WMO VLab Regional Focus Group
of the Americas and Caribbean

Since 2004

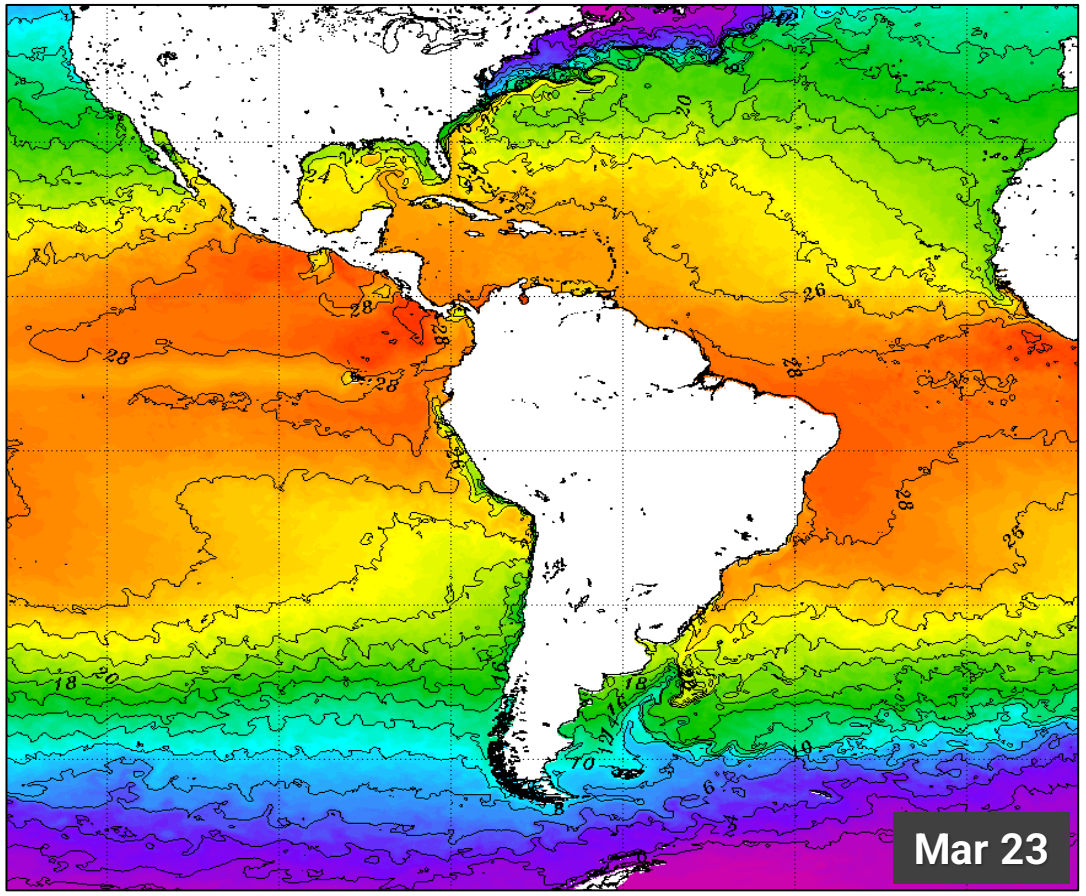
Climate Indices

Current Status and Projections

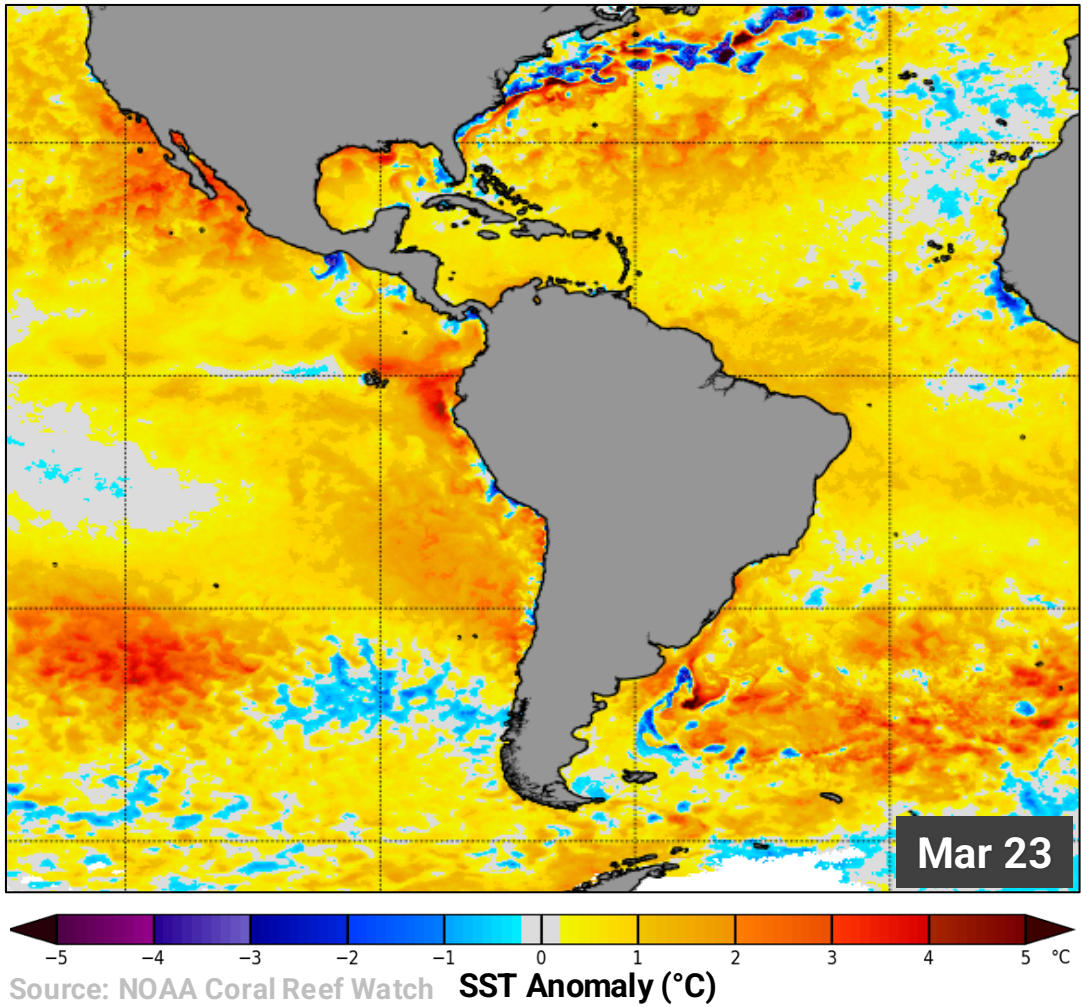
Wednesday 25 March 2026

Sea Surface Temperature (SST)

SST

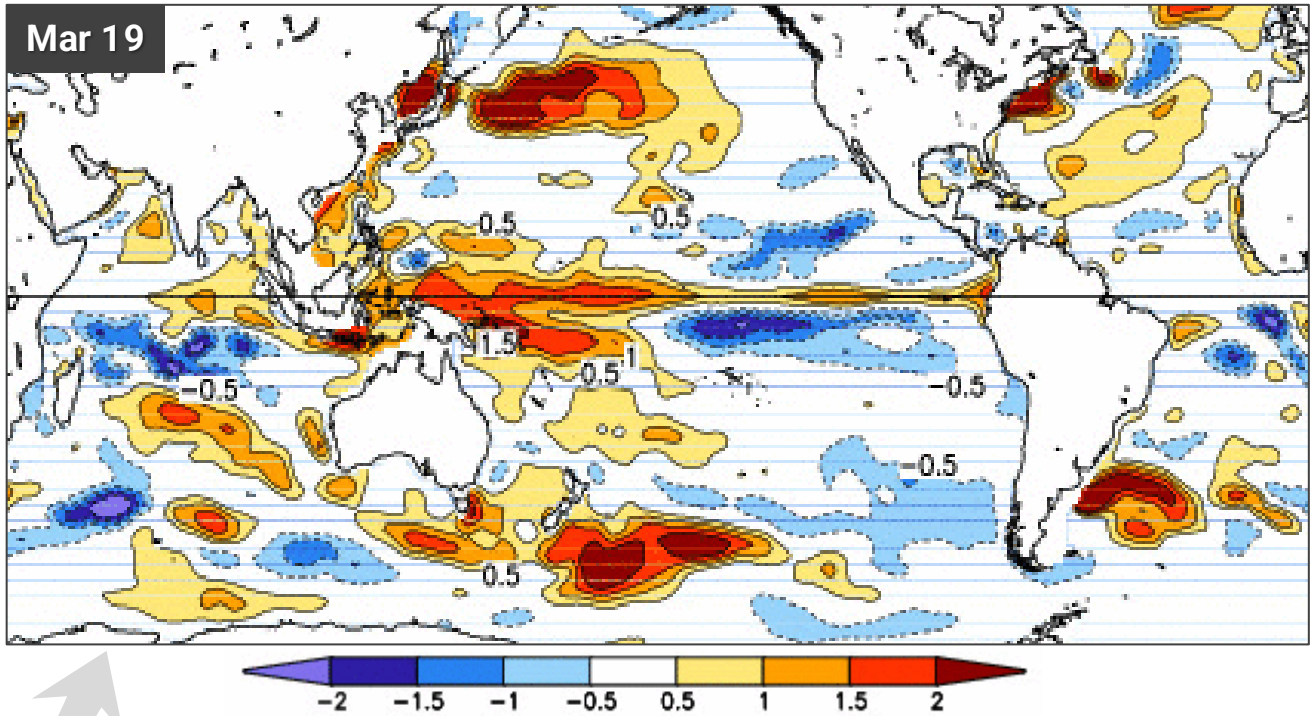


SST Anomaly



Top 300m Layer Temperature Anomaly

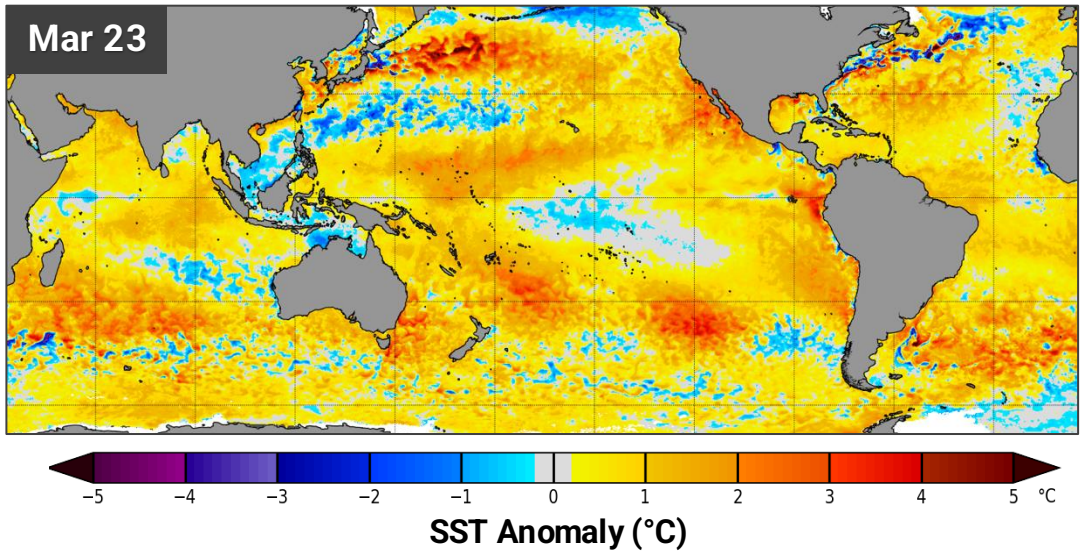
Layer Anomaly



Source: GODAS, CPC

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

Surface Anomaly



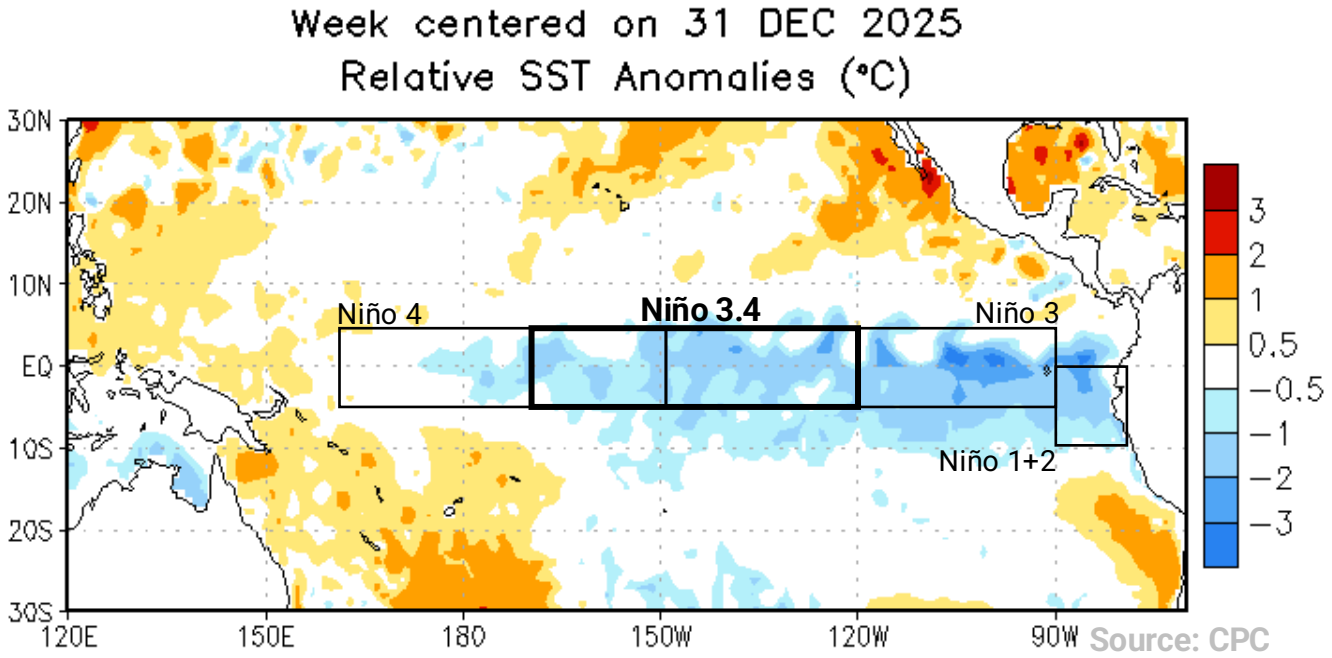
Source: NOAA Coral Reef Watch

El Niño-Southern Oscillation (ENSO)

CPC Official Statement

La Niña Advisory / El Niño Watch

- La Niña is present.*
- Equatorial sea surface temperatures (SSTs) are below-average in the east central Pacific Ocean.
- Atmospheric anomalies over the tropical Pacific Ocean are consistent with La Niña.



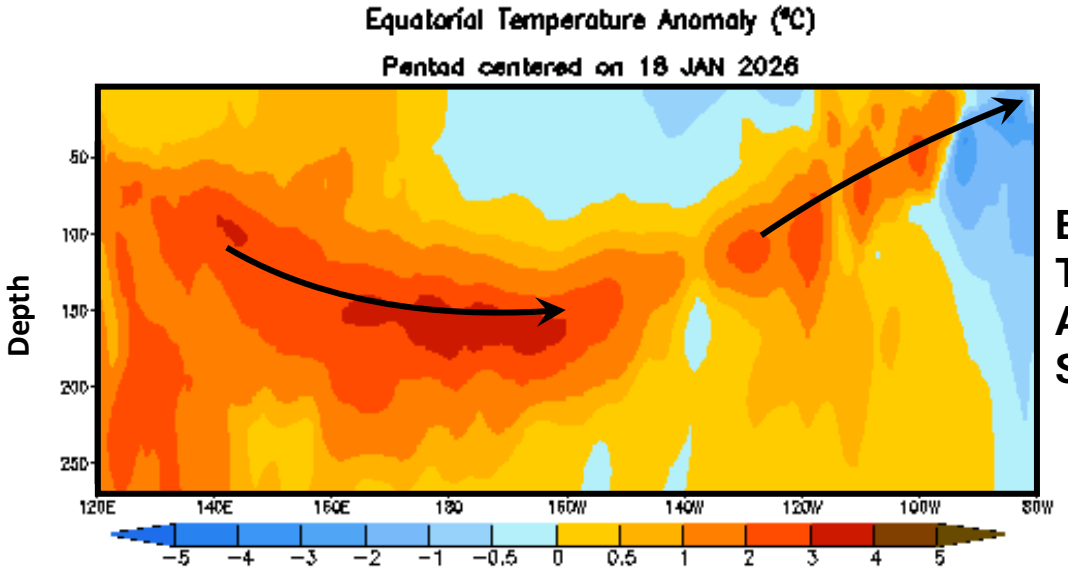
Key Points

- Negative SST Anomalies (SSTA) are constrained to the central Pacific and decreasing in coverage.
- The South American coast is warming rapidly (from arriving Kelvin Waves and local processes).
- By March 23: Niño 3.4 SSTA ~ **+0.3°C** and Niño 1+2 SSTA ~ **+1.4°C**

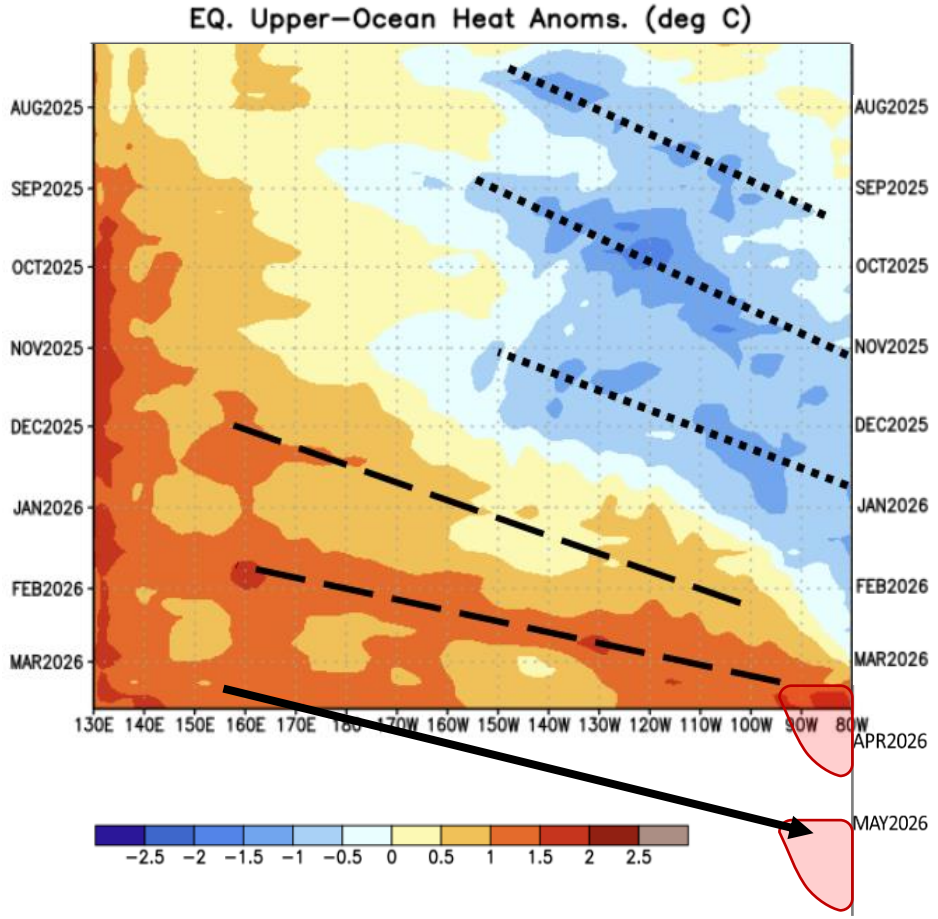
Oceanic Kelvin Waves: Very Active!

Takeaways

- One is warming the South American coast since mid-March and will continue doing so through mid-April.
- A second one near 180 will likely warm up the coast during May.
- The entire Pacific is warm, which translates into continuous warming of the South American coast, beyond individual groups of Kelvin Waves.

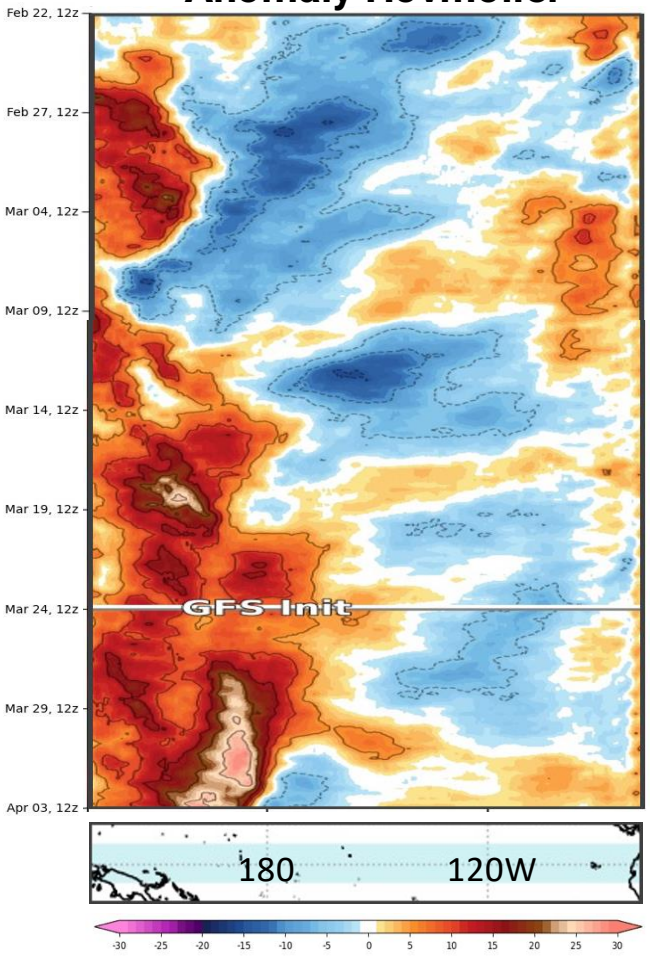


Equatorial Temperature Anomaly Cross Section



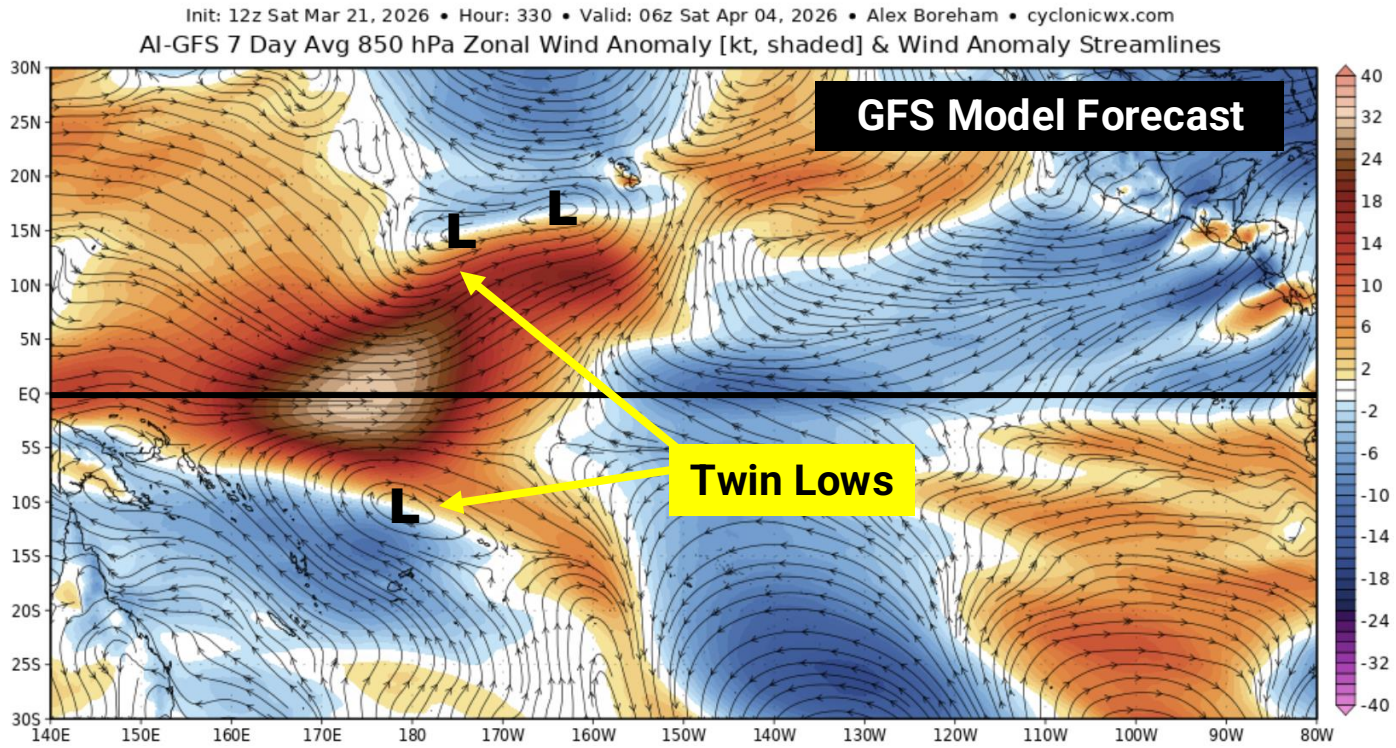
More Kelvins could form: Strong Westerly Wind Burst Possible

850 hPa Zonal Wind Anomaly Hovmöller



Source: Cyclonicwx – Alex Boreham

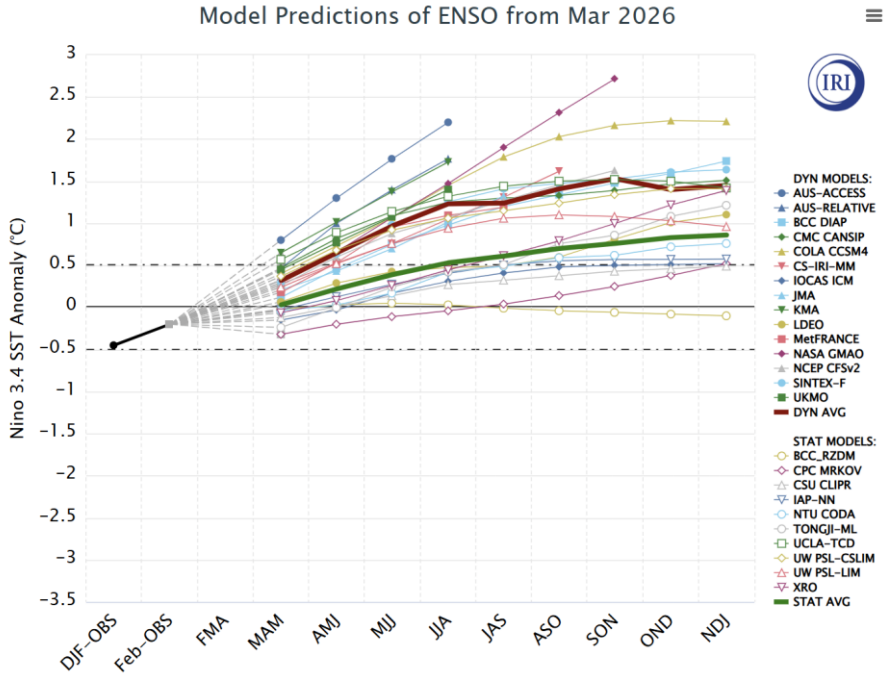
First week of April: North and South hemisphere lows/troughs and favorable MJO will likely favor a strong westerly wind burst. Resolved consistently in many numerical models.



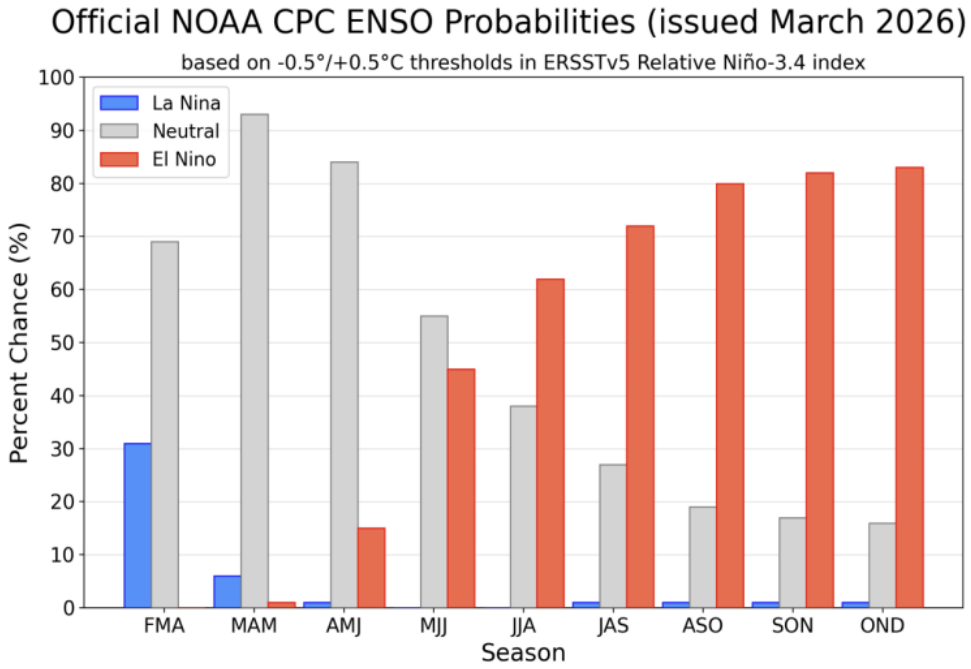
ENSO Outlook:

A transition from La Niña to ENSO-neutral is expected in the next month, with ENSO-neutral favored through May-July 2026 (55% chance). In June-August 2026, El Niño is likely to emerge (62% chance) and persist through at least the end of 2026.

Dynamical Models



Probabilistic Forecast

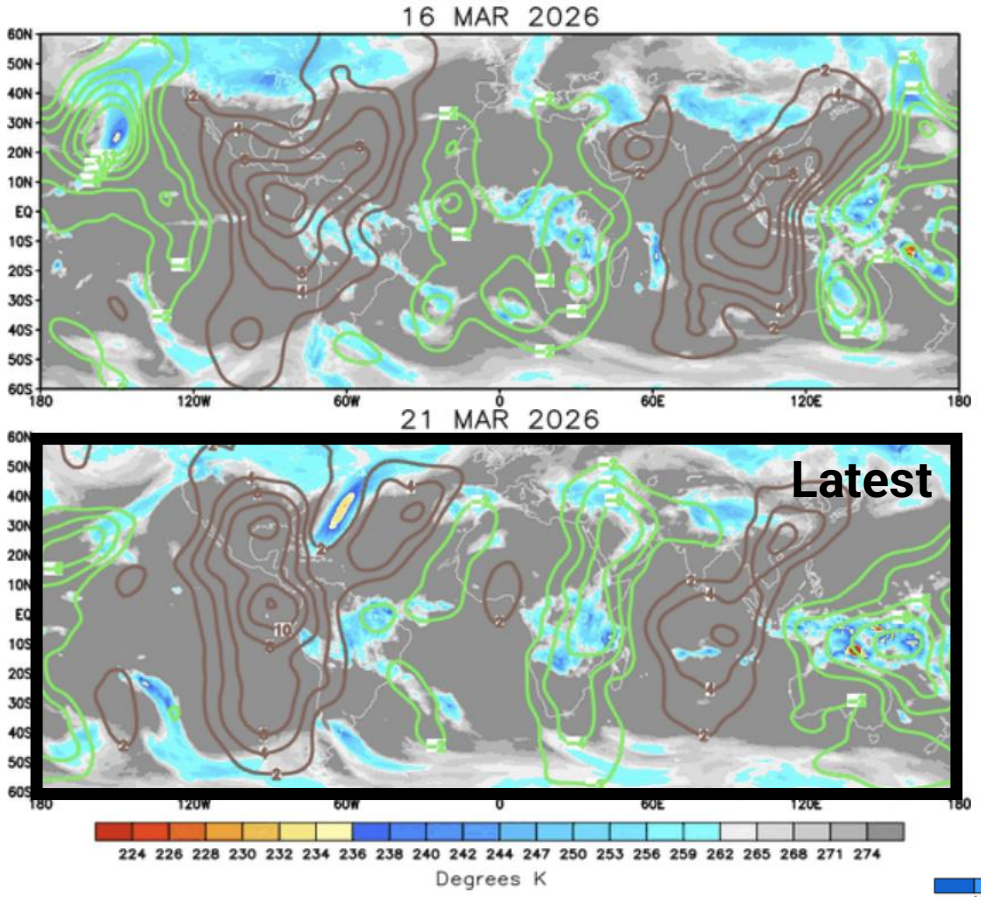


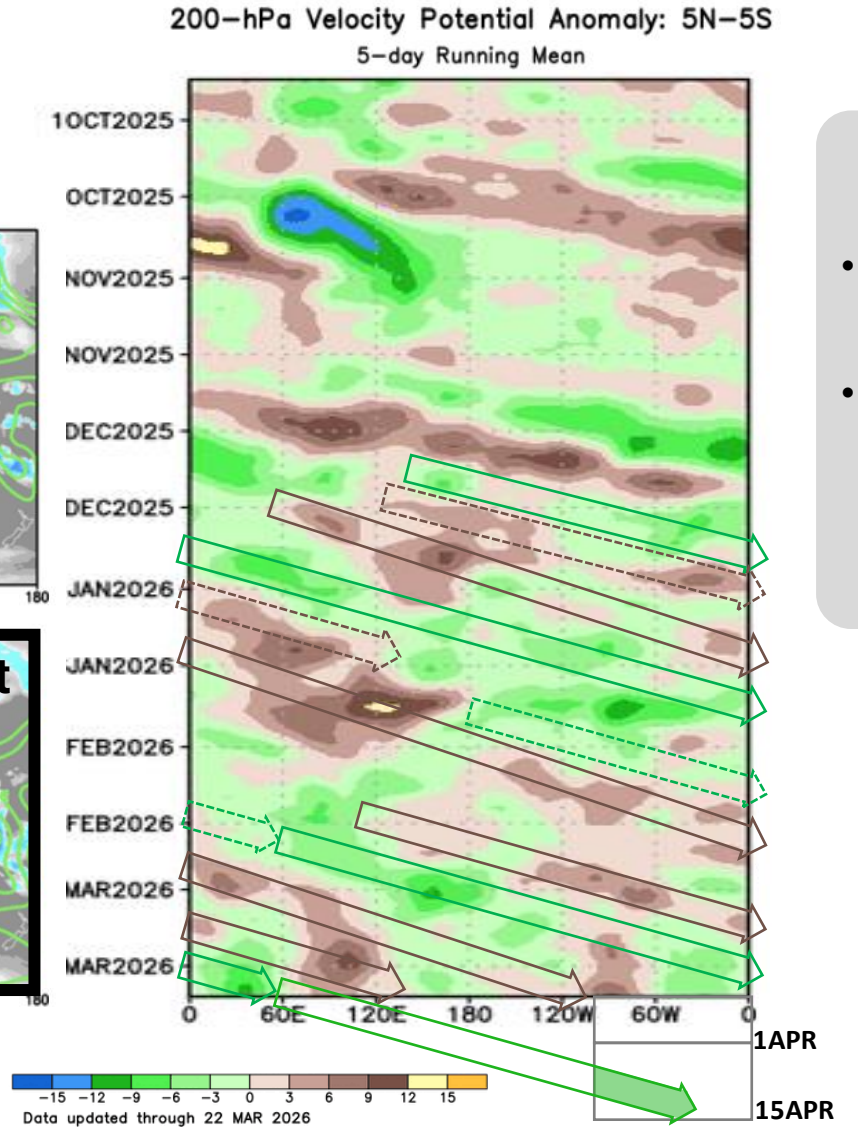
Takeaways

- NOAA has increased the chances for El Niño starting in the north Hemisphere Summer.
- Chances greatly increase through the end of the year.
- Dynamical models are still more aggressive than statistical ones.

Madden-Julian Oscillation (MJO)

Velocity Potential and Outgoing Long Wave Radiation



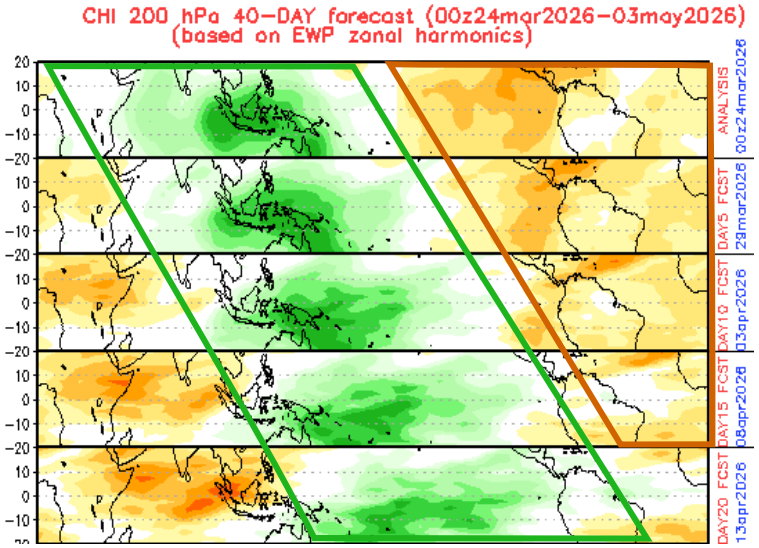


Takeaways

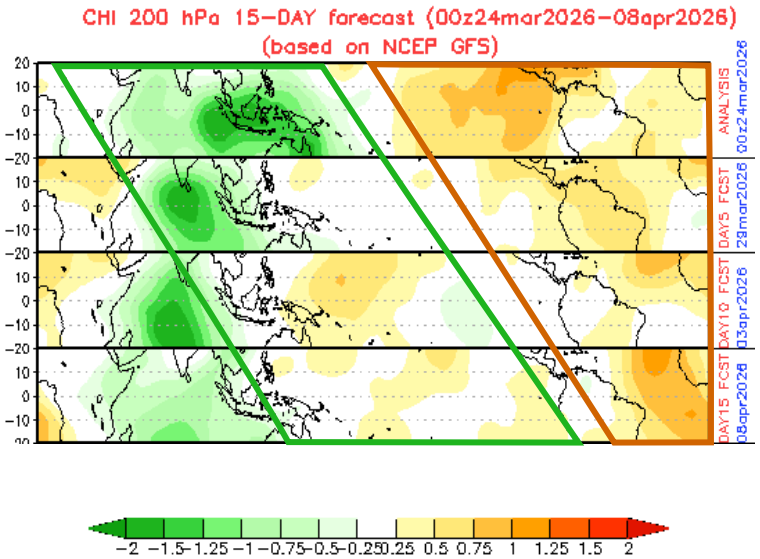
- The MJO continues as a disorganized **Wave 2** pattern.
- Analyzing the Howmöller, the next upper divergent (wet) phase should cross the Americas during the second week of April.

MJO Forecasts

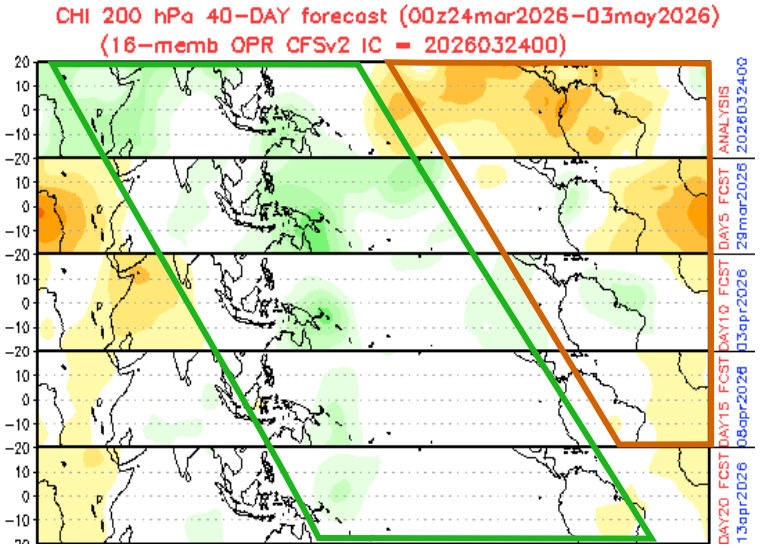
Empirical Wave Propagation



Global Forecast System (GFS)



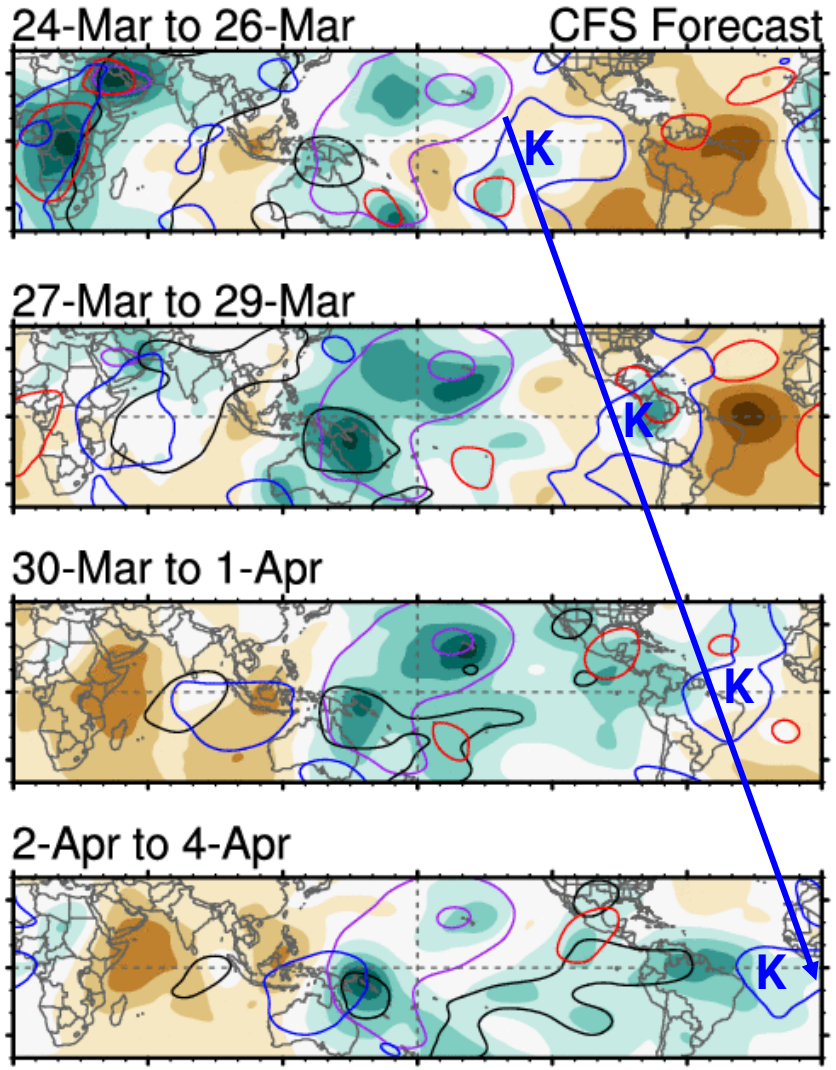
Climate Forecast System (CFS)



Takeaways

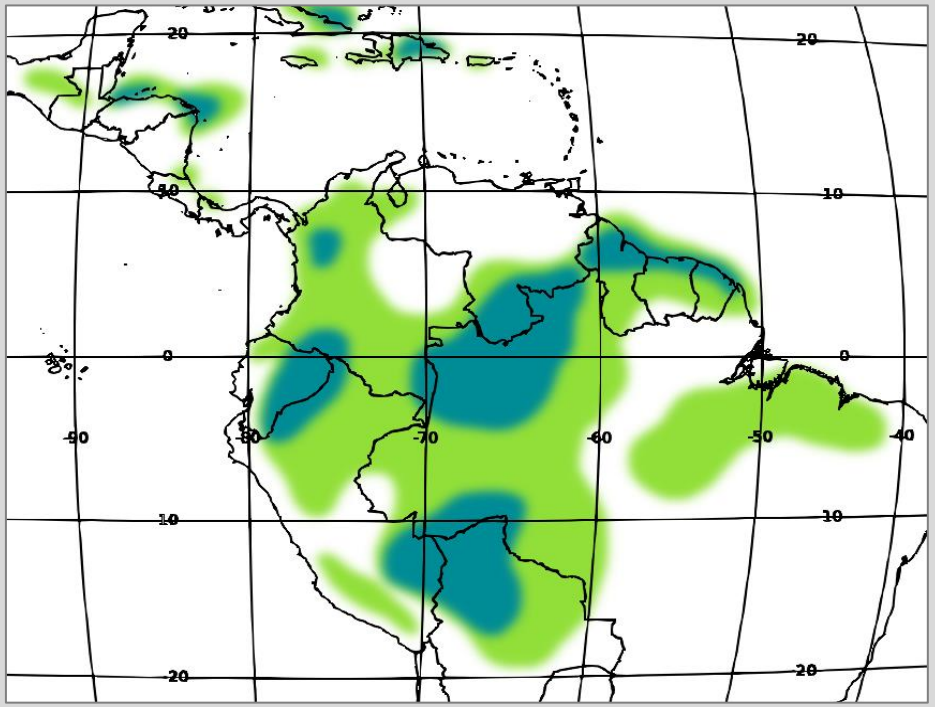
- Models disagree, expected given a disorganized MJO.
- Observations still suggest that MJO upper convergence (dry conditions) could last through early April, giving way to upper divergence (wet conditions) during the second and third weeks.

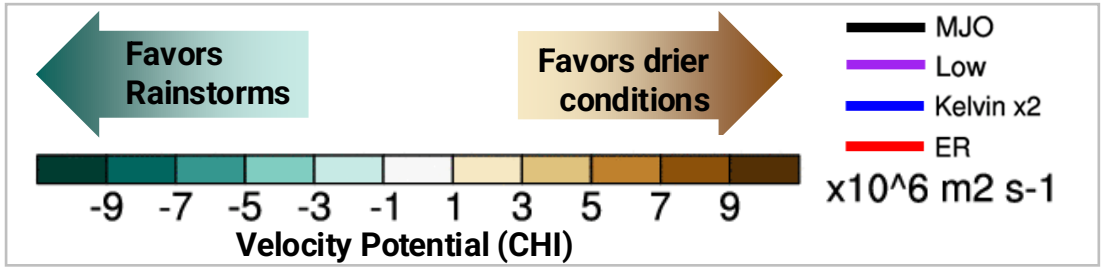
Upper Tropospheric Waves



Takeaway

A Kelvin Wave could cross the Americas from March 26 through March 30, likely to stimulate precipitation in colored areas.

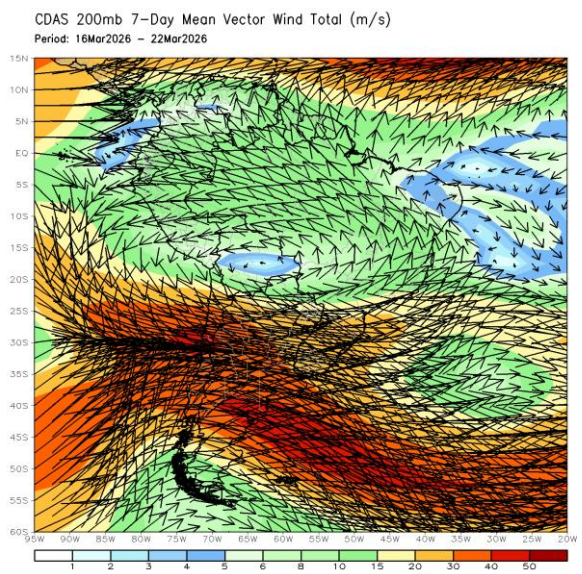


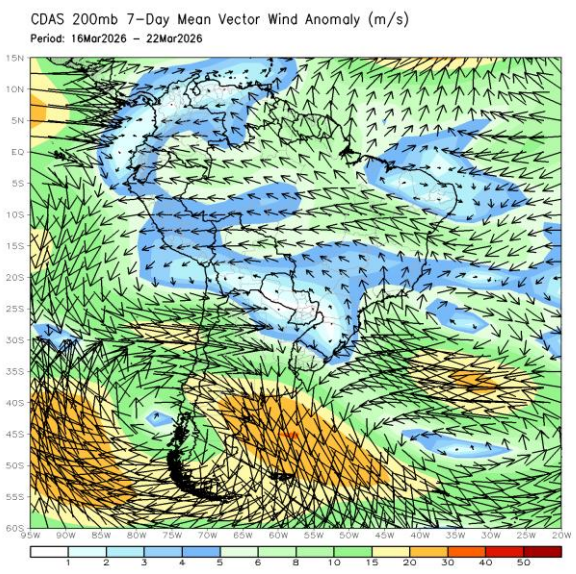


South America - Last 7 days

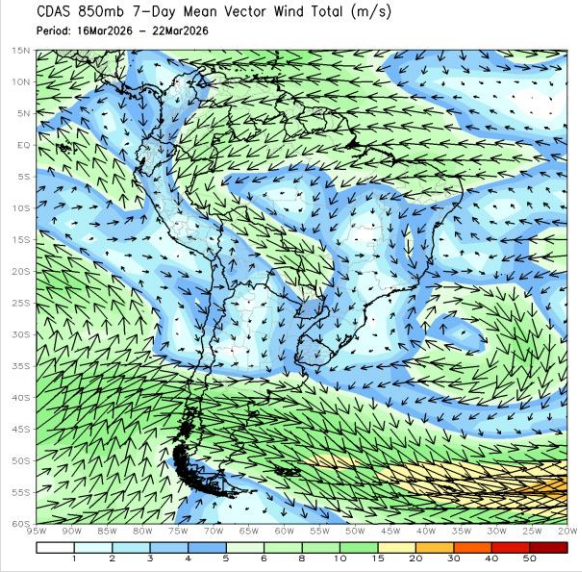
Flow

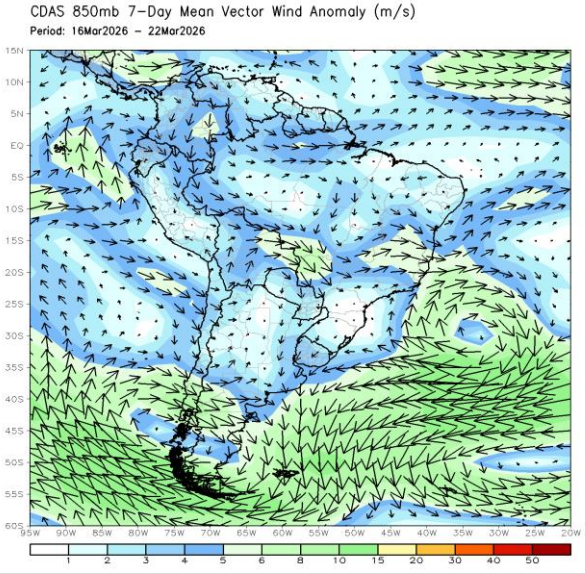
200 hPa



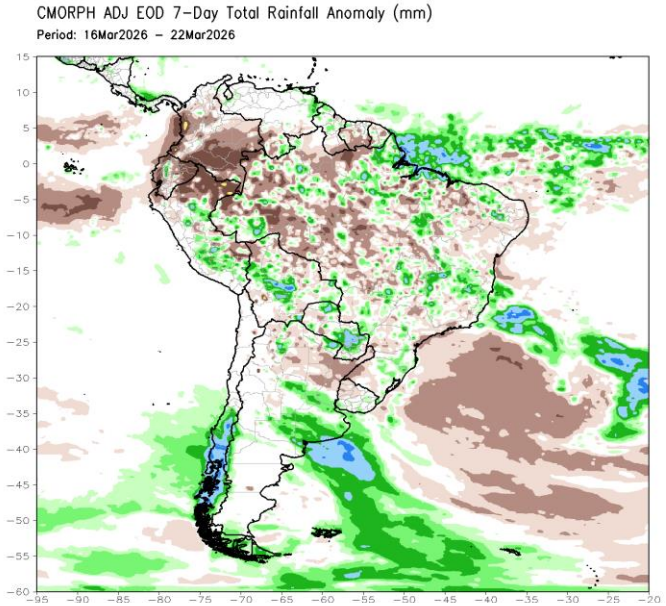


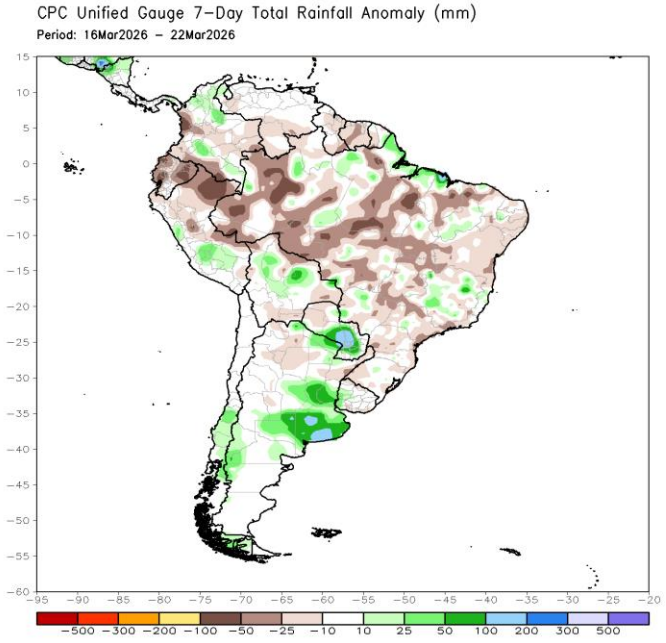
850 hPa





Rainfall Anomalies

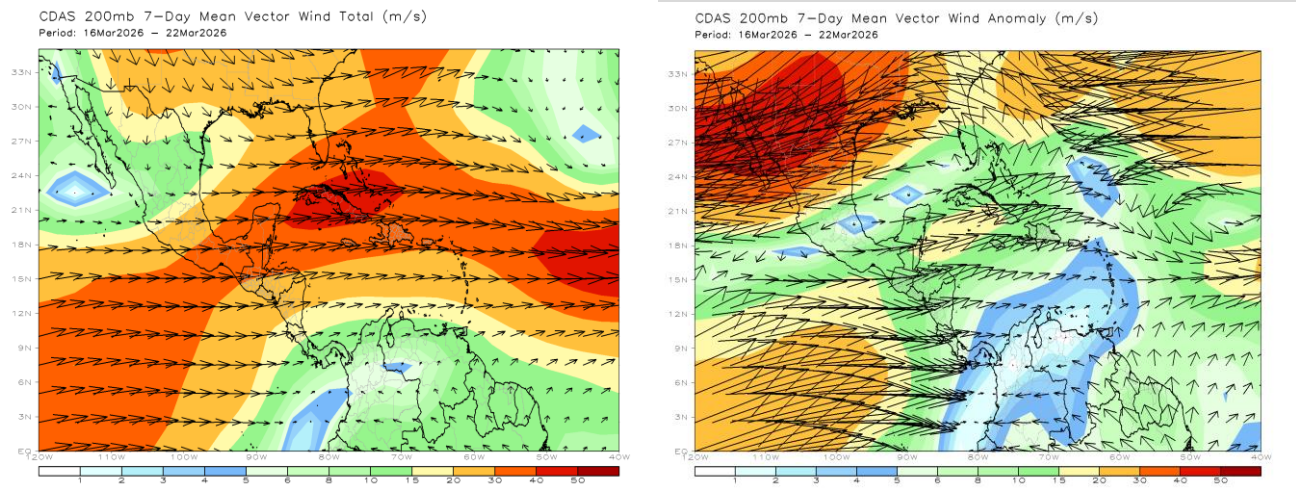




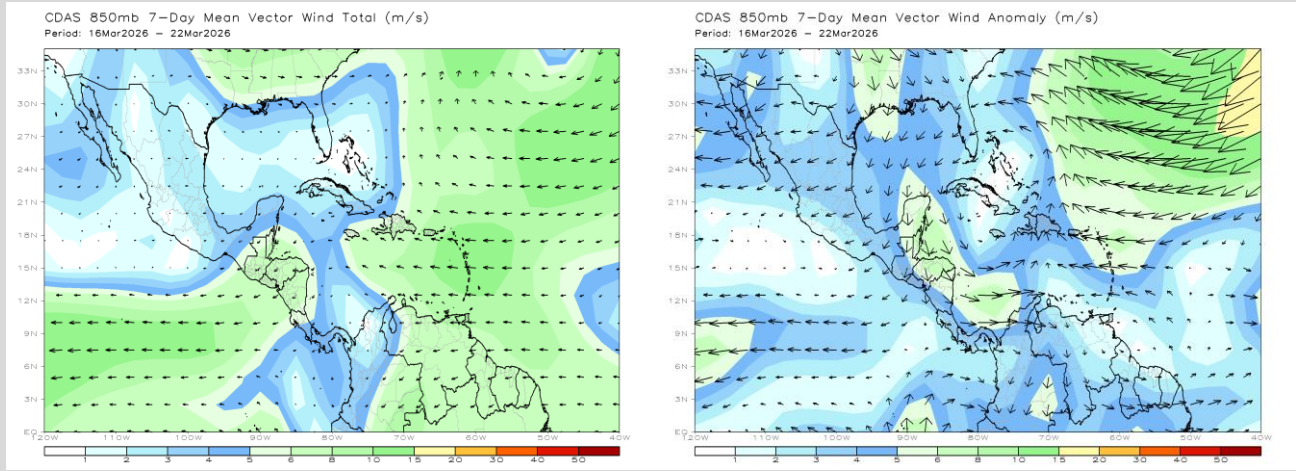
Caribbean, Central America and Mexico
last 7 days

Flow

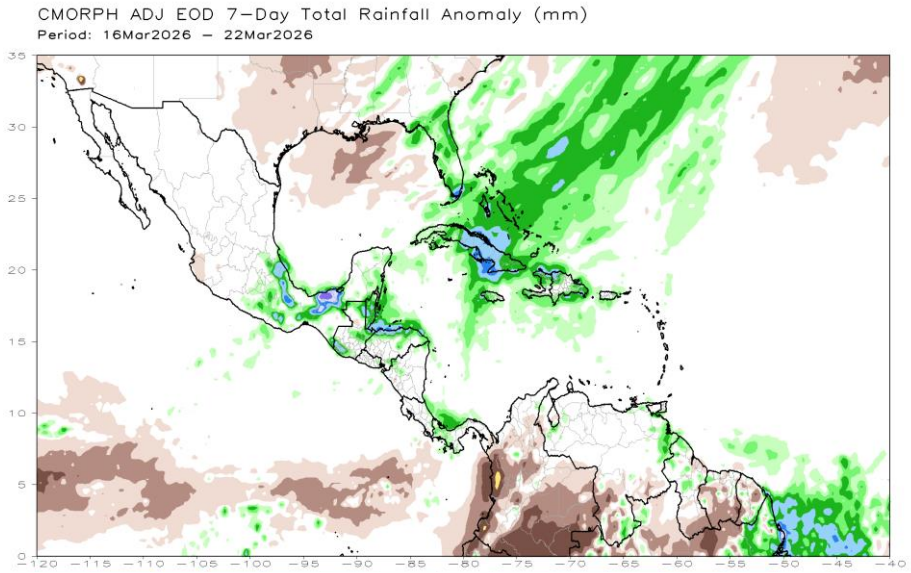
200 hPa

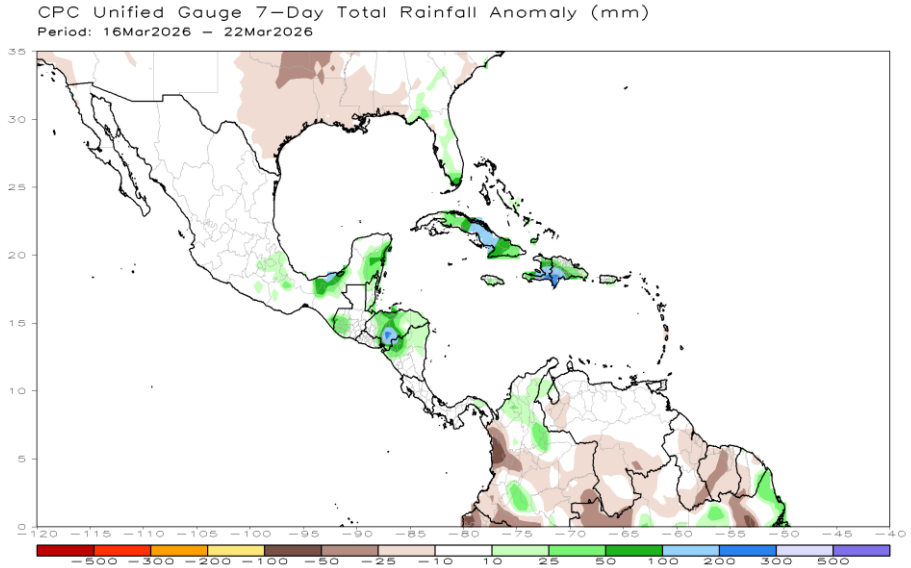


850 hPa



Rainfall Anomalies





Thank you! Gracias! **Obrigado!**

Next Sessions

Wednesday, 25 March 2026 at 15:00 UTC

Wednesday, 22 April 2026 at 15:00 UTC

Wednesday, 20 May 2026 at 15:00 UTC

Wednesday, 24 June 2026 at 15:00 UTC

Our website: https://rammb2.cira.colostate.edu/training/rmtc/focusgroup/
Join our distribution list: email erin.sanders@colostate.edu or jose.galvez@colostate.edu