Supplementary Information for

Future heat extremes and impacts in a convection permitting climate ensemble over Germany

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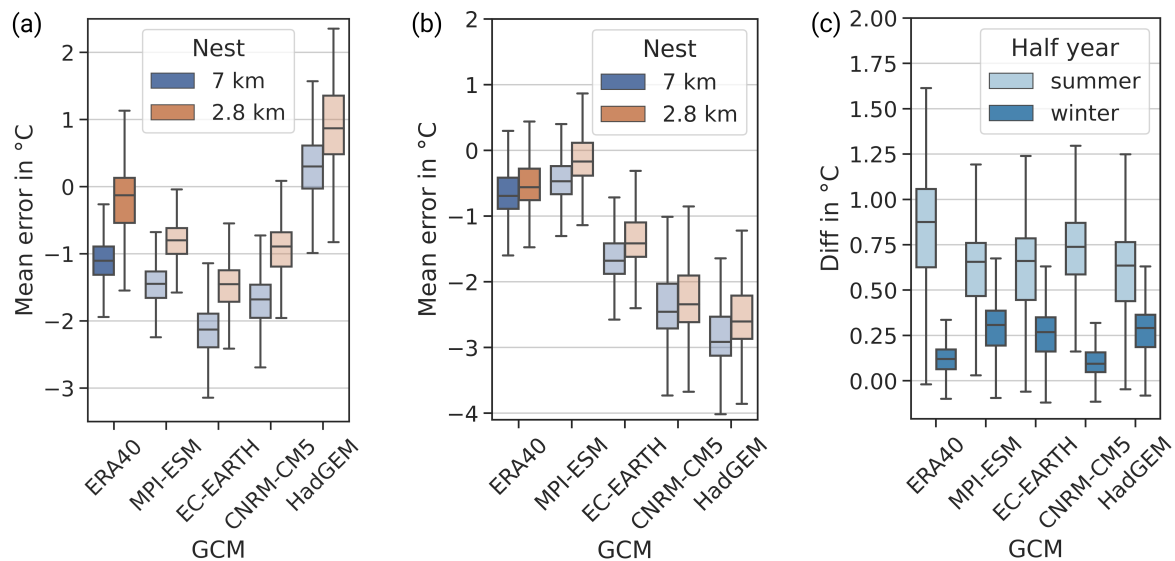
Figure S1. Comparison of 2 m temperature in the 2nd (7 km) and 3rd grid (2.8 km) with the observation data set HYRAS for the reference period. The analysis was performed on the grid points in the evaluation area. The distribution over those grid points is visualized in the box plot in (a) for the mean error of the ensemble in the summer half year, in (b) for the mean error of the ensemble in the winter half year, and in (c) the mean difference between 2nd (7 km) and 3rd grid (2.8 km).
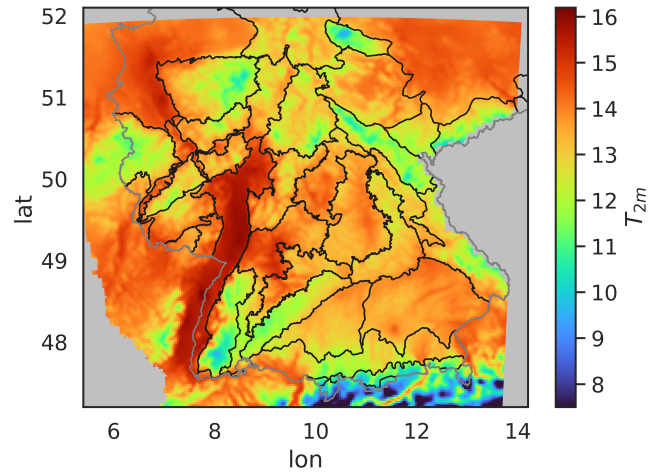
Figure S2. The ensemble mean of mean summer half year temperature at 2 m in the reference period 1971-2000.
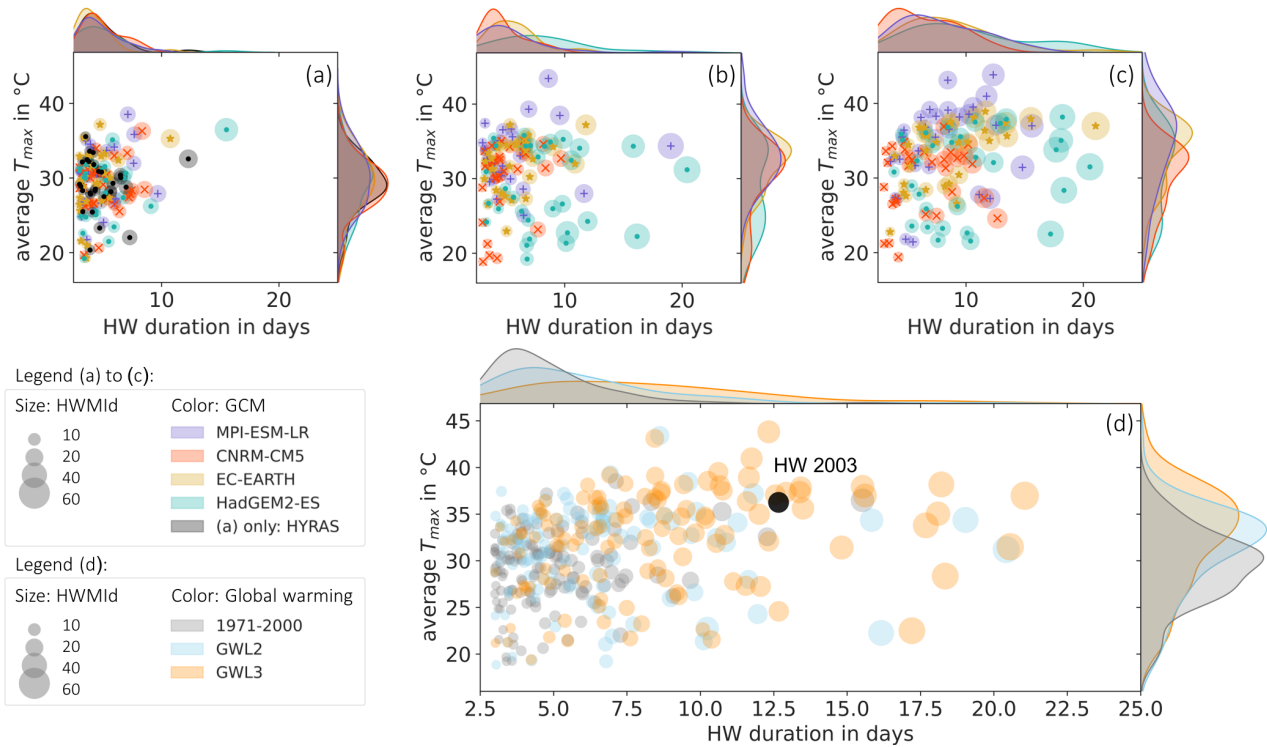
Figure S3. Maximum HW temperature over HW length of the strongest HW in each summer half year (May–Oct) in every projection run. The considered events are identified over the maximum of the HWMId integrated over the area. The HW-features of all involved grid points are averaged. Panel (a) to (c) show the single ensemble members and comparison with the observation: (a) for 1971-2000, (b) for GWL2, and (c) for GWL3. In Panel d the ensemble members of one GWL are merged to display the evolution over time. The black data point corresponds to the HW in 2003 derived from HYRAS data.