ENSO Transition Signal: La Niña Fade and El Niño Risk Emergence in Q2 2026

EngineHouse Analysis

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Overview

The tropical Pacific is transitioning from weak La Niña conditions toward ENSO-neutral state, with El Niño probability rising to 40% by May-July 2026. This shift will disrupt global precipitation and temperature patterns, creating acute agricultural planning uncertainty and elevated extreme weather risk across vulnerable regions. The consequences span food price volatility, direct mortality from intensified storms, and climate-driven displacement from agricultural and coastal zones.

SECTION 2

Main Findings

What the evidence shows

Key Findings

- La Niña conditions are fading toward ENSO-neutral by March-May 2026 (60% probability) with ENSO-neutral most likely through May-July (60% probability). This represents a decisive break from the current climate regime and signals imminent global weather pattern reorganisation.
- El Niño probability is rising to 40% by May-July 2026, indicating material risk of transition to warm phase conditions. This dual-track forecast reflects genuine model uncertainty but confirms the system is moving away from La Niña suppression of tropical Pacific warmth.
- Subsurface ocean temperatures in the eastern Pacific are already warming, with sea surface temperatures shifting away from La Niña levels. This physical signal indicates the transition is underway and not merely a probabilistic forecast artifact.
- ENSO transitions drive impacts through multiple pathways beyond the index itself—regional climate drivers, seasonal timing, and local vulnerability all modulate outcomes. Single-metric forecasts mask the complexity of regional agricultural and disaster risk.

SECTION 3

Evidence

Key passages from the source

Key Passages

- WMO Global Producing Centres forecasts show 60% chance of ENSO-neutral conditions March–May 2026, with only 30% probability of La Niña continuation and 10% El Niño probability in that window. By April–June, ENSO-neutral probability rises to ~70%, and by May–July it stabilises at ~60% with El Niño probability rising to 40%.
- Sea surface temperatures and key atmospheric and oceanic indicators in the tropical Pacific confirm weak La Niña conditions are fading. Subsurface temperatures are warming and moving toward the eastern Pacific, a physical precursor to potential El Niño development.
- Tropical Pacific sea surface temperature forecasts carry substantial uncertainty across models and ensemble members, reflecting genuine predictability limits at the 3–4 month horizon. This uncertainty is material for regional impact forecasting.
- El Niño events produce substantially warmer than normal sea surface temperatures in central and eastern tropical Pacific, altering global atmospheric circulation and precipitation patterns. La Niña produces opposite effects. The transition between these states reorganises weather globally.

SECTION 4

Consequences

Human and systemic impacts

Human Consequences

ENSO transitions generate mortality through intensified extreme weather events—El Niño typically amplifies tropical cyclone activity in some regions and drought in others, with direct deaths from storms, flooding, and heat stress. Coastal communities face elevated storm surge and cyclone risk as sea surface temperatures warm. Food affordability crises emerge as crop failures and yield volatility disrupt agricultural production; farmers face acute planning uncertainty during transition periods, unable to calibrate planting decisions to either La Niña or El Niño conditions, driving yield losses and food price spikes that push vulnerable populations beyond purchasing power. Displacement cascades from both acute disaster events and chronic agricultural collapse—crop failures force rural-to-urban migration, while intensified cyclones and flooding displace coastal populations. Systemic effects include destabilisation of global food supply chains, particularly for staple crops sensitive to Pacific precipitation patterns, and erosion of agricultural insurance and credit systems as volatility exceeds historical risk models.

SECTION 5

Why This Matters

Broader significance

Significance

ENSO transitions are among the most predictable large-scale climate signals available, yet they remain among the highest-impact drivers of global food security, disaster risk, and climate migration. The current shift from La Niña toward ENSO-neutral and potential El Niño represents a critical window for early action on agricultural contingency planning, disaster preparedness, and food price stabilisation in vulnerable regions. The 3–4 month forecast horizon provides actionable lead time, but only if regional governments and humanitarian systems operationalise ENSO-informed early warning into concrete adaptation measures before the transition completes.

Sources & Provenance

- WMO Global Producing Centres ENSO forecasts (mid-February 2026 baseline)
- WMO El Niño/La Niña Update series and climate pattern documentation
- Tropical Pacific sea surface temperature and subsurface ocean data (as of mid-February 2026)
- Historical ENSO impact literature on global precipitation, temperature, and regional climate drivers