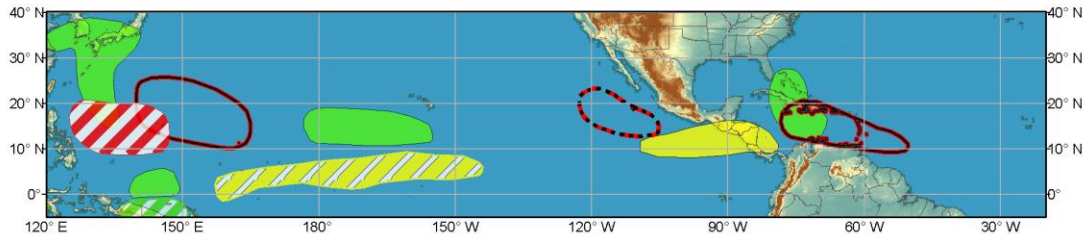




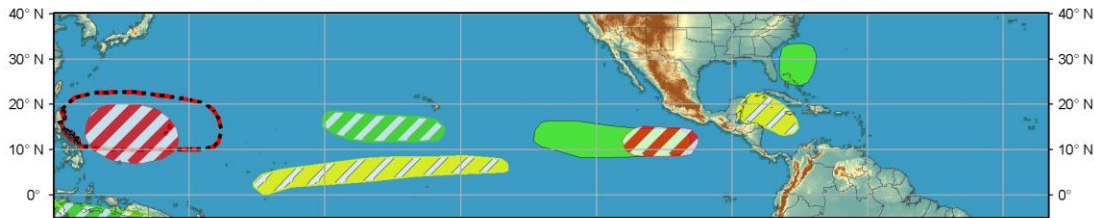
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Oct 01 2016 - Oct 04 2016



Week 2 - Valid: Oct 05 2016 - Oct 11 2016



Confidence
High Moderate

Produced: 09/30/2016
Forecaster: Allgood

- 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.**



Recent observations and the RMM-based and CPC velocity potential based MJO indices depict little eastward propagation of an intraseasonal signal over the past several days. The negative IOD phase, which favors enhanced (suppressed) convection over the Maritime Continent (Arabian Sea), continues to strongly influence the pattern. Kelvin Wave activity continues across the Pacific basin, and may increase the potential for additional tropical cyclone development over the East Pacific.

Tropical Storm Chaba formed near Guam, and the Joint Typhoon Warning Center forecasts strengthening to typhoon intensity, with potential impacts to Japan in several days. Hurricane Matthew strengthened to Category-3 intensity on the Saffir-Simpson scale over the central Caribbean Sea. Hurricane Matthew is expected to bring significant wind, rain, and storm surge impacts to Jamaica, Haiti, Cuba, and the Bahamas over the next several days, but impacts to the eastern CONUS are more uncertain. During the remainder of the Week-1 period, there is moderate confidence for additional tropical cyclogenesis over the West Pacific between Guam and the Philippines in the wave of Tropical Storm Chaba. The potential for new tropical cyclone formation over the East Pacific has diminished during Days 1-4, with the latest NHC TWO indicating a 10 percent chance for a tropical depression

formation. Kelvin Wave activity, however, may promote East Pacific tropical cyclone formation during Days 5-11.

Forecasts for enhanced or suppressed precipitation were modified based on the latest tropical cyclone forecast tracks and dynamical model guidance.

The original discussion released on 27 September follows.

Although the RMM-based MJO index continues to show an enhanced convective signal over the Maritime Continent, the MJO weakened during the past week, with the OLR pattern not reflective of a robust MJO event. The CPC upper-level velocity potential based index depicts a weakening signal, with little eastward propagation. Over the past several days, widespread enhanced rainfall was observed over the eastern Indian Ocean south of the equator, which is not typical during a Phase-5 MJO event during September. Impacts from the negative phase of the Indian Ocean Dipole (IOD), which supports enhanced East Indian Ocean convection due to elevated sea surface temperatures, as well as low-level westerly wind anomalies over much of the Indian Ocean basin, are likely interfering with the intraseasonal signal. Dynamical model RMM-based MJO forecasts are in fairly good agreement predicting a weak signal during the next week, with possible strengthening of the index over the eastern Pacific by Week-2. The potential for a weak signal during Week-1 is supported by a slowly evolving base state favoring suppressed convection over the central Pacific. Therefore, the MJO is not anticipated to play a substantial role in the evolution of the global tropical convective pattern, but may become increasingly influential later in the period. Kelvin wave activity originating from the remnant Maritime Continent enhanced convective envelope may still play a role in potential tropical cyclone formation over the East Pacific during the outlook period.

Two tropical storms developed on 26 September over the eastern and east-central Pacific. Tropical Storm Roslyn formed near 120W and 15N, and is forecast to dissipate over the next week while remaining far from land. Tropical Storm Uluka formed well southeast of Hawaii, and is currently moving to the north-northeast. A turn to the west is anticipated over the next several days, but Tropical Storm Uluka is forecast to weaken to a depression while still far to the east of Hawaii. Typhoon Megi formed northwest of Guam on 23 September and strengthened to Category-4 intensity on the Saffir-Simpson Scale before making landfall over Taiwan as a Category-3 storm. Several fatalities, hundreds of injuries,

and extensive property damage were reported in Taiwan due to Typhoon Megi. The storm is forecast to make a second landfall over mainland China early in the period at Category-1 or tropical storm intensity.

Over the next day or two, a low-latitude disturbance east of the Lesser Antilles has a high potential for tropical cyclogenesis. Dynamical model forecasts indicate a potential for impacts across parts of the Caribbean and potentially the mainland US, although there is considerable uncertainty in both the track and intensity forecasts. Later in the Week-1 period, there is a moderate potential for new tropical cyclone development over the East Pacific well south of Mexico, while a weak disturbance over the Bay of Campeche has a low potential to become a tropical cyclone. Over the West Pacific, two disturbances near or east of 150E have a moderate to high potential for tropical cyclogenesis, and may bring enhanced rainfall or winds to Guam. Several dynamical models depict one or both of these systems recurving over the next week or two, which could ultimately affect the mid-latitude pattern over the Western Hemisphere. During Week-2, the overall potential for tropical cyclone formation decreases, although many GFS ensemble members indicate a potential for new a new tropical cyclone forming east of the Philippines.

During Week-1, enhanced convection, possibly partly associated either with the remnant MJO enhanced phase or the IOD, is forecast for parts of the Maritime Continent, while suppressed convection is favored across much of the central Indian Ocean basin. Enhanced rainfall in association with Typhoon Megi and a mid-latitude front is forecast for parts of China and Japan, while persistent cyclonic flow over South Asia favors enhanced rainfall from eastern India through western Myanmar. Across the Pacific, the low-frequency base state favors suppressed convection just north of the equator, while areas of enhanced convection further north are possible in association with tropical disturbances. Suppressed convection is favored across parts of Central America, while rainfall associated with a tropical disturbance is anticipated over the western Gulf of Mexico and Bay of Campeche and adjacent coastal areas.

During Week-2, a consensus of the CFS and ECMWF dynamical model forecast systems supports enhanced (suppressed) convection across parts of Southeast Asia and the Maritime Continent (South Asia and the southern Bay of Bengal, and the central Pacific). Kelvin wave activity or an emerging MJO signal support a potential for enhanced rainfall over the East Pacific basin, while a mid-latitude frontal system may produce enhanced rainfall across parts of central and eastern Brazil. Enhanced convection is favored by both the CFS and ECMWF across the eastern Gulf of Mexico, although the patterns depicted by each model are quite different.

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

