Global Tropics Hazards And Benefits Outlook

8/9/2022

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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

Cool shading
More clouds/rain

Warm shading
Less clouds/rain

X = TC Howard (8/6)
Synopsis of Climate Modes

**ENSO: (14 July, 2022 Update)** next update on 11th of Aug.!

- ENSO Alert System Status: La Niña Advisory

- La Niña is favored to continue through 2022 with the odds for La Niña decreasing into the Northern Hemisphere late summer (60% chance in July-September 2022) before increasing through the Northern Hemisphere fall and early winter 2022 (62-66% chance).

**MJO and other subseasonal tropical variability:**

- The MJO continues to be not well defined, as reflected in the upper-level velocity potential fields and RMM observations during the past week.

- Dynamical model RMM forecasts are in general agreement favoring a fast eastward propagation of the intraseasonal signal across the Pacific and possibly reaching the Indian Ocean during the next two weeks. The rapid phase speed in the forecasts falls more in-line with a convectively coupled Kelvin wave than a canonical MJO, however a more coherent MJO is possible later in the outlook period.

- Other modes of tropical variability appear more likely to be primary contributors to precipitation and tropical cyclogenesis in the Pacific and Atlantic.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Aug 10, 2022 - Aug 16, 2022

Week 2 - Valid: Aug 17, 2022 - Aug 23, 2022

Confidence

Tropical Cyclone Formation High Moderate
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: 08/09/2022
Forecaster: Novella

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.
A wave-1 pattern became evident during late July, with the enhanced MJO envelope shifting east into Africa and the IO.

Envelopes of enhanced and suppressed conditions continued to shift eastward by early August.

Pattern has become much less defined with increasing anomalous divergence aloft over the Pacific and Atlantic. Enhanced convection remains entrenched over the IO / MT.
There is better agreement among the dynamical models favoring fast, continued eastward propagation of the signal across the western Pacific and reaching the Indian Ocean, but maintain a low amplitude. The rapid phase speed is suggestive of Kelvin wave activity projecting onto the RMM index.

However, such fast moving activity may aid in the reorganization of the MJO later in August, which is depicted in some RMM mean solutions (CFS, BOM) pointing to a more coherent signal emerging by the week-2 period and beyond.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
**Kelvin wave** activity has been a chief player in TC genesis over the eastern Pacific as additional activity is favored during week-1.

**Rossby Wave** activity is observed shifting westward over the Americas.

**MJO** activity is coming through the filtering beyond the week-2 period, with a more wave-1 type pattern emerging.
Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

**Hurricane Howard**
Tuesday August 09, 2022
8 AM PDT Advisory 13
NWS National Hurricane Center

**Current information:**
Center location 22.0 N 116.9 W
Maximum sustained wind 85 mph
Movement WNW at 10 mph

**Forecast positions:**
- Tropical Cyclone
- Post/Potential TC
  - S sustained winds: 39-73 mph
  - D sustained winds: < 39 mph
  - H sustained winds: 74-110 mph
  - M sustained winds: > 110 mph

**Potential track area:**
- Day 1-3
- Day 4-5

**Watches:**
- Hurricane
- Trop Stm

**Warnings:**
- Hurricane
- Trop Stm

**Current wind extent:**
- Hurricane
- Trop Stm
Weekly Mean Anomaly of Tropical Cyclone Strike Probability. Date: 20220808 0 UTC \( t + (336-504) \) Probability of a TC passing within 300km radius

09Aug to 13Aug

ECMWF Forecast

14Aug to 18Aug

19Aug to 23Aug

24Aug to 28Aug

Contours at \(-12, -36\) W m\(^{-2}\)
Connections to U.S. Impacts
A more amplified pattern favored aloft is likely to bring higher chances for warm(cold) in the PacNW (central CONUS)