



Supplement of

Added value of seasonal hindcasts to create UK hydrological drought storylines

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Supplementary materials

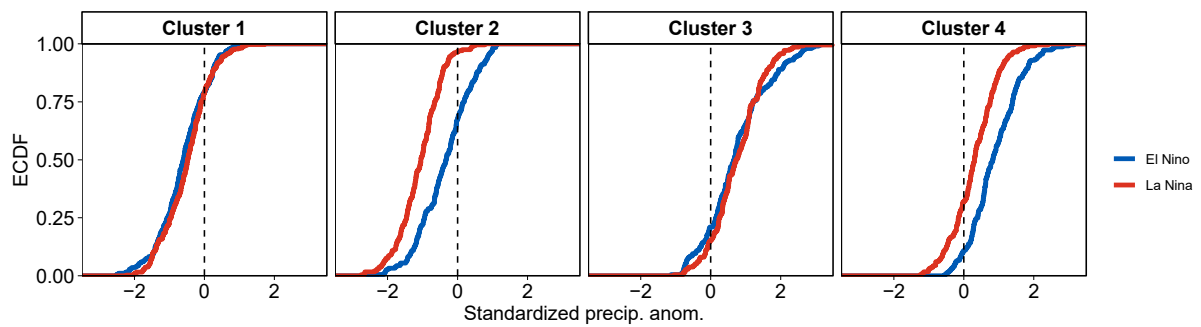


Figure S1: Standardised precipitation anomalies associated with La Niña (red) and El Niño (blue) winters in each circulation storyline.

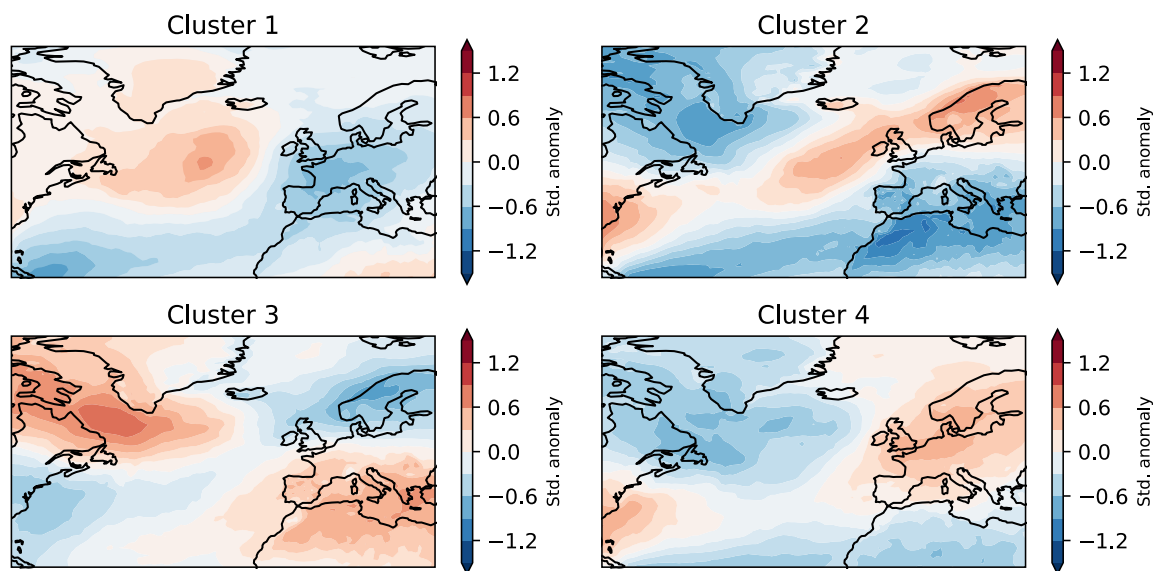


Figure S2: Composite mean temperature anomalies for each winter cluster

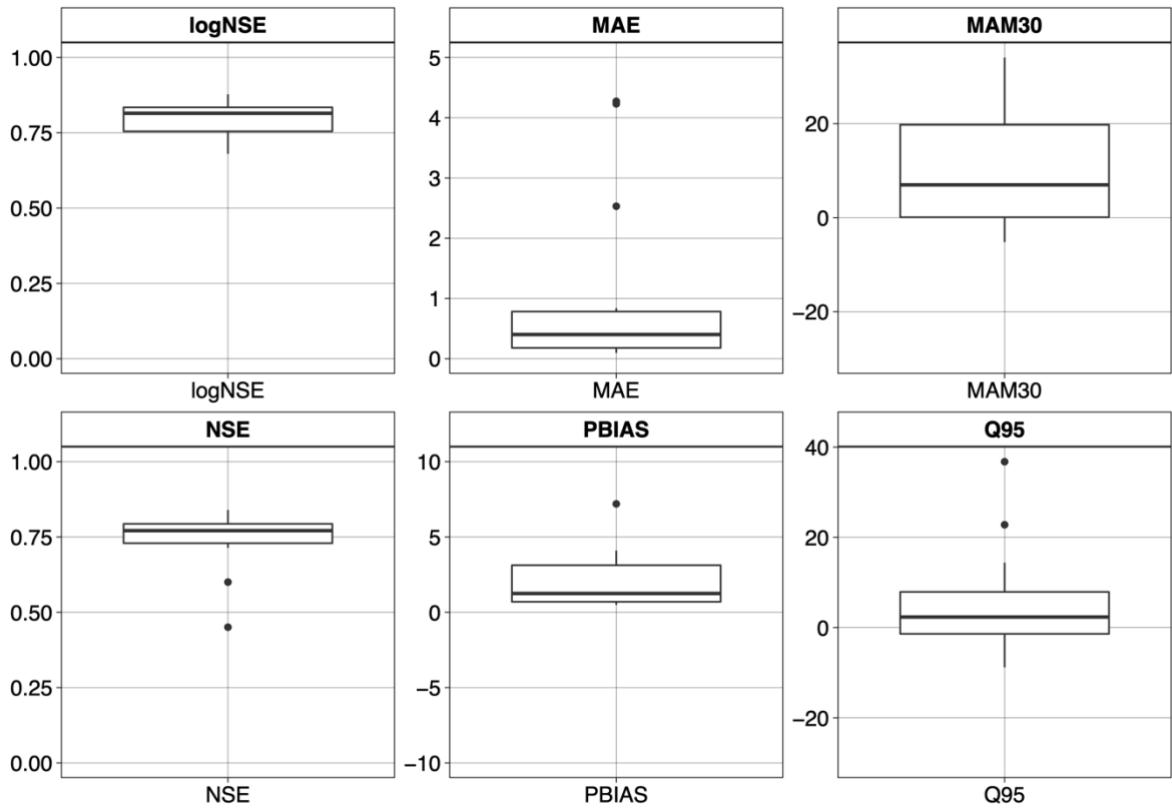


Figure S3: Model performance statistics of across the selected catchments for each of the six evaluation metrics.

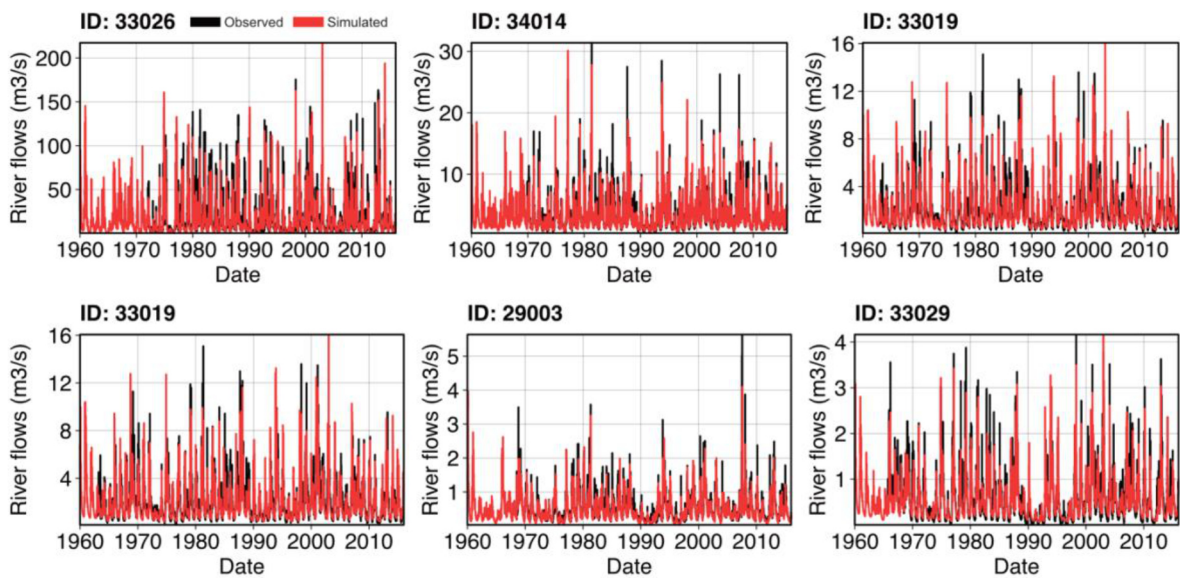


Figure S4: Observed (black) and simulated (red) river flows over the baseline period for six example catchments.

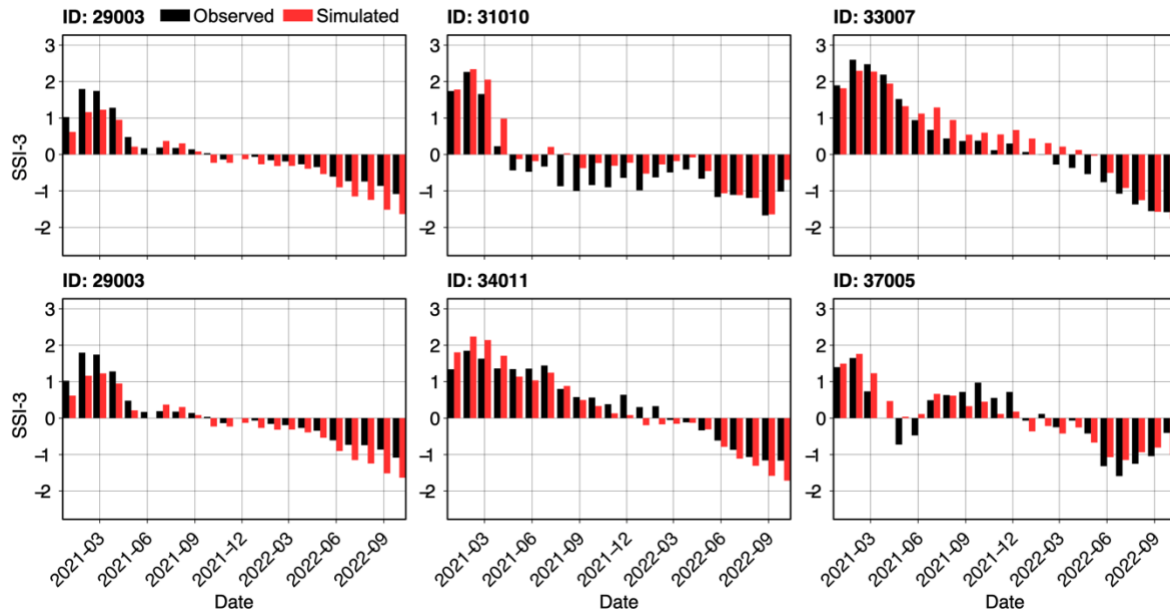


Figure S5: Observed (black) and simulated (red) standardised streamflow index accumulated over 3 months (SSI-3) for the period 2021-2022. Observed SSI-3 is taken from the UKCEH Water Resources Portal (<https://eip.ceh.ac.uk/hydrology/water-resources/>)

Unclustered

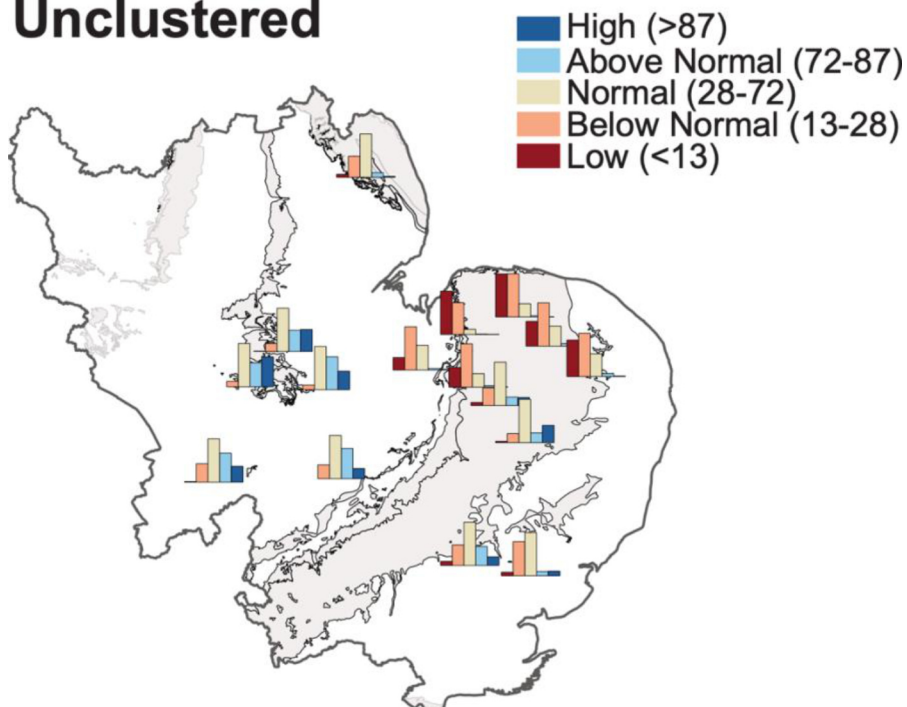


Figure S6: Outlook of river flows represented in percentile terms relative to 1965-2015. Equivalent to Figure 5 but across all 2850 winters in SEAS5 instead of the four clusters. Individual plots show the distribution of hindcast winters for each percentile category as indicated by the colour key. 'Contains British Geological Survey materials © UKRI 2024'

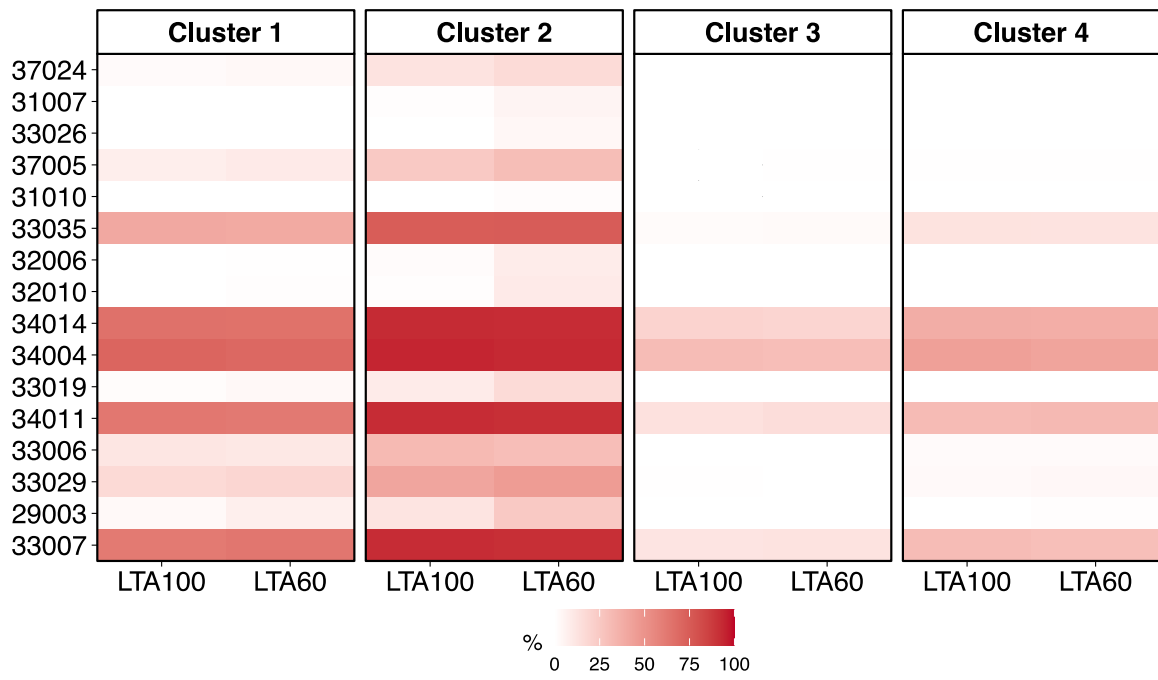


Figure S7: Equivalent to Figure 8 but for SSI-12