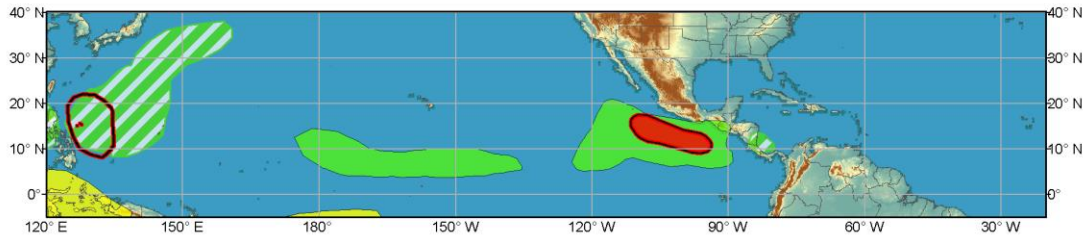




Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 09 2018 - Jun 12 2018



Week 2 - Valid: Jun 13 2018 - Jun 19 2018



Confidence
High Moderate

Produced: 06/08/2018
Forecaster: Finan/Baxter

- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Prior TC Formation Outlook** Tropical cyclone outlook from previous release.
- 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. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



The MJO signal has continued eastward propagation through the beginning of Week-1, in spite of dynamical model guidance indicating a rapid decay of the signal. The convective envelope has now pushed further into the western Pacific, while still remaining over parts of the eastern Maritime Continent. During the next two weeks, the MJO signal is likely to decay as it traverses the Pacific and the Americas; however, the decline is not expected to be as rapid as the model guidance continues to forecast.

The eastern Pacific basin had its first named storm of the 2018 season earlier this week with Hurricane Aletta. The National Hurricane Center (NHC) expects the track to stay off the coast of the Baja Peninsula while weakening to a tropical depression at the end of Week-1. This region remains highlighted for potential tropical cyclone formation in Week-1, as another tropical system is expected to organize; currently, NHC depicts an 80% chance of formation within the next 48 hours. The western Pacific has also been active early in Week-1, with the formation of Tropical Storm Maliksi. Additional tropical cyclone formation is not expected at this time, so the region of development has been removed for the update. For Week-2, tropical cyclogenesis in the western Pacific continues to be absent in the model guidance, so the area of moderate confidence has also been removed from the map. Patterns may still

be conducive to tropical cyclone formation; however, confidence in this forecast is low at this time. Some regions of above-average rainfall have been altered in both Week-1 and Week-2 in association with likely tropical cyclone tracks and the latest model guidance.

The original forecast discussion follows.

The enhanced MJO phase is currently centered over the Maritime Continent, with MJO-related convection shifting northeastward, as is typical in the warm season. The RMM index has maintained its high amplitude in the face of dynamical model forecasts that have anticipated a rapid decrease in amplitude over the past few days. The CPC velocity potential index retains a weak MJO signal over the eastern Maritime Continent. This is consistent with the fact that the low-level zonal wind field is currently the largest contributor to the overall RMM index value. Some remnant MJO activity is expected to propagate across the Pacific to the Western Hemisphere over the next two weeks, but at greatly reduced amplitude.

Tropical Depression 05W formed over the South China Seas on June 2 and is forecast to make landfall somewhere between the Hainan Peninsula and Hong Kong as a tropical storm near 0Z June 7. The Northern Hemisphere tropical cyclone season is ramping up, with a few areas highlighted for tropical cyclone formation during Week-1. Tropical cyclone formation is highly likely over the West Pacific, just east of the Philippines, very early in Week-1. This system is currently forecast by the GEFS and ECMWF ensemble systems to track generally northward before recurving ahead of a mid-latitude shortwave trough. Two tropical cyclones are expected to form in the East Pacific, one at the beginning of the period, the other later in Week-1. The enhanced activity over the East Pacific seems most closely related to Kelvin wave activity ahead of the MJO convective envelope. Both of these systems are expected to track northwestward, and the latter will have a better chance of posing some threat to western Mexico. Based on consultation with the Joint Typhoon Warning Center (JTWC), a moderate risk of tropical cyclone formation is indicated over the Bay of Bengal for late in Week-1. During Week-2, there is a moderate risk for tropical cyclone formation over the West Pacific between 140E and 150E. There is little indication of this in the current suite of dynamical model guidance, but the pattern seems conducive to development based on discussions with JTWC.

Areas favoring above- or below-average rainfall during Week-1 are based on dynamical model consensus, the background MJO and remnant low-frequency state, along with forecast or ongoing tropical cyclone activity. A broad area favoring below-average rainfall is depicted for the central and eastern Indian Ocean eastward across much of the Maritime Continent. This is consistent with the dynamical model guidance and the northward shifting convection consistent with MJO propagation. Likewise, a broad region from India to the West Pacific between 10N and 20N is more likely to experience enhanced rainfall. High-confidence forecasts for above-average rainfall over parts of the central and eastern Pacific, north of the equator, are based on anomalously warm SSTs, MJO activity, and potential tropical cyclone activity.

During Week-2, confidence decreases along with overall forecast coverage. Continued eastward MJO propagation is inferred by the northward shifting regions favoring above-average rainfall over the West Pacific and Southeast Asia. Additionally, ongoing tropical cyclone activity is likely over the East Pacific, while a tropical cyclone or its remnants increase the odds of above-average rainfall southeast of Japan. The GEFS has been more bullish on the development of a tropical cyclone over the western Caribbean or Gulf of Mexico associated with a pronounced weakness in the subtropical ridge. The ECMWF, however, does not support this as it maintains a notable westward extension of the Bermuda High into the Gulf of Mexico during Week-2.

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