

# Global Tropics Hazards And Benefits Outlook

6/28/2022

Danny Barandiaran

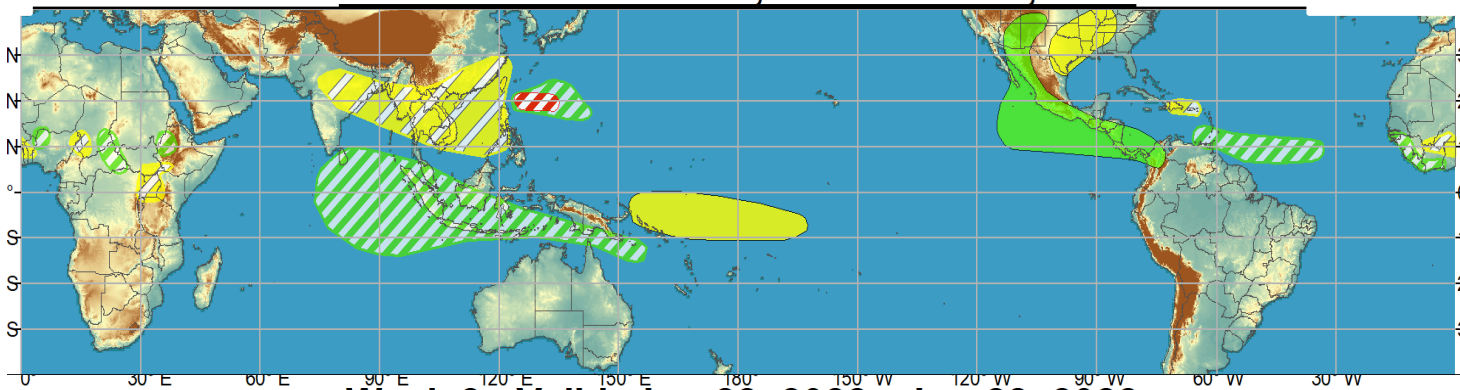
## Outline

1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

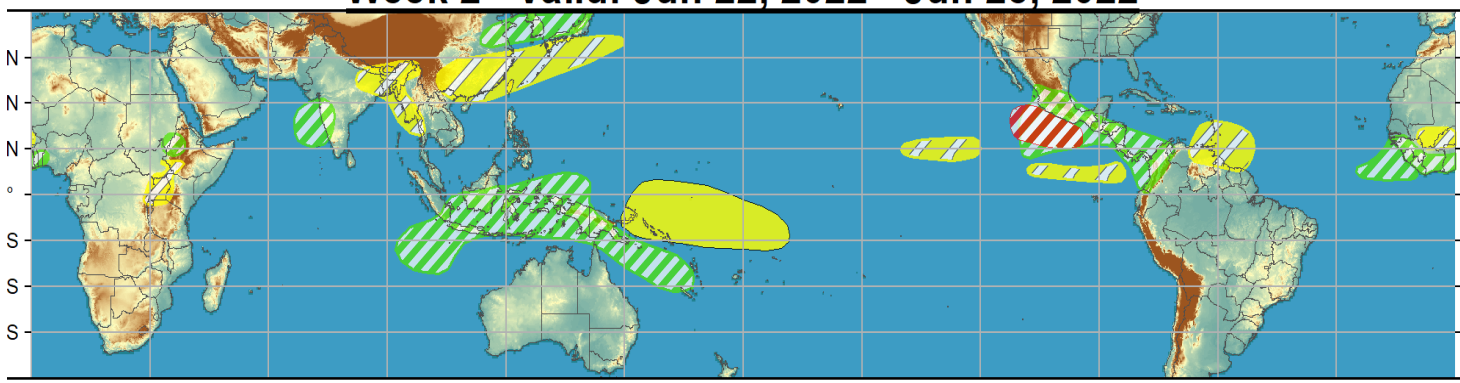
# Outlook Review

No TC formation in the last week

**Week 1 - Valid: Jun 22, 2022 - Jun 28, 2022**

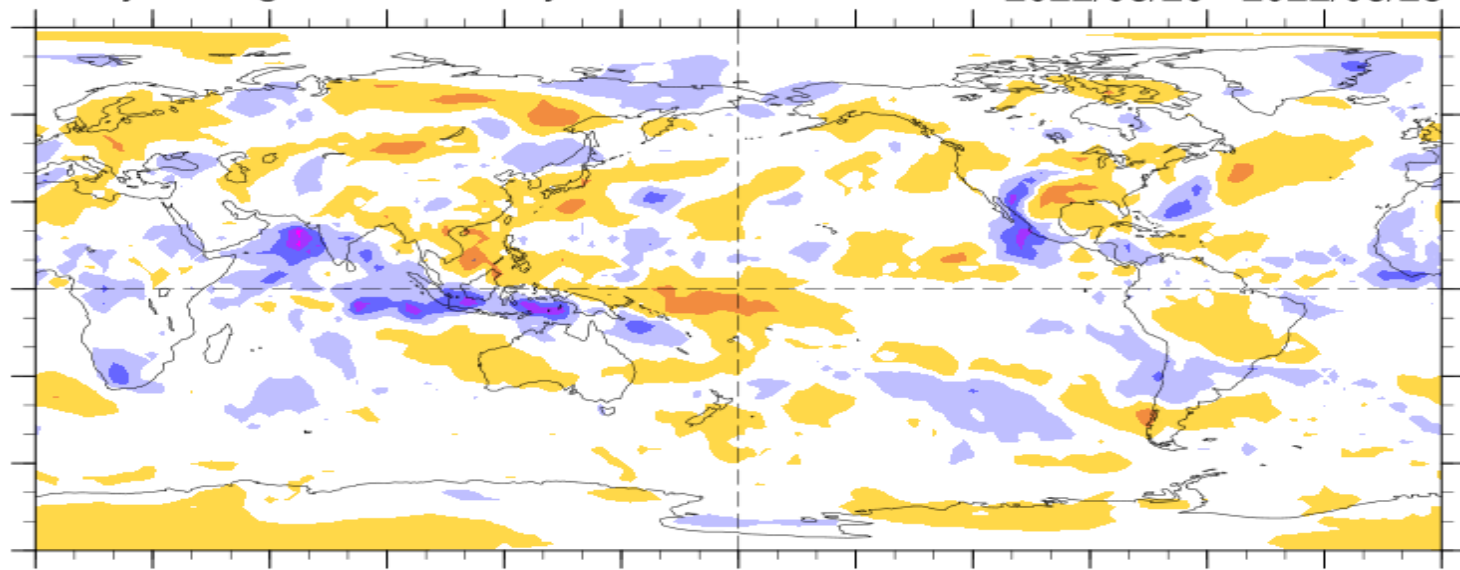


**Week 2 - Valid: Jun 22, 2022 - Jun 28, 2022**



7-Day Average OLR Anomaly

2022/06/20 - 2022/06/26



Cool shading  
More clouds/rain

Warm shading  
Less clouds/rain

# Synopsis of Climate Modes

**ENSO:** (Jun 9, 2022 Update)

*next update on Thursday, July 14<sup>th</sup>*

- ENSO Alert System Status: [La Niña Advisory](#)
- Though La Niña is favored to continue, the odds for La Niña decrease into the Northern Hemisphere late summer (52% chance in JAS 2022) before slightly increasing through the Northern Hemisphere fall and early winter 2022 (58-59% chance)

## **MJO and other subseasonal tropical variability:**

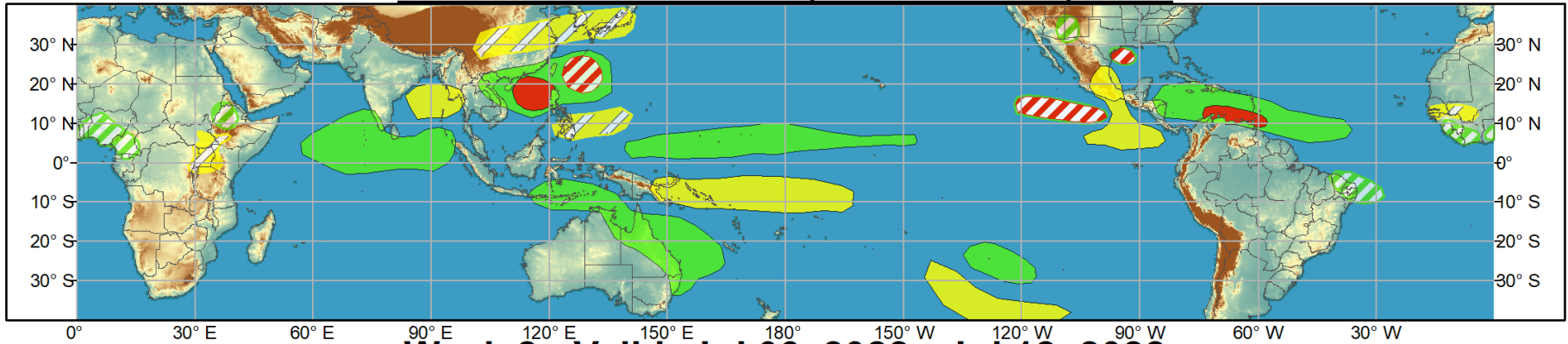
- The MJO remains weak due to a stationary pattern.
- The GFS and ECMWF models are favoring eastward propagation resuming with a strengthening MJO over the Indian Ocean and Maritime Continent during the next two weeks.
- Tropics are currently quite active with respect to TCs. Celia remains active and there are areas of potential TC development in the West Pacific, East Pacific, and tropical Atlantic.



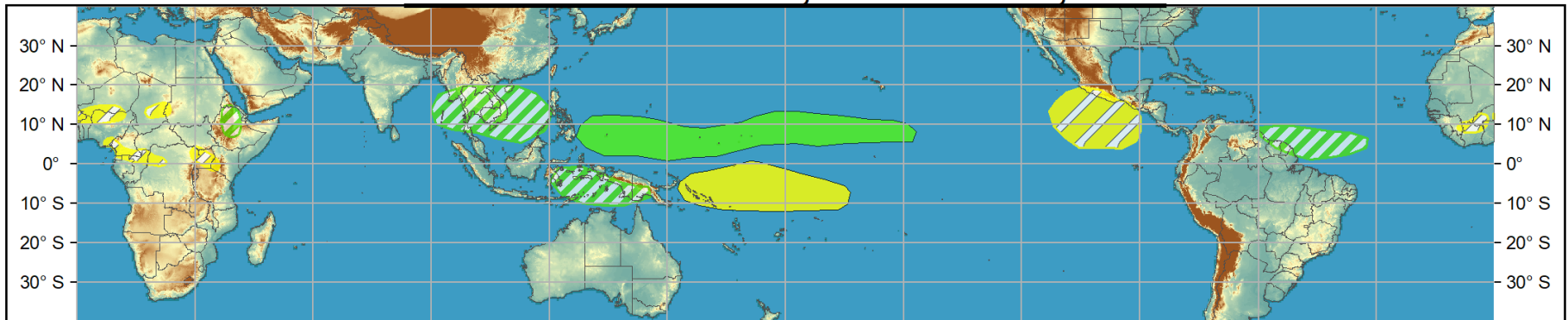
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Jun 29, 2022 - Jul 05, 2022



## Week 2 - Valid: Jul 06, 2022 - Jul 12, 2022



### Confidence

High Moderate

**Tropical Cyclone Formation**



Development of a tropical cyclone (tropical depression - TD, or greater strength).

**Above-average rainfall**



Weekly total rainfall in the upper third of the historical range.

**Below-average rainfall**



Weekly total rainfall in the lower third of the historical range.

**Above-normal temperatures**



7-day mean temperatures in the upper third of the historical range.

**Below-normal temperatures**



7-day mean temperatures in the lower third of the historical range.

Produced: 06/28/2022

Forecaster: Barandiaran

Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.





# IR Satellite & 200-hpa Velocity Potential Anomalies

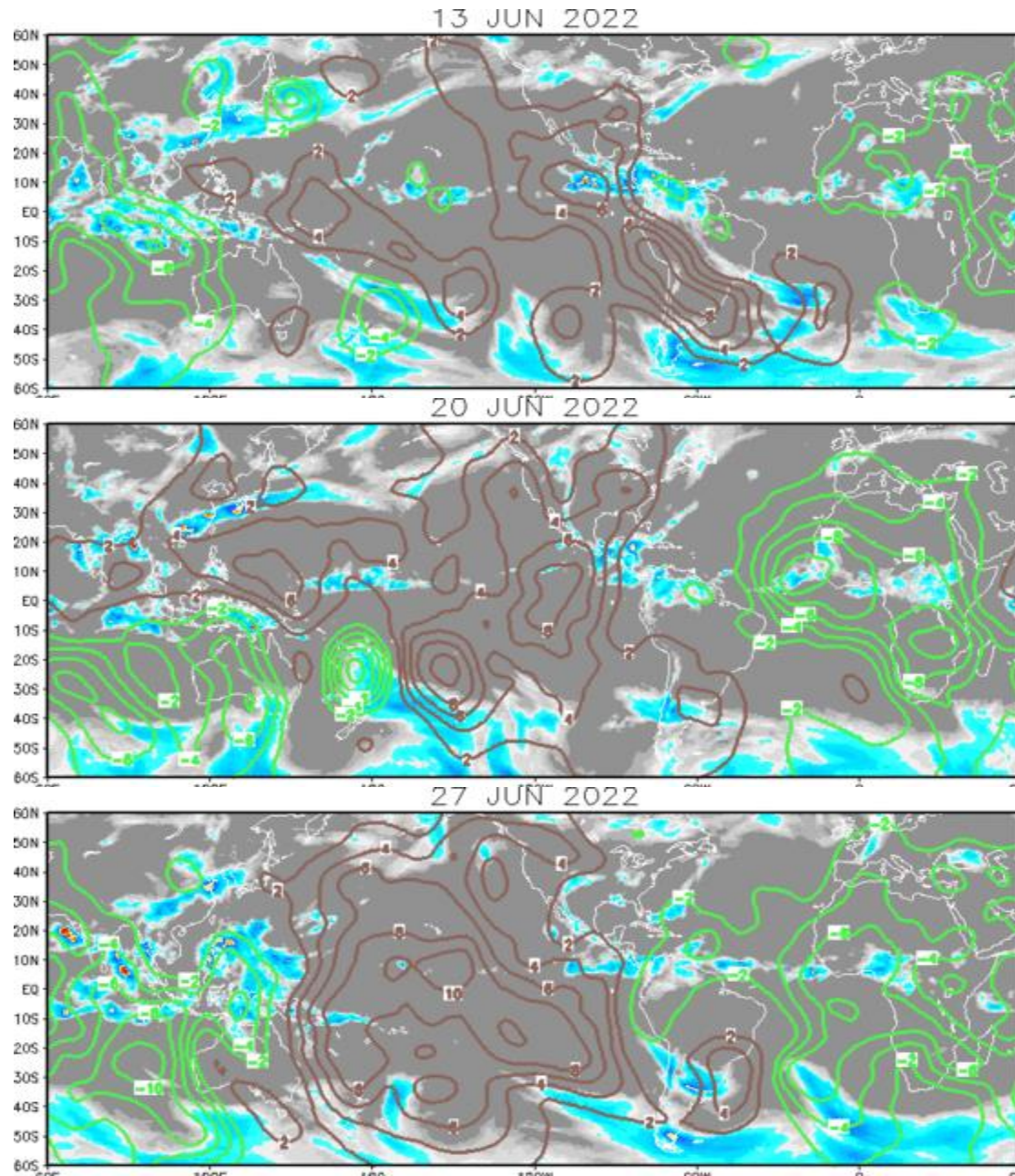
Green: Enhanced Divergence

Brown: Enhanced Convergence

During mid-June, a nearly stationary wave-1 pattern became established..

Convective envelope over Africa and southern Indian Ocean strengthened mid-period.

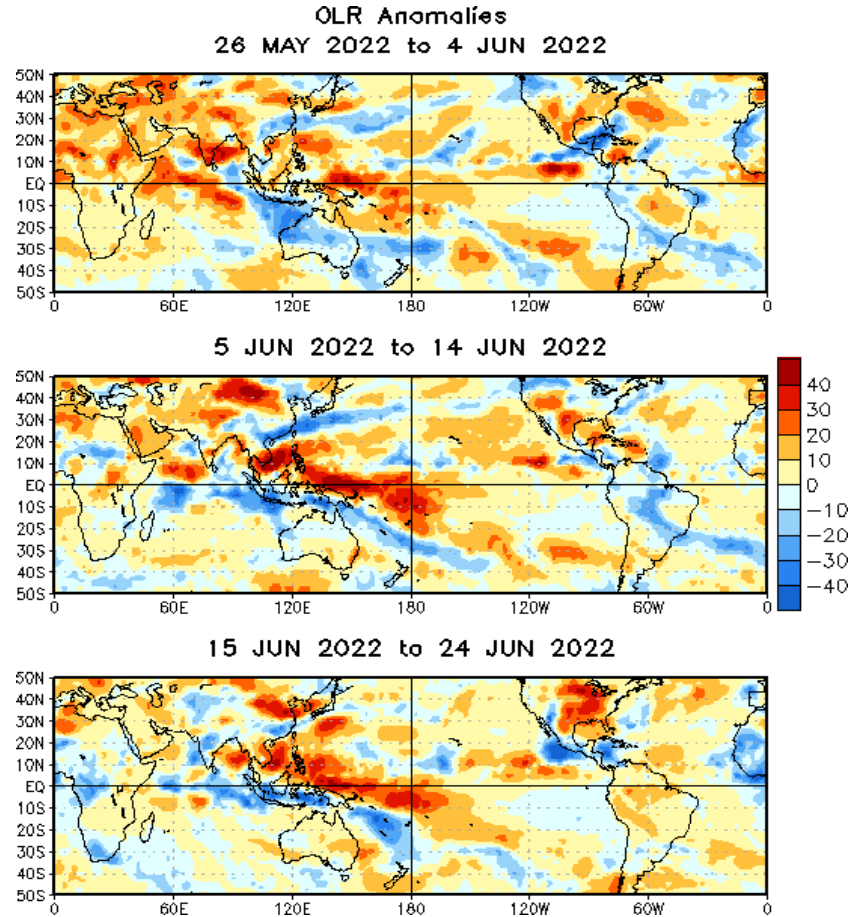
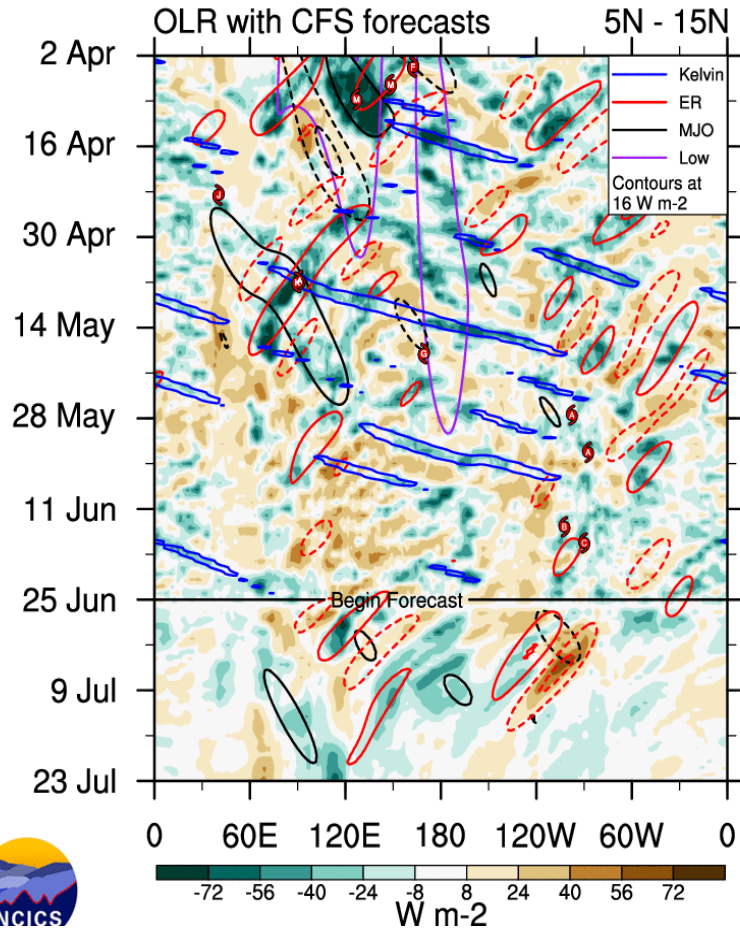
Area of enhanced convection expanded both eastward and westward, while center suppressed convection shrank and moved slightly retrograde.



# Outgoing Longwave Radiation (OLR) Anomalies

**Green shades: Anomalous convection (wetness)**

**Brown shades: Anomalous subsidence (dryness)**



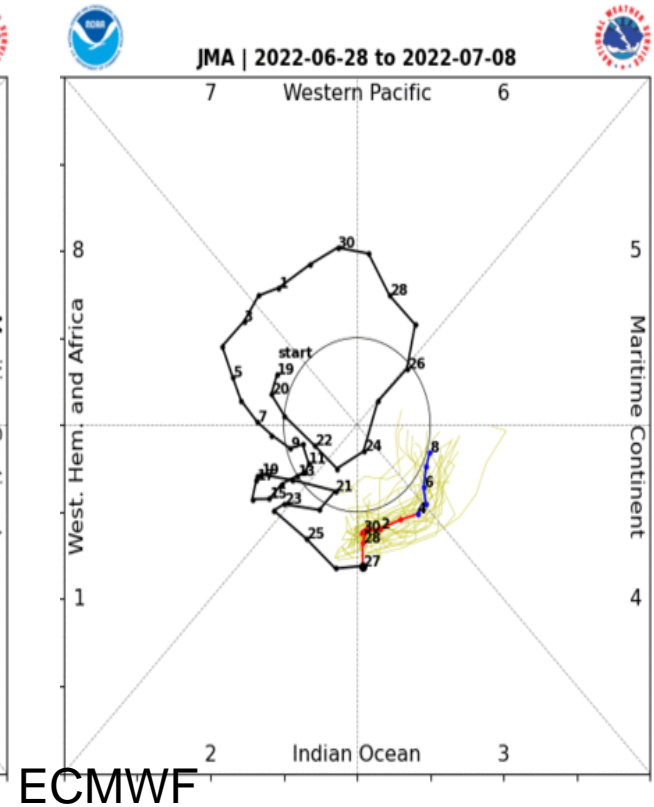
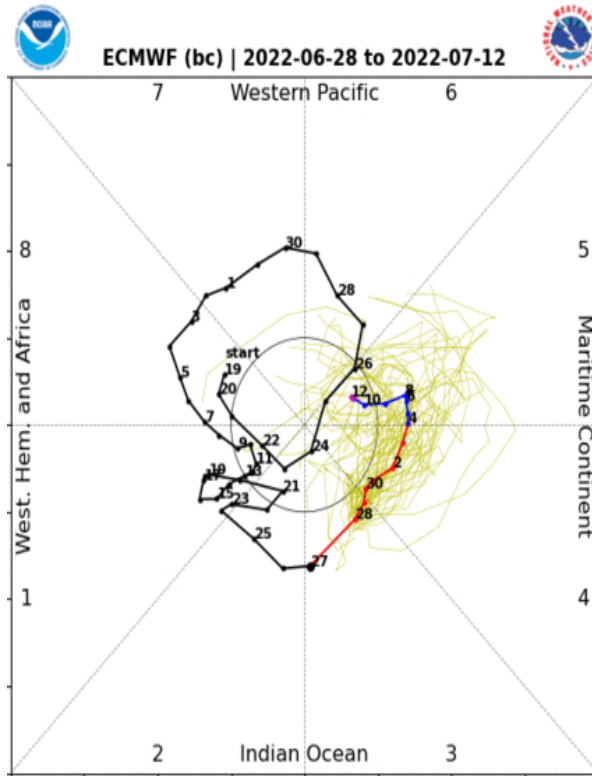
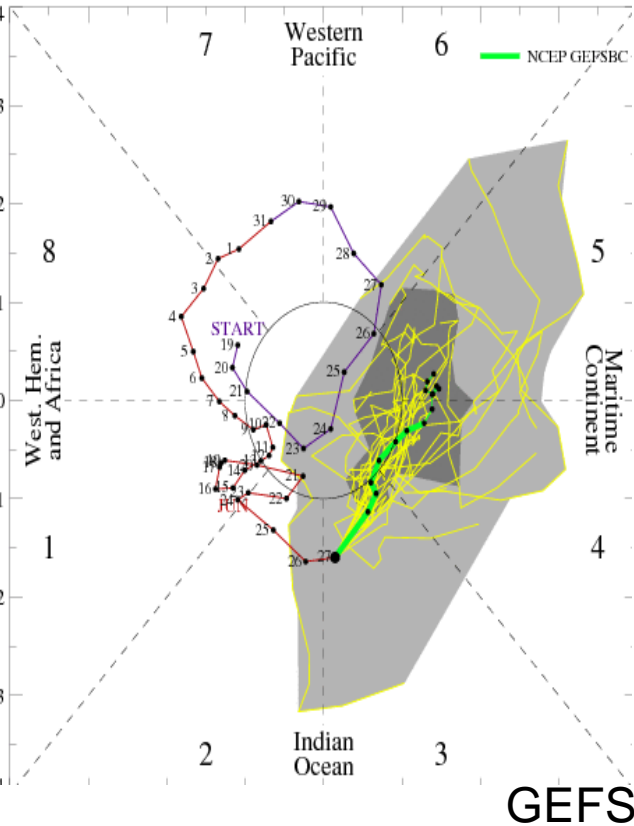
- Suppressed convection to the west and along the Date Line consistent with ongoing La Nina conditions continues, intensifying and spreading westward across the Maritime Continent during the month of June.
- Objective filtering OLR forecasts focused north of the equator are favoring the emergence of Rossby wave activity on either side of the Date Line in the coming weeks.





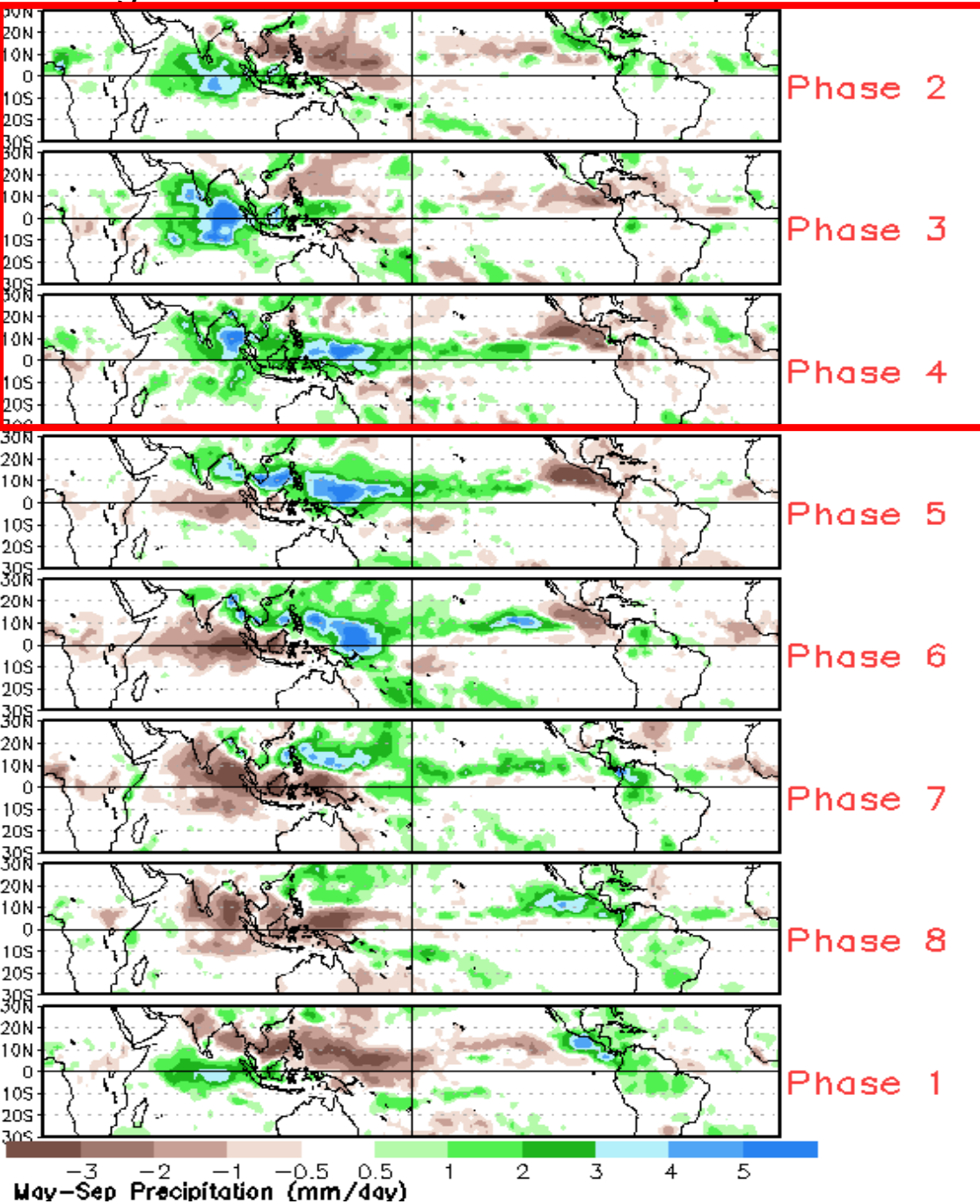
# MJO Observation/Forecast

[RMM1, RMM2] forecast for Jun-28-2022 to Jul-12-2022



Stationary pattern appears to be coming to an end as the RMM index has begun moving coherently, and ensemble forecasts for GEFS, ECMWF, and JMA all favor continued eastward propagation of the convective envelope.

# Average Conditions when the MJO is present

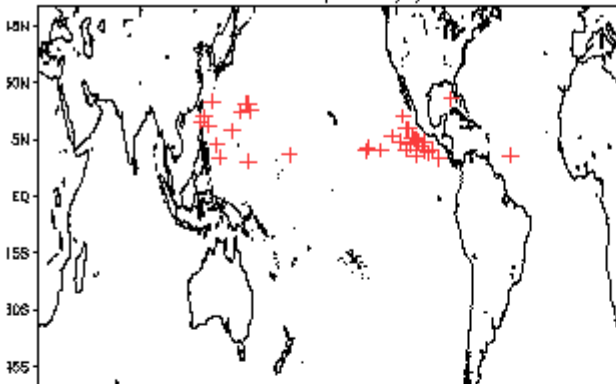


CAVEAT: These panels are representative of robust MJO events.

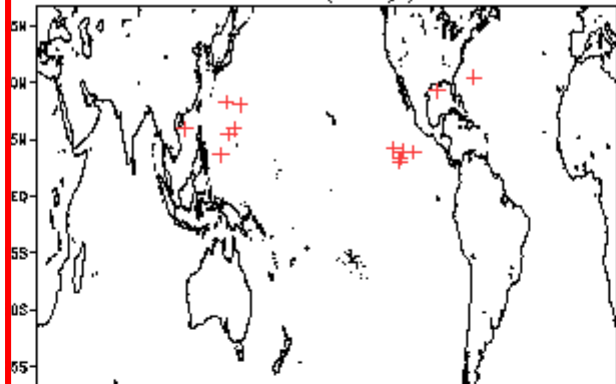


# July Tropical Storm Formation by MJO phase

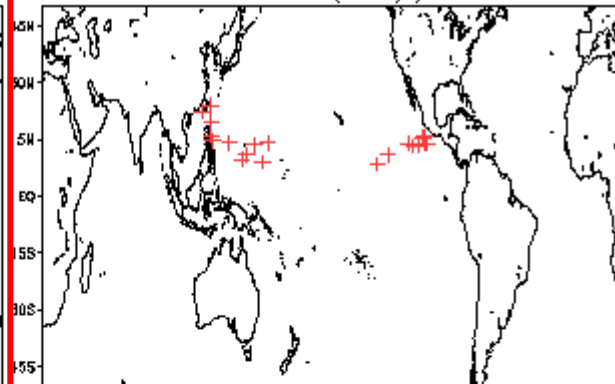
Phase 1 (144 days) 37 storms



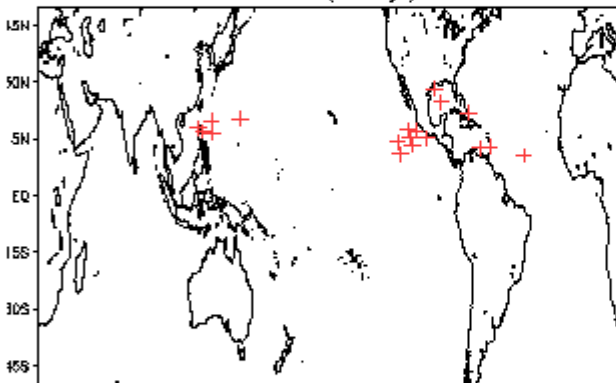
Phase 4 (40 days) 14 storms



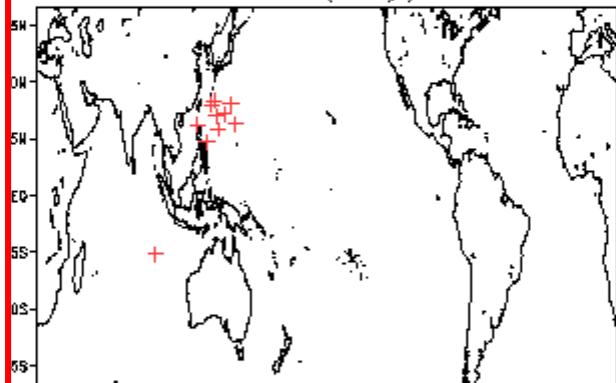
Phase 7 (87 days) 21 storms



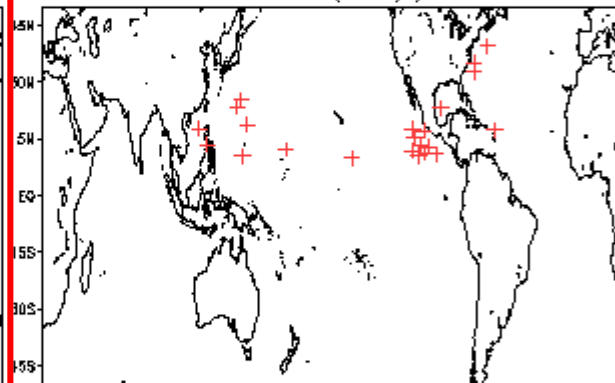
Phase 2 (74 days) 20 storms



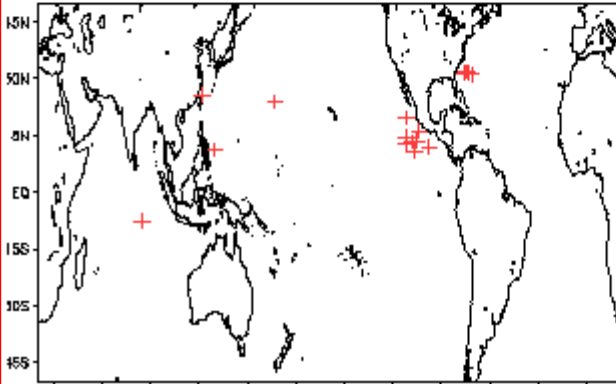
Phase 5 (63 days) 11 storms



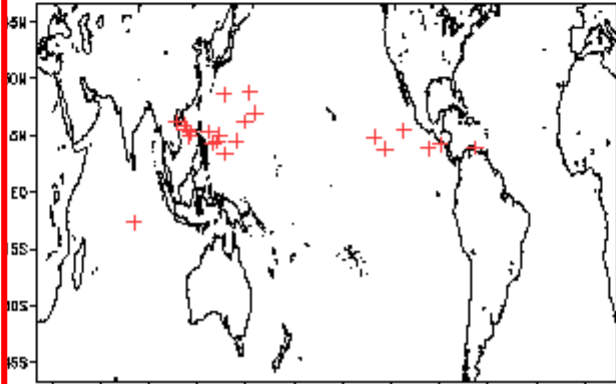
Phase 8 (61 days) 24 storms



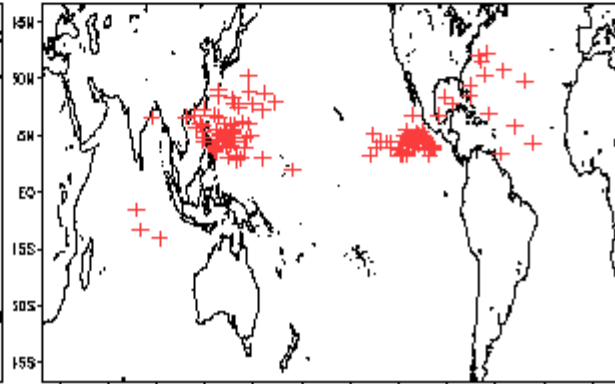
Phase 3 (49 days) 17 storms



Phase 6 (60 days) 23 storms



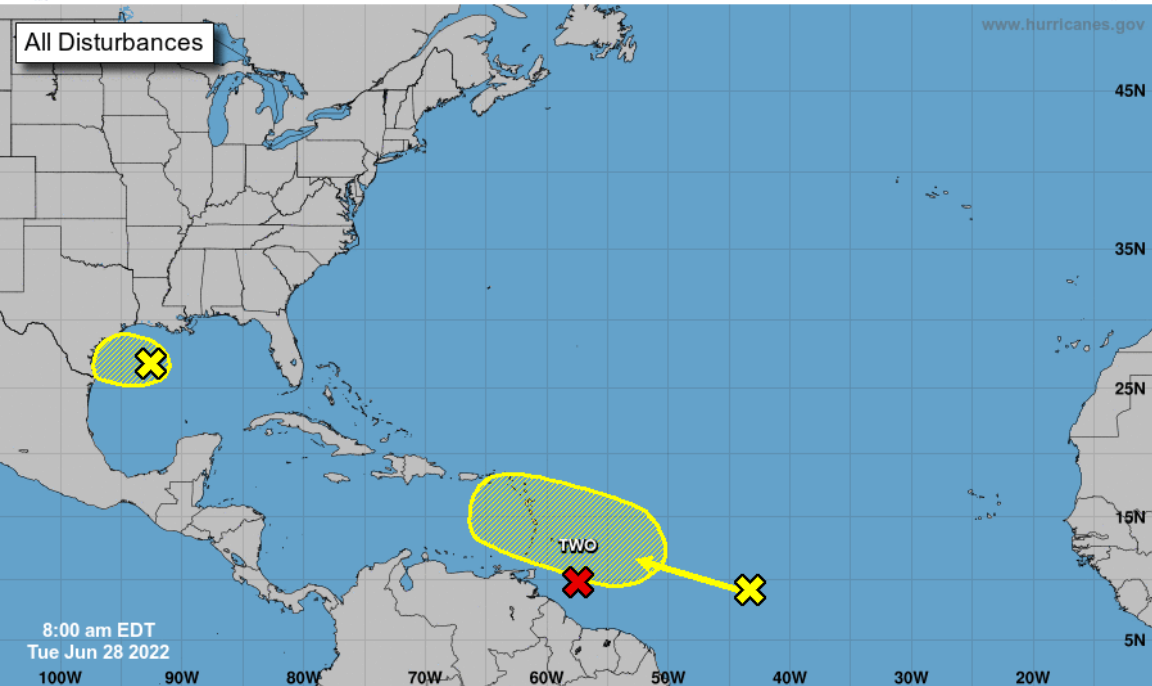
Null (480 days) 130 storms





# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT  
Tue Jun 28 2022

100W 90W 80W 70W 60W 50W 40W 30W 20W

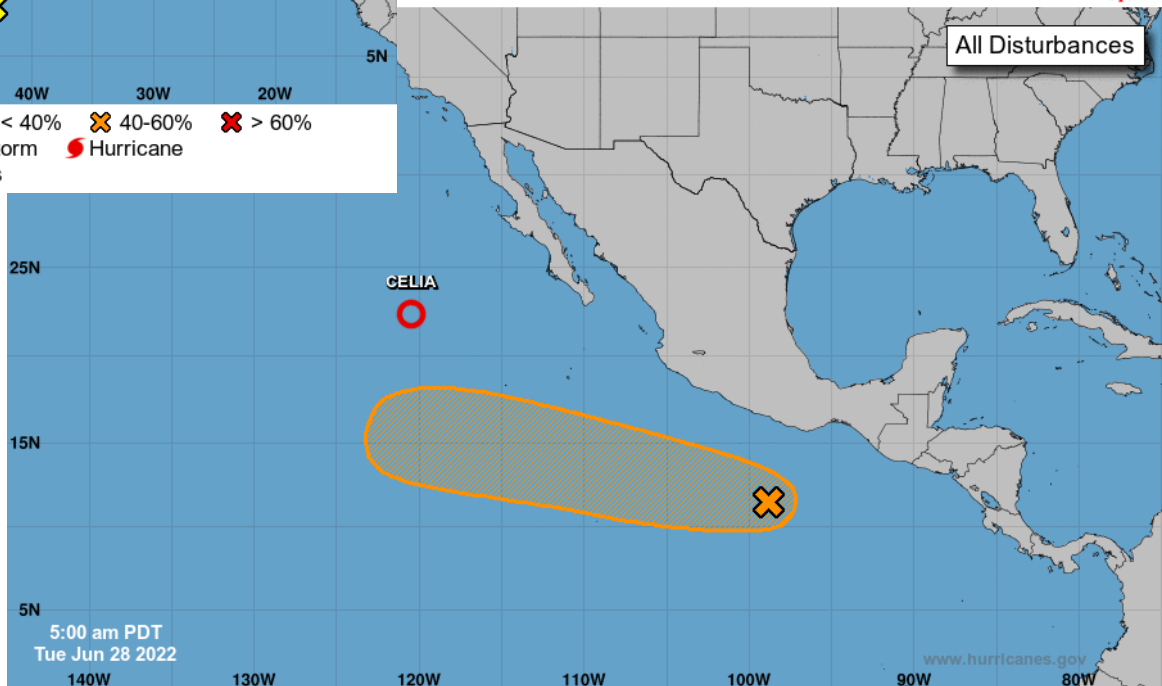
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

# Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



All Disturbances

5:00 am PDT  
Tue Jun 28 2022

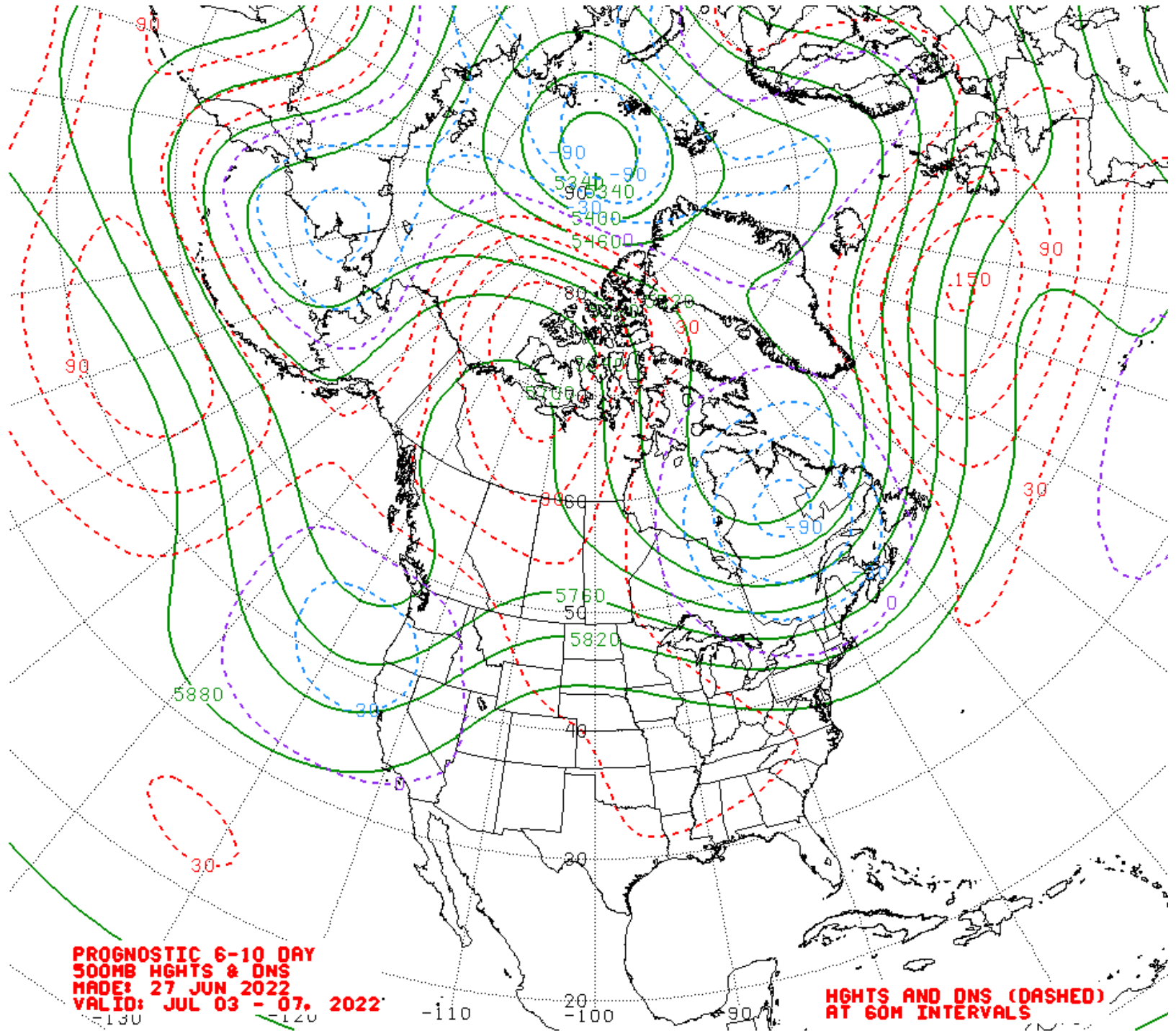
140W 130W 120W 110W 100W 90W 80W

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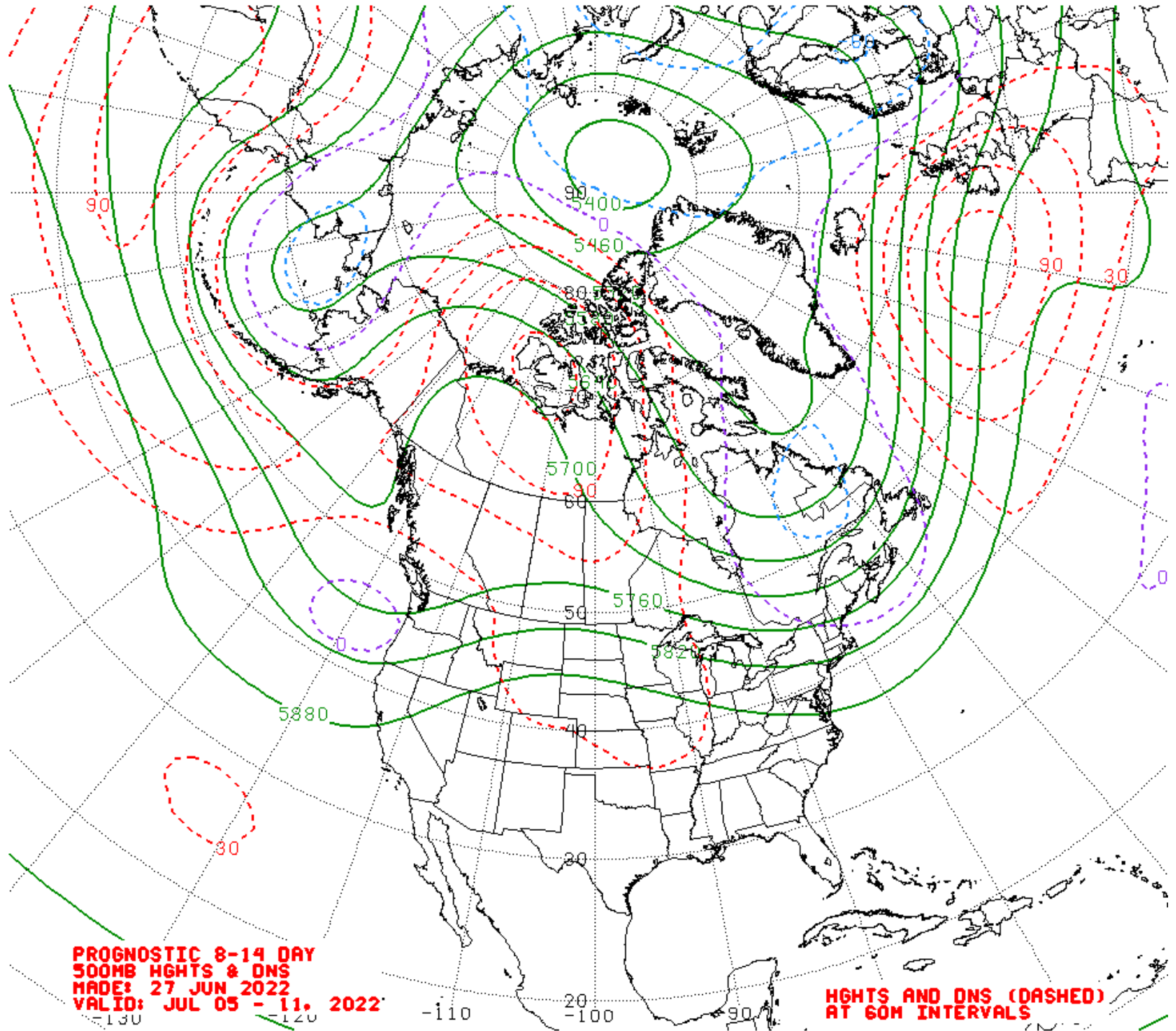
# U.S. Impacts



**PROGNOSTIC 6-10 DAY  
500MB HGHTS & DNS  
MADE: 27 JUN 2022  
VALID: JUL 03 - 07, 2022**

**HGHTS AND DNS (DASHED)  
AT 60M INTERVALS**





**PROGNOSTIC 8-14 DAY  
500MB HGTs & DNS  
MADE: 27 JUN 2022  
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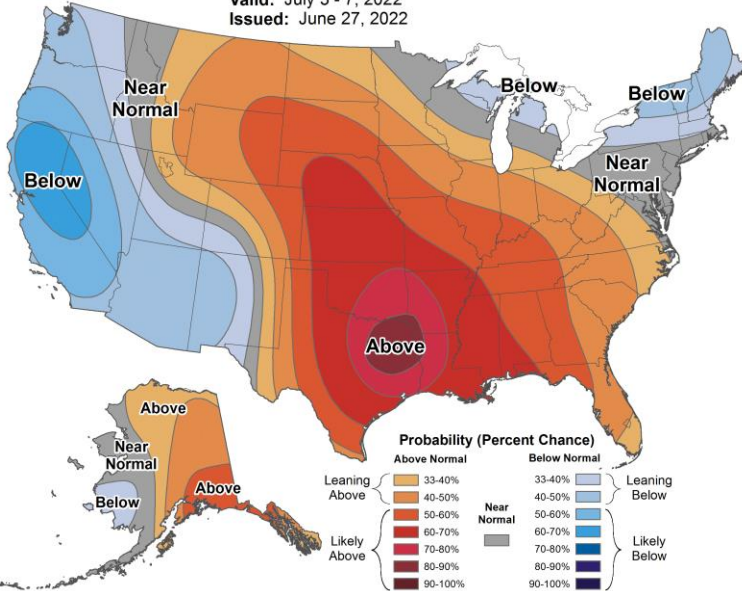
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# Temperature and Precipitation Outlooks



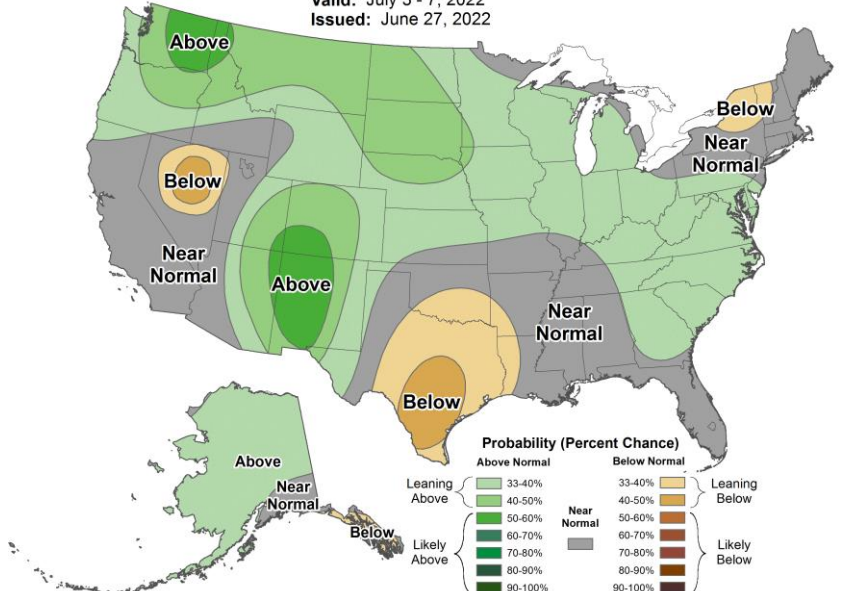
## 6-10 Day Temperature Outlook

Valid: July 3 - 7, 2022  
Issued: June 27, 2022



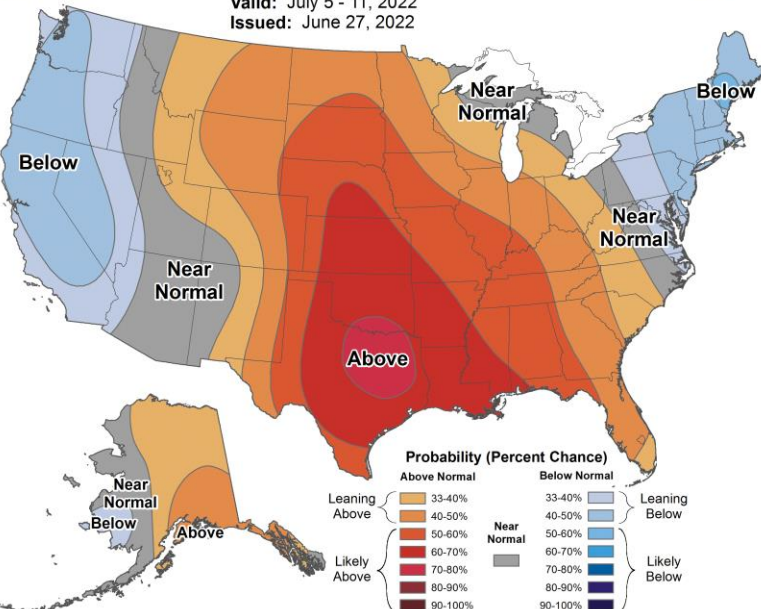
## 6-10 Day Precipitation Outlook

Valid: July 3 - 7, 2022  
Issued: June 27, 2022



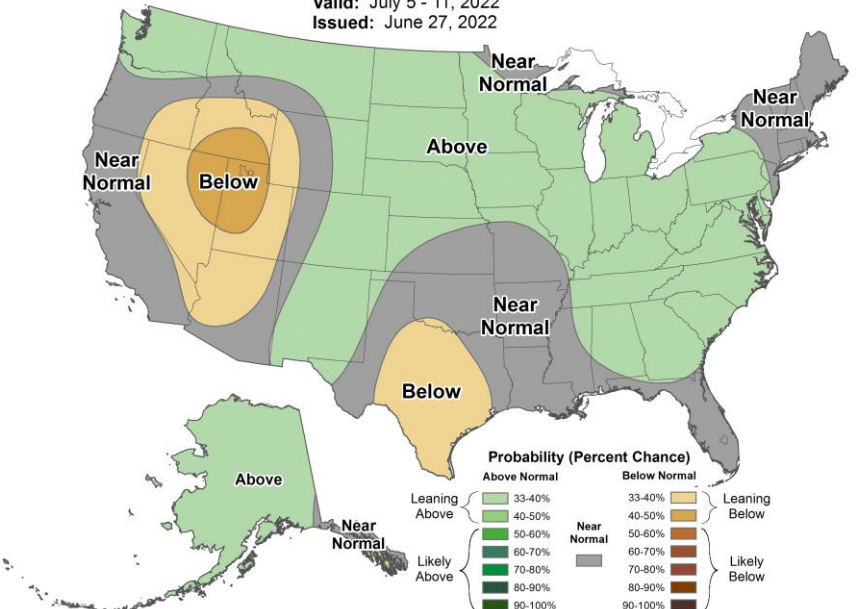
## 8-14 Day Temperature Outlook

Valid: July 5 - 11, 2022  
Issued: June 27, 2022



## 8-14 Day Precipitation Outlook

Valid: July 5 - 11, 2022  
Issued: June 27, 2022



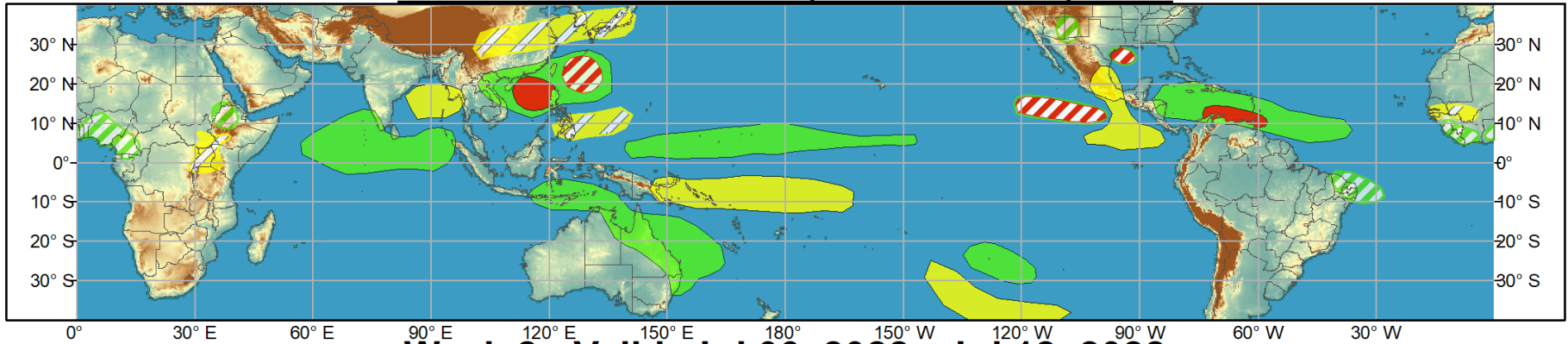




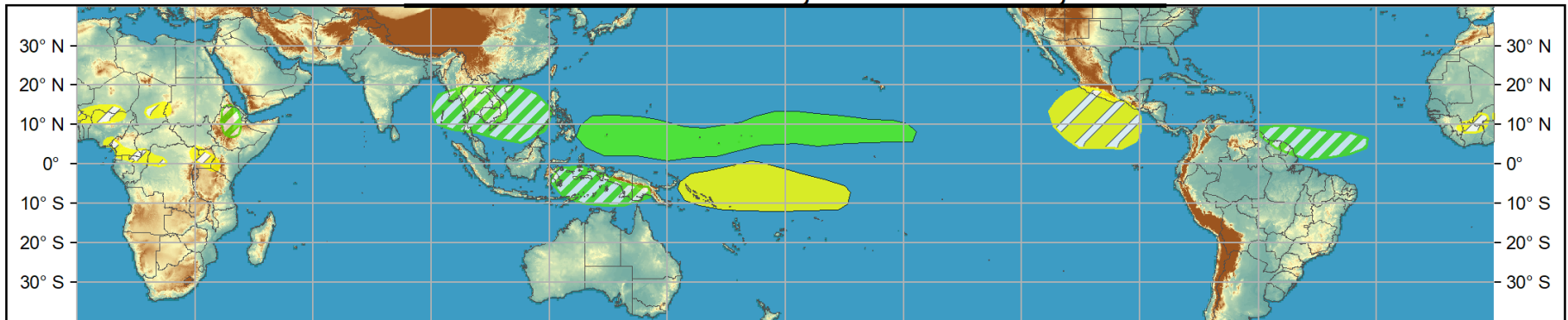
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