

### Geophysical Research Letter

## Supporting Information for

#### Past and future climate-driven changes of agricultural land in central Europe

M.C.A. Torbenson<sup>1,2</sup>, J. Esper<sup>1,2</sup>, R. Brázdil<sup>2,3</sup>, U. Büntgen<sup>2,3,4</sup>, J.E. Olesen<sup>5</sup>, D. Semarádová<sup>2,6</sup>, M. Vlach<sup>7</sup>, O. Urban<sup>2</sup>, J. Balek<sup>2,6</sup>, T. Kolář<sup>2,8</sup>, M. Rybníček<sup>2,8</sup>, N. Pernicová<sup>2,6</sup>, F. Reinig<sup>1</sup>, E. Martinez del Castillo<sup>1</sup>, P.D. Jones<sup>9</sup>, & M. Trnka<sup>2,6</sup>

1 Department of Geography, Johannes Gutenberg University, Mainz, Germany.

2 Global Change Research Institute, Czech Academy of Sciences, Brno, Czech Republic.

3 Department of Geography, Faculty of Science, Masaryk University, Brno, Czech Republic.

4 Department of Geography, University of Cambridge, Cambridge, United Kingdom.

5 Department of Agroecology, Aarhus University, Tjele, Denmark.

6 Department of Agrosystems and Bioclimatology, Faculty of Agronomy, Mendel University in Brno, Czech Republic.

7 Institute of Archaeology (ARUB), Czech Academy of Science, Brno, Czech Republic.

8 Department of Wood Science and Wood Technology, Mendel University in Brno, Czech Republic.

9 Climatic Research Unit, School of Environmental Sciences, University of East Anglia, Norwich, United Kingdom.

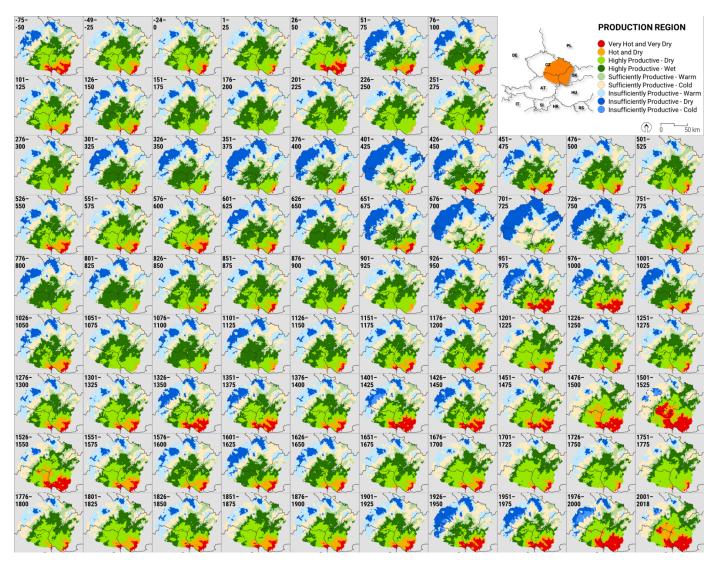
#### **Contents of this file**

Tables S1 Figures S1 to S5

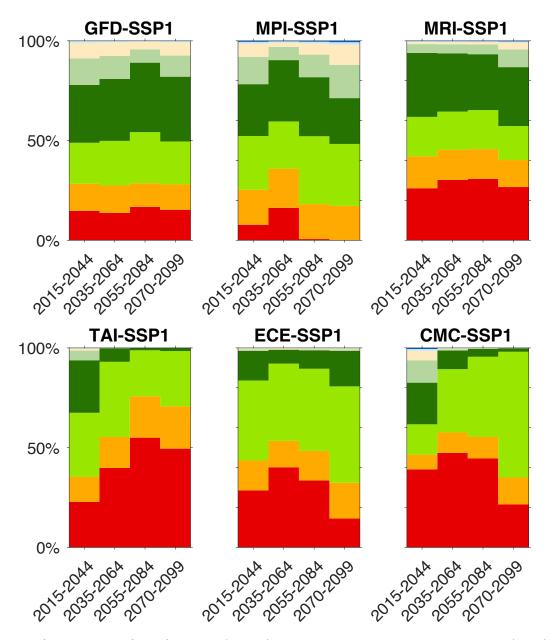
# **SUPPLEMENTARY TABLES AND FIGURES**

**Supporting Information Table 1**. Summary of six CMIP6 ensemble models used for the projection of future climate.

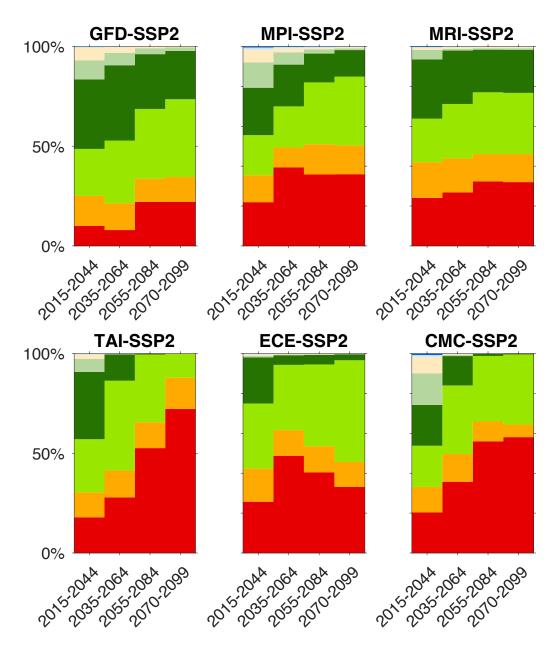
Abbreviation	Modeling group	Version	Reference
GFD	NOAA - GFDL	ESM 4	Dunne et al., 2020
MPI	Max Planck Institute	ESM1.2	Mauritsen et al., 2019
MRI	Meteorological Research Institute	ESM2.0	Yukimoto et al., 2019
TAI	National Center for Atmospheric Research	ESM1	Lee et al., 2020
ECE	EC-Earth Consortium	Earth3	Döscher et al., 2022
CMC	University Corp. for Atmospheric Research	CESM2.0	Danabasoglu et al., 2020



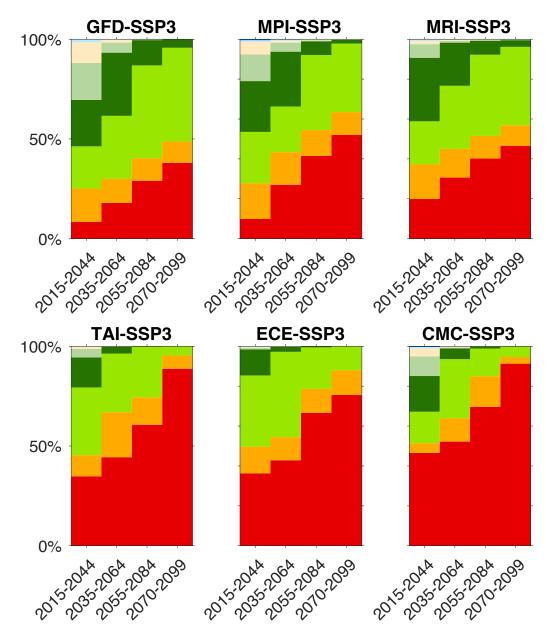
**Supporting Information Figure 1**. Spatial variability of nine modern agroclimatic zones in central Europe during the full reconstruction period, divided into 25-year periods.



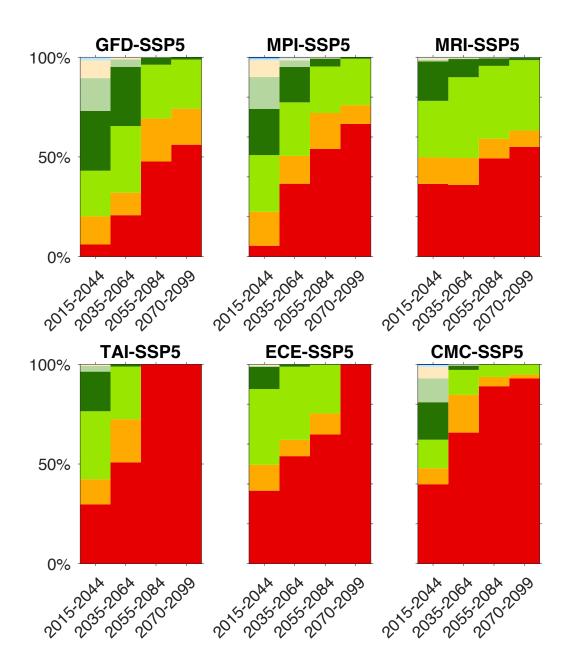
**Supporting Information Figure 2**. Changing mean areal percentage of agroclimatic zones across the study region for four projected 30-year periods, considering the SSP1-2.6 scenario, of the six CMIP6 models used.



**Supporting Information Figure 3**. Changing mean areal percentage of agroclimatic zones across the study region for four projected 30-year periods, considering the SSP2-4.5 scenario, of the six CMIP6 models used.



**Supporting Information Figure 4**. Changing mean areal percentage of agroclimatic zones across the study region for four projected 30-year periods, considering the SSP3-7.0 scenario, of the six CMIP6 models used.



**Supporting Information Figure 5.** Changing mean areal percentage of agroclimatic zones across the study region for four projected 30-year periods, considering the SSP5-8.5 scenario, of the six CMIP6 models used.