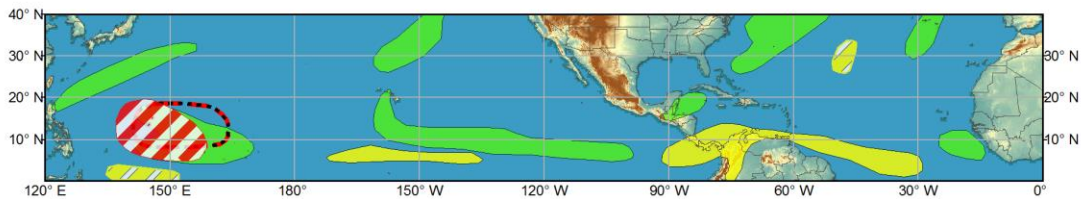




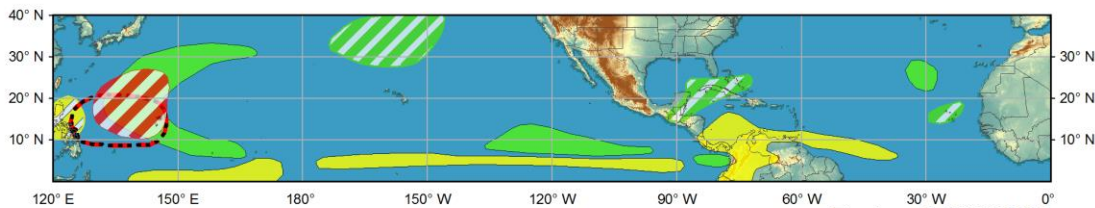
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Nov 13 2021 - Nov 16 2021



Week 2 - Valid: Nov 17 2021 - Nov 23 2021



Confidence
High Moderate

Produced: 11/12/2021
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.



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There is not much change in the overall assessment of the tropical convective pattern since the initial release of the Global Tropical Hazards and Benefits Outlook on 9 November. The intraseasonal signal remains weak, with some amplification of the CPC velocity potential based index and a shift of the RMM-based MJO Index back to the Maritime Continent as a Kelvin wave constructively interfered with the La Nina base state. Dynamical models favor a weakening projection on the RMM-based index as the Kelvin wave crosses the Pacific and destructively interferes with the low frequency ENSO signal.

During Days 1-4, the remaining portion of Week-1, no new tropical cyclone formations are anticipated across the Atlantic, East Pacific, or Central Pacific basins. While confidence in tropical cyclogenesis in the vicinity of Guam has decreased somewhat with respect to the initial outlook, there remains sufficient dynamical model support to keep a moderate potential for Days 1-4 or early in the Days 5-11 period, and both the GEFS and ECMWF have some ensemble members developing a system with typhoon intensity. During Week-2, a handful of ensemble members continue to depict a new tropical cyclone forming closer to the Philippines, but confidence has decreased.

The precipitation outlook was updated to reflect the latest model guidance. The original discussion released on 9 November 2021 follows.

The MJO remains weak as reflected in the RMM index which has continued to show a low amplitude intraseasonal signal since mid-October. During the past week, the MJO signal rapidly shifted eastward into the Maritime Continent likely tied to the passage of a Kelvin wave, and more recently, retreated back into phase 3 likely due to Rossby wave activity that is currently analyzed over the Indian Ocean. Looking ahead, dynamical models favor the resumption of an eastward propagating signal over the Maritime Continent, but maintain a low amplitude as the majority of ensemble means keep the signal within the RMM unit circle during the next two weeks. Of note, there are several ensemble members, including statistical guidance, which favor a stronger MJO event crossing the western Pacific later in the period. However, there remains a good deal of uncertainty in this realization given the strengthening low frequency base state associated with the ongoing La Nina. The large -scale environment is expected to be conducive for tropical cyclone (TC) formation in the Eastern Hemisphere, and quieter conditions are anticipated for the eastern Pacific and Atlantic basins in conjunction with a less active climatology later in November.

A pair of TCs, Sandra and Terry, formed in the eastern Pacific and briefly peaked at Tropical Storm intensity this past weekend. Now both at tropical depression strength, the National Hurricane Center (NHC) forecasts these two systems to continue tracking westward over open waters, and eventually dissipate later this week. No TC areas are added in the outlook over the eastern Pacific, as there is little support in the guidance for additional TC development during the next two weeks. Across the Atlantic, a broad area of suppressed convection continues to be favored among the ensembles throughout the Caribbean and the Main Development Region, reducing the potential for late season TC activity during the next two weeks. Farther north, subtropical cyclone development is possible near the Azores late in week-1, however confidence is too low to include any corresponding TC shapes in the outlook given less support from probabilistic guidance and cooler sea surface temperatures (SSTs) in the region.

There continues to be good model support for tropical cyclogenesis in the northern Indian Ocean tied to the interaction of the aforementioned Kelvin wave and Rossby wave early in week -1. The Joint Typhoon Warning Center (JTWC) is currently monitoring a disturbance in the Bay of Bengal where reduced shear and warm SSTs remain conducive for development by the outset of the period, supporting a high confidence area in the region. Although less supported in the probabilistic tools, a moderate confidence area is also posted in the Arabian Sea associated with another area of low pressure that is favored to

strengthen in the deterministic solutions later this week. Regardless of formation with these two disturbances, heavy precipitation amounts appear likely, which may trigger flooding for parts of southern India and Sri Lanka during the next several days. By early to the middle part of next week, there is continued support in the ensemble and probabilistic guidance favoring the development of another closed low in the Bay of Bengal, prompting a moderate confidence area for week-2. In the western Pacific, dynamical models continue to advertise an area of low pressure strengthening near the Mariana Islands next week, however there remains differences in regards to the timing of this feature. To address this uncertainty, a pair of moderate confidence areas are posted for week -1 and week-2, with the latter area more focused in the Philippine Sea in accordance with the ECMWF solutions.

The precipitation outlook during the next two weeks is based on a consensus of GEFS, CFS, and ECMWF guidance. For hazardous weather concerns during the next two weeks across the U.S., please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's Week-2 Hazards Outlook. Forecasts over Africa are made in consultation with the International Desk at CPC and can represent local-scale conditions in addition to global scale variability.