

EL NIÑO/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION

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CLIMATE PREDICTION CENTER/NCEP/NWS

10 September 2026

ENSO Alert System Status: **El Niño Advisory**

Synopsis: El Niño is strengthening, with a greater than 90% chance of a very strong event during the Northern Hemisphere fall and winter 2026-27.

El Niño strengthened further over the past month, with sea surface temperature anomalies exceeding +3.0°C in the eastern equatorial Pacific (Fig. 1). Except for the Niño-4 index, which decreased to +0.1°C in August, values in the other Niño indices increased, reaching +1.8°C in Niño-3.4, +2.5°C in Niño-3, and +3.4°C in Niño-1+2 (Fig. 2). The equatorial subsurface temperature index (average from 180°-100°W) remained steady during August (Fig. 3), reflecting a deeper-than-average thermocline (Fig. 4). Subsurface temperatures continued to be significantly above average, with widespread anomalies in excess of +10.0°C at depth. Low-level westerly wind anomalies and upper-level easterly wind anomalies extended from the western to the east-central equatorial Pacific. Enhanced convection and rainfall persisted from the central to the eastern Pacific, while anomalies remained suppressed over Indonesia (Fig. 5). The traditional and equatorial Southern Oscillation indices remained negative. Collectively, the coupled ocean-atmosphere system reflected a strengthening El Niño.

The [CPC Official ENSO outlook](#), which synthesizes multiple models from North America and abroad, indicates El Niño will continue to strengthen through the end of the year (Figs. 6-8). During the October-December 2026 season, there is a 75% chance of a historic event that would exceed the strength of previous El Niño events dating back to 1950 (+2.5°C or more for a [3-month RONI value](#)). With an event of this magnitude, the chances of experiencing impacts consistent with El Niño are larger, though not guaranteed (see [CPC outlooks](#) for probabilities of seasonal anomalies). In summary, El Niño is strengthening, with a greater than 90% chance of a very strong event during the Northern Hemisphere fall and winter 2026-27.

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 8 October 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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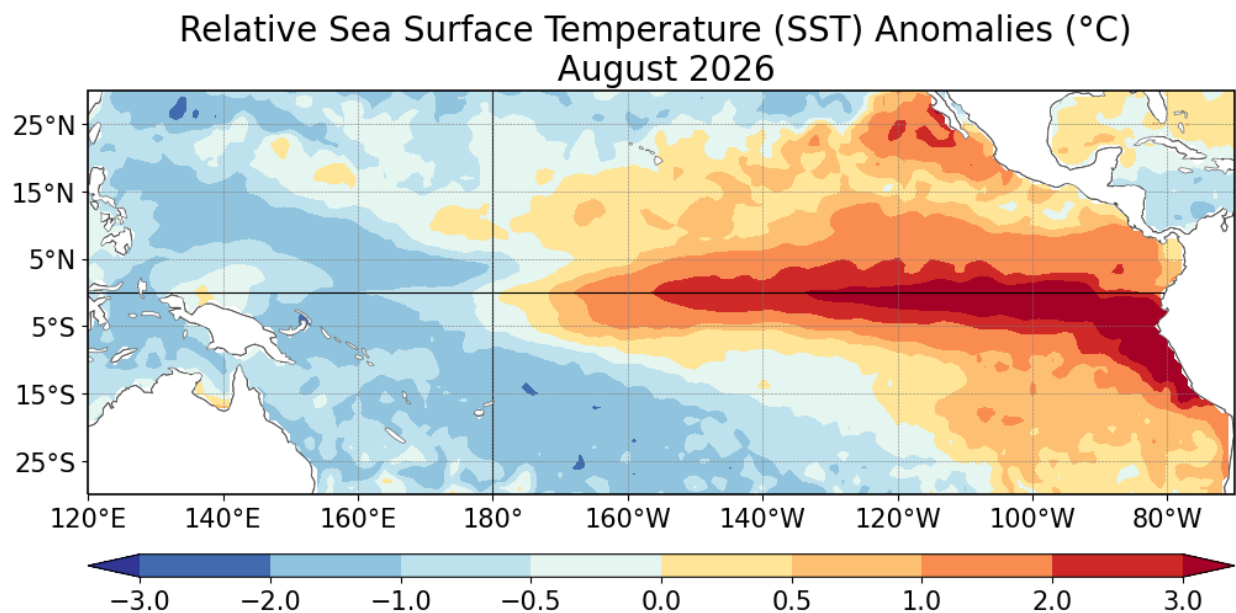


Figure 1. Average relative sea surface temperature (SST) anomalies (°C) for August 2026. Anomalies are computed with respect to the 1991-2020 base period monthly means. Data: OISSTv2.1.

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_update/Monthly_RelSSTA_map-hr.png

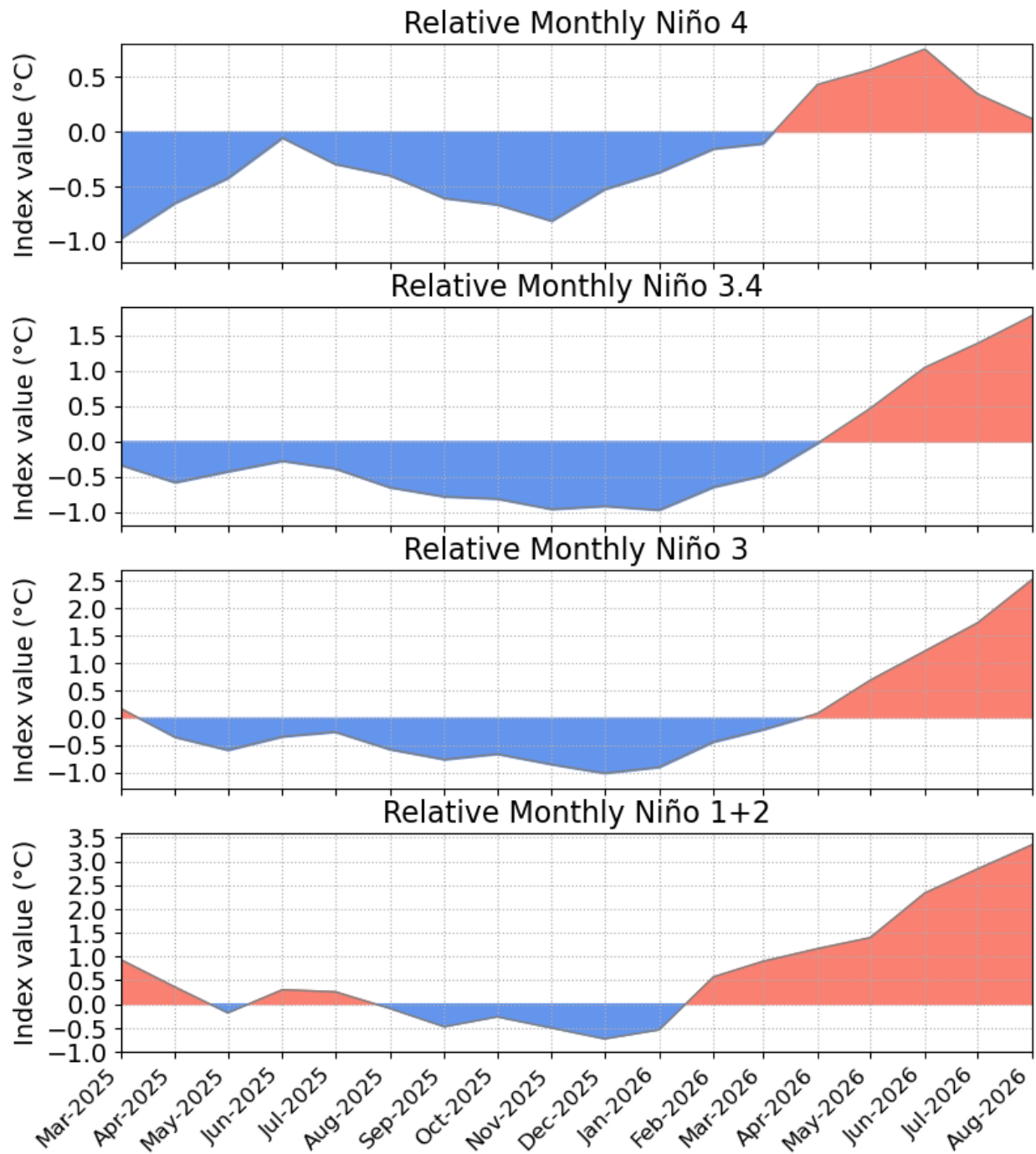


Figure 2. Time series of area-averaged relative sea surface temperature (SST) anomalies ($^{\circ}\text{C}$) in the Niño regions [Niño-4 (5°N - 5°S , 160°E - 150°W), Niño-3.4 (5°N - 5°S , 170°W - 120°W), Niño-3 (5°N - 5°S , 150°W - 90°W), Niño-1+2 (0° - 10°S , 90°W - 80°W) minus tropical mean (20°N - 20°S). The relative indices are re-scaled to match the variance of traditional indices. Anomalies are departures from the 1991-2020 base period monthly means. Data: OISSTv2.1.

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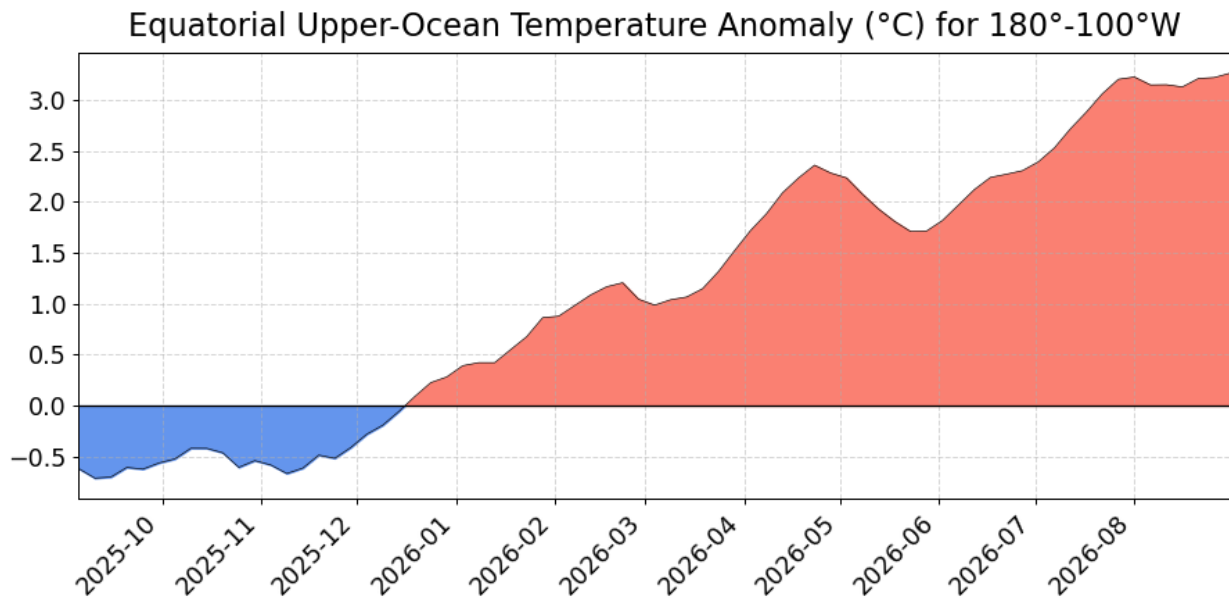


Figure 3. Area-averaged upper-ocean (0-300m) temperature anomaly (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). The temperature anomaly is computed as the departure from the 1991-2020 base period pentad means. Data: GODAS.

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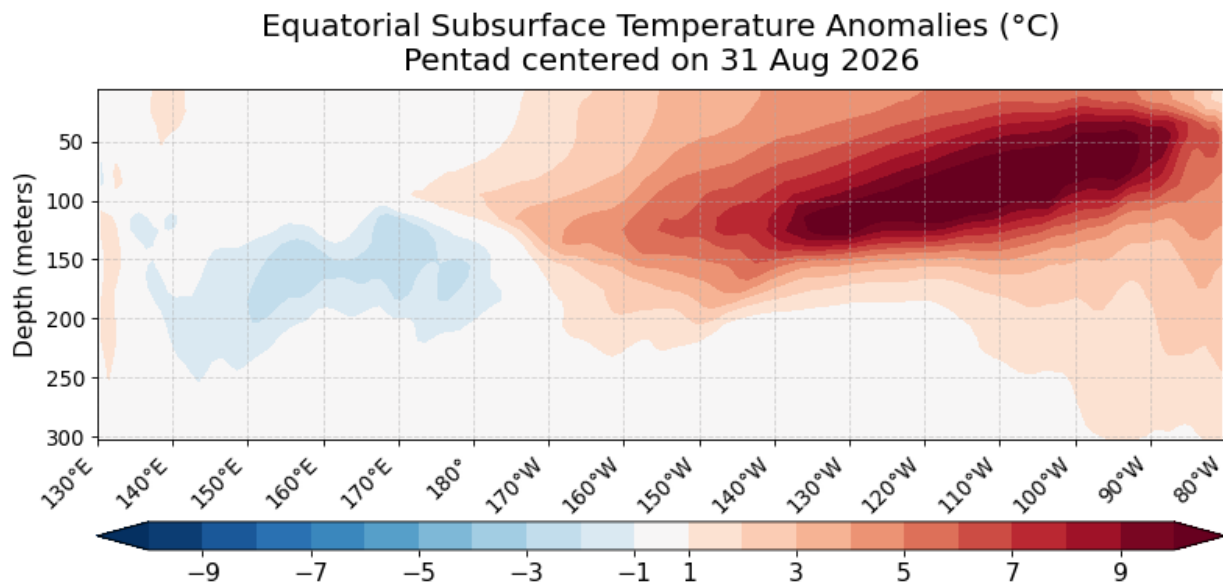


Figure 4. Depth-longitude section of equatorial Pacific upper-ocean (0-300m) temperature anomalies (°C) centered on the pentad of 31 August 2026. Anomalies are departures from the 1991-2020 base period pentad means. Data: GODAS.

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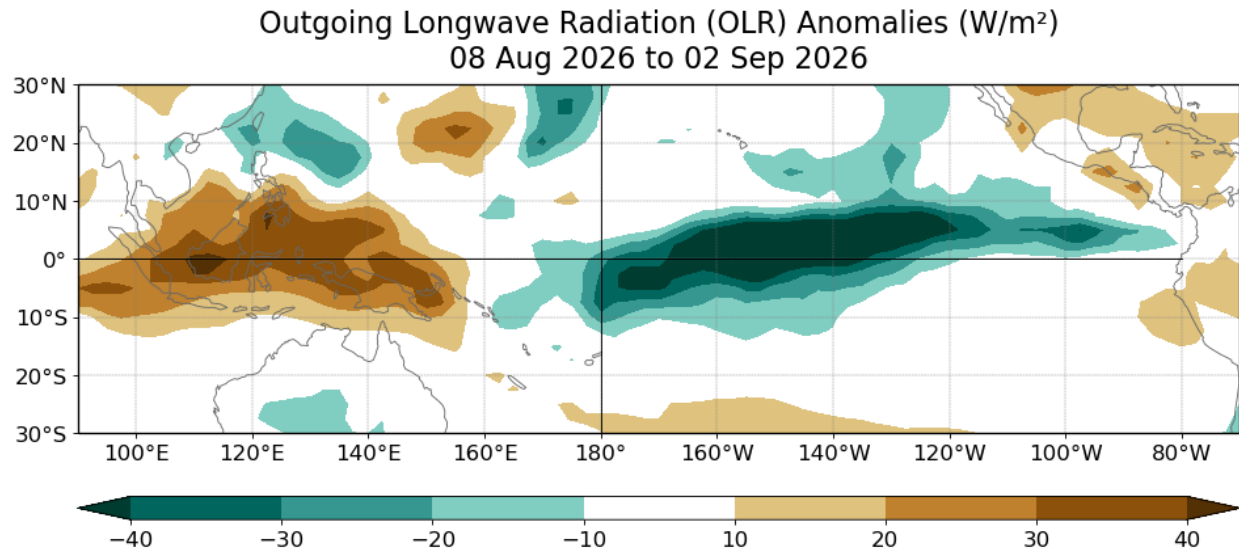


Figure 5. Average outgoing longwave radiation (OLR) anomalies (W/m^2) for the period 8 August – 2 September 2026. OLR anomalies are computed as departures from the 1991-2020 base period pentad means. Data: CBOv1.
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NOAA CPC Official ENSO Outlook (issued September 2026)

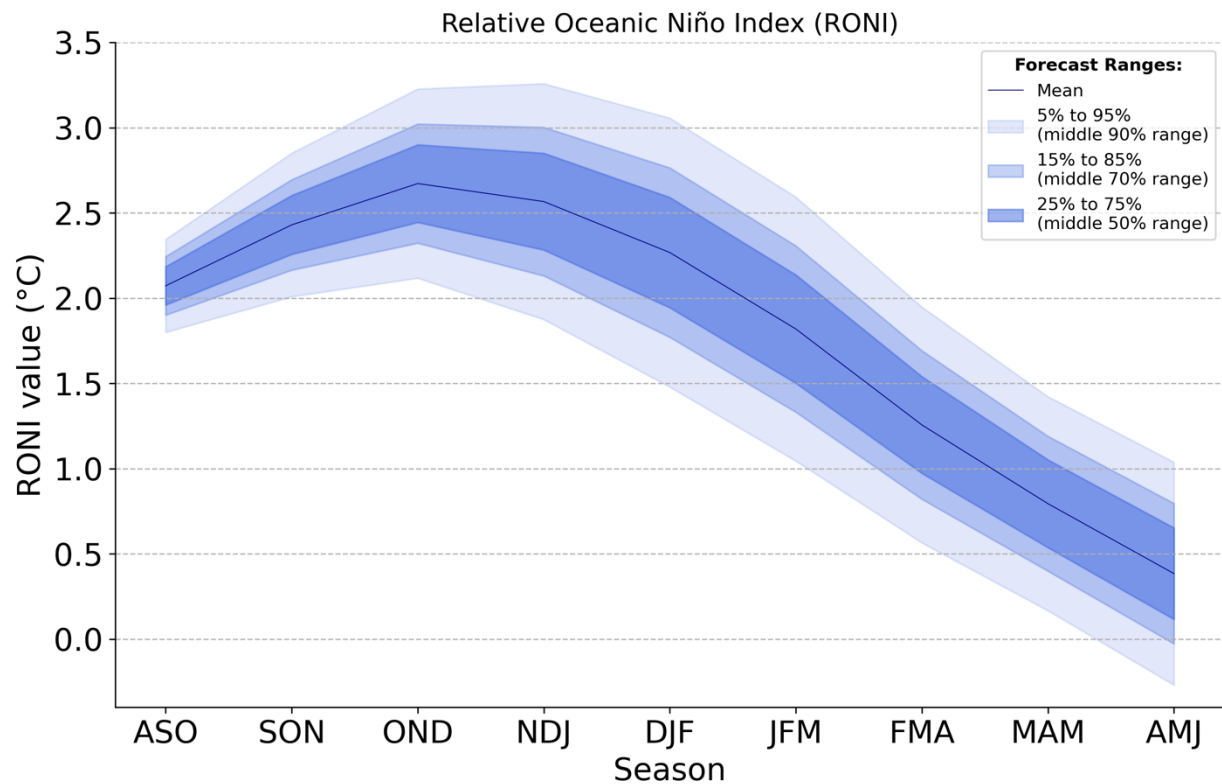


Figure 6. Official ENSO outlook (°C) for the Niño-3.4 relative sea surface temperature index (5°N-5°S, 170°W -120°W) minus tropical mean (20°N-20°S). The relative index is re-scaled to match the variance of the traditional index. Figure updated 10 September 2026. Higher resolution image/table:

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso/roni/outlook/

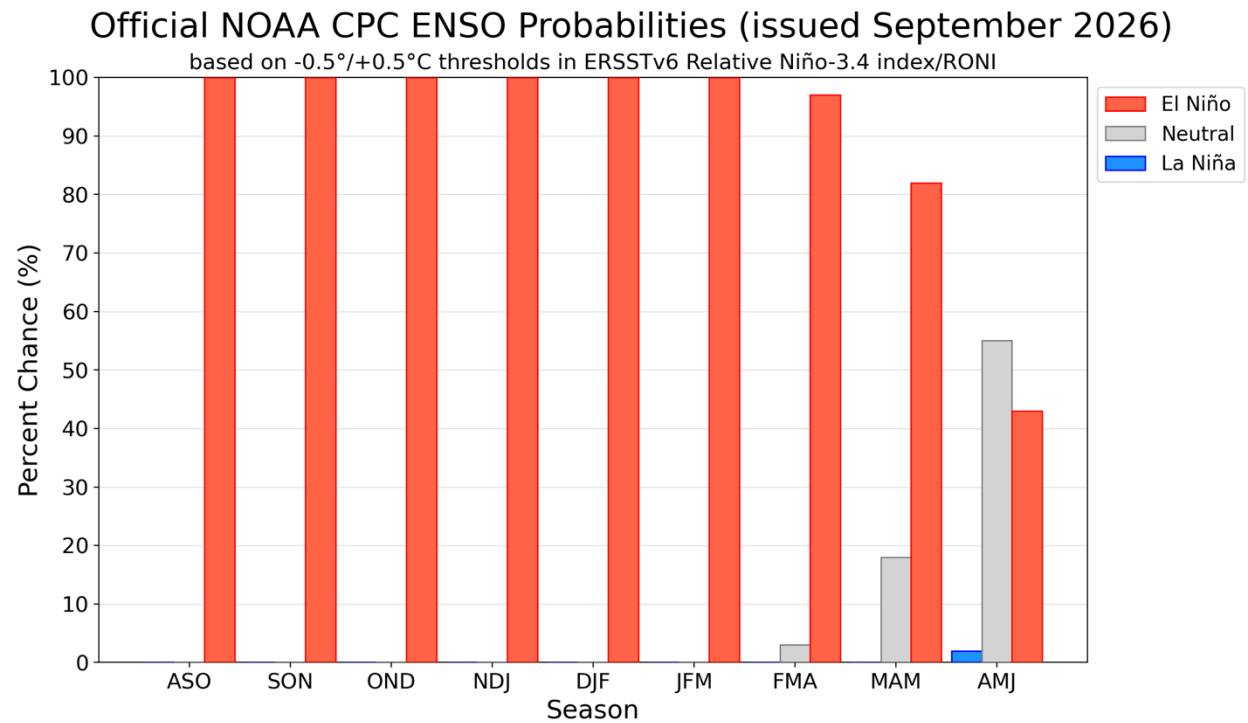


Figure 7. Official ENSO probabilities for the Niño-3.4 relative sea surface temperature index (5°N - 5°S , 170°W - 120°W) minus tropical mean (20°N - 20°S). The relative index is re-scaled to match the variance of the traditional index. Figure updated 10 September 2026. Higher resolution image/table:

https://cpc.ncep.noaa.gov/products/analysis_monitoring/enso/roni/probabilities/

NOAA CPC ENSO Strength Probabilities (issued September 2026)

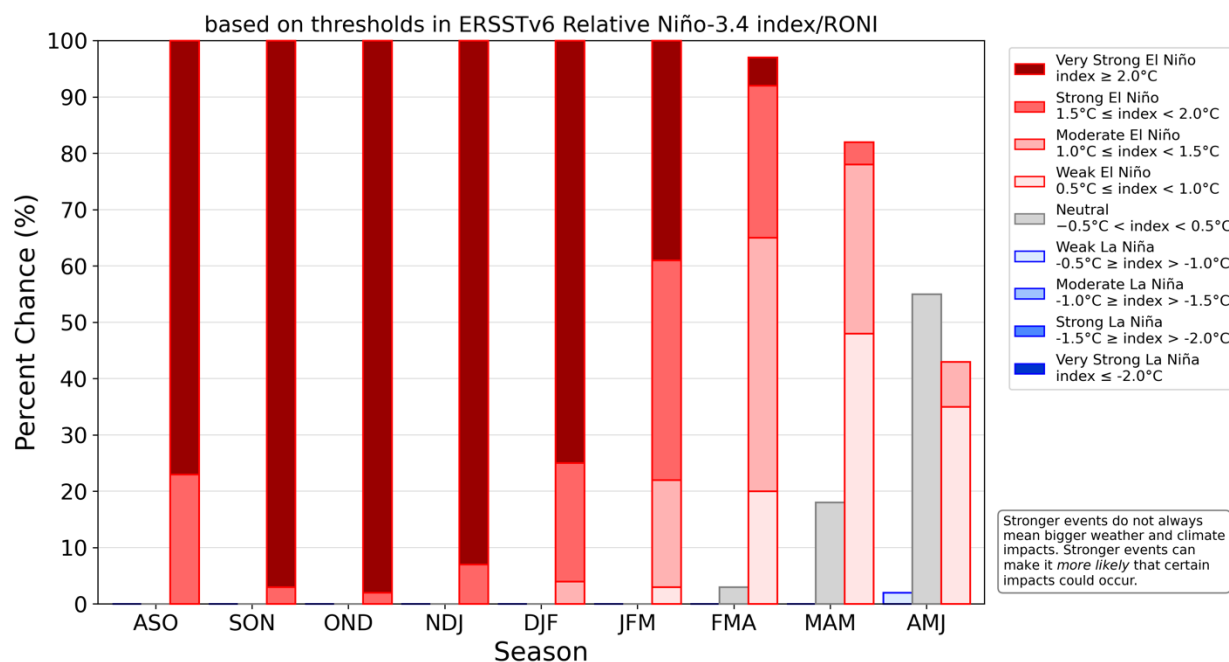


Figure 8. ENSO strength probabilities for the Niño-3.4 relative sea surface temperature index (5°N-5°S, 170°W-120°W) minus tropical mean (20°N-20°S). The relative index is re-scaled to match the variance of the traditional index. Figure updated 10 September 2026. Higher resolution image/table:

https://cpc.ncep.noaa.gov/products/analysis_monitoring/enso/roni/strengths/