ENSO Transition Alert: From La Niña to Neutral Conditions

Global Climate Pattern Shift Analysis - February 2026

WMO Global Producing Centres Assessment

CRITICAL CLIMATE TRANSITION UNDERWAY

Weak La Niña conditions are fading as tropical Pacific indicators shift toward ENSO-neutral state

CONTEXT

Sea surface temperatures and atmospheric patterns in the tropical Pacific show clear signals of transition from La Niña conditions that have persisted through early 2026

March-May 2026 Probability Forecast

60%	30%	10%
ENSO-NEUTRAL	LA NIÑA CONTINUATION	EL NIÑO DEVELOPMENT
dominant	**declining**	**emerging**

ENSO Probability Breakdown by Period

Period	ENSO-Neutral	La Niña	El Niño
Mar-May 2026	60%	30%	10%
Current Status	Transitioning	Weakening	Minimal

Source: WMO Global Producing Centres

HIGH MODEL UNCERTAINTY

Substantial uncertainty exists across tropical Pacific sea surface temperature forecasts, with widespread variation among models and ensemble members

ENSO System Dynamics

- El Niño and La Niña represent opposite phases of Pacific Ocean-atmosphere interaction
- ENSO events alter global weather and climate patterns through tropical Pacific circulation changes
- Sea surface temperature anomalies in central and eastern tropical Pacific drive atmospheric responses

- ENSO impacts extend far beyond the Pacific region through teleconnection patterns
- Magnitude of ENSO indicators does not directly correlate with impact severity
- Regional climate outcomes depend on multiple factors beyond ENSO state alone

ENSO Phase Characteristics

El Niño

Warmer Pacific conditions

- Elevated sea surface temperatures
- Altered precipitation patterns
- Global weather disruption

La Niña

Cooler Pacific conditions

- Below-normal sea temperatures
- Enhanced trade winds
- Opposite weather impacts

ENSO-Neutral

Baseline conditions

- Normal temperature patterns
- Typical circulation
- Reduced extreme variability

HUMAN IMPACT CONSEQUENCES

ENSO transitions drive extreme weather events that kill people, displace millions, and collapse food security

CONTEXT

The shift from La Niña toward potential El Niño conditions creates cascading risks across agricultural systems, coastal communities, and vulnerable populations globally

Critical Risk Sectors

- Agricultural planning disrupted by uncertain seasonal patterns
- Crop failures and food system destabilization expected
- Coastal communities face intensified storm preparation needs

- Food prices may surge beyond reach of vulnerable populations
- Displacement risks increase with extreme weather events
- Global supply chains vulnerable to climate pattern shifts

FOOD SECURITY CRISIS RISK

Food-insecure populations face affordability collapse as agricultural systems destabilize during ENSO transitions, with farmers confronting crop planning chaos

Key Monitoring Indicators

- Sea surface temperature anomalies in tropical Pacific regions
- Atmospheric circulation patterns and trade wind strength
- Ocean subsurface temperature profiles and thermocline depth
- Precipitation patterns across ENSO-sensitive regions

Ongoing Assessment Required

Regional seasonal outlooks must assess relative effects of ENSO alongside other climate drivers to provide accurate impact forecasts for decision-makers

Sources

- WMO Global Producing Centres ENSO Forecasts, February 2026
- WMO El Niño/La Niña Updates Publication Series
- WMO (2003) Climate into the 21st Century - Circulation Patterns
- https://wmo.int/publication-series/el-ninola-nina-updates