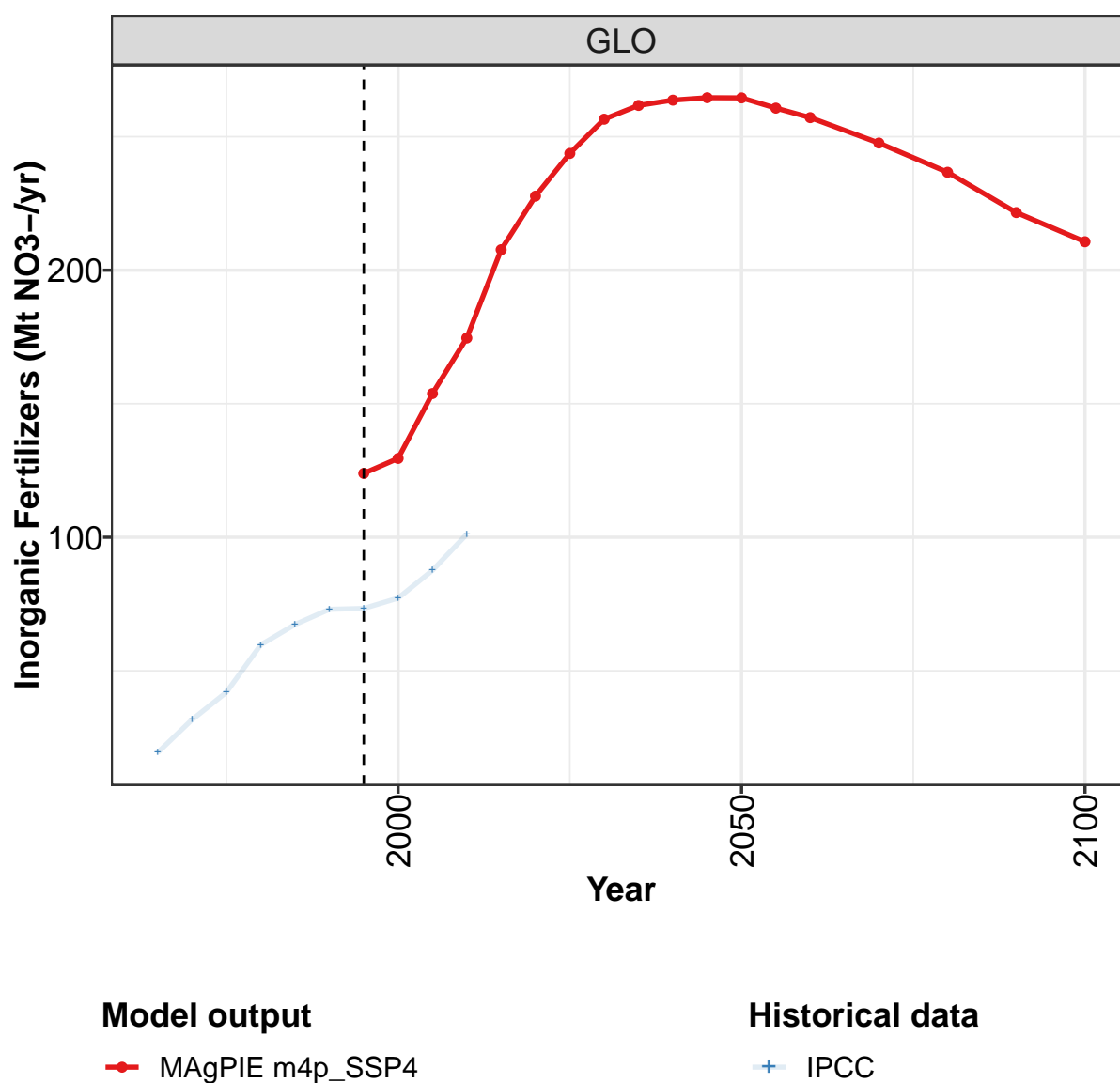
	2050	2055	2060	2070	2080	2090	2100
GLO	139	144	148	155	159	160	164
CAZ	5	5	5	6	6	6	6
CHA	24	24	23	21	18	14	12
EUR	16	16	17	17	17	17	18
IND	13	14	15	15	16	16	16
JPN	0	0	0	0	0	0	0
LAM	24	25	26	26	27	26	26
MEA	5	5	6	6	6	7	7
NEU	2	2	2	2	2	2	2
OAS	17	18	19	21	23	24	25
REF	8	8	8	8	8	8	8
SSA	9	11	13	17	21	25	29
USA	15	15	16	16	16	16	16

Table 874: MAgPIE m4p\_SSP4 — 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



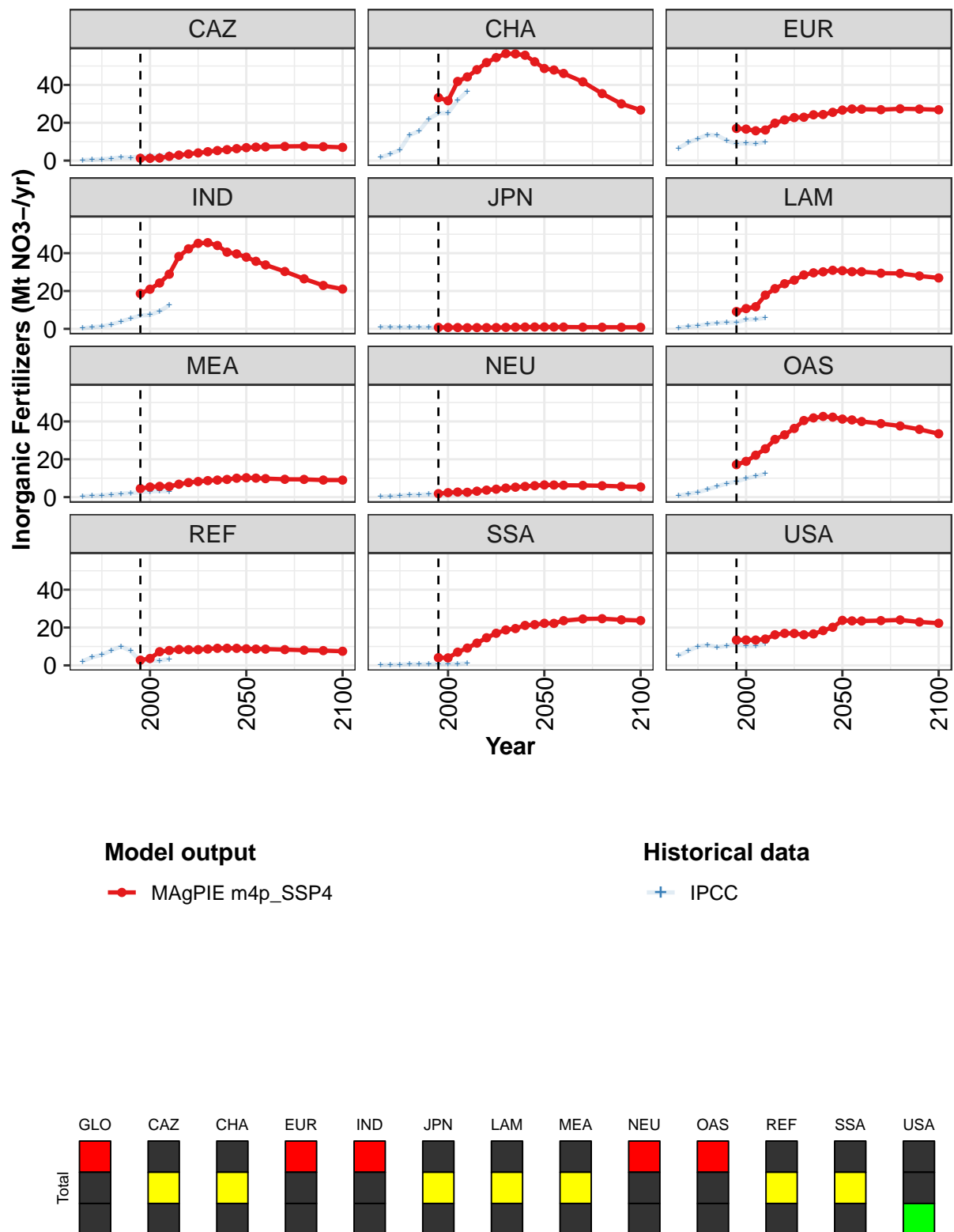


Figure 260: MAgPIE m4p\_SSP4 — Emissions—NO<sub>3</sub>Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO<sub>3</sub>-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	124	130	154	175	208	228	244	257	262	264	265
CAZ	1	1	1	2	3	3	4	5	5	6	6
CHA	33	32	42	44	48	52	54	57	56	56	52
EUR	17	17	16	16	20	22	23	23	24	24	26
IND	19	21	24	29	38	42	45	46	44	41	40
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	9	11	12	18	21	24	26	28	30	30	31
MEA	5	5	6	6	7	8	8	9	9	9	10
NEU	2	2	3	3	3	4	4	5	5	6	6
OAS	17	19	22	26	30	33	36	40	42	43	42
REF	3	4	7	8	8	8	8	9	9	9	9
SSA	4	4	7	9	12	15	17	19	19	21	22
USA	13	13	13	14	16	17	17	16	17	18	20

Table 876: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	265	261	257	248	237	222	211
CAZ	7	7	7	7	8	7	7
CHA	49	48	46	42	35	30	27
EUR	27	27	27	27	27	27	27
IND	38	36	34	30	26	23	21
JPN	1	1	1	1	1	1	1
LAM	31	30	30	29	29	28	27
MEA	10	10	10	9	9	9	9
NEU	6	6	6	6	6	6	5
OAS	41	41	40	39	38	36	34
REF	9	9	9	8	8	8	7
SSA	22	22	24	25	25	24	24
USA	24	24	23	24	24	23	22

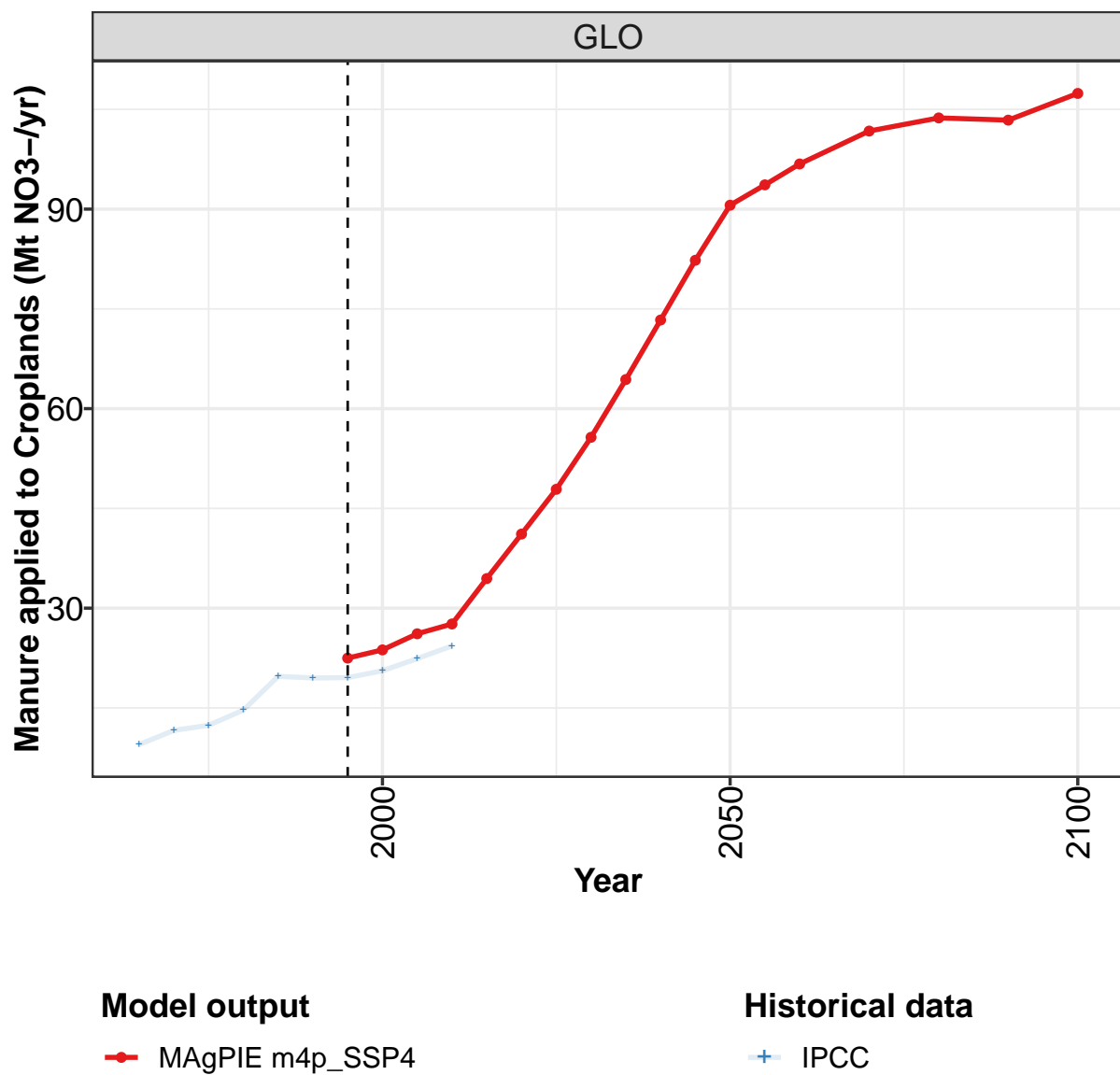
Table 877: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils—Inorganic Fertilizers (Mt NO3-/yr) [PART 2/2]

	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



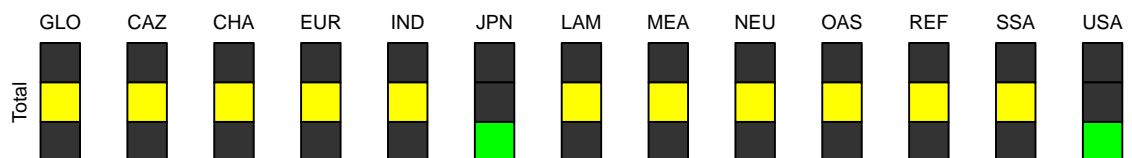
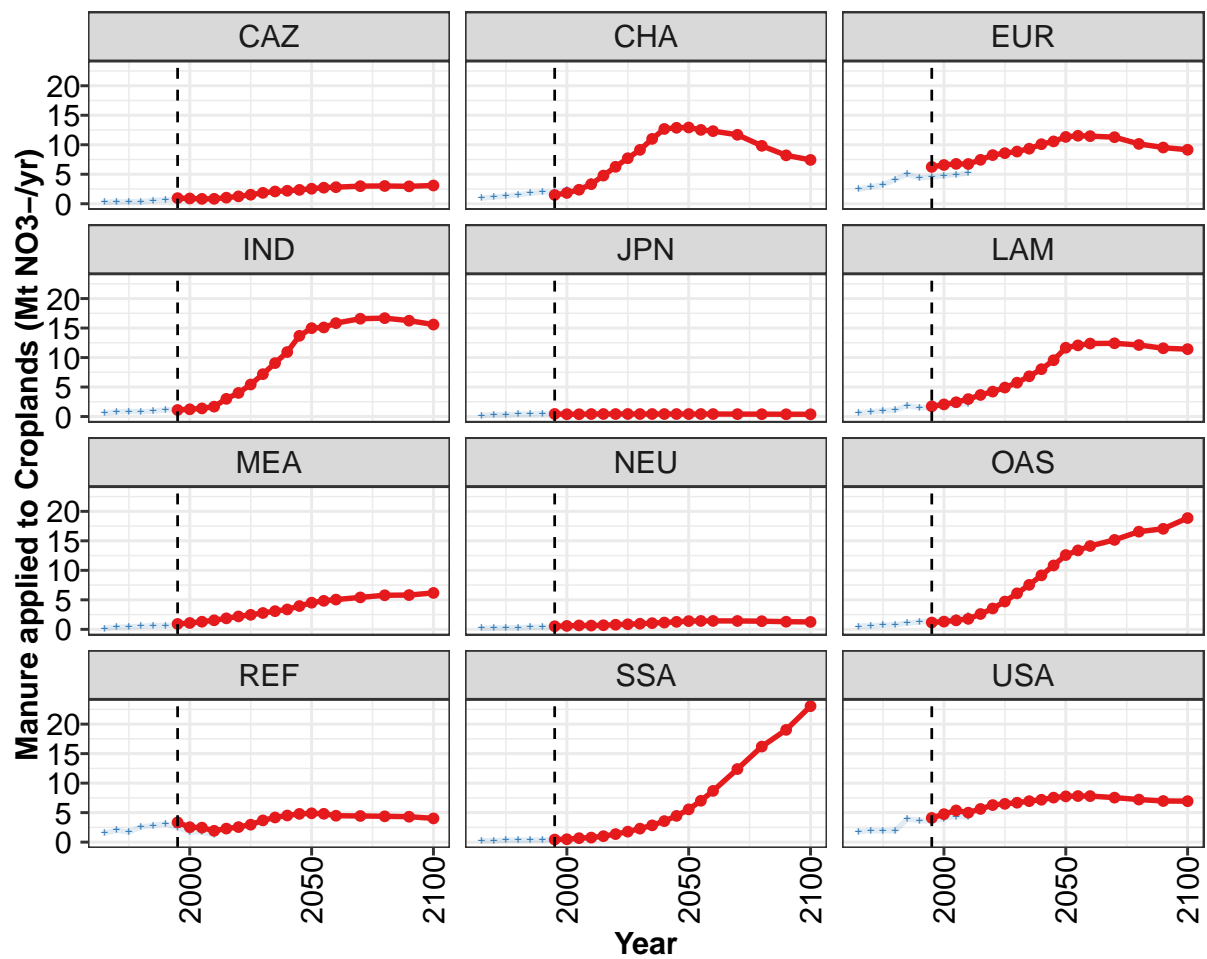


Figure 261: MAgPIE m4p\_SSP4 — Emissions—NO<sub>3</sub>Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO<sub>3</sub>-yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	24	26	28	34	41	48	56	64	73	82
CAZ	1	1	1	1	1	1	2	2	2	2	2
CHA	1	2	2	3	5	6	8	9	11	13	13
EUR	6	7	7	7	7	8	9	9	9	10	11
IND	1	1	1	2	3	4	5	7	9	11	14
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	2	2	2	3	4	4	5	6	7	8	10
MEA	1	1	1	2	2	2	2	3	3	3	4
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	1	1	2	2	3	4	5	6	8	9	11
REF	3	3	2	2	2	3	3	4	4	5	5
SSA	0	0	1	1	1	1	2	2	3	4	4
USA	4	5	5	5	6	6	6	7	7	7	8

Table 879: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils—Manure applied to Croplands (Mt NO3-/yr) [PART 1/2]

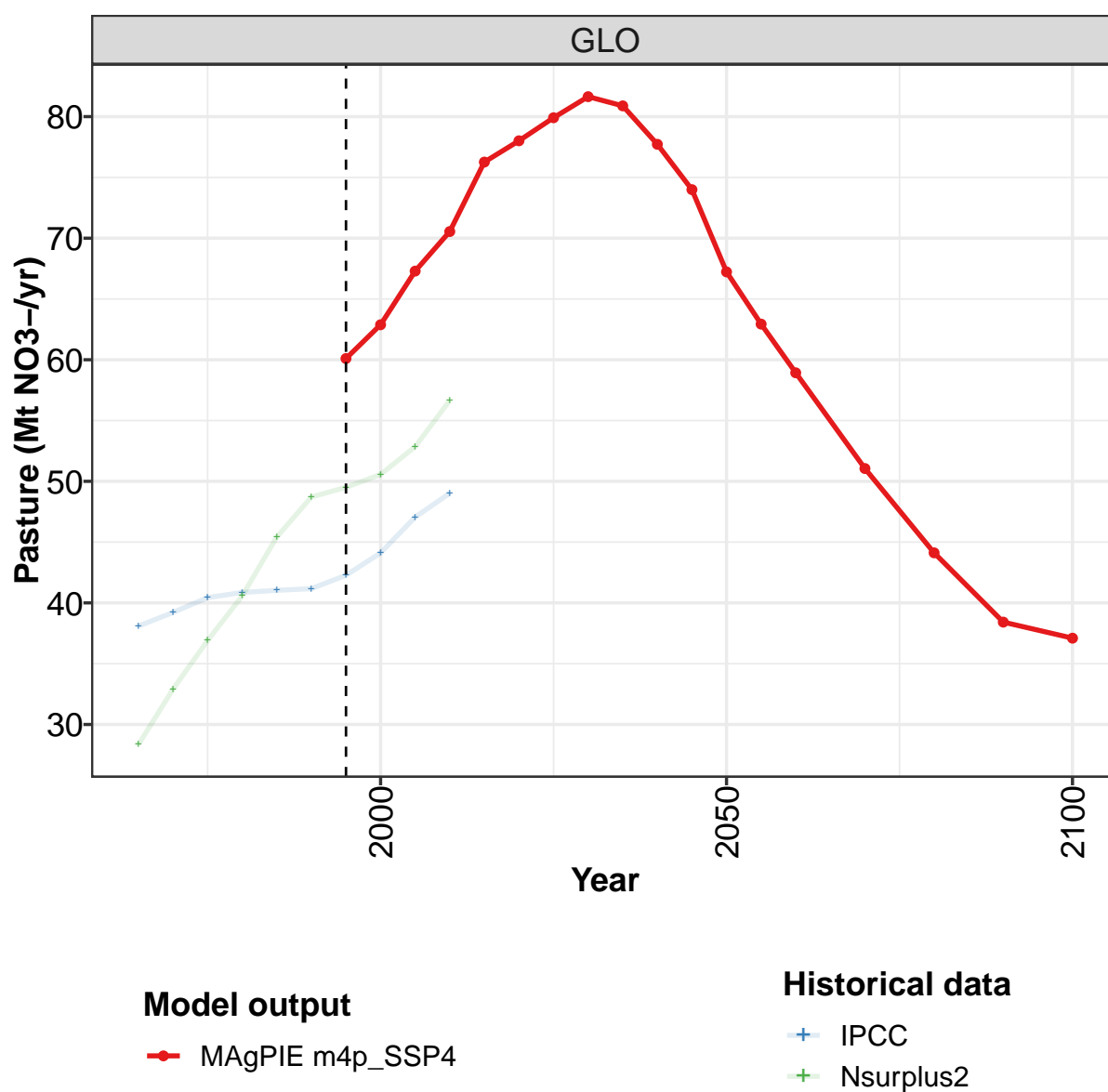
	2050	2055	2060	2070	2080	2090	2100
GLO	91	94	97	102	104	103	107
CAZ	3	3	3	3	3	3	3
CHA	13	13	12	12	10	8	7
EUR	11	12	11	11	10	10	9
IND	15	15	16	17	17	16	16
JPN	0	0	0	0	0	0	0
LAM	12	12	12	12	12	12	11
MEA	5	5	5	5	6	6	6
NEU	1	1	1	1	1	1	1
OAS	13	13	14	15	17	17	19
REF	5	5	4	4	4	4	4
SSA	6	7	9	12	16	19	23
USA	8	8	8	8	7	7	7

Table 880: MAgPIE m4p\_SSP4 — 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



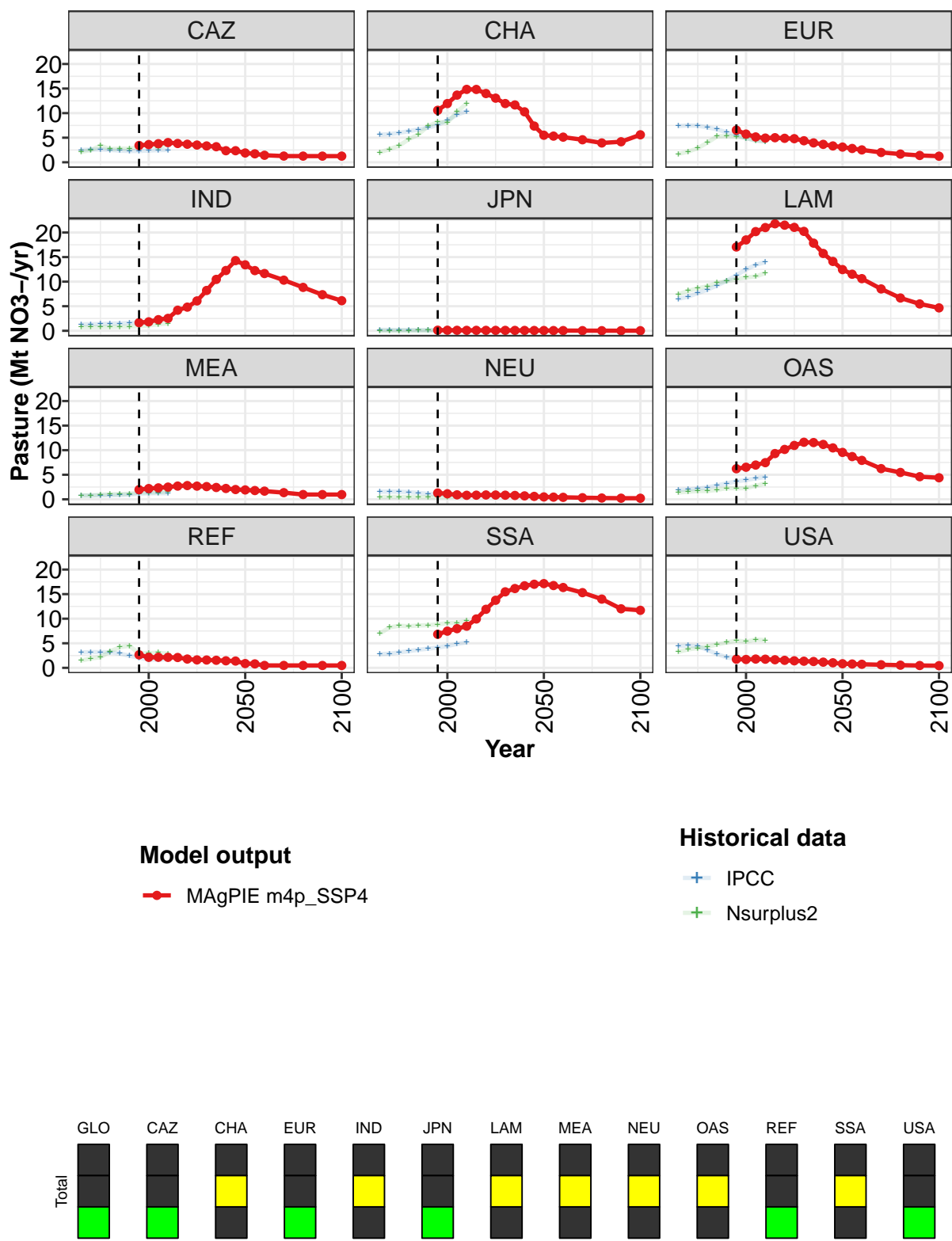


Figure 262: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	60.1	62.9	67.3	70.5	76.3	78.0	79.9	81.6	80.9	77.7	74.0
CAZ	3.4	3.6	3.8	4.0	3.8	3.7	3.5	3.3	3.2	2.4	2.4
CHA	10.6	11.9	13.7	14.8	14.8	14.0	13.0	11.9	11.7	10.3	7.4
EUR	6.5	5.7	5.2	4.9	5.0	4.9	4.8	4.4	3.9	3.6	3.3
IND	1.7	1.8	2.3	2.5	4.2	4.8	6.1	8.2	10.5	12.3	14.3
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	17.1	18.5	20.2	21.0	21.8	21.5	21.0	20.2	17.8	15.7	14.1
MEA	2.0	2.2	2.3	2.5	2.7	2.8	2.7	2.6	2.4	2.2	2.0
NEU	1.3	1.1	0.9	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.6
OAS	6.2	6.5	7.0	7.5	9.3	10.2	11.0	11.6	11.6	11.2	10.5
REF	2.7	2.1	2.2	2.1	2.1	1.8	1.6	1.6	1.5	1.4	1.4
SSA	6.8	7.5	8.0	8.5	9.9	11.9	13.7	15.5	16.1	16.7	17.0
USA	1.8	1.7	1.8	1.8	1.7	1.5	1.4	1.4	1.3	1.2	1.0

Table 882: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	67.2	62.9	58.9	51.1	44.1	38.4	37.1
CAZ	1.9	1.7	1.4	1.3	1.3	1.3	1.3
CHA	5.5	5.3	5.1	4.6	3.9	4.2	5.6
EUR	3.1	2.8	2.5	2.0	1.7	1.4	1.2
IND	13.4	12.3	11.7	10.3	8.8	7.3	6.1
JPN	0.1	0.0	0.0	0.0	0.0	0.0	0.0
LAM	12.5	11.5	10.6	8.5	6.7	5.5	4.7
MEA	1.9	1.8	1.7	1.4	1.0	1.0	1.0
NEU	0.5	0.4	0.4	0.3	0.3	0.2	0.2
OAS	9.5	8.7	7.9	6.2	5.5	4.6	4.4
REF	0.9	0.8	0.5	0.5	0.5	0.5	0.5
SSA	17.1	16.7	16.3	15.3	14.0	12.0	11.7
USA	0.8	0.8	0.7	0.6	0.5	0.5	0.4

Table 883: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Agricultural Soils—Pasture (Mt NO3-/yr) [PART 2/2]

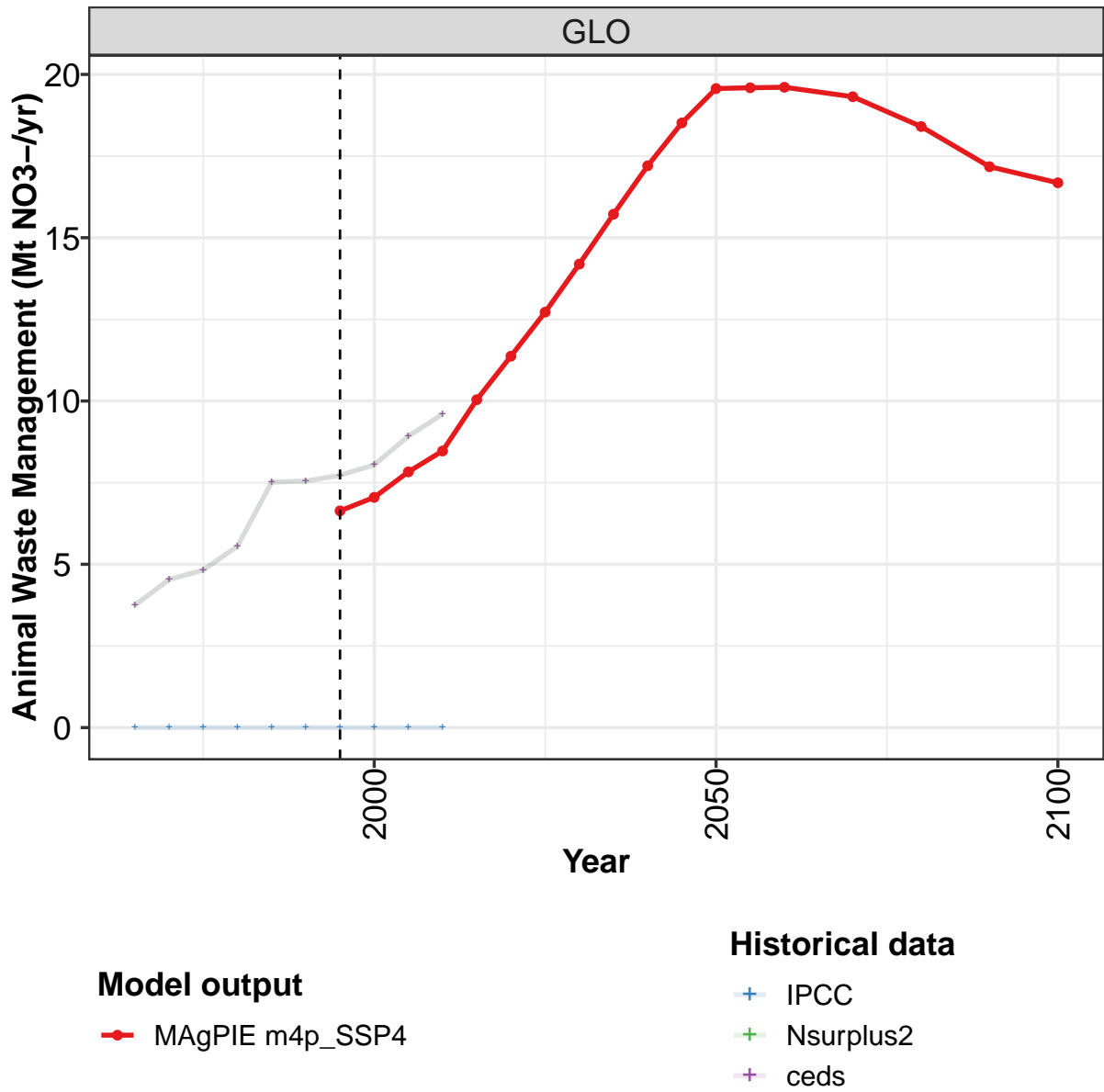
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	38.1	39.2	40.4	40.9	41.0	41.2	42.3	44.1	47.1	49.0
CAZ	2.5	2.6	2.6	2.5	2.4	2.3	2.3	2.4	2.5	2.5
CHA	5.6	5.7	6.0	6.3	6.7	7.1	7.6	8.5	9.7	10.4
EUR	7.4	7.5	7.4	7.1	6.7	6.1	5.5	4.9	4.5	4.2
IND	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	2.4	2.7
JPN	0.2	0.2	0.2	0.2	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





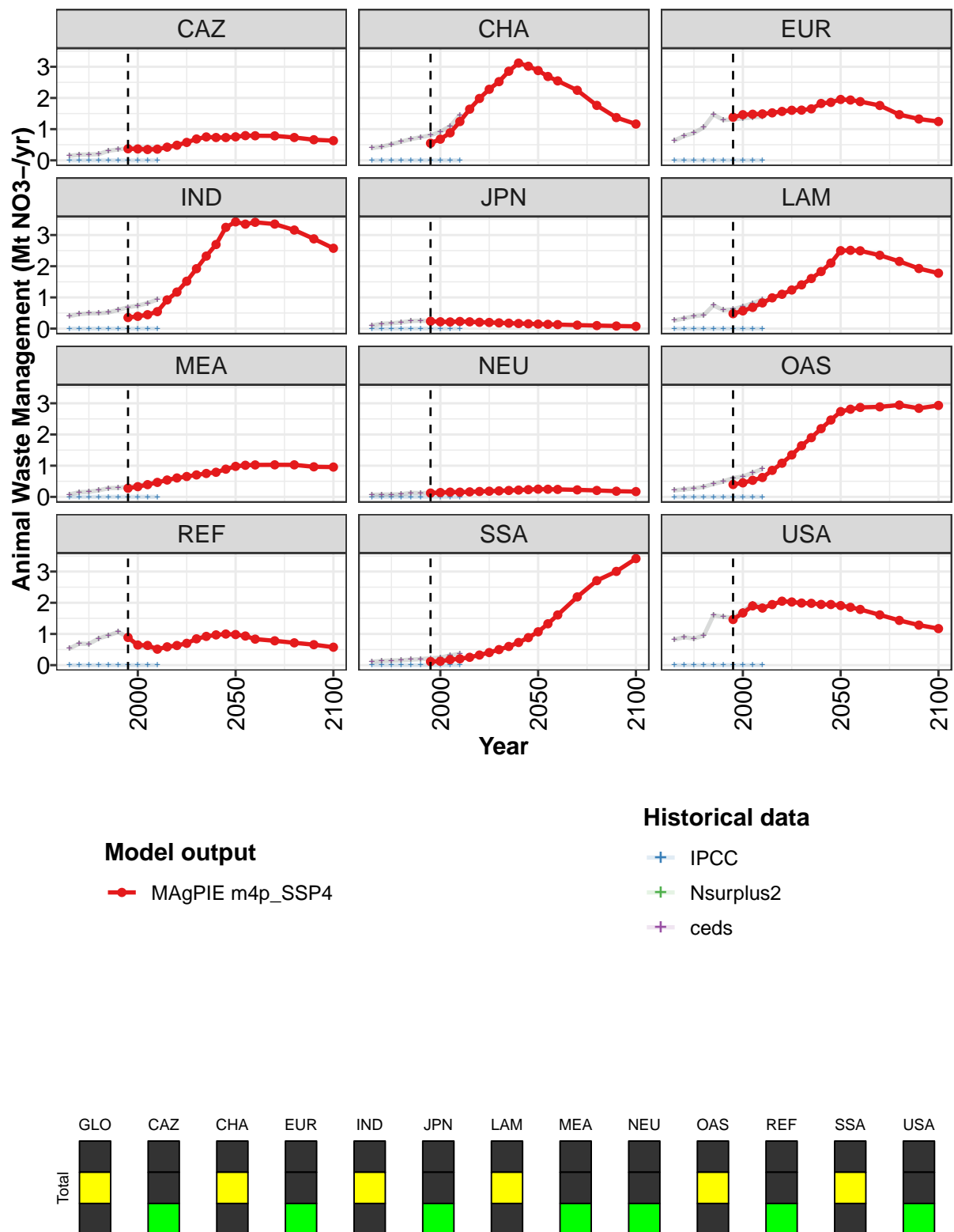


Figure 263: MAgPIE m4p\_SSP4 — Emissions—NO<sub>3</sub>Land—Agriculture—Animal Waste Management (Mt NO<sub>3</sub>-/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.6	7.1	7.8	8.5	10.0	11.4	12.7	14.2	15.7	17.2	18.5
CAZ	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.7	0.7
CHA	0.5	0.7	0.9	1.2	1.6	2.0	2.3	2.5	2.9	3.1	3.0
EUR	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.8	1.9
IND	0.4	0.4	0.4	0.5	0.9	1.2	1.5	1.9	2.3	2.7	3.2
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	1.6	1.8	2.1
MEA	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.9
NEU	0.1	0.1	0.2	0.2	0.2	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	1.6	1.9	2.2	2.5
REF	0.9	0.6	0.6	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.0
SSA	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.9
USA	1.5	1.7	1.9	1.8	1.9	2.1	2.0	2.0	2.0	1.9	1.9

Table 886: MAgPIE m4p\_SSP4 — Emissions—NO3Land—Agriculture—Animal Waste Management (Mt NO3-/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	19.6	19.6	19.6	19.3	18.4	17.2	16.7
CAZ	0.8	0.8	0.8	0.8	0.7	0.7	0.6
CHA	2.9	2.7	2.5	2.2	1.8	1.4	1.2
EUR	2.0	1.9	1.9	1.8	1.5	1.3	1.2
IND	3.4	3.3	3.4	3.4	3.2	2.9	2.6
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.5	2.5	2.5	2.4	2.2	1.9	1.8
MEA	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	2.7	2.8	2.9	2.9	2.9	2.8	2.9
REF	1.0	0.9	0.8	0.8	0.7	0.7	0.6
SSA	1.1	1.3	1.6	2.2	2.7	3.0	3.4
USA	1.9	1.9	1.8	1.6	1.4	1.3	1.2

Table 887: MAgPIE m4p\_SSP4 — 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**

- 17 Bioenergy crops**
- 18 Crop residues**
- 19 Crops**
- 20 Fish**
- 21 Forage**
- 22 Livestock products**
- 23 Pasture**
- 24 Secondary products**

**Part VI****Food Expenditure Share**

- 25 Bioenergy crops**
- 26 Crop residues**
- 27 Crops**
- 28 Fish**
- 29 Forage**
- 30 Livestock products**
- 31 Pasture**
- 32 Secondary products**

## Part VII

## Household Expenditure

## 33 Food

## 33.1 Expenditure

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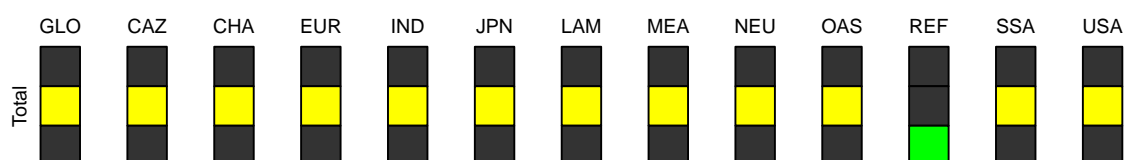


Figure 264: MAGPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	548	506	534	558	575	569	583	608	612	608	621
CAZ	715	739	677	664	749	767	820	831	839	844	870
CHA	656	763	879	1019	797	783	792	832	858	859	876
EUR	806	770	747	668	754	760	784	808	809	811	825
IND	239	257	244	327	368	369	402	452	441	422	433
JPN	515	487	470	446	454	449	448	422	413	402	398
LAM	626	615	574	585	590	593	601	630	640	638	649
MEA	551	378	407	456	535	502	527	566	567	573	595
NEU	683	608	620	555	551	583	623	640	651	650	657
OAS	240	267	237	295	332	350	373	387	405	416	443
REF	1104	516	849	576	742	740	750	800	824	839	863
SSA	625	306	359	361	575	585	588	594	602	597	602
USA	734	930	954	817	933	861	853	860	841	836	890

Table 891: MAGPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	630	629	624	639	649	628	645
CAZ	895	901	893	891	888	833	854
CHA	874	842	813	752	699	664	656
EUR	850	831	810	817	816	775	800
IND	448	465	477	523	562	546	525
JPN	395	386	379	373	369	355	353
LAM	665	647	604	583	589	568	566
MEA	614	622	624	669	681	664	739
NEU	658	665	670	676	619	563	560
OAS	473	480	485	503	519	495	509
REF	880	846	830	838	837	787	764
SSA	598	621	631	668	683	671	694
USA	895	883	869	872	873	832	850

Table 892: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure (USD/capita) [PART 2/2]

## 33.1.1 Crops

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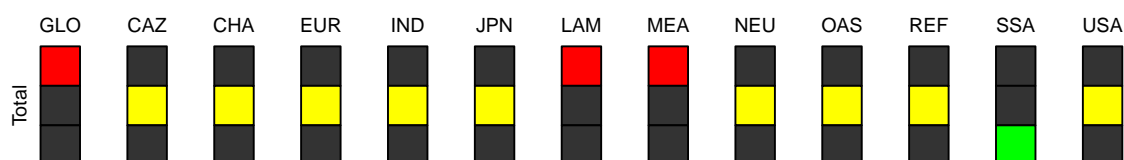


Figure 265: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	154	176	186	199	181	174	178	185	189	187	188
CAZ	131	148	140	156	155	157	150	149	152	152	153
CHA	193	255	281	319	251	233	232	243	251	254	257
EUR	156	163	158	147	161	164	169	179	183	187	191
IND	166	187	176	234	179	162	160	156	160	151	151
JPN	124	120	122	113	118	117	116	100	102	101	102
LAM	120	124	117	123	119	116	114	117	122	122	125
MEA	200	211	210	189	212	212	231	252	241	232	229
NEU	239	219	310	268	234	259	290	306	312	315	321
OAS	106	114	123	128	142	135	138	137	137	138	143
REF	63	37	92	39	79	72	134	193	196	196	198
SSA	163	179	206	207	199	201	202	208	216	211	210
USA	168	197	186	172	182	187	184	192	198	199	203

Table 893: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	186	189	187	191	193	189	190
CAZ	156	160	163	170	176	173	180
CHA	256	256	253	245	238	234	237
EUR	202	204	204	211	217	213	217
IND	148	149	147	154	161	157	159
JPN	104	104	105	110	114	114	117
LAM	126	128	126	130	136	136	139
MEA	228	227	222	247	247	244	264
NEU	317	318	321	323	281	263	263
OAS	144	148	147	148	149	144	142
REF	199	197	197	206	213	210	211
SSA	201	208	205	206	209	202	195
USA	208	211	211	218	222	220	222

Table 894: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops (USD/capita) [PART 2/2]

### 33.1.2 Crops—Cereals

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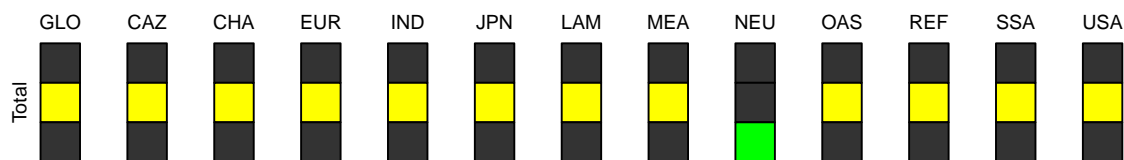


Figure 266: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Cereals (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	64	65	69	71	51	46	43	42	45	44	45
CAZ	34	45	33	41	38	37	31	30	31	31	32
CHA	81	85	81	78	41	33	30	32	34	33	34
EUR	30	27	28	23	28	28	28	30	30	31	32
IND	93	106	96	123	62	47	42	37	44	41	42
JPN	42	36	34	35	37	37	36	20	21	21	22
LAM	37	32	30	34	29	27	25	26	26	26	27
MEA	86	74	91	69	64	64	61	62	61	60	59
NEU	36	34	32	38	28	26	25	35	35	42	43
OAS	53	56	61	65	53	51	45	43	42	42	42
REF	57	30	84	28	64	56	48	48	45	43	43
SSA	62	65	87	87	76	72	69	70	72	68	66
USA	32	37	35	30	31	31	26	28	31	31	33

Table 895: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Cereals (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	45	45	44	44	45	43	42
CAZ	34	36	37	40	43	40	43
CHA	34	32	30	24	21	18	18
EUR	35	35	34	35	37	35	35
IND	41	40	39	41	42	38	36
JPN	23	23	23	25	26	24	25
LAM	29	29	28	28	30	28	28
MEA	62	61	59	60	61	59	60
NEU	42	40	42	37	35	27	27
OAS	44	43	42	41	40	38	36
REF	43	40	39	40	42	37	35
SSA	60	62	59	59	58	54	50
USA	38	39	39	40	41	40	40

Table 896: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Cereals (USD/capita) [PART 2/2]

### 33.1.3 Crops—Oil crops

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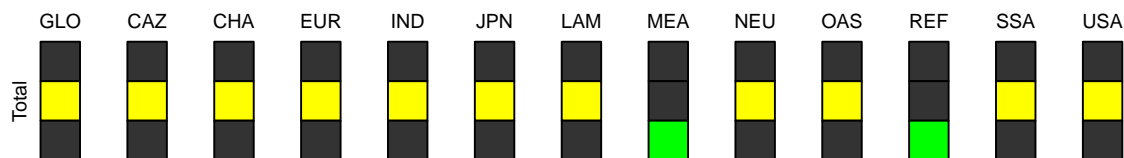


Figure 267: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Oil crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.5	7.1	8.0	8.5	7.8	7.5	7.2	7.1	6.8	6.4	6.4
CAZ	4.3	4.0	4.1	5.4	6.5	6.1	6.5	6.5	6.2	5.8	5.8
CHA	4.7	6.4	6.3	7.5	5.5	4.7	4.2	4.3	4.3	4.3	4.3
EUR	1.9	2.0	1.9	2.5	2.7	2.6	2.6	2.5	2.5	2.5	2.5
IND	7.9	5.7	6.5	10.1	8.6	7.5	7.3	7.1	6.4	5.5	5.1
JPN	8.8	10.1	10.9	9.9	10.6	10.5	10.5	10.4	10.0	9.4	9.4
LAM	2.9	5.0	6.2	5.5	5.4	4.8	4.5	4.1	3.8	3.6	3.4
MEA	1.1	1.6	1.3	1.9	2.0	1.7	1.4	1.2	1.0	0.9	0.9
NEU	1.7	3.0	3.7	3.9	4.0	3.4	3.0	2.7	2.5	2.3	2.1
OAS	15.5	16.6	16.5	13.8	12.6	11.5	10.3	9.5	7.9	7.4	7.1
REF	0.2	0.4	1.1	0.9	1.1	0.9	0.8	0.8	0.8	0.7	0.7
SSA	9.2	10.4	14.7	14.7	14.5	16.1	15.5	15.7	15.3	14.4	14.1
USA	2.9	3.4	4.3	3.9	4.7	4.7	4.5	4.7	4.5	4.5	4.5

Table 897: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Oil crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	6.3	6.4	6.3	6.3	6.2	6.2	6.1
CAZ	5.6	5.7	5.7	5.8	5.9	5.7	5.9
CHA	4.3	4.1	3.9	3.6	3.4	3.4	3.3
EUR	2.7	2.6	2.6	2.7	2.7	2.5	2.6
IND	4.8	4.7	4.5	4.7	4.8	4.5	4.3
JPN	9.3	9.2	9.1	9.3	9.4	8.9	9.0
LAM	3.1	3.0	2.9	2.7	2.6	2.5	2.5
MEA	1.0	1.0	0.9	0.9	0.9	0.8	0.8
NEU	1.9	1.9	1.9	1.9	2.0	1.9	1.9
OAS	6.7	6.4	6.1	5.8	5.6	5.0	4.8
REF	0.7	0.6	0.6	0.7	0.7	0.7	0.6
SSA	13.9	14.0	13.6	12.6	11.9	11.5	10.9
USA	4.5	4.4	4.3	4.5	4.7	4.4	4.3

Table 898: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Oil crops (USD/capita) [PART 2/2]

## 33.1.4 Crops—Other crops

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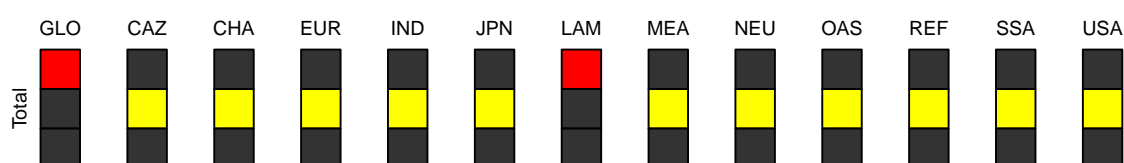


Figure 268: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Other crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	84	103	108	120	122	121	128	135	137	136	137
CAZ	92	99	103	110	111	113	112	112	115	115	116
CHA	107	163	194	234	204	196	198	207	214	216	219
EUR	124	135	128	121	130	133	138	147	150	154	157
IND	64	75	73	100	108	106	109	111	109	104	103
JPN	73	74	77	69	70	70	69	69	70	71	71
LAM	79	87	80	83	84	85	84	87	92	92	95
MEA	113	134	117	117	145	146	168	189	179	171	169
NEU	202	182	274	226	202	229	262	268	275	271	276
OAS	38	41	45	49	76	73	82	84	87	89	93
REF	6	7	8	10	13	15	86	144	150	153	154
SSA	92	104	103	105	108	113	117	122	129	129	130
USA	133	157	147	138	147	151	154	160	163	164	166

Table 899: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Other crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	135	138	136	140	142	140	142
CAZ	117	119	120	124	127	127	132
CHA	218	220	218	217	213	212	216
EUR	165	167	167	173	177	176	179
IND	101	103	103	108	114	114	118
JPN	71	72	73	76	79	81	84
LAM	94	96	96	99	104	105	109
MEA	165	165	162	185	185	184	204
NEU	274	276	278	284	244	234	234
OAS	93	99	98	101	103	101	100
REF	155	156	158	165	170	172	175
SSA	128	132	132	135	139	136	134
USA	166	167	168	173	177	176	178

Table 900: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Other crops (USD/capita) [PART 2/2]

### 33.1.5 Crops—Sugar crops

```
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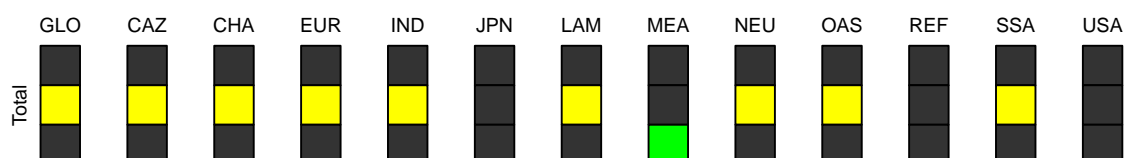


Figure 269: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Sugar crops (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.143	0.171	0.144	0.251	0.227	0.210	0.204	0.192	0.183	0.170	0.163
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	0.850	0.733	0.697	0.659	0.603	0.528	0.487
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	0.112	0.108	0.102	0.097	0.095	0.092	0.089
MEA	0.236	0.390	0.312	0.268	0.260	0.277	0.300	0.289	0.269	0.253	0.238
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	0.212	0.205	0.194	0.189	0.188	0.188	0.190
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	0.090	0.106	0.124	0.122	0.129	0.123	0.087	0.100	0.102	0.105
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\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Sugar crops (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.156	0.156	0.150	0.149	0.146	0.141	0.135
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	0.002
EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IND	0.449	0.443	0.417	0.426	0.435	0.422	0.415
JPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LAM	0.088	0.087	0.083	0.080	0.078	0.070	0.068
MEA	0.225	0.228	0.222	0.210	0.199	0.188	0.191
NEU	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OAS	0.194	0.192	0.191	0.191	0.193	0.203	0.197
REF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSA	0.098	0.102	0.097	0.091	0.084	0.081	0.074
USA	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 902: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Crops—Sugar crops (USD/capita) [PART 2/2]

### 33.1.6 Fish

```
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values are not allowed in subscripted assignments of data frames
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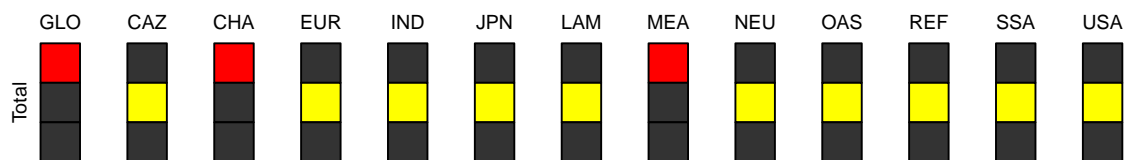


Figure 270: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Fish (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.1	5.4	5.8	6.3	7.3	8.1	8.6	9.1	9.4	9.6	9.8
CAZ	6.3	6.6	6.7	7.1	7.1	7.1	7.1	7.1	7.2	7.3	7.3
CHA	5.2	6.5	6.9	8.7	10.1	11.2	12.0	12.5	12.8	13.1	13.3
EUR	8.0	9.1	10.5	10.7	10.9	11.1	11.1	11.1	11.2	11.3	11.3
IND	1.1	1.4	1.6	2.0	3.0	3.6	4.1	4.6	4.9	5.3	5.6
JPN	42.4	38.1	36.1	30.8	32.0	32.4	32.7	32.9	33.1	33.2	33.3
LAM	3.8	3.4	2.9	3.1	3.5	3.7	3.8	4.0	4.1	4.2	4.3
MEA	2.4	2.7	3.2	3.8	4.5	5.0	5.3	5.5	5.7	5.9	6.0
NEU	4.1	3.8	3.5	3.7	3.9	4.1	4.3	4.4	4.5	4.6	4.7
OAS	6.0	6.3	7.0	8.3	11.1	13.0	14.6	15.8	16.5	17.0	17.2
REF	4.2	4.6	5.9	6.3	6.5	6.7	7.0	7.3	7.5	7.6	7.7
SSA	2.8	2.4	2.8	3.1	3.9	5.0	5.9	6.6	7.2	7.7	8.2
USA	5.9	5.9	7.5	7.3	7.4	7.5	7.5	7.4	7.4	7.4	7.4

Table 903: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Fish (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	9.9	10.1	10.2	10.6	10.9	11.1	11.5
CAZ	7.3	7.4	7.4	7.6	7.6	7.7	7.7
CHA	13.4	13.5	13.6	13.8	13.9	14.0	14.1
EUR	11.4	11.5	11.6	11.5	11.5	11.6	11.7
IND	5.8	6.0	6.2	6.6	6.9	7.1	7.3
JPN	33.5	33.8	34.1	33.8	33.7	34.0	34.3
LAM	4.3	4.4	4.4	4.3	4.2	4.2	4.2
MEA	6.0	6.1	6.1	6.4	6.4	6.4	6.4
NEU	4.7	4.8	4.9	4.8	4.8	4.9	5.0
OAS	17.3	17.2	17.1	16.7	16.1	15.1	14.3
REF	7.8	7.9	8.0	8.1	8.2	8.3	8.3
SSA	8.7	9.2	9.8	11.1	12.4	13.1	14.2
USA	7.4	7.4	7.4	7.4	7.4	7.4	7.4

Table 904: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Fish (USD/capita) [PART 2/2]

### 33.1.7 Livestock products

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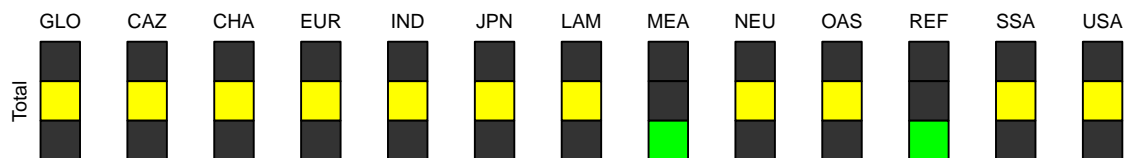


Figure 271: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Livestock products (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	307	246	261	265	272	267	274	290	297	300	316
CAZ	469	401	323	392	362	394	454	474	496	518	550
CHA	359	423	518	578	366	346	352	382	409	417	439
EUR	454	370	396	362	374	381	403	418	422	428	447
IND	40	36	49	47	112	125	150	195	184	180	192
JPN	161	148	143	147	179	163	158	148	147	147	150
LAM	402	379	342	334	335	336	345	370	379	383	395
MEA	305	134	154	234	271	235	239	254	271	291	317
NEU	366	305	242	165	190	200	205	211	222	223	230
OAS	89	123	74	134	134	152	167	178	198	210	233
REF	959	396	628	394	492	502	444	428	454	476	502
SSA	407	59	81	83	299	297	294	287	285	281	283
USA	413	572	470	390	485	413	410	415	401	405	457

Table 905: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Livestock products (USD/capita) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	329	327	326	337	343	328	342
CAZ	581	586	580	578	576	533	553
CHA	449	428	411	373	342	321	319
EUR	469	452	438	448	449	422	452
IND	213	227	242	281	314	310	292
JPN	151	147	144	144	145	139	141
LAM	415	398	360	342	350	340	336
MEA	338	346	353	372	382	371	422
NEU	238	245	250	259	251	219	220
OAS	261	264	272	291	306	288	306
REF	523	496	483	488	486	449	432
SSA	283	294	302	324	325	315	334
USA	462	451	440	440	440	412	436

Table 906: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Livestock products (USD/capita) [PART 2/2]

## 33.1.8 Secondary products

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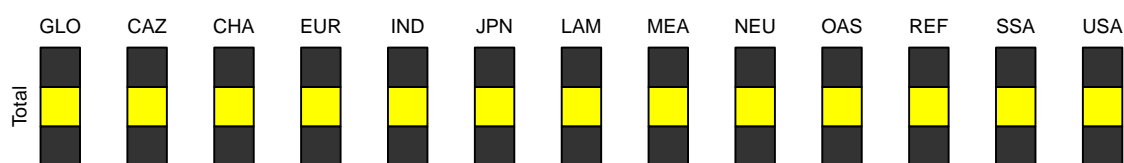


Figure 272: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Secondary products (USD/capita)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	82	79	82	88	115	120	123	123	117	111	108
CAZ	108	184	206	109	225	209	209	201	184	167	159
CHA	100	80	74	114	170	192	196	195	185	175	166
EUR	188	228	183	148	208	205	201	200	193	185	176
IND	32	33	18	44	74	79	89	96	92	86	84
JPN	188	182	169	155	125	136	140	141	131	120	112
LAM	100	109	112	125	133	137	139	139	135	129	125
MEA	44	30	40	29	47	50	52	54	49	44	43
NEU	73	79	65	118	122	120	124	119	112	106	102
OAS	38	23	33	25	45	51	53	56	53	51	50
REF	78	78	123	136	165	159	165	171	166	159	155
SSA	52	66	70	67	73	82	86	92	95	97	101
USA	147	155	292	248	258	254	251	245	234	224	223

Table 907: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Secondary products (USD/capita) [PART 1/2]

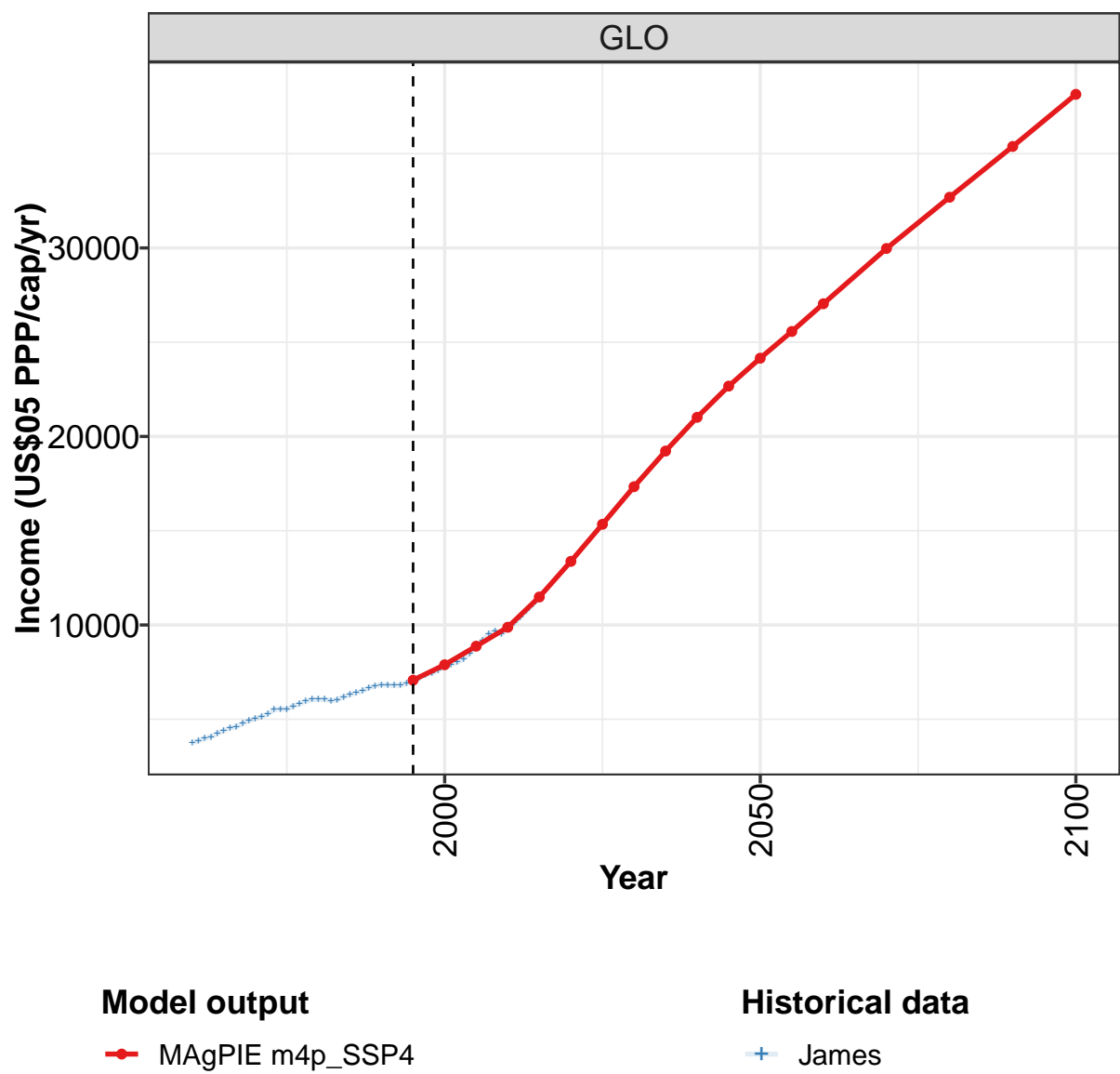


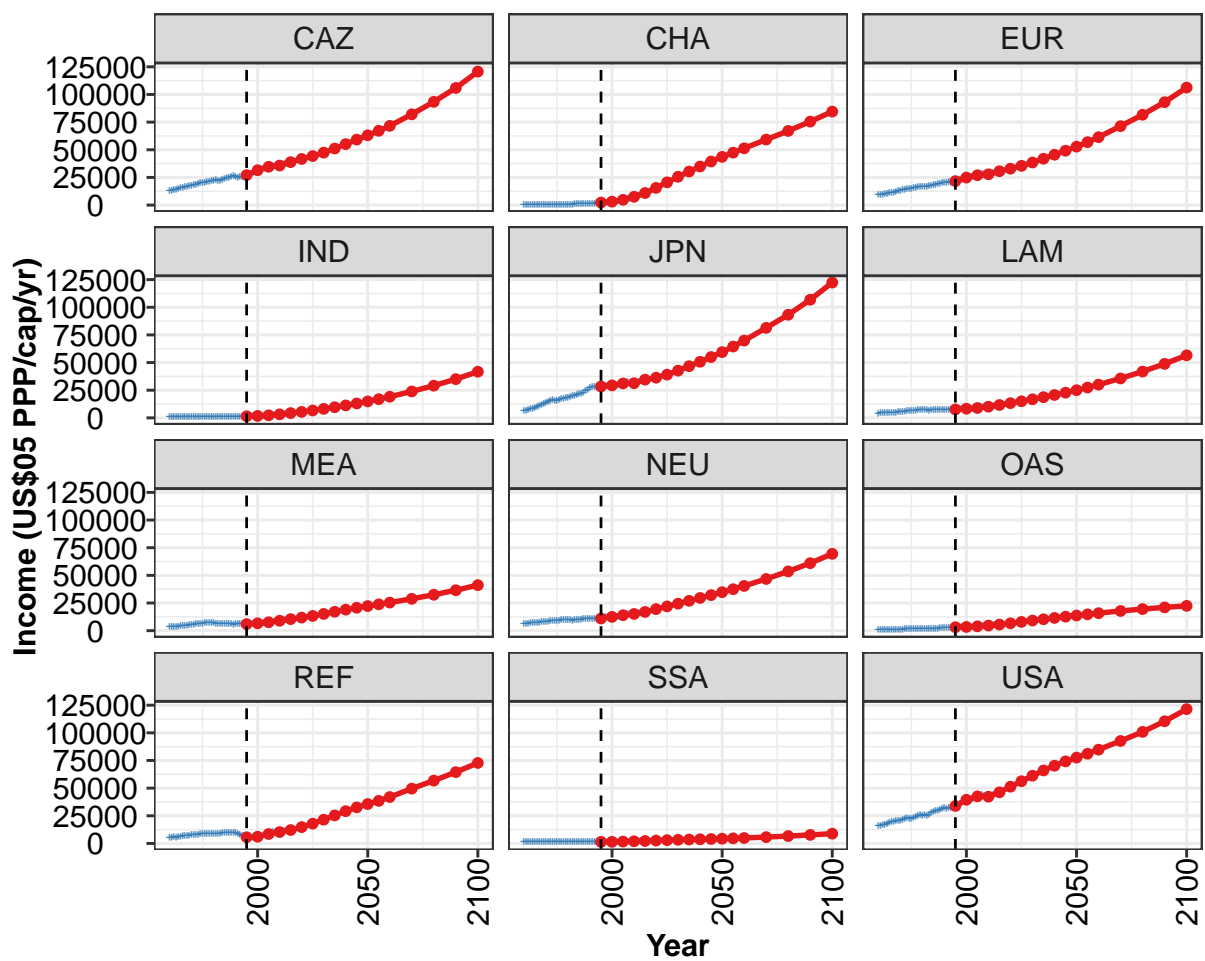
	2050	2055	2060	2070	2080	2090	2100
GLO	105	103	101	101	102	99	102
CAZ	151	148	143	136	129	119	113
CHA	155	145	136	120	105	95	85
EUR	168	163	157	147	138	128	120
IND	82	83	82	82	80	72	66
JPN	106	101	96	86	76	68	61
LAM	119	117	113	107	99	88	87
MEA	42	43	43	44	45	43	47
NEU	99	97	94	90	83	76	71
OAS	50	50	48	48	49	47	47
REF	151	146	142	136	129	121	113
SSA	105	110	115	127	137	141	150
USA	218	214	211	207	203	192	184

Table 908: MAgPIE m4p\_SSP4 — Household Expenditure—Food—Expenditure—Secondary products (USD/capita) [PART 2/2]

Part VIII

Income





#### Model output

—●— MAgPIE m4p\_SSP4

#### Historical data

+ James



Figure 273: MAgPIE m4p\_SSP4 — Income (US\$05 PPP/cap/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7073	7892	8875	9881	11486	13376	15344	17336	19226	21017	22671
CAZ	27123	31531	34642	35772	38839	41726	44323	47401	51158	55151	59217
CHA	2294	3145	4773	7508	10894	15551	20577	25616	30311	34900	39418
EUR	21701	24870	27003	27829	30612	32925	35484	38516	41928	45529	49168
IND	1467	1778	2336	3218	4354	5431	6697	8114	9642	11303	13050
JPN	28385	29396	31129	31329	34576	36325	39082	42730	46738	50724	55028
LAM	7651	8298	8937	10115	11659	13329	15006	16819	18714	20708	22794
MEA	6005	6669	7587	8980	10449	11805	13332	15155	17107	19009	20736
NEU	11011	12490	13974	15139	16938	19494	21912	24434	26978	29585	32161
OAS	3138	3362	3927	4630	5527	6675	7905	9154	10344	11525	12659
REF	5643	6102	8573	10334	12155	14801	17914	21497	25378	29208	32643
SSA	1447	1497	1712	1959	2250	2635	2995	3319	3574	3822	4074
USA	33906	39506	42583	42310	46247	51336	56270	61255	66022	70307	74195

Table 909: MAgPIE m4p\_SSP4 — Income (US\$05 PPP/cap/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	24153	25571	27042	29973	32691	35386	38148
CAZ	63118	67154	71617	82047	93369	105904	120727
CHA	43617	47420	51336	59229	67046	75505	84547
EUR	52853	56911	61418	71382	81681	93051	106292
IND	14890	16920	19112	23887	29131	35038	41767
JPN	59453	64477	69877	81392	93247	106809	122334
LAM	25023	27432	30043	35662	41889	48814	56567
MEA	22258	23791	25385	28812	32478	36552	41171
NEU	34778	37511	40425	46756	53580	61042	69497
OAS	13730	14787	15832	17811	19529	21042	22430
REF	35640	38524	41986	49576	56839	64517	72810
SSA	4341	4635	4972	5759	6683	7721	8880
USA	77664	81146	84818	92666	100906	110455	121455

Table 910: MAgPIE m4p\_SSP4 — 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]

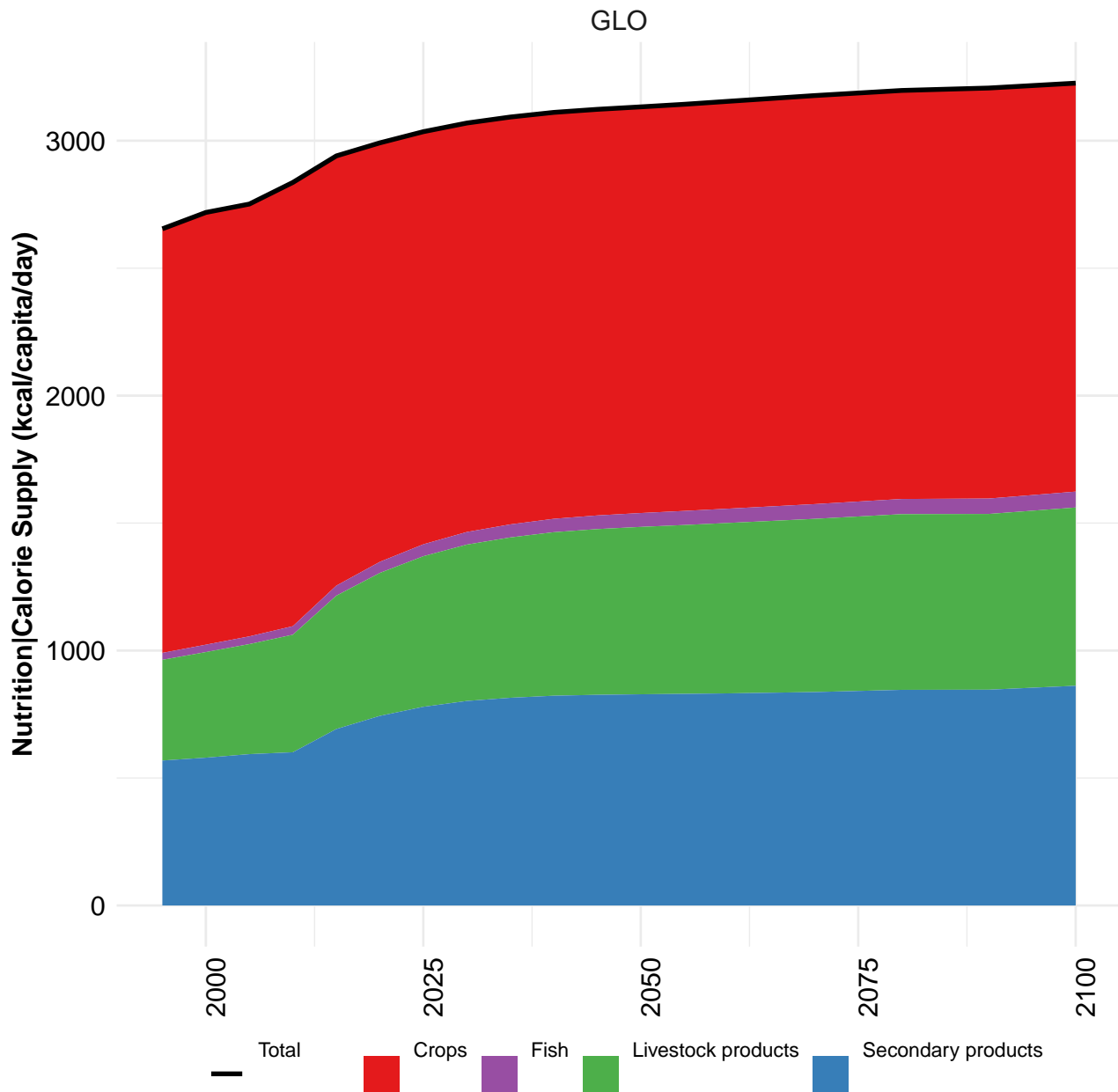
	2015
GLO	11446
CAZ	38838
CHA	10690
EUR	30583
IND	4354
JPN	34576
LAM	11619
MEA	10453
NEU	16937
OAS	5521
REF	12155
SSA	2220
USA	46247

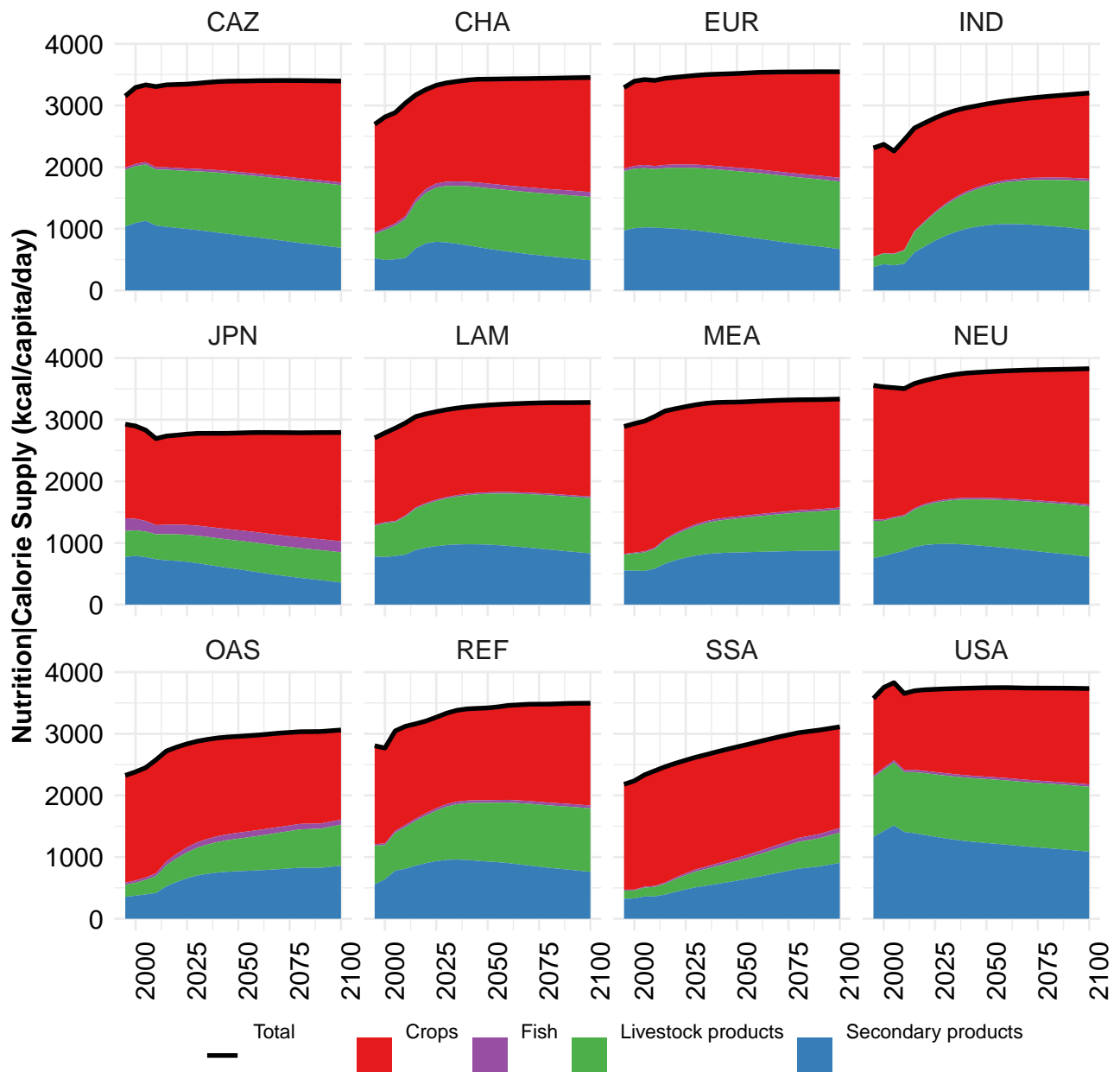
Table 916: James — Income (US\$05 PPP/cap/yr) [PART 6/6]

## Part IX

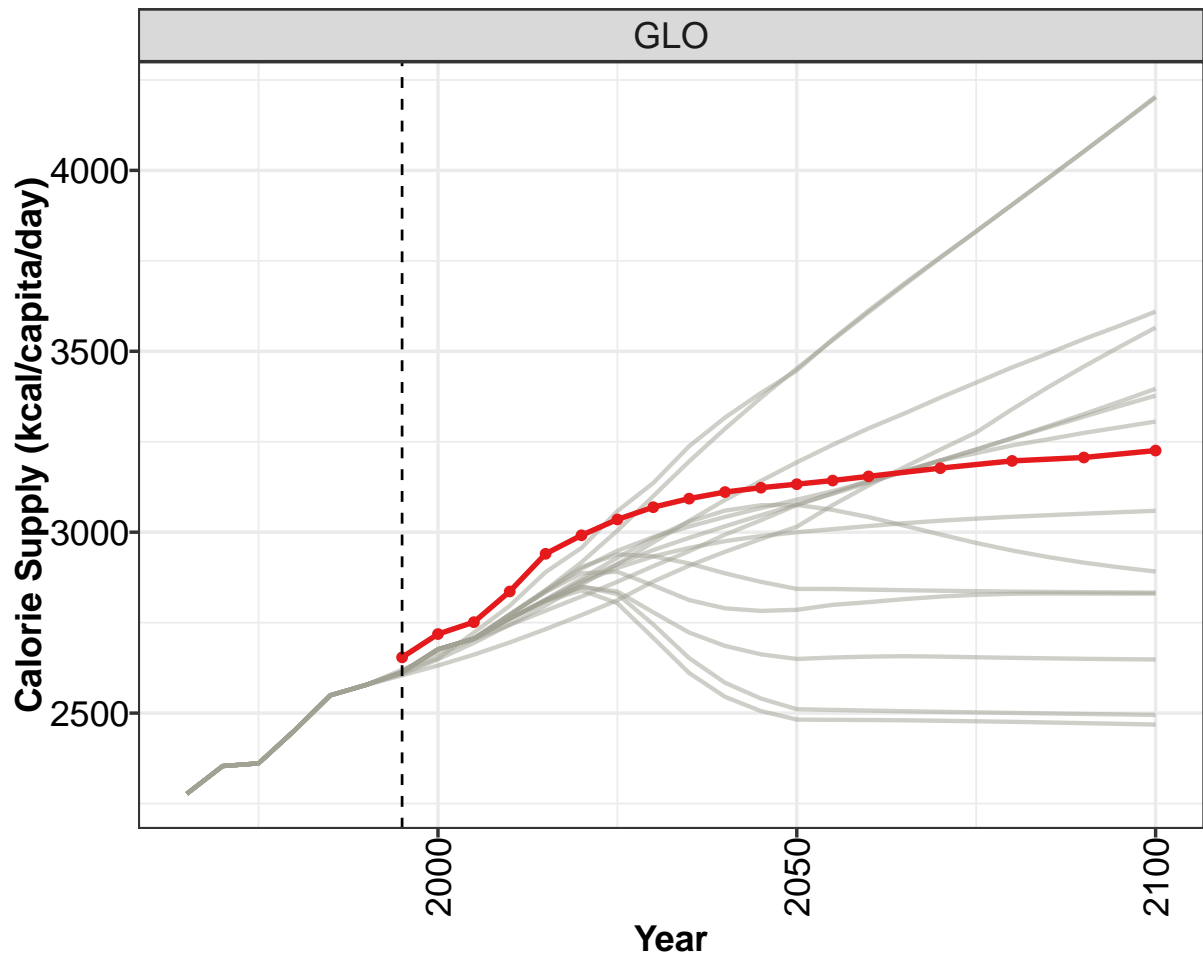
## Nutrition

## 34 Calorie Supply







**Model output**

—•— MAgPIE m4p\_SSP4

**Other projections**

— Bodirsky2015

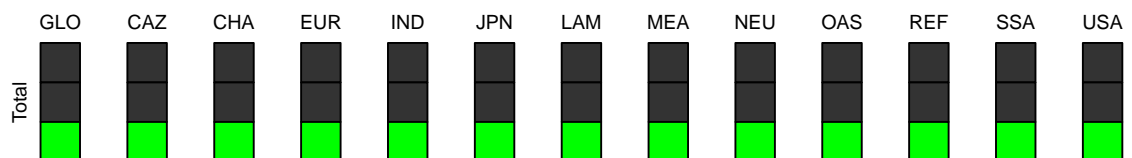
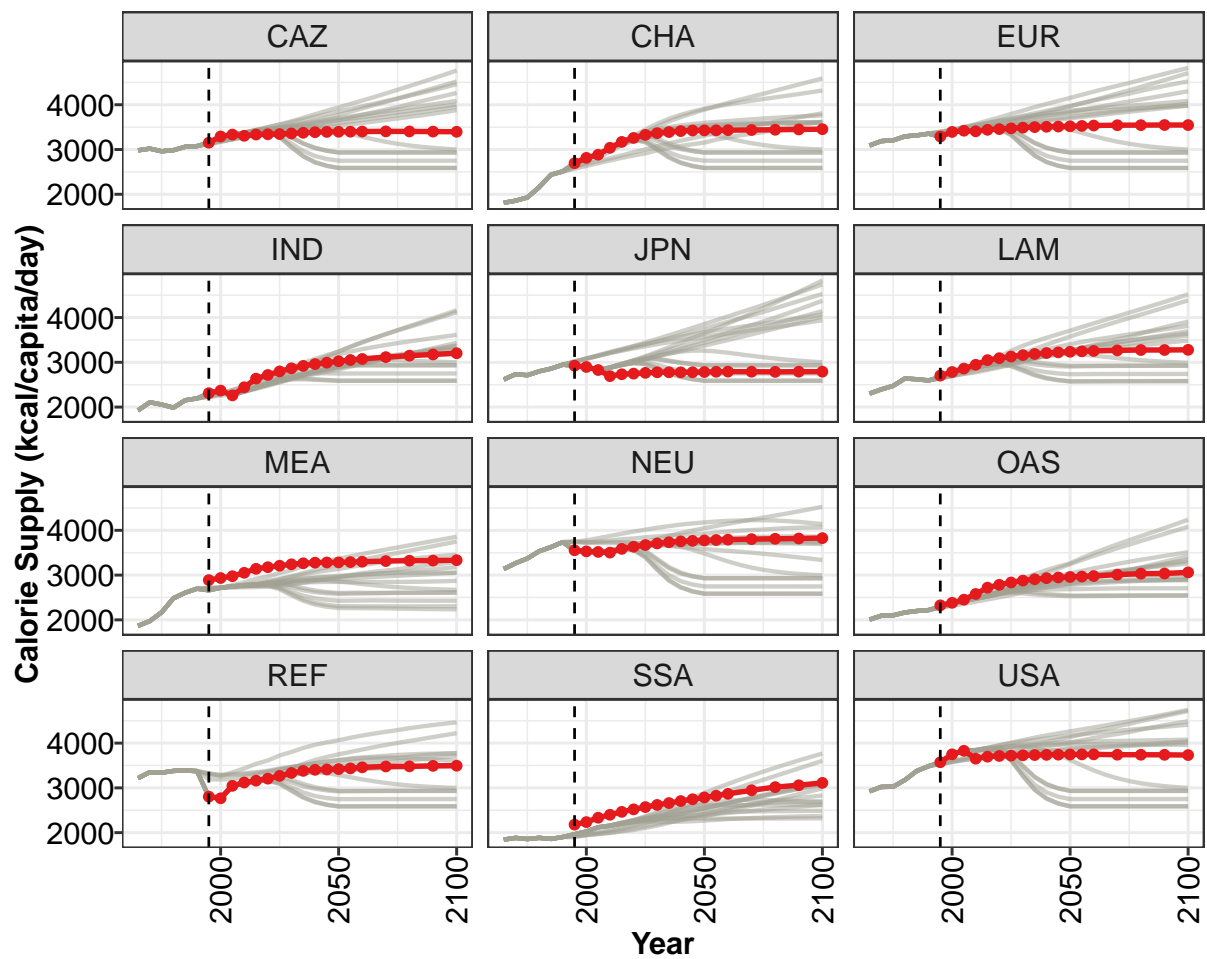


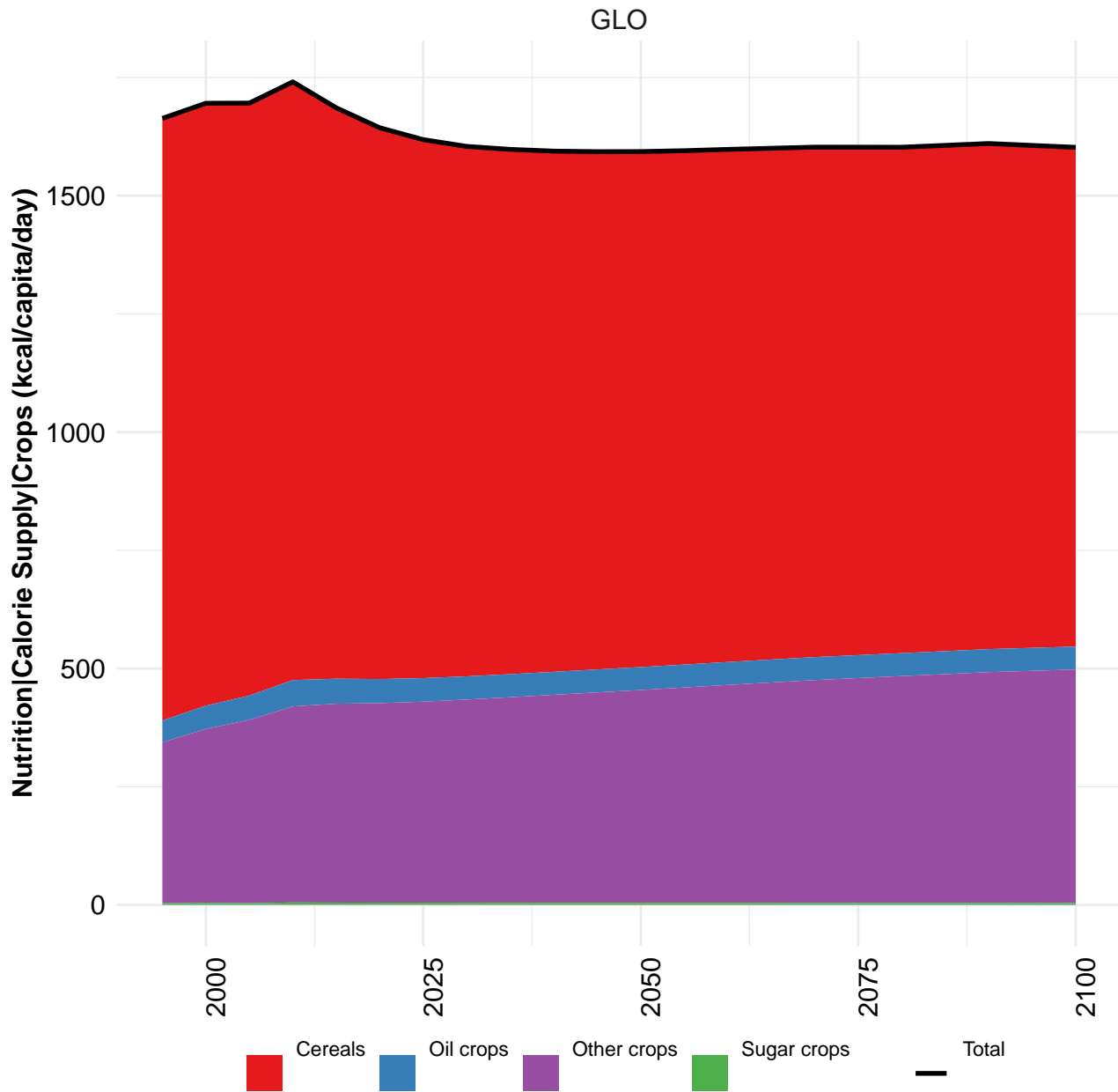
Figure 274: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply (kcal/capita/day)

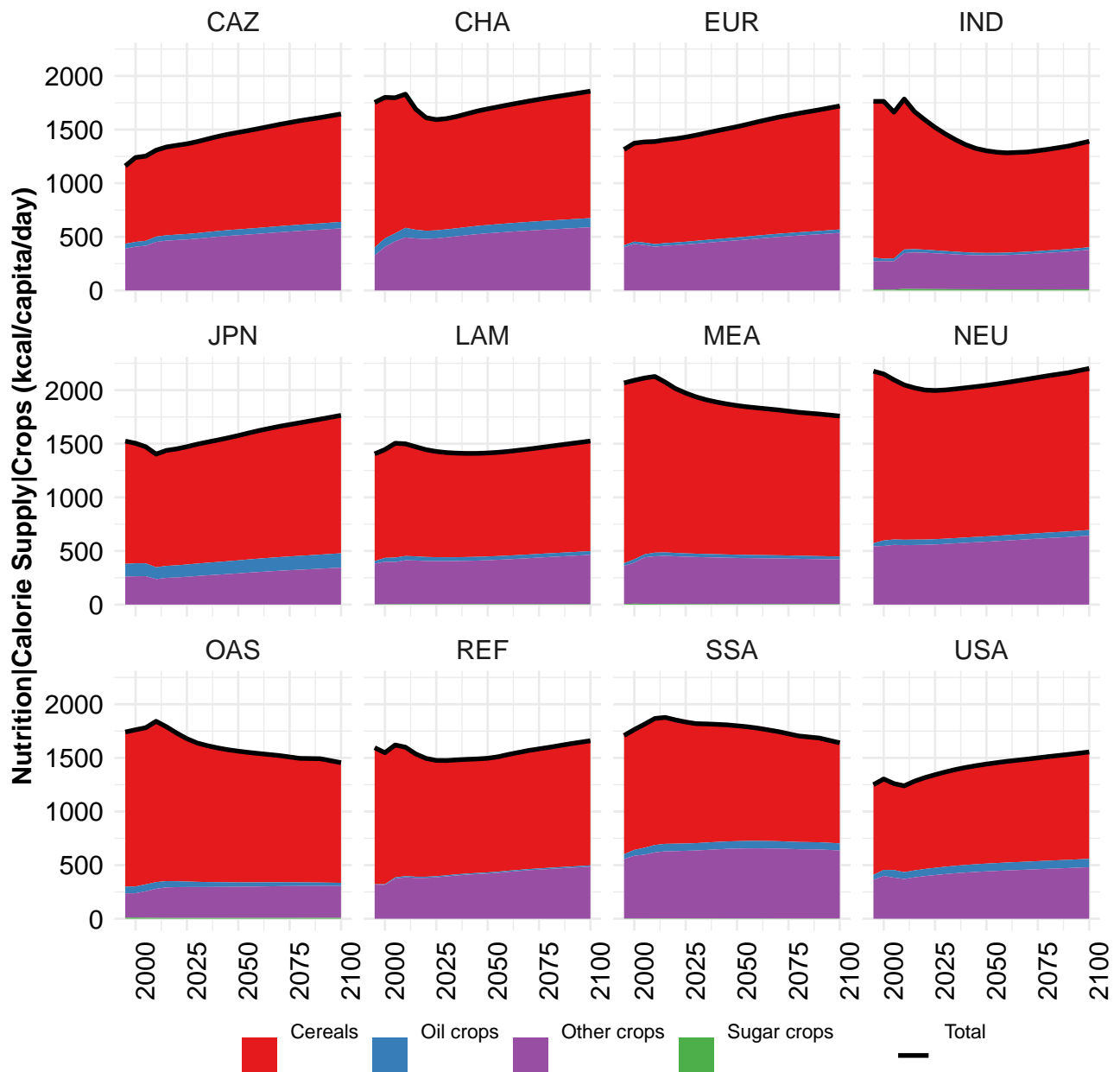
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2654	2719	2751	2836	2940	2991	3035	3069	3093	3111	3123
CAZ	3152	3292	3334	3306	3335	3340	3346	3359	3374	3387	3393
CHA	2694	2813	2883	3039	3170	3259	3328	3366	3390	3411	3425
EUR	3290	3393	3420	3407	3440	3456	3473	3488	3501	3507	3513
IND	2311	2369	2261	2443	2635	2717	2797	2867	2920	2961	2992
JPN	2925	2896	2828	2692	2733	2748	2765	2777	2777	2777	2778
LAM	2703	2784	2860	2945	3049	3093	3129	3161	3187	3207	3222
MEA	2889	2935	2975	3052	3141	3177	3210	3241	3265	3278	3283
NEU	3555	3531	3518	3502	3586	3634	3672	3707	3734	3754	3765
OAS	2325	2382	2451	2579	2719	2783	2836	2878	2908	2932	2947
REF	2805	2768	3046	3121	3161	3207	3268	3333	3380	3403	3412
SSA	2180	2236	2334	2400	2465	2521	2572	2620	2662	2706	2747
USA	3573	3750	3829	3653	3697	3713	3721	3728	3734	3738	3742

Table 917: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply (kcal/capita/day) [PART 1/2]

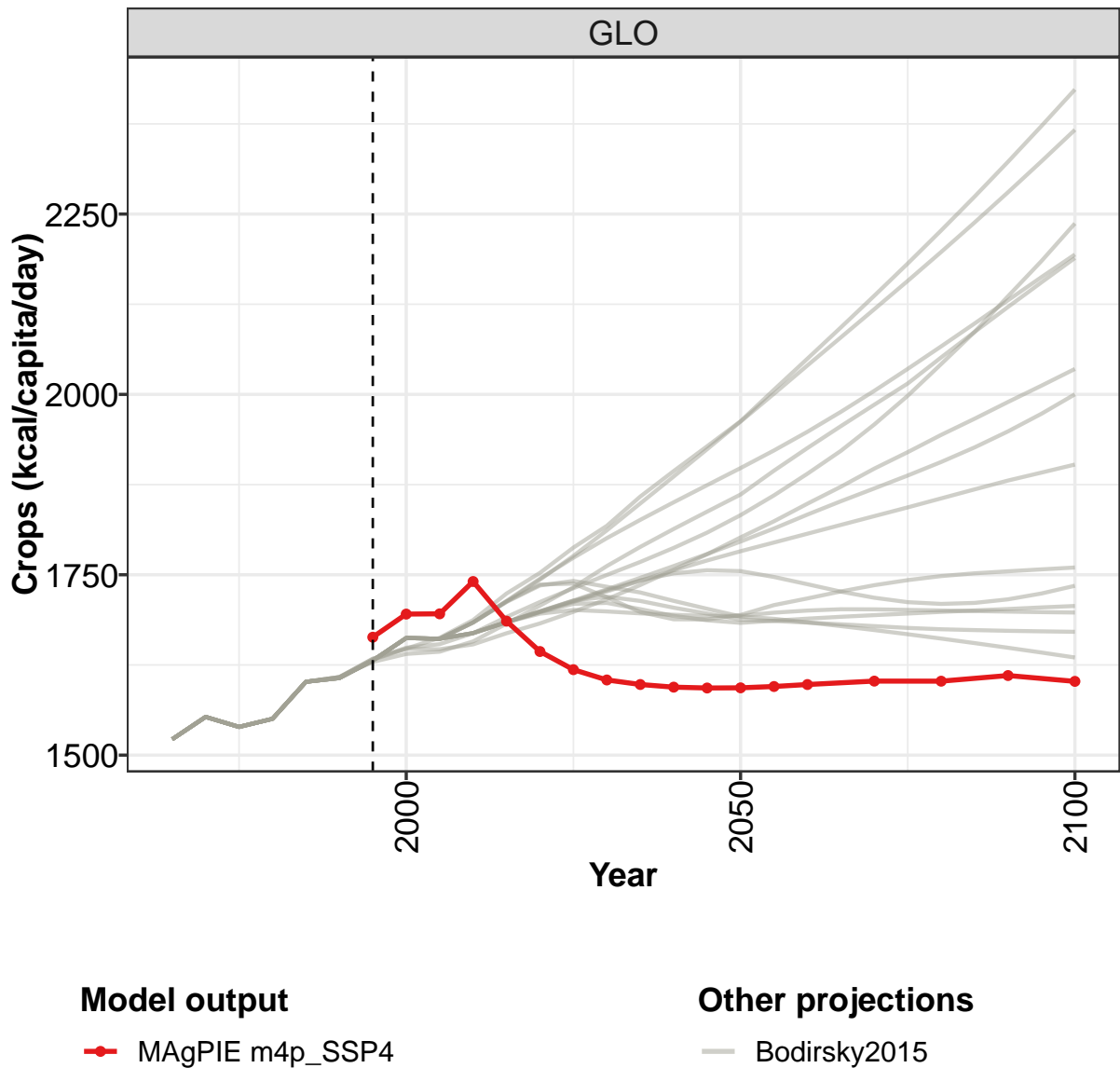
	2050	2055	2060	2070	2080	2090	2100
GLO	3133	3143	3154	3177	3197	3207	3226
CAZ	3396	3398	3402	3405	3404	3400	3396
CHA	3427	3430	3432	3436	3441	3448	3454
EUR	3519	3527	3536	3543	3545	3547	3546
IND	3024	3052	3075	3116	3148	3175	3202
JPN	2783	2788	2791	2790	2787	2790	2791
LAM	3235	3246	3254	3267	3275	3275	3278
MEA	3284	3291	3299	3313	3322	3324	3333
NEU	3774	3784	3792	3804	3812	3817	3826
OAS	2958	2968	2980	3010	3033	3036	3061
REF	3419	3436	3460	3479	3481	3493	3496
SSA	2787	2826	2867	2947	3017	3059	3112
USA	3746	3748	3749	3741	3740	3739	3733

Table 918: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply (kcal/capita/day) [PART 2/2]





34.1 Crops



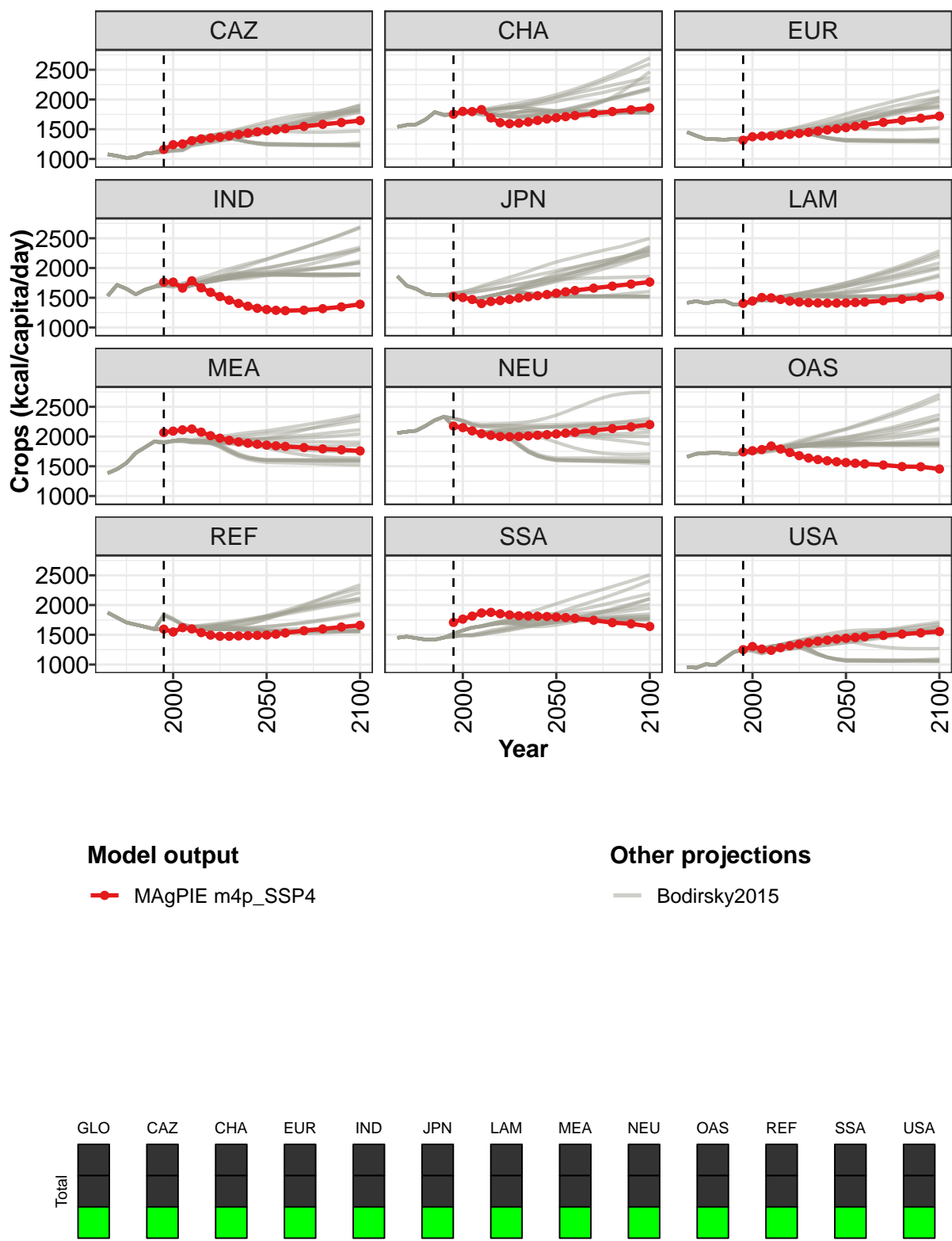


Figure 275: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops (kcal/capita/day)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1663	1696	1696	1741	1686	1644	1619	1604	1598	1594	1593
CAZ	1161	1240	1253	1308	1337	1353	1367	1387	1412	1435	1456
CHA	1753	1800	1796	1830	1691	1611	1593	1602	1622	1648	1673
EUR	1314	1373	1385	1388	1404	1414	1429	1448	1468	1488	1508
IND	1763	1763	1662	1785	1667	1591	1520	1459	1405	1358	1324
JPN	1524	1504	1471	1403	1437	1452	1472	1495	1515	1534	1555
LAM	1405	1445	1504	1499	1471	1444	1427	1417	1412	1409	1410
MEA	2067	2091	2113	2127	2074	2014	1972	1937	1909	1888	1871
NEU	2176	2150	2096	2048	2020	2001	1996	2001	2011	2022	2033
OAS	1741	1762	1781	1841	1790	1731	1679	1638	1613	1592	1576
REF	1595	1548	1620	1599	1536	1495	1476	1475	1481	1486	1490
SSA	1708	1764	1814	1867	1877	1854	1834	1819	1816	1812	1808
USA	1250	1303	1260	1239	1283	1315	1343	1368	1391	1411	1427

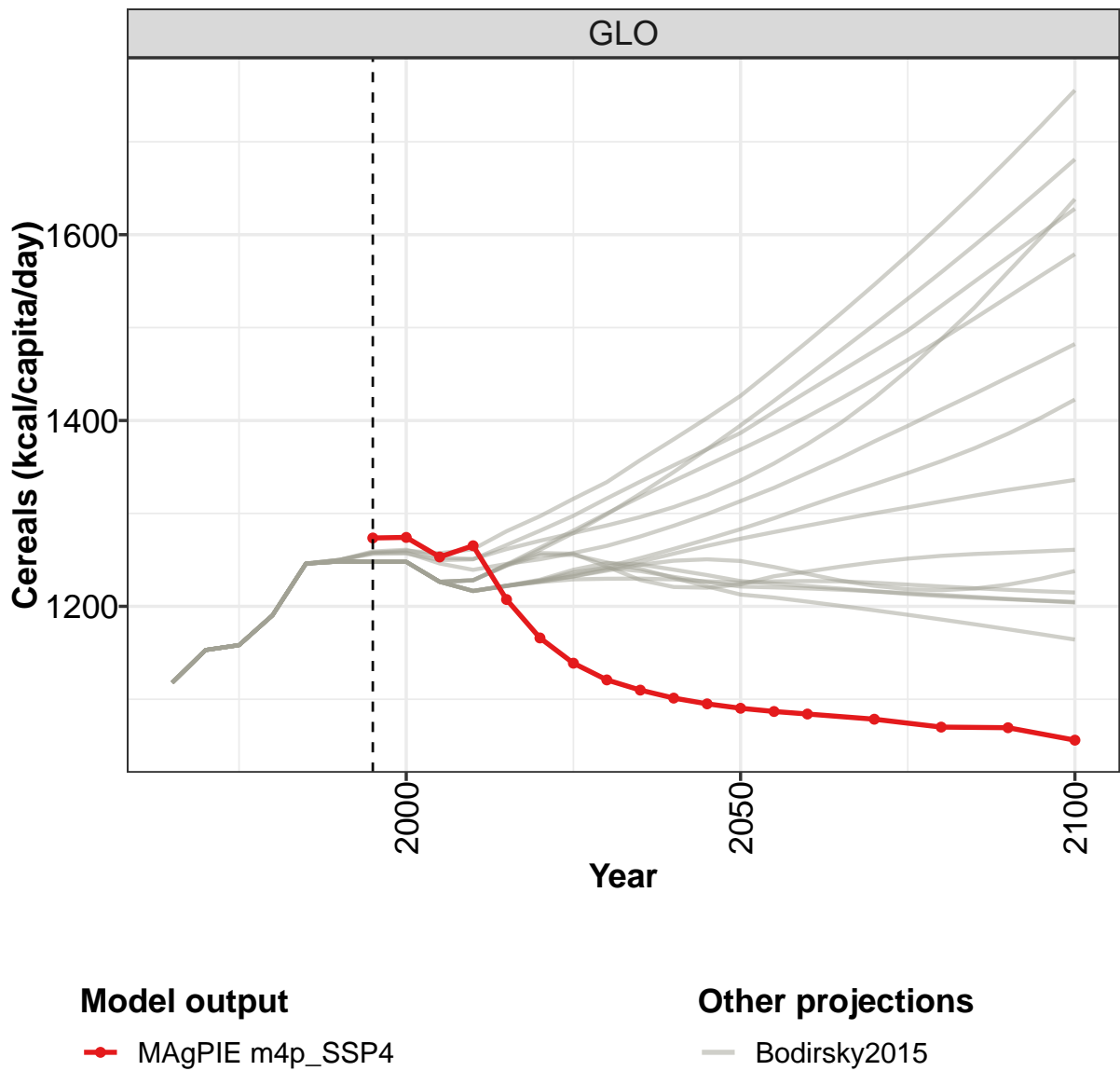
Table 919: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1593	1595	1598	1603	1603	1610	1602
CAZ	1474	1491	1509	1548	1583	1612	1645
CHA	1693	1711	1730	1765	1798	1827	1858
EUR	1527	1549	1572	1615	1651	1684	1720
IND	1302	1289	1283	1291	1316	1346	1390
JPN	1576	1600	1622	1662	1695	1729	1764
LAM	1414	1420	1428	1450	1475	1500	1525
MEA	1855	1844	1834	1815	1792	1777	1758
NEU	2044	2057	2071	2102	2134	2163	2201
OAS	1562	1551	1540	1521	1495	1492	1455
REF	1496	1510	1531	1569	1598	1631	1660
SSA	1799	1790	1777	1745	1704	1685	1640
USA	1442	1455	1468	1488	1511	1532	1555

Table 920: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops (kcal/capita/day) [PART 2/2]



34.1.1 Cereals



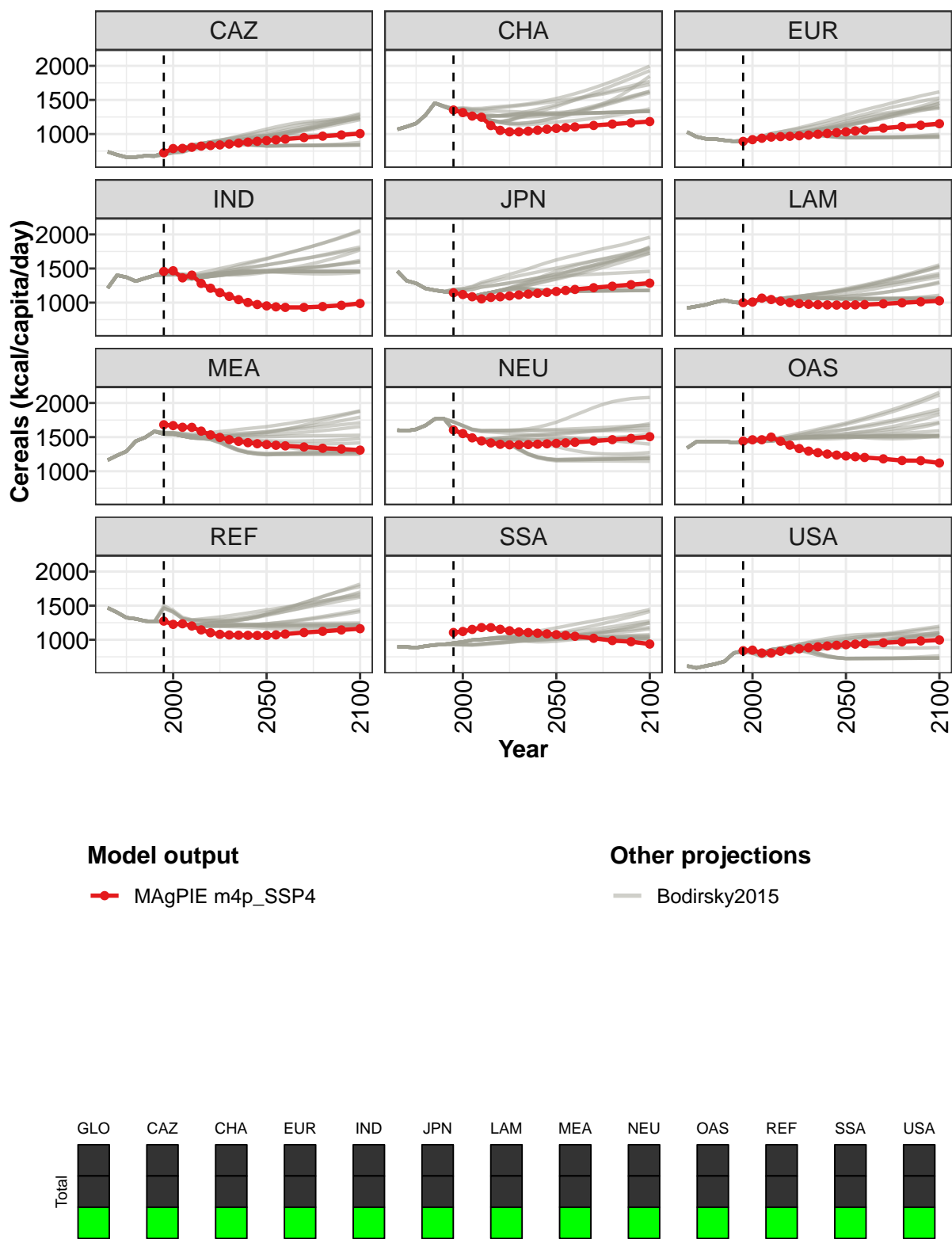


Figure 276: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Cereals (kcal/capita/day)

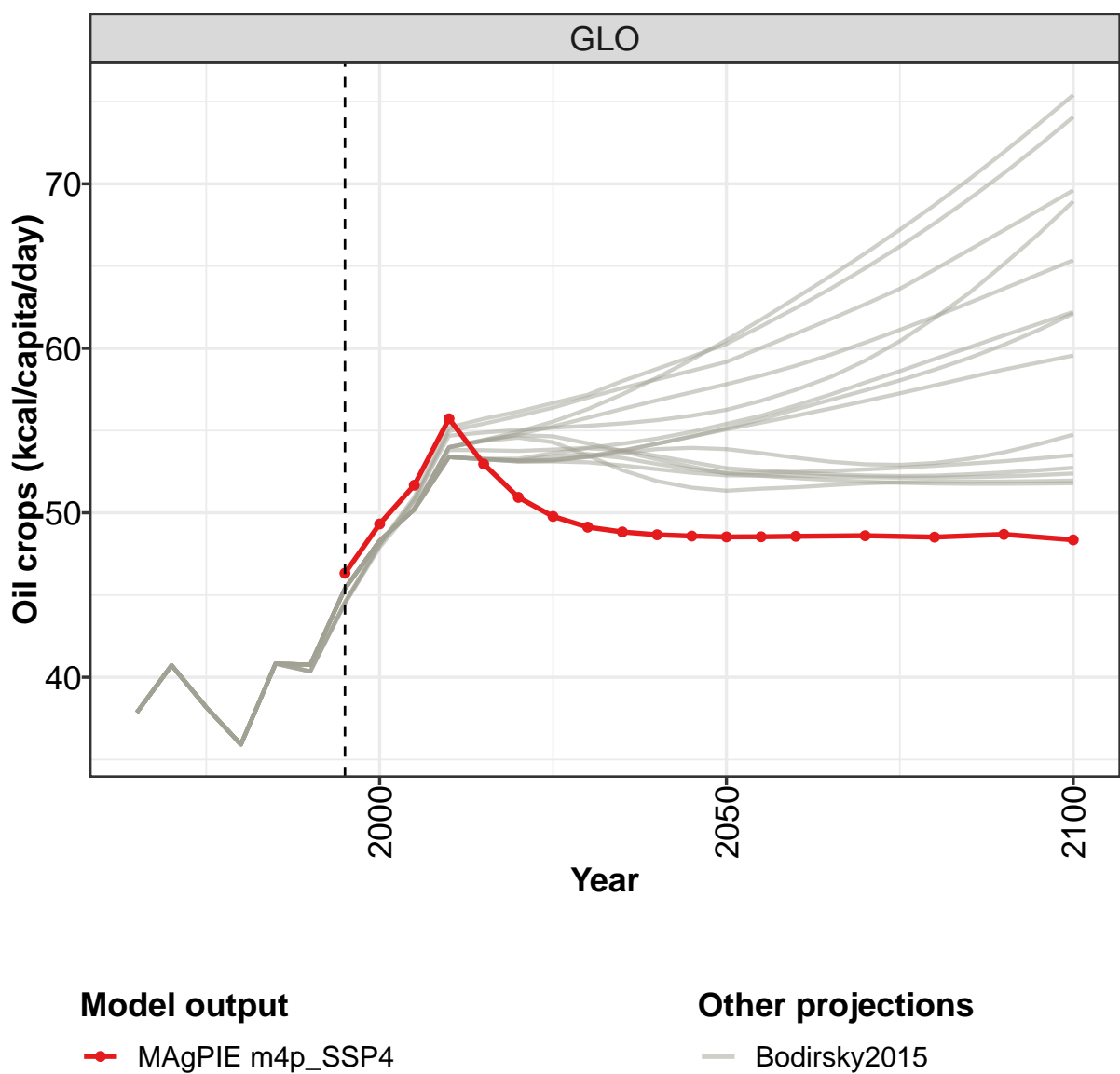
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1274	1274	1253	1265	1207	1166	1139	1121	1110	1101	1095
CAZ	725	787	790	806	823	832	841	853	867	881	894
CHA	1352	1315	1263	1246	1125	1054	1033	1033	1042	1056	1071
EUR	893	918	939	956	962	967	975	985	998	1009	1021
IND	1457	1467	1363	1403	1282	1211	1146	1092	1044	1003	972
JPN	1144	1119	1086	1055	1076	1085	1098	1113	1125	1137	1150
LAM	1000	1009	1066	1046	1022	1000	986	976	970	966	964
MEA	1681	1669	1644	1643	1588	1533	1494	1462	1437	1419	1403
NEU	1604	1552	1489	1443	1414	1394	1387	1387	1391	1396	1402
OAS	1441	1461	1461	1500	1439	1382	1332	1294	1271	1252	1236
REF	1274	1226	1235	1202	1145	1103	1080	1070	1067	1065	1063
SSA	1107	1122	1152	1179	1179	1154	1132	1114	1106	1096	1087
USA	840	848	806	805	832	851	868	883	897	909	919

Table 921: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Cereals (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1090	1087	1084	1079	1070	1069	1056
CAZ	904	914	926	949	969	987	1007
CHA	1083	1093	1105	1126	1146	1164	1184
EUR	1032	1046	1060	1086	1109	1129	1152
IND	952	938	930	930	942	960	988
JPN	1164	1179	1193	1219	1241	1263	1286
LAM	965	967	971	983	997	1012	1026
MEA	1390	1380	1372	1355	1337	1325	1309
NEU	1408	1415	1424	1442	1462	1481	1506
OAS	1223	1212	1201	1181	1156	1154	1120
REF	1064	1071	1084	1106	1124	1144	1162
SSA	1075	1064	1051	1022	988	972	938
USA	928	936	944	956	970	983	996

Table 922: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Cereals (kcal/capita/day) [PART 2/2]

34.1.2 Oil crops



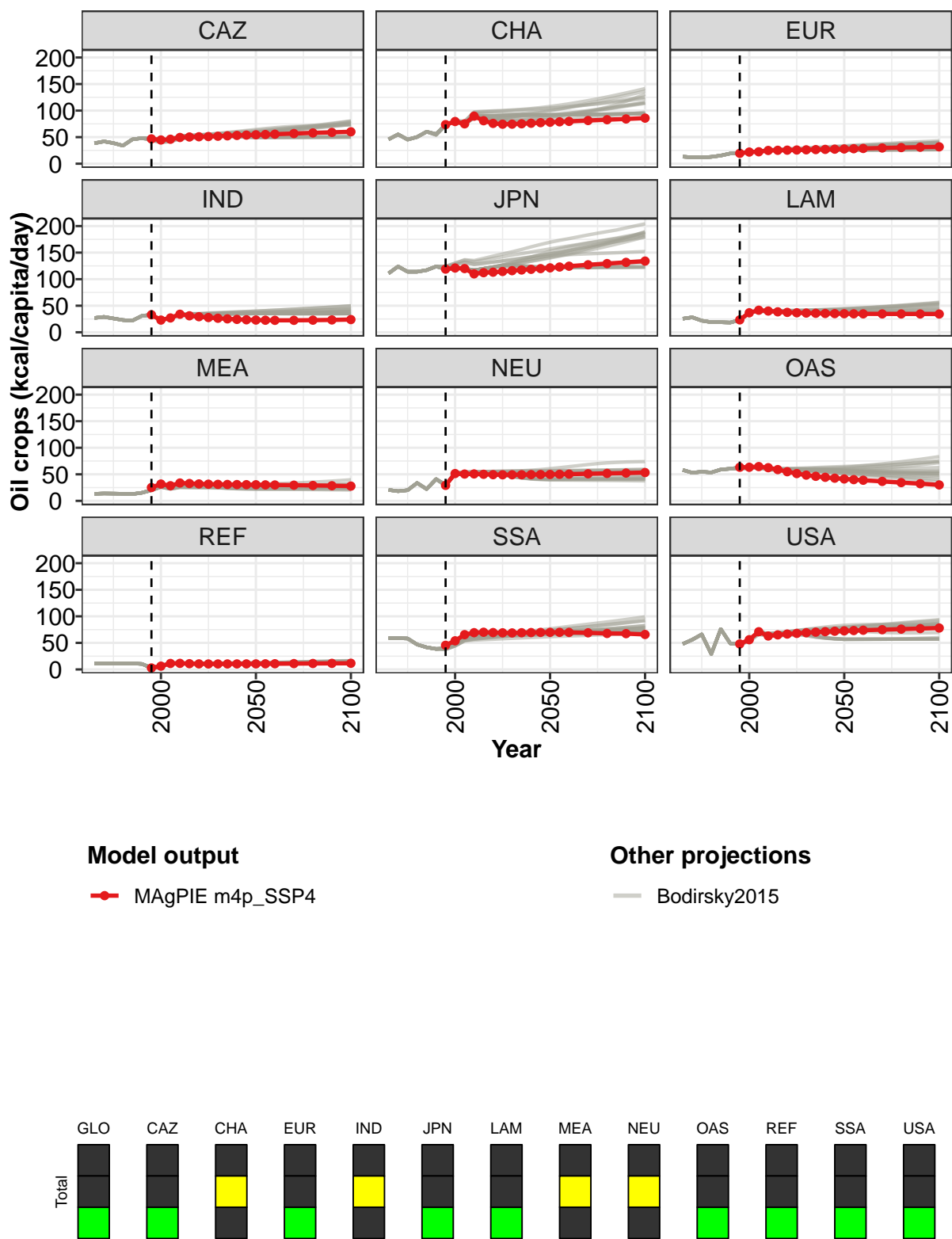


Figure 277: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Oil crops (kcal/capita/day)

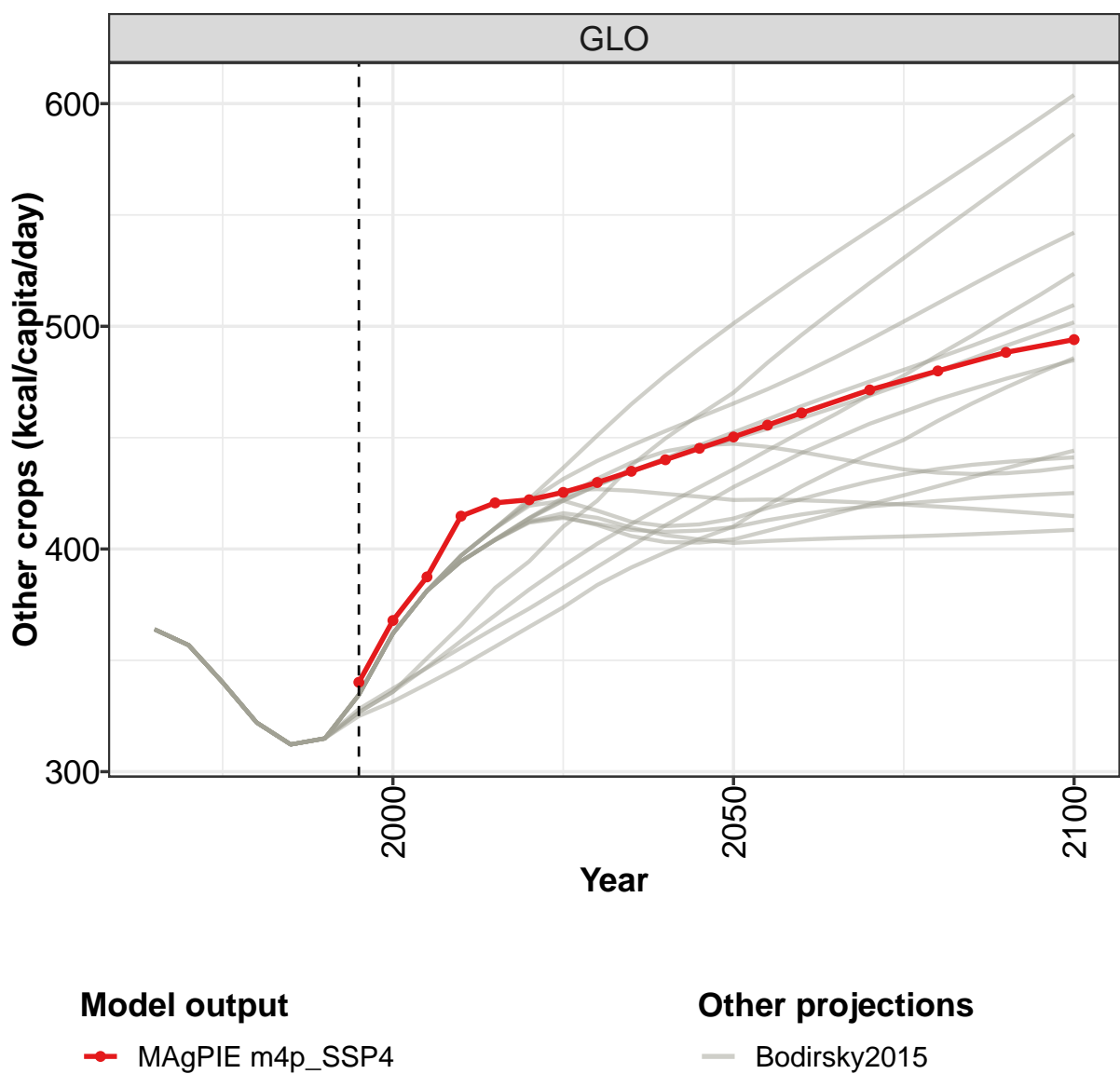
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	46	49	52	56	53	51	50	49	49	49	49
CAZ	47	45	46	49	50	51	51	52	53	53	54
CHA	74	79	75	90	81	76	74	75	75	76	77
EUR	20	22	22	25	25	26	26	26	27	27	27
IND	33	23	27	34	31	29	28	26	25	24	24
JPN	119	121	120	110	112	113	115	116	117	119	120
LAM	23	37	42	40	39	37	37	36	36	35	35
MEA	25	32	29	34	33	32	31	31	31	31	30
NEU	29	51	50	51	50	49	49	49	49	49	50
OAS	63	63	65	62	59	55	51	48	46	44	43
REF	3	6	11	11	11	10	10	10	10	10	10
SSA	46	54	65	69	70	69	69	69	69	69	70
USA	48	56	71	63	65	67	68	69	70	71	72

Table 923: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Oil crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	49	49	49	49	49	49	48
CAZ	54	55	56	57	58	59	60
CHA	78	79	80	81	83	84	86
EUR	28	28	29	30	30	31	32
IND	23	23	23	23	23	23	24
JPN	121	123	124	127	129	132	134
LAM	35	35	35	35	35	34	34
MEA	30	30	30	30	29	29	28
NEU	50	50	50	51	52	52	53
OAS	41	40	39	37	34	32	30
REF	11	11	11	11	11	11	12
SSA	70	70	70	69	68	67	66
USA	73	73	74	75	76	77	78

Table 924: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Oil crops (kcal/capita/day) [PART 2/2]

34.1.3 Other crops



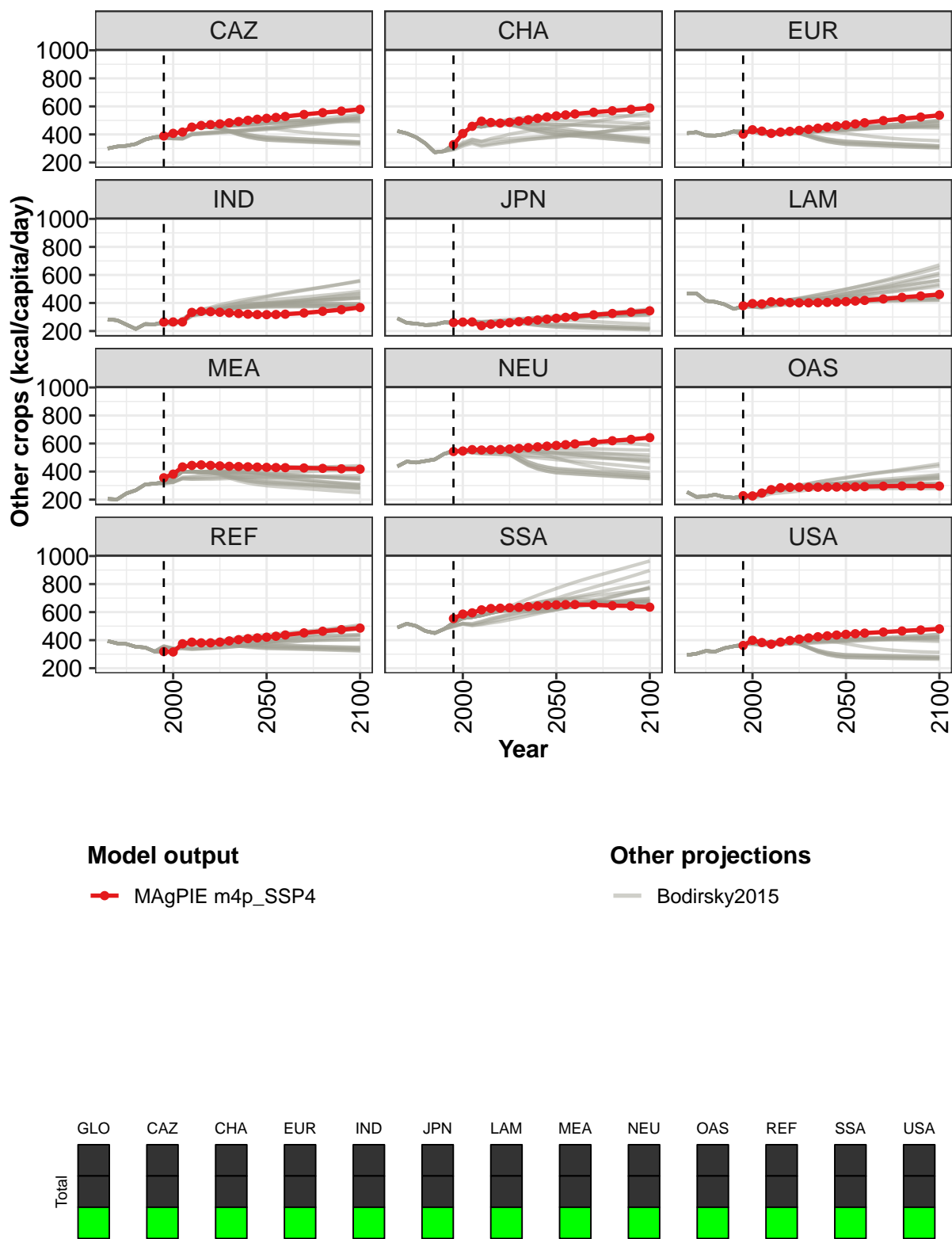


Figure 278: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Other crops (kcal/capita/day)



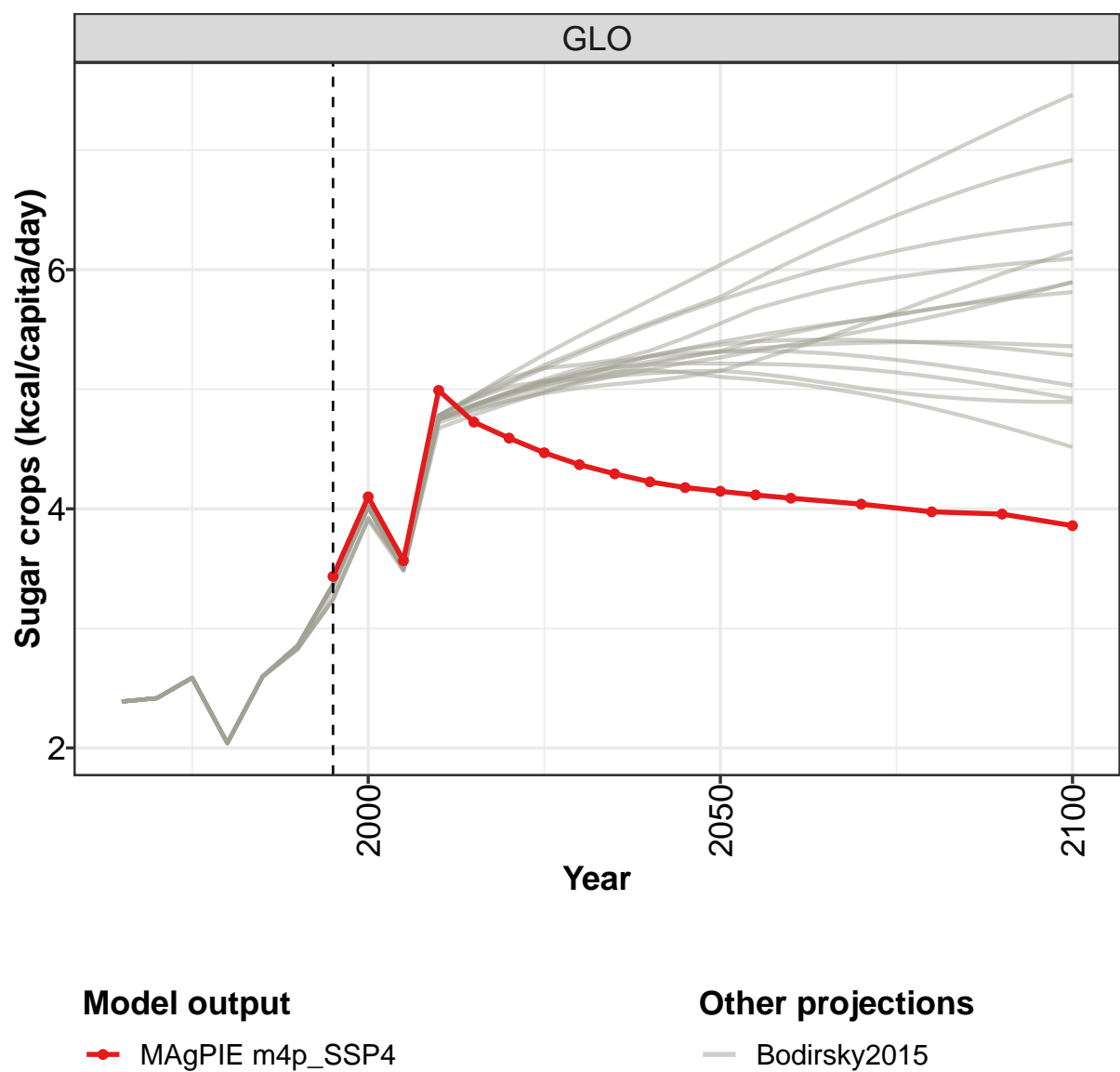
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	340	368	387	415	421	422	425	430	435	440	445
CAZ	389	408	417	452	464	470	475	483	492	501	508
CHA	327	406	458	494	485	481	486	495	505	515	525
EUR	402	433	423	408	416	422	428	436	444	452	459
IND	264	265	265	333	340	338	334	330	325	320	317
JPN	261	264	265	238	249	253	259	266	273	279	285
LAM	380	396	394	409	407	403	401	401	402	404	407
MEA	356	382	433	444	448	444	441	438	436	434	432
NEU	543	547	556	554	556	557	560	565	571	576	581
OAS	228	226	247	271	285	287	288	288	288	289	290
REF	319	316	374	386	381	381	386	395	404	411	416
SSA	554	586	595	616	626	628	631	634	639	644	649
USA	362	399	383	371	386	397	407	416	424	431	436

Table 925: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Other crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	450	456	461	471	480	488	494
CAZ	515	521	528	542	555	566	579
CHA	532	539	546	558	569	579	589
EUR	467	475	483	499	512	524	536
IND	317	318	320	329	340	352	368
JPN	291	298	304	316	325	335	344
LAM	410	414	419	429	440	450	461
MEA	430	429	428	426	423	420	417
NEU	586	592	597	609	620	630	642
OAS	290	291	293	296	297	297	296
REF	421	428	437	452	464	475	486
SSA	652	653	654	652	646	644	635
USA	441	446	450	458	465	473	480

Table 926: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Other crops (kcal/capita/day) [PART 2/2]

34.1.4 Sugar crops



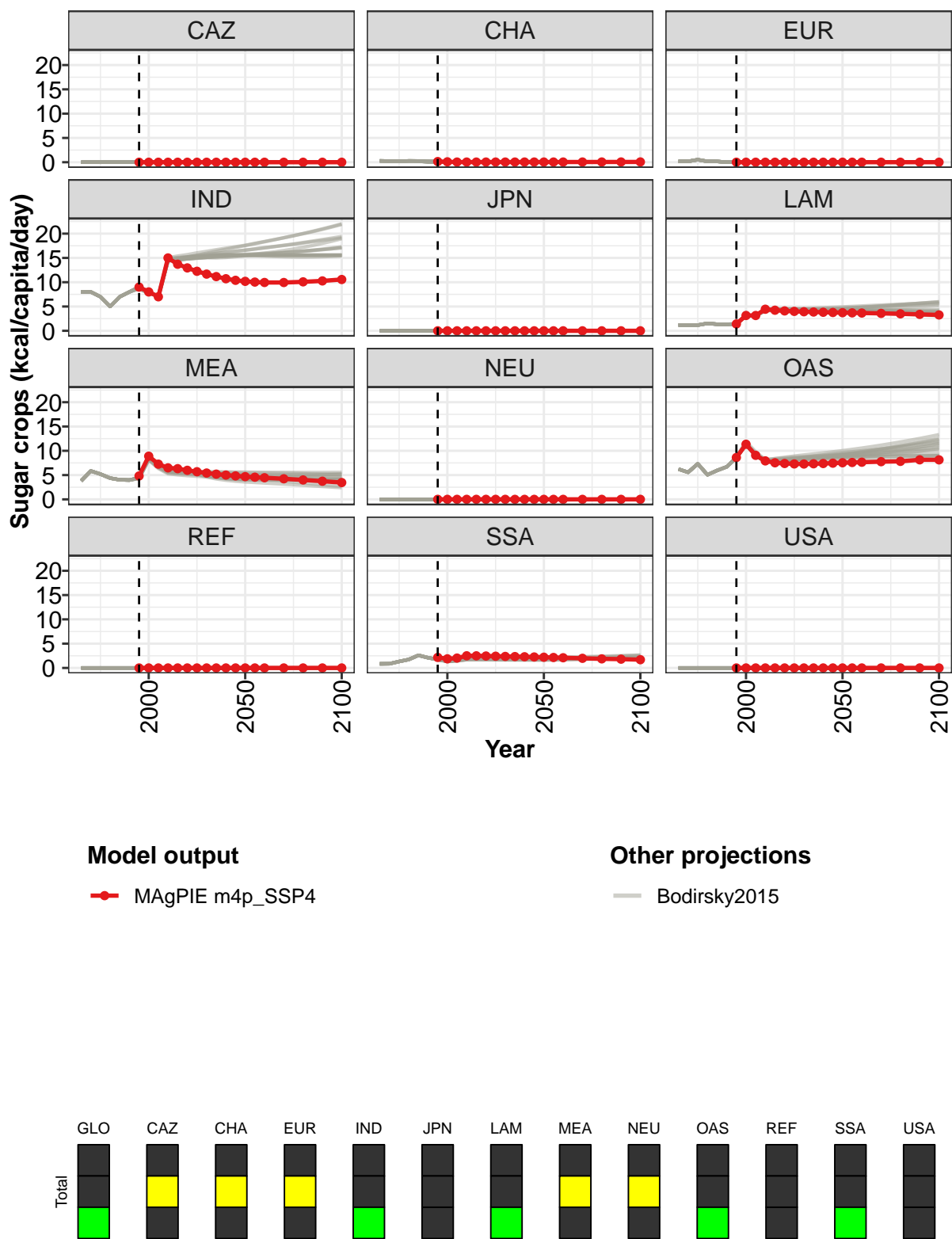


Figure 279: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Sugar crops (kcal/capita/day)

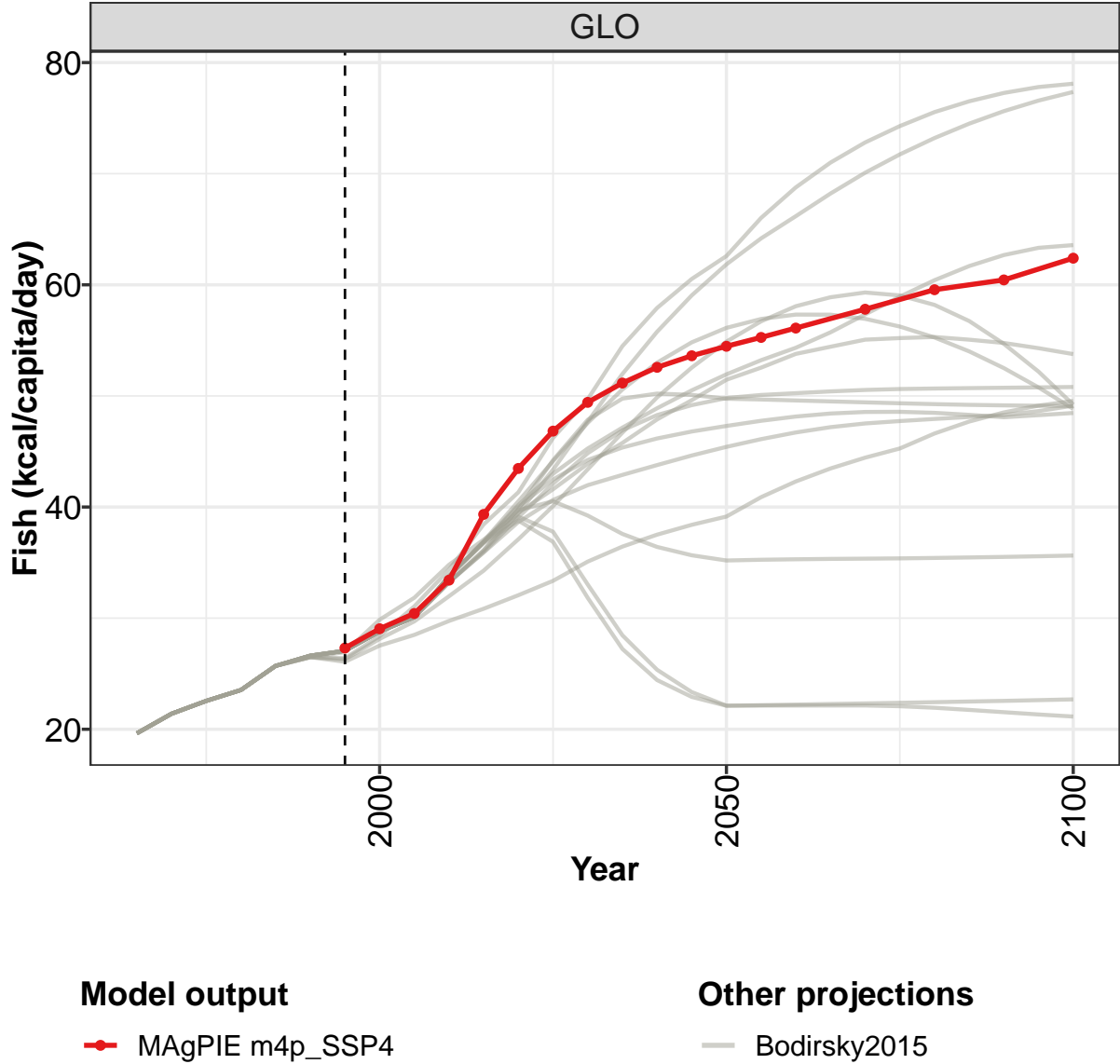
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.4	4.1	3.6	5.0	4.7	4.6	4.5	4.4	4.3	4.2	4.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	9.0	8.0	7.0	15.0	13.7	12.9	12.3	11.7	11.2	10.7	10.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	3.2	3.1	4.4	4.2	4.1	4.0	3.9	3.9	3.8	3.8
MEA	4.8	8.9	7.3	6.5	6.3	6.0	5.7	5.4	5.2	5.0	4.8
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	8.6	11.3	9.1	7.9	7.5	7.4	7.3	7.3	7.3	7.4	7.5
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.2	1.9	2.0	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

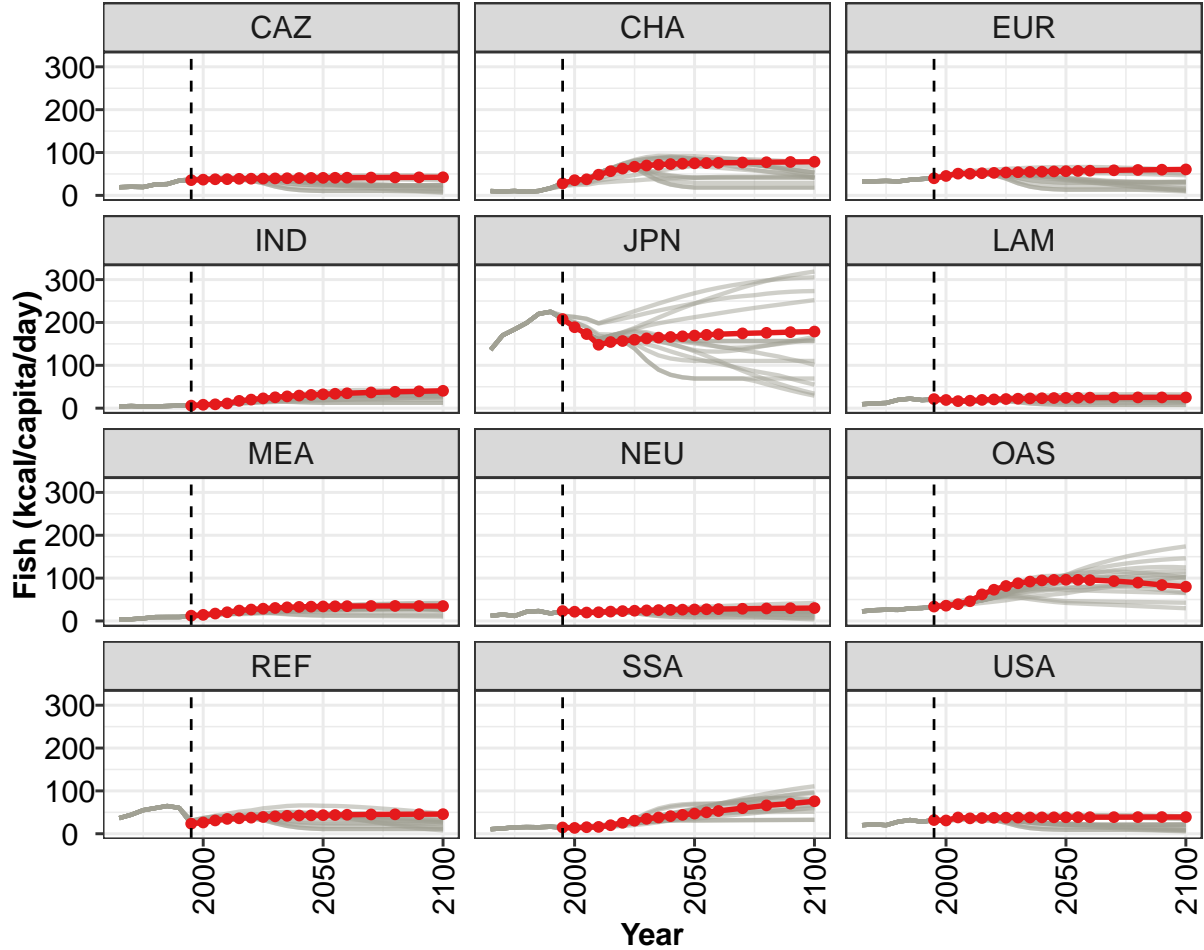
Table 927: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Sugar crops (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4.1	4.1	4.1	4.0	4.0	4.0	3.9
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	0.1	0.1
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	10.2	10.0	9.9	9.9	10.1	10.3	10.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.7	3.7	3.7	3.6	3.5	3.4	3.3
MEA	4.7	4.6	4.5	4.2	4.0	3.7	3.5
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	7.5	7.6	7.7	7.8	7.8	8.1	8.1
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.2	2.2	2.1	2.0	1.9	1.8	1.7
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 928: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Crops—Sugar crops (kcal/capita/day) [PART 2/2]

34.2 Fish





Model output

MAgPIE m4p\_SSP4

Other projections

Bodirsky2015

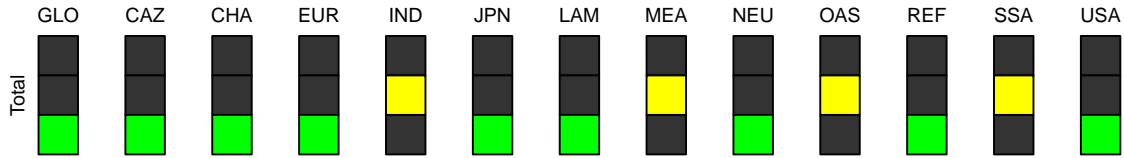


Figure 280: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Fish (kcal/capita/day)

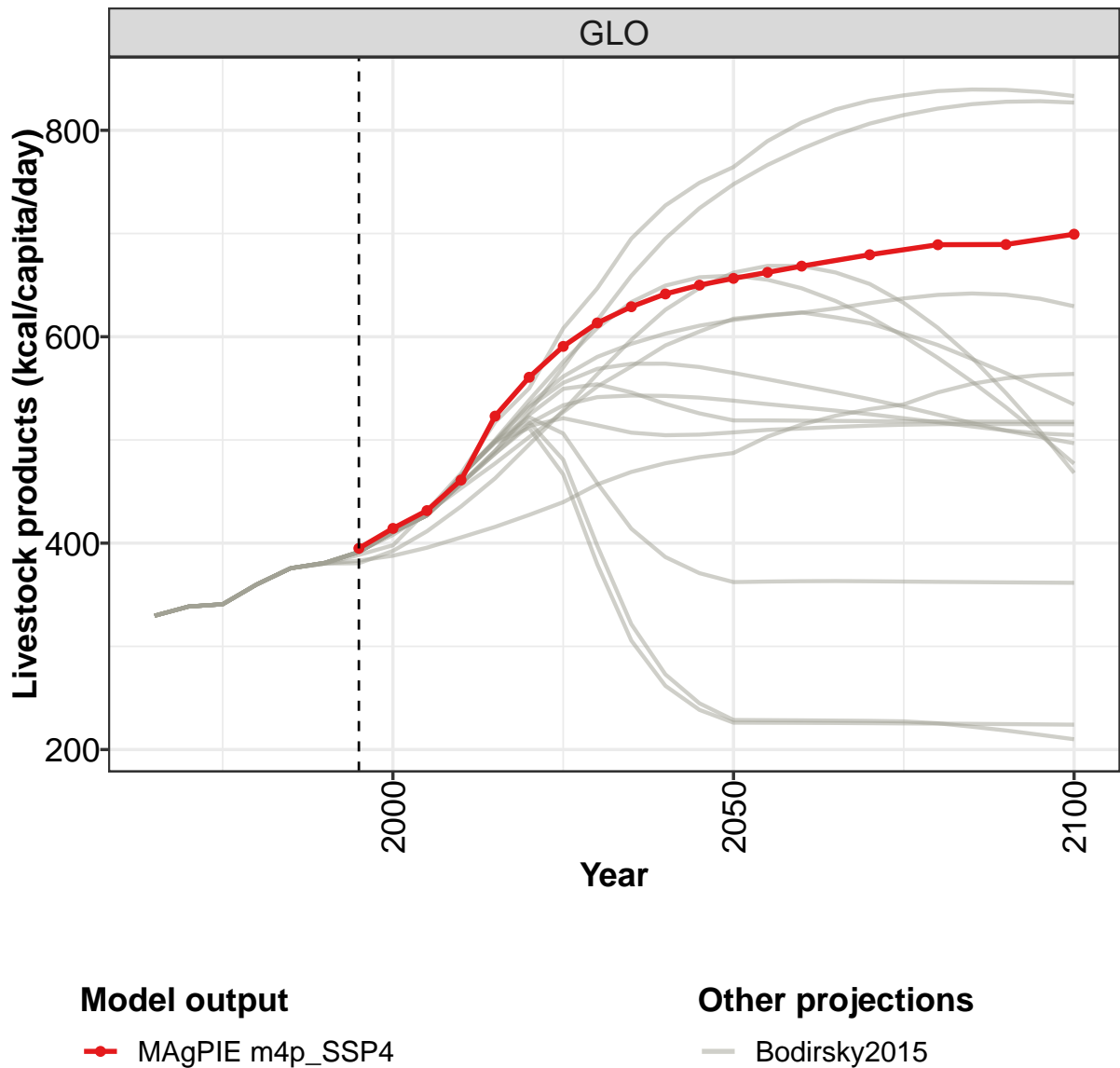
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	27	29	30	33	39	43	47	49	51	53	54
CAZ	36	37	38	38	39	39	39	40	40	40	41
CHA	28	36	38	48	56	63	67	70	72	73	74
EUR	40	45	51	51	52	53	53	54	55	55	56
IND	6	8	9	11	17	20	23	25	28	29	31
JPN	208	189	173	148	154	157	160	163	165	166	168
LAM	21	19	16	17	19	20	21	22	23	23	24
MEA	12	14	17	20	24	27	29	30	32	33	33
NEU	23	22	20	20	22	23	24	25	25	26	26
OAS	34	36	39	46	62	73	82	88	92	95	96
REF	24	26	31	35	36	38	39	41	42	43	43
SSA	15	14	15	16	20	26	31	35	38	41	44
USA	32	31	38	36	37	37	38	38	38	38	38

Table 929: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Fish (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	54	55	56	58	60	60	62
CAZ	41	41	41	42	42	42	42
CHA	75	75	76	77	77	78	78
EUR	56	57	58	59	59	60	61
IND	32	34	35	37	38	39	41
JPN	169	171	173	175	176	177	179
LAM	24	24	25	25	25	25	25
MEA	34	34	35	35	35	35	35
NEU	27	27	28	28	29	30	30
OAS	96	96	95	93	89	84	80
REF	43	44	44	45	45	46	46
SSA	47	50	53	60	66	70	76
USA	38	39	39	39	39	39	39

Table 930: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Fish (kcal/capita/day) [PART 2/2]

34.3 Livestock products





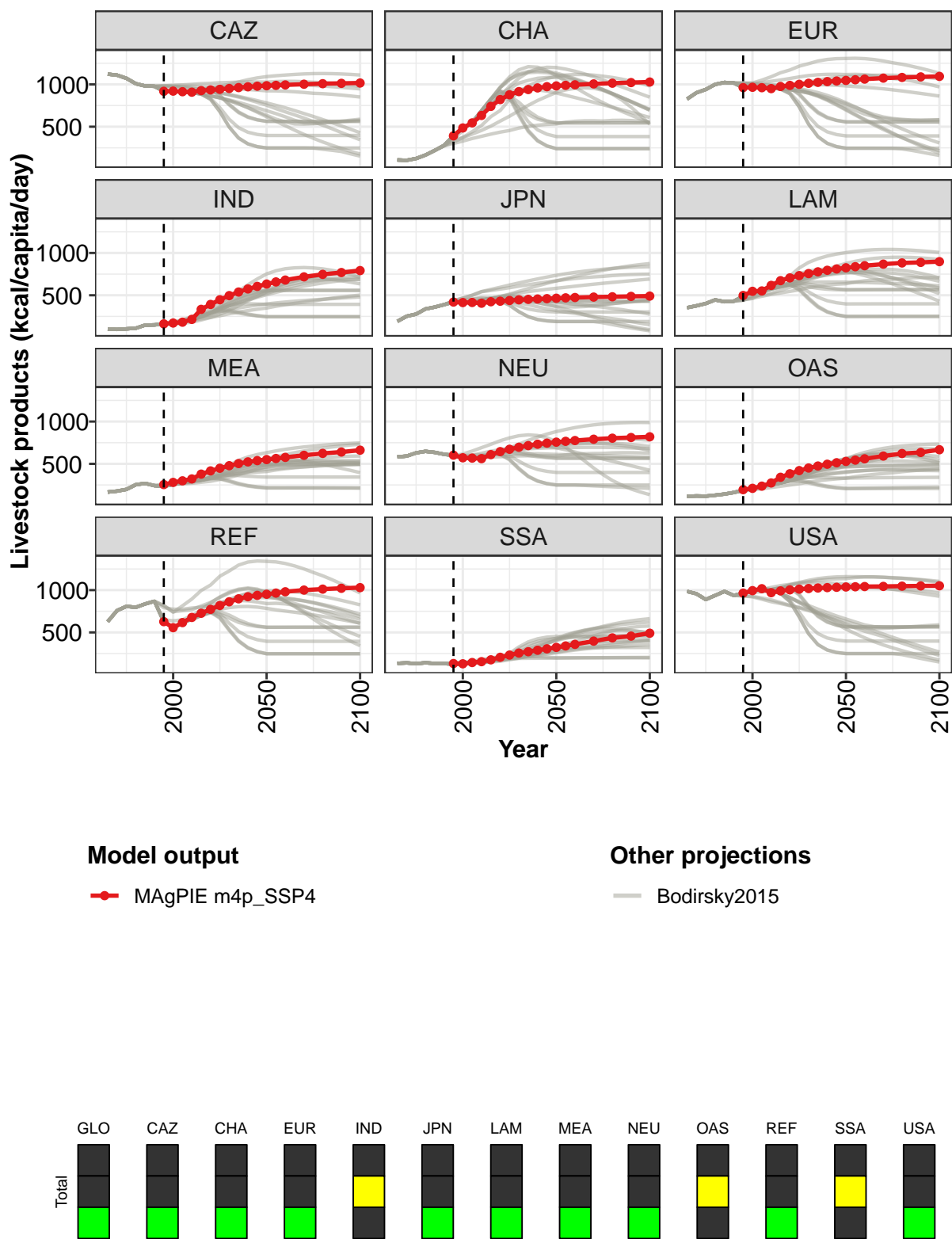


Figure 281: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Livestock products (kcal/capita/day)

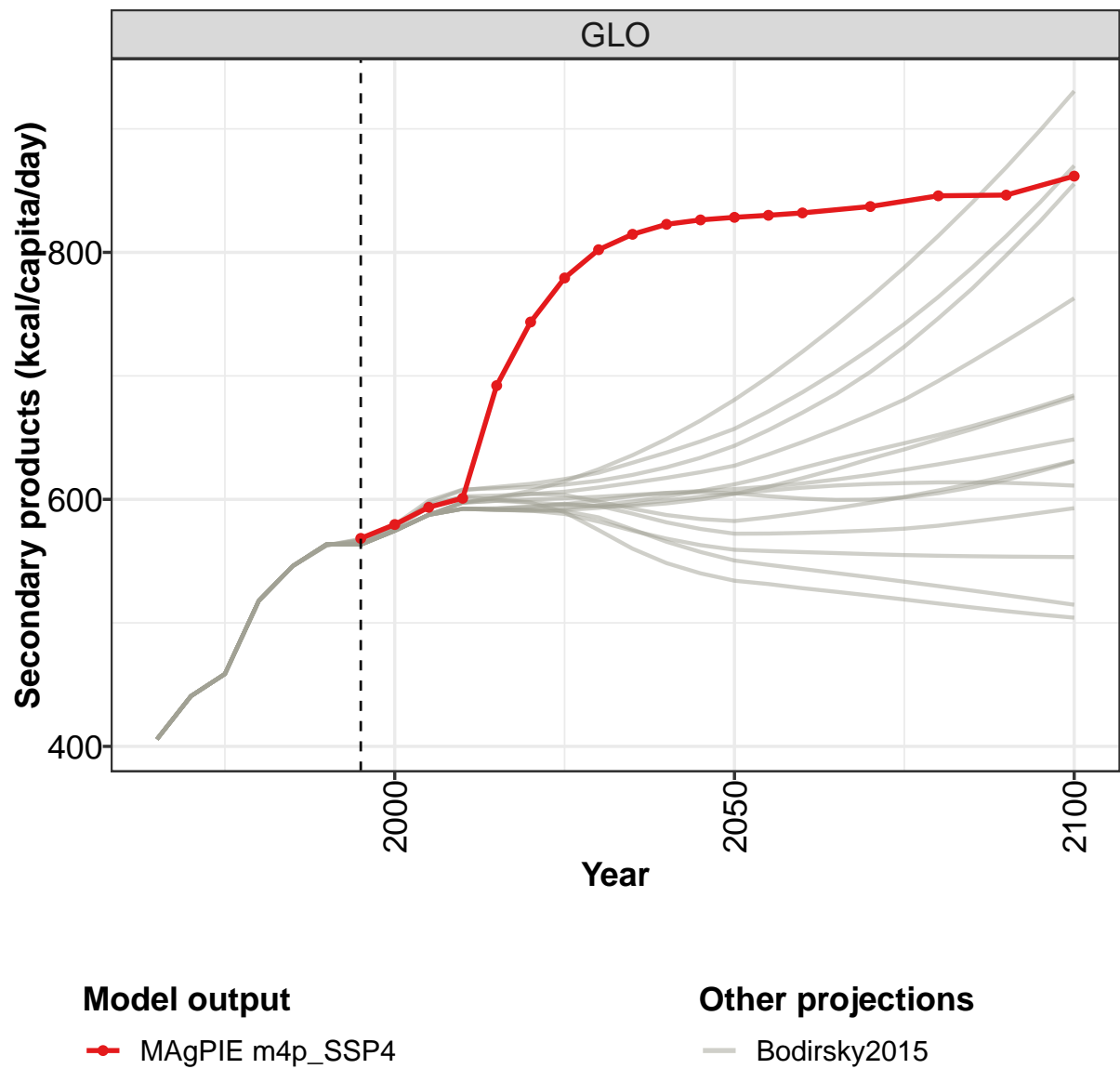
	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	395	414	432	461	523	561	591	613	629	641	650
CAZ	919	921	914	908	927	935	942	952	962	972	979
CHA	392	485	545	633	741	821	878	915	939	959	973
EUR	962	966	961	950	975	989	1001	1013	1025	1033	1040
IND	162	172	182	215	334	392	447	496	538	575	605
JPN	420	414	415	406	424	430	438	446	452	456	460
LAM	497	547	551	617	673	706	732	757	777	795	811
MEA	255	281	299	322	379	417	448	478	504	523	538
NEU	603	572	568	562	609	645	672	696	716	732	745
OAS	195	210	236	274	341	383	420	451	474	496	513
REF	627	556	616	677	727	772	819	862	897	922	938
SSA	132	129	144	154	176	206	232	256	272	290	306
USA	965	994	1017	970	991	1003	1012	1019	1025	1030	1034

Table 931: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Livestock products (kcal/capita/day) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	657	662	668	679	689	689	699
CAZ	984	989	994	1002	1009	1013	1017
CHA	982	989	996	1006	1014	1022	1028
EUR	1047	1055	1063	1074	1082	1089	1095
IND	633	658	680	718	747	769	792
JPN	465	470	473	479	482	487	490
LAM	825	838	849	868	882	889	898
MEA	551	563	576	601	624	640	662
NEU	756	766	776	791	803	811	820
OAS	529	544	560	592	622	635	667
REF	951	965	981	1001	1012	1022	1030
SSA	323	340	359	397	436	457	491
USA	1037	1040	1042	1044	1047	1050	1052

Table 932: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Livestock products (kcal/capita/day) [PART 2/2]

34.4 Secondary products



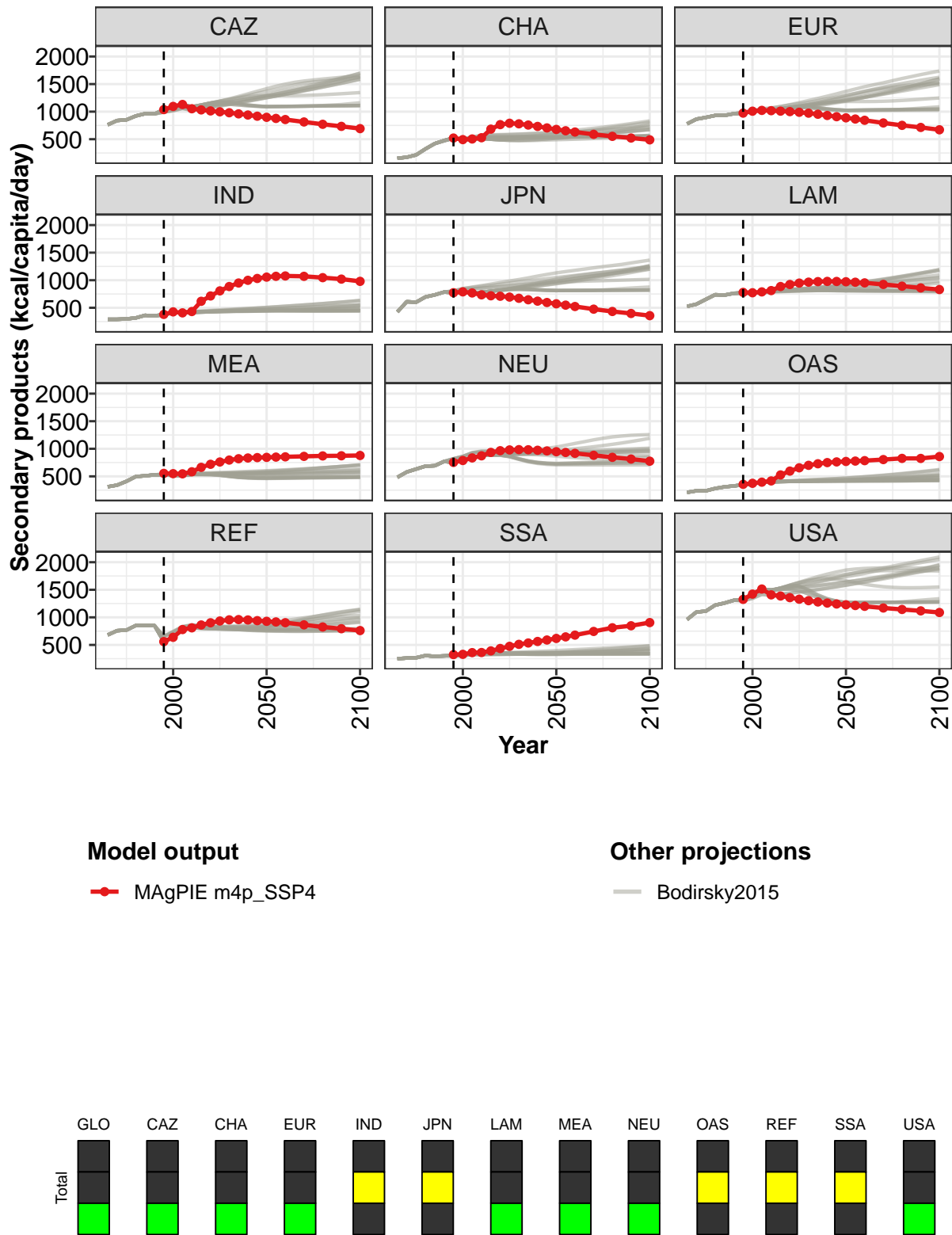


Figure 282: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Secondary products (kcal/capita/day)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	568	580	594	601	692	744	779	802	815	823	826
CAZ	1037	1095	1130	1053	1032	1014	997	980	960	939	918
CHA	521	493	504	527	683	765	790	780	757	732	705
EUR	973	1008	1023	1017	1009	1001	989	973	953	931	909
IND	380	426	408	432	618	714	807	886	949	998	1032
JPN	773	789	769	735	718	709	694	672	646	621	596
LAM	779	773	788	812	886	923	948	965	975	979	978
MEA	554	549	546	583	663	719	761	796	820	833	840
NEU	753	787	834	872	934	965	980	985	982	973	961
OAS	355	374	395	417	526	596	655	700	728	750	762
REF	560	638	779	810	862	902	934	955	960	953	940
SSA	324	329	360	362	392	435	474	510	536	563	589
USA	1326	1422	1514	1408	1387	1357	1329	1303	1279	1259	1243

Table 933: MAgPIE m4p\_SSP4 — Nutrition—Calorie Supply—Secondary products (kcal/capita/day) [PART 1/2]

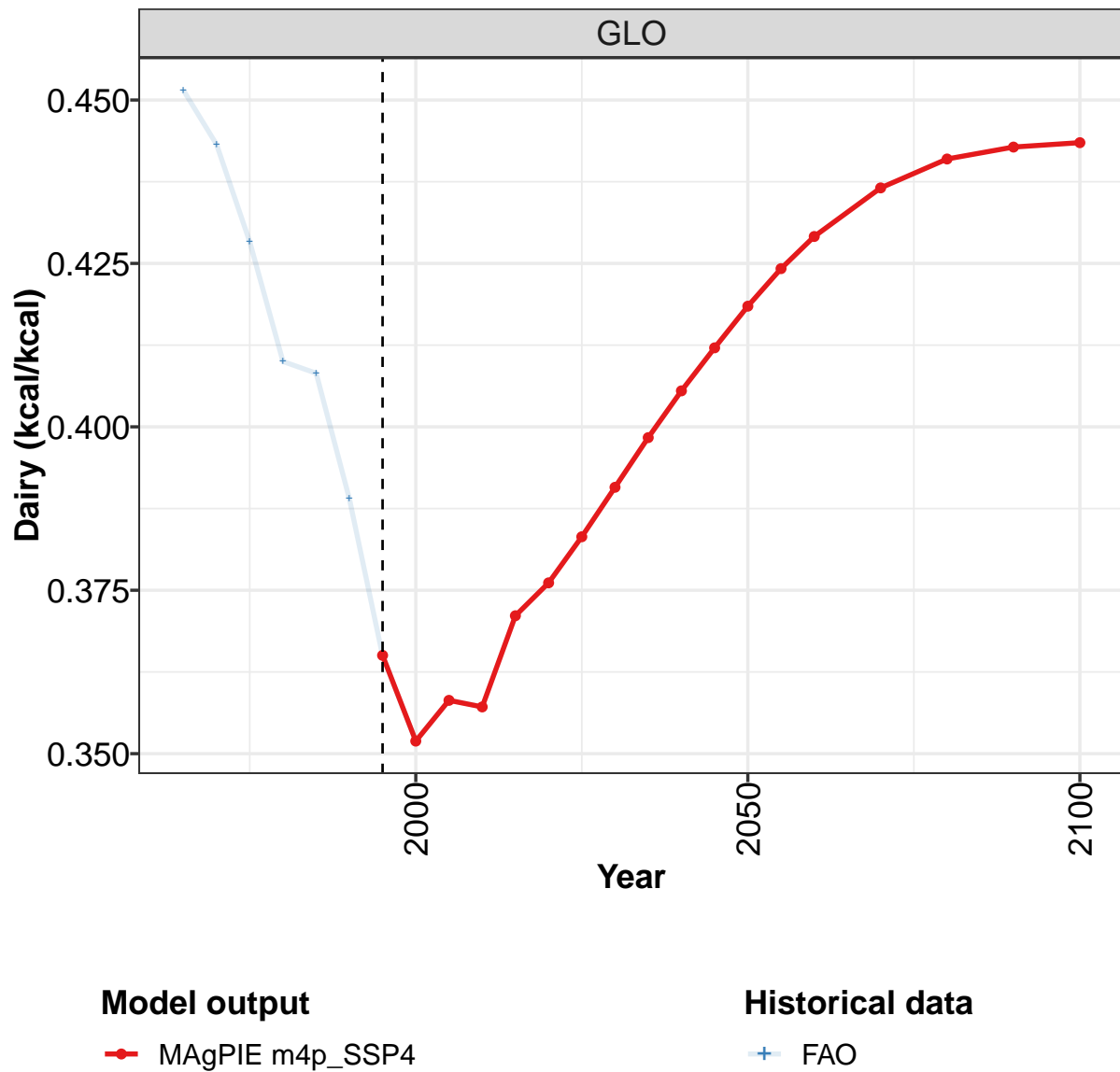
	2050	2055	2060	2070	2080	2090	2100
GLO	828	830	832	837	846	846	862
CAZ	898	877	857	813	771	733	692
CHA	677	654	631	589	552	522	489
EUR	888	866	843	795	751	714	671
IND	1056	1071	1077	1071	1047	1020	979
JPN	572	548	523	475	433	397	358
LAM	972	964	952	924	892	861	831
MEA	844	850	854	862	871	873	879
NEU	947	933	917	882	845	814	775
OAS	770	777	785	804	826	825	859
REF	928	917	903	864	825	794	760
SSA	618	646	678	745	811	848	905
USA	1228	1214	1200	1170	1143	1118	1088

Table 934: MAgPIE m4p\_SSP4 — 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



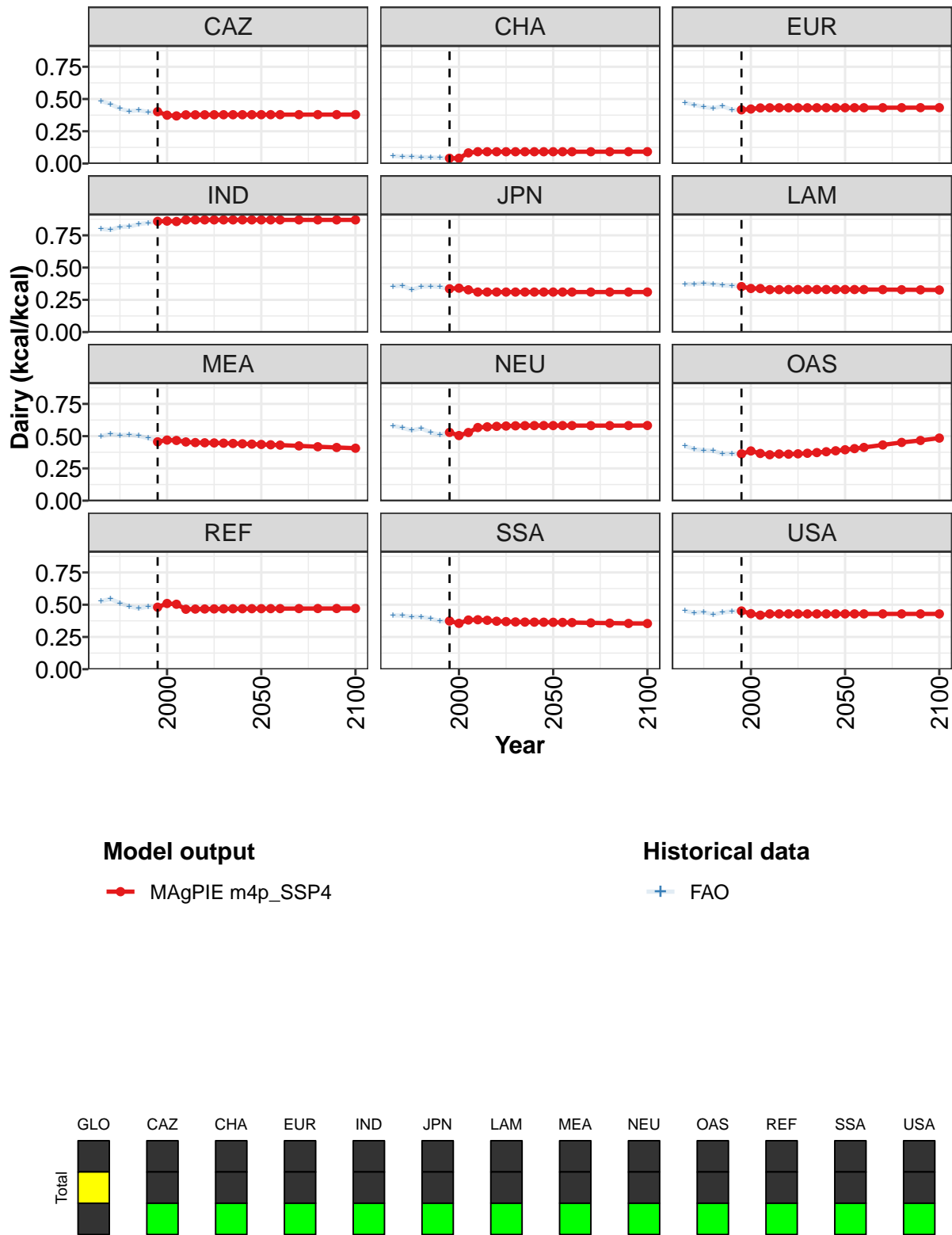


Figure 283: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Dairy (kcal/kcal)

	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	0.391	0.398	0.406	0.412
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	0.330	0.330	0.330
MEA	0.456	0.470	0.467	0.455	0.450	0.449	0.448	0.446	0.443	0.441	0.438
NEU	0.529	0.505	0.528	0.567	0.572	0.576	0.579	0.580	0.581	0.582	0.582
OAS	0.363	0.385	0.366	0.356	0.362	0.360	0.363	0.367	0.373	0.379	0.387
REF	0.481	0.510	0.504	0.465	0.466	0.467	0.468	0.468	0.469	0.469	0.469
SSA	0.374	0.356	0.381	0.384	0.379	0.372	0.369	0.367	0.366	0.365	0.364
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\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Dairy (kcal/kcal) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	0.418	0.424	0.429	0.437	0.441	0.443	0.443
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	0.433	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	0.330	0.330	0.330	0.329	0.328	0.327	0.326
MEA	0.436	0.433	0.430	0.424	0.418	0.412	0.406
NEU	0.582	0.582	0.582	0.582	0.582	0.582	0.583
OAS	0.395	0.403	0.413	0.432	0.451	0.467	0.485
REF	0.469	0.470	0.470	0.470	0.471	0.471	0.471
SSA	0.364	0.363	0.362	0.359	0.357	0.355	0.354
USA	0.429	0.429	0.429	0.429	0.429	0.429	0.429

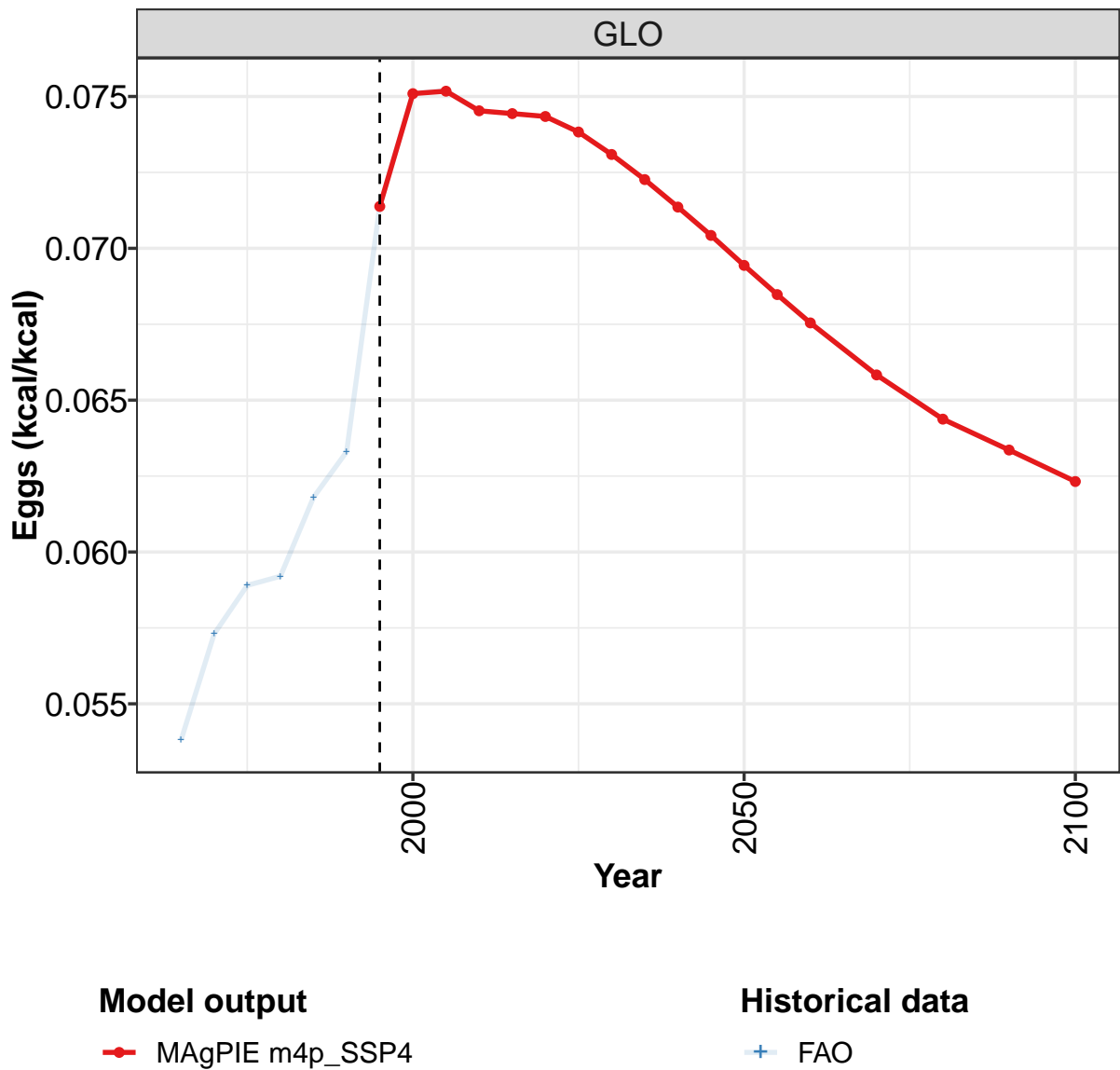
Table 936: MAGPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Dairy (kcal/kcal) [PART 2/2]

	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



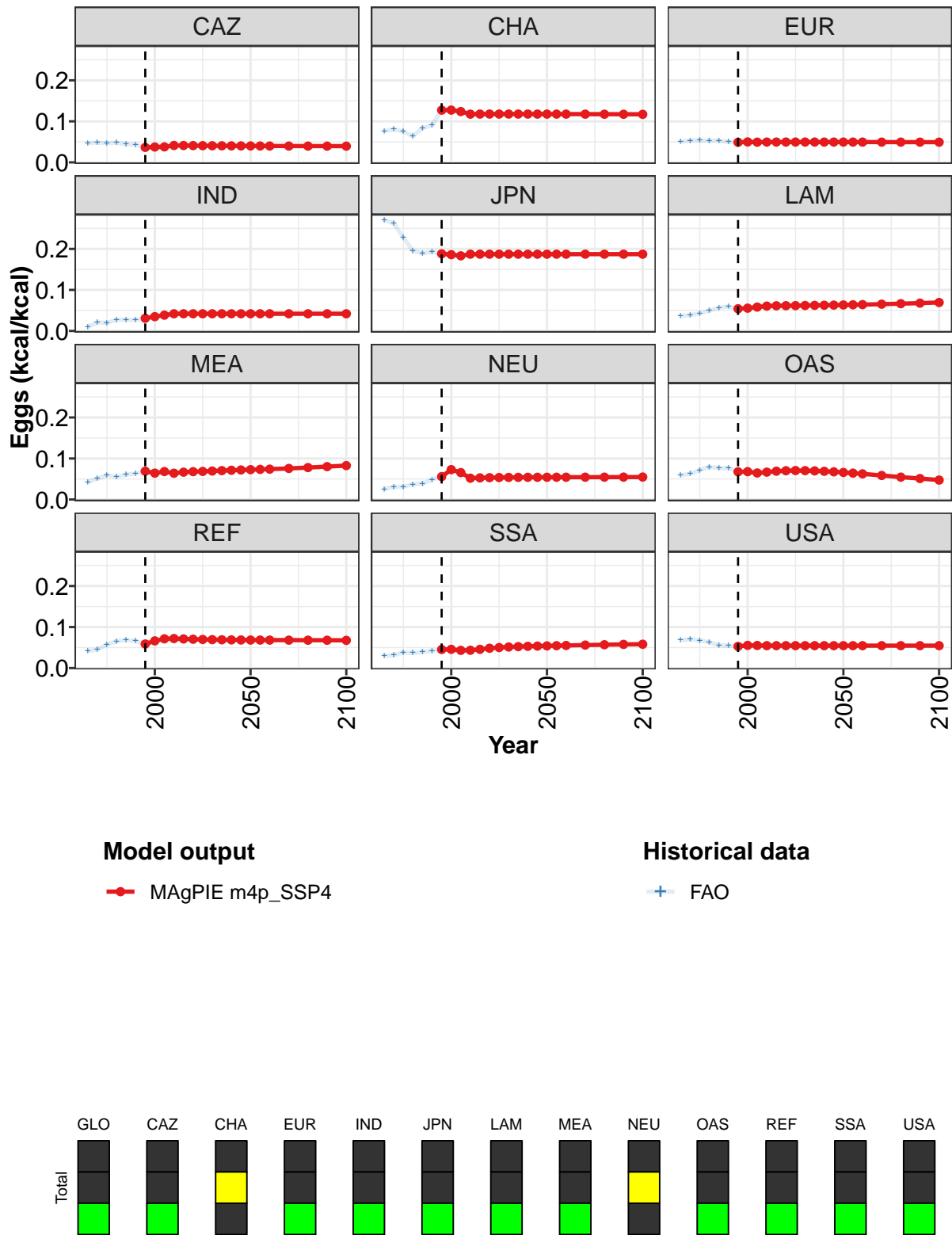


Figure 284: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Eggs (kcal/kcal)

	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	0.070
CAZ	0.037	0.037	0.038	0.041	0.041	0.041	0.041	0.041	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	0.050	0.050	0.050
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	0.062	0.062	0.062	0.062	0.063	0.063
MEA	0.069	0.064	0.068	0.064	0.067	0.068	0.068	0.069	0.070	0.071	0.072
NEU	0.056	0.073	0.066	0.052	0.053	0.053	0.054	0.054	0.054	0.054	0.054
OAS	0.068	0.068	0.065	0.067	0.069	0.070	0.071	0.070	0.070	0.069	0.067
REF	0.059	0.066	0.071	0.072	0.071	0.070	0.070	0.069	0.069	0.069	0.068
SSA	0.045	0.046	0.043	0.043	0.046	0.048	0.050	0.051	0.052	0.053	0.054
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\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Eggs (kcal/kcal) [PART 1/2]

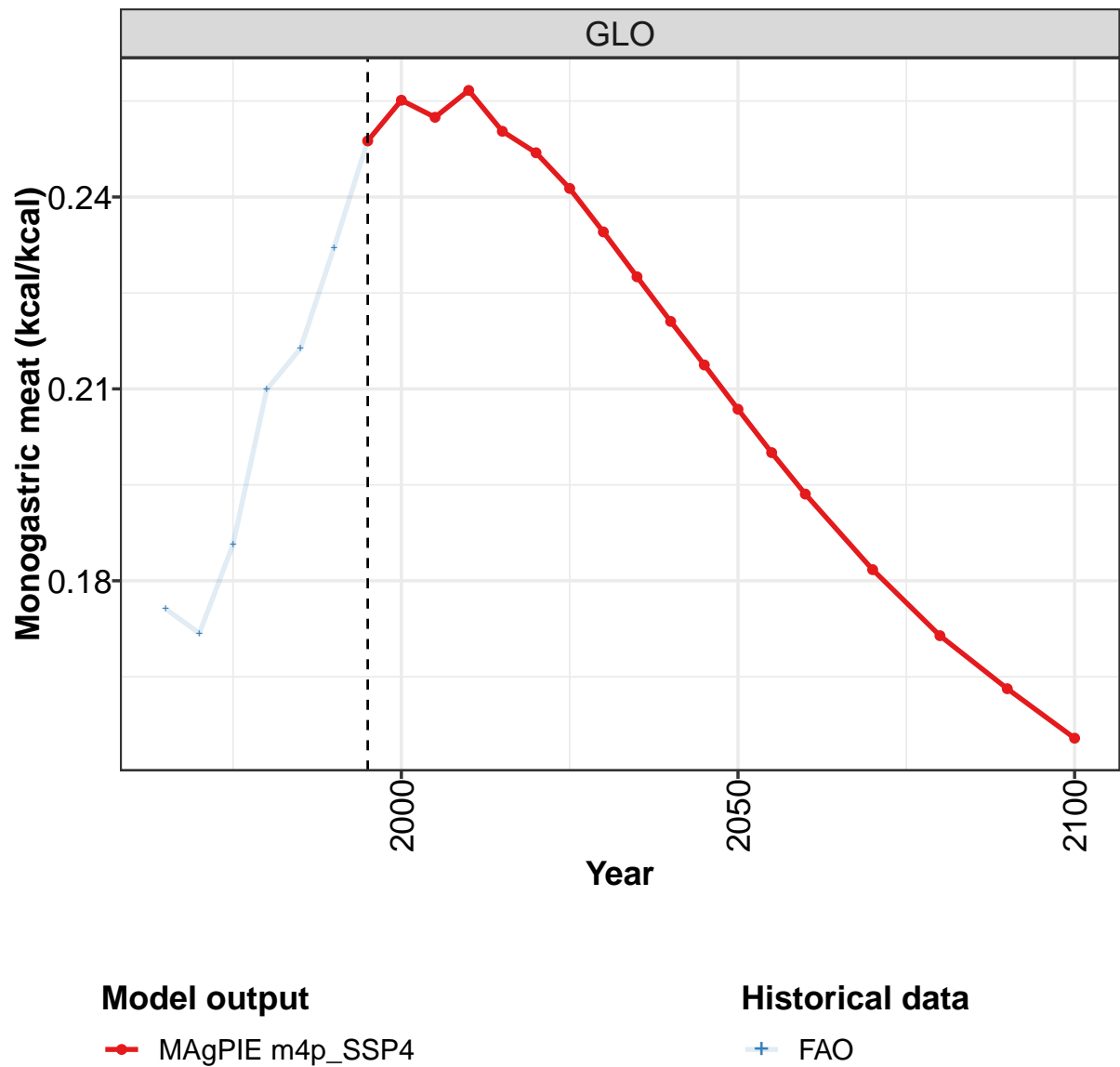
	2050	2055	2060	2070	2080	2090	2100
GLO	0.069	0.068	0.068	0.066	0.064	0.063	0.062
CAZ	0.040	0.040	0.040	0.040	0.040	0.040	0.040
CHA	0.118	0.118	0.118	0.118	0.117	0.117	0.117
EUR	0.050	0.049	0.049	0.049	0.049	0.049	0.049
IND	0.042	0.042	0.042	0.042	0.042	0.042	0.042
JPN	0.187	0.187	0.187	0.187	0.187	0.187	0.187
LAM	0.063	0.064	0.064	0.065	0.066	0.068	0.069
MEA	0.073	0.073	0.074	0.076	0.078	0.080	0.083
NEU	0.054	0.054	0.054	0.054	0.055	0.055	0.055
OAS	0.066	0.064	0.063	0.059	0.055	0.051	0.047
REF	0.068	0.068	0.068	0.068	0.068	0.068	0.068
SSA	0.054	0.055	0.055	0.056	0.057	0.058	0.058
USA	0.055	0.055	0.055	0.055	0.055	0.055	0.055

Table 939: MAGPIE m4p\_SSP4 — 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



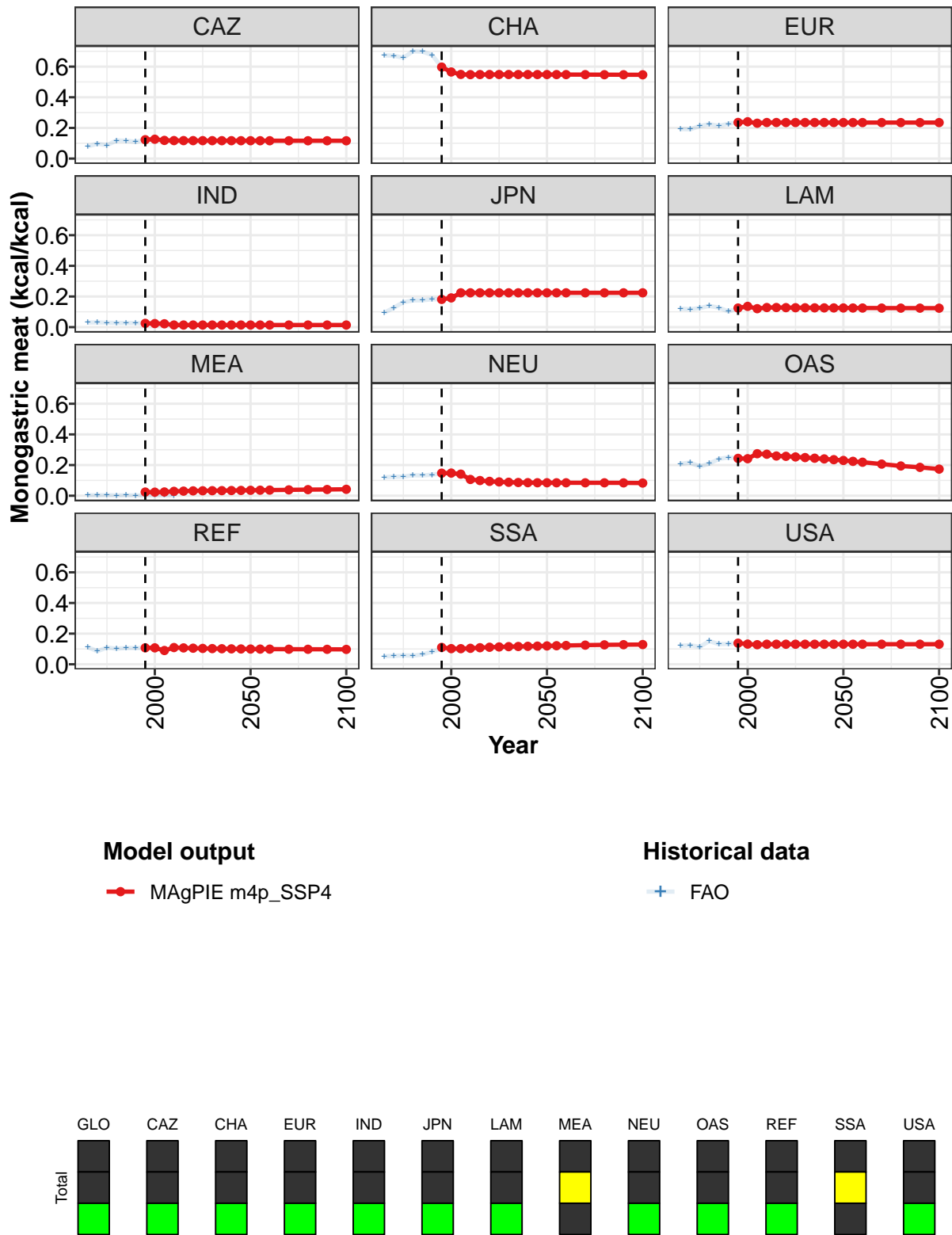


Figure 285: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Monogastric meat (kcal/kcal)

	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	0.235	0.228	0.221	0.214
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	0.548	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	0.126	0.125
MEA	0.024	0.023	0.024	0.028	0.030	0.032	0.032	0.033	0.033	0.034	0.035
NEU	0.147	0.148	0.141	0.106	0.099	0.094	0.090	0.088	0.086	0.085	0.085
OAS	0.244	0.241	0.274	0.271	0.259	0.257	0.253	0.249	0.245	0.240	0.235
REF	0.108	0.107	0.090	0.109	0.107	0.105	0.104	0.102	0.101	0.101	0.100
SSA	0.110	0.102	0.102	0.104	0.108	0.111	0.113	0.115	0.116	0.117	0.118
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\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Monogastric meat (kcal/kcal) [PART 1/2]

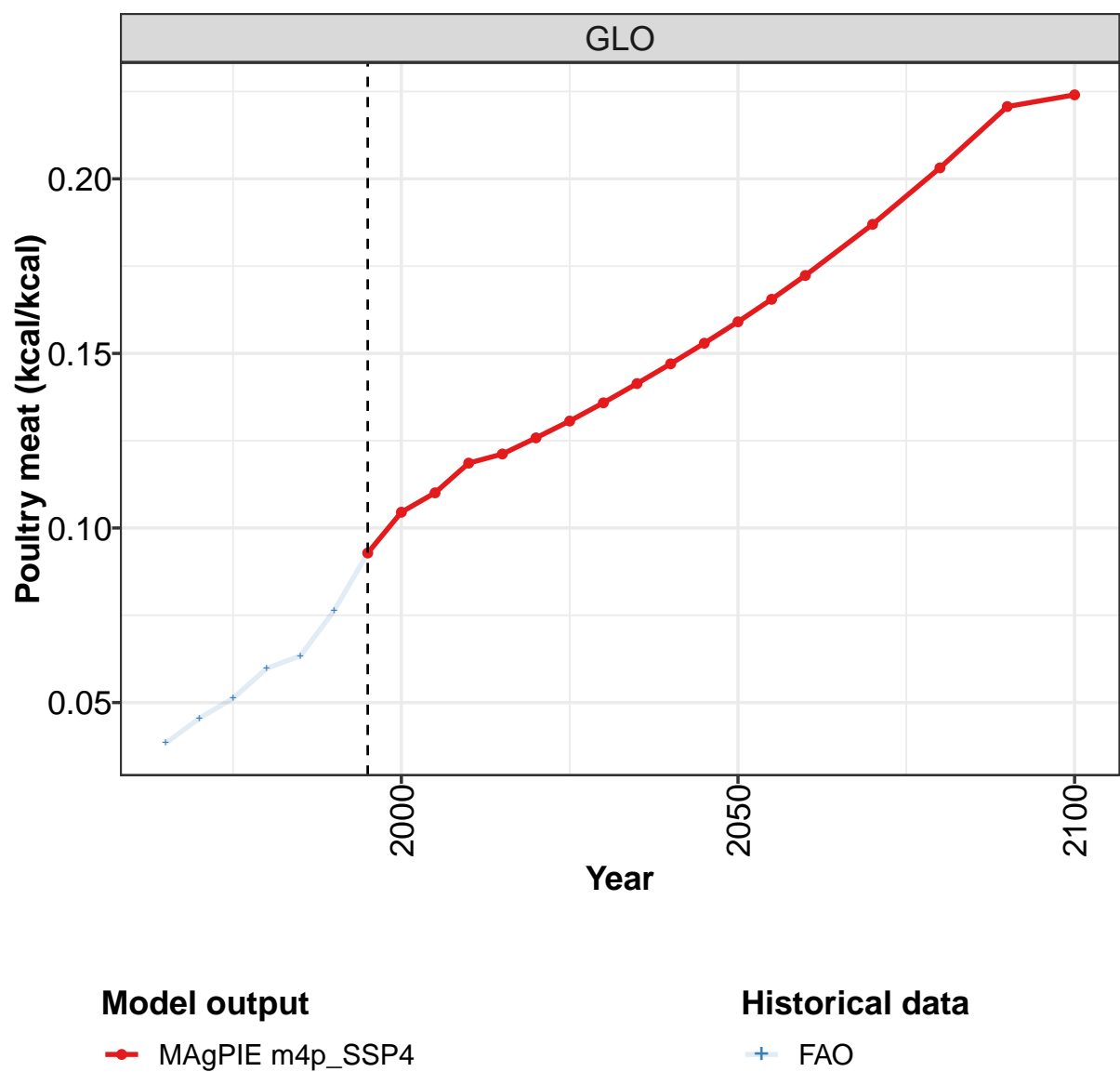
	2050	2055	2060	2070	2080	2090	2100
GLO	0.207	0.200	0.194	0.182	0.171	0.163	0.155
CAZ	0.117	0.117	0.116	0.116	0.116	0.116	0.116
CHA	0.548	0.548	0.548	0.548	0.547	0.547	0.547
EUR	0.235	0.235	0.235	0.235	0.235	0.235	0.235
IND	0.014	0.014	0.014	0.014	0.014	0.014	0.014
JPN	0.224	0.224	0.224	0.224	0.224	0.224	0.224
LAM	0.125	0.125	0.125	0.124	0.124	0.124	0.124
MEA	0.035	0.036	0.037	0.038	0.040	0.041	0.042
NEU	0.085	0.084	0.084	0.084	0.084	0.084	0.083
OAS	0.230	0.224	0.219	0.206	0.194	0.185	0.174
REF	0.100	0.099	0.099	0.098	0.098	0.098	0.097
SSA	0.120	0.121	0.123	0.125	0.127	0.128	0.129
USA	0.131	0.131	0.131	0.131	0.131	0.131	0.131

Table 942: MAGPIE m4p\_SSP4 — 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



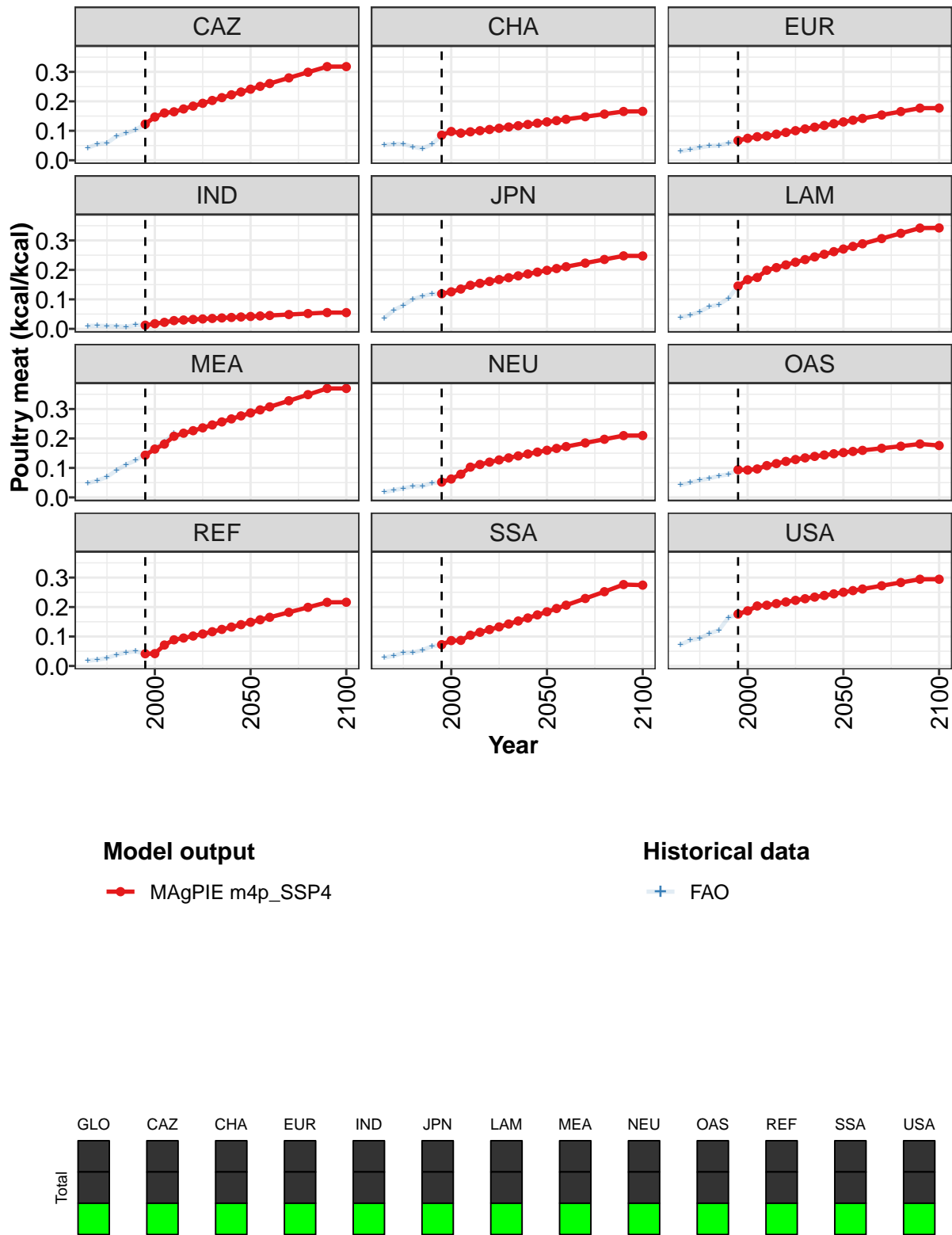


Figure 286: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Poultry meat (kcal/kcal)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.093	0.105	0.110	0.119	0.121	0.126	0.131	0.136	0.141	0.147	0.153
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	0.034	0.035	0.037	0.039	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	0.226	0.236	0.246	0.256	0.266	0.277
NEU	0.052	0.062	0.079	0.103	0.112	0.120	0.127	0.134	0.141	0.147	0.154
OAS	0.094	0.093	0.097	0.108	0.115	0.122	0.129	0.134	0.139	0.144	0.148
REF	0.042	0.042	0.071	0.089	0.095	0.102	0.109	0.116	0.124	0.132	0.140
SSA	0.072	0.086	0.087	0.104	0.114	0.123	0.133	0.142	0.153	0.163	0.173
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\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Poultry meat (kcal/kcal) [PART 1/2]

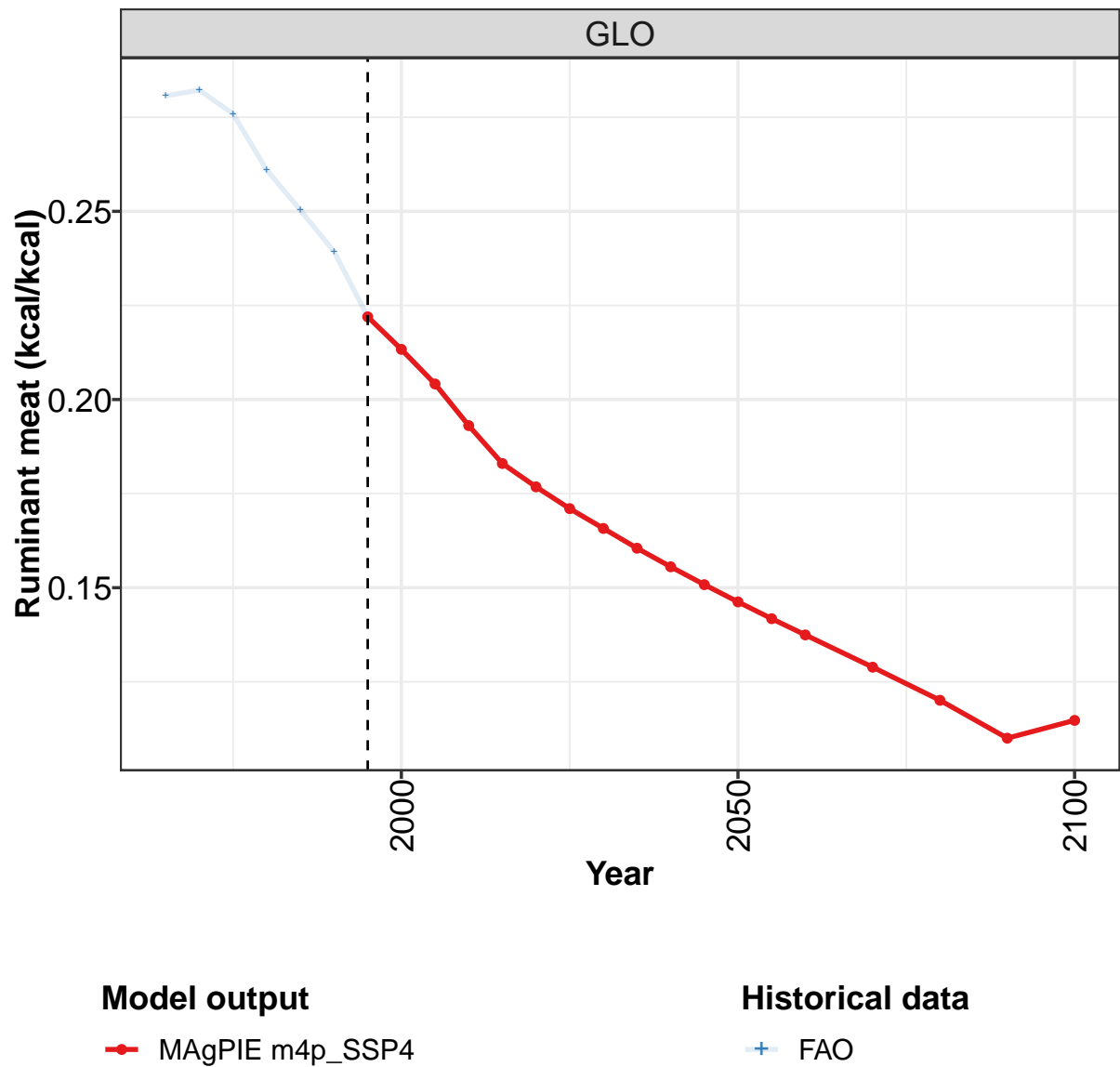
	2050	2055	2060	2070	2080	2090	2100
GLO	0.159	0.166	0.172	0.187	0.203	0.221	0.224
CAZ	0.241	0.251	0.260	0.280	0.299	0.318	0.318
CHA	0.130	0.135	0.139	0.148	0.157	0.166	0.166
EUR	0.130	0.136	0.142	0.154	0.165	0.177	0.177
IND	0.042	0.044	0.045	0.049	0.052	0.055	0.055
JPN	0.199	0.205	0.211	0.223	0.235	0.248	0.247
LAM	0.271	0.280	0.289	0.306	0.324	0.342	0.342
MEA	0.287	0.297	0.307	0.328	0.349	0.370	0.370
NEU	0.160	0.166	0.172	0.185	0.197	0.210	0.210
OAS	0.152	0.156	0.160	0.167	0.174	0.181	0.176
REF	0.148	0.157	0.165	0.182	0.199	0.216	0.216
SSA	0.184	0.195	0.206	0.229	0.252	0.276	0.274
USA	0.250	0.256	0.261	0.272	0.283	0.294	0.294

Table 945: MAGPIE m4p\_SSP4 — 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



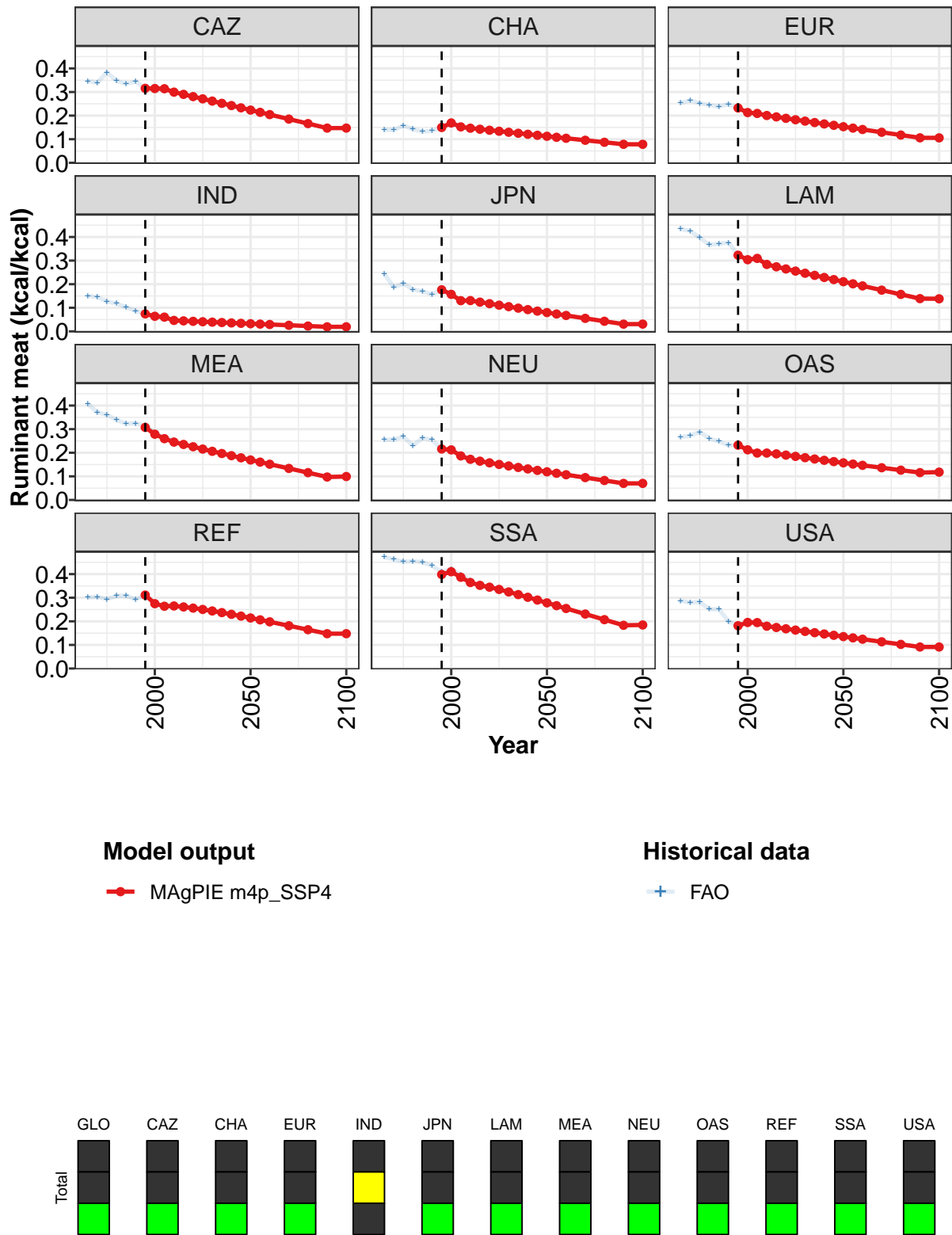


Figure 287: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Ruminant meat (kcal/kcal)

	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	0.166	0.161	0.156	0.151
CAZ	0.316	0.315	0.314	0.300	0.290	0.281	0.271	0.262	0.252	0.243	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	0.037	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	0.228	0.219
MEA	0.307	0.279	0.260	0.245	0.235	0.225	0.216	0.206	0.197	0.188	0.179
NEU	0.216	0.212	0.187	0.172	0.164	0.157	0.151	0.144	0.138	0.131	0.125
OAS	0.232	0.212	0.199	0.199	0.195	0.190	0.185	0.179	0.173	0.168	0.163
REF	0.311	0.275	0.264	0.265	0.261	0.256	0.250	0.244	0.237	0.230	0.222
SSA	0.399	0.410	0.387	0.364	0.352	0.345	0.335	0.325	0.313	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\_SSP4 — Nutrition—Dietary Composition—Livestock Demand Structure—Livestock products—Ruminant meat (kcal/kcal) [PART 1/2]

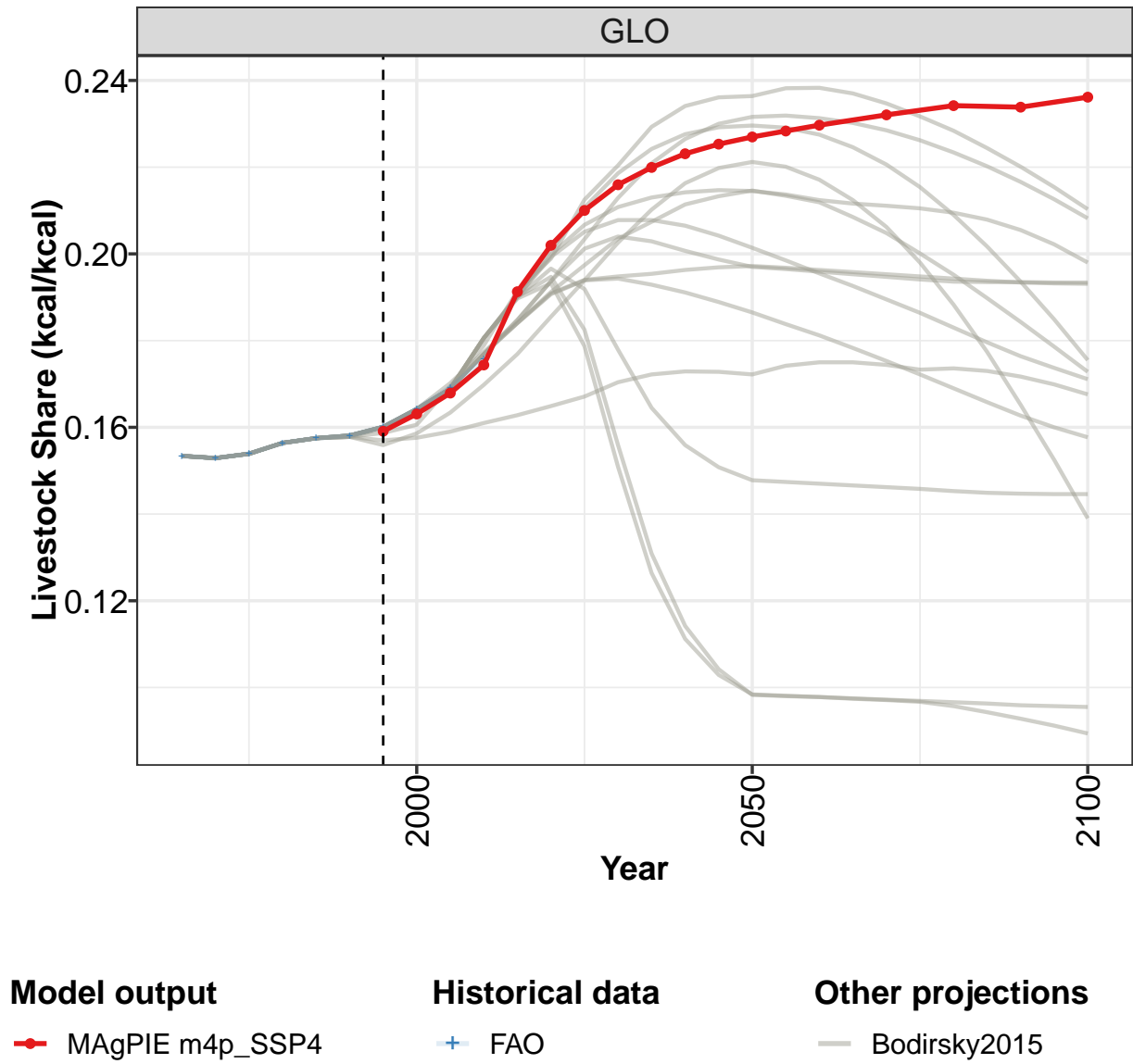
	2050	2055	2060	2070	2080	2090	2100
GLO	0.146	0.142	0.137	0.129	0.120	0.110	0.115
CAZ	0.224	0.214	0.204	0.185	0.166	0.147	0.147
CHA	0.113	0.108	0.104	0.096	0.087	0.078	0.078
EUR	0.153	0.147	0.141	0.129	0.118	0.106	0.106
IND	0.032	0.031	0.029	0.026	0.023	0.019	0.019
JPN	0.080	0.074	0.068	0.055	0.043	0.031	0.031
LAM	0.211	0.202	0.193	0.175	0.157	0.139	0.138
MEA	0.169	0.160	0.151	0.134	0.116	0.097	0.099
NEU	0.119	0.113	0.107	0.095	0.082	0.070	0.070
OAS	0.157	0.152	0.147	0.136	0.126	0.116	0.118
REF	0.214	0.206	0.198	0.181	0.165	0.148	0.148
SSA	0.278	0.266	0.254	0.231	0.207	0.183	0.185
USA	0.135	0.130	0.124	0.113	0.102	0.091	0.091

Table 948: MAGPIE m4p\_SSP4 — 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



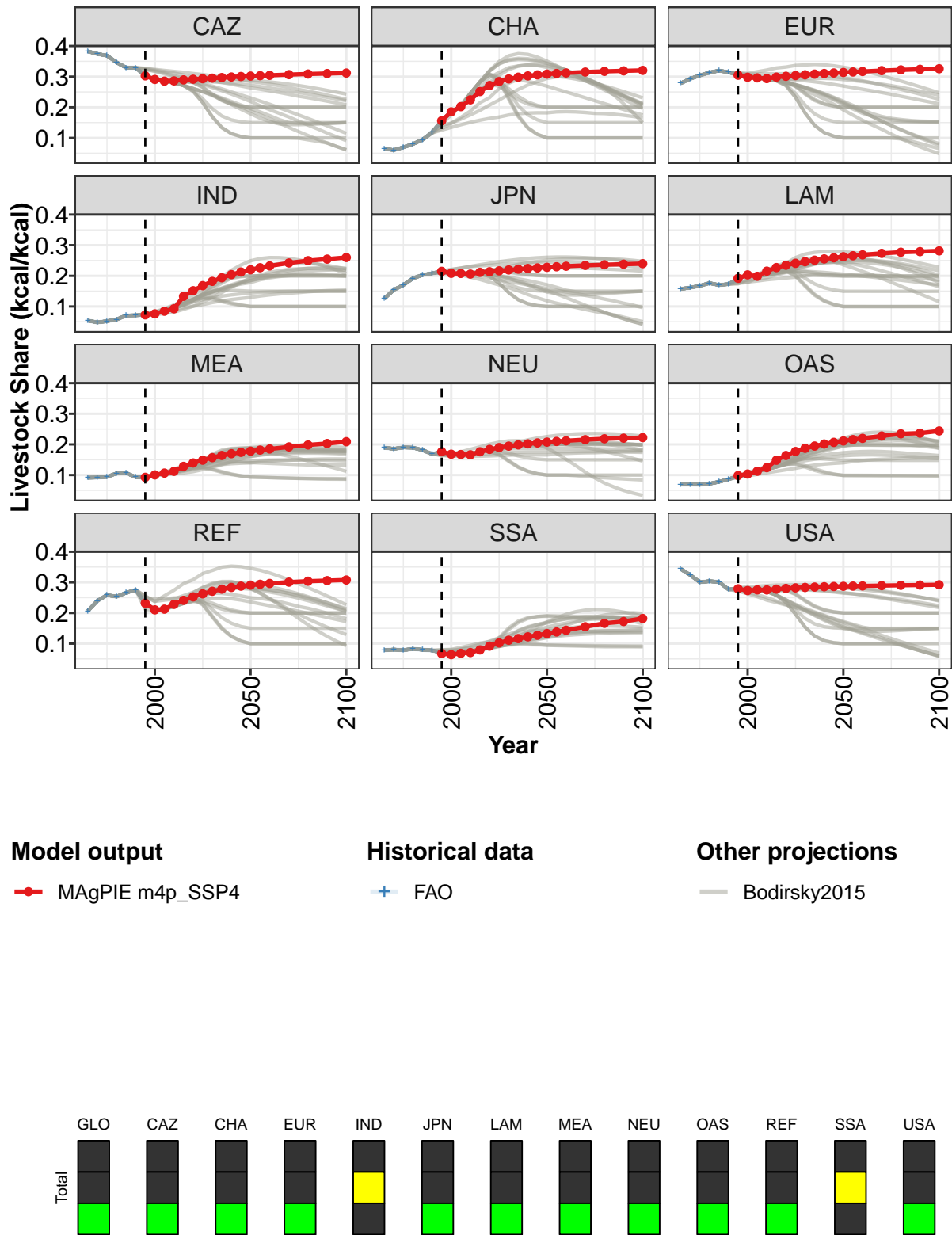


Figure 288: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Share (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.159	0.163	0.168	0.174	0.191	0.202	0.210	0.216	0.220	0.223	0.225
CAZ	0.303	0.291	0.285	0.286	0.289	0.292	0.293	0.295	0.297	0.299	0.301
CHA	0.156	0.185	0.202	0.224	0.251	0.271	0.284	0.292	0.298	0.302	0.306
EUR	0.305	0.298	0.296	0.294	0.299	0.301	0.304	0.306	0.308	0.310	0.312
IND	0.073	0.076	0.084	0.093	0.133	0.152	0.168	0.182	0.194	0.204	0.213
JPN	0.215	0.208	0.208	0.206	0.211	0.214	0.216	0.219	0.222	0.224	0.226
LAM	0.192	0.203	0.199	0.215	0.227	0.235	0.241	0.246	0.251	0.255	0.259
MEA	0.093	0.100	0.106	0.112	0.128	0.140	0.149	0.157	0.164	0.170	0.174
NEU	0.176	0.168	0.167	0.166	0.176	0.184	0.190	0.194	0.199	0.202	0.205
OAS	0.098	0.103	0.112	0.124	0.148	0.164	0.177	0.187	0.195	0.201	0.207
REF	0.232	0.210	0.212	0.228	0.241	0.253	0.263	0.271	0.278	0.283	0.288
SSA	0.067	0.064	0.068	0.071	0.080	0.092	0.102	0.111	0.117	0.122	0.127
USA	0.279	0.273	0.276	0.275	0.278	0.280	0.282	0.283	0.285	0.286	0.287

Table 950: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Livestock Share (kcal/kcal) [PART 1/2]

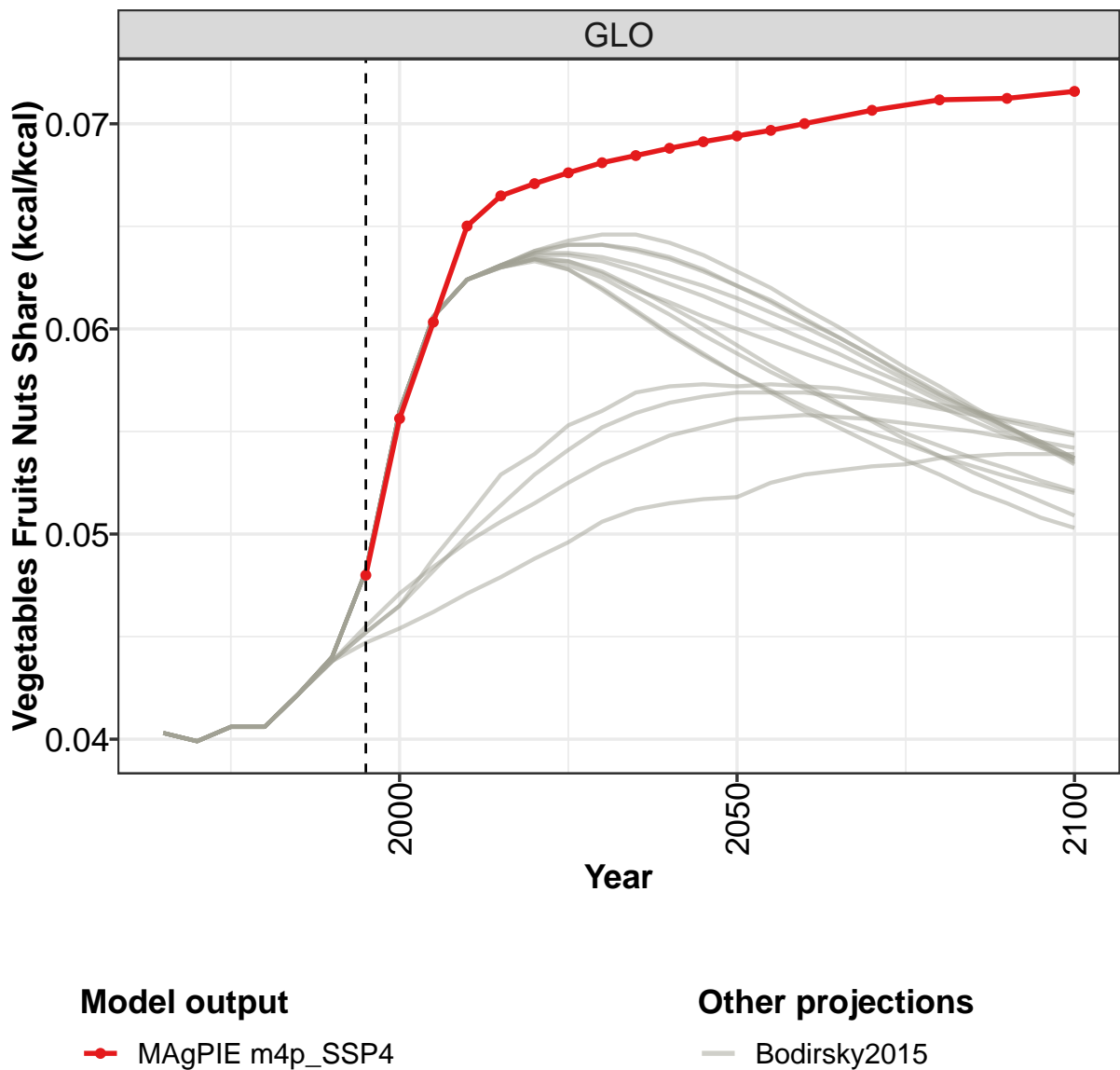
	2050	2055	2060	2070	2080	2090	2100
GLO	0.227	0.228	0.230	0.232	0.234	0.234	0.236
CAZ	0.302	0.303	0.304	0.307	0.309	0.310	0.312
CHA	0.308	0.310	0.312	0.315	0.317	0.319	0.320
EUR	0.314	0.315	0.317	0.320	0.322	0.324	0.326
IND	0.220	0.227	0.232	0.242	0.250	0.255	0.260
JPN	0.228	0.230	0.231	0.234	0.236	0.238	0.240
LAM	0.262	0.266	0.269	0.273	0.277	0.279	0.282
MEA	0.178	0.182	0.185	0.192	0.198	0.203	0.209
NEU	0.208	0.210	0.212	0.216	0.218	0.220	0.222
OAS	0.211	0.216	0.220	0.228	0.235	0.237	0.244
REF	0.291	0.294	0.296	0.301	0.304	0.306	0.308
SSA	0.133	0.138	0.144	0.155	0.166	0.172	0.182
USA	0.287	0.288	0.288	0.289	0.290	0.291	0.292

Table 951: MAgPIE m4p\_SSP4 — 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





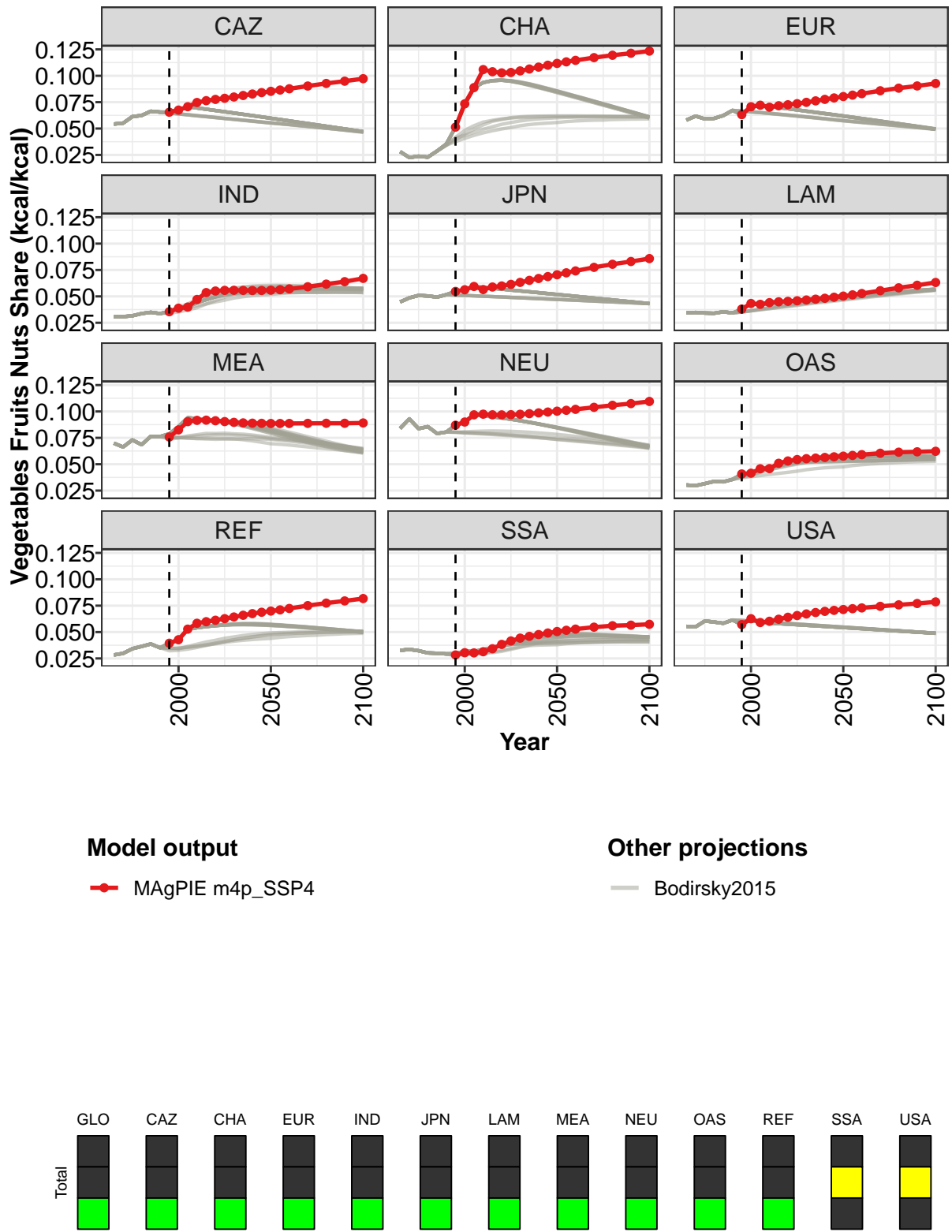


Figure 289: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Vegetables Fruits Nuts Share (kcal/kcal)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.048	0.056	0.060	0.065	0.066	0.067	0.068	0.068	0.068	0.069	0.069
CAZ	0.066	0.067	0.071	0.075	0.076	0.078	0.079	0.080	0.081	0.083	0.084
CHA	0.051	0.073	0.089	0.106	0.104	0.103	0.103	0.105	0.106	0.108	0.110
EUR	0.063	0.071	0.072	0.070	0.072	0.073	0.074	0.075	0.076	0.078	0.079
IND	0.035	0.039	0.040	0.047	0.054	0.055	0.056	0.056	0.056	0.056	0.056
JPN	0.055	0.056	0.059	0.056	0.059	0.060	0.061	0.063	0.065	0.067	0.069
LAM	0.038	0.043	0.042	0.044	0.045	0.045	0.046	0.047	0.047	0.048	0.049
MEA	0.076	0.083	0.090	0.092	0.092	0.091	0.090	0.090	0.089	0.089	0.089
NEU	0.087	0.090	0.097	0.097	0.097	0.097	0.097	0.097	0.098	0.099	0.099
OAS	0.041	0.041	0.046	0.046	0.051	0.053	0.054	0.055	0.056	0.056	0.057
REF	0.039	0.043	0.053	0.058	0.060	0.061	0.063	0.064	0.066	0.067	0.069
SSA	0.028	0.030	0.030	0.031	0.034	0.038	0.042	0.044	0.046	0.048	0.049
USA	0.057	0.063	0.059	0.060	0.062	0.064	0.066	0.067	0.069	0.070	0.071

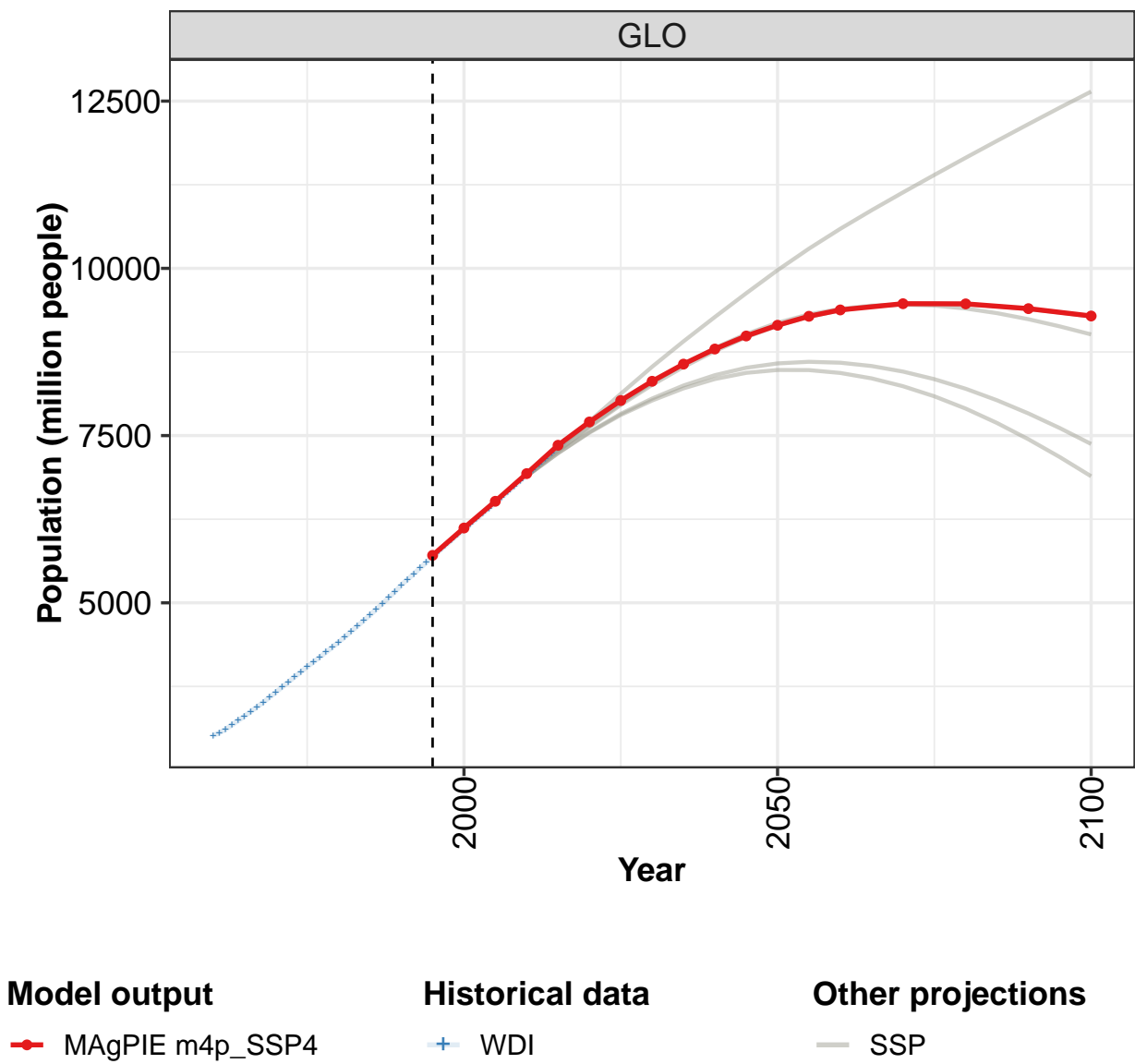
Table 953: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Vegetables Fruits Nuts Share (kcal/kcal)  
[PART 1/2]

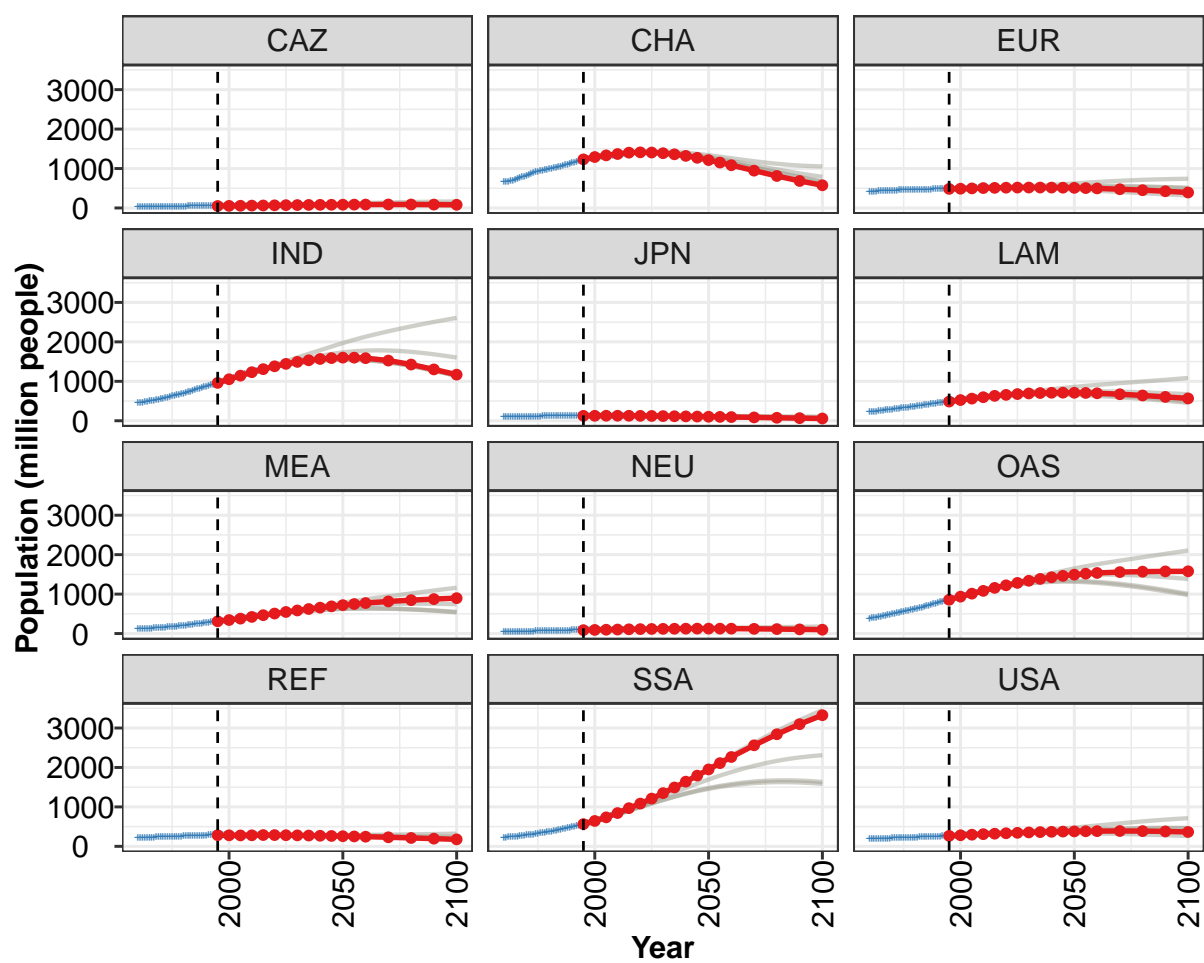
	2050	2055	2060	2070	2080	2090	2100
GLO	0.069	0.070	0.070	0.071	0.071	0.071	0.072
CAZ	0.085	0.086	0.088	0.090	0.093	0.095	0.097
CHA	0.112	0.113	0.115	0.117	0.119	0.121	0.123
EUR	0.080	0.082	0.083	0.086	0.088	0.090	0.093
IND	0.056	0.056	0.057	0.059	0.062	0.064	0.067
JPN	0.071	0.072	0.074	0.078	0.080	0.083	0.086
LAM	0.050	0.051	0.053	0.055	0.058	0.061	0.063
MEA	0.089	0.089	0.089	0.089	0.089	0.089	0.089
NEU	0.100	0.101	0.102	0.104	0.106	0.107	0.109
OAS	0.058	0.058	0.059	0.060	0.061	0.062	0.062
REF	0.070	0.071	0.072	0.075	0.077	0.080	0.082
SSA	0.051	0.052	0.053	0.055	0.056	0.057	0.057
USA	0.071	0.072	0.073	0.074	0.076	0.077	0.079

Table 954: MAgPIE m4p\_SSP4 — Nutrition—Dietary Composition—Vegetables Fruits Nuts Share (kcal/kcal)  
[PART 2/2]

Part X

# Population





#### Model output

—●— MAgPIE m4p\_SSP4

#### Historical data

+ WDI

#### Other projections

— SSP

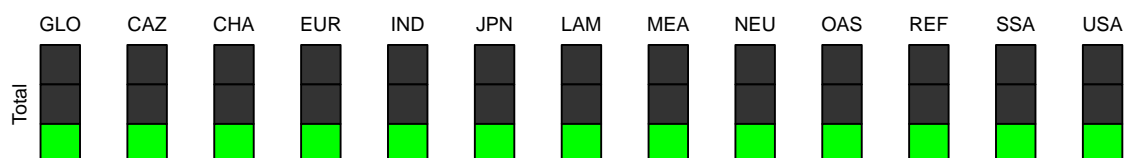


Figure 290: MAgPIE m4p\_SSP4 — Population (million people)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5710	6118	6518	6932	7356	7704	8024	8312	8569	8794	8989
CAZ	51	54	57	60	64	68	71	74	77	80	82
CHA	1233	1292	1334	1368	1402	1410	1406	1389	1361	1321	1272
EUR	485	489	496	505	510	515	518	519	518	517	515
IND	960	1053	1144	1231	1309	1381	1443	1492	1534	1567	1590
JPN	125	127	128	128	127	125	123	119	115	112	107
LAM	487	526	562	598	632	657	677	693	704	710	712
MEA	310	344	379	422	467	508	548	586	623	657	690
NEU	88	92	97	102	109	113	117	120	122	124	125
OAS	858	936	1012	1083	1158	1224	1284	1339	1386	1427	1463
REF	283	280	278	281	287	286	283	279	274	269	264
SSA	564	644	736	845	969	1085	1211	1350	1492	1641	1794
USA	266	282	296	309	321	333	344	353	362	369	375

Table 955: MAgPIE m4p\_SSP4 — Population (million people) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	9150	9283	9378	9472	9469	9398	9288
CAZ	84	86	88	89	89	86	82
CHA	1214	1151	1084	947	812	685	576
EUR	511	504	496	476	452	424	393
IND	1601	1601	1588	1526	1426	1303	1169
JPN	103	99	95	86	76	67	58
LAM	710	705	697	673	641	605	567
MEA	721	749	774	815	847	875	898
NEU	126	125	124	120	114	106	99
OAS	1493	1519	1537	1559	1570	1576	1579
REF	257	251	245	230	213	195	177
SSA	1950	2110	2265	2562	2842	3097	3325
USA	379	383	386	390	387	378	365

Table 956: MAgPIE m4p\_SSP4 — 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]

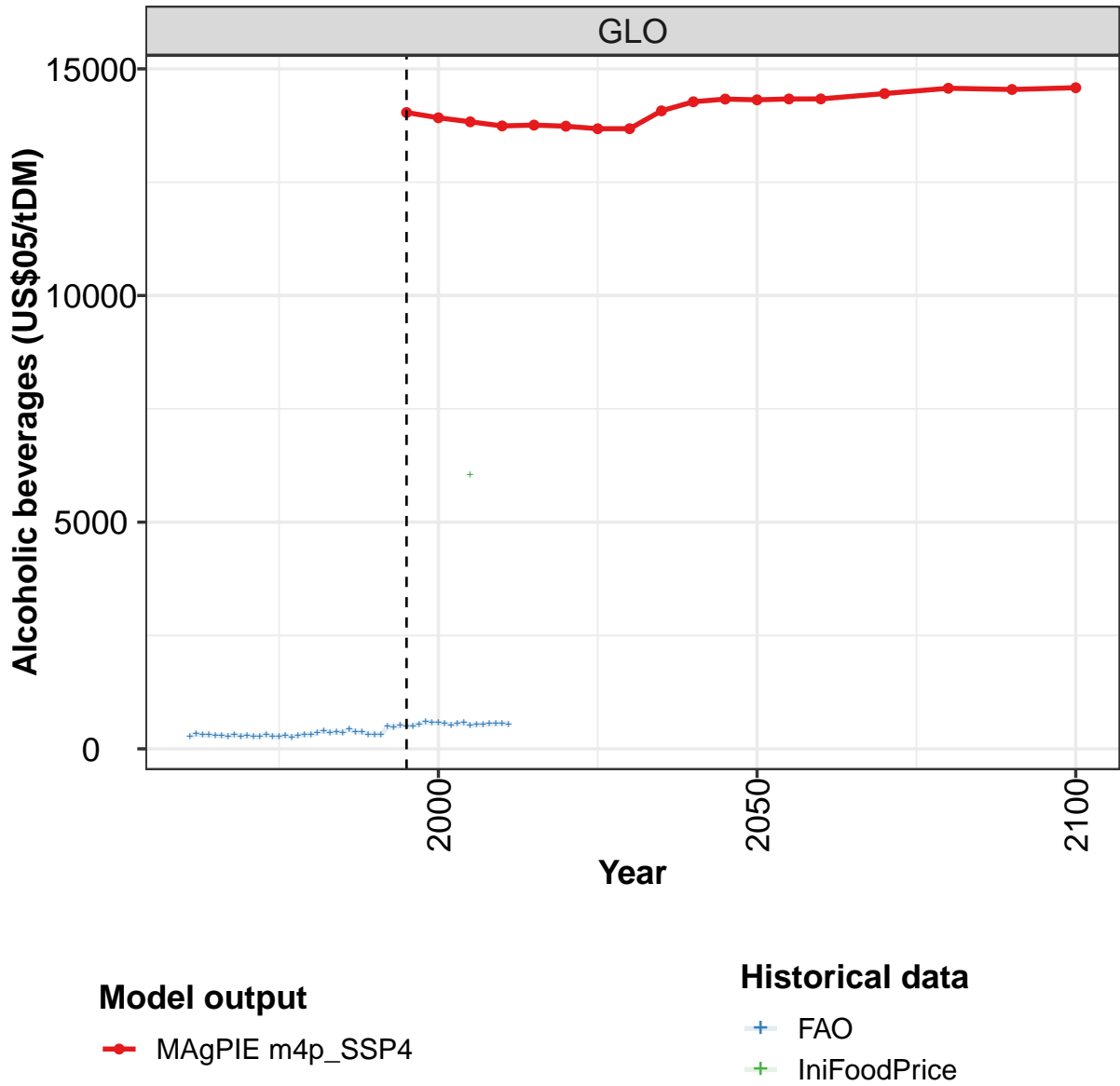
	2015	2016
GLO	7325	7412
CAZ	64	65
CHA	1379	1387
EUR	510	512
IND	1309	1324
JPN	127	127
LAM	631	638
MEA	466	475
NEU	109	110
OAS	1158	1173
REF	287	289
SSA	963	990
USA	321	323

Table 962: WDI — Population (million people) [PART 6/6]

Part XI  
Prices

36 Agriculture

36.1 Alcoholic beverages





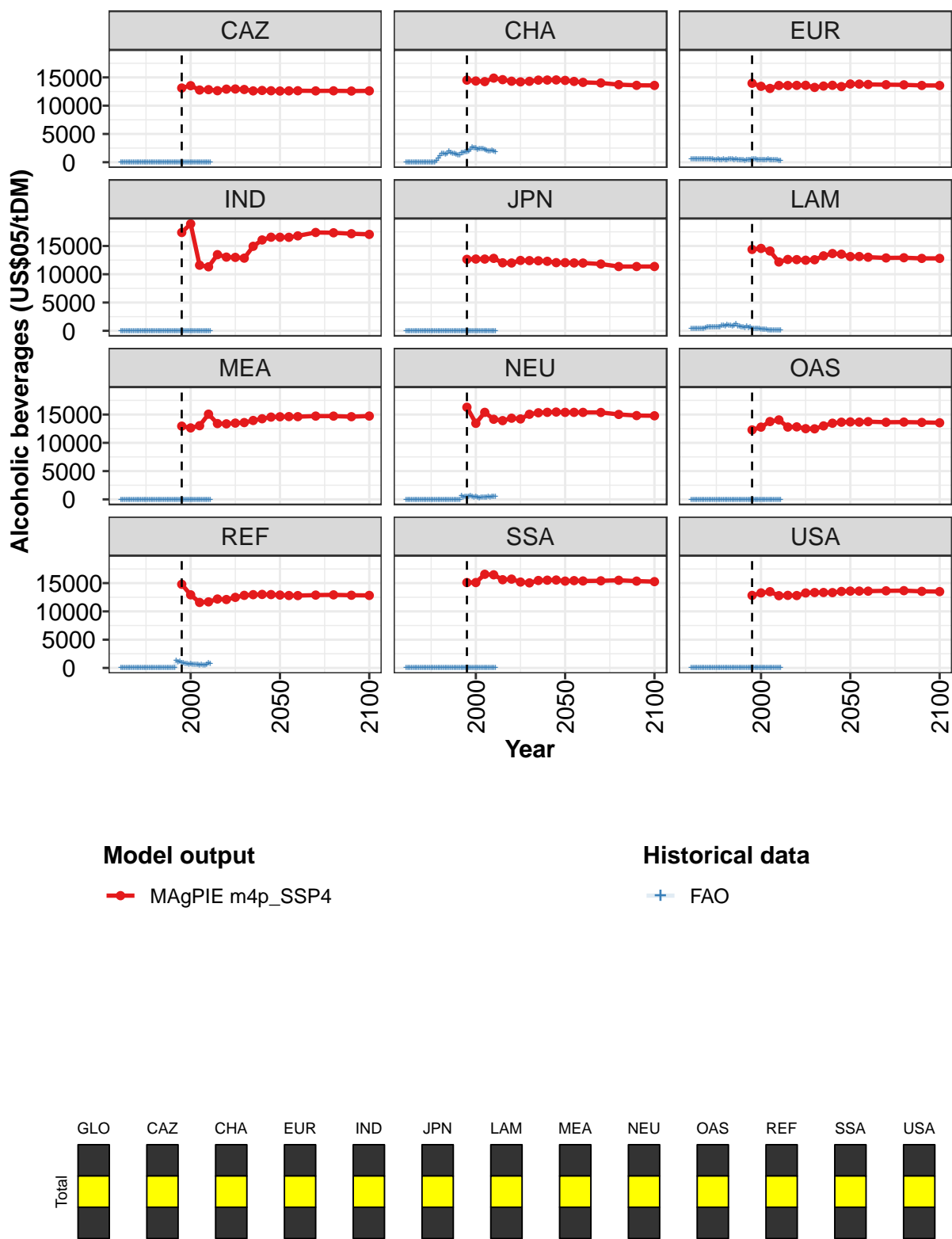


Figure 291: MAgPIE m4p\_SSP4 — Prices—Agriculture—Alcoholic beverages (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14037	13921	13832	13741	13759	13735	13679	13680	14074	14274	14333
CAZ	13121	13538	12771	12834	12647	12923	12948	12861	12613	12690	12638
CHA	14517	14366	14255	14874	14600	14324	14210	14307	14518	14531	14550
EUR	13963	13425	13049	13571	13567	13587	13601	13230	13471	13607	13374
IND	17384	18912	11600	11321	13466	13030	12985	12848	14943	16064	16550
JPN	12639	12687	12685	12810	12025	11990	12443	12413	12381	12293	12051
LAM	14386	14568	14114	12171	12617	12583	12481	12565	13251	13659	13547
MEA	12953	12639	13029	15071	13408	13358	13488	13580	13951	14259	14552
NEU	16289	13446	15390	14170	13925	14353	14223	15045	15314	15393	15448
OAS	12280	12777	13759	14051	12790	12822	12503	12475	12992	13467	13648
REF	14795	12932	11584	11685	12190	12098	12481	12841	12956	13004	12974
SSA	15101	15101	16565	16471	15600	15709	15192	15043	15465	15518	15547
USA	12827	13267	13485	12780	12836	12802	13265	13337	13342	13320	13528

Table 963: MAgPIE m4p\_SSP4 — Prices—Agriculture—Alcoholic beverages (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	14317	14336	14337	14455	14572	14545	14584
CAZ	12590	12620	12640	12612	12626	12587	12616
CHA	14467	14288	14122	14016	13719	13595	13583
EUR	13829	13819	13751	13711	13683	13577	13568
IND	16546	16531	16791	17387	17333	17168	17048
JPN	12048	11998	11981	11810	11363	11365	11368
LAM	13129	13139	13015	12885	12922	12801	12808
MEA	14607	14635	14624	14728	14724	14621	14738
NEU	15387	15392	15382	15373	15020	14819	14783
OAS	13698	13660	13745	13636	13669	13611	13547
REF	12889	12812	12797	12884	12925	12857	12826
SSA	15357	15441	15380	15408	15503	15356	15264
USA	13595	13594	13583	13641	13668	13547	13506

Table 964: MAgPIE m4p\_SSP4 — 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

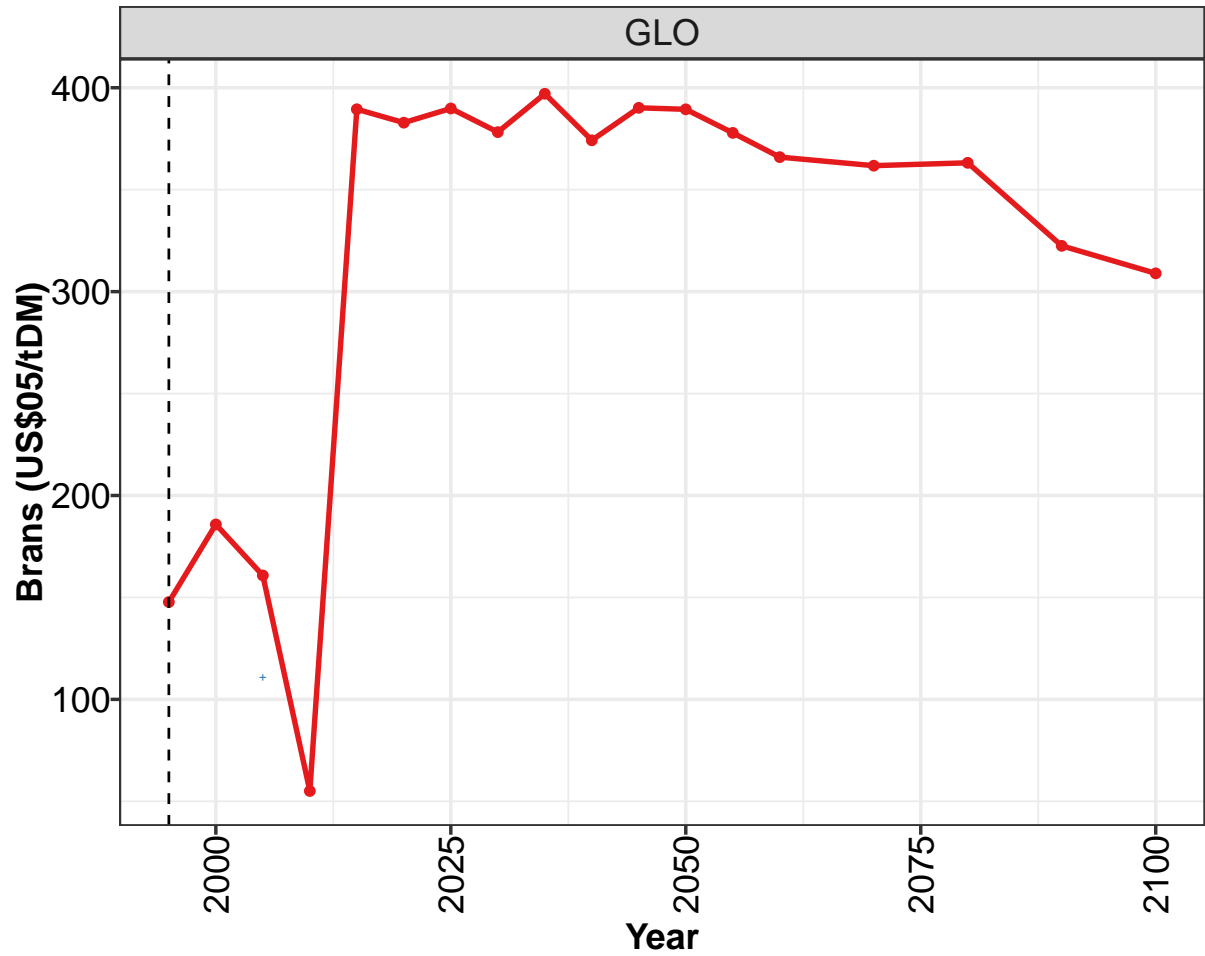
Table 969: FAO — Prices—Agriculture—Alcoholic beverages (US\$05/tDM) [PART 5/5]

	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

## geom\_path: Each group consists of only one observation. Do you need to adjust the group## aesthetic?



Model output

MAgPIE m4p\_SSP4

Historical data

IniFoodPrice

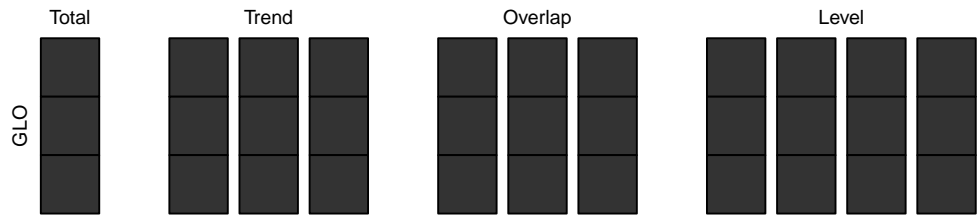


Figure 292: MAgPIE m4p\_SSP4 — Prices—Agriculture—Brans (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	148	186	161	55	389	383	390	378	397	374	390

Table 971: MAgPIE m4p\_SSP4 — Prices—Agriculture—Brans (US\$05/tDM) [PART 1/2]

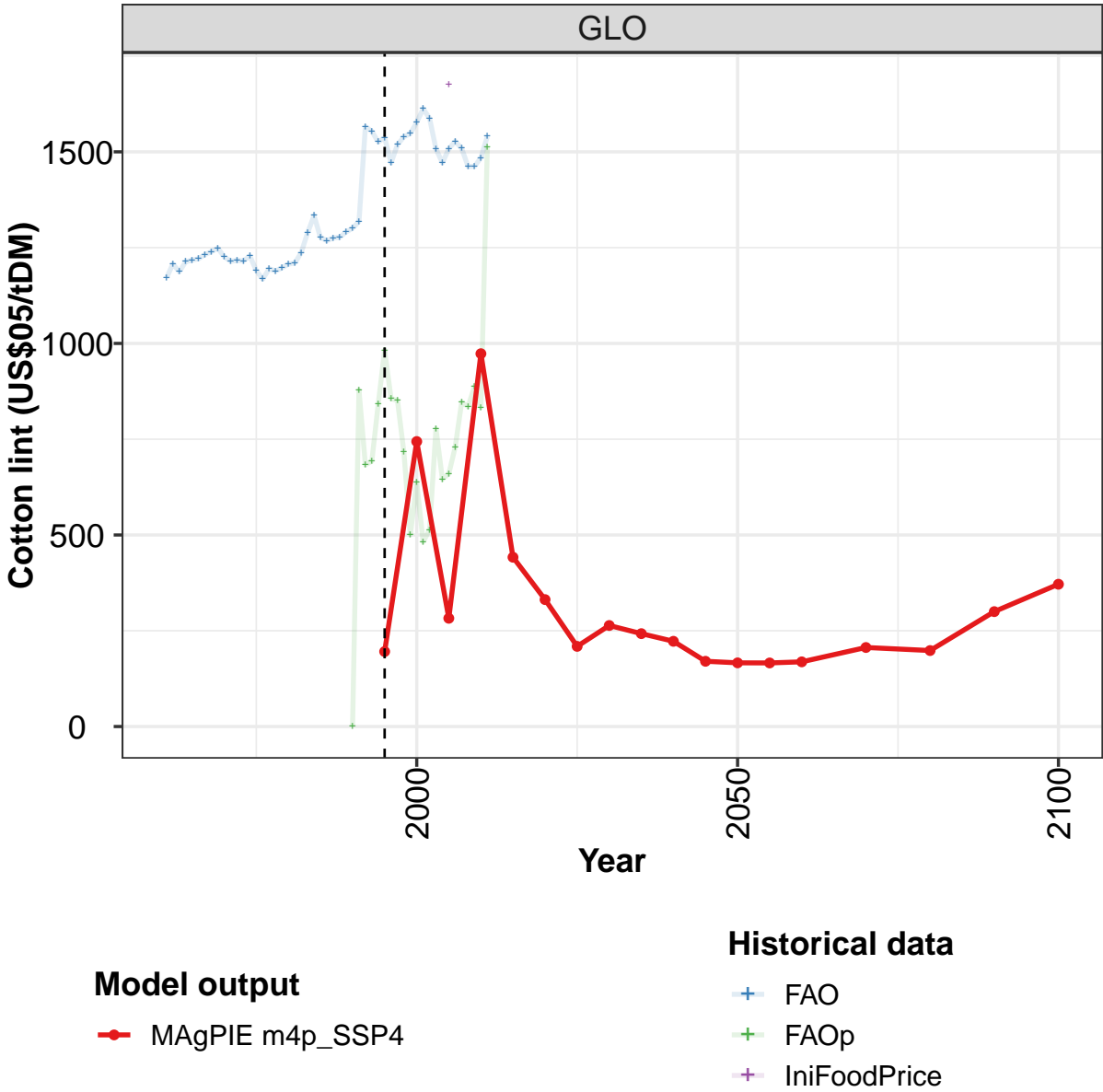
	2050	2055	2060	2070	2080	2090	2100
GLO	389	378	366	362	363	322	309

Table 972: MAgPIE m4p\_SSP4 — 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



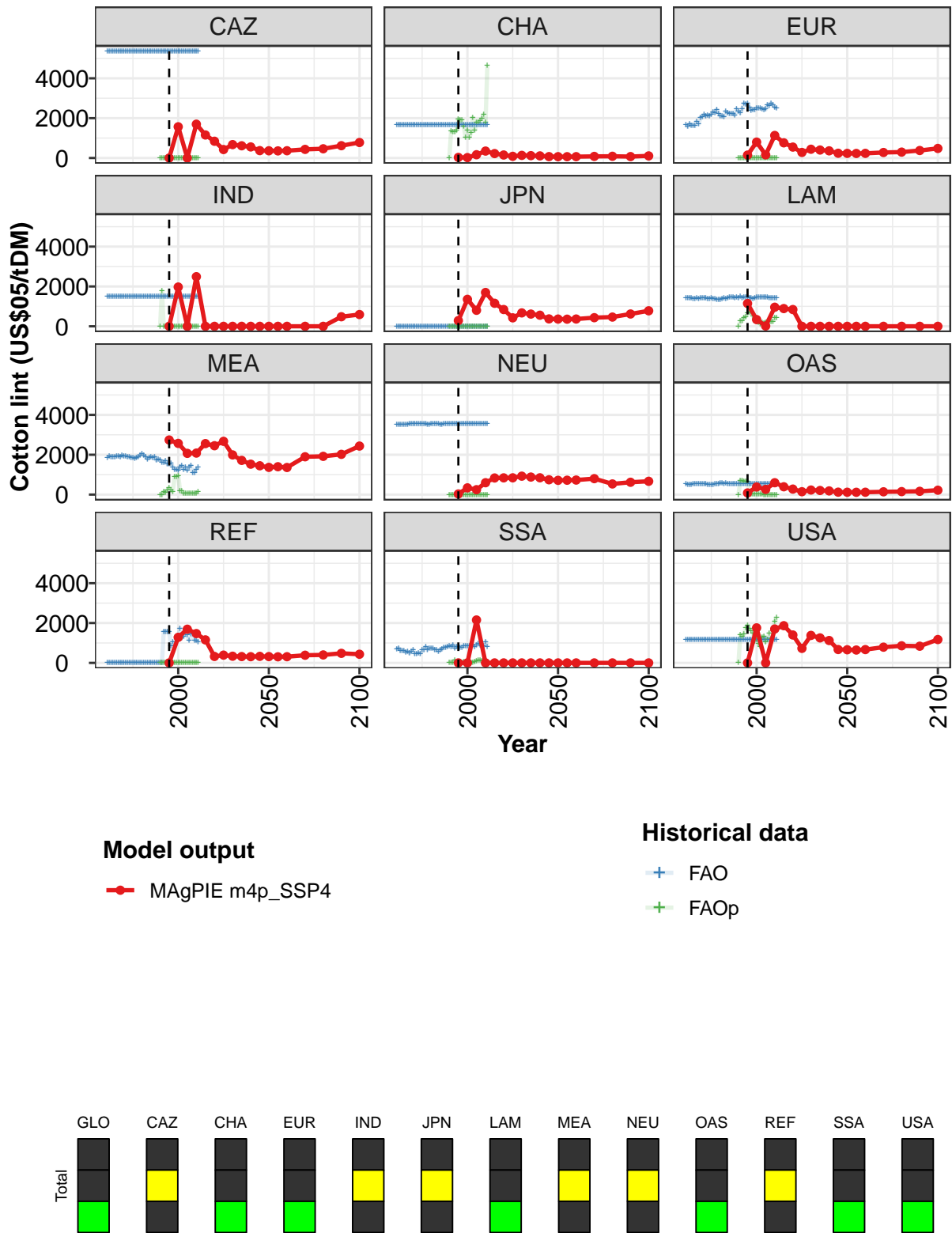


Figure 293: MAgPIE m4p\_SSP4 — Prices—Agriculture—Cotton lint (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	196	744	283	973	442	331	209	264	243	223	170
CAZ	0	1567	0	1698	1156	841	425	673	614	557	371
CHA	30	21	165	348	223	151	84	132	119	107	70
EUR	148	799	159	1132	762	548	280	441	400	360	239
IND	3	1971	0	2490	0	0	0	0	0	0	0
JPN	287	1354	804	1698	1156	841	425	673	614	557	371
LAM	1146	338	16	958	889	841	0	0	0	0	0
MEA	2741	2571	2070	2084	2560	2454	2675	1992	1717	1527	1447
NEU	32	338	247	596	834	841	842	925	881	844	744
OAS	83	382	261	596	393	276	146	228	206	185	122
REF	0	1283	1691	1472	1156	323	390	335	318	312	328
SSA	0	0	2154	0	0	0	0	0	0	0	0
USA	0	1759	0	1702	1867	1400	729	1380	1255	1124	671

Table 974: MAgPIE m4p\_SSP4 — Prices—Agriculture—Cotton lint (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	166	166	169	206	198	300	372
CAZ	363	357	365	433	463	619	778
CHA	68	66	68	81	86	72	106
EUR	233	228	234	277	297	377	481
IND	0	0	0	0	0	480	591
JPN	363	357	365	433	463	619	778
LAM	0	0	0	0	0	0	0
MEA	1367	1399	1361	1899	1920	2021	2436
NEU	716	722	730	801	535	619	669
OAS	118	116	119	141	151	165	220
REF	317	306	311	384	400	480	435
SSA	0	0	0	0	0	0	0
USA	660	646	668	789	858	838	1172

Table 975: MAgPIE m4p\_SSP4 — 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]

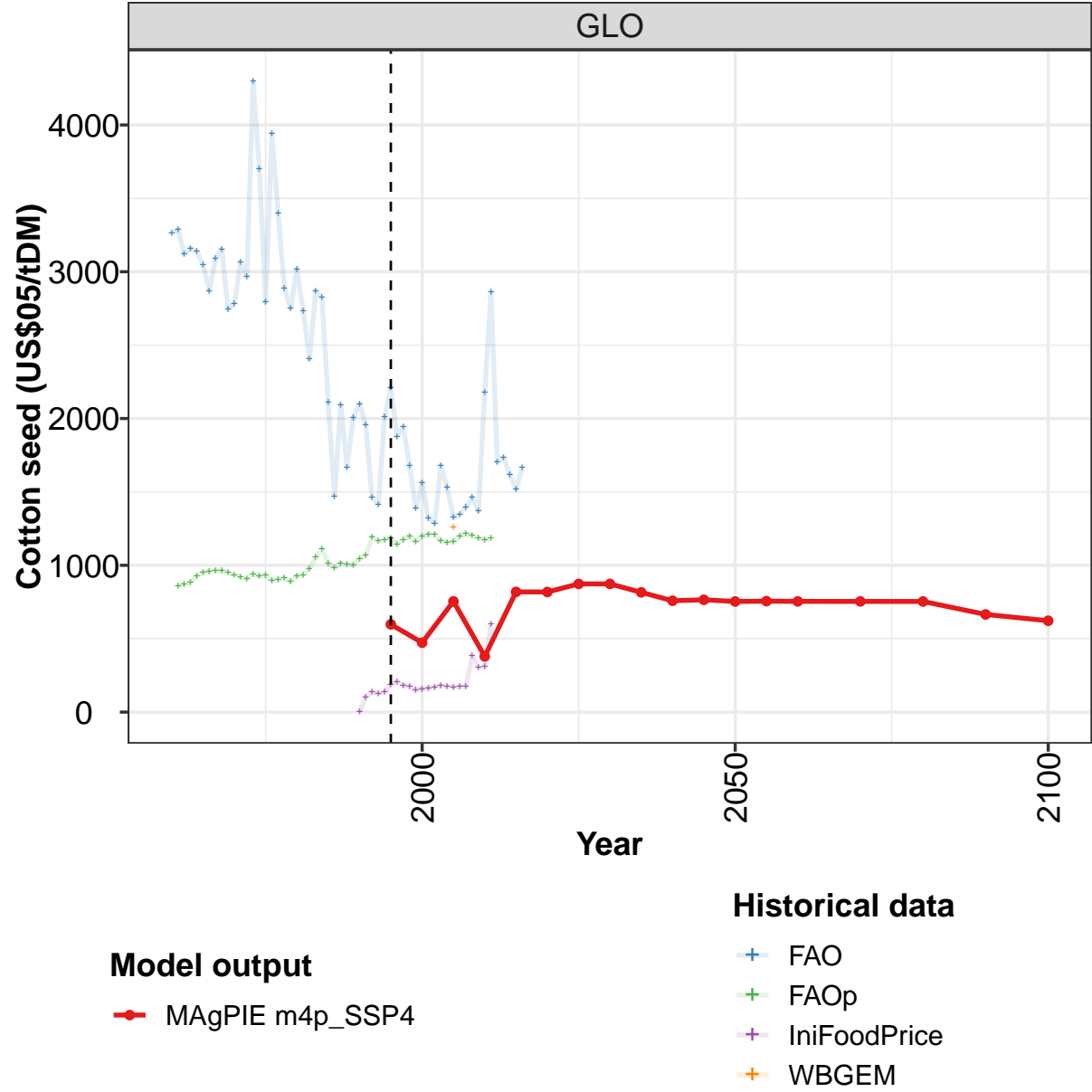
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	482	514	777	646	660	730	847	835	888	833	1512
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	1016	1284	2021	1377	1781	1798	1879	1981	2188	1805	4630
EUR	2	1	1	1	0	0	0	0	0	1	0
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	187	128	176	165	188	215	210	232	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



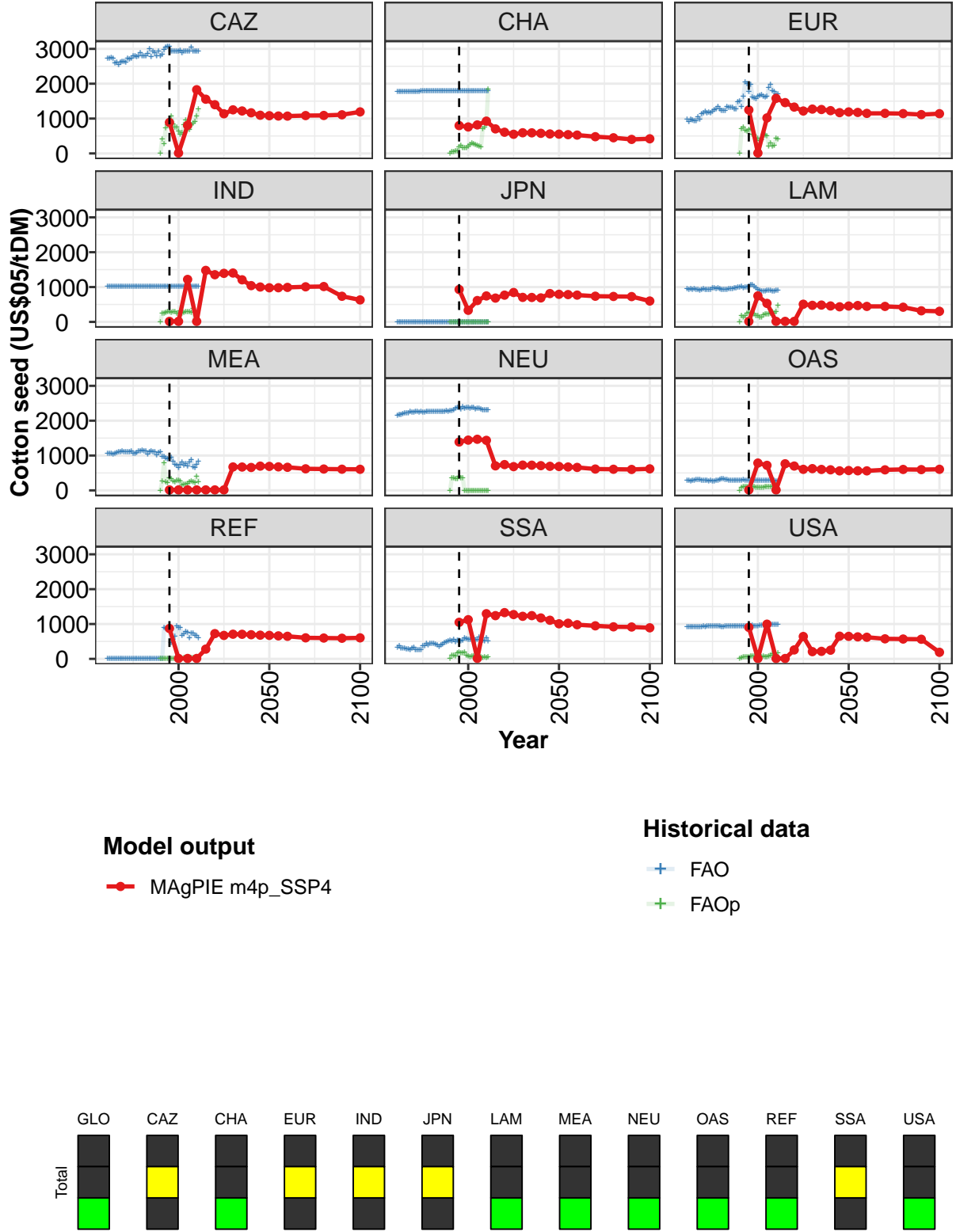


Figure 294: MAGPIE m4p\_SSP4 — Prices—Agriculture—Cotton seed (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	598	473	754	380	819	818	873	873	816	759	765
CAZ	889	12	806	1828	1555	1398	1138	1251	1219	1166	1096
CHA	799	759	818	927	705	608	550	593	591	577	559
EUR	1247	11	1019	1581	1458	1330	1217	1272	1260	1228	1170
IND	15	15	1219	15	1478	1354	1394	1403	1208	1041	1002
JPN	930	333	613	745	684	768	844	704	702	689	814
LAM	16	747	532	16	15	15	507	475	483	458	434
MEA	14	14	14	14	14	14	14	673	671	658	696
NEU	1389	1443	1467	1436	705	741	682	726	723	710	691
OAS	14	784	719	14	764	699	604	625	601	591	561
REF	872	13	12	12	280	725	673	708	706	693	680
SSA	1049	1124	15	1296	1241	1327	1272	1221	1241	1174	1109
USA	904	11	996	11	11	257	643	208	216	250	652

Table 984: MAgPIE m4p\_SSP4 — Prices—Agriculture—Cotton seed (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	754	756	754	754	754	665	622
CAZ	1083	1074	1071	1086	1090	1109	1192
CHA	553	539	527	480	450	402	420
EUR	1190	1177	1149	1150	1142	1114	1140
IND	980	981	990	1008	1015	736	631
JPN	792	784	769	738	731	727	600
LAM	456	470	445	445	422	318	304
MEA	689	675	663	619	613	608	606
NEU	686	671	659	613	607	601	618
OAS	570	563	561	590	602	596	606
REF	674	661	649	604	598	592	603
SSA	1007	1023	980	948	920	915	892
USA	646	632	620	575	570	564	189

Table 985: MAgPIE m4p\_SSP4 — 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]

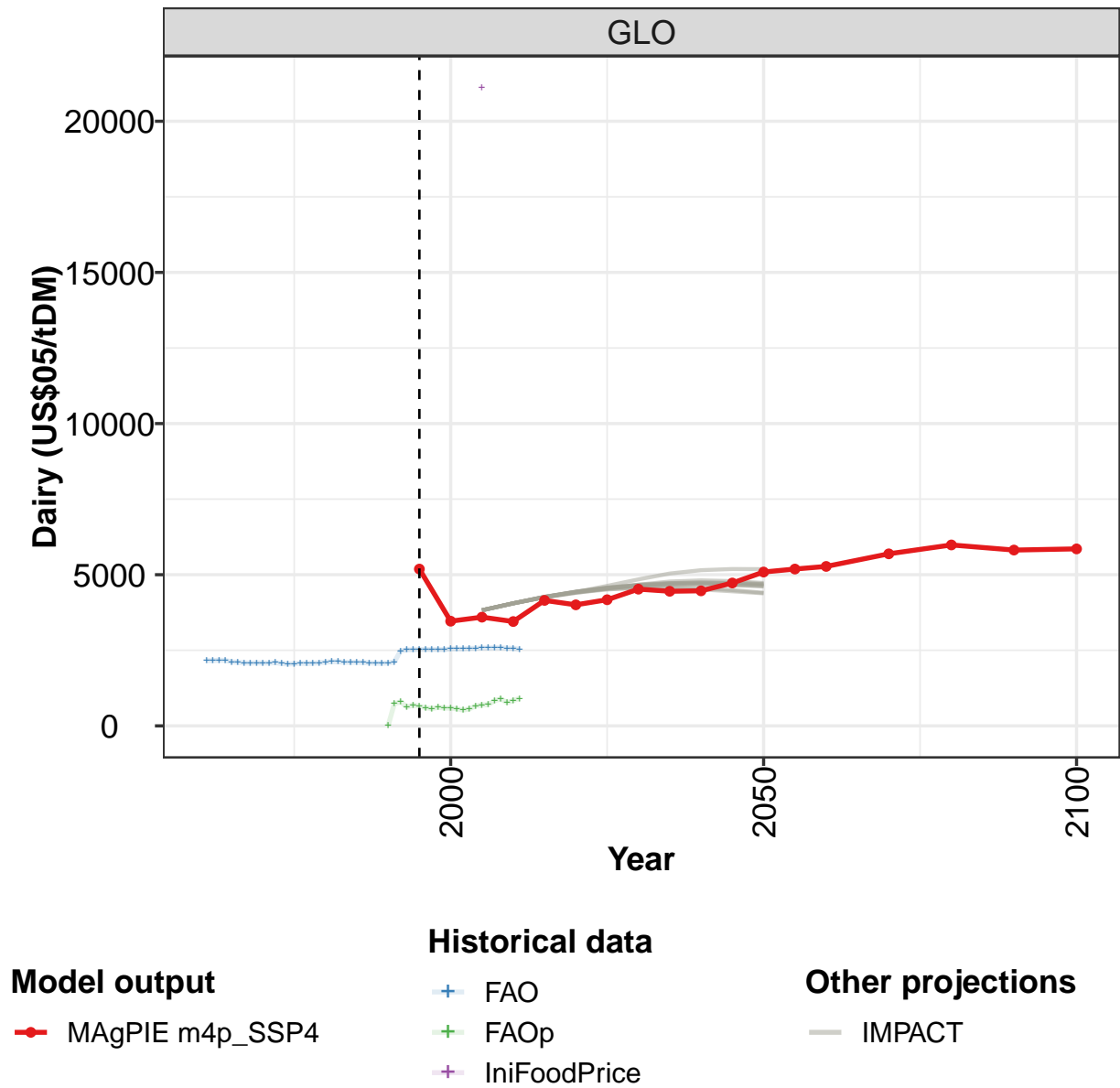
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	164	171	180	177	170	172	176	382	304	308	602
CAZ	552	582	826	950	698	685	821	872	911	1068	1262
CHA	244	290	267	244	224	206	191	711	739	852	1839
EUR	367	380	554	515	496	211	301	202	224	429	407
IND	306	242	265	293	279	292	270	375	0	0	0
JPN	0	0	0	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



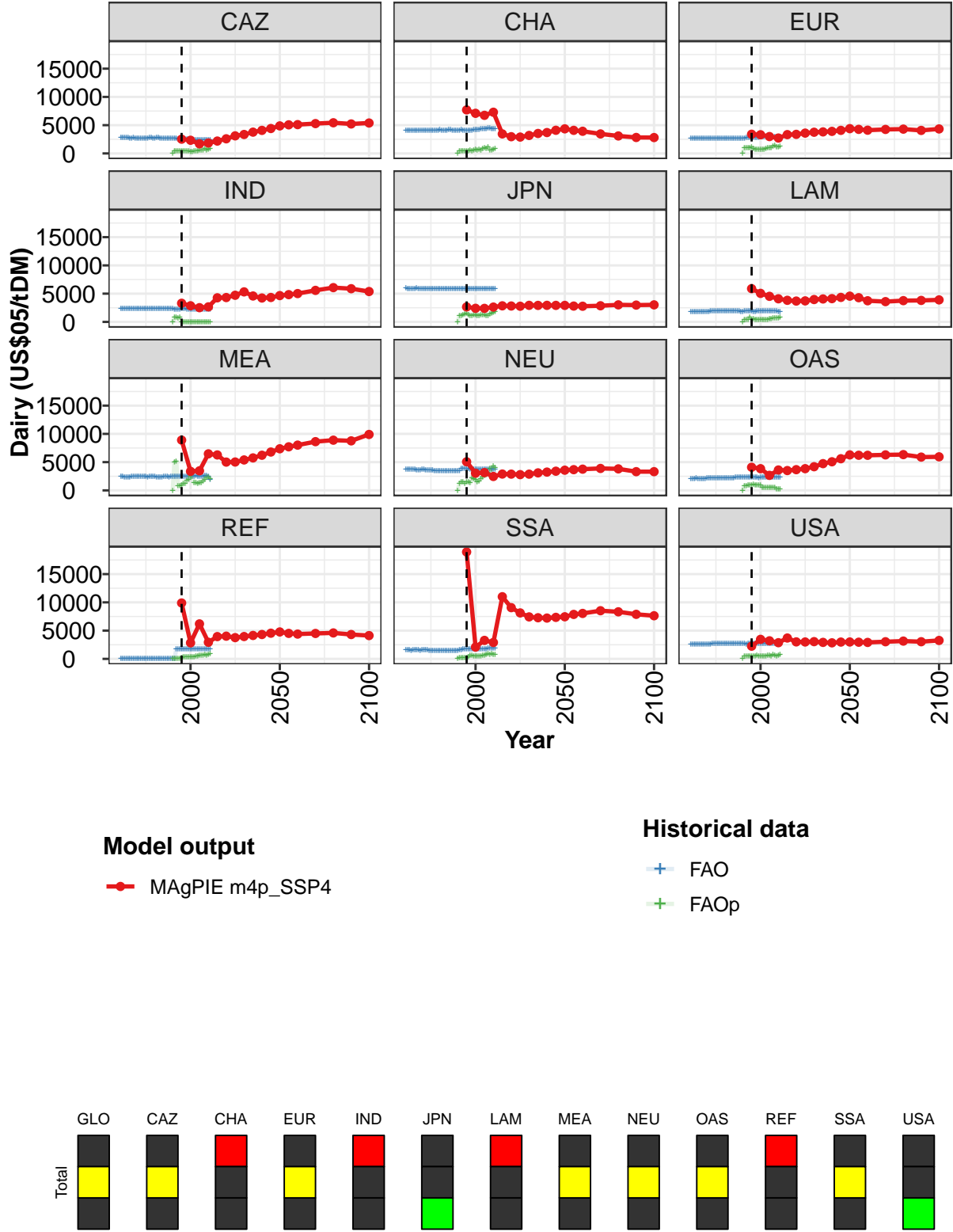


Figure 295: MAgPIE m4p\_SSP4 — Prices—Agriculture—Dairy (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5188	3464	3597	3452	4151	4005	4173	4523	4453	4467	4726
CAZ	2525	2329	1695	1846	2189	2591	3111	3356	3770	4079	4408
CHA	7704	7099	6745	7288	3455	2963	2898	3185	3534	3696	4100
EUR	3398	3306	2985	2721	3328	3377	3596	3751	3813	3905	4083
IND	3303	2860	2524	2666	4267	4315	4717	5319	4587	4231	4324
JPN	2655	2410	2396	2627	2849	2816	2778	2934	2922	2932	2928
LAM	5886	5052	4527	4093	3822	3690	3725	3958	4062	4119	4339
MEA	8904	3369	3468	6467	6274	5010	5026	5388	5751	6221	6790
NEU	5066	3046	3148	2466	2895	2880	2793	2877	3103	3243	3398
OAS	4093	3842	2664	3614	3512	3671	3845	4193	4736	5066	5603
REF	9890	2838	6193	2937	3945	4020	3765	3958	4147	4315	4546
SSA	18916	2086	3275	2905	11002	9069	8135	7429	7280	7224	7350
USA	2249	3455	3197	2865	3692	3010	2991	3051	2919	2841	2979

Table 1000: MAgPIE m4p\_SSP4 — Prices—Agriculture—Dairy (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5089	5188	5275	5691	5985	5816	5855
CAZ	4874	5063	5101	5282	5427	5218	5385
CHA	4352	4089	3921	3453	3093	2826	2812
EUR	4386	4259	4113	4247	4303	4072	4334
IND	4659	4828	5016	5583	6068	5879	5380
JPN	2928	2805	2775	2860	3019	2977	3019
LAM	4560	4285	3746	3592	3767	3804	3898
MEA	7365	7712	8013	8626	8889	8766	9899
NEU	3576	3670	3758	3885	3809	3316	3315
OAS	6284	6218	6210	6287	6333	5895	5942
REF	4768	4515	4390	4499	4593	4310	4128
SSA	7453	7870	8045	8525	8333	7886	7634
USA	2991	2952	2913	3035	3148	3040	3262

Table 1001: MAgPIE m4p\_SSP4 — 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]

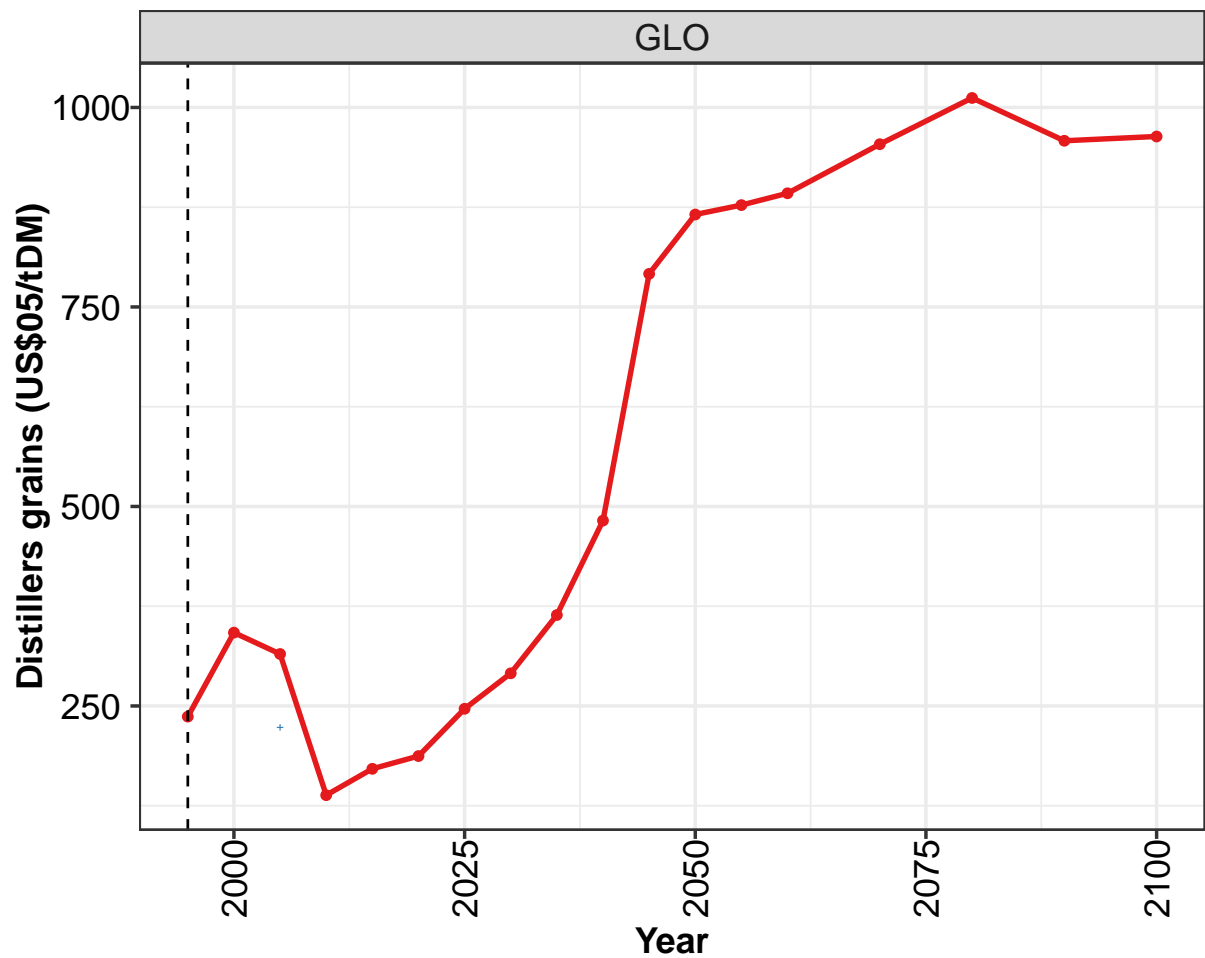


	2005
GLO	21104
CAZ	
CHA	
EUR	
IND	
JPN	
LAM	
MEA	
NEU	
OAS	
REF	
SSA	
USA	

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?



Model output

—•— MAGPIE m4p\_SSP4

Historical data

+ IniFoodPrice

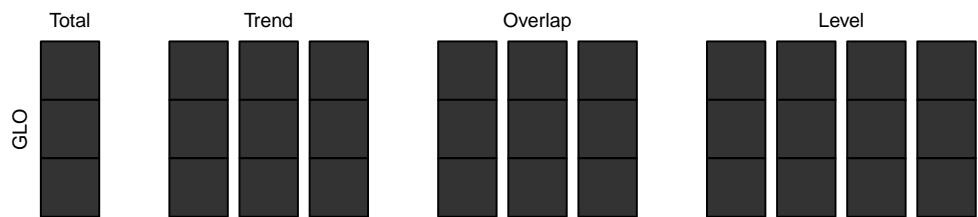


Figure 296: MAGPIE m4p\_SSP4 — Prices—Agriculture—Distillers grains (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	237	342	315	138	171	187	246	291	364	482	792

Table 1010: MAgPIE m4p\_SSP4 — Prices—Agriculture—Distillers grains (US\$05/tDM) [PART 1/2]

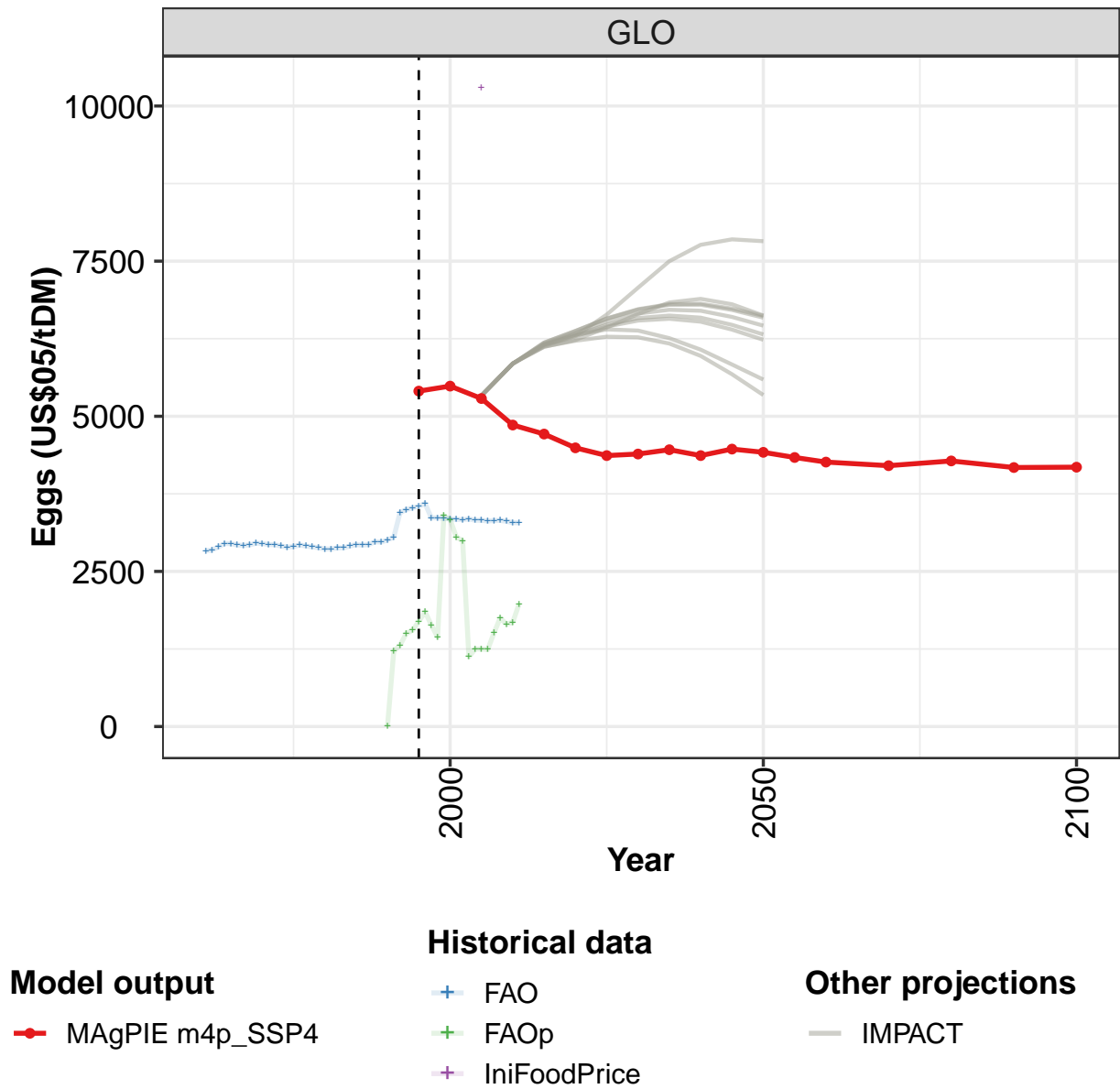
	2050	2055	2060	2070	2080	2090	2100
GLO	866	878	892	954	1012	958	964

Table 1011: MAgPIE m4p\_SSP4 — 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



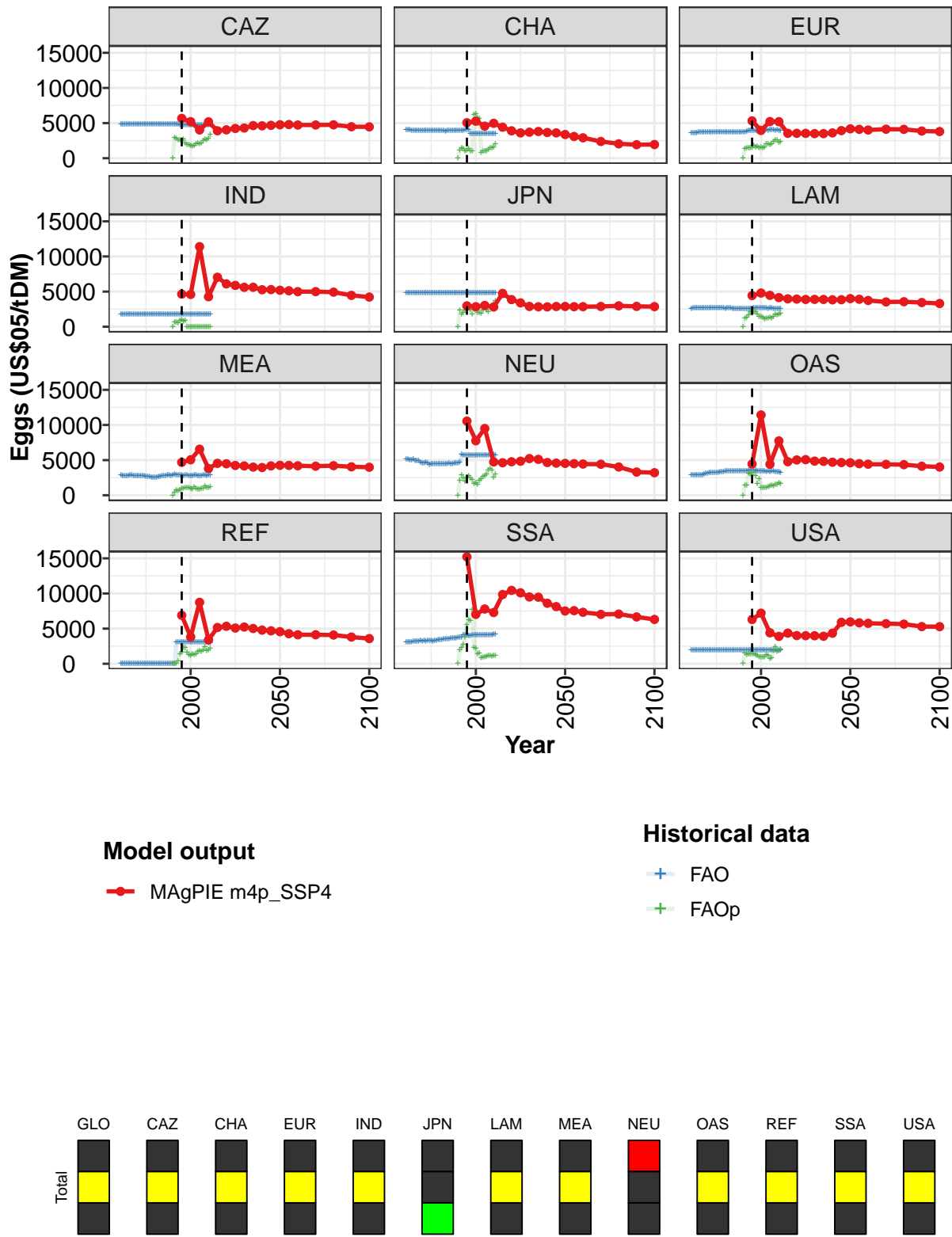


Figure 297: MAgPIE m4p\_SSP4 — Prices—Agriculture—Eggs (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5406	5486	5287	4859	4714	4492	4367	4392	4461	4367	4471
CAZ	5665	5202	4021	5173	3907	4039	4234	4301	4644	4610	4680
CHA	5060	5264	4565	4970	4416	3900	3602	3701	3803	3663	3603
EUR	5314	3955	5215	5199	3543	3543	3538	3500	3501	3600	3927
IND	4642	4600	11396	4271	7038	6099	5881	5610	5621	5262	5286
JPN	2968	2848	3028	2815	4744	3860	3396	2888	2841	2824	2879
LAM	4436	4795	4468	4144	3970	3936	3882	3893	3882	3829	3844
MEA	4682	5051	6555	3802	4539	4479	4240	4172	4008	3943	4178
NEU	10552	7759	9502	4743	4624	4768	4844	5221	5112	4656	4572
OAS	4456	11426	4409	7733	4779	5021	5068	4857	4824	4701	4653
REF	6895	3814	8739	3404	5160	5333	5085	5230	5021	4788	4687
SSA	15215	7029	7798	7293	9853	10441	10098	9506	9477	8613	8132
USA	6295	7201	4409	3900	4360	4015	3997	3989	3917	4351	5900

Table 1013: MAgPIE m4p\_SSP4 — Prices—Agriculture—Eggs (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4420	4336	4262	4204	4280	4174	4180
CAZ	4760	4790	4721	4727	4749	4477	4463
CHA	3372	3093	2904	2381	2048	1925	1948
EUR	4186	4110	4015	4128	4108	3869	3797
IND	5193	5119	4991	4996	4922	4460	4224
JPN	2886	2855	2856	2883	2976	2895	2862
LAM	4000	3915	3737	3526	3557	3444	3304
MEA	4264	4243	4195	4133	4208	4048	3985
NEU	4532	4496	4441	4416	4021	3301	3212
OAS	4624	4496	4419	4396	4353	4131	4022
REF	4566	4280	4125	4130	4092	3802	3583
SSA	7509	7559	7329	7028	7072	6668	6311
USA	5962	5828	5756	5707	5644	5293	5281

Table 1014: MAgPIE m4p\_SSP4 — 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?

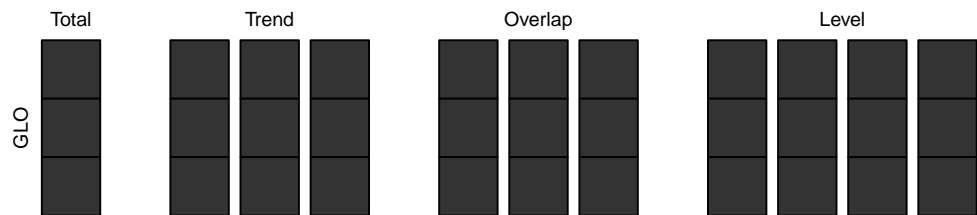
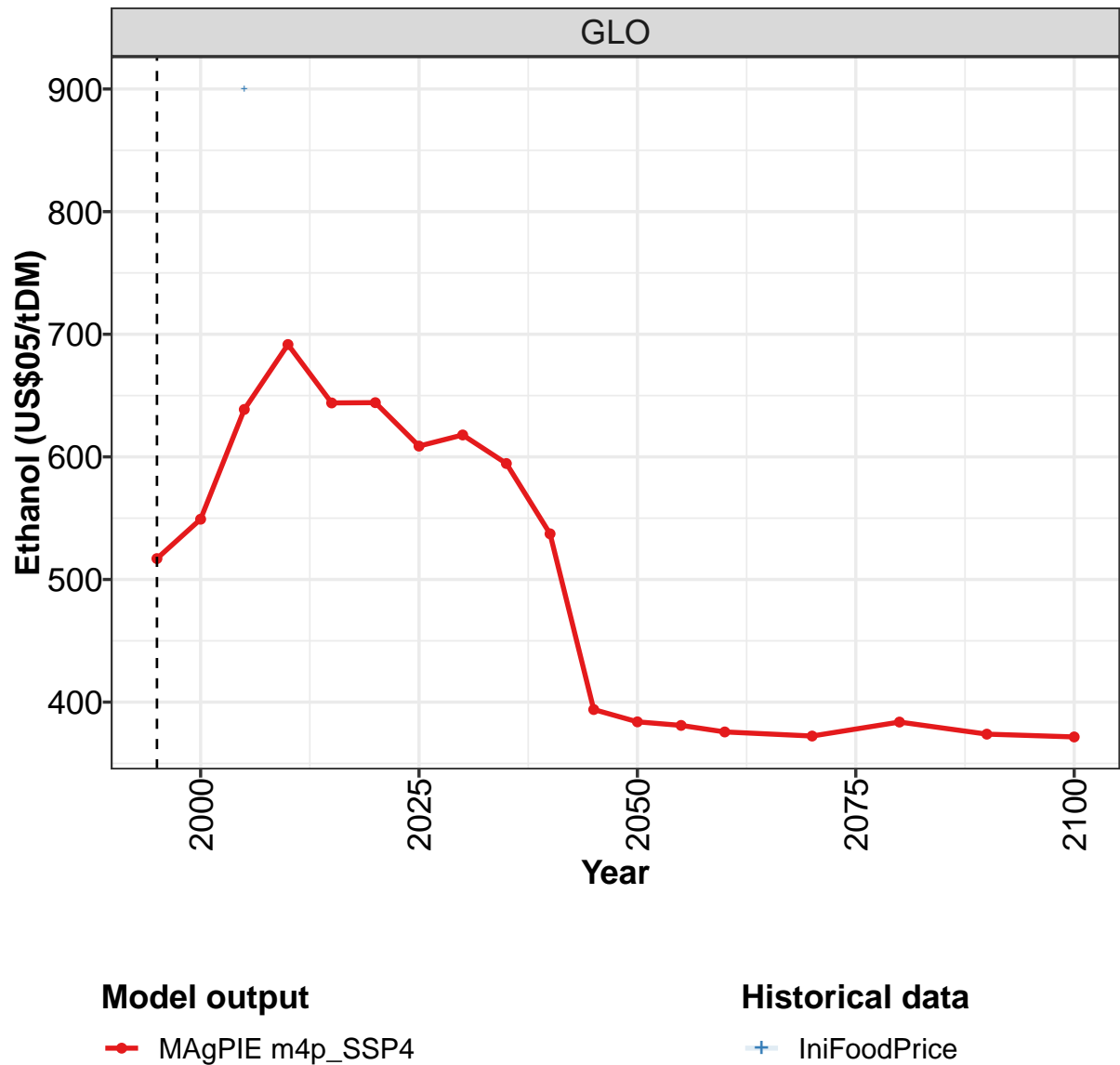


Figure 298: MAgPIE m4p\_SSP4 — Prices—Agriculture—Ethanol (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	517	549	639	692	644	644	609	618	595	537	394

Table 1023: MAgPIE m4p\_SSP4 — Prices—Agriculture—Ethanol (US\$05/tDM) [PART 1/2]

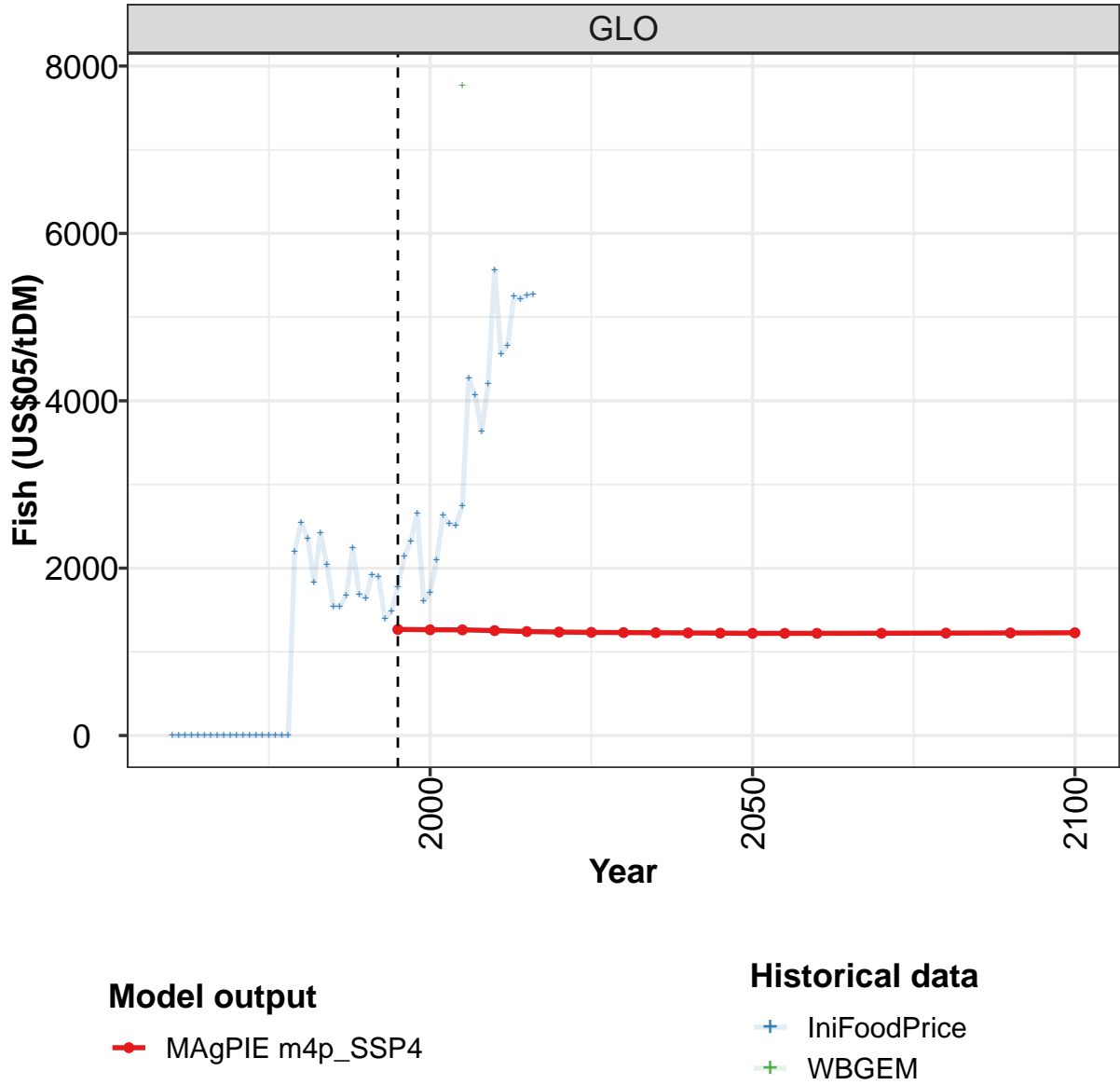
	2050	2055	2060	2070	2080	2090	2100
GLO	384	381	376	372	384	374	372

Table 1024: MAgPIE m4p\_SSP4 — Prices—Agriculture—Ethanol (US\$05/tDM) [PART 2/2]

	2005
GLO	900

Table 1025: IniFoodPrice — Prices—Agriculture—Ethanol (US\$05/tDM)

36.9 Fish



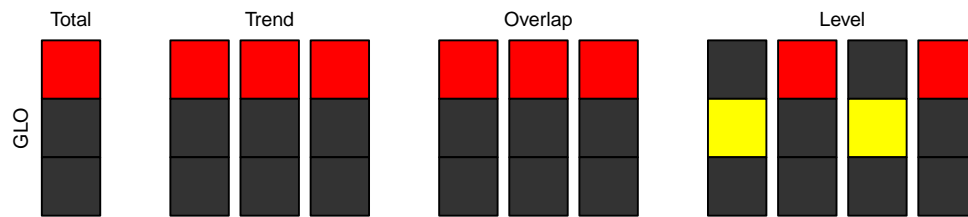


Figure 299: MAgPIE m4p\_SSP4 — Prices—Agriculture—Fish (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1268	1263	1263	1254	1242	1237	1233	1230	1228	1226	1224

Table 1026: MAgPIE m4p\_SSP4 — Prices—Agriculture—Fish (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1221	1221	1221	1222	1224	1226	1228

Table 1027: MAgPIE m4p\_SSP4 — 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]

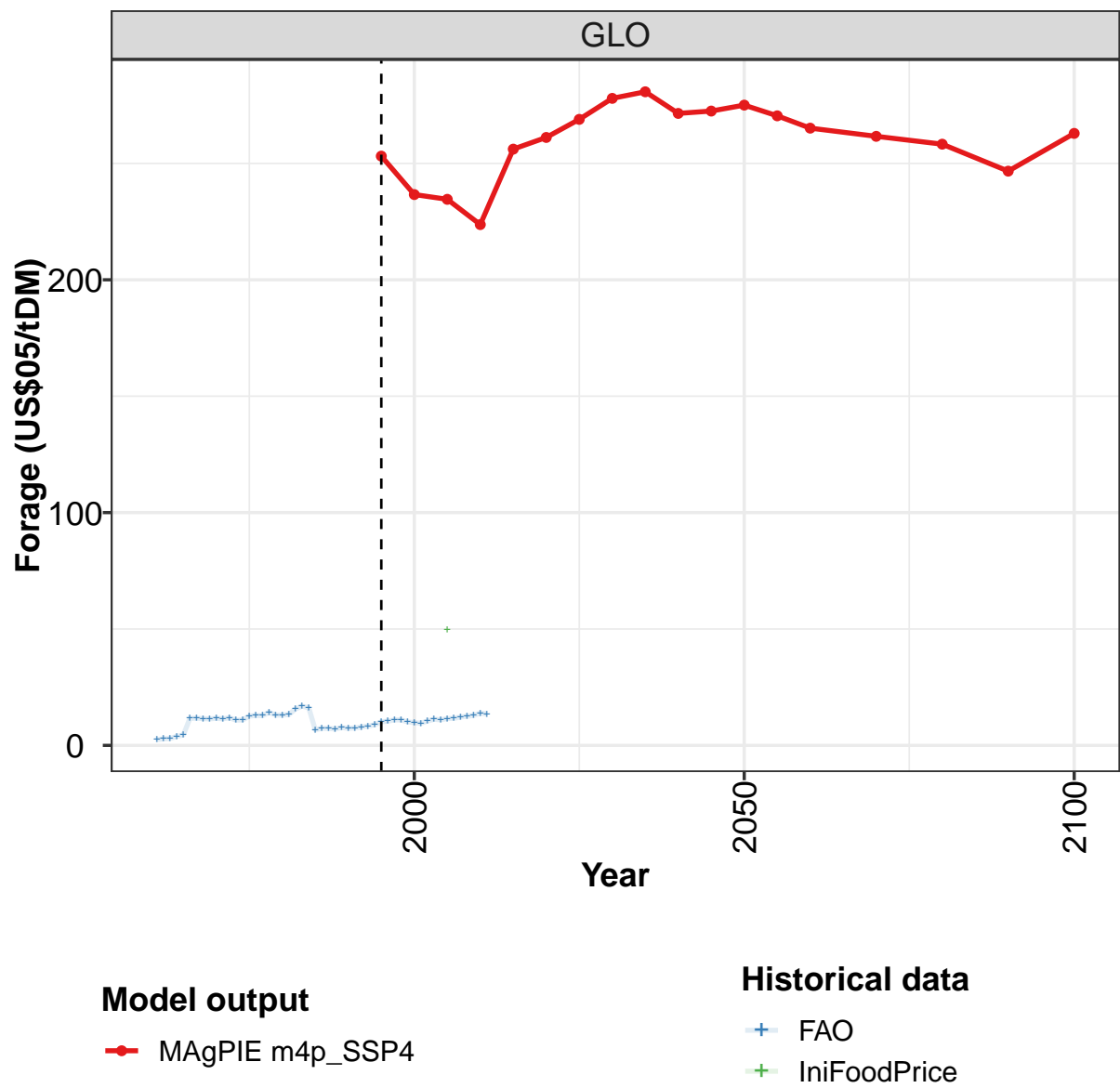
	2015	2016
GLO	5256	5275

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



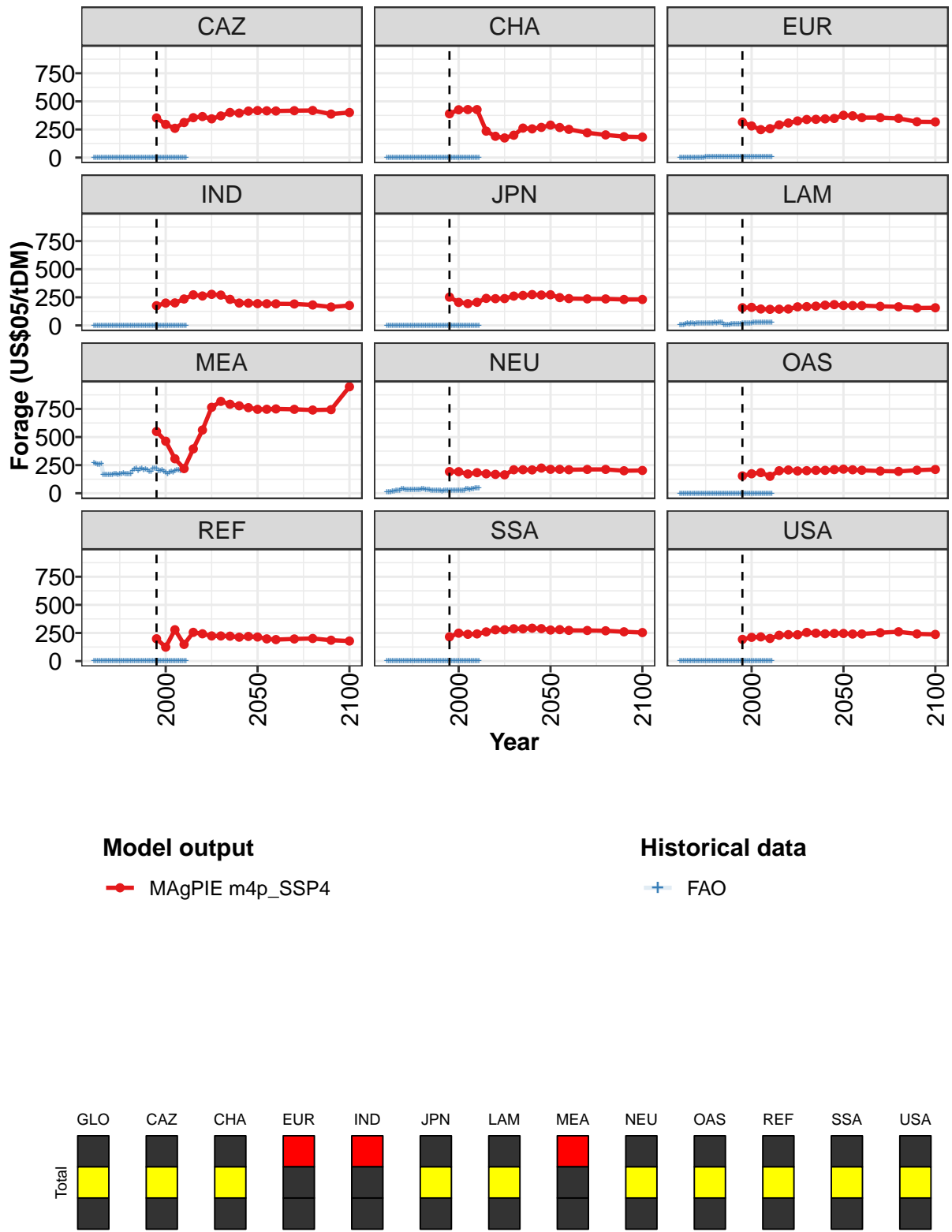


Figure 300: MAgPIE m4p\_SSP4 — Prices—Agriculture—Forage (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	253	237	235	224	256	261	269	278	281	271	272
CAZ	353	295	260	312	355	365	345	370	401	396	414
CHA	389	425	427	427	235	189	175	199	262	255	268
EUR	315	281	248	257	291	307	326	339	340	344	348
IND	175	199	200	235	272	262	277	270	232	199	198
JPN	251	205	194	206	241	238	239	261	267	274	270
LAM	157	161	146	143	144	146	165	167	171	180	185
MEA	549	463	307	219	395	562	765	817	792	778	761
NEU	193	192	172	183	173	168	164	209	209	208	224
OAS	154	173	184	151	200	207	198	201	204	204	210
REF	199	124	279	148	256	243	224	223	221	213	219
SSA	216	248	239	242	260	278	278	288	287	293	289
USA	193	211	215	201	230	235	234	255	248	242	246

Table 1035: MAgPIE m4p\_SSP4 — Prices—Agriculture—Forage (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	275	270	265	262	258	247	263
CAZ	418	416	414	417	419	387	401
CHA	289	268	251	220	202	186	183
EUR	376	371	356	355	348	319	317
IND	194	193	192	191	182	164	177
JPN	273	247	239	236	235	231	231
LAM	177	176	176	170	165	155	157
MEA	746	747	750	746	740	744	947
NEU	213	213	209	212	212	200	203
OAS	214	209	204	197	194	205	212
REF	214	197	191	197	201	185	178
SSA	276	280	273	272	270	261	254
USA	246	241	241	252	261	242	237

Table 1036: MAgPIE m4p\_SSP4 — 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]



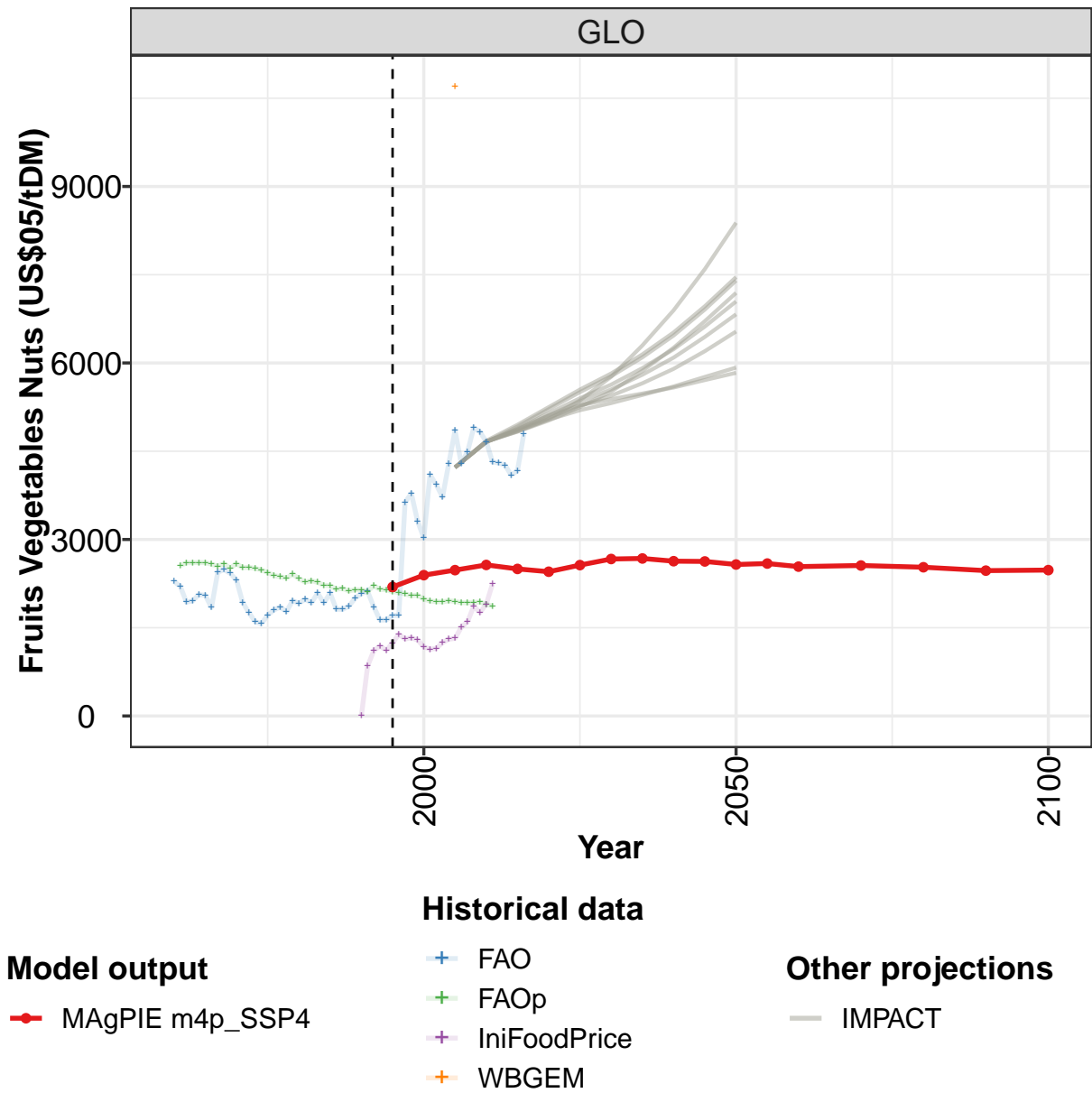
	2005	2006	2007	2008	2009	2010	2011
GLO	12	12	12	13	13	14	14
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	8	7	8	9	8	8	7
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	26	28	28	30	28	29	28
MEA	201	207	208	198	207	214	215
NEU	36	33	41	42	43	44	43
OAS	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0
SSA	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	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



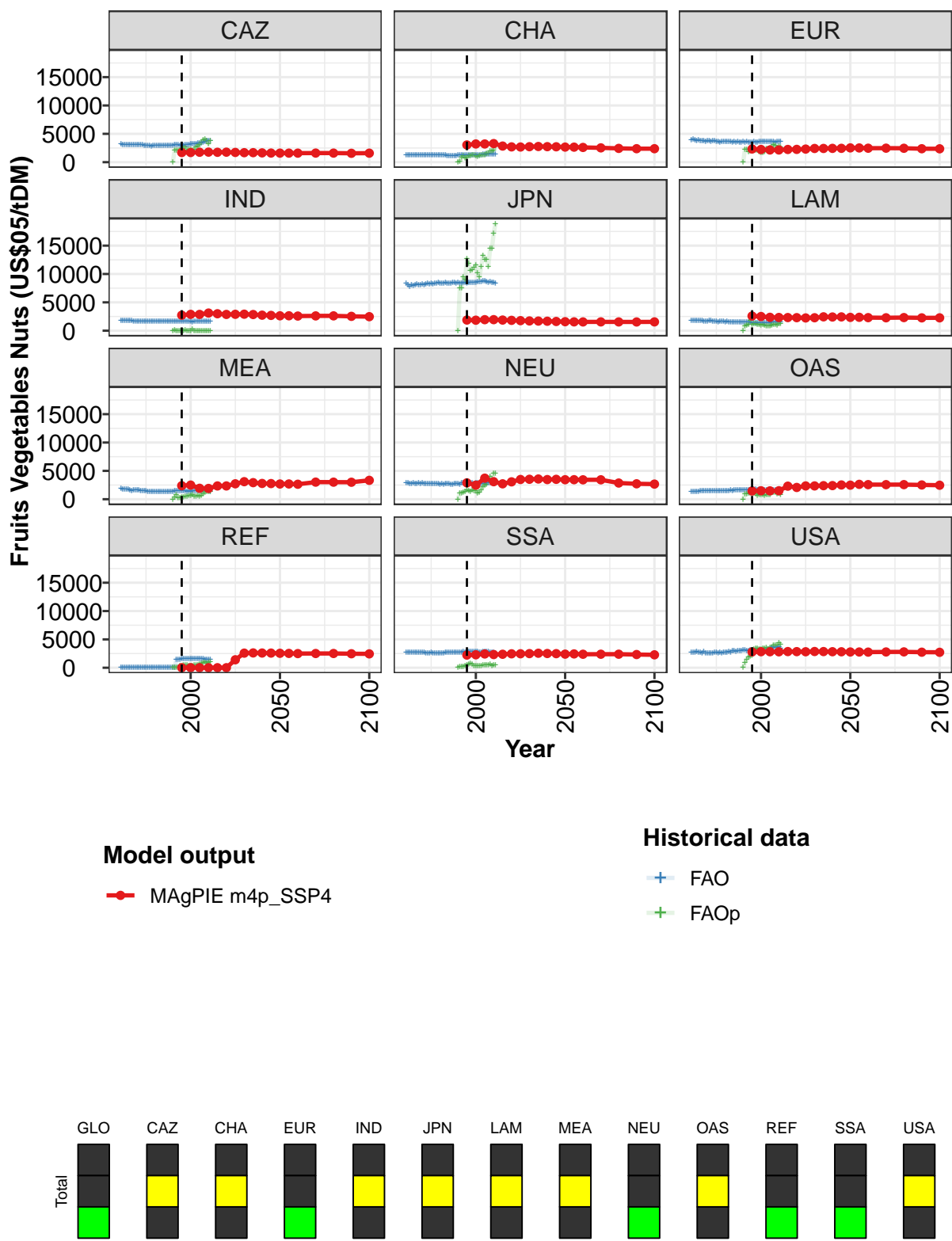


Figure 301: MAGPIE m4p\_SSP4 — Prices—Agriculture—Fruits Vegetables Nuts (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2192	2393	2479	2567	2499	2452	2564	2668	2677	2631	2627
CAZ	1699	1705	1750	1772	1746	1766	1719	1677	1680	1641	1610
CHA	3040	3213	3214	3281	2841	2701	2679	2733	2767	2741	2718
EUR	2329	2237	2154	2154	2245	2256	2313	2417	2421	2435	2443
IND	2735	2882	2876	3113	2994	2870	2894	2912	2852	2738	2701
JPN	1880	1851	1945	1948	1878	1827	1773	1720	1699	1669	1627
LAM	2588	2503	2362	2334	2318	2299	2253	2287	2449	2418	2437
MEA	2387	2494	1932	1902	2343	2343	2721	3098	2923	2783	2761
NEU	2889	2477	3715	3092	2717	3069	3480	3522	3565	3468	3508
OAS	1456	1489	1476	1498	2307	2076	2347	2347	2391	2403	2516
REF	9	9	9	9	9	9	1408	2579	2616	2597	2587
SSA	2239	2287	2428	2327	2381	2458	2467	2495	2564	2511	2488
USA	2786	2833	2826	2813	2853	2842	2821	2863	2855	2828	2819

Table 1043: MAgPIE m4p\_SSP4 — Prices—Agriculture—Fruits Vegetables Nuts (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2575	2591	2539	2557	2528	2470	2479
CAZ	1599	1599	1594	1606	1601	1568	1590
CHA	2665	2654	2601	2526	2432	2380	2380
EUR	2523	2510	2466	2473	2452	2370	2362
IND	2629	2634	2585	2610	2619	2531	2476
JPN	1590	1561	1551	1556	1548	1543	1557
LAM	2352	2364	2304	2281	2315	2265	2270
MEA	2688	2695	2642	3017	3010	2997	3330
NEU	3443	3445	3422	3427	2856	2720	2670
OAS	2485	2627	2575	2572	2576	2516	2469
REF	2551	2529	2499	2511	2515	2469	2447
SSA	2401	2442	2382	2386	2391	2329	2281
USA	2784	2778	2758	2787	2799	2743	2725

Table 1044: MAgPIE m4p\_SSP4 — 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: WBGEN — 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: WBGEN — 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

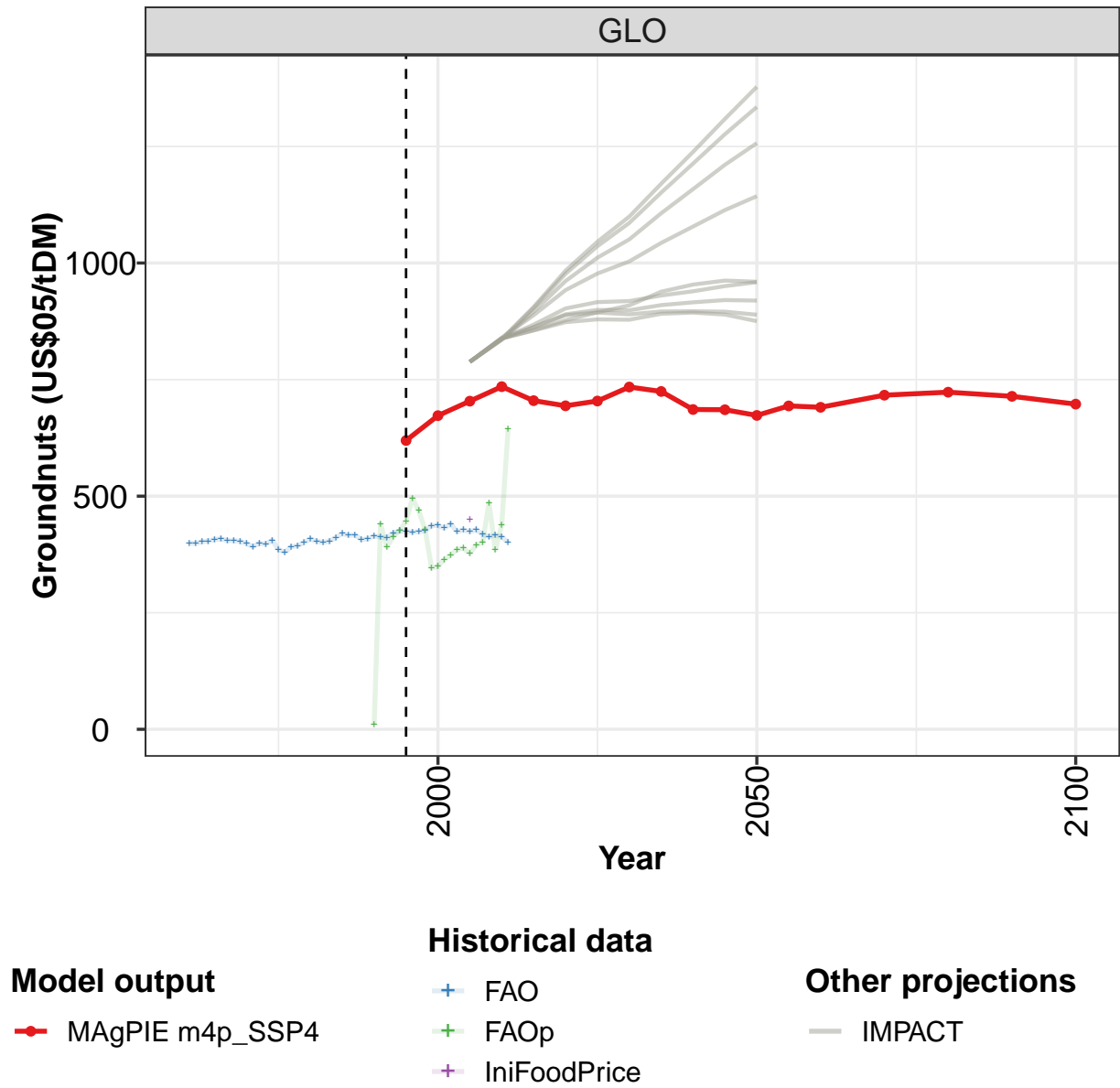
Table 1057: FAOp — Prices—Agriculture—Fruits Vegetables Nuts (US\$05/tDM) [PART 2/3]



	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



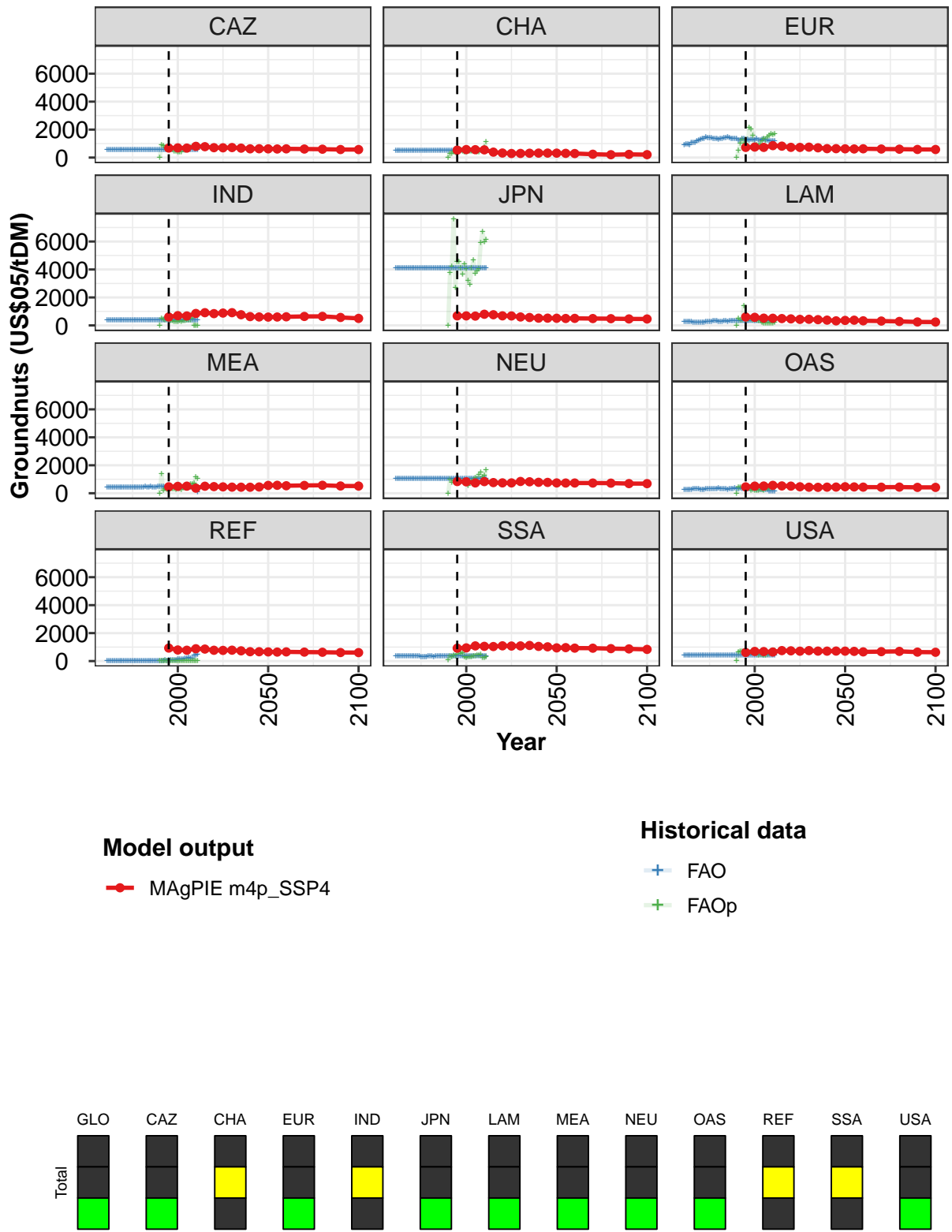


Figure 302: MAGPIE m4p\_SSP4 — Prices—Agriculture—Groundnuts (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	619	673	704	735	705	694	704	734	725	686	685
CAZ	682	695	679	803	778	707	698	716	675	626	631
CHA	533	572	565	552	389	325	292	296	311	321	321
EUR	728	752	730	853	816	731	726	744	699	638	636
IND	604	697	676	854	911	843	883	910	764	630	606
JPN	684	682	668	799	764	685	677	604	567	520	519
LAM	604	577	519	512	489	468	433	440	412	378	326
MEA	460	492	508	365	502	475	455	437	433	429	448
NEU	837	817	738	832	763	742	739	844	820	782	775
OAS	455	509	517	563	523	509	462	432	423	435	442
REF	931	794	776	882	859	774	763	779	733	672	670
SSA	922	943	1086	1055	1040	1091	1077	1084	1118	1051	1020
USA	616	691	680	649	750	733	707	750	713	711	716

Table 1059: MAgPIE m4p\_SSP4 — Prices—Agriculture—Groundnuts (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	673	694	691	717	723	714	697
CAZ	623	613	624	611	599	574	574
CHA	317	303	289	239	205	228	210
EUR	626	615	628	611	600	581	577
IND	595	601	616	642	645	569	502
JPN	511	496	504	490	481	463	460
LAM	357	374	329	312	283	248	242
MEA	560	568	536	558	570	520	515
NEU	738	731	732	729	723	691	688
OAS	464	452	437	433	441	420	420
REF	658	645	657	642	631	612	608
SSA	945	963	926	922	890	871	835
USA	711	695	659	675	693	642	632

Table 1060: MAgPIE m4p\_SSP4 — 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]

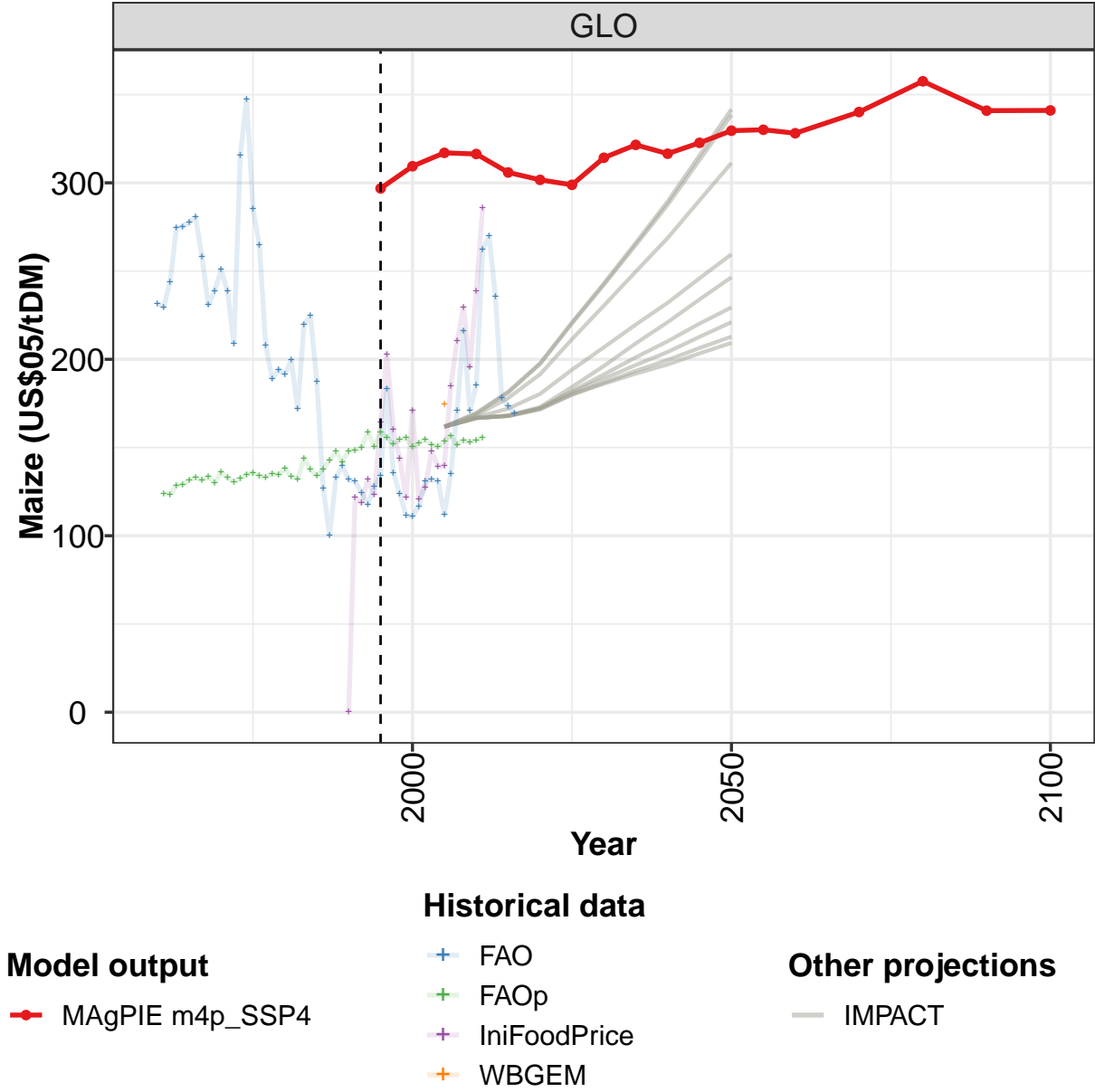
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	364	373	386	388	377	395	401	486	385	438	644
CAZ	391	405	545	533	536	561	714	763	768	849	910
CHA	440	455	473	446	422	404	394	519	590	751	1115
EUR	906	826	986	1203	1379	1218	1451	1557	1681	1662	1682
IND	302	297	320	352	367	357	399	513	0	0	0
JPN	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





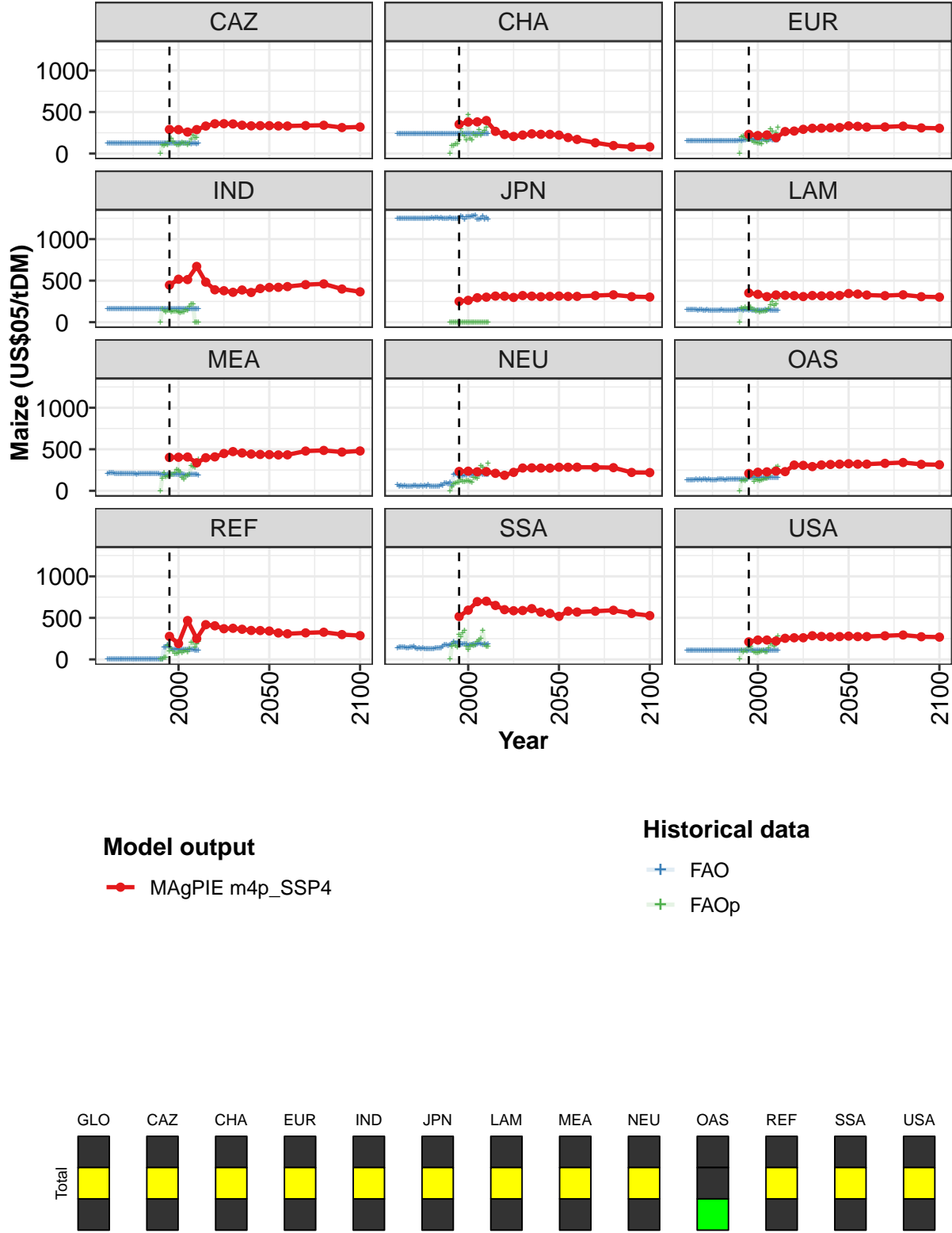


Figure 303: MAGPIE m4p\_SSP4 — Prices—Agriculture—Maize (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	297	309	317	316	306	302	299	314	322	317	323
CAZ	290	288	259	288	331	359	360	357	341	334	336
CHA	353	380	381	398	267	229	205	223	238	231	231
EUR	231	216	224	191	265	271	292	304	306	310	313
IND	447	517	513	671	482	390	379	360	387	358	405
JPN	250	263	294	301	314	313	298	321	313	306	311
LAM	352	335	307	328	323	319	308	321	317	319	321
MEA	401	404	407	337	398	409	449	472	455	442	438
NEU	233	236	229	230	211	187	222	274	276	274	273
OAS	208	223	228	237	231	310	306	291	311	317	321
REF	278	191	468	251	418	405	369	375	363	349	347
SSA	517	593	695	701	650	599	586	589	611	569	554
USA	211	233	233	221	254	260	261	285	277	271	275

Table 1069: MAgPIE m4p\_SSP4 — Prices—Agriculture—Maize (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	330	330	328	340	358	341	341
CAZ	336	332	332	337	341	313	320
CHA	222	193	170	130	96	79	81
EUR	333	328	318	321	330	309	304
IND	418	420	428	452	461	399	366
JPN	315	310	311	320	329	308	302
LAM	345	339	327	319	330	306	301
MEA	436	432	433	479	486	466	480
NEU	284	283	284	283	279	221	219
OAS	326	320	321	331	340	318	313
REF	342	319	309	319	327	299	286
SSA	518	581	570	580	592	553	527
USA	280	275	275	284	294	273	268

Table 1070: MAgPIE m4p\_SSP4 — 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

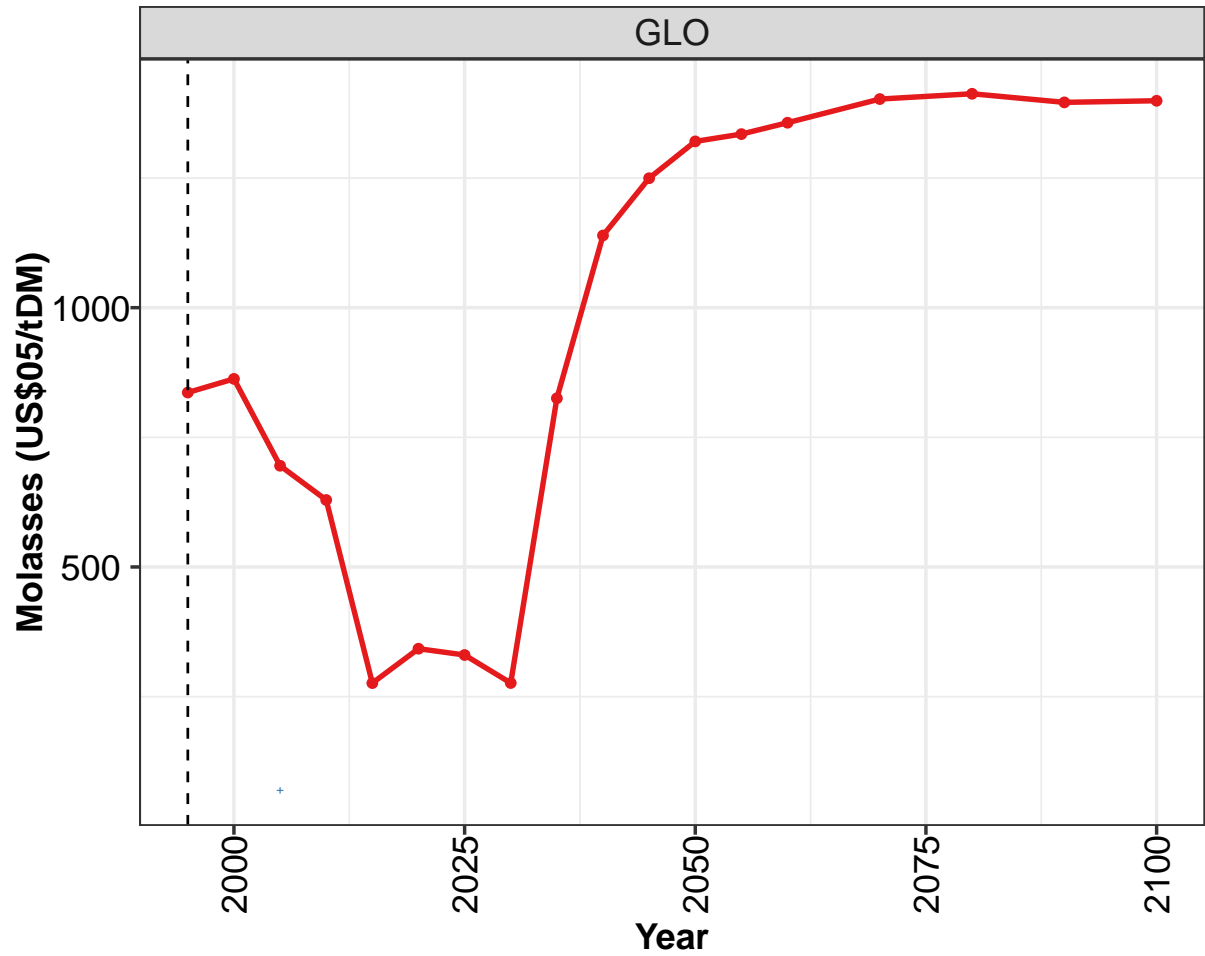
Table 1083: FAOp — Prices—Agriculture—Maize (US\$05/tDM) [PART 2/3]

	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?



Model output

—●— MAgPIE m4p\_SSP4

Historical data

+ IniFoodPrice

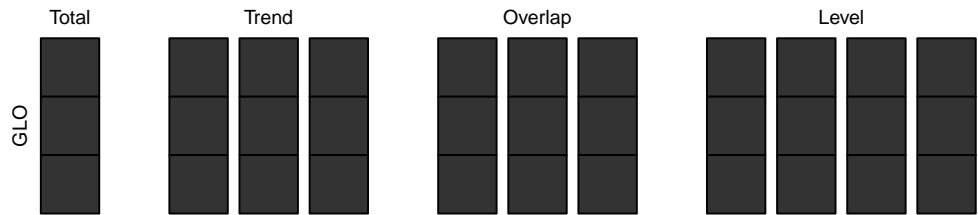


Figure 304: MAgPIE m4p\_SSP4 — Prices—Agriculture—Molasses (US\$05/tDM)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	836	863	695	629	276	342	330	276	825	1139	1250

Table 1085: MAgPIE m4p\_SSP4 — Prices—Agriculture—Molasses (US\$05/tDM) [PART 1/2]

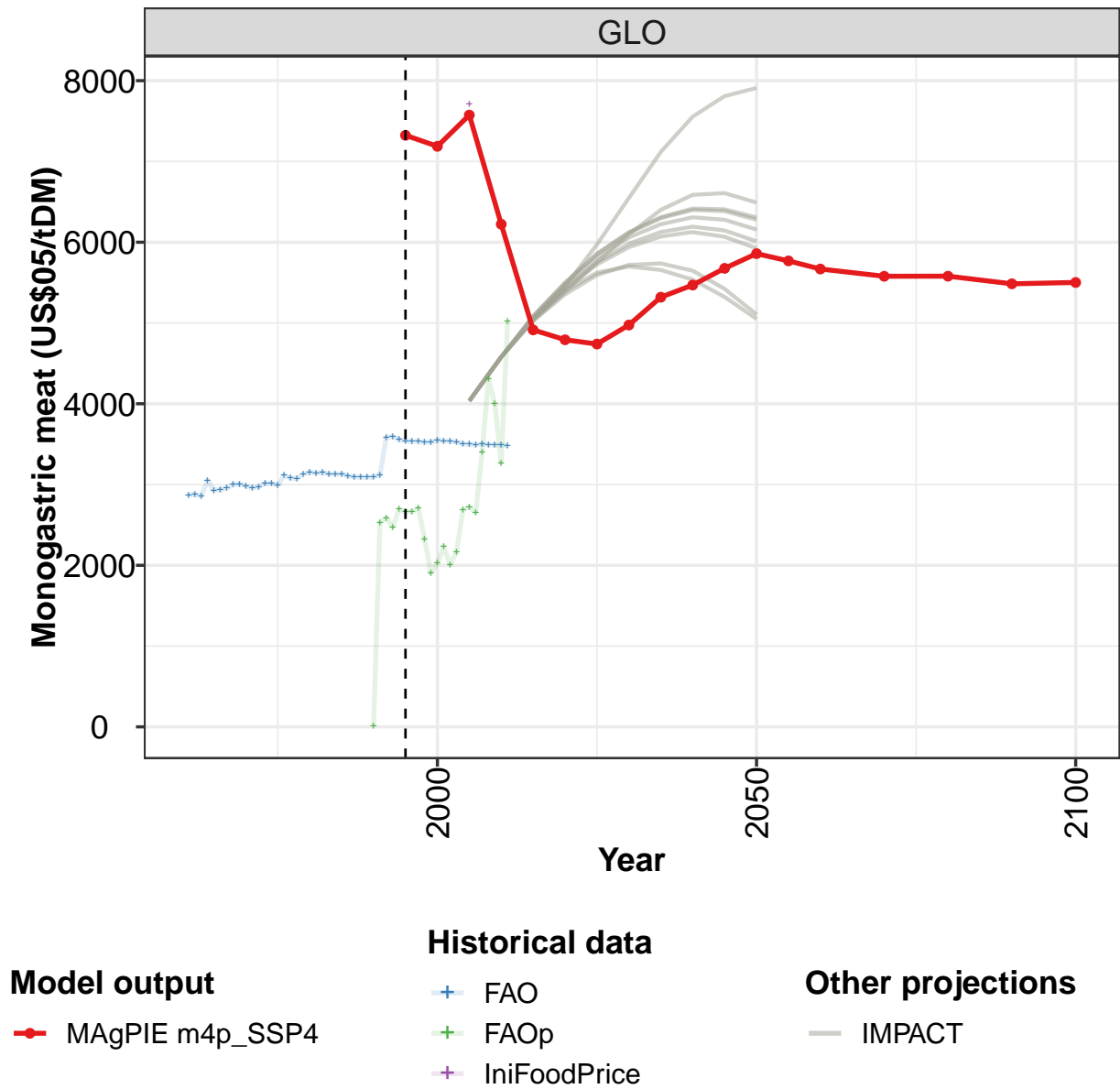
	2050	2055	2060	2070	2080	2090	2100
GLO	1321	1335	1357	1402	1413	1396	1399

Table 1086: MAgPIE m4p\_SSP4 — 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



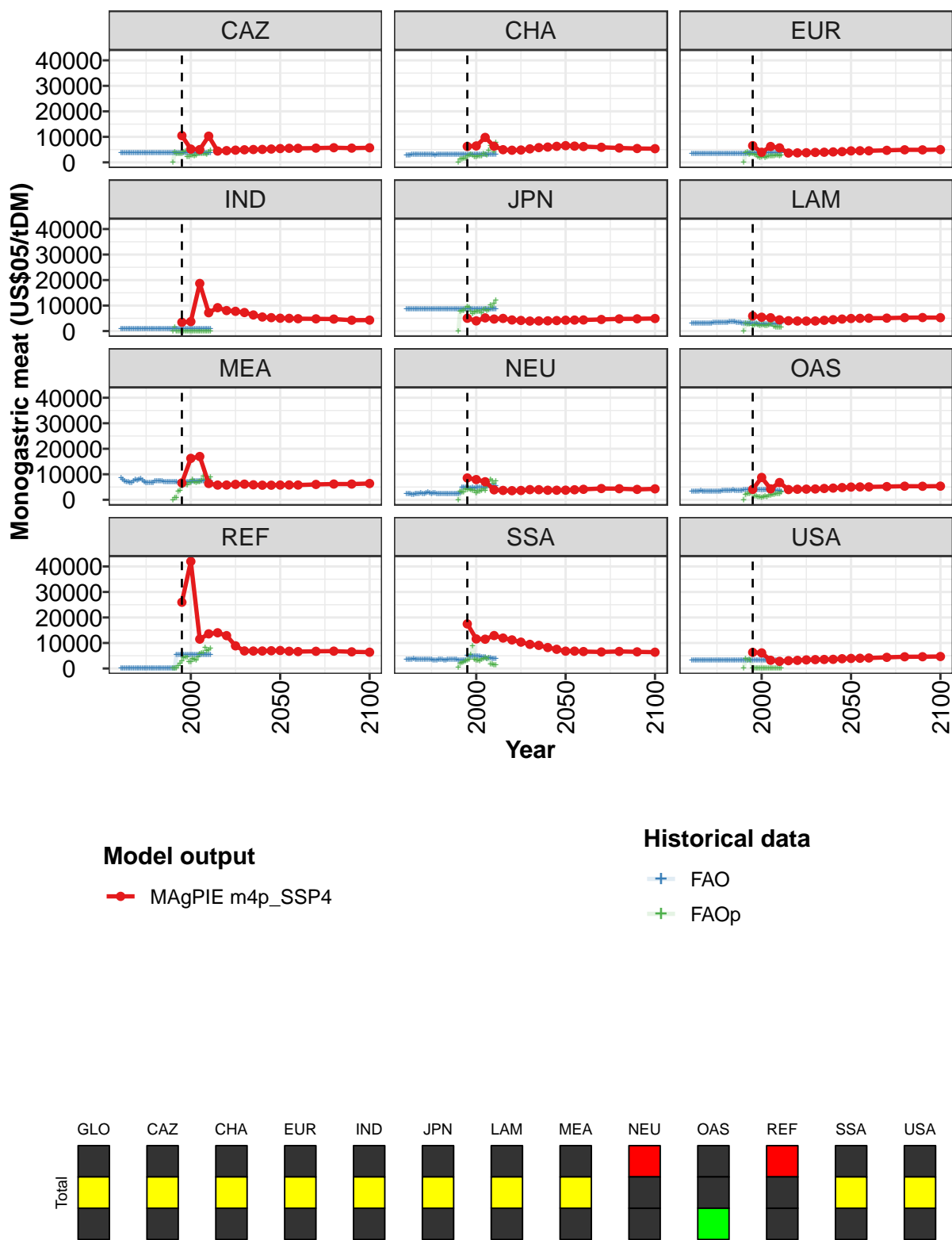


Figure 305: MAGPIE m4p\_SSP4 — Prices—Agriculture—Monogastric meat (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	7324	7187	7574	6223	4915	4792	4740	4975	5319	5470	5677
CAZ	10477	5205	5006	10276	4434	4596	4784	4928	5029	5081	5222
CHA	6237	6437	9776	6327	4961	4752	4838	5284	5780	5990	6287
EUR	6546	3946	6219	5678	3656	3717	3769	3900	3972	4086	4199
IND	3449	3708	18661	7187	9161	8040	7745	7268	6312	5508	5258
JPN	5015	3983	5161	4709	4961	4348	4164	3925	3963	4007	4104
LAM	5915	5419	5220	4399	4040	3937	3915	3945	4226	4457	4701
MEA	6608	16241	16964	6390	5775	5780	6044	6118	5867	5716	5718
NEU	8543	7919	7069	3903	3671	3568	3643	3977	3952	3745	3741
OAS	4071	8751	4270	6764	4003	4126	4170	4233	4434	4586	4780
REF	25979	41965	11512	13580	14005	12878	8883	6879	6840	6848	6956
SSA	17475	11586	11481	12910	11933	11206	10333	9459	9063	8214	7515
USA	6325	6117	3218	2800	3053	3188	3373	3483	3536	3589	3821

Table 1088: MAgPIE m4p\_SSP4 — Prices—Agriculture—Monogastric meat (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5859	5769	5668	5578	5580	5485	5502
CAZ	5407	5520	5505	5585	5738	5582	5713
CHA	6545	6362	6190	5908	5638	5425	5360
EUR	4499	4545	4534	4718	4922	4901	4991
IND	5044	4982	4843	4787	4703	4255	4287
JPN	4254	4310	4358	4545	4773	4803	4920
LAM	4933	4983	5042	5073	5259	5294	5256
MEA	5769	5801	5776	6020	6165	6160	6375
NEU	3764	3922	4105	4405	4337	4067	4277
OAS	4990	5044	5049	5170	5326	5292	5340
REF	7039	6767	6619	6742	6800	6531	6385
SSA	6793	6804	6638	6475	6679	6521	6382
USA	3953	4011	4117	4369	4588	4619	4693

Table 1089: MAgPIE m4p\_SSP4 — 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?

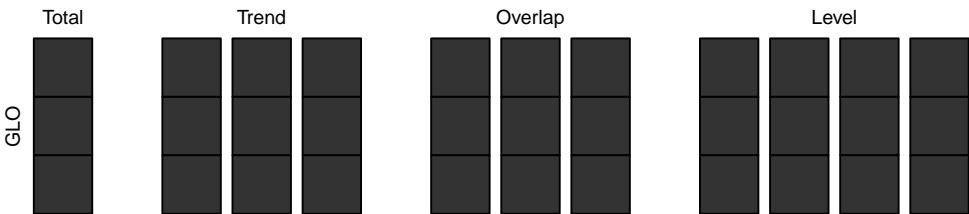
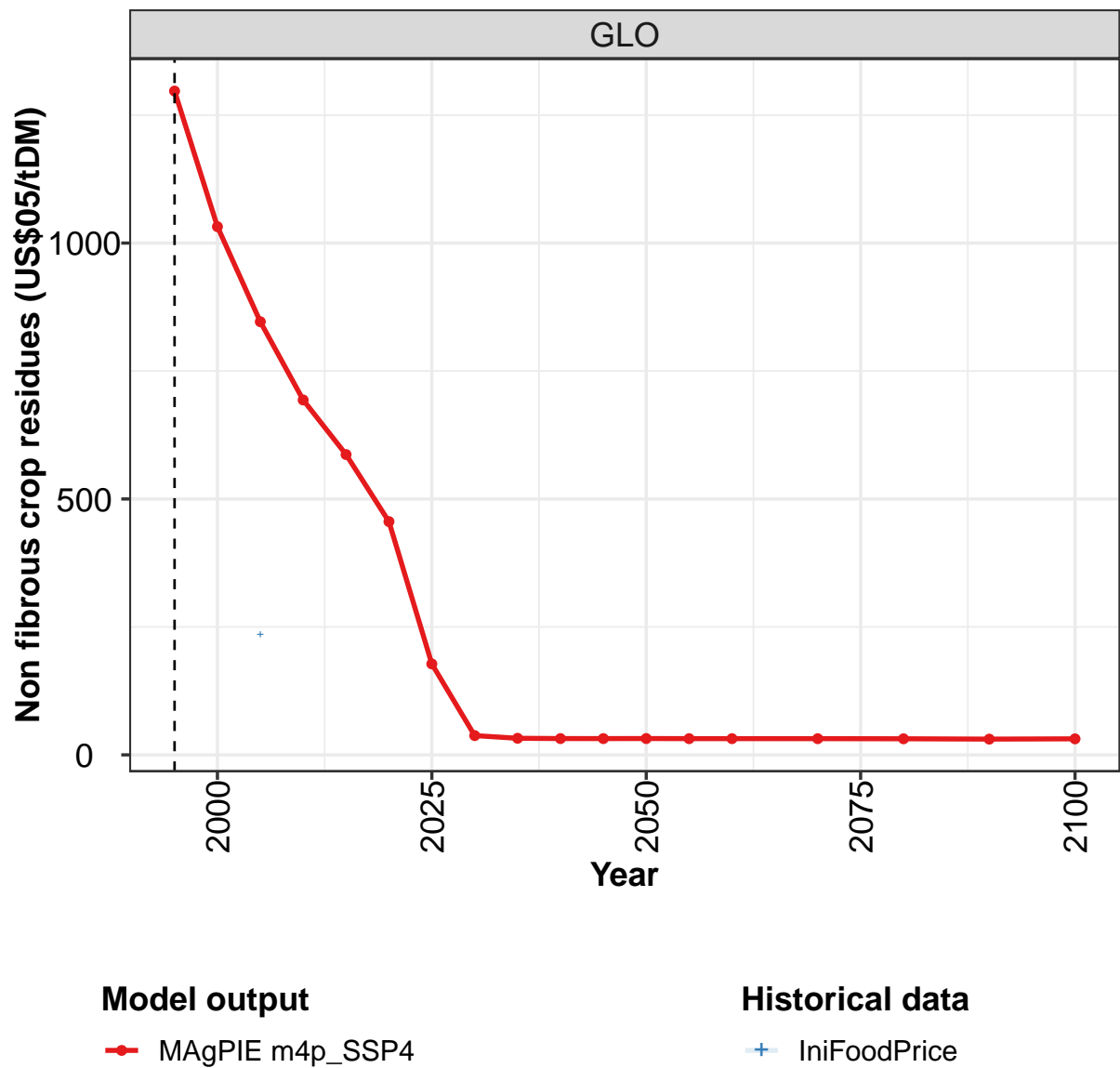


Figure 306: MAgPIE m4p\_SSP4 — Prices—Agriculture—Non fibrous crop residues (US\$05/tDM)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1297	1032	846	693	587	456	178	38	32	32	32

Table 1098: MAgPIE m4p\_SSP4 — Prices—Agriculture—Non fibrous crop residues (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	32	32	32	32	31	31	31

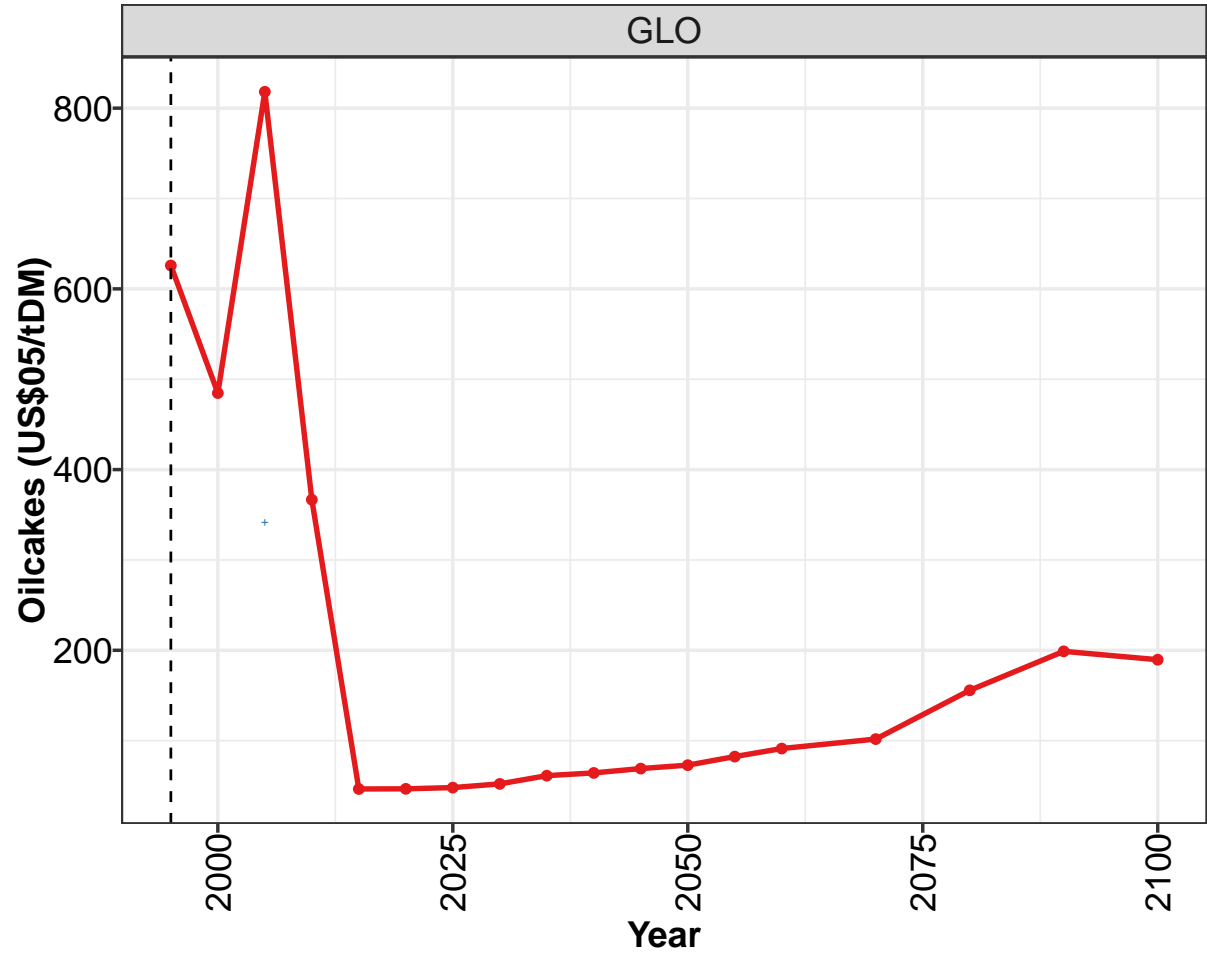
Table 1099: MAgPIE m4p\_SSP4 — Prices—Agriculture—Non fibrous crop residues (US\$05/tDM) [PART 2/2]

	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?



Model output

MAgPIE m4p\_SSP4

Historical data

IniFoodPrice

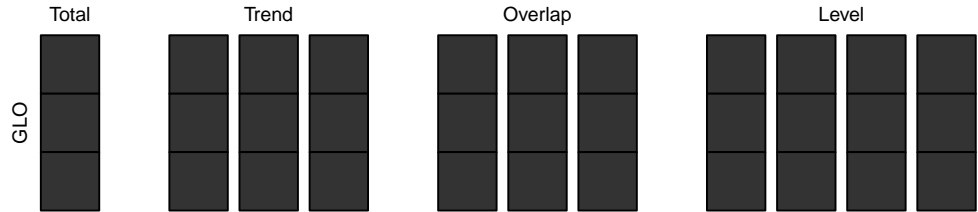


Figure 307: MAgPIE m4p\_SSP4 — Prices—Agriculture—Oilcakes (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	626	485	818	367	47	47	48	52	61	64	69

Table 1101: MAgPIE m4p\_SSP4 — Prices—Agriculture—Oilkakes (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	73	82	91	102	156	199	190

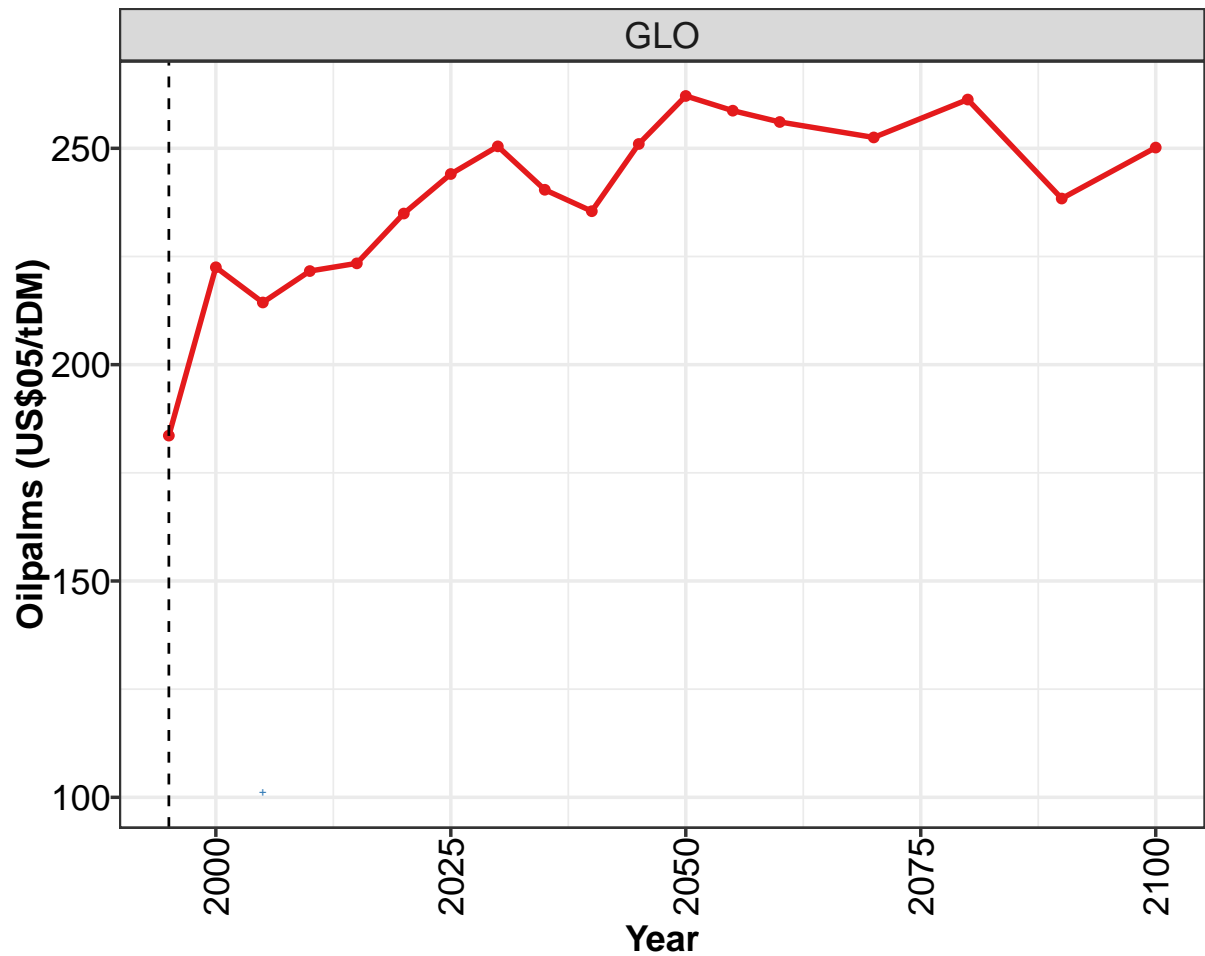
Table 1102: MAgPIE m4p\_SSP4 — Prices—Agriculture—Oilkakes (US\$05/tDM) [PART 2/2]

	2005
GLO	341

Table 1103: IniFoodPrice — Prices—Agriculture—Oilkakes (US\$05/tDM)

36.18 Oilpalms

## geom\_path: Each group consists of only one observation. Do you need to adjust the group## aesthetic?



Model output

MAgPIE m4p\_SSP4

Historical data

IniFoodPrice

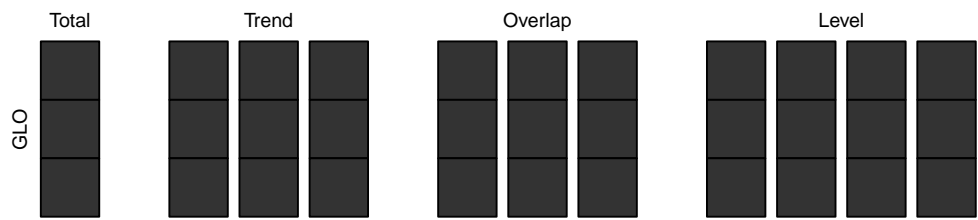


Figure 308: MAgPIE m4p\_SSP4 — Prices—Agriculture—Oilpalms (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	184	223	214	222	223	235	244	250	240	235	251

Table 1104: MAgPIE m4p\_SSP4 — Prices—Agriculture—Oilpalms (US\$05/tDM) [PART 1/2]

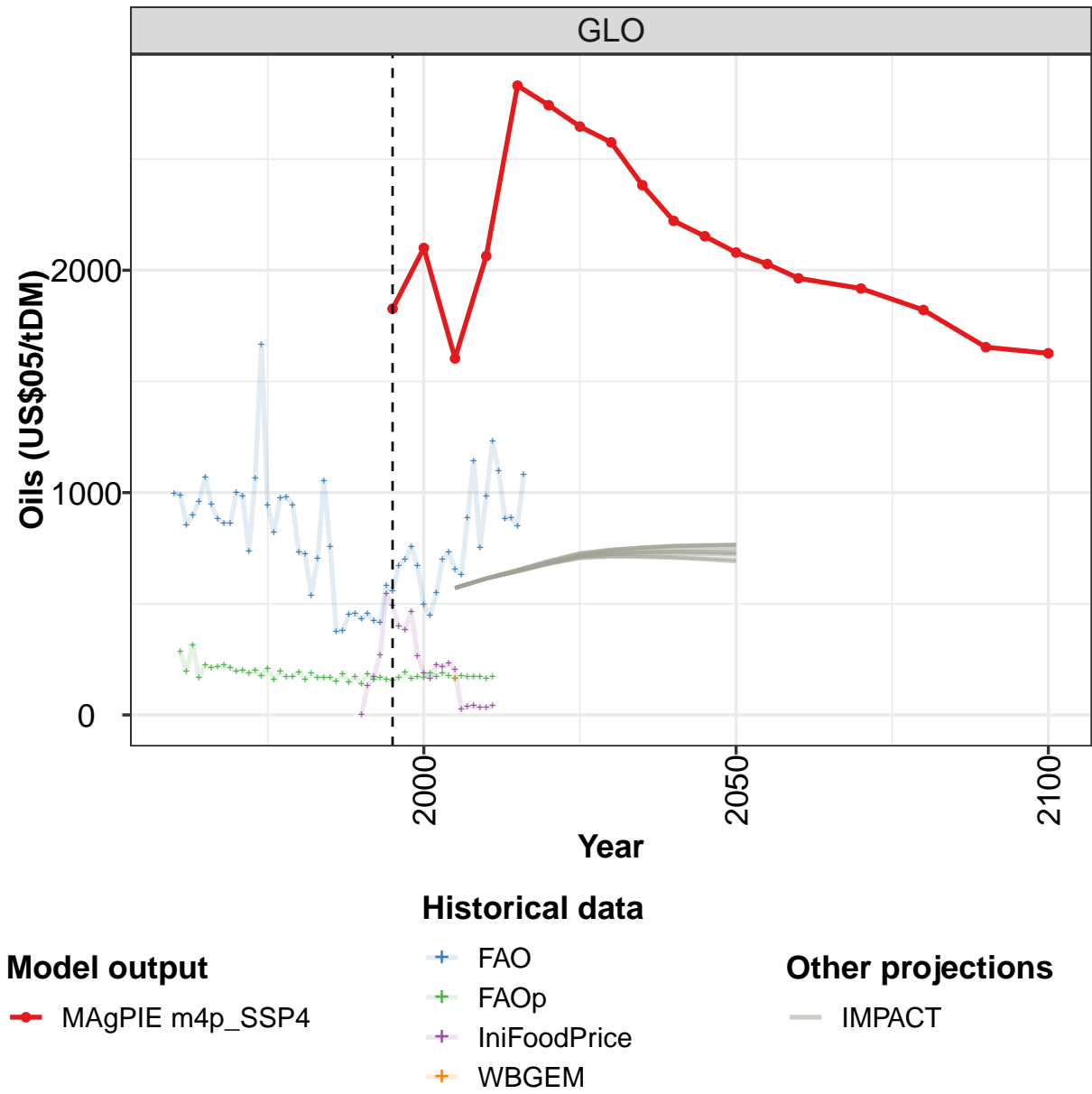
	2050	2055	2060	2070	2080	2090	2100
GLO	262	259	256	253	261	238	250

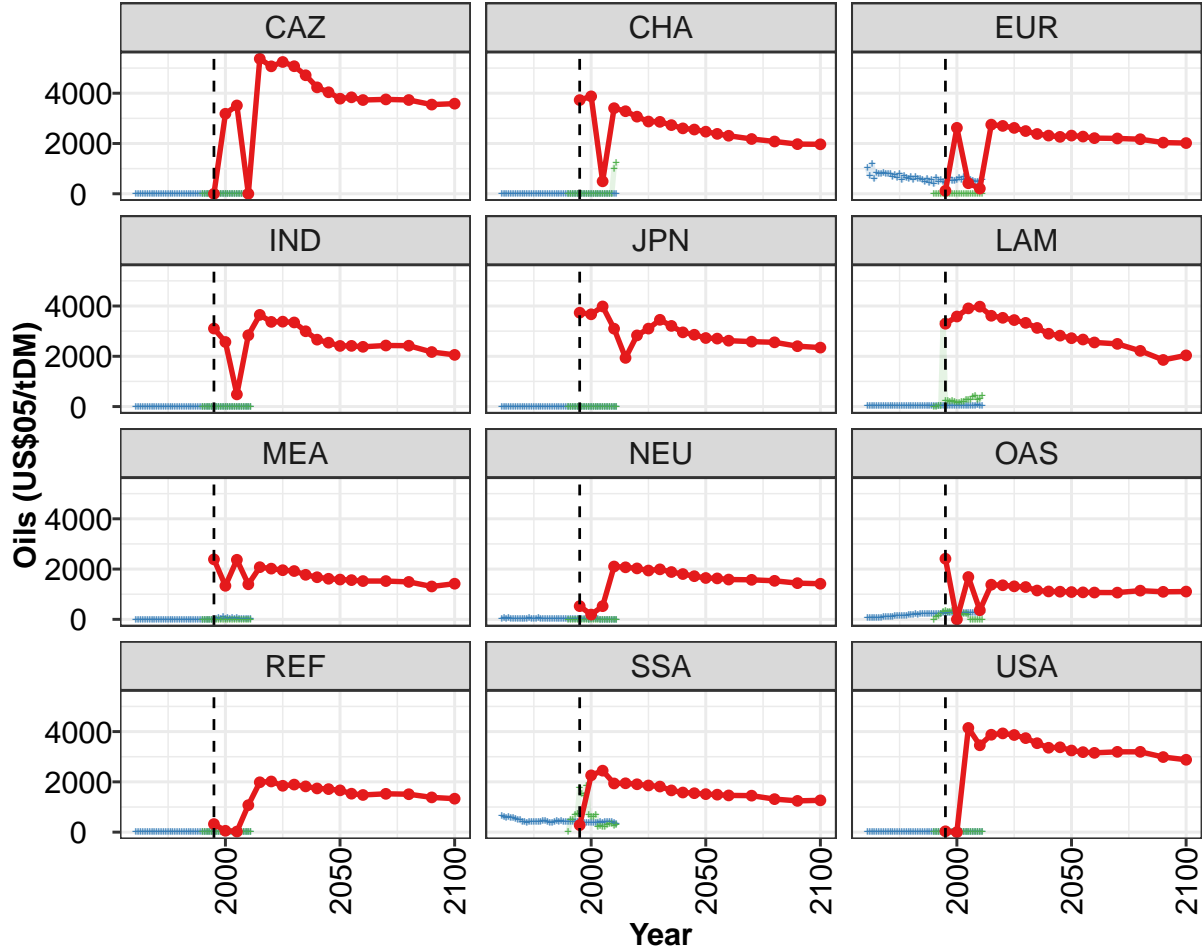
Table 1105: MAgPIE m4p\_SSP4 — Prices—Agriculture—Oilpalms (US\$05/tDM) [PART 2/2]

	2005
GLO	101

Table 1106: IniFoodPrice — Prices—Agriculture—Oilpalms (US\$05/tDM)

36.19 Oils





**Model output**

— MAgPIE m4p\_SSP4

**Historical data**

+ FAO  
+ FAOp

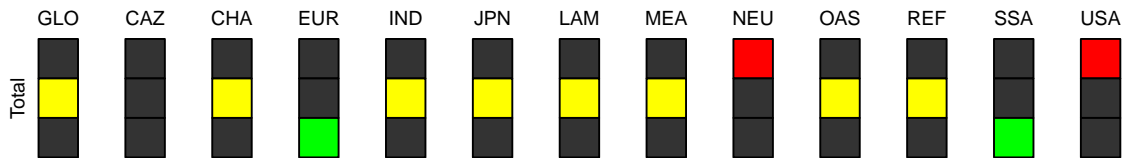


Figure 309: MAgPIE m4p\_SSP4 — Prices—Agriculture—Oils (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1827	2100	1604	2064	2831	2742	2646	2575	2383	2222	2153
CAZ	0	3183	3513	2	5370	5070	5243	5075	4715	4233	4038
CHA	3729	3876	496	3405	3284	3068	2874	2861	2732	2603	2555
EUR	119	2623	419	209	2750	2700	2621	2495	2379	2314	2265
IND	3104	2569	485	2838	3647	3369	3377	3346	2997	2662	2541
JPN	3735	3670	3983	3098	1937	2832	3102	3451	3209	2952	2857
LAM	3295	3582	3906	3975	3612	3531	3441	3330	3128	2898	2821
MEA	2387	1335	2370	1395	2076	2018	1956	1922	1772	1676	1615
NEU	526	191	525	2103	2071	2027	1943	1990	1883	1803	1718
OAS	2412	0	1685	364	1379	1356	1314	1287	1148	1111	1101
REF	323	54	24	1073	1985	2017	1845	1892	1820	1739	1713
SSA	280	2260	2446	1937	1944	1905	1857	1815	1661	1577	1550
USA	35	0	4146	3456	3875	3929	3865	3741	3538	3357	3375

Table 1107: MAgPIE m4p-SSP4 — Prices—Agriculture—Oils (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2080	2028	1964	1918	1821	1654	1627
CAZ	3784	3837	3729	3754	3731	3547	3584
CHA	2470	2384	2308	2180	2080	1975	1969
EUR	2315	2276	2214	2201	2170	2035	2018
IND	2413	2415	2377	2429	2421	2170	2056
JPN	2727	2704	2621	2582	2556	2402	2345
LAM	2720	2668	2551	2494	2216	1854	2036
MEA	1584	1562	1524	1523	1490	1308	1419
NEU	1646	1630	1584	1573	1533	1441	1416
OAS	1086	1074	1067	1064	1142	1095	1106
REF	1663	1530	1480	1525	1509	1383	1331
SSA	1513	1491	1461	1452	1314	1244	1265
USA	3247	3183	3154	3195	3196	2987	2879

Table 1108: MAgPIE m4p-SSP4 — 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

## geom\_path: Each group consists of only one observation. Do you need to adjust the group## aesthetic?

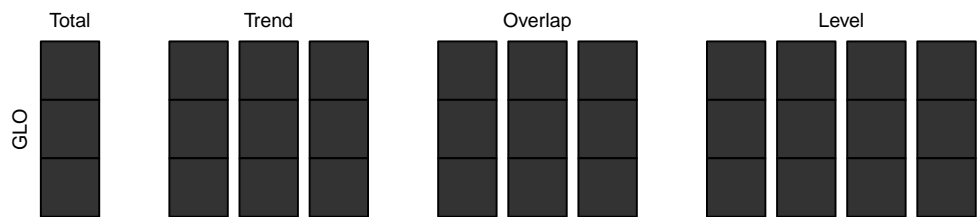
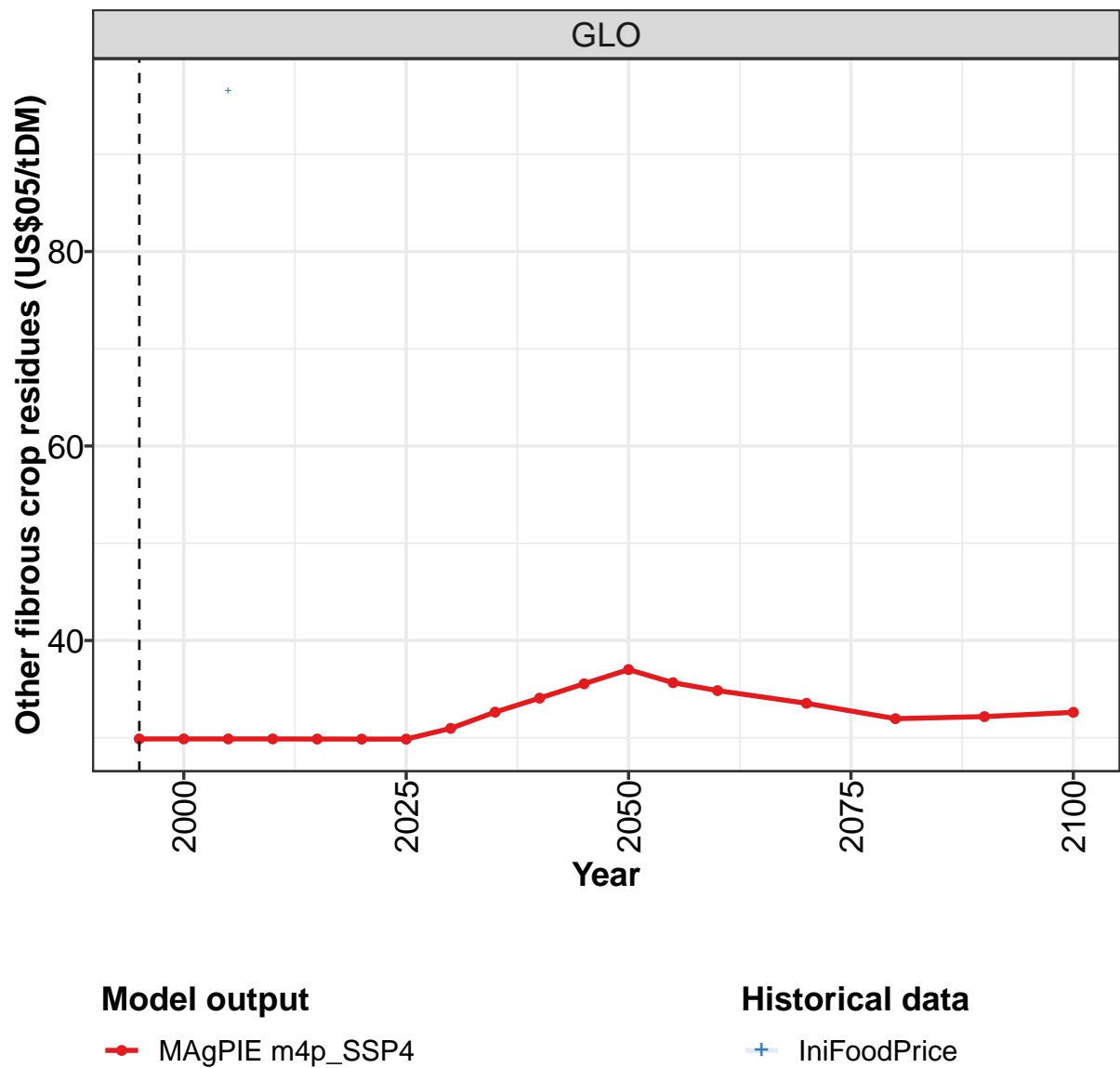


Figure 310: MAGPIE m4p\_SSP4 — Prices—Agriculture—Other fibrous crop residues (US\$05/tDM)

	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	31.0	32.6	34.1	35.6

Table 1123: MAgPIE m4p\_SSP4 — Prices—Agriculture—Other fibrous crop residues (US\$05/tDM) [PART 1/2]

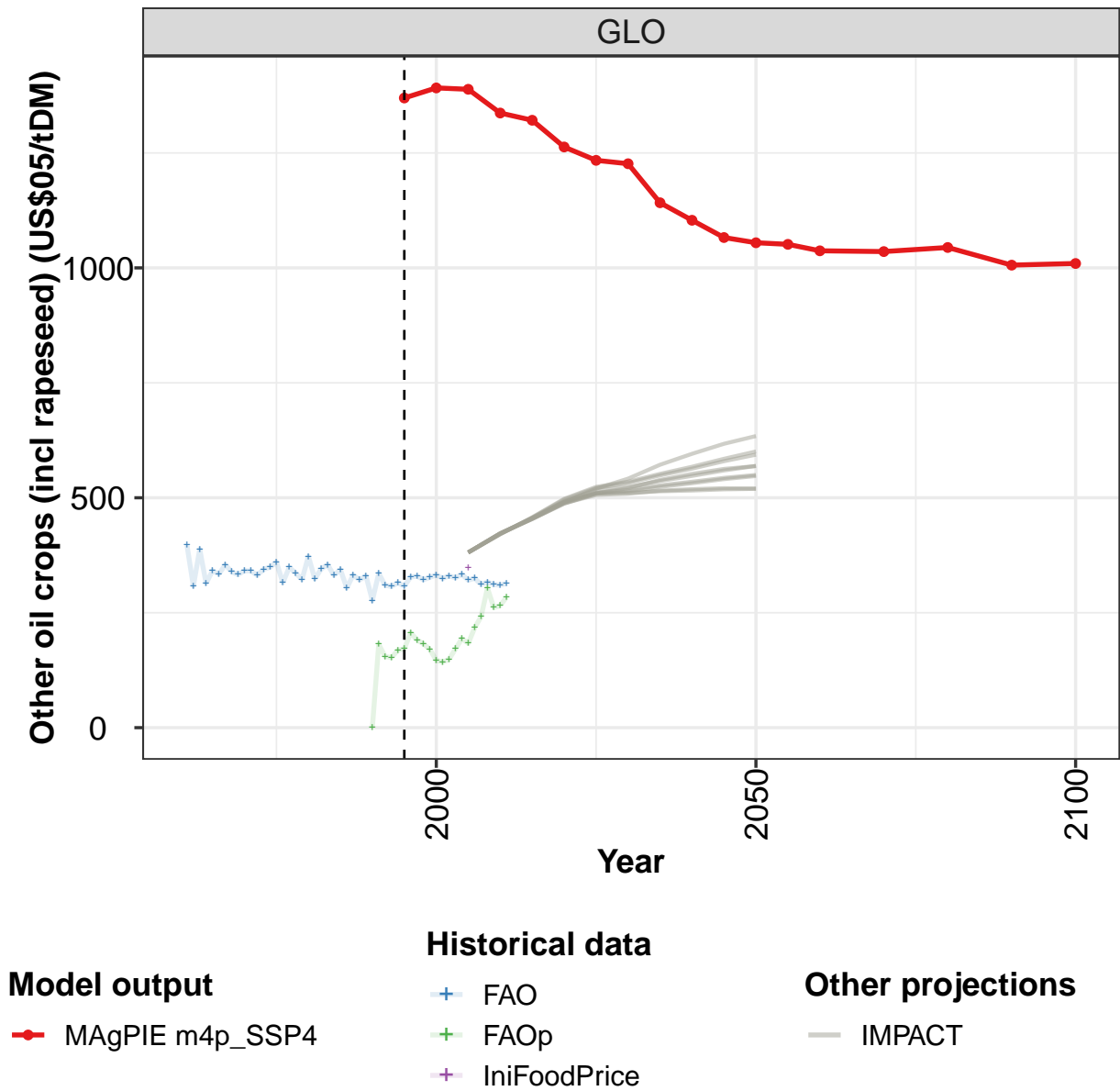
	2050	2055	2060	2070	2080	2090	2100
GLO	37.0	35.7	34.9	33.5	32.0	32.2	32.6

Table 1124: MAgPIE m4p\_SSP4 — 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)





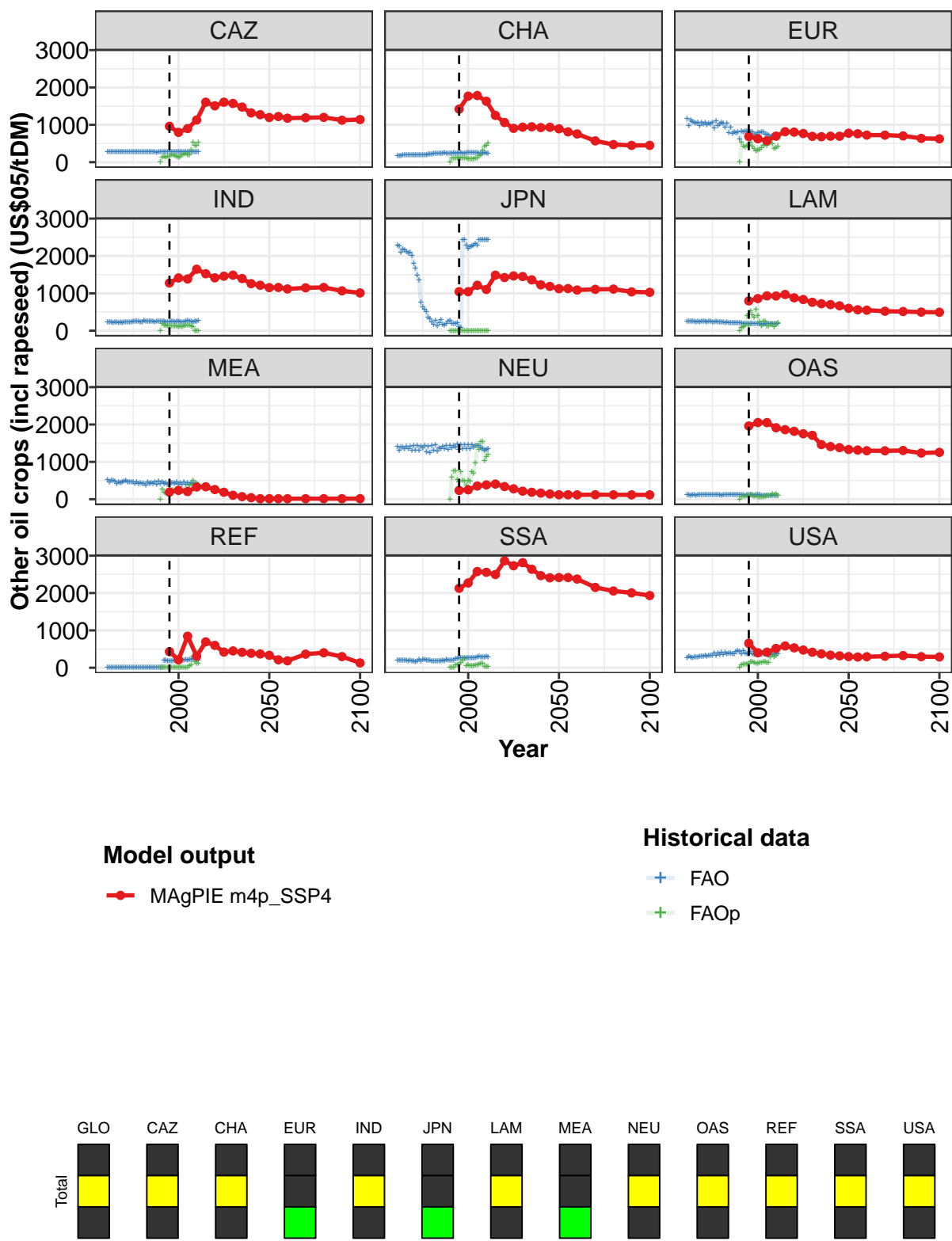


Figure 311: MAgPIE m4p\_SSP4 — Prices—Agriculture—Other oil crops (incl rapeseed) (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1370	1391	1388	1337	1321	1263	1234	1227	1142	1104	1066
CAZ	961	798	900	1129	1605	1509	1606	1572	1476	1319	1272
CHA	1420	1767	1786	1630	1252	1062	906	938	948	926	934
EUR	687	627	574	697	816	804	768	691	682	695	695
IND	1277	1412	1385	1646	1525	1415	1460	1487	1396	1259	1217
JPN	1045	1045	1216	1104	1487	1423	1466	1450	1361	1227	1186
LAM	797	861	933	929	970	881	835	761	721	699	666
MEA	191	237	206	327	333	259	187	106	69	41	14
NEU	237	252	354	384	407	339	278	215	187	164	140
OAS	1960	2052	2051	1913	1862	1818	1753	1711	1463	1410	1380
REF	431	212	844	310	693	599	419	450	414	387	369
SSA	2126	2270	2576	2555	2496	2862	2730	2813	2637	2466	2407
USA	654	401	416	517	583	533	474	416	372	338	319

Table 1126: MAgPIE m4p\_SSP4 — Prices—Agriculture—Other oil crops (incl rapeseed) (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1055	1051	1037	1035	1044	1006	1010
CAZ	1196	1222	1178	1189	1199	1124	1141
CHA	894	812	756	570	472	449	451
EUR	775	761	725	724	704	637	625
IND	1153	1157	1117	1148	1157	1067	1011
JPN	1123	1128	1089	1107	1114	1040	1027
LAM	598	561	550	521	514	498	494
MEA	14	14	14	14	14	15	15
NEU	120	119	117	121	119	116	117
OAS	1330	1317	1298	1296	1304	1237	1255
REF	333	212	186	365	401	299	129
SSA	2415	2414	2375	2150	2054	2005	1932
USA	299	287	294	308	325	297	290

Table 1127: MAgPIE m4p\_SSP4 — 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

## geom\_path: Each group consists of only one observation. Do you need to adjust the group## aesthetic?

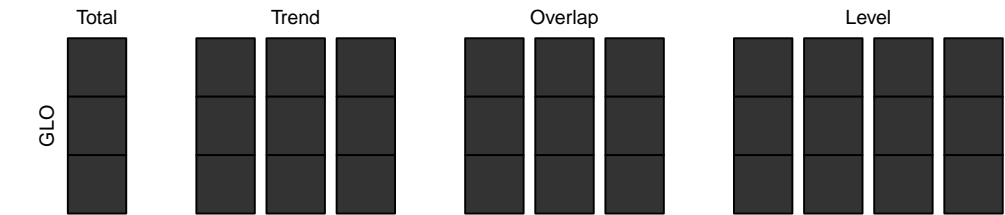
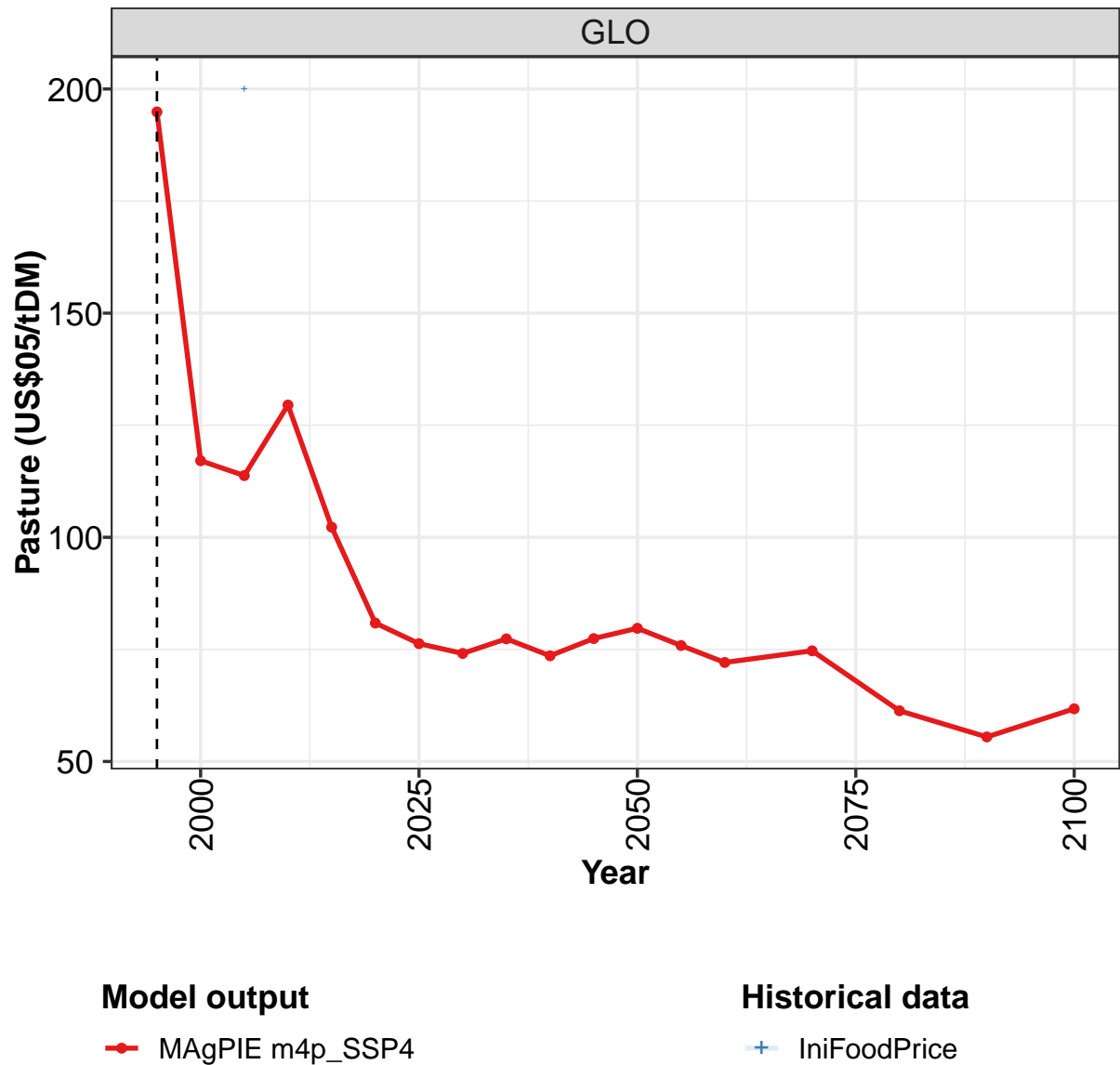


Figure 312: MAgPIE m4p\_SSP4 — Prices—Agriculture—Pasture (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	195	117	114	130	102	81	76	74	77	74	77

Table 1136: MAgPIE m4p\_SSP4 — Prices—Agriculture—Pasture (US\$05/tDM) [PART 1/2]

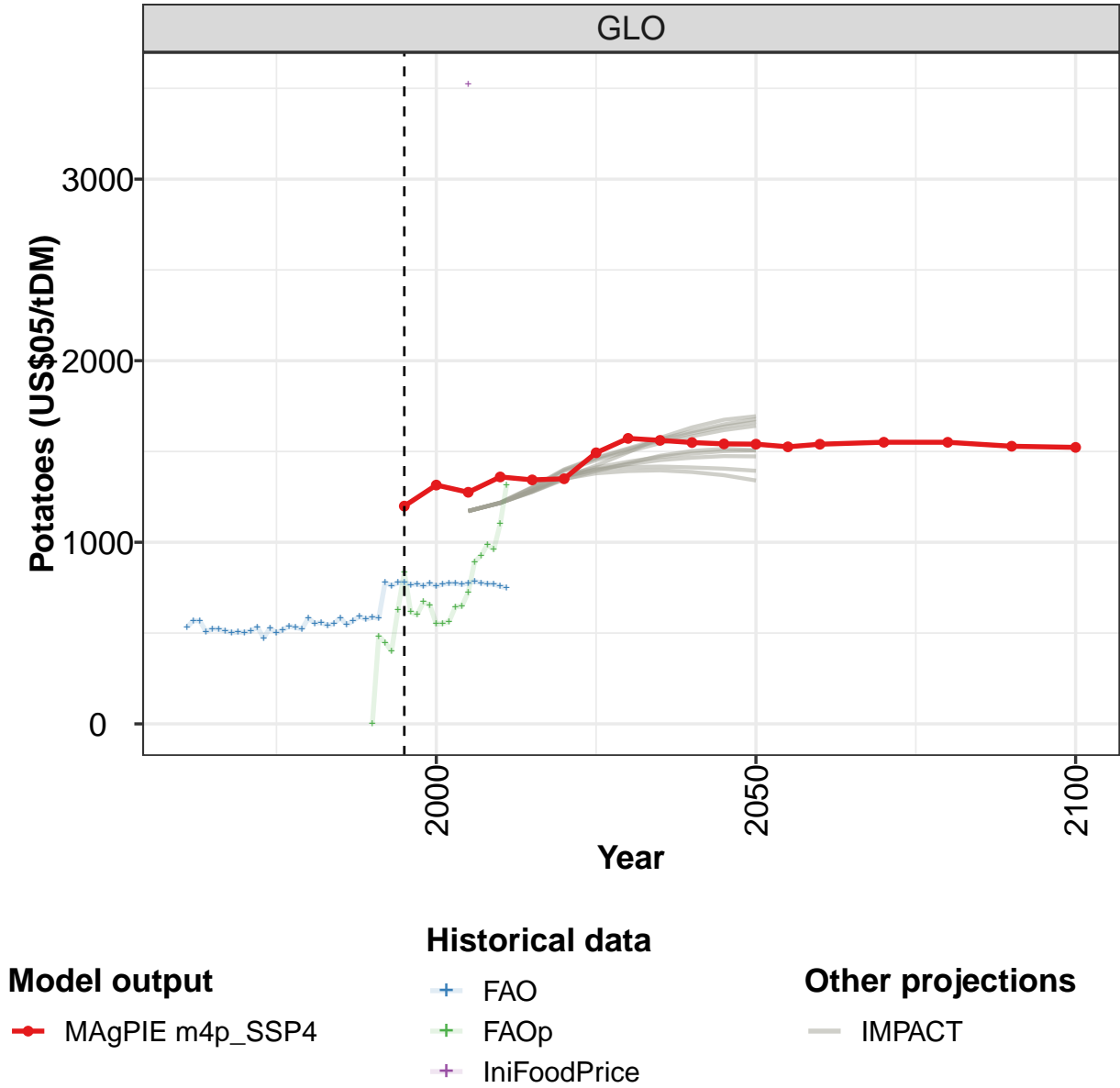
	2050	2055	2060	2070	2080	2090	2100
GLO	80	76	72	75	61	55	62

Table 1137: MAgPIE m4p\_SSP4 — Prices—Agriculture—Pasture (US\$05/tDM) [PART 2/2]

	2005
GLO	200

Table 1138: IniFoodPrice — Prices—Agriculture—Pasture (US\$05/tDM)

36.23 Potatoes



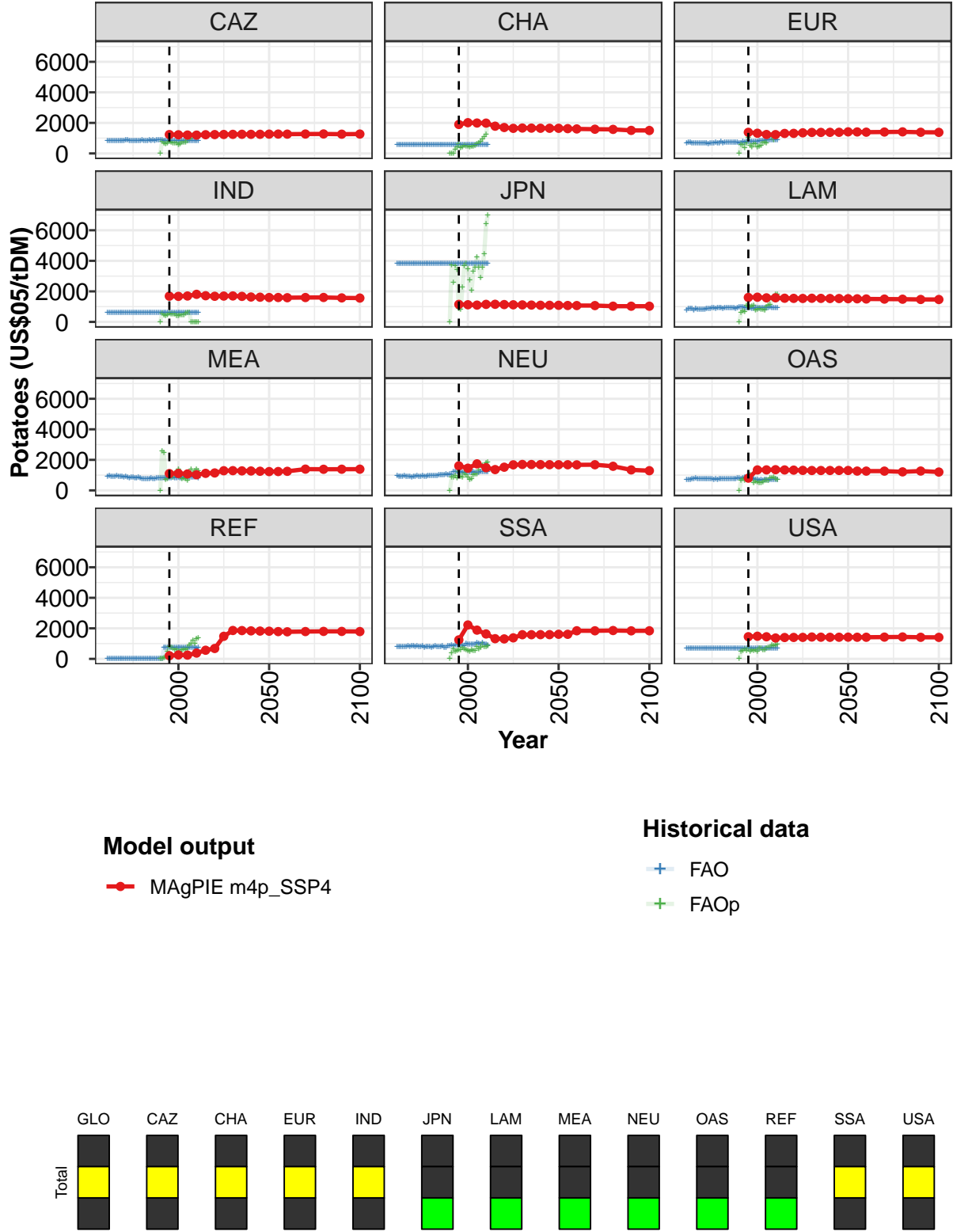


Figure 313: MAgPIE m4p\_SSP4 — Prices—Agriculture—Potatoes (US\$05/tDM)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1199	1315	1275	1360	1344	1350	1493	1572	1561	1549	1542
CAZ	1237	1222	1205	1200	1226	1235	1241	1250	1253	1250	1253
CHA	1897	2014	1992	1985	1784	1698	1643	1663	1659	1649	1647
EUR	1382	1323	1240	1234	1309	1314	1350	1375	1376	1381	1384
IND	1686	1674	1697	1806	1715	1679	1693	1701	1673	1632	1619
JPN	1147	1126	1099	1150	1155	1136	1121	1115	1102	1090	1088
LAM	1602	1619	1576	1579	1551	1542	1536	1550	1542	1532	1531
MEA	1102	1109	1078	1023	1117	1142	1288	1294	1278	1272	1255
NEU	1606	1454	1738	1488	1363	1519	1674	1698	1694	1688	1683
OAS	804	1340	1343	1356	1339	1328	1310	1302	1303	1304	1307
REF	208	258	247	381	566	681	1479	1860	1853	1834	1821
SSA	1246	2221	1883	1632	1323	1308	1377	1583	1583	1587	1588
USA	1452	1484	1449	1367	1400	1405	1409	1432	1420	1414	1417

Table 1139: MAgPIE m4p\_SSP4 — Prices—Agriculture—Potatoes (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1540	1526	1540	1551	1551	1529	1523
CAZ	1264	1267	1263	1271	1275	1260	1269
CHA	1646	1623	1604	1585	1574	1509	1503
EUR	1413	1408	1392	1402	1413	1386	1381
IND	1597	1599	1585	1598	1601	1574	1562
JPN	1088	1075	1071	1070	1029	1028	1028
LAM	1521	1514	1503	1494	1488	1470	1468
MEA	1233	1235	1249	1392	1384	1387	1390
NEU	1680	1679	1673	1680	1579	1342	1290
OAS	1303	1266	1263	1263	1214	1269	1203
REF	1812	1787	1773	1789	1800	1799	1790
SSA	1612	1609	1841	1839	1858	1836	1839
USA	1423	1416	1417	1426	1437	1414	1410

Table 1140: MAgPIE m4p\_SSP4 — 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]

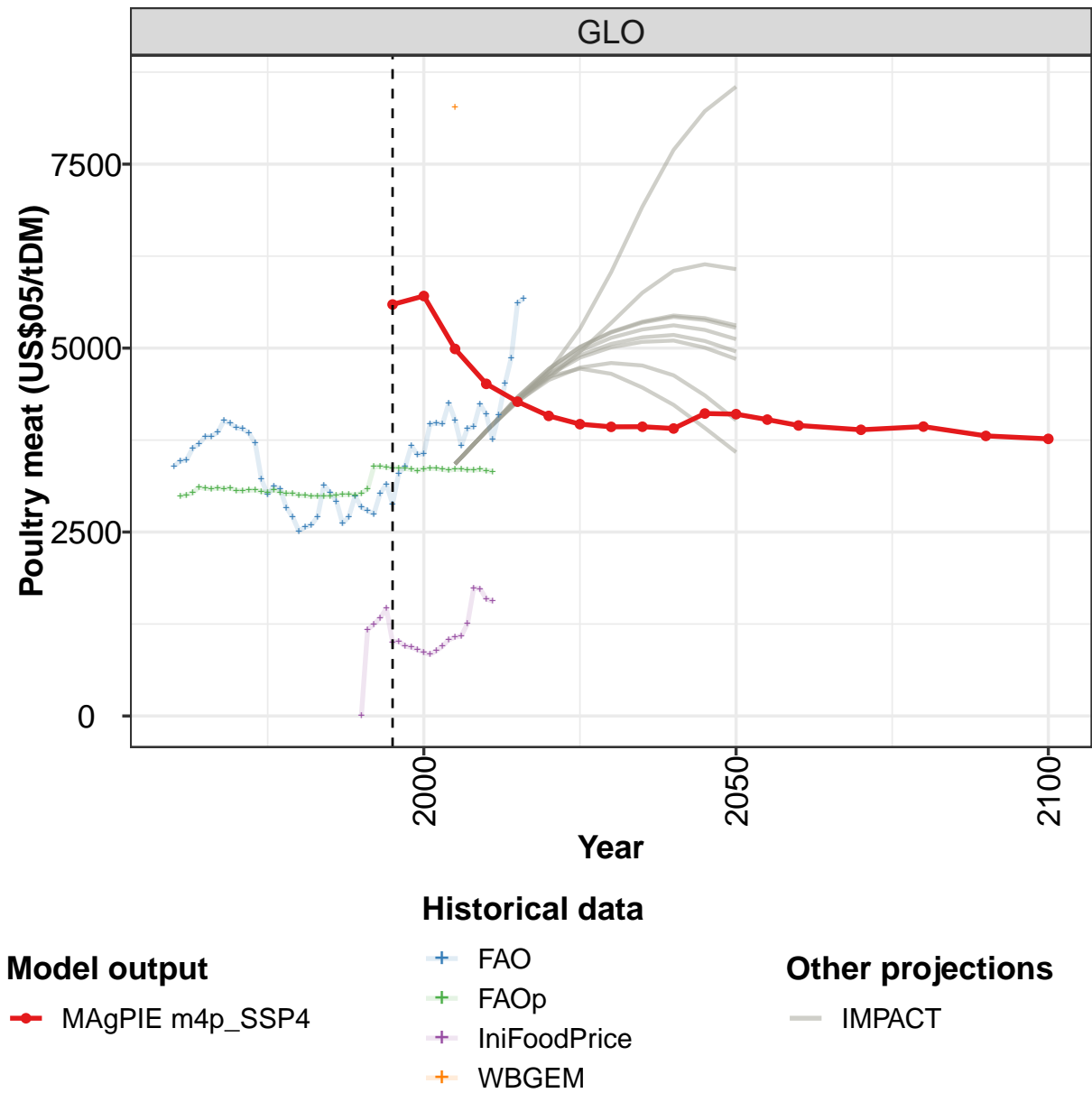
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	553	564	645	648	725	893	926	987	960	1102	1317
CAZ	615	713	733	746	809	943	1008	1214	1186	1206	1311
CHA	434	450	461	494	599	678	782	915	1104	1248	2014
EUR	483	494	713	728	698	1158	1184	1068	890	1062	1163
IND	464	434	434	571	595	591	0	0	0	0	0
JPN	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



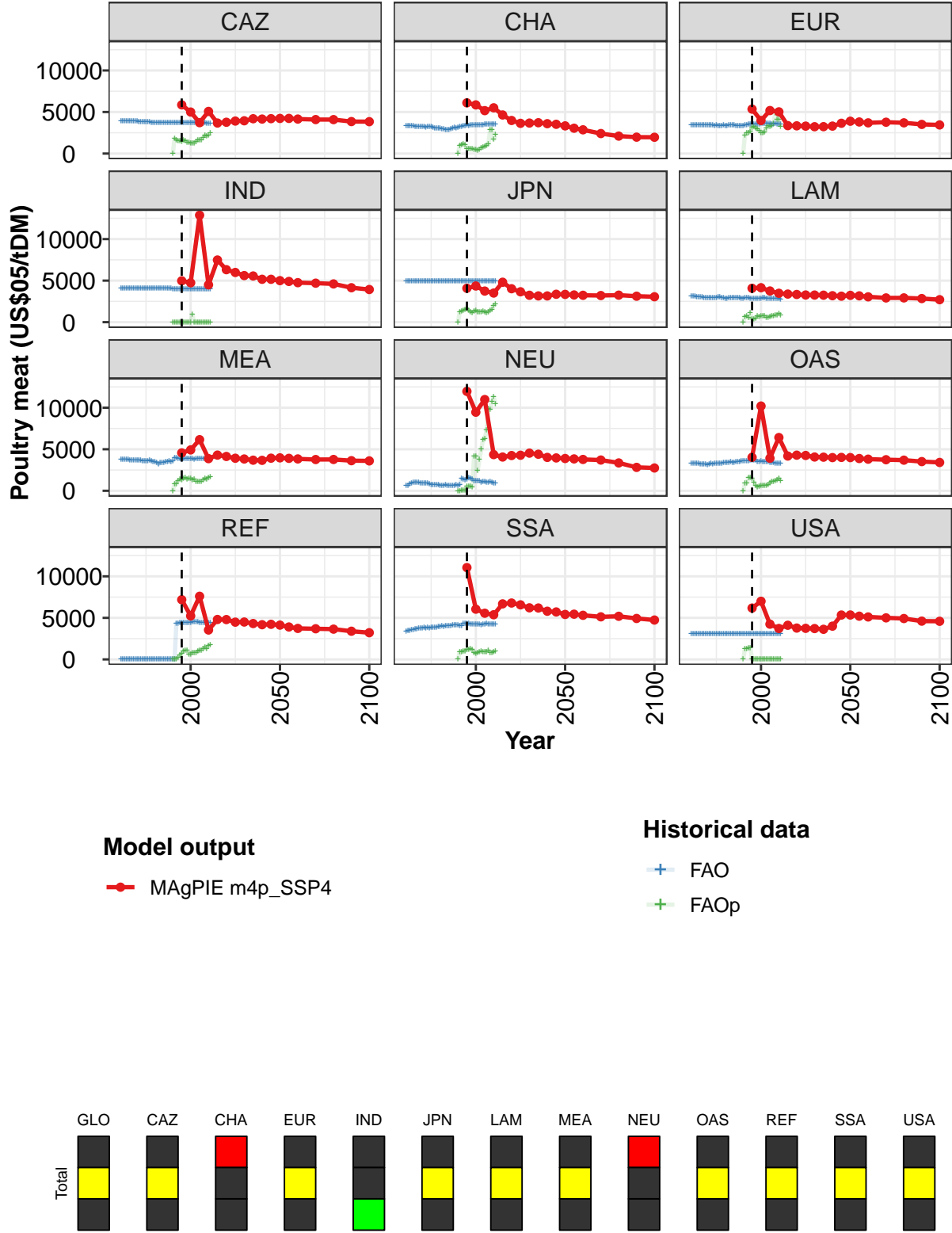


Figure 314: MAGPIE m4p\_SSP4 — Prices—Agriculture—Poultry meat (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5593	5708	4989	4514	4272	4079	3966	3930	3931	3907	4111
CAZ	5861	4995	3719	5071	3675	3768	3910	3944	4190	4152	4202
CHA	6104	5858	5166	5507	4644	3982	3638	3671	3713	3597	3522
EUR	5350	3975	5178	5021	3361	3337	3303	3230	3238	3306	3645
IND	4981	4739	12876	4495	7482	6318	5985	5610	5560	5162	5163
JPN	4085	4354	3744	3504	4807	4026	3661	3241	3163	3160	3359
LAM	4084	4147	3755	3478	3385	3334	3271	3265	3251	3186	3129
MEA	4563	4924	6153	3871	4296	4134	3919	3830	3685	3665	3926
NEU	11968	9461	10985	4356	4065	4245	4283	4531	4400	4019	3955
OAS	4029	10201	3925	6410	4184	4289	4255	4068	4048	3997	4019
REF	7187	5237	7600	3539	4807	4795	4486	4501	4318	4181	4226
SSA	11052	6049	5559	5377	6685	6787	6570	6212	6190	5799	5715
USA	6182	6999	4243	3724	4113	3774	3742	3716	3626	4004	5342

Table 1149: MAgPIE m4p\_SSP4 — Prices—Agriculture—Poultry meat (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4103	4028	3949	3890	3933	3807	3766
CAZ	4227	4231	4151	4090	4087	3850	3838
CHA	3332	3051	2857	2407	2100	1975	1962
EUR	3892	3802	3697	3772	3700	3508	3445
IND	5002	4905	4755	4695	4606	4148	3930
JPN	3344	3276	3236	3205	3253	3125	3061
LAM	3230	3169	3051	2918	2923	2844	2708
MEA	3965	3907	3836	3763	3771	3625	3600
NEU	3887	3838	3773	3702	3354	2820	2746
OAS	3997	3885	3808	3741	3688	3515	3414
REF	4130	3904	3733	3690	3644	3393	3215
SSA	5414	5446	5312	5126	5191	4929	4739
USA	5348	5204	5112	5002	4922	4607	4591

Table 1150: MAgPIE m4p\_SSP4 — 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]

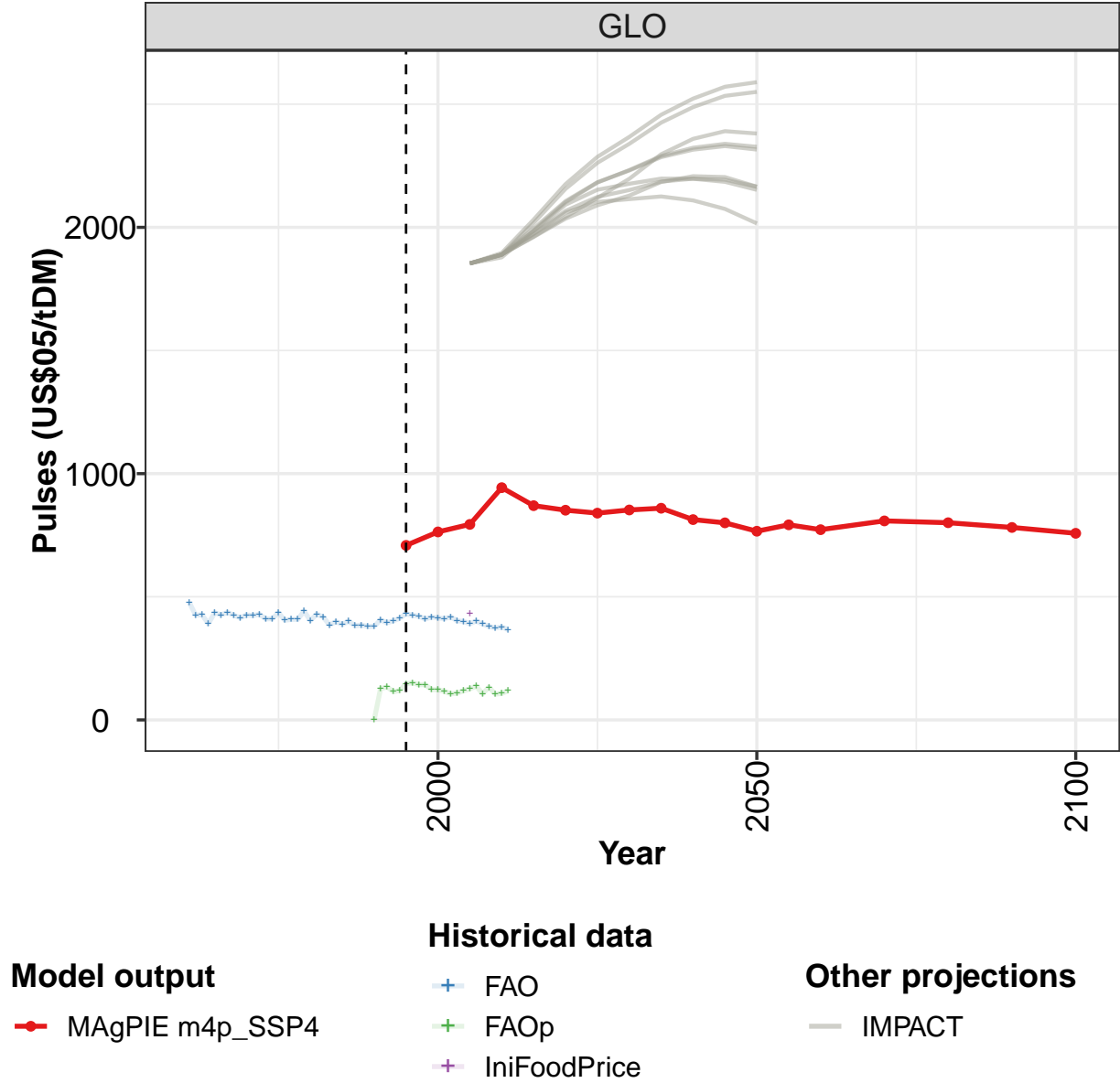
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	835	885	948	1037	1070	1089	1256	1742	1728	1594	1559
CAZ	1263	1223	1418	1609	1633	1637	1899	2206	2102	2217	2454
CHA	352	481	643	806	849	908	1115	2842	2902	1691	2266
EUR	2450	2579	3007	3292	3260	3310	3637	4876	4133	4067	3250
IND	890	0	0	0	0	0	0	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



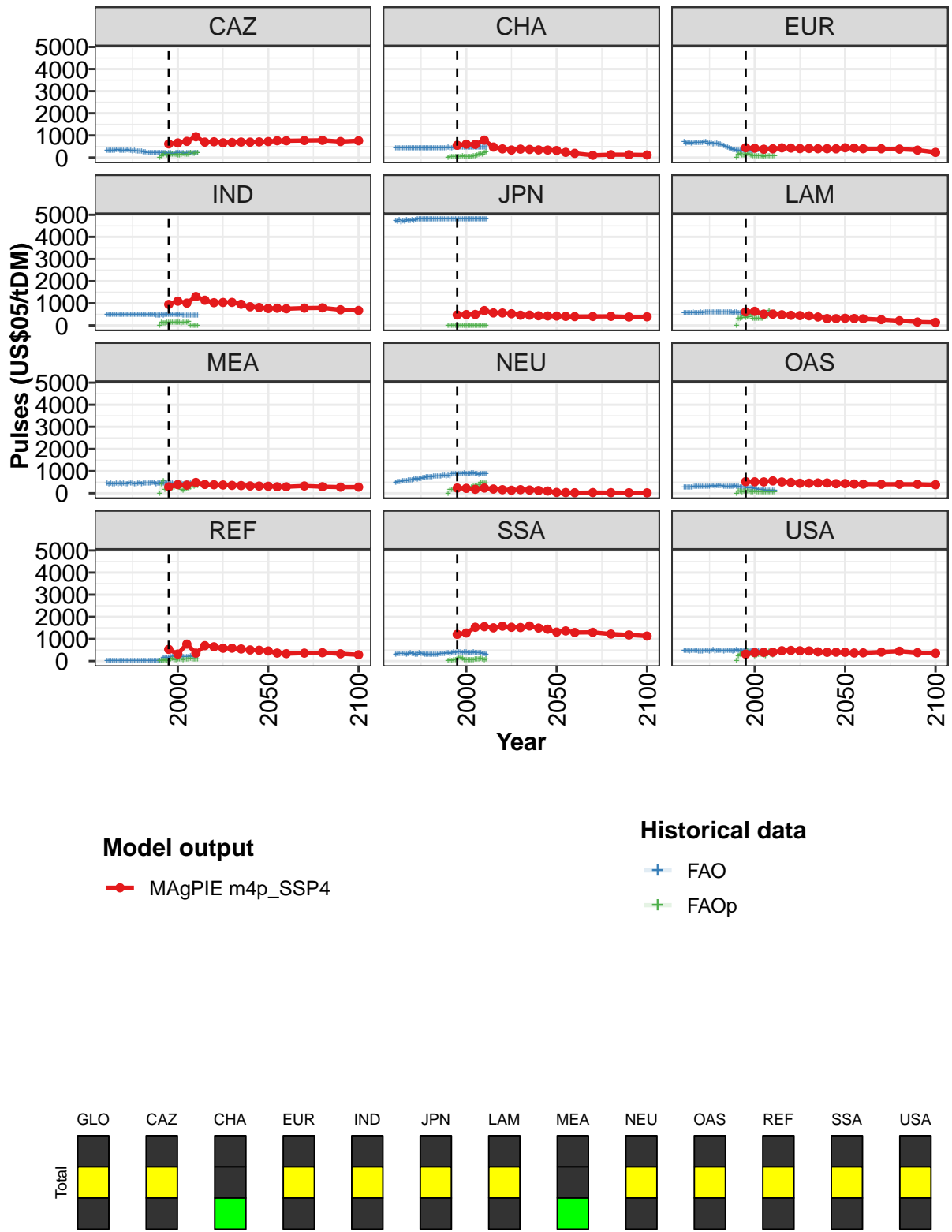


Figure 315: MAGPIE m4p\_SSP4 — Prices—Agriculture—Pulses (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	709	763	794	943	870	852	840	853	860	813	800
CAZ	619	662	730	943	699	713	669	681	702	697	708
CHA	556	606	596	788	475	391	341	381	368	346	340
EUR	446	423	377	395	440	430	405	410	400	400	395
IND	949	1096	1008	1305	1139	1027	1038	1041	957	843	810
JPN	473	491	496	671	564	561	527	462	464	436	429
LAM	613	635	512	512	482	457	445	434	380	309	303
MEA	290	388	368	486	398	384	372	356	347	330	324
NEU	236	221	179	235	190	160	134	161	143	122	101
OAS	523	515	513	557	509	488	450	453	465	464	432
REF	528	316	766	359	695	645	579	582	546	503	489
SSA	1209	1271	1530	1556	1505	1578	1530	1518	1586	1496	1443
USA	312	381	392	401	468	479	465	460	418	396	402

Table 1165: MAgPIE m4p\_SSP4 — Prices—Agriculture—Pulses (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	766	792	773	808	801	781	758
CAZ	722	761	759	770	779	723	761
CHA	318	237	191	105	131	129	117
EUR	444	428	398	397	382	337	235
IND	767	777	754	783	793	707	675
JPN	424	409	399	405	409	381	389
LAM	323	312	299	262	210	153	138
MEA	316	293	292	328	294	276	278
NEU	36	30	21	29	26	21	17
OAS	437	417	413	406	406	404	384
REF	457	361	335	359	377	329	284
SSA	1310	1364	1293	1300	1221	1183	1132
USA	396	365	371	406	444	378	353

Table 1166: MAgPIE m4p\_SSP4 — 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]

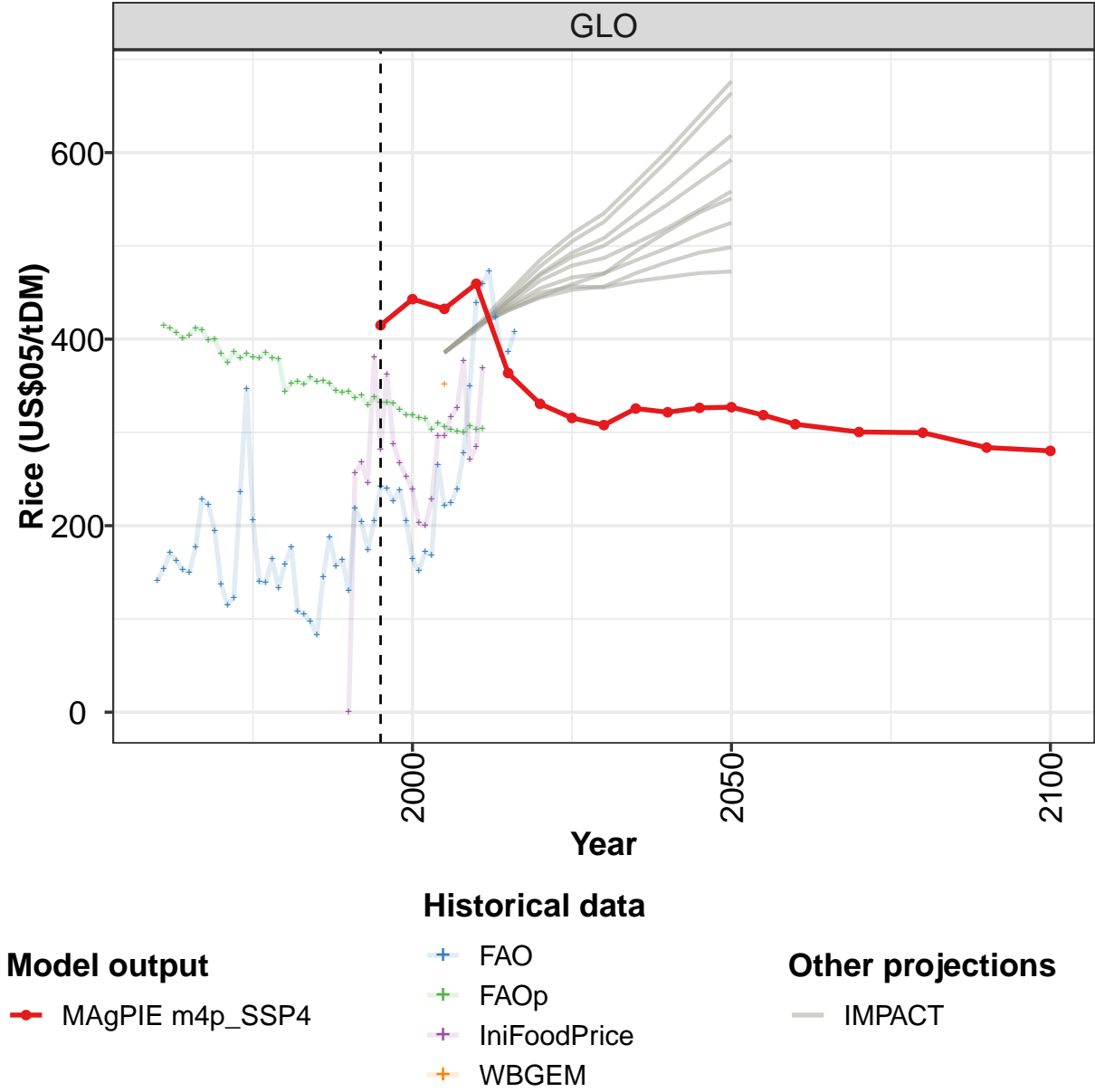
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	116	106	109	118	126	137	106	133	105	107	118
CAZ	123	129	168	137	147	131	200	223	192	197	216
CHA	48	52	53	59	61	117	141	182	145	204	254
EUR	71	69	63	66	48	57	74	74	60	68	78
IND	119	117	119	132	138	153	0	0	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	306	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



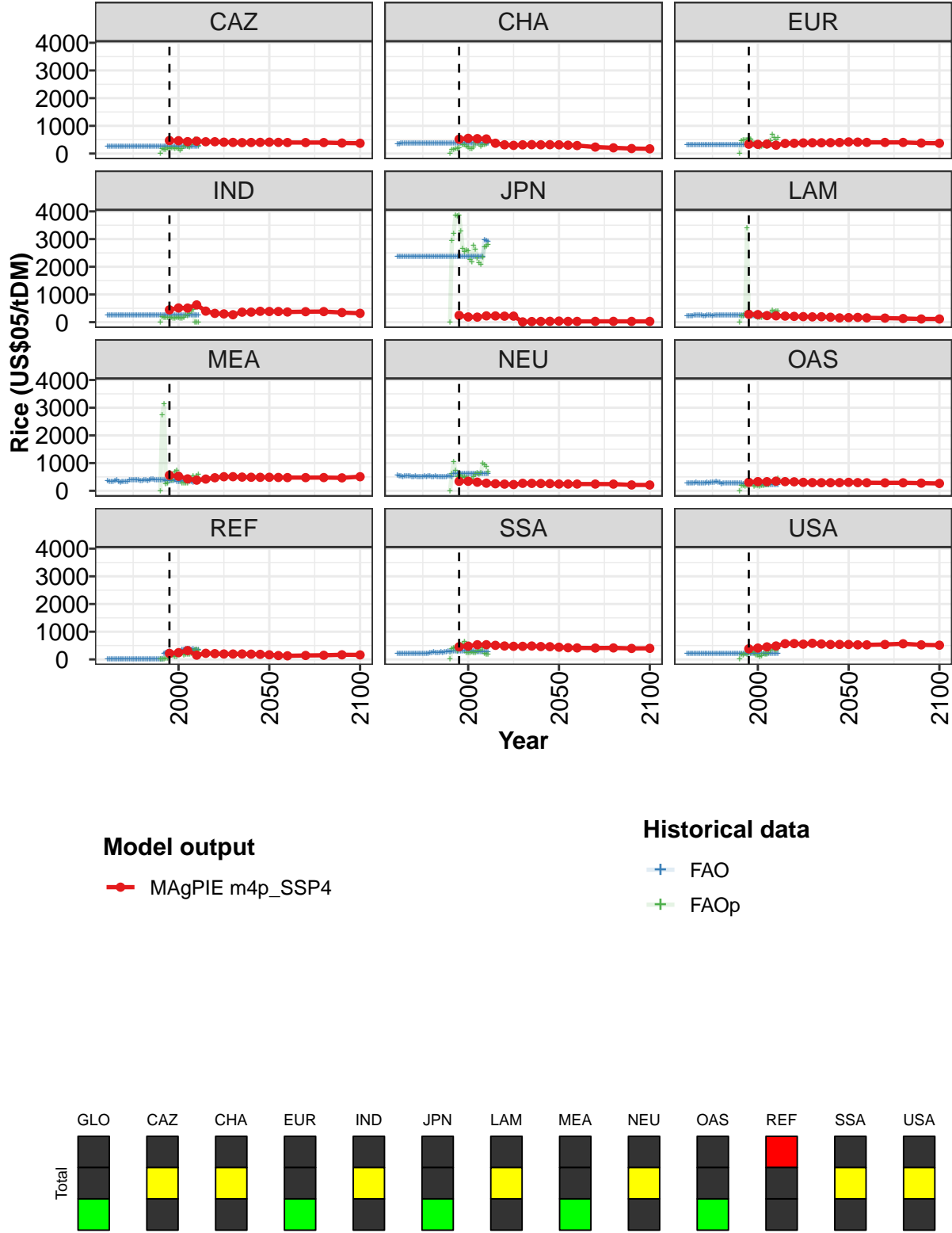


Figure 316: MAGPIE m4p\_SSP4 — Prices—Agriculture—Rice (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	415	443	432	459	364	331	315	308	326	322	326
CAZ	469	463	430	447	426	427	411	403	395	400	404
CHA	518	548	537	528	373	316	296	315	322	317	320
EUR	337	333	344	302	365	369	384	389	390	392	400
IND	446	513	509	623	399	318	299	269	361	362	392
JPN	244	188	182	227	225	217	218	11	22	26	31
LAM	286	273	238	230	220	209	200	192	196	179	156
MEA	559	525	430	385	424	471	508	509	495	489	487
NEU	341	343	311	274	254	242	226	270	267	262	258
OAS	307	331	329	347	331	325	305	296	292	293	296
REF	218	244	318	153	221	208	196	195	196	190	183
SSA	456	479	529	530	509	484	473	472	484	464	459
USA	383	409	452	486	567	571	550	581	557	540	541

Table 1175: MAgPIE m4p-SSP4 — Prices—Agriculture—Rice (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	327	319	309	300	300	284	280
CAZ	411	403	398	397	397	380	372
CHA	317	303	289	234	207	180	170
EUR	420	412	402	402	402	379	371
IND	386	384	368	378	382	347	320
JPN	38	28	27	29	29	28	27
LAM	164	172	156	147	132	115	115
MEA	488	481	477	476	478	467	508
NEU	244	244	244	243	241	212	209
OAS	305	296	290	287	289	277	265
REF	166	140	130	142	149	166	162
SSA	441	422	415	410	415	396	400
USA	539	526	525	539	565	525	513

Table 1176: MAgPIE m4p-SSP4 — 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]

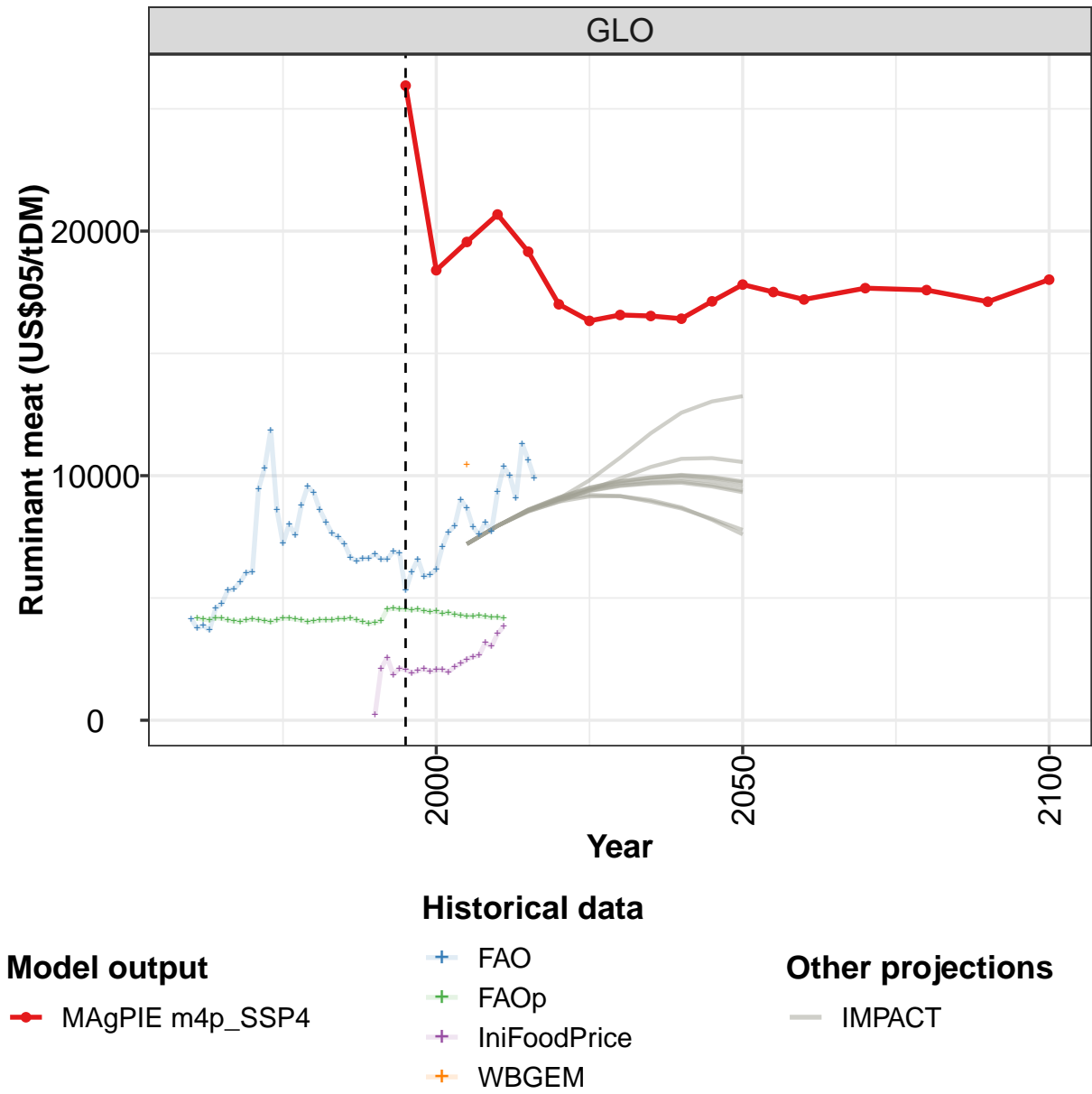
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	203	200	228	296	296	316	326	376	271	284	369
CAZ	127	171	259	275	261	236	326	400	516	482	284
CHA	173	160	236	358	366	377	259	317	324	338	460
EUR	242	244	285	272	245	417	467	676	571	483	569
IND	143	143	154	239	234	298	397	443	0	0	0
JPN	2265	2171	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

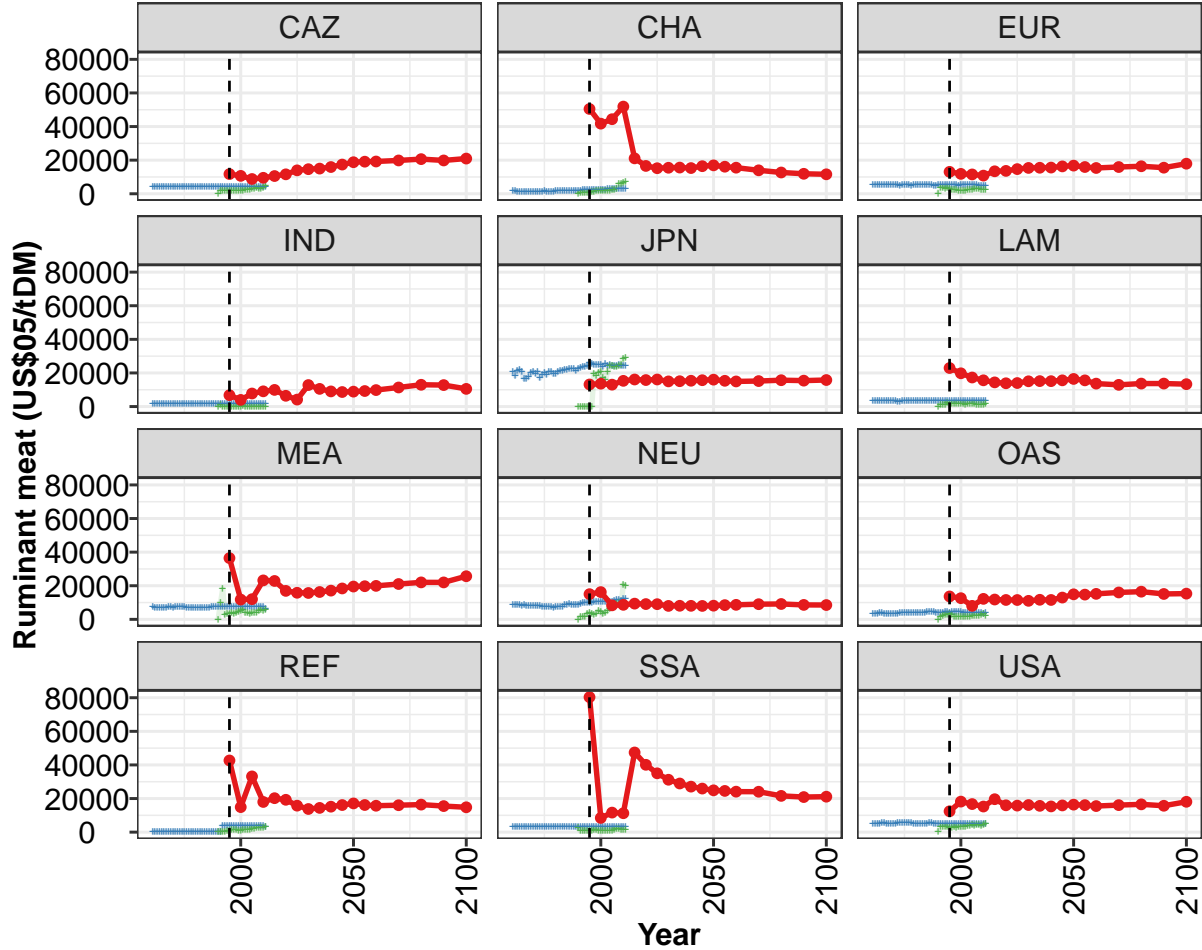
Table 1189: FAOp — Prices—Agriculture—Rice (US\$05/tDM) [PART 2/3]

	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





Model output

MAgPIE m4p\_SSP4

Historical data

FAO  
FAOp

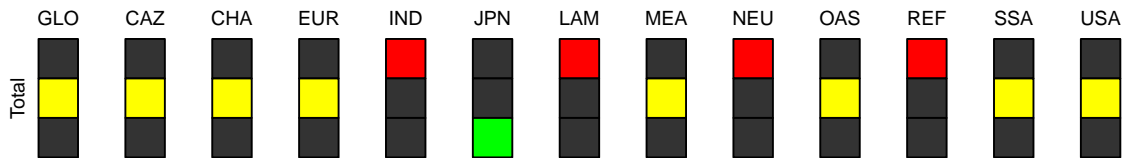


Figure 317: MAgPIE m4p\_SSP4 — Prices—Agriculture—Ruminant meat (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	25949	18400	19557	20680	19158	17007	16330	16570	16529	16418	17128
CAZ	11723	10666	8793	9515	10558	11579	13949	14648	14988	15918	17384
CHA	50463	41739	44382	51902	21077	16570	15226	15490	15599	15304	16420
EUR	13071	11852	11510	10814	13388	13628	14686	15386	15497	15596	16290
IND	6788	3969	7777	9072	9917	6414	4153	12814	10530	9026	8659
JPN	13151	13612	13054	15320	16121	15790	16124	15001	15094	15367	15700
LAM	22946	19801	17295	15638	14407	13876	14003	15056	15168	15128	15624
MEA	36458	11776	12019	23190	22858	16952	15831	15711	16283	17109	18400
NEU	15007	16235	8343	8650	9362	9103	9053	8006	8091	8063	7997
OAS	13643	12620	8036	12196	11811	11545	11516	11034	11650	11550	12972
REF	42668	14910	33190	17979	20225	19267	15779	13780	14437	15166	16142
SSA	80340	8478	11643	11271	47416	40095	35025	31197	28967	27104	25945
USA	12425	18188	16717	15257	19605	15980	15800	16153	15664	15315	15916

Table 1191: MAgPIE m4p\_SSP4 — Prices—Agriculture—Ruminant meat (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	17813	17509	17204	17667	17589	17113	18015
CAZ	18780	19101	19207	19838	20622	19833	20961
CHA	16923	16116	15536	13958	12677	11895	11598
EUR	16766	15930	15361	15922	16374	15545	17908
IND	8893	9255	9816	11368	12970	12792	10538
JPN	16022	15342	14961	15177	15698	15437	15803
LAM	16450	15606	13664	12928	13691	13690	13336
MEA	19538	19739	19925	21031	22008	21990	25670
NEU	8148	8478	8658	9027	9153	8598	8528
OAS	14910	14737	15185	16008	16482	15119	15310
REF	17108	16174	15726	16035	16397	15511	14795
SSA	24890	24543	24111	24068	21588	20882	21110
USA	16375	16098	15528	16090	16543	15713	18079

Table 1192: MAgPIE m4p\_SSP4 — 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?

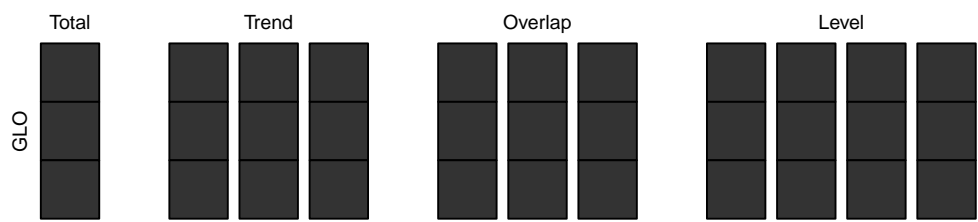
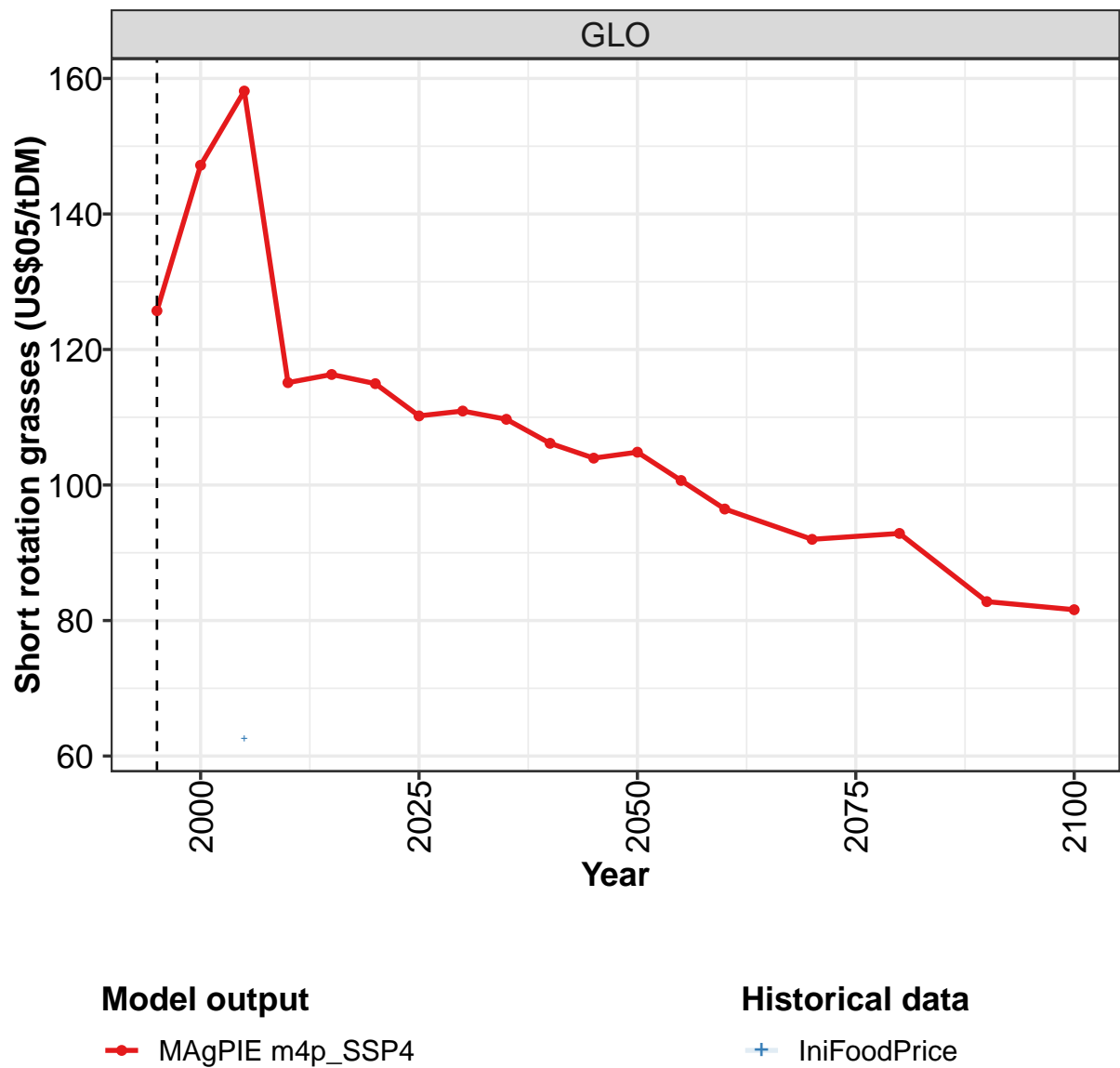


Figure 318: MAgPIE m4p\_SSP4 — Prices—Agriculture—Short rotation grasses (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	126	147	158	115	116	115	110	111	110	106	104

Table 1207: MAgPIE m4p\_SSP4 — Prices—Agriculture—Short rotation grasses (US\$05/tDM) [PART 1/2]

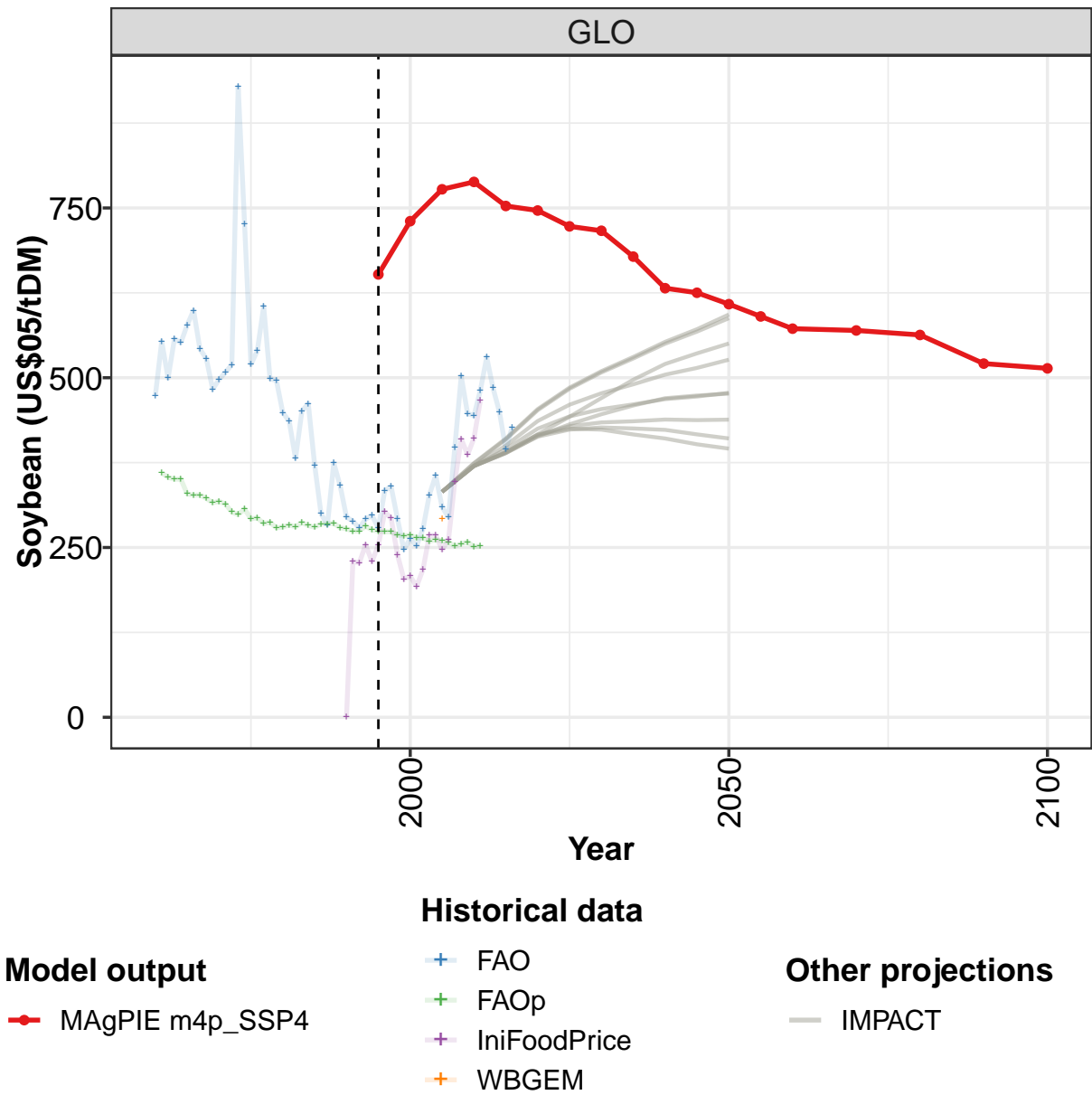
	2050	2055	2060	2070	2080	2090	2100
GLO	105	101	96	92	93	83	82

Table 1208: MAgPIE m4p\_SSP4 — 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



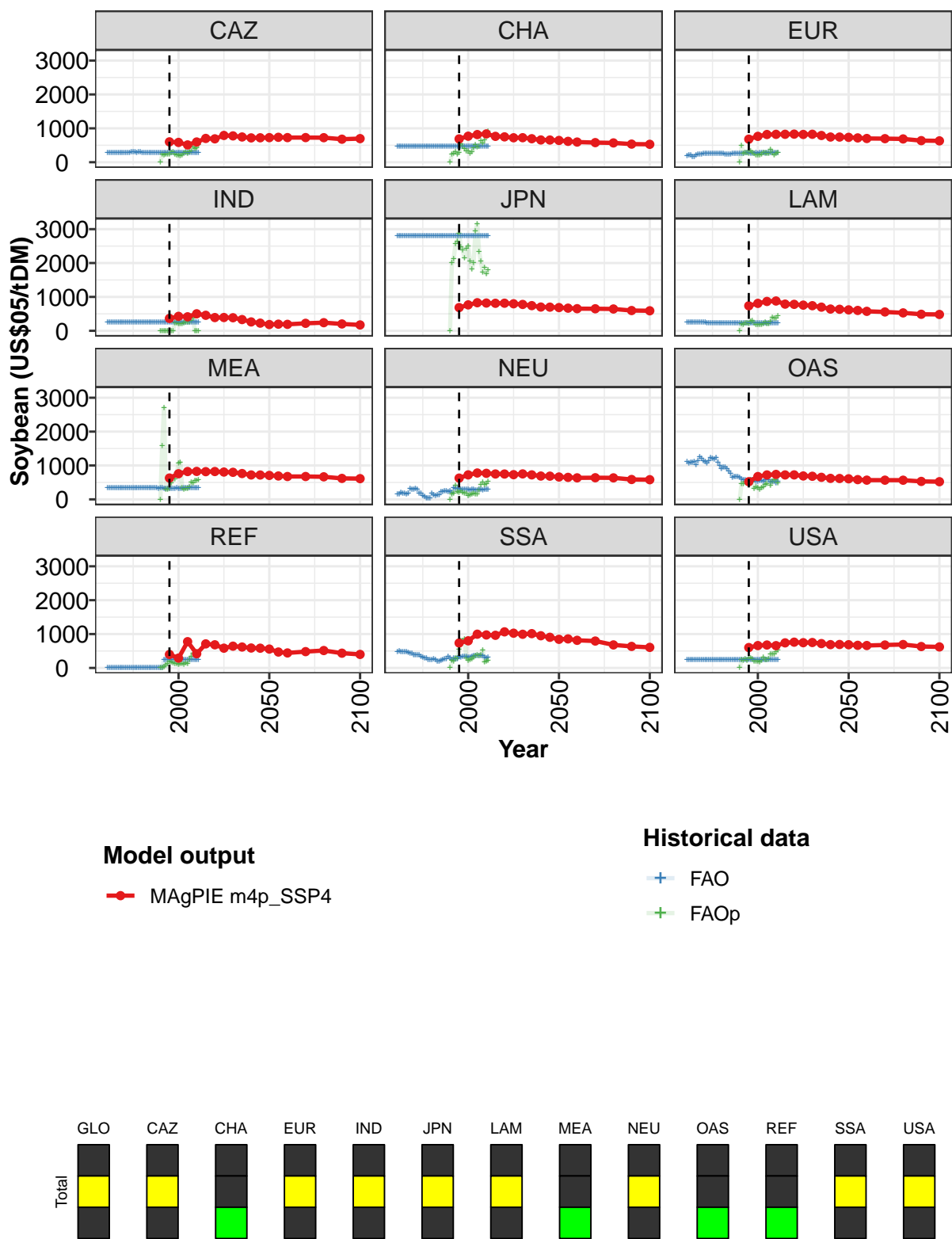


Figure 319: MAgPIE m4p\_SSP4 — Prices—Agriculture—Soybean (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	652	731	778	788	753	746	723	716	678	632	625
CAZ	602	585	511	598	702	690	790	778	745	718	722
CHA	688	769	816	836	764	749	722	724	694	657	656
EUR	681	764	818	823	825	829	820	825	789	744	743
IND	366	426	413	502	458	391	392	386	332	262	227
JPN	686	765	829	819	812	815	798	778	743	701	698
LAM	738	810	866	879	788	781	758	741	699	642	635
MEA	630	757	822	825	818	822	807	799	763	721	719
NEU	628	723	779	770	750	748	729	752	723	689	686
OAS	522	674	722	737	722	723	691	682	651	620	617
REF	399	290	776	420	710	684	584	643	618	589	583
SSA	737	801	996	974	964	1066	1026	994	1012	951	904
USA	602	660	677	659	741	761	745	751	719	688	693

Table 1210: MAgPIE m4p\_SSP4 — Prices—Agriculture—Soybean (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	608	590	572	570	563	521	514
CAZ	726	736	727	727	724	680	697
CHA	643	616	596	579	570	535	529
EUR	734	718	701	696	687	637	631
IND	185	196	191	221	240	202	173
JPN	686	668	653	651	644	598	591
LAM	618	601	575	556	529	488	482
MEA	707	690	675	675	666	619	612
NEU	661	649	635	639	635	587	581
OAS	608	583	568	567	566	530	522
REF	558	470	443	482	514	436	400
SSA	845	857	815	795	680	636	607
USA	686	668	662	677	691	632	621

Table 1211: MAgPIE m4p\_SSP4 — 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

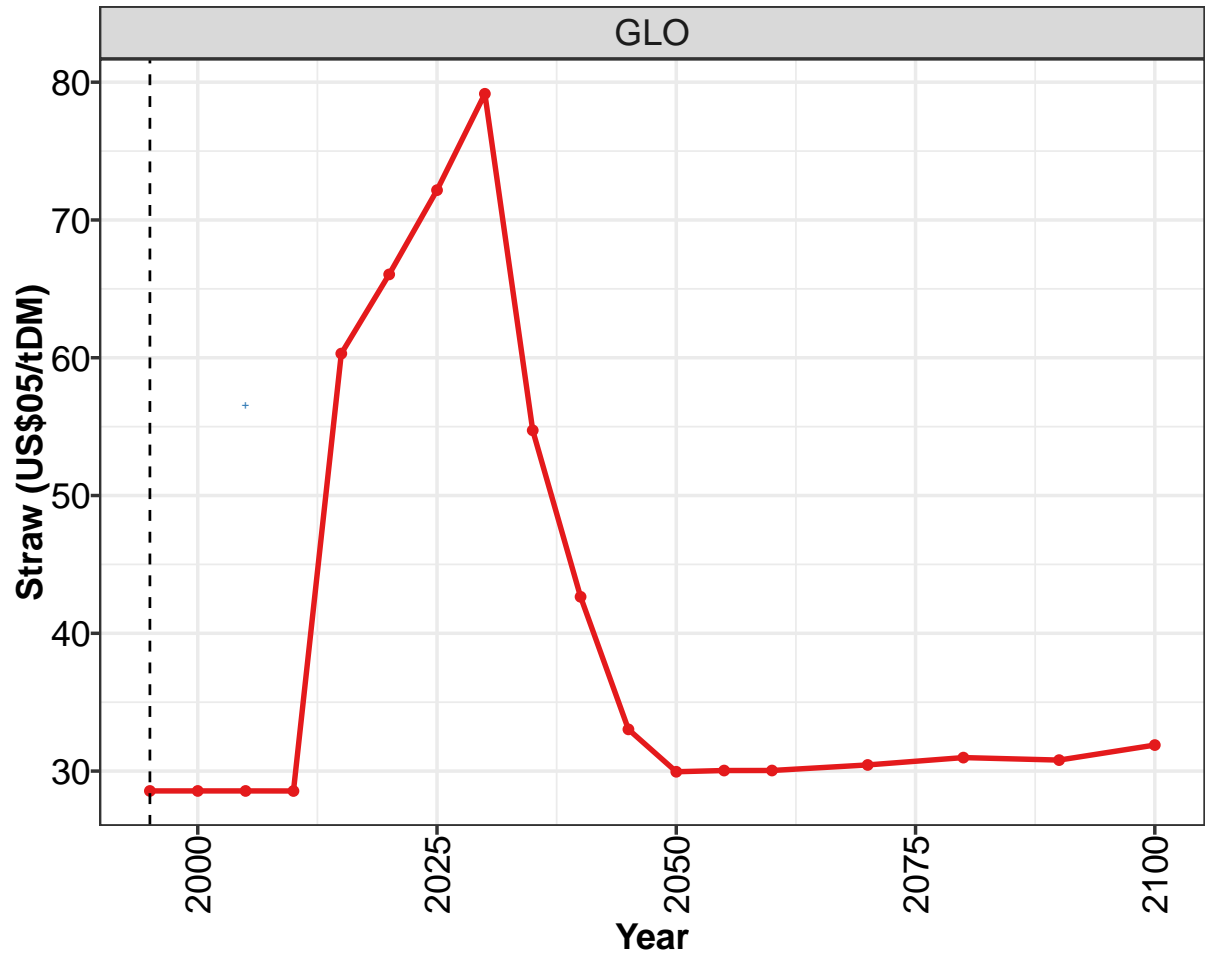
Table 1224: FAOp — Prices—Agriculture—Soybean (US\$05/tDM) [PART 2/3]

	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?



Model output

— MAgPIE m4p\_SSP4

Historical data

+ IniFoodPrice

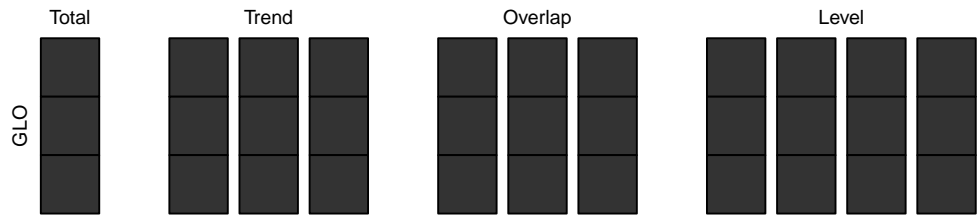


Figure 320: MAgPIE m4p\_SSP4 — Prices—Agriculture—Straw (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	28.6	28.6	28.6	28.6	60.3	66.1	72.2	79.2	54.7	42.7	33.0

Table 1226: MAgPIE m4p\_SSP4 — Prices—Agriculture—Straw (US\$05/tDM) [PART 1/2]

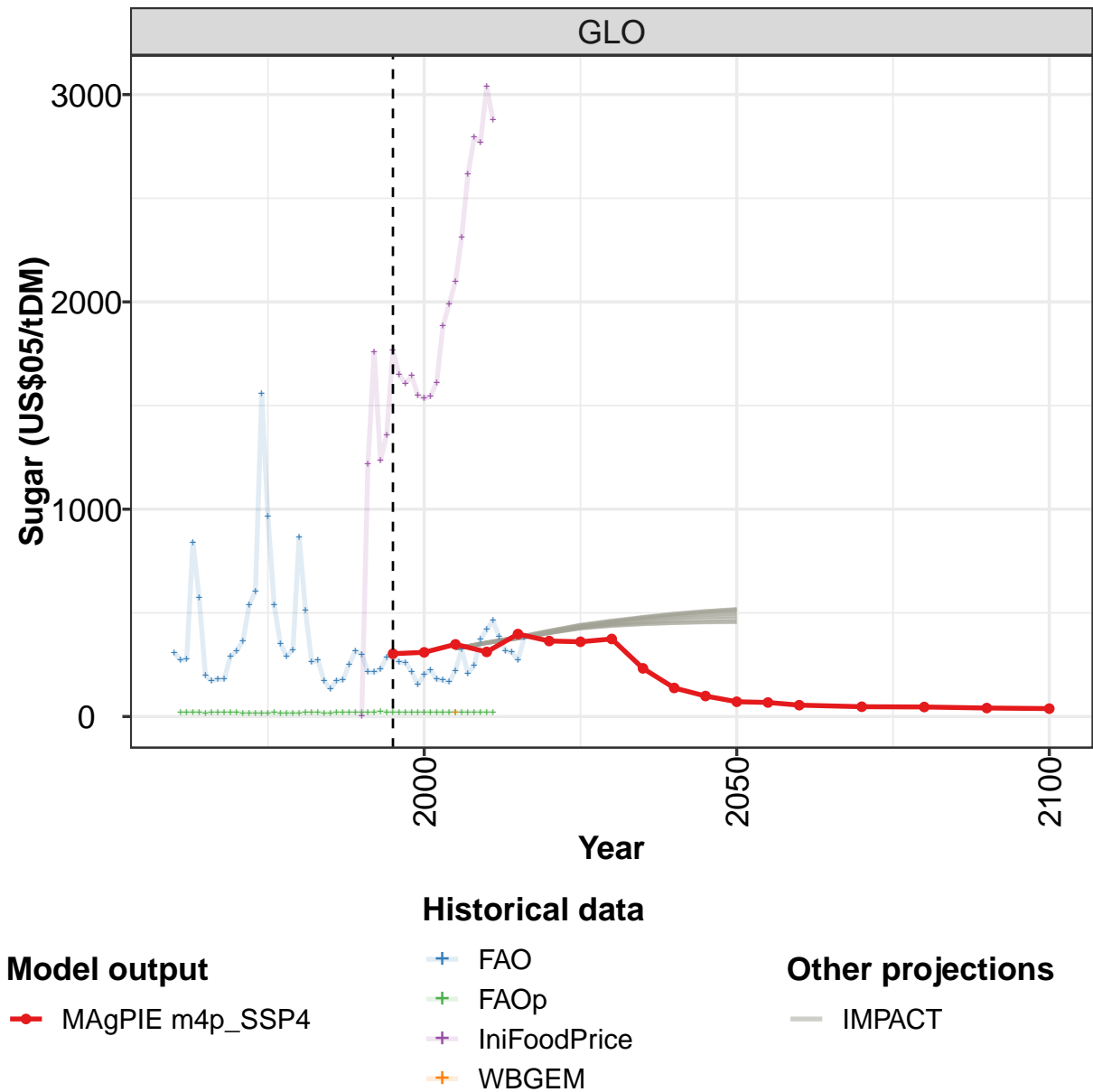
	2050	2055	2060	2070	2080	2090	2100
GLO	30.0	30.0	30.0	30.4	31.0	30.8	31.9

Table 1227: MAgPIE m4p\_SSP4 — 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



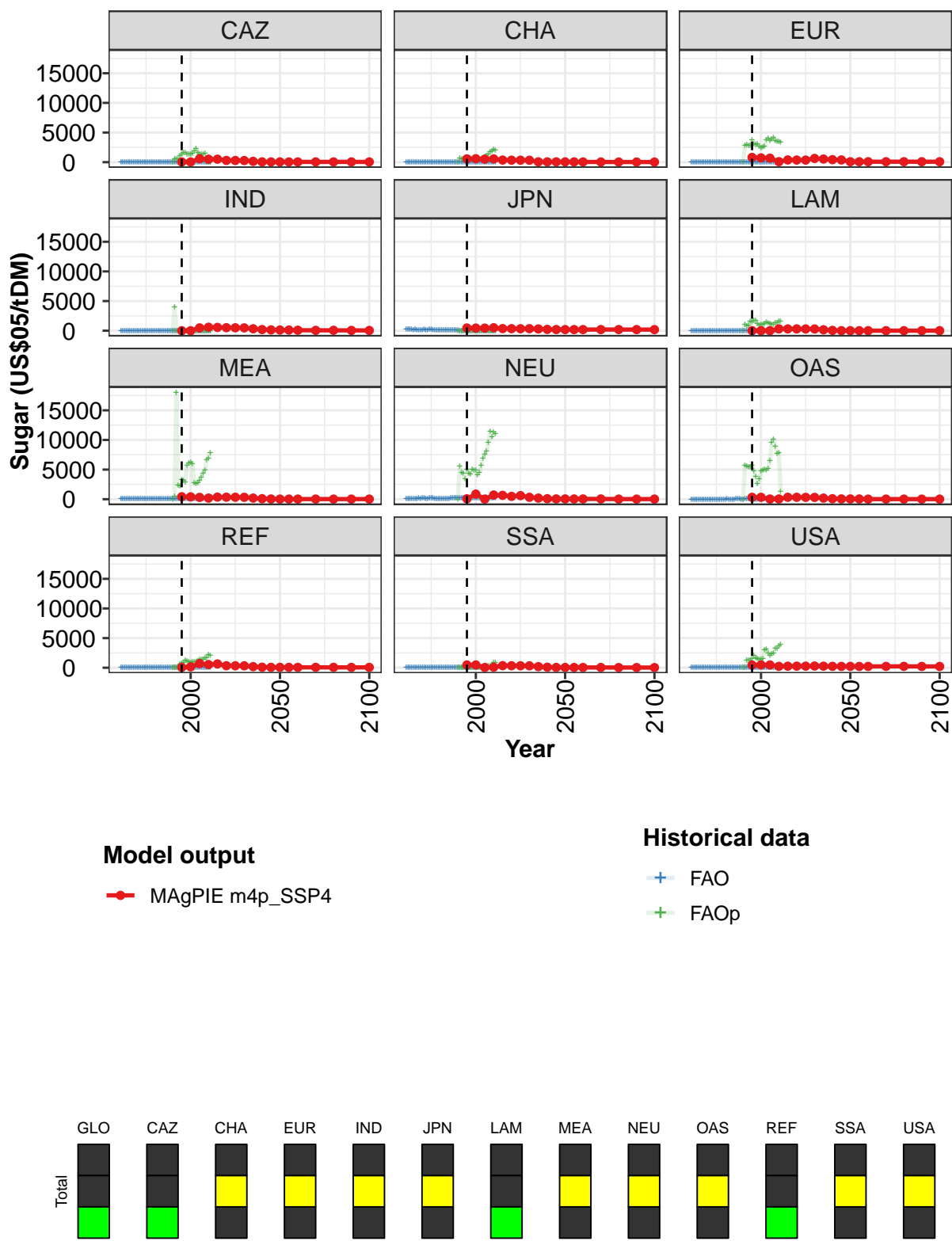


Figure 321: MAgPIE m4p\_SSP4 — Prices—Agriculture—Sugar (US\$05/tDM)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	303	310	348	312	398	364	361	374	232	138	99
CAZ	35	41	581	501	502	293	285	279	143	54	47
CHA	556	581	514	556	356	340	333	326	53	52	52
EUR	806	724	674	87	377	361	354	632	530	426	376
IND	0	0	478	586	554	505	493	480	325	194	138
JPN	461	437	434	499	358	345	334	342	298	224	196
LAM	10	9	7	313	303	304	296	290	155	53	10
MEA	421	405	314	189	356	341	333	327	192	91	42
NEU	67	863	25	713	657	481	608	326	192	91	52
OAS	324	322	32	45	326	327	317	311	192	87	50
REF	59	152	704	534	640	341	333	327	192	91	72
SSA	469	476	37	94	356	340	333	326	192	91	52
USA	454	484	465	235	263	269	269	290	267	240	230

Table 1229: MAgPIE m4p\_SSP4 — Prices—Agriculture—Sugar (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	71	68	55	47	46	41	38
CAZ	46	45	45	45	46	42	43
CHA	50	45	41	33	27	24	24
EUR	79	77	76	76	78	74	73
IND	117	116	84	56	62	51	44
JPN	191	188	188	193	197	187	184
LAM	7	7	7	7	7	6	6
MEA	24	24	24	24	24	24	24
NEU	48	45	45	45	24	19	19
OAS	48	45	18	19	19	18	18
REF	69	66	64	66	67	63	62
SSA	48	46	45	45	34	32	31
USA	227	222	223	229	235	221	218

Table 1230: MAgPIE m4p\_SSP4 — 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]

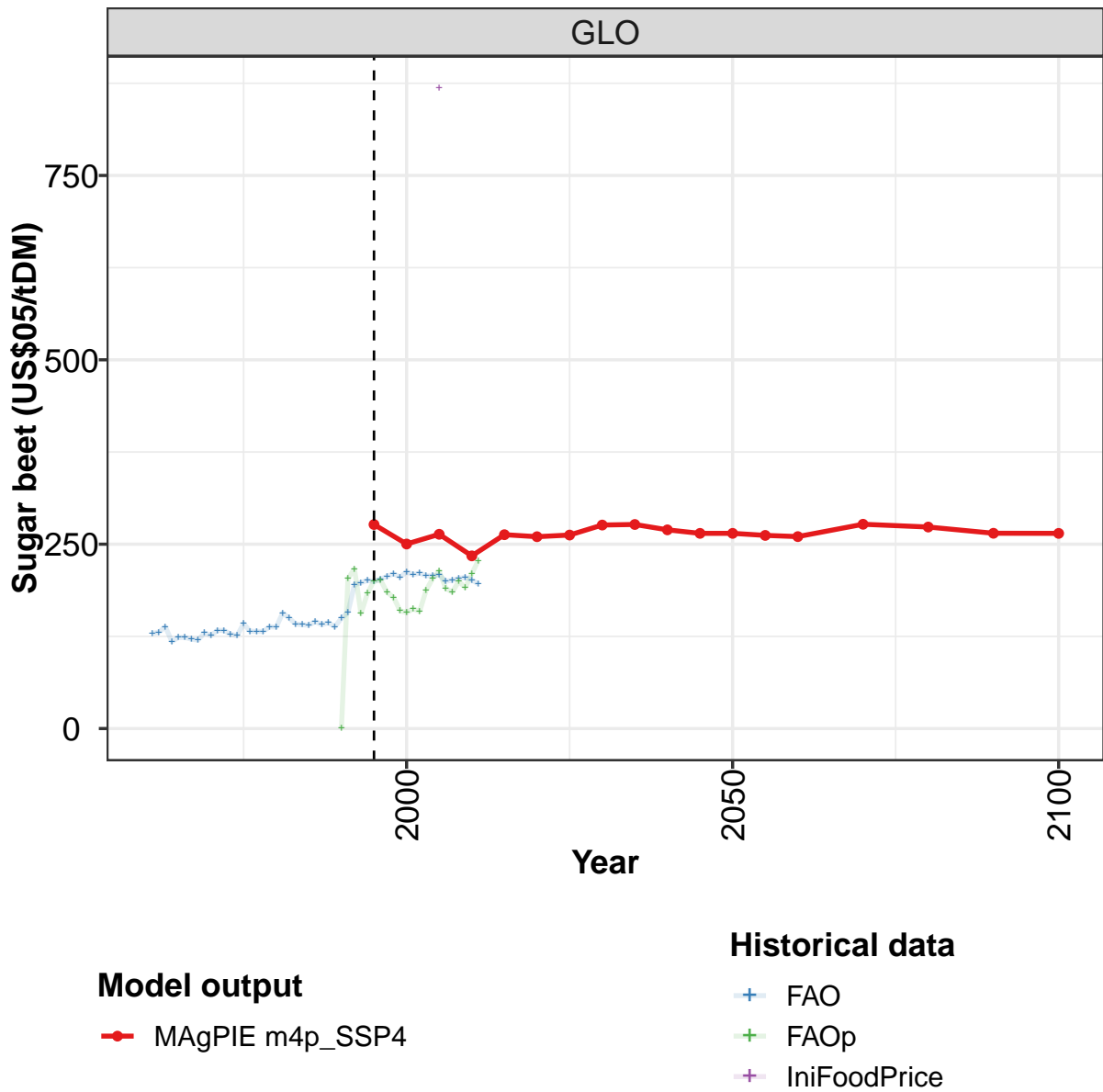
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	1544	1611	1884	1991	2097	2312	2615	2793	2770	3038	2875
CAZ	1403	1879	2323	1648	1279	1311	1371	1535	0	0	0
CHA	608	543	520	711	905	1132	1401	1745	1813	2097	1998
EUR	2599	2731	3741	3982	3641	3893	4088	3625	3534	3486	3354
IND	0	0	0	0	0	0	0	0	0	0	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



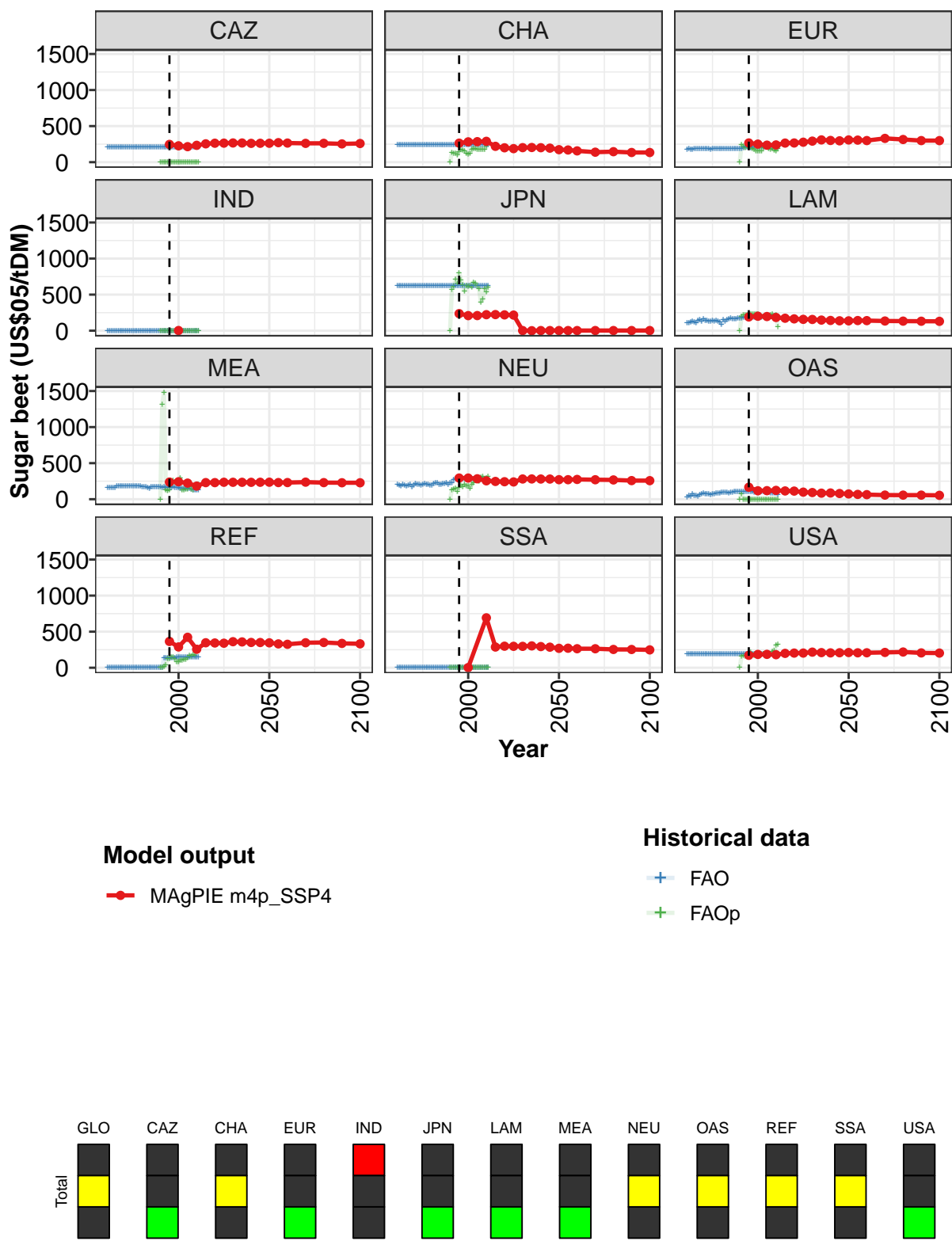


Figure 322: MAGPIE m4p\_SSP4 — Prices—Agriculture—Sugar beet (US\$05/tDM)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	277	250	263	234	263	260	262	276	277	269	265
CAZ	246	227	215	234	254	263	264	267	266	261	262
CHA	264	282	285	289	220	200	188	201	204	201	194
EUR	267	251	236	239	265	266	277	292	309	301	296
IND		2									
JPN	237	209	210	222	223	220	216	2	0	2	2
LAM	191	201	197	183	173	164	157	156	147	142	138
MEA	238	242	223	182	230	230	235	235	235	234	235
NEU	294	293	283	255	247	243	240	281	281	280	280
OAS	166	117	119	123	115	113	98	93	84	86	79
REF	364	288	422	257	346	343	340	361	358	351	350
SSA		2		692	287	299	297	297	303	294	285
USA	173	185	186	181	199	203	204	216	210	206	208

Table 1245: MAgPIE m4p\_SSP4 — Prices—Agriculture—Sugar beet (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	265	262	260	277	273	265	265
CAZ	262	271	265	261	261	253	259
CHA	174	169	157	139	145	134	134
EUR	308	306	299	330	314	299	299
IND							
JPN	2	2	2	2	2	2	2
LAM	137	141	140	134	133	131	130
MEA	236	231	231	237	230	229	228
NEU	271	271	274	270	267	258	258
OAS	73	67	63	57	57	57	54
REF	346	331	325	347	350	337	332
SSA	269	271	264	263	254	253	247
USA	211	207	207	212	218	206	203

Table 1246: MAgPIE m4p\_SSP4 — 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]

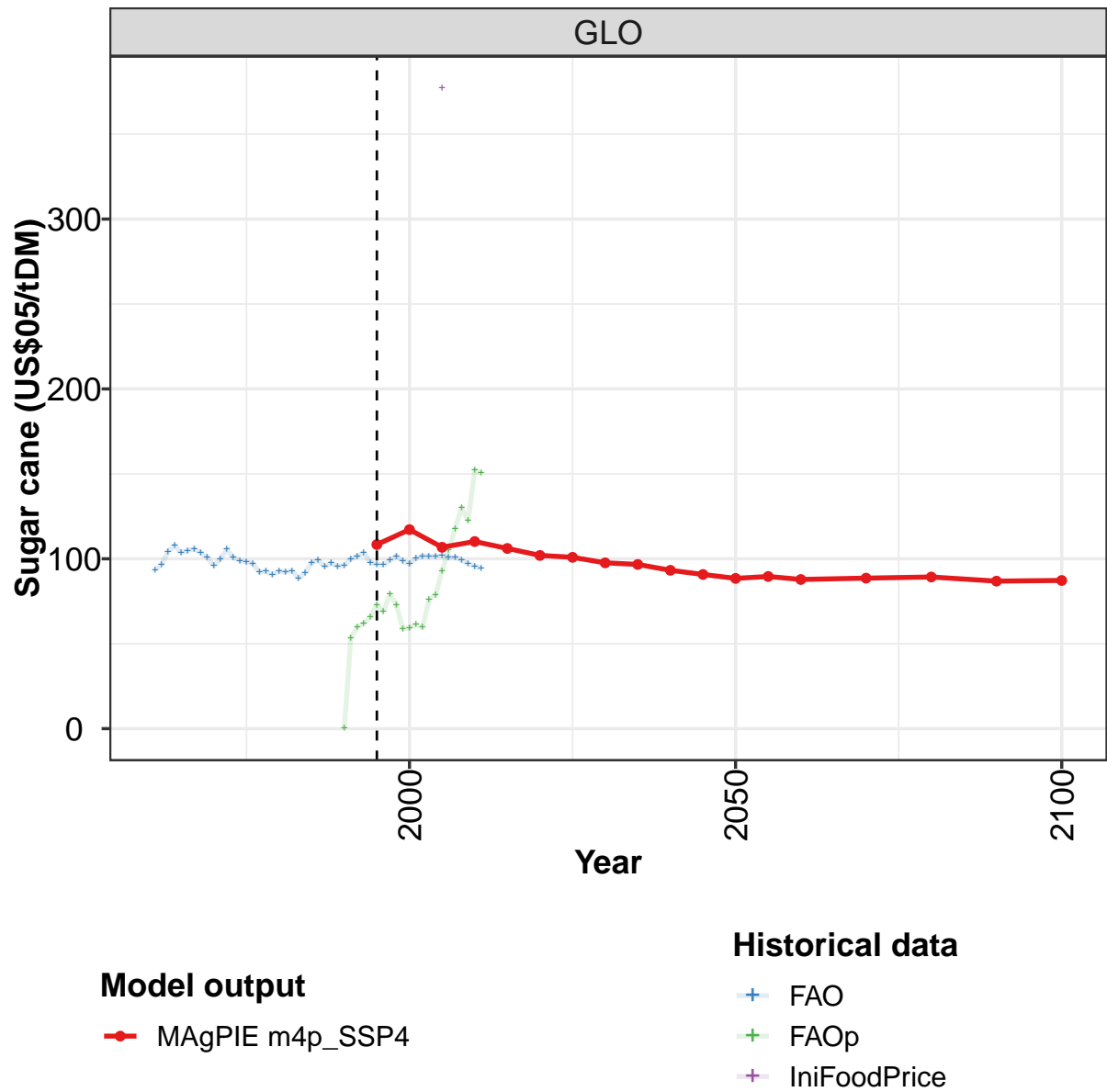
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	162	159	188	203	213	190	185	200	191	210	228
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	125	176	192	183	177	173	172	178	171	215	271
EUR	152	151	196	222	227	181	180	182	164	156	181
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	619	604	666	658	620	577	393	433	575	538	607
LAM	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



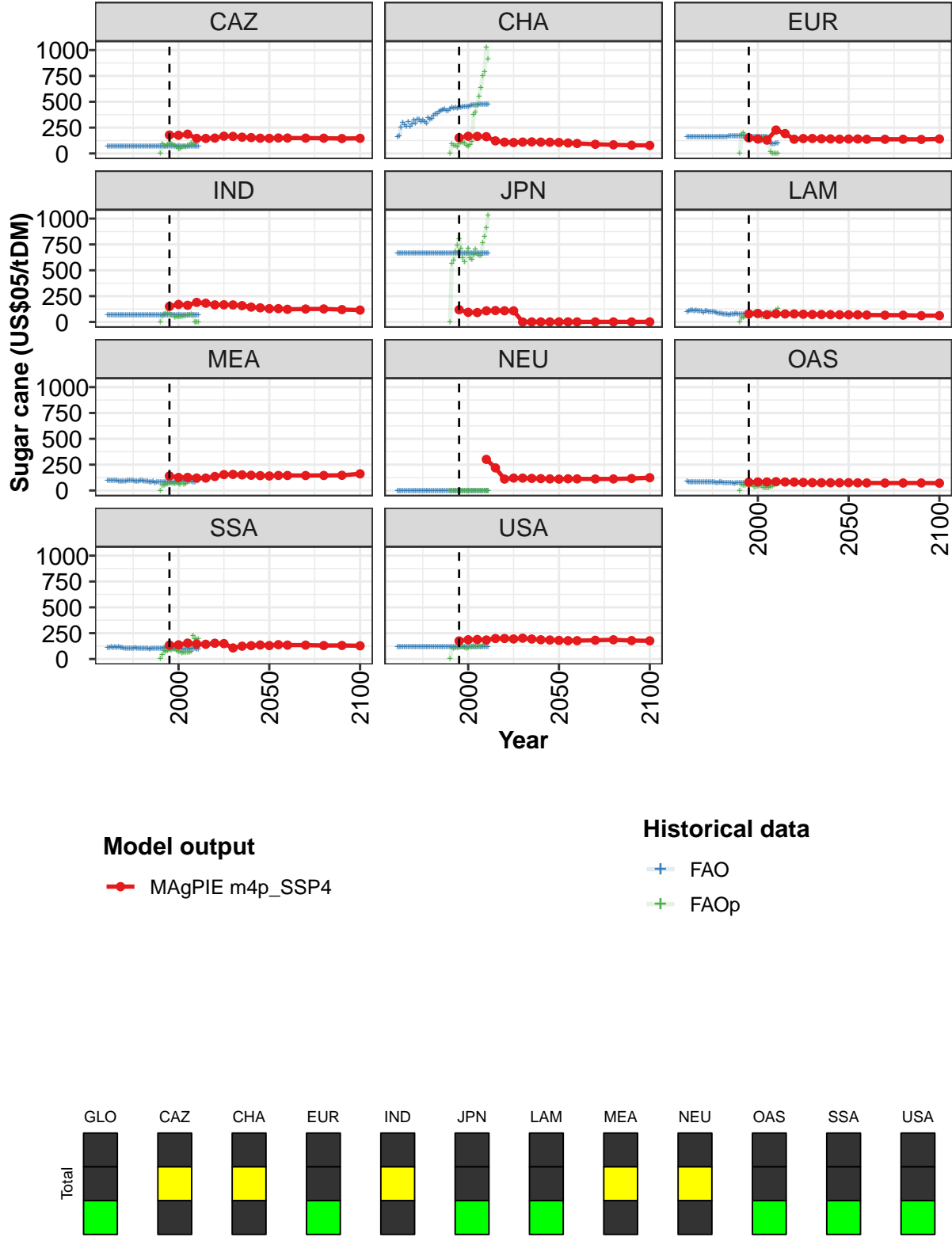


Figure 323: MAgPIE m4p\_SSP4 — Prices—Agriculture—Sugar cane (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	108	117	107	110	106	102	101	98	97	93	91
CAZ	178	176	187	146	145	149	167	165	157	153	148
CHA	151	166	165	162	122	109	106	110	112	109	109
EUR	150	140	129	227	192	138	144	145	142	141	138
IND	150	169	162	189	181	165	166	165	158	144	137
JPN	119	94	91	108	111	109	108	0	1	1	1
LAM	78	82	71	79	78	78	75	73	72	71	70
MEA	140	126	127	121	120	135	154	156	151	148	144
NEU				301	219	111	120	120	117	115	112
OAS	80	83	82	85	82	81	78	76	75	75	74
SSA	135	137	154	145	143	153	149	107	124	129	136
USA	175	186	189	184	198	198	194	201	193	186	184

Table 1255: MAgPIE m4p\_SSP4 — Prices—Agriculture—Sugar cane (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	88	90	88	89	89	87	87
CAZ	146	150	149	148	148	144	146
CHA	106	101	97	89	84	79	78
EUR	140	140	138	137	137	136	140
IND	129	129	123	125	126	120	115
JPN	1	1	1	1	1	1	1
LAM	70	69	67	66	66	62	62
MEA	141	146	145	145	146	147	161
NEU	110	113	112	111	112	116	124
OAS	75	74	73	72	72	73	71
SSA	130	139	135	135	130	131	128
USA	180	178	177	181	186	178	176

Table 1256: MAgPIE m4p\_SSP4 — 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]

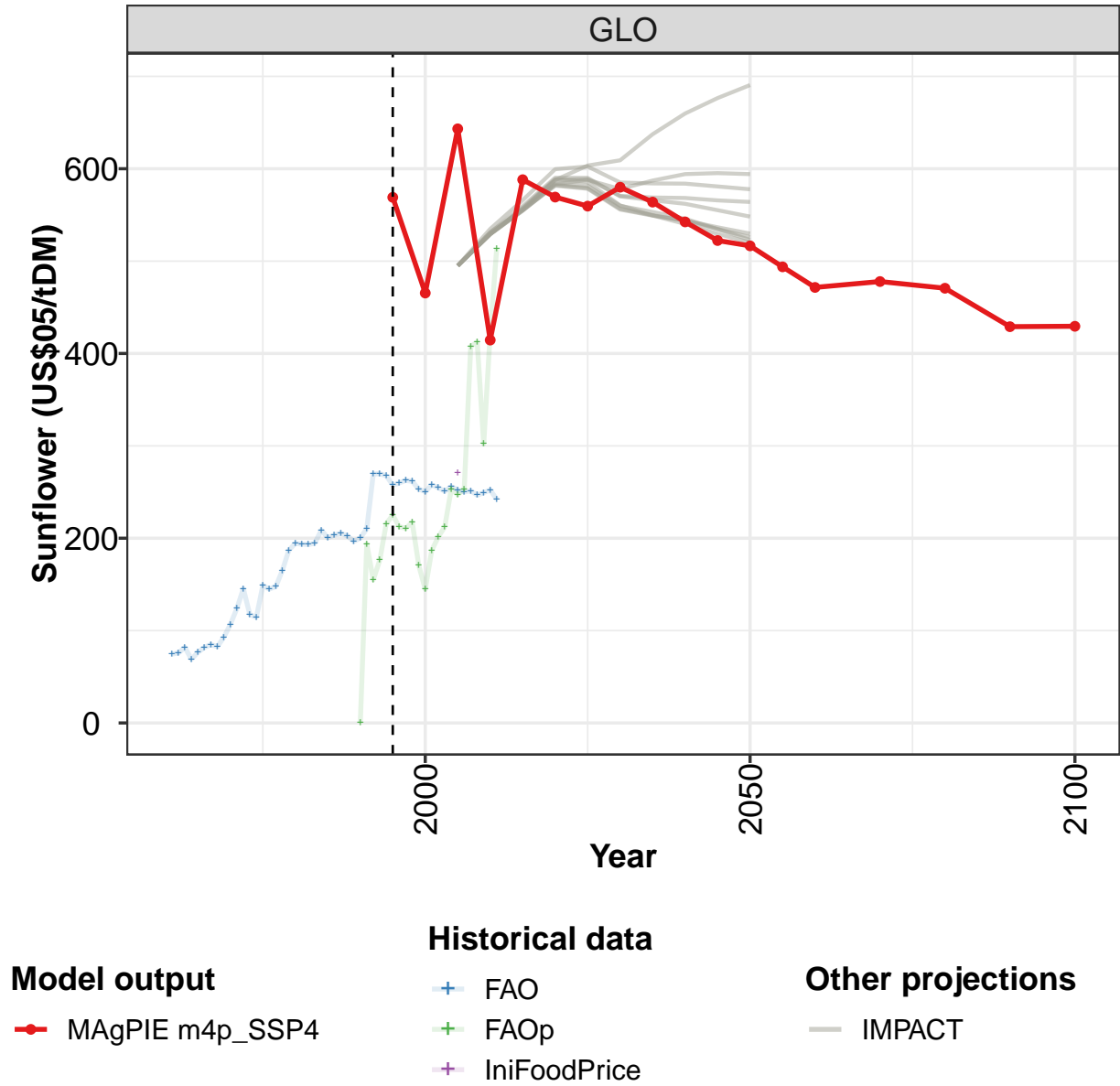
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	61	60	76	79	93	105	118	130	122	152	150
CAZ	44	62	67	63	74	78	102	81	94	150	145
CHA	83	117	373	397	465	549	634	752	793	1027	912
EUR	130	119	160	156	152	130	17	0	0	0	0
IND	49	53	58	61	64	66	73	69	0	0	0
JPN	621	604	649	702	655	644	641	765	828	911	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



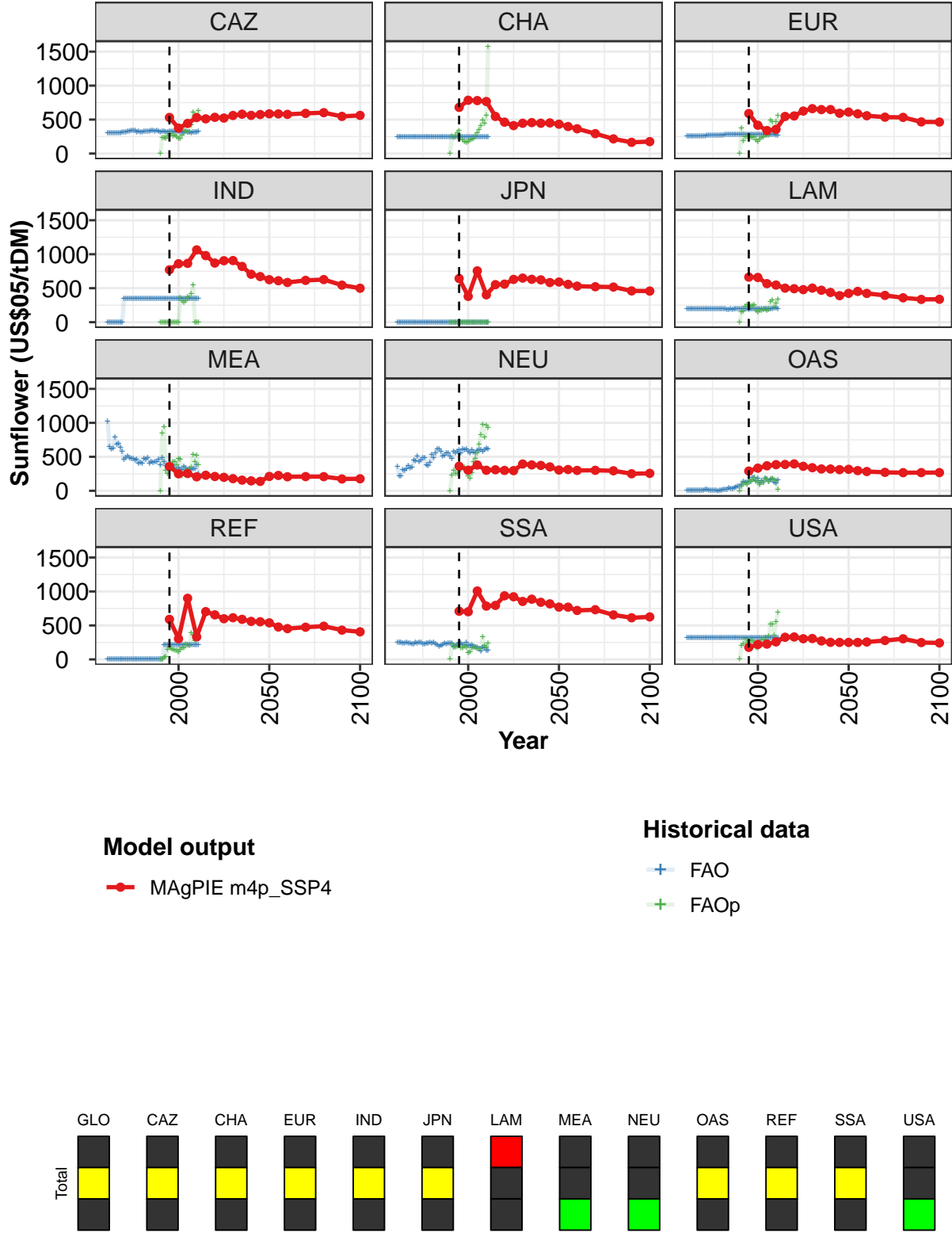


Figure 324: MAgPIE m4p\_SSP4 — Prices—Agriculture—Sunflower (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	569	465	643	415	588	569	560	580	564	542	522
CAZ	531	374	444	530	511	533	523	560	580	562	574
CHA	680	785	780	766	547	463	411	446	455	446	451
EUR	589	416	338	356	546	554	626	661	647	648	593
IND	771	860	865	1064	980	871	905	907	820	705	671
JPN	643	379	755	403	552	560	630	649	631	623	584
LAM	663	658	567	547	501	493	479	502	470	438	390
MEA	359	250	255	206	229	211	198	179	157	146	138
NEU	361	304	379	302	309	300	297	394	381	373	352
OAS	290	333	368	385	388	396	360	340	321	321	311
REF	590	304	900	331	703	656	599	614	590	560	555
SSA	709	702	1007	785	795	937	922	853	887	841	818
USA	177	220	225	258	326	330	304	308	272	251	250

Table 1265: MAgPIE m4p-SSP4 — Prices—Agriculture—Sunflower (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	517	494	472	478	471	429	429
CAZ	585	584	577	591	602	547	562
CHA	433	398	365	293	216	165	176
EUR	610	585	557	536	533	466	464
IND	625	610	584	615	627	545	500
JPN	591	557	530	521	517	460	458
LAM	424	453	423	394	359	335	337
MEA	212	226	207	209	209	174	177
NEU	306	313	300	301	294	251	257
OAS	316	297	284	271	266	267	268
REF	538	477	454	474	489	431	407
SSA	770	769	720	731	655	613	626
USA	250	250	257	278	303	248	243

Table 1266: MAgPIE m4p-SSP4 — 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]

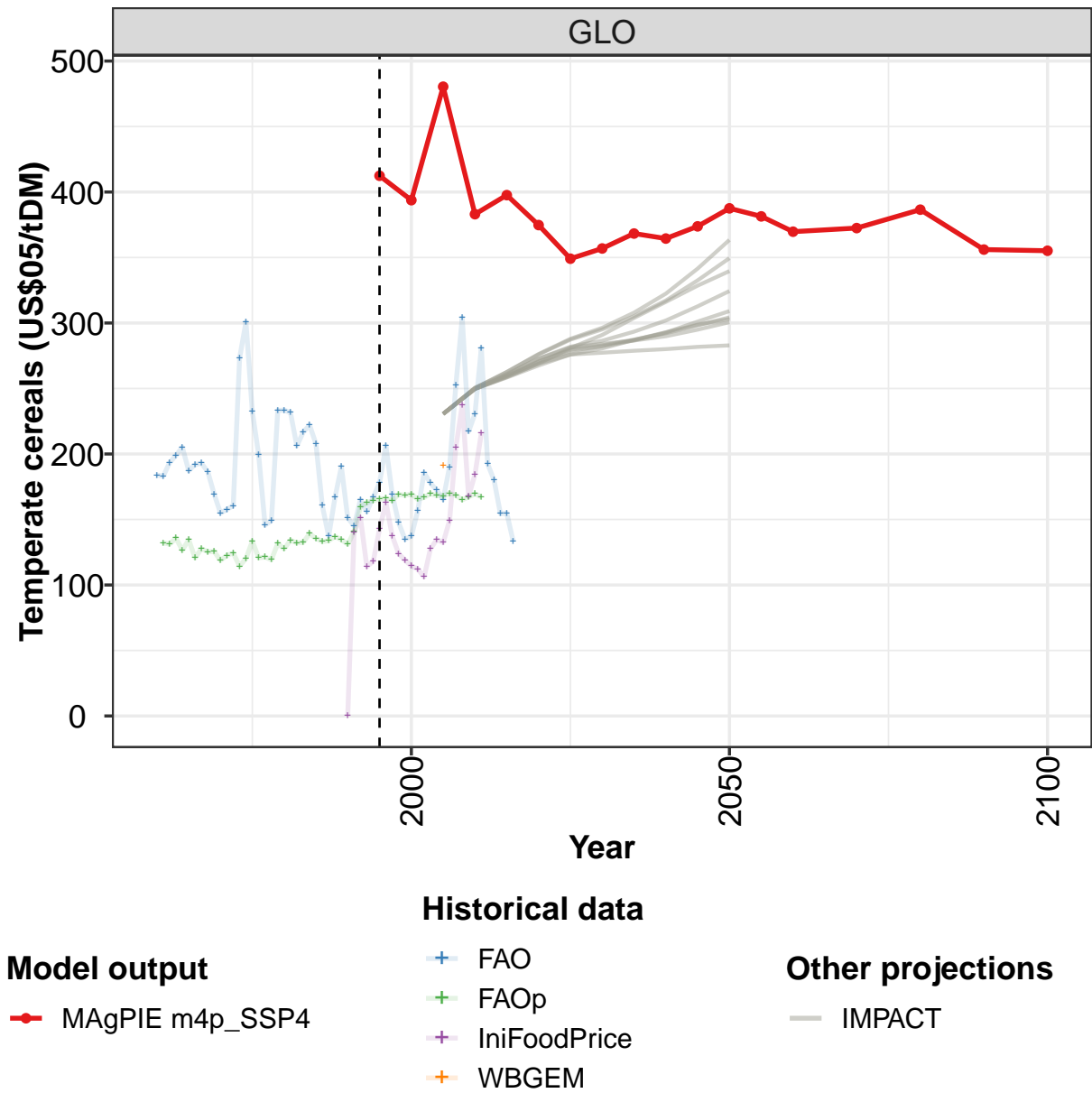
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	187	201	212	253	247	253	408	412	302	422	514
CAZ	218	274	340	331	314	319	424	610	564	499	627
CHA	200	207	217	257	300	349	409	495	441	556	1575
EUR	212	237	240	271	271	273	489	472	317	461	558
IND	357	311	289	318	366	356	414	547	0	0	0
JPN	0	0	0	0	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





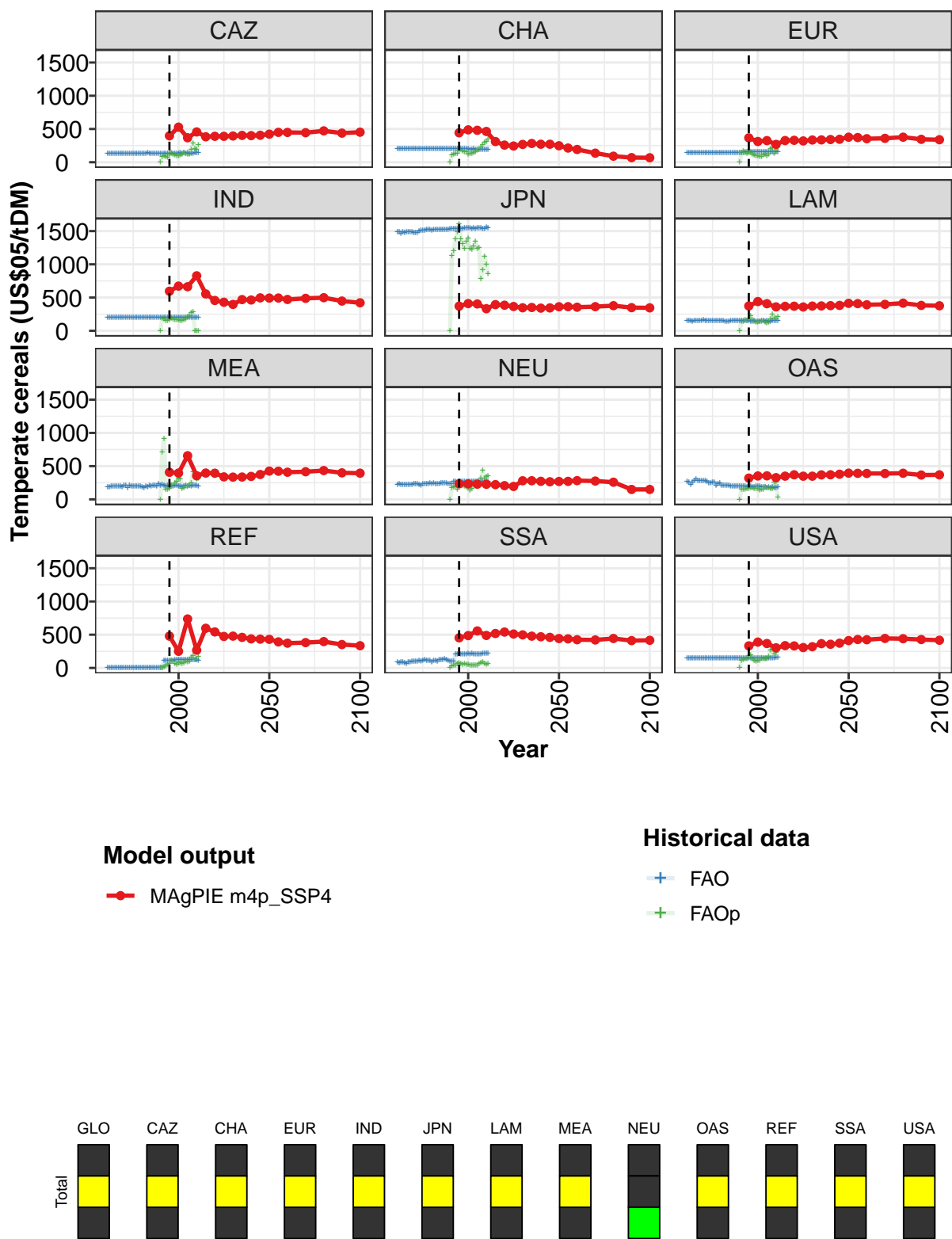


Figure 325: MAGPIE m4p\_SSP4 — Prices—Agriculture—Temperate cereals (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	412	394	480	383	398	375	349	357	368	364	374
CAZ	397	528	368	456	383	390	390	395	403	400	406
CHA	443	487	480	463	311	258	244	268	282	271	271
EUR	366	312	325	268	326	330	320	334	336	342	345
IND	596	672	663	827	555	456	430	397	470	463	495
JPN	371	410	404	333	394	385	366	347	351	341	344
LAM	373	440	408	360	368	370	358	372	374	378	382
MEA	407	396	657	356	396	394	339	335	336	345	374
NEU	234	233	229	227	222	207	195	280	281	272	265
OAS	320	352	354	327	350	370	349	349	368	370	379
REF	478	250	737	267	597	542	474	479	460	437	434
SSA	453	487	557	489	518	540	510	498	479	469	460
USA	332	389	367	303	336	332	307	320	365	356	373

Table 1275: MAgPIE m4p\_SSP4 — Prices—Agriculture—Temperate cereals (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	388	381	370	372	387	356	355
CAZ	423	449	448	444	472	438	452
CHA	248	213	192	136	91	69	67
EUR	377	371	354	359	377	345	339
IND	493	493	471	488	498	447	422
JPN	362	363	355	363	378	348	345
LAM	413	409	392	398	416	382	377
MEA	426	423	409	416	434	399	394
NEU	269	271	282	276	258	149	150
OAS	394	392	390	389	393	366	369
REF	431	392	373	381	397	352	335
SSA	443	438	425	421	443	411	416
USA	412	428	425	444	440	427	417

Table 1276: MAgPIE m4p\_SSP4 — 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]

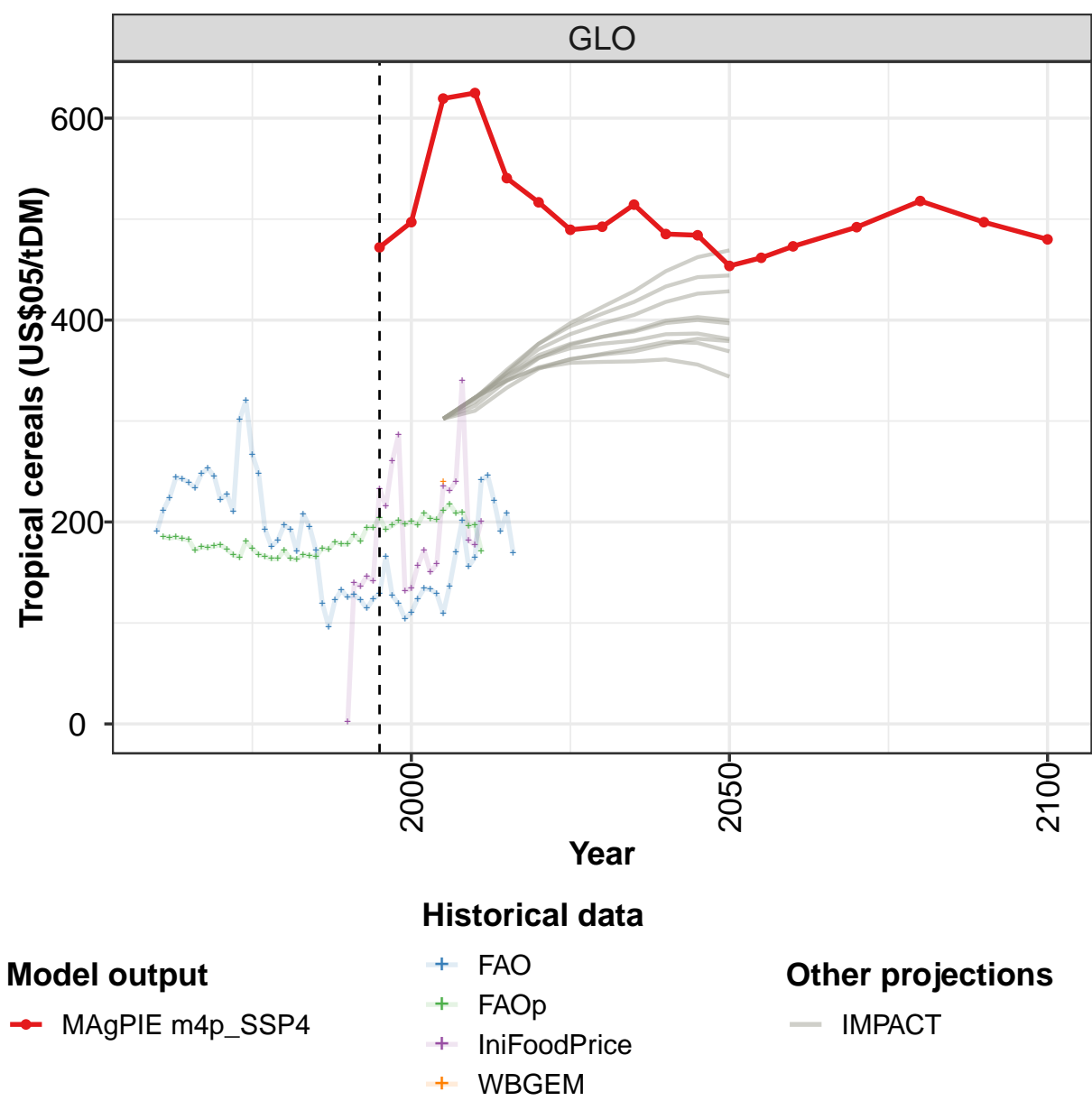
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	112	106	128	135	132	149	205	237	168	184	216
CAZ	106	124	144	129	119	121	189	288	203	185	257
CHA	129	127	137	159	179	193	225	260	298	310	346
EUR	86	82	106	114	99	122	198	211	125	168	227
IND	158	158	170	178	214	223	275	282	0	0	0
JPN	1237	1221	1274	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





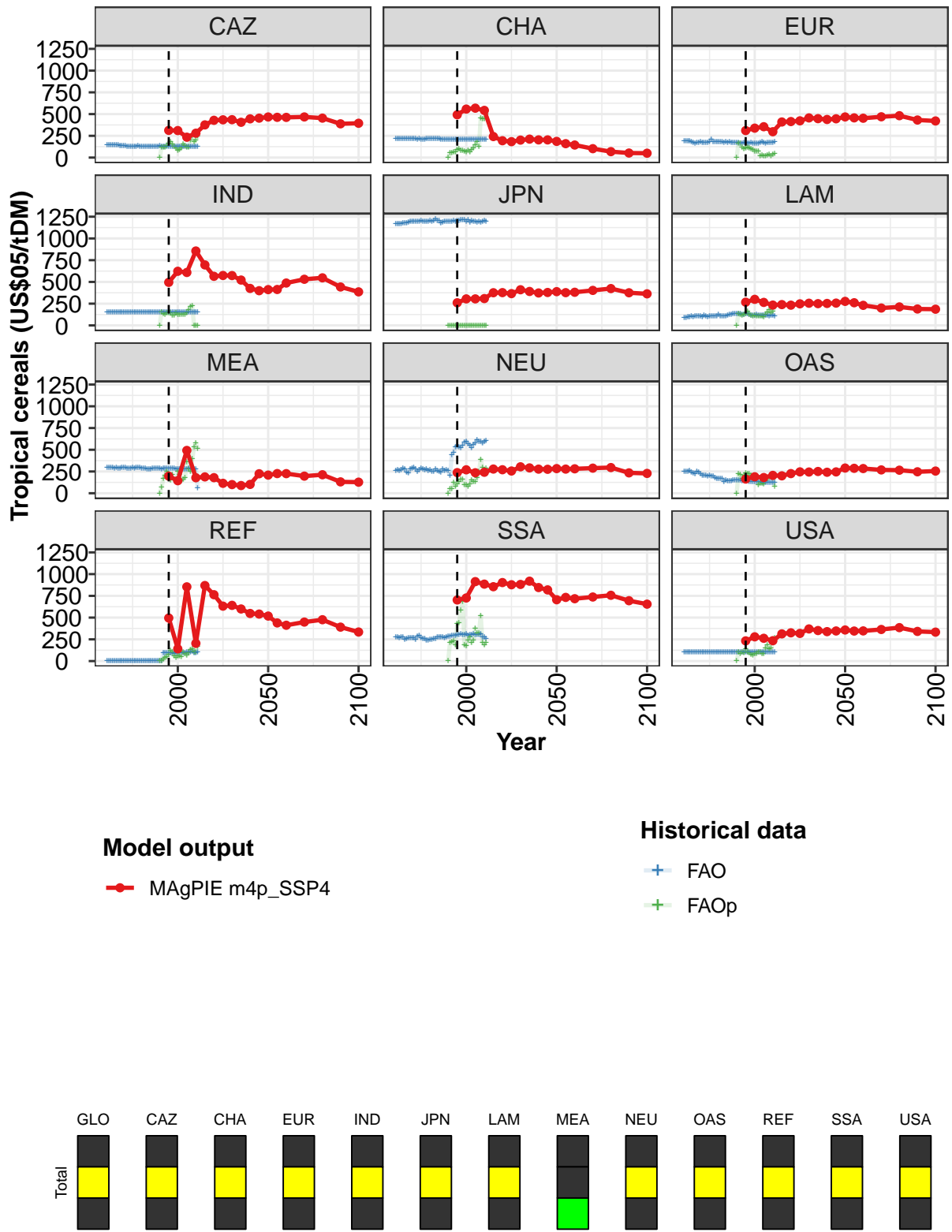


Figure 326: MAgPIE m4p\_SSP4 — Prices—Agriculture—Tropical cereals (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	472	497	619	625	541	517	489	492	514	485	484
CAZ	313	311	234	280	376	429	434	436	406	445	454
CHA	492	558	568	543	242	194	183	201	212	203	203
EUR	311	338	355	298	409	414	423	456	448	438	446
IND	495	623	609	856	696	565	574	573	522	425	399
JPN	260	305	305	309	376	377	365	410	390	373	379
LAM	267	300	265	234	239	233	248	255	250	253	257
MEA	197	144	492	179	188	179	114	100	89	102	224
NEU	237	269	236	241	278	270	256	304	291	277	276
OAS	163	190	181	205	200	226	246	244	250	242	245
REF	495	141	854	204	869	763	632	641	599	548	541
SSA	703	726	914	885	855	903	878	882	919	846	819
USA	233	279	262	234	313	325	318	370	351	339	346

Table 1291: MAgPIE m4p\_SSP4 — Prices—Agriculture—Tropical cereals (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	454	462	473	492	518	497	480
CAZ	467	463	462	467	454	388	395
CHA	186	160	144	102	68	52	50
EUR	467	457	452	469	482	432	421
IND	412	413	488	531	547	442	386
JPN	389	377	381	403	424	375	363
LAM	276	261	231	200	213	189	186
MEA	209	226	225	197	213	131	128
NEU	283	278	281	289	296	234	228
OAS	290	287	284	268	265	247	255
REF	518	439	412	449	476	391	334
SSA	706	732	717	737	757	694	655
USA	358	346	347	364	385	341	333

Table 1292: MAgPIE m4p\_SSP4 — 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]

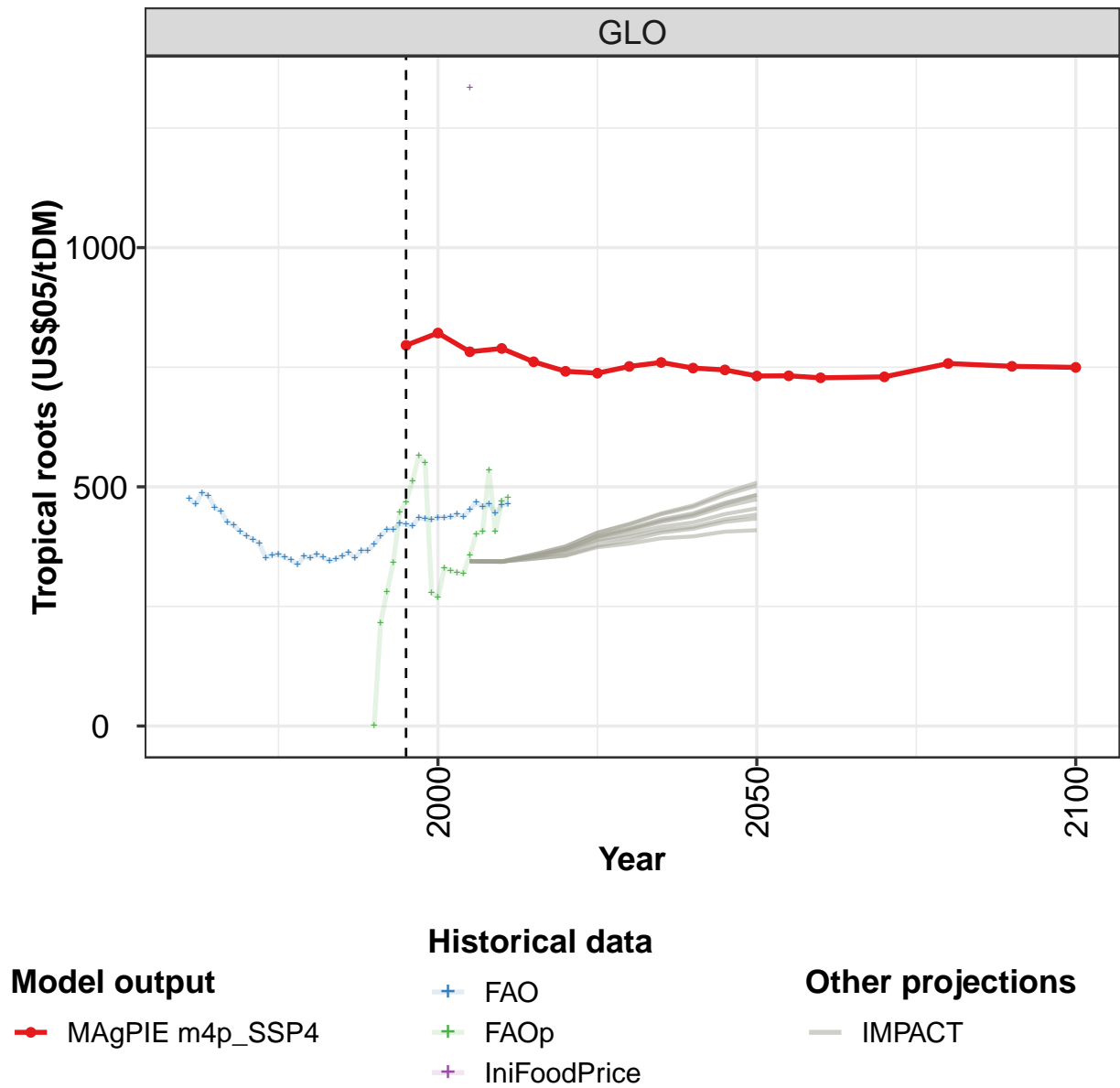
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	157	172	150	158	235	231	240	340	182	177	201
CAZ	89	110	157	138	119	120	197	244	182	200	244
CHA	84	63	90	112	147	180	126	458	447	446	498
EUR	73	76	22	24	20	17	32	33	22	34	44
IND	123	129	128	128	147	178	213	222	0	0	0
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	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





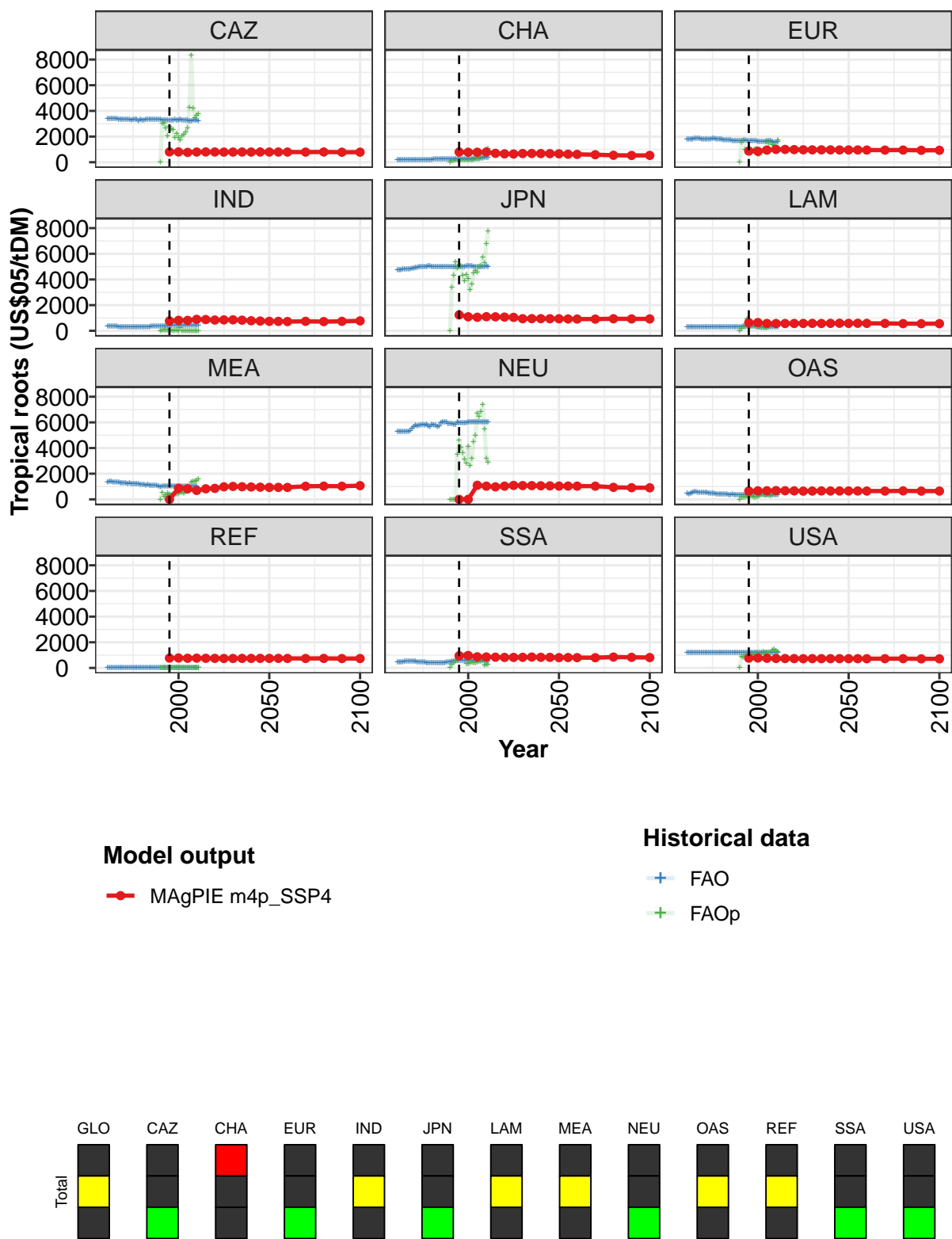


Figure 327: MAgPIE m4p\_SSP4 — Prices—Agriculture—Tropical roots (US\$05/tDM)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	796	821	782	789	761	741	738	752	760	748	744
CAZ	805	804	766	794	800	798	790	793	797	794	798
CHA	795	775	776	794	694	653	640	679	681	675	669
EUR	868	850	944	999	998	982	969	965	966	961	958
IND	765	817	811	891	875	838	849	855	828	782	761
JPN	1239	1093	1055	1099	1089	1067	1047	941	948	946	942
LAM	636	643	571	568	568	572	575	579	570	581	589
MEA	0	862	825	697	825	858	981	1008	986	965	949
NEU	0	2	1100	1031	976	1033	1088	1075	1070	1060	1052
OAS	652	665	670	683	672	661	642	647	657	653	653
REF	768	779	757	763	752	747	737	741	745	745	747
SSA	948	970	867	856	839	821	822	830	851	830	824
USA	764	777	752	738	734	730	720	726	724	723	724

Table 1307: MAgPIE m4p\_SSP4 — Prices—Agriculture—Tropical roots (US\$05/tDM) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	732	732	728	730	758	752	750
CAZ	793	795	792	789	798	781	784
CHA	657	627	613	586	541	528	532
EUR	956	957	948	944	949	929	930
IND	737	736	720	736	716	737	773
JPN	936	922	915	911	939	926	926
LAM	580	588	580	574	559	552	557
MEA	932	935	933	1022	1033	1023	1070
NEU	1035	1038	1032	1030	937	910	904
OAS	653	653	649	645	662	644	647
REF	744	746	742	738	744	732	734
SSA	803	810	803	796	849	829	811
USA	722	722	719	721	725	709	711

Table 1308: MAgPIE m4p\_SSP4 — 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]

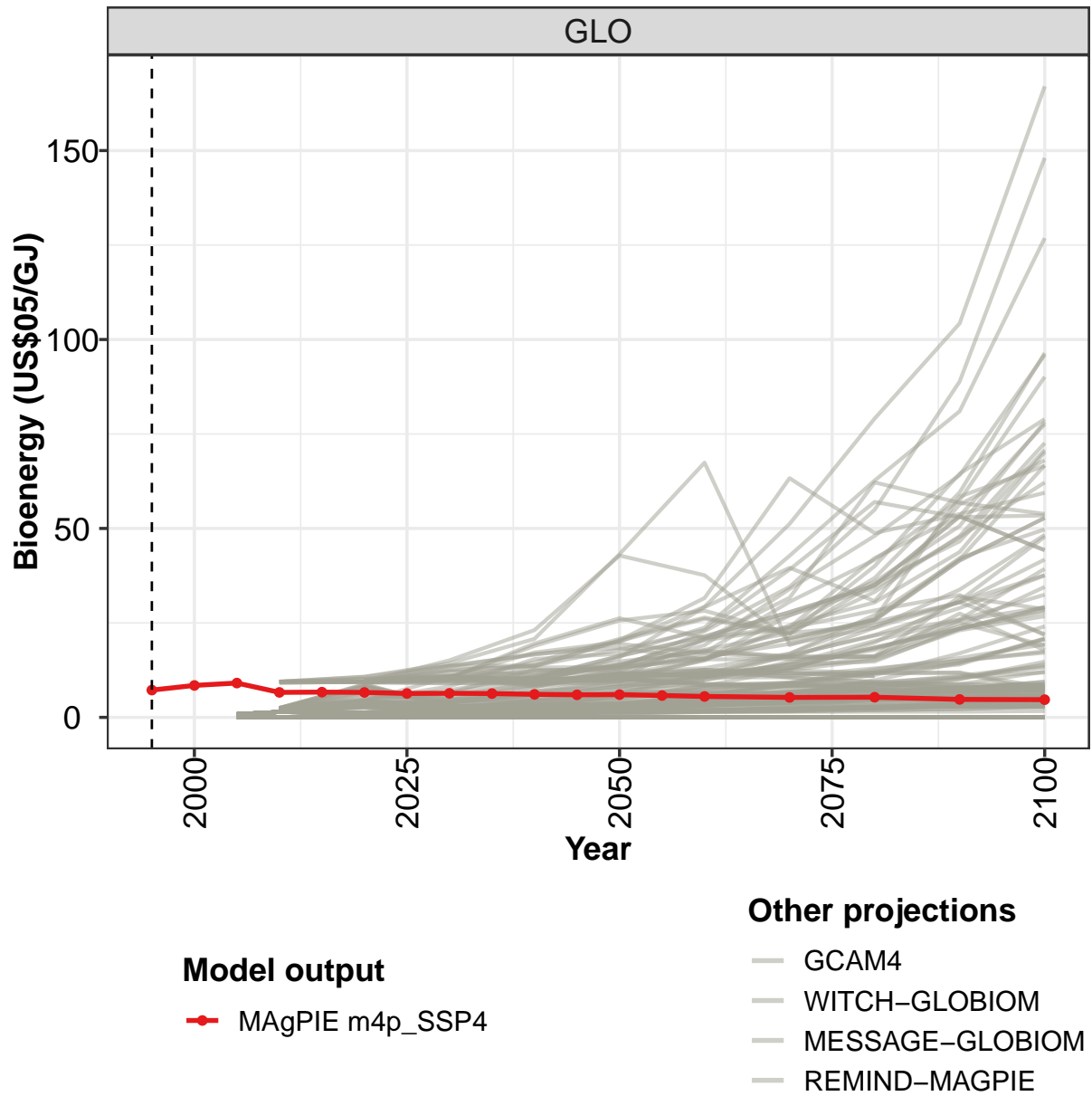
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GLO	329	325	320	320	357	401	406	534	407	471	478
CAZ	1753	2037	2170	2333	2637	4246	8334	4220	3446	3653	3737
CHA	209	189	197	223	227	266	328	434	836	1008	1076
EUR	631	734	970	863	1693	1460	1587	1369	1314	997	1717
IND	256	0	0	0	0	0	0	0	0	0	0
JPN	3184	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



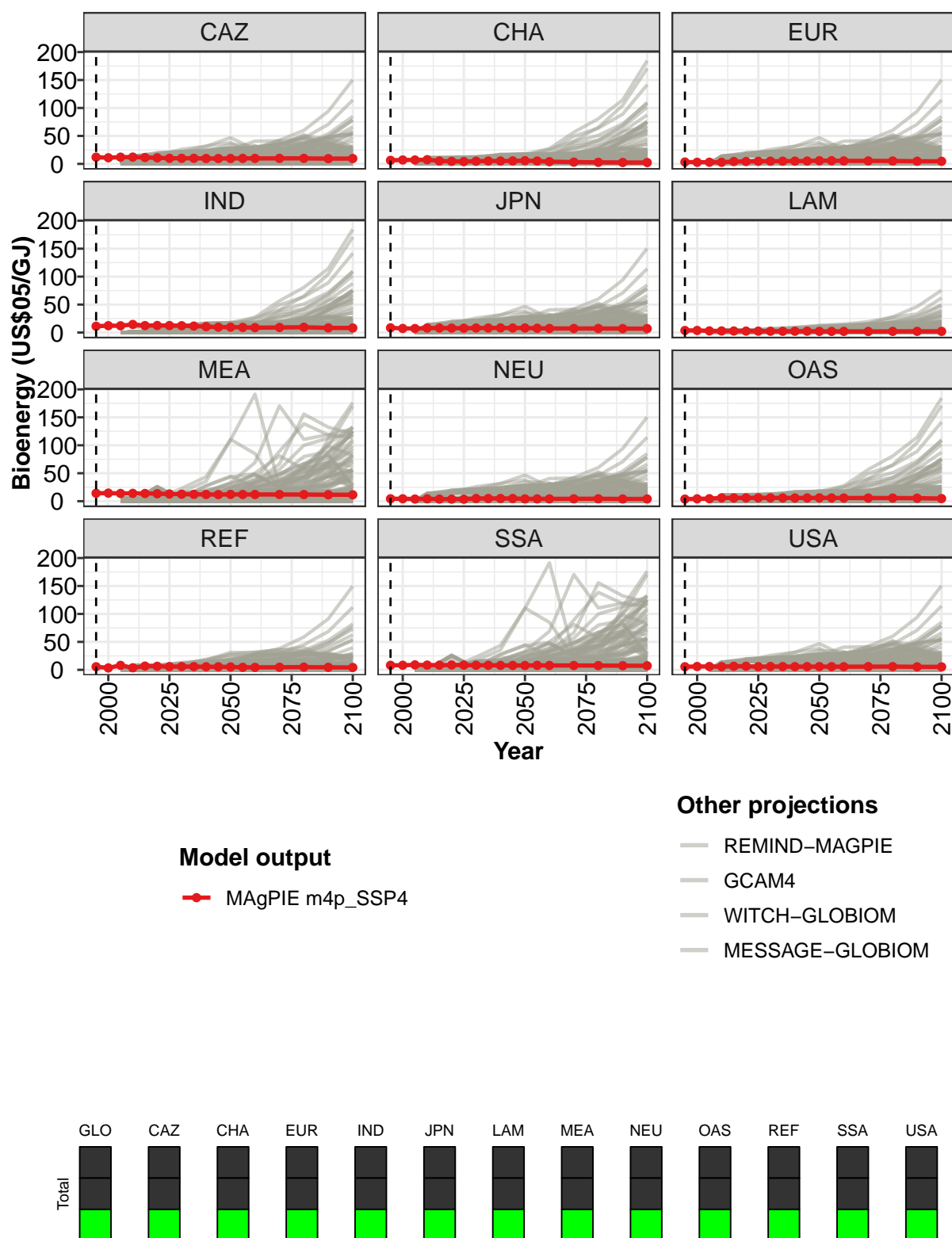


Figure 328: MAgPIE m4p\_SSP4 — Prices—Bioenergy (US\$05/GJ)

	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	6.4	6.3	6.1	6.0
CAZ	12.0	10.9	12.0	12.2	11.4	10.9	10.0	10.0	10.0	9.7	9.6
CHA	6.3	7.0	7.0	7.5	5.2	4.5	4.1	4.7	5.1	5.1	5.3
EUR	3.3	2.9	3.0	2.9	4.2	4.3	4.6	4.8	4.8	5.0	5.1
IND	11.3	12.2	12.1	14.4	12.5	12.6	12.5	12.3	11.6	10.6	9.7
JPN	8.5	7.3	7.2	8.0	8.1	7.9	7.8	8.1	8.1	8.3	8.1
LAM	3.7	3.8	3.0	2.9	2.8	2.6	2.5	2.4	2.3	2.4	2.4
MEA	14.2	14.5	13.9	14.0	13.8	13.4	12.9	12.5	12.3	12.0	11.9
NEU	4.4	4.3	3.9	4.2	3.8	3.7	3.6	4.8	4.9	4.9	4.8
OAS	3.7	4.2	4.5	6.0	5.8	6.0	6.0	5.9	5.8	5.8	5.8
REF	5.6	3.5	8.0	3.7	6.7	6.4	5.8	5.9	5.8	5.5	5.5
SSA	8.1	8.2	8.9	8.5	8.4	8.7	8.5	8.2	8.2	8.0	7.9
USA	5.6	6.0	6.0	5.8	6.4	6.5	5.7	6.0	5.8	5.7	5.7

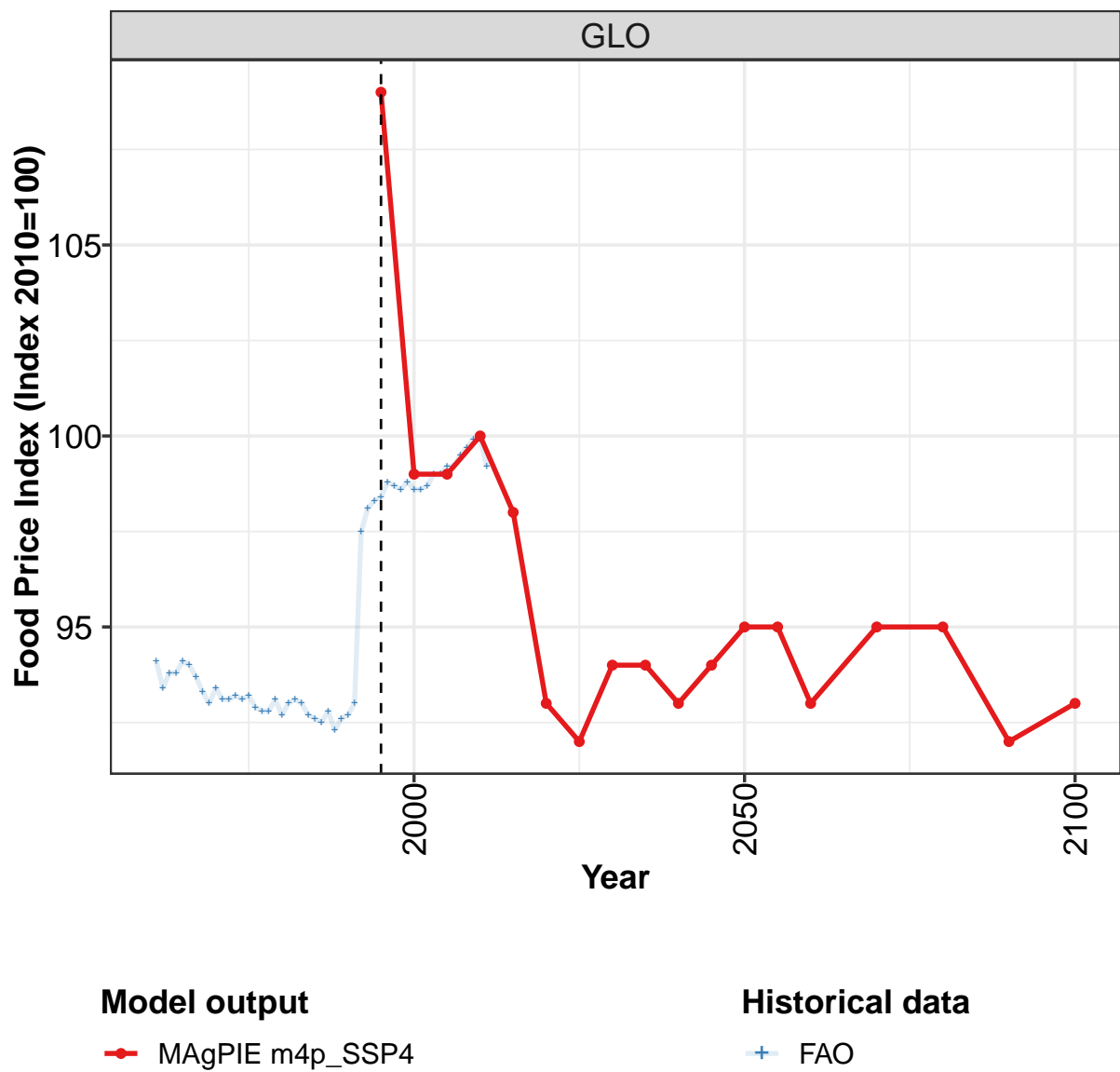
Table 1317: MAgPIE m4p\_SSP4 — Prices—Bioenergy (US\$05/GJ) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	6.0	5.8	5.5	5.3	5.3	4.8	4.7
CAZ	9.7	9.9	9.8	9.9	9.9	9.3	9.6
CHA	5.7	5.1	3.9	3.1	2.8	2.5	2.4
EUR	5.7	5.6	5.3	5.3	5.2	4.7	4.6
IND	9.7	9.2	8.8	9.0	9.5	8.3	8.1
JPN	8.1	7.6	7.3	7.3	7.2	7.0	7.0
LAM	2.1	2.1	2.0	1.9	2.1	2.1	2.1
MEA	12.2	12.0	11.9	12.0	11.9	11.5	11.5
NEU	4.1	4.2	4.1	4.3	4.3	4.0	4.0
OAS	6.0	5.8	5.7	5.7	5.7	5.4	4.7
REF	5.2	4.5	4.4	4.7	4.9	4.5	4.2
SSA	7.7	8.0	7.8	7.8	7.6	7.4	7.3
USA	5.8	5.7	5.6	5.7	5.8	5.4	5.4

Table 1318: MAgPIE m4p\_SSP4 — Prices—Bioenergy (US\$05/GJ) [PART 2/2]



## 38 Food Price Index



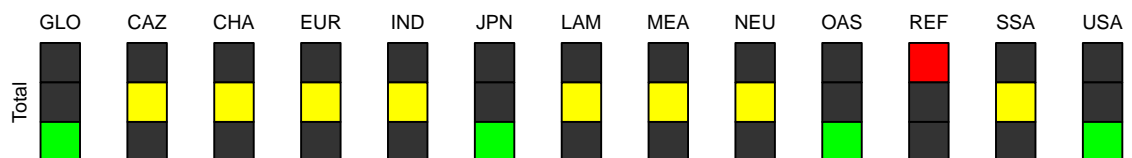
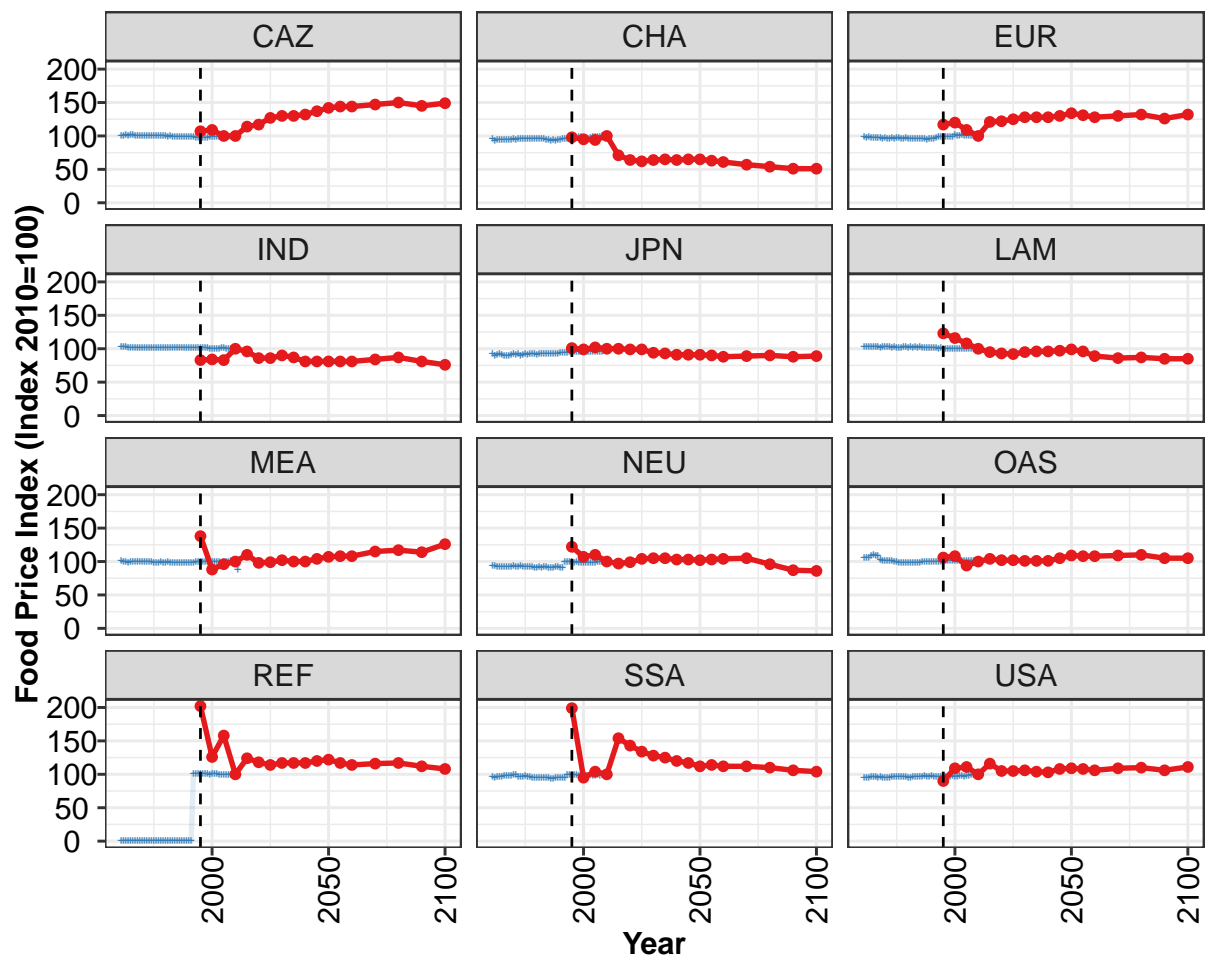


Figure 329: MAgPIE m4p\_SSP4 — Prices—Food Price Index (Index 2010=100)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	109	99	99	100	98	93	92	94	94	93	94
CAZ	107	109	100	100	114	117	127	130	130	132	137
CHA	98	95	94	100	71	64	62	64	65	64	65
EUR	117	120	109	100	121	122	125	128	128	128	130
IND	83	84	83	100	96	86	86	90	87	81	81
JPN	101	99	102	100	100	99	99	94	93	91	91
LAM	123	116	108	100	95	93	92	95	96	96	97
MEA	138	88	96	100	110	98	99	102	100	100	104
NEU	122	107	110	100	97	99	104	105	105	103	103
OAS	106	108	94	100	104	102	102	101	101	101	105
REF	202	126	158	100	124	118	114	117	117	117	120
SSA	199	95	104	100	154	143	134	128	125	120	117
USA	90	109	111	100	116	105	105	106	104	103	108

Table 1319: MAgPIE m4p\_SSP4 — Prices—Food Price Index (Index 2010=100) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	95	95	93	95	95	92	93
CAZ	142	144	144	147	150	145	149
CHA	65	63	61	57	54	51	51
EUR	134	131	128	130	132	126	132
IND	81	81	81	84	87	81	76
JPN	91	90	88	89	90	88	89
LAM	99	96	89	86	87	85	85
MEA	107	108	108	115	117	114	126
NEU	102	103	104	105	96	87	86
OAS	109	108	108	109	110	105	105
REF	122	117	114	116	117	112	108
SSA	112	114	112	112	110	106	104
USA	109	108	106	109	110	106	111

Table 1320: MAgPIE m4p\_SSP4 — 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]

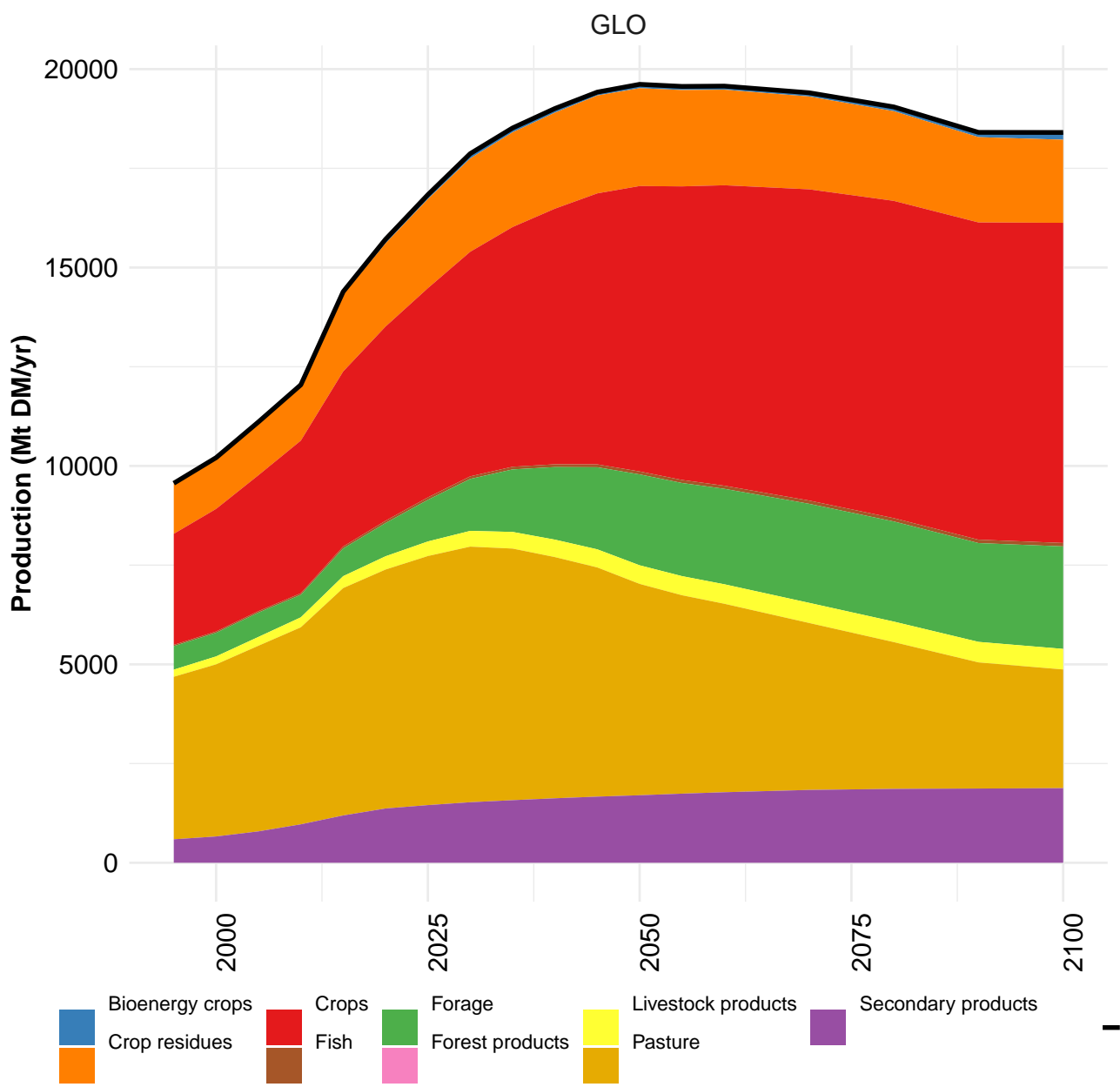
	2005	2006	2007	2008	2009	2010	2011
GLO	99	99	100	100	100	100	99
CAZ	99	99	99	99	100	100	101
CHA	98	98	99	100	100	100	100
EUR	101	101	100	100	100	100	100
IND	101	100	100	100	100	100	100
JPN	96	95	95	95	100	100	99
LAM	100	100	100	100	100	100	100
MEA	100	100	100	101	101	100	88
NEU	99	100	99	100	99	100	99
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

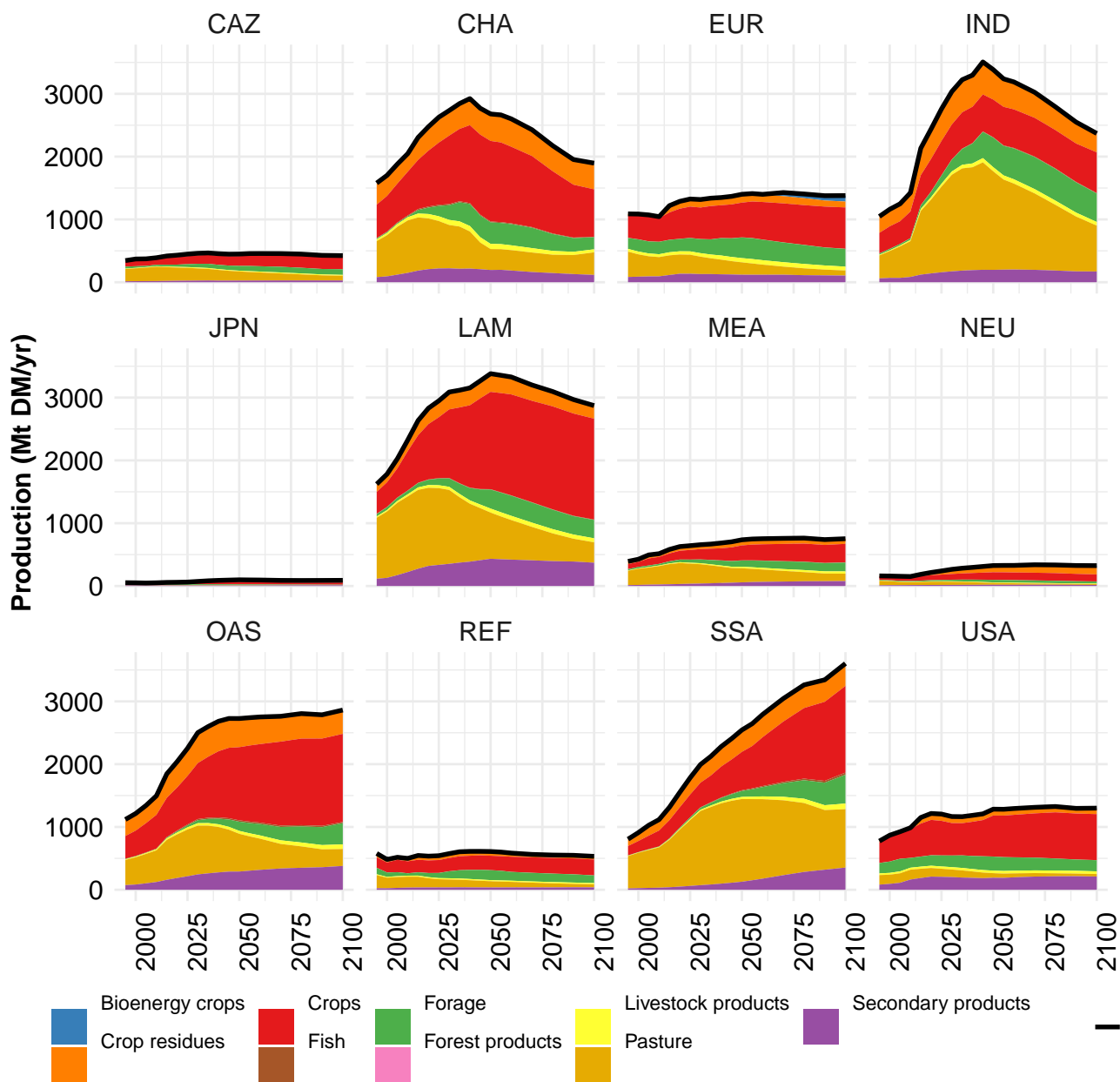
Table 1325: FAO — Prices—Food Price Index (Index 2010=100) [PART 5/5]

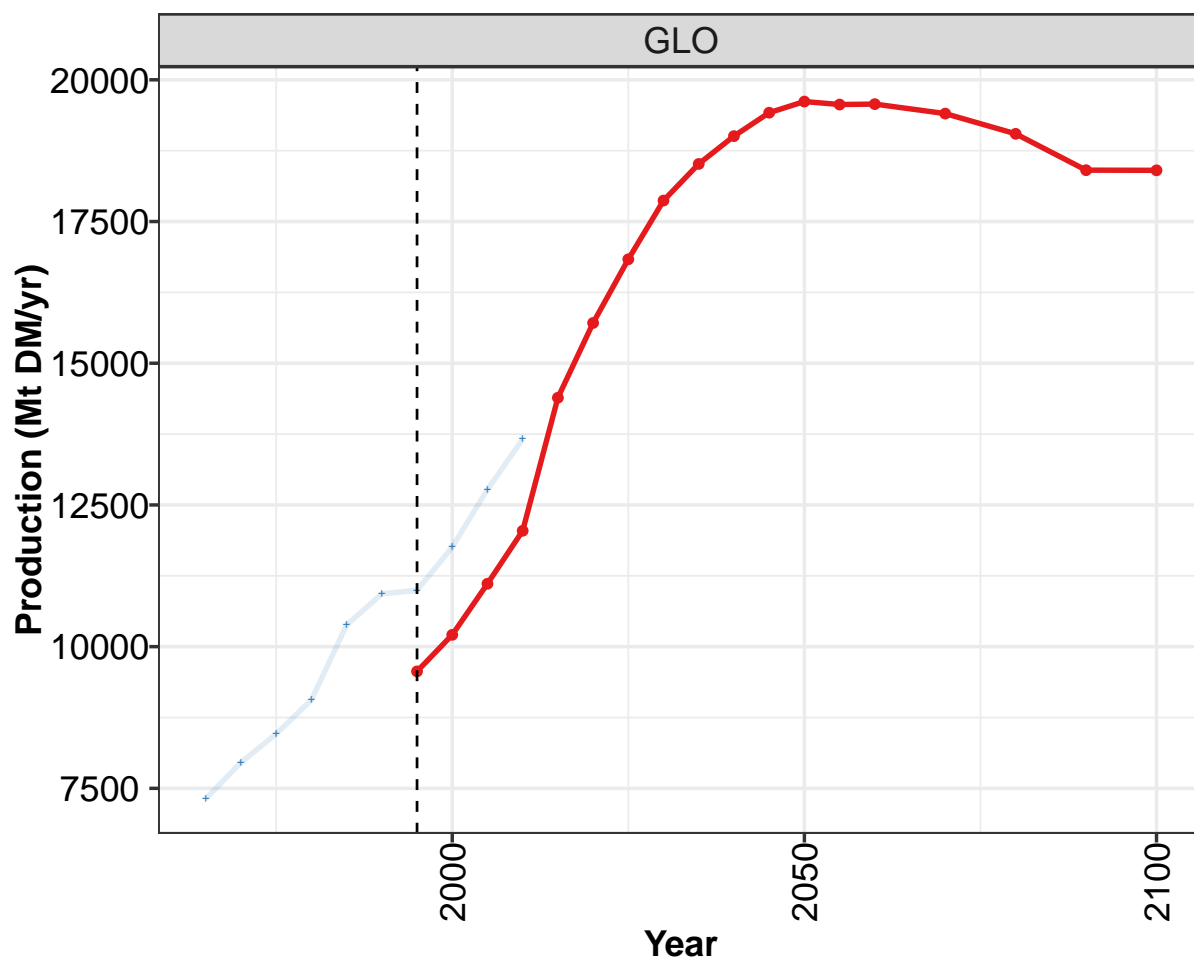
**39 GHG Emission****40 Land****41 Water**

Part XII

# Production







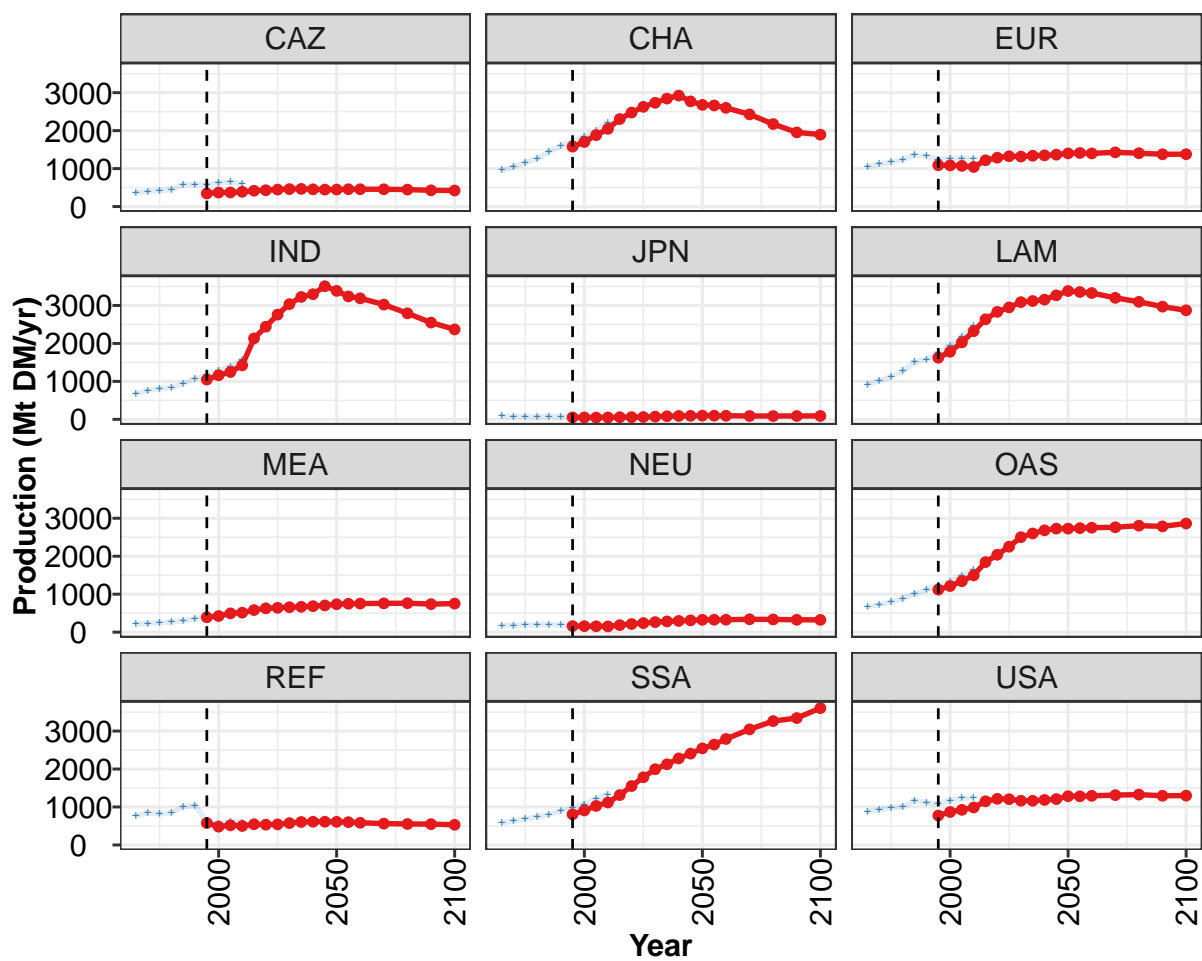
**Model output**

—●— MAgPIE m4p\_SSP4

**Historical data**

—+— FAO





**Model output**

—●— MAGPIE m4p\_SSP4

**Historical data**

—+— FAO

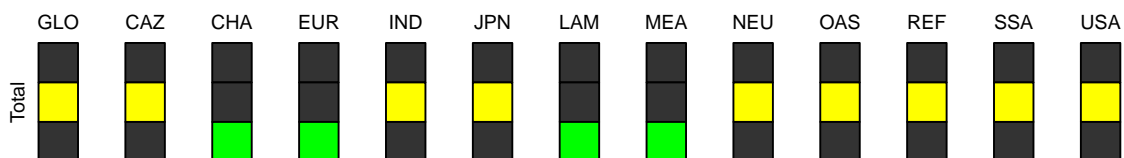


Figure 330: MAGPIE m4p\_SSP4 — Production (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9564	10209	11110	12044	14391	15711	16834	17870	18517	19007	19420
CAZ	344	369	372	390	417	431	448	460	466	454	447
CHA	1579	1702	1882	2047	2306	2477	2627	2734	2844	2924	2770
EUR	1088	1085	1072	1044	1219	1288	1325	1317	1338	1349	1368
IND	1047	1161	1248	1423	2133	2441	2759	3036	3224	3297	3507
JPN	53	50	47	51	57	59	63	73	83	90	94
LAM	1623	1781	2028	2324	2635	2831	2949	3089	3118	3154	3267
MEA	392	426	495	514	582	628	642	657	667	685	703
NEU	161	158	155	151	186	215	240	265	283	296	311
OAS	1119	1215	1343	1496	1845	2040	2252	2503	2600	2683	2727
REF	578	483	517	500	546	535	542	576	605	611	612
SSA	805	910	1028	1118	1314	1552	1783	1995	2124	2280	2406
USA	775	868	925	987	1151	1215	1205	1166	1164	1185	1208

Table 1326: MAgPIE m4p-SSP4 — Production (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	19617	19564	19572	19404	19048	18406	18403
CAZ	448	456	457	456	448	428	424
CHA	2679	2664	2601	2428	2174	1954	1896
EUR	1400	1411	1400	1428	1405	1378	1379
IND	3385	3238	3189	3024	2793	2550	2369
JPN	98	97	95	89	88	89	90
LAM	3381	3355	3328	3200	3096	2969	2873
MEA	736	748	753	758	763	739	753
NEU	325	327	328	338	335	326	324
OAS	2727	2740	2752	2762	2805	2786	2862
REF	609	600	584	563	553	549	532
SSA	2544	2645	2791	3045	3262	3343	3603
USA	1284	1282	1294	1312	1326	1296	1300

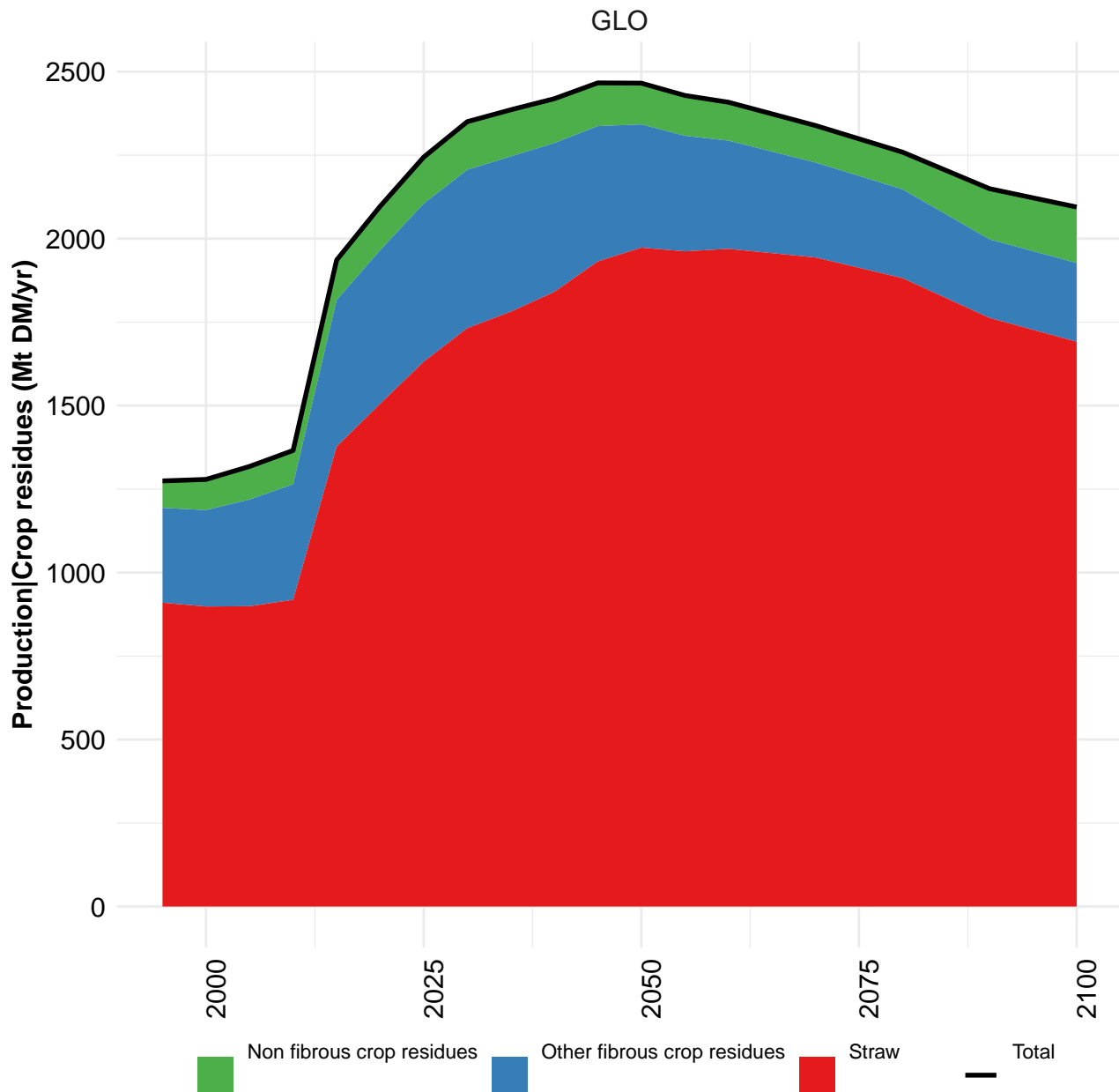
Table 1327: MAgPIE m4p-SSP4 — Production (Mt DM/yr) [PART 2/2]

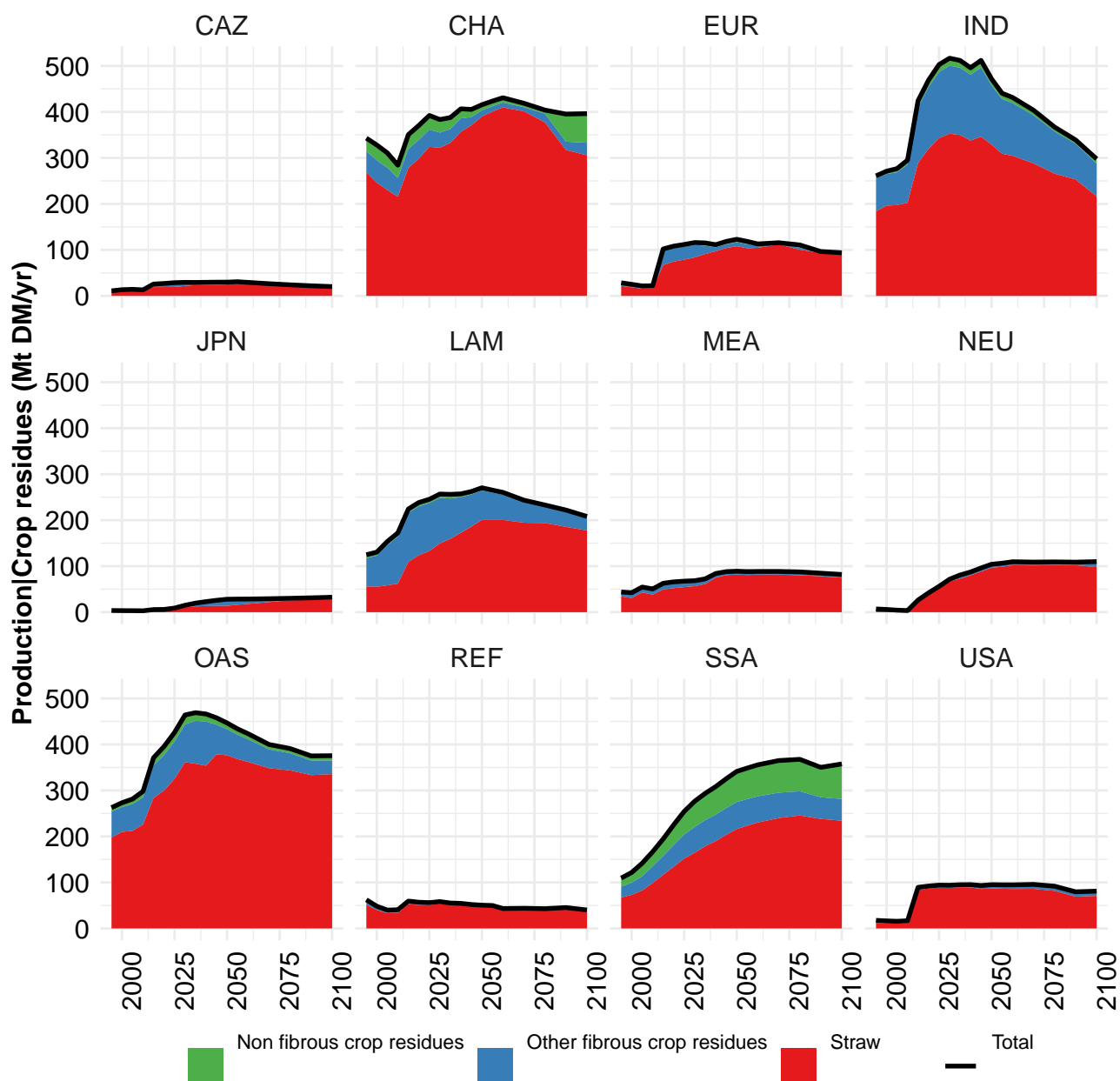
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7317	7958	8459	9061	10381	10933	10993	11756	12774	13658
CAZ	368	397	417	445	578	583	570	621	643	603
CHA	961	1042	1160	1264	1439	1599	1716	1836	1998	2207
EUR	1041	1114	1167	1236	1355	1327	1243	1271	1271	1247
IND	678	759	808	843	942	1062	1168	1278	1395	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

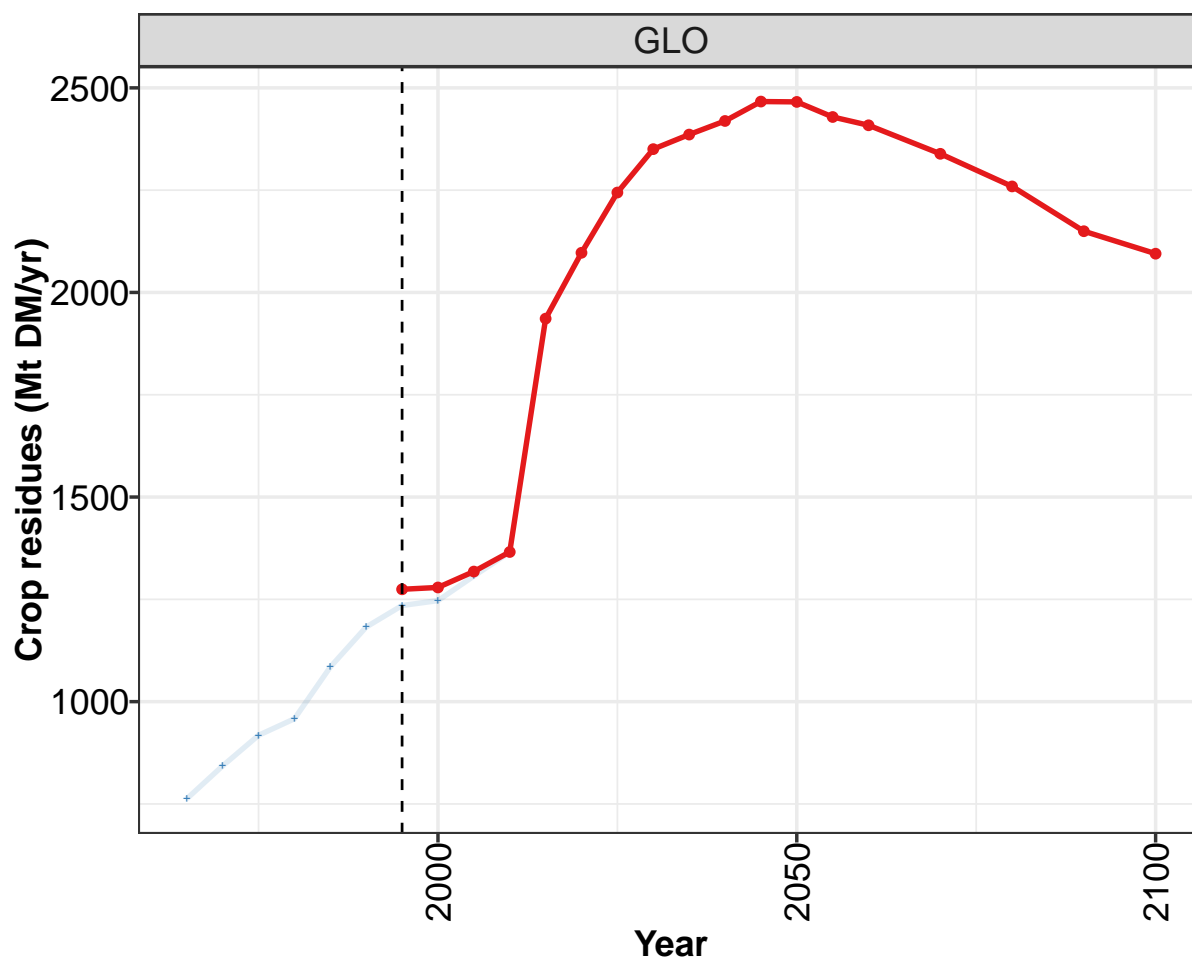
Table 1328: FAO — Production (Mt DM/yr)

## 42 Bioenergy crops

## 43 Crop residues







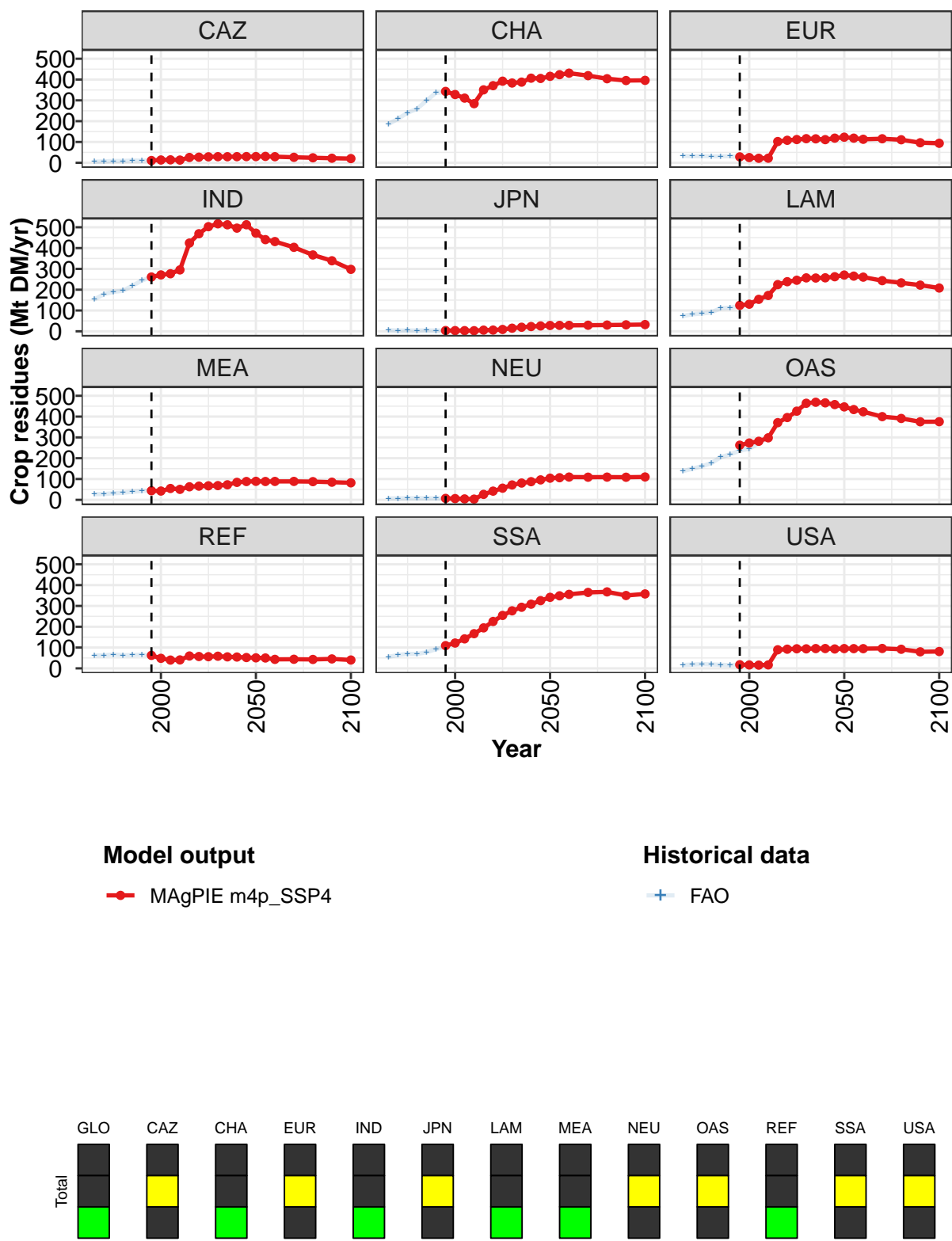


Figure 331: MAgPIE m4p\_SSP4 — Production—Crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1275	1279	1318	1366	1936	2097	2244	2350	2386	2419	2467
CAZ	11	13	14	13	26	27	29	29	29	30	30
CHA	343	328	311	284	351	371	392	383	388	407	405
EUR	29	25	22	22	102	108	112	116	115	111	118
IND	261	271	277	295	424	469	503	517	512	496	512
JPN	4	3	3	3	6	6	9	15	20	23	26
LAM	125	130	154	172	224	238	245	257	256	257	262
MEA	44	42	55	50	63	66	67	68	72	84	88
NEU	7	6	4	3	26	42	56	72	81	87	96
OAS	263	273	281	298	371	396	426	464	469	466	458
REF	62	48	40	41	59	57	56	58	55	54	52
SSA	109	122	142	167	195	225	254	277	294	308	325
USA	18	16	16	17	89	92	94	94	95	95	93

Table 1329: MAgPIE m4p\_SSP4 — Production—Crop residues (Mt DM/yr) [PART 1/2]

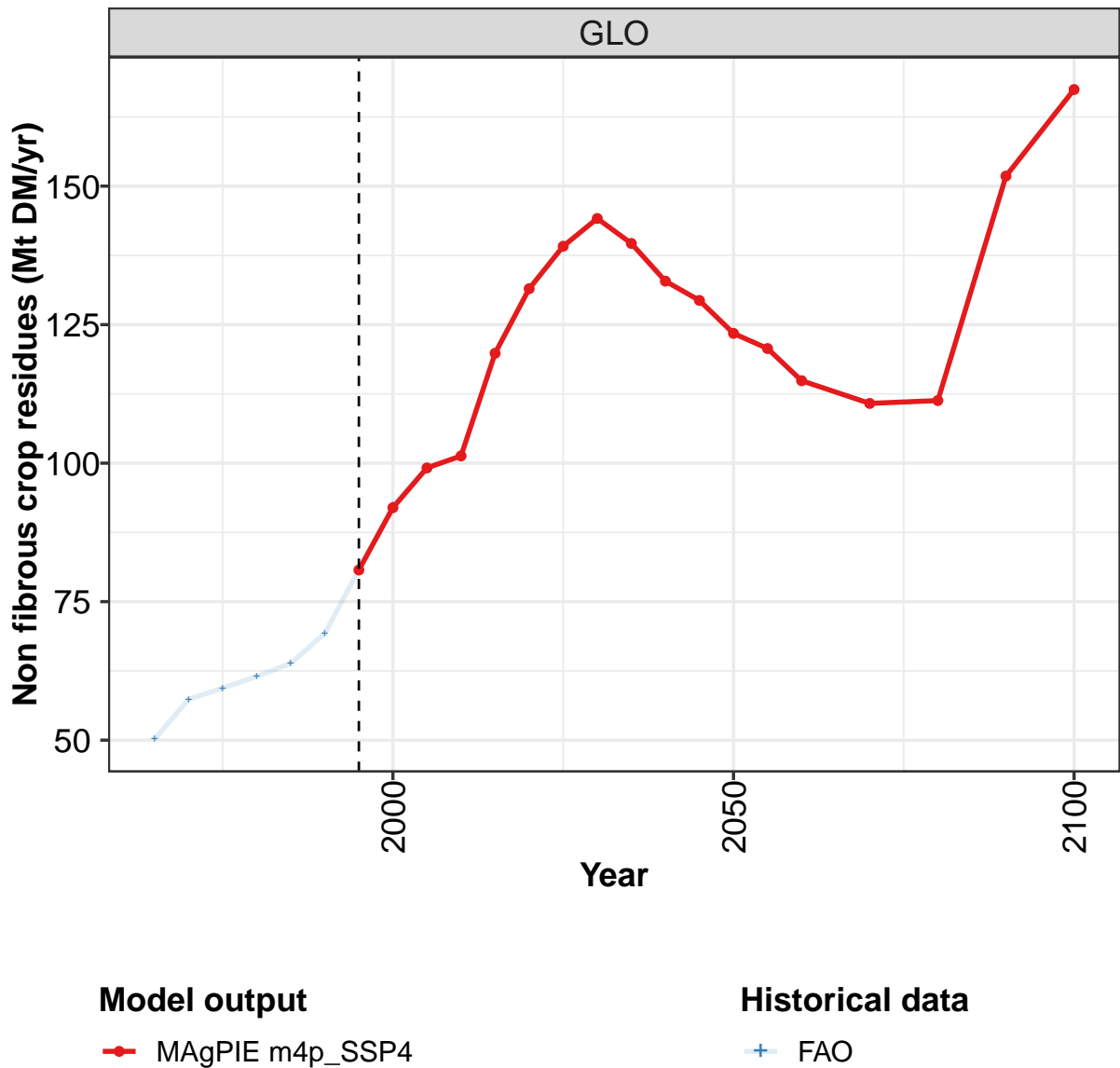
	2050	2055	2060	2070	2080	2090	2100
GLO	2466	2429	2409	2339	2259	2150	2095
CAZ	30	31	29	26	24	22	20
CHA	416	424	431	419	404	395	396
EUR	123	118	113	116	111	96	94
IND	472	441	431	404	367	339	298
JPN	28	28	29	29	30	31	32
LAM	270	265	260	243	233	222	208
MEA	89	88	88	89	88	85	82
NEU	104	106	110	109	109	109	110
OAS	447	434	423	400	391	375	376
REF	51	50	43	44	43	45	40
SSA	341	349	356	365	368	350	358
USA	95	95	95	96	92	80	81

Table 1330: MAgPIE m4p\_SSP4 — 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





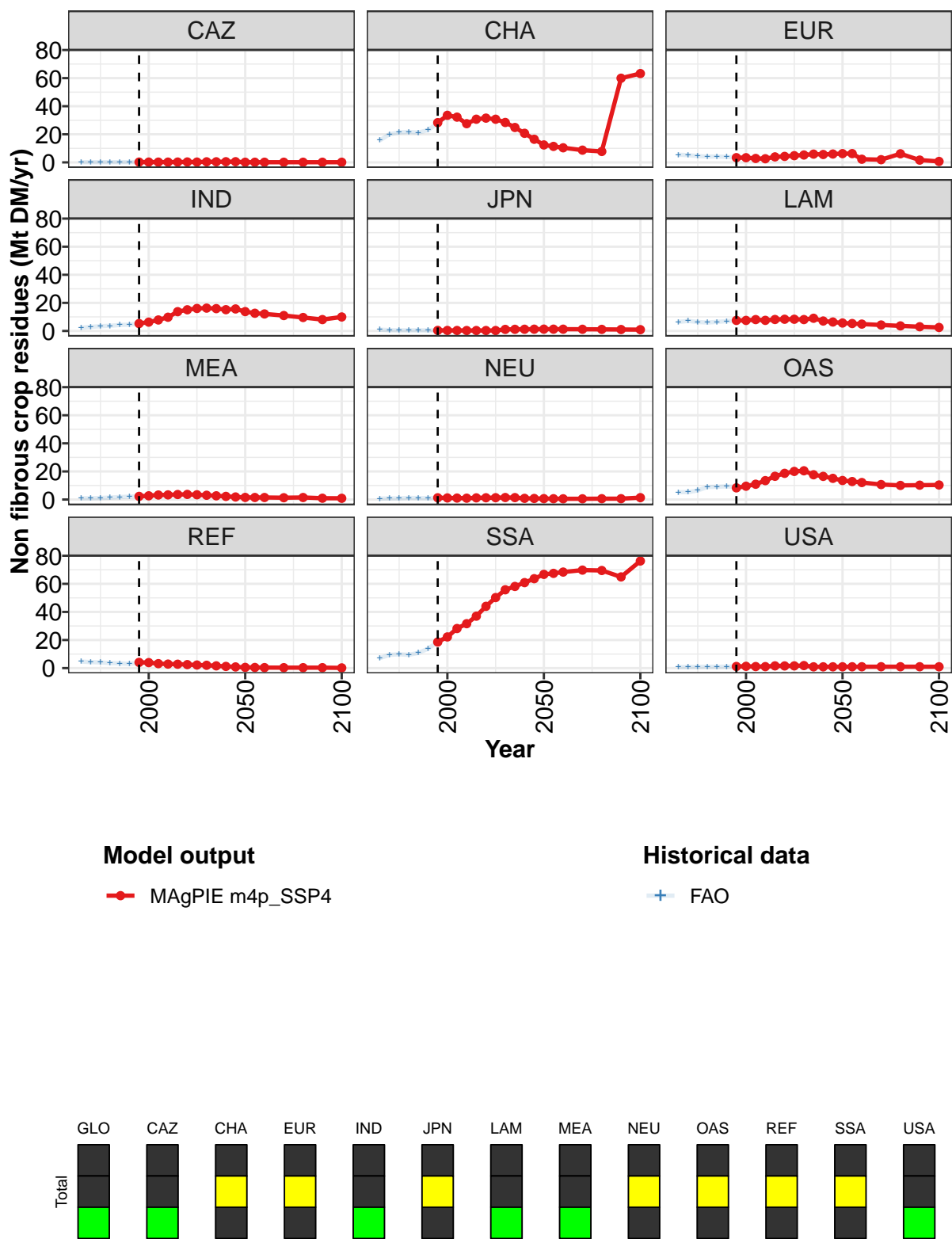


Figure 332: MAGPIE m4p\_SSP4 — Production—Crop residues—Non fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	92	99	101	120	131	139	144	140	133	129
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	28	34	32	28	31	32	31	28	25	21	16
EUR	3	3	3	3	4	4	5	5	6	6	6
IND	5	6	8	10	14	15	16	16	16	15	16
JPN	0	0	0	0	0	0	0	1	1	1	1
LAM	8	8	8	8	8	8	8	8	9	7	6
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	17	19	20	20	18	16	15
REF	4	4	3	3	3	2	2	2	2	1	1
SSA	19	22	28	32	37	44	50	56	58	61	64
USA	1	1	1	1	2	2	2	2	1	1	1

Table 1332: MAgPIE m4p\_SSP4 — Production—Crop residues—Non fibrous crop residues (Mt DM/yr) [PART 1/2]

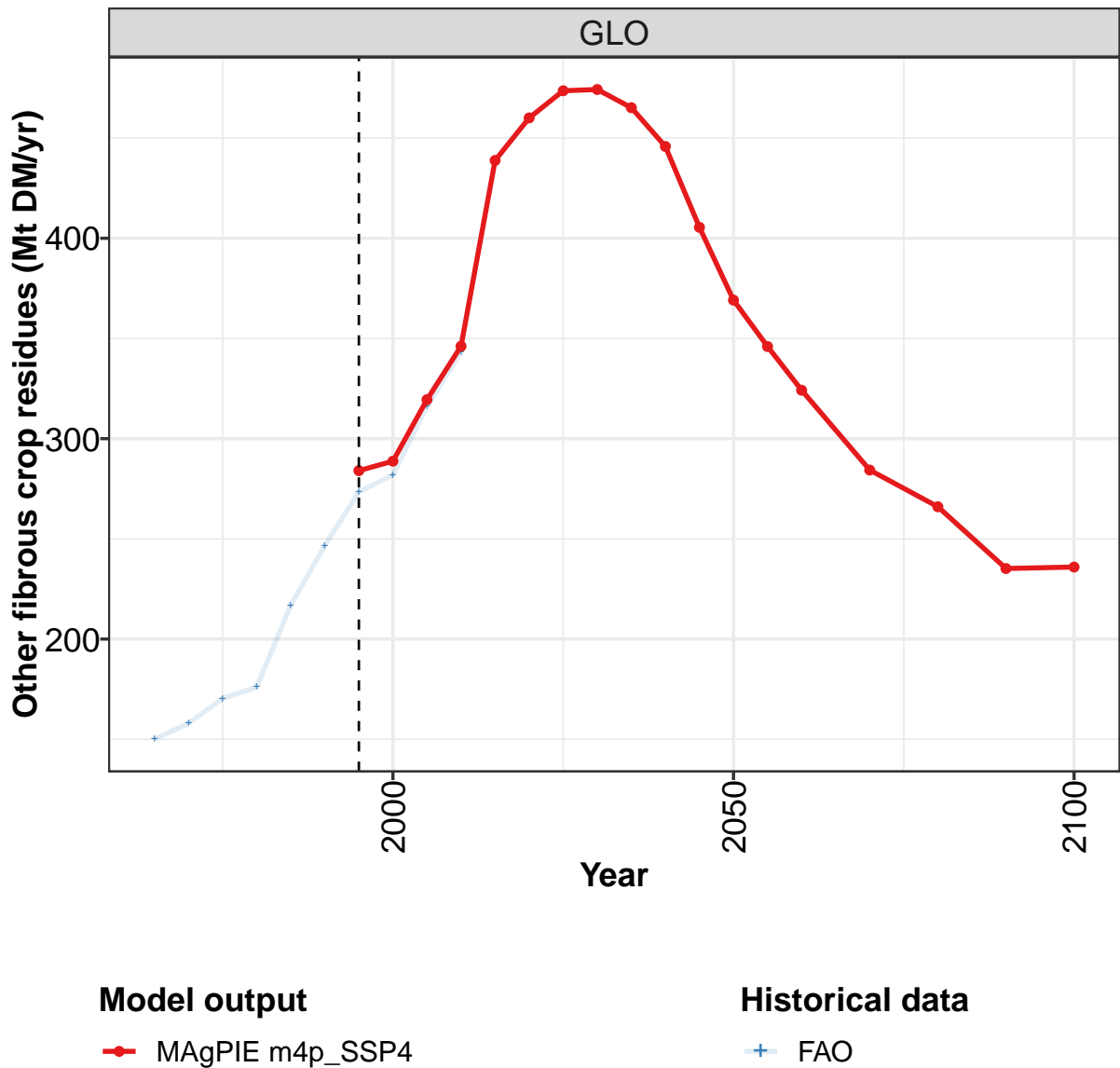
	2050	2055	2060	2070	2080	2090	2100
GLO	123	121	115	111	111	152	167
CAZ	0	0	0	0	0	0	0
CHA	12	11	10	9	8	60	63
EUR	6	6	2	2	6	2	1
IND	14	13	12	11	10	8	10
JPN	1	1	1	1	1	1	1
LAM	6	5	5	4	4	3	2
MEA	2	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1
OAS	14	13	12	11	10	10	10
REF	1	0	0	0	0	0	0
SSA	67	67	68	70	70	65	76
USA	1	1	1	1	1	1	1

Table 1333: MAgPIE m4p\_SSP4 — 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



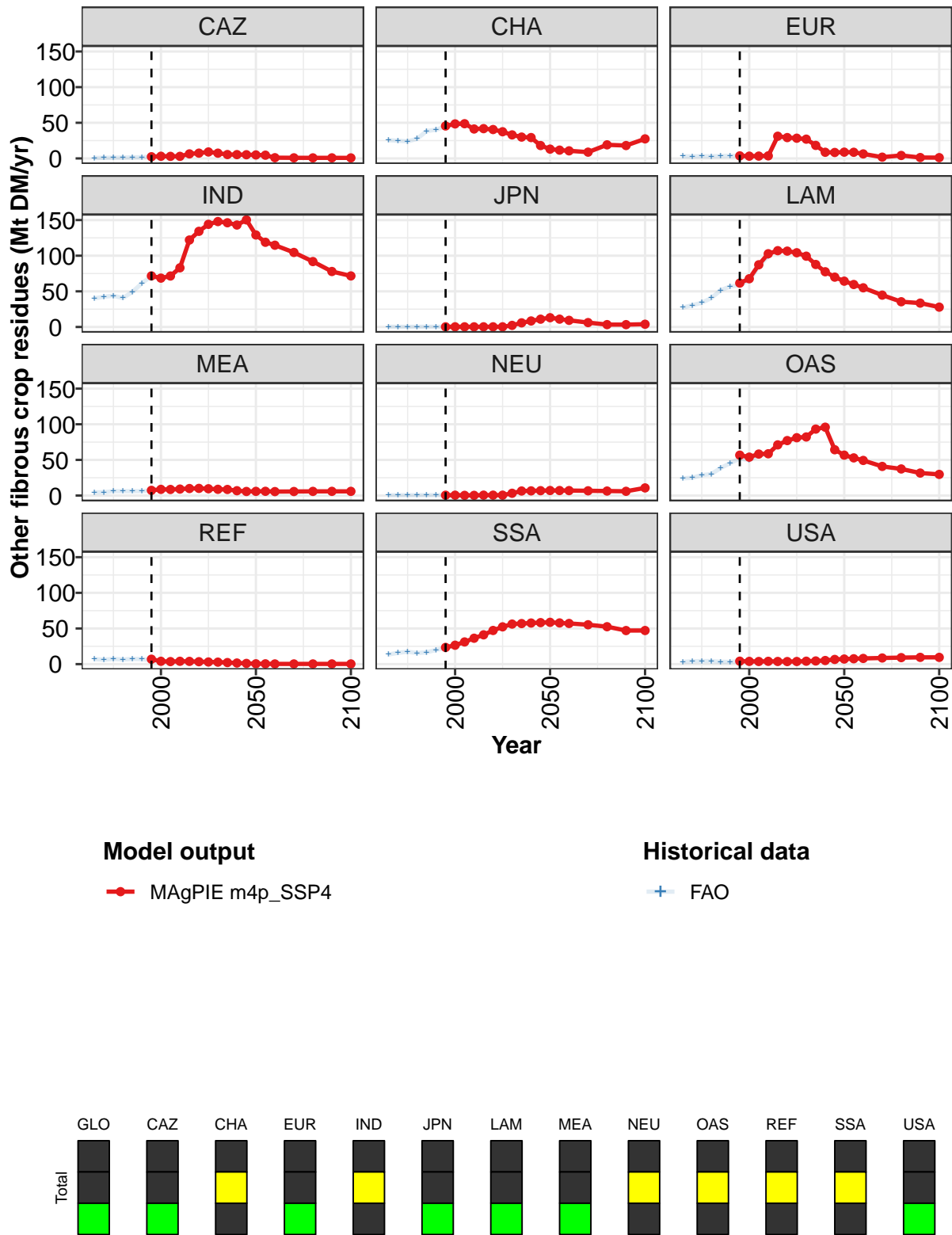


Figure 333: MAgPIE m4p\_SSP4 — Production—Crop residues—Other fibrous crop residues (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	284	289	319	346	439	460	474	474	465	446	405
CAZ	2	3	3	3	6	7	9	7	5	5	5
CHA	46	48	49	41	42	41	37	33	30	29	18
EUR	4	3	3	4	31	29	28	27	18	9	8
IND	72	69	72	83	122	134	144	148	146	143	150
JPN	0	0	0	0	0	0	0	2	6	8	11
LAM	62	68	87	103	107	106	104	99	88	77	70
MEA	7	9	9	9	10	10	10	9	9	7	6
NEU	0	1	0	0	1	1	1	3	6	7	7
OAS	57	54	58	59	71	77	81	82	93	96	64
REF	7	4	4	4	4	3	3	3	2	2	1
SSA	23	27	31	36	41	47	52	56	57	58	58
USA	4	4	4	4	4	4	4	4	4	5	7

Table 1335: MAgPIE m4p\_SSP4 — Production—Crop residues—Other fibrous crop residues (Mt DM/yr)  
[PART 1/2]

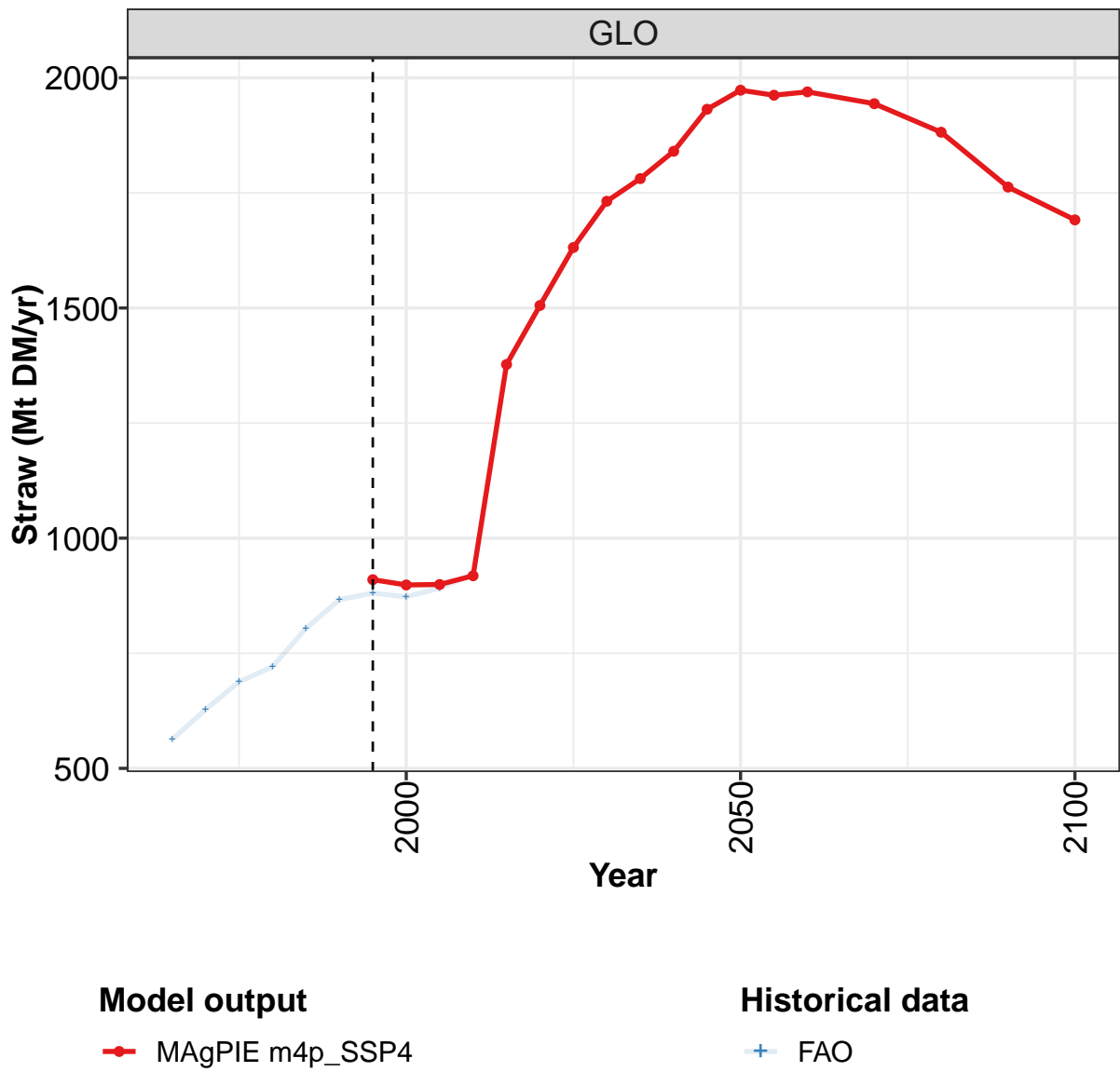
	2050	2055	2060	2070	2080	2090	2100
GLO	369	346	324	284	266	235	236
CAZ	5	5	1	1	1	1	1
CHA	13	12	11	9	19	18	27
EUR	9	9	6	2	4	1	1
IND	129	119	115	105	92	78	72
JPN	13	11	9	6	3	3	4
LAM	64	60	55	45	35	33	28
MEA	6	6	6	6	6	6	6
NEU	7	7	7	7	6	6	11
OAS	57	53	49	41	37	32	30
REF	0	0	0	0	0	0	0
SSA	59	58	57	55	53	47	47
USA	7	8	8	9	9	9	10

Table 1336: MAgPIE m4p\_SSP4 — 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



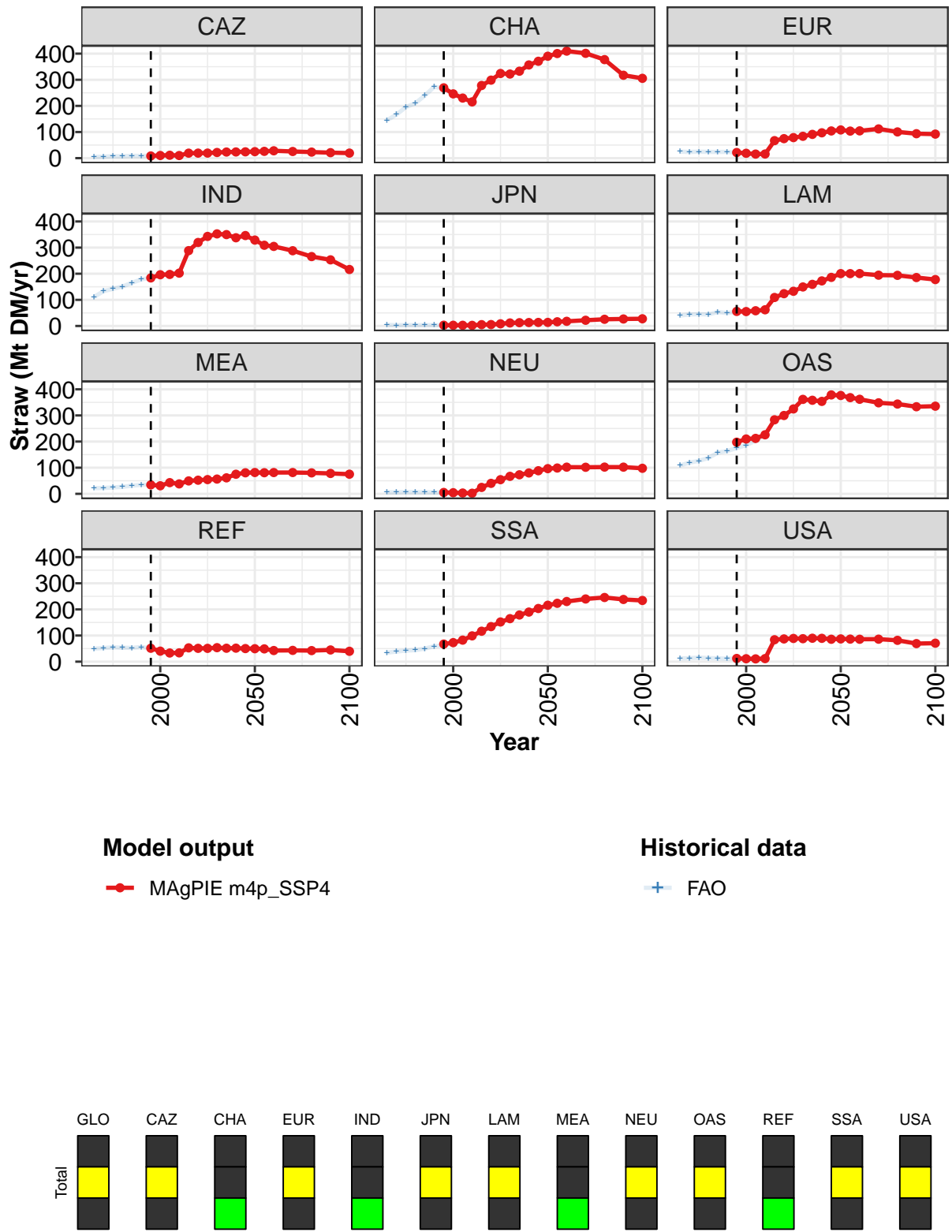


Figure 334: MAgPIE m4p\_SSP4 — Production—Crop residues—Straw (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	910	898	899	918	1377	1505	1631	1732	1781	1840	1932
CAZ	8	10	11	10	19	19	19	22	23	24	24
CHA	269	246	230	215	278	299	324	322	333	357	371
EUR	22	19	16	16	67	75	79	84	91	97	104
IND	184	196	197	202	288	320	343	353	350	338	346
JPN	3	3	3	2	5	5	8	12	13	13	14
LAM	56	55	58	62	109	124	133	149	159	173	186
MEA	34	31	43	38	49	52	54	57	61	75	81
NEU	5	4	3	2	24	40	54	67	73	80	88
OAS	198	210	212	226	283	300	325	361	358	354	379
REF	51	40	33	34	53	51	51	54	51	52	50
SSA	67	73	82	99	117	134	152	165	179	190	204
USA	12	11	11	12	84	87	89	88	90	89	86

Table 1338: MAgPIE m4p\_SSP4 — Production—Crop residues—Straw (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1973	1962	1970	1944	1882	1763	1691
CAZ	25	26	28	26	23	21	19
CHA	390	400	410	401	377	317	306
EUR	108	104	104	112	100	94	92
IND	329	309	305	288	266	253	216
JPN	14	16	18	22	26	27	28
LAM	200	200	201	194	194	185	178
MEA	82	81	81	82	80	78	75
NEU	96	99	102	102	102	102	98
OAS	376	368	362	348	344	333	335
REF	50	49	43	43	42	45	40
SSA	216	223	230	240	246	238	234
USA	87	86	86	86	82	69	71

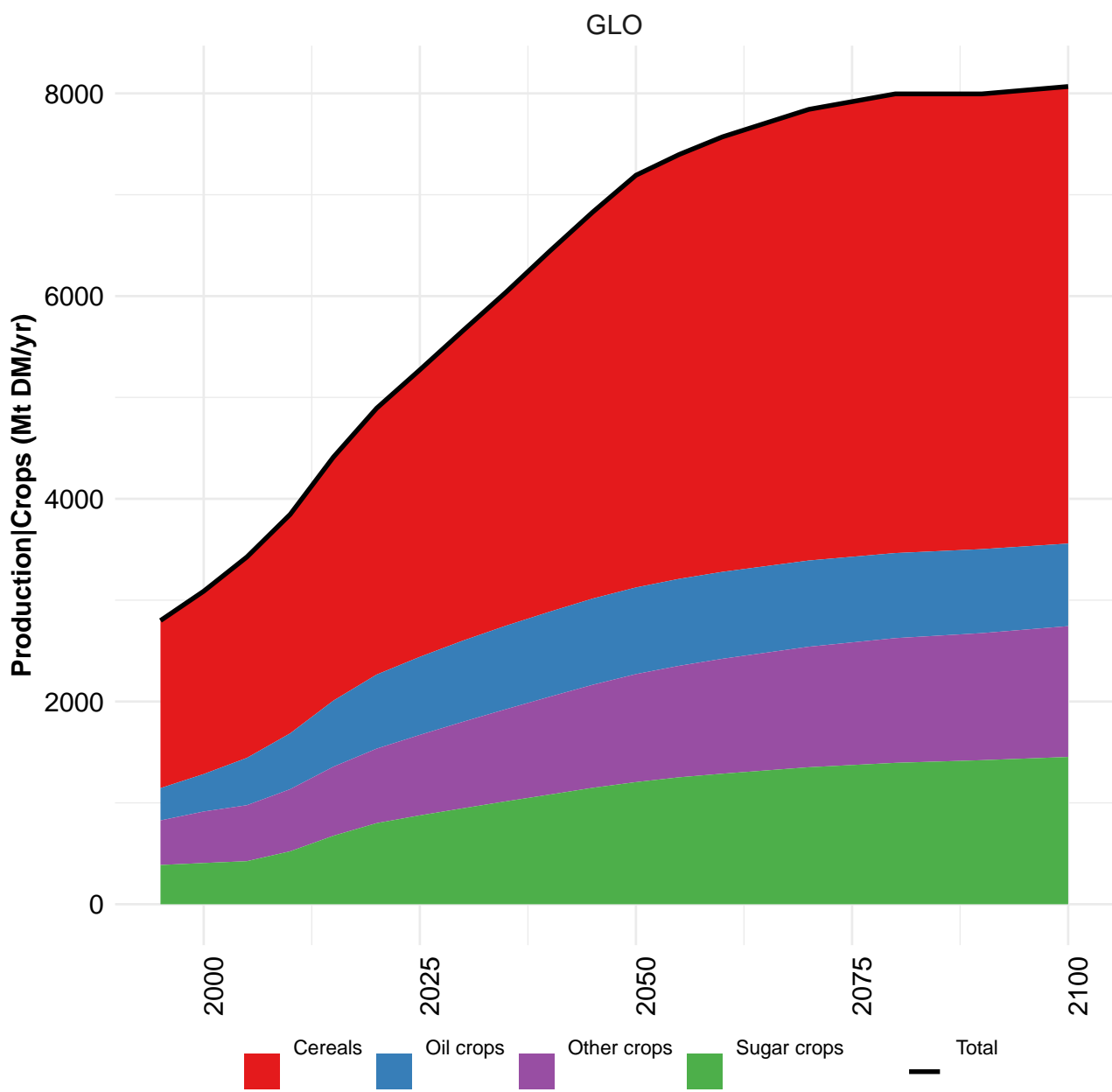
Table 1339: MAgPIE m4p\_SSP4 — Production—Crop residues—Straw (Mt DM/yr) [PART 2/2]

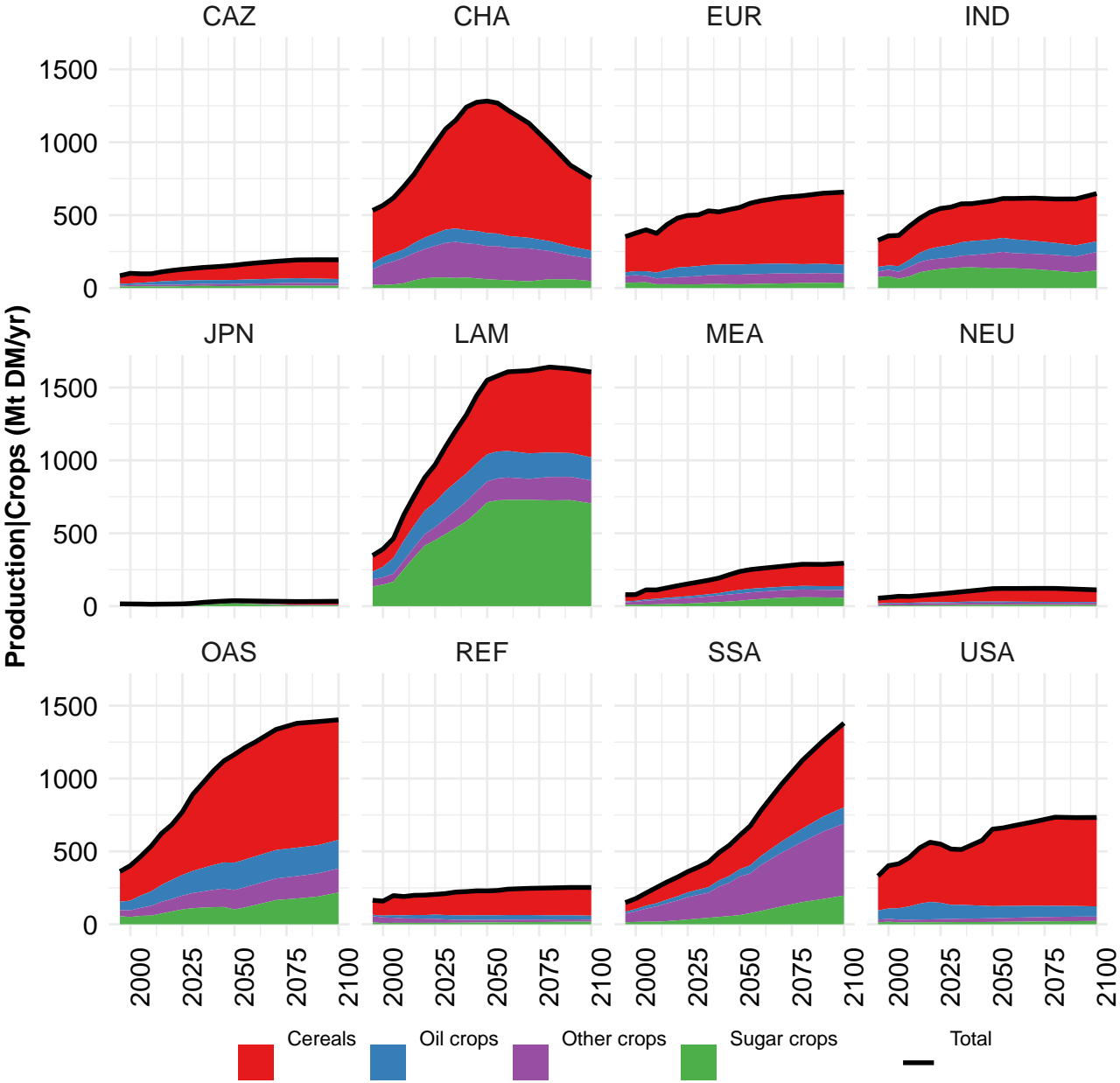
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	563	628	688	721	804	866	881	873	892	921
CAZ	5	6	7	7	9	8	9	12	14	12
CHA	145	167	195	210	239	274	266	246	230	215
EUR	25	24	25	24	24	24	21	18	15	15
IND	111	133	142	151	165	178	185	198	200	205
JPN	4	3	4	3	3	3	3	3	3	2
LAM	40	44	45	44	53	50	55	56	57	60
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

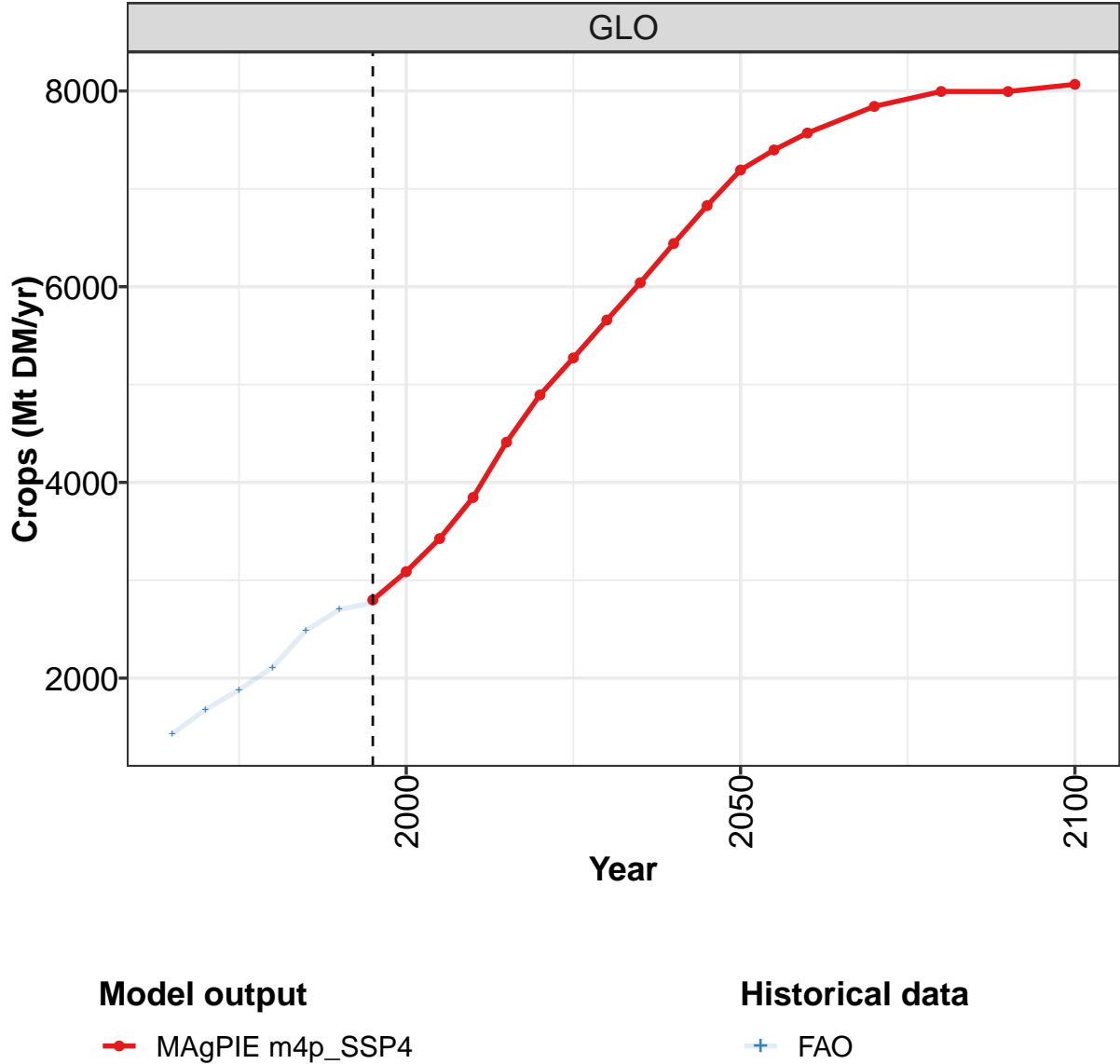
Table 1340: FAO — Production—Crop residues—Straw (Mt DM/yr)



44 Crops







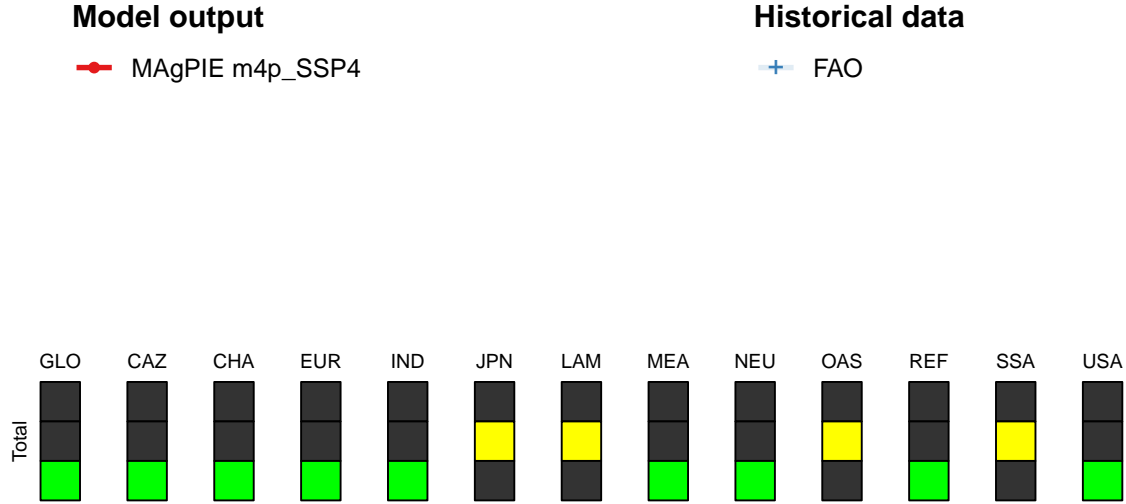
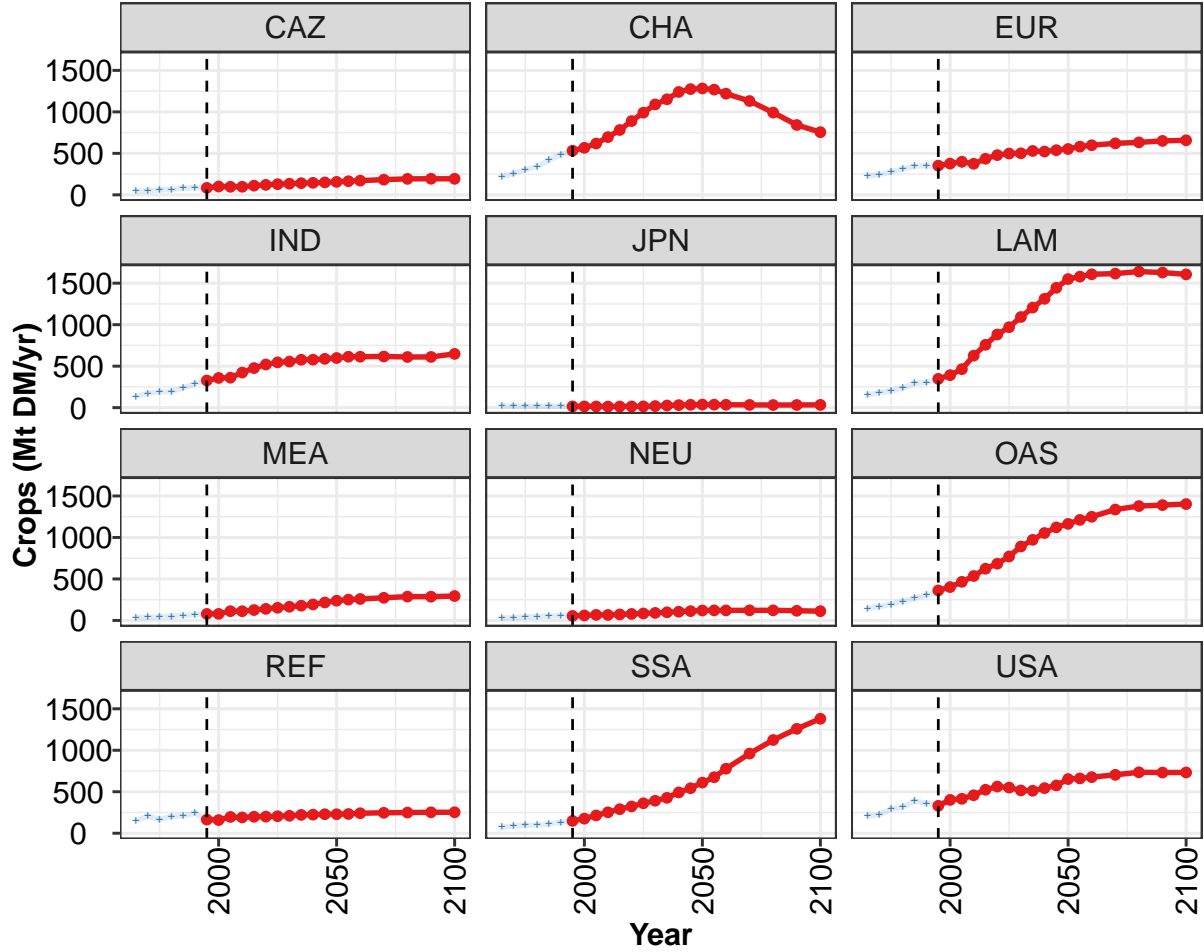


Figure 335: MAgPIE m4p\_SSP4 — Production—Crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2799	3088	3426	3846	4411	4893	5272	5660	6040	6441	6829
CAZ	84	101	97	98	111	120	128	135	141	145	150
CHA	532	567	618	696	782	889	991	1090	1152	1240	1274
EUR	352	377	399	375	435	479	498	501	529	522	538
IND	327	358	361	423	477	520	546	555	578	578	588
JPN	16	15	15	13	14	15	15	19	26	31	35
LAM	347	392	464	627	758	882	970	1093	1206	1312	1444
MEA	79	79	112	111	125	140	153	165	178	193	216
NEU	55	60	68	66	72	78	84	91	98	105	112
OAS	362	402	466	536	624	684	771	891	972	1054	1121
REF	165	159	197	190	199	200	205	211	221	224	230
SSA	149	176	215	253	290	323	361	392	427	492	543
USA	331	402	415	458	524	563	550	516	513	544	576

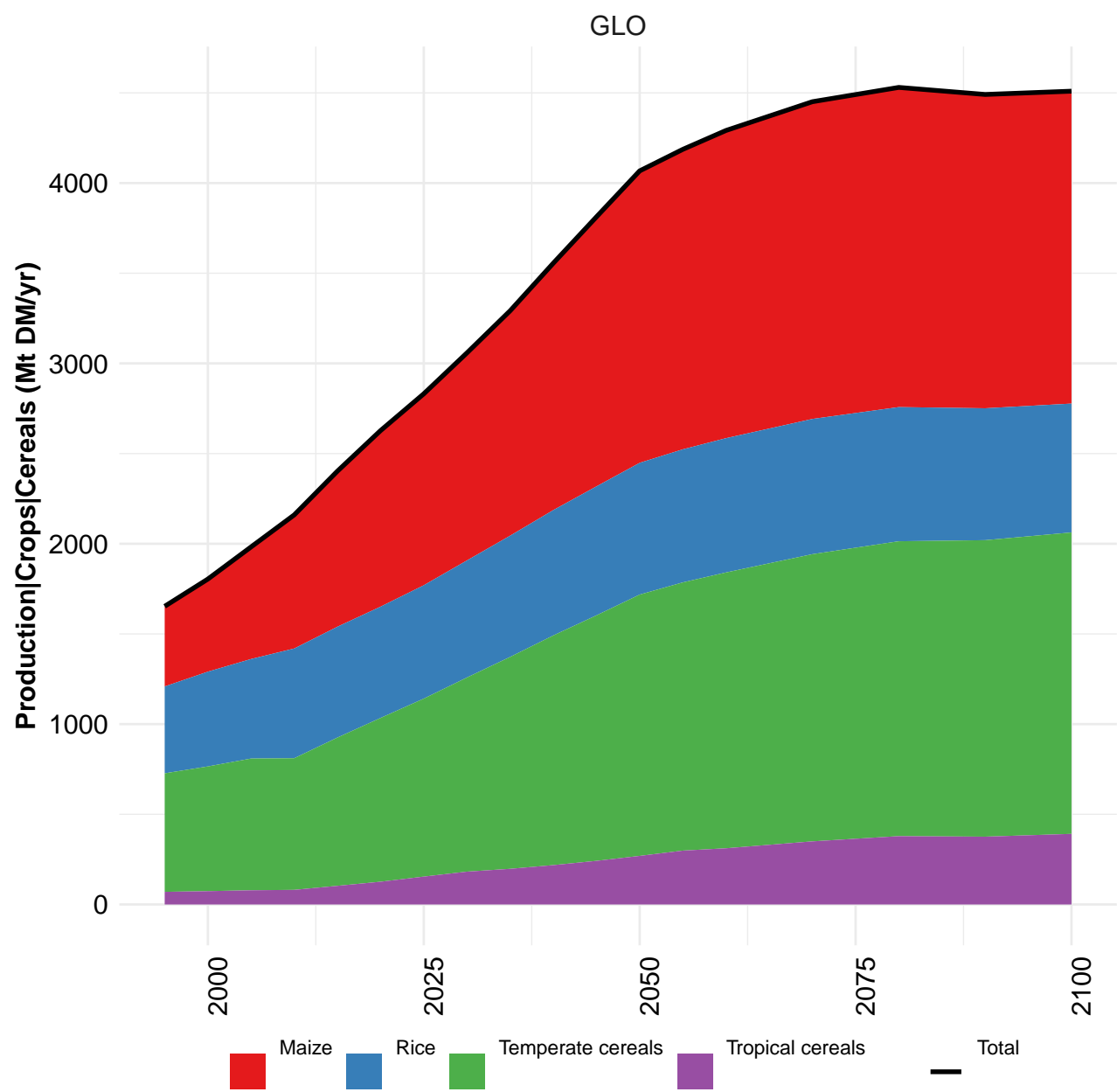
Table 1341: MAgPIE m4p-SSP4 — Production—Crops (Mt DM/yr) [PART 1/2]

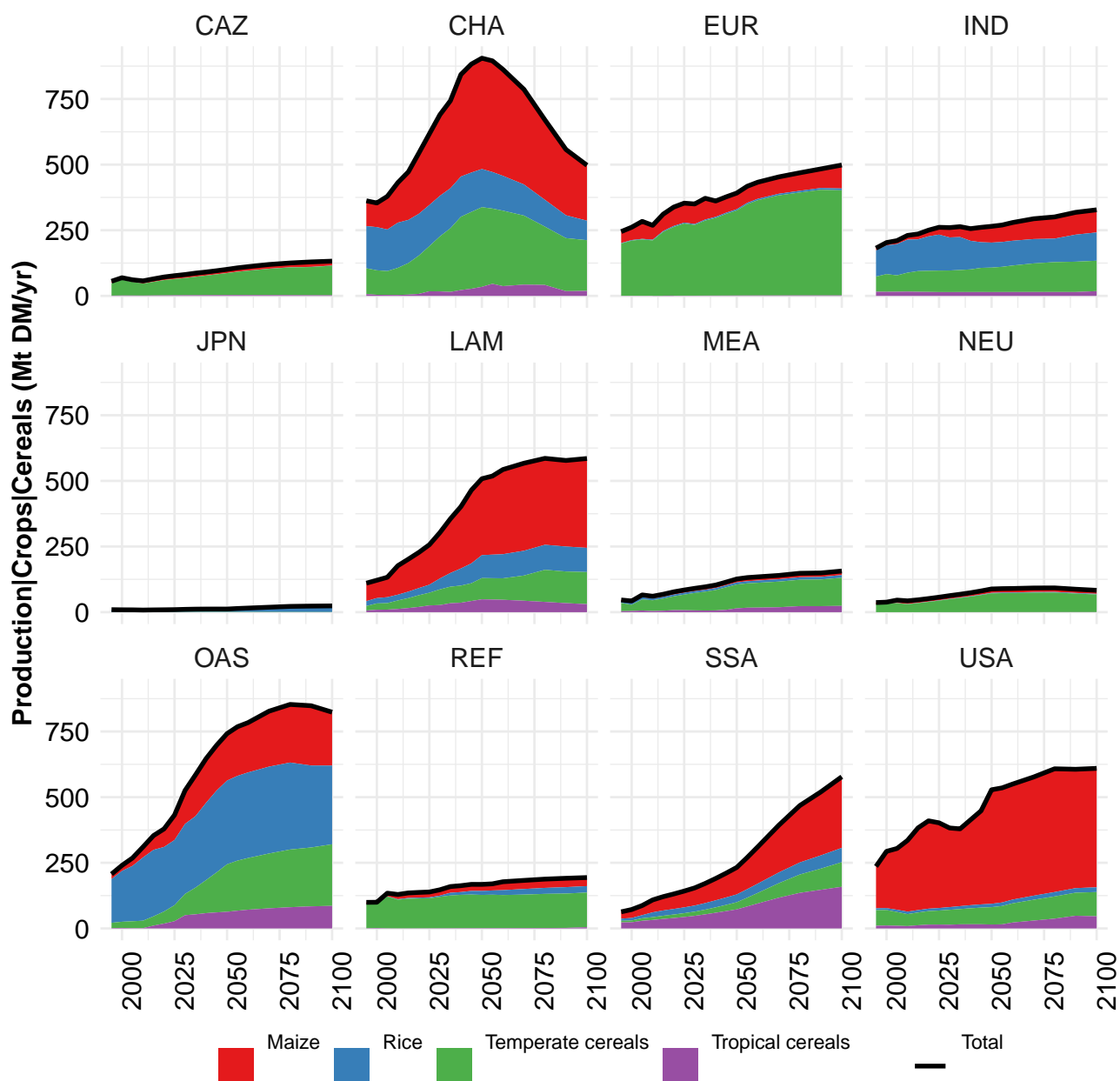
	2050	2055	2060	2070	2080	2090	2100
GLO	7192	7397	7571	7842	7995	7995	8068
CAZ	156	165	172	183	193	194	194
CHA	1283	1269	1220	1131	991	842	755
EUR	553	581	598	621	633	650	658
IND	598	614	614	617	611	611	648
JPN	37	36	35	33	32	32	34
LAM	1550	1579	1608	1616	1640	1628	1606
MEA	238	251	259	273	287	287	294
NEU	120	121	121	122	122	117	112
OAS	1164	1212	1250	1337	1379	1390	1403
REF	229	232	241	246	249	253	252
SSA	611	675	778	960	1124	1259	1380
USA	653	661	676	704	735	732	733

Table 1342: MAgPIE m4p-SSP4 — Production—Crops (Mt DM/yr) [PART 2/2]

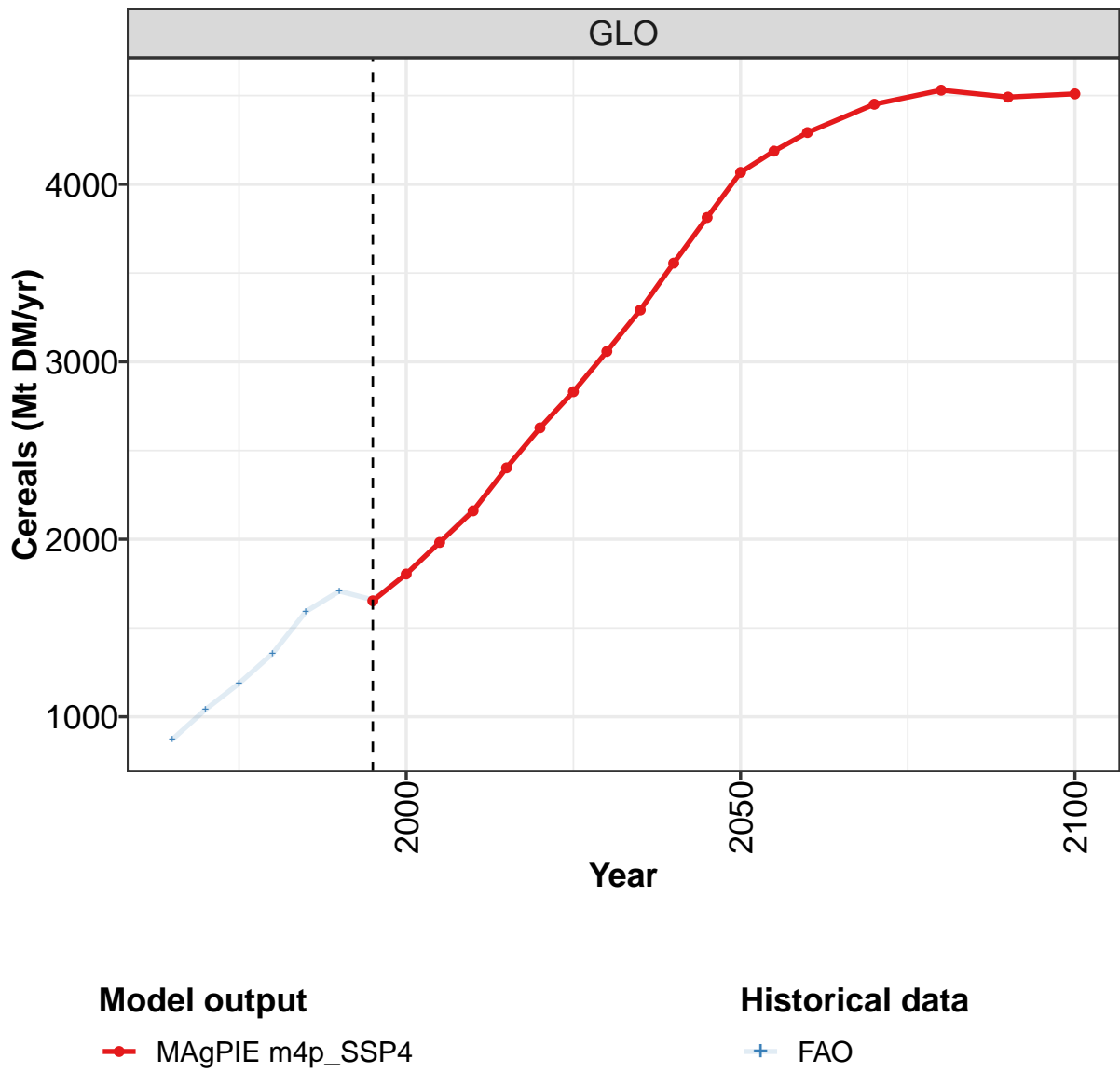
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1430	1679	1880	2110	2486	2702	2769	3057	3404	3830
CAZ	44	47	60	64	81	88	95	109	116	108
CHA	214	258	301	342	417	488	536	569	615	702
EUR	226	245	278	311	345	353	333	356	363	353
IND	135	173	190	196	239	289	330	360	360	426
JPN	21	20	19	17	19	17	16	15	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)





44.1 Cereals





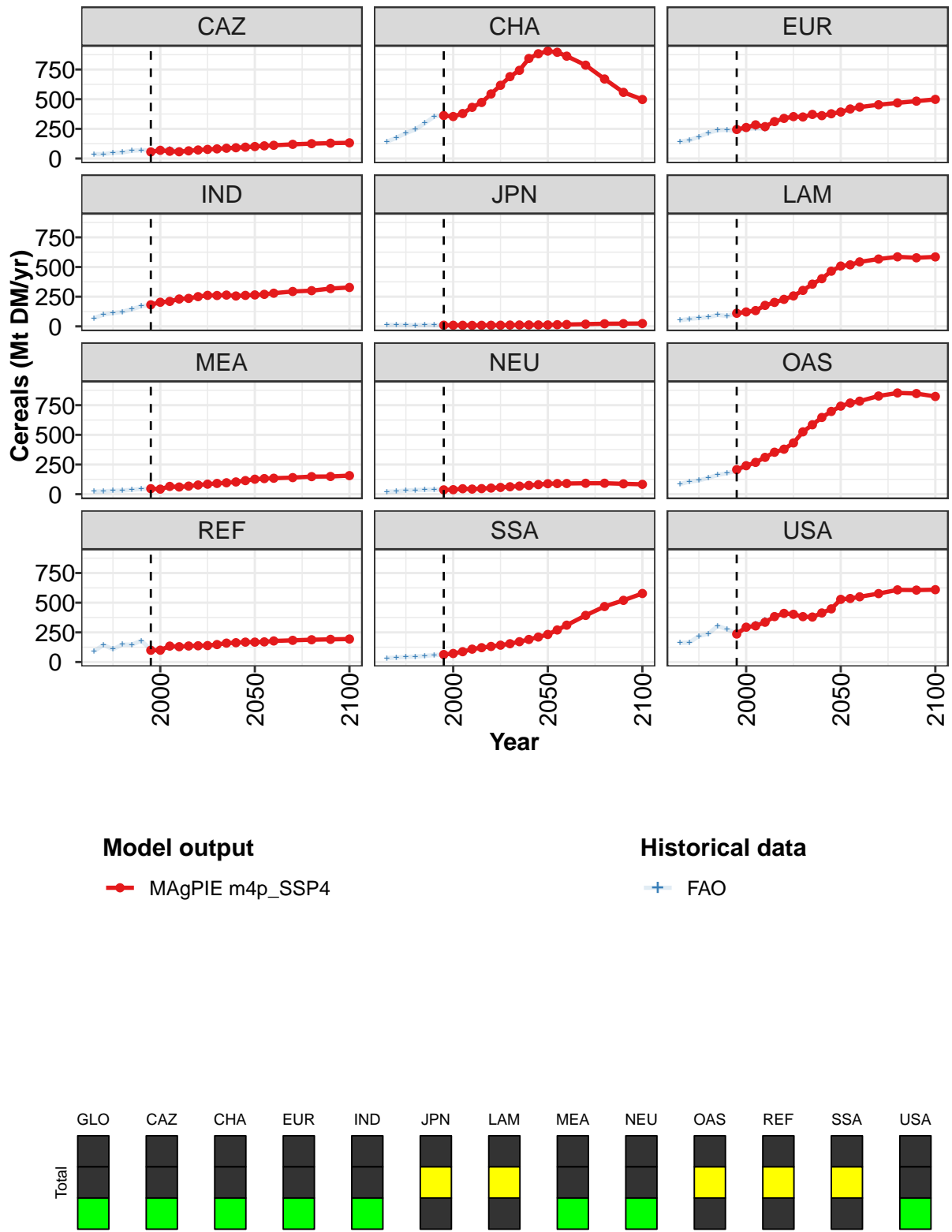


Figure 336: MAGPIE m4p\_SSP4 — Production—Crops—Cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1653	1804	1982	2160	2403	2628	2832	3058	3292	3556	3813
CAZ	56	69	61	57	65	72	77	81	87	91	96
CHA	362	354	379	431	472	544	617	690	743	843	883
EUR	245	261	284	269	311	338	353	350	372	361	377
IND	182	203	210	230	236	250	261	260	264	256	261
JPN	10	9	9	8	9	9	10	11	12	12	12
LAM	110	122	133	177	202	228	257	303	355	402	465
MEA	46	43	66	61	68	77	84	91	96	103	115
NEU	37	38	46	43	47	52	57	63	68	74	81
OAS	207	240	268	310	354	379	432	525	585	647	697
REF	99	100	134	129	135	137	139	147	159	163	168
SSA	63	72	87	109	121	131	142	154	171	190	211
USA	236	294	304	335	383	410	402	383	379	414	448

Table 1344: MAgPIE m4p\_SSP4 — Production—Crops—Cereals (Mt DM/yr) [PART 1/2]

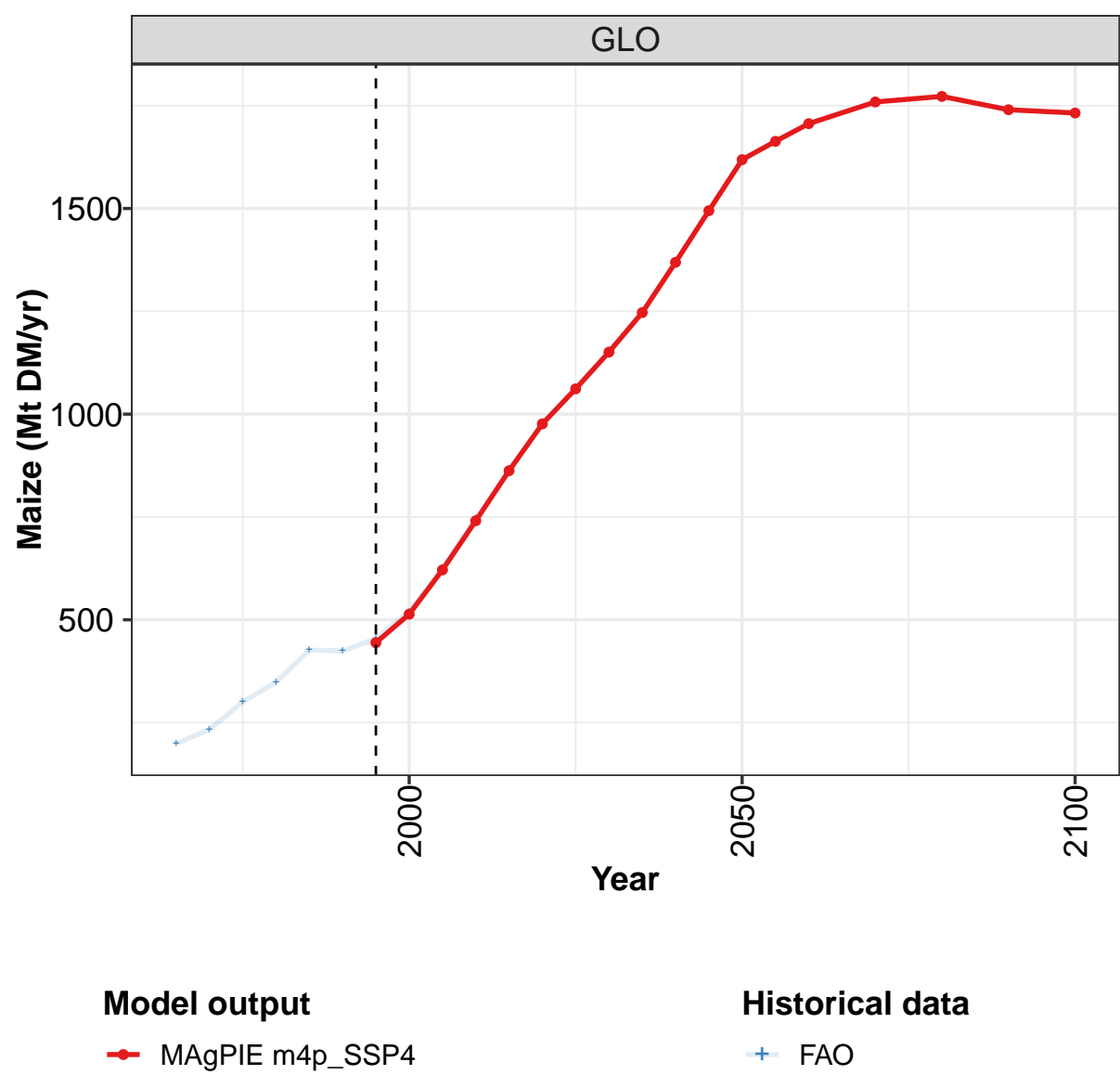
	2050	2055	2060	2070	2080	2090	2100
GLO	4067	4187	4292	4451	4530	4491	4509
CAZ	101	107	111	120	125	129	132
CHA	905	895	862	787	670	558	497
EUR	392	418	433	453	469	484	498
IND	265	270	279	294	301	318	328
JPN	12	14	16	19	22	23	24
LAM	508	518	543	567	586	578	585
MEA	126	132	134	140	148	149	157
NEU	88	90	90	92	92	87	83
OAS	742	768	784	827	853	848	824
REF	168	170	178	183	188	191	194
SSA	232	270	311	393	468	520	578
USA	528	535	550	577	608	606	610

Table 1345: MAgPIE m4p\_SSP4 — 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



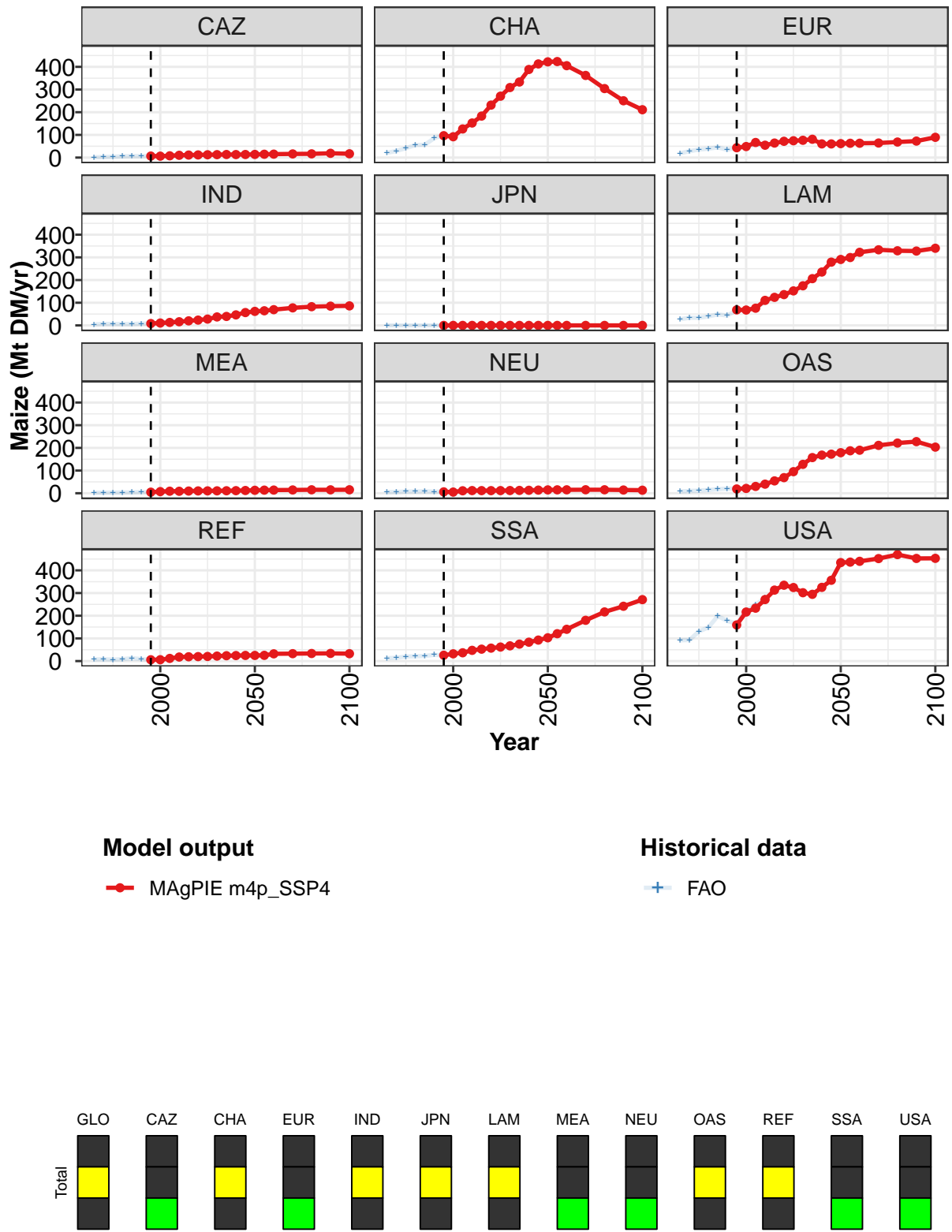


Figure 337: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Maize (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	444	514	621	741	863	976	1062	1151	1247	1369	1495
CAZ	7	6	8	10	11	12	12	13	14	13	14
CHA	97	92	126	152	183	231	271	309	333	388	413
EUR	43	49	67	55	64	72	74	76	81	60	60
IND	8	11	13	16	20	24	28	37	40	46	57
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	68	68	76	110	124	136	152	175	206	235	279
MEA	5	7	9	9	10	10	10	11	11	11	12
NEU	6	5	11	12	12	12	12	12	12	13	14
OAS	19	21	30	40	54	69	95	127	157	168	172
REF	6	6	12	18	19	20	20	22	24	24	25
SSA	26	32	37	47	53	57	62	67	75	83	93
USA	159	216	233	271	313	335	324	301	294	325	356

Table 1347: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Maize (Mt DM/yr) [PART 1/2]

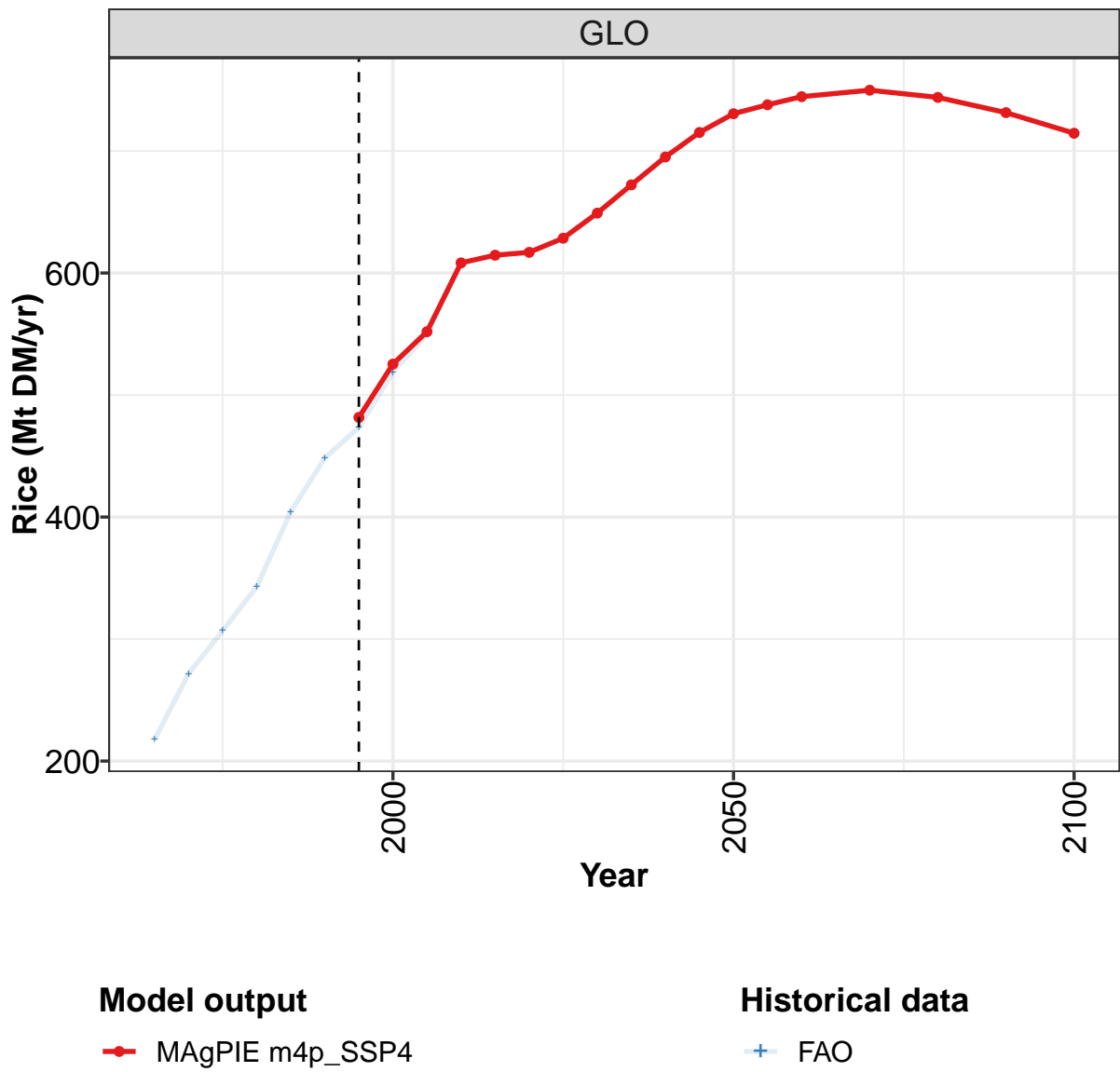
	2050	2055	2060	2070	2080	2090	2100
GLO	1619	1663	1706	1759	1773	1740	1732
CAZ	14	15	15	16	16	19	17
CHA	422	423	405	362	304	251	211
EUR	62	63	63	64	69	73	89
IND	62	65	69	77	83	85	86
JPN	0	0	0	0	0	0	0
LAM	291	299	322	333	329	328	340
MEA	13	14	14	15	15	15	15
NEU	15	15	15	15	15	14	13
OAS	179	187	190	211	221	228	203
REF	25	25	32	33	33	34	33
SSA	103	121	140	180	217	242	271
USA	434	436	440	452	470	453	453

Table 1348: MAgPIE m4p\_SSP4 — 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



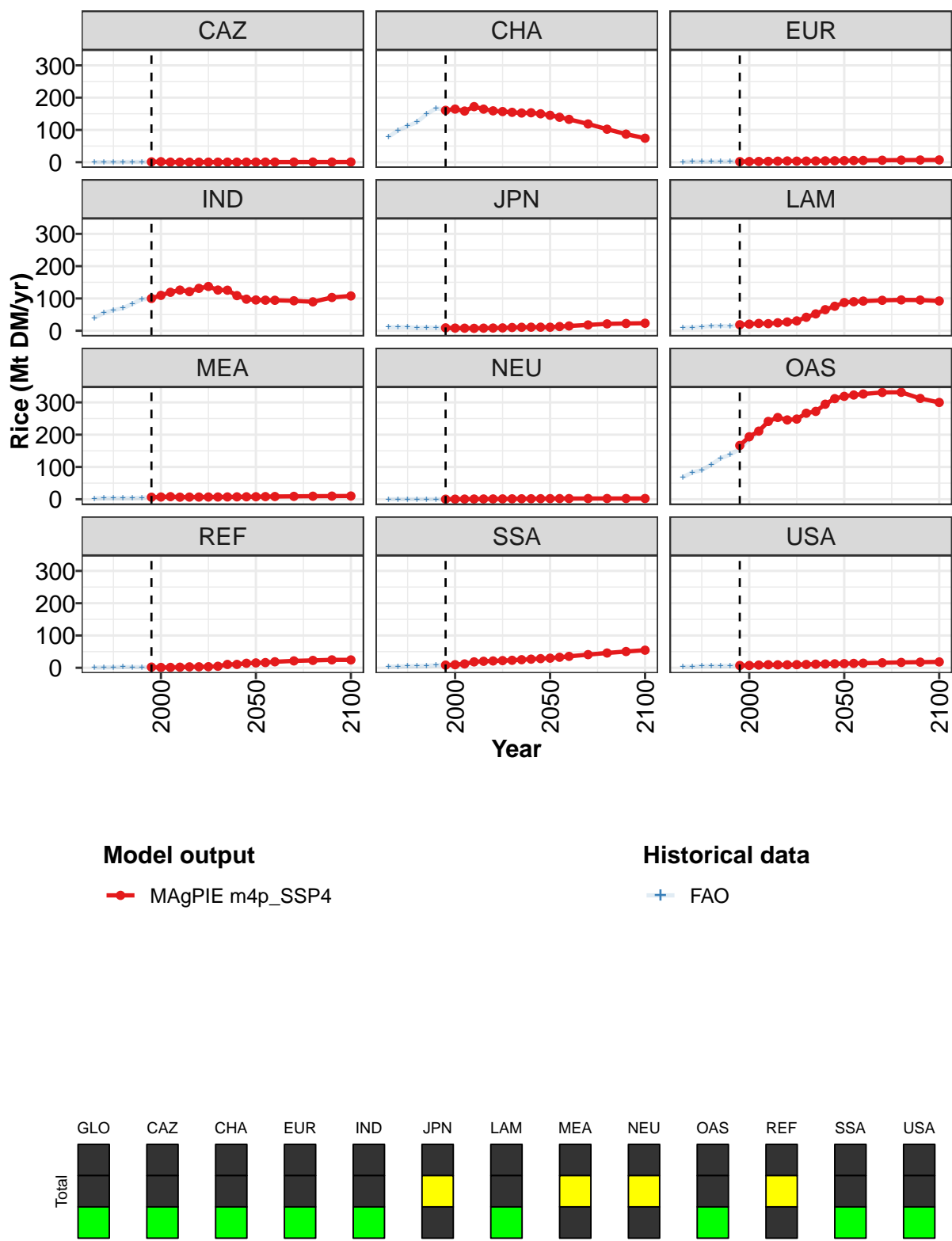


Figure 338: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Rice (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	482	525	552	608	615	617	629	649	672	695	715
CAZ	1	2	0	0	0	0	0	0	0	0	0
CHA	161	164	158	172	164	159	157	155	152	153	150
EUR	2	2	2	3	3	4	3	3	4	4	4
IND	100	110	119	126	121	131	137	126	126	109	98
JPN	9	8	8	7	8	8	9	10	11	11	11
LAM	19	20	23	22	25	27	31	42	52	65	76
MEA	6	7	8	7	7	7	7	7	7	7	8
NEU	0	0	1	1	1	1	1	1	1	2	2
OAS	167	194	211	241	253	246	248	266	272	294	312
REF	2	1	1	2	3	3	3	5	10	11	14
SSA	8	10	12	18	20	21	22	23	25	27	28
USA	7	7	8	9	9	9	10	10	11	12	12

Table 1350: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	731	738	745	750	744	731	715
CAZ	0	0	0	0	1	1	1
CHA	145	139	133	118	102	87	74
EUR	5	5	6	6	7	7	7
IND	95	95	94	93	90	103	108
JPN	11	13	15	18	21	22	23
LAM	87	90	92	94	95	95	92
MEA	8	8	9	9	9	10	10
NEU	2	2	2	2	2	2	2
OAS	319	323	326	331	331	312	300
REF	15	16	19	21	23	25	24
SSA	30	33	35	41	46	50	55
USA	13	14	14	16	17	17	18

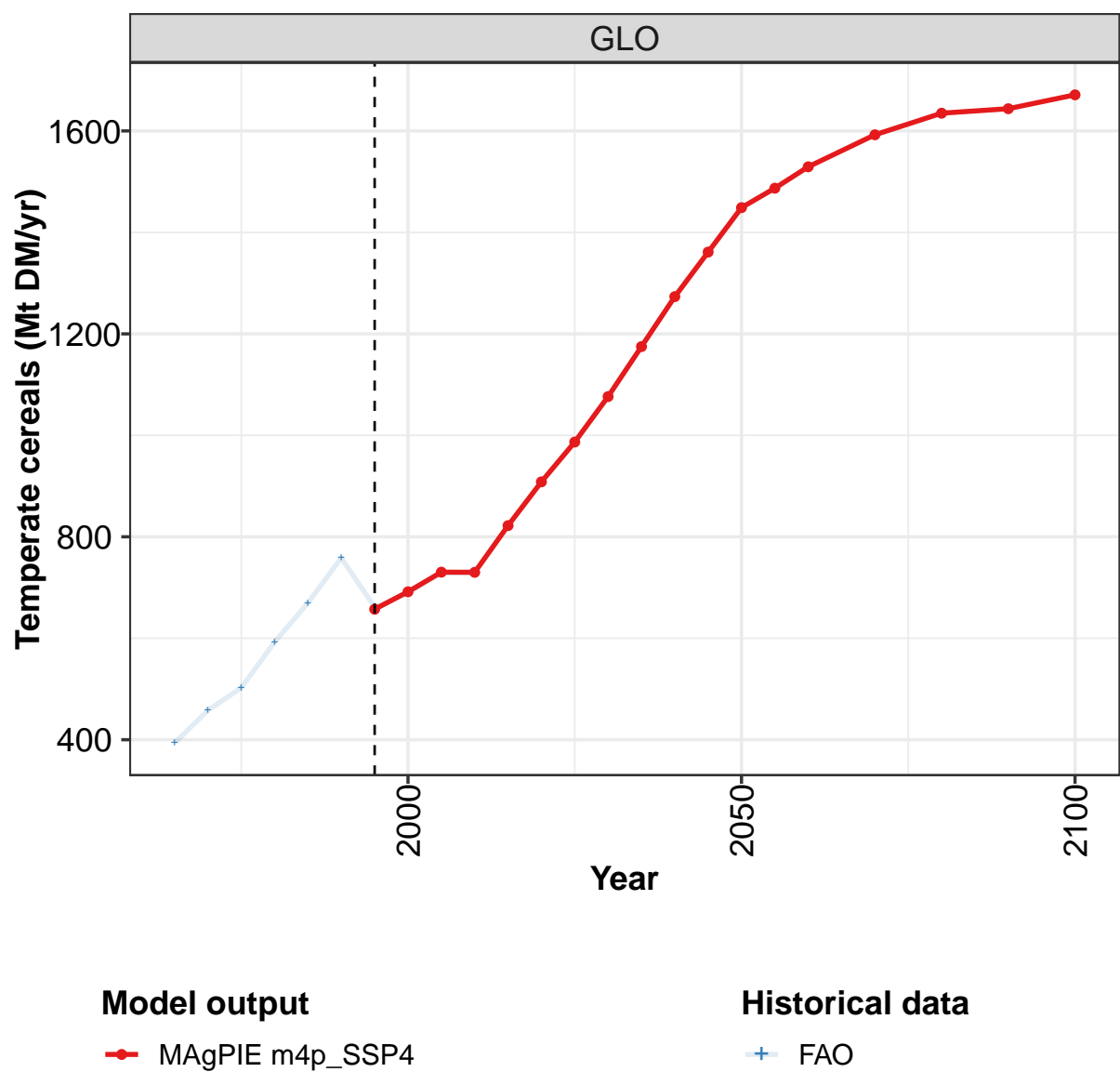
Table 1351: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Rice (Mt DM/yr) [PART 2/2]

	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



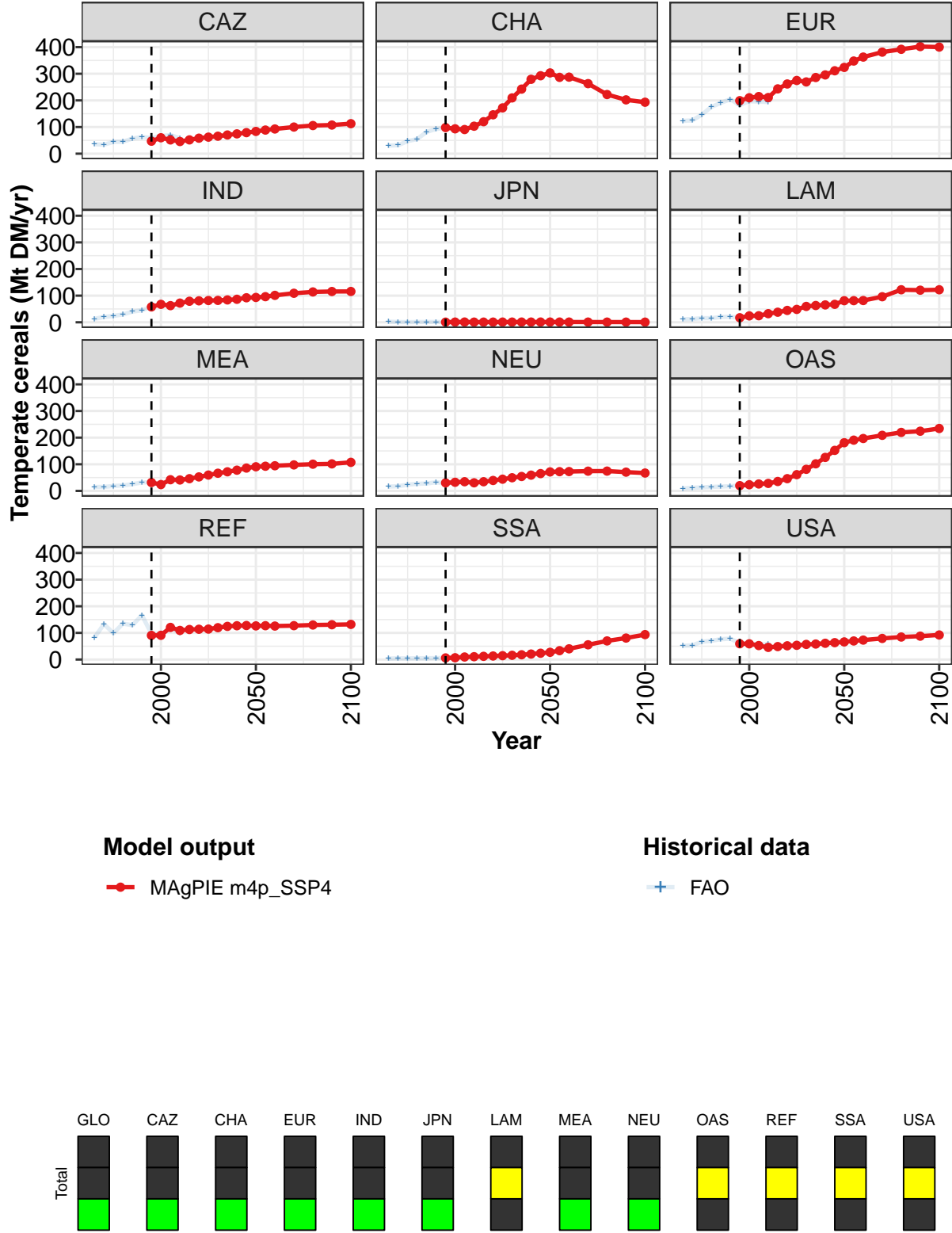


Figure 339: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	657	692	730	730	822	908	987	1076	1175	1273	1361
CAZ	47	60	52	46	52	58	62	66	70	74	79
CHA	98	93	91	103	120	146	172	209	242	279	293
EUR	199	210	214	211	243	262	275	269	286	296	311
IND	58	67	63	72	79	81	82	82	84	86	92
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	17	24	25	32	38	45	48	60	63	65	67
MEA	31	24	42	41	46	53	60	66	72	78	86
NEU	30	33	35	31	35	39	44	49	54	59	65
OAS	20	23	26	28	35	46	61	81	102	126	152
REF	91	91	121	109	113	114	114	120	125	127	128
SSA	6	7	10	11	12	13	15	16	18	21	24
USA	59	59	53	46	49	52	53	57	58	61	63

Table 1353: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Temperate cereals (Mt DM/yr) [PART 1/2]

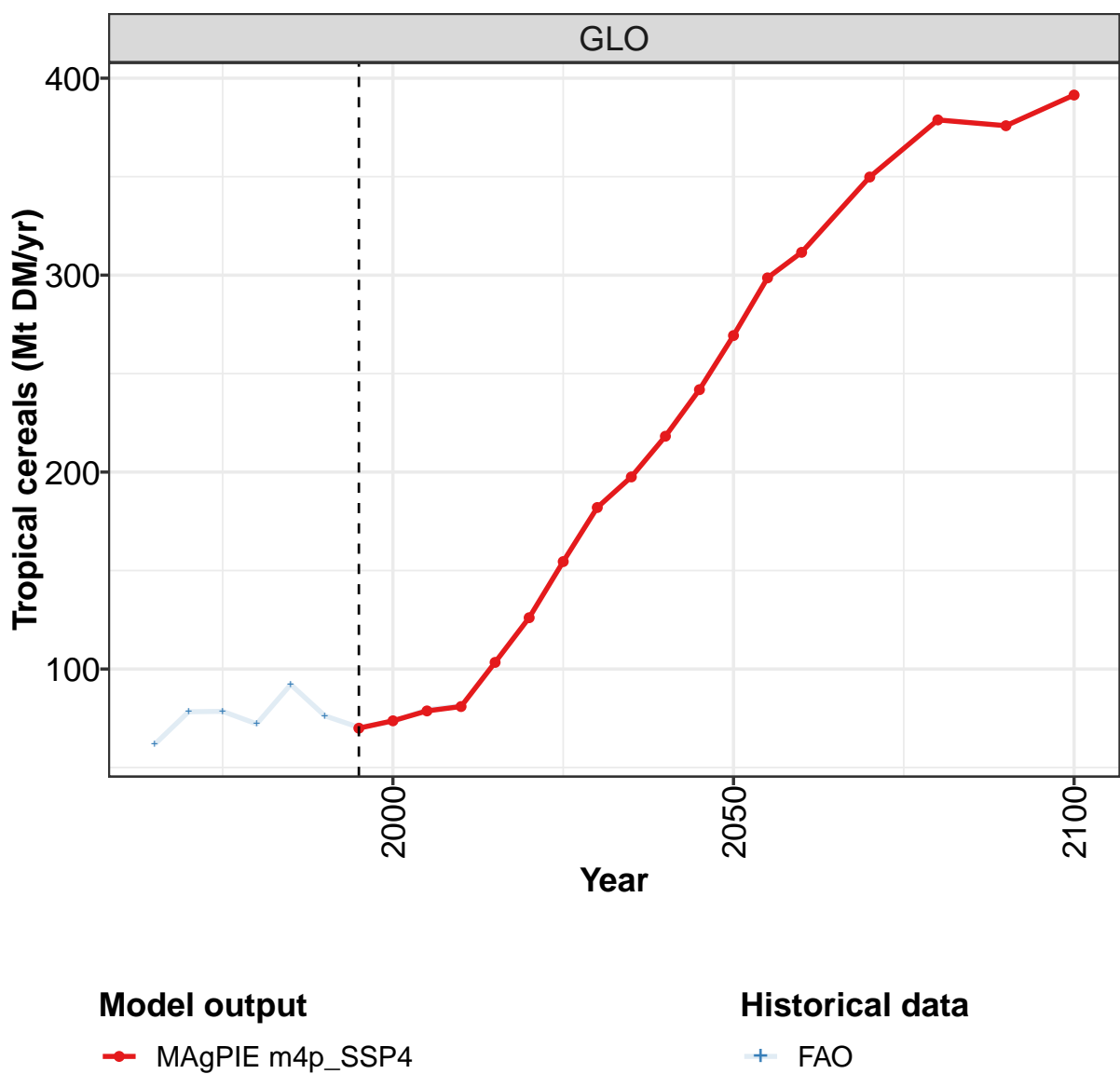
	2050	2055	2060	2070	2080	2090	2100
GLO	1449	1487	1529	1592	1635	1644	1671
CAZ	84	89	93	100	106	107	113
CHA	303	287	287	263	222	202	193
EUR	324	348	363	381	392	402	400
IND	93	96	101	109	114	116	116
JPN	1	1	1	1	1	1	1
LAM	81	81	82	96	122	121	122
MEA	91	93	94	98	100	102	107
NEU	71	72	73	74	74	70	67
OAS	181	191	197	209	220	224	234
REF	126	127	126	127	130	131	132
SSA	27	33	40	55	70	81	94
USA	66	70	73	79	85	88	92

Table 1354: MAgPIE m4p\_SSP4 — 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



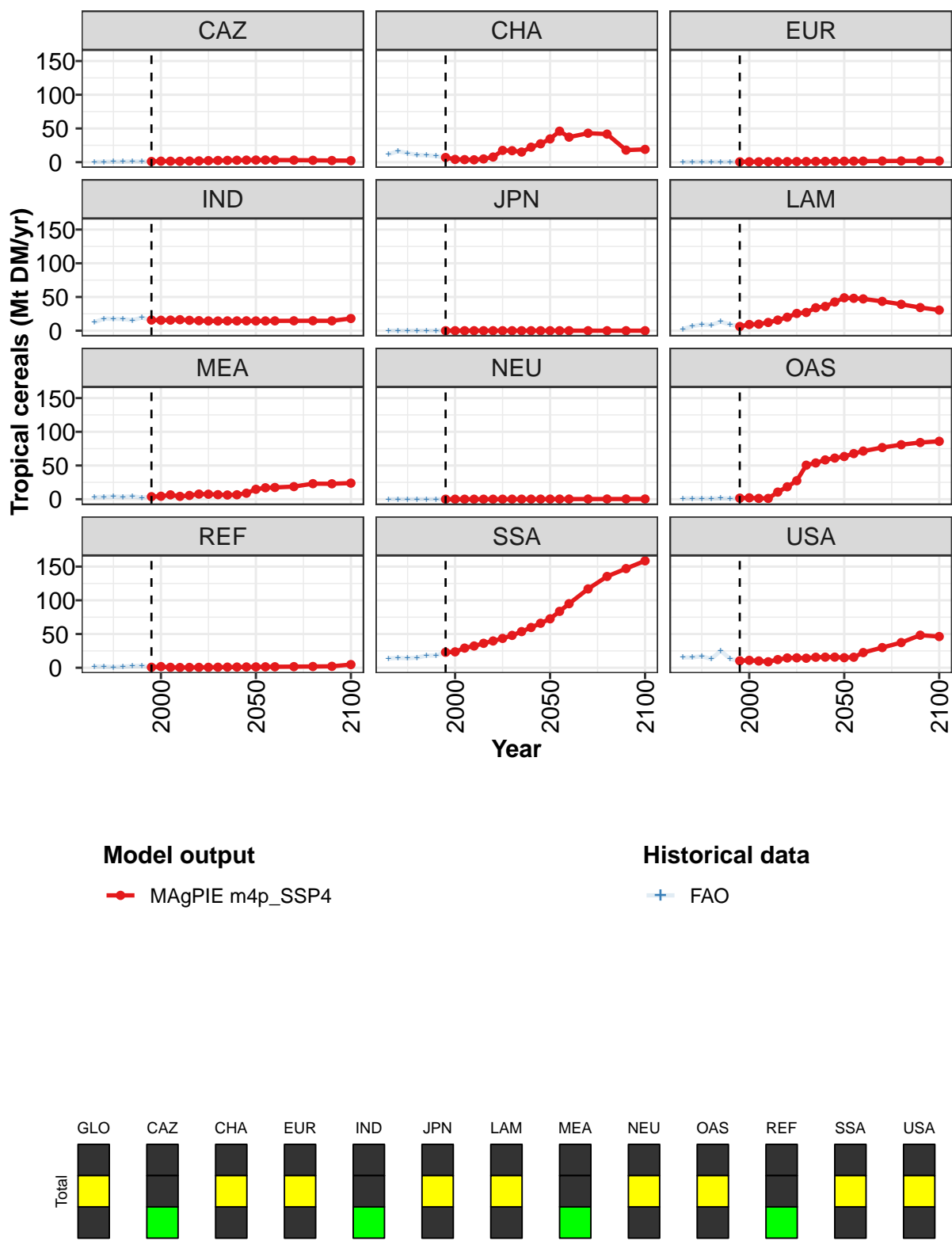


Figure 340: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Tropical cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	70	74	79	81	103	126	155	182	198	218	242
CAZ	1	2	1	1	2	2	2	3	3	3	3
CHA	7	4	4	4	5	8	17	17	15	22	27
EUR	1	1	0	1	1	1	1	1	1	1	1
IND	16	15	16	16	15	15	14	14	15	15	15
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	9	10	12	16	20	26	27	34	36	43
MEA	4	4	7	4	6	8	7	7	6	7	9
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	2	2	1	1	11	18	27	50	54	58	61
REF	1	2	1	0	0	1	1	1	1	1	1
SSA	23	24	29	32	36	40	44	48	54	60	66
USA	10	11	10	9	12	15	15	14	16	16	16

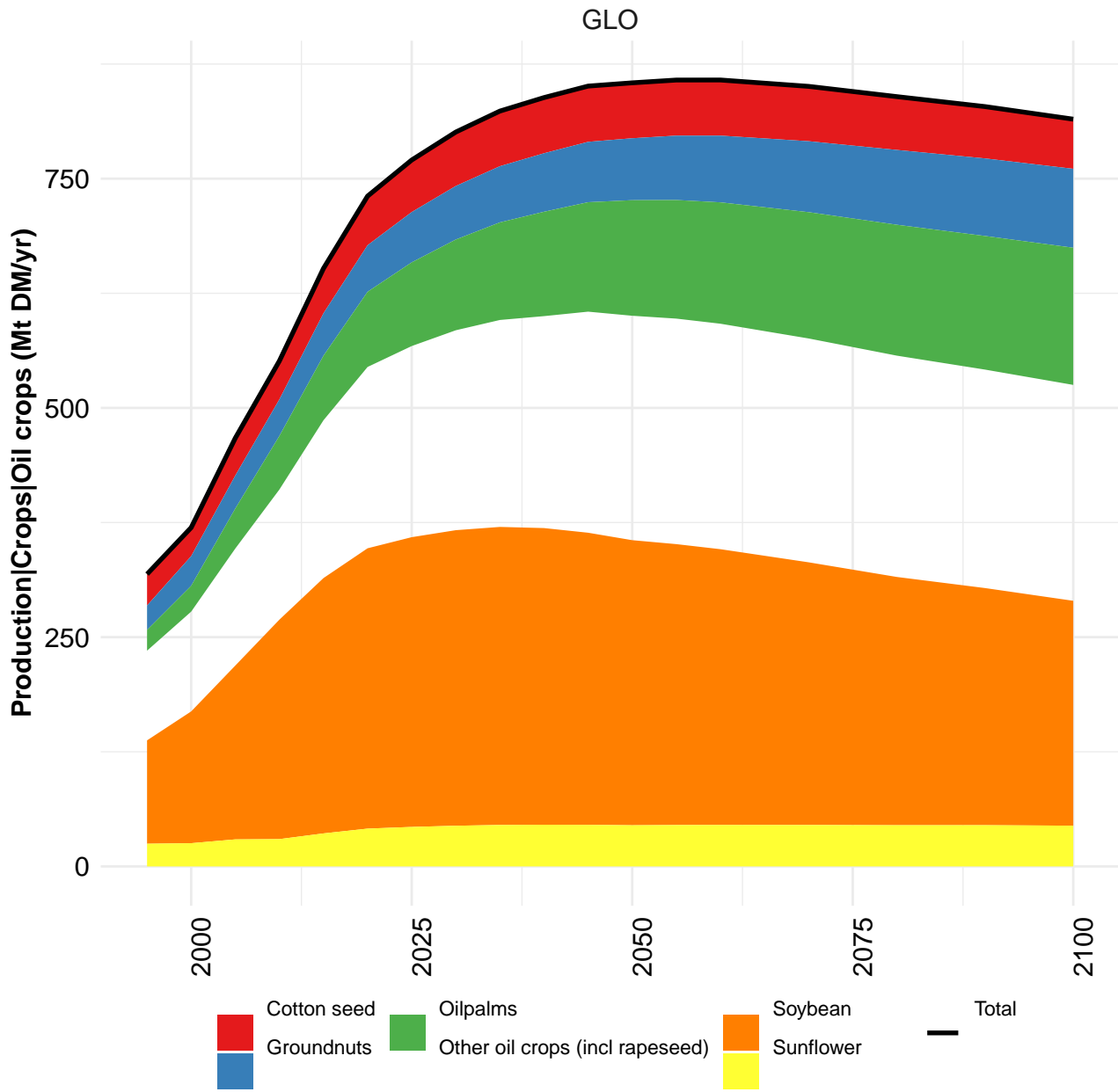
Table 1356: MAgPIE m4p\_SSP4 — Production—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

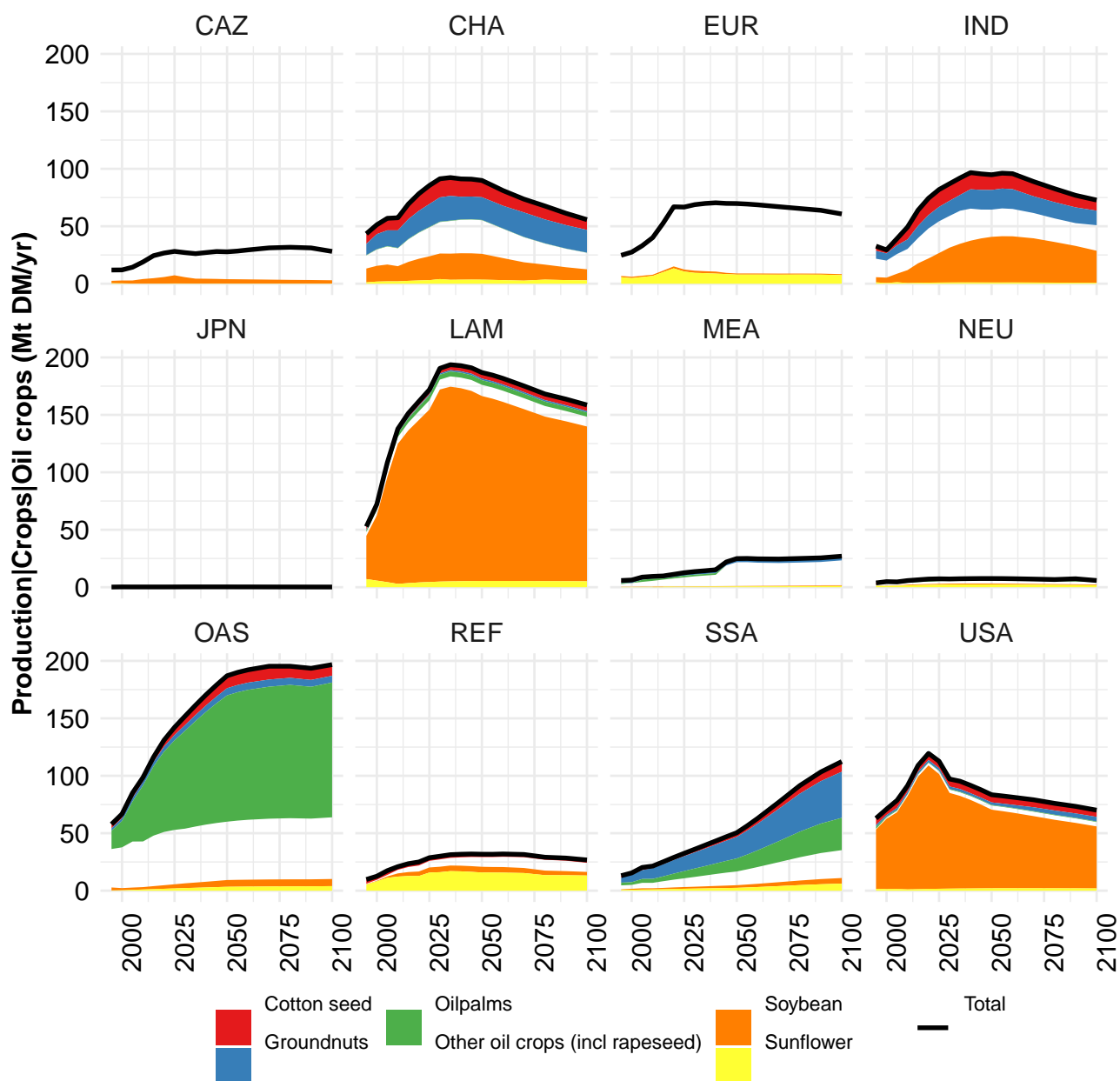
	2050	2055	2060	2070	2080	2090	2100
GLO	269	299	312	350	379	376	391
CAZ	3	3	3	3	3	2	2
CHA	35	46	37	43	42	18	19
EUR	1	2	2	2	2	2	2
IND	14	14	15	15	15	15	18
JPN	0	0	0	0	0	0	0
LAM	49	48	47	43	39	34	31
MEA	15	17	17	19	23	23	24
NEU	0	0	0	0	0	0	0
OAS	63	68	71	77	81	84	86
REF	1	1	1	2	2	2	5
SSA	73	84	95	117	135	147	159
USA	15	16	22	30	37	48	46

Table 1357: MAgPIE m4p\_SSP4 — 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

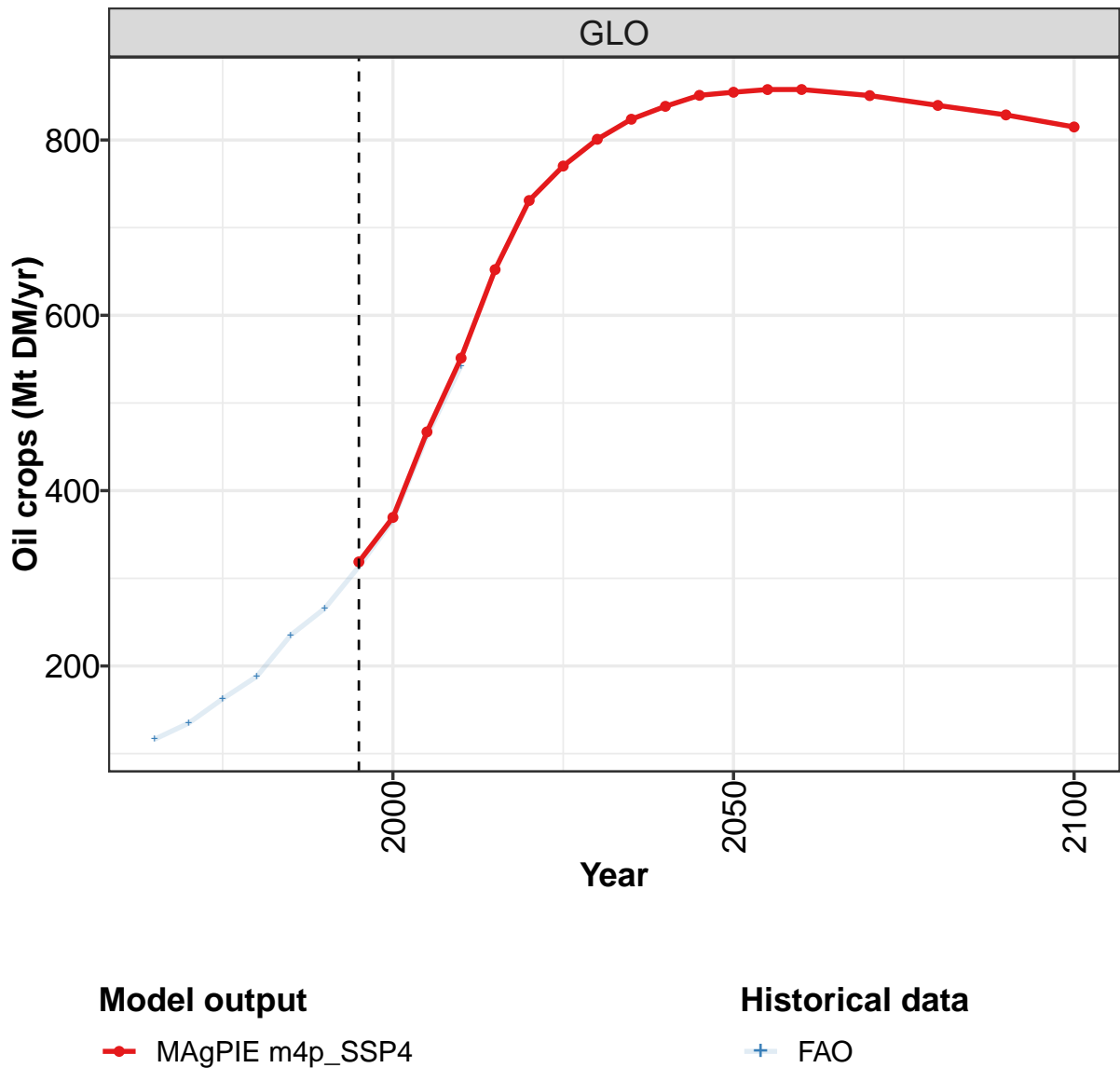
Table 1358: FAO — Production—Crops—Cereals—Tropical cereals (Mt DM/yr)







44.2 Oil crops



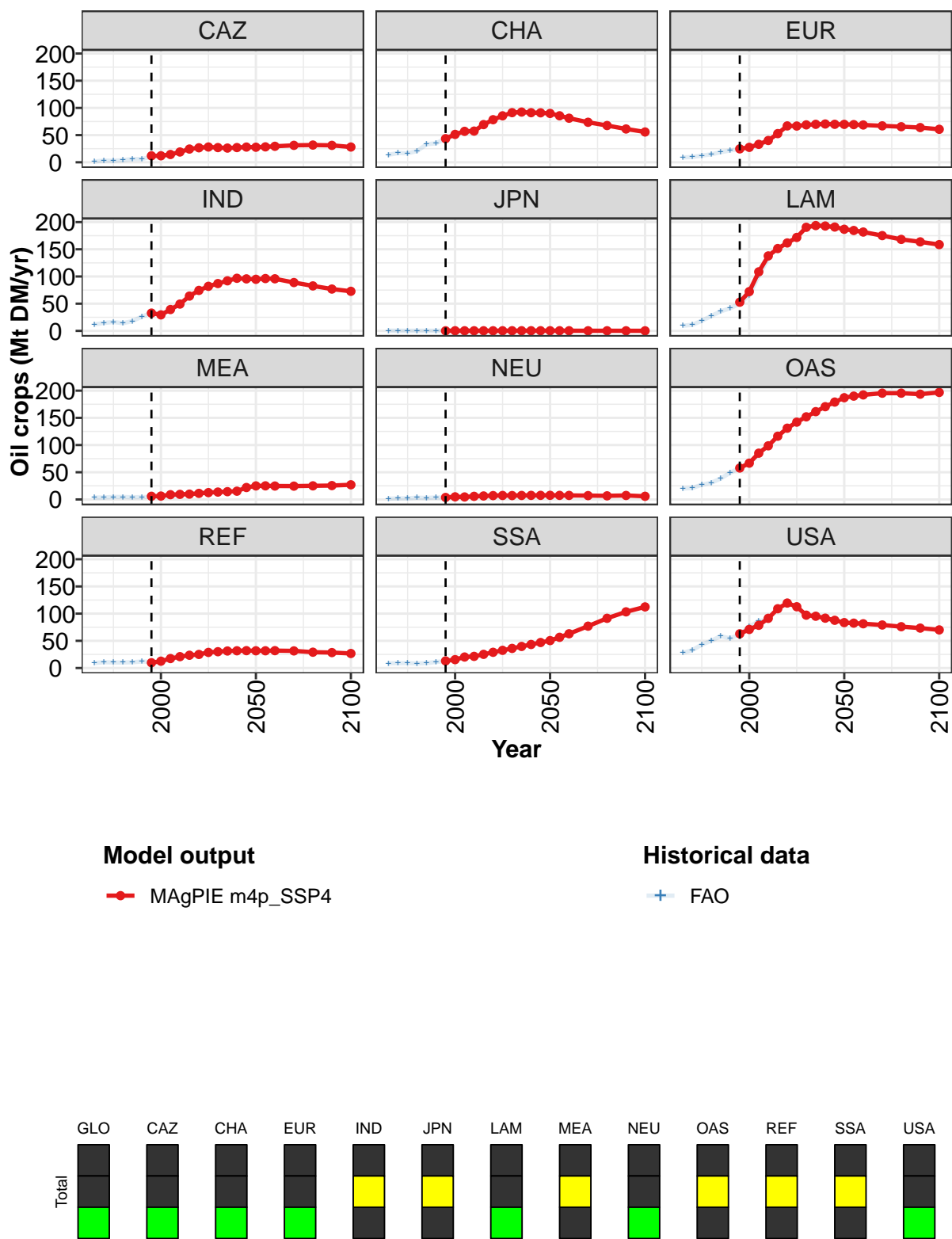


Figure 341: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	319	369	467	551	652	731	770	801	824	838	851
CAZ	12	12	14	19	24	27	28	27	26	27	28
CHA	43	51	57	57	69	78	85	91	92	91	91
EUR	25	27	33	40	53	67	67	69	70	70	70
IND	33	29	39	49	64	74	82	87	92	97	96
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	53	72	109	138	151	162	172	190	194	193	191
MEA	6	6	9	9	10	11	13	14	14	15	22
NEU	4	5	5	6	6	7	7	7	7	7	8
OAS	58	67	85	99	116	131	142	152	161	171	179
REF	10	13	17	21	24	25	29	30	31	32	32
SSA	13	15	20	21	25	29	33	36	40	43	47
USA	63	71	79	91	109	119	113	97	95	92	88

Table 1359: MAgPIE m4p-SSP4 — Production—Crops—Oil crops (Mt DM/yr) [PART 1/2]

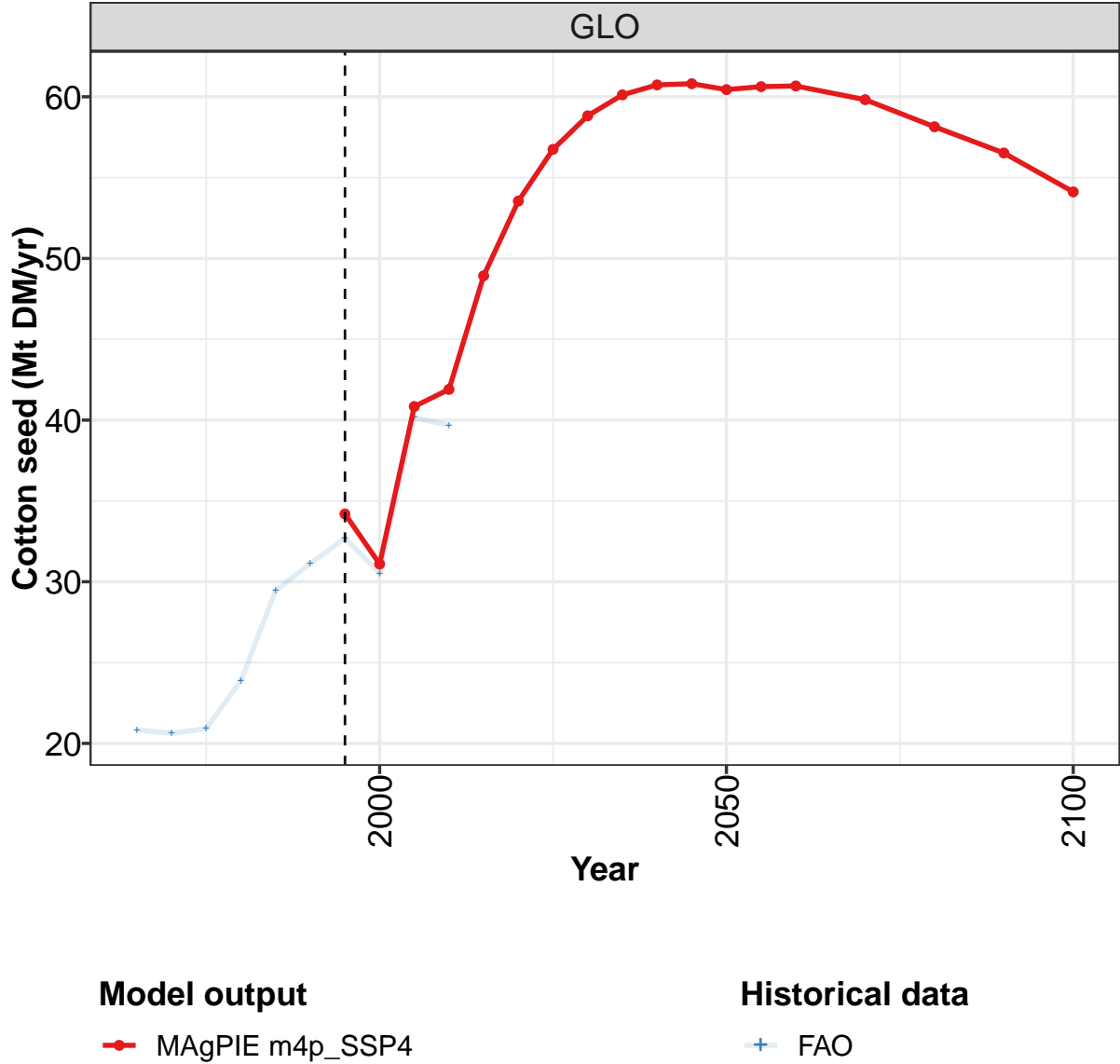
	2050	2055	2060	2070	2080	2090	2100
GLO	854	858	858	851	839	829	815
CAZ	28	28	29	31	32	31	28
CHA	90	86	81	74	68	61	56
EUR	70	69	69	67	65	64	61
IND	95	96	96	89	83	77	73
JPN	0	0	0	0	0	0	0
LAM	187	185	182	175	168	164	159
MEA	25	25	25	25	25	26	27
NEU	8	8	7	7	7	7	6
OAS	187	190	192	195	195	194	197
REF	32	32	32	31	29	28	27
SSA	50	56	63	77	91	103	112
USA	84	83	81	79	76	73	70

Table 1360: MAgPIE m4p-SSP4 — 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



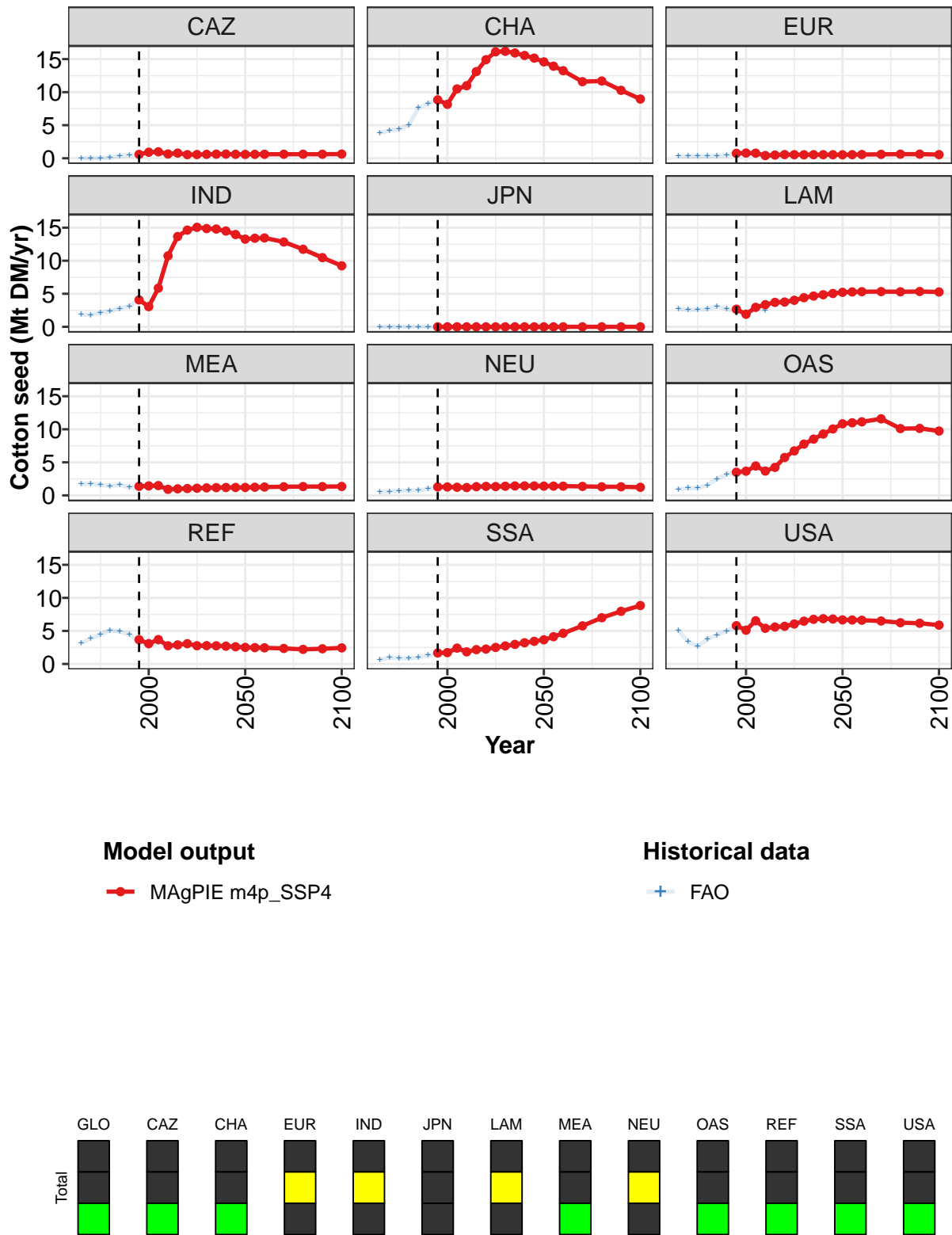


Figure 342: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Cotton seed (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.2	31.1	40.8	41.9	48.9	53.6	56.8	58.8	60.1	60.7	60.8
CAZ	0.6	0.9	1.0	0.6	0.8	0.5	0.6	0.6	0.6	0.6	0.6
CHA	8.8	8.2	10.5	11.0	13.1	14.9	16.1	16.2	15.9	15.6	15.1
EUR	0.7	0.8	0.8	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5
IND	4.1	3.1	5.9	10.7	13.7	14.6	15.1	14.9	14.8	14.5	14.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.7	1.9	2.9	3.4	3.7	3.8	4.0	4.4	4.7	4.9	5.0
MEA	1.4	1.4	1.5	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2
NEU	1.3	1.3	1.2	1.2	1.3	1.4	1.3	1.4	1.4	1.4	1.4
OAS	3.5	3.7	4.5	3.7	4.2	5.7	6.7	7.8	8.5	9.3	10.1
REF	3.7	3.1	3.7	2.8	2.9	3.1	2.8	2.8	2.8	2.7	2.6
SSA	1.7	1.7	2.4	1.8	2.2	2.3	2.5	2.7	3.0	3.2	3.4
USA	5.8	5.1	6.5	5.4	5.6	5.7	6.0	6.5	6.8	6.8	6.8

Table 1362: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

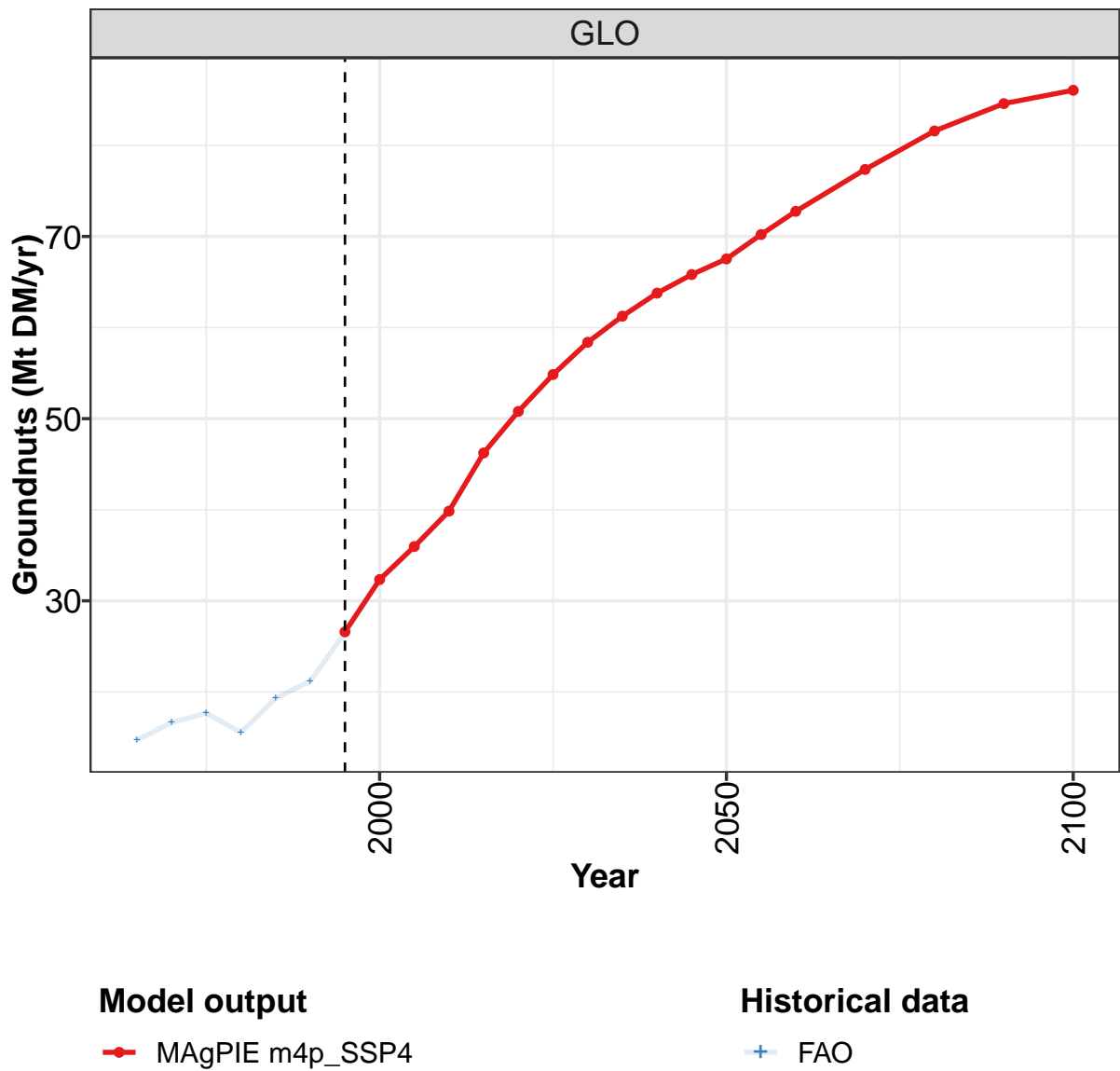
	2050	2055	2060	2070	2080	2090	2100
GLO	60.4	60.6	60.7	59.8	58.1	56.5	54.1
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	14.6	13.9	13.2	11.6	11.7	10.3	9.0
EUR	0.5	0.5	0.6	0.6	0.6	0.6	0.6
IND	13.3	13.4	13.5	12.8	11.7	10.5	9.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	5.2	5.3	5.3	5.3	5.3	5.3	5.3
MEA	1.2	1.2	1.3	1.3	1.3	1.3	1.4
NEU	1.4	1.4	1.4	1.4	1.3	1.3	1.2
OAS	10.8	11.0	11.1	11.6	10.1	10.1	9.7
REF	2.5	2.5	2.4	2.3	2.2	2.3	2.4
SSA	3.7	4.1	4.6	5.8	7.0	8.0	8.8
USA	6.7	6.7	6.6	6.5	6.2	6.2	5.9

Table 1363: MAgPIE m4p\_SSP4 — 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



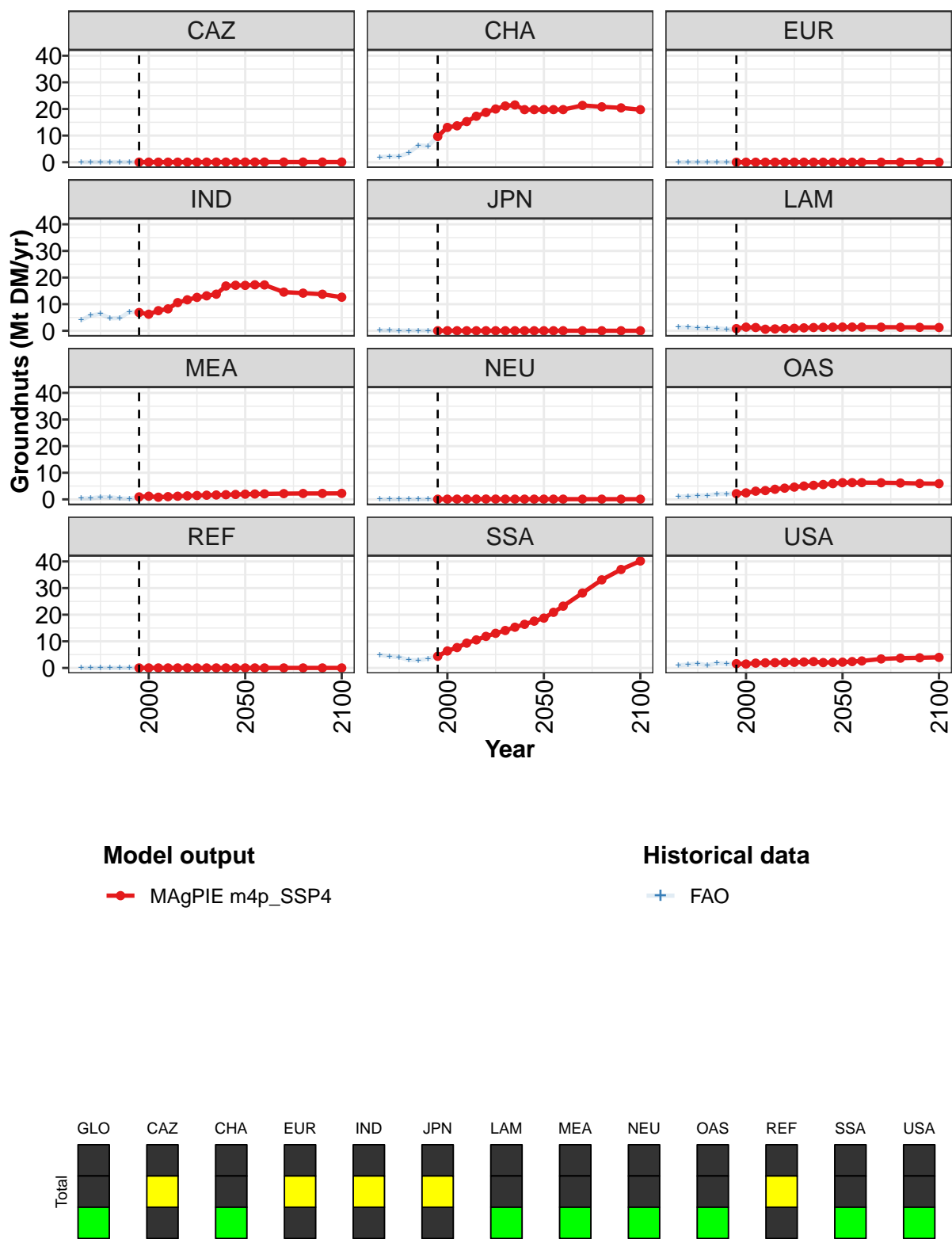


Figure 343: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Groundnuts (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26.6	32.3	36.0	39.8	46.2	50.8	54.8	58.4	61.3	63.8	65.8
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
CHA	9.7	13.1	13.7	15.3	17.3	18.7	20.0	21.1	21.5	19.7	19.8
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	11.6	12.5	13.1	13.8	16.8	17.1
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	1.1	1.2	1.3	1.4
MEA	0.9	1.2	0.8	1.0	1.2	1.3	1.5	1.6	1.6	1.7	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	2.2	2.4	3.1	3.3	3.8	4.2	4.6	5.0	5.3	5.6	5.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	4.4	6.4	7.6	9.3	10.5	11.9	13.0	14.1	15.3	16.4	17.6
USA	1.6	1.5	1.8	1.9	2.0	2.0	2.1	2.2	2.4	2.0	2.1

Table 1365: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

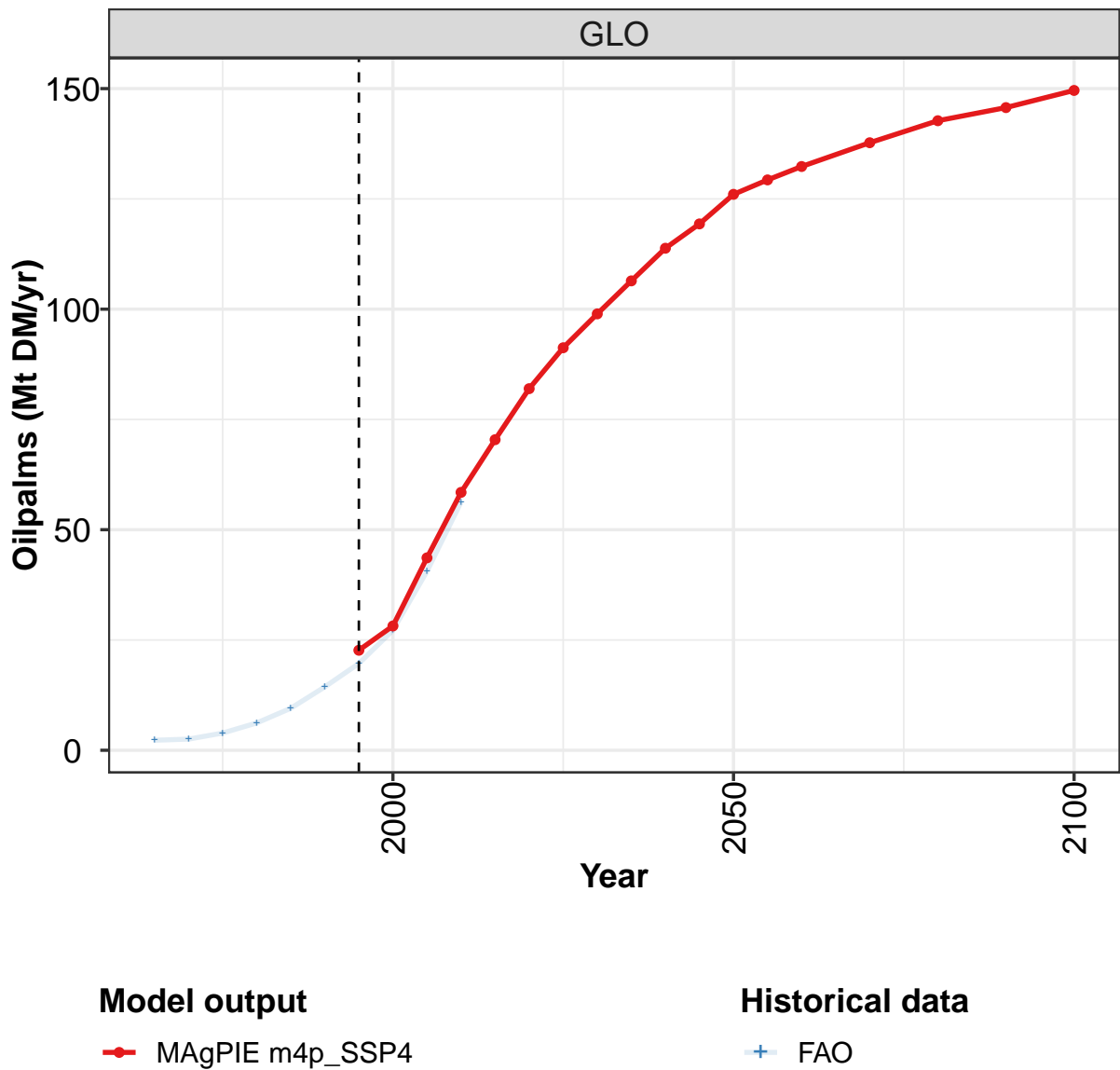
	2050	2055	2060	2070	2080	2090	2100
GLO	67.5	70.2	72.8	77.4	81.6	84.6	86.1
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	19.8	19.8	19.8	21.3	20.8	20.4	19.8
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	17.1	17.3	17.2	14.5	14.1	13.7	12.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	1.4	1.4	1.4	1.3	1.3	1.2
MEA	2.0	2.0	2.1	2.2	2.2	2.2	2.3
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	6.3	6.3	6.3	6.2	6.1	6.0	5.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	18.7	20.9	23.2	28.1	33.1	37.0	40.2
USA	2.2	2.4	2.6	3.4	3.7	3.8	4.0

Table 1366: MAgPIE m4p\_SSP4 — 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



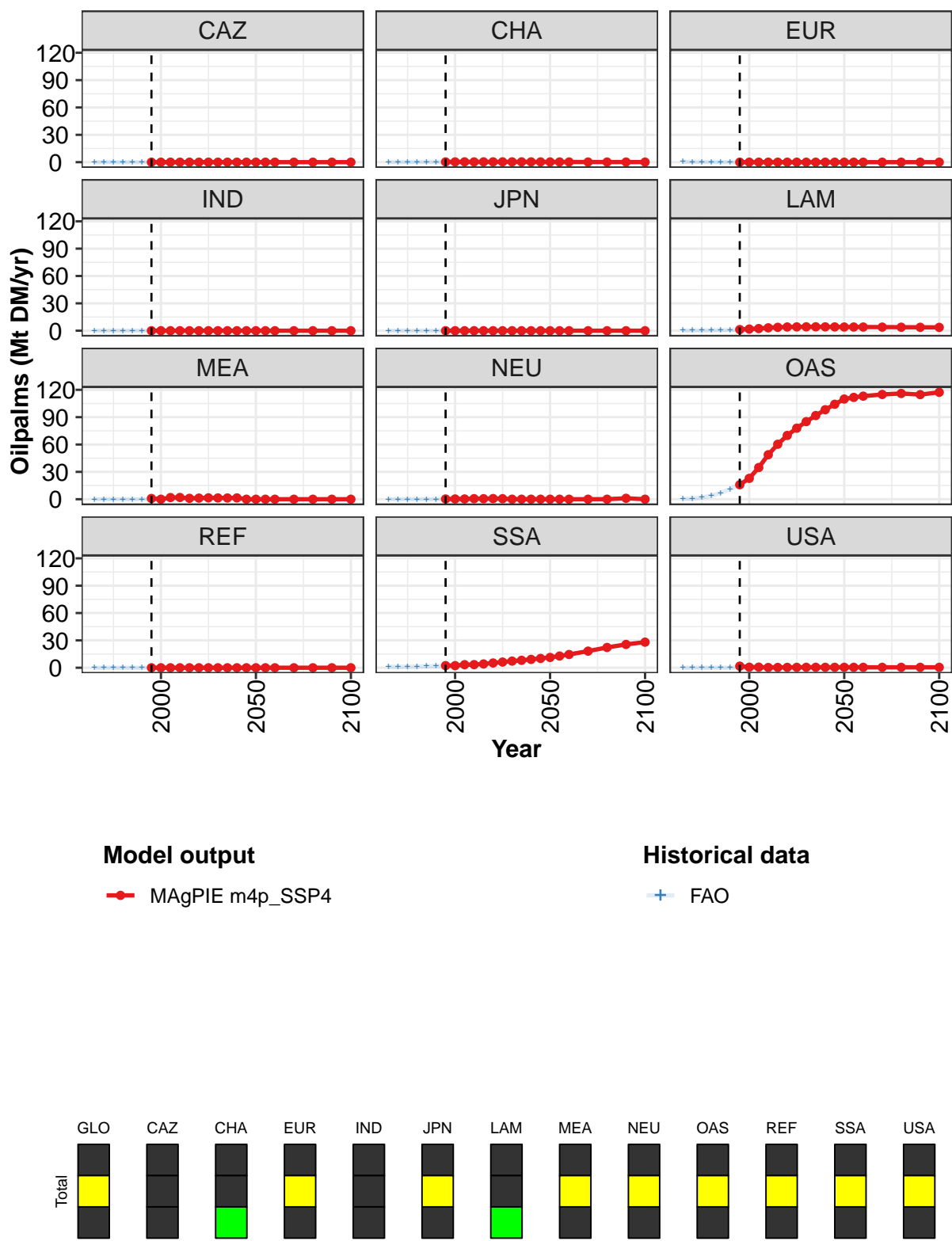


Figure 344: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Oilpalms (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	23	28	44	58	70	82	91	99	106	114	119
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	1	2	1	1	1	0
NEU	0	0	0	1	1	1	1	0	0	0	0
OAS	16	23	35	49	60	70	78	85	92	98	104
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	2	2	3	3	4	5	6	7	8	9	10
USA	2	1	1	0	0	0	0	0	0	0	0

Table 1368: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Oilpalms (Mt DM/yr) [PART 1/2]

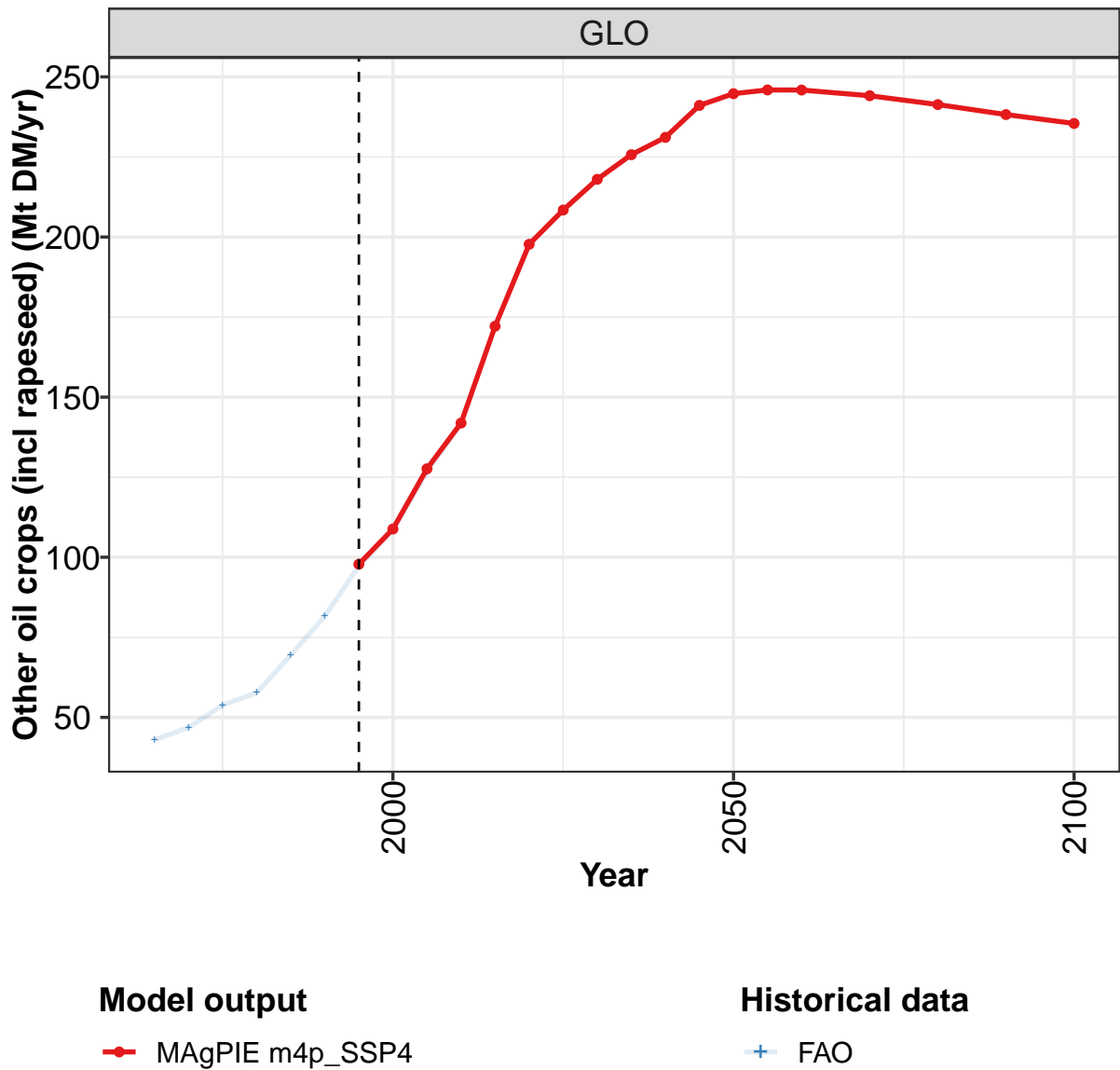
	2050	2055	2060	2070	2080	2090	2100
GLO	126	129	132	138	143	146	150
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	4	4	4	4	4	4	4
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	1	0
OAS	110	112	113	115	116	115	117
REF	0	0	0	0	0	0	0
SSA	11	13	15	18	22	26	28
USA	0	0	0	0	0	0	0

Table 1369: MAgPIE m4p\_SSP4 — 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)



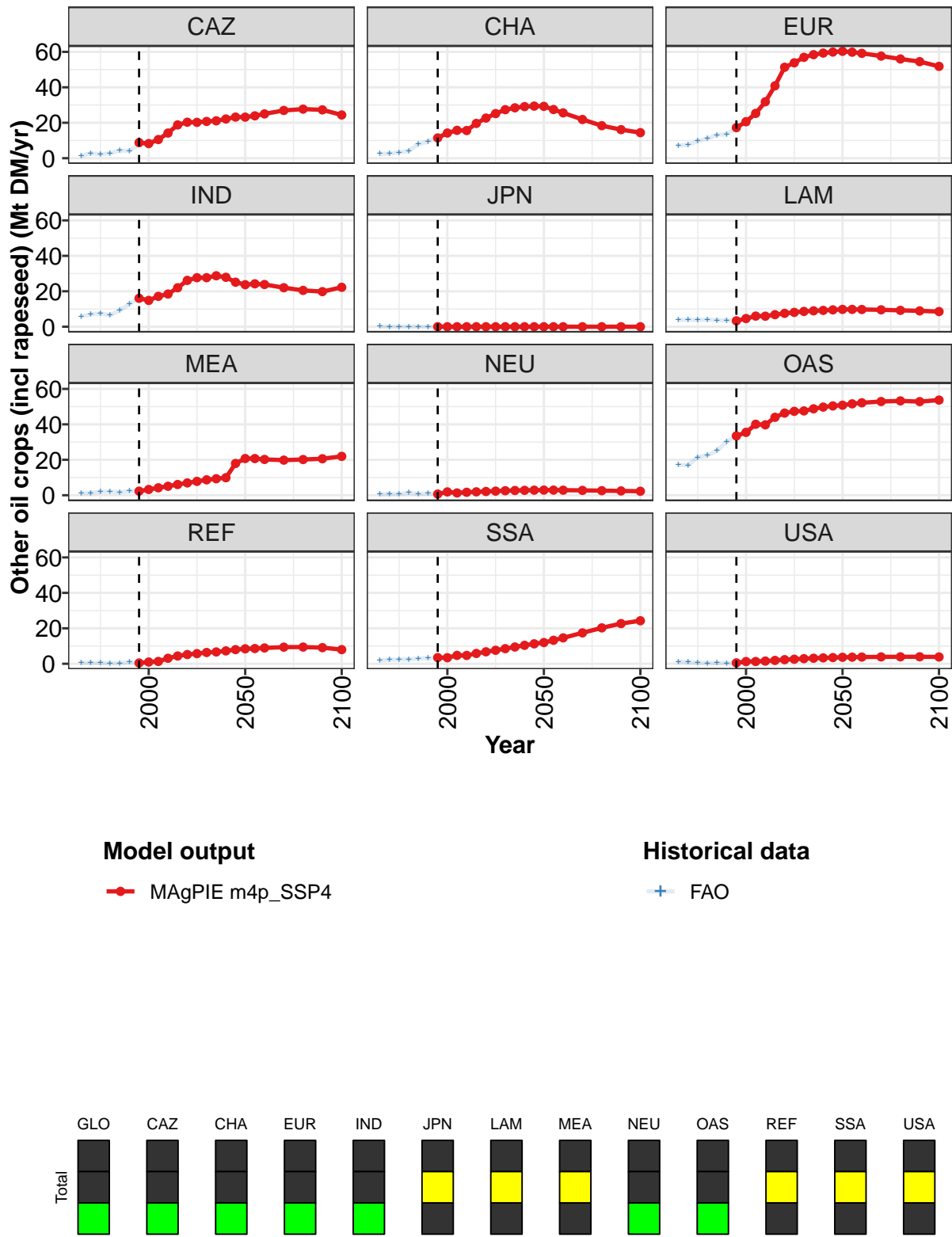


Figure 345: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	98	109	128	142	172	198	208	218	226	231	241
CAZ	9	8	11	14	19	20	20	21	21	22	23
CHA	11	14	16	16	20	23	25	27	28	29	29
EUR	17	21	25	32	41	51	54	57	58	59	60
IND	16	15	17	18	22	26	28	28	29	28	25
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	3	5	6	6	7	8	8	9	9	9	10
MEA	2	3	4	5	6	7	8	9	9	10	18
NEU	1	2	1	2	2	2	2	3	3	3	3
OAS	33	35	40	40	44	46	47	48	49	50	50
REF	0	1	1	3	4	5	6	6	7	7	8
SSA	3	3	5	5	6	7	8	9	9	10	11
USA	1	1	1	2	2	2	3	3	3	3	3

Table 1371: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)  
[PART 1/2]

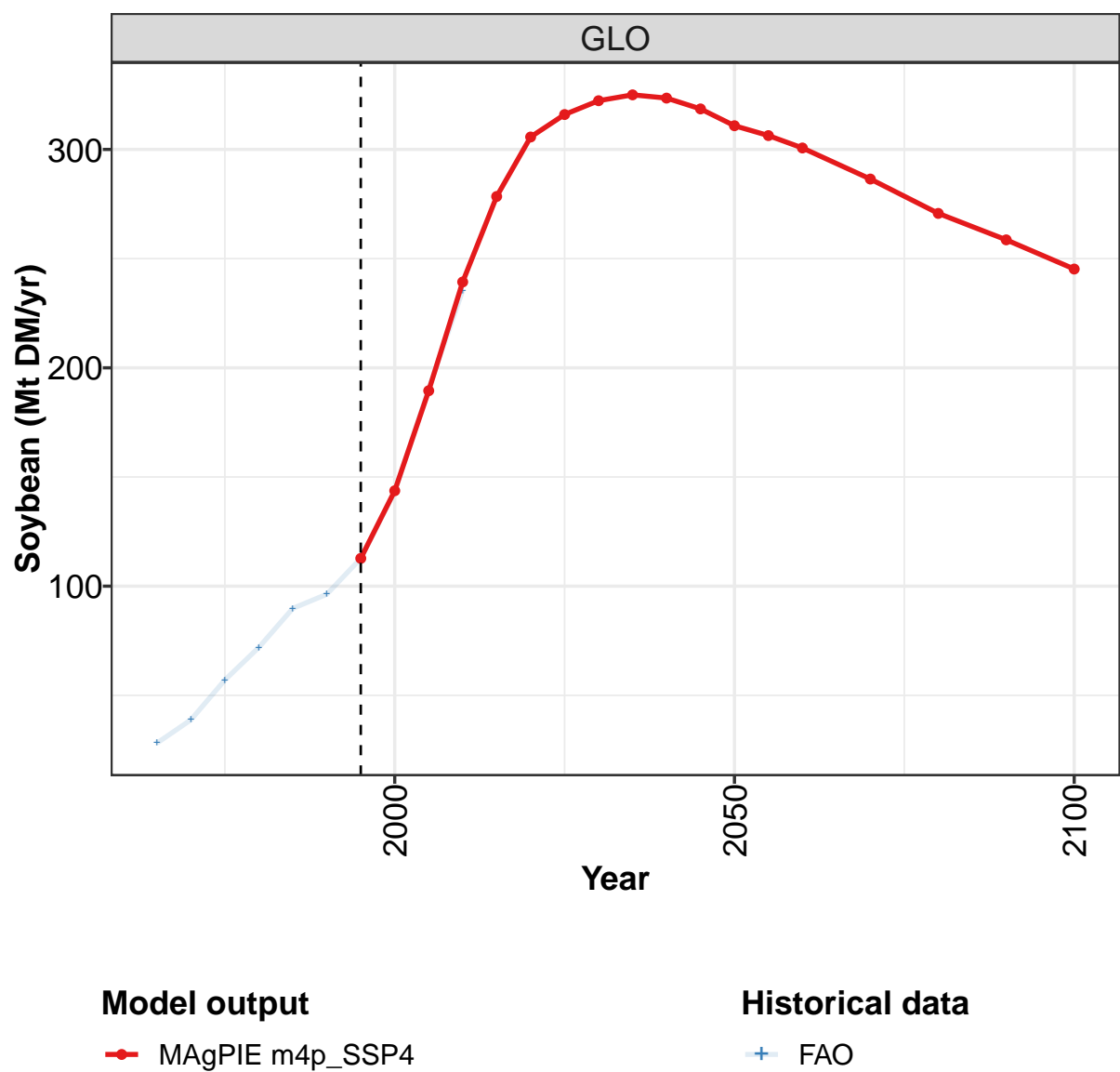
	2050	2055	2060	2070	2080	2090	2100
GLO	245	246	246	244	241	238	235
CAZ	23	24	25	27	28	27	24
CHA	29	27	26	22	18	16	14
EUR	60	60	59	58	56	54	52
IND	24	24	24	22	21	20	22
JPN	0	0	0	0	0	0	0
LAM	10	10	10	10	9	9	9
MEA	21	21	20	20	20	21	22
NEU	3	3	3	3	3	2	2
OAS	51	52	52	53	53	53	54
REF	8	9	9	9	9	9	8
SSA	12	13	15	17	20	23	24
USA	4	4	4	4	4	4	4

Table 1372: MAgPIE m4p\_SSP4 — 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





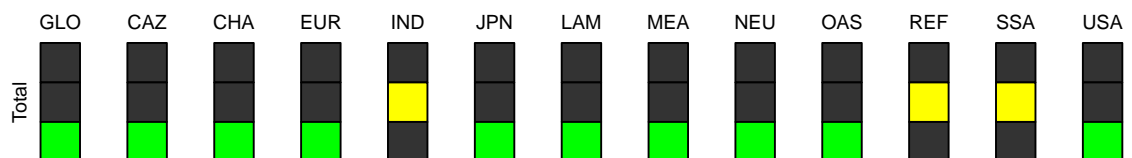
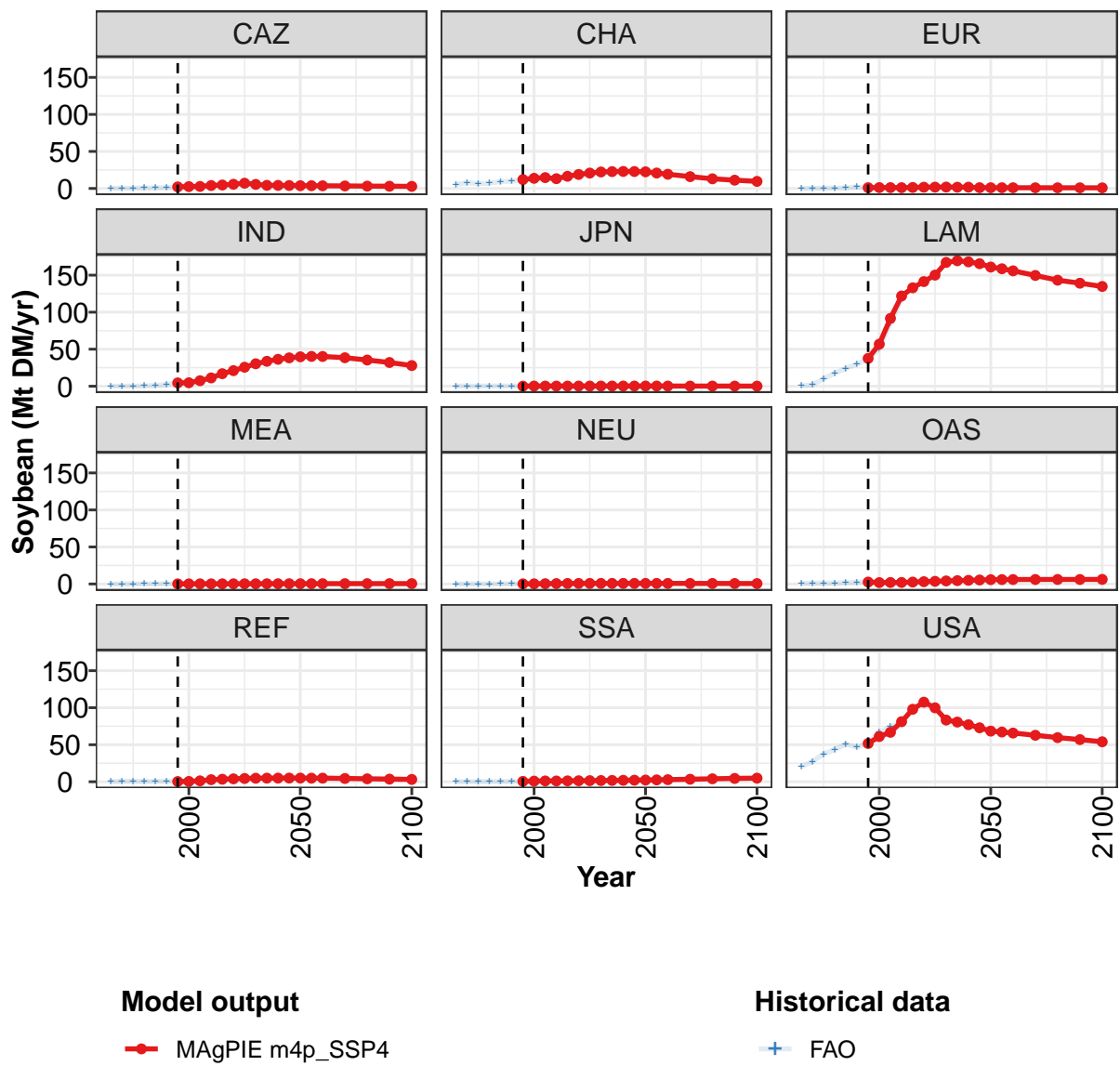


Figure 346: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Soybean (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	113	144	190	239	278	306	316	322	325	324	319
CAZ	2	3	3	4	5	6	7	5	4	4	4
CHA	12	14	15	13	16	19	21	22	23	23	23
EUR	1	1	1	1	1	2	2	2	2	2	1
IND	4	5	7	11	17	21	26	30	34	36	38
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	38	57	92	122	133	141	150	167	169	168	166
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	5	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	2
USA	52	61	67	81	98	107	100	83	81	77	73

Table 1374: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Soybean (Mt DM/yr) [PART 1/2]

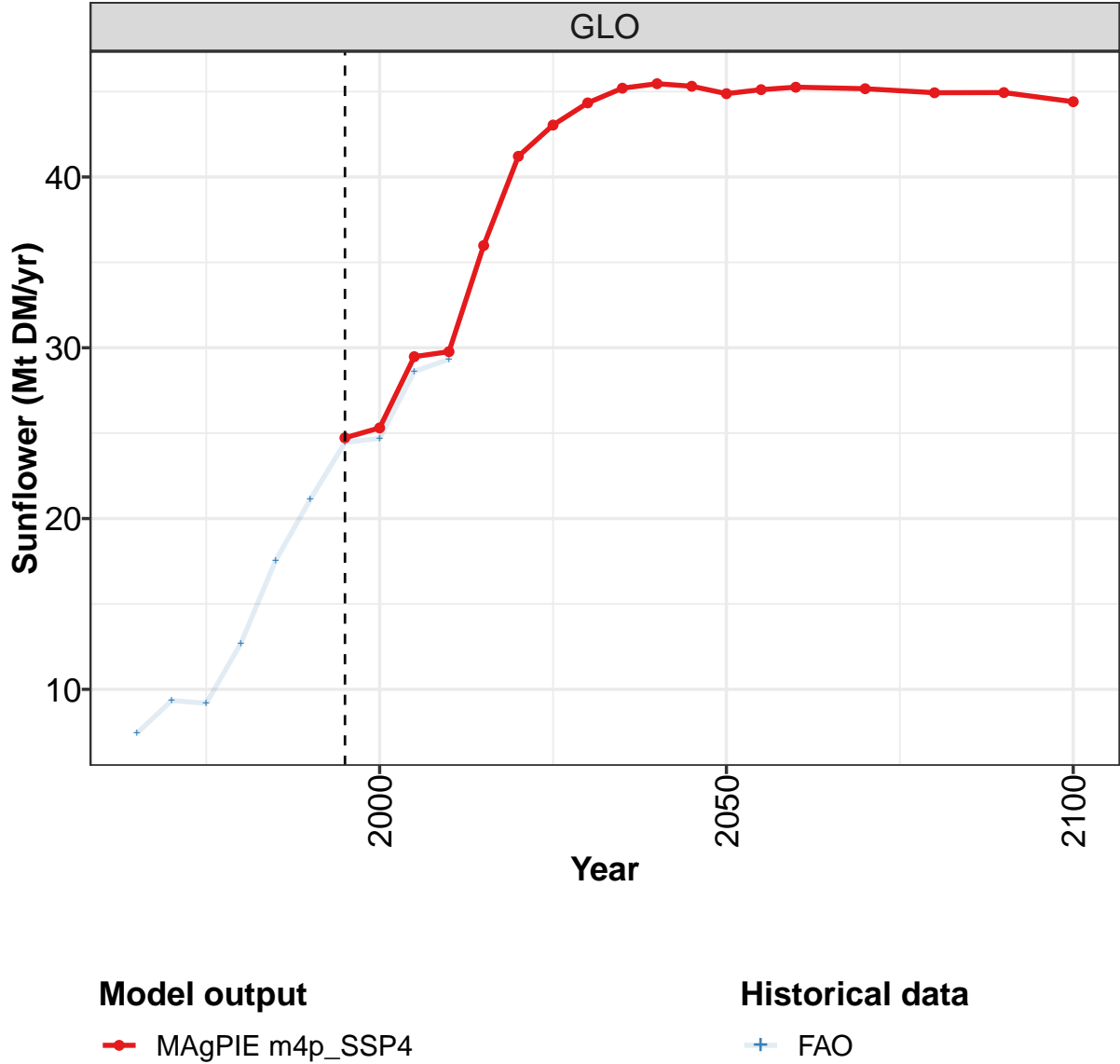
	2050	2055	2060	2070	2080	2090	2100
GLO	311	306	301	286	271	259	245
CAZ	4	4	4	3	3	3	3
CHA	22	21	19	16	13	11	10
EUR	1	1	1	1	1	1	1
IND	40	40	40	38	35	32	28
JPN	0	0	0	0	0	0	0
LAM	161	159	156	150	143	139	135
MEA	0	0	0	0	0	0	0
NEU	1	1	1	1	1	1	1
OAS	6	6	6	6	6	6	6
REF	5	5	5	4	4	4	3
SSA	2	3	3	3	4	4	5
USA	68	67	66	63	60	57	54

Table 1375: MAgPIE m4p\_SSP4 — 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



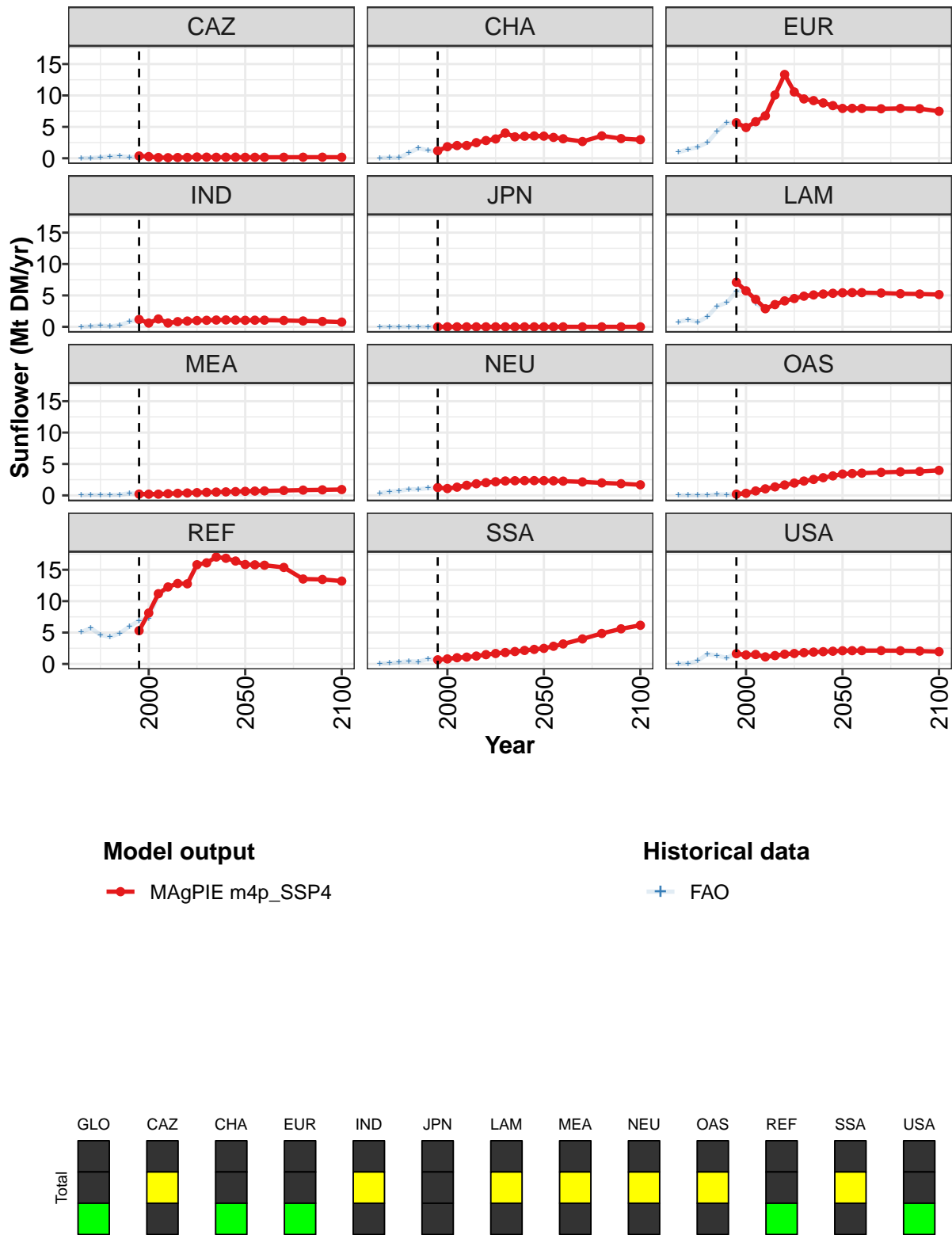


Figure 347: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Sunflower (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	24.7	25.3	29.5	29.8	36.0	41.2	43.0	44.3	45.2	45.5	45.3
CAZ	0.4	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
CHA	1.2	1.8	2.0	2.0	2.5	2.8	3.1	4.0	3.4	3.5	3.5
EUR	5.7	4.9	5.8	6.8	10.1	13.3	10.6	9.4	9.2	8.8	8.4
IND	1.2	0.6	1.3	0.6	0.8	0.9	1.0	1.0	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	3.5	4.1	4.5	4.9	5.1	5.2	5.3
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	1.8	2.0	2.2	2.3	2.3	2.3	2.4
OAS	0.2	0.3	0.7	1.0	1.4	1.7	2.0	2.3	2.5	2.8	3.1
REF	5.3	8.1	11.2	12.3	12.8	12.8	15.8	16.1	17.0	16.8	16.4
SSA	0.7	0.8	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.3
USA	1.6	1.4	1.5	1.1	1.3	1.5	1.7	1.8	1.9	2.0	2.0

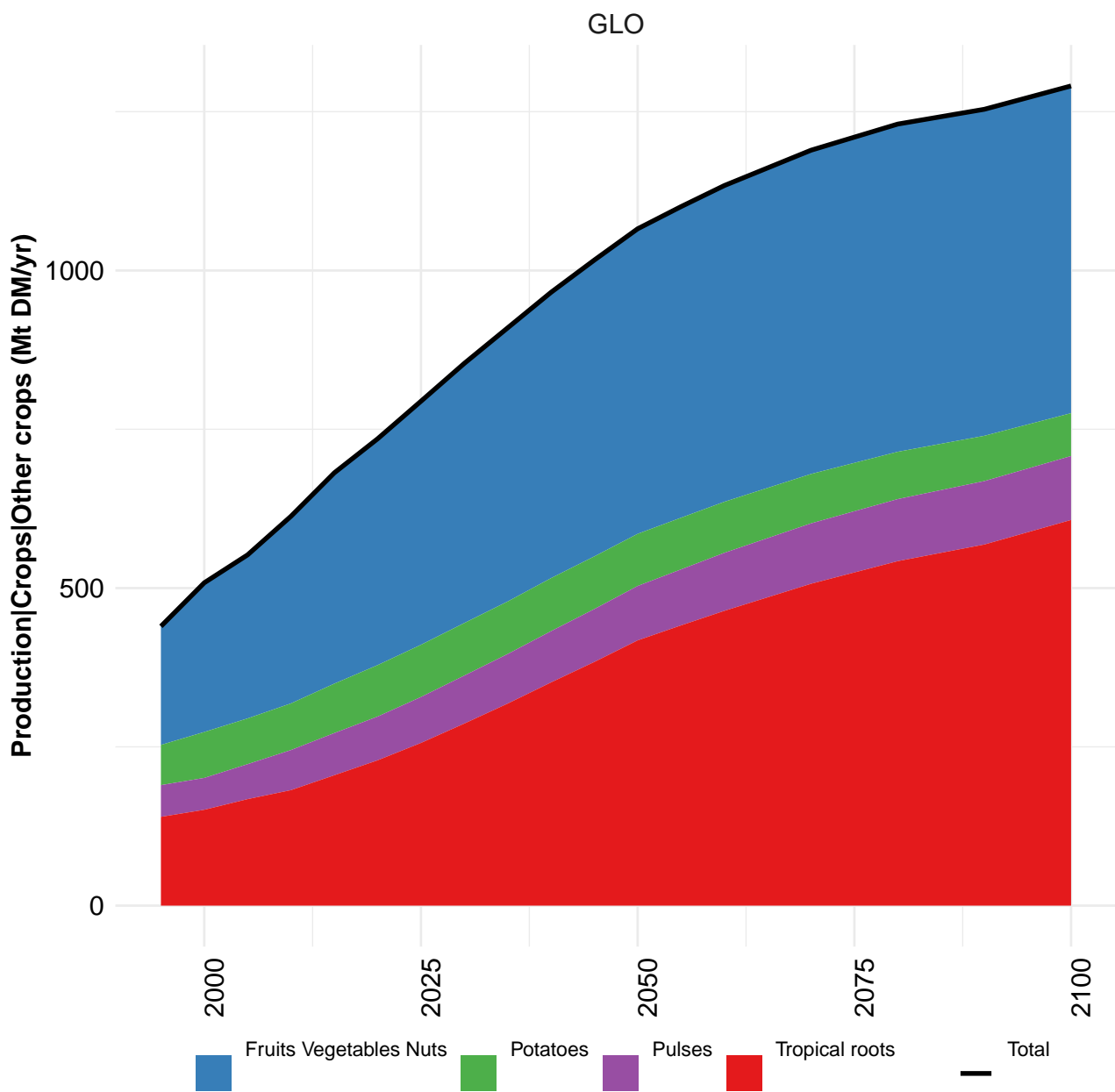
Table 1377: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

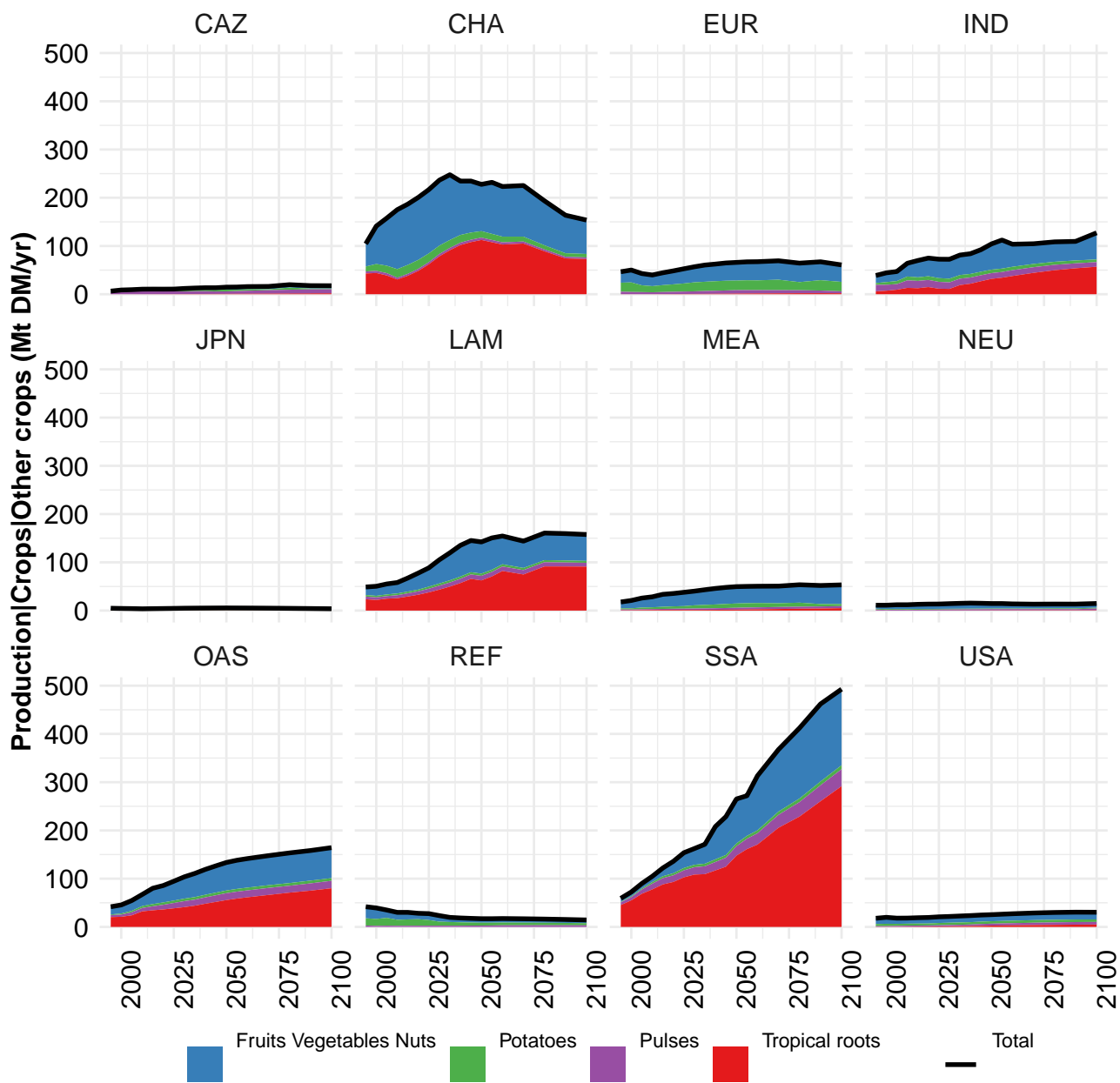
	2050	2055	2060	2070	2080	2090	2100
GLO	44.9	45.1	45.3	45.2	44.9	44.9	44.4
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.2
CHA	3.5	3.3	3.1	2.7	3.6	3.1	3.0
EUR	7.9	7.9	7.9	7.9	7.9	7.9	7.5
IND	1.0	1.1	1.1	1.0	0.9	0.9	0.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	5.4	5.4	5.4	5.4	5.3	5.2	5.1
MEA	0.6	0.7	0.7	0.8	0.8	0.9	0.9
NEU	2.3	2.3	2.3	2.1	2.0	1.9	1.7
OAS	3.4	3.5	3.5	3.7	3.7	3.8	4.0
REF	15.8	15.8	15.7	15.4	13.5	13.5	13.2
SSA	2.5	2.8	3.2	4.0	4.9	5.6	6.2
USA	2.1	2.1	2.1	2.1	2.1	2.1	2.0

Table 1378: MAgPIE m4p\_SSP4 — Production—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 2/2]

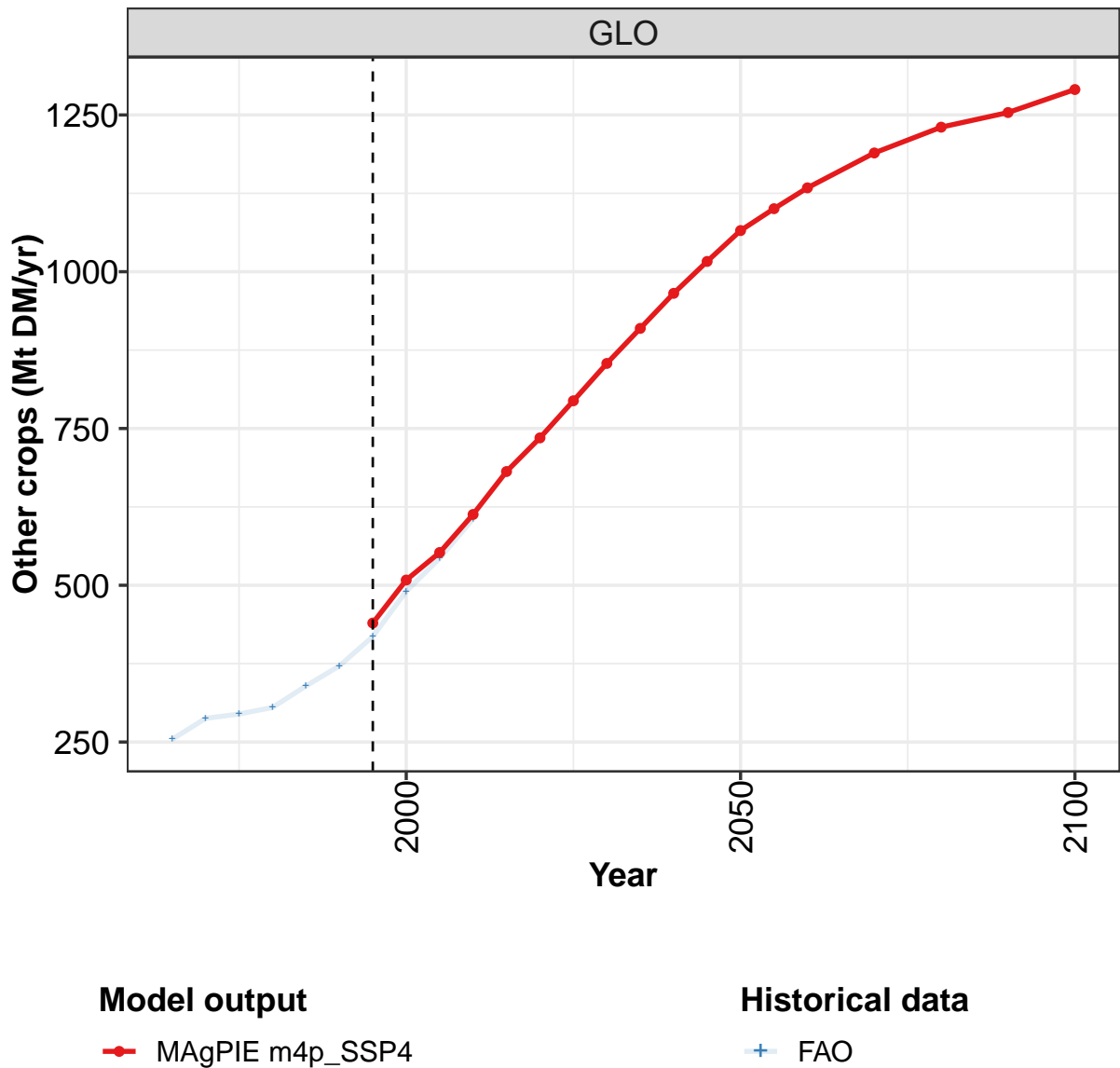
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	7.4	9.3	9.2	12.7	17.5	21.1	24.5	24.7	28.6	29.3
CAZ	0.0	0.0	0.1	0.3	0.3	0.2	0.2	0.3	0.1	0.1
CHA	0.1	0.1	0.1	0.8	1.6	1.2	1.2	1.8	1.8	2.1
EUR	1.0	1.4	1.8	2.5	4.3	5.7	5.6	4.9	5.7	6.6
IND	0.0	0.1	0.2	0.1	0.3	0.8	1.2	0.6	1.3	0.6
JPN	0.0	0.0	0.0	0.0	0.0	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)





44.3 Other crops





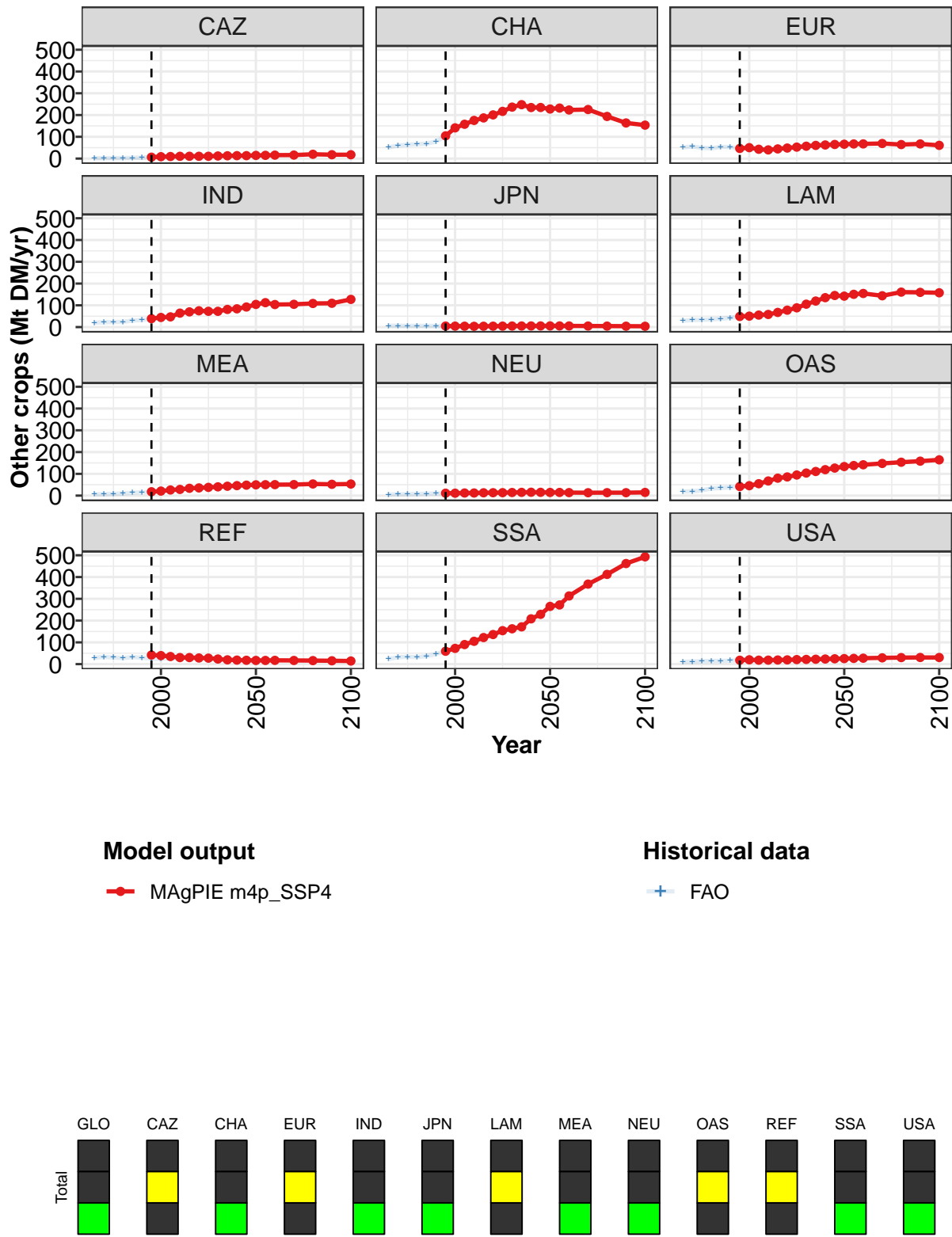


Figure 348: MAgPIE m4p\_SSP4 — Production—Crops—Other crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	440	508	552	613	681	735	794	854	910	966	1016
CAZ	6	9	9	11	11	11	11	12	13	13	13
CHA	104	141	158	175	187	201	217	236	248	235	235
EUR	47	50	43	40	44	48	53	57	60	62	65
IND	39	44	47	64	70	75	73	72	81	84	92
JPN	5	4	4	4	4	4	5	5	5	5	5
LAM	49	50	55	58	67	78	89	105	120	135	145
MEA	18	21	26	29	34	35	38	40	43	46	48
NEU	11	11	12	12	13	13	14	14	15	16	15
OAS	42	46	55	67	80	86	95	104	111	119	127
REF	42	39	35	30	30	28	28	23	20	19	18
SSA	59	72	90	105	122	136	154	162	171	208	229
USA	18	20	18	18	19	20	21	22	23	23	25

Table 1380: MAgPIE m4p\_SSP4 — Production—Crops—Other crops (Mt DM/yr) [PART 1/2]

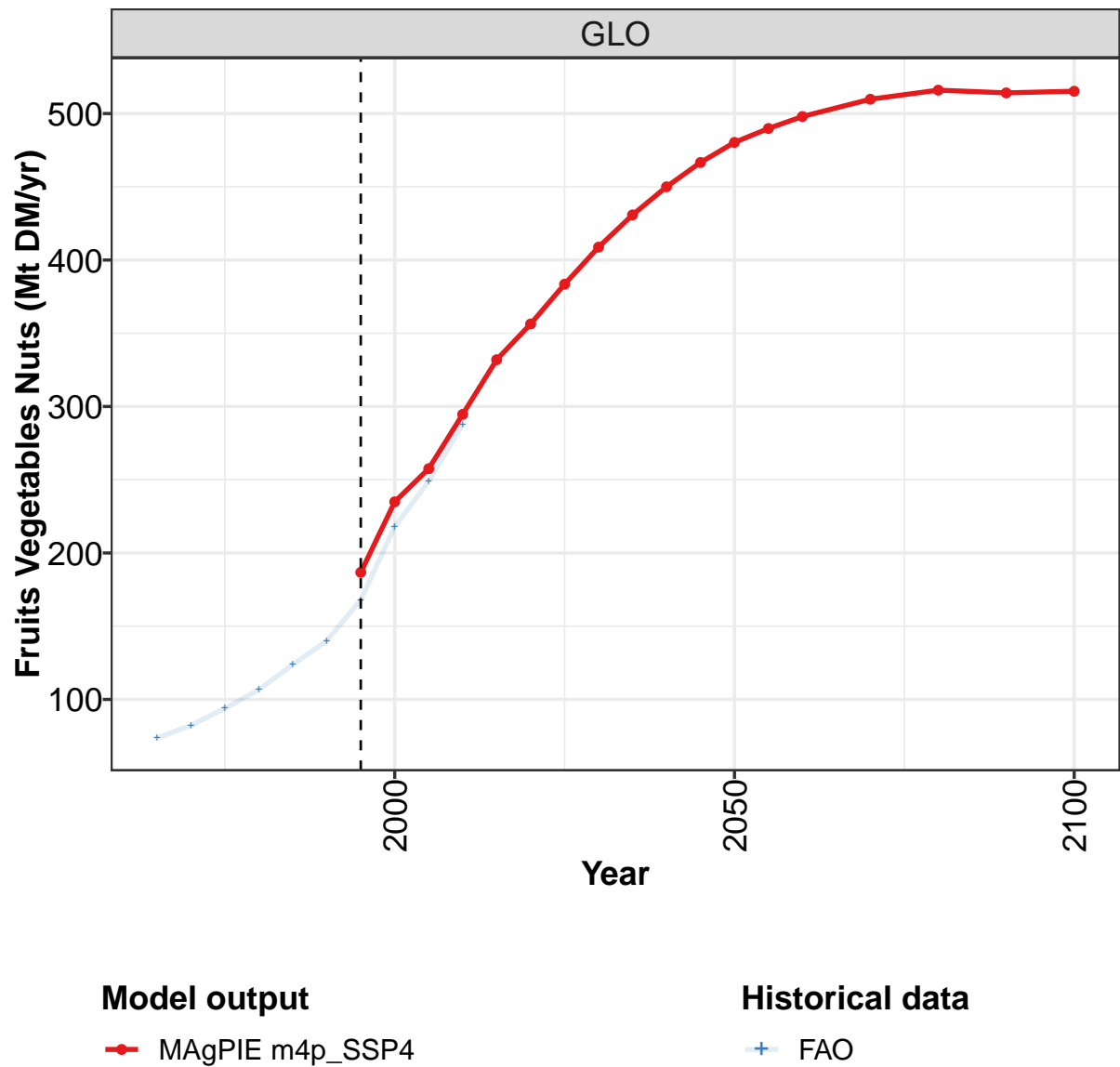
	2050	2055	2060	2070	2080	2090	2100
GLO	1066	1101	1134	1189	1231	1254	1291
CAZ	15	15	16	16	20	18	18
CHA	228	232	223	225	194	164	154
EUR	66	67	67	69	64	67	61
IND	104	112	104	105	109	110	127
JPN	5	5	5	5	5	4	4
LAM	142	151	155	144	161	160	158
MEA	50	50	50	51	54	52	53
NEU	15	15	14	13	14	13	15
OAS	134	138	142	148	153	158	164
REF	17	17	17	17	16	15	14
SSA	265	272	313	368	412	462	493
USA	25	26	27	29	30	31	30

Table 1381: MAgPIE m4p\_SSP4 — 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



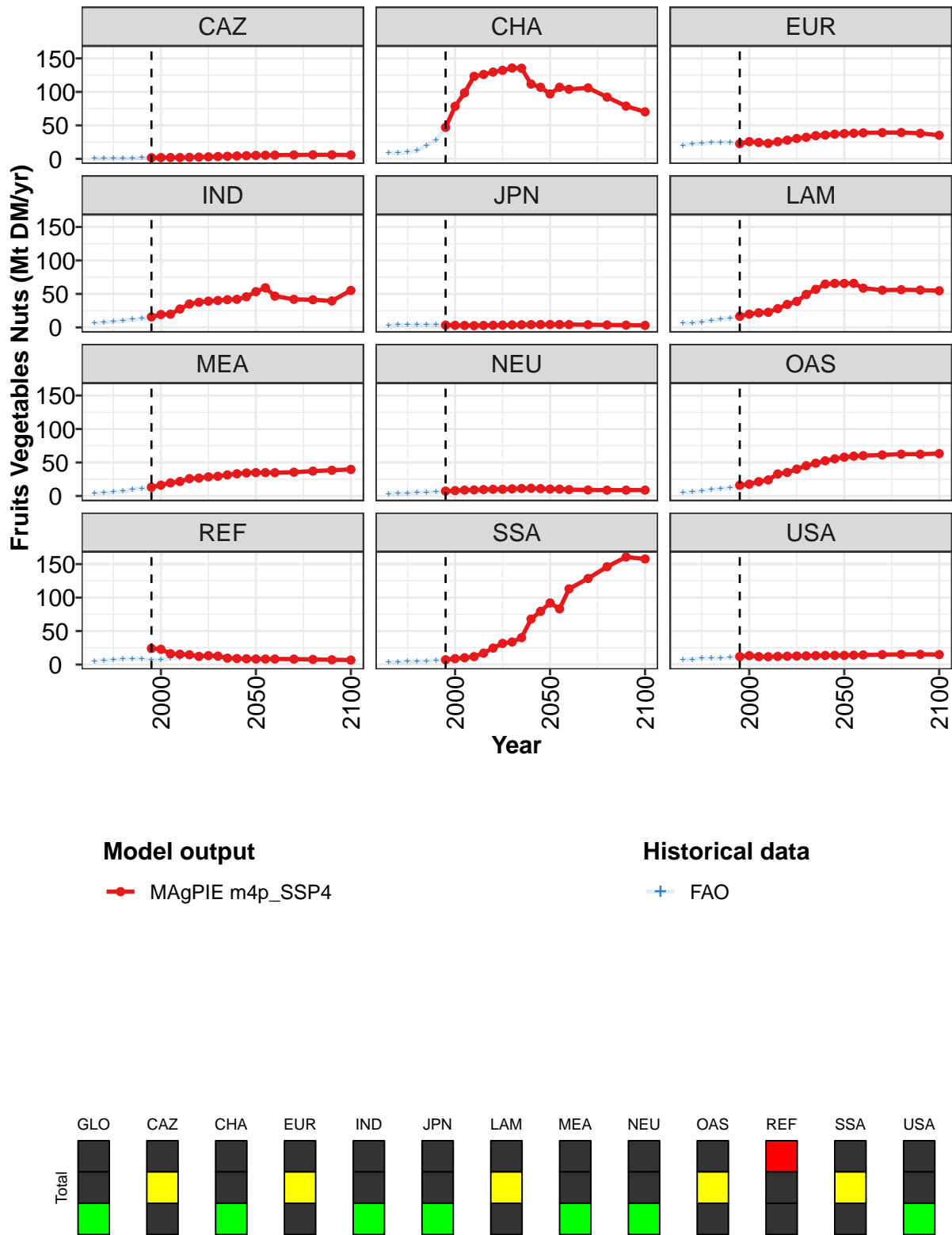


Figure 349: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	187	235	258	295	332	356	383	409	431	450	467
CAZ	2	2	2	2	2	3	3	3	4	4	5
CHA	47	78	99	123	126	130	132	136	135	112	107
EUR	23	26	24	23	26	28	30	32	35	35	37
IND	16	19	20	27	35	38	39	40	41	42	46
JPN	3	3	3	3	3	3	3	4	4	4	4
LAM	17	20	22	23	28	34	39	49	57	65	66
MEA	13	16	20	22	26	27	29	29	31	33	34
NEU	7	8	9	9	10	10	10	11	11	12	11
OAS	16	18	21	24	33	35	40	45	49	53	55
REF	24	23	16	15	15	12	13	13	10	9	9
SSA	7	9	10	12	17	25	32	34	40	68	79
USA	12	13	12	12	12	12	13	13	13	14	14

Table 1383: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)  
[PART 1/2]

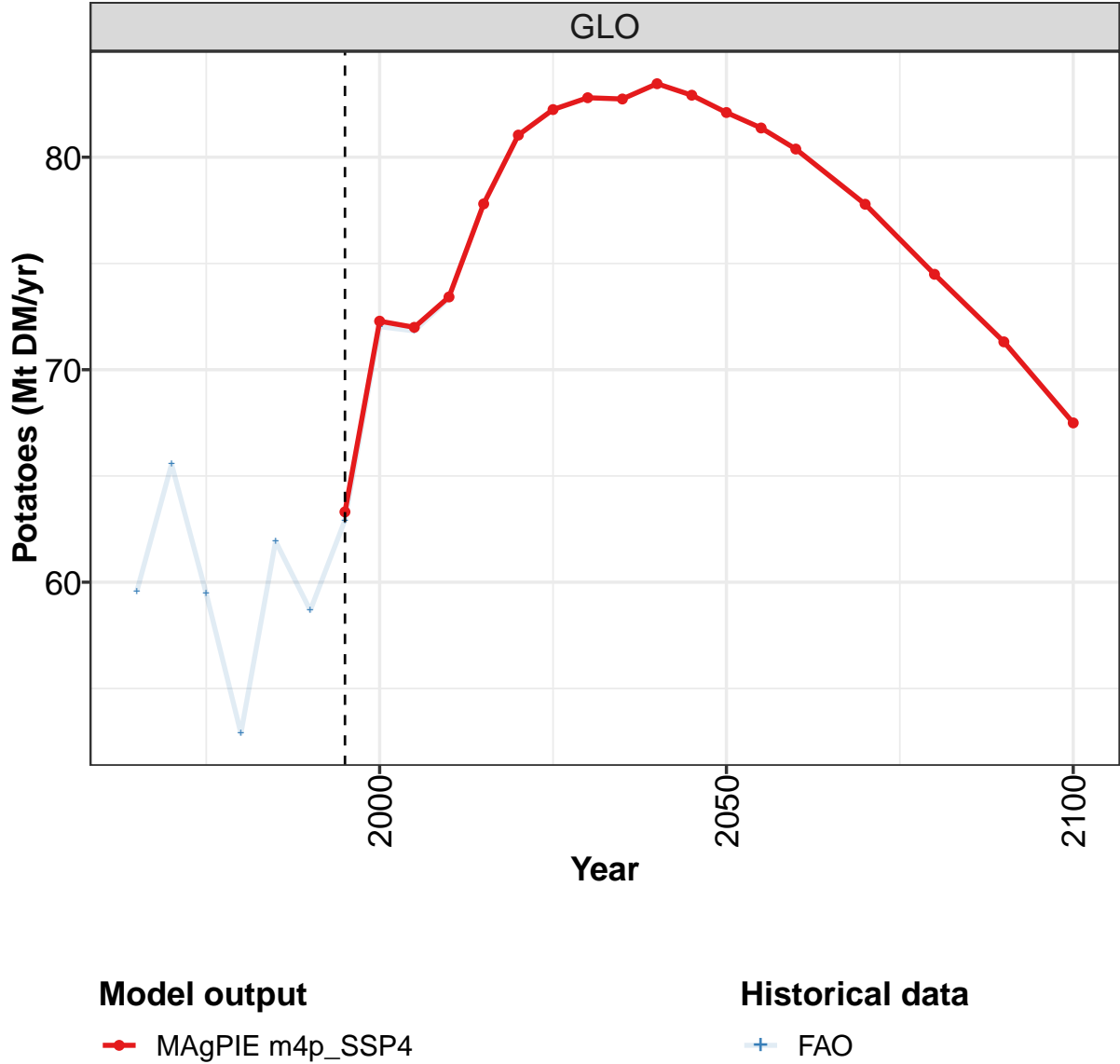
	2050	2055	2060	2070	2080	2090	2100
GLO	480	490	498	510	516	514	515
CAZ	5	5	6	6	6	6	6
CHA	97	107	104	106	92	79	70
EUR	38	38	39	39	39	38	35
IND	53	59	47	42	41	40	55
JPN	4	4	4	4	4	3	3
LAM	66	66	59	56	56	56	55
MEA	35	35	35	36	37	38	40
NEU	10	10	9	9	9	9	9
OAS	58	59	60	61	62	62	63
REF	8	8	8	8	8	7	7
SSA	92	83	113	128	146	161	158
USA	14	14	14	15	15	15	15

Table 1384: MAgPIE m4p\_SSP4 — 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



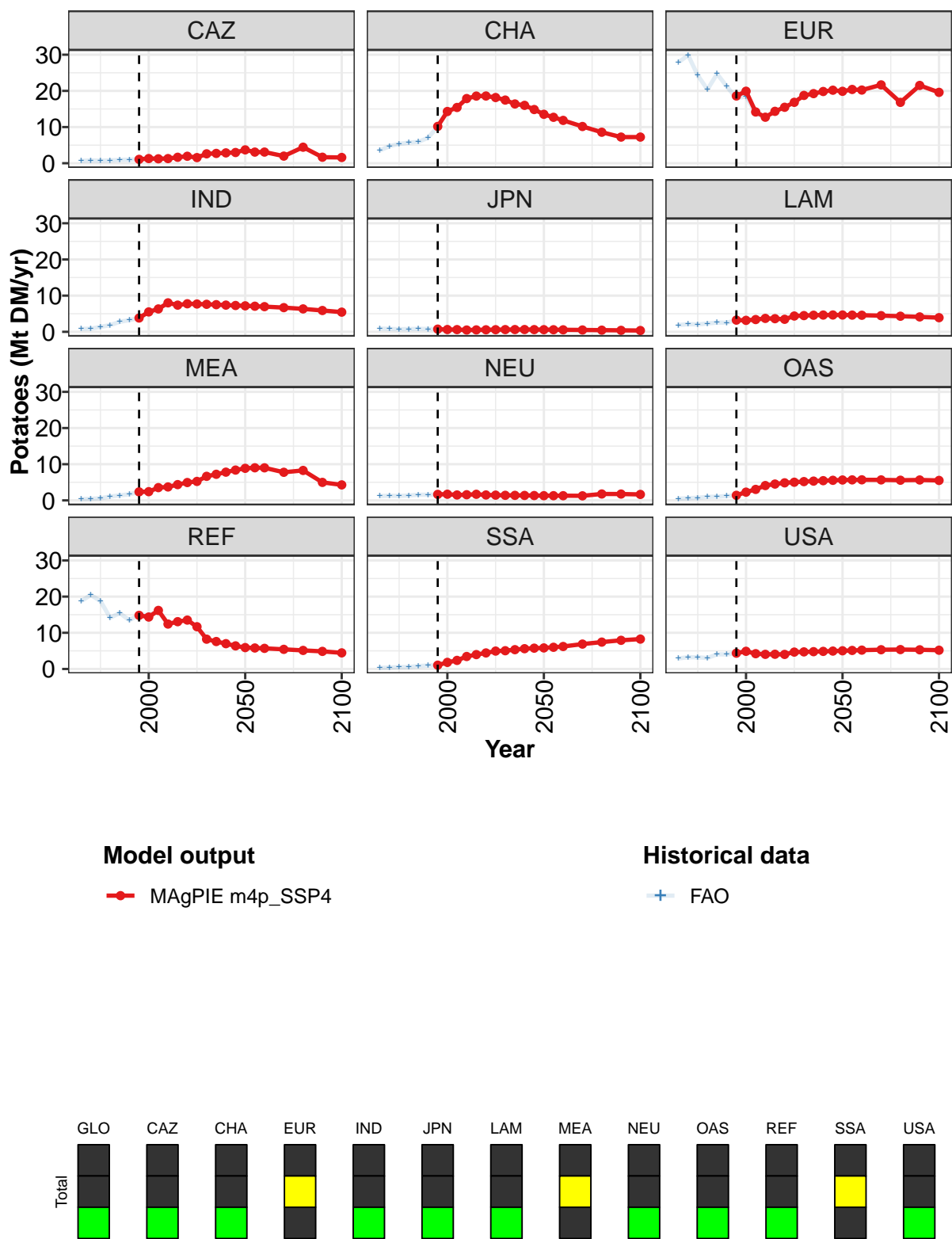


Figure 350: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	63.3	72.3	72.0	73.4	77.8	81.0	82.2	82.8	82.7	83.5	82.9
CAZ	1.1	1.3	1.2	1.3	1.7	1.9	1.6	2.6	2.7	2.9	3.0
CHA	10.2	14.3	15.4	17.9	18.6	18.6	18.2	17.5	16.4	16.0	14.8
EUR	18.6	19.9	14.2	12.7	14.4	15.5	16.8	18.7	19.3	19.8	20.2
IND	3.8	5.5	6.3	8.0	7.4	7.8	7.7	7.6	7.5	7.4	7.3
JPN	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
LAM	3.2	3.2	3.4	3.7	3.6	3.5	4.4	4.5	4.6	4.6	4.7
MEA	2.4	2.4	3.5	3.7	4.4	4.9	5.2	6.7	7.2	7.8	8.4
NEU	1.7	1.7	1.5	1.6	1.7	1.5	1.5	1.4	1.4	1.4	1.3
OAS	1.4	2.3	3.0	4.1	4.5	4.9	5.0	5.2	5.3	5.5	5.6
REF	14.8	14.4	16.2	12.4	13.1	13.5	11.7	8.2	7.6	7.0	6.4
SSA	1.0	1.8	2.4	3.5	4.0	4.4	4.9	5.0	5.3	5.6	5.8
USA	4.4	4.9	4.2	4.0	4.1	4.0	4.7	4.7	4.8	4.9	4.9

Table 1386: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	82.1	81.4	80.4	77.8	74.5	71.3	67.5
CAZ	3.7	3.1	3.1	2.0	4.4	1.7	1.6
CHA	13.5	12.7	11.8	10.2	8.6	7.2	7.2
EUR	19.9	20.4	20.2	21.7	16.8	21.5	19.6
IND	7.2	7.1	7.0	6.7	6.3	5.9	5.4
JPN	0.6	0.6	0.6	0.5	0.5	0.4	0.4
LAM	4.6	4.6	4.6	4.5	4.3	4.1	3.9
MEA	8.9	9.0	9.0	7.8	8.3	5.0	4.3
NEU	1.3	1.3	1.3	1.3	1.8	1.8	1.6
OAS	5.6	5.7	5.7	5.7	5.6	5.6	5.5
REF	5.9	5.8	5.7	5.4	5.1	4.9	4.5
SSA	5.8	6.0	6.2	6.9	7.4	7.9	8.3
USA	5.0	5.1	5.2	5.3	5.4	5.3	5.2

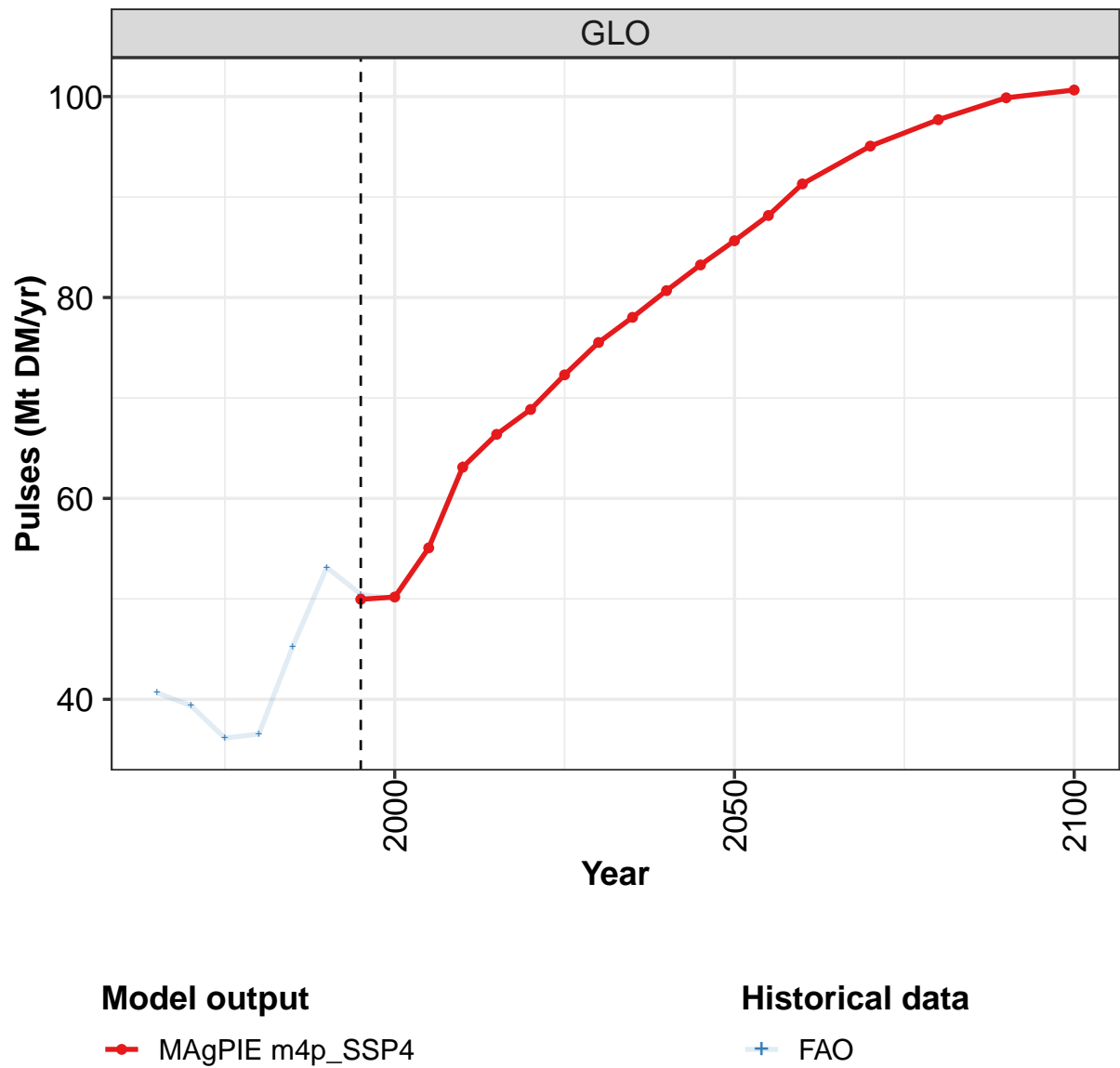
Table 1387: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Potatoes (Mt DM/yr) [PART 2/2]

	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



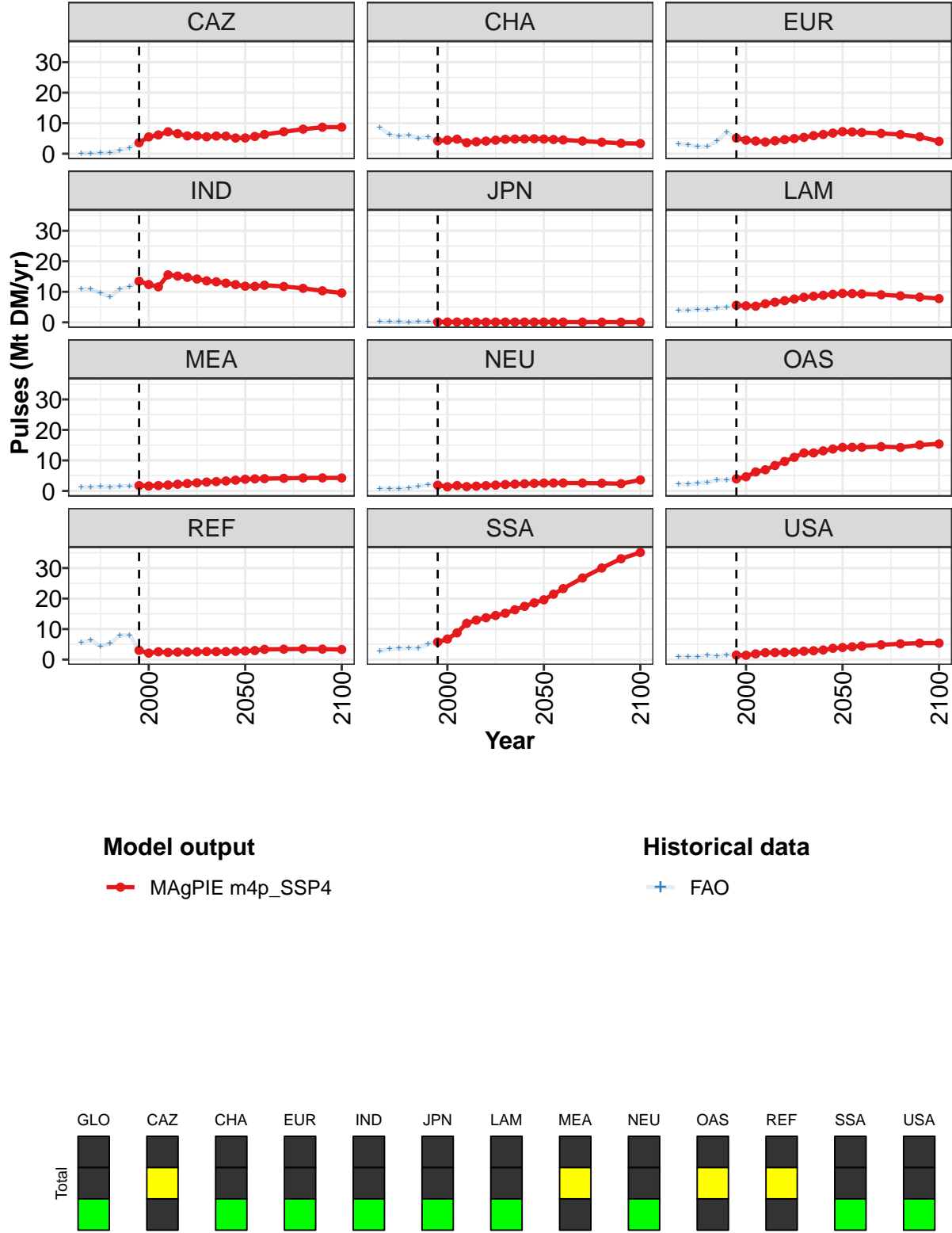


Figure 351: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Pulses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	50	50	55	63	66	69	72	76	78	81	83
CAZ	4	6	6	7	7	6	6	6	6	6	5
CHA	4	4	5	4	4	4	4	5	5	5	5
EUR	5	4	4	4	4	5	5	5	6	6	7
IND	13	12	12	16	15	15	14	14	13	13	12
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	5	5	6	7	7	8	8	9	9	9
MEA	2	2	2	2	2	2	3	3	3	3	4
NEU	2	1	2	1	2	2	2	2	2	2	2
OAS	4	5	6	7	8	10	11	12	12	13	14
REF	3	2	3	2	2	2	3	3	3	3	3
SSA	6	7	9	12	13	14	14	15	16	17	19
USA	1	1	2	2	2	2	2	3	3	3	4

Table 1389: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

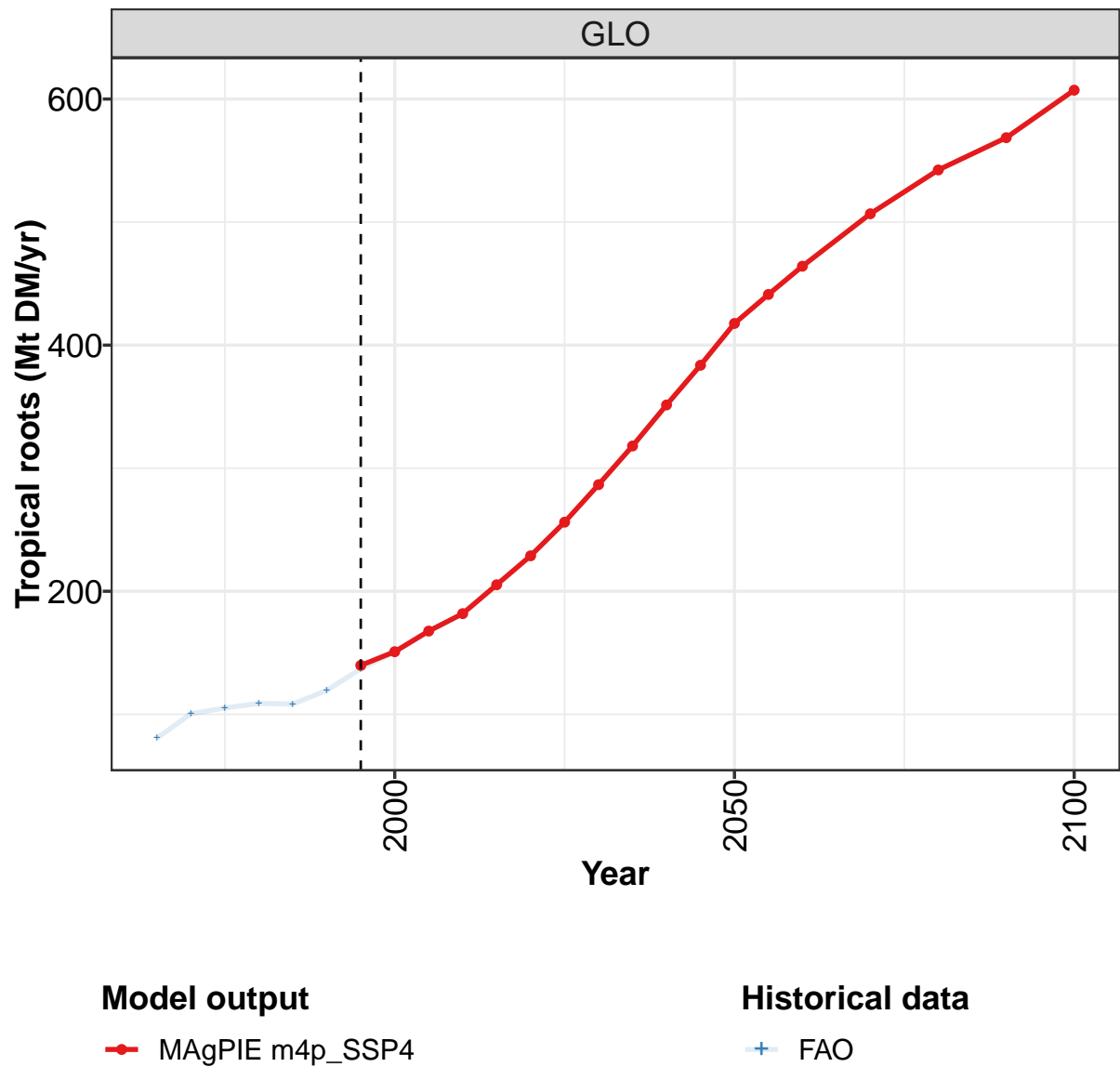
	2050	2055	2060	2070	2080	2090	2100
GLO	86	88	91	95	98	100	101
CAZ	5	6	6	7	8	9	9
CHA	5	5	5	4	4	3	3
EUR	7	7	7	7	6	6	4
IND	12	12	12	12	11	10	10
JPN	0	0	0	0	0	0	0
LAM	9	9	9	9	9	8	8
MEA	4	4	4	4	4	4	4
NEU	3	3	3	3	3	2	4
OAS	14	14	14	15	14	15	15
REF	3	3	3	3	3	3	3
SSA	20	21	23	27	30	33	35
USA	4	4	4	5	5	5	5

Table 1390: MAgPIE m4p\_SSP4 — 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



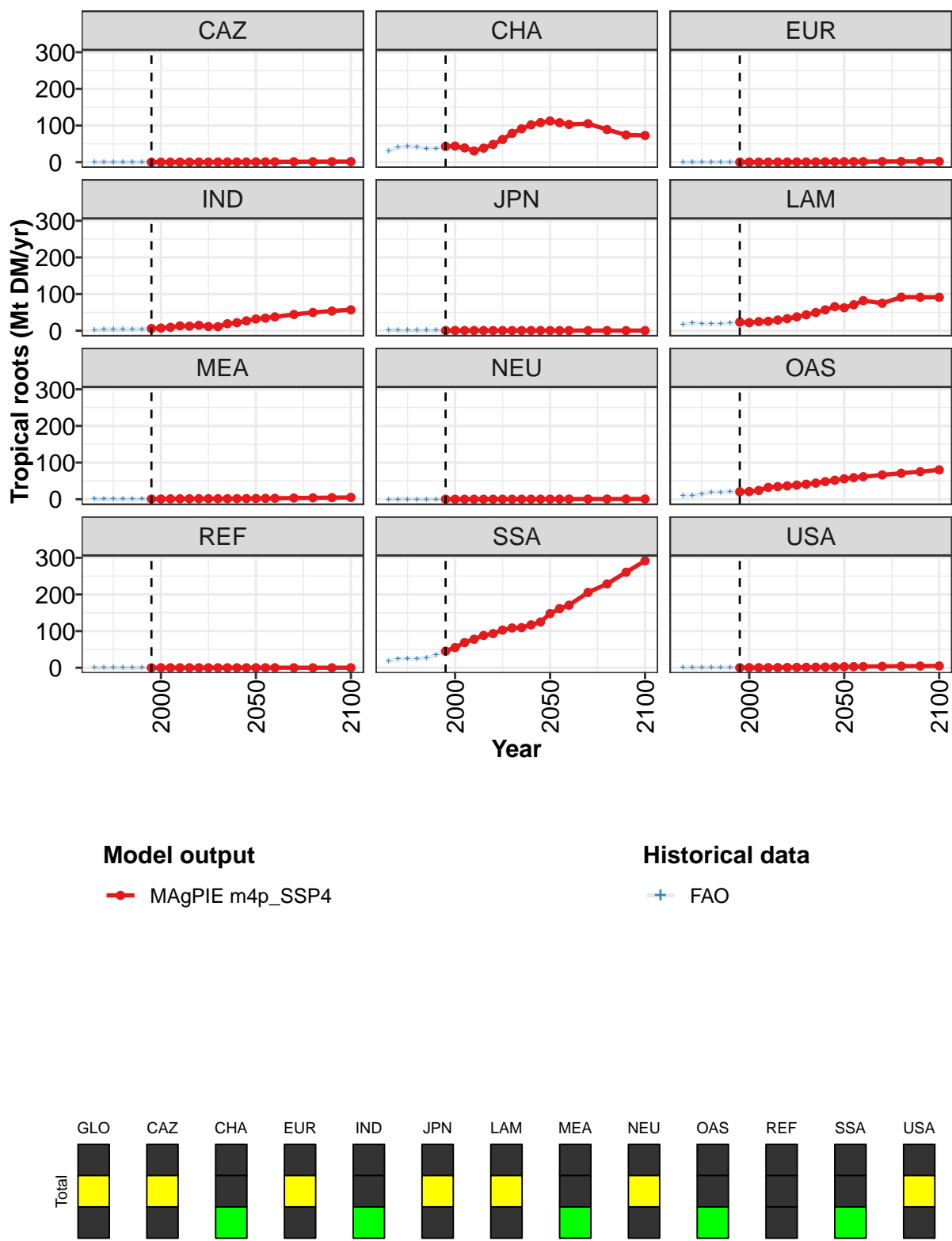


Figure 352: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Tropical roots (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	140	151	168	182	205	229	256	287	318	351	384
CAZ	0	0	0	0	0	0	0	0	0	1	1
CHA	43	44	39	31	38	48	62	79	91	102	108
EUR	0	0	0	0	0	0	0	1	1	1	1
IND	6	7	9	13	12	15	11	11	19	22	27
JPN	1	1	1	0	0	0	0	0	0	0	0
LAM	23	22	25	26	29	33	38	43	50	57	66
MEA	1	1	1	1	1	1	1	1	1	2	2
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	20	21	24	32	34	36	39	41	44	48	52
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	45	55	69	78	88	93	103	109	109	117	125
USA	0	0	0	0	1	1	1	1	2	2	2

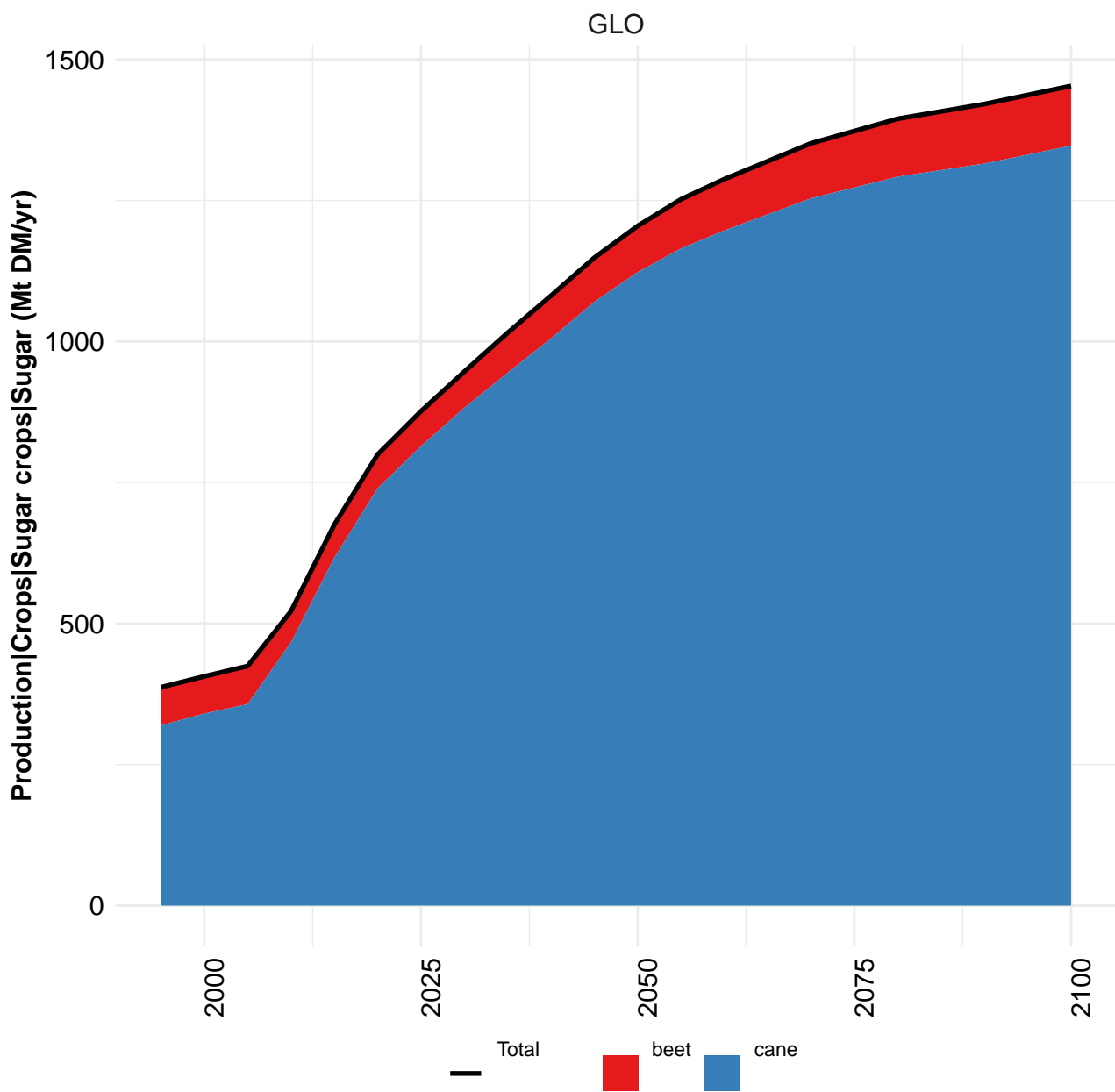
Table 1392: MAgPIE m4p\_SSP4 — Production—Crops—Other crops—Tropical roots (Mt DM/yr) [PART 1/2]

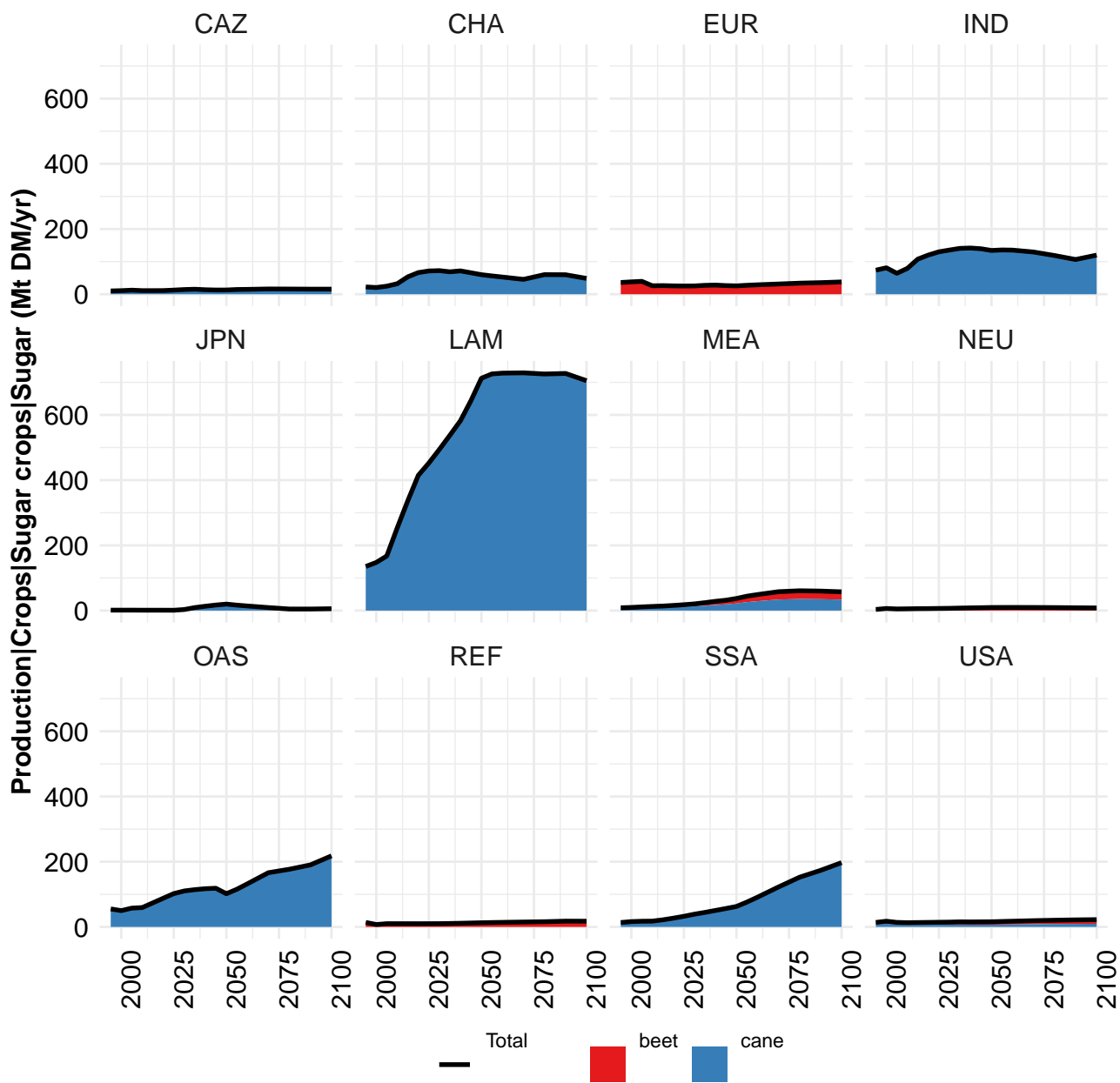
	2050	2055	2060	2070	2080	2090	2100
GLO	418	441	464	507	542	569	607
CAZ	1	1	1	1	1	1	2
CHA	112	108	103	105	89	74	73
EUR	1	1	2	2	2	2	2
IND	32	34	38	44	50	54	57
JPN	0	0	0	0	0	0	0
LAM	62	71	82	75	91	91	91
MEA	2	2	3	3	4	4	5
NEU	0	0	0	0	1	1	1
OAS	56	59	61	66	71	75	80
REF	0	0	0	0	0	0	0
SSA	148	161	171	206	229	261	292
USA	3	3	3	4	4	5	5

Table 1393: MAgPIE m4p\_SSP4 — 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

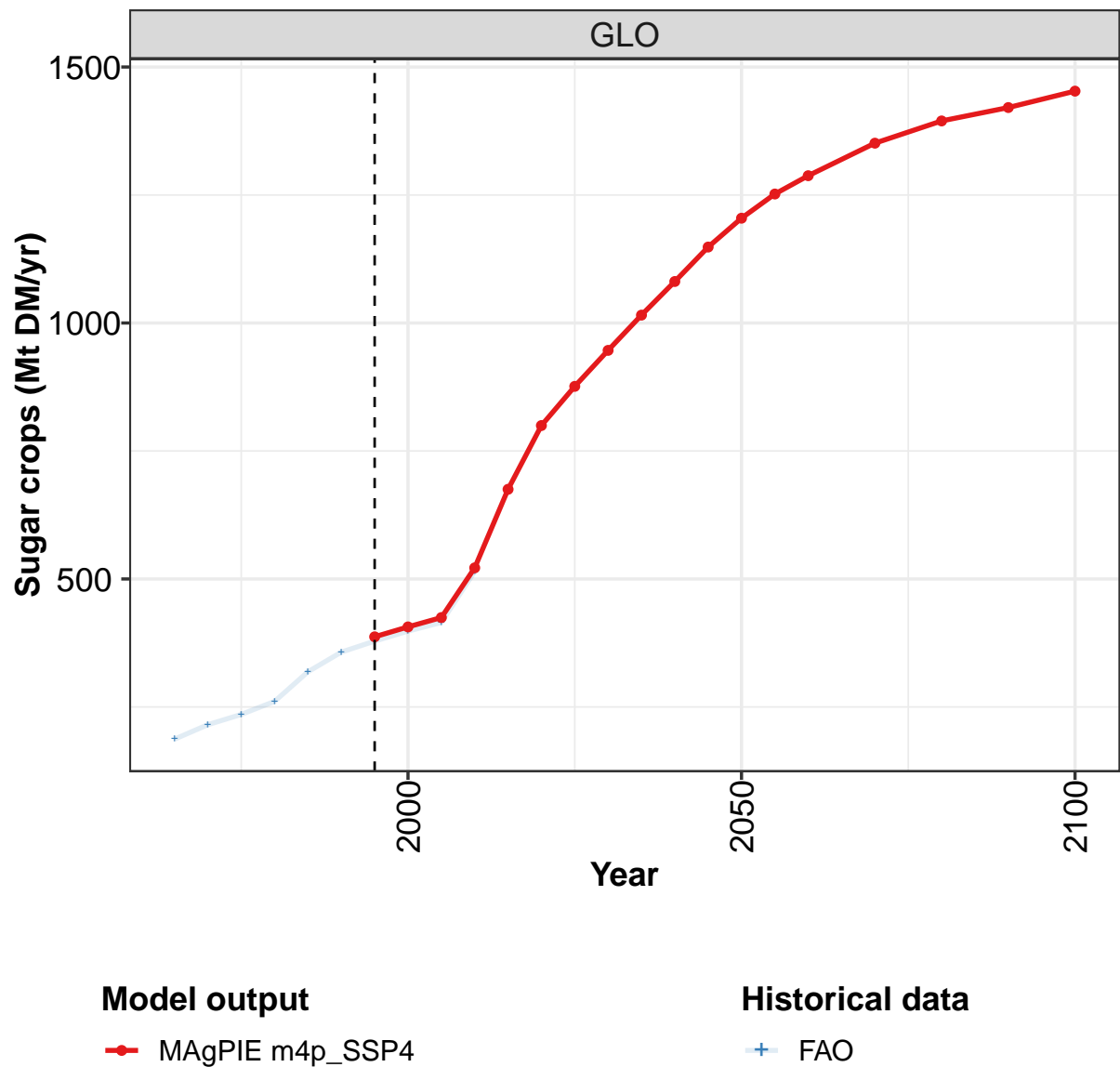
Table 1394: FAO — Production—Crops—Other crops—Tropical roots (Mt DM/yr)







44.4 Sugar crops



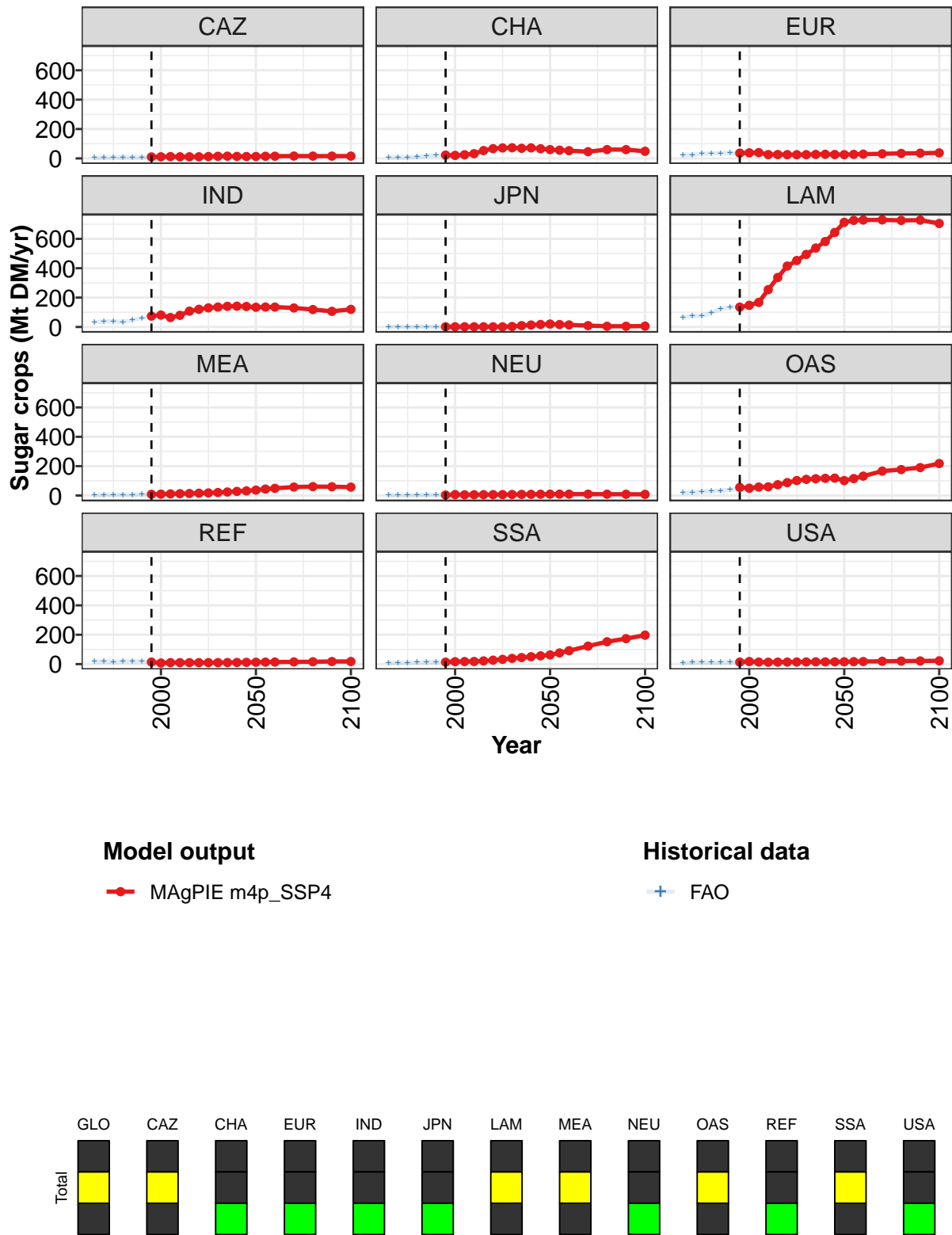


Figure 353: MAgPIE m4p\_SSP4 — Production—Crops—Sugar crops (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	387	406	425	522	675	800	876	947	1015	1081	1148
CAZ	10	11	12	11	11	11	13	14	15	14	13
CHA	22	21	25	32	53	66	71	72	69	72	66
EUR	36	38	40	26	26	26	25	25	27	28	26
IND	74	81	64	79	108	120	130	135	141	142	139
JPN	1	1	1	1	1	1	1	3	9	13	17
LAM	135	148	167	254	337	415	452	494	537	582	643
MEA	9	10	11	13	14	16	18	20	24	28	32
NEU	3	6	5	5	6	6	6	7	8	8	9
OAS	55	50	58	59	74	88	102	110	114	117	119
REF	14	7	10	10	10	10	10	10	11	11	12
SSA	13	16	17	18	22	27	33	39	44	50	56
USA	14	18	14	13	13	14	14	15	16	15	16

Table 1395: MAgPIE m4p\_SSP4 — Production—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

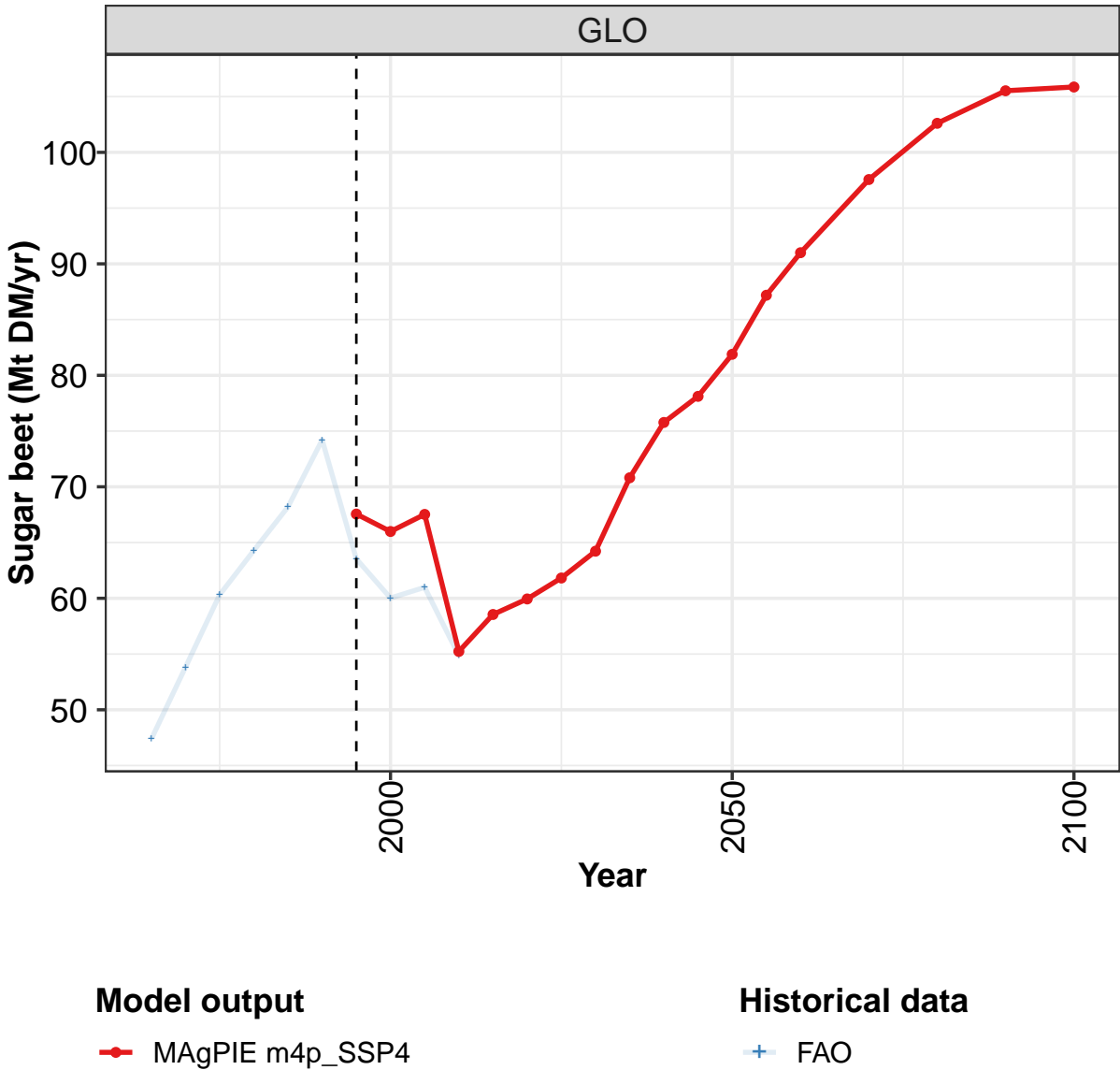
	2050	2055	2060	2070	2080	2090	2100
GLO	1205	1252	1288	1351	1395	1421	1453
CAZ	13	14	15	16	16	16	16
CHA	60	56	53	46	60	60	48
EUR	26	27	29	31	34	36	38
IND	134	136	135	129	119	107	120
JPN	20	17	14	9	5	5	6
LAM	713	726	728	729	726	727	705
MEA	37	44	49	58	61	60	57
NEU	9	10	10	10	9	9	8
OAS	102	116	132	166	177	190	218
REF	13	13	14	15	16	18	18
SSA	63	76	91	122	152	173	197
USA	16	17	18	19	21	22	22

Table 1396: MAgPIE m4p\_SSP4 — 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



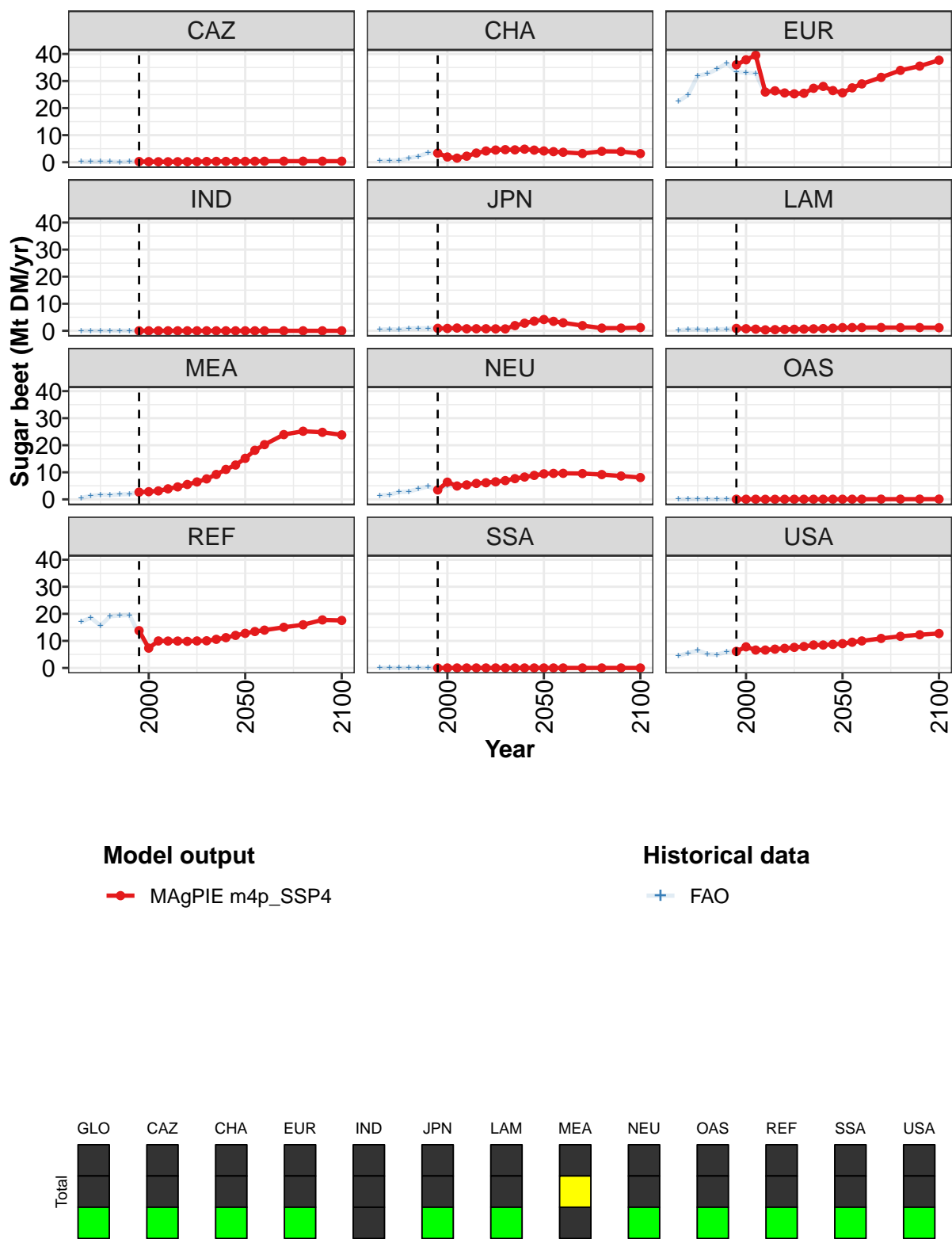


Figure 354: MAgPIE m4p\_SSP4 — Production—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	68	66	68	55	59	60	62	64	71	76	78
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	3	2	2	2	3	4	4	5	5	5	4
EUR	36	38	40	26	26	26	25	25	27	28	26
IND	0	0	0	0	0	0	0	0	0	0	0
JPN	1	1	1	1	1	1	1	1	2	3	4
LAM	1	1	1	0	0	0	1	1	1	1	1
MEA	3	3	3	4	5	6	6	8	9	11	13
NEU	3	6	5	5	6	6	6	7	8	8	9
OAS	0	0	0	0	0	0	0	0	0	0	0
REF	14	7	10	10	10	10	10	10	11	11	12
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	6	8	7	7	7	7	8	8	8	8	9

Table 1398: MAgPIE m4p\_SSP4 — Production—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 1/2]

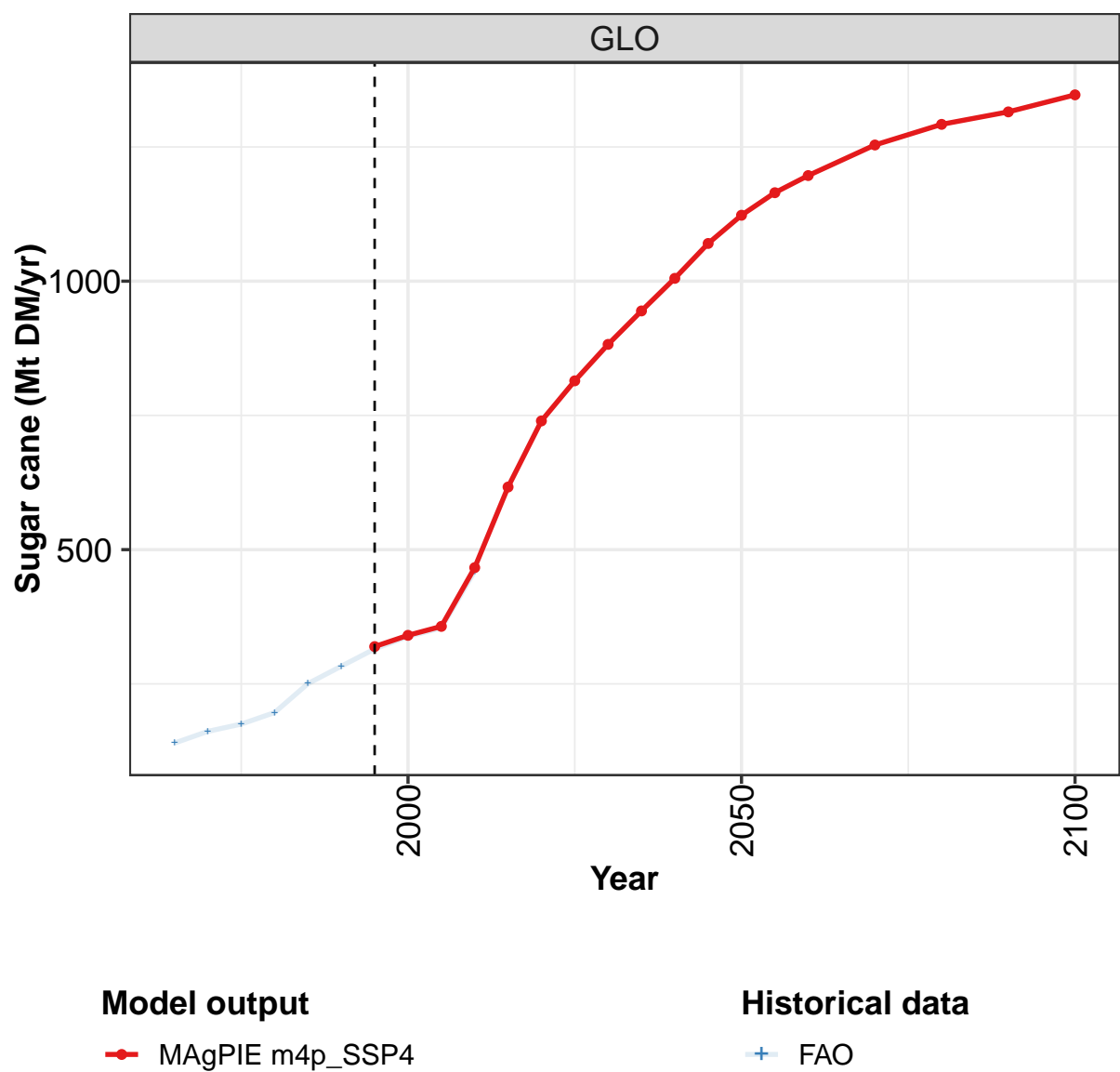
	2050	2055	2060	2070	2080	2090	2100
GLO	82	87	91	98	103	106	106
CAZ	0	0	0	0	0	0	0
CHA	4	4	4	3	4	4	3
EUR	26	27	29	31	34	36	38
IND	0	0	0	0	0	0	0
JPN	4	3	3	2	1	1	1
LAM	1	1	1	1	1	1	1
MEA	15	18	20	24	25	25	24
NEU	9	10	10	10	9	9	8
OAS	0	0	0	0	0	0	0
REF	13	13	14	15	16	18	18
SSA	0	0	0	0	0	0	0
USA	9	10	10	11	12	12	13

Table 1399: MAgPIE m4p\_SSP4 — 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



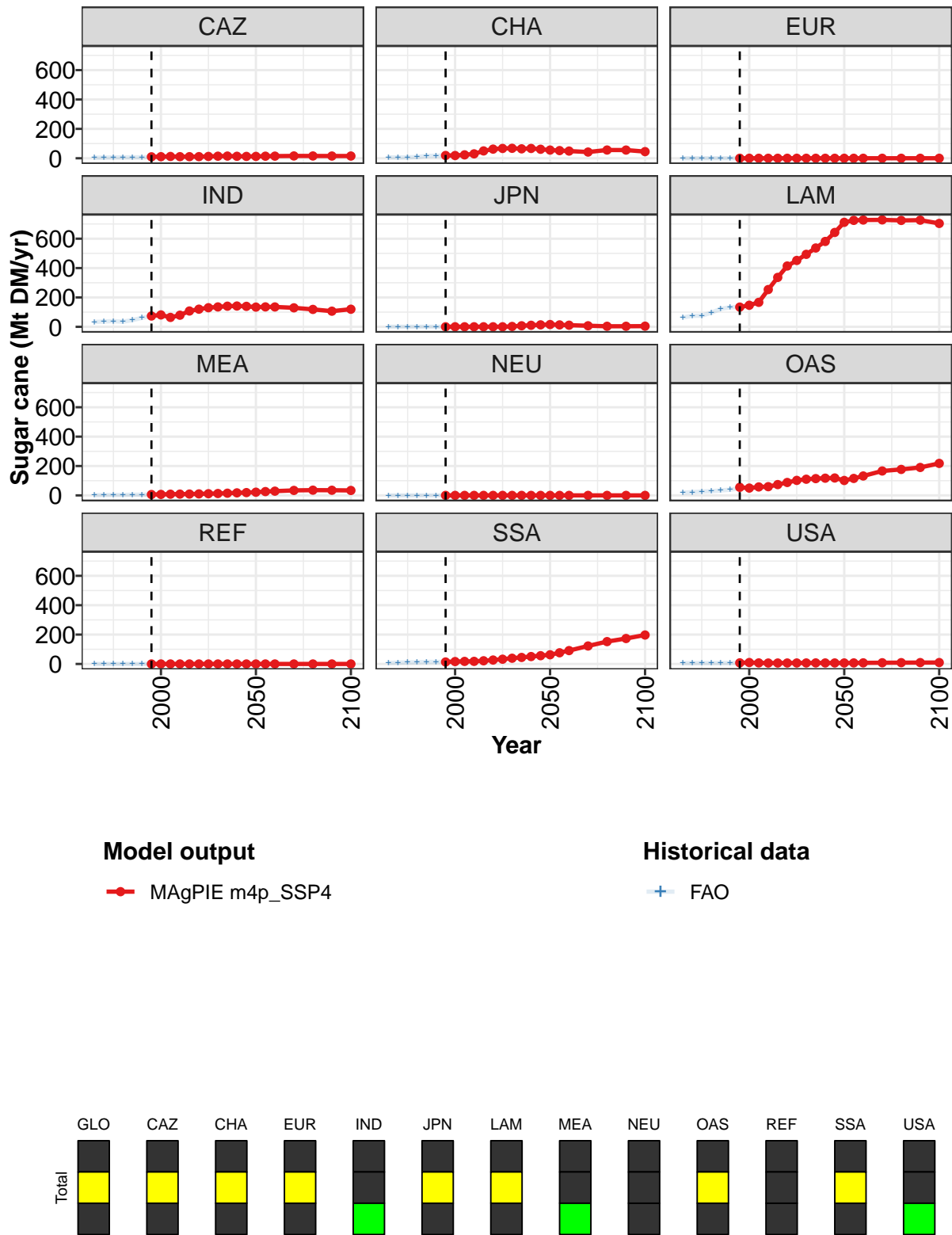


Figure 355: MAgPIE m4p\_SSP4 — Production—Crops—Sugar crops—Sugar cane (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	319	340	357	467	617	740	814	882	945	1005	1070
CAZ	10	11	12	11	11	11	12	14	15	13	13
CHA	19	19	23	30	50	62	67	68	64	67	61
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	74	81	64	79	108	120	130	135	141	142	139
JPN	0	0	0	0	0	0	0	3	7	11	13
LAM	134	147	167	254	337	414	452	493	537	581	643
MEA	6	7	8	9	9	10	11	13	15	17	19
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	55	50	58	59	74	88	102	110	114	117	119
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	13	16	17	18	22	27	33	39	44	50	56
USA	8	10	7	6	7	7	7	7	7	7	7

Table 1401: MAgPIE m4p\_SSP4 — Production—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

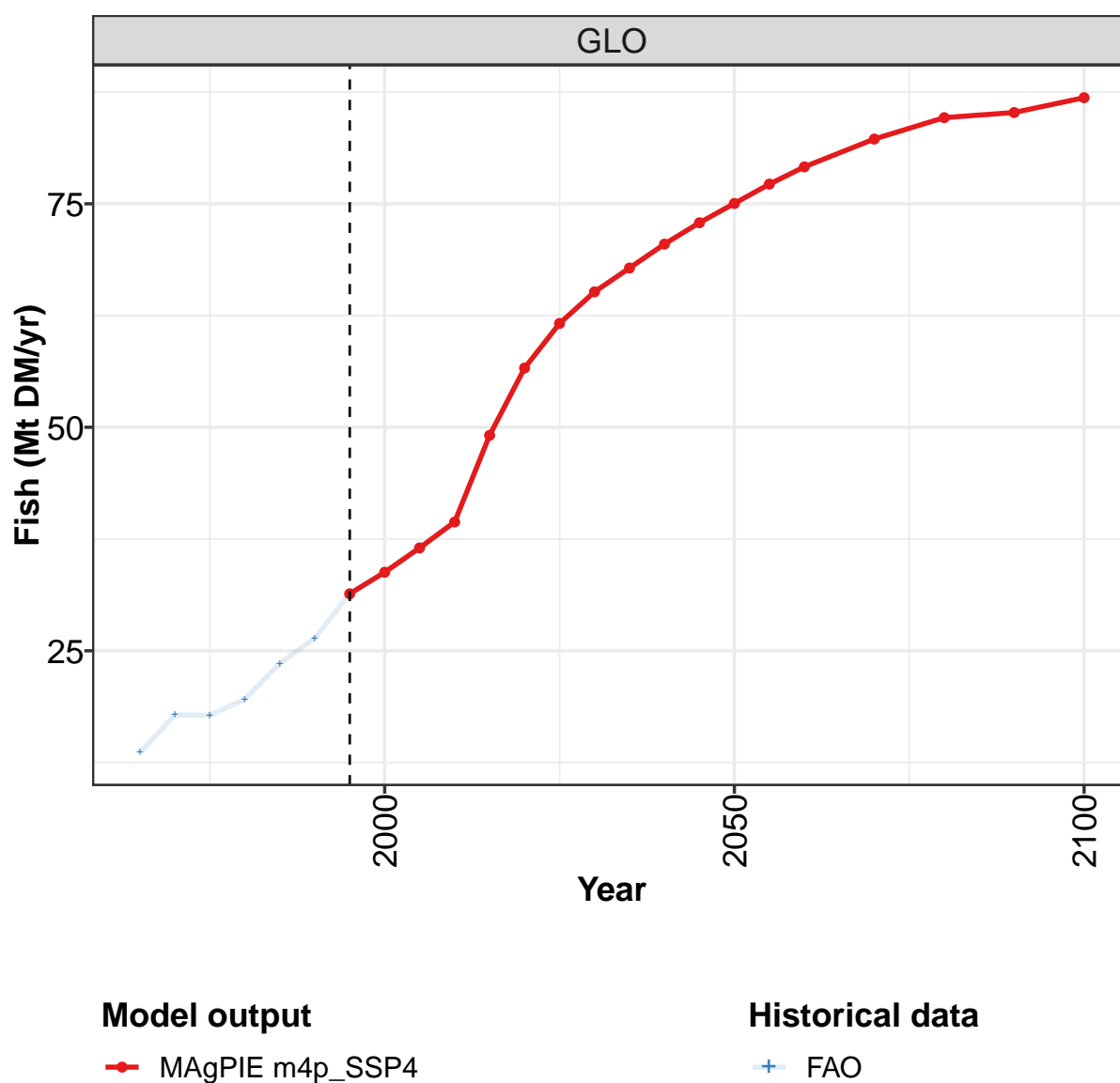
	2050	2055	2060	2070	2080	2090	2100
GLO	1123	1165	1197	1254	1292	1315	1347
CAZ	13	14	15	16	16	15	15
CHA	56	52	49	42	56	56	45
EUR	0	0	0	0	0	0	0
IND	134	136	135	129	119	107	120
JPN	16	13	11	7	4	4	5
LAM	711	725	727	728	724	726	704
MEA	22	26	29	34	36	35	34
NEU	0	0	0	0	0	0	0
OAS	102	115	132	166	177	190	218
REF	0	0	0	0	0	0	0
SSA	63	76	91	122	152	173	197
USA	7	7	8	8	9	9	10

Table 1402: MAgPIE m4p\_SSP4 — 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



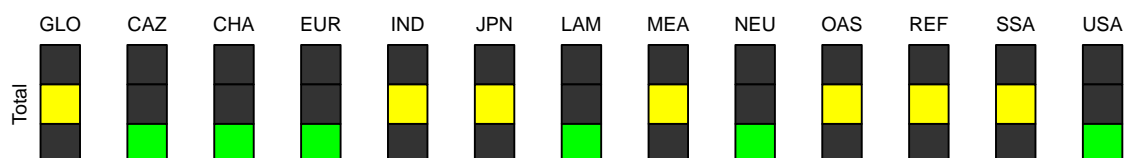
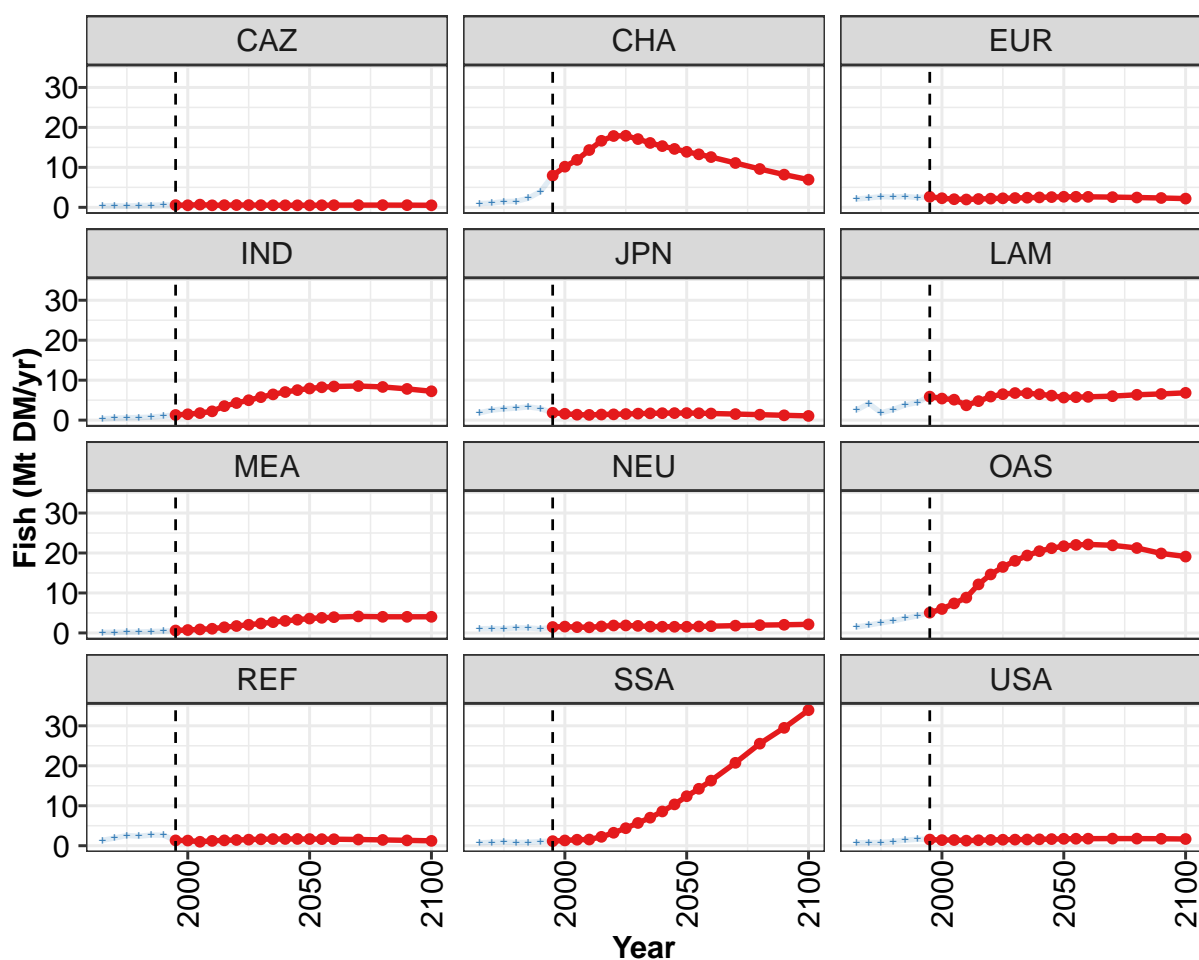


Figure 356: MAgPIE m4p\_SSP4 — Production—Fish (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	31.4	33.8	36.5	39.4	49.1	56.6	61.6	65.1	67.8	70.5	72.9
CAZ	0.6	0.5	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5
CHA	7.9	10.2	11.9	14.3	16.7	17.9	17.9	17.1	16.1	15.3	14.6
EUR	2.6	2.3	2.0	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.6
IND	1.3	1.5	1.8	2.2	3.5	4.3	5.0	5.8	6.4	7.0	7.5
JPN	1.8	1.6	1.4	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8
LAM	5.9	5.4	5.1	3.7	4.8	5.9	6.5	6.8	6.7	6.5	6.1
MEA	0.6	0.7	0.9	1.1	1.4	1.7	2.0	2.4	2.7	3.0	3.3
NEU	1.5	1.6	1.5	1.4	1.6	1.9	1.9	1.8	1.6	1.6	1.5
OAS	5.1	6.0	7.4	8.8	12.1	14.6	16.5	18.0	19.4	20.5	21.2
REF	1.3	1.3	1.0	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.7
SSA	1.1	1.3	1.5	1.6	2.2	3.2	4.4	5.7	7.0	8.6	10.3
USA	1.5	1.4	1.4	1.3	1.4	1.5	1.5	1.5	1.6	1.6	1.7

Table 1404: MAgPIE m4p\_SSP4 — Production—Fish (Mt DM/yr) [PART 1/2]

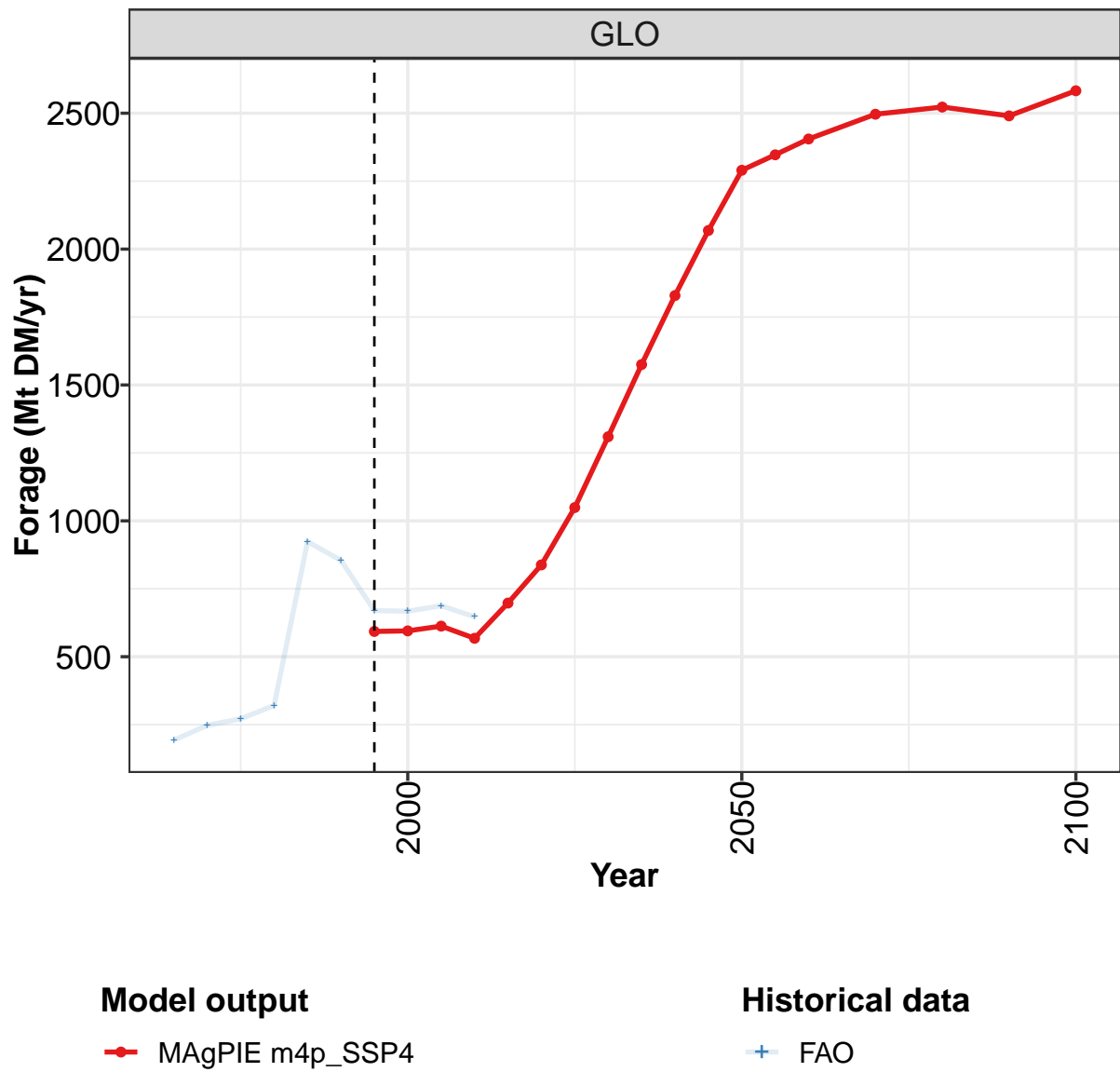
	2050	2055	2060	2070	2080	2090	2100
GLO	75.0	77.2	79.1	82.2	84.6	85.2	86.9
CAZ	0.5	0.5	0.5	0.6	0.6	0.5	0.5
CHA	13.9	13.3	12.6	11.1	9.6	8.2	6.9
EUR	2.6	2.6	2.6	2.6	2.5	2.3	2.2
IND	7.9	8.2	8.4	8.5	8.3	7.8	7.2
JPN	1.8	1.7	1.7	1.5	1.4	1.2	1.1
LAM	5.6	5.7	5.8	6.0	6.3	6.6	6.8
MEA	3.6	3.8	3.9	4.1	4.0	4.0	4.0
NEU	1.6	1.6	1.7	1.8	2.0	2.0	2.1
OAS	21.7	22.0	22.1	21.9	21.2	19.9	19.1
REF	1.7	1.7	1.6	1.6	1.4	1.3	1.2
SSA	12.4	14.2	16.3	20.7	25.5	29.5	33.9
USA	1.7	1.7	1.8	1.8	1.8	1.7	1.7

Table 1405: MAgPIE m4p\_SSP4 — 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



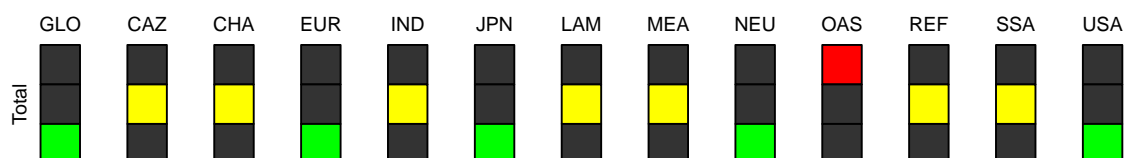
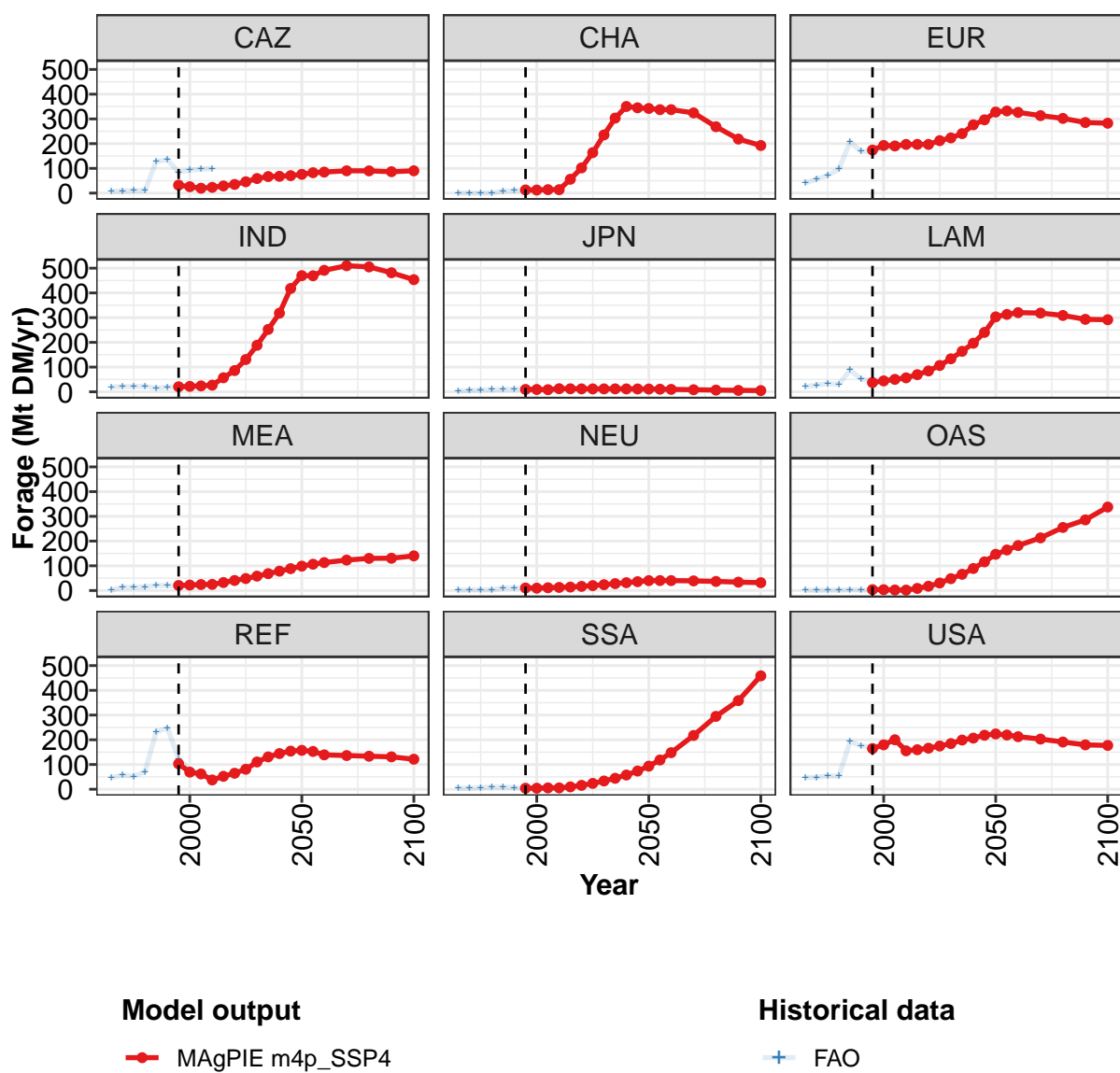


Figure 357: MAgPIE m4p\_SSP4 — Production—Forage (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	593	595	613	568	698	838	1049	1310	1575	1829	2069
CAZ	32	26	20	23	29	35	46	59	67	68	71
CHA	13	12	14	14	56	102	164	235	303	350	345
EUR	174	193	191	197	197	197	212	223	241	276	296
IND	20	22	24	27	57	86	131	188	252	318	418
JPN	10	10	9	13	12	12	12	12	12	12	12
LAM	37	44	50	56	69	84	107	134	164	197	240
MEA	21	22	24	25	32	41	49	58	68	78	88
NEU	10	10	11	13	14	17	20	24	28	32	36
OAS	4	3	2	2	9	17	30	48	66	89	116
REF	103	69	62	38	52	65	81	110	131	144	154
SSA	4	4	5	5	10	16	24	33	44	58	74
USA	165	180	200	155	160	166	175	185	199	207	219

Table 1407: MAgPIE m4p\_SSP4 — Production—Forage (Mt DM/yr) [PART 1/2]

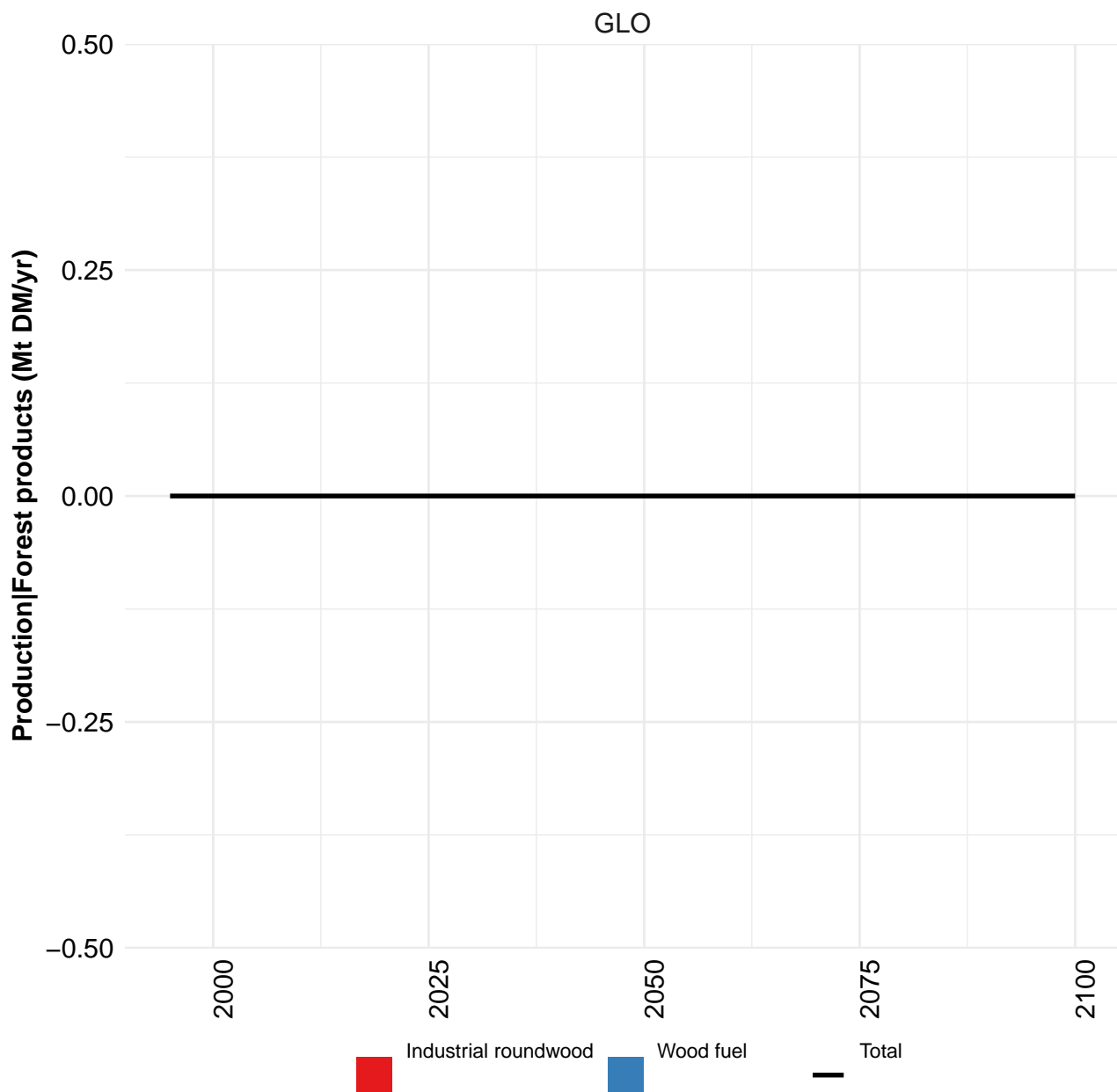
	2050	2055	2060	2070	2080	2090	2100
GLO	2290	2347	2405	2496	2523	2490	2583
CAZ	76	83	85	90	90	87	90
CHA	342	337	338	324	268	219	192
EUR	328	332	326	313	302	285	283
IND	470	469	491	510	505	482	454
JPN	11	11	10	8	7	6	5
LAM	303	313	320	318	309	293	292
MEA	99	106	113	123	130	131	140
NEU	40	40	40	39	37	34	32
OAS	147	164	182	213	255	286	338
REF	157	153	139	136	134	131	121
SSA	93	118	148	217	295	358	459
USA	224	219	213	203	191	179	177

Table 1408: MAgPIE m4p\_SSP4 — Production—Forage (Mt DM/yr) [PART 2/2]

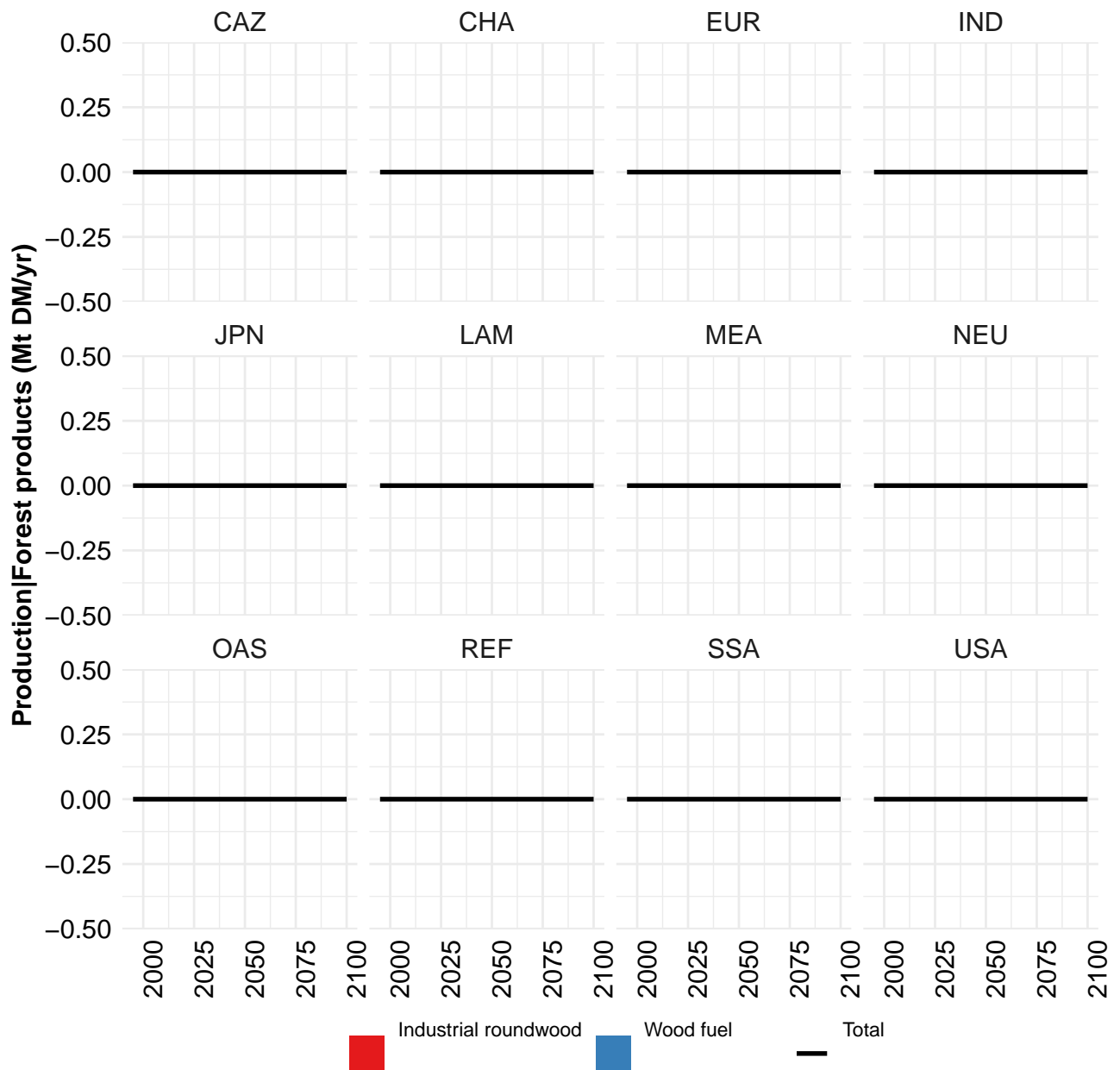
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	193	247	272	321	923	855	670	667	688	647
CAZ	7	9	10	10	128	135	85	93	96	99
CHA	0	0	0	0	8	10	11	12	13	14
EUR	40	57	71	97	206	168	169	182	186	196
IND	19	21	21	22	15	18	20	22	25	28
JPN	3	6	8	9	10	10	9	9	8	12
LAM	21	27	33	31	88	51	46	50	51	54
MEA	2	14	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)

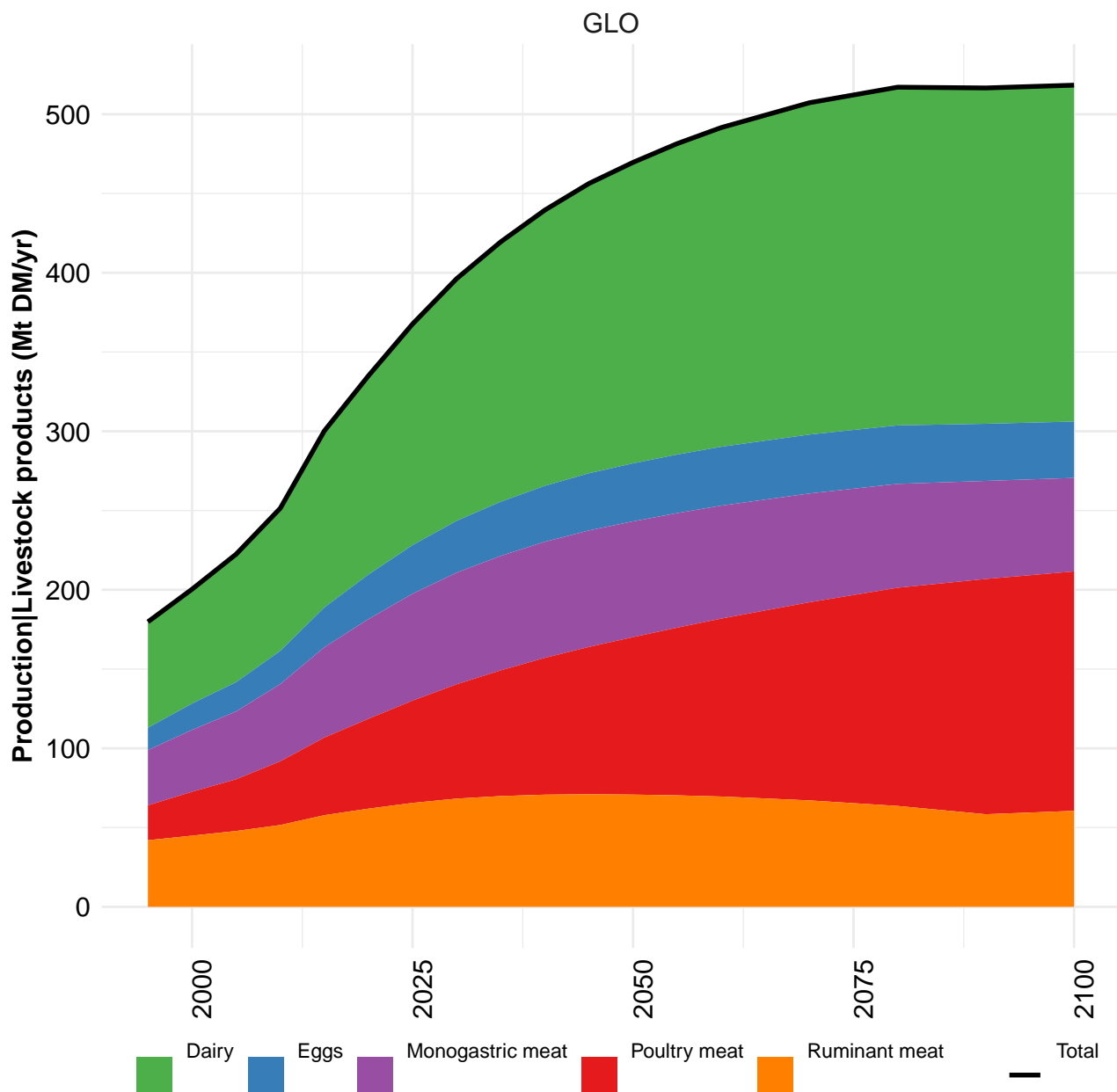
## 47 Forest products

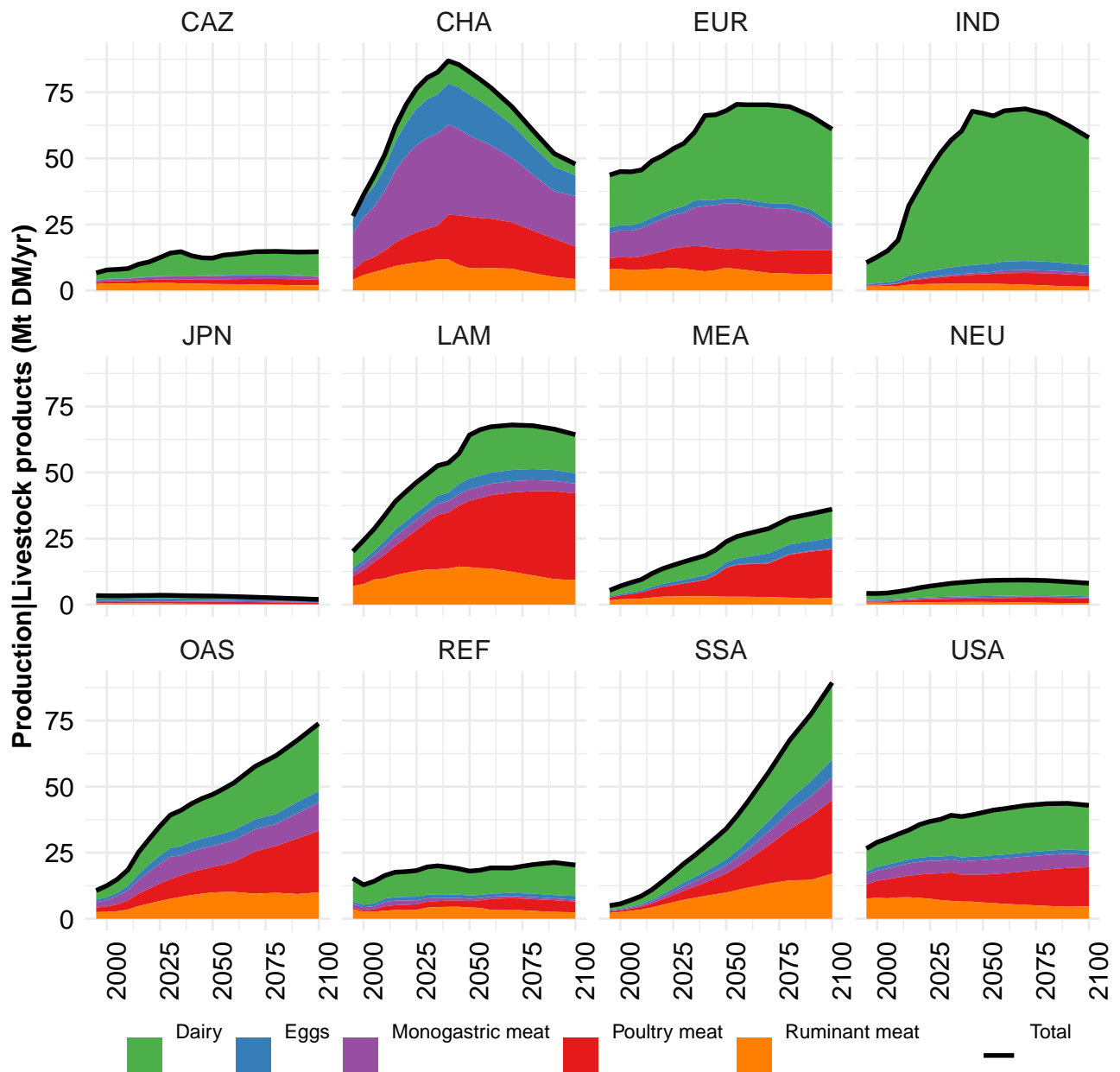


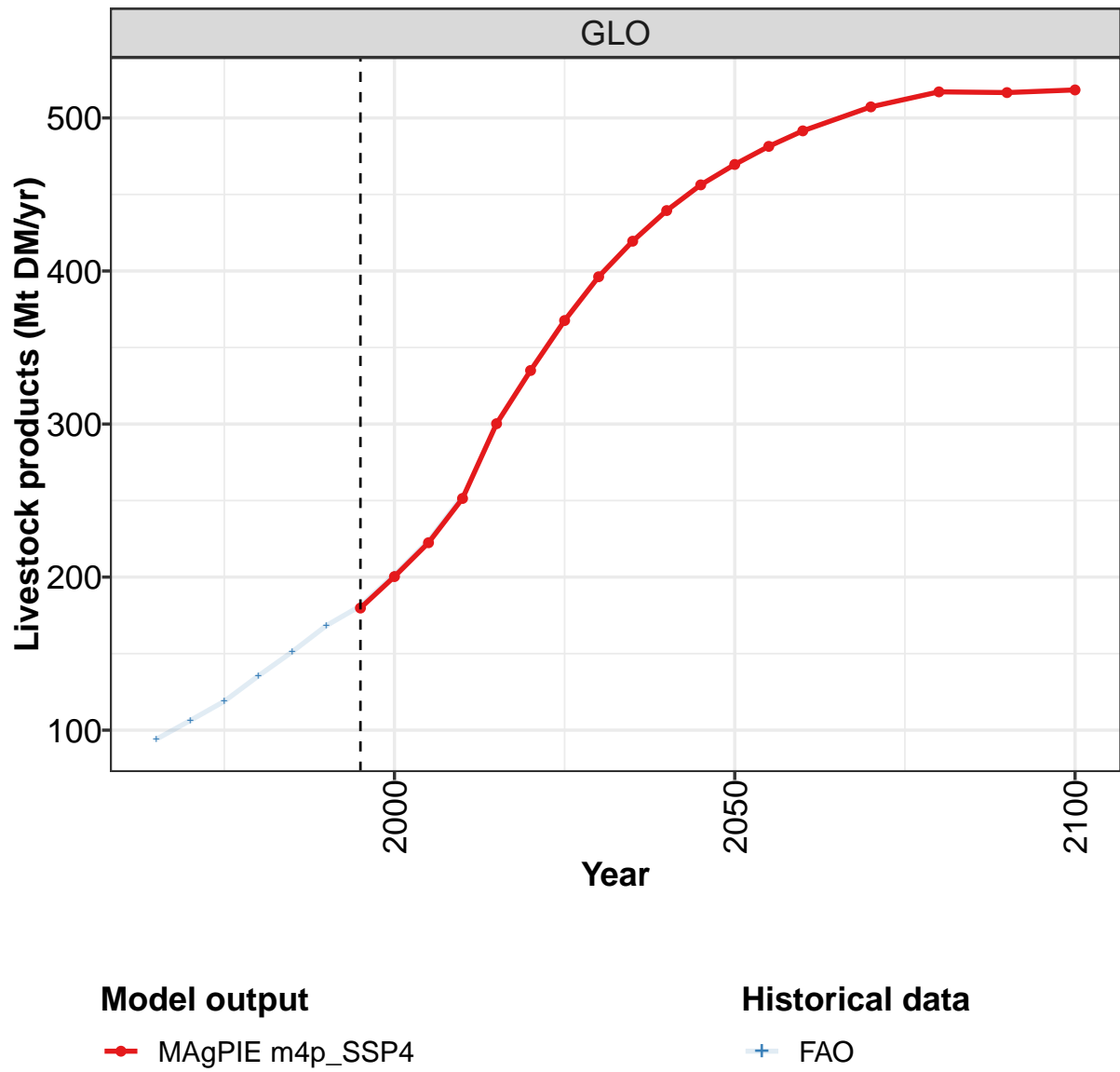




## 48 Livestock products







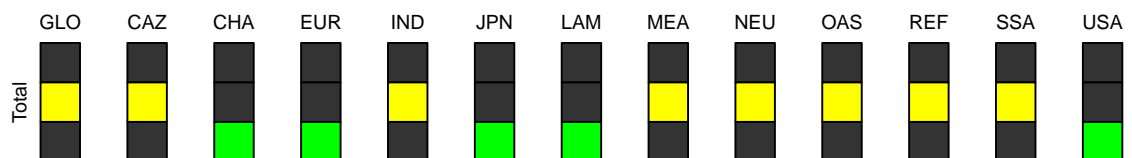
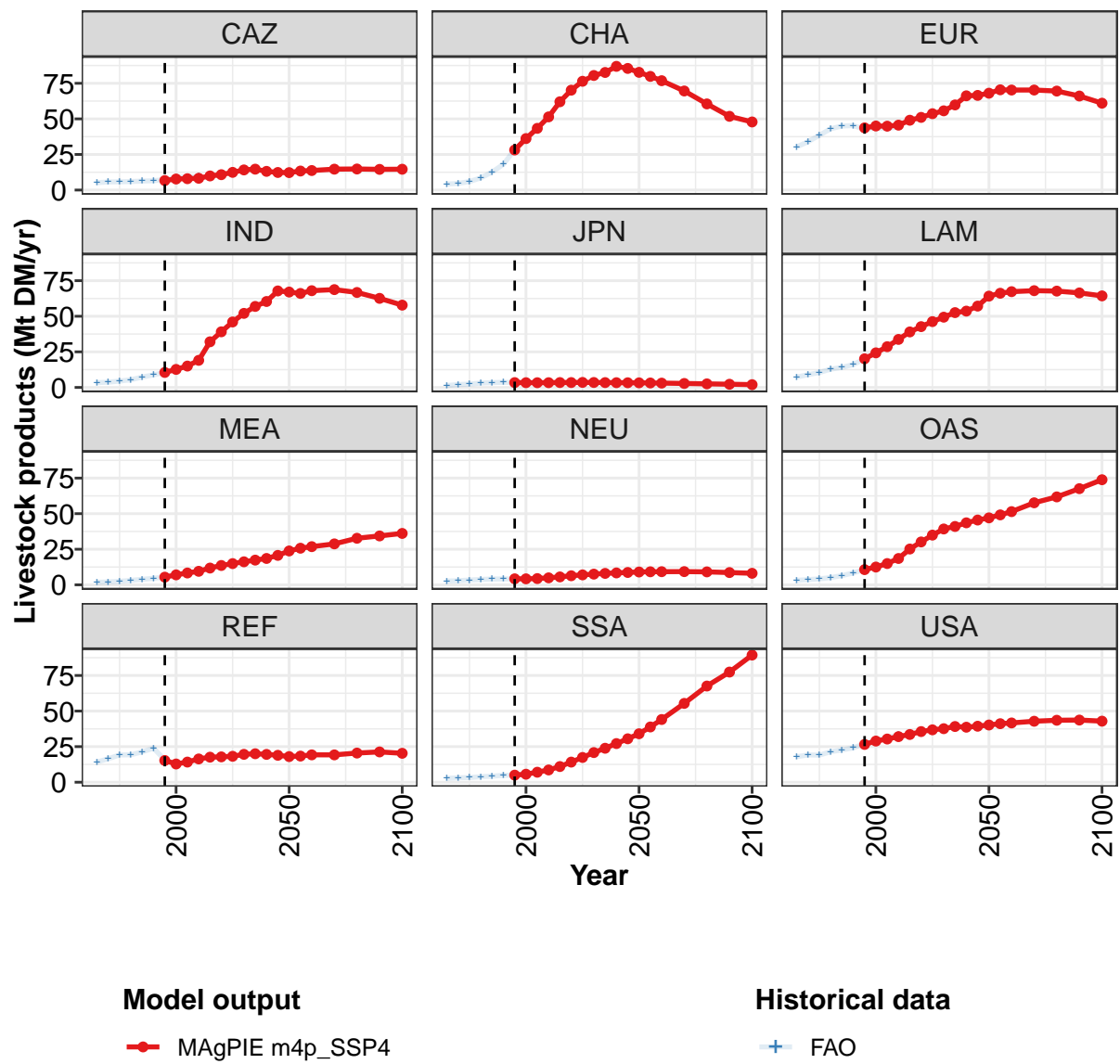


Figure 358: MAgPIE m4p\_SSP4 — Production—Livestock products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	180	200	222	251	300	335	368	396	419	440	456
CAZ	7	8	8	8	10	11	12	14	15	13	12
CHA	28	36	43	51	62	70	76	80	83	87	85
EUR	44	45	45	46	49	51	54	56	60	66	66
IND	11	13	15	19	32	39	46	52	57	60	68
JPN	3	3	3	3	3	3	4	3	3	3	3
LAM	20	24	29	34	39	43	46	49	53	54	57
MEA	5	7	8	10	12	14	15	16	17	19	21
NEU	4	4	4	5	6	6	7	8	8	8	9
OAS	11	12	15	19	25	30	35	39	41	44	46
REF	15	13	14	16	18	18	18	20	20	20	19
SSA	5	6	7	9	11	14	17	21	24	27	31
USA	27	29	30	32	34	36	37	38	39	39	39

Table 1410: MAgPIE m4p\_SSP4 — Production—Livestock products (Mt DM/yr) [PART 1/2]

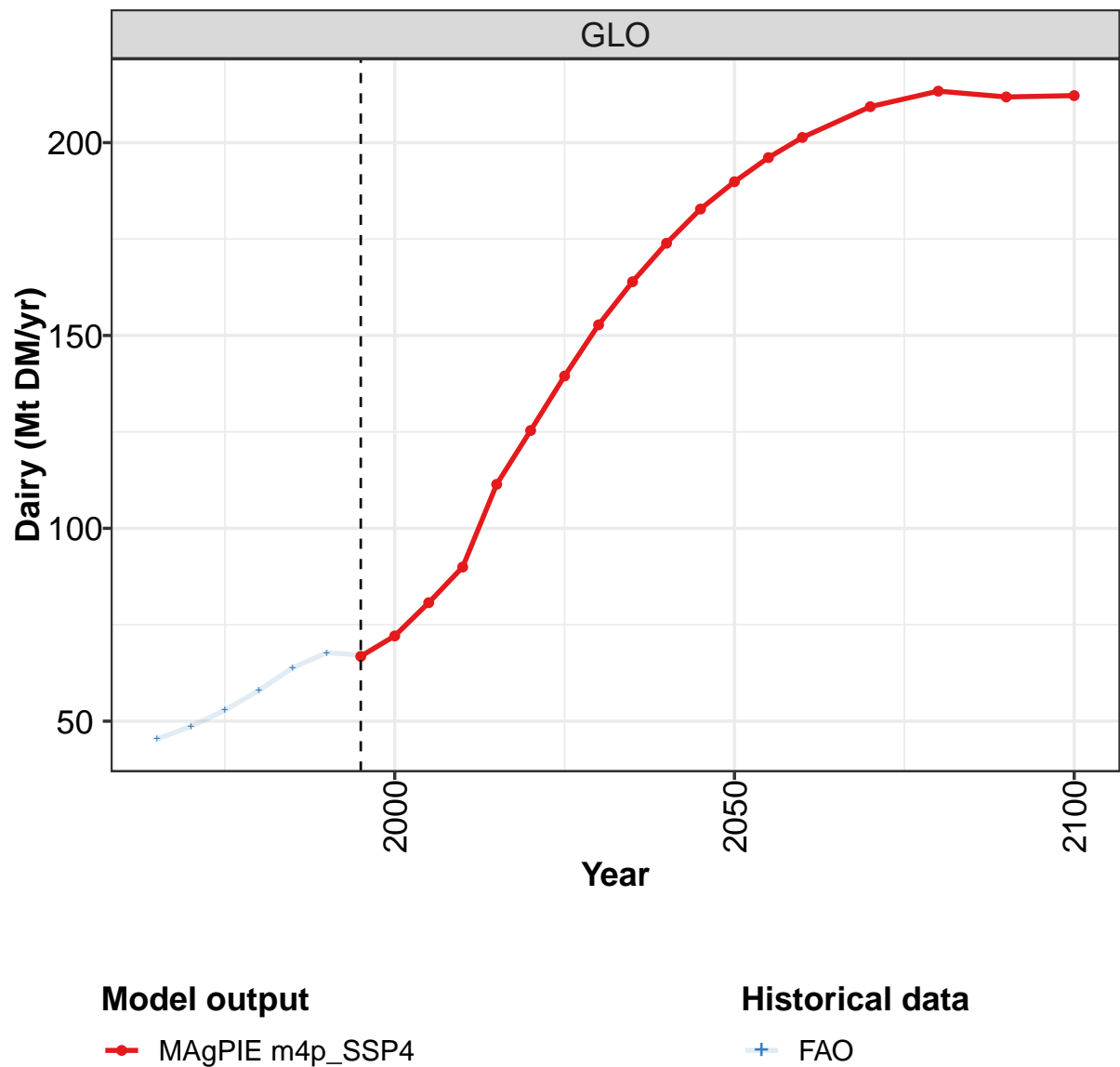
	2050	2055	2060	2070	2080	2090	2100
GLO	470	481	492	507	517	517	518
CAZ	12	13	14	15	15	15	15
CHA	83	80	77	70	61	52	48
EUR	68	70	70	70	70	66	61
IND	67	66	68	69	67	63	58
JPN	3	3	3	3	3	2	2
LAM	64	66	67	68	68	66	64
MEA	24	26	27	29	33	34	36
NEU	9	9	9	9	9	9	8
OAS	47	49	51	58	62	68	74
REF	18	18	19	19	21	21	20
SSA	34	39	44	55	68	77	89
USA	40	41	42	43	44	44	43

Table 1411: MAgPIE m4p\_SSP4 — 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



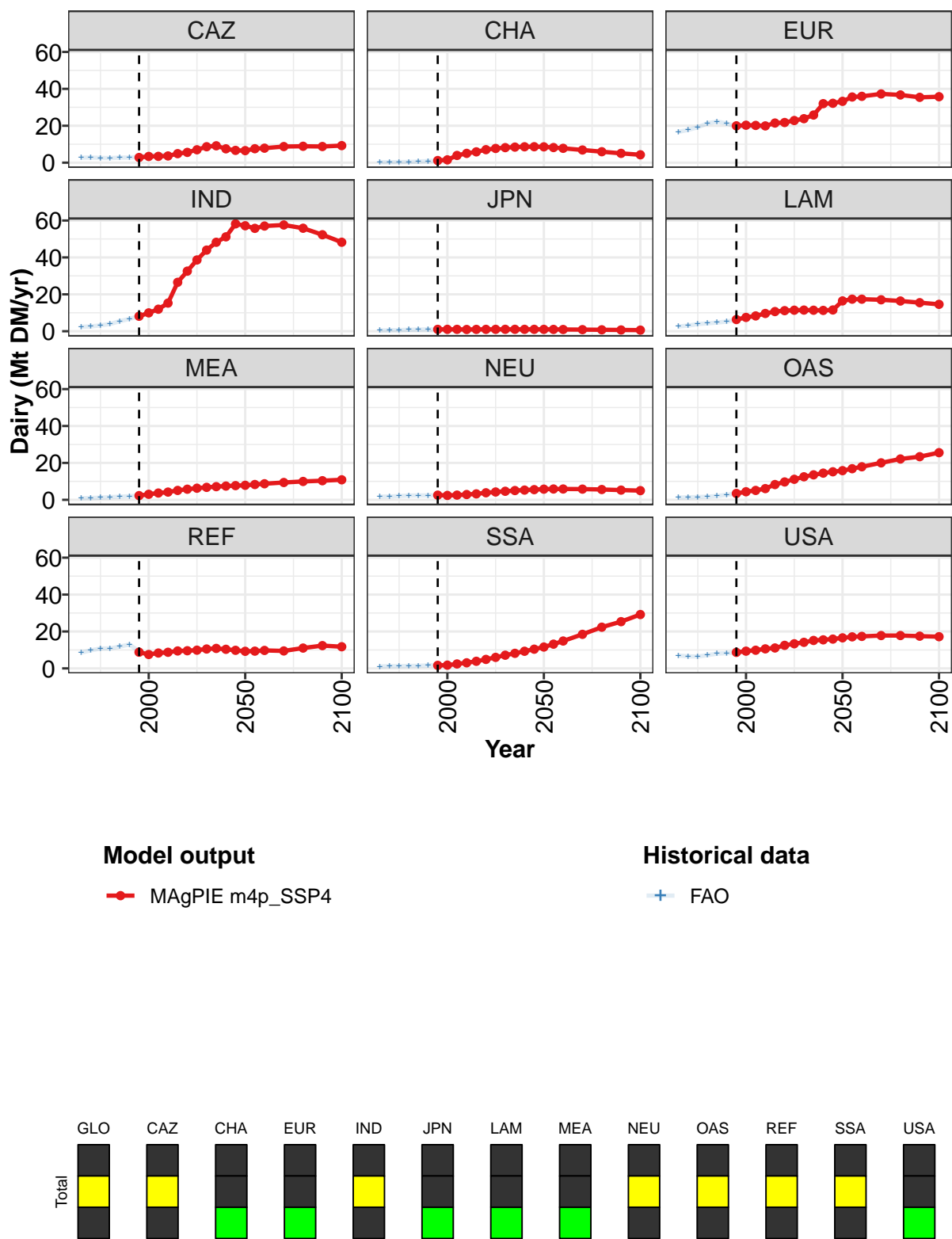


Figure 359: MAGPIE m4p\_SSP4 — Production—Livestock products—Dairy (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	67	72	81	90	111	125	140	153	164	174	183
CAZ	3	3	3	4	5	6	7	9	9	8	7
CHA	1	2	4	5	6	7	8	8	8	9	9
EUR	20	20	20	20	21	22	23	24	26	32	32
IND	8	10	12	15	27	33	39	44	48	51	58
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	6	7	8	10	11	11	11	11	11	11	12
MEA	2	3	4	4	5	6	6	7	7	7	8
NEU	3	2	3	3	3	4	4	5	5	5	6
OAS	3	4	5	6	8	10	11	12	14	14	15
REF	9	8	8	9	9	10	10	11	11	10	10
SSA	2	2	2	3	4	5	6	7	8	9	10
USA	9	9	10	11	11	13	13	14	15	15	16

Table 1413: MAgPIE m4p-SSP4 — Production—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

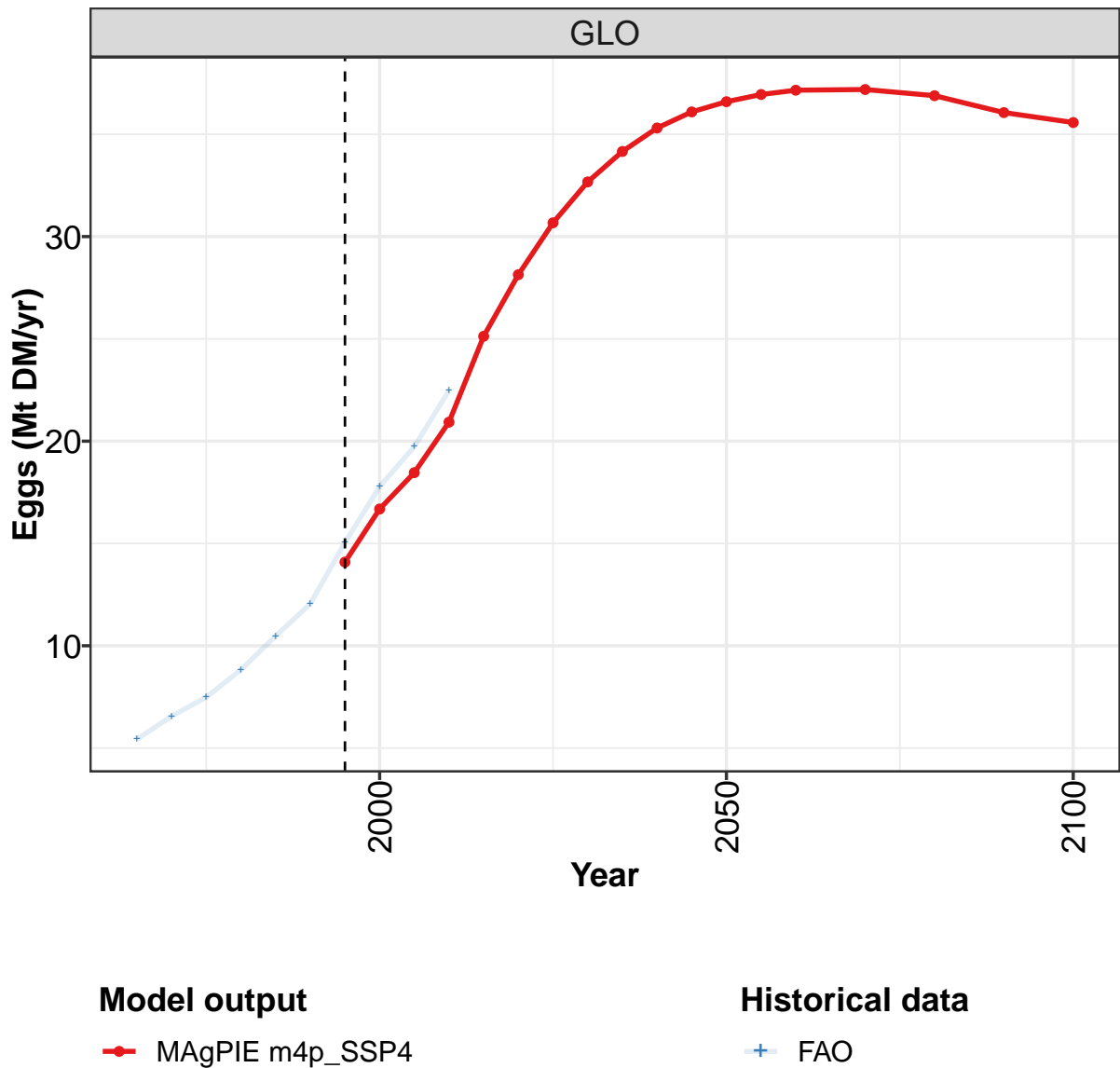
	2050	2055	2060	2070	2080	2090	2100
GLO	190	196	201	209	213	212	212
CAZ	7	8	8	9	9	9	9
CHA	9	8	8	7	6	5	4
EUR	33	36	36	37	37	35	36
IND	57	56	57	58	56	52	48
JPN	1	1	1	1	1	1	1
LAM	16	17	17	17	16	15	15
MEA	8	8	9	9	10	10	11
NEU	6	6	6	6	6	5	5
OAS	16	17	18	20	22	23	26
REF	9	9	10	9	11	12	12
SSA	12	13	15	18	22	25	29
USA	17	17	17	18	18	17	17

Table 1414: MAgPIE m4p-SSP4 — 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



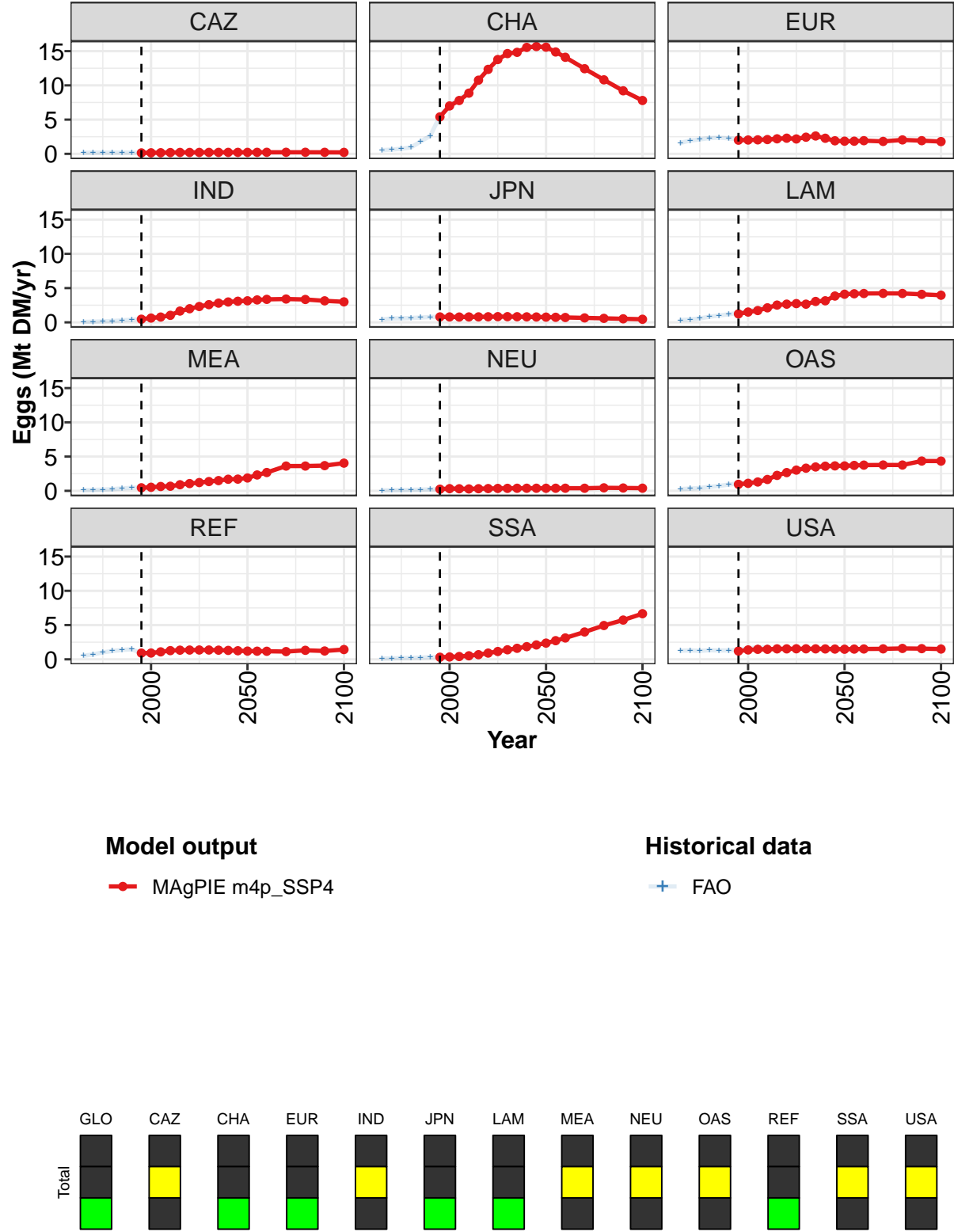


Figure 360: MAgPIE m4p\_SSP4 — Production—Livestock products—Eggs (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.1	16.7	18.5	20.9	25.1	28.1	30.7	32.7	34.2	35.3	36.1
CAZ	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	5.4	7.0	7.8	8.9	10.8	12.3	13.8	14.6	14.8	15.5	15.7
EUR	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.4	2.6	2.3	1.9
IND	0.5	0.6	0.8	1.0	1.6	2.0	2.3	2.6	2.8	3.0	3.1
JPN	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
LAM	1.2	1.5	1.7	2.1	2.5	2.7	2.7	2.7	3.1	3.1	3.8
MEA	0.4	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.5	1.7	1.7
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	3.0	3.3	3.5	3.6	3.6
REF	0.9	0.9	1.1	1.3	1.3	1.4	1.4	1.4	1.3	1.3	1.3
SSA	0.3	0.3	0.4	0.5	0.7	0.9	1.1	1.4	1.6	1.9	2.1
USA	1.2	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Table 1416: MAgPIE m4p\_SSP4 — Production—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

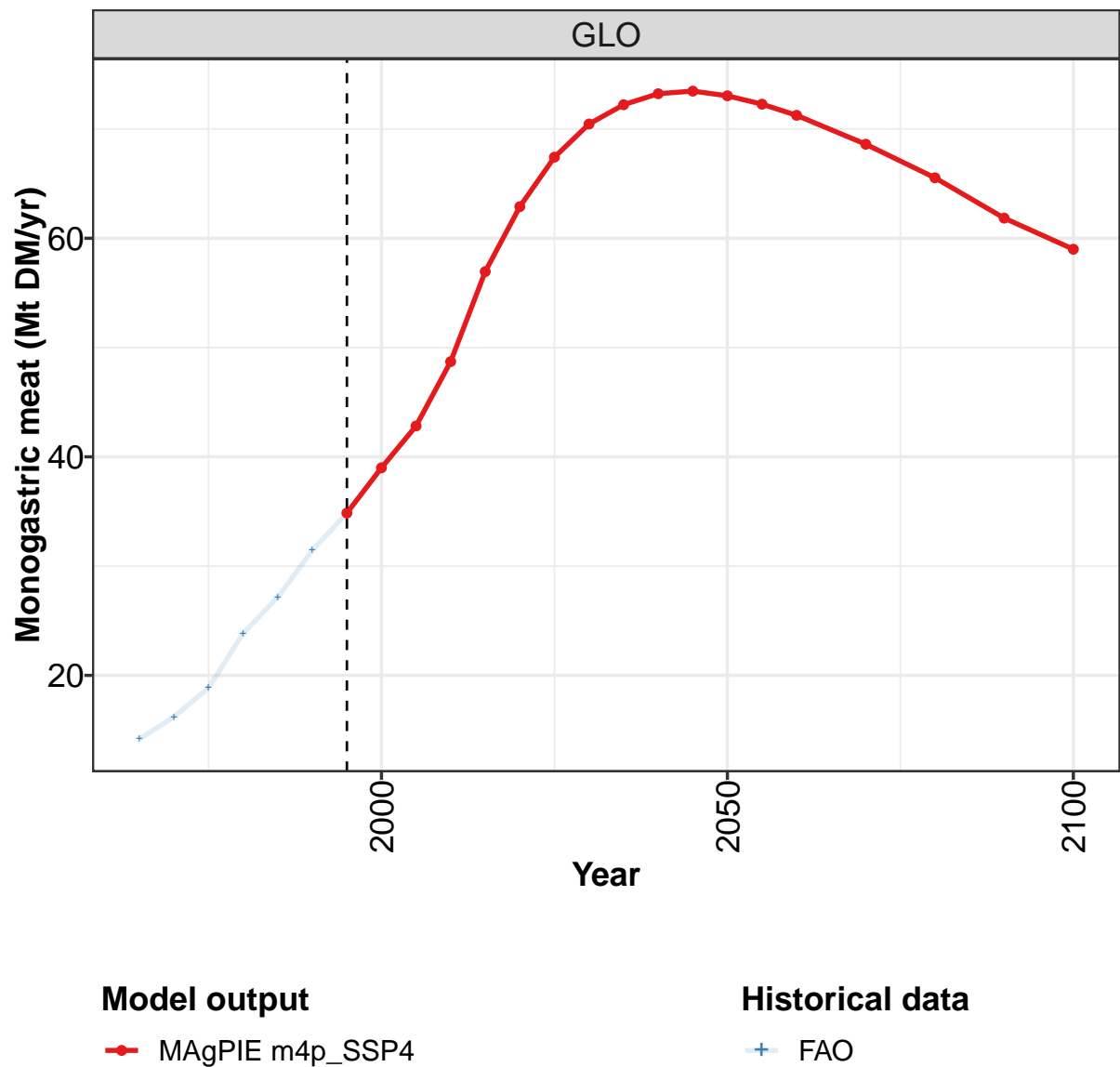
	2050	2055	2060	2070	2080	2090	2100
GLO	36.6	36.9	37.2	37.2	36.9	36.1	35.6
CAZ	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CHA	15.6	14.9	14.1	12.4	10.8	9.2	7.8
EUR	1.9	1.8	1.9	1.8	2.0	1.9	1.8
IND	3.1	3.3	3.4	3.4	3.3	3.1	3.0
JPN	0.8	0.7	0.7	0.7	0.6	0.5	0.5
LAM	4.1	4.2	4.2	4.2	4.2	4.1	4.0
MEA	1.9	2.3	2.7	3.6	3.6	3.7	4.0
NEU	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OAS	3.6	3.7	3.8	3.8	3.8	4.4	4.3
REF	1.2	1.2	1.2	1.1	1.3	1.2	1.4
SSA	2.4	2.7	3.1	4.0	4.9	5.7	6.7
USA	1.5	1.5	1.5	1.5	1.6	1.6	1.5

Table 1417: MAgPIE m4p\_SSP4 — 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



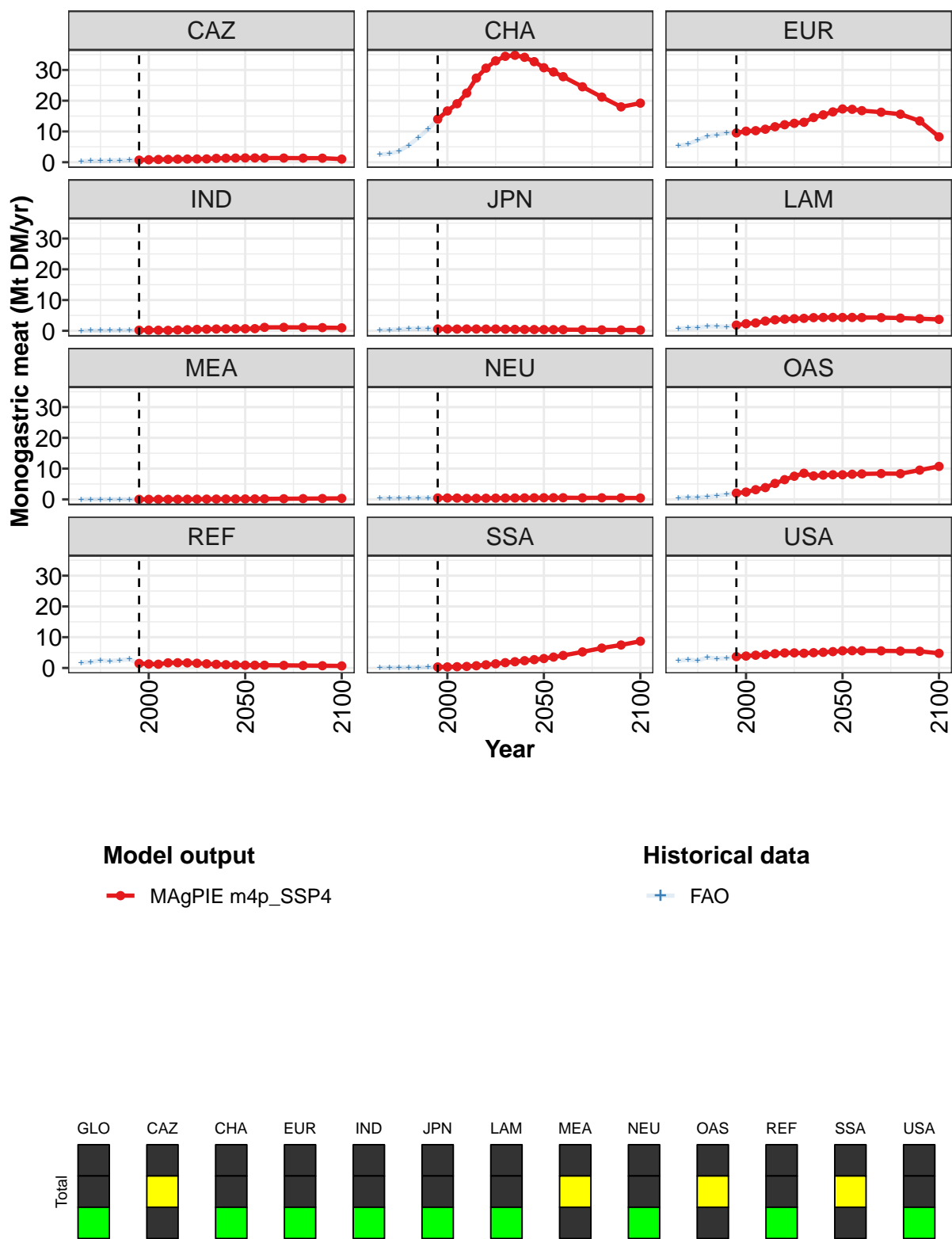


Figure 361: MAgPIE m4p\_SSP4 — Production—Livestock products—Monogastric meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.9	39.0	42.8	48.7	57.0	62.9	67.4	70.5	72.2	73.2	73.5
CAZ	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.3	1.3	1.4
CHA	14.0	16.7	19.0	22.5	27.4	30.6	33.0	34.4	34.8	34.1	32.7
EUR	9.5	10.1	10.3	10.7	11.5	12.2	12.7	13.0	14.5	15.4	16.4
IND	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.7
JPN	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4
LAM	1.9	2.3	2.6	3.2	3.6	3.8	3.9	4.1	4.3	4.3	4.4
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
NEU	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5
OAS	2.0	2.4	3.1	3.8	5.2	6.4	7.5	8.5	7.6	7.9	8.0
REF	1.5	1.3	1.2	1.7	1.7	1.7	1.5	1.3	1.2	1.1	1.0
SSA	0.3	0.3	0.4	0.5	0.7	1.0	1.4	1.7	2.0	2.4	2.7
USA	3.7	3.9	4.1	4.3	4.6	4.9	4.9	4.8	5.0	5.1	5.3

Table 1419: MAgPIE m4p\_SSP4 — Production—Livestock products—Monogastric meat (Mt DM/yr) [PART 1/2]

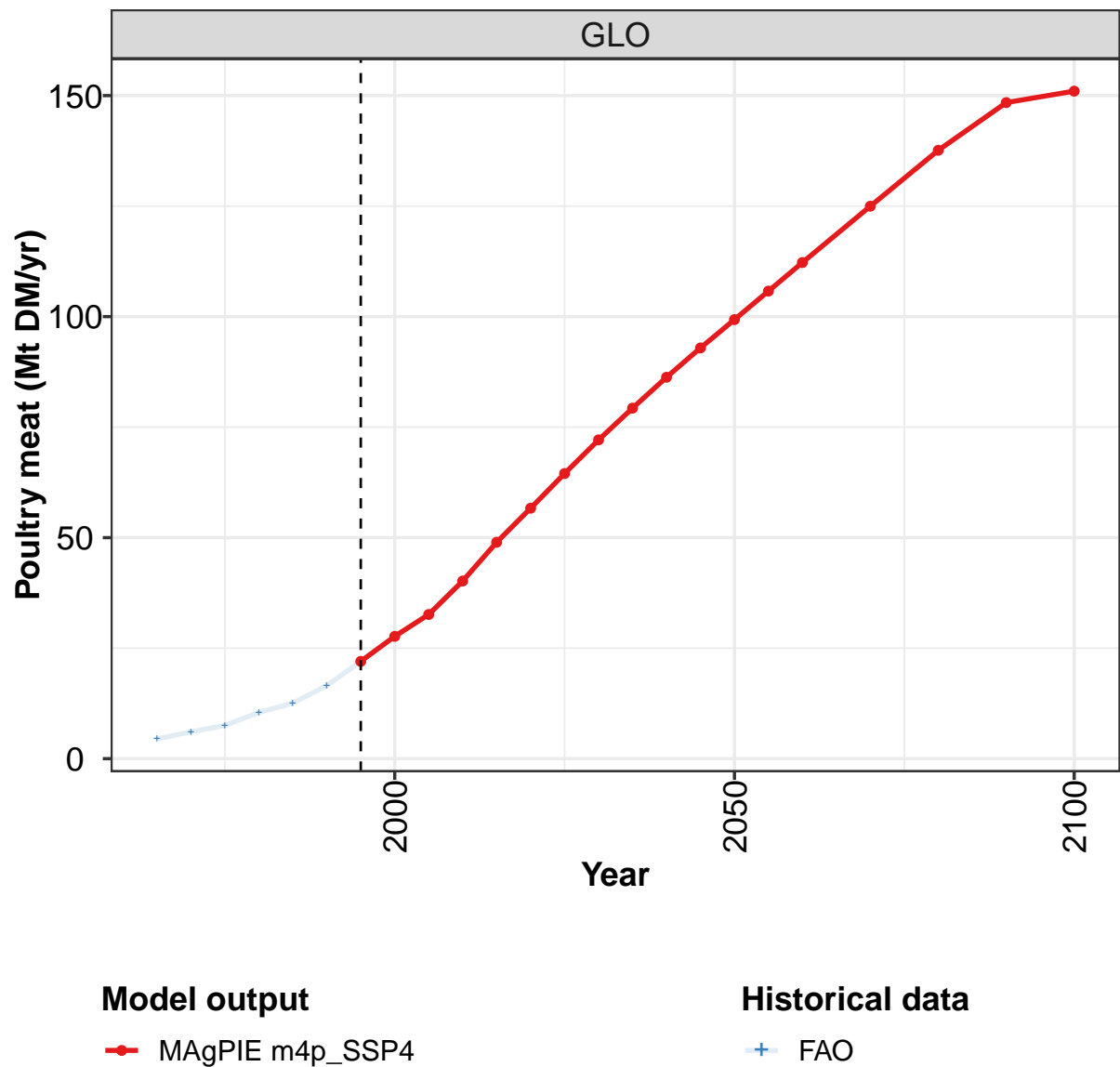
	2050	2055	2060	2070	2080	2090	2100
GLO	73.0	72.3	71.3	68.6	65.5	61.8	59.0
CAZ	1.4	1.4	1.4	1.4	1.3	1.3	1.0
CHA	30.7	29.3	27.8	24.5	21.2	18.0	19.2
EUR	17.3	17.2	16.8	16.3	15.6	13.4	8.3
IND	0.7	0.7	1.1	1.1	1.1	1.0	1.0
JPN	0.4	0.4	0.4	0.3	0.3	0.3	0.2
LAM	4.3	4.4	4.3	4.3	4.1	3.9	3.7
MEA	0.1	0.1	0.2	0.2	0.2	0.3	0.3
NEU	0.5	0.5	0.5	0.5	0.5	0.5	0.4
OAS	8.0	8.2	8.3	8.4	8.4	9.5	10.7
REF	0.9	0.9	0.9	0.8	0.8	0.7	0.7
SSA	3.1	3.5	4.1	5.2	6.5	7.5	8.7
USA	5.6	5.6	5.6	5.6	5.5	5.4	4.8

Table 1420: MAgPIE m4p\_SSP4 — 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





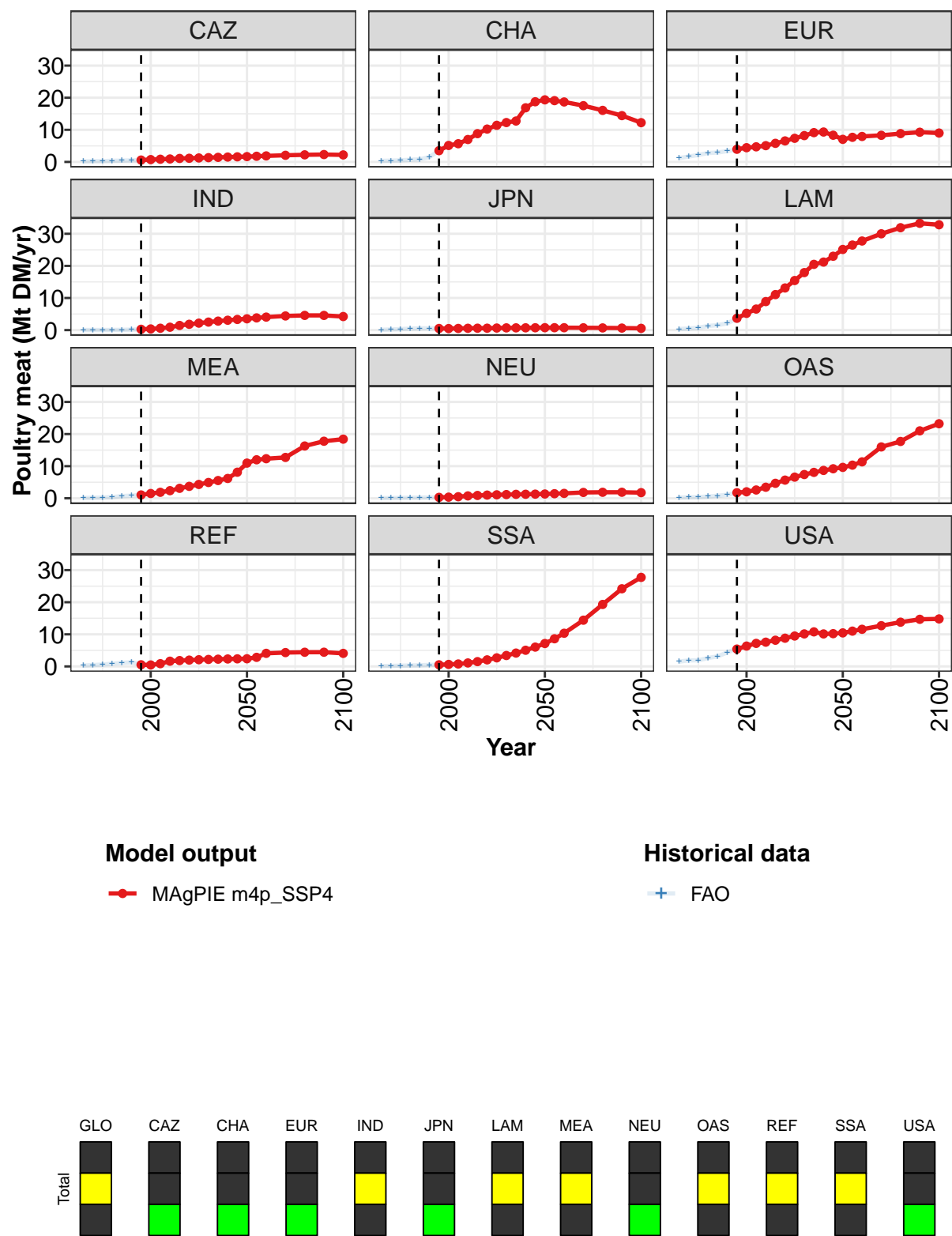


Figure 362: MAgPIE m4p\_SSP4 — Production—Livestock products—Poultry meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	22	28	33	40	49	57	65	72	79	86	93
CAZ	1	1	1	1	1	1	1	1	1	2	2
CHA	4	5	6	7	9	10	11	12	13	17	19
EUR	4	4	5	5	6	7	7	8	9	9	8
IND	0	0	1	1	1	2	2	2	3	3	3
JPN	1	0	1	1	1	1	1	1	1	1	1
LAM	4	5	7	9	11	13	15	18	20	21	23
MEA	1	1	2	2	3	4	4	5	6	6	8
NEU	0	0	0	1	1	1	1	1	1	1	1
OAS	2	2	3	3	5	6	7	7	8	9	9
REF	1	0	1	2	2	2	2	2	2	2	2
SSA	1	1	1	1	2	2	3	3	4	5	6
USA	5	6	7	8	8	9	9	10	11	10	10

Table 1422: MAgPIE m4p\_SSP4 — Production—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

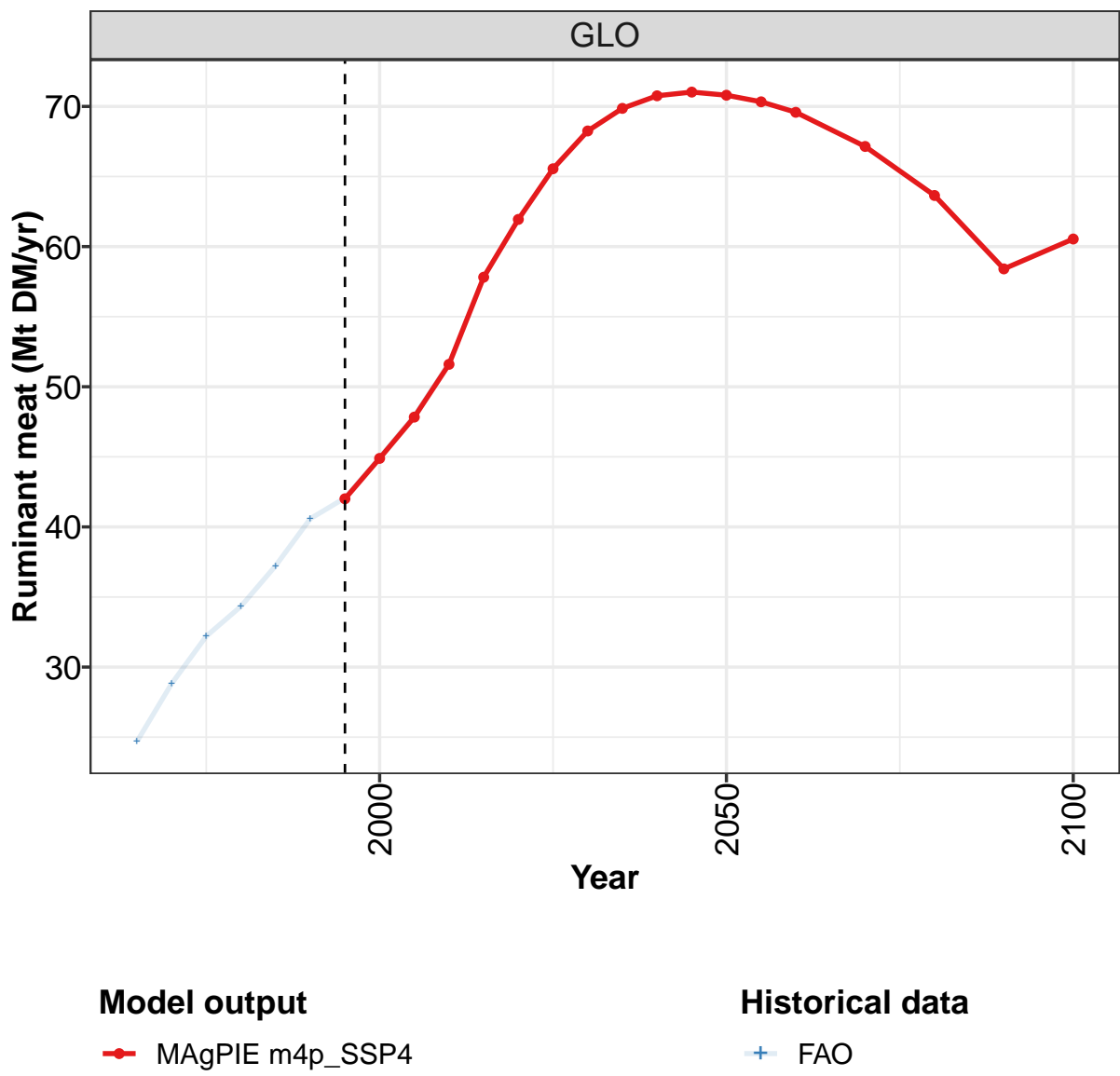
	2050	2055	2060	2070	2080	2090	2100
GLO	99	106	112	125	138	148	151
CAZ	2	2	2	2	2	2	2
CHA	19	19	19	18	16	14	12
EUR	7	8	8	8	9	9	9
IND	4	4	4	4	5	5	4
JPN	1	1	1	1	1	1	1
LAM	25	26	28	30	32	33	33
MEA	11	12	12	13	16	18	18
NEU	1	1	2	2	2	2	2
OAS	10	10	11	16	18	21	23
REF	2	3	4	4	4	4	4
SSA	7	9	10	14	19	24	28
USA	10	11	12	13	14	15	15

Table 1423: MAgPIE m4p\_SSP4 — 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



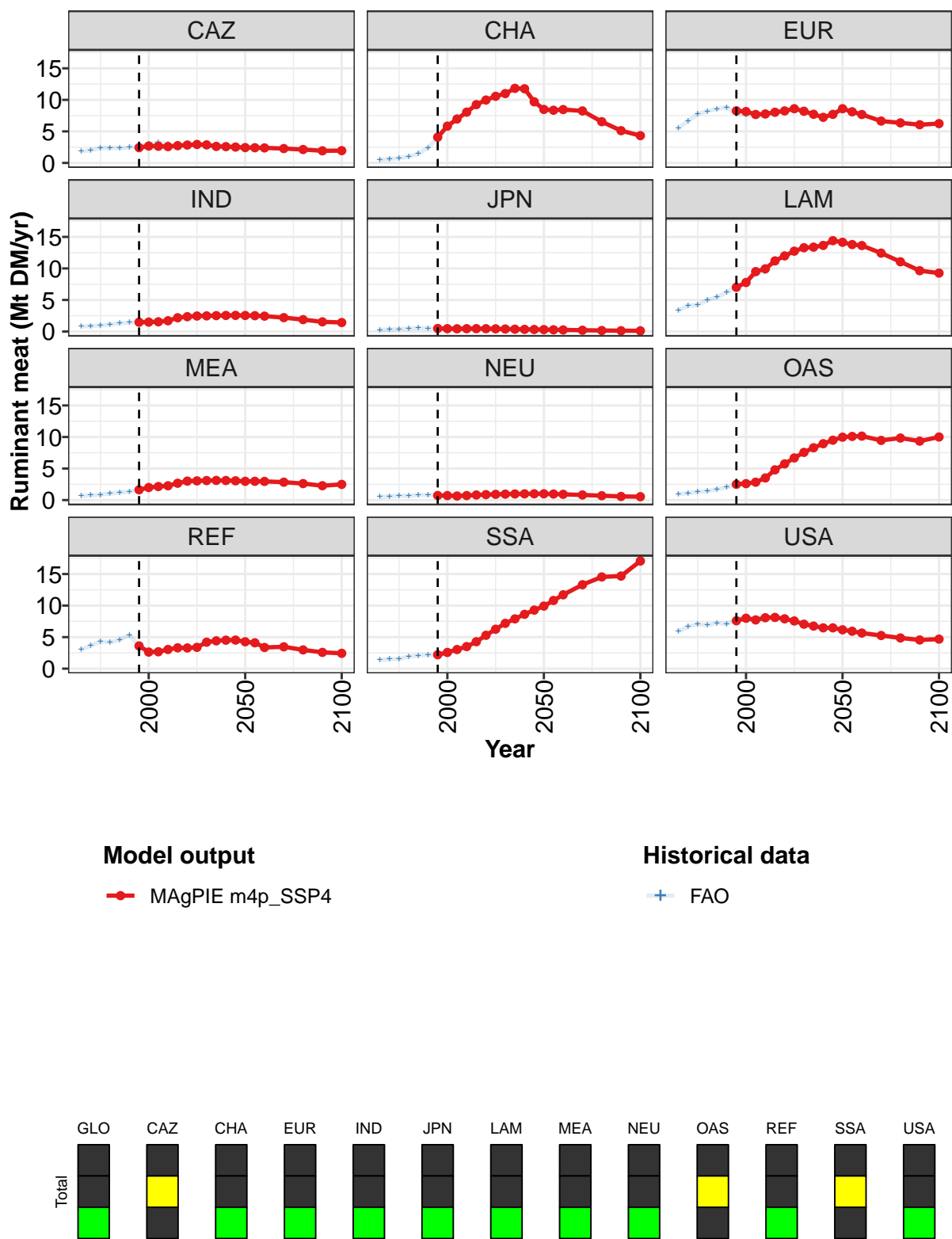


Figure 363: MAgPIE m4p\_SSP4 — Production—Livestock products—Ruminant meat (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	42.0	44.9	47.8	51.6	57.8	61.9	65.6	68.3	69.9	70.8	71.0
CAZ	2.4	2.7	2.6	2.6	2.7	2.8	2.9	2.9	2.6	2.6	2.5
CHA	4.1	5.8	7.0	8.0	9.2	10.0	10.6	11.0	11.8	11.8	9.7
EUR	8.3	8.1	7.7	7.8	8.0	8.2	8.6	8.2	7.7	7.2	7.7
IND	1.5	1.5	1.5	1.7	2.2	2.4	2.5	2.5	2.5	2.5	2.6
JPN	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3
LAM	7.0	7.8	9.5	9.9	11.2	12.0	12.7	13.3	13.4	13.7	14.4
MEA	1.6	2.0	2.1	2.3	2.7	3.0	3.0	3.1	3.1	3.1	3.1
NEU	0.7	0.7	0.6	0.7	0.8	0.9	0.9	0.9	1.0	1.0	1.0
OAS	2.5	2.6	2.8	3.5	4.8	5.7	6.7	7.6	8.3	8.9	9.5
REF	3.6	2.6	2.7	3.0	3.3	3.3	3.4	4.2	4.4	4.5	4.5
SSA	2.2	2.6	3.0	3.5	4.3	5.3	6.3	7.2	7.9	8.6	9.3
USA	7.6	8.0	7.7	8.1	8.1	7.9	7.6	7.0	6.8	6.5	6.5

Table 1425: MAgPIE m4p\_SSP4 — Production—Livestock products—Ruminant meat (Mt DM/yr) [PART 1/2]

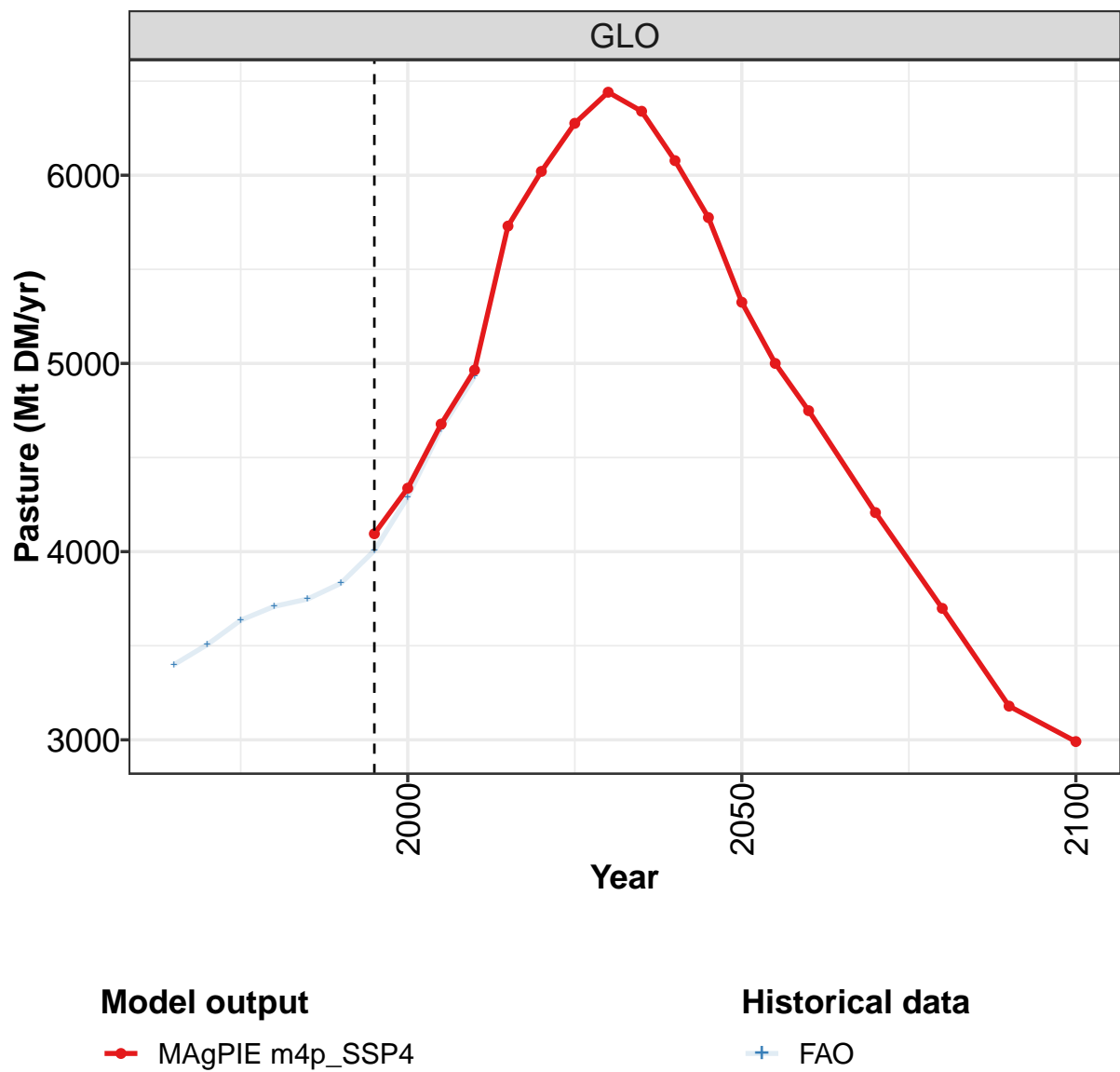
	2050	2055	2060	2070	2080	2090	2100
GLO	70.8	70.3	69.6	67.1	63.6	58.4	60.5
CAZ	2.4	2.4	2.4	2.3	2.1	1.9	2.0
CHA	8.5	8.4	8.5	8.2	6.5	5.1	4.3
EUR	8.6	8.1	7.7	6.6	6.4	6.1	6.2
IND	2.5	2.5	2.4	2.2	1.9	1.5	1.4
JPN	0.3	0.3	0.3	0.2	0.2	0.1	0.1
LAM	14.1	13.8	13.6	12.4	11.1	9.6	9.3
MEA	3.0	3.0	3.0	2.8	2.6	2.3	2.5
NEU	1.0	1.0	0.9	0.8	0.7	0.6	0.5
OAS	10.0	10.1	10.1	9.5	9.8	9.3	10.0
REF	4.3	4.1	3.4	3.5	3.0	2.6	2.4
SSA	9.9	10.8	11.7	13.3	14.5	14.7	17.1
USA	6.2	5.9	5.6	5.3	4.9	4.5	4.7

Table 1426: MAgPIE m4p\_SSP4 — 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



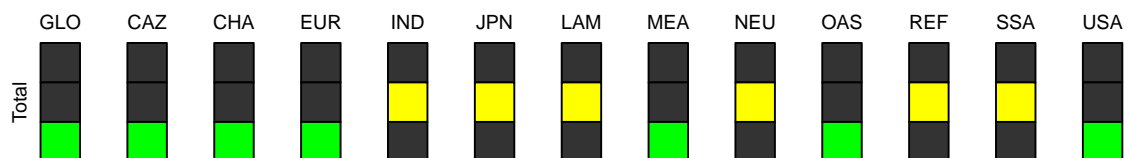
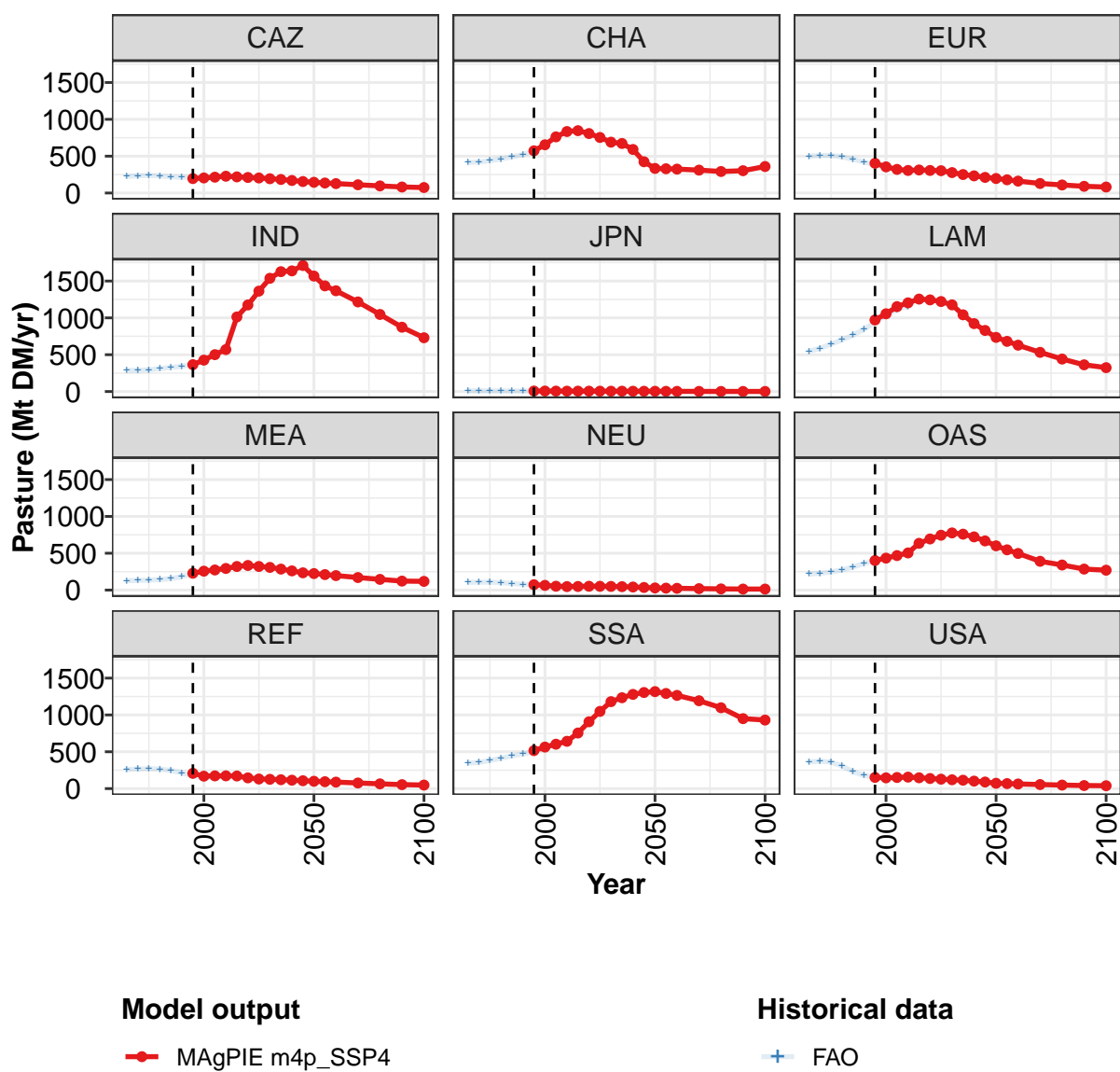


Figure 364: MAgPIE m4p\_SSP4 — Production—Pasture (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4095	4337	4678	4965	5730	6021	6276	6441	6340	6078	5775
CAZ	196	205	215	228	219	211	204	194	184	170	156
CHA	573	655	762	835	846	807	754	690	672	591	424
EUR	404	355	321	306	313	306	303	277	251	233	212
IND	365	427	501	570	1013	1176	1363	1538	1628	1638	1711
JPN	7	7	6	5	5	5	5	5	5	4	4
LAM	972	1056	1153	1204	1255	1244	1222	1177	1042	922	829
MEA	228	257	273	294	321	334	321	308	285	261	234
NEU	73	64	52	47	49	52	51	50	46	41	35
OAS	401	434	468	504	635	694	745	776	759	722	667
REF	207	169	173	174	171	146	131	126	121	114	107
SSA	516	564	603	642	755	907	1048	1181	1234	1279	1305
USA	152	146	151	156	147	137	128	120	114	102	90

Table 1428: MAgPIE m4p\_SSP4 — Production—Pasture (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5325	5000	4749	4208	3699	3179	2991
CAZ	145	136	128	112	96	82	74
CHA	334	329	325	311	292	303	360
EUR	197	180	162	129	109	91	81
IND	1568	1435	1369	1217	1047	873	730
JPN	3	3	2	2	1	1	1
LAM	735	681	629	532	441	363	324
MEA	224	210	197	170	145	122	118
NEU	29	27	24	20	16	14	13
OAS	601	546	497	391	340	285	270
REF	99	94	88	76	65	54	48
SSA	1317	1292	1265	1193	1098	950	931
USA	73	68	63	55	48	42	39

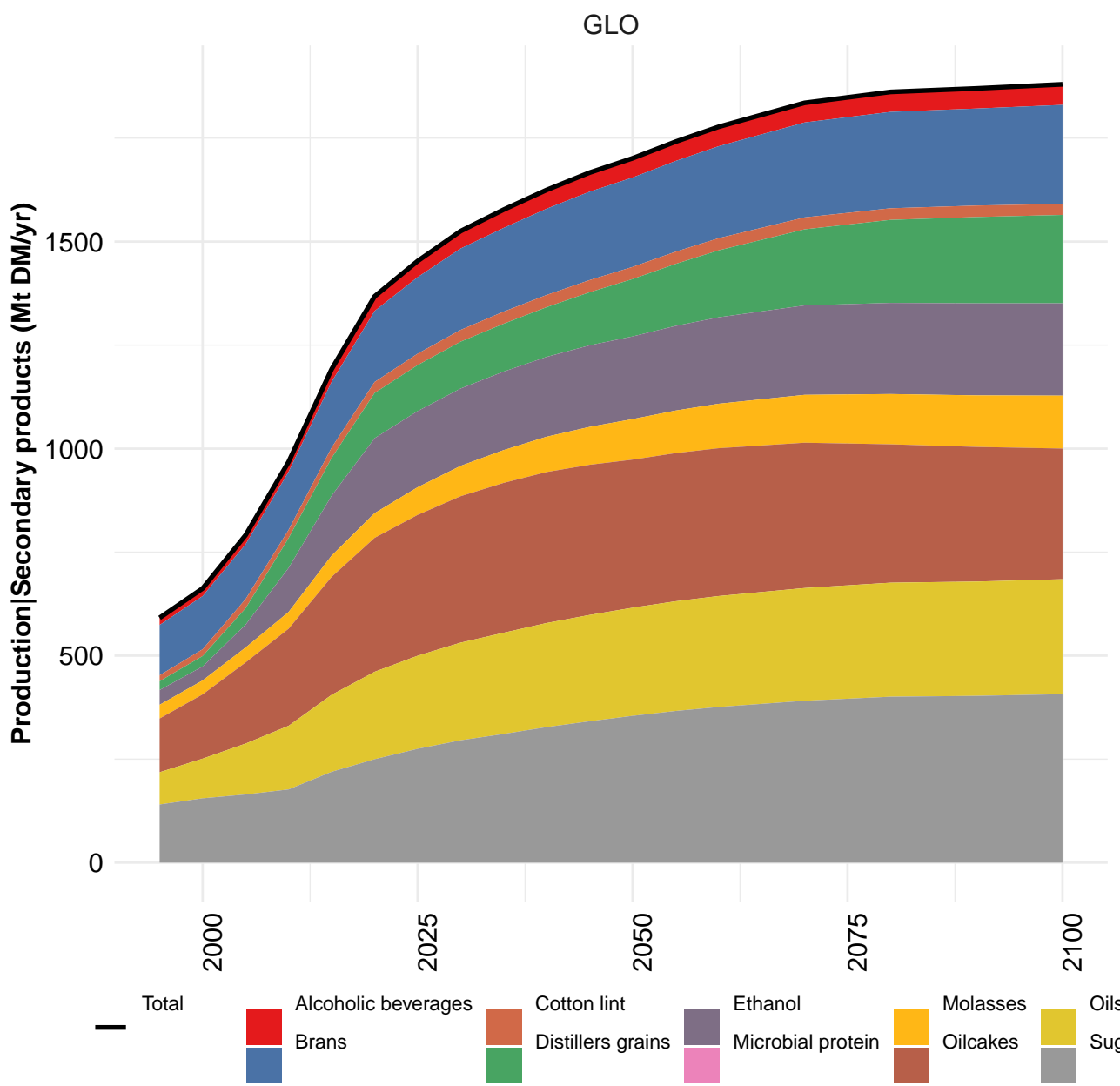
Table 1429: MAgPIE m4p\_SSP4 — Production—Pasture (Mt DM/yr) [PART 2/2]

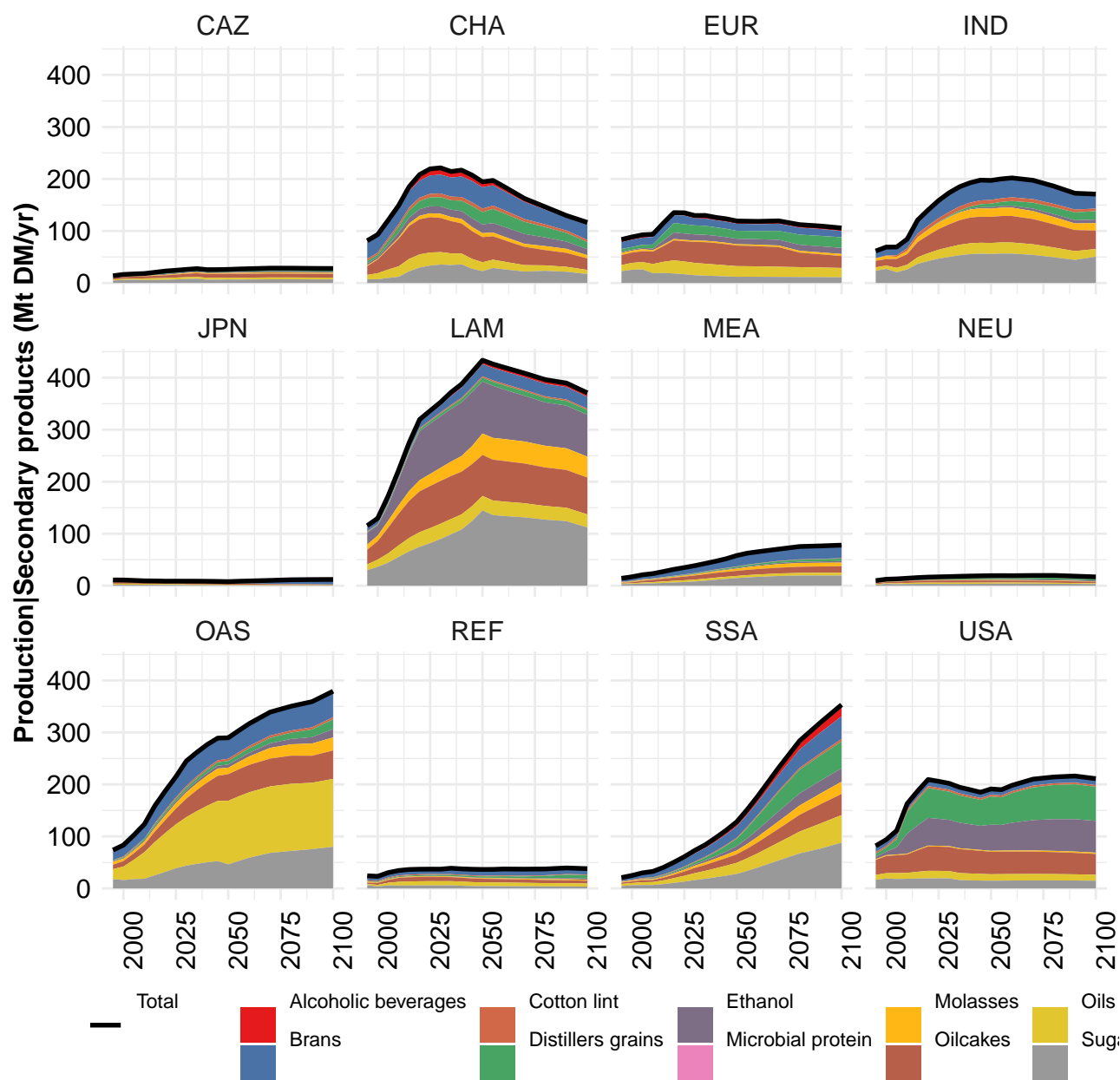
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3399	3506	3636	3709	3748	3832	4006	4290	4653	4931
CAZ	225	234	239	233	220	212	215	223	229	231
CHA	414	422	438	463	490	521	572	657	760	832
EUR	499	509	510	491	457	421	381	339	309	296
IND	287	288	295	311	328	342	367	429	522	594
JPN	10	10	9	9	8	8	7	7	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

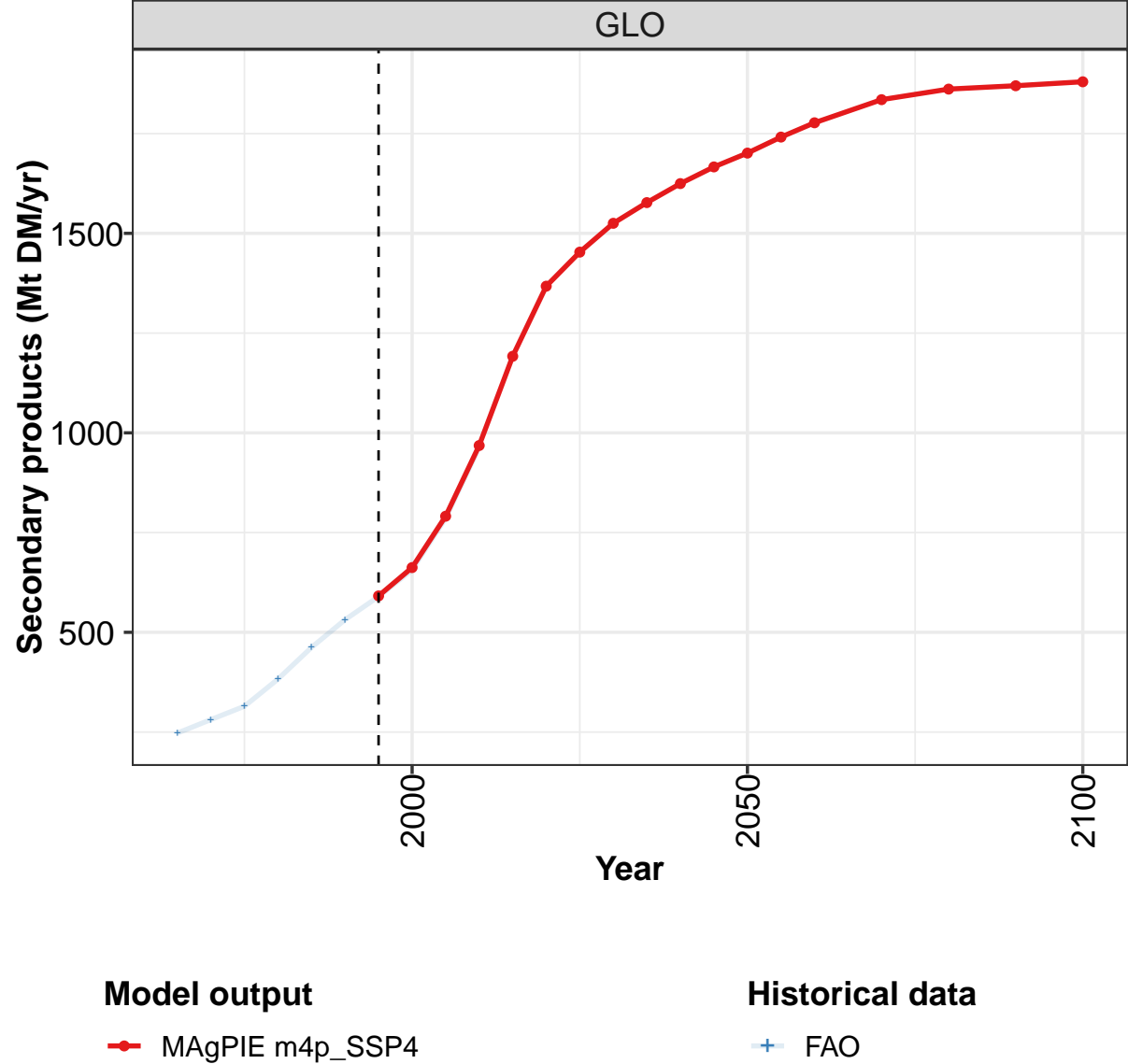
Table 1430: FAO — Production—Pasture (Mt DM/yr)



50 Secondary products







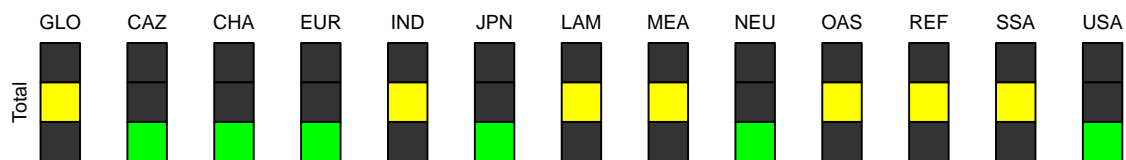
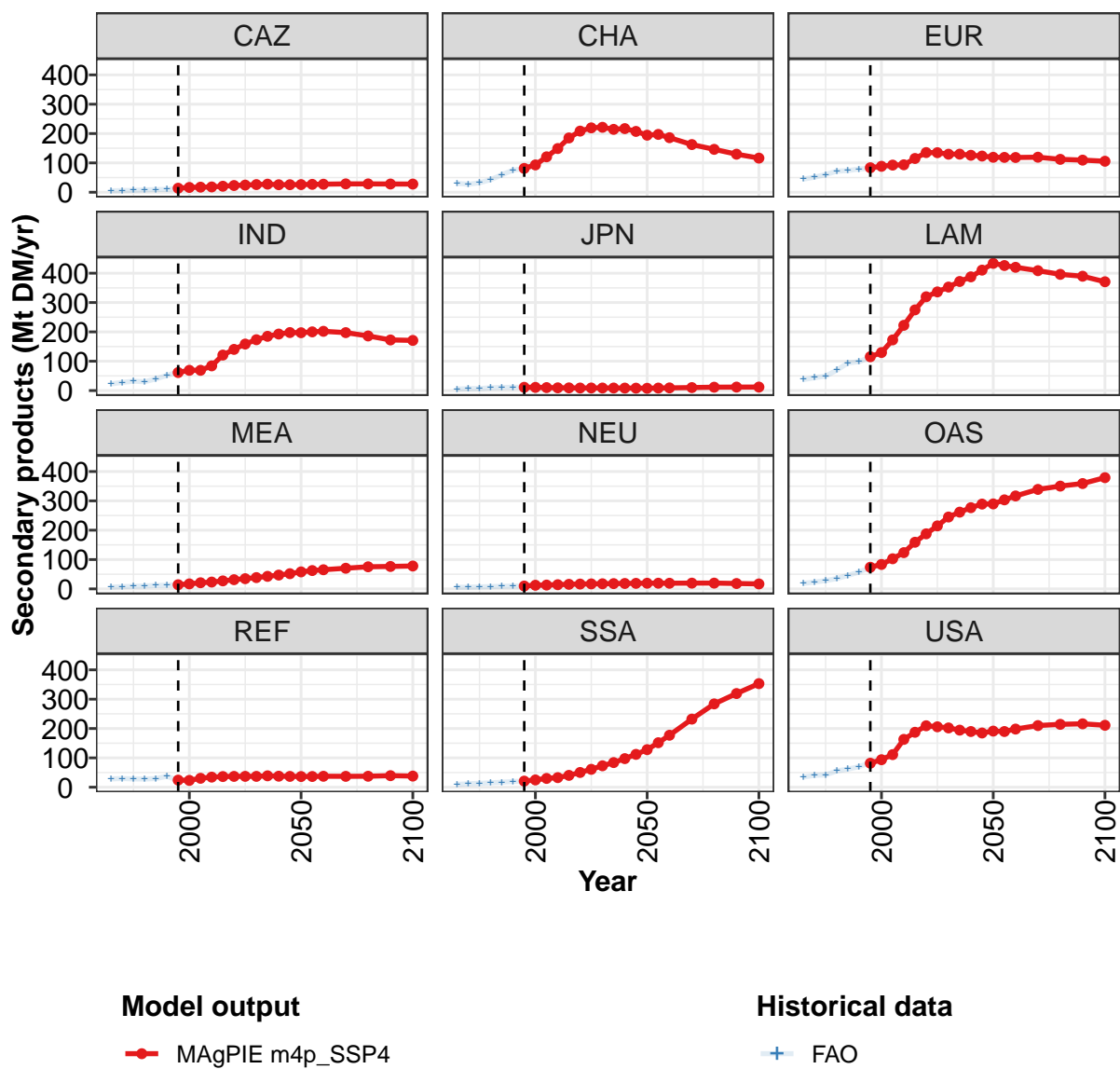


Figure 365: MAgPIE m4p\_SSP4 — Production—Secondary products (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	591	662	791	968	1192	1368	1453	1525	1577	1625	1667
CAZ	14	16	17	18	21	23	24	26	28	26	26
CHA	81	93	121	149	185	208	219	221	214	217	207
EUR	84	88	93	94	115	135	135	130	130	126	123
IND	61	69	69	84	121	140	159	173	185	193	198
JPN	11	11	10	9	9	9	9	9	9	9	8
LAM	115	130	173	222	275	320	336	353	372	388	411
MEA	14	17	21	23	27	31	35	39	43	47	52
NEU	10	12	13	14	16	16	17	17	18	19	19
OAS	74	83	103	124	159	188	215	245	262	277	289
REF	24	23	30	34	36	37	37	37	39	38	37
SSA	21	25	30	33	40	50	61	73	84	97	112
USA	82	94	111	163	187	209	206	202	194	190	185

Table 1431: MAgPIE m4p-SSP4 — Production—Secondary products (Mt DM/yr) [PART 1/2]

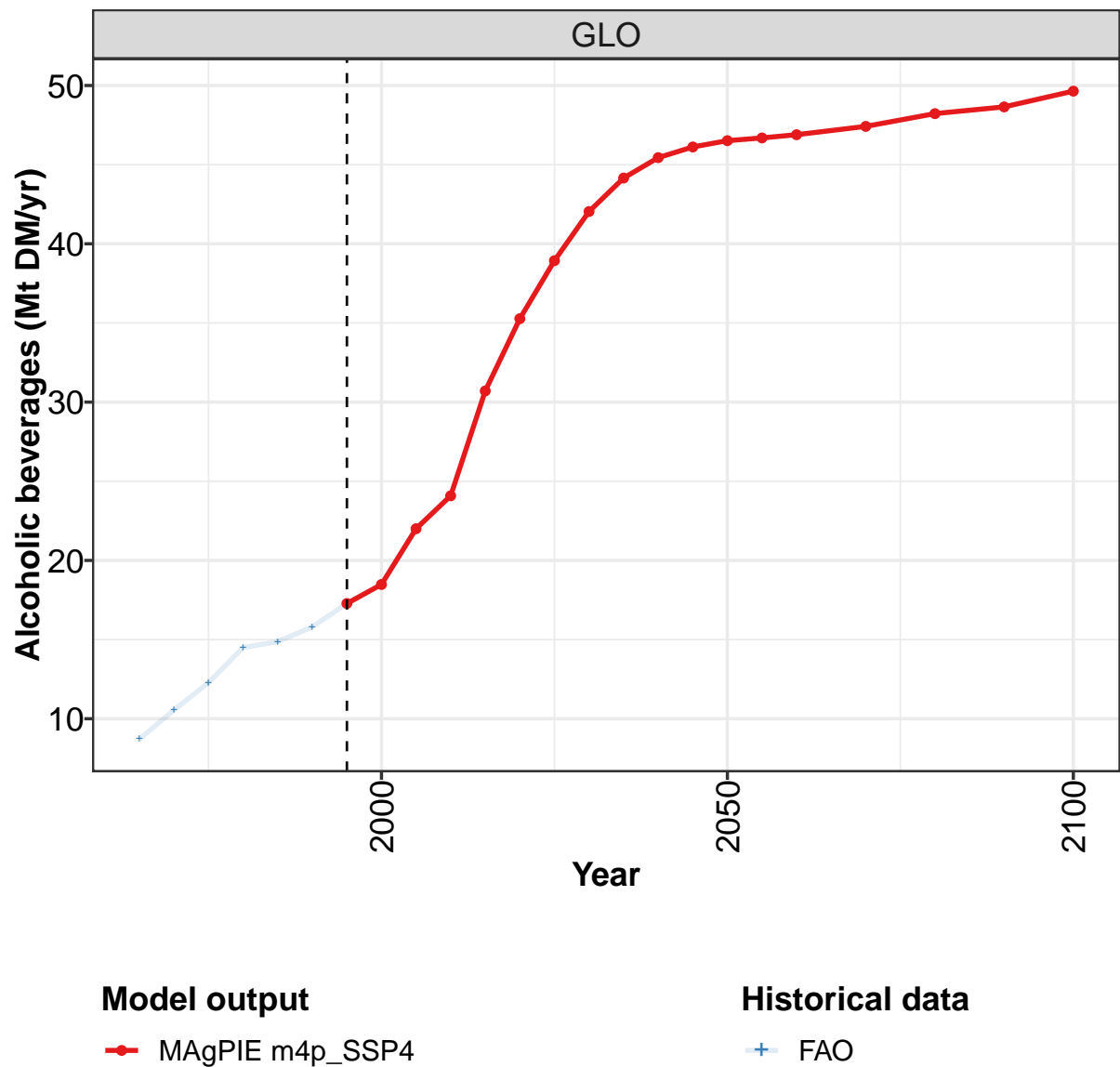
	2050	2055	2060	2070	2080	2090	2100
GLO	1701	1741	1777	1835	1862	1870	1880
CAZ	26	27	27	29	28	28	28
CHA	194	197	186	163	146	130	116
EUR	119	119	118	119	112	109	106
IND	197	200	202	197	186	173	171
JPN	8	9	9	10	11	12	12
LAM	434	426	420	409	396	390	371
MEA	58	63	65	70	75	76	78
NEU	19	19	19	20	20	18	17
OAS	290	304	317	339	350	359	379
REF	36	37	37	37	37	39	38
SSA	128	152	177	232	284	319	353
USA	191	190	198	210	214	216	211

Table 1432: MAgPIE m4p-SSP4 — 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



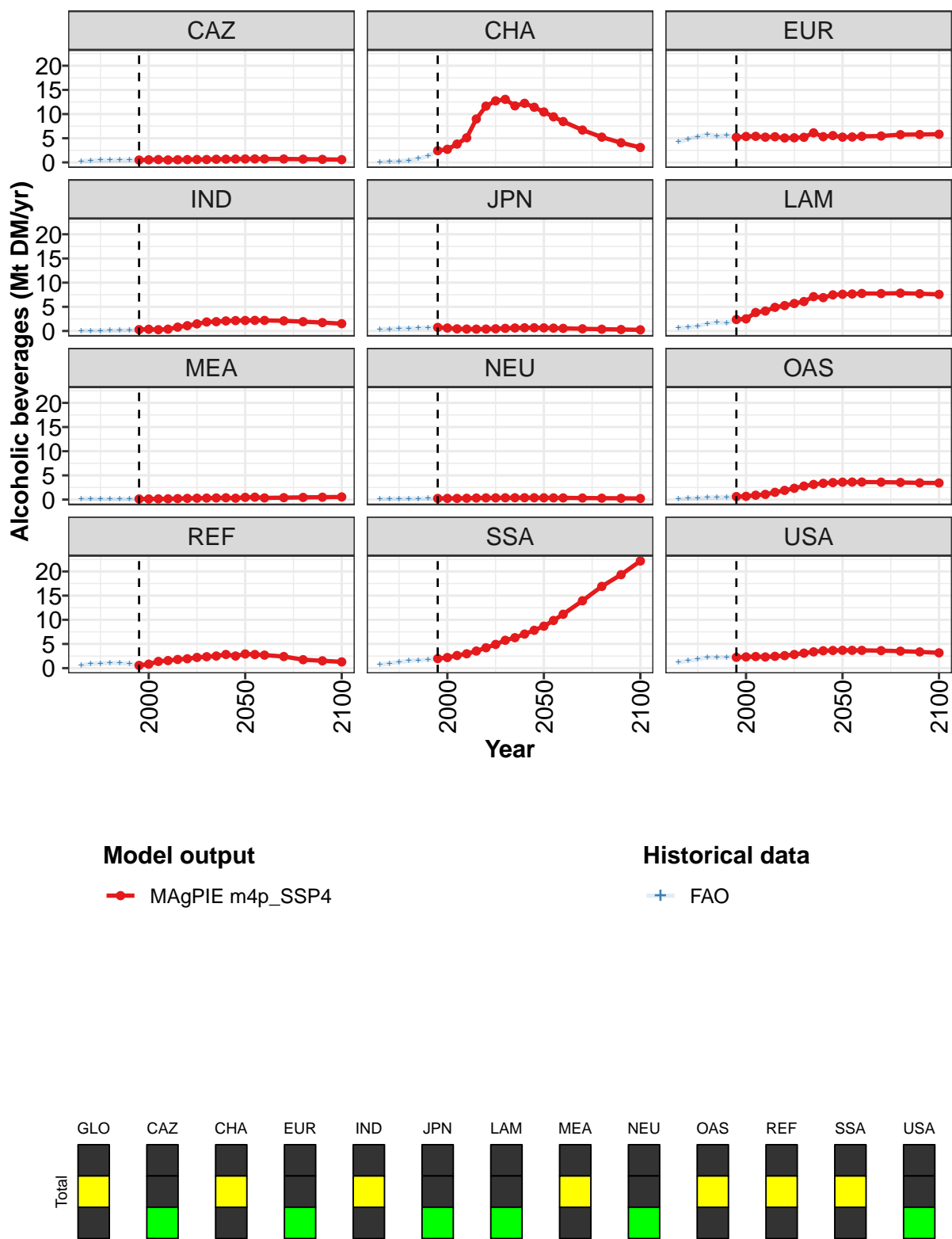


Figure 366: MAgPIE m4p\_SSP4 — Production—Secondary products—Alcoholic beverages (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.3	18.5	22.0	24.1	30.7	35.3	38.9	42.0	44.2	45.4	46.1
CAZ	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7
CHA	2.4	2.7	3.8	5.1	9.0	11.6	12.7	13.0	11.7	12.2	11.4
EUR	5.2	5.4	5.4	5.2	5.3	5.1	5.1	5.2	6.1	5.3	5.6
IND	0.3	0.4	0.3	0.4	0.8	1.1	1.5	1.9	1.9	2.1	2.2
JPN	0.7	0.6	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7
LAM	2.4	2.5	3.8	4.1	4.9	5.3	5.7	6.1	7.1	6.9	7.5
MEA	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3
NEU	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
OAS	0.6	0.7	0.9	1.1	1.5	1.9	2.3	2.8	3.1	3.4	3.5
REF	0.6	0.8	1.4	1.6	1.8	1.9	2.2	2.4	2.5	2.8	2.5
SSA	2.0	2.2	2.6	3.0	3.5	4.2	4.9	5.8	6.3	7.0	7.8
USA	2.2	2.3	2.4	2.3	2.4	2.6	2.8	3.1	3.4	3.6	3.7

Table 1434: MAgPIE m4p\_SSP4 — Production—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	46.5	46.7	46.9	47.4	48.2	48.6	49.6
CAZ	0.7	0.7	0.7	0.7	0.7	0.6	0.6
CHA	10.4	9.4	8.5	6.7	5.2	4.1	3.1
EUR	5.2	5.3	5.4	5.5	5.7	5.8	5.8
IND	2.2	2.2	2.2	2.1	1.9	1.7	1.5
JPN	0.6	0.6	0.5	0.5	0.4	0.3	0.2
LAM	7.6	7.7	7.8	7.7	7.8	7.7	7.6
MEA	0.5	0.5	0.3	0.4	0.4	0.5	0.5
NEU	0.4	0.4	0.3	0.3	0.3	0.3	0.2
OAS	3.6	3.6	3.6	3.6	3.5	3.5	3.4
REF	2.9	2.8	2.7	2.4	1.7	1.5	1.3
SSA	8.7	9.9	11.1	13.9	16.9	19.3	22.2
USA	3.7	3.7	3.7	3.6	3.5	3.4	3.2

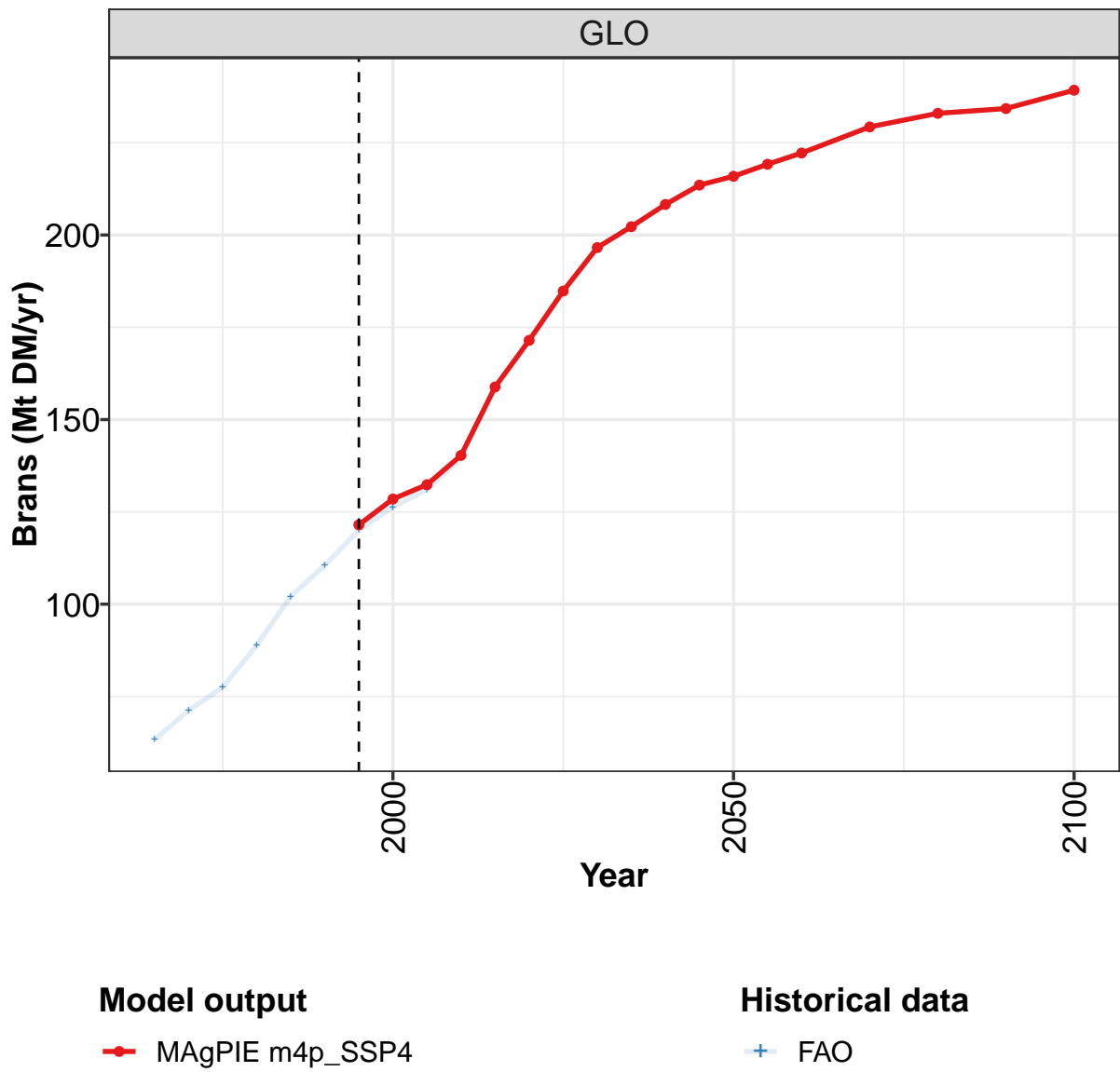
Table 1435: MAgPIE m4p\_SSP4 — Production—Secondary products—Alcoholic beverages (Mt DM/yr) [PART 2/2]

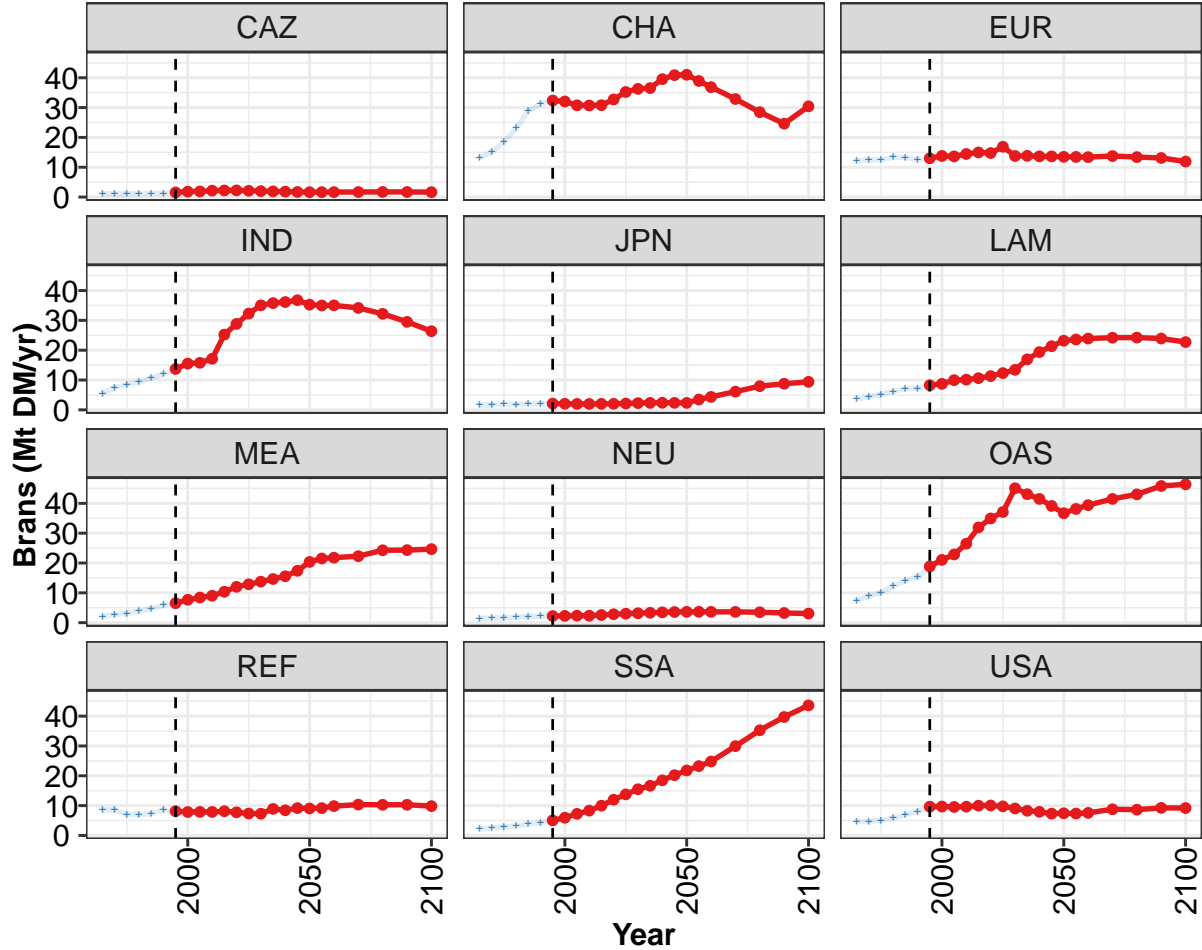
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	8.7	10.5	12.3	14.5	14.9	15.8	17.3	18.5	22.0	24.1
CAZ	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5
CHA	0.1	0.1	0.2	0.4	0.8	1.3	2.4	2.7	3.8	5.1
EUR	4.2	4.9	5.3	5.8	5.4	5.6	5.2	5.4	5.3	5.1
IND	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.4
JPN	0.3	0.4	0.5	0.6	0.6	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





Model output

—●— MAGPIE m4p\_SSP4

Historical data

—+— FAO

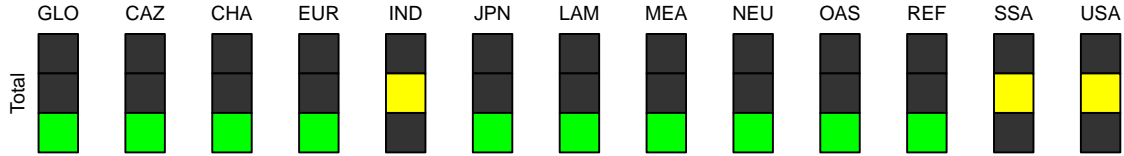


Figure 367: MAGPIE m4p\_SSP4 — Production—Secondary products—Brans (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	122	128	132	140	159	171	185	197	202	208	214
CAZ	2	2	2	2	2	2	2	2	2	2	2
CHA	32	32	31	31	31	33	35	36	37	40	41
EUR	13	14	14	14	15	15	17	14	14	14	14
IND	14	16	16	17	25	29	32	35	36	36	37
JPN	2	2	2	2	2	2	2	2	2	2	2
LAM	8	9	10	10	11	11	12	13	17	19	21
MEA	7	8	8	9	10	12	13	14	15	16	17
NEU	2	2	2	2	3	3	3	3	3	3	4
OAS	19	21	23	26	32	35	37	45	43	41	39
REF	8	8	8	8	8	8	7	7	9	8	9
SSA	5	6	7	8	10	12	14	16	17	18	20
USA	10	10	10	10	10	10	10	9	8	8	7

Table 1437: MAgPIE m4p\_SSP4 — Production—Secondary products—Brans (Mt DM/yr) [PART 1/2]

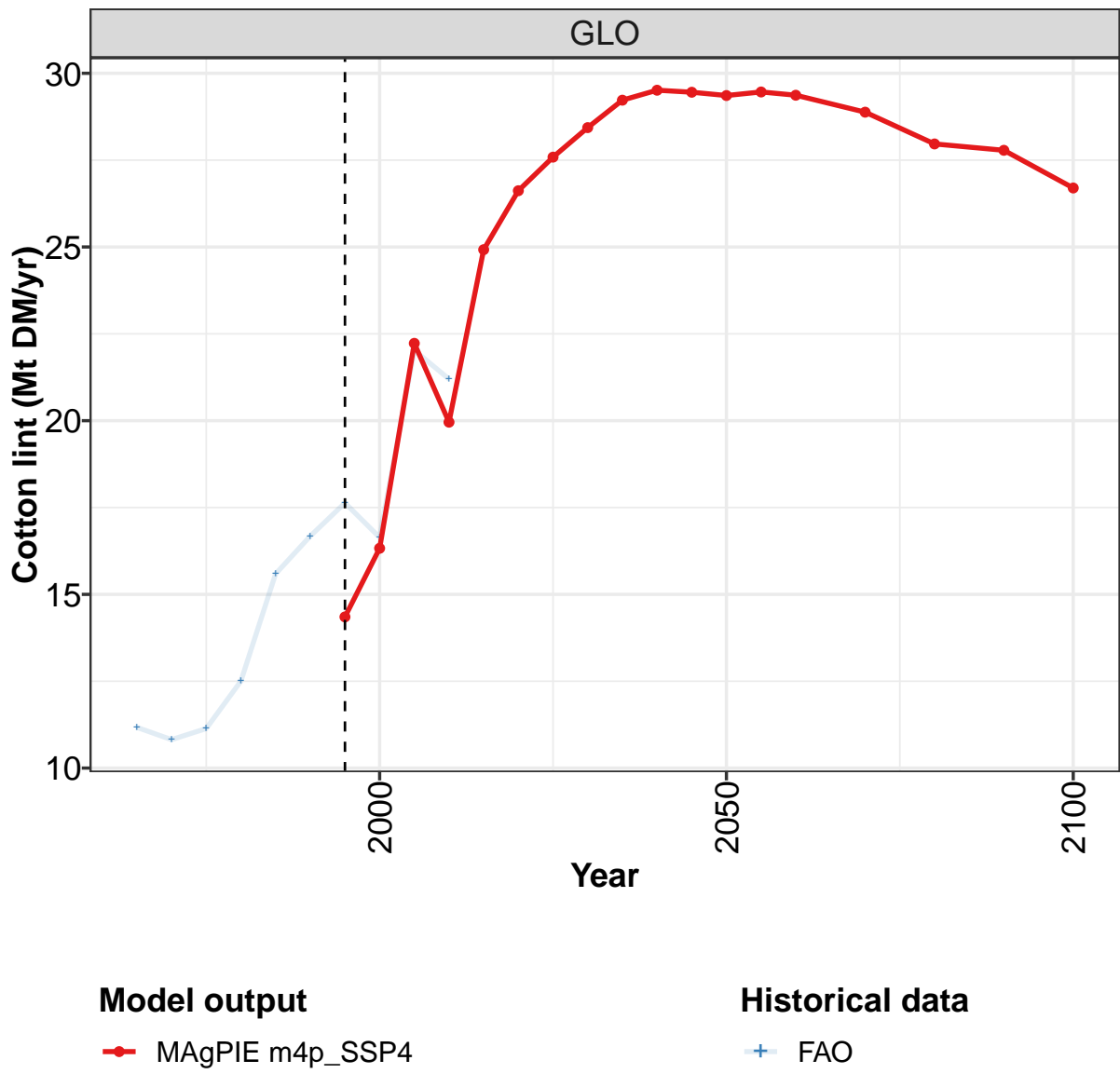
	2050	2055	2060	2070	2080	2090	2100
GLO	216	219	222	229	233	234	239
CAZ	2	2	2	2	2	2	2
CHA	41	39	37	33	28	25	30
EUR	13	13	13	14	13	13	12
IND	35	35	35	34	32	30	26
JPN	2	3	4	6	8	9	9
LAM	23	24	24	24	24	24	23
MEA	20	22	22	22	24	24	25
NEU	4	4	4	4	3	3	3
OAS	37	38	39	41	43	46	46
REF	9	9	10	10	10	10	10
SSA	22	23	25	30	35	40	44
USA	7	7	8	9	9	9	9

Table 1438: MAgPIE m4p\_SSP4 — 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



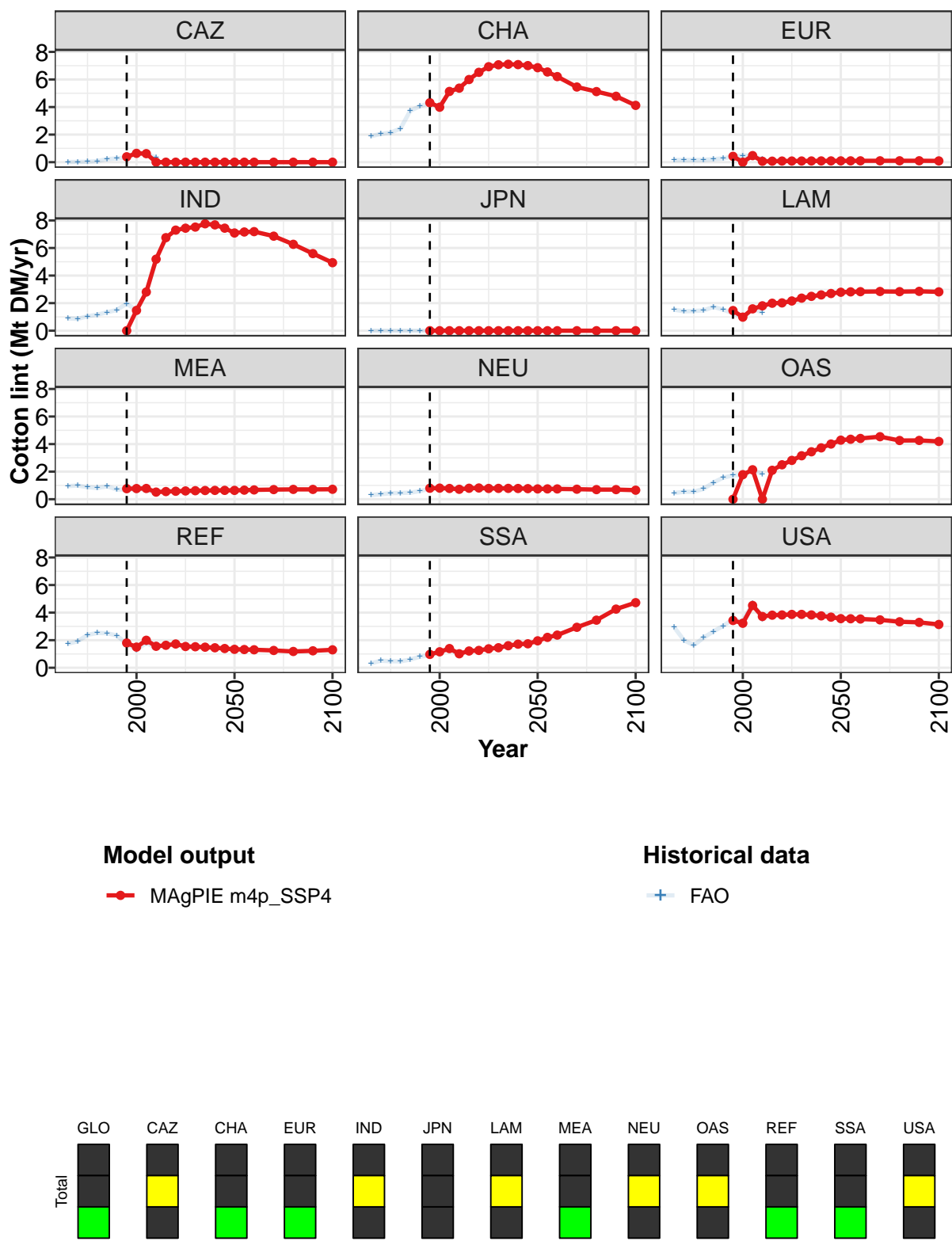


Figure 368: MAgPIE m4p\_SSP4 — Production—Secondary products—Cotton lint (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.4	16.3	22.2	20.0	24.9	26.6	27.6	28.4	29.2	29.5	29.5
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	7.1	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	6.8	7.3	7.4	7.5	7.8	7.7	7.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.5	1.0	1.6	1.8	2.0	2.0	2.2	2.4	2.5	2.6	2.7
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	0.8	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	3.2	3.4	3.7	4.0
REF	1.8	1.5	2.0	1.6	1.6	1.7	1.5	1.5	1.5	1.4	1.4
SSA	1.0	1.2	1.4	1.0	1.2	1.3	1.4	1.5	1.6	1.7	1.7
USA	3.4	3.2	4.5	3.7	3.8	3.8	3.9	3.9	3.8	3.8	3.7

Table 1440: MAgPIE m4p\_SSP4 — Production—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

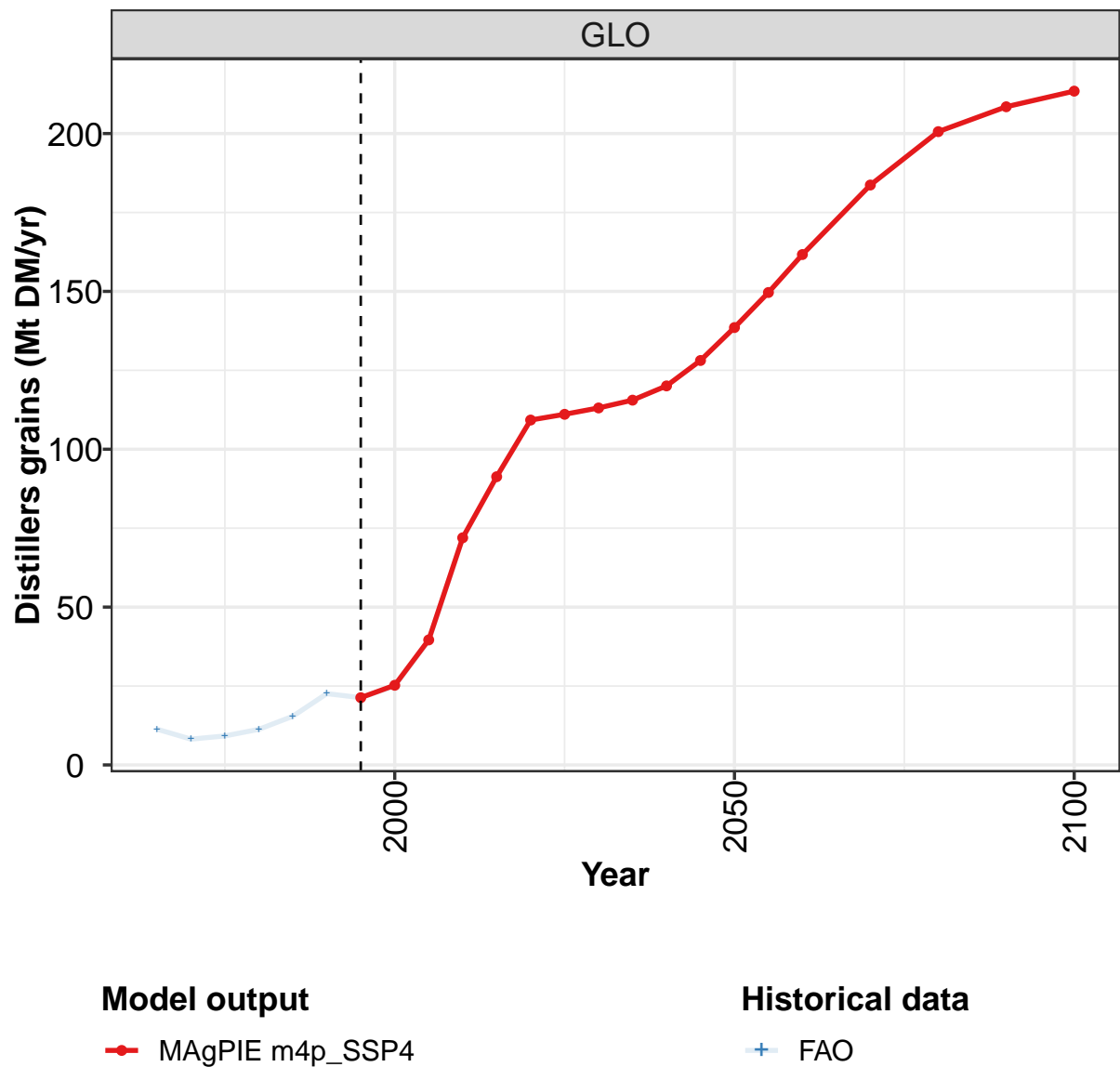
	2050	2055	2060	2070	2080	2090	2100
GLO	29.4	29.5	29.4	28.9	28.0	27.8	26.7
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	6.9	6.5	6.2	5.5	5.1	4.8	4.1
EUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	7.1	7.2	7.2	6.9	6.3	5.6	4.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	2.8	2.8	2.8	2.8	2.8	2.9	2.8
MEA	0.6	0.7	0.7	0.7	0.7	0.7	0.7
NEU	0.7	0.8	0.7	0.7	0.7	0.7	0.7
OAS	4.3	4.4	4.4	4.5	4.3	4.3	4.2
REF	1.3	1.3	1.3	1.3	1.2	1.2	1.3
SSA	2.0	2.2	2.4	2.9	3.5	4.3	4.7
USA	3.6	3.6	3.5	3.5	3.3	3.3	3.1

Table 1441: MAgPIE m4p\_SSP4 — 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



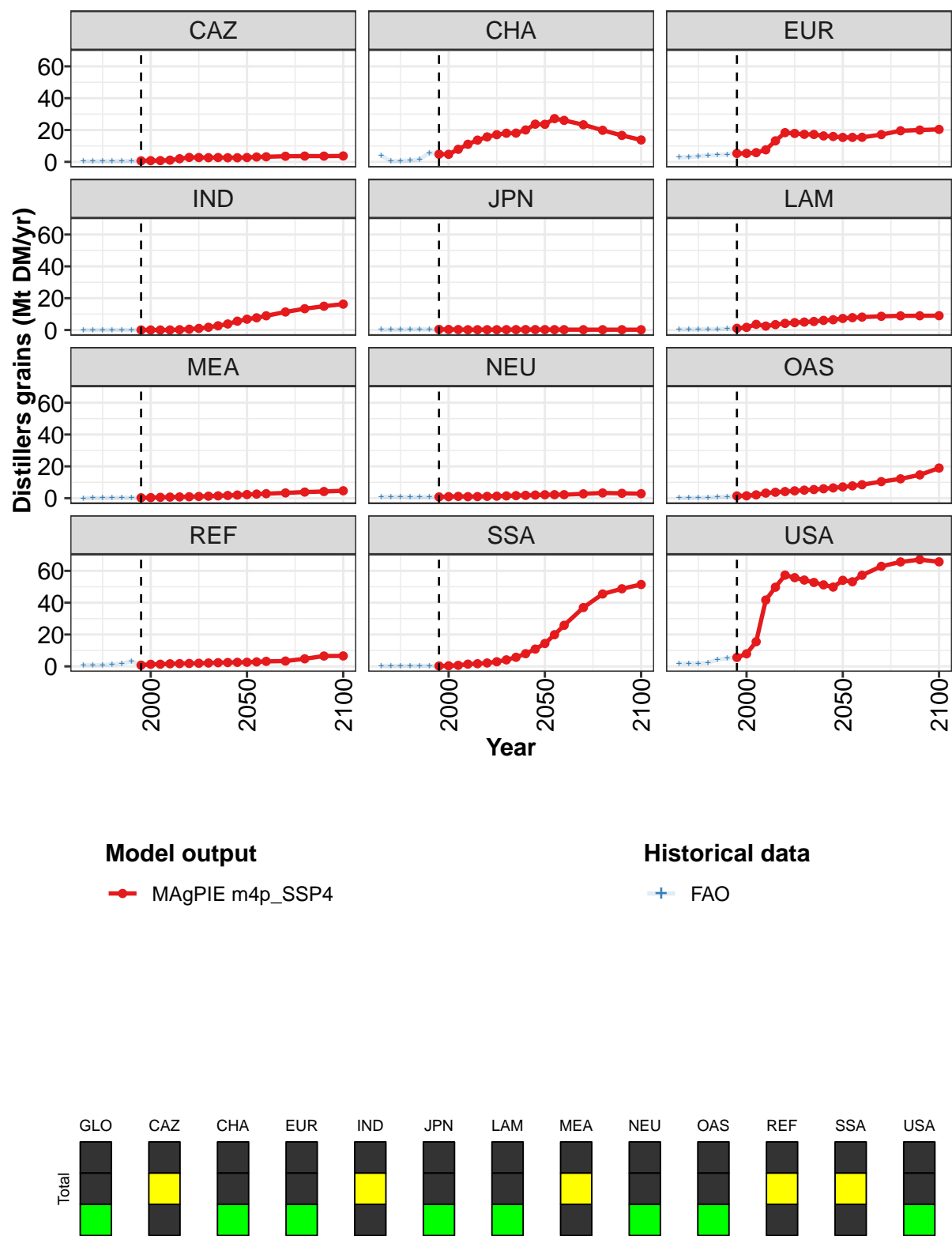


Figure 369: MAgPIE m4p\_SSP4 — Production—Secondary products—Distillers grains (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21	25	40	72	91	109	111	113	116	120	128
CAZ	1	1	1	1	2	3	3	3	3	3	3
CHA	5	5	8	11	14	16	17	18	18	20	24
EUR	5	5	6	8	13	18	18	17	17	16	16
IND	0	0	0	0	0	1	1	2	3	4	6
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	4	2	3	4	5	5	5	6	6
MEA	0	0	1	1	1	1	1	1	1	2	2
NEU	1	1	1	1	1	1	1	1	2	2	2
OAS	1	2	2	3	4	4	5	5	5	6	6
REF	1	1	1	2	2	2	2	2	2	2	3
SSA	0	0	1	1	2	2	3	4	6	8	11
USA	6	8	15	42	50	57	56	54	53	51	50

Table 1443: MAgPIE m4p\_SSP4 — Production—Secondary products—Distillers grains (Mt DM/yr) [PART 1/2]

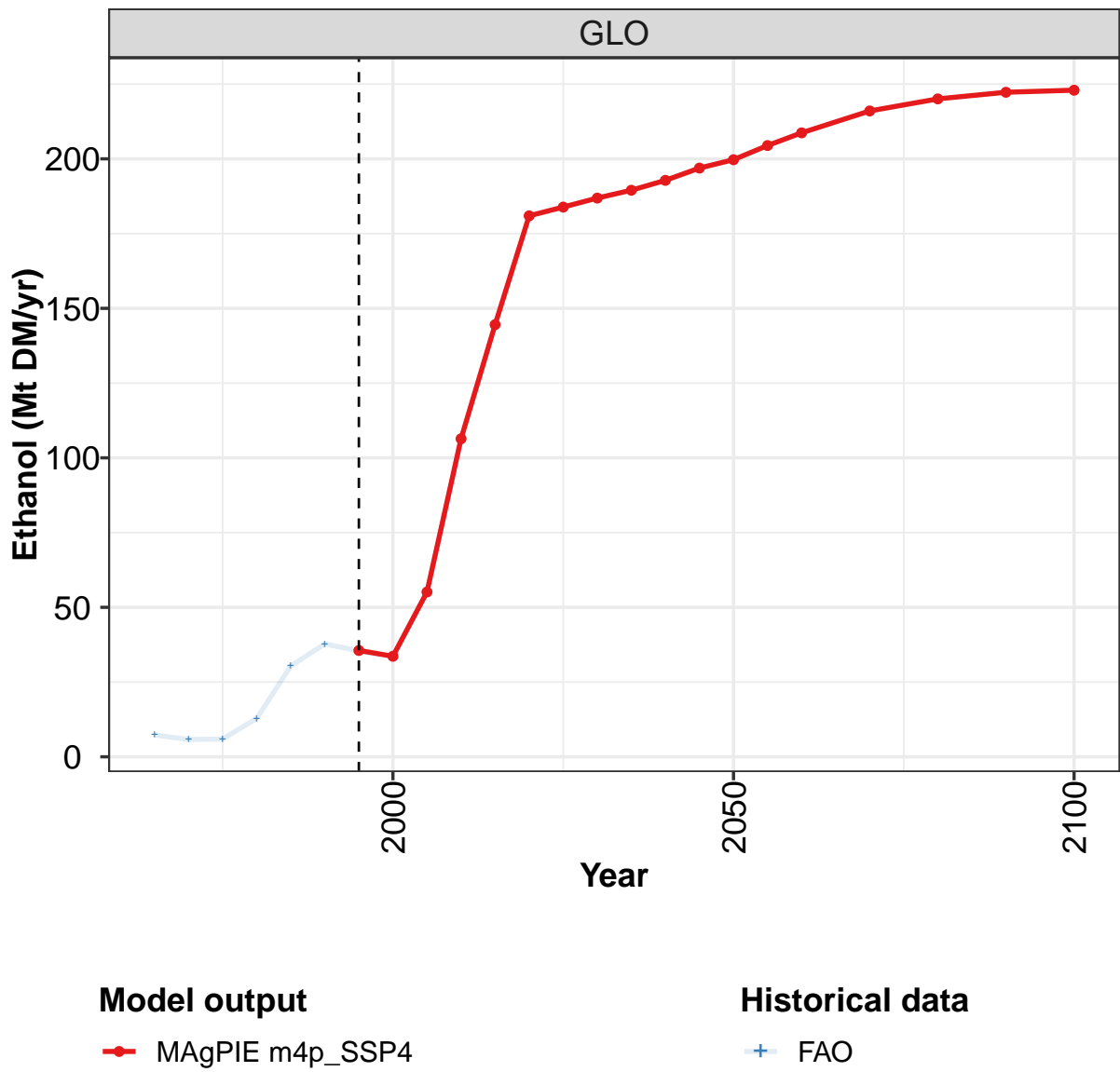
	2050	2055	2060	2070	2080	2090	2100
GLO	139	150	162	184	201	208	213
CAZ	3	3	3	4	4	4	4
CHA	24	27	26	23	20	17	14
EUR	15	15	15	17	20	20	20
IND	7	8	9	11	13	15	16
JPN	0	0	0	0	0	0	0
LAM	7	8	8	9	9	9	9
MEA	2	3	3	3	4	4	5
NEU	2	2	2	3	3	3	3
OAS	7	8	8	10	12	15	19
REF	3	3	3	3	5	6	7
SSA	14	20	26	37	45	49	51
USA	54	53	57	63	66	67	66

Table 1444: MAgPIE m4p\_SSP4 — 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



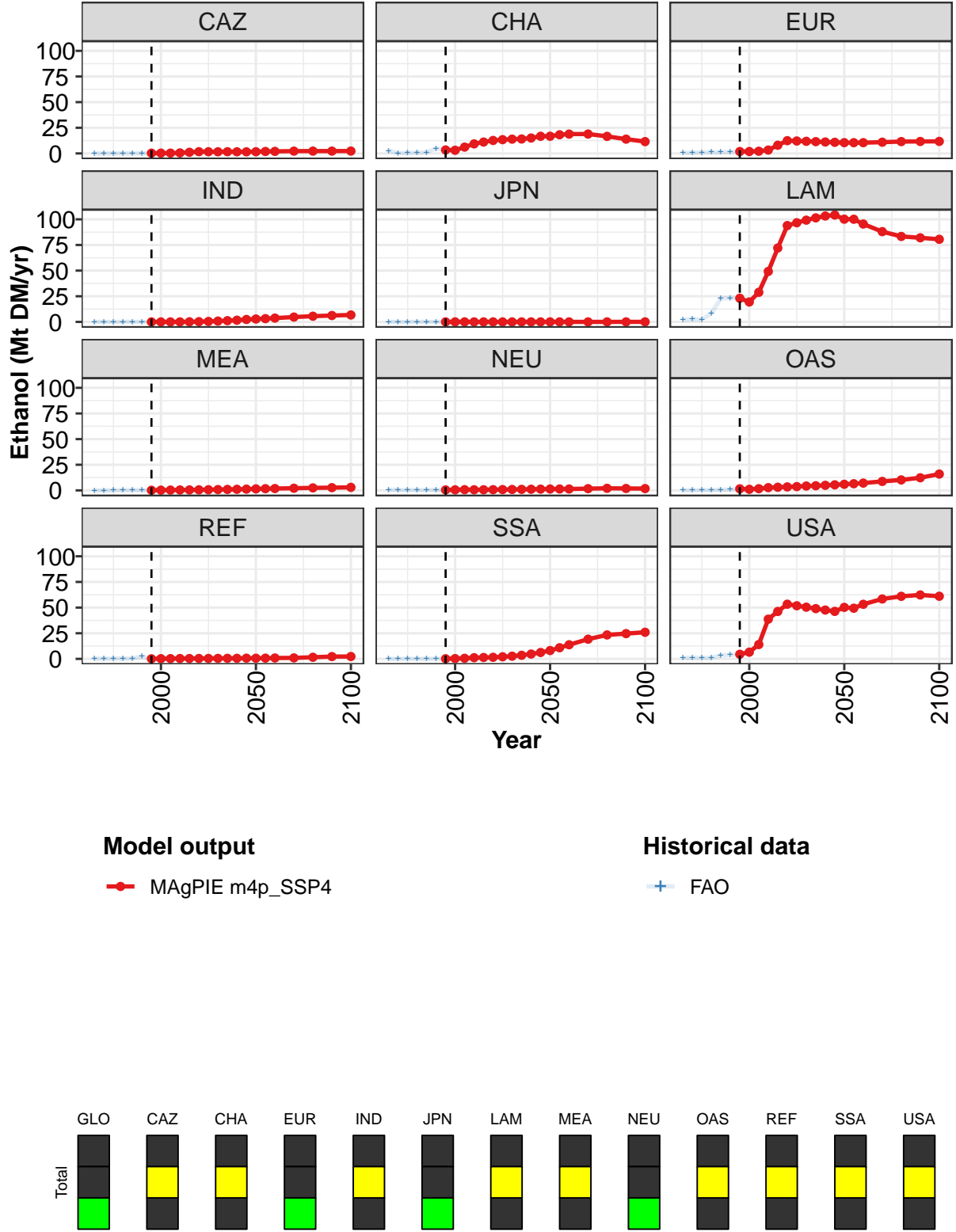


Figure 370: MAgPIE m4p\_SSP4 — Production—Secondary products—Ethanol (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	36	34	55	106	145	181	184	187	190	193	197
CAZ	0	0	0	1	1	2	2	2	2	2	2
CHA	3	3	6	9	11	13	13	14	14	15	17
EUR	2	2	2	3	8	12	12	12	11	11	11
IND	0	0	0	0	0	0	0	1	1	2	2
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	23	19	29	49	72	94	97	99	101	103	104
MEA	0	0	0	0	0	1	1	1	1	1	1
NEU	0	1	1	1	1	1	1	1	1	1	1
OAS	2	1	2	3	3	3	4	4	5	5	5
REF	0	0	0	0	0	0	0	0	1	1	1
SSA	0	0	1	1	1	2	2	3	4	5	6
USA	4	7	14	39	46	53	52	50	49	48	46

Table 1446: MAgPIE m4p\_SSP4 — Production—Secondary products—Ethanol (Mt DM/yr) [PART 1/2]

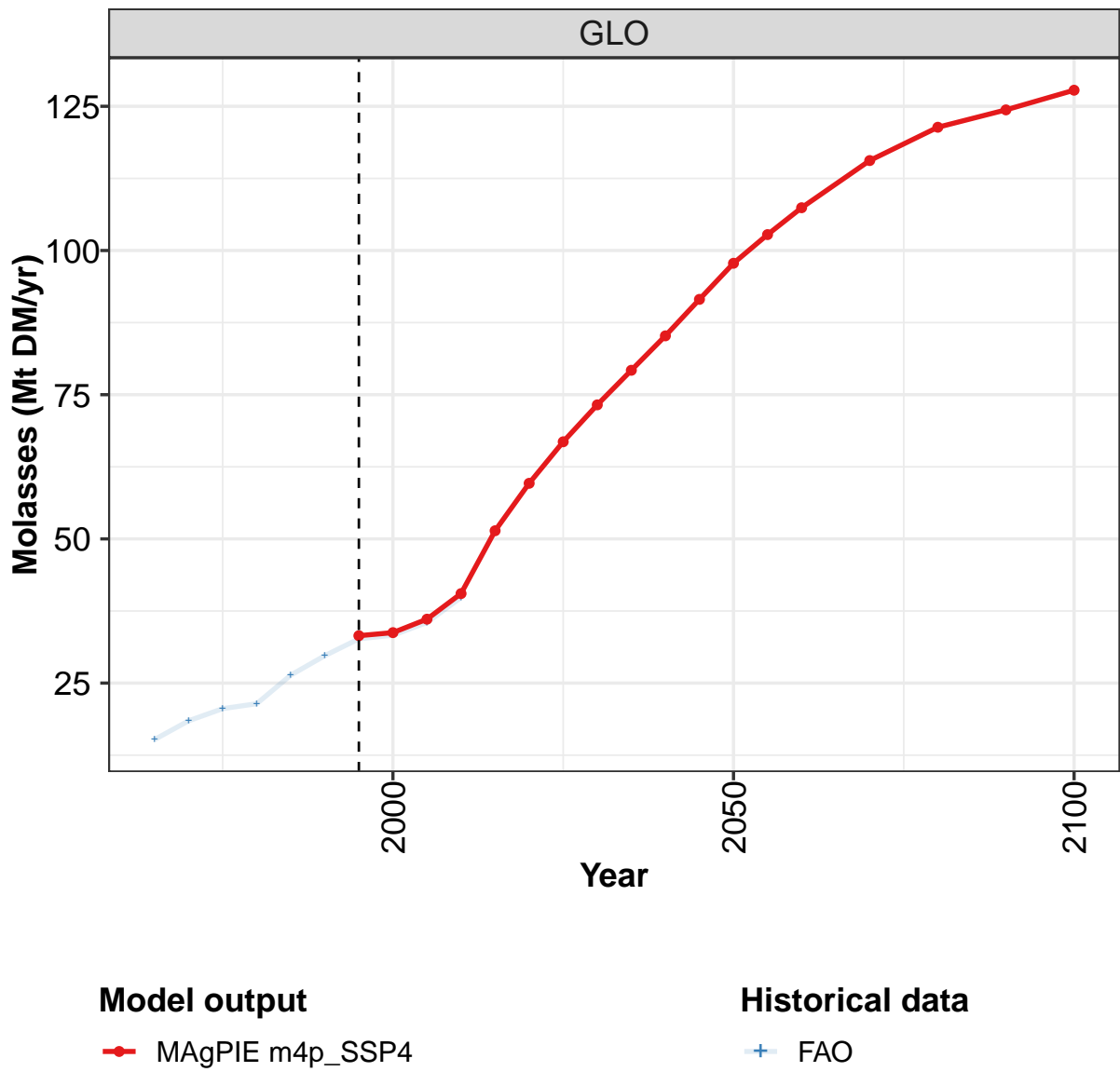
	2050	2055	2060	2070	2080	2090	2100
GLO	200	204	209	216	220	222	223
CAZ	2	2	2	2	2	2	2
CHA	17	18	19	19	17	14	12
EUR	11	11	10	11	12	12	12
IND	3	3	4	5	6	6	7
JPN	0	0	0	0	0	0	0
LAM	100	100	95	88	83	82	81
MEA	1	2	2	2	2	3	3
NEU	1	1	1	2	2	2	2
OAS	6	7	7	9	10	12	16
REF	1	1	1	1	2	2	2
SSA	8	11	14	19	23	25	26
USA	50	49	53	58	61	62	61

Table 1447: MAgPIE m4p\_SSP4 — 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



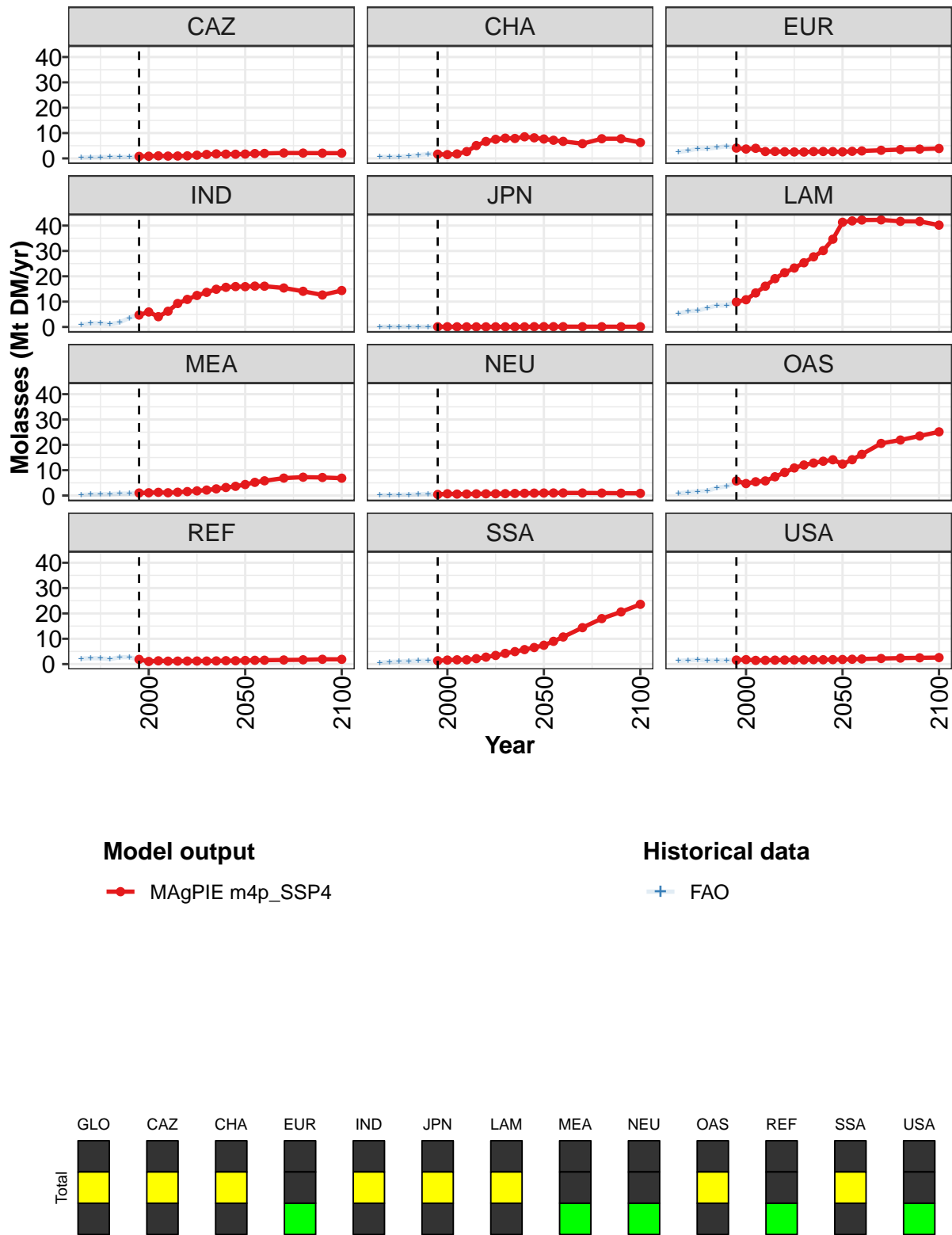


Figure 371: MAgPIE m4p\_SSP4 — Production—Secondary products—Molasses (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	33	34	36	41	51	60	67	73	79	85	92
CAZ	1	1	1	1	1	1	1	2	2	2	2
CHA	2	1	2	3	5	7	8	8	8	9	8
EUR	4	4	4	3	3	3	3	3	3	3	3
IND	5	6	4	6	9	11	12	14	15	16	16
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	10	11	13	16	19	21	23	25	28	30	35
MEA	1	1	1	1	1	2	2	2	3	3	4
NEU	0	1	1	1	1	1	1	1	1	1	1
OAS	6	5	5	6	7	9	11	12	13	14	14
REF	2	1	1	1	1	1	1	1	1	1	1
SSA	1	2	2	2	2	3	3	4	5	6	7
USA	2	2	1	2	2	2	2	2	2	2	2

Table 1449: MAgPIE m4p-SSP4 — Production—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

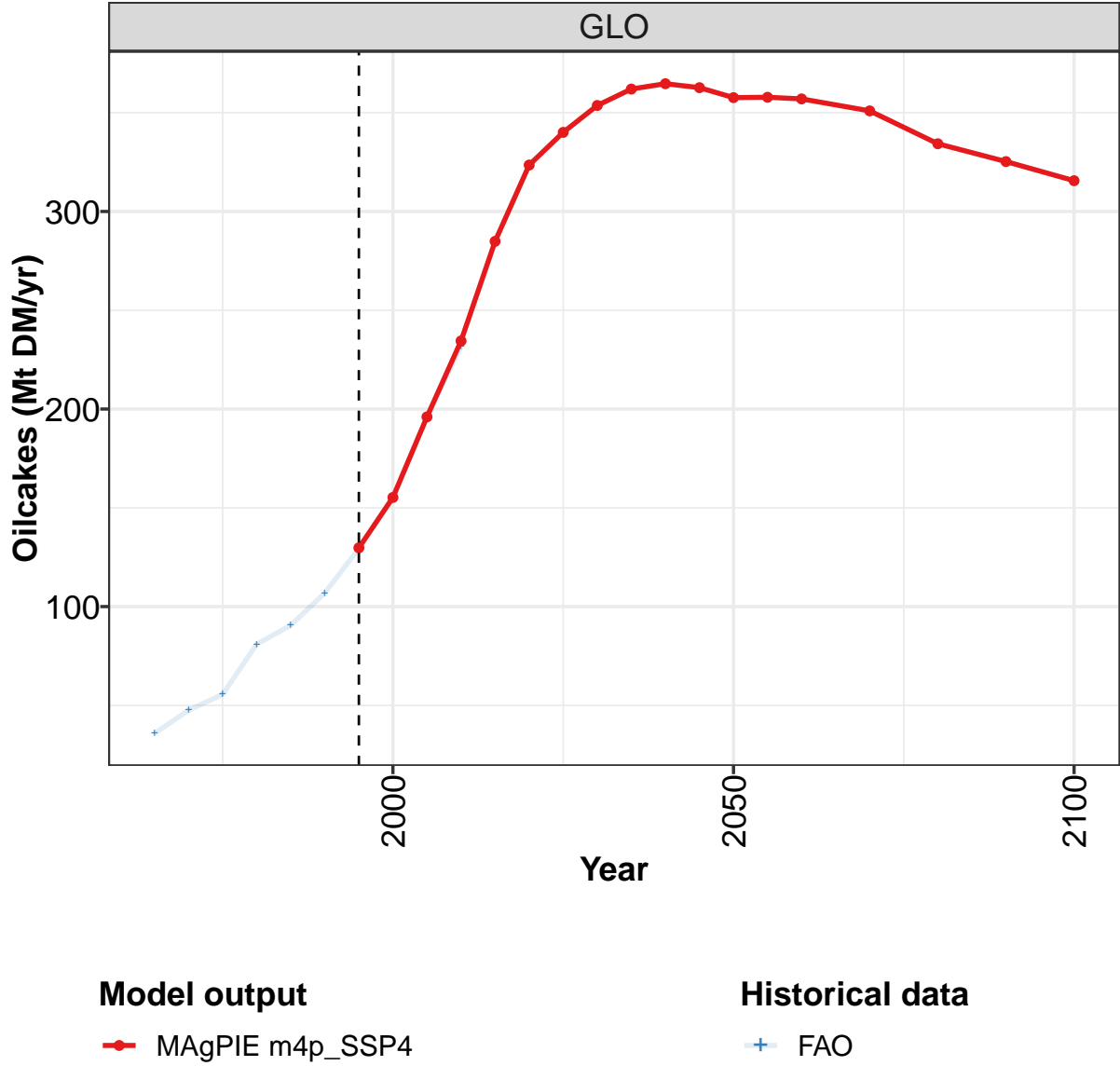
	2050	2055	2060	2070	2080	2090	2100
GLO	98	103	107	116	121	124	128
CAZ	2	2	2	2	2	2	2
CHA	8	7	7	6	8	8	6
EUR	3	3	3	3	3	4	4
IND	16	16	16	15	14	13	14
JPN	0	0	0	0	0	0	0
LAM	41	42	42	42	42	42	40
MEA	4	5	6	7	7	7	7
NEU	1	1	1	1	1	1	1
OAS	12	14	16	21	22	24	25
REF	1	1	2	2	2	2	2
SSA	7	9	11	14	18	21	24
USA	2	2	2	2	2	2	3

Table 1450: MAgPIE m4p-SSP4 — 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





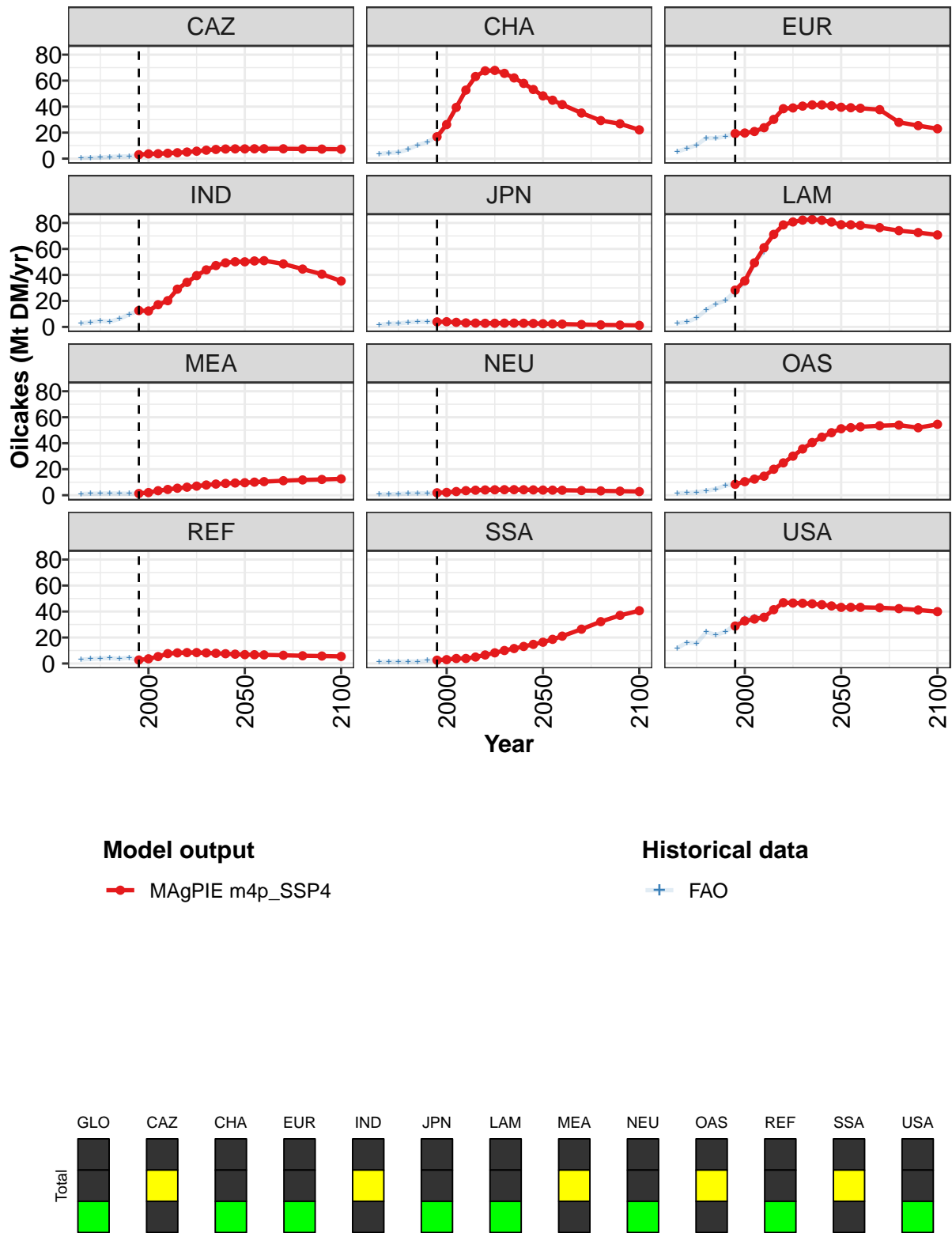


Figure 372: MAgPIE m4p\_SSP4 — Production—Secondary products—Oilcakes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	130	155	196	234	285	324	340	354	362	365	363
CAZ	3	4	4	4	5	5	6	6	7	7	8
CHA	17	26	39	53	63	68	68	66	62	58	53
EUR	19	20	21	24	30	38	39	40	41	41	41
IND	13	12	17	20	29	34	39	44	47	49	50
JPN	4	4	4	3	3	3	3	3	3	3	3
LAM	28	35	49	61	71	78	81	82	83	82	81
MEA	1	2	3	4	5	6	7	8	9	9	9
NEU	2	2	3	4	4	4	4	4	4	4	4
OAS	8	10	12	15	20	25	30	36	41	45	48
REF	3	4	5	8	8	8	8	8	8	8	7
SSA	3	3	4	4	5	7	8	10	12	13	15
USA	29	33	34	36	41	47	47	46	46	45	44

Table 1452: MAgPIE m4p-SSP4 — Production—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

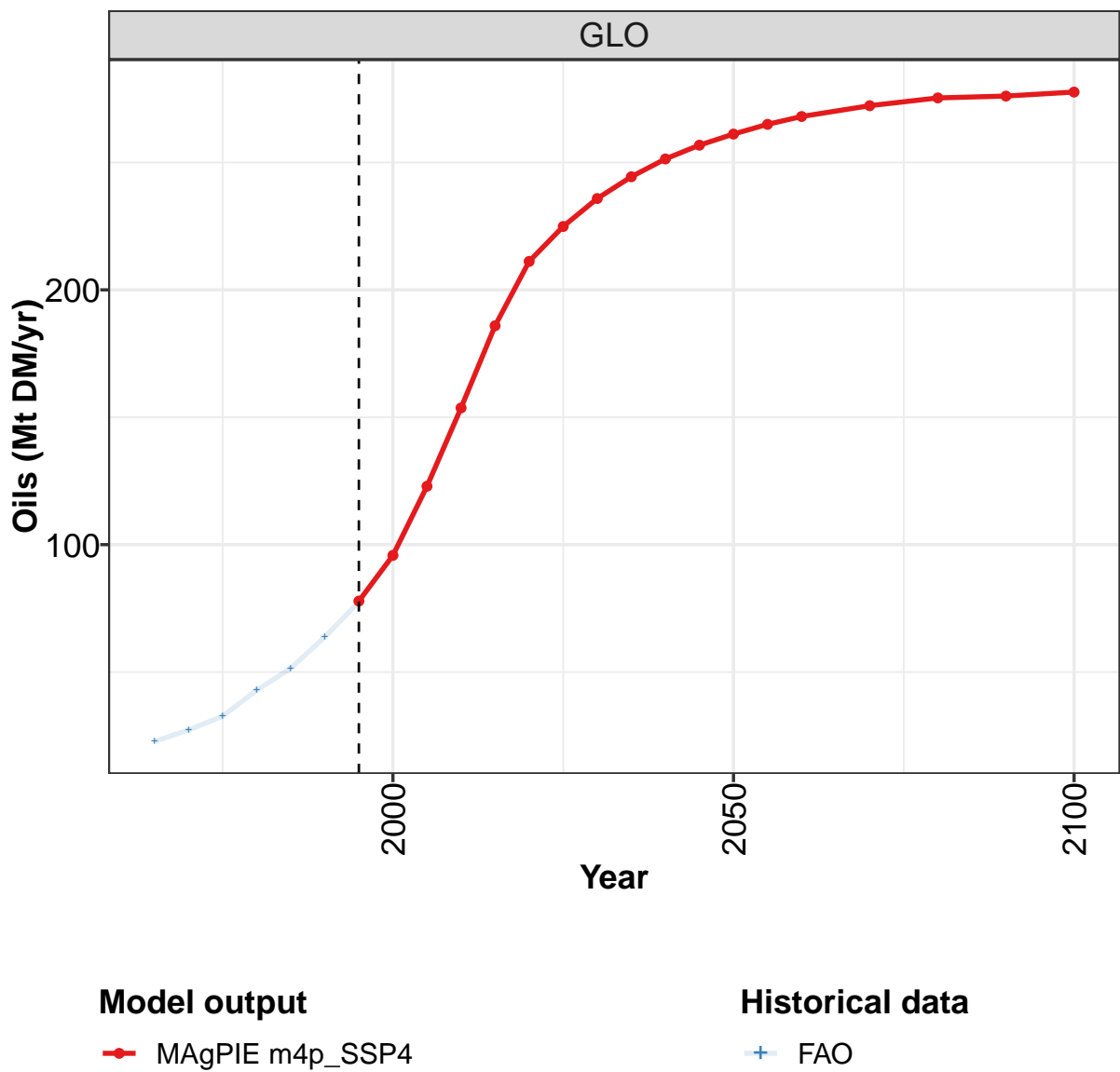
	2050	2055	2060	2070	2080	2090	2100
GLO	358	358	357	351	334	325	316
CAZ	7	8	8	8	7	7	7
CHA	48	45	42	35	29	27	22
EUR	40	39	39	38	28	25	23
IND	50	51	51	48	45	41	35
JPN	2	2	2	2	2	1	1
LAM	79	79	78	76	74	73	71
MEA	10	10	10	11	12	12	13
NEU	4	4	4	4	3	3	3
OAS	51	52	53	53	54	52	55
REF	7	7	7	6	6	6	5
SSA	16	19	21	26	32	37	41
USA	43	43	43	43	42	41	40

Table 1453: MAgPIE m4p-SSP4 — 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



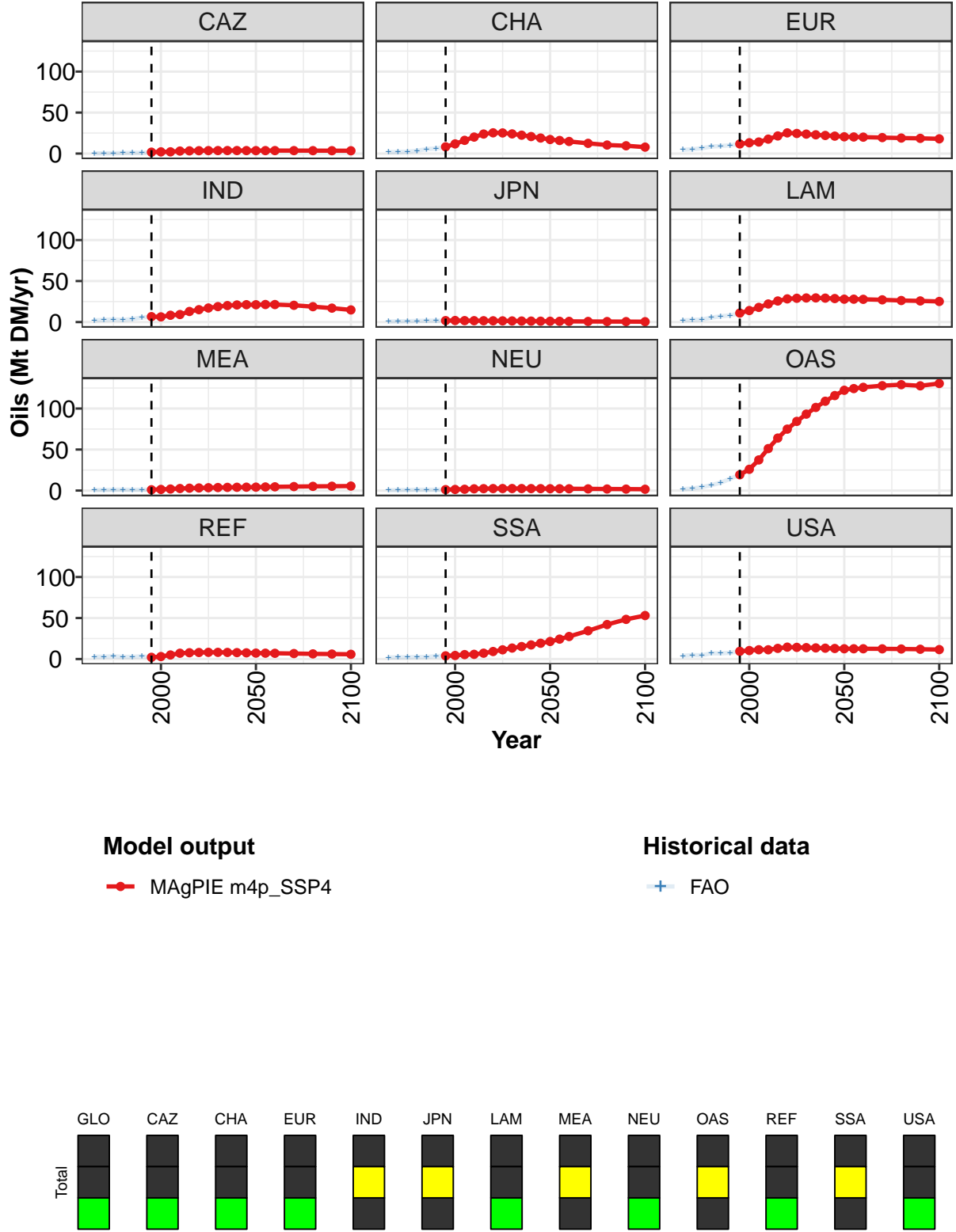


Figure 373: MAgPIE m4p\_SSP4 — Production—Secondary products—Oils (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	78	96	123	154	186	211	225	236	244	251	257
CAZ	2	2	2	3	3	4	4	4	4	4	4
CHA	8	12	16	20	24	25	25	24	22	21	19
EUR	12	13	14	18	22	25	25	24	23	22	21
IND	7	6	8	9	13	15	17	19	20	21	21
JPN	2	2	2	2	2	2	1	1	1	1	1
LAM	11	14	18	22	26	28	29	29	29	29	29
MEA	1	1	2	2	3	3	3	4	4	4	4
NEU	1	1	2	2	2	2	2	2	2	2	2
OAS	19	26	37	51	64	75	84	93	101	109	116
REF	2	3	5	7	8	8	8	8	8	8	8
SSA	4	4	5	6	7	9	11	13	15	17	19
USA	9	10	11	11	13	15	14	14	14	13	13

Table 1455: MAgPIE m4p\_SSP4 — Production—Secondary products—Oils (Mt DM/yr) [PART 1/2]

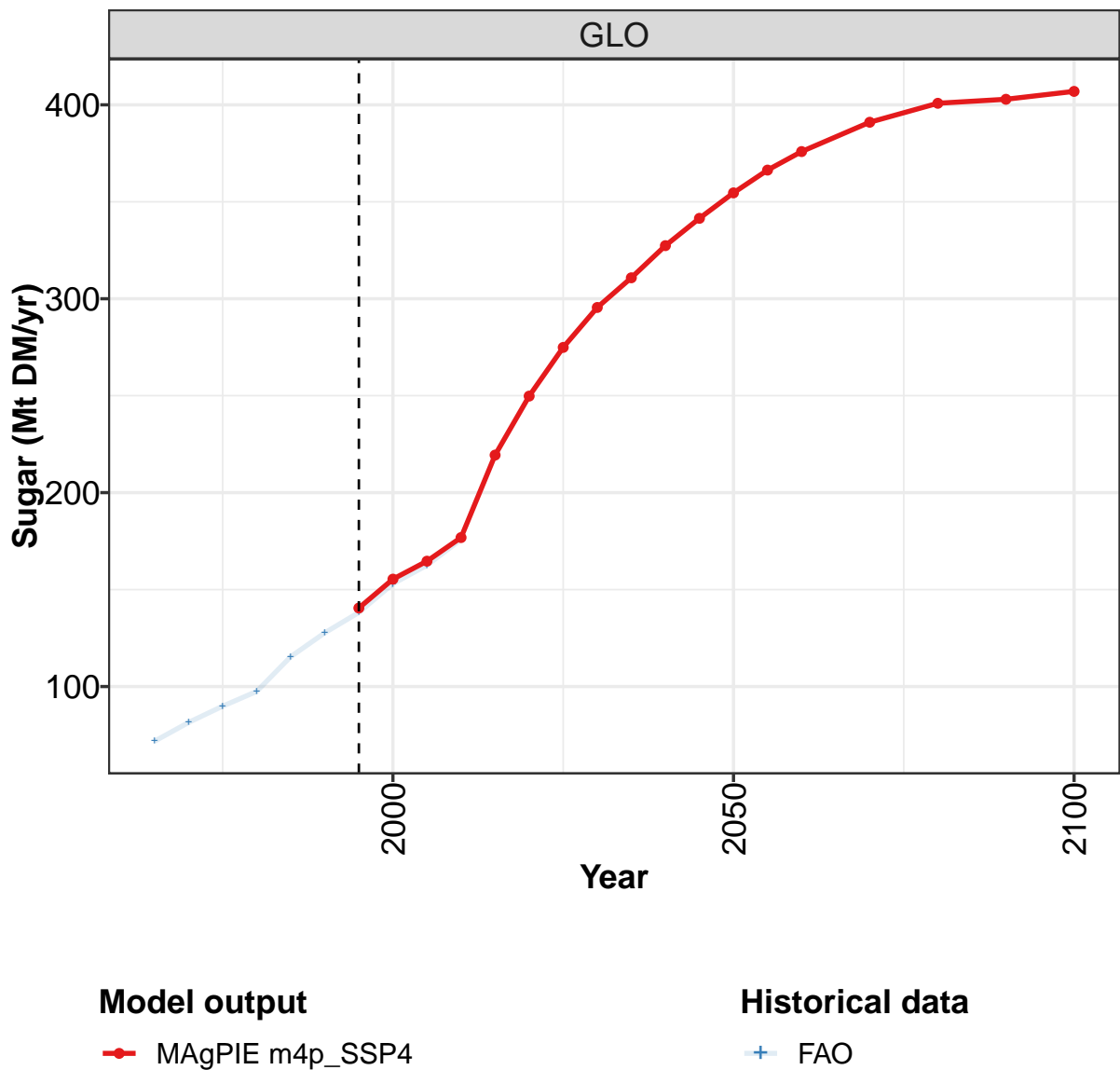
	2050	2055	2060	2070	2080	2090	2100
GLO	261	265	268	272	275	276	278
CAZ	4	4	4	4	4	4	3
CHA	17	16	15	12	10	10	8
EUR	20	20	20	20	19	19	18
IND	21	21	21	20	19	17	15
JPN	1	1	1	1	1	1	0
LAM	28	28	28	27	26	26	25
MEA	4	4	5	5	5	5	5
NEU	2	2	2	2	2	2	2
OAS	122	124	126	128	129	128	131
REF	7	7	7	7	6	6	6
SSA	21	24	27	34	42	48	53
USA	13	13	13	12	12	12	12

Table 1456: MAgPIE m4p\_SSP4 — 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



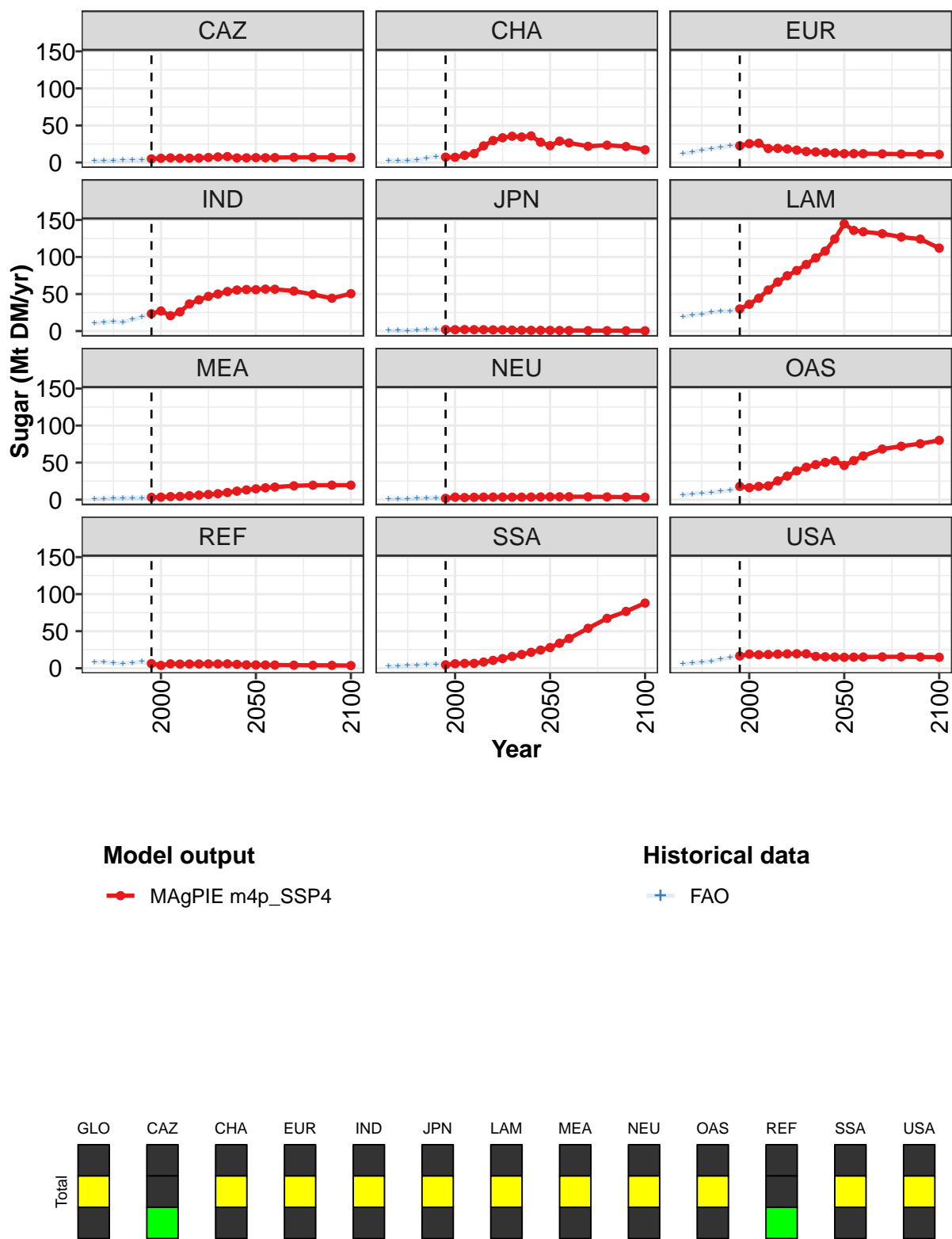


Figure 374: MAgPIE m4p\_SSP4 — Production—Secondary products—Sugar (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	140	155	165	177	219	250	275	296	311	327	341
CAZ	5	6	6	6	6	6	7	8	8	6	6
CHA	7	7	10	12	22	30	33	35	34	36	27
EUR	23	25	26	19	19	18	17	15	14	13	13
IND	23	27	21	26	37	42	47	50	53	55	56
JPN	2	2	2	2	2	2	2	1	1	1	1
LAM	30	36	44	55	66	75	82	90	99	108	124
MEA	3	3	4	4	5	6	7	8	10	11	13
NEU	2	3	3	3	3	3	3	3	3	4	4
OAS	18	16	18	19	25	32	39	44	47	50	53
REF	6	4	6	6	6	6	6	6	6	5	5
SSA	5	6	7	7	8	11	13	16	19	22	25
USA	17	19	18	19	19	19	20	19	16	15	15

Table 1458: MAgPIE m4p\_SSP4 — Production—Secondary products—Sugar (Mt DM/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	355	366	376	391	401	403	407
CAZ	7	6	7	7	7	7	7
CHA	23	29	26	22	23	22	17
EUR	12	12	12	12	11	11	11
IND	56	57	56	54	49	44	51
JPN	1	1	1	1	1	0	0
LAM	145	136	134	131	127	124	112
MEA	15	16	17	19	19	20	20
NEU	4	4	4	4	4	3	3
OAS	46	53	59	68	72	75	80
REF	4	4	4	4	4	4	4
SSA	28	34	40	54	67	77	88
USA	15	15	15	15	15	15	15

Table 1459: MAgPIE m4p\_SSP4 — 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

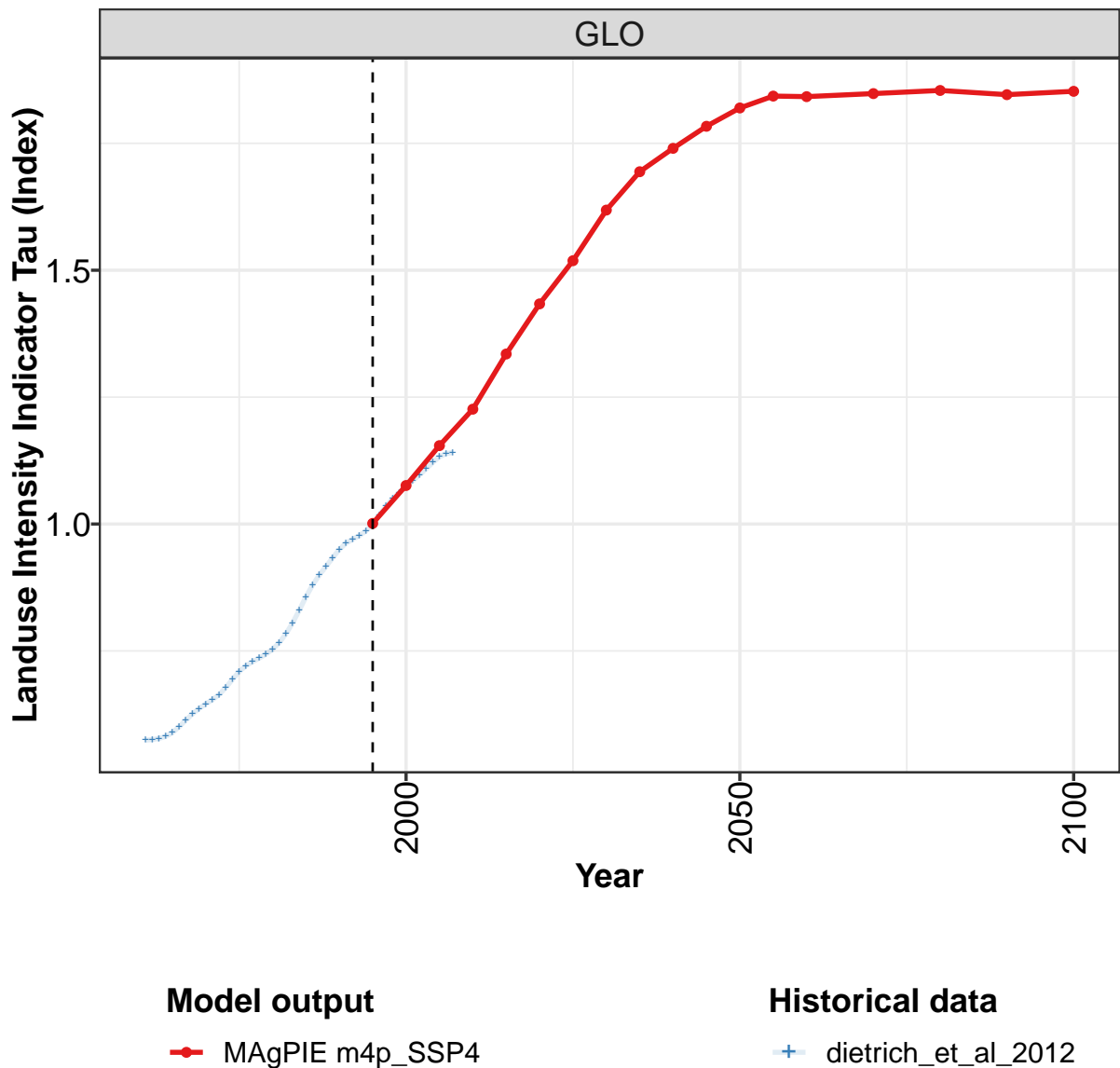
Table 1460: FAO — Production—Secondary products—Sugar (Mt DM/yr)



Part XIII

Productivity

51 Landuse Intensity Indicator Tau



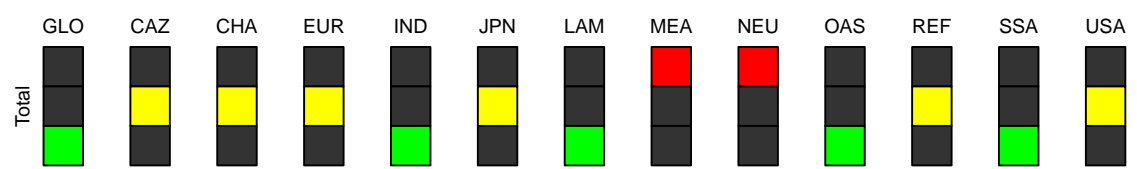
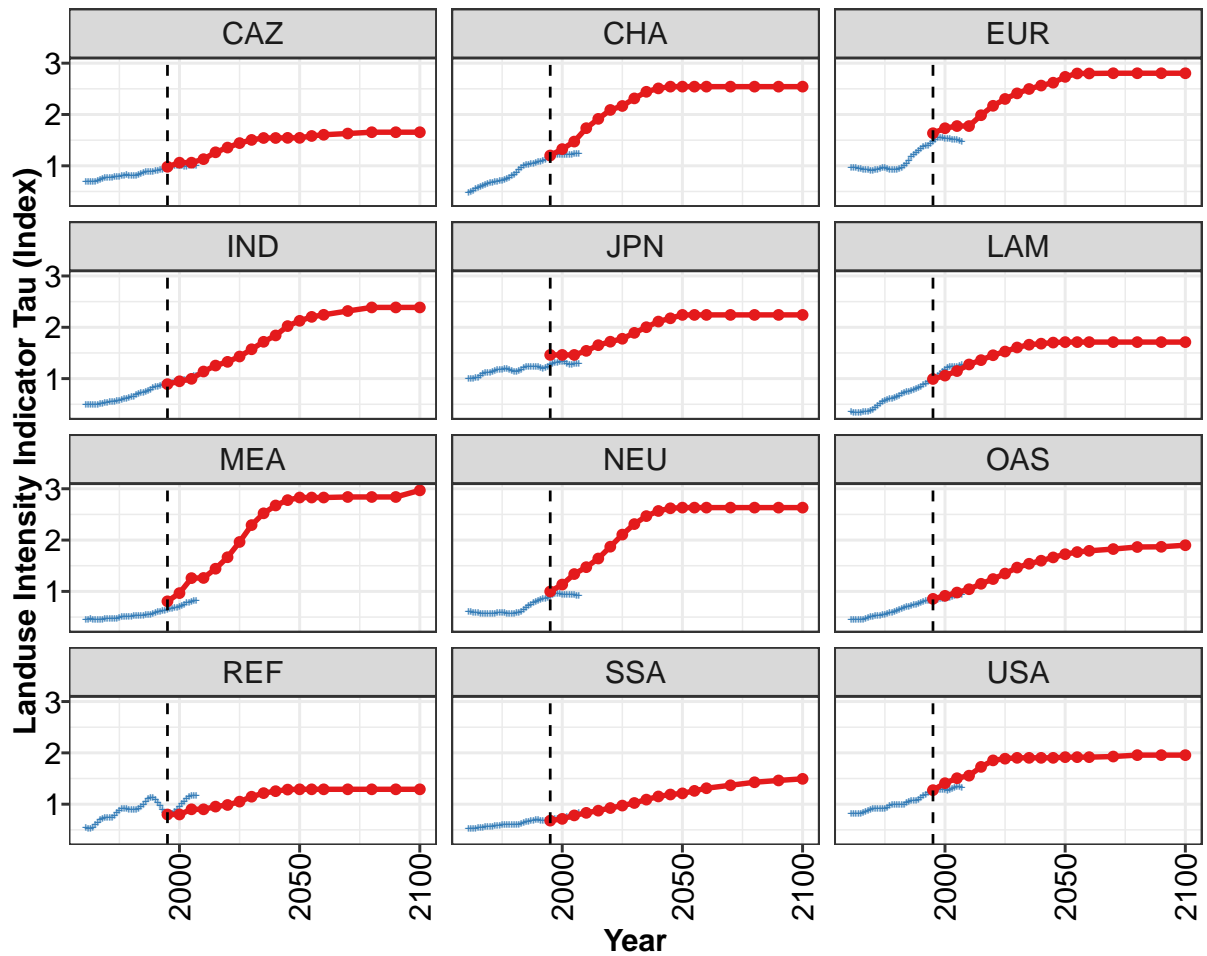


Figure 375: MAgPIE m4p\_SSP4 — Productivity—Landuse Intensity Indicator Tau (Index)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.00	1.08	1.15	1.23	1.33	1.43	1.52	1.62	1.69	1.74	1.78
CAZ	0.98	1.06	1.06	1.13	1.26	1.36	1.44	1.50	1.54	1.54	1.55
CHA	1.20	1.33	1.47	1.73	1.92	2.09	2.17	2.31	2.44	2.51	2.54
EUR	1.64	1.73	1.78	1.78	1.99	2.17	2.30	2.41	2.50	2.56	2.62
IND	0.89	0.95	1.00	1.14	1.25	1.33	1.43	1.57	1.72	1.84	2.02
JPN	1.46	1.46	1.46	1.54	1.65	1.72	1.78	1.89	2.00	2.11	2.18
LAM	0.99	1.06	1.15	1.28	1.36	1.46	1.53	1.61	1.66	1.68	1.70
MEA	0.81	0.97	1.26	1.26	1.44	1.67	1.96	2.29	2.52	2.67	2.78
NEU	1.00	1.13	1.34	1.47	1.64	1.87	2.11	2.31	2.47	2.57	2.62
OAS	0.85	0.91	0.98	1.04	1.15	1.24	1.35	1.47	1.54	1.60	1.66
REF	0.80	0.80	0.90	0.90	0.95	0.99	1.05	1.15	1.22	1.25	1.28
SSA	0.68	0.71	0.78	0.83	0.87	0.93	0.97	1.02	1.09	1.15	1.19
USA	1.27	1.41	1.51	1.56	1.73	1.85	1.89	1.90	1.90	1.90	1.90

Table 1461: MAgPIE m4p\_SSP4 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.82	1.84	1.84	1.85	1.85	1.85	1.85
CAZ	1.55	1.58	1.61	1.63	1.66	1.66	1.66
CHA	2.54	2.54	2.54	2.54	2.54	2.54	2.54
EUR	2.73	2.80	2.80	2.80	2.80	2.80	2.80
IND	2.13	2.20	2.24	2.32	2.39	2.39	2.39
JPN	2.24	2.24	2.24	2.24	2.24	2.24	2.24
LAM	1.71	1.71	1.71	1.71	1.71	1.71	1.71
MEA	2.83	2.83	2.83	2.84	2.84	2.84	2.97
NEU	2.63	2.63	2.63	2.63	2.63	2.63	2.63
OAS	1.73	1.77	1.79	1.83	1.87	1.87	1.90
REF	1.29	1.29	1.29	1.29	1.29	1.29	1.29
SSA	1.21	1.26	1.31	1.37	1.43	1.46	1.49
USA	1.92	1.92	1.92	1.93	1.96	1.96	1.96

Table 1462: MAgPIE m4p\_SSP4 — 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]

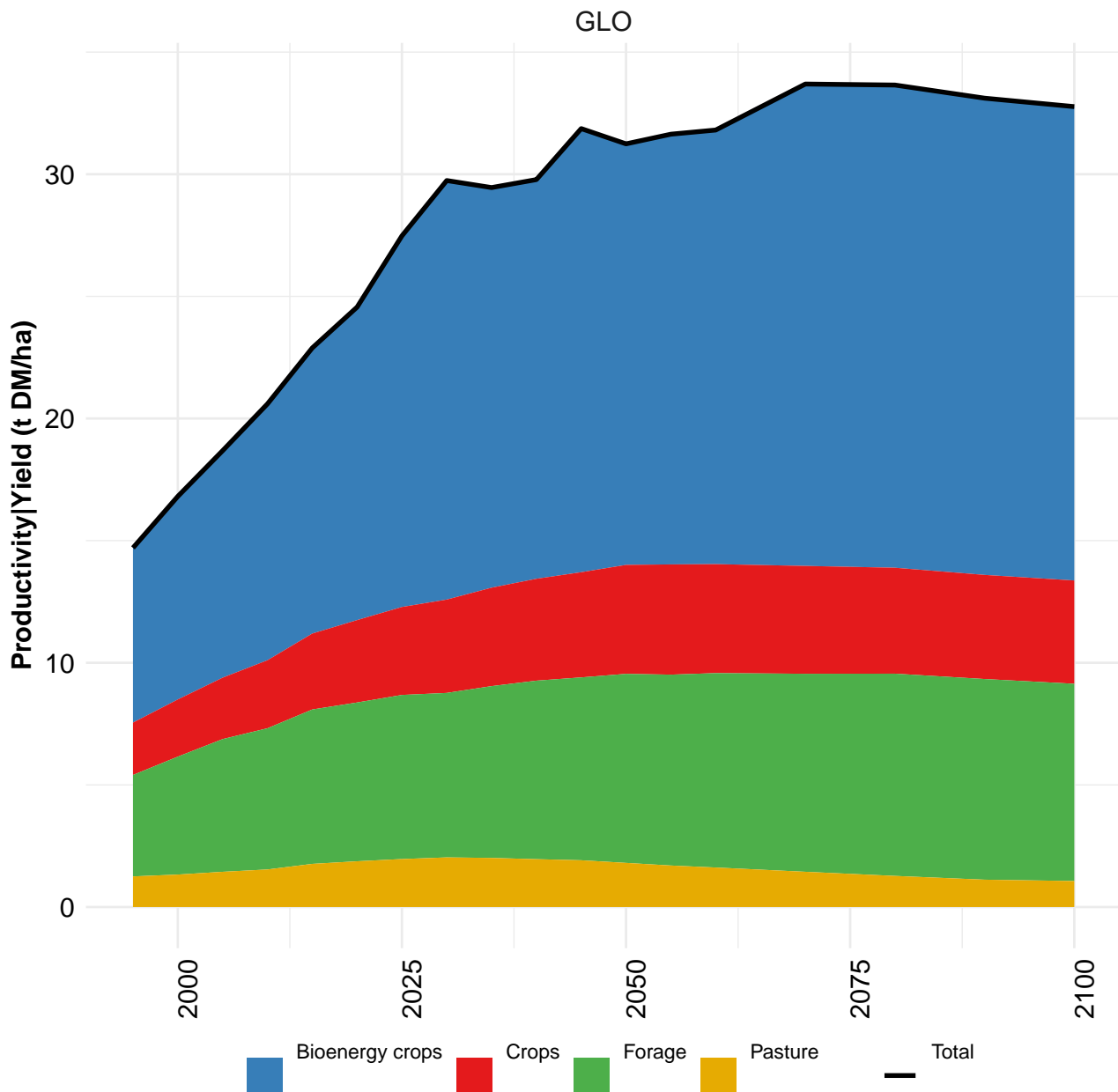
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GLO	0.99	1.00	1.02	1.04	1.05	1.06	1.07	1.09	1.10	1.11	1.12
CAZ	0.95	0.97	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
CHA	1.15	1.17	1.19	1.21	1.22	1.21	1.21	1.21	1.21	1.21	1.22
EUR	1.43	1.47	1.51	1.54	1.55	1.55	1.54	1.53	1.52	1.52	1.51
IND	0.88	0.89	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

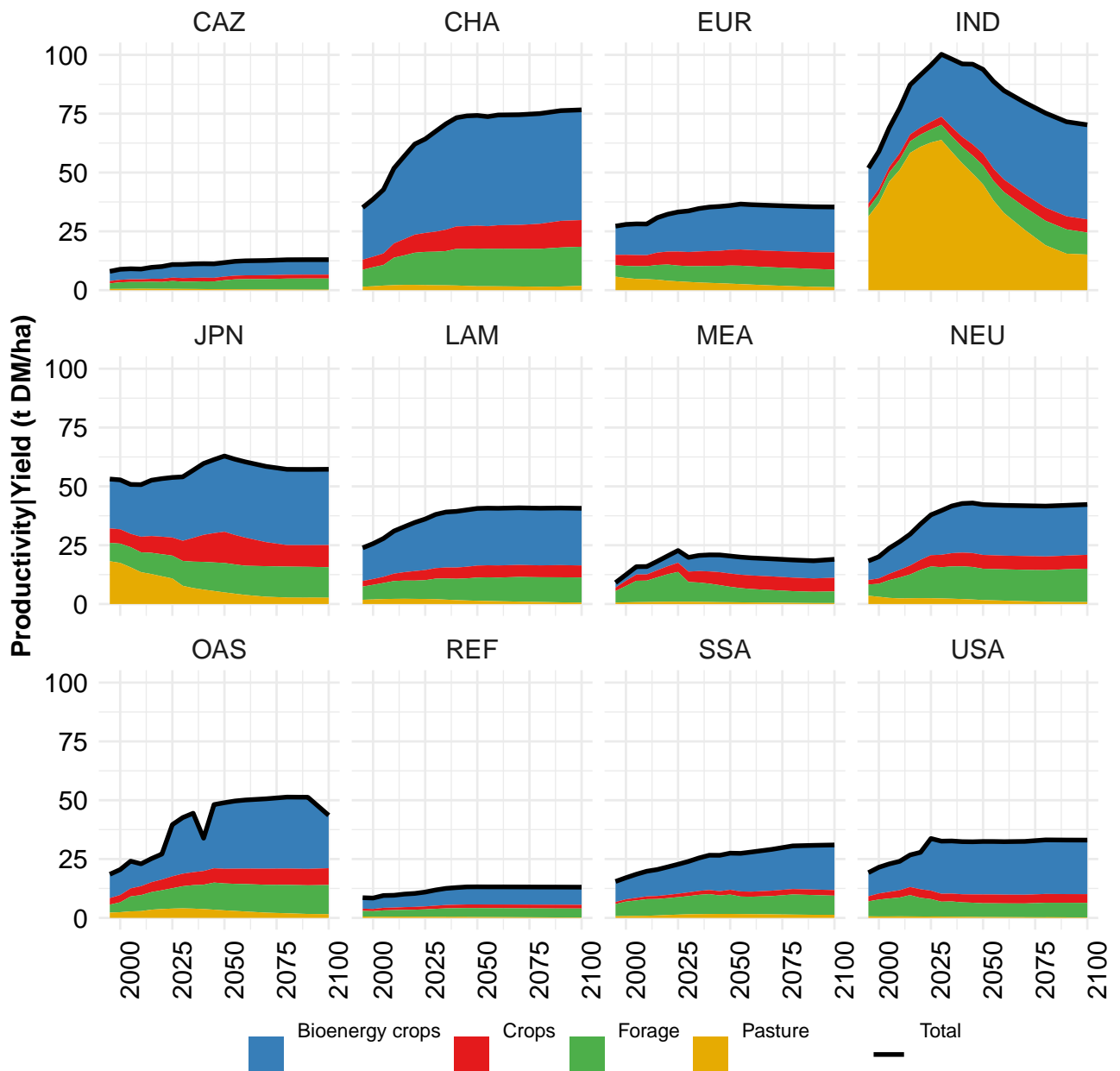
Table 1466: dietrich\_et\_al.2012 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 4/5]

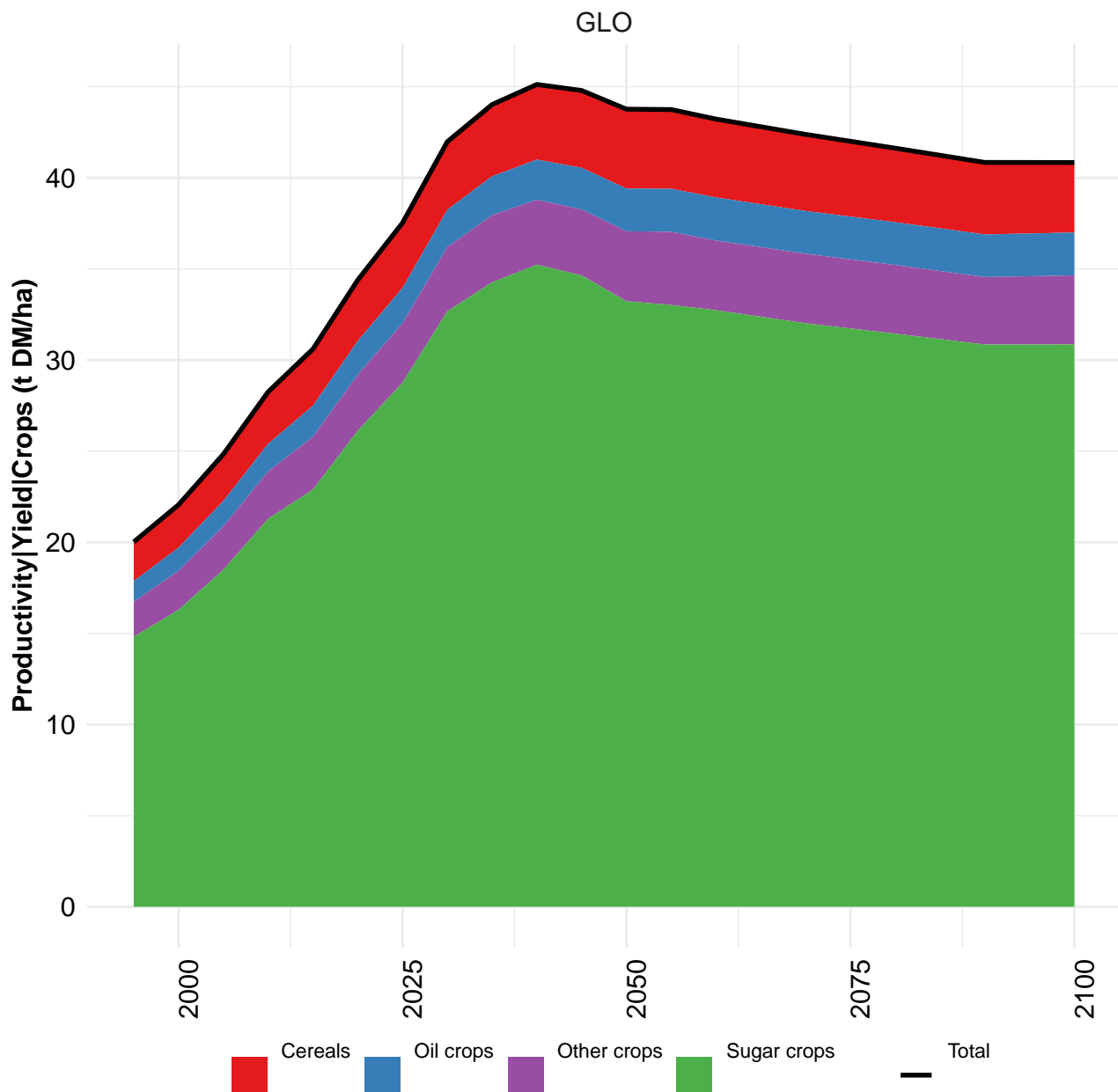
	2005	2006	2007
GLO	1.13	1.14	1.14
CAZ	1.01	1.01	1.00
CHA	1.23	1.23	1.24
EUR	1.51	1.49	1.47
IND	1.03	1.05	1.06
JPN	1.28	1.29	1.29
LAM	1.23	1.25	1.27
MEA	0.80	0.81	0.82
NEU	0.93	0.92	0.91
OAS	0.93	0.94	0.94
REF	1.16	1.17	1.17
SSA	0.79	0.81	0.83
USA	1.34	1.33	1.31

Table 1467: dietrich\_et\_al\_2012 — Productivity—Landuse Intensity Indicator Tau (Index) [PART 5/5]

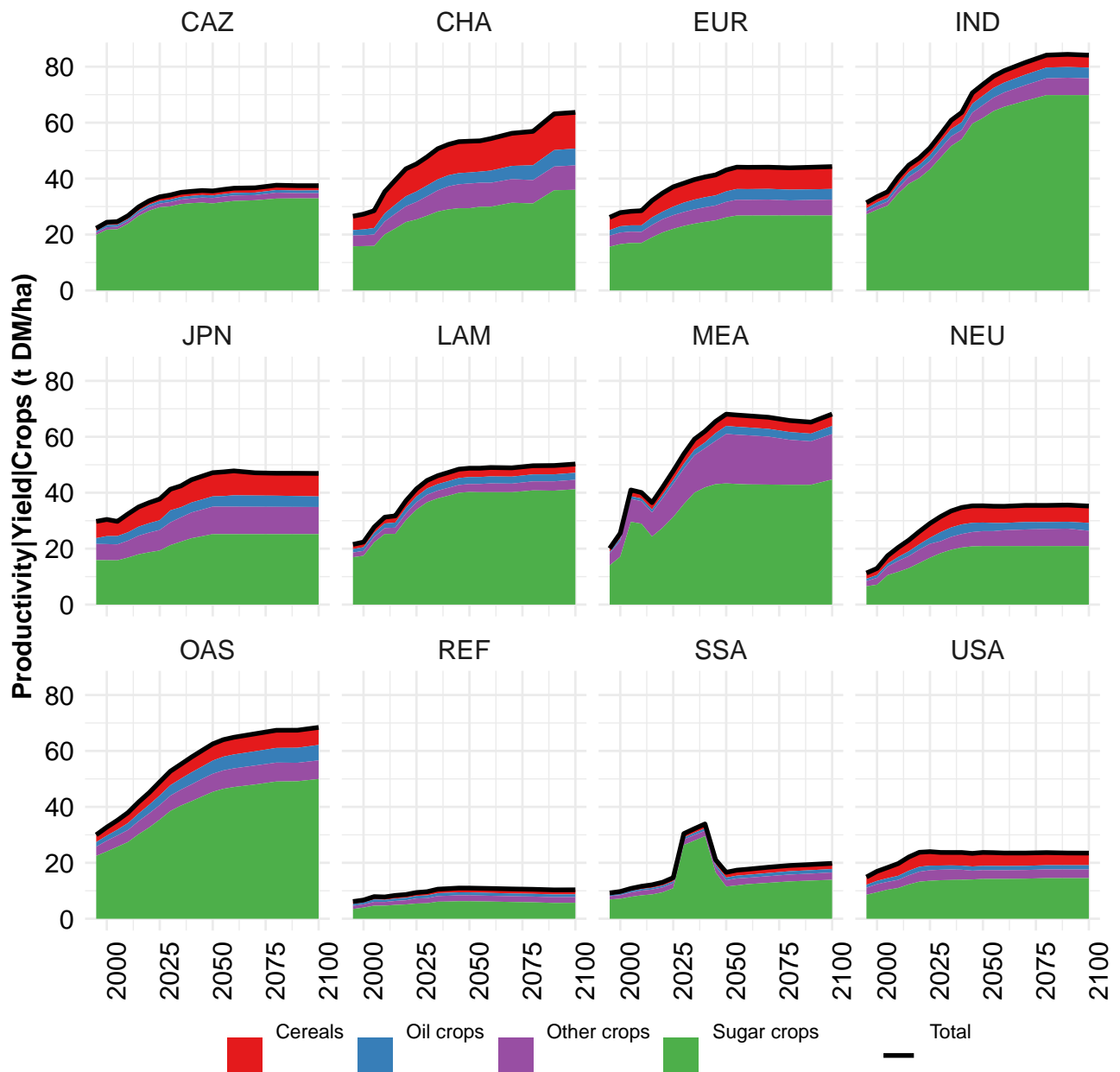
## 52 Yield



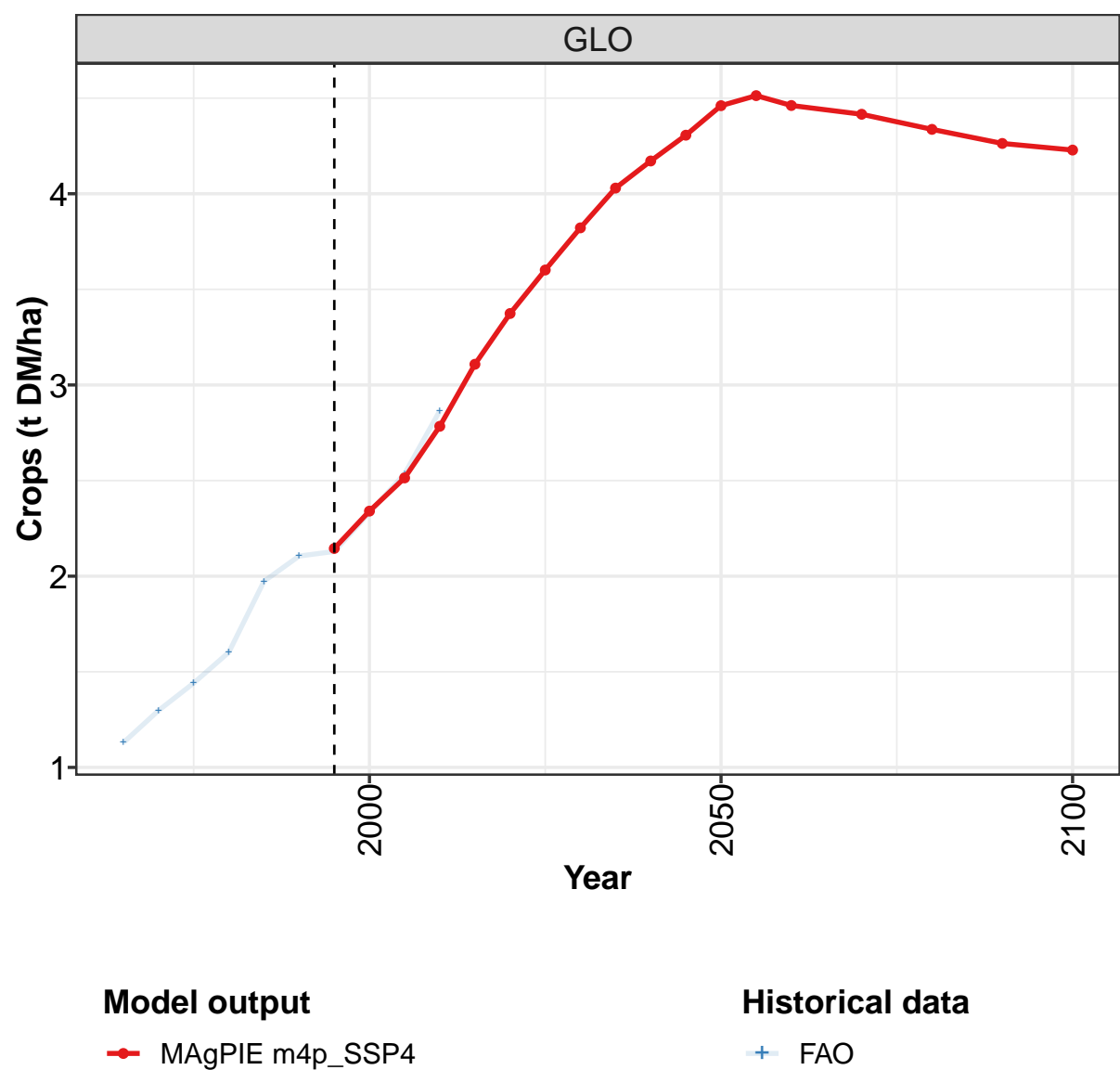








52.1 Crops



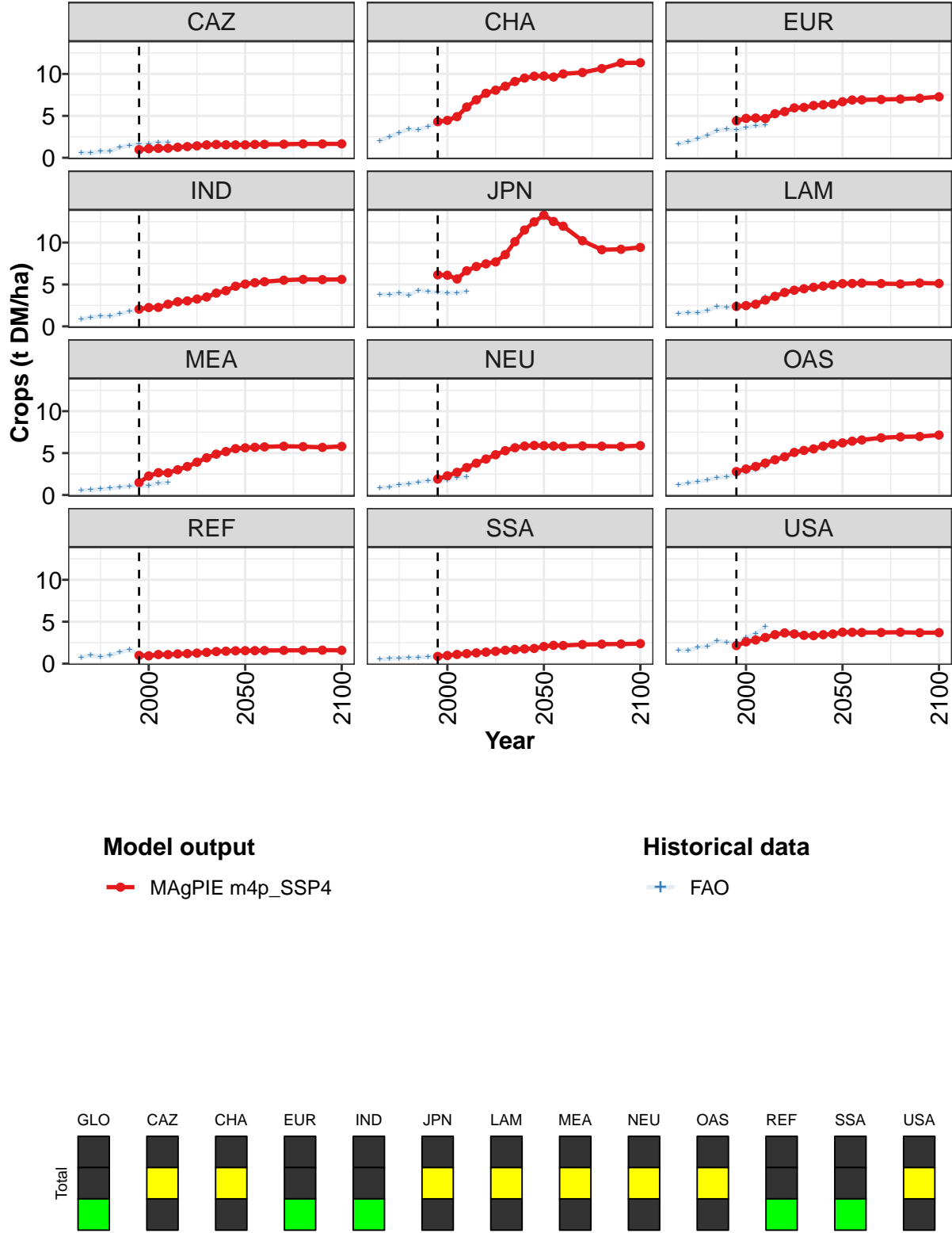


Figure 376: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops (t DM/ha)

	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	3.8	4.0	4.2	4.3
CAZ	1.0	1.1	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.5	1.5
CHA	4.3	4.5	4.9	6.1	6.9	7.7	8.1	8.5	9.1	9.5	9.7
EUR	4.4	4.7	4.7	4.7	5.3	5.5	6.0	6.0	6.2	6.3	6.4
IND	2.1	2.2	2.3	2.6	2.9	3.0	3.3	3.5	4.0	4.3	4.8
JPN	6.1	6.1	5.7	6.6	7.1	7.5	7.7	8.6	10.1	11.5	12.5
LAM	2.4	2.5	2.6	3.1	3.6	4.0	4.3	4.5	4.7	4.8	5.0
MEA	1.5	2.3	2.7	2.6	3.0	3.4	3.9	4.4	4.9	5.2	5.5
NEU	1.9	2.3	2.7	3.3	3.8	4.3	4.8	5.3	5.6	5.8	5.9
OAS	2.8	3.1	3.4	3.8	4.2	4.6	5.1	5.3	5.5	5.8	6.1
REF	1.0	0.9	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.5
SSA	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.8
USA	2.1	2.6	2.8	3.1	3.5	3.7	3.5	3.4	3.3	3.5	3.5

Table 1468: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops (t DM/ha) [PART 1/2]

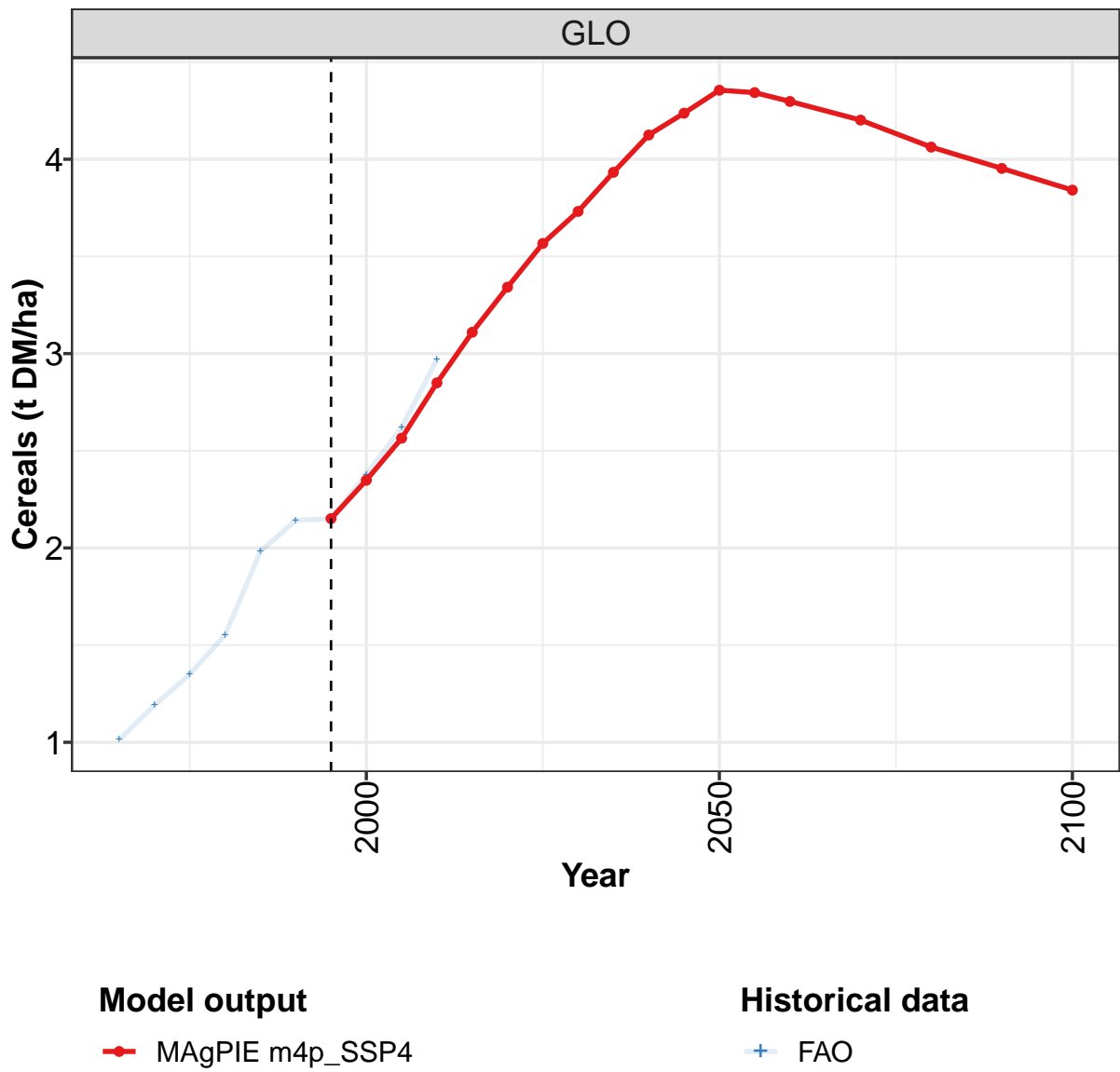
	2050	2055	2060	2070	2080	2090	2100
GLO	4.5	4.5	4.5	4.4	4.3	4.3	4.2
CAZ	1.5	1.6	1.6	1.6	1.7	1.6	1.7
CHA	9.8	9.6	10.0	10.2	10.6	11.3	11.3
EUR	6.7	6.9	6.9	7.0	7.0	7.1	7.3
IND	5.0	5.2	5.3	5.5	5.6	5.6	5.6
JPN	13.3	12.5	12.0	10.2	9.1	9.2	9.4
LAM	5.1	5.1	5.2	5.1	5.1	5.2	5.1
MEA	5.6	5.7	5.7	5.8	5.8	5.7	5.8
NEU	5.9	5.8	5.8	5.9	5.8	5.8	5.9
OAS	6.2	6.4	6.6	6.8	6.9	7.0	7.2
REF	1.5	1.5	1.6	1.6	1.6	1.6	1.6
SSA	2.0	2.2	2.2	2.3	2.3	2.3	2.4
USA	3.7	3.7	3.7	3.7	3.7	3.7	3.7

Table 1469: MAgPIE m4p\_SSP4 — 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



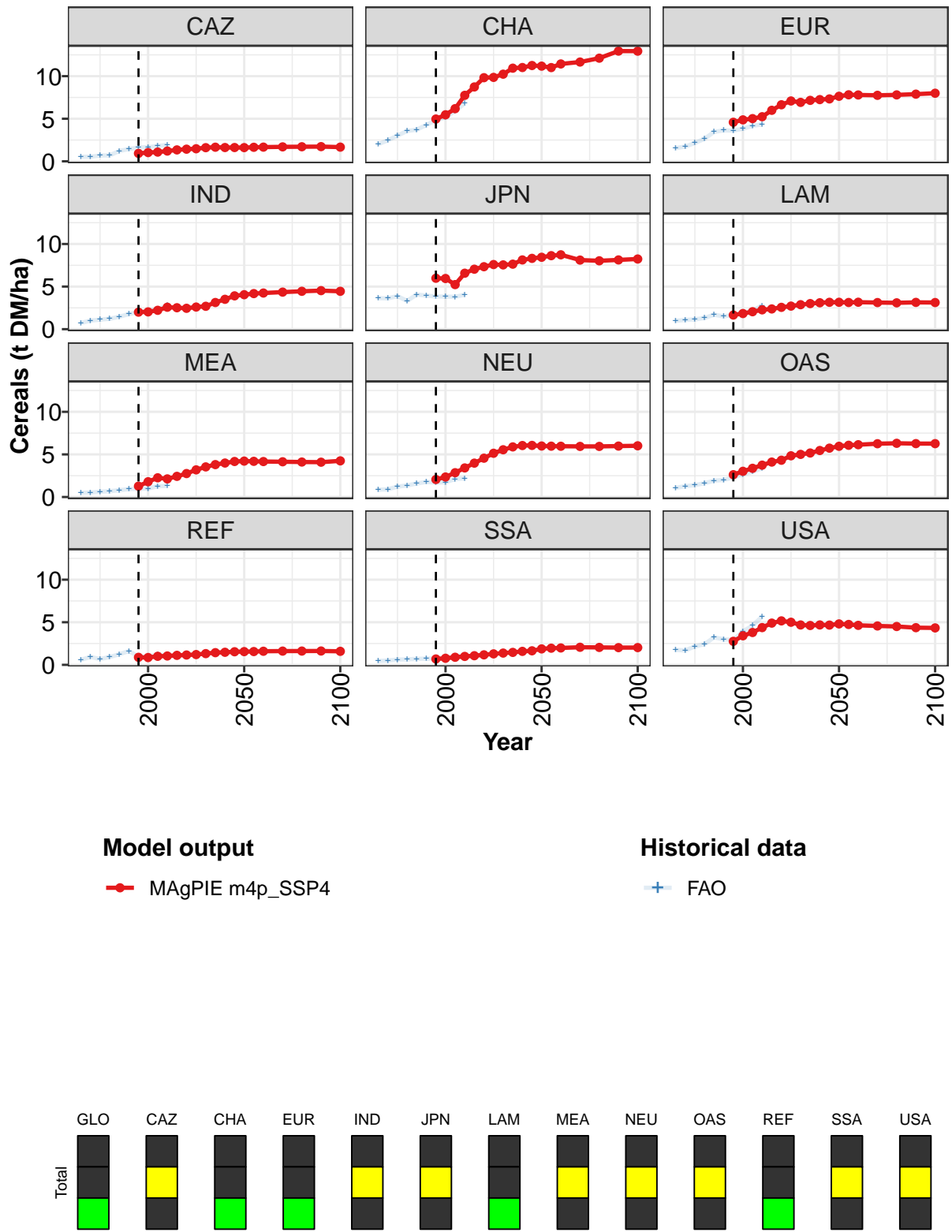


Figure 377: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.2	2.3	2.6	2.8	3.1	3.3	3.6	3.7	3.9	4.1	4.2
CAZ	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.6	1.6
CHA	5.0	5.5	6.2	7.8	8.7	9.8	9.9	10.2	10.9	11.0	11.3
EUR	4.6	4.9	5.0	5.2	6.0	6.6	7.1	6.9	7.2	7.2	7.3
IND	2.0	2.0	2.2	2.6	2.5	2.5	2.6	2.7	3.1	3.5	3.9
JPN	6.0	5.9	5.2	6.6	7.0	7.3	7.6	7.5	7.6	8.1	8.3
LAM	1.7	1.8	2.1	2.3	2.4	2.6	2.7	2.9	3.0	3.1	3.2
MEA	1.3	1.8	2.3	2.1	2.4	2.8	3.2	3.5	3.8	4.0	4.2
NEU	2.1	2.3	2.9	3.4	4.0	4.6	5.1	5.5	5.9	6.0	6.1
OAS	2.6	3.0	3.4	3.7	4.1	4.3	4.8	5.0	5.2	5.5	5.7
REF	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.5
SSA	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.6
USA	2.8	3.4	3.8	4.4	4.9	5.2	5.0	4.7	4.6	4.7	4.7

Table 1471: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals (t DM/ha) [PART 1/2]

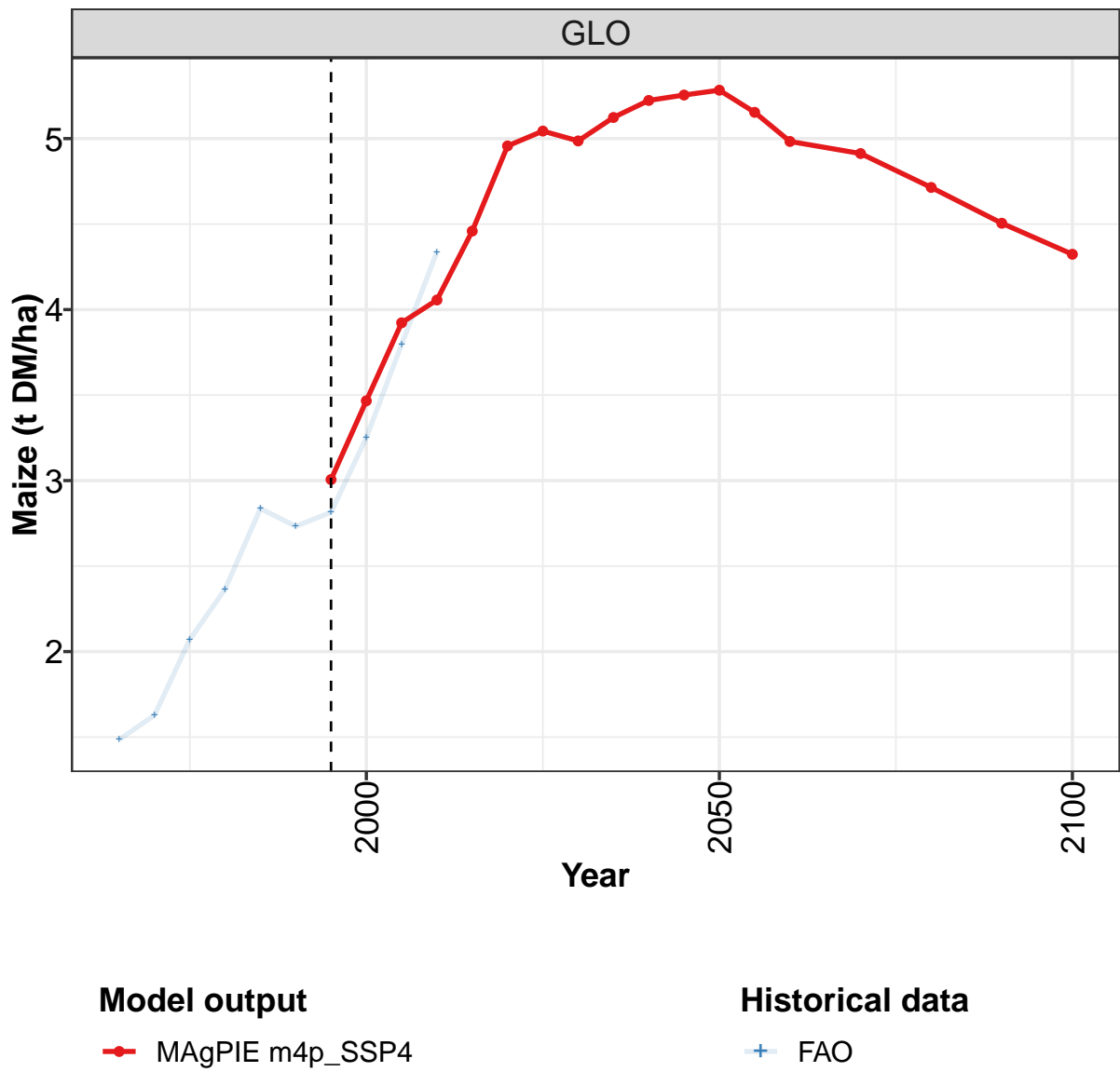
	2050	2055	2060	2070	2080	2090	2100
GLO	4.4	4.3	4.3	4.2	4.1	4.0	3.8
CAZ	1.6	1.6	1.7	1.7	1.7	1.7	1.7
CHA	11.2	11.0	11.4	11.7	12.1	12.9	12.9
EUR	7.6	7.8	7.8	7.8	7.8	7.9	8.0
IND	4.0	4.2	4.2	4.4	4.4	4.5	4.4
JPN	8.4	8.6	8.7	8.1	8.0	8.1	8.2
LAM	3.2	3.1	3.2	3.1	3.1	3.1	3.1
MEA	4.2	4.2	4.2	4.1	4.1	4.1	4.2
NEU	6.0	6.0	6.0	5.9	5.9	6.0	6.0
OAS	6.0	6.1	6.1	6.3	6.3	6.3	6.3
REF	1.6	1.6	1.6	1.6	1.6	1.6	1.6
SSA	1.9	2.0	2.0	2.1	2.0	2.0	2.0
USA	4.8	4.7	4.6	4.6	4.5	4.4	4.3

Table 1472: MAgPIE m4p\_SSP4 — 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





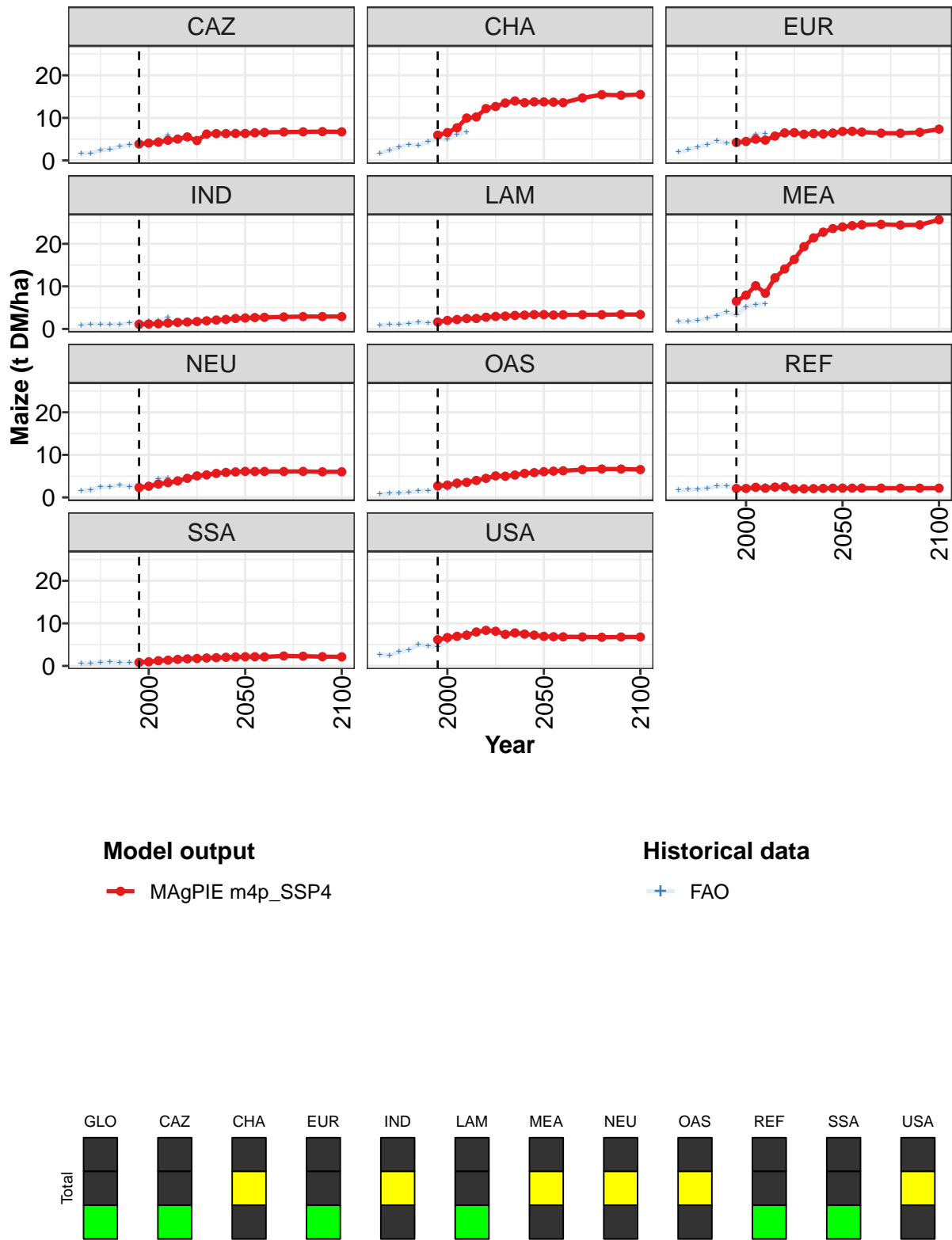


Figure 378: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Maize (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.0	3.5	3.9	4.1	4.5	5.0	5.0	5.0	5.1	5.2	5.3
CAZ	3.9	4.1	4.3	4.7	5.0	5.5	4.7	6.2	6.3	6.3	6.3
CHA	5.9	6.5	7.7	10.0	10.2	12.2	12.7	13.5	14.0	13.6	13.8
EUR	4.2	4.5	5.0	4.8	5.7	6.5	6.5	6.1	6.3	6.2	6.4
IND	1.1	1.2	1.2	1.4	1.5	1.6	1.7	1.9	2.1	2.2	2.5
LAM	1.6	2.0	2.2	2.4	2.5	2.8	2.9	3.0	3.2	3.2	3.4
MEA	6.5	7.9	10.2	8.4	12.0	14.1	16.3	19.3	21.4	22.8	23.6
NEU	2.3	2.6	3.1	3.5	3.9	4.5	5.1	5.3	5.6	5.9	6.0
OAS	2.7	2.9	3.4	3.5	4.0	4.5	5.1	5.0	5.3	5.6	5.8
REF	2.1	2.1	2.4	2.2	2.4	2.5	2.0	2.0	2.1	2.1	2.2
SSA	0.8	1.0	1.2	1.3	1.5	1.7	1.7	1.9	1.9	2.0	2.1
USA	6.2	6.7	7.0	7.2	8.0	8.4	8.2	7.4	7.8	7.5	7.2

Table 1474: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Maize (t DM/ha) [PART 1/2]

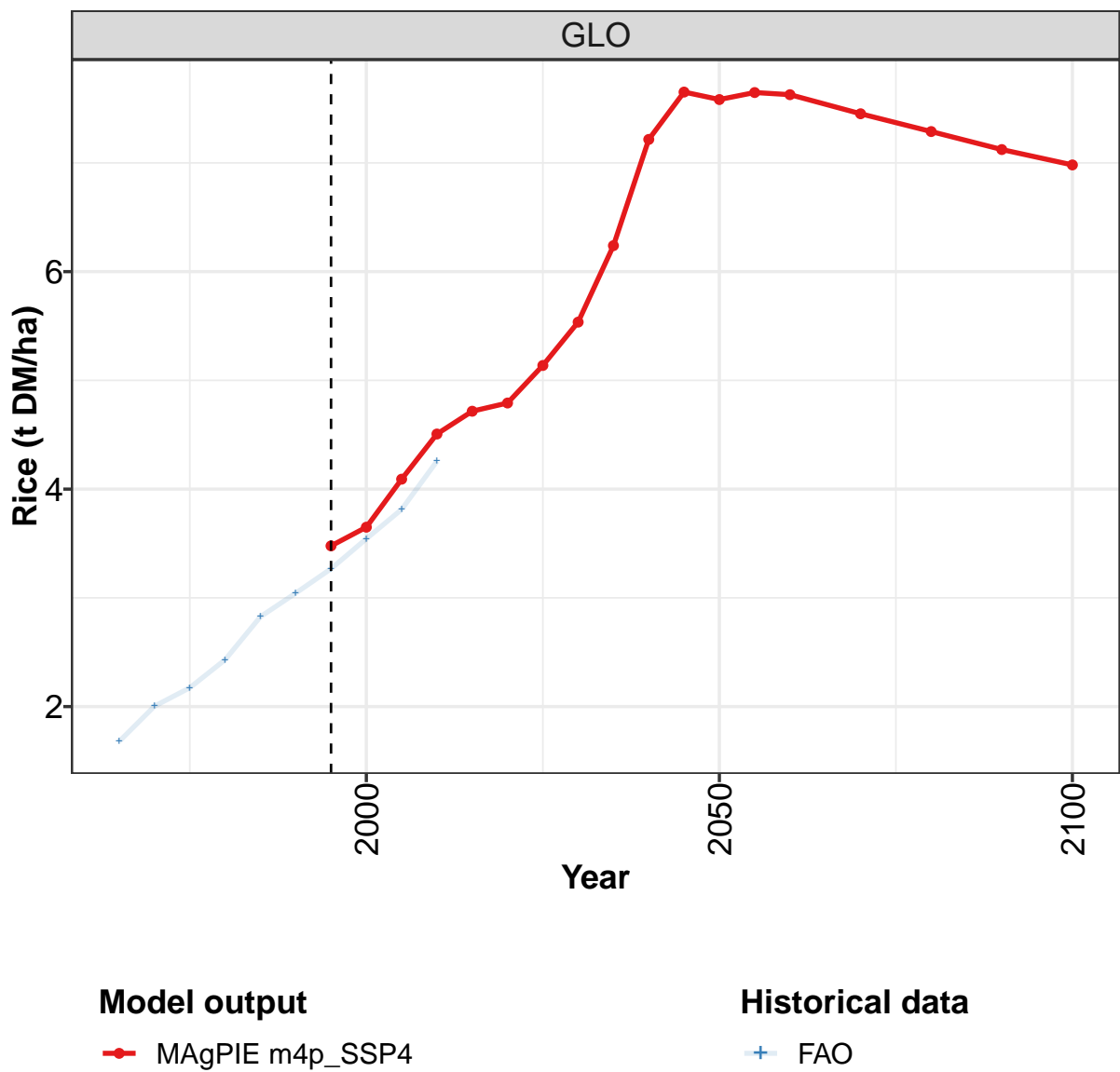
	2050	2055	2060	2070	2080	2090	2100
GLO	5.3	5.2	5.0	4.9	4.7	4.5	4.3
CAZ	6.3	6.5	6.6	6.7	6.7	6.8	6.7
CHA	13.8	13.7	13.6	14.7	15.4	15.3	15.5
EUR	6.8	6.8	6.7	6.4	6.4	6.6	7.4
IND	2.6	2.7	2.7	2.8	2.9	2.9	2.9
LAM	3.4	3.3	3.3	3.3	3.3	3.4	3.4
MEA	24.0	24.3	24.5	24.6	24.4	24.5	25.6
NEU	6.1	6.1	6.1	6.1	6.1	6.0	6.0
OAS	6.0	6.2	6.3	6.5	6.7	6.7	6.6
REF	2.2	2.2	2.2	2.2	2.2	2.2	2.2
SSA	2.1	2.2	2.1	2.3	2.3	2.2	2.1
USA	7.0	6.9	6.8	6.8	6.7	6.8	6.8

Table 1475: MAgPIE m4p\_SSP4 — 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



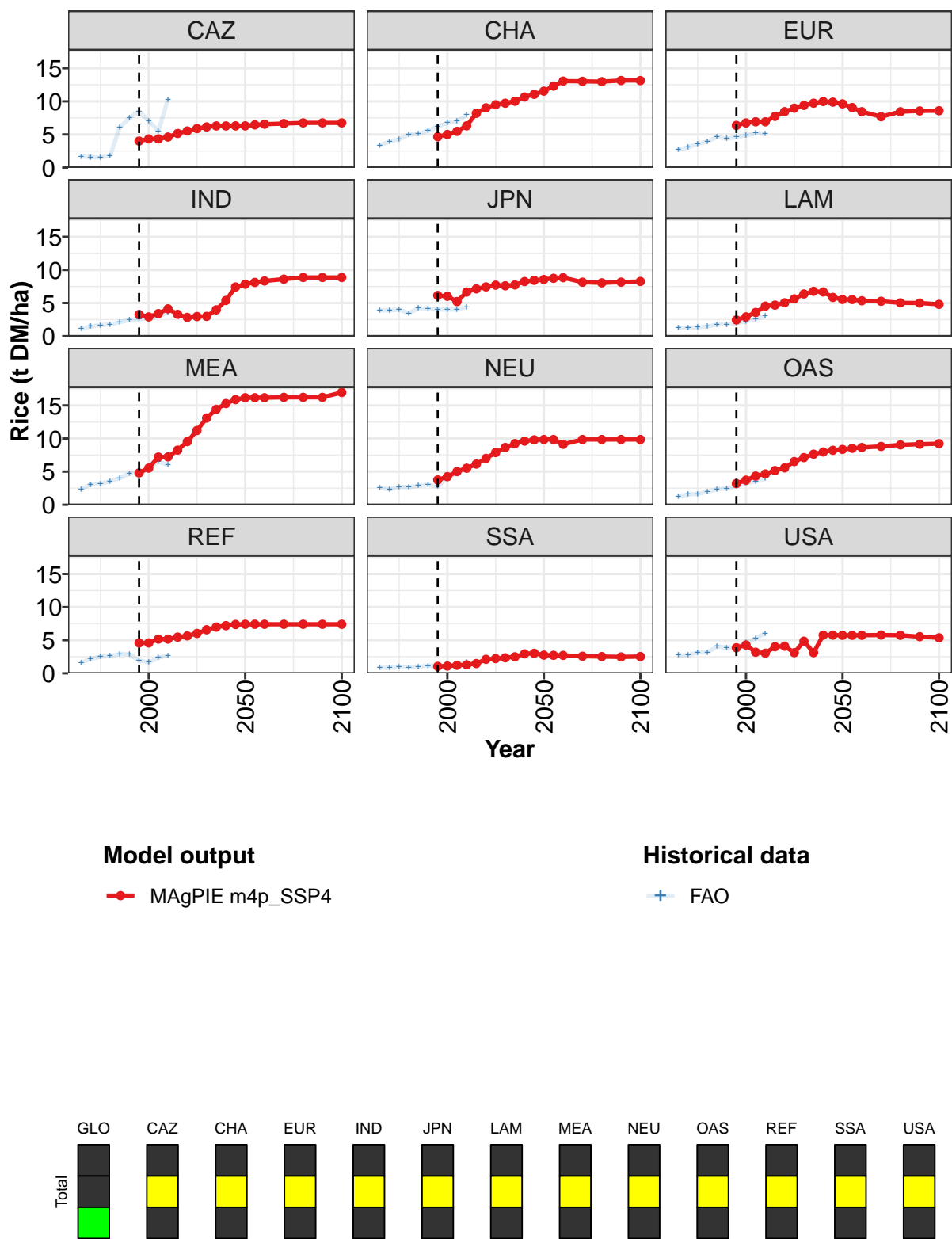


Figure 379: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Rice (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.5	3.6	4.1	4.5	4.7	4.8	5.1	5.5	6.2	7.2	7.7
CAZ	4.0	4.3	4.3	4.6	5.2	5.5	5.9	6.1	6.3	6.3	6.3
CHA	4.7	5.0	5.5	6.3	8.2	9.0	9.5	9.7	10.0	10.7	11.1
EUR	6.4	6.7	6.9	6.9	7.7	8.4	9.0	9.4	9.7	10.0	9.9
IND	3.3	2.9	3.4	4.1	3.3	2.8	3.0	3.0	4.0	5.4	7.4
JPN	6.1	6.0	5.2	6.7	7.1	7.4	7.7	7.6	7.7	8.2	8.4
LAM	2.4	2.9	3.6	4.5	4.7	5.0	5.6	6.4	6.8	6.7	5.8
MEA	4.8	5.5	7.2	7.2	8.3	9.5	11.2	13.1	14.4	15.3	15.9
NEU	3.7	4.2	5.0	5.5	6.1	7.0	7.9	8.6	9.2	9.6	9.8
OAS	3.2	3.7	4.3	4.6	5.2	5.6	6.5	7.1	7.6	8.0	8.2
REF	4.6	4.6	5.2	5.2	5.5	5.7	6.0	6.6	7.0	7.2	7.4
SSA	1.0	1.1	1.2	1.3	1.5	2.1	2.2	2.3	2.5	2.9	3.0
USA	3.9	4.3	3.2	3.0	4.0	4.1	3.1	4.9	3.1	5.8	5.8

Table 1477: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Rice (t DM/ha) [PART 1/2]

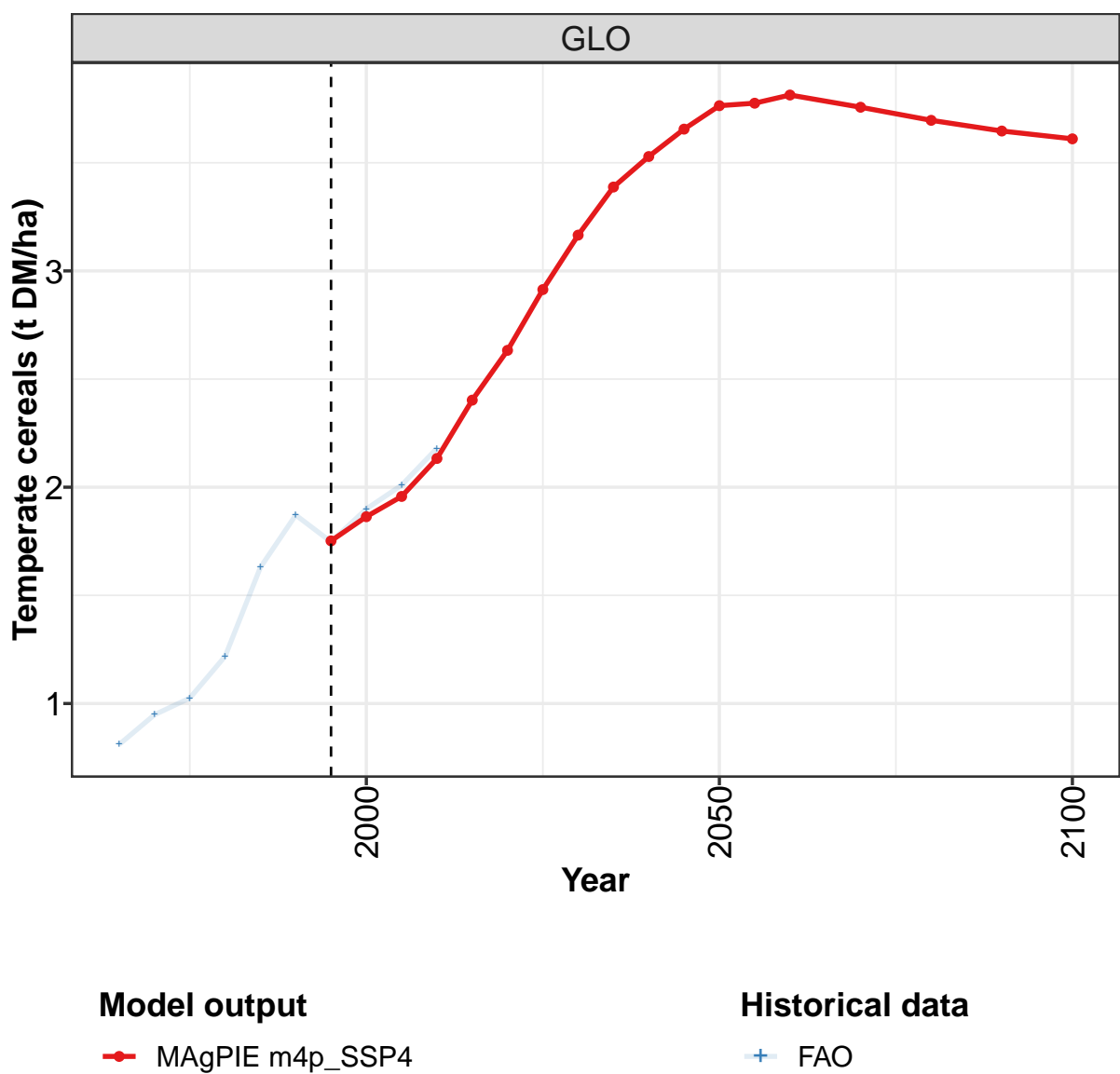
	2050	2055	2060	2070	2080	2090	2100
GLO	7.6	7.6	7.6	7.5	7.3	7.1	7.0
CAZ	6.3	6.5	6.5	6.6	6.7	6.7	6.7
CHA	11.5	12.3	13.1	13.0	13.0	13.1	13.1
EUR	9.6	9.1	8.4	7.7	8.4	8.6	8.6
IND	7.8	8.1	8.3	8.6	8.9	8.9	8.9
JPN	8.5	8.7	8.8	8.1	8.1	8.2	8.3
LAM	5.5	5.5	5.3	5.3	5.0	5.0	4.8
MEA	16.2	16.2	16.2	16.2	16.2	16.2	17.0
NEU	9.8	9.8	9.1	9.8	9.8	9.8	9.8
OAS	8.4	8.5	8.6	8.8	9.0	9.1	9.2
REF	7.4	7.4	7.4	7.4	7.4	7.4	7.4
SSA	2.7	2.7	2.7	2.6	2.5	2.5	2.5
USA	5.7	5.7	5.7	5.8	5.7	5.5	5.4

Table 1478: MAgPIE m4p\_SSP4 — 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



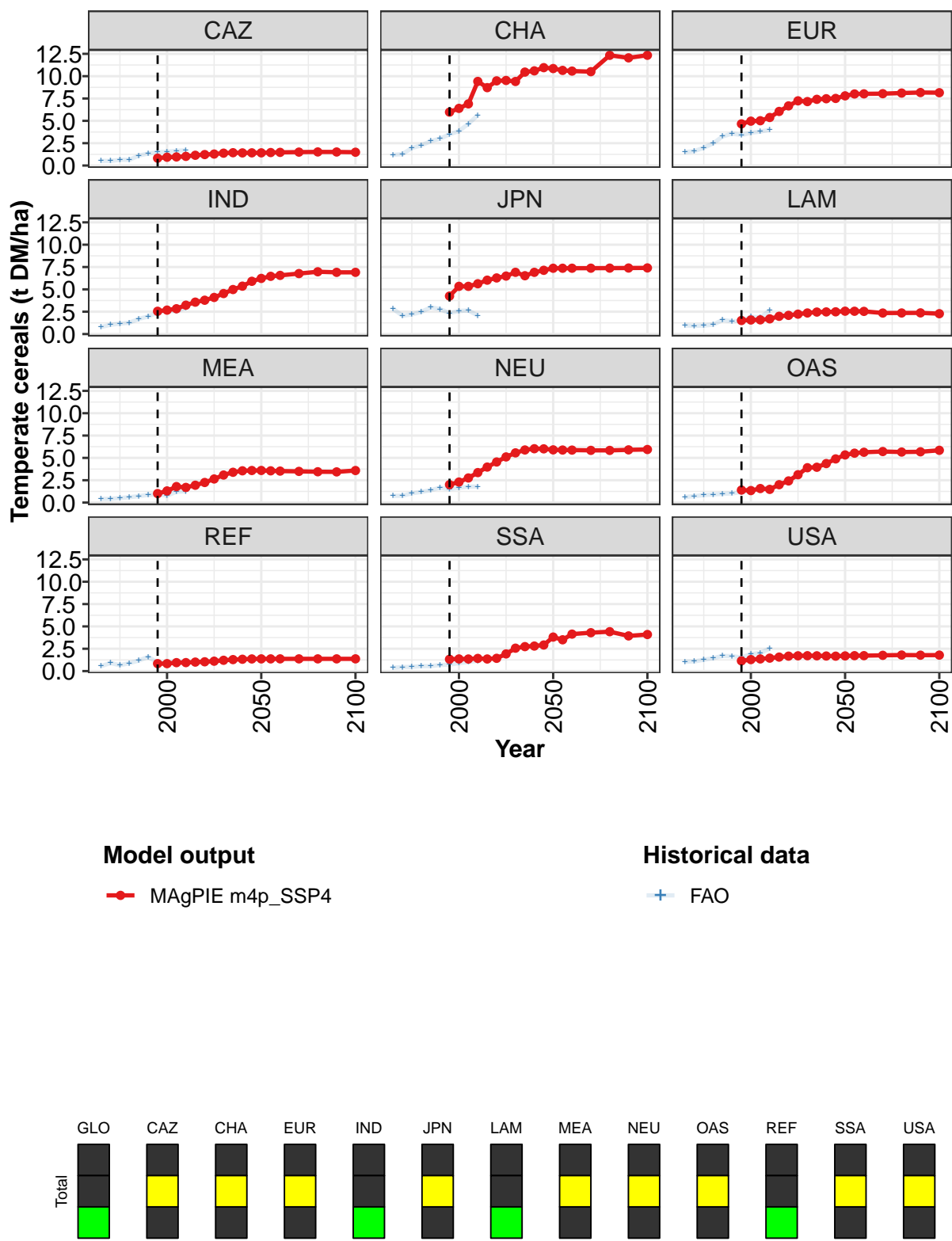


Figure 380: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Temperate cereals (t DM/ha)

	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	3.5	3.7
CAZ	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.4	1.4	1.4
CHA	6.0	6.4	6.9	9.4	8.7	9.5	9.5	9.4	10.5	10.6	11.0
EUR	4.7	5.0	5.0	5.4	6.1	6.7	7.2	7.2	7.4	7.5	7.5
IND	2.5	2.7	2.8	3.2	3.6	3.8	4.1	4.5	5.0	5.4	5.9
JPN	4.2	5.3	5.3	5.6	6.0	6.3	6.5	6.9	6.5	6.9	7.1
LAM	1.5	1.6	1.6	1.7	2.0	2.1	2.2	2.4	2.5	2.5	2.5
MEA	1.0	1.3	1.8	1.7	1.9	2.2	2.6	3.1	3.4	3.6	3.6
NEU	2.0	2.3	2.8	3.4	4.0	4.5	5.1	5.6	5.9	6.0	6.0
OAS	1.4	1.3	1.6	1.5	2.0	2.4	3.1	3.9	4.0	4.4	4.9
REF	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.2	1.3	1.3	1.4
SSA	1.3	1.4	1.4	1.4	1.4	1.4	1.9	2.6	2.7	2.8	2.9
USA	1.1	1.3	1.4	1.5	1.6	1.7	1.7	1.7	1.7	1.7	1.7

Table 1480: MAgPIE m4p\_SSP4 — 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	3.7	3.6	3.6
CAZ	1.4	1.5	1.5	1.5	1.5	1.5	1.5
CHA	10.9	10.6	10.6	10.5	12.3	12.1	12.3
EUR	7.8	8.0	8.0	8.0	8.1	8.2	8.2
IND	6.2	6.5	6.6	6.8	7.0	6.9	6.9
JPN	7.4	7.4	7.4	7.4	7.4	7.4	7.4
LAM	2.6	2.6	2.5	2.4	2.4	2.4	2.3
MEA	3.6	3.6	3.5	3.5	3.4	3.4	3.6
NEU	5.9	5.9	5.9	5.8	5.8	5.9	5.9
OAS	5.3	5.5	5.6	5.7	5.7	5.7	5.8
REF	1.4	1.4	1.4	1.4	1.4	1.4	1.4
SSA	3.8	3.5	4.1	4.3	4.4	3.9	4.1
USA	1.7	1.7	1.7	1.8	1.8	1.8	1.8

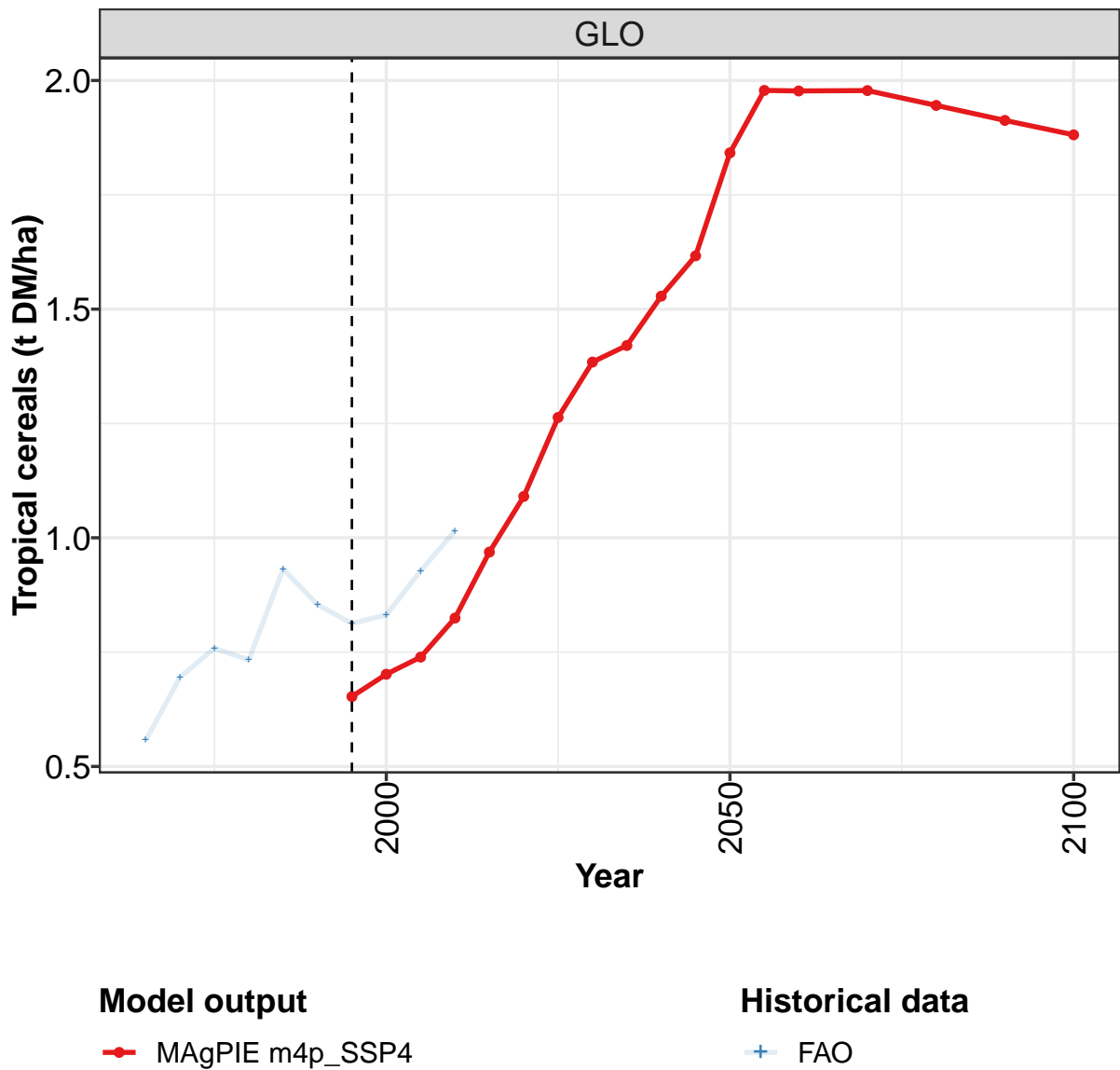
Table 1481: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Temperate cereals (t DM/ha)  
[PART 2/2]

	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



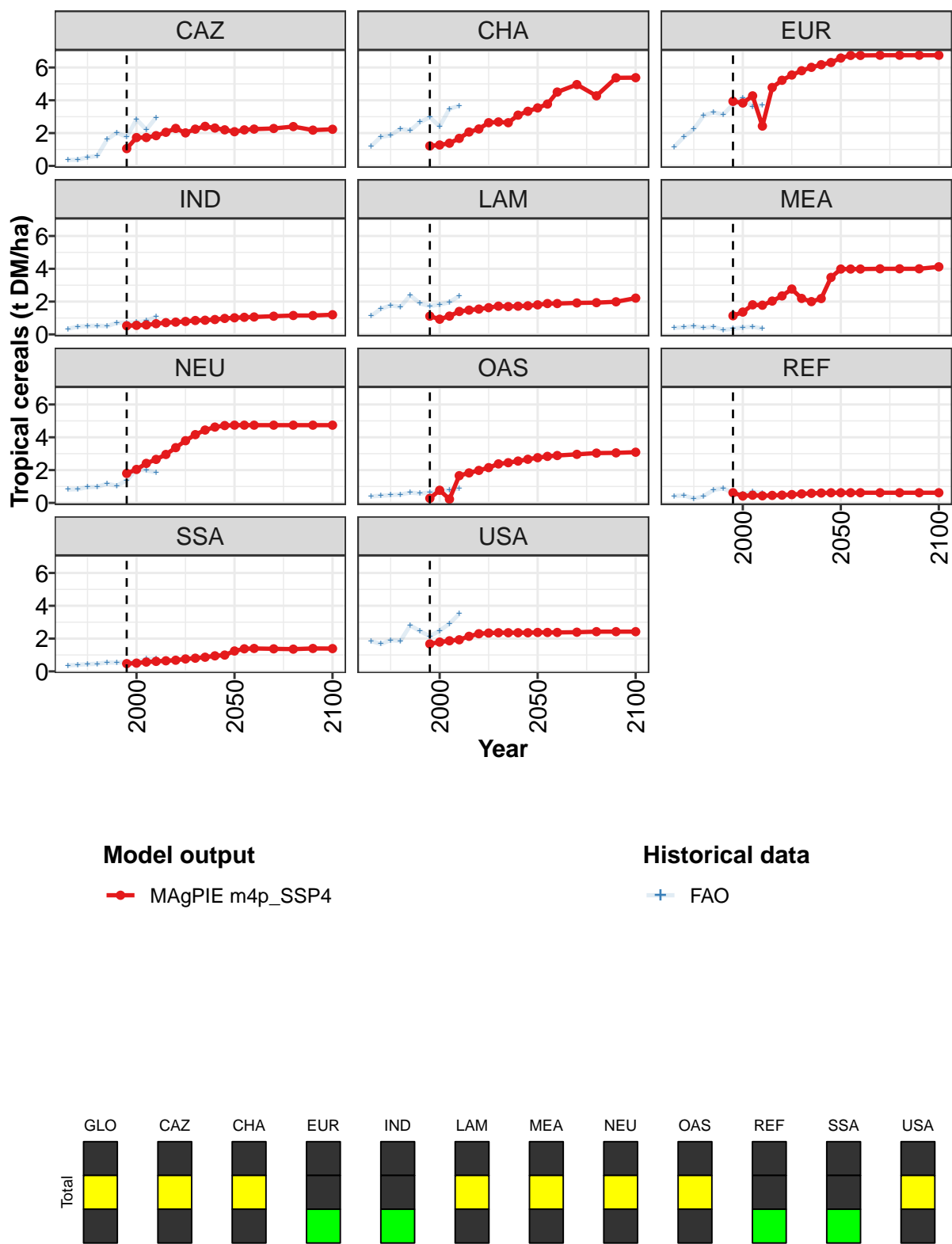


Figure 381: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Tropical cereals (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.65	0.70	0.74	0.82	0.97	1.09	1.26	1.38	1.42	1.53	1.62
CAZ	1.05	1.73	1.73	1.84	2.05	2.29	2.01	2.24	2.41	2.31	2.20
CHA	1.22	1.27	1.38	1.68	2.06	2.25	2.63	2.68	2.63	3.09	3.33
EUR	3.93	3.84	4.27	2.43	4.78	5.22	5.54	5.80	6.01	6.17	6.30
IND	0.53	0.55	0.58	0.65	0.72	0.75	0.79	0.85	0.86	0.91	0.97
LAM	1.11	0.93	1.12	1.40	1.48	1.54	1.63	1.72	1.70	1.72	1.74
MEA	1.14	1.36	1.80	1.78	2.03	2.35	2.77	2.19	2.00	2.19	3.47
NEU	1.80	2.04	2.41	2.65	2.95	3.37	3.79	4.16	4.44	4.62	4.72
OAS	0.28	0.77	0.23	1.66	1.83	1.98	2.15	2.38	2.45	2.55	2.66
REF	0.62	0.42	0.47	0.43	0.46	0.47	0.50	0.55	0.58	0.60	0.62
SSA	0.48	0.51	0.57	0.61	0.65	0.68	0.76	0.81	0.87	0.95	1.00
USA	1.68	1.79	1.87	1.93	2.14	2.30	2.34	2.36	2.36	2.36	2.36

Table 1483: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Cereals—Tropical cereals (t DM/ha) [PART 1/2]

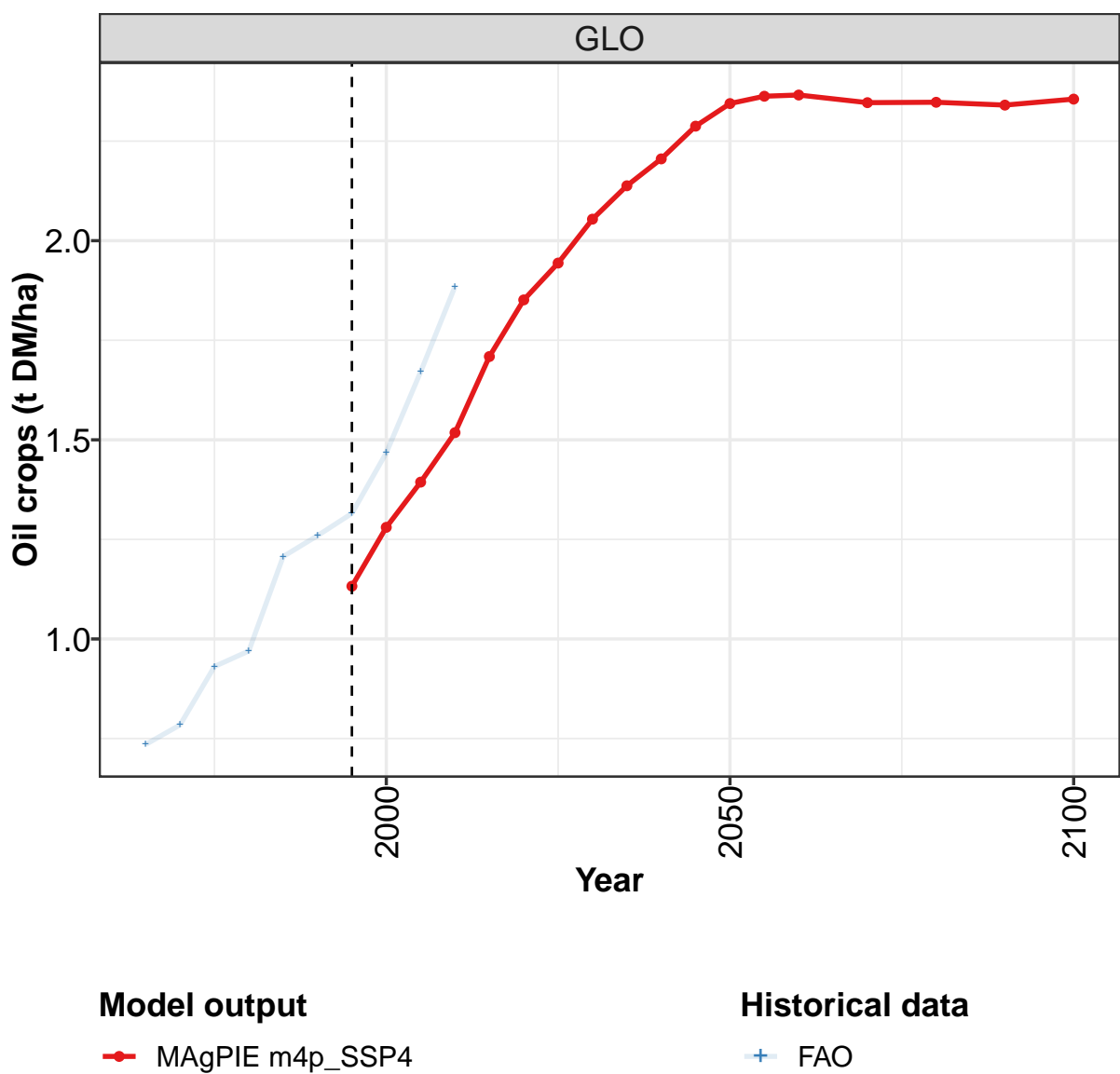
	2050	2055	2060	2070	2080	2090	2100
GLO	1.84	1.98	1.98	1.98	1.95	1.91	1.88
CAZ	2.09	2.20	2.24	2.28	2.40	2.18	2.23
CHA	3.53	3.77	4.50	4.96	4.27	5.37	5.38
EUR	6.58	6.74	6.74	6.75	6.75	6.75	6.75
IND	1.01	1.04	1.06	1.11	1.15	1.15	1.20
LAM	1.80	1.88	1.88	1.92	1.93	1.99	2.21
MEA	3.98	3.98	3.98	4.00	4.00	4.00	4.12
NEU	4.74	4.74	4.74	4.74	4.74	4.74	4.74
OAS	2.76	2.84	2.89	2.96	3.04	3.05	3.09
REF	0.62	0.62	0.62	0.62	0.62	0.62	0.62
SSA	1.24	1.38	1.40	1.38	1.36	1.40	1.39
USA	2.37	2.37	2.37	2.39	2.42	2.42	2.42

Table 1484: MAgPIE m4p\_SSP4 — 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



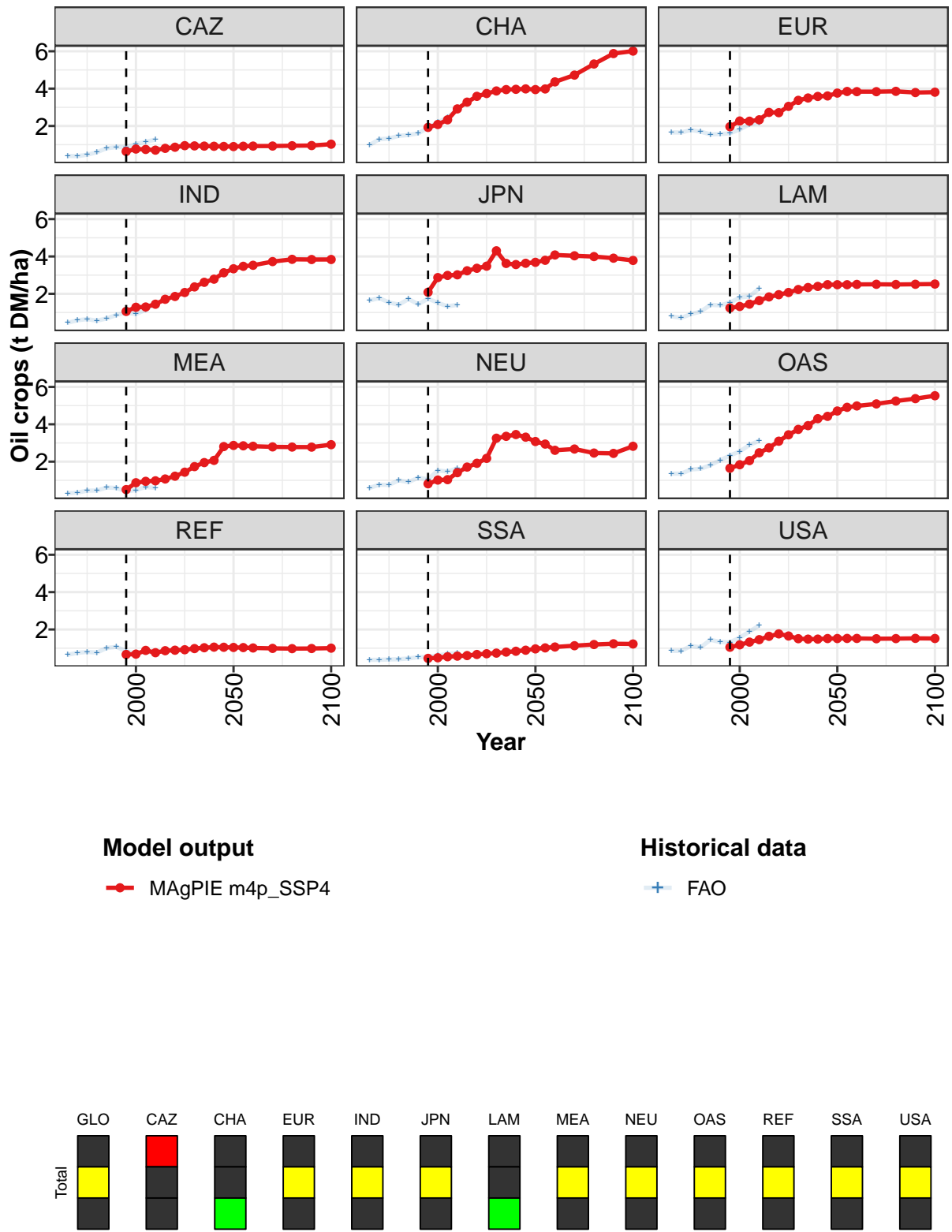


Figure 382: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.13	1.28	1.39	1.52	1.71	1.85	1.94	2.05	2.14	2.21	2.29
CAZ	0.64	0.77	0.75	0.71	0.80	0.86	0.95	0.93	0.92	0.91	0.91
CHA	1.93	2.08	2.33	2.92	3.28	3.59	3.74	3.88	3.95	3.96	3.99
EUR	1.96	2.27	2.26	2.33	2.73	2.71	3.05	3.37	3.50	3.58	3.61
IND	1.06	1.28	1.29	1.44	1.71	1.86	2.07	2.37	2.62	2.79	3.13
JPN	2.09	2.87	2.99	3.02	3.23	3.37	3.48	4.30	3.63	3.57	3.64
LAM	1.25	1.32	1.45	1.64	1.83	1.95	2.07	2.23	2.34	2.40	2.49
MEA	0.50	0.87	0.95	0.98	1.07	1.22	1.44	1.74	1.95	2.07	2.81
NEU	0.82	1.02	1.04	1.41	1.71	1.91	2.18	3.26	3.36	3.45	3.31
OAS	1.65	1.84	2.06	2.48	2.74	3.10	3.44	3.73	3.93	4.30	4.43
REF	0.66	0.68	0.88	0.76	0.87	0.89	0.92	0.98	1.02	1.06	1.05
SSA	0.46	0.49	0.54	0.57	0.60	0.66	0.70	0.74	0.79	0.84	0.89
USA	1.05	1.18	1.33	1.46	1.64	1.77	1.65	1.51	1.48	1.49	1.52

Table 1486: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops (t DM/ha) [PART 1/2]

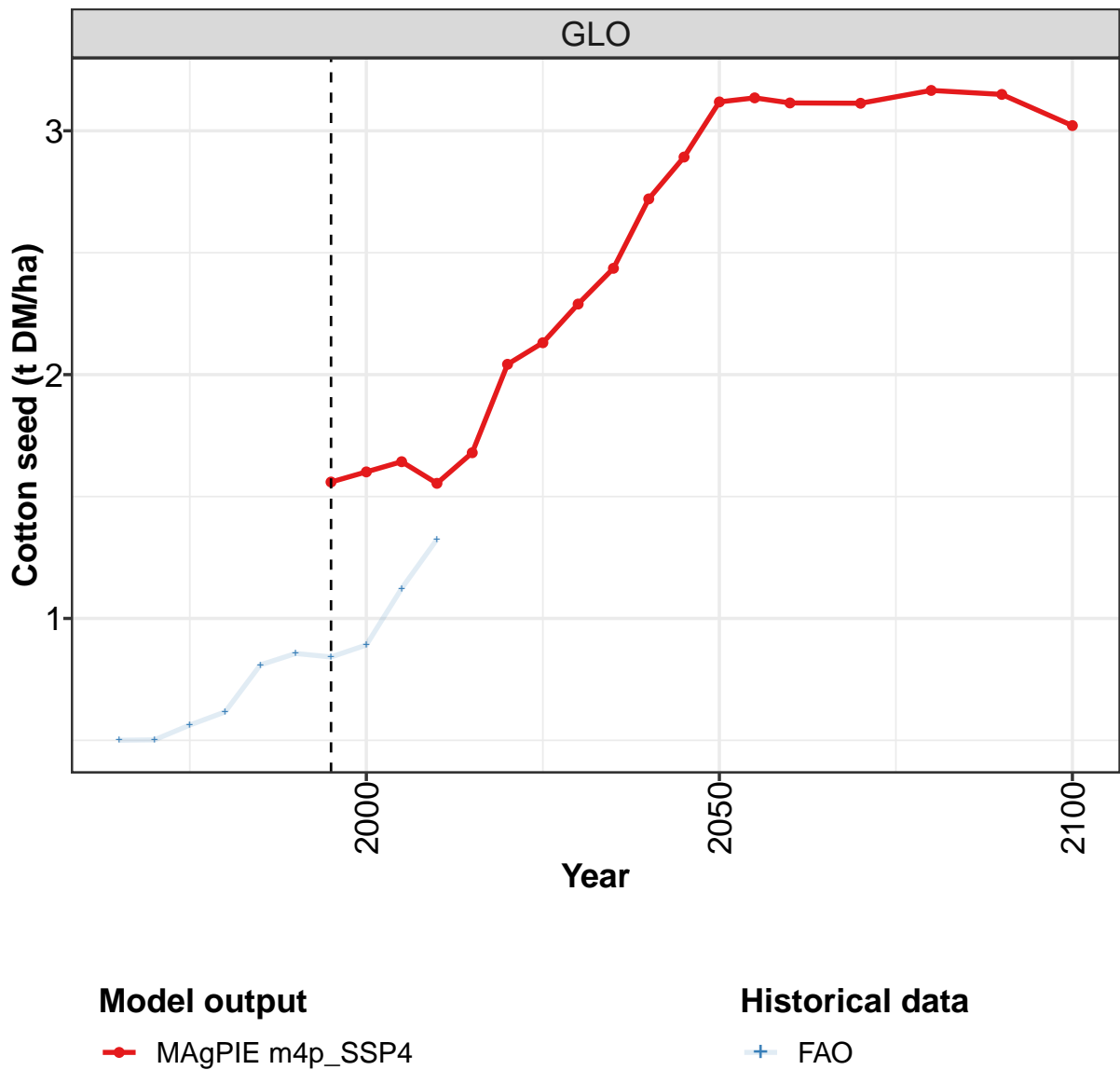
	2050	2055	2060	2070	2080	2090	2100
GLO	2.34	2.36	2.37	2.35	2.35	2.34	2.36
CAZ	0.90	0.92	0.93	0.93	0.94	0.95	1.03
CHA	3.95	3.98	4.36	4.72	5.32	5.88	6.01
EUR	3.76	3.85	3.84	3.84	3.86	3.79	3.81
IND	3.34	3.47	3.53	3.73	3.85	3.84	3.84
JPN	3.69	3.80	4.08	4.04	3.99	3.91	3.79
LAM	2.49	2.49	2.50	2.51	2.50	2.51	2.52
MEA	2.87	2.85	2.82	2.79	2.78	2.78	2.91
NEU	3.08	2.94	2.61	2.68	2.46	2.44	2.82
OAS	4.71	4.91	4.98	5.09	5.25	5.37	5.53
REF	1.04	1.03	1.01	0.99	0.98	0.98	1.00
SSA	0.96	1.02	1.06	1.13	1.20	1.24	1.22
USA	1.52	1.52	1.52	1.51	1.51	1.53	1.52

Table 1487: MAgPIE m4p\_SSP4 — 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



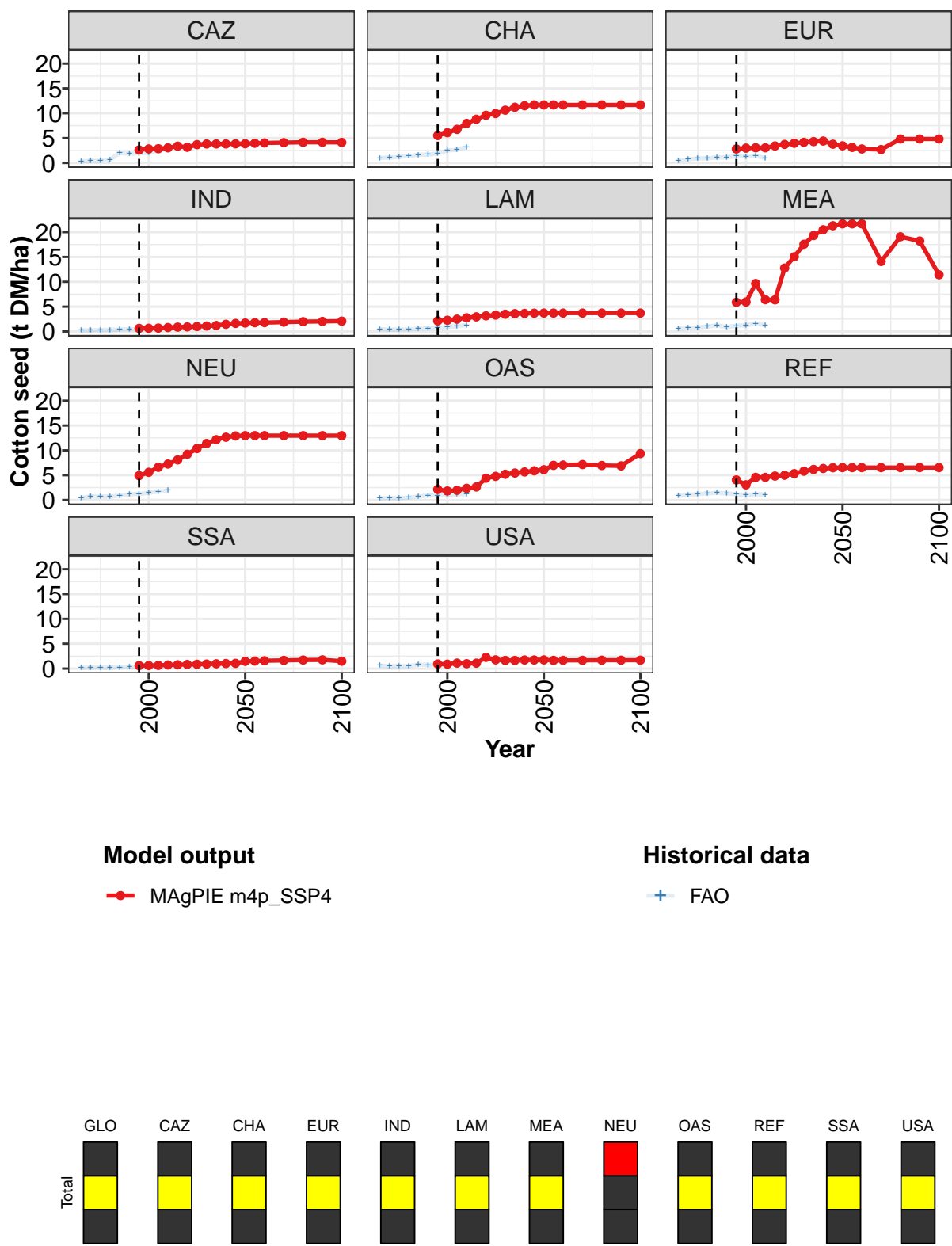


Figure 383: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Cotton seed (t DM/ha)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.6	1.6	1.6	1.6	1.7	2.0	2.1	2.3	2.4	2.7	2.9
CAZ	2.6	2.8	2.9	3.0	3.4	3.2	3.7	3.8	3.8	3.8	3.9
CHA	5.5	6.1	6.8	8.0	8.8	9.6	9.9	10.6	11.2	11.5	11.7
EUR	2.8	3.0	3.1	3.1	3.4	3.7	4.0	4.1	4.3	4.4	3.8
IND	0.6	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.4	1.6
LAM	2.1	2.3	2.5	2.8	2.9	3.2	3.3	3.5	3.6	3.6	3.7
MEA	5.9	5.9	9.6	6.4	6.4	12.8	15.0	17.6	19.3	20.5	21.3
NEU	4.9	5.6	6.6	7.3	8.1	9.2	10.4	11.4	12.1	12.6	12.9
OAS	2.1	1.8	2.0	2.4	2.6	4.4	4.8	5.2	5.4	5.7	5.9
REF	4.1	3.1	4.6	4.6	4.8	5.0	5.3	5.8	6.2	6.4	6.5
SSA	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.1
USA	0.9	0.9	1.1	1.0	1.1	2.3	1.8	1.6	1.6	1.7	1.7

Table 1489: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Cotton seed (t DM/ha) [PART 1/2]

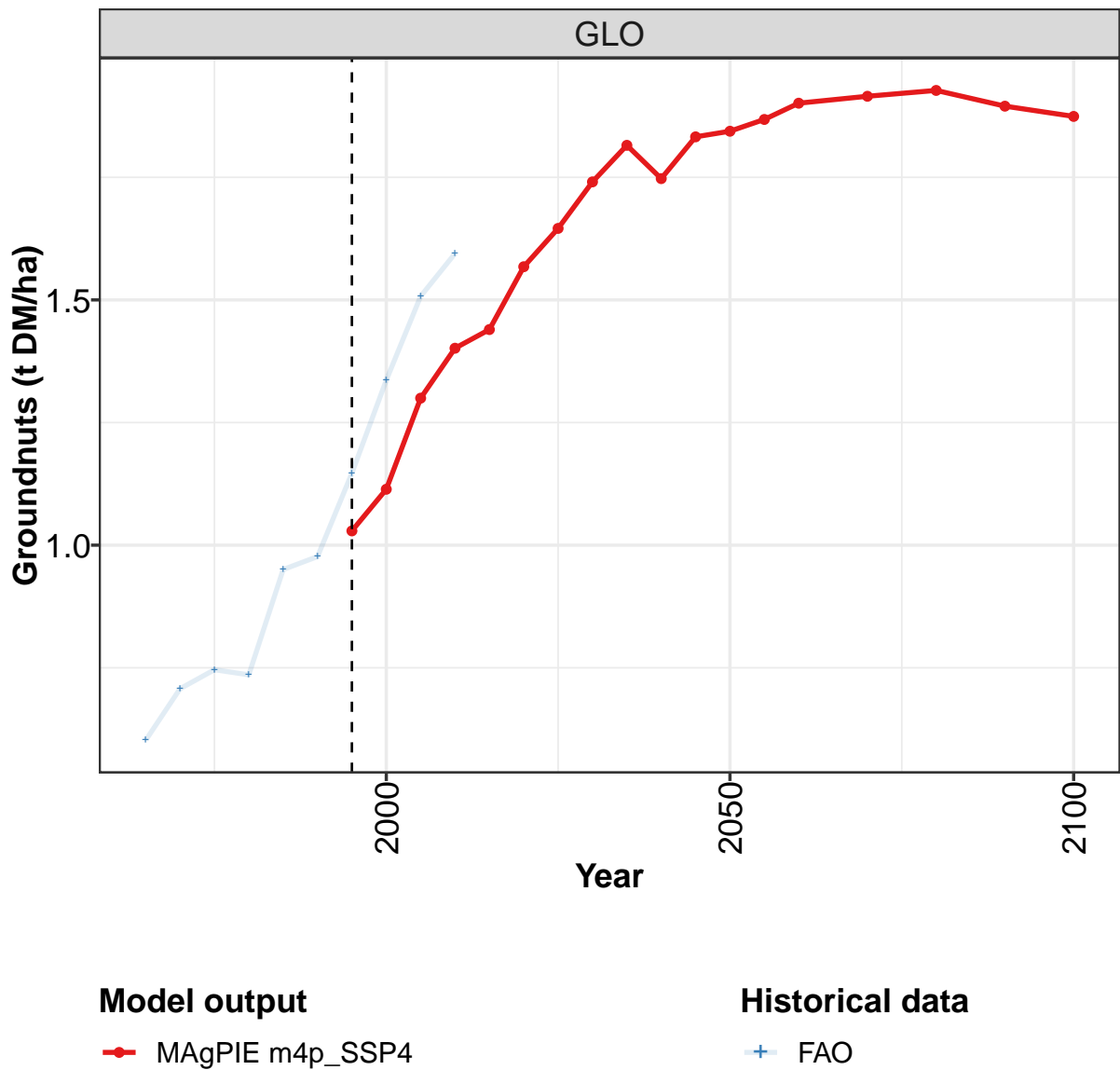
	2050	2055	2060	2070	2080	2090	2100
GLO	3.1	3.1	3.1	3.1	3.2	3.1	3.0
CAZ	3.9	4.0	4.0	4.1	4.2	4.2	4.1
CHA	11.7	11.7	11.7	11.7	11.7	11.7	11.7
EUR	3.4	3.1	2.8	2.7	4.8	4.8	4.8
IND	1.7	1.8	1.8	1.9	2.0	2.0	2.1
LAM	3.7	3.7	3.7	3.7	3.7	3.7	3.7
MEA	21.7	21.7	21.7	14.1	19.1	18.2	11.4
NEU	13.0	13.0	13.0	13.0	13.0	13.0	13.0
OAS	6.1	7.0	7.0	7.1	7.0	6.9	9.3
REF	6.5	6.5	6.5	6.5	6.5	6.5	6.5
SSA	1.5	1.5	1.6	1.7	1.7	1.8	1.5
USA	1.8	1.7	1.7	1.7	1.7	1.7	1.7

Table 1490: MAgPIE m4p\_SSP4 — 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



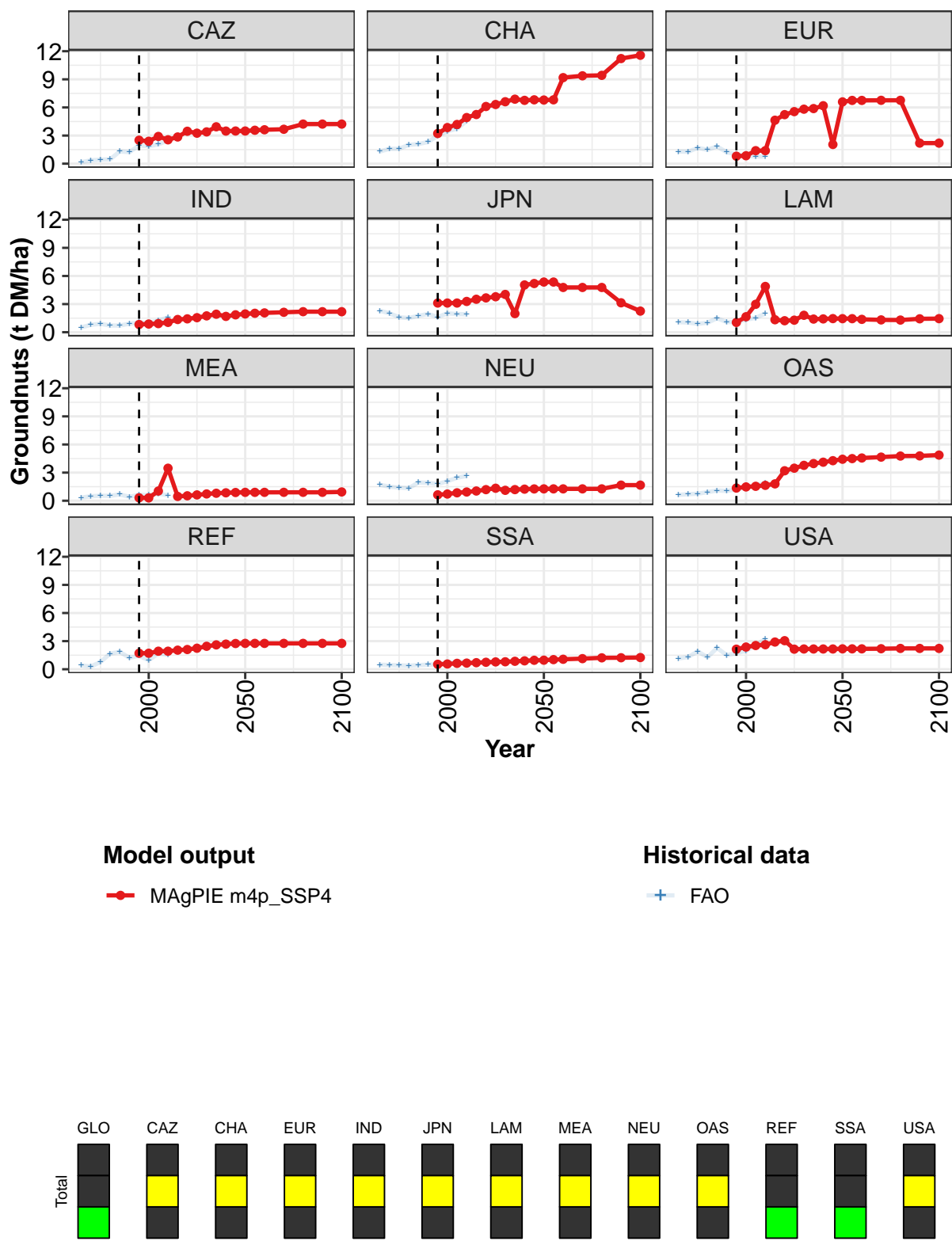


Figure 384: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Groundnuts (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.0	1.1	1.3	1.4	1.4	1.6	1.6	1.7	1.8	1.7	1.8
CAZ	2.5	2.4	2.9	2.5	2.8	3.5	3.3	3.4	3.9	3.5	3.5
CHA	3.2	3.9	4.2	4.9	5.2	6.1	6.3	6.6	6.9	6.8	6.8
EUR	0.8	0.8	1.4	1.4	4.6	5.2	5.6	5.8	5.9	6.2	2.1
IND	0.8	0.9	0.9	1.0	1.4	1.4	1.6	1.7	1.9	1.7	1.9
JPN	3.1	3.1	3.1	3.3	3.5	3.7	3.8	4.0	2.0	5.0	5.2
LAM	1.0	1.7	3.0	4.9	1.3	1.2	1.3	1.8	1.4	1.4	1.5
MEA	0.3	0.3	1.0	3.5	0.5	0.5	0.6	0.7	0.8	0.8	0.9
NEU	0.6	0.7	0.8	0.9	1.0	1.2	1.3	1.1	1.2	1.2	1.3
OAS	1.4	1.5	1.5	1.6	1.8	3.2	3.5	3.8	4.0	4.1	4.3
REF	1.7	1.7	1.9	1.9	2.0	2.1	2.2	2.5	2.6	2.7	2.7
SSA	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	1.0
USA	2.1	2.4	2.5	2.6	2.9	3.0	2.1	2.2	2.2	2.2	2.2

Table 1492: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Groundnuts (t DM/ha) [PART 1/2]

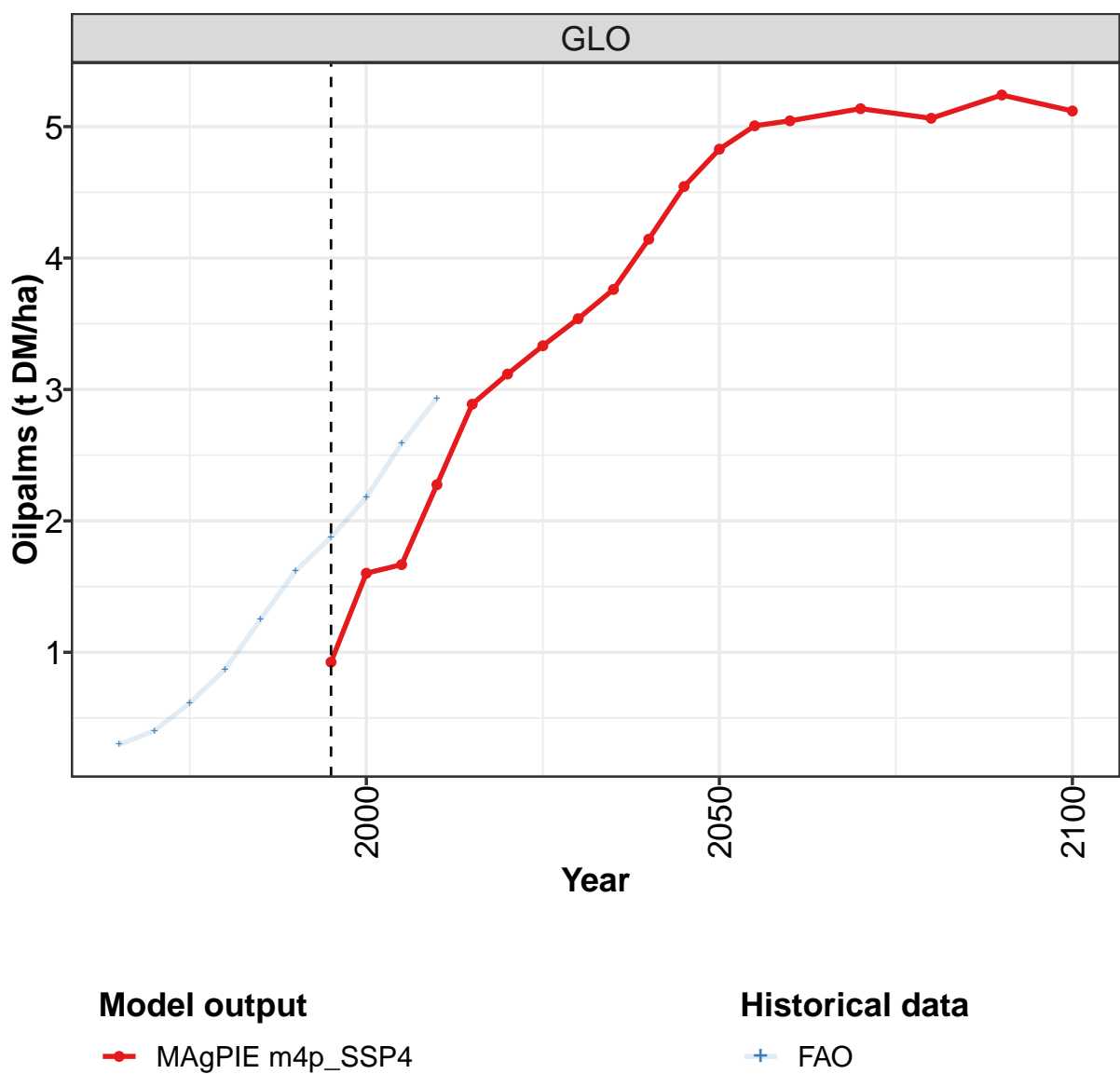
	2050	2055	2060	2070	2080	2090	2100
GLO	1.8	1.9	1.9	1.9	1.9	1.9	1.9
CAZ	3.5	3.6	3.6	3.7	4.2	4.2	4.2
CHA	6.8	6.8	9.2	9.4	9.4	11.2	11.6
EUR	6.6	6.8	6.8	6.8	6.8	2.2	2.2
IND	1.9	2.0	2.1	2.1	2.2	2.2	2.2
JPN	5.4	5.4	4.8	4.8	4.8	3.1	2.3
LAM	1.4	1.4	1.4	1.3	1.3	1.4	1.4
MEA	0.9	0.9	0.9	0.9	0.9	0.9	0.9
NEU	1.3	1.3	1.3	1.3	1.3	1.7	1.7
OAS	4.4	4.5	4.6	4.7	4.8	4.8	4.9
REF	2.8	2.8	2.8	2.8	2.8	2.8	2.8
SSA	1.0	1.0	1.1	1.1	1.2	1.2	1.3
USA	2.2	2.2	2.2	2.2	2.2	2.2	2.2

Table 1493: MAgPIE m4p\_SSP4 — 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



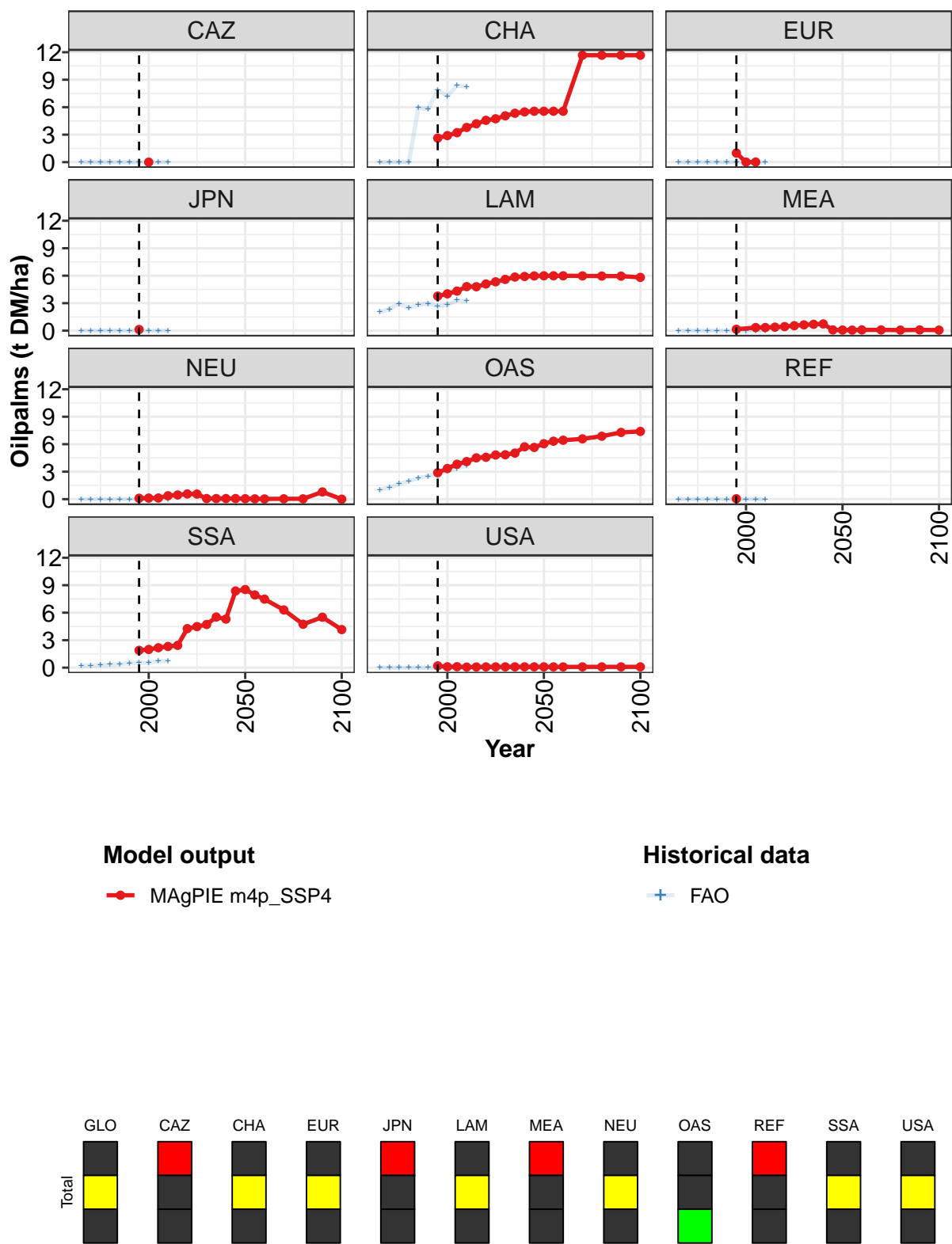


Figure 385: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Oilpalms (t DM/ha)

	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	5	5	6
EUR	1	0	0								
JPN	0										
LAM	4	4	4	5	5	5	5	6	6	6	6
MEA	0		0	0	0	0	1	1	1	1	0
NEU	0	0	0	0	0	1	1	0	0	0	0
OAS	3	3	4	4	5	5	5	5	5	6	6
REF	0										
SSA	2	2	2	2	2	4	4	5	6	5	8
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1495: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Oilpalms (t DM/ha) [PART 1/2]

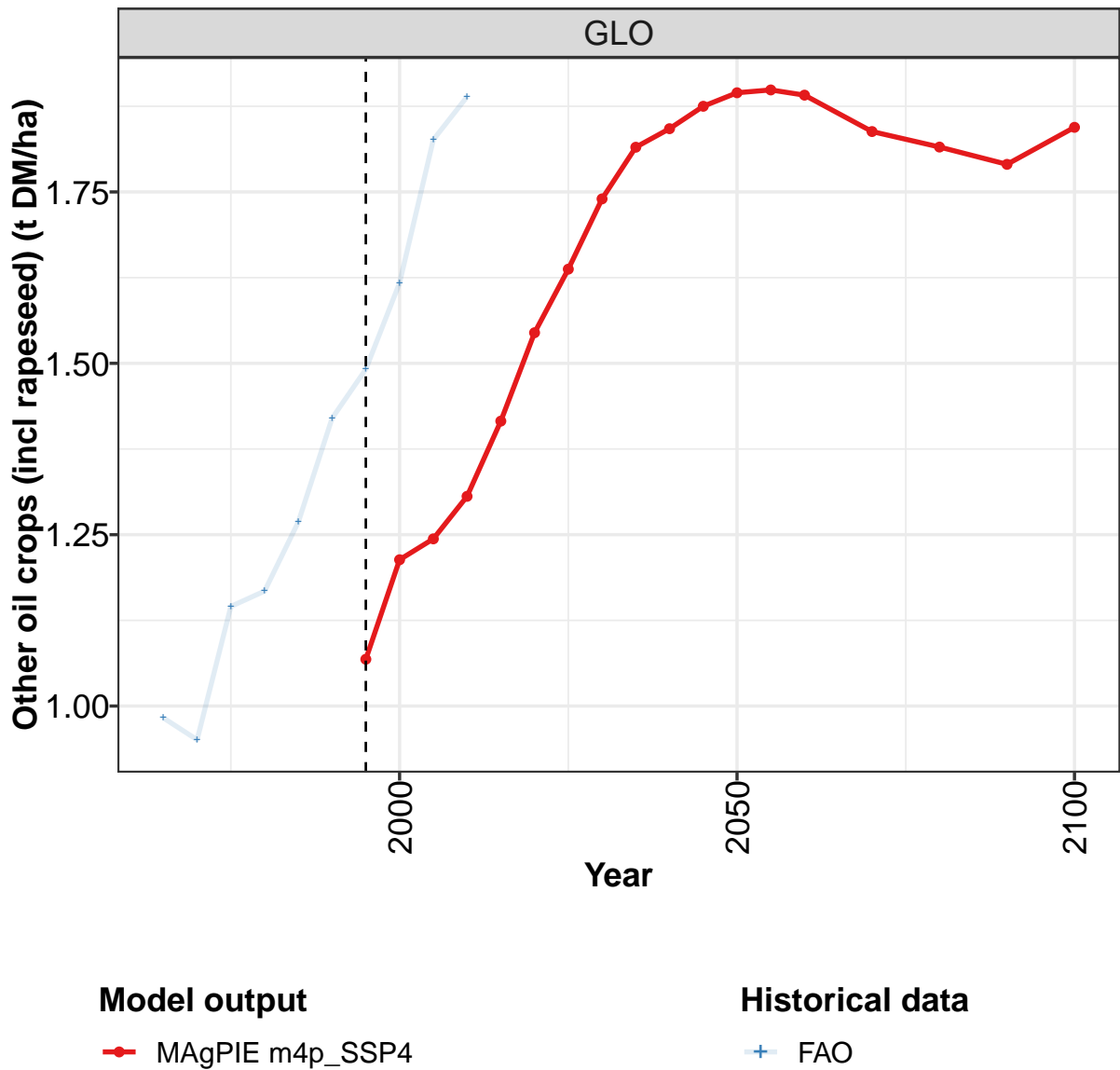
	2050	2055	2060	2070	2080	2090	2100
GLO	5	5	5	5	5	5	5
CAZ							
CHA	6	6	6	12	12	12	12
EUR							
JPN							
LAM	6	6	6	6	6	6	6
MEA	0	0	0	0	0	0	0
NEU	0	0	0	0	0	1	0
OAS	6	6	6	7	7	7	7
REF							
SSA	9	8	7	6	5	6	4
USA	0	0	0	0	0	0	0

Table 1496: MAgPIE m4p\_SSP4 — 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)





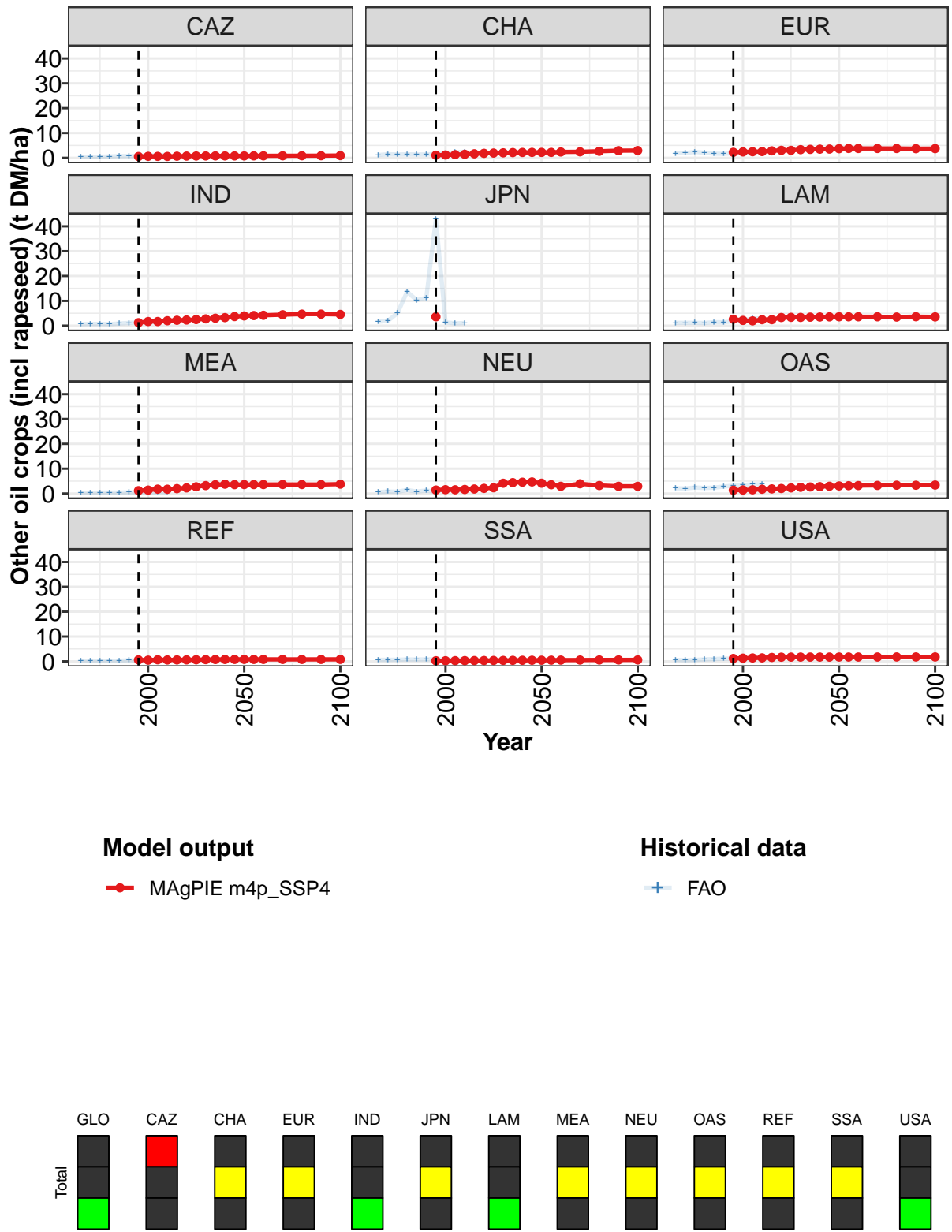


Figure 386: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Other oil crops (incl rapeseed) (t DM/ha)

	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	2	3	3	3	4
JPN	4										
LAM	3	2	2	2	2	3	3	3	3	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	5
OAS	1	1	2	2	2	2	2	3	3	3	3
REF	1	0	1	1	1	1	1	1	1	1	1
SSA	0	0	0	0	0	0	0	0	0	0	0
USA	1	1	1	1	2	2	2	2	2	2	2

Table 1498: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Other oil crops (incl rapeseed) (t DM/ha) [PART 1/2]

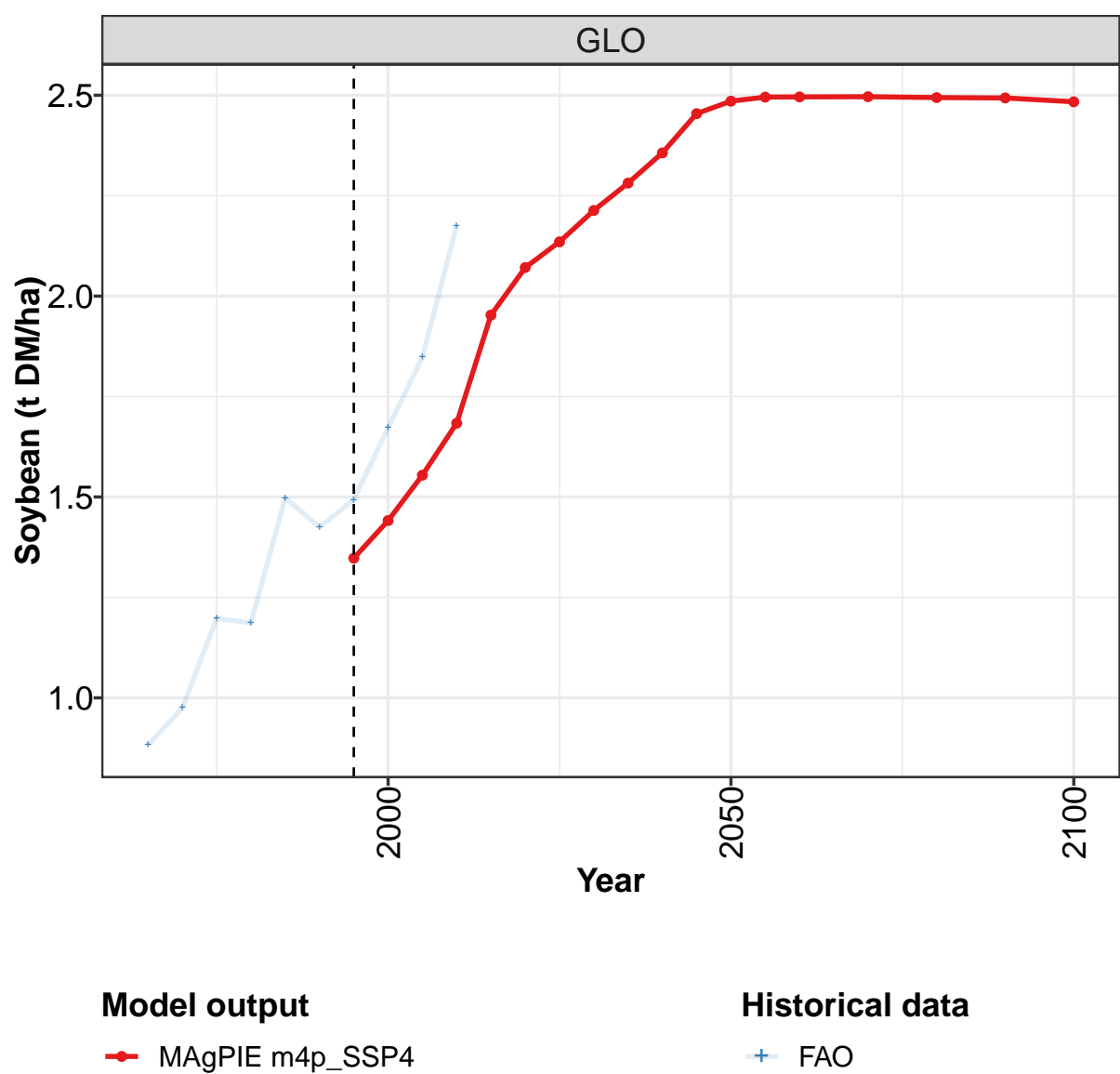
	2050	2055	2060	2070	2080	2090	2100
GLO	2	2	2	2	2	2	2
CAZ	1	1	1	1	1	1	1
CHA	2	2	2	2	3	3	3
EUR	4	4	4	4	4	4	4
IND	4	4	4	4	5	5	5
JPN							
LAM	4	4	4	4	3	4	4
MEA	4	4	4	4	4	4	4
NEU	4	4	3	4	3	3	3
OAS	3	3	3	3	3	3	3
REF	1	1	1	1	1	1	1
SSA	0	0	1	1	1	1	1
USA	2	2	2	2	2	2	2

Table 1499: MAgPIE m4p\_SSP4 — 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



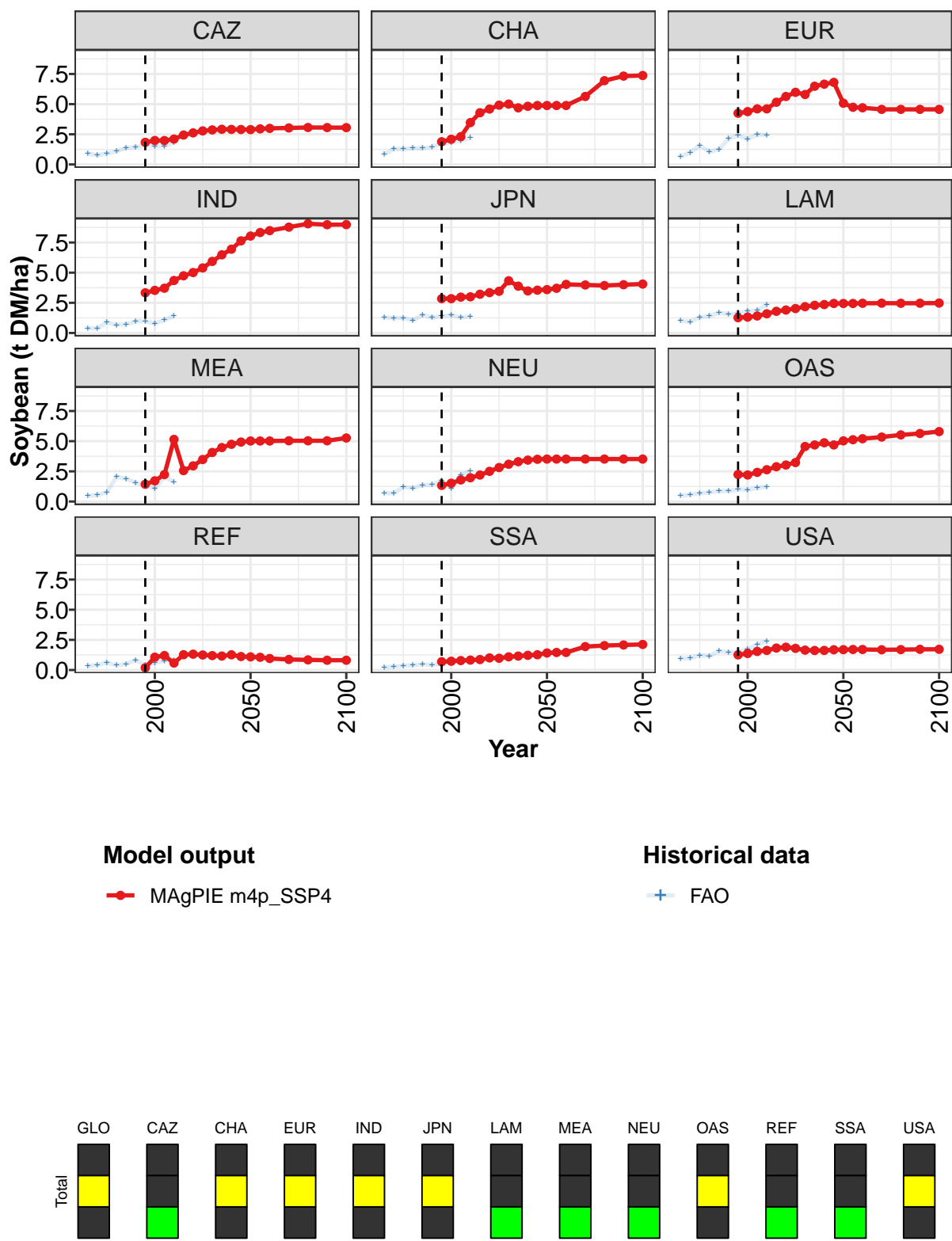


Figure 387: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Soybean (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.35	1.44	1.55	1.68	1.95	2.07	2.14	2.21	2.28	2.36	2.45
CAZ	1.83	1.99	1.98	2.10	2.44	2.62	2.78	2.87	2.92	2.91	2.90
CHA	1.88	2.09	2.31	3.47	4.29	4.60	4.92	5.01	4.69	4.82	4.89
EUR	4.25	4.38	4.61	4.61	5.16	5.64	5.98	5.80	6.49	6.66	6.80
IND	3.33	3.54	3.71	4.35	4.74	5.01	5.39	5.93	6.48	6.95	7.64
JPN	2.84	2.84	2.97	3.00	3.21	3.34	3.46	4.33	3.88	3.49	3.55
LAM	1.27	1.32	1.41	1.59	1.80	1.90	2.03	2.18	2.29	2.36	2.45
MEA	1.43	1.72	2.23	5.15	2.56	2.95	3.48	4.07	4.47	4.74	4.93
NEU	1.33	1.52	1.79	1.97	2.19	2.50	2.82	3.09	3.30	3.43	3.50
OAS	2.24	2.20	2.42	2.64	2.88	3.03	3.23	4.56	4.69	4.87	4.69
REF	0.19	1.07	1.20	0.58	1.27	1.31	1.25	1.20	1.16	1.26	1.12
SSA	0.69	0.73	0.78	0.82	0.87	1.01	0.98	1.09	1.16	1.22	1.27
USA	1.26	1.37	1.54	1.63	1.82	1.89	1.80	1.65	1.62	1.63	1.68

Table 1501: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Soybean (t DM/ha) [PART 1/2]

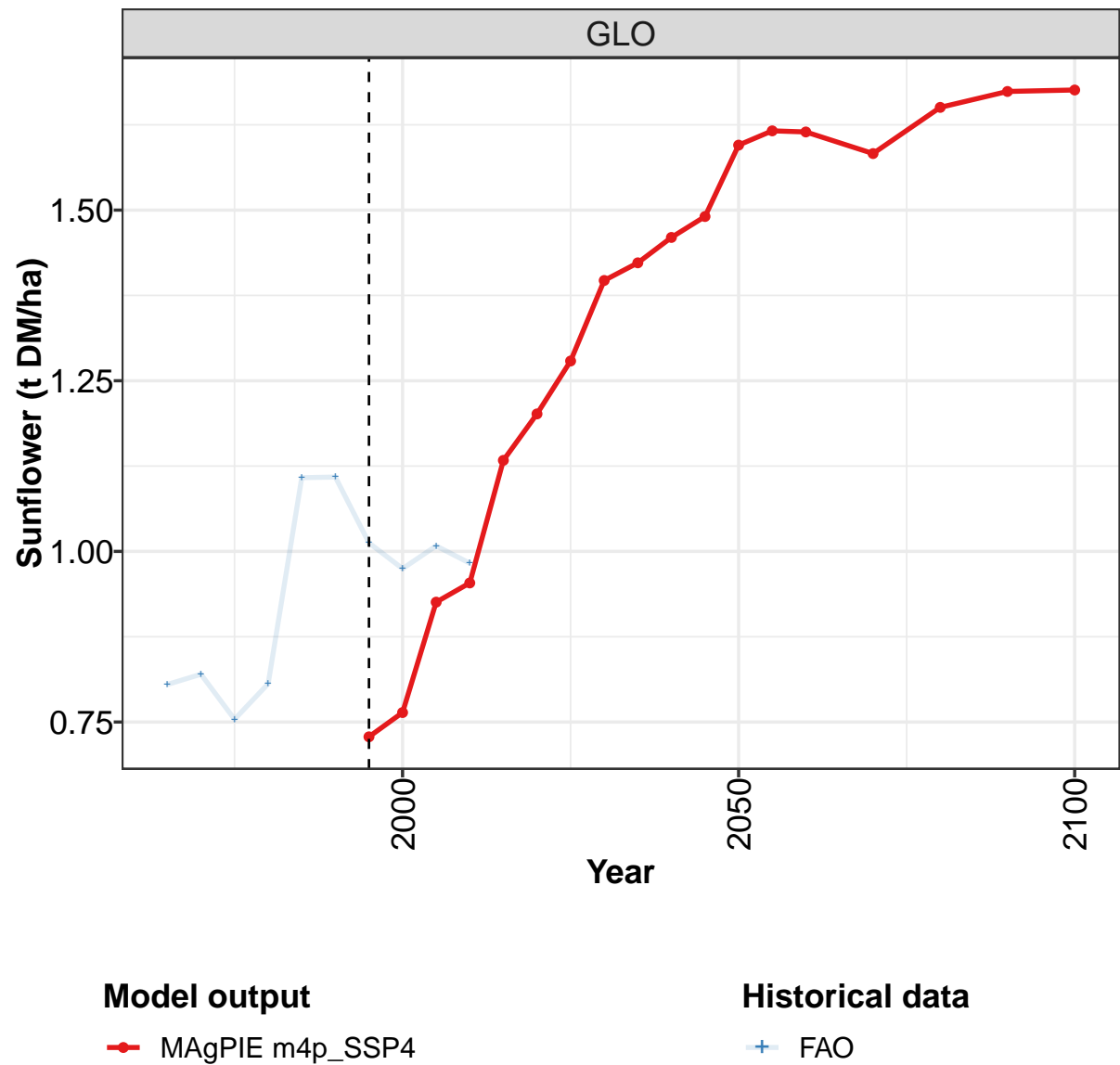
	2050	2055	2060	2070	2080	2090	2100
GLO	2.49	2.50	2.50	2.50	2.49	2.49	2.48
CAZ	2.89	2.95	2.99	3.03	3.06	3.06	3.05
CHA	4.89	4.89	4.89	5.64	6.95	7.33	7.37
EUR	5.08	4.74	4.70	4.57	4.57	4.57	4.57
IND	8.04	8.33	8.48	8.77	9.05	8.98	8.98
JPN	3.60	3.71	4.03	3.98	3.93	4.00	4.06
LAM	2.45	2.44	2.46	2.47	2.46	2.47	2.48
MEA	5.02	5.02	5.02	5.04	5.04	5.04	5.27
NEU	3.52	3.52	3.52	3.52	3.52	3.52	3.52
OAS	5.03	5.12	5.20	5.34	5.52	5.64	5.80
REF	1.09	1.06	0.96	0.88	0.84	0.81	0.81
SSA	1.41	1.46	1.46	1.94	2.03	2.08	2.12
USA	1.69	1.70	1.70	1.68	1.69	1.72	1.72

Table 1502: MAgPIE m4p\_SSP4 — 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



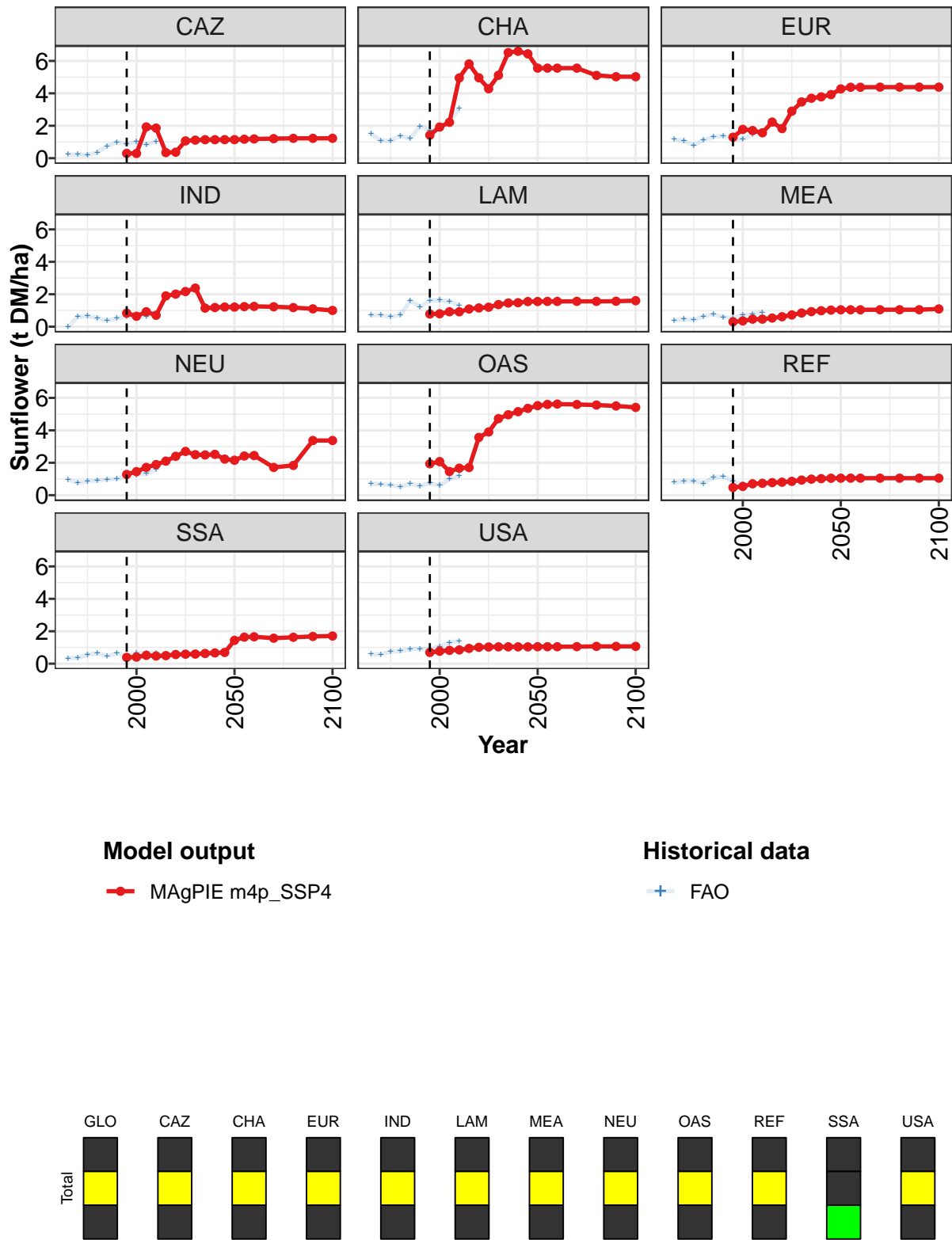


Figure 388: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Sunflower (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.73	0.76	0.93	0.95	1.13	1.20	1.28	1.40	1.42	1.46	1.49
CAZ	0.30	0.29	1.93	1.86	0.35	0.37	1.07	1.11	1.14	1.14	1.14
CHA	1.42	1.92	2.21	4.95	5.82	4.96	4.28	5.12	6.52	6.59	6.44
EUR	1.29	1.78	1.71	1.57	2.23	1.83	2.90	3.47	3.70	3.78	3.92
IND	0.83	0.64	0.92	0.70	1.90	2.01	2.17	2.38	1.15	1.18	1.21
LAM	0.78	0.80	0.92	0.92	1.09	1.16	1.20	1.36	1.46	1.48	1.55
MEA	0.30	0.36	0.46	0.47	0.53	0.61	0.72	0.84	0.93	0.98	1.02
NEU	1.28	1.45	1.71	1.89	2.10	2.40	2.70	2.50	2.48	2.52	2.23
OAS	1.94	2.07	1.46	1.67	1.71	3.56	3.90	4.72	4.96	5.15	5.35
REF	0.47	0.54	0.70	0.73	0.78	0.80	0.85	0.93	0.99	1.02	1.04
SSA	0.39	0.41	0.51	0.47	0.50	0.56	0.58	0.59	0.63	0.66	0.69
USA	0.69	0.77	0.82	0.85	0.94	1.01	1.03	1.04	1.04	1.04	1.04

Table 1504: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Sunflower (t DM/ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.60	1.62	1.61	1.58	1.65	1.67	1.68
CAZ	1.14	1.17	1.19	1.21	1.22	1.22	1.23
CHA	5.56	5.56	5.56	5.56	5.11	5.03	5.03
EUR	4.27	4.38	4.38	4.38	4.38	4.38	4.38
IND	1.21	1.24	1.25	1.23	1.18	1.10	1.00
LAM	1.55	1.56	1.56	1.56	1.56	1.57	1.60
MEA	1.04	1.04	1.04	1.05	1.05	1.05	1.09
NEU	2.16	2.42	2.45	1.71	1.84	3.37	3.37
OAS	5.52	5.60	5.62	5.59	5.56	5.50	5.41
REF	1.05	1.05	1.05	1.05	1.05	1.05	1.05
SSA	1.44	1.64	1.66	1.57	1.63	1.68	1.71
USA	1.05	1.05	1.05	1.05	1.07	1.07	1.07

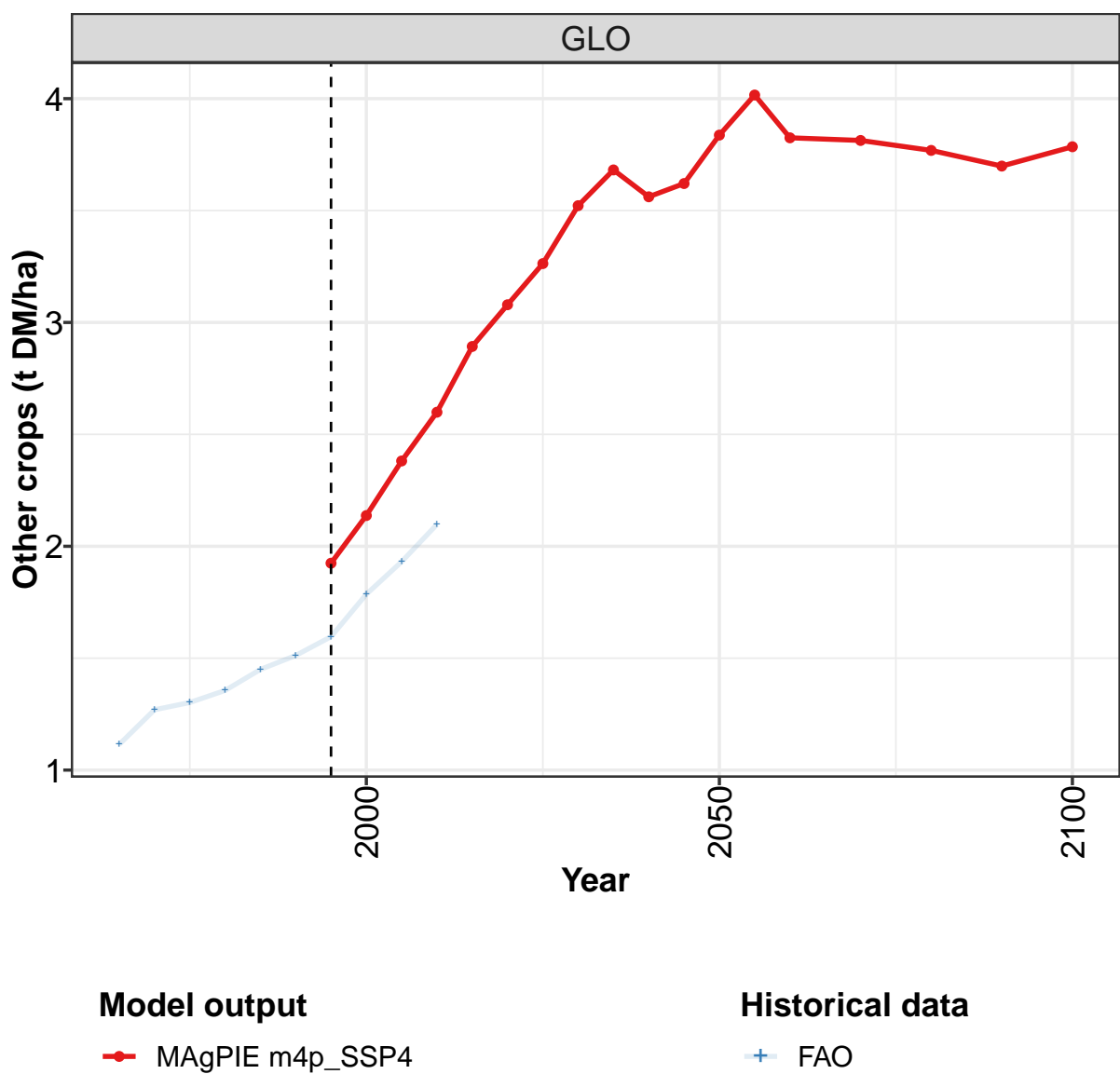
Table 1505: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Oil crops—Sunflower (t DM/ha) [PART 2/2]

	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



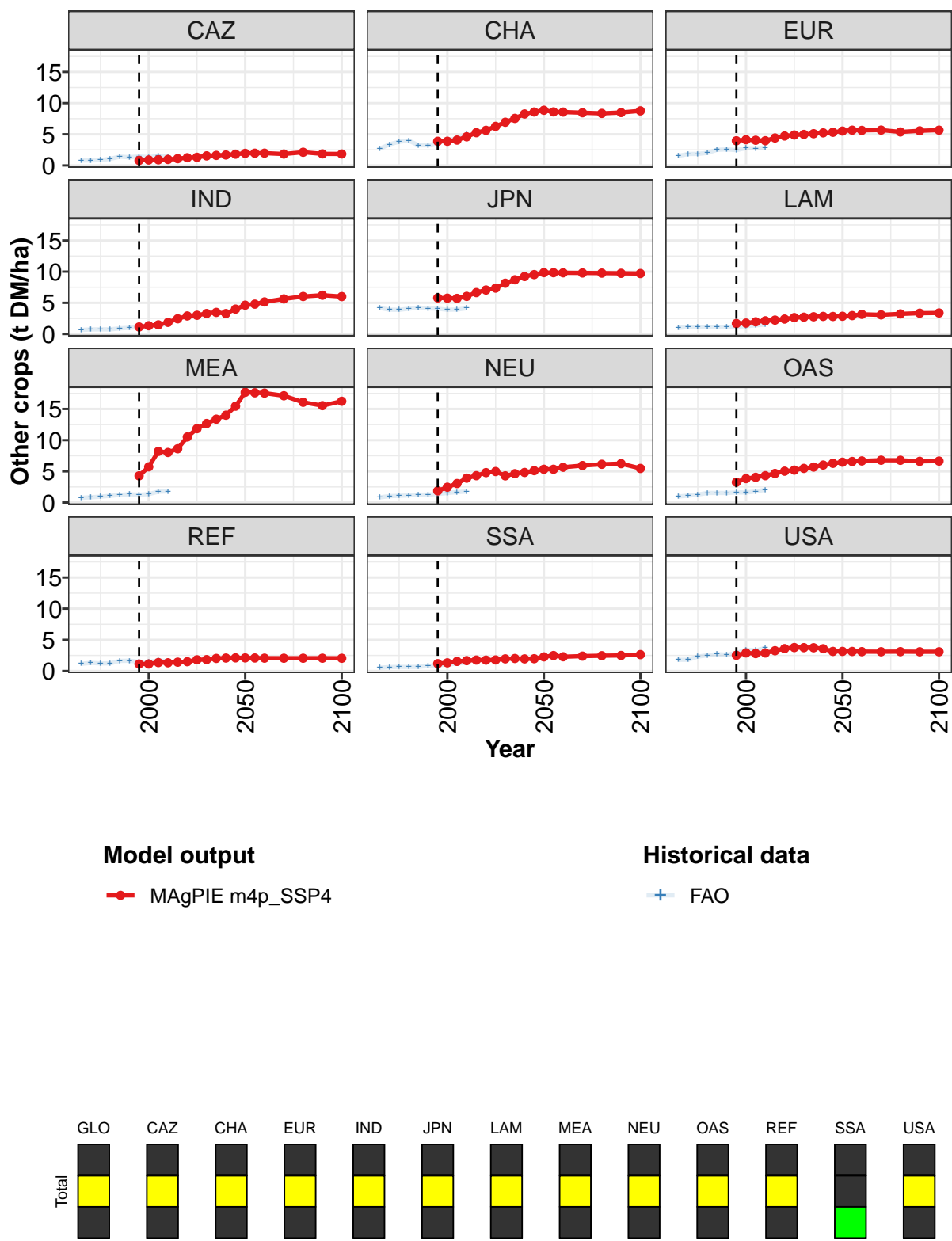


Figure 389: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops (t DM/ha)

	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	3.5	3.7	3.6	3.6
CAZ	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8
CHA	3.9	3.9	4.1	4.6	5.3	5.6	6.3	6.9	7.5	8.3	8.6
EUR	4.0	4.1	4.0	4.0	4.4	4.7	4.9	5.0	5.1	5.2	5.3
IND	1.1	1.3	1.5	1.9	2.4	2.9	3.0	3.3	3.5	3.3	4.0
JPN	5.8	5.7	5.7	6.0	6.6	7.1	7.4	8.1	8.7	9.2	9.5
LAM	1.7	1.8	2.0	2.1	2.2	2.4	2.6	2.7	2.8	2.8	2.8
MEA	4.3	5.7	8.2	8.0	8.6	10.5	11.8	12.7	13.4	14.0	15.4
NEU	1.9	2.5	3.0	3.9	4.3	4.8	5.0	4.3	4.6	4.8	5.1
OAS	3.3	3.8	4.0	4.3	4.7	5.0	5.2	5.5	5.7	6.0	6.3
REF	1.1	1.1	1.4	1.3	1.4	1.5	1.8	1.8	2.0	2.1	2.1
SSA	1.2	1.3	1.5	1.7	1.8	1.7	1.8	1.9	2.0	1.9	2.0
USA	2.5	2.9	2.8	2.9	3.3	3.6	3.8	3.7	3.7	3.6	3.1

Table 1507: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops (t DM/ha) [PART 1/2]

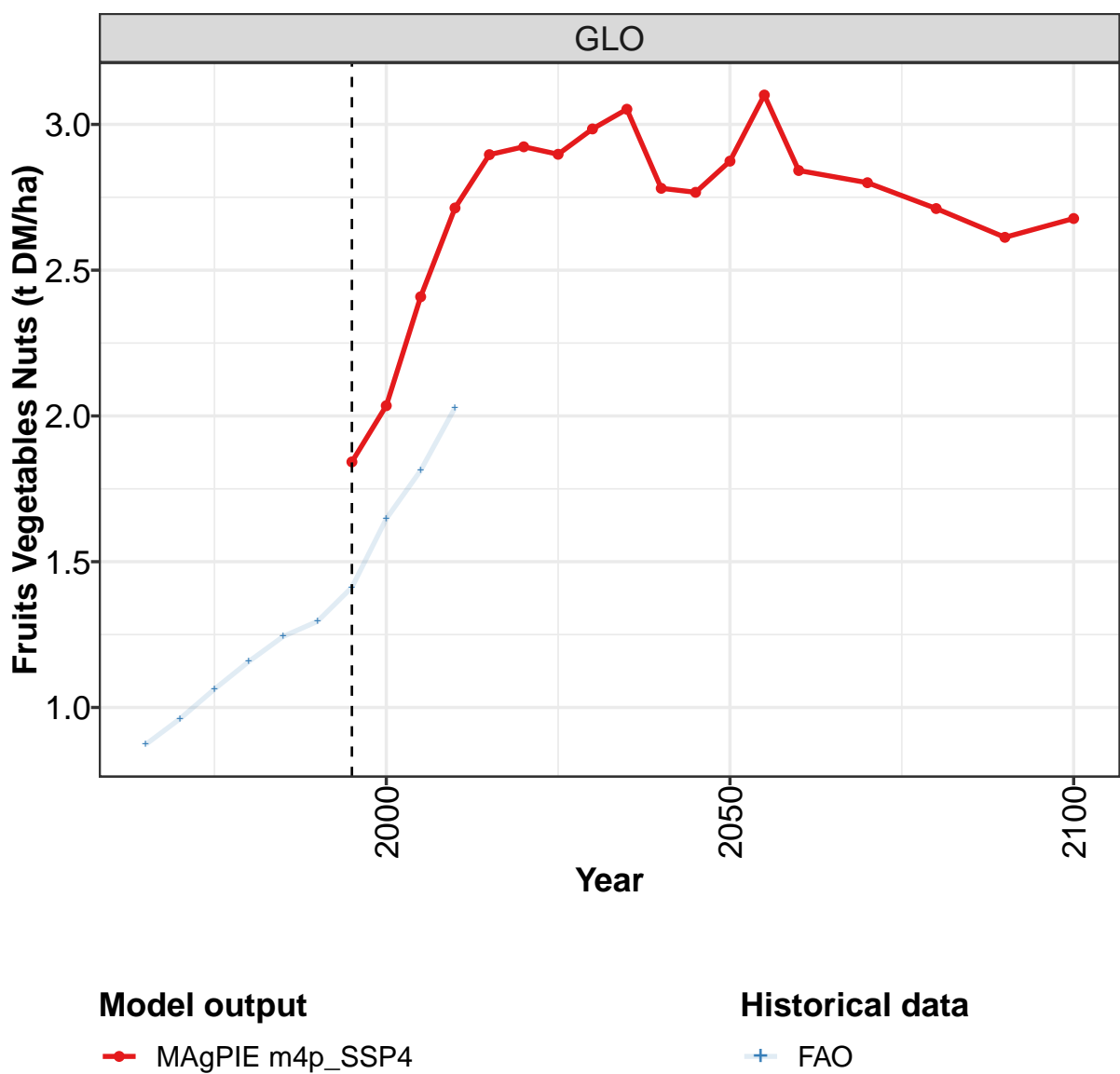
	2050	2055	2060	2070	2080	2090	2100
GLO	3.8	4.0	3.8	3.8	3.8	3.7	3.8
CAZ	1.9	2.0	2.0	1.8	2.1	1.9	1.8
CHA	8.8	8.6	8.6	8.5	8.3	8.5	8.8
EUR	5.5	5.7	5.6	5.7	5.4	5.6	5.7
IND	4.6	4.8	5.1	5.6	6.0	6.2	6.0
JPN	9.8	9.8	9.8	9.8	9.8	9.7	9.7
LAM	2.8	3.0	3.2	3.1	3.2	3.3	3.4
MEA	17.7	17.6	17.6	17.1	16.1	15.5	16.2
NEU	5.3	5.3	5.7	5.9	6.1	6.2	5.5
OAS	6.5	6.6	6.7	6.8	6.8	6.6	6.7
REF	2.1	2.1	2.1	2.1	2.1	2.1	2.0
SSA	2.3	2.5	2.3	2.4	2.5	2.5	2.6
USA	3.1	3.1	3.1	3.1	3.1	3.1	3.1

Table 1508: MAgPIE m4p\_SSP4 — 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



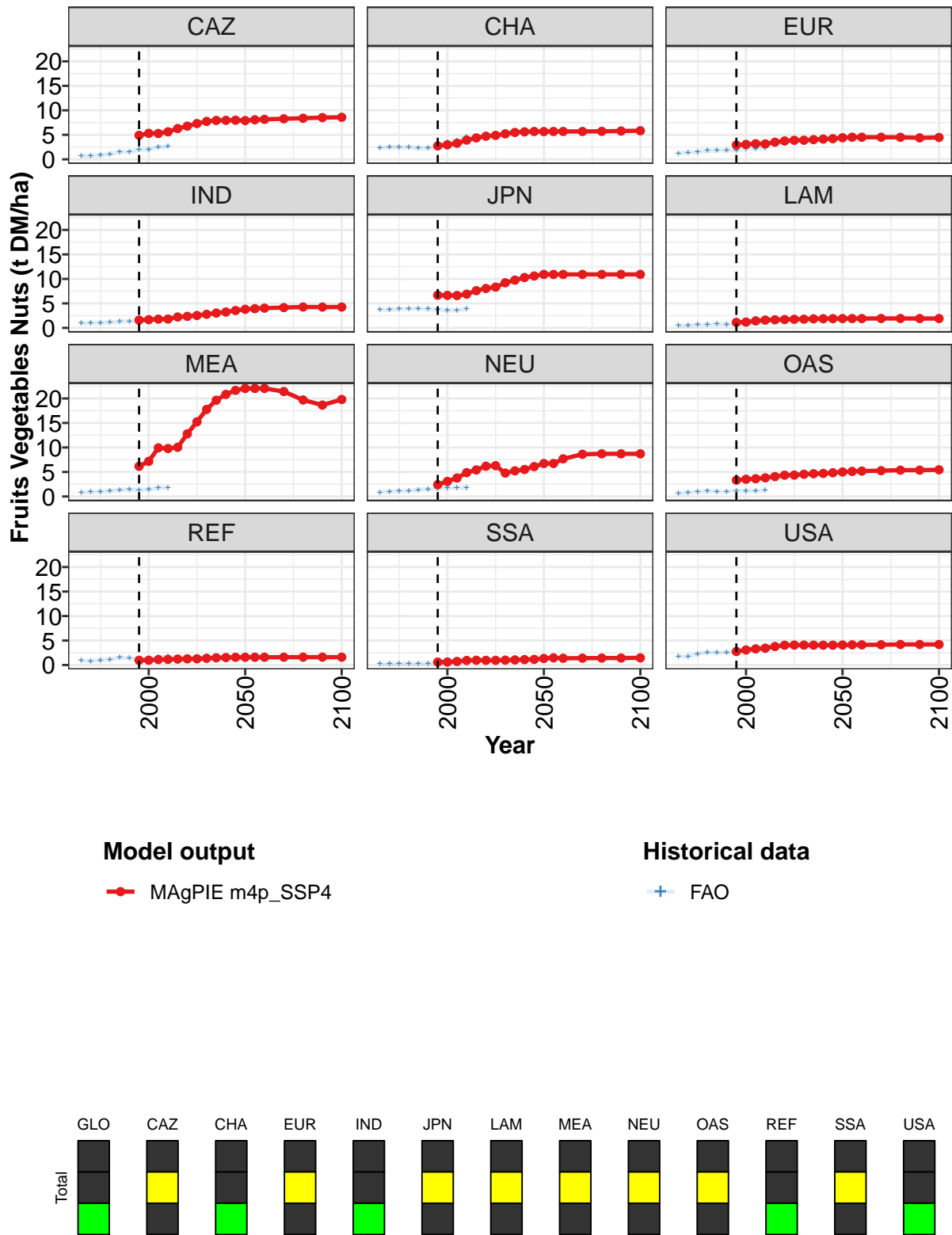


Figure 390: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Fruits Vegetables Nuts (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.8	2.0	2.4	2.7	2.9	2.9	2.9	3.0	3.1	2.8	2.8
CAZ	4.9	5.3	5.3	5.6	6.3	6.8	7.3	7.7	7.9	8.0	8.0
CHA	2.7	3.0	3.3	3.9	4.4	4.7	4.9	5.2	5.5	5.6	5.7
EUR	2.9	3.0	3.2	3.2	3.5	3.8	3.9	3.9	4.0	4.1	4.2
IND	1.6	1.7	1.8	1.8	2.2	2.4	2.5	2.8	3.0	3.2	3.6
JPN	6.7	6.6	6.6	6.9	7.6	8.1	8.3	9.2	9.8	10.3	10.6
LAM	1.1	1.2	1.4	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9
MEA	6.2	7.2	9.9	9.8	10.0	12.8	15.2	17.8	19.6	20.8	21.7
NEU	2.4	3.1	3.8	4.9	5.4	6.2	6.3	4.8	5.2	5.5	6.1
OAS	3.3	3.5	3.6	3.8	4.1	4.3	4.4	4.5	4.6	4.7	4.8
REF	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.5	1.6
SSA	0.6	0.6	0.7	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.2
USA	2.8	3.1	3.3	3.4	3.8	4.0	4.1	4.1	4.1	4.1	4.1

Table 1510: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Fruits Vegetables Nuts (t DM/ha) [PART 1/2]

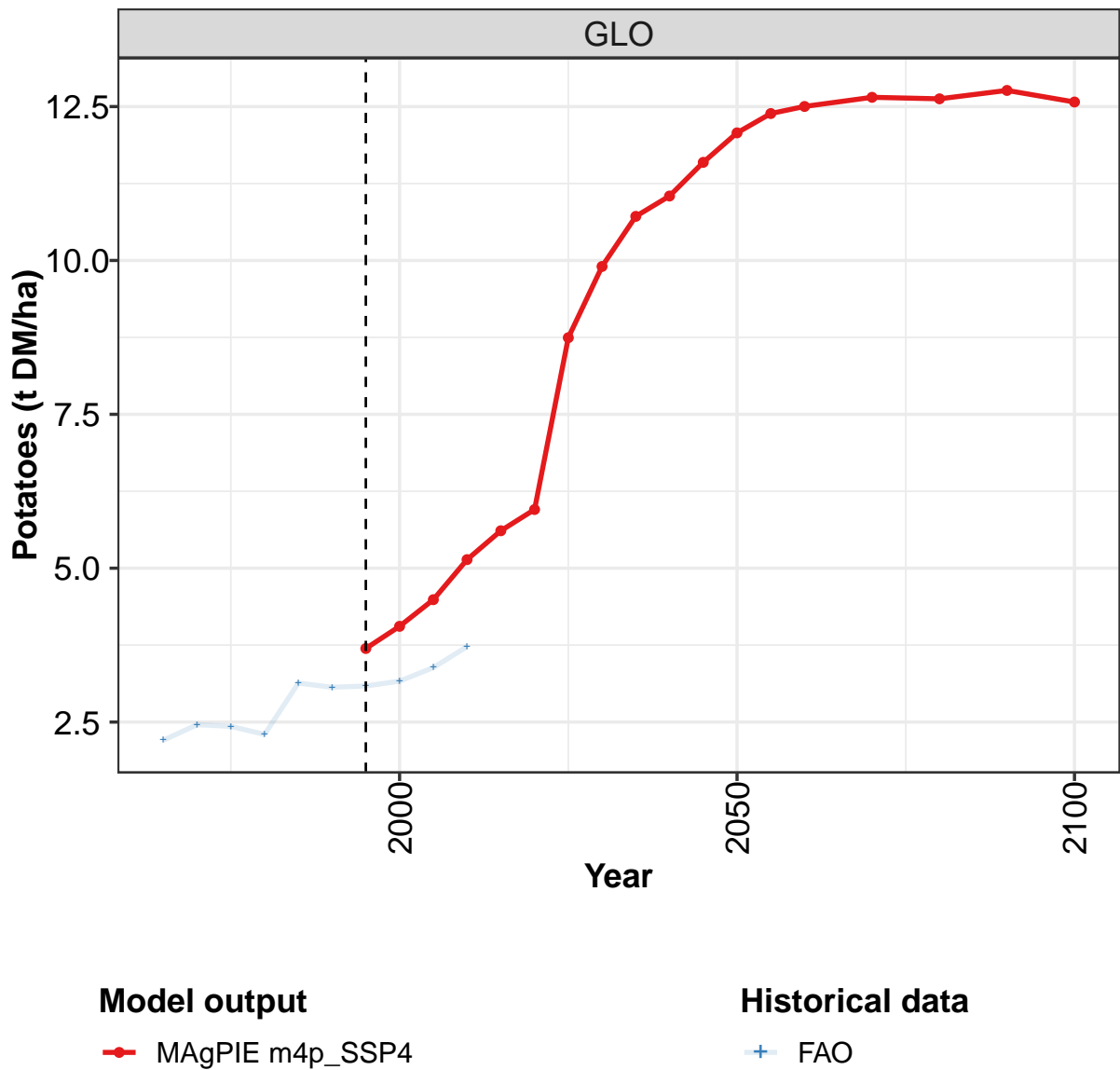
	2050	2055	2060	2070	2080	2090	2100
GLO	2.9	3.1	2.8	2.8	2.7	2.6	2.7
CAZ	7.9	8.1	8.2	8.3	8.4	8.5	8.6
CHA	5.7	5.7	5.7	5.7	5.7	5.8	5.8
EUR	4.4	4.5	4.5	4.5	4.5	4.4	4.5
IND	3.8	3.9	4.0	4.2	4.3	4.2	4.3
JPN	10.9	10.9	10.9	10.9	10.9	10.9	10.9
LAM	1.9	1.9	1.9	1.9	1.9	1.9	1.9
MEA	22.0	22.0	22.0	21.4	19.7	18.7	19.8
NEU	6.7	6.7	7.7	8.6	8.7	8.7	8.7
OAS	5.0	5.1	5.2	5.3	5.4	5.4	5.4
REF	1.6	1.6	1.6	1.6	1.6	1.6	1.6
SSA	1.3	1.5	1.4	1.4	1.4	1.4	1.5
USA	4.1	4.1	4.1	4.1	4.2	4.2	4.2

Table 1511: MAGPIE m4p\_SSP4 — 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



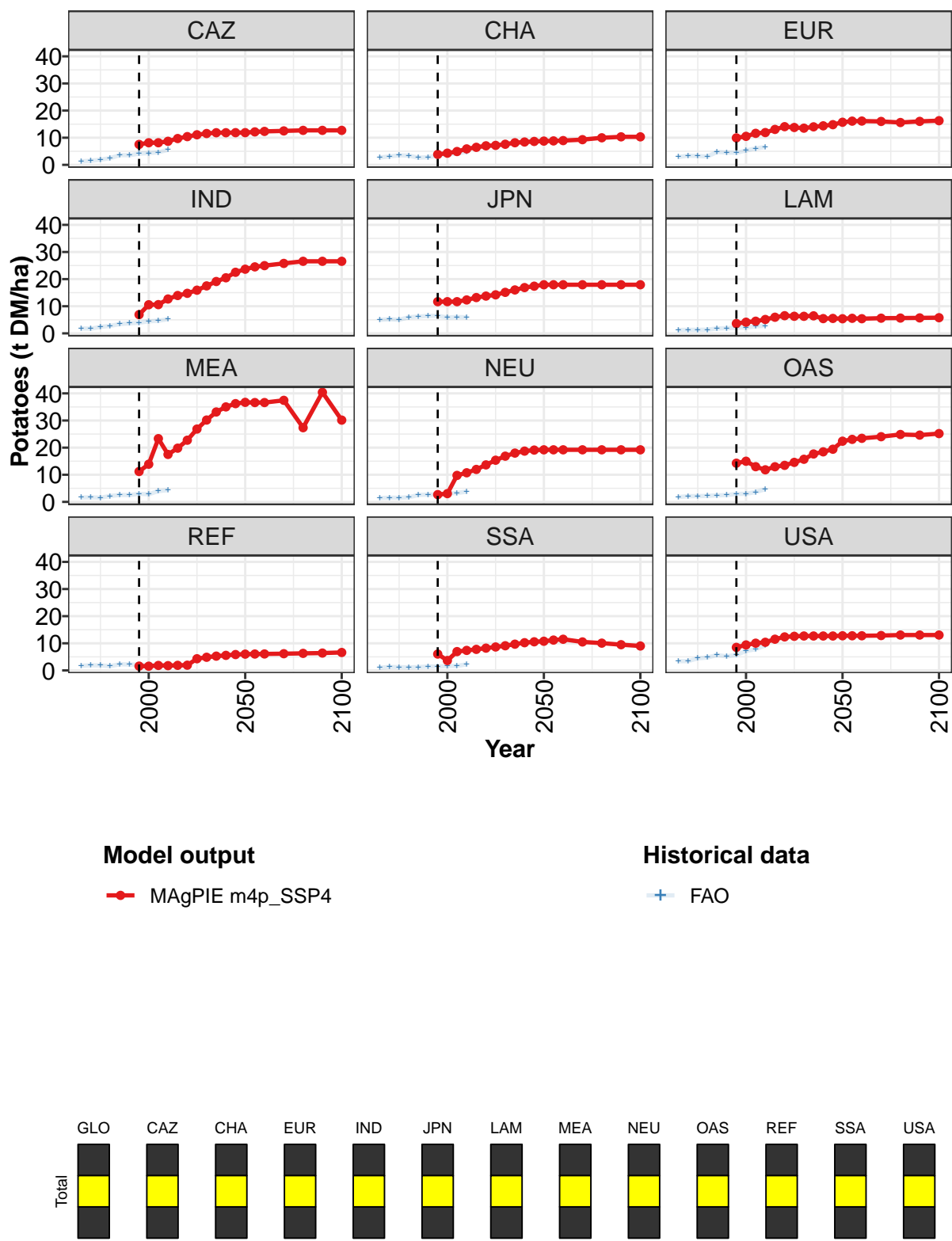


Figure 391: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Potatoes (t DM/ha)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.7	4.1	4.5	5.1	5.6	6.0	8.7	9.9	10.7	11.0	11.6
CAZ	7.5	8.2	8.2	8.7	9.7	10.4	11.1	11.6	11.8	11.8	11.9
CHA	3.9	4.3	4.9	5.9	6.5	7.0	7.2	7.6	8.2	8.4	8.6
EUR	9.9	10.5	11.6	11.9	13.1	14.1	13.8	13.5	14.0	14.4	14.8
IND	6.9	10.6	10.6	12.7	14.0	14.8	15.9	17.5	19.1	20.5	22.5
JPN	11.7	11.7	11.7	12.3	13.2	13.7	14.2	15.1	16.0	16.9	17.4
LAM	3.6	4.1	4.5	5.1	5.9	6.5	6.3	6.3	6.5	5.4	5.5
MEA	11.2	13.9	23.3	17.5	19.8	22.7	26.9	30.2	33.1	35.0	36.2
NEU	2.7	3.1	9.8	10.7	12.0	13.6	15.4	16.9	18.0	18.7	19.1
OAS	14.3	15.0	13.0	11.8	13.0	13.5	14.6	15.7	17.7	18.5	19.4
REF	1.6	1.6	1.8	1.8	1.9	1.9	4.3	4.8	5.3	5.5	5.8
SSA	6.0	3.7	6.9	7.4	7.8	8.2	8.6	9.1	9.7	10.2	10.6
USA	8.5	9.4	10.0	10.4	11.5	12.4	12.6	12.7	12.7	12.7	12.7

Table 1513: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Potatoes (t DM/ha) [PART 1/2]

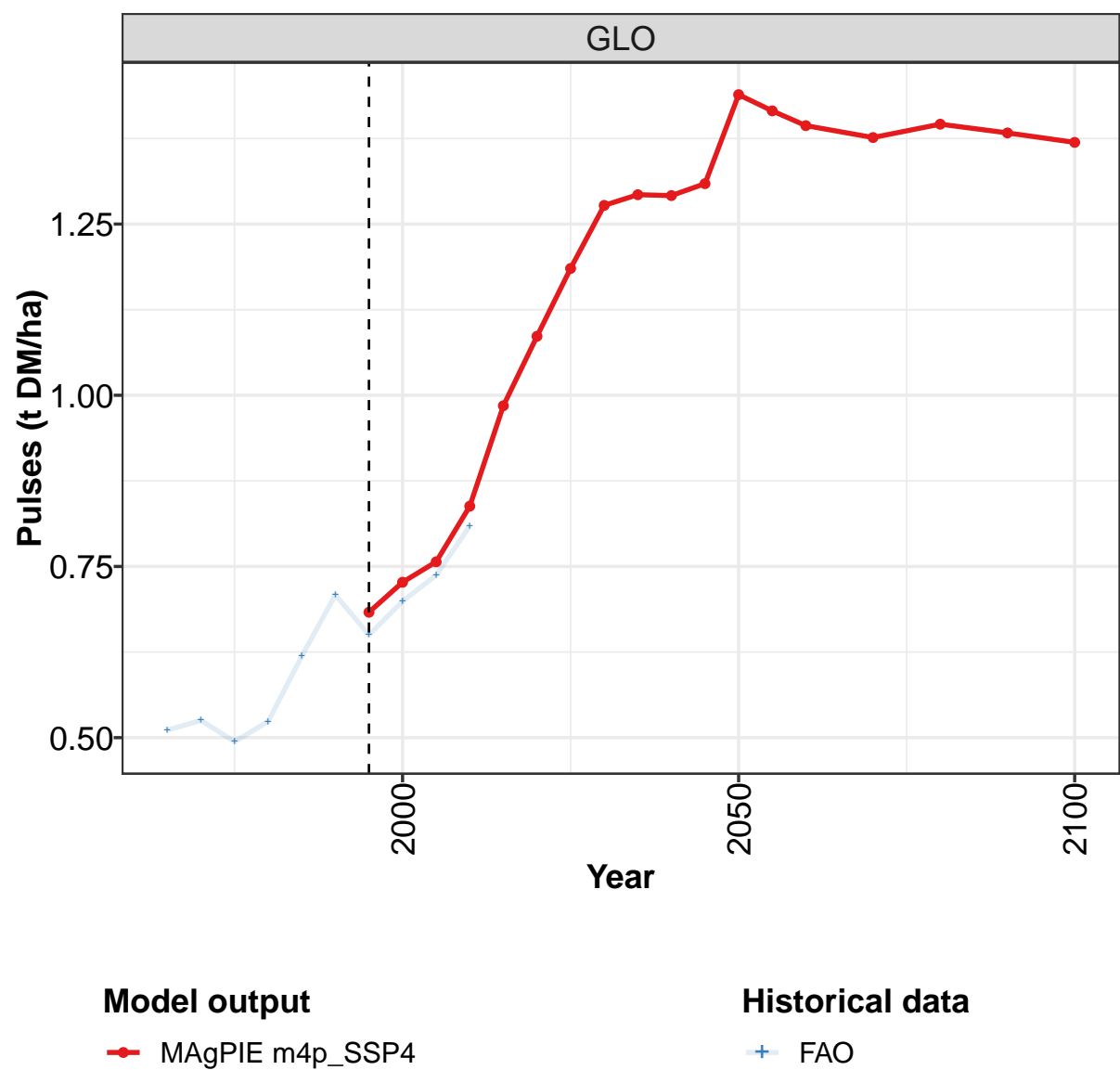
	2050	2055	2060	2070	2080	2090	2100
GLO	12.1	12.4	12.5	12.7	12.6	12.8	12.6
CAZ	11.9	12.2	12.3	12.5	12.7	12.7	12.7
CHA	8.8	8.8	8.9	9.3	10.0	10.3	10.3
EUR	15.7	16.1	16.1	16.0	15.6	16.0	16.3
IND	23.7	24.5	25.0	25.8	26.6	26.6	26.6
JPN	17.9	17.9	17.9	17.9	17.9	17.9	17.9
LAM	5.4	5.6	5.4	5.6	5.6	5.7	5.8
MEA	36.7	36.6	36.6	37.4	27.4	40.4	30.1
NEU	19.2	19.2	19.2	19.2	19.2	19.2	19.2
OAS	22.4	23.0	23.4	24.0	24.9	24.6	25.2
REF	6.0	6.0	6.1	6.2	6.3	6.4	6.6
SSA	10.8	11.2	11.5	10.5	10.1	9.5	9.0
USA	12.8	12.8	12.8	12.9	13.0	13.0	13.0

Table 1514: MAgPIE m4p\_SSP4 — 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



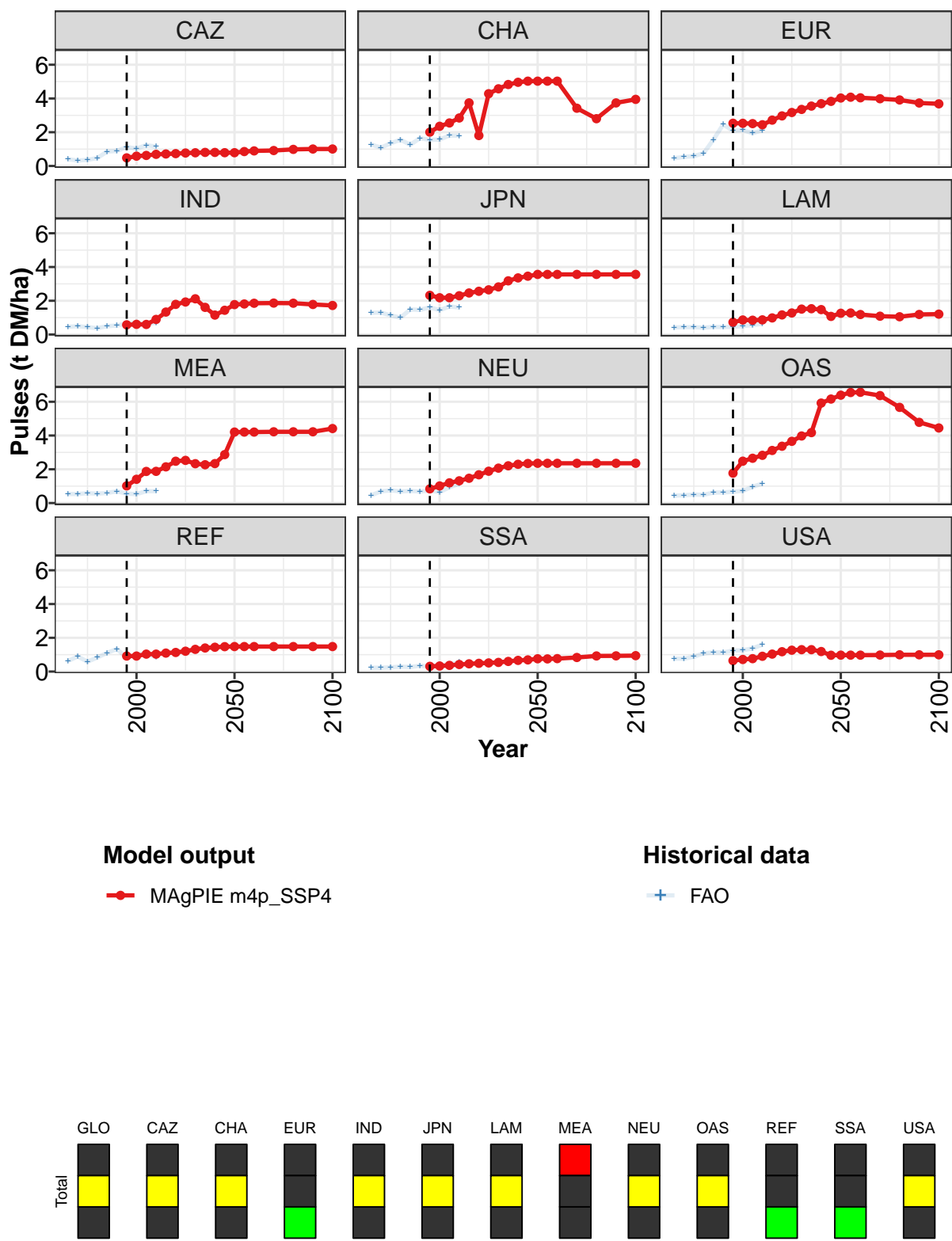


Figure 392: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Pulses (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.68	0.73	0.76	0.84	0.98	1.09	1.19	1.28	1.29	1.29	1.31
CAZ	0.48	0.58	0.62	0.69	0.71	0.73	0.77	0.78	0.81	0.80	0.79
CHA	2.01	2.35	2.55	2.84	3.74	1.80	4.28	4.57	4.83	4.96	5.03
EUR	2.53	2.53	2.51	2.44	2.72	2.97	3.17	3.35	3.55	3.69	3.83
IND	0.57	0.60	0.60	0.89	1.33	1.79	1.93	2.12	1.61	1.15	1.44
JPN	2.32	2.18	2.18	2.30	2.46	2.56	2.65	2.82	3.18	3.35	3.46
LAM	0.73	0.86	0.85	0.87	0.98	1.16	1.28	1.51	1.53	1.48	1.07
MEA	1.02	1.41	1.87	1.88	2.14	2.48	2.53	2.33	2.27	2.34	2.87
NEU	0.84	1.01	1.20	1.32	1.47	1.67	1.88	2.07	2.21	2.30	2.34
OAS	1.77	2.48	2.65	2.83	3.12	3.37	3.66	3.97	4.17	5.92	6.16
REF	0.92	0.92	1.03	1.03	1.09	1.13	1.21	1.32	1.40	1.44	1.48
SSA	0.31	0.33	0.37	0.42	0.46	0.49	0.51	0.54	0.60	0.66	0.69
USA	0.65	0.72	0.76	0.91	1.03	1.18	1.27	1.30	1.30	1.19	0.97

Table 1516: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Pulses (t DM/ha) [PART 1/2]

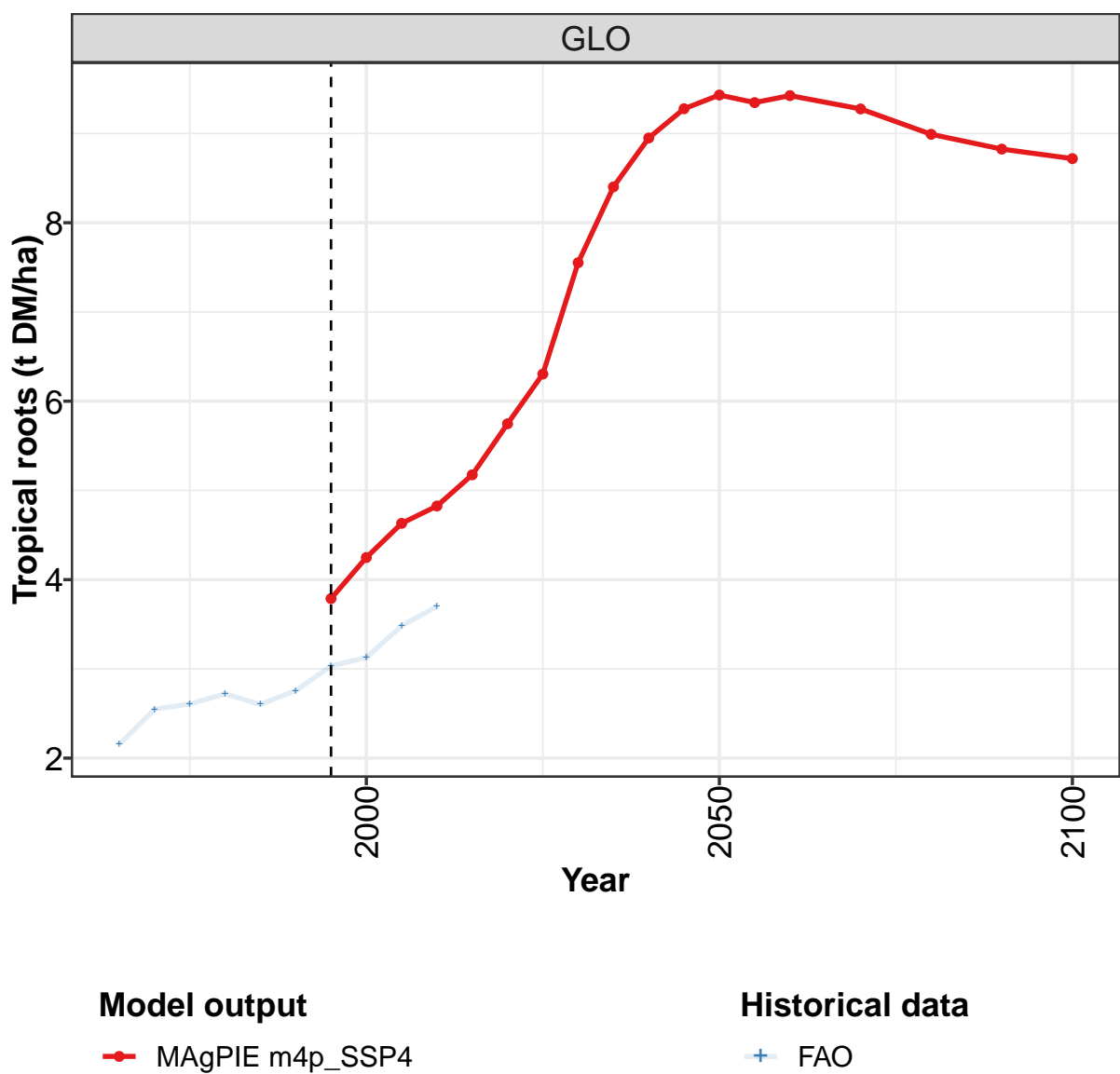
	2050	2055	2060	2070	2080	2090	2100
GLO	1.44	1.42	1.39	1.38	1.40	1.38	1.37
CAZ	0.79	0.85	0.89	0.92	0.98	1.01	1.01
CHA	5.03	5.03	5.03	3.42	2.80	3.74	3.95
EUR	4.03	4.08	4.04	3.98	3.91	3.73	3.68
IND	1.77	1.81	1.85	1.86	1.86	1.78	1.72
JPN	3.56	3.56	3.56	3.56	3.56	3.56	3.56
LAM	1.26	1.28	1.18	1.09	1.05	1.19	1.21
MEA	4.21	4.21	4.21	4.22	4.22	4.22	4.41
NEU	2.35	2.35	2.35	2.35	2.35	2.35	2.35
OAS	6.39	6.55	6.56	6.37	5.67	4.78	4.45
REF	1.48	1.48	1.48	1.48	1.48	1.48	1.48
SSA	0.76	0.75	0.77	0.83	0.92	0.93	0.94
USA	0.97	0.97	0.97	0.98	0.99	0.99	0.99

Table 1517: MAgPIE m4p\_SSP4 — 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



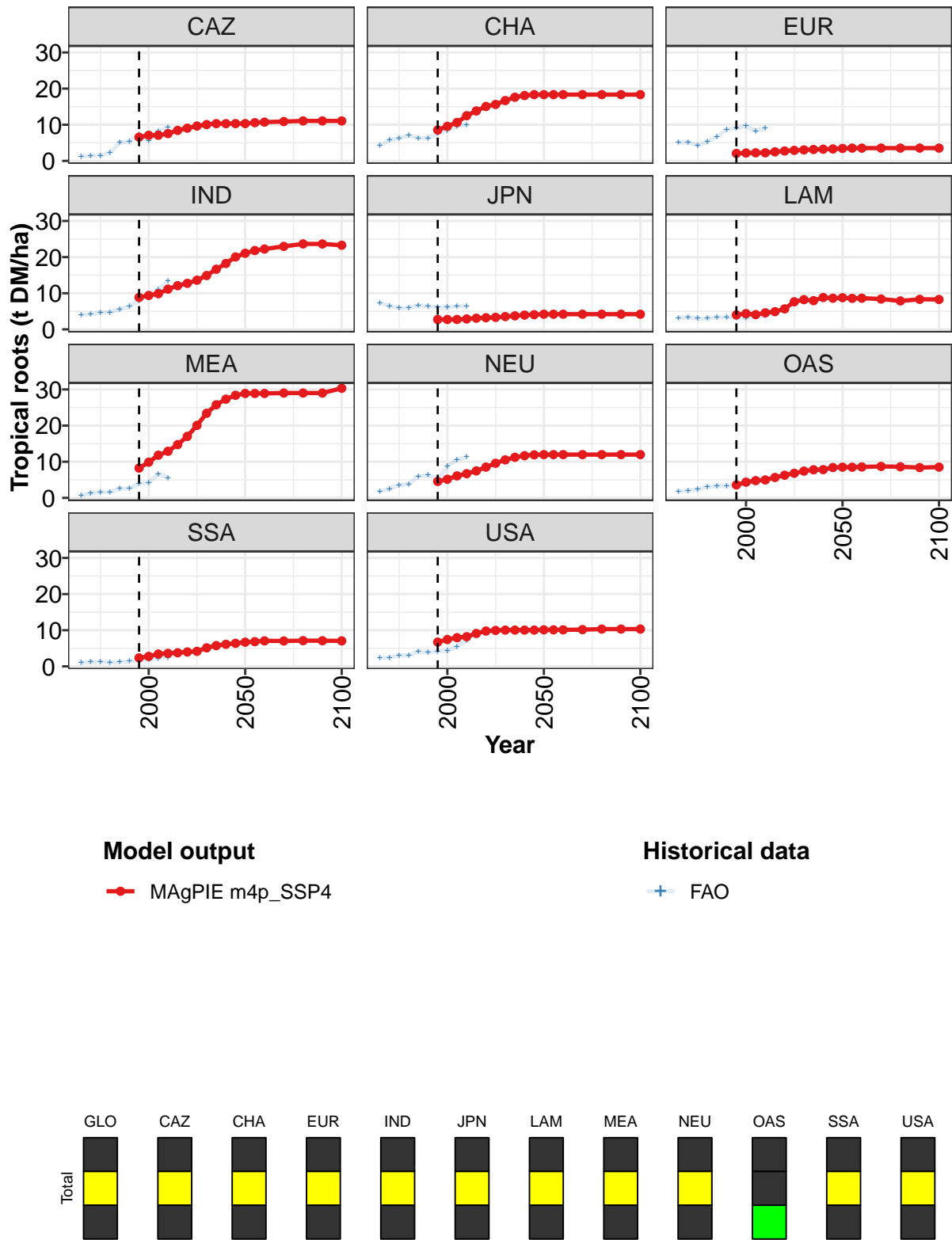


Figure 393: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Tropical roots (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.8	4.2	4.6	4.8	5.2	5.7	6.3	7.6	8.4	8.9	9.3
CAZ	6.6	7.1	7.1	7.6	8.4	9.1	9.6	10.1	10.3	10.3	10.3
CHA	8.5	9.6	10.6	12.5	13.8	15.1	15.6	16.7	17.6	18.1	18.3
EUR	2.1	2.2	2.2	2.2	2.5	2.7	2.9	3.0	3.2	3.2	3.3
IND	8.8	9.4	9.9	11.1	12.1	12.8	13.6	14.9	16.6	18.2	20.1
JPN	2.7	2.7	2.7	2.9	3.1	3.2	3.3	3.5	3.8	4.0	4.1
LAM	4.0	4.4	4.1	4.6	4.9	5.7	7.6	8.2	8.0	8.8	8.6
MEA	8.2	9.9	11.8	12.9	14.7	17.0	20.1	23.4	25.8	27.3	28.4
NEU	4.5	5.2	6.1	6.7	7.5	8.5	9.6	10.5	11.2	11.7	11.9
OAS	3.6	4.4	4.8	5.0	5.7	6.3	6.8	7.4	7.8	7.8	8.4
SSA	2.4	2.8	3.4	3.6	3.8	4.0	4.2	5.1	5.8	6.1	6.4
USA	6.7	7.4	7.9	8.2	9.1	9.8	10.0	10.0	10.0	10.0	10.0

Table 1519: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Other crops—Tropical roots (t DM/ha)  
[PART 1/2]

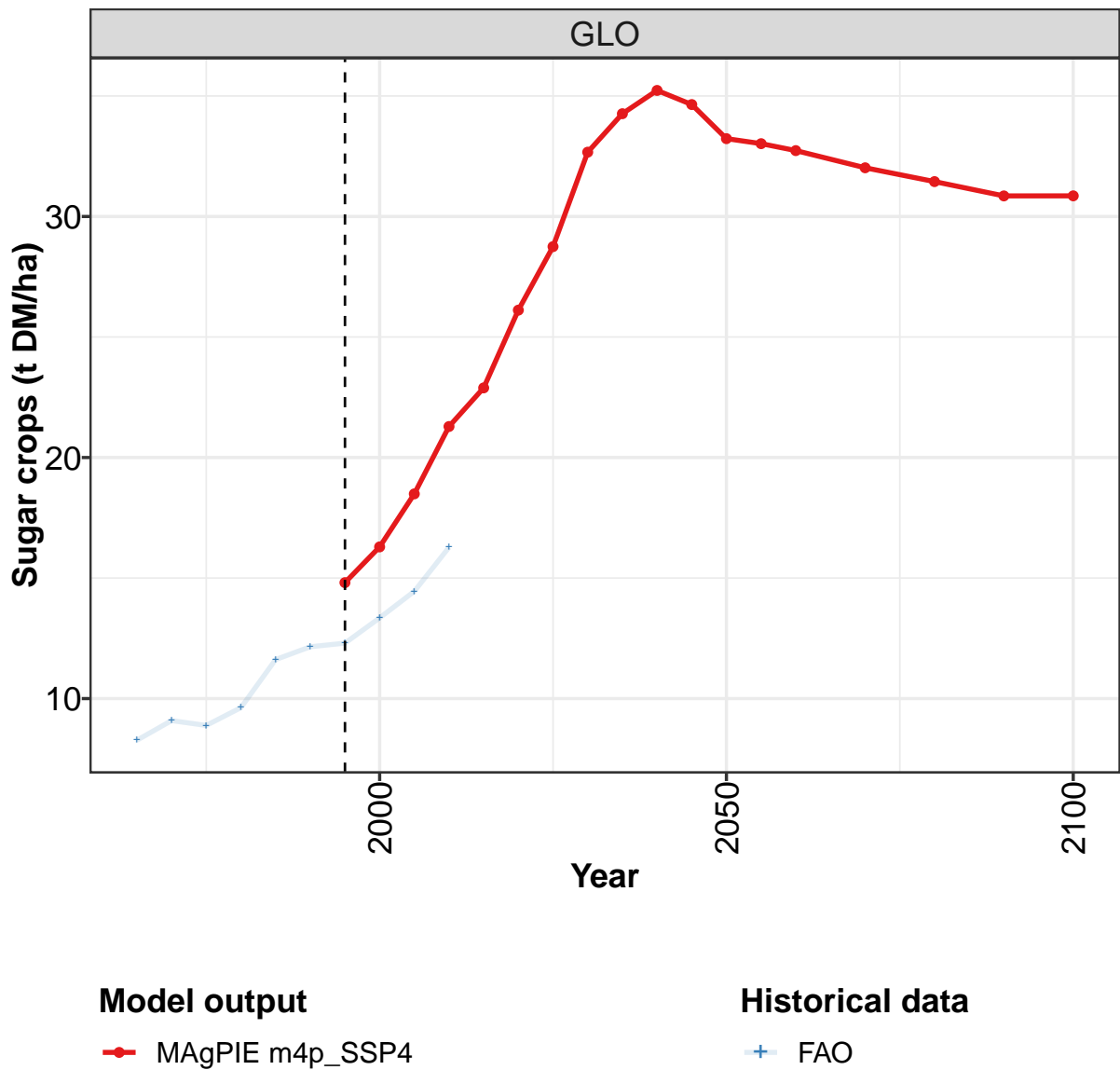
	2050	2055	2060	2070	2080	2090	2100
GLO	9.4	9.3	9.4	9.3	9.0	8.8	8.7
CAZ	10.3	10.6	10.7	10.9	11.1	11.1	11.1
CHA	18.3	18.3	18.3	18.3	18.3	18.3	18.3
EUR	3.5	3.5	3.5	3.5	3.5	3.5	3.5
IND	21.1	21.8	22.2	23.0	23.7	23.6	23.3
JPN	4.2	4.2	4.2	4.2	4.2	4.2	4.2
LAM	8.8	8.6	8.6	8.4	7.9	8.3	8.3
MEA	28.9	28.9	28.9	29.0	29.0	29.0	30.3
NEU	12.0	12.0	12.0	12.0	12.0	12.0	12.0
OAS	8.5	8.5	8.6	8.7	8.6	8.4	8.5
SSA	6.7	6.8	7.1	7.0	7.1	7.1	7.1
USA	10.1	10.1	10.1	10.2	10.3	10.3	10.3

Table 1520: MAgPIE m4p\_SSP4 — 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





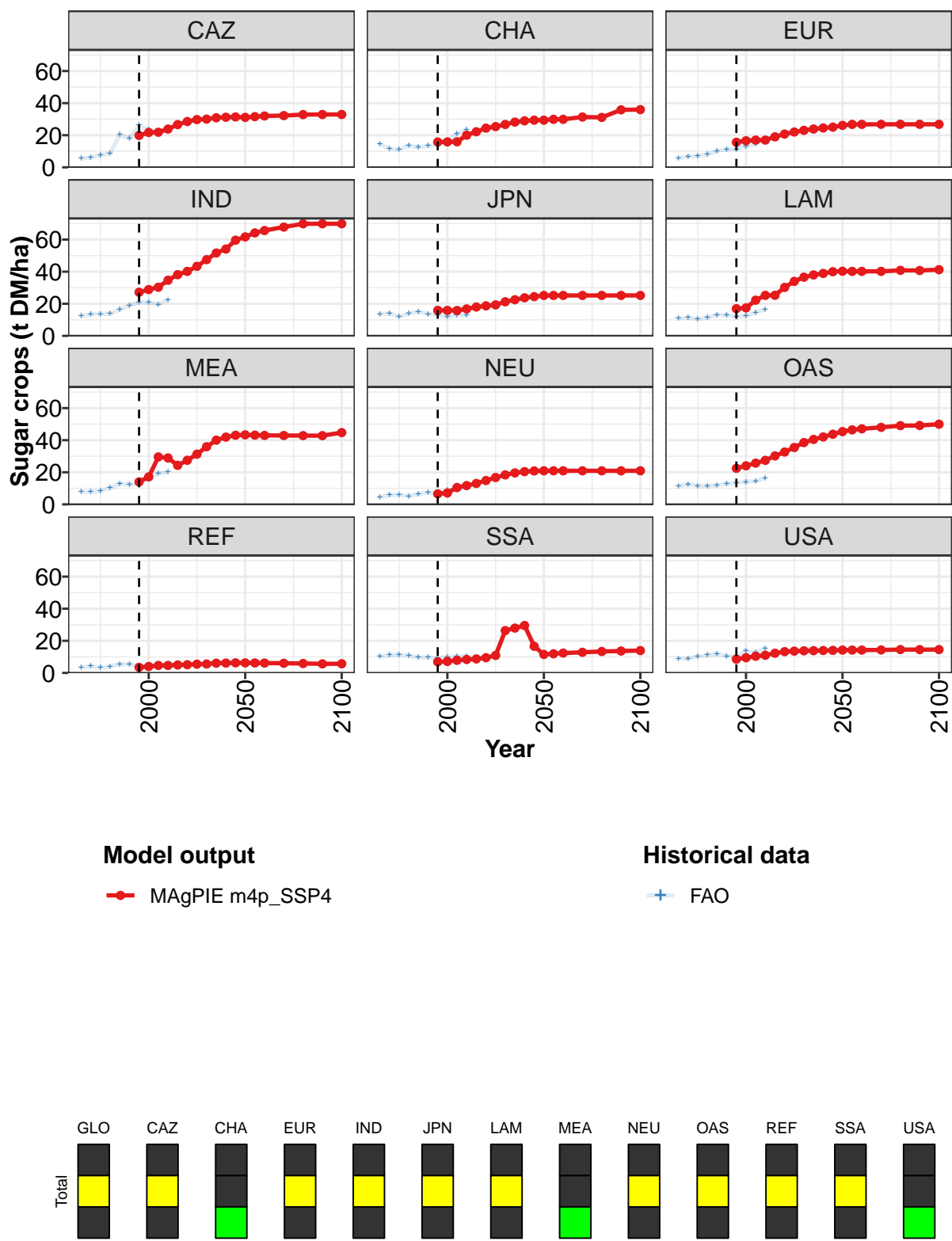


Figure 394: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Sugar crops (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	14.8	16.3	18.5	21.3	22.9	26.1	28.8	32.7	34.3	35.2	34.6
CAZ	19.9	21.7	21.9	23.8	26.6	28.5	29.8	30.1	30.9	31.2	31.4
CHA	15.8	15.9	15.9	20.0	22.2	24.4	25.4	26.7	28.2	29.0	29.4
EUR	15.6	16.6	17.0	17.0	19.0	20.8	22.0	23.1	23.9	24.5	25.1
IND	27.2	28.9	30.3	34.7	38.1	40.2	43.3	47.5	51.6	54.1	59.6
JPN	15.9	15.9	15.8	16.8	18.0	18.7	19.3	21.2	22.5	23.7	24.4
LAM	16.9	17.4	22.2	25.2	25.3	30.2	34.0	36.6	38.0	38.9	40.0
MEA	14.0	17.1	29.6	28.9	24.3	27.5	31.3	35.9	40.0	41.9	43.1
NEU	6.6	7.1	10.5	11.7	13.0	14.9	16.7	18.4	19.6	20.4	20.8
OAS	22.5	24.0	25.7	27.4	30.2	32.6	35.4	38.5	40.5	42.0	43.7
REF	3.5	4.0	4.7	4.7	4.9	5.1	5.4	5.5	6.1	6.1	6.3
SSA	6.9	7.2	7.8	8.4	8.7	9.5	10.9	26.4	27.9	29.5	16.6
USA	8.6	9.5	10.4	11.0	12.3	13.2	13.6	13.8	13.9	13.9	14.0

Table 1522: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Sugar crops (t DM/ha) [PART 1/2]

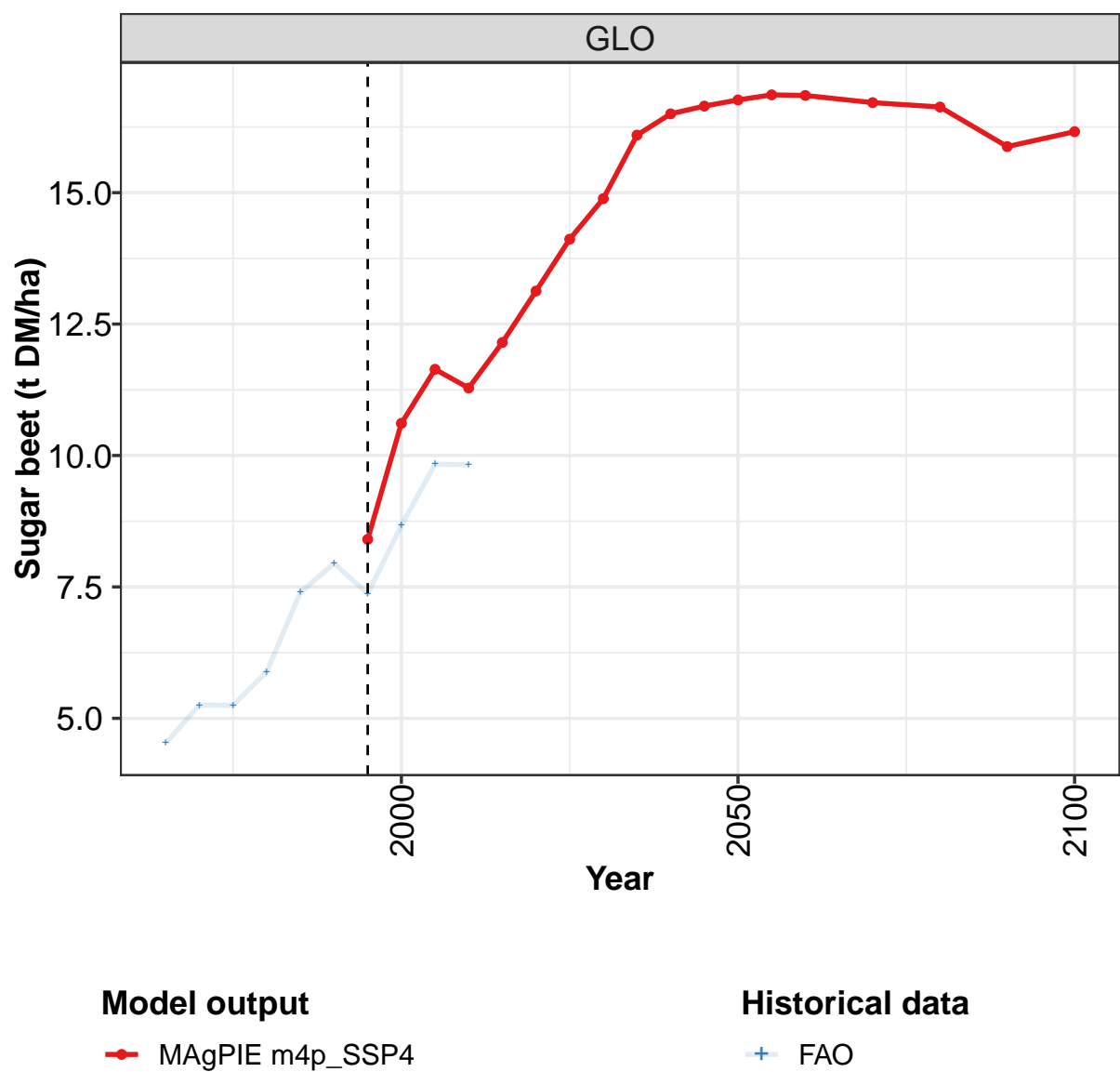
	2050	2055	2060	2070	2080	2090	2100
GLO	33.2	33.0	32.7	32.0	31.4	30.9	30.9
CAZ	31.1	31.6	32.0	32.2	32.9	32.9	32.9
CHA	29.4	29.9	29.9	31.4	31.1	35.8	36.0
EUR	26.1	26.8	26.8	26.8	26.8	26.8	26.8
IND	61.7	64.1	65.6	67.8	69.8	69.8	69.8
JPN	25.2	25.2	25.2	25.2	25.2	25.2	25.2
LAM	40.3	40.2	40.2	40.2	40.8	40.7	41.2
MEA	43.3	43.1	43.0	42.9	42.8	42.8	44.7
NEU	20.9	20.9	20.9	20.9	20.9	20.9	20.9
OAS	45.4	46.5	47.1	48.0	49.1	49.2	50.0
REF	6.3	6.2	6.1	6.0	5.9	5.6	5.7
SSA	11.5	11.9	12.4	12.8	13.3	13.6	13.9
USA	14.2	14.2	14.2	14.3	14.5	14.5	14.5

Table 1523: MAGPIE m4p\_SSP4 — 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



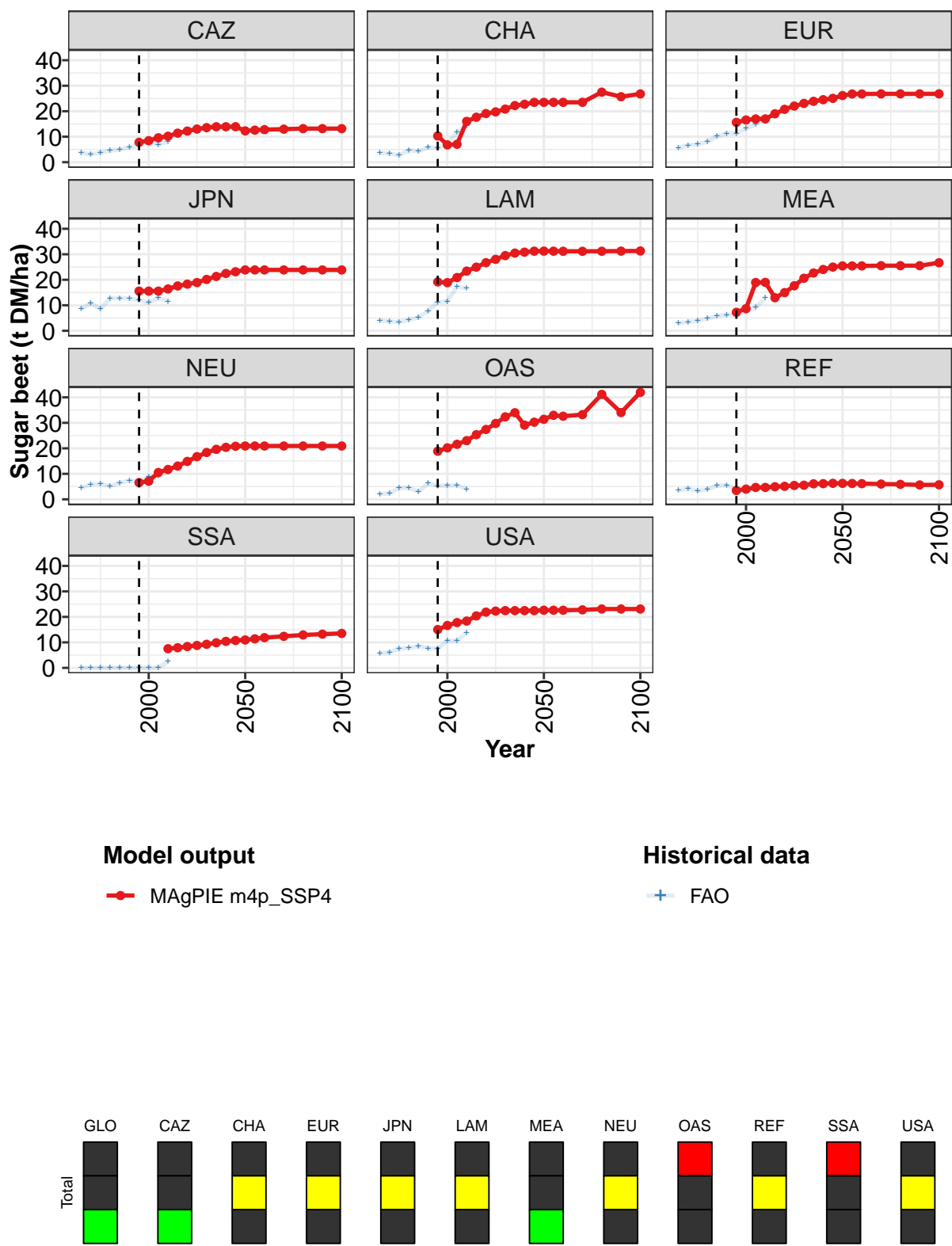


Figure 395: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Sugar crops—Sugar beet (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8	11	12	11	12	13	14	15	16	16	17
CAZ	8	8	10	10	11	12	13	14	14	14	14
CHA	10	7	7	16	18	19	20	21	22	23	23
EUR	16	17	17	17	19	21	22	23	24	25	25
JPN	16	16	16	16	18	18	19	20	21	22	23
LAM	19	19	21	23	25	27	28	29	30	31	31
MEA	7	9	19	19	13	15	18	21	23	24	25
NEU	7	7	11	12	13	15	17	18	20	20	21
OAS	19	20	22	23	25	27	30	32	34	29	30
REF	3	4	5	5	5	5	5	6	6	6	6
SSA				8	8	8	9	9	10	10	11
USA	15	17	18	18	20	22	22	22	22	22	22

Table 1525: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Sugar crops—Sugar beet (t DM/ha) [PART 1/2]

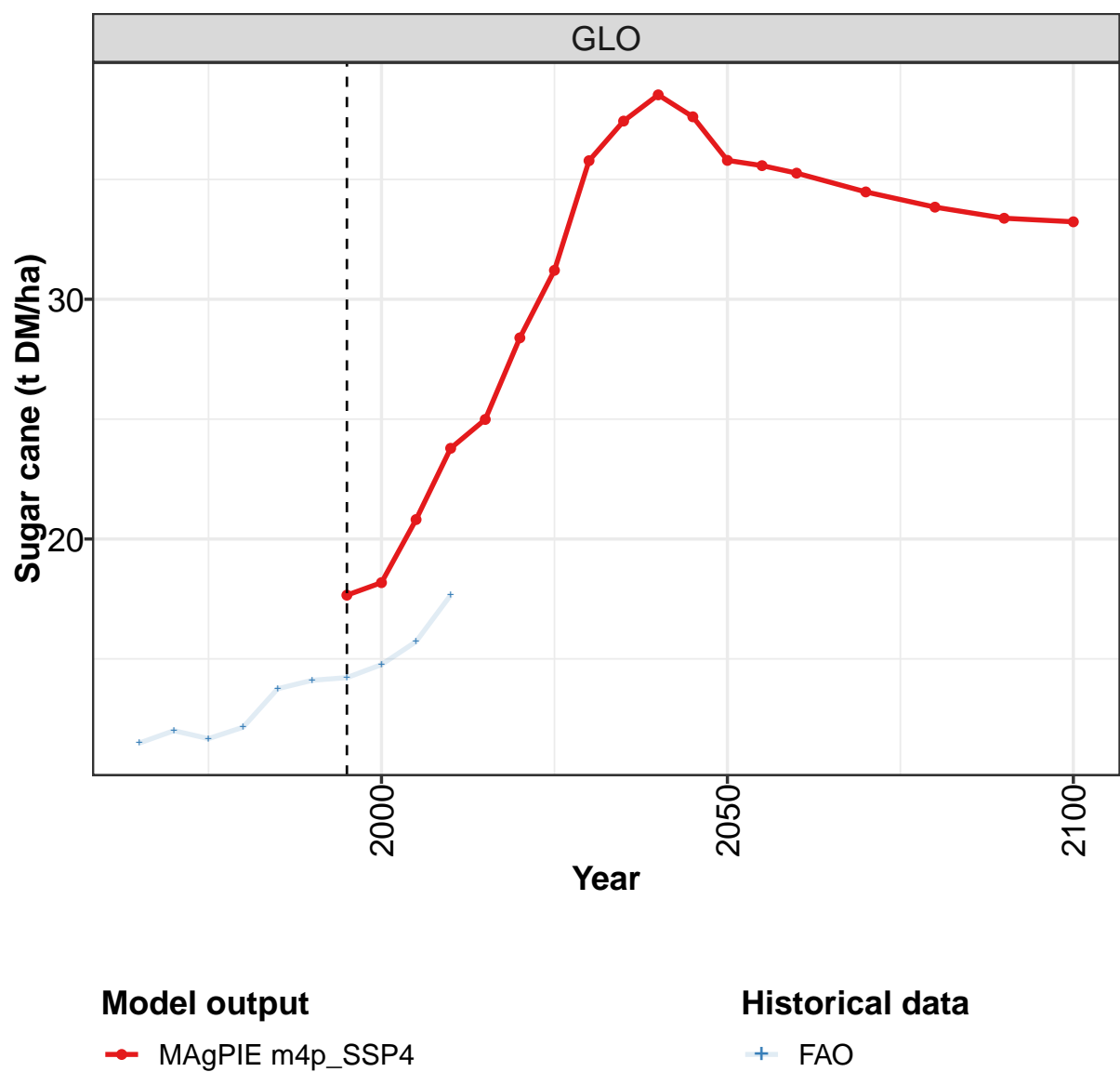
	2050	2055	2060	2070	2080	2090	2100
GLO	17	17	17	17	17	16	16
CAZ	12	13	13	13	13	13	13
CHA	23	23	23	23	27	26	27
EUR	26	27	27	27	27	27	27
JPN	24	24	24	24	24	24	24
LAM	31	31	31	31	31	31	31
MEA	25	25	25	26	26	26	27
NEU	21	21	21	21	21	21	21
OAS	31	33	33	33	41	34	42
REF	6	6	6	6	6	6	6
SSA	11	11	12	12	13	13	14
USA	23	23	23	23	23	23	23

Table 1526: MAgPIE m4p\_SSP4 — 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



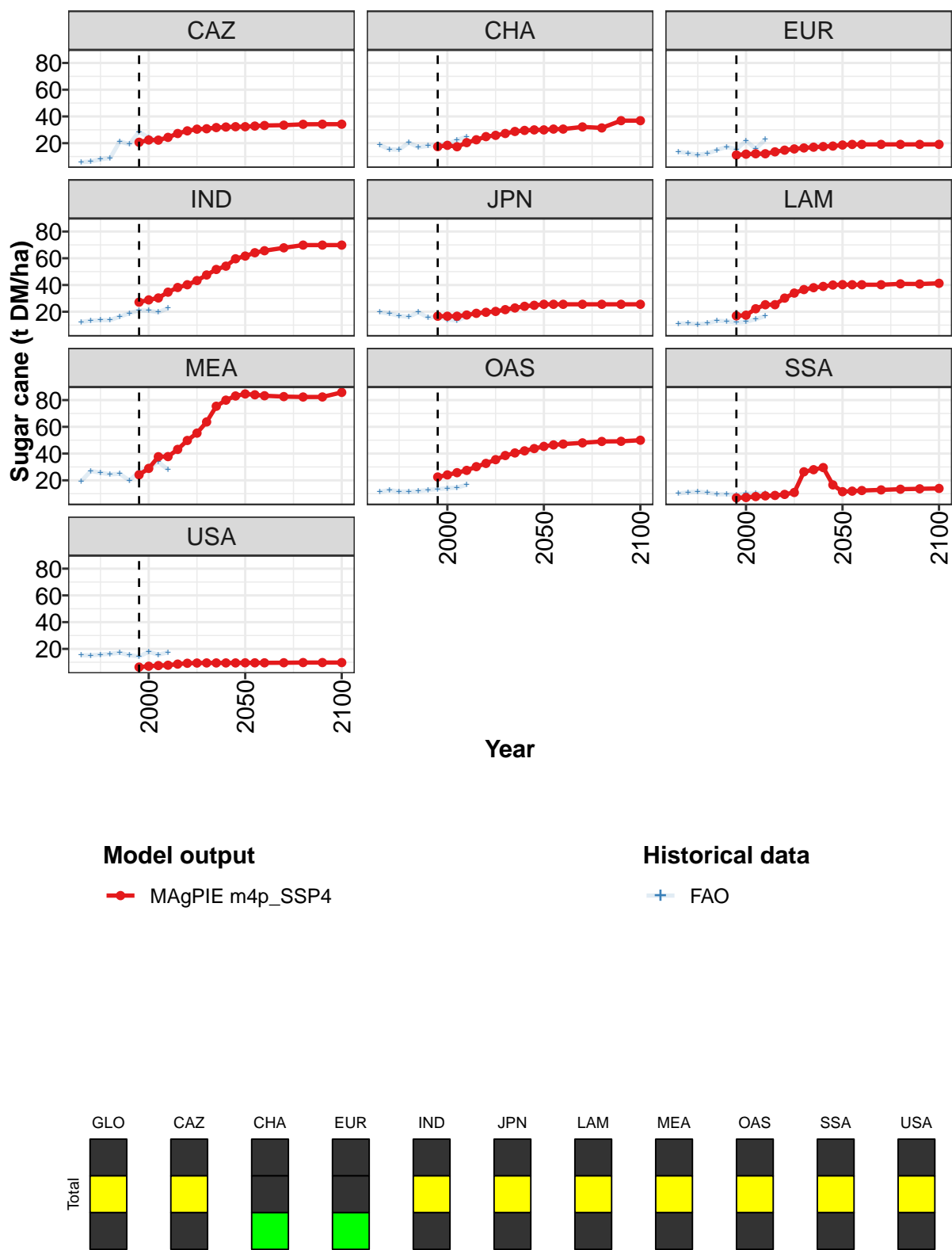


Figure 396: MAGPIE m4p\_SSP4 — Productivity—Yield—Crops—Sugar crops—Sugar cane (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.7	18.2	20.8	23.8	25.0	28.4	31.2	35.8	37.4	38.5	37.6
CAZ	20.7	22.4	22.3	24.4	27.2	29.2	30.5	30.8	31.7	32.1	32.3
CHA	17.4	18.4	17.3	20.4	22.6	24.9	25.9	27.3	28.8	29.5	29.9
EUR	11.1	11.8	12.1	12.1	13.5	14.8	15.7	16.4	17.0	17.5	17.8
IND	27.2	28.9	30.3	34.7	38.1	40.2	43.3	47.5	51.6	54.1	59.6
JPN	16.7	16.7	16.7	17.6	18.8	19.6	20.3	21.6	22.8	24.1	24.8
LAM	16.9	17.4	22.2	25.2	25.3	30.2	34.0	36.6	38.0	38.9	40.0
MEA	24.1	28.9	37.7	37.7	43.1	49.8	55.3	63.7	75.4	80.0	83.1
OAS	22.5	24.0	25.7	27.4	30.2	32.6	35.5	38.5	40.5	42.0	43.7
SSA	6.9	7.2	7.8	8.4	8.7	9.5	10.9	26.4	27.9	29.5	16.6
USA	6.4	7.0	7.5	7.8	8.6	9.2	9.4	9.5	9.5	9.5	9.5

Table 1528: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Sugar crops—Sugar cane (t DM/ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	35.8	35.6	35.3	34.5	33.8	33.4	33.2
CAZ	32.3	32.8	33.2	33.5	34.1	34.2	34.2
CHA	29.9	30.6	30.6	32.2	31.4	36.9	36.9
EUR	18.6	19.1	19.1	19.1	19.1	19.1	19.1
IND	61.7	64.1	65.6	67.8	69.8	69.8	69.8
JPN	25.6	25.6	25.6	25.6	25.6	25.6	25.6
LAM	40.3	40.2	40.2	40.2	40.9	40.8	41.3
MEA	84.6	84.0	83.2	82.6	82.3	82.3	85.7
OAS	45.4	46.5	47.1	48.0	49.1	49.2	50.0
SSA	11.5	11.9	12.4	12.8	13.3	13.6	13.9
USA	9.6	9.6	9.6	9.6	9.8	9.8	9.8

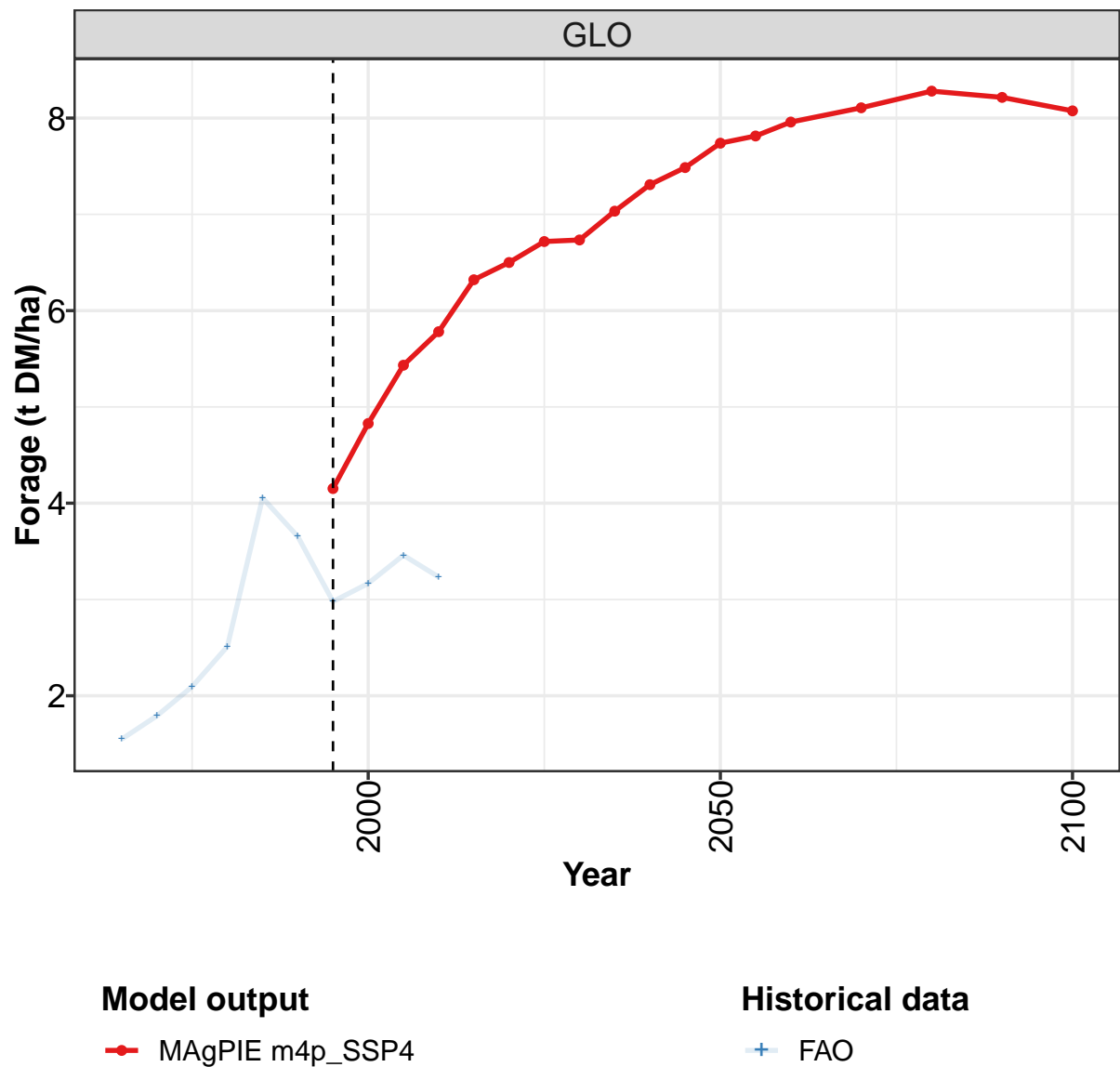
Table 1529: MAgPIE m4p\_SSP4 — Productivity—Yield—Crops—Sugar crops—Sugar cane (t DM/ha) [PART 2/2]

	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



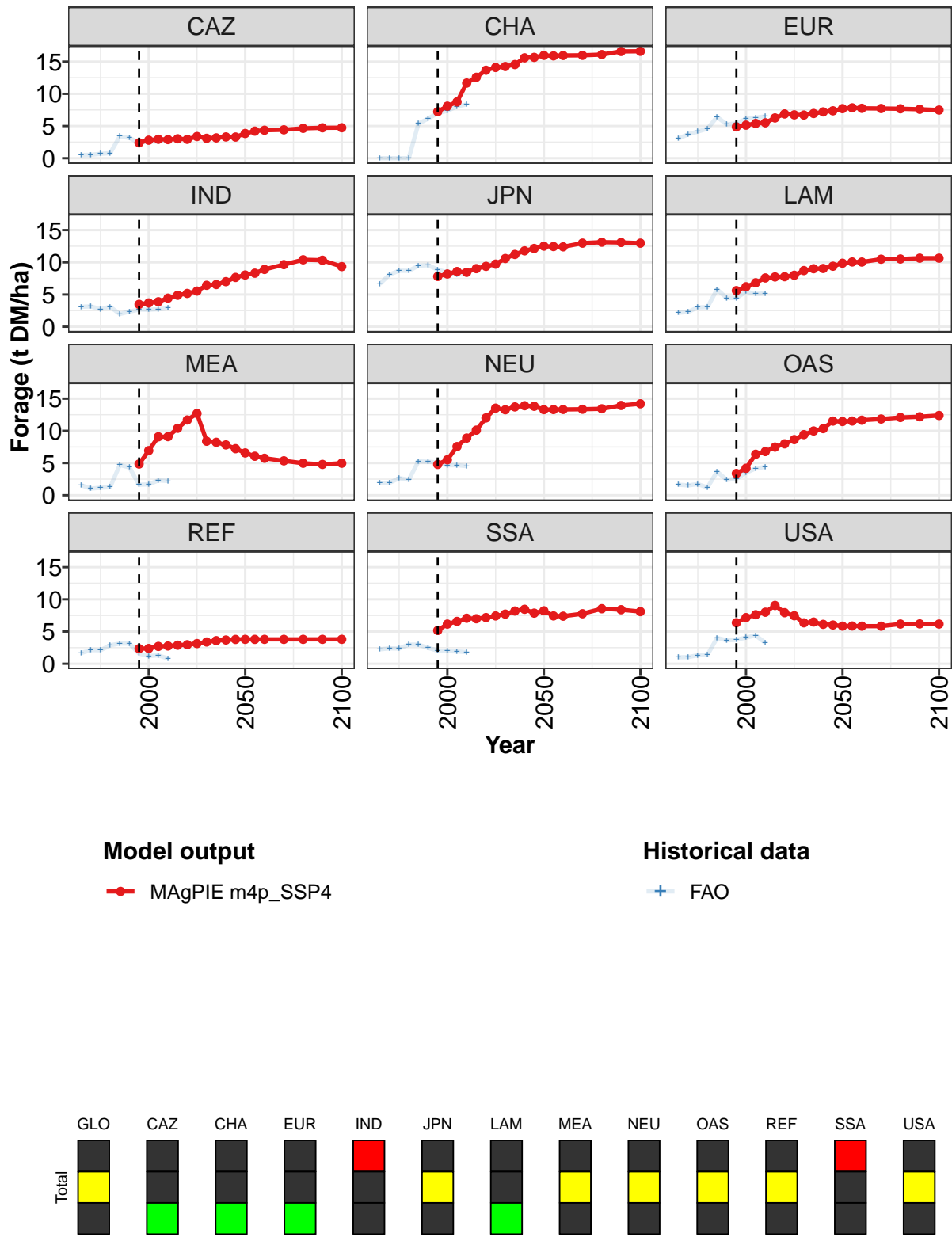


Figure 397: MAgPIE m4p\_SSP4 — Productivity—Yield—Forage (t DM/ha)

	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	6.7	7.0	7.3	7.5
CAZ	2.4	2.8	3.0	2.9	3.0	2.9	3.4	3.1	3.2	3.3	3.3
CHA	7.2	8.1	8.8	11.7	12.6	13.7	14.1	14.2	14.5	15.6	15.7
EUR	4.9	5.1	5.4	5.5	6.3	6.9	6.7	6.7	6.9	7.2	7.4
IND	3.5	3.7	3.9	4.4	4.9	5.2	5.5	6.4	6.5	7.0	7.7
JPN	7.8	8.2	8.6	8.4	9.0	9.4	9.7	10.6	11.2	11.8	12.2
LAM	5.6	6.2	6.8	7.6	7.7	7.8	8.0	8.7	9.0	9.0	9.4
MEA	4.8	6.9	9.1	9.1	10.4	11.7	12.7	8.4	8.2	7.8	7.2
NEU	4.8	5.5	7.6	8.9	10.1	12.0	13.5	13.3	13.7	13.9	13.8
OAS	3.4	4.2	6.4	6.8	7.5	8.0	8.6	9.4	10.0	10.3	11.5
REF	2.3	2.4	2.7	2.8	2.9	3.0	3.1	3.4	3.6	3.7	3.8
SSA	5.2	6.2	6.6	7.1	7.0	7.2	7.4	7.7	8.2	8.5	7.9
USA	6.4	7.2	7.6	8.0	9.1	7.9	7.5	6.4	6.5	6.1	6.0

Table 1531: MAgPIE m4p\_SSP4 — Productivity—Yield—Forage (t DM/ha) [PART 1/2]

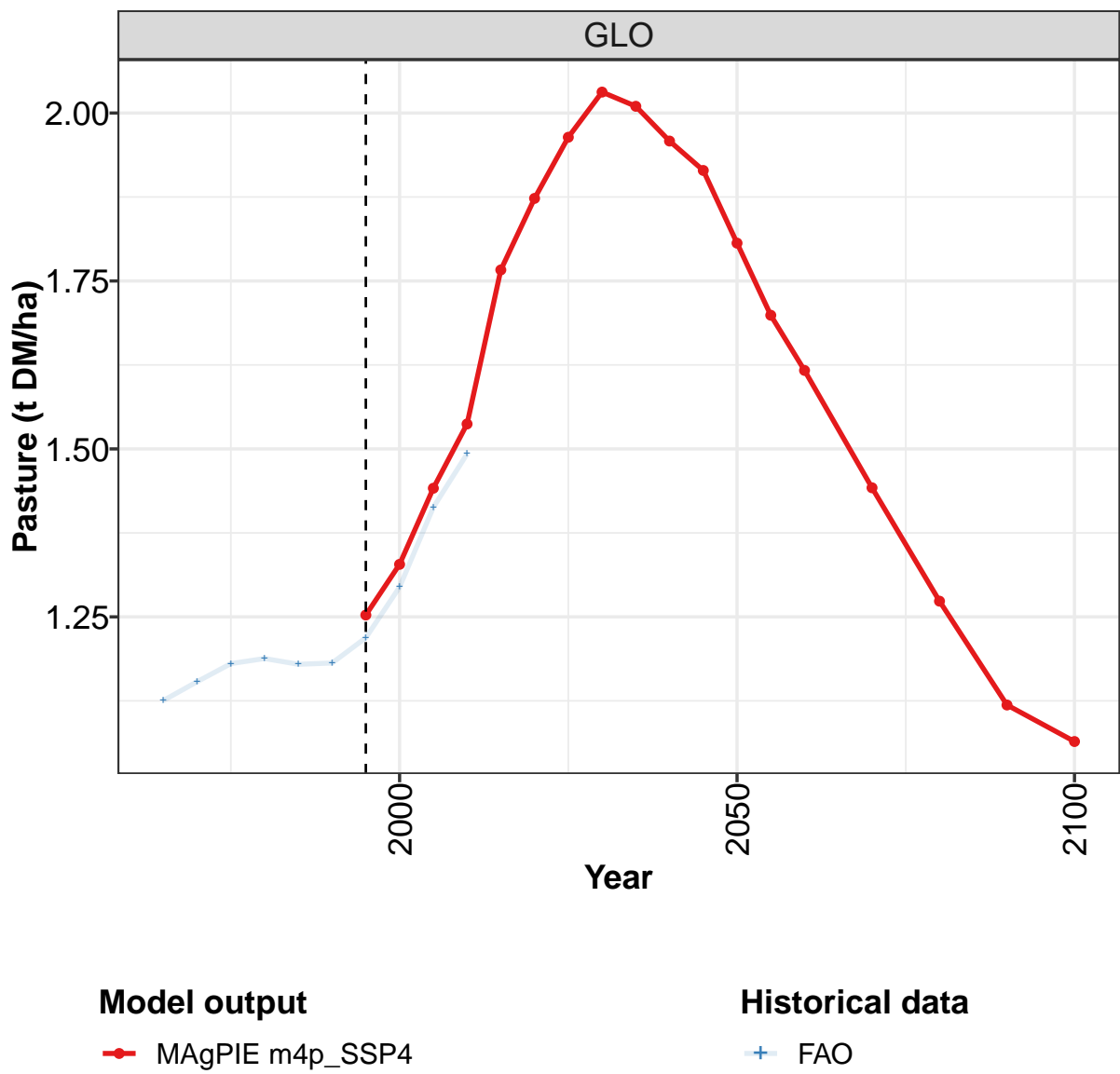
	2050	2055	2060	2070	2080	2090	2100
GLO	7.7	7.8	8.0	8.1	8.3	8.2	8.1
CAZ	3.8	4.2	4.3	4.4	4.6	4.7	4.7
CHA	16.0	15.9	16.0	16.0	16.1	16.6	16.6
EUR	7.7	7.8	7.7	7.7	7.7	7.6	7.5
IND	8.0	8.3	8.9	9.6	10.4	10.3	9.3
JPN	12.5	12.5	12.4	13.0	13.1	13.1	13.0
LAM	9.9	10.1	10.0	10.5	10.5	10.6	10.6
MEA	6.6	6.1	5.7	5.3	5.0	4.8	5.0
NEU	13.3	13.3	13.3	13.4	13.4	13.9	14.2
OAS	11.4	11.5	11.7	11.8	12.1	12.2	12.4
REF	3.8	3.8	3.8	3.8	3.8	3.8	3.8
SSA	8.2	7.4	7.4	7.8	8.5	8.4	8.1
USA	5.8	5.9	5.8	5.8	6.2	6.2	6.2

Table 1532: MAgPIE m4p\_SSP4 — 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



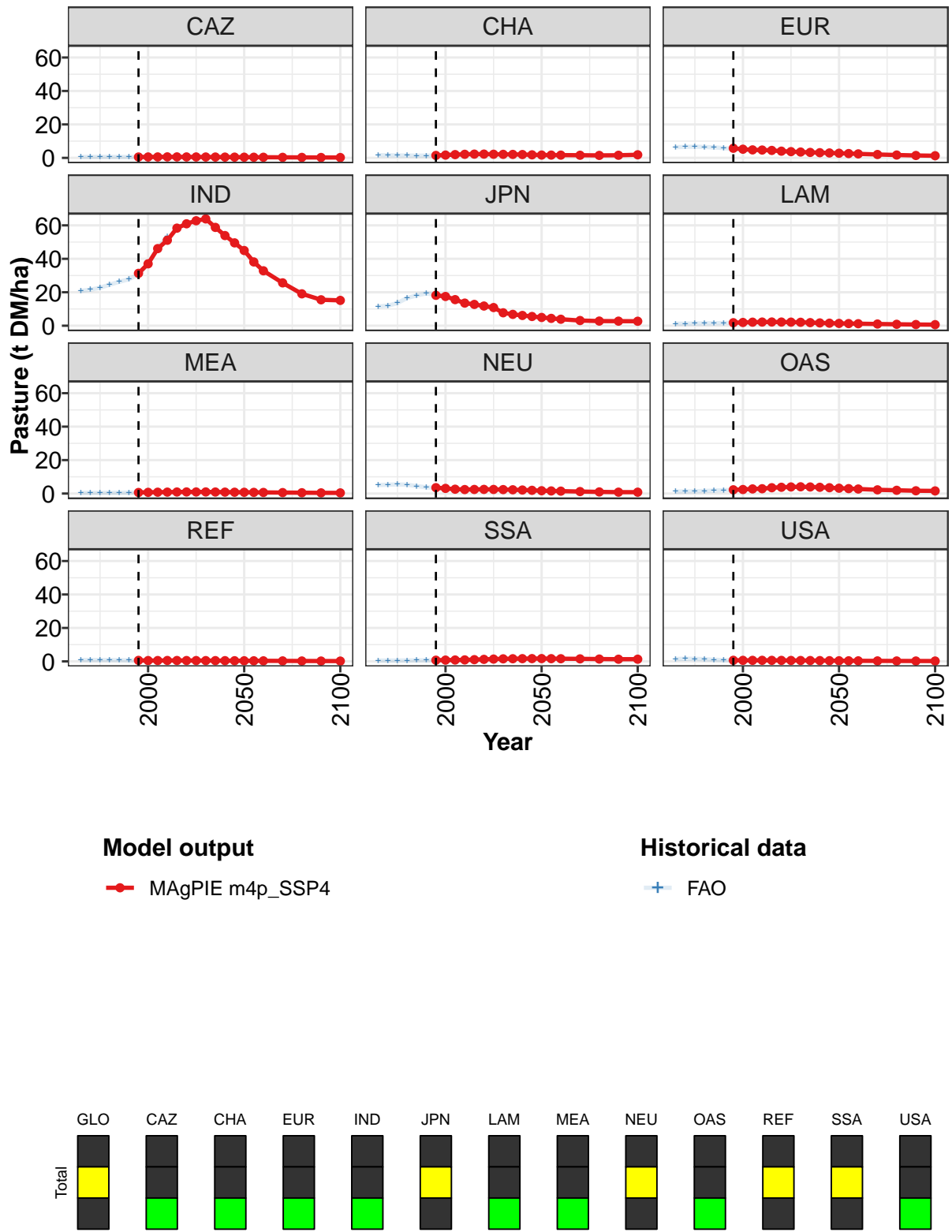


Figure 398: MAgPIE m4p\_SSP4 — Productivity—Yield—Pasture (t DM/ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.3	1.3	1.4	1.5	1.8	1.9	2.0	2.0	2.0	2.0	1.9
CAZ	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4
CHA	1.5	1.7	2.0	2.1	2.2	2.3	2.2	2.1	2.1	2.0	1.8
EUR	5.7	5.2	4.8	4.7	4.5	4.0	3.7	3.5	3.3	3.1	2.9
IND	31.3	37.0	46.1	51.1	58.3	60.9	62.8	63.8	58.8	53.9	49.5
JPN	18.2	17.5	15.6	13.5	12.7	11.8	10.9	7.7	6.8	6.1	5.5
LAM	1.8	2.0	2.1	2.2	2.2	2.2	2.1	2.1	1.9	1.7	1.5
MEA	0.6	0.7	0.8	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.8
NEU	3.5	3.1	2.6	2.4	2.5	2.5	2.5	2.4	2.3	2.1	1.9
OAS	2.2	2.4	2.8	2.9	3.5	3.8	3.9	4.0	3.9	3.7	3.5
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	1.0	1.2	1.4	1.5	1.6	1.6	1.7
USA	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4

Table 1534: MAgPIE m4p\_SSP4 — Productivity—Yield—Pasture (t DM/ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1.8	1.7	1.6	1.4	1.3	1.1	1.1
CAZ	0.4	0.4	0.4	0.3	0.3	0.2	0.2
CHA	1.7	1.7	1.6	1.6	1.5	1.6	1.9
EUR	2.8	2.6	2.4	2.0	1.7	1.4	1.3
IND	45.0	38.1	32.8	25.6	19.1	15.5	15.1
JPN	4.9	4.4	3.9	3.1	2.8	2.7	2.7
LAM	1.4	1.3	1.2	1.0	0.9	0.7	0.6
MEA	0.8	0.7	0.7	0.6	0.5	0.4	0.4
NEU	1.7	1.6	1.4	1.2	1.0	0.8	0.8
OAS	3.2	2.9	2.7	2.2	1.9	1.7	1.6
REF	0.4	0.4	0.3	0.3	0.2	0.2	0.2
SSA	1.7	1.6	1.6	1.5	1.4	1.3	1.3
USA	0.4	0.3	0.3	0.3	0.3	0.2	0.2

Table 1535: MAgPIE m4p\_SSP4 — Productivity—Yield—Pasture (t DM/ha) [PART 2/2]

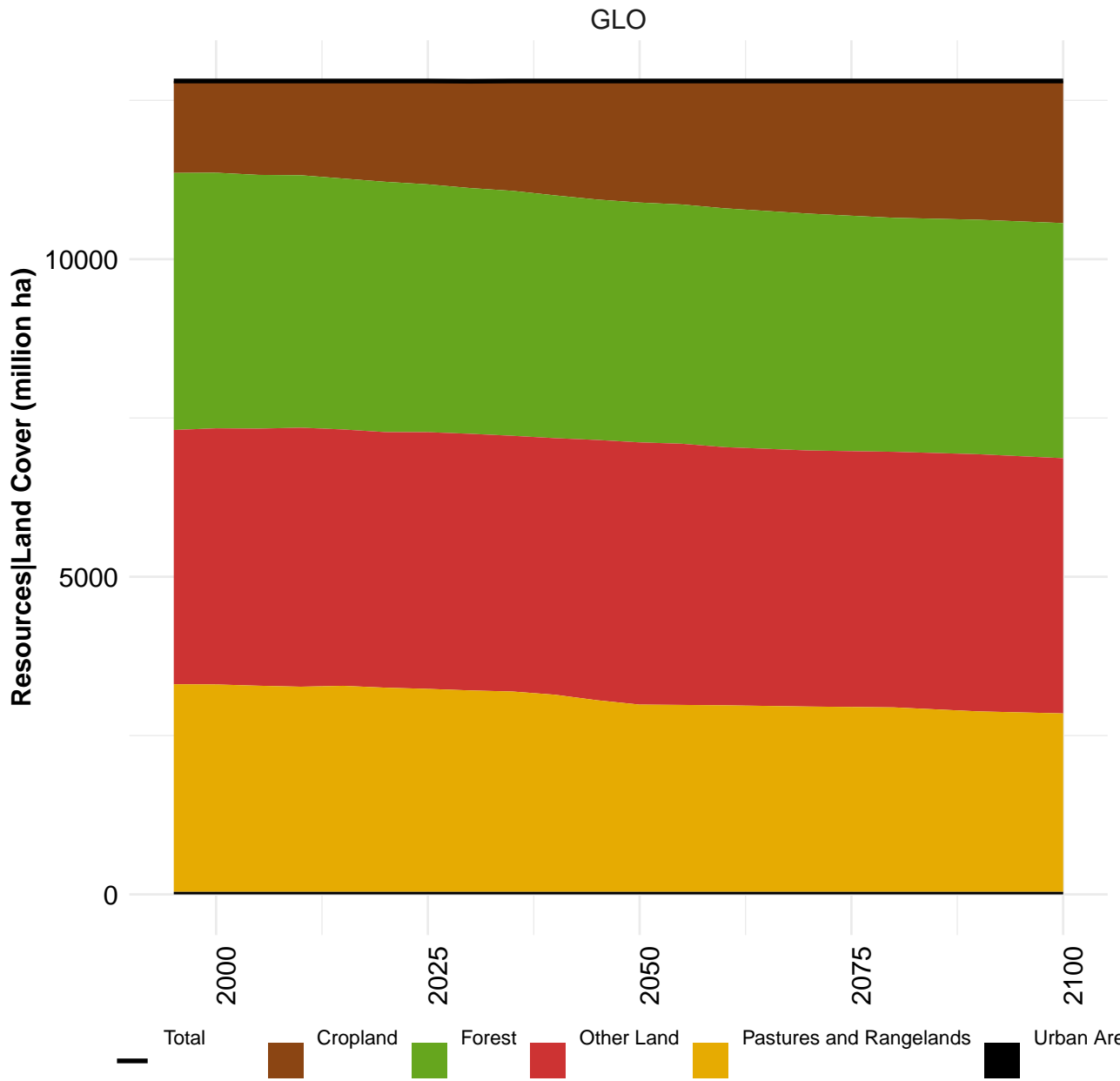
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.5
CAZ	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6
CHA	1.6	1.6	1.5	1.4	1.3	1.3	1.5	1.7	2.0	2.1
EUR	6.4	6.5	6.7	6.5	6.2	5.9	5.3	4.9	4.5	4.4
IND	20.8	21.5	22.7	24.5	26.3	27.8	30.7	37.0	46.5	53.4
JPN	11.5	11.9	13.5	16.6	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

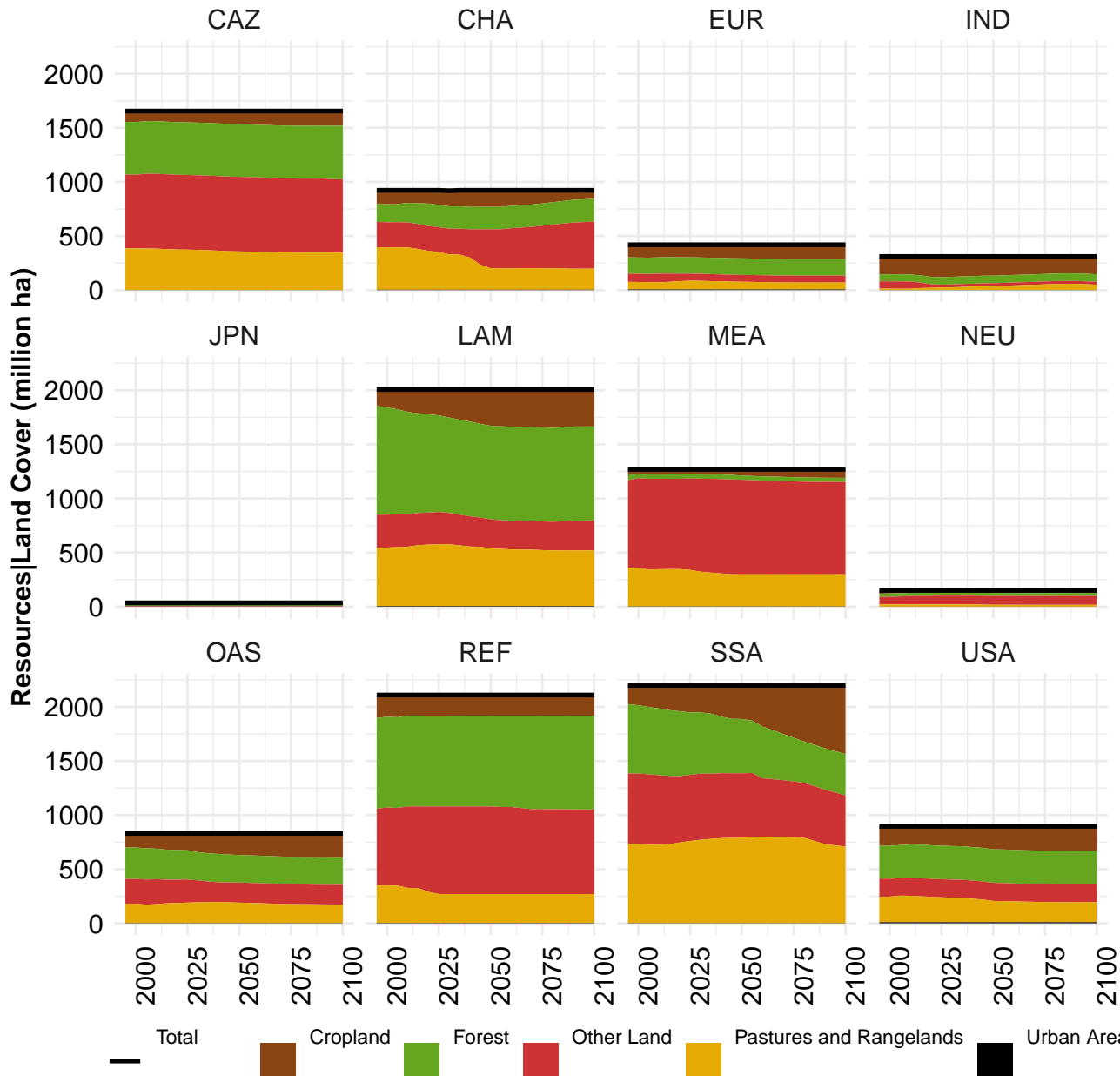
Table 1536: FAO — Productivity—Yield—Pasture (t DM/ha)

## 53 Yield-increasing technological change

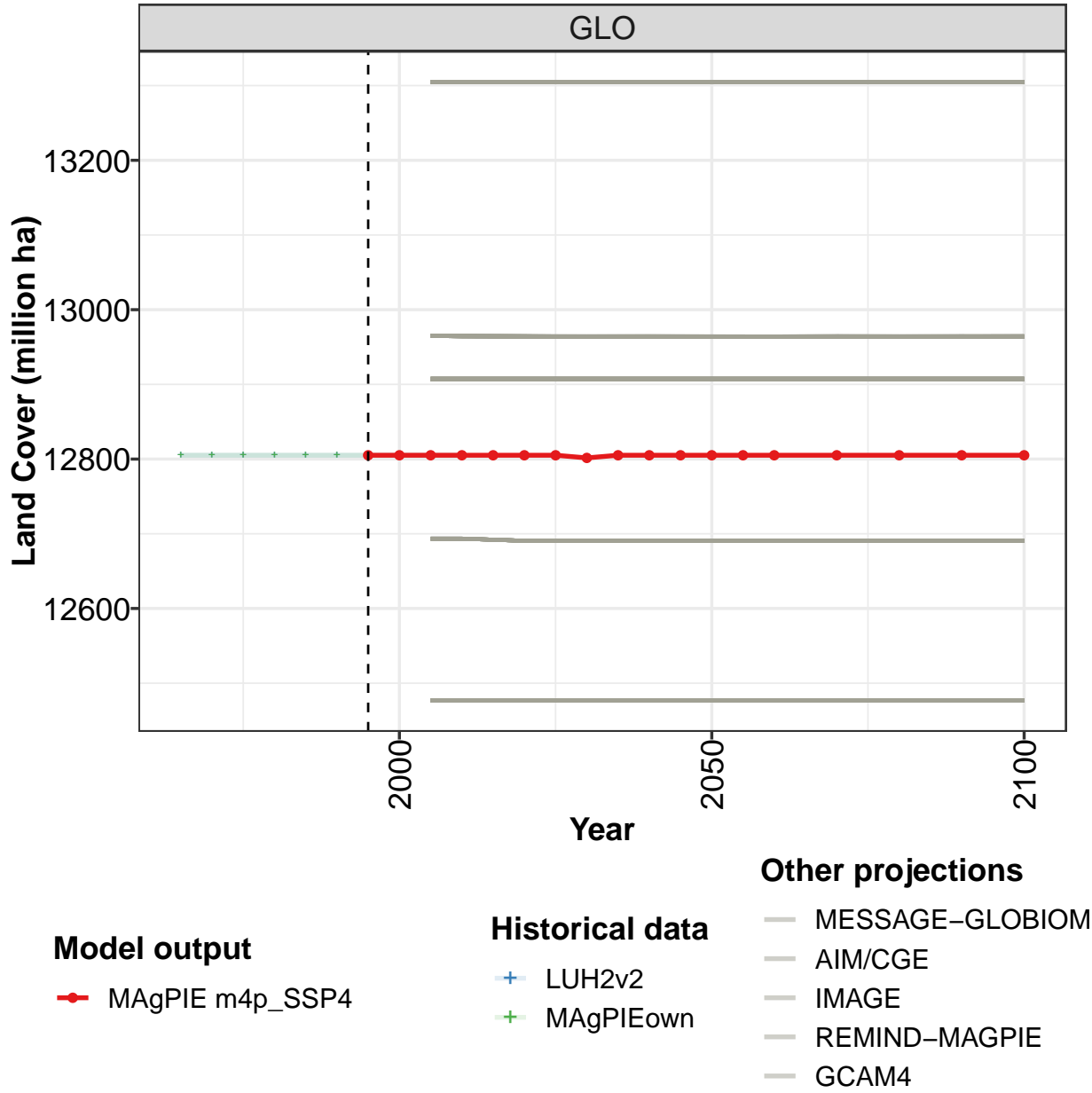
Part XIV  
Resources

54 Land Cover









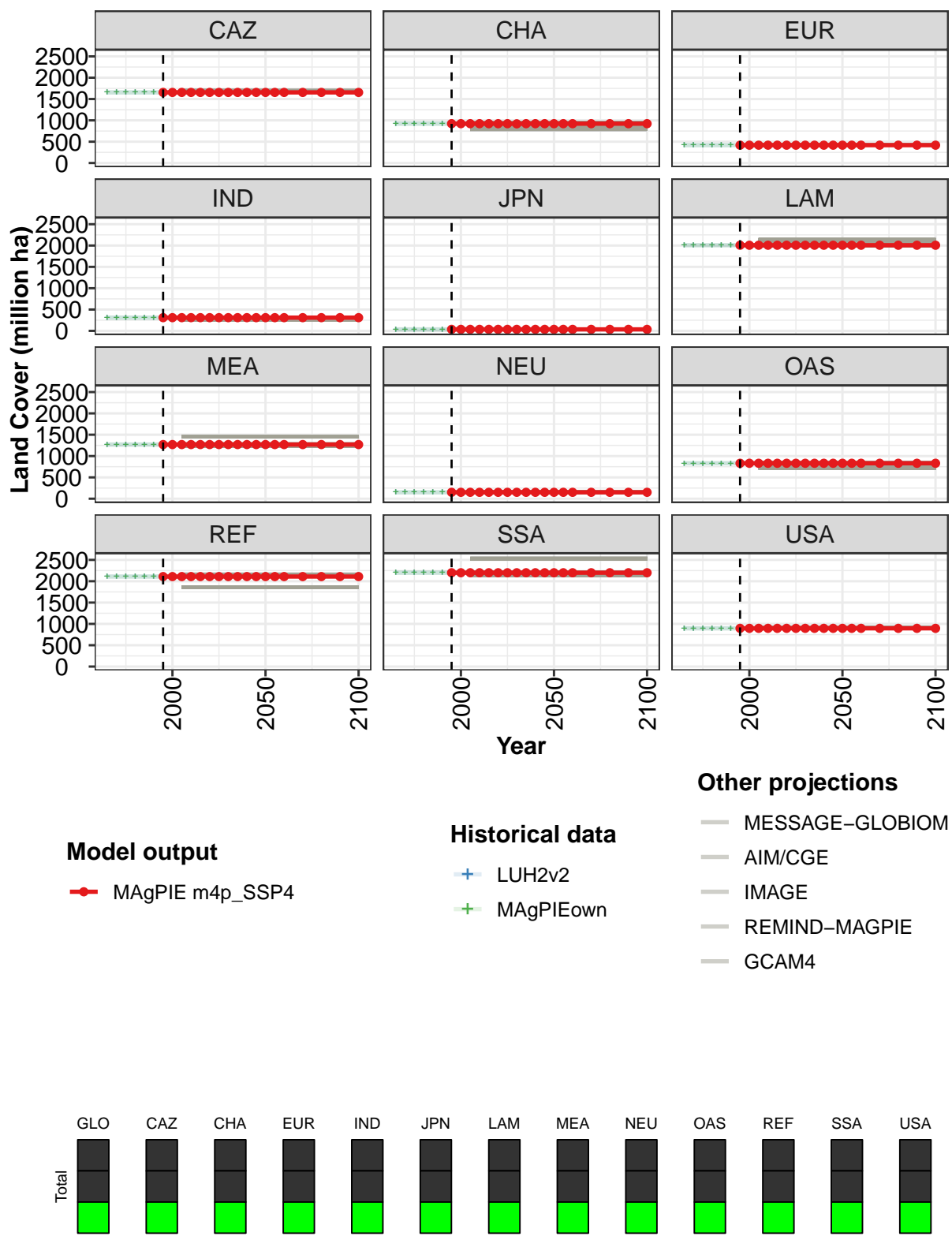


Figure 399: MAgPIE m4p\_SSP4 — Resources—Land Cover (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	12805	12805	12805	12805	12805	12805	12805	12802	12805	12805	12805
CAZ	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655
CHA	922	922	922	922	922	922	922	919	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\_SSP4 — 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

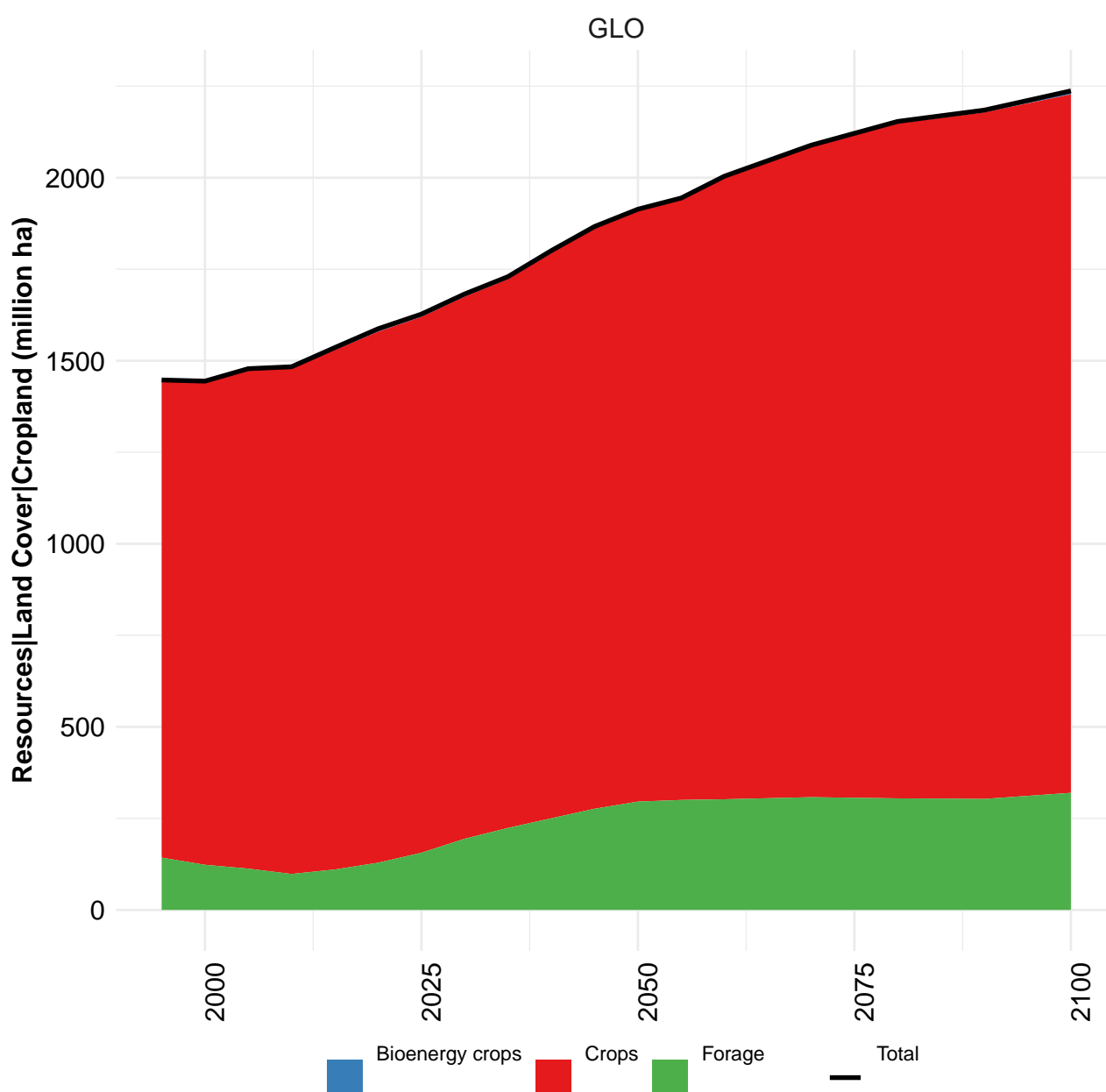
Table 1538: MAgPIE m4p\_SSP4 — Resources—Land Cover (million ha) [PART 2/2]

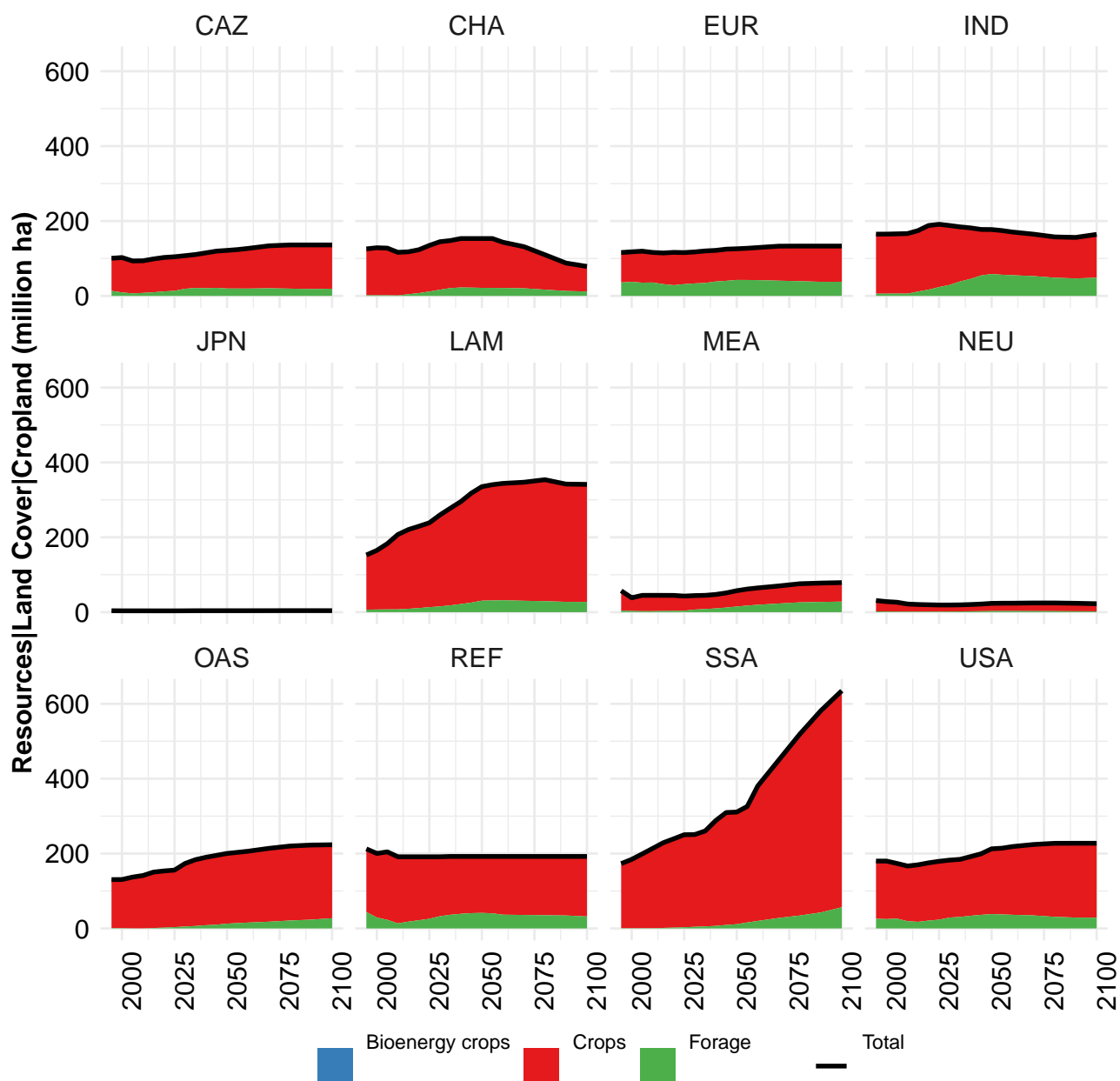
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12805	12805	12805	12805	12805	12805	12805	12805	12805	12805
CAZ	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655
CHA	922	922	922	922	922	922	922	922	922	922
EUR	419	419	419	419	419	419	419	419	419	419
IND	310	310	310	310	310	310	310	310	310	310
JPN	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)

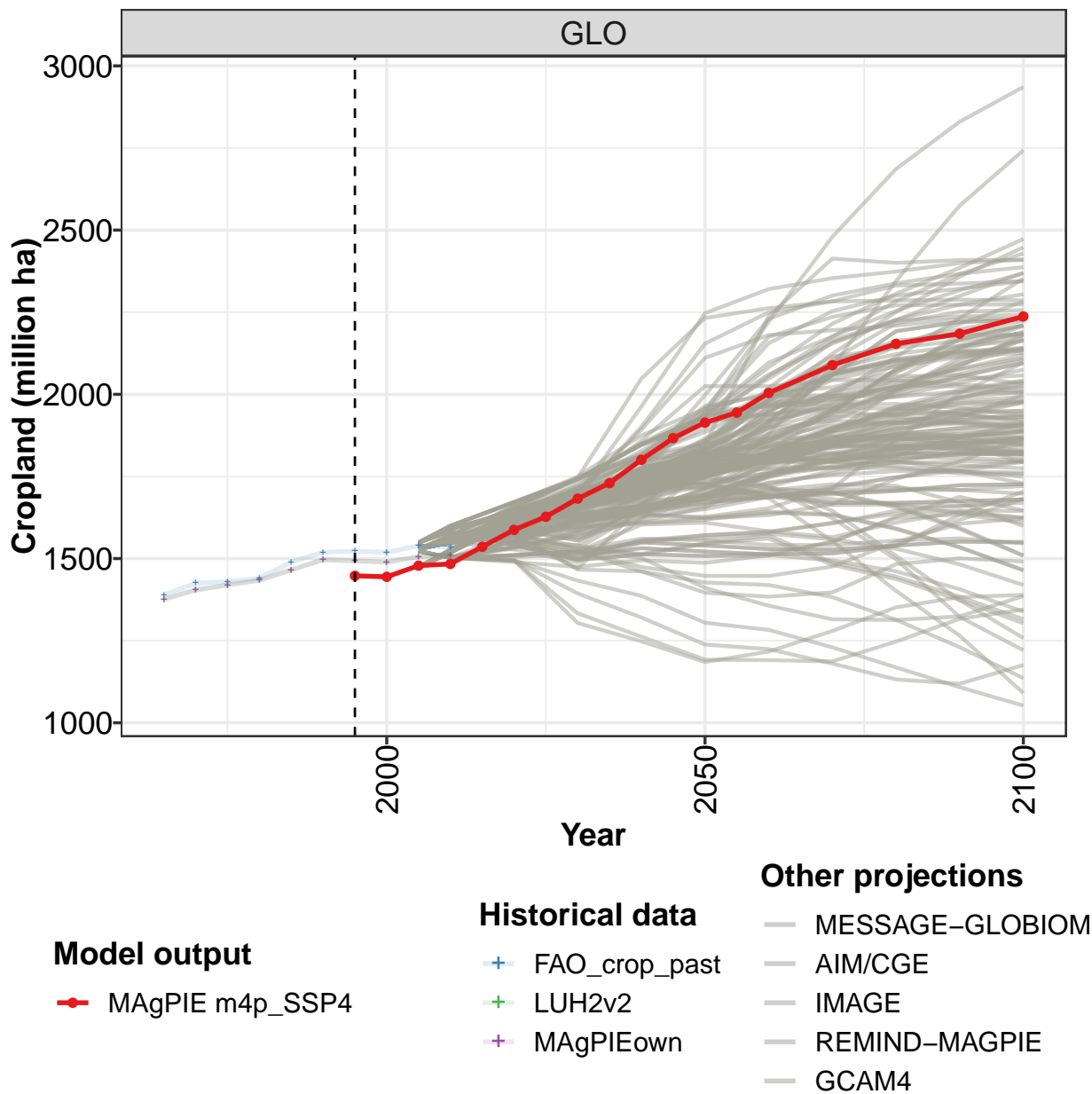
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	12805	12805	12805	12805	12805	12805	12805	12805	12805	12805
CAZ	1655	1655	1655	1655	1655	1655	1655	1655	1655	1655
CHA	922	922	922	922	922	922	922	922	922	922
EUR	419	419	419	419	419	419	419	419	419	419
IND	310	310	310	310	310	310	310	310	310	310
JPN	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)





54.1 Cropland



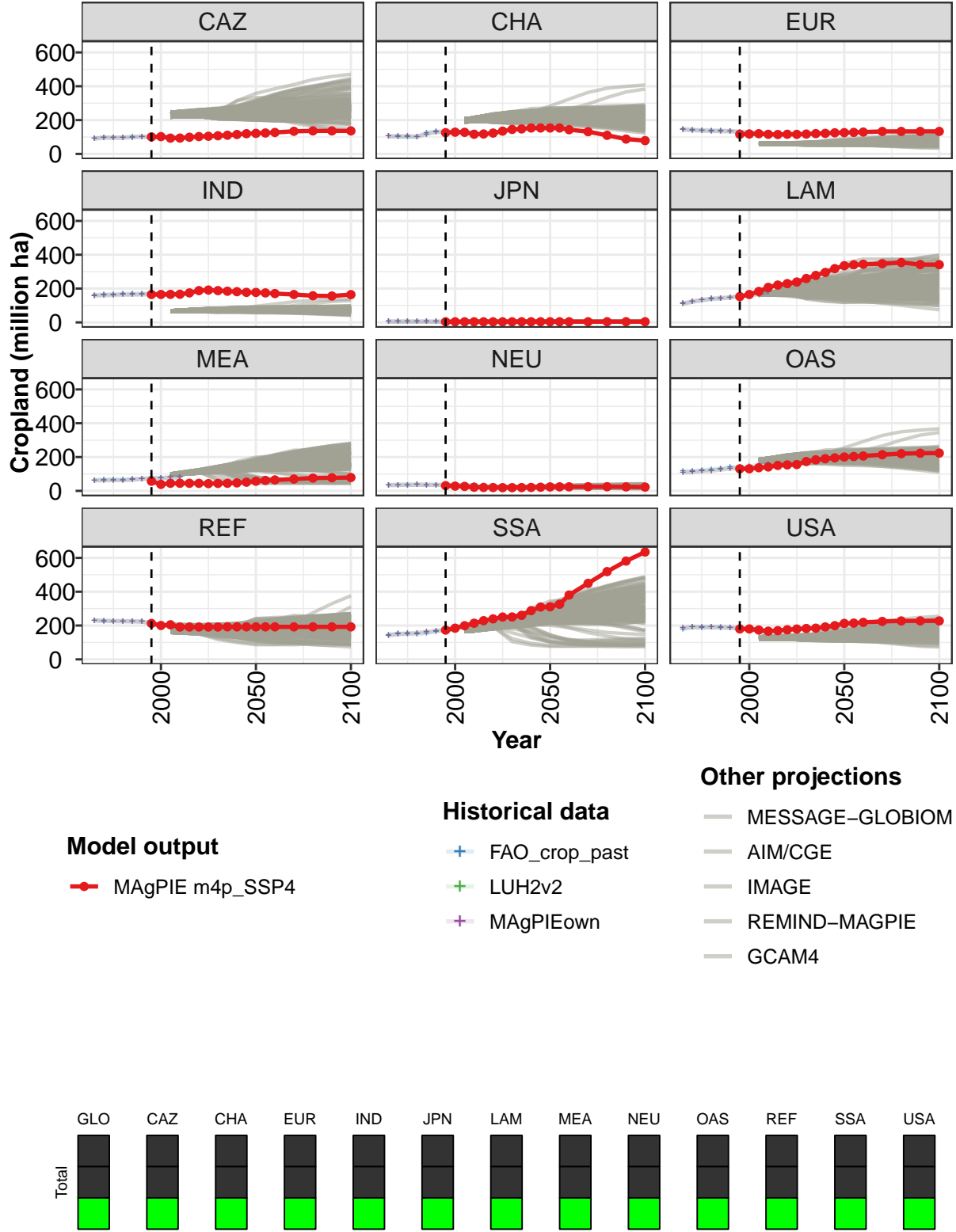


Figure 400: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1448	1444	1478	1484	1536	1587	1627	1682	1730	1801	1867
CAZ	101	102	93	94	99	103	105	107	111	115	120
CHA	126	129	128	116	118	123	135	145	148	153	153
EUR	116	118	119	116	115	116	116	117	120	122	125
IND	165	165	166	166	174	188	191	188	184	182	177
JPN	4	4	4	4	4	4	4	4	4	4	4
LAM	153	165	183	207	221	229	239	260	278	295	318
MEA	57	38	45	45	45	45	43	44	45	47	51
NEU	31	28	26	22	21	20	19	19	20	20	22
OAS	130	131	137	141	150	154	156	173	184	190	195
REF	213	200	205	191	191	191	191	191	192	192	192
SSA	173	184	199	214	229	239	250	251	260	288	310
USA	180	180	174	167	170	175	179	182	185	192	199

Table 1541: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	1914	1944	2004	2089	2154	2185	2237
CAZ	122	124	127	134	136	136	136
CHA	153	153	143	131	110	88	79
EUR	126	127	129	133	133	133	133
IND	177	174	171	165	158	156	164
JPN	4	4	4	4	4	4	4
LAM	335	341	344	347	354	342	341
MEA	57	62	65	70	76	78	79
NEU	24	24	24	25	25	24	23
OAS	200	203	206	214	220	223	224
REF	192	192	192	192	192	192	192
SSA	311	326	380	450	519	581	635
USA	213	214	219	224	227	227	227

Table 1542: MAgPIE m4p\_SSP4 — 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)



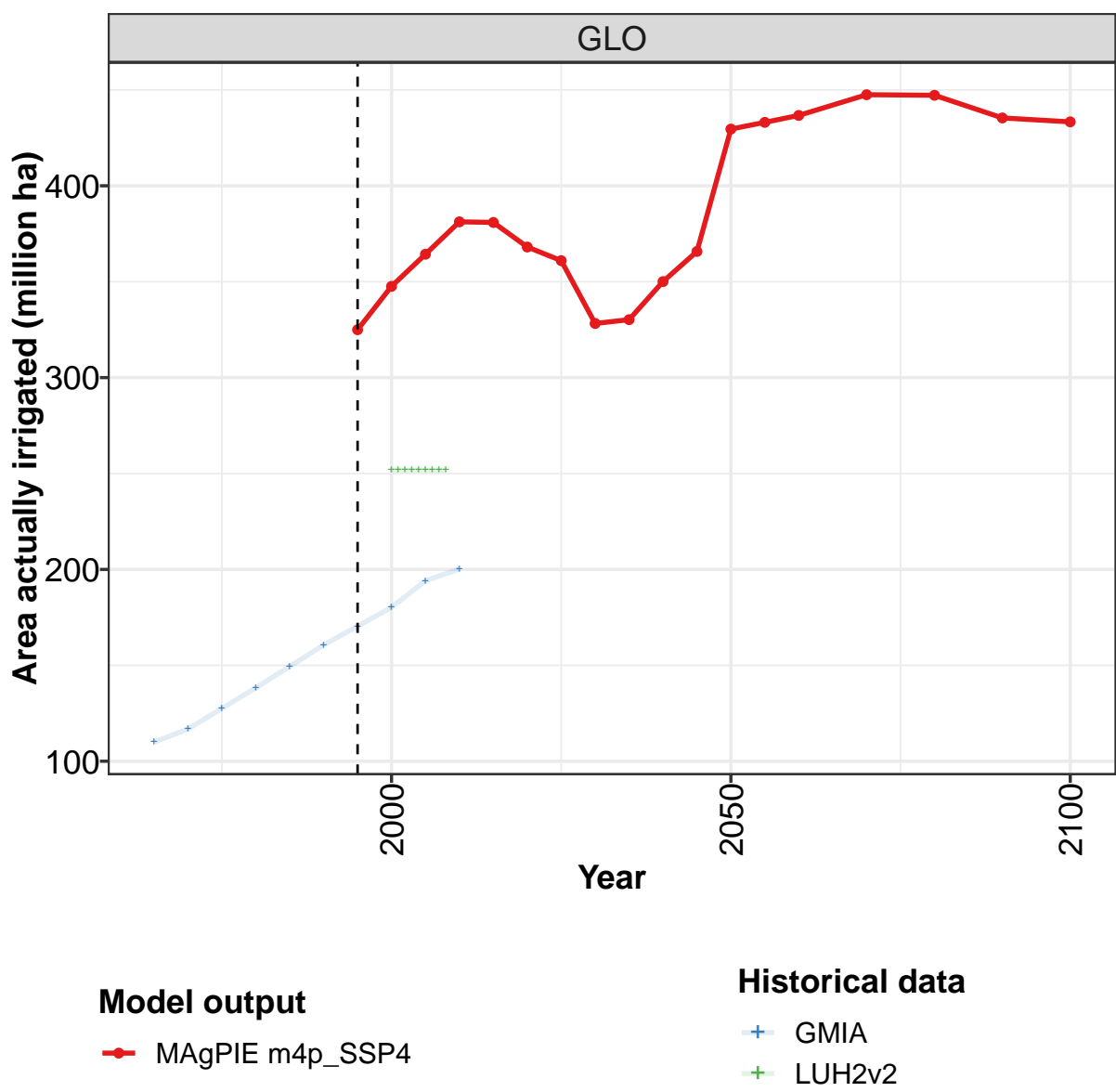
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1376	1404	1419	1434	1465	1497	1493	1489	1506	1510
CAZ	91	96	96	96	99	101	101	100	101	91
CHA	104	104	104	103	117	130	129	128	130	122
EUR	143	140	138	135	134	133	130	127	119	118
IND	158	160	162	163	164	165	166	167	169	168
JPN	5	5	5	5	5	5	4	4	4	4
LAM	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



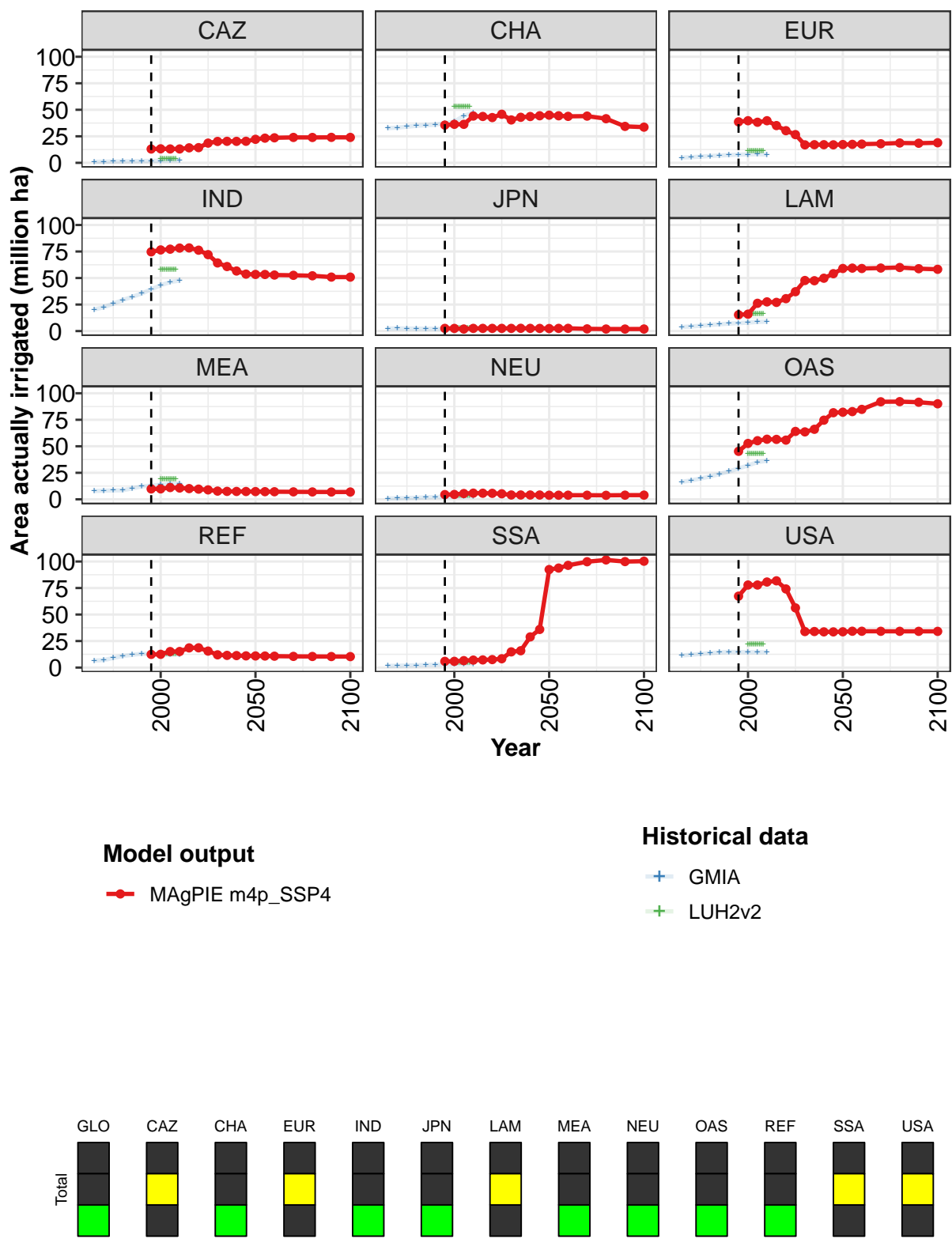


Figure 401: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Area actually irrigated (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	325	348	364	381	381	368	361	328	330	350	366
CAZ	13	13	13	13	14	14	19	20	20	20	20
CHA	36	36	36	44	44	43	46	40	43	44	44
EUR	39	40	38	40	35	30	27	17	17	17	17
IND	75	77	77	78	78	76	72	64	61	57	54
JPN	3	3	2	3	3	3	3	3	3	3	2
LAM	15	16	26	28	27	31	37	48	47	50	54
MEA	10	10	11	11	10	10	9	8	7	7	7
NEU	4	5	5	6	6	6	5	4	4	4	4
OAS	45	53	55	57	57	56	64	64	66	75	82
REF	12	13	15	15	19	19	16	12	11	11	11
SSA	6	6	7	7	7	8	8	15	16	29	36
USA	67	78	78	81	82	74	56	34	34	34	34

Table 1546: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Area actually irrigated (million ha)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	430	433	437	447	447	435	433
CAZ	22	23	24	24	24	24	24
CHA	45	44	44	44	42	34	34
EUR	17	17	18	18	19	18	19
IND	53	53	53	53	52	51	51
JPN	2	3	3	2	2	2	2
LAM	59	59	59	59	60	59	58
MEA	7	7	7	7	7	7	7
NEU	4	4	4	4	4	4	4
OAS	82	83	85	92	92	92	90
REF	11	11	11	11	10	10	10
SSA	92	94	96	100	101	100	100
USA	34	34	34	34	34	34	34

Table 1547: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Area actually irrigated (million ha)  
[PART 2/2]

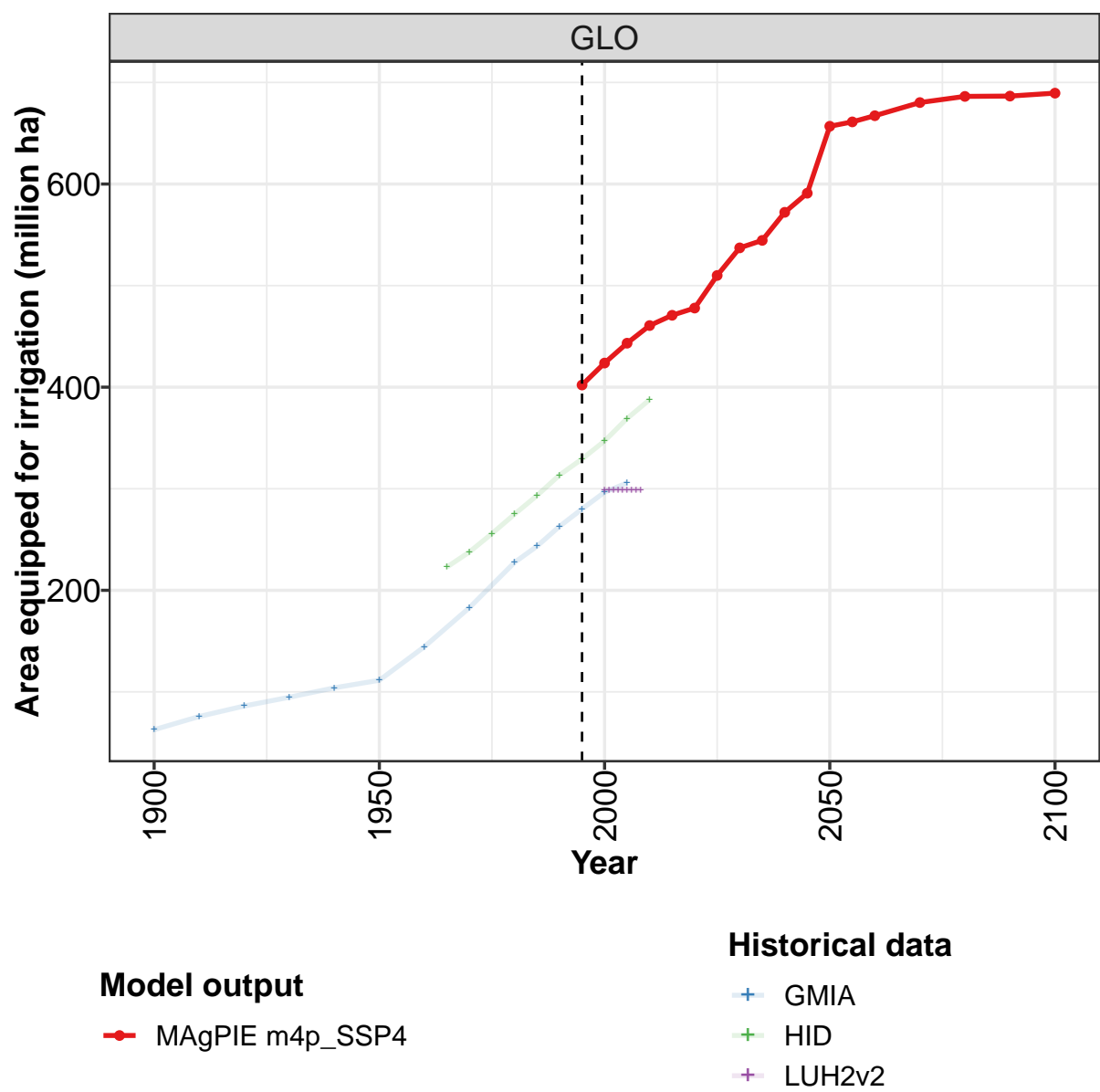
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	110	117	128	138	149	161	170	180	194	200
CAZ	1	1	1	1	1	2	2	2	2	2
CHA	33	33	34	35	35	36	37	39	44	47
EUR	5	5	6	6	7	7	8	8	8	8
IND	20	22	26	29	32	35	39	43	46	48
JPN	2	3	2	2	2	2	2	2	2	2
LAM	4	4	5	6	6	7	8	8	9	9
MEA	8	8	8	9	10	12	13	14	15	15
NEU	1	1	1	1	2	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



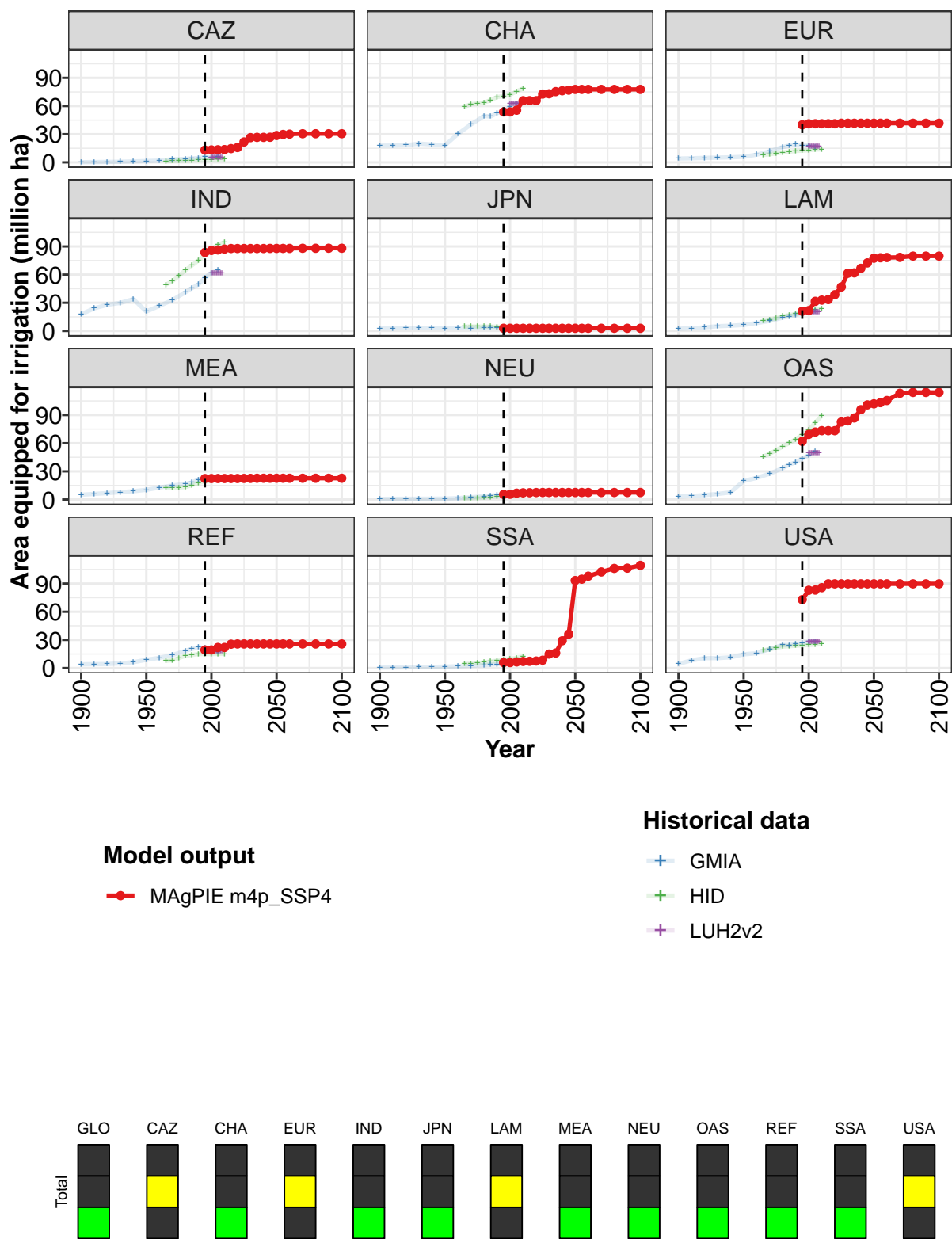


Figure 402: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	402	424	443	461	471	478	510	537	545	572	591
CAZ	13	13	13	14	15	16	22	26	27	27	27
CHA	54	54	56	66	66	66	73	73	75	76	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	47	61	62	67	72
MEA	22	22	22	22	22	22	22	23	23	23	23
NEU	5	6	7	7	7	7	7	7	7	7	7
OAS	62	69	72	73	73	73	83	84	87	96	101
REF	19	19	22	22	25	26	26	26	26	26	26
SSA	6	6	7	7	7	8	8	15	16	29	36
USA	73	83	83	86	90	90	90	90	90	90	90

Table 1550: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Area equipped for irrigation (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	657	661	667	680	686	687	689
CAZ	29	30	30	31	31	31	31
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	77	78	78	78	80	80	80
MEA	23	23	23	23	23	23	23
NEU	7	7	7	7	7	7	7
OAS	102	103	105	113	114	114	114
REF	26	26	26	26	26	26	26
SSA	93	95	98	102	106	106	109
USA	90	90	90	90	90	90	90

Table 1551: MAgPIE m4p\_SSP4 — 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]

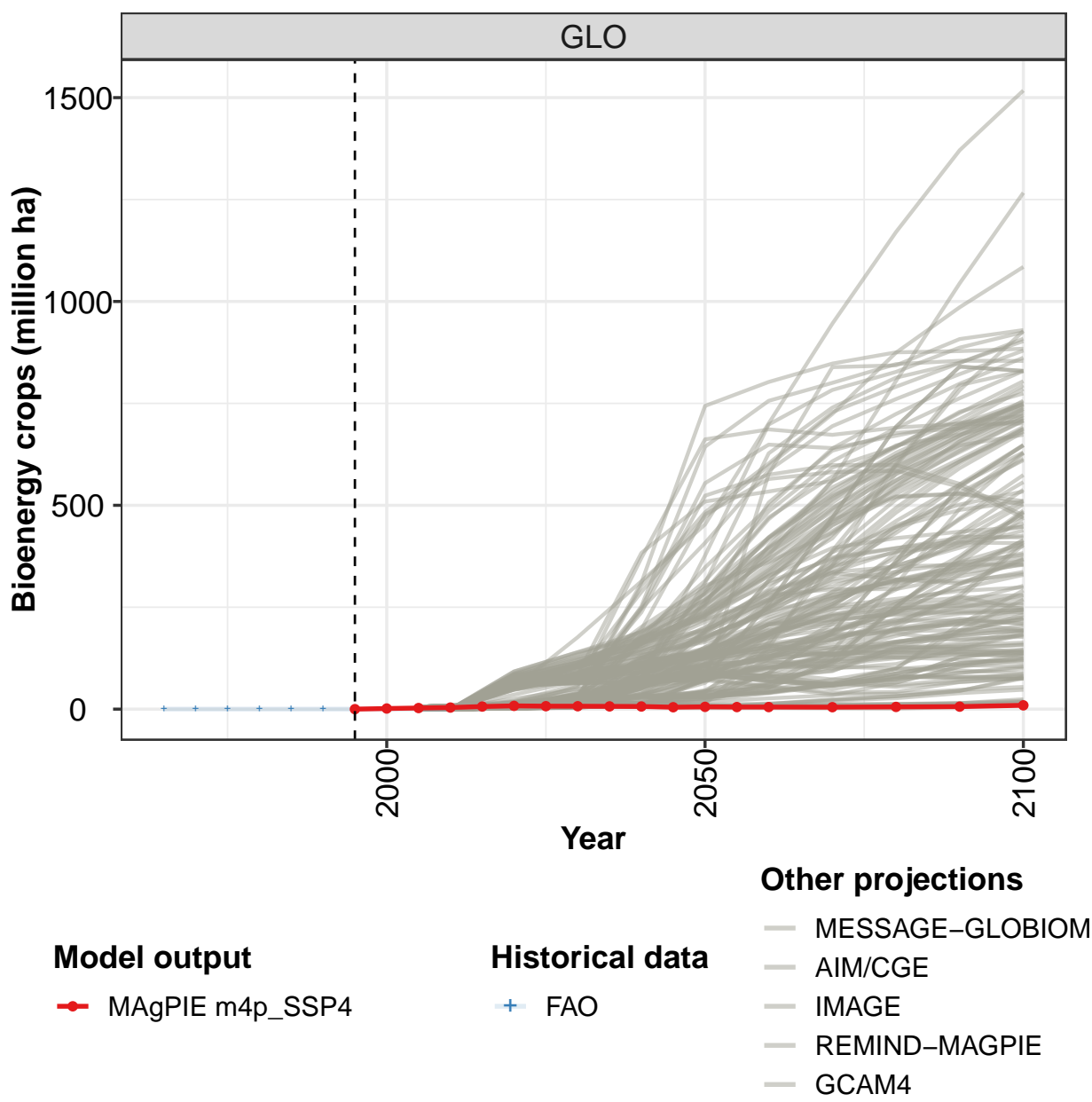
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	223	238	256	275	293	313	329	347	369	388
CAZ	1	1	2	2	2	2	3	3	3	3
CHA	59	62	63	64	66	70	70	72	76	79
EUR	8	9	10	11	11	12	12	13	14	14
IND	49	53	59	65	70	75	81	87	92	95
JPN	5	5	5	5	5	5	4	4	4	4
LAM	11	12	14	16	17	18	19	20	22	24
MEA	12	13	13	13	15	18	19	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



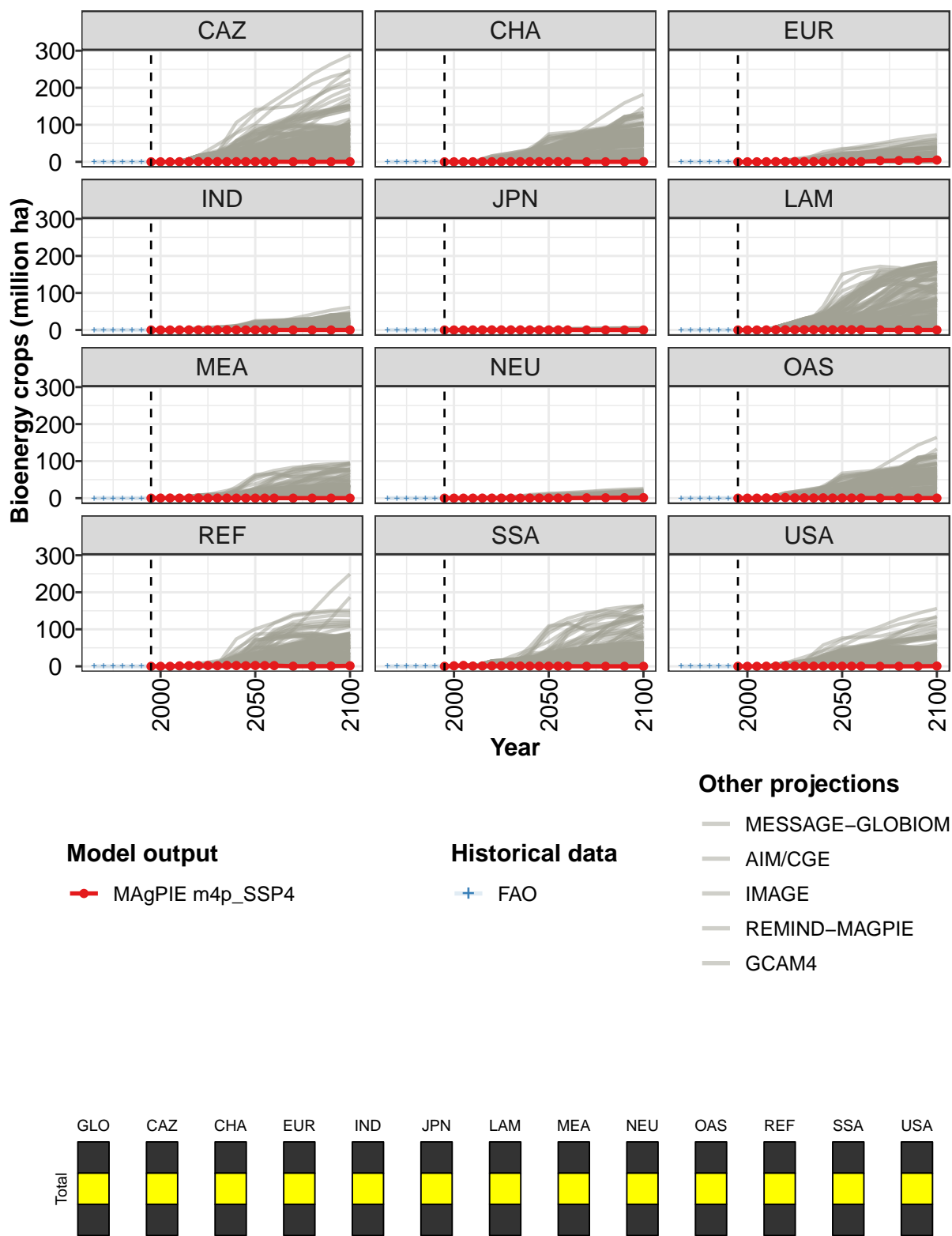


Figure 403: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Bioenergy crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.00	1.52	2.72	3.88	6.39	8.01	7.27	7.16	6.75	6.47	4.70
CAZ	0.00	0.00	0.00	0.25	0.41	0.50	0.47	0.47	0.38	0.35	0.26
CHA	0.00	0.00	0.00	0.11	0.20	0.28	0.31	0.37	0.35	0.35	0.30
EUR	0.00	0.00	0.00	0.22	0.40	0.54	0.56	0.64	0.56	0.58	0.52
IND	0.00	0.00	0.00	0.14	0.25	0.32	0.30	0.29	0.23	0.20	0.14
JPN	0.00	0.00	0.00	0.13	0.23	0.30	0.29	0.29	0.23	0.21	0.15
LAM	0.00	0.00	0.00	0.24	0.48	0.67	0.75	0.85	0.78	0.78	0.68
MEA	0.00	0.20	0.30	0.09	0.12	0.13	0.10	0.09	0.12	0.06	0.04
NEU	0.00	0.00	0.00	0.05	0.09	0.12	0.11	0.12	0.10	0.10	0.09
OAS	0.00	0.00	0.00	0.52	1.06	1.48	0.60	0.88	0.48	0.81	0.32
REF	0.00	0.00	0.00	1.06	1.63	1.95	2.13	1.74	2.37	2.08	1.53
SSA	0.00	1.32	2.41	0.71	0.96	1.10	1.02	0.97	0.77	0.64	0.44
USA	0.00	0.00	0.00	0.34	0.56	0.63	0.61	0.44	0.36	0.32	0.23

Table 1556: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Bioenergy crops (million ha) [PART 1/2]

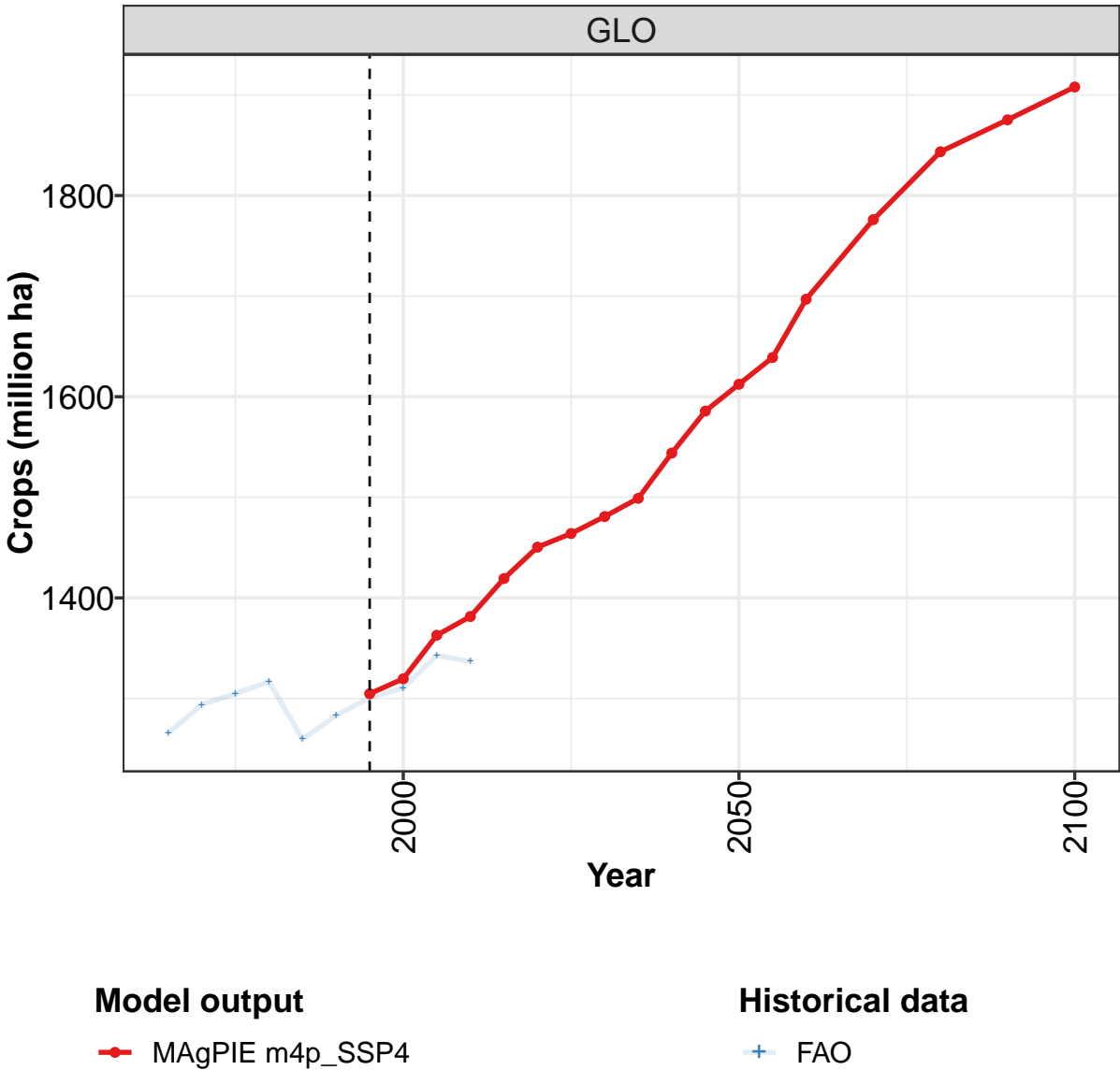
	2050	2055	2060	2070	2080	2090	2100
GLO	5.66	5.17	5.08	4.80	5.51	6.18	9.40
CAZ	0.30	0.27	0.27	0.06	0.09	0.13	0.33
CHA	0.30	0.31	0.28	0.00	0.05	0.11	0.45
EUR	0.52	0.40	0.47	2.92	3.45	3.96	4.90
IND	0.15	0.14	0.13	0.06	0.07	0.04	0.09
JPN	0.17	0.15	0.16	0.06	0.07	0.09	0.09
LAM	0.79	0.75	0.72	0.34	0.11	0.00	0.01
MEA	0.04	0.04	0.04	0.01	0.01	0.00	0.00
NEU	0.12	0.11	0.12	0.82	0.94	1.11	1.38
OAS	0.35	0.32	0.32	0.12	0.21	0.11	0.17
REF	2.21	2.03	1.93	0.30	0.42	0.52	1.36
SSA	0.47	0.41	0.39	0.09	0.05	0.00	0.00
USA	0.26	0.25	0.25	0.00	0.03	0.09	0.61

Table 1557: MAgPIE m4p\_SSP4 — 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



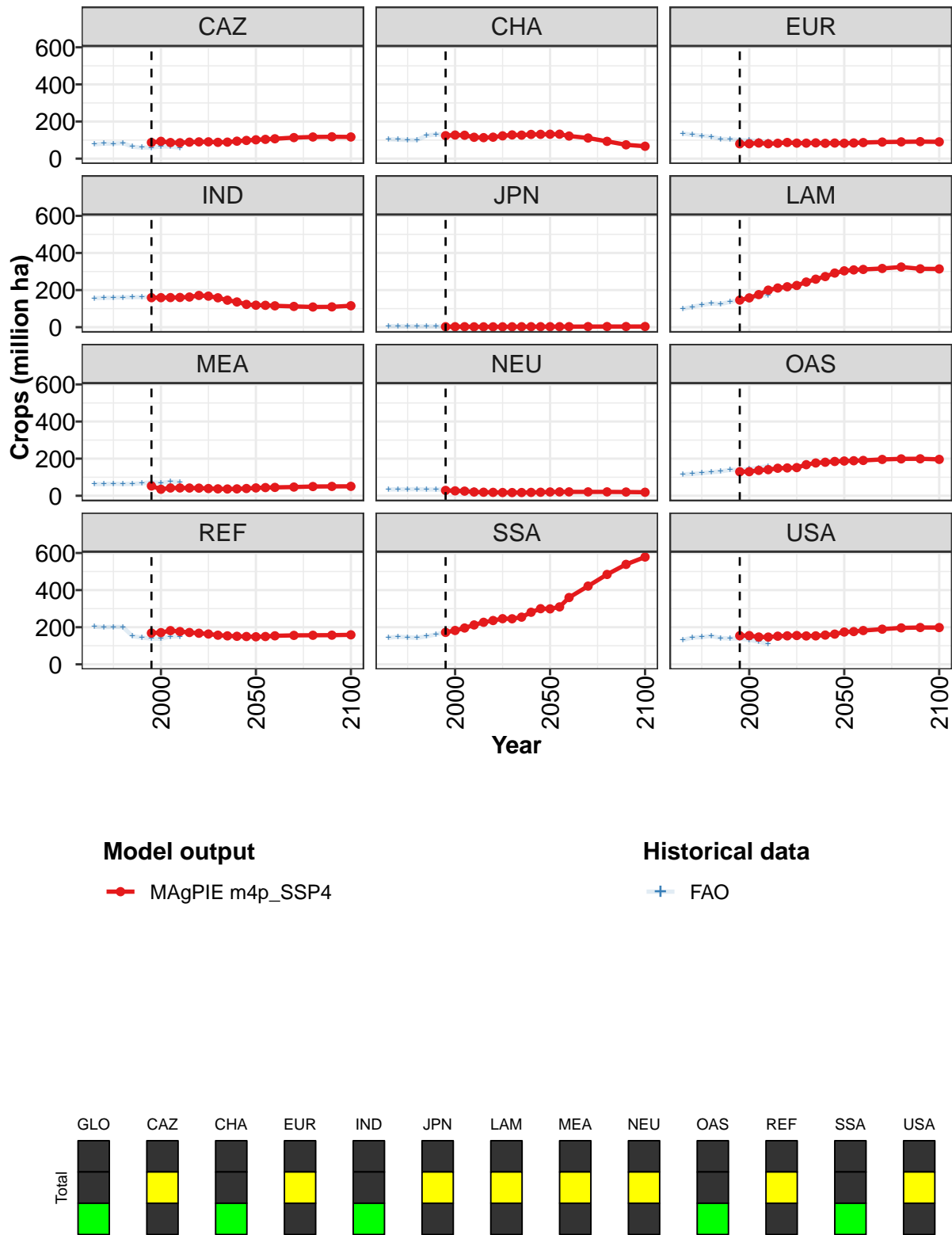


Figure 404: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1305	1320	1363	1381	1419	1450	1464	1481	1499	1544	1586
CAZ	87	93	87	85	89	90	90	88	89	94	98
CHA	124	127	126	115	113	116	123	128	127	130	131
EUR	80	80	84	80	83	87	84	84	85	83	84
IND	159	159	160	160	163	171	167	158	146	136	123
JPN	3	2	3	2	2	2	2	2	3	3	3
LAM	146	158	176	200	211	218	225	243	259	273	292
MEA	53	35	42	42	42	41	39	37	37	37	39
NEU	29	26	25	20	19	18	18	17	17	18	19
OAS	129	130	137	141	148	150	152	168	177	181	185
REF	169	171	182	177	172	168	163	157	153	151	150
SSA	172	182	196	212	226	236	246	246	254	281	300
USA	154	155	147	147	152	154	155	153	153	158	163

Table 1559: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops (million ha) [PART 1/2]

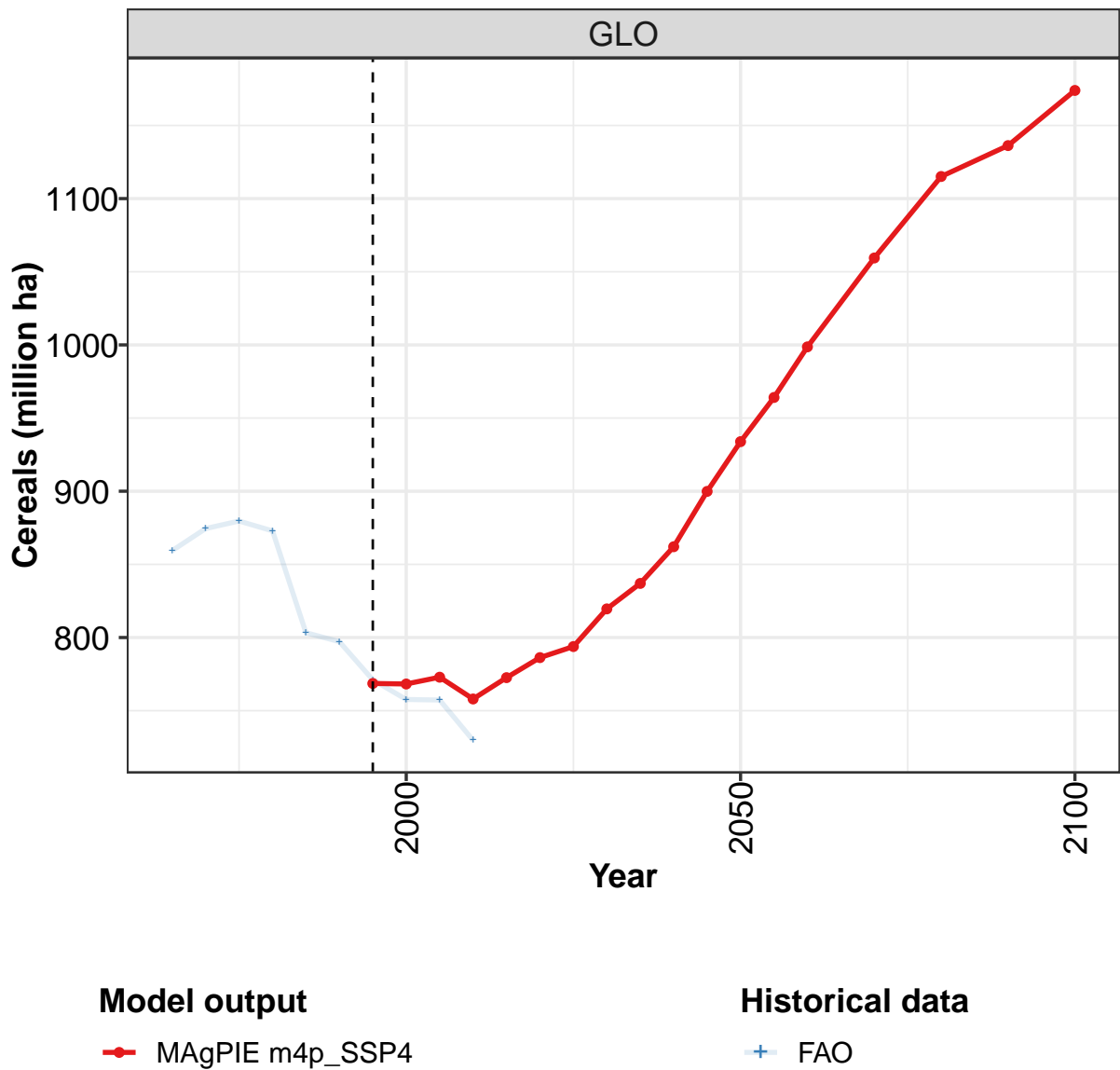
	2050	2055	2060	2070	2080	2090	2100
GLO	1612	1639	1697	1776	1844	1875	1908
CAZ	101	104	107	113	117	118	117
CHA	132	132	122	111	93	74	67
EUR	83	84	87	89	90	92	90
IND	119	118	115	112	109	109	116
JPN	3	3	3	3	3	4	4
LAM	304	309	311	316	324	315	314
MEA	42	44	45	47	50	50	51
NEU	20	21	21	21	21	20	19
OAS	187	189	190	196	199	199	196
REF	149	150	154	156	157	157	159
SSA	299	309	360	422	484	539	578
USA	174	177	182	190	196	198	198

Table 1560: MAgPIE m4p\_SSP4 — 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





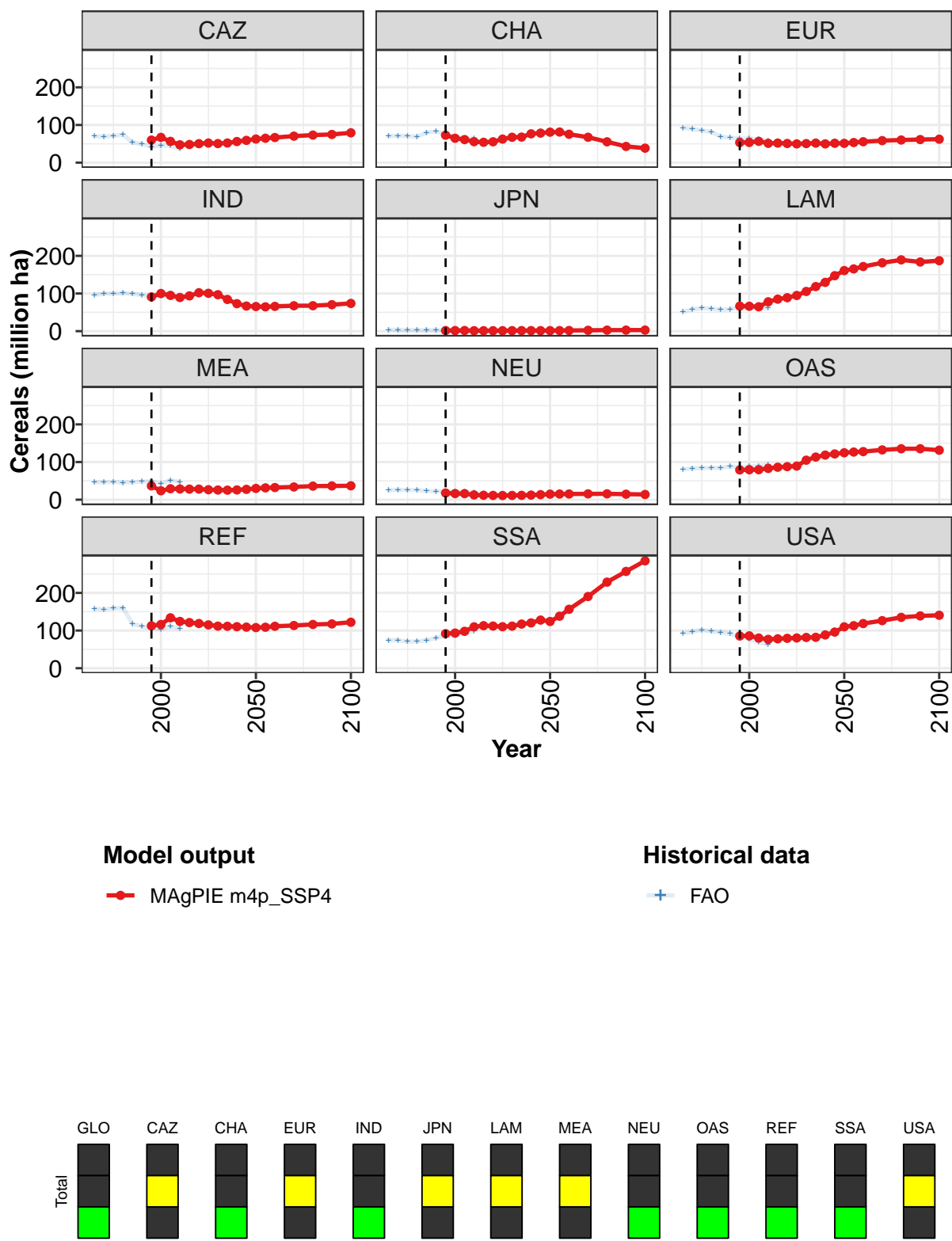


Figure 405: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	769	768	773	758	773	786	794	820	837	862	900
CAZ	60	67	56	47	48	50	52	51	52	56	59
CHA	73	65	61	56	54	55	63	67	68	77	78
EUR	53	54	57	51	52	51	50	51	52	50	51
IND	91	100	95	89	94	102	101	97	84	73	67
JPN	2	2	2	1	1	1	1	1	2	1	1
LAM	67	66	65	78	85	89	95	105	118	130	147
MEA	37	24	29	29	28	28	26	26	25	26	27
NEU	18	16	16	13	12	11	11	11	12	12	13
OAS	79	80	80	83	86	88	89	105	113	118	122
REF	113	116	134	124	121	119	115	112	111	110	109
SSA	92	93	98	110	113	112	110	112	117	120	128
USA	86	86	80	77	78	79	80	82	82	88	96

Table 1562: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals (million ha) [PART 1/2]

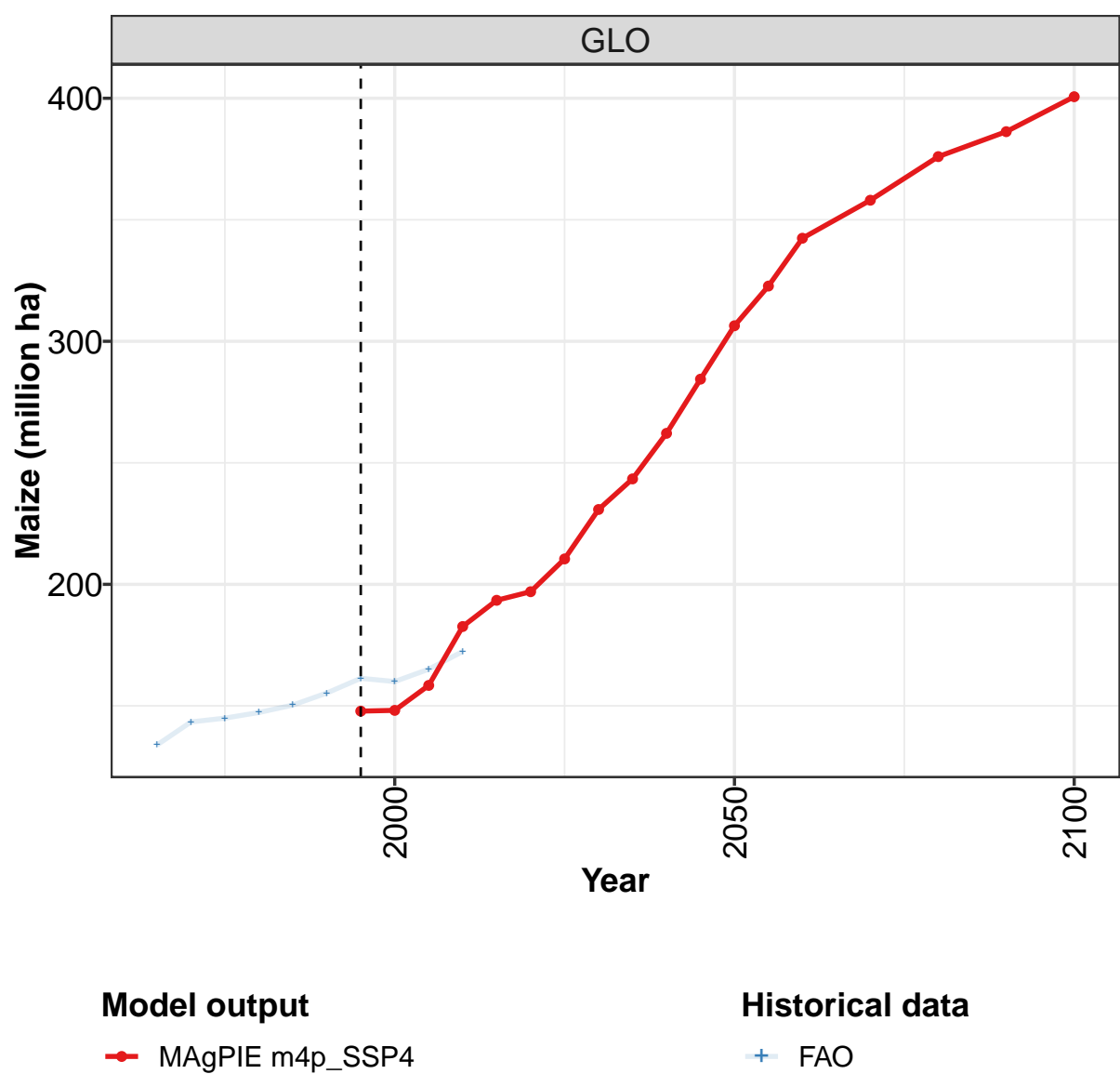
	2050	2055	2060	2070	2080	2090	2100
GLO	934	964	999	1059	1115	1136	1174
CAZ	63	65	67	70	73	75	79
CHA	81	81	75	67	55	43	38
EUR	51	53	56	58	60	61	62
IND	65	65	66	68	68	70	74
JPN	1	2	2	2	3	3	3
LAM	161	165	172	182	189	184	187
MEA	30	31	32	34	36	37	37
NEU	15	15	15	16	16	15	14
OAS	125	126	128	132	135	135	131
REF	108	109	111	113	116	118	122
SSA	124	138	157	190	229	257	285
USA	110	113	119	126	135	139	141

Table 1563: MAgPIE m4p\_SSP4 — 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



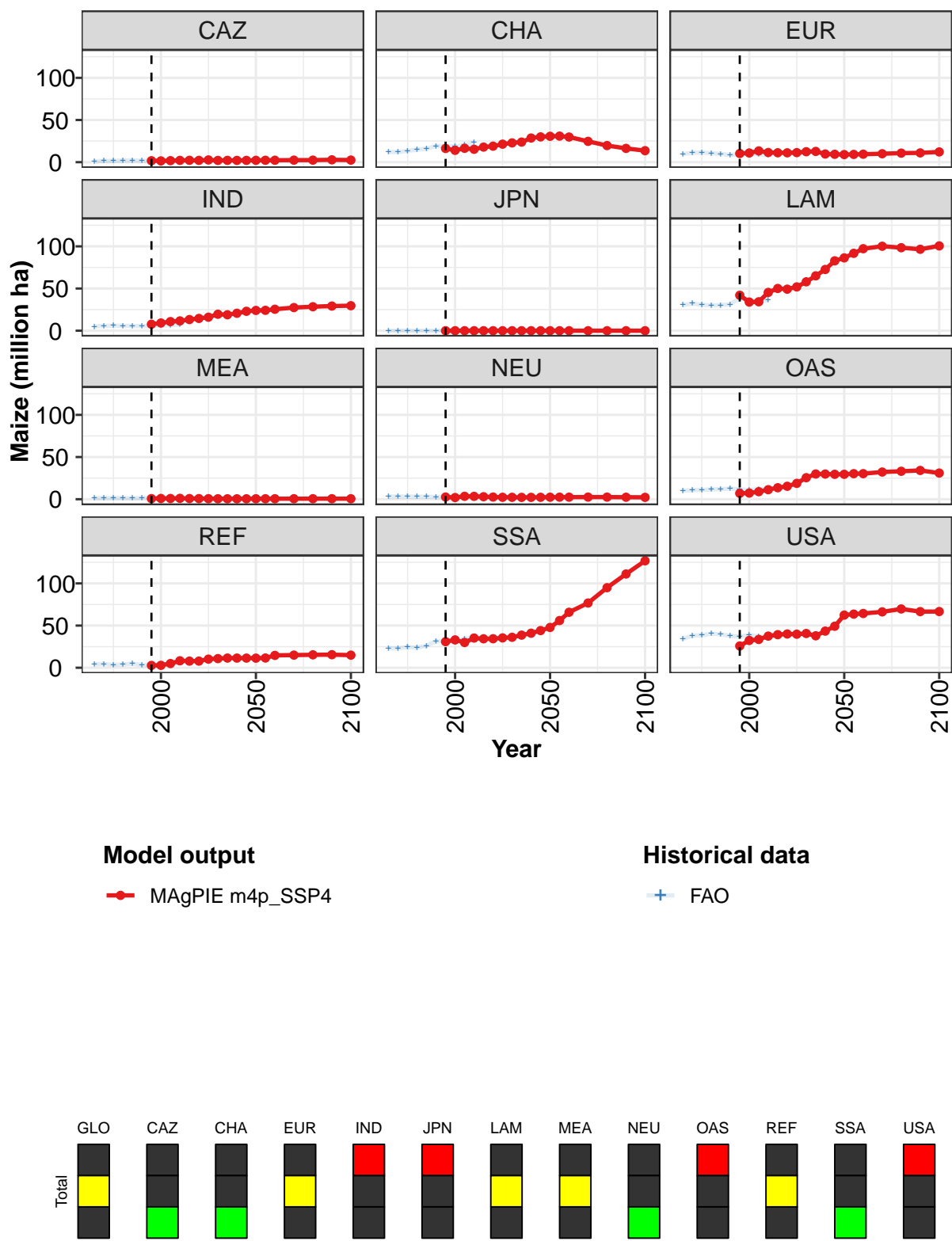


Figure 406: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Maize (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	148	148	158	183	193	197	210	231	243	262	284
CAZ	2	2	2	2	2	2	3	2	2	2	2
CHA	16	14	16	15	18	19	21	23	24	29	30
EUR	10	11	13	11	11	11	11	12	13	10	9
IND	8	9	11	12	13	15	16	20	19	21	23
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	42	34	34	45	50	49	52	58	65	73	83
MEA	1	1	1	1	1	1	1	1	1	1	1
NEU	3	2	3	3	3	3	2	2	2	2	2
OAS	7	7	9	11	14	15	19	26	30	30	30
REF	3	3	5	8	8	8	10	11	11	11	11
SSA	31	33	30	35	34	34	35	36	39	41	44
USA	26	32	34	38	39	40	40	41	38	43	49

Table 1565: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Maize (million ha)  
[PART 1/2]

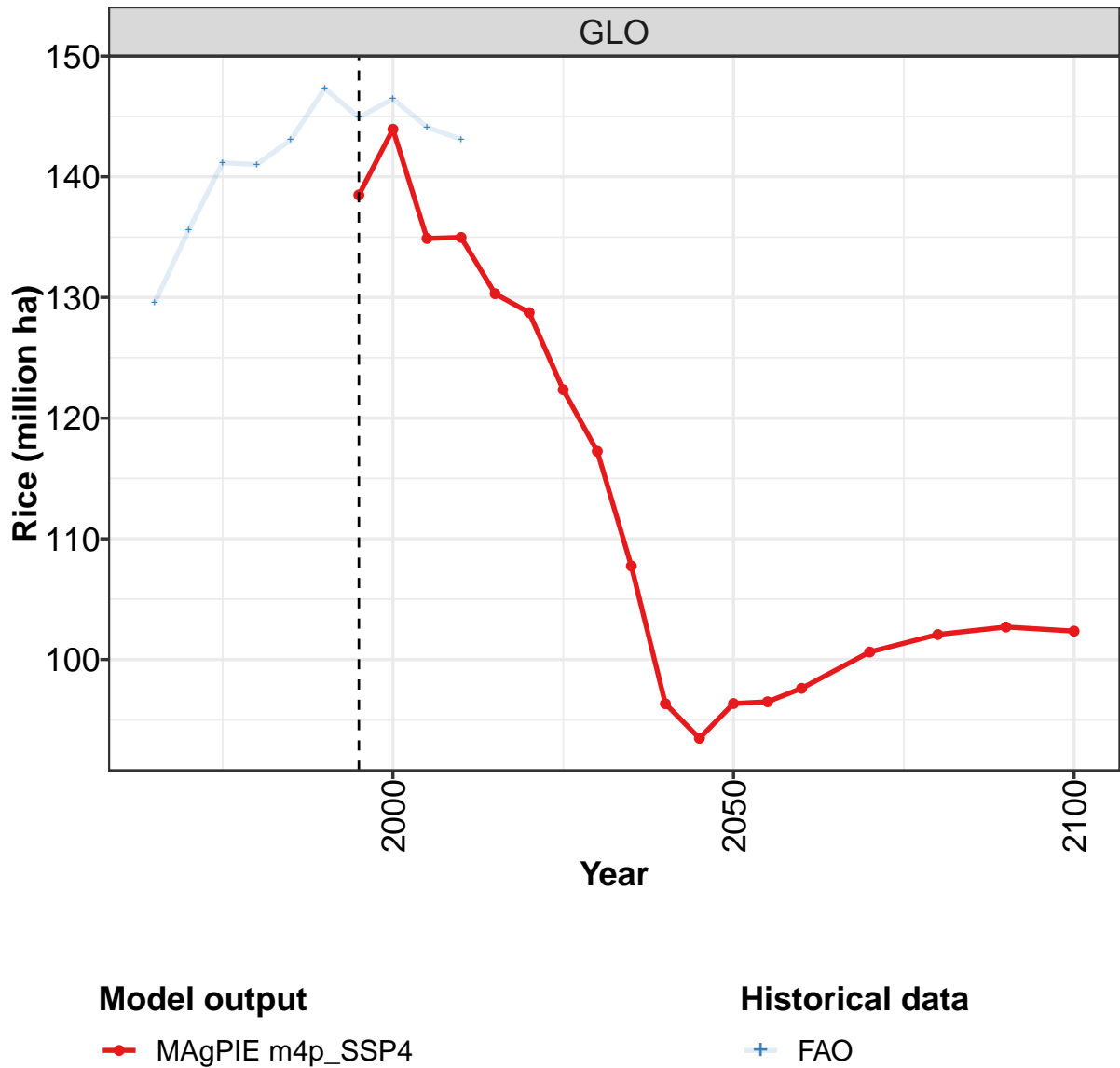
	2050	2055	2060	2070	2080	2090	2100
GLO	306	323	342	358	376	386	401
CAZ	2	2	2	2	2	3	2
CHA	31	31	30	25	20	16	14
EUR	9	9	9	10	11	11	12
IND	24	24	25	27	28	29	30
JPN	0	0	0	0	0	0	0
LAM	86	92	97	100	98	97	101
MEA	1	1	1	1	1	1	1
NEU	2	2	2	3	3	2	2
OAS	30	30	30	32	33	34	31
REF	11	12	15	15	15	15	15
SSA	48	56	66	77	95	111	127
USA	62	64	64	66	70	67	67

Table 1566: MAgPIE m4p\_SSP4 — 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



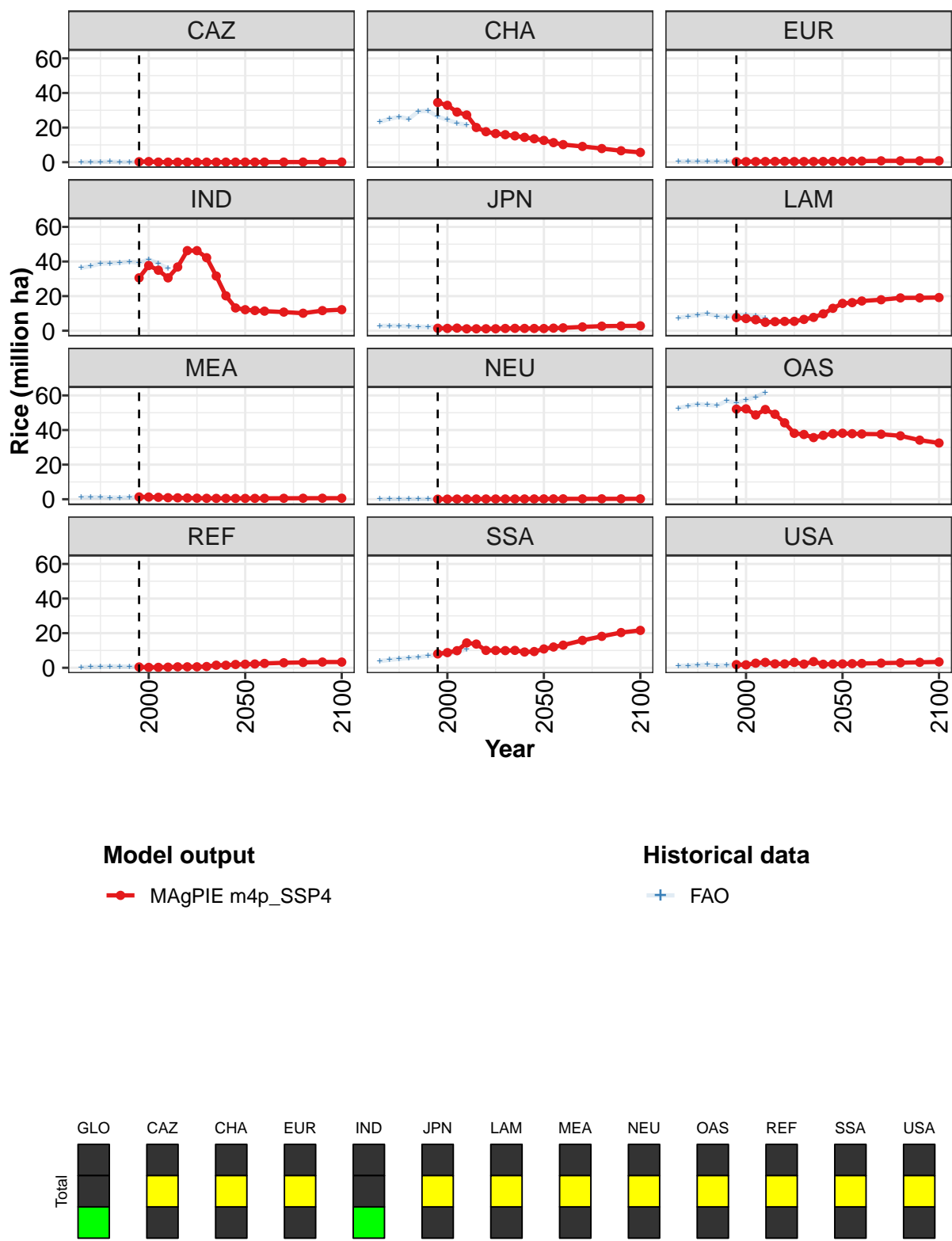


Figure 407: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Rice (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	138	144	135	135	130	129	122	117	108	96	93
CAZ	0	0	0	0	0	0	0	0	0	0	0
CHA	35	33	29	27	20	18	17	16	15	14	14
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	31	38	35	31	37	46	46	42	32	20	13
JPN	1	1	2	1	1	1	1	1	1	1	1
LAM	8	7	6	5	5	5	5	7	8	10	13
MEA	1	1	1	1	1	1	1	1	1	0	0
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	52	52	49	52	49	44	38	37	36	37	38
REF	0	0	0	0	1	1	1	1	1	1	2
SSA	8	9	10	14	14	10	10	10	10	9	9
USA	2	2	3	3	2	2	3	2	4	2	2

Table 1568: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Rice (million ha)  
[PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	96	96	98	101	102	103	102
CAZ	0	0	0	0	0	0	0
CHA	13	11	10	9	8	7	6
EUR	0	1	1	1	1	1	1
IND	12	12	11	11	10	12	12
JPN	1	1	2	2	3	3	3
LAM	16	16	17	18	19	19	19
MEA	0	1	1	1	1	1	1
NEU	0	0	0	0	0	0	0
OAS	38	38	38	38	37	34	33
REF	2	2	3	3	3	3	3
SSA	11	12	13	16	18	20	22
USA	2	2	2	3	3	3	3

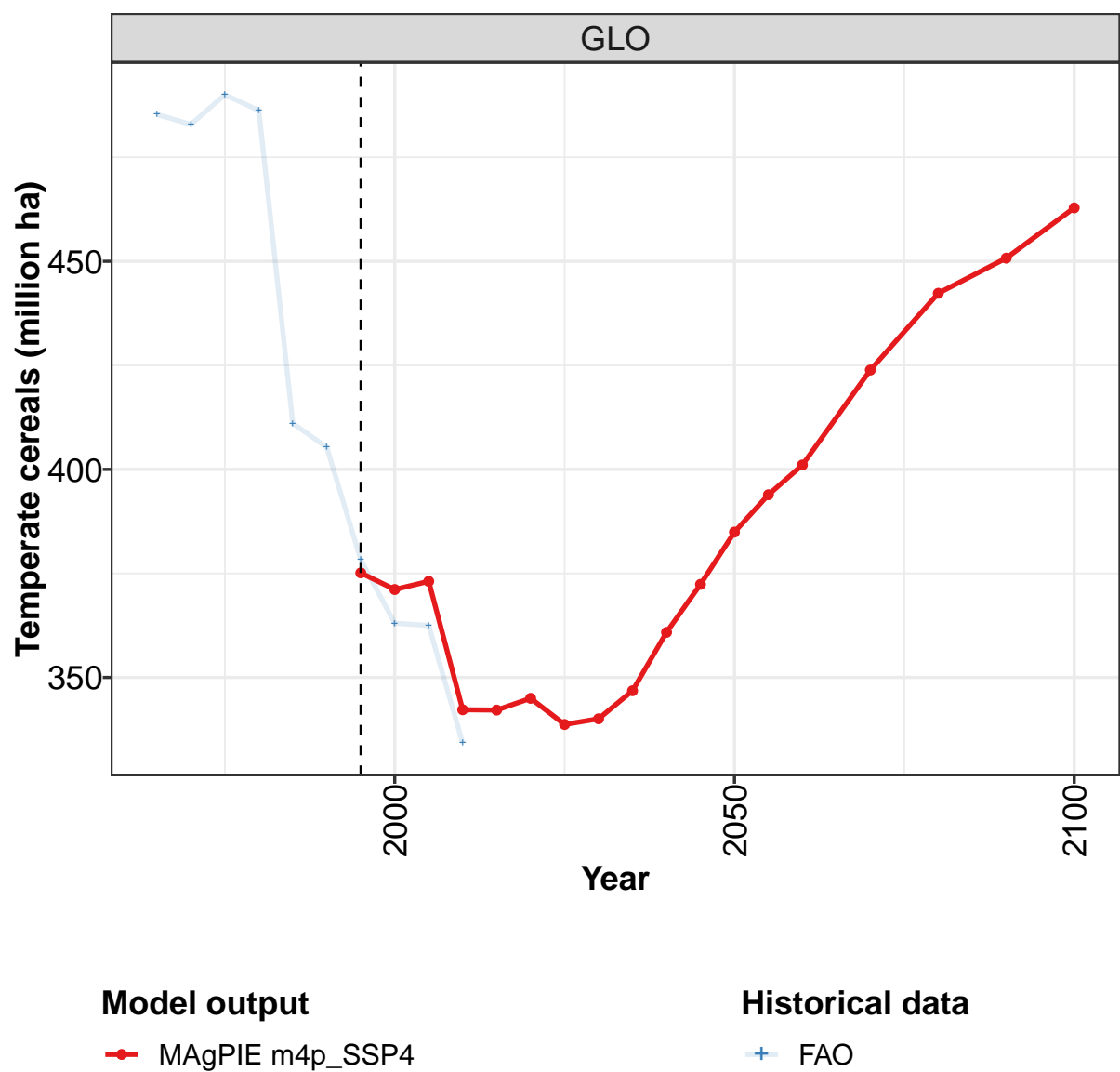
Table 1569: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Rice (million ha)  
[PART 2/2]

	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



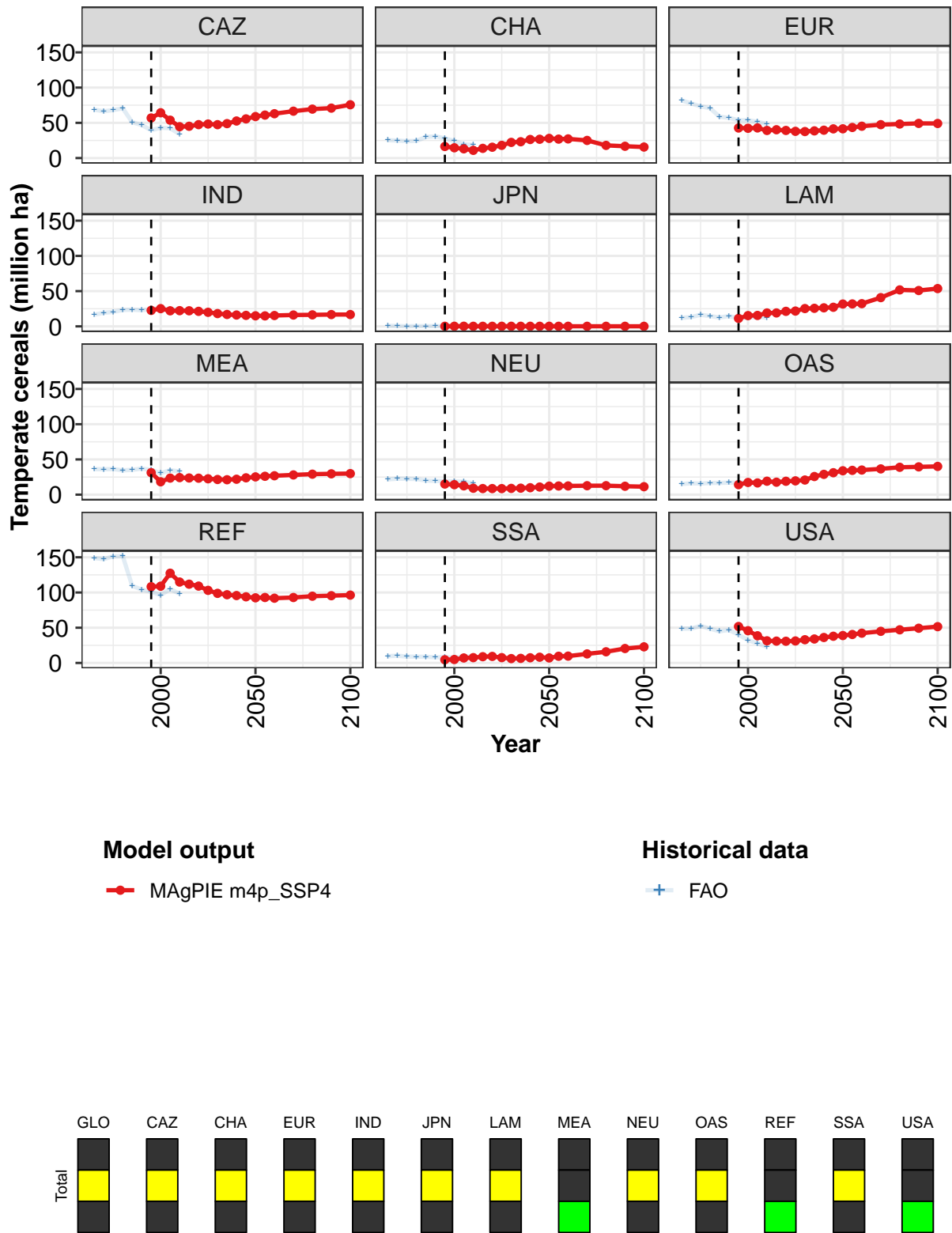


Figure 408: MAGPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Temperate cereals (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	375	371	373	342	342	345	339	340	347	361	372
CAZ	57	64	54	45	45	47	48	47	49	53	56
CHA	16	15	13	11	14	15	18	22	23	26	27
EUR	43	42	43	39	40	39	38	38	39	40	41
IND	23	25	22	22	22	21	20	18	17	16	16
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	11	15	16	19	19	21	22	25	26	26	27
MEA	31	18	23	24	24	23	23	22	21	22	24
NEU	15	14	13	9	9	9	9	9	9	10	11
OAS	14	17	17	19	18	19	20	21	26	29	31
REF	108	109	127	115	112	109	103	99	97	96	94
SSA	5	5	7	8	9	9	8	6	7	7	8
USA	52	46	39	31	31	31	31	33	34	36	38

Table 1571: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Temperate cereals (million ha) [PART 1/2]

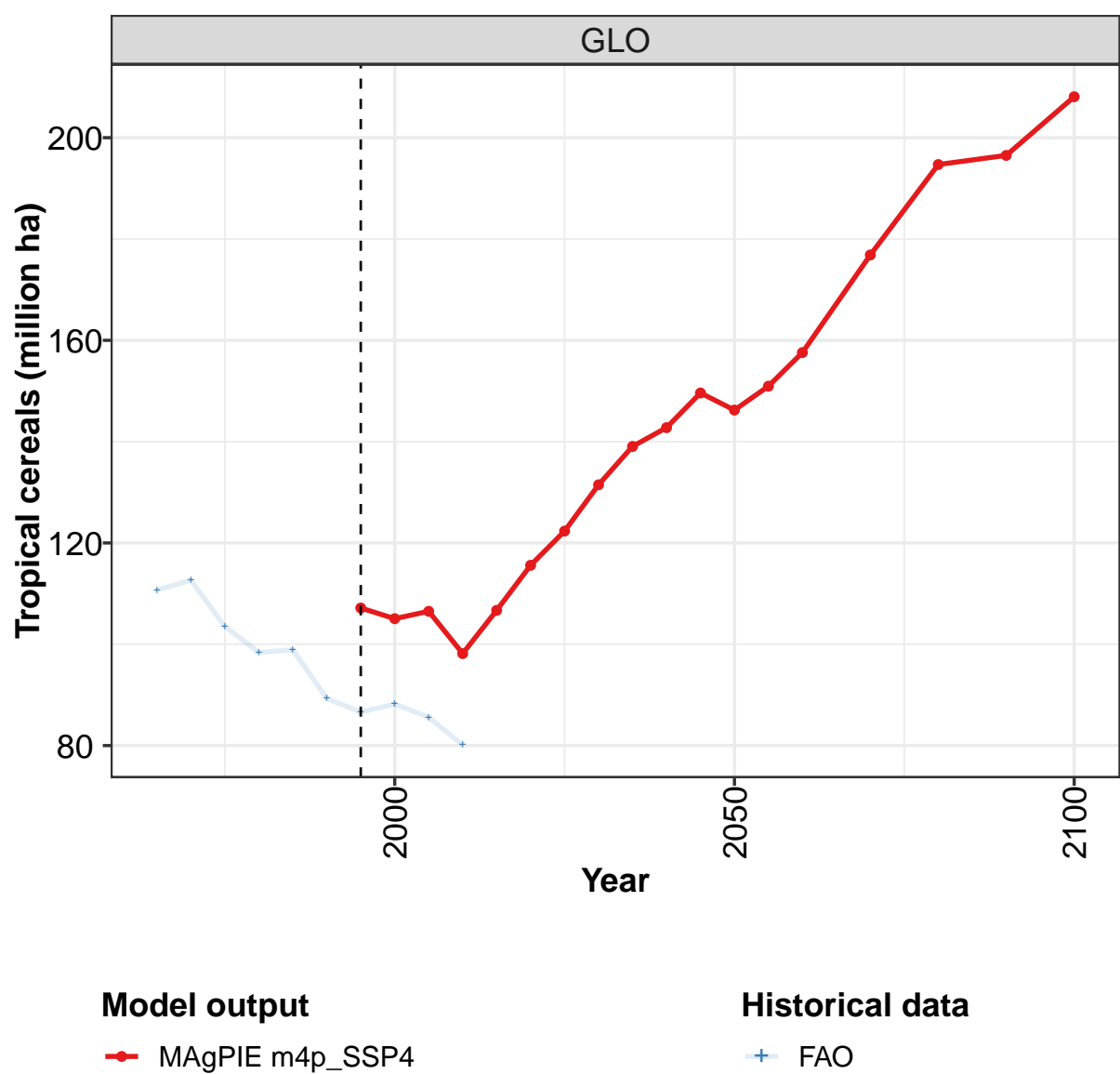
	2050	2055	2060	2070	2080	2090	2100
GLO	385	394	401	424	442	451	463
CAZ	59	61	63	67	69	71	76
CHA	28	27	27	25	18	17	16
EUR	42	43	45	47	48	49	49
IND	15	15	15	16	16	17	17
JPN	0	0	0	0	0	0	0
LAM	32	32	32	41	52	51	54
MEA	25	26	27	28	29	30	30
NEU	12	12	12	13	13	12	11
OAS	34	34	35	37	39	39	40
REF	92	93	92	93	95	95	96
SSA	7	10	10	13	16	20	23
USA	39	40	42	45	47	49	52

Table 1572: MAgPIE m4p\_SSP4 — 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



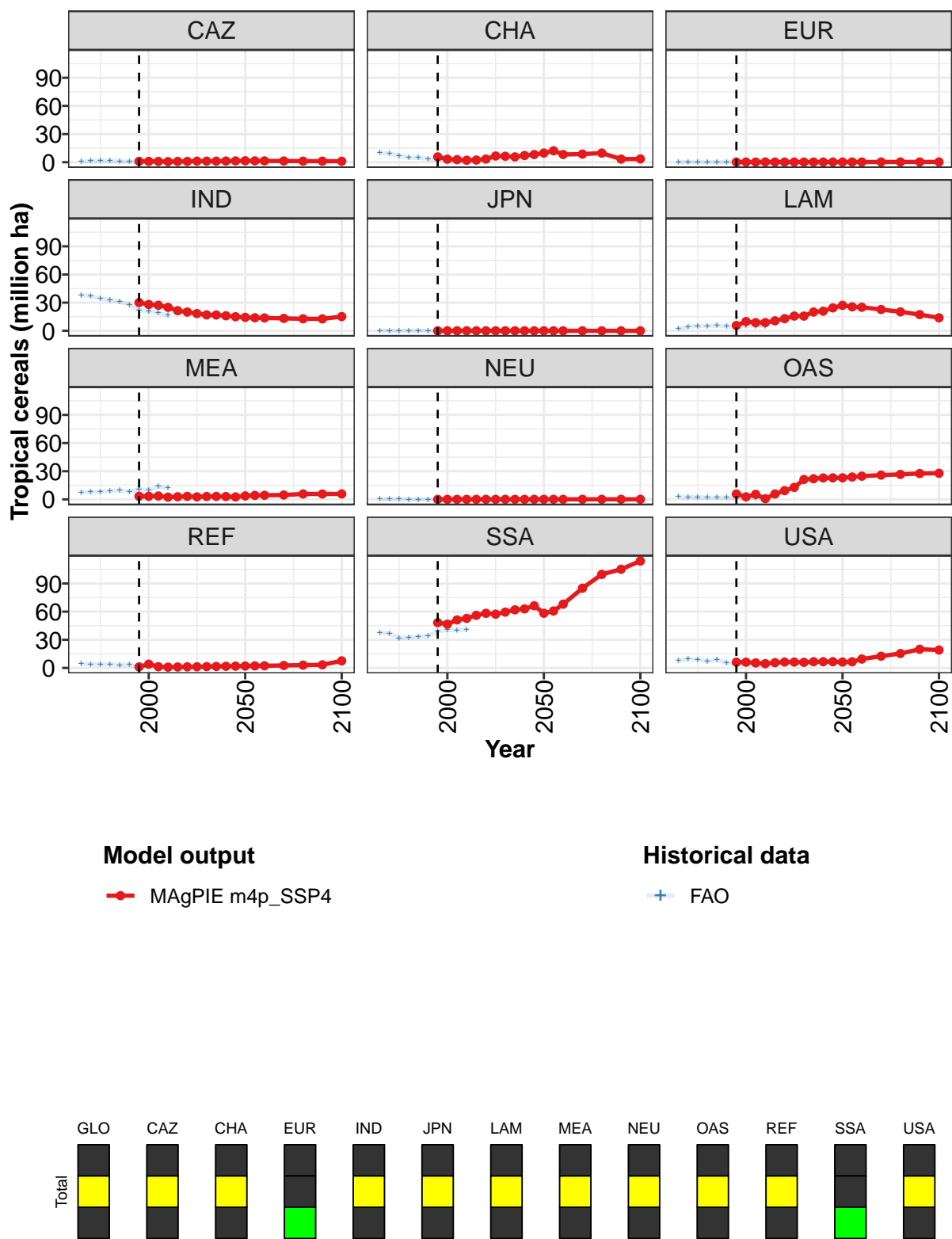


Figure 409: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Tropical cereals (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	107	105	107	98	107	116	122	131	139	143	150
CAZ	1	1	1	1	1	1	1	1	1	1	1
CHA	6	3	3	2	2	3	7	6	6	7	8
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	30	28	27	25	21	20	18	17	17	16	15
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	6	10	9	9	11	13	16	16	20	21	24
MEA	3	3	4	2	3	3	3	3	3	3	3
NEU	0	0	0	0	0	0	0	0	0	0	0
OAS	6	3	5	1	6	9	13	21	22	23	23
REF	1	4	1	1	1	1	1	1	2	2	2
SSA	48	47	51	53	56	58	57	59	62	63	66
USA	6	6	5	5	6	6	6	6	7	7	7

Table 1574: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Cereals—Tropical cereals (million ha) [PART 1/2]

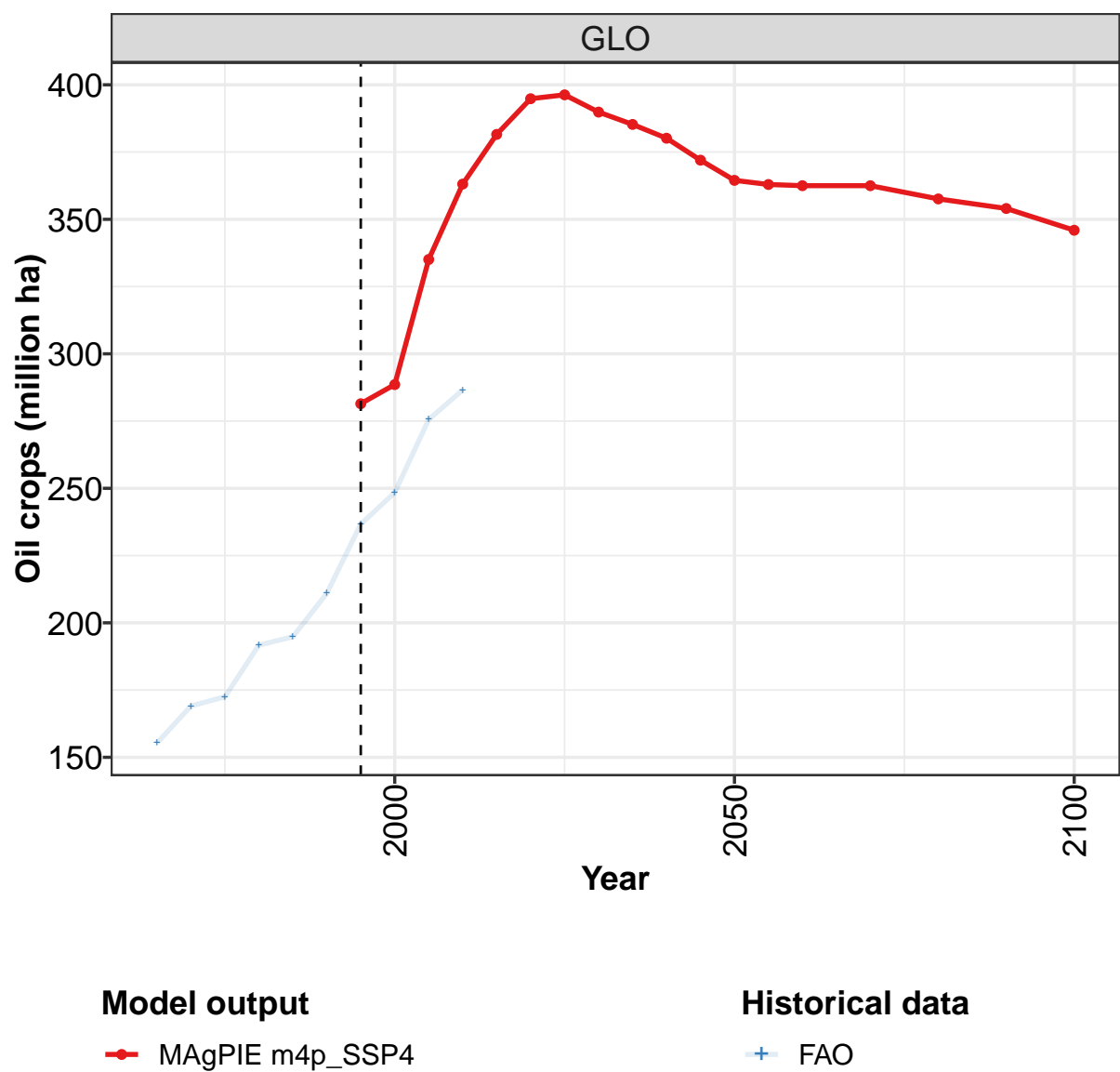
	2050	2055	2060	2070	2080	2090	2100
GLO	146	151	158	177	195	197	208
CAZ	2	1	1	1	1	1	1
CHA	10	12	8	9	10	3	4
EUR	0	0	0	0	0	0	0
IND	14	14	14	13	13	13	15
JPN	0	0	0	0	0	0	0
LAM	27	26	25	23	20	17	14
MEA	4	4	4	5	6	6	6
NEU	0	0	0	0	0	0	0
OAS	23	24	25	26	27	28	28
REF	2	2	2	3	3	3	8
SSA	58	61	68	85	100	105	114
USA	6	7	9	13	15	20	19

Table 1575: MAgPIE m4p\_SSP4 — 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



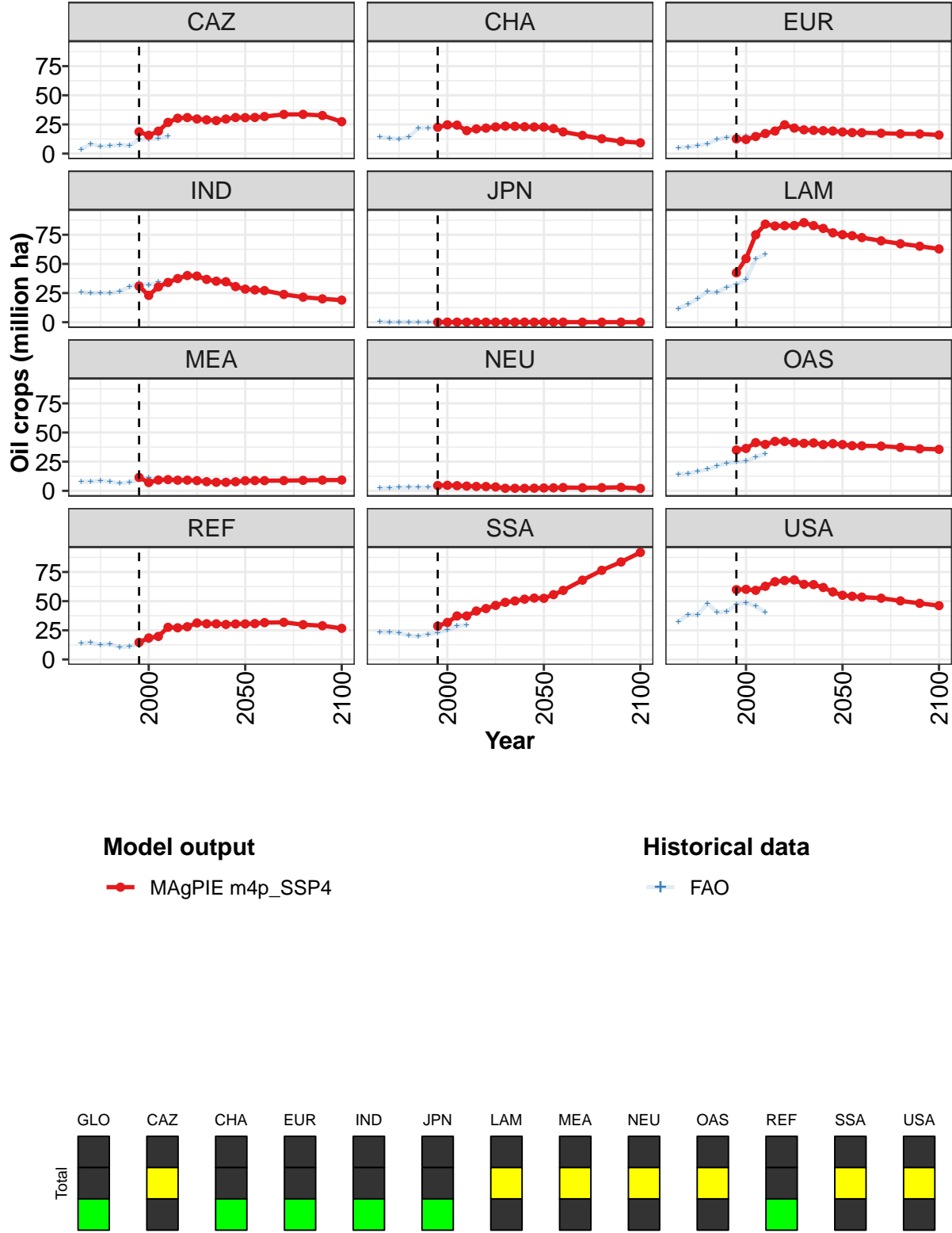


Figure 410: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops (million ha)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	281	289	335	363	382	395	396	390	385	380	372
CAZ	19	16	19	27	30	31	30	29	28	30	31
CHA	23	25	24	20	21	22	23	24	23	23	23
EUR	13	12	15	17	19	25	22	20	20	20	19
IND	31	23	30	34	37	40	40	37	35	35	31
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	42	55	75	84	83	83	83	85	83	80	77
MEA	12	7	9	10	9	9	9	8	7	7	8
NEU	5	5	4	4	4	4	3	2	2	2	2
OAS	35	36	41	40	42	42	41	41	41	40	40
REF	15	18	20	28	27	28	31	31	31	30	30
SSA	29	32	37	37	42	44	46	49	50	52	53
USA	60	60	59	63	67	68	68	64	64	62	58

Table 1577: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops (million ha) [PART 1/2]

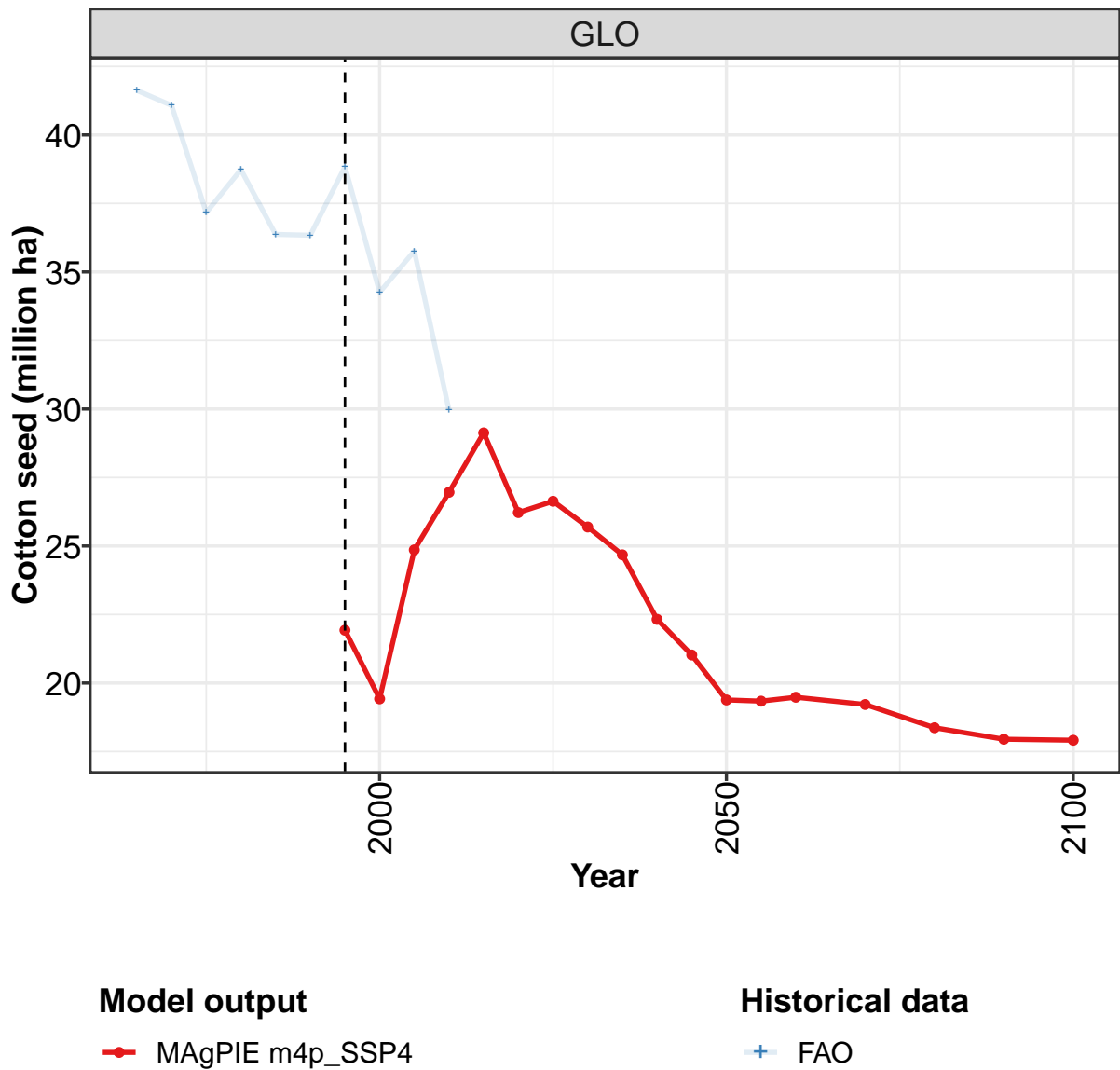
	2050	2055	2060	2070	2080	2090	2100
GLO	364	363	363	362	358	354	346
CAZ	31	31	32	34	34	33	27
CHA	23	21	19	16	13	10	9
EUR	19	18	18	17	17	17	16
IND	28	28	27	24	21	20	19
JPN	0	0	0	0	0	0	0
LAM	75	74	73	70	67	65	63
MEA	9	9	9	9	9	9	9
NEU	2	3	3	3	3	3	2
OAS	40	39	39	38	37	36	36
REF	31	31	32	32	30	29	27
SSA	52	56	59	68	76	84	92
USA	55	54	53	53	50	48	46

Table 1578: MAgPIE m4p\_SSP4 — 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



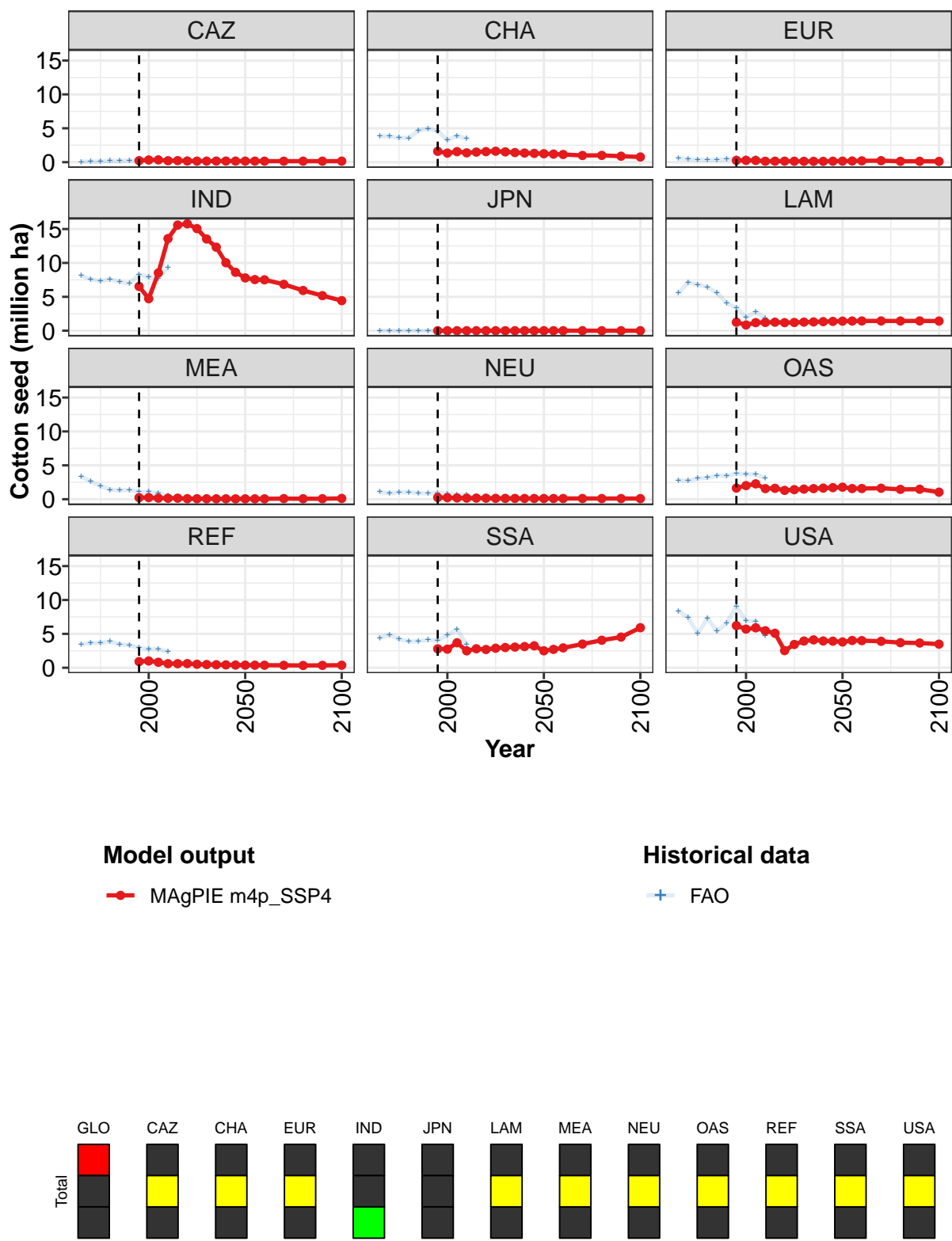


Figure 411: MAGPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Cotton seed (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	21.9	19.4	24.9	27.0	29.1	26.2	26.6	25.7	24.7	22.3	21.0
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	1.5	1.4	1.4	1.3
EUR	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IND	6.5	4.7	8.5	13.6	15.6	15.8	15.1	13.5	12.3	10.0	8.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.3	0.8	1.2	1.2	1.3	1.2	1.2	1.3	1.3	1.3	1.4
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	0.1	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	1.5	1.6	1.6	1.7
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	2.8	2.7	2.9	3.0	3.0	3.1	3.2
USA	6.2	5.7	5.9	5.5	5.1	2.5	3.4	3.9	4.1	4.0	3.9

Table 1580: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Cotton seed (million ha) [PART 1/2]

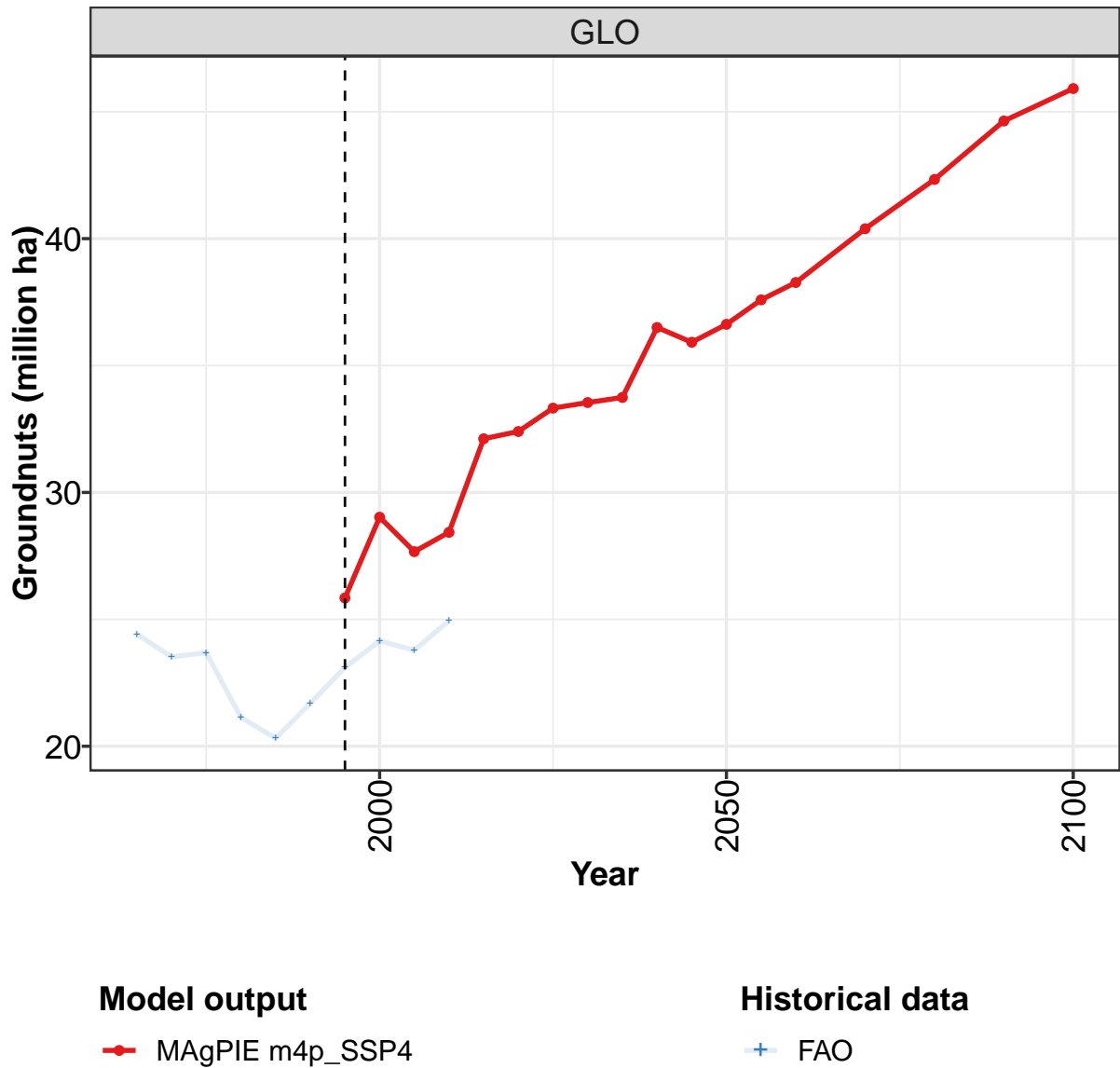
	2050	2055	2060	2070	2080	2090	2100
GLO	19.4	19.3	19.5	19.2	18.4	17.9	17.9
CAZ	0.2	0.2	0.1	0.1	0.1	0.1	0.2
CHA	1.2	1.2	1.1	1.0	1.0	0.9	0.8
EUR	0.2	0.2	0.2	0.2	0.1	0.1	0.1
IND	7.8	7.5	7.5	6.8	5.9	5.2	4.4
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.4	1.4	1.4	1.4	1.4	1.4	1.4
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.8	1.6	1.6	1.6	1.5	1.5	1.0
REF	0.4	0.4	0.4	0.4	0.3	0.4	0.4
SSA	2.5	2.7	2.9	3.5	4.1	4.5	5.9
USA	3.8	4.0	4.0	3.9	3.7	3.6	3.5

Table 1581: MAgPIE m4p\_SSP4 — 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



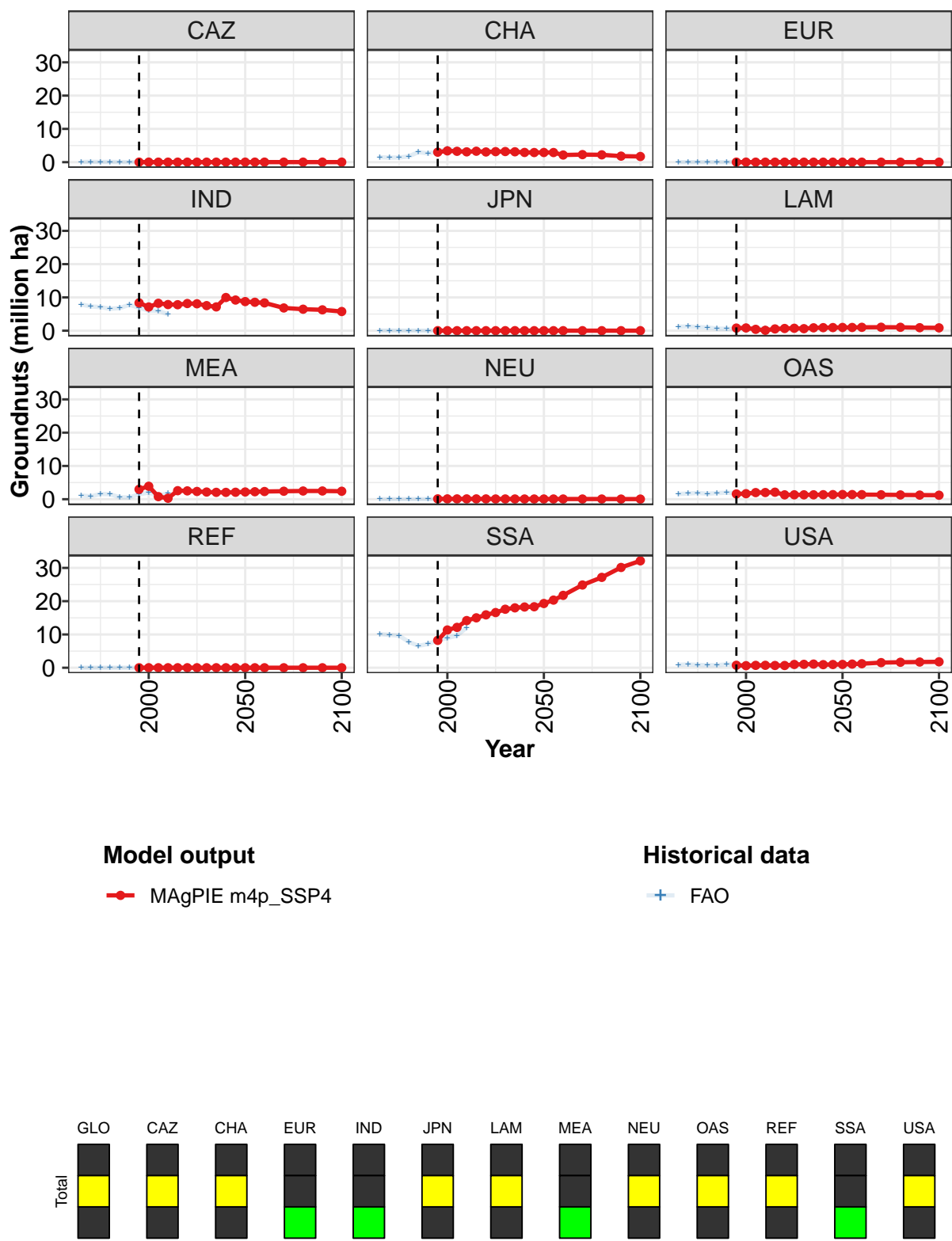


Figure 412: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Groundnuts (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	25.8	29.0	27.7	28.4	32.1	32.4	33.3	33.5	33.7	36.5	35.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	3.0	3.4	3.3	3.1	3.3	3.1	3.2	3.2	3.1	2.9	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	7.8	8.2	8.1	7.5	7.2	10.0	9.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.8	0.8	0.4	0.1	0.5	0.7	0.7	0.6	0.9	0.9	0.9
MEA	3.0	3.9	0.8	0.3	2.6	2.5	2.3	2.2	2.1	2.1	2.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.6	1.7	2.0	2.0	2.1	1.3	1.3	1.3	1.3	1.4	1.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	8.2	11.3	12.1	14.2	15.0	15.9	16.6	17.6	18.0	18.3	18.3
USA	0.7	0.6	0.7	0.7	0.7	0.7	1.0	1.0	1.1	0.9	1.0

Table 1583: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Groundnuts (million ha) [PART 1/2]

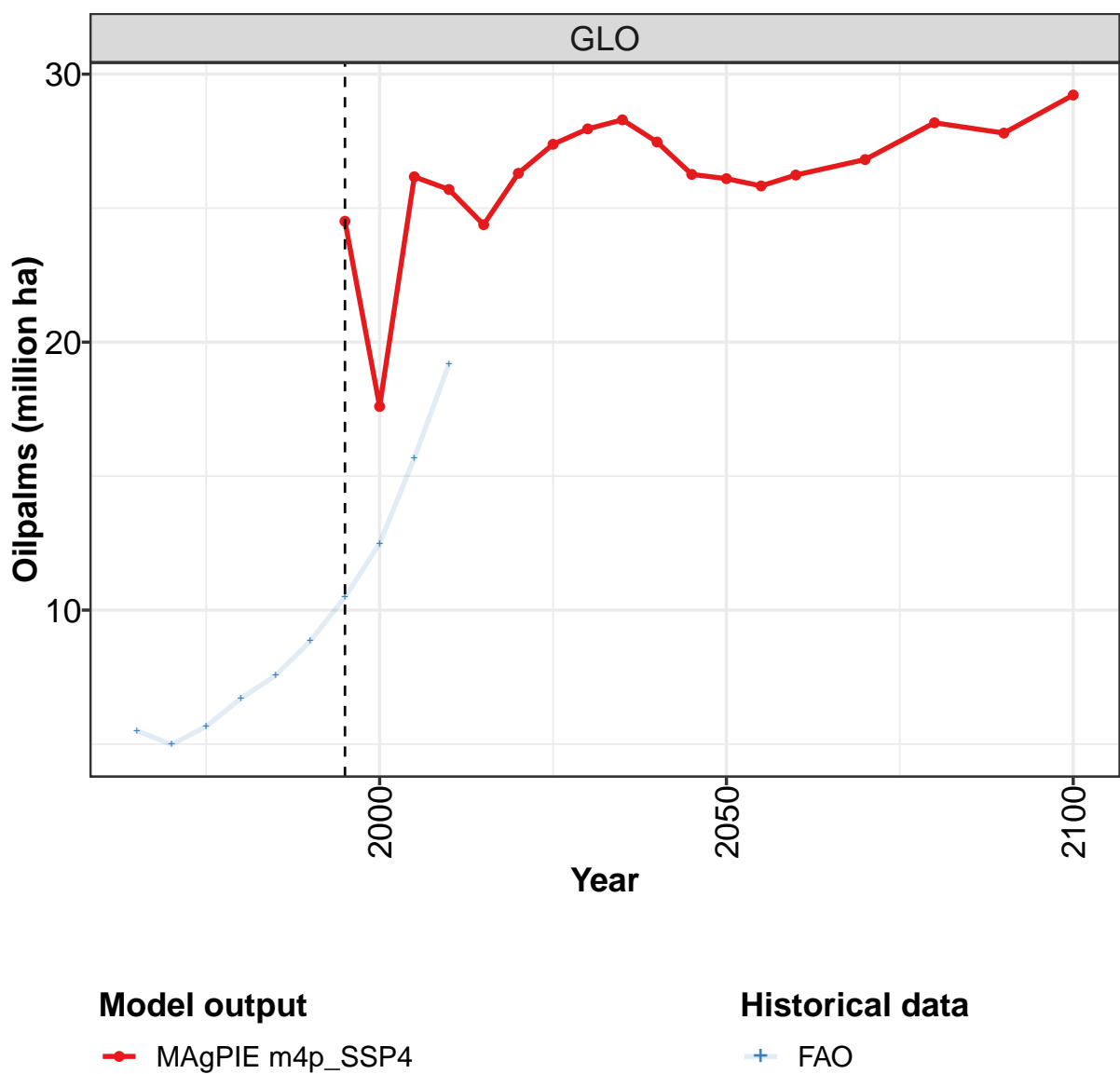
	2050	2055	2060	2070	2080	2090	2100
GLO	36.6	37.6	38.3	40.4	42.3	44.6	45.9
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	2.9	2.9	2.2	2.3	2.2	1.8	1.7
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	8.8	8.5	8.4	6.8	6.5	6.3	5.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.0	1.0	1.0	1.0	1.0	0.9	0.9
MEA	2.2	2.3	2.3	2.4	2.5	2.5	2.4
NEU	0.1	0.1	0.1	0.1	0.1	0.0	0.0
OAS	1.4	1.4	1.4	1.3	1.3	1.2	1.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	19.3	20.3	21.8	24.9	27.2	30.1	32.1
USA	1.0	1.1	1.2	1.5	1.7	1.7	1.8

Table 1584: MAgPIE m4p\_SSP4 — 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





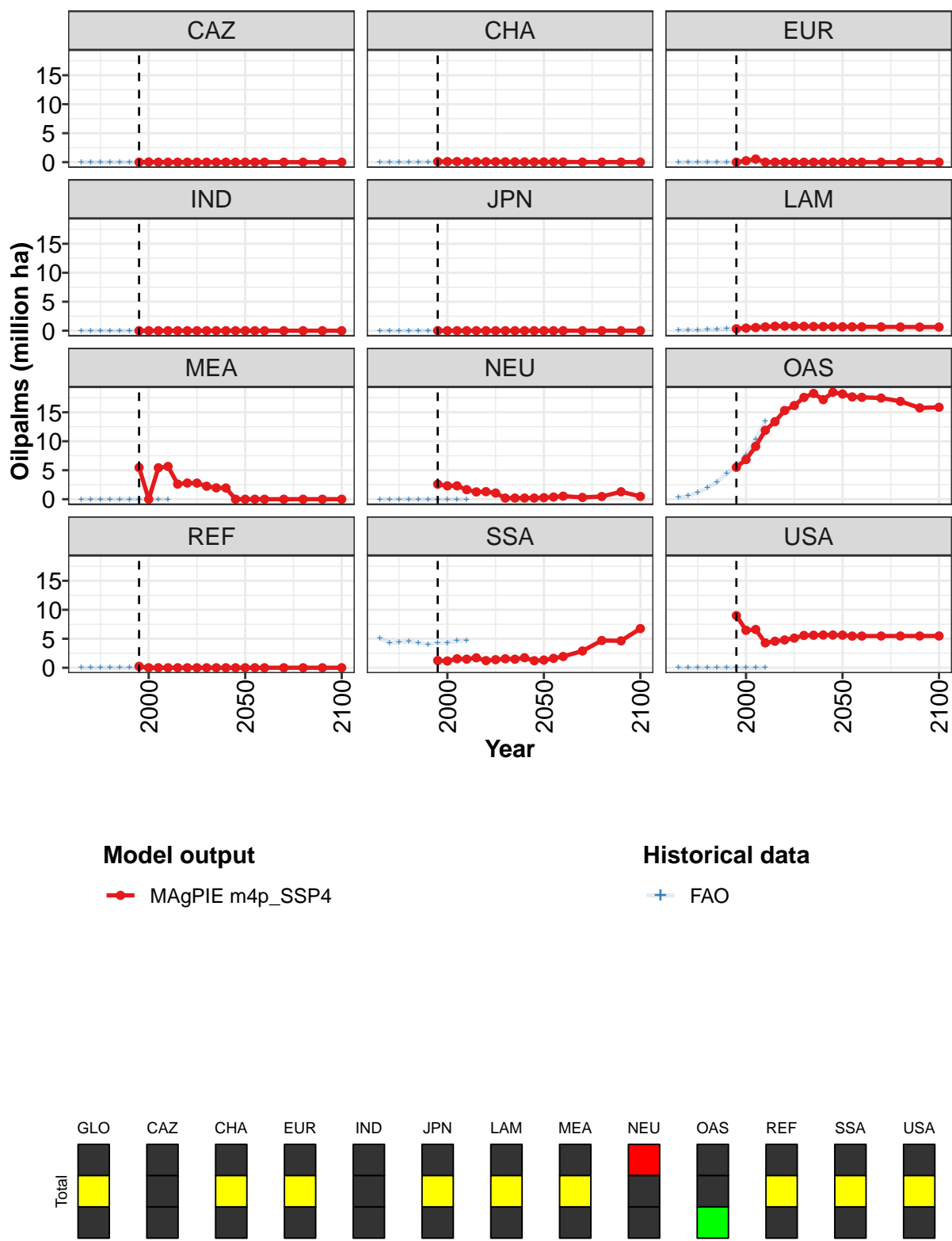


Figure 413: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Oilpalms (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	24.5	17.6	26.2	25.7	24.4	26.3	27.4	28.0	28.3	27.5	26.3
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.8	0.8	0.7	0.7	0.7
MEA	5.5	0.0	5.4	5.7	2.6	2.8	2.8	2.2	2.0	1.9	0.0
NEU	2.6	2.3	2.3	1.6	1.3	1.3	1.1	0.2	0.2	0.2	0.2
OAS	5.5	6.8	9.1	11.9	13.4	15.3	16.2	17.6	18.3	17.2	18.4
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	1.5	1.5	1.7	1.2
USA	9.0	6.5	6.6	4.3	4.6	4.8	5.1	5.6	5.6	5.6	5.6

Table 1586: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Oilpalms (million ha) [PART 1/2]

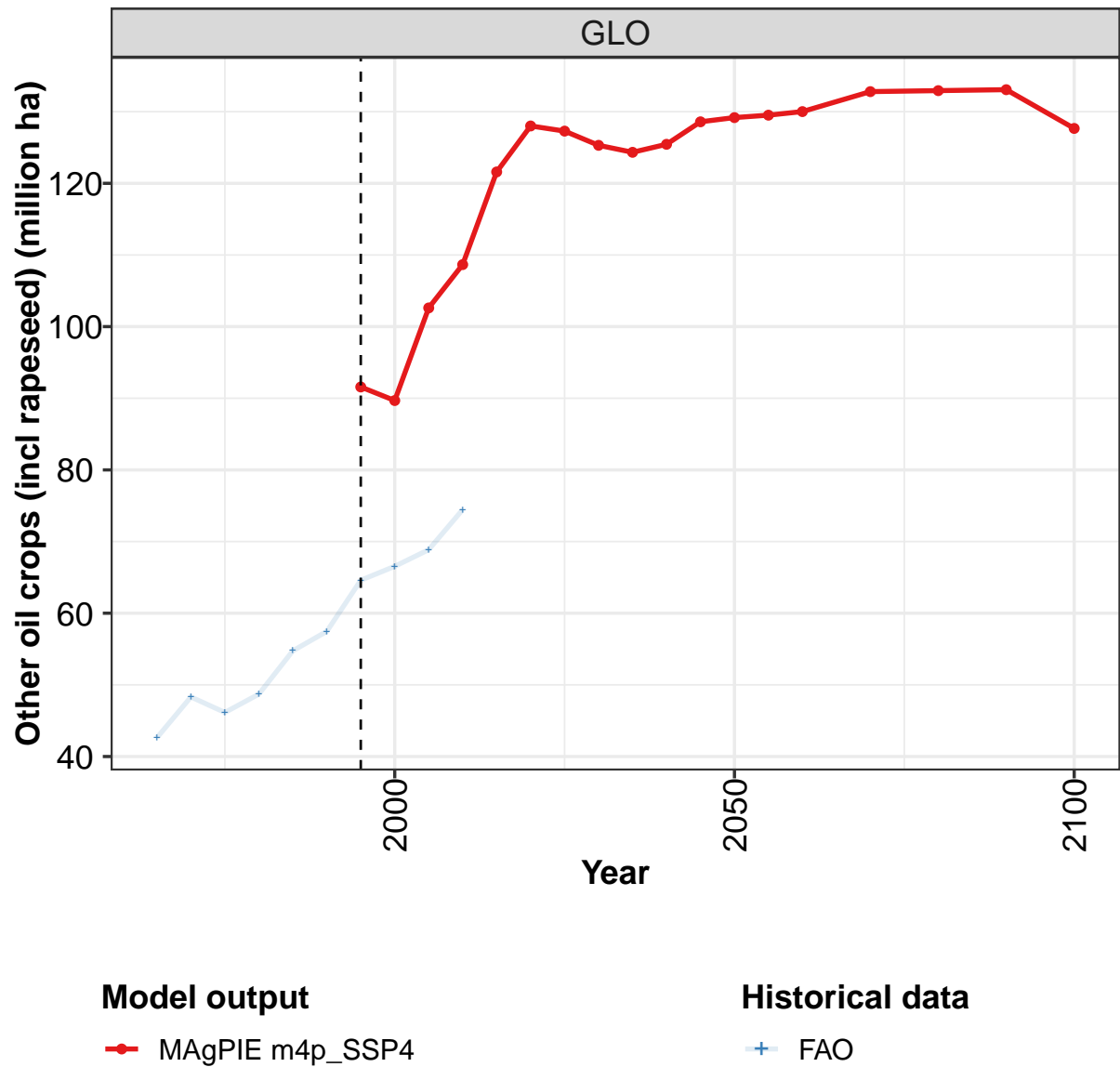
	2050	2055	2060	2070	2080	2090	2100
GLO	26.1	25.8	26.2	26.8	28.2	27.8	29.2
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.7	0.7	0.7	0.7	0.6	0.6	0.6
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.3	0.4	0.5	0.3	0.5	1.3	0.5
OAS	18.2	17.7	17.6	17.5	16.9	15.7	15.9
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	1.3	1.6	1.9	2.9	4.7	4.6	6.8
USA	5.6	5.5	5.5	5.5	5.5	5.5	5.5

Table 1587: MAgPIE m4p\_SSP4 — 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)



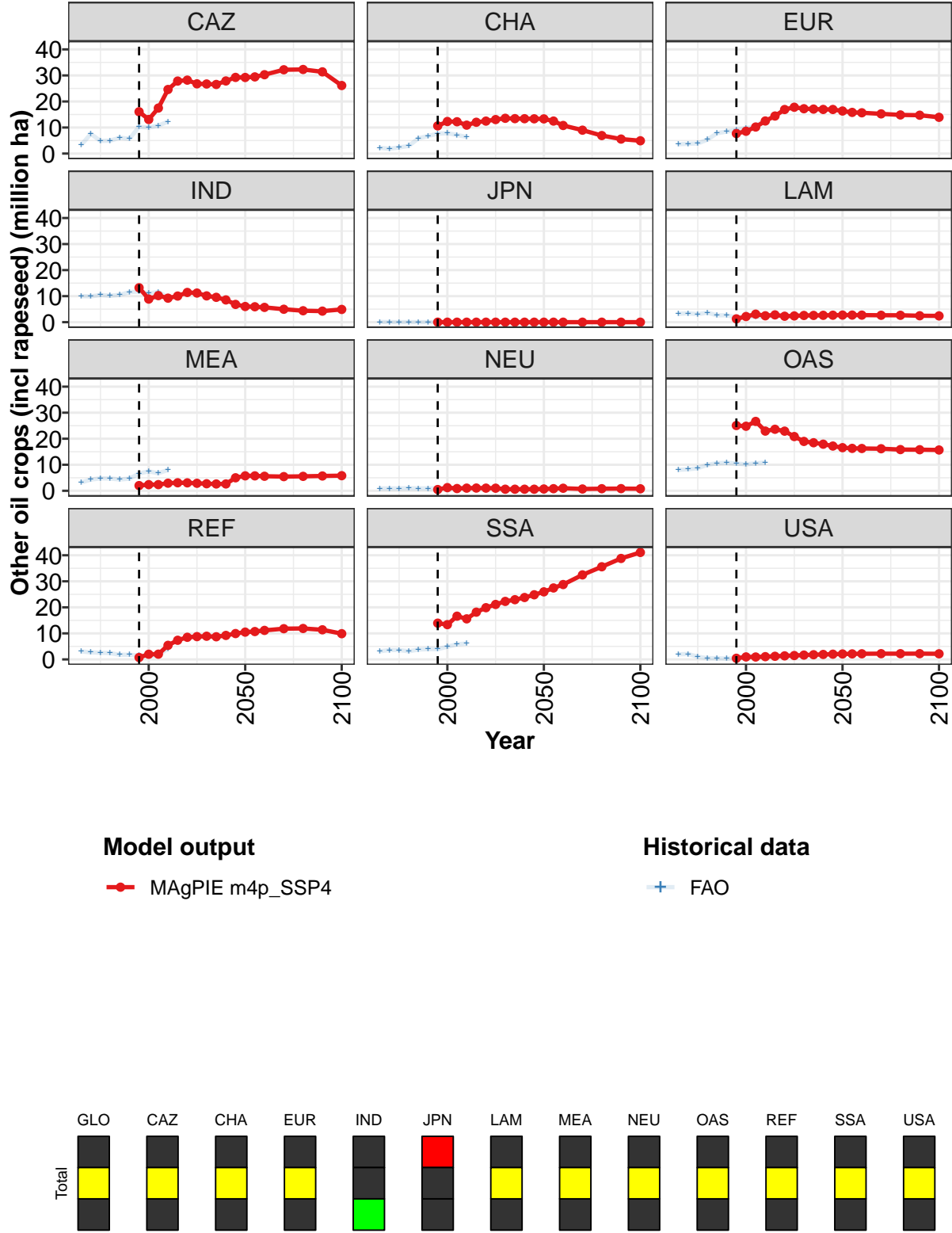


Figure 414: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Other oil crops (incl rapeseed) (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	92	90	103	109	122	128	127	125	124	125	129
CAZ	16	13	17	25	28	28	27	27	27	28	29
CHA	11	12	12	11	12	12	13	14	13	13	13
EUR	8	9	10	13	14	17	18	17	17	17	17
IND	13	9	10	9	10	11	11	10	10	9	7
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	1	2	3	2	3	2	2	3	3	3	3
MEA	2	2	2	3	3	3	3	3	3	3	5
NEU	0	1	1	1	1	1	1	1	1	1	1
OAS	25	25	27	23	24	23	21	19	18	18	17
REF	1	2	2	5	7	8	9	9	9	9	10
SSA	14	13	17	16	18	20	21	22	23	24	25
USA	0	1	1	1	1	1	1	2	2	2	2

Table 1589: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Other oil crops (incl rapeseed) (million ha) [PART 1/2]

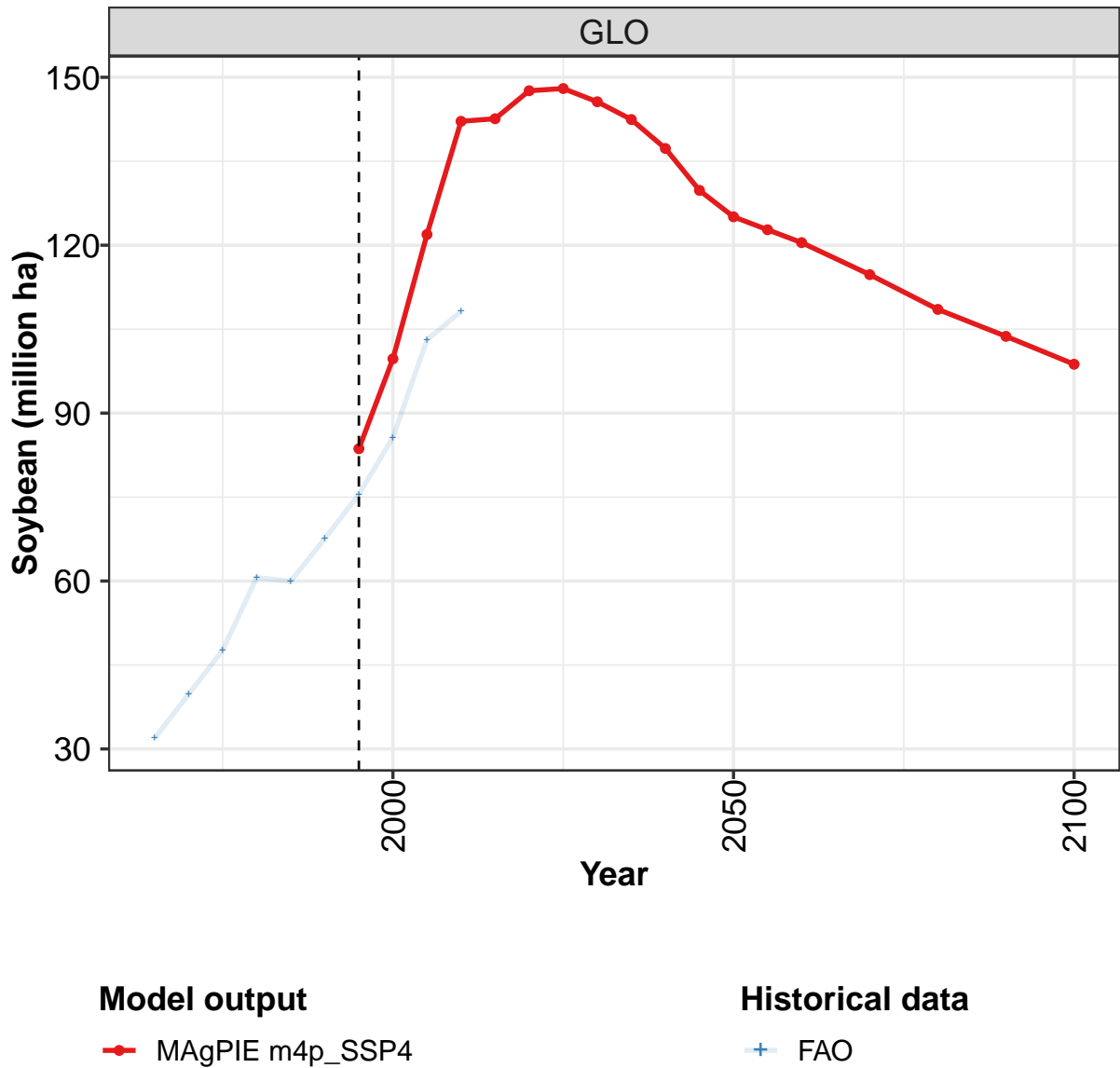
	2050	2055	2060	2070	2080	2090	2100
GLO	129	130	130	133	133	133	128
CAZ	29	29	30	32	32	31	26
CHA	13	12	11	9	7	6	5
EUR	16	16	16	15	15	15	14
IND	6	6	6	5	4	4	5
JPN	0	0	0	0	0	0	0
LAM	3	3	3	3	3	2	2
MEA	6	6	6	5	6	6	6
NEU	1	1	1	1	1	1	1
OAS	17	16	16	16	16	16	16
REF	10	11	11	12	12	11	10
SSA	26	27	29	32	36	39	41
USA	2	2	2	2	2	2	2

Table 1590: MAgPIE m4p\_SSP4 — 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



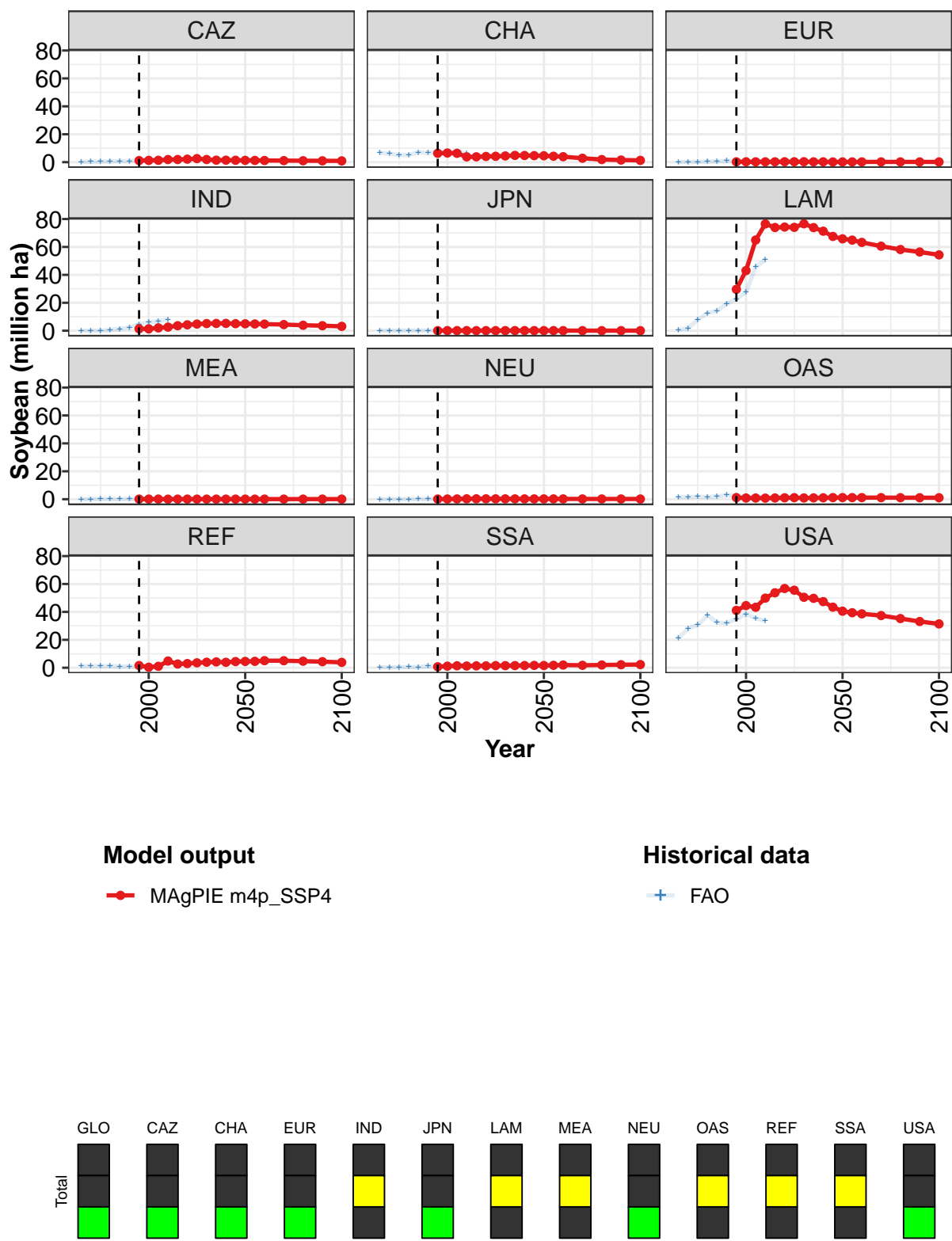


Figure 415: MAGPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Soybean (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	84	100	122	142	143	148	148	146	142	137	130
CAZ	1	1	1	2	2	2	3	2	1	1	1
CHA	6	7	6	4	4	4	4	4	5	5	5
EUR	0	0	0	0	0	0	0	0	0	0	0
IND	1	1	2	3	4	4	5	5	5	5	5
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	30	43	65	77	74	74	74	77	74	71	68
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	4	4	4	4
SSA	1	1	1	1	1	1	2	1	2	2	2
USA	41	45	43	50	54	57	56	50	50	47	43

Table 1592: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Soybean (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	125	123	120	115	109	104	99
CAZ	1	1	1	1	1	1	1
CHA	5	4	4	3	2	2	1
EUR	0	0	0	0	0	0	0
IND	5	5	5	4	4	4	3
JPN	0	0	0	0	0	0	0
LAM	66	65	63	61	58	56	54
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	4	4
SSA	2	2	2	2	2	2	2
USA	41	39	39	37	35	33	31

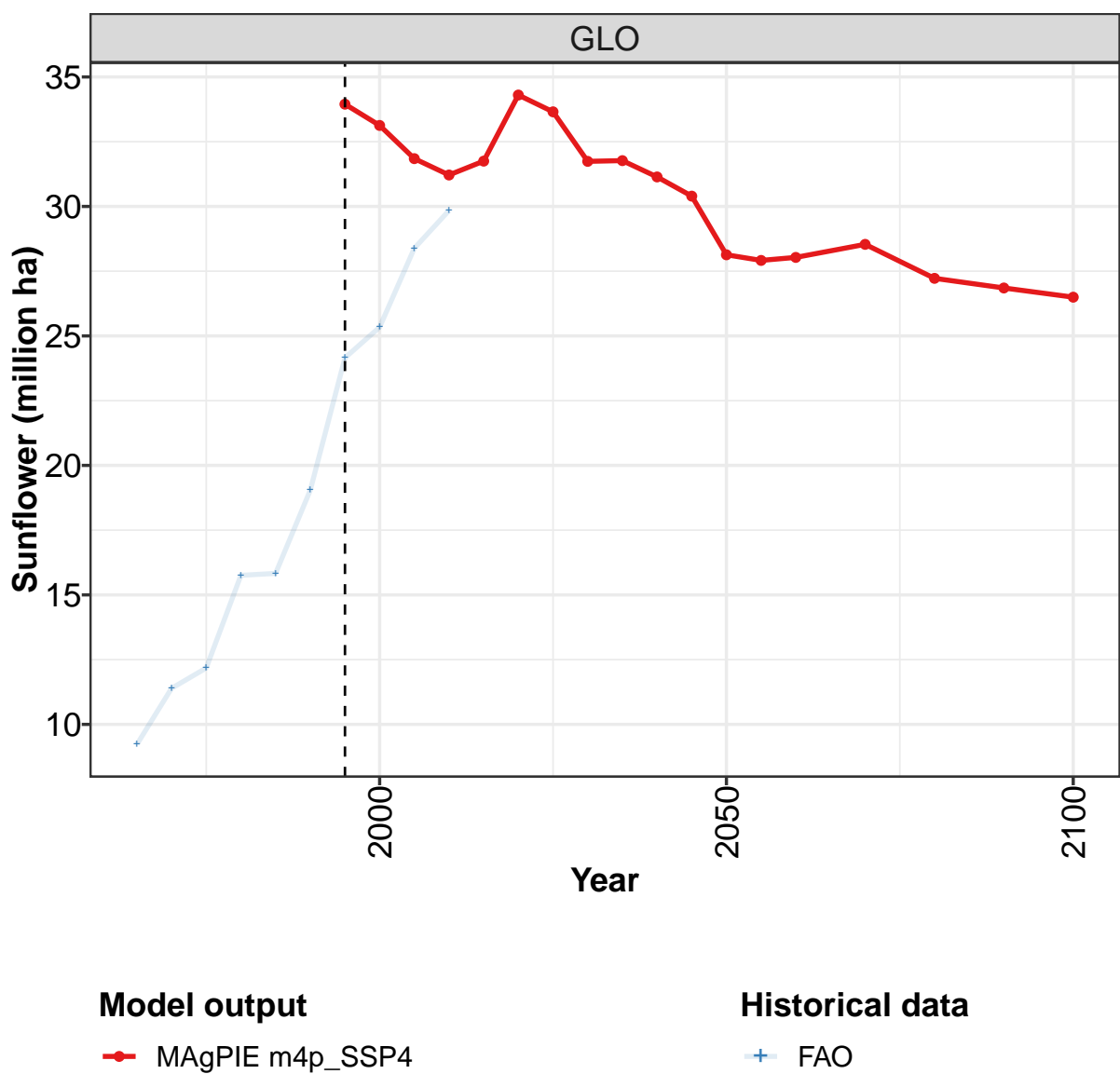
Table 1593: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Soybean (million ha) [PART 2/2]

	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



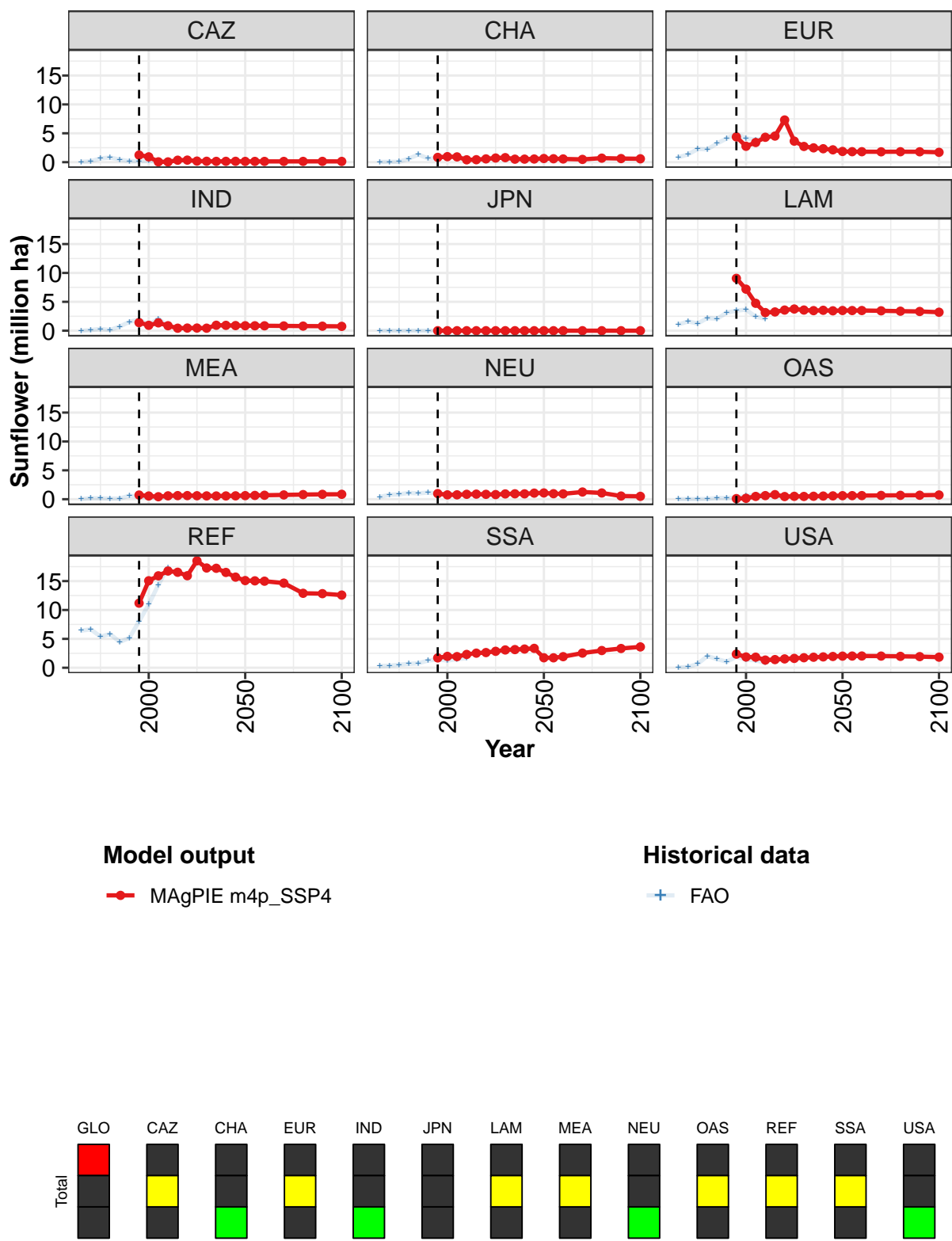


Figure 416: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Sunflower (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	33.9	33.1	31.8	31.2	31.7	34.3	33.7	31.7	31.8	31.1	30.4
CAZ	1.2	0.9	0.1	0.1	0.3	0.4	0.2	0.2	0.1	0.1	0.1
CHA	0.8	1.0	0.9	0.4	0.4	0.6	0.7	0.8	0.5	0.5	0.6
EUR	4.4	2.8	3.4	4.3	4.5	7.3	3.6	2.7	2.5	2.3	2.1
IND	1.4	0.9	1.4	0.9	0.4	0.5	0.5	0.4	0.9	0.9	0.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	9.1	7.2	4.7	3.1	3.3	3.6	3.8	3.6	3.5	3.5	3.4
MEA	0.7	0.6	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NEU	1.0	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.9	0.9	1.1
OAS	0.1	0.2	0.5	0.6	0.8	0.5	0.5	0.5	0.5	0.5	0.6
REF	11.2	15.1	15.9	16.7	16.5	15.9	18.5	17.3	17.2	16.5	15.7
SSA	1.7	2.0	1.9	2.3	2.5	2.6	2.8	3.1	3.1	3.2	3.4
USA	2.4	1.9	1.8	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0

Table 1595: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Oil crops—Sunflower (million ha) [PART 1/2]

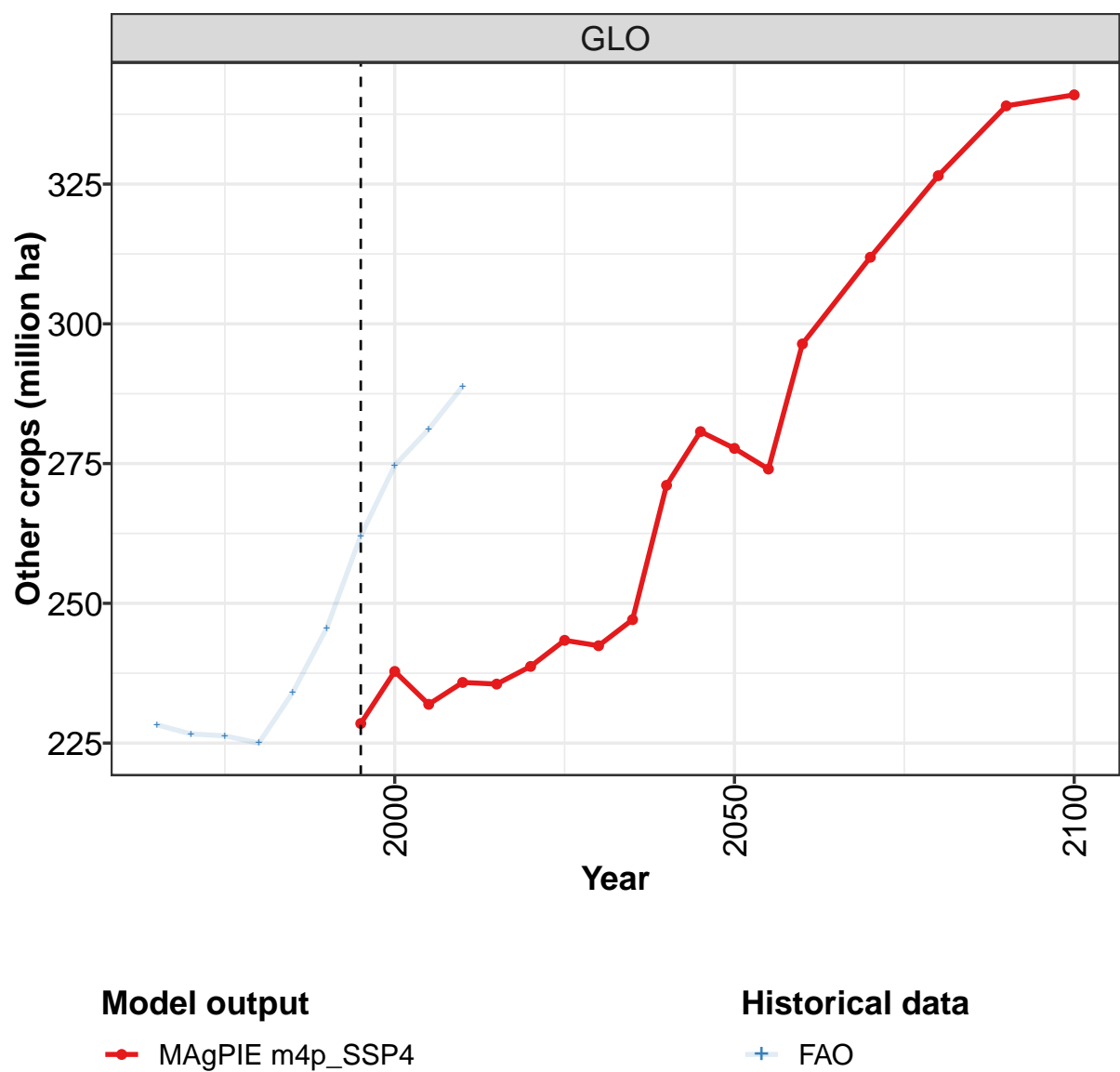
	2050	2055	2060	2070	2080	2090	2100
GLO	28.1	27.9	28.0	28.5	27.2	26.9	26.5
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.6	0.6	0.6	0.5	0.7	0.6	0.6
EUR	1.9	1.8	1.8	1.8	1.8	1.8	1.7
IND	0.9	0.9	0.8	0.8	0.8	0.8	0.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.5	3.5	3.5	3.4	3.4	3.3	3.2
MEA	0.6	0.7	0.7	0.7	0.8	0.8	0.9
NEU	1.1	1.0	0.9	1.3	1.1	0.6	0.5
OAS	0.6	0.6	0.6	0.7	0.7	0.7	0.7
REF	15.1	15.0	15.0	14.7	12.9	12.8	12.6
SSA	1.7	1.7	1.9	2.5	3.0	3.3	3.6
USA	2.0	2.0	2.0	2.0	2.0	1.9	1.8

Table 1596: MAgPIE m4p\_SSP4 — 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



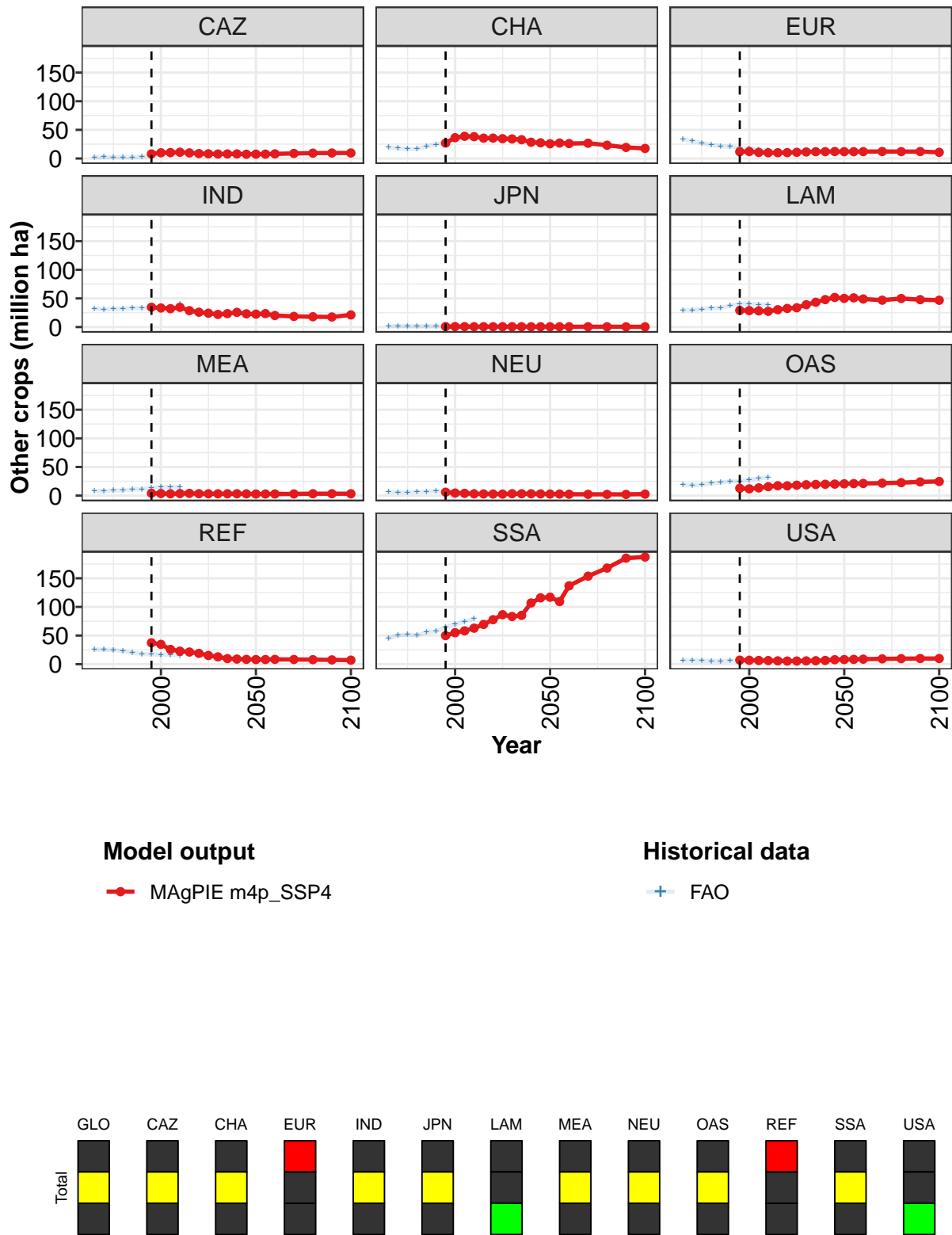


Figure 417: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	229	238	232	236	236	239	243	242	247	271	281
CAZ	8	10	10	11	10	9	8	8	8	8	7
CHA	27	36	39	38	35	36	35	34	33	28	27
EUR	12	12	11	10	10	10	11	11	12	12	12
IND	35	33	32	34	29	26	24	22	23	26	23
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	29	29	28	27	30	33	34	39	43	48	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	18	19	19	20	20
REF	37	35	26	23	21	19	15	13	10	9	8
SSA	50	55	58	63	69	78	86	83	85	107	116
USA	7	7	6	6	6	5	6	6	6	7	8

Table 1598: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops (million ha)  
[PART 1/2]

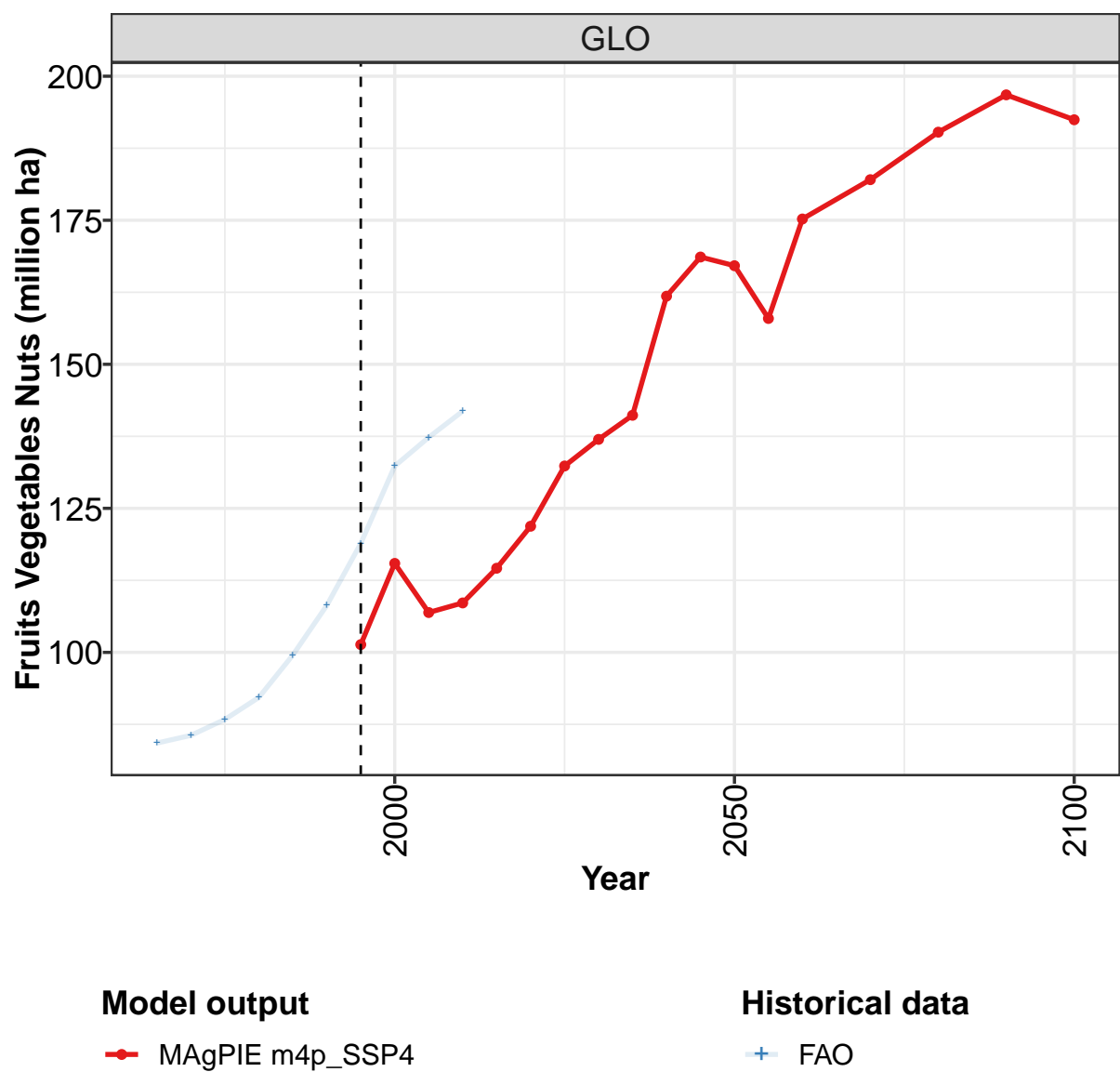
	2050	2055	2060	2070	2080	2090	2100
GLO	278	274	296	312	327	339	341
CAZ	8	8	8	9	9	10	10
CHA	26	27	26	27	23	19	18
EUR	12	12	12	12	12	12	11
IND	23	23	20	19	18	18	21
JPN	1	1	1	1	0	0	0
LAM	50	51	49	47	50	48	47
MEA	3	3	3	3	3	3	3
NEU	3	3	2	2	2	2	3
OAS	21	21	21	22	23	24	25
REF	8	8	8	8	8	8	7
SSA	117	109	137	154	168	185	187
USA	8	8	9	9	10	10	10

Table 1599: MAgPIE m4p\_SSP4 — 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



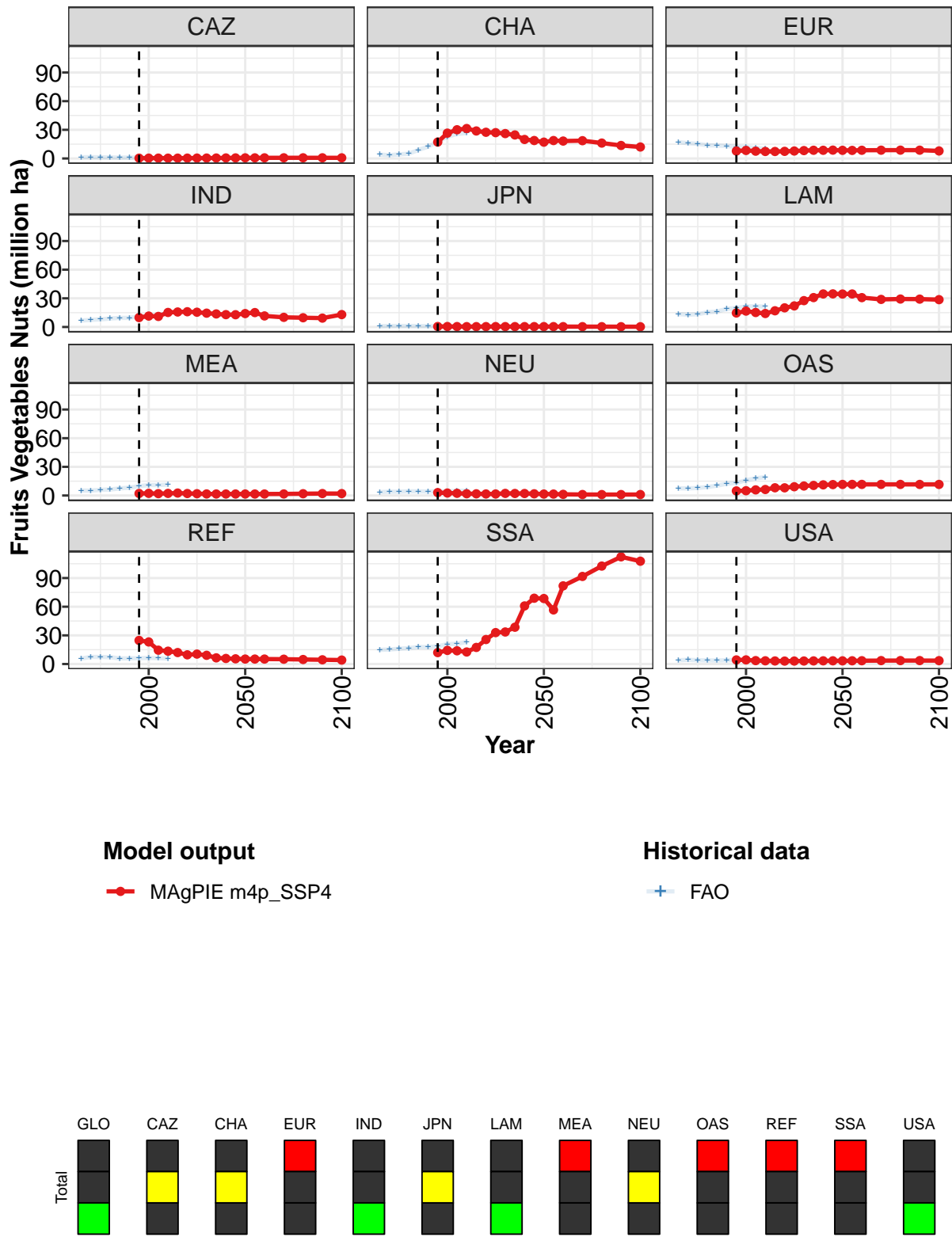


Figure 418: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Fruits Vegetables Nuts (million ha)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	101	115	107	109	115	122	132	137	141	162	169
CAZ	0	0	0	0	0	0	0	0	0	1	1
CHA	17	27	30	31	29	27	27	26	25	20	19
EUR	8	8	8	7	7	7	8	8	9	9	9
IND	10	11	11	15	16	16	15	14	14	13	13
JPN	1	0	0	0	0	0	0	0	0	0	0
LAM	15	17	15	14	17	20	22	28	31	35	35
MEA	2	2	2	2	3	2	2	2	2	2	2
NEU	3	3	2	2	2	2	2	2	2	2	2
OAS	5	5	6	6	8	8	9	10	11	11	11
REF	25	23	14	13	12	10	10	9	6	6	5
SSA	12	14	14	13	17	26	33	34	39	61	69
USA	4	4	4	3	3	3	3	3	3	3	3

Table 1601: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Fruits Vegetables Nuts (million ha) [PART 1/2]

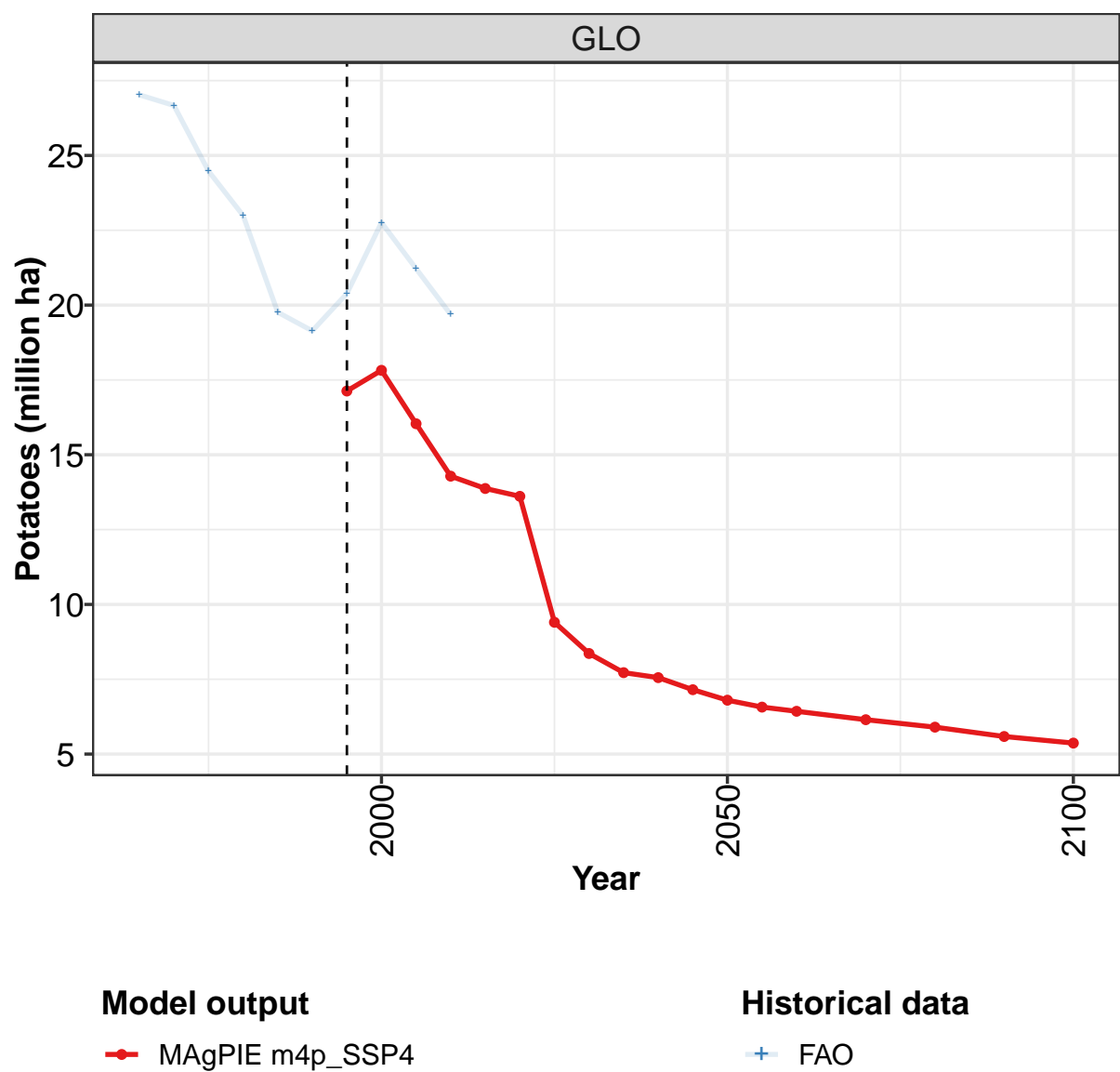
	2050	2055	2060	2070	2080	2090	2100
GLO	167	158	175	182	190	197	192
CAZ	1	1	1	1	1	1	1
CHA	17	19	18	19	16	14	12
EUR	9	8	9	9	9	9	8
IND	14	15	12	10	10	9	13
JPN	0	0	0	0	0	0	0
LAM	35	35	31	29	29	29	29
MEA	2	2	2	2	2	2	2
NEU	2	2	1	1	1	1	1
OAS	12	12	12	12	12	12	12
REF	5	5	5	5	5	4	4
SSA	69	57	82	92	103	112	108
USA	3	3	3	4	4	4	4

Table 1602: MAgPIE m4p\_SSP4 — 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



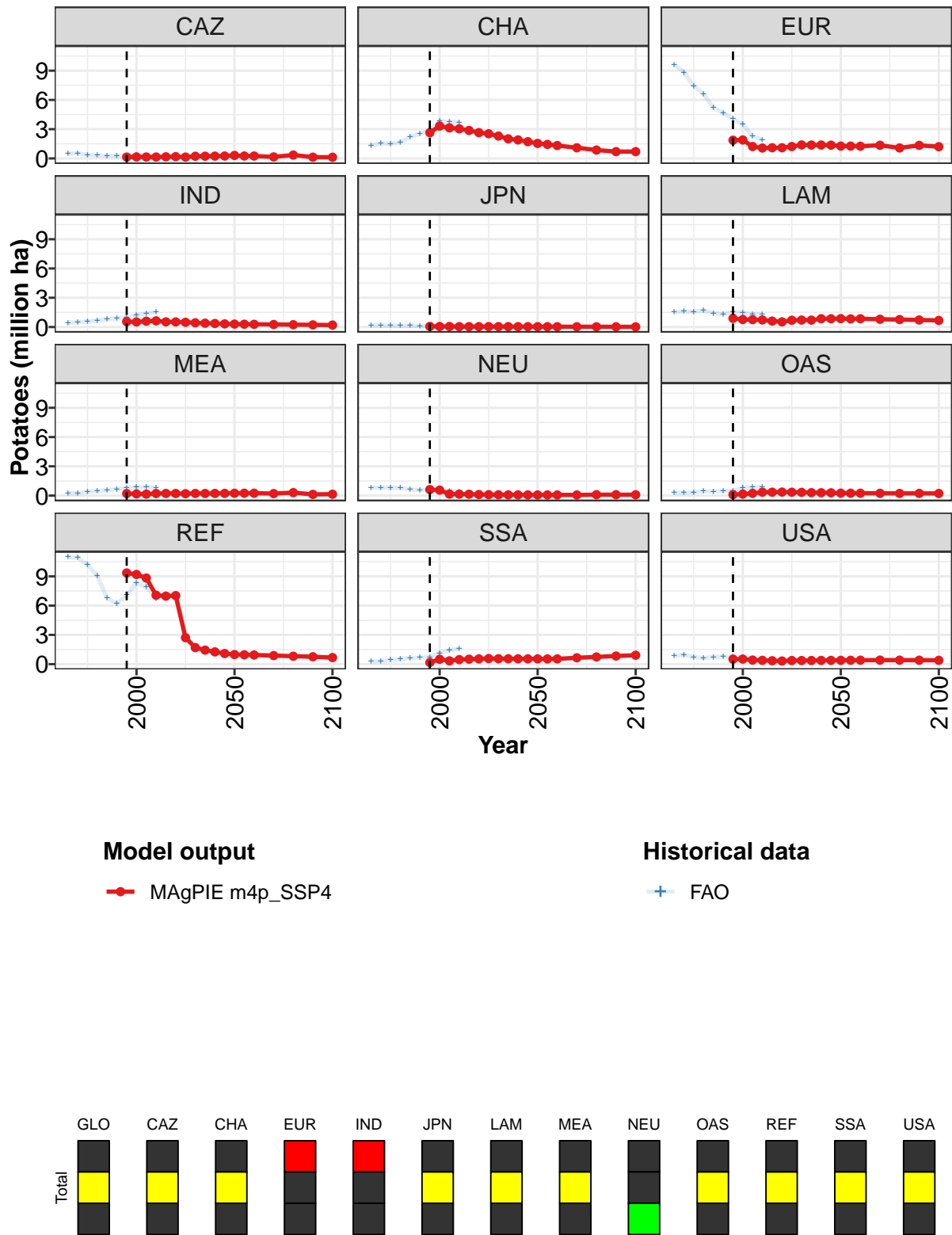


Figure 419: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Potatoes (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	17.1	17.8	16.0	14.3	13.9	13.6	9.4	8.4	7.7	7.6	7.2
CAZ	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.3
CHA	2.6	3.3	3.1	3.0	2.9	2.6	2.5	2.3	2.0	1.9	1.7
EUR	1.9	1.9	1.2	1.1	1.1	1.1	1.2	1.4	1.4	1.4	1.4
IND	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	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	0.9	0.8
MEA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEU	0.6	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	0.3	0.4	0.3	0.3	0.3	0.3	0.3
REF	9.4	9.2	8.8	7.1	7.0	7.0	2.7	1.7	1.4	1.3	1.1
SSA	0.2	0.5	0.3	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5
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\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Potatoes (million ha) [PART 1/2]

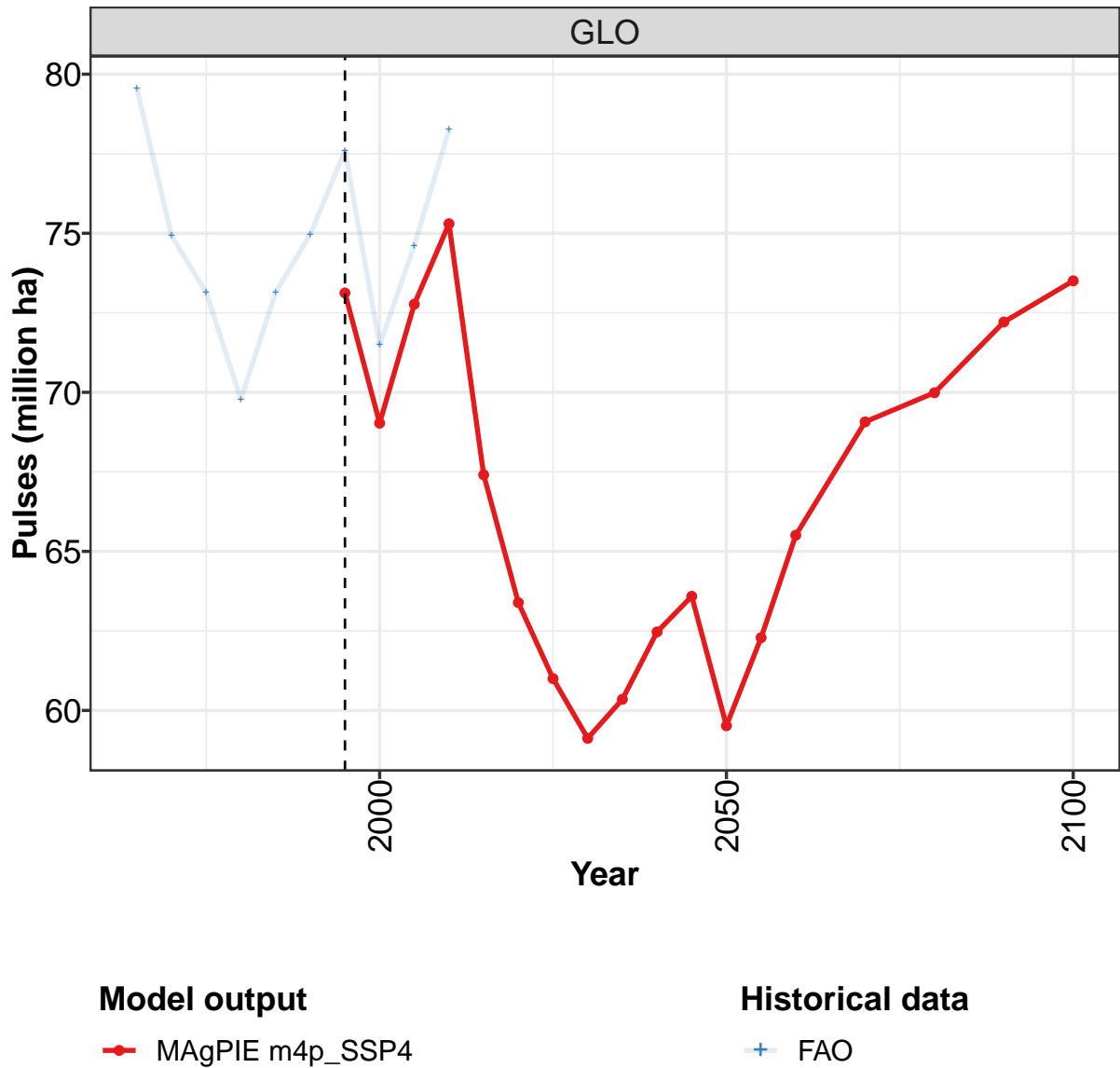
	2050	2055	2060	2070	2080	2090	2100
GLO	6.8	6.6	6.4	6.1	5.9	5.6	5.4
CAZ	0.3	0.3	0.3	0.2	0.3	0.1	0.1
CHA	1.5	1.4	1.3	1.1	0.9	0.7	0.7
EUR	1.3	1.3	1.3	1.4	1.1	1.3	1.2
IND	0.3	0.3	0.3	0.3	0.2	0.2	0.2
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.9	0.8	0.8	0.8	0.8	0.7	0.7
MEA	0.2	0.2	0.2	0.2	0.3	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.3	0.2	0.2	0.2	0.2	0.2	0.2
REF	1.0	1.0	0.9	0.9	0.8	0.8	0.7
SSA	0.5	0.5	0.5	0.7	0.7	0.8	0.9
USA	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Table 1605: MAgPIE m4p\_SSP4 — 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



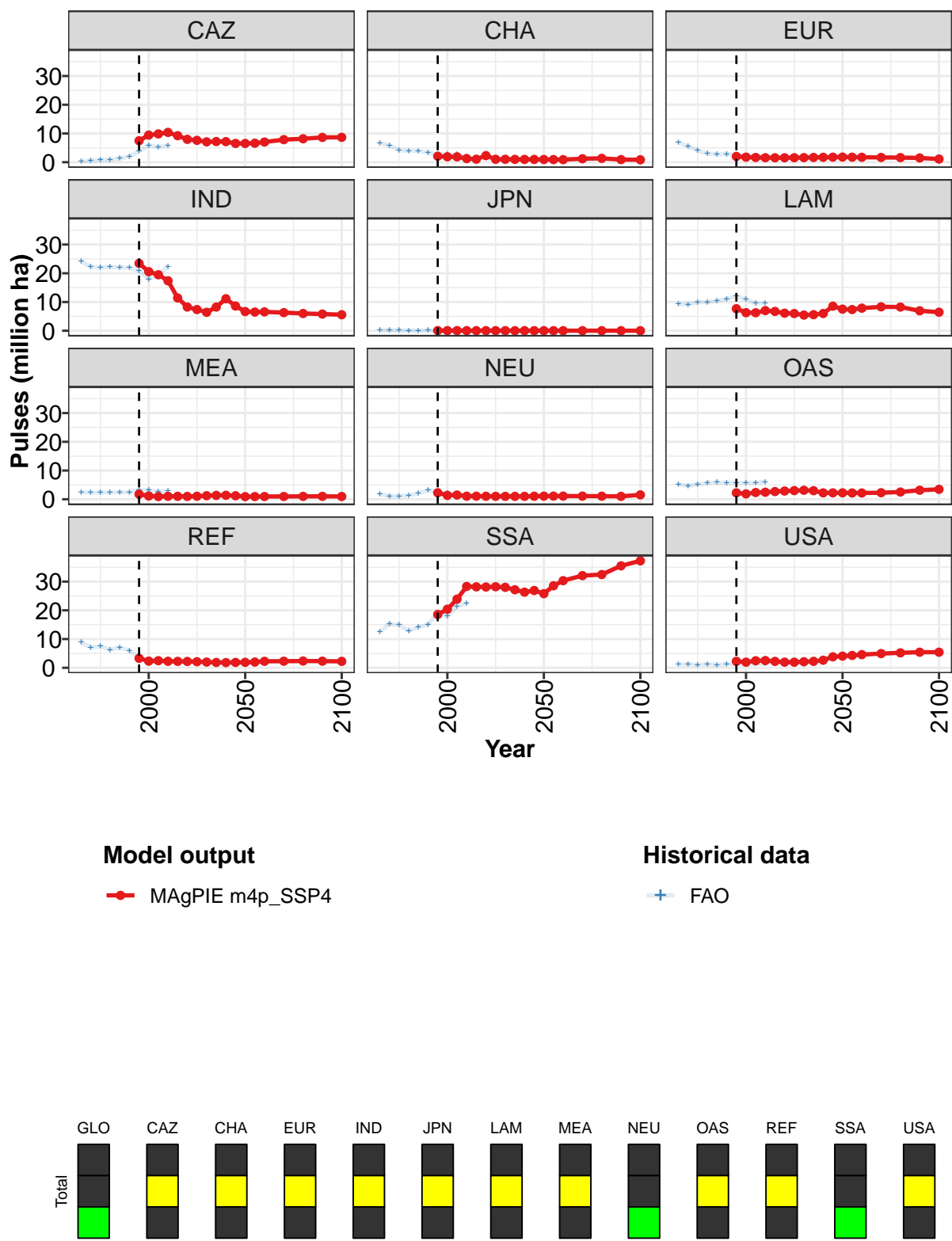


Figure 420: MAGPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Pulses (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	73.1	69.0	72.8	75.3	67.4	63.4	61.0	59.1	60.3	62.5	63.6
CAZ	7.5	9.4	9.9	10.4	9.2	8.0	7.6	7.1	7.2	7.2	6.5
CHA	2.1	1.9	1.9	1.3	1.0	2.3	1.0	1.0	1.0	1.0	1.0
EUR	2.0	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.8
IND	23.5	20.6	19.5	17.4	11.4	8.3	7.4	6.4	8.2	11.1	8.6
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	6.1	6.0	5.5	5.6	6.0	8.6
MEA	1.7	1.2	0.9	1.0	1.0	1.0	1.1	1.2	1.4	1.4	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	2.9	3.0	3.1	3.0	2.2	2.2
REF	3.3	2.3	2.5	2.3	2.2	2.2	2.1	2.0	1.9	1.8	1.9
SSA	18.6	20.4	23.9	28.3	28.2	28.1	28.2	28.0	27.2	26.3	26.9
USA	2.2	2.0	2.5	2.5	2.2	2.0	2.0	2.1	2.2	2.6	3.8

Table 1607: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Pulses (million ha) [PART 1/2]

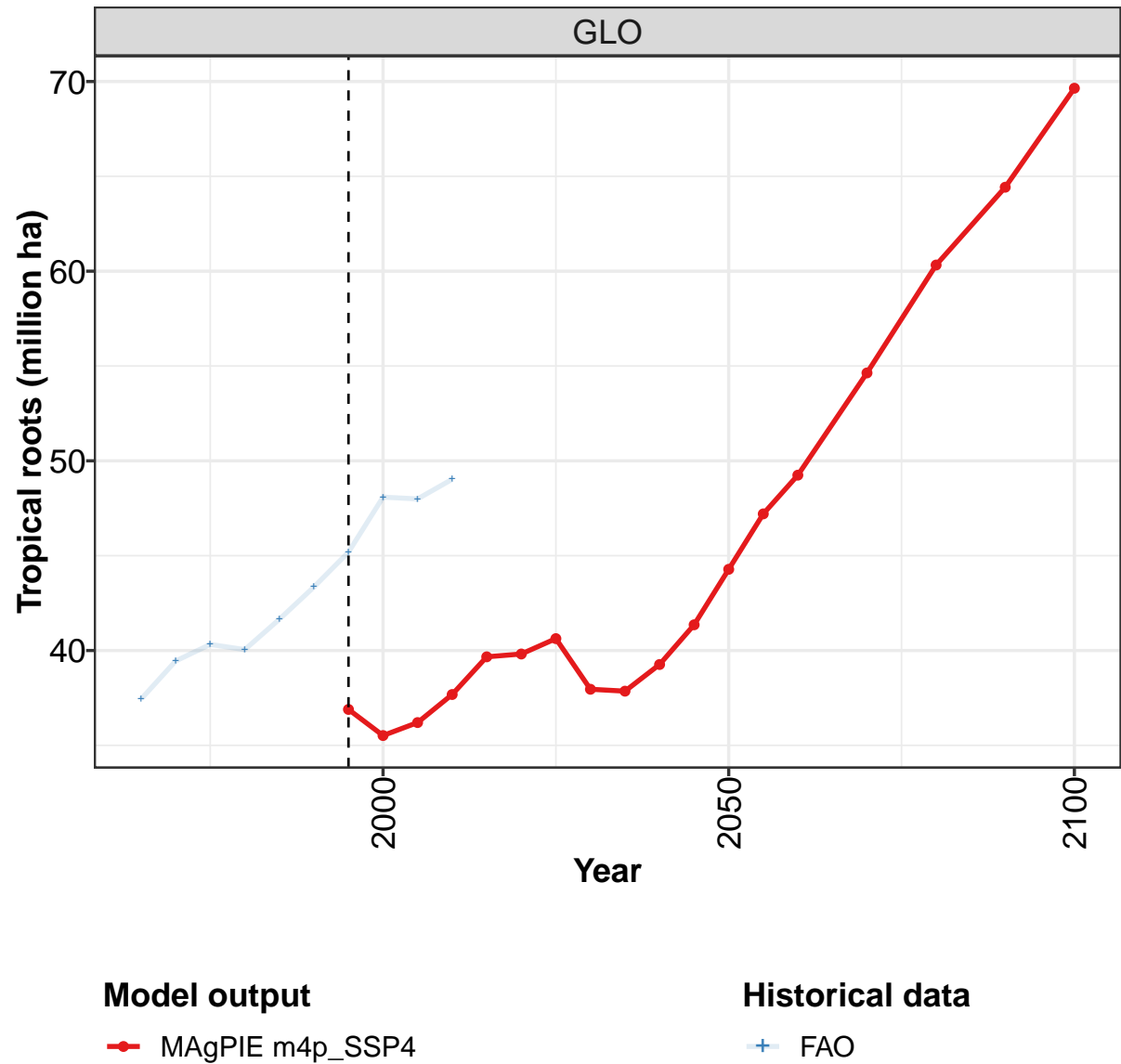
	2050	2055	2060	2070	2080	2090	2100
GLO	59.5	62.3	65.5	69.1	70.0	72.2	73.5
CAZ	6.5	6.6	7.0	7.9	8.2	8.6	8.7
CHA	1.0	0.9	0.9	1.2	1.3	0.9	0.8
EUR	1.8	1.8	1.7	1.7	1.6	1.5	1.1
IND	6.7	6.5	6.6	6.3	6.0	5.8	5.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	7.5	7.4	7.9	8.3	8.2	6.9	6.5
MEA	0.9	0.9	1.0	1.0	1.0	1.0	1.0
NEU	1.1	1.1	1.1	1.1	1.1	1.0	1.5
OAS	2.2	2.2	2.2	2.3	2.5	3.2	3.5
REF	1.9	2.0	2.3	2.3	2.4	2.3	2.2
SSA	25.8	28.6	30.3	32.1	32.4	35.5	37.2
USA	4.1	4.3	4.6	4.9	5.2	5.4	5.4

Table 1608: MAgPIE m4p\_SSP4 — 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





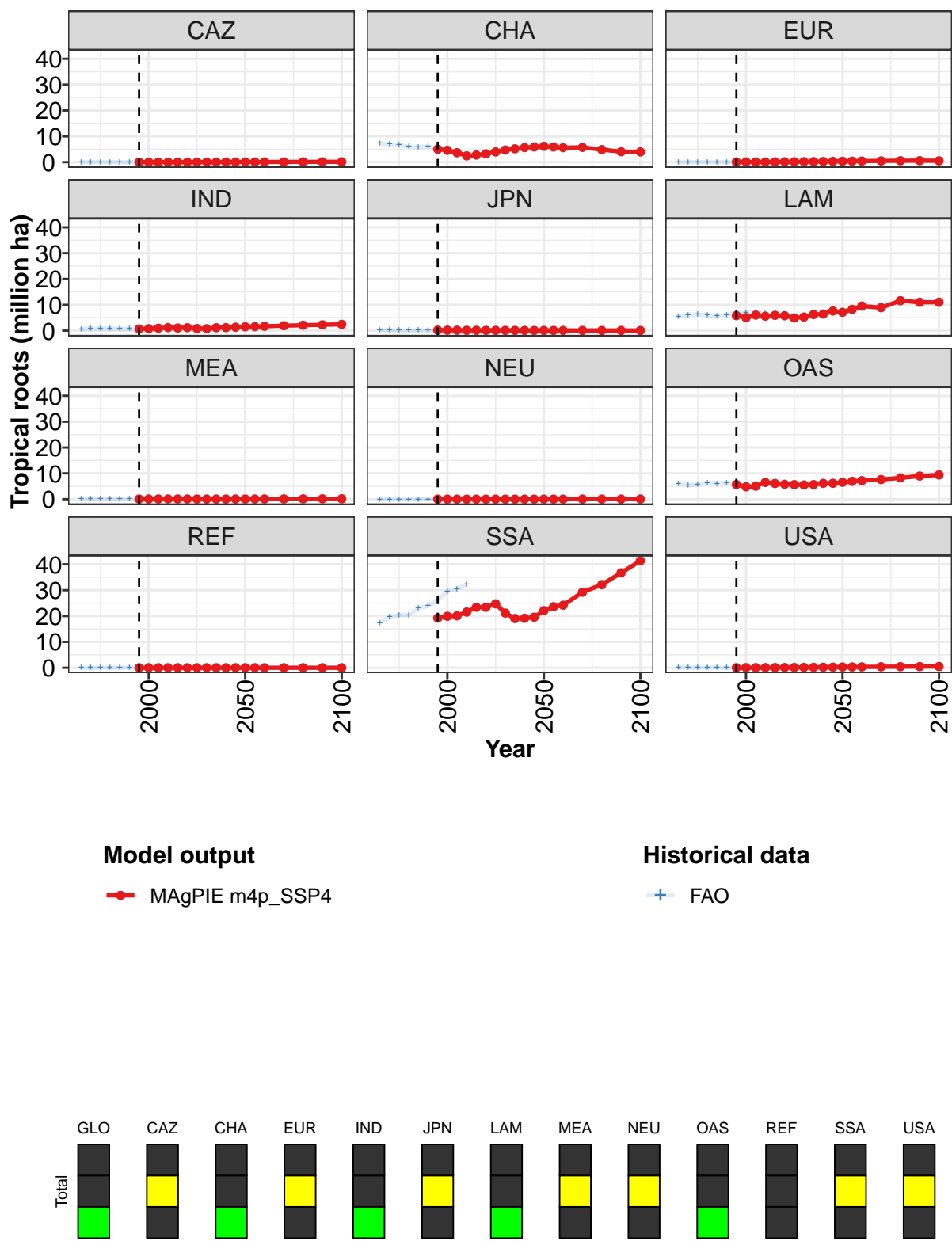


Figure 421: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Tropical roots (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	36.9	35.5	36.2	37.7	39.7	39.8	40.6	38.0	37.9	39.3	41.4
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	5.2	5.6	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	1.2	0.8	0.7	1.1	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	5.8	4.9	5.3	6.2	6.5	7.6
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	5.8	5.7	5.5	5.7	6.1	6.2
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	19.2	19.9	20.1	21.5	23.4	23.4	24.7	21.2	19.0	19.1	19.6
USA	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2

Table 1610: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Other crops—Tropical roots (million ha) [PART 1/2]

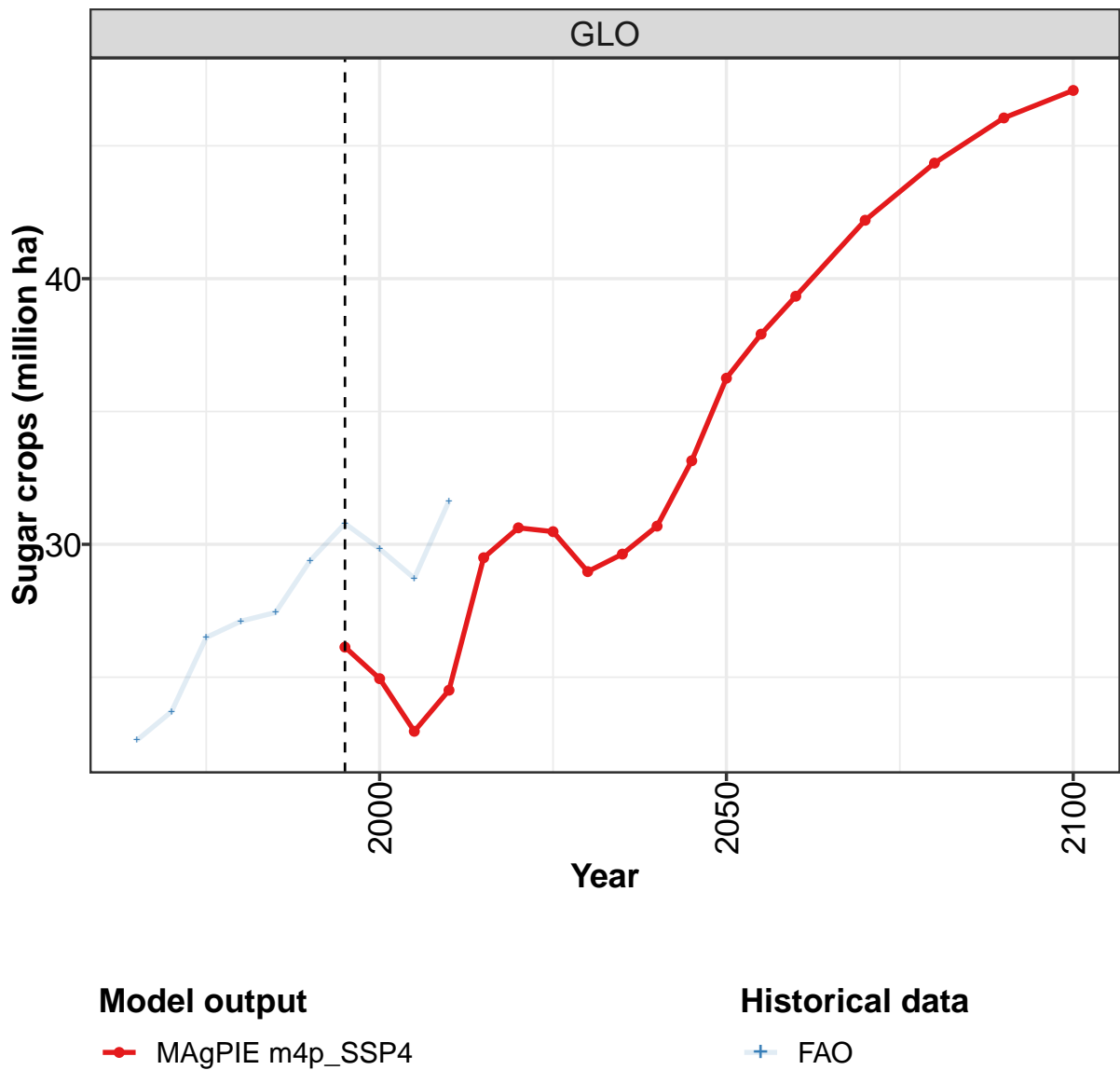
	2050	2055	2060	2070	2080	2090	2100
GLO	44.3	47.2	49.2	54.6	60.3	64.4	69.6
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	6.1	5.9	5.6	5.7	4.9	4.1	4.0
EUR	0.4	0.4	0.4	0.5	0.6	0.6	0.5
IND	1.5	1.6	1.7	1.9	2.1	2.3	2.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	7.1	8.2	9.5	8.9	11.6	11.0	11.0
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.2
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.1
OAS	6.5	6.9	7.2	7.6	8.3	9.0	9.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	22.1	23.6	24.2	29.2	32.1	36.7	41.4
USA	0.3	0.3	0.3	0.4	0.4	0.5	0.5

Table 1611: MAgPIE m4p\_SSP4 — 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



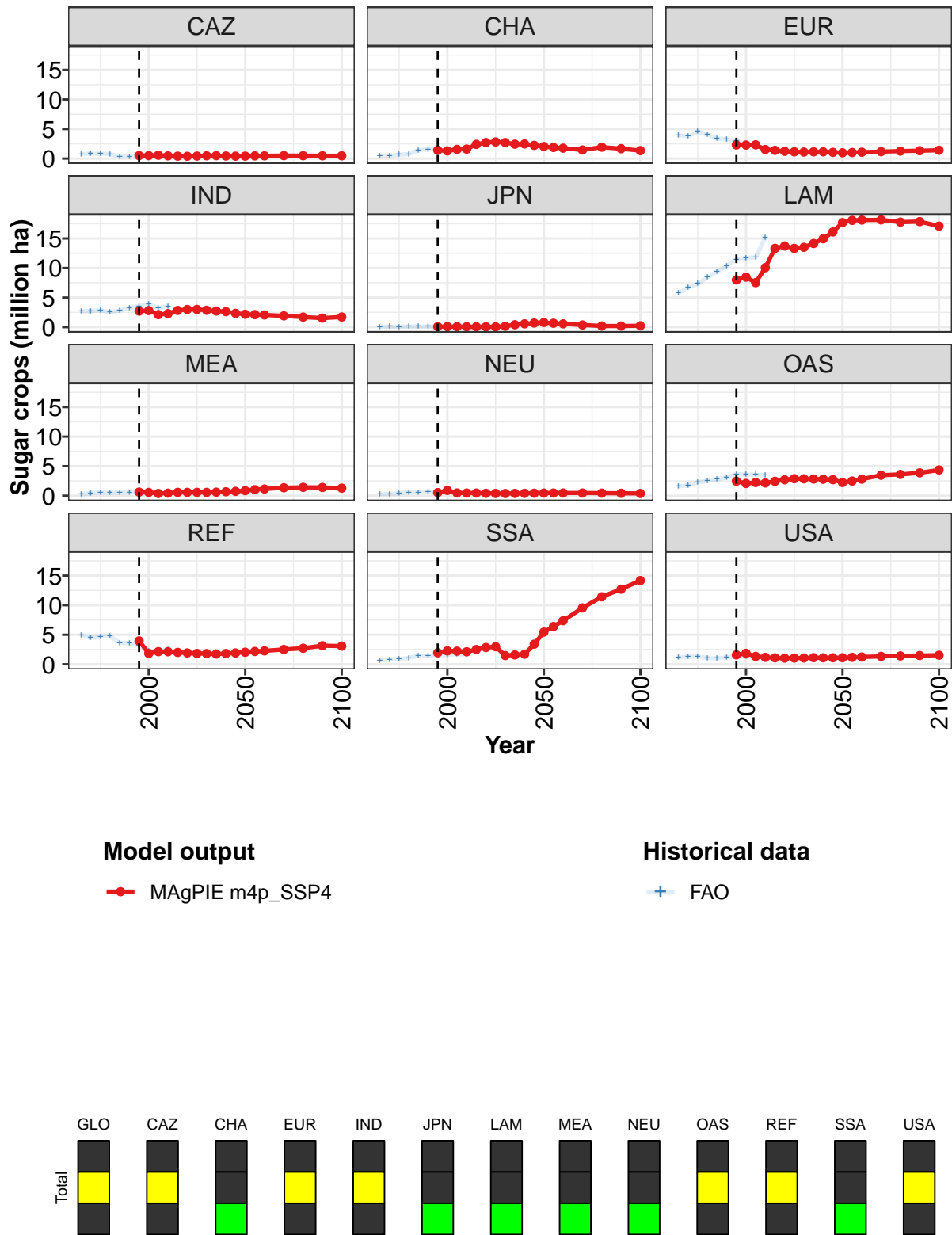


Figure 422: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Sugar crops (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	26.1	24.9	23.0	24.5	29.5	30.6	30.5	29.0	29.6	30.7	33.1
CAZ	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4
CHA	1.4	1.3	1.6	1.6	2.4	2.7	2.8	2.7	2.4	2.5	2.2
EUR	2.3	2.3	2.3	1.5	1.4	1.2	1.1	1.1	1.1	1.1	1.1
IND	2.7	2.8	2.1	2.3	2.8	3.0	3.0	2.9	2.7	2.6	2.3
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.7
LAM	8.0	8.5	7.5	10.1	13.3	13.7	13.3	13.5	14.2	15.0	16.1
MEA	0.6	0.6	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.7	0.7
NEU	0.5	0.9	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
OAS	2.5	2.1	2.2	2.2	2.4	2.7	2.9	2.9	2.8	2.8	2.7
REF	4.0	1.8	2.1	2.1	2.0	1.9	1.8	1.8	1.7	1.8	1.9
SSA	2.0	2.3	2.2	2.1	2.5	2.8	3.0	1.5	1.6	1.7	3.4
USA	1.6	1.9	1.3	1.2	1.1	1.0	1.1	1.1	1.1	1.1	1.1

Table 1613: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Sugar crops (million ha)  
[PART 1/2]

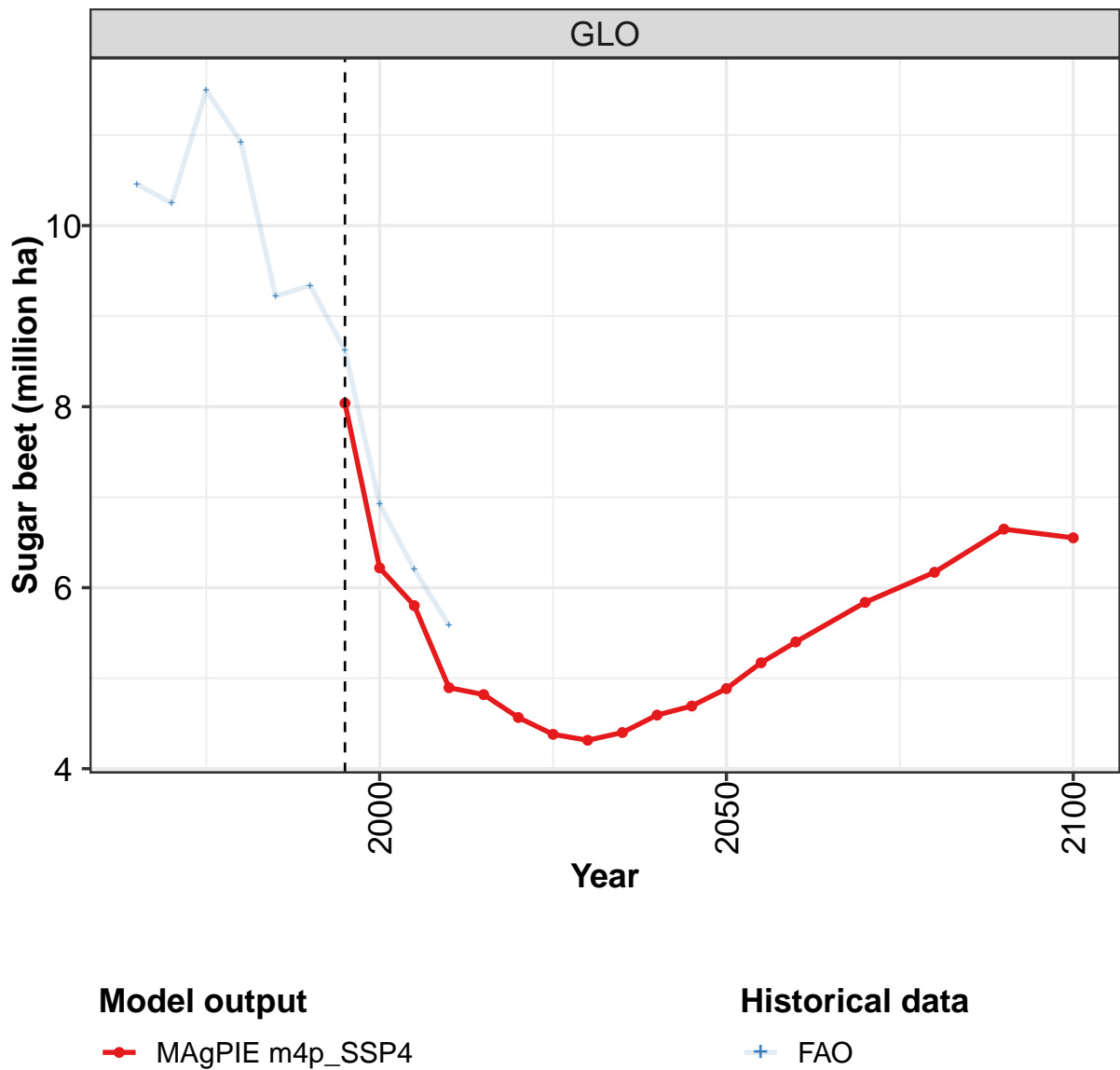
	2050	2055	2060	2070	2080	2090	2100
GLO	36.3	37.9	39.3	42.2	44.3	46.1	47.1
CAZ	0.4	0.5	0.5	0.5	0.5	0.5	0.5
CHA	2.0	1.9	1.8	1.5	1.9	1.7	1.3
EUR	1.0	1.0	1.1	1.2	1.3	1.3	1.4
IND	2.2	2.1	2.1	1.9	1.7	1.5	1.7
JPN	0.8	0.7	0.6	0.4	0.2	0.2	0.2
LAM	17.7	18.1	18.1	18.1	17.8	17.9	17.1
MEA	0.9	1.0	1.1	1.3	1.4	1.4	1.3
NEU	0.5	0.5	0.5	0.5	0.4	0.4	0.4
OAS	2.2	2.5	2.8	3.5	3.6	3.9	4.4
REF	2.0	2.2	2.3	2.5	2.7	3.1	3.1
SSA	5.5	6.4	7.4	9.5	11.4	12.7	14.2
USA	1.1	1.2	1.2	1.3	1.4	1.5	1.5

Table 1614: MAgPIE m4p\_SSP4 — 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



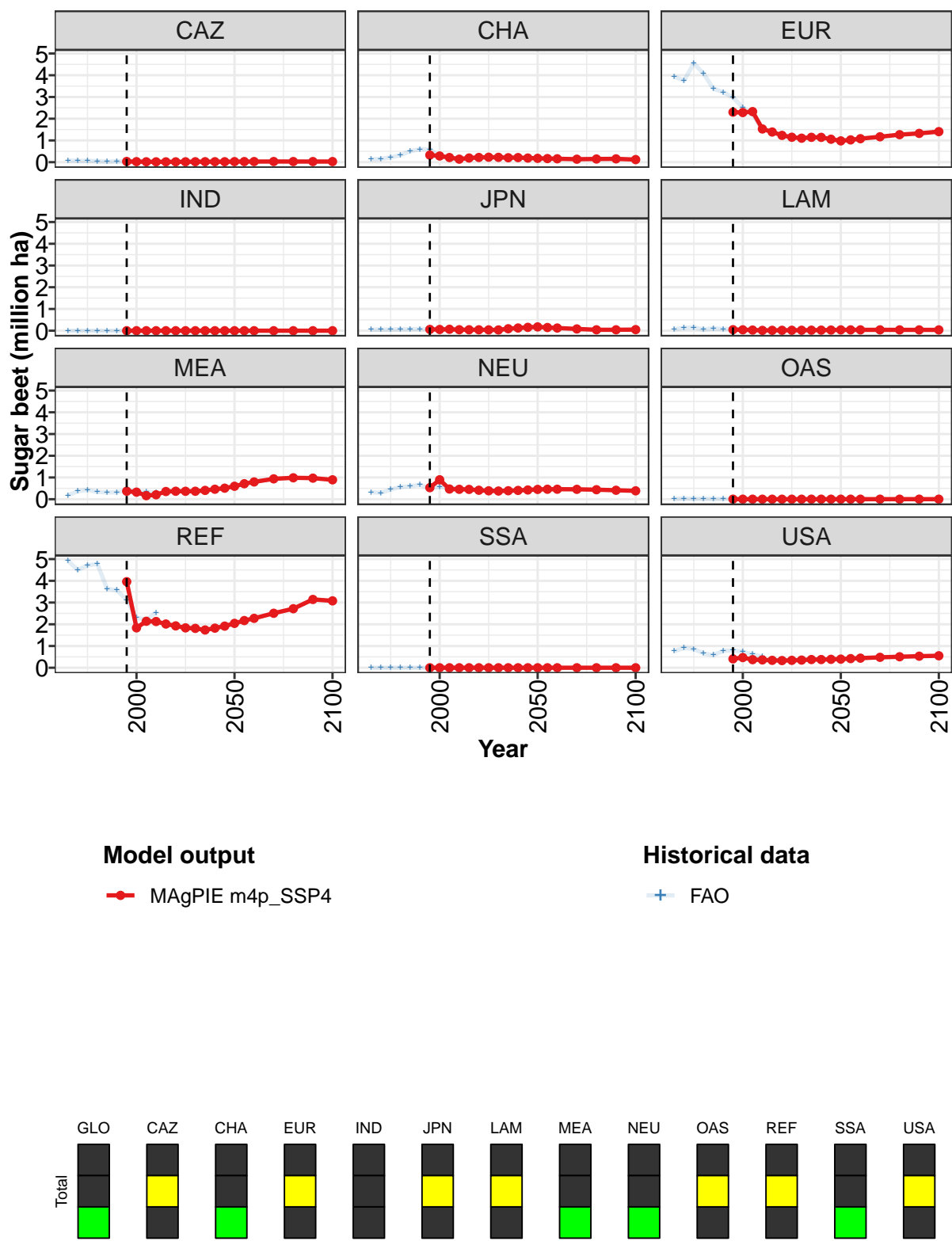


Figure 423: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar beet (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	8.04	6.22	5.80	4.89	4.82	4.57	4.38	4.31	4.40	4.59	4.69
CAZ	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.33	0.28	0.21	0.14	0.19	0.22	0.23	0.22	0.21	0.21	0.19
EUR	2.30	2.28	2.33	1.53	1.39	1.23	1.15	1.10	1.14	1.14	1.06
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	0.03	0.09	0.12	0.15
LAM	0.05	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
MEA	0.37	0.33	0.16	0.21	0.36	0.37	0.36	0.37	0.41	0.46	0.51
NEU	0.53	0.90	0.47	0.46	0.45	0.41	0.39	0.38	0.39	0.41	0.43
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	2.01	1.93	1.83	1.81	1.74	1.82	1.92
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	0.35	0.38	0.38	0.39

Table 1616: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar beet (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4.88	5.17	5.40	5.84	6.17	6.65	6.55
CAZ	0.03	0.03	0.03	0.03	0.03	0.03	0.03
CHA	0.18	0.17	0.16	0.14	0.15	0.15	0.12
EUR	0.98	1.03	1.08	1.17	1.27	1.32	1.41
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.17	0.15	0.12	0.08	0.04	0.04	0.05
LAM	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MEA	0.60	0.71	0.80	0.94	0.99	0.97	0.89
NEU	0.45	0.46	0.46	0.46	0.44	0.41	0.39
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	2.04	2.17	2.27	2.51	2.72	3.14	3.08
SSA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USA	0.40	0.42	0.44	0.48	0.51	0.53	0.55

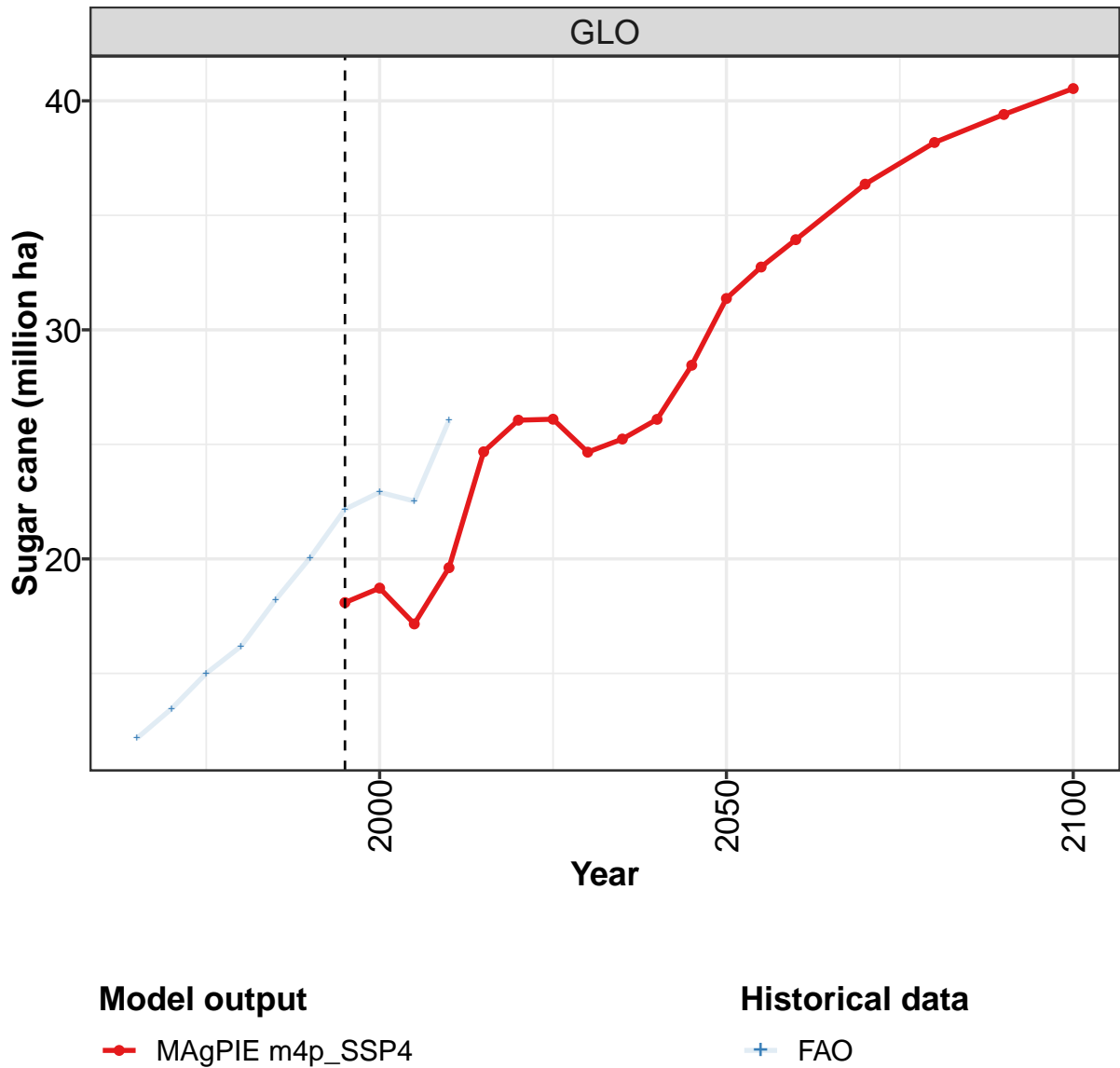
Table 1617: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar beet (million ha) [PART 2/2]

	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



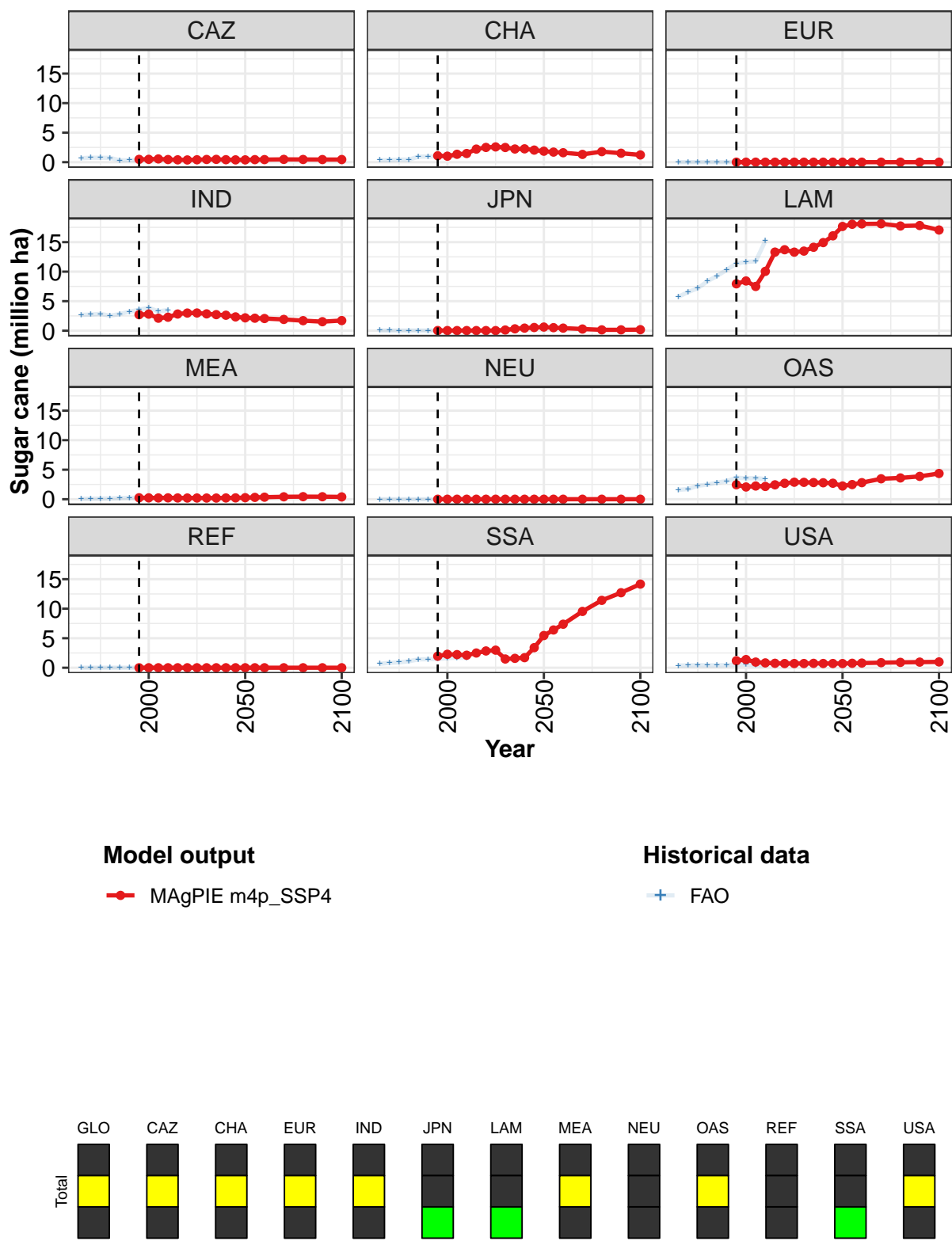


Figure 424: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar cane (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	18.1	18.7	17.2	19.6	24.7	26.1	26.1	24.7	25.2	26.1	28.5
CAZ	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4
CHA	1.1	1.0	1.3	1.5	2.2	2.5	2.6	2.5	2.2	2.3	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	2.7	2.8	2.1	2.3	2.8	3.0	3.0	2.9	2.7	2.6	2.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5
LAM	7.9	8.4	7.5	10.1	13.3	13.7	13.3	13.5	14.1	14.9	16.1
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	2.5	2.1	2.2	2.2	2.4	2.7	2.9	2.9	2.8	2.8	2.7
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	2.0	2.3	2.2	2.1	2.5	2.8	3.0	1.5	1.6	1.7	3.4
USA	1.2	1.4	1.0	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7

Table 1619: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Crops—Sugar crops—Sugar cane (million ha) [PART 1/2]

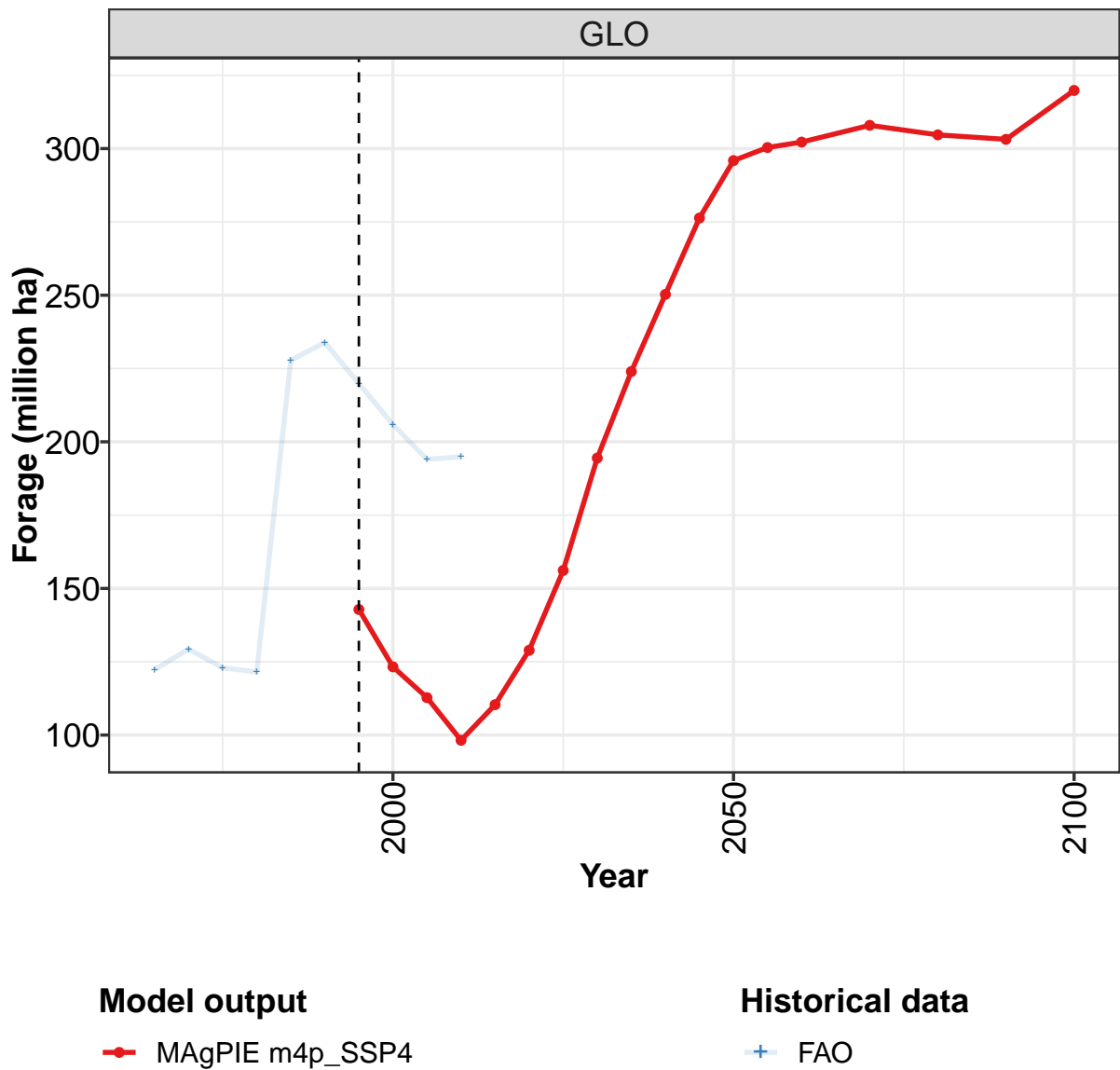
	2050	2055	2060	2070	2080	2090	2100
GLO	31.4	32.7	33.9	36.4	38.2	39.4	40.5
CAZ	0.4	0.4	0.4	0.5	0.5	0.4	0.4
CHA	1.9	1.7	1.6	1.3	1.8	1.5	1.2
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	2.2	2.1	2.1	1.9	1.7	1.5	1.7
JPN	0.6	0.5	0.4	0.3	0.1	0.1	0.2
LAM	17.7	18.0	18.1	18.1	17.7	17.8	17.1
MEA	0.3	0.3	0.3	0.4	0.4	0.4	0.4
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	2.2	2.5	2.8	3.5	3.6	3.9	4.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	5.5	6.4	7.4	9.5	11.4	12.7	14.2
USA	0.7	0.8	0.8	0.9	0.9	1.0	1.0

Table 1620: MAgPIE m4p\_SSP4 — 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



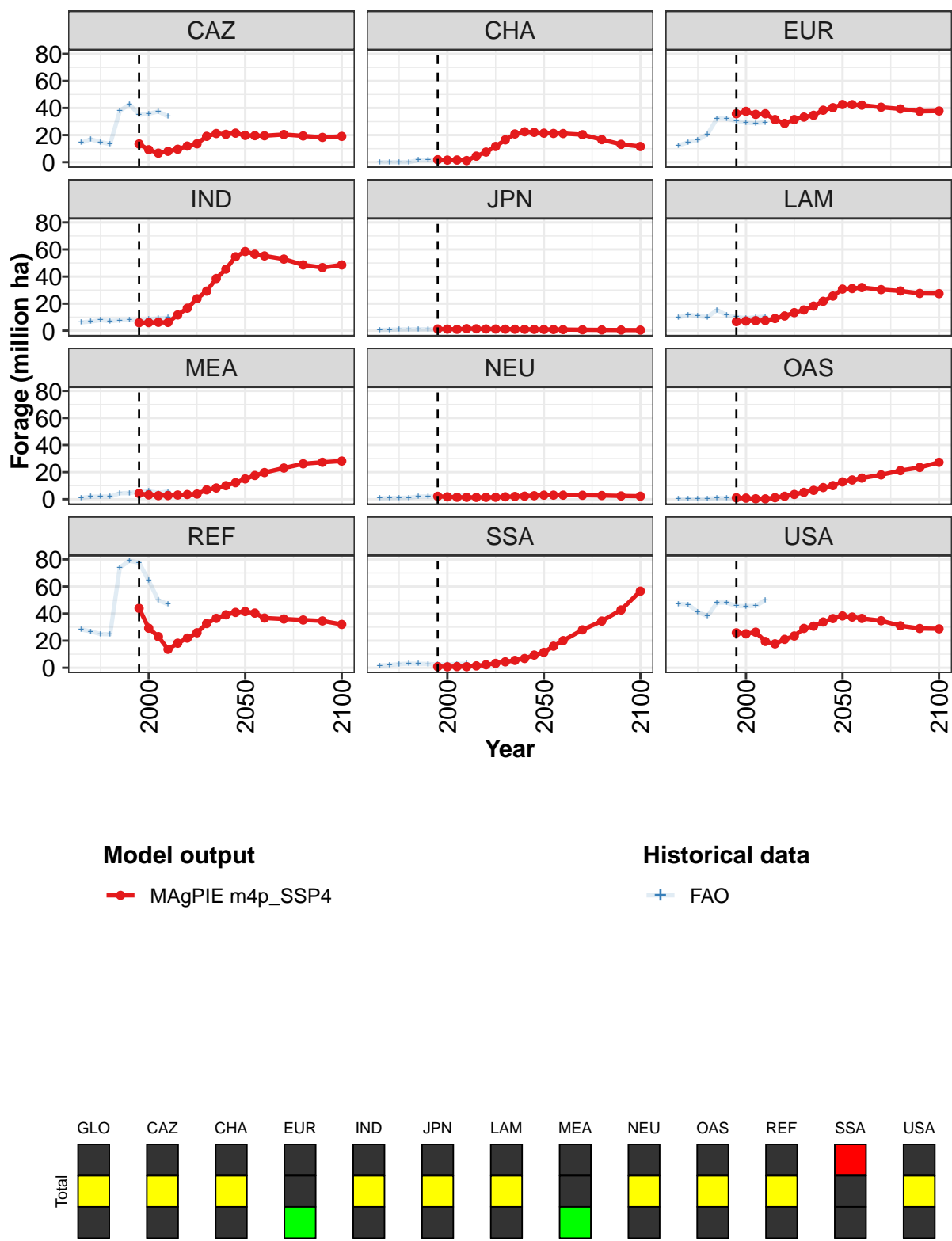


Figure 425: MAGPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Forage (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	143	123	113	98	110	129	156	194	224	250	276
CAZ	13	9	7	8	10	12	14	19	21	21	21
CHA	2	2	2	1	4	7	12	17	21	22	22
EUR	36	38	35	36	31	29	31	33	35	38	40
IND	6	6	6	6	12	17	24	29	39	45	55
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	7	7	7	7	9	11	13	15	18	22	26
MEA	4	3	3	3	3	3	4	7	8	10	12
NEU	2	2	1	1	1	1	1	2	2	2	3
OAS	1	1	0	0	1	2	4	5	7	9	10
REF	44	29	23	14	18	22	26	33	36	39	41
SSA	1	1	1	1	1	2	3	4	5	7	9
USA	26	25	26	19	18	21	23	29	31	34	36

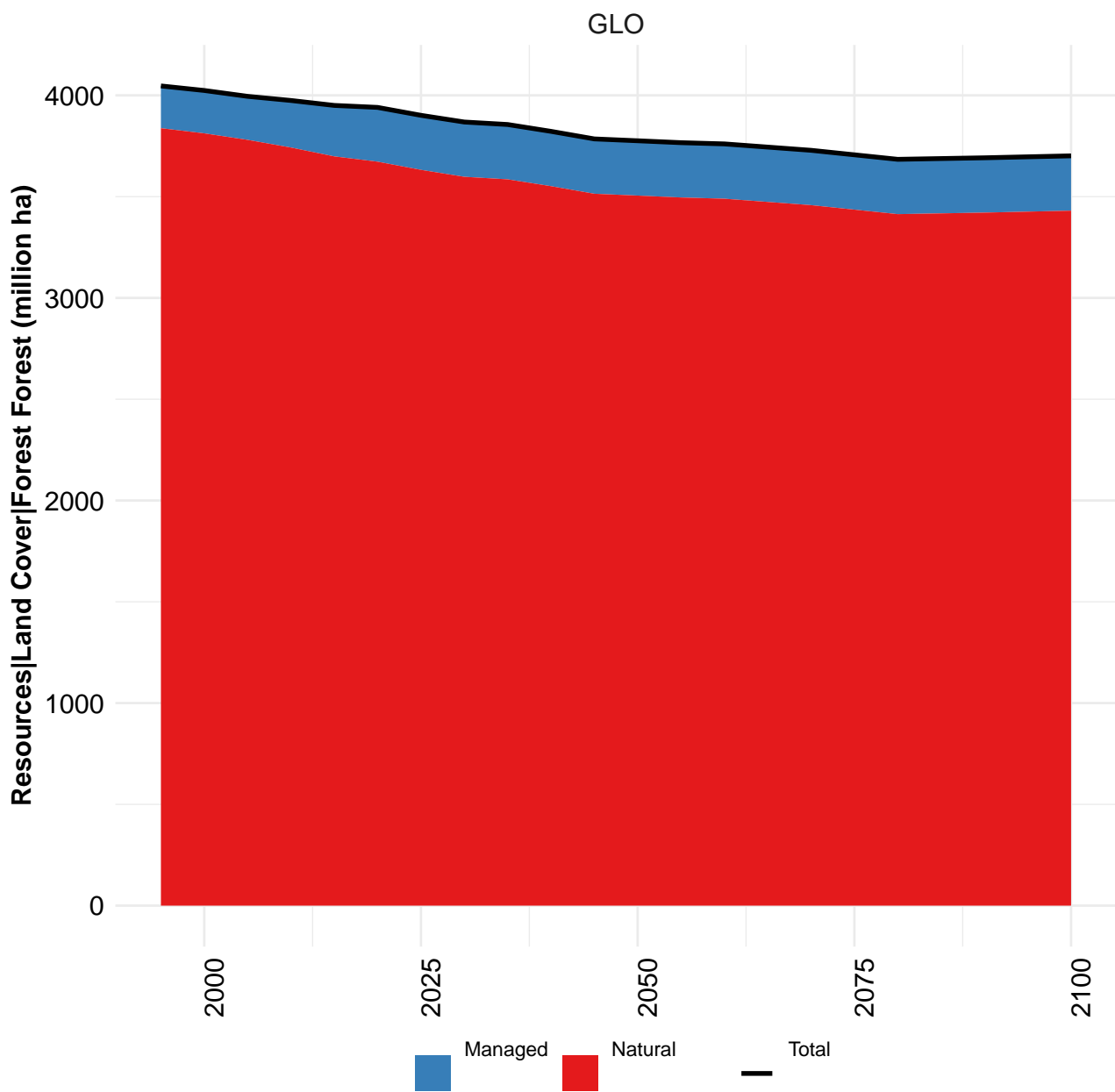
Table 1622: MAgPIE m4p\_SSP4 — Resources—Land Cover—Cropland—Forage (million ha) [PART 1/2]

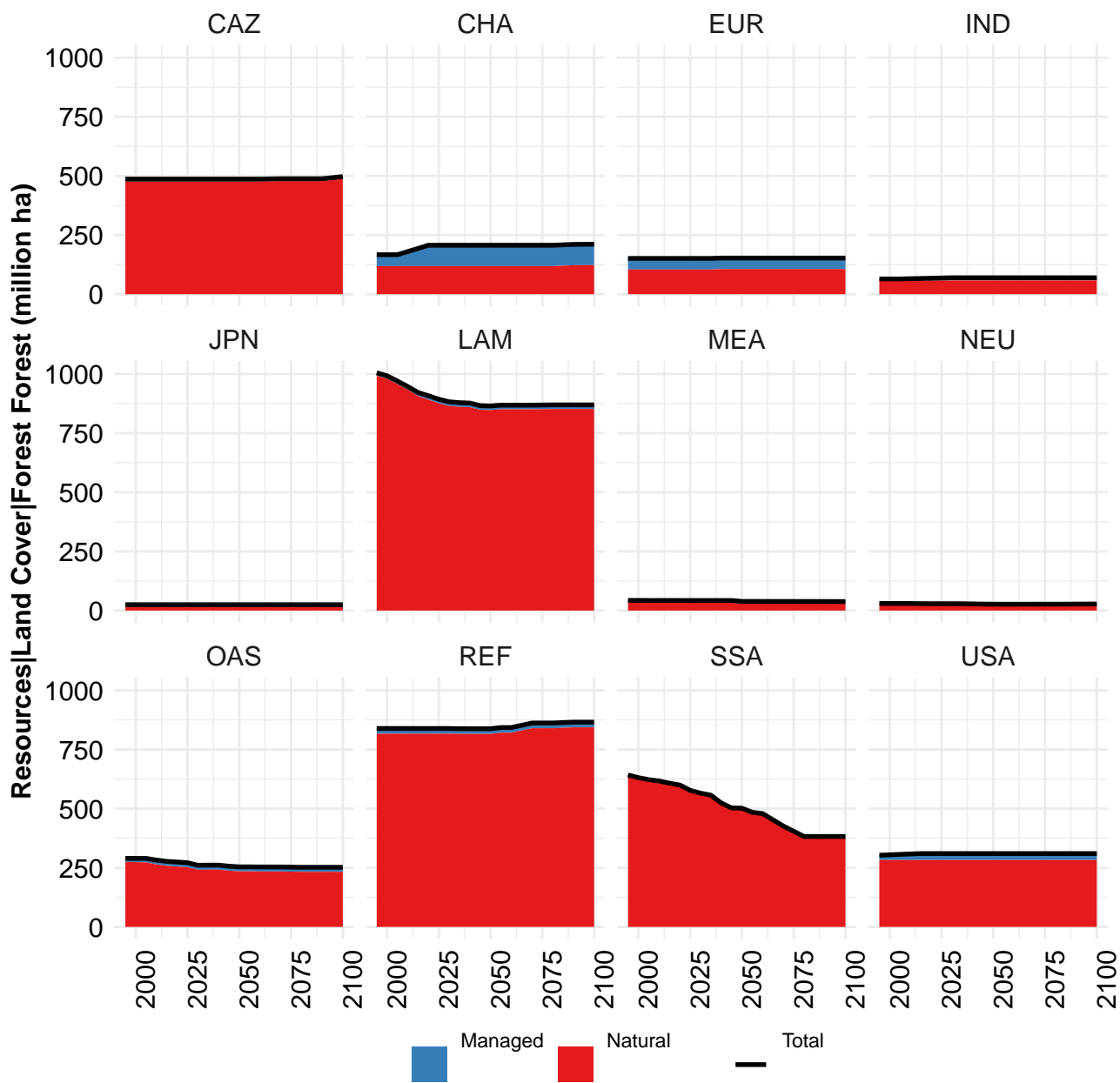
	2050	2055	2060	2070	2080	2090	2100
GLO	296	300	302	308	305	303	320
CAZ	20	20	20	20	19	18	19
CHA	21	21	21	20	17	13	12
EUR	43	42	42	41	39	38	38
IND	58	56	55	53	49	47	49
JPN	1	1	1	1	1	0	0
LAM	31	31	32	30	29	28	27
MEA	15	18	20	23	26	27	28
NEU	3	3	3	3	3	2	2
OAS	13	14	16	18	21	23	27
REF	42	40	37	36	35	35	32
SSA	11	16	20	28	34	43	57
USA	38	37	36	35	31	29	29

Table 1623: MAgPIE m4p\_SSP4 — 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

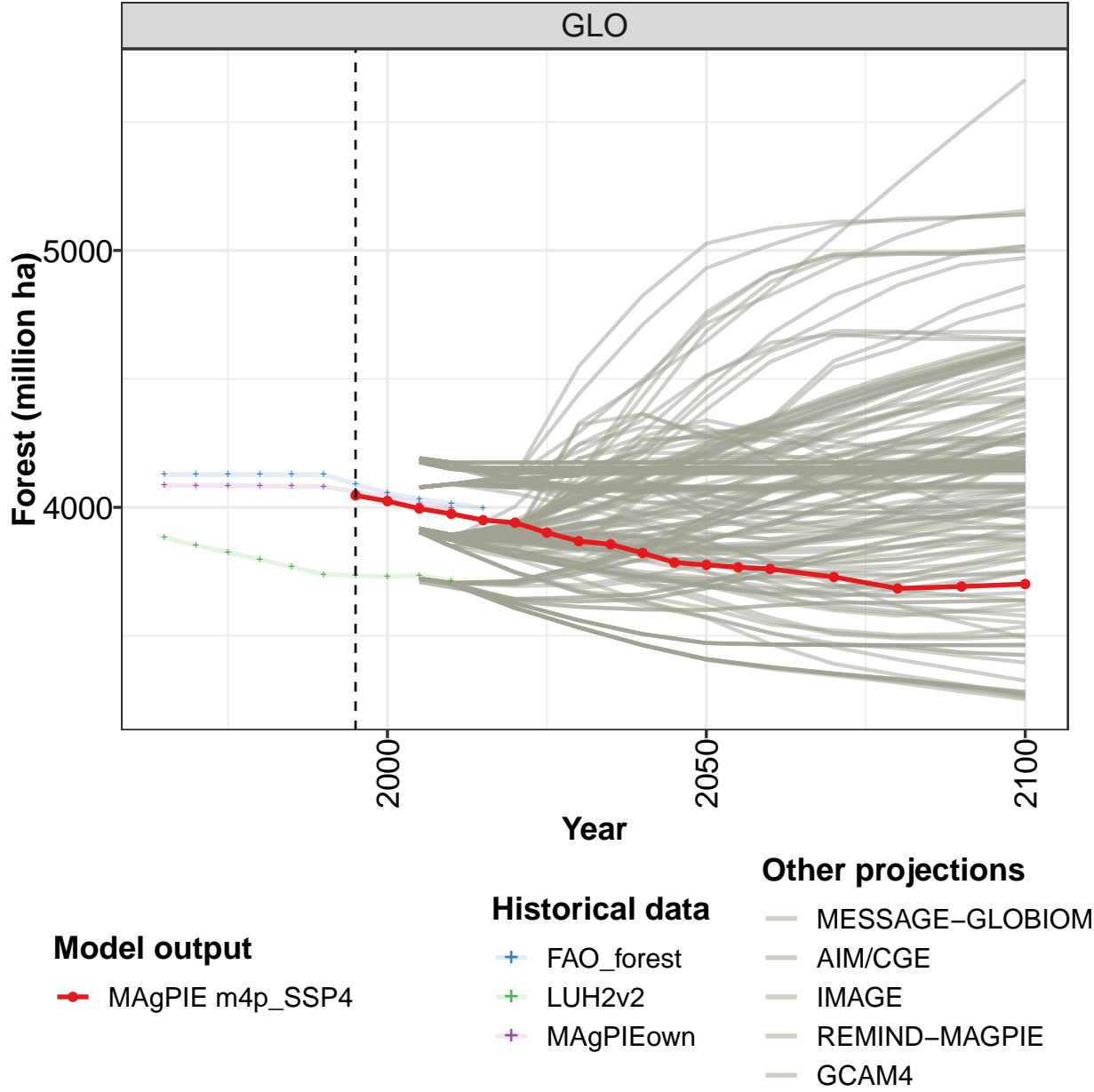
Table 1624: FAO — Resources—Land Cover—Cropland—Forage (million ha)







54.2 Forest



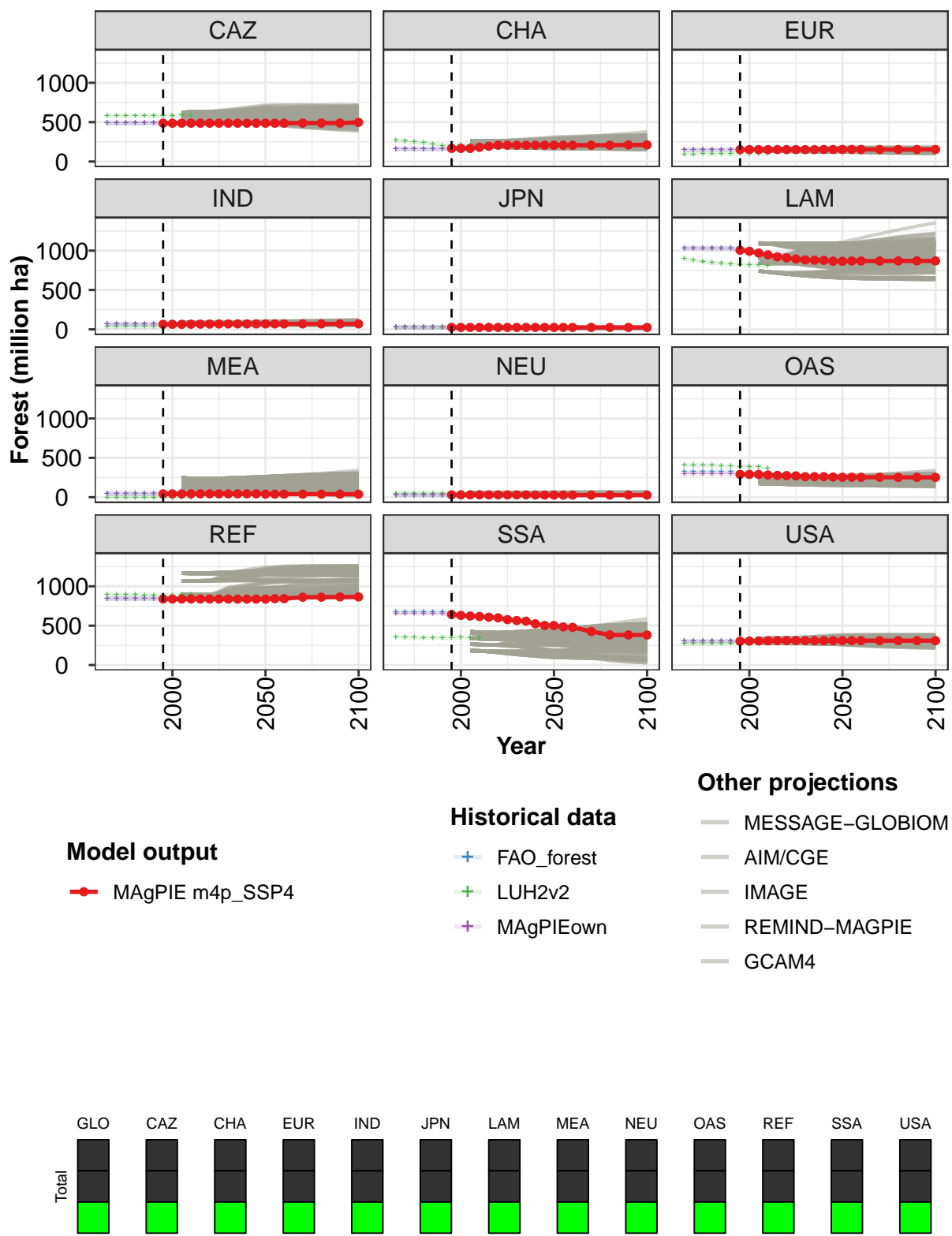


Figure 426: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4046	4024	3995	3975	3950	3940	3901	3868	3856	3822	3785
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	922	908	893	882	879	877	866
MEA	43	43	43	43	43	43	43	43	43	43	43
NEU	30	30	30	30	29	29	29	29	29	28	27
OAS	290	290	290	282	277	274	271	261	261	261	257
REF	839	839	839	839	839	839	839	839	838	838	838
SSA	642	631	623	617	608	600	577	565	557	524	503
USA	303	305	307	308	310	310	310	310	310	310	310

Table 1625: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	3776	3766	3760	3729	3684	3692	3701
CAZ	487	487	487	488	488	488	497
CHA	207	207	207	207	207	211	211
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	865	868	868	868	870	870	870
MEA	39	39	39	39	38	38	38
NEU	27	27	27	27	27	27	28
OAS	254	254	253	253	252	252	252
REF	838	843	843	862	862	866	866
SSA	502	484	479	426	382	382	382
USA	310	310	310	310	310	310	310

Table 1626: MAgPIE m4p\_SSP4 — 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)

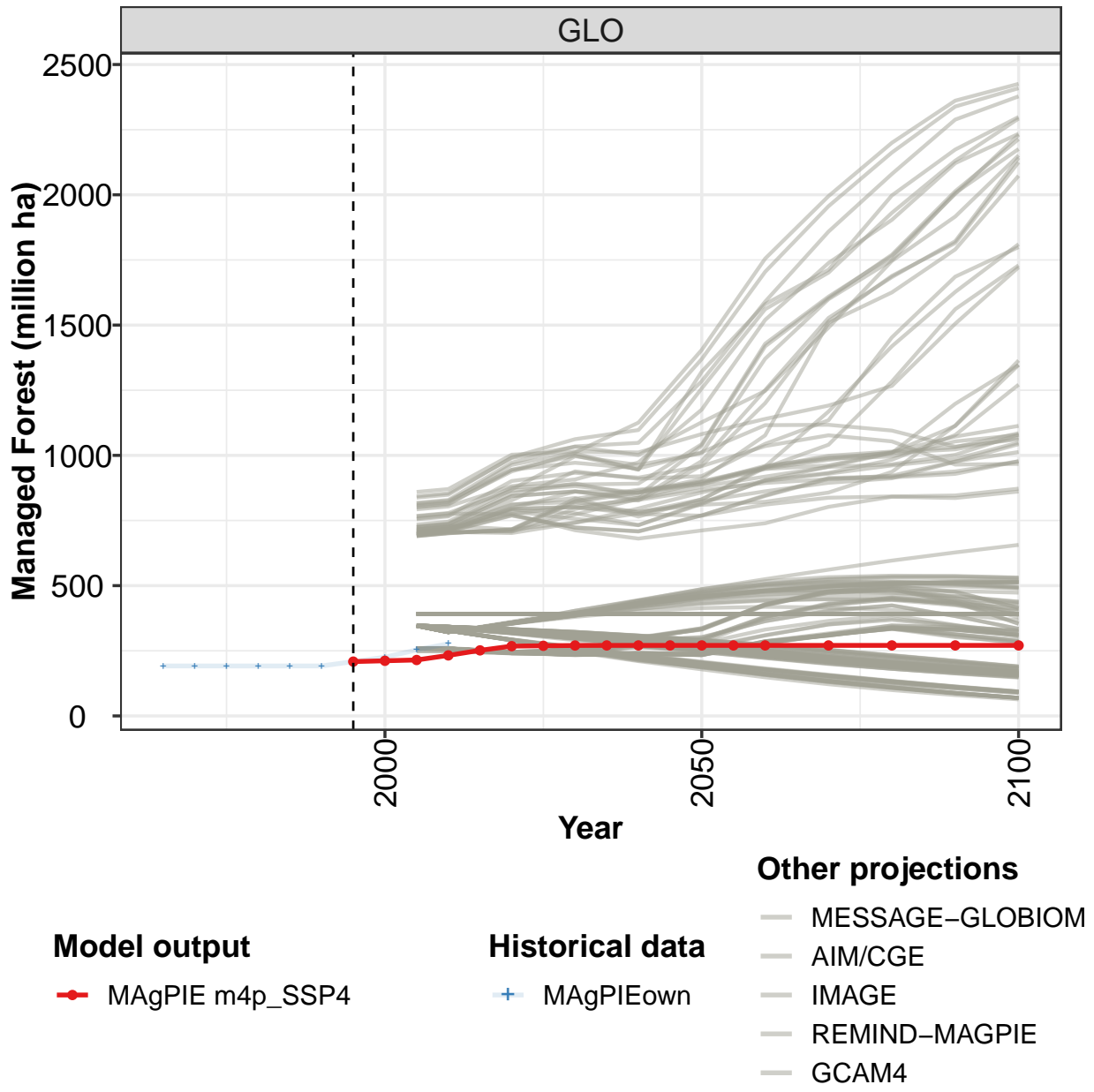
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	3883	3852	3825	3797	3768	3739	3735	3730	3736	3715
CAZ	583	582	582	582	583	583	583	584	587	590
CHA	267	261	249	237	220	203	204	206	204	207
EUR	94	95	96	97	98	98	100	102	103	103
IND	37	37	36	36	36	36	36	36	36	36
JPN	29	29	29	29	29	29	30	30	30	30
LAM	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



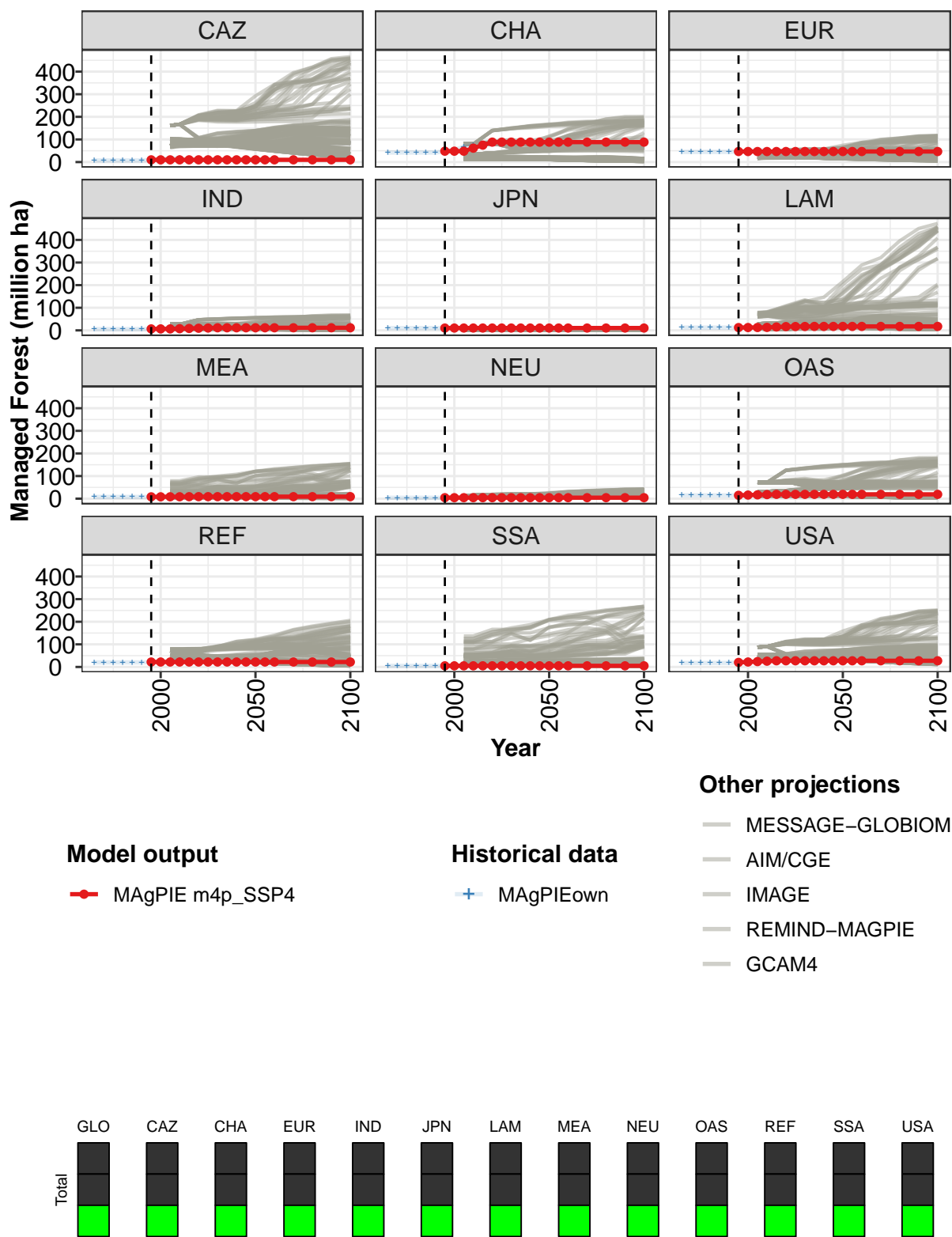


Figure 427: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Managed Forest (million ha)

	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\_SSP4 — Resources—Land Cover—Forest—Managed Forest (million ha) [PART 1/2]

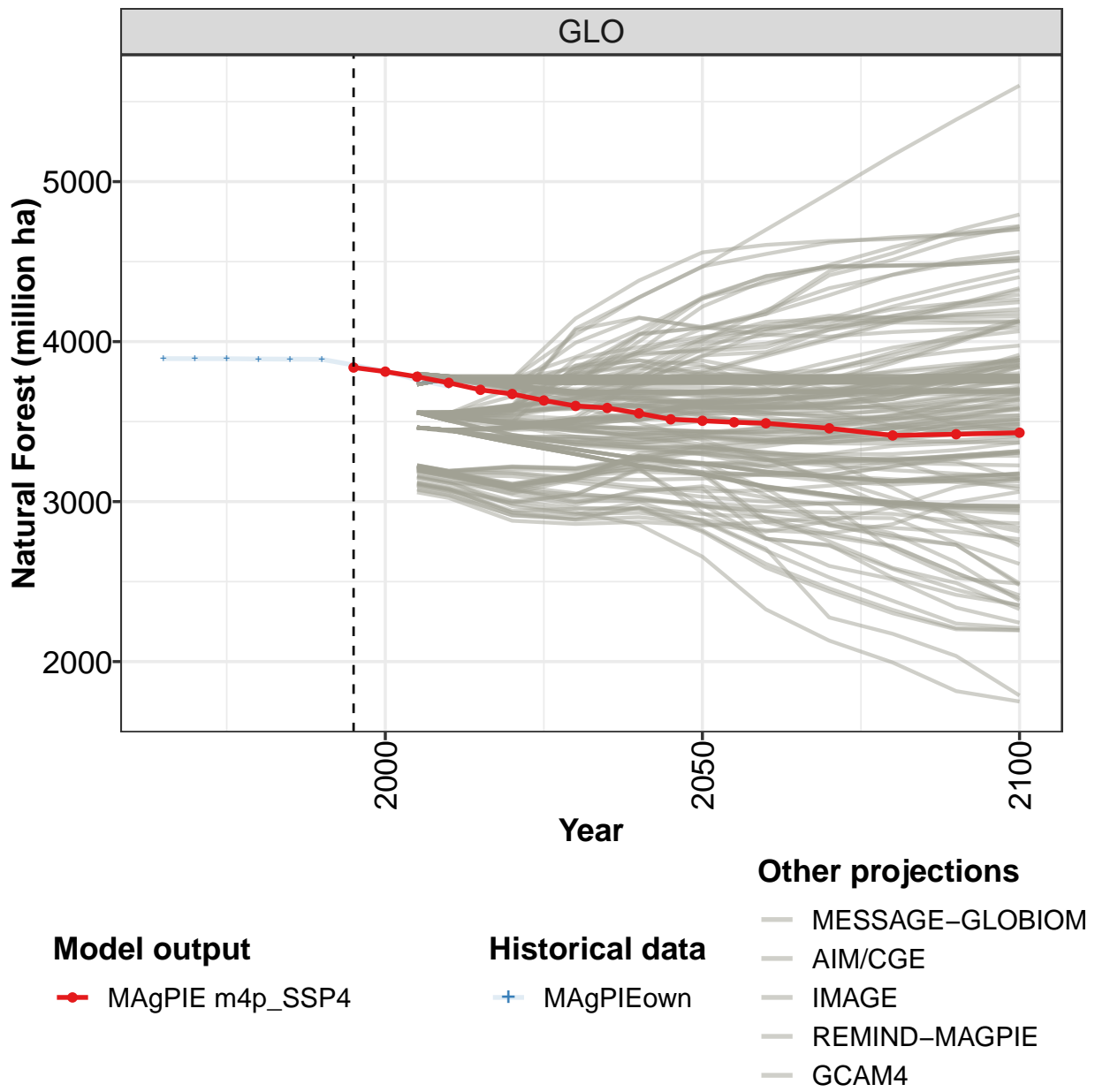
	2050	2055	2060	2070	2080	2090	2100
GLO	271	271	271	271	271	271	271
CAZ	10	10	10	10	10	10	10
CHA	88	88	88	88	88	88	88
EUR	47	47	47	47	47	47	47
IND	11	11	11	11	11	11	11
JPN	10	10	10	10	10	10	10
LAM	17	17	17	17	17	17	17
MEA	9	9	9	9	9	9	9
NEU	4	4	4	4	4	4	4
OAS	19	19	19	19	19	19	19
REF	22	22	22	22	22	22	22
SSA	5	5	5	5	5	5	5
USA	27	27	27	27	27	27	27

Table 1631: MAgPIE m4p\_SSP4 — 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





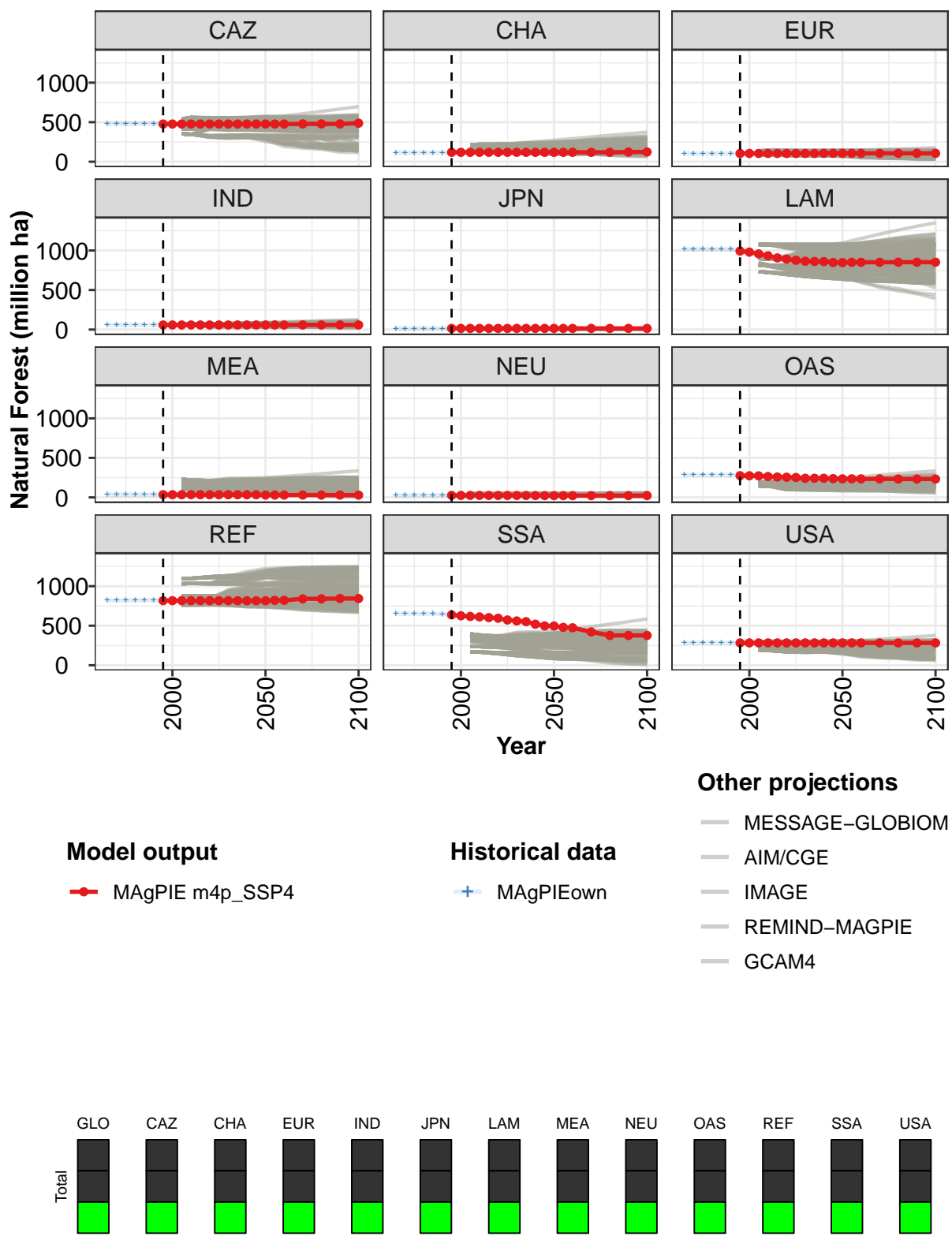


Figure 428: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Natural Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3838	3812	3780	3742	3699	3673	3632	3598	3585	3552	3514
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	907	891	876	865	861	860	849
MEA	35	35	34	34	34	34	34	34	34	34	34
NEU	26	26	26	26	25	25	25	25	25	24	23
OAS	275	274	273	264	258	255	252	241	242	242	238
REF	817	817	817	817	817	817	817	817	816	816	816
SSA	637	626	617	612	603	595	572	560	552	519	498
USA	283	283	283	283	283	283	283	283	283	283	283

Table 1633: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Natural Forest (million ha) [PART 1/2]

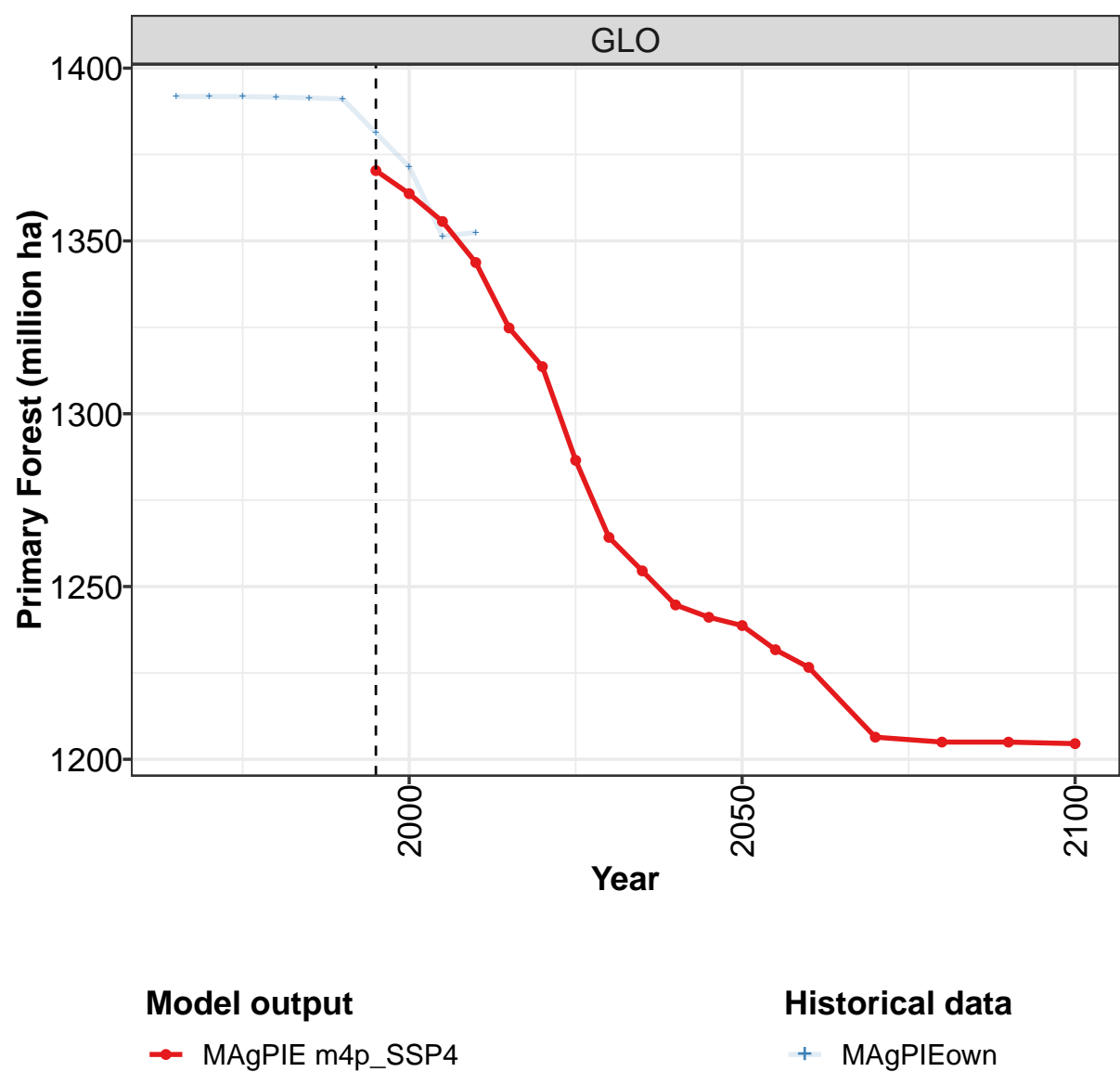
	2050	2055	2060	2070	2080	2090	2100
GLO	3505	3496	3490	3458	3414	3421	3431
CAZ	477	477	477	478	478	478	487
CHA	119	119	119	119	119	122	123
EUR	106	106	106	106	106	106	106
IND	58	58	58	58	58	58	58
JPN	15	15	15	15	15	15	15
LAM	847	851	851	851	852	852	852
MEA	30	30	30	30	30	30	29
NEU	23	22	22	23	23	23	24
OAS	235	235	234	234	233	233	233
REF	816	821	821	840	840	844	844
SSA	497	479	474	421	377	377	377
USA	283	283	283	283	283	283	283

Table 1634: MAgPIE m4p\_SSP4 — 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



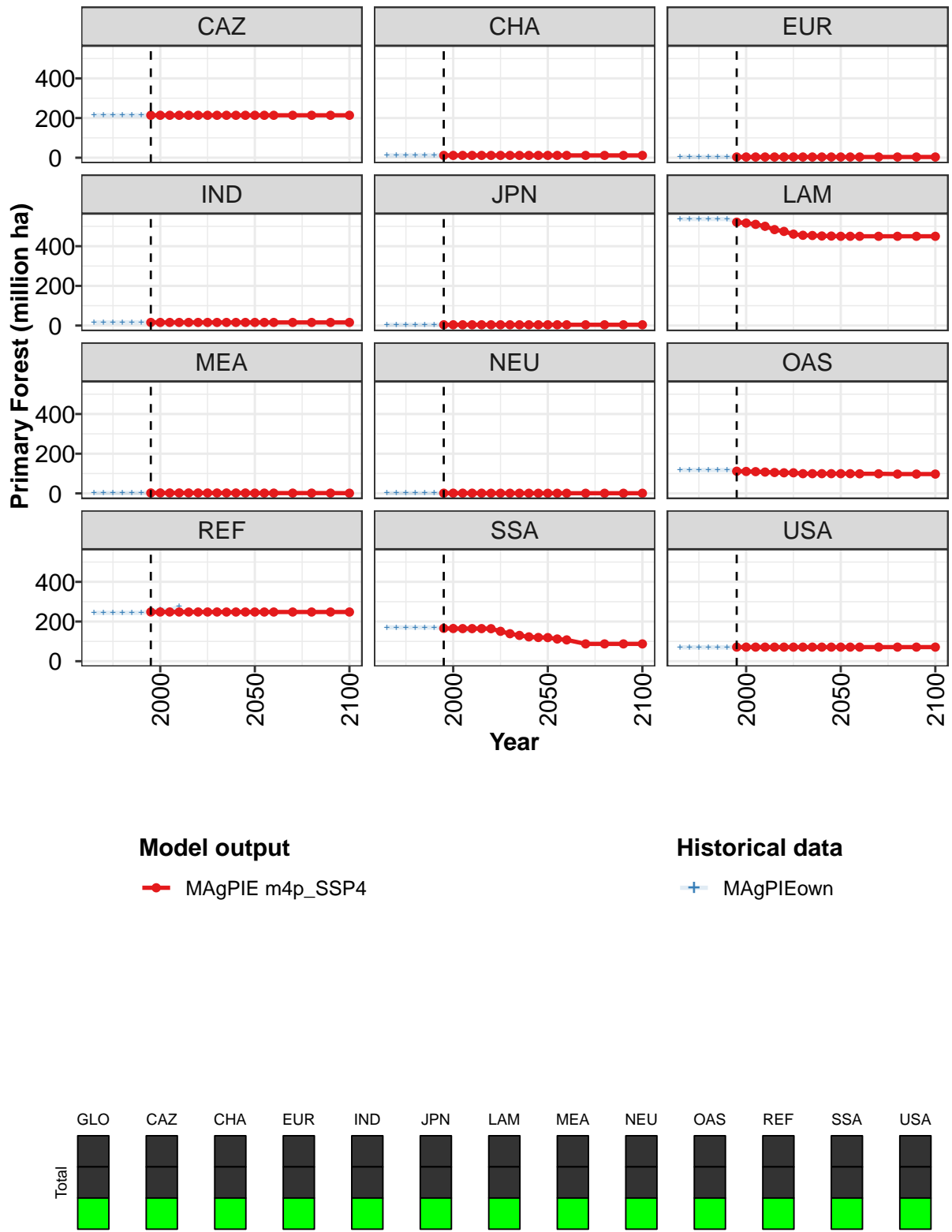


Figure 429: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Natural Forest—Primary Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1370	1364	1356	1344	1325	1314	1287	1264	1255	1245	1241
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	484	475	461	455	454	452	451
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	104	104	99	99	99	99
REF	248	248	248	248	248	248	248	248	248	248	248
SSA	166	165	164	164	164	164	151	139	130	123	120
USA	71	71	71	71	71	71	71	71	71	71	71

Table 1636: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Natural Forest—Primary Forest (million ha) [PART 1/2]

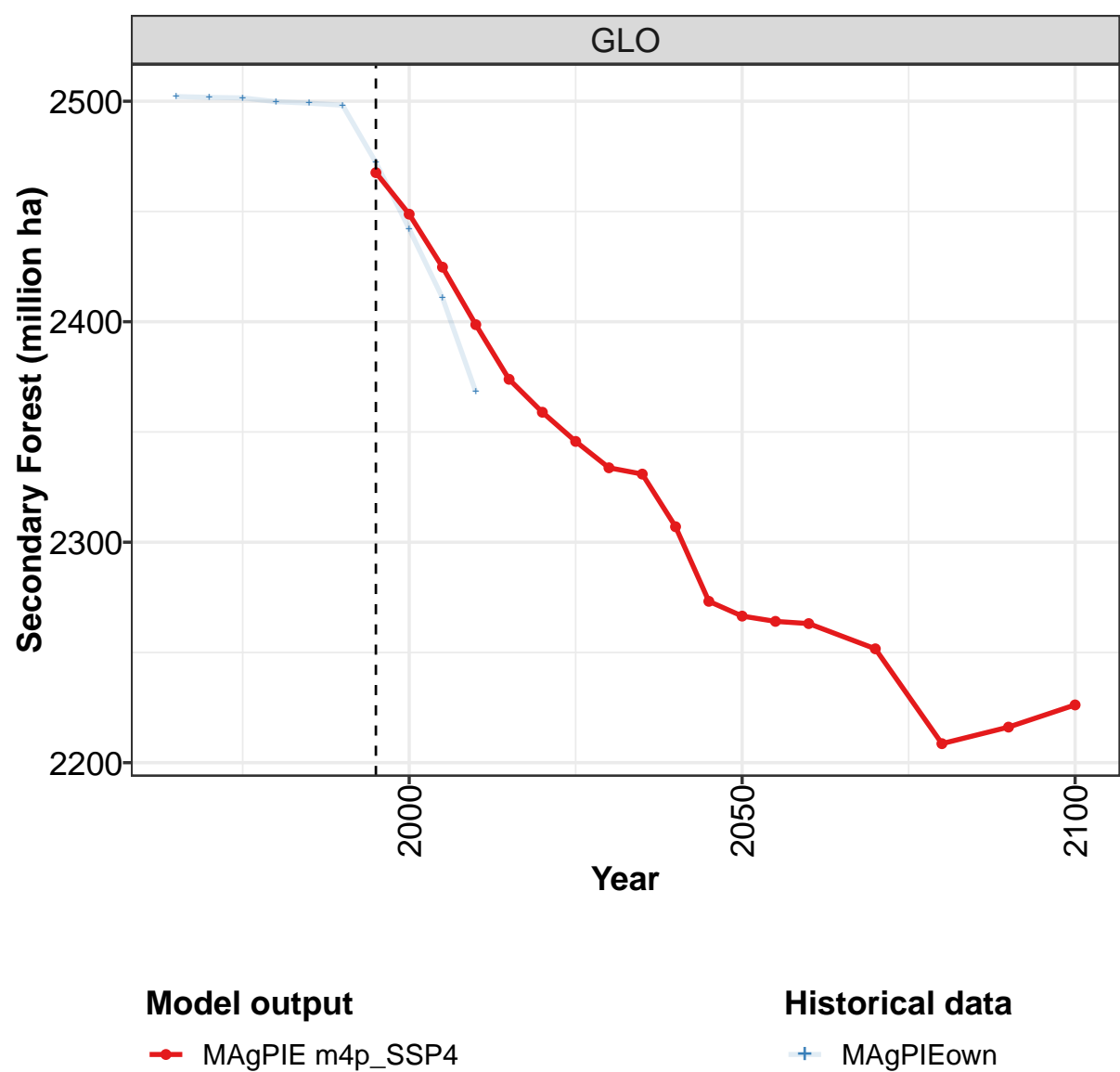
	2050	2055	2060	2070	2080	2090	2100
GLO	1239	1232	1227	1206	1205	1205	1205
CAZ	214	214	214	214	214	214	214
CHA	12	12	12	12	12	12	12
EUR	4	4	4	4	4	4	4
IND	16	16	16	16	16	16	16
JPN	4	4	4	4	4	4	4
LAM	450	450	450	450	450	450	450
MEA	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1
OAS	99	99	99	99	97	97	97
REF	248	248	248	248	248	248	248
SSA	119	112	108	87	87	87	87
USA	71	71	71	71	71	71	71

Table 1637: MAgPIE m4p\_SSP4 — 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



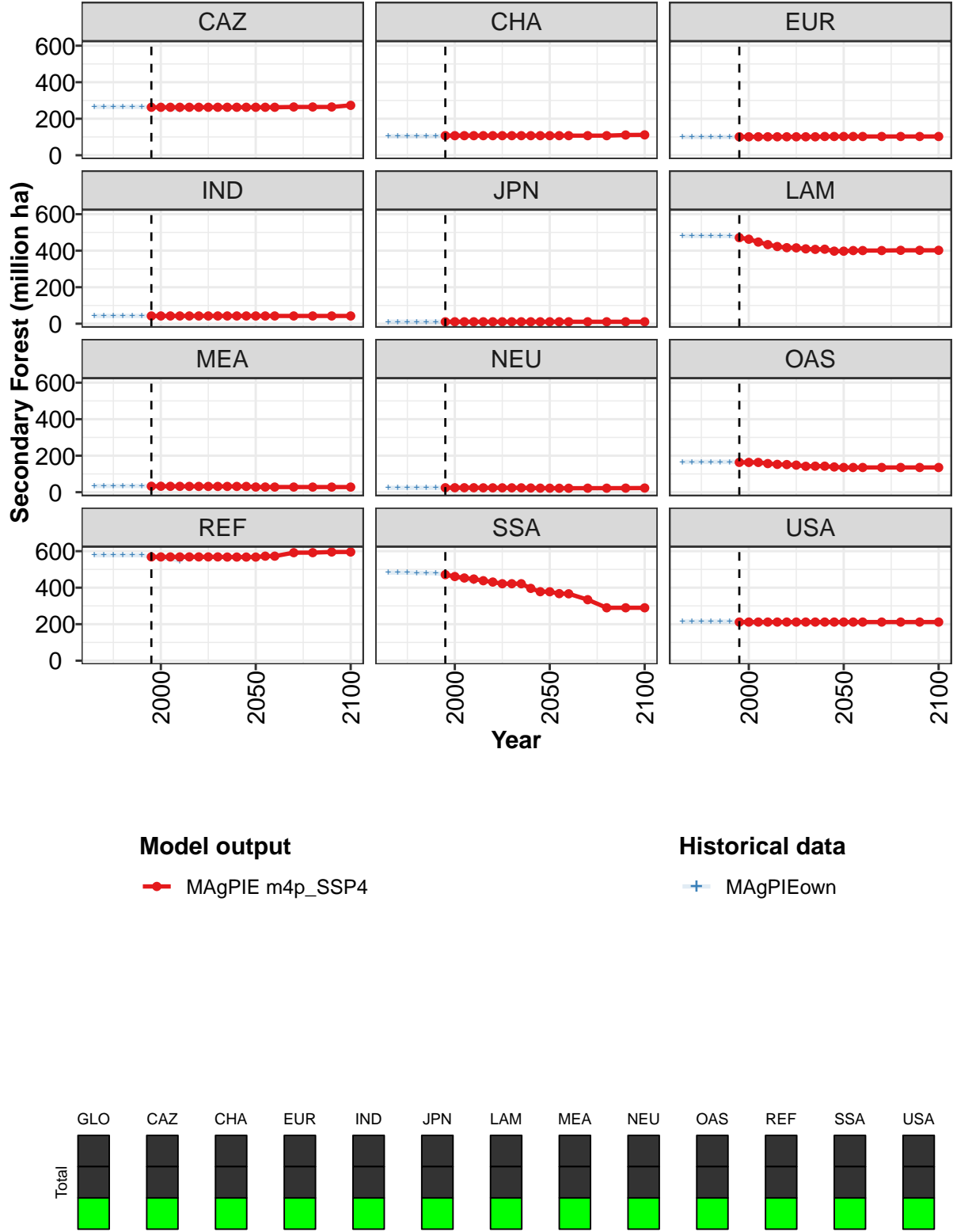


Figure 430: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Natural Forest—Secondary Forest (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2468	2449	2425	2399	2374	2359	2346	2334	2331	2307	2273
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	423	417	416	410	407	408	398
MEA	33	33	32	32	32	32	32	32	32	32	32
NEU	24	24	24	24	24	24	24	24	24	23	22
OAS	163	163	163	157	153	151	148	142	143	143	138
REF	569	569	569	569	569	569	569	569	568	568	568
SSA	471	461	453	447	438	431	422	422	422	396	378
USA	212	212	212	212	212	212	212	212	212	212	212

Table 1639: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Natural Forest—Secondary Forest (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2266	2264	2263	2252	2209	2216	2226
CAZ	263	263	263	264	264	264	273
CHA	107	107	107	107	107	111	112
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	397	401	401	401	402	402	402
MEA	28	28	28	28	28	28	28
NEU	22	22	22	22	22	22	23
OAS	135	135	135	135	135	136	136
REF	568	573	573	592	592	595	595
SSA	378	367	366	334	290	290	290
USA	212	212	212	212	212	212	212

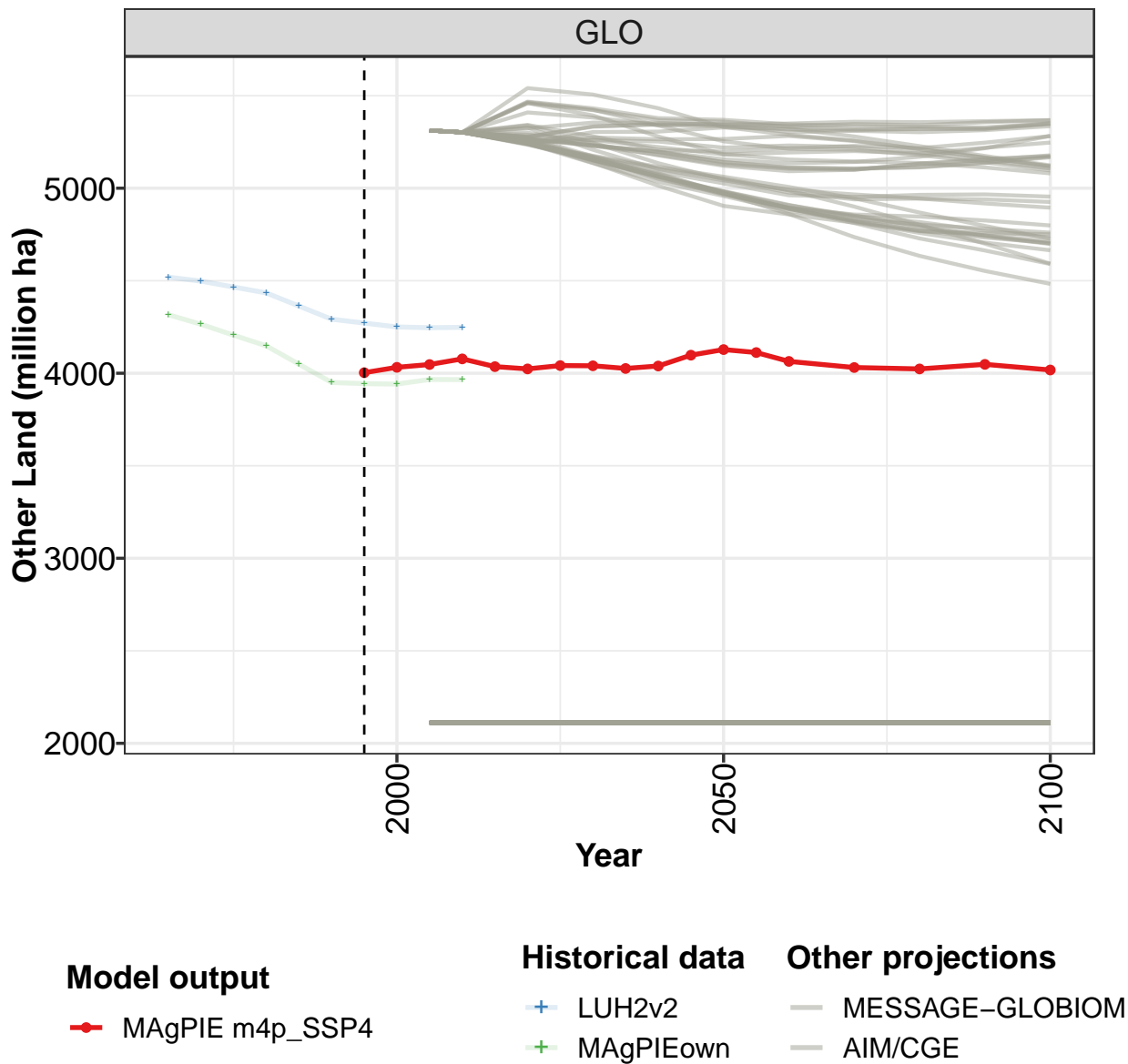
Table 1640: MAgPIE m4p\_SSP4 — Resources—Land Cover—Forest—Natural Forest—Secondary Forest (million ha) [PART 2/2]

	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



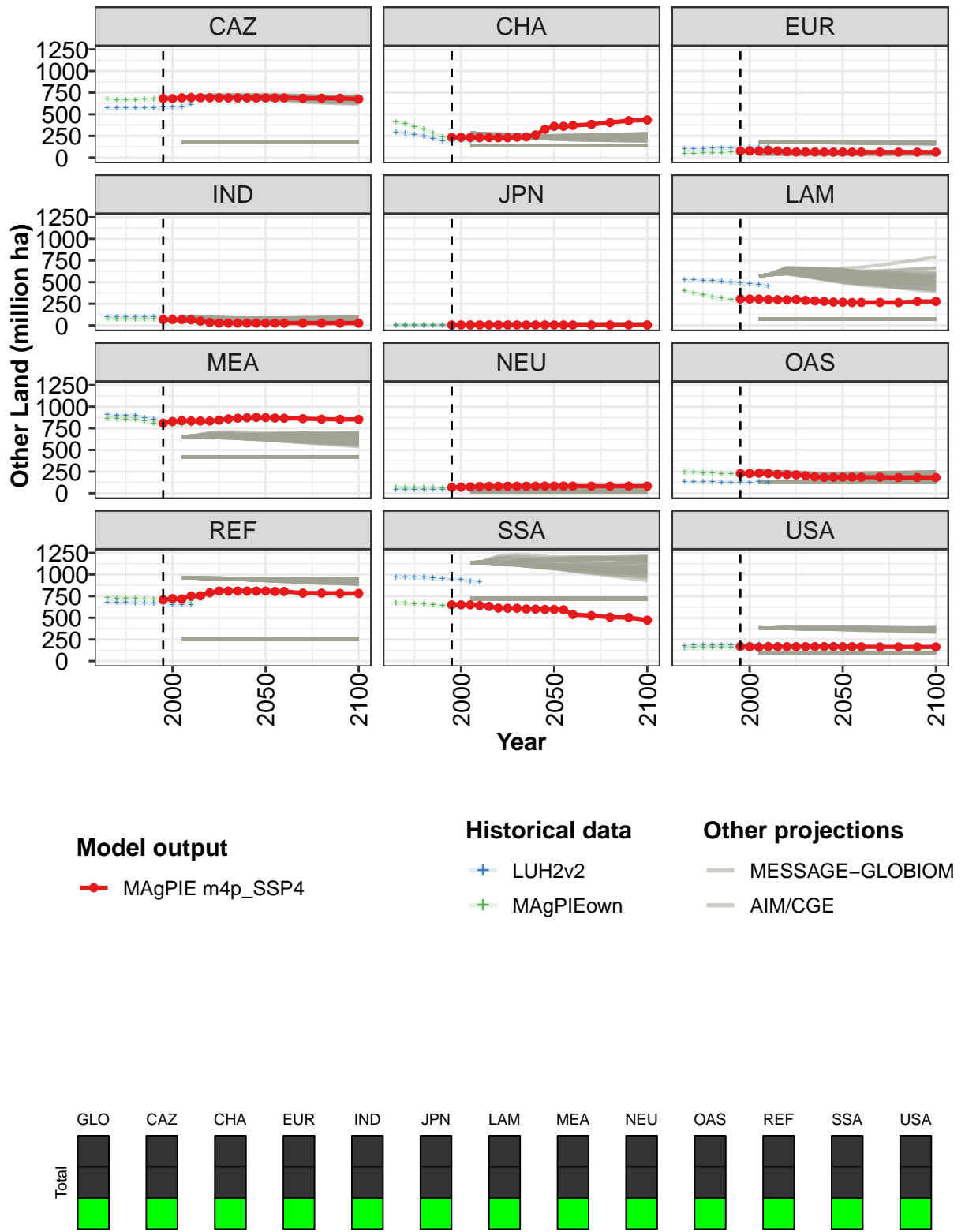


Figure 431: MAgPIE m4p\_SSP4 — Resources—Land Cover—Other Land (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4003	4032	4047	4078	4036	4023	4041	4040	4026	4039	4098
CAZ	683	681	690	692	691	691	690	690	690	690	690
CHA	234	234	234	231	231	230	230	236	240	261	327
EUR	76	75	75	80	77	69	65	65	65	63	63
IND	67	67	67	65	50	34	27	27	27	27	27
JPN	5	5	5	5	5	5	5	5	5	5	5
LAM	305	304	304	299	297	296	299	289	284	279	270
MEA	809	829	839	836	834	834	844	859	867	872	876
NEU	68	71	73	78	80	80	80	81	80	81	82
OAS	229	229	232	229	218	215	212	202	190	184	185
REF	709	721	717	753	754	790	809	809	809	809	809
SSA	650	650	650	642	631	613	611	610	602	600	597
USA	169	165	161	167	166	167	167	167	167	167	167

Table 1642: MAgPIE m4p\_SSP4 — Resources—Land Cover—Other Land (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	4128	4112	4064	4031	4023	4048	4018
CAZ	690	690	690	685	685	685	676
CHA	361	361	371	383	405	426	435
EUR	63	63	63	63	63	63	63
IND	27	27	27	27	26	26	26
JPN	5	5	5	5	5	5	5
LAM	268	265	266	266	265	276	277
MEA	874	870	867	862	856	854	853
NEU	82	82	82	81	81	82	83
OAS	186	185	185	185	181	182	182
REF	809	804	804	785	785	782	782
SSA	597	593	539	525	507	503	473
USA	167	167	165	164	164	164	164

Table 1643: MAgPIE m4p\_SSP4 — Resources—Land Cover—Other Land (million ha) [PART 2/2]

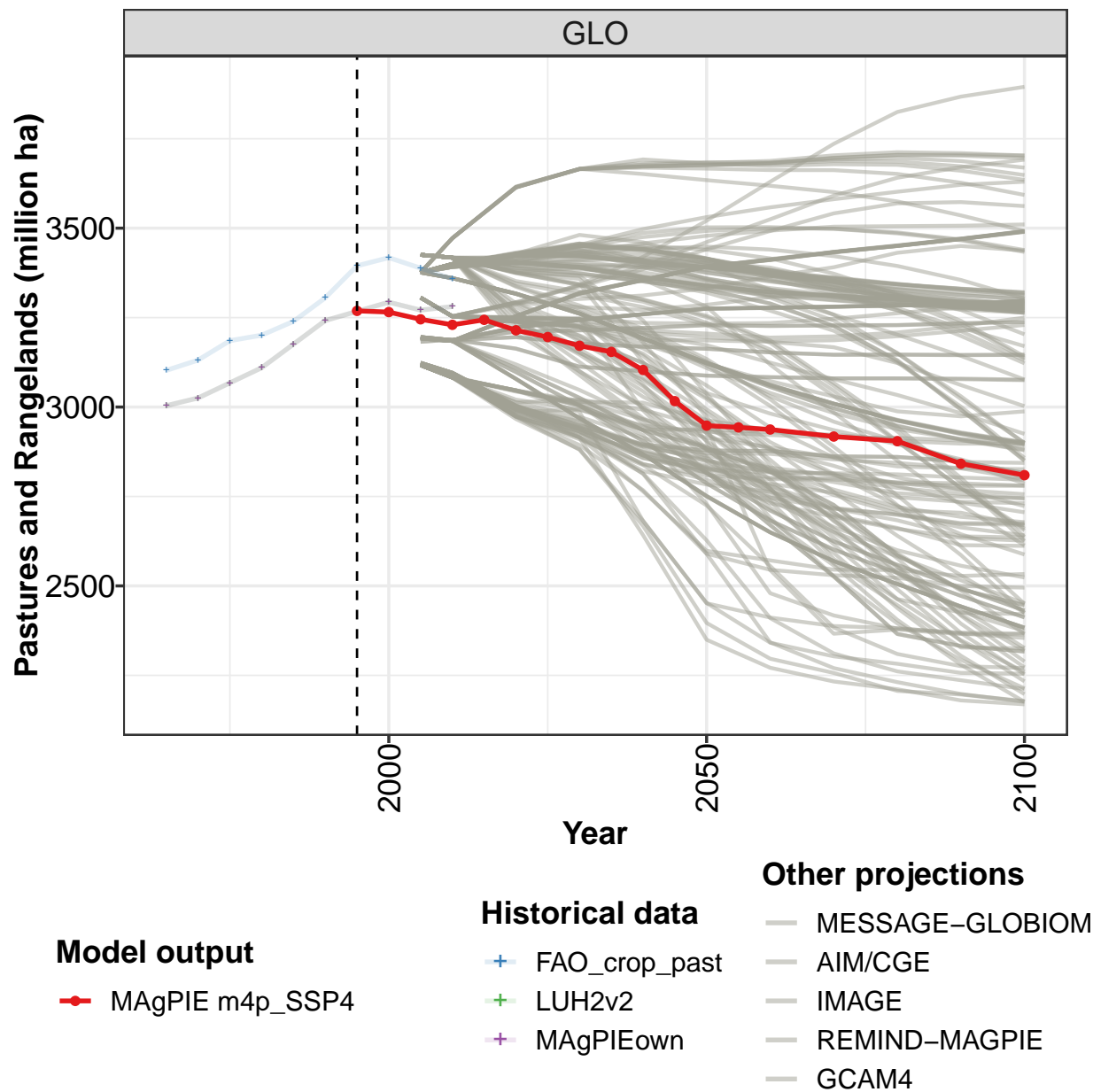
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4519	4498	4466	4434	4363	4292	4271	4250	4246	4248
CAZ	576	571	571	571	574	577	579	581	585	614
CHA	295	285	268	250	221	192	194	197	196	200
EUR	101	103	105	107	108	110	113	116	122	125
IND	101	99	98	97	96	96	95	94	93	93
JPN	0	0	0	0	0	0	0	0	0	0
LAM	531	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



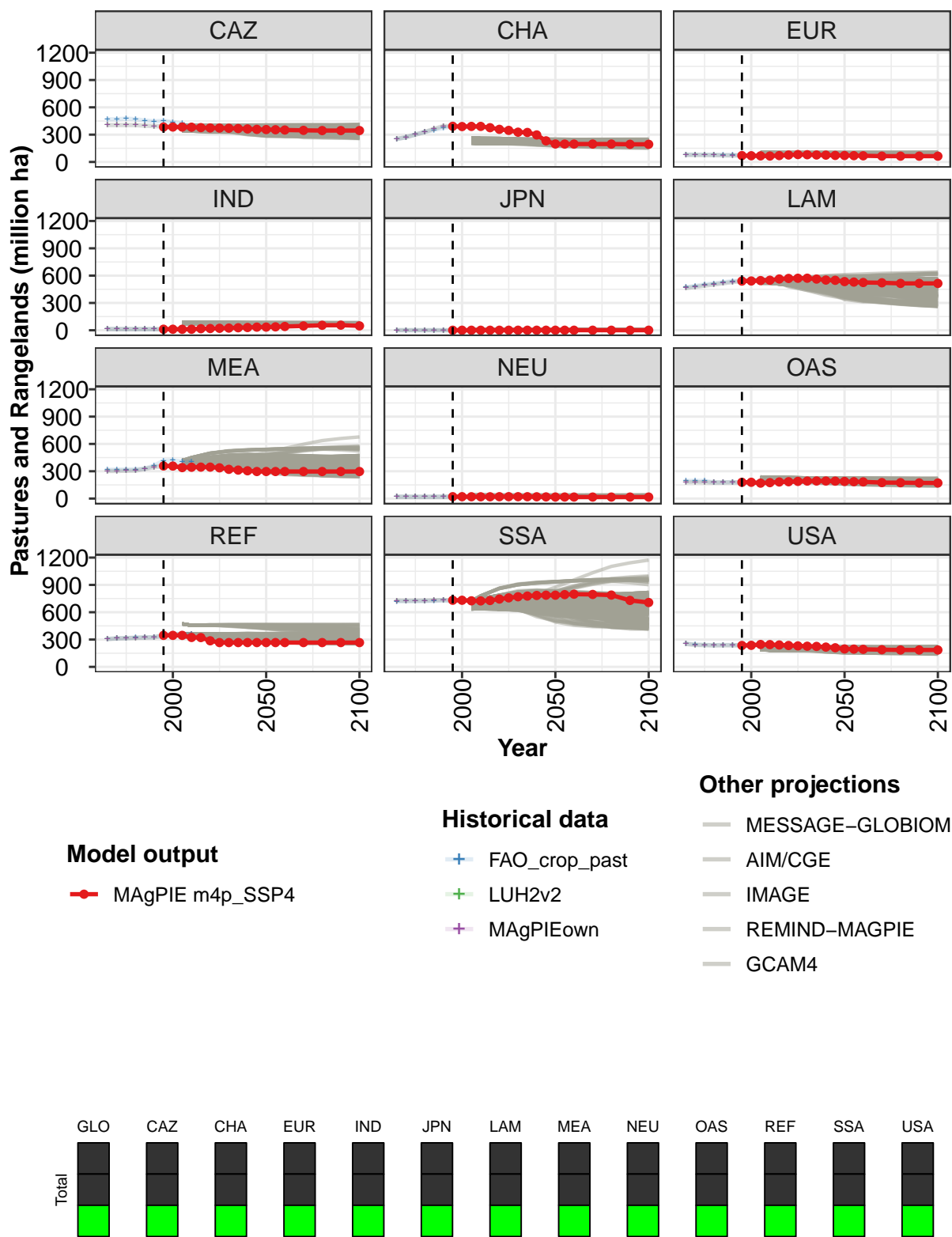


Figure 432: MAgPIE m4p\_SSP4 — Resources—Land Cover—Pastures and Rangelands (million ha)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3269	3265	3245	3230	3244	3215	3196	3171	3154	3104	3017
CAZ	384	384	384	382	377	374	372	370	367	363	358
CHA	392	389	391	391	376	359	347	327	324	297	232
EUR	70	68	67	65	70	76	81	79	77	75	72
IND	12	12	11	11	17	19	22	24	28	30	35
JPN	0	0	0	0	0	0	0	1	1	1	1
LAM	540	541	546	550	563	569	571	572	562	552	549
MEA	358	357	340	344	345	345	338	321	313	305	297
NEU	21	21	20	20	20	21	21	21	21	20	18
OAS	179	179	170	175	182	185	189	192	193	193	191
REF	346	346	346	323	322	286	267	267	267	267	267
SSA	732	732	725	725	729	745	758	770	778	784	787
USA	235	237	246	245	240	235	230	227	225	217	210

Table 1646: MAgPIE m4p\_SSP4 — Resources—Land Cover—Pastures and Rangelands (million ha) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	2948	2943	2937	2918	2905	2841	2810
CAZ	356	354	351	347	345	345	345
CHA	198	197	197	197	197	194	194
EUR	71	70	68	64	64	64	64
IND	35	38	42	47	55	56	48
JPN	1	1	1	1	0	0	0
LAM	535	529	525	521	515	515	515
MEA	297	297	297	297	297	297	297
NEU	17	17	17	17	17	17	17
OAS	188	185	183	176	175	172	171
REF	267	267	267	267	267	267	267
SSA	787	794	798	795	788	730	707
USA	197	195	193	189	185	185	185

Table 1647: MAgPIE m4p\_SSP4 — 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

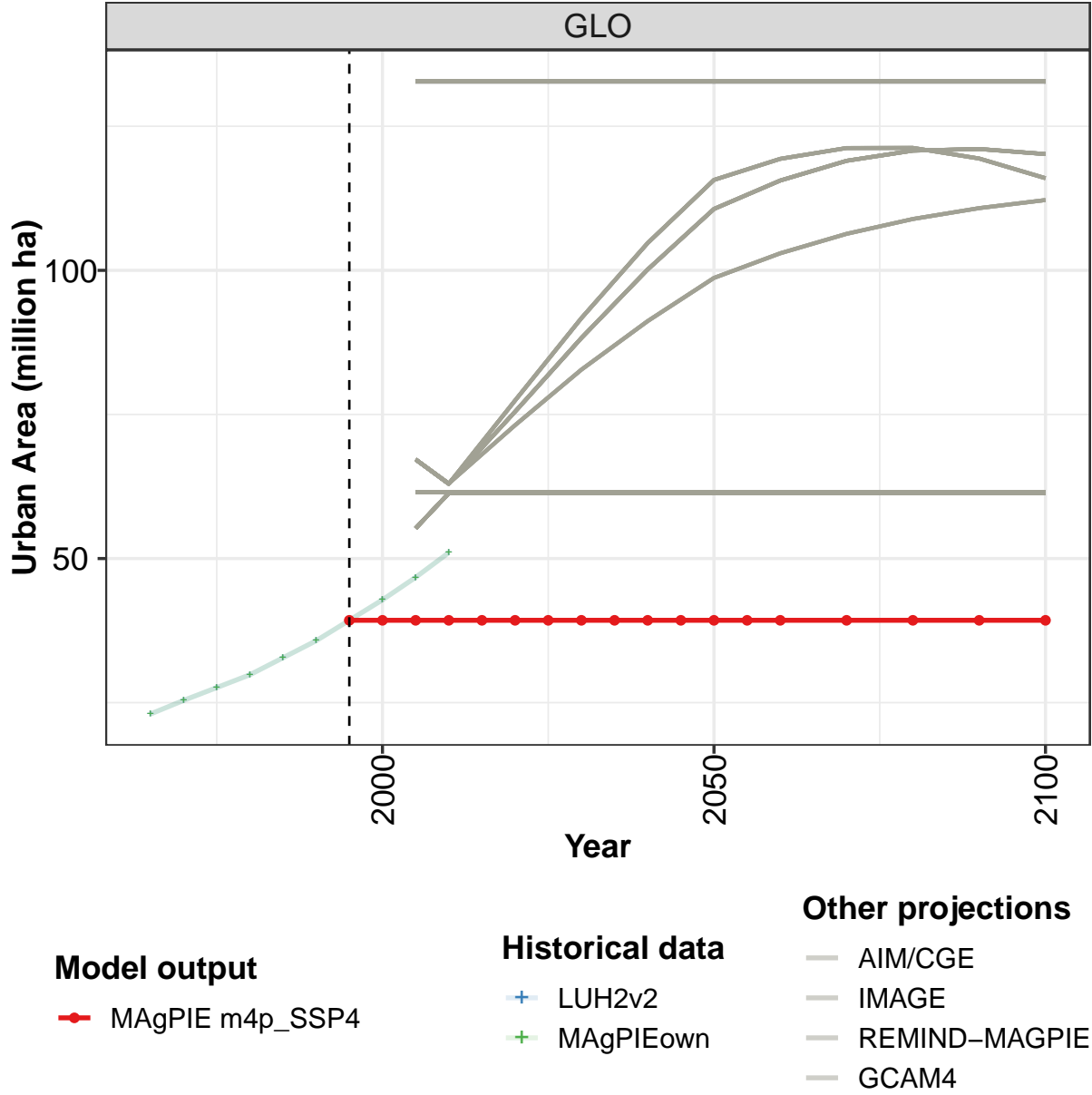
Table 1649: LUH2v2 — Resources—Land Cover—Pastures and Rangelands (million ha)

	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



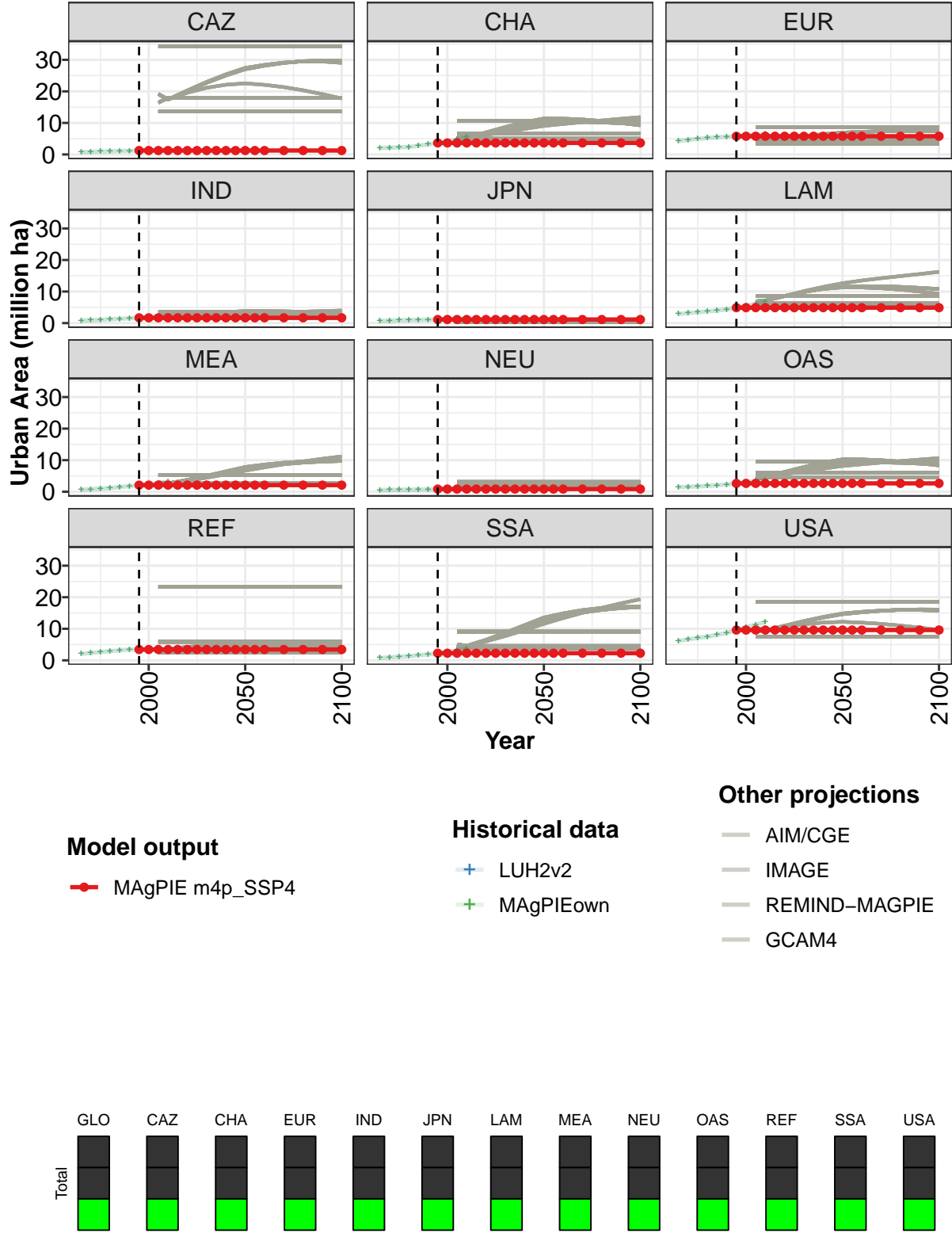


Figure 433: MAgPIE m4p\_SSP4 — Resources—Land Cover—Urban Area (million ha)

	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\_SSP4 — 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\_SSP4 — Resources—Land Cover—Urban Area (million ha) [PART 2/2]

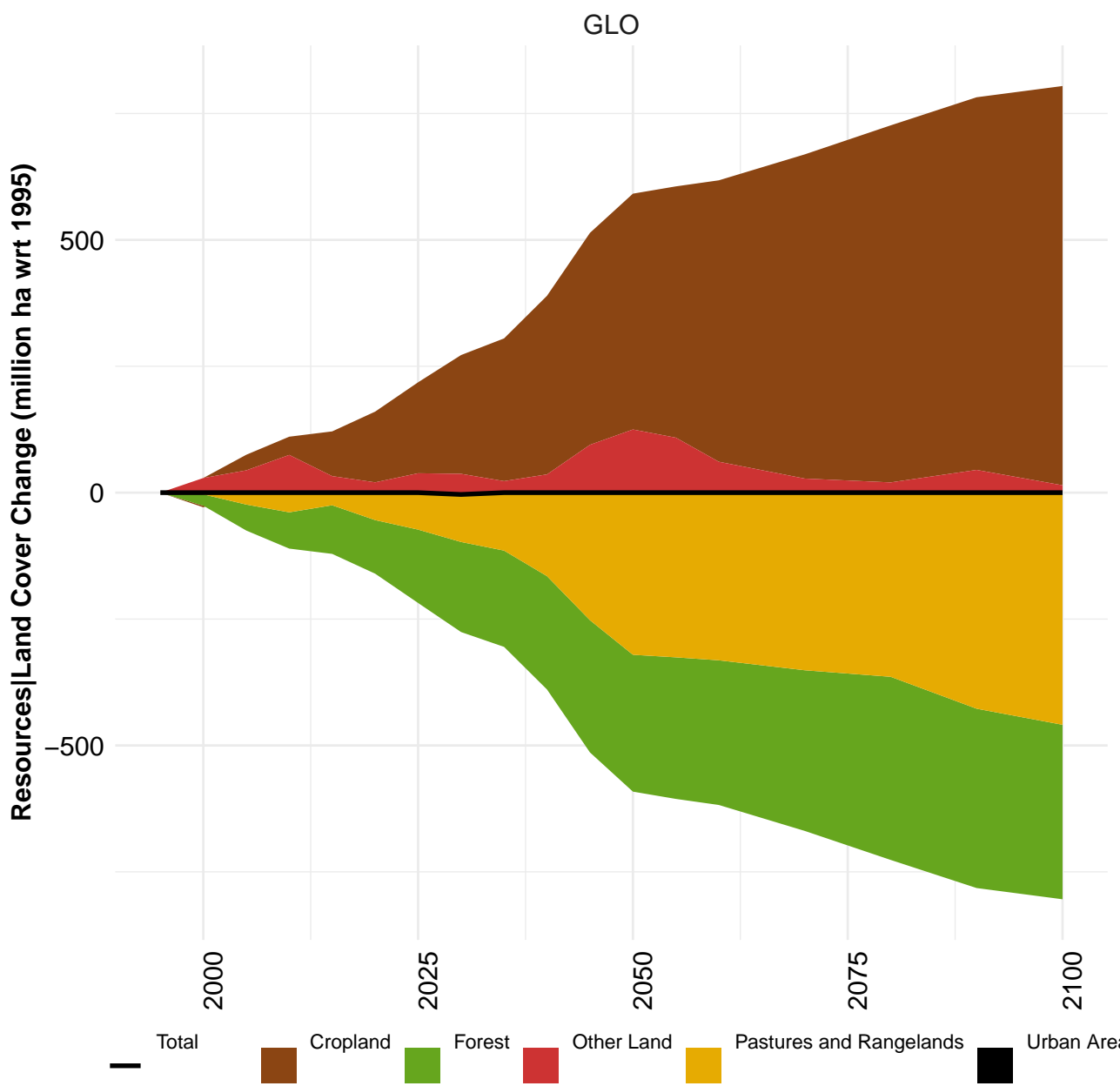
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	23.0	25.4	27.6	29.8	32.8	35.7	39.3	42.8	46.7	51.0
CAZ	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.3	1.5	1.6
CHA	2.1	2.2	2.3	2.3	2.8	3.2	3.7	4.1	4.7	5.5
EUR	4.3	4.6	4.9	5.3	5.5	5.6	5.8	5.9	6.2	6.4
IND	0.8	0.9	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.2
JPN	0.7	0.8	0.9	1.0	1.0	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

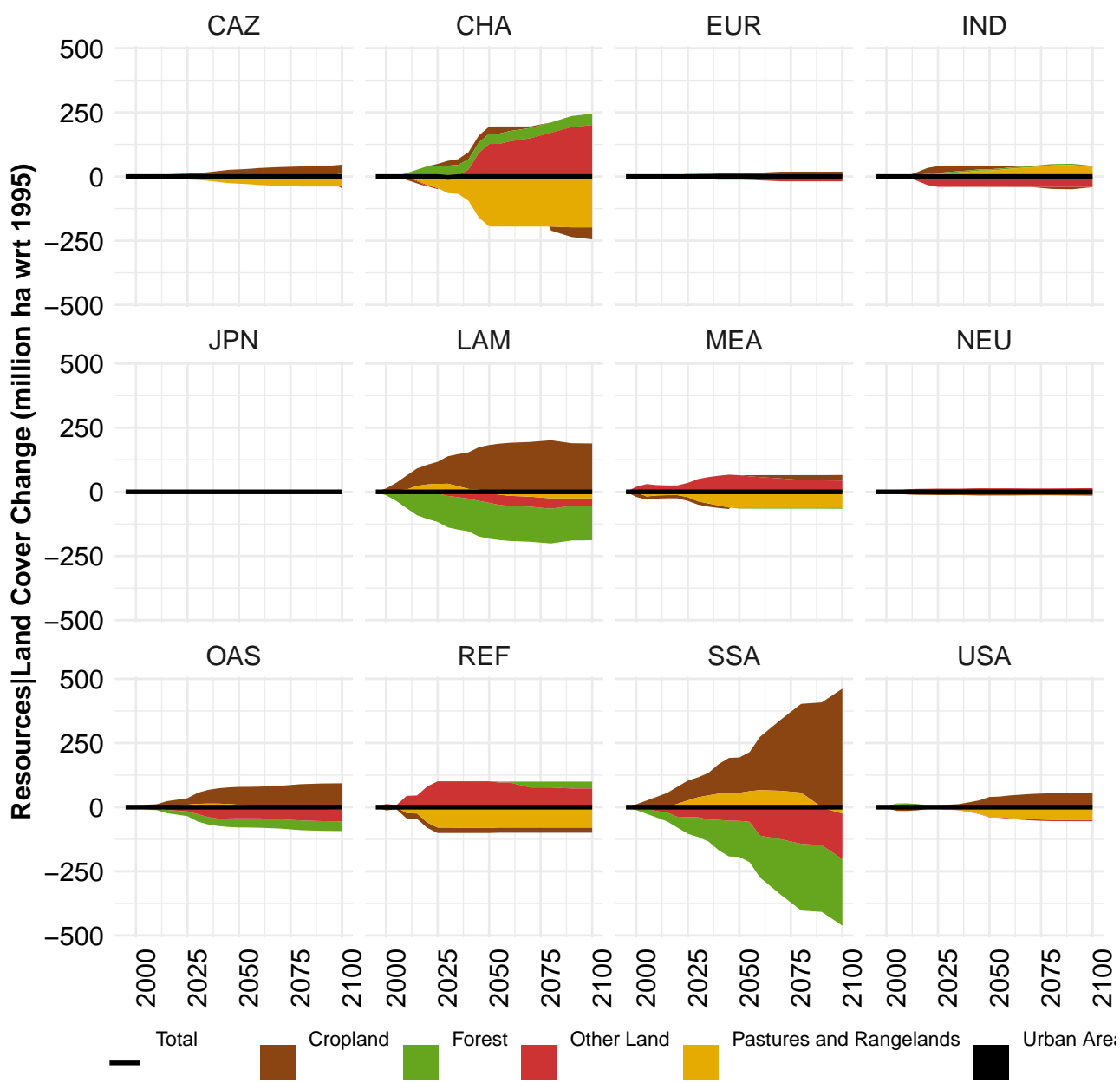
Table 1653: LUH2v2 — Resources—Land Cover—Urban Area (million ha)

	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

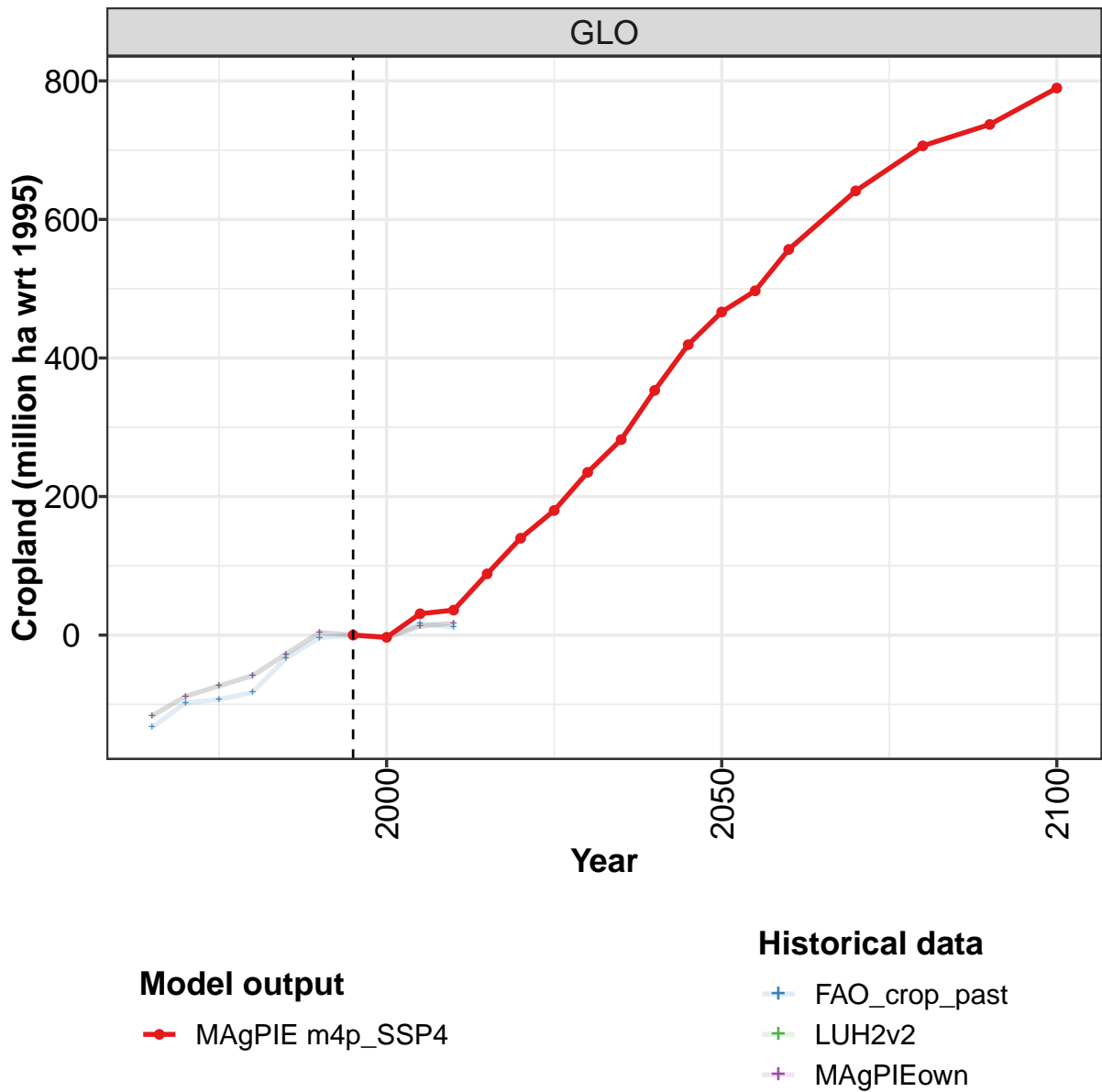
Table 1654: MAgPIEown — Resources—Land Cover—Urban Area (million ha)

55 Land Cover Change





55.1 Cropland



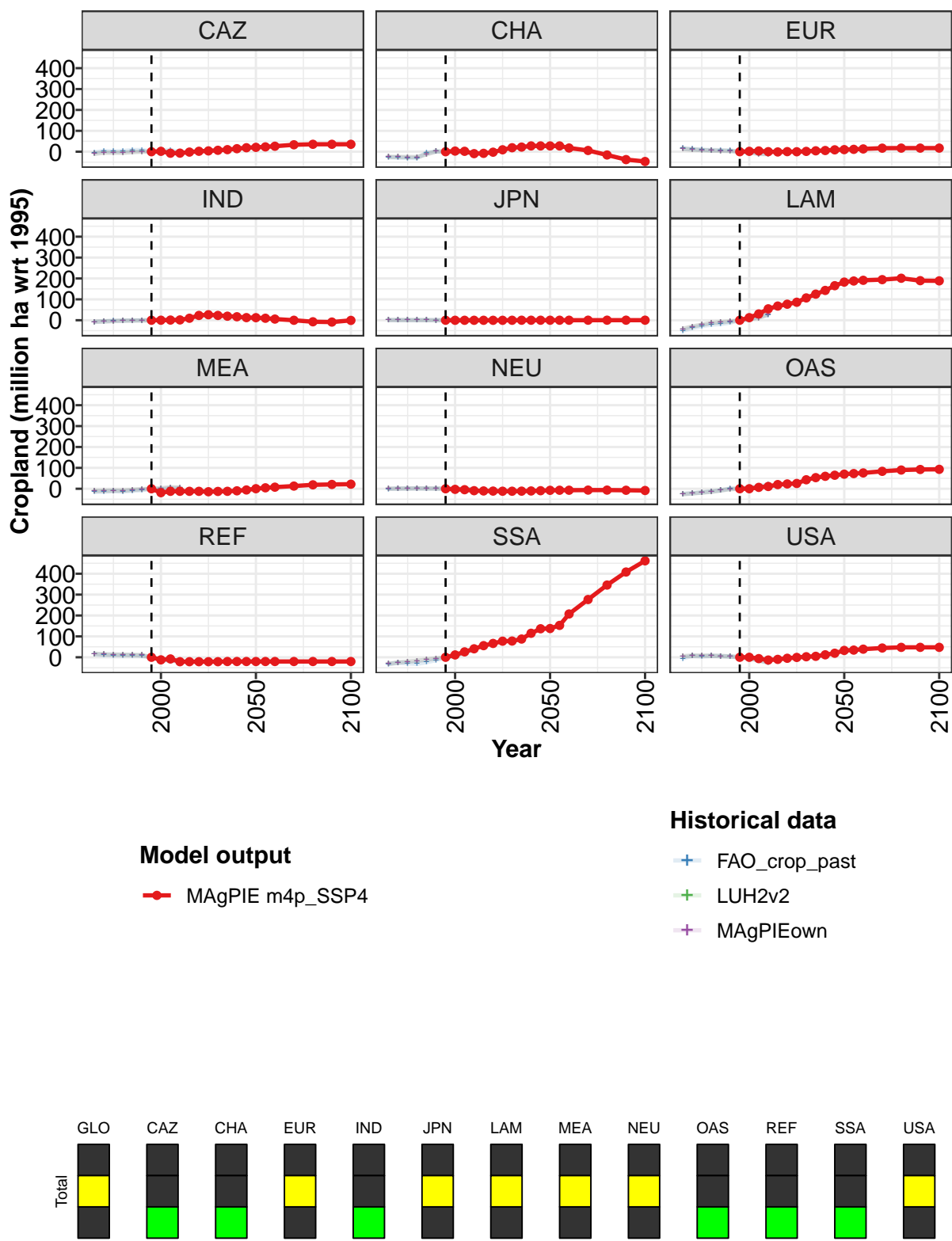


Figure 434: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Cropland (million ha wrt 1995)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	-3	31	36	88	140	180	235	282	353	419
CAZ	0	2	-7	-7	-2	2	4	7	10	14	19
CHA	0	3	2	-9	-8	-2	9	19	22	28	28
EUR	0	2	4	0	-1	0	-0	2	4	6	9
IND	0	0	1	2	10	23	26	23	19	17	13
JPN	0	-0	-0	-0	-0	-0	-0	-0	0	0	0
LAM	0	12	30	55	68	77	86	107	125	143	165
MEA	0	-19	-12	-12	-12	-12	-14	-13	-12	-10	-6
NEU	0	-3	-4	-9	-10	-11	-12	-12	-11	-11	-9
OAS	0	0	7	11	20	23	25	43	53	60	65
REF	0	-12	-8	-21	-21	-21	-21	-21	-20	-20	-20
SSA	0	11	26	41	56	66	77	78	87	115	137
USA	0	-0	-6	-13	-10	-5	-1	3	5	12	19

Table 1655: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Cropland (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	466	497	557	641	706	737	790
CAZ	21	23	26	33	36	36	36
CHA	28	28	18	6	-16	-38	-47
EUR	10	11	13	17	17	17	17
IND	12	10	6	-0	-7	-9	-1
JPN	0	0	0	0	0	0	0
LAM	183	188	191	194	201	189	189
MEA	0	5	8	13	19	21	22
NEU	-7	-7	-7	-6	-6	-7	-8
OAS	70	73	76	83	90	92	93
REF	-20	-20	-20	-20	-20	-20	-20
SSA	138	153	207	277	346	408	462
USA	33	34	39	44	47	48	48

Table 1656: MAgPIE m4p\_SSP4 — 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

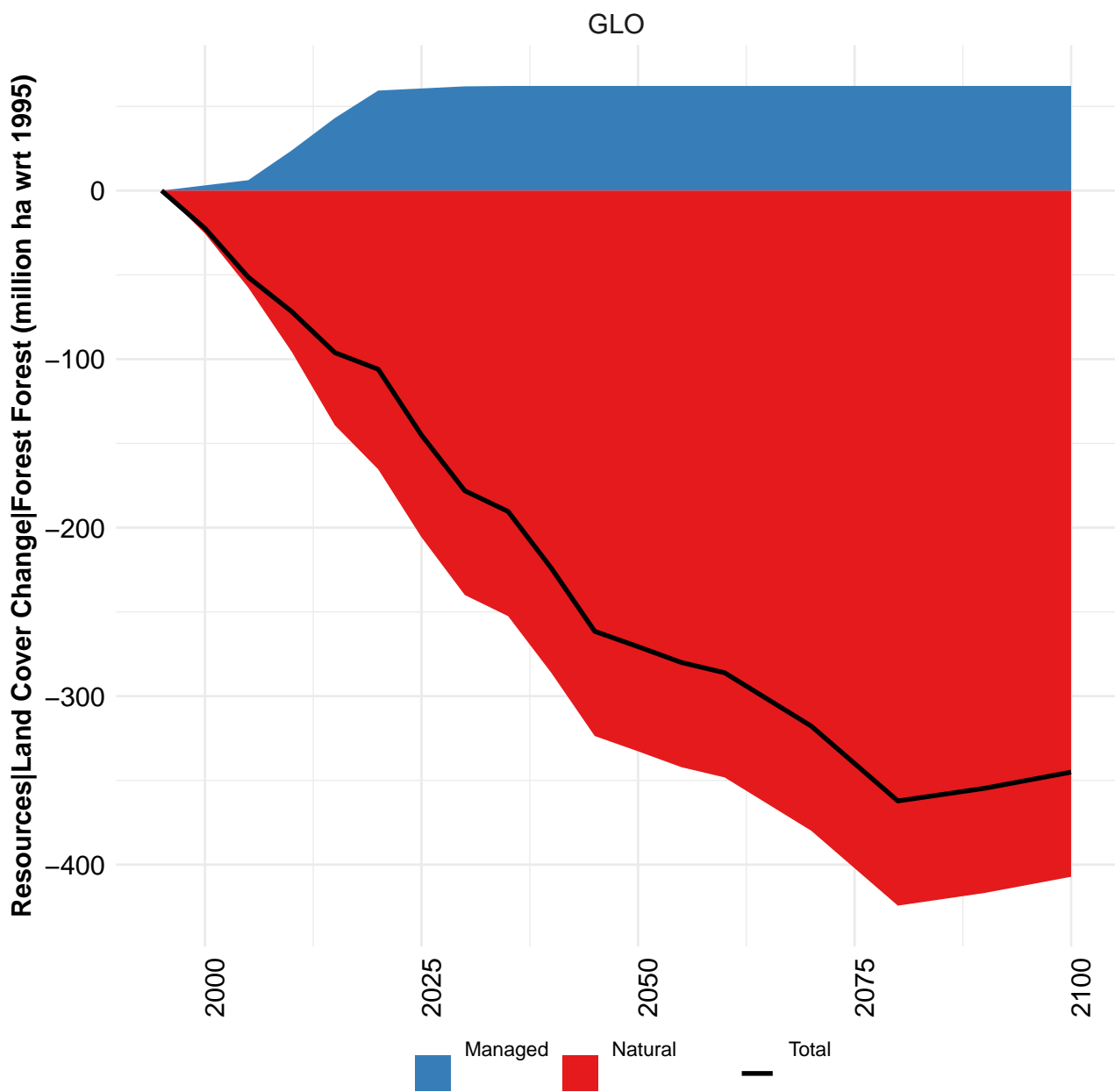
Table 1657: FAO\_crop\_past — Resources—Land Cover Change—Cropland (million ha wrt 1995)

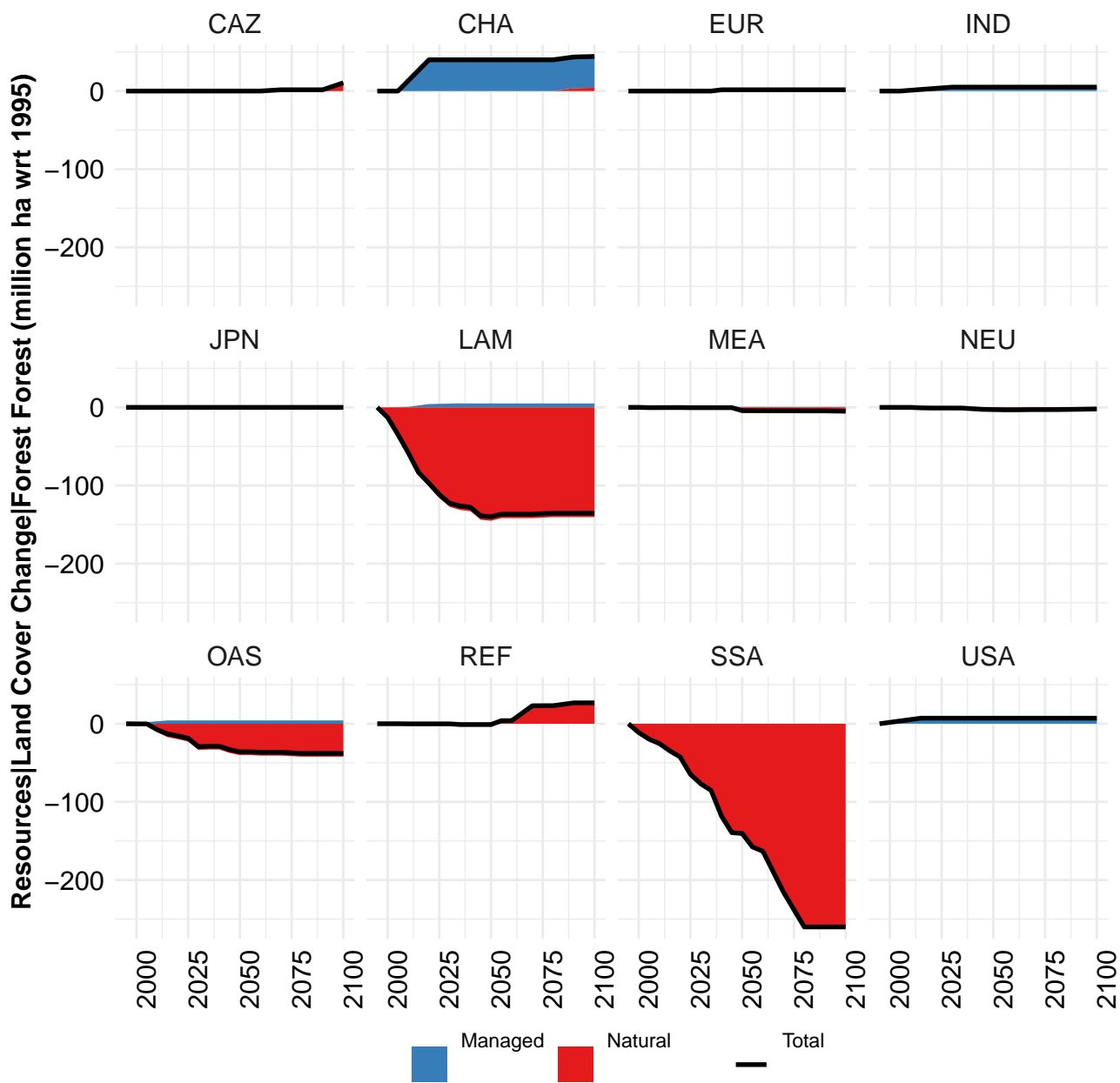
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-116.7	-88.3	-73.4	-58.5	-27.3	3.8	0.0	-3.8	12.9	17.4
CAZ	-10.3	-4.5	-4.6	-4.8	-2.1	0.6	0.0	-0.6	0.5	-9.8
CHA	-24.9	-25.3	-25.5	-25.7	-12.4	1.0	0.0	-1.0	1.1	-7.1
EUR	13.0	10.2	7.9	5.5	4.4	3.3	0.0	-3.3	-10.5	-11.8
IND	-7.5	-5.5	-4.0	-2.4	-1.8	-1.2	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)

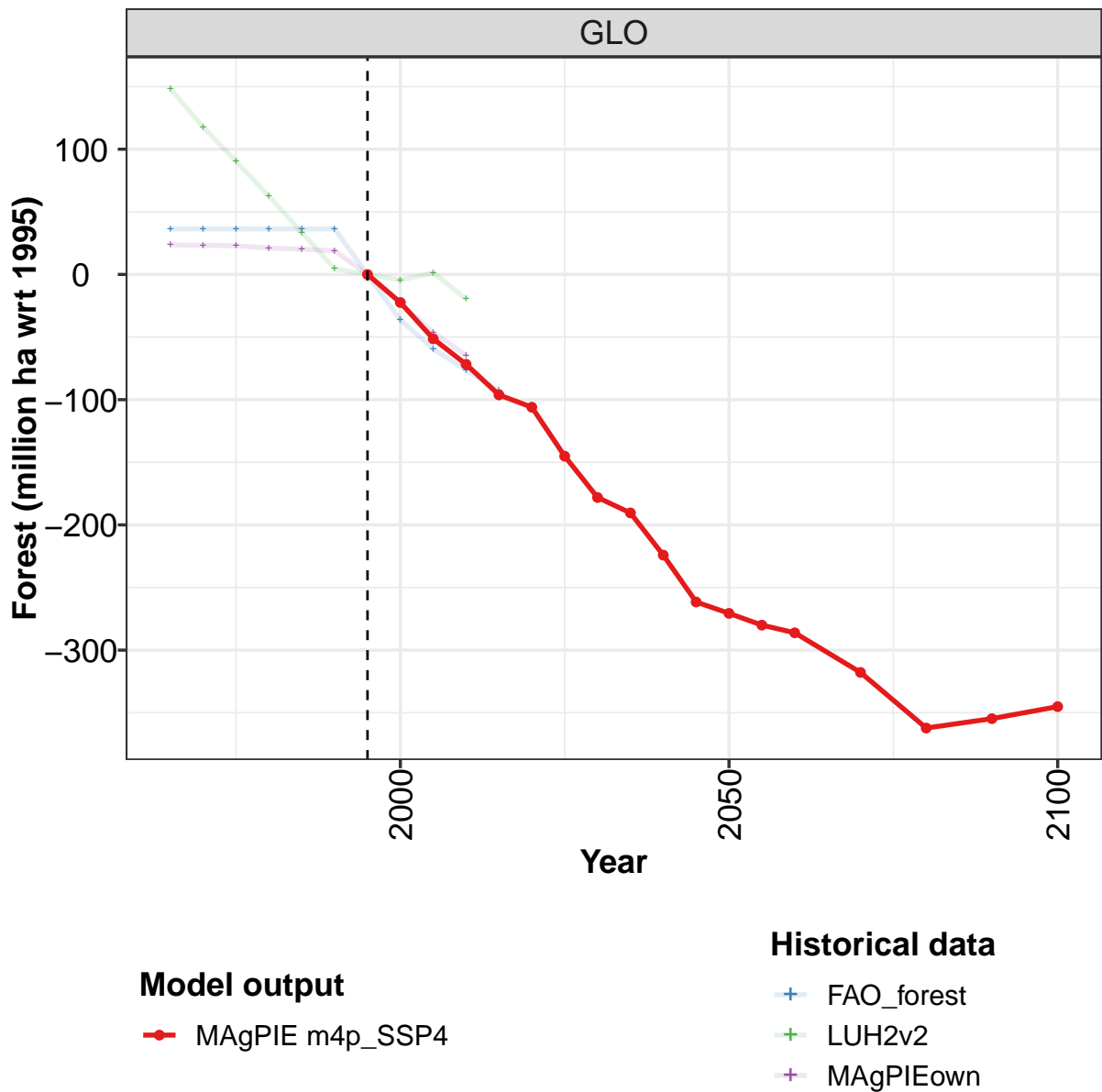
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-116.7	-88.3	-73.4	-58.5	-27.3	3.8	0.0	-3.8	12.9	17.4
CAZ	-10.3	-4.5	-4.6	-4.8	-2.1	0.6	0.0	-0.6	0.5	-9.8
CHA	-24.9	-25.3	-25.5	-25.7	-12.4	1.0	0.0	-1.0	1.1	-7.1
EUR	13.0	10.2	7.9	5.5	4.4	3.3	0.0	-3.3	-10.5	-11.8
IND	-7.5	-5.5	-4.0	-2.4	-1.8	-1.2	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)





55.2 Forest



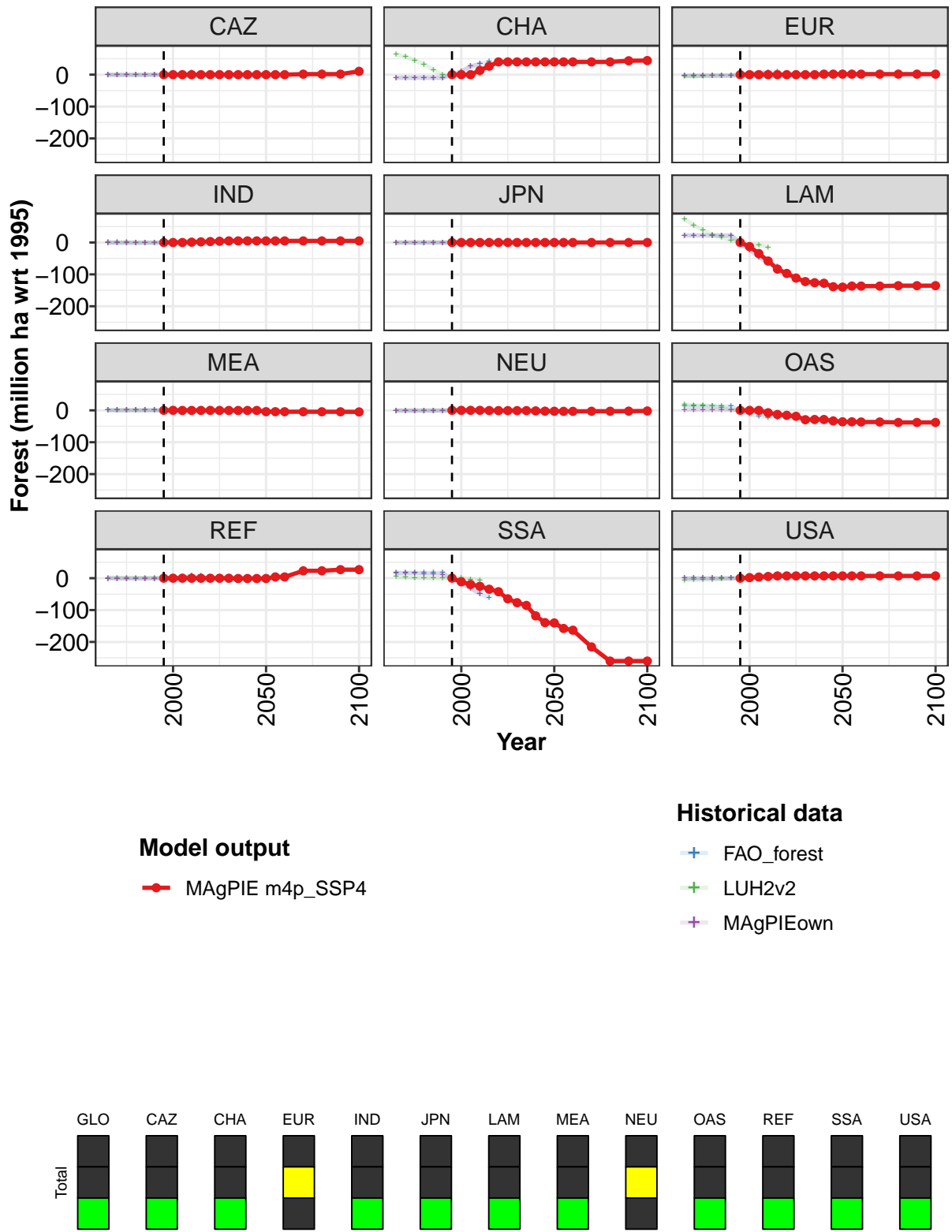


Figure 435: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-22.4	-51.4	-71.7	-96.2	-106.0	-145.1	-178.1	-190.4	-224.1	-261.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	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	-83.4	-97.0	-111.5	-122.6	-126.1	-127.7	-138.8
MEA	0.0	0.0	-0.3	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3
NEU	0.0	0.0	-0.0	-0.0	-0.6	-0.8	-0.8	-0.8	-0.9	-1.7	-2.5
OAS	0.0	-0.2	-0.2	-7.5	-12.9	-15.5	-18.6	-29.4	-28.7	-28.7	-33.1
REF	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-1.0	-1.0	-1.0
SSA	0.0	-11.3	-19.7	-25.4	-34.7	-42.4	-64.7	-76.9	-85.4	-118.2	-139.5
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\_SSP4 — Resources—Land Cover Change—Forest (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	-270.6	-280.0	-286.1	-317.8	-362.2	-354.7	-345.1
CAZ	0.0	0.0	0.0	1.6	1.6	1.6	10.5
CHA	40.0	40.0	40.0	40.0	40.0	43.6	44.3
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	-140.0	-136.7	-136.7	-136.7	-135.4	-135.4	-135.4
MEA	-4.2	-4.2	-4.4	-4.4	-4.5	-4.5	-4.9
NEU	-2.8	-3.1	-3.1	-2.8	-2.8	-2.5	-2.0
OAS	-36.0	-36.0	-36.5	-36.5	-38.0	-38.0	-37.9
REF	-1.0	3.9	3.9	23.0	23.1	26.7	26.7
SSA	-140.4	-157.7	-163.1	-215.8	-260.0	-260.0	-260.0
USA	7.1	7.1	7.1	7.1	7.1	7.1	7.1

Table 1661: MAgPIE m4p\_SSP4 — 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

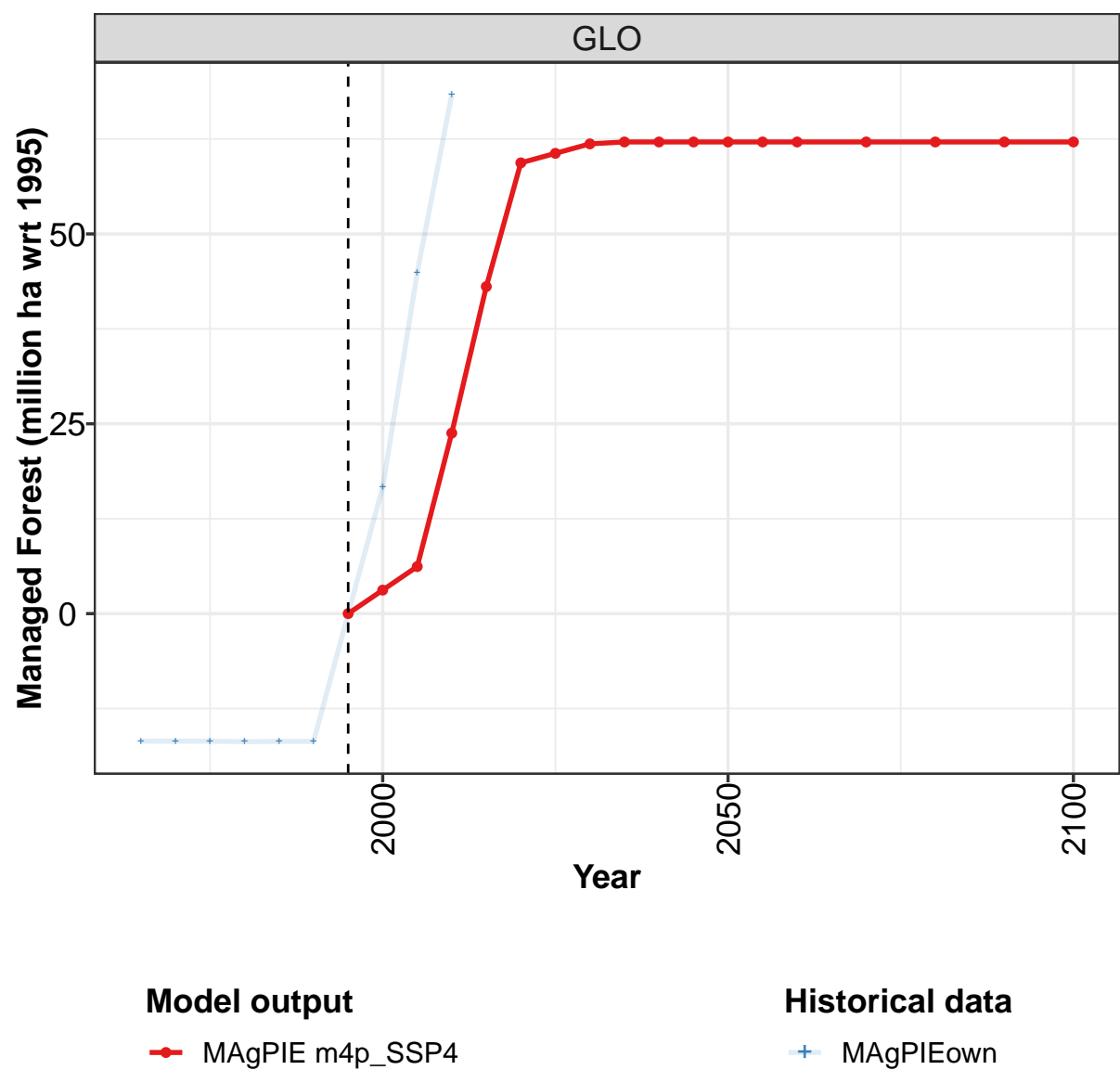
Table 1663: LUH2v2 — Resources—Land Cover Change—Forest (million ha wrt 1995)

	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



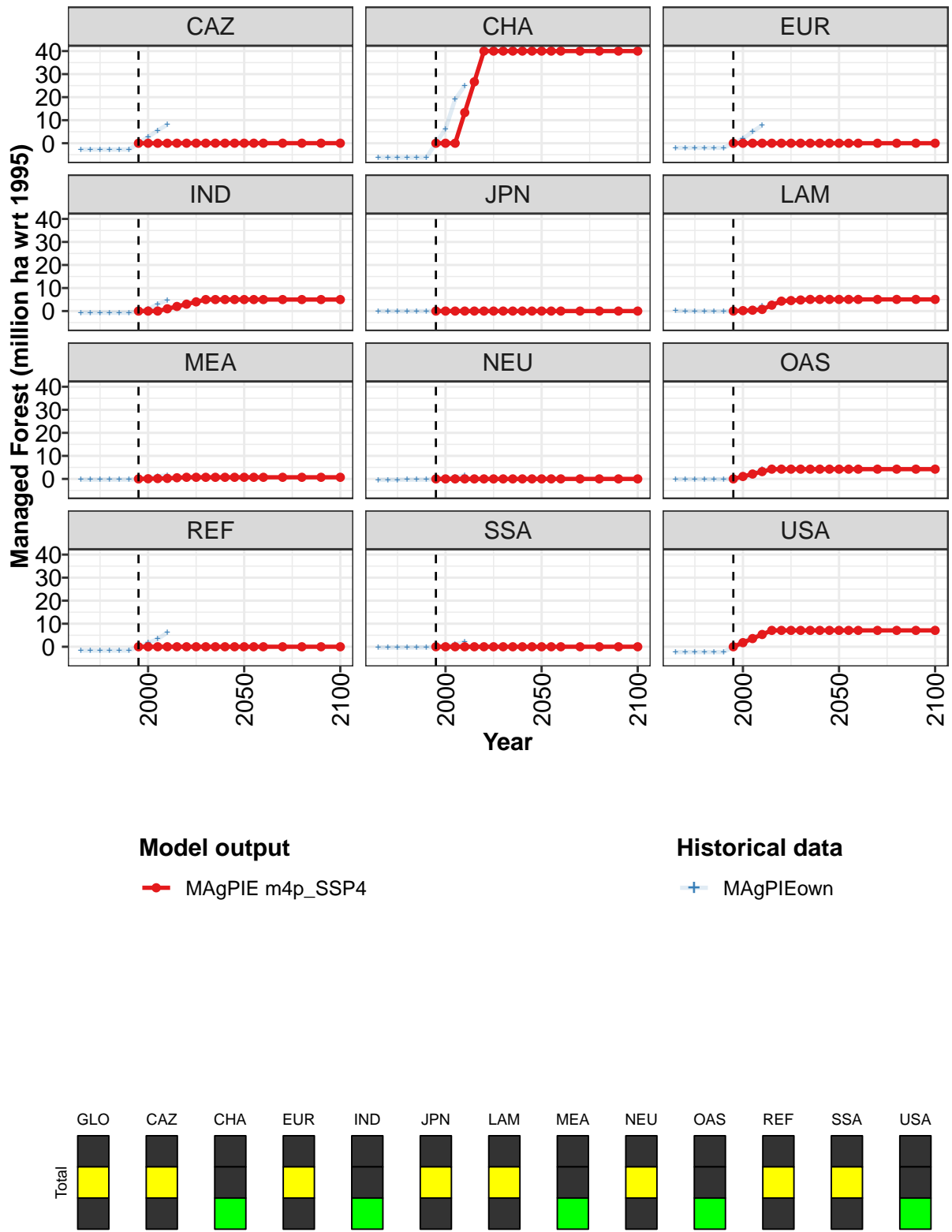


Figure 436: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Forest—Managed Forest (million ha wrt 1995)

	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\_SSP4 — 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\_SSP4 — 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



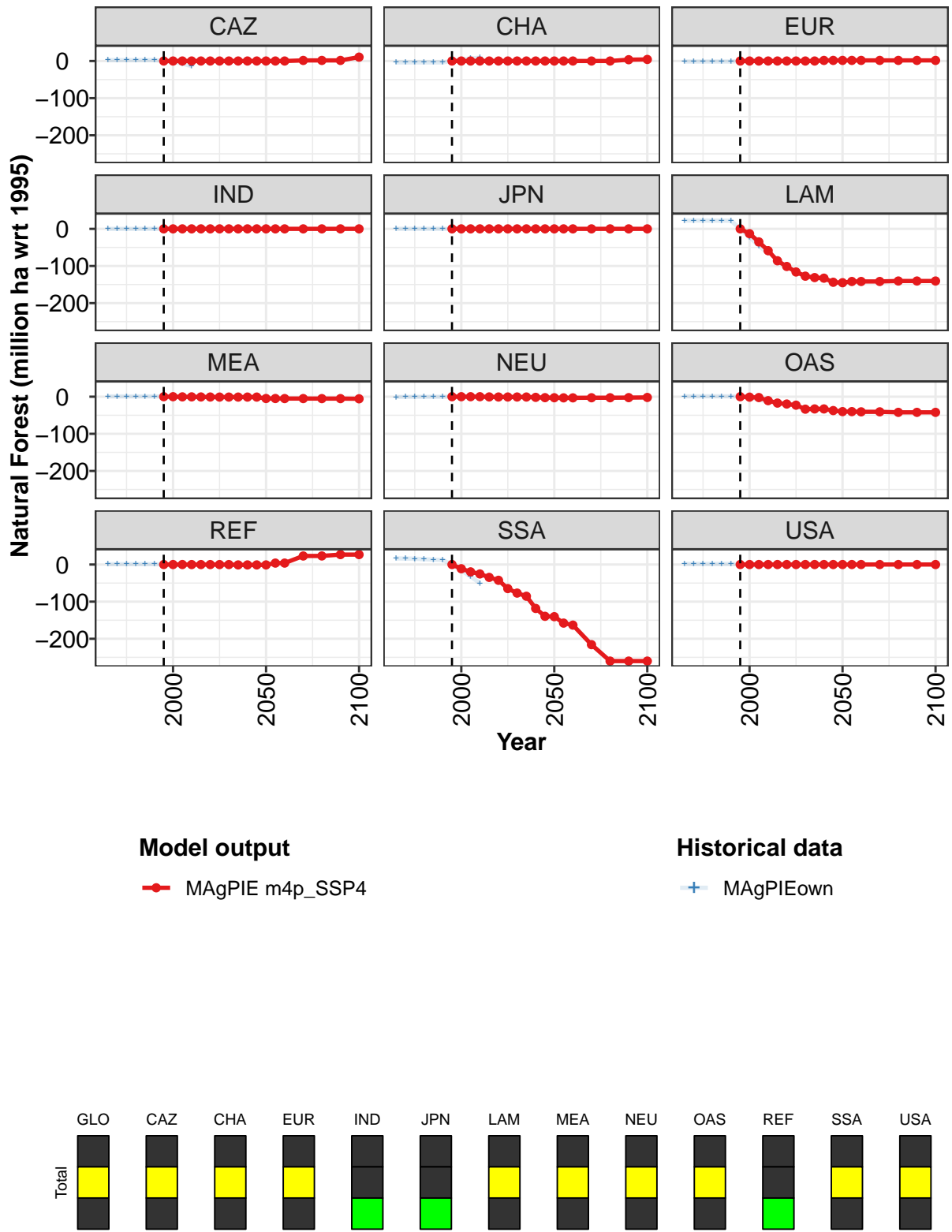


Figure 437: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Forest—Natural Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-25.5	-57.6	-95.5	-139.2	-165.4	-205.7	-240.0	-252.5	-286.2	-323.7
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	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	-85.9	-101.3	-116.1	-127.4	-131.2	-132.8	-143.8
MEA	0.0	-0.0	-0.4	-0.5	-0.7	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0
NEU	0.0	0.0	-0.0	-0.0	-0.6	-0.8	-0.8	-0.8	-0.9	-1.7	-2.5
OAS	0.0	-1.2	-2.3	-10.7	-17.2	-19.8	-22.9	-33.6	-33.0	-33.0	-37.4
REF	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-1.0	-1.0	-1.0
SSA	0.0	-11.3	-19.7	-25.4	-34.7	-42.4	-64.7	-76.9	-85.4	-118.2	-139.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1668: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Forest—Natural Forest (million ha wrt 1995) [PART 1/2]

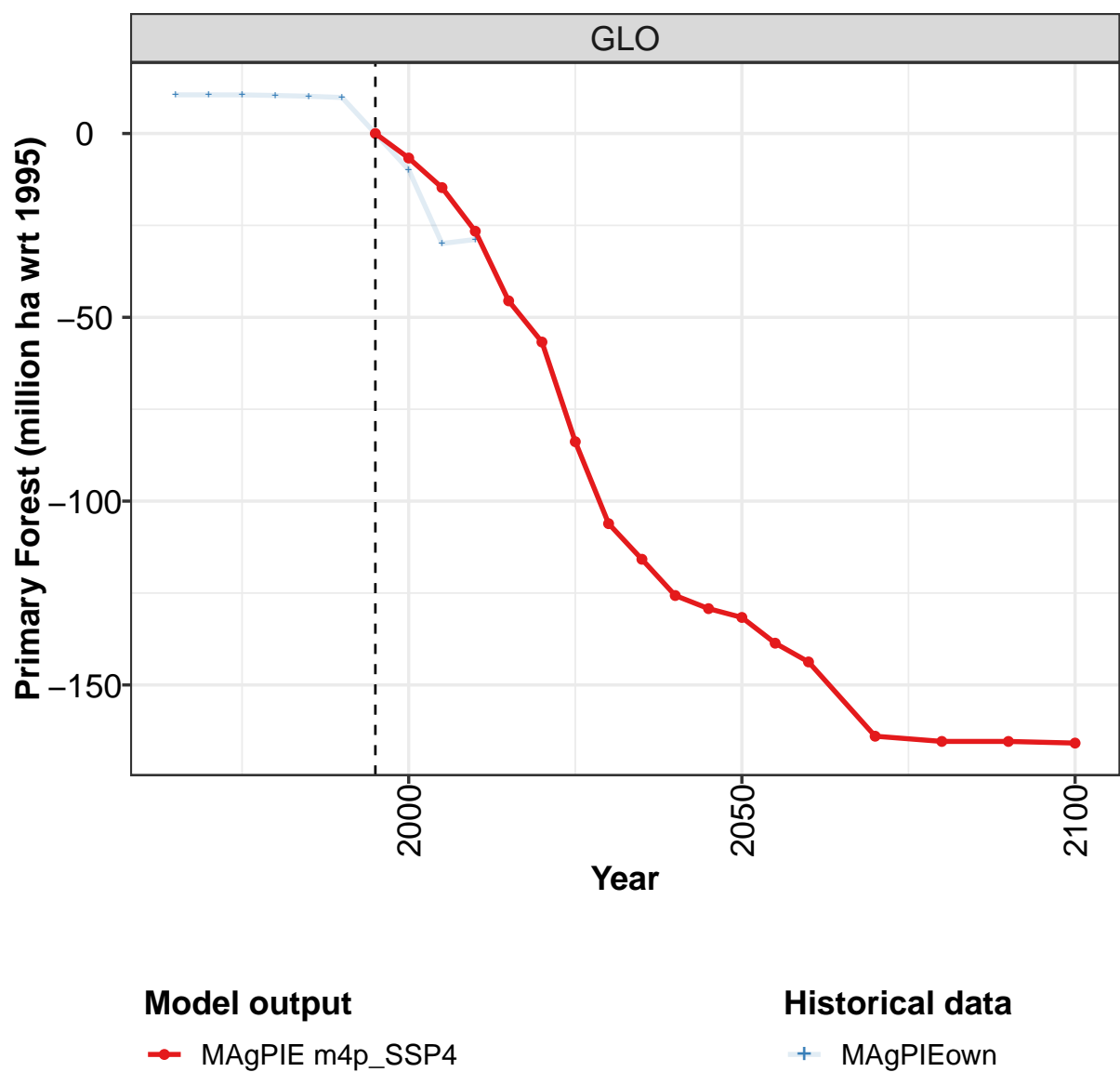
	2050	2055	2060	2070	2080	2090	2100
GLO	-332.7	-342.1	-348.3	-379.9	-424.3	-416.8	-407.2
CAZ	-0.0	-0.0	-0.0	1.6	1.6	1.6	10.5
CHA	0.0	0.0	0.0	0.0	0.0	3.6	4.3
EUR	1.6	1.6	1.6	1.6	1.6	1.6	1.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	-145.0	-141.7	-141.7	-141.7	-140.4	-140.4	-140.4
MEA	-4.9	-4.9	-5.1	-5.1	-5.2	-5.2	-5.6
NEU	-2.8	-3.1	-3.1	-2.8	-2.8	-2.5	-2.0
OAS	-40.2	-40.2	-40.8	-40.8	-42.2	-42.2	-42.2
REF	-1.0	3.9	3.9	23.0	23.1	26.7	26.7
SSA	-140.4	-157.7	-163.1	-215.8	-260.0	-260.0	-260.0
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1669: MAgPIE m4p\_SSP4 — 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



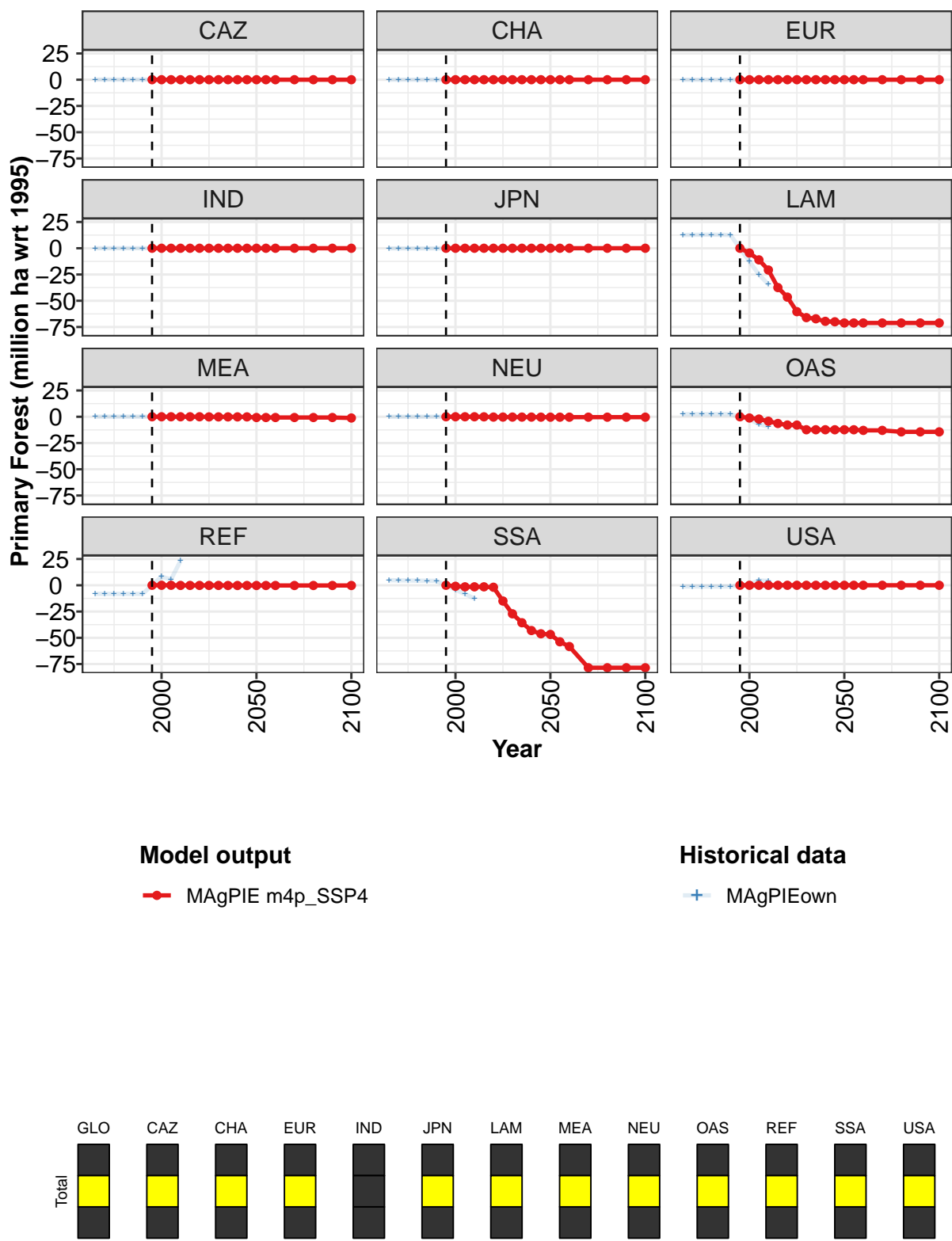


Figure 438: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Forest—Natural Forest—Primary Forest (million ha wrt 1995)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	-7	-15	-27	-46	-57	-84	-106	-116	-126	-129
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	-37	-47	-60	-66	-67	-70	-70
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	-8	-8	-12	-12	-12	-12
REF	0	0	0	-0	-0	-0	-0	-0	-0	-0	-0
SSA	0	-1	-1	-1	-1	-2	-15	-27	-36	-43	-46
USA	0	0	0	0	0	0	0	0	0	0	0

Table 1671: MAgPIE m4p.SSP4 — Resources—Land Cover Change—Forest—Natural Forest—Primary Forest (million ha wrt 1995) [PART 1/2]

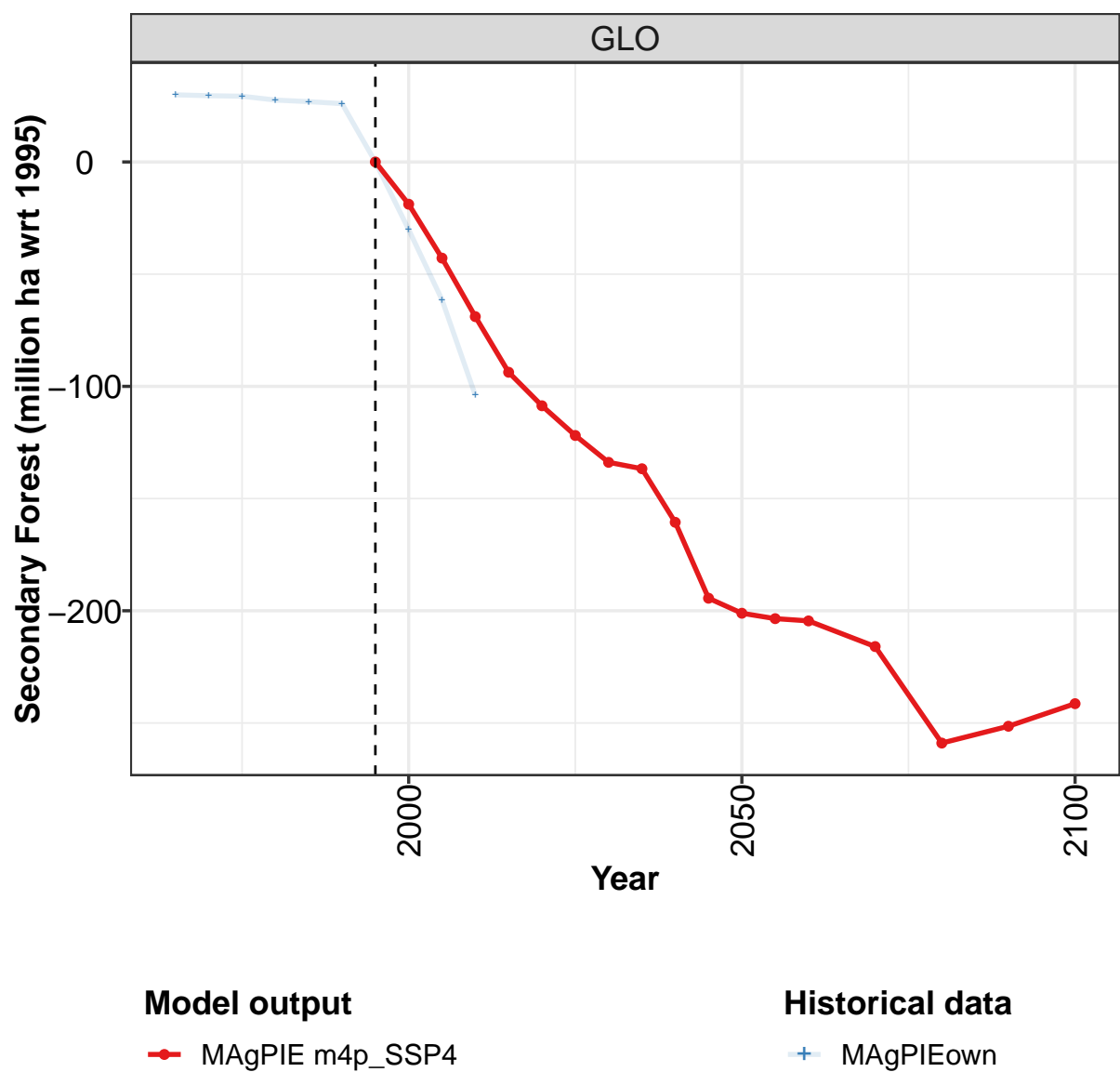
	2050	2055	2060	2070	2080	2090	2100
GLO	-132	-139	-144	-164	-165	-165	-166
CAZ	0	0	0	0	0	0	0
CHA	0	0	0	0	0	0	0
EUR	0	0	0	0	0	0	0
IND	0	0	0	0	0	0	0
JPN	0	0	0	0	0	0	0
LAM	-71	-71	-71	-71	-71	-71	-71
MEA	-1	-1	-1	-1	-1	-1	-1
NEU	-0	-0	-0	-0	-0	-0	-0
OAS	-12	-12	-13	-13	-14	-14	-14
REF	-0	-0	-0	-0	-0	-0	-0
SSA	-47	-54	-58	-79	-79	-79	-79
USA	0	0	0	0	0	0	0

Table 1672: MAgPIE m4p.SSP4 — 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



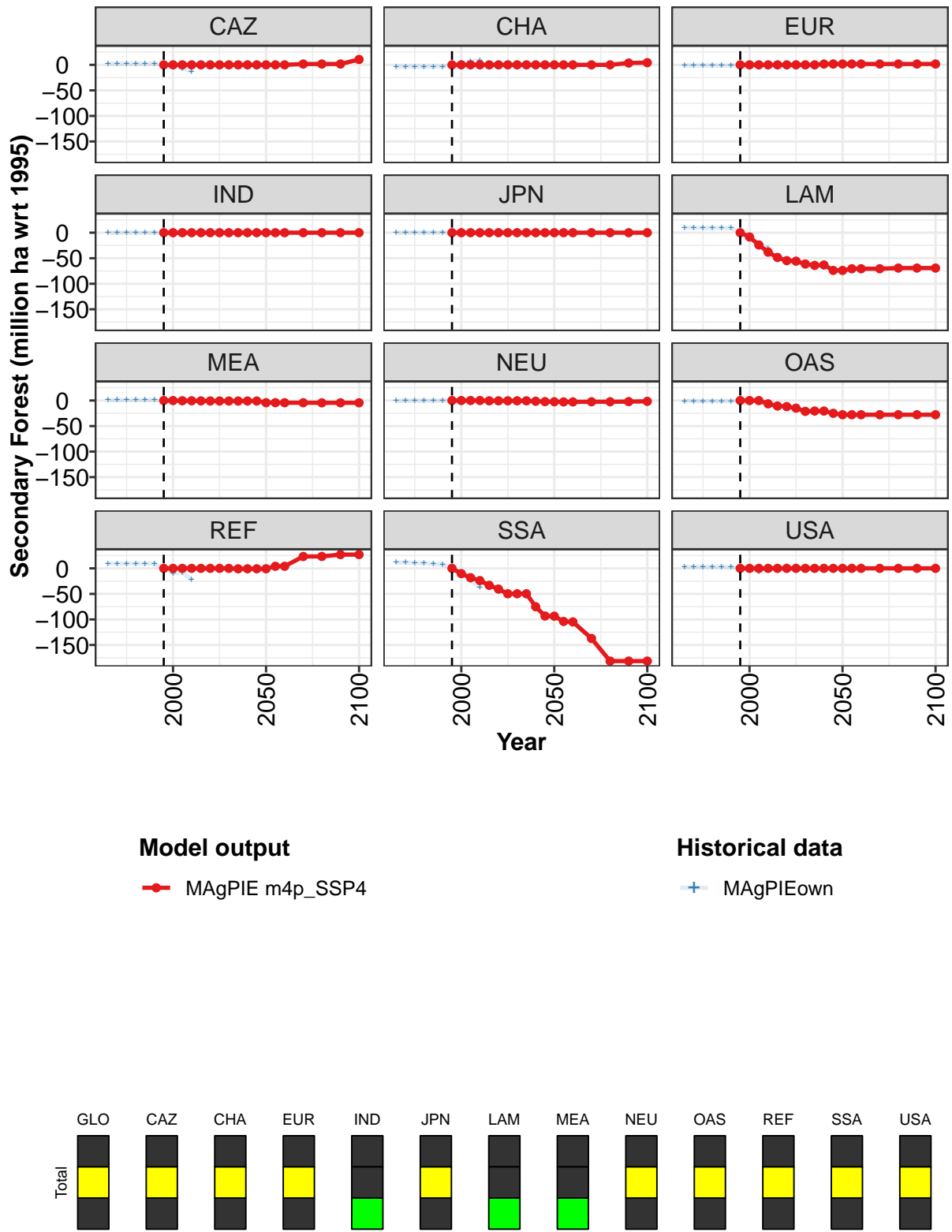


Figure 439: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Forest—Natural Forest—Secondary Forest (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-18.8	-42.8	-68.9	-93.7	-108.7	-121.9	-133.9	-136.7	-160.6	-194.4
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	0.0	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	-48.5	-54.8	-55.7	-61.4	-64.0	-63.2	-73.8
MEA	0.0	-0.0	-0.4	-0.5	-0.7	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
NEU	0.0	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.6	-1.4	-2.2
OAS	0.0	-0.1	-0.1	-6.5	-10.8	-11.9	-14.9	-21.3	-20.6	-20.6	-25.0
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.8	-0.8	-0.8
SSA	0.0	-10.3	-18.3	-23.9	-33.2	-40.5	-49.7	-49.7	-49.7	-75.1	-93.3
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1674: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Forest—Natural Forest—Secondary Forest (million ha wrt 1995) [PART 1/2]

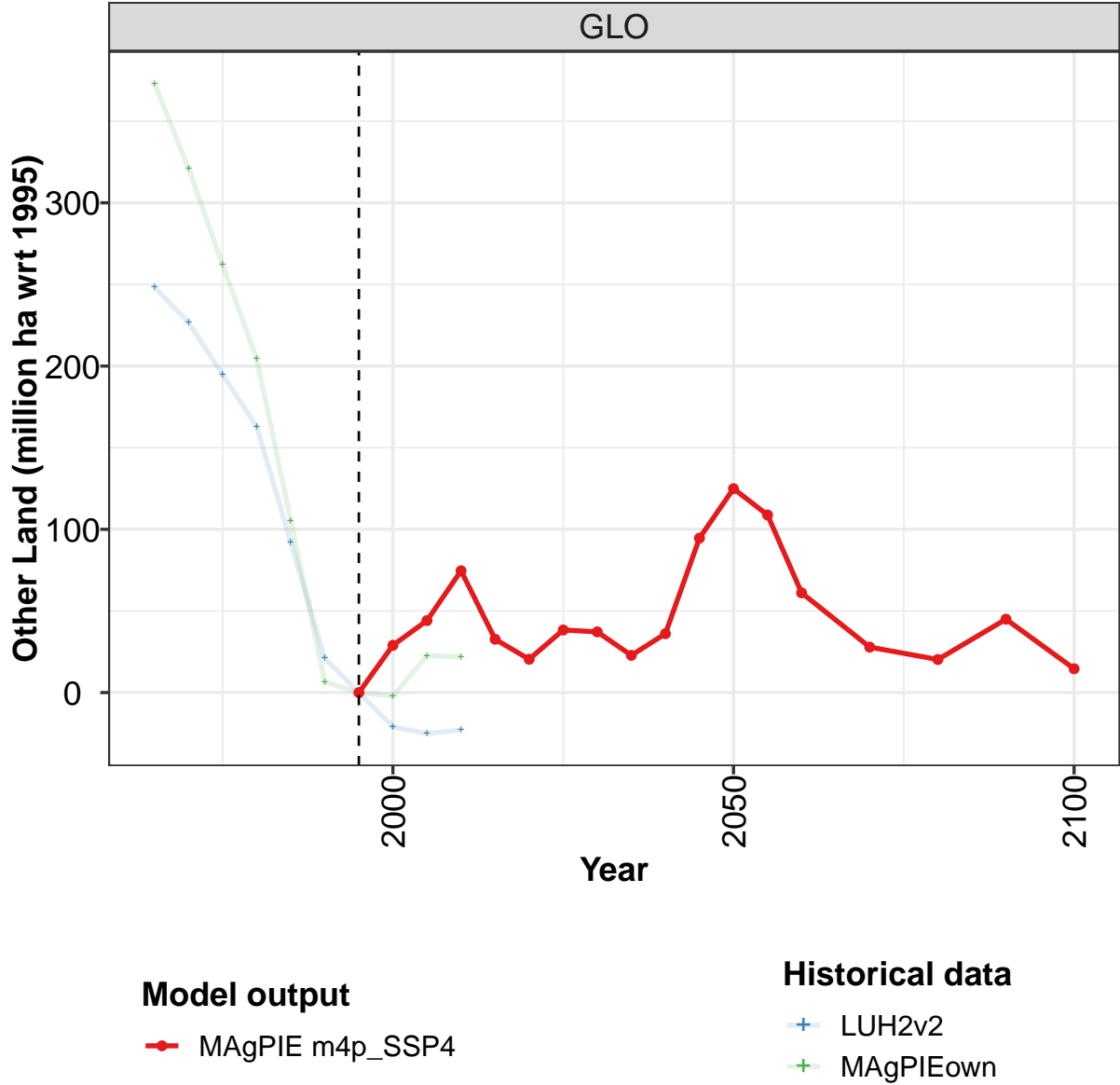
	2050	2055	2060	2070	2080	2090	2100
GLO	-201.1	-203.5	-204.5	-216.0	-259.0	-251.5	-241.4
CAZ	-0.0	-0.0	-0.0	1.6	1.6	1.6	10.5
CHA	0.0	0.0	0.0	0.0	0.0	3.6	4.3
EUR	1.6	1.6	1.6	1.6	1.6	1.6	1.6
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	-73.9	-70.6	-70.6	-70.6	-69.3	-69.3	-69.3
MEA	-4.2	-4.2	-4.3	-4.4	-4.5	-4.5	-4.5
NEU	-2.4	-2.7	-2.7	-2.4	-2.4	-2.1	-1.6
OAS	-27.8	-27.8	-27.8	-27.8	-27.8	-27.8	-27.8
REF	-0.8	4.1	4.1	23.2	23.3	26.9	26.9
SSA	-93.6	-104.0	-104.8	-137.2	-181.5	-181.5	-181.5
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1675: MAgPIE m4p\_SSP4 — 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



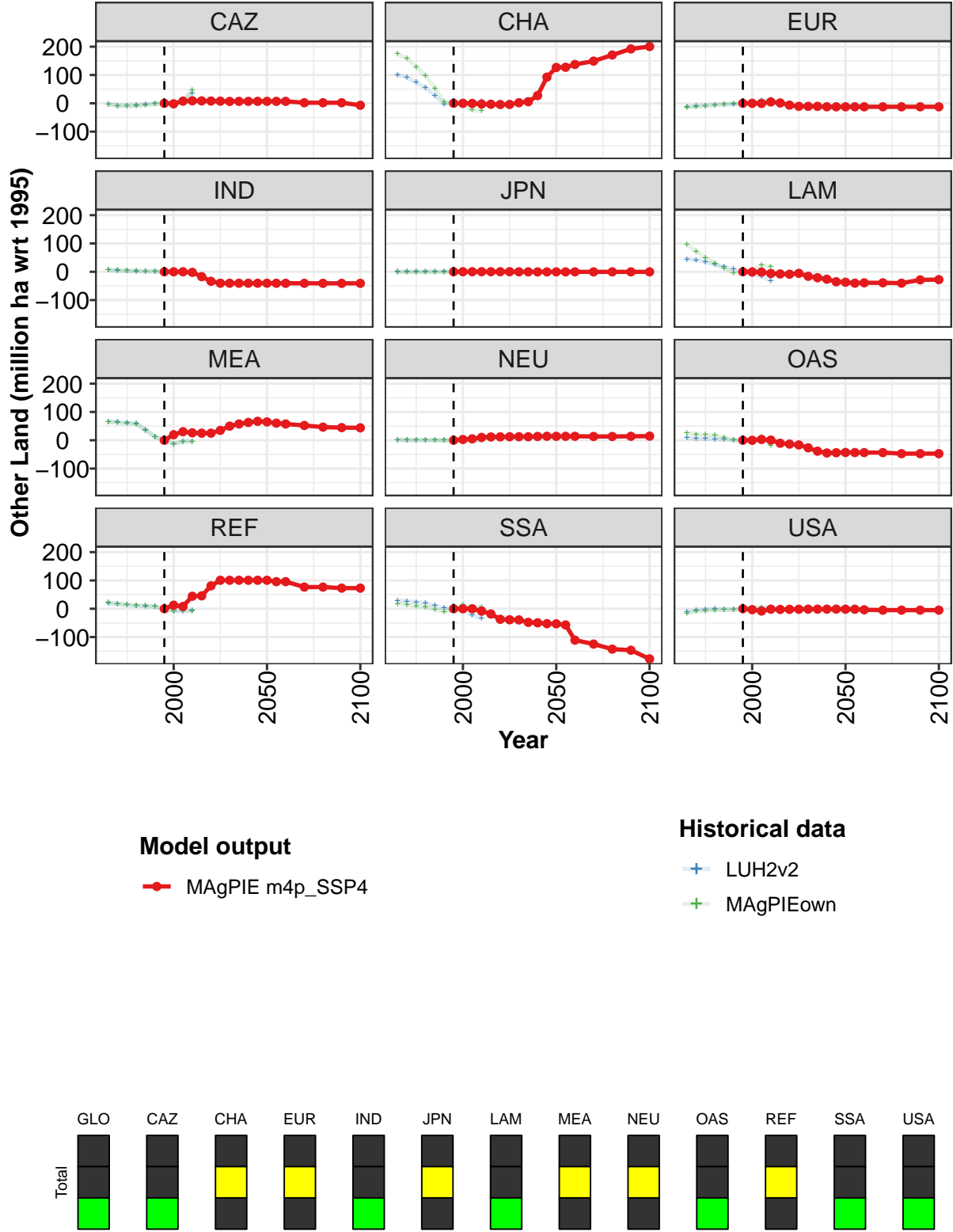


Figure 440: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Other Land (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0	29	44	75	33	20	38	37	23	36	95
CAZ	0	-2	8	9	8	8	8	7	7	7	7
CHA	0	-0	-1	-3	-3	-4	-4	2	6	27	92
EUR	0	-0	-1	5	1	-6	-11	-11	-11	-12	-12
IND	0	0	0	-2	-17	-34	-40	-40	-40	-40	-40
JPN	0	0	0	0	0	0	0	-0	-0	-0	-0
LAM	0	-1	-1	-6	-8	-9	-5	-16	-21	-26	-35
MEA	0	20	30	26	25	25	35	50	58	63	67
NEU	0	3	5	10	12	12	12	13	12	13	14
OAS	0	-0	3	1	-10	-14	-17	-27	-39	-45	-44
REF	0	12	8	44	46	81	101	101	101	101	101
SSA	0	-0	-0	-8	-18	-37	-39	-39	-48	-50	-53
USA	0	-3	-8	-2	-2	-2	-2	-1	-1	-1	-1

Table 1677: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Other Land (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	125	109	61	28	20	45	15
CAZ	7	7	7	2	2	2	-7
CHA	127	127	137	149	171	192	201
EUR	-12	-12	-12	-12	-12	-12	-12
IND	-40	-40	-41	-41	-41	-41	-41
JPN	-0	-0	-0	-0	-0	-0	-0
LAM	-37	-40	-39	-39	-40	-29	-28
MEA	65	60	58	52	46	45	44
NEU	14	14	14	13	13	14	15
OAS	-43	-43	-44	-44	-47	-47	-47
REF	101	96	96	77	77	73	73
SSA	-53	-57	-111	-125	-143	-146	-177
USA	-2	-2	-4	-5	-5	-5	-5

Table 1678: MAgPIE m4p\_SSP4 — 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

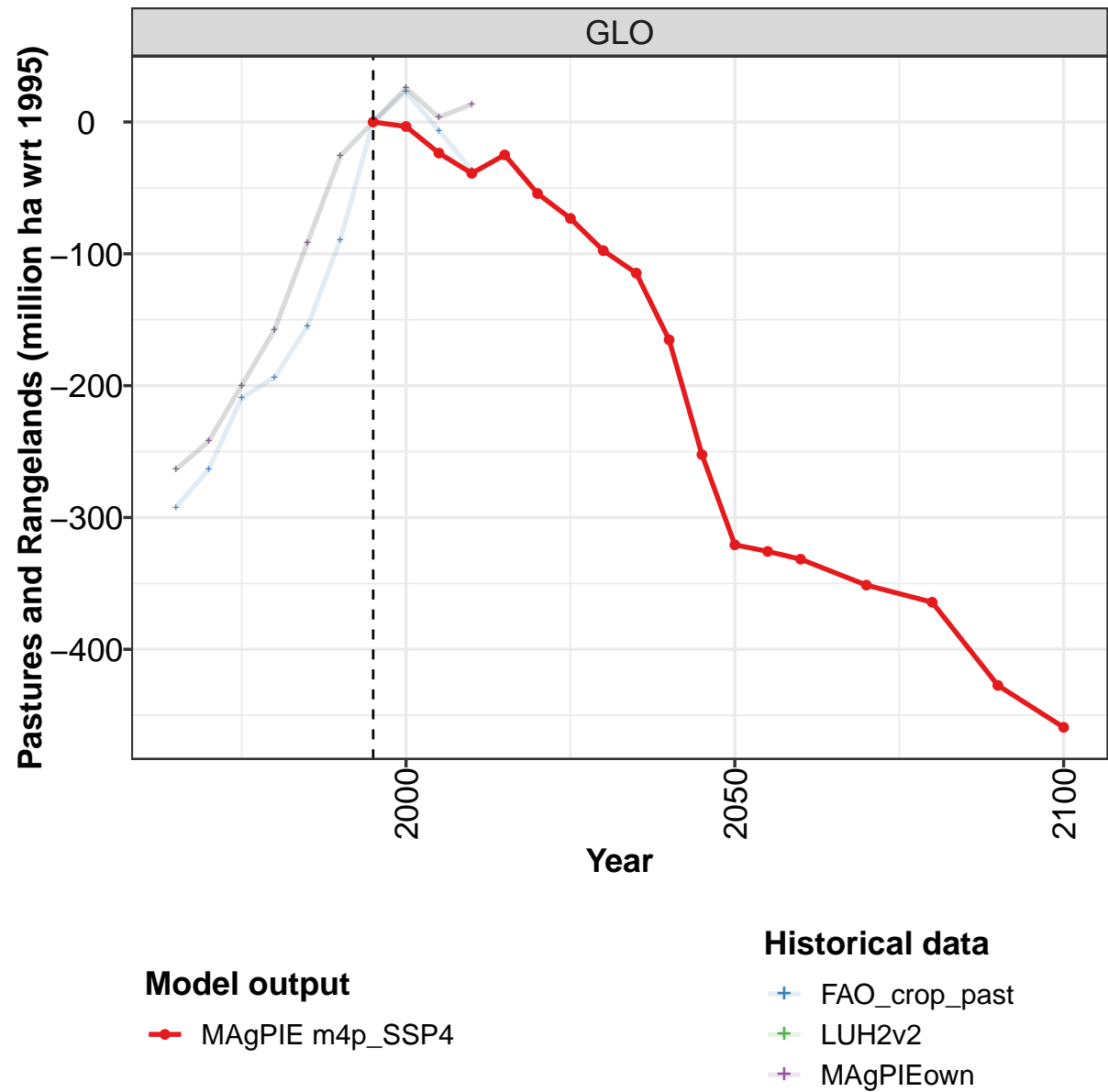
Table 1679: LUH2v2 — Resources—Land Cover Change—Other Land (million ha wrt 1995)

	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



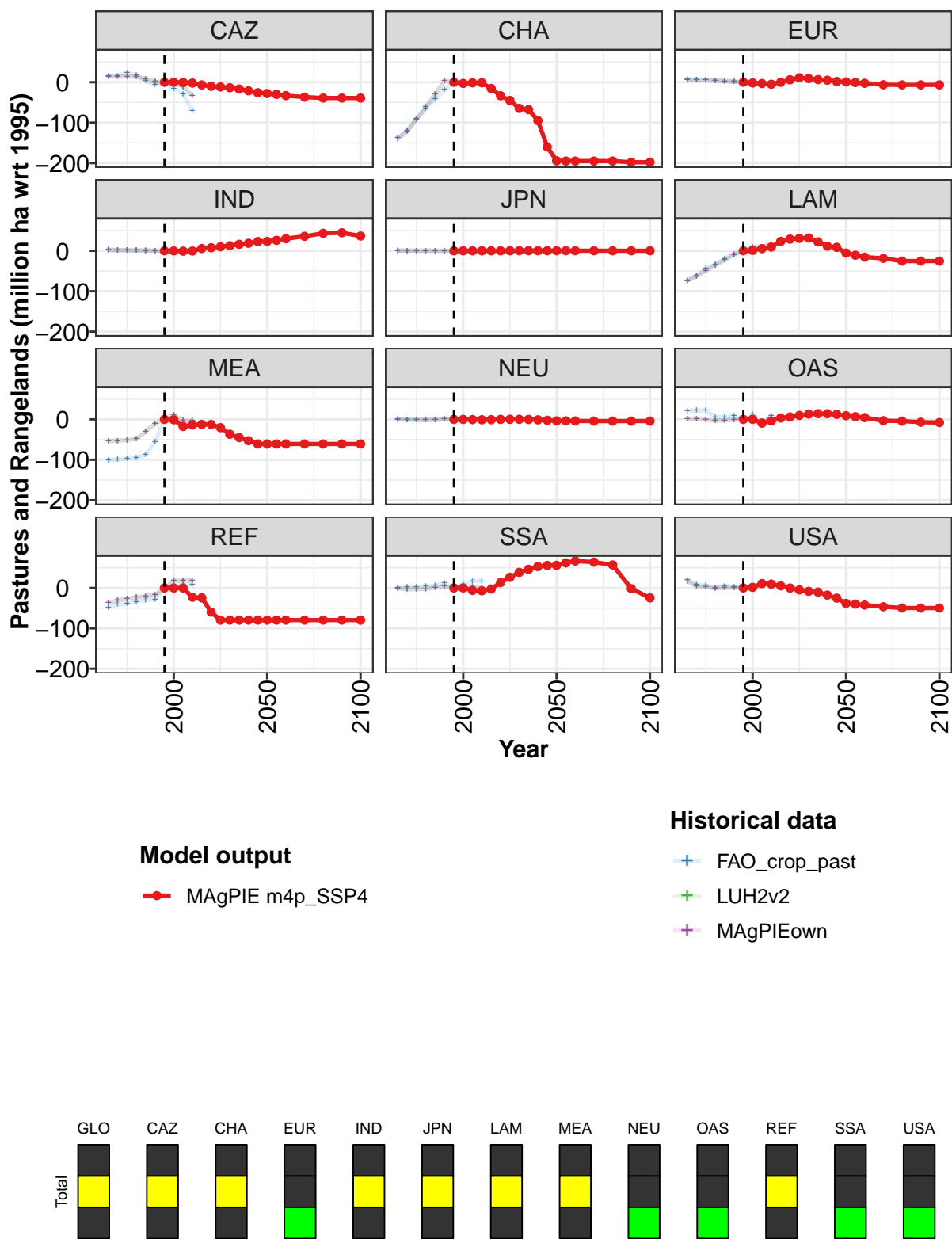


Figure 441: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.0	-3.4	-23.6	-38.9	-25.0	-54.3	-73.1	-97.6	-114.6	-165.2	-252.3
CAZ	0.0	-0.0	-0.4	-2.1	-6.6	-10.2	-11.5	-13.6	-16.8	-21.3	-26.0
CHA	0.0	-3.0	-1.5	-1.3	-15.6	-33.5	-45.2	-64.7	-67.8	-95.0	-160.1
EUR	0.0	-1.8	-3.1	-5.0	-0.1	6.0	10.9	9.1	6.5	5.0	1.7
IND	0.0	-0.1	-0.8	-0.5	5.7	7.6	10.1	12.4	16.0	18.7	22.9
JPN	0.0	-0.0	-0.0	-0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.3
LAM	0.0	1.0	5.5	9.4	23.2	28.9	30.9	31.7	22.1	11.3	8.6
MEA	0.0	-1.1	-17.7	-13.9	-12.6	-12.6	-20.5	-36.8	-45.1	-52.8	-60.8
NEU	0.0	-0.0	-0.6	-1.0	-0.7	-0.0	0.2	0.1	-0.2	-1.2	-2.4
OAS	0.0	0.2	-9.3	-3.9	3.4	6.1	9.8	13.1	14.1	13.9	12.5
REF	0.0	-0.2	-0.3	-23.0	-24.4	-59.7	-79.5	-79.5	-79.5	-79.5	-79.5
SSA	0.0	0.0	-6.1	-7.0	-2.6	13.3	26.4	38.6	46.2	52.9	55.6
USA	0.0	1.6	10.8	9.5	5.3	-0.2	-4.7	-8.3	-10.3	-17.6	-25.2

Table 1681: MAgPIE m4p\_SSP4 — Resources—Land Cover Change—Pastures and Rangelands (million ha wrt 1995) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	-320.7	-325.7	-331.6	-351.3	-364.3	-427.3	-459.2
CAZ	-27.9	-30.1	-33.1	-36.8	-39.1	-39.1	-39.1
CHA	-194.3	-195.0	-195.0	-195.0	-195.0	-197.9	-197.9
EUR	0.7	-0.7	-2.6	-6.3	-6.5	-6.6	-6.6
IND	23.2	26.0	30.0	35.8	43.2	44.7	36.5
JPN	0.3	0.3	0.3	0.2	0.1	0.1	0.1
LAM	-5.6	-10.9	-15.6	-18.8	-25.5	-25.5	-25.5
MEA	-60.8	-60.8	-60.8	-60.8	-60.8	-60.8	-60.8
NEU	-3.7	-3.8	-4.0	-4.2	-4.2	-4.2	-4.2
OAS	9.2	6.6	4.3	-3.4	-4.3	-7.0	-7.9
REF	-79.5	-79.5	-79.5	-79.5	-79.5	-79.5	-79.5
SSA	56.0	62.2	66.7	63.9	56.9	-1.8	-24.6
USA	-38.2	-40.0	-42.4	-46.5	-49.6	-49.7	-49.7

Table 1682: MAgPIE m4p\_SSP4 — 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)

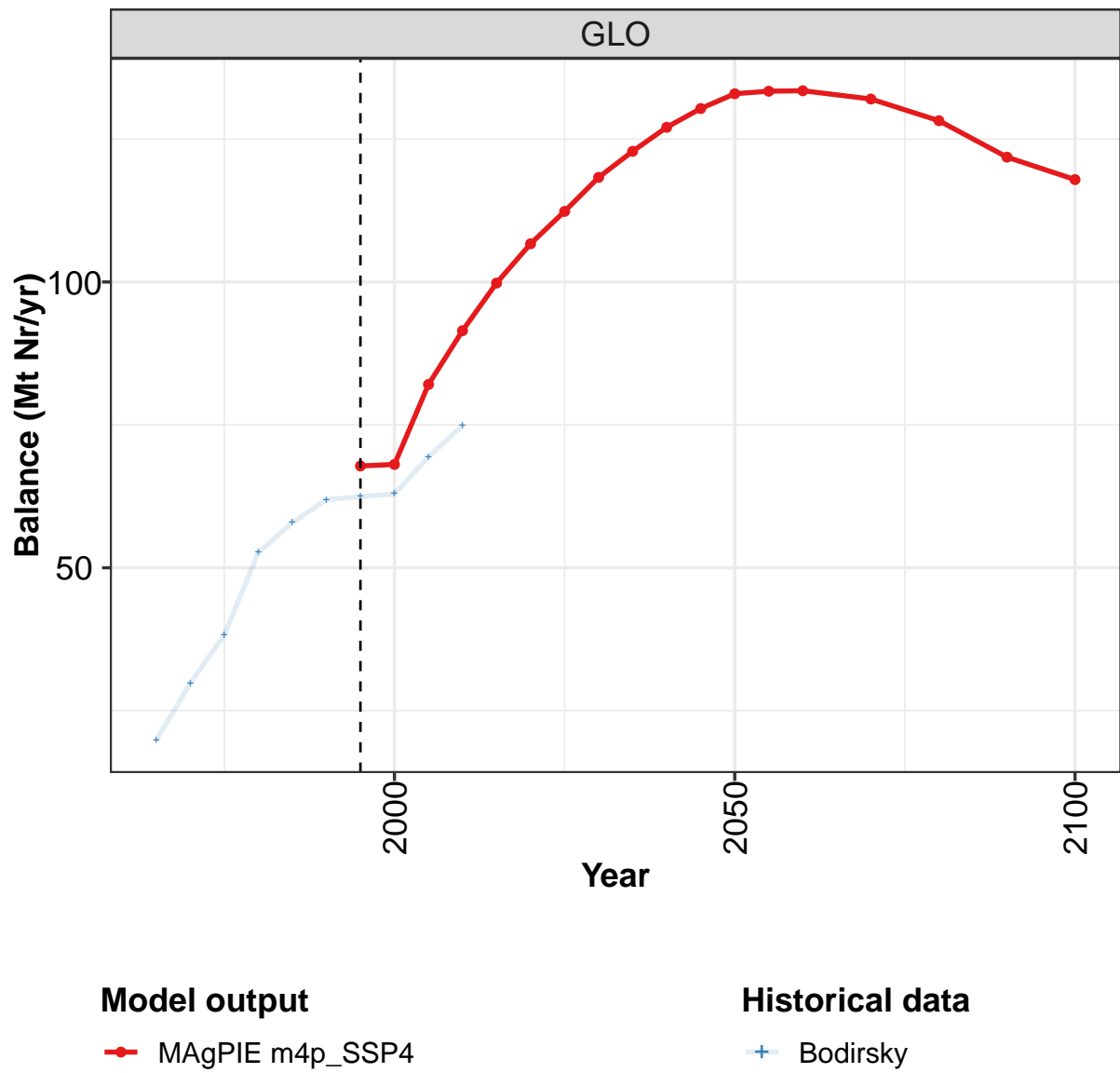
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	-263.6	-242.1	-199.8	-157.6	-91.7	-25.7	0.0	25.7	3.5	13.4
CAZ	14.5	14.3	14.2	14.0	8.0	2.0	0.0	-2.0	-11.1	-32.5
CHA	-137.9	-120.8	-91.0	-61.2	-28.9	3.4	0.0	-3.4	-3.6	-3.4
EUR	6.3	6.0	5.1	4.1	2.8	1.5	0.0	-1.5	-2.6	-4.8
IND	1.8	1.4	1.1	0.7	0.5	0.4	0.0	-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



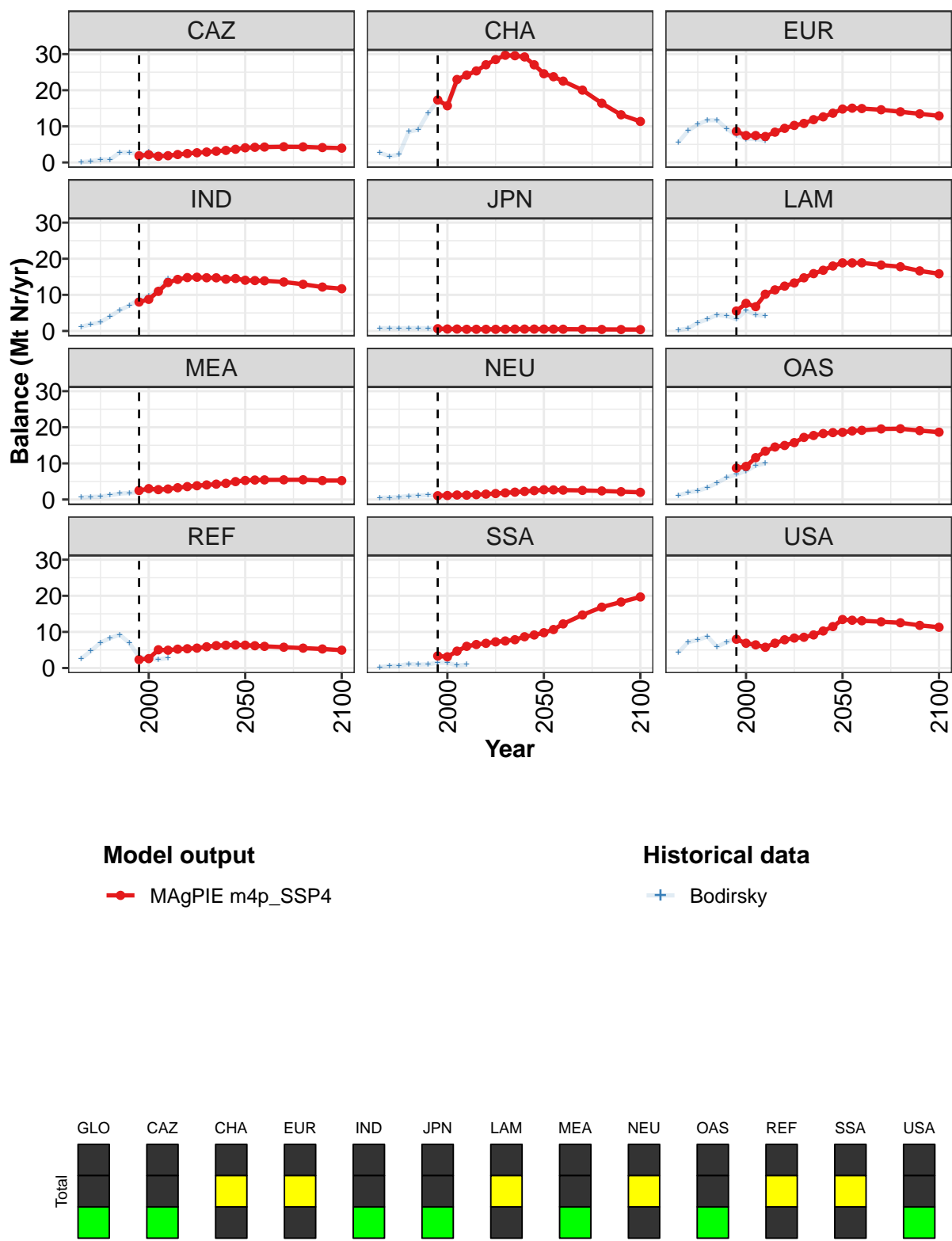


Figure 442: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Balance (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	68	68	82	91	100	107	112	118	123	127	130
CAZ	2	2	2	2	2	2	3	3	3	3	4
CHA	17	16	23	24	25	27	28	30	30	29	27
EUR	9	7	7	7	8	9	10	11	12	13	14
IND	8	9	11	13	14	15	15	15	15	14	15
JPN	1	1	1	0	0	0	0	0	1	1	1
LAM	6	8	7	10	11	12	13	15	16	17	18
MEA	2	3	3	3	3	4	4	4	4	4	5
NEU	1	1	1	1	1	1	2	2	2	2	2
OAS	9	9	12	13	15	15	16	17	18	18	19
REF	2	3	5	5	5	5	6	6	6	6	6
SSA	3	3	5	6	7	7	7	7	8	9	9
USA	8	7	6	6	7	8	8	9	9	10	11

Table 1686: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Balance (Mt Nr/yr) [PART 1/2]

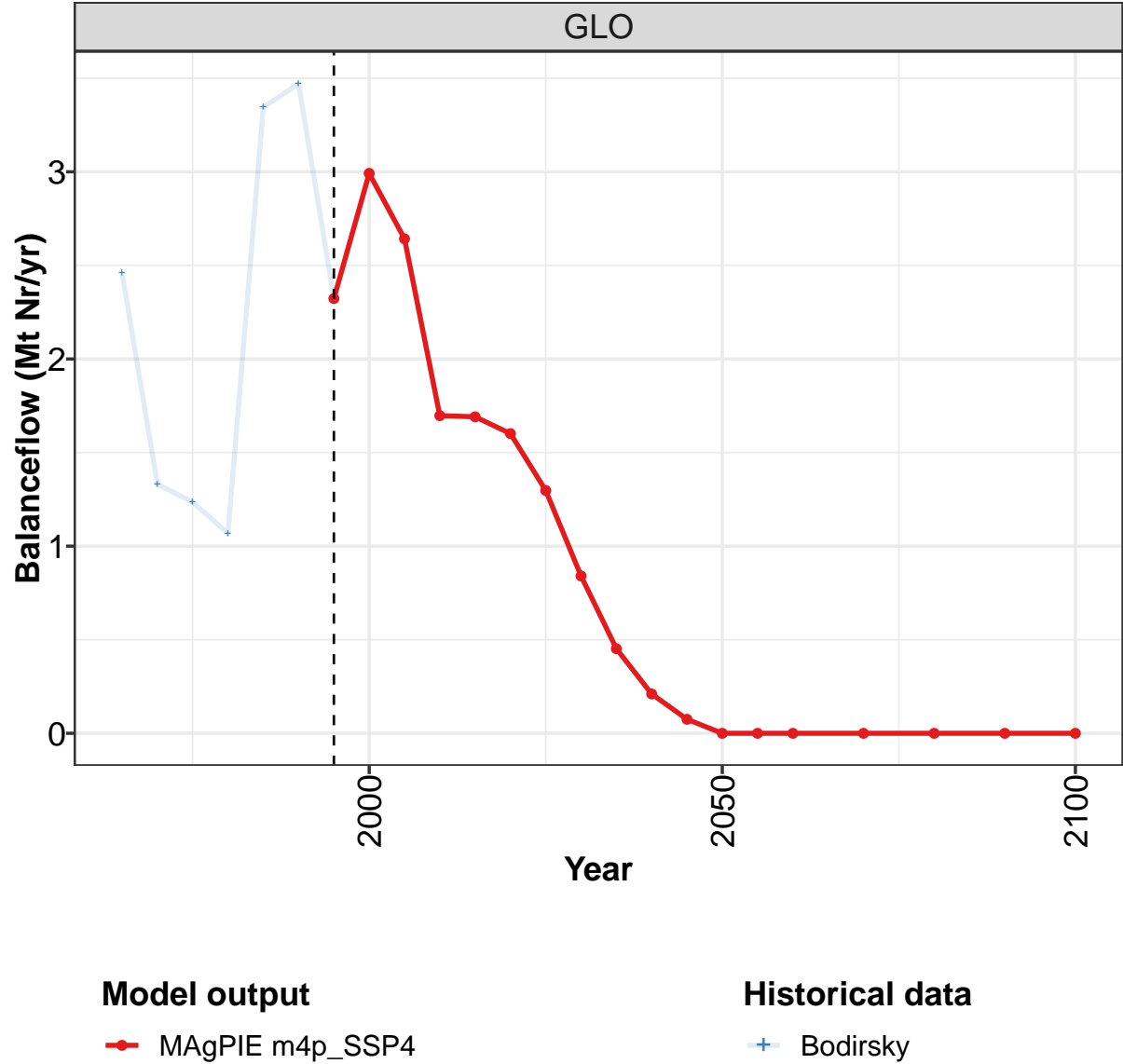
	2050	2055	2060	2070	2080	2090	2100
GLO	133	133	133	132	128	122	118
CAZ	4	4	4	4	4	4	4
CHA	25	24	23	20	16	13	11
EUR	15	15	15	15	14	13	13
IND	14	14	14	14	13	12	12
JPN	1	1	0	0	0	0	0
LAM	19	19	19	18	18	17	16
MEA	5	5	5	5	5	5	5
NEU	3	3	3	3	2	2	2
OAS	19	19	19	20	20	19	19
REF	6	6	6	6	6	5	5
SSA	10	11	12	15	17	18	20
USA	13	13	13	13	13	12	11

Table 1687: MAgPIE m4p\_SSP4 — 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





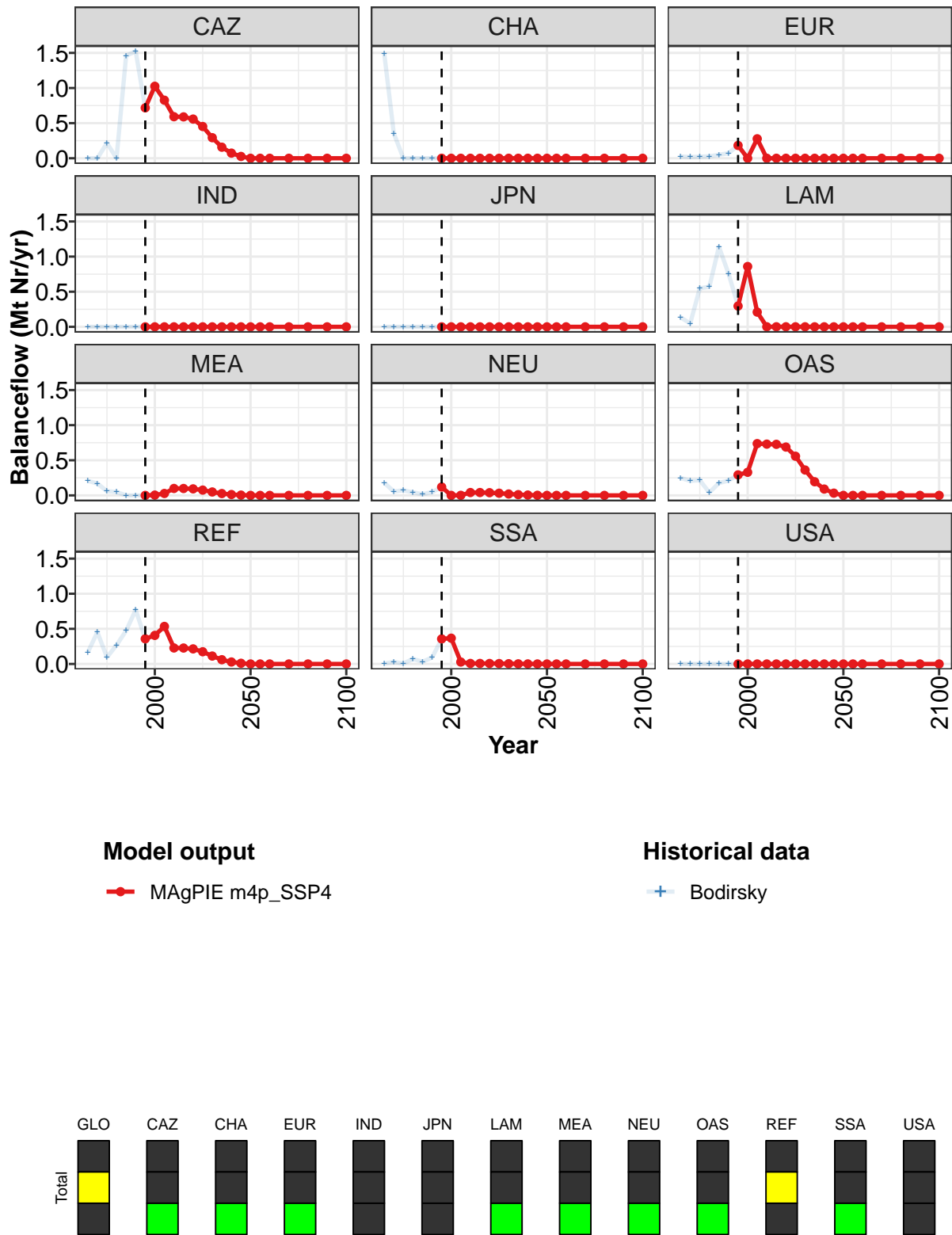


Figure 443: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Balance—Balanceflow (Mt Nr/yr)

	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\_SSP4 — Resources—Nitrogen—Cropland Budget—Balance—Balanceflow (Mt Nr/yr) [PART 1/2]

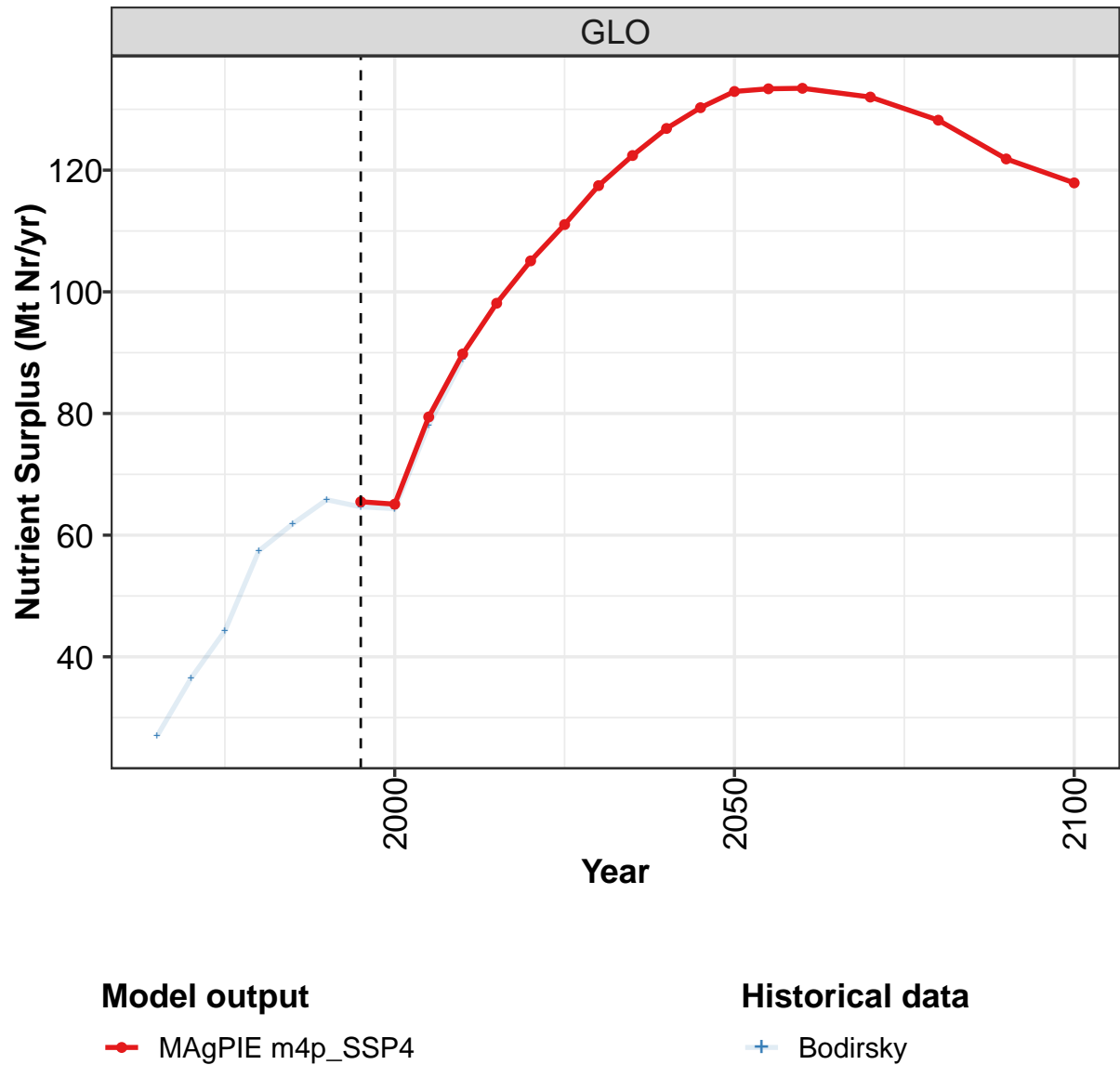
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	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\_SSP4 — 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



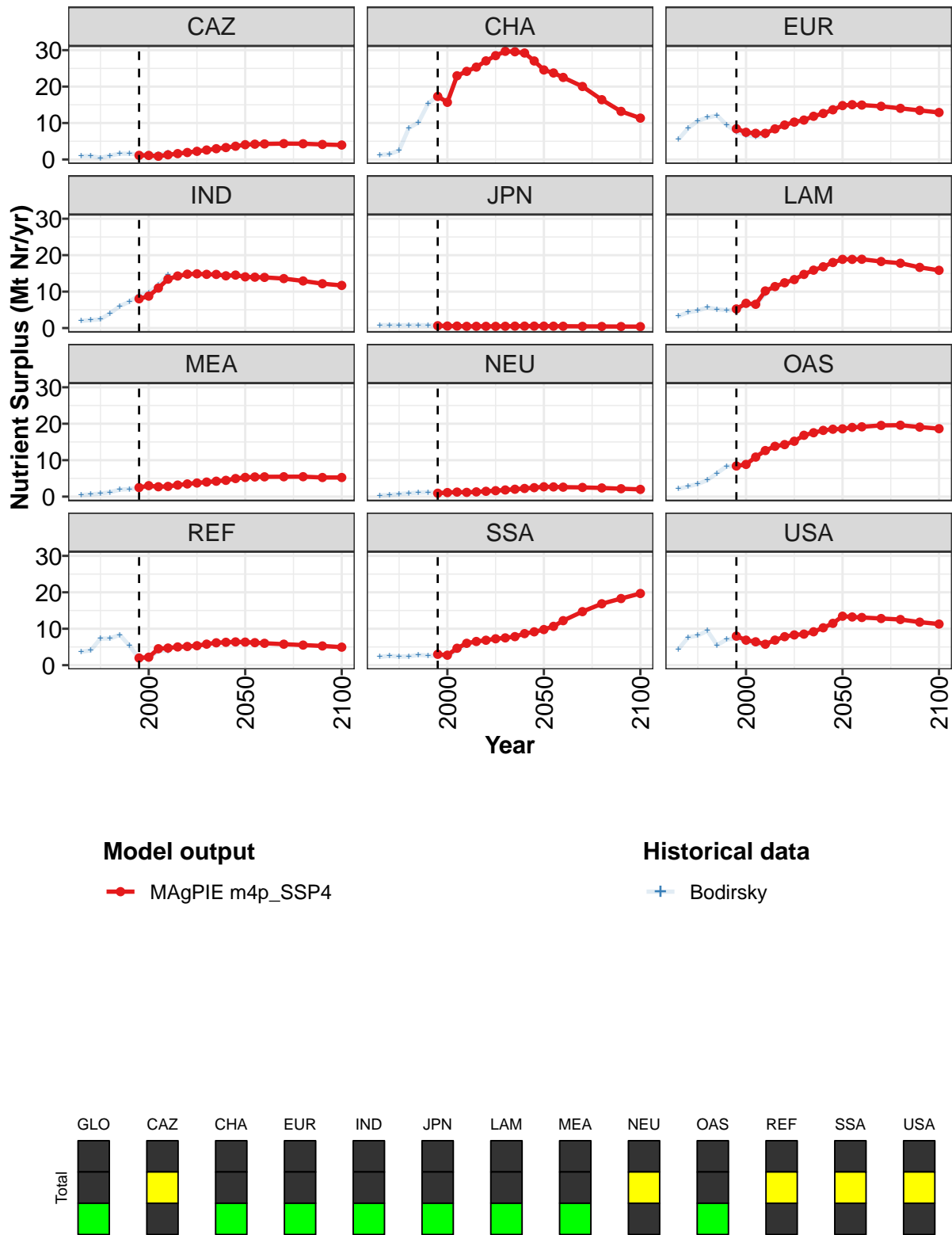


Figure 444: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Balance—Nutrient Surplus (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	65	65	79	90	98	105	111	117	122	127	130
CAZ	1	1	1	1	2	2	2	3	3	3	4
CHA	17	16	23	24	25	27	28	30	30	29	27
EUR	8	7	7	7	8	9	10	11	12	13	14
IND	8	9	11	13	14	15	15	15	15	14	15
JPN	1	1	1	0	0	0	0	0	1	1	1
LAM	5	7	7	10	11	12	13	15	16	17	18
MEA	2	3	3	3	3	3	4	4	4	4	5
NEU	1	1	1	1	1	1	2	2	2	2	2
OAS	8	9	11	13	14	14	15	17	18	18	18
REF	2	2	5	5	5	5	5	6	6	6	6
SSA	3	3	5	6	7	7	7	7	8	9	9
USA	8	7	6	6	7	8	8	9	9	10	11

Table 1692: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Balance—Nutrient Surplus (Mt Nr/yr) [PART 1/2]

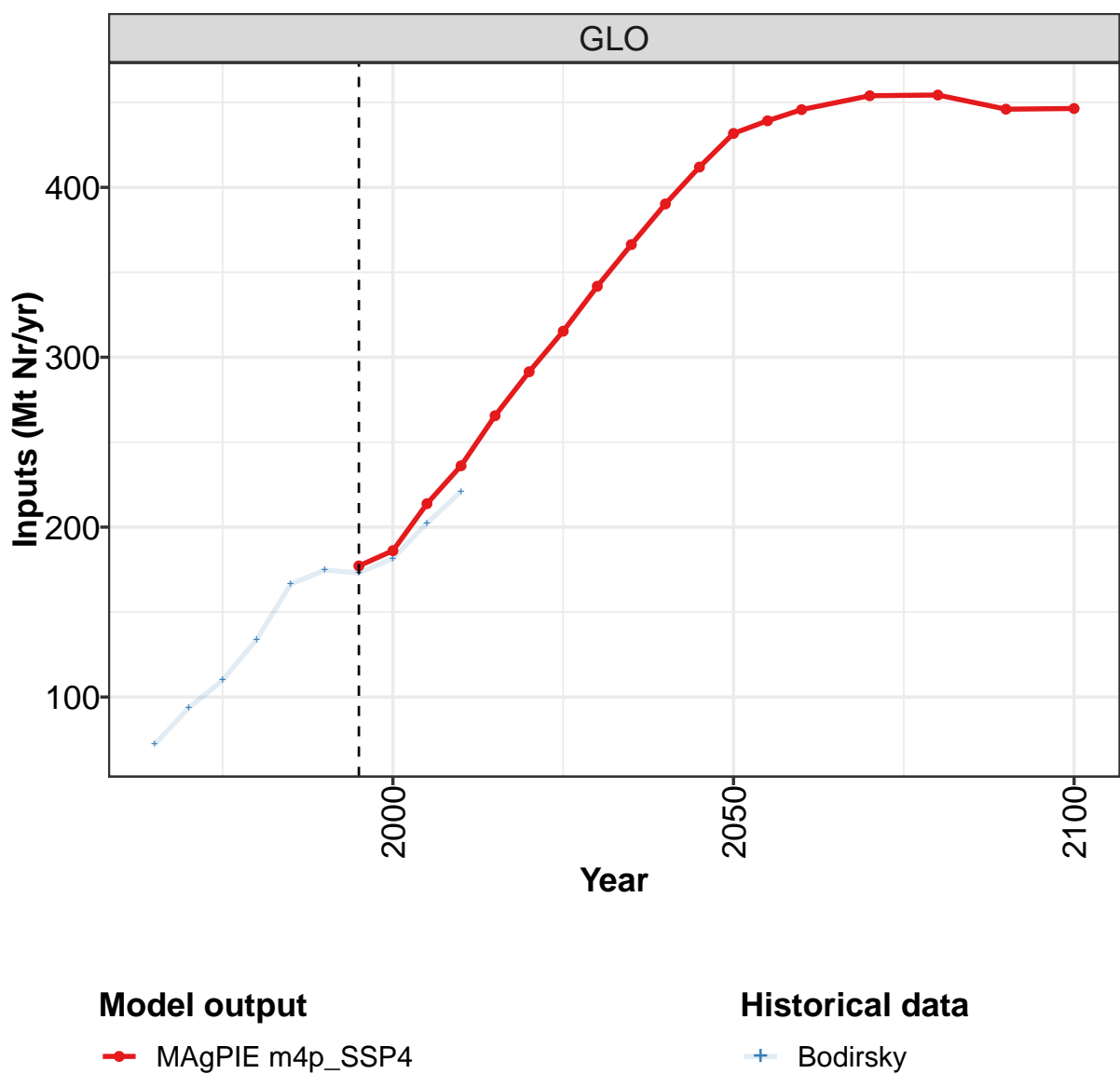
	2050	2055	2060	2070	2080	2090	2100
GLO	133	133	133	132	128	122	118
CAZ	4	4	4	4	4	4	4
CHA	25	24	23	20	16	13	11
EUR	15	15	15	15	14	13	13
IND	14	14	14	14	13	12	12
JPN	1	1	0	0	0	0	0
LAM	19	19	19	18	18	17	16
MEA	5	5	5	5	5	5	5
NEU	3	3	3	3	2	2	2
OAS	19	19	19	20	20	19	19
REF	6	6	6	6	6	5	5
SSA	10	11	12	15	17	18	20
USA	13	13	13	13	13	12	11

Table 1693: MAgPIE m4p\_SSP4 — 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



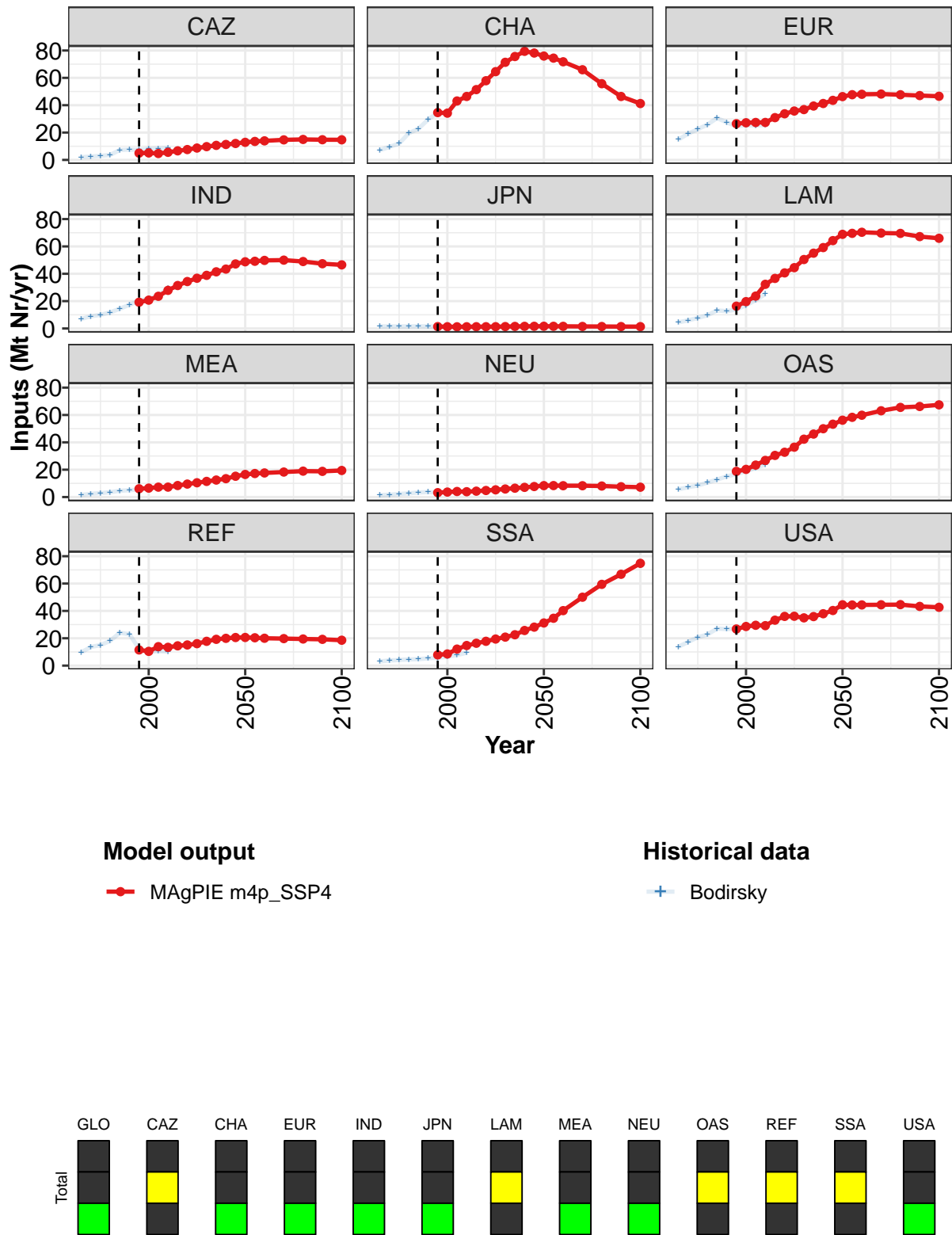


Figure 445: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	177	186	214	236	266	291	315	342	366	390	412
CAZ	5	5	5	6	7	8	9	10	11	11	12
CHA	35	34	43	46	51	58	65	71	76	79	78
EUR	26	27	27	27	31	34	36	37	39	41	44
IND	19	21	24	28	31	34	37	39	41	43	47
JPN	1	1	1	1	1	1	1	1	2	2	2
LAM	16	20	24	32	37	41	44	50	55	59	64
MEA	6	7	7	7	8	9	10	11	12	13	15
NEU	3	4	4	4	4	5	5	6	6	7	8
OAS	19	20	23	27	30	33	36	42	46	50	53
REF	11	10	14	13	14	15	16	18	19	20	21
SSA	8	9	12	15	16	18	19	21	23	26	28
USA	27	29	30	29	33	36	36	35	36	38	40

Table 1695: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	432	439	446	454	454	446	446
CAZ	13	14	14	15	15	15	15
CHA	76	74	72	66	56	46	41
EUR	46	48	48	48	48	47	47
IND	49	49	50	50	49	47	47
JPN	2	2	2	1	1	1	1
LAM	69	70	70	70	70	67	66
MEA	17	17	18	18	19	19	19
NEU	8	8	8	8	8	8	7
OAS	56	58	60	63	66	66	67
REF	21	20	20	20	19	19	19
SSA	31	35	40	50	59	67	75
USA	44	44	44	44	45	43	43

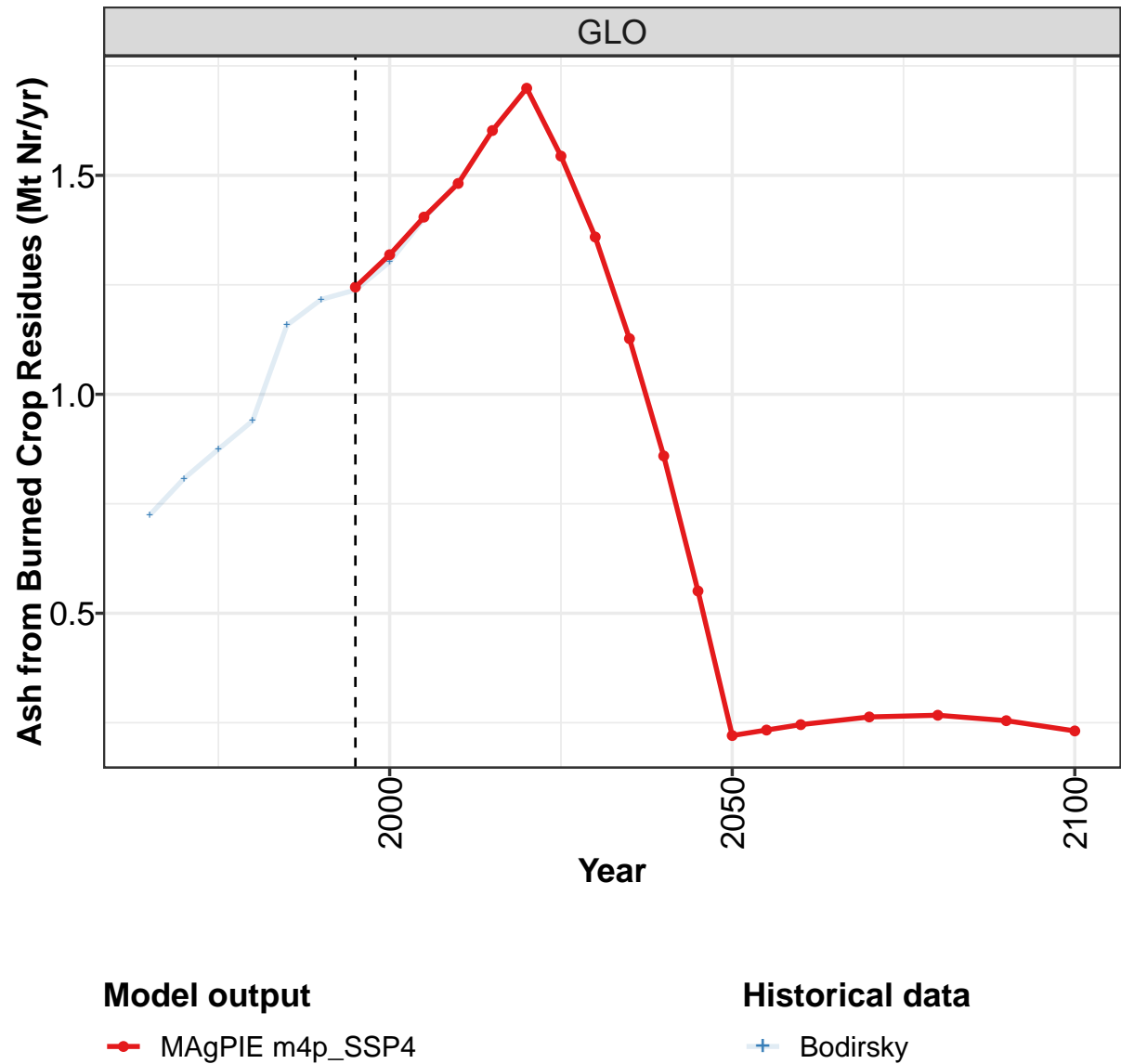
Table 1696: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs (Mt Nr/yr) [PART 2/2]

	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



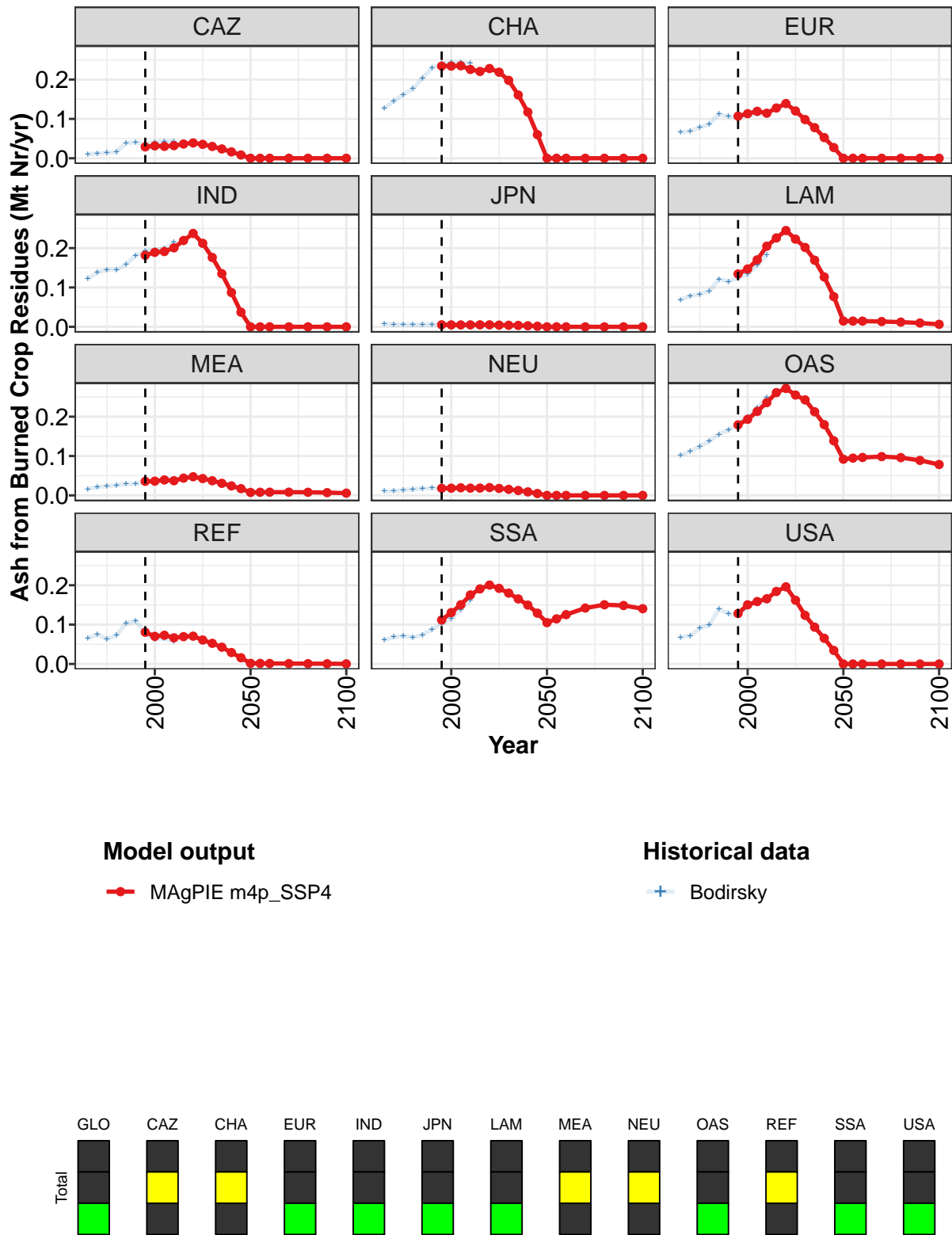


Figure 446: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Ash from Burned Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.24	1.32	1.40	1.48	1.60	1.70	1.54	1.36	1.13	0.86	0.55
CAZ	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.02	0.02	0.01
CHA	0.23	0.23	0.23	0.23	0.22	0.23	0.22	0.20	0.16	0.12	0.06
EUR	0.11	0.11	0.12	0.11	0.13	0.14	0.12	0.10	0.08	0.05	0.03
IND	0.18	0.19	0.19	0.20	0.22	0.24	0.21	0.18	0.13	0.09	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	0.24	0.22	0.20	0.17	0.13	0.08
MEA	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.03	0.02	0.02
NEU	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.00
OAS	0.18	0.19	0.21	0.24	0.26	0.27	0.26	0.24	0.21	0.18	0.14
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	0.17	0.15	0.13
USA	0.13	0.15	0.16	0.17	0.18	0.20	0.16	0.12	0.09	0.07	0.03

Table 1698: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Ash from Burned Crop Residues (Mt Nr/yr) [PART 1/2]

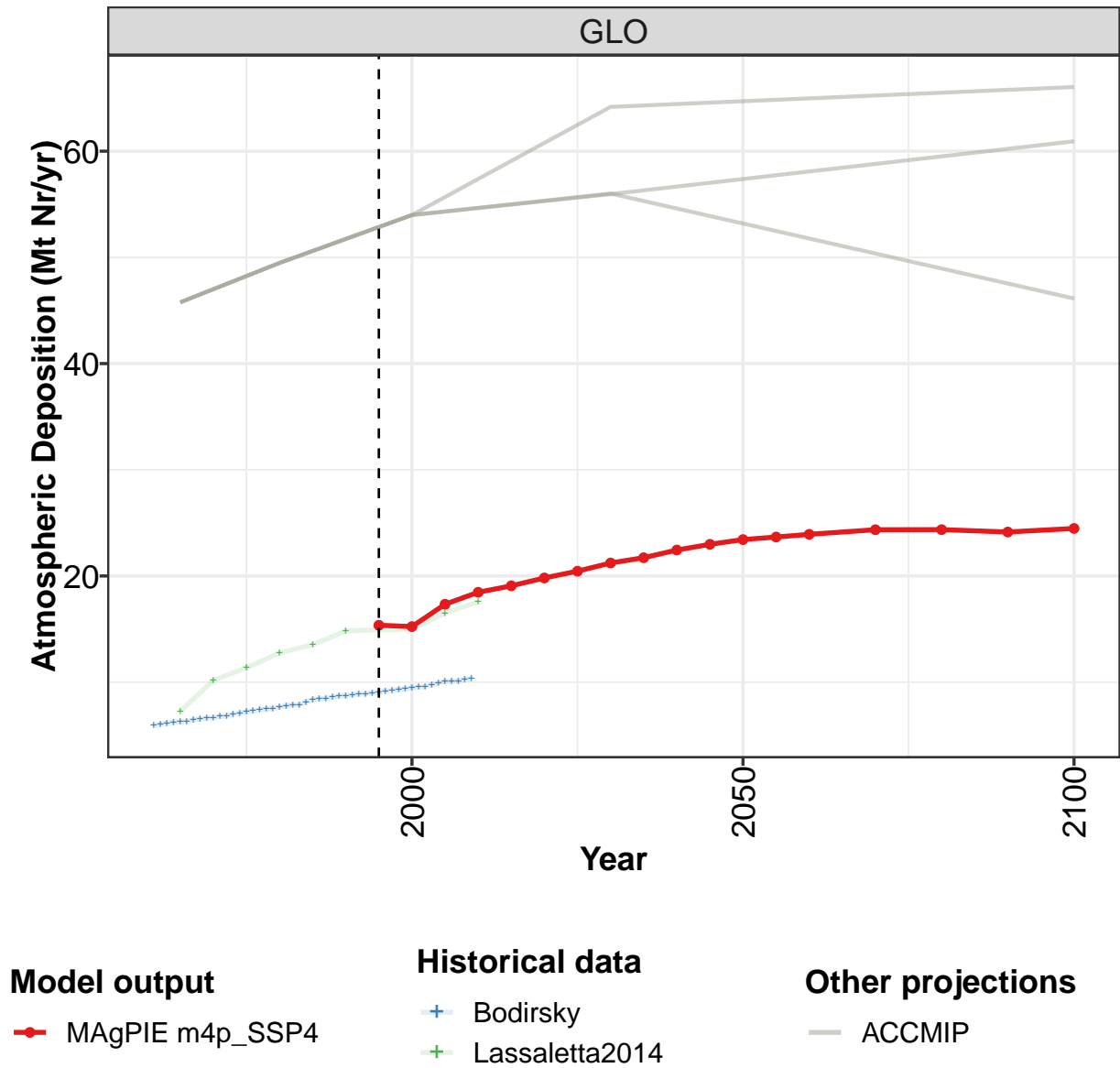
	2050	2055	2060	2070	2080	2090	2100
GLO	0.22	0.23	0.25	0.26	0.27	0.25	0.23
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEA	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.09	0.09	0.10	0.10	0.10	0.09	0.08
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.11	0.11	0.13	0.14	0.15	0.15	0.14
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1699: MAgPIE m4p\_SSP4 — 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



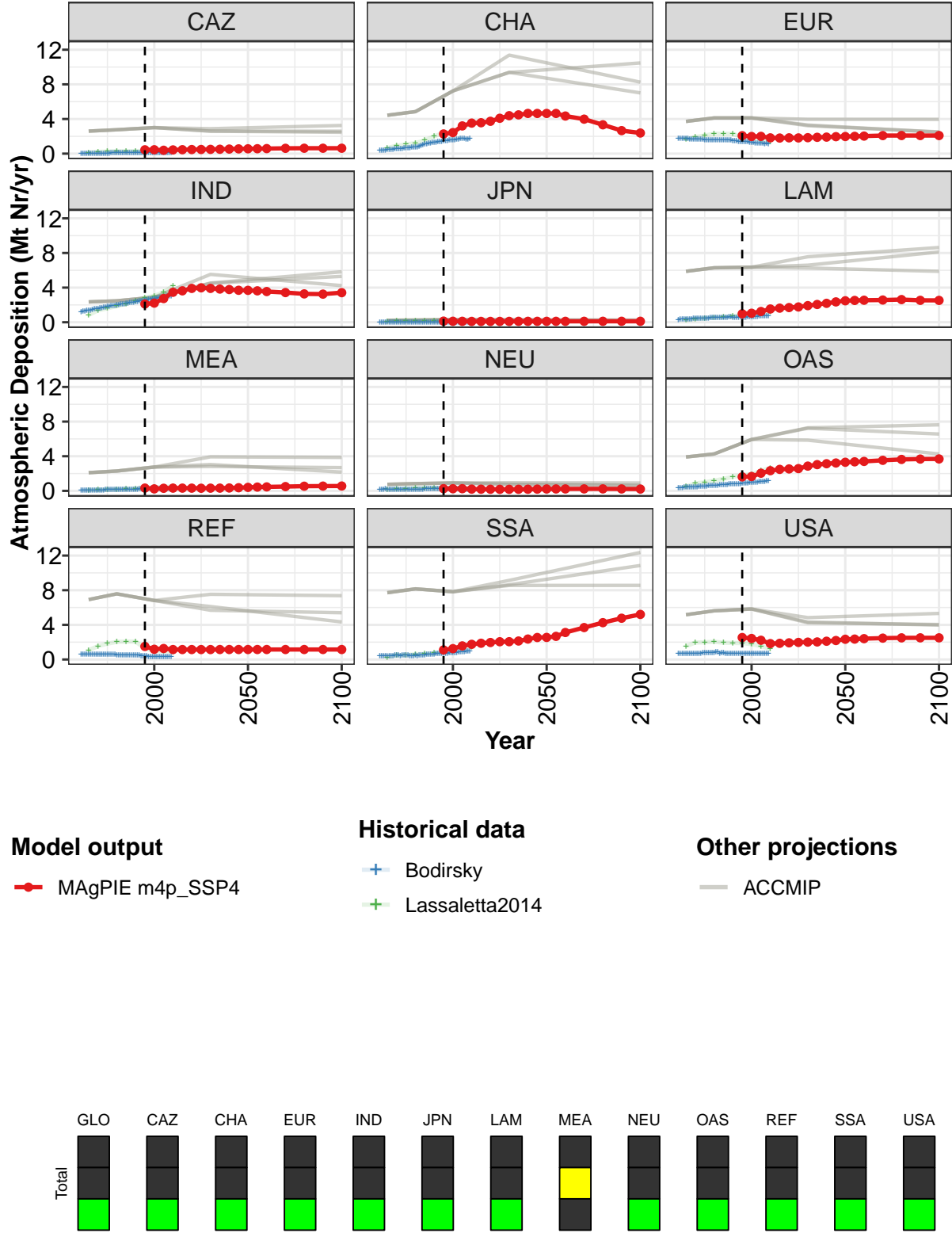


Figure 447: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	15.4	15.2	17.3	18.5	19.1	19.8	20.5	21.2	21.7	22.4	23.0
CAZ	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6
CHA	2.3	2.4	3.2	3.5	3.6	3.7	4.1	4.4	4.5	4.6	4.6
EUR	2.1	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0
IND	2.1	2.2	2.7	3.5	3.6	3.9	4.0	3.9	3.8	3.8	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	1.8	1.9	2.1	2.2	2.4
MEA	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	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	2.5	2.6	2.9	3.0	3.1	3.2
REF	1.5	1.2	1.3	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2
SSA	1.1	1.3	1.6	1.8	1.9	2.0	2.1	2.1	2.1	2.4	2.5
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\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	23.4	23.7	23.9	24.4	24.4	24.1	24.5
CAZ	0.6	0.6	0.6	0.6	0.6	0.6	0.6
CHA	4.6	4.6	4.3	4.0	3.3	2.7	2.4
EUR	2.0	2.0	2.0	2.1	2.1	2.1	2.1
IND	3.7	3.6	3.5	3.4	3.3	3.2	3.4
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.5	2.5	2.5	2.6	2.6	2.5	2.5
MEA	0.4	0.4	0.5	0.5	0.5	0.6	0.6
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	3.3	3.4	3.4	3.5	3.6	3.7	3.7
REF	1.2	1.2	1.2	1.2	1.2	1.2	1.2
SSA	2.5	2.7	3.1	3.7	4.3	4.8	5.2
USA	2.3	2.4	2.4	2.5	2.5	2.5	2.5

Table 1702: MAgPIE m4p\_SSP4 — 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

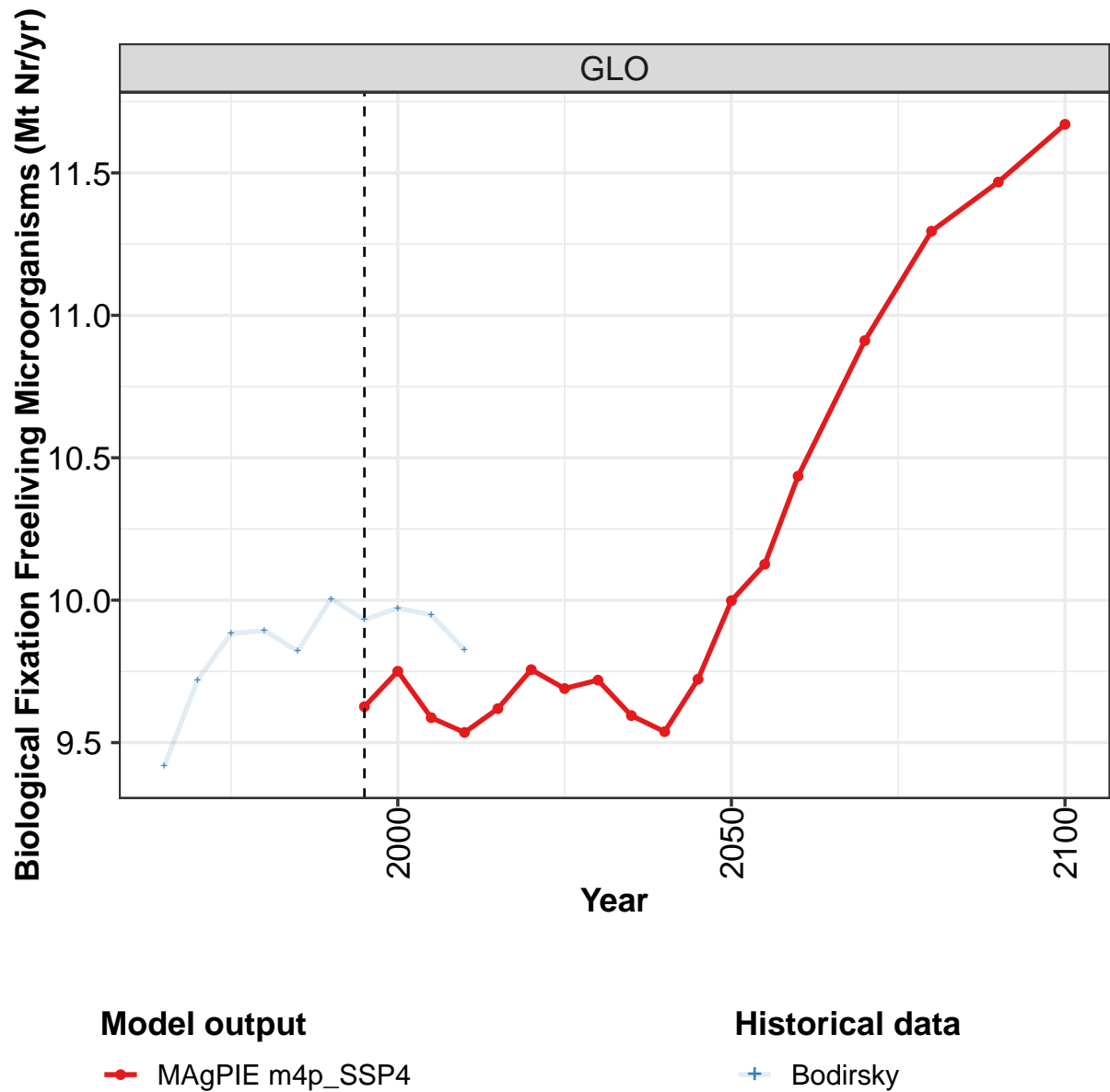
Table 1707: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 5/5]

	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 Freelifving Microorganisms



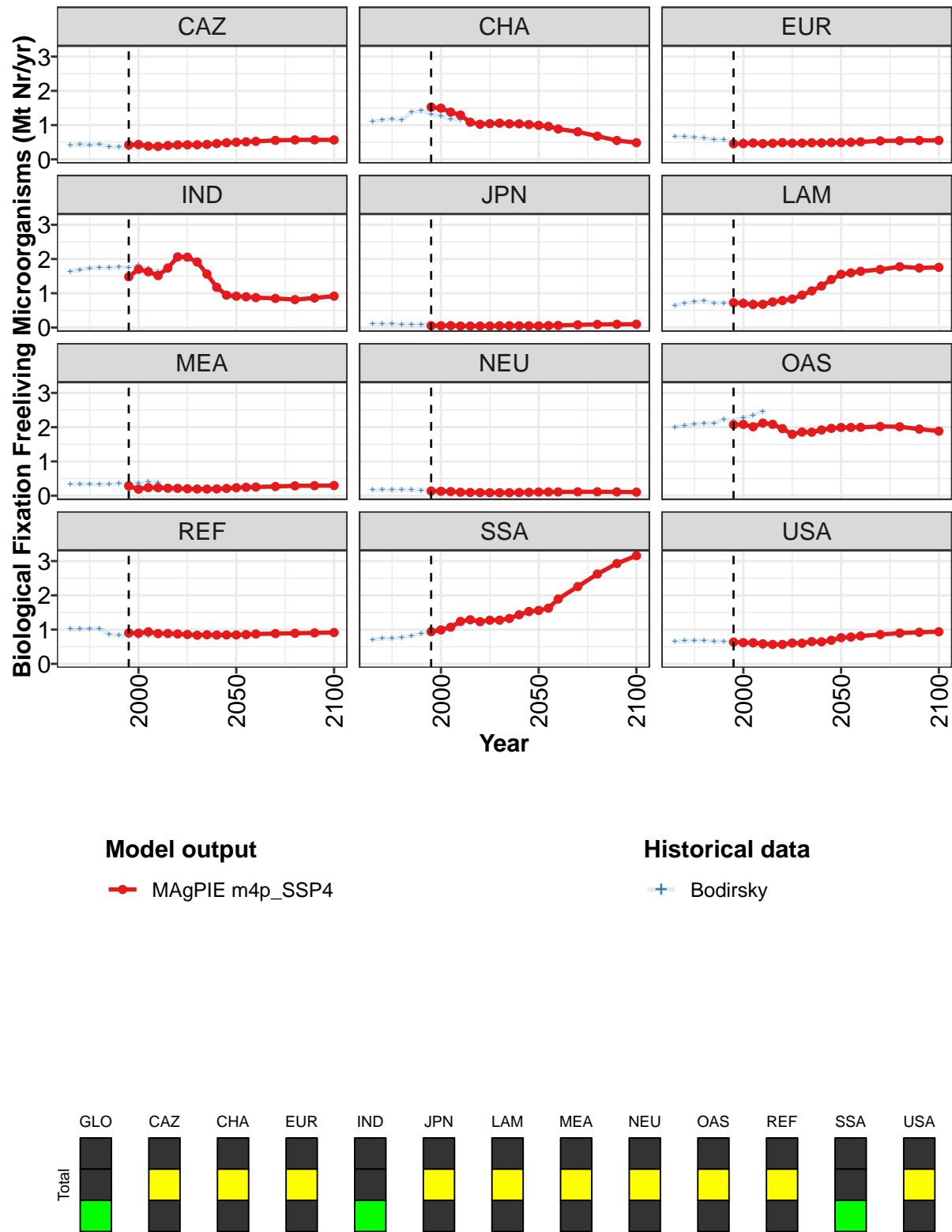


Figure 448: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Free-living Microorganisms (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	9.6	9.8	9.6	9.5	9.6	9.8	9.7	9.7	9.6	9.5	9.7
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
CHA	1.5	1.5	1.4	1.3	1.1	1.0	1.0	1.1	1.0	1.0	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	1.7	2.1	2.1	1.9	1.6	1.2	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	1.2	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	1.8	1.9	1.9	1.9	2.0
REF	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8
SSA	0.9	1.0	1.1	1.2	1.3	1.2	1.3	1.3	1.3	1.4	1.5
USA	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7

Table 1709: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Free-living Microorganisms (Mt Nr/yr) [PART 1/2]

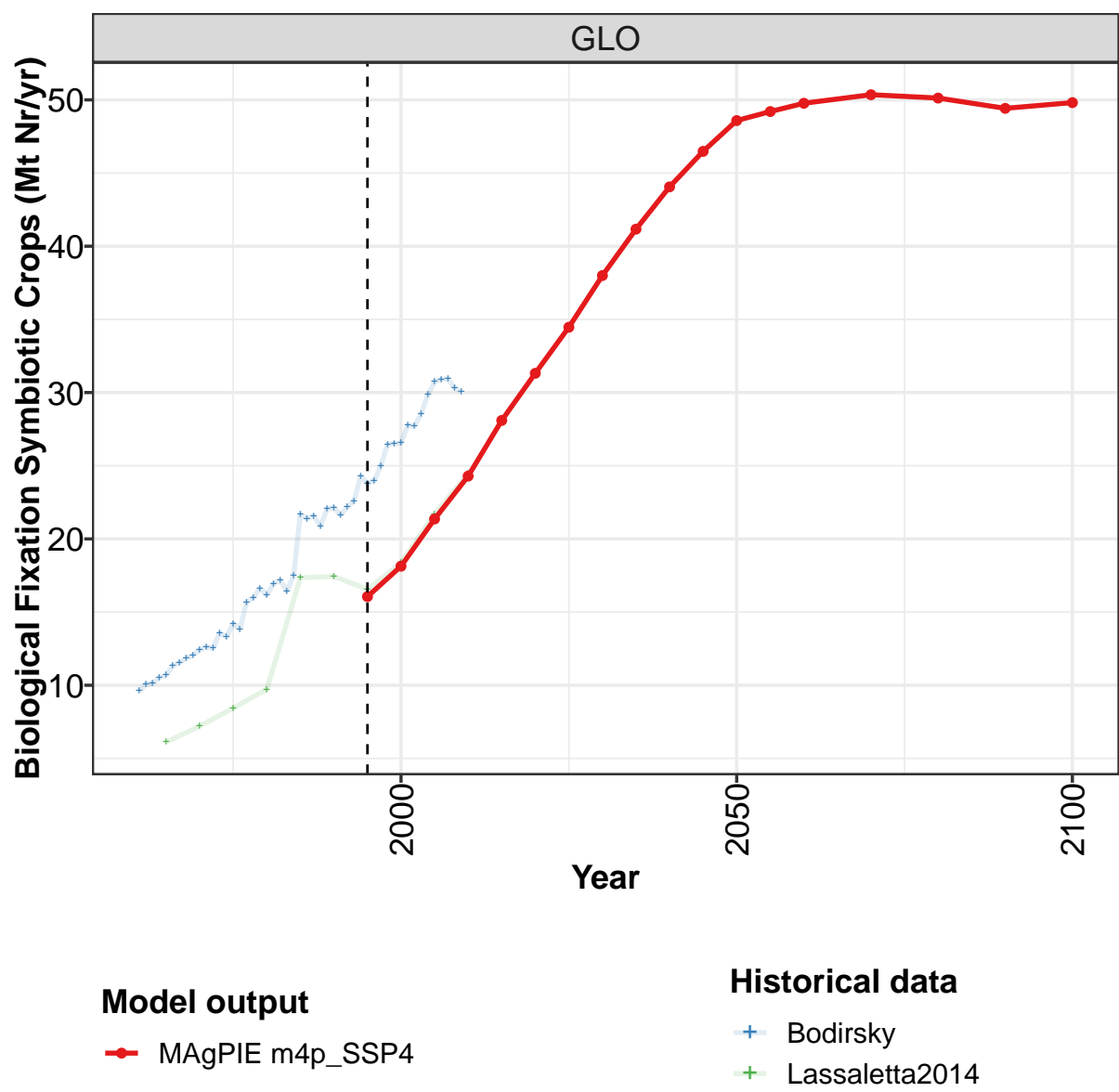
	2050	2055	2060	2070	2080	2090	2100
GLO	10.0	10.1	10.4	10.9	11.3	11.5	11.7
CAZ	0.5	0.5	0.5	0.6	0.6	0.6	0.6
CHA	1.0	1.0	0.9	0.8	0.7	0.6	0.5
EUR	0.5	0.5	0.5	0.5	0.5	0.6	0.6
IND	0.9	0.9	0.9	0.8	0.8	0.9	0.9
JPN	0.0	0.1	0.1	0.1	0.1	0.1	0.1
LAM	1.6	1.6	1.6	1.7	1.8	1.7	1.8
MEA	0.2	0.2	0.3	0.3	0.3	0.3	0.3
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	2.0	2.0	2.0	2.0	2.0	1.9	1.9
REF	0.8	0.9	0.9	0.9	0.9	0.9	0.9
SSA	1.6	1.6	1.9	2.3	2.6	2.9	3.2
USA	0.8	0.8	0.8	0.9	0.9	0.9	0.9

Table 1710: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Free-living 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 Freelifving Microorganisms (Mt Nr/yr)

56.1.8 Inputs—Biological Fixation Symbiotic Crops



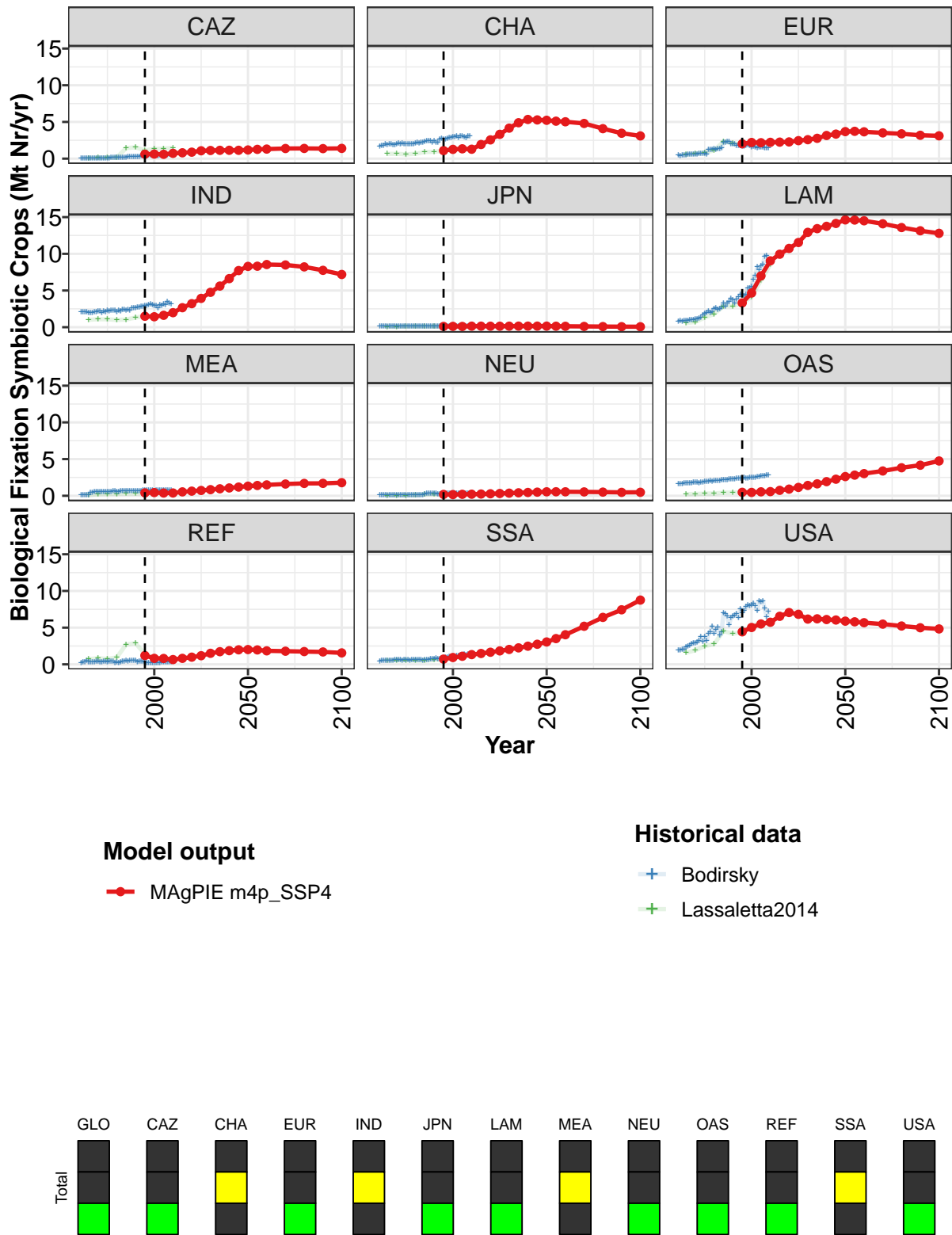


Figure 449: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.1	18.1	21.4	24.3	28.1	31.3	34.5	38.0	41.2	44.1	46.5
CAZ	0.6	0.6	0.6	0.7	0.8	0.9	1.1	1.1	1.1	1.1	1.1
CHA	1.1	1.3	1.3	1.3	1.9	2.6	3.3	4.2	4.9	5.3	5.3
EUR	2.0	2.2	2.2	2.2	2.3	2.3	2.5	2.6	2.8	3.2	3.3
IND	1.5	1.4	1.6	2.0	2.7	3.2	3.9	4.8	5.6	6.6	7.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
LAM	3.3	4.7	7.0	9.0	9.9	10.7	11.5	12.9	13.4	13.7	14.1
MEA	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2
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	1.4	1.6	1.9	2.3
REF	1.2	0.8	0.8	0.7	0.8	1.0	1.2	1.5	1.7	1.9	2.0
SSA	0.7	0.9	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.5	2.7
USA	4.4	5.0	5.5	5.7	6.5	7.1	6.8	6.2	6.2	6.1	6.0

Table 1712: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	48.6	49.2	49.8	50.4	50.1	49.4	49.8
CAZ	1.2	1.3	1.3	1.4	1.4	1.4	1.4
CHA	5.2	5.1	5.0	4.8	4.1	3.5	3.1
EUR	3.7	3.7	3.7	3.5	3.4	3.2	3.1
IND	8.3	8.3	8.5	8.5	8.2	7.8	7.2
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	14.6	14.6	14.5	14.1	13.6	13.1	12.8
MEA	1.3	1.4	1.5	1.6	1.7	1.7	1.8
NEU	0.5	0.5	0.5	0.5	0.5	0.5	0.5
OAS	2.6	2.8	3.0	3.4	3.8	4.2	4.7
REF	2.0	2.0	1.8	1.8	1.7	1.7	1.6
SSA	3.1	3.5	4.0	5.2	6.4	7.4	8.8
USA	5.9	5.8	5.7	5.5	5.2	5.0	4.8

Table 1713: MAgPIE m4p\_SSP4 — 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

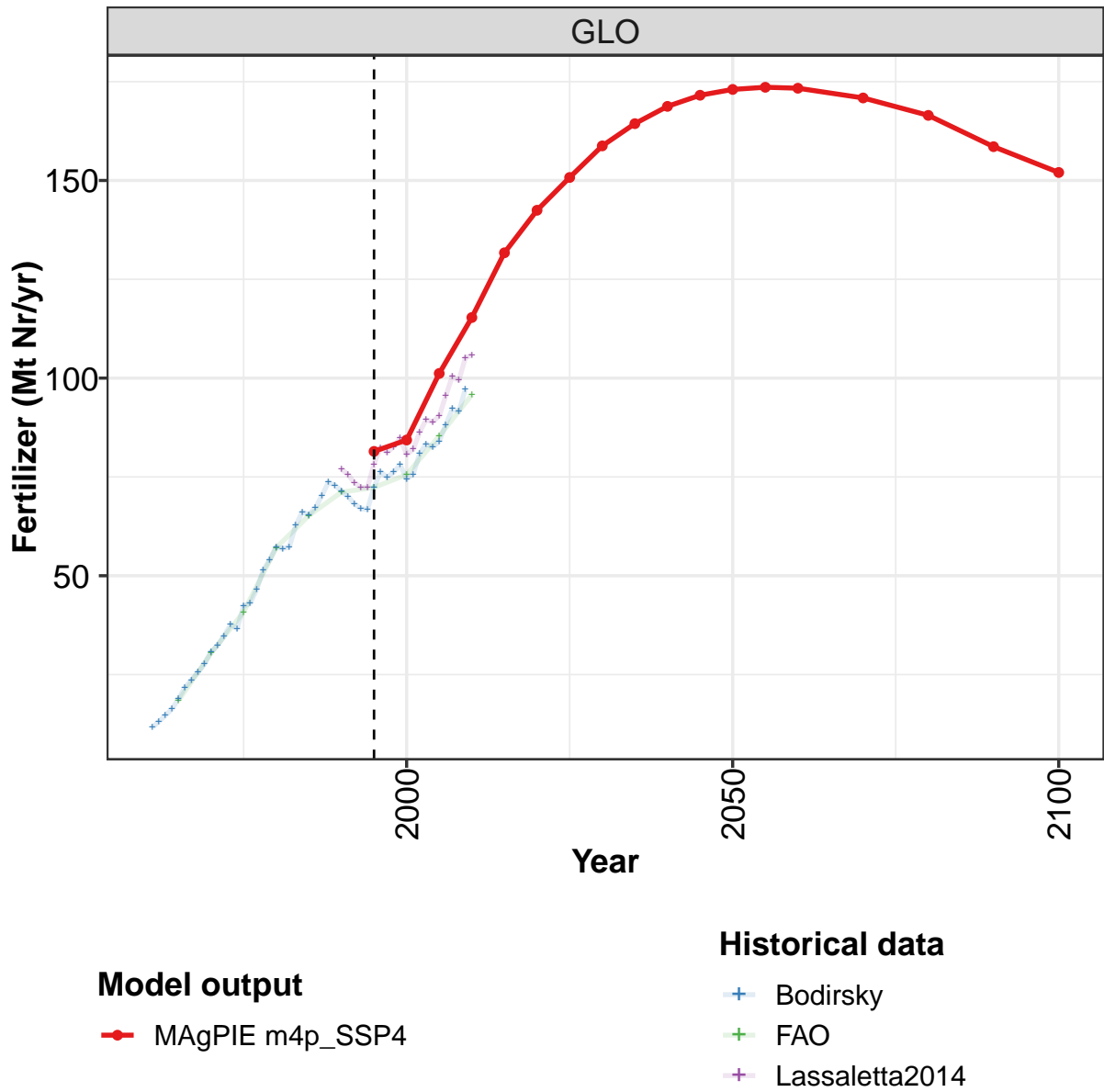
Table 1718: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Inputs—Biological Fixation Symbiotic Crops (Mt Nr/yr) [PART 5/5]

	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



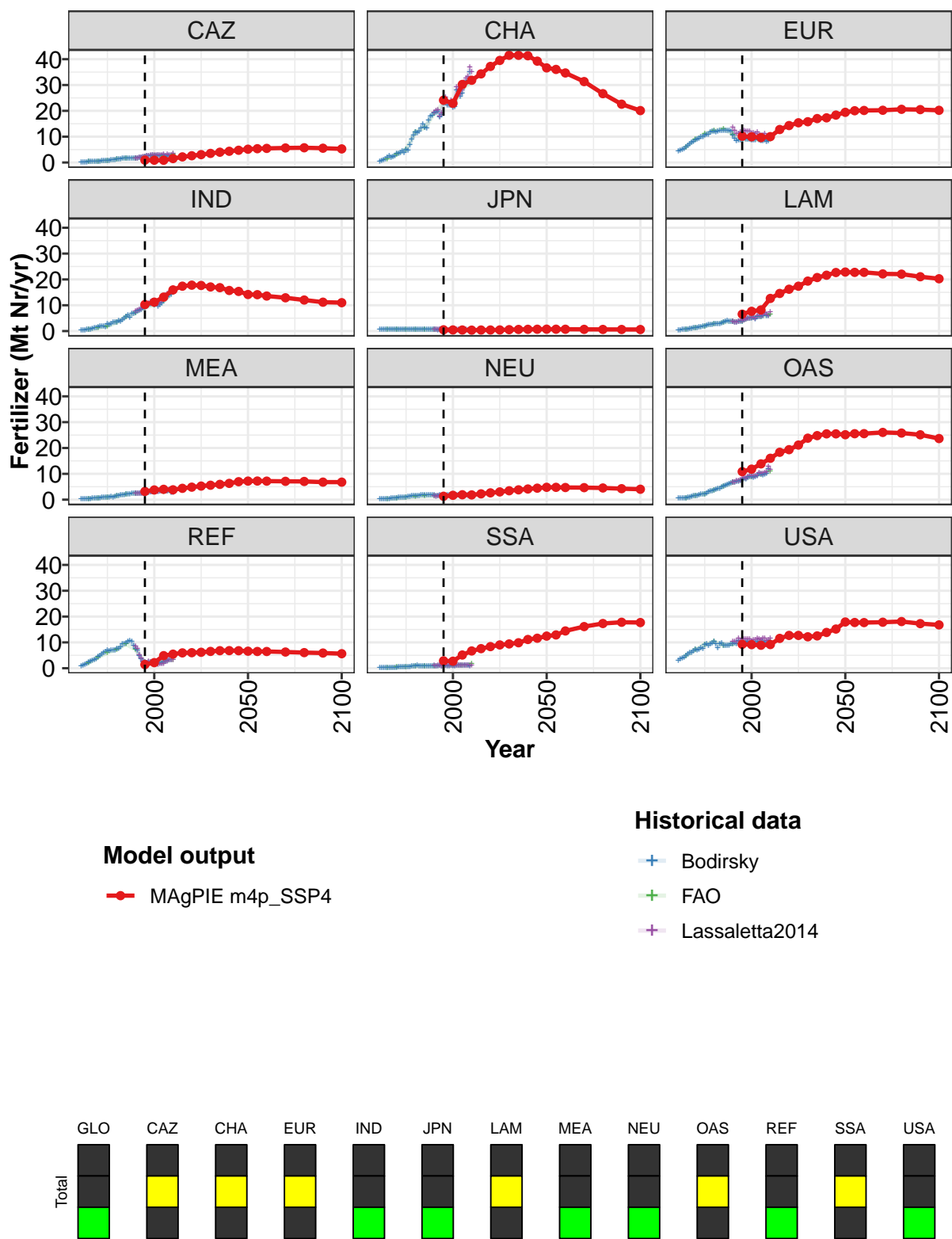


Figure 450: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	81	84	101	115	132	142	151	159	164	169	172
CAZ	1	1	1	2	2	3	3	4	4	4	5
CHA	24	23	30	32	34	37	40	42	42	41	39
EUR	10	10	10	10	13	14	15	16	17	17	18
IND	10	11	13	16	17	18	18	17	17	16	15
JPN	1	0	0	0	0	0	0	1	1	1	1
LAM	7	8	8	13	15	16	17	19	21	22	23
MEA	3	4	4	4	4	5	5	6	6	6	7
NEU	1	2	2	2	2	3	3	3	4	4	4
OAS	11	12	14	16	18	19	21	24	25	25	25
REF	1	2	5	5	6	6	6	7	7	7	7
SSA	3	3	5	7	8	8	9	9	10	11	12
USA	9	9	9	9	12	13	13	12	13	14	15

Table 1720: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Fertilizer (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	173	174	173	171	166	159	152
CAZ	5	5	5	6	6	6	5
CHA	37	36	35	31	27	23	20
EUR	19	20	20	20	21	20	20
IND	14	14	14	13	12	11	11
JPN	1	1	1	1	1	1	1
LAM	23	23	23	22	22	21	20
MEA	7	7	7	7	7	7	7
NEU	5	5	5	5	5	4	4
OAS	25	26	26	26	26	25	24
REF	7	6	6	6	6	6	6
SSA	12	13	14	16	17	18	18
USA	18	18	18	18	18	17	17

Table 1721: MAgPIE m4p\_SSP4 — 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)

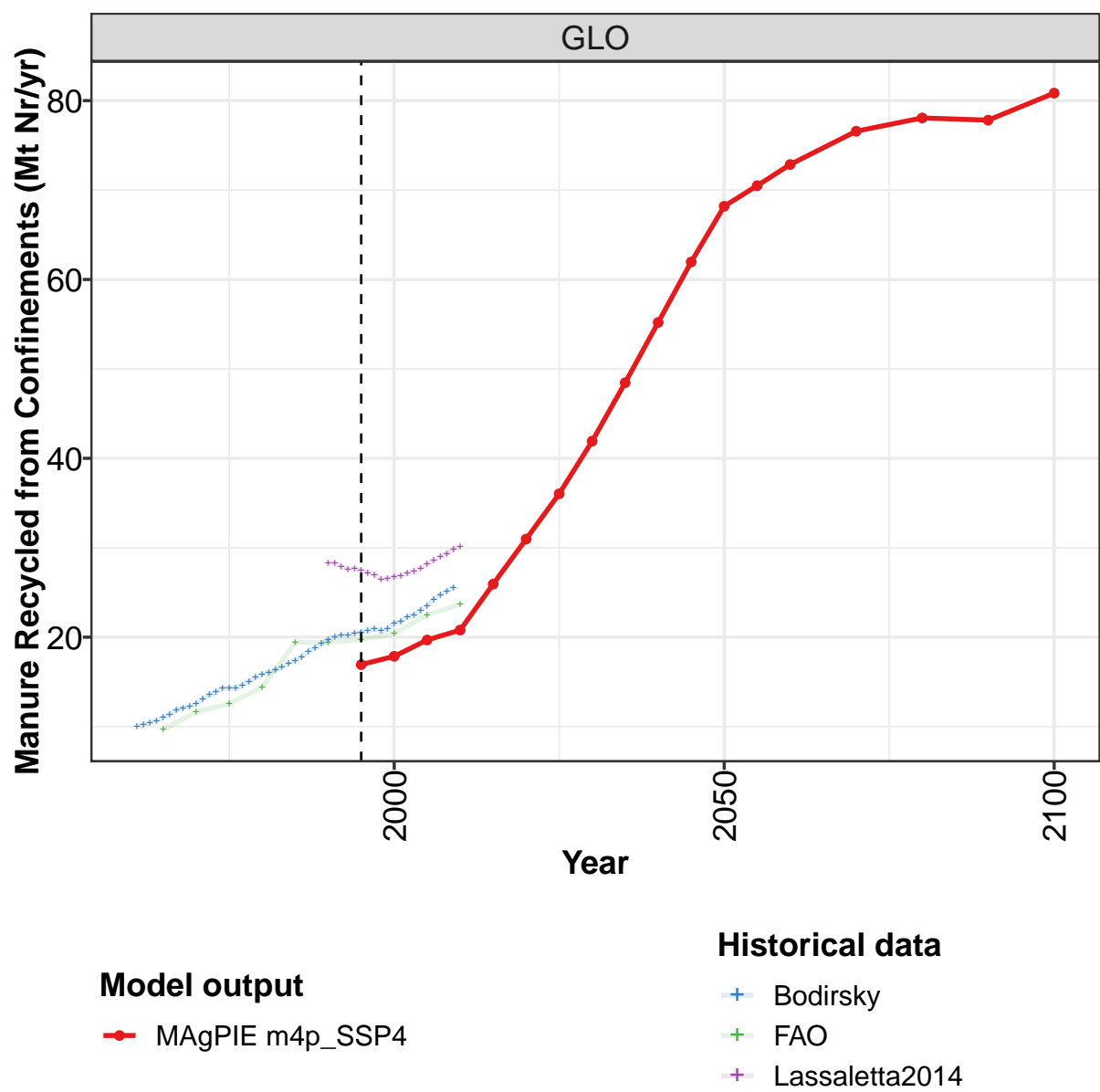
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	77	76	74	72	72	78	82	81	83	85	81
CAZ	2	2	2	2	2	2	3	3	3	3	3
CHA	20	20	20	18	19	24	25	23	23	24	22
EUR	14	12	11	11	12	11	12	12	12	12	11
IND	8	8	8	9	10	10	10	11	11	12	11
JPN	1	1	1	1	1	1	1	0	0	0	0
LAM	4	4	4	4	4	4	4	5	5	5	5
MEA	2	2	3	3	2	3	3	3	3	3	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



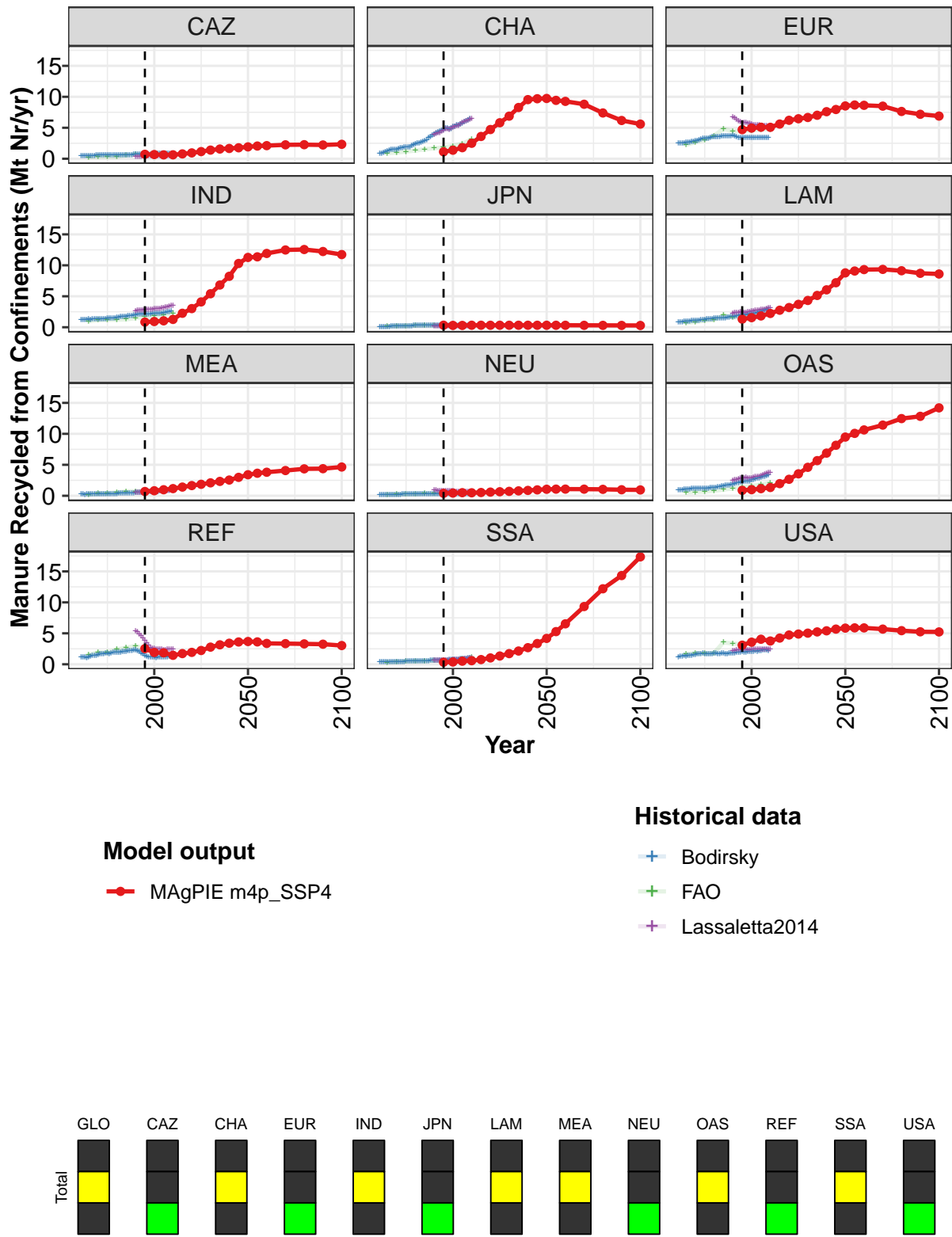


Figure 451: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.9	17.9	19.7	20.8	25.9	31.0	36.0	41.9	48.5	55.2	62.0
CAZ	0.7	0.7	0.6	0.6	0.8	0.9	1.2	1.4	1.6	1.7	1.8
CHA	1.1	1.4	1.8	2.5	3.6	4.7	5.8	6.9	8.3	9.5	9.7
EUR	4.7	4.9	5.1	5.1	5.6	6.2	6.5	6.7	7.0	7.6	8.0
IND	0.8	0.9	1.0	1.3	2.3	3.0	4.1	5.4	6.8	8.2	10.3
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	1.3	1.6	1.8	2.2	2.8	3.2	3.7	4.3	5.1	6.0	7.2
MEA	0.7	0.8	1.0	1.2	1.4	1.6	1.9	2.1	2.3	2.5	3.0
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	3.5	4.6	5.7	6.9	8.2
REF	2.5	1.9	1.9	1.5	1.7	1.9	2.2	2.8	3.1	3.4	3.6
SSA	0.3	0.4	0.5	0.6	0.8	1.0	1.3	1.7	2.1	2.7	3.4
USA	3.1	3.6	4.0	3.8	4.2	4.7	4.9	5.0	5.2	5.4	5.7

Table 1730: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Manure Recycled from Confinements (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	68.2	70.5	72.9	76.6	78.1	77.8	80.8
CAZ	1.9	2.1	2.1	2.2	2.3	2.2	2.3
CHA	9.7	9.4	9.3	8.8	7.4	6.2	5.6
EUR	8.5	8.7	8.6	8.5	7.6	7.2	6.9
IND	11.3	11.4	11.9	12.5	12.6	12.2	11.7
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	8.8	9.1	9.3	9.3	9.1	8.7	8.6
MEA	3.4	3.6	3.8	4.1	4.3	4.4	4.6
NEU	1.1	1.1	1.1	1.1	1.0	1.0	0.9
OAS	9.5	10.1	10.6	11.4	12.5	12.8	14.2
REF	3.7	3.6	3.4	3.3	3.3	3.2	3.0
SSA	4.2	5.3	6.5	9.3	12.2	14.3	17.3
USA	5.8	5.9	5.9	5.7	5.4	5.2	5.2

Table 1731: MAgPIE m4p\_SSP4 — 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)

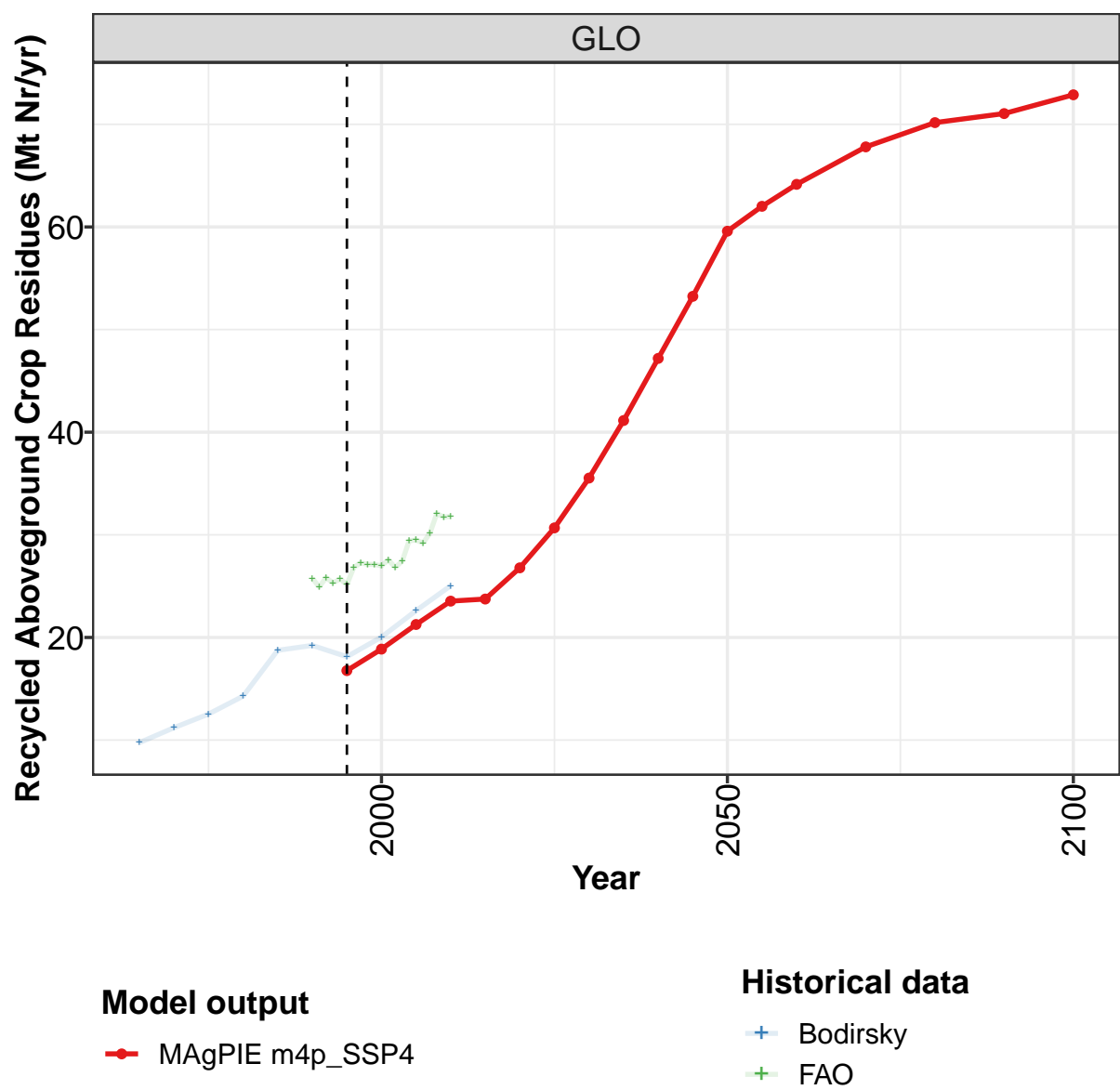
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
GLO	28.3	28.2	27.9	27.6	27.6	27.5	27.2	27.0	26.5	26.6	26.7
CAZ	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CHA	4.0	4.1	4.1	4.2	4.4	4.6	4.8	4.9	4.7	4.9	5.0
EUR	6.8	6.6	6.3	6.0	5.9	5.8	5.8	5.8	5.7	5.7	5.6
IND	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	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



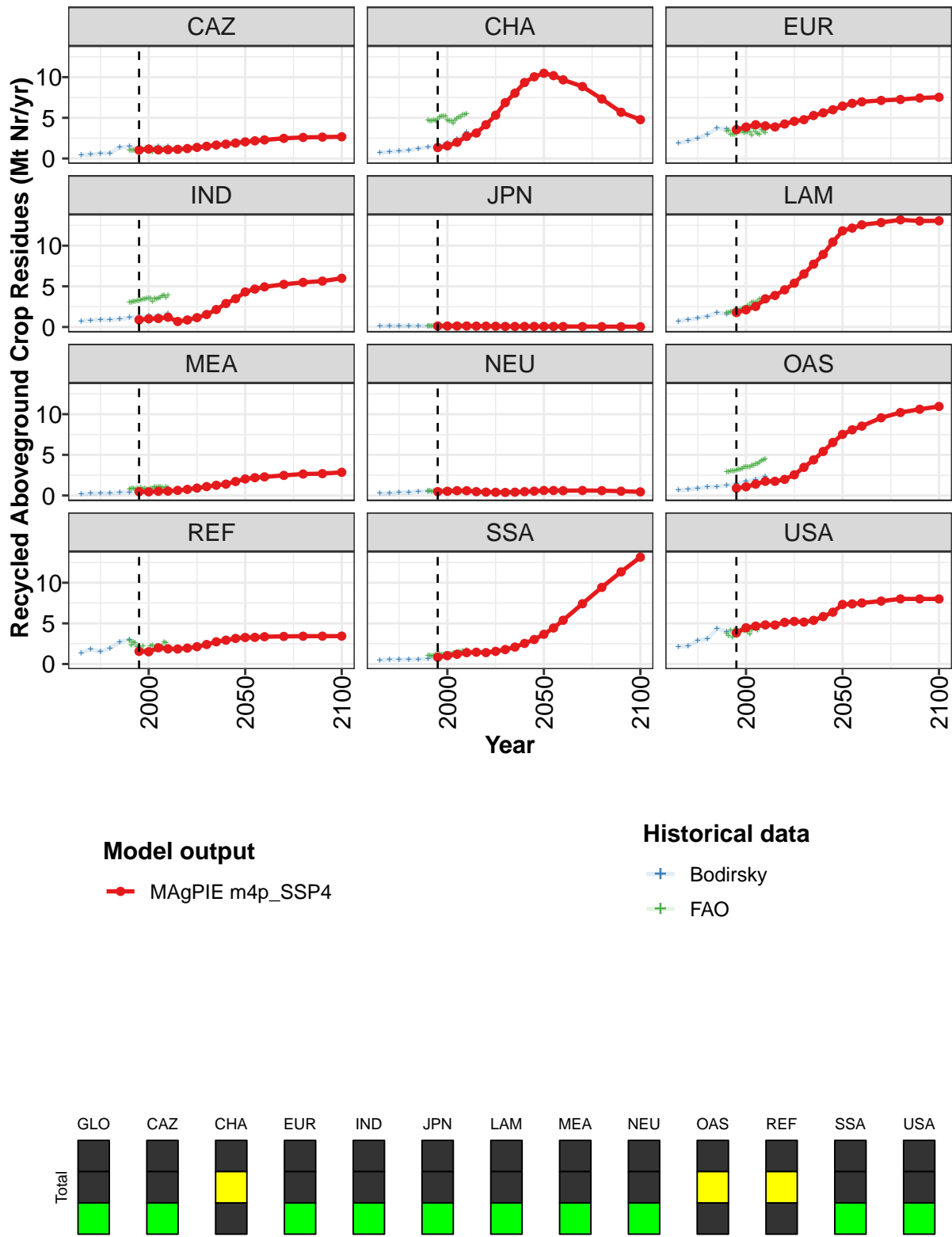


Figure 452: MAGPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.8	18.9	21.3	23.5	23.7	26.8	30.7	35.5	41.1	47.2	53.2
CAZ	1.0	1.2	1.1	1.1	1.1	1.2	1.4	1.5	1.6	1.8	1.9
CHA	1.3	1.6	2.0	2.7	3.1	4.1	5.3	6.9	8.0	9.3	10.0
EUR	3.6	3.9	4.1	4.0	3.9	4.2	4.6	4.8	5.3	5.6	6.0
IND	0.9	1.0	1.0	1.2	0.7	0.9	1.1	1.5	2.1	2.9	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	1.8	2.1	2.5	3.5	3.9	4.6	5.4	6.5	7.7	8.9	10.4
MEA	0.5	0.5	0.5	0.5	0.6	0.8	0.9	1.1	1.3	1.4	1.7
NEU	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5
OAS	0.9	1.1	1.4	1.7	1.8	2.0	2.5	3.5	4.4	5.4	6.5
REF	1.6	1.5	2.0	1.9	1.8	2.0	2.1	2.4	2.7	2.9	3.1
SSA	0.8	1.0	1.2	1.4	1.5	1.4	1.6	1.8	2.1	2.5	3.0
USA	3.8	4.5	4.7	4.8	4.8	5.1	5.2	5.2	5.4	5.8	6.4

Table 1740: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	59.6	62.0	64.2	67.8	70.2	71.1	72.9
CAZ	2.0	2.2	2.3	2.5	2.6	2.6	2.7
CHA	10.5	10.2	9.7	8.8	7.3	5.7	4.8
EUR	6.4	6.8	7.0	7.1	7.3	7.4	7.5
IND	4.3	4.7	4.9	5.2	5.5	5.6	6.0
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	11.8	12.2	12.6	12.8	13.2	13.0	13.1
MEA	2.0	2.2	2.3	2.5	2.6	2.7	2.9
NEU	0.6	0.6	0.6	0.6	0.6	0.5	0.5
OAS	7.5	8.1	8.5	9.6	10.2	10.6	10.9
REF	3.3	3.3	3.4	3.4	3.4	3.4	3.4
SSA	3.7	4.4	5.4	7.4	9.4	11.3	13.1
USA	7.3	7.4	7.5	7.7	8.0	8.0	8.0

Table 1741: MAgPIE m4p\_SSP4 — 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

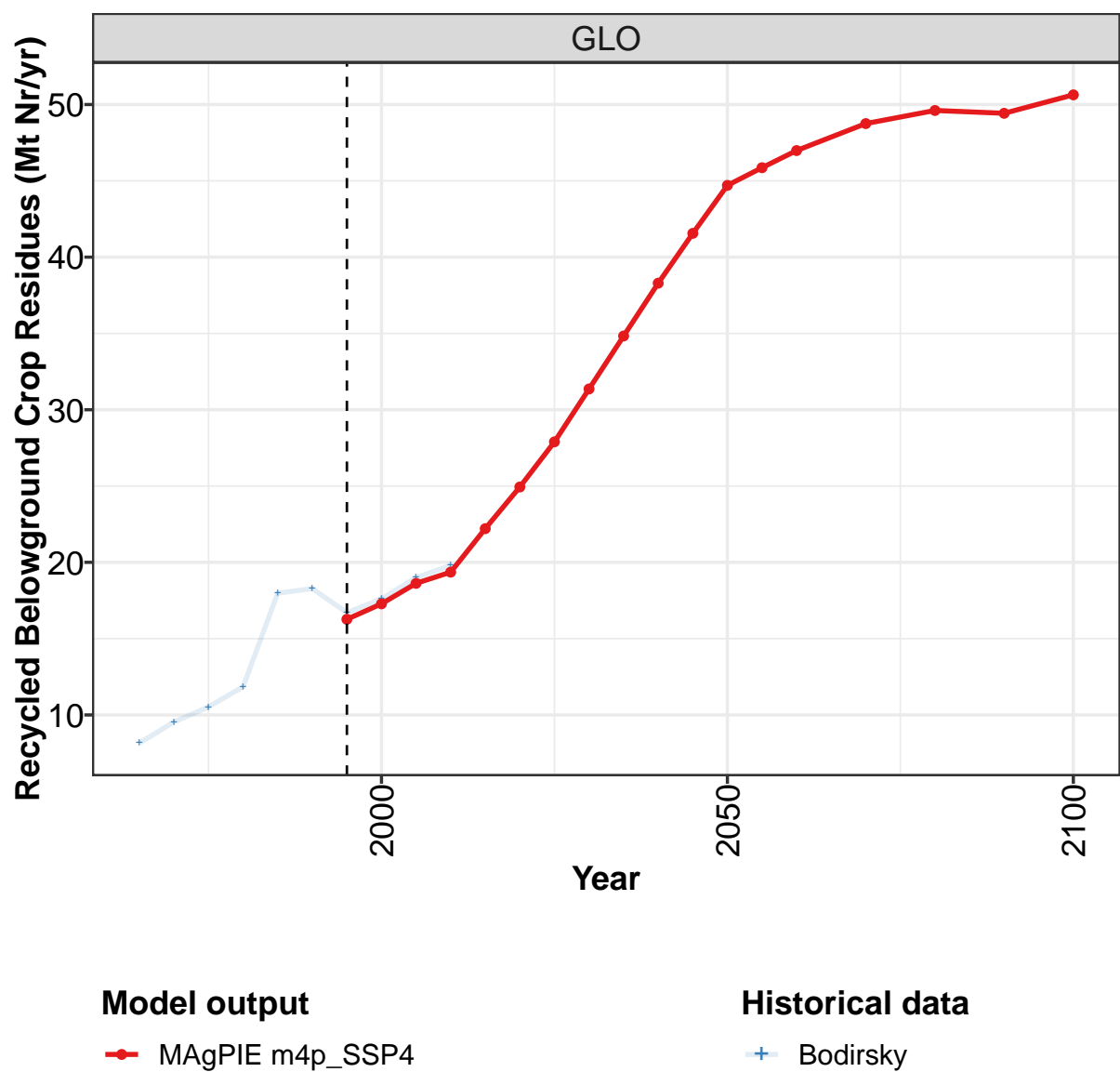
Table 1743: FAO — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Aboveground Crop Residues (Mt Nr/yr) [PART 1/2]

	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



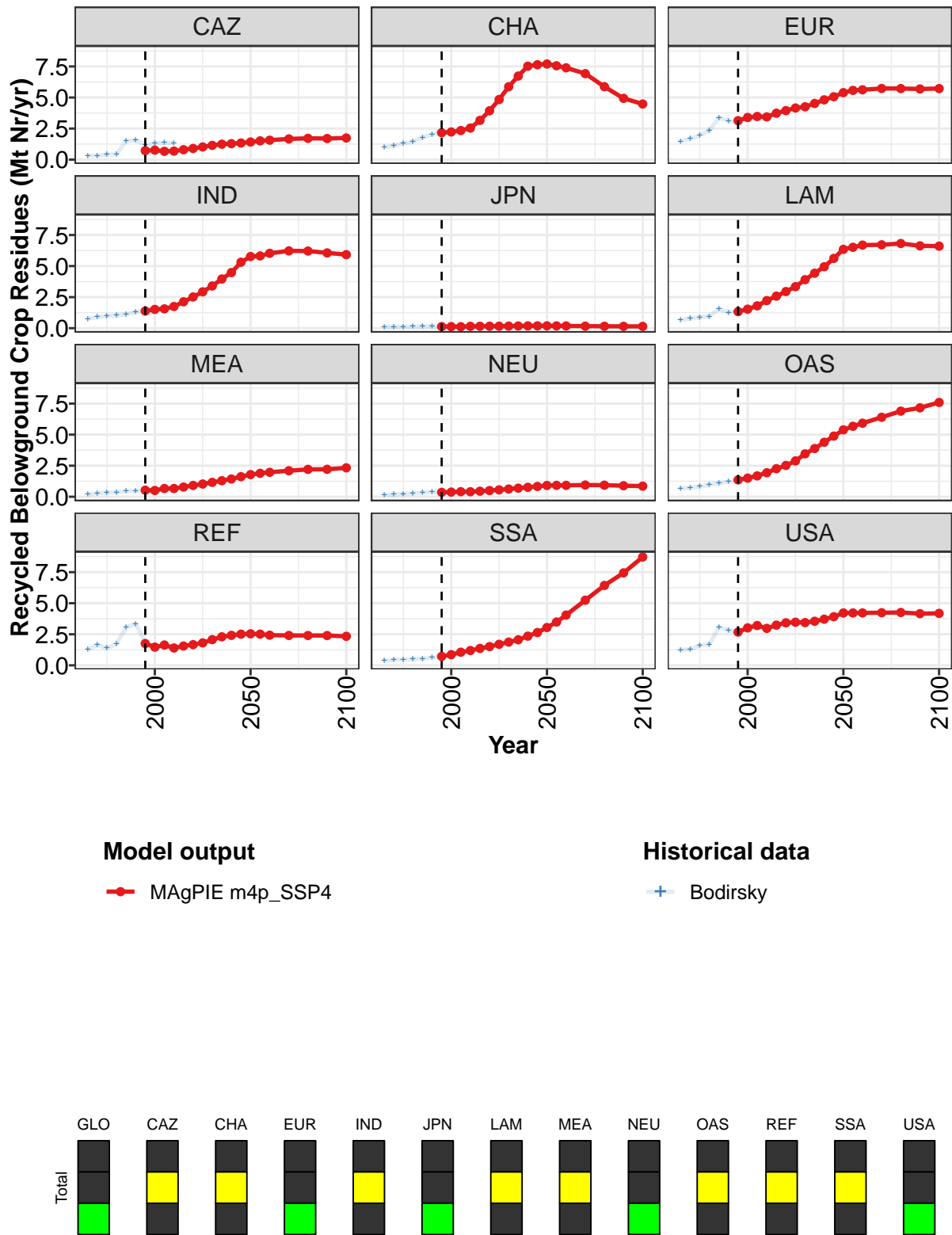


Figure 453: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Belowground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.3	17.3	18.6	19.4	22.2	24.9	27.9	31.4	34.8	38.3	41.6
CAZ	0.7	0.8	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3
CHA	2.2	2.2	2.3	2.5	3.2	3.9	4.8	5.9	6.7	7.5	7.6
EUR	3.1	3.4	3.5	3.4	3.7	3.9	4.2	4.3	4.5	4.8	5.1
IND	1.4	1.5	1.6	1.7	2.1	2.5	2.9	3.4	4.0	4.5	5.3
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	3.9	4.4	4.9	5.6
MEA	0.5	0.5	0.7	0.7	0.8	0.9	1.0	1.2	1.3	1.4	1.6
NEU	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.8
OAS	1.4	1.5	1.7	1.9	2.3	2.5	2.9	3.5	3.9	4.4	4.9
REF	1.8	1.5	1.6	1.4	1.6	1.7	1.8	2.1	2.3	2.4	2.5
SSA	0.7	0.9	1.1	1.2	1.4	1.5	1.7	1.9	2.1	2.3	2.6
USA	2.7	3.0	3.2	3.0	3.2	3.4	3.5	3.4	3.5	3.7	3.9

Table 1745: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Recycled Belowground Crop Residues (Mt Nr/yr) [PART 1/2]

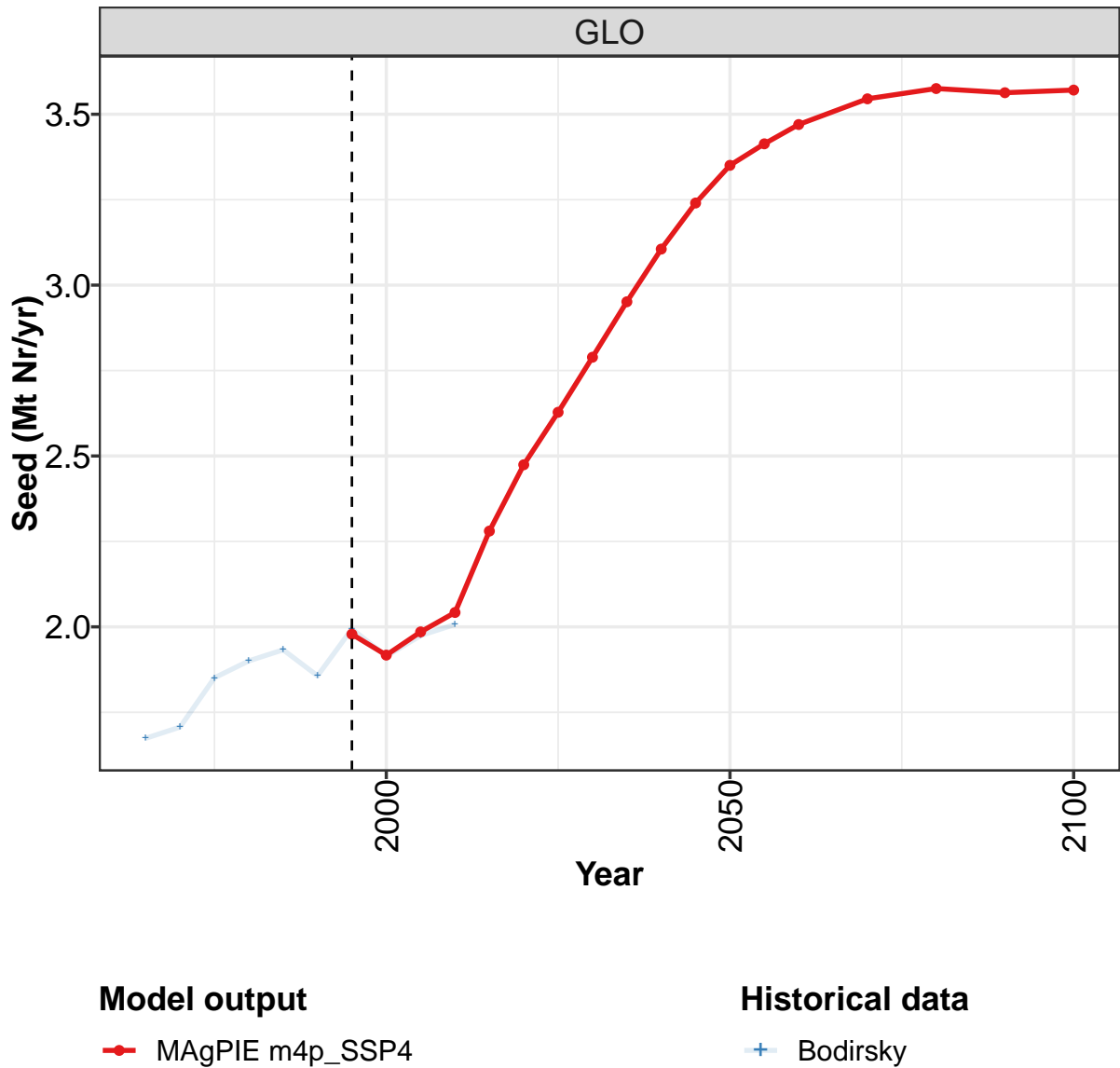
	2050	2055	2060	2070	2080	2090	2100
GLO	44.7	45.9	47.0	48.8	49.6	49.4	50.6
CAZ	1.4	1.5	1.6	1.7	1.7	1.7	1.7
CHA	7.7	7.6	7.4	6.9	5.9	4.9	4.5
EUR	5.4	5.6	5.6	5.7	5.7	5.7	5.7
IND	5.8	5.8	6.0	6.2	6.2	6.1	5.9
JPN	0.2	0.2	0.2	0.2	0.2	0.1	0.1
LAM	6.4	6.5	6.7	6.7	6.8	6.6	6.6
MEA	1.8	1.9	2.0	2.1	2.2	2.2	2.3
NEU	0.9	0.9	0.9	0.9	0.9	0.9	0.9
OAS	5.4	5.7	5.9	6.4	6.9	7.2	7.6
REF	2.5	2.5	2.4	2.4	2.4	2.4	2.3
SSA	3.0	3.5	4.0	5.2	6.4	7.4	8.7
USA	4.2	4.2	4.2	4.2	4.3	4.2	4.2

Table 1746: MAgPIE m4p\_SSP4 — 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



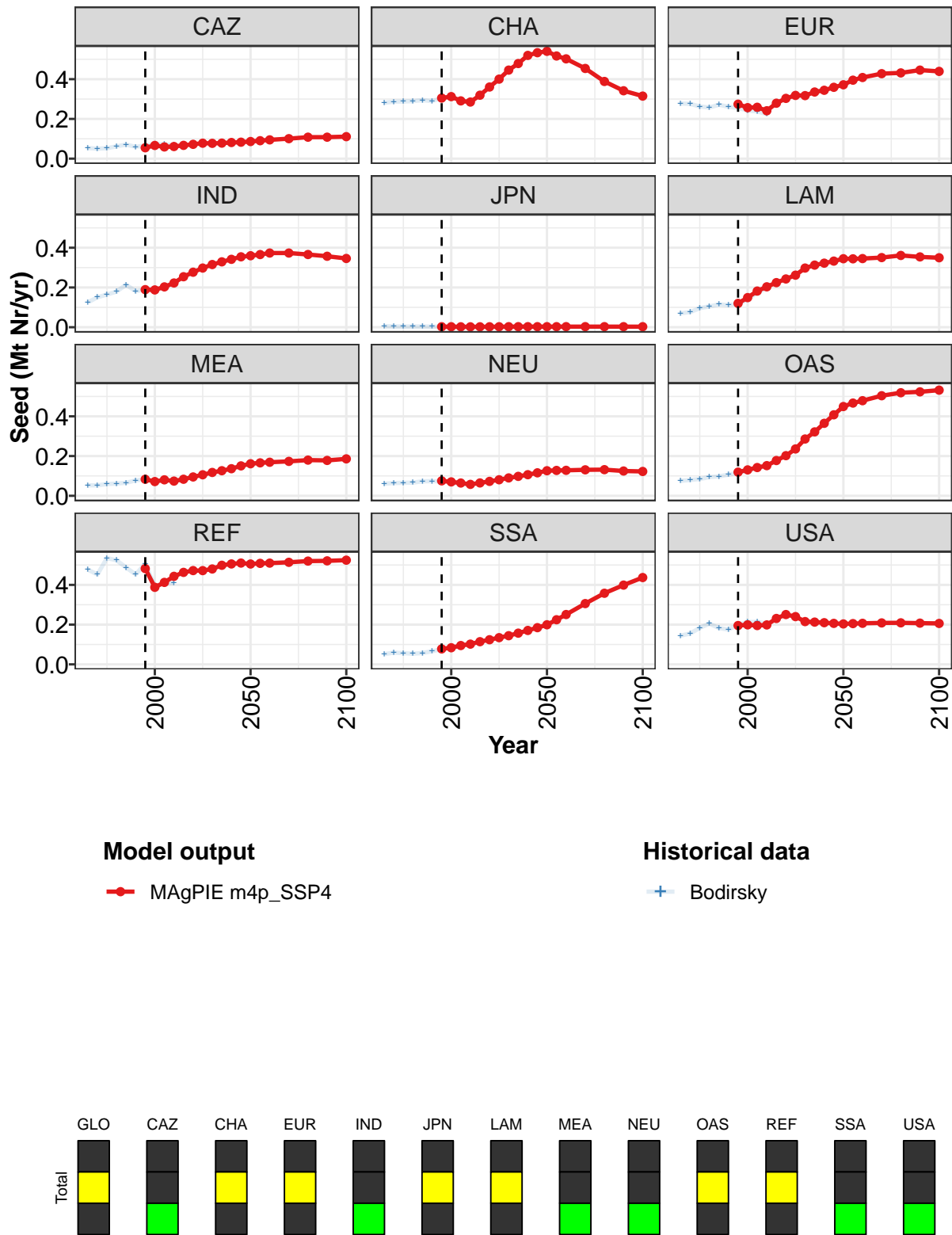


Figure 454: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Seed (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.98	1.92	1.99	2.04	2.28	2.47	2.63	2.79	2.95	3.11	3.24
CAZ	0.05	0.07	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.08
CHA	0.31	0.31	0.29	0.29	0.32	0.36	0.40	0.45	0.48	0.52	0.53
EUR	0.27	0.26	0.26	0.24	0.28	0.30	0.32	0.32	0.34	0.34	0.36
IND	0.19	0.19	0.20	0.22	0.25	0.28	0.30	0.32	0.33	0.34	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	0.12	0.15	0.18	0.20	0.22	0.24	0.26	0.30	0.31	0.32	0.33
MEA	0.08	0.07	0.08	0.07	0.08	0.09	0.11	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	0.12
OAS	0.12	0.13	0.14	0.15	0.18	0.20	0.24	0.29	0.32	0.36	0.41
REF	0.48	0.39	0.41	0.44	0.46	0.47	0.47	0.48	0.50	0.51	0.51
SSA	0.08	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.16	0.17	0.18
USA	0.20	0.20	0.20	0.20	0.23	0.25	0.24	0.22	0.21	0.21	0.21

Table 1748: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Inputs—Seed (Mt Nr/yr) [PART 1/2]

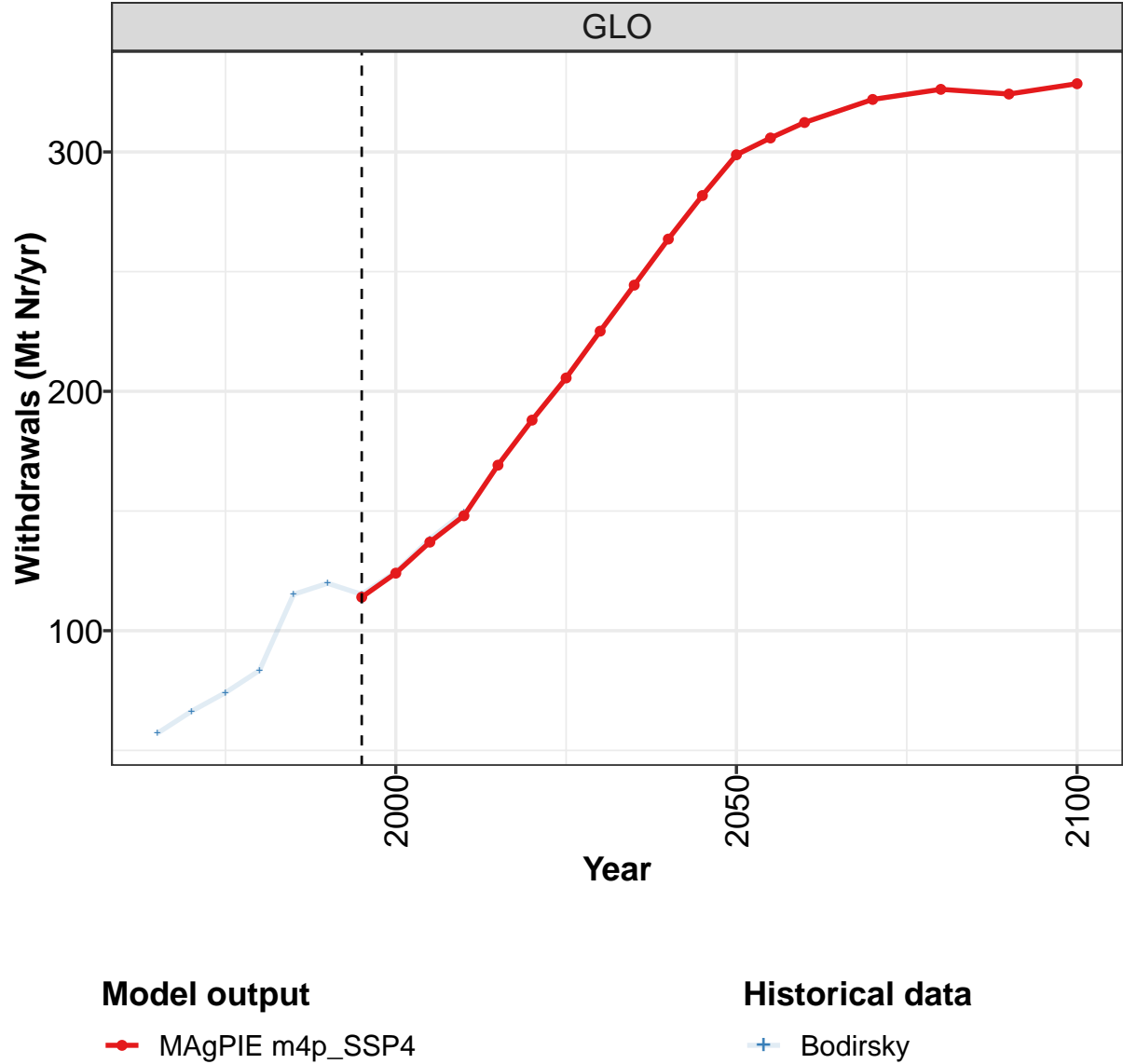
	2050	2055	2060	2070	2080	2090	2100
GLO	3.35	3.41	3.47	3.55	3.58	3.56	3.57
CAZ	0.09	0.09	0.09	0.10	0.11	0.11	0.11
CHA	0.54	0.52	0.50	0.45	0.39	0.34	0.31
EUR	0.37	0.40	0.41	0.43	0.43	0.45	0.44
IND	0.36	0.37	0.37	0.37	0.37	0.36	0.35
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.34	0.34	0.35	0.35	0.36	0.35	0.35
MEA	0.16	0.17	0.17	0.17	0.18	0.18	0.19
NEU	0.13	0.13	0.13	0.13	0.13	0.12	0.12
OAS	0.45	0.47	0.48	0.50	0.52	0.52	0.53
REF	0.51	0.51	0.51	0.51	0.52	0.52	0.52
SSA	0.20	0.22	0.25	0.31	0.36	0.40	0.44
USA	0.20	0.21	0.21	0.21	0.21	0.21	0.21

Table 1749: MAgPIE m4p\_SSP4 — 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



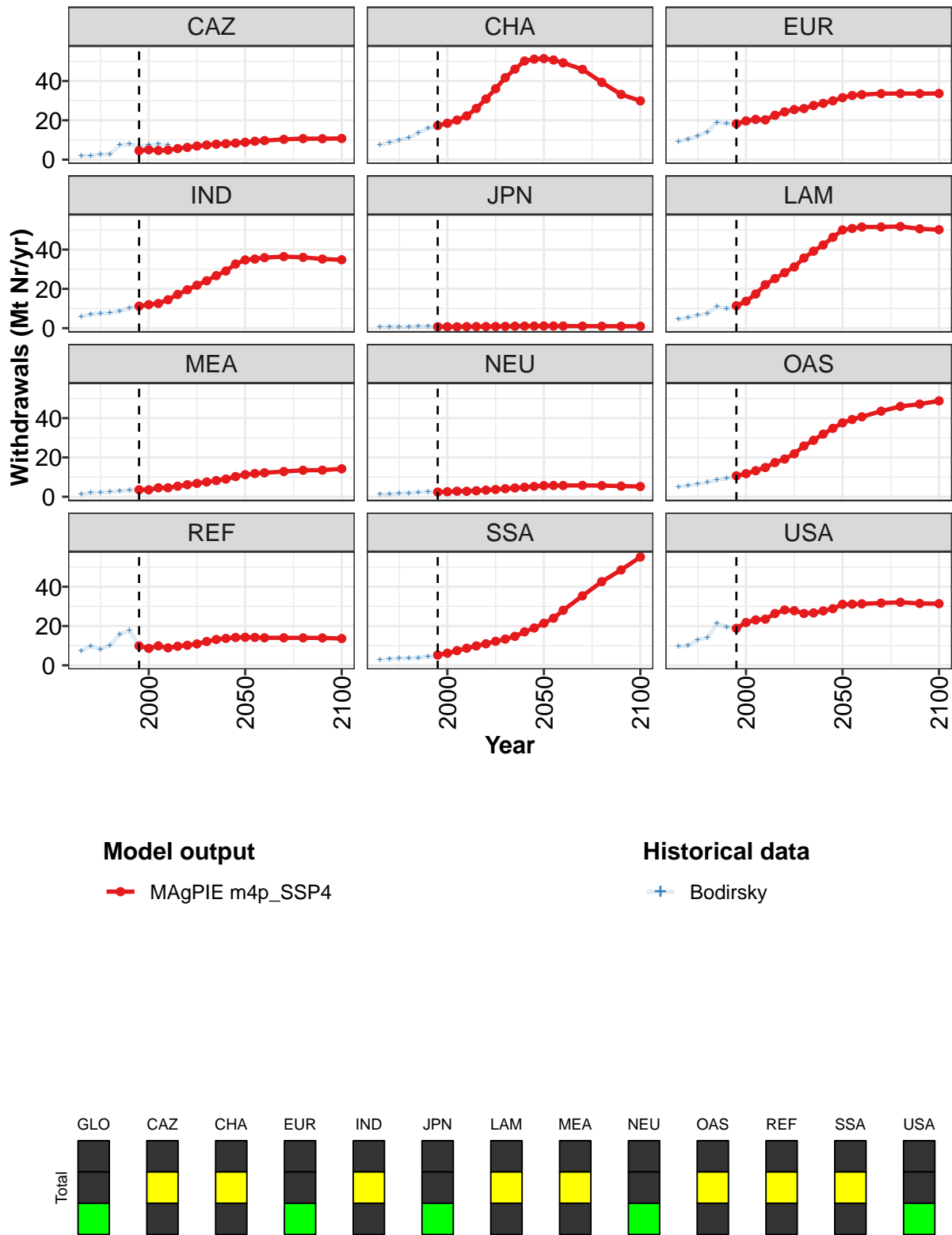


Figure 455: MAGPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals (Mt Nr/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	114	124	137	148	169	188	206	225	244	264	282
CAZ	5	5	5	5	6	6	7	7	8	8	8
CHA	17	19	20	22	26	31	36	42	46	50	51
EUR	18	20	20	20	23	24	25	26	28	29	30
IND	11	12	13	14	17	20	22	24	27	29	33
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	11	14	17	22	25	28	31	36	39	42	46
MEA	4	4	5	5	5	6	7	8	8	9	10
NEU	2	3	3	3	3	3	4	4	4	5	5
OAS	11	12	13	15	17	19	22	26	29	32	35
REF	10	9	10	9	10	10	11	12	13	14	14
SSA	5	6	7	9	10	11	12	13	15	17	19
USA	19	22	23	23	26	28	28	26	27	28	29

Table 1751: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals (Mt Nr/yr) [PART 1/2]

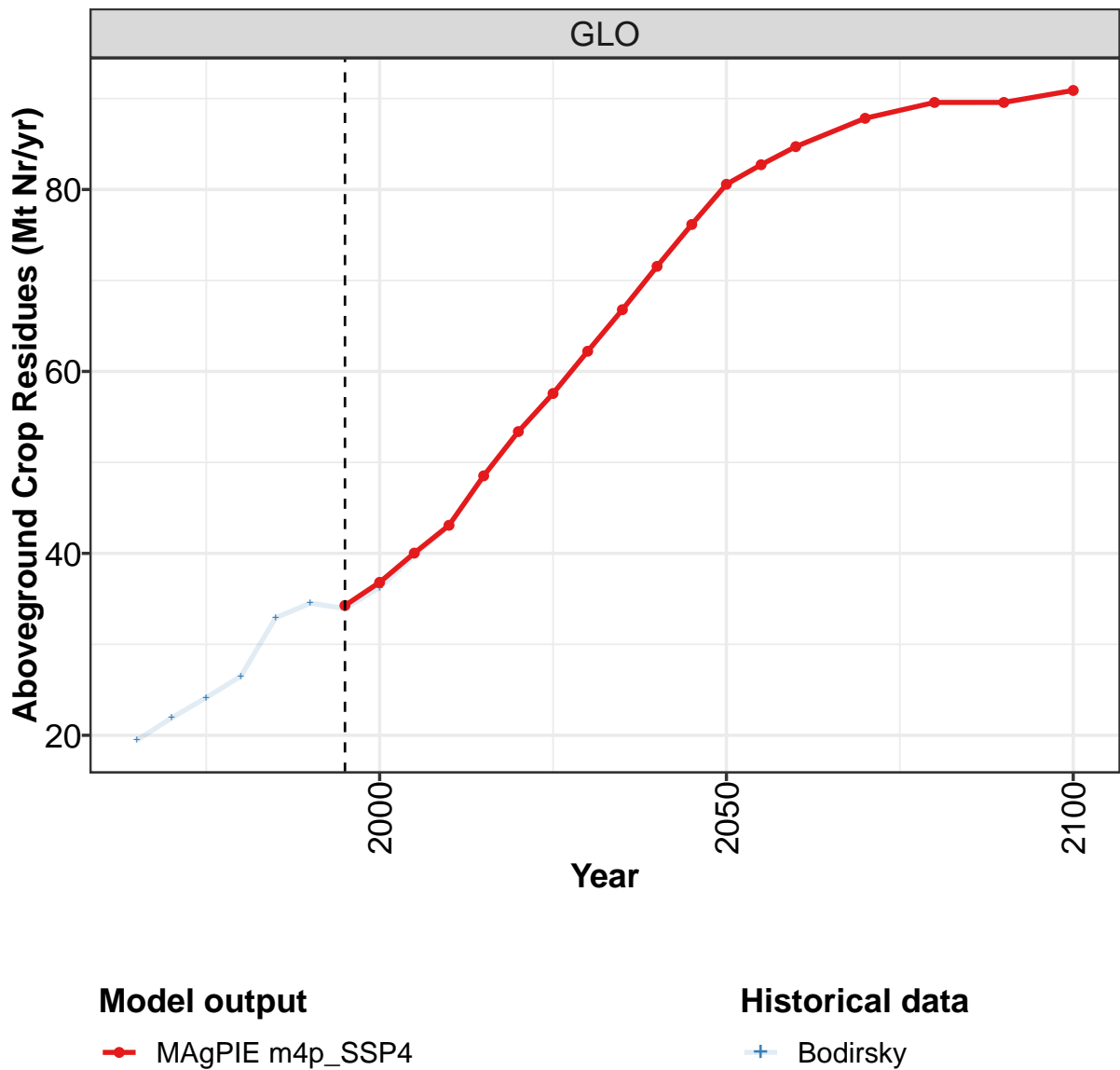
	2050	2055	2060	2070	2080	2090	2100
GLO	299	306	312	322	326	324	329
CAZ	9	9	10	10	11	11	11
CHA	51	51	49	46	39	33	30
EUR	32	33	33	34	34	34	34
IND	35	35	36	36	36	35	35
JPN	1	1	1	1	1	1	1
LAM	50	51	51	52	52	51	50
MEA	11	12	12	13	13	14	14
NEU	6	6	6	6	6	5	5
OAS	38	39	41	44	46	47	49
REF	14	14	14	14	14	14	14
SSA	21	24	28	35	43	49	55
USA	31	31	31	32	32	31	31

Table 1752: MAgPIE m4p\_SSP4 — 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



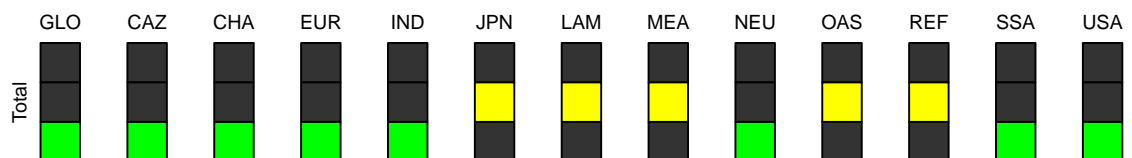
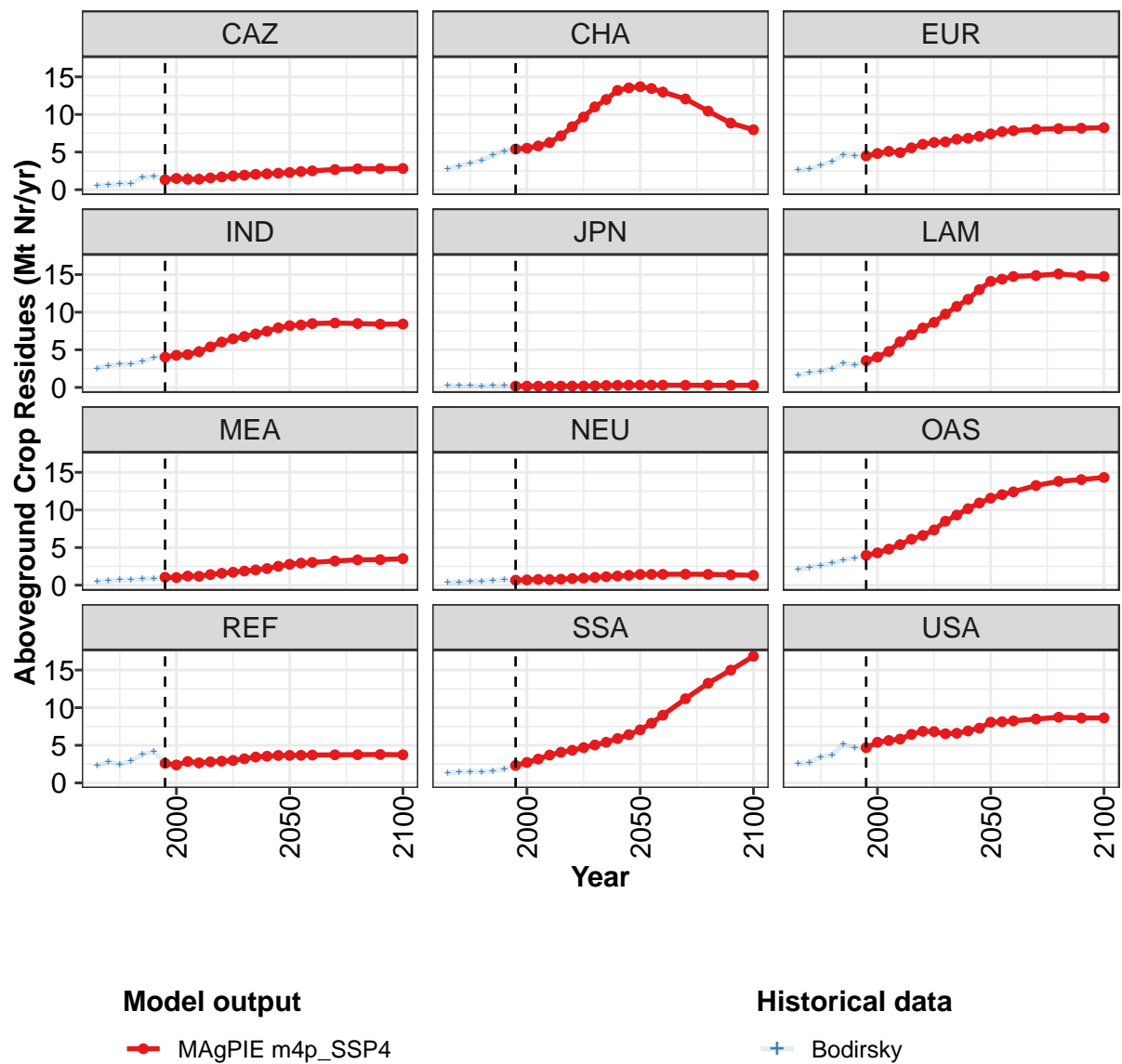


Figure 456: MAGPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals—Aboveground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.3	36.8	40.0	43.1	48.5	53.4	57.6	62.2	66.8	71.6	76.2
CAZ	1.3	1.5	1.4	1.4	1.6	1.7	1.8	1.9	2.0	2.1	2.2
CHA	5.4	5.5	5.8	6.3	7.2	8.4	9.7	11.0	12.0	13.2	13.5
EUR	4.5	4.8	5.1	4.9	5.6	6.0	6.3	6.4	6.7	6.8	7.1
IND	4.0	4.3	4.4	4.7	5.4	6.0	6.5	6.8	7.1	7.5	7.9
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
LAM	3.6	4.0	4.8	6.1	7.0	7.9	8.7	9.7	10.8	11.7	13.0
MEA	1.1	1.0	1.2	1.2	1.4	1.6	1.7	1.9	2.0	2.2	2.5
NEU	0.7	0.7	0.8	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.3
OAS	4.0	4.3	4.8	5.4	6.1	6.6	7.3	8.5	9.3	10.2	10.9
REF	2.6	2.4	2.8	2.7	2.8	2.9	3.0	3.2	3.4	3.5	3.6
SSA	2.3	2.7	3.2	3.7	4.1	4.3	4.7	5.0	5.4	5.9	6.4
USA	4.7	5.4	5.6	5.8	6.5	6.9	6.8	6.5	6.6	6.9	7.3

Table 1754: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals—Aboveground Crop Residues (Mt Nr/yr) [PART 1/2]

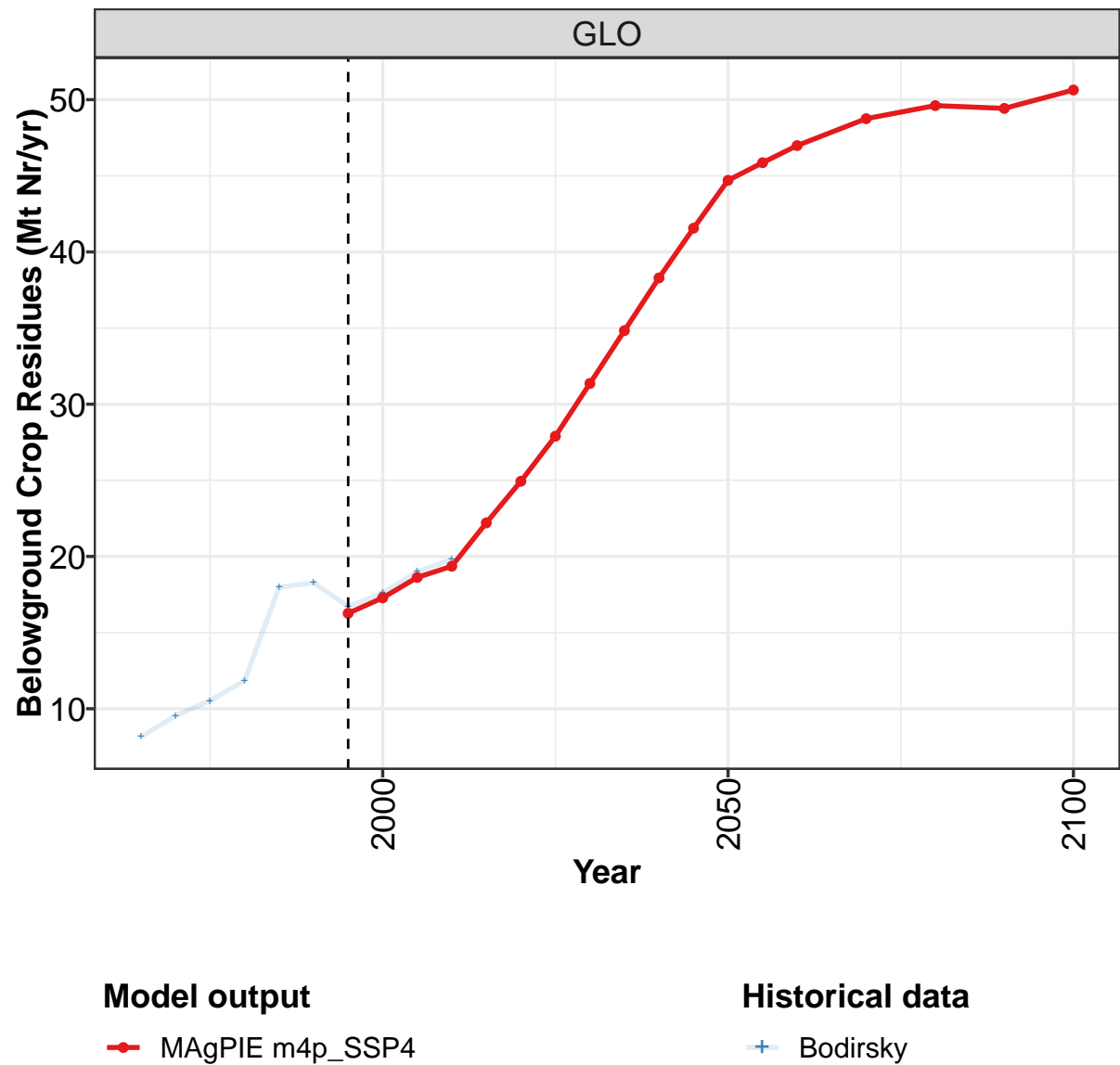
	2050	2055	2060	2070	2080	2090	2100
GLO	80.6	82.7	84.7	87.8	89.6	89.6	90.9
CAZ	2.3	2.4	2.5	2.7	2.8	2.8	2.8
CHA	13.7	13.5	13.0	12.1	10.4	8.9	8.0
EUR	7.4	7.7	7.9	8.0	8.1	8.2	8.2
IND	8.2	8.3	8.5	8.6	8.5	8.4	8.4
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LAM	14.1	14.4	14.8	14.9	15.1	14.8	14.7
MEA	2.8	2.9	3.0	3.2	3.4	3.4	3.5
NEU	1.4	1.4	1.4	1.5	1.4	1.4	1.3
OAS	11.6	12.0	12.4	13.2	13.8	14.0	14.3
REF	3.7	3.7	3.7	3.7	3.8	3.8	3.7
SSA	7.1	7.9	9.0	11.2	13.3	15.0	16.8
USA	8.1	8.1	8.2	8.5	8.7	8.6	8.6

Table 1755: MAgPIE m4p\_SSP4 — 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



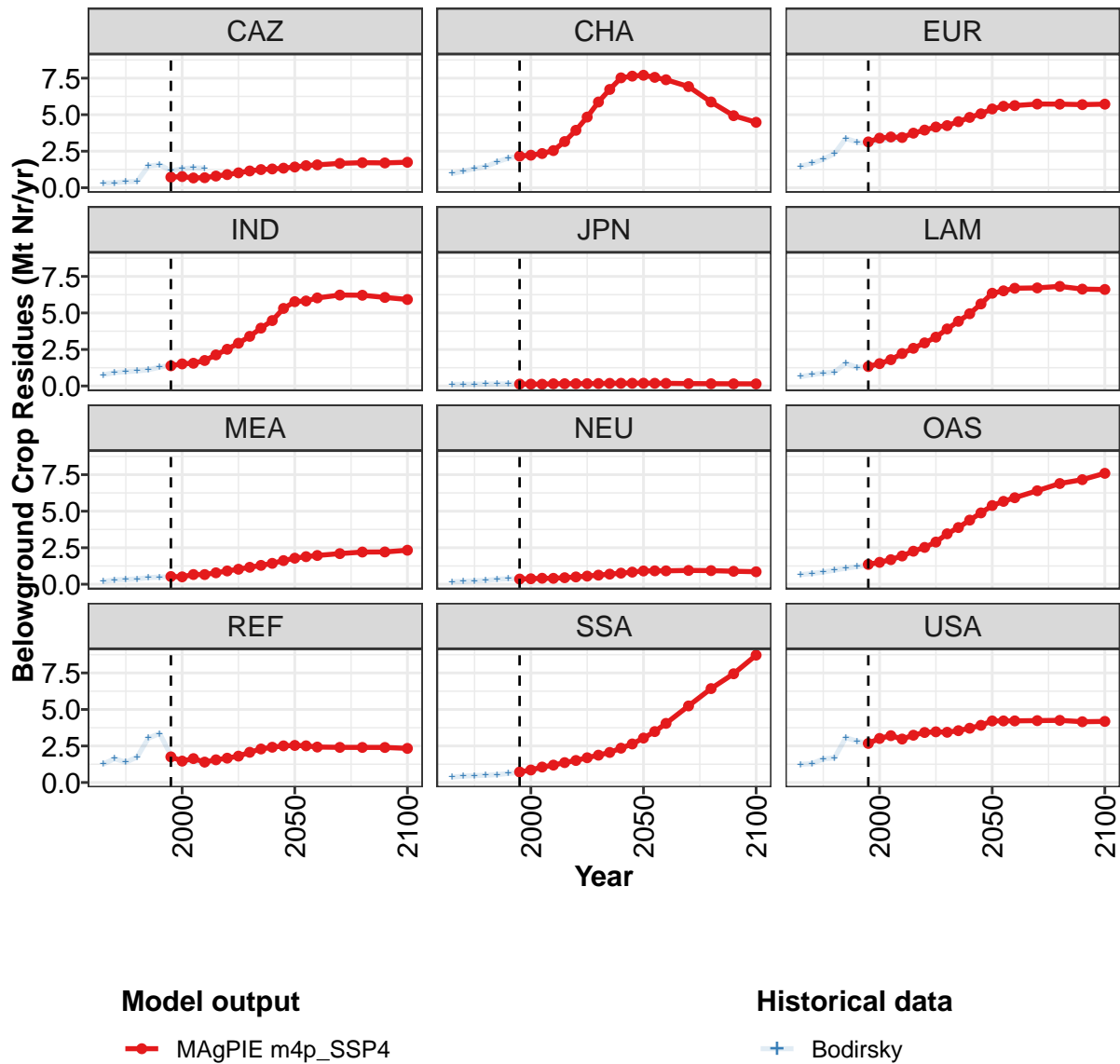


Figure 457: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals—Belowground Crop Residues (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	16.3	17.3	18.6	19.4	22.2	24.9	27.9	31.4	34.8	38.3	41.6
CAZ	0.7	0.8	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3
CHA	2.2	2.2	2.3	2.5	3.2	3.9	4.8	5.9	6.7	7.5	7.6
EUR	3.1	3.4	3.5	3.4	3.7	3.9	4.2	4.3	4.5	4.8	5.1
IND	1.4	1.5	1.6	1.7	2.1	2.5	2.9	3.4	4.0	4.5	5.3
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	3.9	4.4	4.9	5.6
MEA	0.5	0.5	0.7	0.7	0.8	0.9	1.0	1.2	1.3	1.4	1.6
NEU	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.8
OAS	1.4	1.5	1.7	1.9	2.3	2.5	2.9	3.5	3.9	4.4	4.9
REF	1.8	1.5	1.6	1.4	1.6	1.7	1.8	2.1	2.3	2.4	2.5
SSA	0.7	0.9	1.1	1.2	1.4	1.5	1.7	1.9	2.1	2.3	2.6
USA	2.7	3.0	3.2	3.0	3.2	3.4	3.5	3.4	3.5	3.7	3.9

Table 1757: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals—Belowground Crop Residues (Mt Nr/yr) [PART 1/2]

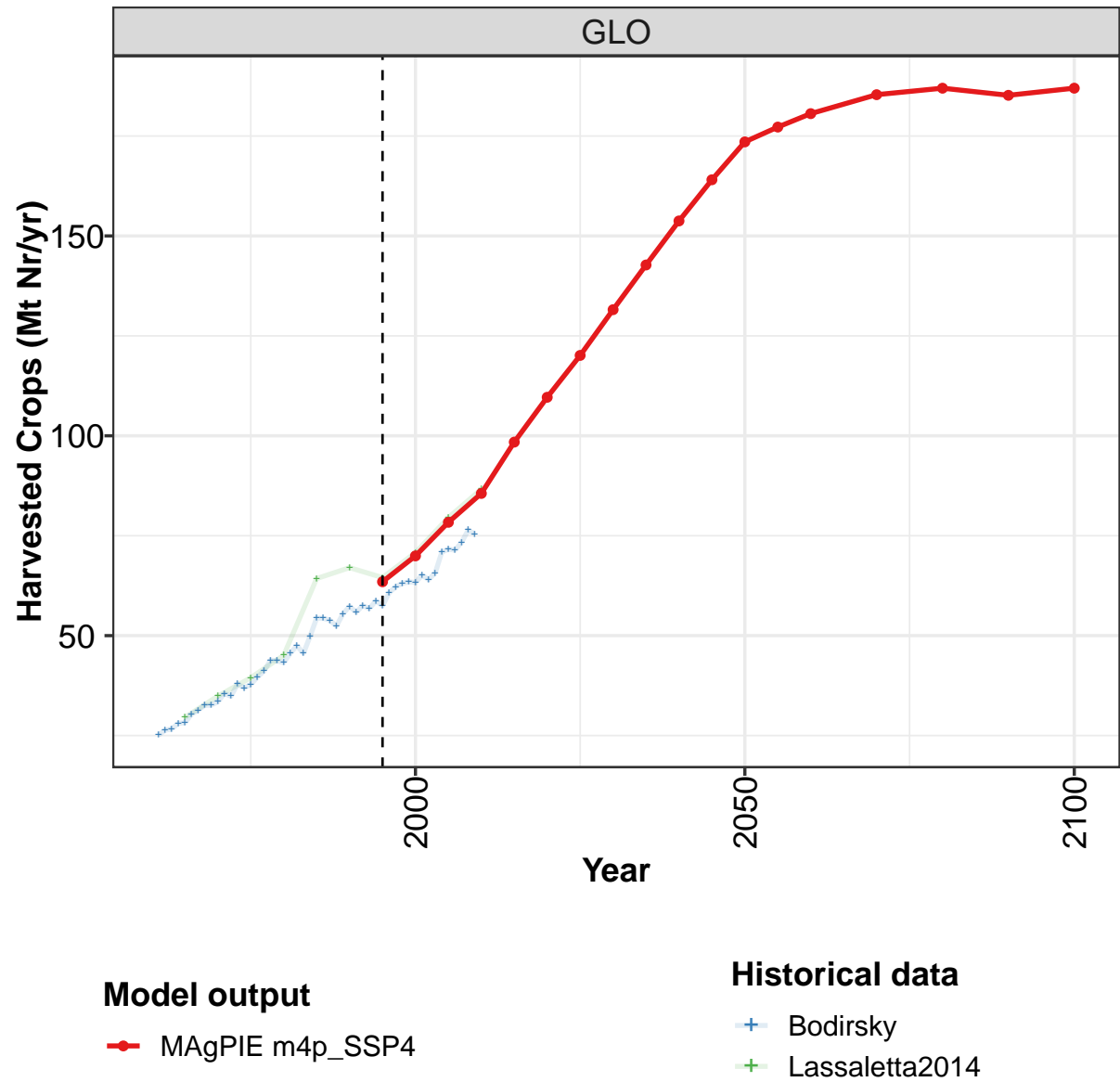
	2050	2055	2060	2070	2080	2090	2100
GLO	44.7	45.9	47.0	48.8	49.6	49.4	50.6
CAZ	1.4	1.5	1.6	1.7	1.7	1.7	1.7
CHA	7.7	7.6	7.4	6.9	5.9	4.9	4.5
EUR	5.4	5.6	5.6	5.7	5.7	5.7	5.7
IND	5.8	5.8	6.0	6.2	6.2	6.1	5.9
JPN	0.2	0.2	0.2	0.2	0.2	0.1	0.1
LAM	6.4	6.5	6.7	6.7	6.8	6.6	6.6
MEA	1.8	1.9	2.0	2.1	2.2	2.2	2.3
NEU	0.9	0.9	0.9	0.9	0.9	0.9	0.9
OAS	5.4	5.7	5.9	6.4	6.9	7.2	7.6
REF	2.5	2.5	2.4	2.4	2.4	2.4	2.3
SSA	3.0	3.5	4.0	5.2	6.4	7.4	8.7
USA	4.2	4.2	4.2	4.2	4.3	4.2	4.2

Table 1758: MAgPIE m4p\_SSP4 — 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





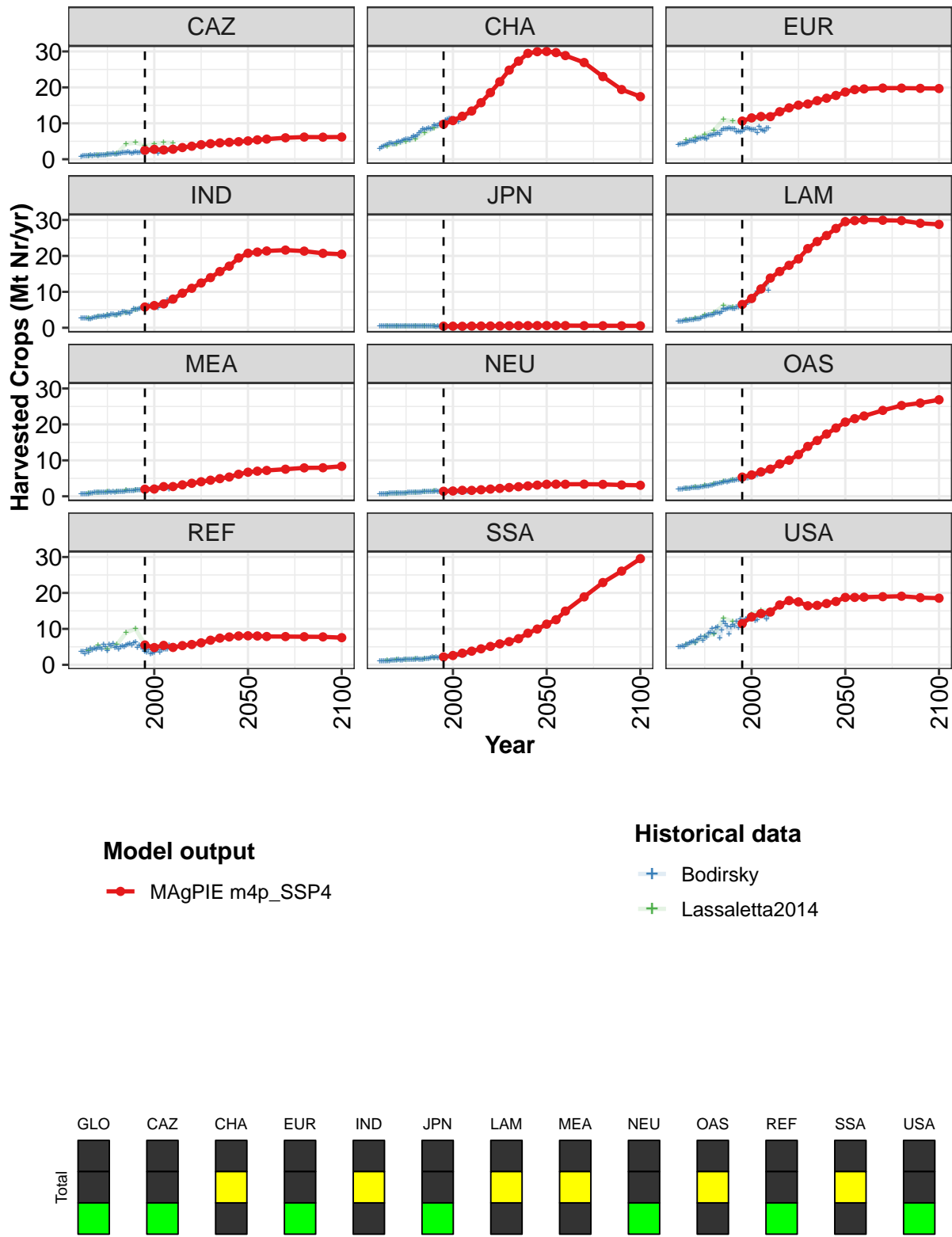


Figure 458: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	63	70	78	86	98	110	120	132	143	154	164
CAZ	2	3	3	3	3	4	4	4	5	5	5
CHA	10	11	12	13	16	19	22	25	27	29	30
EUR	11	12	12	12	13	14	15	15	16	17	18
IND	6	6	7	8	10	11	12	14	16	17	19
JPN	0	0	0	0	0	0	1	1	1	1	1
LAM	6	8	11	14	16	17	19	22	24	26	28
MEA	2	2	3	3	3	4	4	4	5	5	6
NEU	1	1	2	2	2	2	2	2	3	3	3
OAS	5	6	7	8	9	10	12	14	16	17	19
REF	6	5	5	5	5	6	6	7	7	8	8
SSA	2	3	3	4	4	5	6	6	7	9	10
USA	11	13	14	15	17	18	18	16	17	17	18

Table 1760: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	174	177	181	185	187	185	187
CAZ	5	5	6	6	6	6	6
CHA	30	30	29	27	23	19	17
EUR	19	19	20	20	20	20	20
IND	21	21	21	22	21	21	20
JPN	1	1	1	1	1	1	1
LAM	30	30	30	30	30	29	29
MEA	7	7	7	8	8	8	8
NEU	3	3	3	3	3	3	3
OAS	21	22	22	24	25	26	27
REF	8	8	8	8	8	8	8
SSA	11	13	15	19	23	26	30
USA	19	19	19	19	19	19	19

Table 1761: MAgPIE m4p\_SSP4 — 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

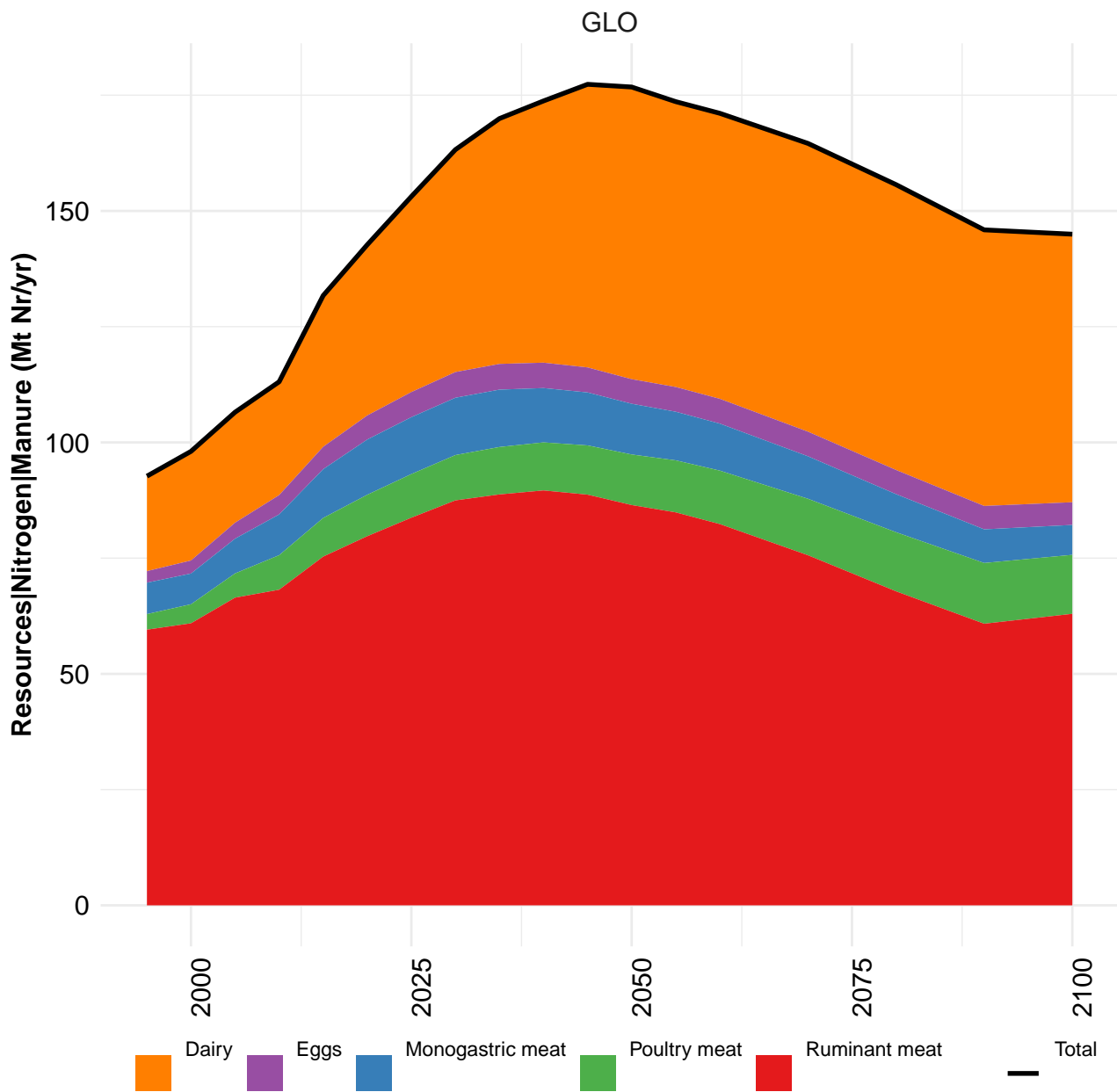
Table 1765: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 4/5]

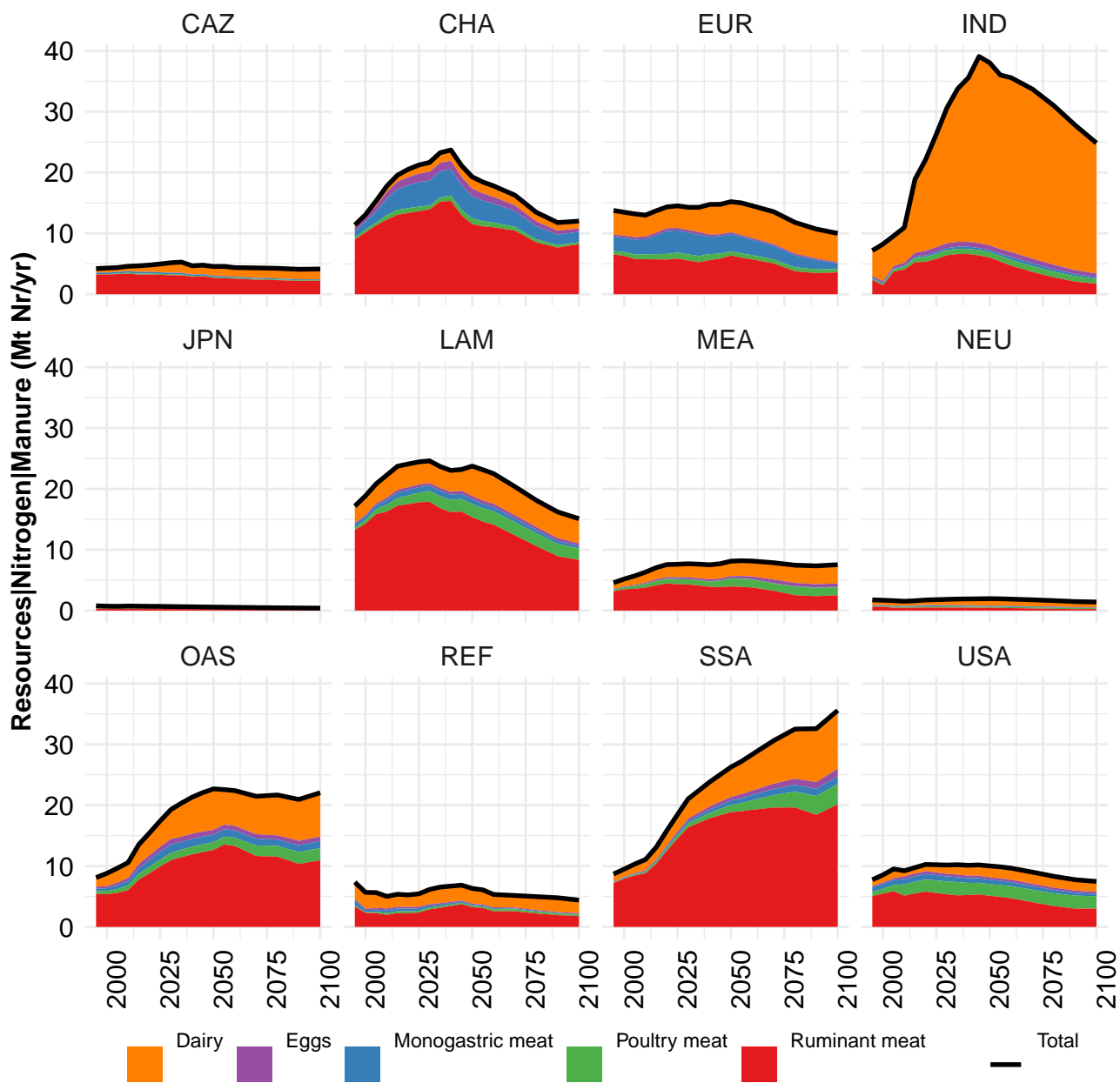
	2005	2006	2007	2008	2009
GLO	71.6	71.4	73.3	76.4	75.4
CAZ	2.7	2.2	2.3	2.8	2.7
CHA	11.7	12.0	12.1	12.9	12.9
EUR	8.3	8.0	7.7	8.7	8.6
IND	6.8	6.9	7.6	7.5	7.2
JPN	0.3	0.3	0.3	0.4	0.3
LAM	10.2	10.6	11.9	12.1	10.5
MEA	2.3	2.4	2.3	2.0	2.4
NEU	1.5	1.5	1.3	1.4	1.5
OAS	6.4	6.5	6.8	7.1	7.3
REF	4.3	4.3	4.3	5.4	5.1
SSA	3.1	3.2	3.1	3.4	3.4
USA	13.9	13.5	13.6	12.7	13.5

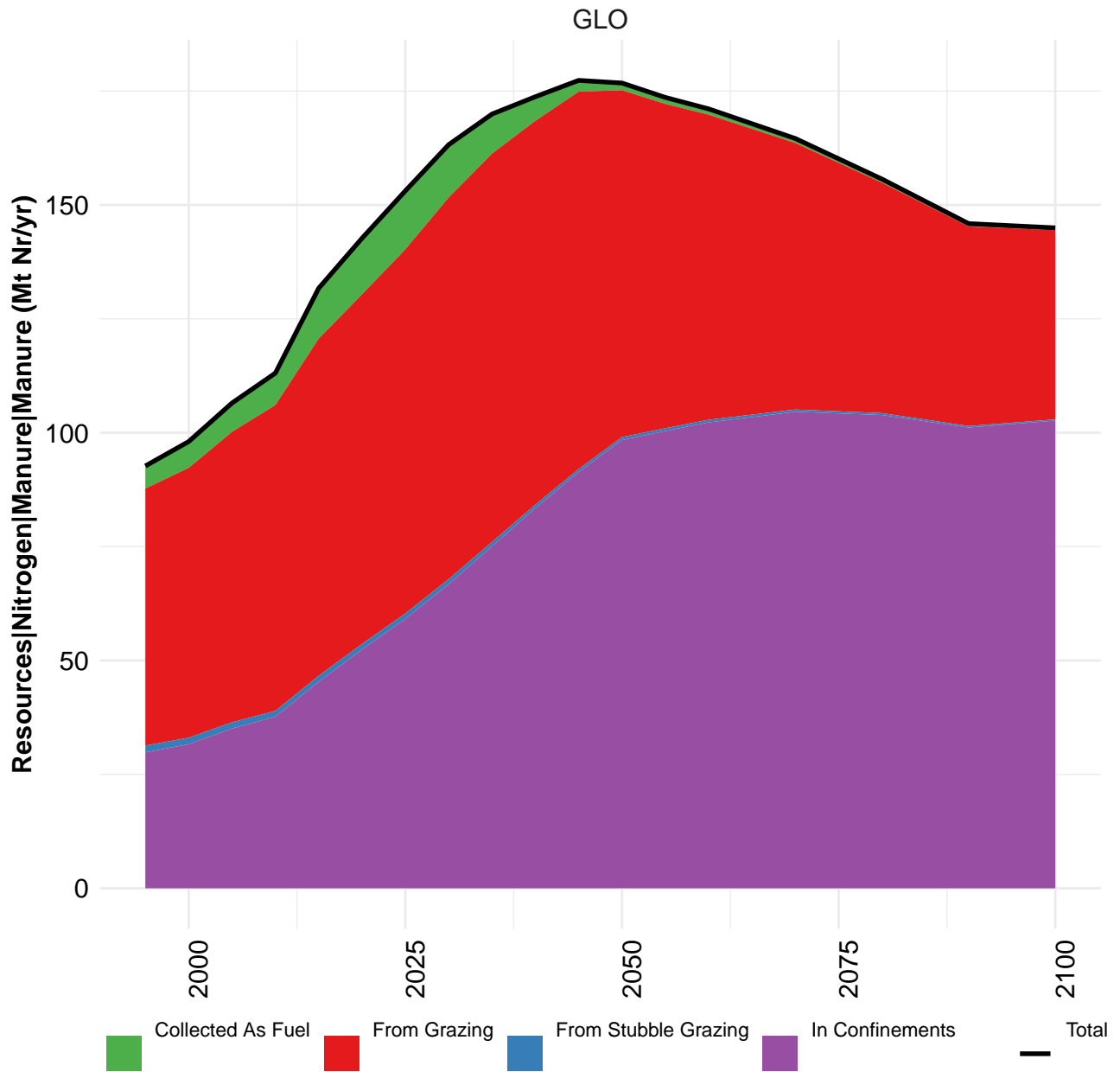
Table 1766: Lassaletta2014 — Resources—Nitrogen—Cropland Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 5/5]

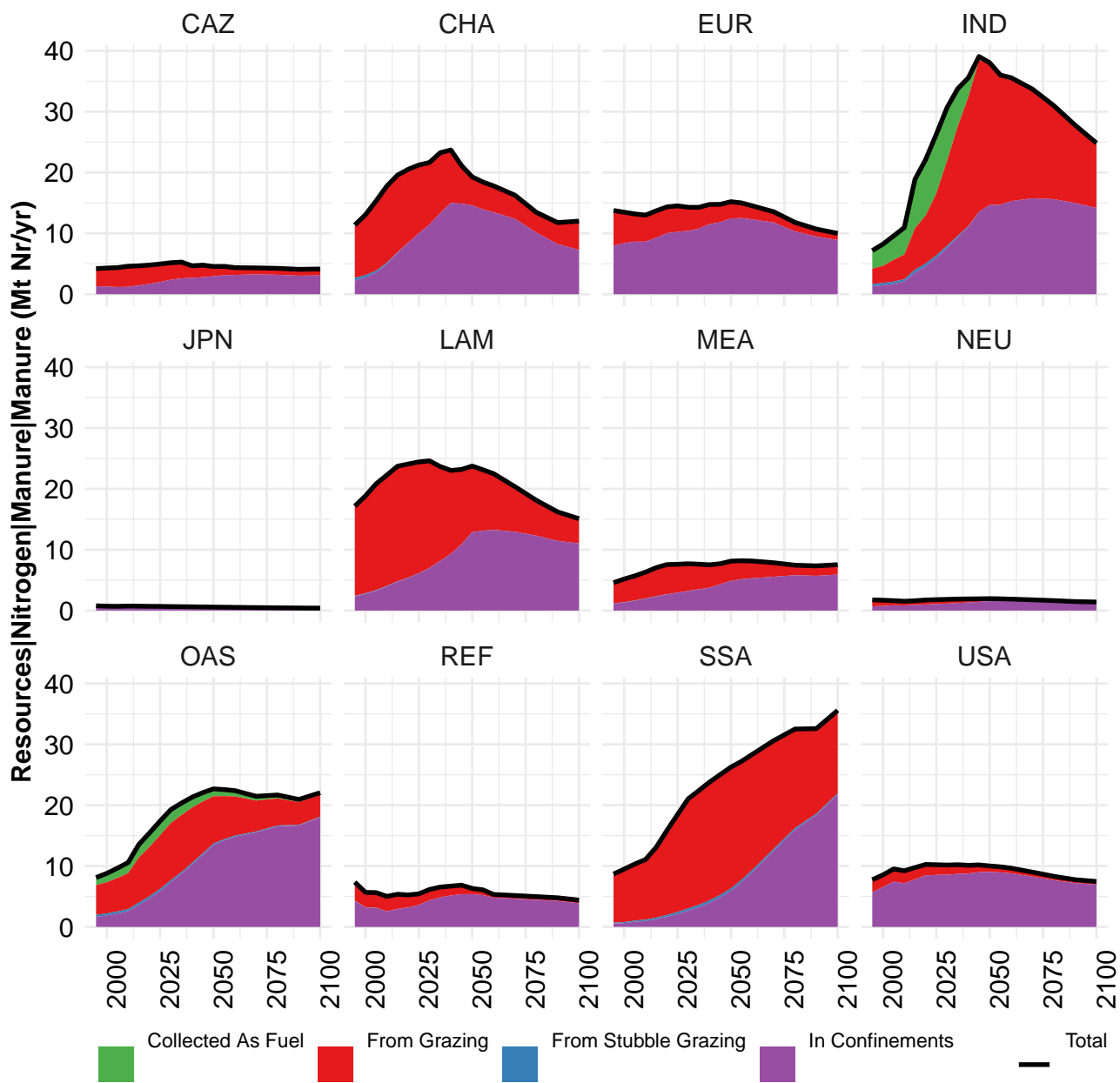
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	29.5	34.9	39.5	45.1	64.3	67.0	64.5	70.8	79.5	86.6
CAZ	1.0	1.1	1.4	1.5	4.3	4.6	3.8	4.3	4.6	4.6
CHA	3.7	4.3	4.9	5.6	7.3	8.6	9.8	10.8	11.9	13.5
EUR	5.3	5.9	6.8	8.1	11.0	10.6	10.1	10.9	11.2	11.4
IND	2.6	3.2	3.4	3.6	4.2	5.0	5.8	6.2	6.6	8.1
JPN	0.4	0.4	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)



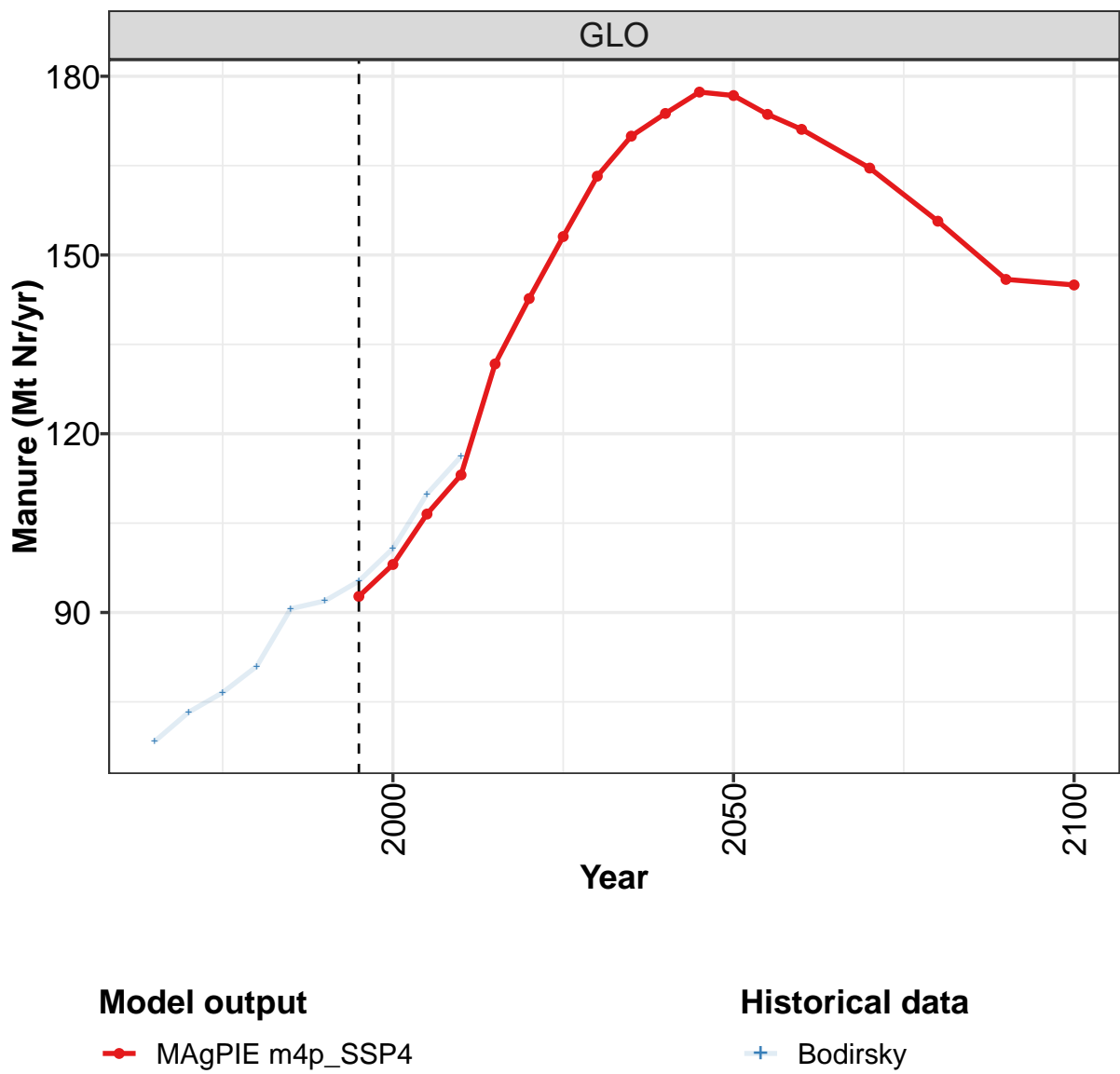








56.2 Manure



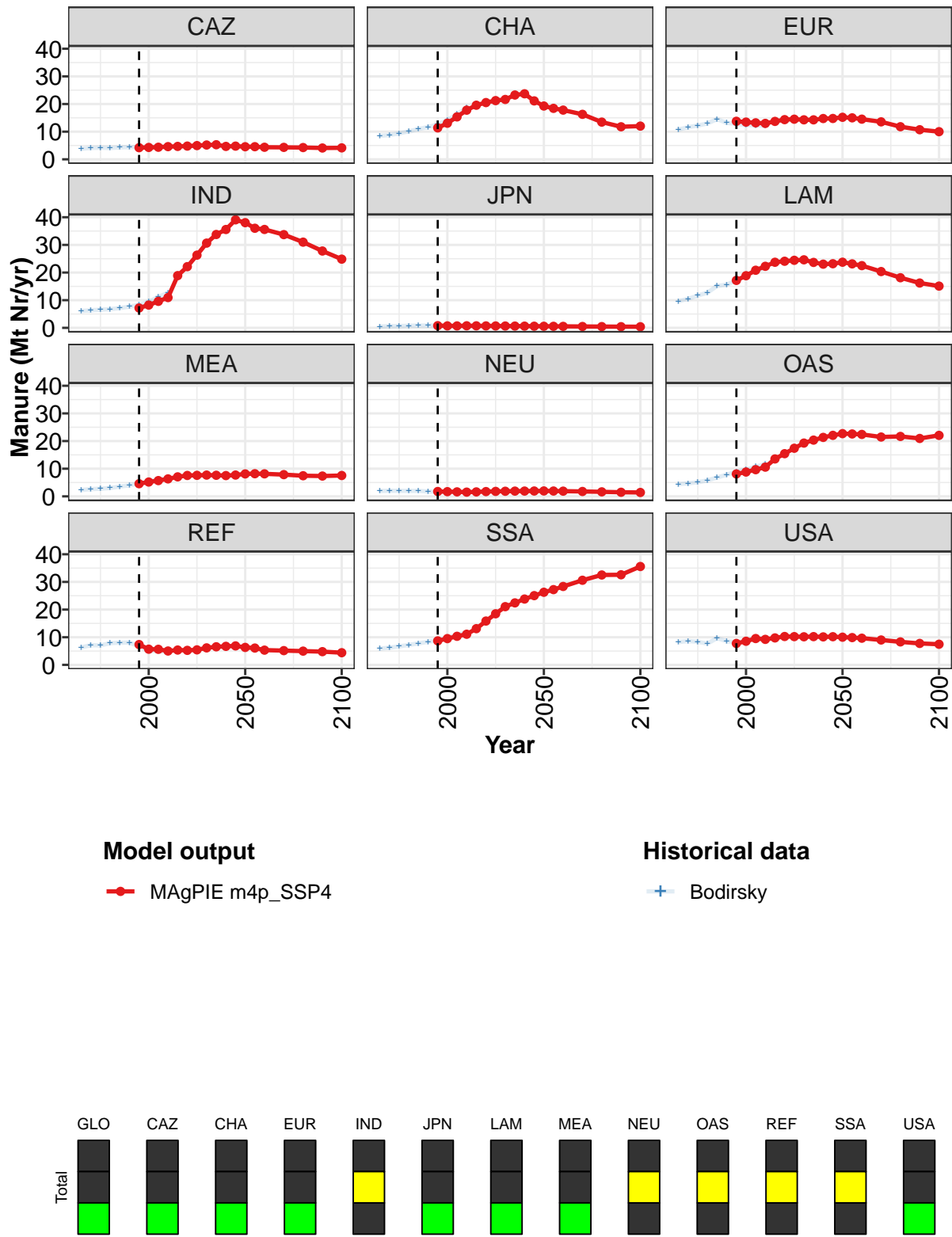


Figure 459: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	93	98	107	113	132	143	153	163	170	174	177
CAZ	4	4	4	5	5	5	5	5	5	5	5
CHA	11	13	15	18	20	21	21	22	23	24	21
EUR	14	13	13	13	14	14	15	14	14	15	15
IND	7	8	10	11	19	22	26	31	34	36	39
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	17	19	21	22	24	24	24	25	24	23	23
MEA	5	5	6	6	7	8	8	8	8	8	8
NEU	2	2	2	2	2	2	2	2	2	2	2
OAS	8	9	10	11	14	15	17	19	20	21	22
REF	7	6	6	5	5	5	5	6	7	7	7
SSA	9	10	10	11	13	16	18	21	22	24	25
USA	8	9	10	9	10	10	10	10	10	10	10

Table 1768: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure (Mt Nr/yr) [PART 1/2]

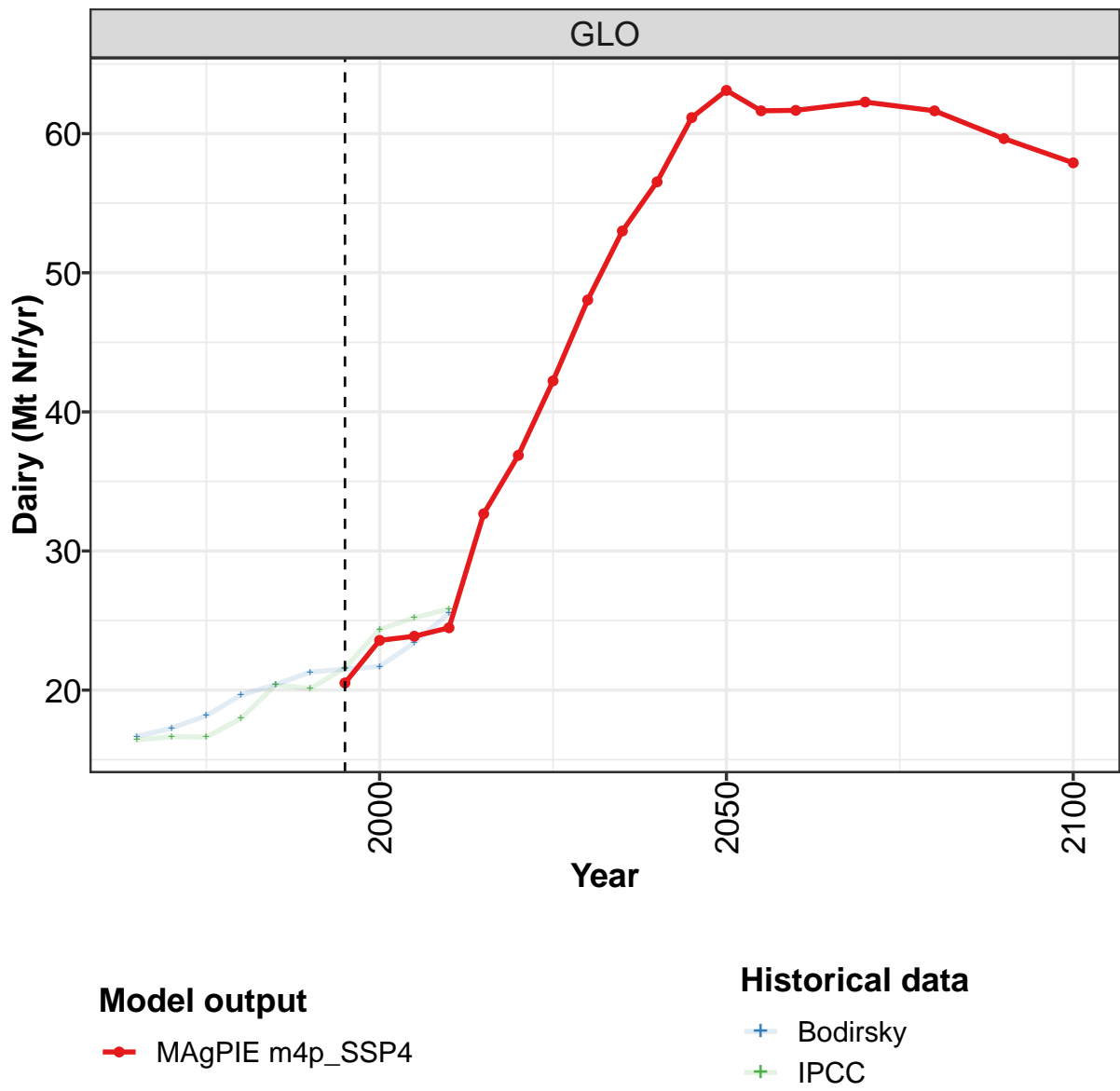
	2050	2055	2060	2070	2080	2090	2100
GLO	177	174	171	165	156	146	145
CAZ	5	5	4	4	4	4	4
CHA	19	18	18	16	13	12	12
EUR	15	15	15	14	12	11	10
IND	38	36	36	34	31	28	25
JPN	1	1	1	0	0	0	0
LAM	24	23	23	20	18	16	15
MEA	8	8	8	8	7	7	8
NEU	2	2	2	2	2	1	1
OAS	23	23	22	21	22	21	22
REF	6	6	5	5	5	5	4
SSA	26	27	28	31	33	33	36
USA	10	10	10	9	8	8	7

Table 1769: MAgPIE m4p\_SSP4 — 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



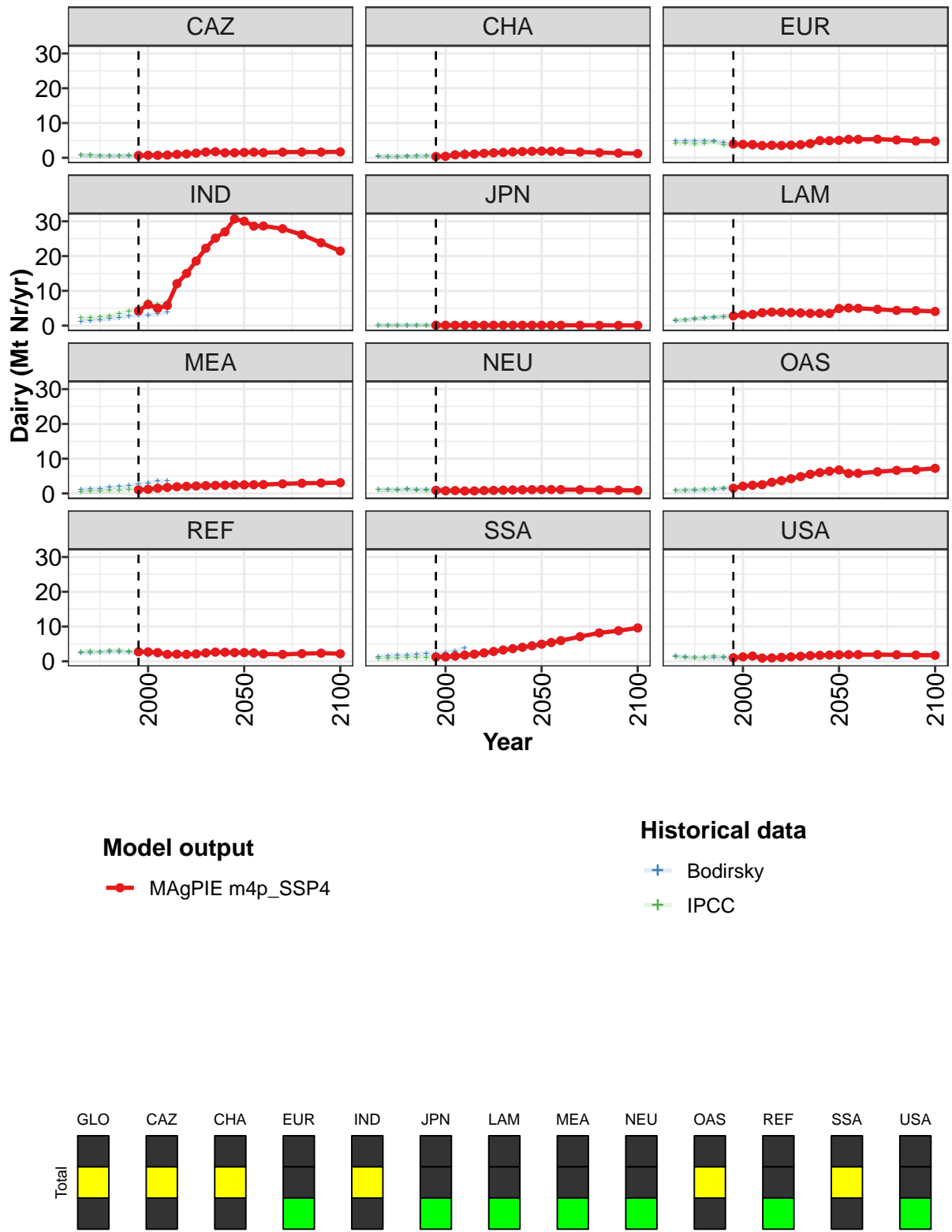


Figure 460: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	20.5	23.6	23.9	24.5	32.7	36.9	42.2	48.0	53.0	56.5	61.2
CAZ	0.6	0.7	0.7	0.8	1.0	1.1	1.3	1.6	1.7	1.4	1.4
CHA	0.4	0.4	0.8	1.0	1.1	1.3	1.4	1.5	1.7	1.8	1.9
EUR	4.0	3.9	3.8	3.5	3.6	3.5	3.6	3.7	4.1	4.9	4.9
IND	4.2	6.1	5.0	5.8	12.1	15.0	18.6	22.3	25.2	27.0	30.7
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	2.8	3.1	3.2	3.7	3.9	3.8	3.7	3.6	3.5	3.5	3.5
MEA	1.0	1.2	1.5	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.4
NEU	0.9	0.8	0.8	0.7	0.7	0.8	0.9	1.0	1.0	1.1	1.1
OAS	1.5	2.1	2.4	2.5	3.2	3.7	4.2	4.8	5.5	6.0	6.4
REF	2.7	2.7	2.5	2.0	2.1	2.0	2.1	2.4	2.6	2.6	2.5
SSA	1.2	1.3	1.5	1.8	2.0	2.4	2.8	3.3	3.6	4.0	4.5
USA	1.0	1.3	1.5	0.9	1.0	1.1	1.3	1.4	1.6	1.7	1.8

Table 1771: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	63.1	61.6	61.7	62.3	61.6	59.6	57.9
CAZ	1.5	1.6	1.5	1.6	1.6	1.6	1.7
CHA	1.9	1.9	1.8	1.7	1.5	1.3	1.2
EUR	5.0	5.3	5.3	5.3	5.1	4.8	4.8
IND	30.0	28.6	28.7	27.9	26.2	23.8	21.5
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	4.9	5.1	5.0	4.7	4.4	4.3	4.1
MEA	2.5	2.5	2.5	2.8	2.9	3.0	3.1
NEU	1.1	1.1	1.1	1.1	1.0	0.9	0.9
OAS	6.8	5.7	5.8	6.2	6.6	6.8	7.2
REF	2.5	2.4	2.1	2.0	2.2	2.3	2.2
SSA	4.9	5.4	5.9	7.1	8.2	8.8	9.6
USA	1.9	1.9	1.9	1.9	1.9	1.8	1.7

Table 1772: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Dairy (Mt Nr/yr) [PART 2/2]

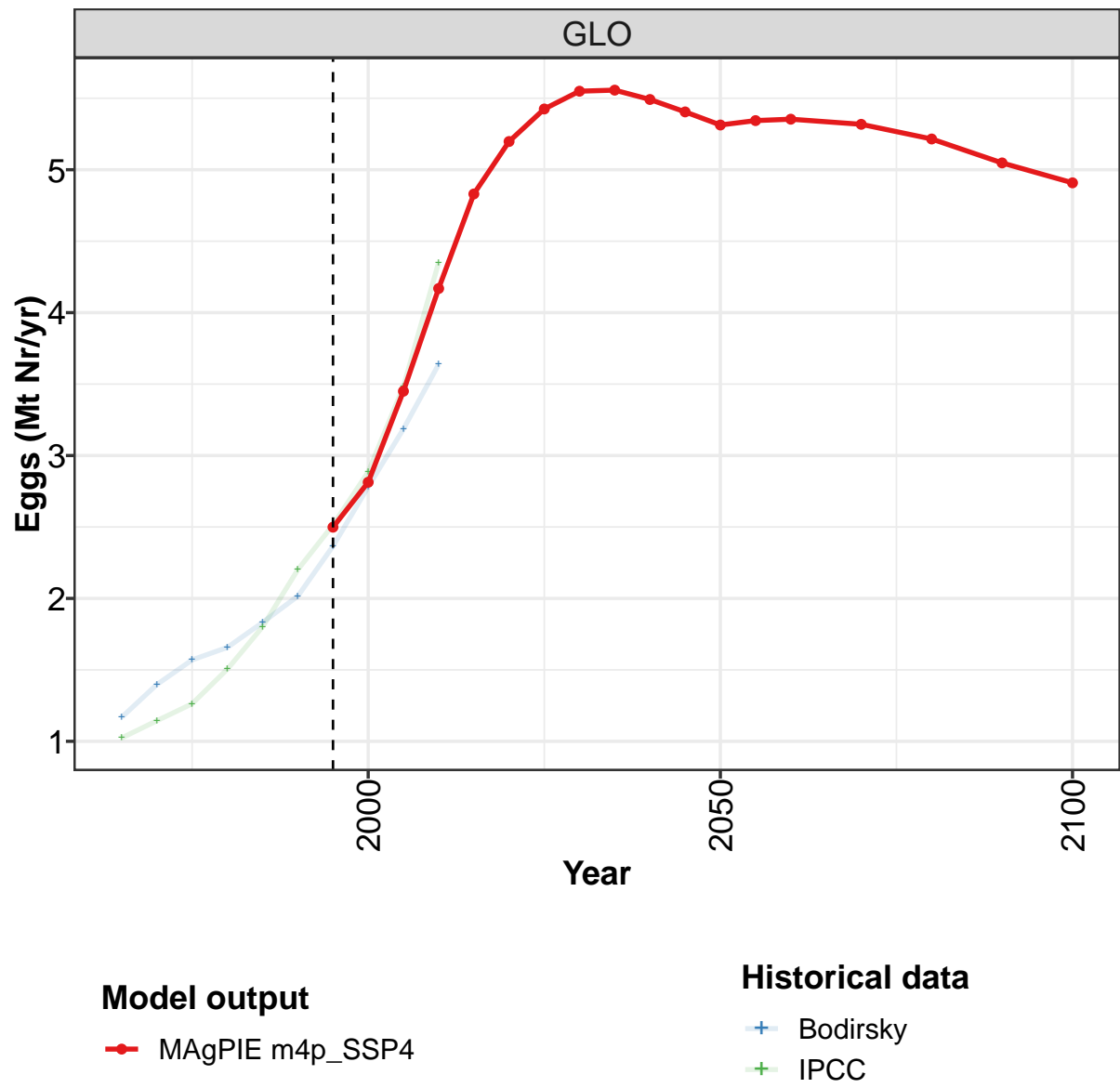
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	16.7	17.3	18.2	19.6	20.4	21.3	21.5	21.7	23.4	25.5
CAZ	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6
CHA	0.3	0.3	0.4	0.4	0.5	0.6	0.8	1.0	1.5	1.8
EUR	4.8	4.8	4.9	4.9	4.8	4.3	3.6	3.2	2.9	2.8
IND	1.2	1.4	1.6	2.0	2.3	2.7	2.9	3.0	3.3	3.8
JPN	0.1	0.1	0.1	0.1	0.1	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





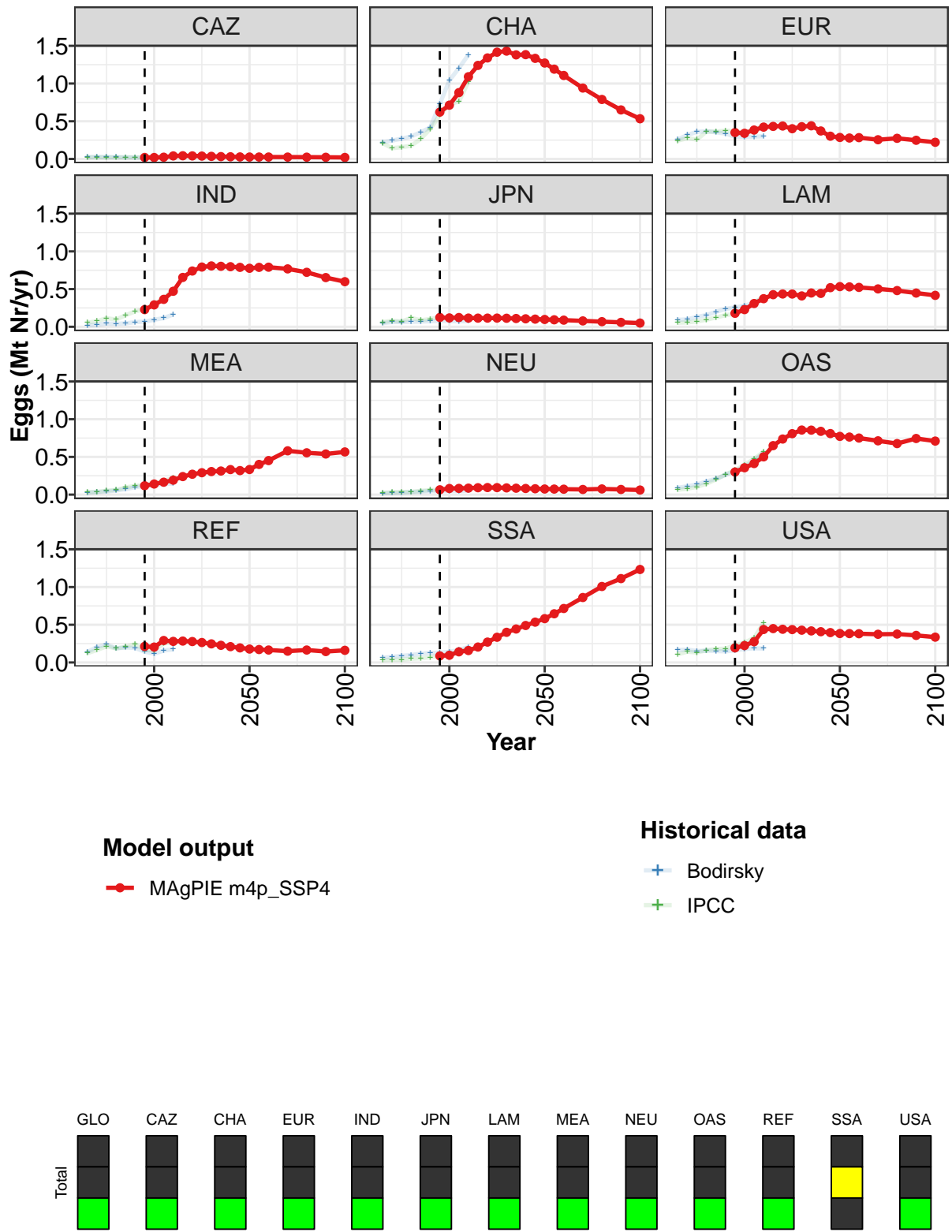


Figure 461: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2.50	2.81	3.45	4.17	4.83	5.20	5.43	5.55	5.56	5.49	5.40
CAZ	0.02	0.02	0.02	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
CHA	0.62	0.71	0.88	1.09	1.24	1.34	1.42	1.43	1.38	1.38	1.33
EUR	0.35	0.34	0.38	0.42	0.43	0.44	0.40	0.43	0.44	0.37	0.30
IND	0.23	0.29	0.36	0.47	0.65	0.74	0.79	0.81	0.80	0.80	0.79
JPN	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.10
LAM	0.18	0.23	0.31	0.37	0.43	0.44	0.43	0.41	0.45	0.44	0.52
MEA	0.12	0.14	0.16	0.19	0.24	0.27	0.29	0.31	0.31	0.33	0.32
NEU	0.06	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08
OAS	0.30	0.36	0.41	0.50	0.65	0.74	0.81	0.86	0.86	0.84	0.81
REF	0.21	0.20	0.29	0.28	0.28	0.28	0.26	0.25	0.23	0.21	0.19
SSA	0.09	0.10	0.14	0.16	0.20	0.27	0.33	0.40	0.44	0.49	0.53
USA	0.19	0.22	0.27	0.44	0.45	0.44	0.44	0.43	0.42	0.41	0.40

Table 1775: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	5.31	5.34	5.35	5.32	5.22	5.05	4.91
CAZ	0.03	0.03	0.03	0.03	0.02	0.02	0.02
CHA	1.27	1.19	1.11	0.94	0.79	0.65	0.53
EUR	0.29	0.28	0.28	0.26	0.27	0.25	0.22
IND	0.78	0.79	0.79	0.77	0.72	0.65	0.60
JPN	0.10	0.09	0.09	0.08	0.07	0.06	0.05
LAM	0.53	0.53	0.52	0.50	0.48	0.45	0.42
MEA	0.33	0.40	0.45	0.58	0.55	0.54	0.57
NEU	0.07	0.07	0.07	0.07	0.08	0.07	0.06
OAS	0.77	0.76	0.75	0.71	0.68	0.74	0.71
REF	0.18	0.17	0.17	0.15	0.17	0.14	0.16
SSA	0.58	0.65	0.72	0.86	1.01	1.11	1.23
USA	0.38	0.38	0.38	0.37	0.38	0.36	0.34

Table 1776: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Eggs (Mt Nr/yr) [PART 2/2]

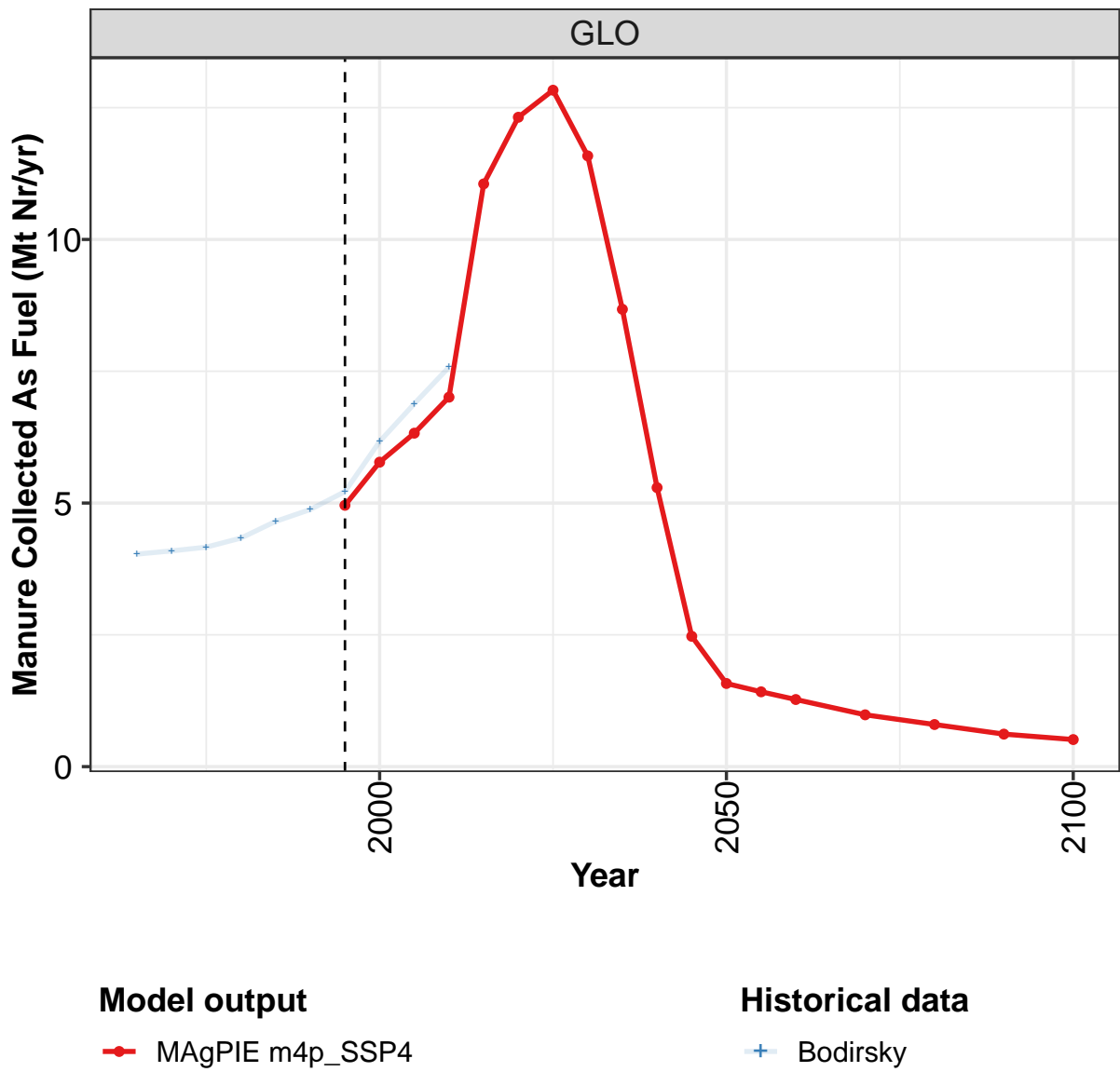
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.17	1.40	1.57	1.66	1.83	2.02	2.37	2.78	3.19	3.64
CAZ	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHA	0.22	0.24	0.27	0.30	0.35	0.42	0.73	1.04	1.20	1.38
EUR	0.26	0.32	0.36	0.37	0.35	0.34	0.30	0.29	0.30	0.30
IND	0.02	0.03	0.04	0.04	0.04	0.06	0.07	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



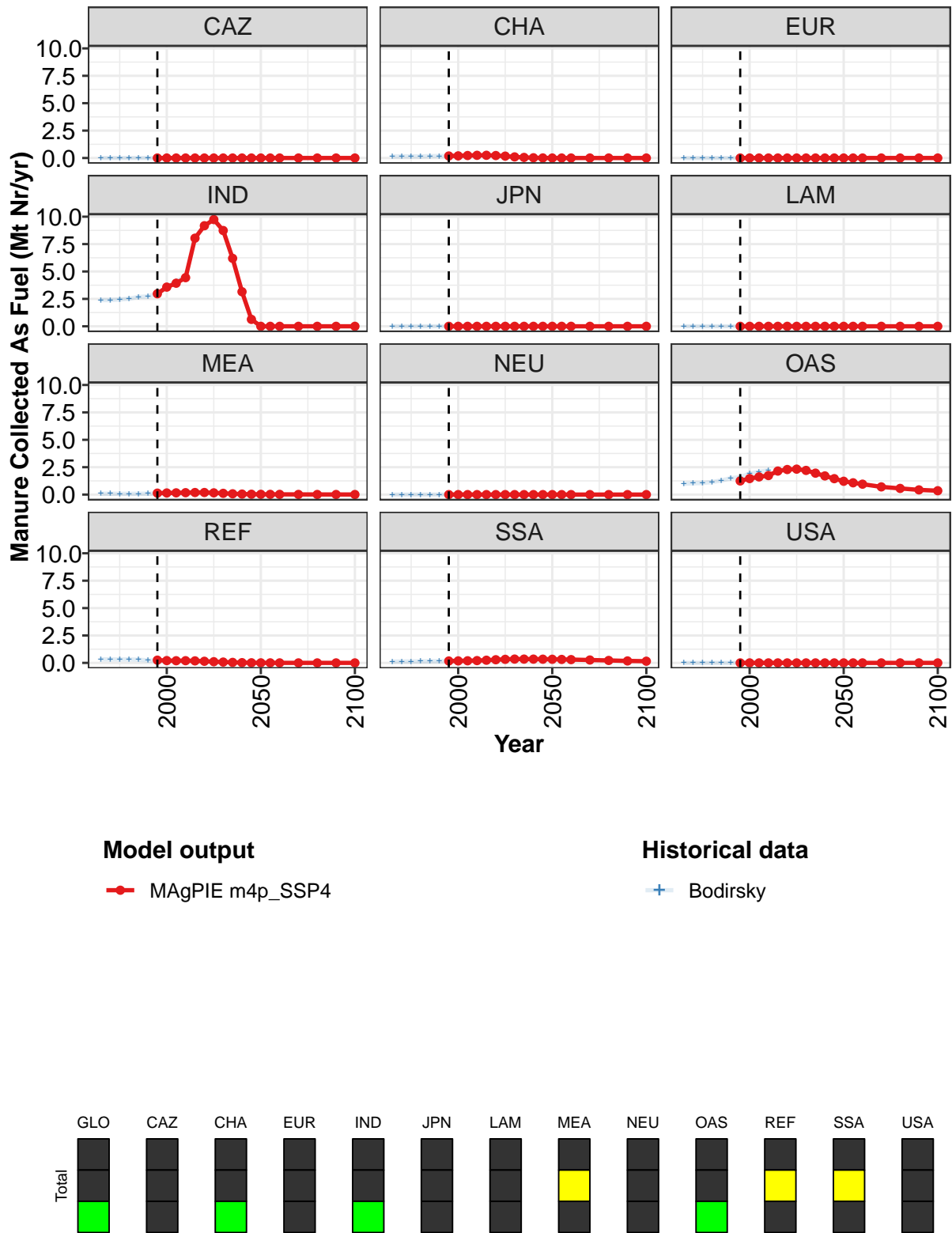


Figure 462: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Manure Collected As Fuel (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	5.0	5.8	6.3	7.0	11.1	12.3	12.8	11.6	8.7	5.3	2.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	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	3.6	3.9	4.4	8.0	9.2	9.7	8.7	6.2	3.2	0.6
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	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	1.2	1.5	1.6	1.7	2.1	2.3	2.3	2.2	2.0	1.7	1.5
REF	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0
SSA	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1779: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Manure Collected As Fuel (Mt Nr/yr)  
[PART 1/2]

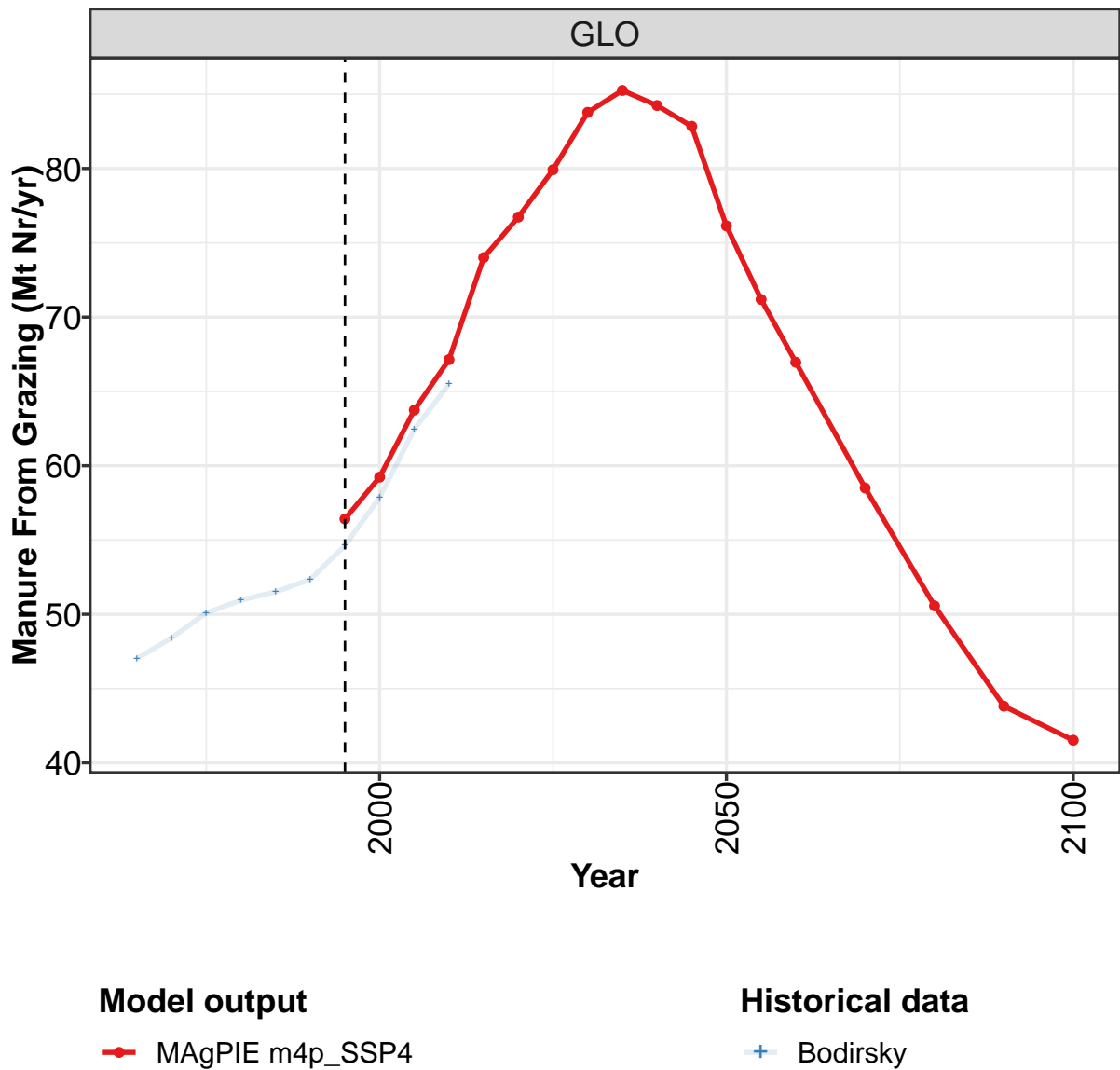
	2050	2055	2060	2070	2080	2090	2100
GLO	1.6	1.4	1.3	1.0	0.8	0.6	0.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEU	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAS	1.2	1.1	1.0	0.7	0.6	0.4	0.4
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	0.3	0.3	0.3	0.3	0.2	0.2	0.2
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1780: MAgPIE m4p\_SSP4 — 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



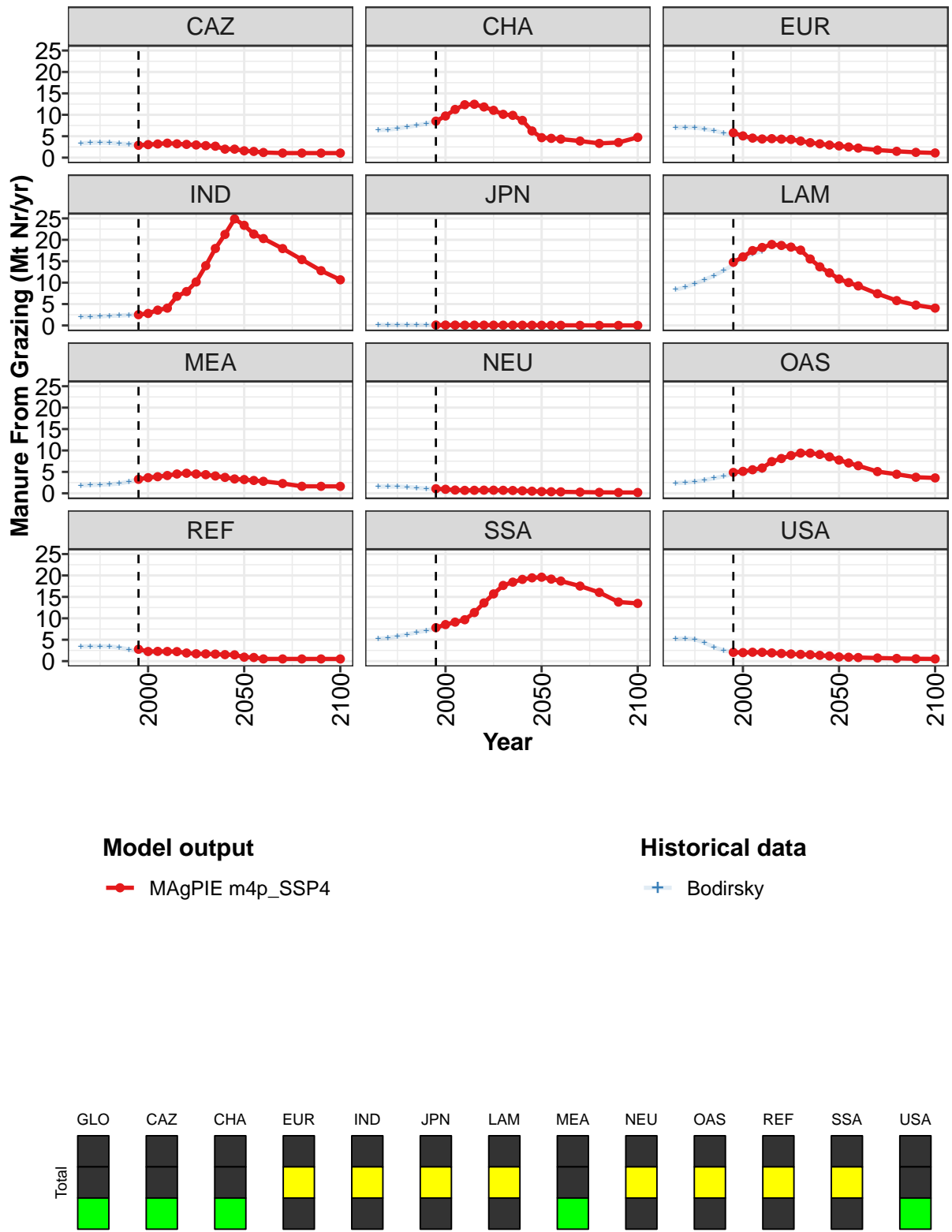


Figure 463: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Manure From Grazing (Mt Nr/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	56.4	59.2	63.7	67.1	74.0	76.7	79.9	83.8	85.3	84.2	82.8
CAZ	2.9	3.0	3.2	3.4	3.2	3.1	3.0	2.8	2.7	2.0	2.0
CHA	8.5	9.7	11.3	12.3	12.5	11.8	11.0	10.1	9.9	8.7	6.2
EUR	5.8	5.1	4.6	4.4	4.4	4.3	4.3	3.9	3.5	3.2	2.9
IND	2.5	2.8	3.6	4.0	6.8	7.9	10.2	13.9	18.0	21.3	24.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	14.8	16.0	17.5	18.2	18.9	18.7	18.3	17.6	15.5	13.7	12.3
MEA	3.3	3.7	3.9	4.2	4.5	4.7	4.5	4.4	4.1	3.7	3.3
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	7.4	8.1	8.8	9.4	9.4	9.1	8.5
REF	2.8	2.2	2.3	2.3	2.2	1.9	1.7	1.7	1.6	1.5	1.5
SSA	7.8	8.5	9.1	9.7	11.3	13.6	15.7	17.7	18.4	19.1	19.4
USA	2.1	2.0	2.1	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.2

Table 1782: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Manure From Grazing (Mt Nr/yr) [PART 1/2]

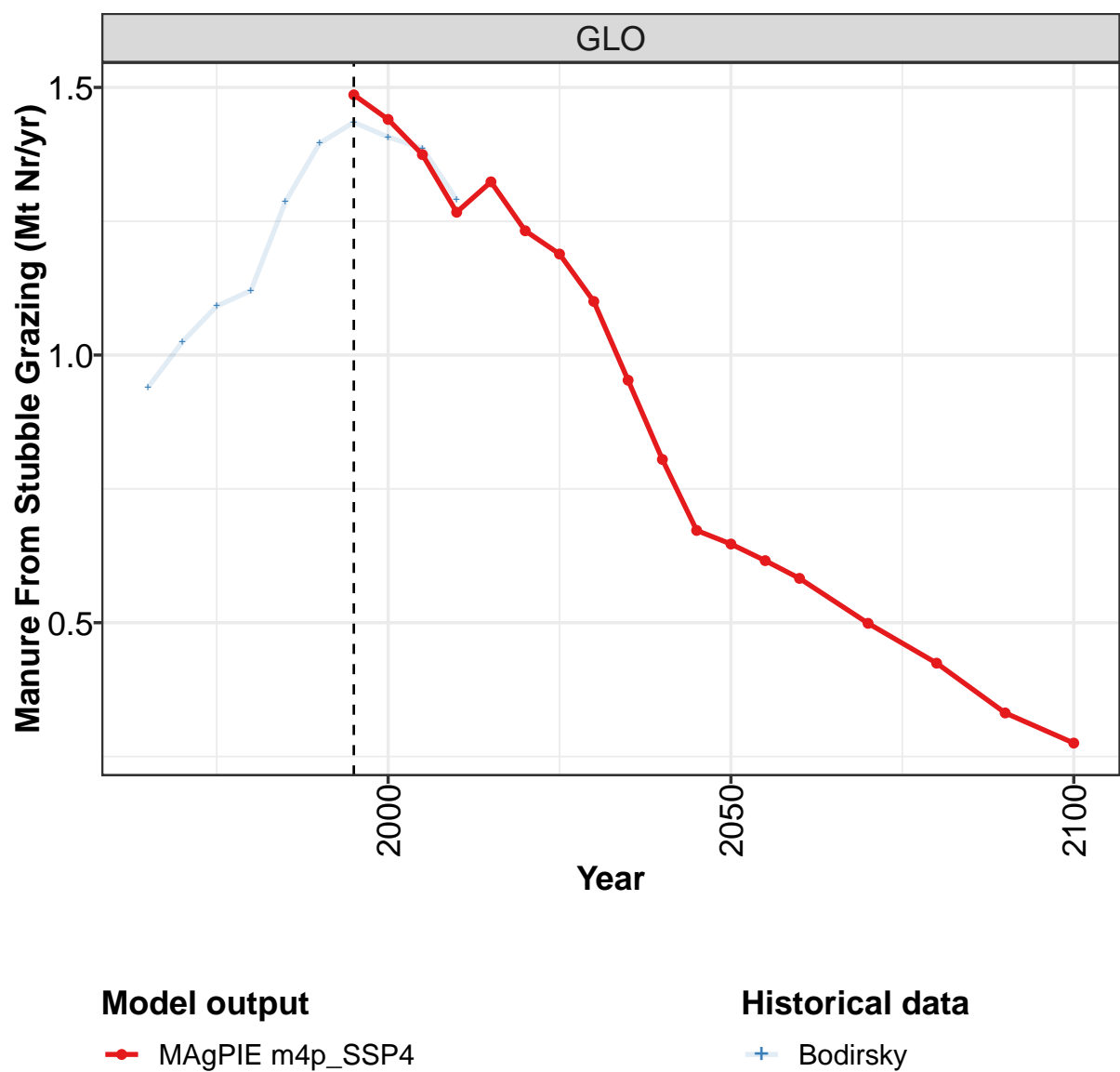
	2050	2055	2060	2070	2080	2090	2100
GLO	76.1	71.2	67.0	58.5	50.6	43.8	41.5
CAZ	1.6	1.5	1.2	1.1	1.1	1.1	1.1
CHA	4.7	4.5	4.3	3.9	3.3	3.5	4.7
EUR	2.7	2.5	2.2	1.8	1.5	1.2	1.1
IND	23.4	21.3	20.3	17.9	15.4	12.8	10.7
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	10.8	10.0	9.2	7.4	5.8	4.8	4.1
MEA	3.2	3.0	2.8	2.3	1.6	1.6	1.6
NEU	0.4	0.4	0.3	0.3	0.2	0.2	0.2
OAS	7.8	7.1	6.4	5.1	4.4	3.7	3.6
REF	0.9	0.9	0.5	0.5	0.5	0.5	0.5
SSA	19.6	19.2	18.7	17.5	16.0	13.8	13.5
USA	1.0	0.9	0.8	0.7	0.6	0.6	0.5

Table 1783: MAgPIE m4p\_SSP4 — 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



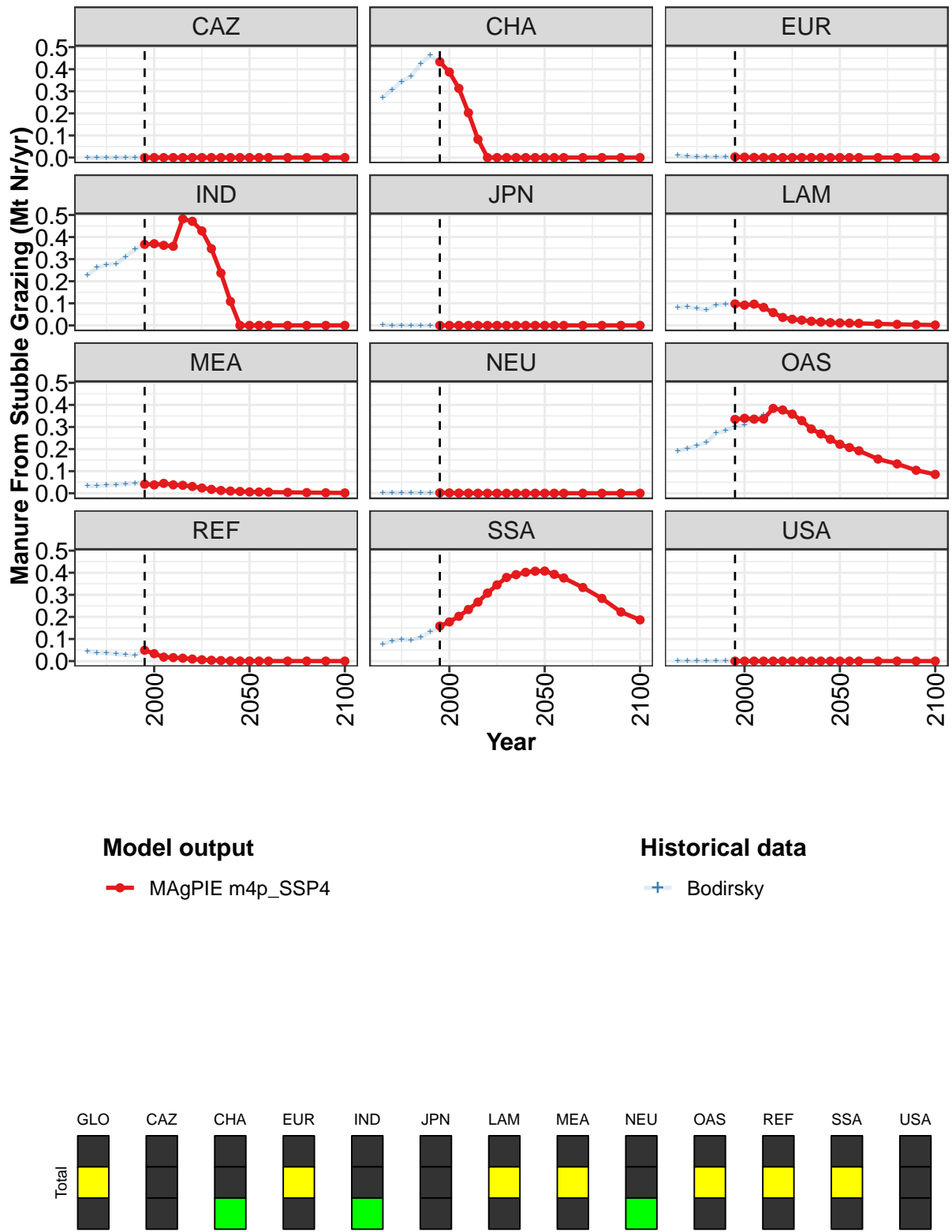


Figure 464: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Manure From Stubble Grazing (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	1.49	1.44	1.37	1.27	1.32	1.23	1.19	1.10	0.95	0.80	0.67
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	0.48	0.47	0.43	0.35	0.24	0.11	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	0.04	0.03	0.02	0.02	0.02	0.01
MEA	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.01	0.01	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	0.33	0.34	0.34	0.34	0.38	0.38	0.36	0.33	0.29	0.27	0.24
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	0.27	0.31	0.34	0.38	0.39	0.40	0.41
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\_SSP4 — Resources—Nitrogen—Manure—Manure From Stubble Grazing (Mt Nr/yr)  
[PART 1/2]

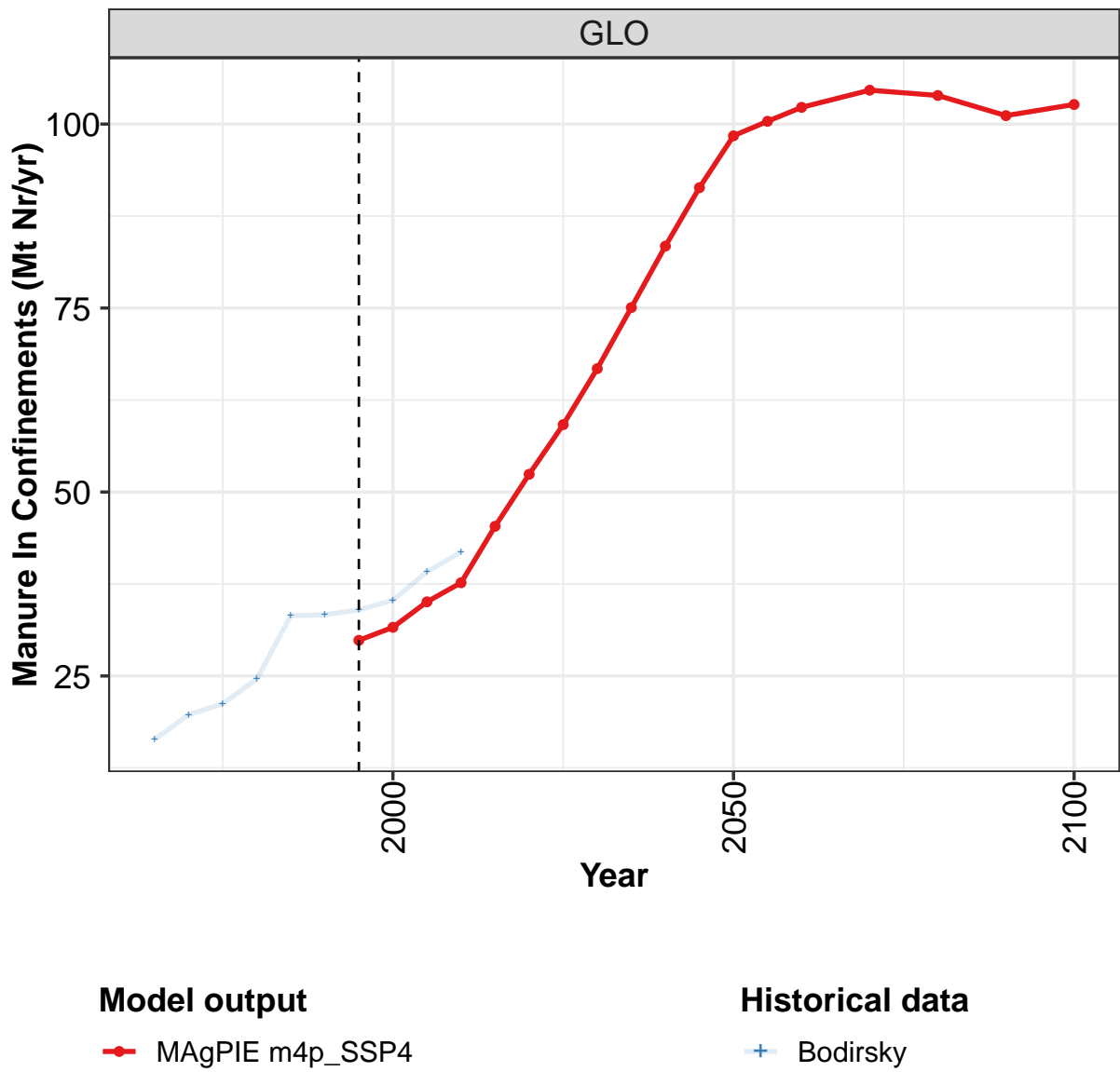
	2050	2055	2060	2070	2080	2090	2100
GLO	0.65	0.62	0.58	0.50	0.42	0.33	0.28
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.01	0.01	0.01	0.01	0.00	0.00	0.00
MEA	0.01	0.01	0.01	0.00	0.00	0.00	0.00
NEU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OAS	0.22	0.21	0.19	0.15	0.13	0.10	0.09
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.41	0.39	0.38	0.33	0.28	0.22	0.19
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1786: MAgPIE m4p\_SSP4 — 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



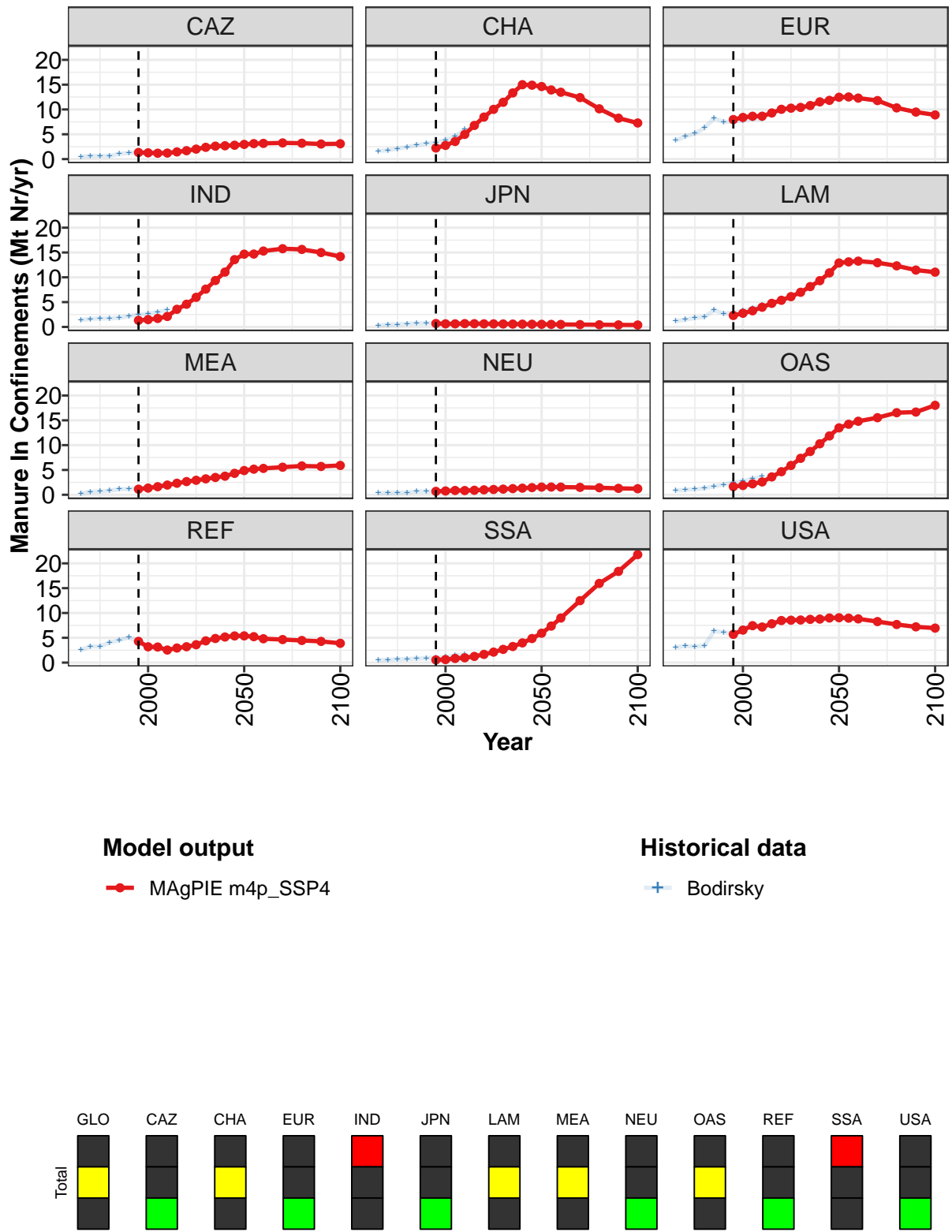


Figure 465: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Manure In Confinements (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	30	32	35	38	45	52	59	67	75	83	91
CAZ	1	1	1	1	1	2	2	2	3	3	3
CHA	2	3	4	5	7	8	10	11	13	15	15
EUR	8	8	9	9	9	10	10	10	11	12	12
IND	1	1	2	2	4	5	6	8	9	11	14
JPN	1	1	1	1	1	1	1	1	1	1	1
LAM	2	3	3	4	5	5	6	7	8	9	11
MEA	1	1	2	2	2	3	3	3	3	4	4
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	2	2	2	3	4	5	6	7	9	10	12
REF	4	3	3	3	3	3	4	4	5	5	5
SSA	1	1	1	1	1	2	2	3	3	4	5
USA	6	7	7	7	8	8	9	9	9	9	9

Table 1788: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Manure In Confinements (Mt Nr/yr)  
[PART 1/2]

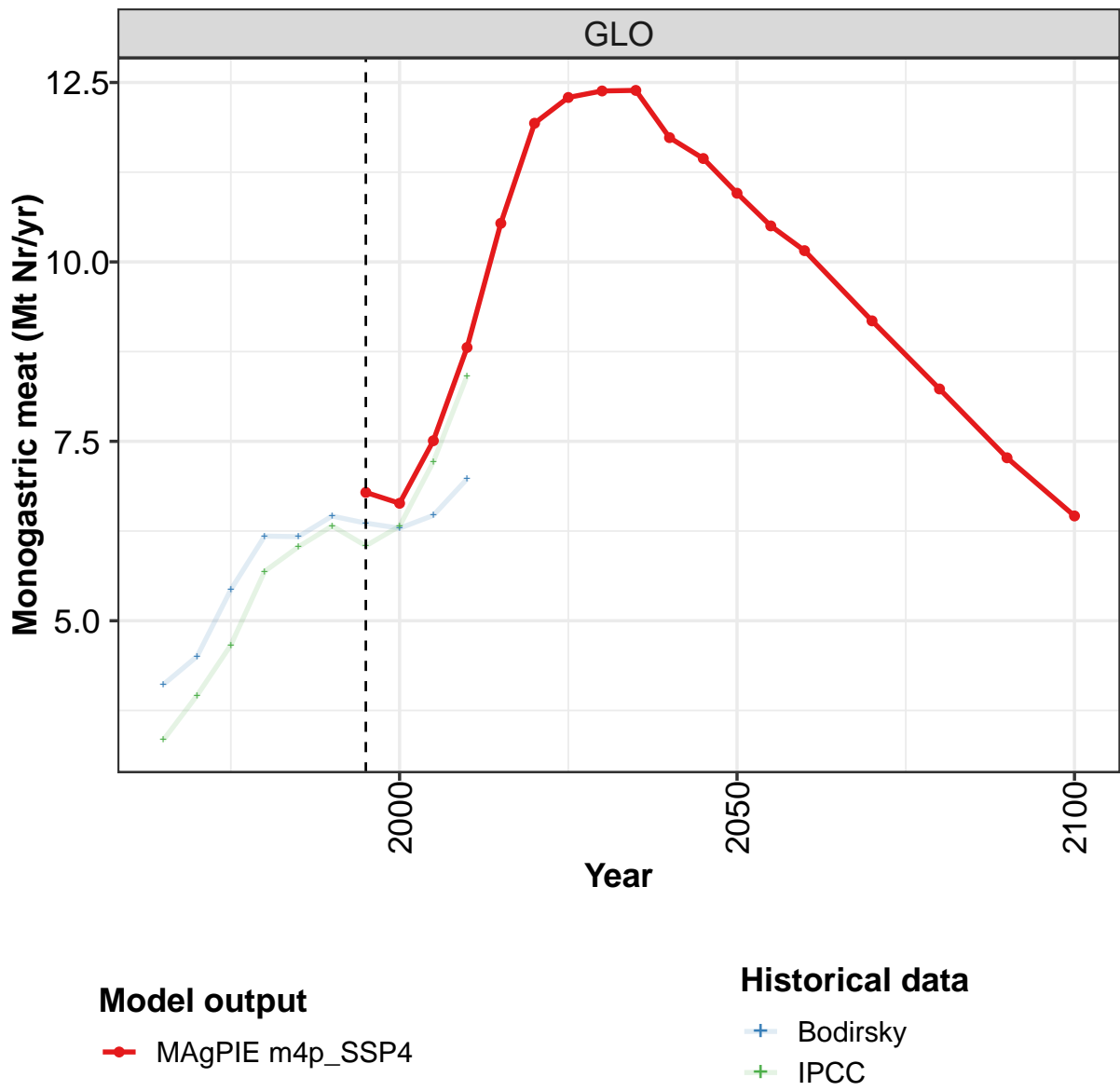
	2050	2055	2060	2070	2080	2090	2100
GLO	98	100	102	105	104	101	103
CAZ	3	3	3	3	3	3	3
CHA	15	14	13	12	10	8	7
EUR	12	13	12	12	10	9	9
IND	15	15	15	16	16	15	14
JPN	1	1	0	0	0	0	0
LAM	13	13	13	13	12	11	11
MEA	5	5	5	6	6	6	6
NEU	2	2	2	1	1	1	1
OAS	13	14	15	16	17	17	18
REF	5	5	5	5	4	4	4
SSA	6	7	9	12	16	18	22
USA	9	9	9	8	8	7	7

Table 1789: MAgPIE m4p\_SSP4 — 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





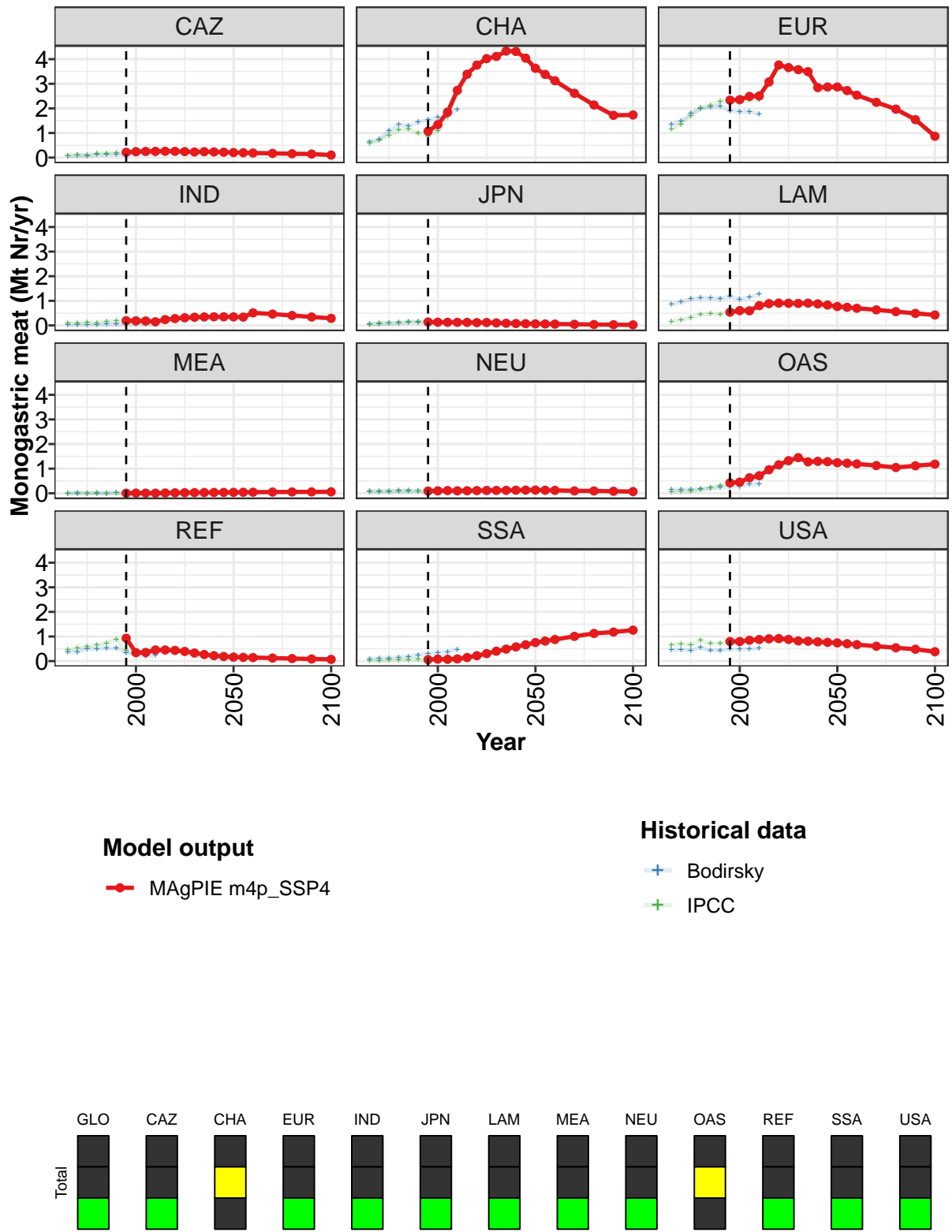


Figure 466: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	6.8	6.6	7.5	8.8	10.5	11.9	12.3	12.4	12.4	11.7	11.4
CAZ	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
CHA	1.1	1.3	1.8	2.7	3.4	3.8	4.0	4.1	4.3	4.3	4.0
EUR	2.3	2.4	2.5	2.5	3.1	3.8	3.7	3.6	3.5	2.8	2.9
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	0.0	0.0
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	1.0	1.2	1.3	1.4	1.3	1.3	1.3
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	0.5	0.6	0.7
USA	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8

Table 1791: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	11.0	10.5	10.2	9.2	8.2	7.3	6.5
CAZ	0.2	0.2	0.2	0.2	0.2	0.1	0.1
CHA	3.6	3.4	3.1	2.6	2.1	1.7	1.7
EUR	2.9	2.7	2.5	2.2	2.0	1.5	0.9
IND	0.3	0.3	0.5	0.5	0.4	0.3	0.3
JPN	0.1	0.1	0.1	0.0	0.0	0.0	0.0
LAM	0.8	0.7	0.7	0.6	0.6	0.5	0.4
MEA	0.0	0.0	0.0	0.0	0.1	0.1	0.1
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	1.2	1.2	1.2	1.1	1.0	1.1	1.2
REF	0.2	0.2	0.1	0.1	0.1	0.1	0.1
SSA	0.8	0.8	0.9	1.0	1.1	1.2	1.3
USA	0.7	0.7	0.7	0.6	0.5	0.5	0.4

Table 1792: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Monogastric meat (Mt Nr/yr) [PART 2/2]

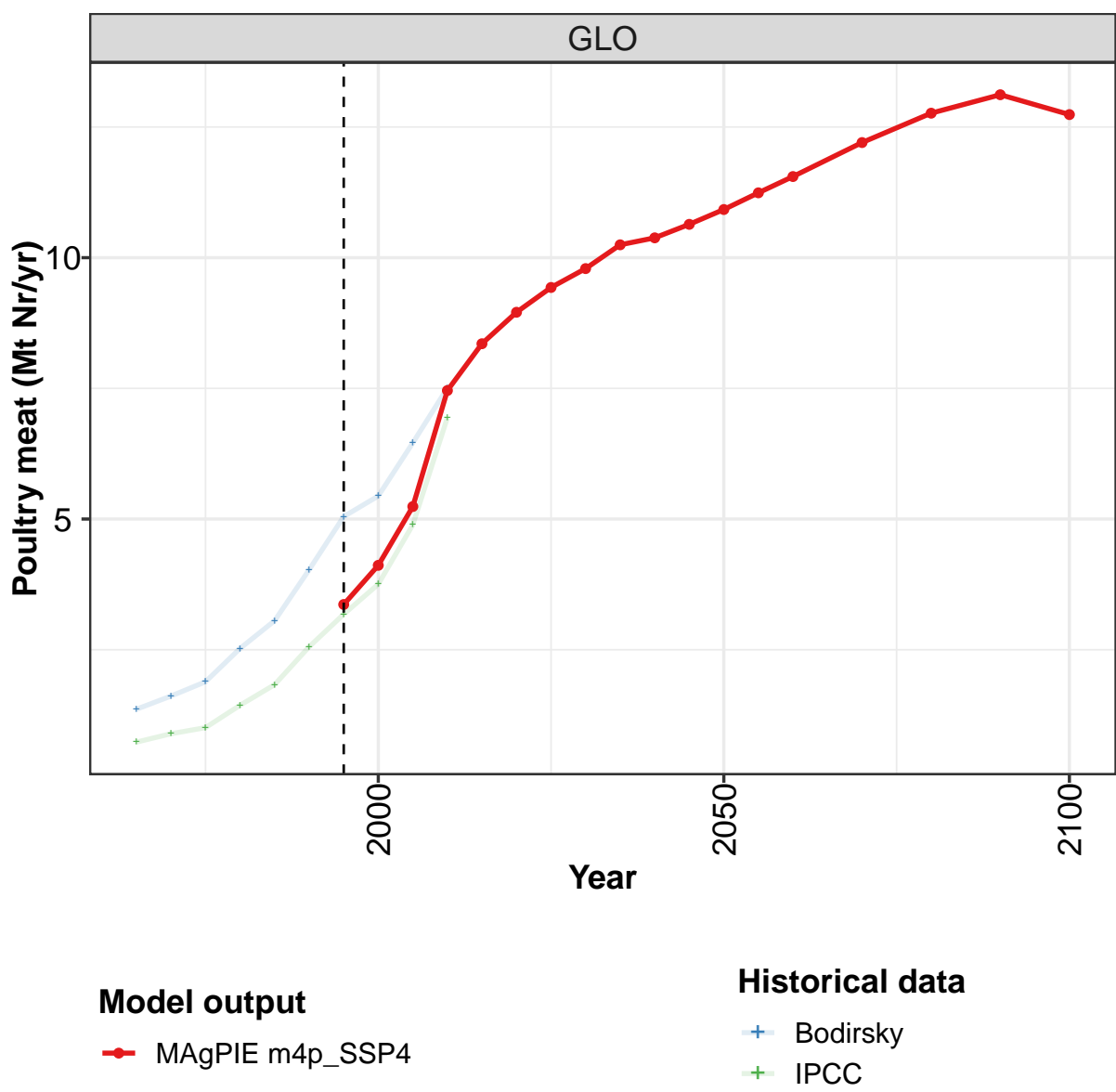
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	4.11	4.50	5.43	6.18	6.17	6.46	6.36	6.29	6.47	6.98
CAZ	0.07	0.09	0.08	0.11	0.12	0.12	0.12	0.14	0.15	0.13
CHA	0.64	0.72	1.08	1.34	1.29	1.45	1.52	1.63	1.67	1.96
EUR	1.36	1.48	1.78	1.99	2.04	2.09	1.90	1.86	1.86	1.78
IND	0.02	0.02	0.03	0.04	0.04	0.05	0.05	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



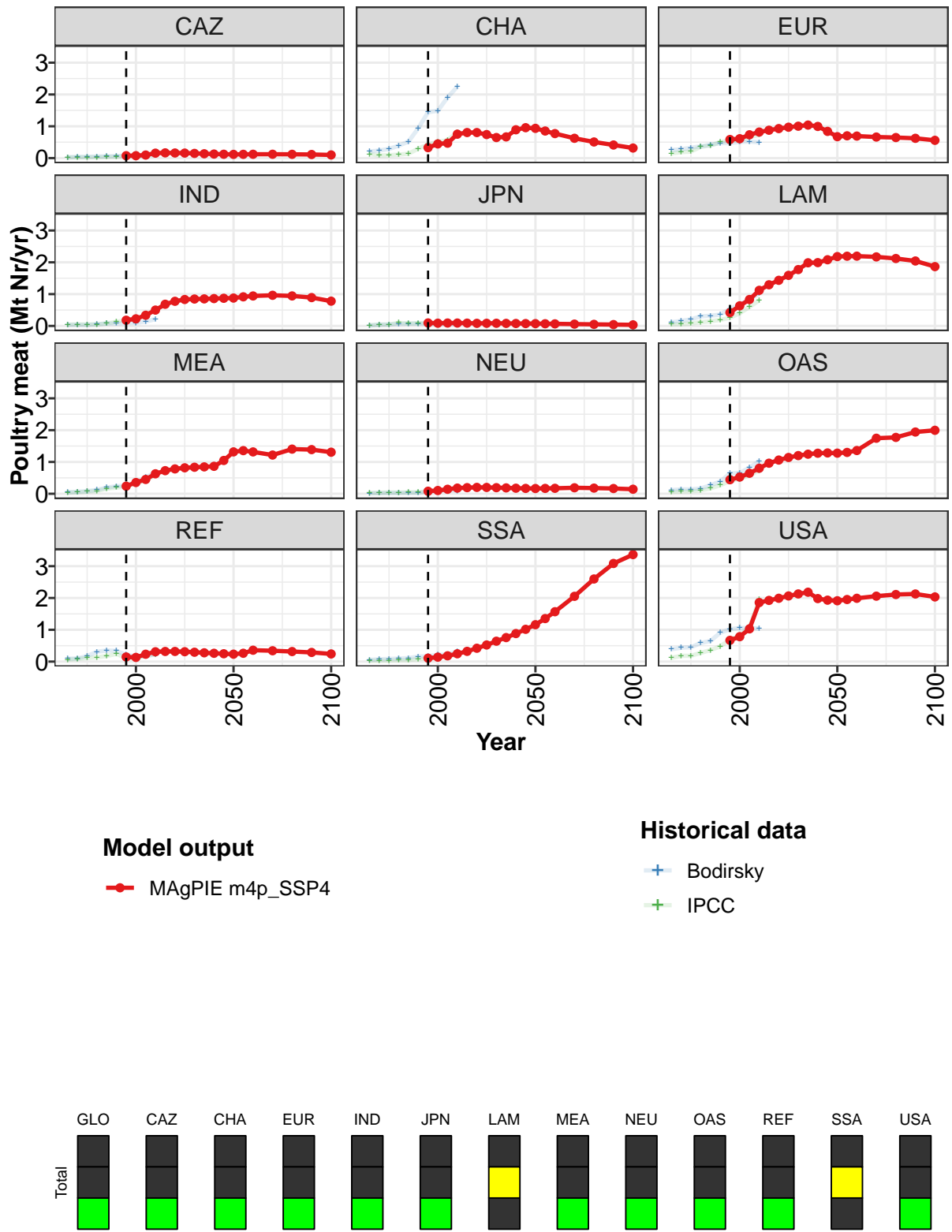


Figure 467: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	3.4	4.1	5.2	7.5	8.4	9.0	9.4	9.8	10.2	10.4	10.6
CAZ	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
CHA	0.3	0.4	0.5	0.8	0.8	0.8	0.7	0.6	0.7	0.9	1.0
EUR	0.6	0.6	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.8
IND	0.2	0.2	0.3	0.5	0.7	0.8	0.8	0.8	0.9	0.9	0.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.4	0.6	0.8	1.1	1.3	1.4	1.6	1.8	2.0	2.0	2.1
MEA	0.2	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.9	1.0
NEU	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.4	0.5	0.6	0.8	1.0	1.1	1.1	1.2	1.2	1.3	1.3
REF	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
SSA	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.0
USA	0.7	0.8	1.0	1.9	1.9	2.0	2.1	2.1	2.2	2.0	1.9

Table 1795: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	10.9	11.2	11.6	12.2	12.8	13.1	12.7
CAZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHA	0.9	0.9	0.8	0.6	0.5	0.4	0.3
EUR	0.7	0.7	0.7	0.7	0.6	0.6	0.6
IND	0.9	0.9	0.9	1.0	0.9	0.9	0.8
JPN	0.1	0.1	0.1	0.1	0.0	0.0	0.0
LAM	2.2	2.2	2.2	2.2	2.1	2.0	1.9
MEA	1.3	1.4	1.3	1.2	1.4	1.4	1.3
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.1
OAS	1.3	1.3	1.4	1.7	1.8	1.9	2.0
REF	0.2	0.3	0.4	0.3	0.3	0.3	0.2
SSA	1.2	1.4	1.6	2.1	2.6	3.1	3.4
USA	1.9	2.0	2.0	2.1	2.1	2.1	2.0

Table 1796: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Poultry meat (Mt Nr/yr) [PART 2/2]

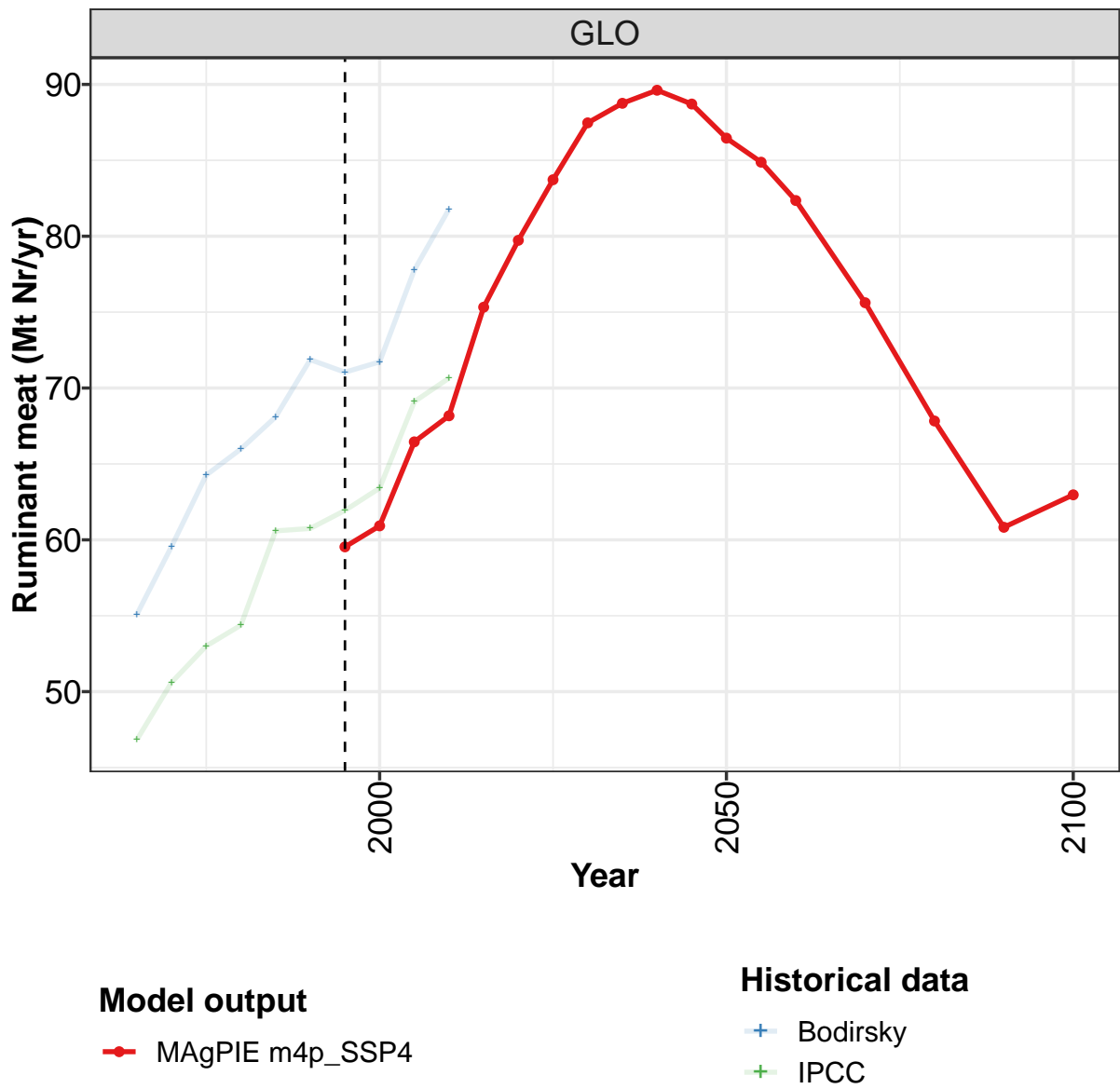
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	1.36	1.61	1.89	2.52	3.06	4.03	5.05	5.44	6.46	7.51
CAZ	0.03	0.04	0.04	0.05	0.05	0.06	0.08	0.09	0.09	0.09
CHA	0.20	0.24	0.29	0.39	0.52	0.94	1.44	1.49	1.91	2.25
EUR	0.25	0.28	0.32	0.37	0.42	0.47	0.47	0.51	0.52	0.50
IND	0.03	0.04	0.03	0.05	0.08	0.07	0.09	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





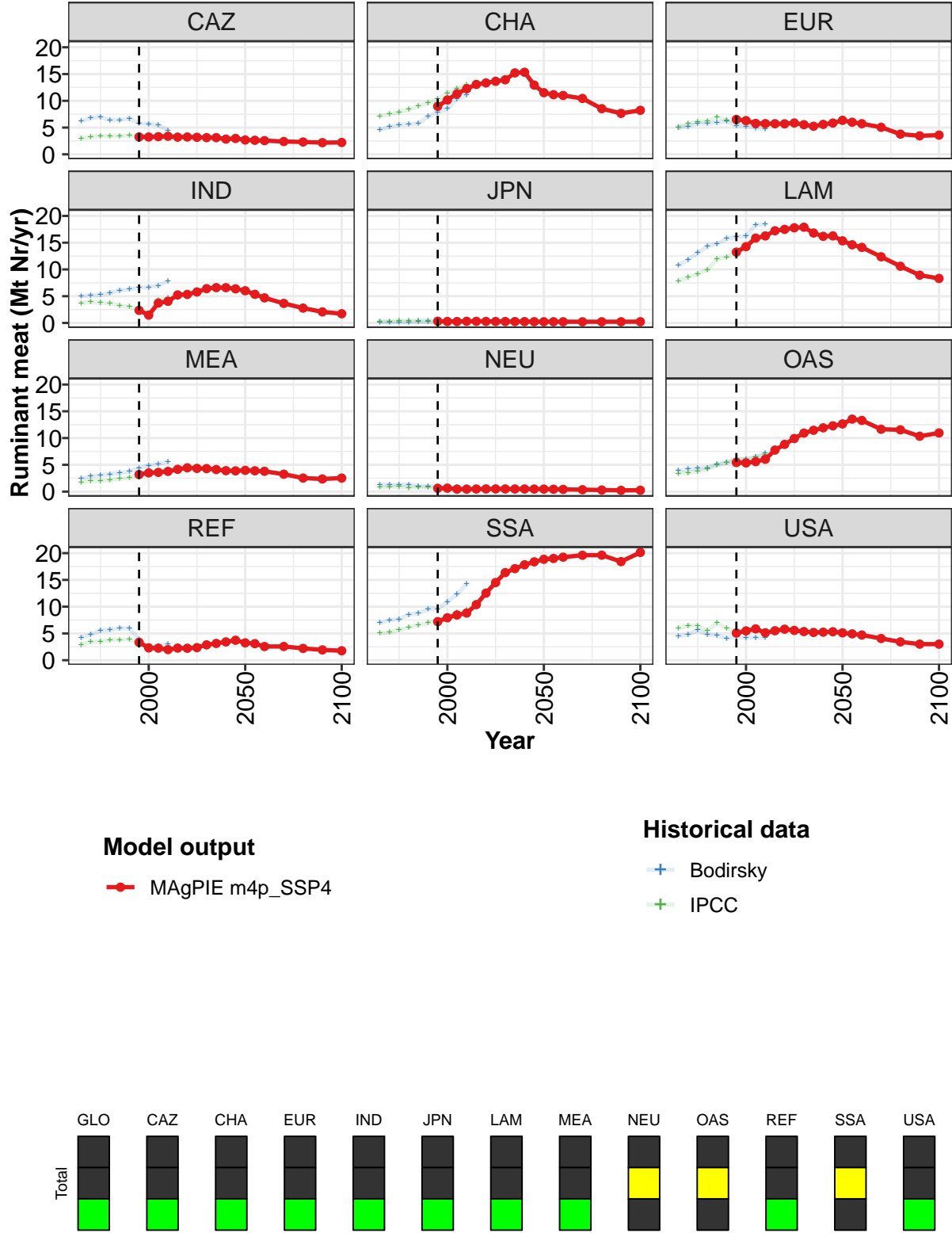


Figure 468: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	59.5	60.9	66.5	68.2	75.3	79.7	83.7	87.5	88.8	89.6	88.7
CAZ	3.3	3.2	3.3	3.4	3.2	3.2	3.2	3.1	3.1	2.8	3.0
CHA	9.0	10.2	11.3	12.2	13.1	13.3	13.6	13.9	15.2	15.3	12.9
EUR	6.5	6.3	5.8	5.7	5.7	5.7	5.9	5.5	5.3	5.6	5.9
IND	2.4	1.5	3.7	4.0	5.2	5.3	5.8	6.4	6.6	6.6	6.4
JPN	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
LAM	13.2	14.3	15.9	16.3	17.2	17.5	17.8	17.9	16.8	16.2	16.3
MEA	3.2	3.5	3.6	3.8	4.2	4.4	4.3	4.3	4.1	3.9	3.9
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	7.8	8.8	9.9	10.9	11.5	11.9	12.3
REF	3.3	2.3	2.3	2.0	2.3	2.2	2.4	2.9	3.1	3.4	3.7
SSA	7.2	7.9	8.4	8.8	10.4	12.5	14.5	16.4	17.1	17.8	18.4
USA	5.1	5.5	5.9	5.1	5.5	5.8	5.6	5.4	5.2	5.2	5.3

Table 1799: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	86.5	84.9	82.4	75.6	67.8	60.8	63.0
CAZ	2.7	2.6	2.6	2.4	2.3	2.2	2.2
CHA	11.5	11.2	11.0	10.4	8.5	7.7	8.2
EUR	6.4	6.0	5.7	5.1	3.8	3.5	3.6
IND	6.0	5.4	4.7	3.7	2.8	2.1	1.7
JPN	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LAM	15.3	14.6	14.1	12.4	10.6	8.9	8.3
MEA	4.0	3.9	3.8	3.2	2.5	2.4	2.5
NEU	0.5	0.4	0.4	0.4	0.3	0.2	0.3
OAS	12.6	13.5	13.3	11.6	11.5	10.3	10.9
REF	3.2	3.1	2.6	2.6	2.2	1.9	1.8
SSA	18.9	19.0	19.2	19.6	19.6	18.4	20.1
USA	5.1	4.9	4.7	4.1	3.4	3.0	3.0

Table 1800: MAgPIE m4p\_SSP4 — 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

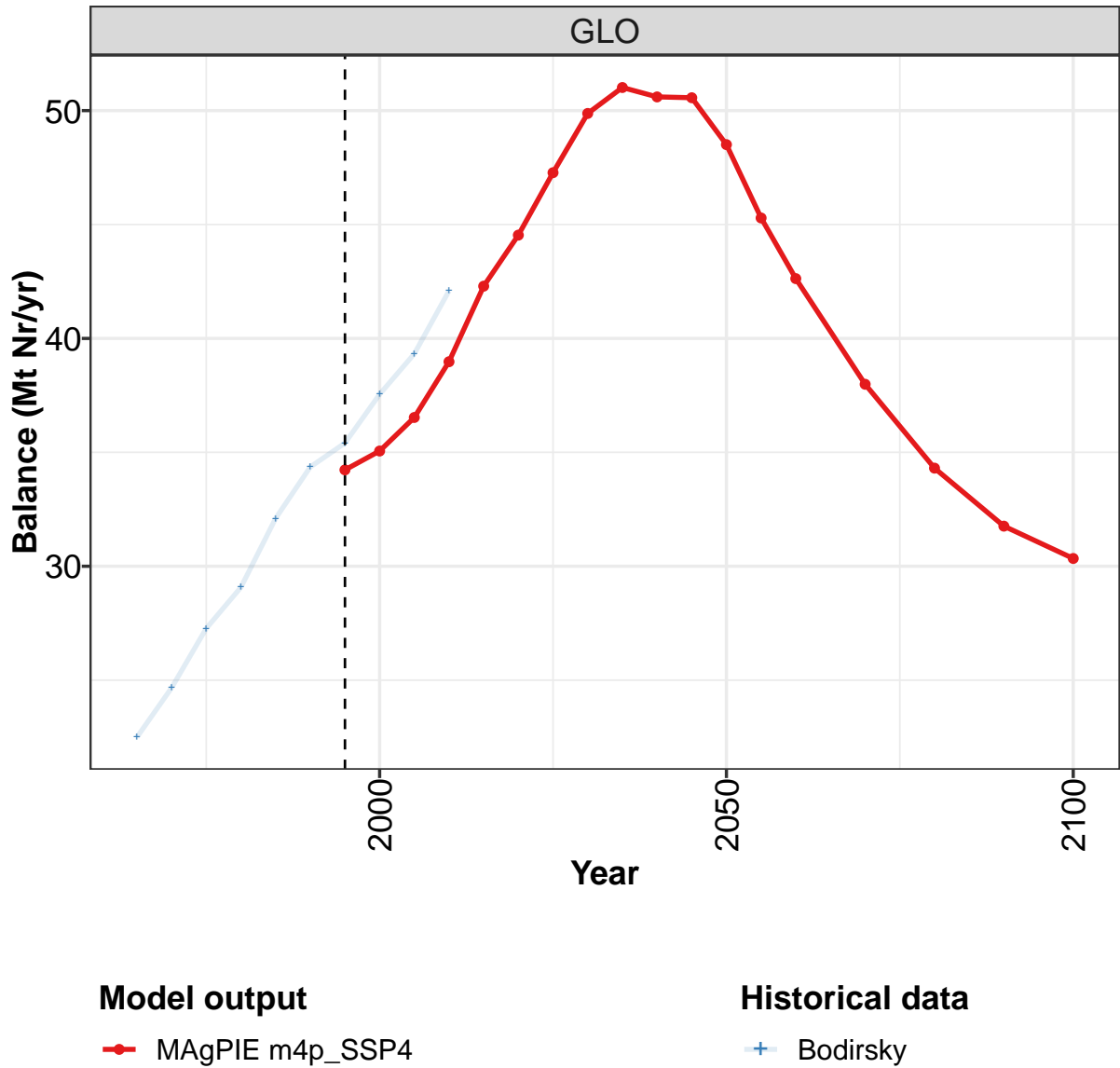
Table 1801: IPCC — Resources—Nitrogen—Manure—Ruminant meat (Mt Nr/yr)

	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



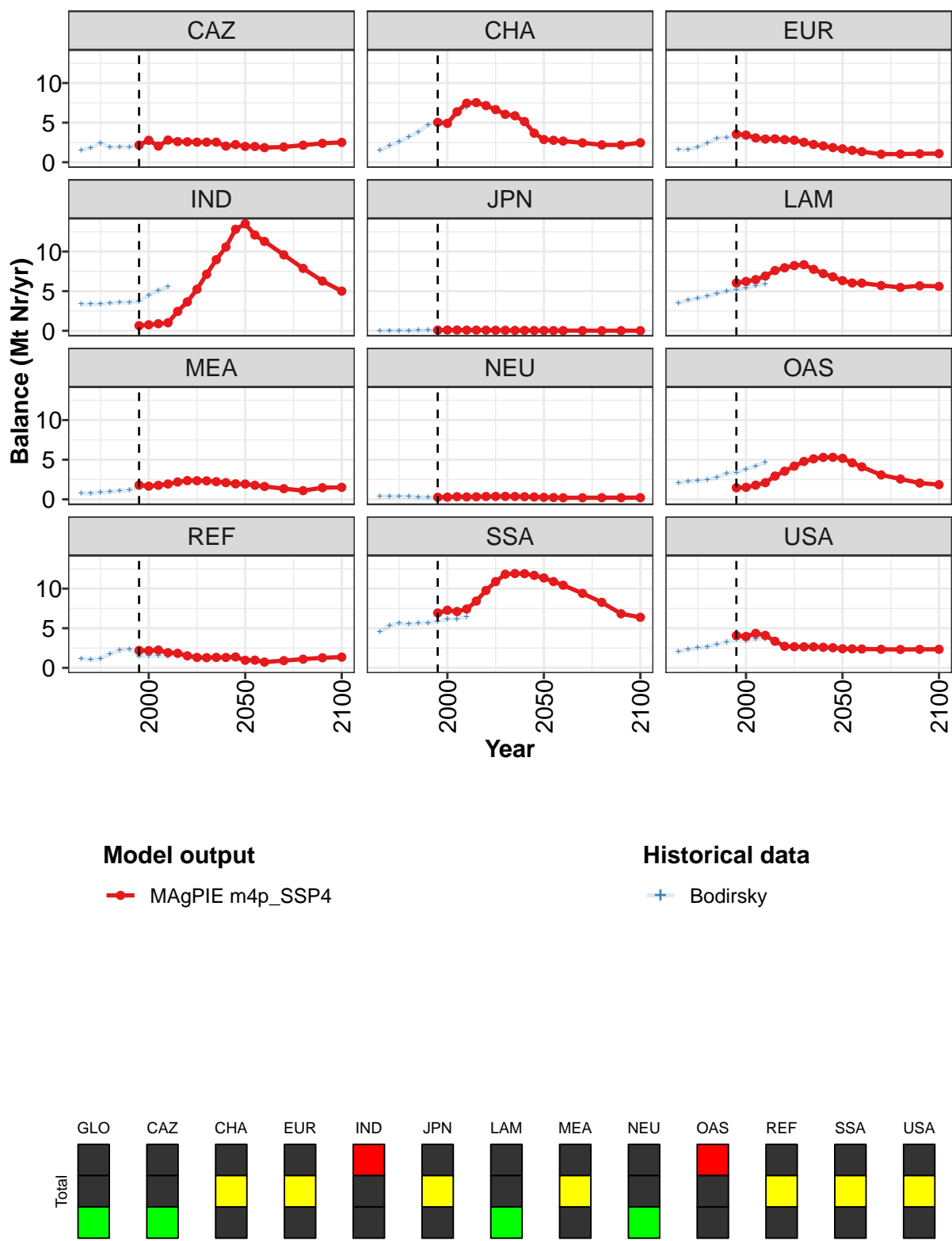


Figure 469: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Balance (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.2	35.1	36.5	39.0	42.3	44.5	47.3	49.9	51.0	50.6	50.6
CAZ	2.2	2.8	2.0	2.8	2.6	2.6	2.5	2.5	2.5	2.0	2.2
CHA	5.0	4.9	6.4	7.5	7.5	7.1	6.6	6.0	5.9	5.1	3.7
EUR	3.6	3.4	3.1	2.9	3.0	2.9	2.8	2.5	2.2	2.1	1.9
IND	0.6	0.8	0.9	1.0	2.5	3.6	5.2	7.1	9.0	10.6	12.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
LAM	6.0	6.2	6.5	6.9	7.6	8.0	8.2	8.3	7.8	7.2	6.8
MEA	1.8	1.7	1.8	1.9	2.2	2.4	2.3	2.3	2.2	2.1	2.0
NEU	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
OAS	1.5	1.5	1.8	2.1	2.9	3.5	4.2	4.8	5.1	5.3	5.3
REF	2.2	2.2	2.2	1.9	1.8	1.5	1.3	1.3	1.3	1.3	1.4
SSA	6.9	7.3	7.1	7.4	8.4	9.8	10.9	11.8	11.9	11.9	11.7
USA	4.1	4.0	4.4	4.1	3.4	2.7	2.7	2.7	2.7	2.6	2.5

Table 1803: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Balance (Mt Nr/yr) [PART 1/2]

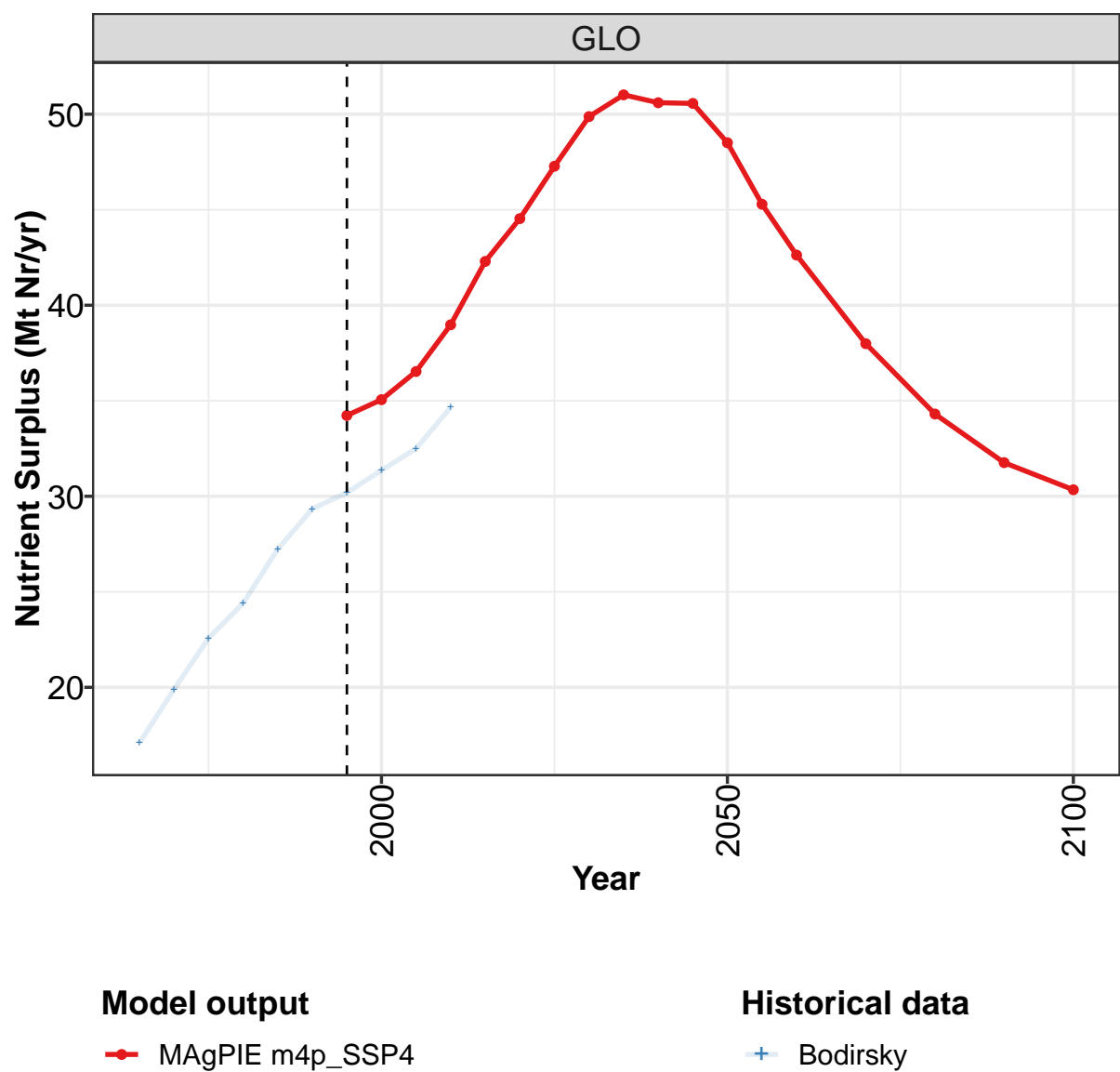
	2050	2055	2060	2070	2080	2090	2100
GLO	48.5	45.3	42.6	38.0	34.3	31.8	30.3
CAZ	2.0	2.0	1.8	1.9	2.2	2.4	2.5
CHA	2.9	2.8	2.7	2.4	2.2	2.2	2.5
EUR	1.7	1.5	1.3	1.0	1.0	1.1	1.1
IND	13.5	12.1	11.3	9.6	7.9	6.3	5.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	6.3	6.0	6.0	5.7	5.5	5.7	5.6
MEA	1.9	1.8	1.6	1.3	1.1	1.5	1.5
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	5.2	4.6	4.1	3.1	2.6	2.0	1.9
REF	1.0	1.0	0.7	0.9	1.1	1.3	1.4
SSA	11.3	10.9	10.4	9.4	8.3	6.8	6.4
USA	2.4	2.4	2.4	2.3	2.3	2.3	2.3

Table 1804: MAgPIE m4p\_SSP4 — 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



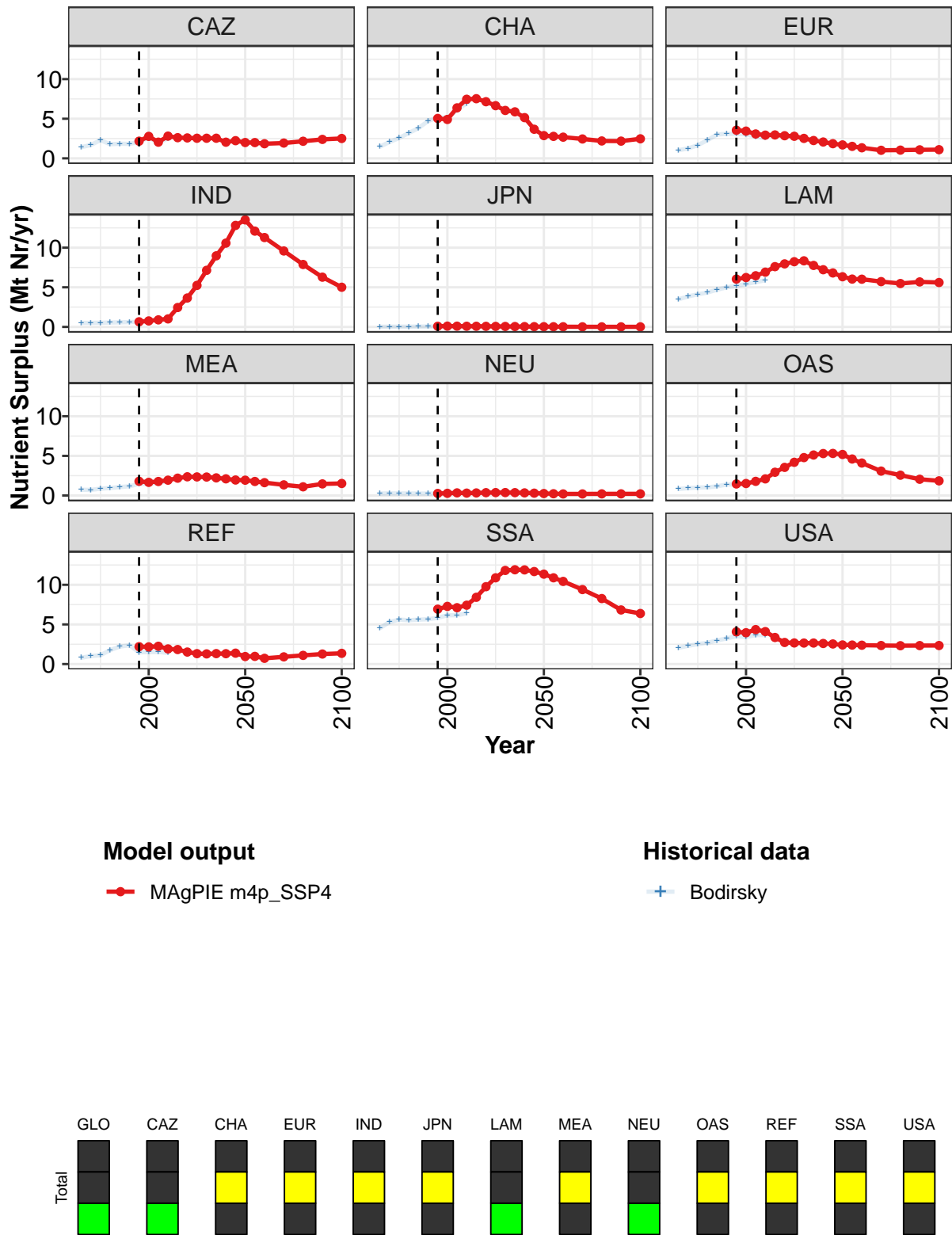


Figure 470: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Balance—Nutrient Surplus (Mt Nr/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	34.2	35.1	36.5	39.0	42.3	44.5	47.3	49.9	51.0	50.6	50.6
CAZ	2.2	2.8	2.0	2.8	2.6	2.6	2.5	2.5	2.5	2.0	2.2
CHA	5.0	4.9	6.4	7.5	7.5	7.1	6.6	6.0	5.9	5.1	3.7
EUR	3.6	3.4	3.1	2.9	3.0	2.9	2.8	2.5	2.2	2.1	1.9
IND	0.6	0.8	0.9	1.0	2.5	3.6	5.2	7.1	9.0	10.6	12.8
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
LAM	6.0	6.2	6.5	6.9	7.6	8.0	8.2	8.3	7.8	7.2	6.8
MEA	1.8	1.7	1.8	1.9	2.2	2.4	2.3	2.3	2.2	2.1	2.0
NEU	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3
OAS	1.5	1.5	1.8	2.1	2.9	3.5	4.2	4.8	5.1	5.3	5.3
REF	2.2	2.2	2.2	1.9	1.8	1.5	1.3	1.3	1.3	1.3	1.4
SSA	6.9	7.3	7.1	7.4	8.4	9.8	10.9	11.8	11.9	11.9	11.7
USA	4.1	4.0	4.4	4.1	3.4	2.7	2.7	2.7	2.7	2.6	2.5

Table 1806: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Balance—Nutrient Surplus (Mt Nr/yr) [PART 1/2]

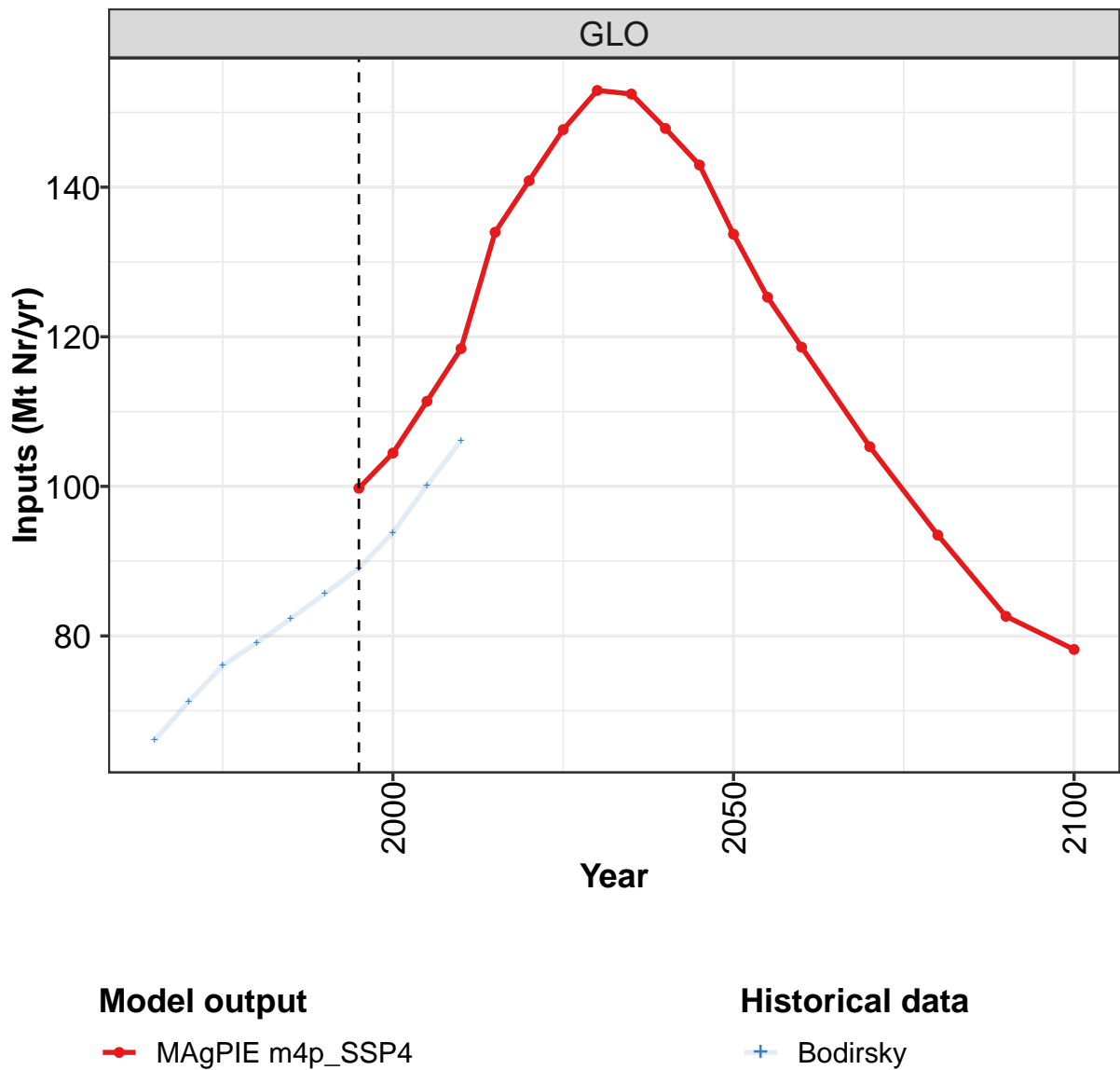
	2050	2055	2060	2070	2080	2090	2100
GLO	48.5	45.3	42.6	38.0	34.3	31.8	30.3
CAZ	2.0	2.0	1.8	1.9	2.2	2.4	2.5
CHA	2.9	2.8	2.7	2.4	2.2	2.2	2.5
EUR	1.7	1.5	1.3	1.0	1.0	1.1	1.1
IND	13.5	12.1	11.3	9.6	7.9	6.3	5.0
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	6.3	6.0	6.0	5.7	5.5	5.7	5.6
MEA	1.9	1.8	1.6	1.3	1.1	1.5	1.5
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	5.2	4.6	4.1	3.1	2.6	2.0	1.9
REF	1.0	1.0	0.7	0.9	1.1	1.3	1.4
SSA	11.3	10.9	10.4	9.4	8.3	6.8	6.4
USA	2.4	2.4	2.4	2.3	2.3	2.3	2.3

Table 1807: MAgPIE m4p\_SSP4 — 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



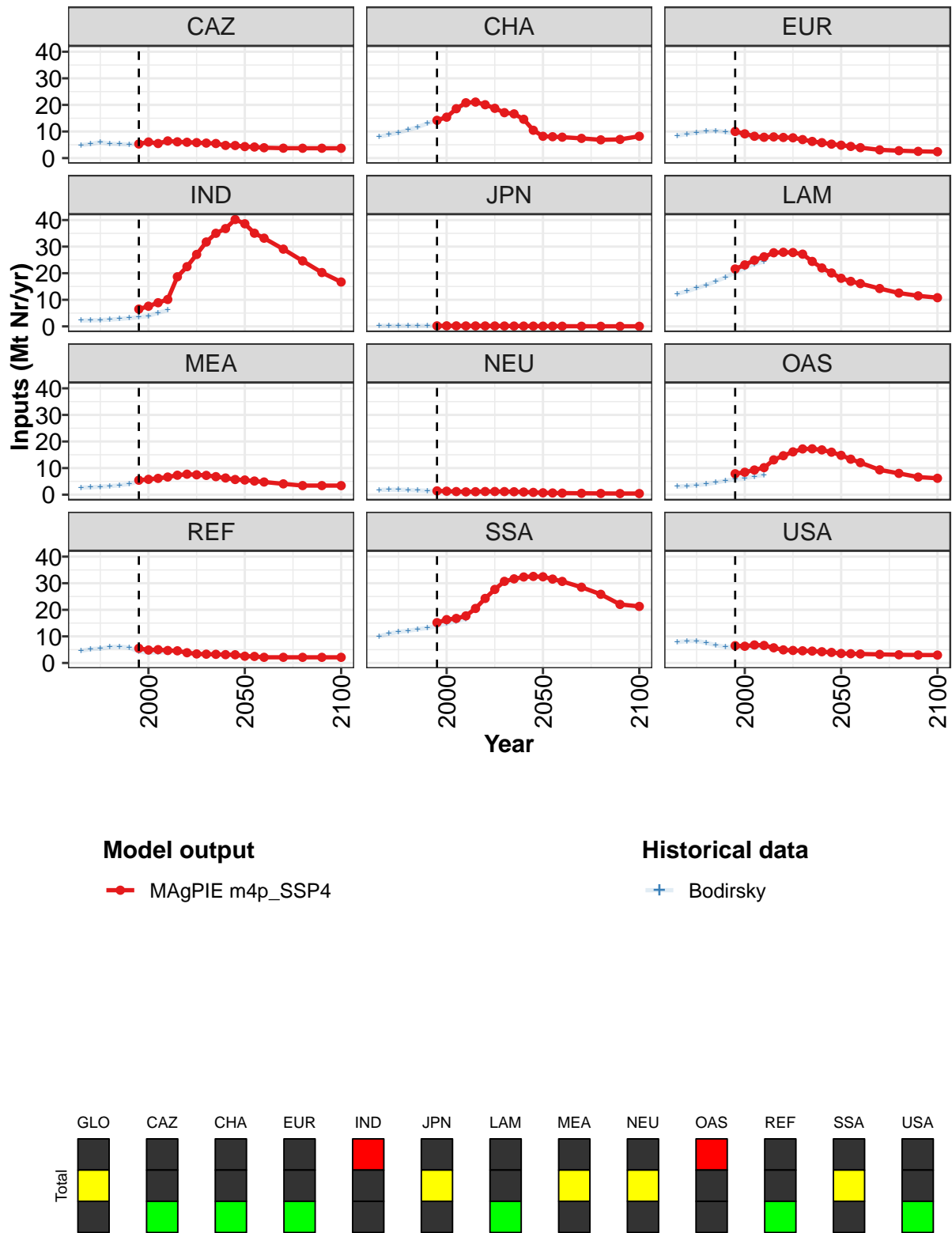


Figure 471: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	100	104	111	118	134	141	148	153	152	148	143
CAZ	5	6	5	6	6	6	6	6	5	5	5
CHA	14	15	19	21	21	20	19	17	17	15	10
EUR	10	9	8	8	8	8	8	7	6	6	5
IND	6	8	9	10	19	22	27	32	35	37	40
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	22	23	25	26	28	28	28	27	24	22	20
MEA	5	6	6	7	7	8	7	7	7	6	6
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	8	8	9	10	13	15	16	17	17	17	16
REF	6	5	5	5	5	4	3	3	3	3	3
SSA	15	16	17	18	21	24	28	31	32	32	33
USA	7	6	7	7	6	5	5	5	4	4	4

Table 1809: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs (Mt Nr/yr) [PART 1/2]

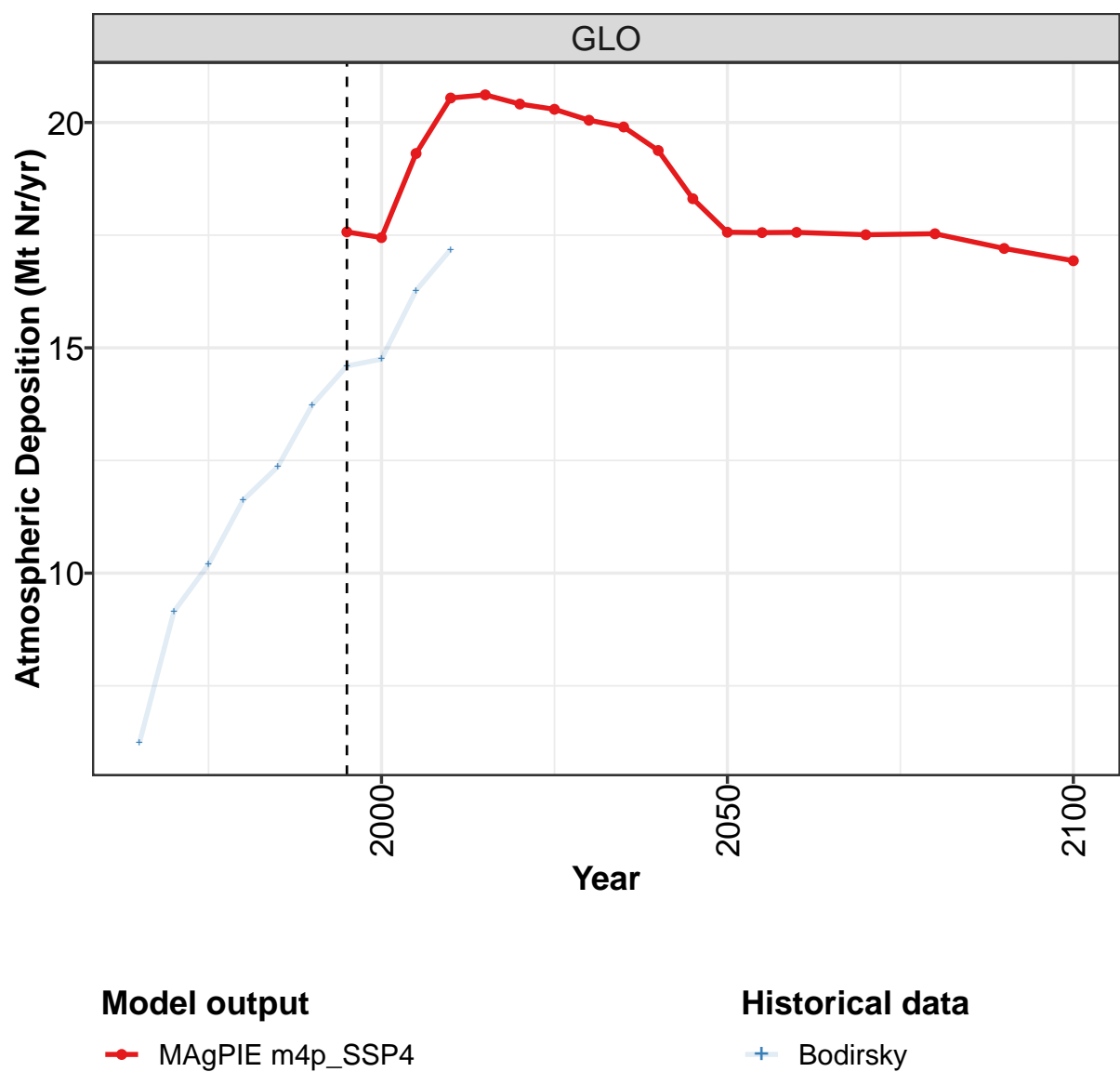
	2050	2055	2060	2070	2080	2090	2100
GLO	134	125	119	105	93	83	78
CAZ	4	4	4	4	4	4	4
CHA	8	8	8	7	7	7	8
EUR	5	4	4	3	3	3	2
IND	39	35	33	29	25	20	17
JPN	0	0	0	0	0	0	0
LAM	18	17	16	14	13	11	11
MEA	6	5	5	4	3	3	3
NEU	1	1	1	1	0	0	0
OAS	15	13	12	9	8	7	6
REF	3	2	2	2	2	2	2
SSA	32	32	31	28	26	22	21
USA	4	3	3	3	3	3	3

Table 1810: MAgPIE m4p\_SSP4 — 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



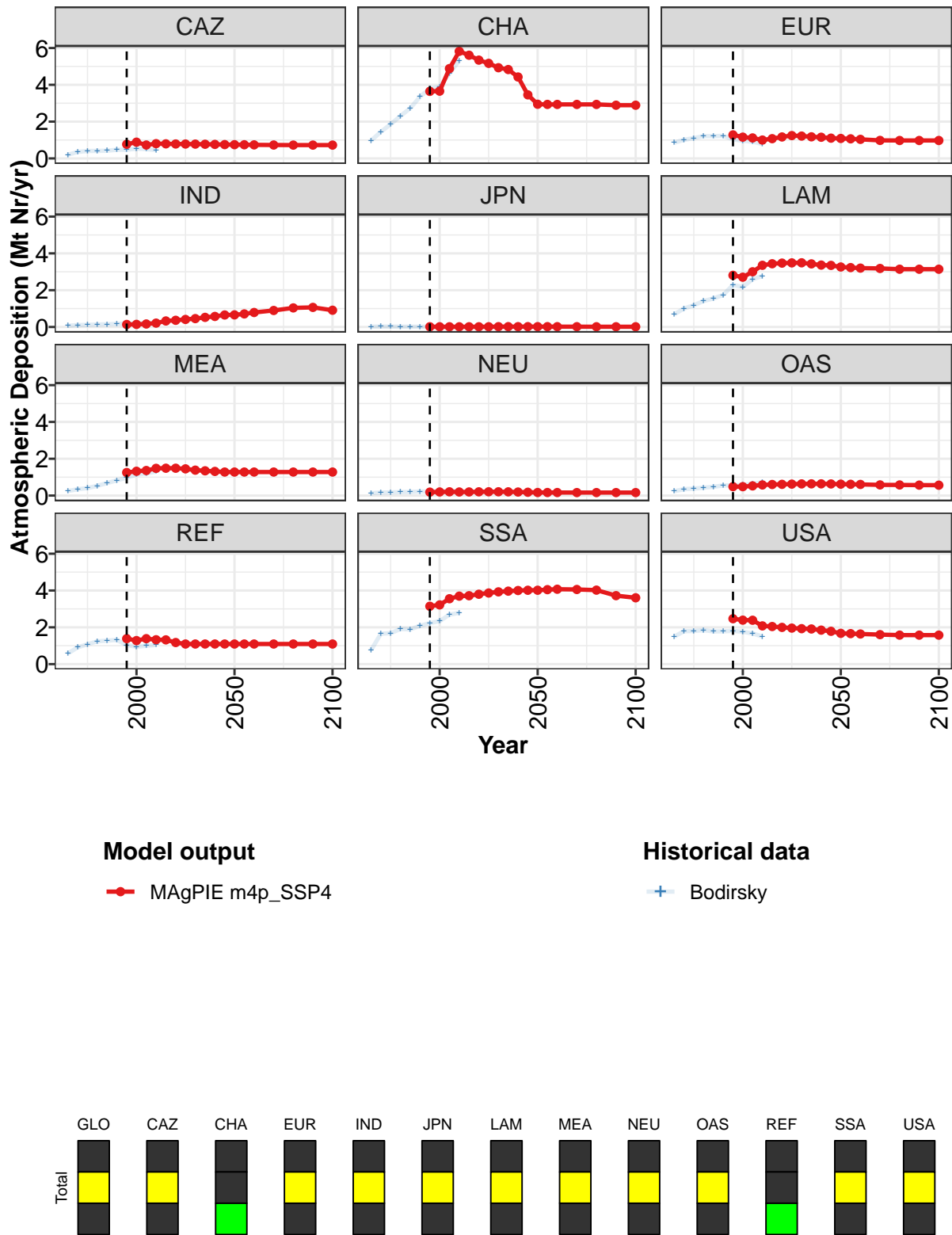


Figure 472: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Atmospheric Deposition (Mt Nr/yr)

	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	20.1	19.9	19.4	18.3
CAZ	0.8	0.9	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
CHA	3.6	3.7	4.9	5.8	5.6	5.3	5.2	4.9	4.8	4.4	3.5
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	0.3	0.4	0.4	0.5	0.5	0.6	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	3.4	3.4	3.3
MEA	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.4	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	1.1	1.1
SSA	3.1	3.2	3.6	3.7	3.7	3.8	3.9	3.9	4.0	4.0	4.0
USA	2.5	2.4	2.4	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8

Table 1812: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Atmospheric Deposition (Mt Nr/yr) [PART 1/2]

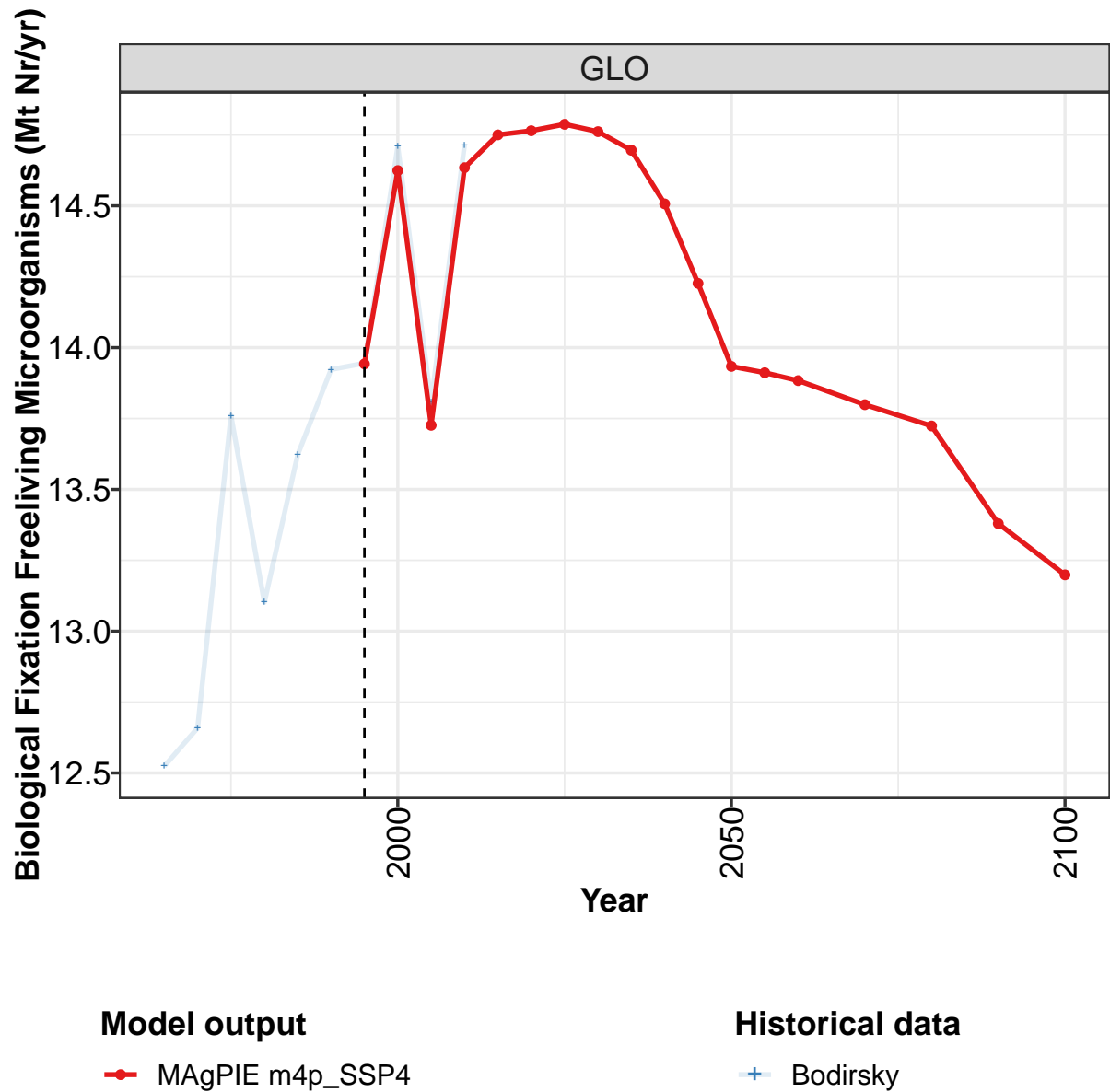
	2050	2055	2060	2070	2080	2090	2100
GLO	17.6	17.6	17.6	17.5	17.5	17.2	16.9
CAZ	0.7	0.7	0.7	0.7	0.7	0.7	0.7
CHA	2.9	2.9	2.9	2.9	2.9	2.9	2.9
EUR	1.1	1.1	1.0	1.0	1.0	1.0	1.0
IND	0.7	0.7	0.8	0.9	1.0	1.1	0.9
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.3	3.2	3.2	3.2	3.1	3.1	3.1
MEA	1.3	1.3	1.3	1.3	1.3	1.3	1.3
NEU	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OAS	0.6	0.6	0.6	0.6	0.6	0.6	0.6
REF	1.1	1.1	1.1	1.1	1.1	1.1	1.1
SSA	4.0	4.0	4.1	4.1	4.0	3.7	3.6
USA	1.7	1.7	1.6	1.6	1.6	1.6	1.6

Table 1813: MAgPIE m4p\_SSP4 — 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 Freelifving Microorganisms





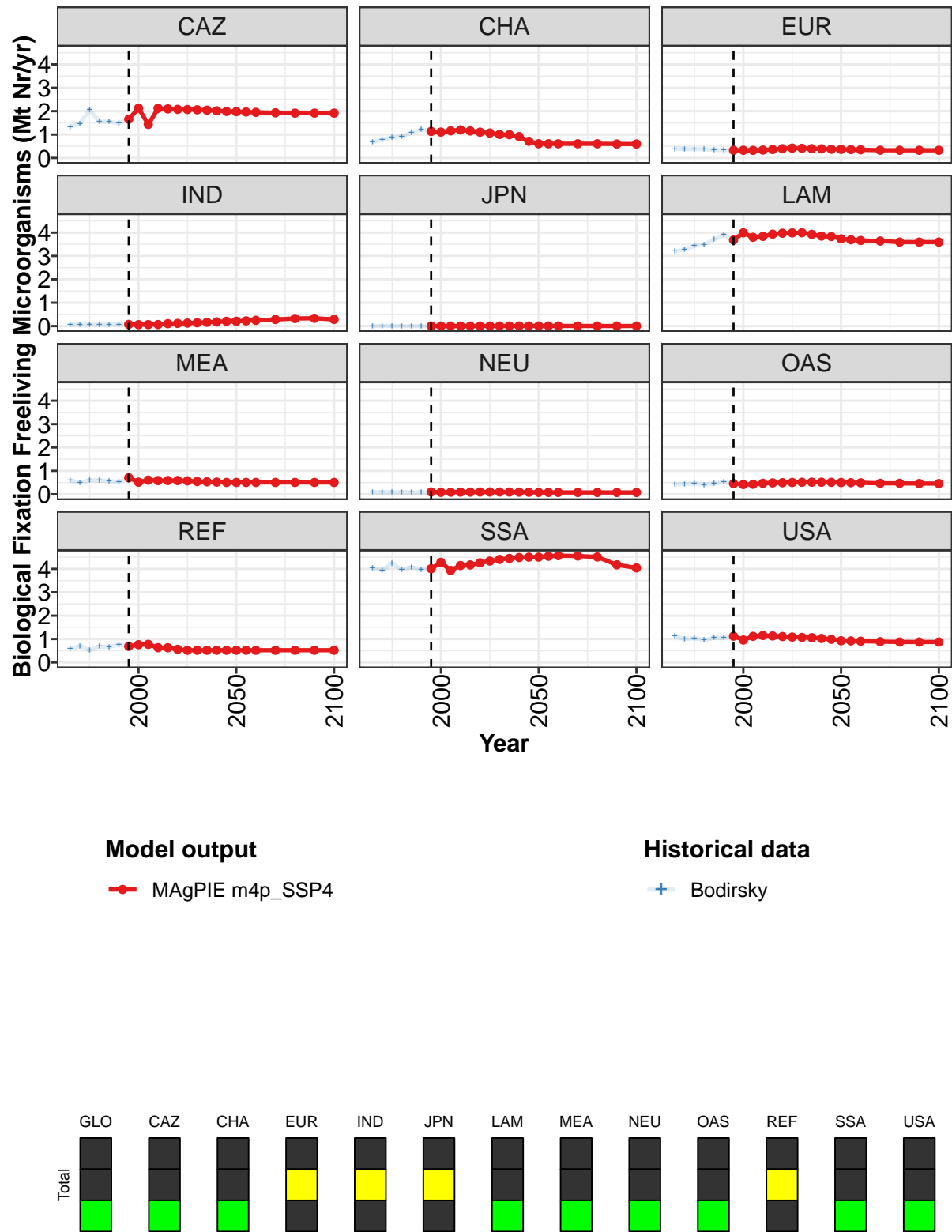


Figure 473: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Biological Fixation Free-living Microorganisms (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	13.9	14.6	13.7	14.6	14.8	14.8	14.8	14.8	14.7	14.5	14.2
CAZ	1.7	2.1	1.4	2.1	2.1	2.1	2.1	2.1	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	0.1	0.1	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	3.9	3.8	3.8
MEA	0.7	0.5	0.6	0.6	0.6	0.6	0.6	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	0.5	0.5
SSA	4.0	4.3	3.9	4.1	4.2	4.3	4.3	4.4	4.4	4.5	4.5
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\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Biological Fixation Free-living Microorganisms (Mt Nr/yr) [PART 1/2]

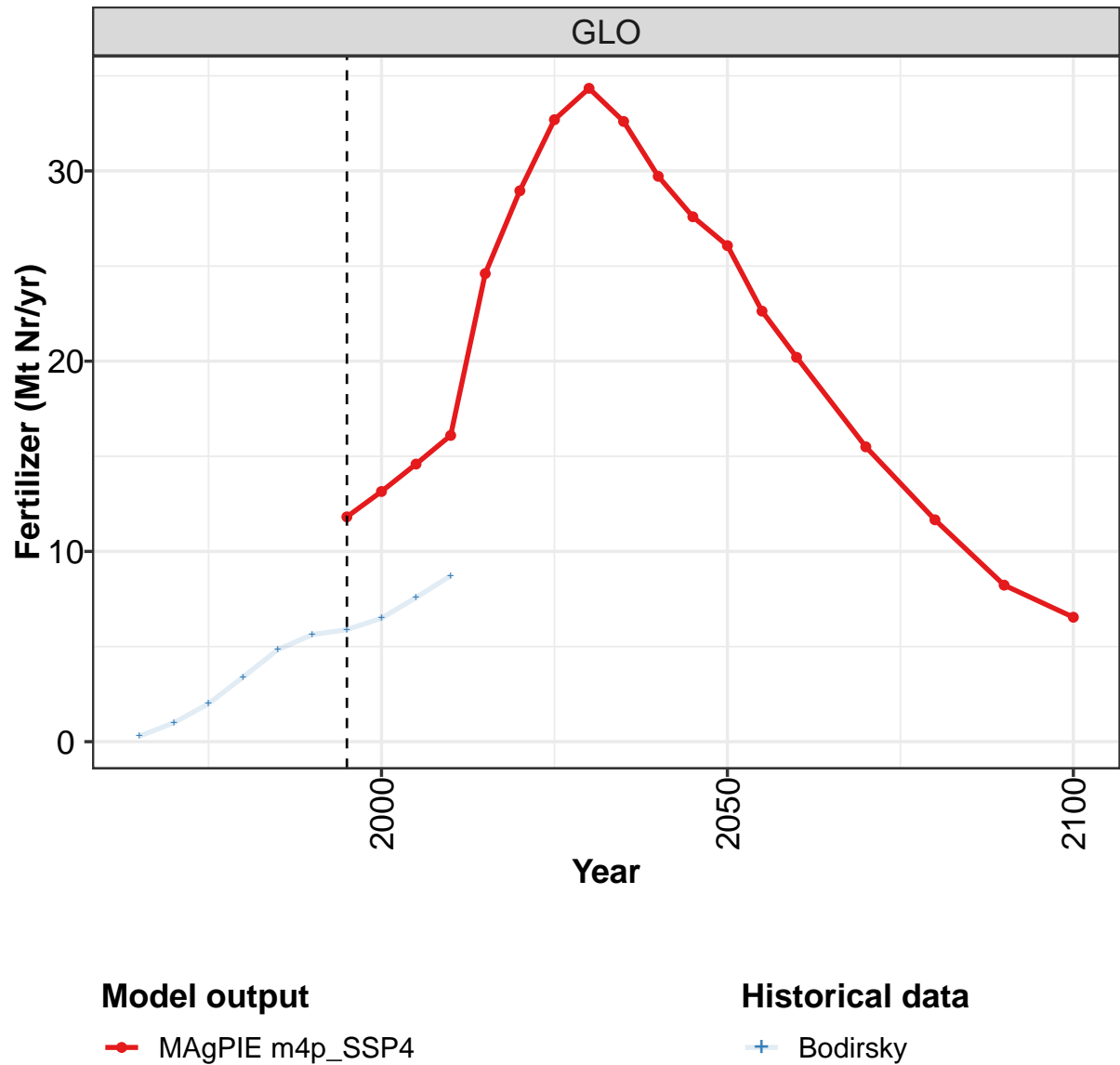
	2050	2055	2060	2070	2080	2090	2100
GLO	13.9	13.9	13.9	13.8	13.7	13.4	13.2
CAZ	2.0	2.0	2.0	1.9	1.9	1.9	1.9
CHA	0.6	0.6	0.6	0.6	0.6	0.6	0.6
EUR	0.4	0.4	0.3	0.3	0.3	0.3	0.3
IND	0.2	0.2	0.2	0.3	0.3	0.3	0.3
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	3.7	3.7	3.7	3.6	3.6	3.6	3.6
MEA	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OAS	0.5	0.5	0.5	0.5	0.5	0.5	0.5
REF	0.5	0.5	0.5	0.5	0.5	0.5	0.5
SSA	4.5	4.5	4.6	4.5	4.5	4.2	4.0
USA	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Table 1816: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Biological Fixation Free-living 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 Freelifing Microorganisms (Mt Nr/yr)

56.3.6 Inputs—Fertilizer



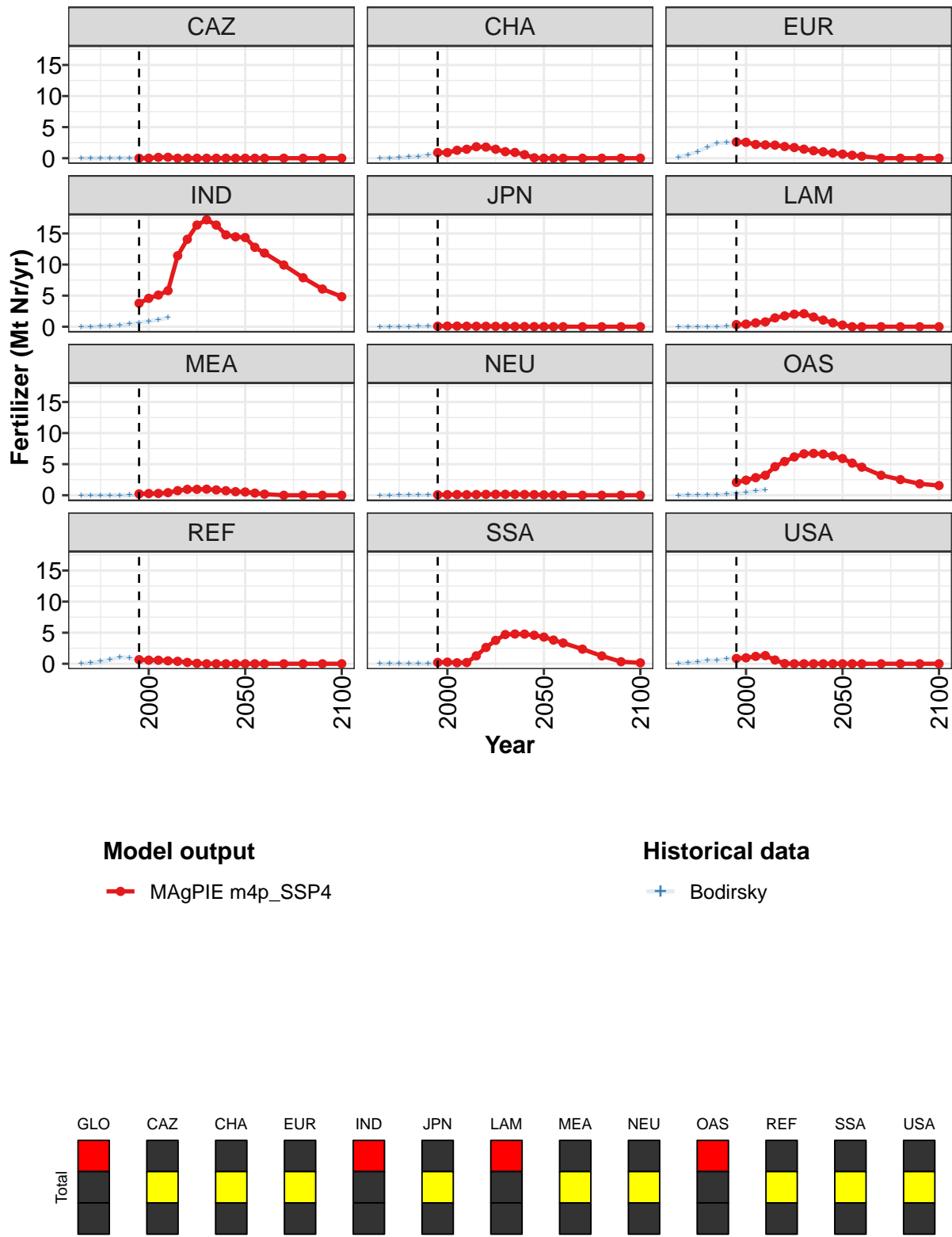


Figure 474: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Fertilizer (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	11.8	13.2	14.6	16.1	24.6	29.0	32.7	34.3	32.6	29.7	27.6
CAZ	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.9	0.9	1.3	1.4	1.8	1.8	1.4	1.0	0.9	0.6	0.1
EUR	2.6	2.6	2.2	2.1	2.1	1.9	1.7	1.5	1.2	1.0	0.8
IND	3.8	4.6	5.1	5.8	11.4	14.1	16.4	17.2	16.4	14.8	14.5
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
LAM	0.3	0.4	0.6	0.8	1.4	1.7	2.0	2.1	1.6	1.1	0.6
MEA	0.2	0.3	0.3	0.4	0.7	0.9	0.9	1.0	0.9	0.7	0.6
NEU	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1
OAS	2.1	2.4	2.8	3.2	4.6	5.4	6.2	6.7	6.7	6.6	6.3
REF	0.7	0.6	0.6	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0
SSA	0.2	0.3	0.2	0.2	1.3	2.6	3.8	4.7	4.8	4.8	4.6
USA	0.9	1.0	1.2	1.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0

Table 1818: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Fertilizer (Mt Nr/yr)  
[PART 1/2]

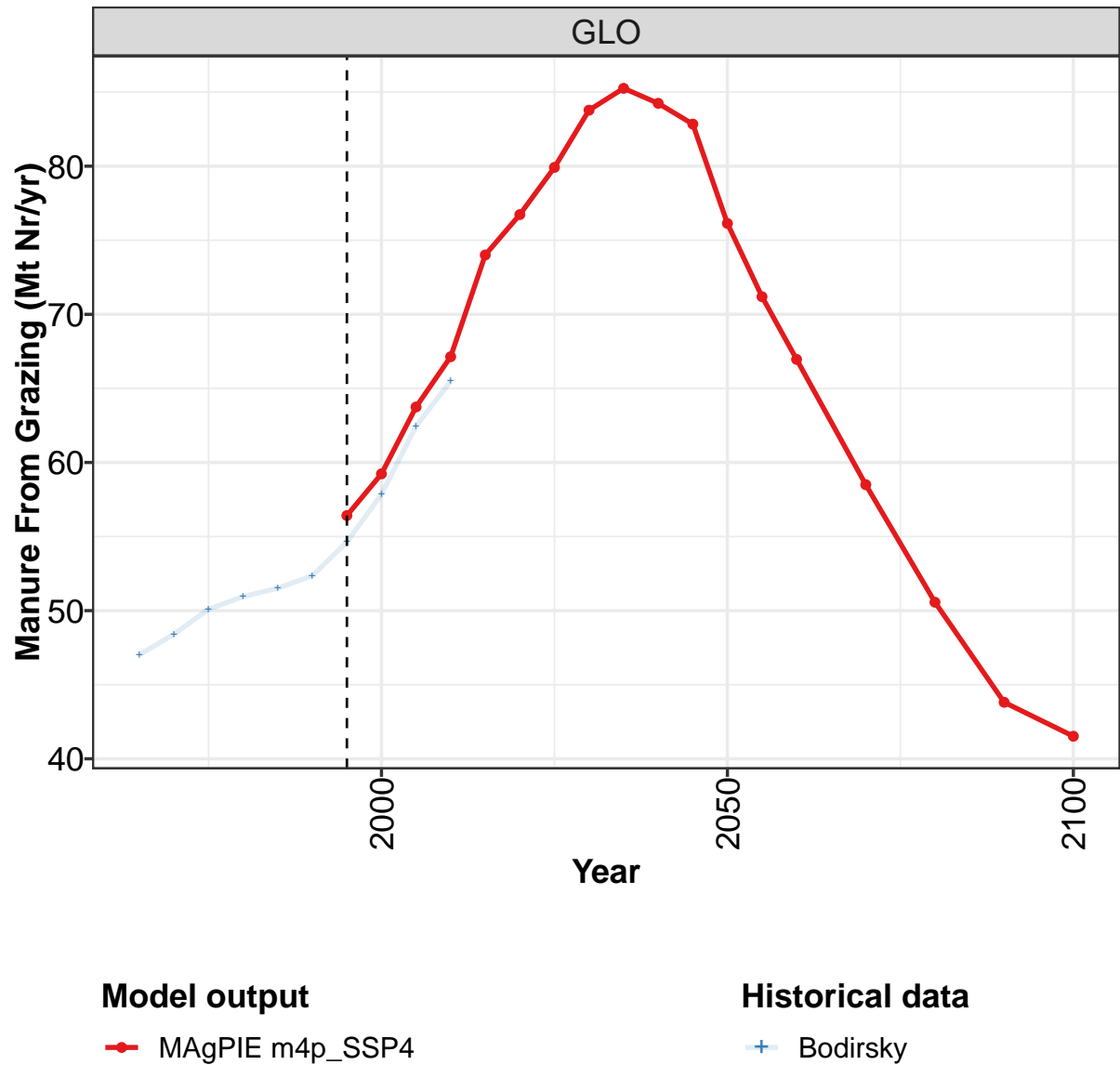
	2050	2055	2060	2070	2080	2090	2100
GLO	26.1	22.6	20.2	15.5	11.7	8.2	6.5
CAZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	0.7	0.5	0.3	0.0	0.0	0.0	0.0
IND	14.4	12.8	11.9	9.9	7.9	6.1	4.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	0.3	0.0	0.0	0.0	0.0	0.0	0.0
MEA	0.5	0.3	0.2	0.0	0.0	0.0	0.0
NEU	0.1	0.0	0.0	0.0	0.0	0.0	0.0
OAS	5.9	5.2	4.5	3.2	2.5	1.8	1.6
REF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSA	4.3	3.8	3.3	2.4	1.3	0.3	0.2
USA	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1819: MAgPIE m4p\_SSP4 — 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



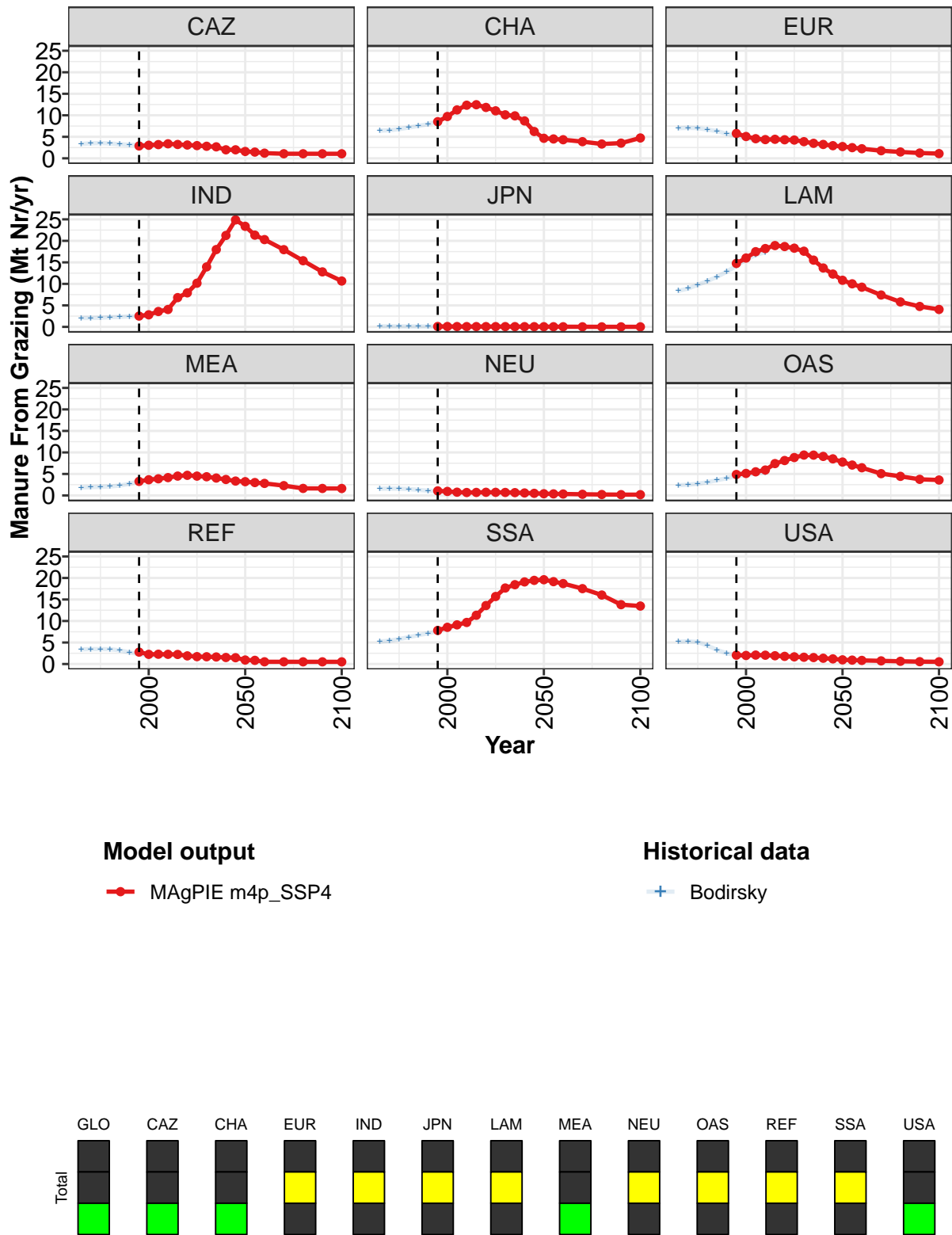


Figure 475: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Manure From Grazing (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	56.4	59.2	63.7	67.1	74.0	76.7	79.9	83.8	85.3	84.2	82.8
CAZ	2.9	3.0	3.2	3.4	3.2	3.1	3.0	2.8	2.7	2.0	2.0
CHA	8.5	9.7	11.3	12.3	12.5	11.8	11.0	10.1	9.9	8.7	6.2
EUR	5.8	5.1	4.6	4.4	4.4	4.3	4.3	3.9	3.5	3.2	2.9
IND	2.5	2.8	3.6	4.0	6.8	7.9	10.2	13.9	18.0	21.3	24.9
JPN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	14.8	16.0	17.5	18.2	18.9	18.7	18.3	17.6	15.5	13.7	12.3
MEA	3.3	3.7	3.9	4.2	4.5	4.7	4.5	4.4	4.1	3.7	3.3
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	7.4	8.1	8.8	9.4	9.4	9.1	8.5
REF	2.8	2.2	2.3	2.3	2.2	1.9	1.7	1.7	1.6	1.5	1.5
SSA	7.8	8.5	9.1	9.7	11.3	13.6	15.7	17.7	18.4	19.1	19.4
USA	2.1	2.0	2.1	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.2

Table 1821: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Manure From Grazing (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	76.1	71.2	67.0	58.5	50.6	43.8	41.5
CAZ	1.6	1.5	1.2	1.1	1.1	1.1	1.1
CHA	4.7	4.5	4.3	3.9	3.3	3.5	4.7
EUR	2.7	2.5	2.2	1.8	1.5	1.2	1.1
IND	23.4	21.3	20.3	17.9	15.4	12.8	10.7
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	10.8	10.0	9.2	7.4	5.8	4.8	4.1
MEA	3.2	3.0	2.8	2.3	1.6	1.6	1.6
NEU	0.4	0.4	0.3	0.3	0.2	0.2	0.2
OAS	7.8	7.1	6.4	5.1	4.4	3.7	3.6
REF	0.9	0.9	0.5	0.5	0.5	0.5	0.5
SSA	19.6	19.2	18.7	17.5	16.0	13.8	13.5
USA	1.0	0.9	0.8	0.7	0.6	0.6	0.5

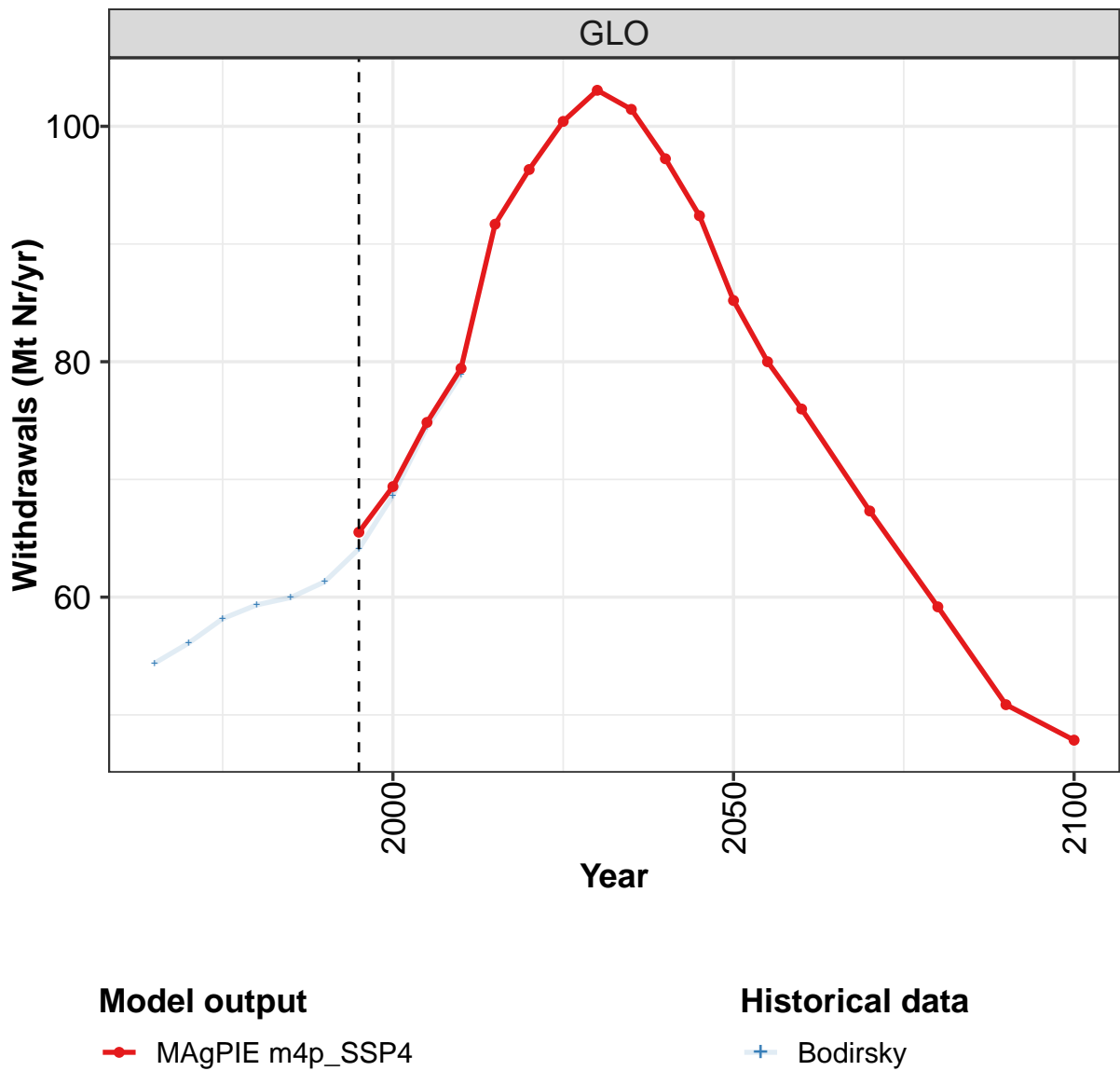
Table 1822: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Inputs—Manure From Grazing (Mt Nr/yr) [PART 2/2]

	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



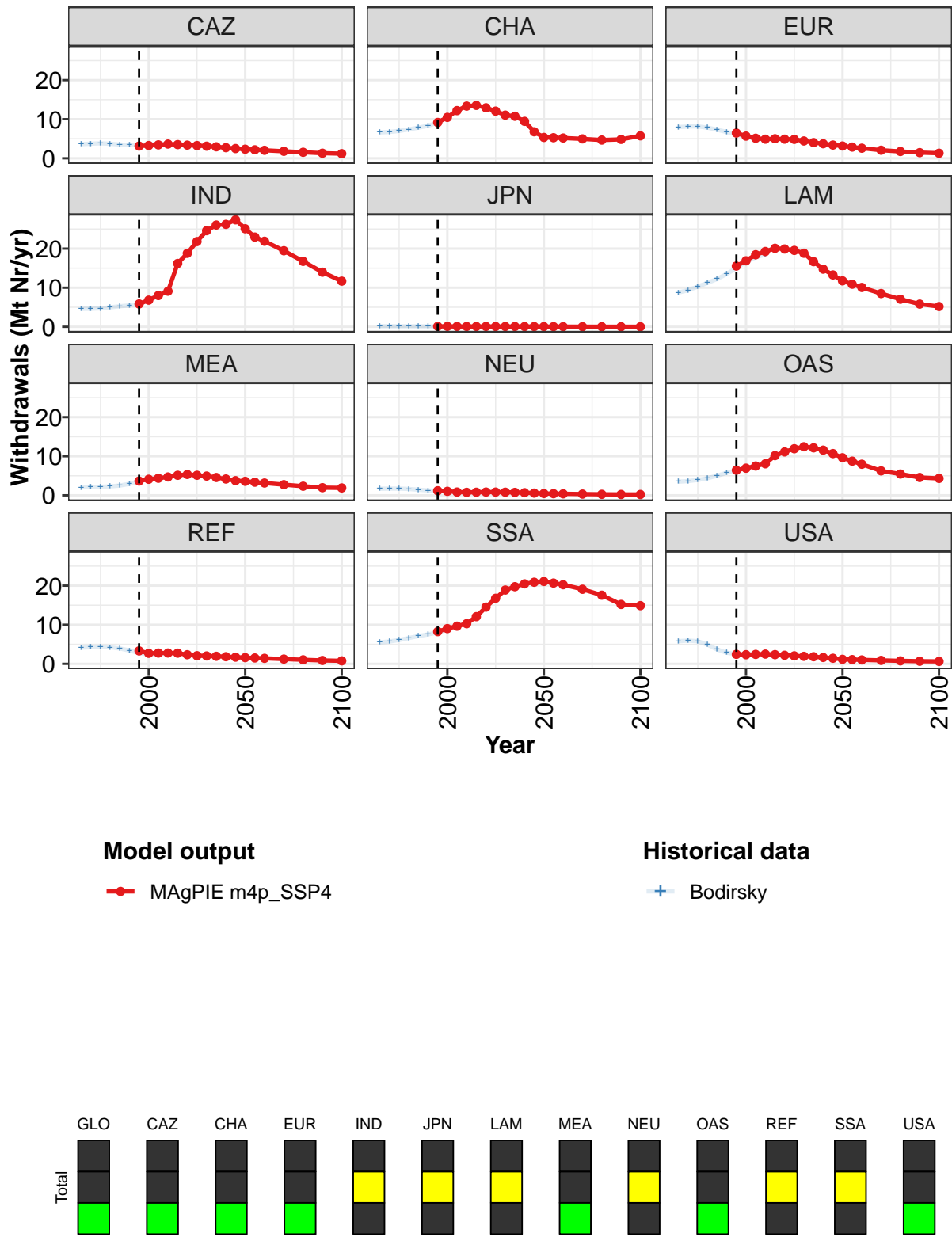


Figure 476: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Withdrawals (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	66	69	75	79	92	96	100	103	101	97	92
CAZ	3	3	3	4	4	3	3	3	3	3	2
CHA	9	10	12	13	14	13	12	11	11	9	7
EUR	6	6	5	5	5	5	5	4	4	4	3
IND	6	7	8	9	16	19	22	25	26	26	27
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	16	17	18	19	20	20	20	19	17	15	13
MEA	4	4	4	5	5	5	5	5	5	4	4
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	6	7	7	8	10	11	12	12	12	12	11
REF	3	3	3	3	3	2	2	2	2	2	2
SSA	8	9	10	10	12	15	17	19	20	20	21
USA	2	2	2	2	2	2	2	2	2	2	1

Table 1824: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Withdrawals (Mt Nr/yr) [PART 1/2]

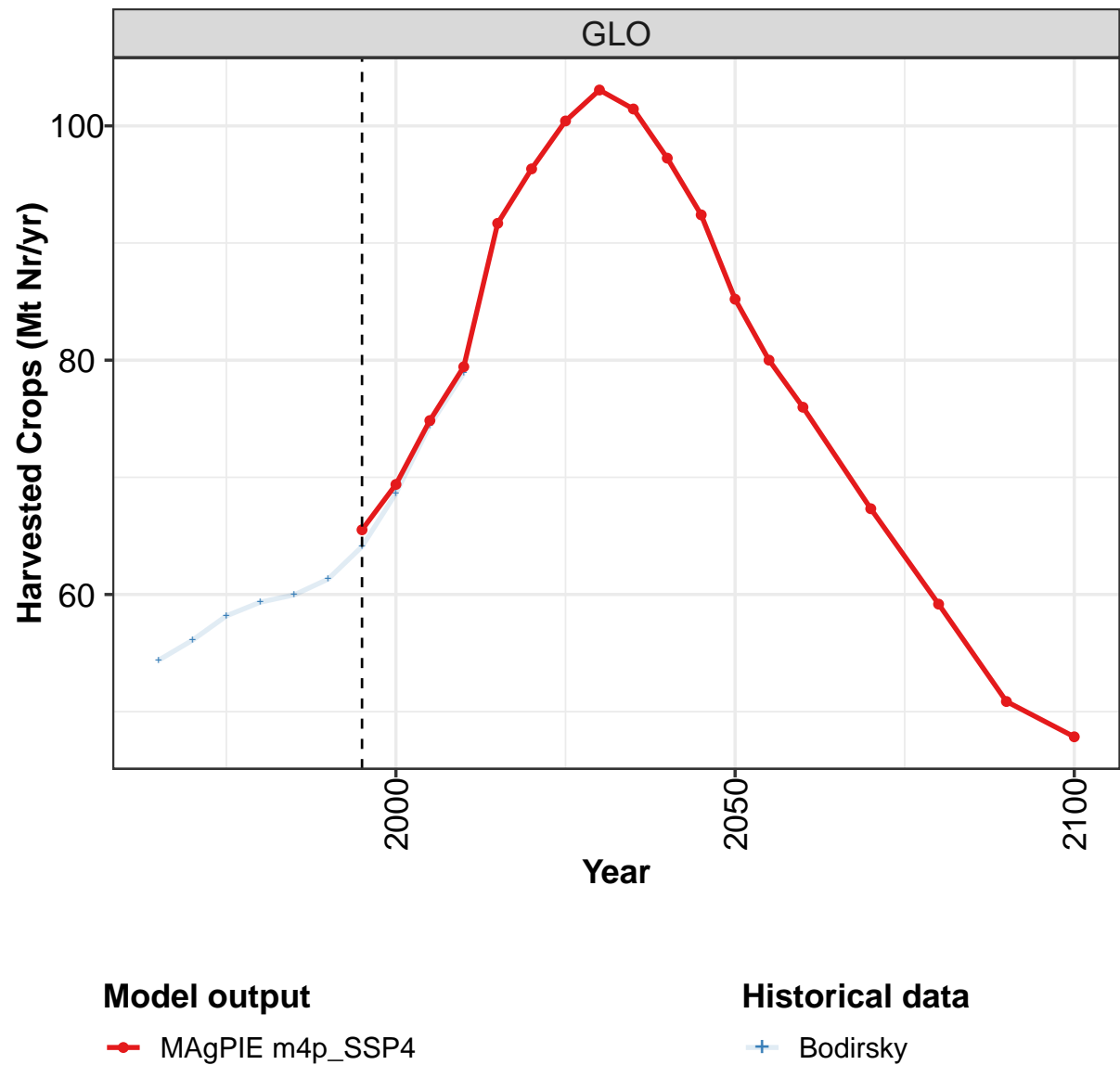
	2050	2055	2060	2070	2080	2090	2100
GLO	85	80	76	67	59	51	48
CAZ	2	2	2	2	2	1	1
CHA	5	5	5	5	5	5	6
EUR	3	3	3	2	2	1	1
IND	25	23	22	19	17	14	12
JPN	0	0	0	0	0	0	0
LAM	12	11	10	9	7	6	5
MEA	4	3	3	3	2	2	2
NEU	0	0	0	0	0	0	0
OAS	10	9	8	6	5	5	4
REF	2	1	1	1	1	1	1
SSA	21	21	20	19	18	15	15
USA	1	1	1	1	1	1	1

Table 1825: MAgPIE m4p\_SSP4 — 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



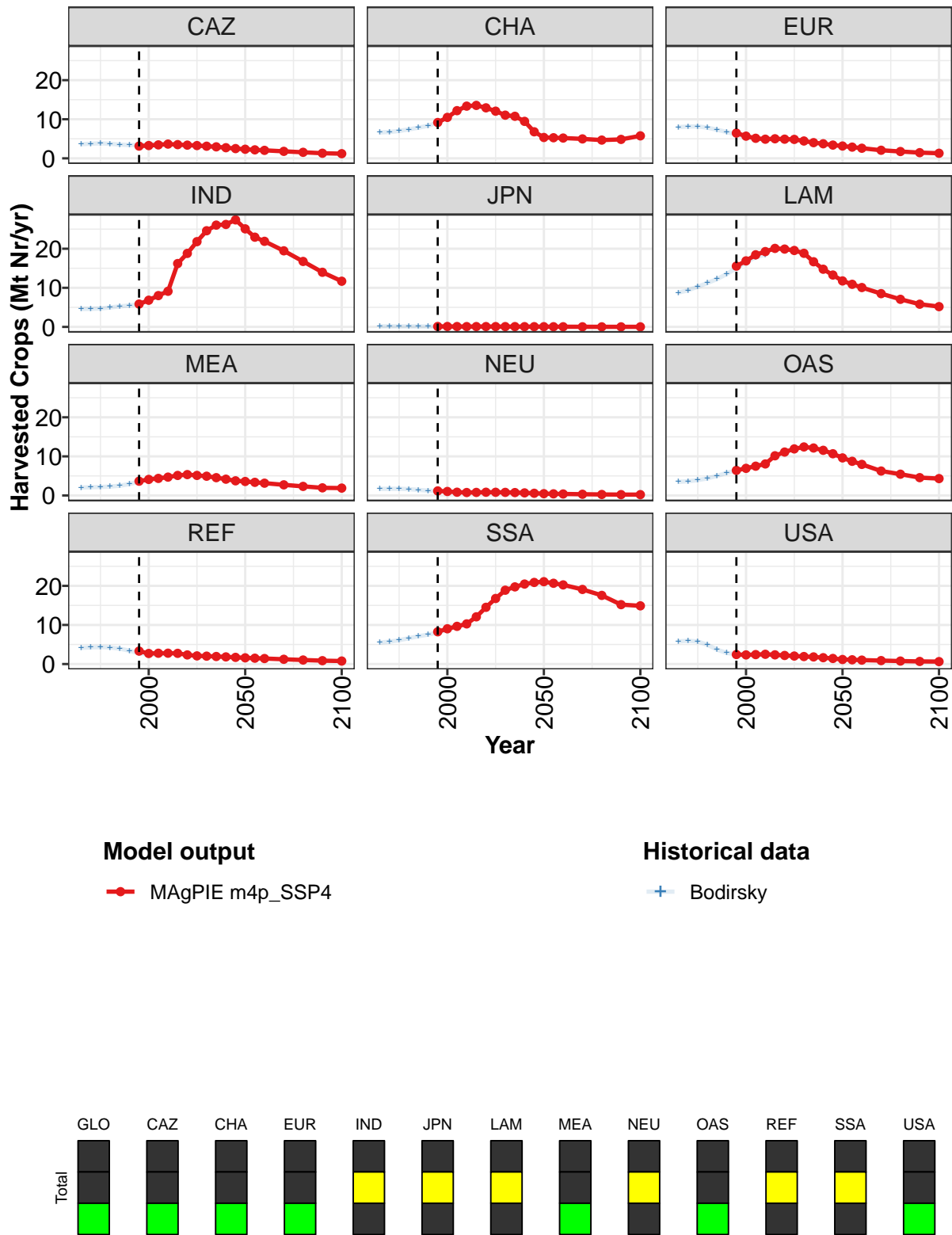


Figure 477: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Withdrawals—Harvested Crops (Mt Nr/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	66	69	75	79	92	96	100	103	101	97	92
CAZ	3	3	3	4	4	3	3	3	3	3	2
CHA	9	10	12	13	14	13	12	11	11	9	7
EUR	6	6	5	5	5	5	5	4	4	4	3
IND	6	7	8	9	16	19	22	25	26	26	27
JPN	0	0	0	0	0	0	0	0	0	0	0
LAM	16	17	18	19	20	20	20	19	17	15	13
MEA	4	4	4	5	5	5	5	5	5	4	4
NEU	1	1	1	1	1	1	1	1	1	1	1
OAS	6	7	7	8	10	11	12	12	12	12	11
REF	3	3	3	3	3	2	2	2	2	2	2
SSA	8	9	10	10	12	15	17	19	20	20	21
USA	2	2	2	2	2	2	2	2	2	2	1

Table 1827: MAgPIE m4p\_SSP4 — Resources—Nitrogen—Pasture Budget—Withdrawals—Harvested Crops (Mt Nr/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	85	80	76	67	59	51	48
CAZ	2	2	2	2	2	1	1
CHA	5	5	5	5	5	5	6
EUR	3	3	3	2	2	1	1
IND	25	23	22	19	17	14	12
JPN	0	0	0	0	0	0	0
LAM	12	11	10	9	7	6	5
MEA	4	3	3	3	2	2	2
NEU	0	0	0	0	0	0	0
OAS	10	9	8	6	5	5	4
REF	2	1	1	1	1	1	1
SSA	21	21	20	19	18	15	15
USA	1	1	1	1	1	1	1

Table 1828: MAgPIE m4p\_SSP4 — 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

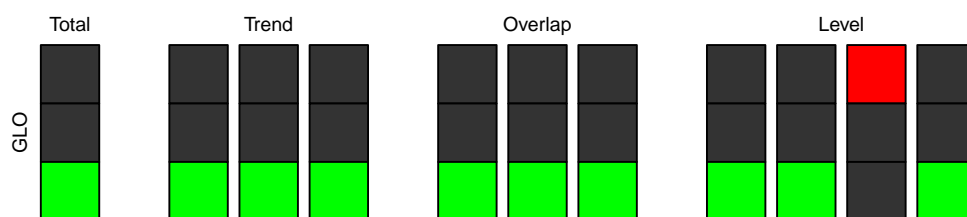
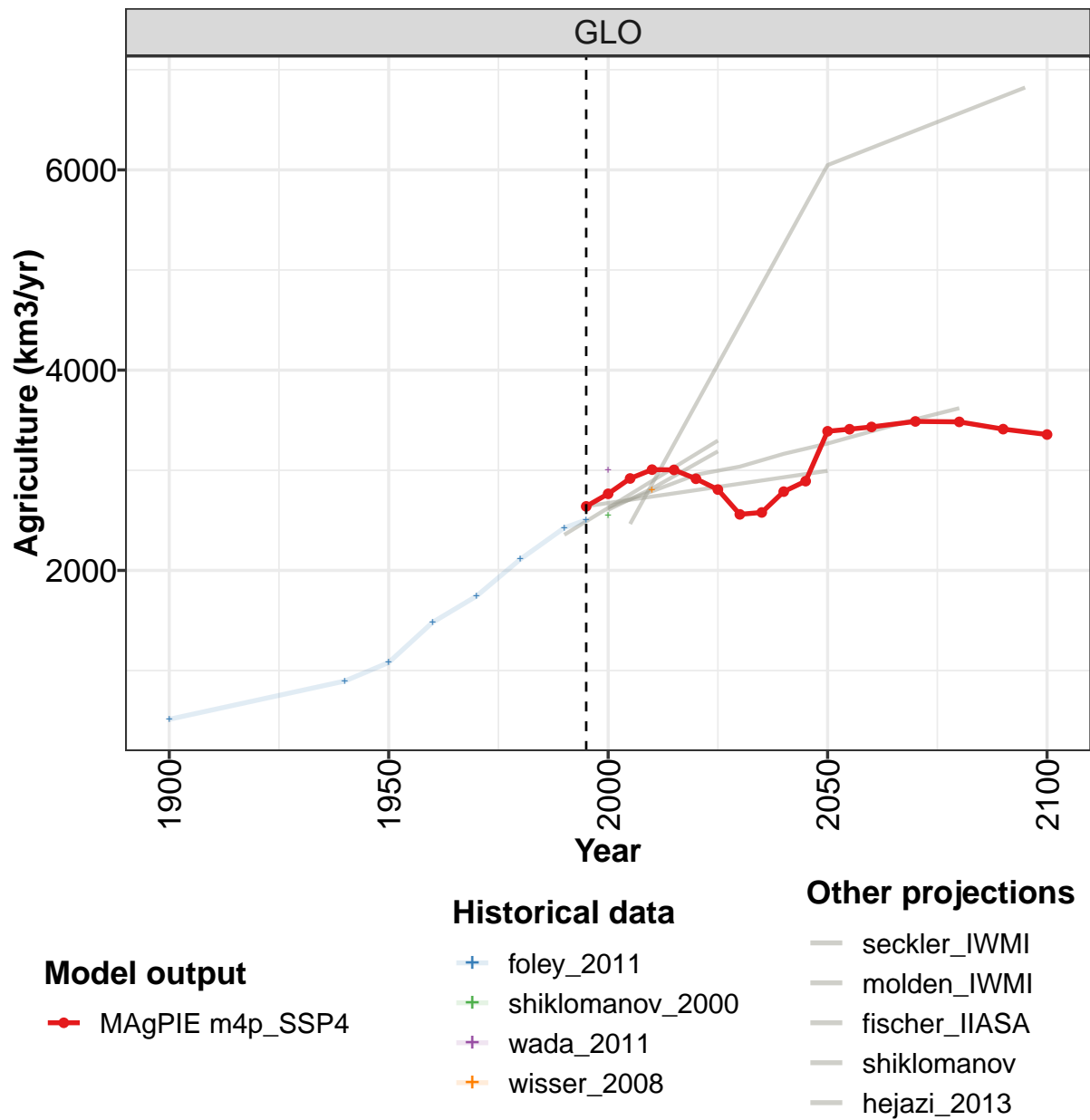


Figure 478: MAgPIE m4p\_SSP4 — Resources—Water—Withdrawal—Agriculture (km3/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	2639	2765	2918	3006	3004	2915	2807	2560	2579	2787	2891

Table 1830: MAgPIE m4p\_SSP4 — Resources—Water—Withdrawal—Agriculture (km3/yr) [PART 1/2]

	2050	2055	2060	2070	2080	2090	2100
GLO	3390	3410	3433	3488	3483	3411	3357

Table 1831: MAgPIE m4p\_SSP4 — 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

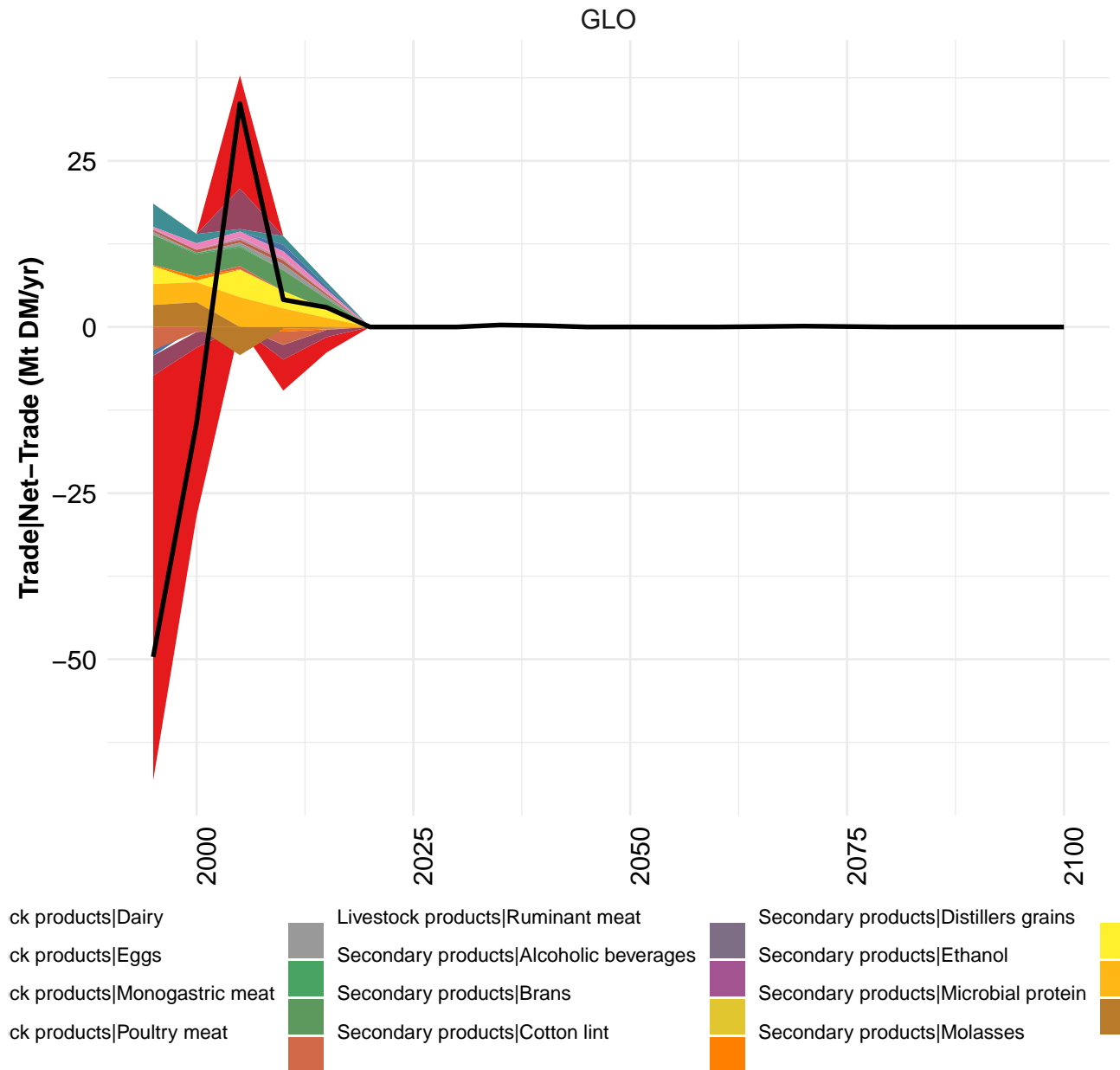
Table 1835: foley\_2011 — Resources—Water—Withdrawal—Agriculture (km3/yr)

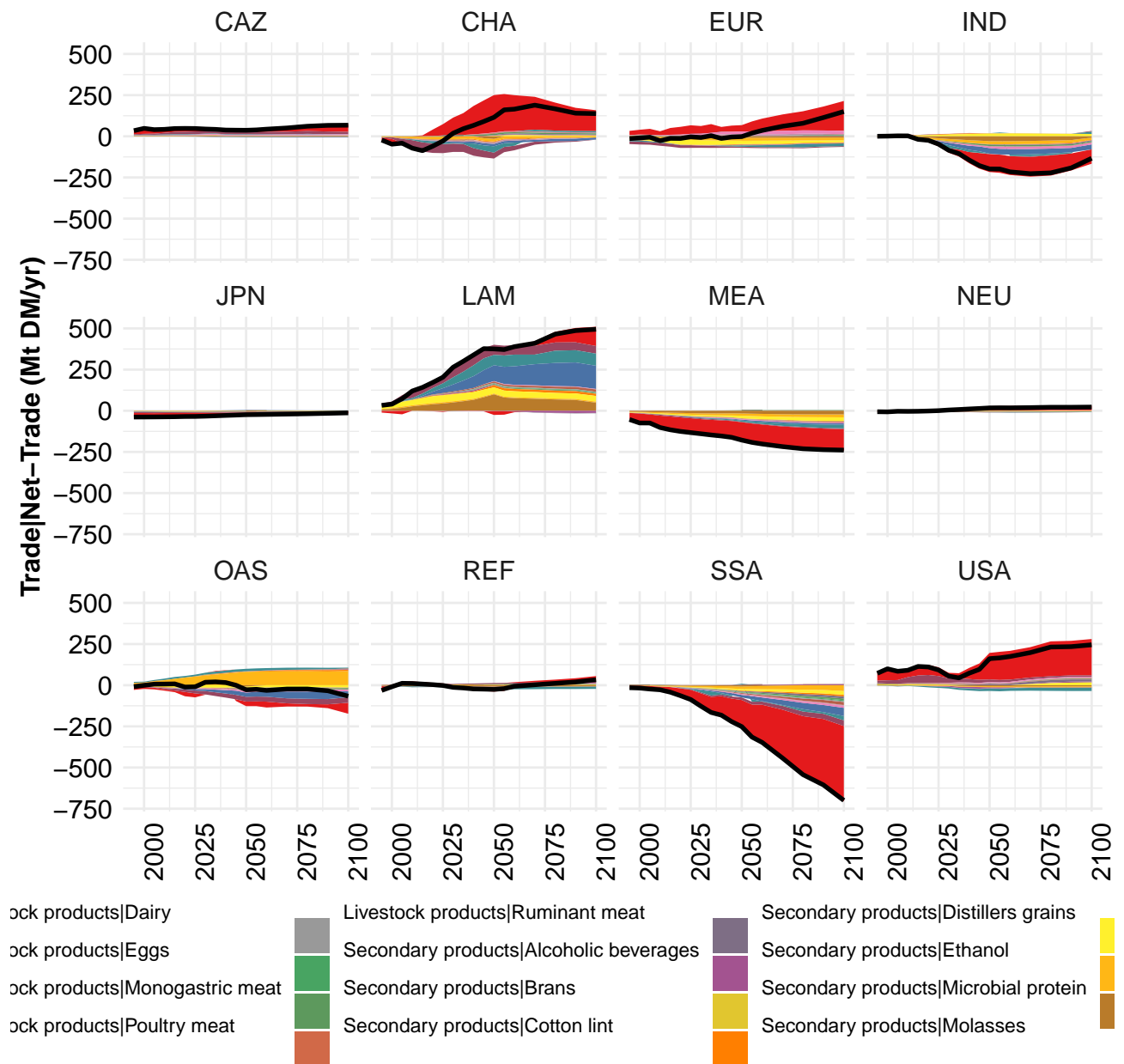


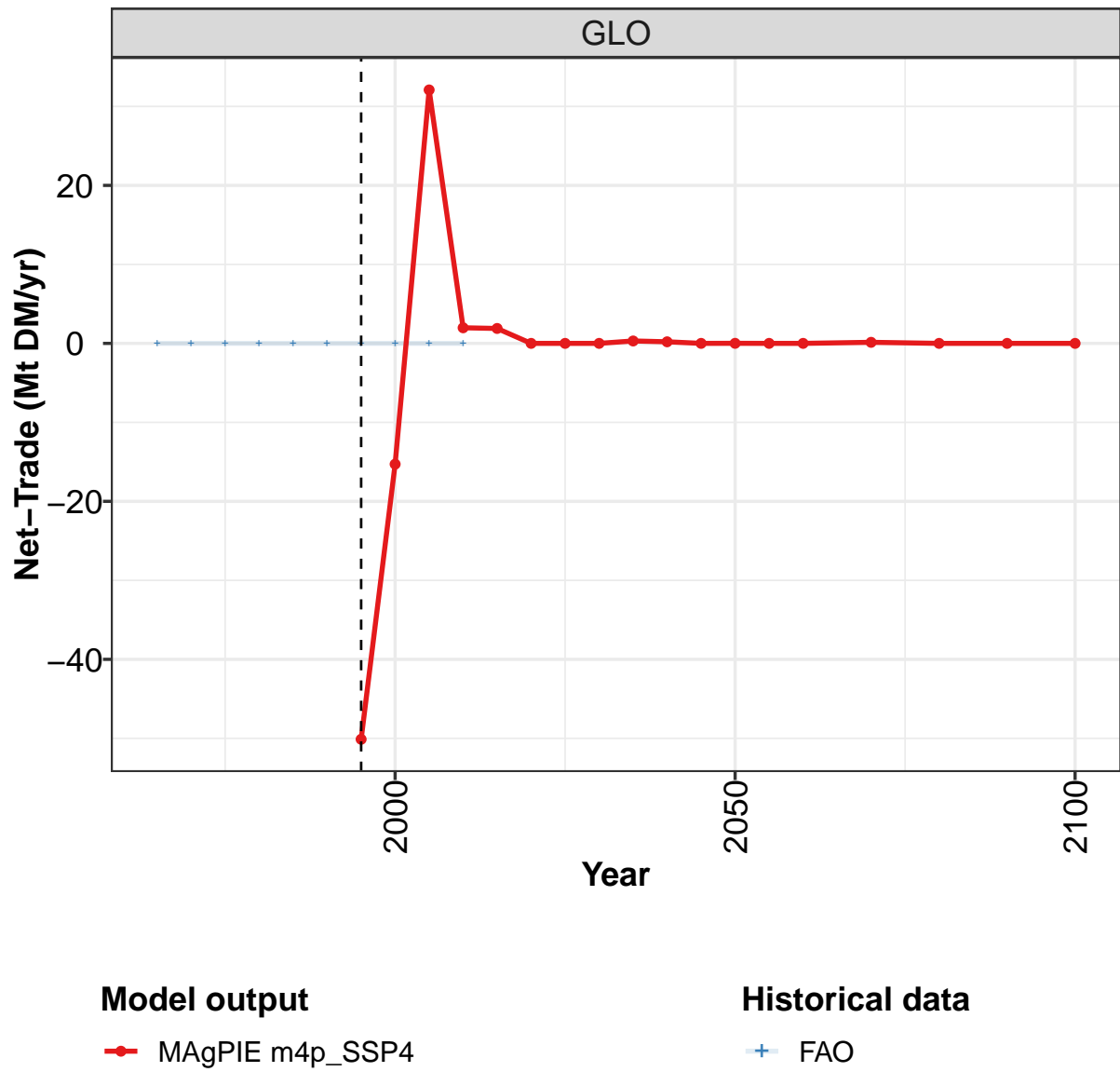
## Part XV

## Trade

## 58 Net-Trade







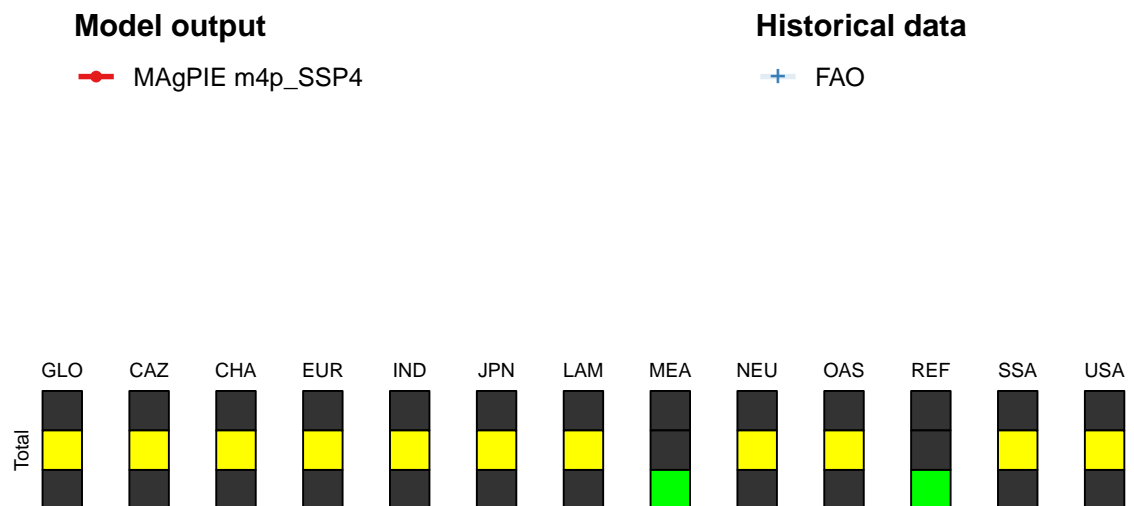
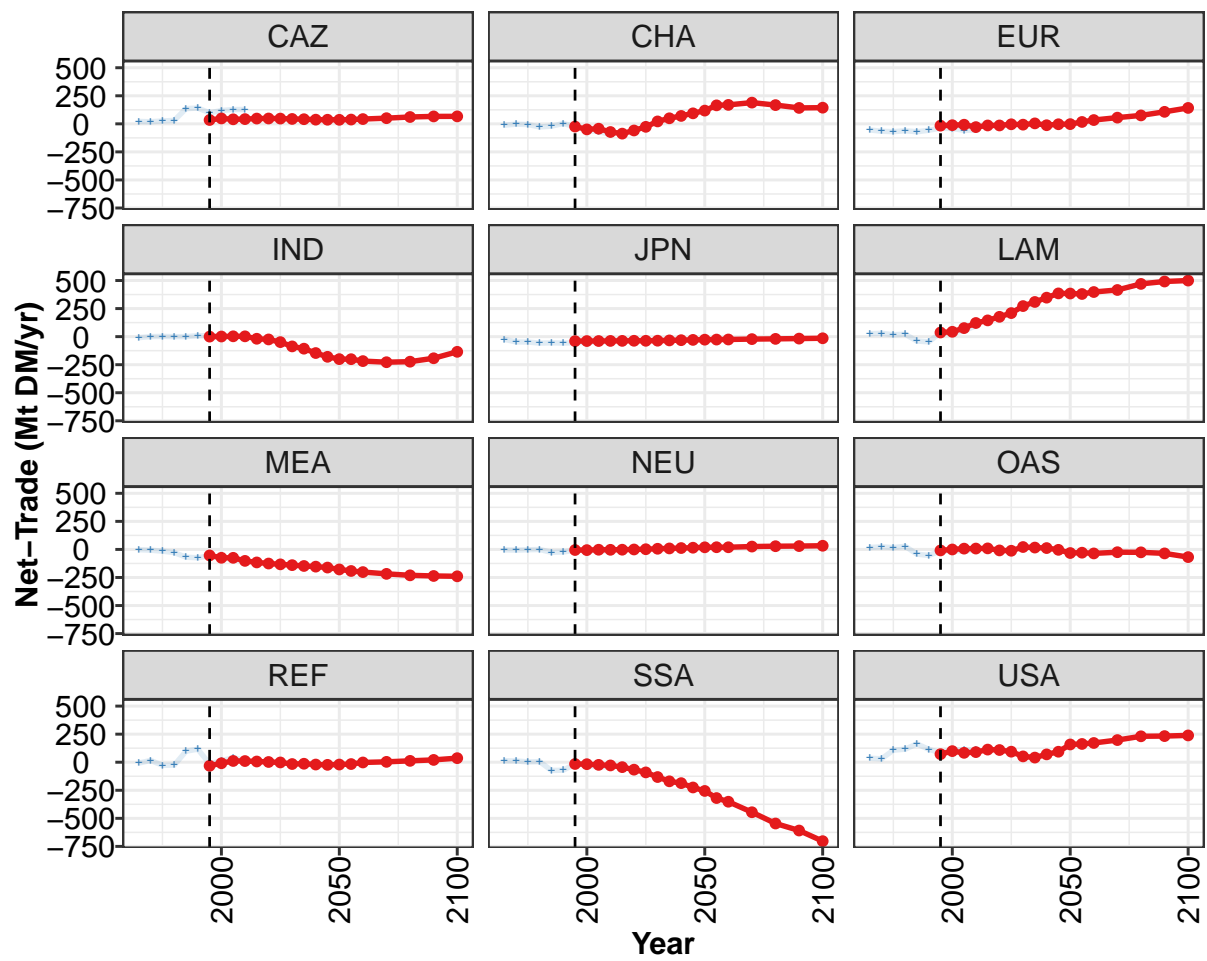


Figure 479: MAgPIE m4p\_SSP4 — Trade—Net-Trade (Mt DM/yr)

	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	48	47	44	42	37	37
CHA	-24	-49	-43	-73	-87	-59	-26	22	50	71	94
EUR	-16	-12	-8	-29	-14	-14	-4	-7	4	-12	-4
IND	0	1	3	3	-19	-25	-49	-87	-107	-146	-180
JPN	-40	-39	-39	-38	-38	-37	-37	-36	-34	-31	-29
LAM	37	43	76	122	145	177	210	272	309	347	385
MEA	-53	-74	-75	-102	-116	-126	-133	-140	-147	-153	-161
NEU	-5	-6	-3	-3	-2	-0	2	6	9	12	15
OAS	-9	-0	7	8	9	-9	-12	22	17	12	-3
REF	-32	-9	11	11	7	2	-2	-16	-13	-20	-23
SSA	-15	-17	-23	-28	-44	-66	-91	-132	-170	-186	-225
USA	72	99	84	90	113	109	94	52	42	70	94

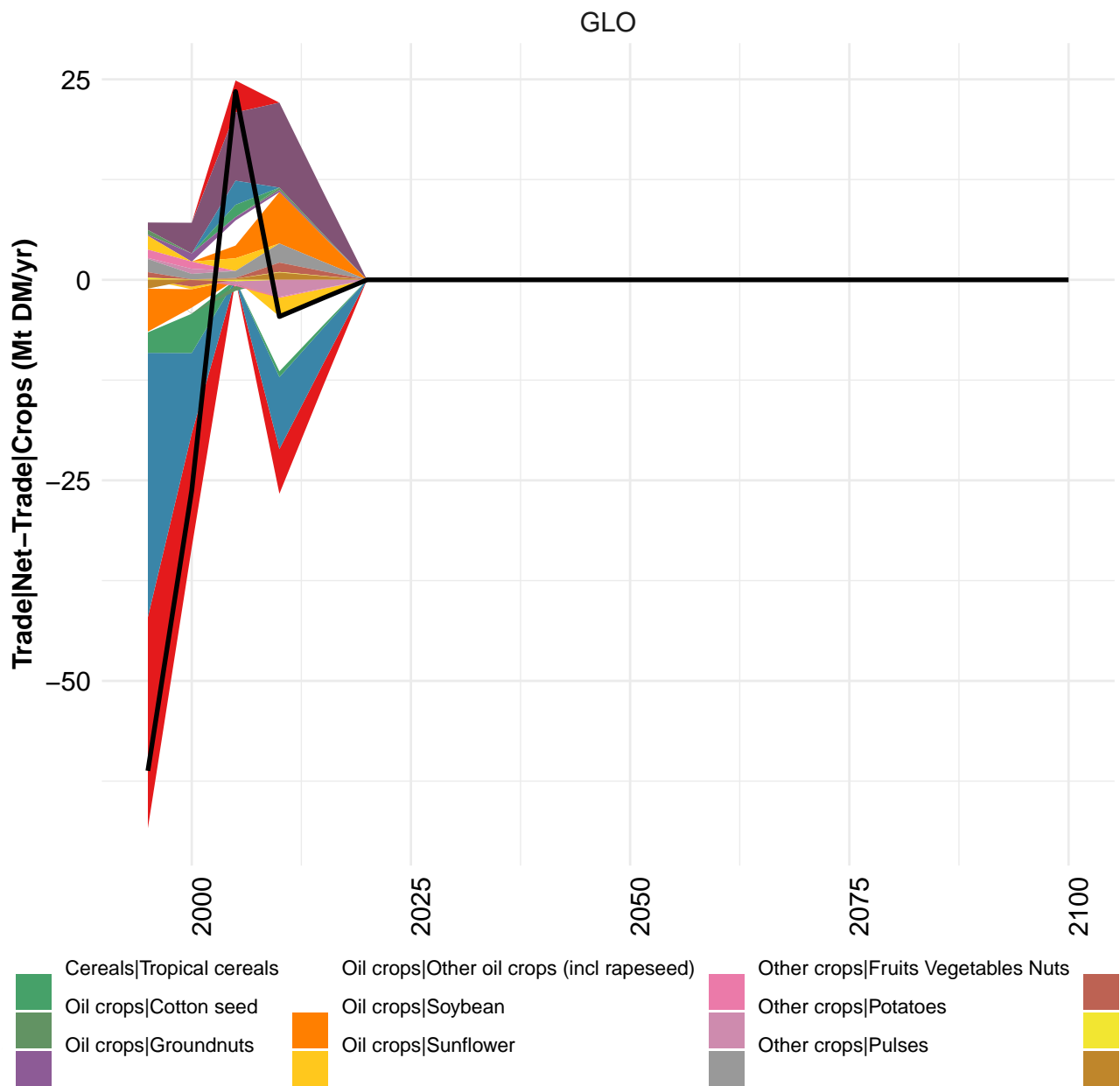
Table 1836: MAgPIE m4p\_SSP4 — Trade—Net-Trade (Mt DM/yr) [PART 1/2]

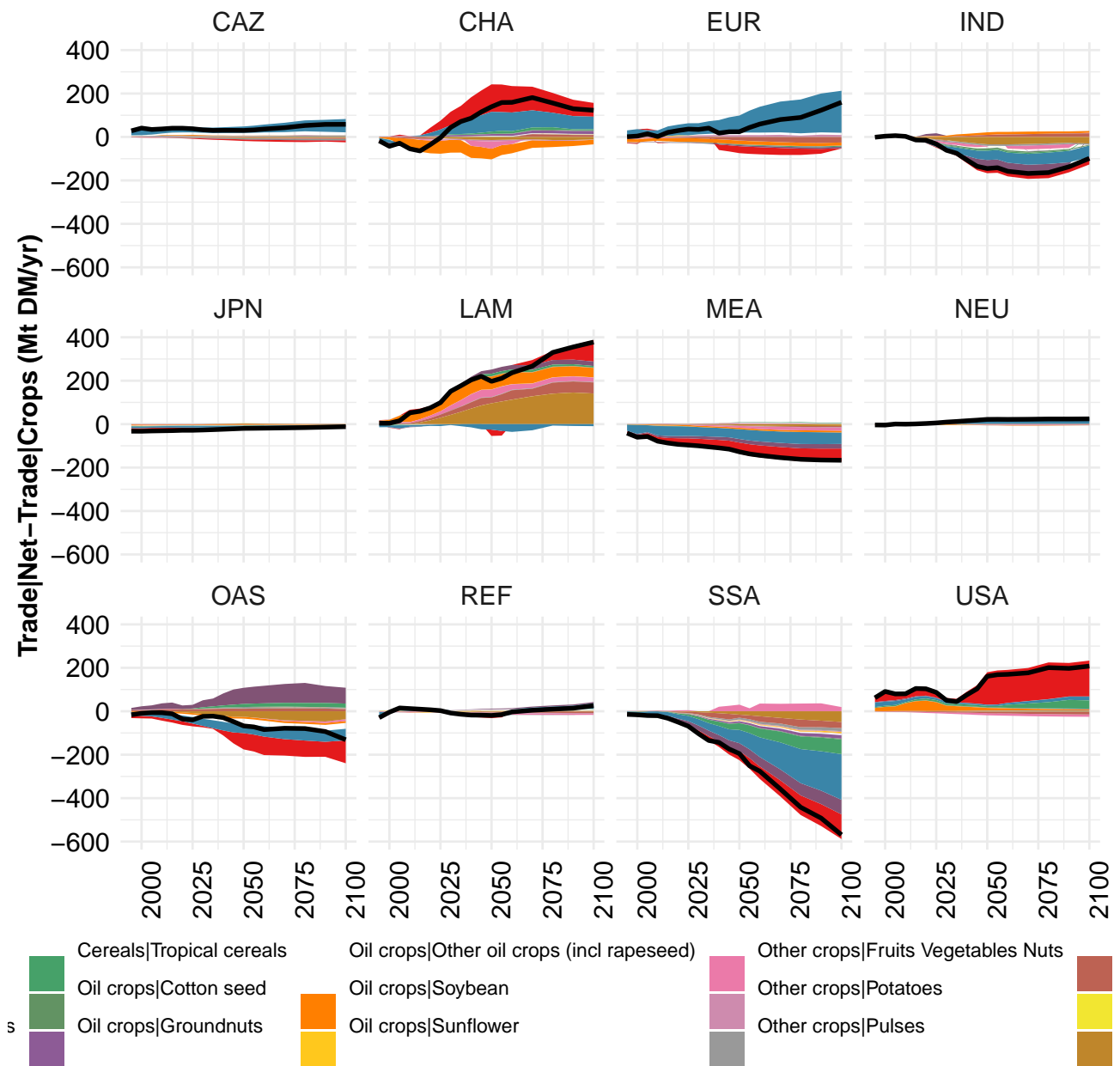
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	-0	0	-0	0	-0
CAZ	36	38	43	51	61	66	67
CHA	118	165	169	189	167	142	144
EUR	-2	17	34	55	75	107	142
IND	-200	-201	-218	-228	-223	-193	-135
JPN	-27	-26	-25	-22	-20	-17	-14
LAM	384	380	398	416	470	491	500
MEA	-178	-192	-202	-218	-231	-236	-239
NEU	19	20	19	26	29	30	33
OAS	-32	-29	-36	-25	-26	-35	-68
REF	-20	-16	-2	3	12	21	36
SSA	-256	-319	-352	-445	-546	-608	-703
USA	158	163	171	198	231	233	239

Table 1837: MAgPIE m4p\_SSP4 — Trade—Net-Trade (Mt DM/yr) [PART 2/2]

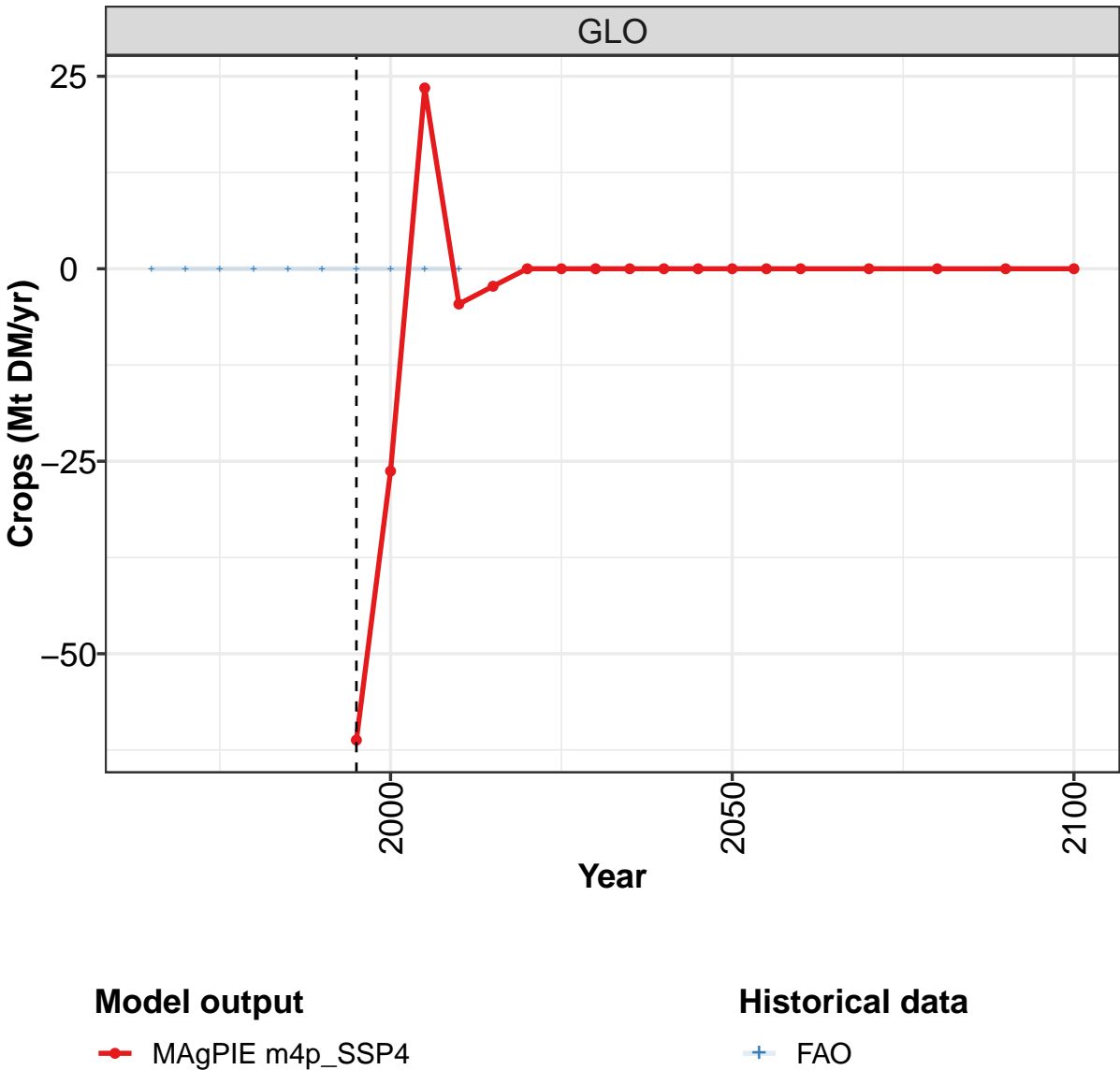
	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010
GLO	0	0	0	0	0	0	0	0	0	0
CAZ	21	19	26	31	136	141	98	119	128	128
CHA	-12	-3	-6	-27	-21	3	-25	-59	-69	-93
EUR	-54	-66	-70	-61	-71	-57	-39	-41	-58	-56
IND	-9	-0	2	-0	0	8	6	3	-1	3
JPN	-24	-47	-48	-58	-55	-58	-54	-50	-47	-42
LAM	26	30	17	22	-39	-47	35	29	52	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)





58.1 Crops





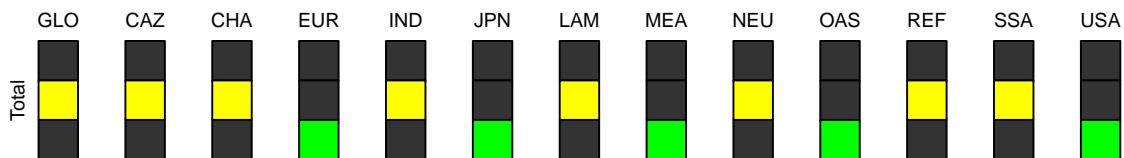
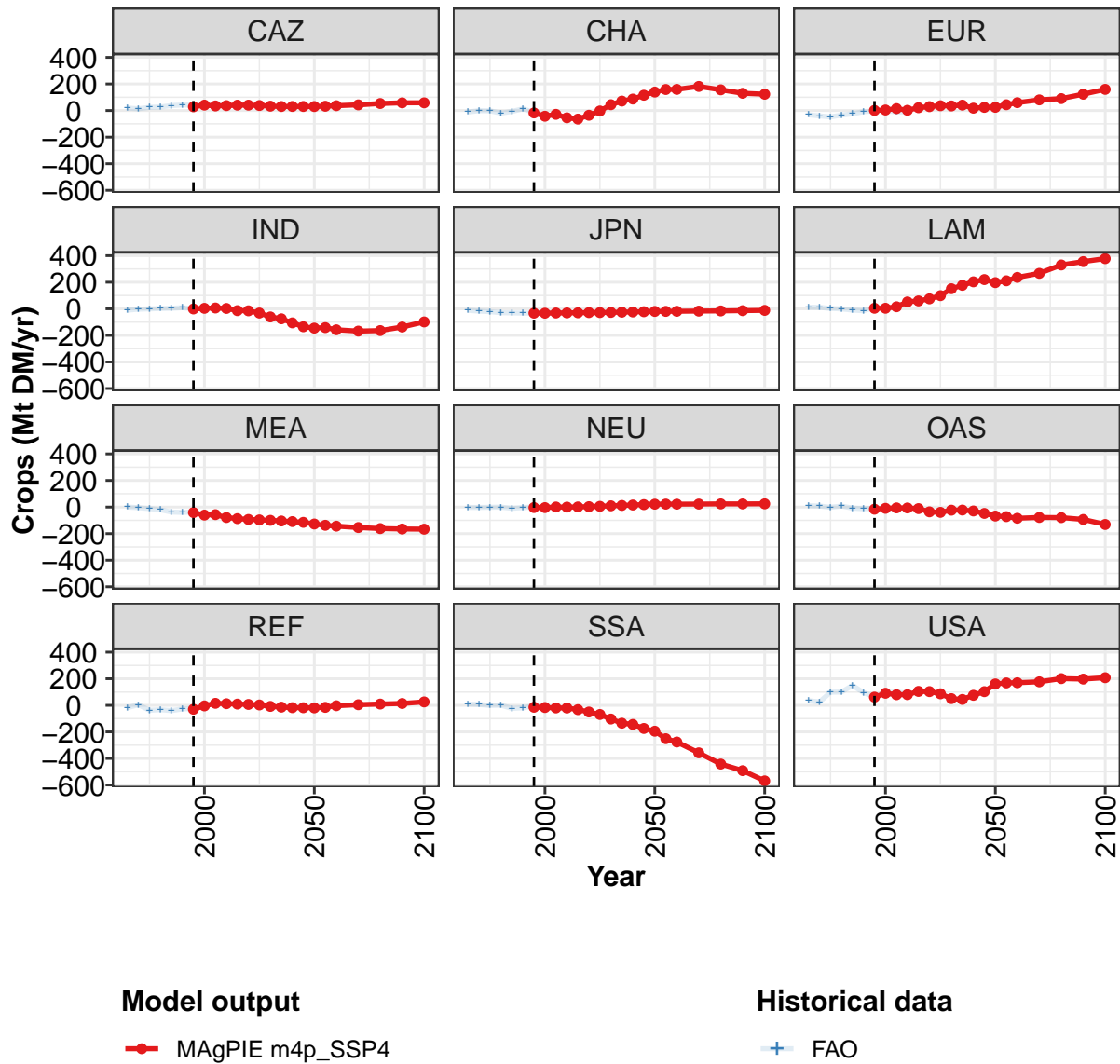


Figure 480: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops (Mt DM/yr)

	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	40	40	38	33	30	31	31
CHA	-18	-43	-29	-54	-64	-35	-3	44	71	86	115
EUR	1	4	15	2	21	29	36	35	41	18	24
IND	-1	4	6	3	-14	-15	-32	-61	-75	-106	-135
JPN	-33	-33	-31	-31	-30	-28	-28	-27	-25	-24	-22
LAM	4	4	15	52	59	75	99	151	177	203	220
MEA	-41	-60	-57	-79	-87	-93	-96	-100	-105	-109	-115
NEU	-4	-4	1	-0	1	3	5	9	12	15	18
OAS	-16	-10	-6	-7	-12	-36	-40	-23	-23	-29	-48
REF	-29	-4	15	12	10	7	3	-8	-14	-18	-18
SSA	-14	-16	-20	-20	-32	-50	-69	-103	-134	-144	-174
USA	62	91	80	80	105	103	87	50	44	76	103

Table 1839: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops (Mt DM/yr) [PART 1/2]

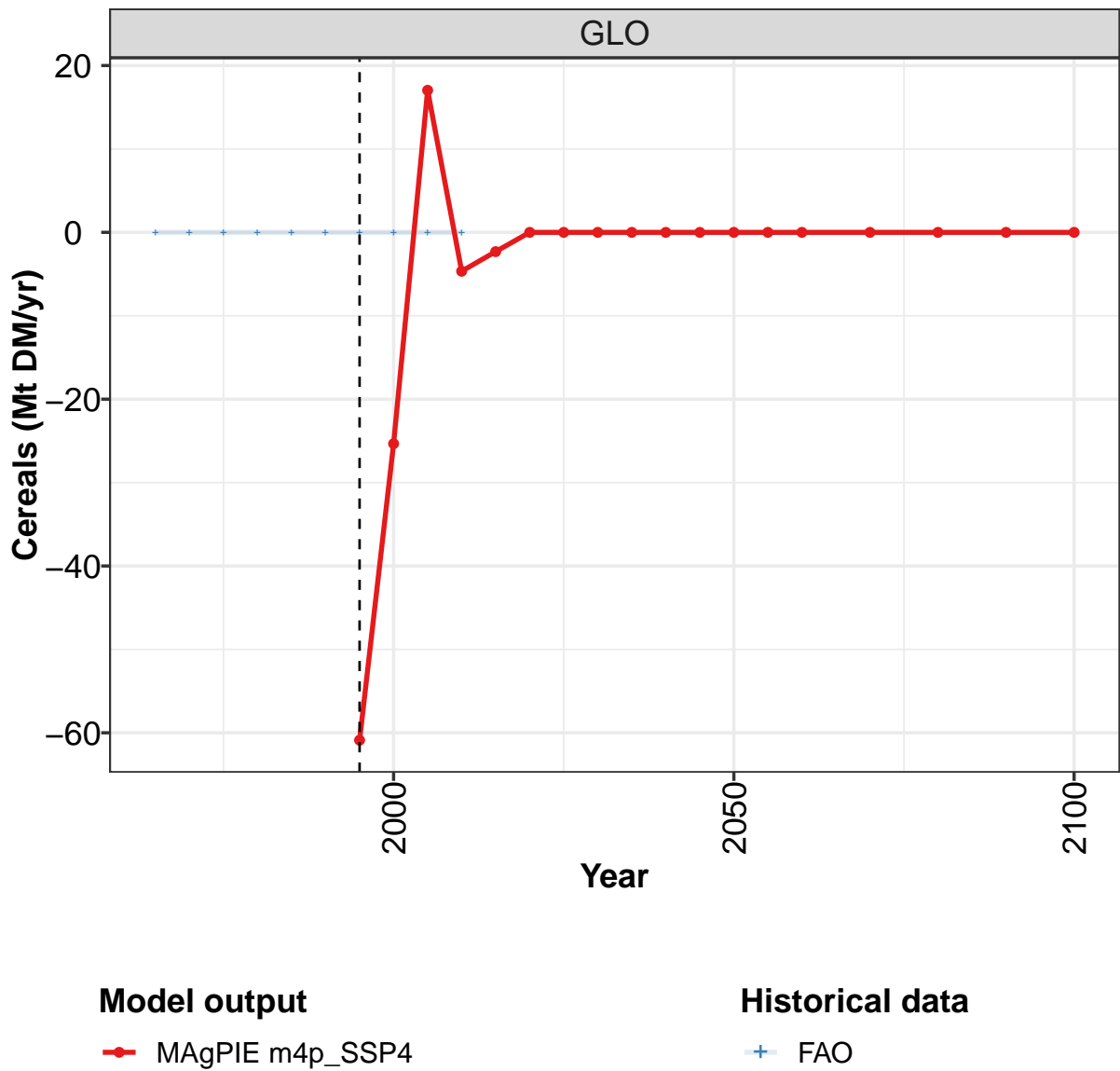
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	-0	0	-0	-0	-0
CAZ	30	32	36	43	53	58	58
CHA	139	159	159	181	156	130	123
EUR	24	44	59	80	90	123	160
IND	-145	-141	-158	-168	-164	-137	-98
JPN	-20	-19	-19	-17	-16	-14	-12
LAM	197	211	236	267	330	355	378
MEA	-127	-137	-144	-154	-162	-165	-166
NEU	22	22	22	22	24	24	24
OAS	-67	-72	-84	-78	-80	-93	-131
REF	-19	-15	-3	5	10	14	26
SSA	-195	-251	-276	-358	-442	-492	-569
USA	161	168	170	177	201	197	208

Table 1840: MAgPIE m4p\_SSP4 — 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*



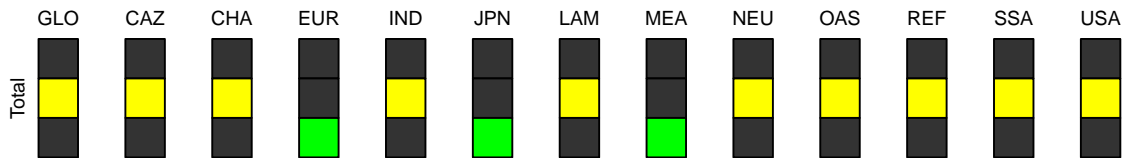
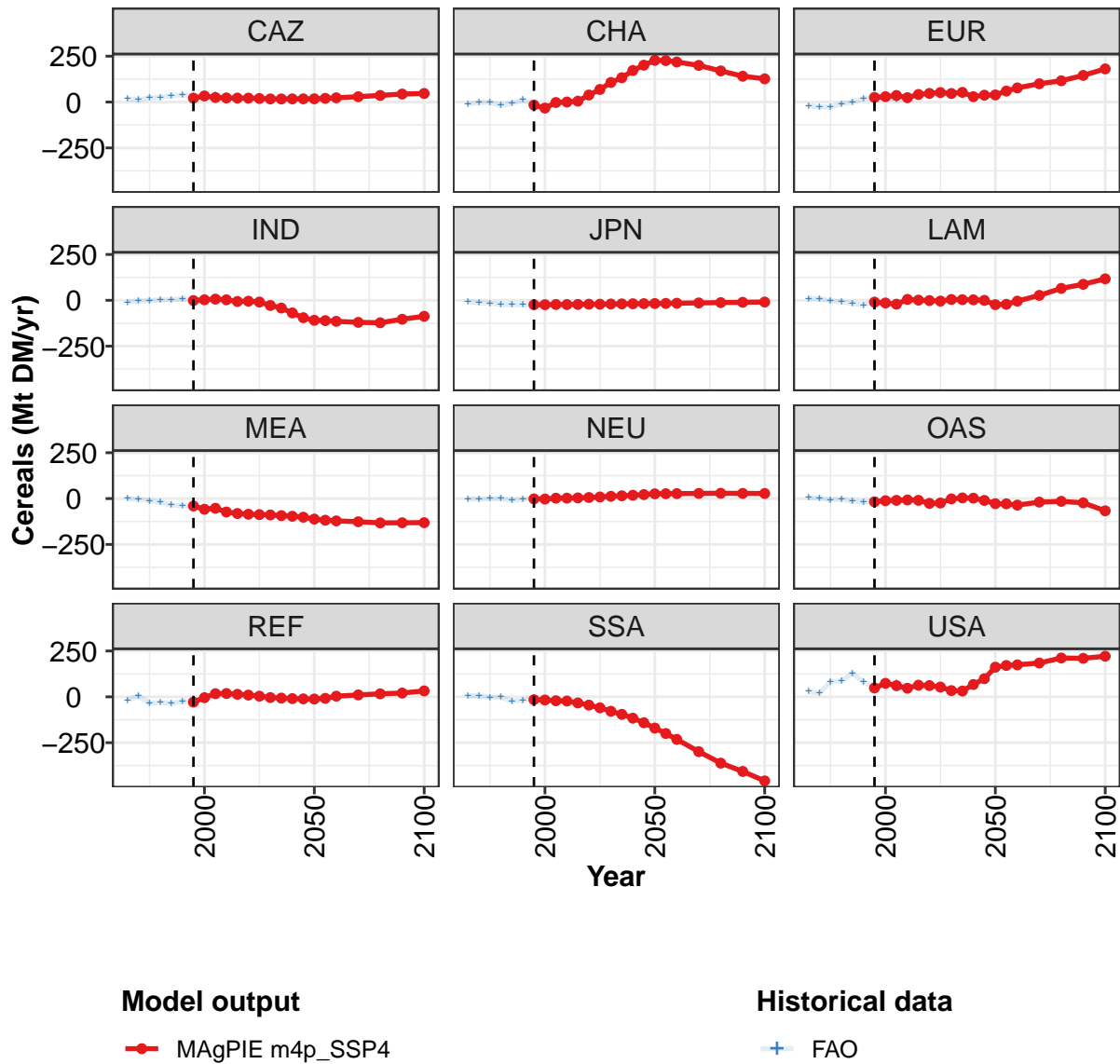


Figure 481: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals (Mt DM/yr)

	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	20	17	17	17	18
CHA	-16	-33	-2	0	5	38	69	107	133	172	201
EUR	25	30	36	24	41	47	52	47	53	29	37
IND	-1	3	7	3	-6	-5	-9	-28	-42	-69	-95
JPN	-24	-24	-23	-23	-22	-21	-21	-20	-19	-19	-18
LAM	-10	-14	-21	5	1	-1	-4	5	3	3	-0
MEA	-41	-58	-53	-73	-81	-85	-87	-89	-93	-96	-101
NEU	-2	-2	2	2	4	6	9	13	15	18	22
OAS	-18	-12	-10	-8	-9	-26	-24	-2	4	2	-10
REF	-29	-5	17	18	14	10	4	-4	-7	-10	-11
SSA	-16	-17	-21	-23	-33	-45	-60	-79	-95	-116	-141
USA	48	74	61	47	64	62	53	34	32	67	99

Table 1842: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals (Mt DM/yr) [PART 1/2]

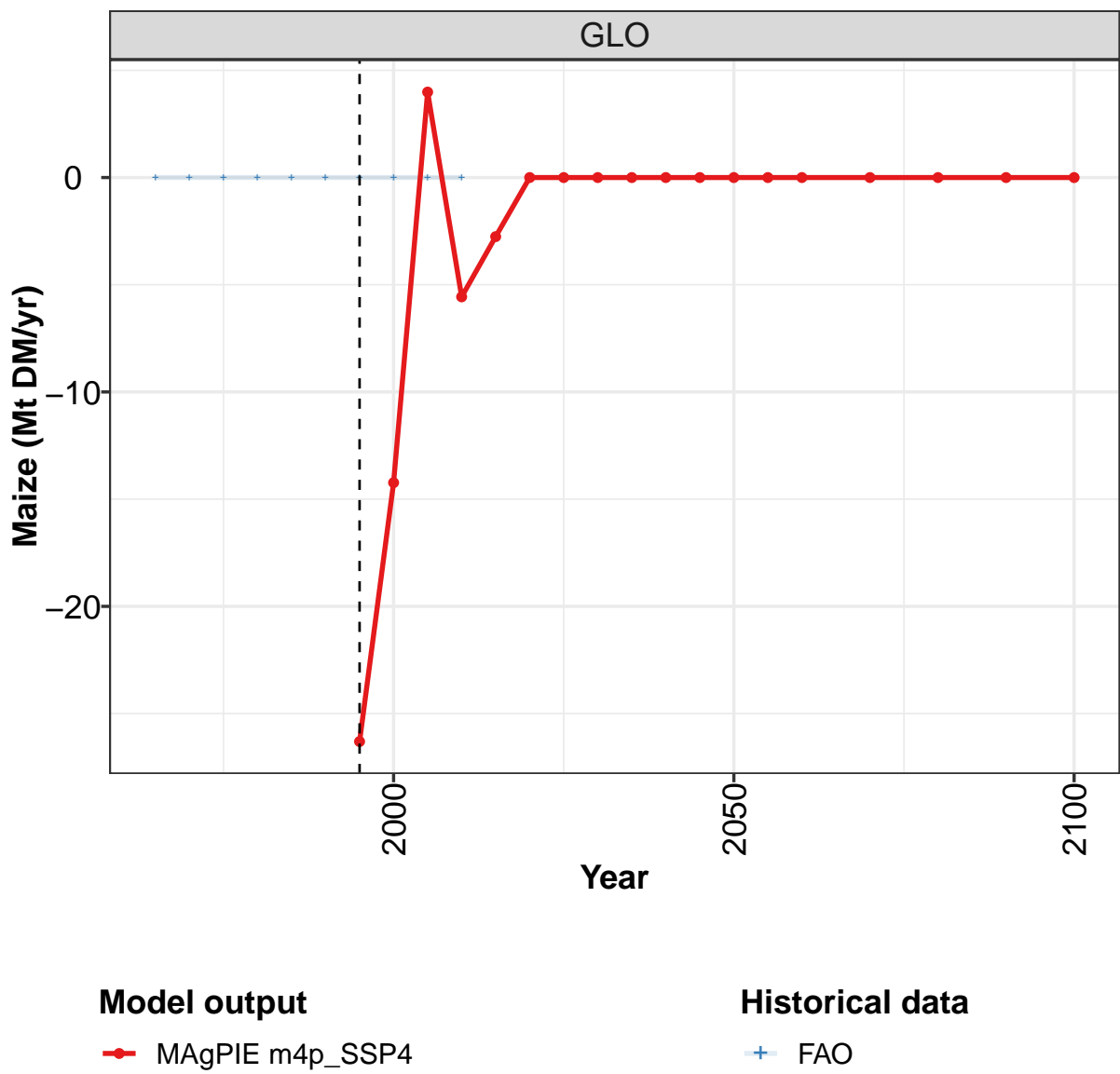
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	-0	-0	-0
CAZ	18	20	23	29	36	44	47
CHA	227	226	218	200	170	141	127
EUR	39	60	77	100	116	145	181
IND	-109	-111	-114	-120	-122	-103	-87
JPN	-17	-17	-16	-14	-12	-11	-9
LAM	-24	-22	-5	27	65	87	117
MEA	-112	-118	-122	-126	-133	-132	-131
NEU	26	27	27	28	29	28	28
OAS	-28	-29	-36	-19	-15	-23	-67
REF	-12	-8	4	10	16	21	32
SSA	-170	-200	-232	-299	-361	-407	-458
USA	162	171	174	184	212	210	221

Table 1843: MAgPIE m4p\_SSP4 — 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



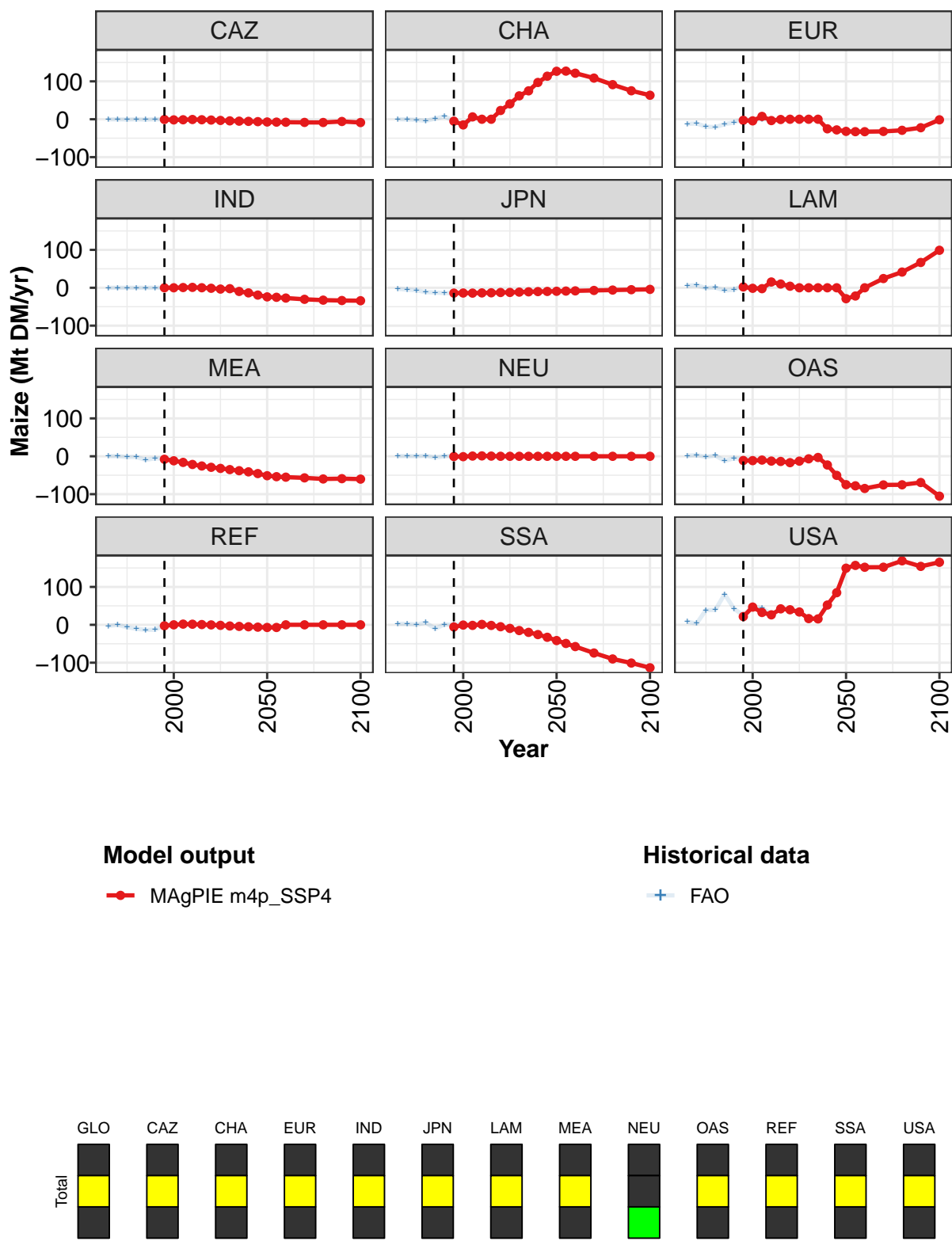


Figure 482: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals—Maize (Mt DM/yr)

	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	-6	-6
CHA	-5	-15	6	0	0	23	41	62	75	97	114
EUR	-3	-4	8	-3	-1	0	-0	0	0	-25	-28
IND	0	0	1	1	0	-1	-3	-2	-10	-13	-19
JPN	-14	-14	-14	-14	-13	-12	-12	-11	-11	-10	-10
LAM	2	-1	-2	15	10	4	-0	0	0	-0	0
MEA	-8	-12	-16	-22	-26	-29	-32	-35	-38	-41	-46
NEU	-1	-1	1	1	1	0	0	0	0	0	0
OAS	-11	-11	-10	-13	-14	-17	-13	-7	-3	-23	-50
REF	-2	0	2	2	1	-0	-1	-3	-4	-5	-6
SSA	-6	-1	-2	1	-2	-5	-9	-15	-20	-26	-33
USA	22	47	33	26	42	40	34	16	16	52	85

Table 1845: MAgPIE m4p-SSP4 — 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	-7	-8	-8	-8	-9	-6	-9
CHA	127	127	122	109	91	75	63
EUR	-32	-33	-33	-32	-29	-22	-1
IND	-24	-25	-27	-30	-33	-34	-34
JPN	-9	-9	-8	-7	-6	-5	-4
LAM	-29	-22	0	24	41	67	99
MEA	-51	-54	-55	-57	-60	-59	-60
NEU	0	-0	0	-0	0	0	0
OAS	-75	-78	-85	-76	-75	-69	-105
REF	-7	-7	0	0	-0	0	0
SSA	-42	-49	-57	-74	-90	-101	-113
USA	149	157	152	152	169	154	165

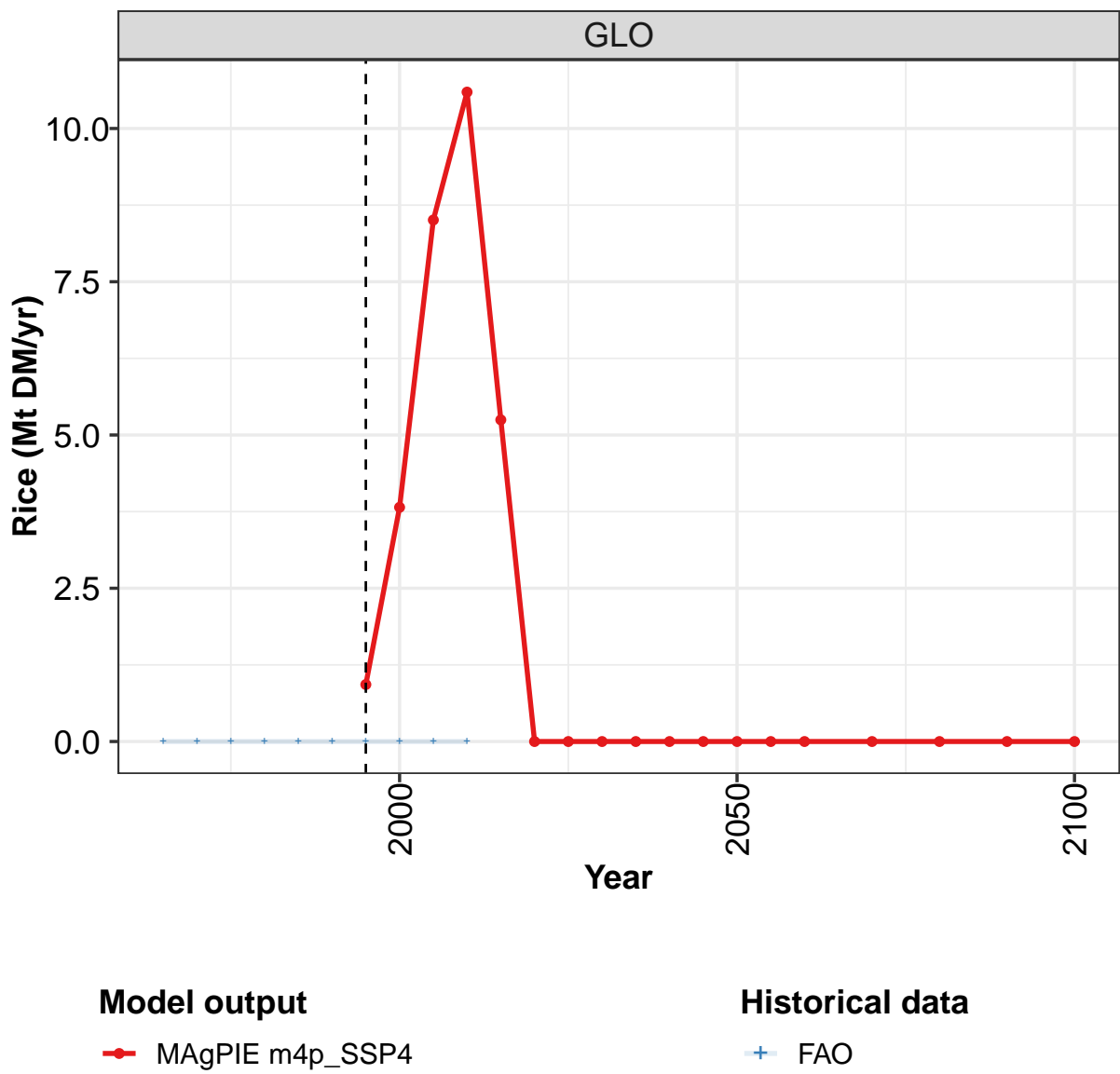
Table 1846: MAgPIE m4p-SSP4 — Trade—Net-Trade—Crops—Cereals—Maize (Mt DM/yr) [PART 2/2]

	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



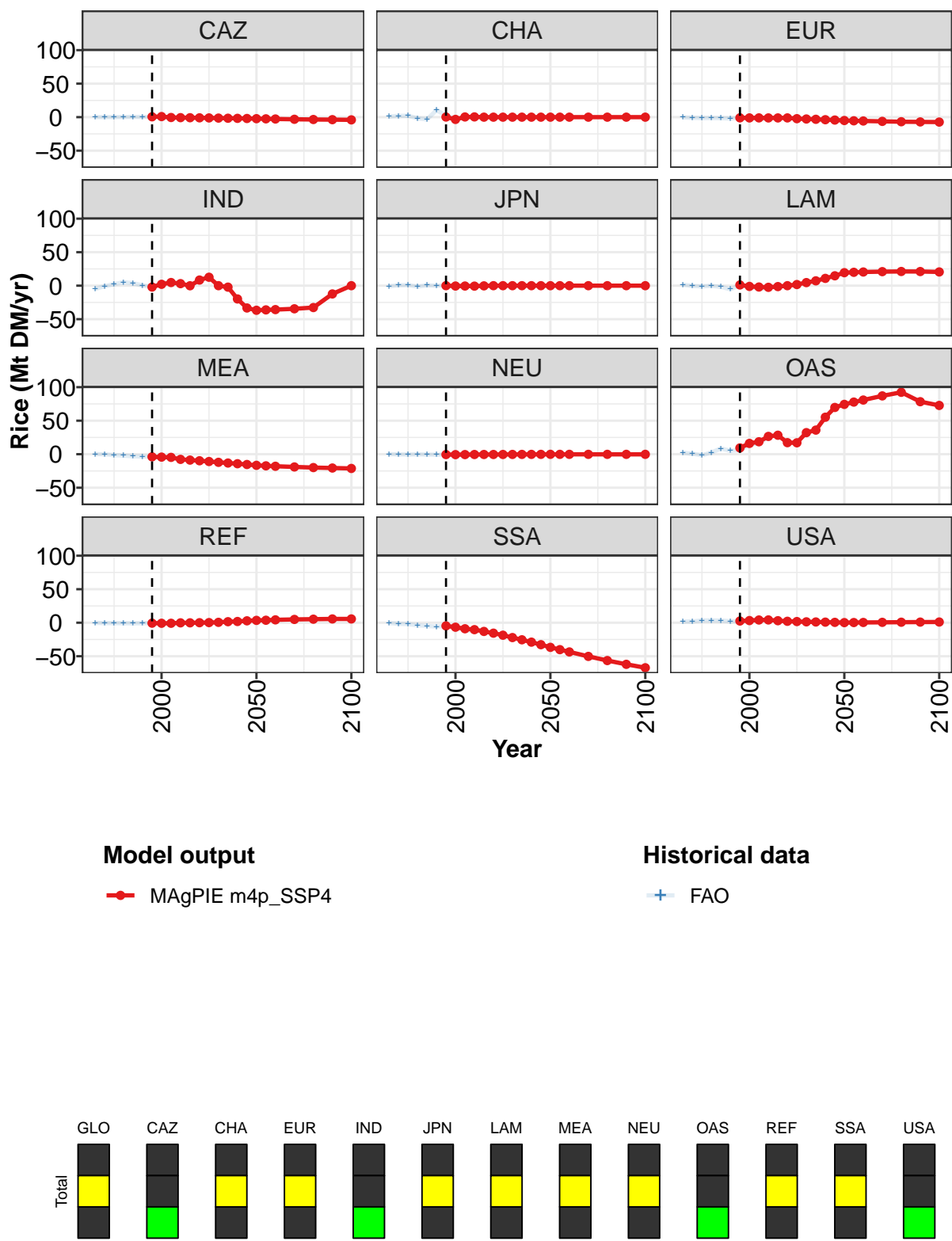


Figure 483: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals—Rice (Mt DM/yr)

	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	-1.4	-1.6	-1.8	-2.0
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	-2.7	-3.2	-3.8	-4.3
IND	-2.0	2.1	4.7	3.0	-0.1	8.4	12.6	0.0	-2.2	-19.8	-33.3
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	4.6	7.2	10.9	14.7
MEA	-3.9	-4.3	-4.7	-7.7	-8.8	-9.8	-10.9	-12.1	-13.2	-14.2	-15.4
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	28.3	17.2	17.0	32.2	36.0	55.2	69.8
REF	-0.6	-0.8	-0.8	-0.2	-0.1	0.0	0.2	0.6	1.5	1.8	2.9
SSA	-4.7	-6.7	-9.0	-10.3	-13.0	-15.6	-18.6	-22.2	-25.5	-29.0	-32.7
USA	2.6	3.2	4.1	4.2	3.0	2.2	1.8	1.3	1.1	0.9	0.6

Table 1848: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals—Rice (Mt DM/yr) [PART 1/2]

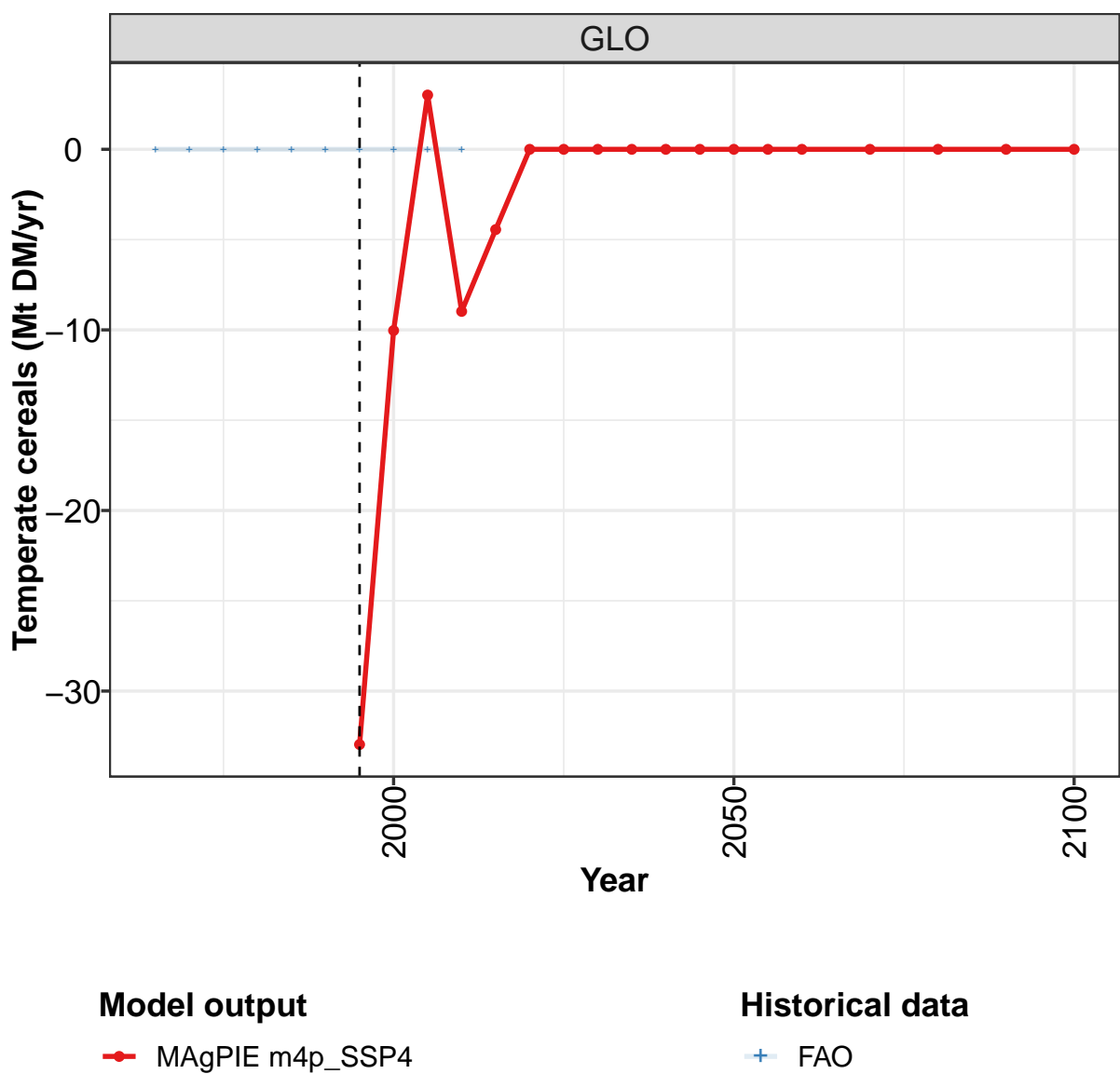
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	-0.0	0.0	0.0	0.0	0.0
CAZ	-2.2	-2.5	-2.7	-3.2	-3.5	-3.7	-4.0
CHA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUR	-5.0	-5.4	-5.7	-6.3	-6.8	-7.1	-7.3
IND	-36.7	-36.1	-35.7	-34.5	-32.6	-12.3	0.0
JPN	0.0	0.0	0.0	0.0	-0.0	0.0	0.0
LAM	19.4	20.0	20.4	20.9	21.2	21.1	20.5
MEA	-16.6	-17.4	-18.0	-19.0	-20.0	-20.6	-21.2
NEU	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
OAS	74.4	77.8	80.8	87.0	92.4	78.4	72.8
REF	3.5	3.7	4.3	4.9	5.3	5.7	5.6
SSA	-36.7	-40.2	-43.6	-50.2	-56.4	-62.1	-67.2
USA	0.2	0.3	0.4	0.6	0.8	0.9	1.1

Table 1849: MAgPIE m4p\_SSP4 — 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



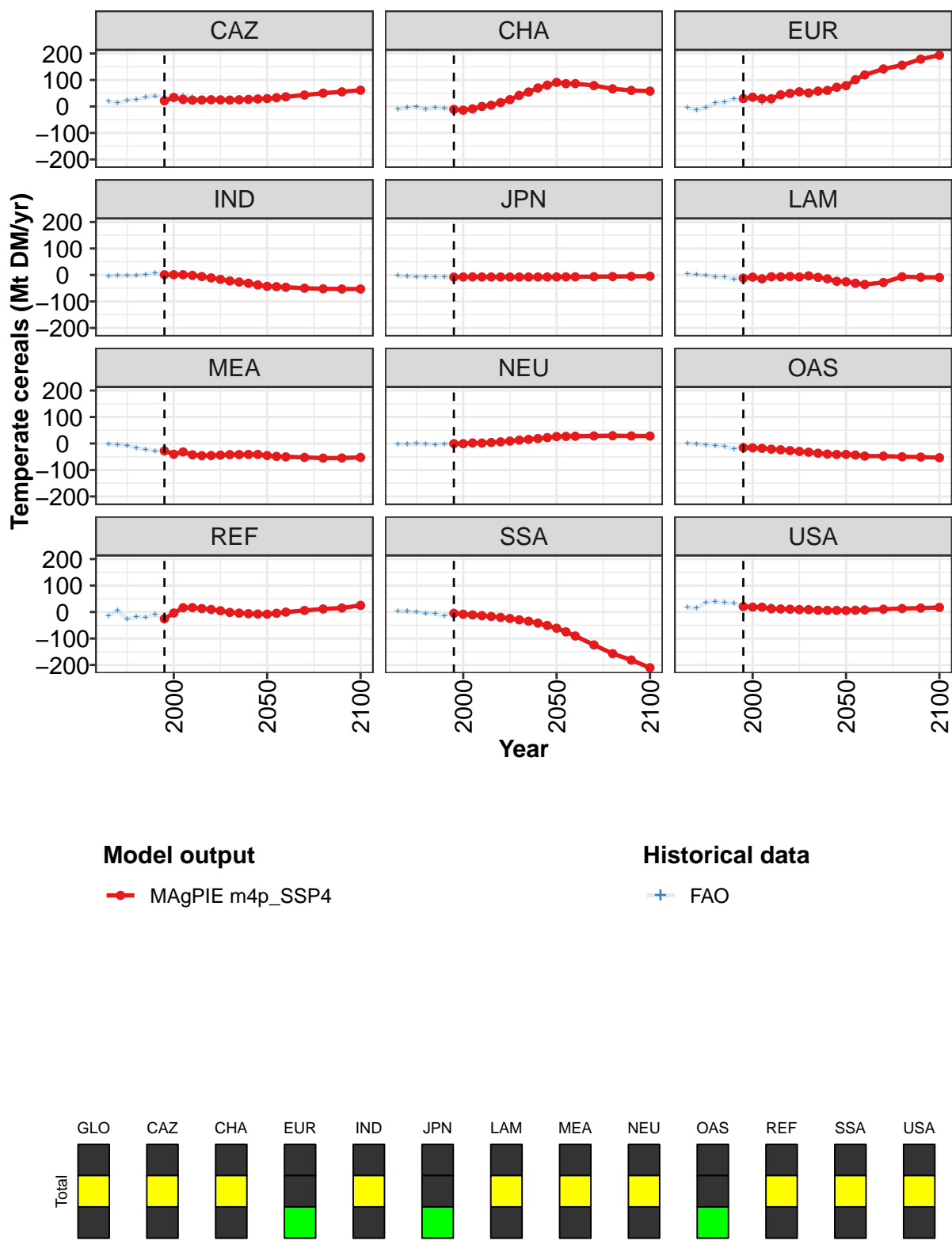


Figure 484: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals—Temperate cereals (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	-33	-10	3	-9	-4	0	-0	-0	-0	0	0
CAZ	21	34	27	24	24	25	25	24	25	27	28
CHA	-11	-14	-9	-0	5	15	26	42	55	70	80
EUR	30	35	30	29	44	49	55	51	58	61	72
IND	1	1	1	-1	-6	-11	-16	-23	-27	-31	-38
JPN	-8	-7	-7	-7	-7	-7	-8	-8	-8	-8	-7
LAM	-12	-8	-14	-7	-7	-5	-8	-3	-9	-14	-24
MEA	-28	-41	-32	-43	-46	-45	-44	-42	-42	-41	-41
NEU	-1	-1	2	2	4	6	9	13	16	19	22
OAS	-16	-16	-18	-21	-24	-27	-30	-33	-37	-40	-41
REF	-26	-4	16	17	13	10	5	-1	-4	-6	-8
SSA	-5	-8	-11	-14	-17	-20	-24	-29	-35	-42	-51
USA	21	19	18	12	12	11	9	9	7	6	6

Table 1851: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals—Temperate cereals (Mt DM/yr)  
[PART 1/2]

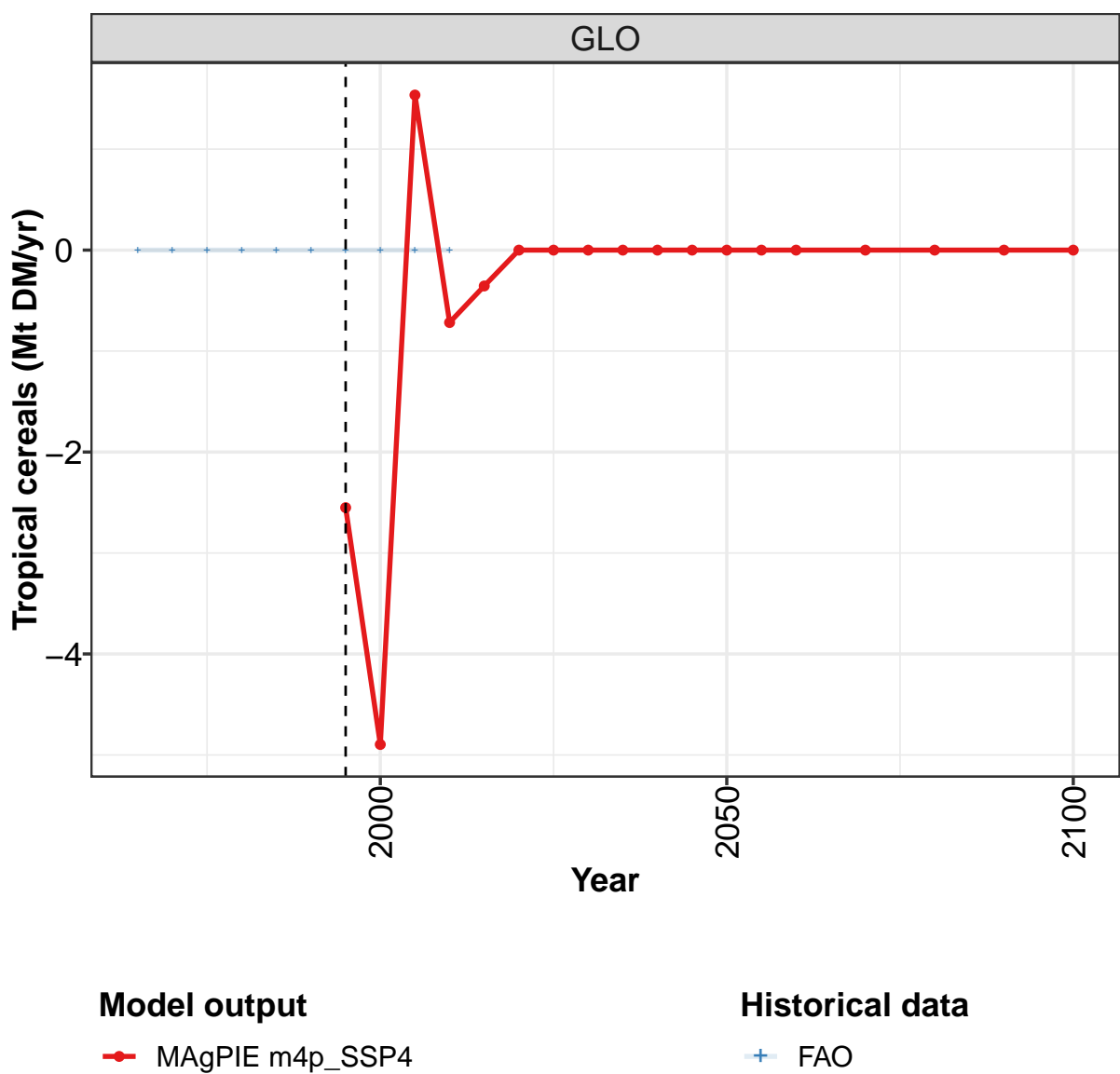
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	0	0	-0	-0	0
CAZ	30	33	36	43	50	55	61
CHA	91	86	86	79	67	61	58
EUR	79	101	119	142	156	179	193
IND	-43	-44	-46	-50	-52	-53	-53
JPN	-7	-7	-7	-6	-6	-5	-5
LAM	-25	-31	-36	-28	-7	-9	-9
MEA	-45	-49	-50	-52	-55	-55	-52
NEU	26	27	27	29	29	29	28
OAS	-41	-43	-47	-48	-50	-51	-53
REF	-8	-5	-0	6	12	15	25
SSA	-61	-75	-90	-124	-157	-181	-210
USA	6	7	8	11	13	15	17

Table 1852: MAgPIE m4p\_SSP4 — 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



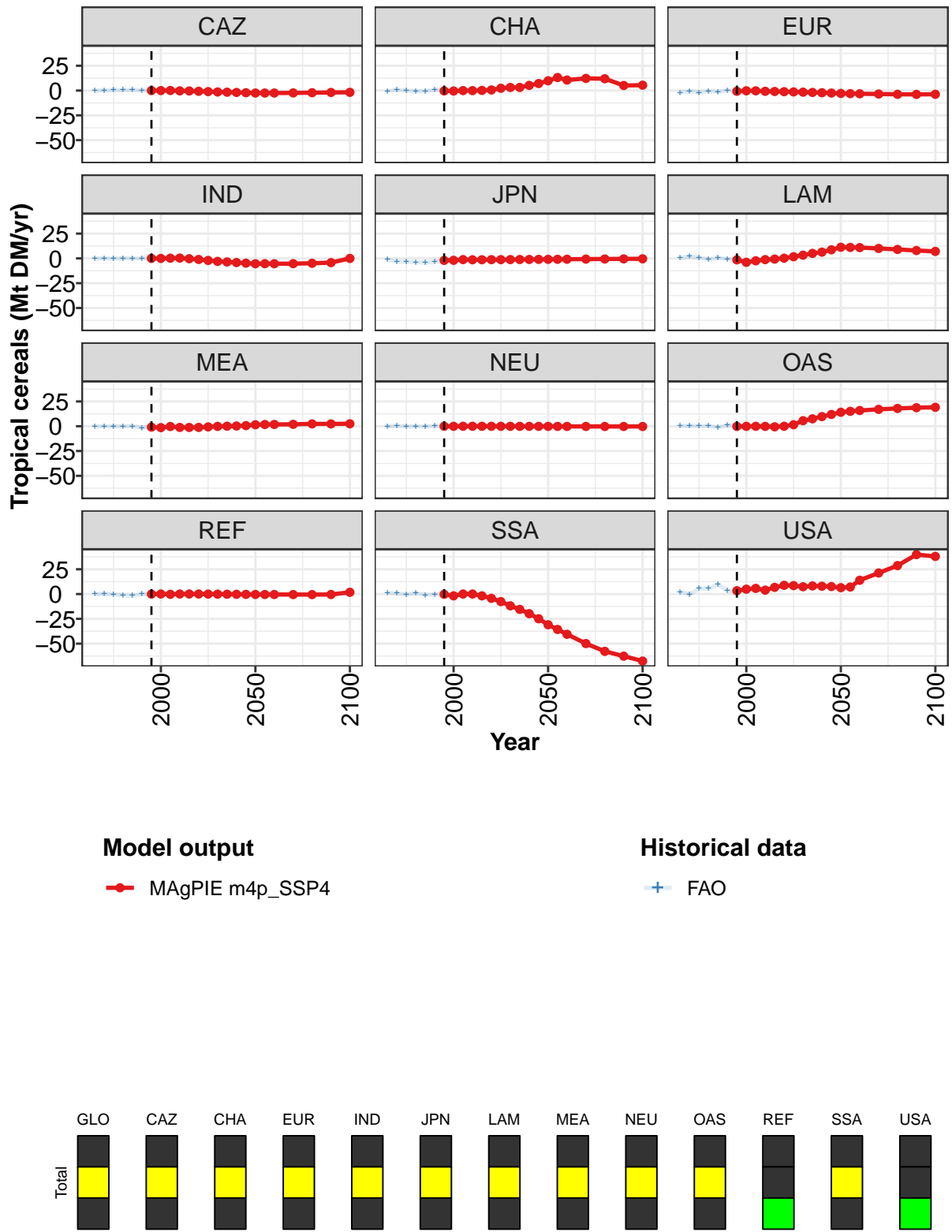


Figure 485: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals—Tropical cereals (Mt DM/yr)



	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	-0.4	-0.7	-1.1	-1.4	-1.6	-1.9	-2.2
CHA	-0.4	-0.5	-0.0	-0.1	0.1	0.6	2.3	3.1	3.1	5.2	7.1
EUR	-0.7	-0.2	-0.2	-0.7	-0.9	-1.1	-1.4	-1.6	-1.9	-2.2	-2.5
IND	0.0	0.0	0.2	0.3	-0.3	-1.1	-2.1	-3.0	-3.6	-4.2	-4.8
JPN	-2.0	-1.9	-1.2	-1.4	-1.4	-1.3	-1.3	-1.2	-1.1	-1.0	-1.0
LAM	-1.5	-3.9	-2.4	-1.2	-0.7	0.2	1.7	3.3	5.0	6.3	8.7
MEA	-0.9	-1.4	-0.3	-1.2	-1.2	-1.2	-0.7	-0.2	0.0	0.3	0.6
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	-0.6	0.0	1.5	5.6	7.5	9.7	11.9
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	-7.6	-11.9	-15.4	-19.8	-24.9
USA	3.4	4.9	5.7	3.9	6.8	8.8	8.5	7.4	8.2	7.9	7.6

Table 1854: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Cereals—Tropical cereals (Mt DM/yr) [PART 1/2]

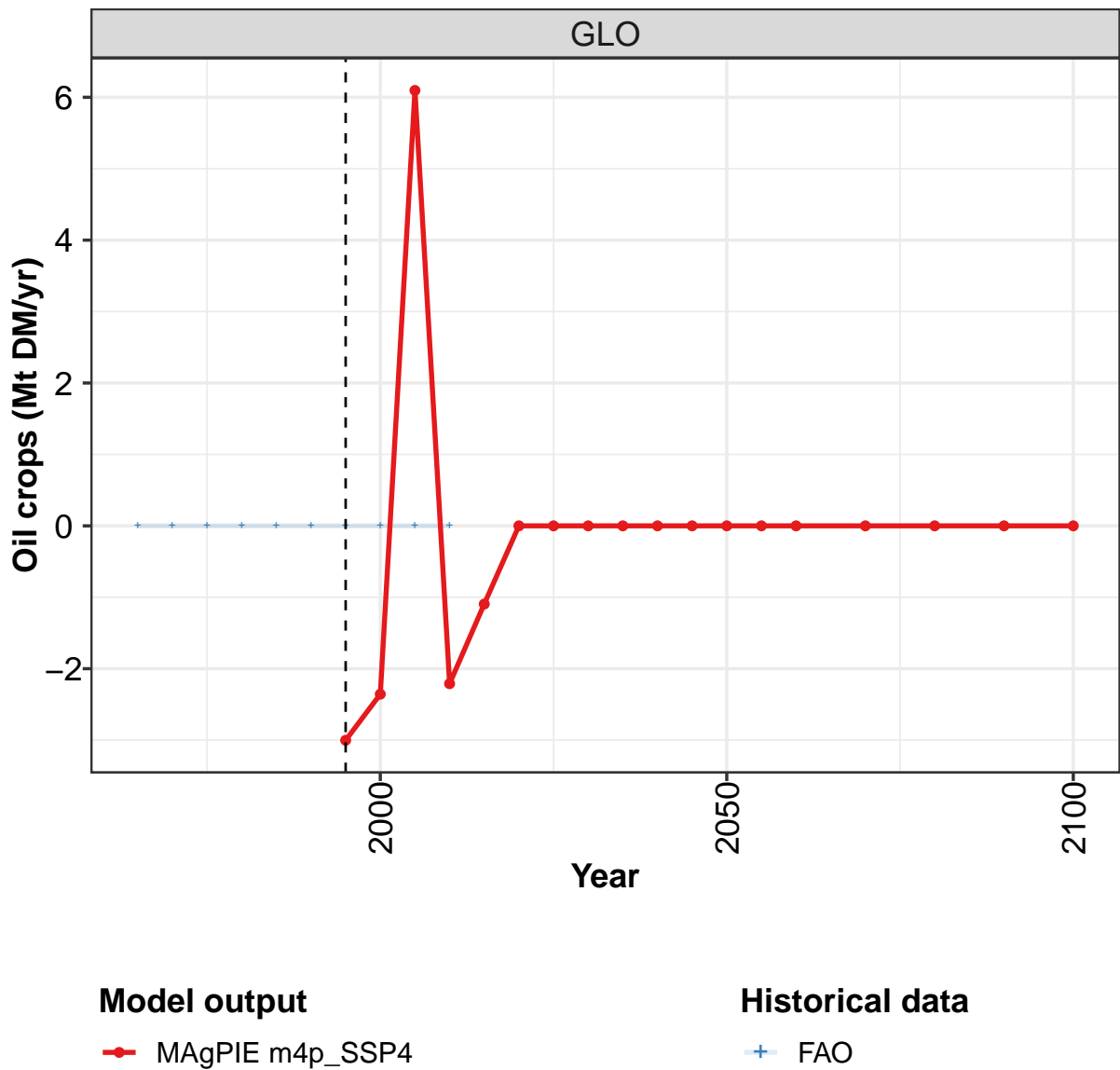
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	0.0	0.0	0.0	-0.0	0.0	-0.0
CAZ	-2.5	-2.5	-2.5	-2.4	-2.2	-1.9	-1.8
CHA	9.9	13.1	10.6	12.3	11.9	5.1	5.4
EUR	-2.9	-3.1	-3.2	-3.5	-3.8	-3.9	-3.8
IND	-5.4	-5.3	-5.4	-5.3	-4.9	-4.3	0.0
JPN	-1.0	-0.9	-0.8	-0.7	-0.6	-0.5	-0.4
LAM	11.3	11.1	10.9	10.0	9.0	7.9	7.1
MEA	1.5	1.7	1.8	1.9	2.4	2.3	2.5
NEU	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3
OAS	14.1	15.0	15.9	17.0	18.0	18.7	19.1
REF	-0.4	-0.4	-0.4	-0.5	-0.5	-0.4	1.8
SSA	-30.9	-35.7	-40.5	-49.9	-57.7	-62.6	-67.6
USA	6.5	7.1	13.9	21.3	28.7	39.8	38.0

Table 1855: MAgPIE m4p\_SSP4 — 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



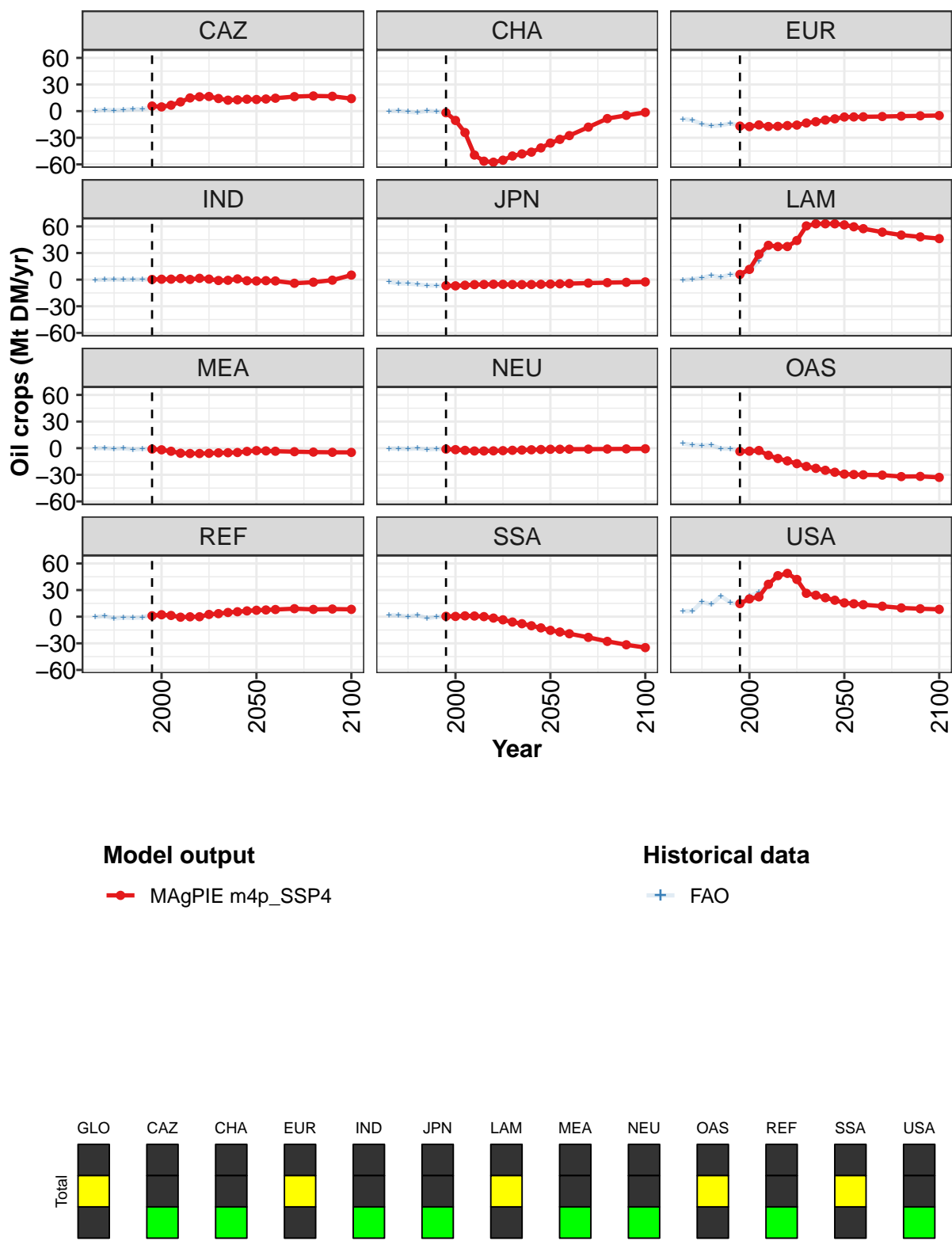


Figure 486: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops (Mt DM/yr)

	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	14.9	16.2	16.5	14.2	12.3	12.7	13.4
CHA	-1.8	-10.5	-24.1	-49.5	-56.4	-57.5	-55.3	-50.6	-48.2	-46.2	-41.5
EUR	-16.9	-17.5	-15.5	-17.3	-17.1	-16.3	-15.7	-13.3	-11.9	-10.0	-8.7
IND	0.2	0.5	0.5	1.2	0.2	1.5	0.6	-0.9	-0.7	0.9	-1.2
JPN	-6.8	-7.0	-6.3	-5.6	-5.4	-5.2	-5.3	-5.5	-5.6	-5.5	-5.2
LAM	5.9	11.6	28.6	38.7	37.3	37.3	44.1	60.5	62.9	63.0	62.9
MEA	-1.0	-1.8	-3.4	-5.7	-6.0	-6.0	-5.8	-5.3	-5.1	-4.9	-3.6
NEU	-1.0	-1.7	-2.4	-3.1	-3.1	-3.0	-2.8	-2.4	-2.1	-1.8	-1.5
OAS	-3.7	-3.3	-2.6	-8.1	-11.6	-14.3	-17.4	-20.6	-22.7	-24.9	-27.1
REF	1.1	2.2	1.4	-0.5	-0.1	-0.0	2.6	3.5	4.8	5.6	6.5
SSA	0.5	0.3	0.9	0.8	0.1	-1.5	-3.5	-6.0	-7.9	-10.2	-12.6
USA	14.8	20.1	22.4	36.5	46.3	48.8	42.0	26.4	24.2	21.4	18.6

Table 1857: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops (Mt DM/yr) [PART 1/2]

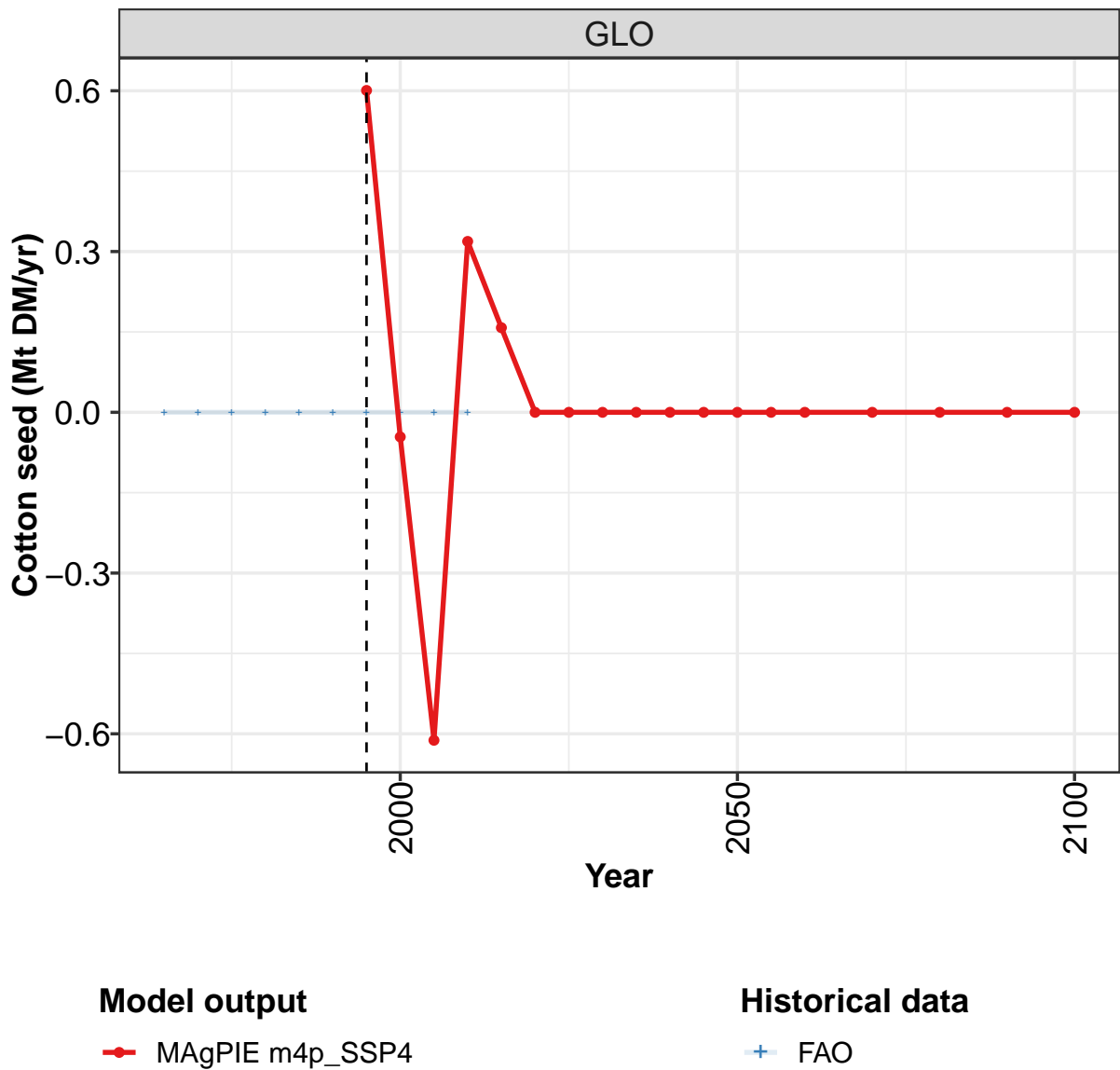
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
CAZ	13.1	13.7	14.6	16.4	17.1	16.7	14.1
CHA	-36.0	-31.8	-27.6	-18.0	-8.4	-4.7	-1.4
EUR	-6.6	-6.5	-6.4	-6.1	-5.6	-5.3	-5.0
IND	-1.5	-1.2	-1.5	-4.1	-2.9	-0.6	5.1
JPN	-5.0	-4.7	-4.4	-3.9	-3.4	-3.0	-2.6
LAM	61.7	59.6	57.4	53.5	50.2	48.2	46.2
MEA	-2.8	-3.1	-3.4	-4.0	-4.4	-4.6	-4.7
NEU	-1.2	-1.2	-1.2	-1.1	-0.9	-0.8	-0.7
OAS	-29.2	-29.7	-30.0	-30.4	-32.0	-31.8	-32.9
REF	7.2	7.6	8.1	9.0	8.2	8.6	8.3
SSA	-15.4	-17.2	-19.2	-23.3	-27.8	-31.6	-34.8
USA	15.6	14.6	13.5	11.8	9.9	9.0	8.3

Table 1858: MAgPIE m4p\_SSP4 — 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



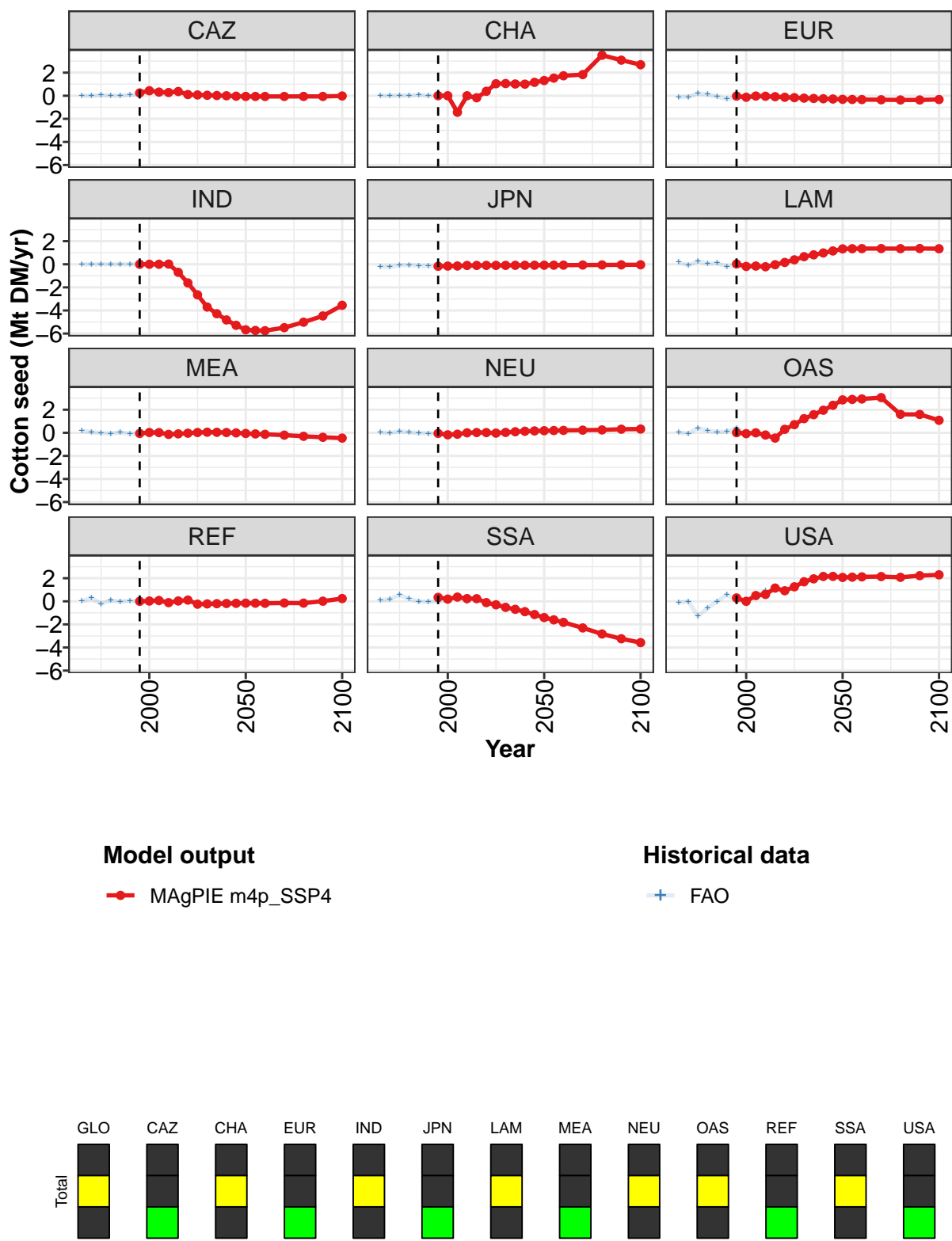


Figure 487: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Cotton seed (Mt DM/yr)

	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	0.07	0.04	0.02	-0.00	-0.04
CHA	0.00	0.00	-1.43	0.00	-0.17	0.39	1.04	1.06	1.02	1.00	1.16
EUR	-0.03	-0.13	-0.02	-0.05	-0.08	-0.13	-0.17	-0.21	-0.23	-0.26	-0.28
IND	0.00	-0.00	-0.00	0.02	-0.70	-1.62	-2.65	-3.71	-4.28	-4.82	-5.29
JPN	-0.17	-0.16	-0.15	-0.10	-0.10	-0.10	-0.10	-0.10	-0.09	-0.09	-0.08
LAM	0.02	-0.19	-0.16	-0.21	-0.04	0.16	0.38	0.66	0.82	0.98	1.15
MEA	-0.06	0.03	0.02	-0.14	-0.09	-0.04	0.03	0.05	0.04	0.02	-0.01
NEU	-0.05	-0.17	-0.12	0.00	0.02	0.02	-0.03	0.03	0.09	0.13	0.16
OAS	0.01	-0.07	0.00	-0.19	-0.46	0.30	0.71	1.22	1.57	1.95	2.38
REF	0.00	0.03	0.07	-0.11	0.03	0.11	-0.25	-0.22	-0.21	-0.19	-0.17
SSA	0.34	0.19	0.37	0.24	0.23	-0.11	-0.30	-0.52	-0.69	-0.90	-1.14
USA	0.29	0.00	0.50	0.60	1.15	0.92	1.26	1.69	1.95	2.15	2.16

Table 1860: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Cotton seed (Mt DM/yr) [PART 1/2]

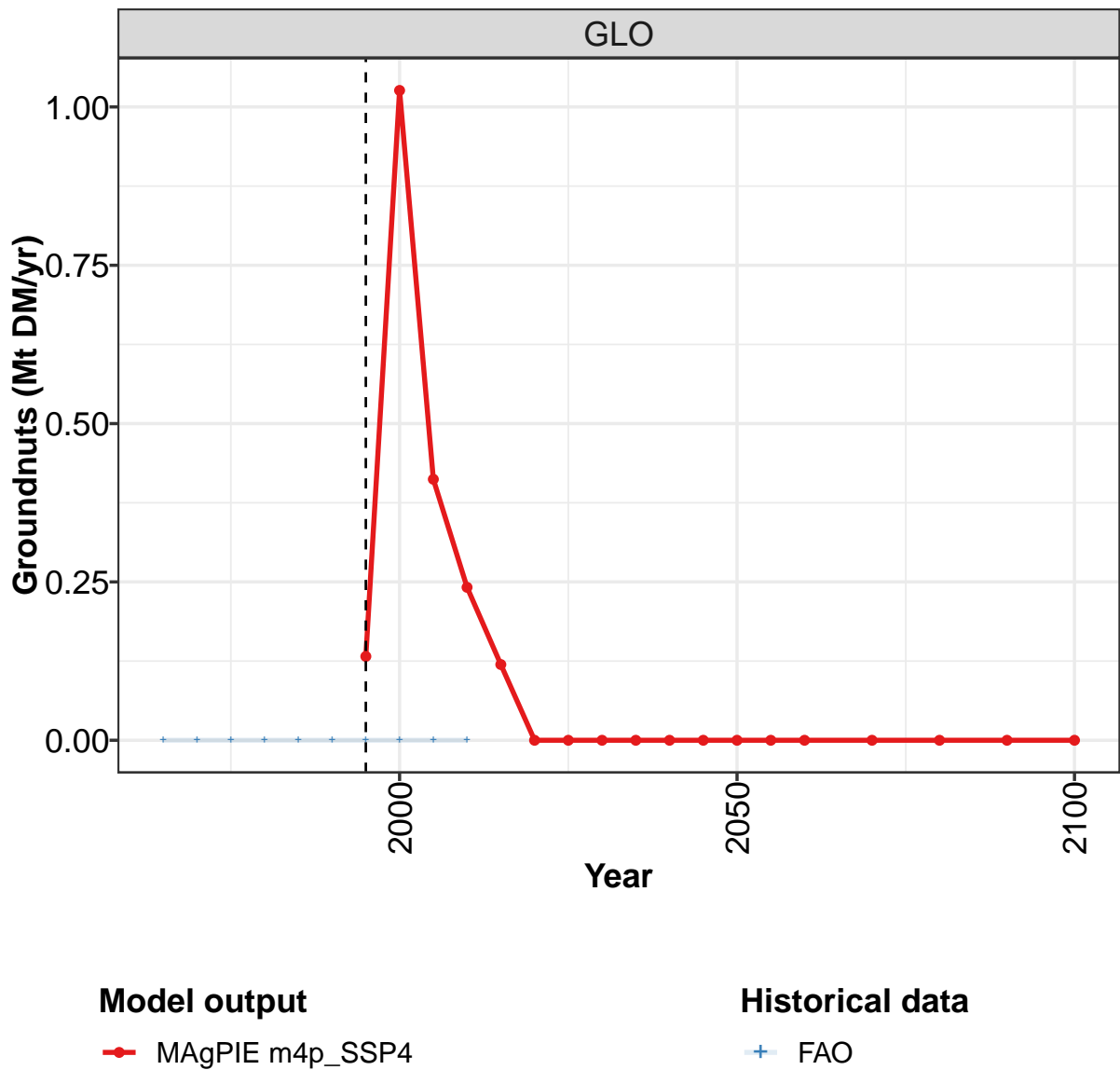
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.00	0.00	-0.00	-0.00	-0.00	-0.00	0.00
CAZ	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.02
CHA	1.32	1.53	1.73	1.83	3.51	3.08	2.69
EUR	-0.31	-0.32	-0.33	-0.35	-0.36	-0.37	-0.33
IND	-5.67	-5.73	-5.75	-5.49	-5.02	-4.47	-3.55
JPN	-0.08	-0.08	-0.07	-0.07	-0.06	-0.05	-0.04
LAM	1.33	1.35	1.36	1.36	1.35	1.36	1.35
MEA	-0.06	-0.10	-0.13	-0.20	-0.31	-0.39	-0.46
NEU	0.18	0.20	0.21	0.23	0.25	0.31	0.32
OAS	2.85	2.89	2.93	3.05	1.60	1.59	1.08
REF	-0.16	-0.16	-0.17	-0.15	-0.16	0.01	0.24
SSA	-1.41	-1.61	-1.82	-2.30	-2.83	-3.24	-3.58
USA	2.07	2.09	2.12	2.14	2.08	2.22	2.30

Table 1861: MAgPIE m4p\_SSP4 — 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





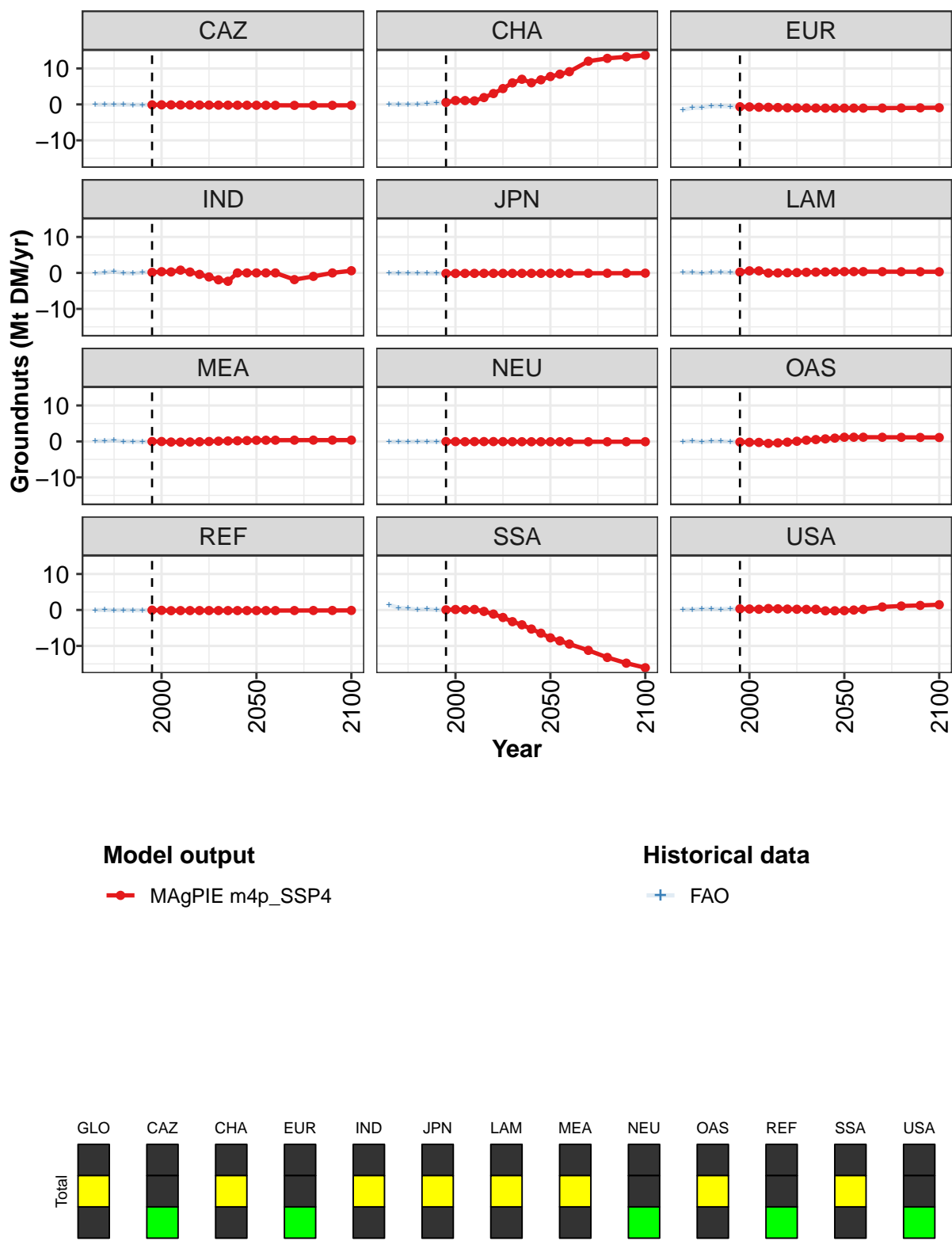


Figure 488: MAGPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Groundnuts (Mt DM/yr)

	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	-0.2	-0.2
CHA	0.6	1.1	1.1	1.0	1.9	3.0	4.4	6.0	7.0	6.0	6.8
EUR	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
IND	0.1	0.3	0.3	0.8	0.2	-0.4	-1.1	-1.9	-2.3	0.0	0.0
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	0.2	0.2	0.3	0.3
MEA	-0.0	-0.0	-0.2	-0.2	-0.2	-0.1	-0.0	0.1	0.1	0.2	0.3
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	-2.1	-3.3	-4.1	-5.3	-6.5
USA	0.3	0.3	0.2	0.4	0.3	0.2	0.2	0.2	0.2	-0.2	-0.2

Table 1863: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Groundnuts (Mt DM/yr) [PART 1/2]

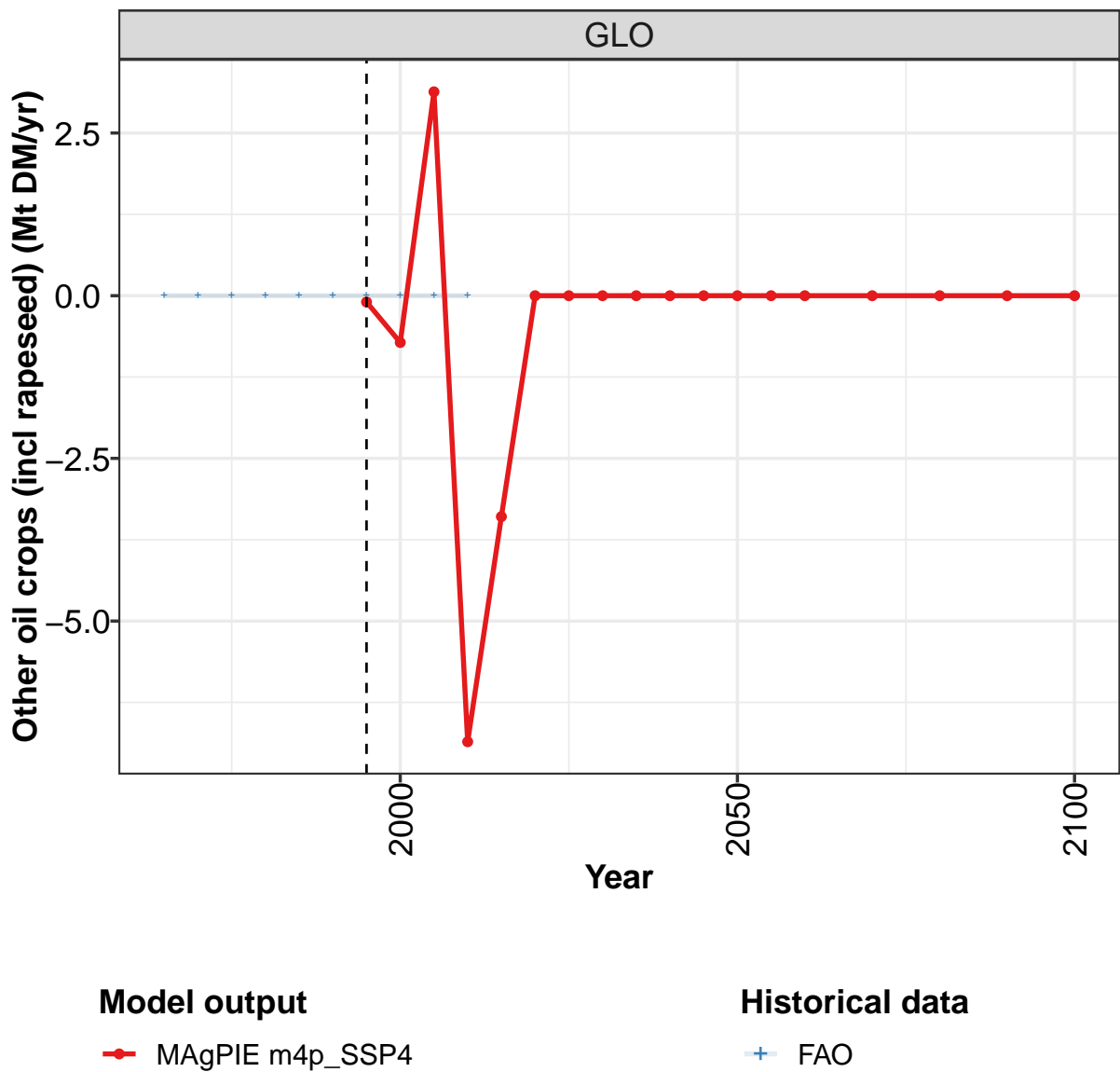
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3
CHA	7.7	8.4	9.1	12.0	12.8	13.2	13.7
EUR	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-0.9
IND	0.0	0.0	0.0	-1.9	-1.0	0.0	0.6
JPN	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LAM	0.4	0.4	0.4	0.3	0.3	0.3	0.3
MEA	0.3	0.3	0.3	0.4	0.4	0.4	0.4
NEU	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
OAS	1.2	1.2	1.2	1.2	1.1	1.1	1.1
REF	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1
SSA	-7.8	-8.6	-9.5	-11.2	-13.2	-14.8	-16.1
USA	-0.2	-0.0	0.2	0.8	1.1	1.3	1.5

Table 1864: MAgPIE m4p\_SSP4 — 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)



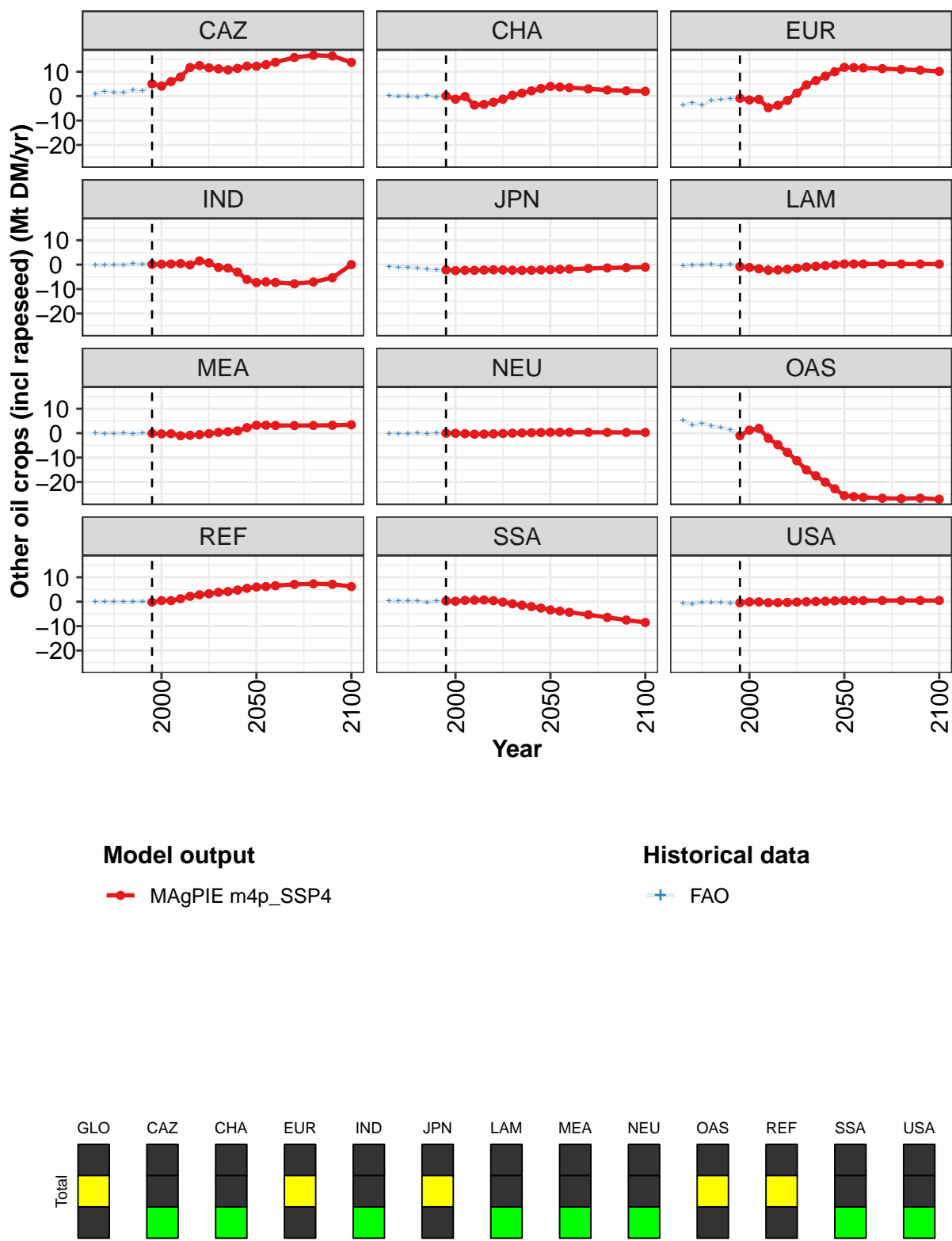


Figure 489: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr)

	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	11.7	12.5	11.6	11.2	10.8	11.4	12.3
CHA	0.1	-1.2	-0.2	-3.7	-3.4	-2.5	-1.2	0.3	1.2	2.2	3.1
EUR	-0.9	-1.6	-1.3	-4.8	-3.8	-1.8	1.2	4.6	6.4	8.2	10.0
IND	0.1	0.2	0.3	0.5	-0.1	1.5	0.7	-1.1	-1.4	-3.0	-6.1
JPN	-2.2	-2.5	-2.3	-2.3	-2.2	-2.1	-2.2	-2.3	-2.3	-2.3	-2.2
LAM	-0.8	-1.2	-1.7	-2.3	-2.2	-1.9	-1.5	-1.0	-0.7	-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	2.3
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	-11.3	-15.0	-17.5	-20.1	-22.8
REF	-0.2	0.4	0.4	1.2	2.2	2.8	3.2	3.8	4.1	4.8	5.5
SSA	0.3	0.2	0.6	0.6	0.7	0.4	-0.2	-0.8	-1.4	-2.0	-2.6
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\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Other oil crops (incl rapeseed) (Mt DM/yr) [PART 1/2]

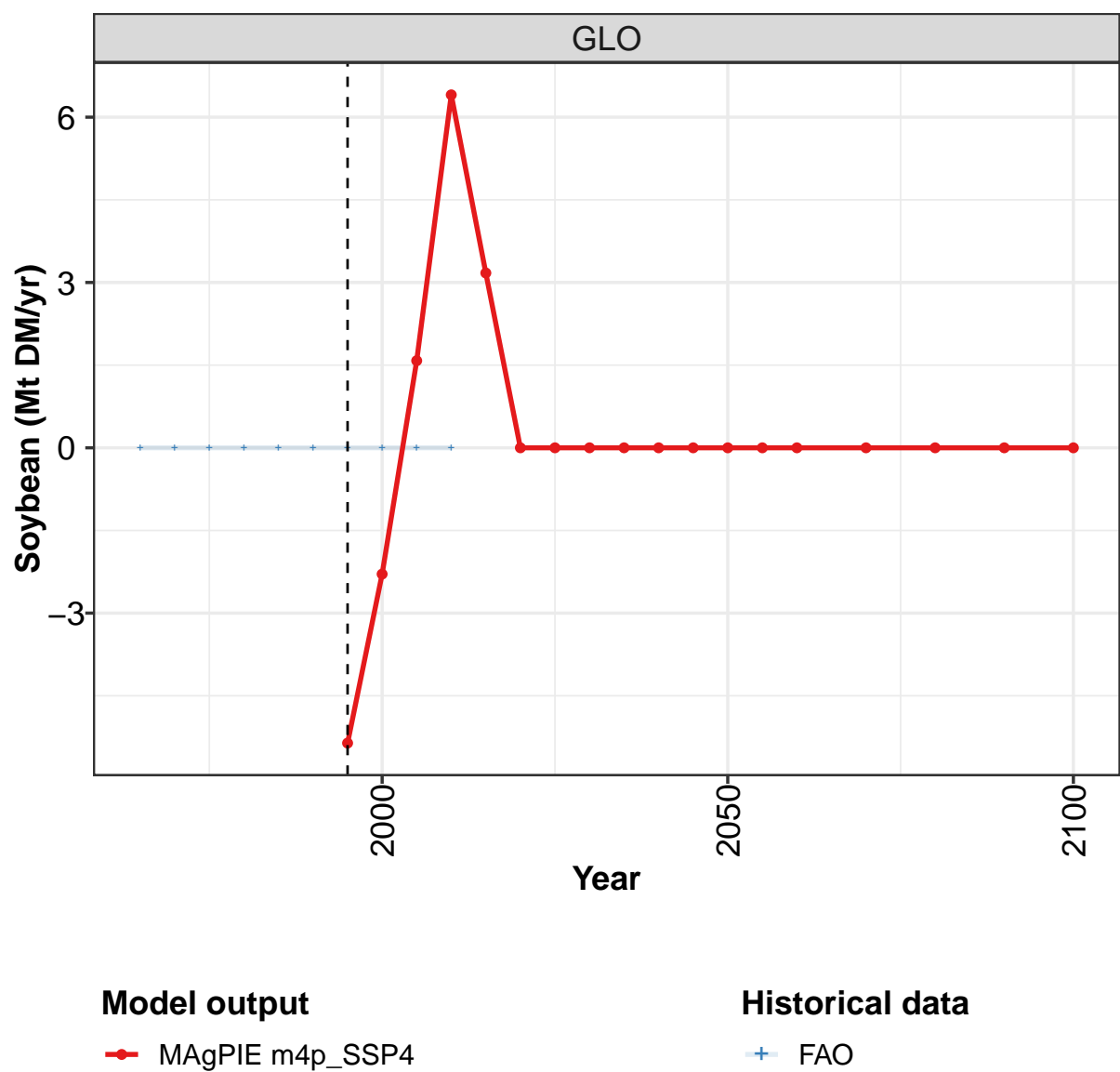
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	0.0	-0.0	0.0	-0.0	-0.0	0.0
CAZ	12.3	12.9	13.9	15.8	16.7	16.4	13.8
CHA	4.0	3.7	3.5	3.0	2.5	2.2	2.0
EUR	11.8	11.7	11.6	11.3	10.9	10.6	10.1
IND	-7.3	-7.1	-7.3	-7.8	-7.1	-5.4	0.0
JPN	-2.1	-1.9	-1.8	-1.6	-1.4	-1.2	-1.0
LAM	0.3	0.3	0.3	0.3	0.3	0.2	0.2
MEA	3.2	3.2	3.2	3.1	3.2	3.2	3.4
NEU	0.4	0.4	0.4	0.3	0.3	0.3	0.3
OAS	-25.6	-26.0	-26.3	-26.6	-26.8	-26.6	-27.0
REF	6.0	6.2	6.5	7.1	7.3	7.1	6.2
SSA	-3.4	-3.9	-4.3	-5.3	-6.4	-7.5	-8.5
USA	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Table 1867: MAgPIE m4p\_SSP4 — 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



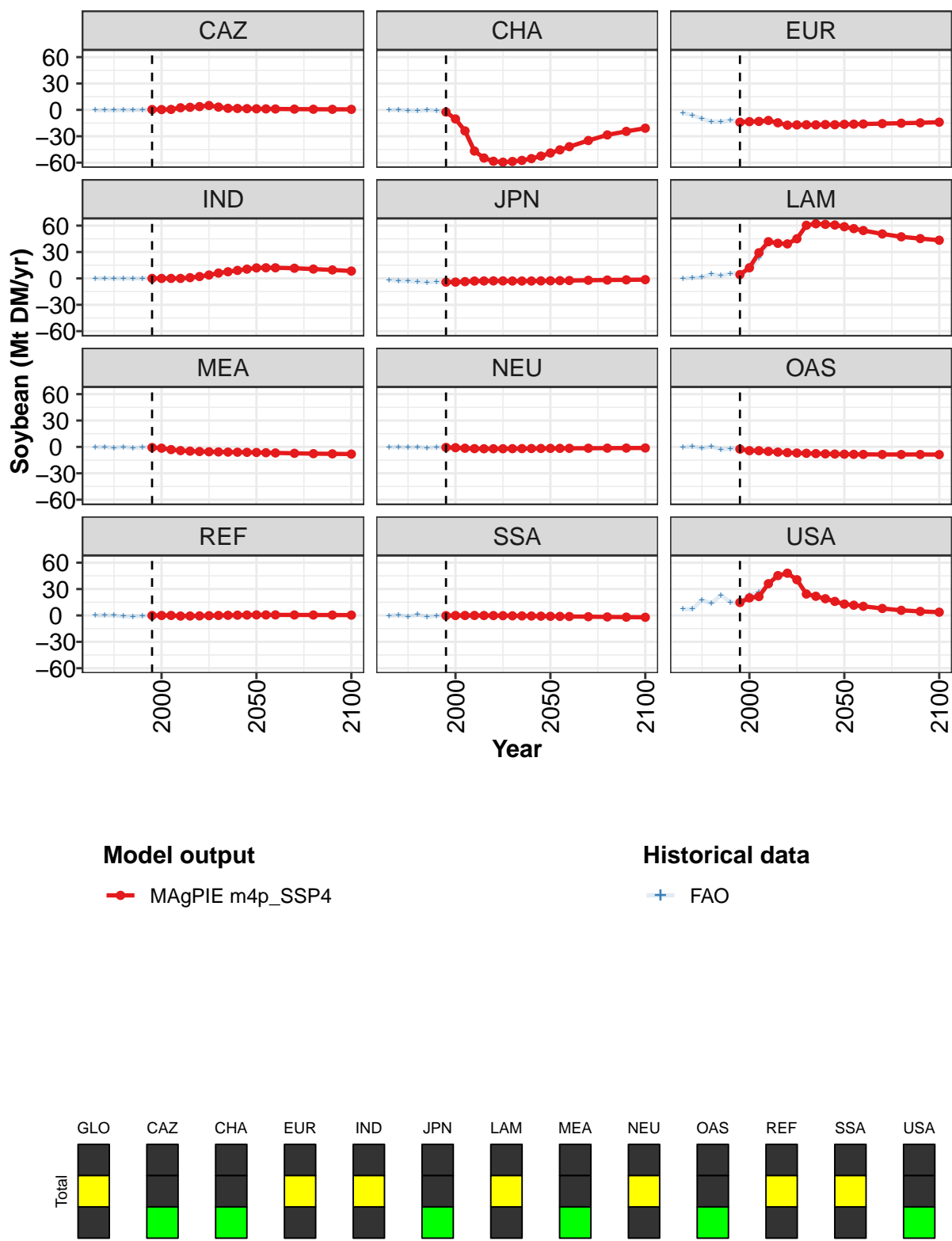


Figure 490: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Soybean (Mt DM/yr)

	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	3.7	5.0	3.2	1.8	1.6	1.4
CHA	-2.5	-10.4	-23.9	-46.8	-54.7	-58.4	-59.5	-58.7	-57.4	-55.4	-52.5
EUR	-14.0	-13.4	-13.1	-12.0	-14.6	-17.4	-17.1	-17.0	-17.1	-16.7	-16.9
IND	0.0	-0.0	0.0	0.0	0.8	2.1	3.9	6.1	7.6	9.1	10.5
JPN	-4.3	-4.2	-3.7	-3.0	-2.9	-2.8	-2.9	-3.0	-3.0	-3.0	-2.8
LAM	4.3	12.1	29.2	41.7	39.9	39.2	45.1	60.3	62.1	61.4	60.7
MEA	-0.7	-1.4	-3.0	-4.2	-4.8	-5.2	-5.5	-5.7	-5.9	-6.0	-6.2
NEU	-0.6	-0.9	-1.5	-1.9	-2.1	-2.1	-2.1	-2.0	-1.9	-1.8	-1.7
OAS	-2.5	-4.2	-4.3	-5.1	-5.9	-6.5	-6.9	-7.3	-7.6	-7.9	-8.1
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	-0.8
USA	14.7	19.9	21.5	36.1	45.3	48.0	40.7	24.4	21.8	19.0	16.0

Table 1869: MAgPIE m4p\_SSP4 — 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	1.2	1.1	1.0	0.9	0.7	0.6	0.6
CHA	-49.0	-45.5	-41.9	-34.9	-28.5	-24.4	-20.8
EUR	-16.4	-16.3	-16.1	-15.6	-15.2	-14.7	-14.0
IND	11.9	12.1	12.1	11.5	10.6	9.6	8.4
JPN	-2.7	-2.6	-2.4	-2.1	-1.9	-1.7	-1.4
LAM	58.7	56.6	54.4	50.6	47.3	45.3	43.4
MEA	-6.3	-6.6	-6.8	-7.3	-7.7	-7.9	-8.1
NEU	-1.6	-1.6	-1.6	-1.5	-1.4	-1.3	-1.2
OAS	-8.3	-8.4	-8.5	-8.6	-8.7	-8.6	-8.8
REF	0.6	0.6	0.6	0.6	0.5	0.4	0.4
SSA	-1.0	-1.1	-1.2	-1.5	-1.7	-1.9	-2.1
USA	12.9	11.6	10.4	7.9	5.8	4.6	3.7

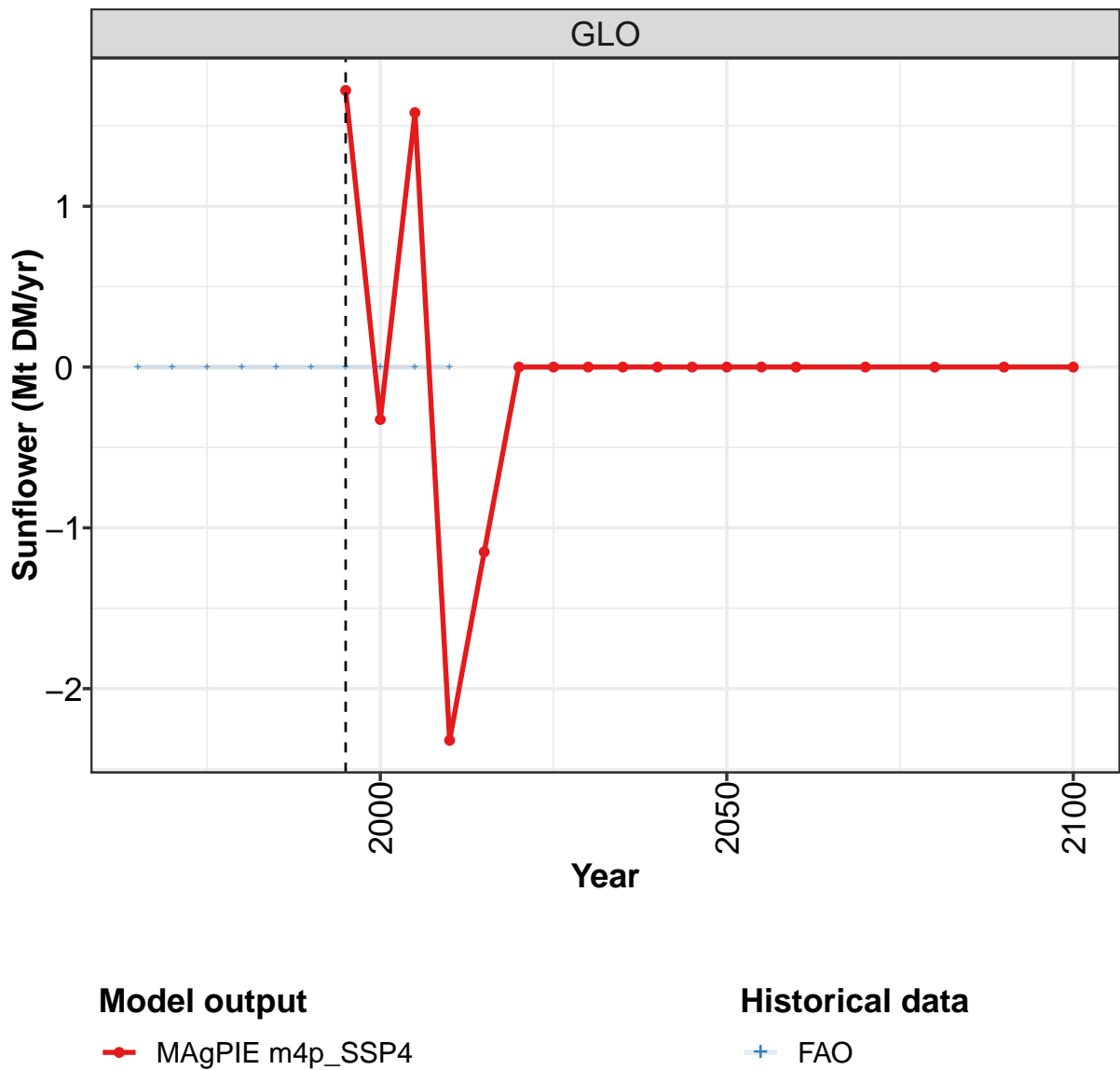
Table 1870: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Soybean (Mt DM/yr) [PART 2/2]

	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



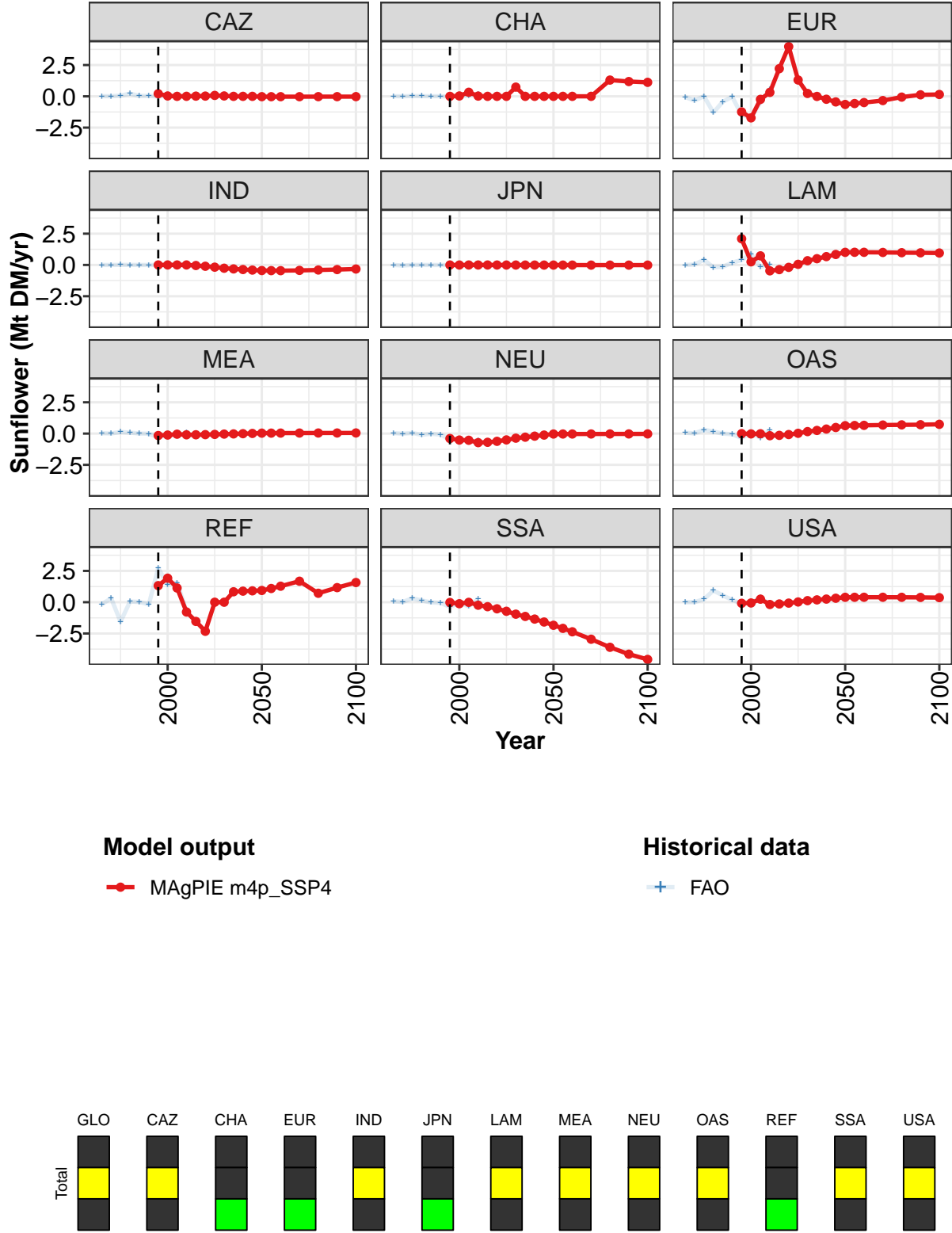


Figure 491: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Sunflower (Mt DM/yr)

	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	0.02	0.07	0.03	-0.00	0.00	-0.00
CHA	0.00	0.03	0.32	0.02	0.00	0.00	0.00	0.74	-0.00	0.00	-0.00
EUR	-1.24	-1.72	-0.24	0.32	2.21	3.98	1.31	0.23	-0.01	-0.23	-0.45
IND	0.00	0.00	-0.00	0.00	-0.04	-0.10	-0.18	-0.26	-0.31	-0.36	-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	0.34	0.50	0.67	0.84
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	-0.37	-0.29	-0.20	-0.12
OAS	-0.00	-0.03	-0.01	-0.17	-0.14	-0.08	0.02	0.16	0.25	0.36	0.49
REF	1.32	1.92	1.14	-0.78	-1.54	-2.32	0.00	0.00	0.83	0.89	0.91
SSA	-0.02	-0.12	-0.01	-0.24	-0.36	-0.53	-0.72	-0.96	-1.14	-1.35	-1.58
USA	-0.09	-0.06	0.24	-0.18	-0.14	-0.07	0.02	0.13	0.19	0.25	0.32

Table 1872: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Oil crops—Sunflower (Mt DM/yr) [PART 1/2]

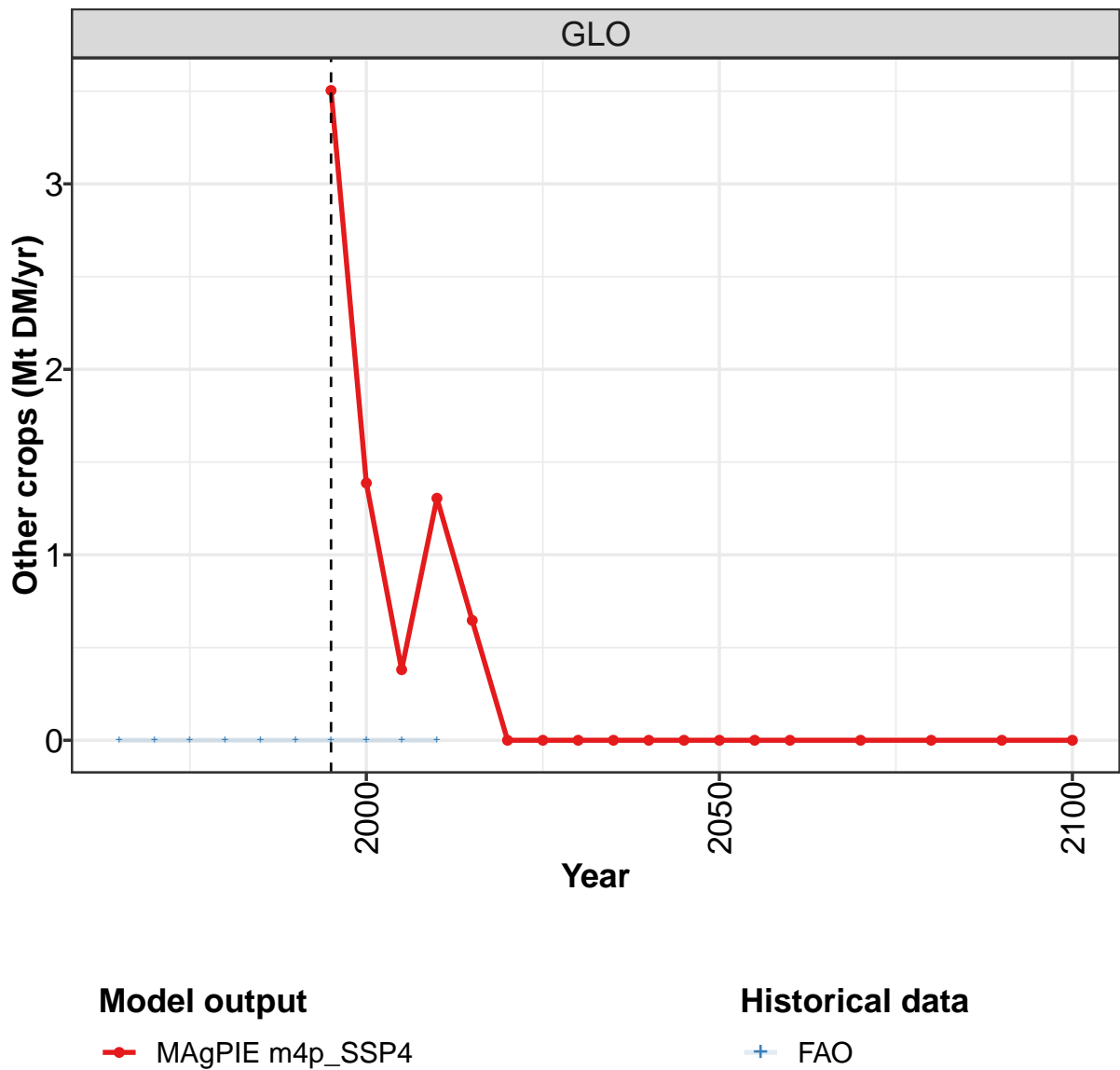
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
CHA	0.00	0.00	0.00	0.00	1.30	1.18	1.12
EUR	-0.65	-0.58	-0.50	-0.34	-0.06	0.12	0.15
IND	-0.44	-0.45	-0.45	-0.43	-0.40	-0.37	-0.32
JPN	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
LAM	1.01	1.01	1.01	1.00	0.98	0.97	0.96
MEA	0.03	0.04	0.04	0.04	0.05	0.05	0.05
NEU	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02
OAS	0.63	0.65	0.66	0.68	0.70	0.71	0.74
REF	0.94	1.10	1.28	1.68	0.71	1.16	1.57
SSA	-1.84	-2.09	-2.36	-2.96	-3.60	-4.15	-4.57
USA	0.39	0.39	0.40	0.40	0.39	0.38	0.36

Table 1873: MAgPIE m4p\_SSP4 — 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



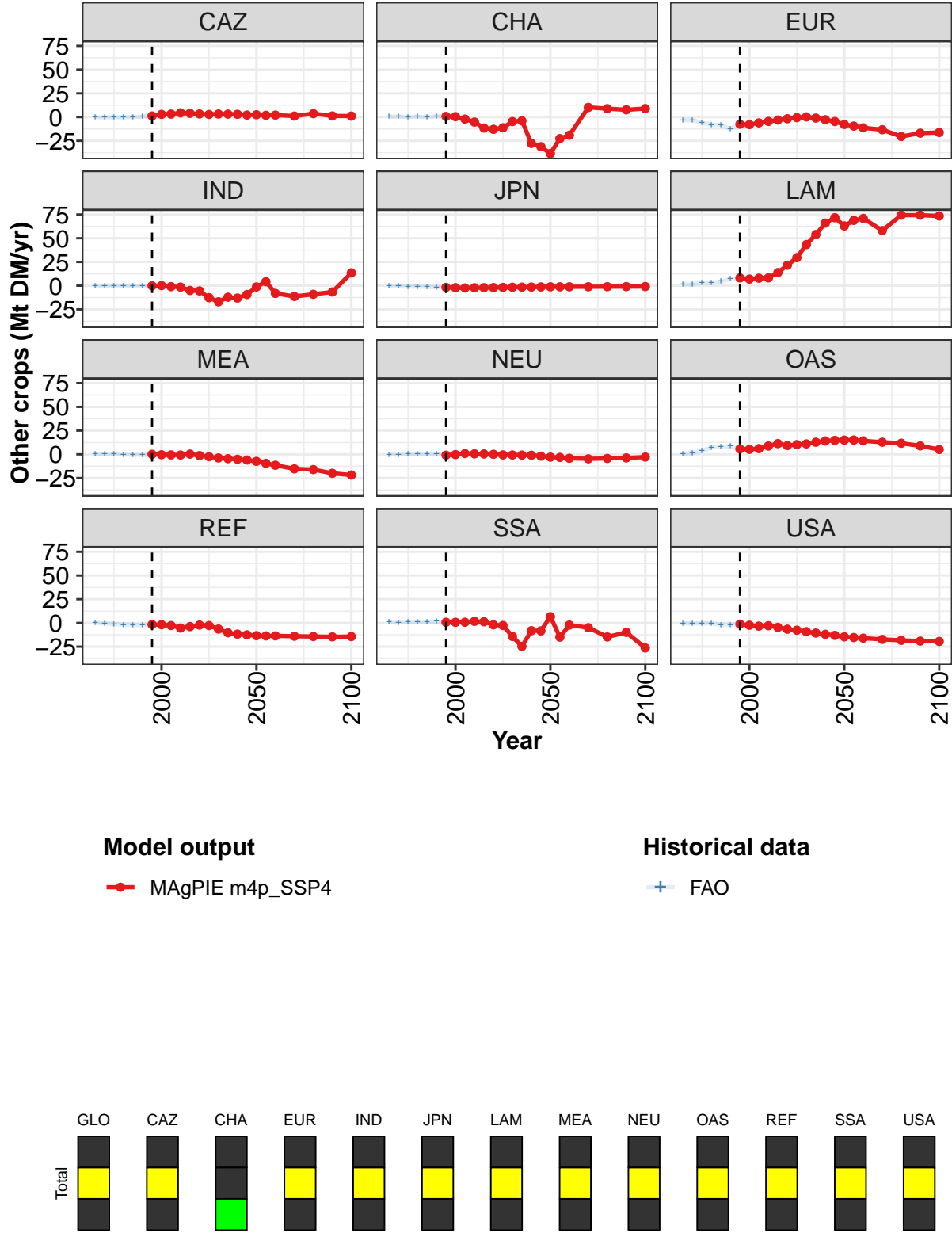


Figure 492: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops (Mt DM/yr)

	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	4.0	3.3	2.8	3.2	3.1	2.9	2.1
CHA	0.7	0.5	-2.1	-5.3	-11.5	-12.9	-11.3	-4.7	-3.9	-27.7	-31.2
EUR	-7.5	-7.9	-6.1	-4.6	-3.1	-1.8	-0.6	0.2	-1.1	-2.8	-4.7
IND	-0.1	0.1	-1.0	-1.5	-5.0	-5.5	-12.6	-17.0	-12.1	-13.0	-9.3
JPN	-1.8	-2.1	-2.4	-2.1	-2.1	-2.0	-1.8	-1.7	-1.5	-1.4	-1.3
LAM	8.2	7.0	7.9	8.3	13.8	21.6	29.5	43.3	53.9	66.0	71.6
MEA	0.1	-0.4	-0.6	-0.7	0.2	-1.3	-2.5	-3.8	-4.6	-5.2	-6.0
NEU	-0.9	-0.3	0.8	0.5	0.4	0.1	-0.6	-0.7	-0.8	-0.9	-1.9
OAS	5.8	5.3	6.0	8.8	11.3	9.3	10.2	11.0	12.8	14.1	14.7
REF	-1.7	-1.9	-2.7	-5.4	-3.8	-2.2	-2.7	-6.4	-10.4	-11.8	-12.5
SSA	0.8	0.7	0.8	1.7	1.3	-2.0	-2.7	-14.2	-24.7	-8.2	-8.4
USA	-1.2	-2.4	-3.3	-2.9	-4.7	-6.6	-7.7	-9.2	-10.6	-12.0	-13.1

Table 1875: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops (Mt DM/yr) [PART 1/2]

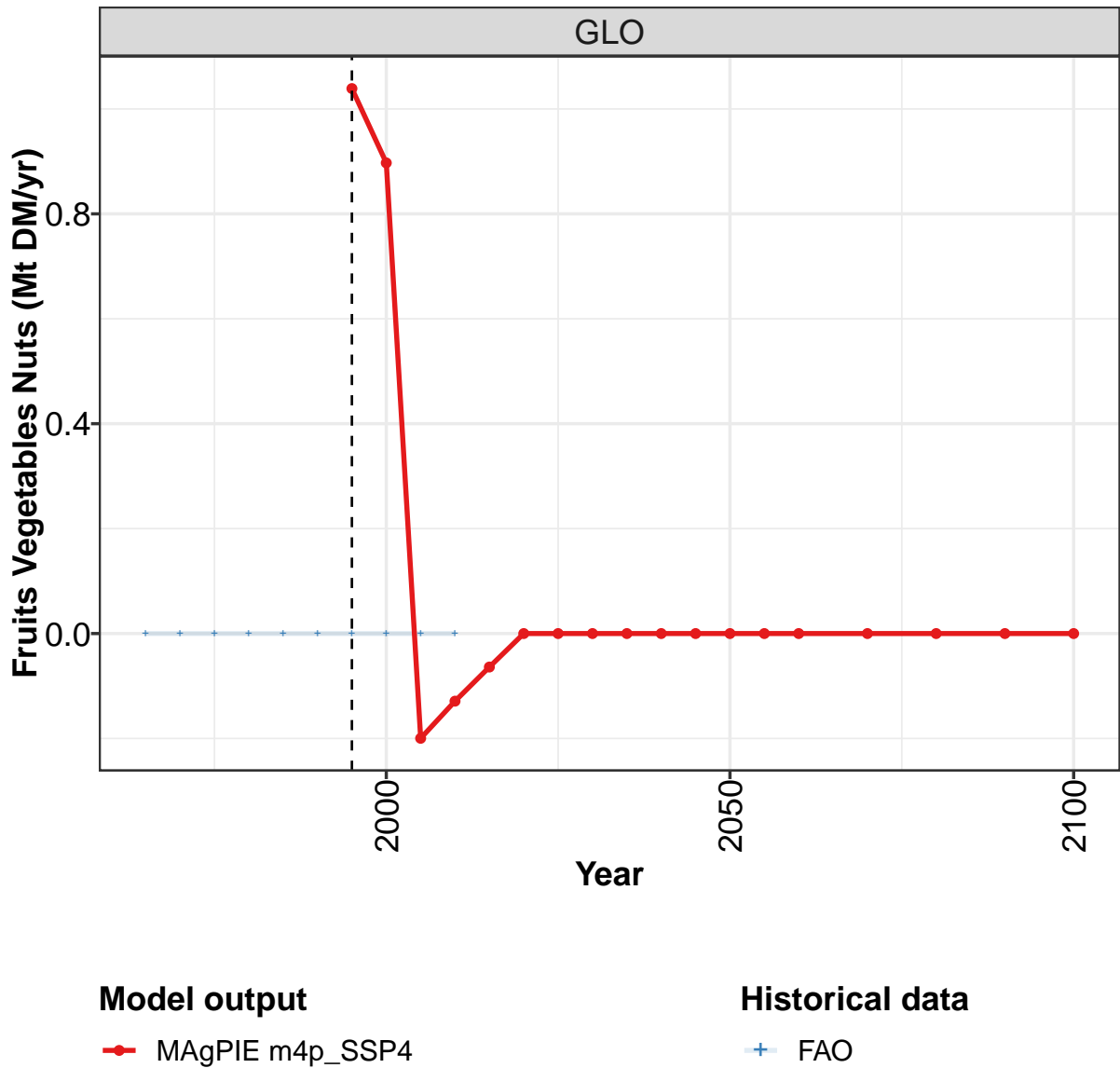
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	0.0	0.0	-0.0	0.0	0.0	-0.0
CAZ	2.5	1.9	2.1	1.1	3.6	1.2	1.0
CHA	-38.4	-22.7	-19.1	10.2	8.9	7.7	8.9
EUR	-7.8	-9.5	-11.3	-13.3	-20.5	-16.9	-16.2
IND	-1.3	4.2	-8.1	-11.3	-9.0	-6.6	13.5
JPN	-1.2	-1.2	-1.1	-1.1	-1.0	-1.0	-0.9
LAM	62.9	68.8	70.9	58.1	74.3	74.3	73.4
MEA	-7.4	-9.5	-11.5	-15.3	-16.1	-20.0	-21.9
NEU	-2.9	-3.2	-4.1	-4.7	-4.3	-3.8	-2.9
OAS	15.0	15.0	14.2	12.8	11.7	8.9	5.1
REF	-13.4	-13.6	-13.6	-14.0	-14.3	-14.7	-14.3
SSA	6.6	-14.9	-2.2	-5.0	-14.8	-10.0	-26.3
USA	-14.6	-15.4	-16.0	-17.3	-18.4	-19.1	-19.5

Table 1876: MAgPIE m4p\_SSP4 — 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



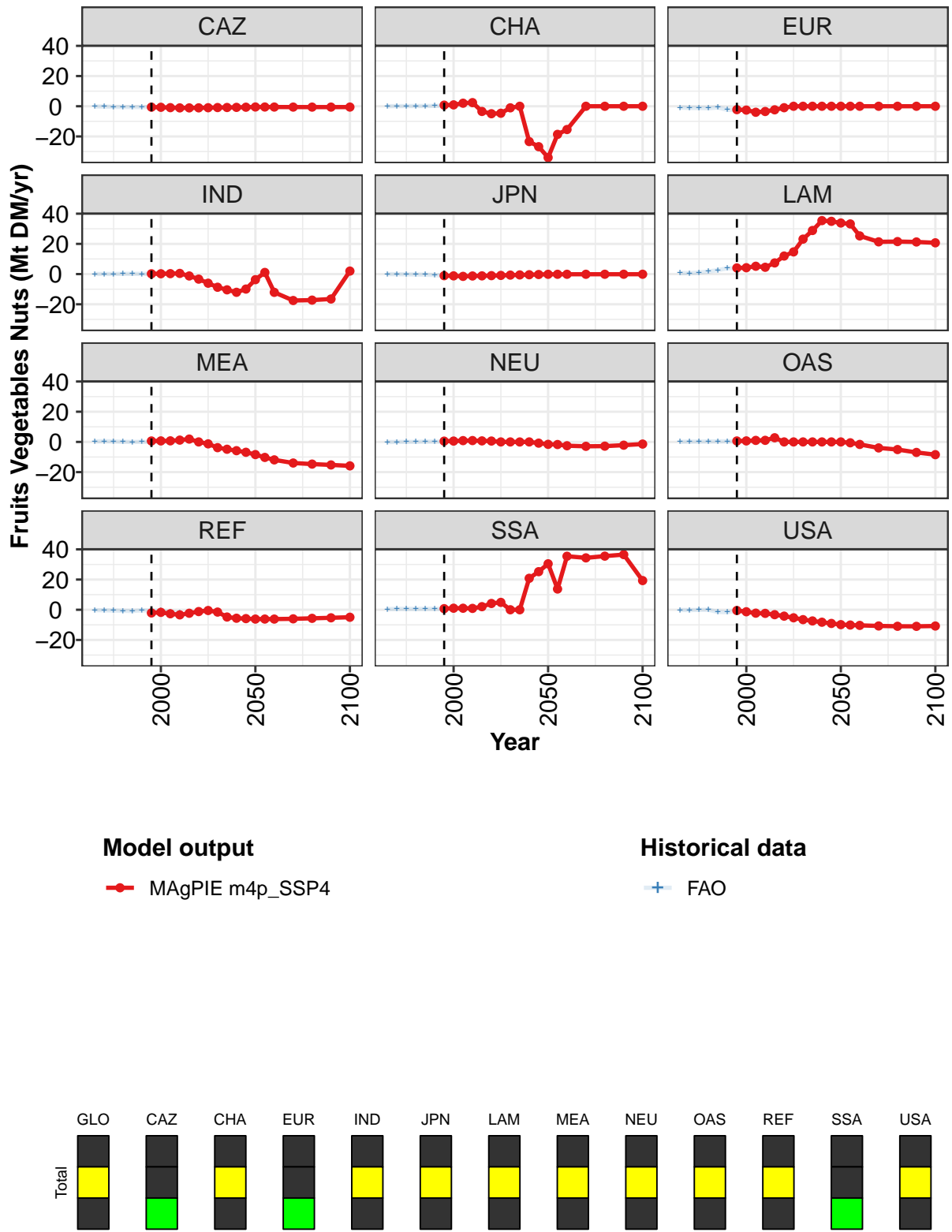


Figure 493: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr)



	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	-1.0	-0.9	-0.8	-0.7	-0.6
CHA	0.7	0.9	2.0	2.4	-3.4	-4.9	-4.6	-1.0	0.0	-23.4	-26.8
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	-1.2	-3.3	-6.0	-8.7	-10.4	-12.1	-9.9
JPN	-1.1	-1.2	-1.5	-1.3	-1.2	-1.0	-0.9	-0.7	-0.6	-0.4	-0.3
LAM	4.1	4.2	5.2	4.5	7.4	12.0	14.7	23.2	28.9	35.4	34.9
MEA	0.6	0.7	0.7	1.2	1.9	0.0	-1.3	-3.8	-4.8	-5.8	-6.8
NEU	0.5	0.6	0.9	0.9	0.7	0.6	0.0	0.0	-0.0	0.0	-0.8
OAS	0.6	0.7	1.0	1.1	2.8	0.0	0.0	0.0	0.0	0.0	0.0
REF	-2.1	-1.7	-2.6	-3.4	-2.3	-1.2	-0.5	-1.5	-4.8	-5.6	-5.9
SSA	0.7	1.0	1.0	0.9	2.1	4.2	4.9	-0.0	0.0	20.8	25.2
USA	-0.5	-1.3	-2.3	-2.4	-3.3	-4.2	-5.3	-6.5	-7.4	-8.3	-9.1

Table 1878: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Fruits Vegetables Nuts (Mt DM/yr) [PART 1/2]

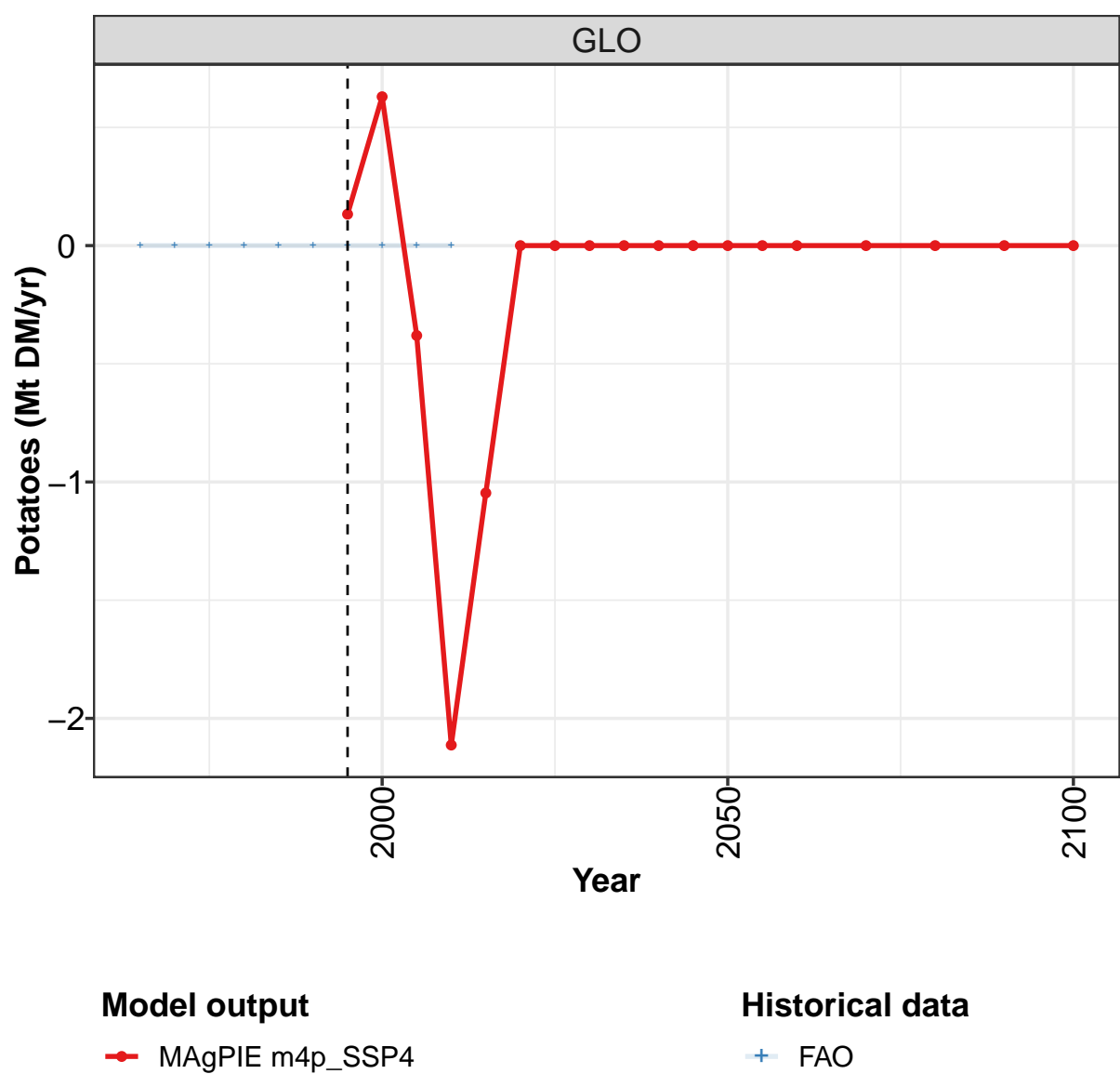
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	0.0	0.0	0.0	0.0	0.0	-0.0
CAZ	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.5
CHA	-34.0	-18.6	-15.4	0.0	0.0	0.0	0.0
EUR	0.0	0.0	0.0	0.0	0.0	0.0	-0.0
IND	-3.7	1.1	-12.1	-17.5	-17.2	-16.5	2.0
JPN	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LAM	33.8	33.2	25.3	21.4	21.5	21.3	20.7
MEA	-8.4	-10.3	-11.9	-14.0	-14.7	-15.2	-15.9
NEU	-1.6	-1.7	-2.5	-2.9	-2.8	-2.2	-1.4
OAS	0.0	-0.6	-1.6	-4.0	-5.1	-7.0	-8.4
REF	-6.2	-6.1	-6.2	-6.0	-5.7	-5.3	-5.0
SSA	30.4	13.7	35.4	34.4	35.5	36.5	19.3
USA	-9.9	-10.1	-10.3	-10.7	-10.9	-11.0	-10.8

Table 1879: MAgPIE m4p\_SSP4 — 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



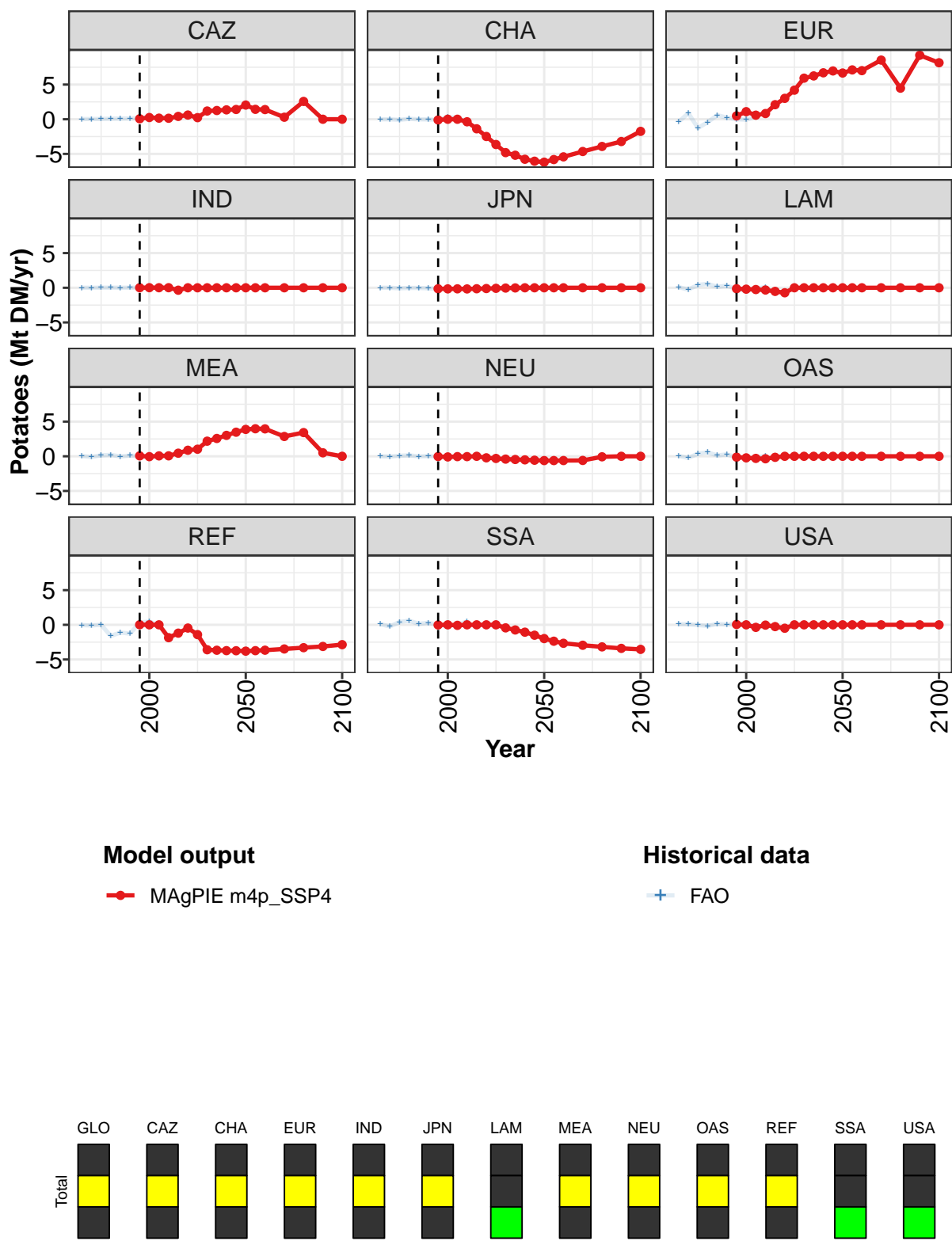


Figure 494: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Potatoes (Mt DM/yr)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	0.13	0.63	-0.38	-2.11	-1.05	-0.00	-0.00	-0.00	0.00	0.00	-0.00
CAZ	0.07	0.25	0.16	0.14	0.41	0.61	0.23	1.19	1.26	1.35	1.41
CHA	-0.10	0.00	0.00	-0.36	-1.38	-2.49	-3.64	-4.81	-5.19	-5.77	-6.05
EUR	0.48	1.09	0.59	0.82	2.10	3.02	4.19	5.93	6.25	6.70	6.97
IND	0.01	0.01	0.01	0.01	-0.35	0.00	0.00	0.00	0.00	0.00	0.00
JPN	-0.14	-0.16	-0.15	-0.17	-0.14	-0.11	-0.08	-0.04	-0.02	0.00	0.00
LAM	-0.13	-0.20	-0.26	-0.32	-0.52	-0.72	0.00	0.00	0.00	0.00	0.00
MEA	0.06	-0.05	0.06	0.07	0.45	0.87	1.02	2.18	2.57	3.02	3.47
NEU	-0.03	-0.09	-0.05	-0.05	0.00	-0.22	-0.31	-0.41	-0.46	-0.51	-0.57
OAS	-0.12	-0.23	-0.30	-0.36	-0.15	-0.00	0.00	0.00	0.00	0.00	0.00
REF	0.01	-0.00	0.00	-1.86	-1.20	-0.47	-1.41	-3.60	-3.67	-3.72	-3.74
SSA	-0.02	0.00	-0.07	0.00	0.00	0.00	0.00	-0.44	-0.74	-1.06	-1.50
USA	0.05	0.00	-0.37	-0.04	-0.26	-0.49	0.00	0.00	0.00	0.00	0.00

Table 1881: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Potatoes (Mt DM/yr) [PART 1/2]

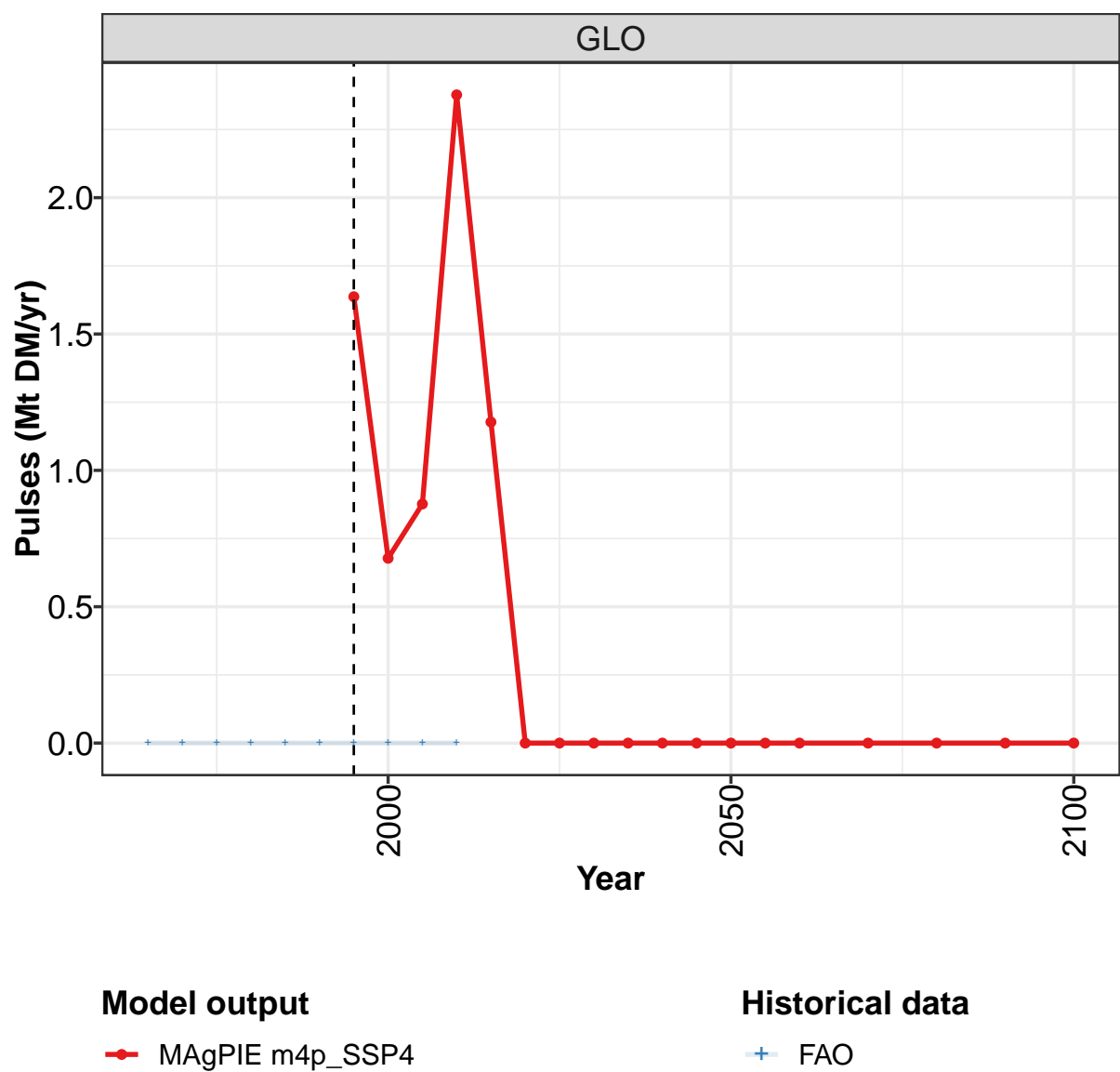
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	-0.00	0.00	0.00	-0.00
CAZ	2.05	1.43	1.39	0.29	2.57	0.00	0.00
CHA	-6.19	-5.81	-5.42	-4.65	-3.92	-3.21	-1.75
EUR	6.67	7.12	7.01	8.53	4.48	9.23	8.15
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEA	3.88	3.97	3.96	2.86	3.42	0.50	0.00
NEU	-0.62	-0.62	-0.61	-0.60	-0.07	0.00	0.00
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	-3.80	-3.73	-3.66	-3.48	-3.29	-3.12	-2.86
SSA	-1.99	-2.36	-2.66	-2.95	-3.18	-3.40	-3.54
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1882: MAgPIE m4p\_SSP4 — 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



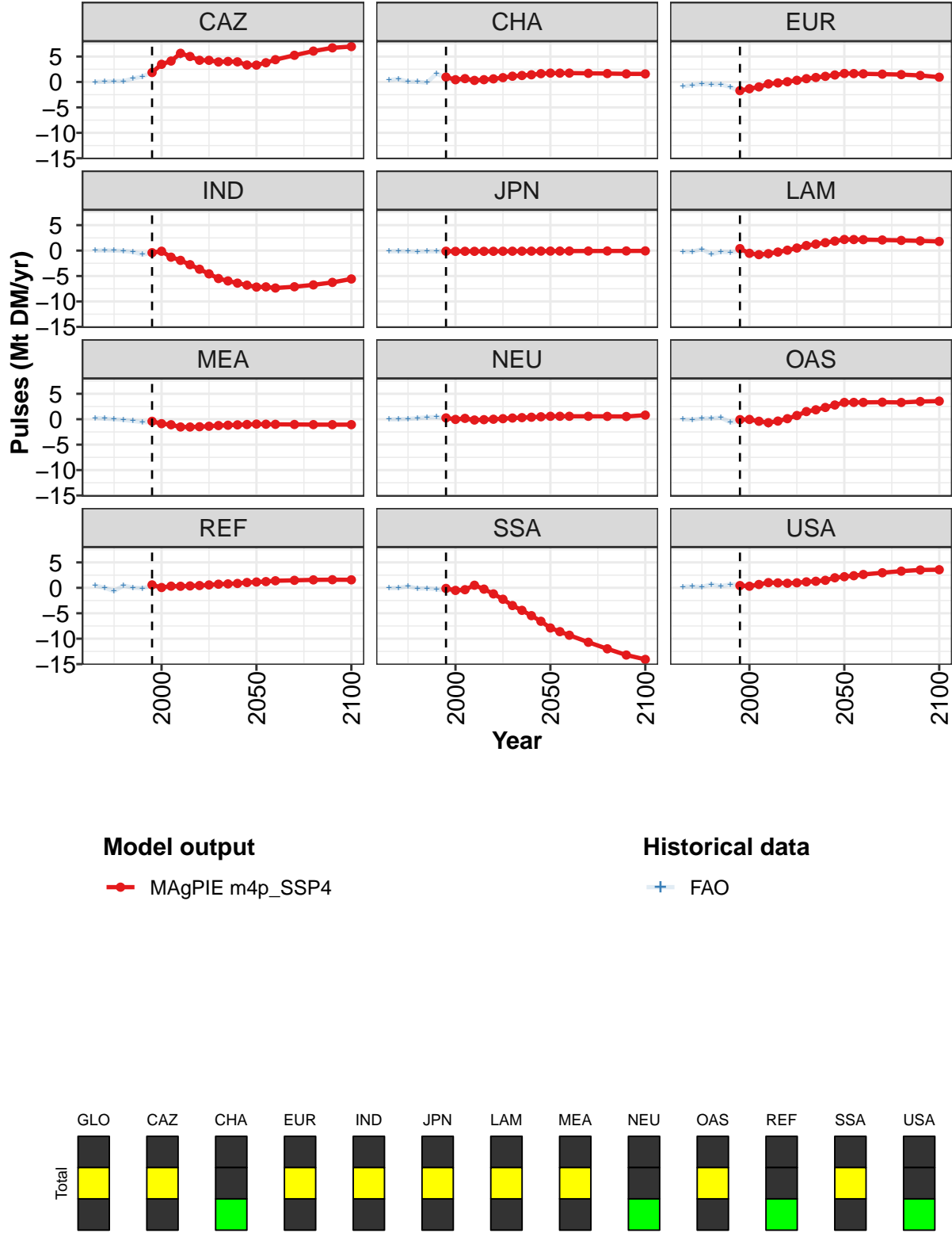


Figure 495: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Pulses (Mt DM/yr)

	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	5.01	4.27	4.26	3.93	4.04	3.96	3.33
CHA	0.96	0.44	0.66	0.31	0.45	0.61	0.85	1.14	1.27	1.42	1.64
EUR	-1.70	-1.33	-0.97	-0.38	-0.19	0.05	0.33	0.65	0.88	1.11	1.37
IND	-0.42	-0.13	-1.29	-1.92	-2.77	-3.66	-4.57	-5.49	-5.97	-6.40	-6.79
JPN	-0.13	-0.15	-0.14	-0.15	-0.14	-0.14	-0.13	-0.12	-0.12	-0.11	-0.10
LAM	0.39	-0.53	-0.79	-0.60	-0.29	0.08	0.50	0.99	1.27	1.56	1.87
MEA	-0.42	-0.87	-1.09	-1.52	-1.53	-1.48	-1.38	-1.25	-1.18	-1.11	-1.04
NEU	0.26	-0.04	0.16	-0.16	-0.09	0.00	0.11	0.23	0.31	0.39	0.48
OAS	-0.08	-0.05	-0.40	-0.69	-0.37	0.11	0.73	1.50	1.85	2.31	2.79
REF	0.58	0.06	0.33	0.31	0.38	0.45	0.57	0.71	0.78	0.86	1.05
SSA	-0.12	-0.51	-0.36	0.51	-0.26	-1.19	-2.24	-3.48	-4.42	-5.47	-6.58
USA	0.45	0.32	0.66	1.03	0.97	0.90	0.99	1.18	1.29	1.48	1.98

Table 1884: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Pulses (Mt DM/yr) [PART 1/2]

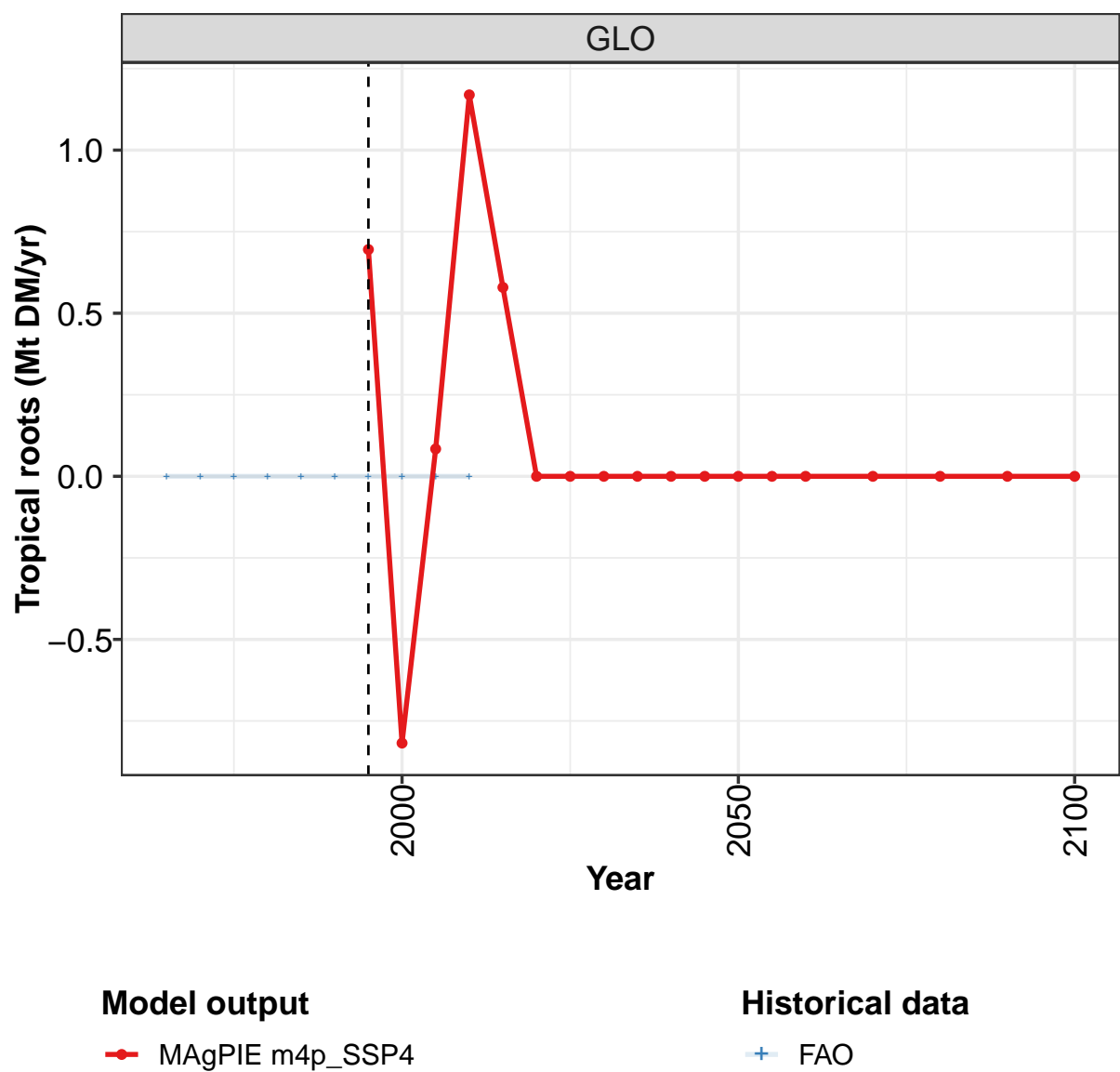
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	-0.00	0.00	0.00	-0.00
CAZ	3.31	3.78	4.39	5.25	6.07	6.71	6.96
CHA	1.74	1.74	1.74	1.70	1.65	1.59	1.59
EUR	1.67	1.65	1.60	1.53	1.45	1.28	0.94
IND	-7.17	-7.13	-7.36	-7.11	-6.74	-6.26	-5.58
JPN	-0.10	-0.09	-0.09	-0.08	-0.08	-0.07	-0.06
LAM	2.19	2.17	2.15	2.09	2.00	1.91	1.80
MEA	-0.96	-0.99	-1.01	-1.03	-1.06	-1.07	-1.07
NEU	0.57	0.58	0.58	0.57	0.56	0.53	0.80
OAS	3.30	3.30	3.31	3.35	3.29	3.48	3.56
REF	1.14	1.23	1.39	1.48	1.57	1.60	1.58
SSA	-7.89	-8.61	-9.32	-10.70	-11.99	-13.21	-14.07
USA	2.19	2.38	2.62	2.97	3.28	3.51	3.56

Table 1885: MAgPIE m4p\_SSP4 — 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





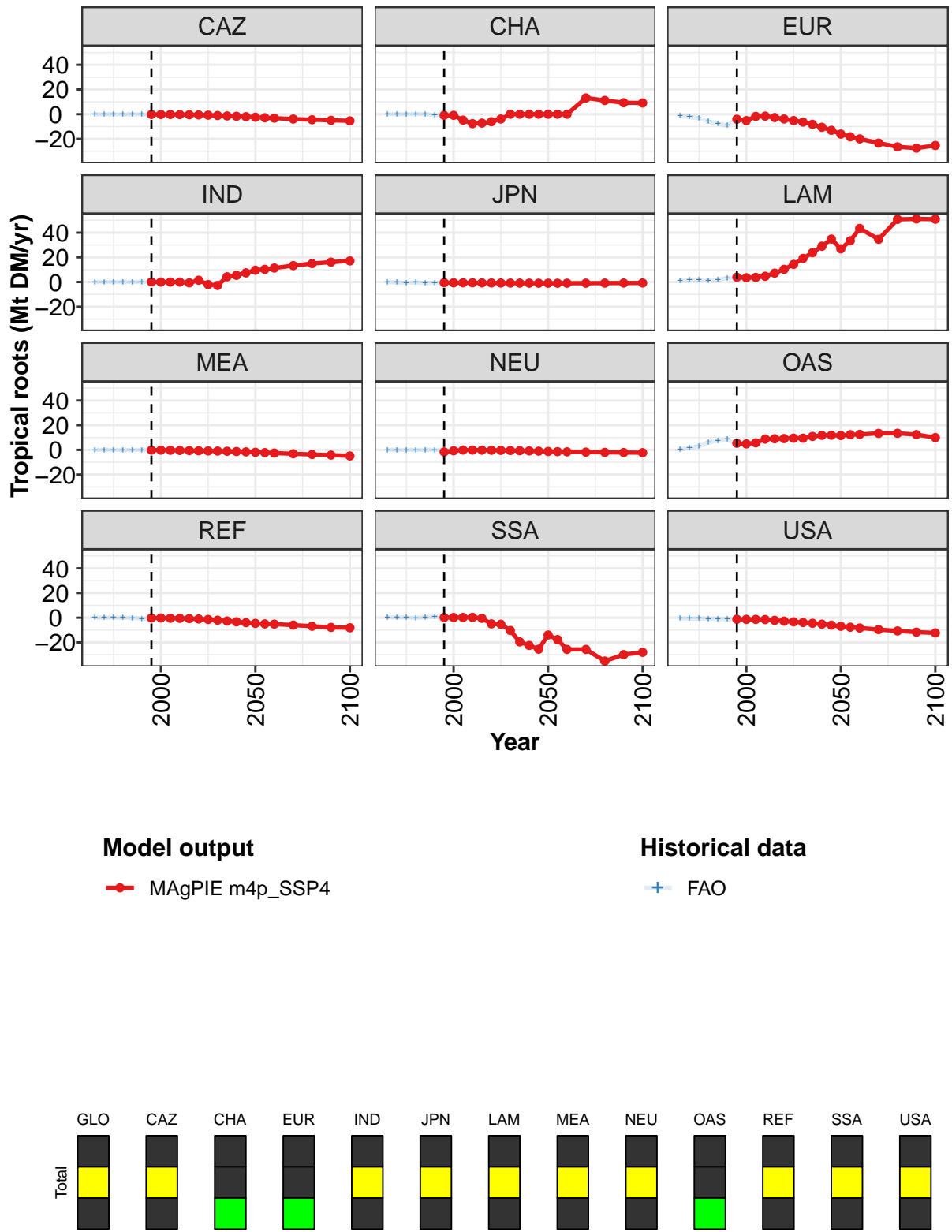


Figure 496: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Tropical roots (Mt DM/yr)

	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	-0.7	-1.0	-1.4	-1.6	-2.0
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	-5.1	-6.4	-8.2	-10.6	-13.0
IND	0.1	0.0	0.0	0.0	-0.7	1.5	-2.0	-2.8	4.3	5.5	7.4
JPN	-0.4	-0.6	-0.6	-0.6	-0.6	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9
LAM	3.9	3.5	3.8	4.7	7.2	10.3	14.3	19.2	23.8	29.0	34.8
MEA	-0.2	-0.2	-0.3	-0.5	-0.6	-0.7	-0.8	-1.0	-1.1	-1.3	-1.6
NEU	-1.7	-0.7	-0.1	-0.2	-0.2	-0.3	-0.4	-0.5	-0.7	-0.8	-1.0
OAS	5.3	4.9	5.7	8.8	9.0	9.2	9.5	9.5	10.9	11.8	11.9
REF	-0.2	-0.2	-0.4	-0.5	-0.7	-1.0	-1.4	-2.0	-2.7	-3.3	-4.0
SSA	0.2	0.2	0.2	0.3	-0.5	-5.0	-5.3	-10.3	-19.6	-22.5	-25.5
USA	-1.2	-1.4	-1.3	-1.5	-2.1	-2.8	-3.3	-3.8	-4.5	-5.2	-6.0

Table 1887: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Other crops—Tropical roots (Mt DM/yr)  
[PART 1/2]

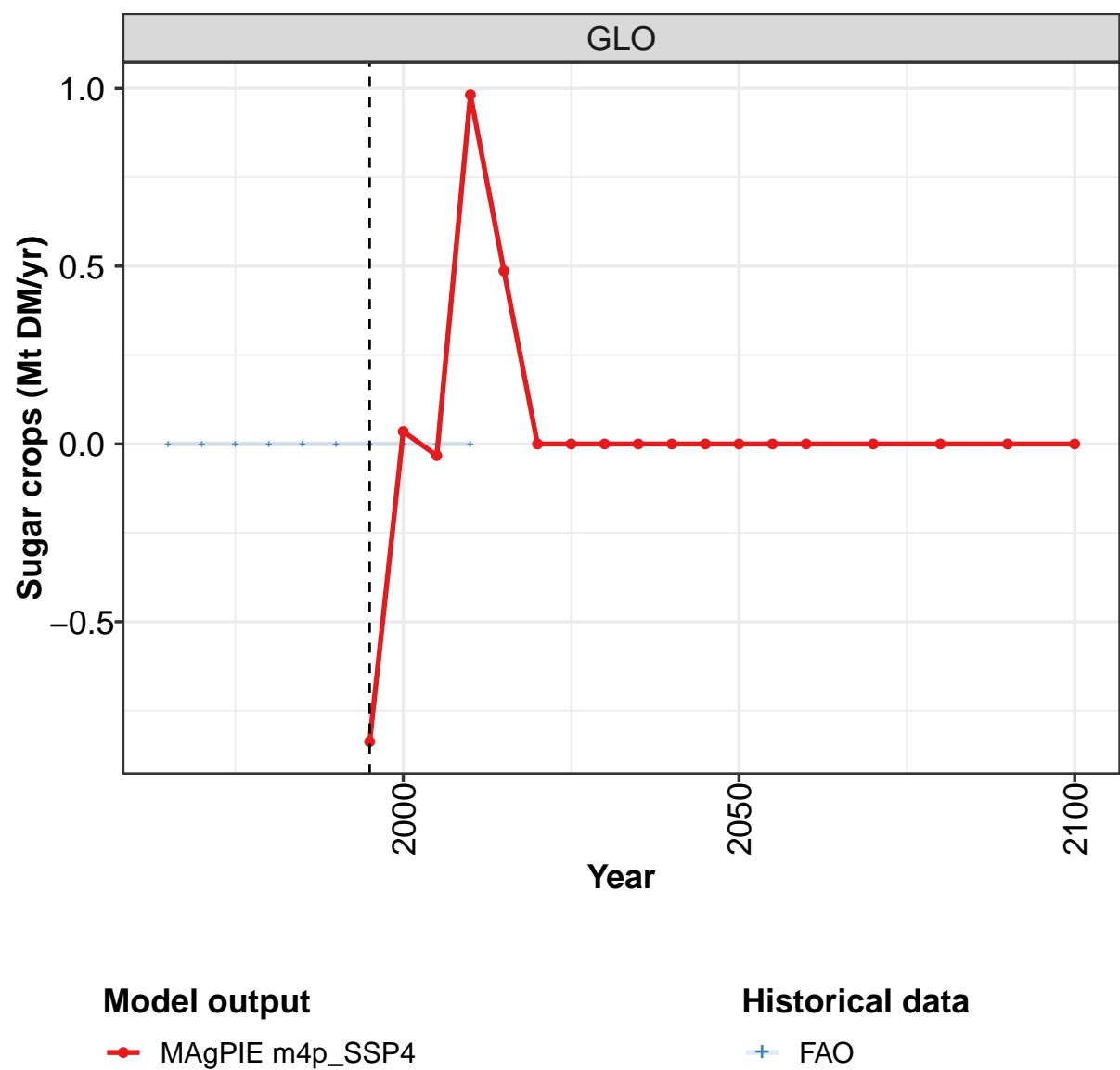
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	-0.0	0.0	-0.0	0.0	0.0
CAZ	-2.4	-2.8	-3.2	-3.9	-4.5	-4.9	-5.4
CHA	-0.0	-0.0	-0.0	13.1	11.1	9.3	9.1
EUR	-16.1	-18.3	-20.0	-23.4	-26.4	-27.4	-25.3
IND	9.6	10.3	11.3	13.3	14.9	16.1	17.1
JPN	-0.9	-0.9	-0.9	-0.9	-0.9	-0.8	-0.7
LAM	26.9	33.4	43.5	34.6	50.8	51.1	50.9
MEA	-2.0	-2.2	-2.6	-3.2	-3.8	-4.2	-4.9
NEU	-1.3	-1.4	-1.6	-1.8	-2.0	-2.2	-2.3
OAS	11.7	12.3	12.5	13.4	13.5	12.4	10.0
REF	-4.6	-5.0	-5.2	-6.0	-6.9	-7.8	-8.1
SSA	-14.0	-17.7	-25.7	-25.7	-35.1	-29.9	-28.0
USA	-6.9	-7.6	-8.3	-9.6	-10.7	-11.7	-12.3

Table 1888: MAgPIE m4p\_SSP4 — 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



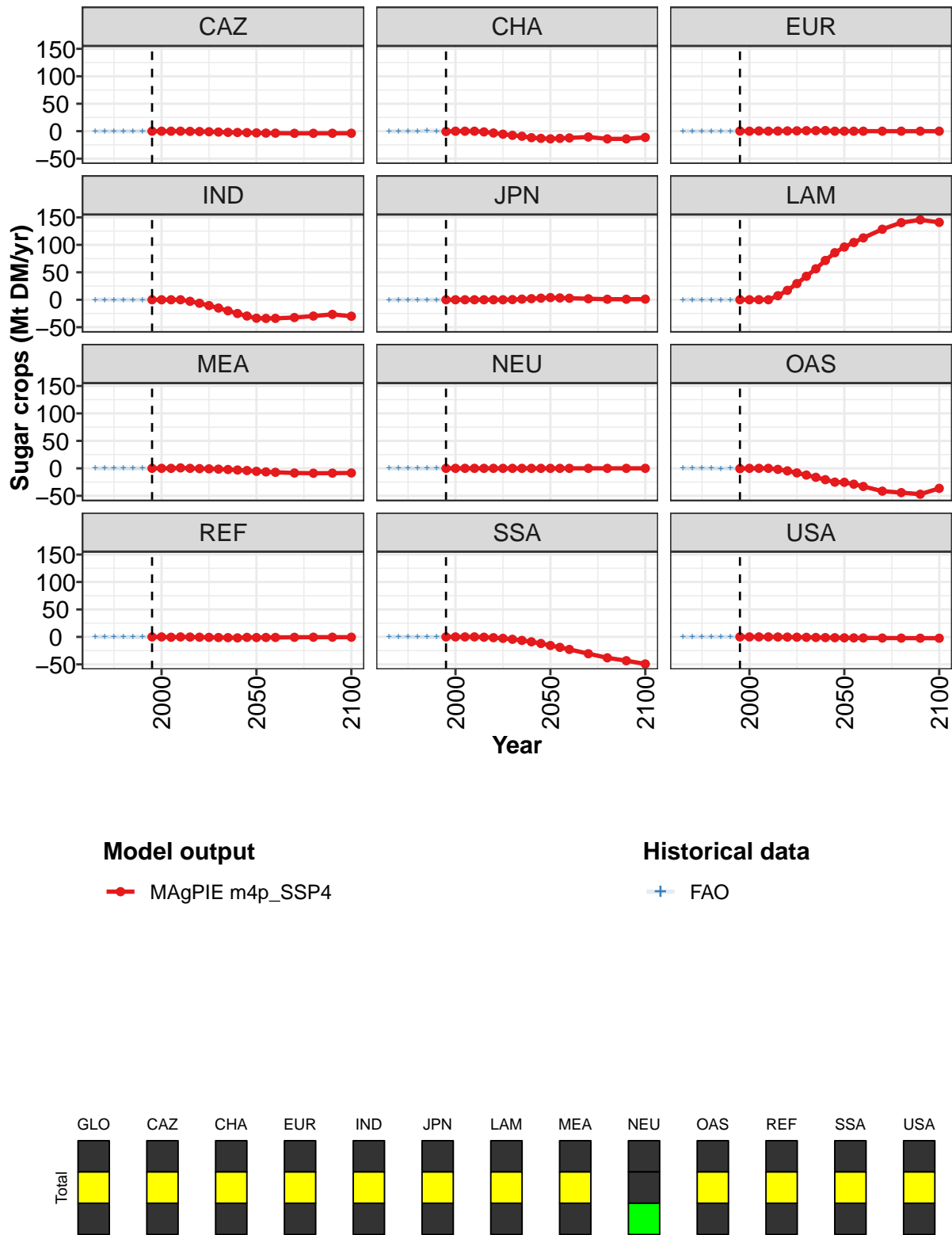


Figure 497: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Sugar crops (Mt DM/yr)

	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	-2	-3
CHA	-1	0	0	0	-1	-3	-5	-8	-9	-12	-13
EUR	0	-0	0	0	0	0	1	1	1	1	-0
IND	0	-0	0	0	-3	-6	-11	-15	-20	-25	-30
JPN	-0	0	0	0	0	0	0	0	1	2	3
LAM	0	0	0	0	7	17	29	43	56	72	86
MEA	0	0	0	1	0	-1	-1	-1	-2	-3	-4
NEU	0	0	0	0	-0	-0	-0	-0	-0	-0	-0
OAS	-1	0	0	0	-2	-5	-8	-12	-16	-21	-25
REF	0	0	-1	0	-0	-1	-1	-1	-1	-2	-1
SSA	0	-0	0	0	-1	-1	-3	-4	-6	-9	-12
USA	0	0	-0	0	-0	-0	-1	-1	-1	-1	-1

Table 1890: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Sugar crops (Mt DM/yr) [PART 1/2]

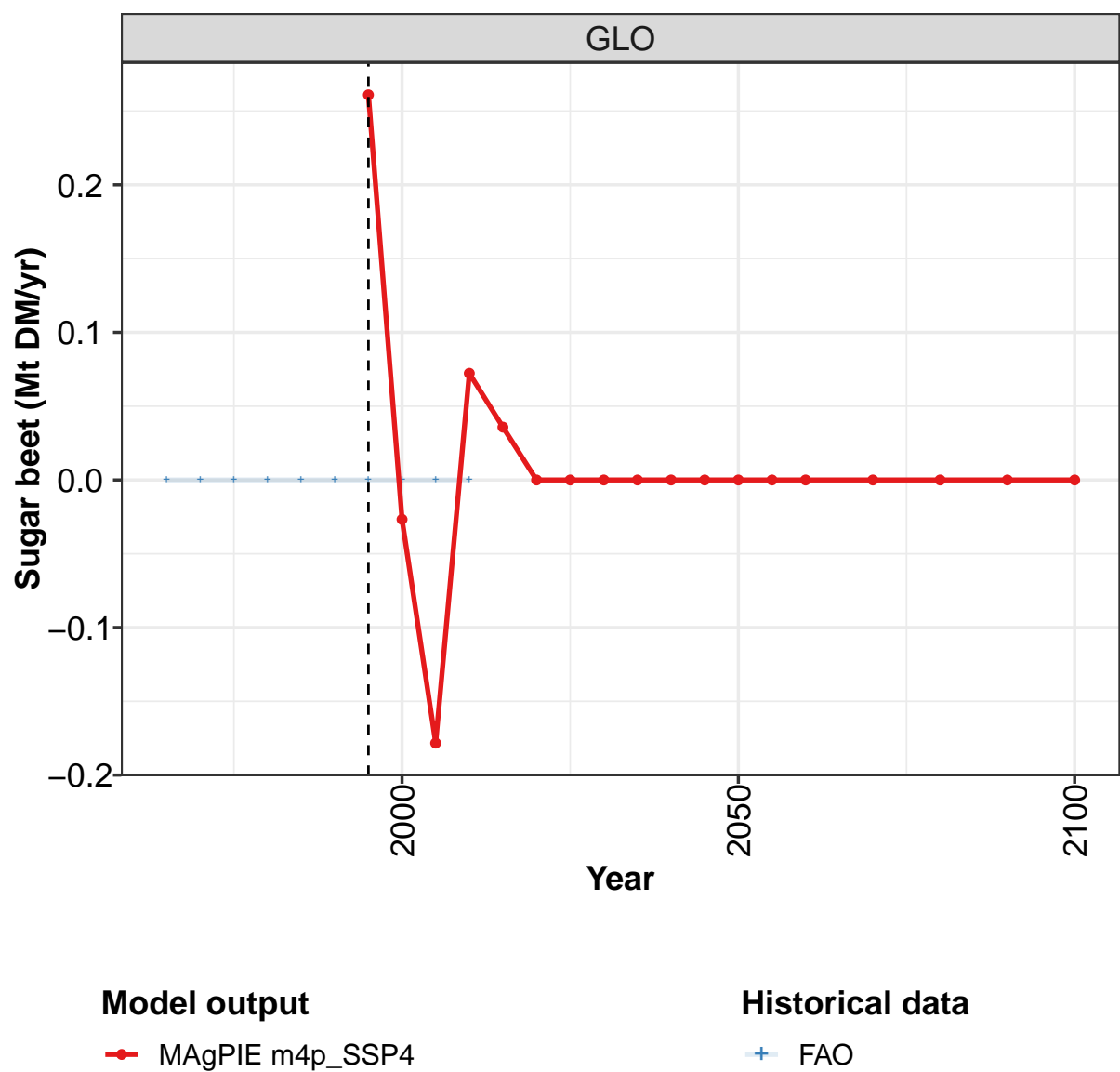
	2050	2055	2060	2070	2080	2090	2100
GLO	-0	0	-0	0	-0	-0	-0
CAZ	-3	-3	-4	-4	-4	-4	-4
CHA	-14	-13	-12	-11	-14	-14	-11
EUR	-0	-0	-0	-0	-0	-0	-0
IND	-34	-34	-34	-32	-30	-27	-30
JPN	4	3	3	2	1	1	1
LAM	96	104	113	128	140	145	141
MEA	-5	-6	-7	-8	-9	-9	-8
NEU	-0	-0	-0	-0	-0	-0	-0
OAS	-25	-29	-33	-42	-44	-47	-36
REF	-1	-1	-1	-1	-1	-1	-1
SSA	-16	-19	-23	-31	-38	-43	-49
USA	-2	-2	-2	-2	-2	-2	-2

Table 1891: MAgPIE m4p\_SSP4 — 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



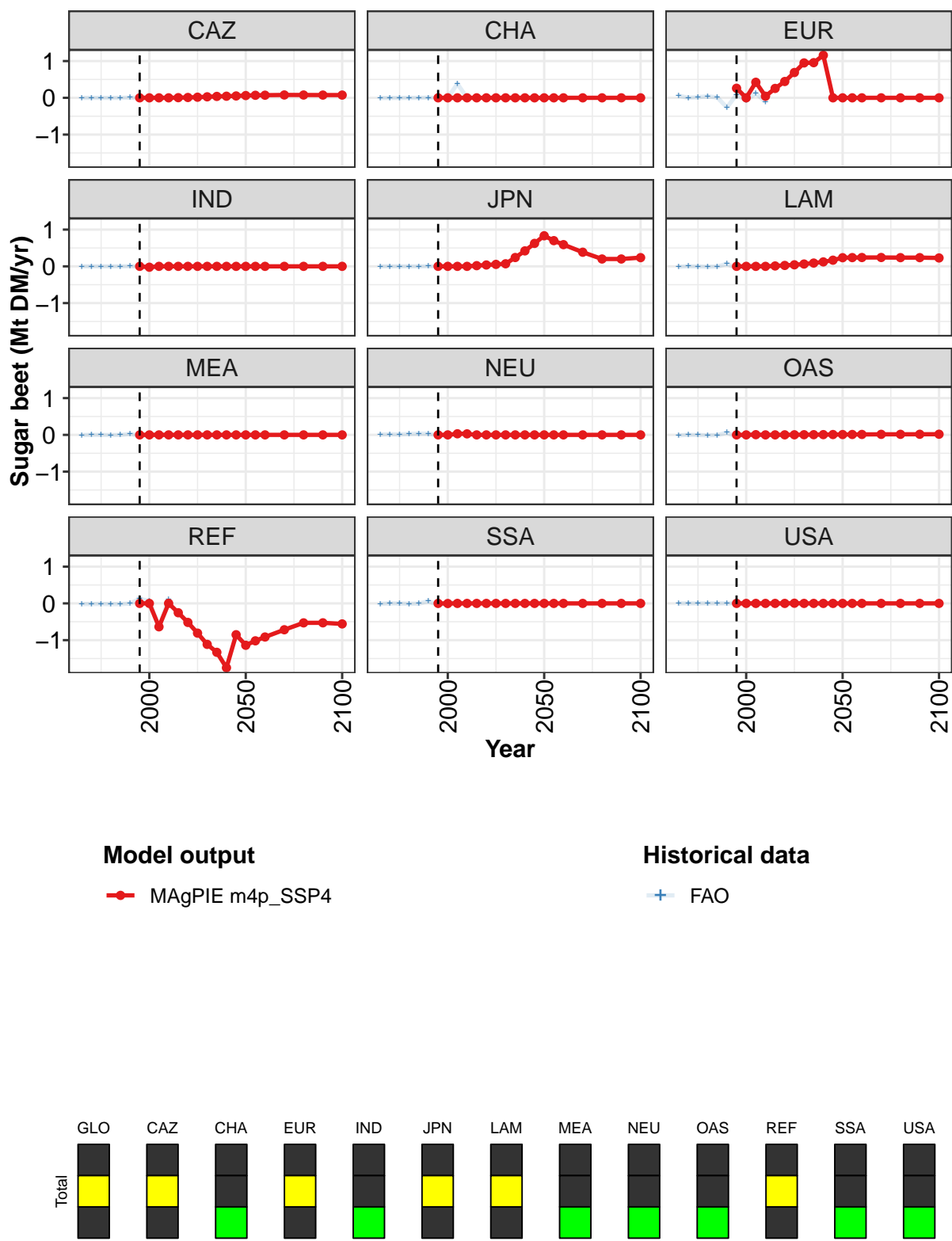


Figure 498: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Sugar crops—Sugar beet (Mt DM/yr)

	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	0.04	0.05
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	0.44	0.69	0.95	0.96	1.16	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	0.07	0.24	0.42	0.62
LAM	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.06	0.09	0.12	0.17
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	-1.11	-1.33	-1.75	-0.85
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\_SSP4 — 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	0.06	0.07	0.07	0.08	0.08	0.08	0.08
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	0.83	0.70	0.59	0.38	0.20	0.20	0.24
LAM	0.24	0.24	0.24	0.24	0.24	0.24	0.23
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	0.02	0.02	0.02
REF	-1.14	-1.02	-0.91	-0.72	-0.53	-0.53	-0.56
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

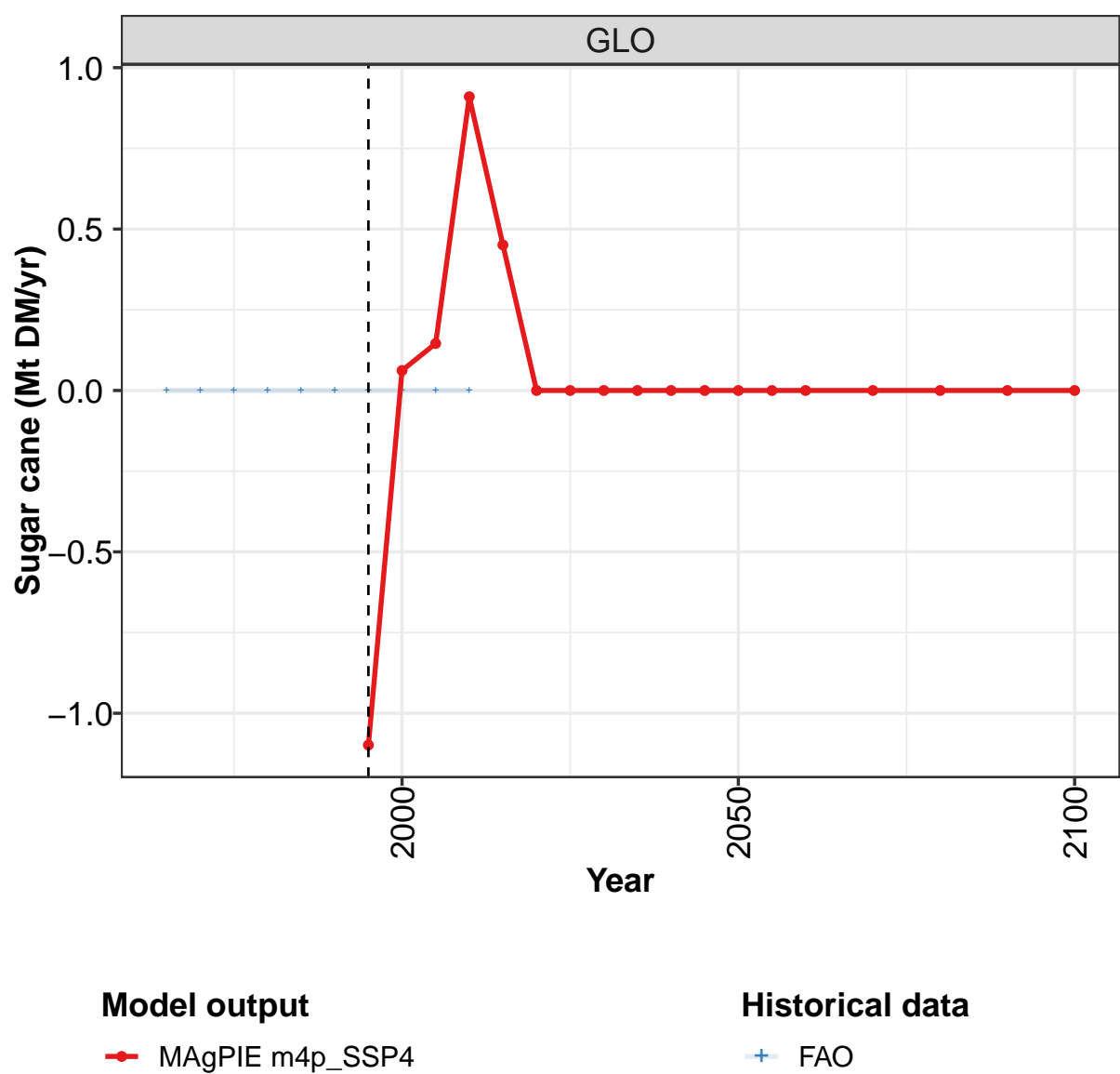
Table 1894: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Sugar crops—Sugar beet (Mt DM/yr) [PART 2/2]

	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



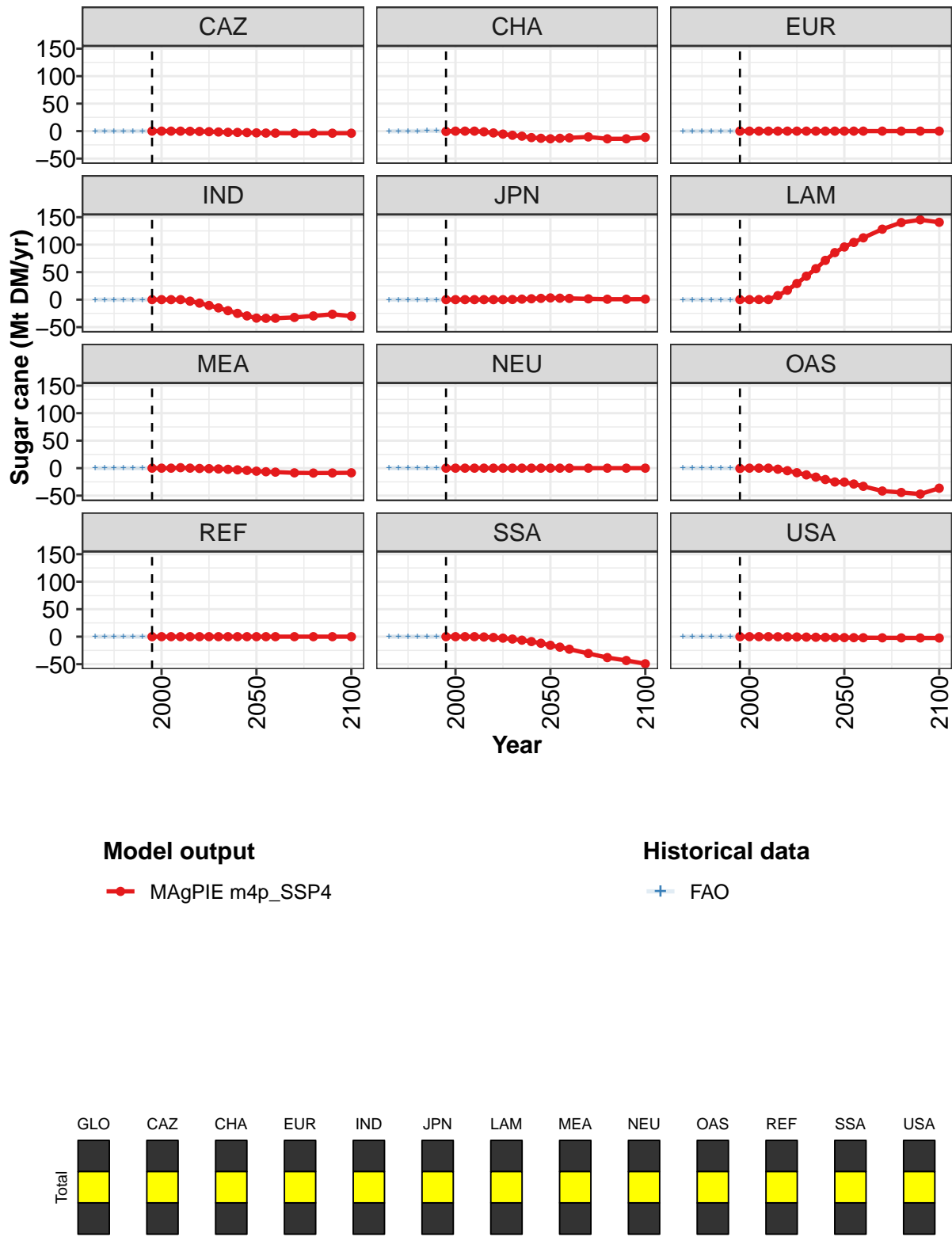


Figure 499: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Sugar crops—Sugar cane (Mt DM/yr)

	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	-2	-3
CHA	-1	0	0	0	-1	-3	-5	-8	-9	-12	-13
EUR	0	-0	0	-0	-0	-0	-0	-0	-0	-0	-0
IND	0	0	0	0	-3	-6	-11	-15	-20	-25	-30
JPN	-0	0	0	0	-0	-0	-0	0	1	2	2
LAM	0	0	0	0	7	17	29	43	56	71	86
MEA	0	0	0	1	0	-1	-1	-1	-2	-3	-4
NEU	0	0	0	-0	-0	-0	-0	-0	-0	-0	-0
OAS	-1	0	0	0	-2	-5	-8	-12	-16	-21	-25
REF	0	0	0	0	0	0	0	0	0	0	0
SSA	0	0	0	0	-1	-1	-3	-4	-6	-9	-12
USA	0	0	-0	0	-0	-0	-1	-1	-1	-1	-1

Table 1896: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 1/2]

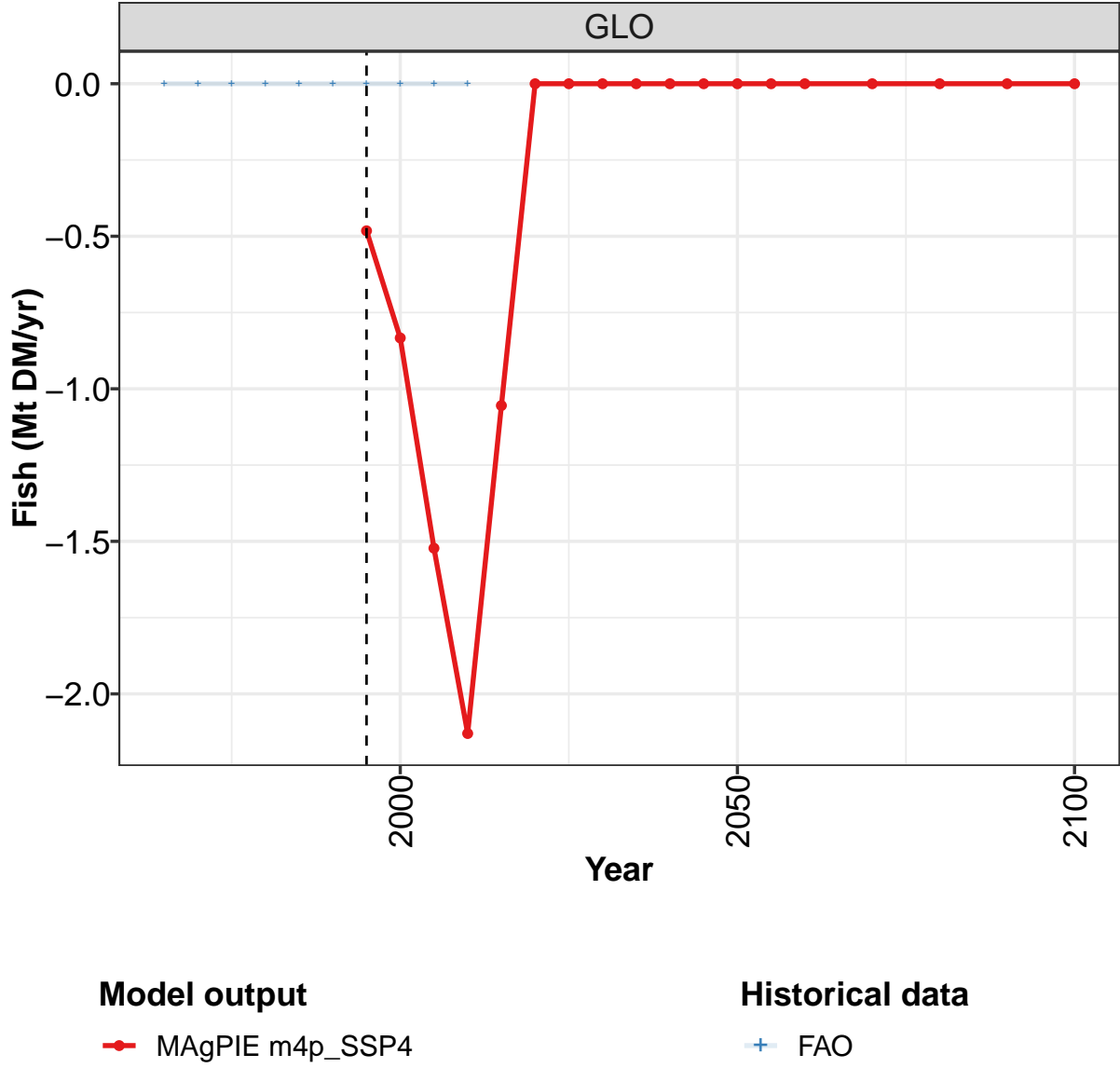
	2050	2055	2060	2070	2080	2090	2100
GLO	-0	0	-0	0	0	-0	-0
CAZ	-3	-4	-4	-4	-4	-4	-4
CHA	-14	-13	-12	-11	-14	-14	-11
EUR	-0	-0	-0	-0	-0	-0	-0
IND	-34	-34	-34	-32	-30	-27	-30
JPN	3	3	2	1	1	1	1
LAM	96	104	112	128	140	145	141
MEA	-5	-6	-7	-8	-9	-9	-8
NEU	-0	-0	-0	-0	-0	-0	-0
OAS	-25	-29	-33	-42	-44	-47	-36
REF	0	0	0	0	0	0	0
SSA	-16	-19	-23	-31	-38	-43	-49
USA	-2	-2	-2	-2	-2	-2	-2

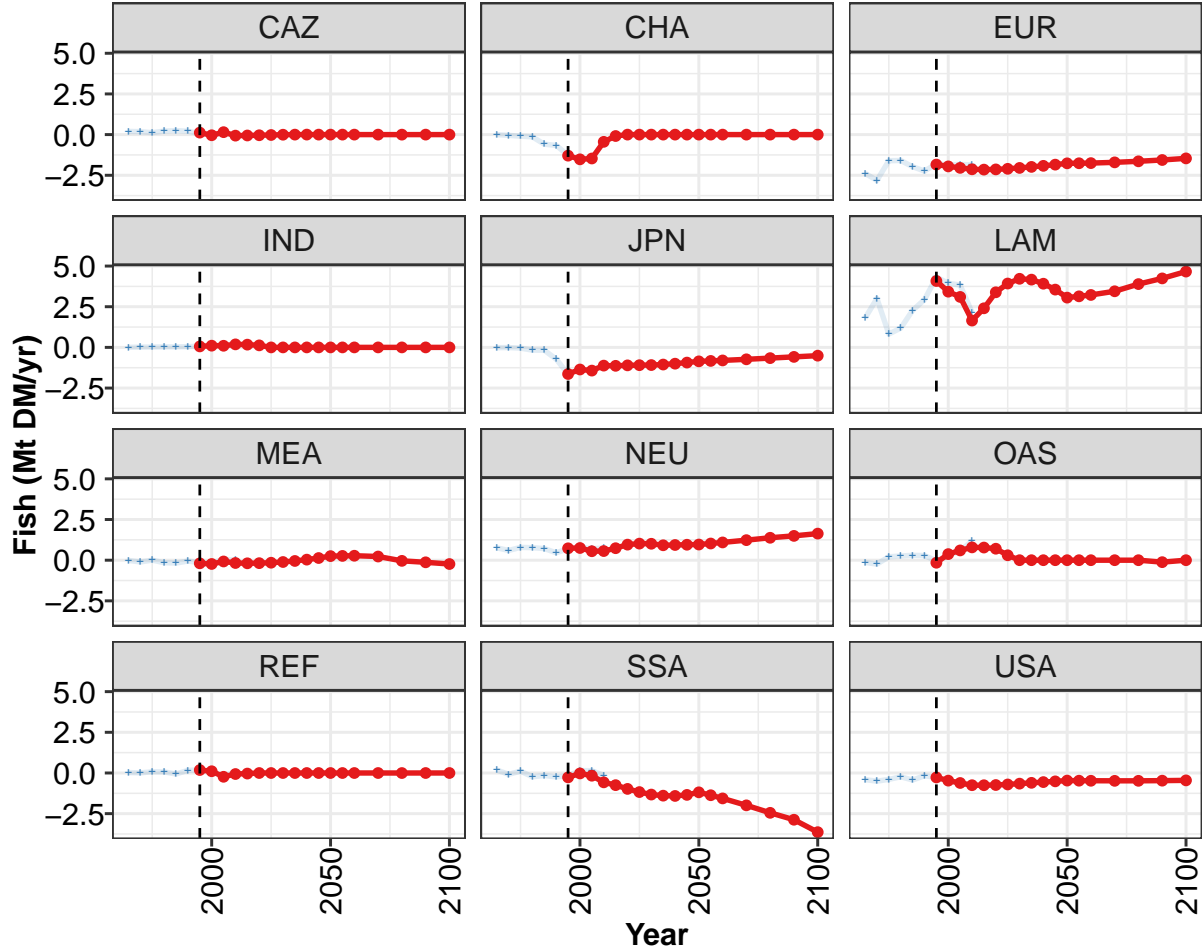
Table 1897: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Crops—Sugar crops—Sugar cane (Mt DM/yr) [PART 2/2]

	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





Model output

—•— MAGPIE m4p\_SSP4

Historical data

+— FAO

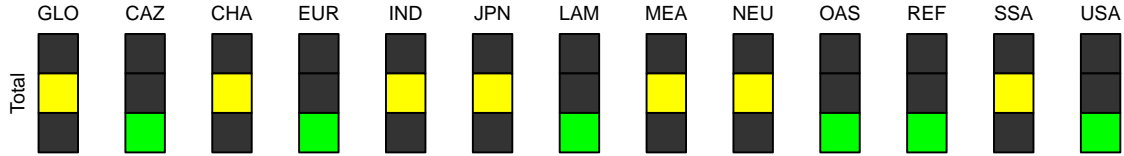


Figure 500: MAGPIE m4p\_SSP4 — Trade—Net-Trade—Fish (Mt DM/yr)

	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	-2.14	-2.10	-2.05	-1.98	-1.92	-1.85
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	-1.10	-1.09	-1.08	-1.05	-1.00	-0.93
LAM	4.08	3.43	3.10	1.65	2.40	3.39	3.93	4.22	4.17	3.92	3.55
MEA	-0.19	-0.23	-0.08	-0.17	-0.19	-0.18	-0.15	-0.11	-0.05	0.03	0.13
NEU	0.73	0.75	0.55	0.56	0.74	0.96	1.02	1.01	0.92	0.94	0.95
OAS	-0.16	0.37	0.60	0.79	0.78	0.71	0.30	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	-0.75	-0.98	-1.17	-1.33	-1.39	-1.41	-1.35
USA	-0.27	-0.47	-0.61	-0.75	-0.75	-0.74	-0.70	-0.65	-0.61	-0.56	-0.51

Table 1899: MAgPIE m4p-SSP4 — Trade—Net-Trade—Fish (Mt DM/yr) [PART 1/2]

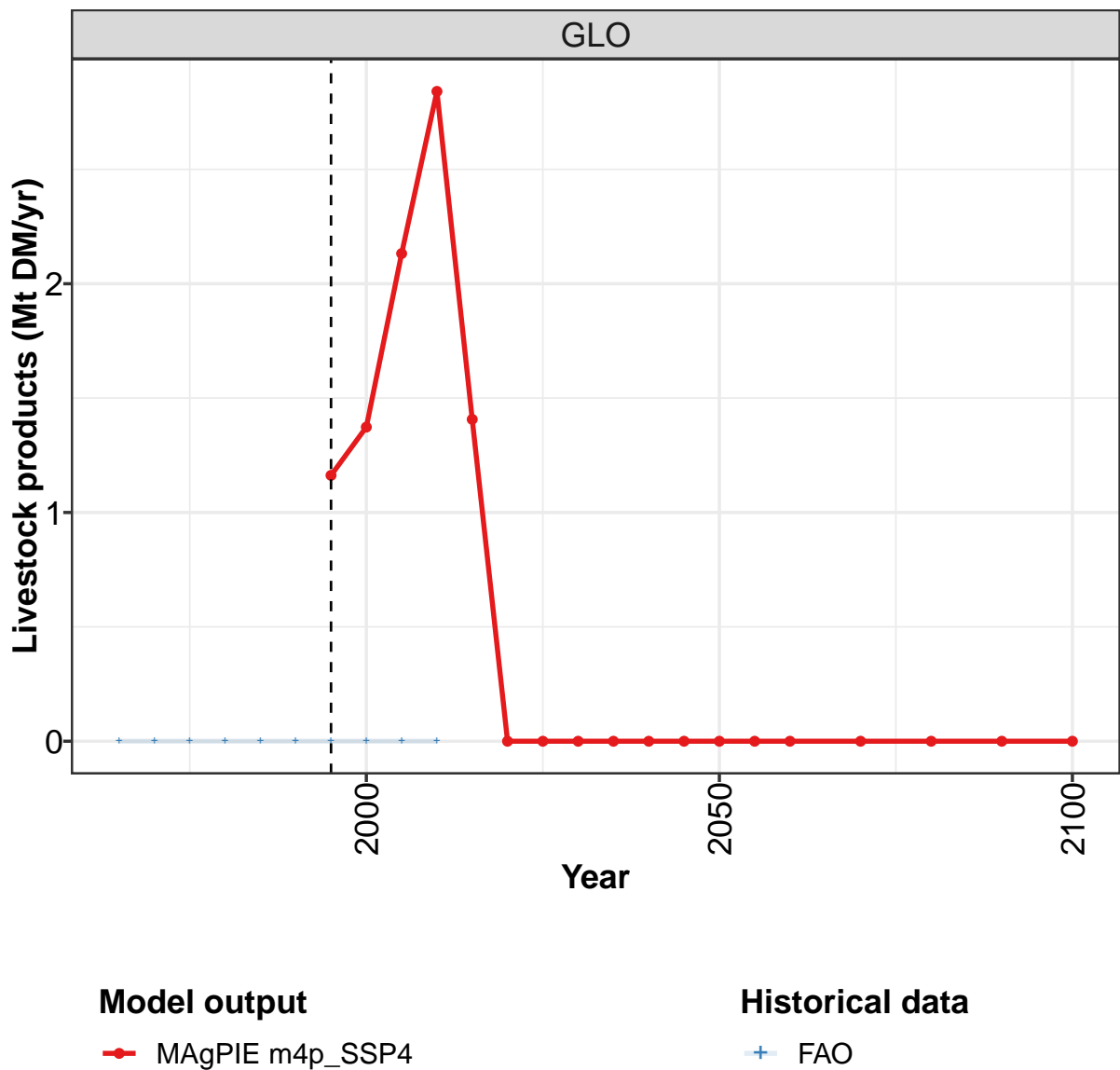
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.00	0.00	0.00	0.00	-0.00	-0.00	0.00
CHA	0.00	0.00	-0.00	0.00	0.00	0.00	0.00
EUR	-1.76	-1.76	-1.75	-1.71	-1.64	-1.56	-1.46
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	-0.86	-0.83	-0.80	-0.73	-0.66	-0.58	-0.51
LAM	3.06	3.14	3.22	3.45	3.89	4.24	4.66
MEA	0.25	0.26	0.28	0.23	-0.04	-0.13	-0.23
NEU	0.96	1.03	1.09	1.23	1.38	1.50	1.63
OAS	0.00	0.00	0.00	0.00	0.00	-0.12	0.00
REF	0.00	0.00	0.00	0.00	-0.00	0.00	0.00
SSA	-1.19	-1.37	-1.56	-1.99	-2.45	-2.87	-3.64
USA	-0.47	-0.47	-0.48	-0.48	-0.48	-0.47	-0.45

Table 1900: MAgPIE m4p-SSP4 — 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



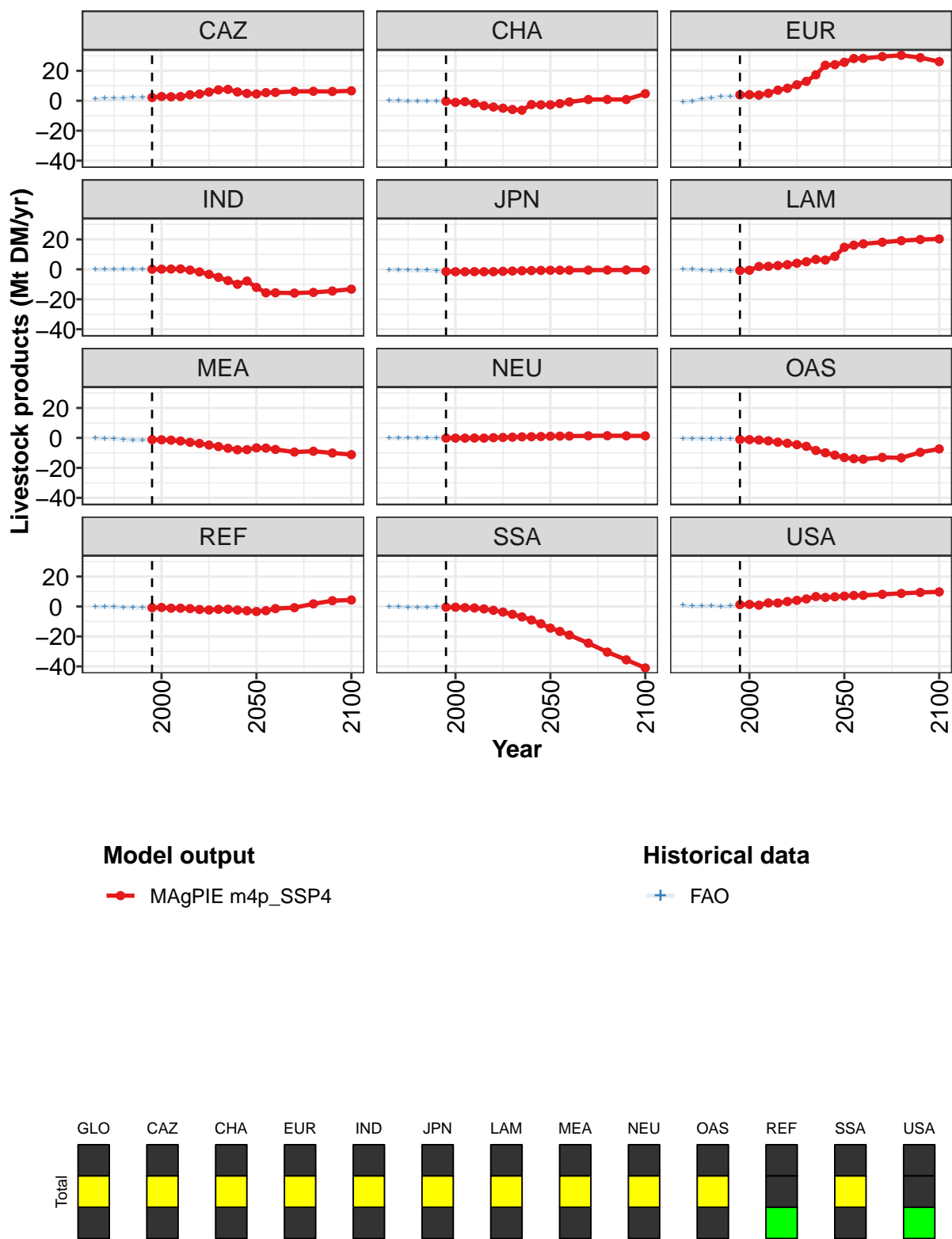


Figure 501: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products (Mt DM/yr)



	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	4.0	4.5	5.8	7.3	7.6	5.9	4.9
CHA	-0.3	-1.1	-0.6	-1.8	-3.4	-4.2	-5.0	-5.8	-6.3	-2.6	-2.7
EUR	3.9	4.1	3.8	5.0	7.1	8.3	10.7	13.0	17.3	23.7	24.1
IND	0.1	0.1	0.2	0.3	-0.5	-1.7	-3.4	-5.3	-7.5	-10.0	-7.8
JPN	-1.5	-1.6	-1.6	-1.6	-1.6	-1.6	-1.3	-1.1	-1.0	-0.8	-0.7
LAM	-0.8	-0.6	1.9	2.0	2.5	3.1	4.1	5.1	6.6	6.2	8.6
MEA	-1.2	-1.3	-1.5	-2.1	-2.9	-3.7	-4.8	-5.8	-6.9	-7.9	-7.8
NEU	-0.1	-0.1	-0.2	-0.1	-0.1	0.1	0.3	0.5	0.7	0.8	0.9
OAS	-1.1	-1.2	-1.4	-2.0	-2.9	-3.6	-4.5	-5.6	-8.4	-9.9	-11.5
REF	-0.8	-0.7	-1.1	-1.1	-1.4	-2.0	-2.3	-1.9	-1.8	-2.4	-2.9
SSA	-0.5	-0.5	-0.8	-1.0	-1.6	-2.5	-3.7	-5.2	-6.9	-9.0	-11.5
USA	1.2	1.4	0.9	2.3	2.3	3.3	4.1	5.0	6.6	6.1	6.4

Table 1902: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products (Mt DM/yr) [PART 1/2]

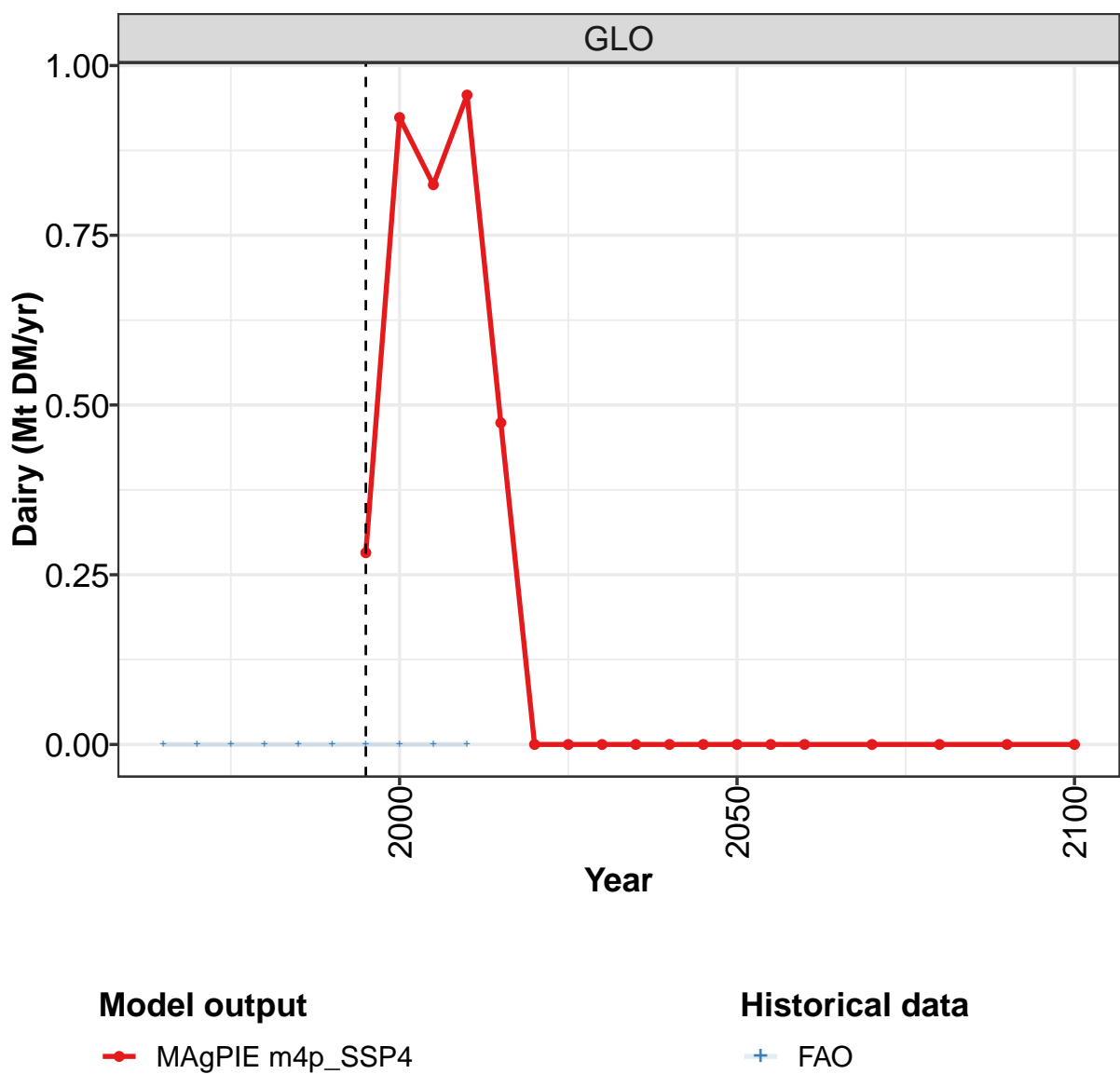
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	-0.0	-0.0	-0.0	0.0
CAZ	4.5	5.4	5.6	6.3	6.3	6.2	6.6
CHA	-2.7	-1.9	-0.8	0.8	0.9	0.8	4.7
EUR	25.7	28.2	28.3	29.5	30.4	28.8	26.1
IND	-12.1	-15.7	-15.7	-15.9	-15.4	-14.5	-13.2
JPN	-0.6	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4
LAM	14.7	16.1	17.0	18.1	19.1	19.9	20.3
MEA	-6.7	-6.8	-7.7	-9.4	-8.9	-10.1	-11.2
NEU	1.1	1.2	1.2	1.4	1.5	1.4	1.4
OAS	-13.1	-13.9	-14.2	-13.0	-13.3	-9.6	-7.4
REF	-3.4	-2.8	-1.4	-0.8	1.7	3.9	4.3
SSA	-14.5	-16.7	-19.1	-24.5	-30.5	-35.6	-41.0
USA	6.9	7.4	7.4	8.1	8.7	9.4	9.7

Table 1903: MAgPIE m4p\_SSP4 — 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



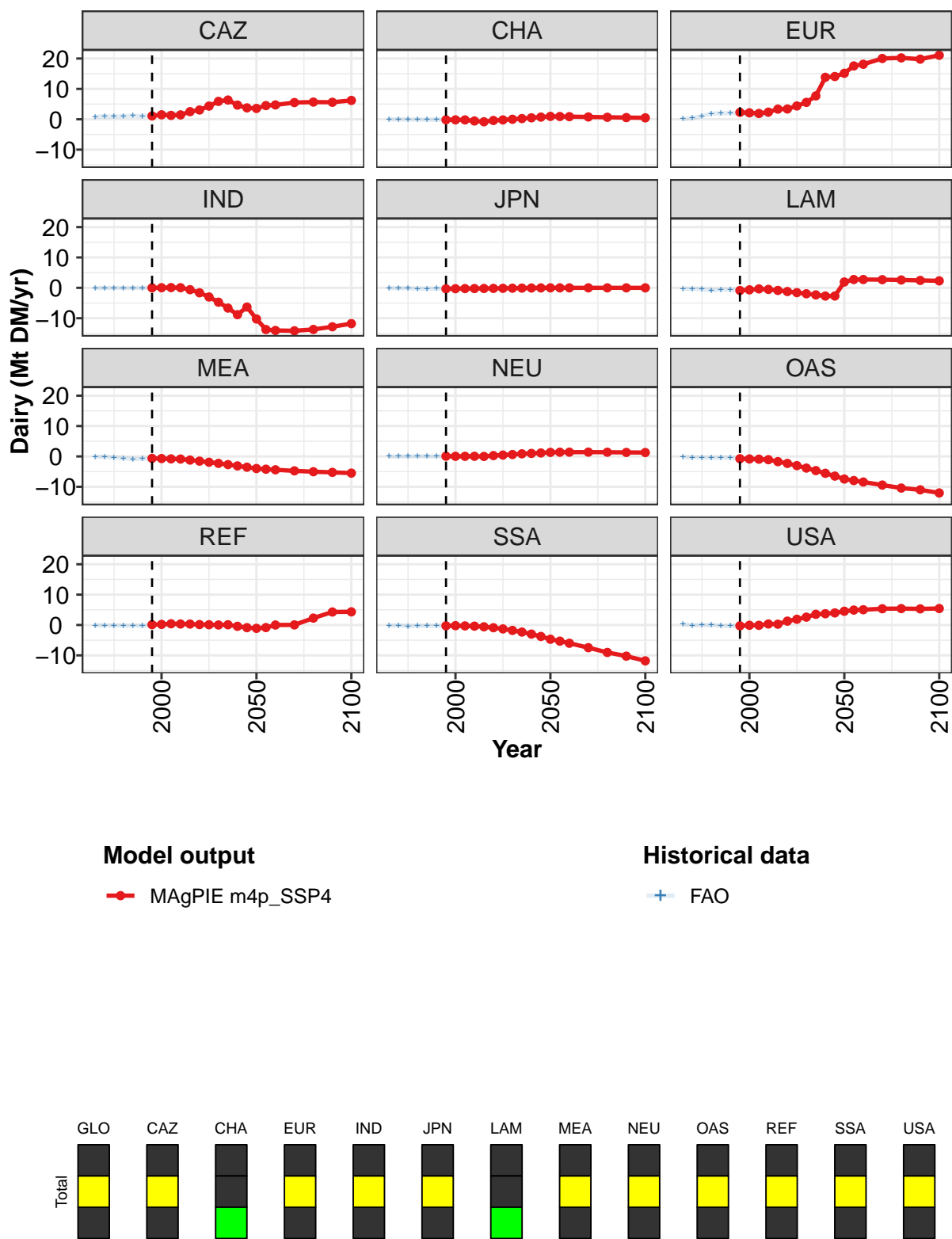


Figure 502: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Dairy (Mt DM/yr)

	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	2.5	3.1	4.3	5.9	6.3	4.7	3.8
CHA	-0.2	-0.2	-0.2	-0.6	-0.8	-0.4	-0.2	0.0	0.2	0.5	0.7
EUR	2.3	2.1	1.9	2.3	3.3	3.4	4.4	5.6	7.7	13.8	14.1
IND	0.0	0.0	0.1	0.0	-0.6	-1.6	-3.0	-4.7	-6.7	-8.8	-6.3
JPN	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.0
LAM	-0.9	-0.7	-0.3	-0.5	-0.8	-1.2	-1.6	-1.9	-2.3	-2.7	-2.7
MEA	-0.6	-0.7	-0.8	-0.9	-1.2	-1.5	-1.9	-2.3	-2.7	-3.1	-3.5
NEU	0.1	0.0	0.0	0.0	0.0	0.3	0.4	0.6	0.9	1.0	1.1
OAS	-0.8	-0.8	-0.9	-1.1	-1.7	-2.3	-3.0	-3.8	-4.7	-5.6	-6.5
REF	0.1	0.2	0.4	0.3	0.3	0.1	0.1	0.0	0.1	-0.4	-0.9
SSA	-0.3	-0.2	-0.3	-0.4	-0.6	-0.9	-1.3	-1.8	-2.3	-3.0	-3.8
USA	-0.3	-0.1	-0.1	0.3	0.3	1.3	1.9	2.6	3.5	3.7	4.0

Table 1905: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Dairy (Mt DM/yr) [PART 1/2]

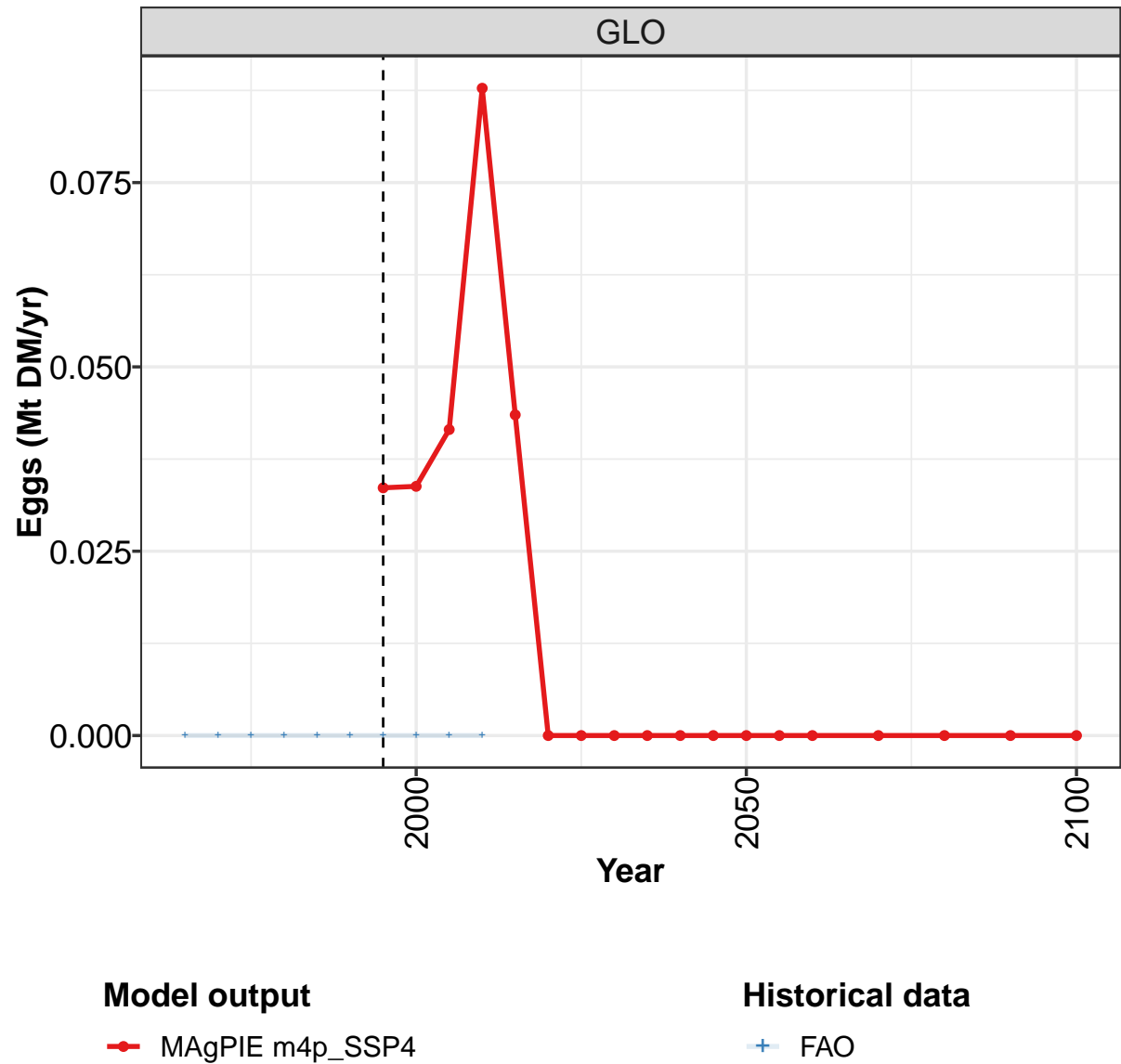
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	-0.0	-0.0	0.0	0.0
CAZ	3.6	4.5	4.7	5.5	5.7	5.6	6.2
CHA	1.0	0.9	0.9	0.8	0.7	0.6	0.5
EUR	15.1	17.6	18.1	20.0	20.2	19.8	21.1
IND	-10.2	-13.7	-14.0	-14.1	-13.7	-12.8	-11.8
JPN	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAM	1.9	2.7	2.7	2.7	2.6	2.4	2.3
MEA	-4.0	-4.2	-4.4	-4.8	-5.0	-5.2	-5.5
NEU	1.3	1.4	1.4	1.4	1.4	1.3	1.3
OAS	-7.4	-7.9	-8.4	-9.4	-10.4	-11.0	-12.0
REF	-1.1	-0.8	0.0	0.0	2.3	4.3	4.3
SSA	-4.7	-5.3	-6.0	-7.5	-9.0	-10.2	-11.8
USA	4.5	4.9	5.0	5.4	5.4	5.3	5.4

Table 1906: MAgPIE m4p\_SSP4 — 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



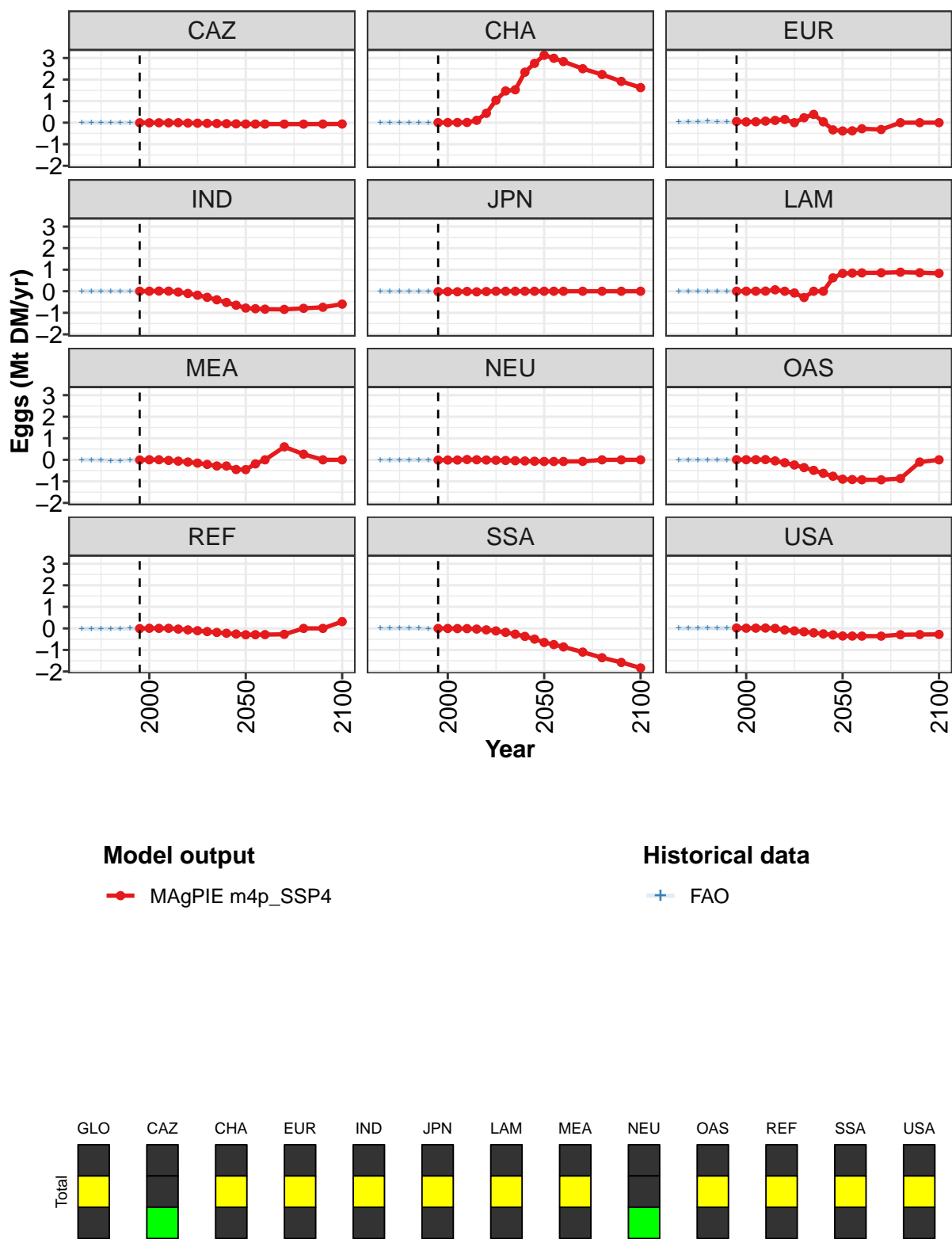


Figure 503: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Eggs (Mt DM/yr)

	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	-0.02	-0.03	-0.04	-0.05	-0.05
CHA	0.00	0.01	0.01	0.01	0.11	0.44	1.04	1.47	1.53	2.34	2.75
EUR	0.06	0.04	0.04	0.07	0.11	0.15	0.00	0.23	0.38	0.04	-0.33
IND	0.00	0.00	0.01	0.01	-0.04	-0.10	-0.18	-0.28	-0.40	-0.52	-0.65
JPN	-0.02	-0.02	-0.02	-0.01	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00
LAM	0.00	0.00	0.00	0.01	0.07	0.00	-0.08	-0.29	0.00	0.00	0.62
MEA	-0.01	0.00	0.00	-0.03	-0.06	-0.10	-0.15	-0.21	-0.28	-0.29	-0.45
NEU	-0.01	-0.01	-0.01	0.01	0.00	-0.01	-0.02	-0.03	-0.04	-0.05	-0.07
OAS	0.01	0.01	0.01	0.01	-0.05	-0.13	-0.24	-0.36	-0.49	-0.63	-0.76
REF	-0.01	0.00	0.00	0.00	-0.03	-0.07	-0.11	-0.15	-0.19	-0.23	-0.26
SSA	-0.00	-0.00	-0.01	-0.01	-0.03	-0.07	-0.12	-0.19	-0.27	-0.37	-0.50
USA	0.02	0.01	0.01	0.02	0.00	-0.07	-0.12	-0.16	-0.21	-0.25	-0.30

Table 1908: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Eggs (Mt DM/yr) [PART 1/2]

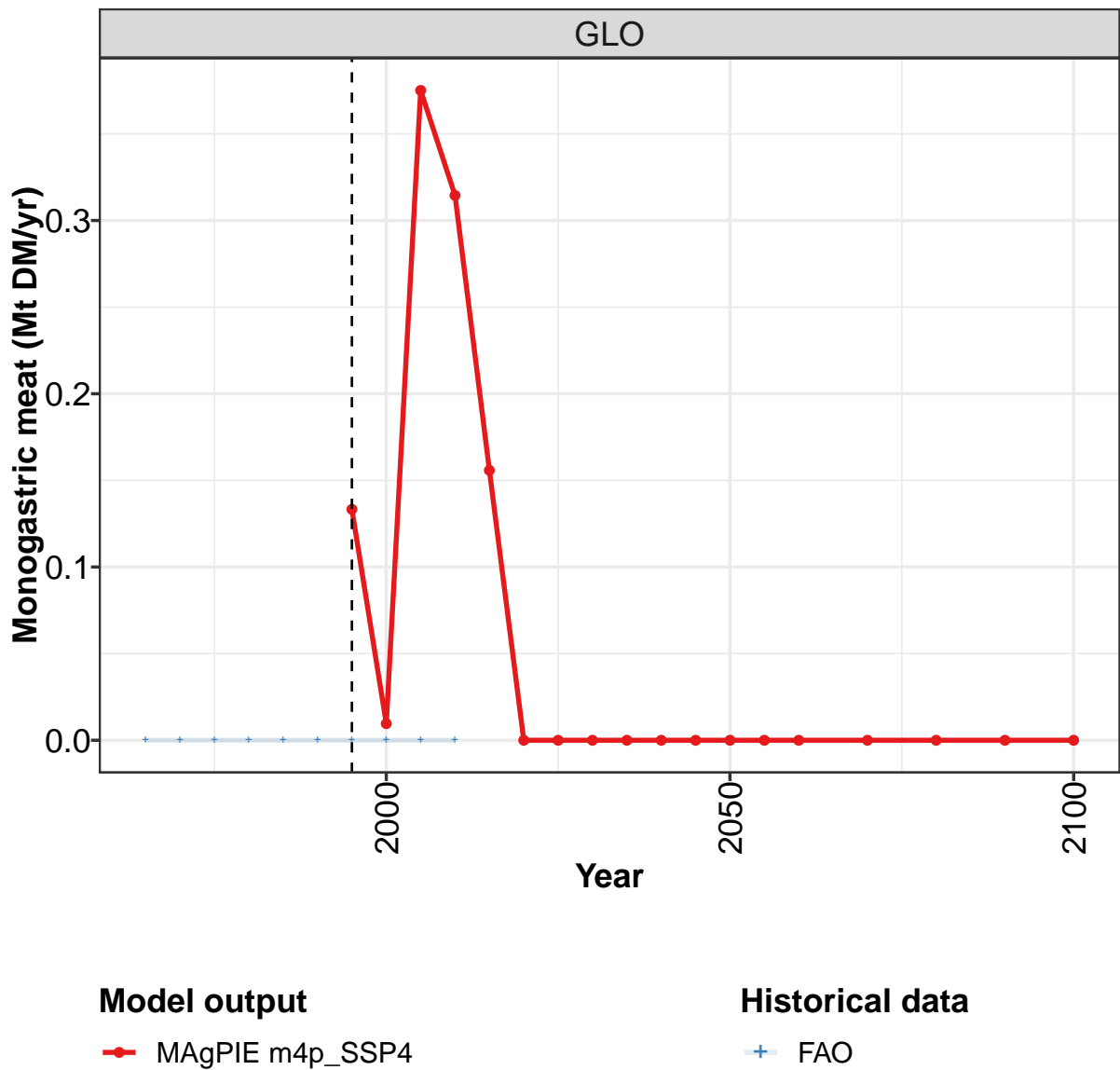
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	-0.00	0.00	0.00	0.00	0.00	0.00
CAZ	-0.06	-0.06	-0.07	-0.07	-0.07	-0.07	-0.06
CHA	3.13	2.99	2.83	2.50	2.24	1.92	1.63
EUR	-0.39	-0.38	-0.28	-0.32	0.00	0.00	0.00
IND	-0.78	-0.81	-0.83	-0.84	-0.79	-0.74	-0.60
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.83	0.84	0.85	0.86	0.89	0.86	0.83
MEA	-0.45	-0.19	0.00	0.60	0.26	0.00	0.00
NEU	-0.08	-0.08	-0.08	-0.07	0.00	0.00	0.00
OAS	-0.90	-0.91	-0.92	-0.93	-0.87	-0.10	0.00
REF	-0.29	-0.29	-0.29	-0.28	0.00	0.00	0.31
SSA	-0.65	-0.75	-0.86	-1.10	-1.36	-1.58	-1.84
USA	-0.35	-0.35	-0.36	-0.36	-0.29	-0.28	-0.28

Table 1909: MAgPIE m4p\_SSP4 — 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





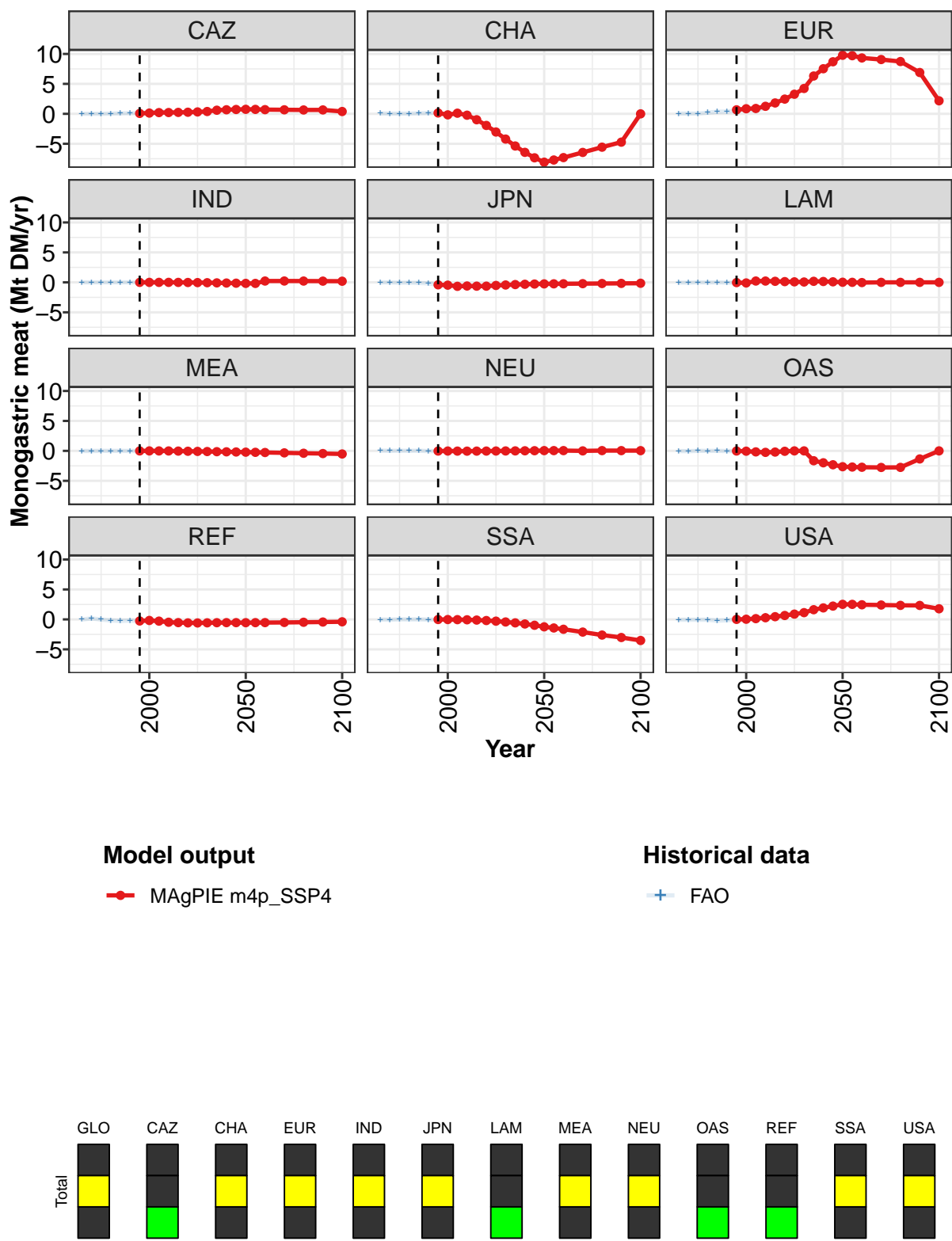


Figure 504: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Monogastric meat (Mt DM/yr)

	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	0.27	0.32	0.39	0.61	0.68	0.73
CHA	0.15	-0.17	0.11	-0.23	-0.99	-1.93	-3.03	-4.21	-5.37	-6.43	-7.34
EUR	0.67	0.85	0.90	1.26	1.82	2.46	3.28	4.23	6.32	7.53	8.69
IND	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.04	-0.06	-0.08	-0.11	-0.14
JPN	-0.41	-0.47	-0.66	-0.61	-0.63	-0.63	-0.52	-0.44	-0.37	-0.32	-0.28
LAM	-0.04	-0.10	0.22	0.22	0.18	0.12	0.09	0.06	0.17	0.14	0.09
MEA	-0.00	-0.00	-0.01	-0.01	-0.03	-0.06	-0.08	-0.11	-0.13	-0.16	-0.18
NEU	-0.02	-0.02	-0.04	-0.04	-0.04	-0.03	-0.02	-0.01	0.00	0.02	0.03
OAS	-0.02	-0.05	-0.17	-0.24	-0.19	-0.07	0.00	0.00	-1.64	-1.98	-2.32
REF	-0.26	-0.17	-0.28	-0.47	-0.53	-0.58	-0.59	-0.57	-0.55	-0.54	-0.54
SSA	-0.02	-0.02	-0.04	-0.06	-0.11	-0.19	-0.29	-0.43	-0.58	-0.76	-0.98
USA	0.01	0.03	0.13	0.28	0.46	0.66	0.88	1.13	1.62	1.92	2.22

Table 1911: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Monogastric meat (Mt DM/yr)  
[PART 1/2]

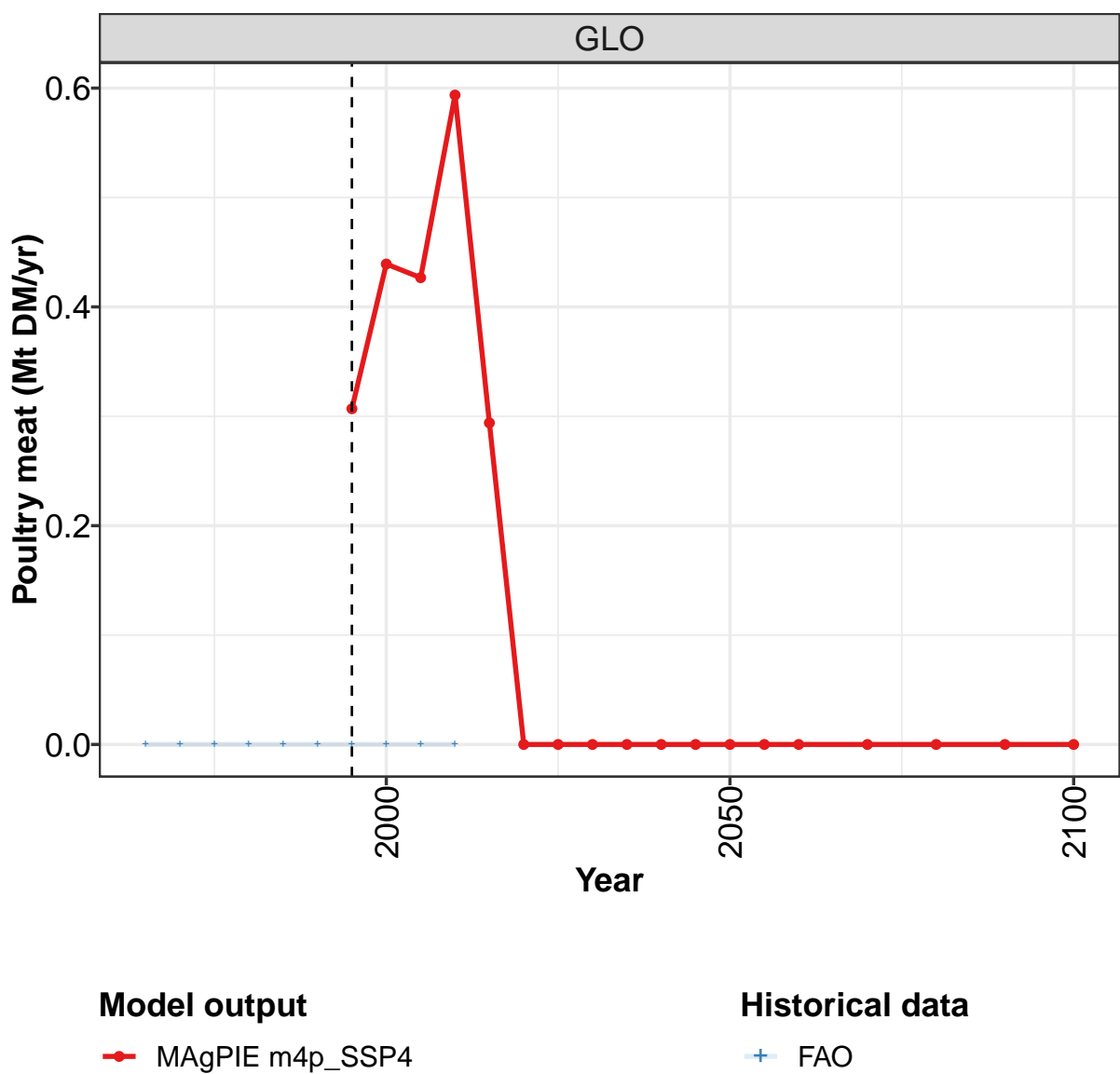
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.76	0.75	0.70	0.67	0.65	0.65	0.39
CHA	-8.07	-7.71	-7.30	-6.44	-5.56	-4.73	0.00
EUR	9.78	9.71	9.33	9.06	8.73	6.90	2.18
IND	-0.17	-0.17	0.22	0.23	0.22	0.21	0.19
JPN	-0.25	-0.24	-0.24	-0.21	-0.19	-0.17	-0.15
LAM	0.02	0.01	-0.03	-0.00	0.00	0.00	0.00
MEA	-0.21	-0.24	-0.27	-0.33	-0.39	-0.44	-0.52
NEU	0.05	0.05	0.05	0.00	0.05	0.04	0.04
OAS	-2.64	-2.69	-2.73	-2.77	-2.75	-1.34	0.00
REF	-0.54	-0.54	-0.53	-0.51	-0.47	-0.44	-0.40
SSA	-1.24	-1.43	-1.64	-2.11	-2.61	-3.02	-3.52
USA	2.52	2.51	2.44	2.40	2.34	2.34	1.78

Table 1912: MAgPIE m4p\_SSP4 — 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



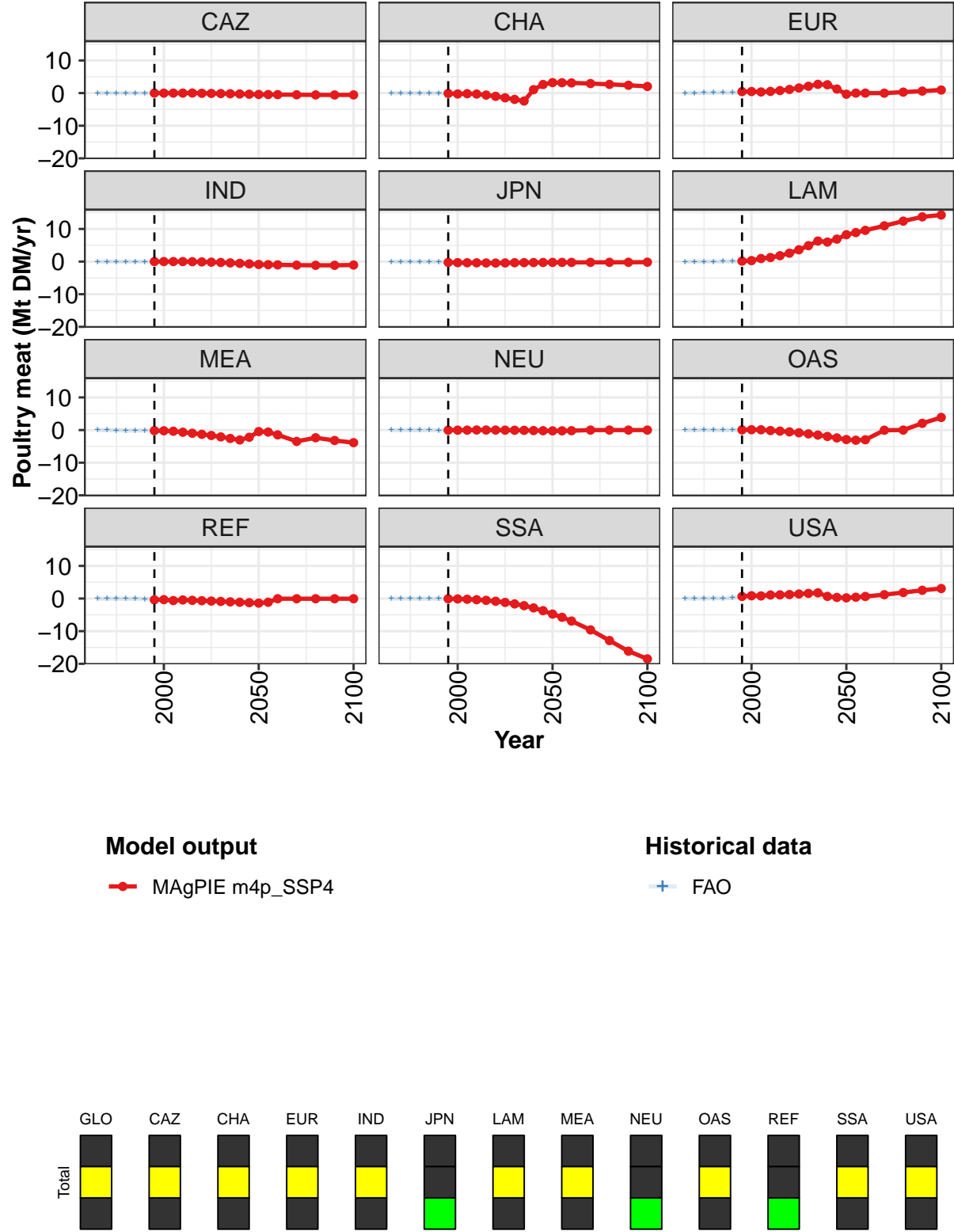


Figure 505: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Poultry meat (Mt DM/yr)

	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	-0.1	-0.2	-0.3	-0.3
CHA	-0.1	-0.3	-0.2	-0.3	-0.6	-1.0	-1.4	-1.9	-2.4	1.1	2.6
EUR	0.5	0.5	0.4	0.5	0.8	1.1	1.6	2.1	2.7	2.6	1.2
IND	0.0	0.0	0.0	0.0	-0.0	-0.1	-0.2	-0.3	-0.4	-0.5	-0.7
JPN	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3
LAM	0.1	0.3	0.9	1.2	1.8	2.6	3.6	4.9	6.3	6.0	6.9
MEA	-0.2	-0.2	-0.4	-0.7	-1.0	-1.3	-1.7	-2.1	-2.6	-3.0	-2.2
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	-0.8	-1.2	-1.5	-2.0	-2.4
REF	-0.4	-0.3	-0.6	-0.4	-0.5	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3
SSA	-0.1	-0.1	-0.2	-0.4	-0.6	-0.8	-1.2	-1.6	-2.2	-2.9	-3.7
USA	0.7	0.9	0.8	1.1	1.1	1.2	1.4	1.6	1.7	0.7	0.3

Table 1914: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Poultry meat (Mt DM/yr) [PART 1/2]

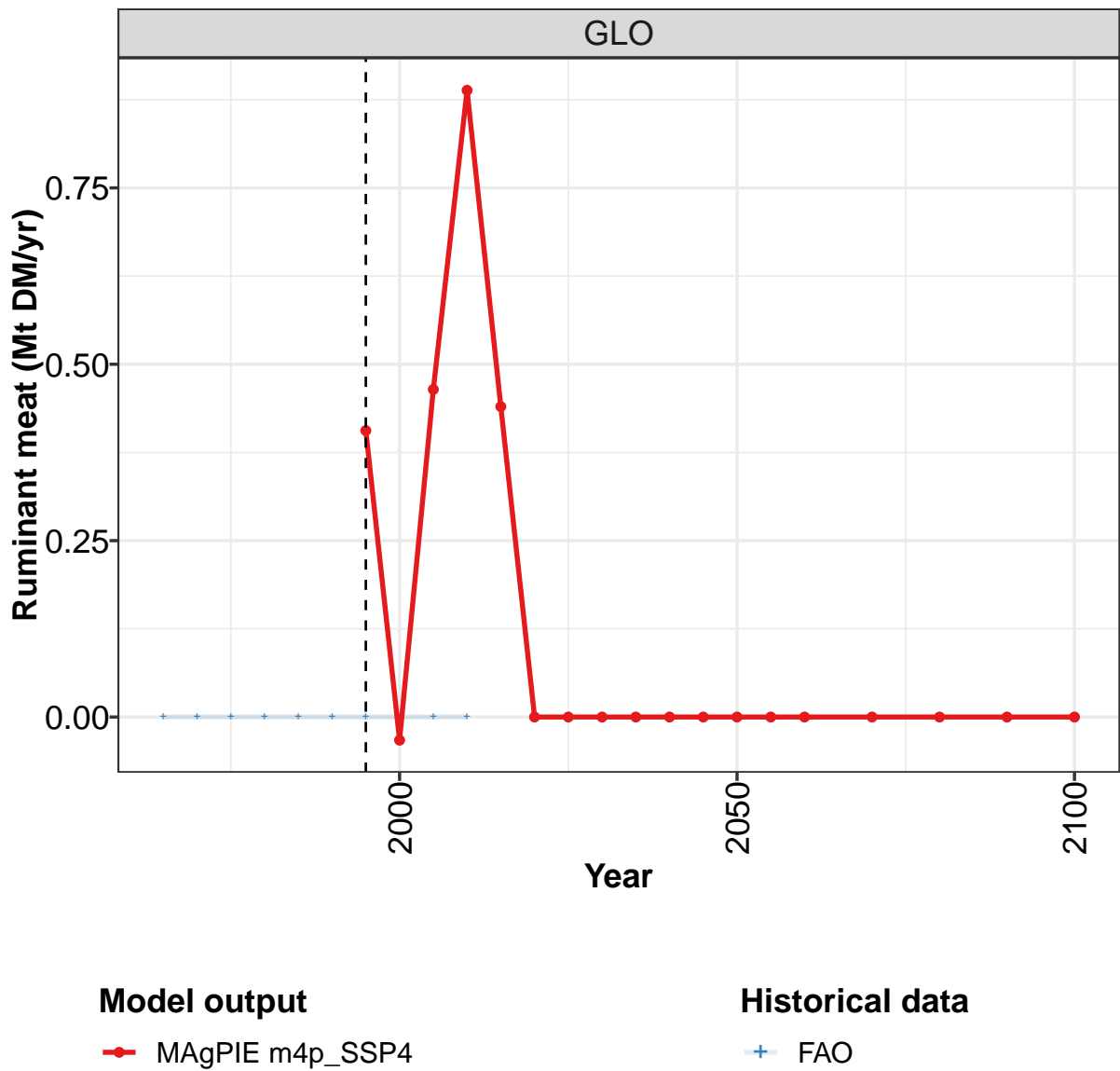
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	0.0	-0.0	0.0
CAZ	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.5
CHA	3.2	3.2	3.1	2.9	2.7	2.4	2.0
EUR	-0.3	0.0	0.0	-0.0	0.3	0.6	0.9
IND	-0.9	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1
JPN	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2
LAM	8.2	8.9	9.6	11.0	12.4	13.7	14.3
MEA	-0.5	-0.6	-1.5	-3.5	-2.4	-3.2	-3.9
NEU	-0.2	-0.2	-0.2	0.0	0.0	0.0	0.0
OAS	-2.9	-3.1	-3.0	-0.0	0.0	2.1	3.9
REF	-1.4	-1.1	-0.1	-0.1	-0.1	-0.1	-0.1
SSA	-4.8	-5.7	-6.9	-9.6	-12.9	-16.1	-18.5
USA	0.2	0.4	0.6	1.2	1.8	2.5	3.1

Table 1915: MAgPIE m4p\_SSP4 — 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



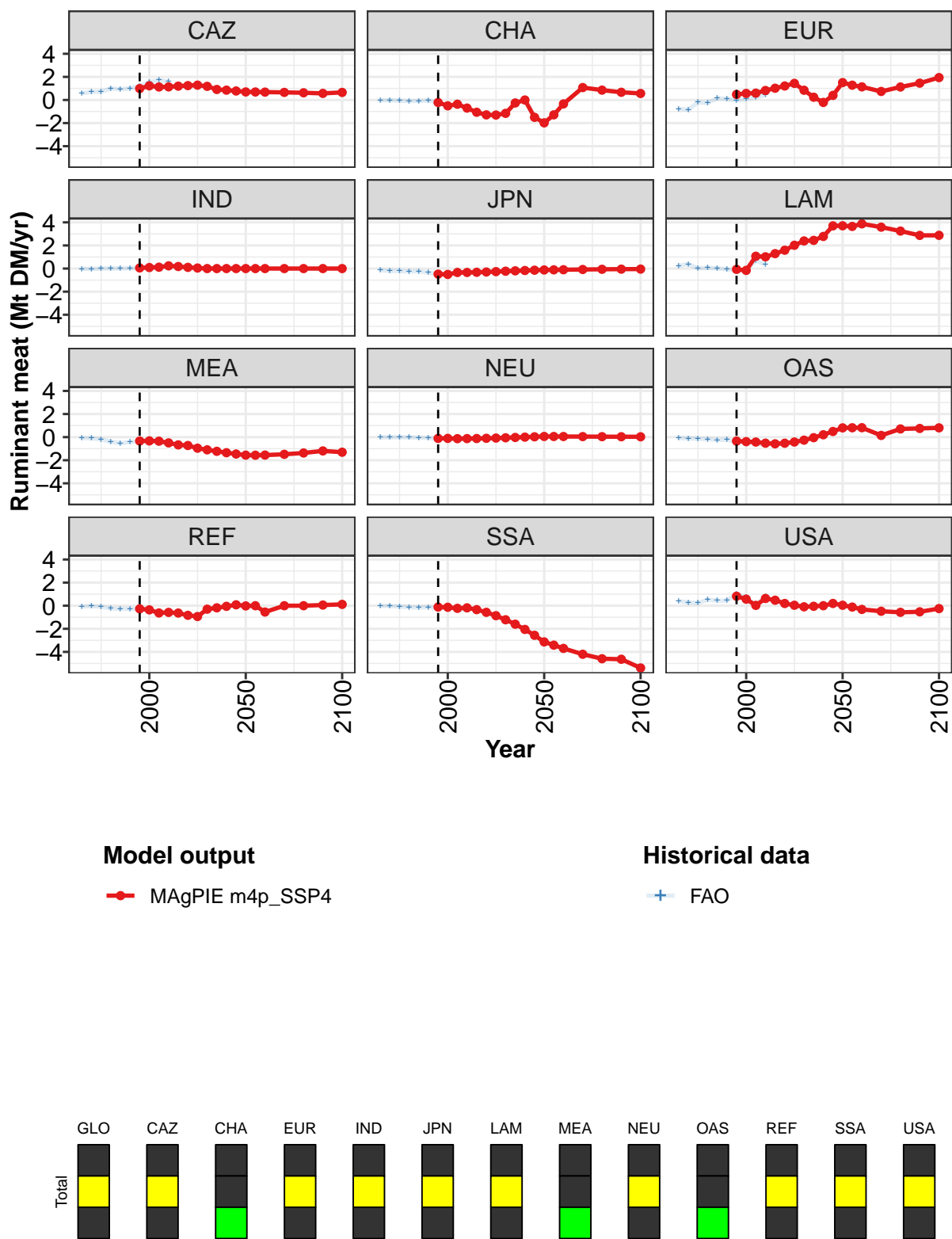


Figure 506: MAGPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Ruminant meat (Mt DM/yr)

	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	1.28	1.18	0.91	0.85	0.78
CHA	-0.22	-0.51	-0.37	-0.70	-1.06	-1.29	-1.30	-1.16	-0.26	-0.00	-1.50
EUR	0.48	0.57	0.59	0.82	1.02	1.21	1.44	0.84	0.24	-0.21	0.40
IND	0.06	0.09	0.12	0.23	0.18	0.10	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	-0.23	-0.20	-0.17	-0.14
LAM	-0.07	-0.16	1.07	1.02	1.29	1.59	2.02	2.39	2.44	2.78	3.70
MEA	-0.33	-0.32	-0.35	-0.50	-0.67	-0.72	-0.96	-1.10	-1.23	-1.35	-1.46
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	-0.42	-0.26	-0.05	0.21	0.49
REF	-0.27	-0.36	-0.63	-0.58	-0.63	-0.83	-0.94	-0.30	-0.18	-0.05	0.08
SSA	-0.12	-0.14	-0.23	-0.18	-0.34	-0.57	-0.86	-1.22	-1.60	-2.05	-2.56
USA	0.82	0.57	0.03	0.63	0.48	0.19	0.04	-0.09	-0.05	0.00	0.20

Table 1917: MAgPIE m4p\_SSP4 — 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	0.70	0.69	0.68	0.66	0.62	0.57	0.66
CHA	-1.98	-1.29	-0.34	1.08	0.85	0.67	0.56
EUR	1.51	1.28	1.14	0.74	1.12	1.46	1.94
IND	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JPN	-0.12	-0.11	-0.10	-0.08	-0.06	-0.05	-0.05
LAM	3.70	3.65	3.87	3.59	3.25	2.87	2.88
MEA	-1.56	-1.56	-1.55	-1.49	-1.37	-1.19	-1.31
NEU	0.06	0.06	0.05	0.05	0.04	0.03	0.03
OAS	0.80	0.81	0.82	0.15	0.71	0.75	0.81
REF	-0.02	0.00	-0.55	0.00	0.00	0.06	0.12
SSA	-3.13	-3.41	-3.70	-4.20	-4.59	-4.64	-5.39
USA	0.04	-0.12	-0.32	-0.48	-0.57	-0.53	-0.25

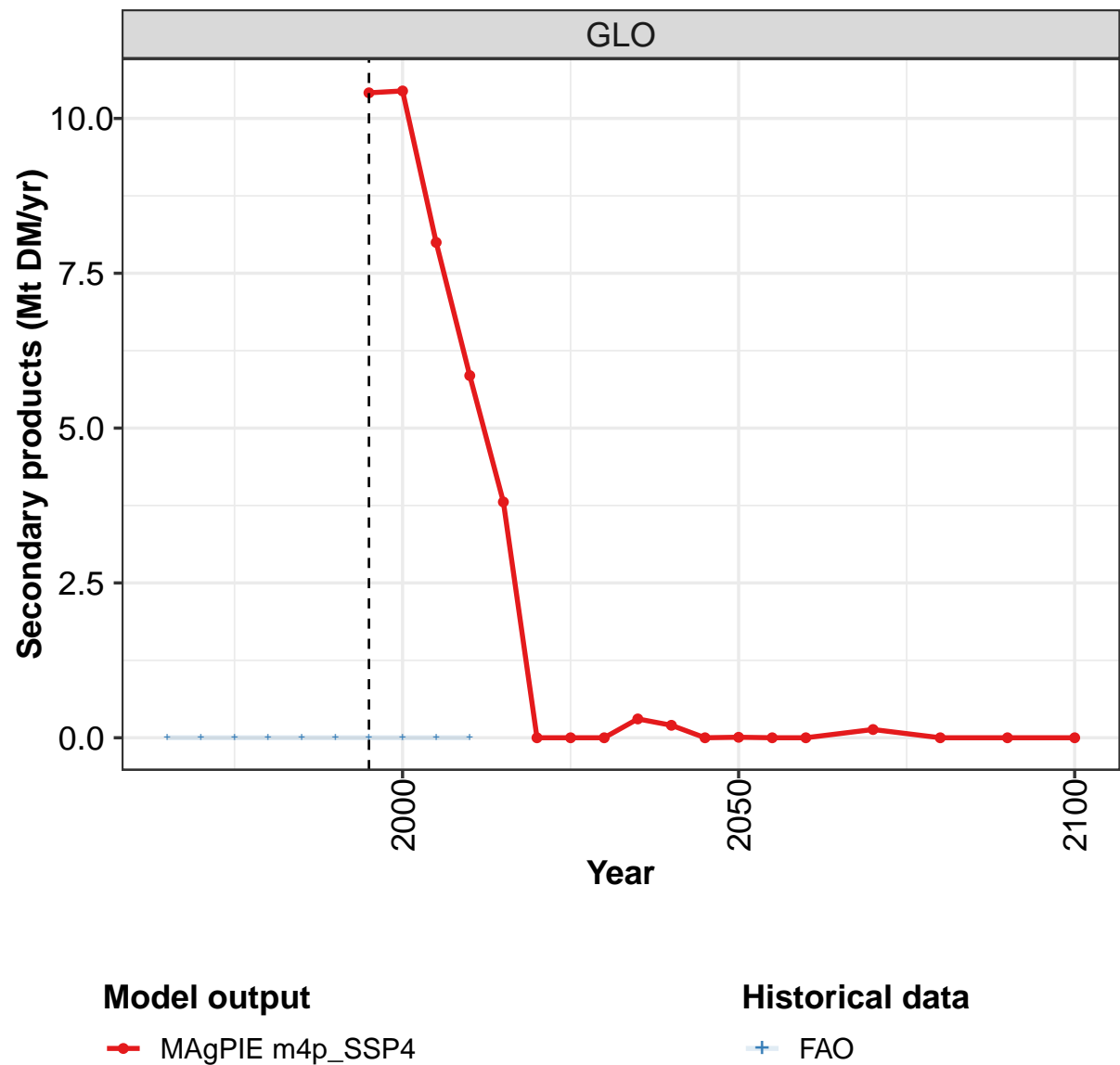
Table 1918: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Livestock products—Ruminant meat (Mt DM/yr)  
[PART 2/2]

	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



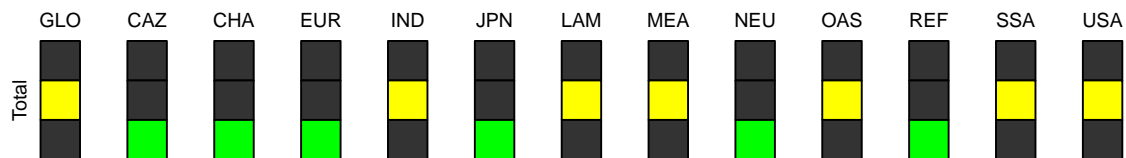
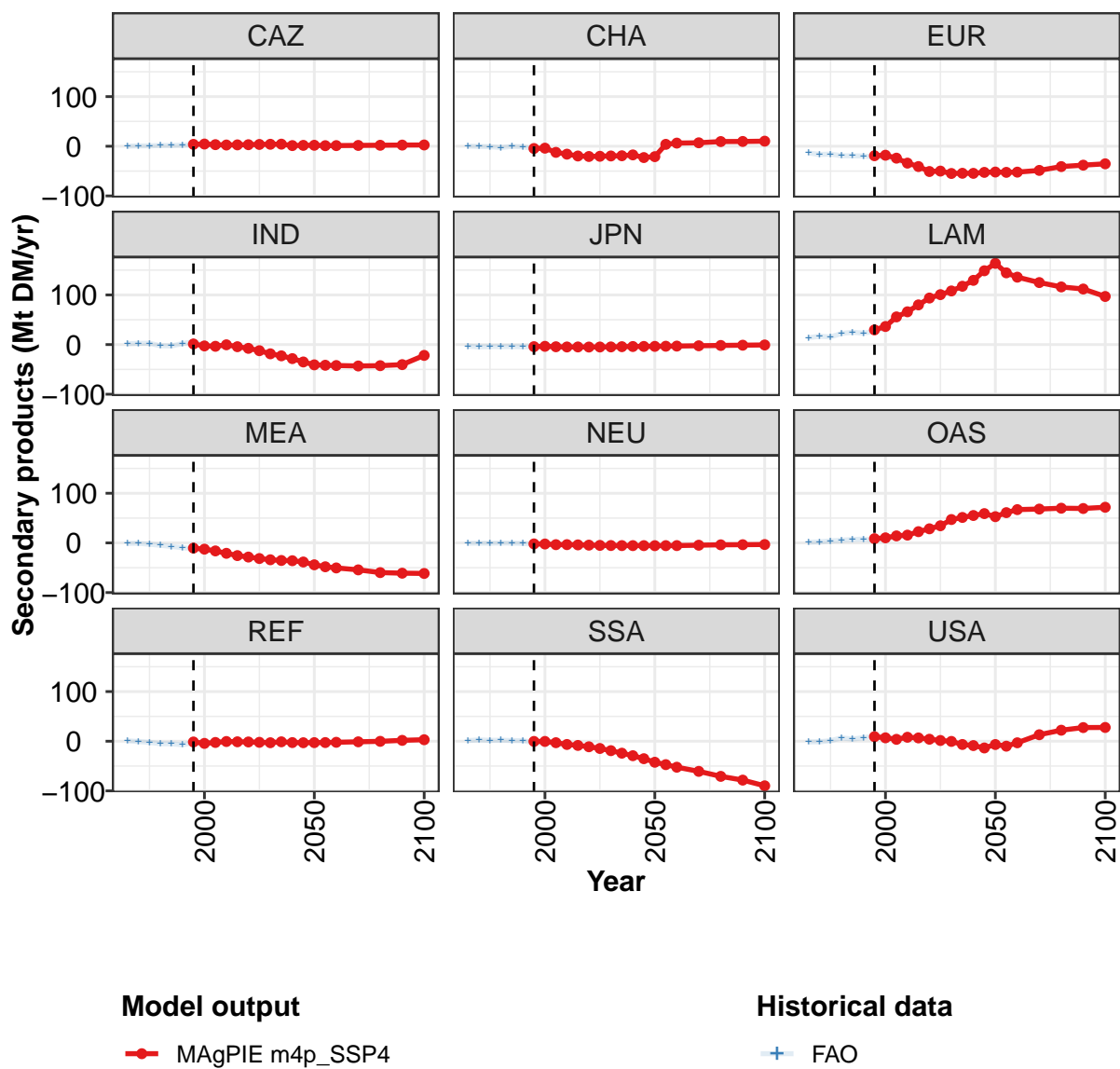


Figure 507: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products (Mt DM/yr)

	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	4	4	4	1	2
CHA	-4	-4	-12	-16	-20	-21	-20	-20	-19	-17	-23
EUR	-19	-18	-24	-34	-41	-51	-50	-55	-54	-55	-53
IND	1	-3	-3	-0	-4	-8	-12	-19	-23	-28	-35
JPN	-4	-3	-4	-5	-5	-5	-5	-5	-4	-4	-4
LAM	30	36	56	66	80	94	101	108	118	129	149
MEA	-10	-13	-16	-21	-26	-28	-31	-34	-35	-36	-38
NEU	-2	-2	-4	-3	-4	-4	-5	-5	-5	-5	-6
OAS	9	10	14	16	23	28	35	47	51	55	59
REF	-1	-4	-2	-1	-1	-1	-2	-3	-1	-3	-3
SSA	-0	-0	-3	-7	-8	-11	-15	-19	-24	-29	-35
USA	9	7	4	8	7	4	1	-0	-7	-9	-14

Table 1920: MAgPIE m4p-SSP4 — Trade—Net-Trade—Secondary products (Mt DM/yr) [PART 1/2]

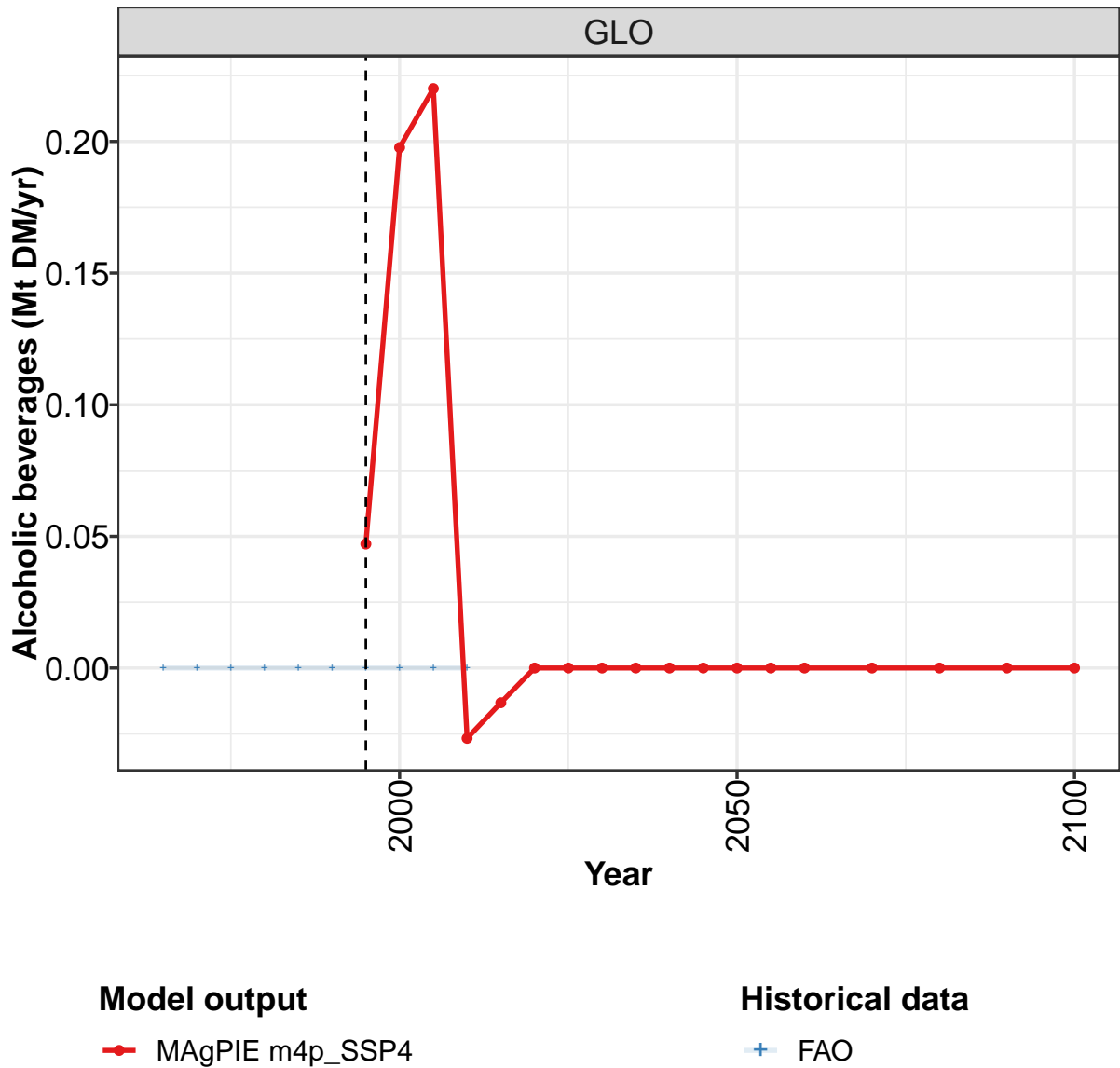
	2050	2055	2060	2070	2080	2090	2100
GLO	0	0	-0	0	-0	-0	0
CAZ	2	1	1	2	2	2	3
CHA	-21	4	6	7	9	10	10
EUR	-52	-53	-52	-49	-41	-38	-35
IND	-41	-42	-42	-43	-42	-40	-22
JPN	-4	-3	-3	-2	-2	-1	-1
LAM	164	145	136	125	116	112	97
MEA	-44	-48	-50	-54	-60	-61	-61
NEU	-6	-5	-5	-5	-4	-4	-3
OAS	53	61	67	68	70	69	72
REF	-3	-3	-2	-1	-0	2	3
SSA	-42	-47	-52	-61	-71	-78	-90
USA	-7	-10	-3	13	22	28	28

Table 1921: MAgPIE m4p-SSP4 — 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



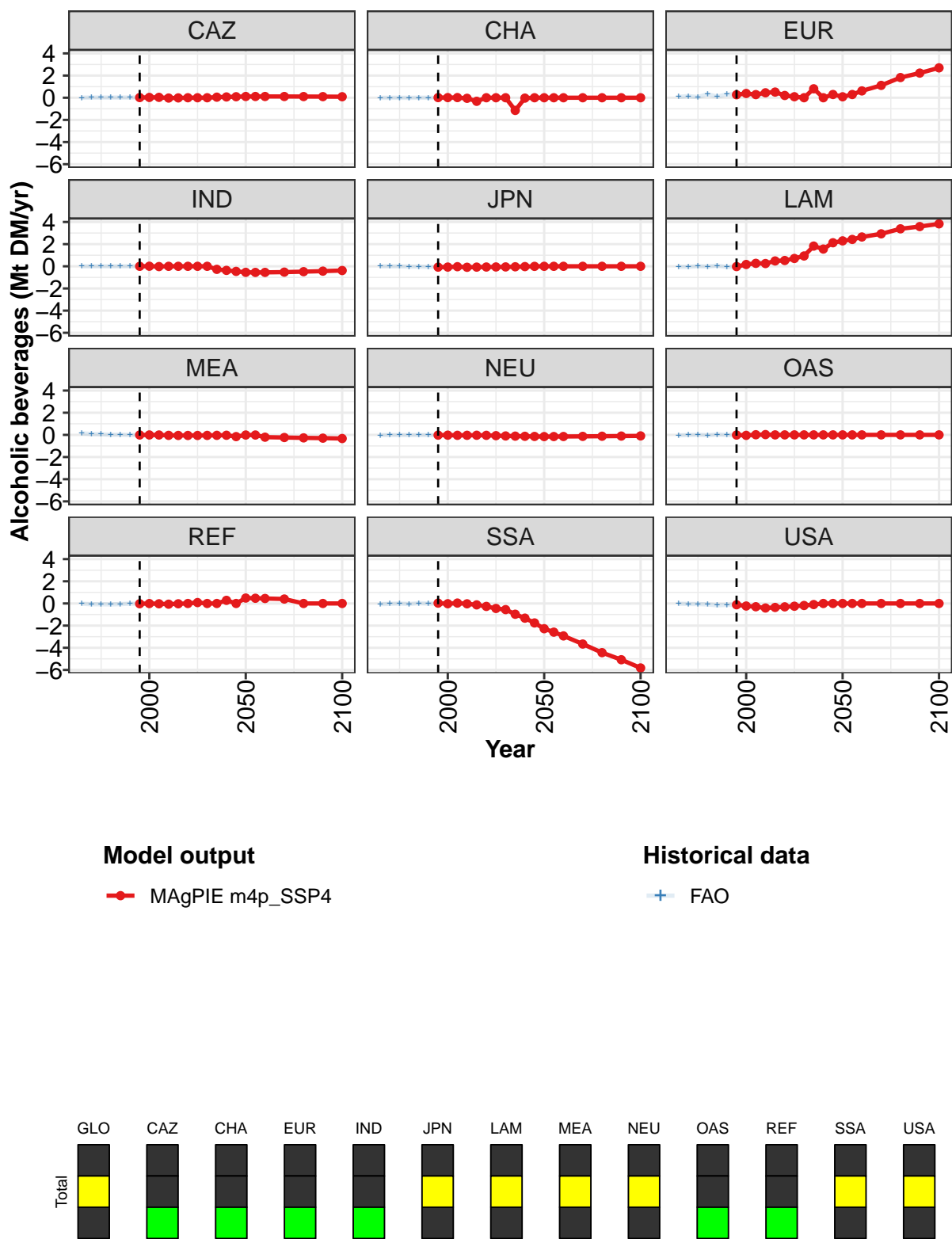


Figure 508: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Alcoholic beverages (Mt DM/yr)

	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	0.05	0.07	0.09
CHA	0.01	0.01	0.01	-0.05	-0.32	0.00	0.00	0.00	-1.14	-0.03	0.00
EUR	0.27	0.39	0.28	0.45	0.51	0.20	0.09	0.00	0.81	0.00	0.29
IND	0.00	0.01	-0.02	0.00	0.00	0.00	0.00	0.00	-0.28	-0.37	-0.46
JPN	-0.07	-0.07	-0.03	-0.09	-0.07	-0.06	-0.06	-0.05	-0.04	-0.02	-0.00
LAM	-0.02	0.17	0.27	0.25	0.48	0.52	0.71	0.93	1.83	1.56	2.13
MEA	-0.01	-0.01	-0.01	-0.04	-0.05	-0.05	-0.05	-0.05	-0.04	-0.03	-0.15
NEU	-0.02	-0.03	-0.04	-0.04	-0.03	-0.04	-0.07	-0.10	-0.11	-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	0.00	0.08	0.00	0.00	0.28	0.00
SSA	0.03	-0.02	0.04	-0.03	-0.13	-0.27	-0.45	-0.56	-0.97	-1.33	-1.76
USA	-0.12	-0.23	-0.30	-0.41	-0.36	-0.30	-0.25	-0.18	-0.10	0.00	0.00

Table 1923: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Alcoholic beverages (Mt DM/yr)  
[PART 1/2]

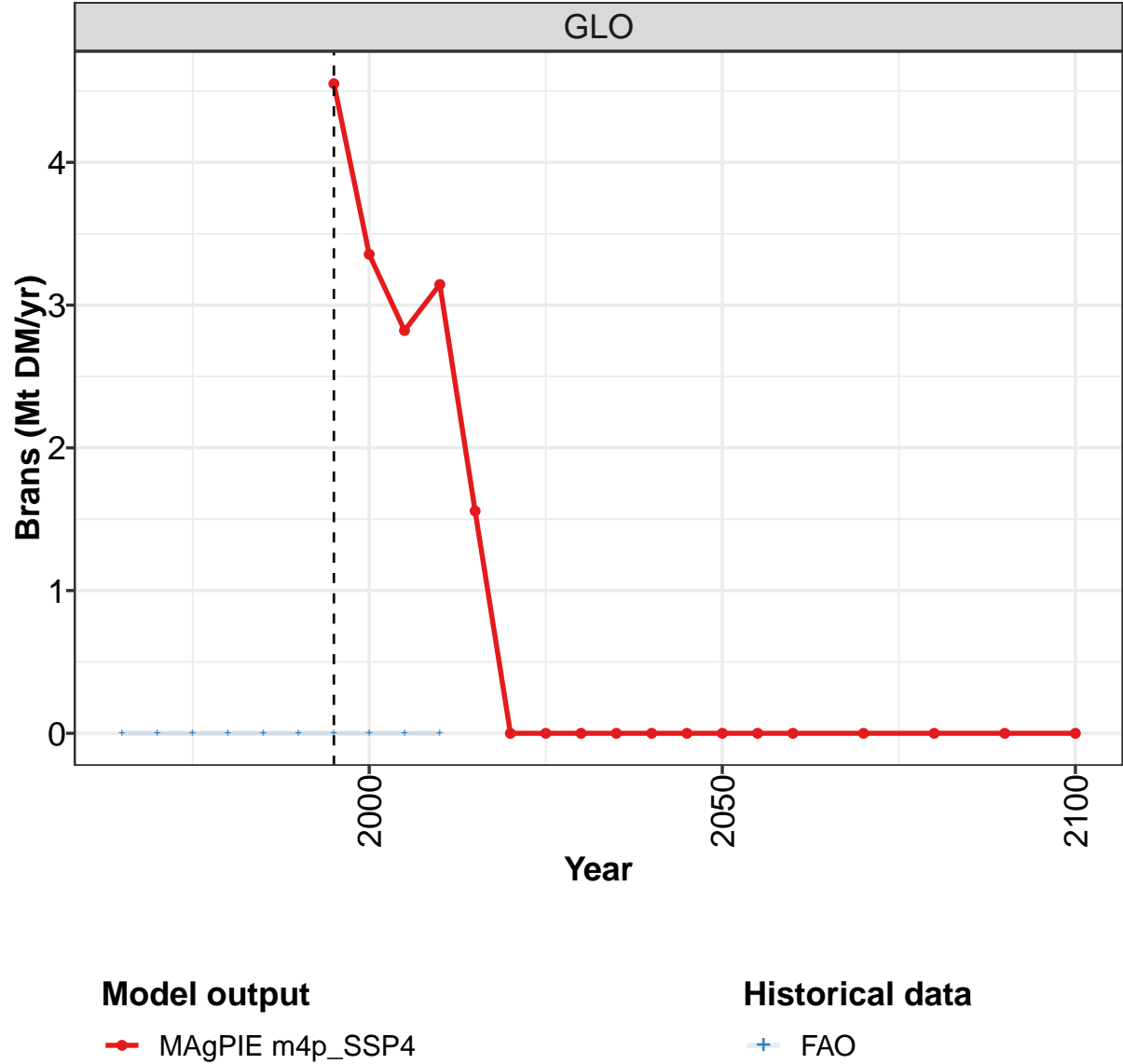
	2050	2055	2060	2070	2080	2090	2100
GLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAZ	0.11	0.11	0.11	0.11	0.11	0.10	0.09
CHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EUR	0.09	0.29	0.62	1.11	1.82	2.23	2.70
IND	-0.54	-0.55	-0.55	-0.52	-0.48	-0.44	-0.38
JPN	0.00	0.00	0.00	0.00	-0.00	0.00	0.00
LAM	2.30	2.43	2.65	2.93	3.38	3.59	3.83
MEA	-0.01	-0.01	-0.21	-0.24	-0.27	-0.29	-0.33
NEU	-0.15	-0.15	-0.14	-0.13	-0.12	-0.11	-0.09
OAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REF	0.49	0.47	0.45	0.40	0.00	0.00	0.00
SSA	-2.28	-2.59	-2.93	-3.66	-4.44	-5.08	-5.82
USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1924: MAgPIE m4p\_SSP4 — 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



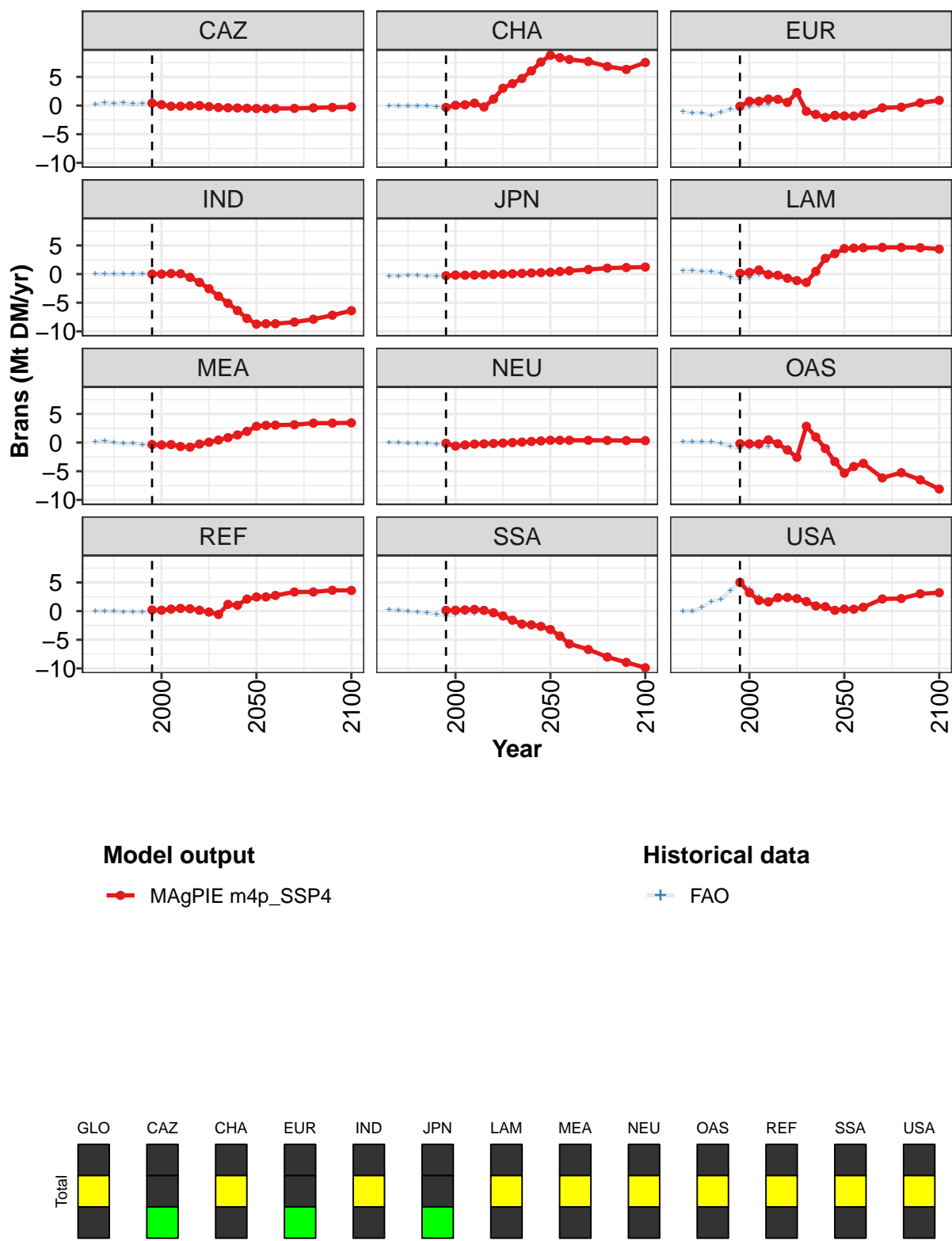


Figure 509: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Brans (Mt DM/yr)



	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
GLO	4.55	3.36	2.82	3.14	1.56	0.00	0.00	0.00	0.00	-0.00	0.00
CAZ	0.42	0.15	-0.12	-0.11	-0.06	0.00	-0.19	-0.34	-0.39	-0.43	-0.48
CHA	-0.33	0.05	0.13	0.42	-0.25	1.12	3.02	3.82	4.72	6.06	7.59
EUR	-0.13	0.75	0.76	1.13	1.09	0.55	2.27	-1.00	-1.55	-2.07	-1.71
IND	0.00	-0.00	0.09	0.06	-0.57	-1.45	-2.56	-3.87	-5.09	-6.36	-7.74
JPN	-0.29	-0.18	-0.20	-0.17	-0.12	-0.07	-0.01	0.05	0.12	0.18	0.25
LAM	0.14	0.30	0.71	-0.10	-0.21	-0.72	-1.13	-1.46	0.47	2.74	3.56
MEA	-0.34	-0.40	-0.35	-0.68	-0.80	-0.26	0.07	0.44	0.87	1.34	1.96
NEU	-0.12	-0.60	-0.41	-0.26	-0.21	-0.16	-0.08	-0.00	0.09	0.19	0.30
OAS	-0.19	-0.21	-0.23	0.48	-0.20	-1.28	-2.57	2.84	0.96	-1.04	-3.31
REF	0.21	0.15	0.36	0.48	0.41	0.15	-0.16	-0.59	1.18	1.02	2.10
SSA	0.14	0.15	0.22	0.30	0.13	-0.28	-0.85	-1.58	-2.27	-2.40	-2.67
USA	5.03	3.20	1.87	1.61	2.34	2.39	2.20	1.67	0.89	0.78	0.13

Table 1926: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Brans (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	-0.52	-0.53	-0.53	-0.49	-0.40	-0.32	-0.23
CHA	8.78	8.35	8.04	7.70	6.82	6.31	7.51
EUR	-1.81	-1.84	-1.53	-0.40	-0.29	0.48	0.90
IND	-8.74	-8.67	-8.66	-8.38	-7.89	-7.18	-6.39
JPN	0.30	0.45	0.57	0.80	1.04	1.14	1.23
LAM	4.45	4.53	4.59	4.65	4.65	4.59	4.36
MEA	2.85	3.01	3.05	3.12	3.39	3.40	3.45
NEU	0.40	0.40	0.40	0.40	0.39	0.36	0.34
OAS	-5.33	-4.18	-3.62	-6.16	-5.25	-6.50	-8.11
REF	2.47	2.48	2.73	3.35	3.35	3.64	3.60
SSA	-3.21	-4.34	-5.72	-6.69	-8.01	-8.94	-9.88
USA	0.36	0.34	0.69	2.12	2.19	3.03	3.21

Table 1927: MAgPIE m4p\_SSP4 — 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)



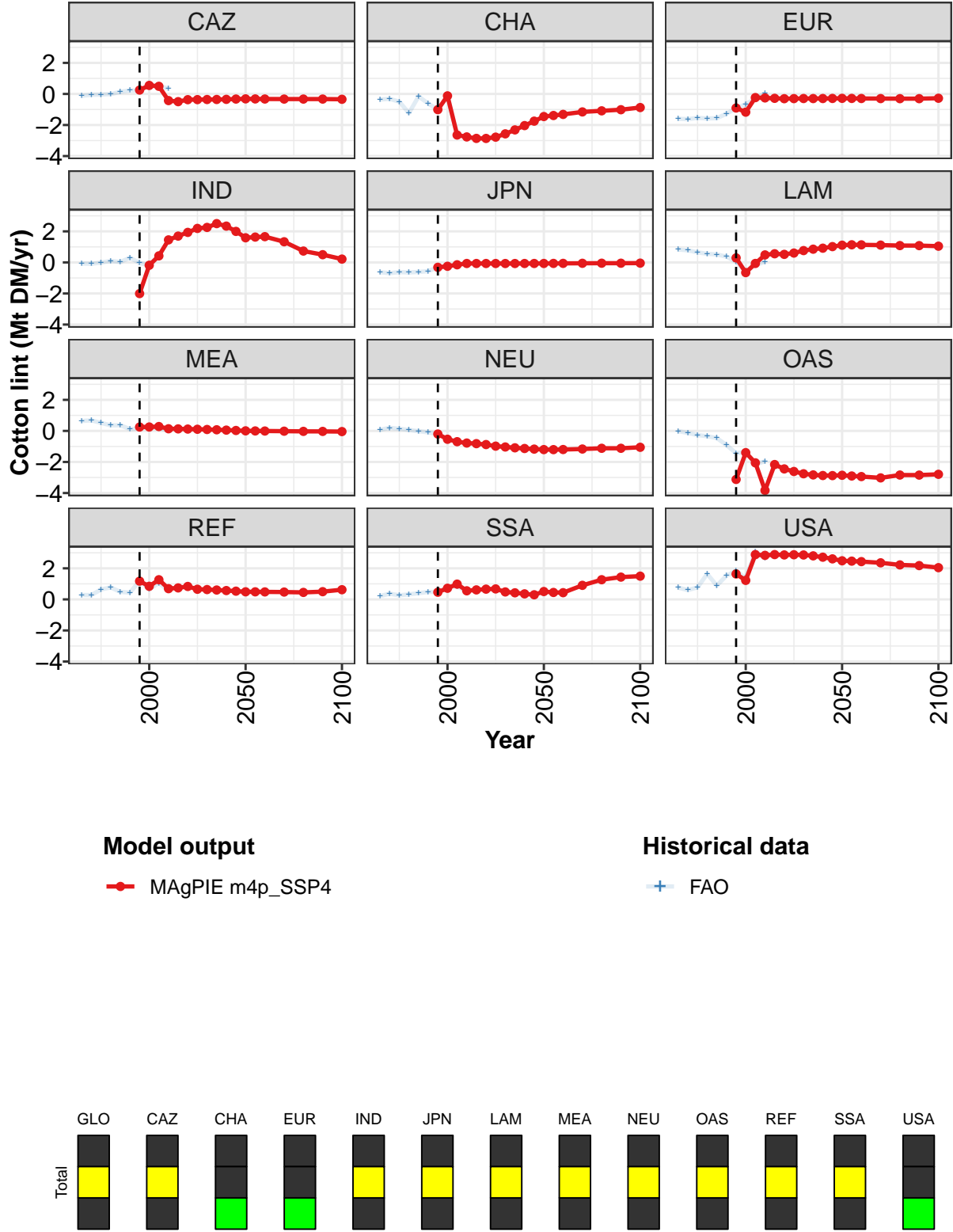


Figure 510: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Cotton lint (Mt DM/yr)

	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	0.30	0.20	0.00
CAZ	0.25	0.55	0.49	-0.43	-0.50	-0.37	-0.36	-0.36	-0.36	-0.35	-0.33
CHA	-1.01	-0.12	-2.64	-2.77	-2.86	-2.86	-2.78	-2.57	-2.31	-2.04	-1.75
EUR	-0.90	-1.17	-0.24	-0.26	-0.28	-0.31	-0.30	-0.29	-0.30	-0.29	-0.29
IND	-2.01	-0.18	0.42	1.45	1.70	1.93	2.19	2.25	2.50	2.34	2.00
JPN	-0.31	-0.25	-0.15	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
LAM	0.29	-0.66	-0.07	0.48	0.56	0.52	0.60	0.76	0.85	0.92	1.02
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	-0.88	-0.98	-1.03	-1.09	-1.13	-1.17
OAS	-3.12	-1.40	-2.06	-3.83	-2.17	-2.45	-2.61	-2.76	-2.83	-2.87	-2.88
REF	1.18	0.84	1.27	0.69	0.74	0.83	0.65	0.63	0.60	0.57	0.53
SSA	0.46	0.72	0.98	0.55	0.61	0.66	0.67	0.48	0.43	0.36	0.30
USA	1.64	1.22	2.88	2.84	2.89	2.86	2.87	2.86	2.80	2.72	2.61

Table 1929: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Cotton lint (Mt DM/yr) [PART 1/2]

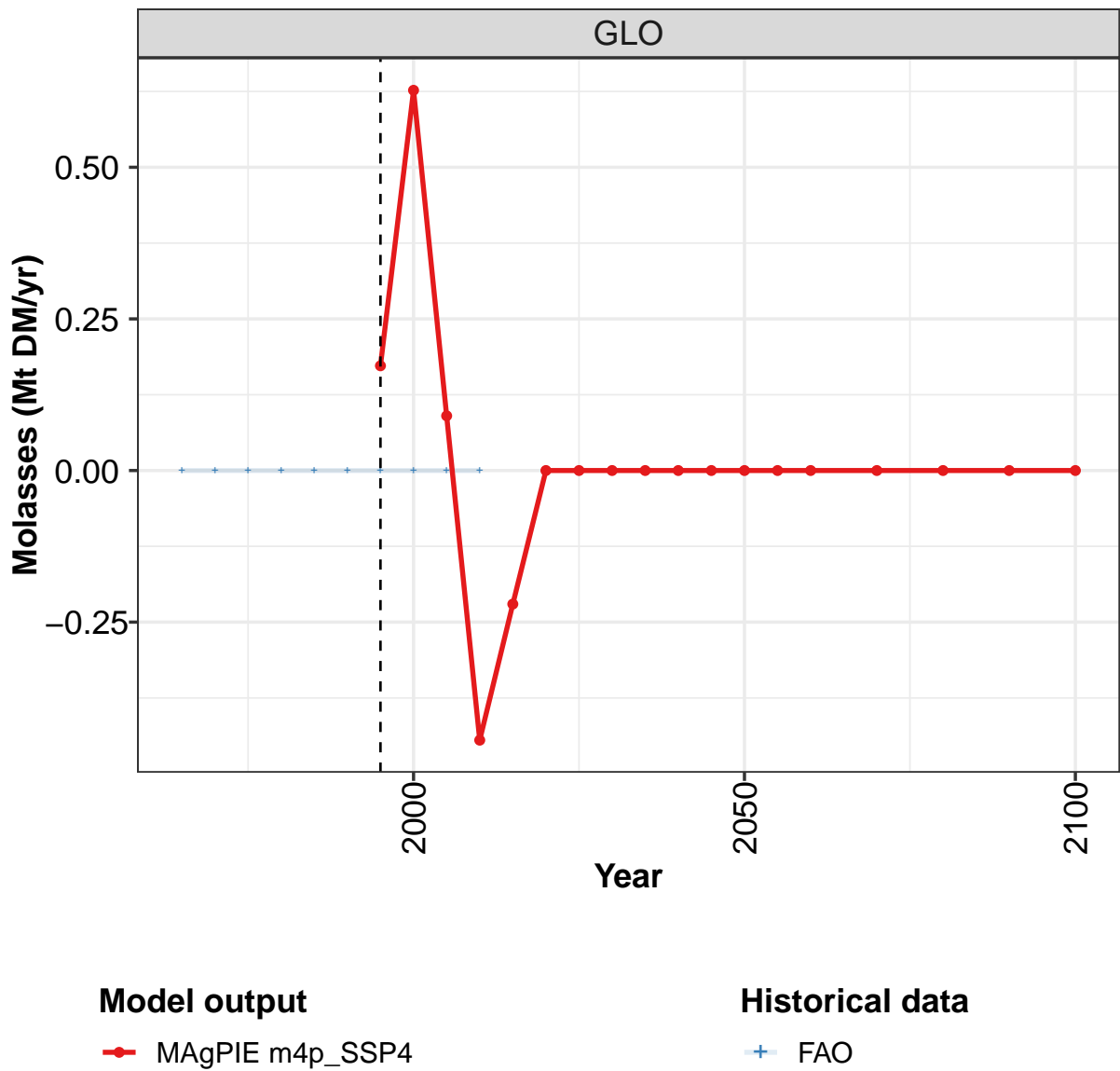
	2050	2055	2060	2070	2080	2090	2100
GLO	0.01	0.00	-0.00	0.13	0.00	0.00	0.00
CAZ	-0.32	-0.32	-0.33	-0.33	-0.33	-0.33	-0.34
CHA	-1.45	-1.39	-1.32	-1.16	-1.09	-1.01	-0.87
EUR	-0.28	-0.29	-0.29	-0.30	-0.30	-0.30	-0.28
IND	1.59	1.63	1.66	1.33	0.73	0.50	0.22
JPN	-0.07	-0.06	-0.06	-0.06	-0.05	-0.05	-0.04
LAM	1.11	1.14	1.13	1.12	1.09	1.08	1.05
MEA	0.00	-0.00	-0.01	-0.02	-0.03	-0.03	-0.04
NEU	-1.20	-1.20	-1.20	-1.17	-1.12	-1.12	-1.05
OAS	-2.86	-2.90	-2.94	-3.02	-2.84	-2.84	-2.79
REF	0.49	0.49	0.48	0.47	0.45	0.50	0.62
SSA	0.51	0.45	0.43	0.90	1.27	1.44	1.50
USA	2.49	2.46	2.43	2.36	2.22	2.18	2.04

Table 1930: MAgPIE m4p\_SSP4 — 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



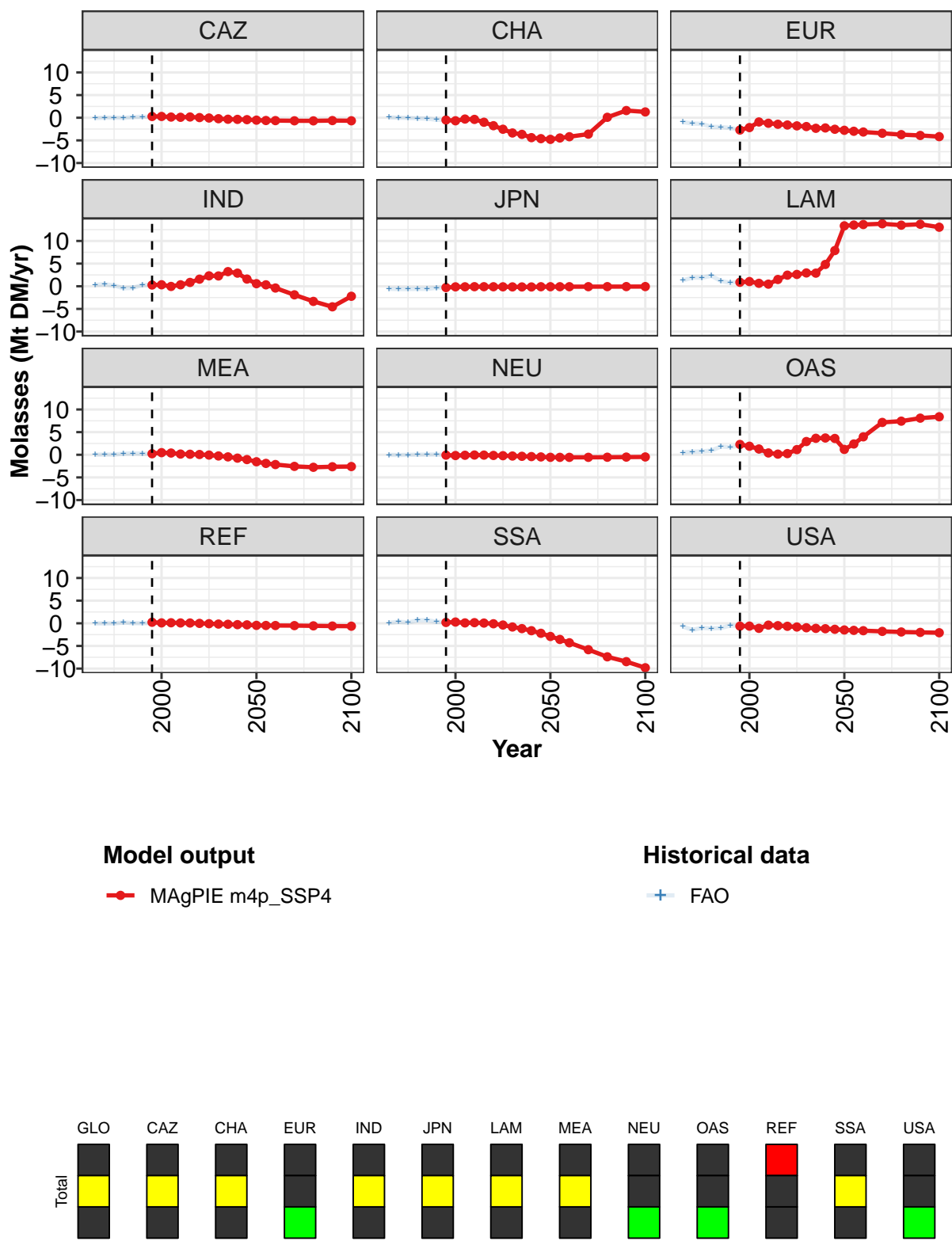


Figure 511: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Molasses (Mt DM/yr)

	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	-0.1	-0.2	-0.3	-0.4	-0.4
CHA	-0.5	-0.7	-0.3	-0.4	-1.0	-1.8	-2.5	-3.4	-3.7	-4.4	-4.6
EUR	-2.7	-2.2	-0.9	-1.2	-1.4	-1.6	-1.8	-1.9	-2.3	-2.3	-2.5
IND	0.3	0.3	-0.0	0.3	0.8	1.6	2.3	2.3	3.2	2.9	1.6
JPN	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1
LAM	0.9	1.0	0.7	0.5	1.5	2.5	2.6	2.9	2.9	4.8	7.9
MEA	0.2	0.5	0.4	0.2	0.1	0.1	-0.1	-0.3	-0.5	-0.7	-1.1
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	0.3	1.1	2.9	3.6	3.7	3.6
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	-0.4	-0.8	-1.2	-1.6	-2.2
USA	-0.6	-0.6	-1.1	-0.4	-0.5	-0.7	-0.8	-1.0	-1.1	-1.2	-1.3

Table 1932: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Molasses (Mt DM/yr) [PART 1/2]

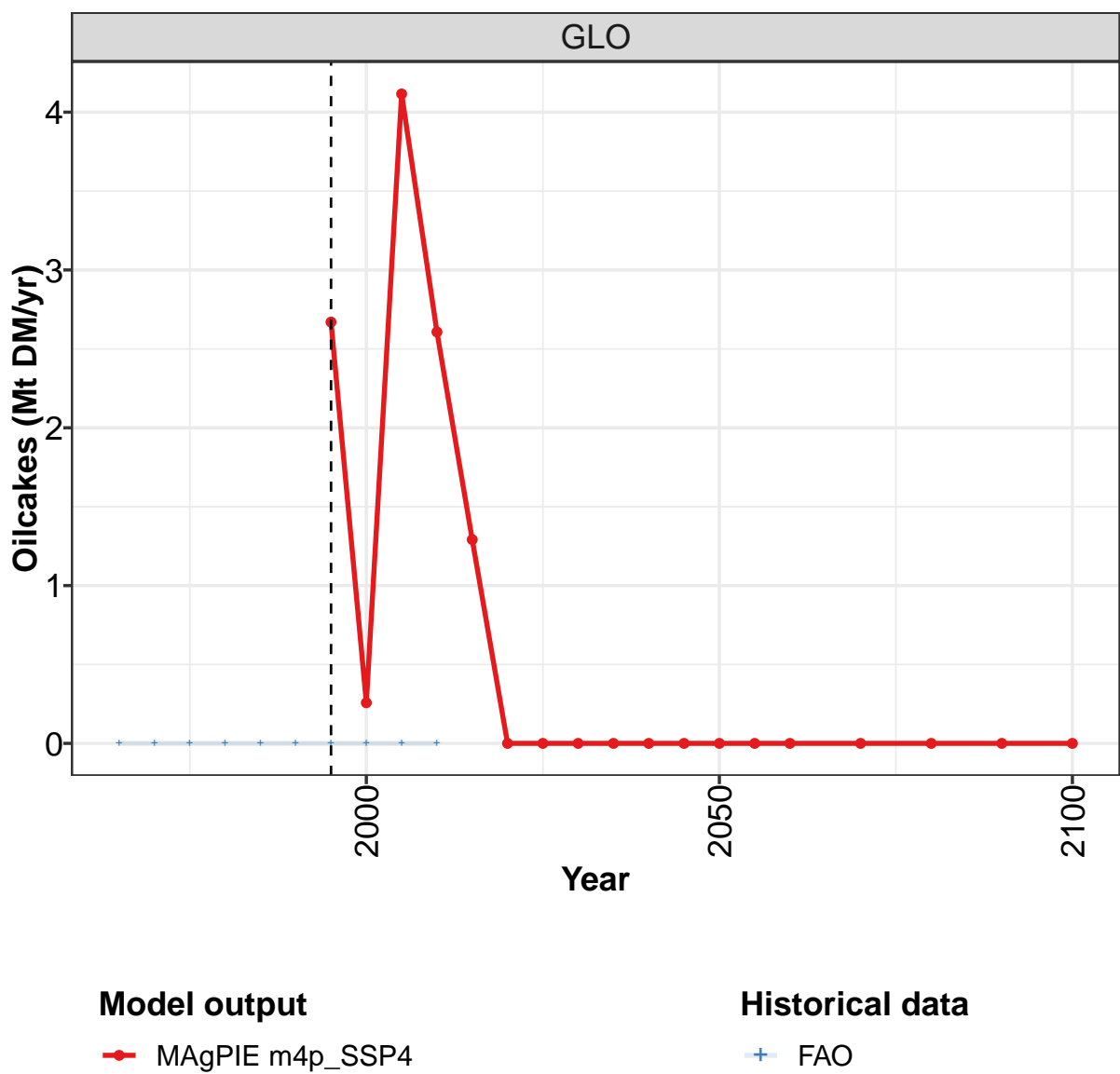
	2050	2055	2060	2070	2080	2090	2100
GLO	-0.0	0.0	0.0	-0.0	0.0	-0.0	0.0
CAZ	-0.5	-0.6	-0.6	-0.7	-0.7	-0.6	-0.7
CHA	-4.8	-4.5	-4.2	-3.6	0.1	1.6	1.3
EUR	-2.8	-3.0	-3.2	-3.4	-3.7	-3.9	-4.2
IND	0.6	0.3	-0.4	-1.9	-3.3	-4.5	-2.2
JPN	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LAM	13.3	13.5	13.6	13.8	13.5	13.7	13.0
MEA	-1.5	-1.9	-2.2	-2.6	-2.8	-2.6	-2.6
NEU	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5
OAS	1.2	2.4	4.0	7.1	7.4	8.1	8.4
REF	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6
SSA	-2.9	-3.6	-4.3	-5.8	-7.4	-8.5	-9.8
USA	-1.5	-1.6	-1.6	-1.8	-1.9	-2.0	-2.1

Table 1933: MAgPIE m4p\_SSP4 — 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





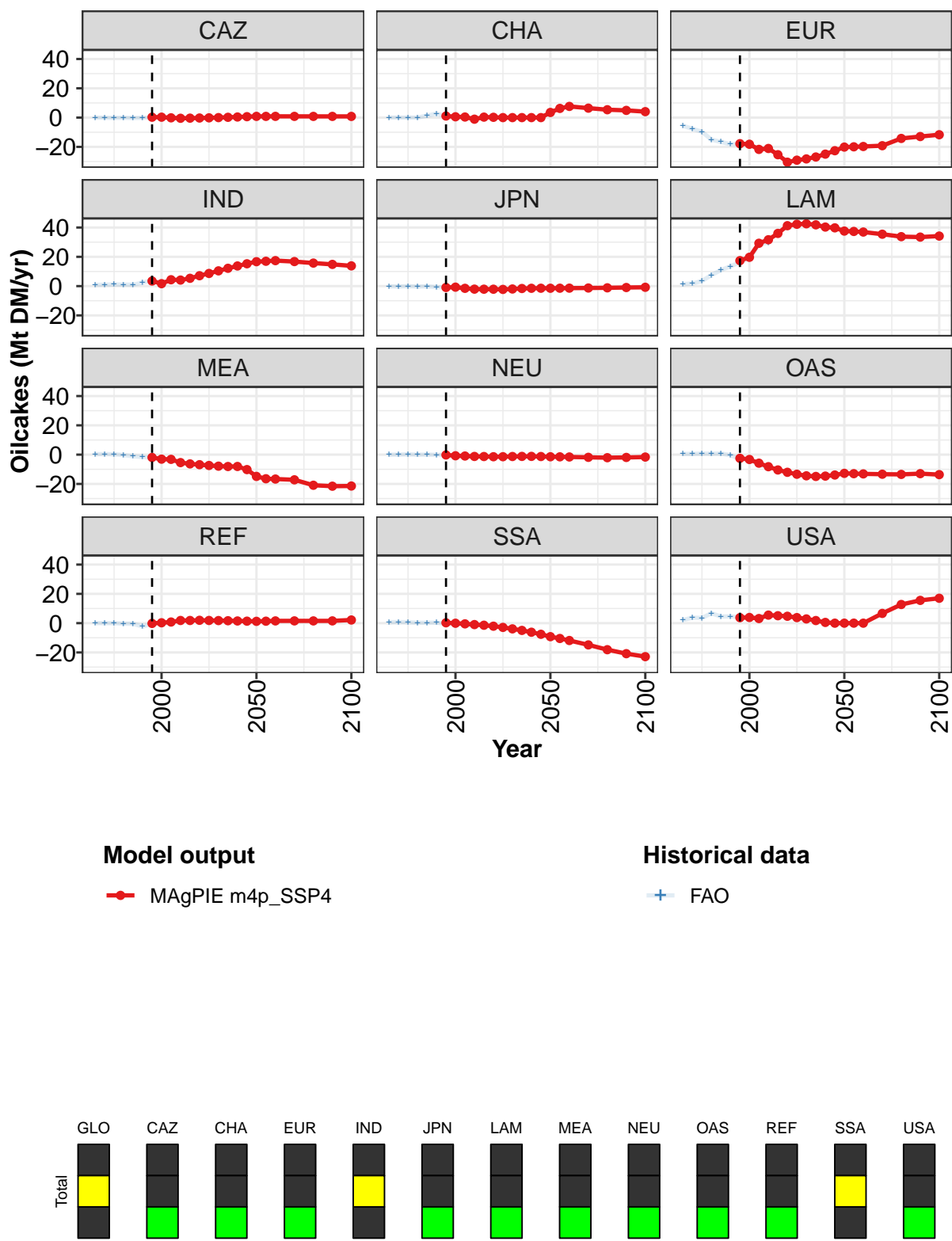


Figure 512: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Oilcakes (Mt DM/yr)

	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	0.2	-0.0	0.0	0.0	0.0	0.0
EUR	-17.8	-18.2	-21.7	-21.1	-25.3	-30.4	-29.1	-28.2	-26.9	-24.9	-22.6
IND	3.5	1.7	4.3	4.1	5.3	7.1	8.6	10.4	12.2	13.8	15.3
JPN	-0.9	-0.7	-1.5	-2.1	-2.1	-2.1	-2.2	-2.0	-1.6	-1.5	-1.4
LAM	17.4	19.7	29.3	31.7	36.0	41.3	42.2	42.6	41.8	40.3	39.8
MEA	-1.9	-3.1	-3.2	-5.4	-6.3	-6.9	-7.4	-7.9	-8.1	-8.1	-10.2
NEU	-0.2	-0.8	-0.9	-1.2	-1.3	-1.4	-1.4	-1.3	-1.2	-1.2	-1.3
OAS	-2.5	-3.3	-5.8	-8.2	-10.5	-12.1	-13.4	-14.5	-14.9	-14.7	-13.9
REF	-0.2	0.3	0.8	1.8	1.8	2.0	1.8	1.8	1.7	1.5	1.4
SSA	0.3	-0.1	-0.5	-1.0	-1.4	-2.1	-2.9	-3.9	-4.9	-6.2	-7.6
USA	3.7	3.9	3.2	5.5	5.1	4.7	3.8	2.9	1.8	0.5	0.0

Table 1935: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Oilcakes (Mt DM/yr) [PART 1/2]

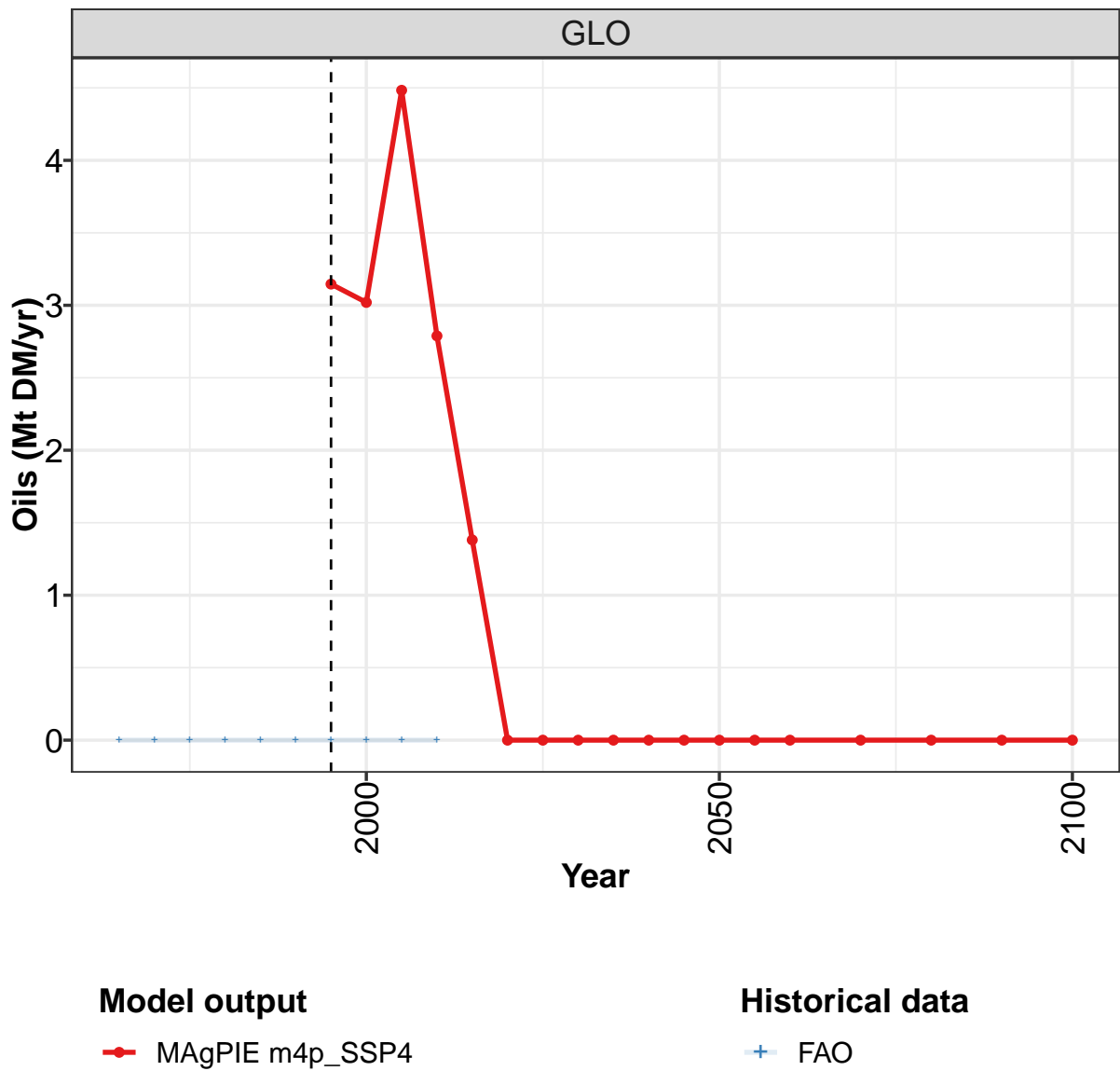
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAZ	0.8	0.8	0.8	0.8	0.8	0.8	0.8
CHA	3.5	6.3	7.6	6.4	5.4	4.9	4.1
EUR	-20.1	-19.9	-19.7	-19.2	-14.2	-12.9	-11.7
IND	16.7	17.0	17.4	16.8	15.7	14.8	13.8
JPN	-1.5	-1.4	-1.4	-1.3	-1.2	-1.0	-0.8
LAM	37.6	37.3	36.9	35.4	33.8	33.5	34.2
MEA	-14.9	-16.5	-16.7	-17.2	-20.9	-21.5	-21.4
NEU	-1.4	-1.5	-1.6	-1.8	-2.1	-1.9	-1.6
OAS	-12.8	-13.0	-13.2	-13.4	-13.5	-13.0	-13.6
REF	1.3	1.3	1.5	1.6	1.5	1.6	2.2
SSA	-9.2	-10.5	-11.8	-14.8	-18.1	-20.8	-22.9
USA	0.0	0.0	0.0	6.7	12.7	15.6	17.0

Table 1936: MAgPIE m4p\_SSP4 — 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



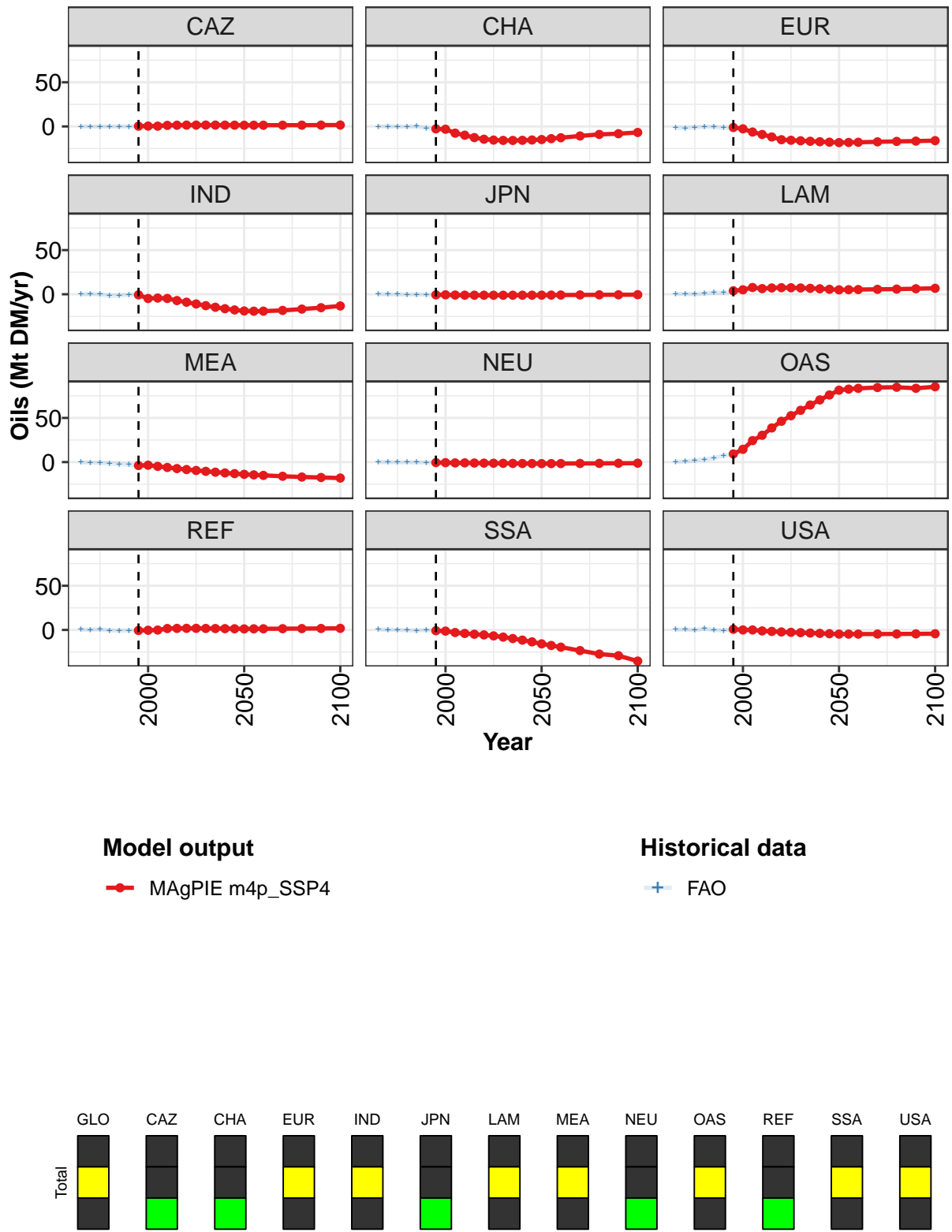


Figure 513: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Oils (Mt DM/yr)

	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	1.5	1.5	1.5	1.4
CHA	-2.7	-3.1	-7.6	-9.9	-12.7	-14.5	-15.5	-15.8	-15.8	-15.7	-15.4
EUR	-1.2	-2.7	-6.3	-9.1	-11.9	-15.0	-15.7	-16.2	-16.8	-17.3	-17.8
IND	-0.7	-4.8	-4.3	-4.7	-7.2	-9.0	-10.9	-12.9	-14.7	-16.3	-17.7
JPN	-0.7	-0.6	-0.9	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-1.0
LAM	3.9	5.0	7.7	6.4	7.1	7.5	7.4	7.1	6.7	6.2	5.6
MEA	-3.9	-3.5	-4.8	-6.1	-7.3	-8.4	-9.4	-10.4	-11.4	-12.3	-13.1
NEU	-0.6	-0.6	-0.9	-0.9	-1.0	-1.2	-1.3	-1.4	-1.5	-1.6	-1.6
OAS	9.3	14.5	24.4	30.4	38.7	46.2	52.5	58.7	64.6	70.4	76.0
REF	-0.6	-0.3	-0.1	1.6	1.8	1.8	1.8	1.7	1.6	1.5	1.3
SSA	-0.9	-1.3	-2.9	-4.0	-4.8	-5.6	-6.7	-8.1	-9.7	-11.5	-13.5
USA	0.8	0.0	0.0	-1.1	-1.7	-2.3	-2.7	-3.1	-3.5	-3.9	-4.3

Table 1938: MAgPIE m4p-SSP4 — Trade—Net-Trade—Secondary products—Oils (Mt DM/yr) [PART 1/2]

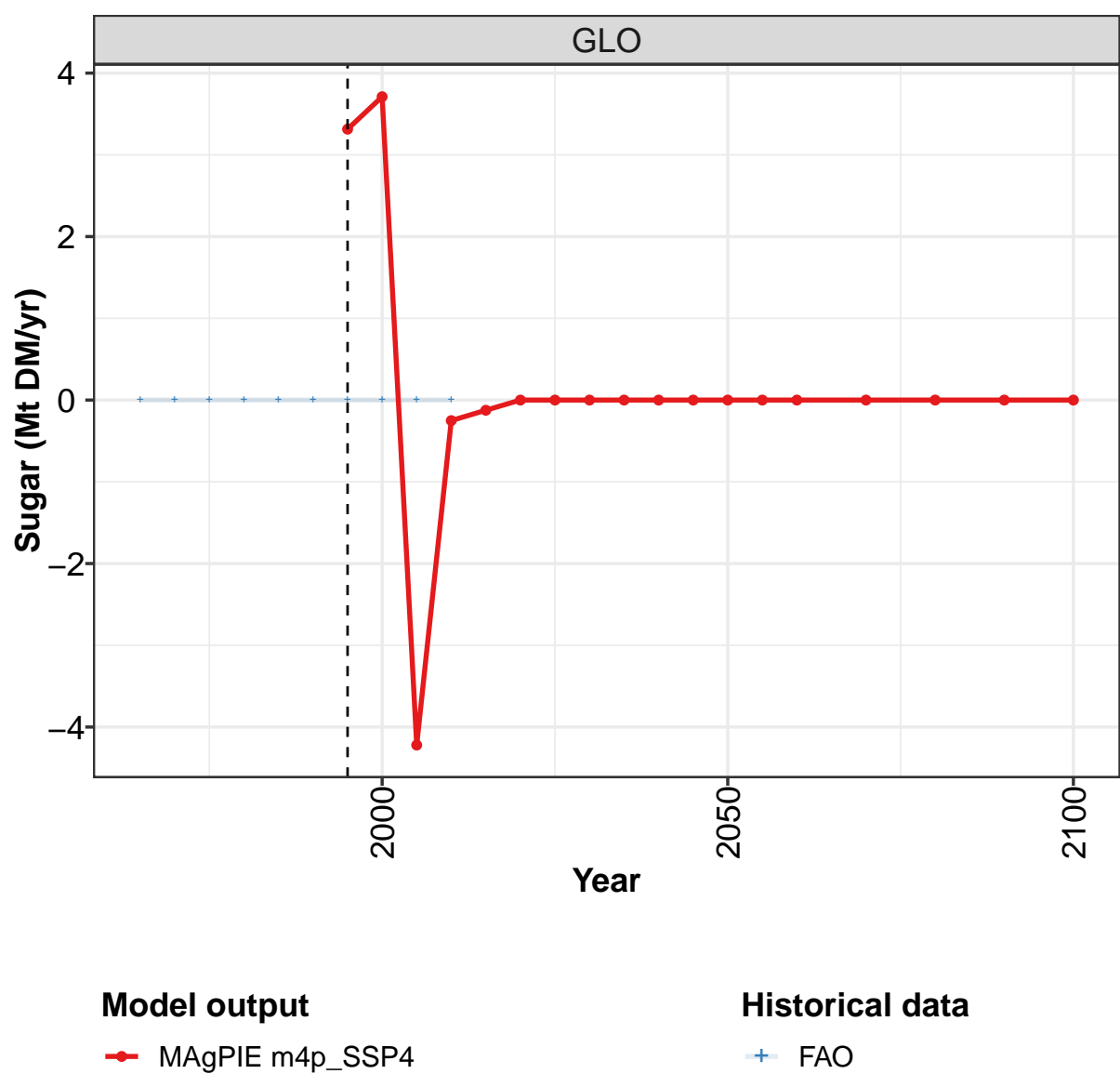
	2050	2055	2060	2070	2080	2090	2100
GLO	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.0
CAZ	1.3	1.4	1.4	1.4	1.4	1.5	1.6
CHA	-14.9	-13.8	-12.8	-10.8	-9.0	-8.3	-6.8
EUR	-18.3	-18.1	-17.9	-17.4	-16.9	-16.6	-16.1
IND	-18.9	-19.1	-19.1	-18.3	-16.8	-15.2	-13.2
JPN	-1.0	-0.9	-0.9	-0.7	-0.6	-0.6	-0.5
LAM	5.0	5.2	5.3	5.6	5.9	6.3	6.7
MEA	-13.8	-14.5	-15.0	-16.0	-16.9	-17.4	-18.1
NEU	-1.7	-1.7	-1.6	-1.5	-1.4	-1.3	-1.2
OAS	81.4	82.6	83.5	84.4	84.8	83.6	85.3
REF	1.2	1.3	1.3	1.4	1.5	1.7	1.8
SSA	-15.7	-17.6	-19.5	-23.4	-27.3	-29.2	-35.3
USA	-4.7	-4.7	-4.7	-4.6	-4.6	-4.5	-4.3

Table 1939: MAgPIE m4p-SSP4 — 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



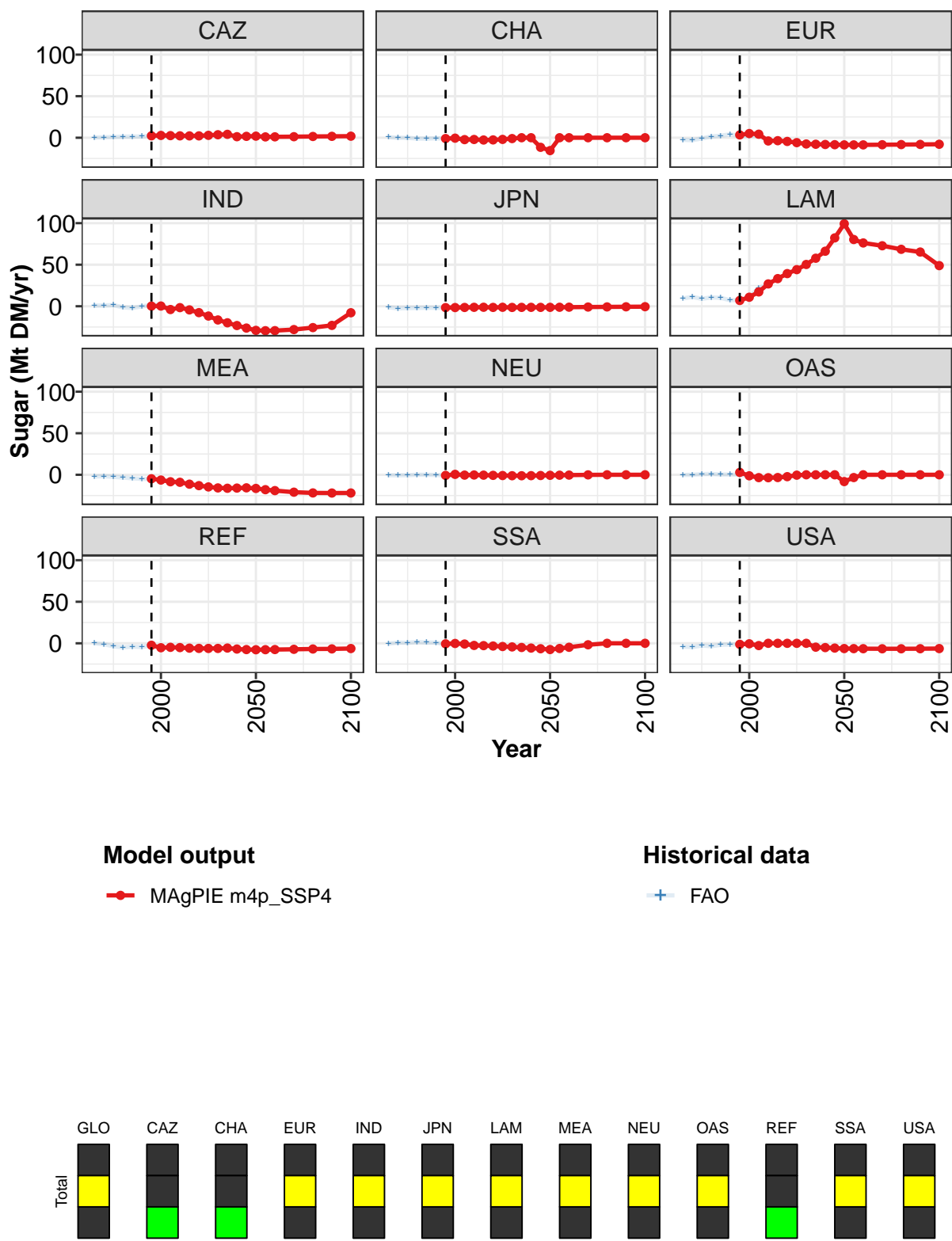


Figure 514: MAgPIE m4p\_SSP4 — Trade—Net-Trade—Secondary products—Sugar (Mt DM/yr)

	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	2.3	2.9	3.6	4.1	1.3	1.7
CHA	-1.0	-0.5	-2.3	-2.1	-2.7	-2.6	-2.0	-1.0	0.0	-0.0	-11.5
EUR	3.4	5.1	4.2	-3.9	-3.6	-4.5	-5.9	-7.5	-7.9	-8.1	-8.4
IND	0.2	0.3	-4.0	-1.7	-4.4	-7.7	-11.8	-16.5	-19.9	-23.2	-26.2
JPN	-1.6	-1.6	-1.4	-1.3	-1.2	-1.4	-1.2	-1.4	-1.4	-1.3	-1.3
LAM	7.0	10.9	17.3	26.9	33.3	39.3	44.1	50.3	57.8	66.2	82.3
MEA	-4.8	-6.3	-8.4	-9.0	-11.3	-13.1	-14.6	-15.8	-16.2	-16.0	-15.7
NEU	-0.8	0.5	-0.4	-0.2	-0.5	-0.7	-0.9	-1.1	-1.1	-1.1	-0.9
OAS	2.9	-1.2	-3.4	-3.5	-3.3	-2.3	-0.5	-0.0	-0.0	0.0	0.0
REF	-2.3	-5.3	-4.9	-5.2	-5.8	-6.1	-6.2	-6.2	-5.7	-6.9	-7.5
SSA	-0.6	-0.2	-0.9	-2.5	-2.8	-3.3	-3.9	-4.4	-5.0	-5.7	-6.6
USA	-1.2	-0.6	-2.7	0.0	0.0	0.0	0.0	0.0	-4.6	-5.2	-5.7

Table 1941: MAgPIE m4p\_SSP4 — 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	1.9	1.0	1.1	1.3	1.5	1.7	1.9
CHA	-15.5	0.0	-0.0	0.0	0.0	0.0	0.0
EUR	-8.6	-8.6	-8.6	-8.4	-8.3	-8.1	-7.9
IND	-29.0	-29.4	-29.4	-28.1	-25.7	-23.0	-7.8
JPN	-1.3	-1.2	-1.1	-0.9	-0.8	-0.7	-0.5
LAM	99.3	80.3	76.2	72.8	68.5	65.3	48.9
MEA	-16.4	-17.9	-19.0	-21.0	-21.8	-22.0	-21.9
NEU	-0.6	-0.5	-0.4	-0.1	0.0	0.0	0.0
OAS	-8.2	-3.3	0.0	0.0	0.0	0.0	0.0
REF	-7.7	-7.7	-7.5	-7.2	-6.9	-6.7	-6.3
SSA	-7.5	-6.2	-4.8	-1.8	0.0	0.0	0.0
USA	-6.3	-6.4	-6.5	-6.6	-6.6	-6.5	-6.3

Table 1942: MAgPIE m4p\_SSP4 — 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

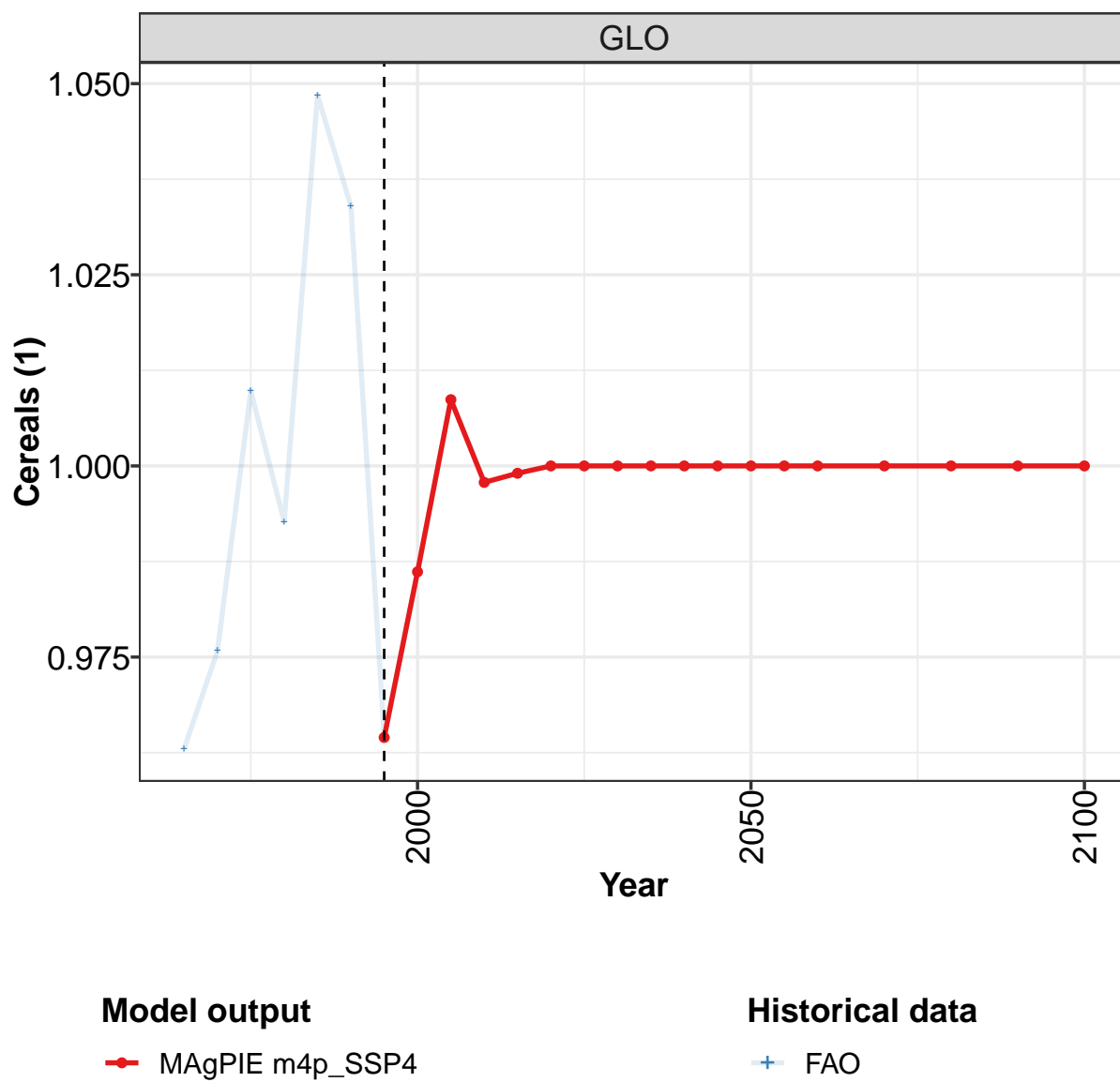
Table 1943: FAO — Trade—Net-Trade—Secondary products—Sugar (Mt DM/yr)



## 59 Self-sufficiency

### 59.1 Crops

#### 59.1.1 Cereals



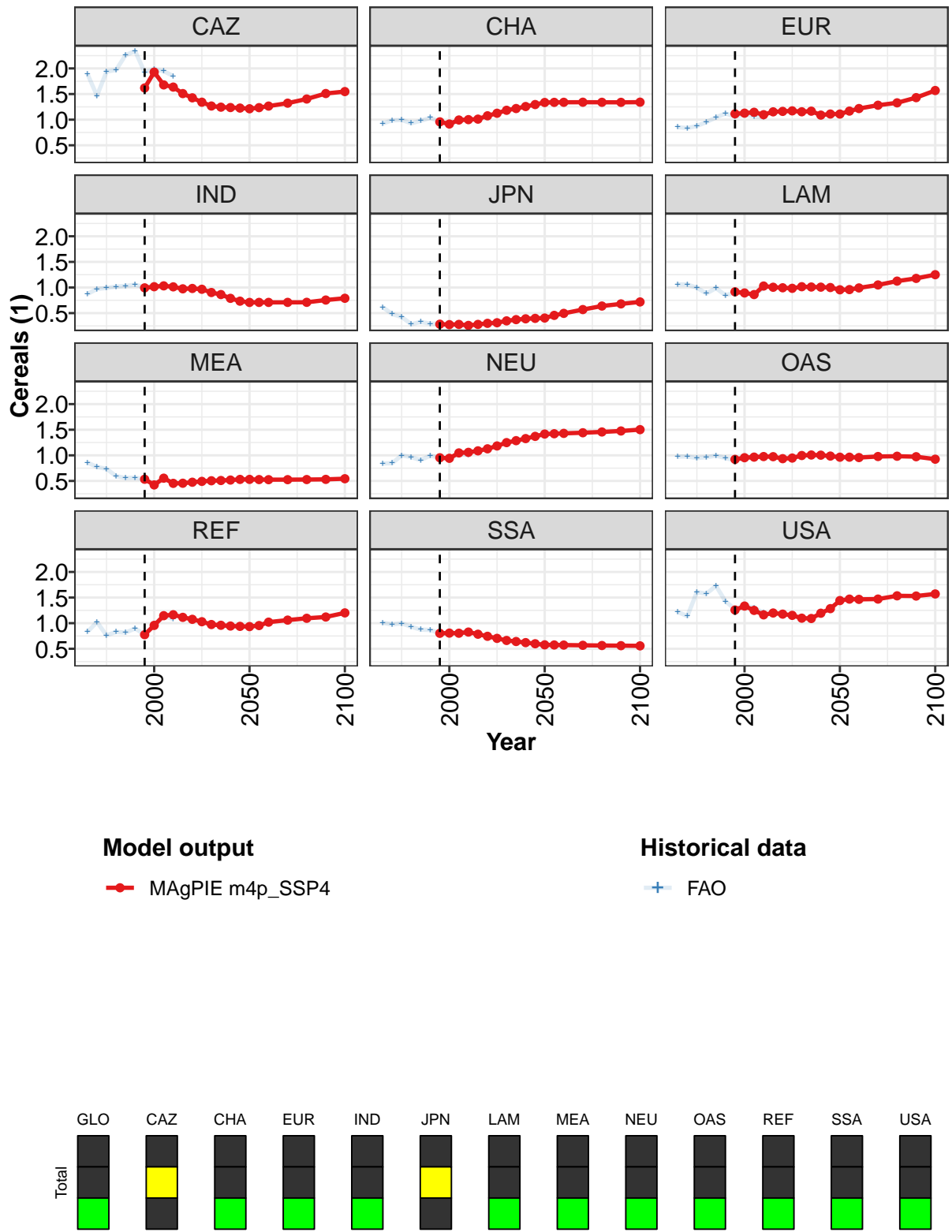


Figure 515: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals (1)

	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	1.51	1.43	1.34	1.27	1.24	1.24	1.23
CHA	0.96	0.92	0.99	1.00	1.01	1.08	1.13	1.18	1.22	1.26	1.30
EUR	1.11	1.13	1.14	1.10	1.15	1.16	1.17	1.15	1.17	1.09	1.11
IND	0.99	1.02	1.03	1.01	0.97	0.98	0.97	0.90	0.86	0.79	0.73
JPN	0.28	0.27	0.28	0.26	0.28	0.30	0.31	0.35	0.37	0.39	0.40
LAM	0.92	0.89	0.86	1.03	1.01	0.99	0.98	1.02	1.01	1.01	1.00
MEA	0.53	0.42	0.55	0.45	0.46	0.48	0.49	0.50	0.51	0.52	0.53
NEU	0.95	0.94	1.05	1.06	1.09	1.13	1.18	1.25	1.29	1.33	1.37
OAS	0.92	0.95	0.97	0.98	0.97	0.94	0.95	1.00	1.01	1.00	0.99
REF	0.78	0.96	1.15	1.16	1.11	1.08	1.03	0.97	0.96	0.94	0.94
SSA	0.80	0.81	0.80	0.83	0.78	0.74	0.70	0.66	0.64	0.62	0.60
USA	1.26	1.33	1.25	1.16	1.20	1.18	1.15	1.10	1.09	1.19	1.28

Table 1944: MAgPIE m4p-SSP4 — Trade—Self-sufficiency—Crops—Cereals (1) [PART 1/2]

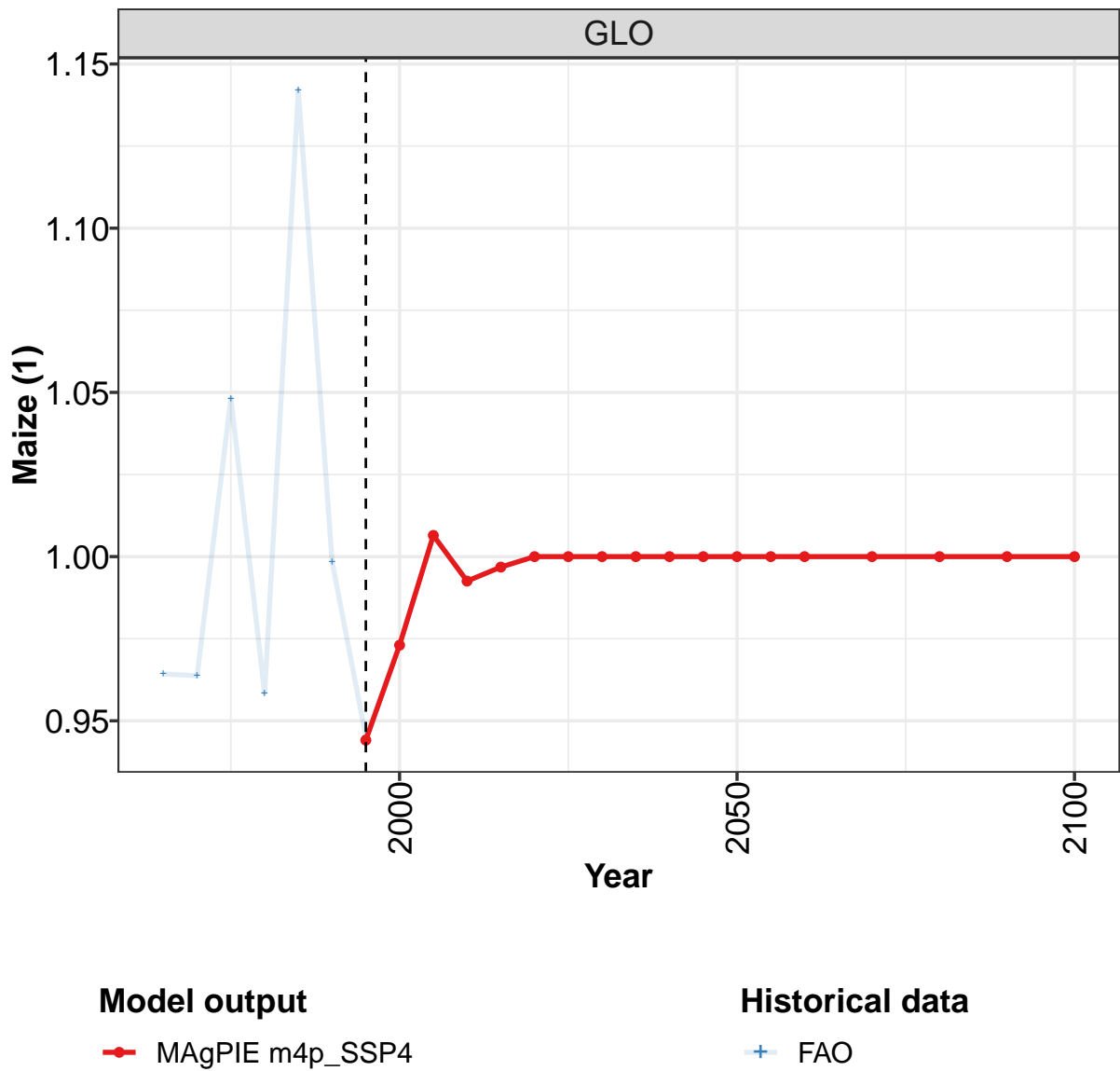
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.21	1.23	1.27	1.32	1.40	1.51	1.55
CHA	1.34	1.34	1.34	1.34	1.34	1.34	1.34
EUR	1.11	1.17	1.22	1.28	1.33	1.43	1.57
IND	0.71	0.71	0.71	0.71	0.71	0.76	0.79
JPN	0.40	0.46	0.50	0.57	0.64	0.68	0.72
LAM	0.96	0.96	0.99	1.05	1.12	1.18	1.25
MEA	0.53	0.53	0.53	0.53	0.53	0.53	0.54
NEU	1.42	1.42	1.43	1.44	1.46	1.48	1.50
OAS	0.96	0.96	0.96	0.98	0.98	0.97	0.92
REF	0.93	0.95	1.02	1.06	1.10	1.12	1.20
SSA	0.58	0.57	0.57	0.57	0.56	0.56	0.56
USA	1.44	1.47	1.46	1.47	1.53	1.53	1.57

Table 1945: MAgPIE m4p-SSP4 — 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



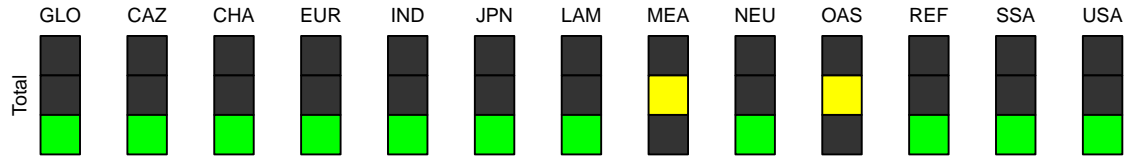
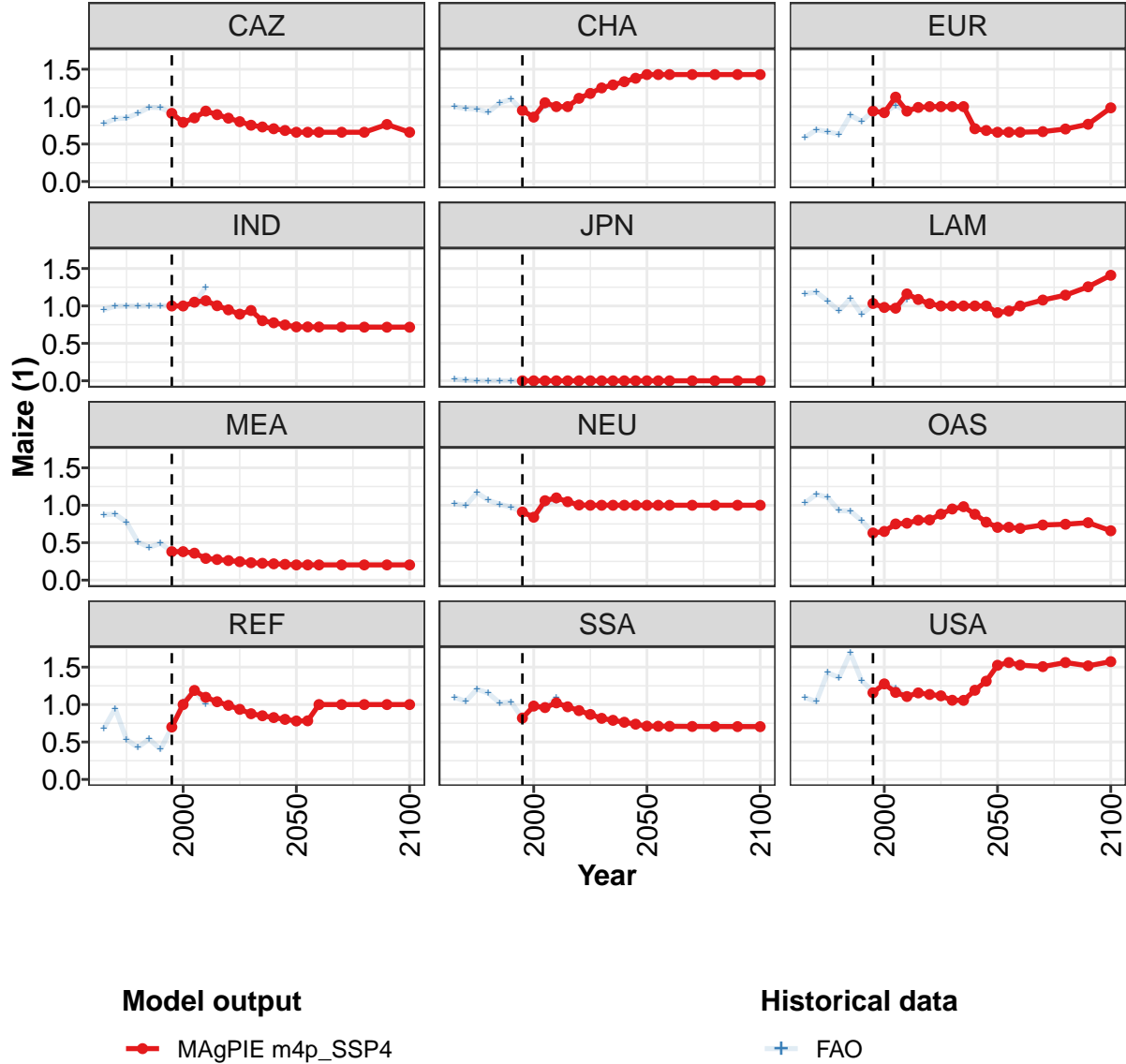


Figure 516: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Maize (1)

	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	0.71	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	0.71	0.68
IND	1.00	1.00	1.05	1.07	1.00	0.95	0.89	0.94	0.80	0.77	0.75
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	1.03	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
OAS	0.63	0.65	0.75	0.76	0.80	0.80	0.88	0.95	0.98	0.88	0.77
REF	0.70	1.00	1.19	1.10	1.04	0.99	0.94	0.88	0.85	0.83	0.80
SSA	0.82	0.98	0.96	1.02	0.97	0.92	0.87	0.82	0.79	0.76	0.74
USA	1.16	1.28	1.16	1.11	1.16	1.13	1.12	1.06	1.06	1.19	1.31

Table 1947: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Maize (1) [PART 1/2]

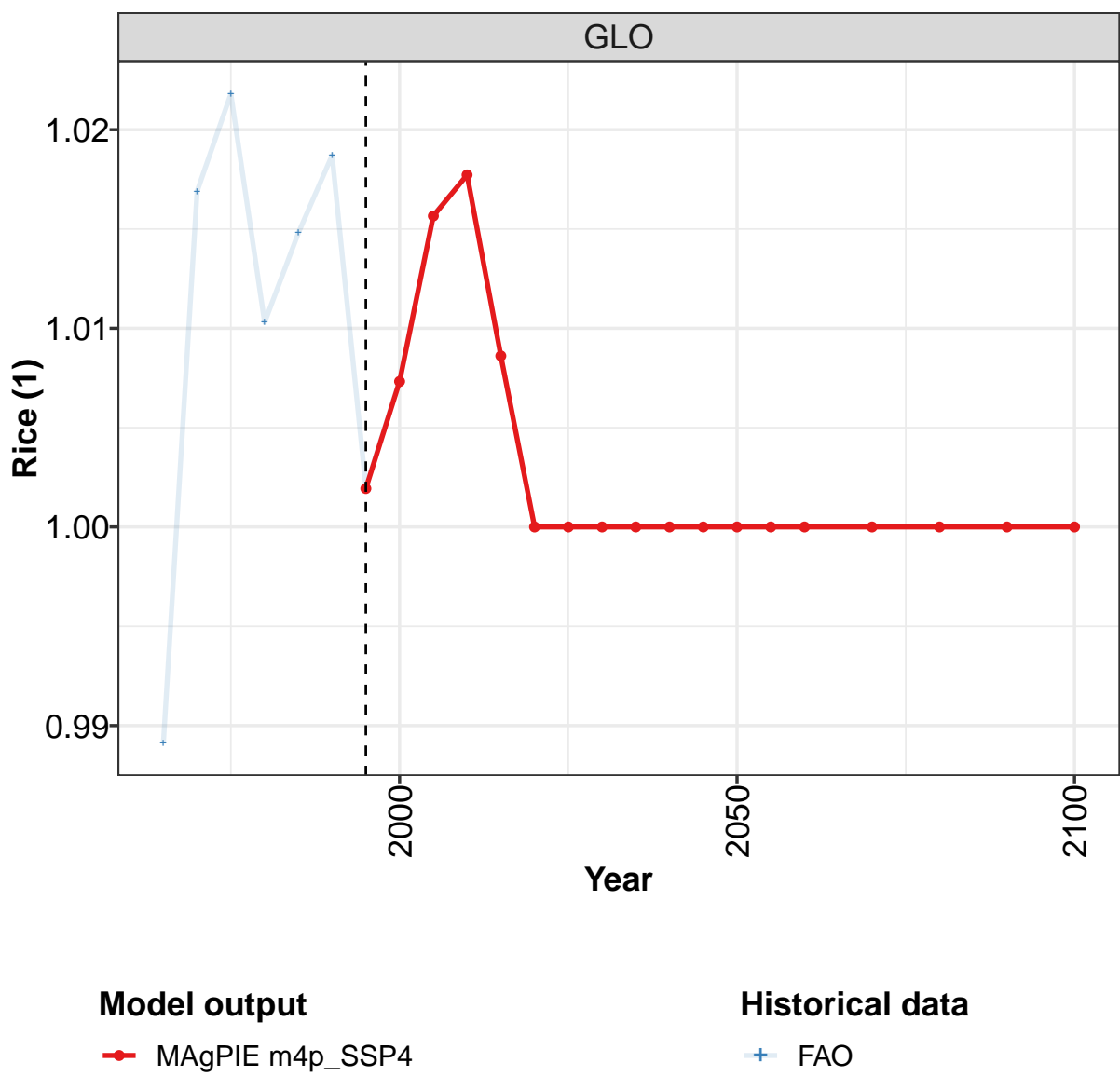
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.66	0.66	0.66	0.66	0.66	0.76	0.66
CHA	1.43	1.43	1.43	1.43	1.43	1.43	1.43
EUR	0.66	0.66	0.66	0.67	0.70	0.76	0.98
IND	0.72	0.72	0.72	0.72	0.72	0.72	0.72
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	0.91	0.93	1.00	1.08	1.14	1.26	1.41
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	0.70	0.71	0.69	0.74	0.75	0.77	0.66
REF	0.78	0.78	1.00	1.00	1.00	1.00	1.00
SSA	0.71	0.71	0.71	0.71	0.71	0.71	0.71
USA	1.52	1.56	1.53	1.51	1.56	1.52	1.57

Table 1948: MAgPIE m4p\_SSP4 — 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



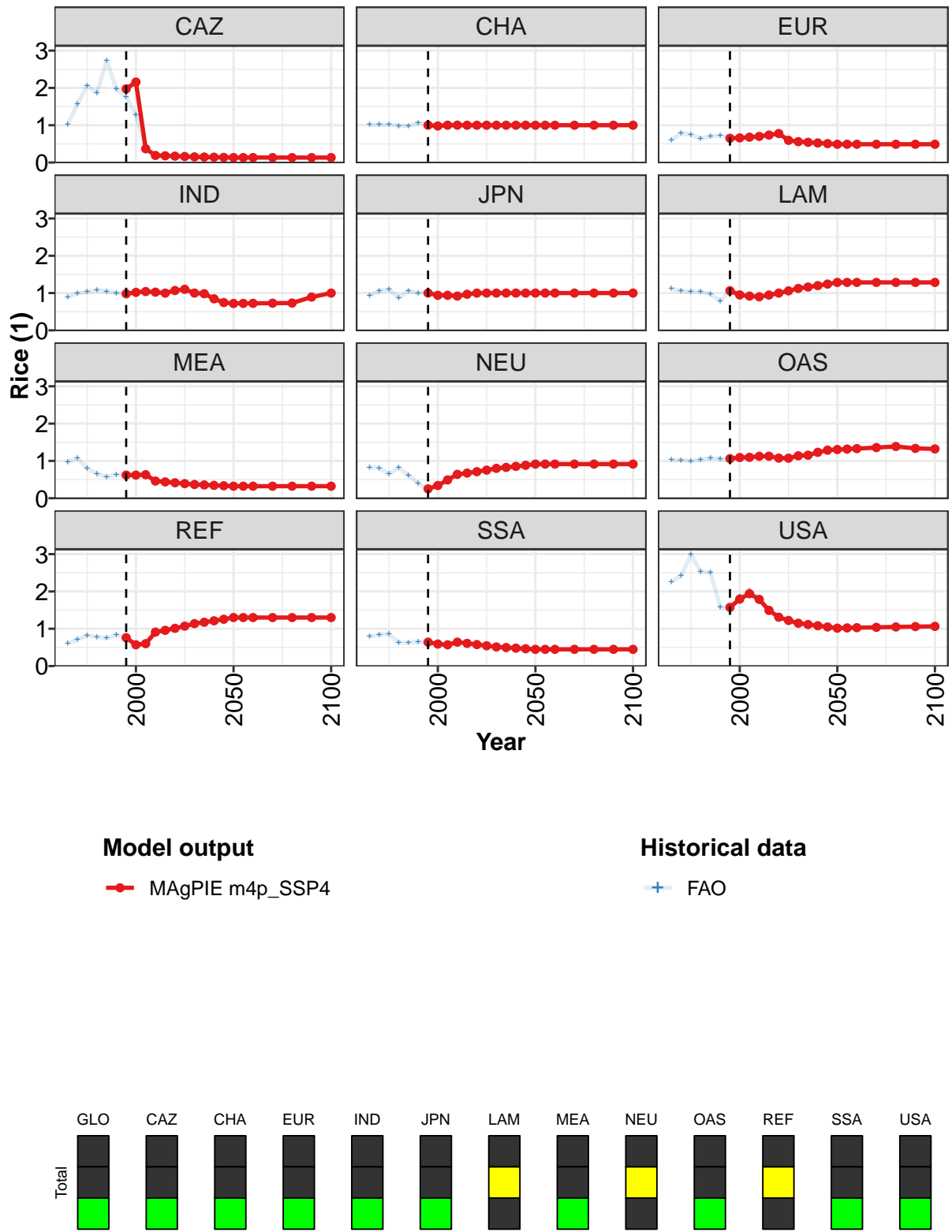


Figure 517: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Rice (1)



	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	0.52	0.51
IND	0.98	1.02	1.04	1.02	1.00	1.07	1.10	1.00	0.98	0.85	0.75
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	1.13	1.08	1.07	1.14	1.15	1.23	1.29
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	1.49	1.31	1.22	1.15	1.11	1.08	1.05

Table 1950: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Rice (1) [PART 1/2]

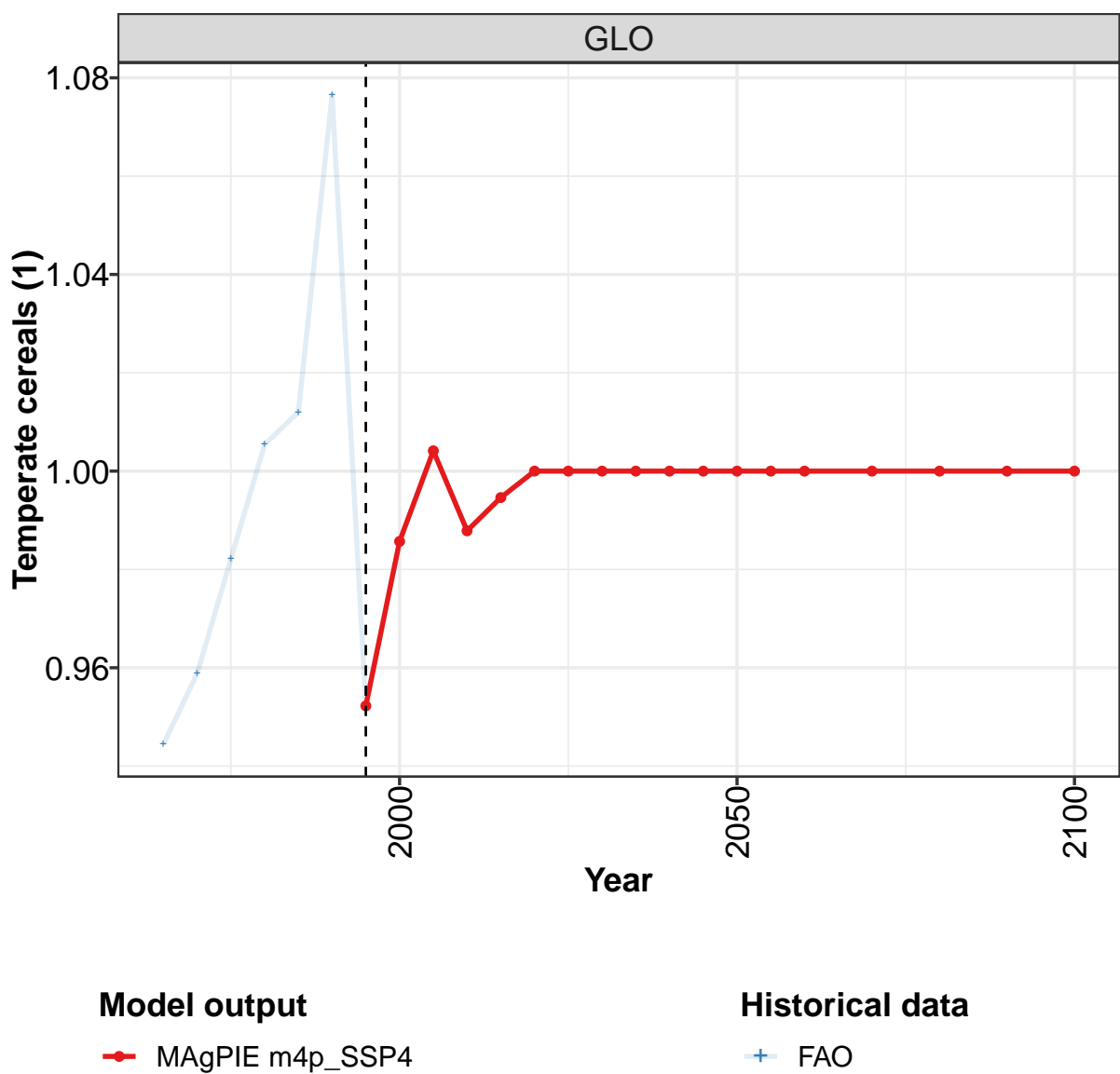
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.13	0.13	0.13	0.13	0.13	0.13	0.13
CHA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.49	0.49	0.49	0.49	0.49	0.49	0.49
IND	0.72	0.72	0.73	0.73	0.73	0.89	1.00
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.29	1.29	1.29	1.29	1.29	1.29	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	1.30	1.32	1.33	1.36	1.39	1.34	1.32
REF	1.30	1.30	1.30	1.30	1.30	1.30	1.30
SSA	0.45	0.45	0.45	0.45	0.45	0.45	0.45
USA	1.02	1.02	1.03	1.04	1.05	1.06	1.06

Table 1951: MAgPIE m4p\_SSP4 — 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



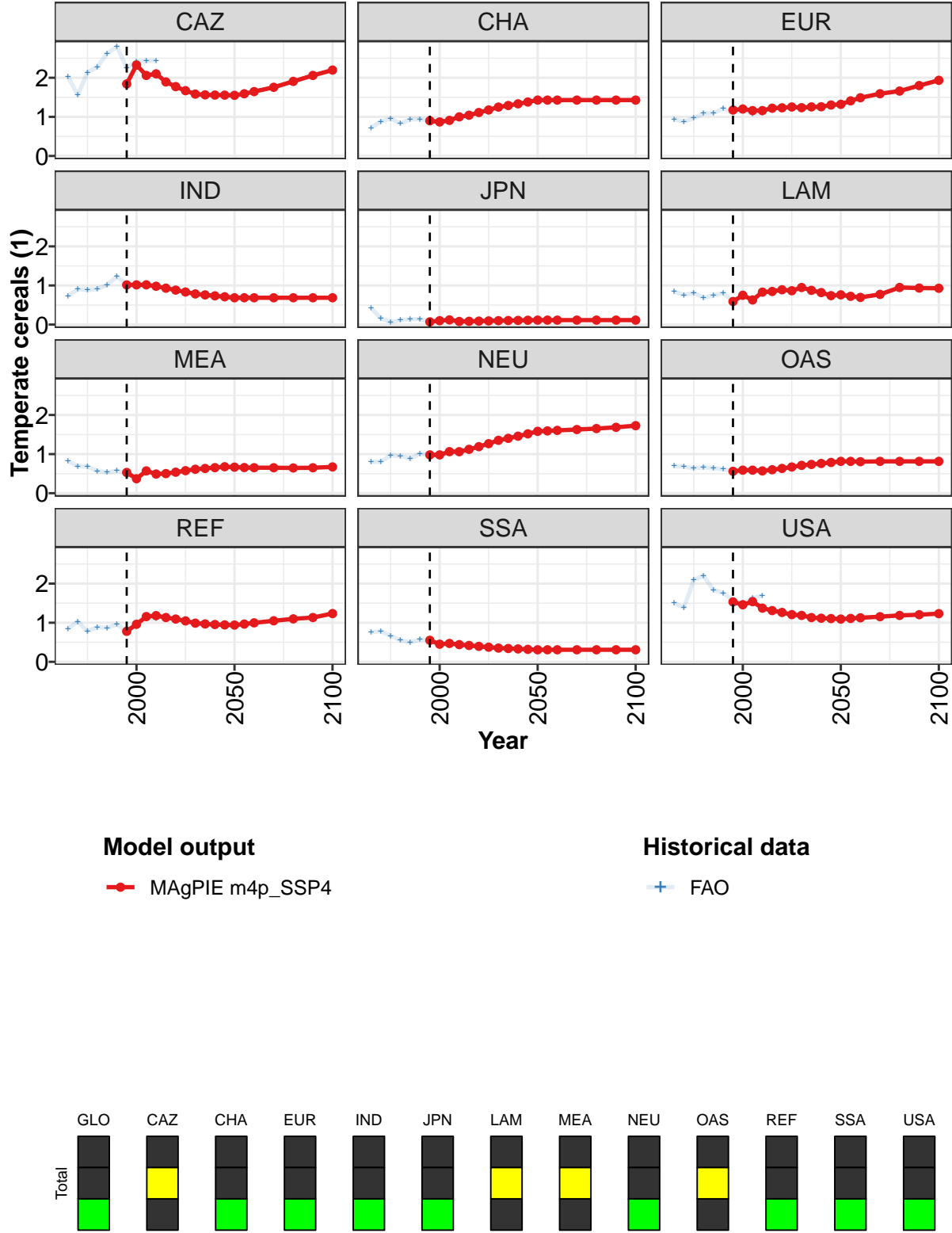


Figure 518: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Temperate cereals (1)

	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	1.89	1.77	1.67	1.58	1.56	1.56	1.56
CHA	0.90	0.87	0.91	1.00	1.04	1.11	1.18	1.25	1.29	1.33	1.38
EUR	1.18	1.20	1.16	1.16	1.22	1.23	1.25	1.23	1.25	1.26	1.30
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	0.89	0.87	0.95	0.88	0.82	0.74
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	1.35	1.40	1.46	1.52
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	1.13	1.09	1.05	0.99	0.97	0.95	0.94
SSA	0.55	0.45	0.47	0.44	0.42	0.40	0.37	0.35	0.34	0.33	0.32
USA	1.53	1.46	1.54	1.37	1.31	1.26	1.21	1.19	1.13	1.12	1.11

Table 1953: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Temperate cereals (1) [PART 1/2]

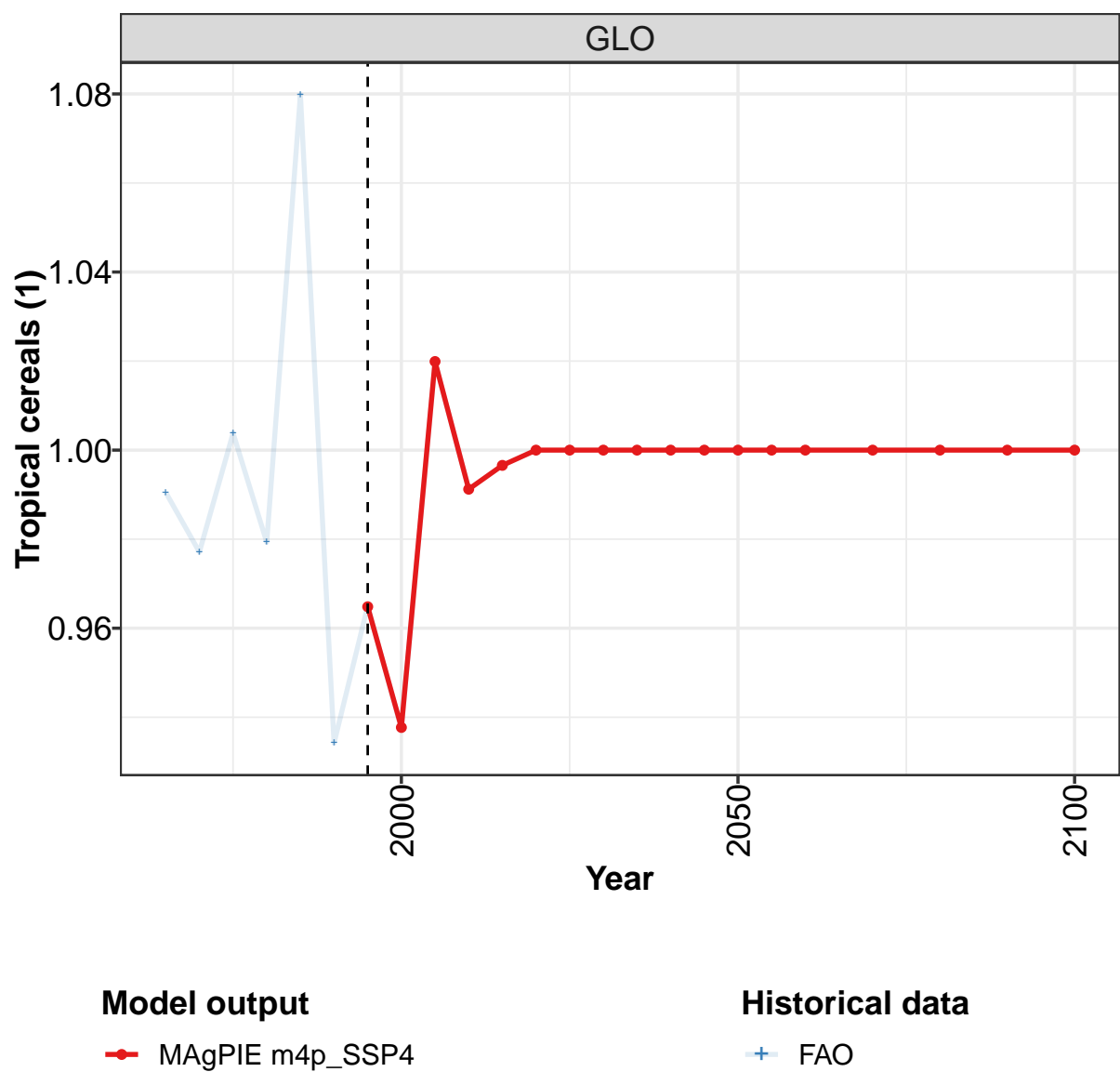
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.55	1.59	1.65	1.76	1.91	2.06	2.20
CHA	1.43	1.43	1.43	1.43	1.43	1.43	1.43
EUR	1.32	1.41	1.49	1.59	1.66	1.80	1.93
IND	0.69	0.69	0.69	0.69	0.69	0.69	0.69
JPN	0.11	0.11	0.11	0.11	0.11	0.11	0.11
LAM	0.76	0.72	0.70	0.77	0.95	0.93	0.93
MEA	0.67	0.66	0.65	0.65	0.65	0.65	0.67
NEU	1.58	1.59	1.61	1.63	1.65	1.69	1.73
OAS	0.81	0.81	0.81	0.81	0.81	0.81	0.81
REF	0.94	0.97	1.00	1.05	1.10	1.13	1.23
SSA	0.31	0.31	0.31	0.31	0.31	0.31	0.31
USA	1.09	1.11	1.13	1.15	1.19	1.20	1.23

Table 1954: MAgPIE m4p\_SSP4 — 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



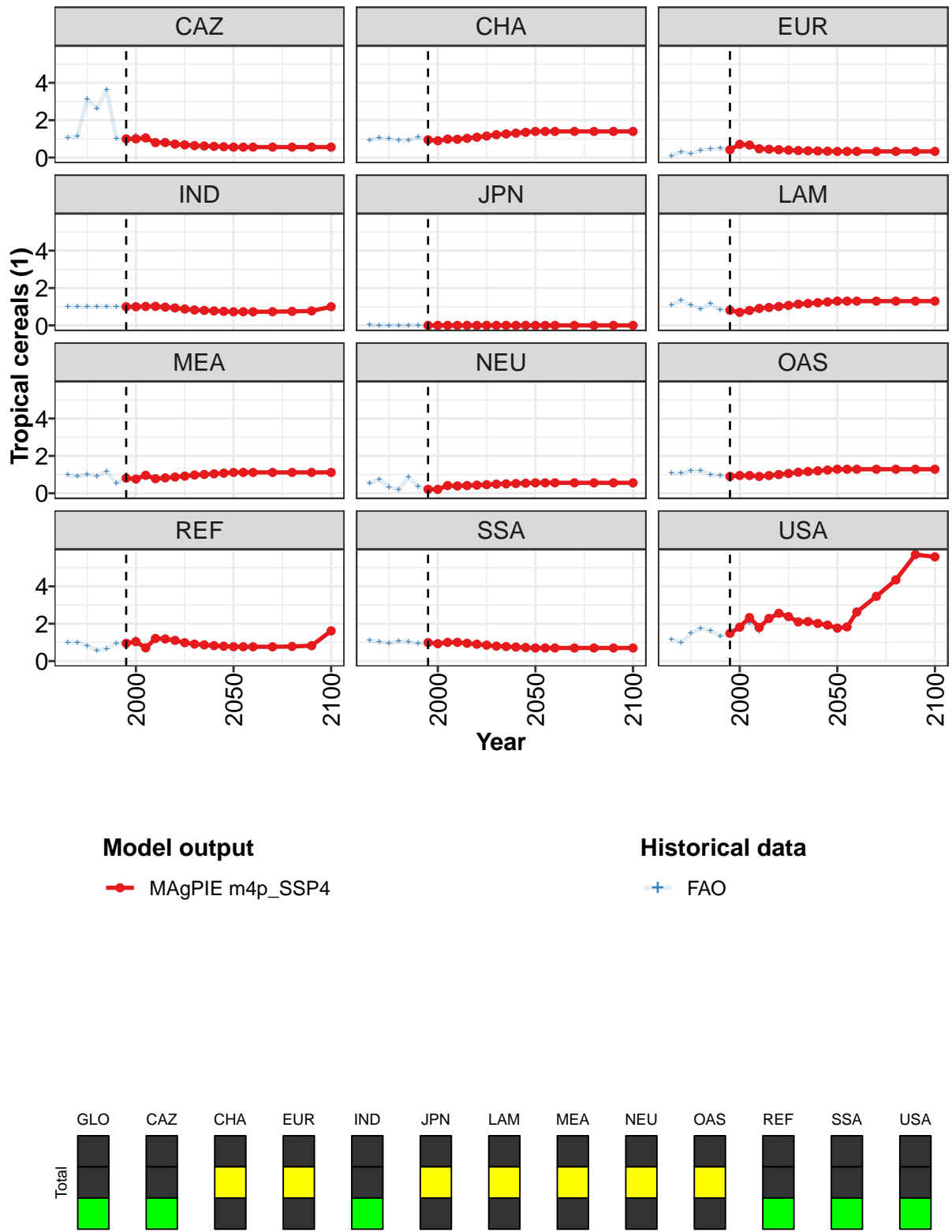


Figure 519: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Tropical cereals (1)

	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	0.80	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	1.22	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	0.80	0.78	0.75
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	1.11	0.98	0.91	0.87	0.83	0.80
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	2.28	2.56	2.38	2.10	2.11	2.02	1.93

Table 1956: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Cereals—Tropical cereals (1) [PART 1/2]

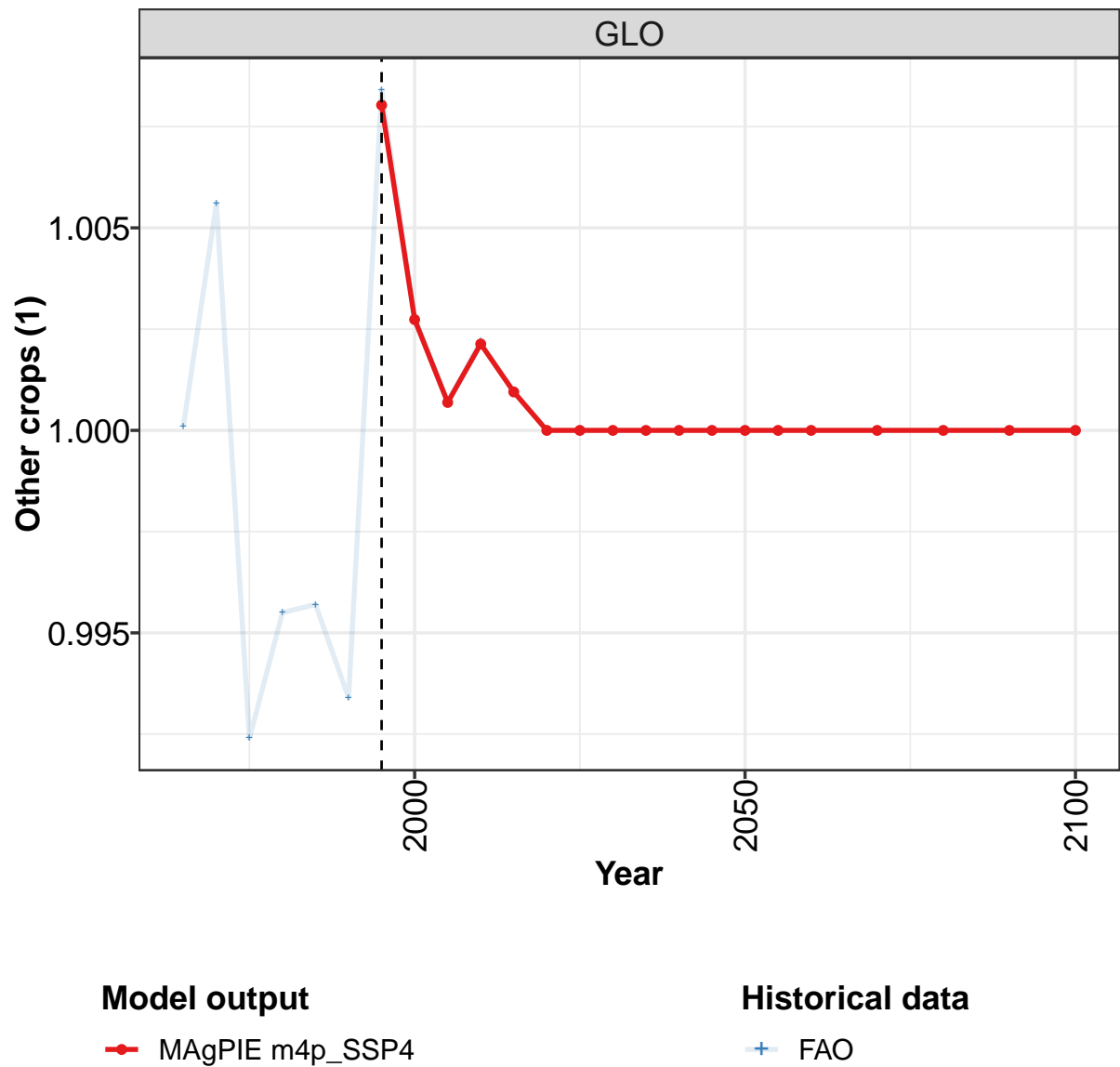
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.56	0.56	0.56	0.56	0.56	0.56	0.56
CHA	1.40	1.40	1.40	1.40	1.40	1.40	1.40
EUR	0.33	0.33	0.33	0.33	0.33	0.33	0.33
IND	0.73	0.73	0.73	0.73	0.75	0.77	1.00
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.30	1.30	1.30	1.30	1.30	1.30	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	0.77	0.77	0.77	0.76	0.78	0.82	1.62
SSA	0.70	0.70	0.70	0.70	0.70	0.70	0.70
USA	1.76	1.83	2.63	3.46	4.35	5.70	5.58

Table 1957: MAgPIE m4p\_SSP4 — 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





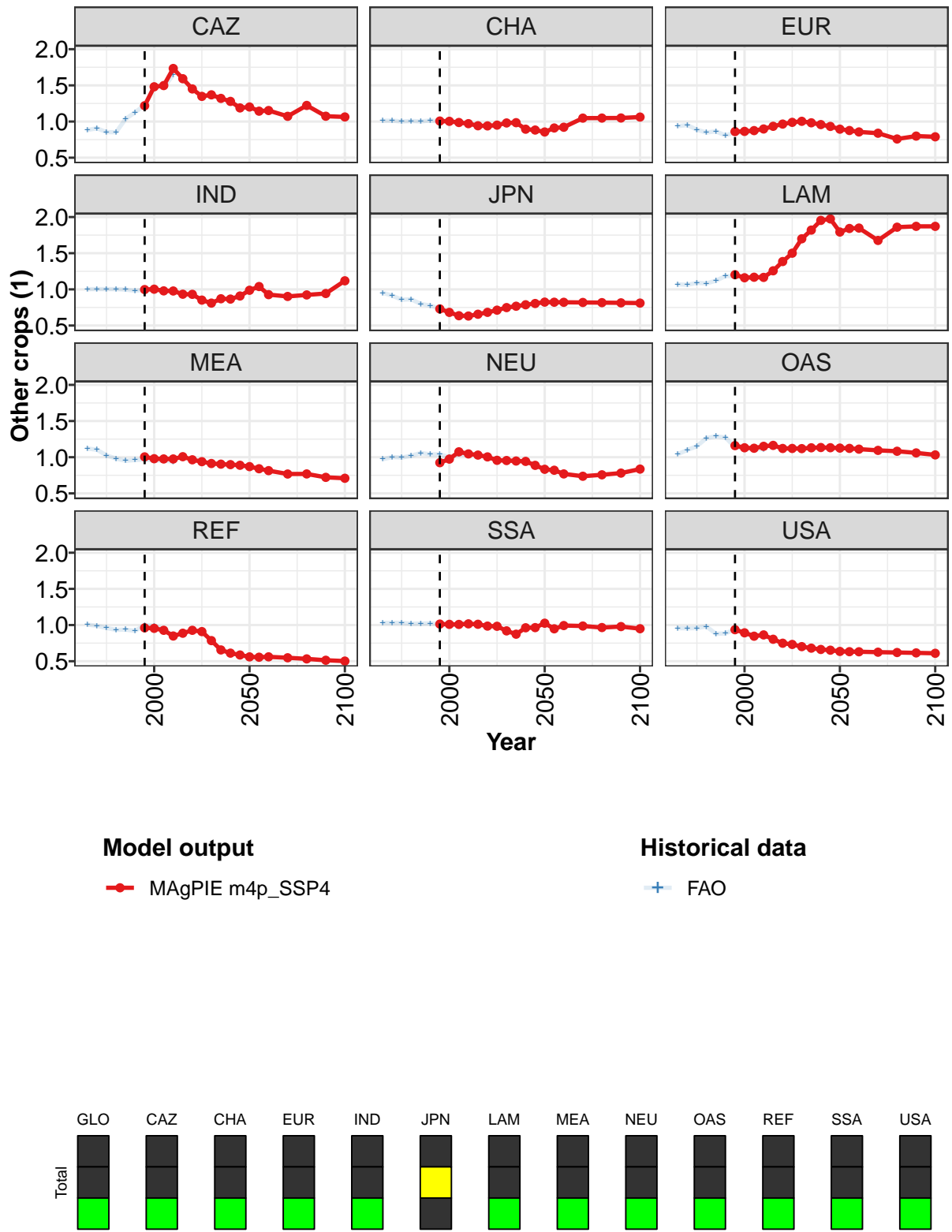


Figure 520: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Other crops (1)

	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	1.59	1.45	1.35	1.37	1.32	1.28	1.19
CHA	1.01	1.00	0.99	0.97	0.94	0.94	0.95	0.98	0.98	0.89	0.88
EUR	0.86	0.86	0.87	0.90	0.93	0.96	0.99	1.00	0.98	0.96	0.93
IND	1.00	1.00	0.98	0.98	0.93	0.93	0.85	0.81	0.87	0.87	0.91
JPN	0.73	0.68	0.64	0.63	0.66	0.68	0.71	0.75	0.77	0.79	0.80
LAM	1.20	1.16	1.17	1.17	1.26	1.38	1.50	1.70	1.82	1.95	1.97
MEA	1.00	0.98	0.98	0.98	1.01	0.96	0.94	0.91	0.90	0.90	0.89
NEU	0.92	0.97	1.07	1.05	1.03	1.00	0.96	0.95	0.95	0.94	0.89
OAS	1.16	1.13	1.12	1.15	1.16	1.12	1.12	1.12	1.13	1.13	1.13
REF	0.96	0.95	0.93	0.85	0.89	0.93	0.91	0.78	0.66	0.61	0.59
SSA	1.01	1.01	1.01	1.02	1.01	0.99	0.98	0.92	0.87	0.96	0.96
USA	0.94	0.89	0.85	0.86	0.80	0.75	0.73	0.70	0.68	0.66	0.65

Table 1959: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Other crops (1) [PART 1/2]

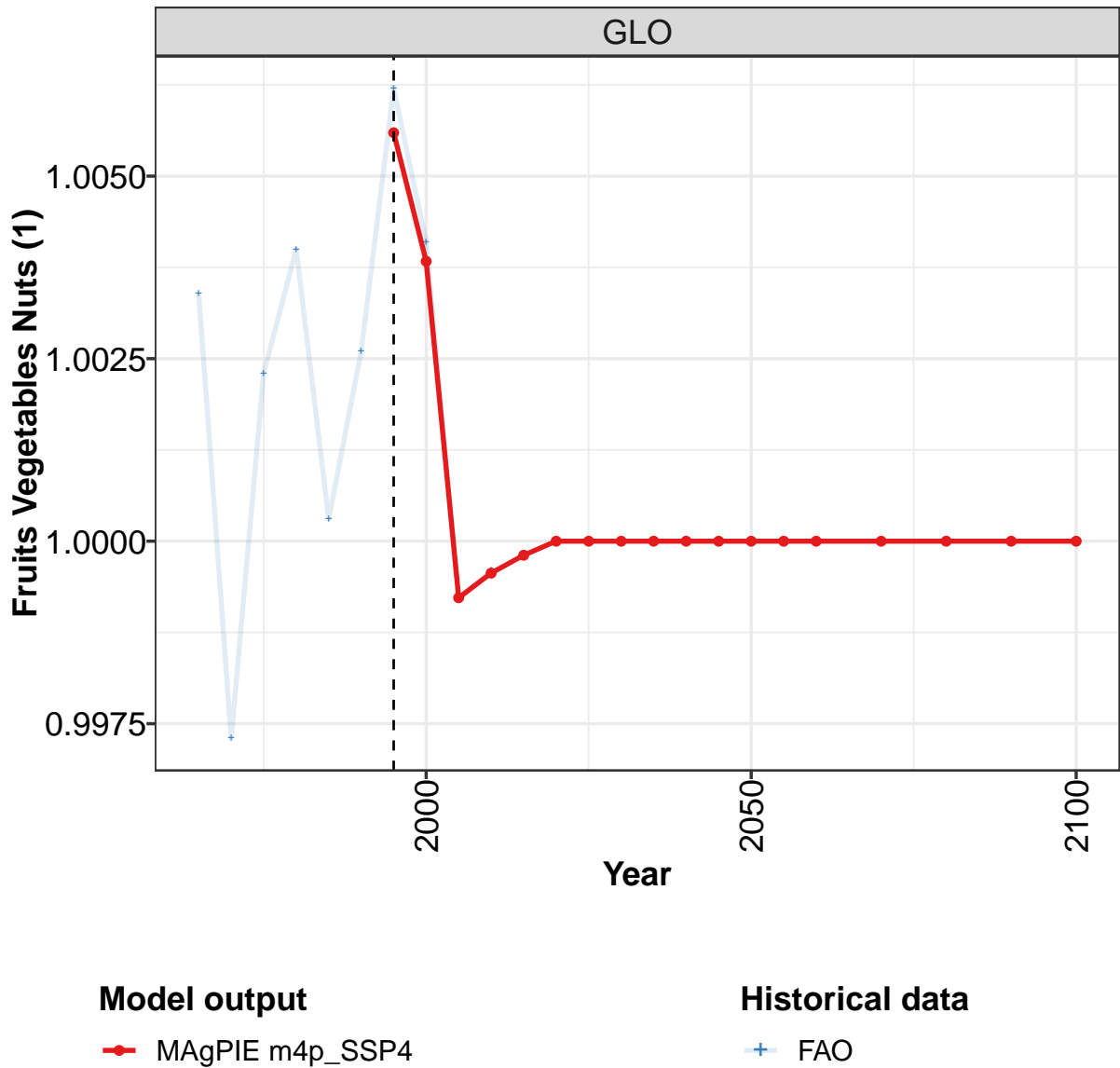
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.20	1.14	1.15	1.07	1.22	1.07	1.06
CHA	0.86	0.91	0.92	1.05	1.05	1.05	1.06
EUR	0.89	0.88	0.86	0.84	0.76	0.80	0.79
IND	0.99	1.04	0.93	0.90	0.92	0.94	1.12
JPN	0.82	0.82	0.82	0.82	0.82	0.81	0.81
LAM	1.79	1.84	1.85	1.68	1.86	1.87	1.87
MEA	0.87	0.84	0.81	0.77	0.77	0.72	0.71
NEU	0.83	0.82	0.77	0.74	0.76	0.78	0.84
OAS	1.13	1.12	1.11	1.09	1.08	1.06	1.03
REF	0.56	0.56	0.56	0.55	0.53	0.51	0.50
SSA	1.03	0.95	0.99	0.99	0.97	0.98	0.95
USA	0.64	0.63	0.63	0.62	0.62	0.62	0.61

Table 1960: MAgPIE m4p\_SSP4 — 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



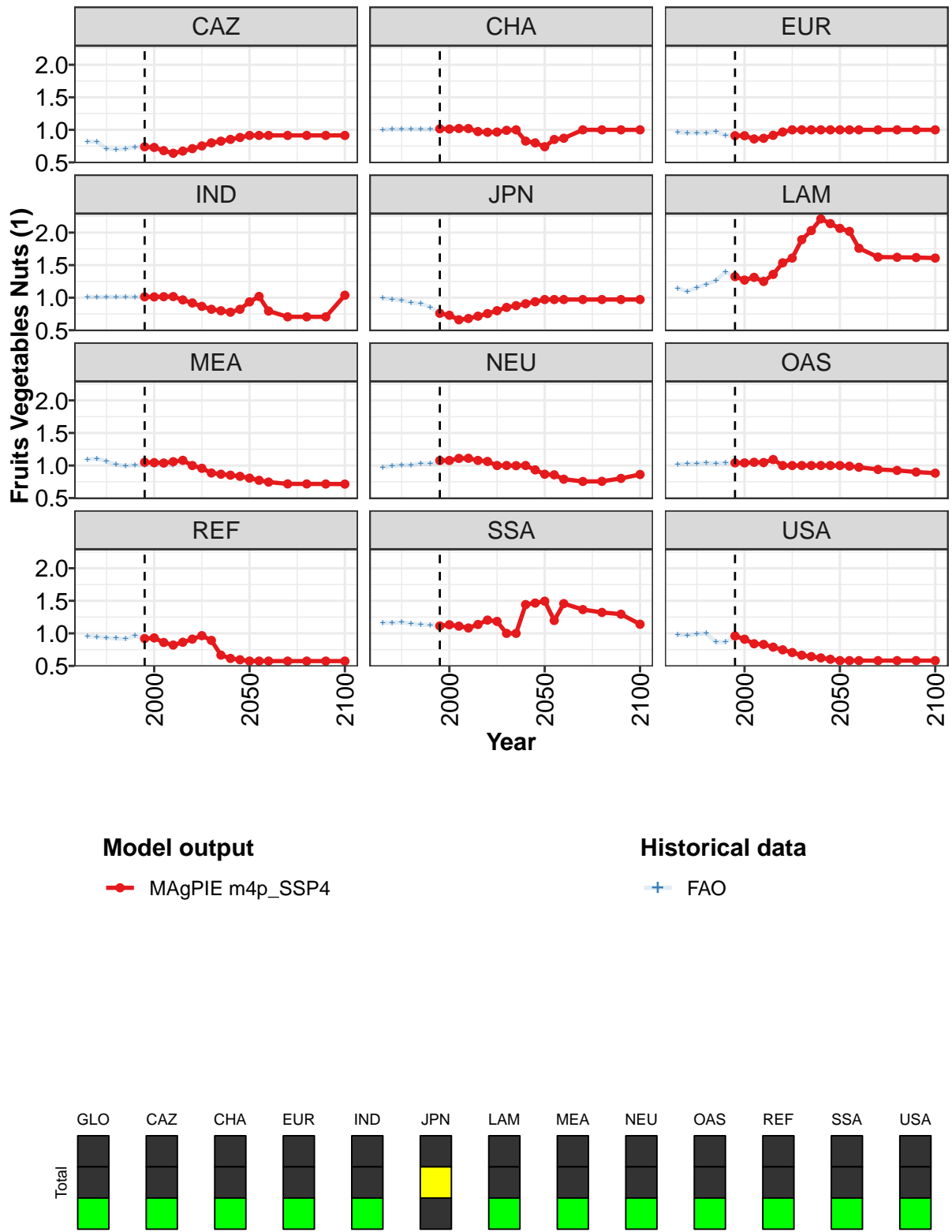


Figure 521: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Other crops—Fruits Vegetables Nuts (1)

	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	0.97	0.96	0.97	0.99	1.00	0.83	0.80
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	0.80	0.78	0.82
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	1.36	1.54	1.61	1.89	2.03	2.21	2.14
MEA	1.05	1.04	1.04	1.06	1.08	1.00	0.96	0.89	0.87	0.85	0.83
NEU	1.08	1.08	1.11	1.11	1.08	1.06	1.00	1.00	1.00	1.00	0.93
OAS	1.04	1.04	1.05	1.05	1.09	1.00	1.00	1.00	1.00	1.00	1.00
REF	0.92	0.93	0.86	0.82	0.86	0.91	0.96	0.89	0.67	0.62	0.59
SSA	1.11	1.13	1.11	1.08	1.14	1.20	1.18	1.00	1.00	1.44	1.47
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\_SSP4 — Trade—Self-sufficiency—Crops—Other crops—Fruits Vegetables Nuts (1)  
[PART 1/2]

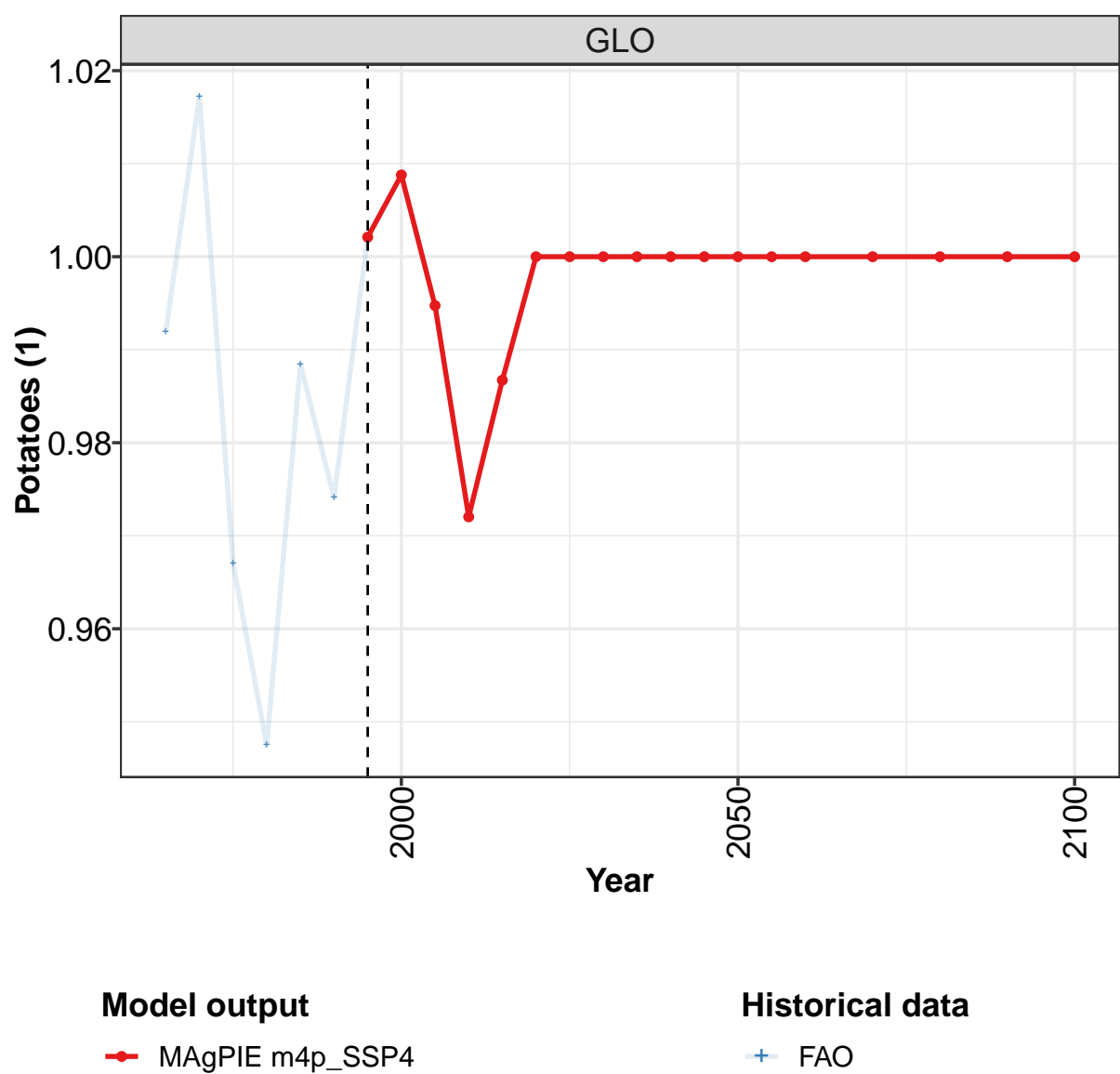
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.91	0.91	0.91	0.91	0.91	0.91	0.91
CHA	0.74	0.85	0.87	1.00	1.00	1.00	1.00
EUR	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IND	0.94	1.02	0.79	0.71	0.71	0.71	1.04
JPN	0.97	0.97	0.97	0.97	0.97	0.97	0.97
LAM	2.06	2.02	1.76	1.62	1.62	1.62	1.61
MEA	0.81	0.77	0.75	0.72	0.72	0.72	0.71
NEU	0.87	0.86	0.79	0.76	0.76	0.80	0.86
OAS	1.00	0.99	0.97	0.94	0.93	0.90	0.88
REF	0.57	0.57	0.57	0.57	0.57	0.57	0.57
SSA	1.49	1.20	1.46	1.37	1.32	1.29	1.14
USA	0.58	0.58	0.58	0.58	0.58	0.58	0.58

Table 1963: MAgPIE m4p\_SSP4 — 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



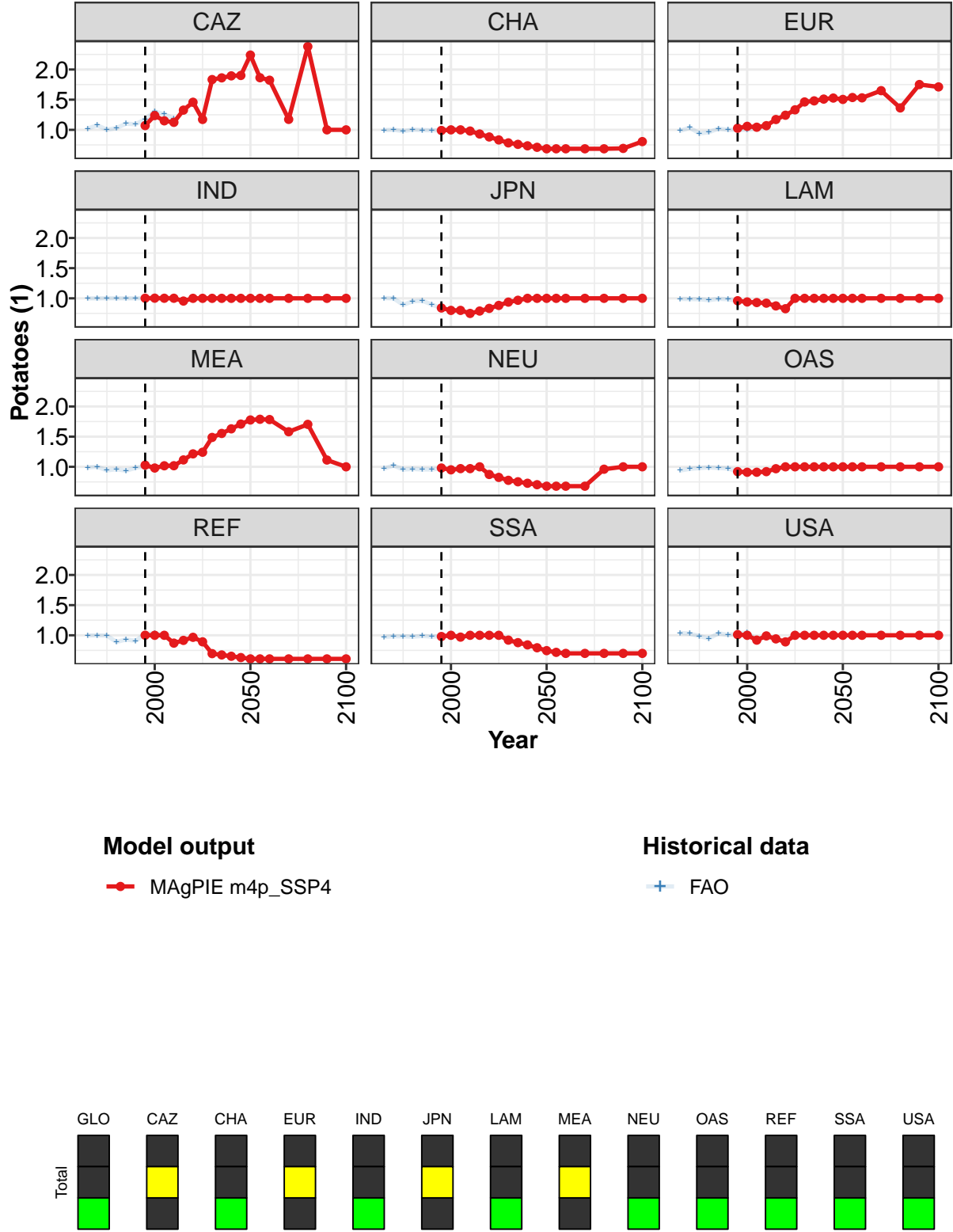


Figure 522: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Other crops—Potatoes (1)

	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	1.33	1.46	1.17	1.83	1.86	1.89	1.90
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	1.17	1.24	1.33	1.46	1.48	1.51	1.53
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	1.11	1.21	1.24	1.49	1.55	1.63	1.71
NEU	0.98	0.95	0.97	0.97	1.00	0.87	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	0.89	0.70	0.67	0.65	0.63
SSA	0.98	1.00	0.97	1.00	1.00	1.00	1.00	0.92	0.88	0.84	0.79
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\_SSP4 — 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	2.24	1.86	1.82	1.17	2.38	1.00	1.00
CHA	0.69	0.69	0.69	0.69	0.69	0.69	0.81
EUR	1.50	1.54	1.53	1.65	1.36	1.75	1.71
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	1.78	1.79	1.78	1.58	1.70	1.11	1.00
NEU	0.68	0.68	0.68	0.68	0.96	1.00	1.00
OAS	1.00	1.00	1.00	1.00	1.00	1.00	1.00
REF	0.61	0.61	0.61	0.61	0.61	0.61	0.61
SSA	0.75	0.72	0.70	0.70	0.70	0.70	0.70
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00

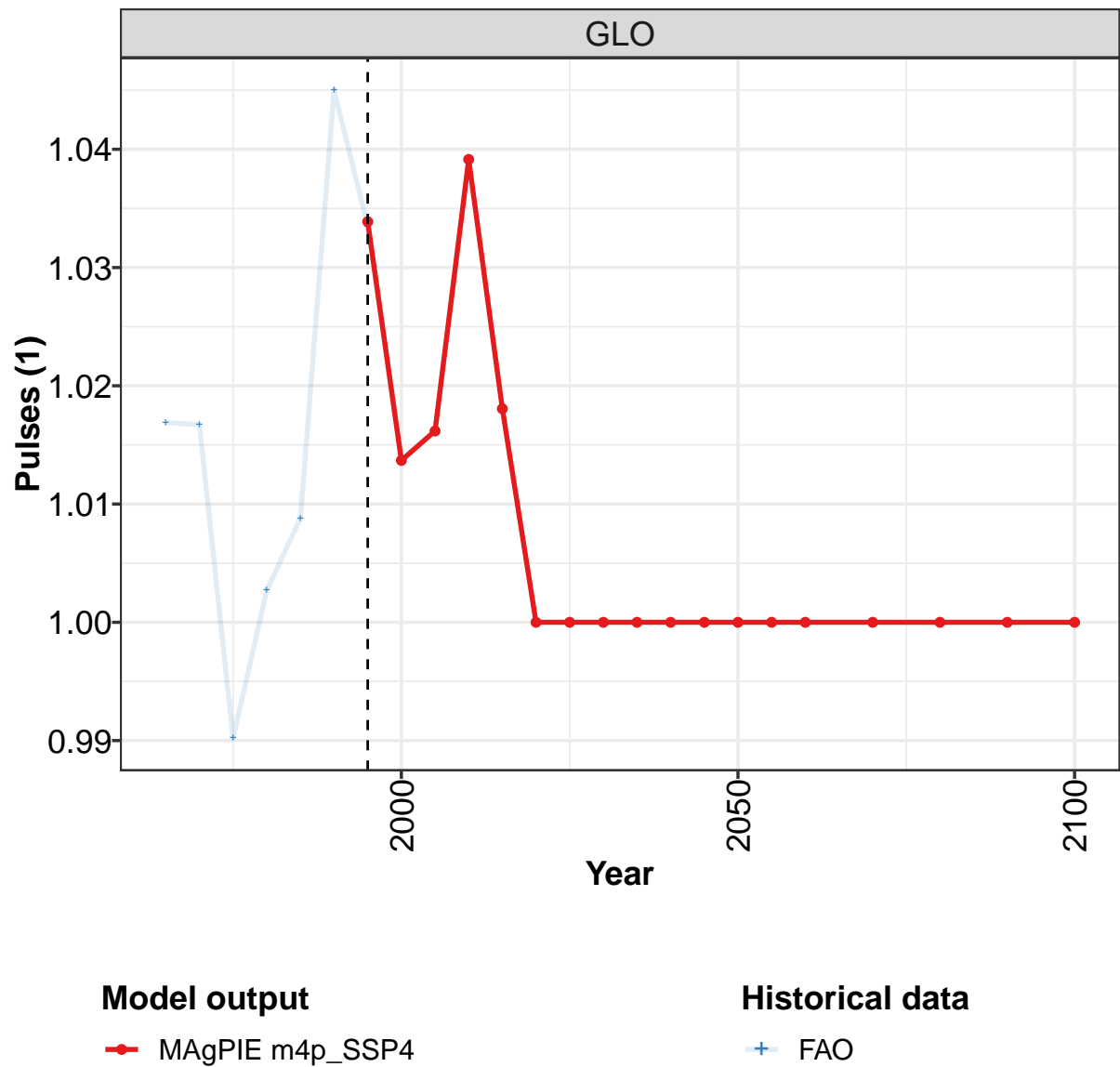
Table 1966: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Other crops—Potatoes (1) [PART 2/2]

	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



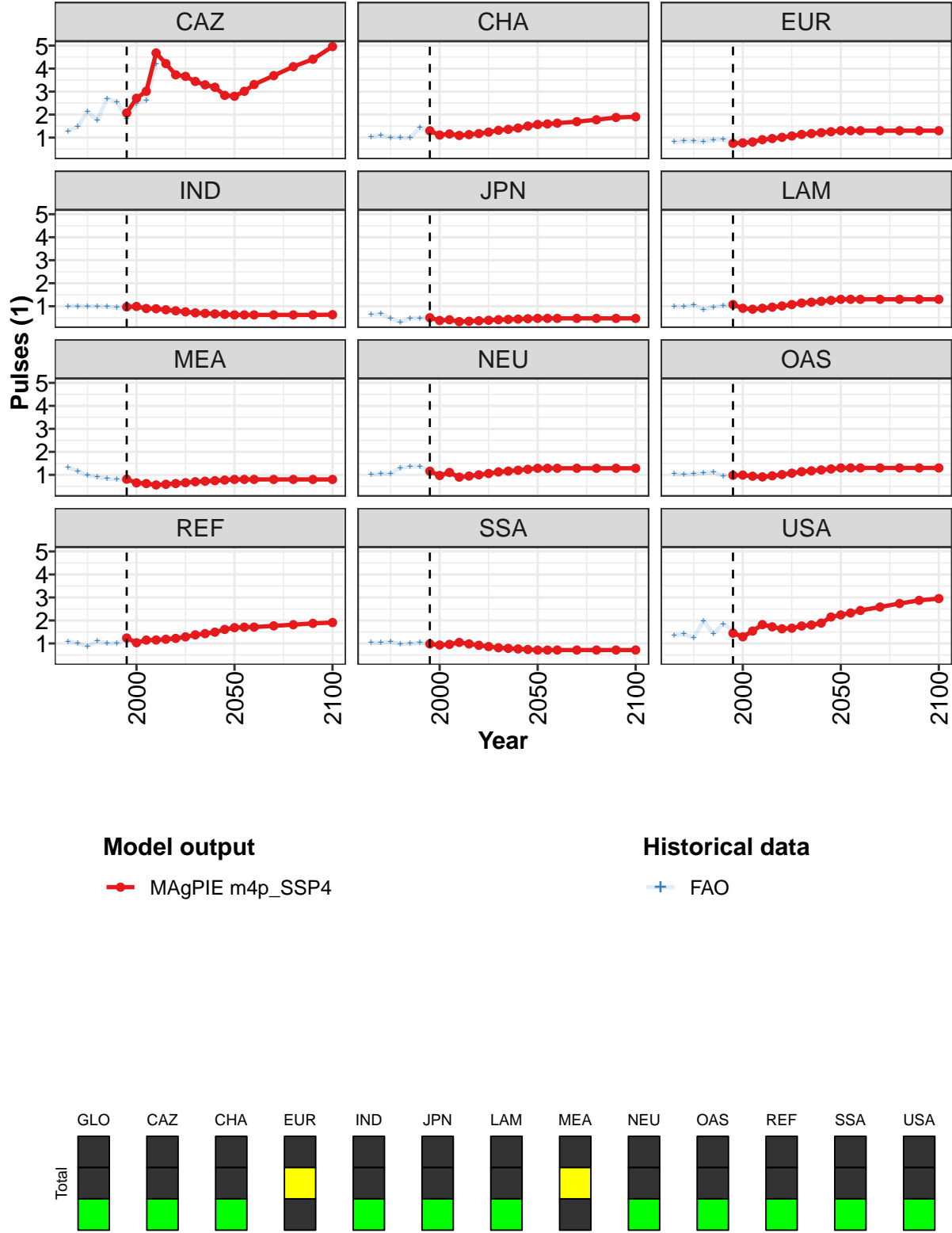


Figure 523: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Other crops—Pulses (1)

	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	4.22	3.73	3.66	3.44	3.29	3.19	2.84
CHA	1.30	1.11	1.16	1.09	1.13	1.17	1.24	1.32	1.36	1.41	1.50
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	1.01	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	1.29	1.37	1.43	1.49	1.61
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	1.72	1.64	1.66	1.76	1.80	1.89	2.15

Table 1968: MAgPIE m4p-SSP4 — Trade—Self-sufficiency—Crops—Other crops—Pulses (1) [PART 1/2]

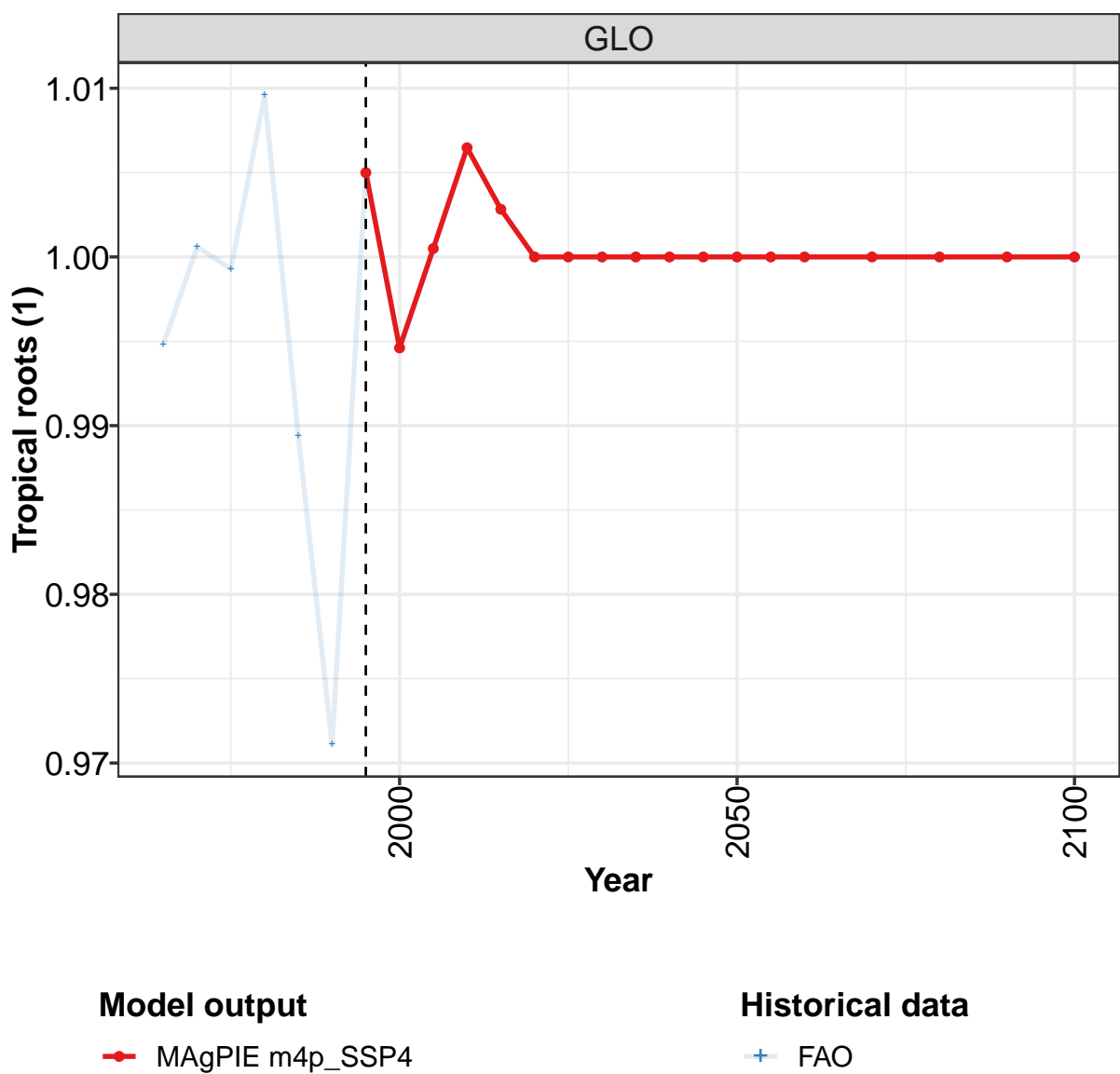
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	2.80	3.01	3.31	3.69	4.08	4.41	4.96
CHA	1.57	1.59	1.63	1.69	1.78	1.88	1.90
EUR	1.30	1.30	1.30	1.30	1.30	1.30	1.30
IND	0.62	0.62	0.62	0.62	0.62	0.62	0.63
JPN	0.47	0.47	0.47	0.47	0.47	0.47	0.47
LAM	1.30	1.30	1.30	1.30	1.30	1.30	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	1.69	1.71	1.71	1.77	1.81	1.87	1.91
SSA	0.71	0.71	0.71	0.71	0.71	0.71	0.71
USA	2.24	2.33	2.43	2.58	2.74	2.87	2.95

Table 1969: MAgPIE m4p-SSP4 — 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



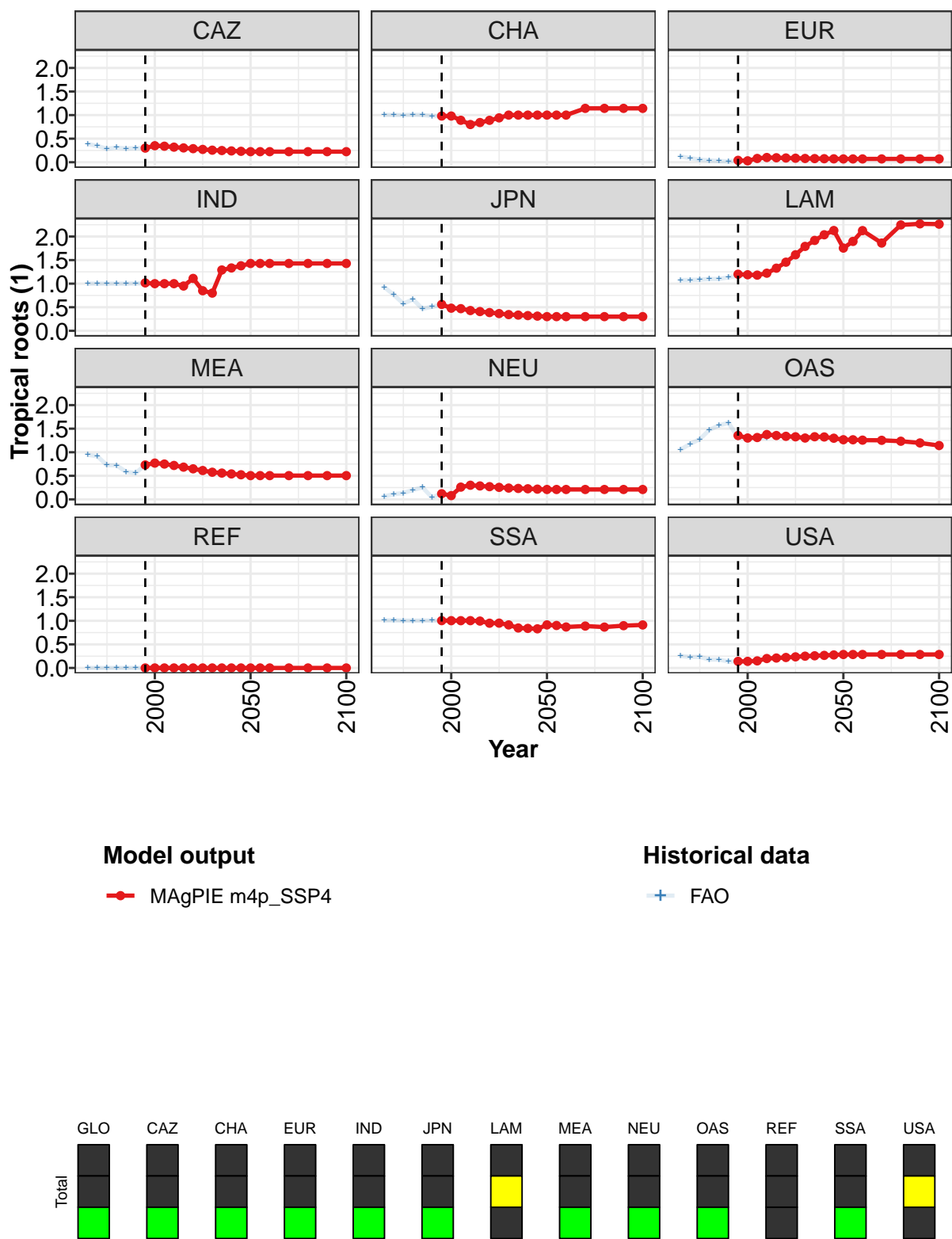


Figure 524: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Other crops—Tropical roots (1)

	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	0.09	0.09	0.09	0.08	0.08	0.08	0.07
IND	1.02	1.00	1.00	1.00	0.95	1.11	0.85	0.80	1.29	1.33	1.38
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	1.61	1.79	1.92	2.04	2.13
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	0.28	0.27	0.26	0.24	0.23	0.22	0.22
OAS	1.35	1.30	1.31	1.38	1.35	1.34	1.33	1.30	1.33	1.32	1.30
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	0.95	0.95	0.91	0.85	0.84	0.83
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\_SSP4 — Trade—Self-sufficiency—Crops—Other crops—Tropical roots (1) [PART 1/2]

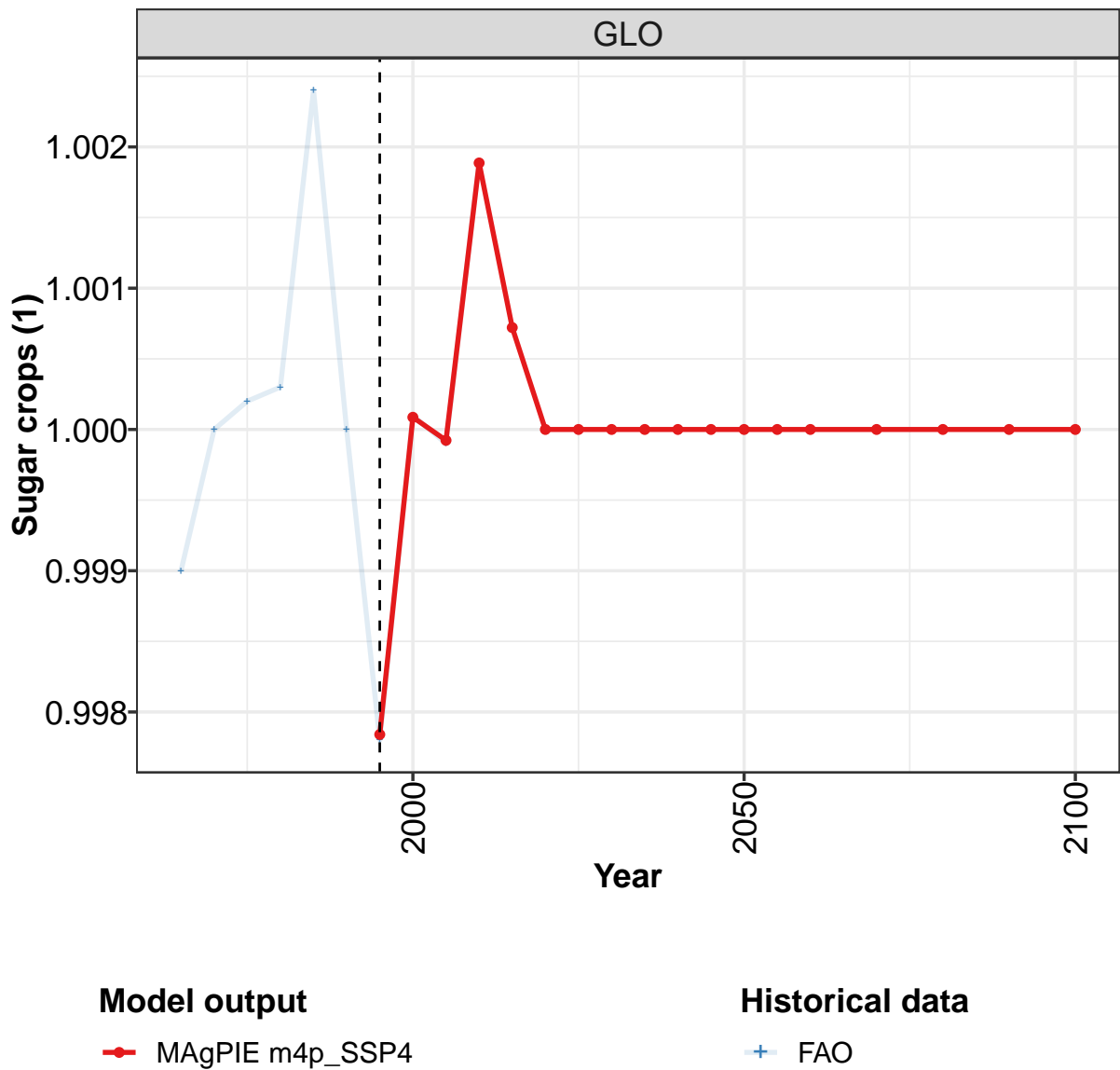
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.22	0.22	0.22	0.22	0.22	0.22	0.22
CHA	1.00	1.00	1.00	1.14	1.14	1.14	1.14
EUR	0.07	0.07	0.07	0.07	0.07	0.07	0.07
IND	1.43	1.43	1.43	1.43	1.43	1.43	1.43
JPN	0.30	0.30	0.30	0.30	0.30	0.30	0.30
LAM	1.76	1.90	2.13	1.86	2.25	2.27	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	1.27	1.26	1.26	1.25	1.23	1.20	1.14
REF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSA	0.91	0.90	0.87	0.89	0.87	0.90	0.91
USA	0.29	0.29	0.29	0.29	0.29	0.29	0.29

Table 1972: MAgPIE m4p\_SSP4 — 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



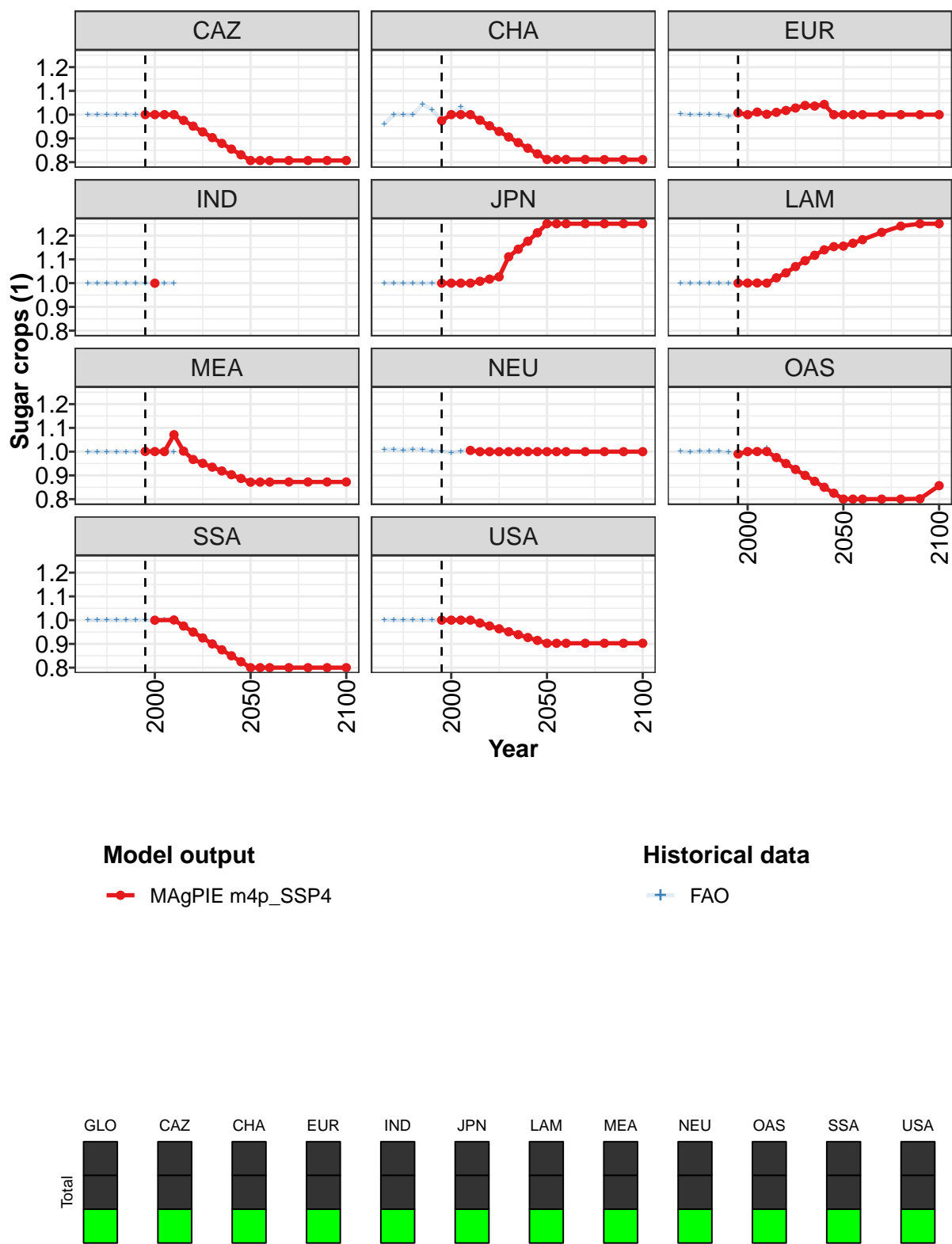


Figure 525: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Sugar crops (1)



	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\_SSP4 — Trade—Self-sufficiency—Crops—Sugar crops (1) [PART 1/2]

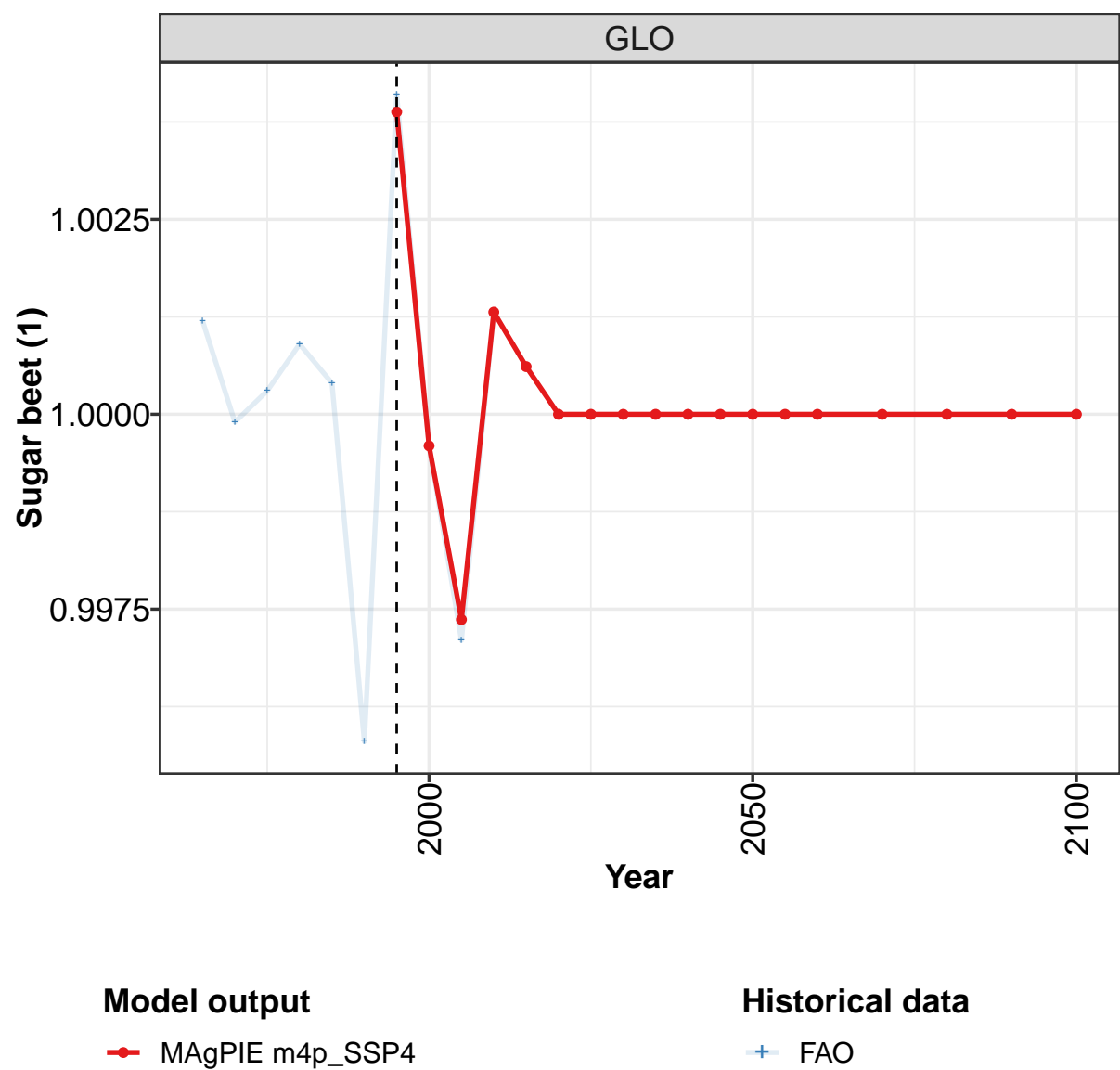
	2050	2055	2060	2070	2080	2090	2100
GLO	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1
EUR	1	1	1	1	1	1	1
IND							
JPN	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1
OAS	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1

Table 1975: MAgPIE m4p\_SSP4 — 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



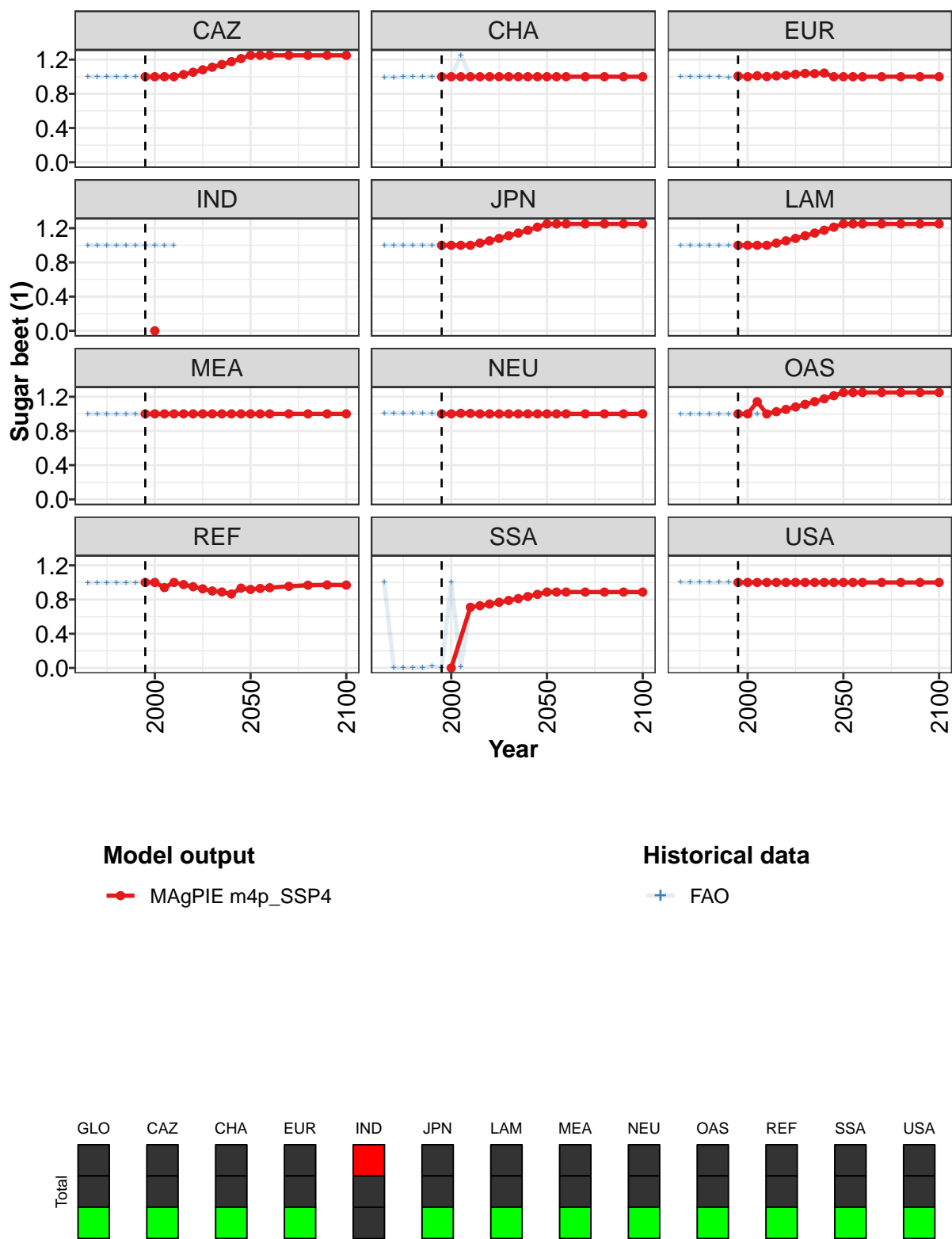


Figure 526: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar beet (1)

	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\_SSP4 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar beet (1) [PART 1/2]

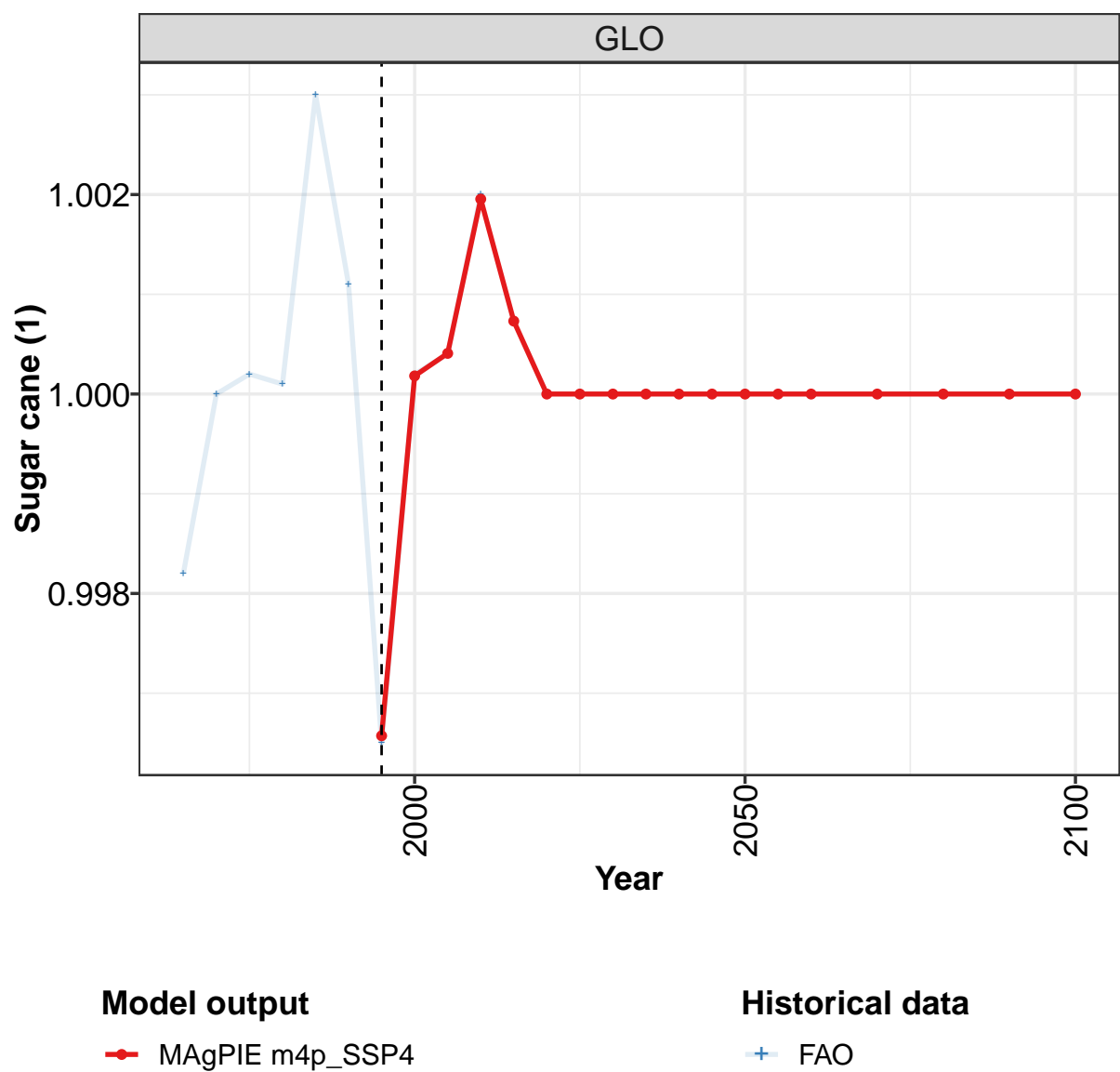
	2050	2055	2060	2070	2080	2090	2100
GLO	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1
EUR	1	1	1	1	1	1	1
IND							
JPN	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1
NEU	1	1	1	1	1	1	1
OAS	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1

Table 1978: MAgPIE m4p\_SSP4 — 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



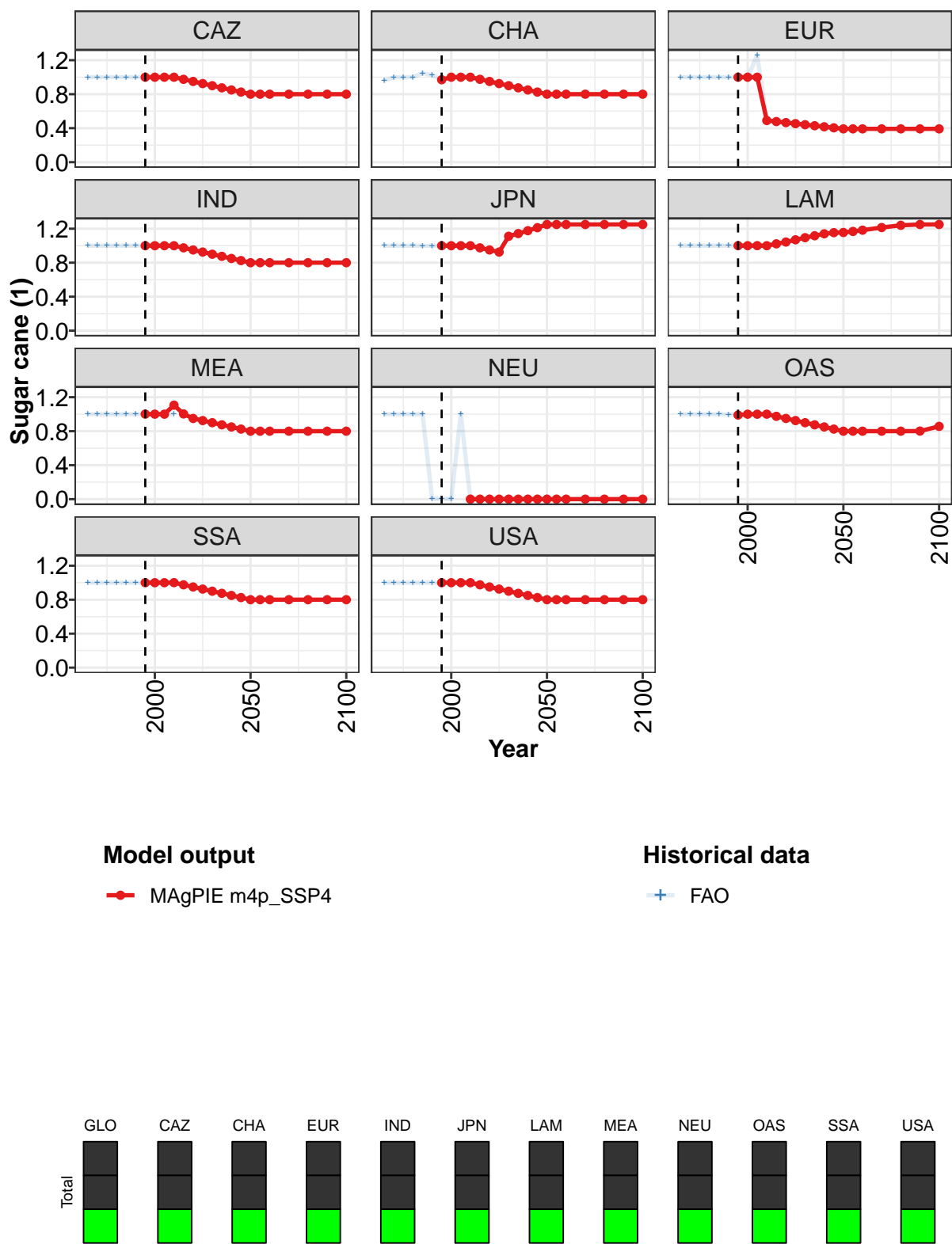


Figure 527: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar cane (1)

	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\_SSP4 — Trade—Self-sufficiency—Crops—Sugar crops—Sugar cane (1) [PART 1/2]

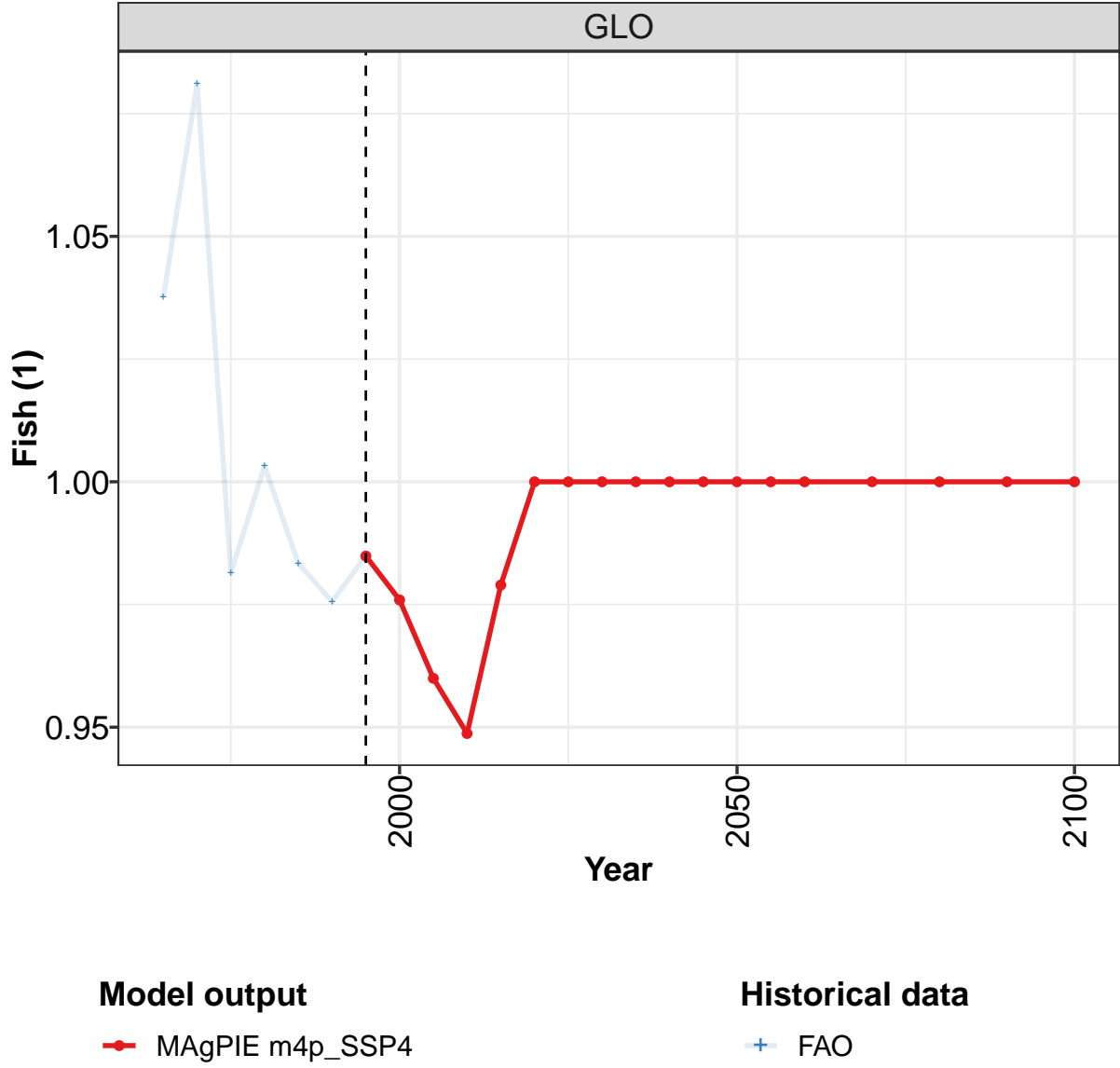
	2050	2055	2060	2070	2080	2090	2100
GLO	1	1	1	1	1	1	1
CAZ	1	1	1	1	1	1	1
CHA	1	1	1	1	1	1	1
EUR	0	0	0	0	0	0	0
IND	1	1	1	1	1	1	1
JPN	1	1	1	1	1	1	1
LAM	1	1	1	1	1	1	1
MEA	1	1	1	1	1	1	1
NEU	0	0	0	0	0	0	0
OAS	1	1	1	1	1	1	1
SSA	1	1	1	1	1	1	1
USA	1	1	1	1	1	1	1

Table 1981: MAgPIE m4p\_SSP4 — 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





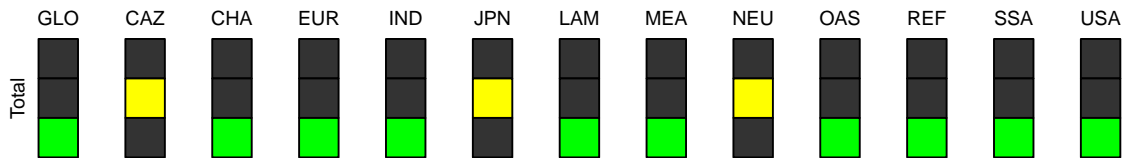
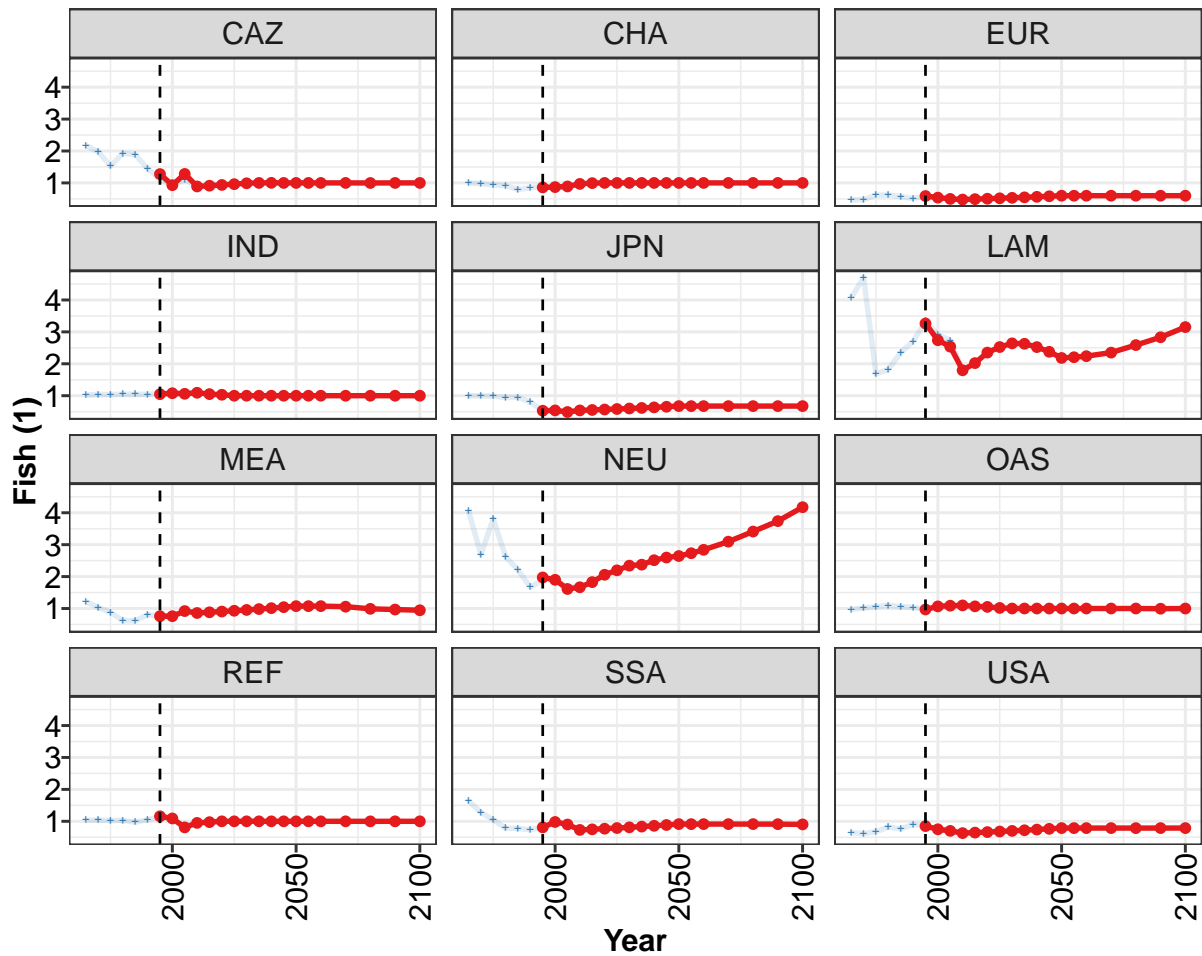


Figure 528: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Fish (1)

	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	2.02	2.35	2.53	2.64	2.63	2.52	2.38
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	2.06	2.20	2.34	2.37	2.51	2.60
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-SSP4 — Trade—Self-sufficiency—Fish (1) [PART 1/2]

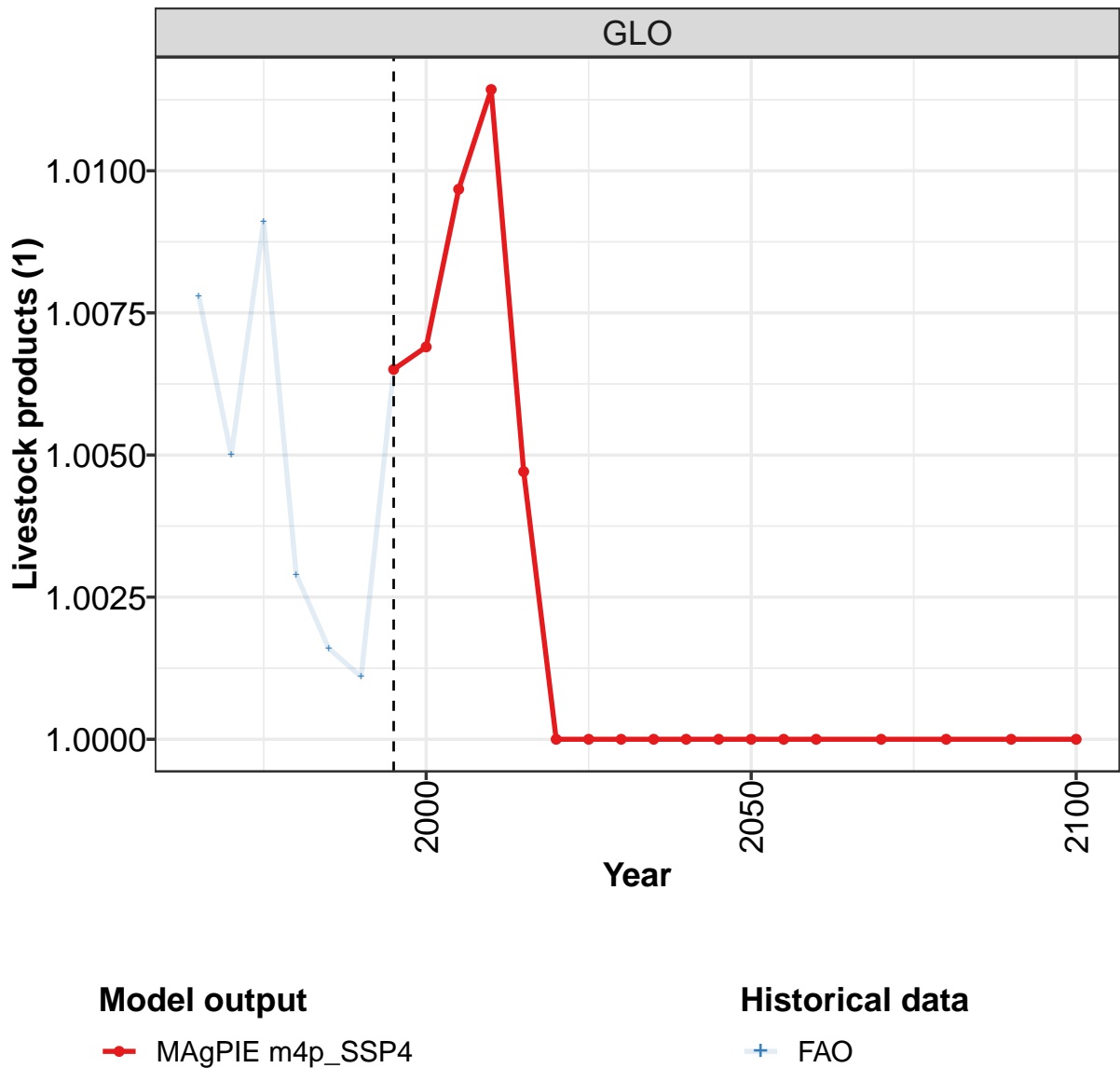
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CHA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EUR	0.60	0.60	0.60	0.60	0.60	0.60	0.60
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	0.68	0.68	0.68	0.68	0.67	0.68	0.68
LAM	2.18	2.21	2.24	2.35	2.59	2.83	3.15
MEA	1.07	1.07	1.07	1.06	0.99	0.97	0.95
NEU	2.64	2.73	2.84	3.09	3.41	3.74	4.18
OAS	1.00	1.00	1.00	1.00	1.00	0.99	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	0.90
USA	0.79	0.79	0.79	0.79	0.79	0.79	0.79

Table 1984: MAgPIE m4p-SSP4 — 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



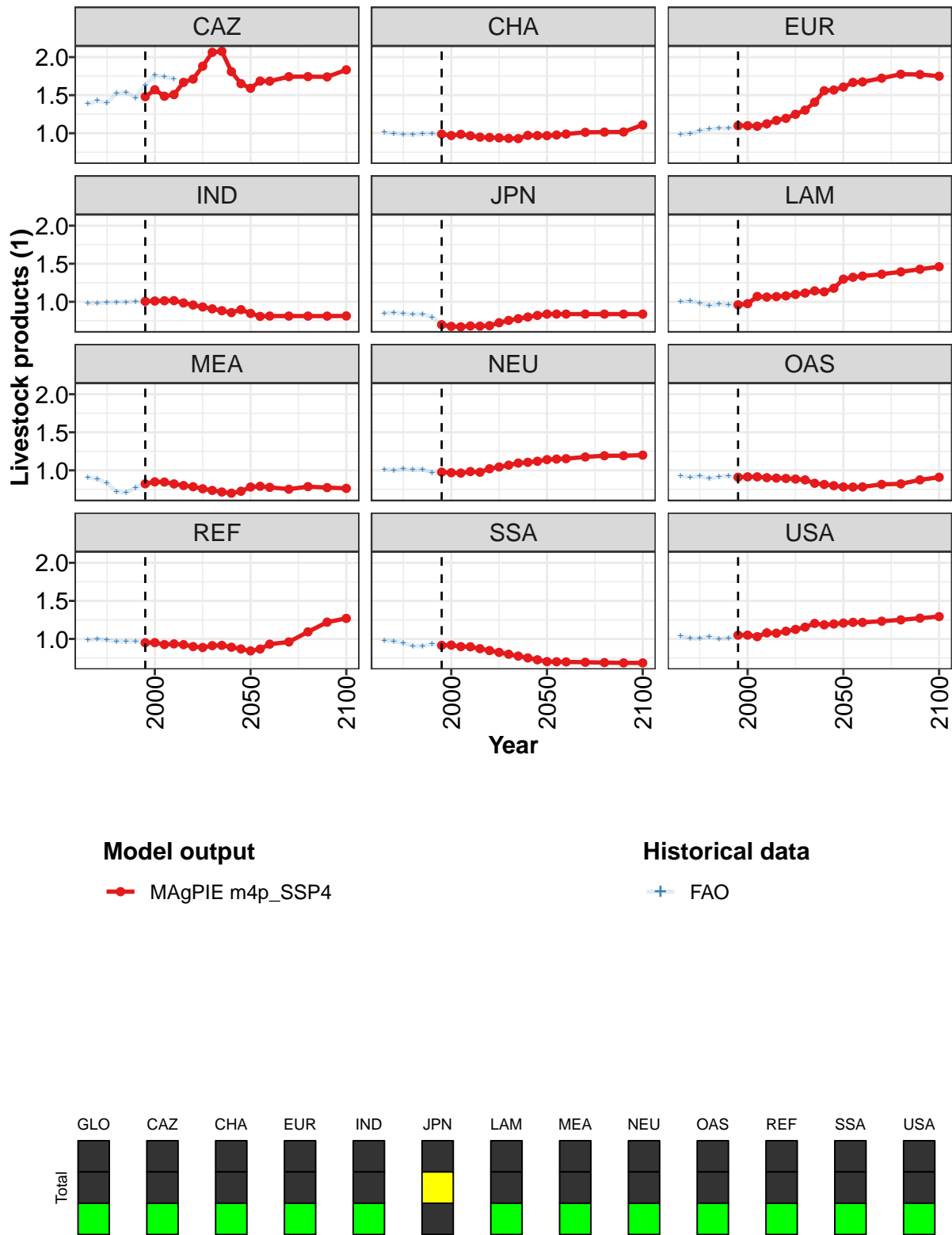


Figure 529: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products (1)

	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	1.67	1.71	1.88	2.06	2.08	1.81	1.65
CHA	0.99	0.97	0.99	0.97	0.95	0.94	0.94	0.93	0.93	0.97	0.97
EUR	1.10	1.10	1.09	1.12	1.17	1.20	1.25	1.30	1.41	1.56	1.57
IND	1.01	1.01	1.01	1.02	0.98	0.96	0.93	0.91	0.88	0.86	0.90
JPN	0.70	0.68	0.67	0.68	0.68	0.69	0.72	0.76	0.78	0.80	0.82
LAM	0.96	0.98	1.07	1.06	1.07	1.08	1.10	1.11	1.14	1.13	1.18
MEA	0.82	0.85	0.85	0.82	0.80	0.78	0.76	0.74	0.72	0.70	0.73
NEU	0.98	0.97	0.96	0.98	0.98	1.02	1.04	1.07	1.10	1.11	1.12
OAS	0.91	0.91	0.91	0.90	0.90	0.89	0.89	0.87	0.83	0.81	0.80
REF	0.95	0.95	0.93	0.93	0.92	0.90	0.89	0.91	0.92	0.89	0.87
SSA	0.92	0.92	0.90	0.90	0.87	0.85	0.82	0.80	0.77	0.75	0.73
USA	1.05	1.05	1.03	1.08	1.07	1.10	1.13	1.15	1.20	1.19	1.20

Table 1986: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products (1) [PART 1/2]

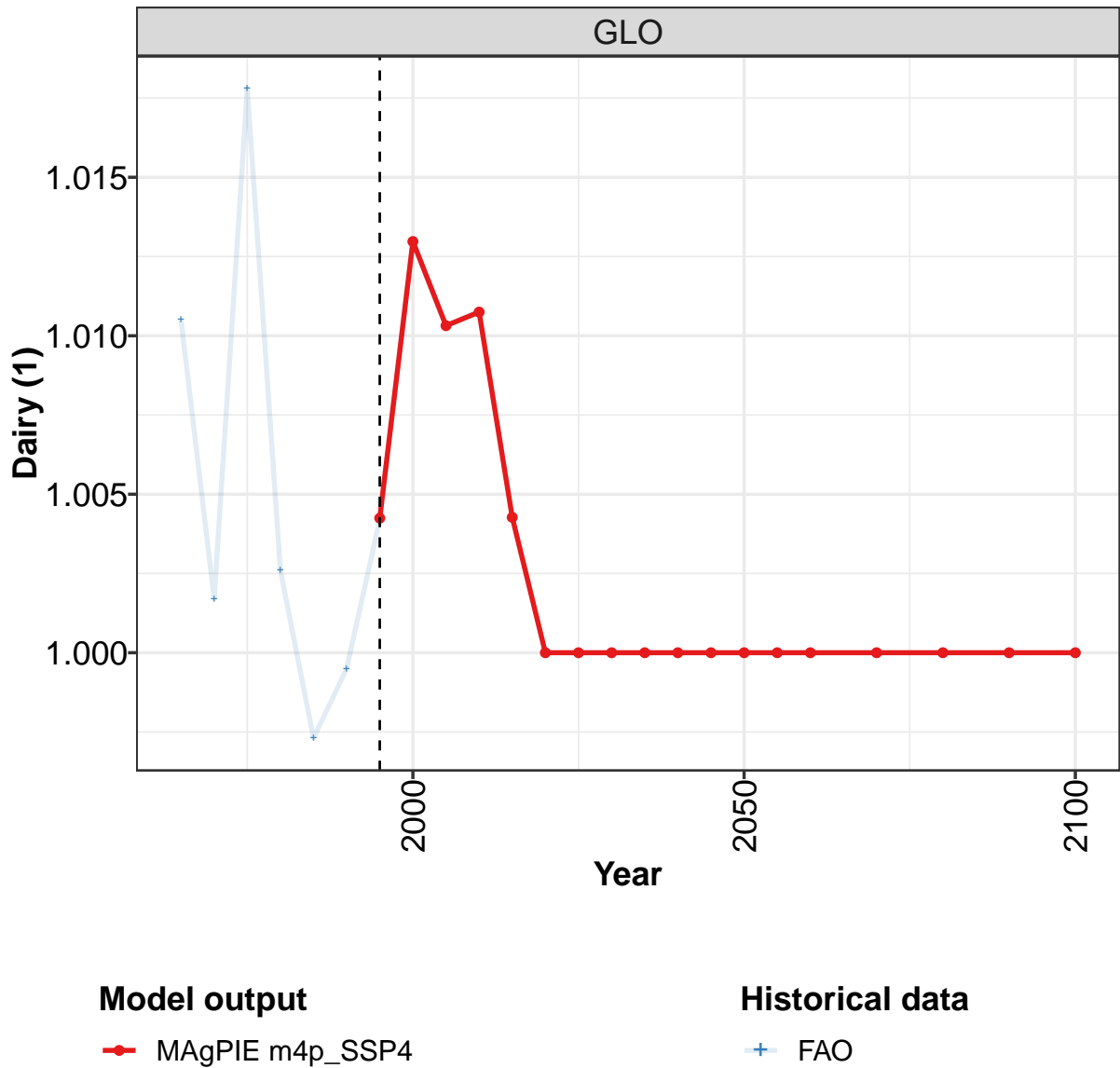
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.59	1.69	1.68	1.74	1.74	1.74	1.83
CHA	0.97	0.98	0.99	1.01	1.01	1.02	1.11
EUR	1.61	1.67	1.67	1.72	1.78	1.77	1.75
IND	0.85	0.81	0.81	0.81	0.81	0.81	0.81
JPN	0.84	0.84	0.84	0.84	0.84	0.84	0.84
LAM	1.30	1.32	1.34	1.36	1.39	1.43	1.46
MEA	0.78	0.79	0.78	0.75	0.79	0.77	0.76
NEU	1.14	1.15	1.15	1.18	1.19	1.19	1.20
OAS	0.78	0.78	0.78	0.82	0.82	0.88	0.91
REF	0.84	0.87	0.93	0.96	1.09	1.22	1.27
SSA	0.70	0.70	0.70	0.69	0.69	0.68	0.69
USA	1.21	1.22	1.22	1.23	1.25	1.27	1.29

Table 1987: MAgPIE m4p\_SSP4 — 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



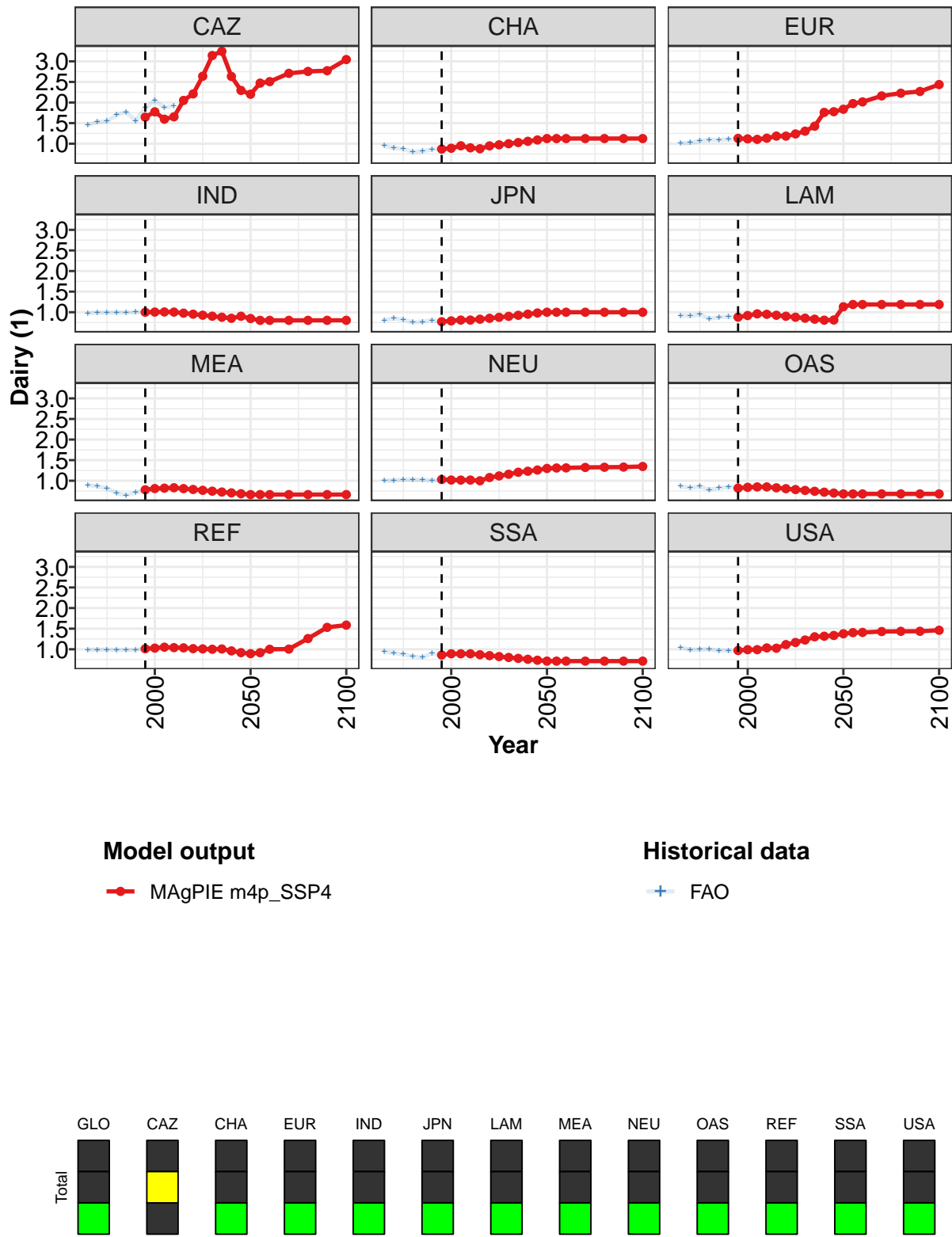


Figure 530: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Dairy (1)

	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	2.05	2.21	2.64	3.14	3.24	2.63	2.29
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	1.18	1.18	1.24	1.30	1.43	1.76	1.78
IND	1.00	1.00	1.01	1.00	0.98	0.95	0.93	0.90	0.88	0.85	0.90
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	0.85	0.83	0.81	0.81
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	1.08	1.12	1.16	1.21	1.23	1.26
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	1.03	1.02	1.01	1.00	1.01	0.96	0.92
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	1.17	1.22	1.30	1.32	1.34

Table 1989: MAgPIE m4p\_SSP4 — 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	2.20	2.47	2.51	2.71	2.76	2.77	3.04
CHA	1.12	1.12	1.12	1.13	1.12	1.12	1.12
EUR	1.84	1.97	2.02	2.16	2.23	2.27	2.44
IND	0.85	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	1.13	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	1.30	1.31	1.31	1.32	1.33	1.33	1.35
OAS	0.68	0.68	0.68	0.68	0.68	0.68	0.68
REF	0.89	0.92	1.00	1.00	1.26	1.53	1.59
SSA	0.71	0.71	0.71	0.71	0.71	0.71	0.71
USA	1.38	1.40	1.41	1.43	1.44	1.44	1.46

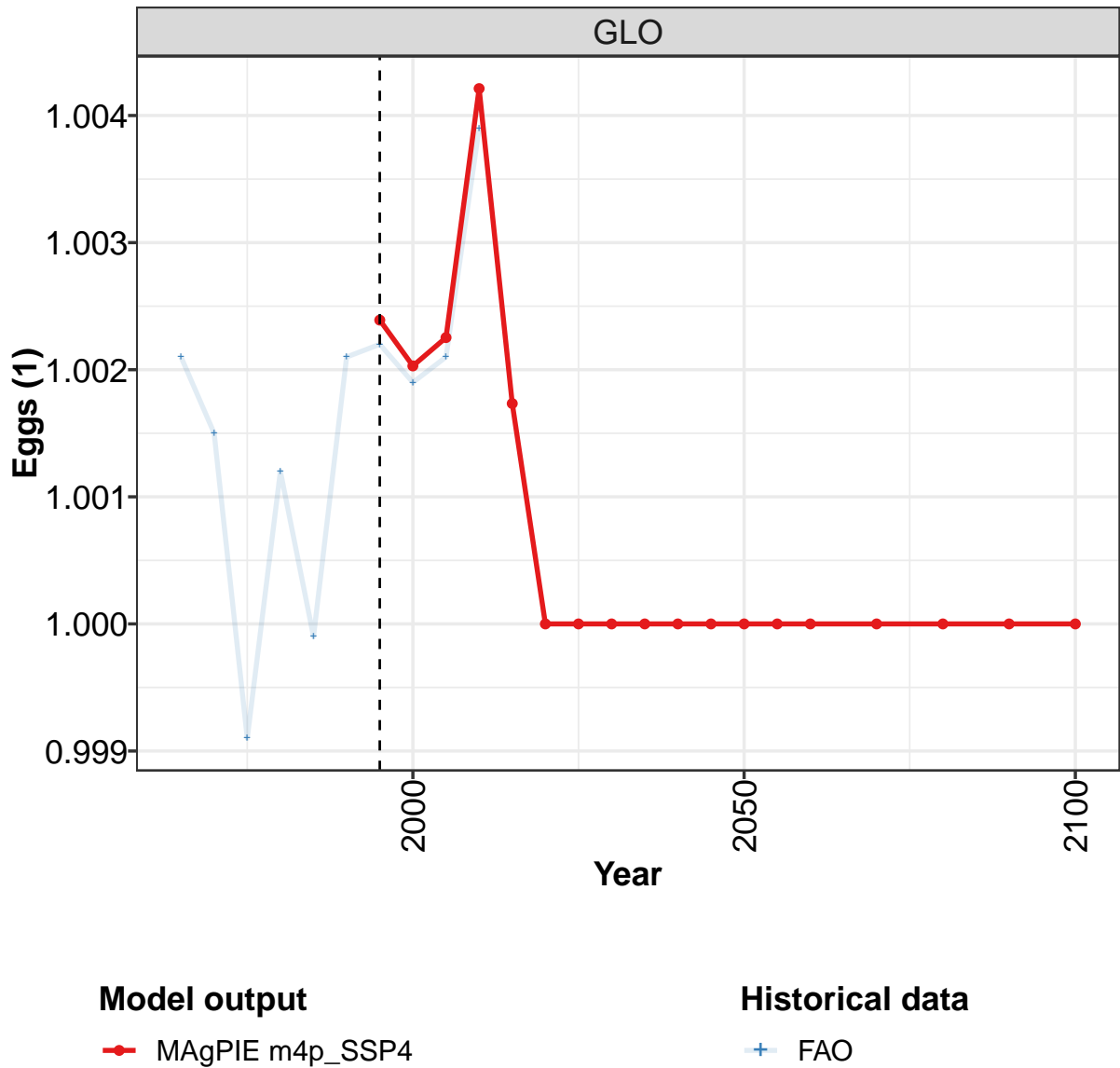
Table 1990: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Dairy (1) [PART 2/2]

	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



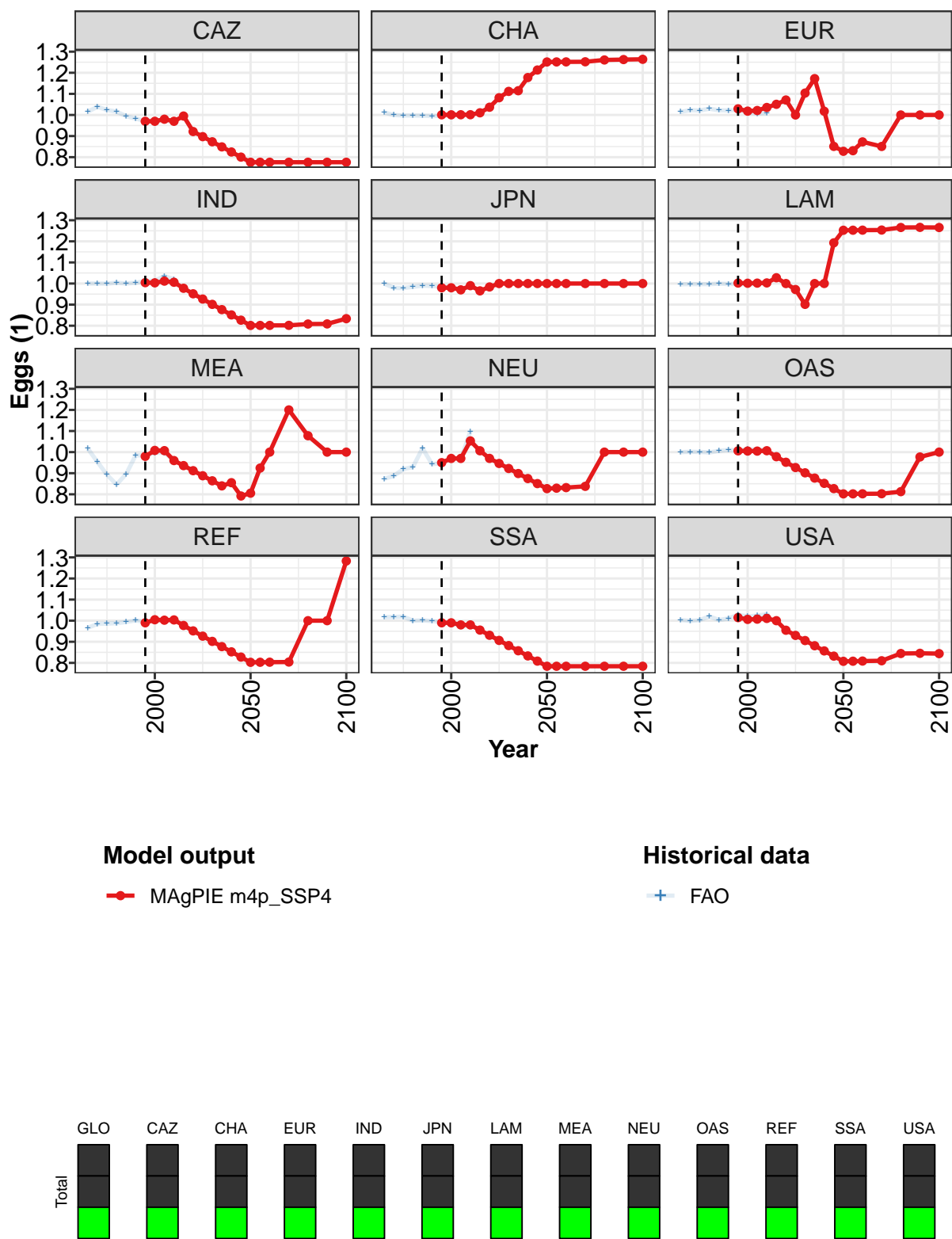


Figure 531: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Eggs (1)

	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	1.11	1.18	1.21
EUR	1.03	1.02	1.02	1.04	1.05	1.07	1.00	1.10	1.17	1.02	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	0.98	1.00	1.00	1.00	1.00	1.00
LAM	1.00	1.00	1.00	1.00	1.03	1.00	0.97	0.90	1.00	1.00	1.19
MEA	0.98	1.01	1.01	0.96	0.94	0.91	0.89	0.86	0.84	0.86	0.79
NEU	0.95	0.97	0.97	1.05	1.01	0.97	0.95	0.92	0.90	0.87	0.85
OAS	1.01	1.01	1.00	1.01	0.98	0.95	0.93	0.90	0.88	0.85	0.83
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	1.00	0.95	0.93	0.91	0.88	0.86	0.83

Table 1992: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Eggs (1) [PART 1/2]

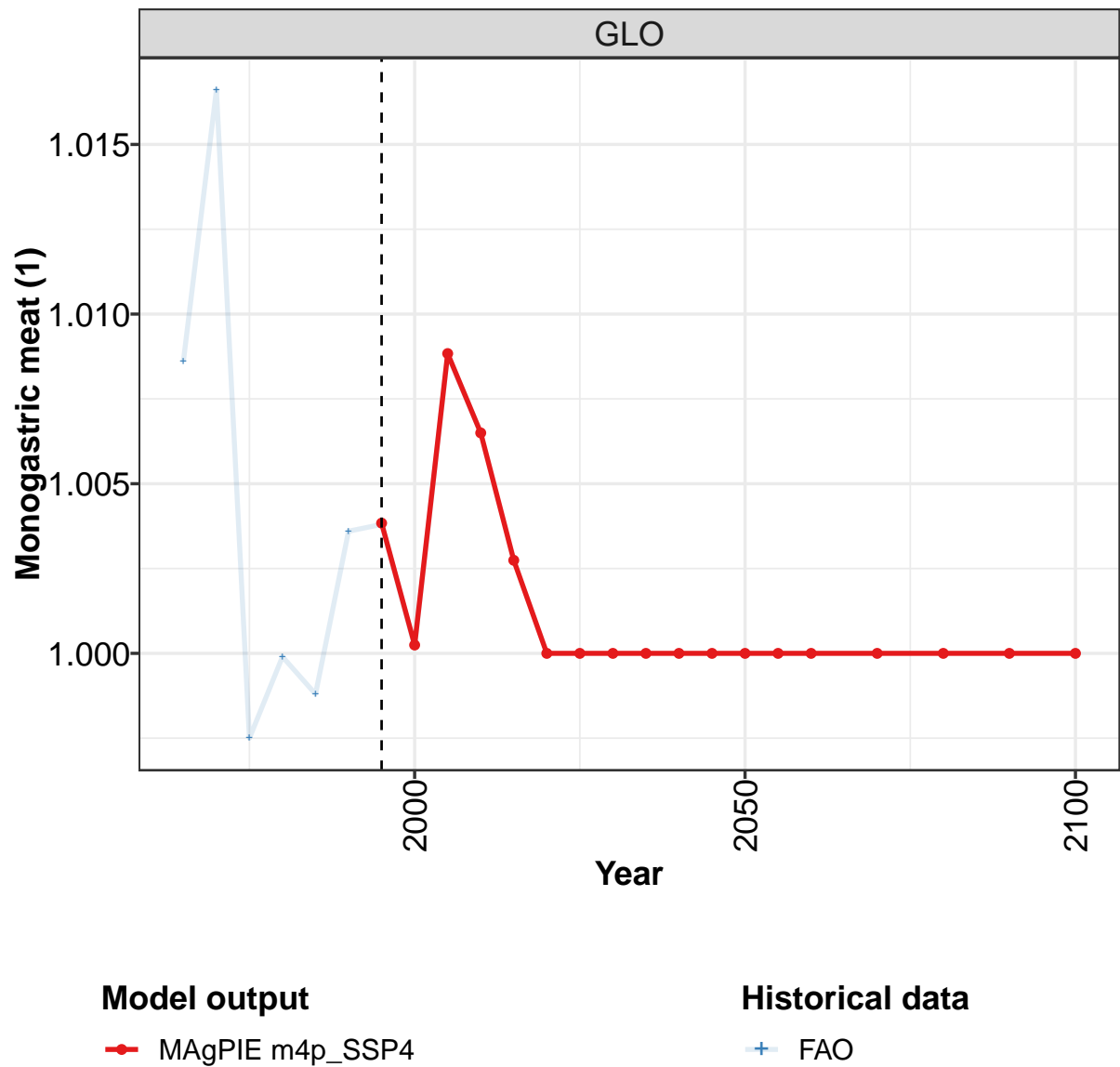
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.78	0.78	0.78	0.78	0.78	0.78	0.78
CHA	1.25	1.25	1.25	1.25	1.26	1.26	1.26
EUR	0.83	0.83	0.87	0.85	1.00	1.00	1.00
IND	0.80	0.80	0.80	0.80	0.81	0.81	0.83
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.25	1.25	1.25	1.25	1.27	1.27	1.27
MEA	0.81	0.92	1.00	1.20	1.08	1.00	1.00
NEU	0.83	0.83	0.83	0.84	1.00	1.00	1.00
OAS	0.80	0.80	0.80	0.80	0.81	0.98	1.00
REF	0.80	0.80	0.80	0.80	1.00	1.00	1.28
SSA	0.78	0.78	0.78	0.78	0.78	0.78	0.78
USA	0.81	0.81	0.81	0.81	0.84	0.85	0.84

Table 1993: MAgPIE m4p\_SSP4 — 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



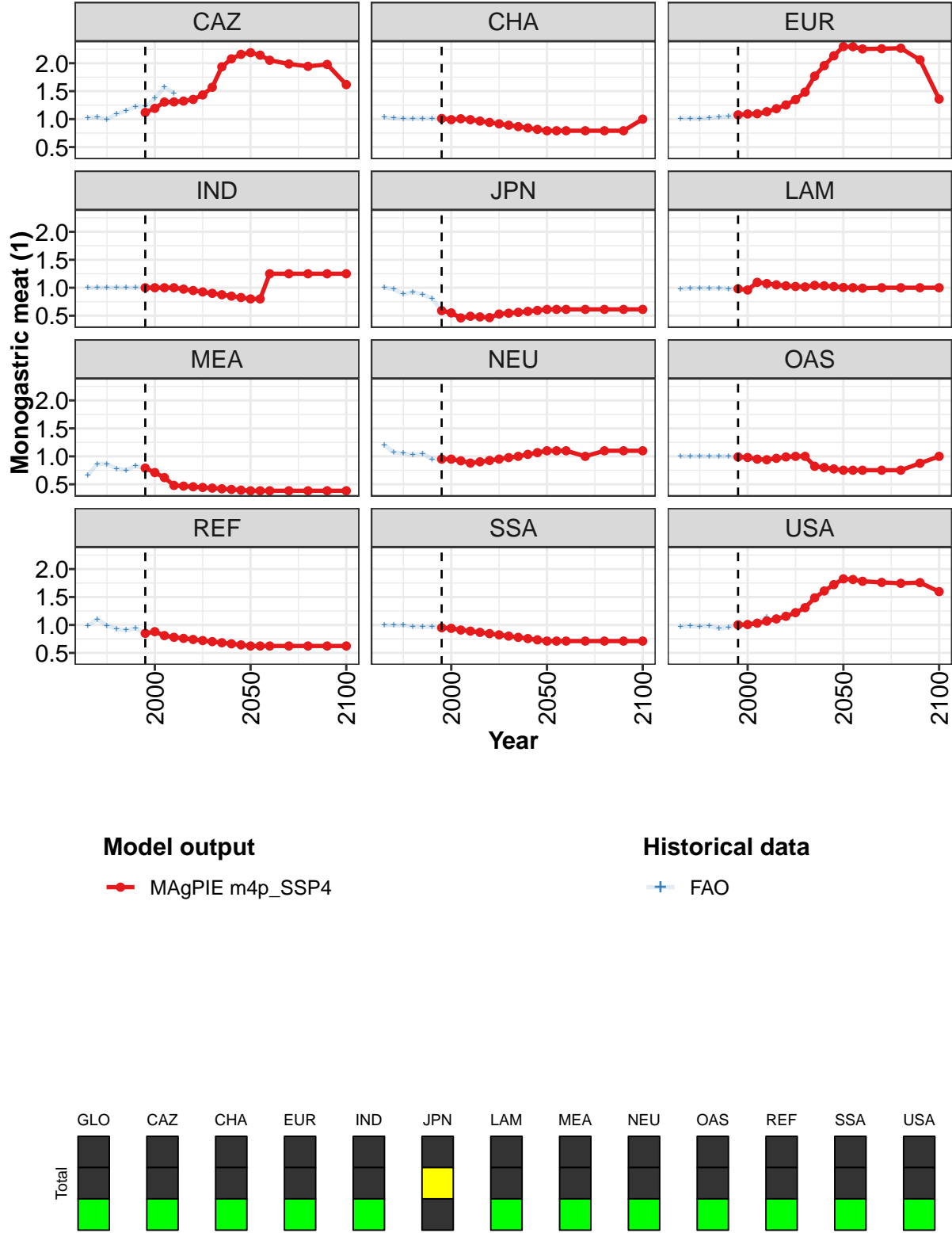


Figure 532: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Monogastric meat (1)

	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	1.35	1.43	1.57	1.94	2.08	2.16
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	1.25	1.35	1.48	1.77	1.96	2.13
IND	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	0.85	0.82
JPN	0.59	0.55	0.46	0.49	0.48	0.47	0.53	0.54	0.56	0.58	0.59
LAM	0.98	0.96	1.10	1.07	1.05	1.03	1.02	1.02	1.04	1.03	1.02
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	1.04	1.07
OAS	0.99	0.98	0.95	0.94	0.96	0.99	1.00	1.00	0.82	0.80	0.78
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	1.31	1.49	1.61	1.72

Table 1995: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Monogastric meat (1) [PART 1/2]

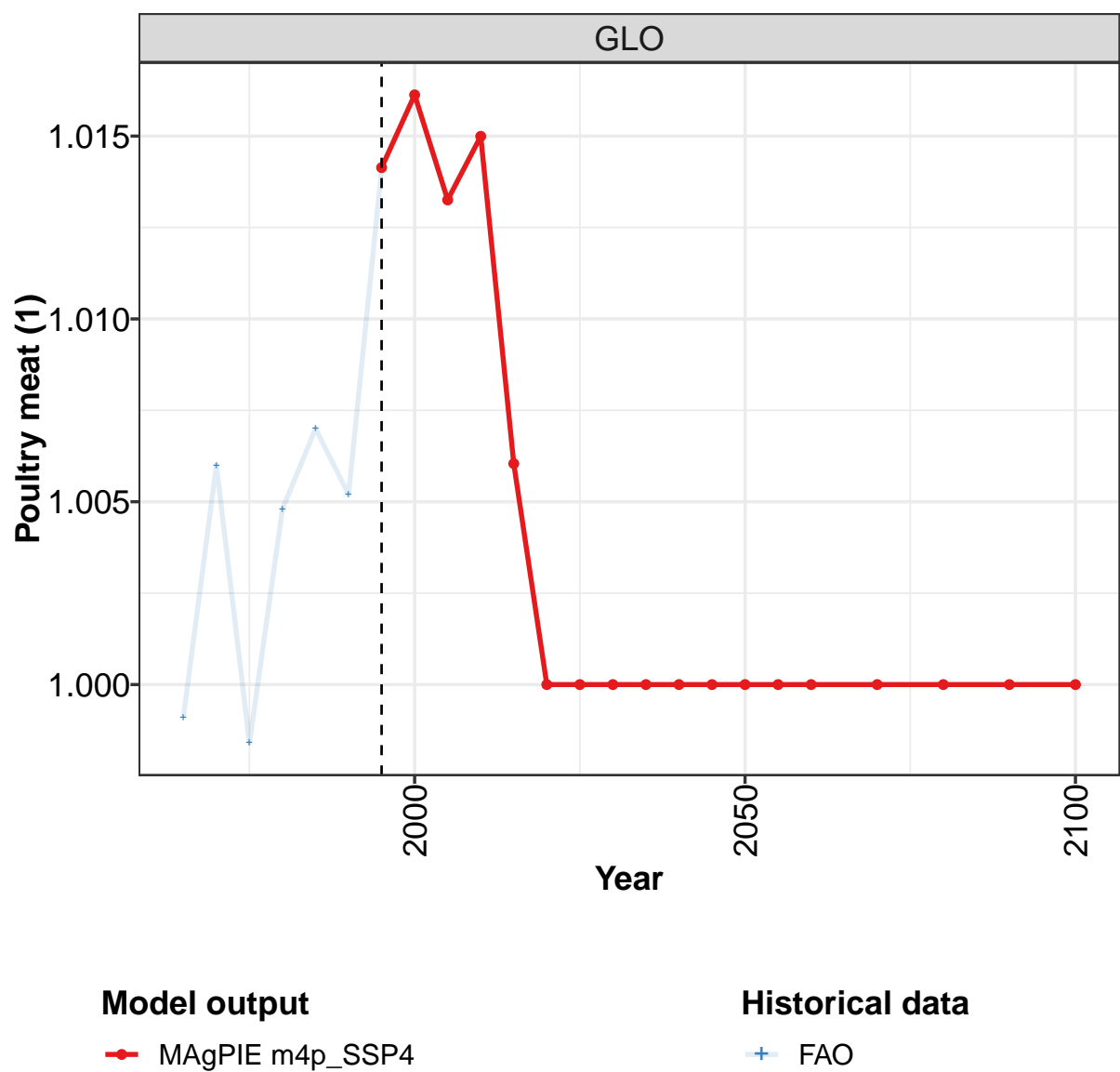
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	2.19	2.14	2.05	1.99	1.94	1.98	1.62
CHA	0.79	0.79	0.79	0.79	0.79	0.79	1.00
EUR	2.30	2.30	2.25	2.26	2.27	2.06	1.36
IND	0.80	0.80	1.25	1.25	1.25	1.25	1.25
JPN	0.61	0.61	0.61	0.61	0.61	0.61	0.61
LAM	1.00	1.00	0.99	1.00	1.00	1.00	1.00
MEA	0.38	0.38	0.38	0.38	0.38	0.38	0.38
NEU	1.10	1.10	1.10	1.00	1.10	1.10	1.10
OAS	0.75	0.75	0.75	0.75	0.75	0.88	1.00
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	1.82	1.81	1.78	1.76	1.75	1.76	1.60

Table 1996: MAgPIE m4p\_SSP4 — 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



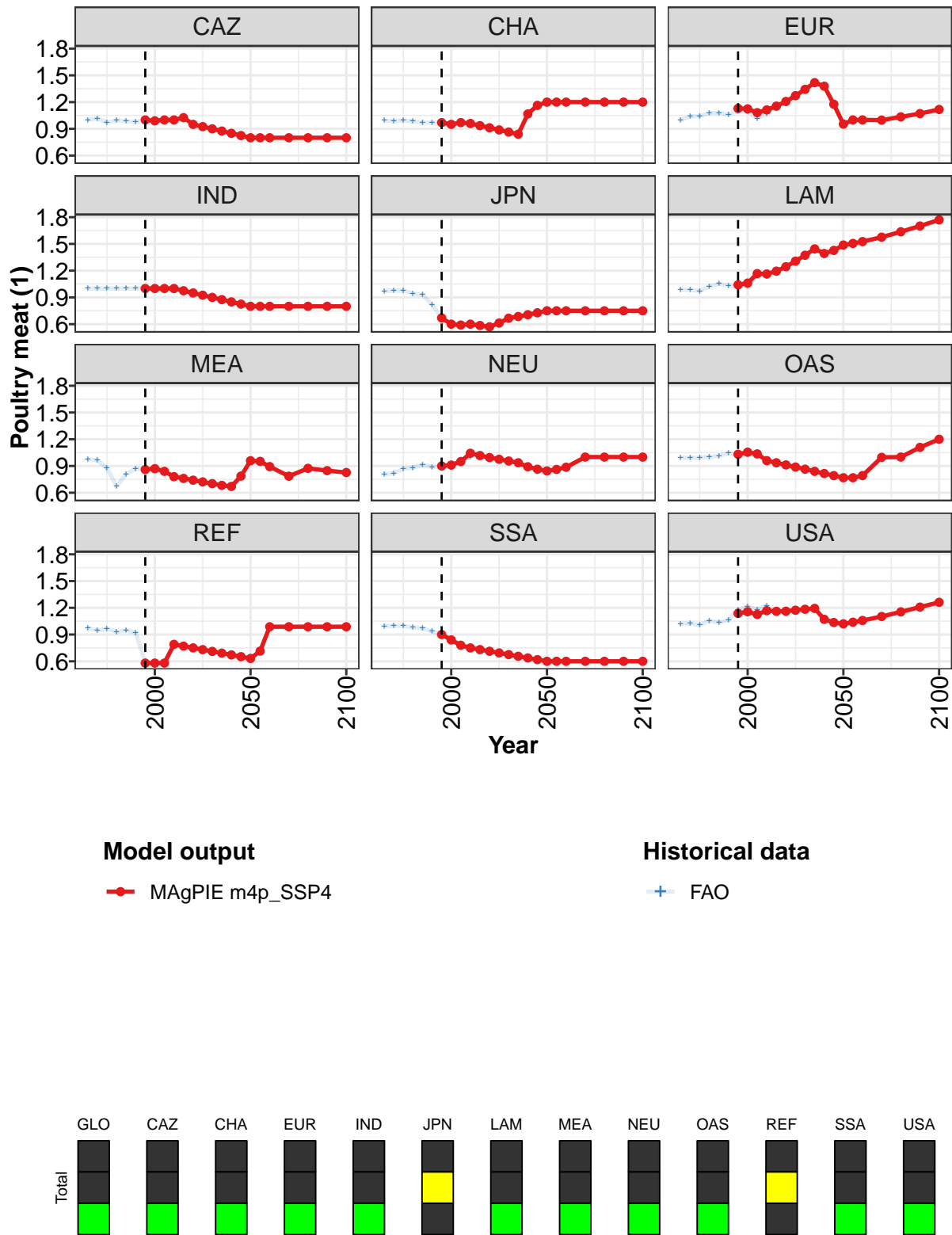


Figure 533: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Poultry meat (1)



	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	1.03	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	0.89	0.86	0.84	1.07	1.16
EUR	1.13	1.12	1.08	1.11	1.15	1.21	1.27	1.34	1.42	1.38	1.18
IND	1.00	1.00	1.00	1.00	0.97	0.95	0.92	0.90	0.88	0.85	0.82
JPN	0.67	0.60	0.59	0.60	0.59	0.57	0.61	0.67	0.69	0.71	0.73
LAM	1.04	1.06	1.17	1.16	1.19	1.24	1.31	1.37	1.44	1.39	1.43
MEA	0.86	0.87	0.84	0.78	0.76	0.74	0.72	0.70	0.68	0.67	0.79
NEU	0.90	0.91	0.95	1.04	1.02	0.99	0.98	0.96	0.94	0.89	0.86
OAS	1.03	1.05	1.04	0.96	0.94	0.91	0.89	0.86	0.84	0.82	0.79
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	1.17	1.18	1.19	1.07	1.04

Table 1998: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Poultry meat (1) [PART 1/2]

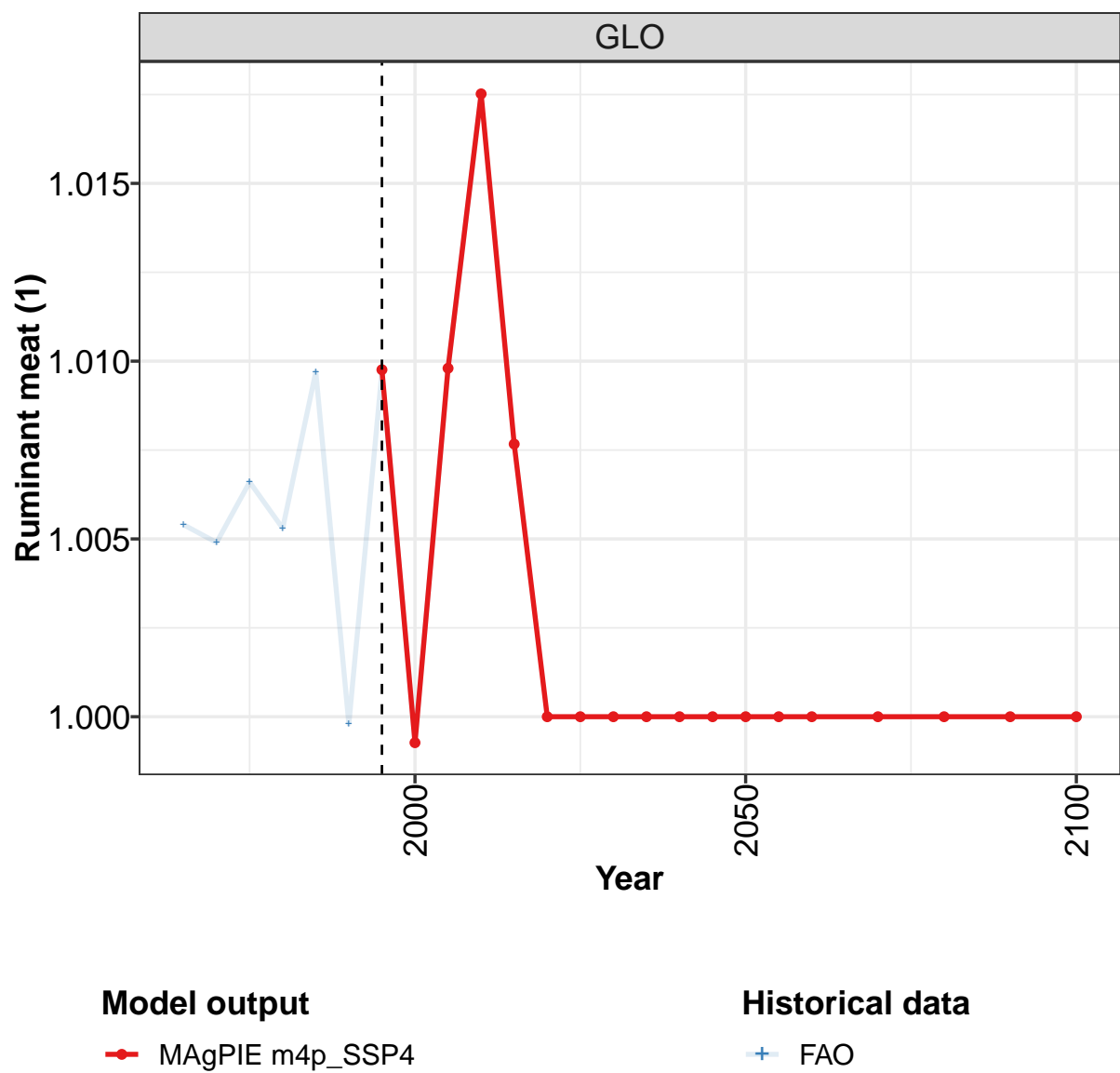
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.80	0.80	0.80	0.80	0.80	0.80	0.80
CHA	1.20	1.20	1.20	1.20	1.20	1.20	1.20
EUR	0.95	1.00	1.00	1.00	1.03	1.07	1.12
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	0.75	0.75	0.75	0.75	0.75	0.75	0.75
LAM	1.49	1.51	1.53	1.58	1.64	1.70	1.77
MEA	0.96	0.95	0.89	0.79	0.87	0.85	0.83
NEU	0.84	0.86	0.89	1.00	1.00	1.00	1.00
OAS	0.77	0.77	0.79	1.00	1.00	1.11	1.20
REF	0.63	0.71	0.99	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	1.04	1.06	1.10	1.15	1.21	1.26

Table 1999: MAgPIE m4p\_SSP4 — 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



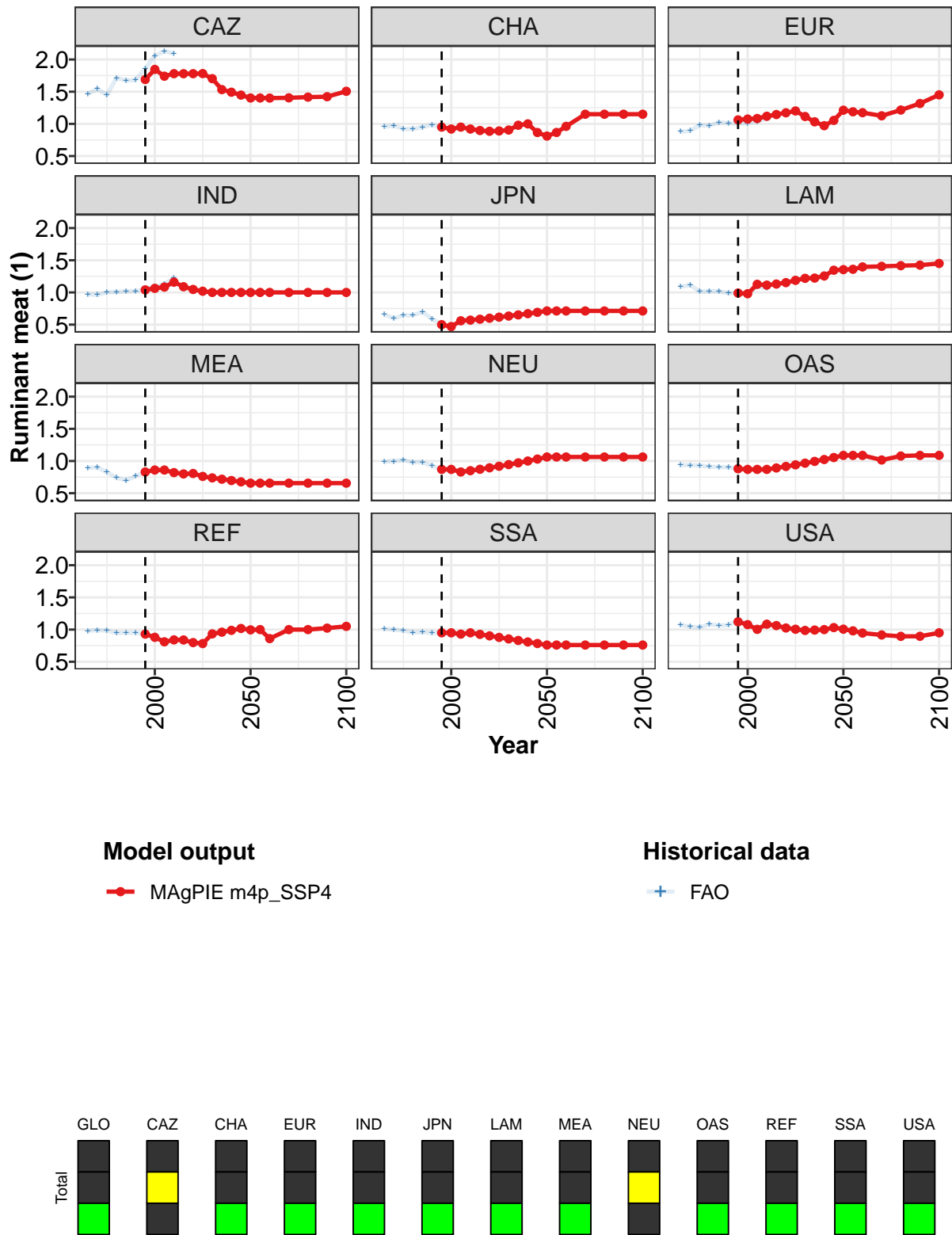


Figure 534: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Ruminant meat (1)

	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	1.78	1.78	1.70	1.53	1.49	1.45
CHA	0.95	0.92	0.95	0.92	0.90	0.89	0.89	0.90	0.98	1.00	0.87
EUR	1.06	1.08	1.08	1.12	1.15	1.17	1.20	1.11	1.03	0.97	1.05
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	1.22	1.22	1.26	1.35
MEA	0.83	0.86	0.86	0.82	0.80	0.81	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	0.84	0.80	0.78	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	0.78
USA	1.12	1.08	1.00	1.08	1.06	1.03	1.01	0.99	0.99	1.00	1.03

Table 2001: MAgPIE m4p\_SSP4 — 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	1.40	1.40	1.40	1.40	1.42	1.42	1.51
CHA	0.81	0.87	0.96	1.15	1.15	1.15	1.15
EUR	1.21	1.19	1.17	1.13	1.22	1.32	1.45
IND	1.00	1.00	1.00	1.00	1.00	1.00	1.00
JPN	0.71	0.71	0.71	0.71	0.71	0.71	0.71
LAM	1.35	1.36	1.40	1.41	1.42	1.42	1.45
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	1.02	1.08	1.09	1.09
REF	1.00	1.00	0.86	1.00	1.00	1.02	1.05
SSA	0.76	0.76	0.76	0.76	0.76	0.76	0.76
USA	1.01	0.98	0.95	0.92	0.89	0.90	0.95

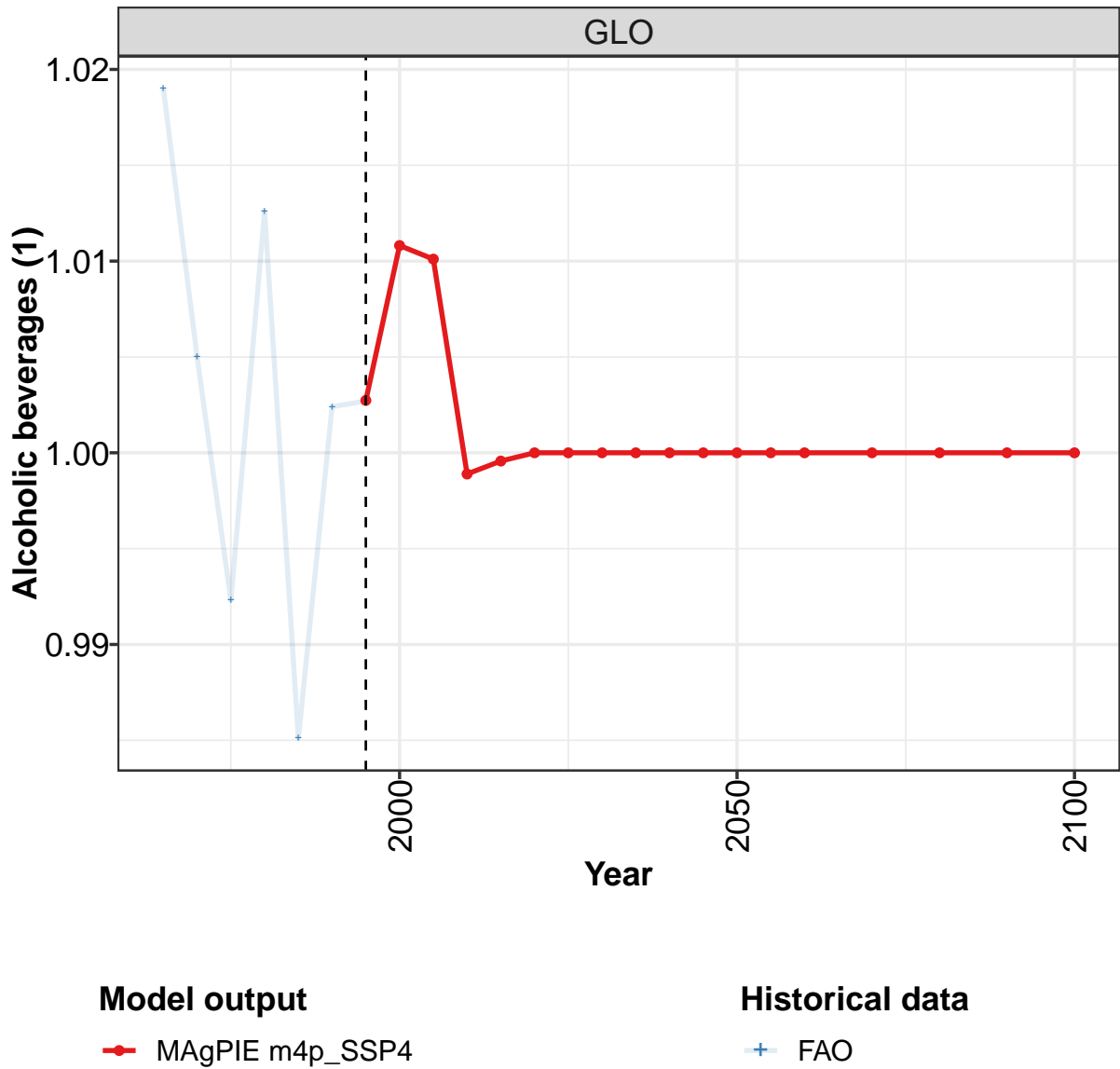
Table 2002: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Livestock products—Ruminant meat (1) [PART 2/2]

	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



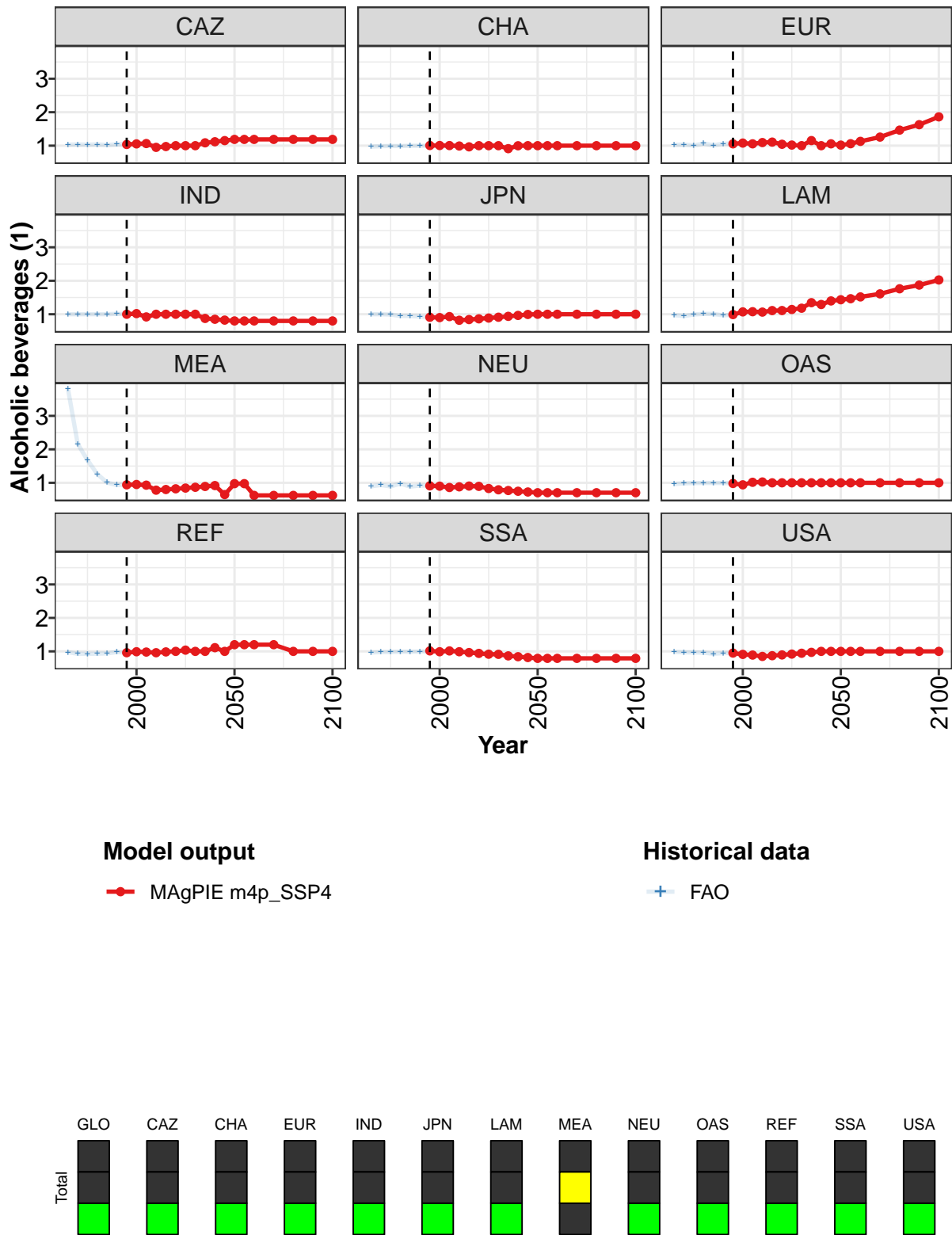


Figure 535: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Alcoholic beverages (1)

	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	1.09	1.12	1.15
CHA	1.01	1.01	1.00	0.99	0.97	1.00	1.00	1.00	0.91	1.00	1.00
EUR	1.05	1.08	1.06	1.09	1.11	1.04	1.02	1.00	1.15	1.00	1.06
IND	1.00	1.02	0.92	1.00	1.00	1.00	1.00	1.00	0.87	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	1.14	1.18	1.35	1.29	1.40
MEA	0.94	0.95	0.93	0.78	0.80	0.82	0.84	0.87	0.89	0.92	0.65
NEU	0.91	0.90	0.86	0.88	0.90	0.89	0.83	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	1.00	1.04	1.00	1.00	1.11	1.00
SSA	1.02	0.99	1.01	0.99	0.97	0.94	0.92	0.91	0.87	0.84	0.82
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\_SSP4 — Trade—Self-sufficiency—Secondary products—Alcoholic beverages (1)  
[PART 1/2]

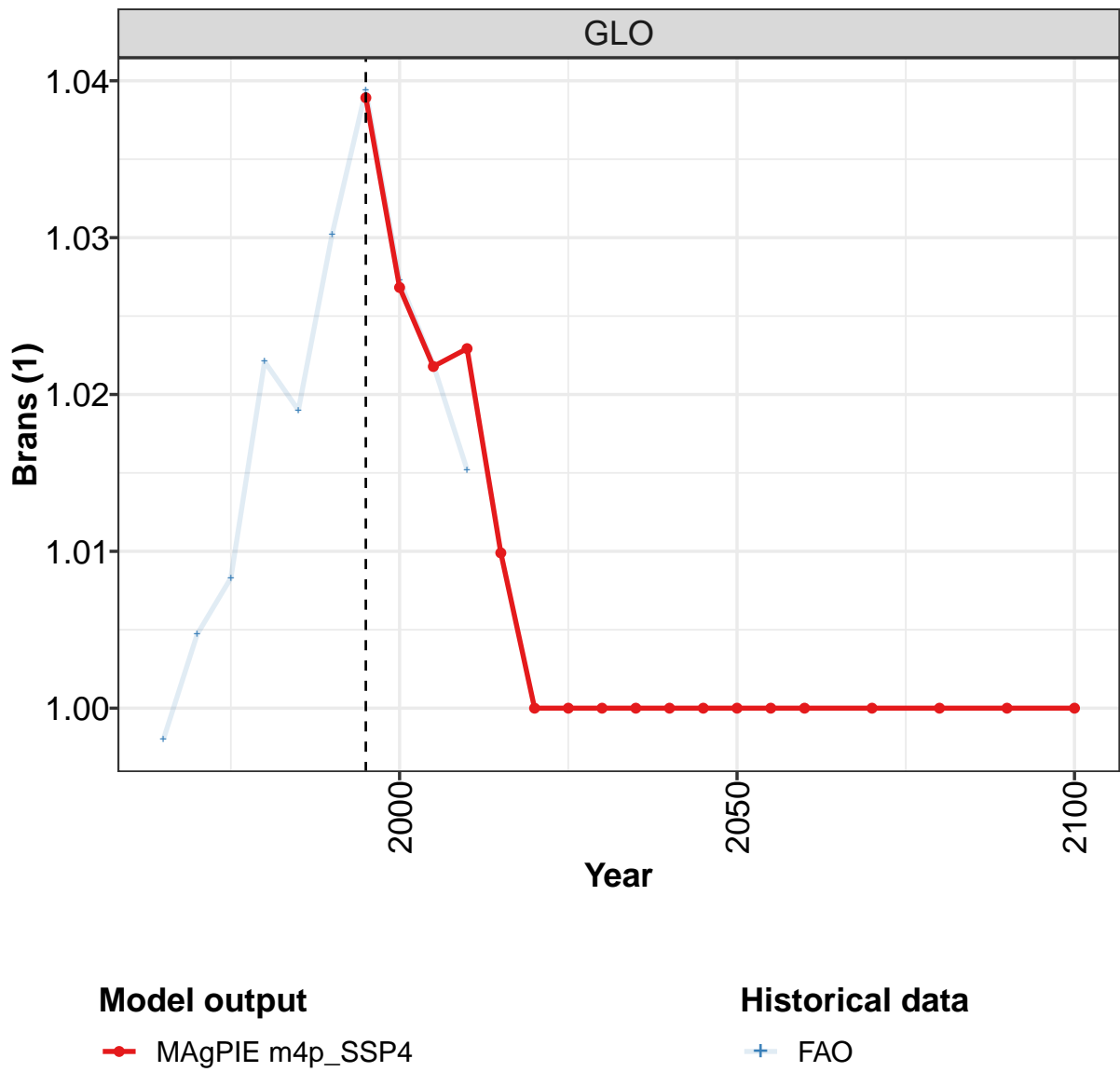
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.19	1.19	1.19	1.19	1.19	1.19	1.19
CHA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EUR	1.02	1.06	1.13	1.26	1.46	1.63	1.86
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LAM	1.43	1.46	1.52	1.61	1.76	1.87	2.02
MEA	0.98	0.97	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	1.20	1.20	1.20	1.20	1.00	1.00	1.00
SSA	0.79	0.79	0.79	0.79	0.79	0.79	0.79
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table 2005: MAgPIE m4p\_SSP4 — 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





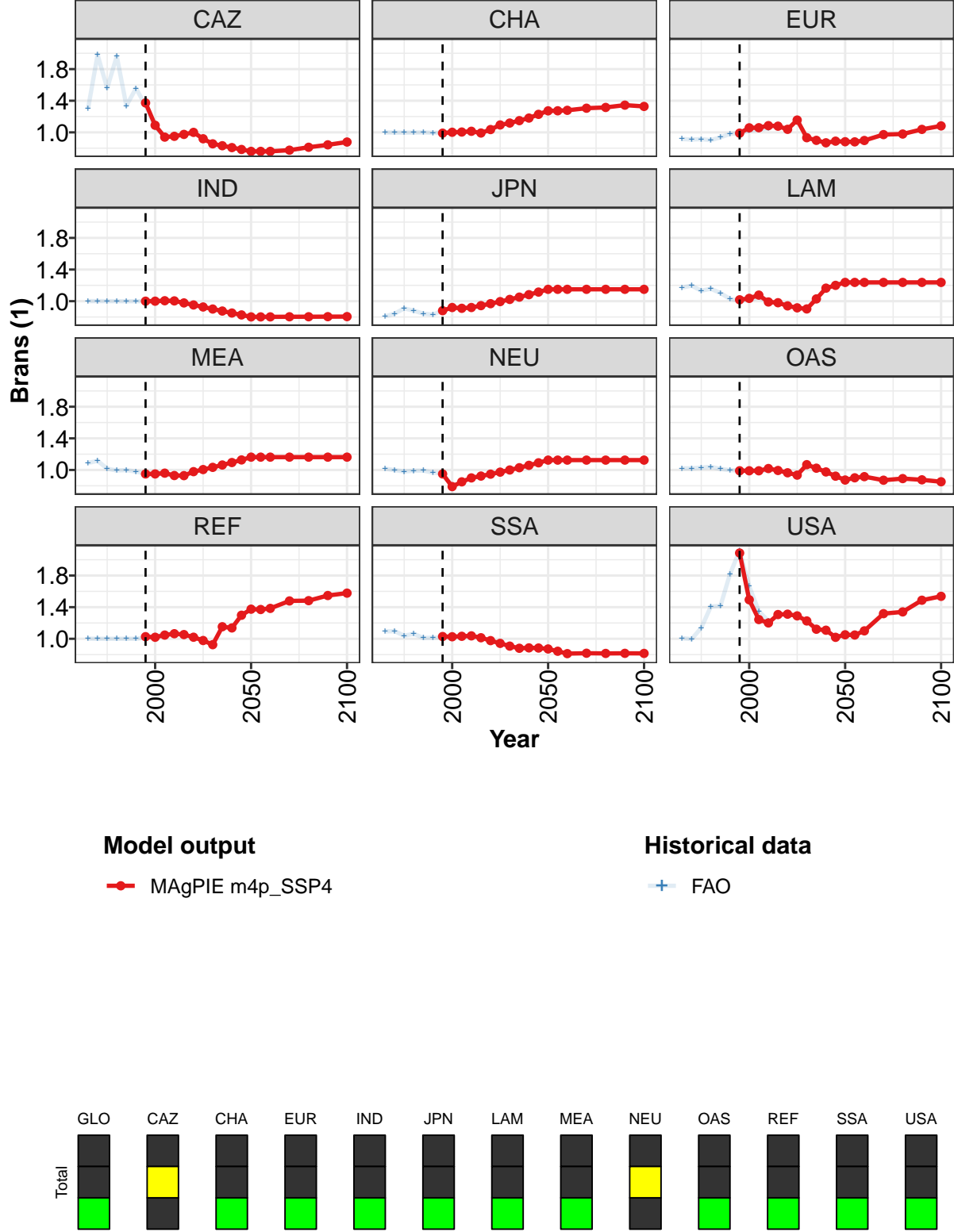


Figure 536: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Brans (1)

	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	0.92	0.86	0.83	0.81	0.78
CHA	0.99	1.00	1.00	1.01	0.99	1.04	1.09	1.12	1.15	1.18	1.23
EUR	0.99	1.06	1.06	1.09	1.08	1.04	1.16	0.93	0.90	0.87	0.89
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	0.98	0.94	0.92	0.90	1.03	1.16	1.20
MEA	0.95	0.95	0.96	0.93	0.93	0.98	1.01	1.03	1.06	1.09	1.13
NEU	0.95	0.79	0.85	0.90	0.92	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	0.94	1.07	1.02	0.98	0.92
REF	1.03	1.02	1.05	1.06	1.05	1.02	0.98	0.93	1.15	1.14	1.30
SSA	1.03	1.03	1.03	1.04	1.01	0.98	0.94	0.91	0.88	0.89	0.88
USA	2.08	1.49	1.24	1.20	1.31	1.31	1.29	1.23	1.12	1.11	1.02

Table 2007: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Brans (1) [PART 1/2]

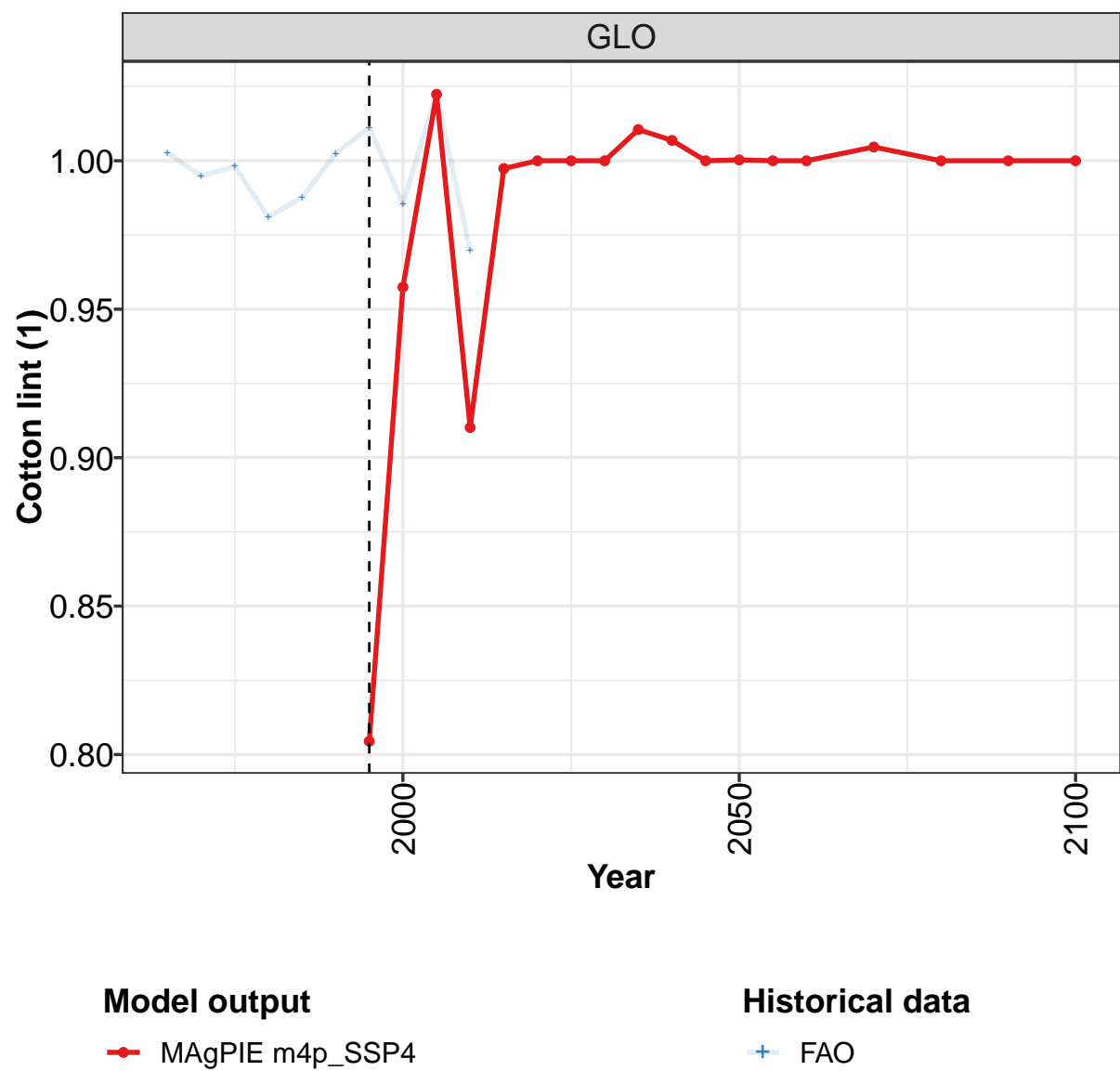
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.76	0.76	0.76	0.77	0.81	0.84	0.88
CHA	1.27	1.27	1.28	1.31	1.32	1.34	1.33
EUR	0.88	0.88	0.90	0.97	0.98	1.04	1.08
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	1.15	1.15	1.15	1.15	1.15	1.15	1.15
LAM	1.24	1.24	1.24	1.24	1.24	1.24	1.24
MEA	1.16	1.16	1.16	1.16	1.16	1.16	1.16
NEU	1.12	1.12	1.12	1.12	1.13	1.12	1.12
OAS	0.87	0.90	0.92	0.87	0.89	0.88	0.85
REF	1.37	1.37	1.38	1.48	1.48	1.55	1.58
SSA	0.87	0.84	0.81	0.82	0.81	0.82	0.82
USA	1.05	1.05	1.10	1.32	1.34	1.49	1.54

Table 2008: MAgPIE m4p\_SSP4 — 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



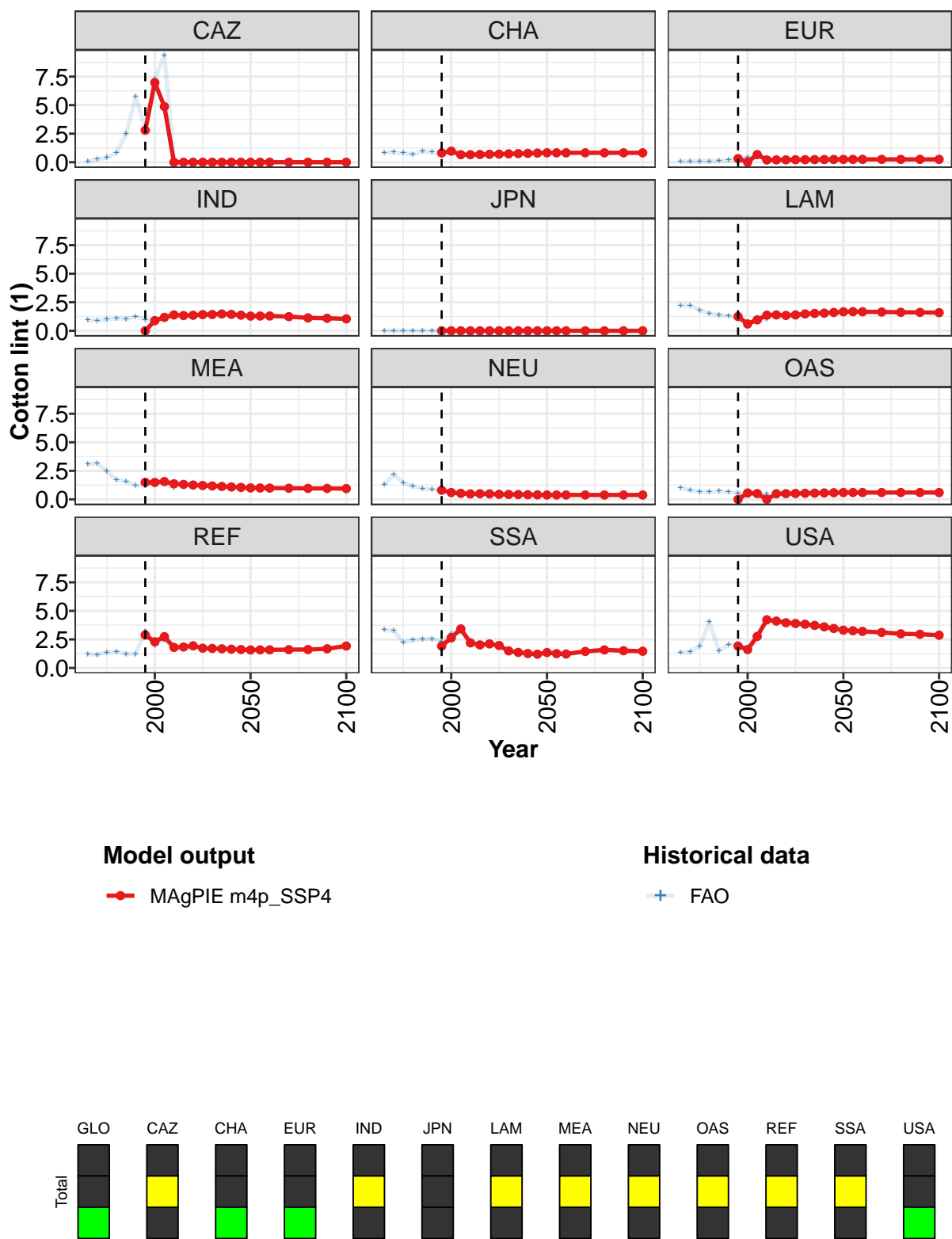


Figure 537: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Cotton lint (1)

	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	1.01	1.01	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	1.36	1.42	1.43	1.48	1.44	1.37
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.25	0.60	0.96	1.37	1.39	1.35	1.39	1.48	1.52	1.55	1.61
MEA	1.49	1.49	1.56	1.37	1.31	1.26	1.22	1.17	1.13	1.09	1.05
NEU	0.80	0.60	0.53	0.48	0.49	0.48	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	1.83	1.94	1.73	1.71	1.68	1.65	1.61
SSA	1.91	2.63	3.42	2.20	2.02	2.11	1.96	1.49	1.36	1.26	1.21
USA	1.91	1.61	2.77	4.22	4.11	3.96	3.90	3.83	3.73	3.60	3.46

Table 2010: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Cotton lint (1) [PART 1/2]

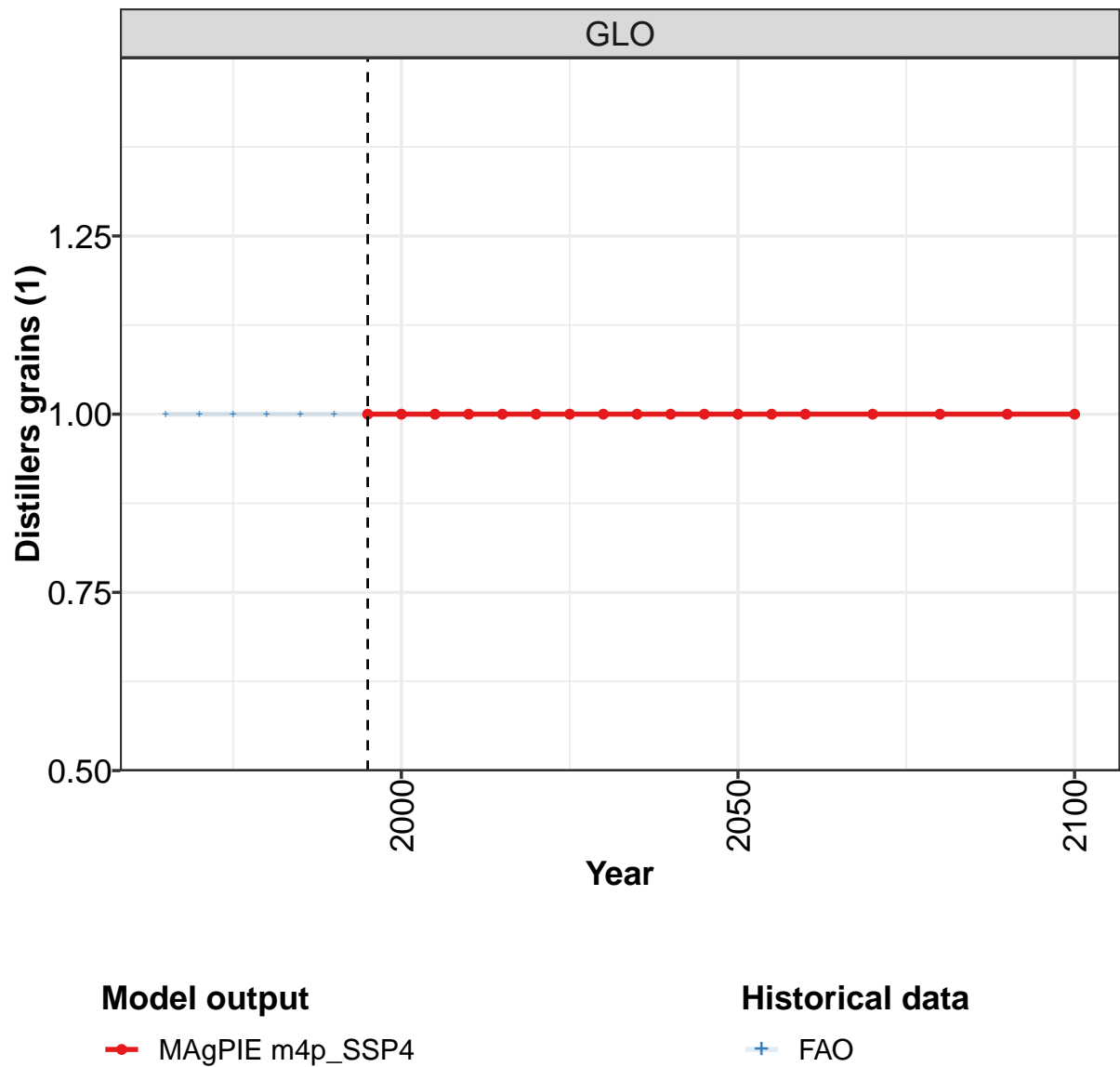
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHA	0.83	0.82	0.83	0.83	0.83	0.82	0.83
EUR	0.25	0.25	0.25	0.25	0.25	0.25	0.25
IND	1.29	1.30	1.30	1.24	1.13	1.10	1.05
JPN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAM	1.66	1.68	1.67	1.64	1.62	1.61	1.59
MEA	1.01	1.00	0.99	0.98	0.96	0.96	0.94
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	1.58	1.58	1.59	1.60	1.62	1.68	1.92
SSA	1.35	1.25	1.22	1.45	1.58	1.51	1.46
USA	3.31	3.26	3.20	3.11	2.99	2.95	2.87

Table 2011: MAgPIE m4p\_SSP4 — 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



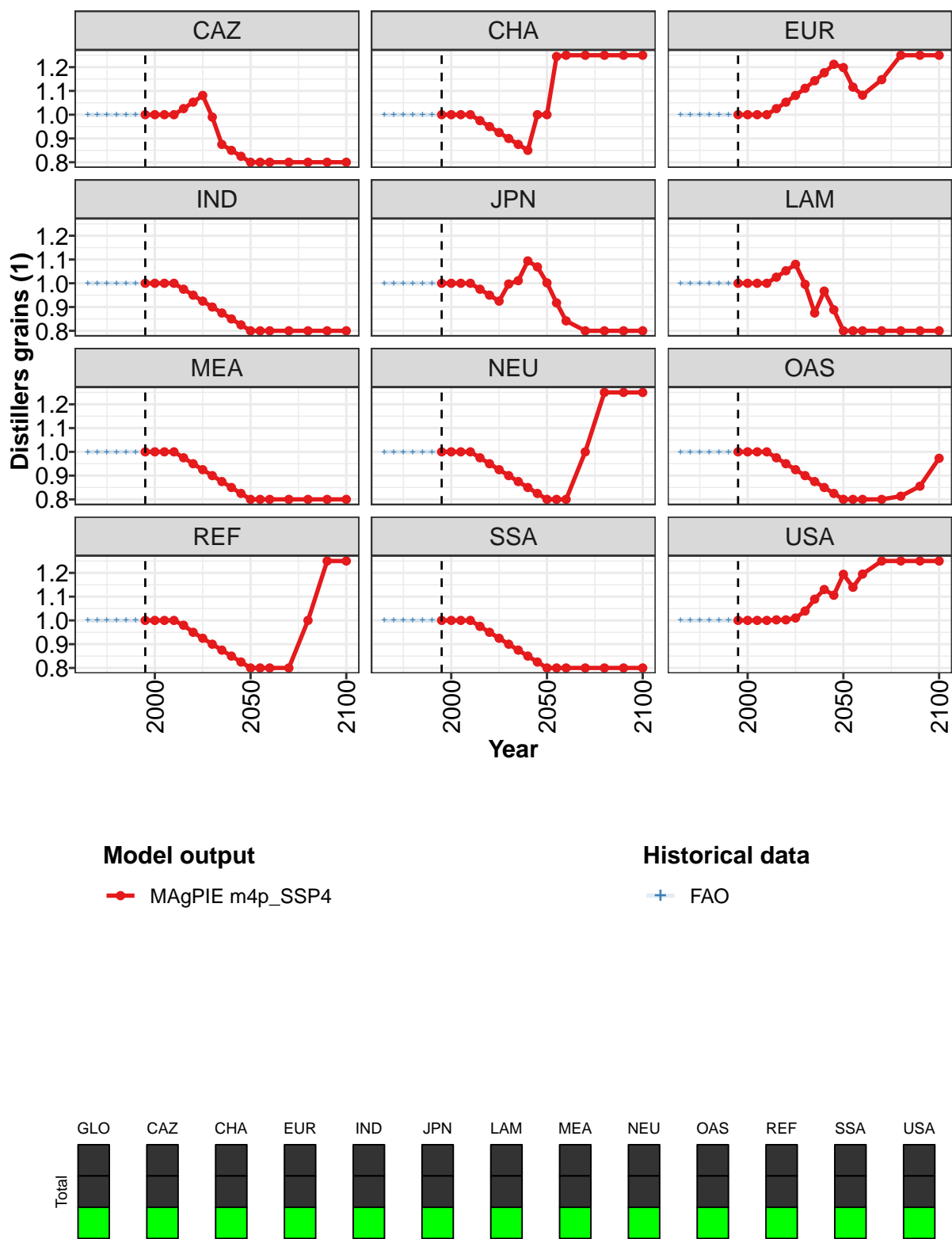


Figure 538: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Distillers grains (1)

	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	0.99	0.87	0.85	0.83
CHA	1.00	1.00	1.00	1.00	0.98	0.95	0.92	0.90	0.88	0.85	1.00
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	0.98	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	0.93	1.00	1.01	1.09	1.07
LAM	1.00	1.00	1.00	1.00	1.03	1.05	1.08	1.00	0.87	0.97	0.89
MEA	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	0.85	0.82
NEU	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	0.85	0.82
OAS	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	0.85	0.82
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	0.87	0.85	0.83
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.04	1.09	1.13	1.11

Table 2013: MAgPIE m4p\_SSP4 — 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	0.80	0.80	0.80
CHA	1.00	1.24	1.25	1.25	1.25	1.25	1.25
EUR	1.20	1.12	1.08	1.15	1.25	1.25	1.25
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	1.00	0.92	0.84	0.80	0.80	0.80	0.80
LAM	0.80	0.80	0.80	0.80	0.80	0.80	0.80
MEA	0.80	0.80	0.80	0.80	0.80	0.80	0.80
NEU	0.80	0.80	0.80	1.00	1.25	1.25	1.25
OAS	0.80	0.80	0.80	0.80	0.81	0.86	0.97
REF	0.80	0.80	0.80	0.80	1.00	1.25	1.25
SSA	0.80	0.80	0.80	0.80	0.80	0.80	0.80
USA	1.19	1.14	1.19	1.25	1.25	1.25	1.25

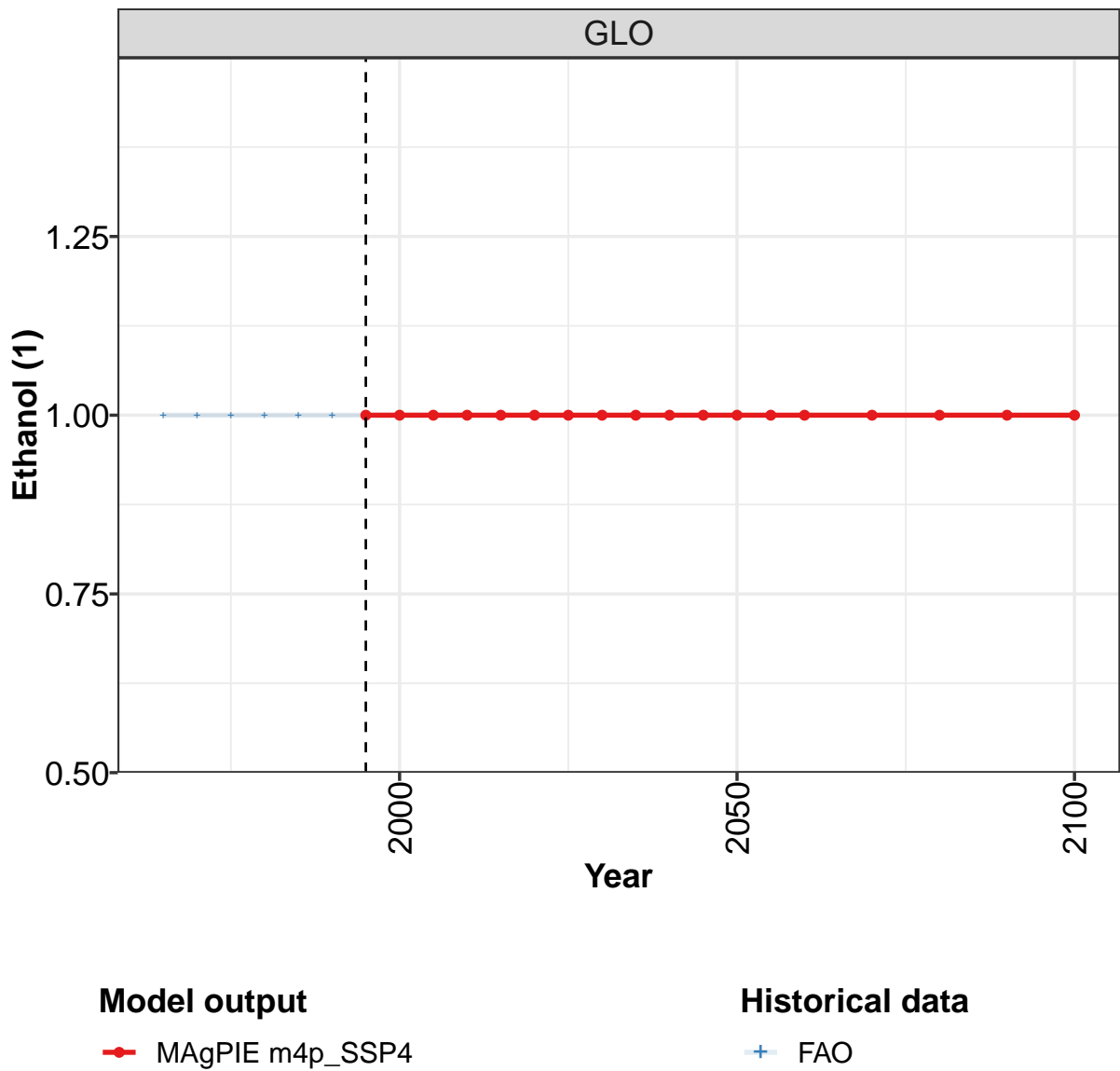
Table 2014: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Distillers grains (1) [PART 2/2]

	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



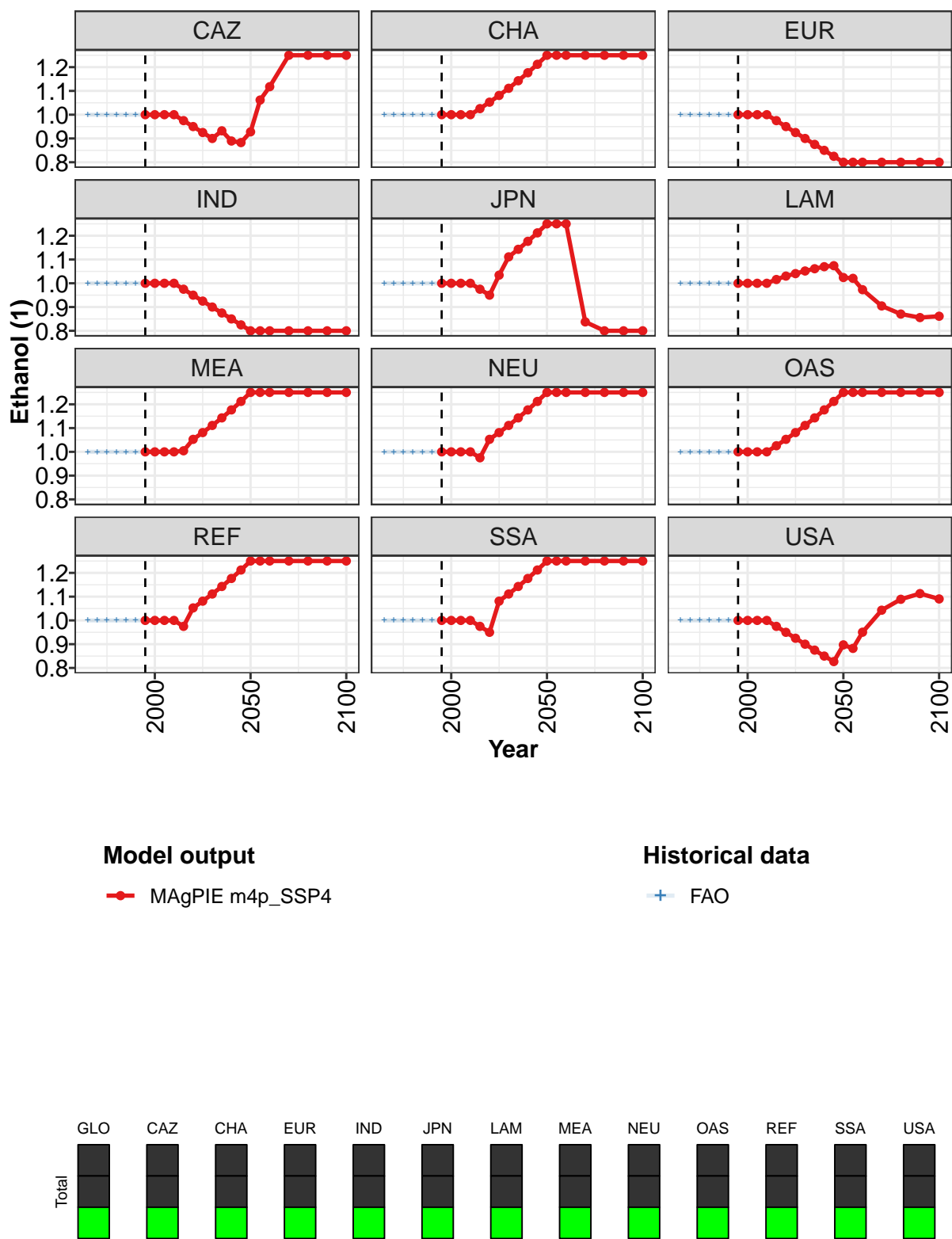


Figure 539: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Ethanol (1)

	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	0.90	0.93	0.89	0.88
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	0.88	0.85	0.82
IND	1.00	1.00	1.00	1.00	0.97	0.95	0.92	0.90	0.88	0.85	0.83
JPN	1.00	1.00	1.00	1.00	0.97	0.95	1.03	1.11	1.14	1.18	1.21
LAM	1.00	1.00	1.00	1.00	1.02	1.03	1.04	1.05	1.06	1.07	1.07
MEA	1.00	1.00	1.00	1.00	1.00	1.05	1.08	1.11	1.14	1.18	1.21
NEU	1.00	1.00	1.00	1.00	0.97	1.05	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	1.18	1.21
REF	1.00	1.00	1.00	1.00	0.97	1.05	1.08	1.11	1.14	1.18	1.21
SSA	1.00	1.00	1.00	1.00	0.97	0.95	1.08	1.11	1.14	1.18	1.21
USA	1.00	1.00	1.00	1.00	0.97	0.95	0.93	0.90	0.88	0.85	0.83

Table 2016: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Ethanol (1) [PART 1/2]

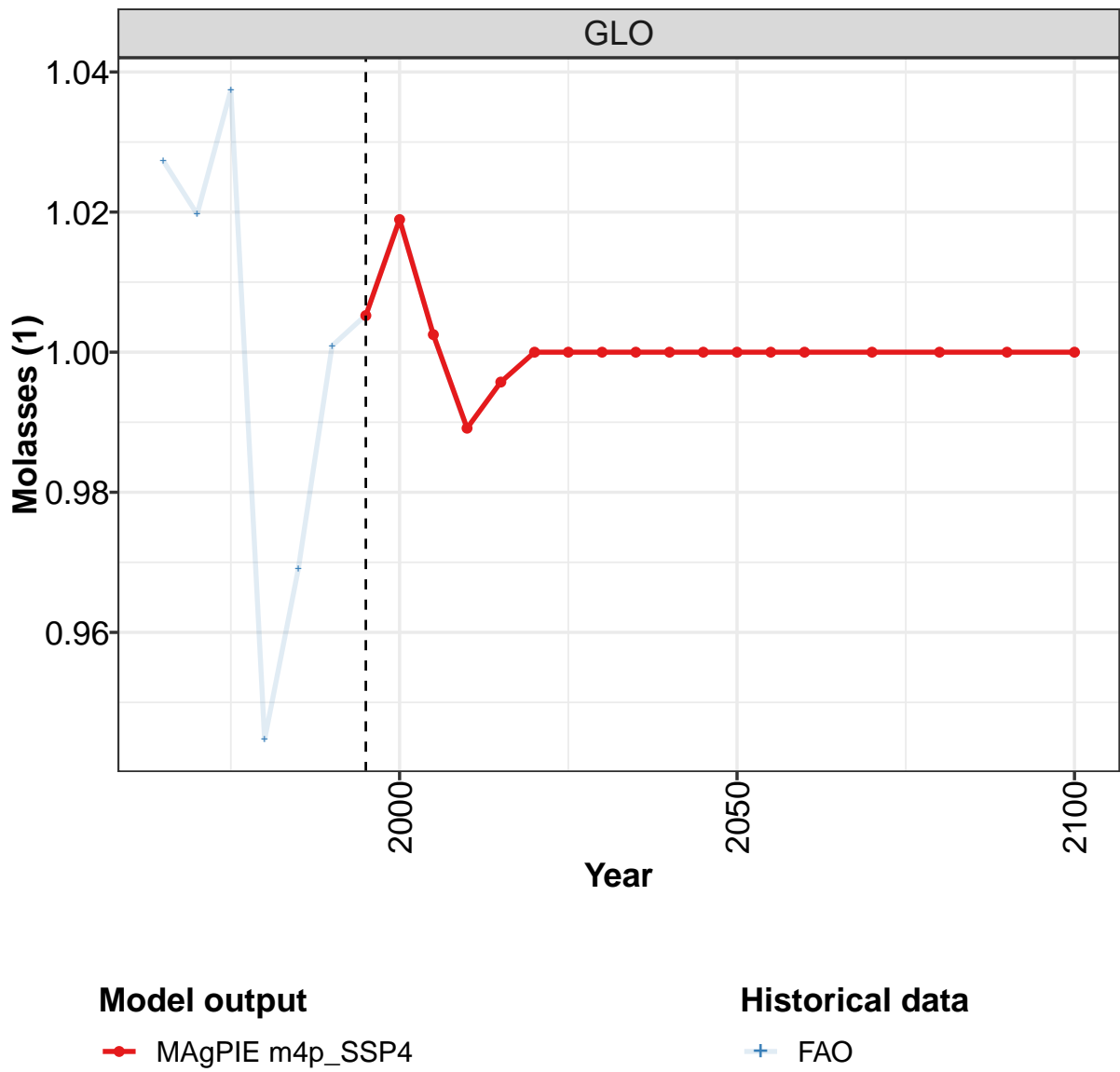
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.93	1.06	1.12	1.25	1.25	1.25	1.25
CHA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
EUR	0.80	0.80	0.80	0.80	0.80	0.80	0.80
IND	0.80	0.80	0.80	0.80	0.80	0.80	0.80
JPN	1.25	1.25	1.25	0.84	0.80	0.80	0.80
LAM	1.02	1.02	0.97	0.90	0.87	0.86	0.86
MEA	1.25	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	1.25	1.25	1.25	1.25	1.25	1.25	1.25
REF	1.25	1.25	1.25	1.25	1.25	1.25	1.25
SSA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
USA	0.90	0.88	0.95	1.04	1.09	1.11	1.09

Table 2017: MAgPIE m4p\_SSP4 — 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



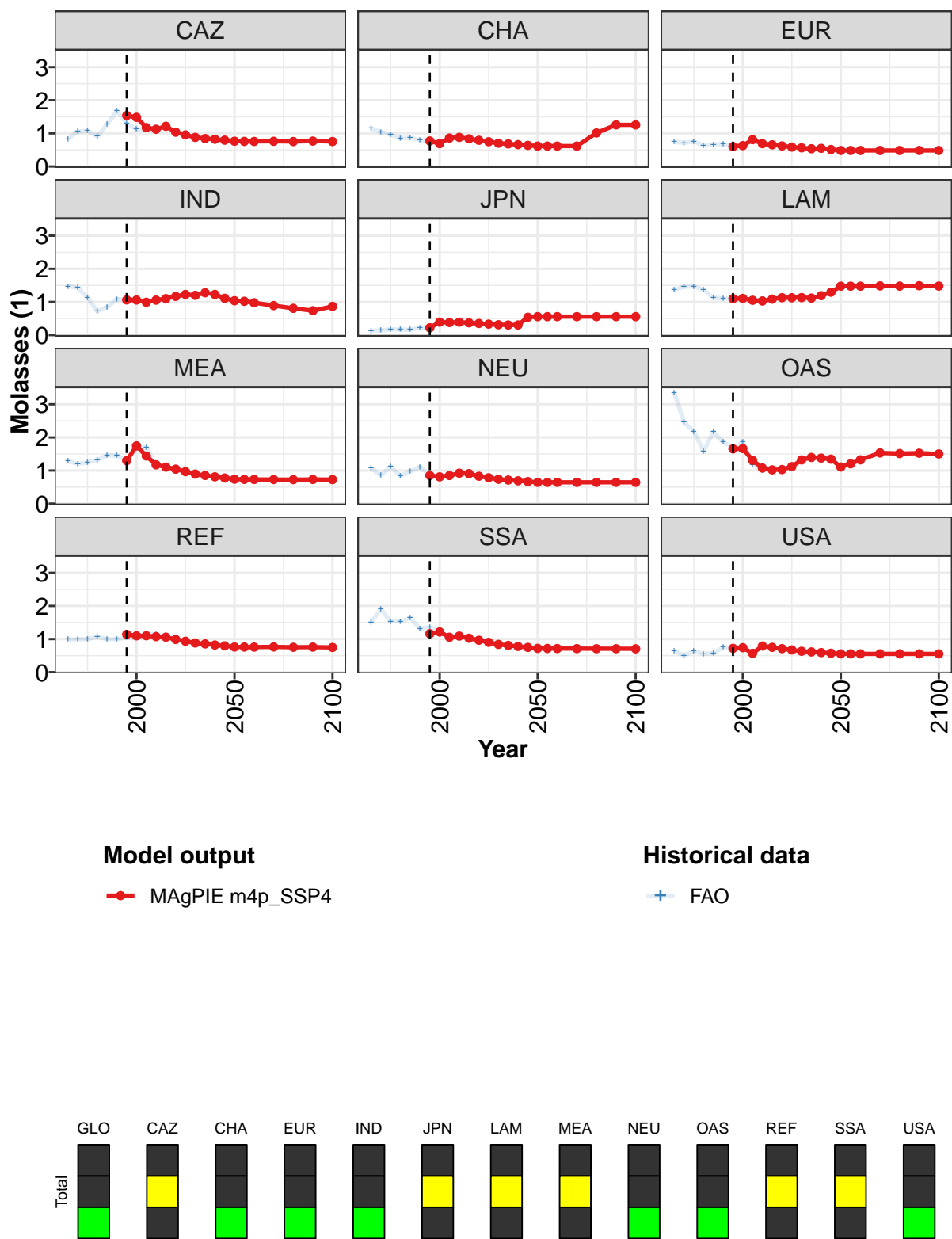


Figure 540: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Molasses (1)

	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	0.95	0.88	0.84	0.82	0.80
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	0.56	0.54	0.55	0.51
IND	1.06	1.06	0.99	1.06	1.10	1.17	1.23	1.20	1.28	1.23	1.11
JPN	0.22	0.39	0.38	0.39	0.37	0.35	0.33	0.31	0.30	0.31	0.54
LAM	1.10	1.11	1.05	1.03	1.09	1.13	1.13	1.13	1.12	1.19	1.29
MEA	1.30	1.75	1.44	1.17	1.10	1.04	0.97	0.89	0.85	0.81	0.77
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	1.03	1.12	1.32	1.40	1.38	1.34
REF	1.14	1.10	1.10	1.07	1.06	0.99	0.93	0.88	0.85	0.82	0.80
SSA	1.16	1.22	1.06	1.09	1.03	0.97	0.90	0.84	0.81	0.78	0.75
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\_SSP4 — Trade—Self-sufficiency—Secondary products—Molasses (1) [PART 1/2]

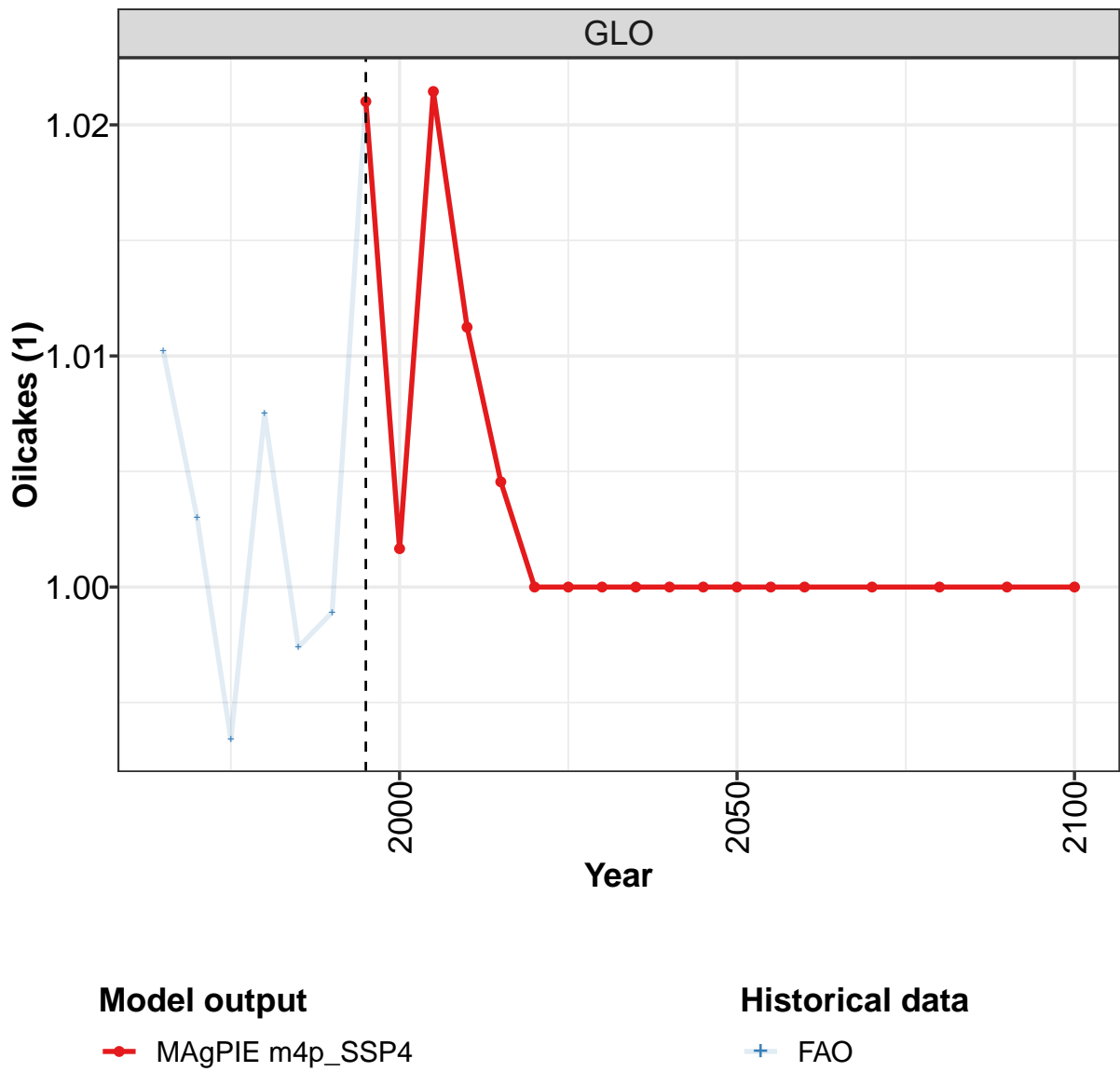
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	0.76	0.76	0.76	0.76	0.75	0.77	0.75
CHA	0.62	0.62	0.62	0.62	1.01	1.26	1.26
EUR	0.48	0.48	0.48	0.48	0.48	0.48	0.48
IND	1.04	1.02	0.98	0.89	0.81	0.74	0.87
JPN	0.56	0.56	0.56	0.56	0.56	0.56	0.56
LAM	1.48	1.48	1.48	1.48	1.48	1.49	1.48
MEA	0.74	0.73	0.73	0.73	0.72	0.73	0.73
NEU	0.64	0.64	0.64	0.64	0.64	0.64	0.64
OAS	1.11	1.20	1.32	1.53	1.51	1.52	1.50
REF	0.76	0.76	0.76	0.76	0.75	0.76	0.75
SSA	0.72	0.72	0.71	0.71	0.71	0.71	0.71
USA	0.55	0.55	0.55	0.55	0.55	0.55	0.55

Table 2020: MAgPIE m4p\_SSP4 — 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



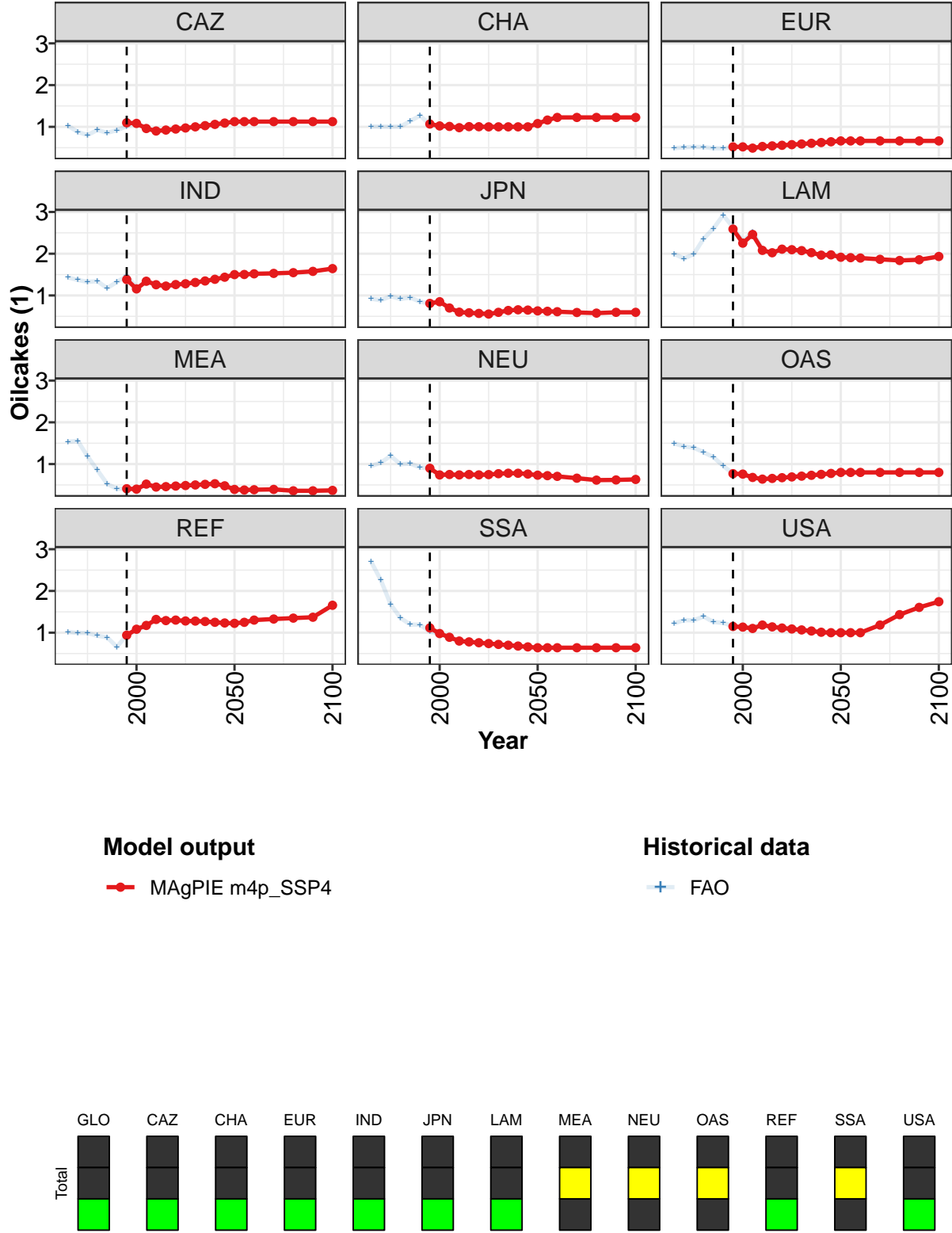


Figure 541: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Oilcakes (1)



	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	1.00	1.00	1.00
EUR	0.52	0.52	0.49	0.53	0.54	0.56	0.57	0.59	0.61	0.62	0.64
IND	1.38	1.16	1.34	1.26	1.22	1.26	1.28	1.31	1.35	1.39	1.44
JPN	0.81	0.85	0.70	0.60	0.58	0.57	0.56	0.60	0.64	0.66	0.65
LAM	2.59	2.25	2.46	2.08	2.02	2.11	2.10	2.07	2.03	1.97	1.97
MEA	0.41	0.40	0.52	0.45	0.46	0.47	0.49	0.50	0.51	0.53	0.48
NEU	0.90	0.74	0.75	0.74	0.75	0.74	0.75	0.77	0.78	0.78	0.76
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	1.28	1.28	1.27	1.25	1.23
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	1.09	1.07	1.04	1.01	1.00

Table 2022: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Oilcakes (1) [PART 1/2]

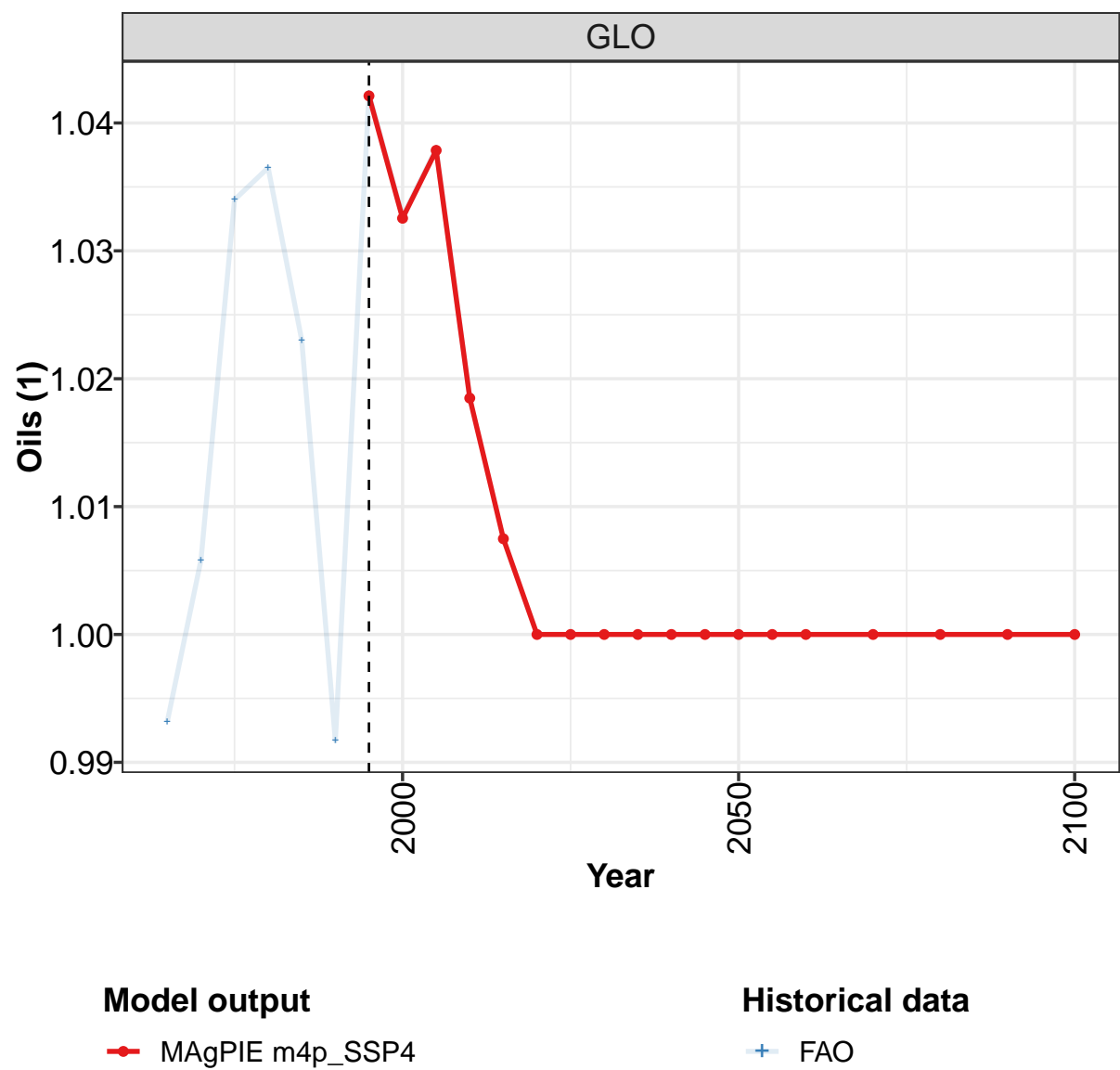
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.12	1.12	1.12	1.12	1.12	1.13	1.12
CHA	1.08	1.16	1.22	1.23	1.23	1.22	1.23
EUR	0.66	0.66	0.66	0.66	0.66	0.66	0.66
IND	1.50	1.50	1.52	1.53	1.55	1.58	1.64
JPN	0.63	0.62	0.61	0.59	0.58	0.60	0.60
LAM	1.92	1.91	1.90	1.87	1.84	1.86	1.93
MEA	0.39	0.38	0.39	0.39	0.36	0.36	0.37
NEU	0.73	0.72	0.71	0.66	0.62	0.62	0.63
OAS	0.80	0.80	0.80	0.80	0.80	0.80	0.80
REF	1.22	1.25	1.30	1.33	1.35	1.37	1.66
SSA	0.64	0.64	0.64	0.64	0.64	0.64	0.64
USA	1.00	1.00	1.00	1.18	1.43	1.61	1.74

Table 2023: MAgPIE m4p\_SSP4 — 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



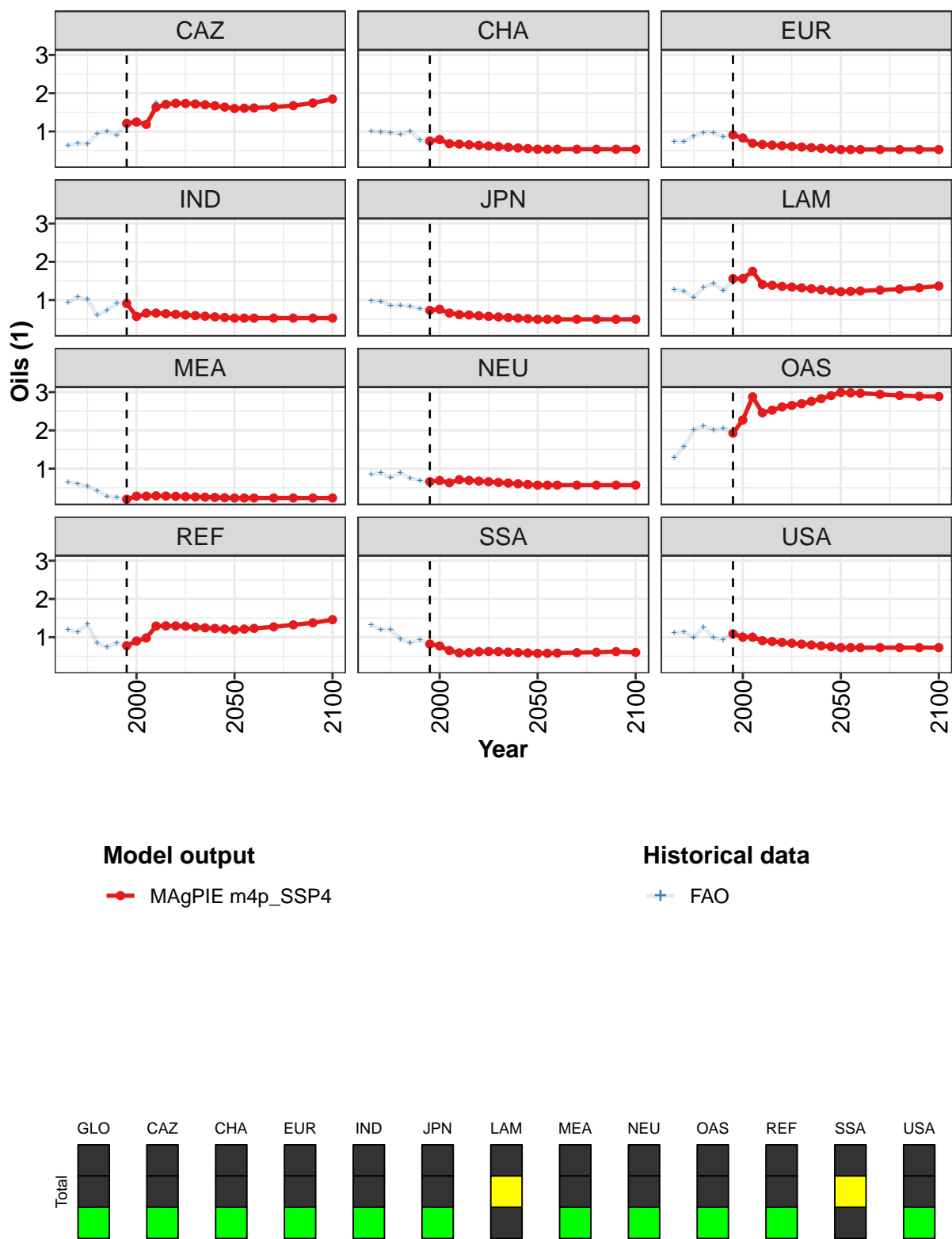


Figure 542: MAgPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Oils (1)

	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	1.74	1.73	1.72	1.70	1.67	1.64
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	0.56	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	1.34	1.32	1.30	1.27	1.25
MEA	0.20	0.28	0.28	0.29	0.28	0.28	0.27	0.26	0.25	0.25	0.24
NEU	0.66	0.69	0.63	0.71	0.69	0.67	0.66	0.64	0.62	0.60	0.59
OAS	1.93	2.27	2.88	2.46	2.53	2.61	2.65	2.70	2.76	2.83	2.91
REF	0.78	0.90	0.98	1.29	1.30	1.30	1.29	1.26	1.25	1.23	1.21
SSA	0.82	0.77	0.65	0.59	0.60	0.62	0.63	0.62	0.61	0.60	0.59
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-SSP4 — Trade—Self-sufficiency—Secondary products—Oils (1) [PART 1/2]

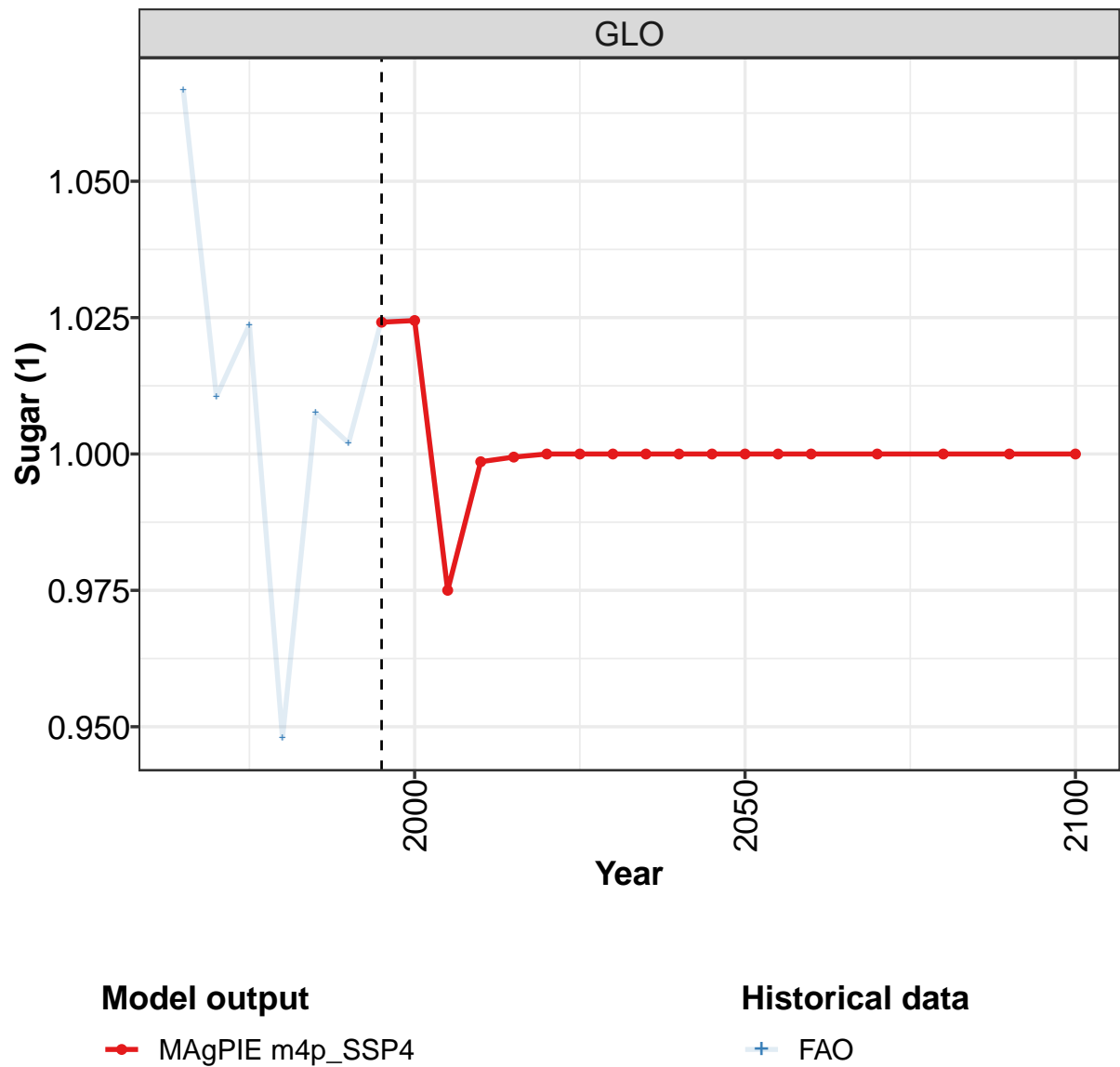
	2050	2055	2060	2070	2080	2090	2100
GLO	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAZ	1.60	1.61	1.62	1.64	1.68	1.74	1.85
CHA	0.54	0.54	0.54	0.54	0.54	0.54	0.54
EUR	0.53	0.53	0.53	0.53	0.53	0.53	0.53
IND	0.53	0.53	0.53	0.53	0.53	0.53	0.53
JPN	0.50	0.50	0.50	0.50	0.50	0.50	0.50
LAM	1.22	1.23	1.24	1.26	1.29	1.32	1.37
MEA	0.23	0.23	0.23	0.23	0.23	0.23	0.23
NEU	0.57	0.57	0.57	0.57	0.57	0.57	0.57
OAS	2.99	2.98	2.97	2.94	2.91	2.89	2.89
REF	1.20	1.21	1.23	1.27	1.32	1.38	1.46
SSA	0.58	0.58	0.58	0.60	0.61	0.62	0.60
USA	0.73	0.73	0.73	0.73	0.73	0.73	0.73

Table 2026: MAgPIE m4p-SSP4 — 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



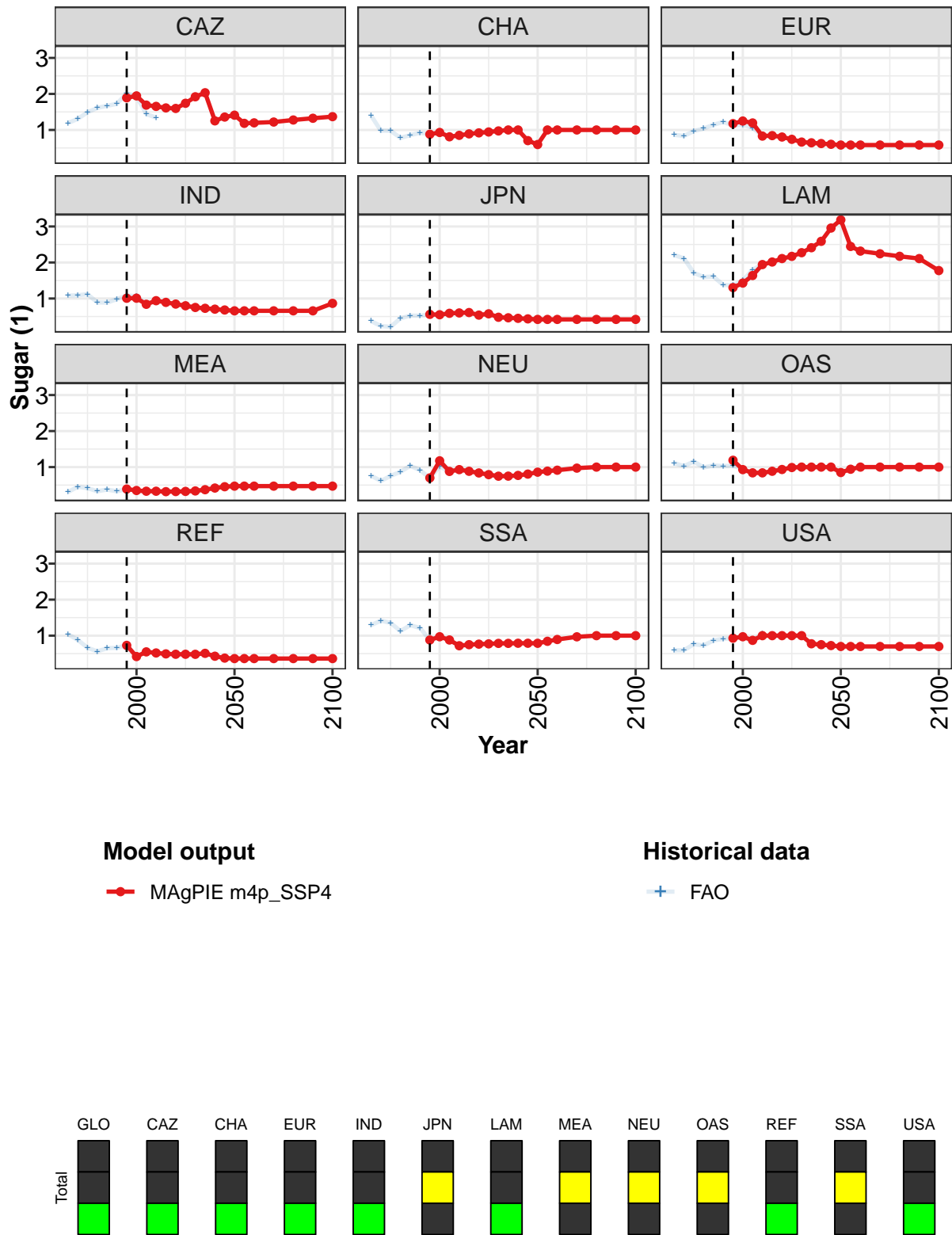


Figure 543: MAGPIE m4p\_SSP4 — Trade—Self-sufficiency—Secondary products—Sugar (1)

	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	1.60	1.74	1.92	2.03	1.25	1.36
CHA	0.88	0.93	0.81	0.85	0.89	0.92	0.94	0.97	1.00	1.00	0.70
EUR	1.18	1.25	1.19	0.83	0.84	0.80	0.74	0.66	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	0.71	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	2.01	2.11	2.17	2.27	2.41	2.59	2.96
MEA	0.39	0.35	0.33	0.33	0.32	0.32	0.33	0.34	0.37	0.42	0.46
NEU	0.70	1.17	0.88	0.93	0.88	0.84	0.79	0.75	0.75	0.77	0.81
OAS	1.19	0.93	0.84	0.84	0.88	0.93	0.99	1.00	1.00	1.00	1.00
REF	0.73	0.42	0.55	0.52	0.49	0.48	0.48	0.48	0.51	0.43	0.38
SSA	0.88	0.97	0.88	0.72	0.75	0.76	0.77	0.79	0.79	0.79	0.79
USA	0.93	0.97	0.87	1.00	1.00	1.00	1.00	1.00	0.77	0.75	0.72

Table 2028: MAgPIE m4p-SSP4 — 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	1.41	1.18	1.20	1.22	1.28	1.32	1.37
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	0.66	0.66	0.66	0.66	0.66	0.87
JPN	0.42	0.42	0.42	0.42	0.42	0.42	0.42
LAM	3.18	2.45	2.32	2.24	2.17	2.11	1.78
MEA	0.47	0.47	0.47	0.47	0.47	0.47	0.47
NEU	0.86	0.89	0.91	0.97	1.00	1.00	1.00
OAS	0.85	0.94	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	0.79	0.84	0.89	0.97	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-SSP4 — 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	285	235	12	11
relative	52%	43%	2%	2%

Table 2031: Global

	green	yellow	red	NA.
total	2954	2786	138	470
relative	47%	44%	2%	7%

Table 2032: Regional

#### 63.2 Trend

	green	yellow	red	NA.
total	233	161	138	11
relative	43%	30%	25%	2%

Table 2033: Global

	green	yellow	red	NA.
total	2686	1556	1627	479
relative	42%	25%	26%	8%

Table 2034: Regional

#### 63.3 Overlap

	green	yellow	red	NA.
total	481	48	3	11
relative	89%	9%	1%	2%

Table 2035: Global

	green	yellow	red	NA.
total	5138	570	101	539
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|N03|Land|Agriculture|Agricultural Soils|Soil Organic Matter Loss (Mt N03-/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)

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## 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)

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## 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)

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## 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)

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## 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)

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## Emissions|N03-N|Land|Agriculture|Other (Mt N03-N/yr)
## Emissions|N03-N|Land|Agriculture|Rice (Mt N03-N/yr)
## Emissions|N03-N|Land|Biomass Burning|Agricultural Waste Burning (Mt N03-N/yr)
## Emissions|N03-N|Land|Biomass Burning|Deforestation Fires (Mt N03-N/yr)
## Emissions|N03-N|Land|Biomass Burning|Forest Fires (Mt N03-N/yr)
## Emissions|N03-N|Land|Biomass Burning|Peat Fires (Mt N03-N/yr)
## Emissions|N03-N|Land|Biomass Burning|Savannah Fires (Mt N03-N/yr)
## Emissions|N03Land| (Mt N03-/yr)
## Emissions|N03Land|Biomass Burning (Mt N03-/yr)
## Emissions|N03Land|Agriculture|Enteric Fermentation (Mt N03-/yr)
## Emissions|N03Land|Agriculture|Other (Mt N03-/yr)
## Emissions|N03Land|Agriculture|Rice (Mt N03-/yr)
## Emissions|N03Land|Biomass Burning|Agricultural Waste Burning (Mt N03-/yr)
## Emissions|N03Land|Biomass Burning|Deforestation Fires (Mt N03-/yr)
## Emissions|N03Land|Biomass Burning|Forest Fires (Mt N03-/yr)
## Emissions|N03Land|Biomass Burning|Peat Fires (Mt N03-/yr)
## Emissions|N03Land|Biomass Burning|Savannah Fires (Mt N03-/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|S02|Land| (Mt S02/yr)
## Emissions|S02|Land|Agriculture (Mt S02/yr)
## Emissions|S02|Land|Biomass Burning (Mt S02/yr)
## Emissions|S02|Land|Agriculture|Agricultural Soils (Mt S02/yr)
## Emissions|S02|Land|Agriculture|Animal Waste Management (Mt S02/yr)
## Emissions|S02|Land|Agriculture|Enteric Fermentation (Mt S02/yr)
## Emissions|S02|Land|Agriculture|Other (Mt S02/yr)
## Emissions|S02|Land|Agriculture|Rice (Mt S02/yr)
## Emissions|S02|Land|Biomass Burning|Agricultural Waste Burning (Mt S02/yr)
## Emissions|S02|Land|Biomass Burning|Deforestation Fires (Mt S02/yr)
## Emissions|S02|Land|Biomass Burning|Forest Fires (Mt S02/yr)
## Emissions|S02|Land|Biomass Burning|Peat Fires (Mt S02/yr)
## Emissions|S02|Land|Biomass Burning|Savannah Fires (Mt S02/yr)
## Emissions|N20|Land|Land Use Change (Mt N20/yr)
## Emissions|NH3|Land|Land Use Change (Mt NH3/yr)
## Emissions|NO2|Land|Land Use Change (Mt NO2/yr)
## Emissions|N03Land|Land Use Change (Mt N03-/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)

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## 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/excoeff_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 disag_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      rgefx_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	splancks	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    lrcode_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"
##	polyspline	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	rworldextra	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 34m 12s
```