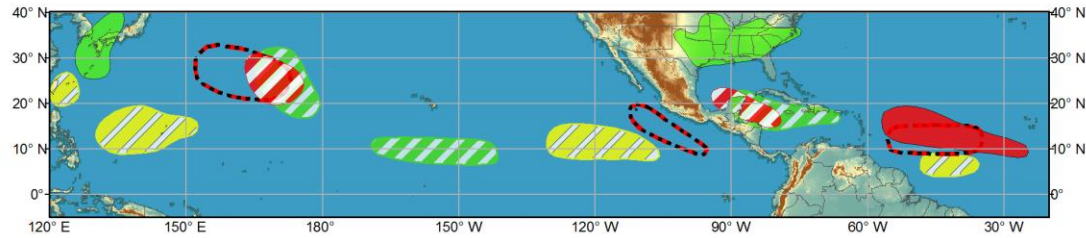


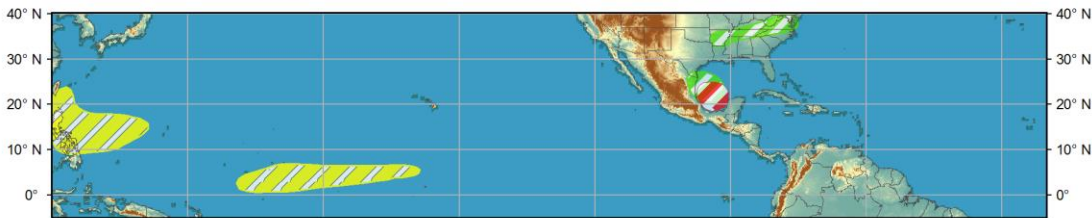


## Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

**Week 1 - Valid: Aug 05 2017 - Aug 08 2017**



**Week 2 - Valid: Aug 09 2017 - Aug 15 2017**



Confidence  
High Moderate

Produced: 08/04/2017  
Forecaster: Artusa

- |                                   |  |  |
|-----------------------------------|--|--|
| <b>Tropical Cyclone Formation</b> |  | Development of a tropical cyclone (tropical depression - TD, or greater strength). |
| <b>Prior TC Formation Outlook</b> |  | Tropical cyclone outlook from previous release.                                    |
| <b>Above-average rainfall</b>     |  | Weekly total rainfall in the upper third of the historical range.                  |
| <b>Below-average rainfall</b>     |  | Weekly total rainfall in the lower third of the historical range.                  |
| <b>Above-normal temperatures</b>  |  | 7-day mean temperatures in the upper third of the historical range.                |
| <b>Below-normal temperatures</b>  |  | 7-day mean temperatures in the lower third of the historical range.                |
- Product is updated once per week. The product targets broad scale conditions integrated over a 7-day period for US interests only.  
Consult your local responsible forecast agency.



A weak MJO signal continues to be in play, with the convectively enhanced phase over the Maritime Continent and western Pacific Ocean (Phase 6 on the Wheeler-Hendon RMM diagram). A persistent low-frequency signal, combined with the MJO signal, is contributing to the widespread ascent of air over this region. Most dynamical solutions weaken the subseasonal signal during Week-1, with several solutions (bias-corrected GFS, European, and Canadian ensemble means) predicting the potential re-emergence of a signal over the Indian Ocean during Week-2.

For Week-1, tropical cyclogenesis is favored over the east-central tropical Atlantic (high confidence), the western Caribbean Sea (moderate confidence), and the western North Pacific Ocean just west of the Date Line (moderate confidence). The potential cyclogenesis over the Atlantic Main Development Region (MDR) and over the western Caribbean Sea are thought to be due in part to a Kelvin wave propagating eastward across the Atlantic basin during Week-1, and to robust easterly waves. The moderate confidence area encompasses the western Caribbean Sea, the Yucatan Peninsula, and the Bay of Campeche in Week-1. The high confidence area covers most of the MDR, with the potential for a tropical cyclone (TC) to approach the Leeward Islands and Puerto Rico by the end of Week-1. Over the western Pacific, the Joint Typhoon Warning Center (JTWC) is monitoring a disturbance currently located

near 25N/175E for potential development into a tropical depression. This area is also highlighted for possible cyclogenesis by the GEFS-based Taiwan tropical cyclone tracker tool. During Week-2, the only area indicated on the map for possible tropical cyclogenesis is the Bay of Campeche (moderate confidence). If a predicted easterly wave moving through the western Caribbean basin late in Week-1 does not develop, it will have another opportunity to form over the Bay of Campeche early in Week-2.

Rainfall is predicted to be above-average (high confidence) over southern Japan and the adjacent offshore islands (such as Okinawa), and the southern Sea of Japan, following the expected track of Typhoon Noru early in Week-1. Above-average rainfall (moderate confidence) is also anticipated just west of the Date Line, associated with potential TC development in that area, and south of Hawaii in the central North Pacific, associated with the ITCZ. Above-average rainfall is also favored (moderate confidence) later in Week-1 over the western Caribbean Sea, associated with possible TC activity. Several fronts are expected to push into the Southeast CONUS and stall, bringing above-average rainfall to that region (high confidence). Below-average rainfall is expected (moderate confidence) near Taiwan, east of the Philippines, the low-latitude East Pacific, and the low-latitude central Atlantic (south of the predicted track of the robust easterly wave now over the eastern Atlantic). These areas of expected below-average rainfall denote where the CFS and ECMWF rainfall forecasts are in agreement. During Week-2, above-average rainfall is predicted (moderate confidence) from the Bay of Campeche northwestward into far southern Texas, associated with potential TC activity. Above-average rainfall is also predicted (moderate confidence) from the Lower Mississippi Valley northeastward to the mid-Atlantic, in relation to a cold front. Drier-than-average conditions (moderate confidence) are predicted over and east of the Philippines, and over the low-latitude North Pacific from about 160E-160W.

----- Previous discussion released on August 1st follows below -----

During the past week, the atmosphere remained largely consistent with an active MJO, with the convectively enhanced phase over the Maritime Continent/western Pacific. Both the RMM-based MJO index and the CPC velocity potential index indicate enhancement of upward vertical motions near 110E-140E. Hovmöller diagrams of OLR indicate a broad, eastward moving anomaly in the same region, though the frequency-wavenumber analysis applied to that OLR data attributes the convection to a mix of westward moving features (equatorial Rossby waves) in addition to the MJO, eastward moving Kelvin waves, and the low-frequency signal (for the more stationary convective components). During the past week, a fairly strong Kelvin wave propagated eastward over the equatorial Pacific, and is expected to remain active as it continues to propagate eastward across the Atlantic basin during Week-1. Most dynamical models predict the subseasonal signal over the Maritime Continent and western Pacific will be largely affected by westward propagating modes of variability through Week-1, with a few models (such as the ECMWF) suggesting possible development of a weak subseasonal signal in Week-2 over the Indian Ocean. This potential Week-2 signal is thought to be related to the Kelvin wave expected to

traverse the Atlantic basin and Africa during Week-1. Statistical guidance such as the Constructed Analog predicts a more stationary convective anomaly couplet, with enhanced convection remaining over the Maritime Continent and western Pacific during Week-1 which then weakens during Week-2, and suppressed convection across the Indian Ocean for the 2-week period.

The forecast intraseasonal evolution would support tropical cyclone (TC) activity over the Pacific and Atlantic basins during Week-1. Some of this expected TC activity could spill over into the Week-2 period. Tropical cyclogenesis is forecast during Week-1 over the western Pacific (related in part to the larger-scale monsoon gyre), and over the eastern Pacific and the Atlantic MDR (Main Development Region) during Week-1, seeded by the convectively-coupled Kelvin wave (CCKW) currently located in the vicinity of phases 7,8. The predicted Atlantic TC area will also depend on the availability of robust African easterly waves (AEW) moving through that area.

During Week-1, above-average rainfall is most likely over the western Pacific, near the predicted paths of any TCs. As of August 1st, the ECMWF and GFS models predict heavy rain (associated with Typhoon Noru) to move across, and south of, southern Japan later in Week-1. Above-average rainfall is also forecast over northern Mexico, much of Texas, and the Gulf Coast region. The Weather Prediction Center (WPC) anticipates rainfall amounts in the 2-5 inch range across this region. Below-average rainfall is forecast over much of India and the Bay of Bengal, in the convectively suppressed portion of the MJO and low-frequency signals. Drier-than-average conditions are also possible over the eastern tropical Pacific, related to subsidence associated with any TC activity.

During Week-2, the dry signal over India is forecast to continue, and below-average rainfall is also possible just north of the equator in the vicinity of the Date Line. Wet signals are forecast over the southeastern contiguous U.S. in a band that stretches from about Louisiana to Delaware (related to frontal activity), over the central and eastern tropical Pacific (where the GFS and ECMWF rainfall forecasts generally agree), and over portions of the Maritime Continent (related to the low-frequency signal).

Forecasts over Africa are made with moderate confidence in consultation with CPCs international desk, and can represent local-scale conditions in addition to global-scale variability.