Global Tropics Hazards And Benefits Outlook

7/5/2022

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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
Synopsis of Climate Modes

ENSO: (June 9, 2022 Update)  next update on Thursday, July 14th

• ENSO Alert System Status: La Niña Advisory

• Though La Niña is favored to continue through the end of the year, the odds for La Niña decrease into the Northern Hemisphere late summer (52% chance in July-September 2022) before slightly increasing through the Northern Hemisphere fall and early winter 2022 (58-59% chance)

MJO and other subseasonal tropical variability:

• A more active MJO pattern has become established, with eastward propagation from the Indian Ocean to the Maritime Continent
• High uncertainty regarding future evolution of the signal across the Pacific, as Equatorial Rossby wave and La Niña conditions may interfere with the signal.
• Maritime Continent MJO events are generally associated with reduced TC activity across the Atlantic and East Pacific basins.
• An enhanced monsoon trough extending across the South China Sea and West Pacific may provide favorability for TC genesis.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 06, 2022 - Jul 12, 2022

Week 2 - Valid: Jul 13, 2022 - Jul 19, 2022

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: 07/05/2022
Forecaster: Allgood

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, consistent with ENSO cold.

Little eastward propagation was evident through mid to late June.

More recently, eastward propagation has been established.
Some GEFS and ECMWF ensemble members show propagation to the West Pacific. Others, however, stall the signal over the Maritime Continent (base state interference) or take a hard “left turn” into the unit circle (Rossby wave interference).
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
MJO activity is not coming through the filtering despite a clear signal in the upper-level VP field.

Rossby wave activity is apparent over the Maritime Continent and West Pacific.
July Tropical Storm Formation by MJO phase

Phase 1 (144 days) 37 storms
Phase 4 (40 days) 14 storms
Phase 7 (67 days) 21 storms
Phase 2 (74 days) 20 storms
Phase 5 (63 days) 11 storms
Phase 8 (61 days) 24 storms
Phase 3 (49 days) 17 storms
Phase 6 (60 days) 23 storms
Null (400 days) 130 storms
No new tropical cyclones are expected during the next five days.
Rainfall causes flooding in Sydney suburbs

Satellite analysis shows extent of flooding

Source: ICYE5, 4 July
Connections to U.S. Impacts
PNA Index: Observed & GEFS Forecasts

500mb Z (Obs: 08Mar2022 - 05Jul2022)  
mean = -0.0674

500mb Z (7 day Forecast)  
mean = -0.1581; cor(w/obs) = 0.8918

500mb Z (10 day Forecast)  
mean = -0.2057; cor(w/obs) = 0.6227

500mb Z (14 day Forecast)  
mean = -0.3296; cor(w/obs) = 0.2824
Week 2 – Temperature and Precipitation

8-14 Day Temperature Outlook
Valid: July 12 - 18, 2022
Issued: July 4, 2022

8-14 Day Precipitation Outlook
Valid: July 12 - 18, 2022
Issued: July 4, 2022
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