

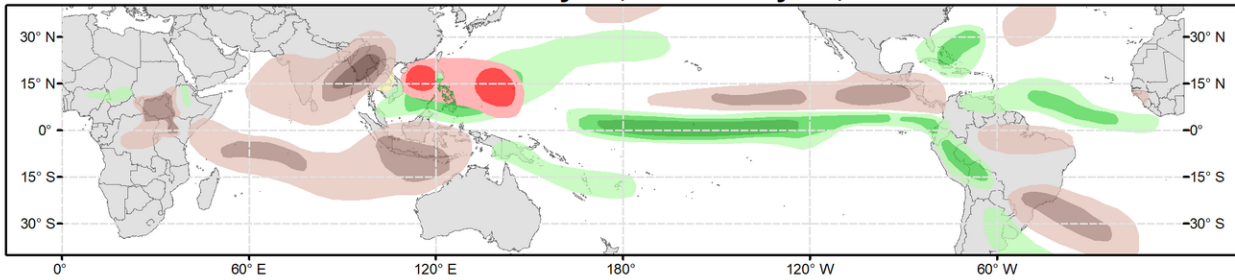


Global Tropics Hazards Outlook

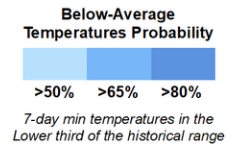
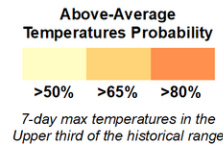
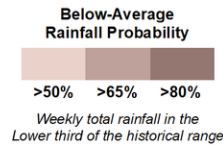
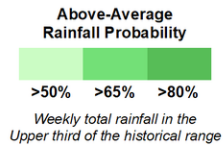
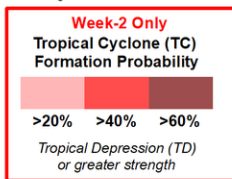
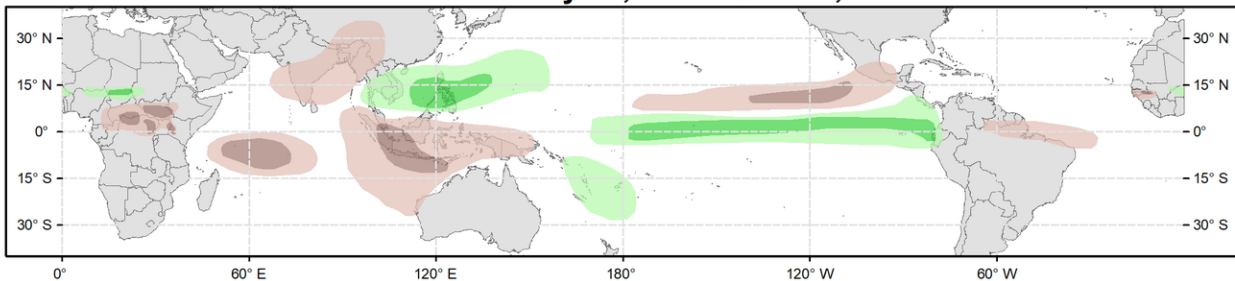
Climate Prediction Center



Week 2 - Valid: May 24, 2023 - May 30, 2023



Week 3 - Valid: May 31, 2023 - Jun 06, 2023



Issued: 05/16/2023
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.

The Madden Julian Oscillation (MJO) remains active where the enhanced phase propagated eastward from the Maritime Continent into the western Pacific during the last week. Following a period of destructively interfering Kelvin and Rossby wave activity resulting in a weakened MJO signal, models favor the MJO to regain amplitude over the western Pacific during week-1. However, RMM forecasts begin to differ on the strength and evolution of the MJO thereafter. The GEFS favors a slower mean solution and struggles to propagate the MJO out of the western Pacific, whereas the CFS and ECMWF are more progressive, shifting the MJO into the Western Hemisphere during the outlook period, albeit at a lower amplitude. To reconcile these differences, the outlook relies more on the upper-level velocity potential forecasts which generally place the enhanced phase of the MJO over the Western Hemisphere towards the end of May, though there is less confidence in the forecast that the MJO will be as robust as it had been during its previous two cycles over this part of the tropics earlier this spring. Regardless of its eventual strength, the large-scale environment is expected to be favorable (unfavorable) for tropical cyclogenesis in the western Pacific (Indian Ocean) in the outlook.

Tied to the MJO, zonal wind observations centered on the equator showed a strong uptick in anomalous lower-level westerlies near 90E earlier in May. This resulted in a cyclonic environment supportive for the formation of tropical cyclones (TCs) Mocha (5/11) and Fabien (5/14) to the north and south of the equator in the Indian Ocean during the past week. Despite being a relatively short-lived system, TC Mocha rapidly strengthened to a category 5 strength over the Bay of Bengal. Mocha slightly weakened and made landfall over Myanmar this past weekend, bringing many adverse impacts to portions of Myanmar. As Mocha dissipated over high terrain, TC Fabien formed over the south-central Indian Ocean and has steadily gained intensity in the past few days. The Joint Typhoon

Warning Center (JTWC) expects Fabien to peak at category 3 intensity, and then gradually weaken while tracking westward over open waters this week.

The anomalous low-level westerlies look to become firmly entrenched throughout the western Pacific, conducive for TC development in the basin. There is good agreement in the ensembles favoring an area of deepening low pressure over the Philippine Sea, with elevated chances in the probabilistic guidance near the Mariana Islands. Given the good support, high (60%) chances for TC development were considered, however there is some uncertainty in the timing of development, with some deterministic solutions signaling genesis here late in week-1. Therefore, 40% chances are posted near the Mariana Islands, as well as another 40% chance area posted for the South China Sea where there are indications in the ensembles depicting a secondary area of increased TC potential later in week-2.

In the western Hemisphere, extended range lower-level wind guidance remains fairly bullish on the persistence of enhanced easterlies and high wind shear to the south of Mexico unfavorable for TC development across the eastern Pacific. In the Atlantic, there is decent continuity in the deterministic solutions favoring an area of deepening low pressure off the coast of the southeastern U.S. that could acquire tropical characteristics during week-2. However, ensembles and probabilistic guidance from the GEFs and ECMWF are less supportive of formation, and no corresponding TC areas are issued.

The precipitation outlook for weeks 2 and 3 is based on a historical skill weighted blend of GEFs, CFS, ECMWF, and Canadian ensemble guidance, anticipated TC tracks and state of the MJO. Forecasts made over Africa are made in coordination with the International Desk at CPC. Below-normal precipitation is predominately favored throughout much of the Indian Ocean into early June associated with the suppressed phase of the MJO, where a reduction or delayed absence of monsoonal precipitation may lead to well above-normal temperatures over parts of India and southeastern Asia. Above-normal precipitation is expected to continue for the equatorial eastern Pacific and the coasts of Ecuador and Peru for both weeks, which is likely to worsen antecedent wet conditions in the region.

For hazardous weather conditions in your area during the next two weeks, please refer to your local NWS office, the Medium Range Hazards Forecast from the Weather Prediction Center, and the CPC Week-2 Hazards Outlook.