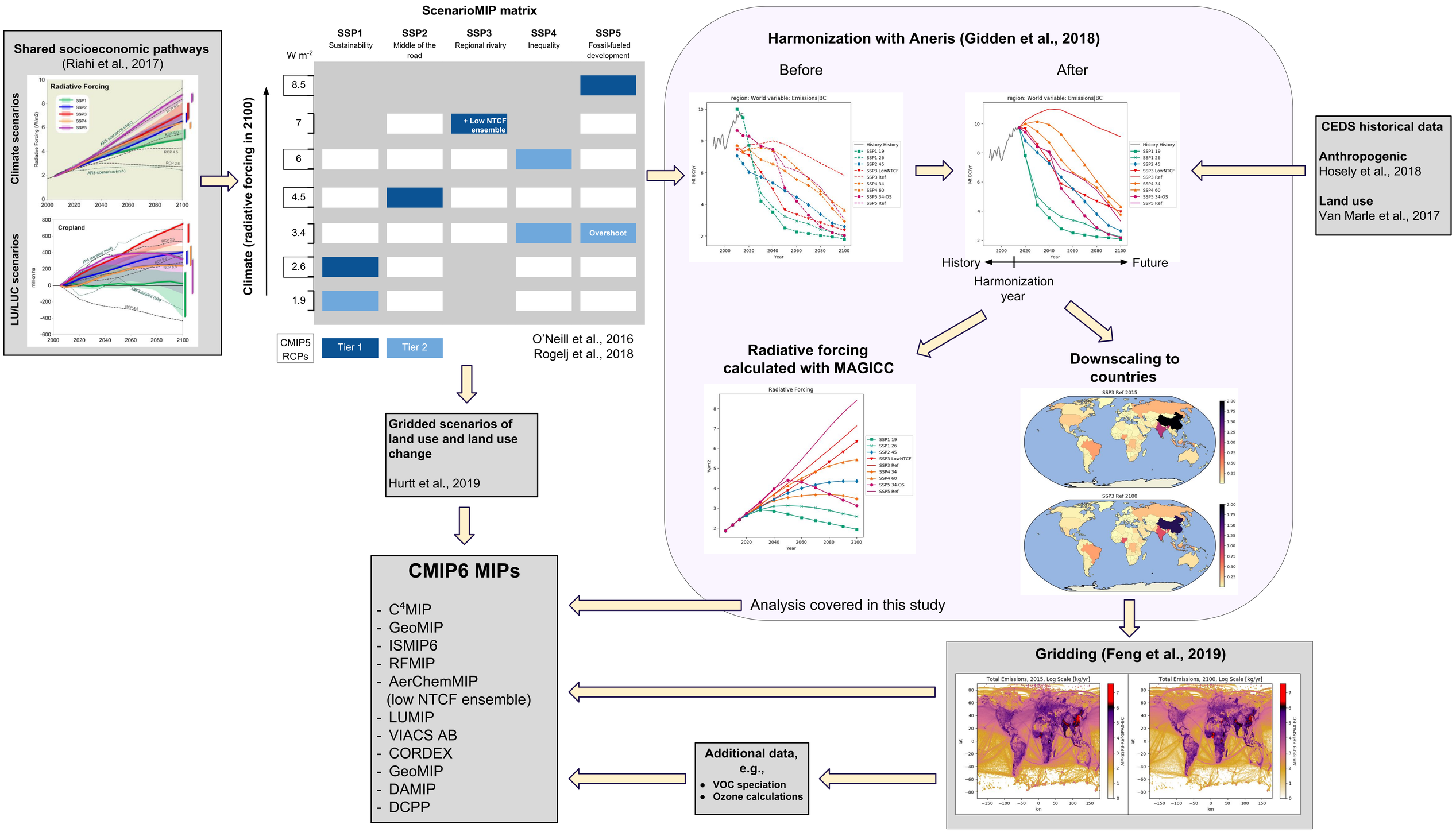
Shared socioeconomic pathways
(Riahi et al., 2017)
Climate scenarios
LU/LUC scenarios
Radiative Forcing
Cropland
ScenarioMIP matrix
SSP1 Sustainability
SSP2 Middle of the road
SSP3 Regional rivalry
SSP4 Inequality
SSP5 Fossil-fueled development
W m-2
8.5
7
6
4.5
3.4
2.6
1.9
+ Low NTCF ensemble
Overshoot
Climate (radiative forcing in 2100)
CMIP5 RCPs
Tier 1
Tier 2
O'Neill et al., 2016
Rogelj et al., 2018
Gridded scenarios of land use and land use change
Hurtt et al., 2019
CMIP6 MIPs
- C4MIP
- GeoMIP
- ISMIP6
- RFMIP
- AerChemMIP (low NTCF ensemble)
- LUMIP
- VIACS AB
- CORDEX
- GeoMIP
- DAMIP
- DCPP
Harmonization with Aneris (Gidden et al., 2018)
Before
After
region: World variable: Emissions|BC
History
Future
Harmonization year
Radiative forcing calculated with MAGICC
Radiative Forcing
Downscaling to countries
SSP3 Ref 2015
SSP3 Ref 2100
Analysis covered in this study
CEDS historical data
Anthropogenic
Hosely et al., 2018
Land use
Van Marle et al., 2017
Gridding (Feng et al., 2019)
Total Emissions, 2015, Log Scale [kg/yr]
Total Emissions, 2100, Log Scale [kg/yr]
Additional data, e.g.,
VOC speciation
Ozone calculations