Climate Indices
Current Status and Projections

Wednesday 22 May 2024
Sea Surface Temperature (SST)

https://coralreefwatch.noaa.gov/product/5km/index_5km_ssta.php

NOAA Coral Reef Watch

https://coralreefwatch.noaa.gov/product/5km/index_5km_ssta.php

20 May

SST

Anomalies

20 May

NOAA OSPO

https://www.ospo.noaa.gov/data/sst/contour/global_small.c.gif

NOAA OSPO

https://www.ospo.noaa.gov/data/sst/contour/global_small.c.gif
Anomalies in a layer take longer to dissipate than superficial ones, and can last for weeks.

**Top Layer Temperature Anomaly**


Source: NOAA Coral Reef Watch
https://coralreefwatch.noaa.gov/product/5km/index_5km_ssta.php
**El Niño-Southern Oscillation (ENSO)**

**CPC Official Statement**

**El Niño Advisory / La Niña Watch**

- El Niño is transitioning toward ENSO-neutral.*
- Equatorial sea surface temperatures (SSTs) are above average in the western and central Pacific Ocean, and below-average SSTs are emerging in the east-central and eastern Pacific Ocean.

**TAKEAWAYS**

- Cold tongue rapidly forming.
- South American coast is cooling.
ENSO: Oceanic Kelvin Waves

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TAKEAWAYS

- A strong cool (upwelling) Kelvin wave is propagating into the South American coast. It should stimulate the current cooling of the coast through mid-June.
A transition from El Niño to ENSO-neutral is likely in the next month. La Niña may develop in June-August 2024 (49% chance) or July-September (69% chance).*
Madden-Julian Oscillation (MJO)

Current Observations:

- The MJO has become better organized in the last couple of weeks, and is exhibiting a wave-1 pattern. Wave 1 = One divergent region and one convergent region across the globe.
- The upper convergent phase is crossing the Americas.

Velocity Potential and Brightness Temperature (shaded)

May 14

May 19

Source: CPC
Empirical Wave Propagation (EWP)
CHI 200 hPa 40-DAY forecast (00z21may2024–30jun2024)
(based on EWP zonal harmonics)

Global Forecast System (GFS)
CHI 200 hPa 15-DAY forecast (00z21may2024–05jun2024)
(based on NCEP GFS)

Climate forecast System (CFS)
CHI 200 hPa 40-DAY forecast (00z21may2024–30jun2024)
(18-mo Aero GFS+ I C – 20240521.00)

TAKEAWAYS
• EWP more reliable than in previous times. This time the GFS is the outlier.
• Next wet phase, potentially during the second and third weeks of June. **Important for the hurricane season!**
Outlook for the next few days:

- Although a large-scale upper convergent pattern is present in the Americas, a Kelvin wave is forecast to cross the region through the weekend.
- This might marginally enhance the rainfall event occurring in the Greater Antilles through Saturday May 25th.
South America, Last 7 Days

Rainfall Anomalies

200 hPa Flow

850 hPa Flow

Average

Anomaly

Gauges

Satellite – Estimated (CMORPH)
Caribbean and Central America, Last 7 Days

Rainfall Anomalies

Gauges (CPC)

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

Next Session: Tuesday June 18, 15 UTC

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