WMO VLab Regional Focus Group
of the Americas and Caribbean

Since 2004

Climate Indices

Current Status and Projections

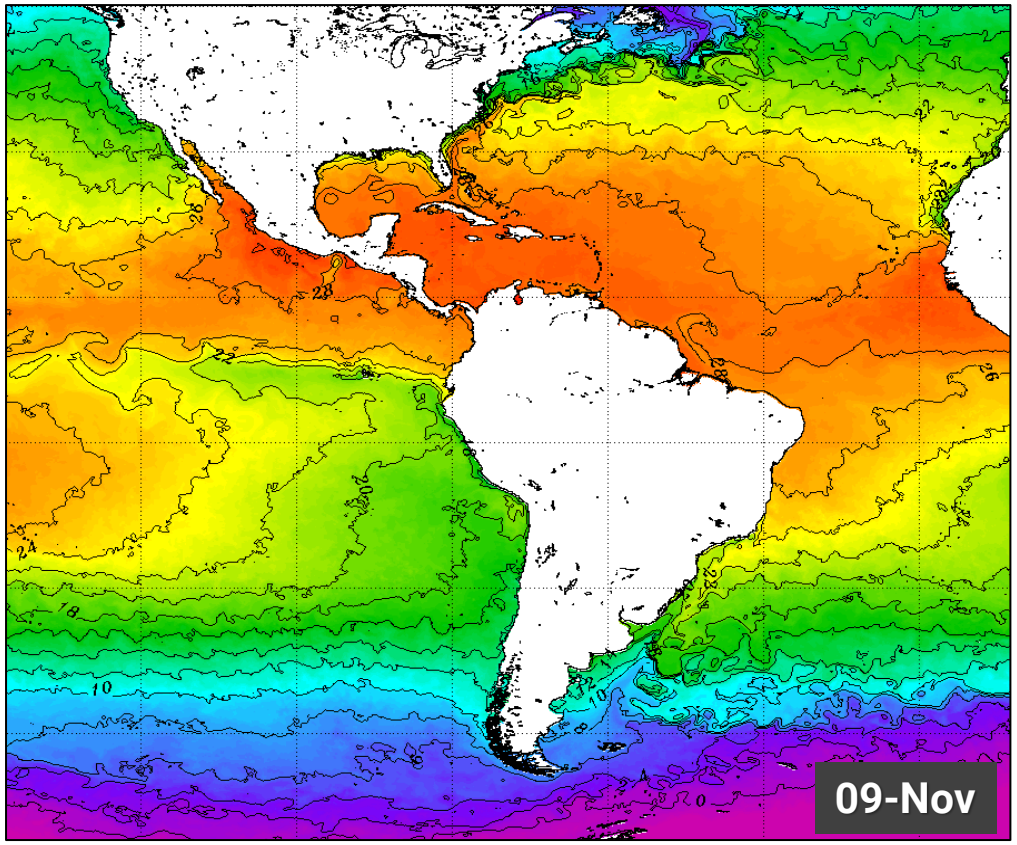
Wednesday 12 November 2025

Some important events during the past few weeks

- Hurricane Melissa in the Caribbean (Oct 21-31).
- Tornado in Brazil (Nov 7)
- Cyclones Kalmaegi (Tino) and Fung-Wong (Uwan) in the Phillipines (Oct 31-Nov 10)
- Potent front, shear line and heavy rains in Central America.

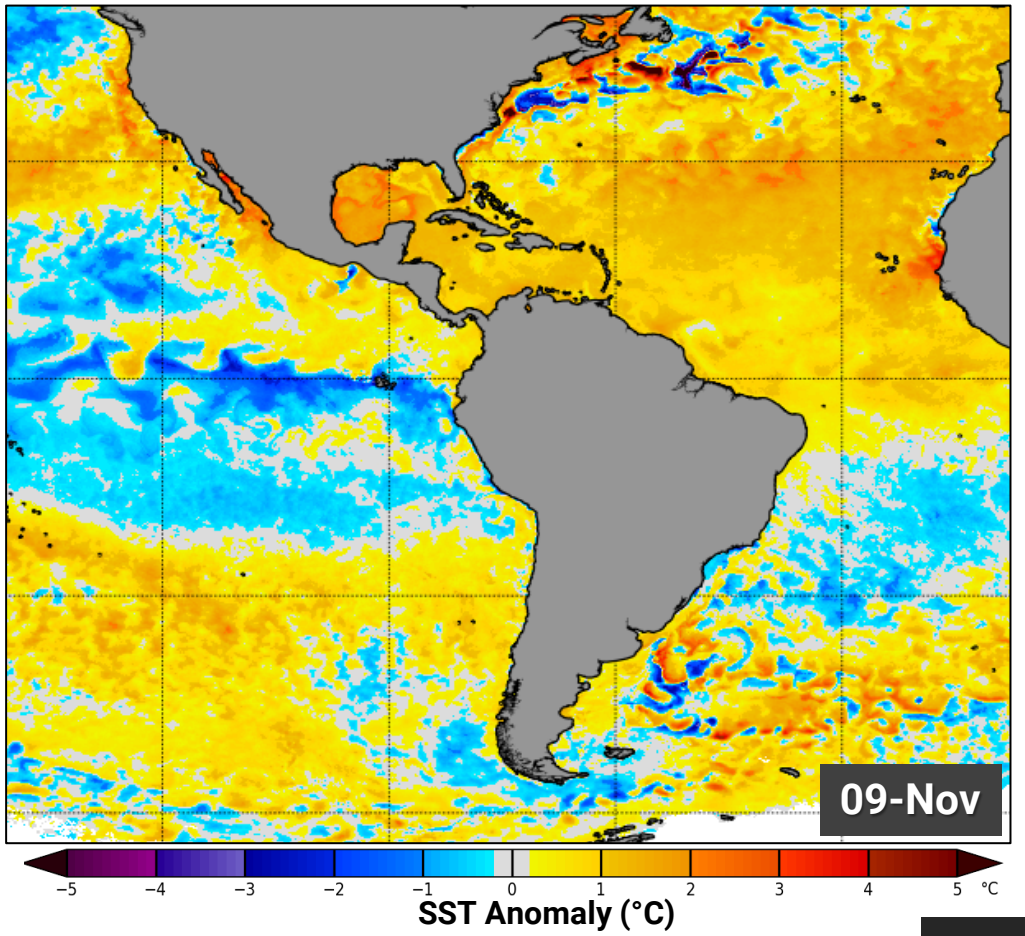
Sea Surface Temperature (SST)

SST



Source: OSPO

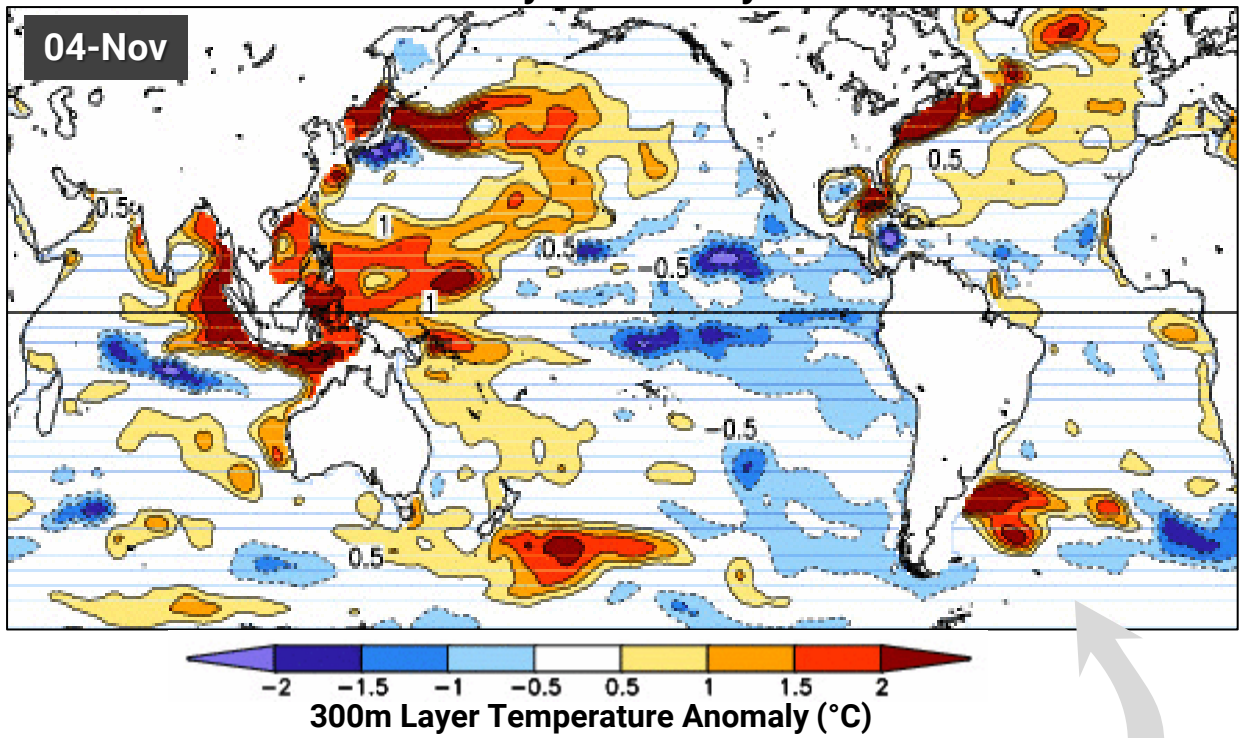
SST Anomaly



Source: NOAA Coral Reef Watch

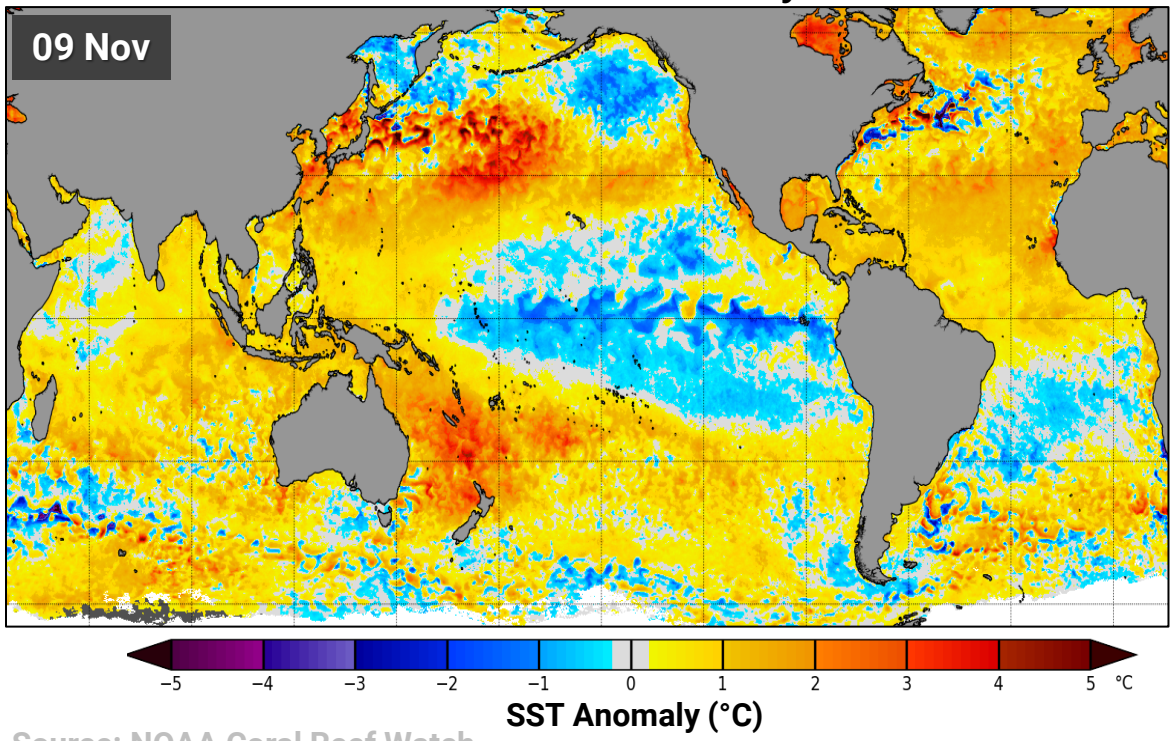
Top 300m Layer Temperature Anomaly

Layer Anomaly



Source: GODAS, CPC

Surface Anomaly



Source: NOAA Coral Reef Watch

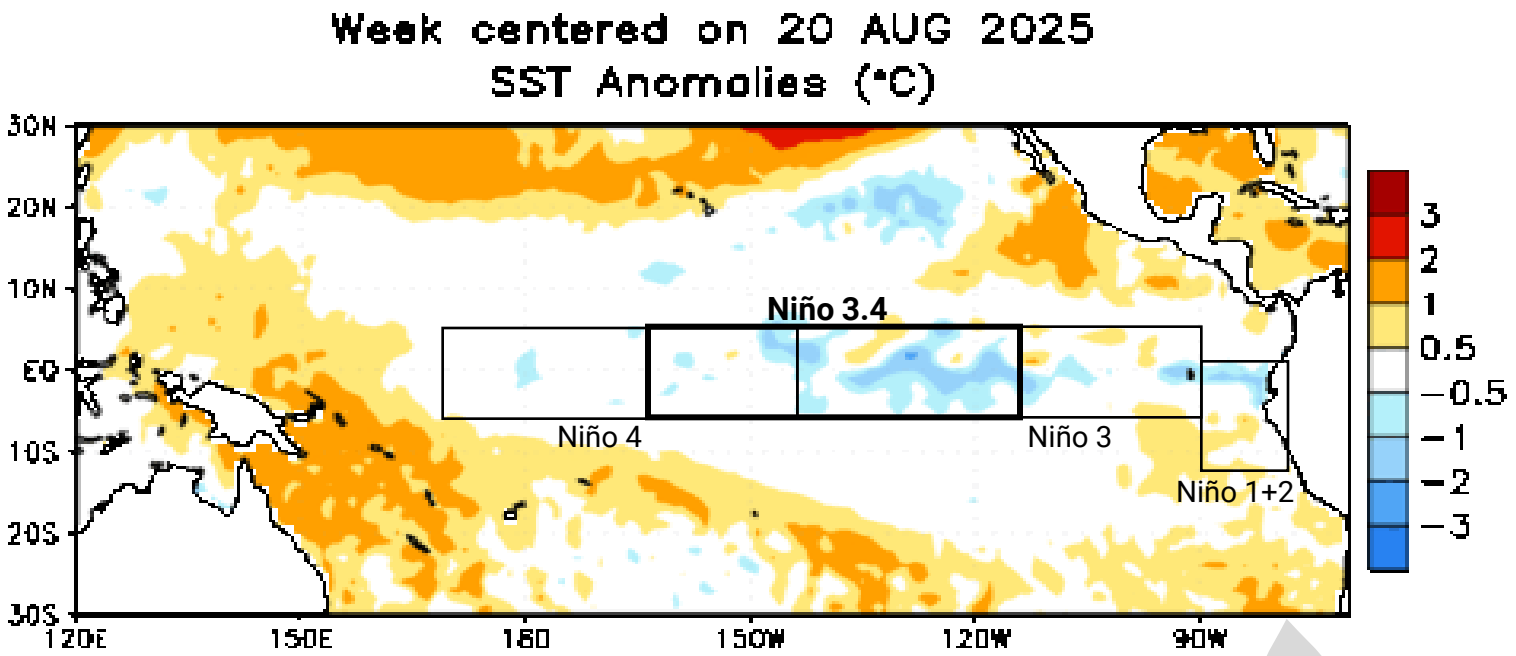
Layer anomalies take longer to dissipate than superficial ones, which makes them a great subseasonal forecasting tool!

El Niño-Southern Oscillation (ENSO)

CPC Official Statement

La Niña Advisory

- La Niña conditions are present.*
- Equatorial SSTs are below average across the central and east-central Pacific Ocean.
- Atmospheric anomalies over the tropical Pacific Ocean are consistent with La Niña.



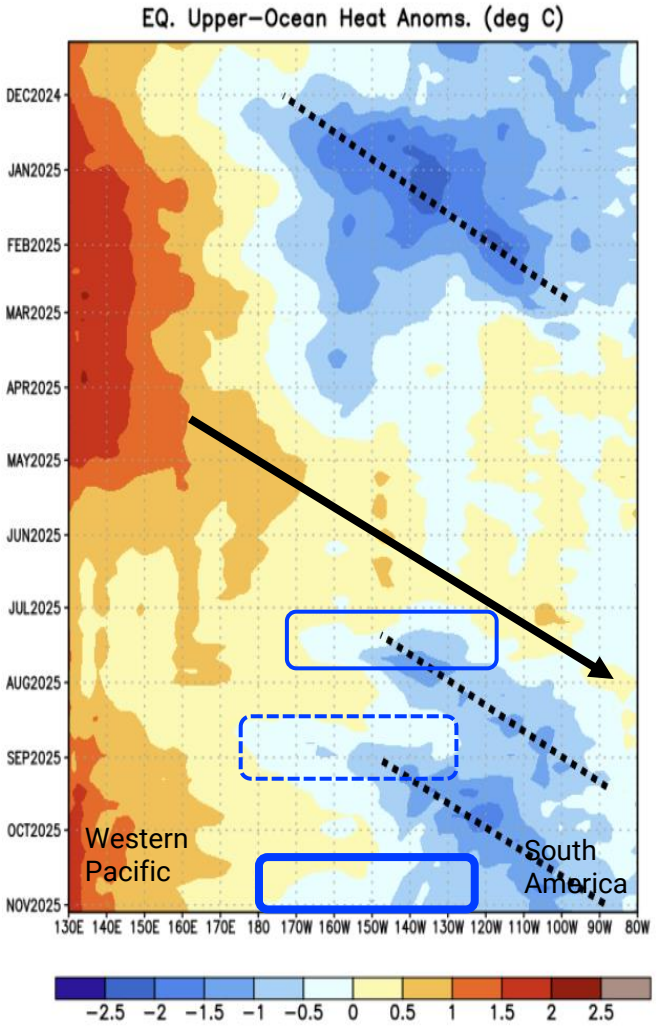
Source: CPC

Takeaway

- La Niña conditions are very well established.

Oceanic Kelvin Wave Activity (ENSO)

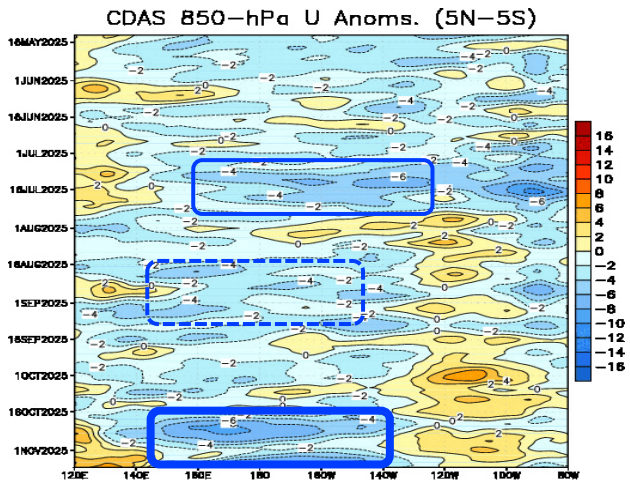
Heat Content Hovmöller



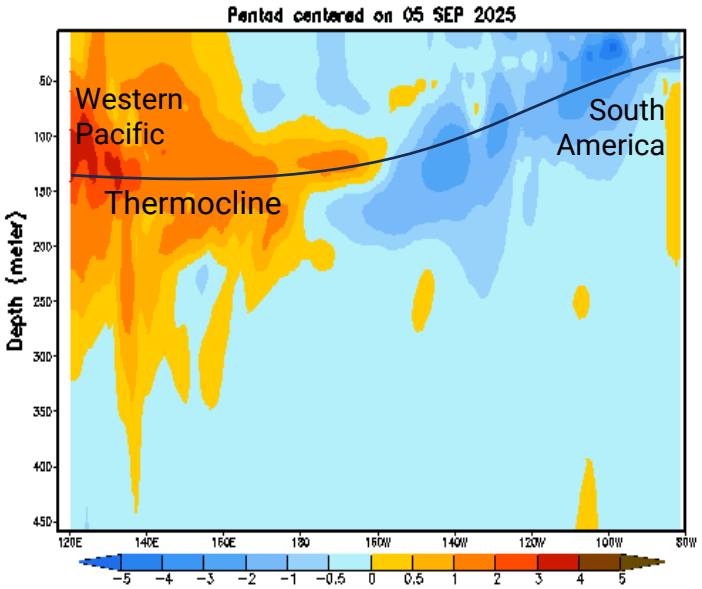
Takeaways

- Cool Kelvin waves continue active, sustaining the cooling in the eastern and central equatorial Pacific.
- Potent easterly wind anomalies in the last month, related to the massive MJO signal in the Indian Ocean/Western Pacific, have likely triggered a new cold Kelvin which should cool the Eastern Pacific/SAM coast by January.

850 Zonal Wind Anomalies



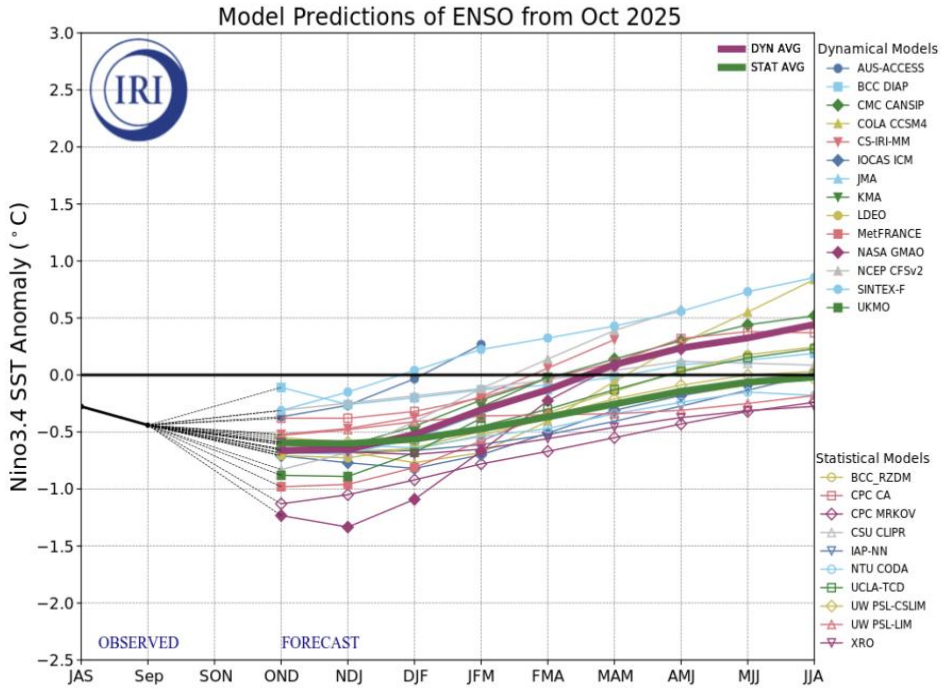
Equatorial Temperature Anomaly Section



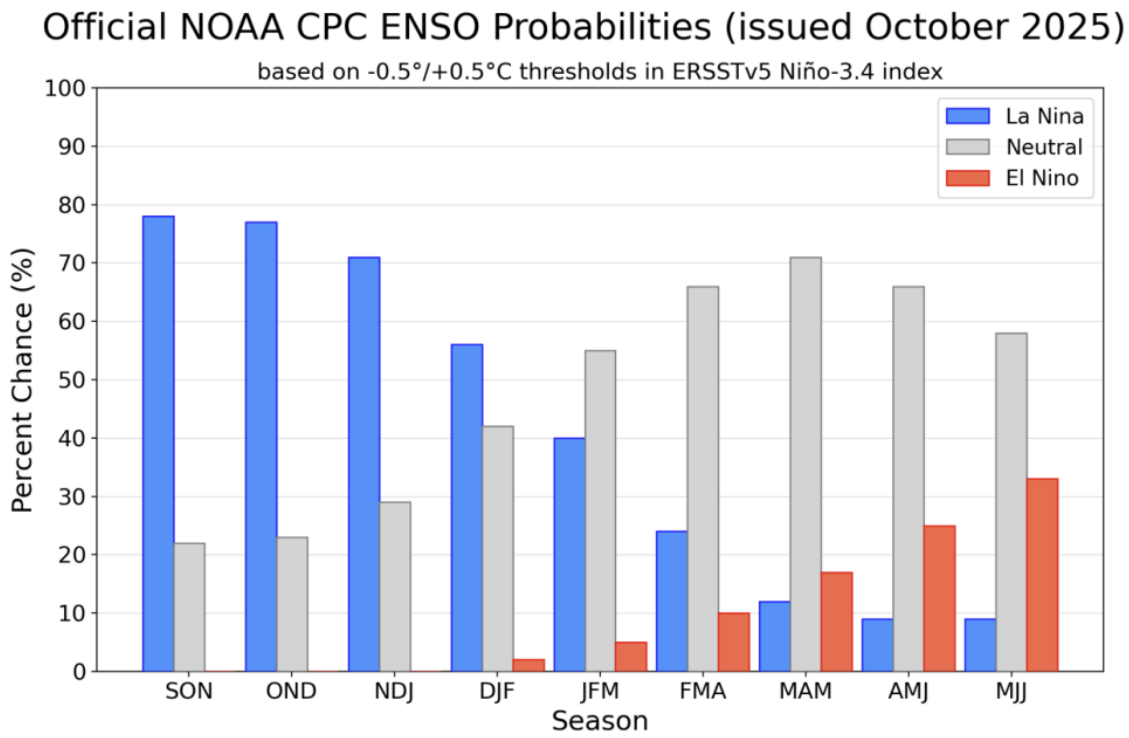
ENSO Outlook:

La Niña conditions are present and favored to persist through December 2025 - February 2026, with a transition to ENSO-neutral likely in January-March 2026 (55% chance).*

Dynamical Models



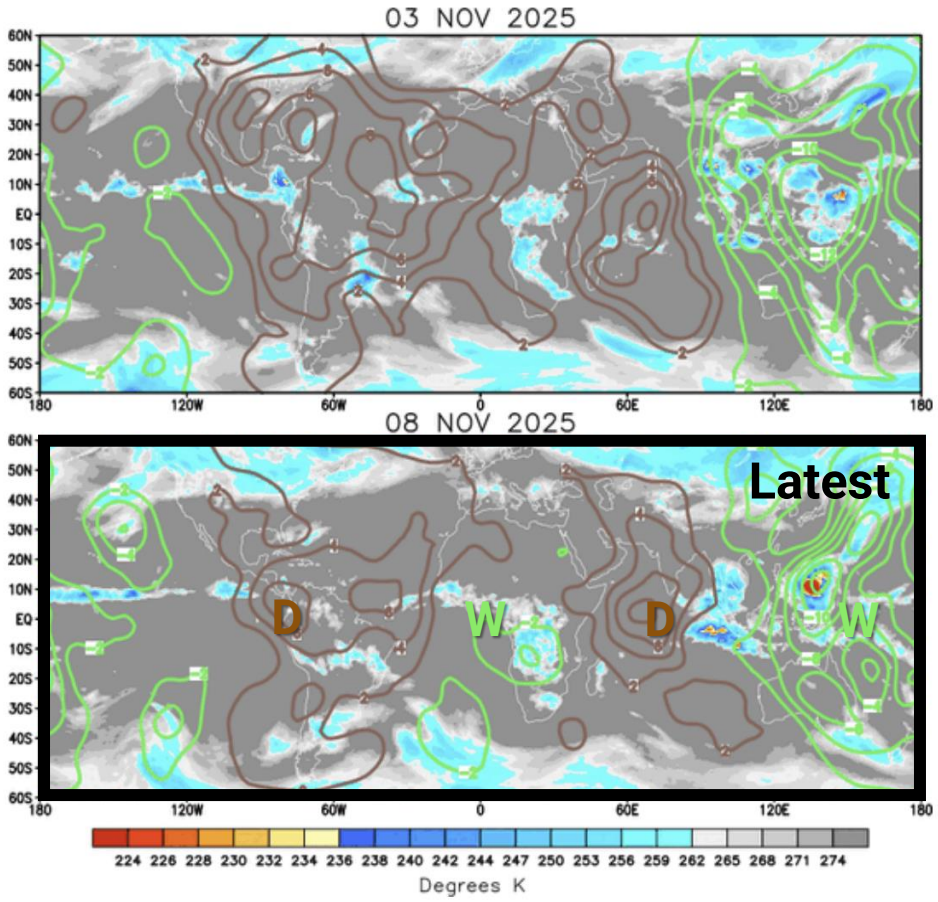
Probabilistic Forecast



Takeaway La Niña should continue through January/February.

Madden-Julian Oscillation (MJO)

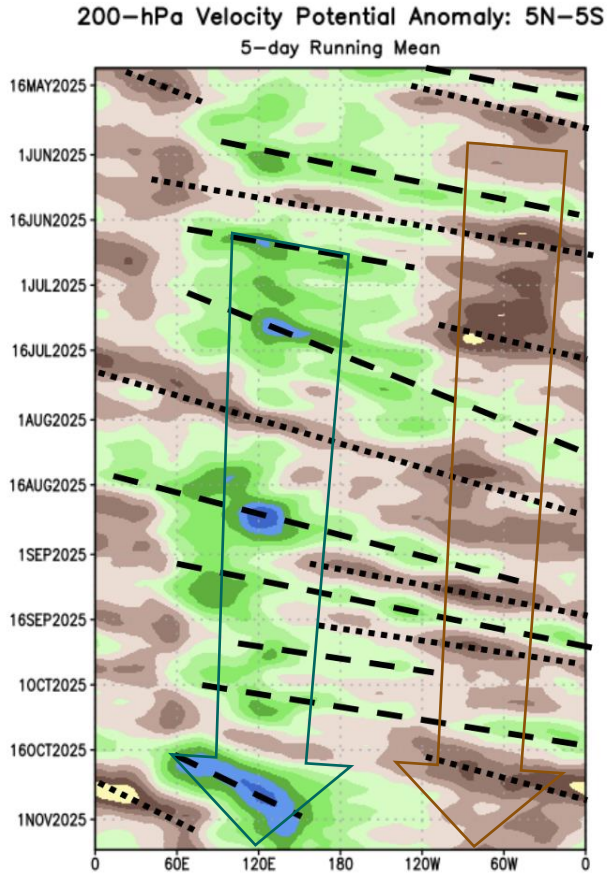
Velocity Potential and Outgoing Long Wave Radiation



Takeaways

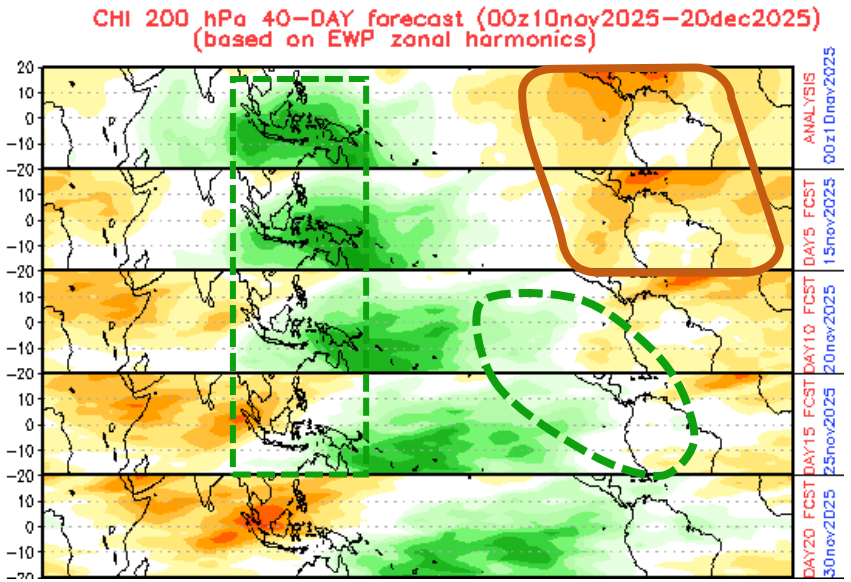
- A low frequency signal is dominant, and continues favoring wetter conditions over the Indian Ocean and Western Pacific (green). Partially related to enhanced Typhoon activity in the Phillipines.
- The MJO has transitioned into a Wave 2 mode, and the signal is weakening (losing organization)
- Propagation seems to be slowing down.

CHI Hovmöller

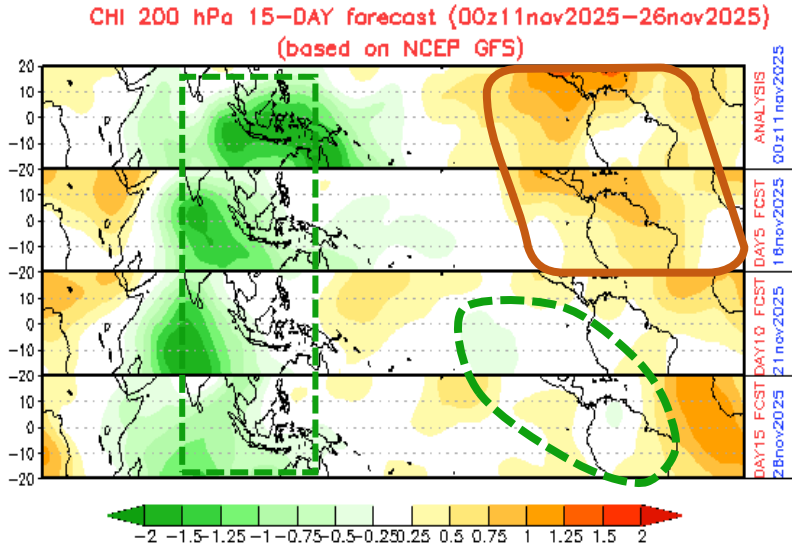


MJO Forecasts

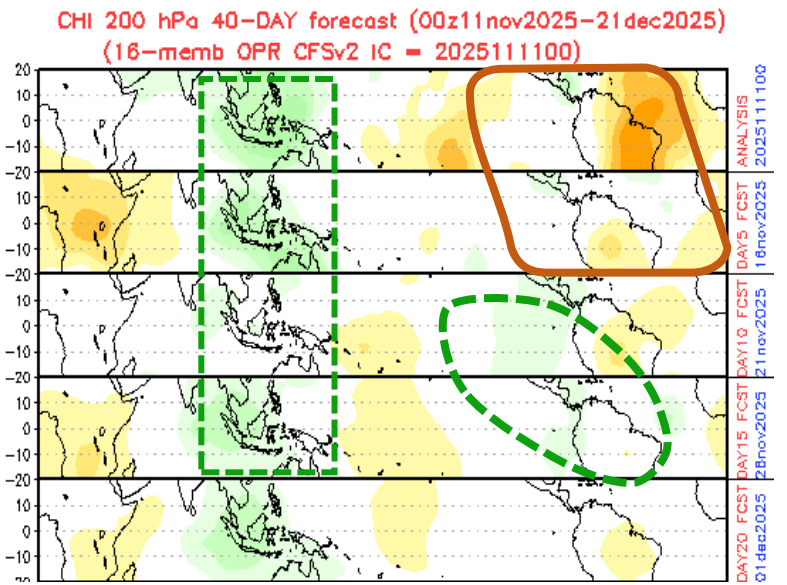
Empirical Wave Propagation



Global Forecast System (GFS)



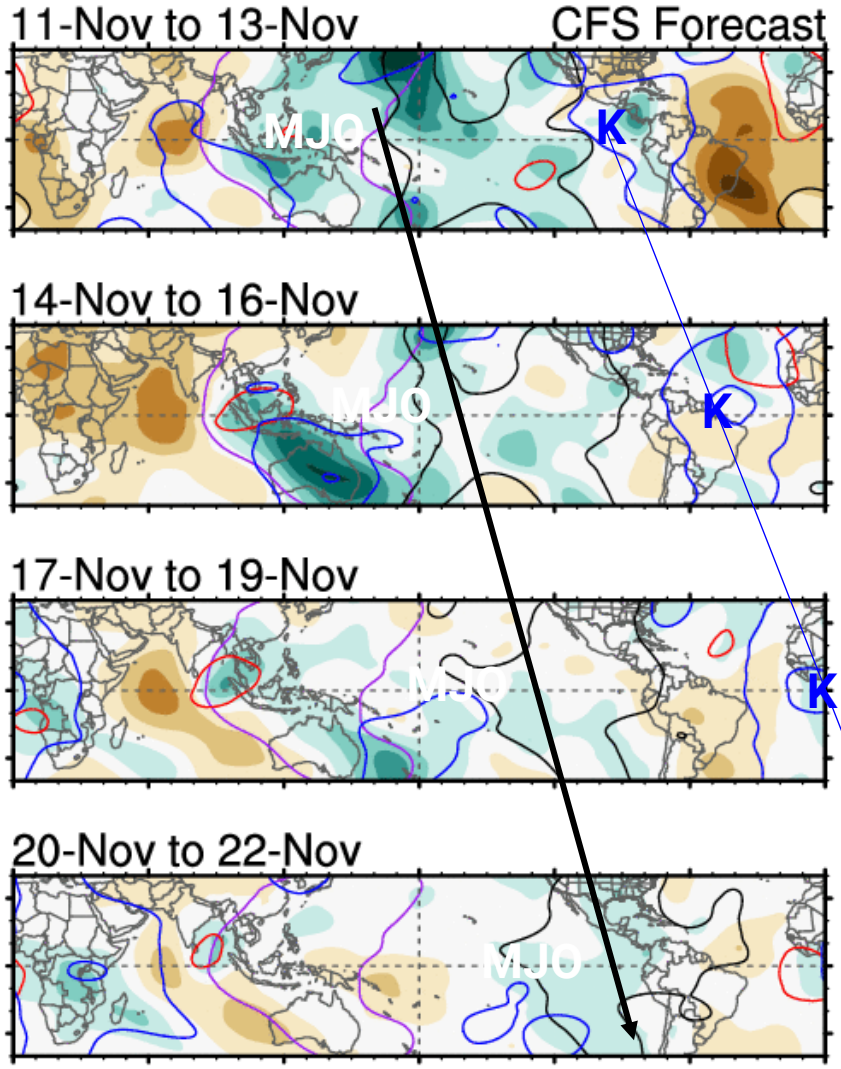
Climate Forecast System (CFS)



Takeaways

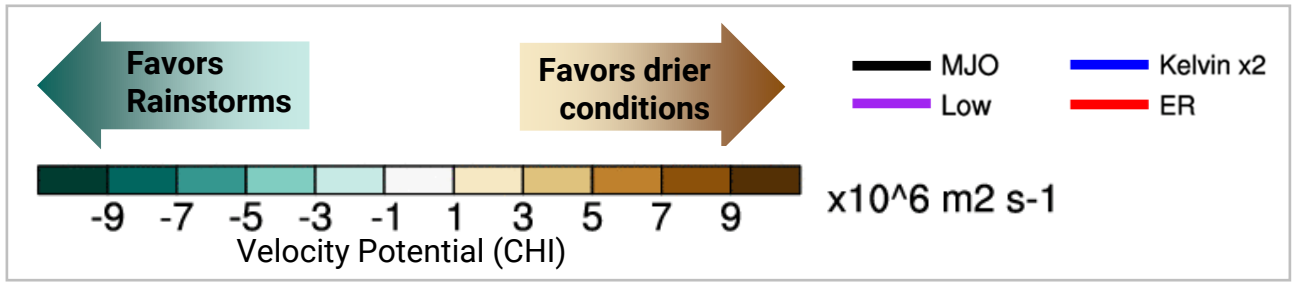
- Differences exist. Yet, there is some agreement in drier conditions in the Americas through early next week.
- Low frequency oscillation likely to persist, favoring wet condition in the Western Pacific and ill-defined propagation.
- Potentially wetter past Nov 20 – Kelvin Wave activity? Weak MJO wet pulse?

MJO and Upper Tropospheric Waves



Takeaways

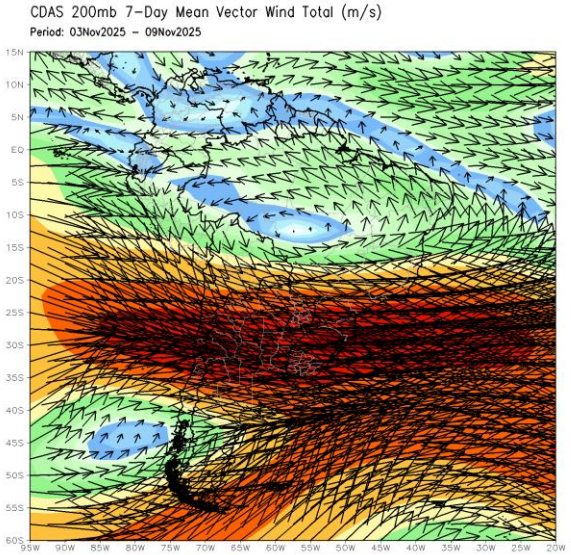
- A Kelvin is crossing the Americas through the weekend, to stimulate precipitation.
- The CFS suggests the wet MJO approaching around Nov 20. Yet, dominance of the low-frequency signal over the Western Pacific could interfere with this potential scenario.

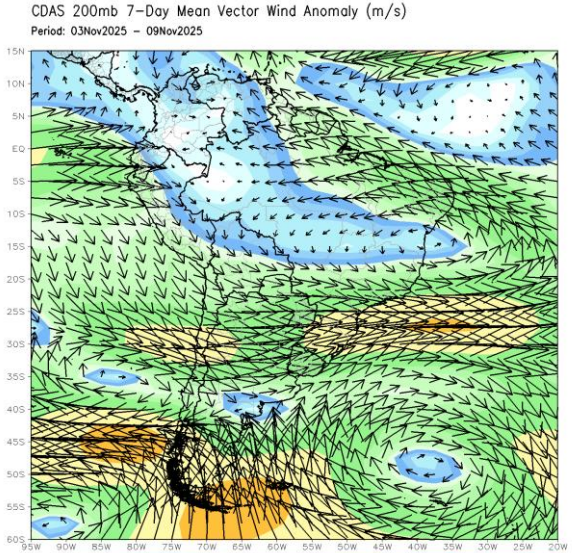


South America, last 7 days

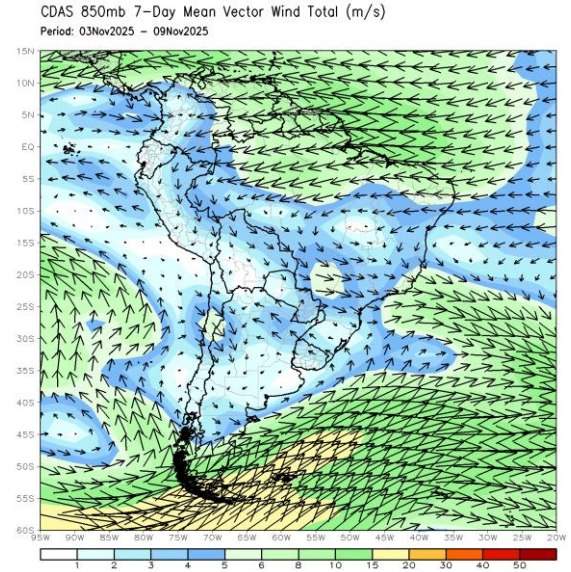
Flow

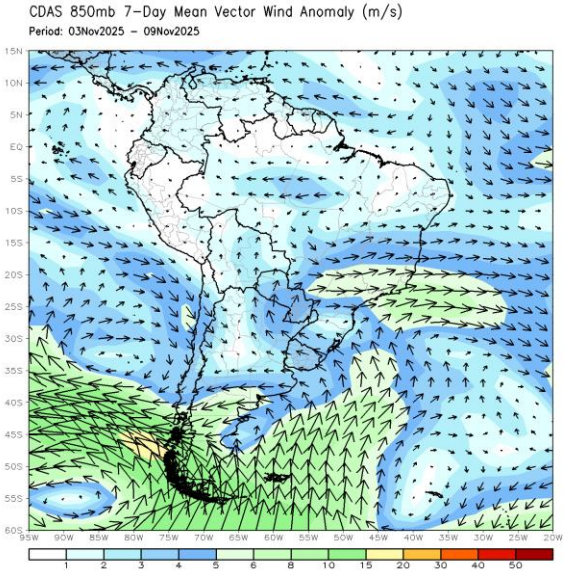
200 hPa



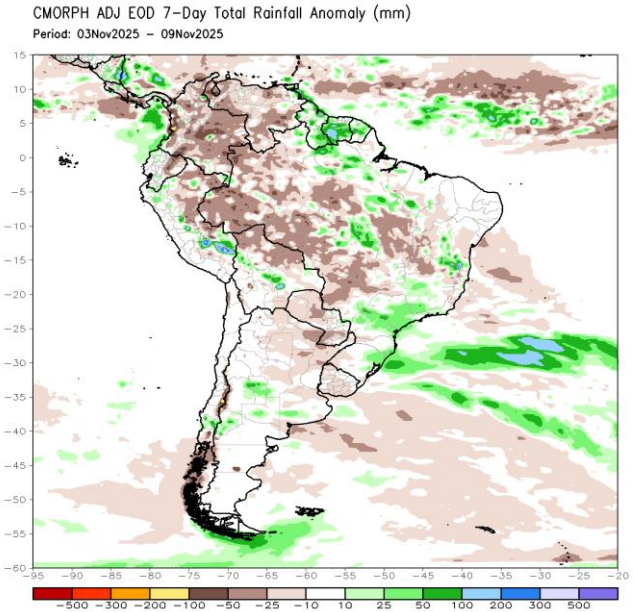


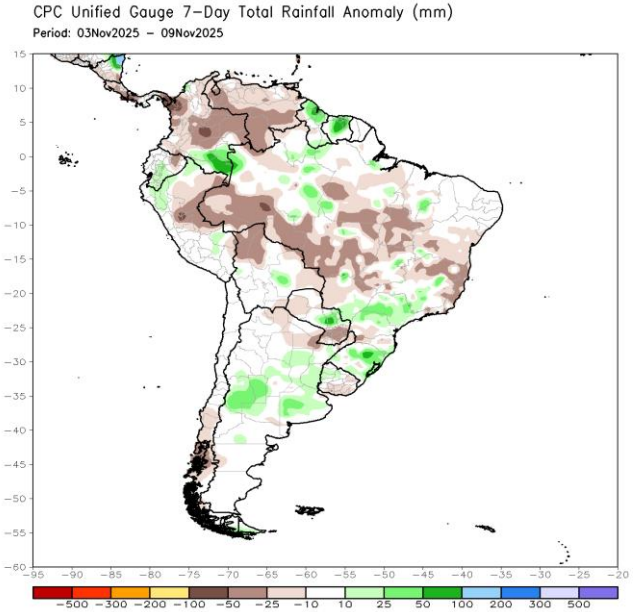
850 hPa





Rainfall Anomalies

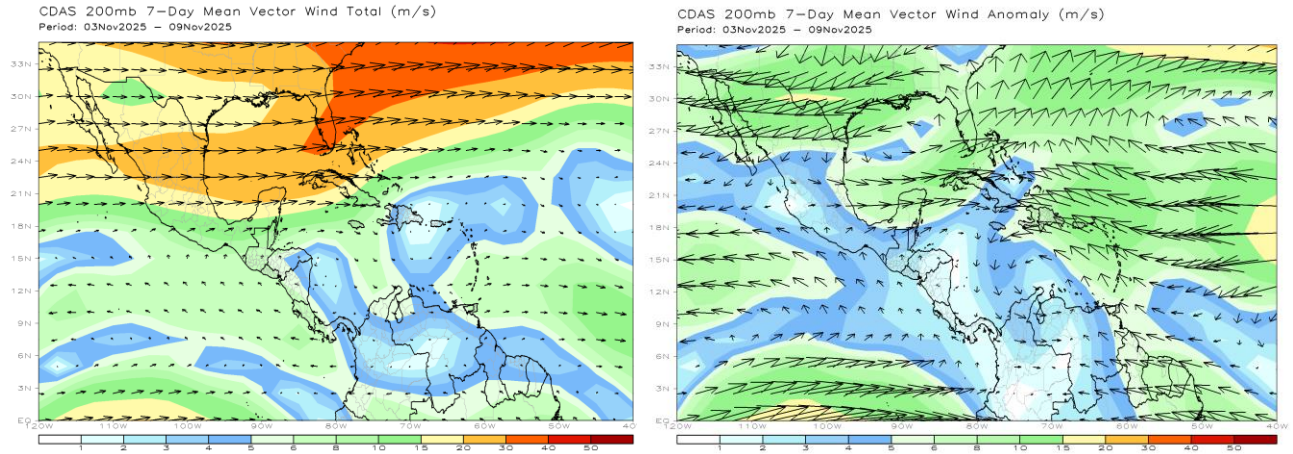




Caribbean, Central America and Mexico, last 7 days

Flow

200 hPa



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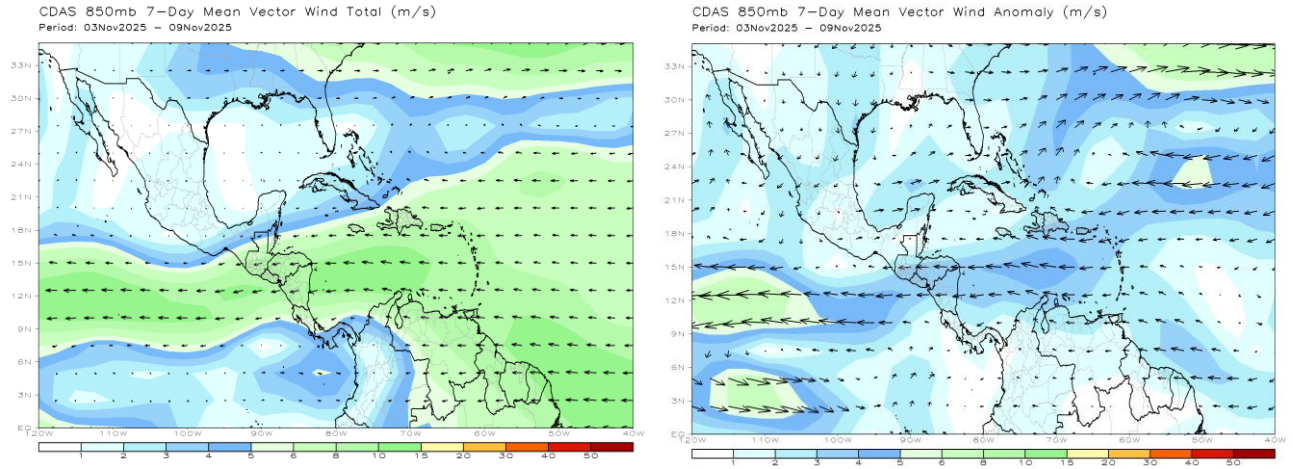

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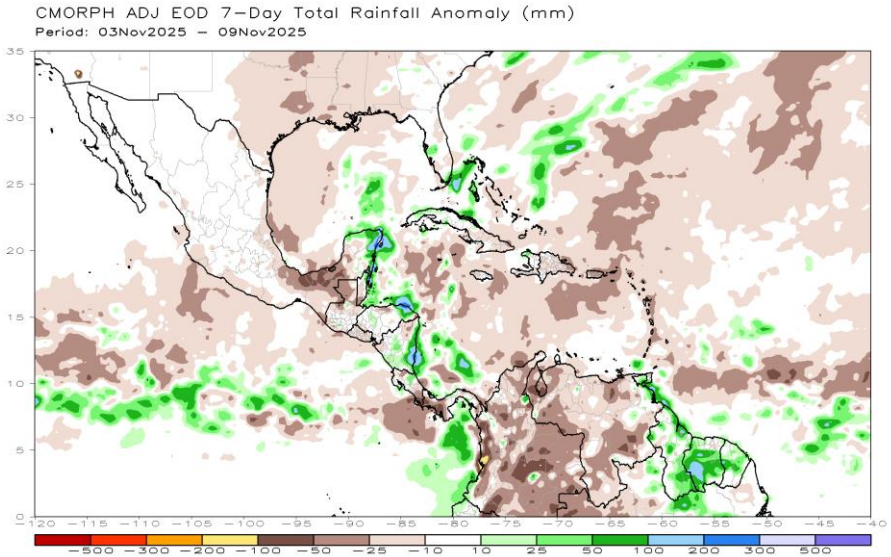

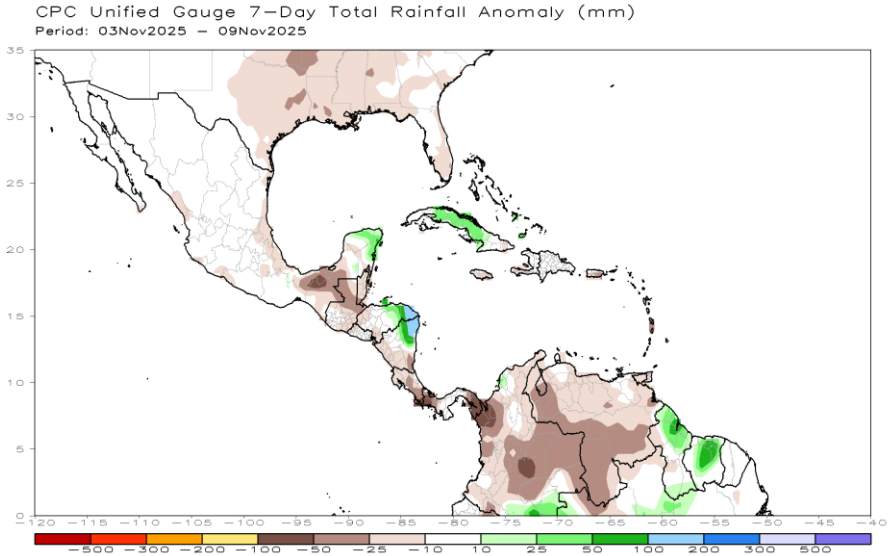

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Since 2004

Next Session: Friday 19 December at 16 UTC

★ Our website: https://rammb2.cira.colostate.edu/training/rmtc/focusgroup/

★ To join our distribution list: email erin.sanders@colostate.edu, or jose.galvez@colostate.edu

Thank you! Gracias! Obrigado!