Supplement of: "**Differing precipitation response between Solar Radiation Management and Carbon Dioxide Removal due to fast and slow components**"
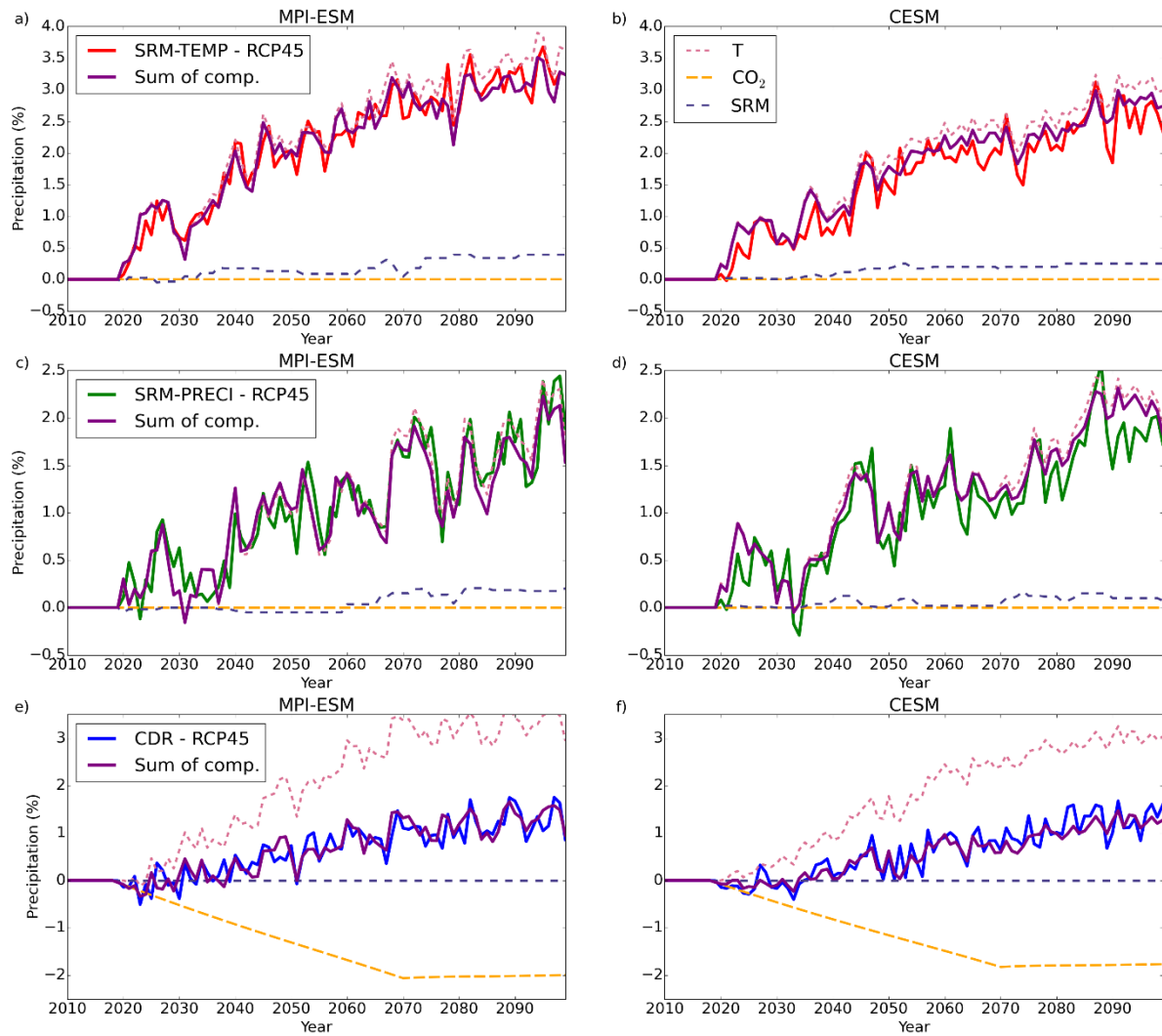
Figure S1. Precipitation and precipitation components for each geoengineering scenario compared to RCP45.
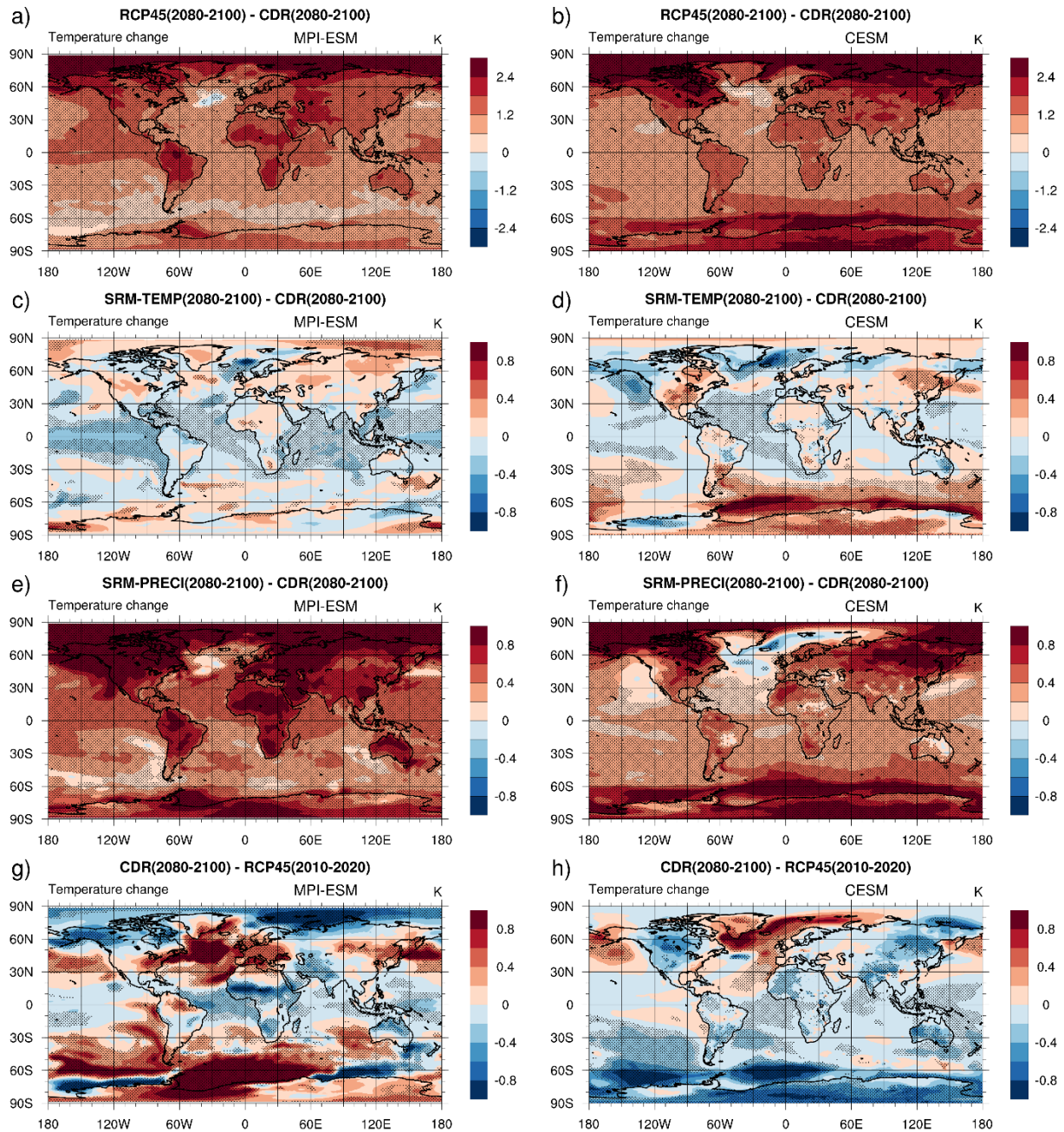
Figure S2. Regional temperature differences between a-b) RCP45 and CDR, c-d) SRM-TEMP and CDR, and e-f) SRM-PRECI and CDR for years 2080-2100. Also shown are the temperature differences between g-h) CDR in years 2080-2100 and RCP45 in years 2010-2020. The left and right columns show results for MPI-ESM and CESM, respectively. Stippling indicates regions where the temperature change is statistically significant at the 95% level, with significance levels estimated using a Student's paired *t*-test (sample of 20 yearly mean values for 3 ensemble members).
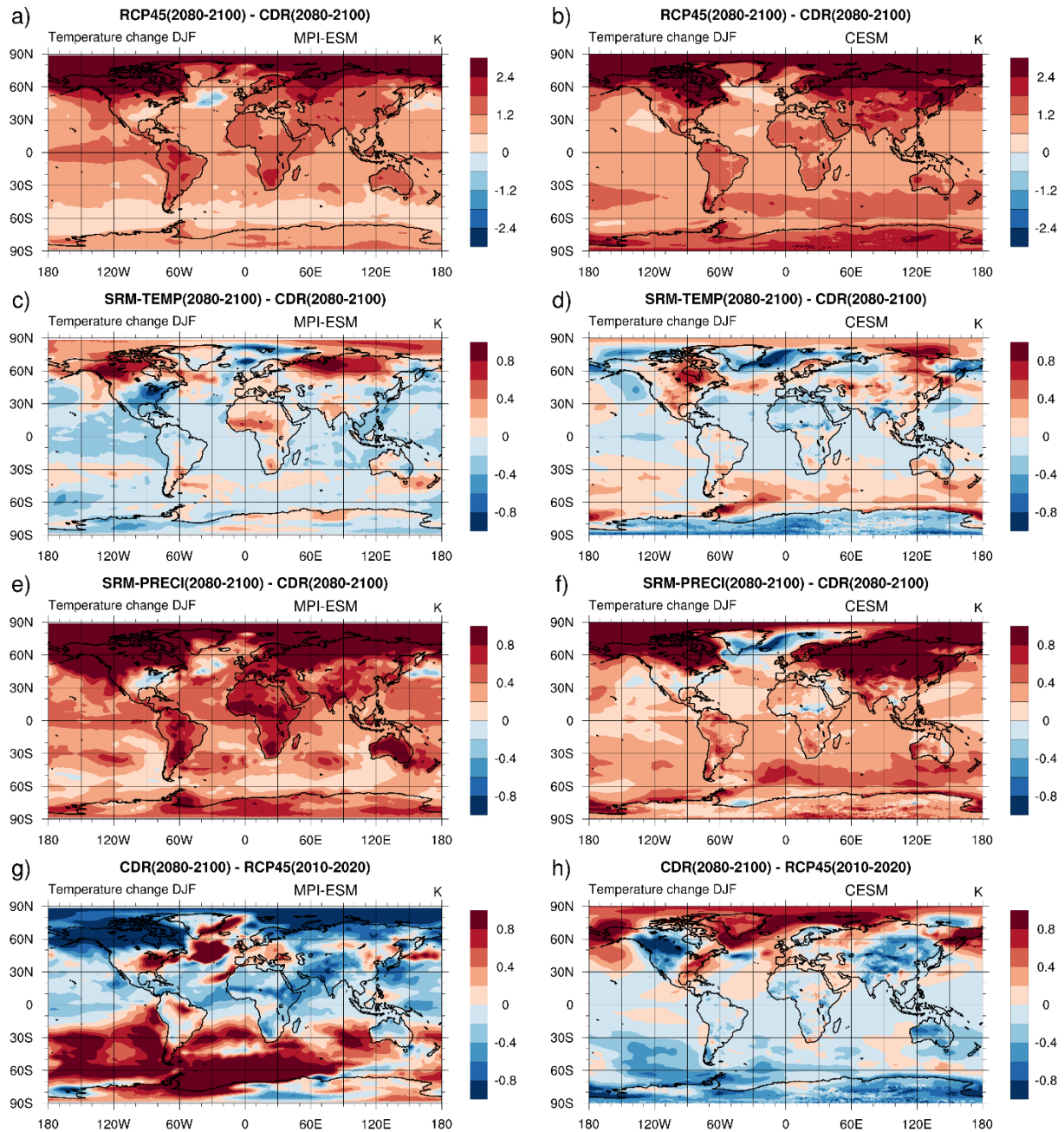
Figure S3. Regional temperature differences in December-January-February between a-b) RCP45 and CDR, c-d) SRM-TEMP and CDR, e-f) SRM-PRECI and CDR in years 2080-2100. Also shown are the temperature differences between g-h) CDR in years 2080-2100 and RCP45 in years 2010-2020. The left and right columns show results for MPI-ESM and CESM, respectively.
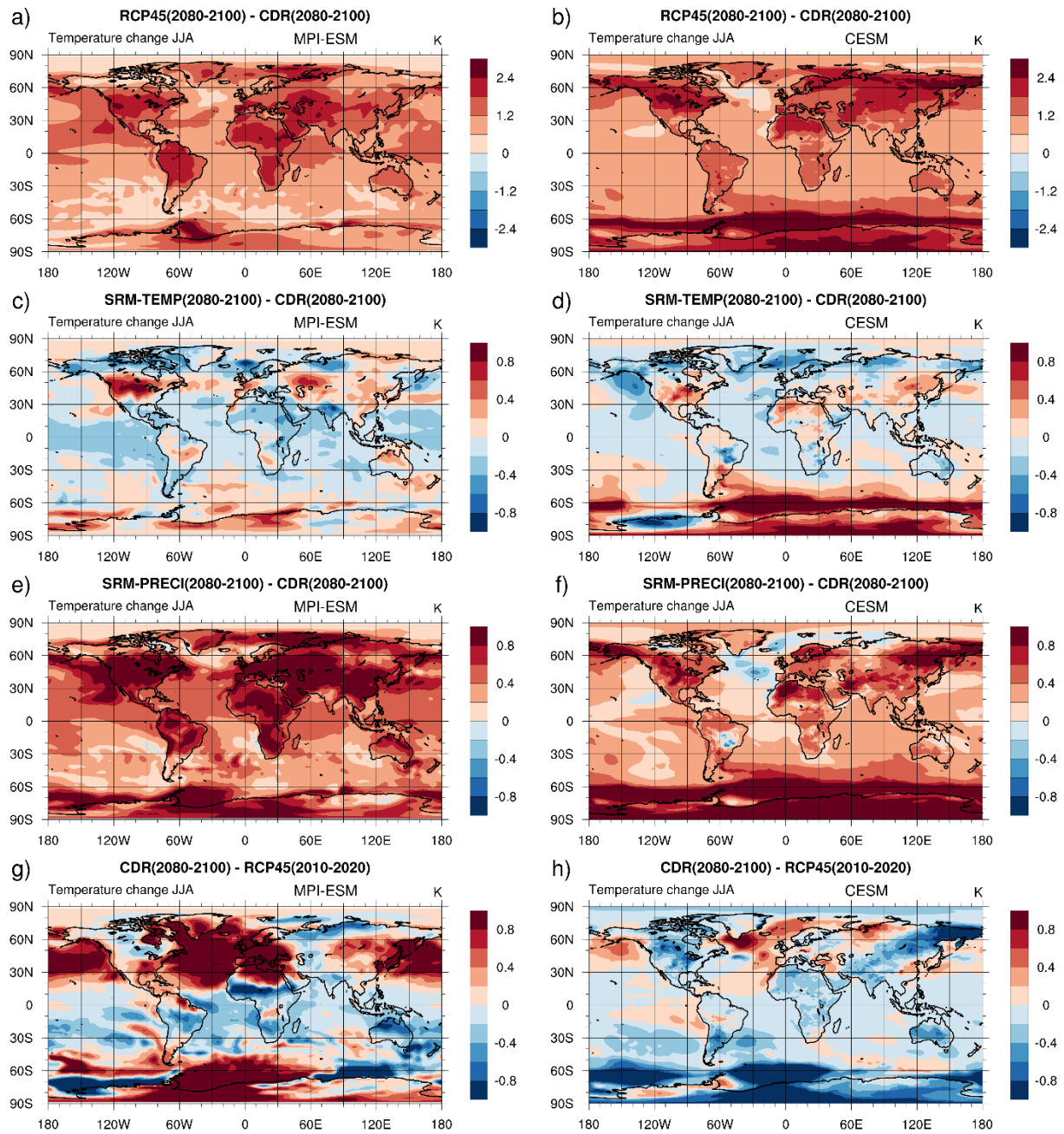
Figure S4. Regional temperature differences in June-July-August between a-b) RCP45 and CDR, c-d) SRM-TEMP and CDR, e-f) SRM-PRECI and CDR in years 2080-2100. Also shown are the temperature differences between g-h) CDR in years 2080-2100 and RCP45 in years 2010-2020. The left and right columns show results for MPI-ESM and CESM, respectively.
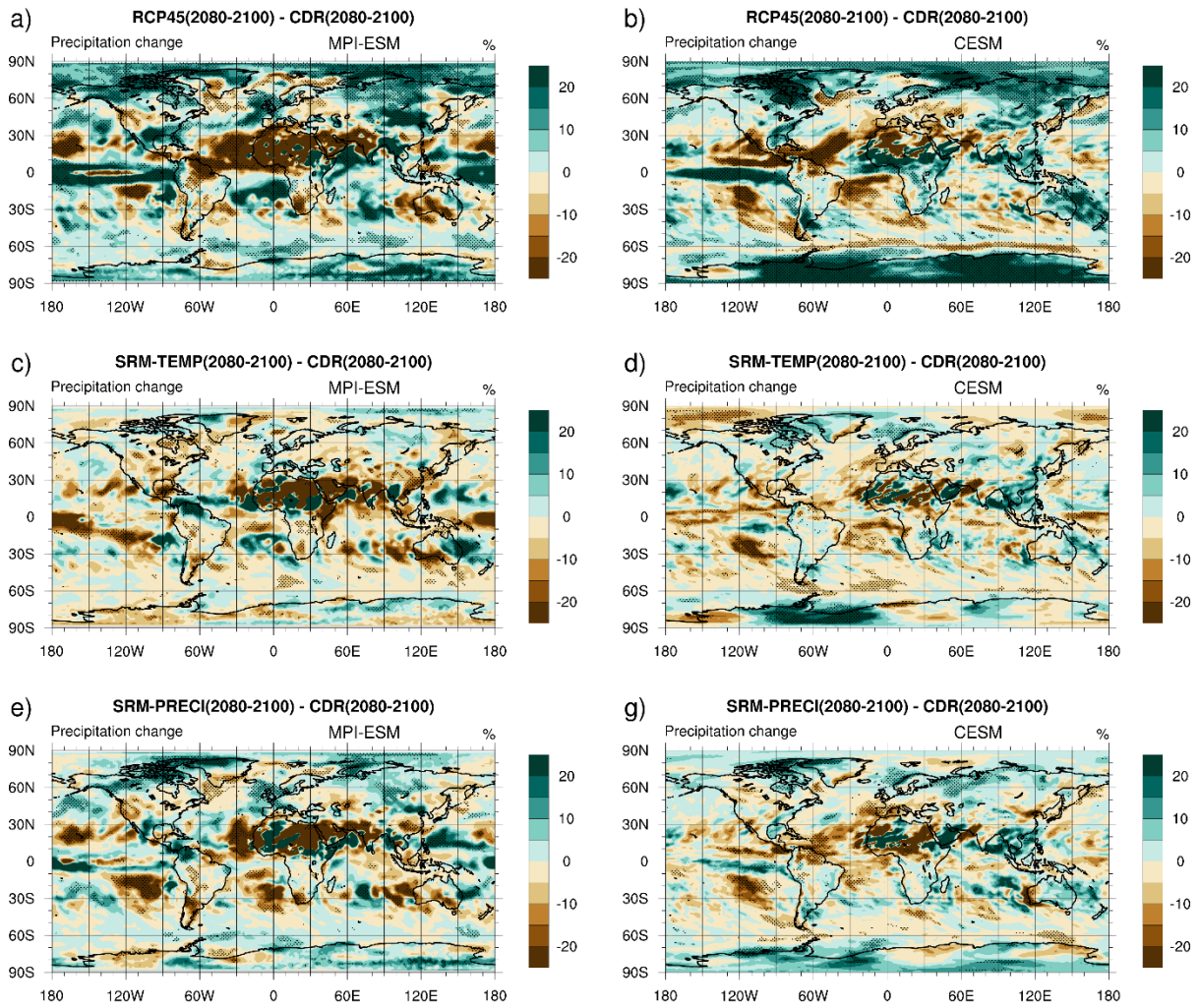
Figure S5. Regional precipitation differences in December-January-February between a-b) RCP45 and CDR, c-d) SRM-TEMP and CDR and e-f) SRM-PRECI and CDR in years 2080-2100. Stippling indicates regions where the temperature change is statistically significant at the 95% level, with significance levels estimated using a Student's paired *t*-test (sample of 20 yearly mean values for 3 ensemble members).
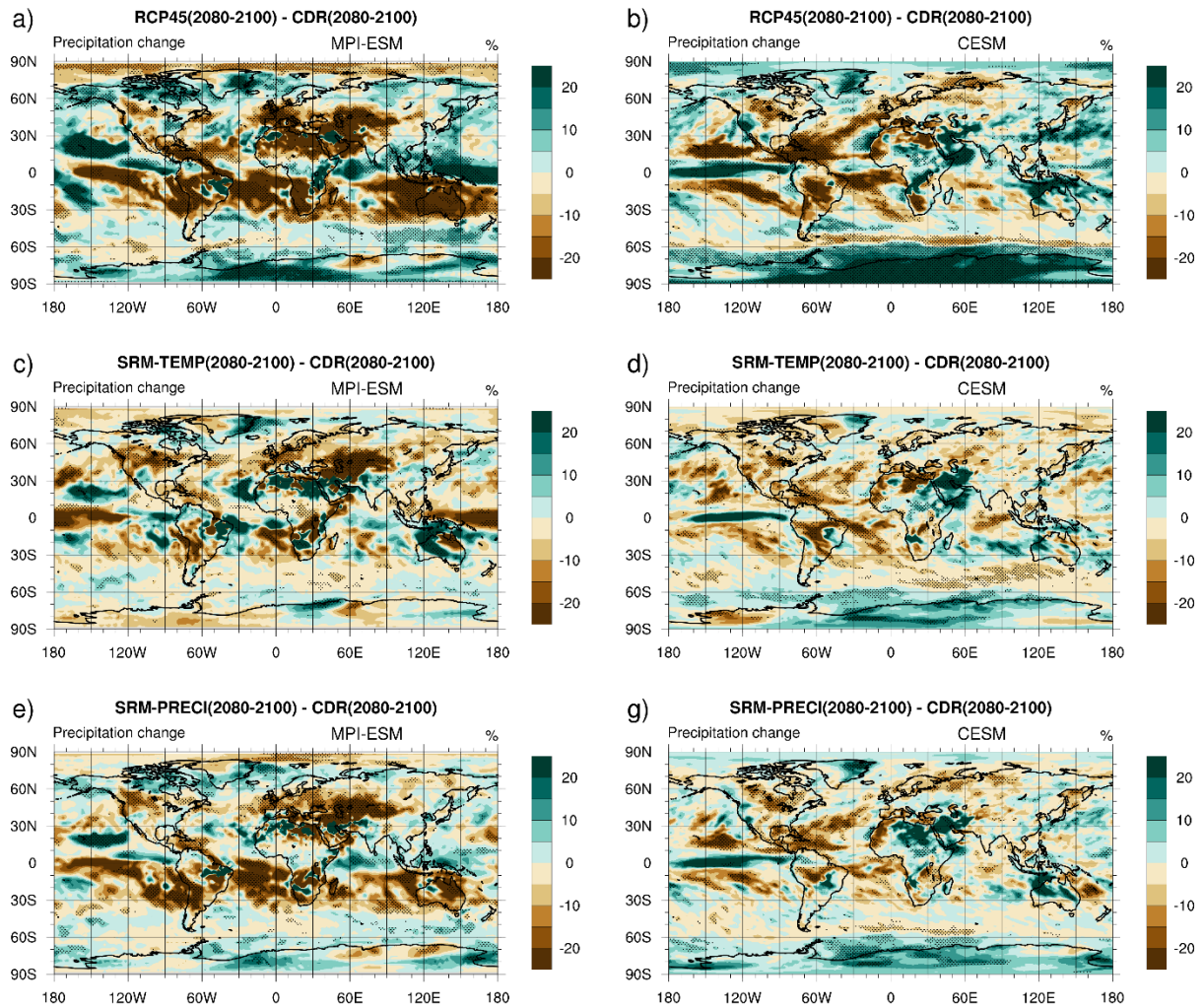
Figure S6. Regional precipitation differences in June-July-August between a-b) RCP45 and CDR, c-d) SRM-TEMP and CDR and e-f) SRM-PRECI and CDR in years 2080-2100. Stippling indicates regions where the temperature change is statistically significant at the 95% level, with significance levels estimated using a Student's paired *t*-test (sample of 20 yearly mean values for 3 ensemble members).