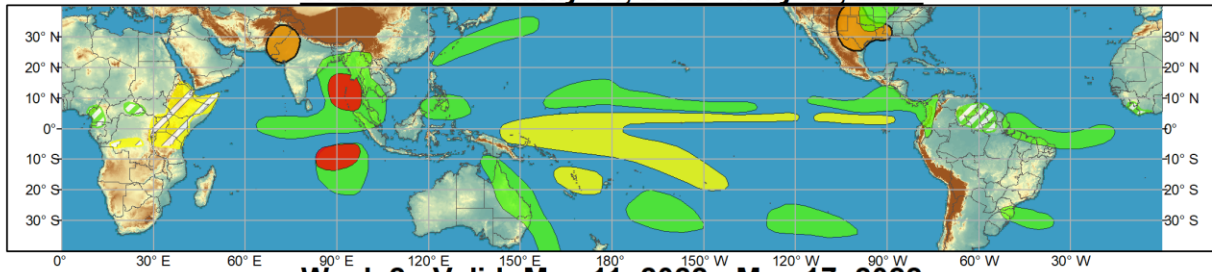




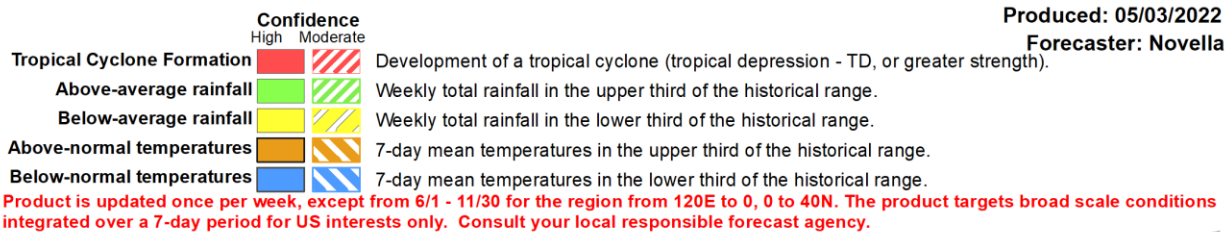
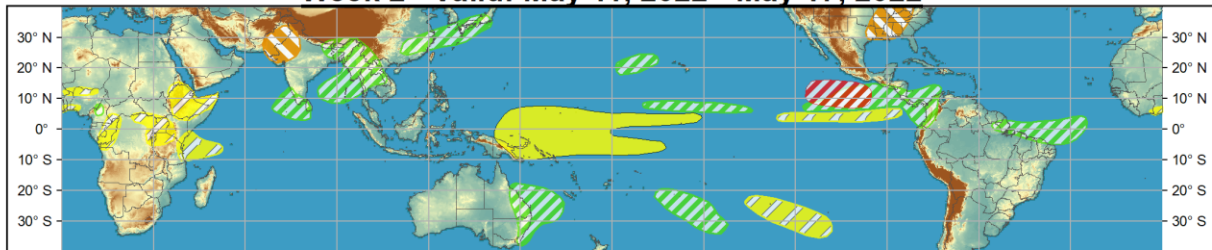
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: May 04, 2022 - May 10, 2022



Week 2 - Valid: May 11, 2022 - May 17, 2022



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Forecaster: Novella



During the last seven days, the Madden Julian Oscillation (MJO) remained weak and incoherent, as reflected in the RMM index and in the upper-level anomaly fields which have continued to exhibit a fairly stagnant pattern. Looking ahead, dynamical model RMM forecasts suggest the possible reemergence of the MJO over Africa and Indian Ocean during week-1, with several ensemble members in the GEFS and ECMWF showing a fast eastward propagation of the intraseasonal signal into the Maritime Continent and western Pacific towards the middle of May. However, much of the increase in amplitude is likely tied to predicted Rossby wave activity traversing the basin as evidenced by the westward shift of the signal in RMM space during week-1. Thereafter, the resumed eastward propagation features a rapid phase speed that is more in-line with a convectively coupled Kelvin Wave than a canonical MJO, which is supported by objective wave filtering of OLR and upper-level velocity potential anomaly field guidance during week-2. Despite the uncertainty regarding a renewed MJO heading into May, there are increased chances for tropical cyclone (TC) formation in the Indian Ocean given the interaction of the aforementioned Kelvin and Rossby wave activity favored in the basin, as well as a strong surge of anomalous lower-level westerlies being advertised in the dynamical models in the eastern equatorial Indian Ocean late in week-1.

No TCs have formed during the last week. For week-1, a pair of high confidence areas for TC formation are posted in the Indian Ocean, one in the Bay of Bengal and the other located south of the equator (near 10S/90E) where there is excellent run-to-run continuity in the model solutions and elevated probabilities in the TC tools. For week-2, TC genesis potential appears rather limited in the eastern hemisphere, with marginal signals in the latest guidance over the western and south Pacific. However, there is good model agreement favoring the development of a broad area of anomalous lower-level westerlies and reduced wind shear in eastern Pacific during week-2 and persisting into the week-3 timeframe. With sufficiently warm SSTs to the south of Mexico, and Kelvin wave activity favored to traverse the Americas, environmental conditions appear to be increasingly conducive for TC formation near the outset of the Eastern Pacific Hurricane season. Therefore, a broad moderate confidence area for TC formation is issued for week-2 from approximately 117W to 95W which captures the largest signals in probabilistic TC tools late in the period.

The precipitation outlook for the next two weeks is based on anticipated TC tracks, La Niña precipitation composites, and a consensus of GEFS and ECMWF ensemble mean solutions. Broadly suppressed precipitation remains favored over the western equatorial Pacific consistent with La Niña conditions, whereas enhanced precipitation is predominately favored throughout many parts of the Indian Ocean and eastern Australia during the next two weeks. Over the Americas, there is an increased potential for heavy precipitation over parts of the eastern Plains, Mississippi, Ohio and Tennessee Valleys tied to a surface low and accompanying frontal system early in week-1. Enhanced precipitation is likely to persist over many saturated portions of Columbia, Ecuador and in northern and southern Brazil, elevating concerns of additional flooding and other adverse ground impacts over these regions of South America. For temperatures, pre-monsoonal excessive heat conditions remain favored over portions of northwestern India and Pakistan through mid-May. Over the CONUS, well above-normal temperatures are favored this weekend throughout the Great Plains and Lower Mississippi Valley, as this anomalous warmth is expected to shift eastward associated with an amplifying mid-level ridge over the eastern U.S. during early week-2.

For hazardous weather concerns during the next two weeks across the U.S., please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's Week-2 Hazards Outlook. Forecasts over Africa are made in consultation with the International Desk at CPC and can represent local-scale conditions in addition to global scale variability.