EL NIÑO/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION

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CLIMATE PREDICTION CENTER/NCEP/NWS

9 July 2026

ENSO Alert System Status: El Niño Advisory

Synopsis: El Niño continues and will strengthen through the end of the year, with a 97% chance it will persist through early spring 2027.

El Niño strengthened over the past month, with a large area of sea surface temperature anomalies in excess of +1.0C across the central and eastern equatorial Pacific (Fig. 1). The latest weekly Niño-3.4 index value was +1.2°C, with the westernmost (Niño-4) and easternmost (Niño-1+2) indices at +0.5°C and +2.7°C, respectively (Fig. 2). The equatorial subsurface temperature index (average from 180°-100°W) increased (Fig. 3), as a recent downwelling Kelvin wave deepened the thermocline and raised temperatures in the eastern Pacific (Fig. 4). Low-level westerly wind anomalies and upper-level easterly wind anomalies were observed over the western and central equatorial Pacific. Convection was enhanced over the central and east-central equatorial Pacific and was suppressed over Indonesia (Fig. 5). The traditional and equatorial Southern Oscillation indices were significantly negative. Collectively, the coupled ocean-atmosphere system reflected a strengthening El Niño.

The North American Multi-Model Ensemble (NMME) average, including the NCEP CFSv2 (Fig. 6), forecasts El Niño to intensify through 2026. Alongside model forecasts, a strong coupling of the atmospheric and oceanic circulation across the Pacific contributes to very high confidence that El Niño will continue through early 2027 (Fig. 7). There is an 81% chance of a very strong El Niño during October-December (Fig. 8) that would rank among the largest El Niño events in the historical record going back to 1950. Even the strongest El Niño events do not lead to the typical impact everywhere, but stronger events can more significantly tilt the odds in favor of expected outcomes (see CPC outlooks for probabilities of seasonal anomalies). In summary, El Niño continues and will strengthen through the end of the year, with a 97% chance it will last through early spring 2027.

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center website (El Niño/La Niña Current Conditions and Expert Discussions). A probabilistic strength forecast is available here. The next ENSO Diagnostics Discussion is scheduled for 13 August 2026. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.enso-update@noaa.gov.

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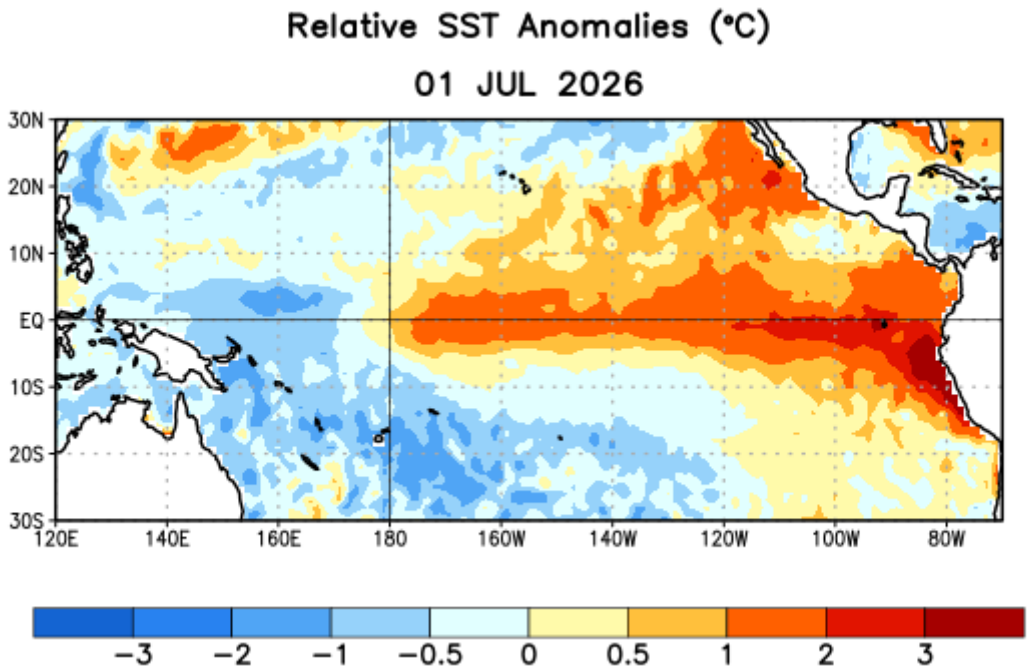

Figure 1. Average relative sea surface temperature (SST) anomalies (°C) for the week centered on 1 July 2026. Anomalies are computed with respect to the 1991-2020 base period weekly means.

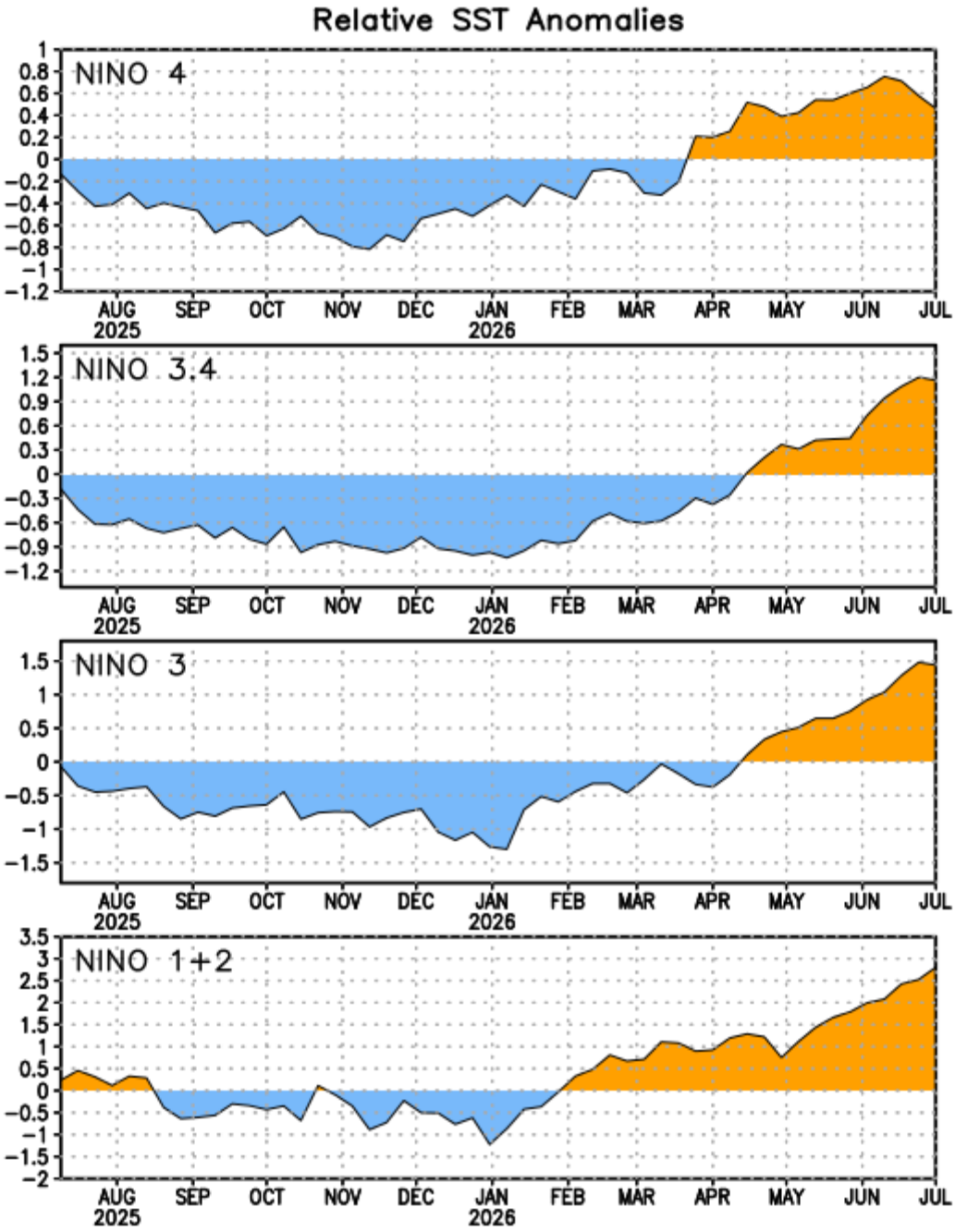

Figure 2. Time series of area-averaged relative sea surface temperature (SST) anomalies (°C) in the Niño regions [Niño-4 (5ºN-5ºS, 160ºE-150ºW), Niño-3.4 (5°N-5°S, 170°W-120°W), Niño-3 (5°N-5°S, 150°W-90°W), Niño-1+2 (0°-10°S, 90°W-80°W) minus tropical mean (20°N-20°S). The relative indices are re-scaled to match the variance of traditional indices. Anomalies are departures from the 1991-2020 base period weekly means.

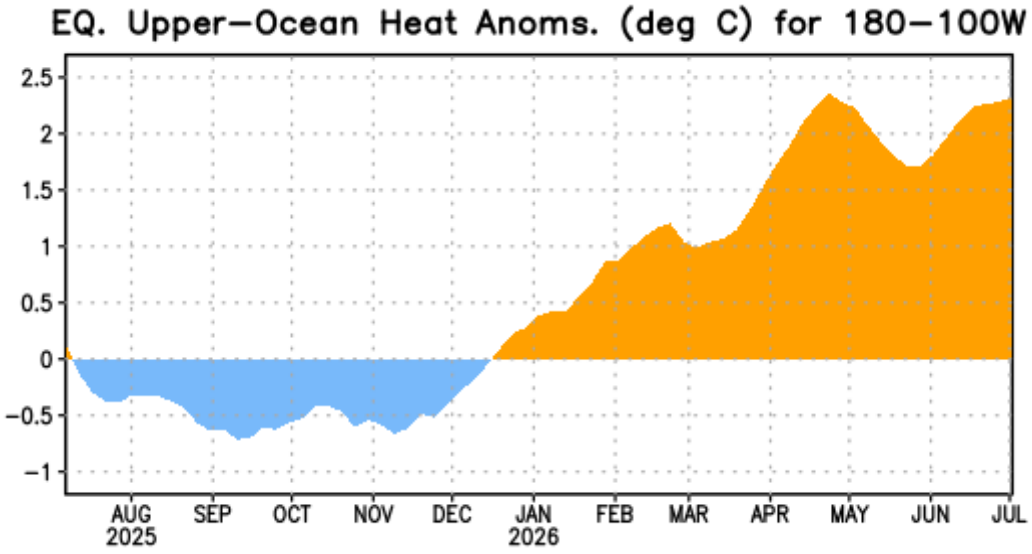

Figure 3. Area-averaged upper-ocean (0-300m) heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180º-100ºW). The heat content anomaly is computed as the departure from the 1991-2020 base period pentad means.

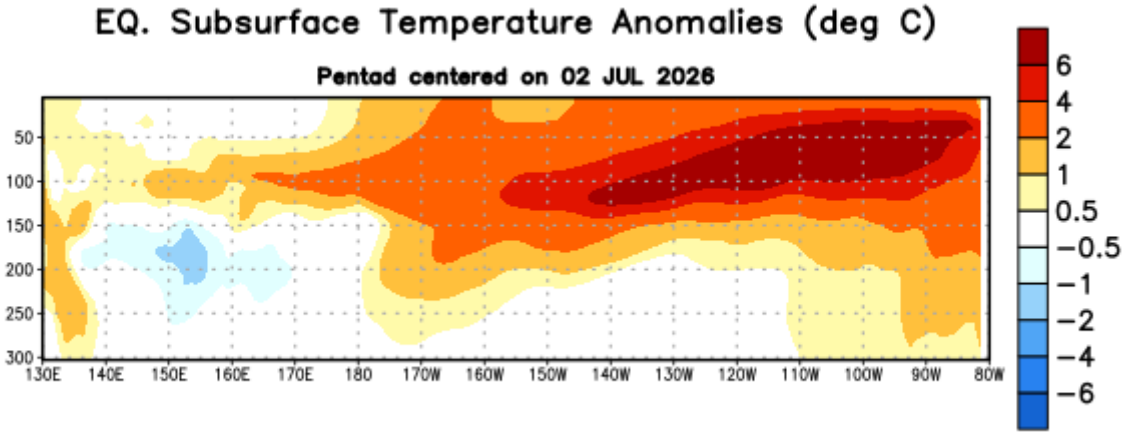

Figure 4. Depth-longitude section of equatorial Pacific upper-ocean (0-300m) temperature anomalies (°C) centered on the pentad of 2 July 2026. Anomalies are departures from the 1991-2020 base period pentad means.

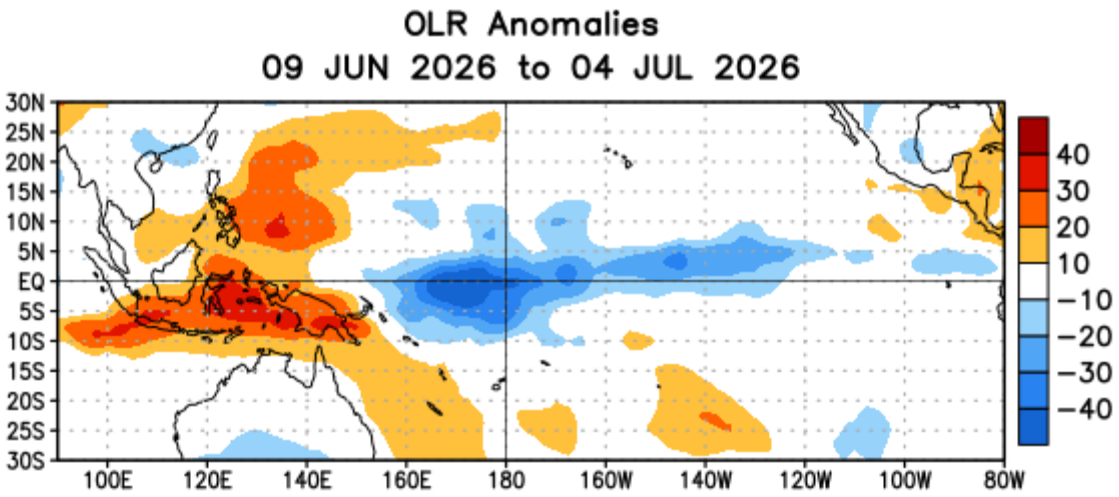

Figure 5. Average outgoing longwave radiation (OLR) anomalies (W/m^2) for the period 9 June – 4 July 2026. OLR anomalies are computed as departures from the 1991-2020 base period pentad means.

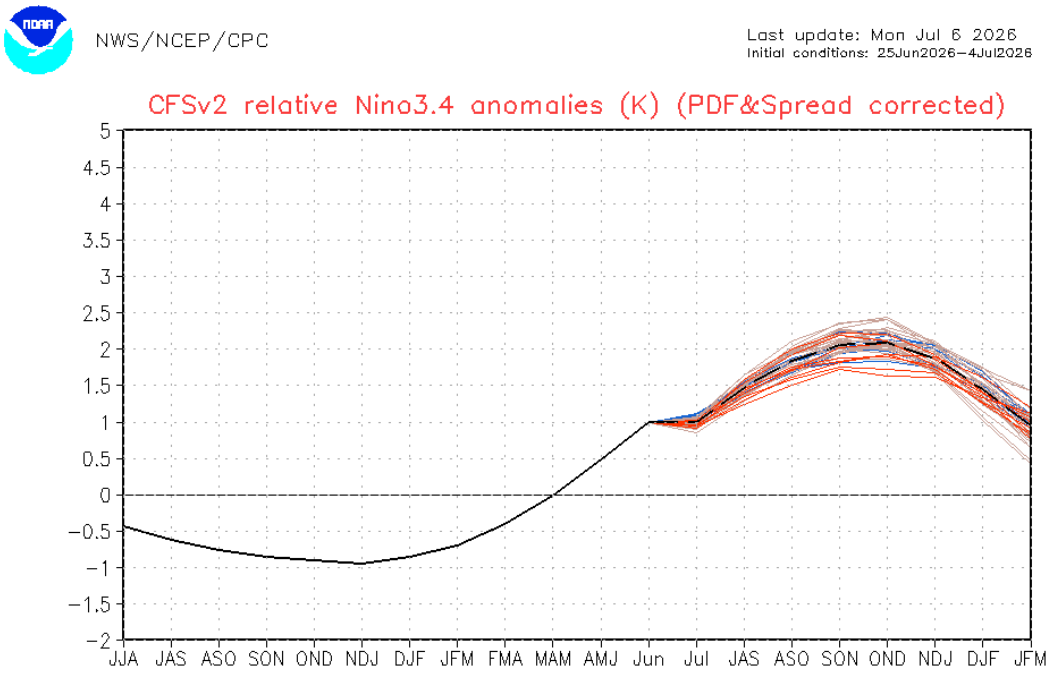

Figure 6. NCEP Climate Forecast System (CFSv2) prediction of relative sea surface temperature anomalies for the Niño 3.4 index (5°N-5°S, 170°W-120°W) minus tropical mean (20°N-20°S). The relative index is re-scaled to match the variance of the traditional index. Figure updated 6 July 2026.

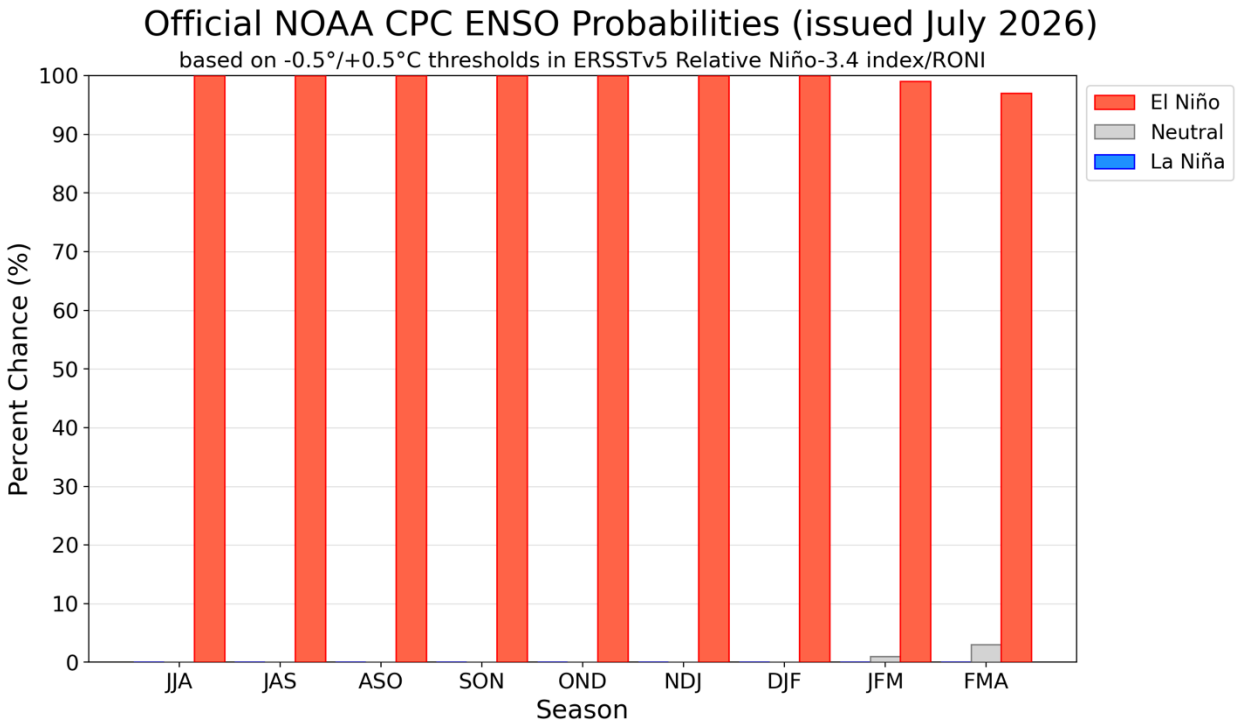

Figure 7. Official ENSO probabilities for the Niño-3.4 relative sea surface temperature index (5°N-5°S, 170°W -120°W) minus tropical mean (20°N-20°S). The relative index is re-scaled to match the variance of the traditional index. Figure updated 9 July 2026. Higher resolution image/table: https://cpc.ncep.noaa.gov/products/analysis_monitoring/enso/roni/probabilities/

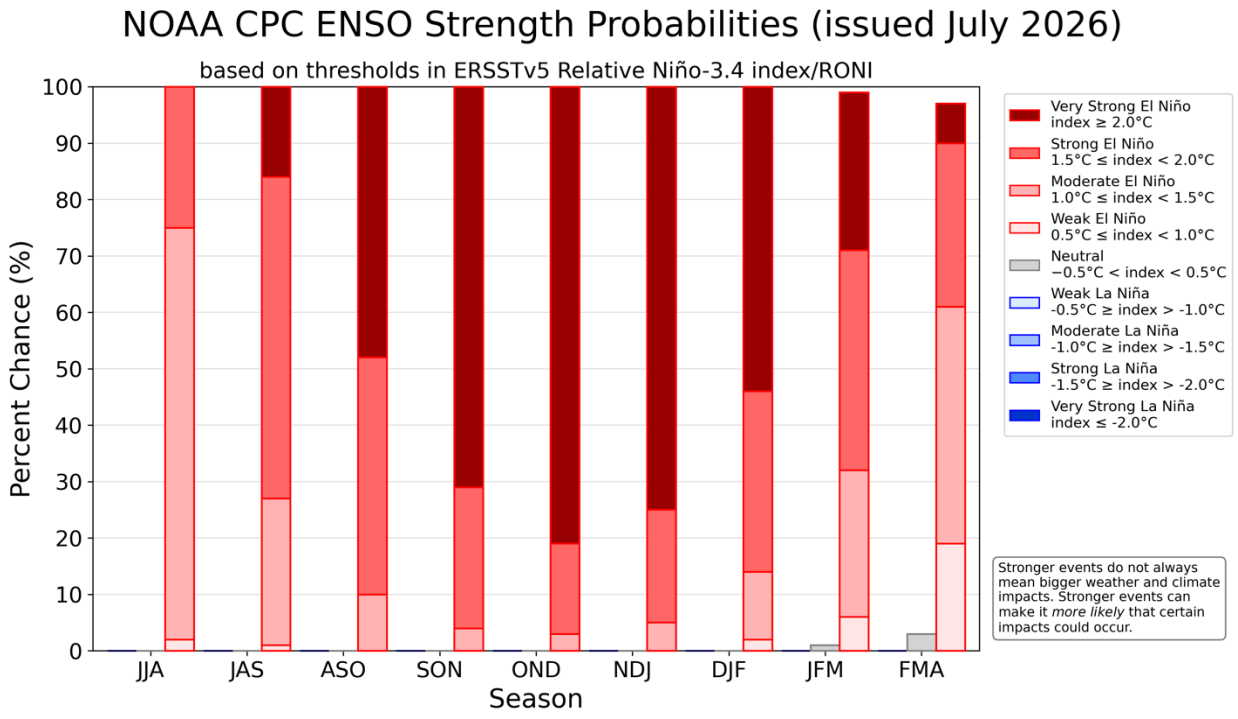

Figure 8. ENSO strength probabilities for the Niño-3.4 relative sea surface temperature index (5°N-5°S, 170°W-120°W) minus tropical mean (20°N-20°S). The relative index is re-scaled to match the variance of the traditional index. Figure updated 9 July 2026. Higher resolution image/table: https://cpc.ncep.noaa.gov/products/analysis_monitoring/enso/roni/strengths/