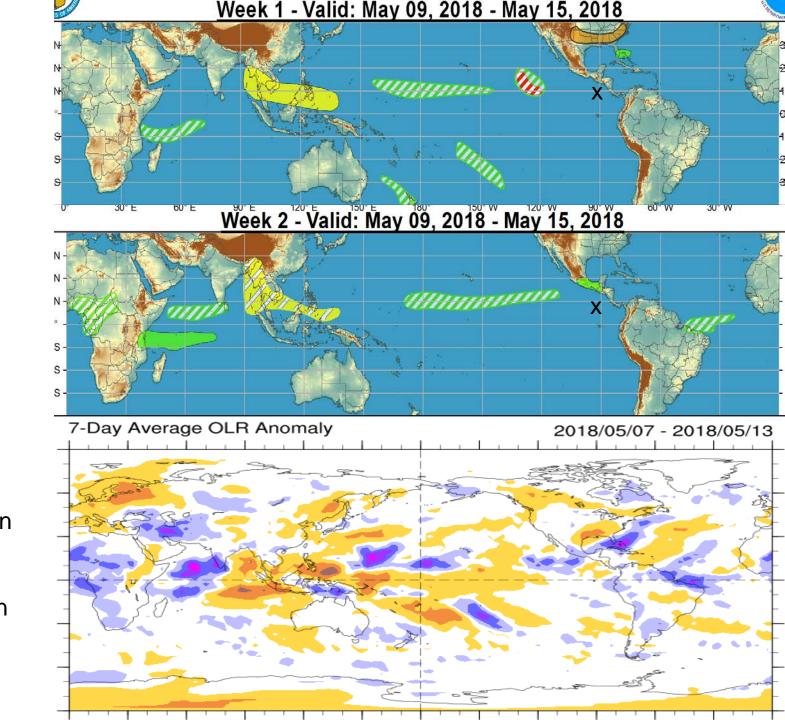
Global Tropics Hazards And Benefits Outlook 5/15/2018

Anthony Artusa

Outline

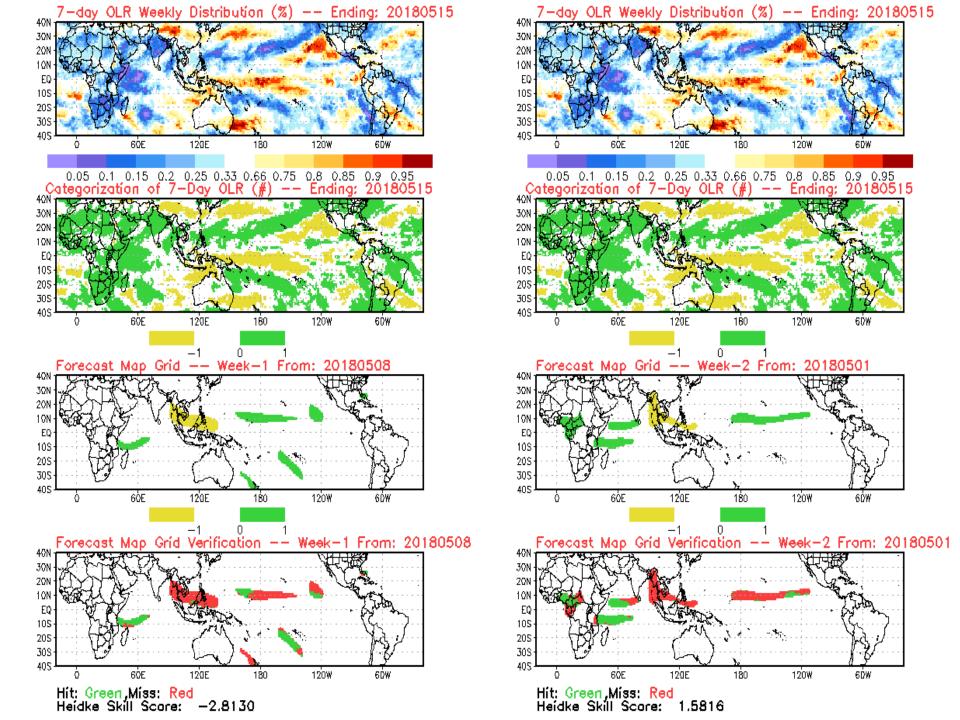
- 1. Review of Recent Conditions
- 2. Synopsis of Climate Modes
- 3. GTH Outlook and Forecast Discussion
- 4. Connections to U.S. Impacts

Outlook Review



Cool shading More clouds/rain

Warm shading Less clouds/rain



Synopsis of Climate Modes

ENSO:

• ENSO-neutral is favored through Sep-Nov 2018, with the possibility of El Nino nearing 50% by Northern Hemisphere winter 2018-19.

MJO and other subseasonal tropical variability:

- A high-amplitude MJO is currently ongoing, with the active enhanced phase over the Western Hemisphere.
- Dynamical models indicate a weakening of the signal during the two-week period into the unit circle on the RMM plots. The primary differences in models is in terms of how far east the intraseasonal signal is likely to propagate. Solutions range between border of phases 1 and 2, and the border of phases 2 and 3.

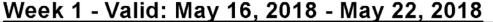
Extratropics:

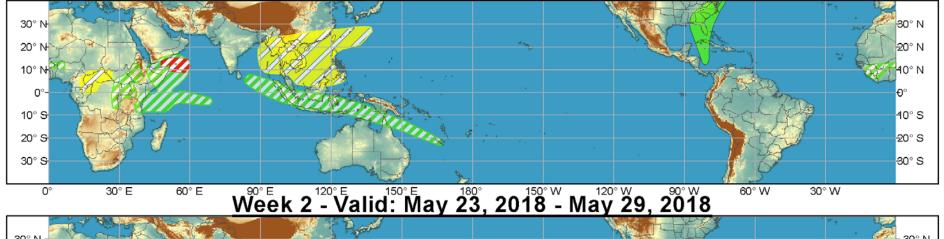
• The extended range temperature and precipitation forecasts for the CONUS may be modestly impacted by the MJO with near-normal temperatures over parts of the north-central CONUS, and a slight tilt in the odds for above-normal temperatures across the Great Lakes area, in the 5-15 day time period.)



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center









Confidence High Moderate

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

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

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.

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.



Above-normal temperatures













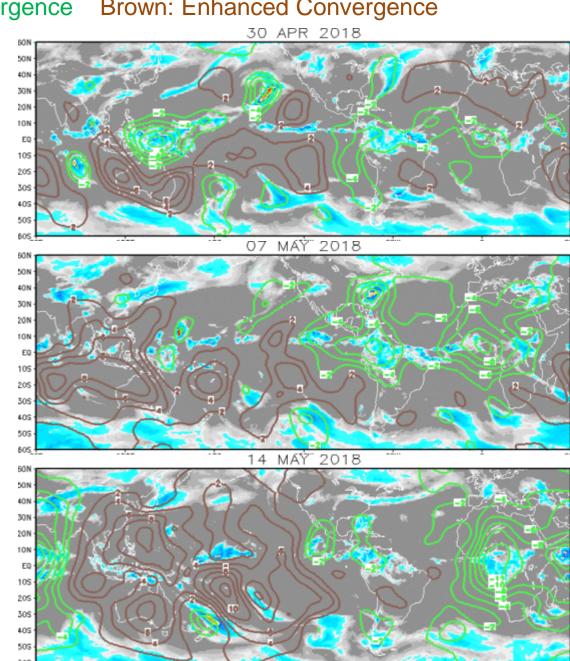
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

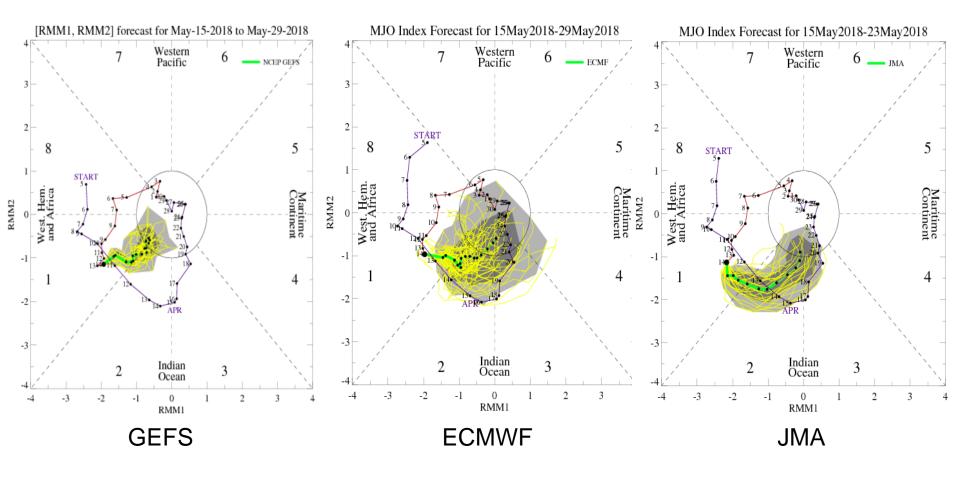
Disorganized VPA pattern

Wave-1 with a moderate MJO projection.

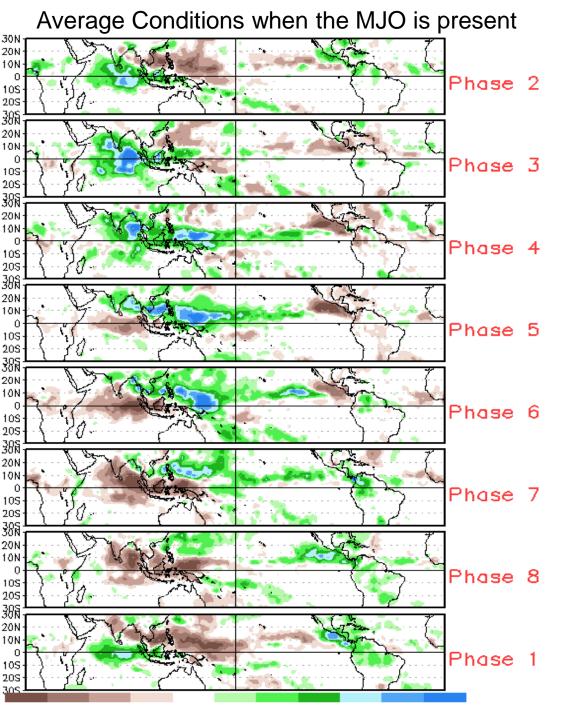
Wave-1 with a moderate MJO projection.



MJO Observation/Forecast

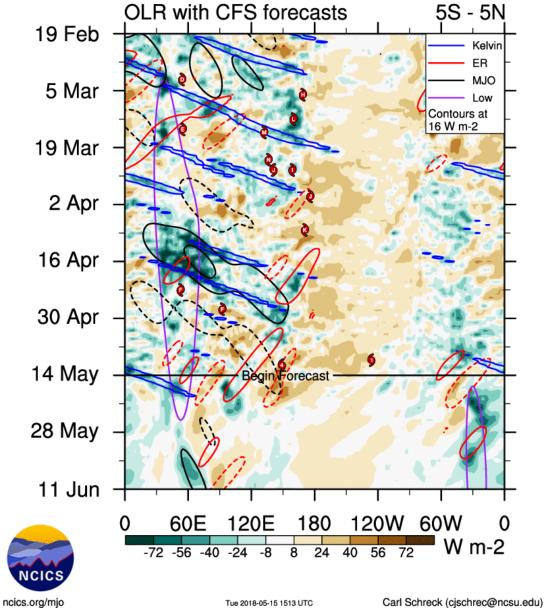


Wheeler-Hendon based analyses of model forecasts indicate various degrees of eastward propagation, though all agree on weakening during the two-week period.



CAVEAT: These panels are representative of robust MJO events.

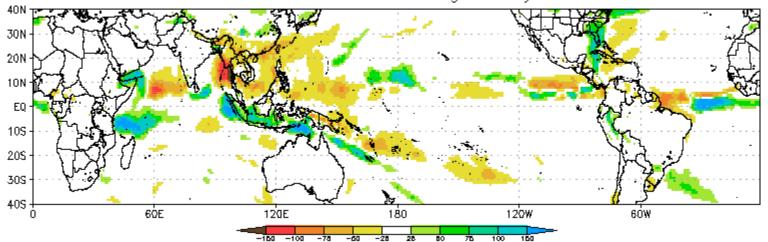
MJO, equatorial Rossby wave, Kelvin wave, & Low-Frequency pattern all contributing to the mix



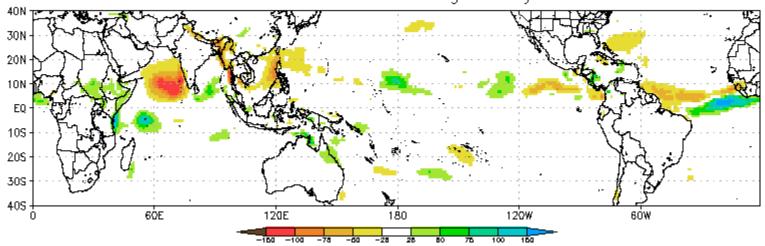
Tue 2018-05-15 1513 UTC

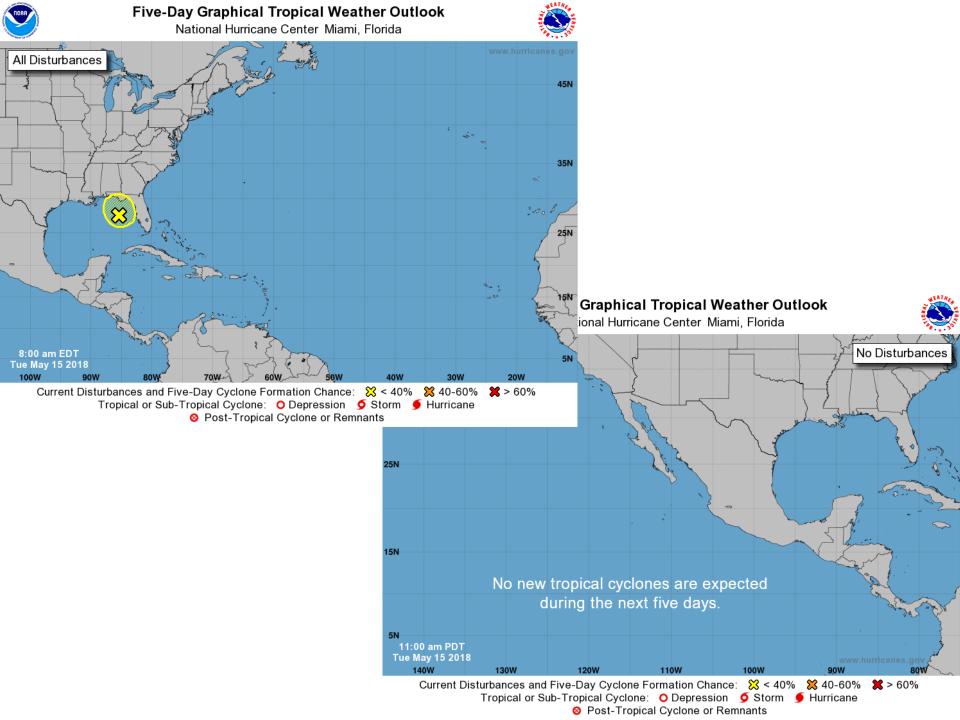
Carl Schreck (cjschrec@ncsu.edu)

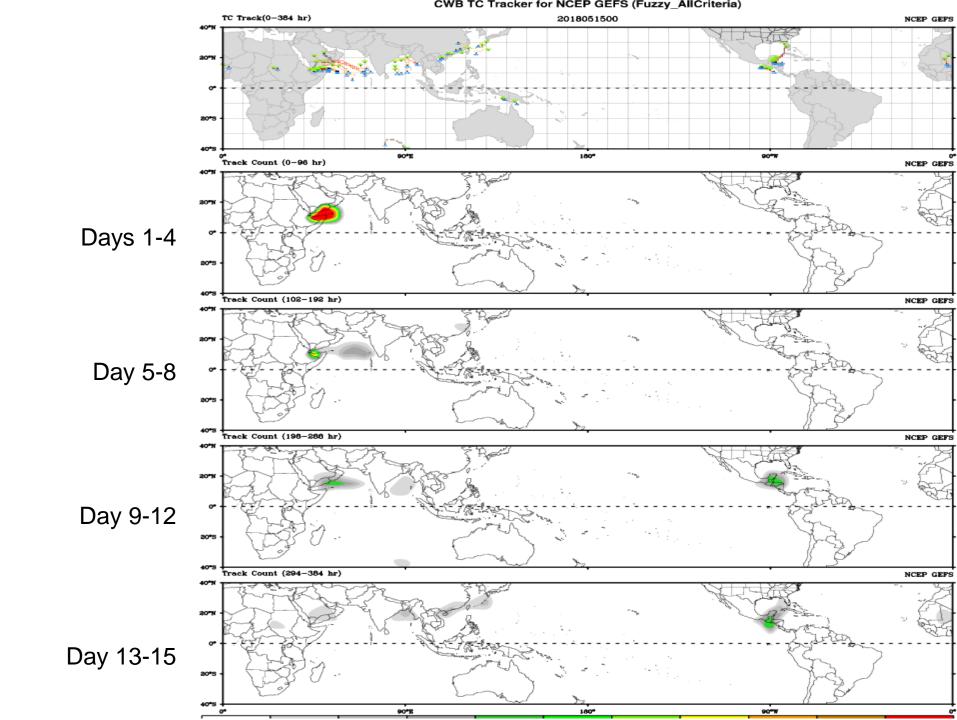
CFS Precipitation Anomalies (mm) Issued 14May2018 Week-1 Forecast Ending 22May2018



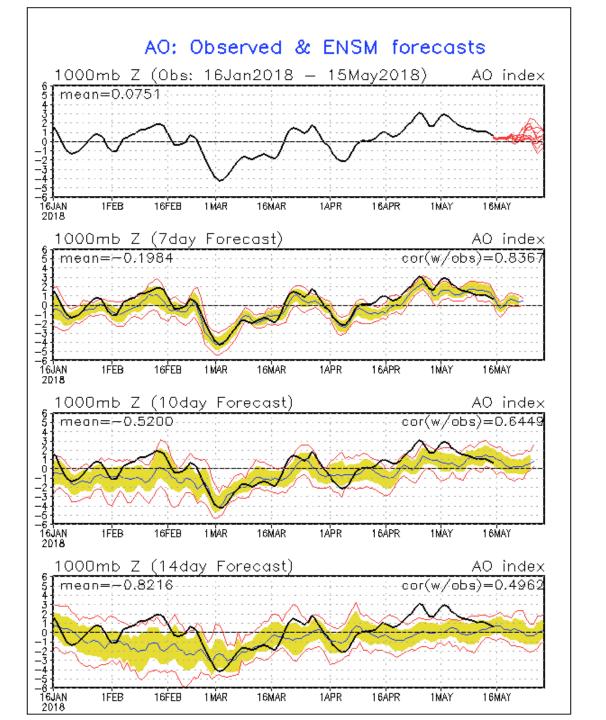
CFS Precipitation Anomalies (mm) Issued 14May2018 Week-2 Forecast Ending 29May2018



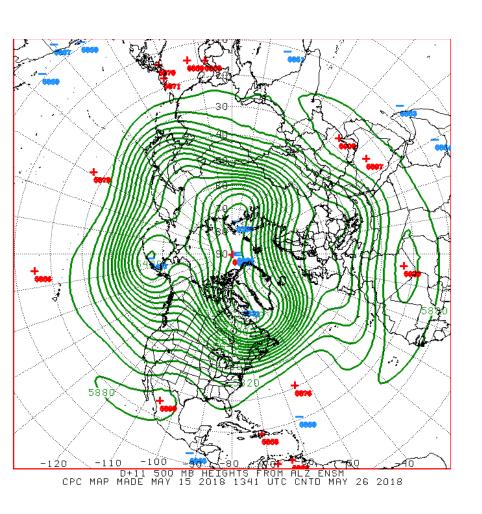


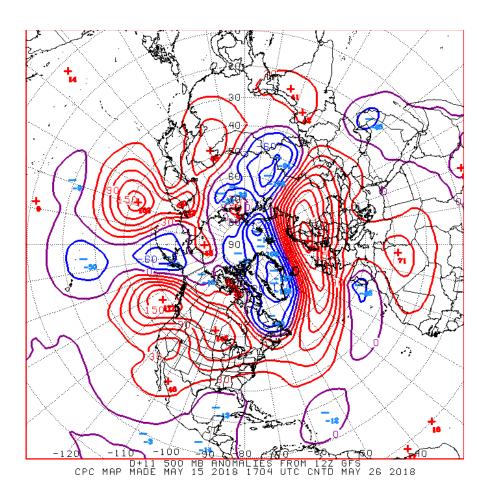


Connections to U.S. Impacts

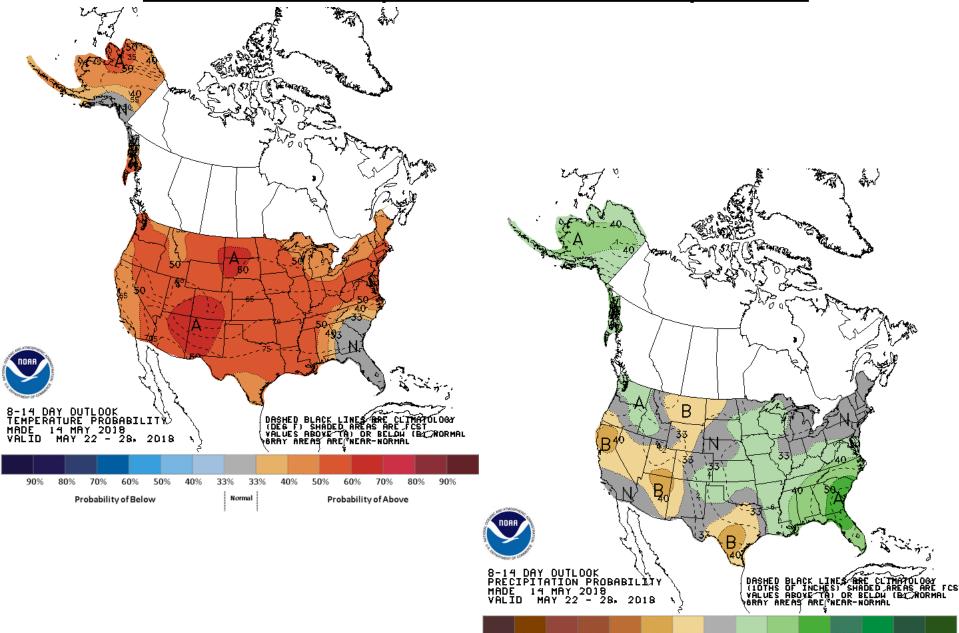


Week-2 GFS Super-Ensemble Mean





Week 2 - Temperature and Precipitation



70%

Probability of Below

60%

Probability of Above

33%

Normal

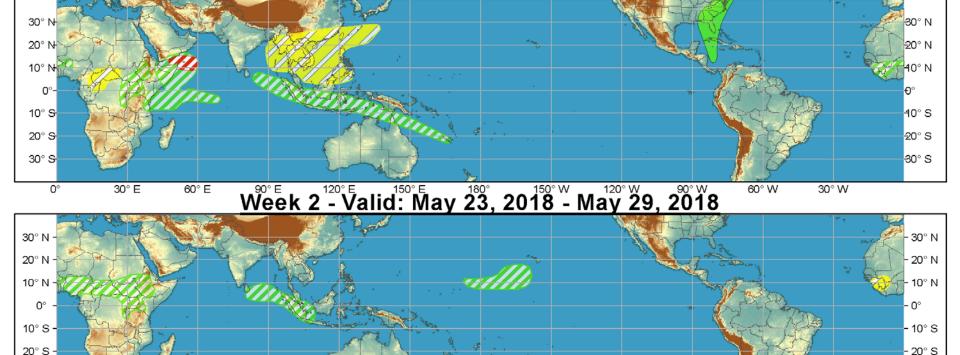


30° S

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center







Confidence High Moderate Produced: 05/15/2018

Forecaster: Artusa

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

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

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.

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.



Below-average rainfall

Above-normal temperatures













30° S