Supplement of

ENSO Teleconnection Patterns Modulate Australian Extratropical Cyclones

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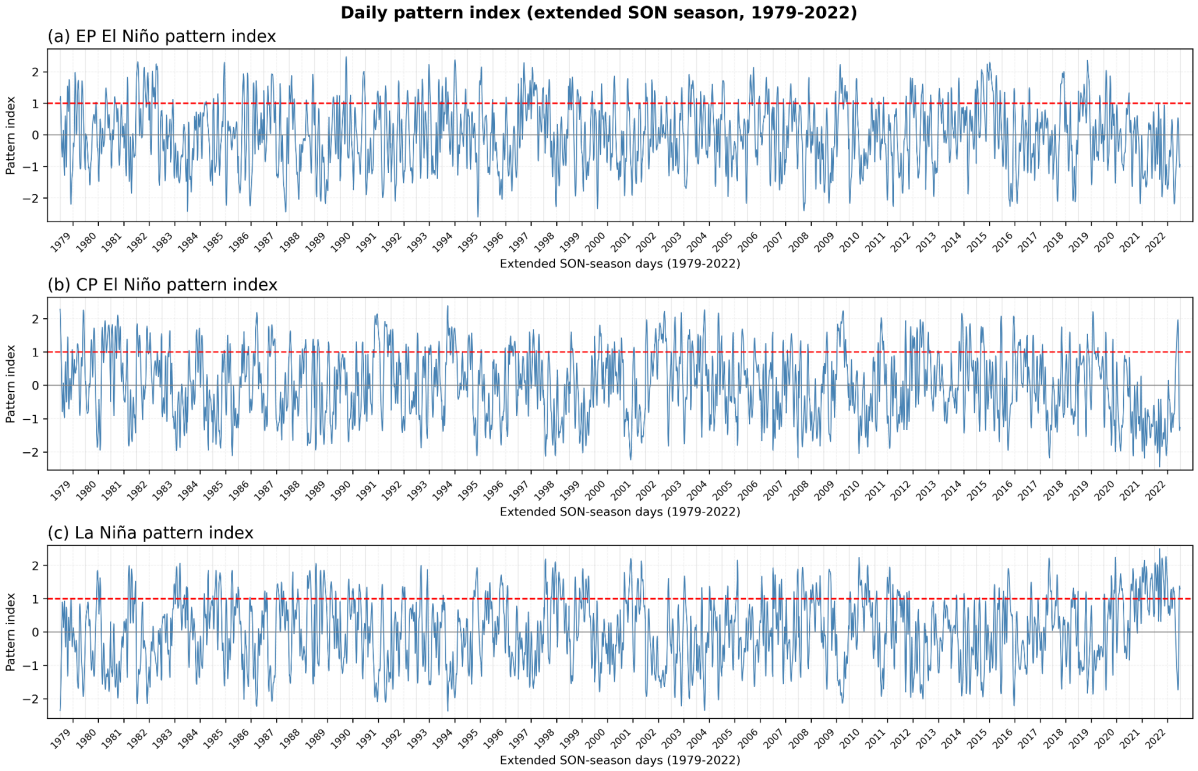

Figure S1. Timeseries of the daily pattern index for (a) EP El Niño-, (b) CP El Niño-, and (c) La Niña-related teleconnection patterns during the extended SON season (15 August-15 December) for 1979-2022. The pattern index is obtained by projecting daily low-frequency Z500 anomaly fields onto the corresponding ENSO-composited reference pattern and normalizing the resulting projection coefficients. Year labels on the x-axis are placed at the midpoint of each extended SON season for clarity. The red dashed line denotes the intensity threshold.

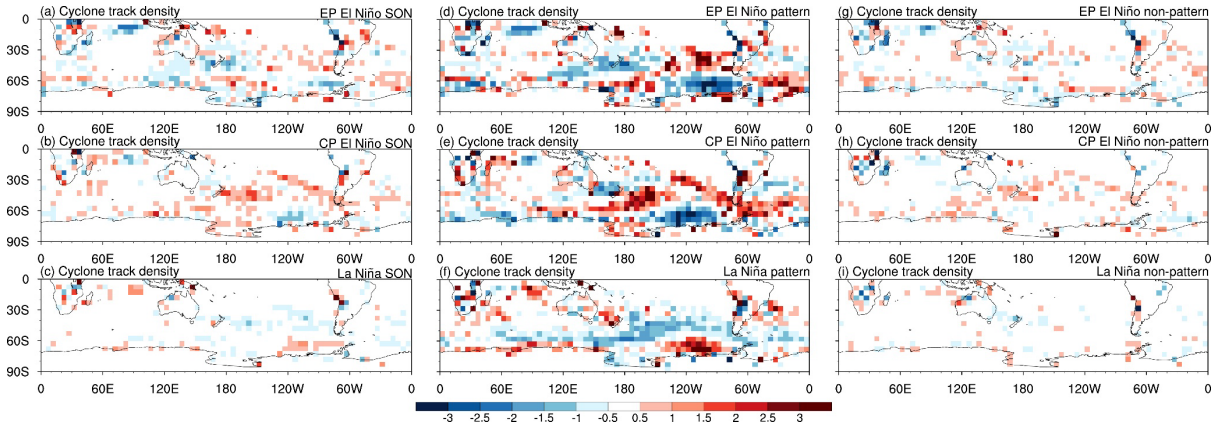

Figure S2. As in Fig. 7, but for the cyclone track density anomalies under different sample spaces during ENSO events. Columns show the anomaly field of cyclone track density (units: counts per 100 hours per 5°×5° grid box) calculated based on (a-c) the conventional seasonal window, (d-f) ENSO-related teleconnection pattern days, and (g-i) non-pattern days. Rows correspond to EP El Niño (top), CP El Niño (middle), and La Niña (bottom) events.

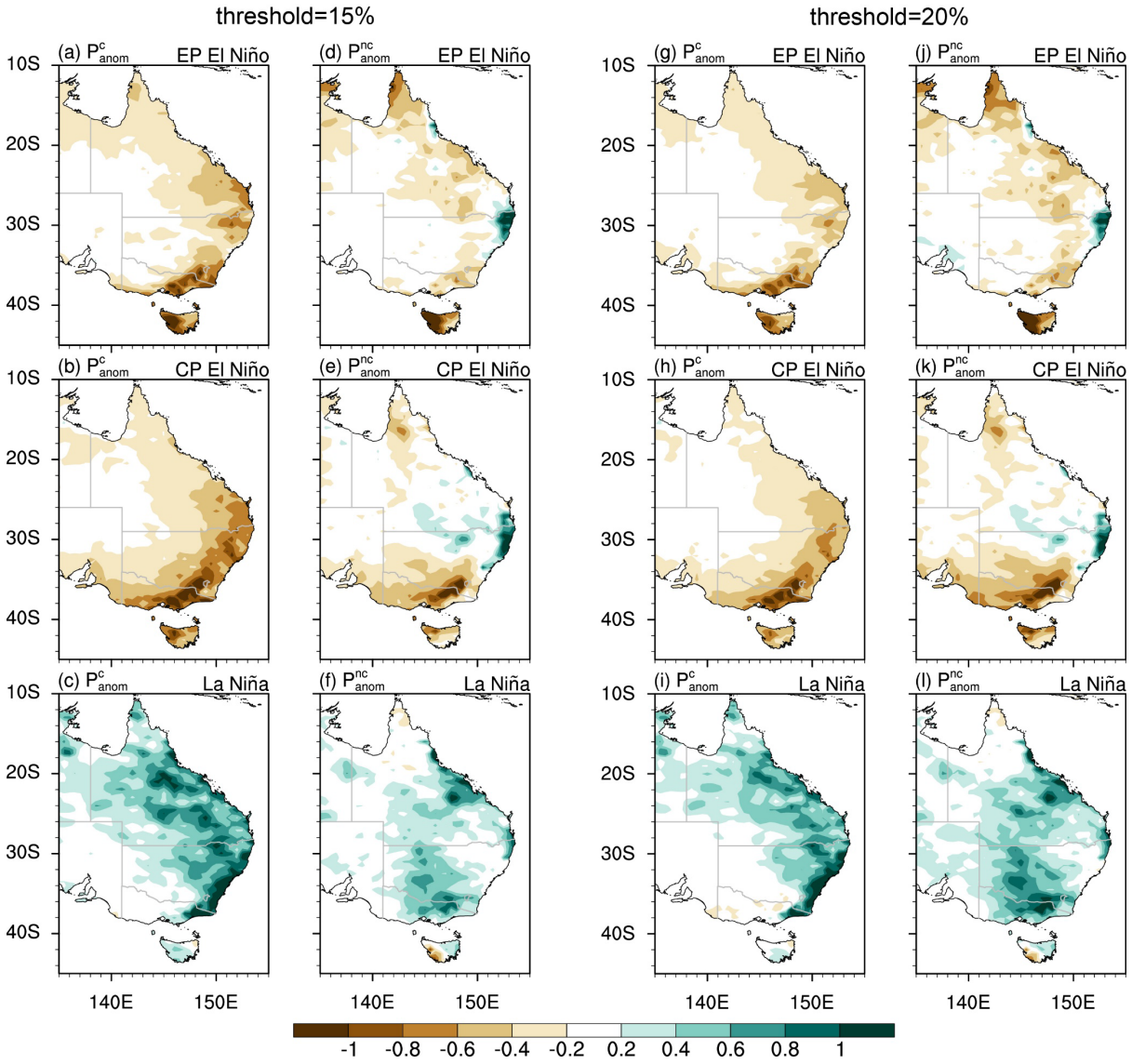

Figure S3. As in Fig. 13, but showing the sensitivity test to the threshold used to define Tasman Sea cyclone days. Rainfall anomaly decomposition (mm day^{-1}) over eastern Australia during ENSO teleconnection pattern days is presented for (left) a 15% threshold and (right) a 20% threshold. In each panel, the left column shows the component associated with Tasman Sea cyclone days (P^{c}_{anom}; a-c and g-i), while the right column shows the component associated with non-cyclone days (P^{nc}_{anom}; d-f and j-l). Rows correspond to EP El Niño (top), CP El Niño (middle), and La Niña (bottom) teleconnection pattern days.