

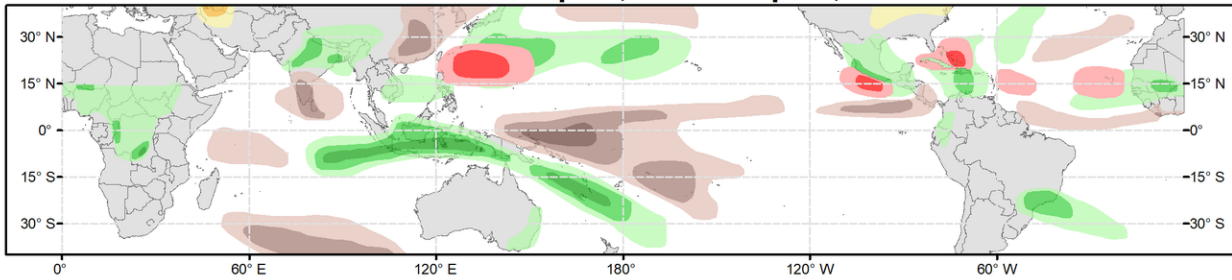


Global Tropics Hazards Outlook

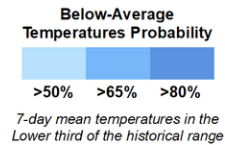
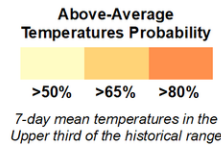
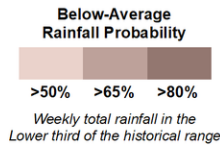
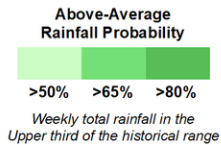
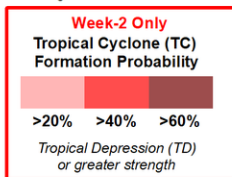
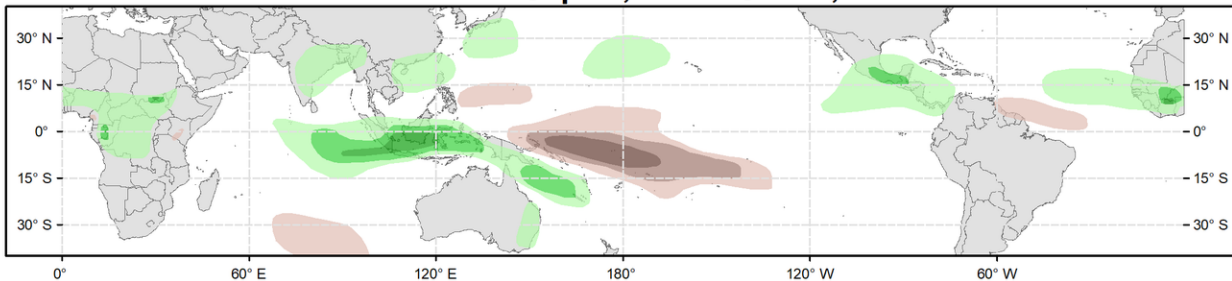
Climate Prediction Center



Week 2 - Valid: Sep 21, 2022 - Sep 27, 2022



Week 3 - Valid: Sep 28, 2022 - Oct 04, 2022



Issued: 09/13/2022
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.

Both the RMM index and upper-level velocity potential anomaly based MJO index indicate a weakened and incoherent MJO during the past week. This weakening is likely attributed to destructive interference with the low frequency footprint over the equatorial Pacific, and there is some support for continued eastward propagation of the intraseasonal signal and possible reemergence in the guidance and tools. Dynamical model RMM forecasts seem to only paint part of the MJO picture moving forward, generally favoring some eastward propagation of the signal, but maintain a low amplitude with only few mean solutions exiting the RMM unit circle during the next few weeks. However, there are questions as to how well the RMM index is able to represent the MJO against the backdrop of such an unusually strong La Nina during the past few months. Hovmoller analyses of upper-level velocity potential and OLR anomaly forecasts focused north of the equator provide a bit more clarity in this regard, which depict the development of enhanced divergence aloft and convection with MJO activity coming through objective wavenumber-frequency filtering over the eastern Pacific and Americas during week-1, that continues to shift eastward into the tropical Atlantic and Africa with a more coherent wave-1 pattern emerging late in September. Should the MJO become better reorganized as it reenters the eastern Hemisphere, large scale conditions would be favorable for tropical cyclone (TC) development over the eastern Pacific and the Atlantic through the end of the month. Additional TC formation is also forecast to continue in the western Pacific tied to Rossby wave activity favored during the outlook period.

During the past week, three TCs developed in the western Pacific basin. Typhoon Muifa formed near 17N/135E on 9/7 and briefly reached Super Typhoon Intensity this past weekend, before weakening to category 2 over the East China Sea. The Joint Typhoon Warning Center (JTWC) forecasts Muifa to track northwestward and make landfall as a category 1 system over the Zhejiang Province of eastern

China where locally heavy rainfall amounts and high winds are favored during the next day or so. Towards the east, TC Merbok formed on 9/11 near 21N/160E and has remained at Tropical Storm intensity while drifting northward over the past few days. Although this system will remain over open waters, the JTWC forecasts Merbok to strengthen to category 2 system under a favorable SST and shear environment and accelerate poleward with an approaching mid-level trough to the west. As Merbok undergoes extratropical transition this week, dynamical models depict an amplification of the mid-level height pattern downstream over northern Pacific and western North America by next weekend, leading to increased chances for below (above) normal temperatures (precipitation) for many parts of Alaska and the western CONUS by next week. In the northern Philippine Sea, Tropical Depression 16W formed on 9/12 near 21N/138E. As this system is expected to meander under competing mid-level steering mechanisms in the near-term, a more northeasterly track towards the islands of southern Japan while strengthening to Typhoon intensity is forecast later this week.

Across the Atlantic, the National Hurricane Center (NHC) is monitoring a pair of tropical waves in the Main Development Region (MDR) where the leading wave has a 40% chance of formation during the next 5 days. Probabilistic TC genesis tools reflect moderate chances of development during the week-1 period, however these signals also persist into the start of week-2 period. Although the GFS and GEFS are less robust with TC potential, there has been good continuity in the ECMWF ensemble favoring several deepening low centers once the disturbance approaches Hispaniola at the end of week-1, but diverge thereafter. Therefore, a broad slight chance (20%) area for TC formation is issued for week-2 to account for this spread in the guidance, with an embedded moderate chance (40%) area posted mainly east of the Bahamas should this disturbance not form during week-1. Another slight chance area is posted to the east of the Lesser Antilles, where there is also support in the probabilistic tools indicating modest chances for development tied to another easterly wave in the MDR. Across the eastern MDR, another easterly wave is forecast to move off of West Africa later in week-2. There are strengthening signals in the latest probabilistic guidance for TC formation near Cape Verde to support slight chances of TC development in the outlook.

In the eastern Pacific, the NHC is also monitoring a trough of low pressure with a high chance (80%) of formation during the next 5 days. Beyond this development potential during week-1, there is support from the model guidance and probabilistic tools for additional TC formation in the basin. Notably, lower-level zonal wind forecasts from the ECMWF, CFS, and GEFS favor a band of strengthening anomalous westerlies to the south of Mexico and into the Caribbean suggestive of an enhanced Central America Gyre (CAG) circulation conducive for TC development. Therefore, a broad slight chance and embedded moderate chance (40%) area are posted to the south of Mexico for week-2. For the western Pacific, there is good agreement in the GEFS and ECMWF ensembles favoring a broad area of deepening low pressure to the south of Japan in the wake of TCs Muifa and Tropical Depression 16W during week-2. With 40% chances depicted in the probabilistic tools, a corresponding moderate chance area for TC development is posted with a broader slight chance area in the outlook.

Probabilities for above- and below- normal precipitation and temperatures in the outlook are based on historical skill-weighted blend of GEFS, ECMWF, CFS and Canadian ensemble forecasts, La Nina precipitation composites, anticipated TC tracks, and some consideration from MJO composites. For hazardous weather concerns 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 (WPC) and the CPC Week-2 Hazards Outlook. Forecasts issued over Africa are made in coordination with the International Desk at CPC.