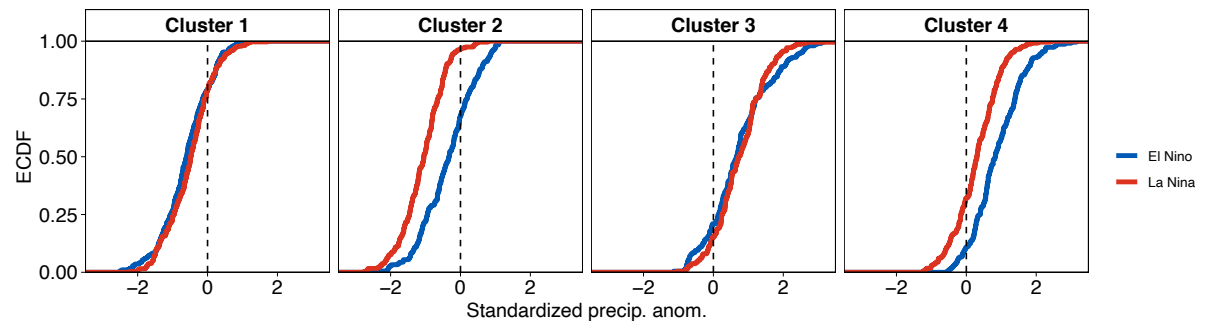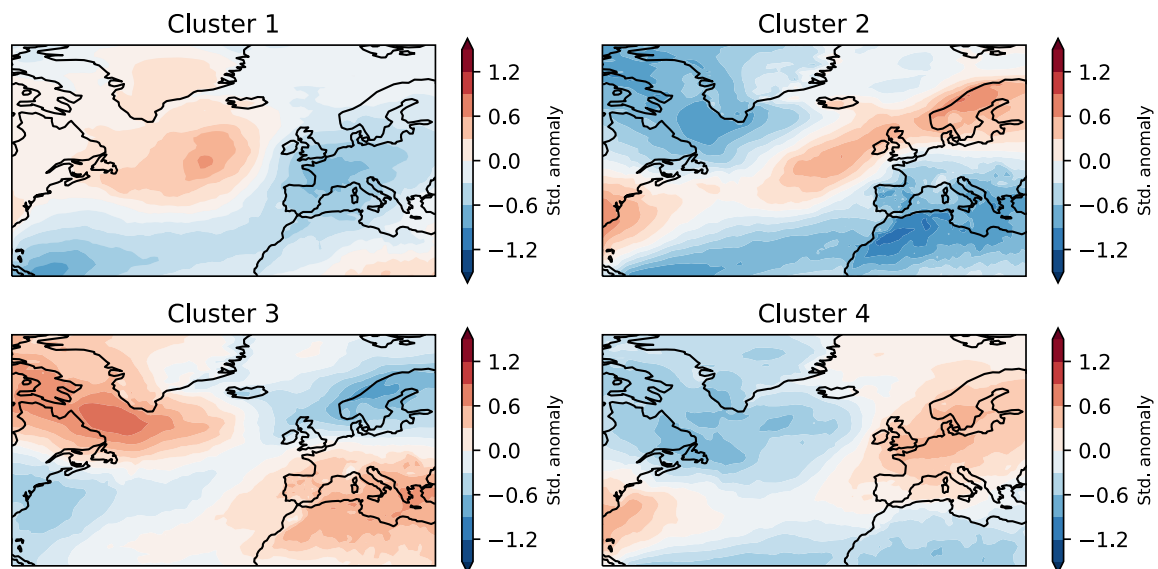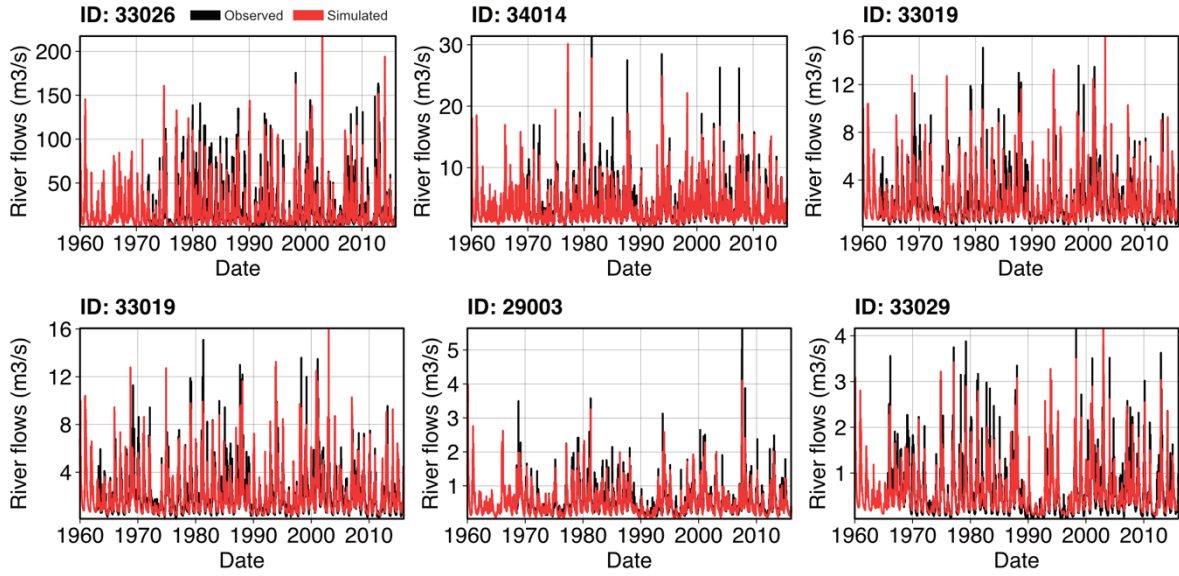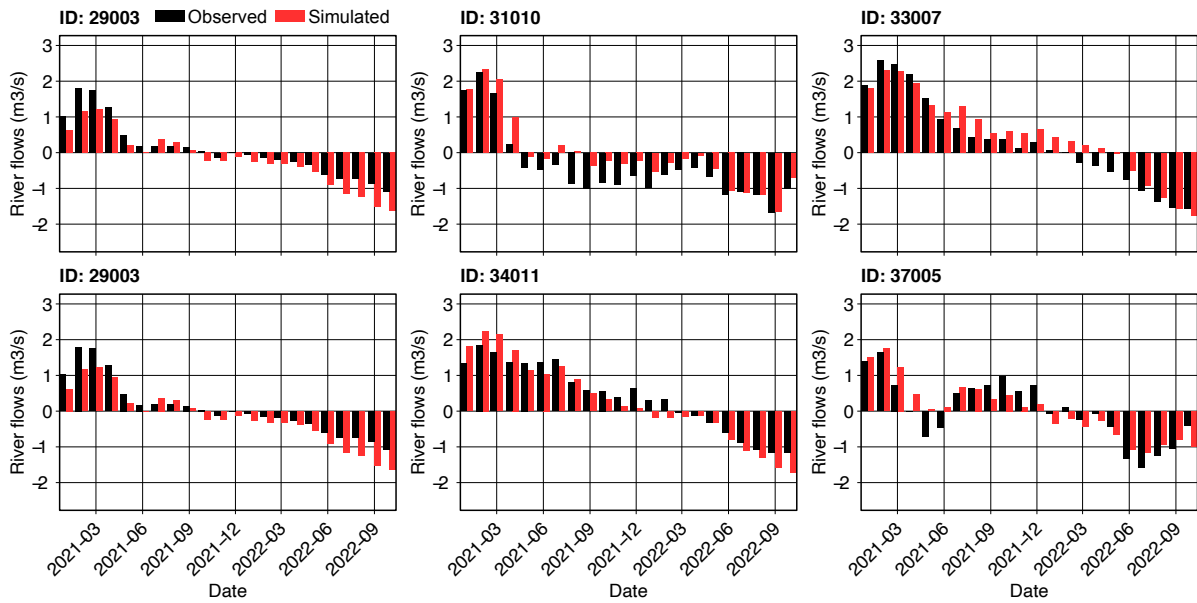# Supplementary materials

Figure S1: Standardised precipitation anomalies associated with La Niña (red) and El Niño (blue) winters in each circulation storyline.

Figure S2: Composite mean temperature anomalies for each winter cluster

Figure S3: Observed (black) and simulated (red) river flows over the baseline period for six example catchments.

Figure S4: Observed (black) and simulated (red) standardised streamflow index accumulated over 3 months (SSI-3) for the period 2021-2022. Observed SSI-3 is taken from the UKCEH Water Resources Portal (https://eip.ceh.ac.uk/hydrology/water-resources/)
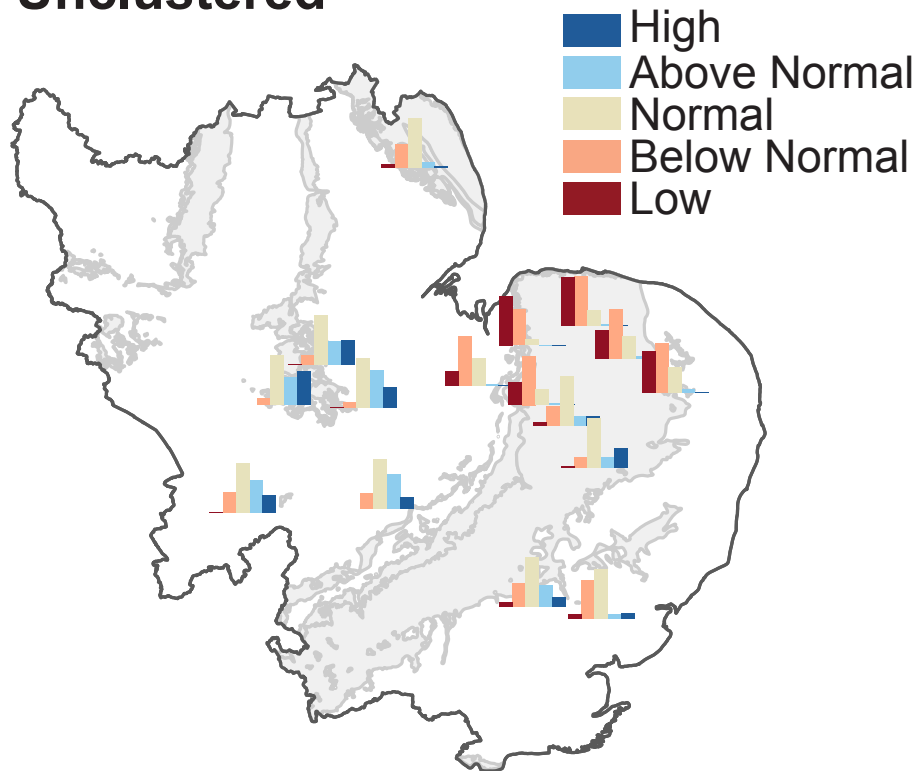
Unclustered

Figure S5: Outlook of river flows represented in percentile terms relative to 1965-2015. Equivalent to Figure 5 but across all 2850 winters in SEAS5 instead of the four clusters. Individual plots show the distribution of hindcast winters for each percentile category as indicated by the colour key.
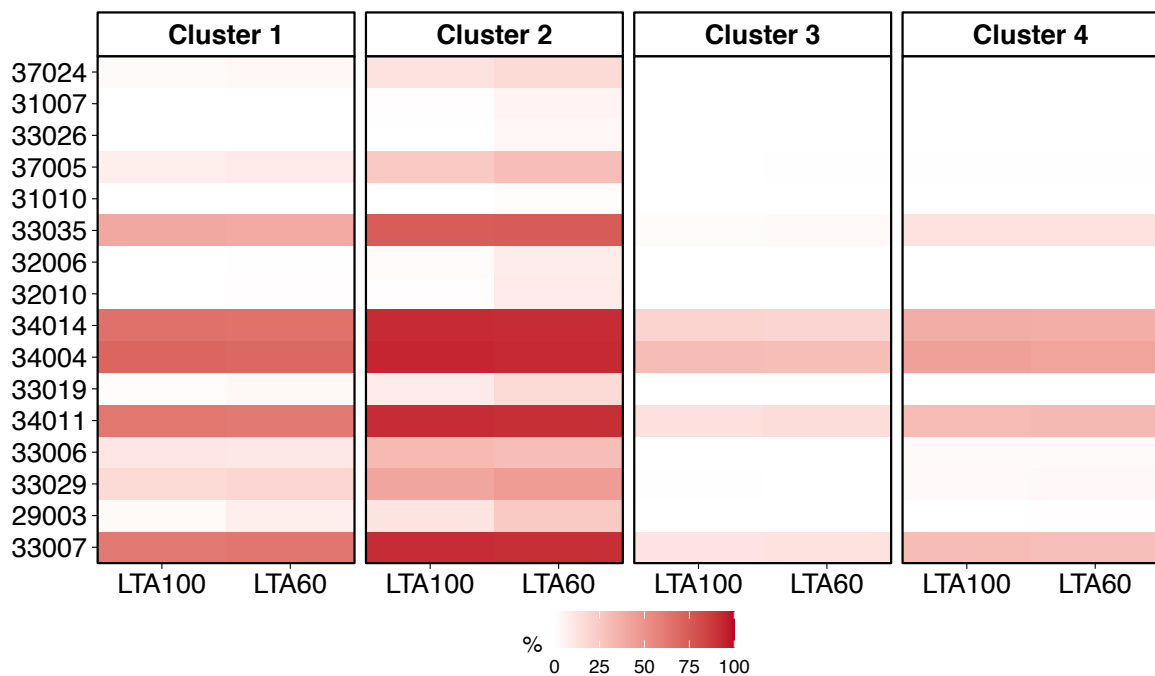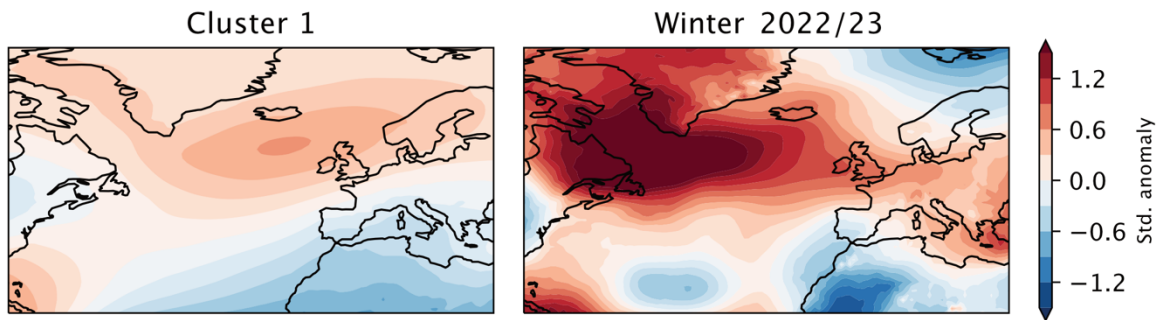

Figure S6: Equivalent to Figure 8 but for SSI-12

Figure S7: Composite mean sea level pressure (SLP) anomalies for winters in cluster 1 compared to mean SLP anomalies over observed winter 2022/23 (data from ERA5).