

Supplement for: The Variability Atlas: How internal climate variability affects the estimation of climate extreme indices

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References

Maher, Nicola et al. (Sept. 25, 2025). “The Updated Multi-Model Large Ensemble Archive and the Climate Variability Diagnostics Package: New Tools for the Study of Climate Variability and Change”. In: *Geoscientific Model Development* 18.18, pp. 6341–6365. ISSN: 1991-959X. DOI: [10.5194/gmd-18-6341-2025](https://doi.org/10.5194/gmd-18-6341-2025).

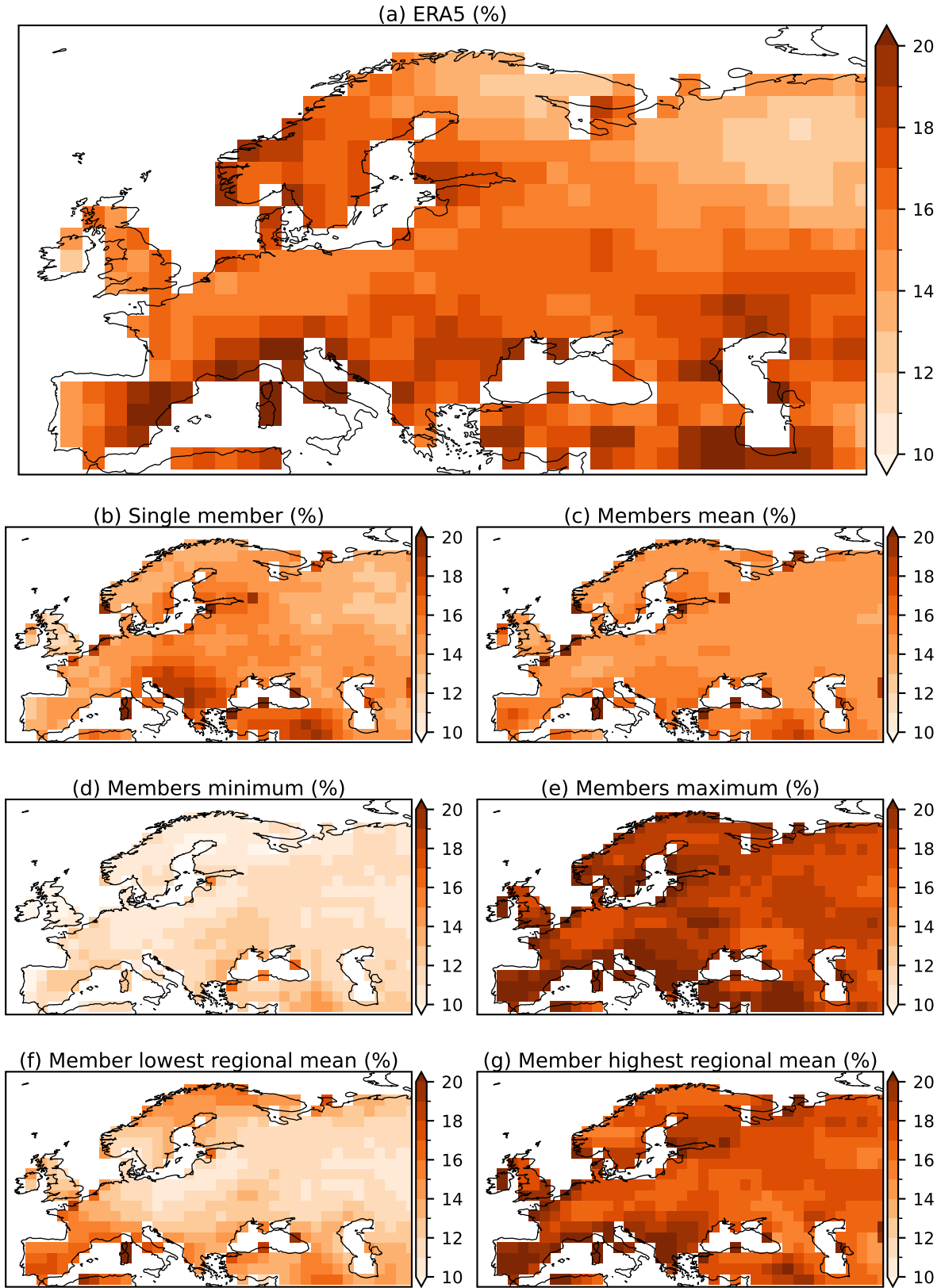


Figure S1: Same as figure 1 a-f in the main manuscript but also showing observed variability in TX90p based on ERA5.

TXx (K): 1995-2014 mean, member standard deviation

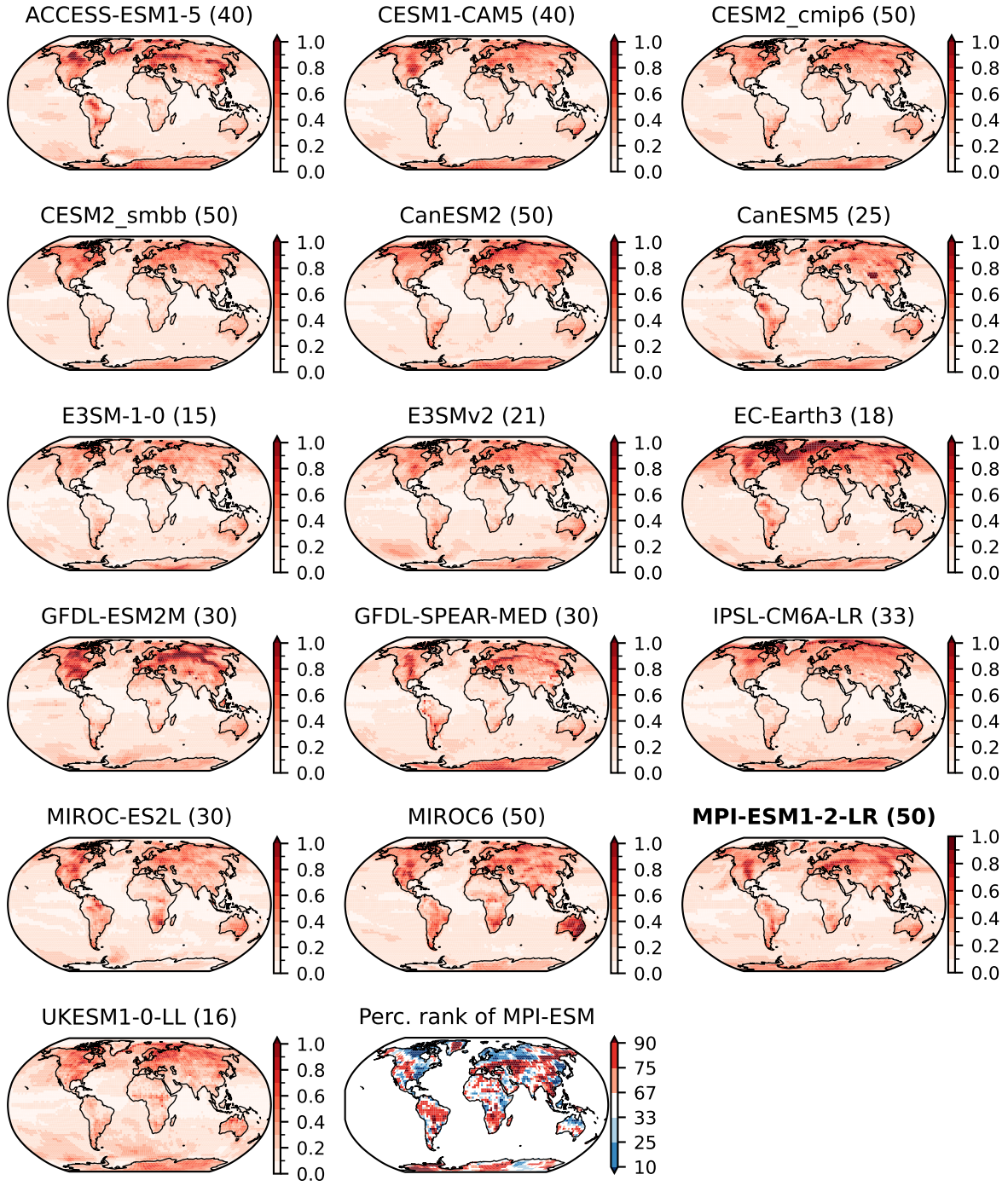


Figure S2: Member standard deviation for TXx from 16 large ensembles (number of members in brackets). The MPI-ESM model used in the main manuscript is highlighted in bold and compared to the other 15 models in a rank analysis in the last panel. Note that all models are used at 2.5° here. Data from the MMLEAv2 (<https://gdex.ucar.edu/datasets/d651039/>) presented in Maher et al. (2025).

Rx1day (mm): 1995-2014 mean, member standard deviation

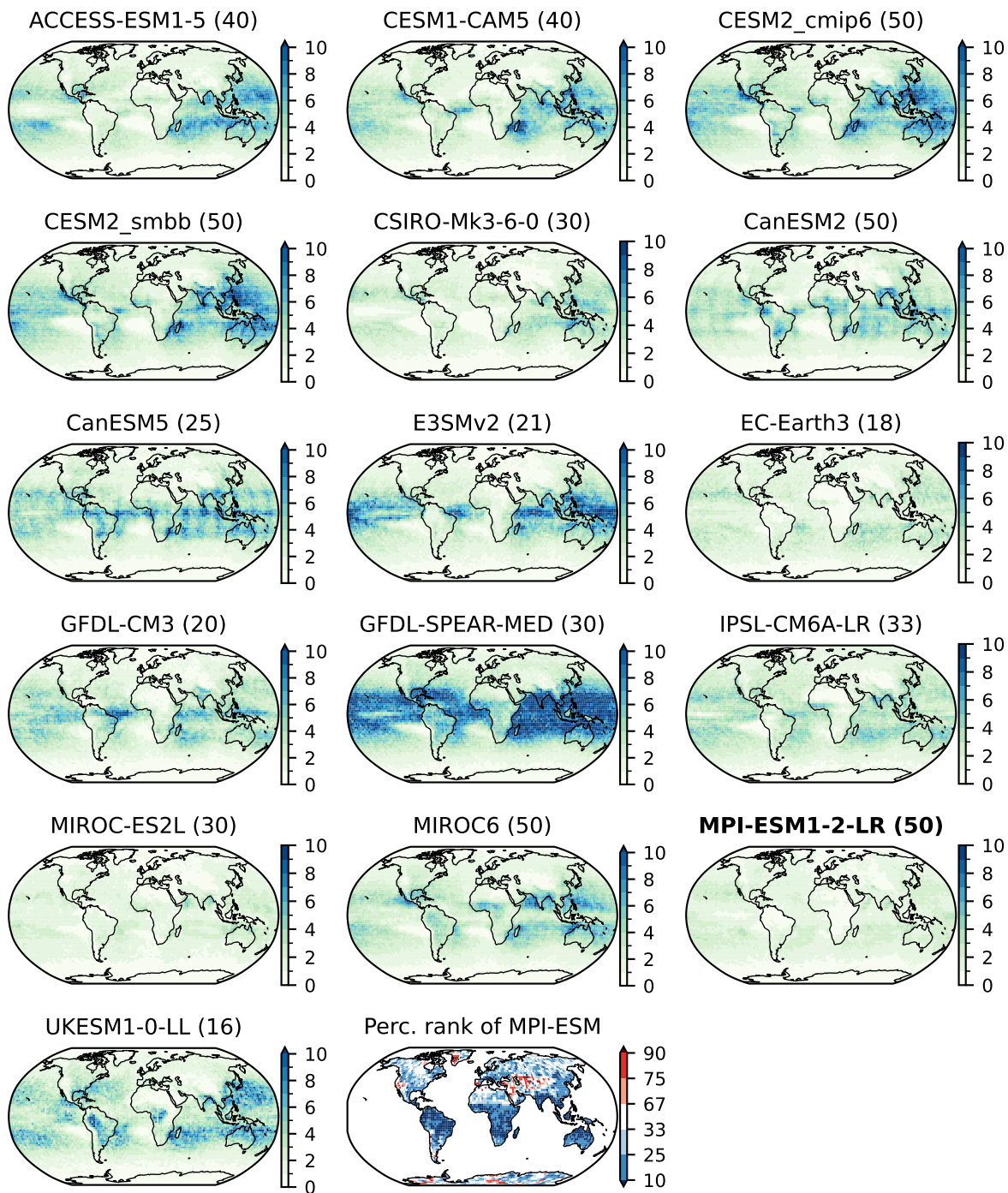


Figure S3: Same as figure S2 but for Rx1day.