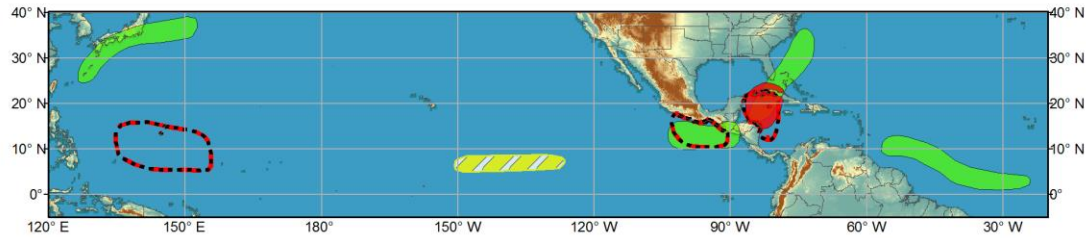




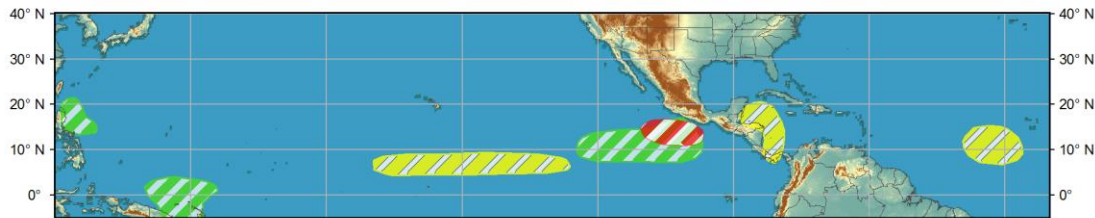
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Oct 28 2017 - Oct 31 2017



Week 2 - Valid: Nov 01 2017 - Nov 07 2017



Confidence
High Moderate

Produced: 10/27/2017
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.



High amplitude projections continue on both the CPC velocity potential and RMM-based MJO indices, with the enhanced phase of the MJO now over the central Pacific (RMM Phase-7). There is little change in the forecast reasoning regarding the evolution of the MJO during the outlook period. The GEFS ensembles depict the MJO propagating across the Western Hemisphere over the next two weeks before re-entering the Indian Ocean basin, while the ECMWF also propagates the MJO event across the Western Hemisphere, but weakens the signal as the enhanced phase approaches the Indian Ocean. Based on the persistence of a robust intraseasonal signal and these outlooks, the MJO is likely to continue playing a large role in the global tropical convective pattern.

Tropical Storm Selma formed south of El Salvador, just to the east of the Week-1 tropical cyclogenesis shape on the initial outlook. Little intensification is anticipated before the storm makes landfall along the coast of El Salvador or Guatemala during the weekend. There is a low potential for additional tropical cyclone development to the west of Tropical Storm Selma during the next five days, and a moderate potential for new tropical cyclogenesis has been added to the Week-2 outlook in this region, as both the GEFS and ECMWF indicate a potential for development. Additionally, tropical cyclone development is likely over the western Caribbean in association with a slow moving disturbance over

the next several days before the system is entrained in a frontal boundary. Regardless of development, the system is anticipated to bring heavy rainfall to South Florida, Cuba, and the Bahamas. Elsewhere, tropical cyclone development appears less likely over the West Pacific, and the moderate Week-1 shape has been removed from the update. Some GEFS members depict West Pacific formation during the Week-2 period, but the potential is too low at this point to include a hazard.

Forecasts for enhanced or suppressed precipitation were modified in this outlook to reflect the latest dynamical model guidance.

The previous forecast discussion from 24 October follows.

The MJO remains active, with high amplitude projections on both the CPC velocity potential and RMM-based MJO indices. Over the past several days the enhanced phase propagated across the Pacific with an increasing phase speed, suggesting influence from Kelvin waves or mid-latitude interactions over the East Pacific. The intraseasonal signal is most pronounced in the upper-level circulation field, with a robust Wavenumber-1 asymmetry in the global velocity potential anomaly field. The OLR anomaly pattern is consistent with MJO composites, but the magnitude of the anomalies is smaller than what has been observed during previous strong MJO events. Destructive interference between the enhanced phase of the MJO and the low frequency base state that has been slowly trending towards La Nina may be playing a role in the reduced convective footprint from the MJO. Nevertheless, the MJO event has generated enhanced convection along the North Pacific ITCZ during the past week, which may temporarily weaken the trade winds. Dynamical model RMM-index forecasts are supportive of continued eastward propagation of this event, with the enhanced phase propagating across the East Pacific and Western Hemisphere over the next two weeks, with possible emergence over the Indian Ocean by late Week-2 or Week-3. Bias-corrected runs of the dynamical model ensembles weaken the amplitude of the event considerably by Week-2, but given the high incipient amplitude of the event and the well-organized upper-level pattern, a continuation of the MJO event through the forecast period seems to be the most likely outcome. Therefore, the MJO is anticipated to play a large role in the evolution of the global tropical convective pattern during the next two weeks, and may also generate a mid-latitude response that influences the longwave pattern over the U.S.

Typhoon Lan swept across eastern Japan on 23 October at Category-2 intensity on the Saffir-Simpson scale, with a large circulation bringing widespread wind and flood damage, including to the Tokyo

metropolitan area. Elsewhere, Tropical Storm Saola formed south of Guam on 19 October, and is forecast to slowly intensify while recurving east of the Philippines. Tropical Storm Saola may also bring impacts to Japan during the Week-1 period. Additional tropical cyclone development is possible over the Northwest Pacific near or west of Guam by late Week-1, with conditions becoming increasingly unfavorable for development during Week-2. A broad area of low pressure over the western Caribbean Sea has a moderate potential for development during Week-1, but a somewhat unfavorable shear environment may help limit intensification of this system as it moves slowly northward. There is also a low to moderate potential for East Pacific tropical cyclogenesis, just south of Mexico's southern coast. No areas for tropical cyclone development were depicted on this outlook for Week-2, but GFS and CFS forecasts suggest a low potential for tropical cyclogenesis over the Bay of Bengal.

Forecasts for above- and below-normal precipitation are based largely on dynamical model consensus and Phase 6/7/8 MJO composites. During Week-1, suppressed (enhanced) convection is favored across much of the equatorial Indian Ocean (eastern Maritime Continent southeastward across the Date Line), consistent with the MJO. Enhanced convection is forecast along the track of Tropical Storm Saola over the Northwest Pacific, and dynamical models indicate enhanced convection over the South China Sea near and east of Vietnam. Enhanced rainfall is possible over eastern Hawaii, and an active pattern is anticipated across the far East Pacific, western Caribbean, the Bahamas, and South Florida due to interactions between a potential tropical cyclone and a frontal boundary. A dipole of enhanced (suppressed) convection is forecast across southern (northeastern) Brazil, and the CFS and ECMWF both depict the Atlantic ITCZ displaced southward.

During Week-2, forecast uncertainty increases due to differences in how quickly the dynamical models propagate the MJO signal across the Western Hemisphere. The CFS continues to show widespread suppressed convection across the eastern Indian ocean, while the ECMWF forecasts an increase in convection across the western and central Indian Ocean. As an attempt to reconcile the differences, a somewhat small dry shape is indicated over the south-central Indian Ocean, where both models maintained a dry signal. Enhanced convection is anticipated to continue near and east of New Guinea, and across the south-central Pacific, while a suppressed north-central Pacific ITCZ is anticipated to return as the destructive interference between the base state and the MJO lessens. Enhanced convection is forecast to persist across the East Pacific, with a less active Atlantic ITCZ.

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