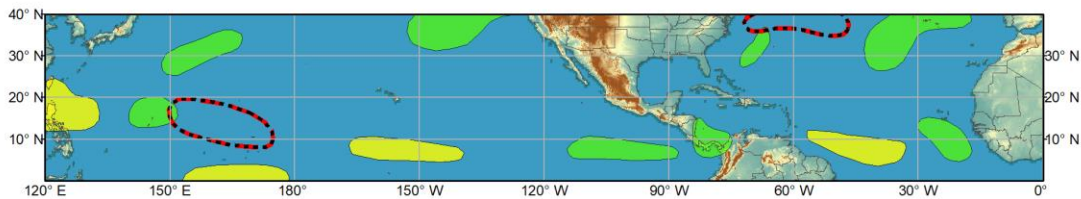




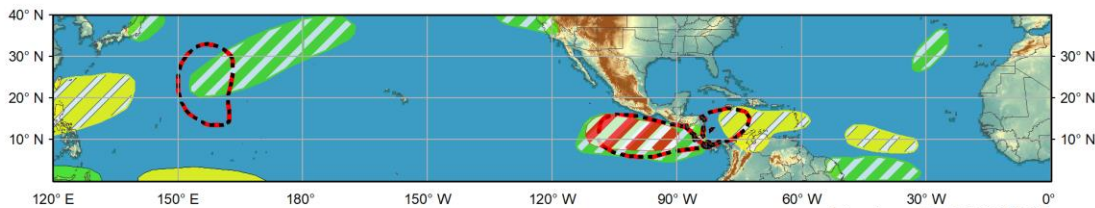
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Oct 30 2021 - Nov 02 2021



Week 2 - Valid: Nov 03 2021 - Nov 09 2021



Confidence
High Moderate

Produced: 10/29/2021
Forecaster: Novella

- 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 Madden-Julian Oscillation (MJO) continues to be weak and disorganized, where the RMM index indicates the intraseasonal signal has remained quasi-stationary within the unit circle during the past week. In recent days, there has been some increase in amplitude (decreasing RMM1 values) over the Western Hemisphere which may be associated with a weakening of enhanced convection observed near the Maritime Continent. There is little change to the MJO perspective since earlier this week as dynamical models continue to favor a slight increase in amplitude over the Western Hemisphere on the short-term, followed by an eastward evolution back towards the Maritime Continent at a low amplitude in RMM space during the next two weeks. The favored return to the Maritime Continent is likely attributed to the developing La Nina base state, where the low frequency convective footprint looks to become better established later in November based on extended range guidance.

No tropical cyclones (TCs) have formed since the previous outlook release with one TC remaining active in the West Pacific. Tropical Storm Malou continues to track northeastward to the east of Japan, and the Joint Typhoon Warning Center forecasts Malou to dissipate and become absorbed in the westerlies in the next day or so. The remnants of this system may amplify the longwave pattern over the North Pacific, which may lead to enhanced onshore flow above normal precipitation across western North

America during the next week. For the updated outlook, tropical cyclogenesis is possible near Mariana Islands by early next week, however the moderate confidence areas for TC formation are removed over the West Pacific due to disagreements in the latest model guidance as predicted shearing conditions have also become less favorable for development throughout much of the basin. Farther west, there are increased chances for TC formation over the southern Indian Ocean during the next few days, though a corresponding TC area is not featured in the updated map.

In the Western Hemisphere, the National Hurricane Center (NHC) is currently monitoring a disturbance in each basin, the eastern Pacific and north central Atlantic, however both have a low chance of formation resulting in no TC areas in the days 1-4 outlook. For days 5-11, there are continued signals in the guidance for possible TC formation in the East Pacific, as well as over the western Caribbean. A broad moderate confidence region is continued to the south of Mexico, where Rossby wave activity, reduced shear, and enhanced convection remains favored by the ensembles. Several GEFS ensemble members continue to show deepening low pressure to the east of Nicaragua, however environmental conditions appear less favorable for development compared to previous guidance, resulting in the removal of a moderate confidence area over the region in the updated outlook as more suppressed convection is expected to develop over the southern Caribbean by late next week.

Areas for forecast above and below normal precipitation have been modified to reflect the latest model guidance for the remaining outlook periods.

----- Previous discussion released on October 26, 2021 follows -----

The Madden-Julian Oscillation (MJO) remained weak, with little amplitude reflected in either the upper-level velocity potential based CPC index or the RMM-based index. The previous intraseasonal signal broke down after experiencing destructive interference with the La Nina base state over the Pacific, and more recently the pattern has reflected a more incoherent influence from Rossby wave and Kelvin wave activity. Widespread enhanced convection has developed over the eastern Indian Ocean, and dynamical model MJO index forecasts suggest a continuation of the disorganized convective state, followed by a slow eastward evolution back towards the low frequency ENSO response pattern. Some GEFS ensemble members suggest an enhanced convective signal developing over the Western Hemisphere, possibly related to tropical cyclone activity. While not consistent with coherent MJO evolution across the Western Hemisphere, the pattern may provide a somewhat favorable environment for late season Atlantic basin tropical cyclone development. Persistent subsidence over the western Caribbean has proved a limiting factor for development, and with dynamical model forecasts favoring a continuation of this pattern, the prospects for tropical cyclone activity are highly uncertain.

Three tropical cyclones developed over the past week. Hurricane Rick formed over the East Pacific south of Mexico on October 22, and strengthened quickly to Category-2 intensity on the Saffir-Simpson scale before making landfall over southern Mexico. Tropical Storm Malou formed on October 24 near Guam, and is currently tracking northward. TS Malou has a large circulation and is forecast to intensify while recurving to the north and northeast well east of Japan. As the remnants of this system enter the midlatitudes, they may help promote a pattern change downstream over North America. Tropical Depression 26-W formed recently just east of Vietnam, and is anticipated to make landfall shortly, bringing widespread soaking rains to parts of Southeast Asia. During Week-1, tropical cyclone formation is possible over the southeastern Indian Ocean, with dynamical models suggesting a potential second system forming during Week-2. Moderate confidence formation hazards are included in both weeks for this region. Additional tropical cyclone development is also possible over the northwestern Pacific near or east of Guam later in Week-1 or early in Week-2, in the same region where TS Malou developed. While confidence is lower in this region, moderate confidence hazards were included on the outlook. Elsewhere, a potent midlatitude cyclone near the U.S. Northeast coast may briefly cut off and acquire warm core characteristics over the next several days. The National Hurricane Center (NHC) currently maintains a 50-percent chance of tropical or subtropical cyclone development in association with this storm system. During Week-2, dynamical models suggest new tropical cyclone development over the East Pacific, and some dynamical model ensemble members continue to depict a formation over the western Caribbean. Several GEFS ensemble members bring a tropical cyclone north out of the Caribbean, but the ECMWF suggests a westward track with possible crossover development over the East Pacific.

The precipitation outlook during the next two weeks is based on a consensus of GEFS, CFS, and ECMWF guidance and tropical cyclone forecast tracks. 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.