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Uncertainty sources in a large ensemble of hydrological projections: Regional Climate Models and Internal Variability matter

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S1 quantiles of the CCR for climate indicators, for the RCP2.6 and RCP4.5 scenarios

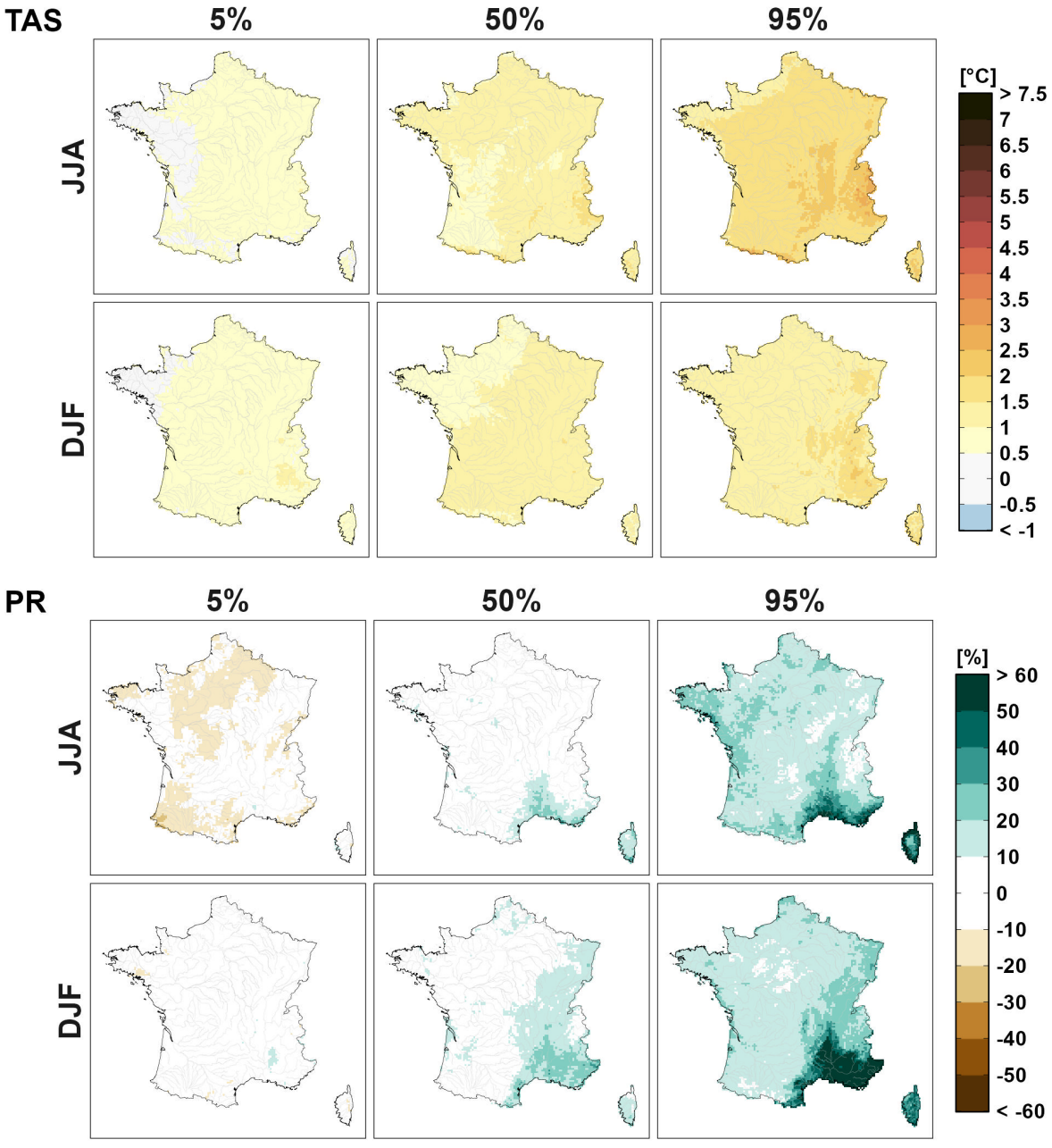

Figure S1. 5%, 50%, and 95% quantiles of the CCR for seasonal temperature (TAS), precipitation (PR), reference evapotranspiration (ET0) and annual precipitation maxima (RX1D) changes (2071-2099 relative to 1976-2005) in summer (JJA) and winter (DJF) for the RCP2.6.

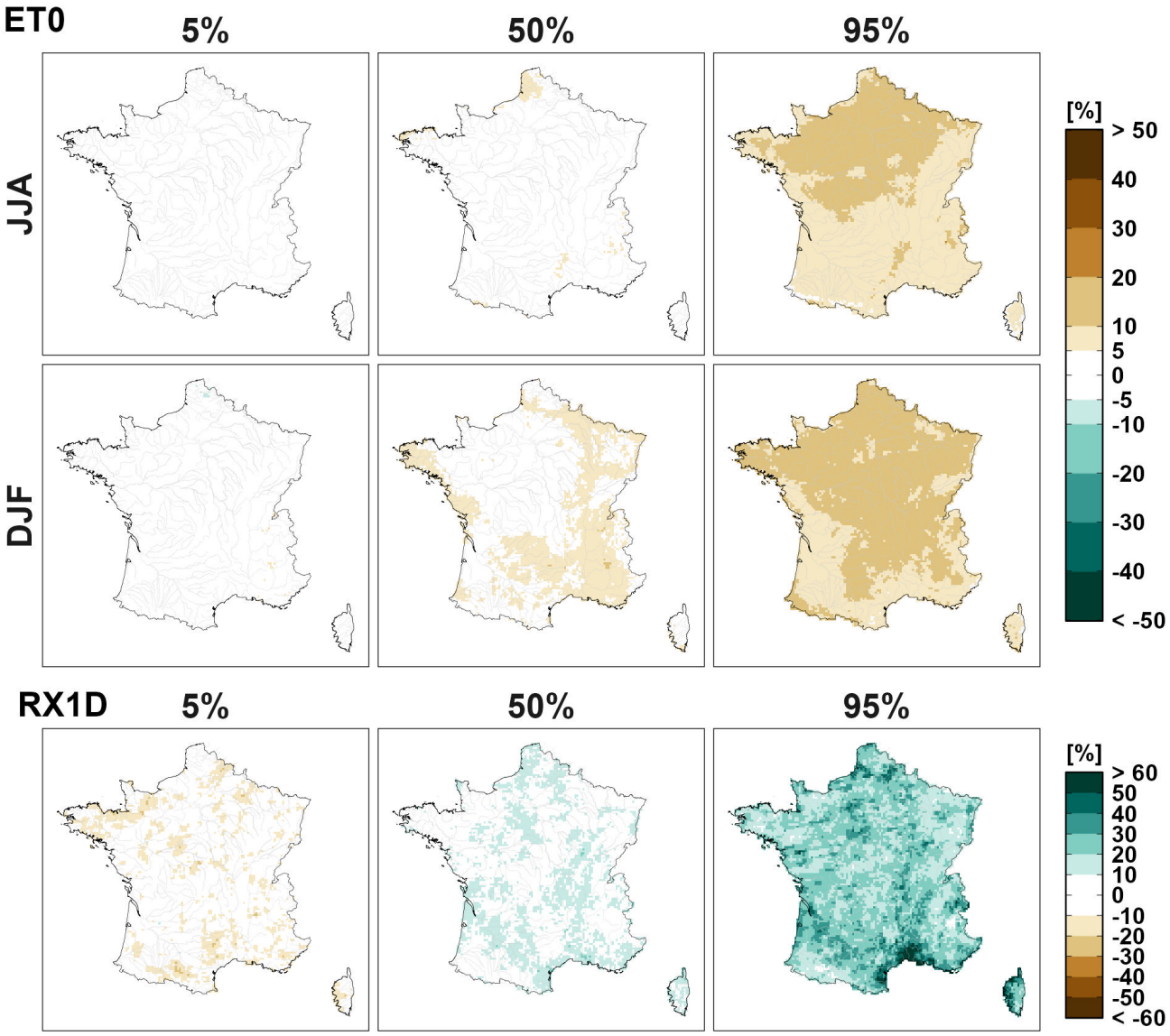

Figure S1. (continued).

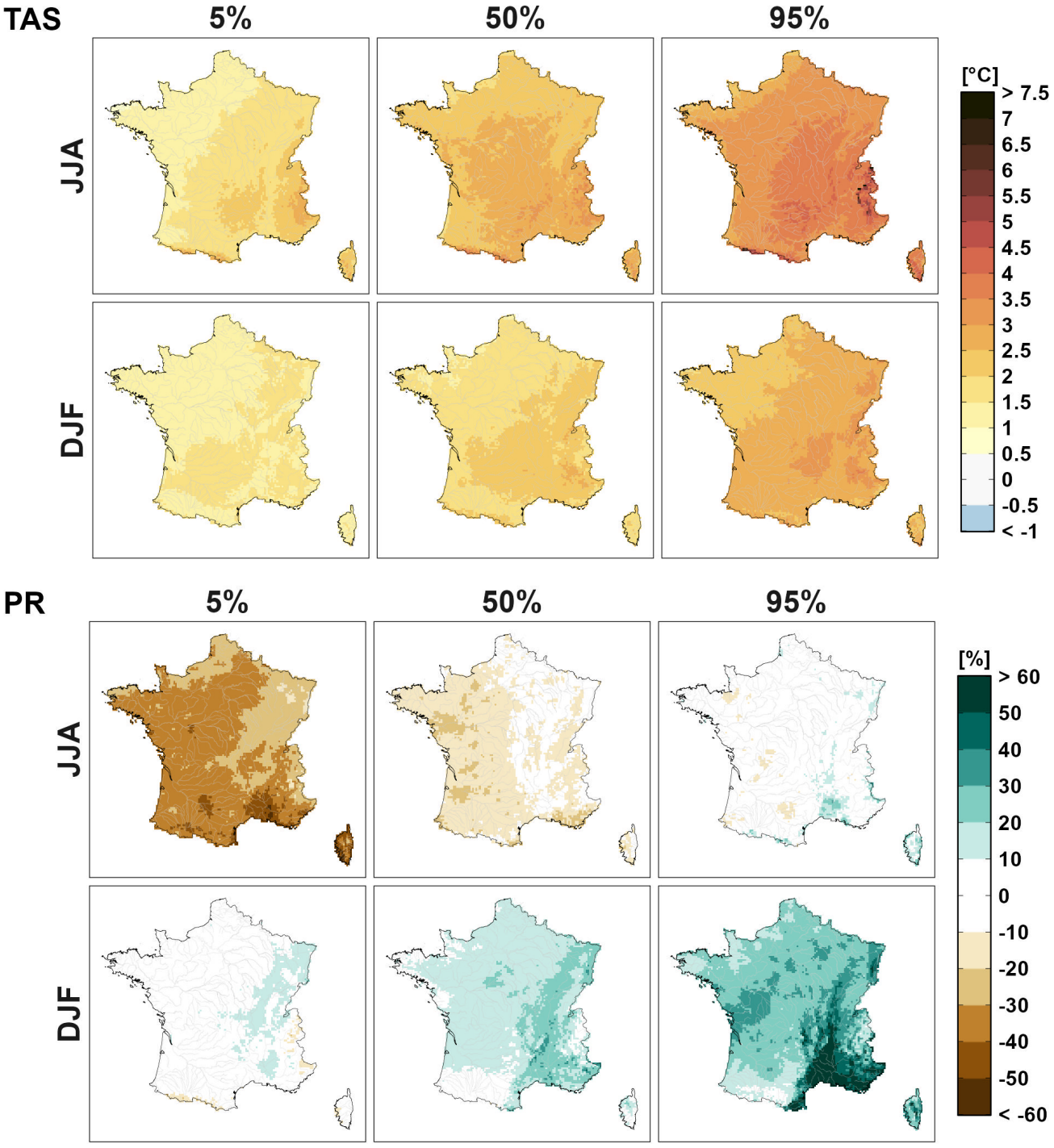

Figure S2. 5%, 50%, and 95% quantiles of the CCR for seasonal temperature (TAS), precipitation (PR), reference evapotranspiration (ET0) and annual daily precipitation maxima (RX1D) changes (2071-2099 relative to 1976-2005) in summer (JJA) and winter (DJF) for the RCP4.5.

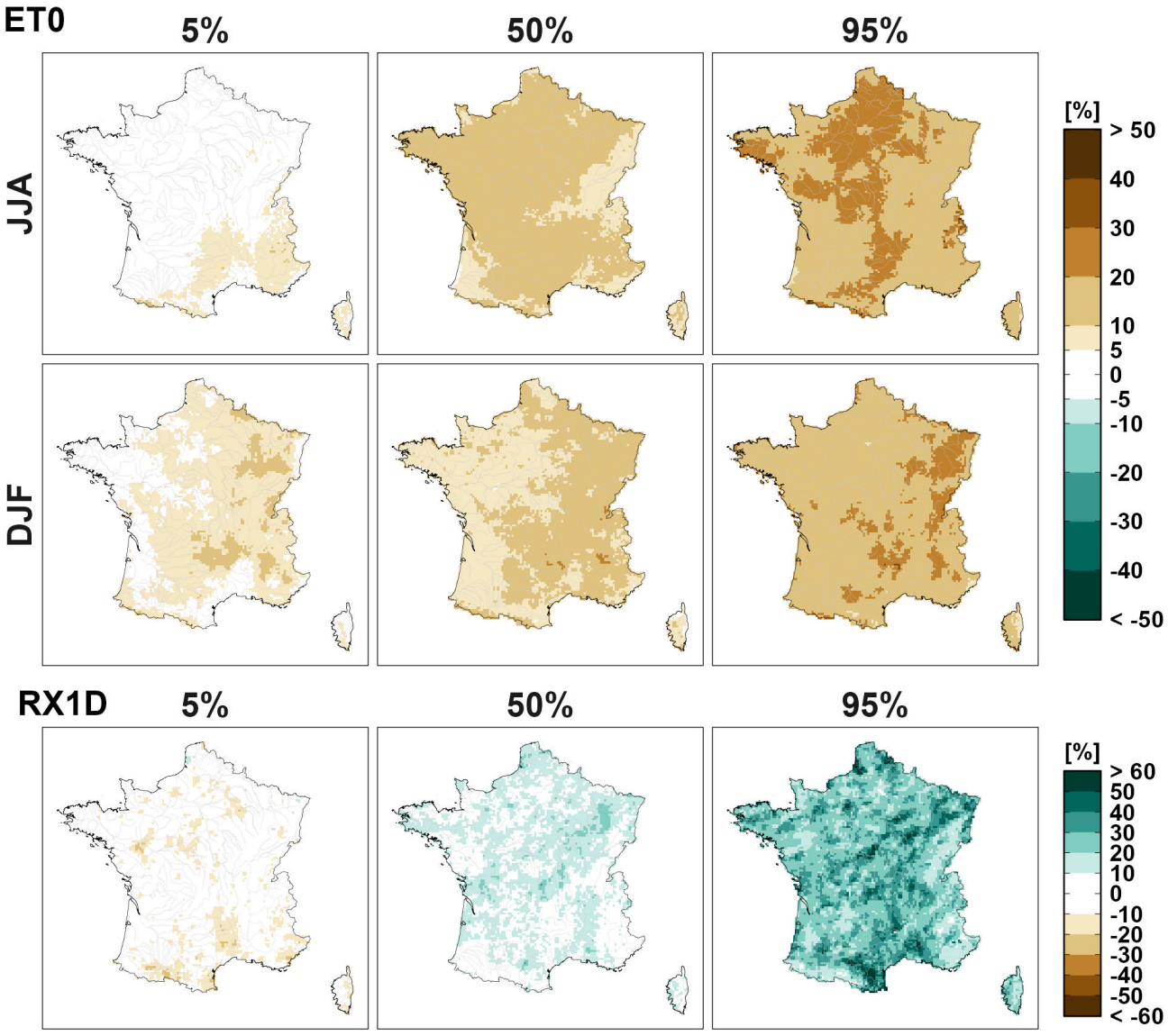

Figure S2. (continued).

S2 quantiles of the CCR for the RCP2.6 and RCP4.5 for QMNA, QA, and QJXA changes

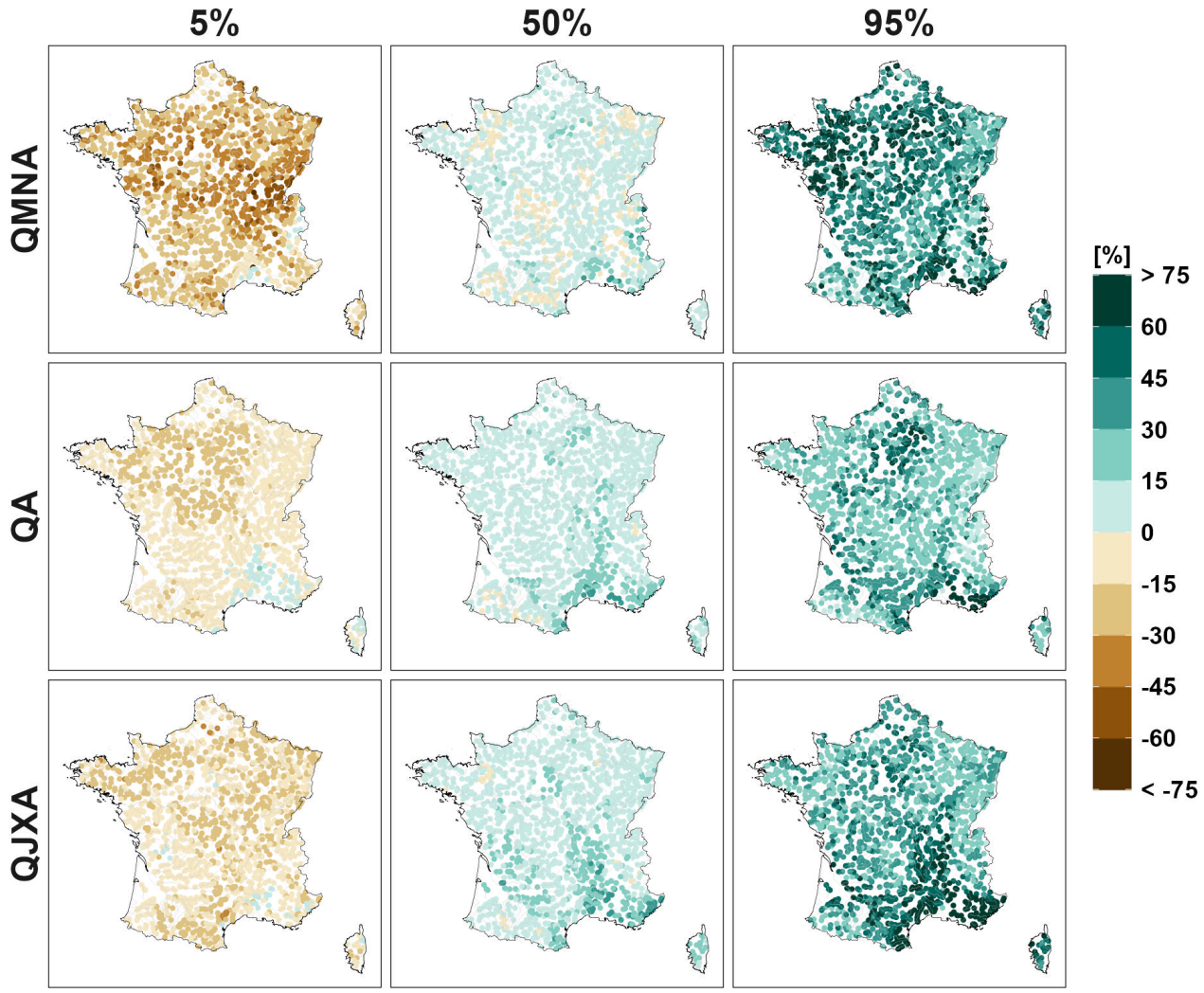

Figure S3. 5%, 50%, and 95% quantiles of the climate change responses for QMNA, QA, and QJXA changes (2071-2099 relative to 1976-2005) for the RCP2.6.

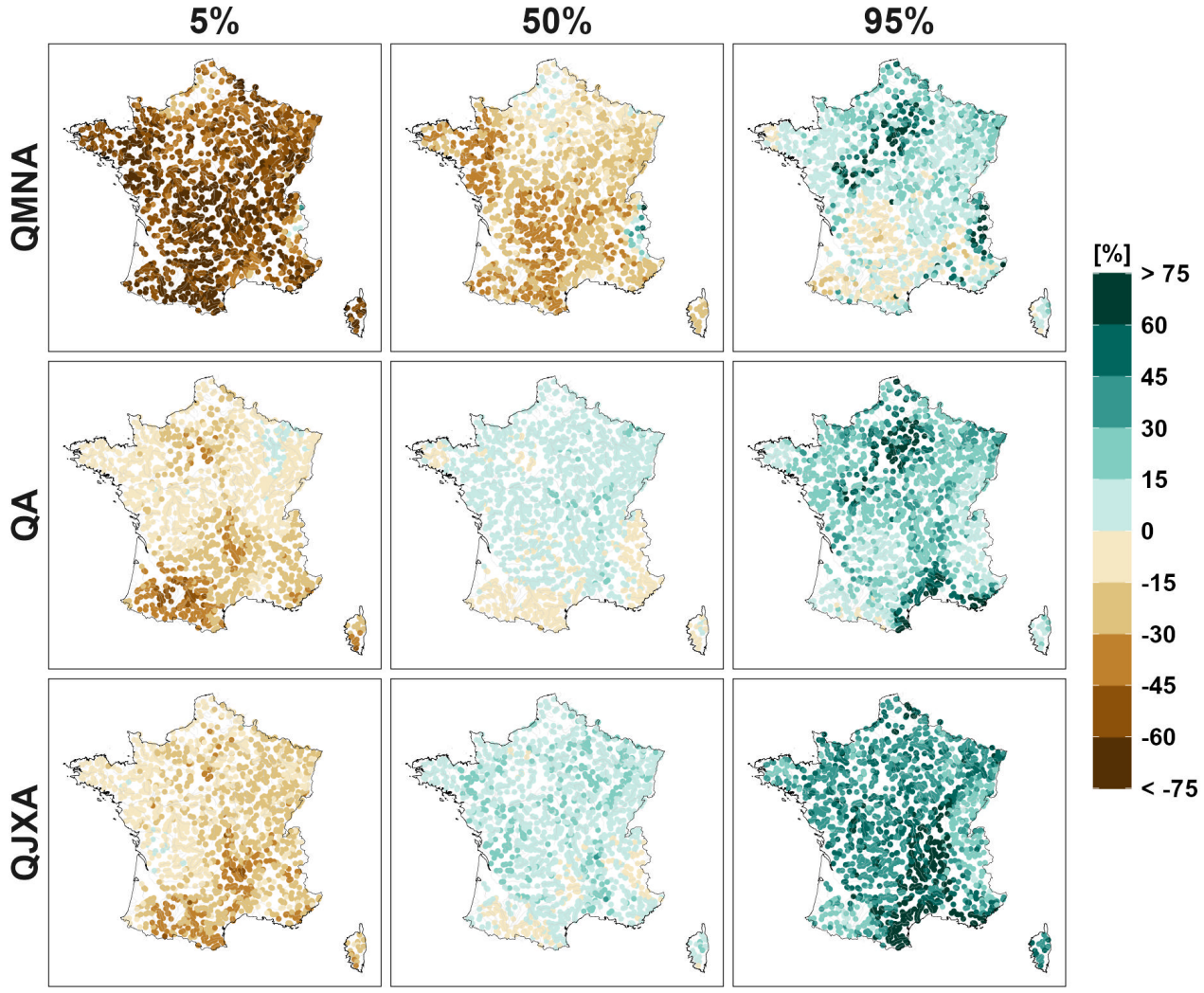

Figure S4. 5%, 50%, and 95% quantiles of the climate change responses for QMNA, QA, and QJXA changes (2071-2099 relative to 1976-2005) for the RCP4.5.

S3 Main uncertainty sources for ETO and RX1D

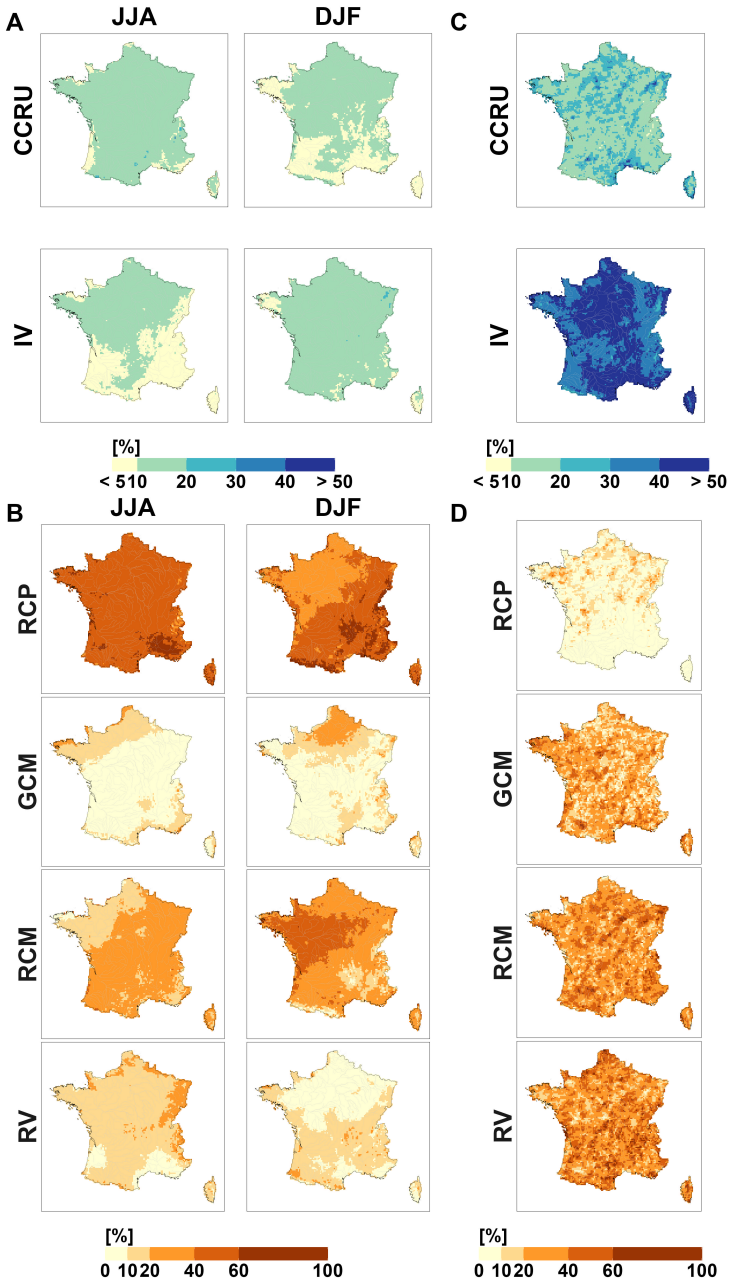

Figure S5. Uncertainty components for seasonal ET0 (A-B) and RX1D (C-D) changes (2071-2099 relative to 1976-2005). (A and C) CCR uncertainty and internal variability (standard deviations expressed in % for relative changes). (B and D) Percentage contribution of uncertainty sources to the CCR variance.

S4 Main effects of the GCM and RCM models for the climate indicators

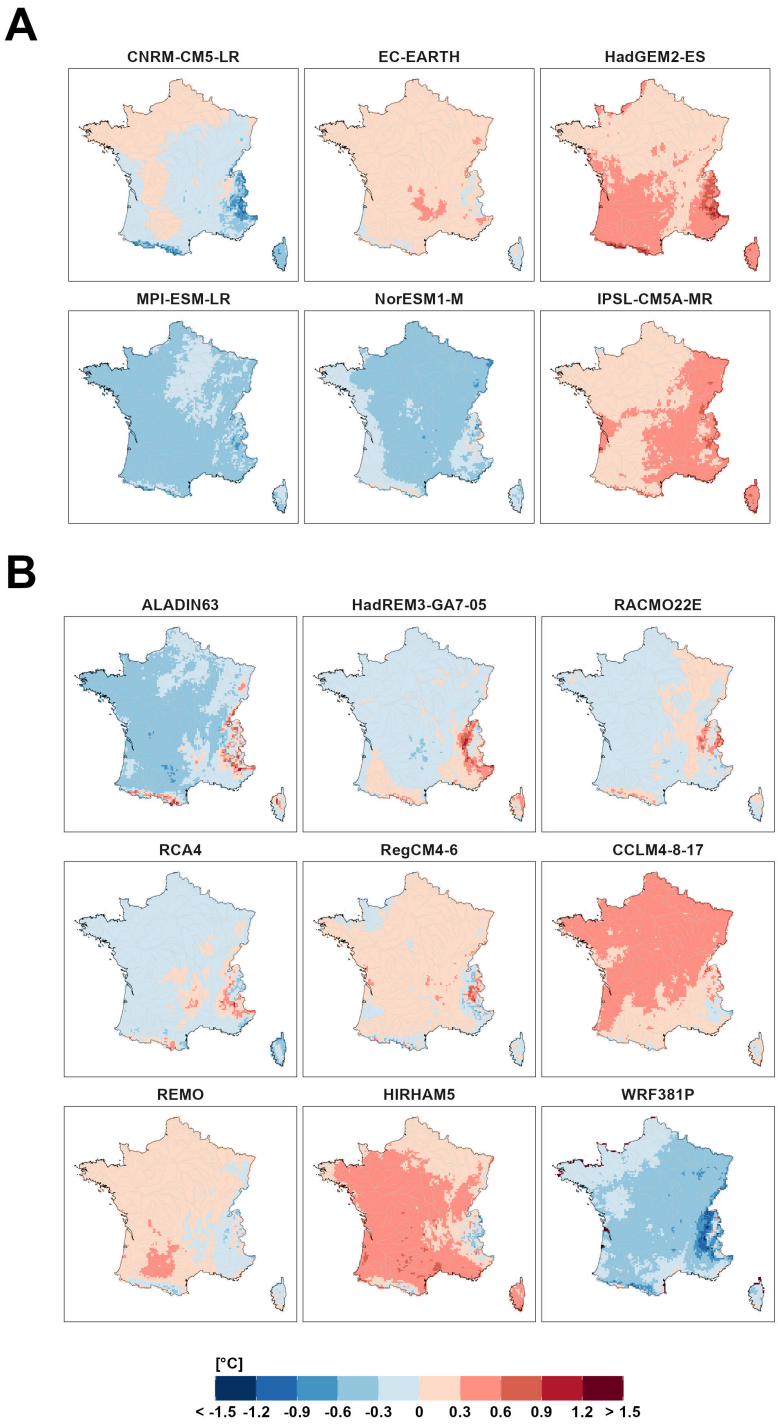

Figure S6. Main effects (i.e. deviations from the grand ensemble mean) of individual GCMs and RCMs for winter temperature changes (2071-2099 relative to 1976-2005).

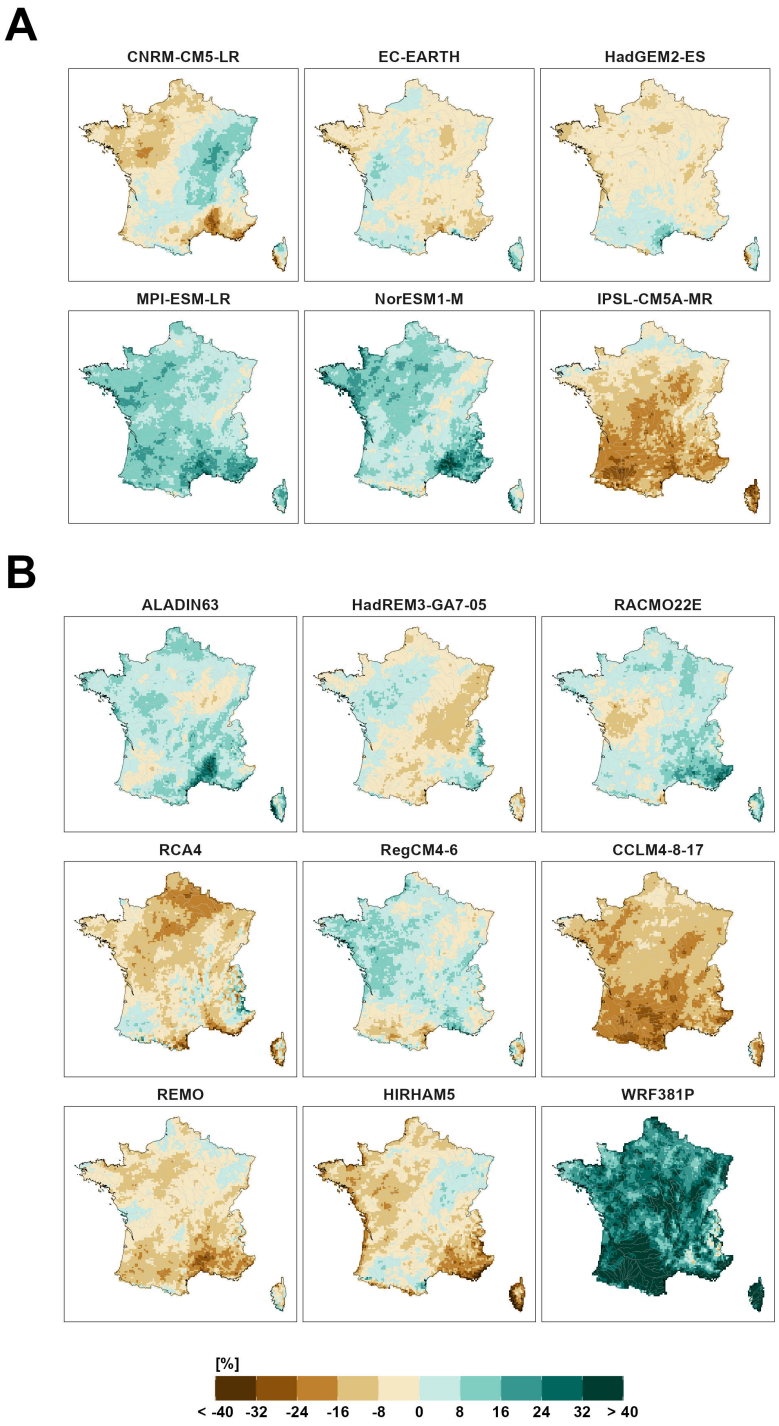

Figure S7. Main effects of individual GCMs and RCMs for summer precipitation changes (2071-2099 relative to 1976-2005).

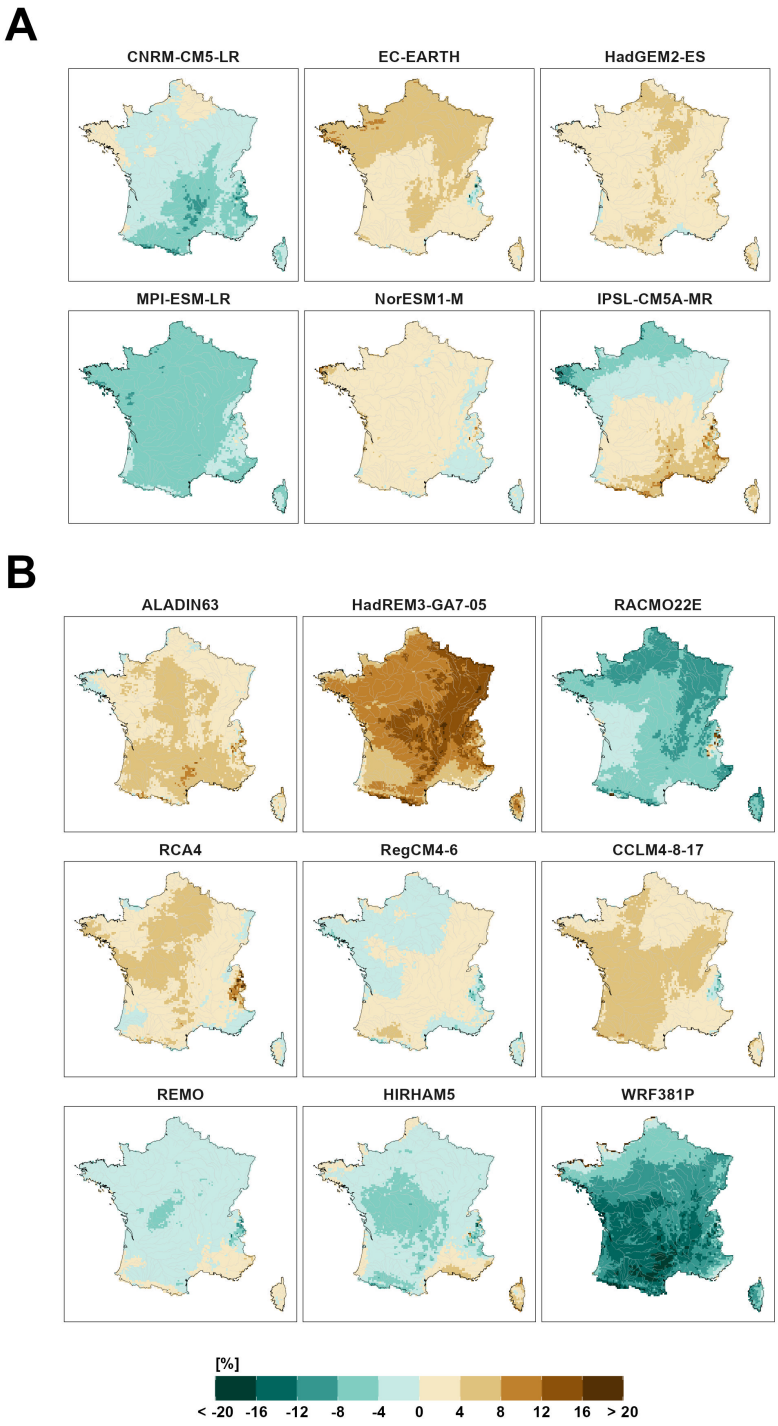

Figure S8. Main effects of individual GCMs and RCMs for summer reference evapotranspiration changes (2071-2099 relative to 1976-2005).

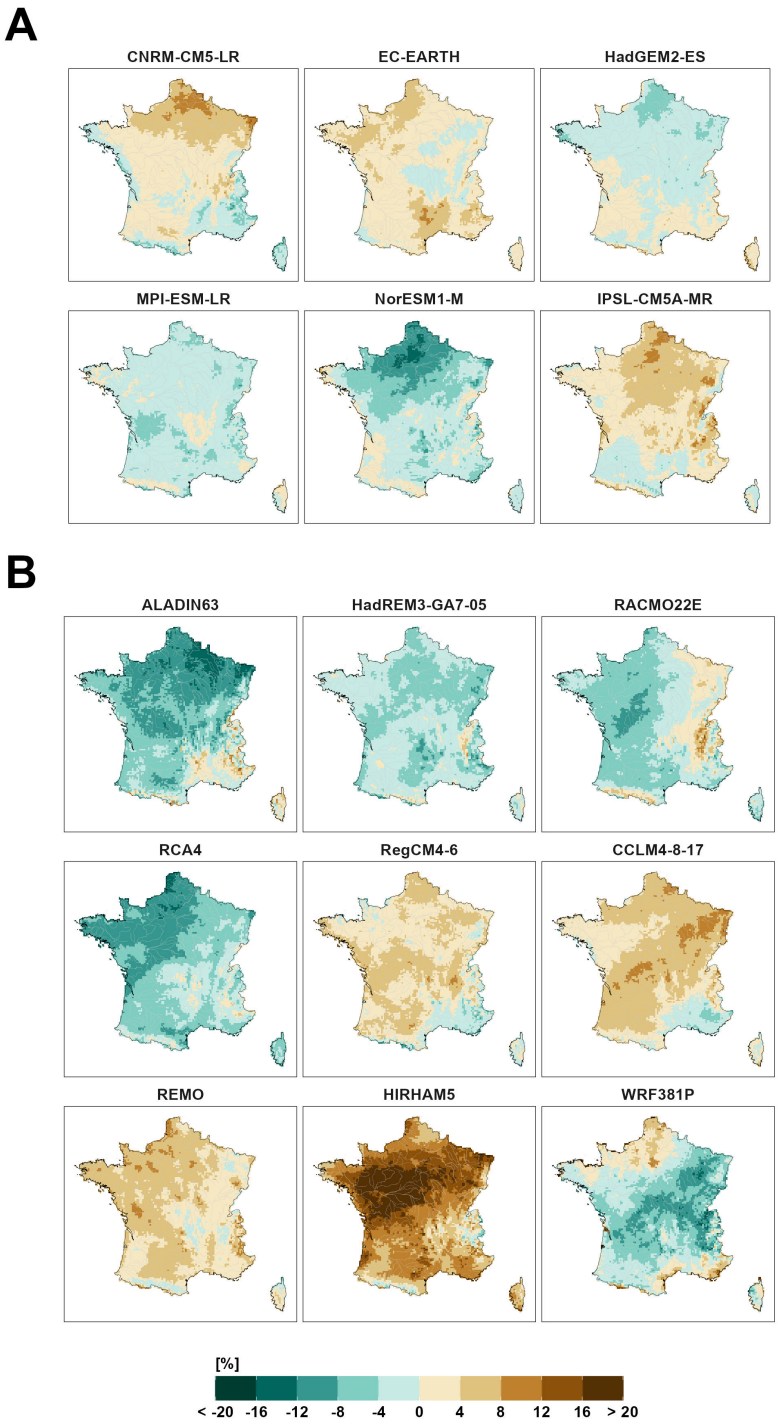

Figure S9. Main effects of individual GCMs and RCMs for winter reference evapotranspiration changes (2071-2099 relative to 1976-2005).

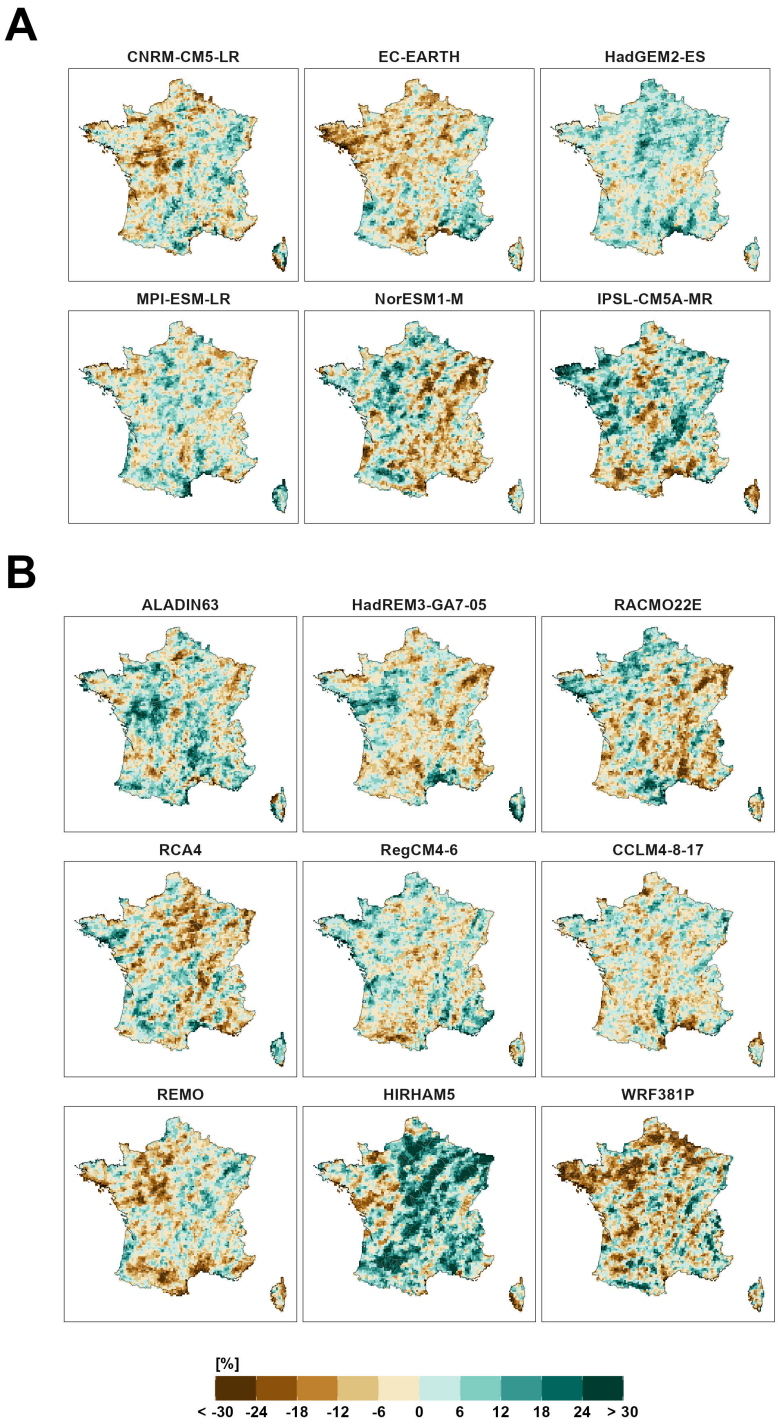

Figure S10. Main effects of individual GCMs and RCMs for annual daily maximum precipitation changes (2071-2099 relative to 1976-2005).

S5 Main effects of the GCMs / RCMs for the hydrological indicators

Figure S11. Main effects of individual GCMs and RCMs for QMNA changes (2071-2099 relative to 1976-2005).

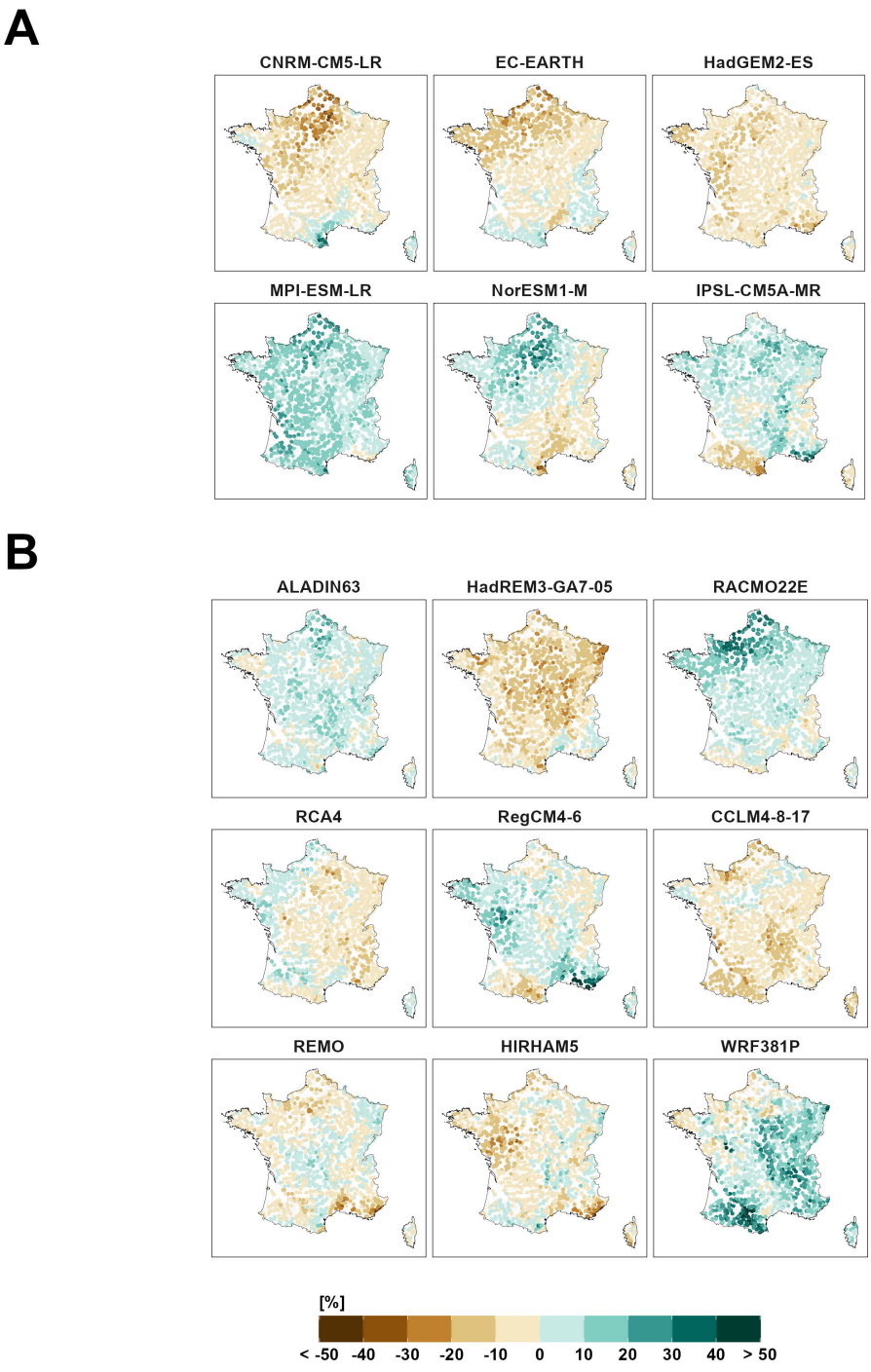

Figure S12. Main effects of individual GCMs and RCMs for QA changes (2071-2099 relative to 1976-2005).

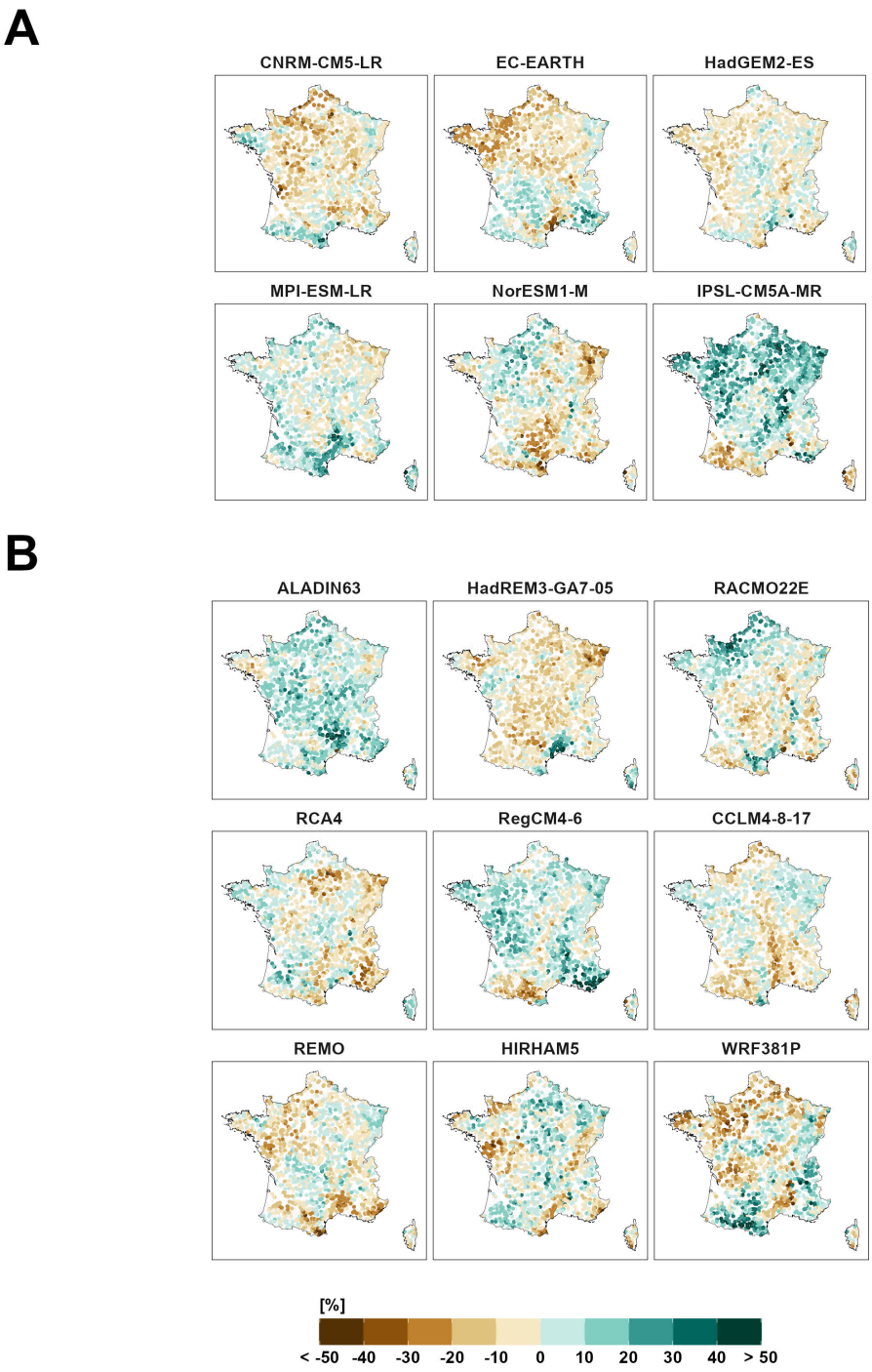

Figure S13. Main effects of individual GCMs and RCMs for QJXA changes (2071-2099 relative to 1976-2005).