Monthly Regional Focus Group Session

Wednesday 07 December 2022 at 17:30 UTC

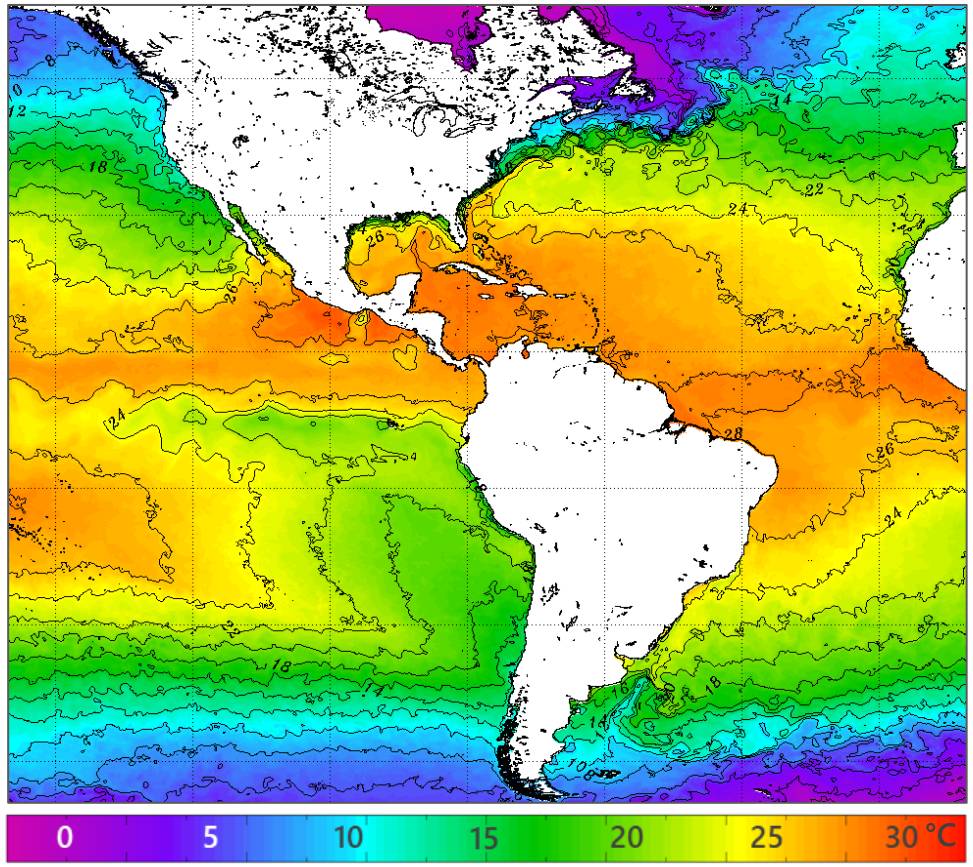
Special welcome to our Barbados NOAA/WMO Workshop Participants

RFG Website: https://rammb2.cira.colostate.edu/training/rmtc/focusgroup/

Sea Surface Temperatures (SST)

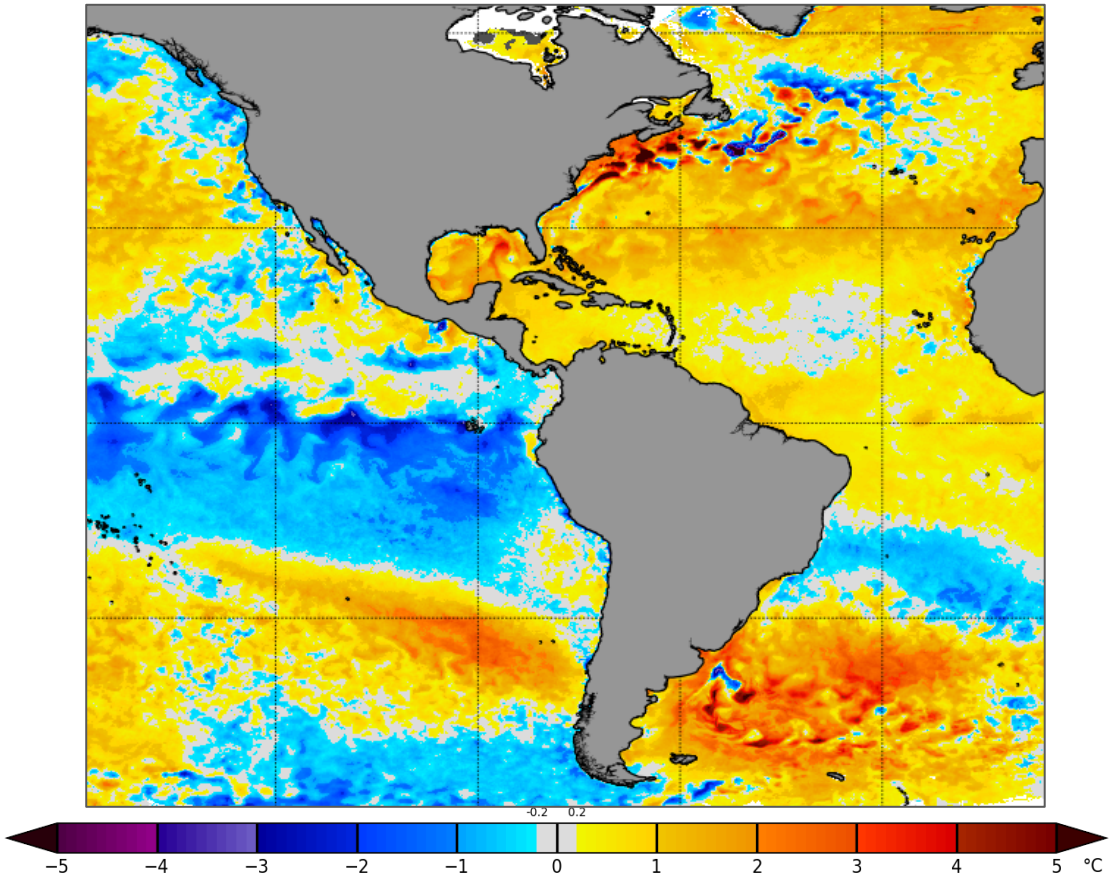
December 4th

SST



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

Anomaly

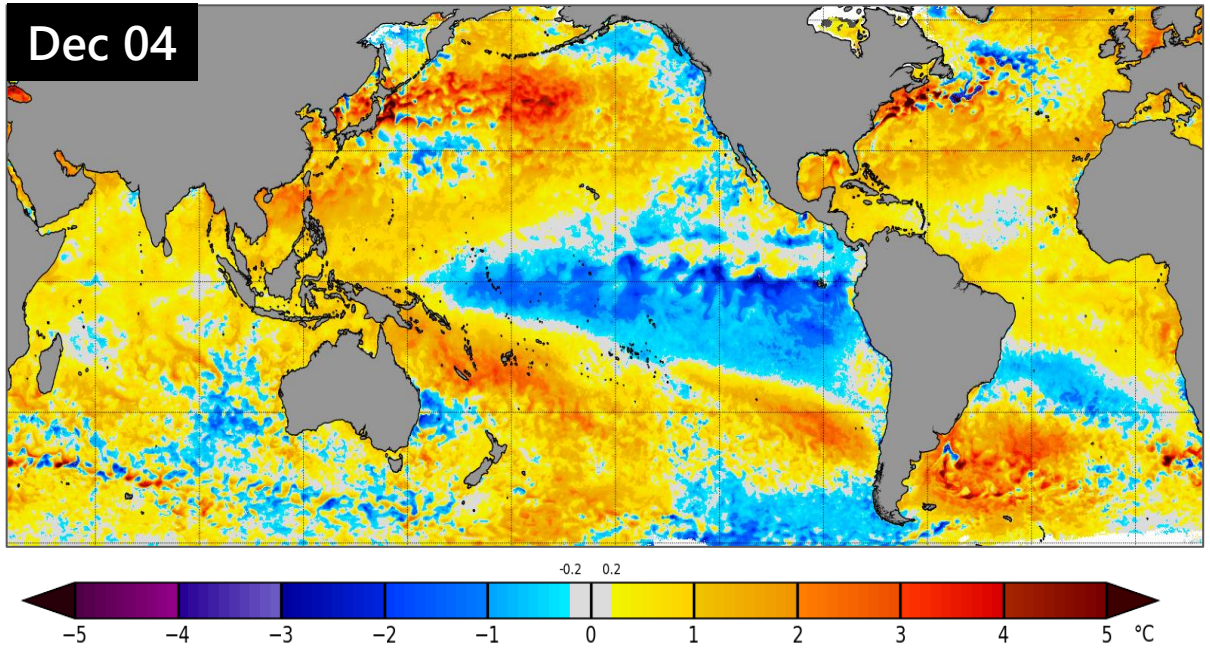


NOAA Coral Reef Watch
https://coralreefwatch.noaa.gov/product/5km/index_5km_ssta.php

Sea Temperature Anomalies in top layer

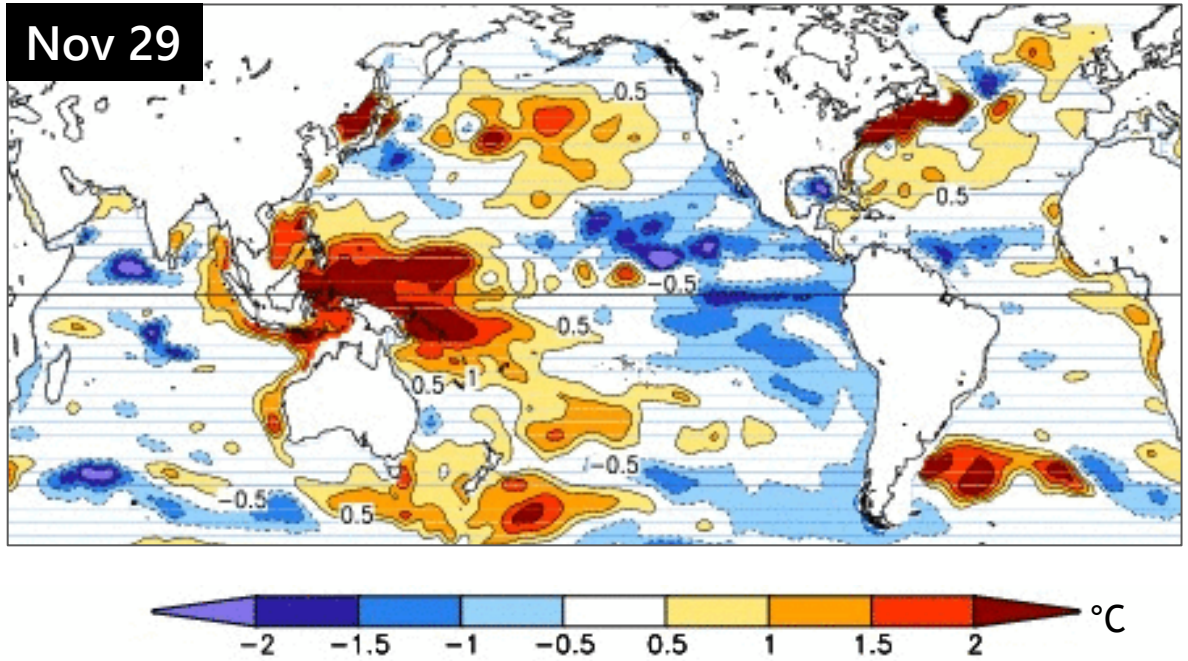
DEEP ANOMALIES LAST LONGER, THUS USEFUL FOR SUBSEASONAL FORECASTING

Surface Anomaly



NOAA Coral Reef Watch
https://coralreefwatch.noaa.gov/product/5km/index_5km_ssta.php

Top 300m-Layer Anomaly (GODAS)

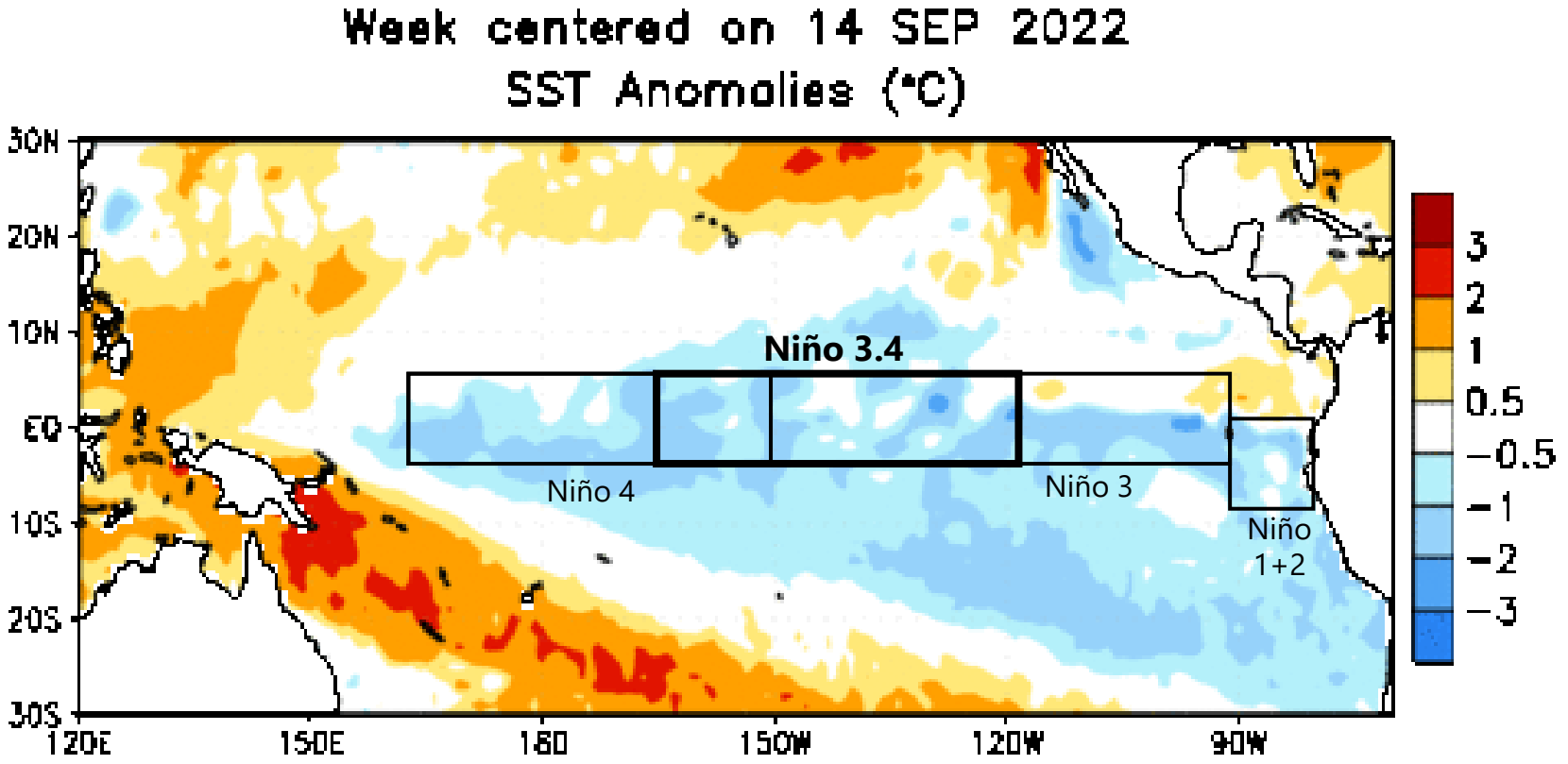


NOAA CPC
Source: CPC GODAS, https://www.cpc.ncep.noaa.gov/products/GODAS/

ENSO:

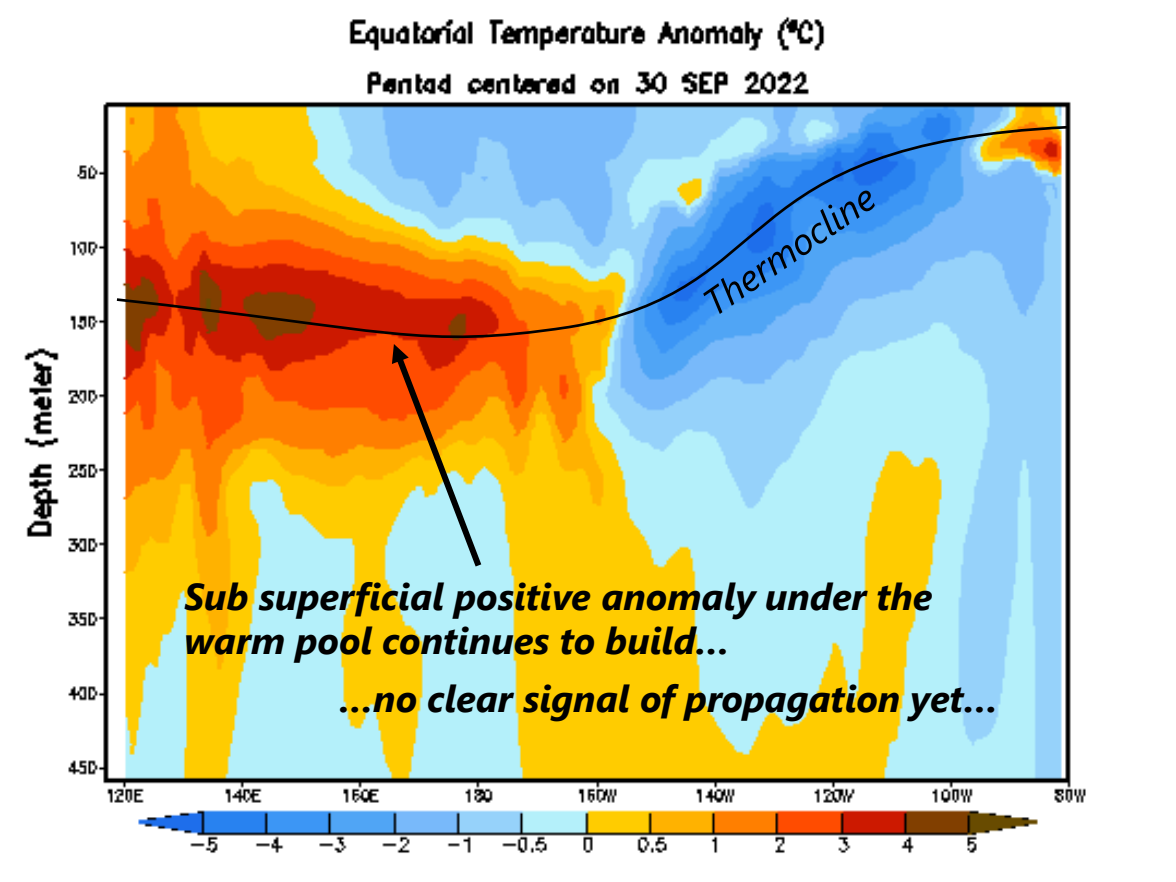
La Niña
(no changes since April)

- La Niña is present.*
- Equatorial SSTs are below average across most of the Pacific Ocean.
- The tropical Pacific atmosphere is consistent with La Niña.



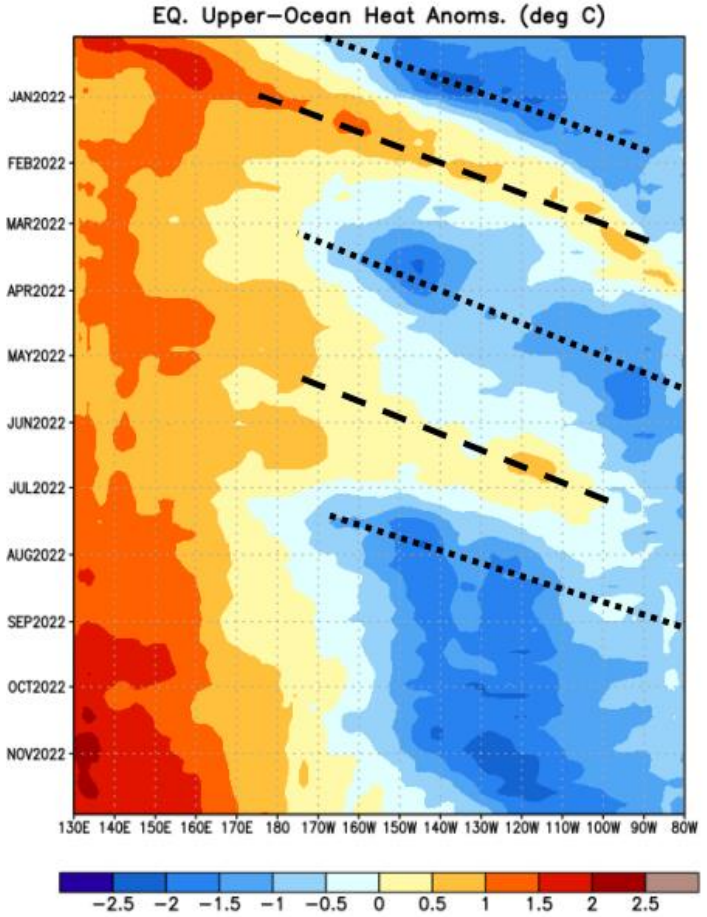
ENSO: Oceanic Kelvin Waves

Equatorial Pacific Temperature Anomaly Cross Section



Source: CPC

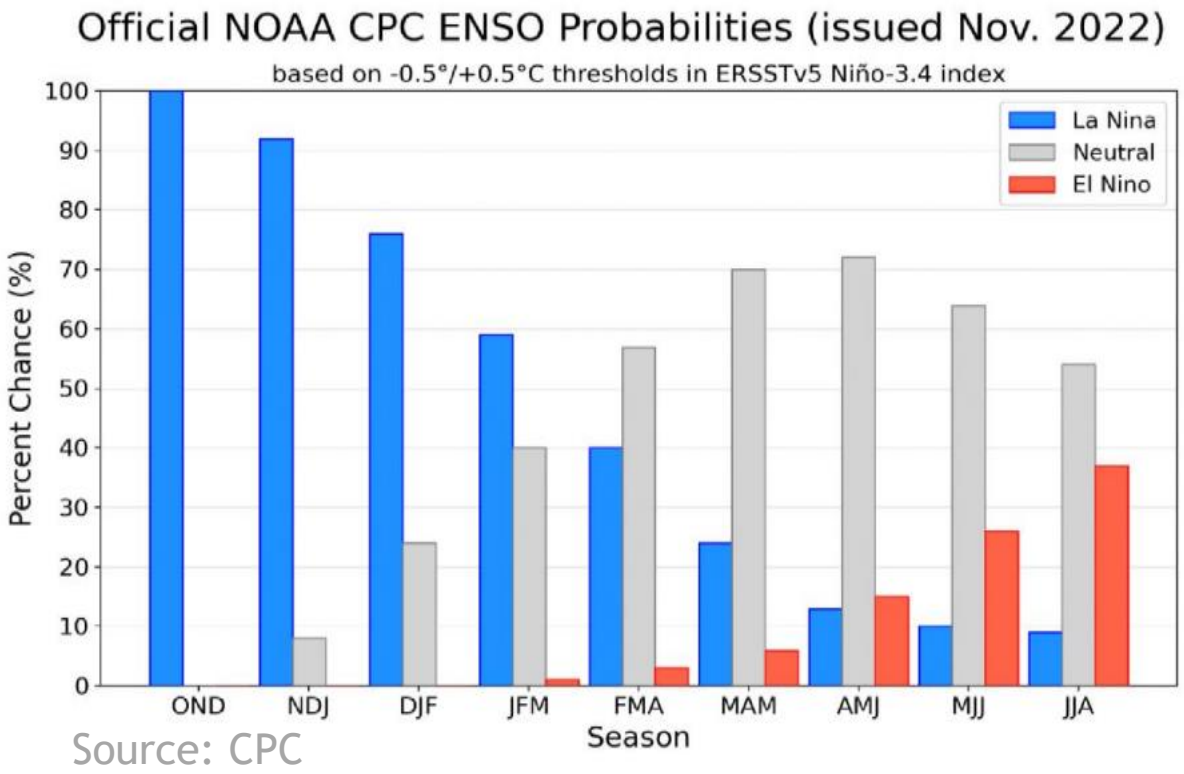
Heat Content Anomaly Hovmöller



ENSO Outlook

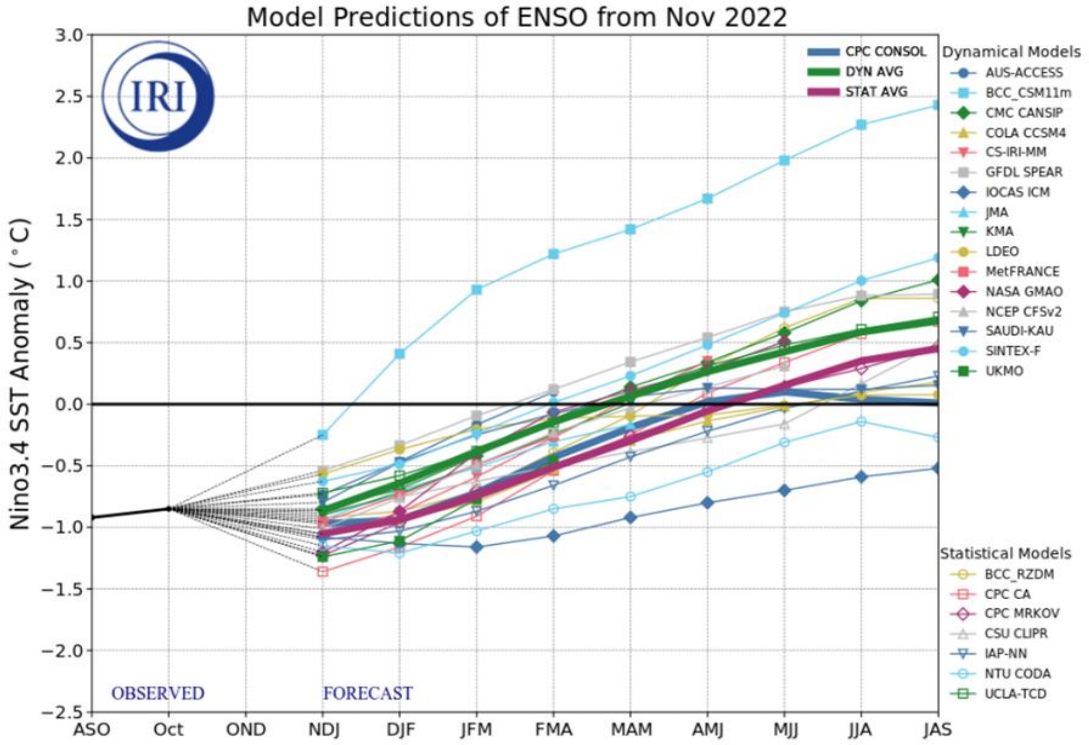
There is a 76% chance of La Niña during the Northern Hemisphere winter (December-February) 2022-23, with a transition to ENSO-neutral favored in February-April 2023 (57% chance).*

CPC Probabilistic Forecast



Source: CPC

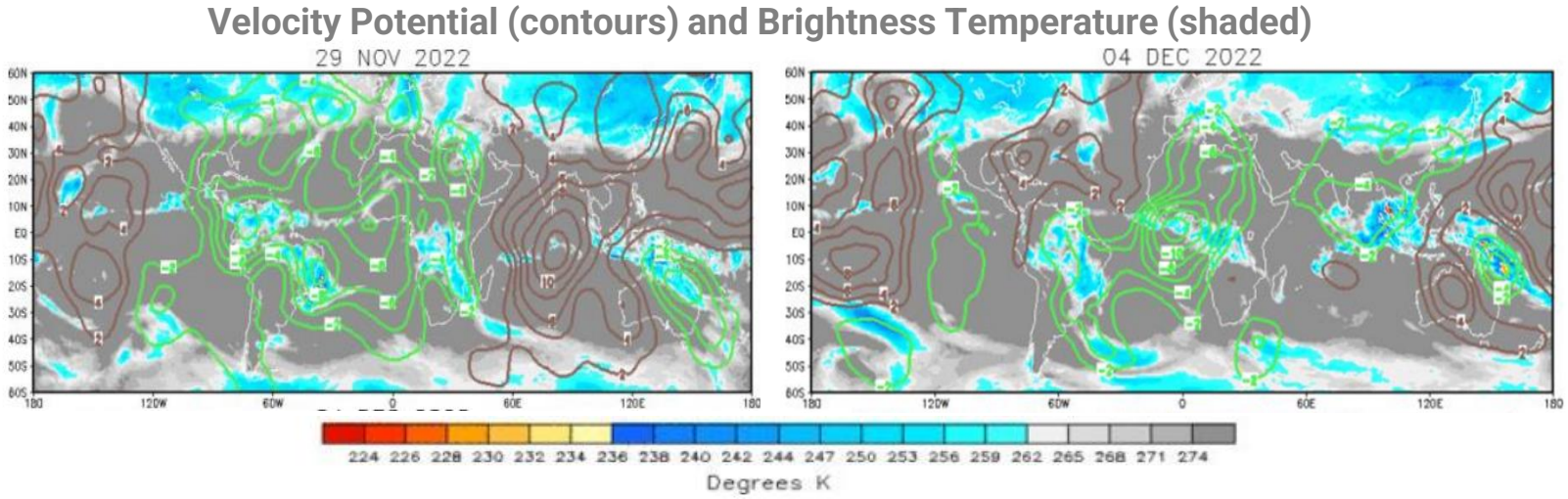
IRI/CPC Dynamic Models

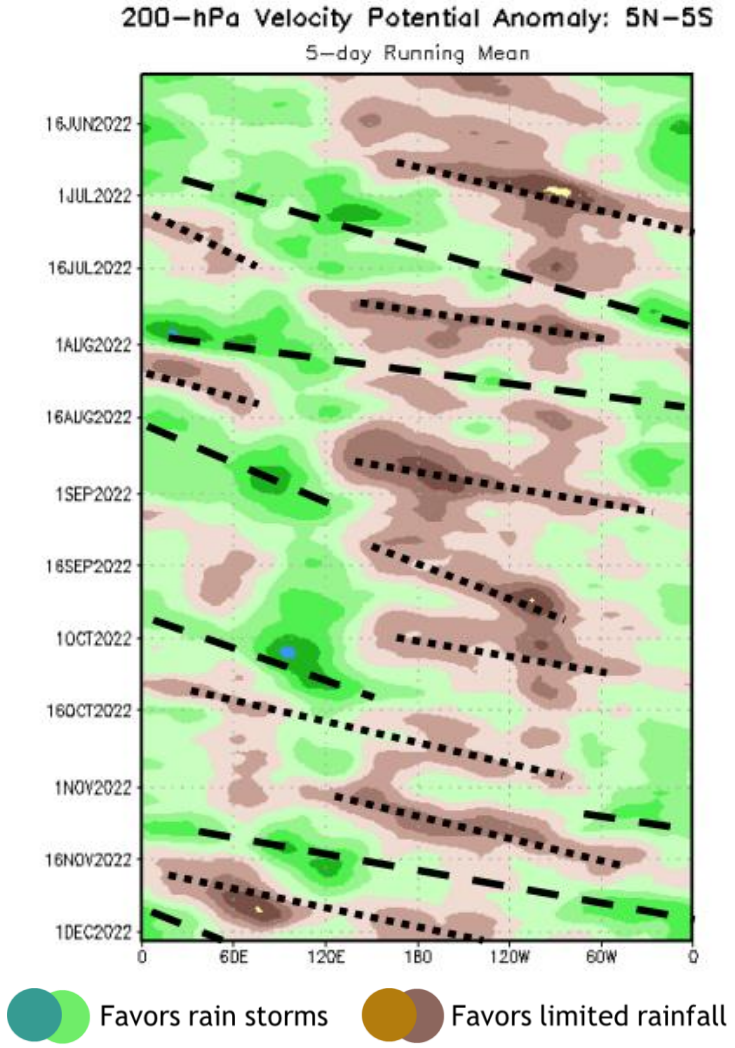


Madden-Julian Oscillation (MJO)

Current Observations:

- Wave-1 Pattern continues. Upper divergent phase (green) was moving across Africa into the Indian Ocean, and Upper Convergent across the Pacific/Date Line.
- Propagation seems to be slowing down.
- Extrapolating propagation, large scale upper convergence should gradually increase over the Americas into mid December.

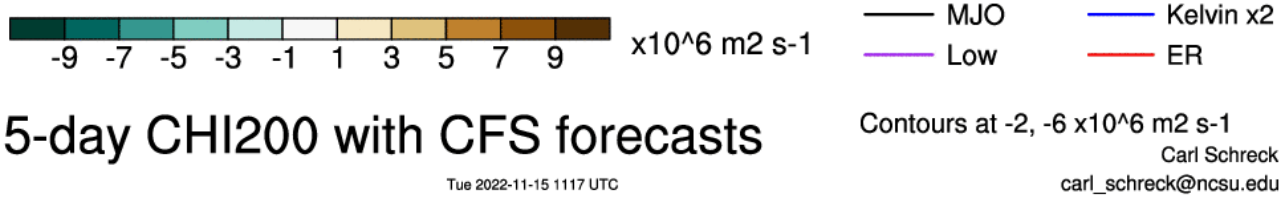


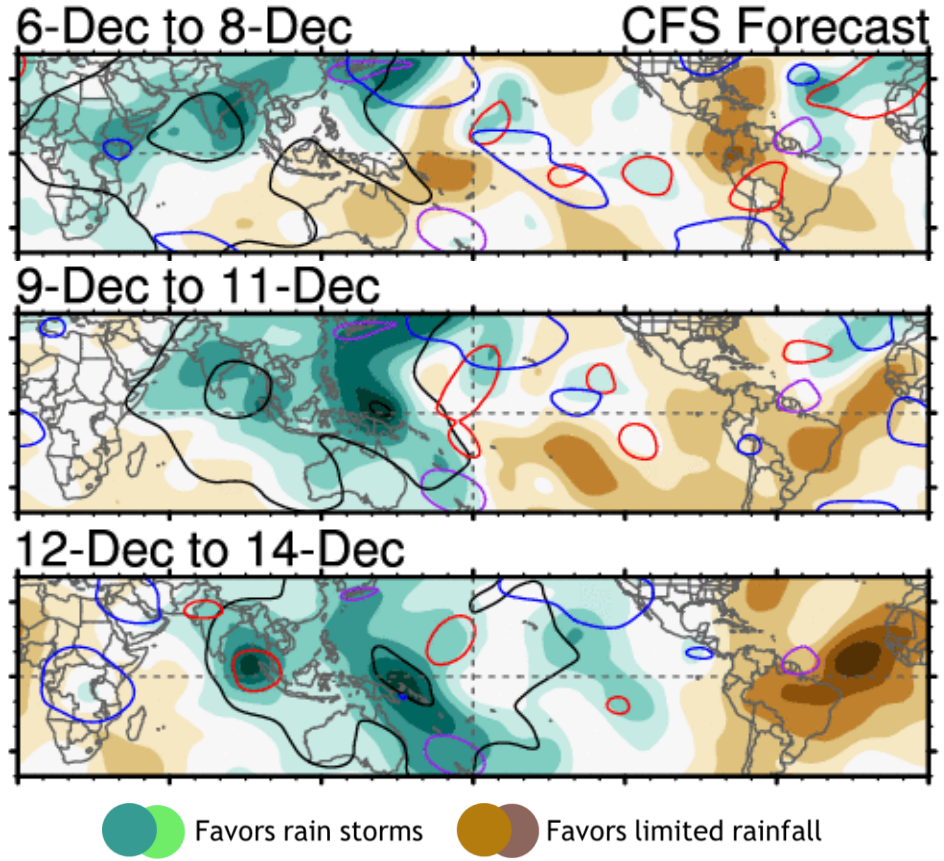


MJO and Upper Tropospheric Waves

Outlook for the next week:

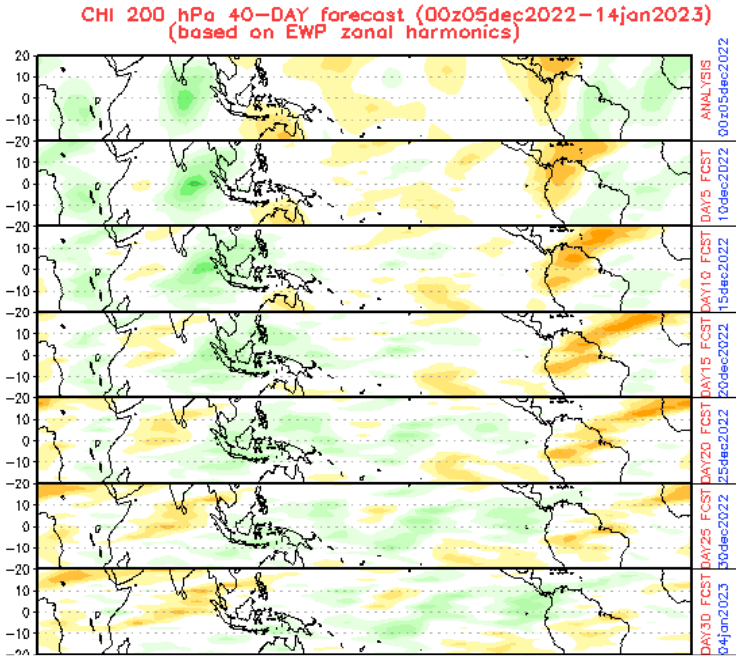
- Increasing large scale upper convergence (positive velocitity potential CHI200).
- This means generally drier.
- No divergent Kelvin until Dec 14-16 (local enhancement in equatorial areas where synoptic systems are favoring rainfall at that time).



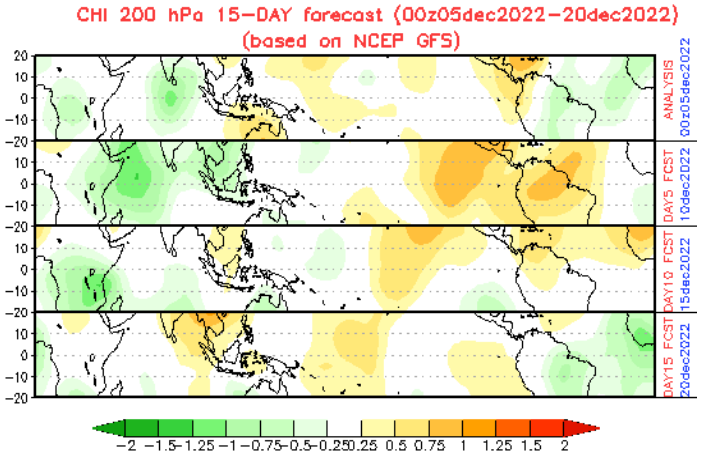


MJO Forecasts for the Americas

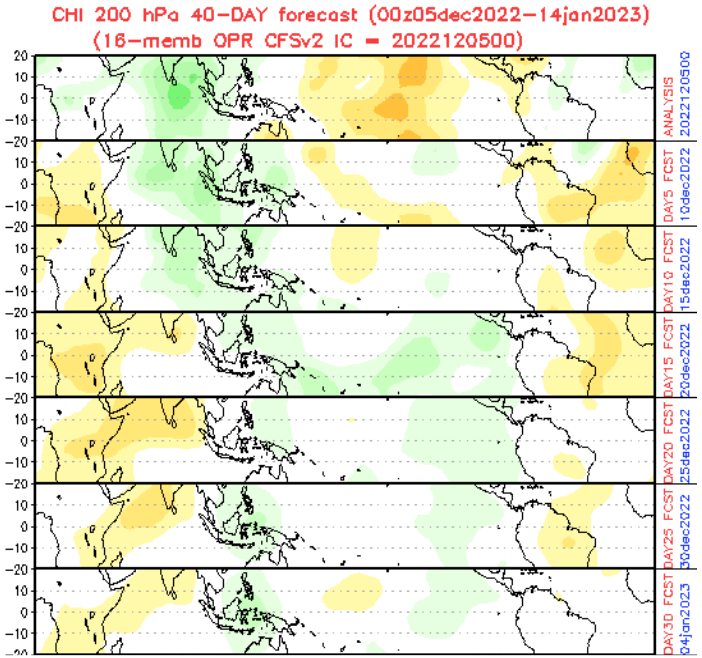
Empirical Wave Propagation (EWP)



Global Forecast System (GFS)



Climate forecast System (CFS)

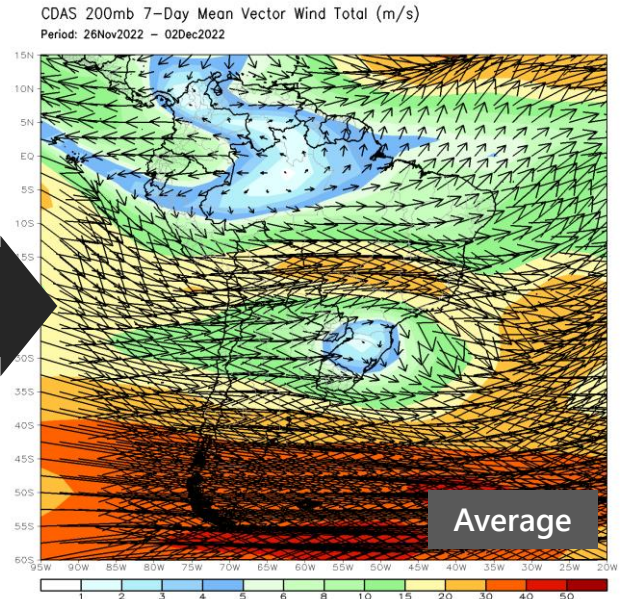


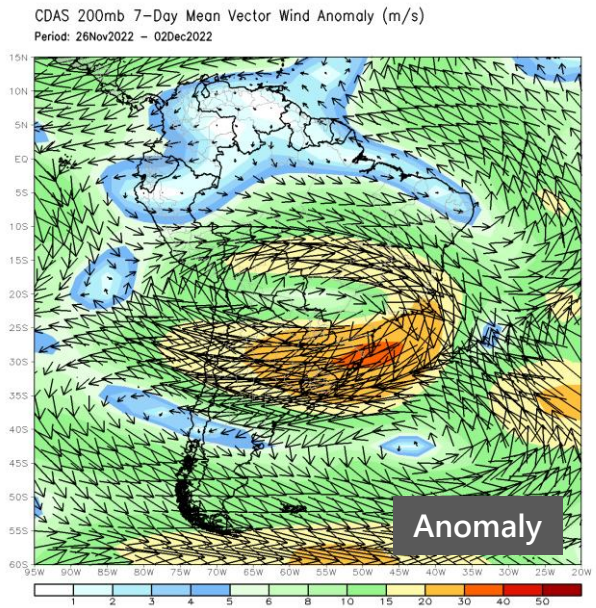
- General agreement on that the pattern is becoming increasingly upper convergent (dry), through Dec 20.
- Potential shift towards wetter conditions past Dec 15, but current model signals are mixed.

Favors rain storms Favors limited rainfall

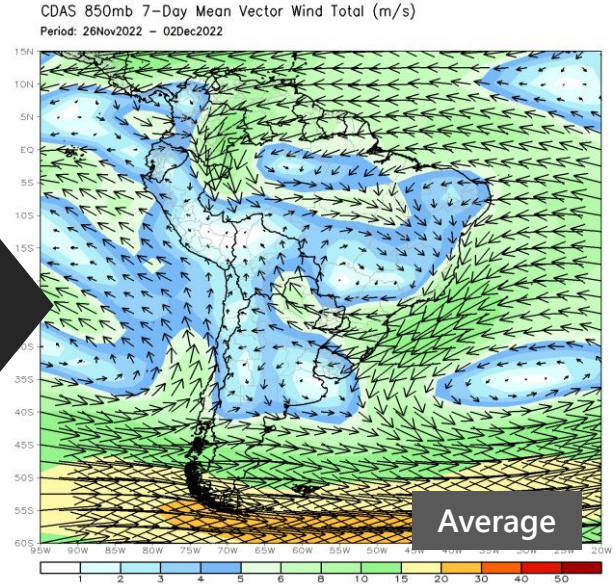
South America, Last 7 Days

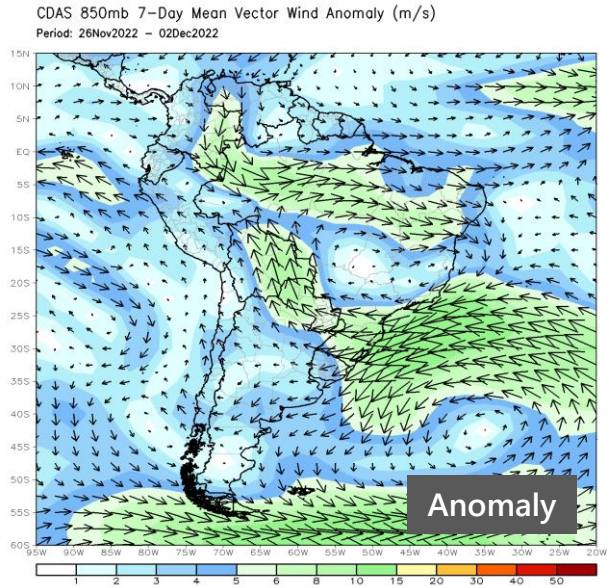
200 hPa Flow

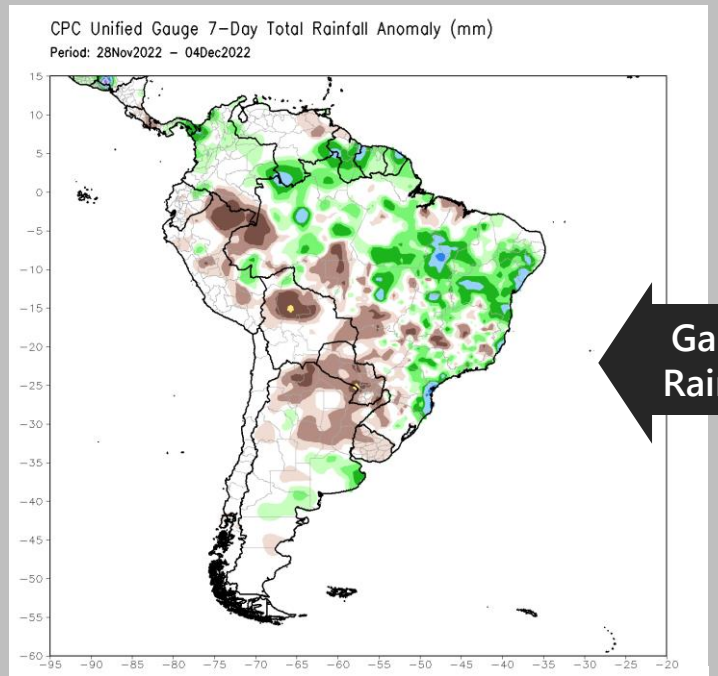




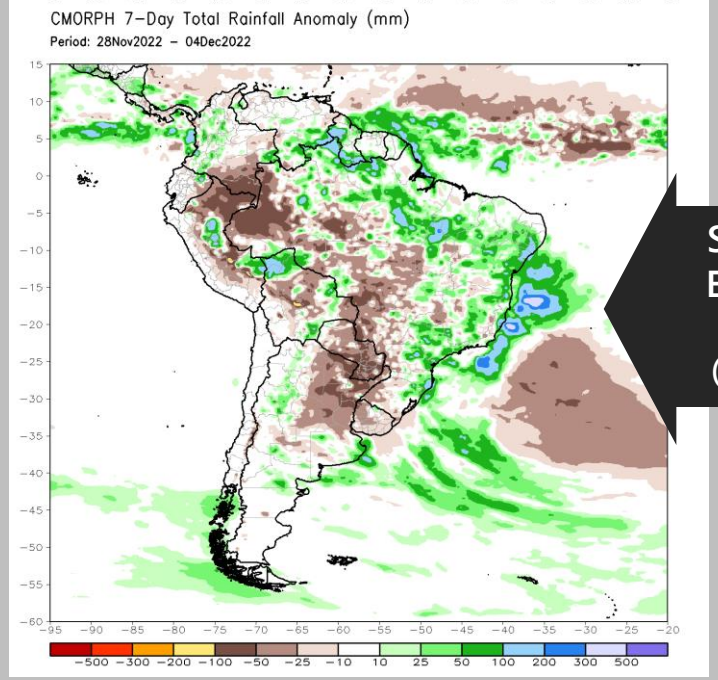
850 hPa Flow







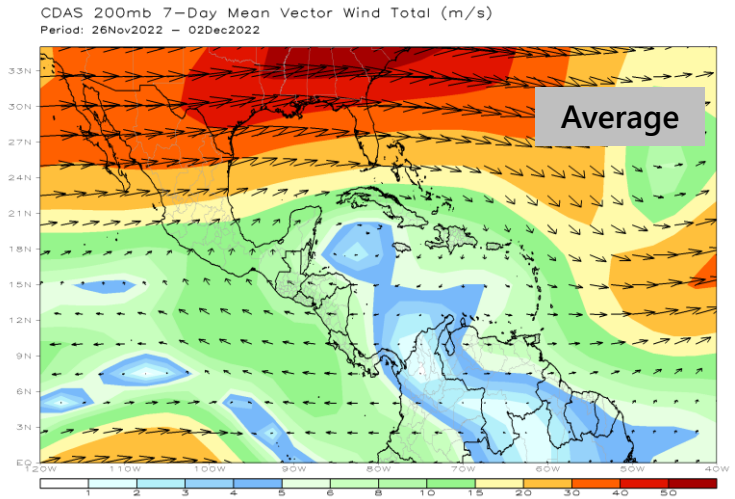
Gauge Rainfall

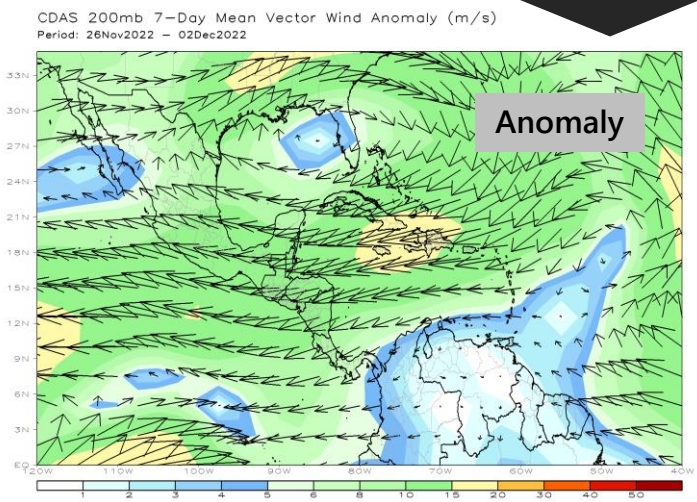


Satellite – Estimated Rainfall (CMORPH)

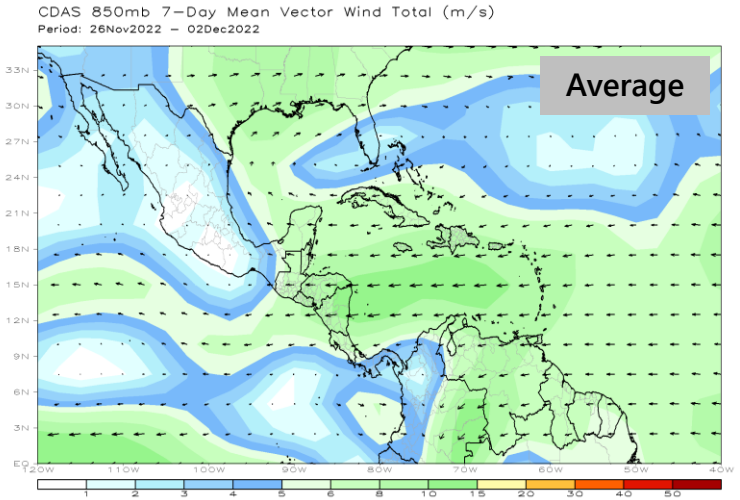
Caribbean/Central America, Last 7 Days

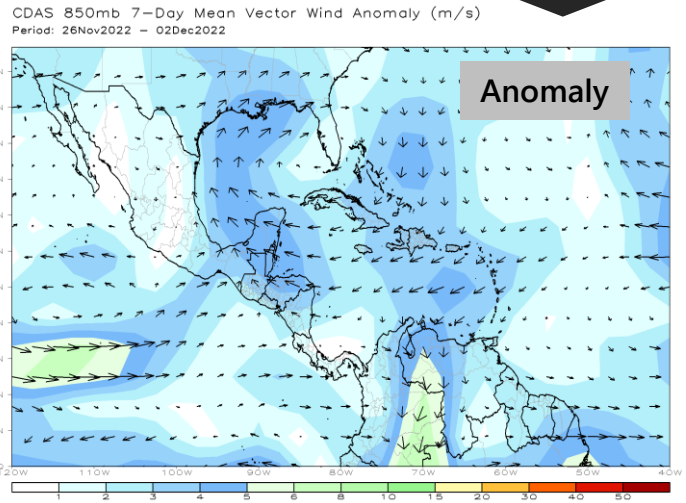
200 hPa Flow



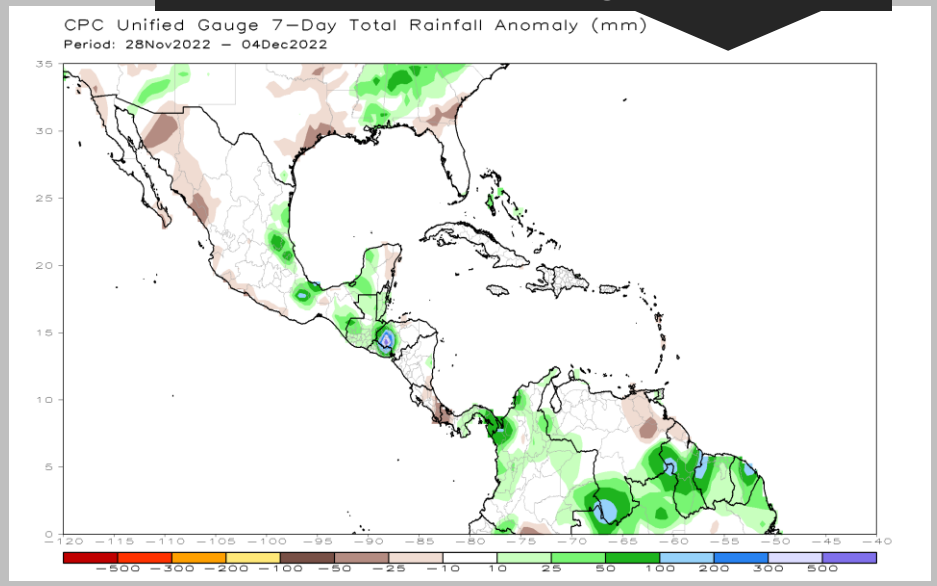


850 hPa Flow

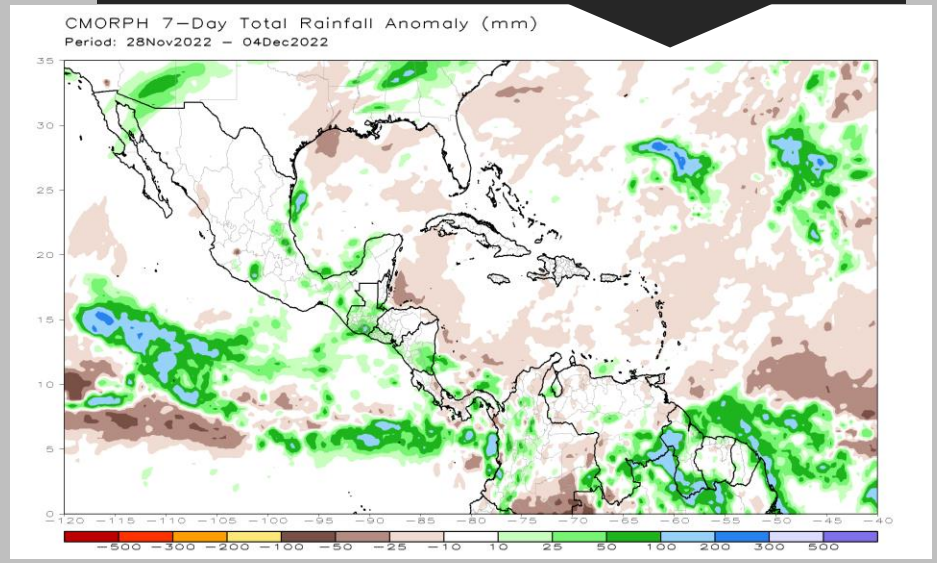




Rainfall from Gauges (CPC)



Satellite – Estimated Rainfall (CMORPH)



¡Gracias! Thank you! ¡Obrigado!

Next RFG Session (January): Date to be discussed

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