Global Tropics Hazards And Benefits Outlook
03/12/2019

Kyle MacRitchie

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 Idai
Formed: March 9

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 remained outside of the unit circle and is currently in Phase 4.

- Dynamical models forecast the MJO to weaken during the next few days. It’s possible that this will occur in an RMM-sense, but the low-frequency state is interfering with the RMM signal, so the RMM index may not be the best measurement of MJO activity right now.

- It’s likely that the MJO-related circulation will continue to propagate eastward over the central Pacific and that MJO-related convection will flare up as the circulation propagates over the warm central Pacific SSTs.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Mar 13, 2019 - Mar 19, 2019

Week 2 - Valid: Mar 20, 2019 - Mar 26, 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: 03/12/2019
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.
MJO-related convection over the Indian Ocean dominates the upper-level velocity potential anomalies. There is a secondary anchor related to the SPCZ.

Wave-1 pattern developed as the MJO became more established.

Still a Wave-1 pattern, but the amplitude of the convection over the eastern Indian Ocean weakened once the Kelvin wave moved through.
Dynamical models predict the MJO to weaken soon. This may happen in an RMM-sense, but it’s likely that aspects of the MJO circulation will continue to propagate eastward.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.

First few days of Week-1

Maybe the rest of Week-1 and early Week-2?
The MJO is over the eastern Indian Ocean/western Maritime Continent now (RMM Phase 4)

High Kelvin and equatorial Rossby wave activity.
The MJO is over the eastern Indian Ocean/western Maritime Continent now (RMM Phase 4)

High Kelvin and equatorial Rossby wave activity.
7-day CHL200 with CFS forecasts

Contours at -2, -6 x10^6 m2 s^-1

Carl Schreck (cjschrec@ncsu.edu)
Connections to U.S. Impacts
Week 2 – Temperature and Precipitation
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Mar 13, 2019 - Mar 19, 2019

Week 2 - Valid: Mar 20, 2019 - Mar 26, 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.

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.

Produced: 03/12/2019
Forecaster: MacRitchie