Global Tropics Hazards And Benefits Outlook

3/5/2019

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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

Typhoon Haleh
3/2 - Present

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO: (February 14, 2019 Update)**

- ENSO Alert System Status: **El Niño Advisory**

- Weak El Niño conditions are present and are expected to continue through the Northern Hemisphere spring 2019 (~ 55% chance).

**MJO and other subseasonal tropical variability:**

- The MJO continued to propagate through the Indian Ocean. It is currently in RMM Phase 3.

- Dynamical guidance suggests that the MJO will weaken as it traverses the Maritime Continent during Week-1.

**Extratropics:**

- Few direct extratropical impacts are expected since the MJO is forecast to weaken during Week-1 and remain inactive for much of the GTH forecast period.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Mar 06, 2019 - Mar 12, 2019

Week 2 - Valid: Mar 13, 2019 - Mar 19, 2019

Confidence

Tropical Cyclone Formation
High
Moderate
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.

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

Below-average rainfall
Weekly total rainfall in the lower third of the historical range.

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

Produced: 03/05/2019
Forecaster: MacRitchie

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.
Noisy Wave-1 pattern. MJO was too weak to anchor the pattern.

The Wave-1 pattern intensified as MJO-related convection off the east coast of Africa developed.

The upper-level VP field is partially anchored by MJO convection in the Indian Ocean.
These dynamical models agree that the MJO will weaken during Week-1 as it approaches the Maritime Continent.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.

The MJO is forecast to be in Phases 3 and 4 during Week-1 before weakening.

CAVEAT: These panels are representative of robust MJO events.
Weak MJO signal over Indian Ocean.

Atmospheric **Kelvin** wave
Weak MJO signal over Indian Ocean.

Atmospheric Kelvin wave
7-day OLR with CFS forecasts
Connections to U.S. Impacts
AO: Observed & ENSM forecasts

1000mb Z (Obs: 06Nov2018 - 05Mar2019) AO index
mean = -0.0370

cor(w/obs) = 0.3062

1000mb Z (7day Forecast) AO index
mean = -0.3265

cor(w/obs) = 0.7495

1000mb Z (10day Forecast) AO index
mean = -0.5360

cor(w/obs) = 0.3830

1000mb Z (14day Forecast) AO index
mean = -0.9258

cor(w/obs) = 0.3830
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