

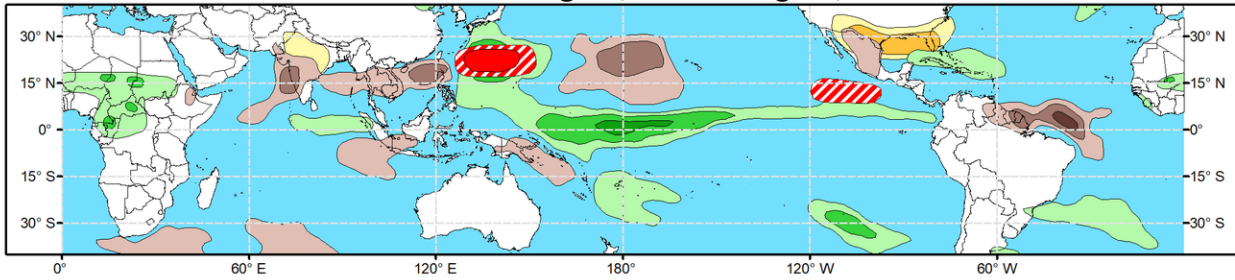


Global Tropics Hazards Outlook

Climate Prediction Center

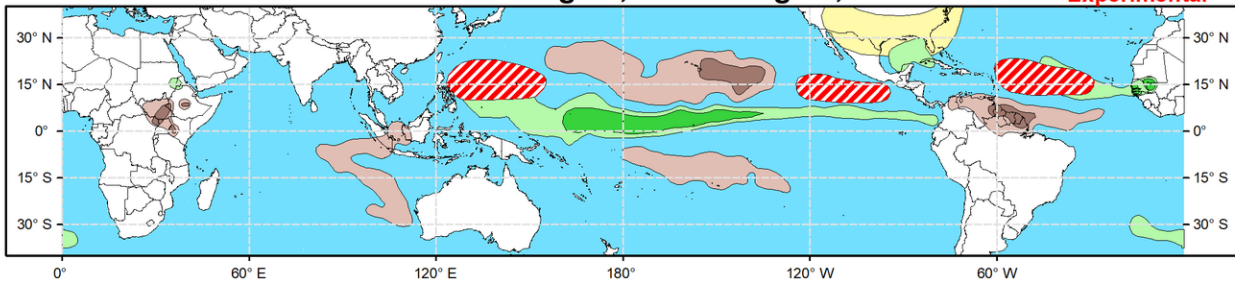


Week 2 - Valid: Aug 09, 2023 - Aug 15, 2023



Week 3 - Valid: Aug 16, 2023 - Aug 22, 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

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Forecaster: Pugh

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 weak with a low amplitude, according to the RMM-based index. However, during mid to late July, the 200-hPa velocity potential anomaly field depicted eastward propagation of anomalous upper-level divergence from the Maritime Continent to the Western Hemisphere as anomalous upper-level convergence shifted east to Africa and the Indian Ocean. The ongoing El Nino is likely continuing to disrupt a longer duration and stronger MJO from occurring. During early to mid-August, dynamical model forecasts depict a number of modes of tropical variability including a weak MJO, equatorial Rossby waves, and a Kelvin wave. Due to the predicted weak MJO and conflicting signals associated with the equatorial Rossby and Kelvin waves, forecast confidence in the weeks 2 and 3 outlooks are tempered. The low frequency El Nino base state is expected to provide the greatest influence on global tropical rainfall and tropical cyclone (TC) development.

Tropical Storm Dora developed in the East Pacific on August 1 and the National Hurricane Center forecasts Dora to become a hurricane as it tracks west-southwestward. On August 1, Tropical Cyclone 4B developed in the northeast Bay of Bengal and is forecast to be short-lived as it tracks inland. Typhoon Doksuri made its final landfall in the Fujian province of eastern China on July 28 with rainfall amounts exceeding 250 mm. Also on July 28, Typhoon Khanun developed to the east of the Philippines and rapidly strengthened, gaining maximum sustained winds of 115 knots by August 1. Khanun is approaching Japan's southern Okinawa island chain but its future track remains highly uncertain during the first week of August. Please refer to the Joint Typhoon Warning Center for the latest forecast on Typhoon Khanun. In the wake of Khanun, the GFS model remains consistent that at least one tropical cyclone (TC) forms at a high latitude (20-25N) to the southeast of Japan early in week-2. The ECMWF model is slower with development but also favors additional TC development over

the West Pacific. Due to timing differences (late week-1 or week-2), only a 40 percent chance of TC formation is posted for week-2. Dynamical models (GEFS and ECMWF) support maintaining a 20 percent chance of TC formation through week-3. Prior to the week-2 time period, the East Pacific is expected to be quite active with multiple TCs. The GEFS and ECCO are more bullish with a continued active East Pacific compared to the ECMWF model. Given these model differences and uncertainty on how the different modes of tropical variability interact, a 20 percent chance of TC formation is posted for the East Pacific during weeks 2 and 3. The Main Development Region (MDR) of the Atlantic typically becomes more active during August, but the background state of El Nino may offset this climatology. Since the extended range ECMWF guidance depicts an increasing signal later in August and consistent with climatology, a 20 percent chance of TC development is only designated for week-3 in the MDR of the Atlantic basin.

The precipitation outlook for weeks 2 and 3 are based on a historical skill weighted blend of the GEFS, CFS, ECCO, and ECMWF models, typical summertime influences associated with El Nino, and considerations of predicted TC tracks. Related to El Nino, above-average rainfall is likely across much of the equatorial Pacific with below-average rainfall favored to the north of the equator. During week-2, the dynamical model consensus depicts a favored area of above-average rainfall across parts of the Caribbean which is related to an equatorial Rossby wave and weak MJO forcing. Although forecast confidence is too low to define a specific area with a 20 percent chance of TC formation in the Atlantic basin during week-2, there are several GFS ensemble members showing a TC emerging from this enhanced rainfall area near the Bahamas. The North American monsoon is likely to remain suppressed through at least week-2, while above-average temperatures persist across the southern tier of the United States and northern Mexico during weeks 2 and 3.

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.