WMO VLab Regional Focus Group
of the Americas and Caribbean

Since 2004

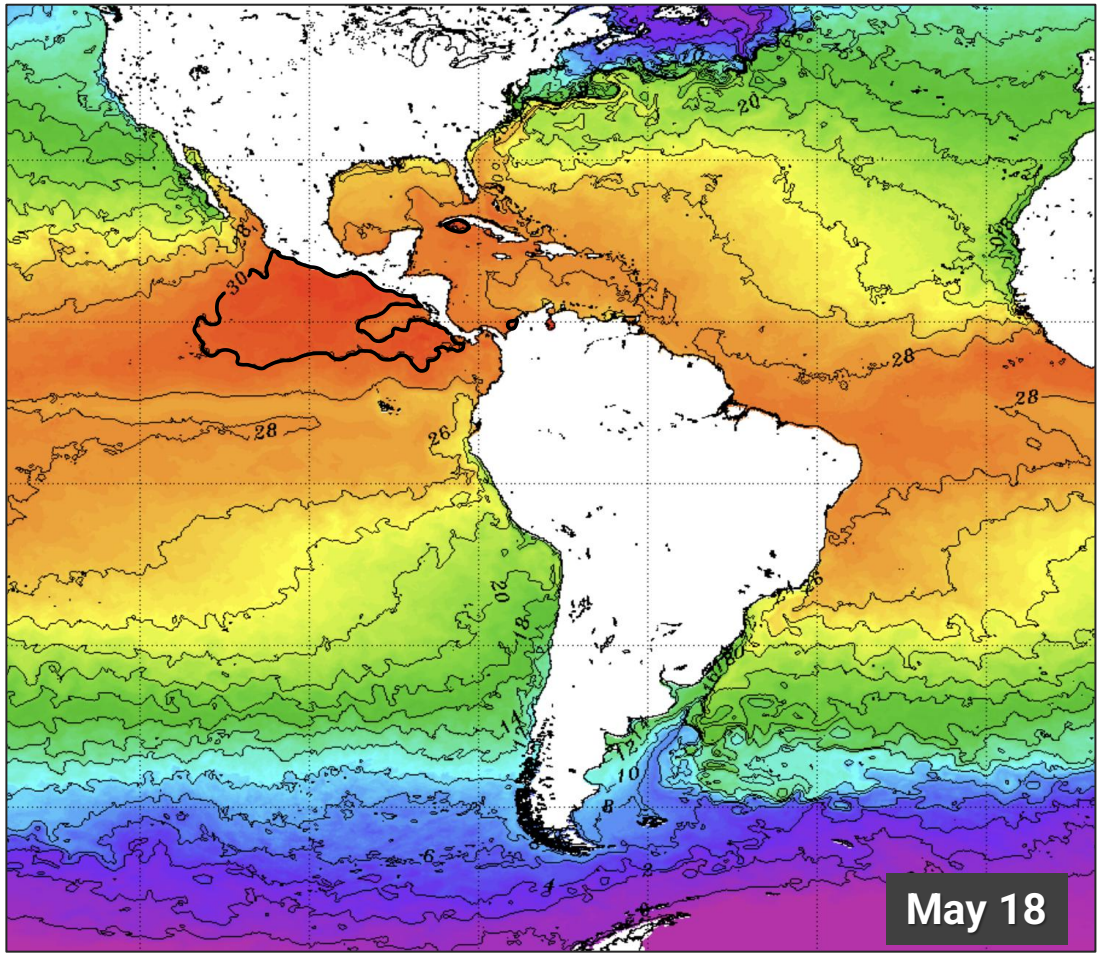
Climate Indices

Current Status and Projections

Wednesday 20 May 2026

Sea Surface Temperature (SST)

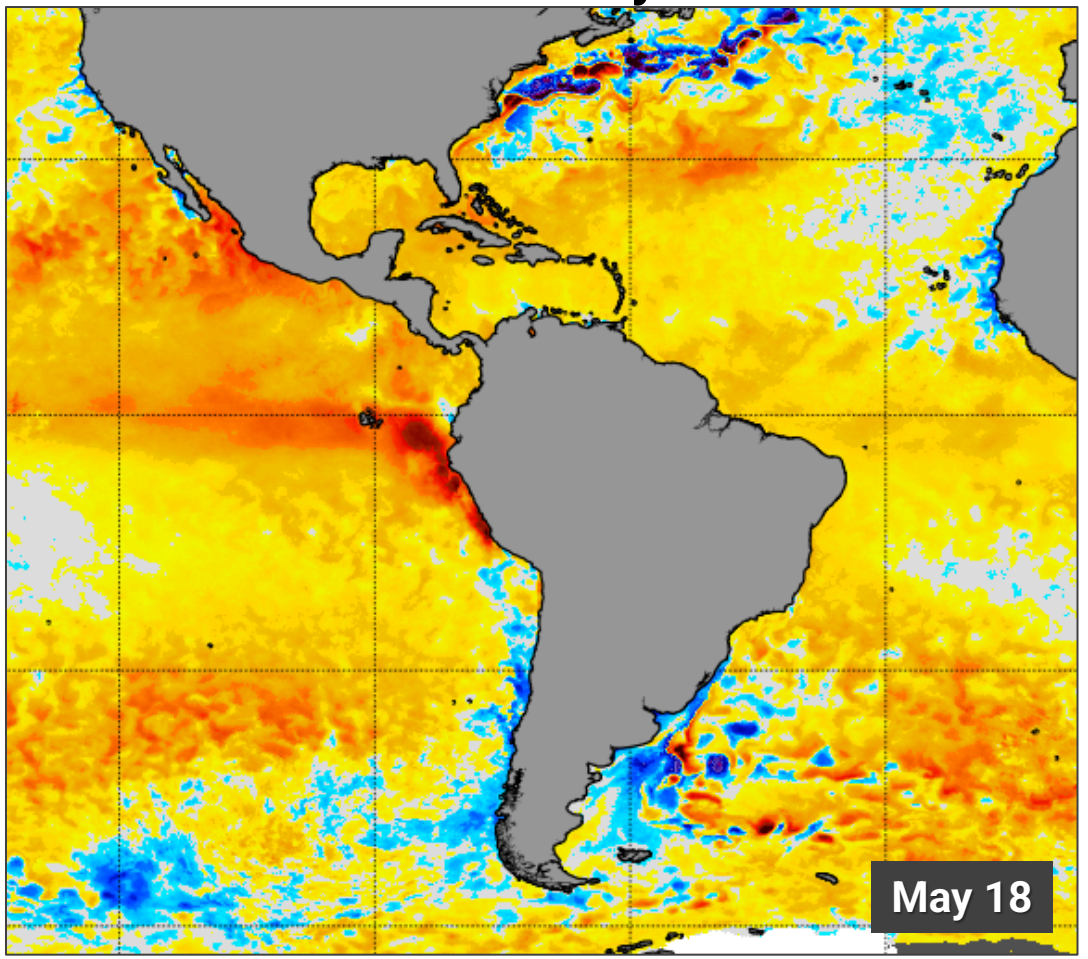
SST



Source: OSPO

Sea Surface Temperature (°C)

Anomaly

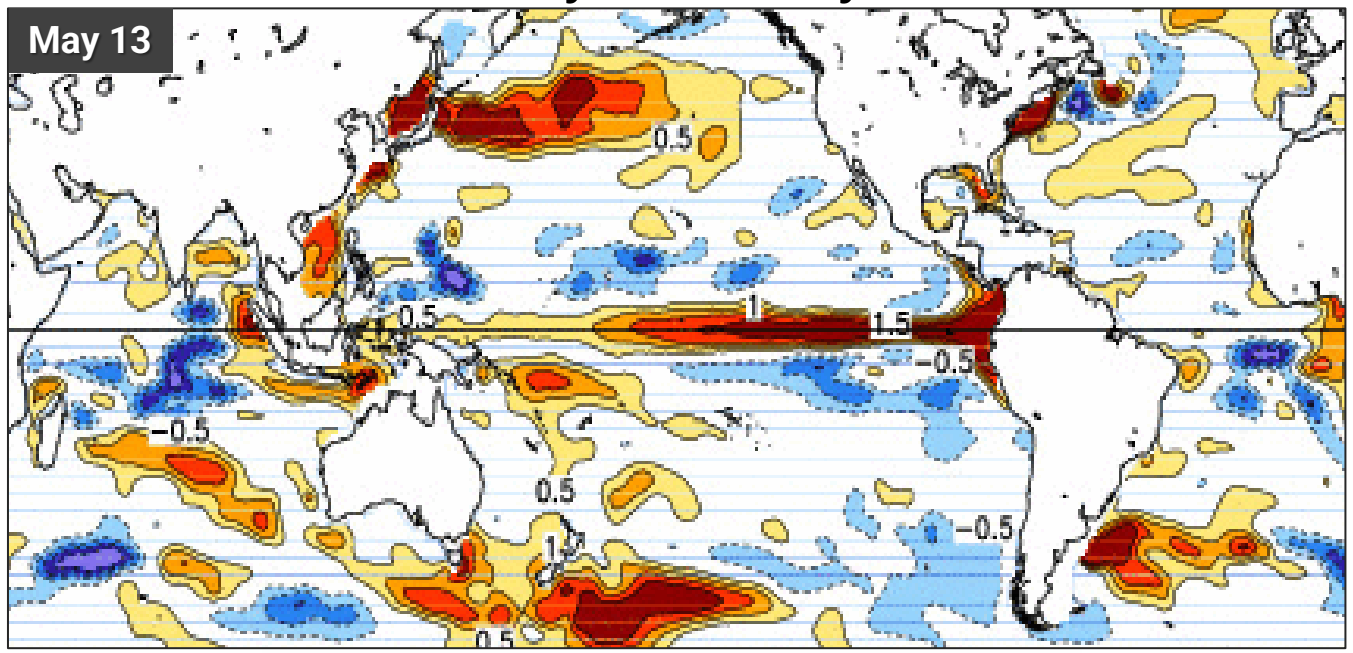


Source: NOAA Coral Reef Watch

SST Anomaly (°C)

Top 300m Layer Temperature Anomaly

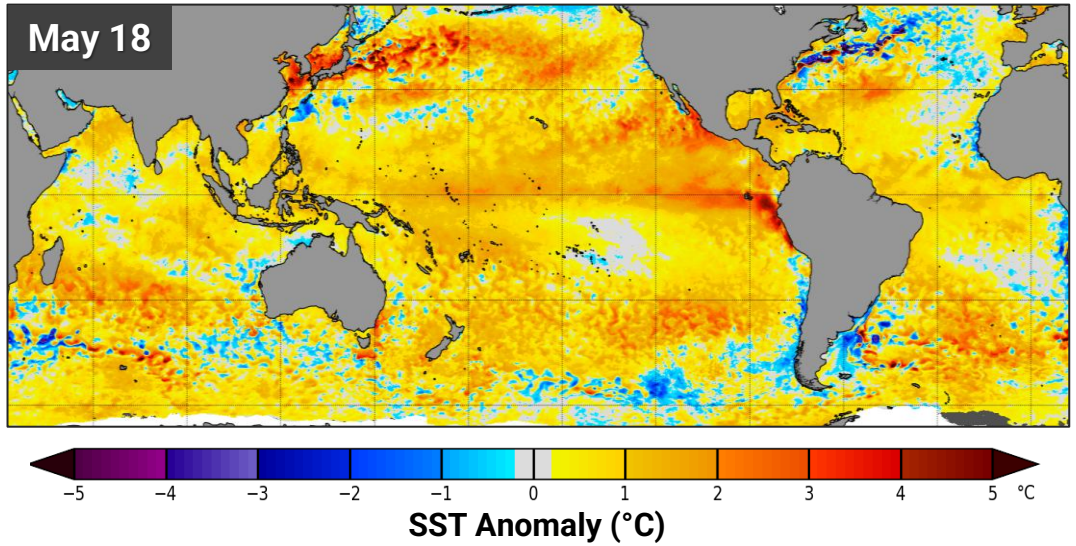
Layer Anomaly



Source: GODAS, CPC

Layer anomalies matter, as they last longer than superficial ones, making them a great subseasonal forecasting tool!

Surface Anomaly



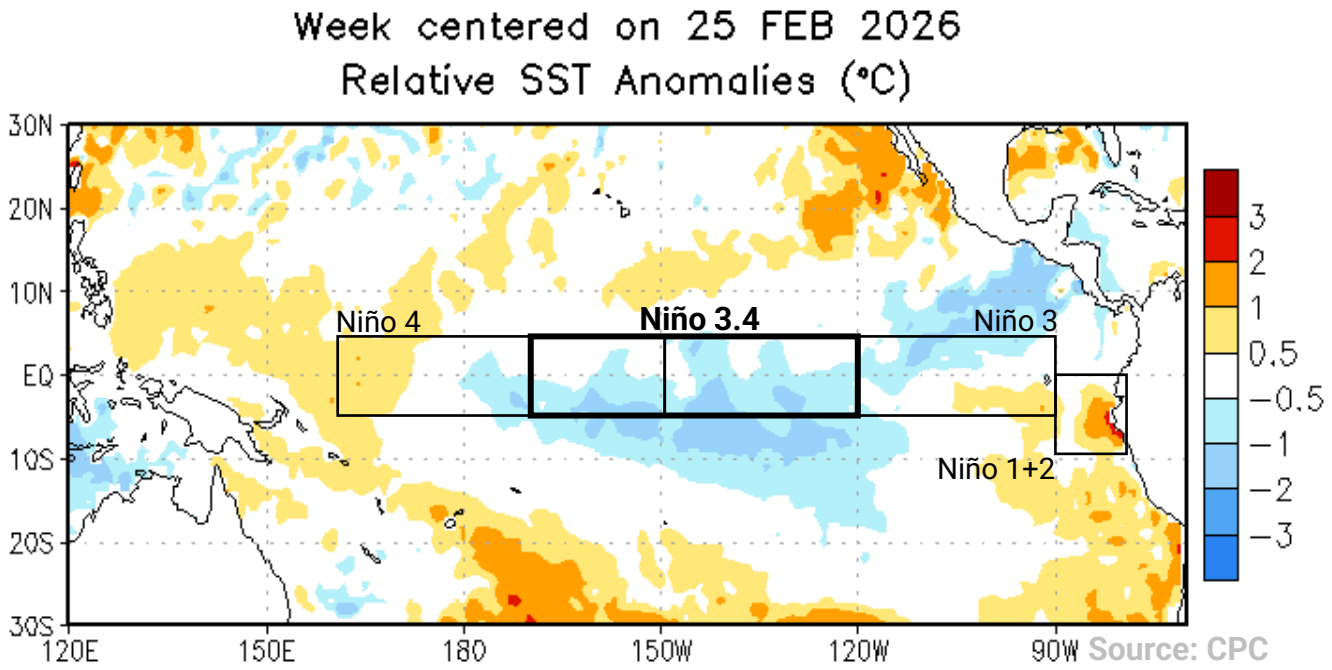
Source: NOAA Coral Reef Watch

El Niño-Southern Oscillation (ENSO)

CPC Official Statement

El Niño Watch

- ENSO-neutral conditions are present.*
- Equatorial sea surface temperatures (SSTs) are near-to-above-average across the central and eastern Pacific Ocean.



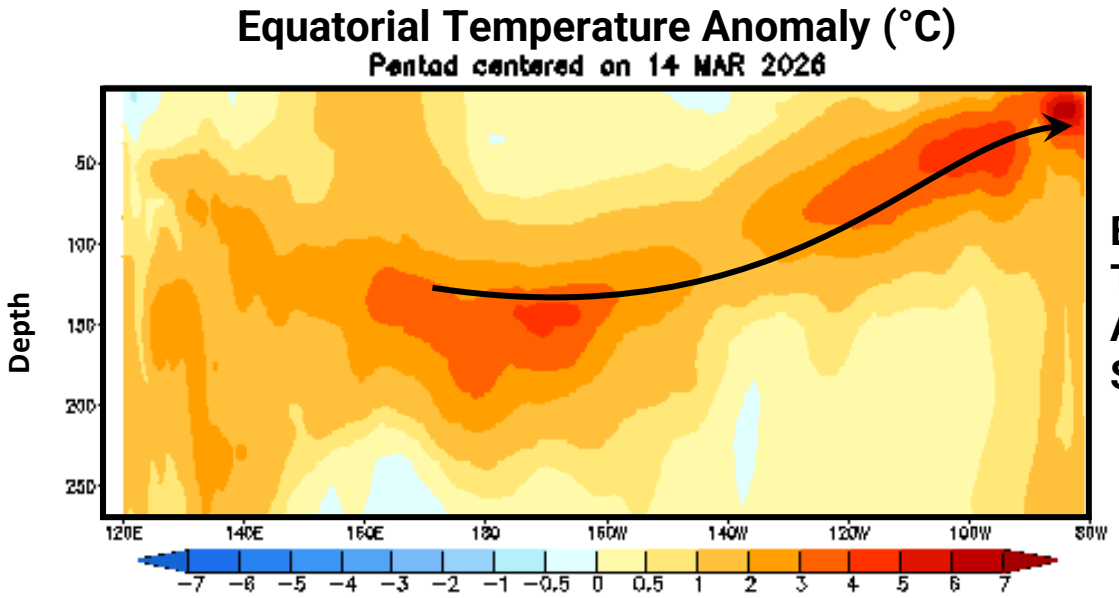
Key Points

- Positive anomalies are showing in all Niño Regions, even in Relative SST Anomaly fields.
- The system has warmed up very rapidly in the last few weeks.
- The South American coast is warming up the fastest recently, due to the arrival of a massive envelope of downwelling Kelvin Waves.

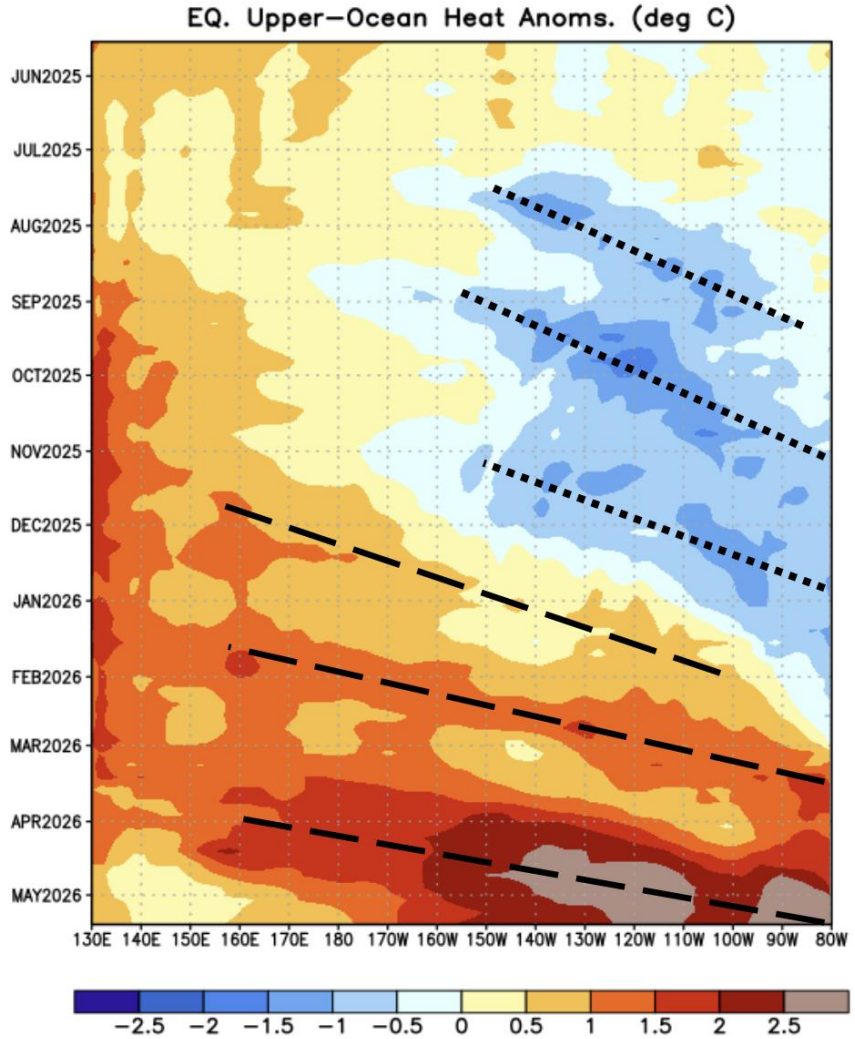
Massive Envelope of Warm Oceanic Kelvin Waves

Takeaways

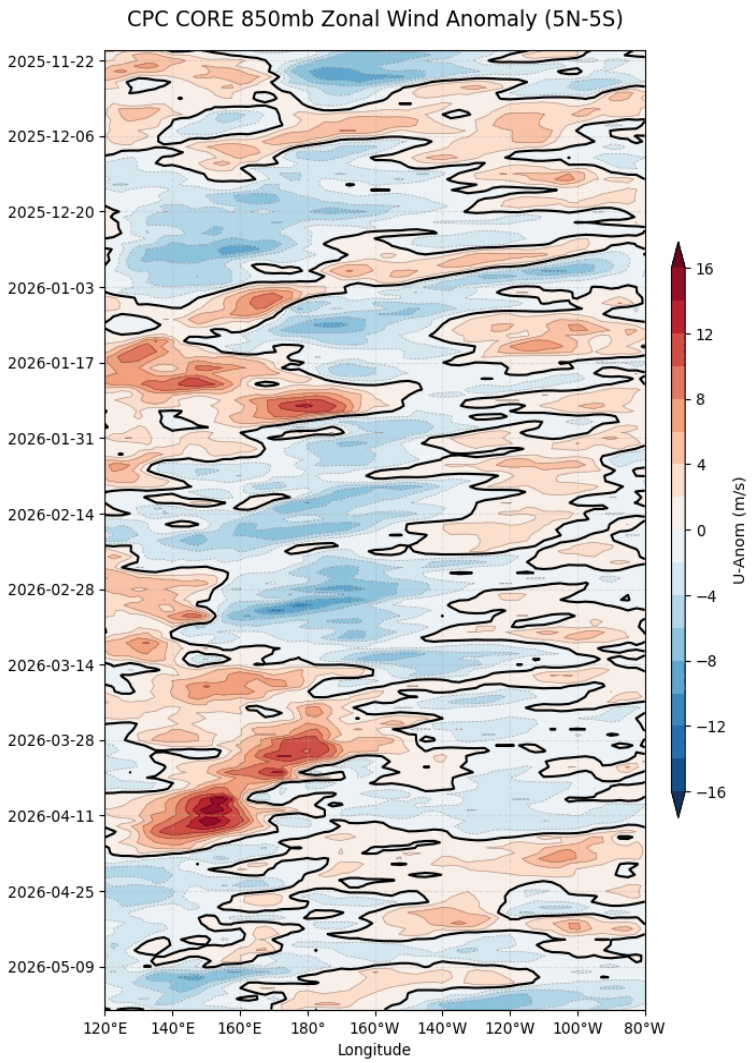
- The current envelope of warm (downwelling) Kelvin waves has been entering the South American coast since late April. It has warmed up coastal waters up to +5C and more, reaching depths exceeding 250 m and below!
- This envelope should continue warming up the coast through at least mid-June, strengthening SST anomalies in Niño 1+2 and eventually Niño 3.

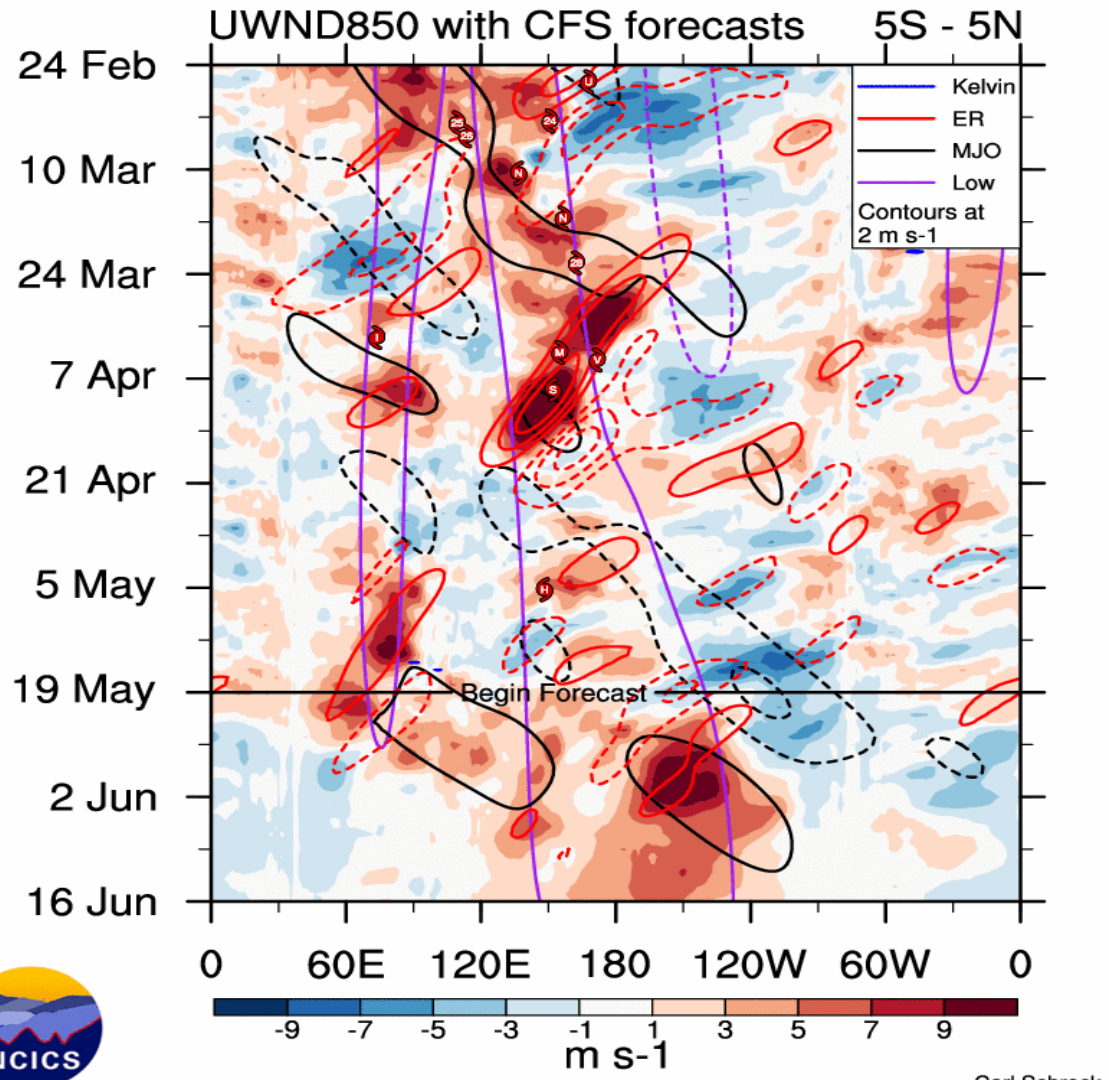


Equatorial Temperature Anomaly Cross Section



Are there new Kelvin waves on the forecast?





NCICS

ncics.org/mjo

Wed 2026-05-20 1028 UTC

Carl Schreck
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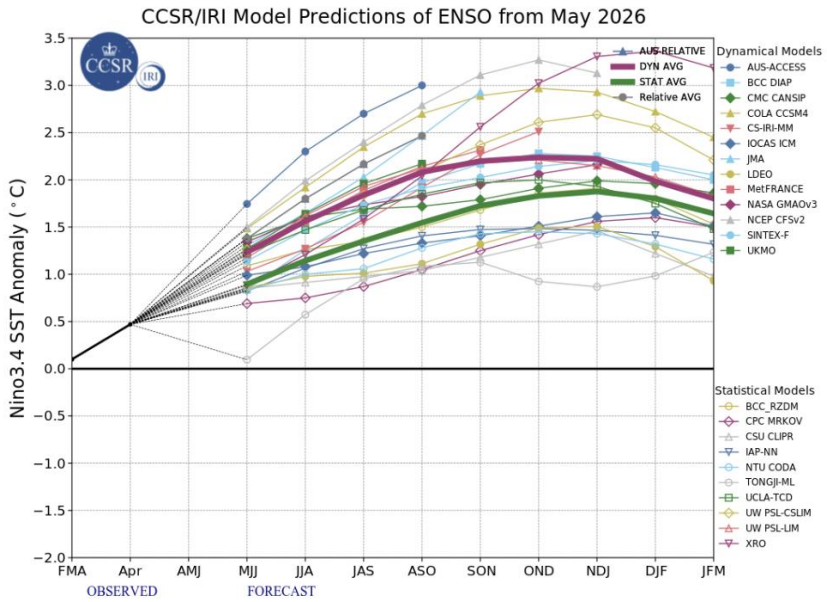
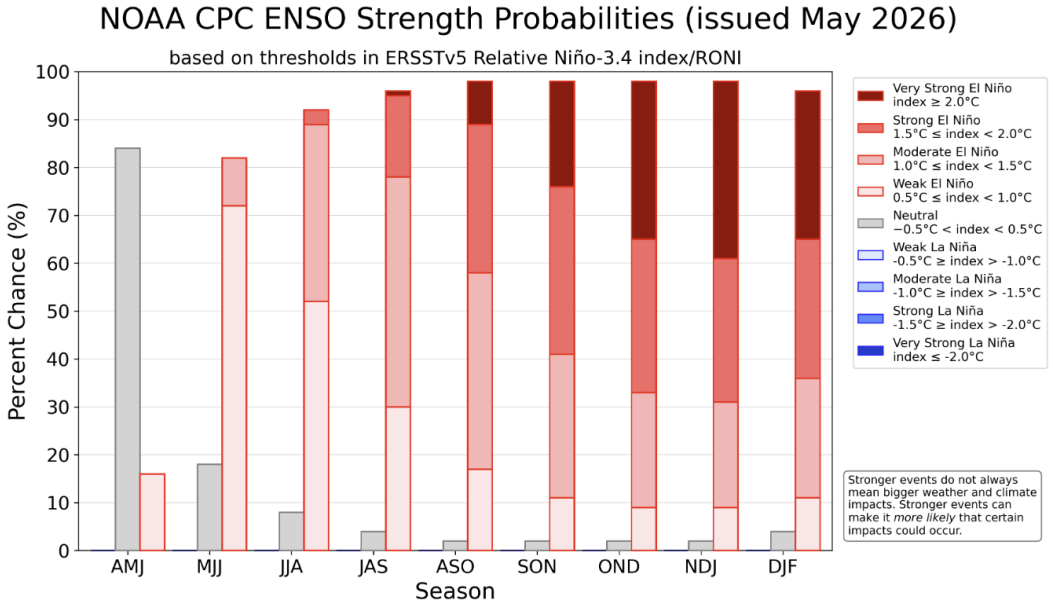
ENSO Outlook:

El Niño is likely to emerge soon (82% chance in May-July 2026) and continue through Northern Hemisphere winter 2026-27 (96% chance in December 2026 – February 2027).*

Dynamical Models



Probabilistic Forecast

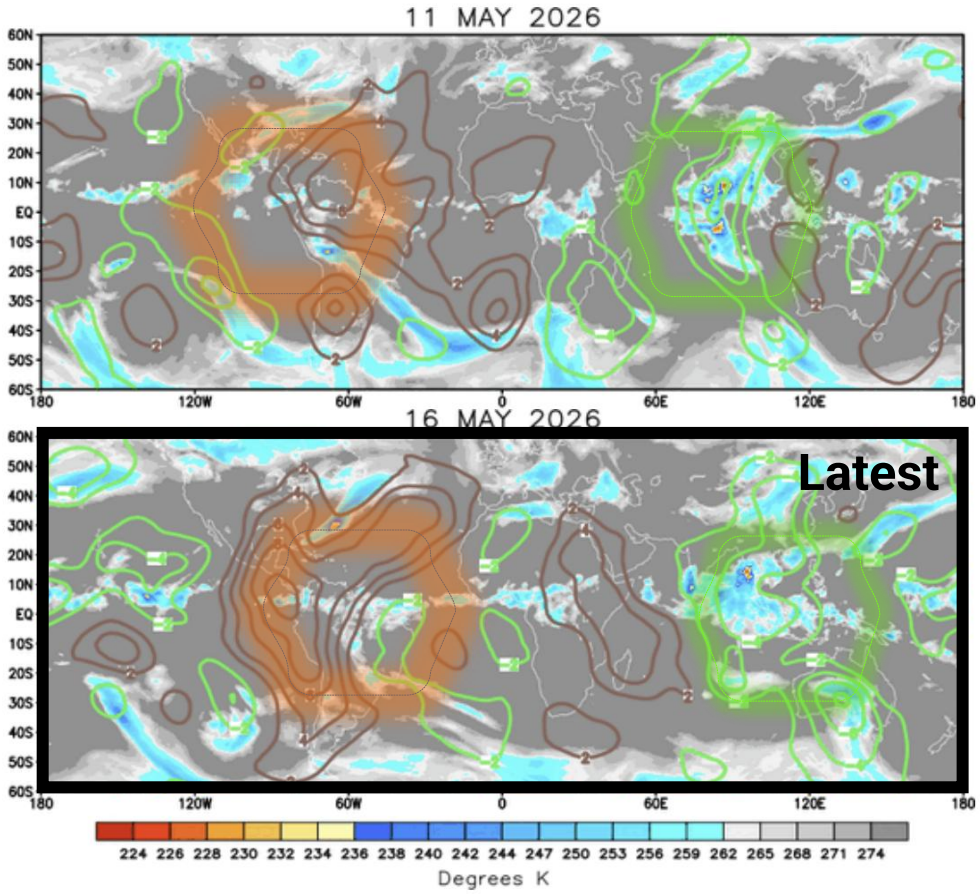


Takeaways

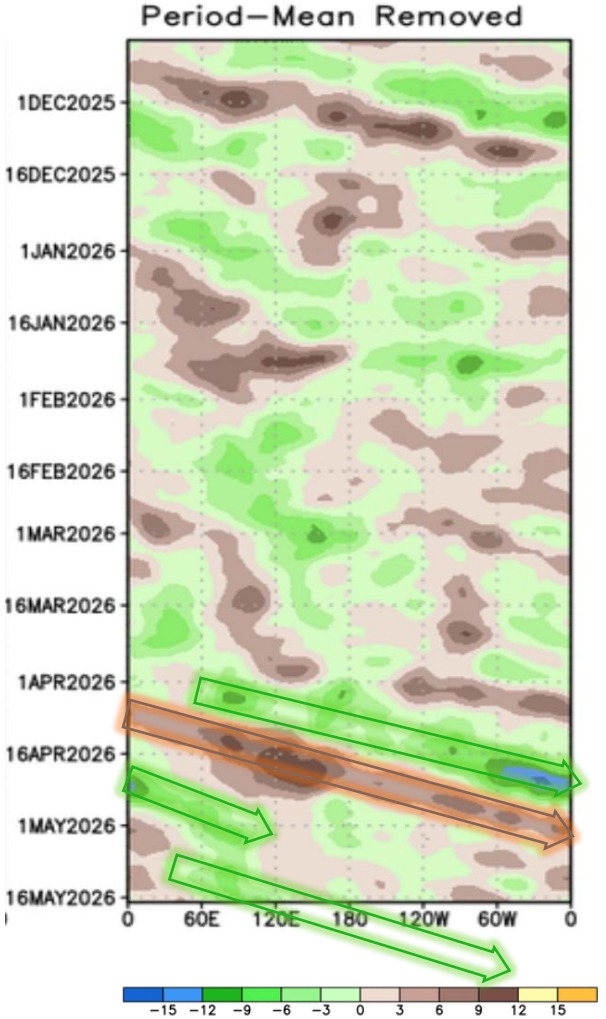
- NOAA is very confident about El Niño developing soon and lasting past February 2027. **Well established El Niños tend to last 1-1.5 years.**
- From September through February, the chances for a strong or very strong event dominate. YET, we need ocean coupling and new robust Kelvin waves, and these are hard to forecast.

Madden-Julian Oscillation (MJO)

200 hPa Velocity Potential and Outgoing Long Wave Radiation Anomalies



200 hPa Velocity Potential Anomalies

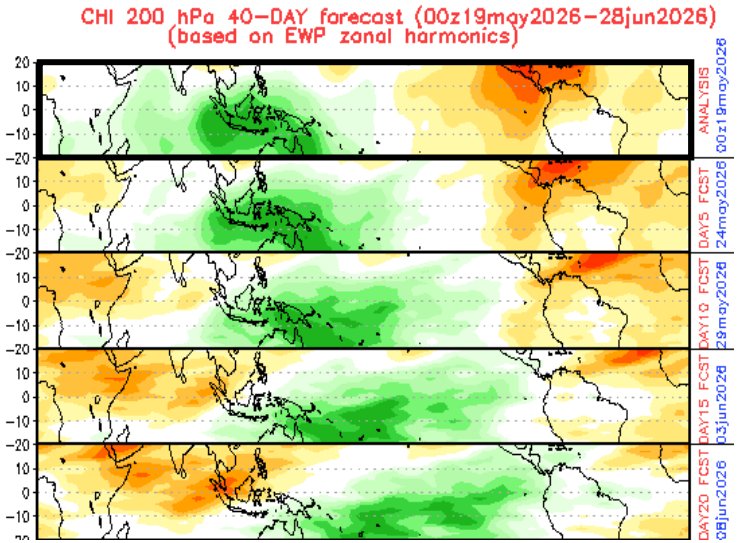


Takeaways

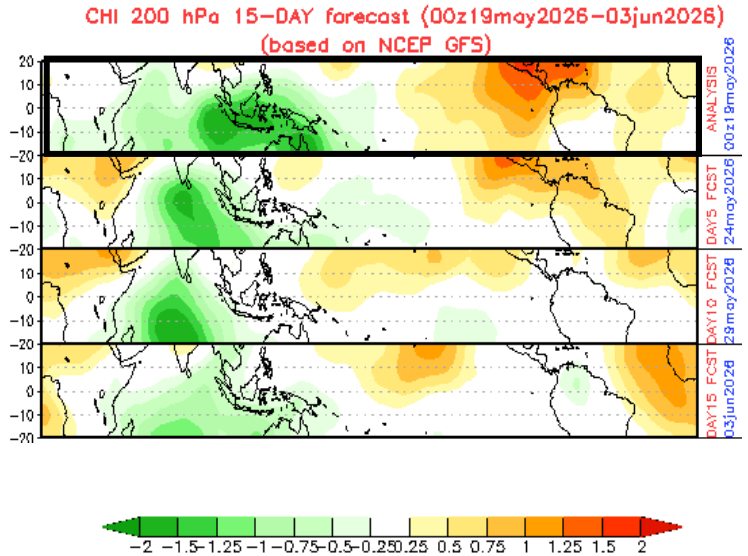
- The MJO is not well organized.
- Continues in wave-1 mode.
- Wet phase moving across the Maritime Continent.

MJO Forecasts

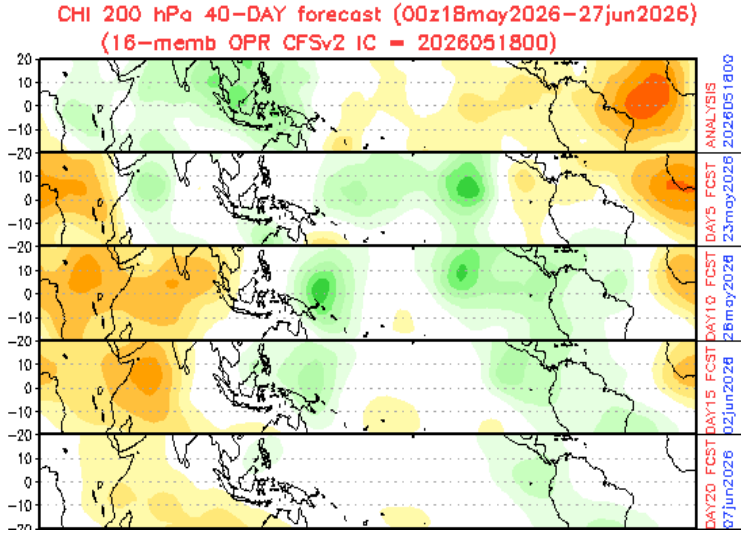
Empirical Wave Propagation



Global Forecast System (GFS)



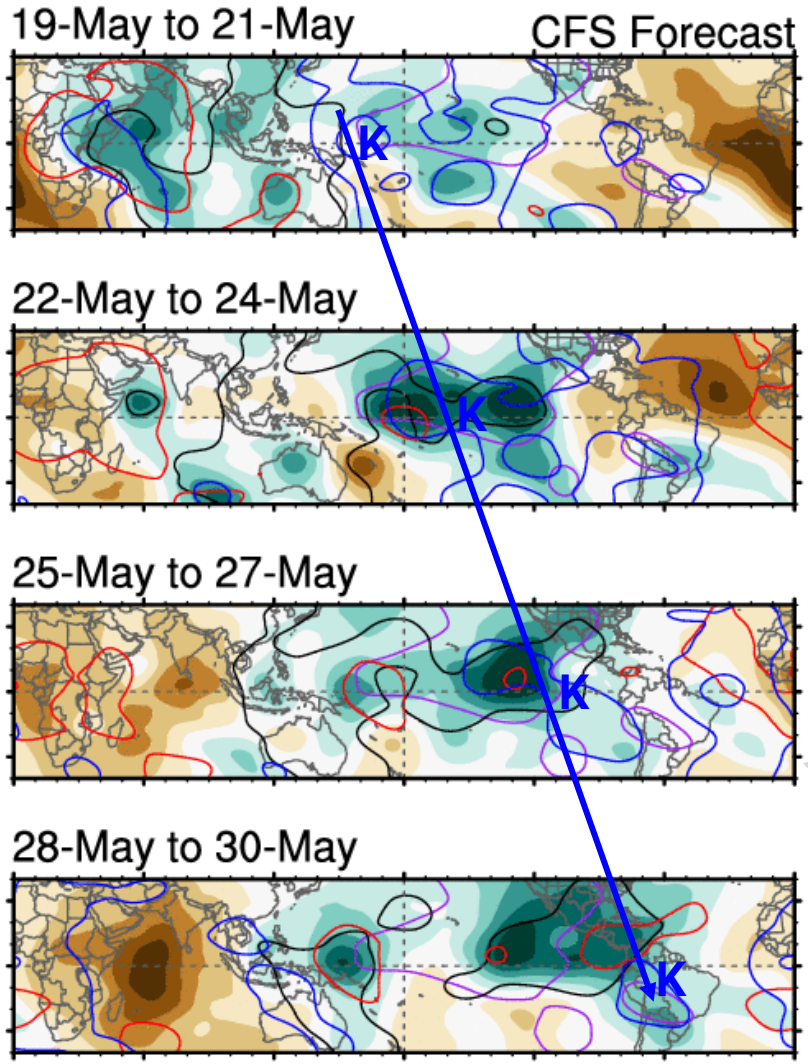
Climate Forecast System (CFS)



Takeaways

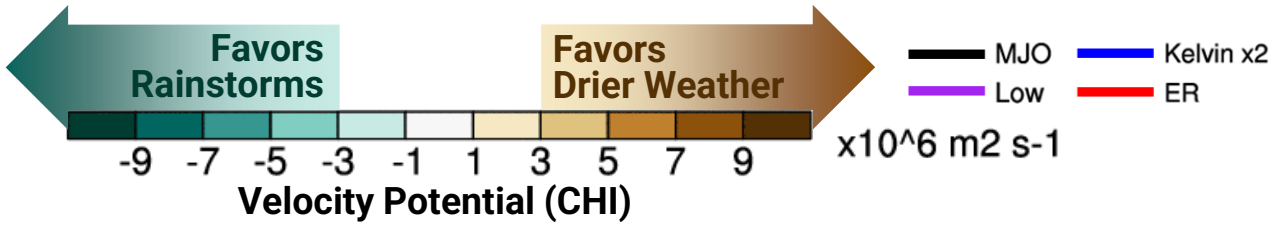
- Model solutions are very different.
- Since propagation is not being coherent, the best approach is to analyze many solutions (ensemble) find the most common outcomes, and find physical grounds to justify the solutions.
- From these, the CFS has often been the most reliable. Considering observations, it makes sense to expect wetter conditions by the end of the month.

Upper Tropospheric Waves



Kelvin Wave:

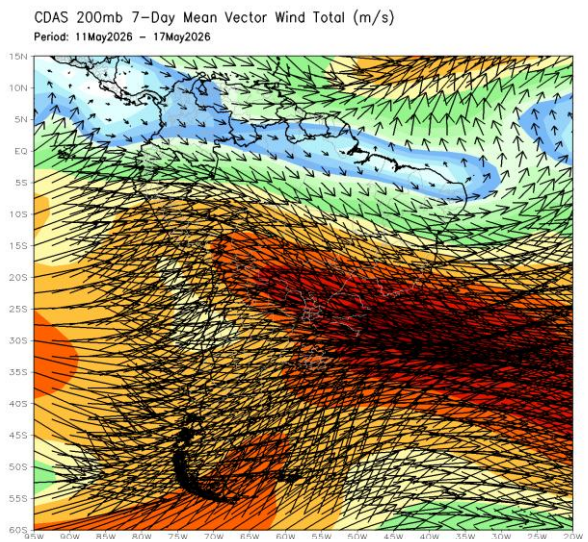
- Will likely enhance convection between May 28 and 30.
- Locations that might feel enhancement from the Kelvin include portions of northern South America and Central America.
- Important to consider these wet spells during the first rainy season to preserve water, given potential generalized drought conditions in the second half of 2026, if a strong El Niño establishes.

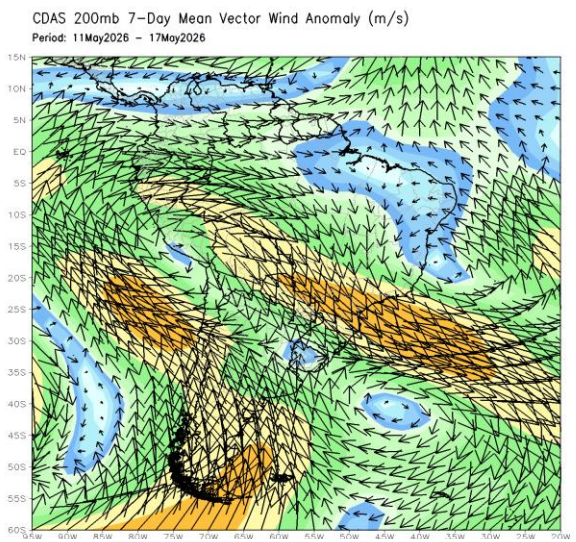


South America - Last 7 days

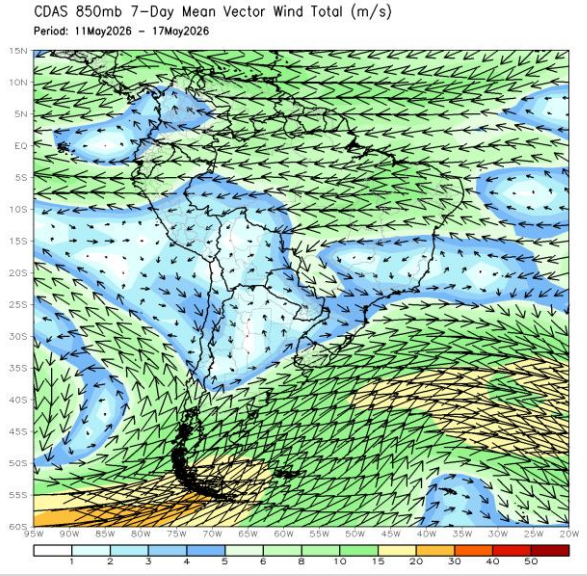
FLOW

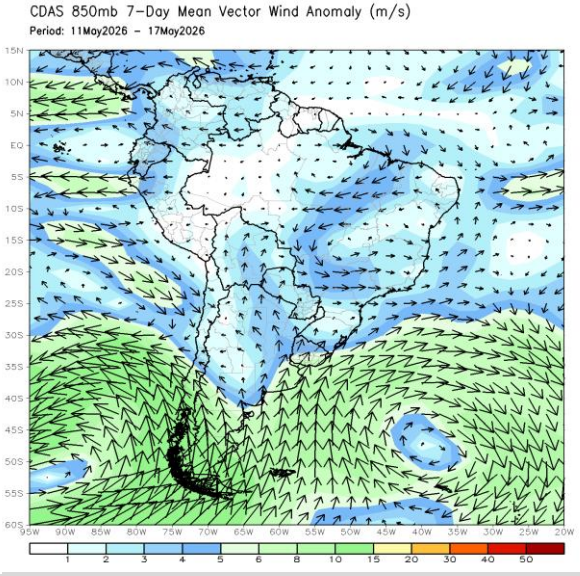
200 hPa



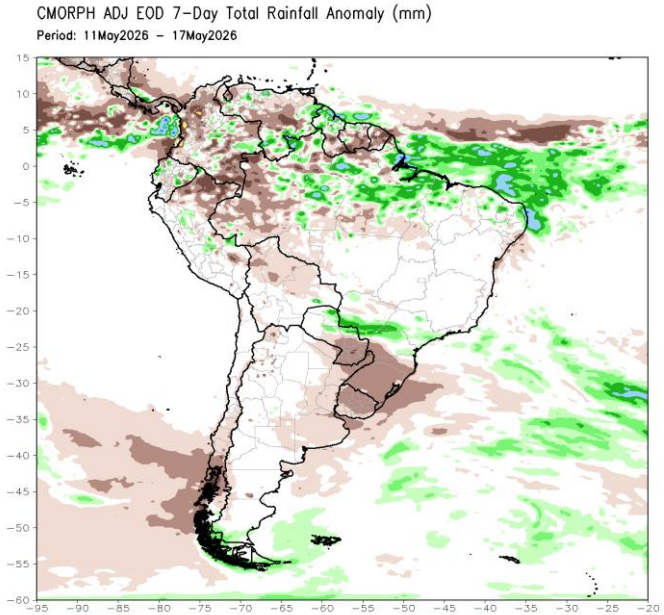


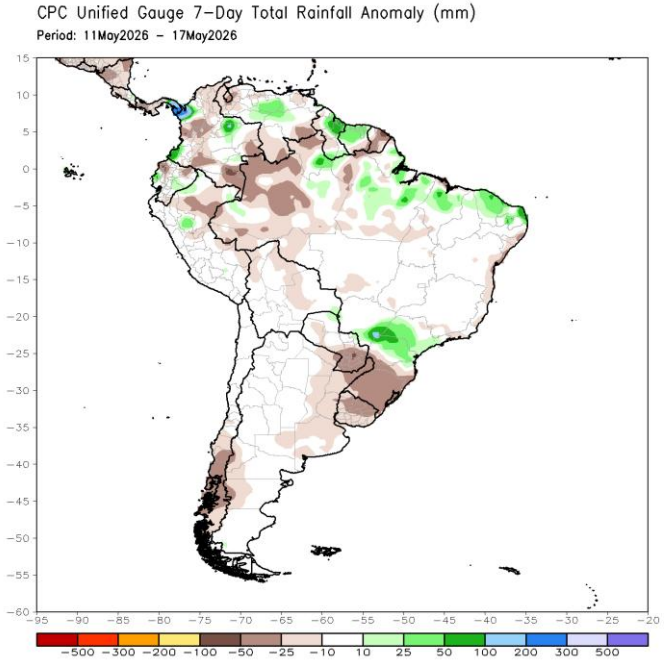
850 hPa





RAINFALL ANOMALIES

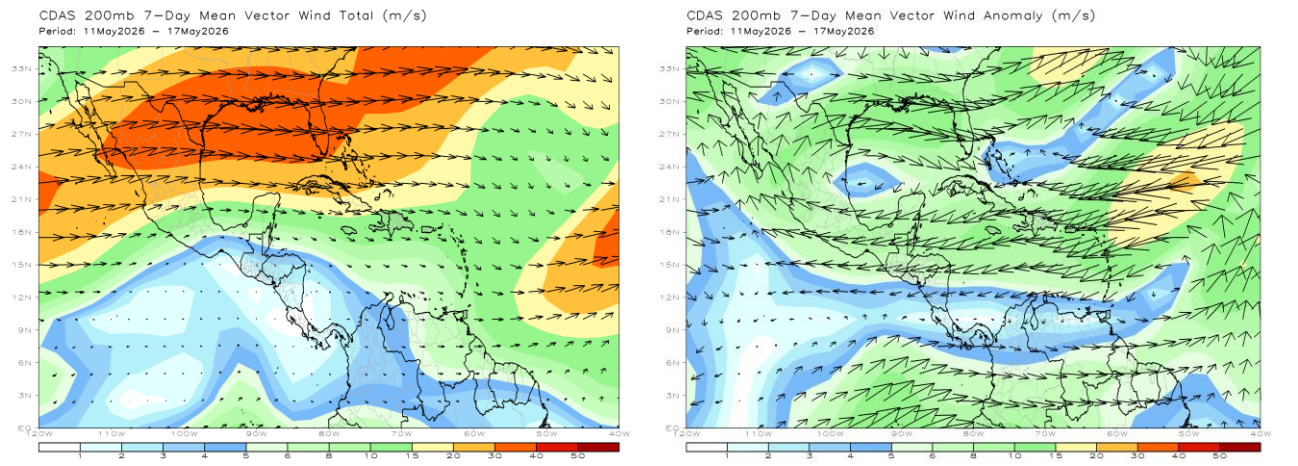




Caribbean, Central America and Mexico last 7 days

FLOW

200 hPa



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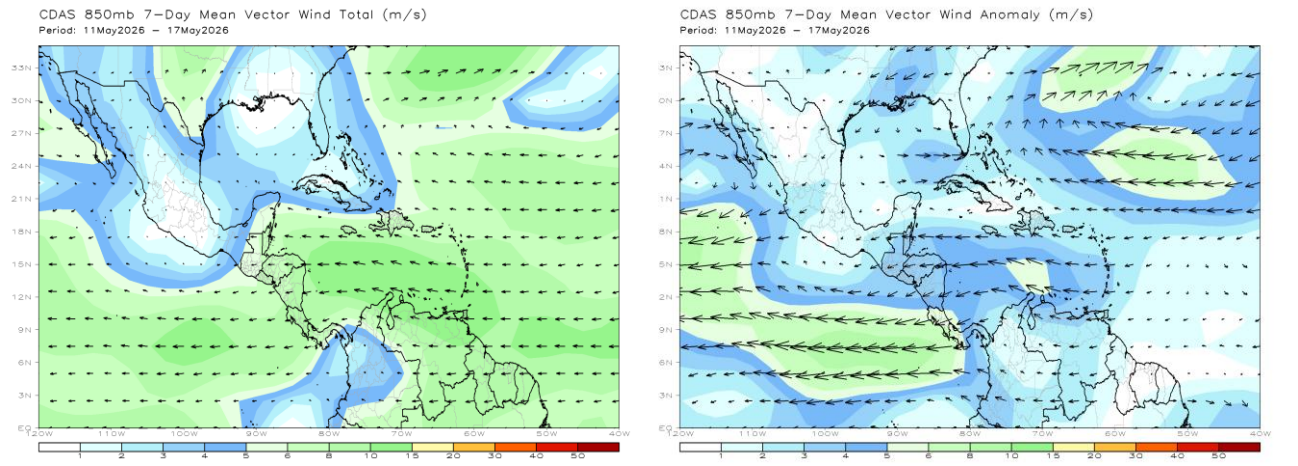

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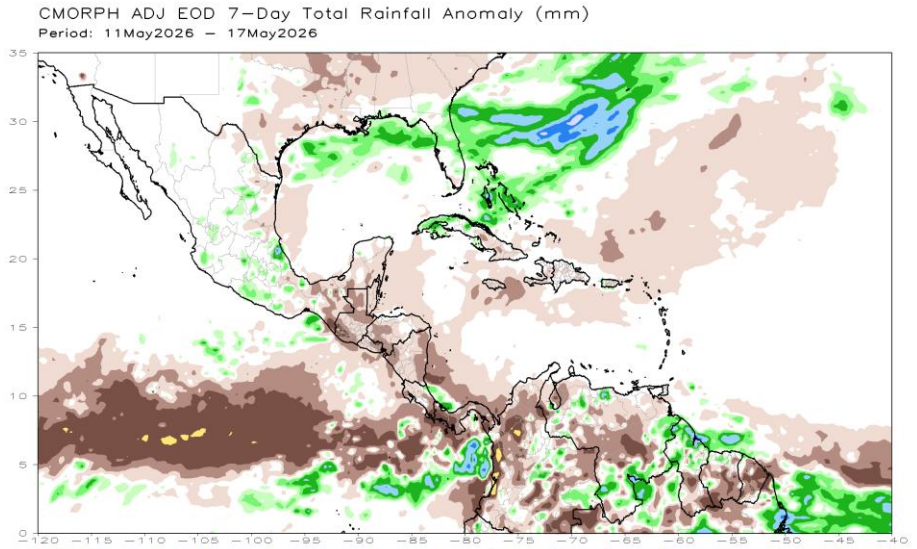

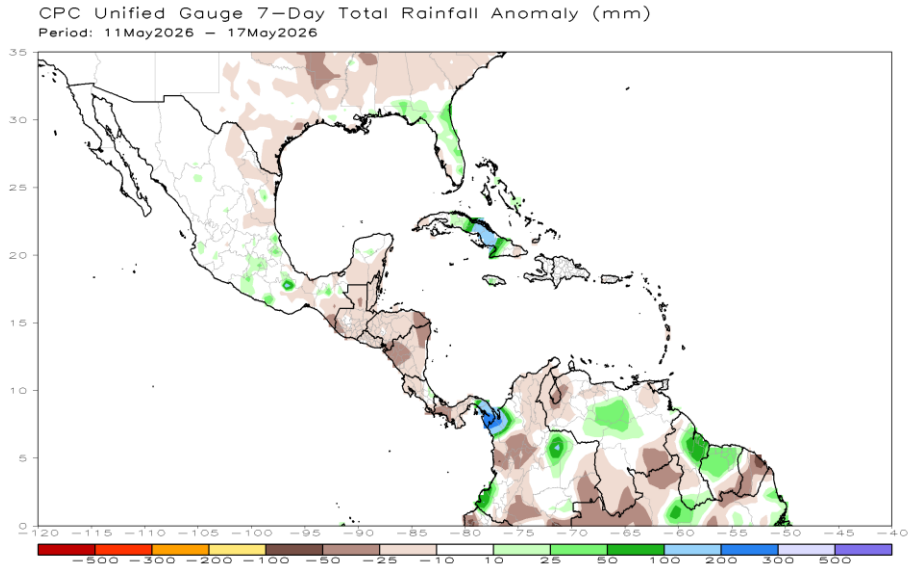

THANK YOU! GRACIAS! OBRIGADO!

Next Session Wednesday, 24 June 2026 at 15:00 UTC