1   **Historical drought patterns over Canada and their relation to teleconnections**

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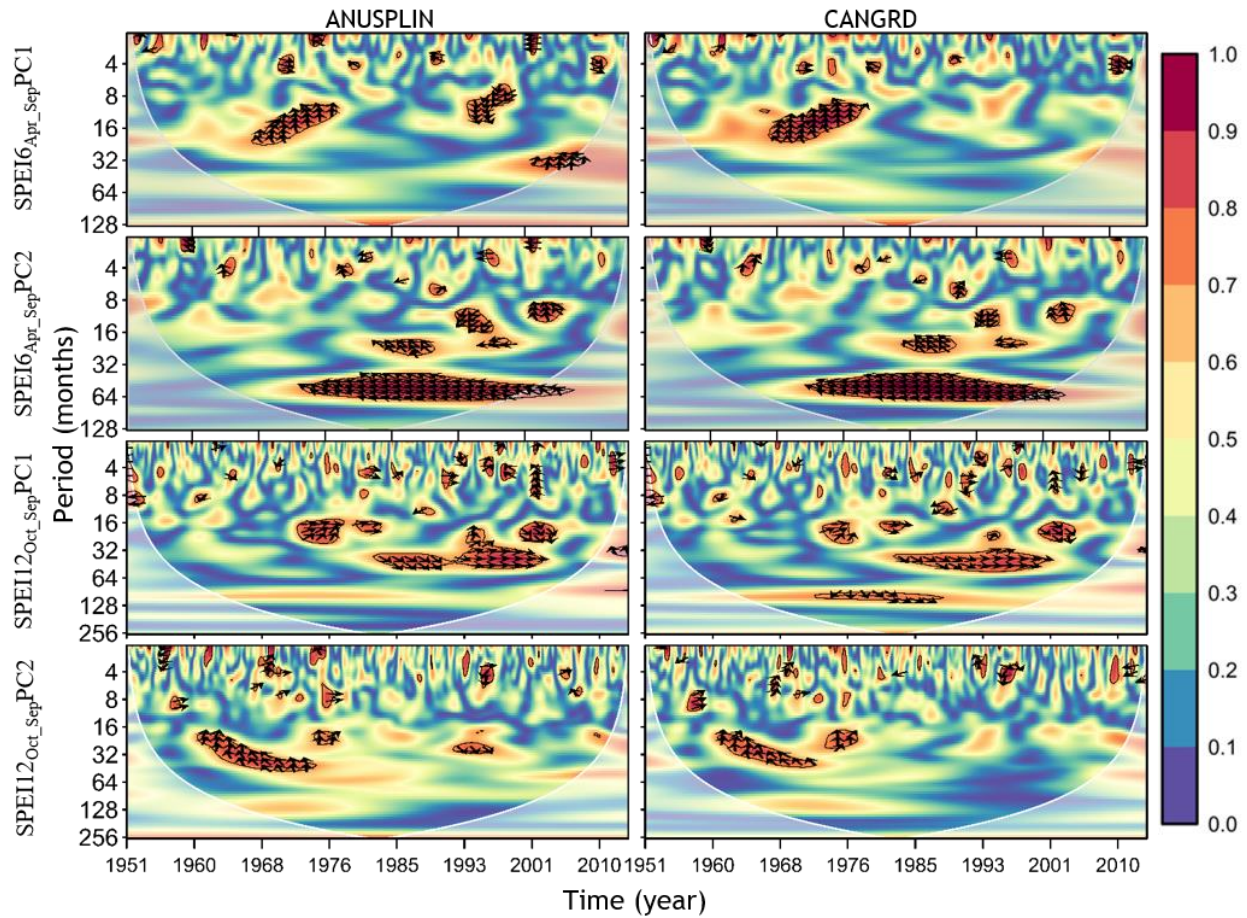
Figure S1: Squared wavelet coherence between the AMO and the temporal patterns of drought (SPEI6$_{Apr\_Sept}$ and SPEI12$_{Oct\_Sept}$). Phase arrows pointing right indicate signals are in phase, whereas a left-pointing arrows indicate an antiphase relationship. Arrows deviating from the horizontal are indicative of lead-lag relationships between the two signals. The black contour designates the 95% confidence level against red noise, and the cone of the influence (COI) where edge effects might distort the picture is shown as a lighter grey shade.

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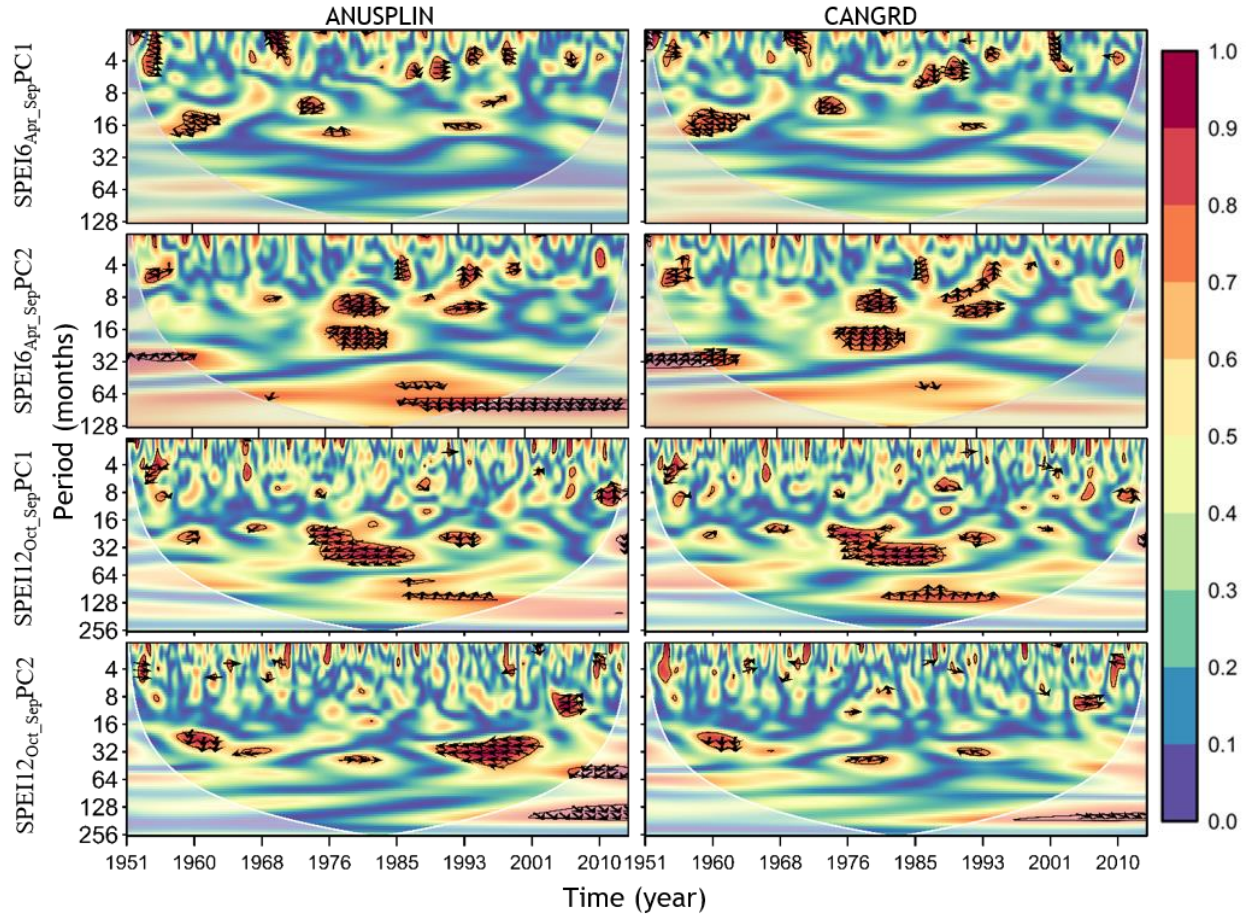
Figure S2: Squared wavelet coherence between the AO and the temporal patterns of drought (SPEI6$_{Apr\_Sept}$

and SPEI12$_{Oct\_Sept}$). Phase arrows pointing right indicate signals are in phase, whereas a left-pointing arrows

indicate an antiphase relationship. Arrows deviating from the horizontal are indicative of lead-lag

relationships between the two signals. The black contour designates the 95% confidence level against red

noise, and the cone of the influence (COI) where edge effects might distort the picture is shown as a lighter

grey shade.

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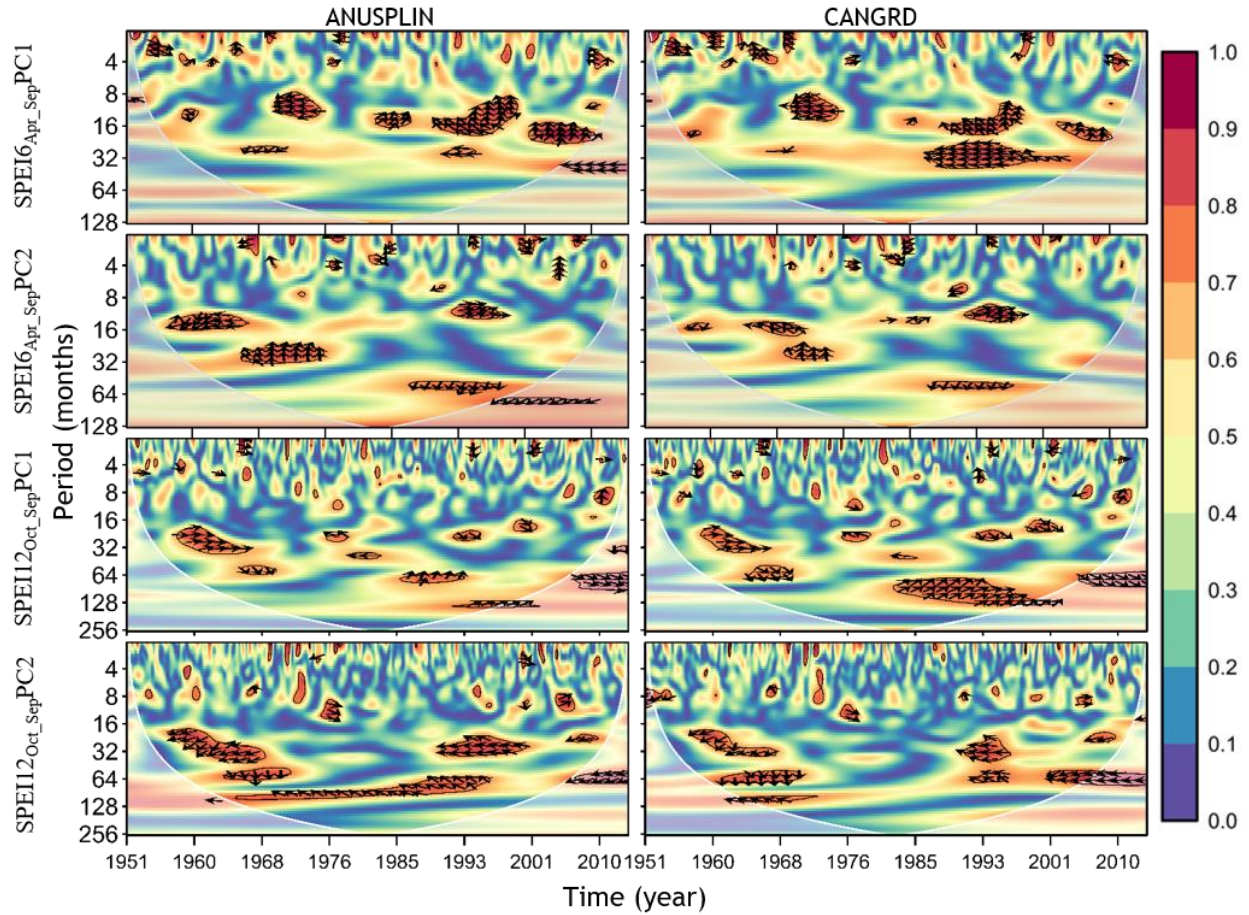
Figure S3: Squared wavelet coherence between the NAO and the temporal patterns of drought (SPEI6_{Apr_Sept} and SPEI12_{Oct_Sept}). Phase arrows pointing right indicate signals are in phase, whereas a left-pointing arrows indicate an antiphase relationship. Arrows deviating from the horizontal are indicative of lead-lag relationships between the two signals. The black contour designates the 95% confidence level against red noise, and the cone of the influence (COI) where edge effects might distort the picture is shown as a lighter grey shade.

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