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Supplement of

The effect of climate type on timescales of drought propagation in an ensemble of global hydrological models

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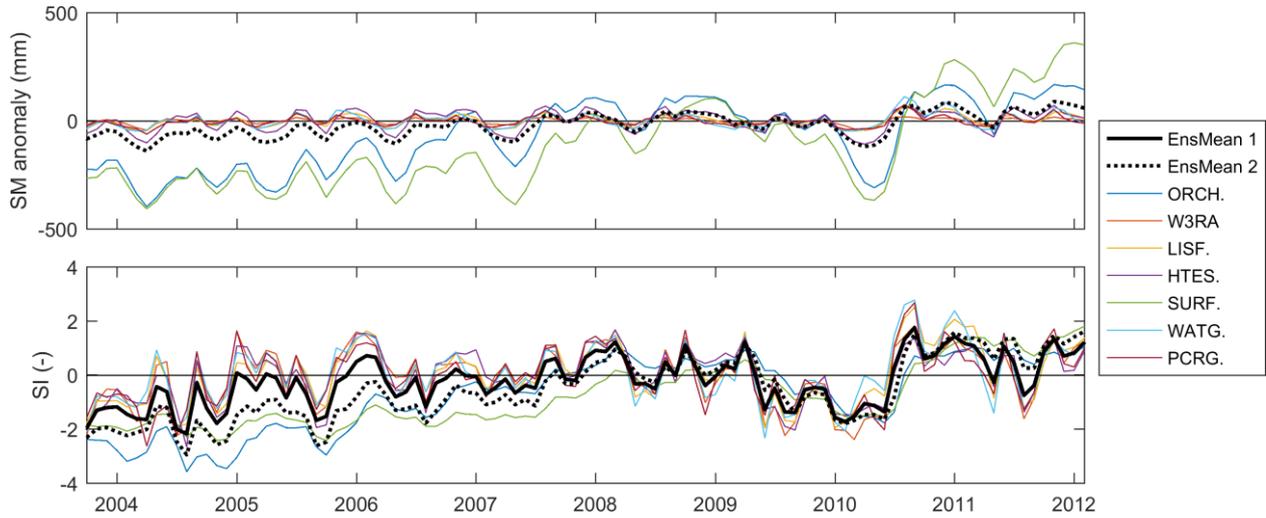


Figure S1. Time series of soil moisture content relative to the multi-year mean (top) and SSMI (bottom) for each of the individual models and two methods of calculating the ensemble mean. EnsMean 1 is based on averaging model SI time series, EnsMean 2 is based on averaging the original model time series.

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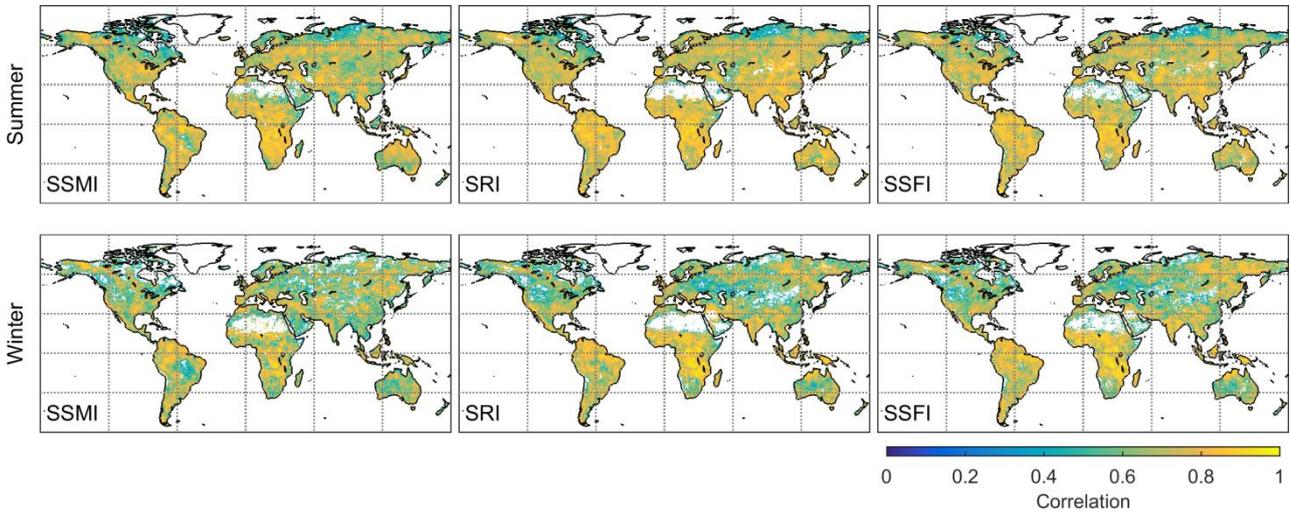


Figure S2: Maps of the highest correlations between SPI and model ensemble mean SSMI, SRI, and SSFI, for summer and winter droughts. Pixels where those correlations are not statistically significant ($p < 0.05$) are masked.

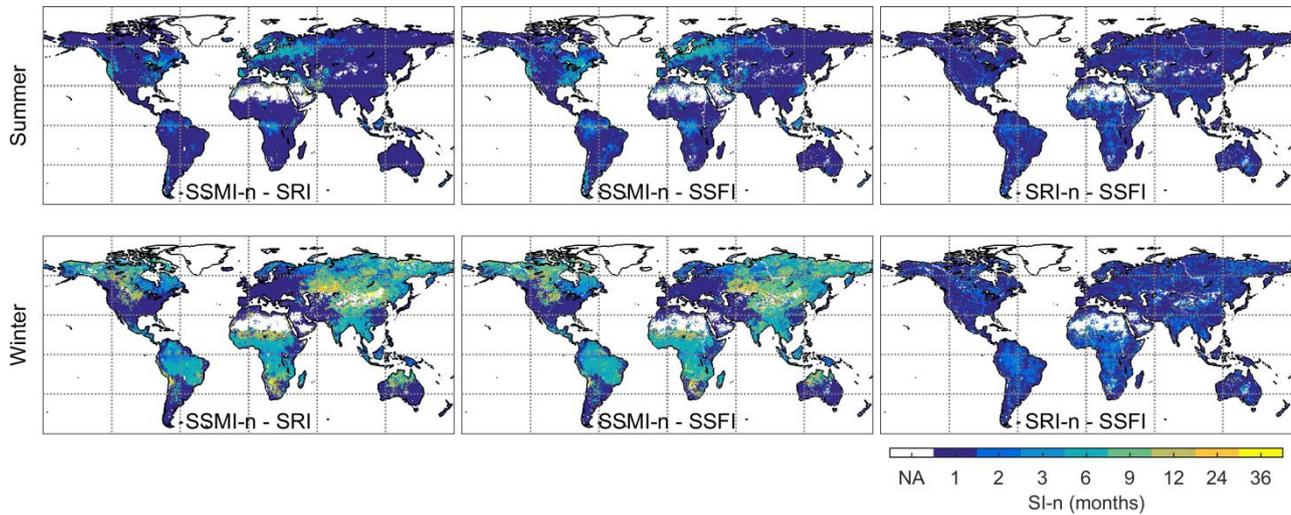


Figure S3: The SSMI and SRI accumulation period (SSMI-n or SRI-n) resulting in the highest correlations with model ensemble mean SRI and SSFI, for summer and winter droughts. Pixels where those correlations are not statistically significant ($p < 0.05$) are masked.

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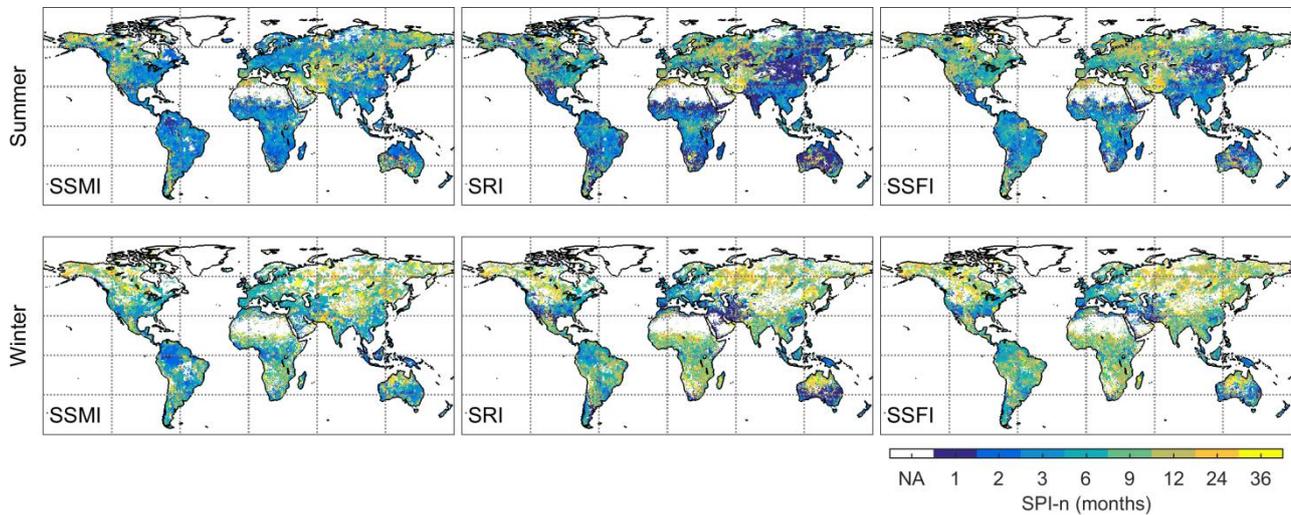


Figure S4: The SPI accumulation period (SPI-n) resulting in the highest correlations with model ensemble mean SSMI, SRI, and SSFI, for summer and winter droughts. Droughts in SSMI, SRI, and SSFI were identified by $SI \leq -0.5$. Pixels where those correlations are not statistically significant ($p < 0.05$) are masked.

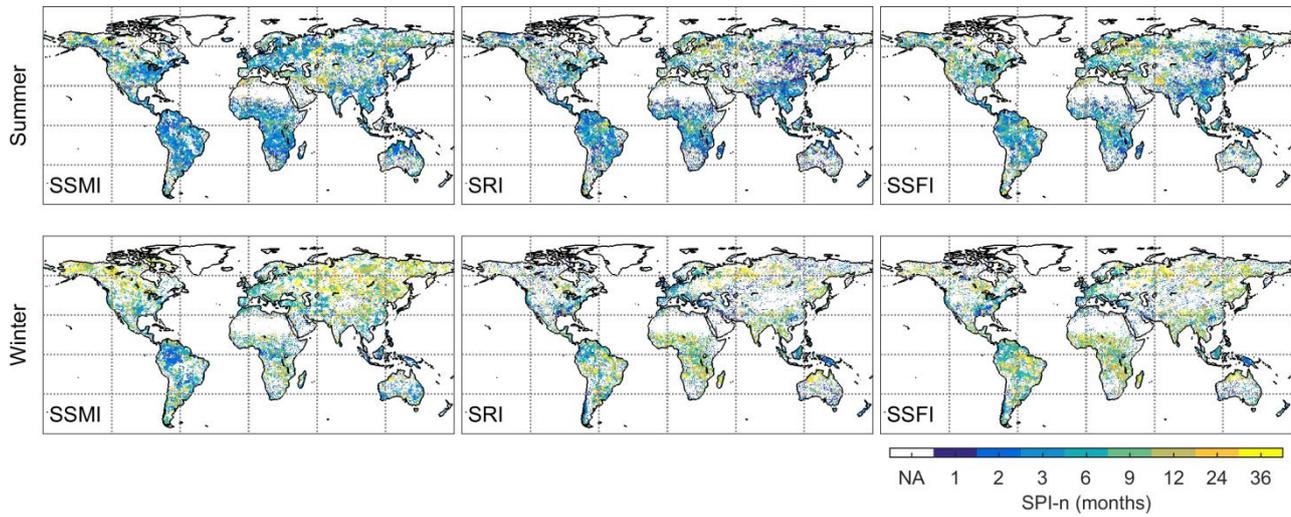


Figure S5: The SPI accumulation period (SPI-n) resulting in the highest correlations with model ensemble mean SSMI, SRI, and SSFI, for summer and winter droughts. Droughts in SSMI, SRI, and SSFI were identified by $SI \leq -1$. Pixels where those correlations are not statistically significant ($p < 0.05$) are masked.

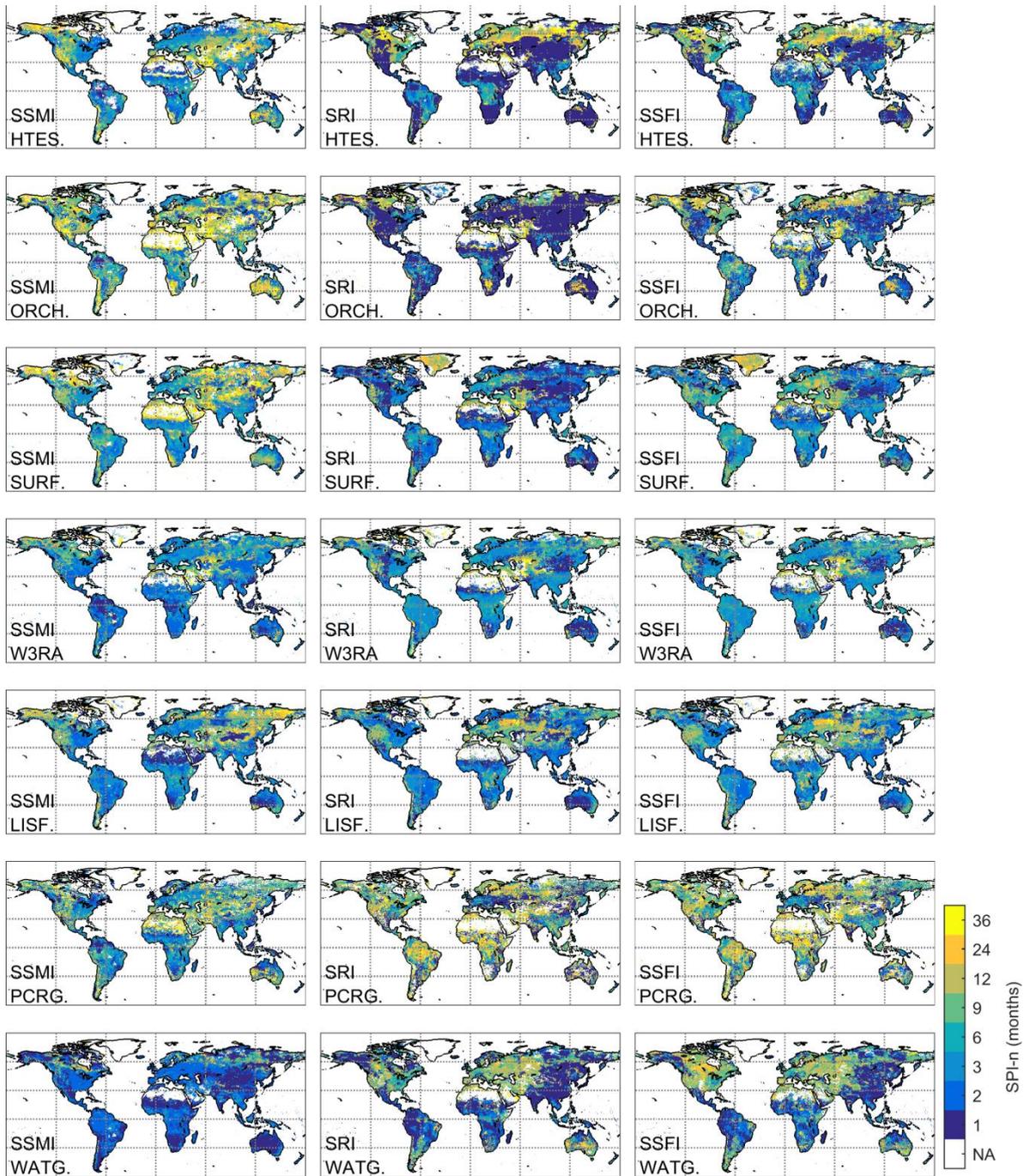


Figure S6: The SPI accumulation period (SPI-n) resulting in the highest correlations with summer droughts in SSMI, SRI, and SSFI for each model. Pixels where those correlations are not statistically significant ($p < 0.05$) are masked.

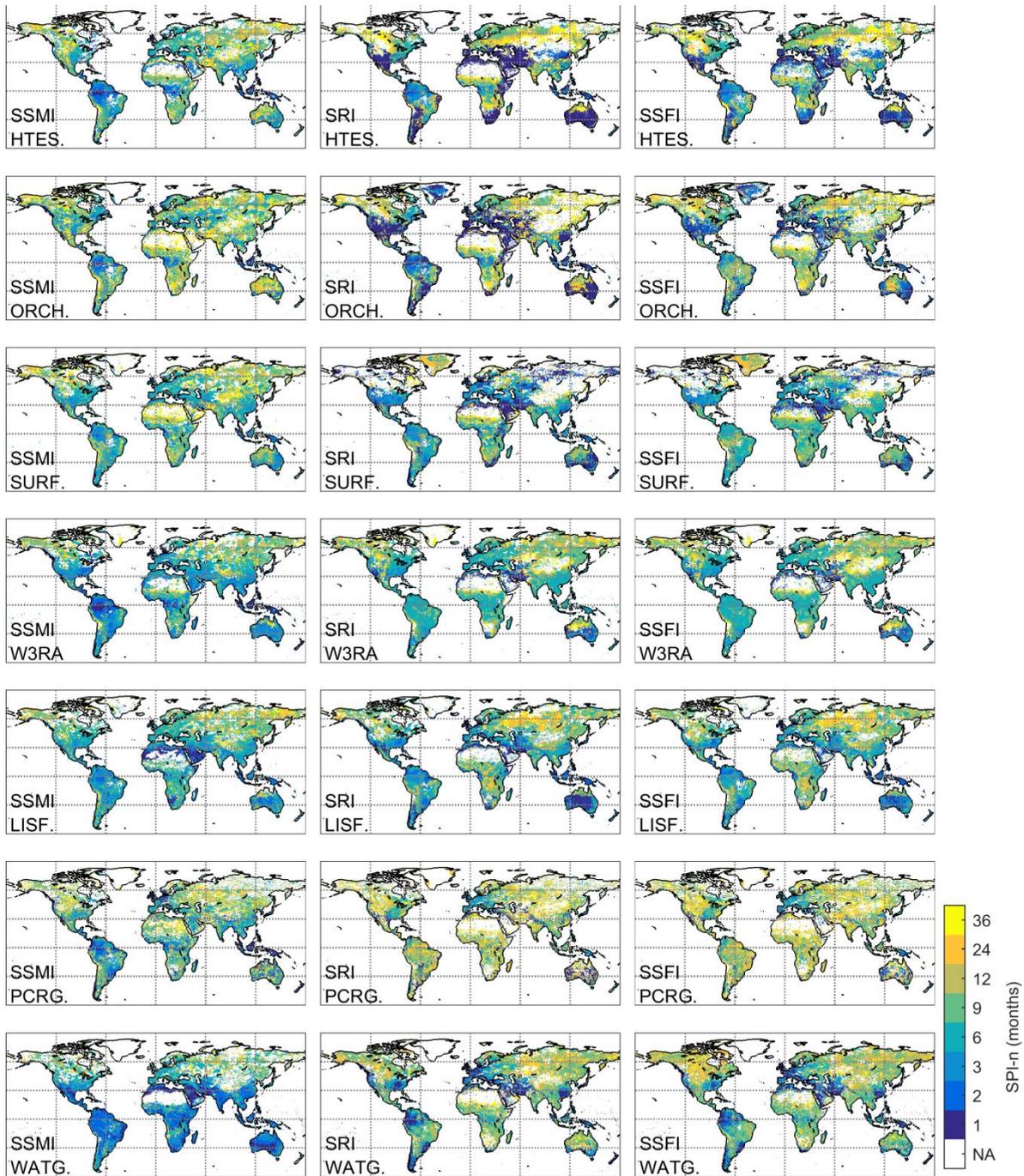


Figure S7: The SPI accumulation period (SPI-n) resulting in the highest correlations with winter droughts in SSMI, SRI, and SSFI for each model. Pixels where those correlations are not statistically significant ($p < 0.05$) are masked.