Global Tropics Hazards And Benefits Outlook

12/1/2020

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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

Tropical Cyclone Buravi
12/1-present
Peak: 35 kts

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO: November 12, 2020 Update**

**ENSO Alert System Status:** La Niña Advisory

- La Niña is likely to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March) and into spring 2021 (~65% chance during March-May)

**MJO and other subseasonal tropical variability:**

- The MJO is currently over the Maritime Continent. A Kelvin wave is approaching the MJO envelope from the West, while a pair of equatorial Rossby waves are over the Bay of Bengal and southeastern Indian Ocean.

- Should the MJO progress eastward, it is likely to destructively interfere with the ongoing La Niña around mid-December.

- Model guidance is very diverse in the forecast the next two weeks, depending on what mode is highlighted (MJO, Kelvin wave, Rossby waves). This, coupled with the potential for destructive interference of the MJO and La Niña, reduces overall forecast confidence.
Week 1 - Valid: Dec 02, 2020 - Dec 08, 2020

Week 2 - Valid: Dec 09, 2020 - Dec 15, 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.

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.
General wave-1 pattern with enhanced convection over the Indian Ocean aided by TC Gati developing over the Arabian Sea.

Increasingly defined wave-1 pattern, with Hurricane Iota no longer mixed in with the suppressed convection over the Western Hemisphere. Pattern slides east some from mid-Nov.

Less coherence once again, with a Kelvin wave near the African coastline breaking up suppression of convection from the Americas through Africa.
Diverse outcomes from the GEFS, tied to differing focuses among Rossby wave, Kelvin wave, and MJO activity.

The ECMWF seems more focused on Rossby wave activity relative to the GEFS.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
**MJO** signal approaching the low frequency suppression of convection near the Date Line from the low frequency state (La Niña).

A Kelvin wave is approaching the MJO envelope (near 120 °E), with a second Kelvin wave near 50°W.

Equatorial Rossby wave activity is also noted near 120 °E.
CFSv2 Weeks 1 & 2 Precipitation
16 Member Ensemble Mean Forecast from 30Nov2020

Week 1 Anomalies (mm/day) 1Dec2020–7Dec2020

Week 2 Anomalies (mm/day) 8Dec2020–14Dec2020
December Tropical Storm Formation by MJO phase

Week-1

Week-2
The Atlantic and East Pacific Hurricane seasons concluded on Monday, the 30th of November.
Connections to U.S. Impacts
Likely to be less cool along the southern tier of the country in today's outlook.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

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Produced: 12/01/2020
Forecaster: Harnos

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