

Supplementary Figures

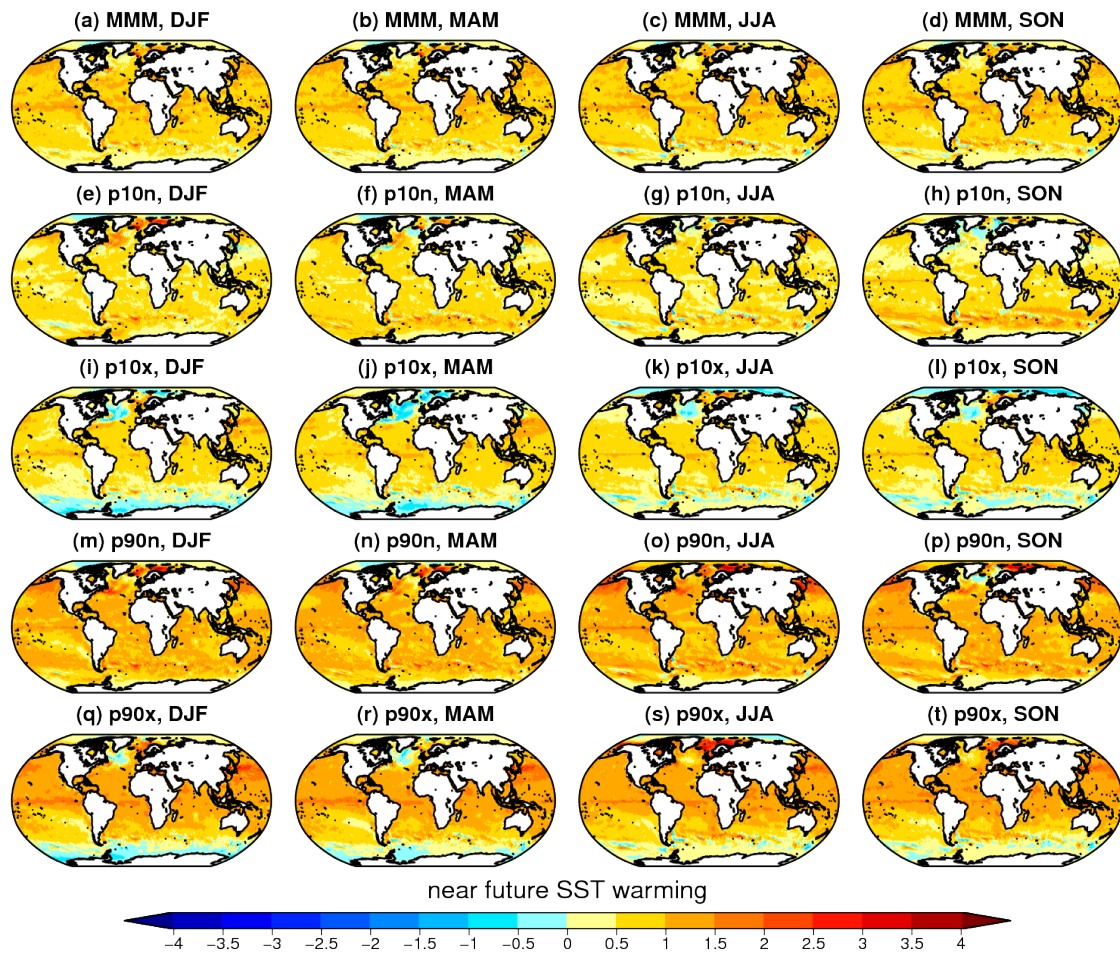


Figure S1: Sea surface temperature warming imposed in the near future time slice for each scenario (rows) and season (columns), with respect to the baseline (1975–2004). MMM refers to scenario “nf”, with CMIP5 multi-model median SST warming pattern (see Table 2 in the main text).

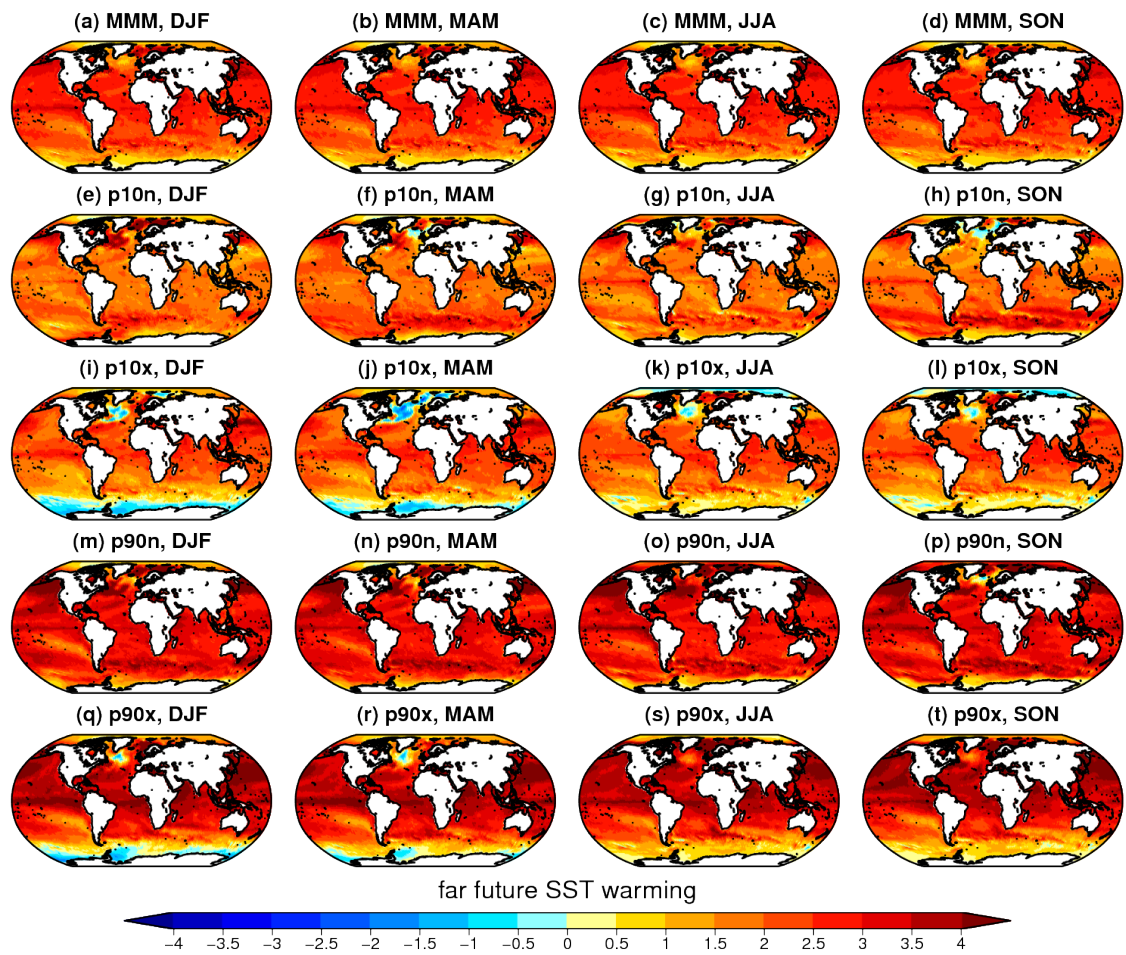


Figure S2: Sea surface temperature warming imposed in the far future time slice for each scenario (rows) and season (columns), with respect to the baseline (1975–2004). MMM refers to scenario “ff”, with CMIP5 multi-model median SST warming pattern (see Table 2 in the main text).

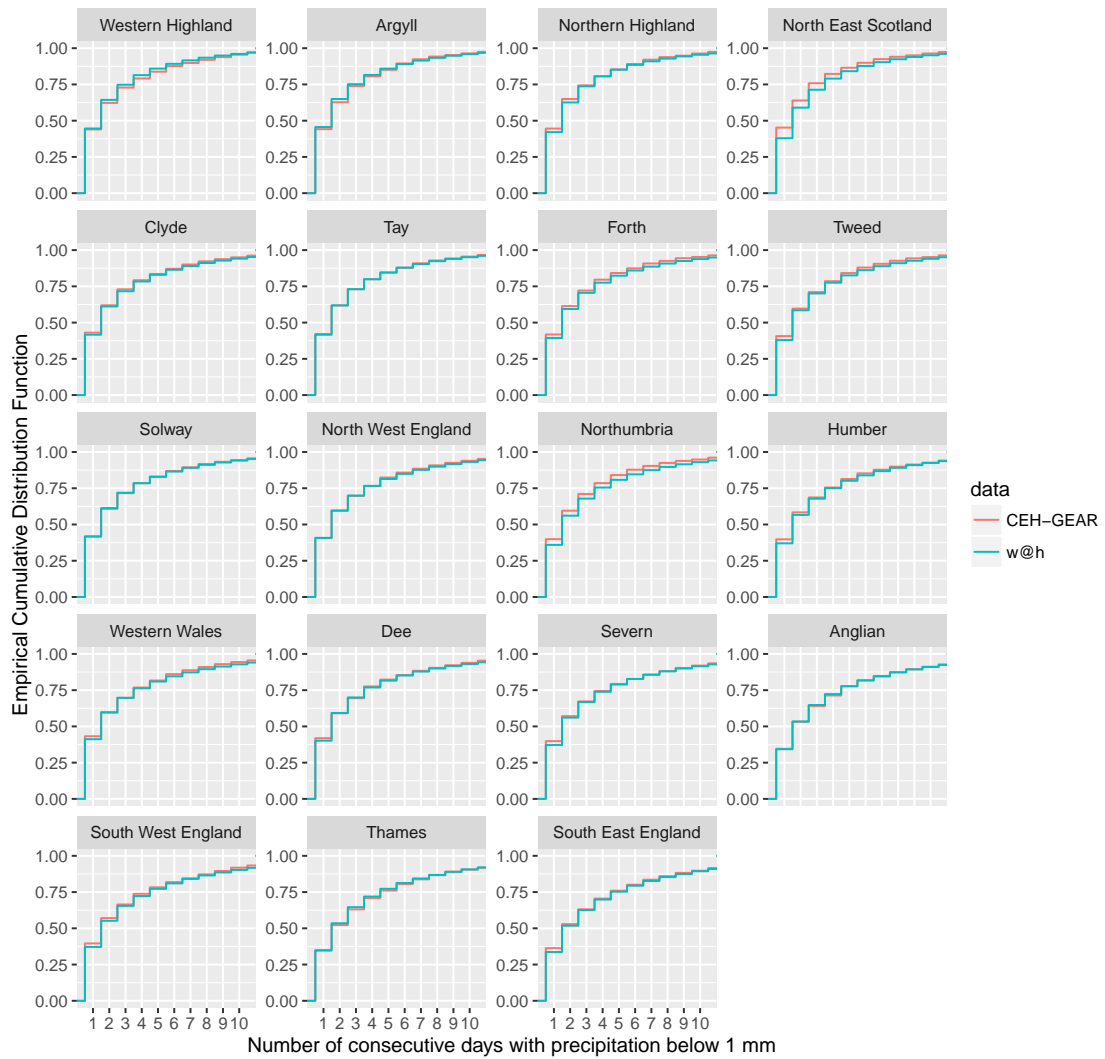


Figure S3: Distribution of dry spell duration for different regions: Empirical cumulative distribution function of the number of consecutive days with regionally-averaged precipitation below 1 mm.

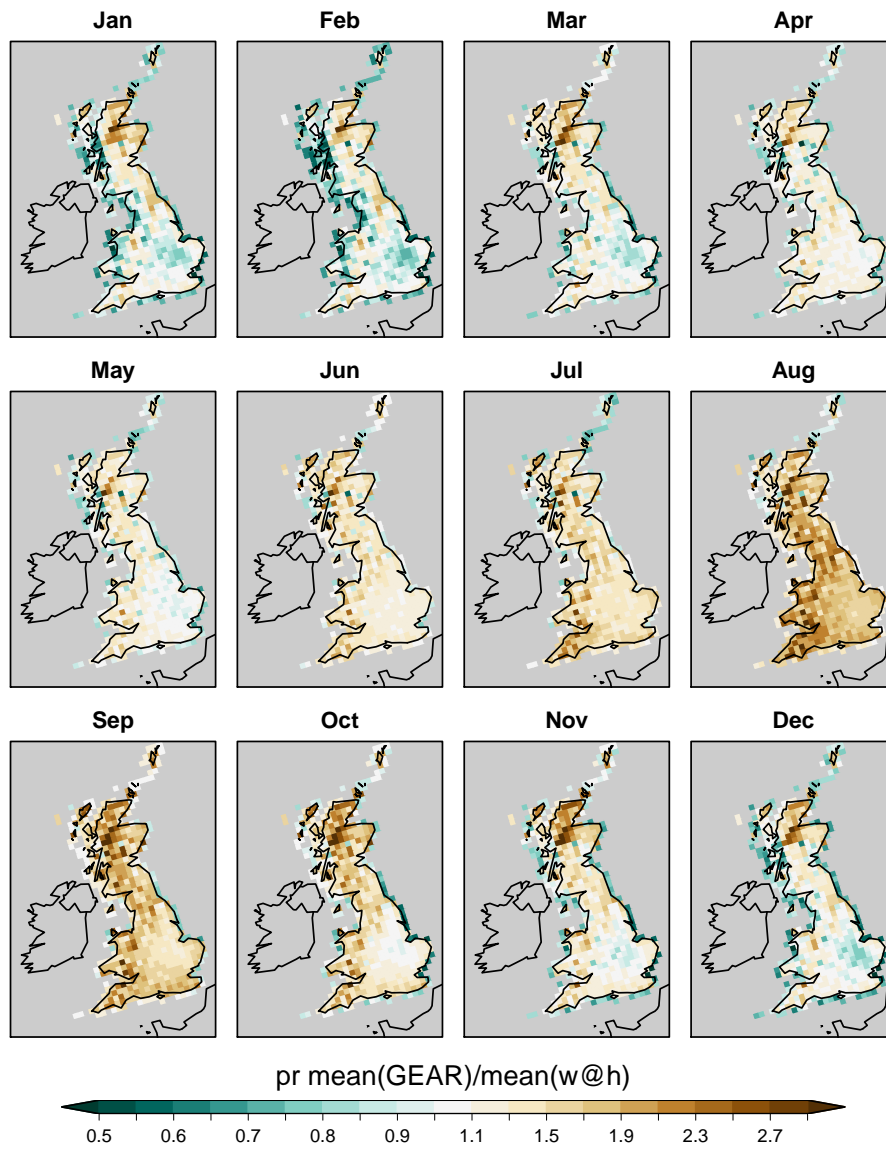


Figure S4: Ratio between observed (GEAR) and modelled (W@H) 1961–2006 monthly averaged precipitation.

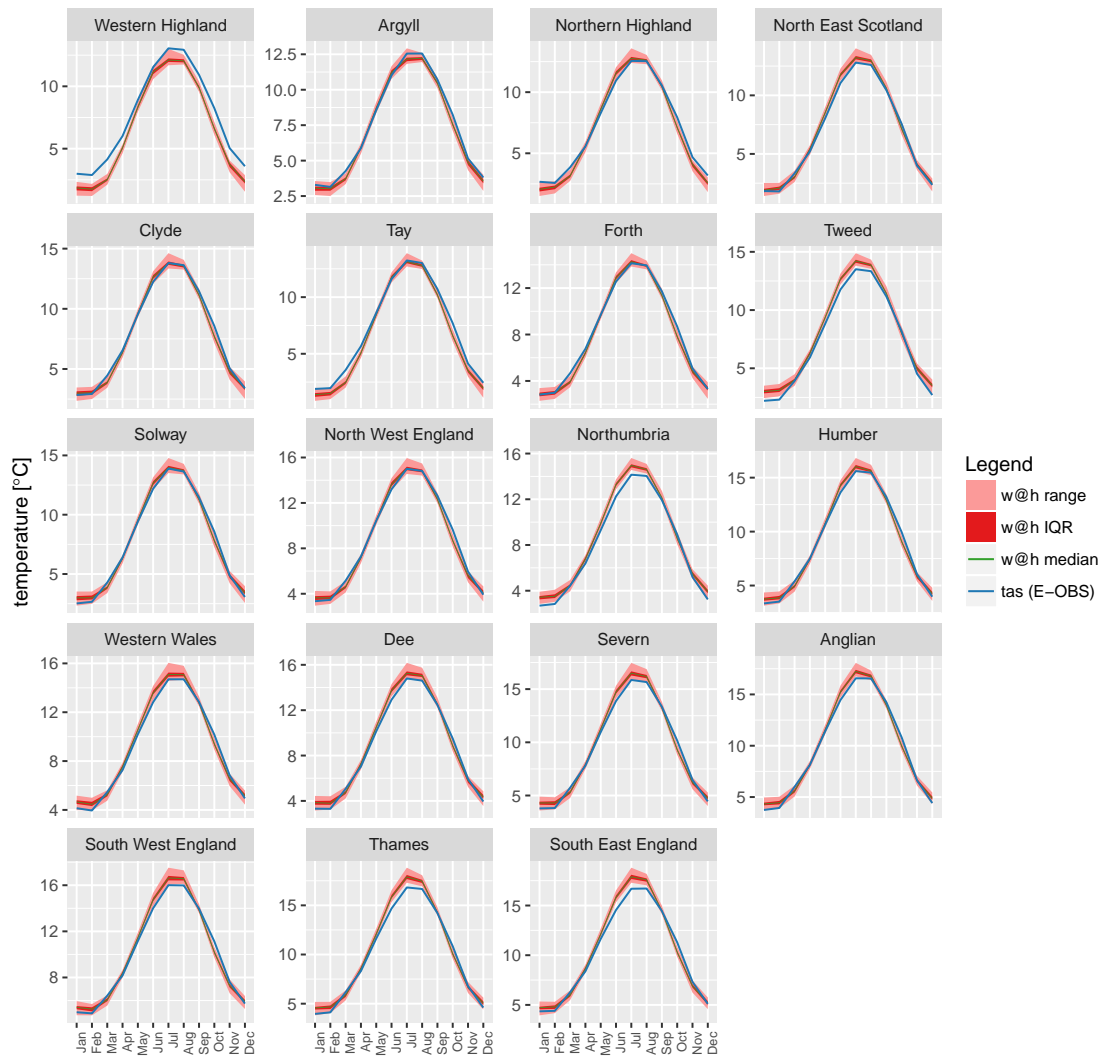


Figure S5: Mean seasonal for regionally-averaged temperature from individual baseline time series (dark red: interquartile range; light red: range; green: median) and observations (E-OBS; blue).

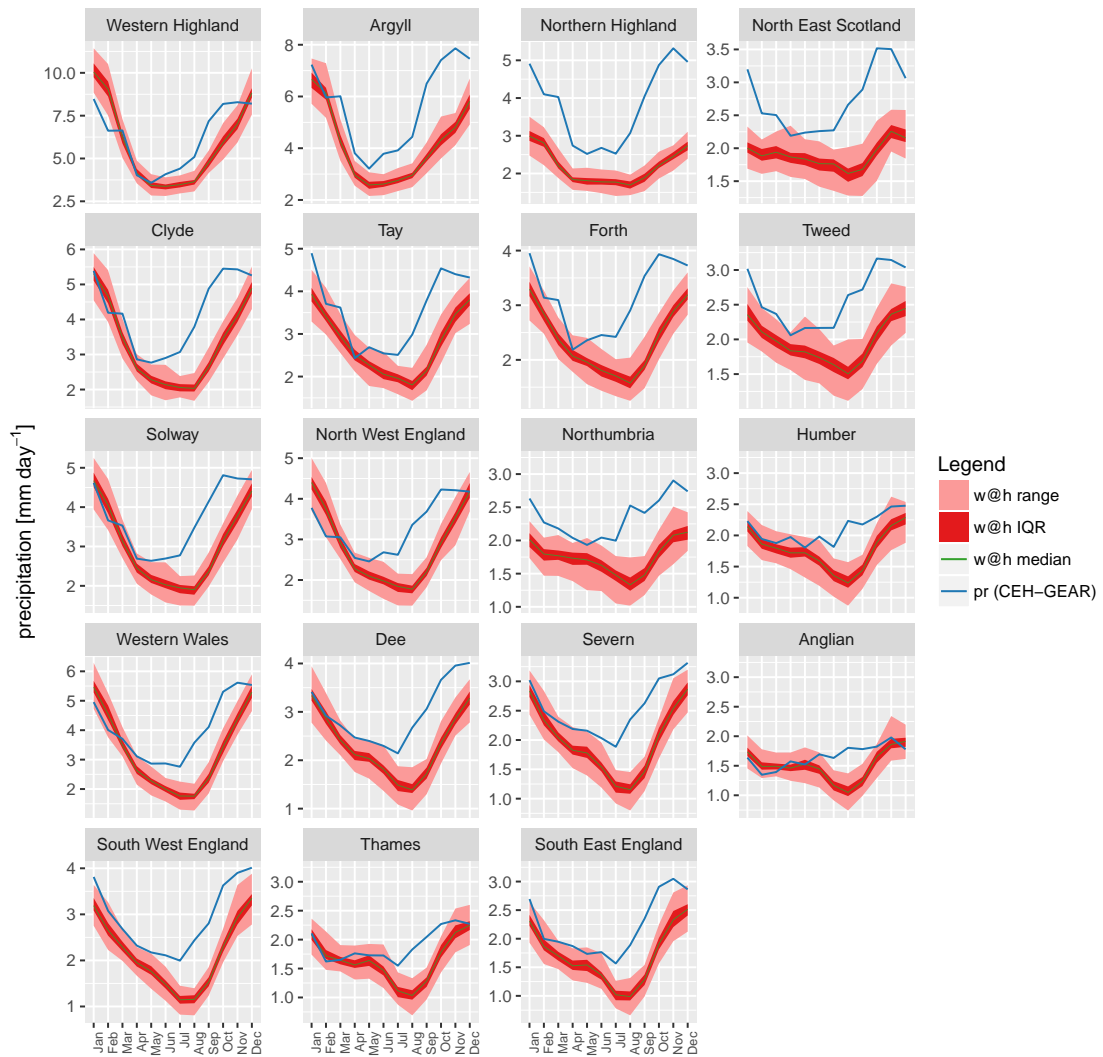


Figure S6: Mean seasonal for regionally-averaged precipitation (raw) from individual baseline time series (dark red: interquartile range; light red: range; green: median) and observations (CEH-GEAR; blue).

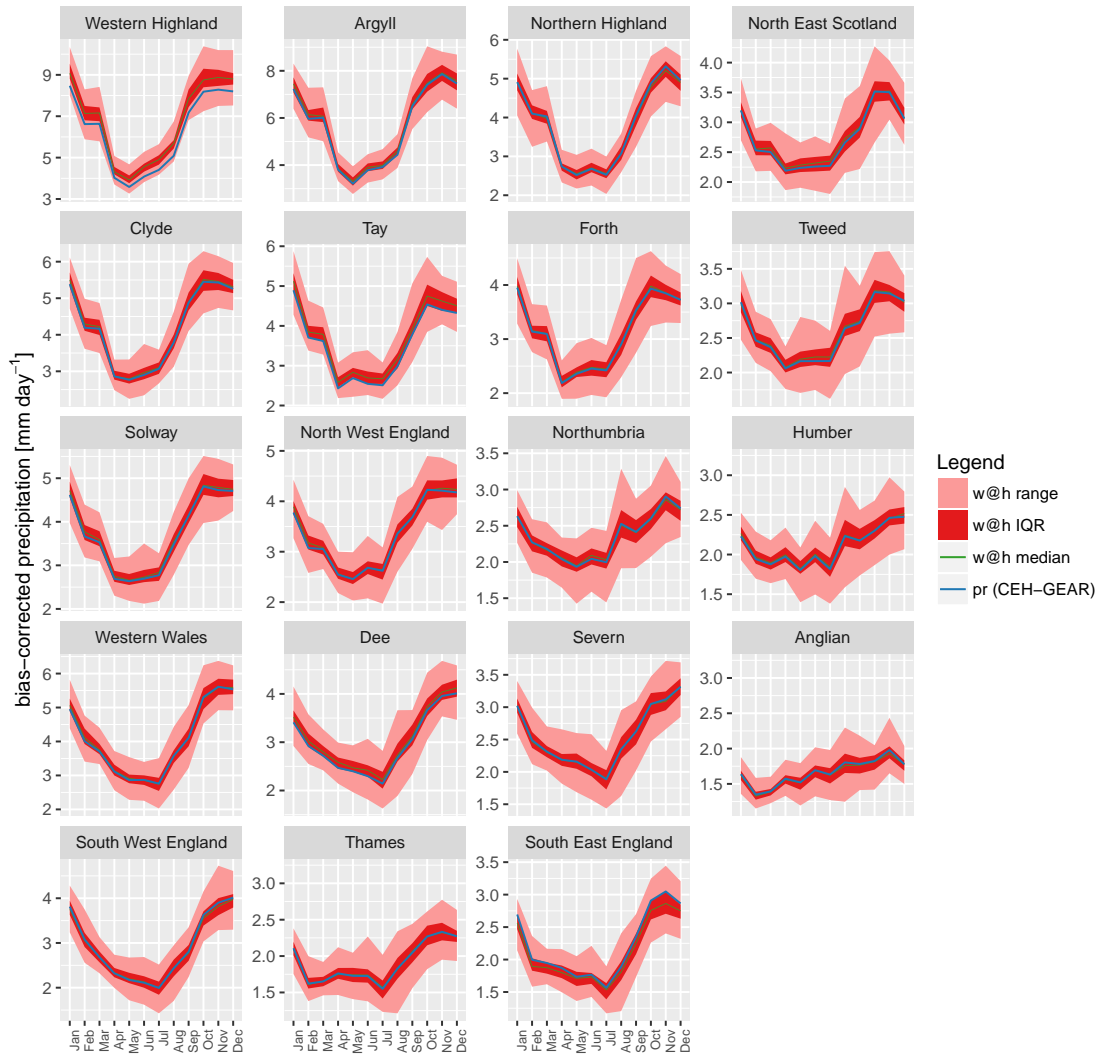


Figure S7: Mean seasonal for regionally-averaged precipitation (bias-corrected) from individual baseline time series (dark red: interquartile range; light red: range; green: median) and observations (CEH-GEAR; blue).

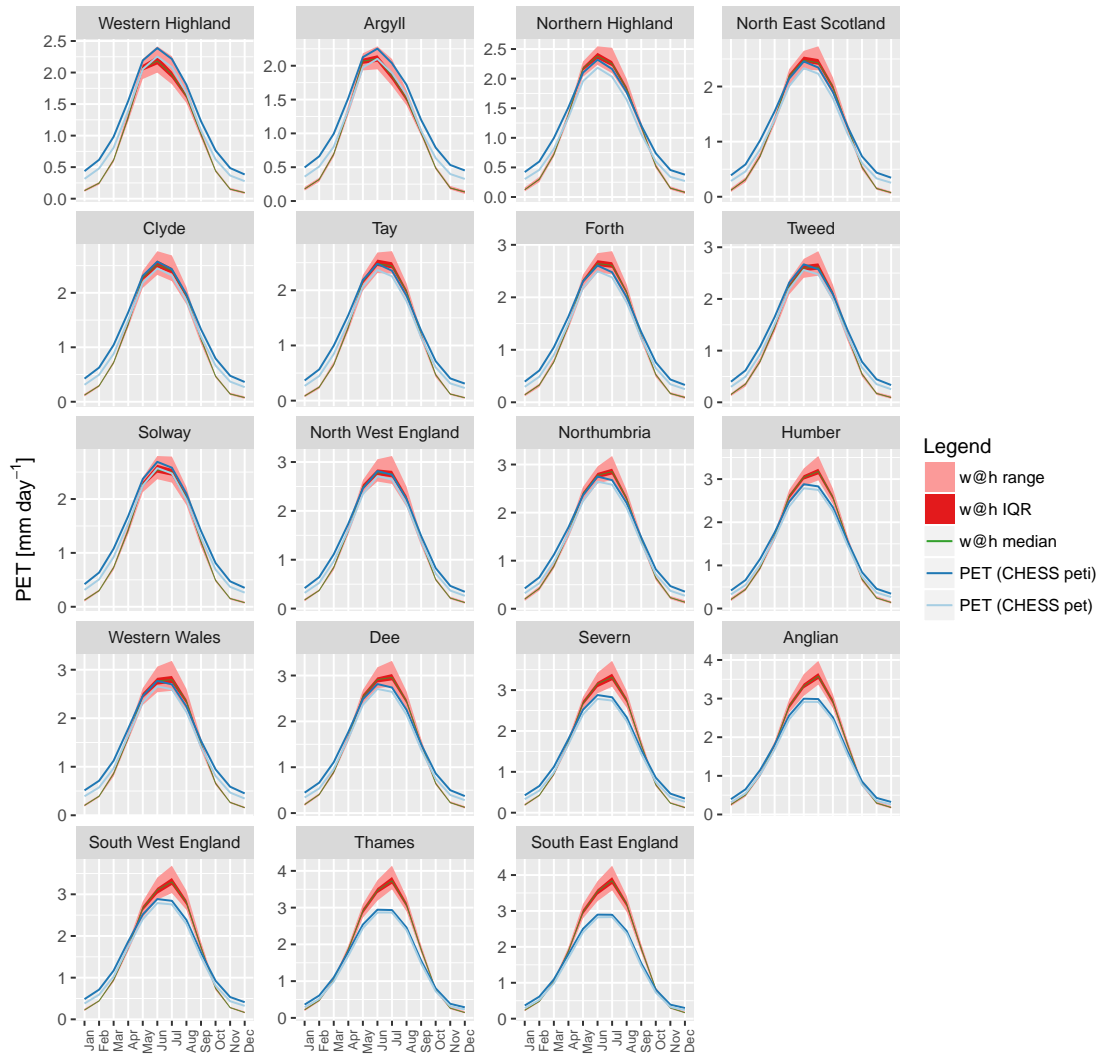


Figure S8: Mean seasonal for regionally-averaged E_{pot} from individual baseline time series (dark red: interquartile range; light red: range; green: median) and observations (CHES-PE; blue, with and without interception correction).

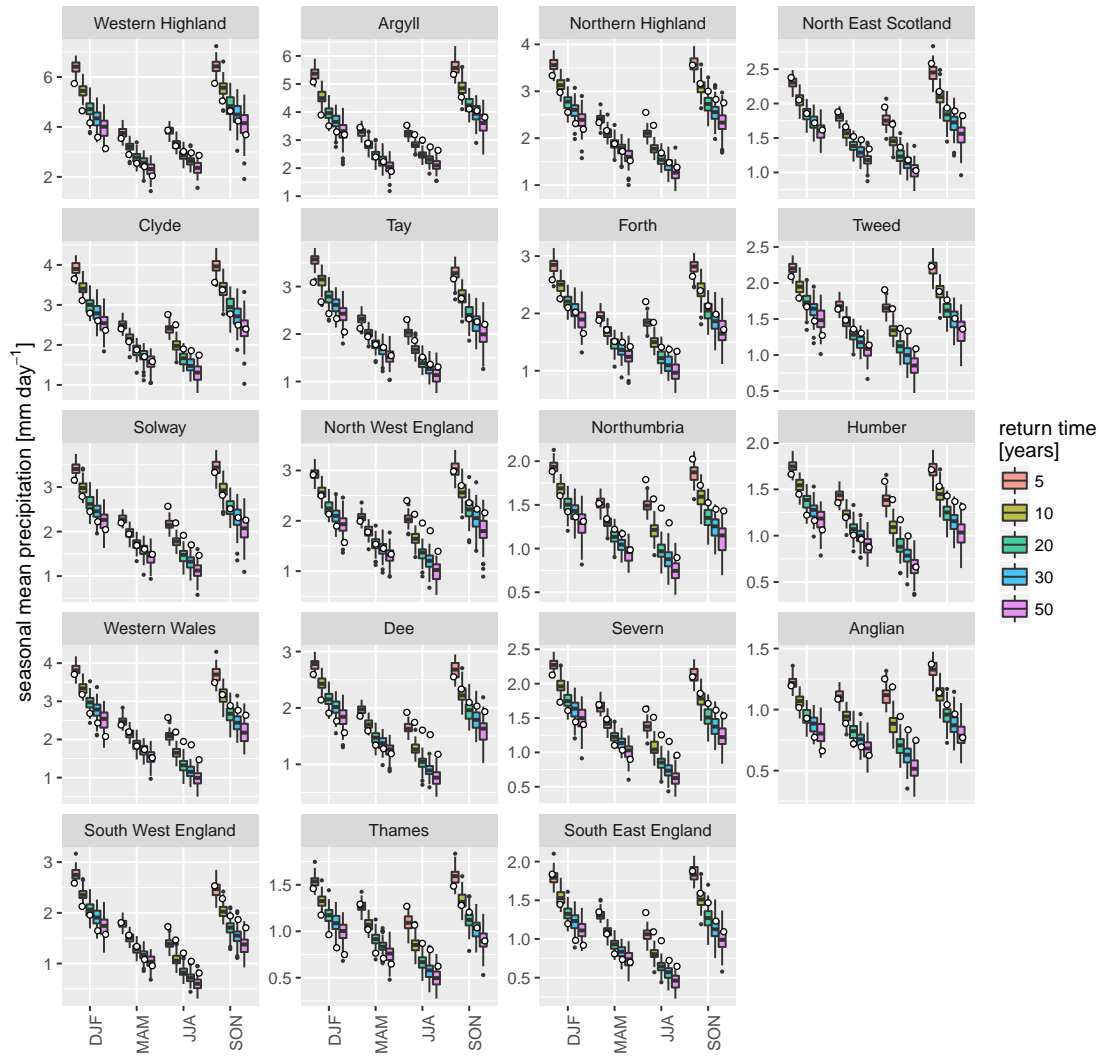


Figure S9: As Fig. 7 in the main text but for seasonal precipitation: Return values of low seasonal precipitation (accumulated over 3 months) in the 100 baseline time series (boxplot) and in CEH-GEAR (white dot) for each region (panel) and season (group), for return times of 5–50 years.

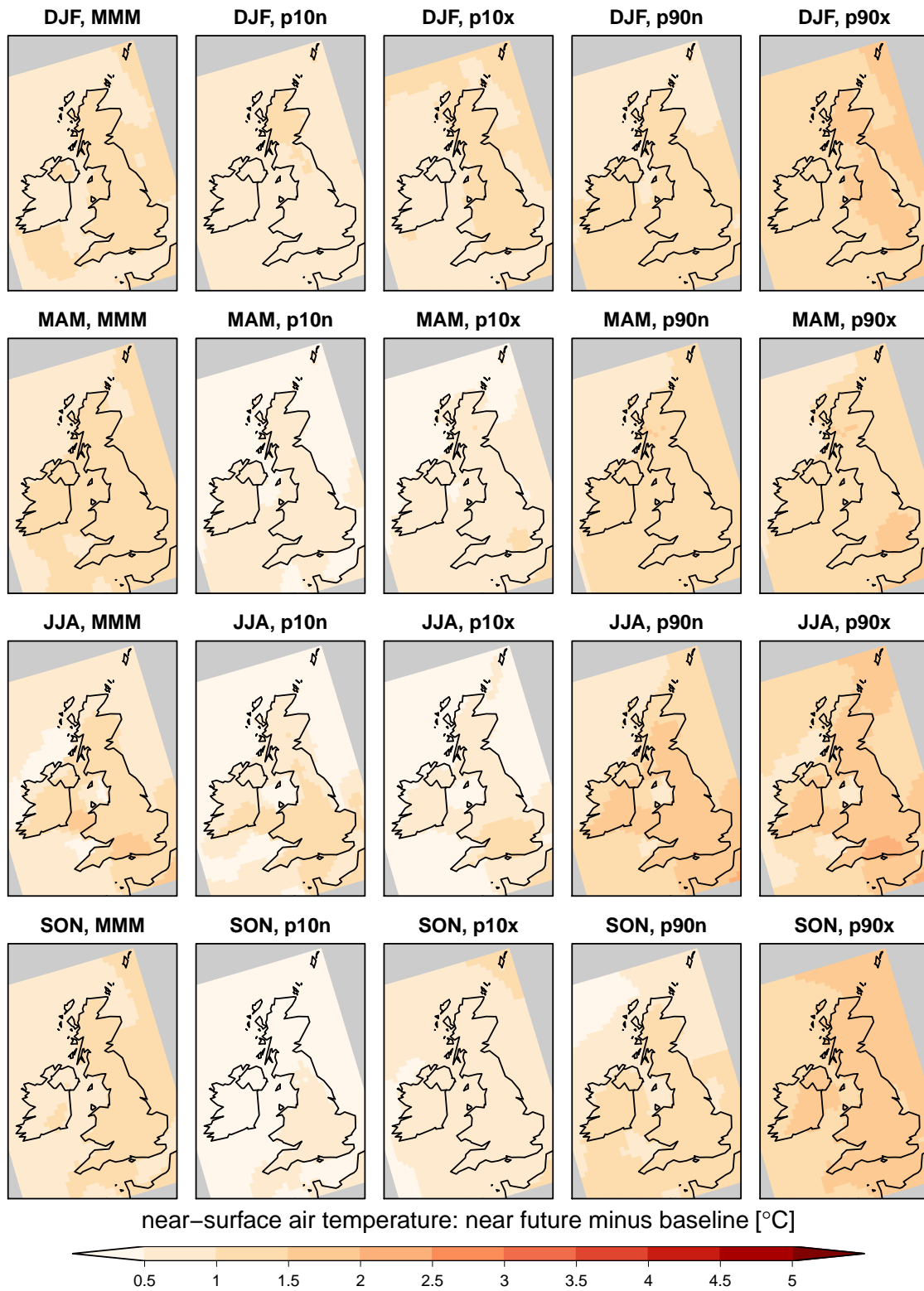


Figure S10: As Fig. 9 in the main text but for the near future time slice: difference in near-surface air temperature with respect to the baseline for each season (row) and scenario (column).

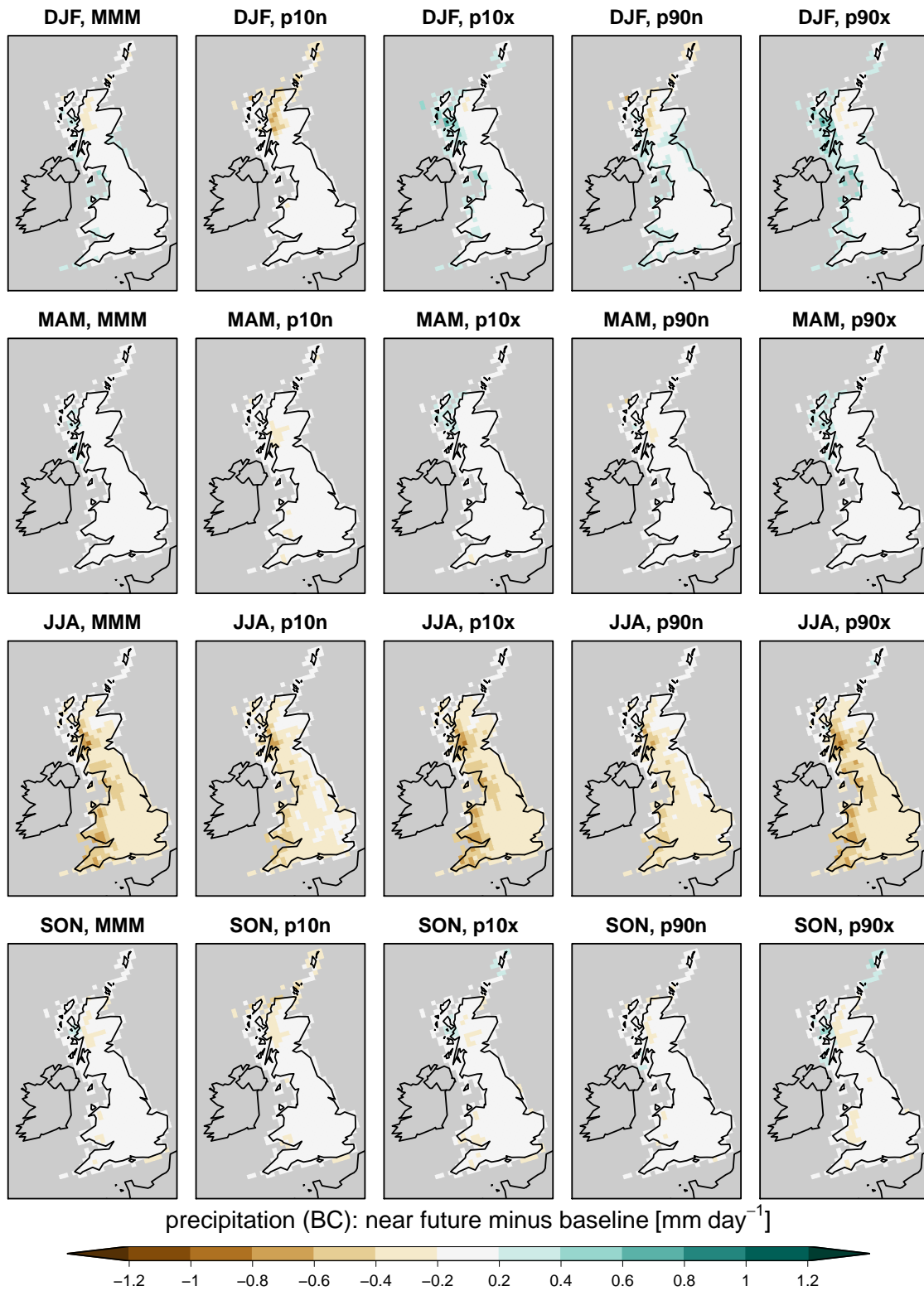


Figure S11: As Fig. 11 in the main text but for the near future time slice: difference in precipitation (bias-corrected) with respect to the baseline for each season (row) and scenario (column).

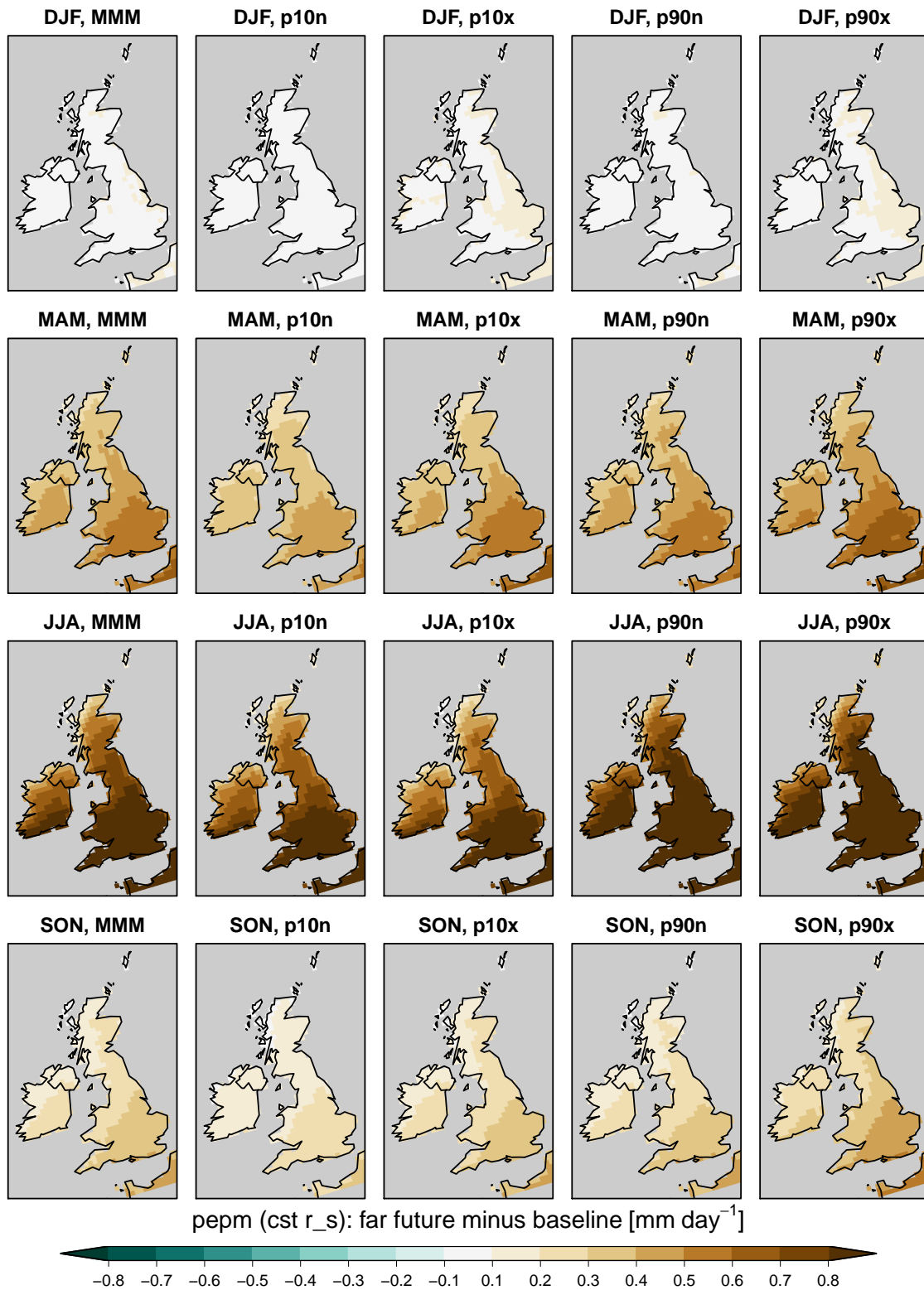


Figure S12: As Fig. 13 in the main text but for E_{pot} without adjusting future stomatal resistance to future CO_2 concentrations.

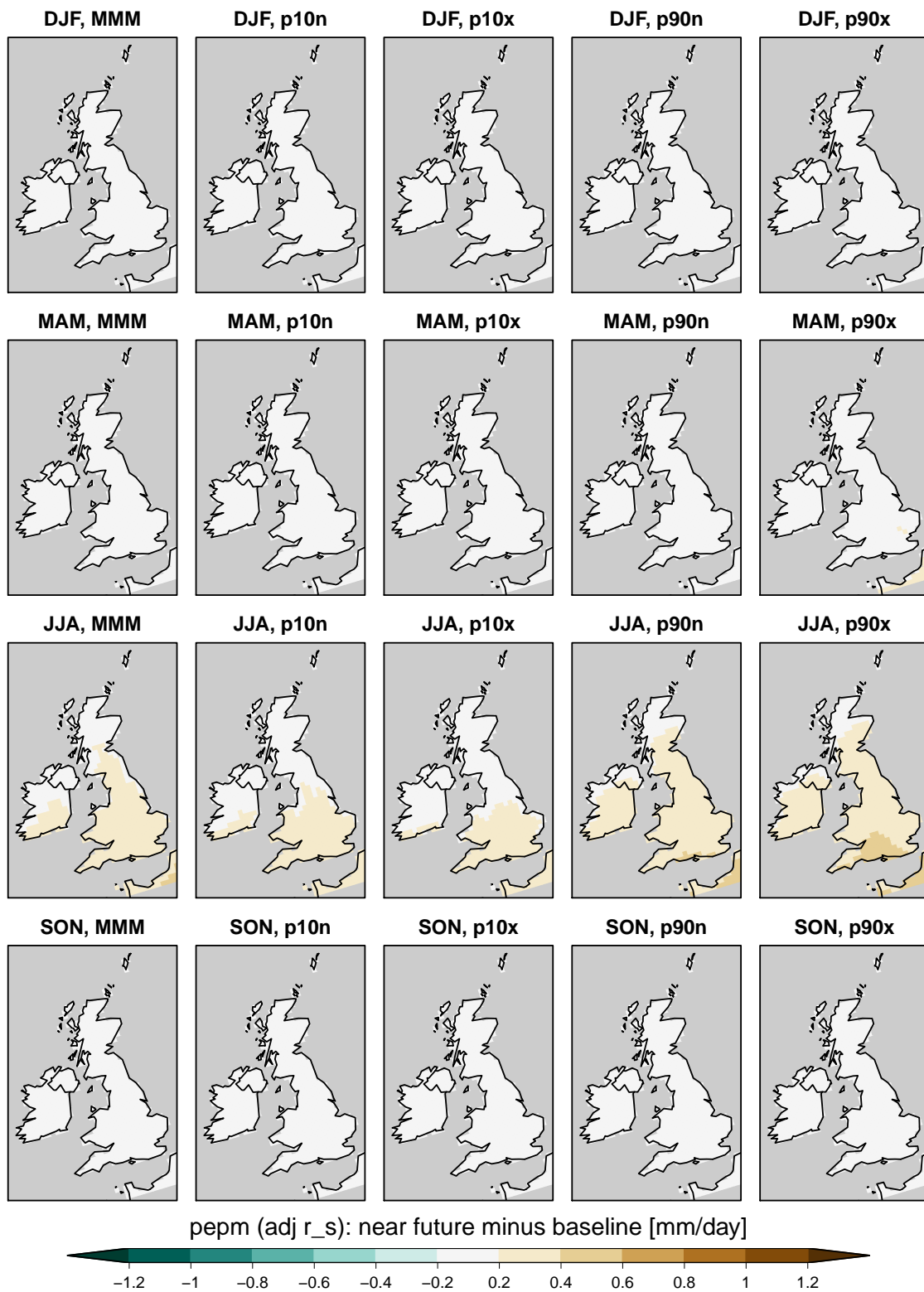


Figure S13: As Fig. 13 in the main text but for the near future time slice: difference in E_{pot} with respect to the baseline for each season (row) and scenario (column).

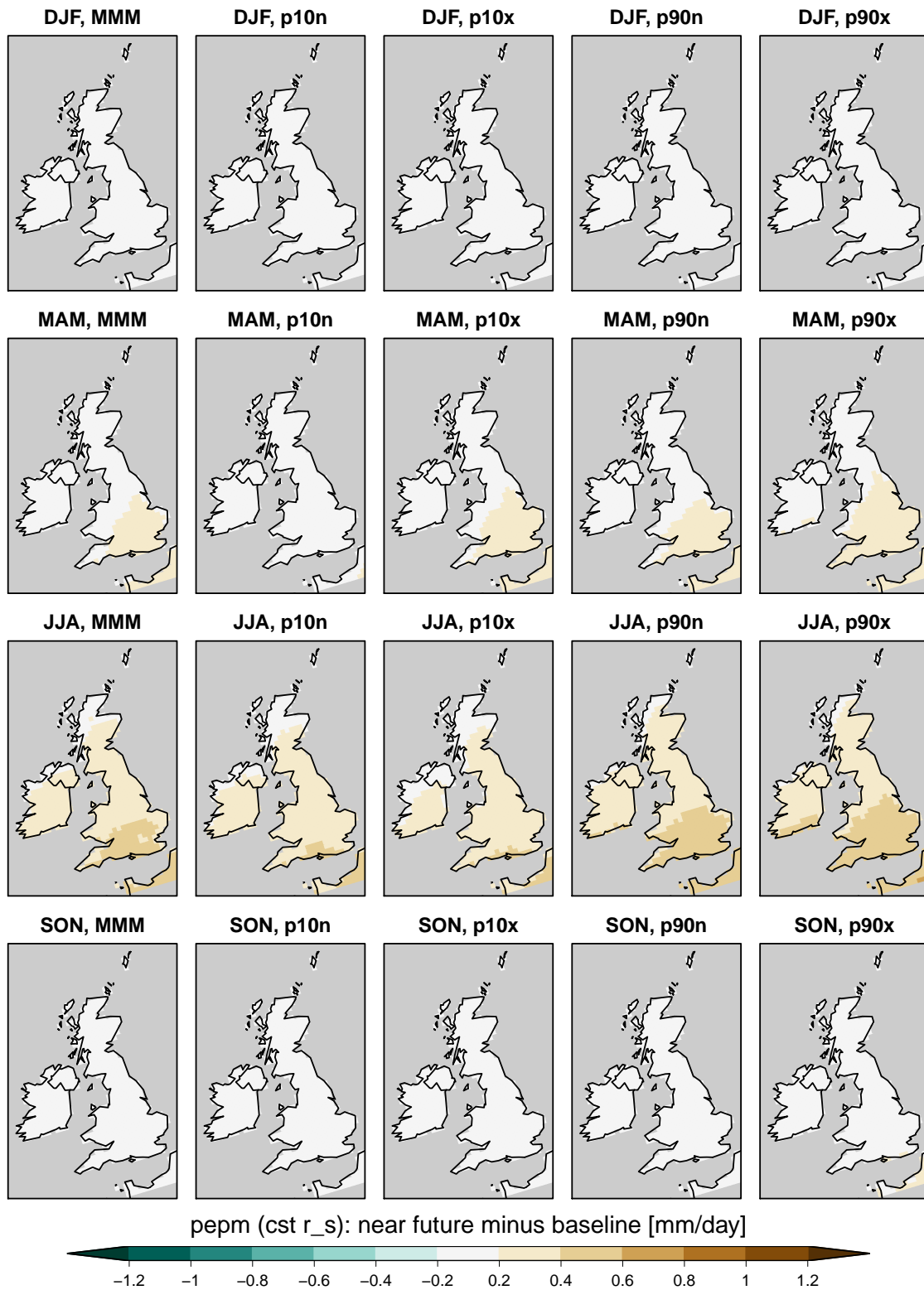


Figure S14: As Fig. S12 but for the near future time slice: difference in E_{pot} without adjusting future stomatal resistance to future CO_2 concentrations.

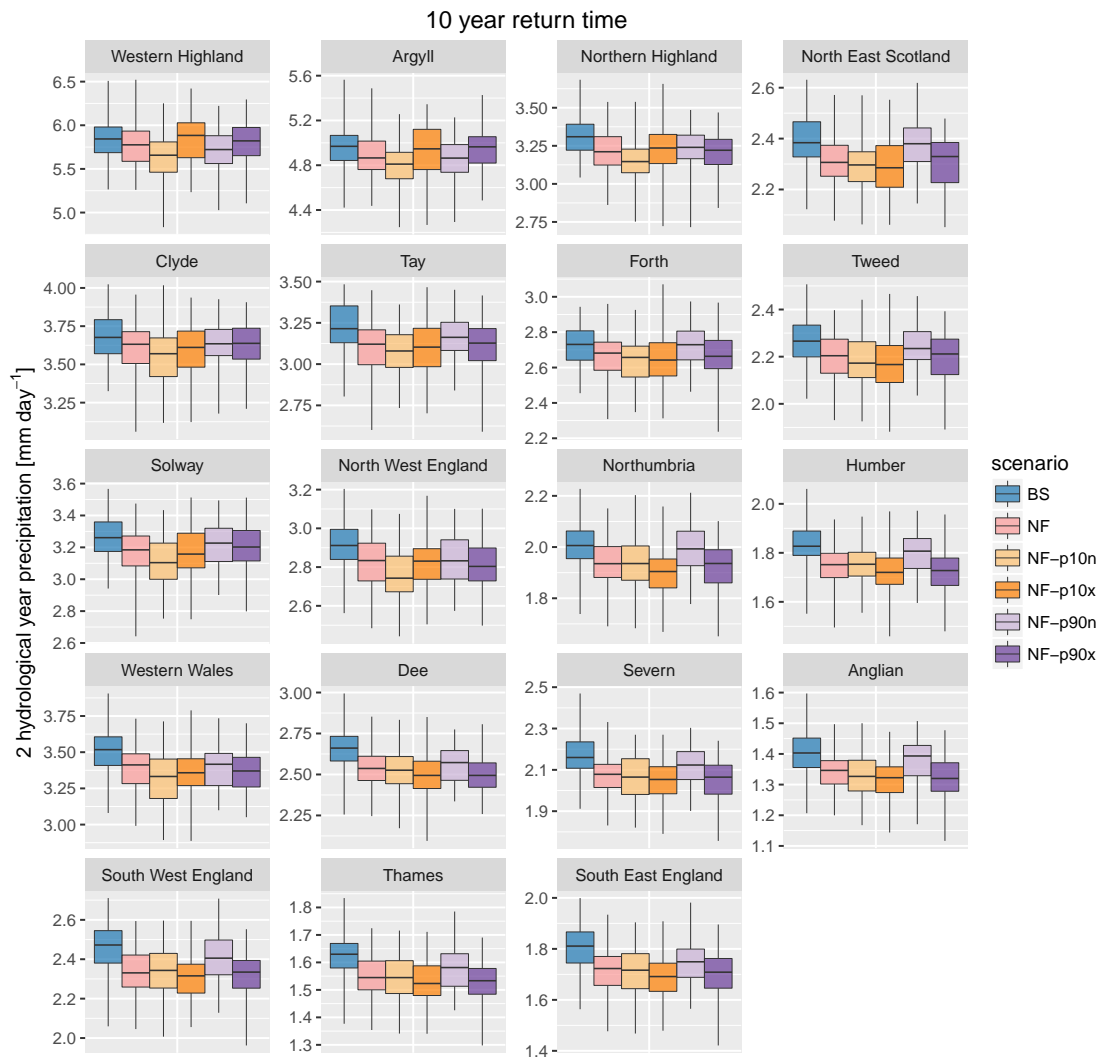


Figure S15: As Fig. 14 in the main text but for the near future time slice: Distribution of return values of 10-year event for low precipitation on two consecutive hydrological years (boxplot) for each region (panel) and scenario (colour). Whiskers display the range from individual time series.

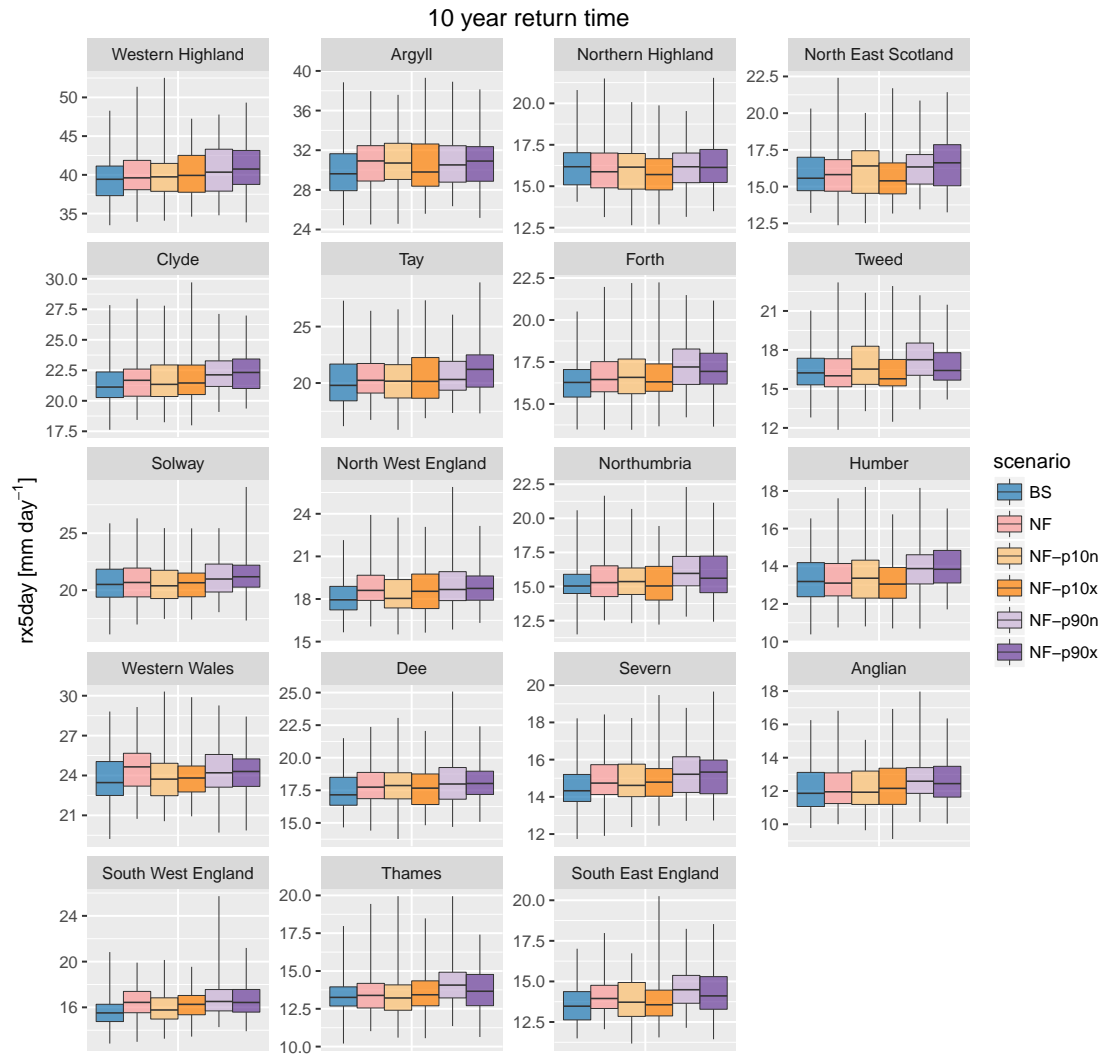


Figure S16: As Fig. 15 in the main text but for the near future time slice: Distribution of return values of 10-year event for rx5day (boxplot) for each region (panel) and scenario (colour). Whiskers display the range from individual time series.