Climate Indices
Current Status and Projections

Wednesday 10 May 2023
Sea Surface Temperature (SST)

SST

May 8

SST Anomaly

May 8

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
Top Layer Temperature Anomaly

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: El Niño Watch

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

TAKEAWAYS
- The rapid EPAC warming that started in mid-March is expanding west and north.
- Impacts on weather and climate are becoming very prominent in Central America (warm temperatures and dry conditions). They continue in western South America.
- Niño 3.4 is warming, but still below +0.5°C (+0.4°C last week).
Hovmöller of Zonal Wind & Heat Content Anomalies

Westerly wind bursts can trigger warm Kelvin Waves that propagate towards South America.

**TAKEAWAYS**

- Heat Content Anoms. suggest 2 warm Kelvin, potentially arriving in SAM by late May and early July.
- Periods of basin-wide westerly anomalies have exacerbated heat content anomalies.
ENSO: Oceanic Kelvin Waves

Equatorial Pacific Temperature Anomaly Section

TAKEAWAYS

• Generalized sub-superficial warming of the equatorial Pacific from recurrent basin-wide westerly anomalies favored by the active MJO.

• Two warm Kelvin waves are propagating, the western one is much weaker.
ENSO-neutral conditions are expected to continue through the Northern Hemisphere spring, followed by a 62% chance of El Niño developing during May-July 2023.*
Madden-Julian Oscillation (MJO)

Current Observations:

- Very well defined Wave-1 Pattern continues.
- Speed: 1 to 1.5 months to circle the globe.
- Wet phase in the Maritime Continent/West Pac, arriving circa May 20.

Source: CPC
**TAKEAWAYS**

- Dry MJO ending circa May 15.
- Wet MJO last 10 days of May, primarily.
Outlook for the next few days:

- Wet Kelvin on May 13-15 for Mexico/Central America, and May 16-18 for northern South America.
South America, Last 7 Days

Rainfall Anomalies

200 hPa Flow

850 hPa Flow

Average

Anomaly

Satellite – Estimated (CMORPH)

Gauges
Caribbean and Central America, Last 7 Days

Rainfall Anomalies

Gauges (CPC)

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

Next Session: 14 June 2023 at 15:00 UTC

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

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