

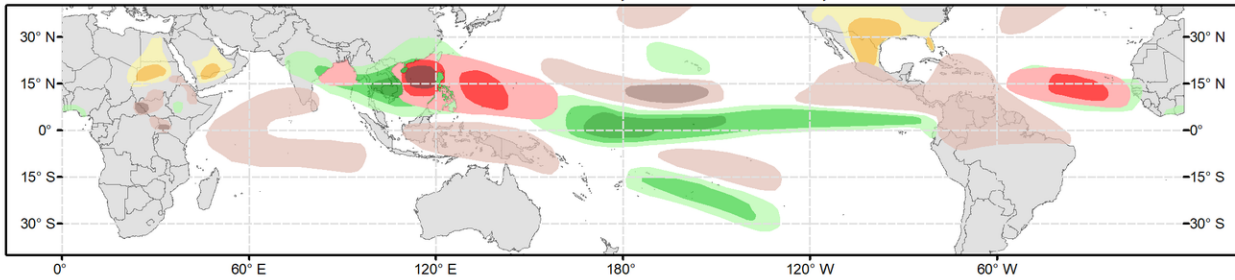


Global Tropics Hazards Outlook

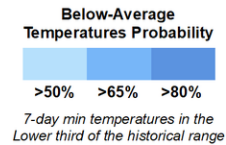
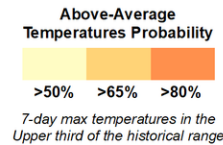
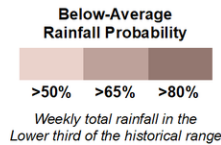
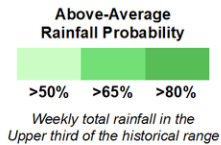
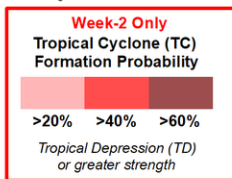
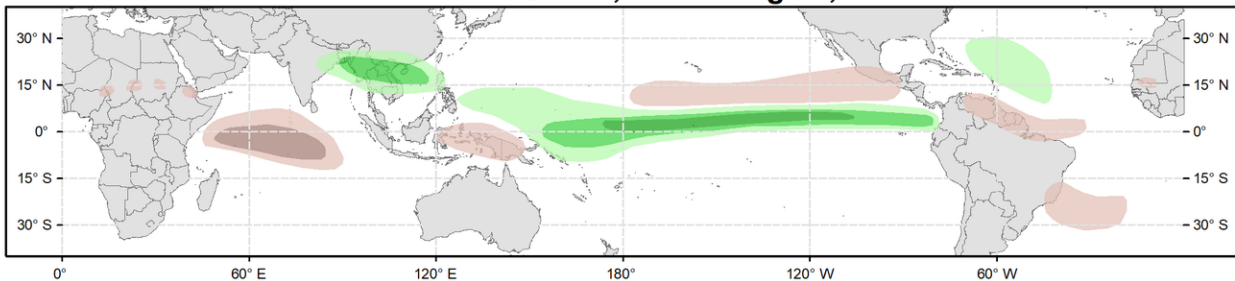
Climate Prediction Center



Week 2 - Valid: Jul 19, 2023 - Jul 25, 2023



Week 3 - Valid: Jul 26, 2023 - Aug 01, 2023



Issued: 07/11/2023
Forecaster: Novella

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.

Since early July, RMM observations continue to show a disorganized Madden Julian Oscillation (MJO) with the enhanced phase having meandered over the Indian Ocean. In recent days, the MJO signal has resumed its eastward propagation which appears to be associated with more enhanced convection along and north of the equator near 90E. Looking ahead, RMM forecasts from the dynamical models have been consistent in favoring renewed MJO activity with the enhanced convective envelope propagating eastward over the Maritime Continent while strengthening into western Pacific during the next several weeks. The GEFS is especially pronounced with this realization, with several ensemble members depicting a high amplitude event unfolding in the western Pacific later in July. These high amplitude solutions are taken with some caution given that the RMM index computation is not yet fully attuned to low frequency footprint in the Pacific, however objective wavenumber-frequency filtering of upper-level velocity potential anomaly forecasts do support a more organized MJO that is expected to constructively interfere with the ongoing El Nino base state. This is evidenced by the onset of strongly anomalous lower-level westerlies favored over the Maritime Continent and shifting into the West Pacific, which are not only expected to aid the low frequency response, but also imply a potentially stronger El Nino should a westerly wind burst occur. Consequently, the large-scale environment is favored to be conducive for tropical cyclone (TC) formation in western Pacific, with decreasing chances for development in the eastern Pacific.

No TCs formed in the global tropics during the past week. After a month-long hiatus where no TCs formed in the Western Pacific, the aforementioned development of anomalous westerlies increases confidence for TC activity returning to the basin during week-2. Coupled with anomalous lower-level easterlies favored to the north in the guidance, a West Pacific gyre could take

shape and induce one or more areas of deepening low pressure in the basin. There has been good continuity in the probabilistic TC genesis tools depicting elevated signals in the South China Sea to support high chances (60%) being posted in week-2. A separate area of moderate chances (40%) is also posted to the east where these tools and ensembles favor a secondary area of deepening low pressure near the Mariana Islands later in the period. In the northern Indian Ocean, probabilistic guidance remains bullish for TC formation in the northern Bay of Bengal with signals supportive of high chances for development. However, this potential is tempered by monsoonal shearing and climatology in the region during July, and 20% chances are issued for week-2.

In the eastern Pacific, the National Hurricane Center (NHC) is currently monitoring a tropical disturbance (94E) with 90% chances of formation during the next 2 days. Following this potential system, there is some support in the ensembles and probabilistic tools for an additional closed low developing to the south of Mexico late in week-1 and into early week-2. However, any potential formation looks to be stunted by strengthening lower-level easterlies and an increased shearing environment that is favored to overspread the basin by next week. Combined with widespread drier than normal conditions favored throughout the eastern Pacific tied to the suppressed phase of the MJO, no corresponding TC area is posted for week-2. Across the Atlantic, probabilistic guidance from the ECMWF has been consistent depicting above-normal chances for TC formation tied to an easterly wave over the Main Development Region (MDR). Given additional support from the GEFs and CFS favoring enhanced convection and decreased shear in the region, as well as above-normal SSTs, 40% chances for development are posted and centered near 35W.

Forecasts for enhanced and suppressed precipitation are based on composites of historical precipitation patterns during Jun-Aug El Nino events, composites of Maritime Continent and West Pacific MJO activity, anticipated TC tracks, and a skill-weighted consensus of dynamical model guidance. For temperatures, amplified mid-level ridging remains favored to persist over much of the CONUS to promote above-normal temperatures with an increased risk of excessive heat for the southern tier of the U.S. Dynamical models also favor increased chances for excessive heat along parts of the Nile River Valley and the lower Arabian Peninsula during week-2.

Precipitation forecasts over Africa are made in coordination with the International Desk at CPC, and can reflect regional-scale influences as well as the broader pattern. For hazardous weather concerns across the US during the next two weeks, 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.