Sea Surface Temperature (SST)

![SST Map](https://www.ospo.noaa.gov/data/sst/contour/global_small.c.gif)

**SST**

- SST values range from 0°C to 30°C.
- Apr 10

![SST Anomaly Map](https://coralreefwatch.noaa.gov/product/5km/index_5km_ssta.php)

**SST Anomaly**

- SST anomaly values range from -5°C to 5°C.
- Apr 10

[NOAA OSPO](https://www.ospo.noaa.gov/data/sst/contour/global_small.c.gif)

[NOAA Coral Reef Watch](https://coralreefwatch.noaa.gov/product/5km/index_5km_ssta.php)
Anomalies in a layer take longer to dissipate than superficial ones, and can last for weeks.
El Niño-Southern Oscillation (ENSO)

CPC Official Statement

Status: Neutral

- ENSO-neutral conditions are observed.*
- Equatorial sea surface temperatures (SSTs) are near average across most of the Pacific Ocean.

TAKEAWAYS

- The EPAC has warmed very rapidly near South America, but mostly superficially.
- The warming has been producing severe impacts in South America since February.
- Niño 3.4 is near average at this time.
Kelvin Waves: Hovmöller of Winds and Heat Content

- Westerly wind bursts (oranges) can trigger downwelling (warm) Kelvin Waves that propagate towards South America.

- Heat Content Anomalies suggest potentially 3 of these processes since January: The latest warm Kelvin is propagating already into 120°W.
ENSO: Oceanic Kelvin Waves

Generalized sub-superficial and superficial warming in the EPAC from March MJO’s low-level westerlies.

Long-fetch downwelling Kelvin wave is propagating across the Central Pacific, approaching 120W, likely to reach the coast by the end of April. Could support current Niño 1+2 warming through the end of May.

TAKEAWAYS
Calculated averaging SST anomalies in region 3.4.

Warm ENSO “El Niño” is classified when ONI exceeds +0.5°C for 3 consecutive trimesters.

The earliest this could happen in 2023 is early July, but we do not know at this time. This does not mean that ongoing warmings will not generate severe impacts. The atmosphere reads what the ocean surface is doing now.

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Takeaway: Regardless of neutral ENSO, regions prone to impacts from warmings in Niño 1+2 (and potentially Niño 3) should monitor this risk through the end of May.
ENSO-neutral conditions are expected to continue through the Northern Hemisphere spring and early summer 2023.*
Madden-Julian Oscillation (MJO)

Current Observations:

- Wave-1 Pattern continues, propagation is well defined.
- Speed: Below average, about 1.5 months to circle the globe.
- Wet phase in the Western Pac. arriving in the Americas ~ April 20.

Source: CPC
TAKEAWAYS

- Dry MJO crossing the region through April 14.
- Wet the second half of April.
- Watch out for wet Kelvin activity starting April 15.
Outlook for the next few days:


Source: NCICS
South America, Last 7 Days

CDAS 200hPa 7-Day Mean Vector Wind Total (m/s)
Period: 04/2023 – 10/2023

CDAS 200hPa 7-Day Mean Vector Wind Anomaly (m/s)
Period: 04/2023 – 10/2023

CDAS 850hPa 7-Day Mean Vector Wind Total (m/s)
Period: 04/2023 – 10/2023

CDAS 850hPa 7-Day Mean Vector Wind Anomaly (m/s)
Period: 04/2023 – 10/2023

CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)
Period: 04/2023 – 10/2023

Satellite – Estimated Rainfall (CMORPH)

Gauge Rainfall

200 hPa Flow

850 hPa Flow

Average

Anomaly
Caribbean/Central America, Last 7 Days

200 hPa Flow

850 hPa Flow

Rainfall from Gauges (CPC)

Satellite – Estimated Rainfall (CMORPH)
¡Gracias! Thank you! ¡Obrigado!

Next Session: May 10, 2023, 15UTC

Recorded sessions and more information available at:
https://rammb2.cira.colostate.edu/training/rmtc/focusgroup/

For enrolling in the distribution list for RFG announcements, please send an email to jose.galvez@noaa.gov or bernie.connell@colostate.edu