Global Tropics Hazards And Benefits Outlook
7/23/2019
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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**: (July 22, 2019)
- ENSO Alert System Status: El Niño Advisory

- A transition from El Nino to ENSO-neutral is expected in the next month or two, with ENSO-neutral most likely to continue through the Northern Hemisphere fall and winter.

**MJO and other subseasonal tropical variability:**
- The MJO was largely incoherent. Enhanced phase over Western Hemisphere and western Indian Ocean. Suppressed phase over Maritime Continent. Strong Kelvin wave near 120W… weakening equatorial Rossby wave over Indian Ocean.

- Dynamical models indicate a weak MJO through the next two weeks. Greatest uncertainty is in location… enhanced phase anywhere from Phase 1-5.

**Extratropics:**
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by MJO activity. Though moisture may stream into the Southwest in Week-2, depending on how close eastern Pacific tropical cyclones can get (including Gulf surges).
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 24, 2019 - Jul 30, 2019

Week 2 - Valid: Jul 31, 2019 - Aug 06, 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: 07/23/2019
Forecaster: Artusa

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.
Enhanced convection over eastern Pacific, South Atlantic & much of Africa. Suppressed over Asia.

Enhanced convection over Maritime Continent; suppressed over most of Australia.

Well-defined Wave-2 pattern. Enhanced phase over east Pacific & Indian Ocean; suppressed over Maritime Continent, west Pacific, Atlantic.
Wheeler-Hendon based analyses of model forecasts indicate large disagreement in phase and amplitude of MJO signal (especially the JMA). Some interference expected from equatorial Rossby waves.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
Rossby wave(s) and Kelvin wave having an influence

Low-frequency pattern may be playing a role near Date Line
Connections to U.S. Impacts
AO: Observed & ENSM forecasts


mean = -0.5350

cor(w/obs) = 0.9032

1000mb Z (7day Forecast)

mean = -0.6022

cor(w/obs) = 0.6843

1000mb Z (10day Forecast)

mean = -0.6178

cor(w/obs) = 0.5316

1000mb Z (14day Forecast)

mean = -0.5764

cor(w/obs) = 0.5316
GFS Super-ensemble mean (Week-2)

500-hPa Heights

Four Corners High (favorable position for Monsoon)

500-hPa Height Anomalies
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