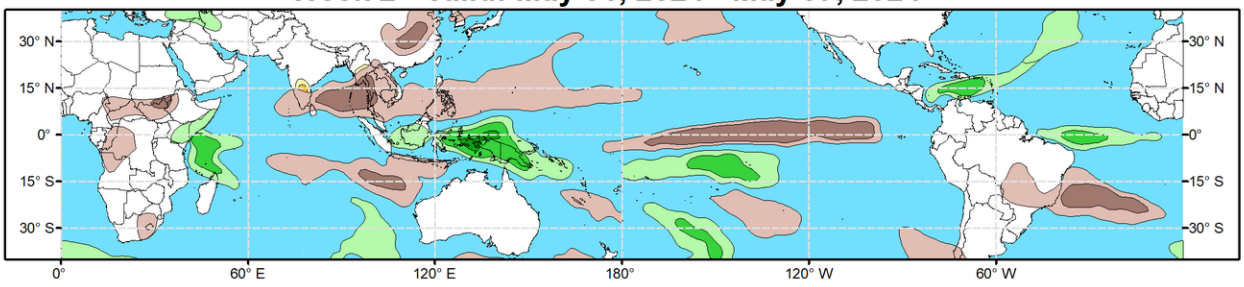
Global Tropics Hazards Outlook

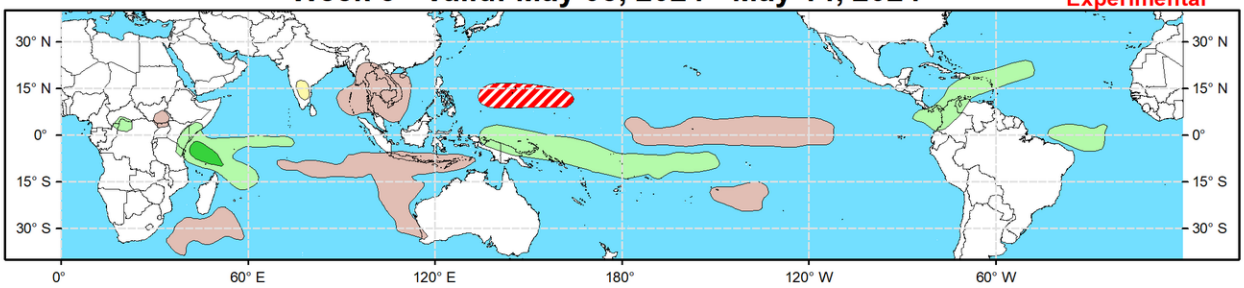
Climate Prediction Center

Week 2 - Valid: May 01, 2024 - May 07, 2024



Week 3 - Valid: May 08, 2024 - May 14, 2024

** 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: 04/23/2024
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.

Following a robust Madden-Julian Oscillation (MJO) during March, it weakened during early to mid-April according to the RMM-based MJO index. However, the observed 200-hPa velocity potential anomaly field depicts a continued MJO signal with its enhanced phase rapidly shifting eastward over the Western Hemisphere during the past two weeks. As this remnant MJO constructively interferes with a low-frequency signal over eastern Africa and the western Indian Ocean, the GEFS and ECMWF ensemble mean feature an increase in anomalous upper-level divergence for these areas during late April. This is expected to result in a stronger and more coherent MJO heading into May. Although there is large model spread on the strength of the MJO during the outlook period (May 1-14), the MJO is expected to influence global tropical rainfall. MJO precipitation composites for phases 5, 6, and 7 were considered in the outlook.

No tropical cyclones (TCs) formed during mid-April and this is typically a quiet time of year. Although recent deterministic GFS and ECMWF model runs have depicted TC genesis over the southern Indian Ocean near the beginning of May, low forecast confidence on a specific location and climatology preclude the designation of a 20 to 40 percent chance formation area. By week-3 (May 8-14), the large-scale environment is expected to become more favorable for TC development across the West Pacific. MJO composites and at least a weak model signal supports a 20 to 40 percent chance to the east of the Philippines. Beyond the outlook period and later in May, the MJO could favor an early season TC in the East Pacific. This will be closely monitored in subsequent outlooks.

The precipitation outlook for weeks 2 and 3 are based on a historical skill weighted blend of the GEFS, CFS, ECCC, and ECMWF models and MJO precipitation composites (phases 5, 6, and 7). Puerto Rico and the U.S. Virgin Islands have been quite wet so far during April and this wet pattern is expected to persist

into early May. Above-average rainfall is also favored for parts of eastern Africa, western Indian Ocean, and Maritime Continent (along the equator) during the first two weeks of May.

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.