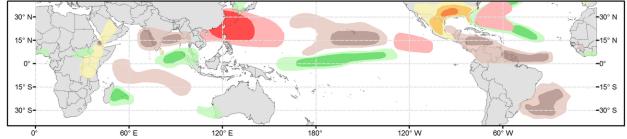


## Global Tropics Hazards Outlook

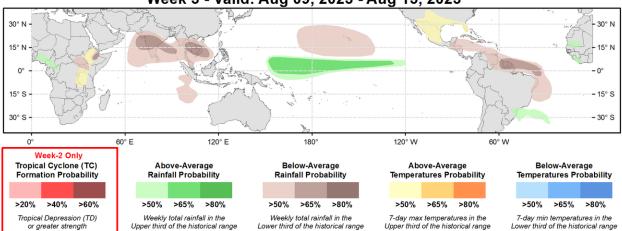
Climate Prediction Center



Week 2 - Valid: Aug 02, 2023 - Aug 08, 2023







Issued: 07/25/2023 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) signal has become increasingly coherent in the upper-level velocity potential anomaly field, with a Wave-1 structure emerging and increased amplitude reflected on the CPC MJO index. The enhanced convective phase corresponding to anomalous large-scale divergence aloft is currently over the Pacific. The RMM-based MJO index remains low-amplitude, however, as the intraseasonal signal in the wind fields appears to be zonally narrow and limited to the Pacific basin, which does not project well onto the index. Enhanced trades near the surface and westerlies aloft over the East Pacific are not consistent with a typical response to the ongoing El Nino; however, the intraseasonal signal as well as tropical cyclone activity contributed to a substantial low-level westerly wind burst (WWB) centered on the Equator northeast of New Guinea. This WWB event is similar, albeit weaker, than one that occurred in May, resulting in a strong downwelling oceanic Kelvin wave. This new activity is also likely to help initiate a new downwelling oceanic Kelvin wave that should help reinforce or even strengthen the El Nino signal heading into the Boreal autumn months. Elsewhere, a broad monsoon trough was established across South, and Southeast Asia, extending over the Northwest Pacific, resulting in an uptick in tropical cyclone activity. Dynamical model MJO index forecasts reflect a considerable degree of uncertainty, with the GEFS increasingly showing renewed activity transitioning from the Maritime Continent to the West Pacific during Weeks 2-3, which is out of phase with the current intraseasonal activity. The ECMWF is somewhat slower to develop this signal, but does have numerous ensemble members depicting a West Pacific amplification during the Weeks 2-3 time frame. It is possible that these models are reflecting the ENSO base state, though any intraseasonal activity over the West Pacific could bring additional reinforcement of the ENSO signal through additional westerly wind bursts.

Typhoon Doksuri formed over the Northwest Pacific on July 22 between the Philippines and Guam. Strengthening quickly to Category-4 intensity on the Saffir-Simpson scale, Doksuri is currently just north of Luzon, bringing significant wind, rain, and storm surge impacts. Forecasts from the Joint Typhoon Warning Center bring Doksuri across the Luzon Strait to the South China Sea, with an eventual landfall over mainland China. A second disturbance just east of the Philippines has an increasing potential for formation over the next several days. During Week-2, the West Pacific basin is favored to remain active. Dynamical model forecasts generally show the area of greatest favorability for development at a higher latitude than is typical, which may be due to influences from the intraseasonal signal. Following a quiet period, the East Pacific is favored to become increasingly active, though there is uncertainty whether a tropical cyclone will form during the Week-2 period or late in the Week-1 period, Therefore, the probability of formation is kept below 40 percent. Dynamical models are currently favoring the southwestern portion of the basin. Across the Atlantic basin, a robust tropical wave is currently traversing the MDR, and has a potential to develop over the western Atlantic basin either during late Week-1 or the Week-2 period. Warm ocean temperatures may also provide opportunities for formation at higher latitudes than is typically observed.

Forecasts for above- and below-normal rainfall are based on historical composites of El Nino events, which favor suppressed monsoon activity across South and Southeast Asia, suppressed rainfall for the Caribbean and portions of Central and South America, and enhanced rainfall near the Date Line. A consensus of dynamical model guidance was also utilized to provide greater detail for the outlook. Persistent above-normal temperatures are favored to continue across the southern CONUS, portions of the Nile Valley, and possibly South Asia due to the reduced monsoon convection.

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.