WMO VLab Regional Focus Group
of the Americas and Caribbean

Since 2004

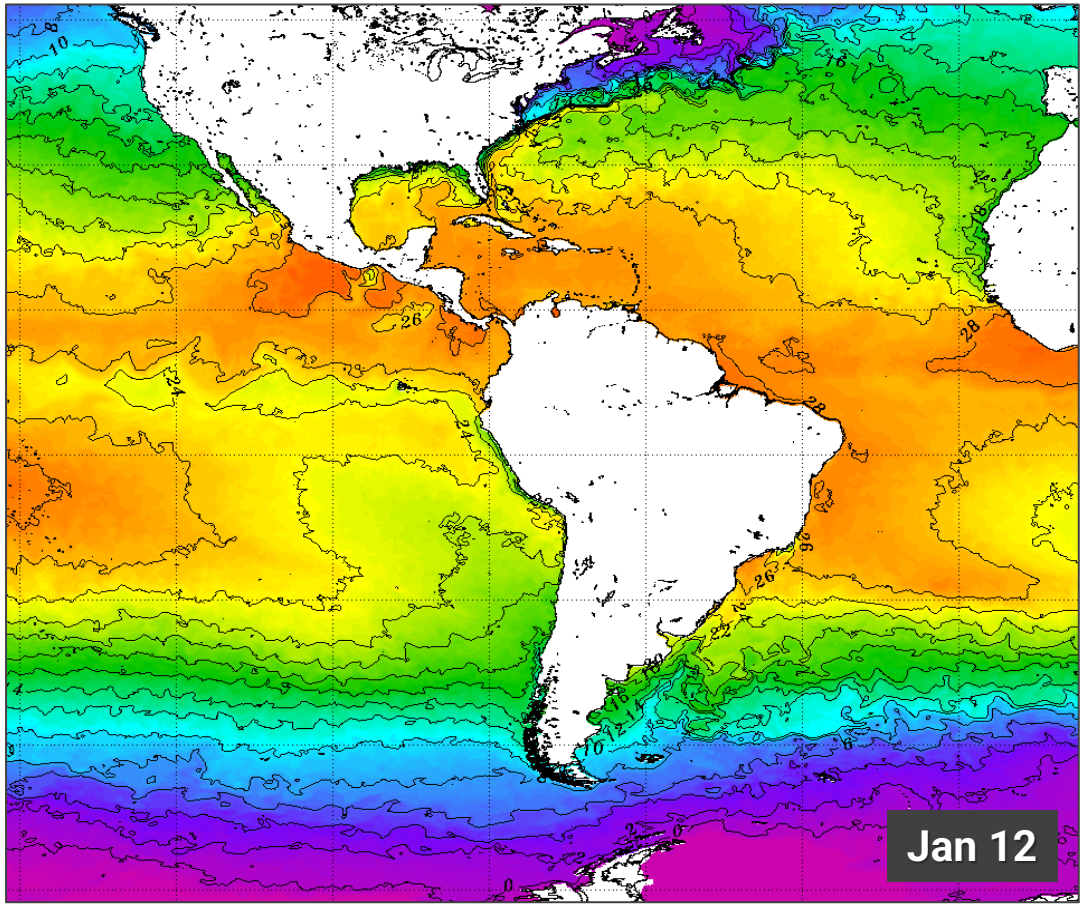
Climate Indices

Current Status and Projections

Wednesday 14 January 2026

Sea Surface Temperature (SST)

SST

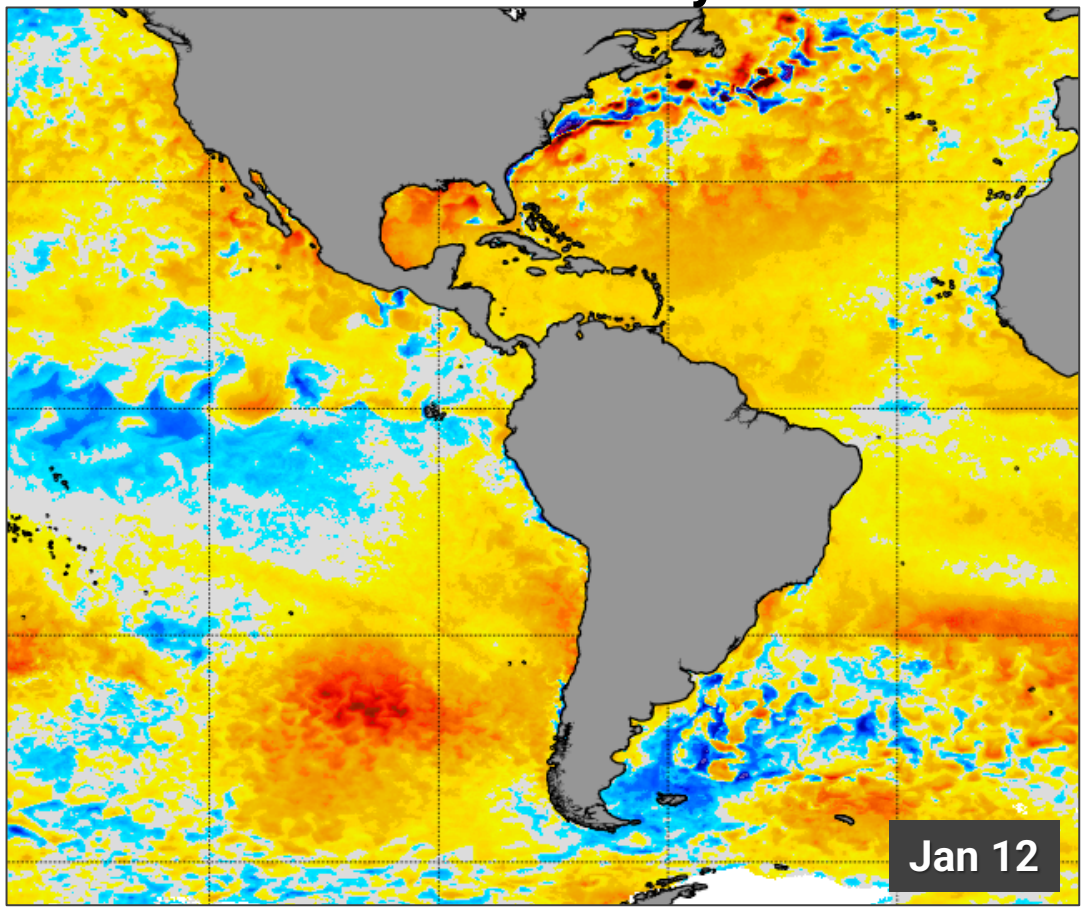


0 5 10 15 20 25 30

Source: OSPO

Sea Surface Temperature (°C)

SST Anomaly



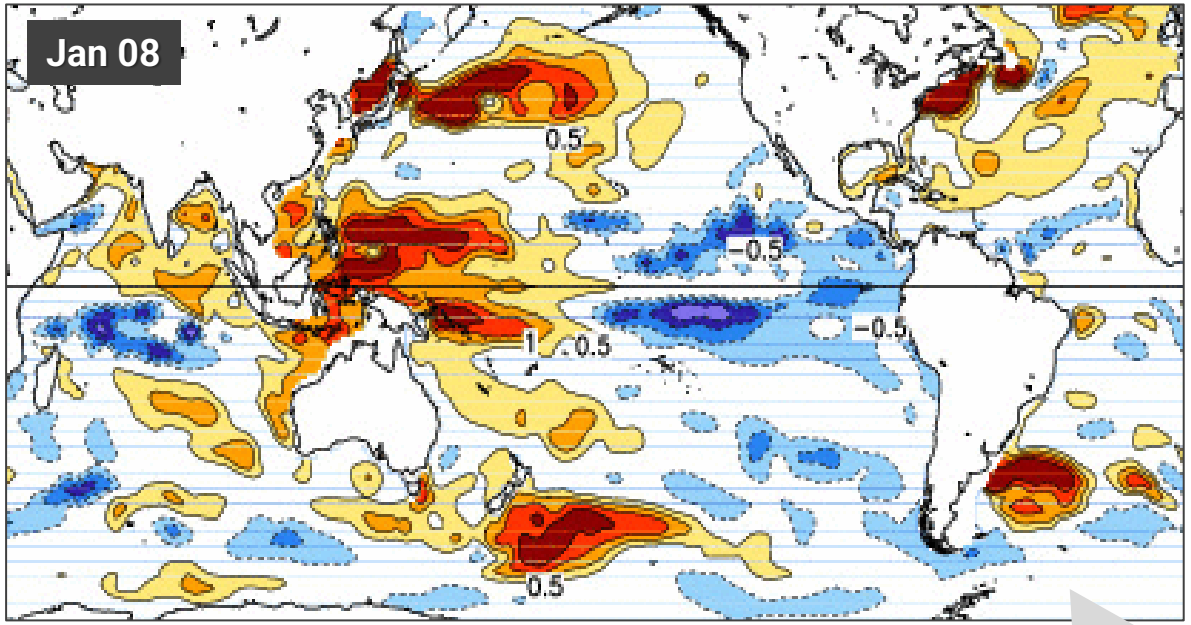
−5 −4 −3 −2 −1 0 1 2 3 4 5 °C

Source: NOAA Coral Reef Watch

SST Anomaly (°C)

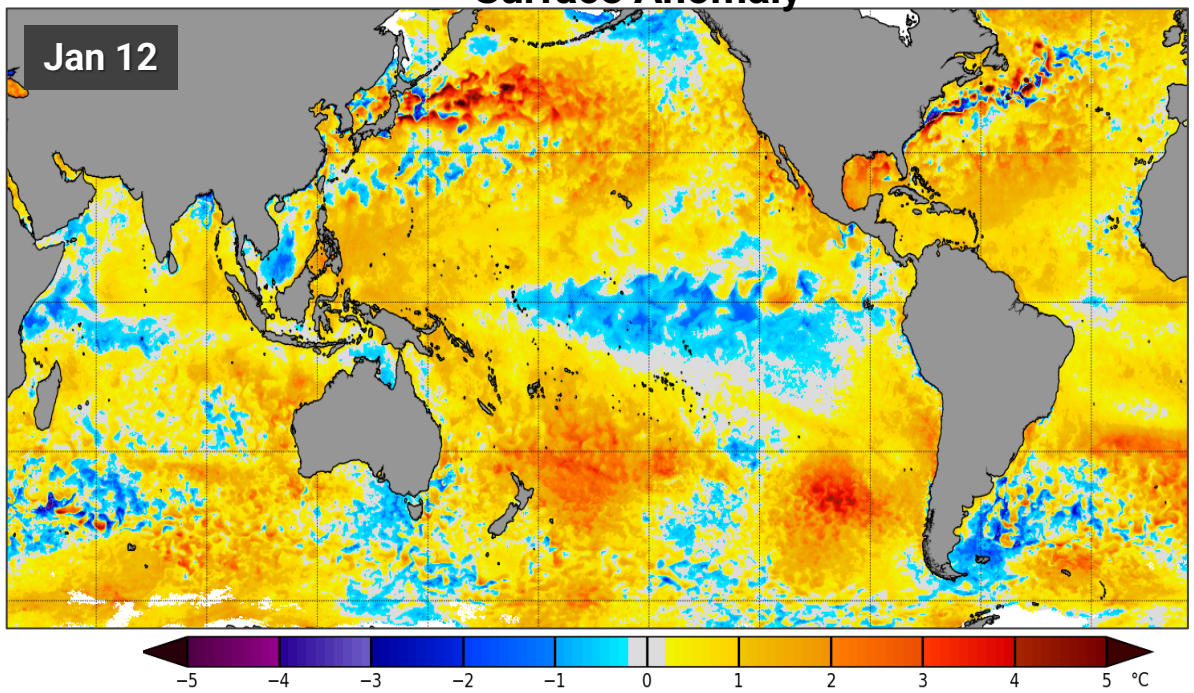
Top 300m Layer Temperature Anomaly

Layer Anomaly



Source: GODAS, CPC

Surface Anomaly



Source: NOAA Coral Reef Watch

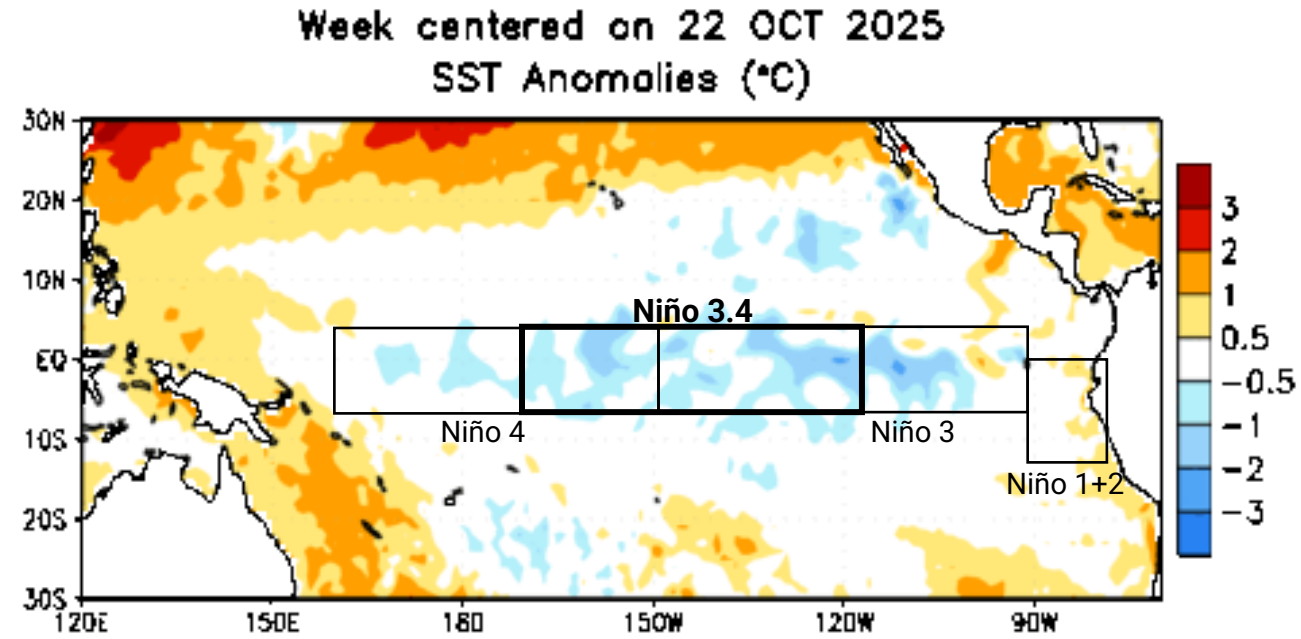
Layer anomalies take longer to dissipate than superficial ones, which makes them a great subseasonal forecasting tool!

El Niño-Southern Oscillation (ENSO)

CPC Official Statement

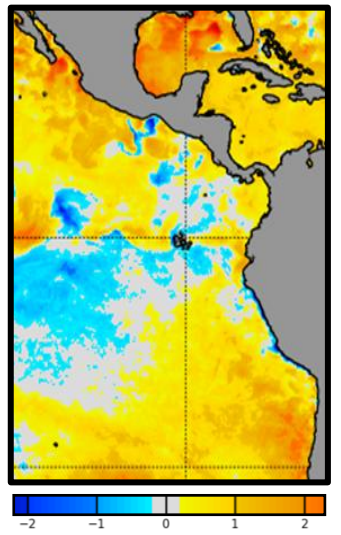
La Niña Advisory

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



Source: CPC

SST Jan 12



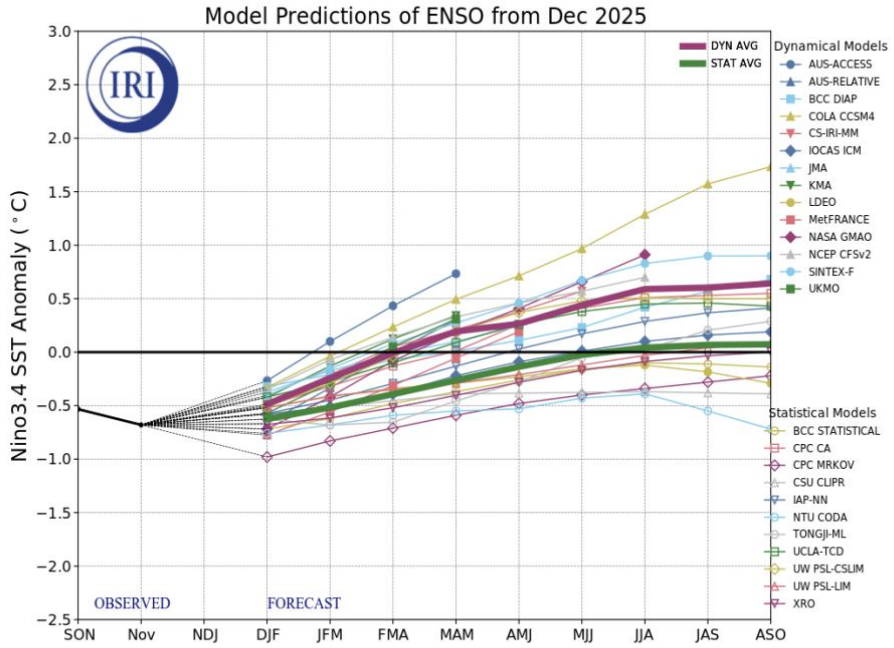
Takeaways

- La Niña anomalies are still present.
- The South American coast seems to be warming since January 7.

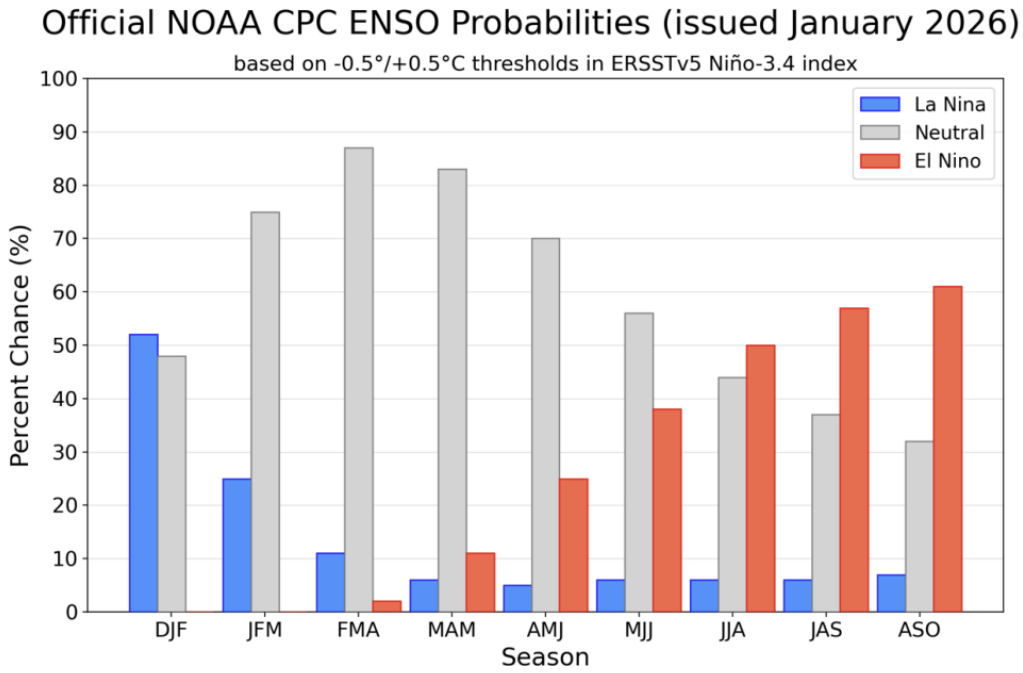
ENSO Outlook:

There is a 75% chance of a transition to ENSO-neutral during January-March 2026. ENSO-neutral is likely through at least Northern Hemisphere late spring 2026.

Dynamical Models



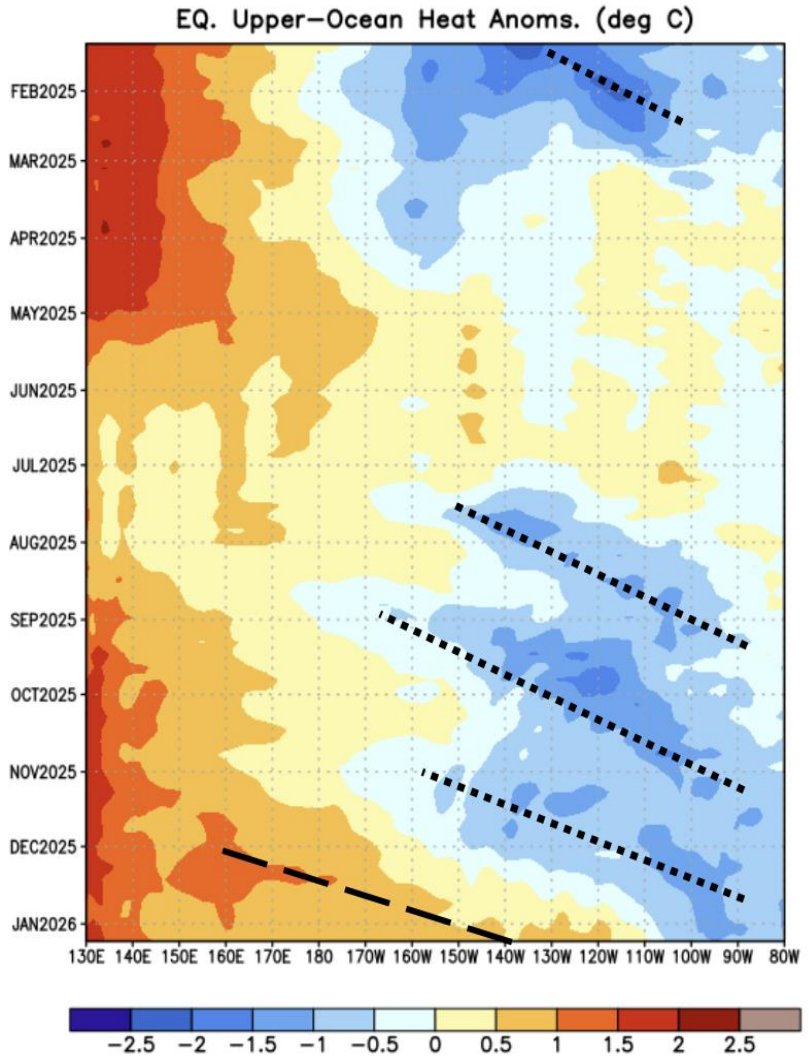
Probabilistic Forecast



Takeaways

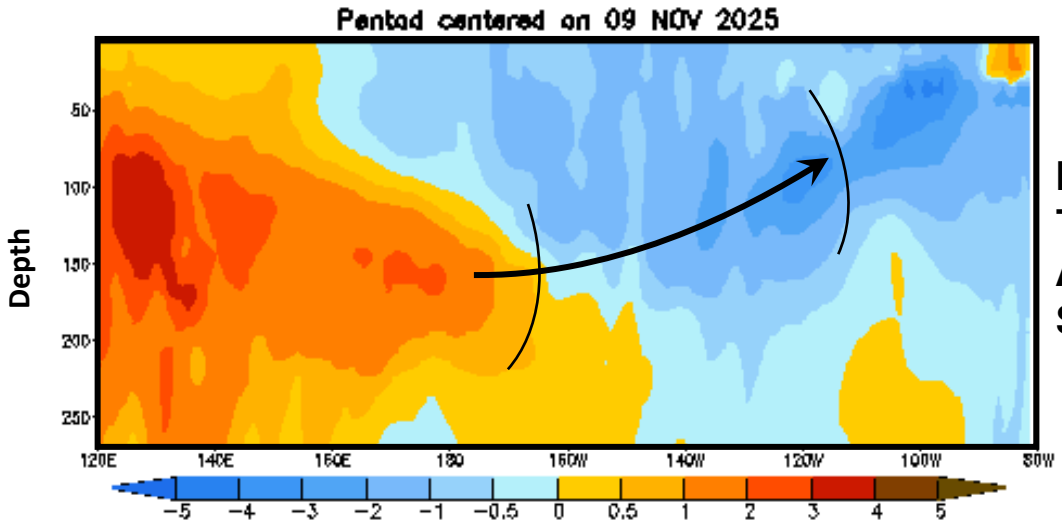
- A rapid transition to ENSO Neutral is expected sometime during February.
- Chances for El Niño increase during the north hemisphere spring, becoming dominant past June 2026.

Oceanic Kelvin Wave Activity (ENSO)



Takeaways

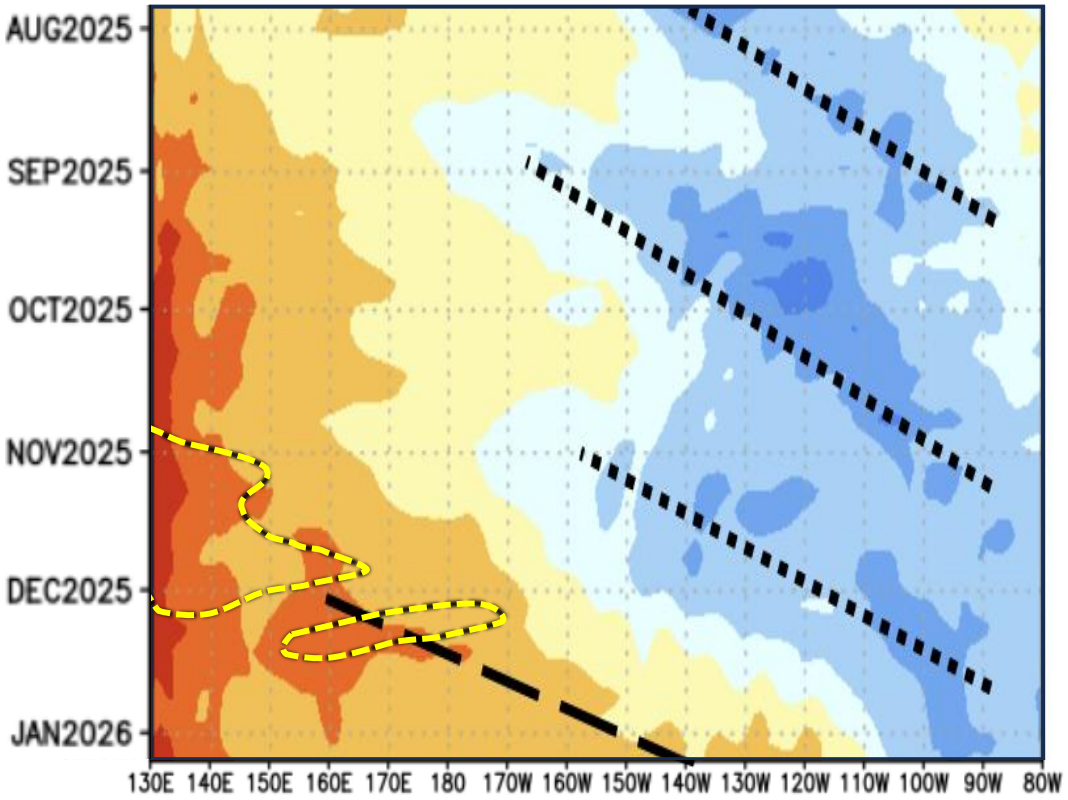
- A potent warm (downwelling) Kelvin is propagating near 110W, to likely favor a South American warming coast by February, consistent with a potentially rapid transition out of La Niña.
- Its arrival during the period of warmest SST poses a risk for a rapid warming of the coasts of Ecuador and Peru due to non-linear feedbacks. This is accompanied by a risk of heavy rainfall events during March and April.



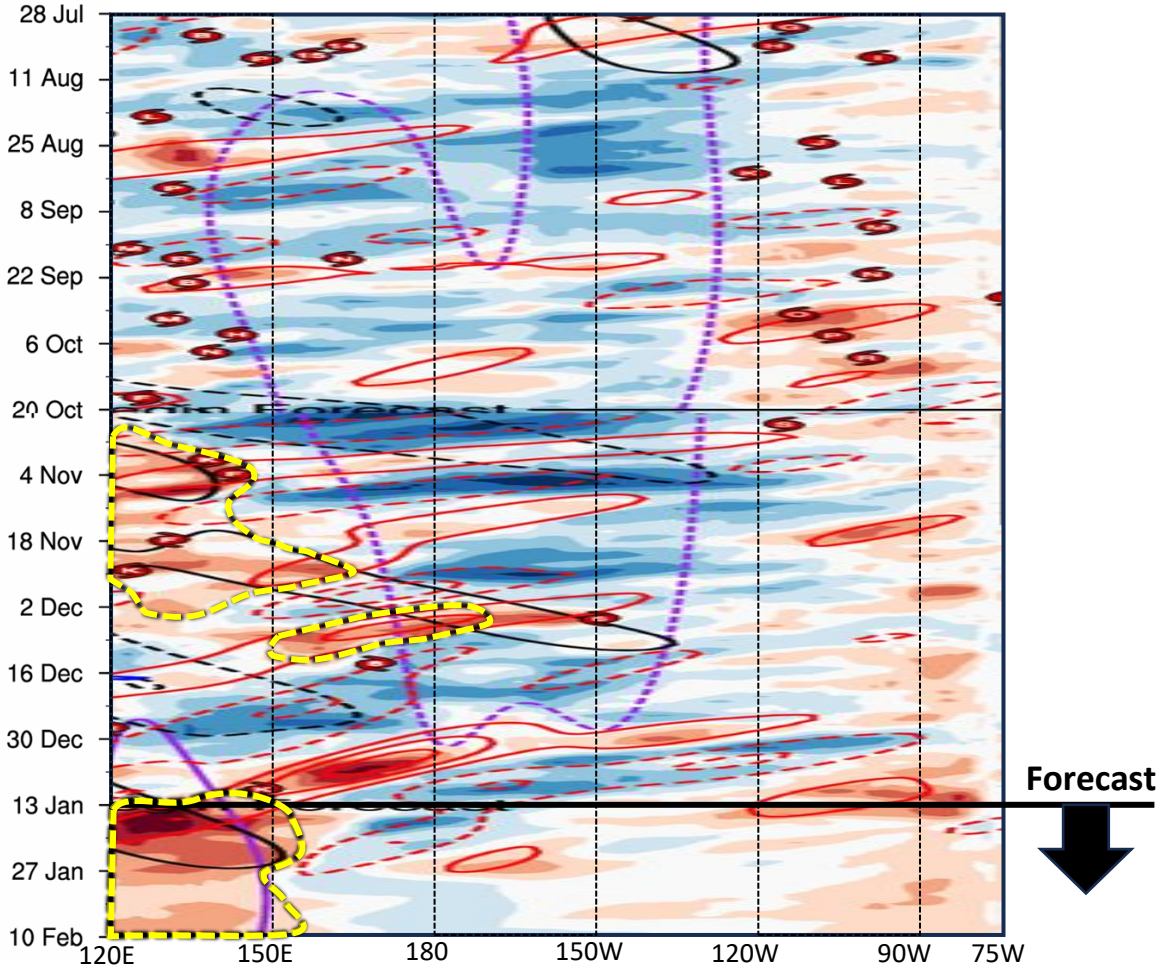
Equatorial Temperature Anomaly Cross Section

Westerly Wind Bursts are ramping up

Ocean Heat Content Hovmöller



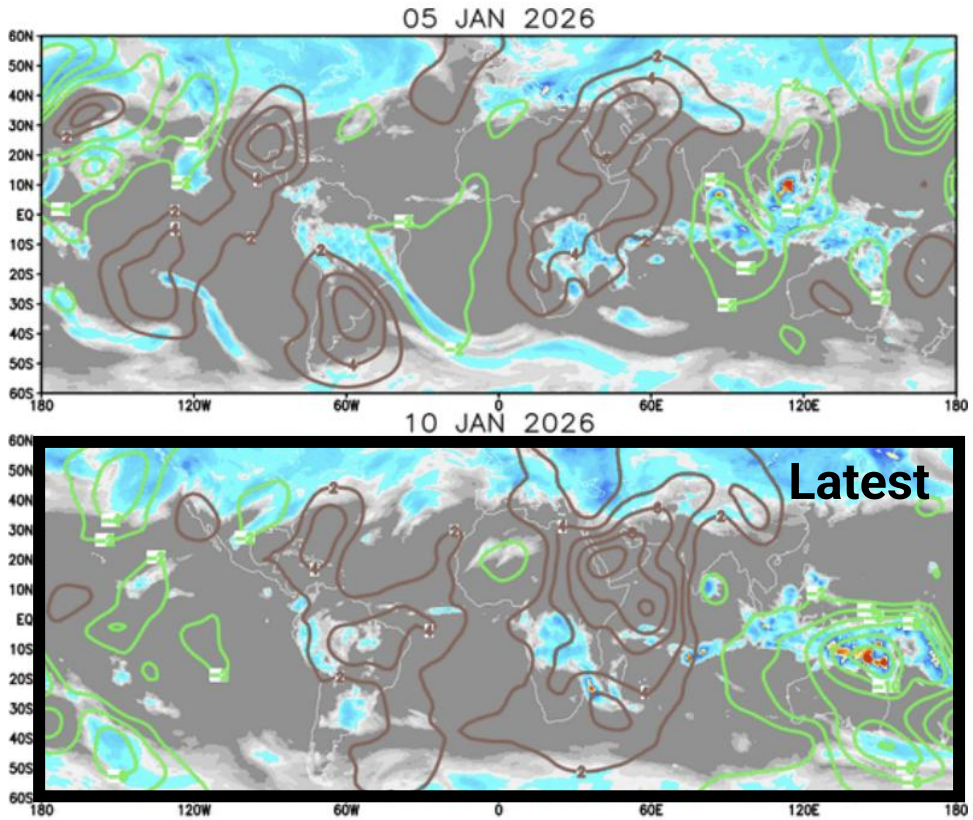
850 hPa Zonal Wind Anomalies Hovmöller

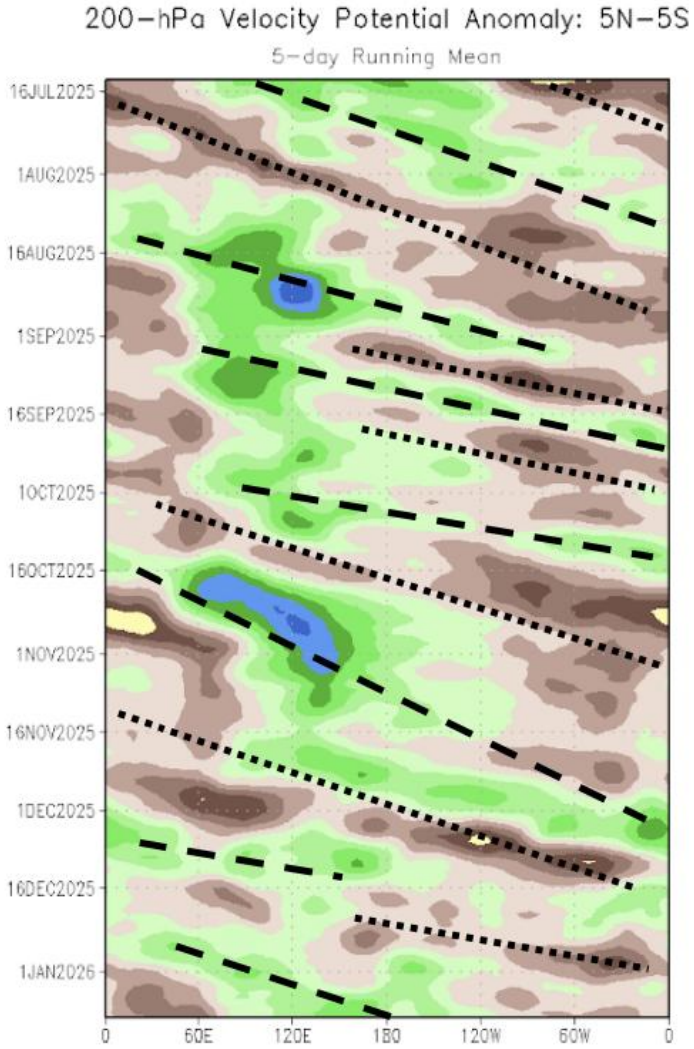


Takeaway The strong westerly wind burst forecast will likely trigger a new warm Kelvin Wave that might warm up the South American coast by late March.

Madden-Julian Oscillation (MJO)

Velocity Potential and Outgoing Long Wave Radiation



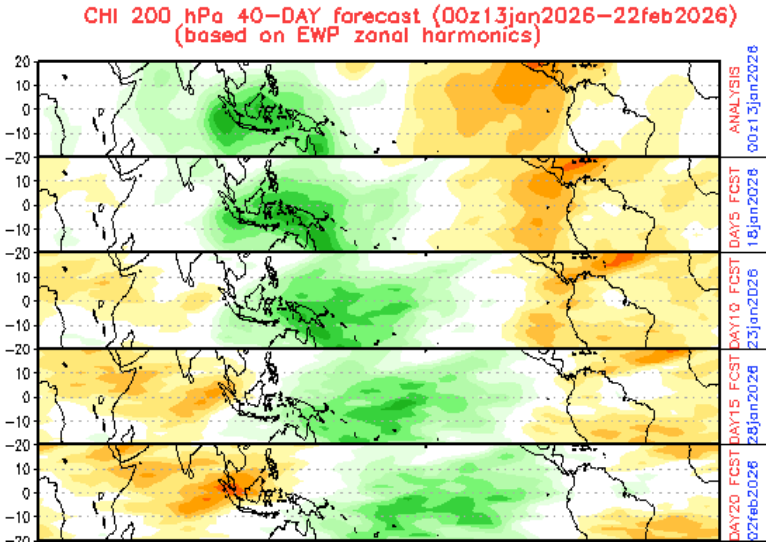


Takeaways

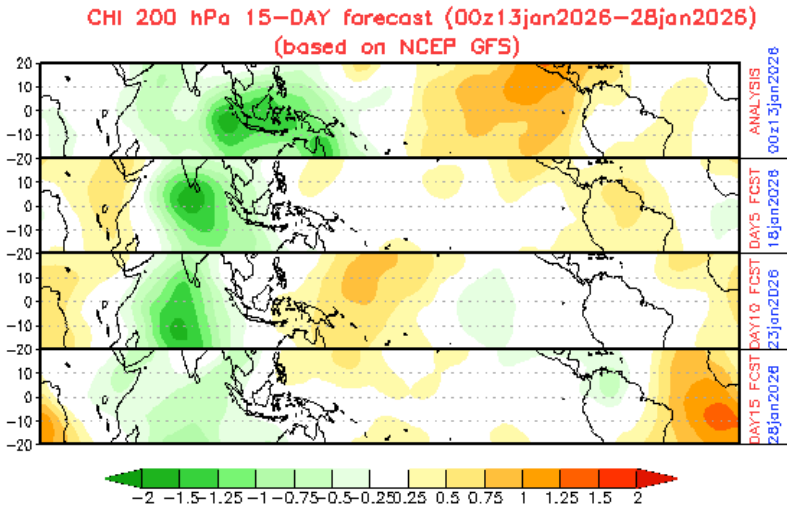
- The MJO continues very disorganized.
- A weak wet pulse seems to be propagating near 180-120W

MJO Forecasts

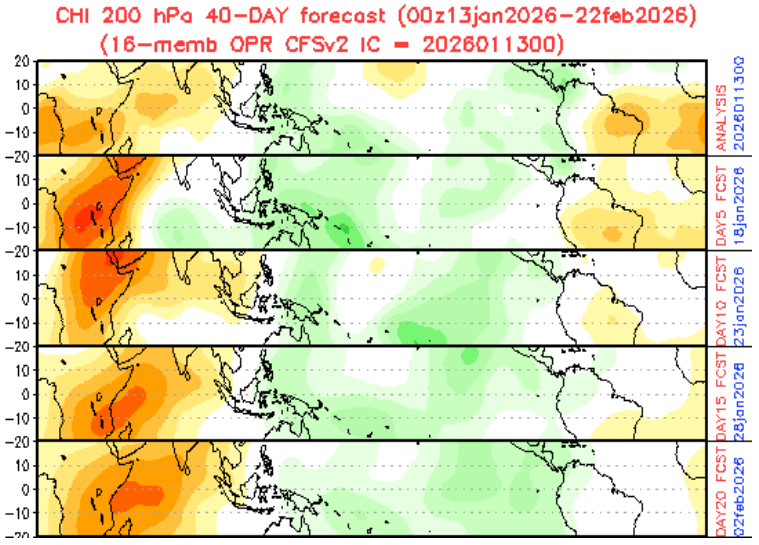
Empirical Wave Propagation



Global Forecast System (GFS)



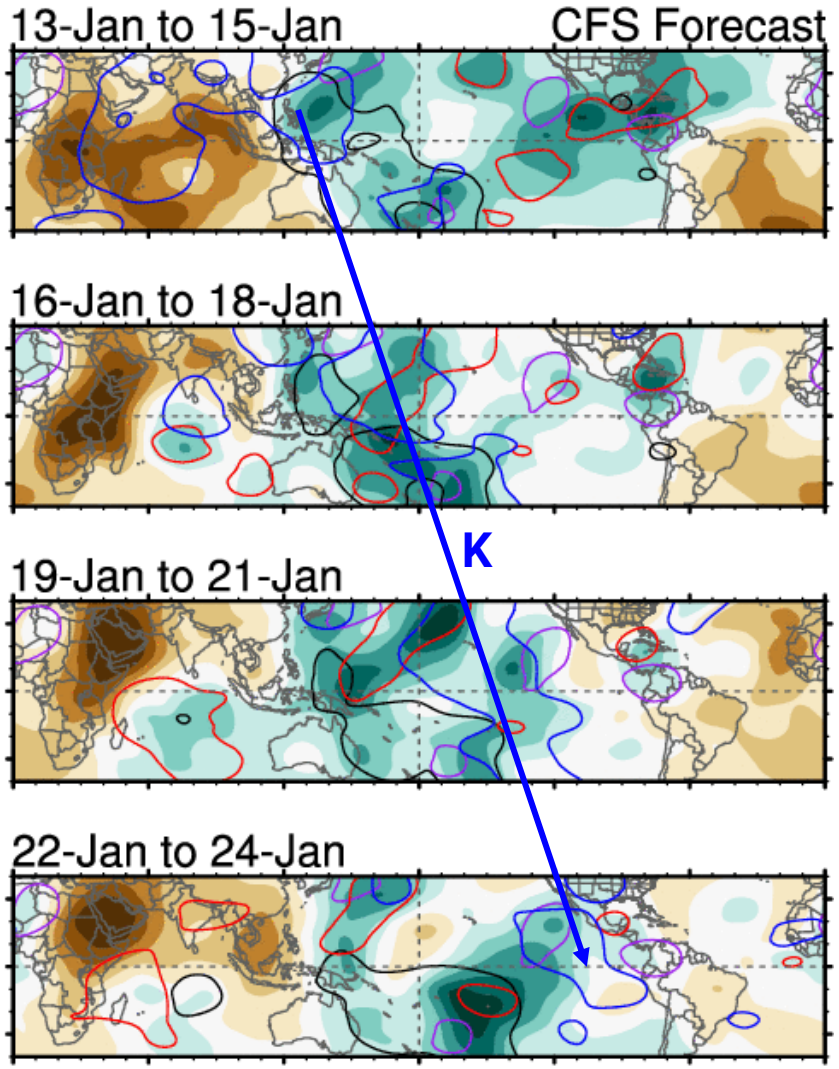
Climate Forecast System (CFS)



Takeaways

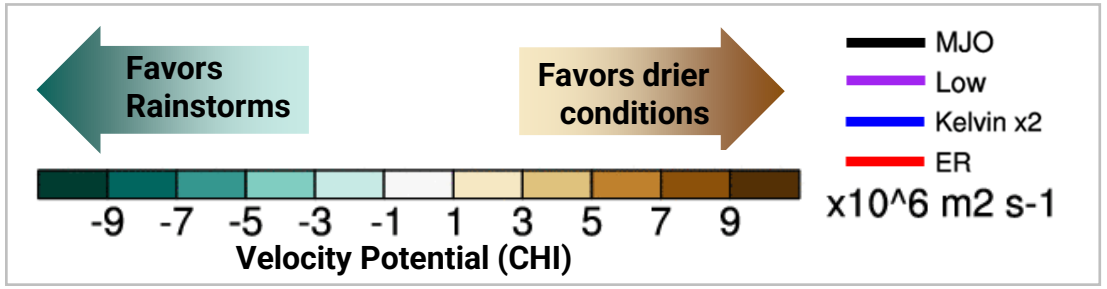
- Based on observations, the MJO is very disorganized, which limits the confidence in model solutions.
- In fact, models largely differ.
- Given the absence of a strong MJO signal, other modes such as Kelvin Waves and the synoptic weather pattern will lilely play a stronger role in the coming weeks.

MJO and Upper Tropospheric Waves



Takeaways

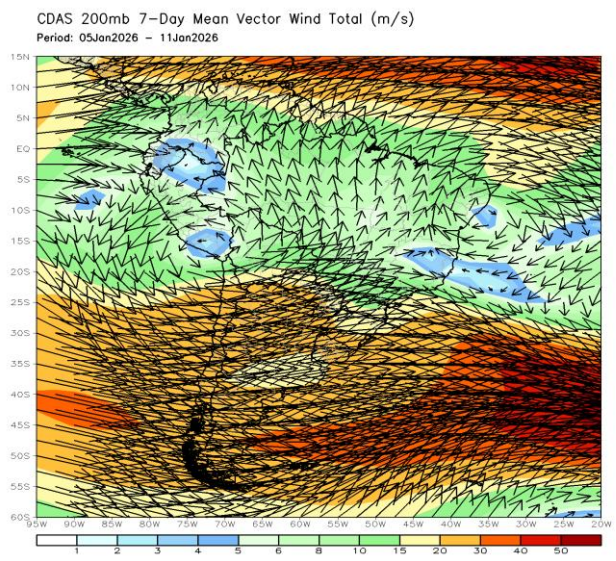
- A Kelvin Wave seems to be propagating across the maritime continent, and is forecast to enter in the Americas by January 24th, to highlight precipitation between Jan 24th and the 27th.
- A disorganized MJO signal might be crossing the Americas through Friday.

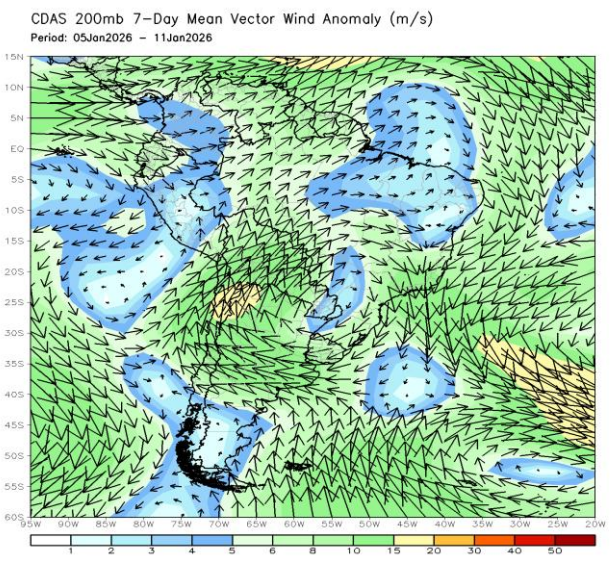


South America - Last 7 days

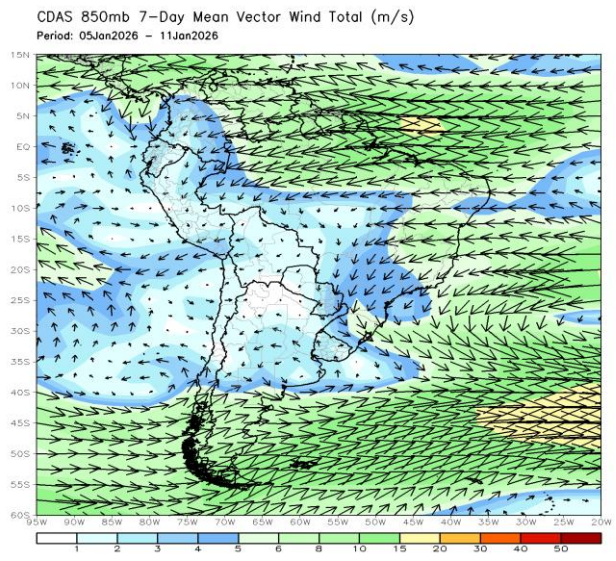
Flow

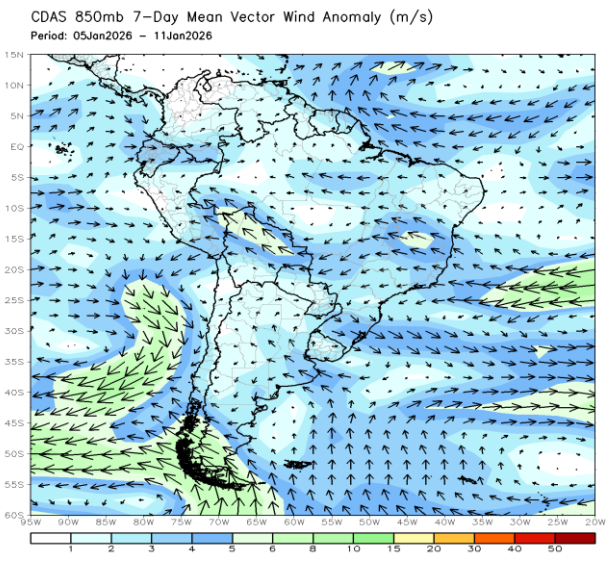
200 hPa



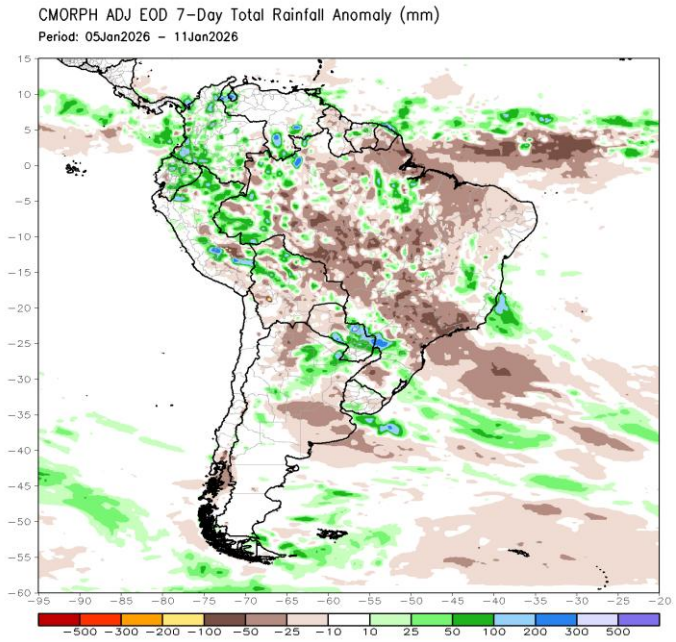


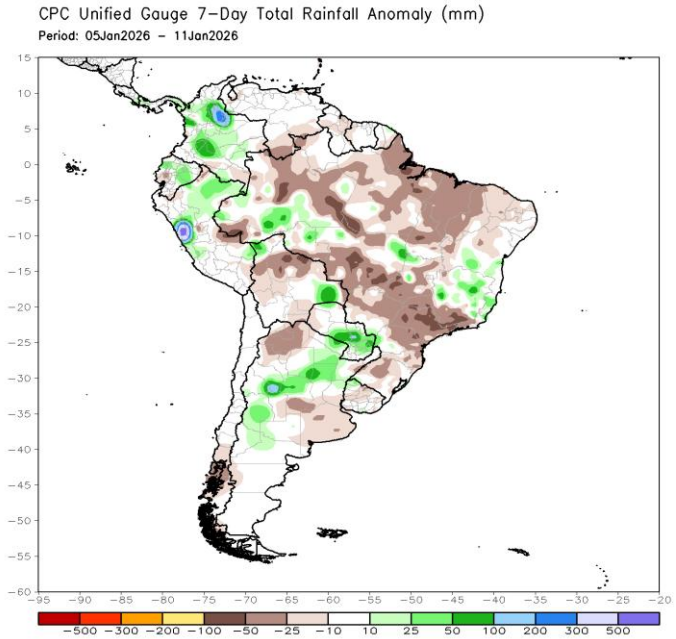
850 hPa





Rainfall Anomalies

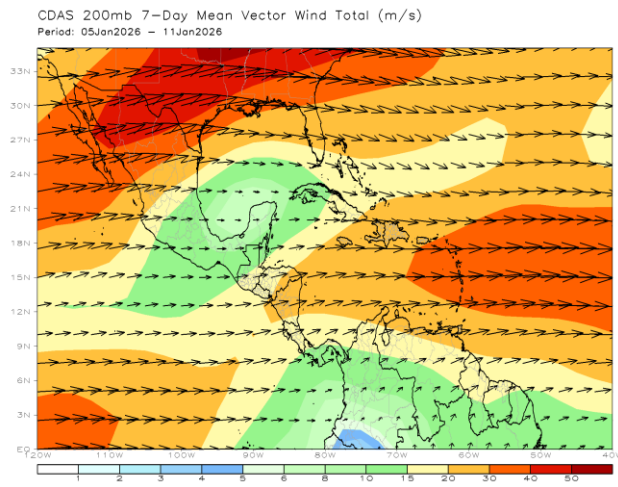


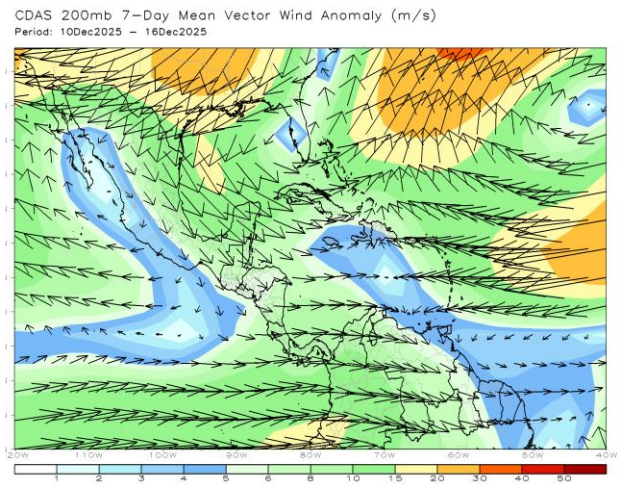


Caribbean, Central America and Mexico last 7 days

Flow

200 hPa





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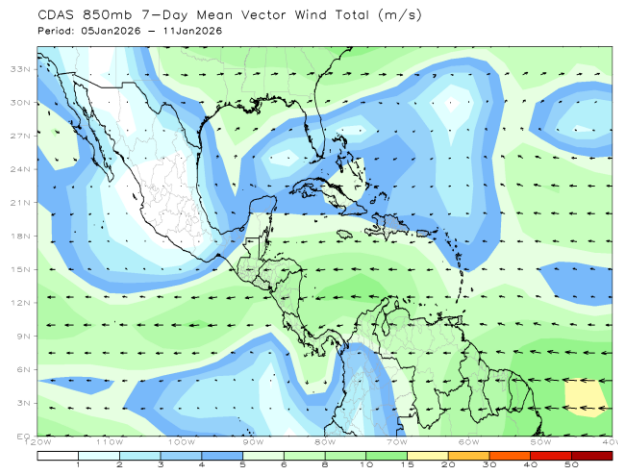
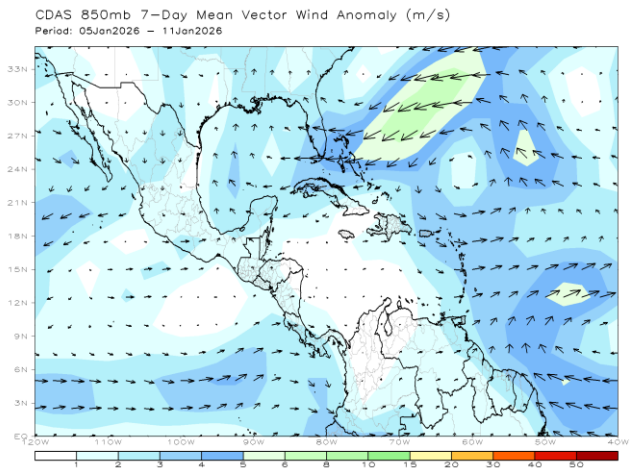
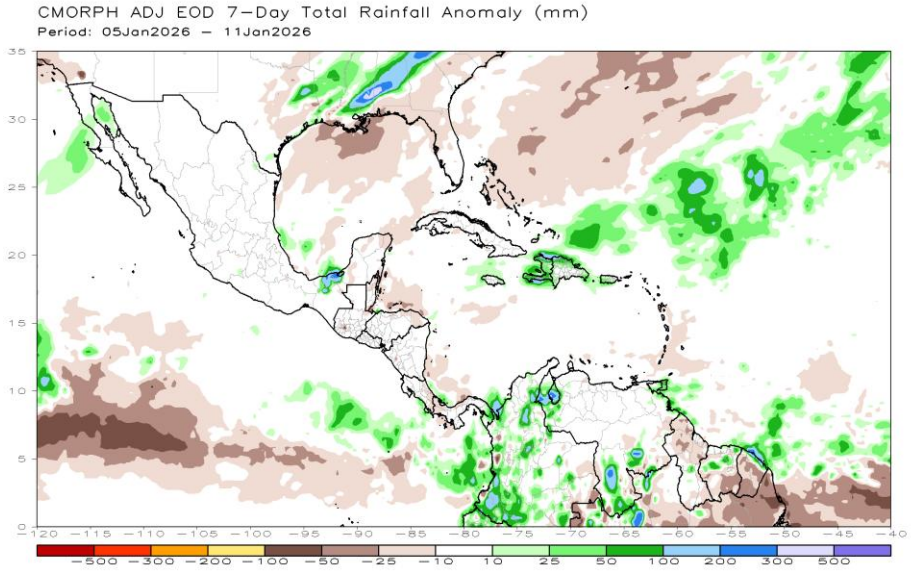
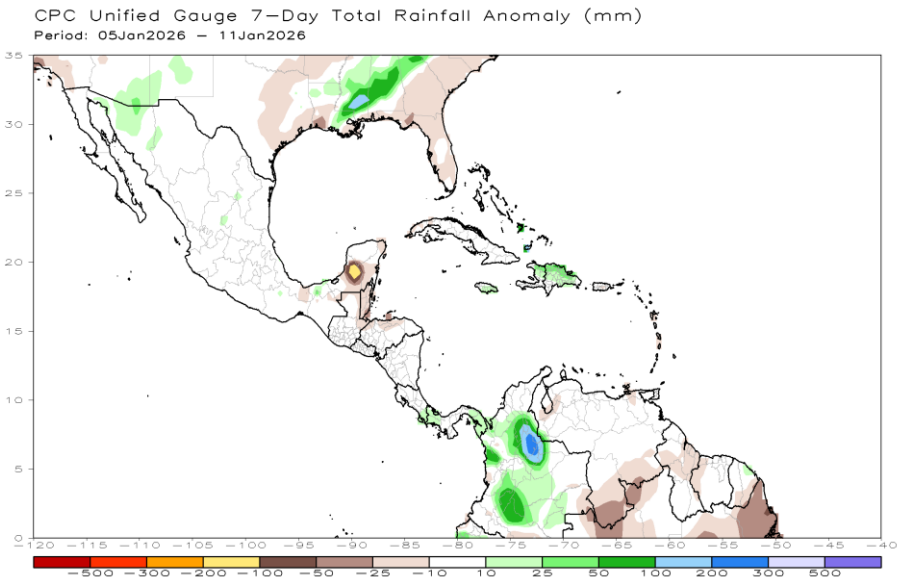




Rainfall Anomalies





Next Sessions

Wednesday, 11 February 2025 at 16:00 UTC

Wednesday, 25 March 2025 at 15:00 UTC

THANK YOU! GRACIAS! OBRIGADO!

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