Supplementary Material for "Reconstructing winter climate anomalies in the Euro-Atlantic sector using circulation patterns"

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Supplementary Figures

- Figure S1: Standard deviation of winter precipitation and temperature for ERA-Interim (1979-2014).
- Figure S2: Bootstrap of the coefficient of efficiency (CE) for precipitation and temperature for the five jet clusters.
- Figure S3: CE for precipitation and temperature for the different classification methods. Similar to Figure 7 in the manuscript, but for a larger domain.
- Figure S4: Correlation between reconstructed and observed winter precipitation anomalies averaged over northern and southern Europe for the different classification methods.

References

Fereday, D., Chadwick, R., Knight, J., and Scaife, A. A. : Atmospheric dynamics is the largest source of uncertainty in future winter European rainfall, J. Climate, 31, 963-977, 2018.

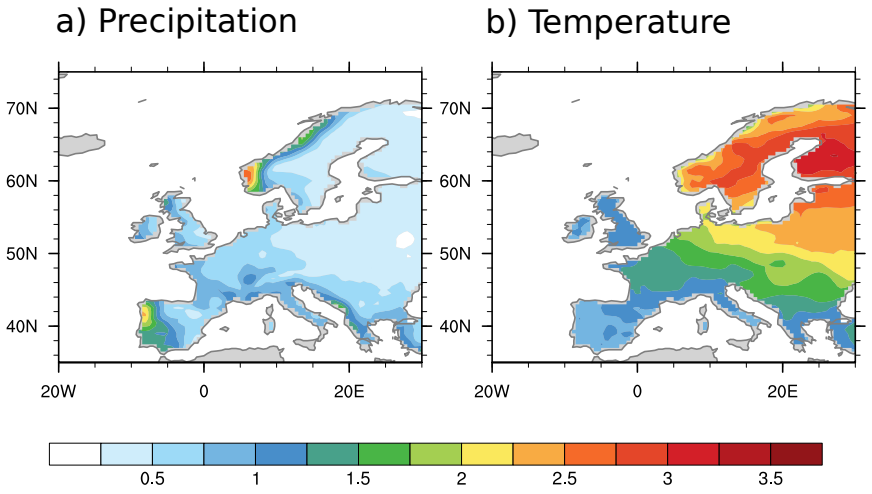

Figure S1. Standard deviation of (a) precipitation (in mm day^{-1}) and (b) temperature (in °C) for ERA-Interim winter means.

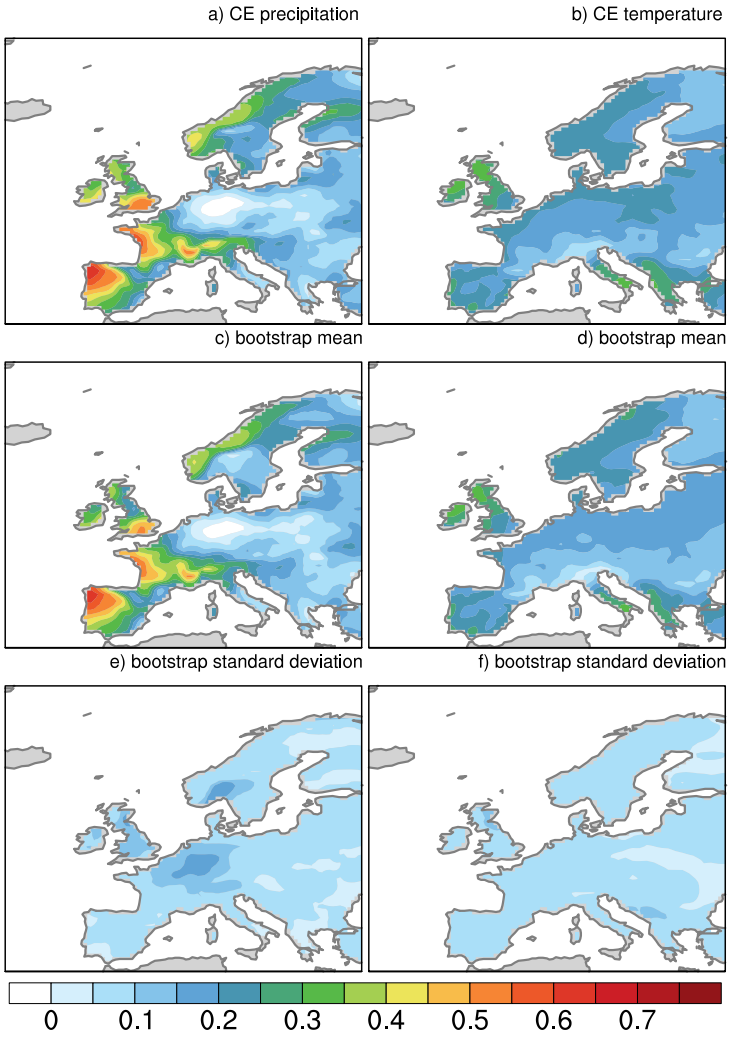

Figure S2. Coefficient of efficiency (CE) for Europe for (a) precipitation and (b) temperature for five jet clusters, as in Figure 7e,f. (c-d) Mean CE for (left) precipitation and (right) temperature calculated from a bootstrap of 100 samples of 35 seasons with replacement. (e-f) Standard deviation of CE for the 100 bootstrapped samples.

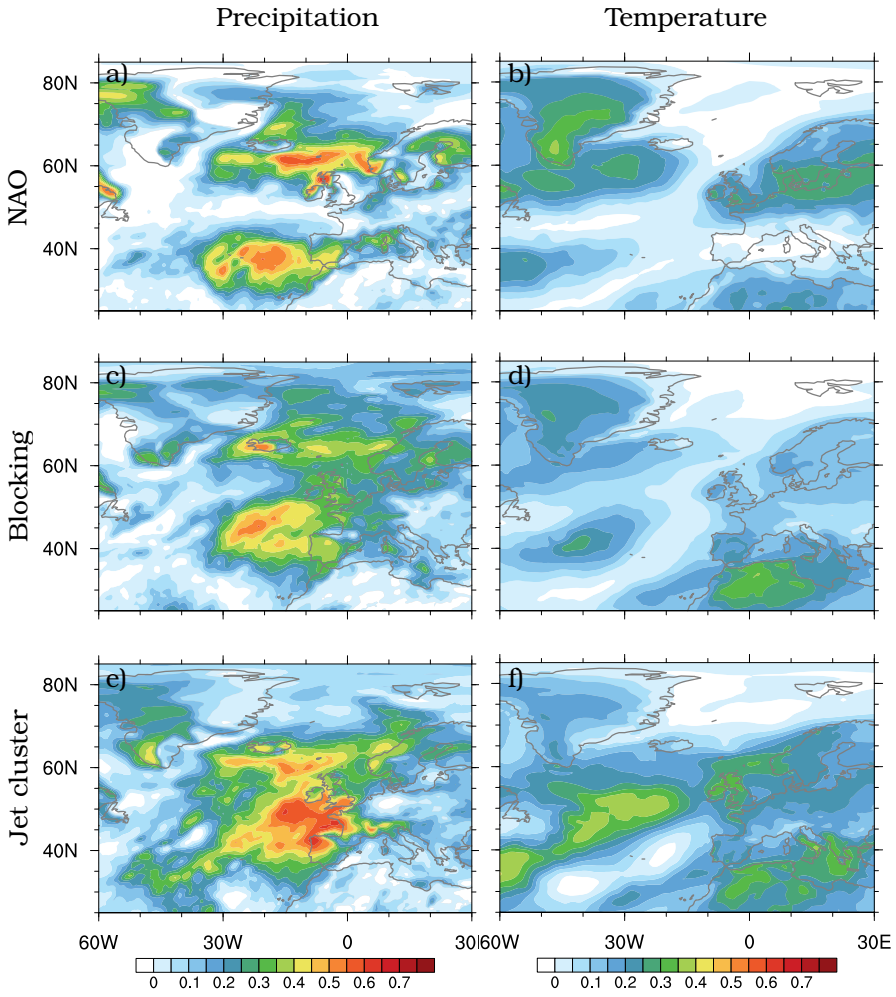

Figure S3. As Figure 7, CE for (left) precipitation and (right) temperature for a larger domain for two NAO phases (a-b), three blocking categories (c-d) and five jet clusters (e-f).

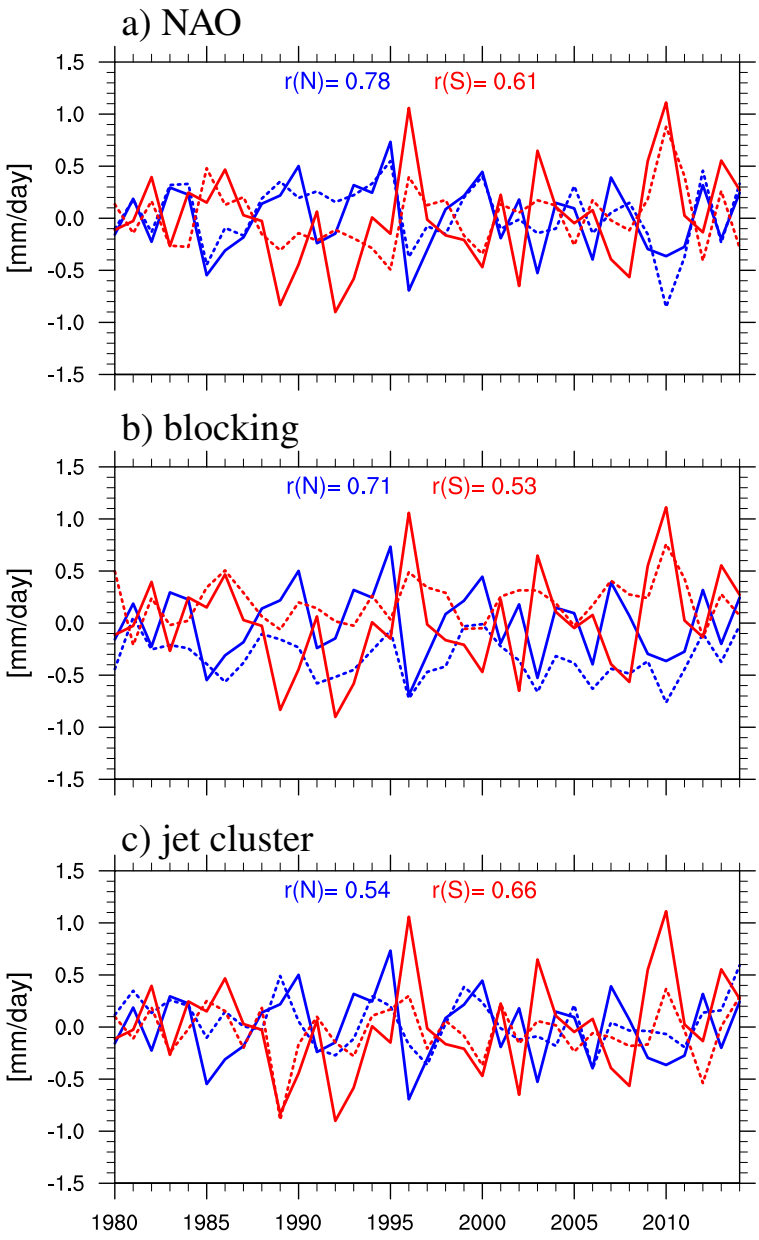

Figure S4. Mean winter precipitation anomalies for northern (N, blue) and southern (S, red) Europe for ERA-Interim (solid) and the reconstruction (dashed) using two NAO phases (a), three blocking categories (b) and five jet clusters (c). Northern Europe is defined as 48-75°N, 10°W-30°E, southern Europe as 35-48°N, 10°W-30°E, following Fereday (2018). Correlation values r between reanalysis and reconstructions for the two regions are shown in each panel.