

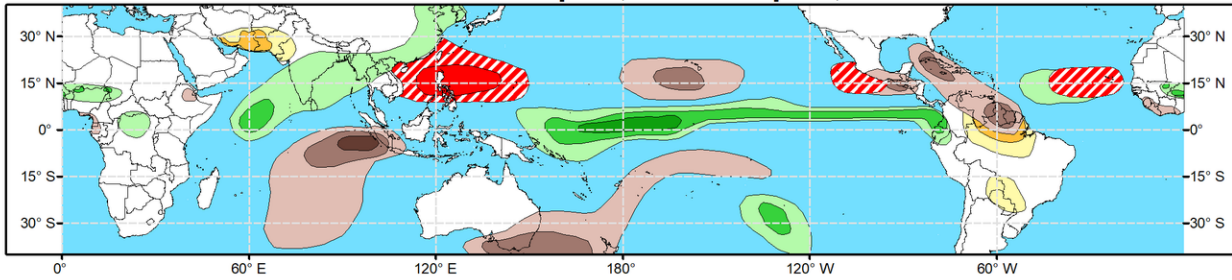


# Global Tropics Hazards Outlook

## Climate Prediction Center

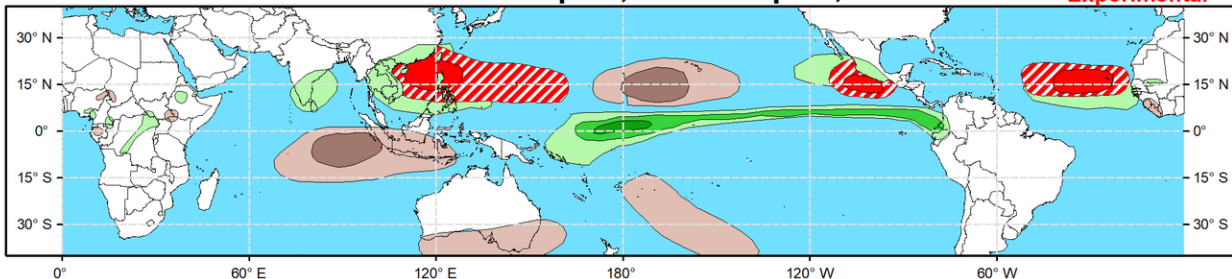


**Week 2 - Valid: Sep 13, 2023 - Sep 19, 2023**



**Week 3 - Valid: Sep 20, 2023 - Sep 26, 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: 09/05/2023**

**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.**

An active El Niño base state with increasing influence is dominating the tropics and impacting any Madden-Julian Oscillation (MJO) activity, which is subject to interference from the El Niño base state during eastward propagation of an enhanced convective envelope. This interference appears to be having an impact on the RMM index's ability to correctly assess the state of MJO. Besides the strong El Niño and the nebulous state of the MJO, variability in tropical convection patterns is also coming from Kelvin and Rossby wave activity, both of which can play a role in tropical cyclone (TC) formation. Dynamical model MJO index forecasts depict a short-lived increase in signal amplitude before returning to a diminished state, with the RMM index staying mostly within the Maritime Continent quadrant. Modeled velocity potential anomalies suggest that MJO activity may be a little more robust than indicated by the RMM index, particularly during weeks 1-2 where models depict an enhanced convective envelope quickly traversing the tropical Pacific before the signal weakens in week 3. Given the current and forecast state of MJO, El Niño conditions are likely to continue to drive tropical variability throughout the forecast period.

It has been an active week for TC genesis, with six storms formed over three basins. In the Western Pacific two TCs formed, Kirogi on Aug 30, and Yun-Yeung on Sep 4, both in the open waters northeast of the Philippines. Both are still active and are anticipated to affect the main islands of Japan in the coming days. For the latest information on these storms please consult the Joint Typhoon Warning Center. In the East Pacific, TC Jova formed on Sep 4 several hundred miles south of the Mexico coast. Jova is currently a tropical storm and in the coming days is forecast to become a hurricane. For the latest information on Jova please refer to the National Hurricane Center (NHC). In the Atlantic basin, three systems formed, all in the Main development Region (MDR).

On Aug 29 Jose formed, strengthened briefly into a Tropical Storm, then weakened quickly and dissipated as it drifted north into cooler waters. A similar fate befell Katia, which formed near the Cape Verde islands on Sep 1 and briefly attained Tropical Storm intensity before also dissipating over cooler waters north of the MDR. Early on Sep 5, Tropical Depression Thirteen (TD13) formed roughly midway between the Cape Verdes and the Lesser Antilles. In the coming days, TD13 is anticipated to strengthen to Hurricane strength and has the potential to impact the Caribbean islands in the coming week. For the latest information on TD13 please refer to the NHC.

With models depicting a quasi-stationary MJO signal over the Maritime Continent, enhanced convection over the Western Pacific is favored, resulting in a moderate chance (40% probability) of TC genesis for the Philippine Sea and eastern South China Sea, and a slight chance (20%) covering most of the rest of the Western Pacific basin. An increase in amplitude of the MJO signal in phase 4 or 5 is generally unfavorable for TC genesis over the East Pacific and Atlantic basins, but in spite of a relatively hostile shear environment, very warm SSTs and dynamical models support at least a slight chance of TC genesis for the East Pacific and the MDR of the Atlantic basin. During the week-3 period the consensus among dynamical models is that the increased signal strength of the MJO is likely to diminish late in week-2 and into week-3. With the favored weakening of the MJO, shearing over the Western Hemisphere is favored to decrease, resulting in an increase in TC genesis probabilities (>40%) for both the East Pacific and Atlantic MDR region. Meanwhile, continued enhanced convection over the Maritime Continent results in a continued moderate chance for TC genesis for the Western Pacific.

The precipitation outlook for the next two weeks is based on anticipated TC tracks, the anticipated state of the MJO, and consensus of GEFs, CFS, Canadian, and ECMWF ensemble mean solutions. Above-normal precipitation continues for the Equatorial Eastern Pacific for both weeks, a response to the El Nino conditions, while suppressed precipitation is favored to the north and south of the El Nino-enhanced precipitation. Below-normal rainfall is also indicated for the western Maritime Continent and portions of the Indian Ocean throughout the forecast period. With enhanced TC activity anticipated, above-normal precipitation is favored for the Eastern Atlantic as well as the Western and Eastern Pacific basins and Southeast Asia. Above-normal temperatures are favored for northern South America, as well as portions of Iran, Afghanistan, Pakistan, and western India for 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.