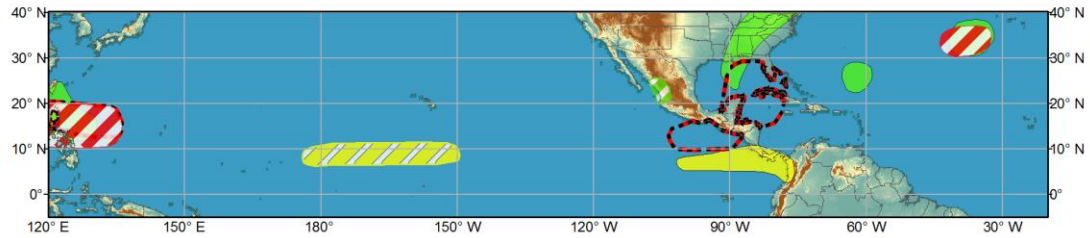


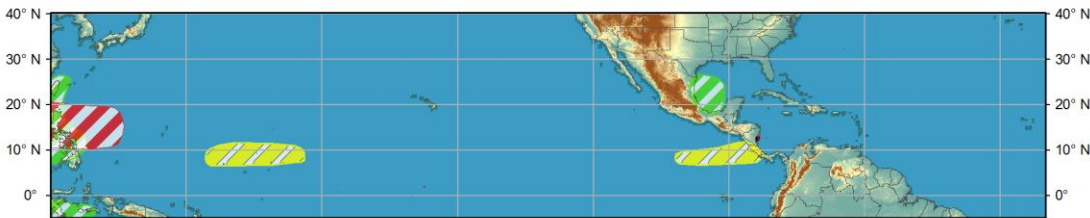


## Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

**Week 1 - Valid: Oct 07 2017 - Oct 10 2017**



**Week 2 - Valid: Oct 11 2017 - Oct 17 2017**



Confidence  
High Moderate

Produced: 10/06/2017  
Forecaster: Pugh

- |                                   |  |  |
|-----------------------------------|--|--|
| <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.**



中央氣象局  
Central Weather Bureau



UNIVERSITY AT ALBANY  
State University of New York



The MJO remains weak and is not expected to influence tropical convection during early to mid-October. Modifications to the favored areas of above- and below-average rainfall from the previous outlook are based on current satellite imagery, predicted tracks of ongoing or possible tropical cyclones (TCs), and recent model guidance.

Tropical depression 16 formed near the east coast of Nicaragua at 12.2N/81.9W on October 4. Although it became Tropical Storm Nate a day later, interaction with land and wind shear limited its strengthening. Nate is forecast to move over the very warm waters of the northwest Caribbean Sea and lower wind shear which is forecast to provide a more favorable environment for strengthening. Forecast confidence in its track is high given the good model agreement and low ensemble spread. Nate is forecast to make landfall along the northern Gulf Coast as a hurricane on Saturday night or Sunday morning. Tropical to hurricane force winds, storm surge, and heavy rainfall are expected from southeast Louisiana east to the western Florida Panhandle this weekend. After landfall, the remnant low is forecast to accelerate northeast to the southern Appalachians and mid-Atlantic on Oct 9. Rainfall amounts of 3 to 7 inches, with isolated totals of more than 10 inches, could trigger flash flooding along

the predicted track of Nate and its remnant low. Please refer to the National Hurricane Center for the latest updates and forecasts on Nate.

A low pressure system is forecast to develop this weekend along a frontal boundary, southwest of the Azores. Environmental conditions are conducive for this low pressure system to become a tropical or subtropical cyclone early next week. Therefore, moderate confidence for tropical cyclone (TC) development is posted for an area over the mid-latitudes of the central Atlantic.

Short-lived Tropical Storm Ramon quickly dissipated over the east Pacific on Oct 5. Except for the potential tropical or subtropical cyclone southwest of the Azores, no other areas over the Atlantic or east Pacific are favored for TC development through Oct 17.

Multiple weak areas of low pressure are forecast to track across the west Pacific, Philippines, and South China Sea through mid-October. Moderate confidence exists that at least one of these low pressure systems becomes a tropical cyclone during the outlook period (Oct 7-17).

The original discussion released October 3 follows.

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The MJO was weak since early September, according to the RMM index and the CPC index based on the 200-hpa Velocity Potential. Dynamical model solutions vary how the MJO evolves during early October but it is most likely to remain weak. The ECMWF and Canadian models indicate a strengthening MJO signal over the Indian Ocean (Phase 3) during Week-1 with an eastward propagation to the western Maritime Continent (Phase 4) by Week-2, while the GFS model indicates an increase in the amplitude of the RMM index in Phase 8. Large uncertainty exists on the state of the MJO during the next two weeks.

An area of low pressure is expected to form over the northwestern Caribbean Sea during the next few days. Deterministic models and their ensemble members generally indicate slow tropical cyclone development of this low pressure system as it progresses north across the Gulf of Mexico. An elongated area of low pressure is located near the southern coast of Mexico and model solutions have a weak surface low closing off this week over the east Pacific. Since environmental conditions are expected to be marginally conducive for TC development over the Gulf of Mexico and east Pacific, moderate

confidence exists for TC development across these areas during Week-1. Please refer to the National Hurricane Center for the latest updates and forecasts. An updated GTH outlook will be posted on October 6 which will provide an updated map.

Satellite imagery, on Oct 3, reveals a trough of low pressure with convection near 15N-150E over the west Pacific. Model guidance supports slow TC development, albeit with moderate confidence, over the west Pacific (10 to 20N/120 to 140E) during Week-1. The moderate confidence for TC development is maintained for the west Pacific during Week-2 and expanded to include the South China Sea, based on the GEFS model guidance and climatology. Another area of convection is currently noted over the south Indian Ocean. Based on the deterministic ECMWF model and many of the GFS ensemble members, moderate confidence exists for TC genesis over the south Indian Ocean (5 to 15S/50 to 70E) during Week-1.

The highest confidence for above-average rainfall is predicted over areas where ongoing convection is enhanced and there is an elevated potential for a tropical cyclone to develop and along its expected track. This includes the east Pacific, much of Central America, the eastern Gulf of Mexico, Cuba, the Bahamas, and much of Florida. Regardless of TC development over the Gulf of Mexico this week, low-level moisture is expected to spread north and interact with a mid-latitude trough. Therefore, above-average rainfall is likely to affect the southern Appalachians later in Week-1. Although TC development is not expected over the northern Bay of Bengal, an area of low pressure is forecast to track west from this region into northeast India, resulting in high confidence for above-average rainfall along its path. The CFS and ECMWF models are in reasonably good agreement on above-average rainfall extending from the southern Indian Ocean to the western Maritime Continent. The low frequency state favors a continuation of below-average rainfall across parts of the equatorial Pacific.

The favored areas of above- and below-average rainfall during Week-2 are primarily based on a consensus between the CFS and ECMWF precipitation forecasts, but minor use of MJO precipitation composites in Phases 3 and 4 were used since the Canadian and ECMWF models, from Oct 2, have a strengthening MJO signal in these phases. Below-average rainfall is expected to continue for parts of the equatorial Pacific given the base state, but confidence is lower than Week-1 as the enhanced phase of a weak MJO signal may reach the west Pacific later in Week-2.

Week-1 forecasts over Africa are made in consultation with CPCs international desk, and can represent local-scale conditions in addition to global-scale variab