

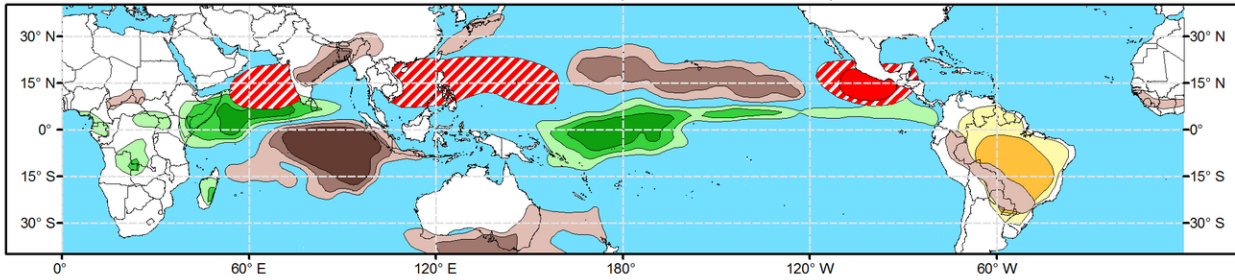


Global Tropics Hazards Outlook

Climate Prediction Center

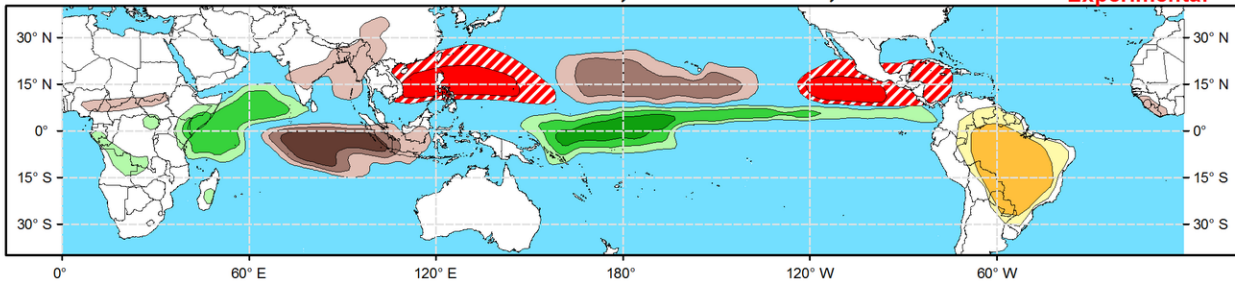


Week 2 - Valid: Oct 18, 2023 - Oct 24, 2023



Week 3 - Valid: Oct 25, 2023 - Oct 31, 2023

**** Experimental ****



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: 10/10/2023
Forecaster: Allgood

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 Madden-Julian Oscillation (MJO) remains active, with the CPC upper-level velocity potential index depicting a strong event with a phase speed on the high end of the canonical envelope. The RMM-based MJO index has also reflected higher amplitudes over the past several days, and currently places the enhanced phase of the MJO over the Western Hemisphere. The atmospheric response to ongoing El Nino conditions is also playing a substantial role in the global tropical convective pattern, with enhanced convection persisting near and west of the Date Line and a well established subtropical jet stream over the Northeast Pacific extending across the southern tier of the CONUS. Recently, a strong westerly wind burst centered over the Equator was observed over the far West Pacific, associated with a broad monsoonal trough with embedded tropical cyclone activity. This event should promote renewed downwelling oceanic Kelvin wave activity, which would further reinforce or strengthen the ENSO response over the coming weeks to months.

The forecast evolution of the intraseasonal signal is highly uncertain. As the MJO continues propagating eastward, its signal will increasingly interfere destructively with the ENSO base state. Additionally, a strongly positive Indian Ocean Dipole (IOD) event is underway, with above (below)-normal SSTs over the western (eastern) Indian Ocean providing a second stationary signal to interfere with the progression of the MJO. Dynamical model forecasts from the ECMWF show the IOD event growing increasingly dominant, with the suppressed convective signal over the eastern Indian Ocean becoming the highest amplitude signal in the global tropics OLR anomaly field. Therefore, this outlook is based on an anticipated weakening of the MJO over the next several weeks, with the positive IOD and El Nino signals serving as the main drivers of the global tropical convective pattern. The resulting Global Tropics Hazards (GTH) Outlook therefore reflects a broadly stationary signal during Weeks 2 and 3.

Hurricane Lidia, which formed just prior to the issuance of last week's GTH outlook, turned east-northeastward while intensifying and is currently forecast to make landfall over the west-central coastline of Mexico, bringing significant wind, rain, and storm surge impacts. Tropical Storm Max formed just off the coast of southern Mexico on October 9, quickly making landfall and dissipating. Over the West Pacific, Typhoon Bolaven is currently passing just north of Guam, and is forecast to continue intensifying before recurving over the northern Pacific, eventually becoming a potent extratropical storm and likely influencing the midlatitude pattern over North America. Over the next week, the Atlantic main development region (MDR) is anticipated to remain unusually active for mid-October, with the National Hurricane Center (NHC) depicting a high probability for new tropical cyclone development. Dynamical model forecasts have shown the basin becoming increasingly quiet during Week-2, though additional development cannot be ruled out given the abnormally warm SSTs in the region. The East Pacific is favored to remain active during Weeks 2 and 3, while increasing Central American Gyre activity may also increasingly favor genesis over the western Caribbean or southern Gulf of Mexico by Week-3. While the signal favoring development is rather strong over the western Caribbean by Week-3, confidence is somewhat reduced due to a potential for subsidence from any East Pacific tropical cyclone activity. Elsewhere, tropical cyclone activity is possible across the West Pacific, with the strongest signal in the dynamical model guidance over the South China Sea and in the vicinity of the Philippines. Additionally, dynamical models favor potential formation over the Arabian Sea during Week-2.

The precipitation outlook for the next two weeks is based on the anticipated dominance of the stationary IOD and El Nino signals, and a consensus of GEFS, CFS, Canadian, and ECMWF ensemble mean solutions. Therefore, above (below) average precipitation is favored for the western (eastern) Indian Ocean, and the central and eastern Pacific. A continued hot, somewhat dry pattern is favored for much of northern South America, which will increasingly stress crops undergoing reproduction. 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.