



Pacific Climate Transition: ENSO Shift Threatens Global Food Security and Extreme Weather Risks

EngineHouse Analysis

Generated 15 April 2026

Overview

The tropical Pacific is transitioning from weak La Niña conditions toward ENSO-neutral, with emerging risks of El Niño development through mid-2026. This climate shift threatens to destabilize global agricultural systems, intensify extreme weather patterns, and drive food affordability crises for vulnerable populations worldwide.

SECTION 2

Main Findings

What the evidence shows

Key Findings

- **Climate Transition Accelerating:** Weak La Niña conditions are rapidly fading toward ENSO-neutral, creating agricultural planning uncertainty and extreme weather volatility across global regions
- **Probability Shift Toward Neutral:** 60% chance of ENSO-neutral conditions through May 2026, rising to 70% by June, signaling the end of La Niña's relatively stable climate patterns
- **El Niño Risk Emerging:** While currently low at 10%, El Niño probability represents a critical threat multiplier for food systems already stressed by recent La Niña impacts and global supply chain vulnerabilities

SECTION 3

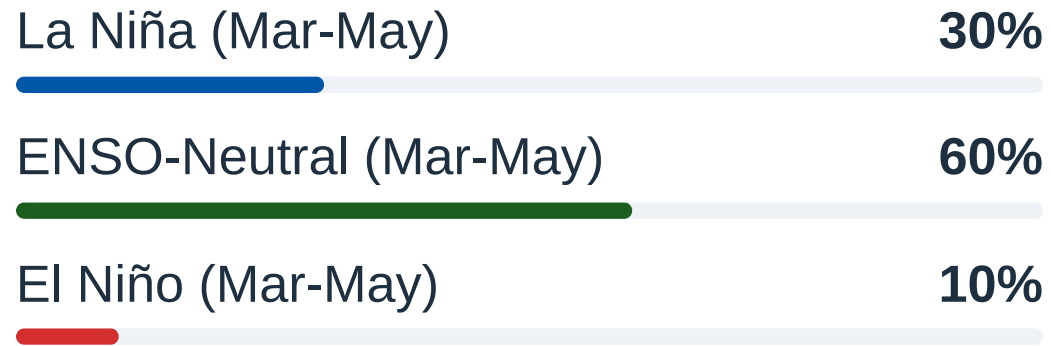
Evidence

Key passages from the source

Key Passages

- WMO Global Producing Centres confirm sea surface temperatures and atmospheric indicators show La Niña conditions fading toward ENSO-neutral as of mid-February 2026
- Forecast models show substantial uncertainty with widespread variation in tropical Pacific temperature projections across ensemble members
- Regional climate impacts depend on both ENSO state and other locally-relevant climate drivers, with magnitudes of ENSO indicators not directly corresponding to impact severity

ENSO Probability Forecast by Period



Seasonal Probability Breakdown

| Period | La Niña | ENSO-Neutral | El Niño |
|--------------|---------|--------------|---------|
| Mar-May 2026 | 30% | 60% | 10% |
| Apr-Jun 2026 | ~20% | ~70% | ~10% |
| May-Jul 2026 | ~20% | ~60% | ~20% |

Source: WMO Global Producing Centres forecasts

SECTION 4

Consequences

Human and systemic impacts

Human Consequences

ENSO transitions historically trigger deadly extreme weather events that kill thousands through intensified storms, floods, and droughts. The shift away from La Niña removes climate stability that farmers depend on for crop planning, threatening food production systems that feed billions. Food prices will spike as agricultural uncertainty spreads, pushing vulnerable populations beyond affordability thresholds and forcing mass displacement from climate-stressed regions. The emerging El Niño risk compounds these threats, as such events typically intensify coastal storm systems and disrupt monsoon patterns critical to Asian and African food security.

AGRICULTURAL PLANNING CRISIS

Farmers face unprecedented uncertainty as ENSO transition disrupts seasonal forecasting reliability during critical planting periods

SECTION 5

Why This Matters

Broader significance

Significance

This ENSO transition occurs at a critical moment when global food systems remain stressed from recent supply chain disruptions and climate impacts. The shift toward potential El Niño conditions represents a fundamental change in global climate patterns that will reshape weather risks, agricultural productivity, and food security across multiple continents through 2026.

Sources & Provenance

- WMO Global Producing Centres ENSO forecasts and sea surface temperature analysis, February 2026
- WMO El Niño/La Niña Update publication series (<https://wmo.int/publication-series/el-ninola-nina-updates>)
- Tropical Pacific atmospheric and oceanic indicator data from WMO monitoring systems