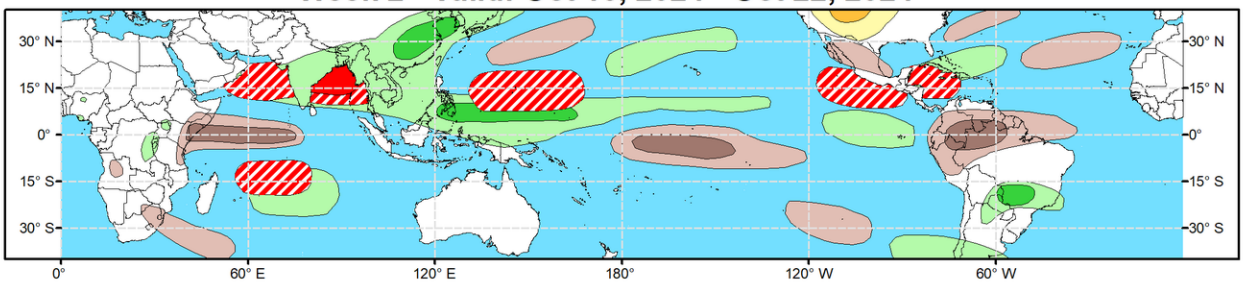
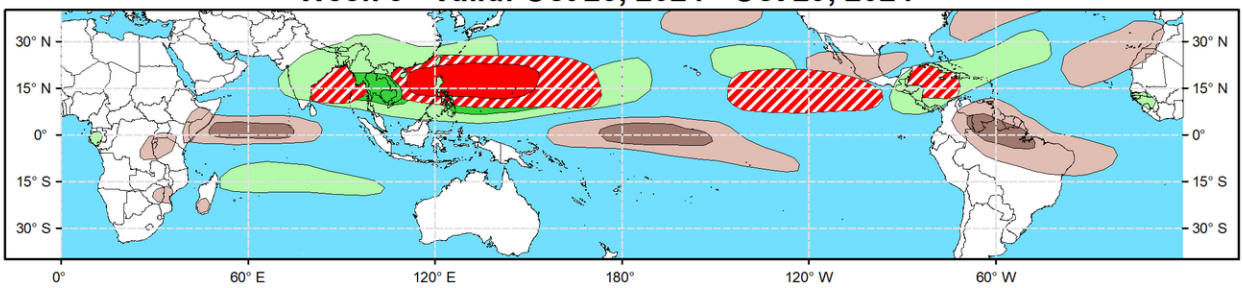
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Oct 16, 2024 - Oct 22, 2024



Week 3 - Valid: Oct 23, 2024 - Oct 29, 2024



Tropical Cyclone (TC) Formation Probability
>20% >40% >60%
Tropical Depression (TD) or greater strength

Above-Average Rainfall Probability
>50% >65% >80%
Weekly total rainfall in the Upper third of the historical range

Below-Average Rainfall Probability
>50% >65% >80%
Weekly total rainfall in the Lower third of the historical range

Above-Average Temperatures Probability
>50% >65% >80%
7-day max temperatures in the Upper third of the historical range

Below-Average Temperatures Probability
>50% >65% >80%
7-day min temperatures in the Lower third of the historical range

Issued: 10/08/2024
Forecaster: Barandiaran

This product is updated once per week and targets broad scale conditions integrated over a 7-day period for US interests only.
Consult your local responsible forecast agency.

The MJO continues to be a significant player in the global tropics. The RMM index currently places the enhanced convective envelope over the Indian Ocean. Dynamical model MJO forecasts depict eastward propagation of the intraseasonal signal into the Maritime Continent and Western Pacific during the next several weeks, with a more suppressed convective pattern developing across North America in the wake of the MJO. Tropical cyclone (TC) activity is favored to be greatest over the Indian Ocean and Western Pacific during weeks 2 and 3. The suppressed phase of the MJO is depicted over the Americas during this period which would tend to inhibit TC formation, however potential destructive Kelvin wave interference leads to lingering chances for TC activity on either side of Central America throughout the forecast period.

It was another busy week for TC activity, with 5 storms forming globally. On Sep 30, TC Ancha formed in the southwest Indian Ocean east of Madagascar. It remained disorganized and dissipated quickly. On Oct 1, TD 11 formed off the southern coast of Mexico. It remained offshore and was quickly broken up by strong shear but nonetheless brought heavy rainfall to portions of Mexico. On Oct 2, TC Leslie formed near the Cape Verde Islands. Leslie reached hurricane intensity but has since weakened to a tropical storm. It is still active and is expected to move northward into the open Atlantic according to the National Hurricane Center (NHC). On Oct 5, TC Milton formed in the Bay of Campeche. On Oct 7 Milton underwent very rapid intensification, reaching category 5 strength. Currently a category 4 hurricane, Milton is forecast to move over the Florida Peninsula during the overnight hours of Oct 9/10, posing significant hazards for the region. For more details on the status of Hurricane Milton please refer to the NHC. Finally, on Oct 6 TC 21W formed southeast of Guam. It is currently near tropical storm strength and the Joint Typhoon Warning Center (JTWC) expects the system to move northward into the open Pacific in the coming

days.

During weeks 2 and 3 dynamical model RMM forecasts favor the MJO transiting across the Maritime Continent and into the Western Pacific. This places the highest chances for TC formation during the forecast period in the Eastern Hemisphere. During week-2 a slight chance (20-40%) of TC development is highlighted for the Arabian Sea , the southern Bay of Bengal (BoB), and the western Pacific from the Philippines to roughly 160 E. A moderate risk for TC genesis is posted for the northern BoB due to favorable placement of the MJO. Additionally, models depict a persistent westerly wind burst over the equatorial western Indian Ocean during weeks 1 and 2 which has the potential to spin up a TC on either side of the equator, therefore a slight chance for TC formation is highlighted for the southwestern Indian Ocean as well for week-2. During week-3 as the MJO continues to move eastward the moderate risk for TC development shifts from the BoB to the South China Sea and the western Pacific. In the Western Hemisphere chances for TC development are relatively modest after a very active period. Models depict a Kelvin wave moving over the Americas sometime during the next few weeks interfering with the suppressed phase of the MJO and resulting in a lingering slight chance for TC genesis on either side of Central America throughout the forecast period.

The precipitation outlook for weeks 2 and 3 is based on potential TC activity, the anticipated state of ENSO and the MJO, and informed by GEFS, CFS, Canadian, and ECMWF ensemble mean solutions. Much of southeast Asia and the Maritime Continent are favored for above-normal precipitation for both weeks due to the favorable position of the MJO. Below-normal precipitation is favored near the Date Line, a product of emerging La Nina conditions. Below-normal precipitation continues to persist for northern South America, continuing a long trend that has led to significant impacts in the Amazon Basin. Above-normal temperatures are indicated for portions of the central U.S. during week-2.

For hazardous weather conditions in your area during the coming two-week period, please refer to your local NWS office, the Medium Range Hazards Forecast produced by the Weather Prediction Center, and the CPC Week-2 Hazards Outlook. Forecasts made over Africa are made in coordination with the International Desk at CPC.