Global Tropics Hazards And Benefits Outlook
2/11/2020

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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

**TC Damien**  
2/6-2/10
Peak intensity: 95 knots

**TC Uesi**  
2/9-Present
Peak intensity: 75 knots

Cool shading  
More clouds/rain

Warm shading  
Less clouds/rain
**Synopsis of Climate Modes**

**ENSO: (January 9, 2020 Update)**

- **ENSO Alert System Status:** Not Active
- **ENSO-neutral is favored through Northern Hemisphere spring (~60% chance), continuing through summer 2020 (~50% chance).**

**MJO and other subseasonal tropical variability:**

- Two eastward-propagating envelopes of enhanced convection are apparent: one over the eastern Indian Ocean and the other approaching the Date Line. How these evolve and if one comes to dominate will have major implications on the forecast.
- In general, the eastern center is forecast to strengthen and help to kill off the western convective center, but there is questions about how quickly this may occur.
- The eastern convective center is also forecast to trigger a westerly wind burst east of New Guinea in mid to late February. This has implications for building warm waters in the West Pacific for a possible El Niño event.
- A West Pacific Madden-Julian Oscillation is favored the next two weeks, despite questions of how robust the event will be and for any teleconnection responses.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Feb 12, 2020 - Feb 18, 2020

Week 2 - Valid: Feb 19, 2020 - Feb 25, 2020

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: 02/11/2020
Forecaster: Harnos

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.
Incoherent pattern, but an eastward moving envelope between the Atlantic and western Indian Ocean.

Eastward shift of the convective envelope to near 60E while it strengthens. A complicated perspective exists across the Pacific and western Hemisphere.

Continued eastward propagation and a wave-1 pattern emerges. Indicative of a robust MJO, but possibly 2 convective centers?
The GEFS and JMA models highlight the eastern portion of the enhanced convection over the Eastern Hemisphere, pushing it into the Pacific by mid-February.

The ECMWF lingers over the Maritime Continent, with the two convective centers of action over the Eastern Hemisphere being maintained much longer, and the western portion receiving greater emphasis.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.

Week-1: Phase 6
Week-2: Phase 7
Two convective centers identified as the MJO over the Eastern Hemisphere.

Low frequency footprints over the western Indian Ocean and near the Date Line (El Niño?).

Periodic Rossby wave activity near and just east of the Date Line and over the Western Indian Ocean.
A westerly wind burst near the Date Line is featured among model guidance during mid- to late February (black box). This could help trigger a downwelling oceanic Kelvin wave that reinforces warm water available for a possible El Niño event to work with.

**Caution must be exercised**, as winds and oceanic conditions during March have limited skill in predicting the state of ENSO during the subsequent winter (see ENSO blog from March 2015).
Connections to U.S. Impacts
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