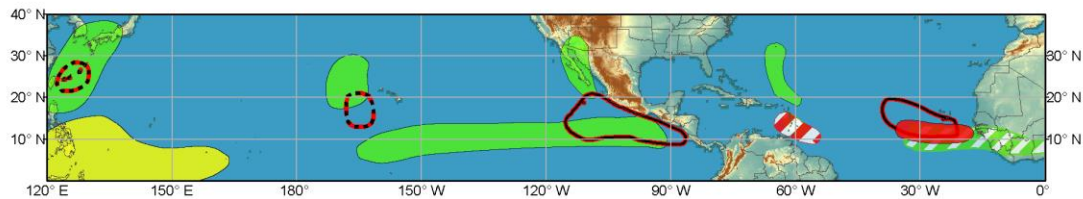




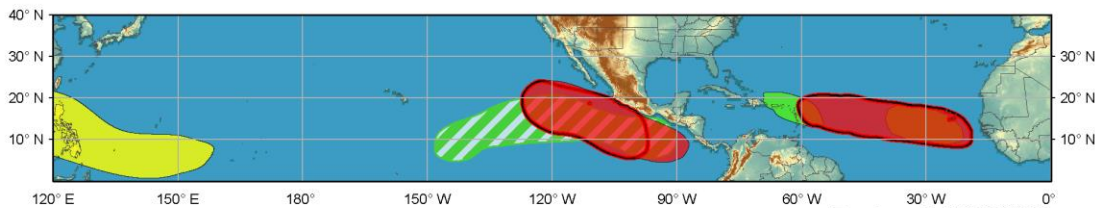
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 21 2019 - Sep 24 2019



Week 2 - Valid: Sep 25 2019 - Oct 01 2019



Confidence
High Moderate

Produced: 09/20/2019
Forecaster: MacRitchie

- 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.



Several areas of potential tropical cyclone formation have been removed from the forecast during Week-1. Tropical Storm Tapah formed in the West Pacific on September 19 and tropical storm Mario formed in the East Pacific on September 18. No additional tropical cyclone formation is forecast in these regions during the remainder of the Week-1 period. Hurricane Lorena will likely produce above normal rainfall throughout Baja California and parts of Arizona.

Tropical Storm (now Hurricane) Jerry formed in the Atlantic on September 18 and additional tropical cyclone formations are expected to be confined to an area east of the Windward Islands and another area in the eastern Atlantic just off the African coast. Model guidance still suggests that Week-2 could be active in the East Pacific and the Atlantic. The only change to the original forecast is to expand the area of potential tropical cyclone formation further southeast in the East Pacific based on model guidance.

Original Discussion from September 17, 2019 follows:

Several moving pieces make up today's GTH forecast. Right now there is both a Kelvin wave and an equatorial Rossby wave in the Central Pacific. These waves have well-defined circulations around the equator, but their associated convection is about 5-10 degrees north of the equator. This convection will spread out as the waves separate and continue eastward and westward respectfully.

The Kelvin wave is likely to enhance convection as it moves over the East Pacific and North Atlantic during late Week-1 and Week-2, which often leads to increased probabilities of tropical cyclogenesis. We have therefore posted high risk hazards for tropical cyclone development in the eastern Pacific and North Atlantic during both Weeks-1 and 2, as well as several above-normal rainfall hazards associated with these waves. The synoptic set-up over North America and the North Atlantic will play a key role in determining the tracks of any TCs that develop in either basin and interested parties are encouraged to consult their local NWS Offices and the National Hurricane Center.

The equatorial Rossby wave is likely to provide a similar enhancement to the convective state of the Indian Ocean (IO), which may aid in the development of a positive Indian Ocean Dipole (IOD) event. The IOD is an El Nino-esque phenomenon in the IO that often appears during Autumn. Its positive phase is characterized by anomalously warm temperatures and active convection over the western IO and anomalously cold temperatures and suppressed convection over the eastern IO. This set up also features a miniature Walker-esque Circulation characterized by anomalous easterlies at the surface and anomalous westerlies aloft.

The CFS is strongly hinting at this sort of circulation developing during the next two or three weeks. This situation would explain the recent proclivity of the models to create a stationary MJO signal over the Indian Ocean since there are so many similarities between the MJO Phase 1 and the positive phase of the IOD. Due to this set up, we are not particularly confident that the MJO will play a significant role in the GTH forecast during the next two weeks, but it's possible that the IOD will. Today's forecast includes a moderate risk of above normal rainfall over parts of the western IO during Week-2 and this probability may increase if the IOD evolves in accordance with the CFS.

The Central Pacific Hurricane Center is also watching a region of potential Tropical Cyclone development just west of Hawaii. We have posted a moderate risk of TC development in this area. Users are advised to monitor the regular updates from the CPHC over the next several days.

There is a high risk for above normal rainfall over eastern Texas and southwestern Louisiana during Week-1 associated with Tropical Storm Imelda in the Gulf of Mexico. This rainfall could lead to flooding and interested parties should consult their local NWS office for the latest information.

Elsewhere, we are monitoring a small area of potential tropical cyclone formation northeast of Taiwan in Week-1 associated with a band of northward moving convection that is reminiscent of a summer MJO event. Forecasts over Africa are made in consultation with CPCs international desk, and can represent local-scale conditions in addition to global-scale variability.