

Global Tropics Hazards And Benefits Outlook

6/18/2019

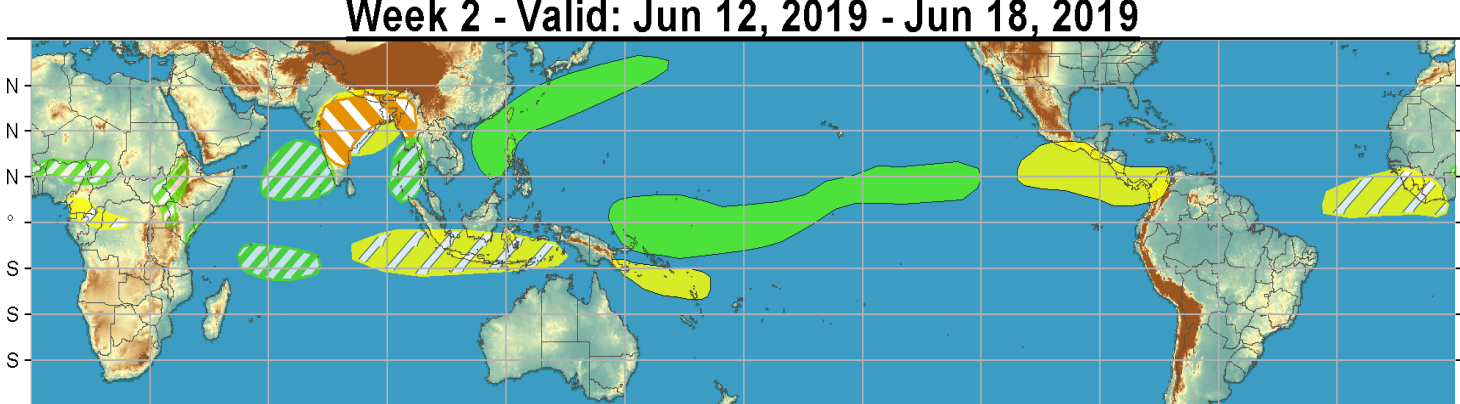
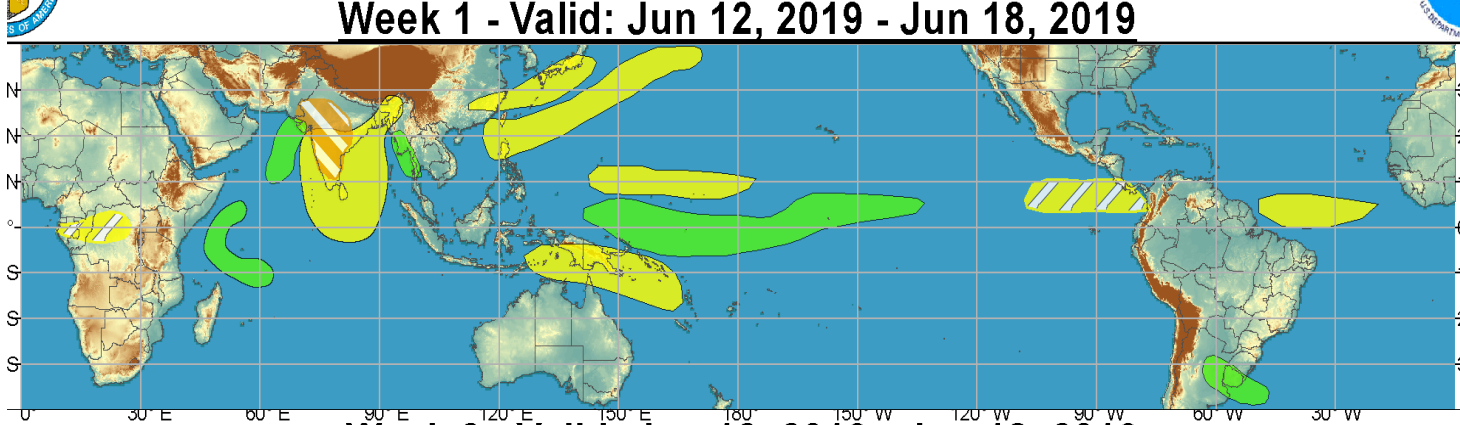
Christina Maurin

Outline

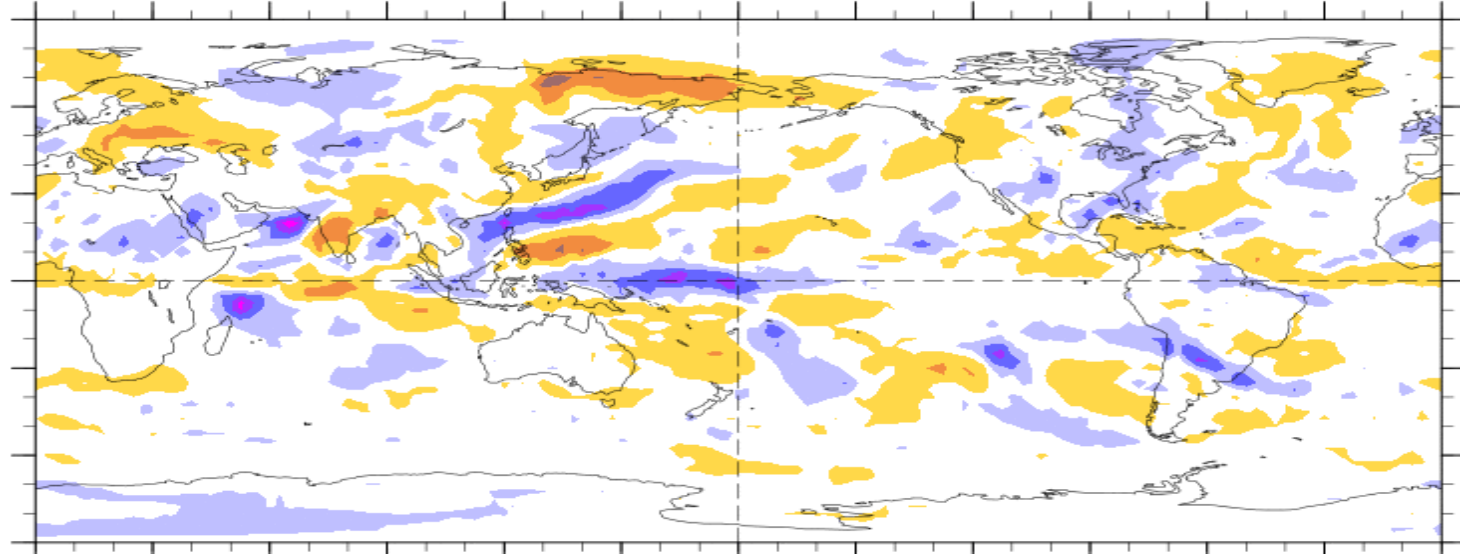
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

No TC formations within last week



7-Day Average OLR Anomaly 2019/06/10 - 2019/06/16



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (June 13, 2019 Update)

- ENSO Alert System Status: [El Niño Advisory](#)
- El Niño is predicted to persist through the Northern Hemisphere summer 2019 (66% chance), with lower odds of continuing through the fall and winter (50-5% chance).

MJO and other subseasonal tropical variability:

- The MJO remained of moderate strength, and propagated to the Maritime Continent, where the convective envelope destructively interfered with the ENSO state.
- Dynamical models show variability in the evolution of the MJO over the new two weeks – most favor some weakening and continued eastward propagation into the Pacific (Phases 6/7).

Impacts:

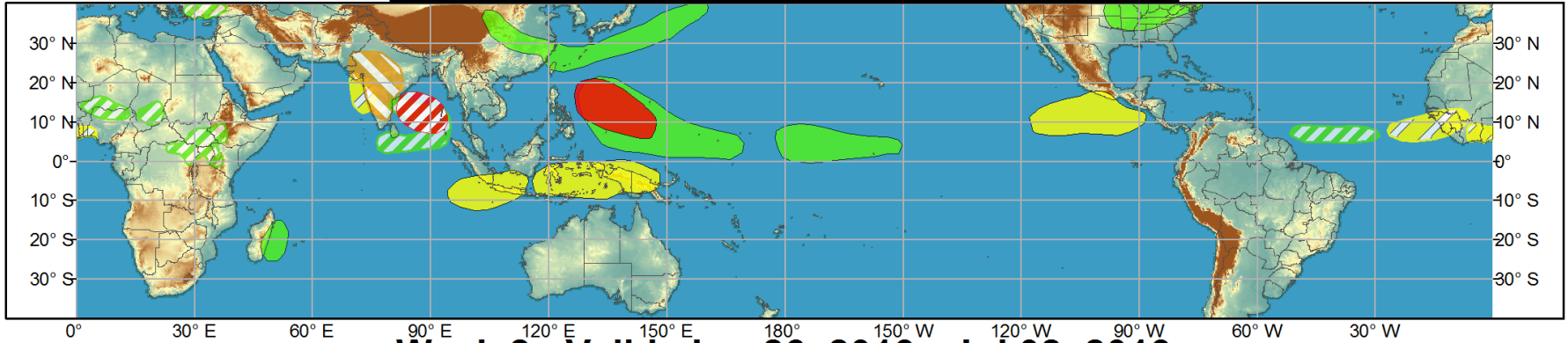
- The western Pacific basin is forecast to be more active during the next two weeks, coinciding with MJO-enhanced convection.
- Conditions over the Indian subcontinent look more conducive to monsoon onset for southern Indian in Week-1; however, moving into Week-2, model forecasts are varied and the progression of the monsoon may be limited.



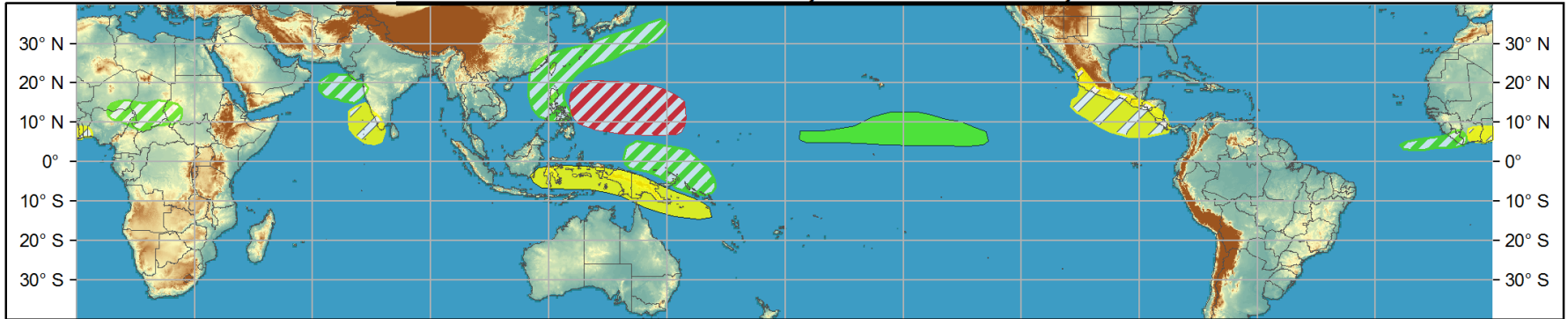
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 19, 2019 - Jun 25, 2019



Week 2 - Valid: Jun 26, 2019 - Jul 02, 2019



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: 06/18/2019

Forecaster: Maurin

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.

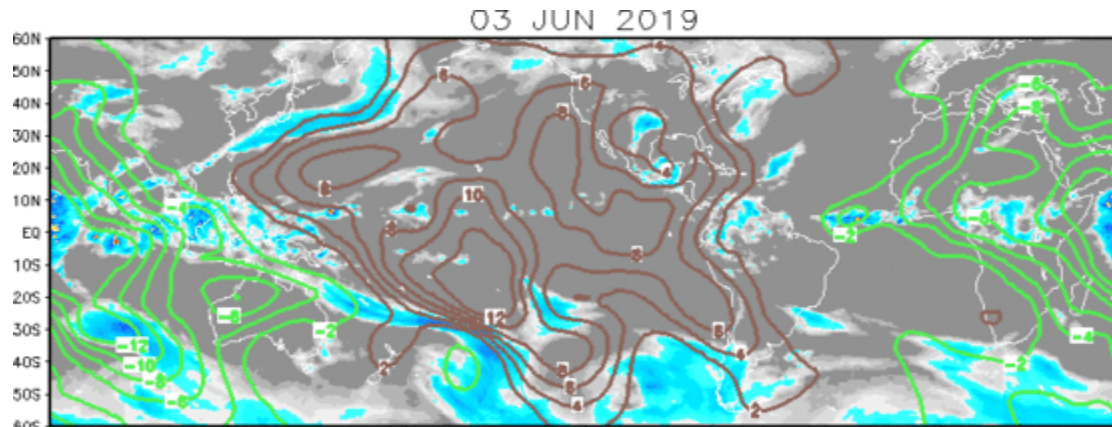


IR Satellite & 200-hpa Velocity Potential Anomalies

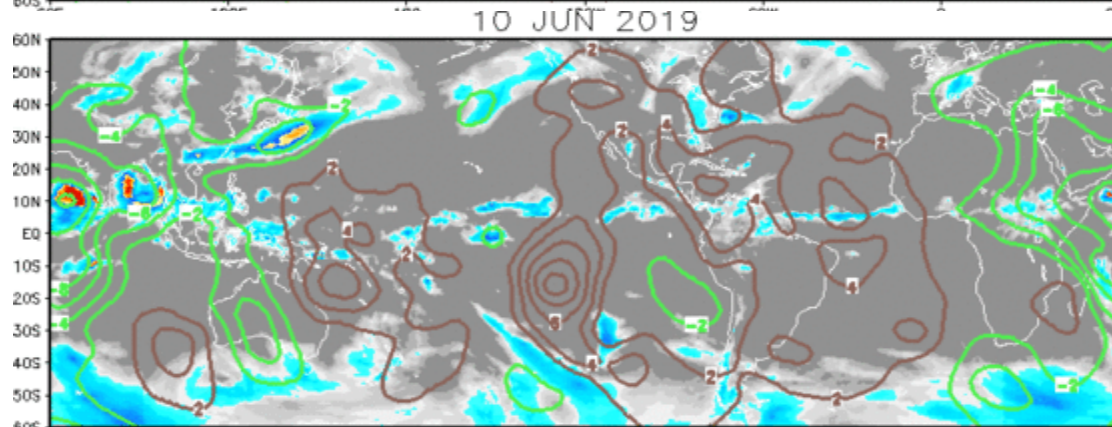
Green: Enhanced Divergence

Brown: Enhanced Convergence

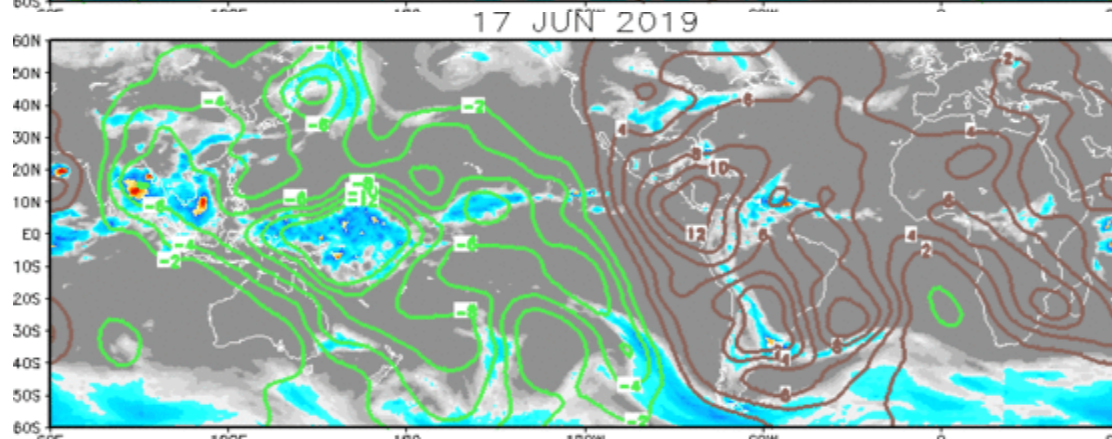
Wave-1 pattern with convection over the Indian Ocean.



Wave-1 pattern remains, with some noise. Convection is amplified, stalling over the Indian Ocean.

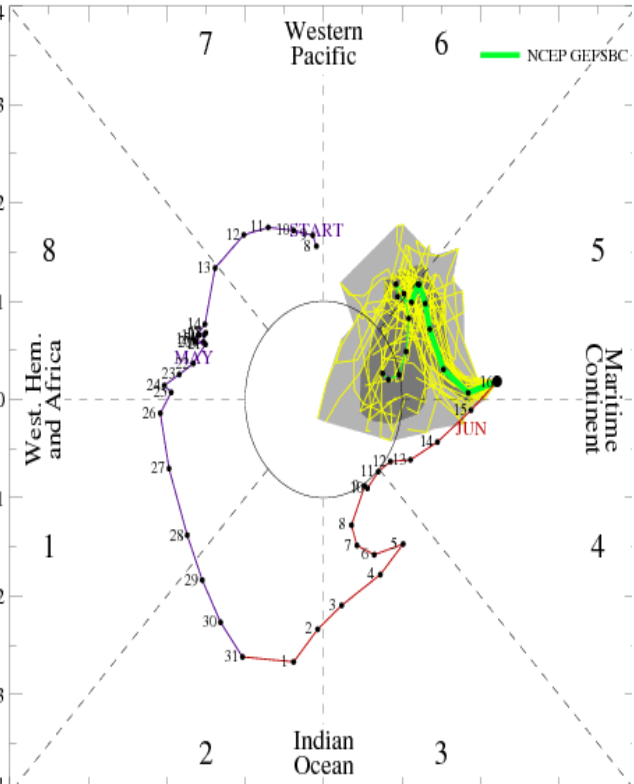


Wave-1 becomes more coherent, convection has shifted over the Maritime Continent.



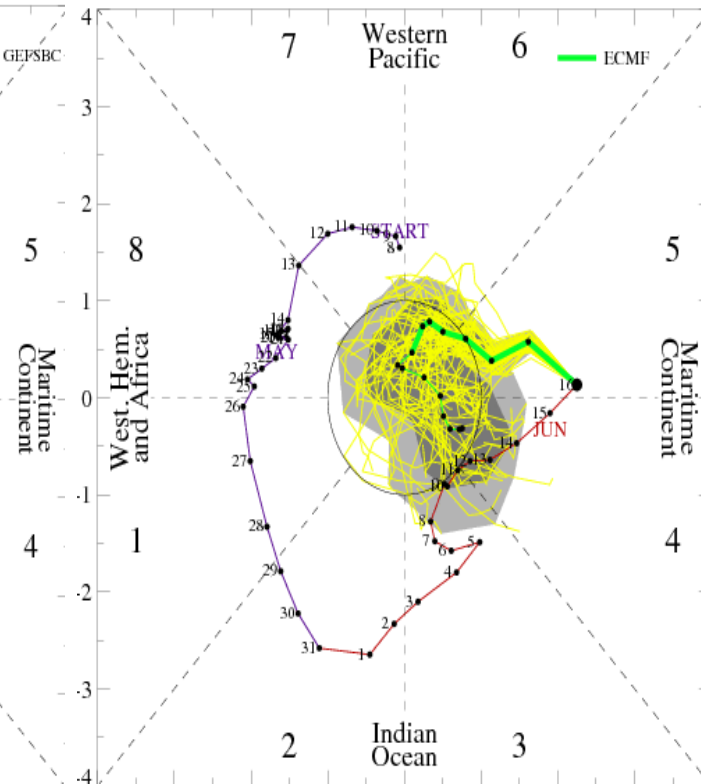
MJO Observation/Forecast

[RMM1, RMM2] forecast for Jun-17-2019 to Jul-01-2019



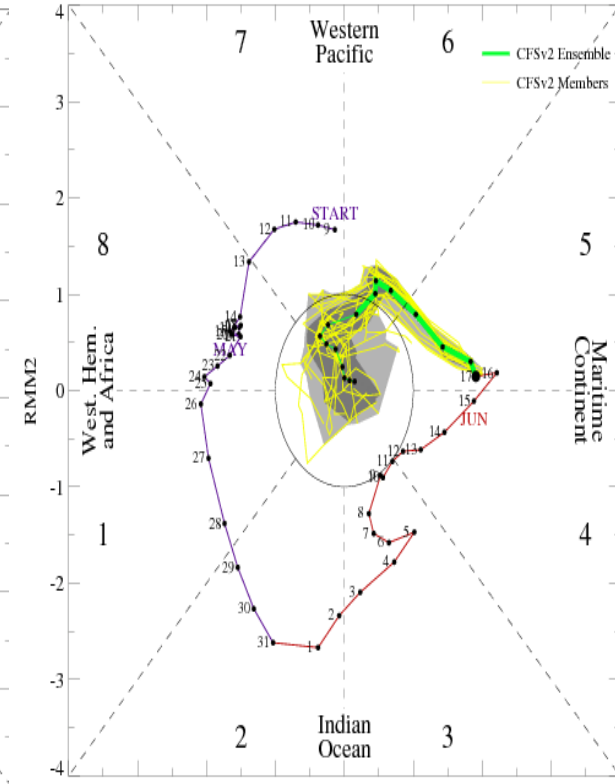
GEFS

MJO Index Forecast for 17Jun2019-01Jul2019



ECMWF

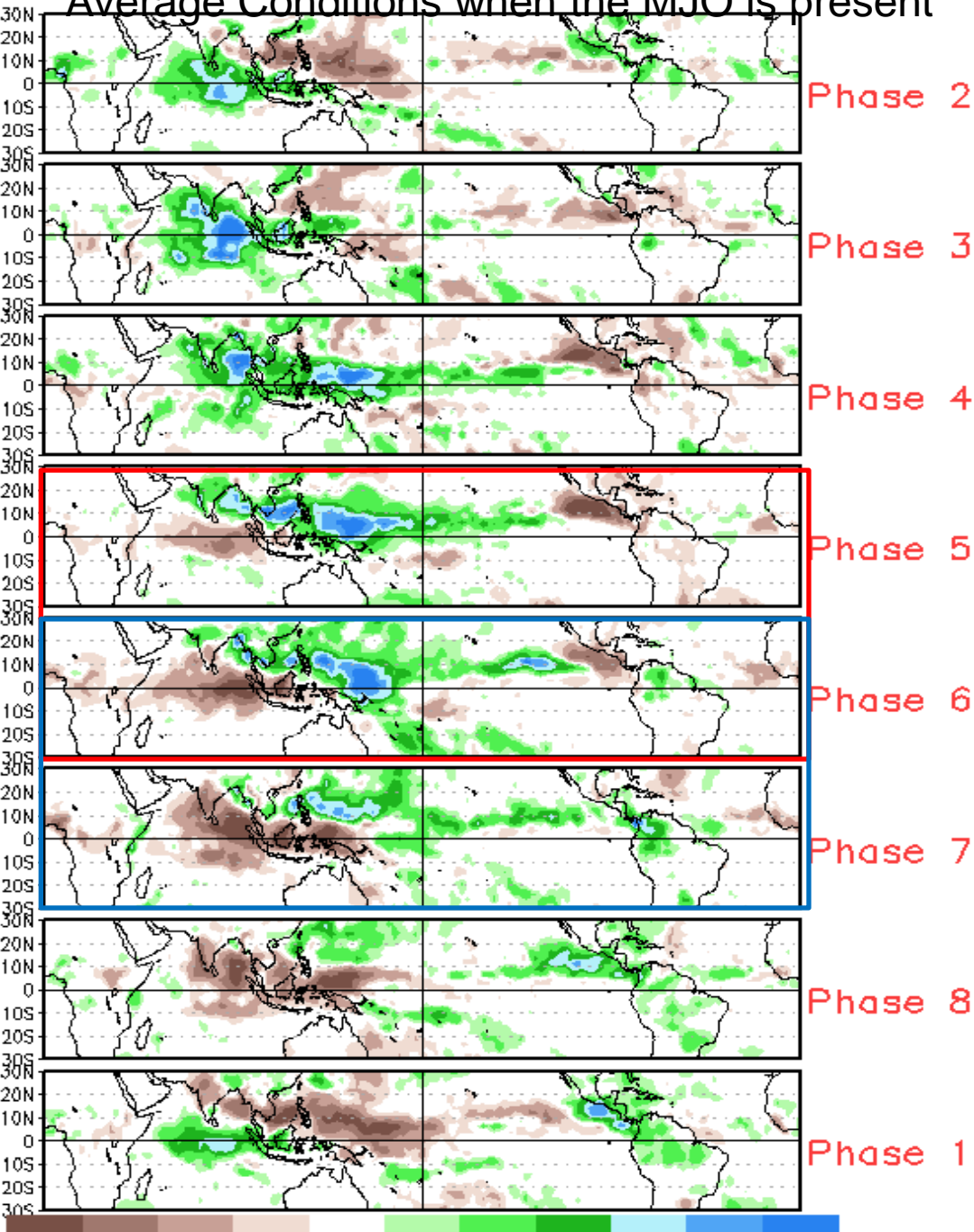
[RMM1, RMM2] forecast for Jun-18-2019 to Jul-02-2019



CFS

All models favor eastward propagation in Week-1, with varying amounts of decay to the signal. ECMWF brings the signal back inside the circle in Week-1, where GEFS and CFS keep the signal propagating into Week-2. Phases 6&7 are favored for Week 1-2.

Average Conditions when the MJO is present



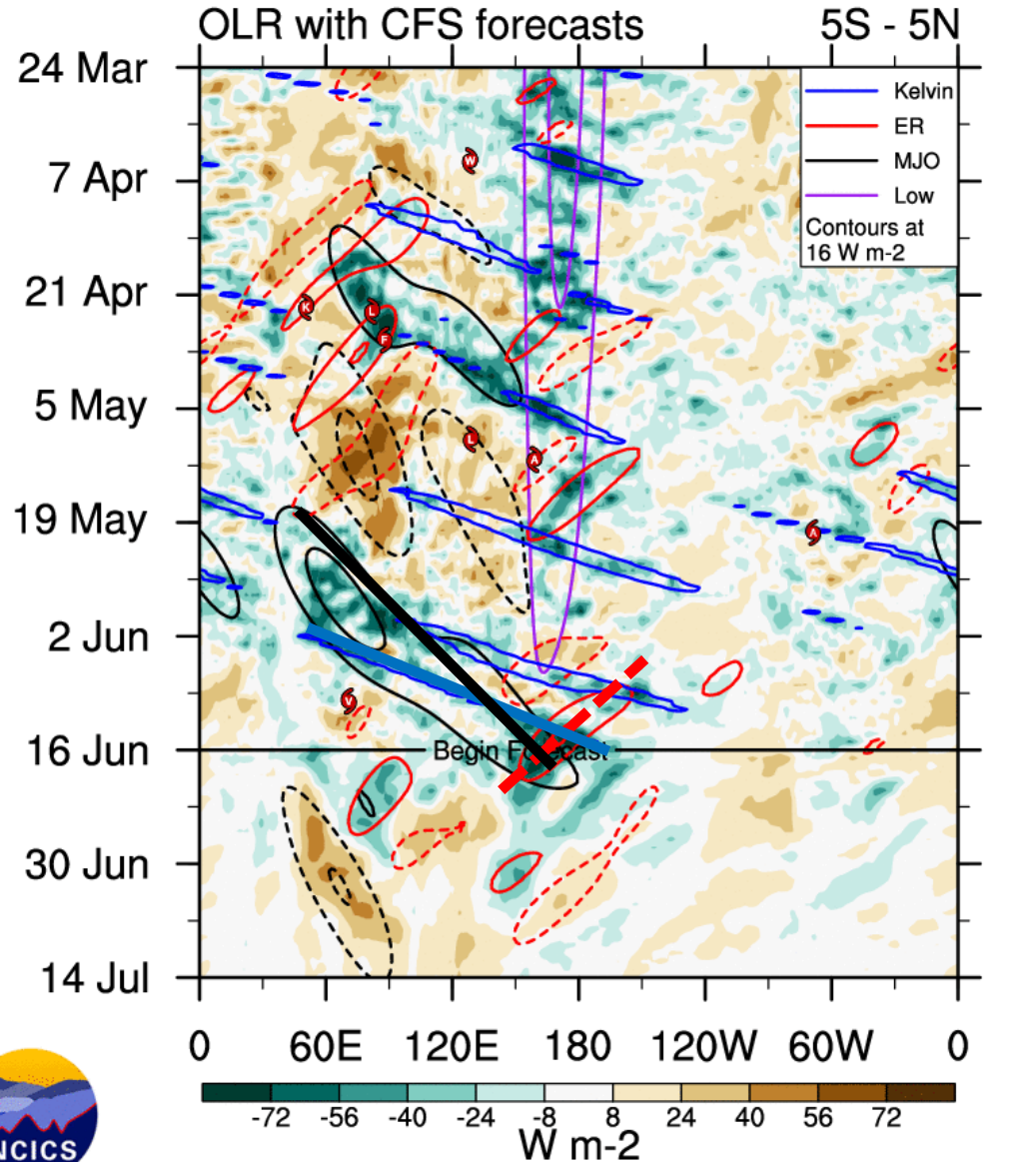
CAVEAT: These panels are representative of robust MJO events.

MJO signal has continued to be strong in the OLR field from early to mid May and is moving toward western Pacific. **Kelvin wave** activity is apparent over the Indian Ocean and Maritime Continent, constructively interfering with MJO, while a westward moving **Rossby wave** slows the MJO signal.

Low-frequency ENSO state signal remains near the Date Line, with some interference from the other modes of variability.



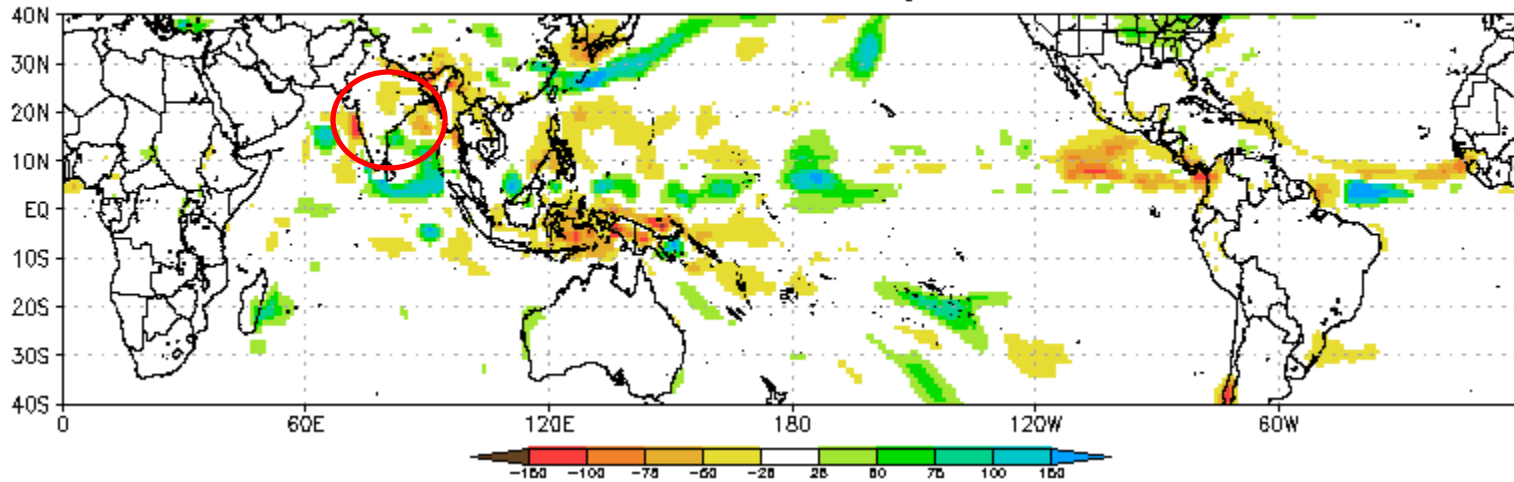
ncics.org/mjo



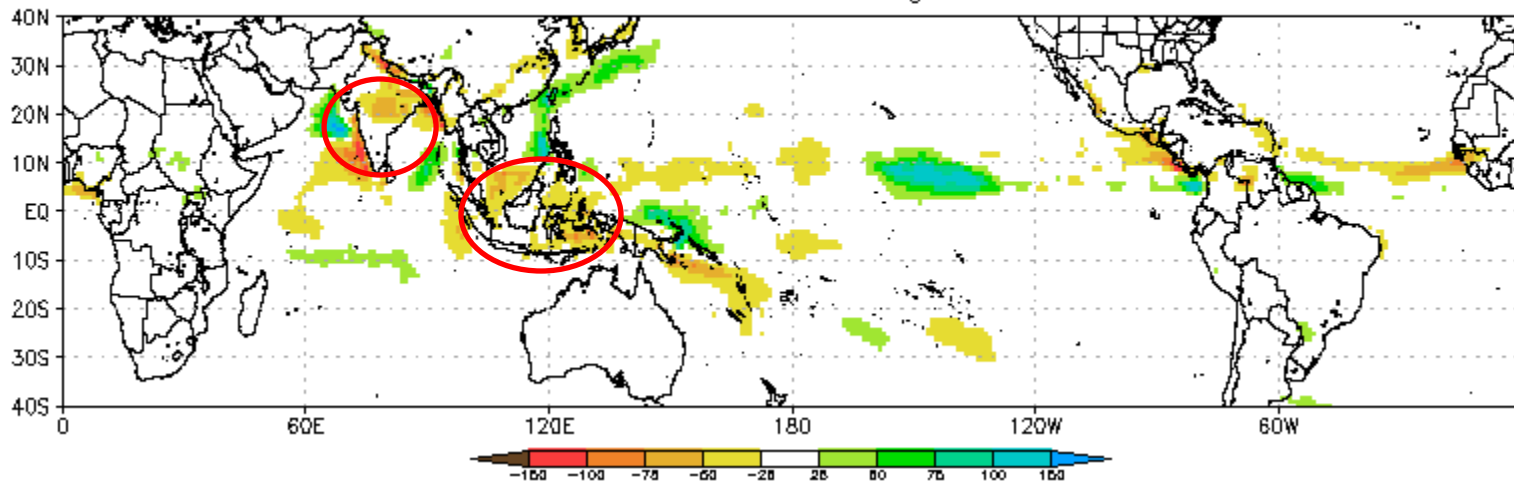
Mon 2019-06-17 15:13 UTC

Carl Schreck (cjschrec@ncsu.edu)

CFS Precipitation Anomalies (mm) Issued 17Jun2019
Week-1 Forecast Ending 25Jun2019

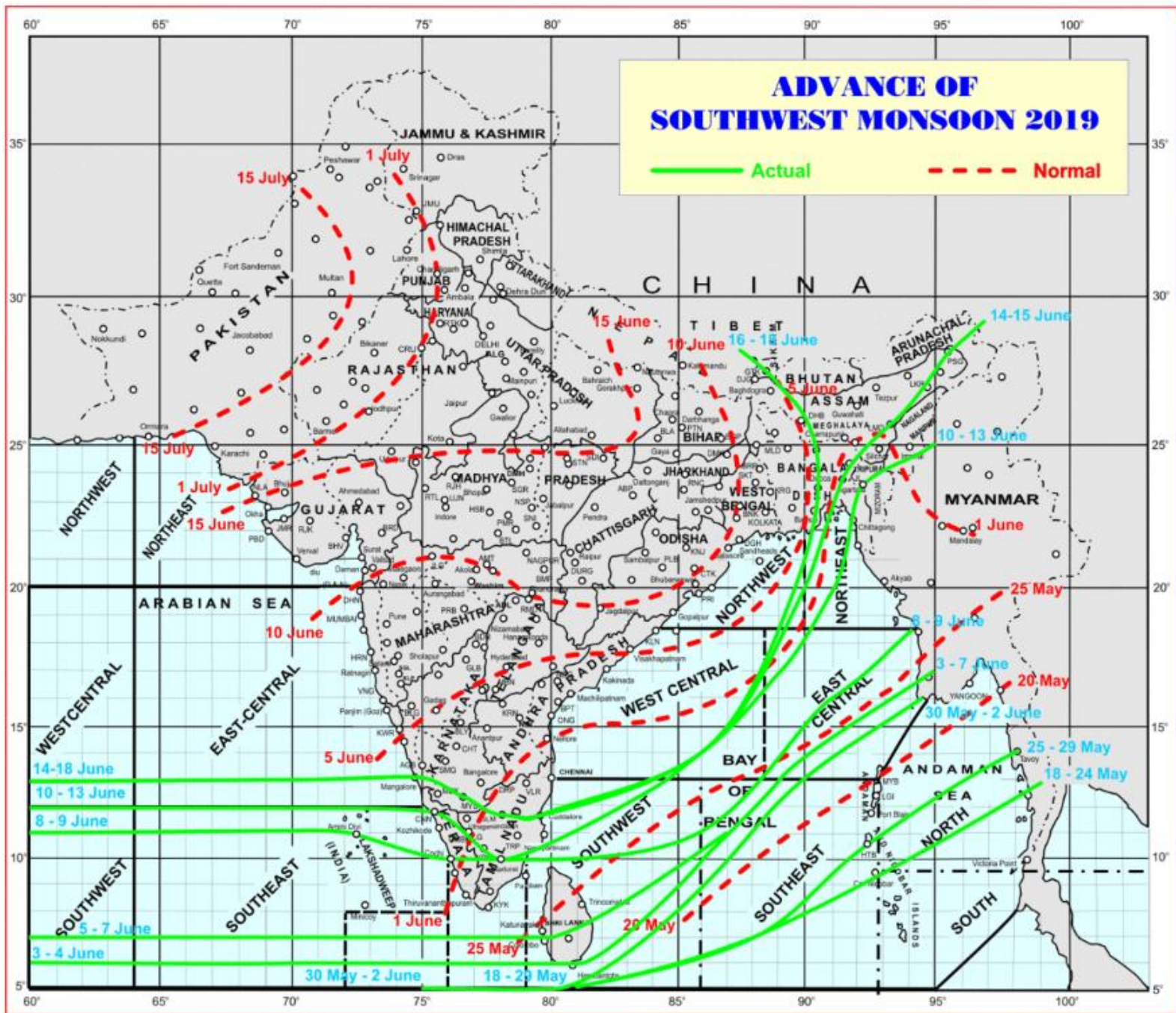


CFS Precipitation Anomalies (mm) Issued 17Jun2019
Week-2 Forecast Ending 02Jul2019



ADVANCE OF SOUTHWEST MONSOON 2019

— Actual - - - Normal





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



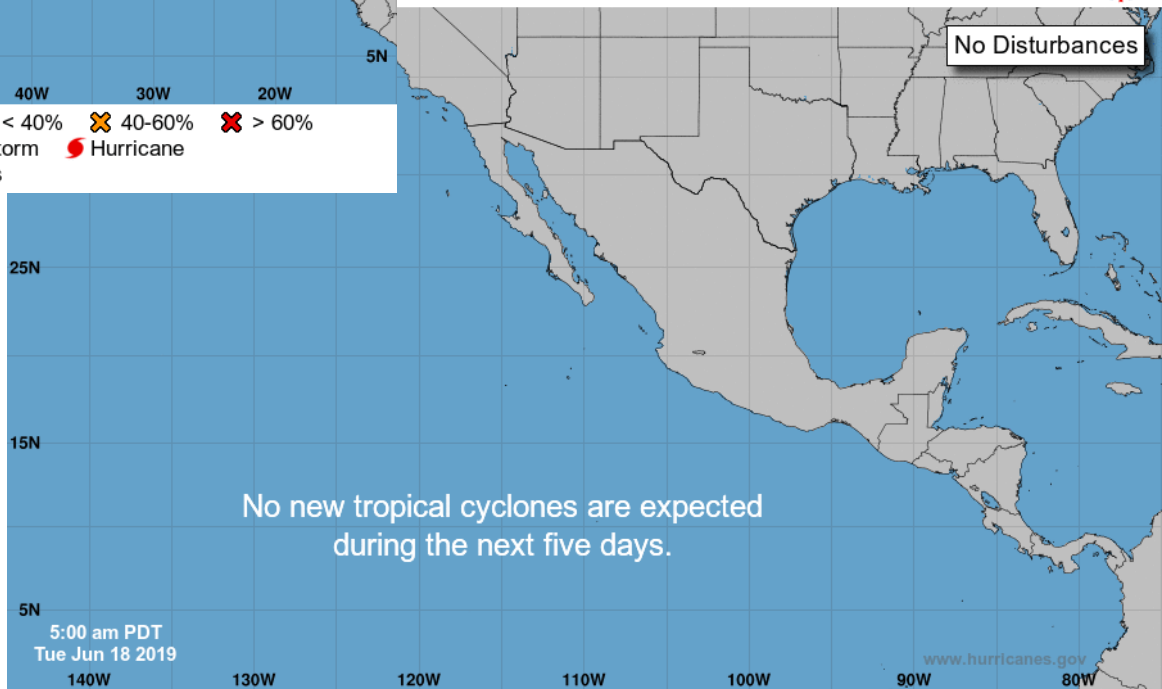
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

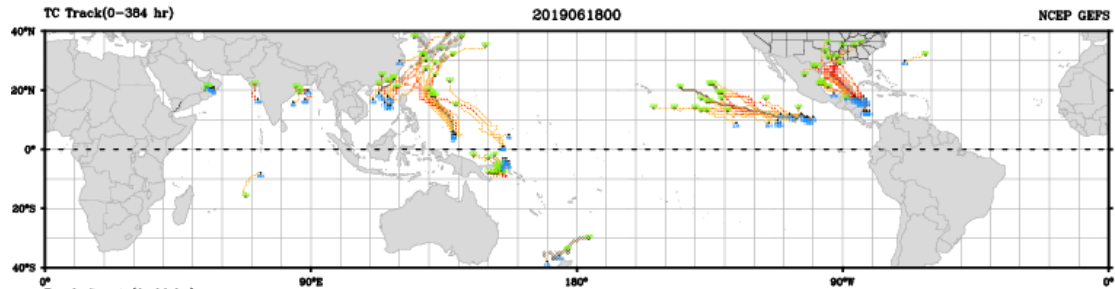
National Hurricane Center Miami, Florida



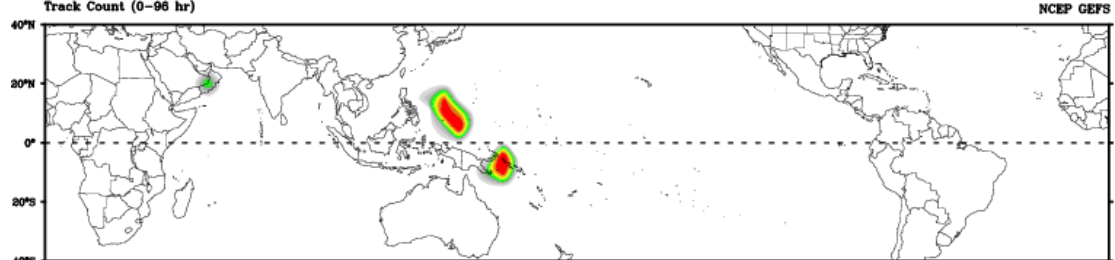
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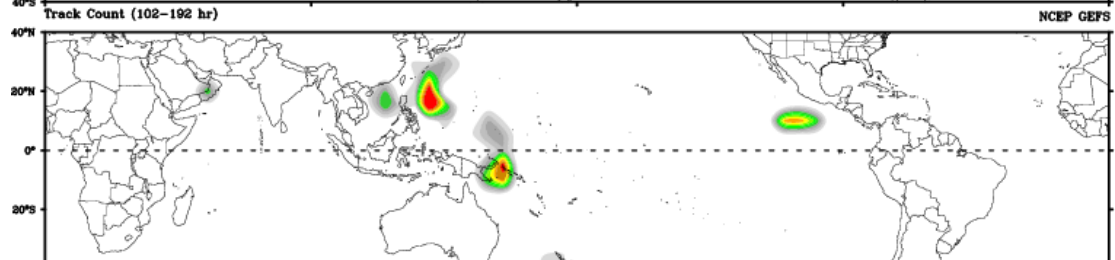
Post-Tropical Cyclone or Remnants



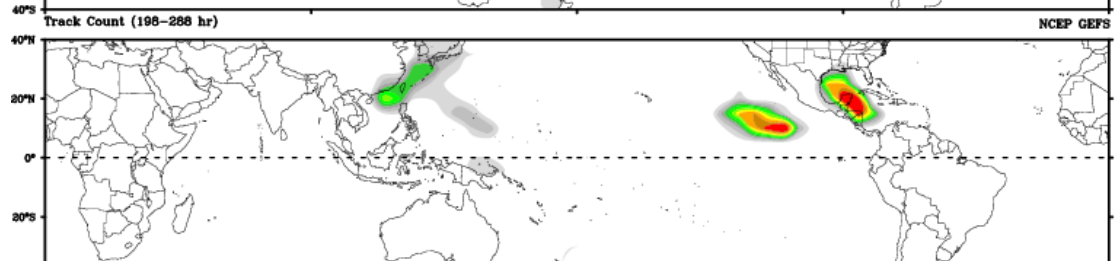
Days 1-4



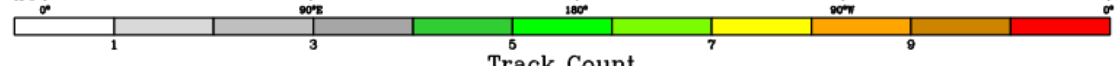
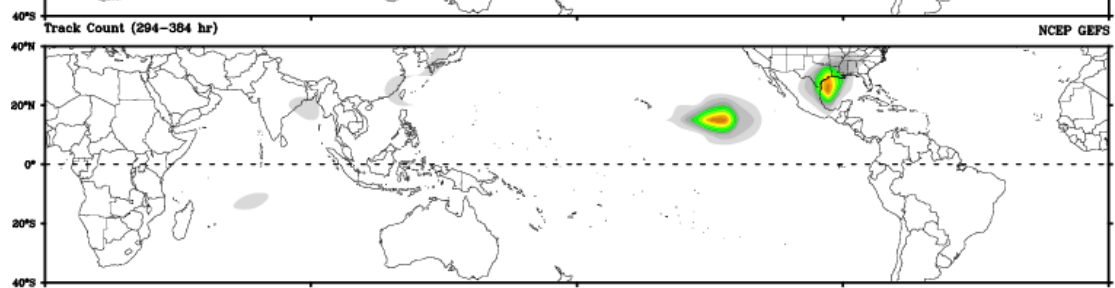
Day 5-8



Day 9-12

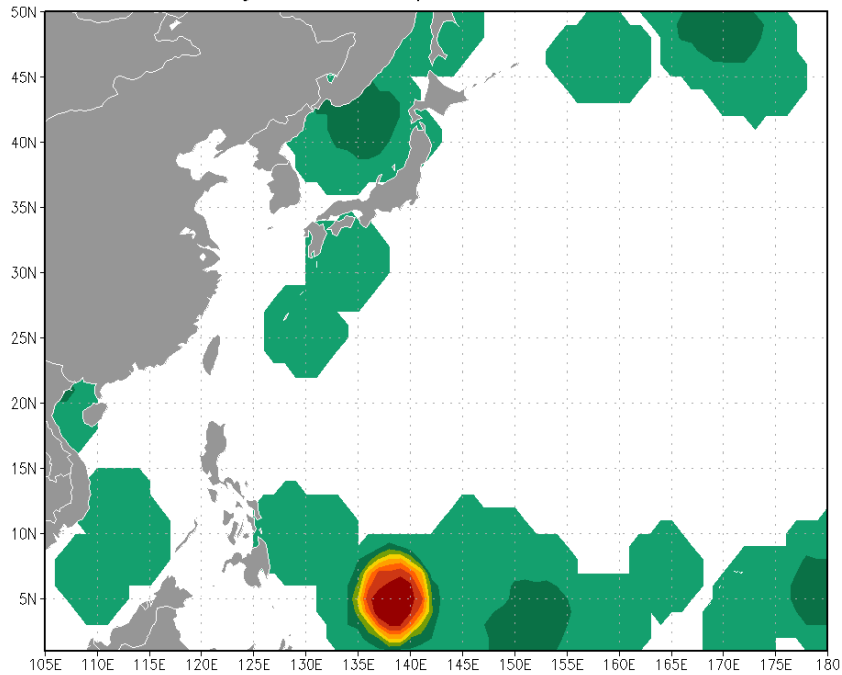


Day 13-15



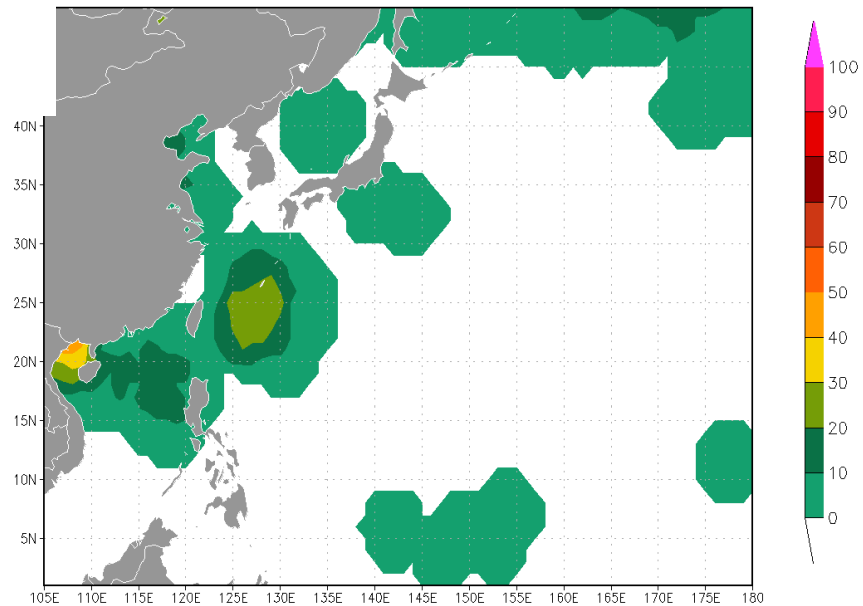
Ensemble-based Probability (%) of TC genesis
using these global ensembles: NCEP FNMOC

For forecasts during the 00–120h period from initial time = 2019061800



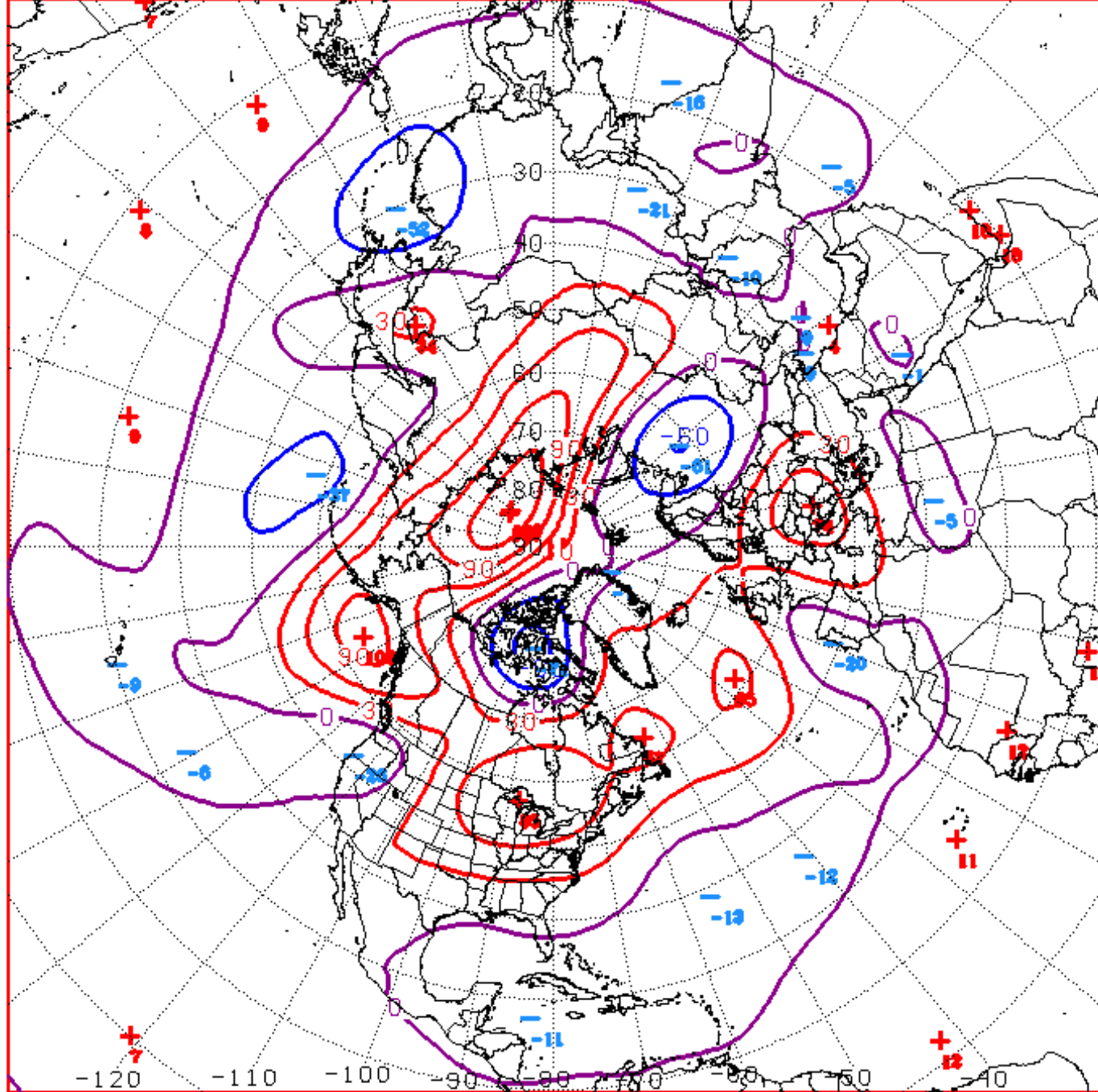
NOAA/OPD

Ensemble-based Probability (%) of TC genesis
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forecasts during the 120–240h period from initial time = 2019061800



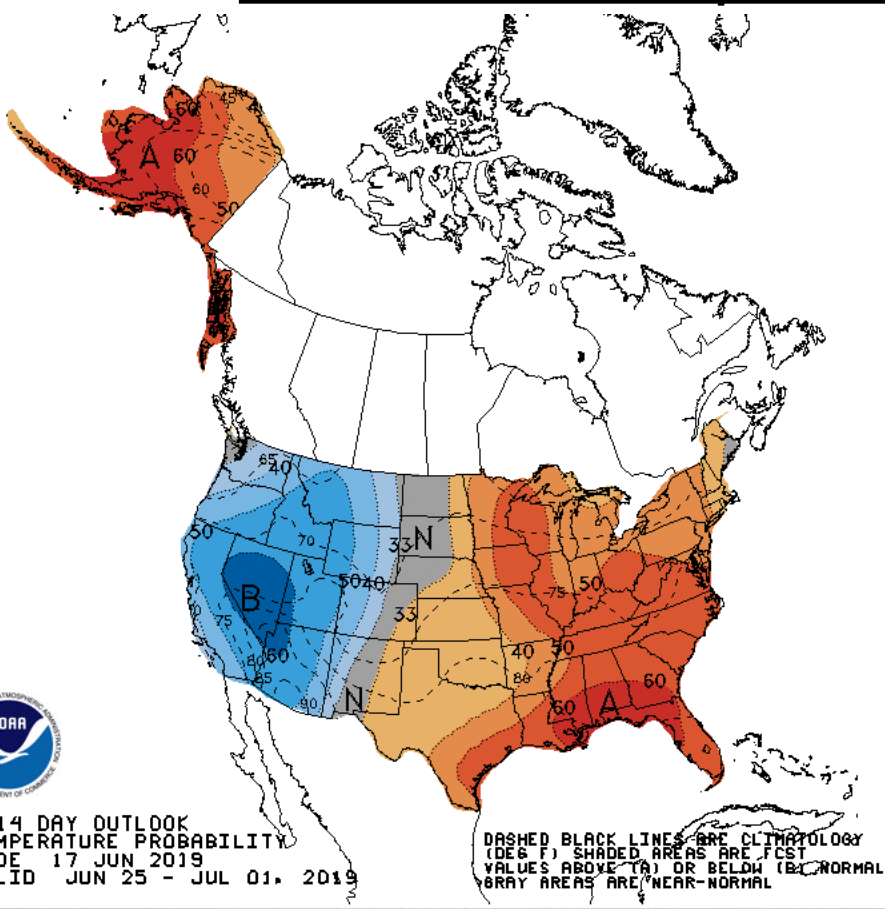
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Connections to U.S. Impacts

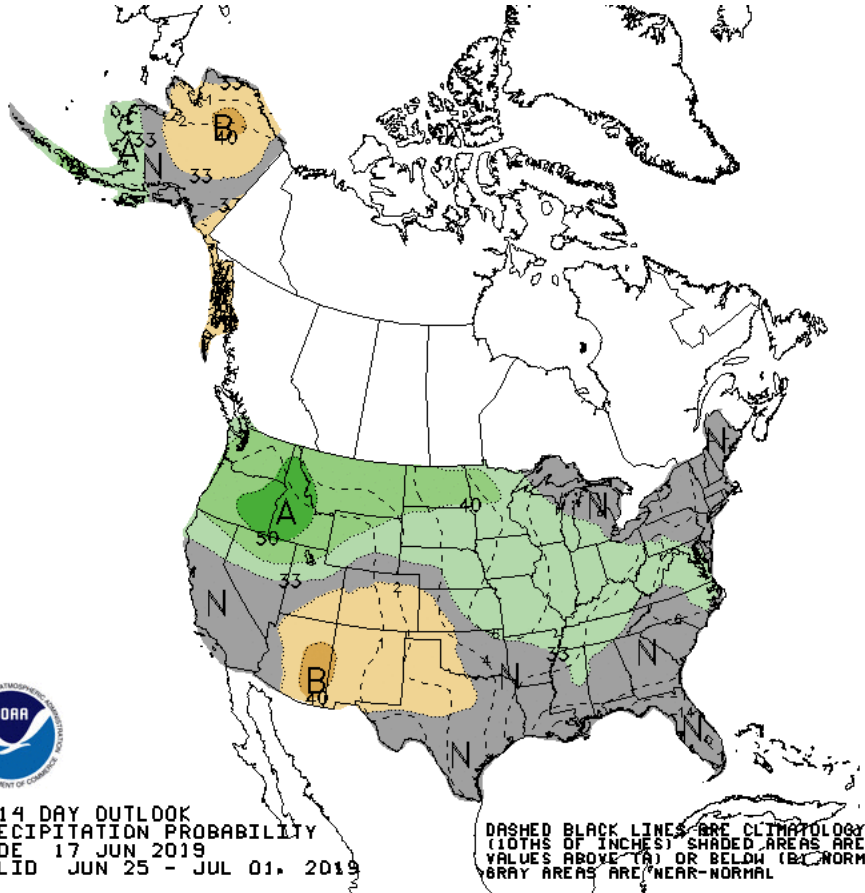
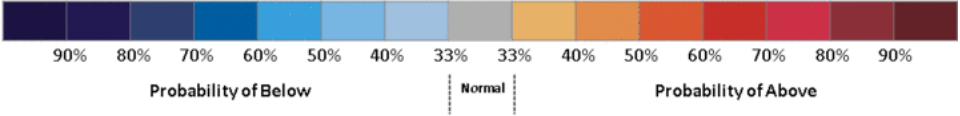


D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE JUN 18 2019 1325 UTC CNTD JUN 29 2019

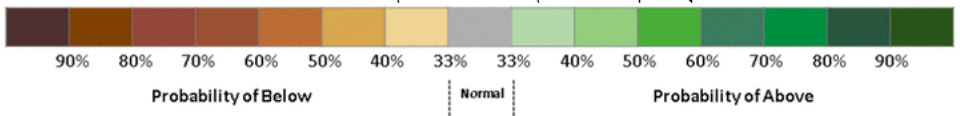
Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 17 JUN 2019
VALID JUN 25 - JUL 01, 2019



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 17 JUN 2019
VALID JUN 25 - JUL 01, 2019

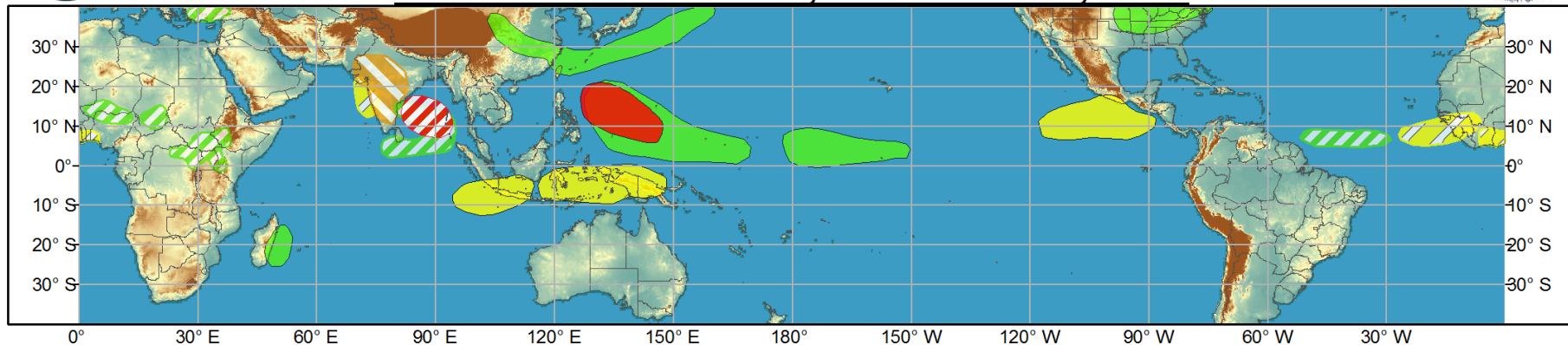




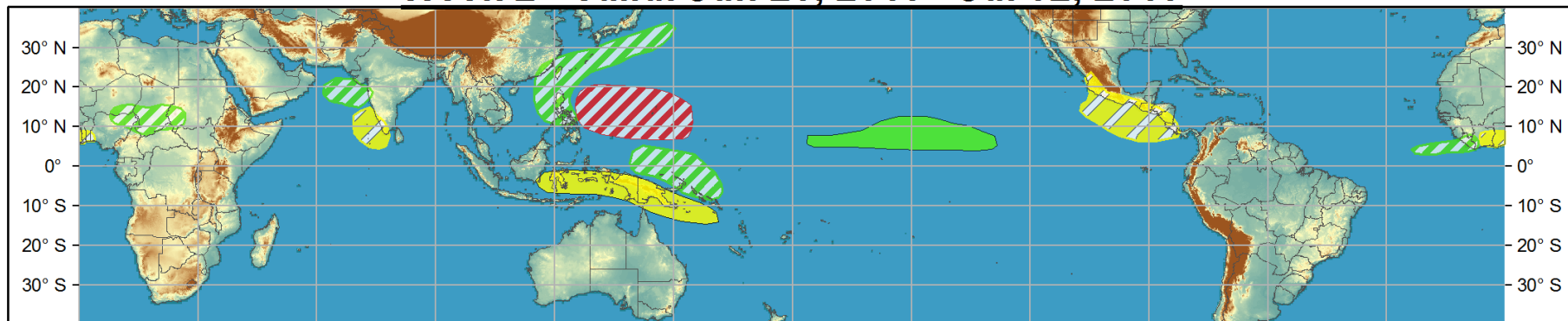
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