Global Tropics Hazards And Benefits Outlook

10/08/2019

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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

Hagibis (5 Oct)
- Peak 140 kts (Cat 5) only 2 days after forming.

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO: (September 12, 2019 Update)**
- ENSO Alert System Status: Not Active
- ENSO-neutral is favored during the Northern Hemisphere fall 2019 (~75% chance), continuing through spring 2020 (55-60% chance).

**MJO and other subseasonal tropical variability:**
- Limited support exists for an active MJO event right now.
- The Indian Ocean Dipole’s positive phase appears to be driving much of the tropical variability at present, and is responsible for the RMM index depicting a stationary MJO over the Western Hemisphere/Africa during the last 2-3 weeks.
- Model guidance does suggest some possibility of an active MJO emerging over the Indian Ocean during Week-2, although this needs to be taken with some caution.

**Extratropics:**
- Tropical teleconnections to North America appear unlikely during the next two weeks. The remnants of Typhoon Hagibis could play a role in influencing western North America during Week-2 in the form of storminess for Alaska and atmospheric river activity into the Pacific Northwest.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Oct 09, 2019 - Oct 15, 2019

Map showing weather patterns and predictions for the first week of October 2019.

Week 2 - Valid: Oct 16, 2019 - Oct 22, 2019

Map showing weather patterns and predictions for the second week of October 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.

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: 10/08/2019
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.
Wave-1 pattern with enhanced (suppressed) convection over the Western (Eastern Hemisphere)

Fairly stationary pattern, indicative of low-frequency influences rather than the MJO

The pattern weakened some over the Pacific and Americas, but remained stationary.
GEFS: Continued emphasis of the low frequency state (Indian Ocean Dipole).

ECMWF: IOD emphasis early, before eastward propagating (MJO?) signal by Week-2.

JMA: Very slow eastward propagation over the next week.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.

Week-2?
Low frequency (+IOD) continues to dominate the Eastern Hemisphere.

Eastward moving feature showing up near 60E the next two-weeks, possibly tied to the MJO?

Signs of continued Rossby wave activity over the Atlantic, West Pacific, and Indian Ocean.
Both 40% areas appear likely to form before the GTH forecast period begins, if at all.
Days 1-4

Day 5-8

Day 9-12

Day 13-15
Connections to U.S. Impacts
AO: Observed & ENSM forecasts

1000mb Z (Obs: 11Jun2019 – 08Oct2019)

mean = -0.4465

1000mb Z (7day Forecast)

mean = -0.4077   cor(w/obs) = 0.7587

1000mb Z (10day Forecast)

mean = -0.4060   cor(w/obs) = 0.4152

1000mb Z (14day Forecast)

mean = -0.3936   cor(w/obs) = 0.1107
Week 2 – Temperature and Precipitation
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- High
- Moderate

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