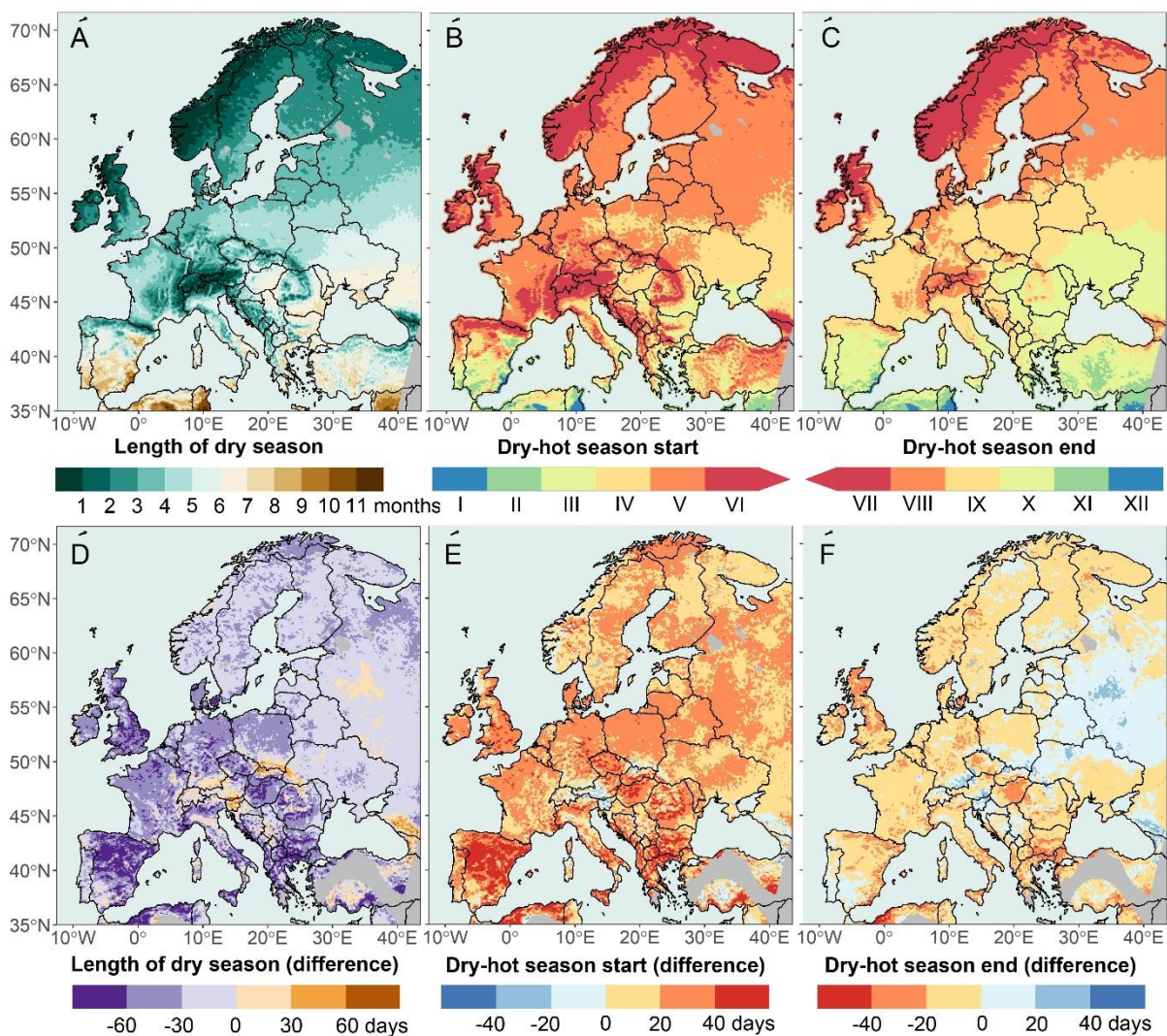


## Evaluation of dry-hot seasons in RCMs for the historical period (1976–2005)

Dry-hot seasons were evaluated in the 1976–2005 historical period. The ensemble mean reproduced spatial patterns of the median length relatively well, but too-short dry-hot seasons were simulated especially in the Mediterranean and Western Europe (their median length was underestimated by 1–2 months; Figure S1A). These biases were related primarily to a tendency of RCMs to simulate late onset of dry-hot periods (Figure S1B, E). By contrast, their median termination was reproduced realistically across Europe, with a slight negative (positive) bias in the western (eastern) parts of the domain (Figure S1C, F).



**Figure S1.** Simulated (model mean) characteristics of dry-hot seasons over Europe in the 1976–2005 historical period. (A) Median length, (B) median month of onset, and (C) median month of termination. (D–F) The same characteristics as A–C but showing differences between model mean and observed data.