

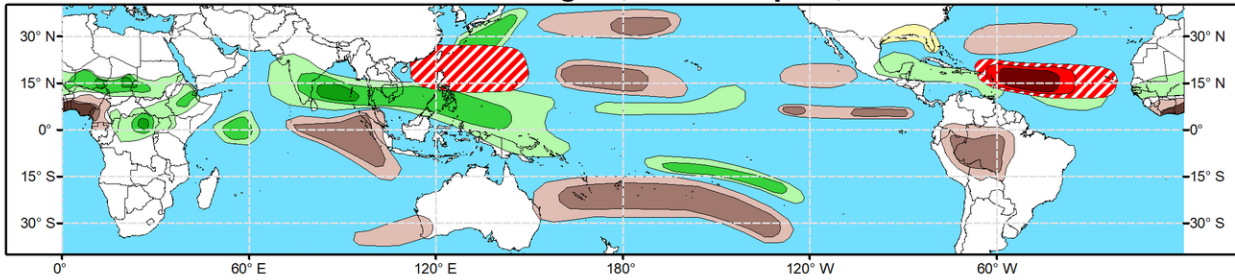


Global Tropics Hazards Outlook

Climate Prediction Center

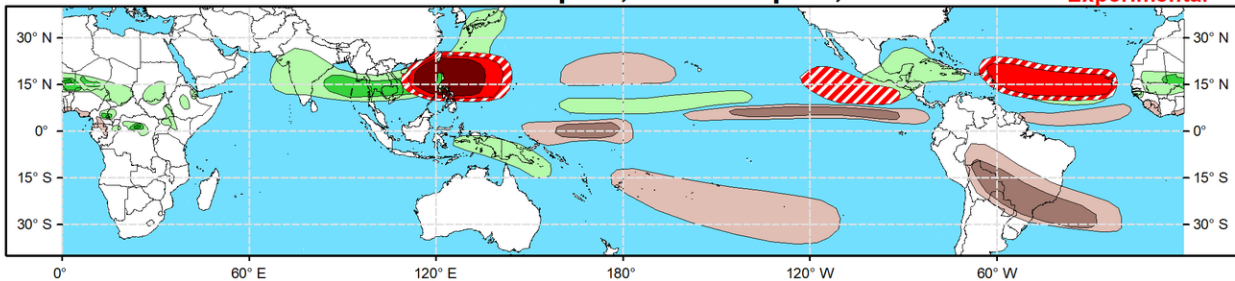


Week 2 - Valid: Aug 28, 2024 - Sep 03, 2024



Week 3 - Valid: Sep 04, 2024 - Sep 10, 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: 08/20/2024
Forecaster: Collow

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) has increased in amplitude over the Indian Ocean (border of RMM phases 2 and 3) during the past week, aided by constructive interference with enhanced Equatorial Rossby Wave activity. Temporary weakening of the MJO is possible in the near-term due to destructive interference with the suppressed phase of a Rossby Wave, although most dynamical models indicate a resurgent MJO moving across the Maritime Continent by the end of week-2. The ECMWF and BOMM ensembles are the most robust, showing a clear propagation of the intraseasonal signal into RMM phase 5 by early September, with the GFS having more variability among its ensemble members. There is also a well-defined wave-1 asymmetry in the global upper-level velocity potential pattern, with enhanced divergence (convergence) aloft across Europe, Africa, and the Indian Ocean (Pacific and the Americas) consistent with the MJO placement. Objective filtering of the upper-level velocity potential anomalies between 5 deg S and 5 deg N indicate an eastward propagating MJO signal into the Maritime Continent, with a slowing over the far Western Pacific during week-3.

The global tropics continued to be active in the past week. Across the Western Pacific, Tropical Storm Jongdari formed on 8/19. This system has since weakened to a depression with its remnants tracking toward Korea. Additional development is possible in the vicinity of the Mariana Islands later this week. While low-end tropical cyclone formation chances (20-40 percent) remain forecast for week-2 given the persistent pattern and climatology, the eastward propagating MJO toward the region greatly increases chances for TC development during week-3, with a 60 percent chance or greater area extending from the South China Sea to east of the Philippines (135 deg E).

A Convectively Coupled Kelvin Wave (CCKW) moving eastward across the basin and

destructively interfering with the suppressed phase of the MJO had led to an uptick in TC activity across the Eastern Pacific. Tropical Storm Gilma formed on 8/18 and is forecast to strengthen into a hurricane and track west-northwestward over open waters. The National Hurricane Center is monitoring two additional disturbances for potential development in the next week. The first (90 percent chance) is forecast to cross into the Central Pacific Basin and track close to Hawaii in the coming days. Another system over the Eastern Pacific (east of Gilma) is given a 50 percent chance of TC development in the next week. The Eastern Pacific is forecast to quiet down during week-2 given the suppressed convective environment aloft and the departing CCKW. However, dynamical models indicate a renewed ramp up in activity toward week-3, supporting 20-40 percent chances for TC development during this time frame.

In the wake of Hurricane Ernesto, the Atlantic Basin is quiet. A stalled frontal boundary over the northern Gulf of Mexico may lead to surface low development later this week, with the Oz deterministic ECMWF indicating a circulation moving along the Gulf Coast. It is highly uncertain whether or not a TC could come out of this, but not improbable. The MJO propagation across the Indian Ocean supports an increase in African easterly wave activity with one or more disturbances forecast to exit the coast of Africa beginning around the end of August and continuing into September. Models have been rather meager in terms of TC formation probabilities, however, the aforementioned uptick in easterly wave activity combined with anomalously warm sea surface temperatures, near peak season climatology, a projected reduction in Saharan dust, and the aforementioned CCKW shifting from the Pacific to the Atlantic support having at least a 60 percent chance of tropical cyclone development during week-2 over the western portion of the Main Development Region, with higher wind shear lowering chances further east. Chances diminish somewhat by week-3 (40-60 percent chance) given an expected tapering of the easterly waves as the MJO shifts further eastward, although wind shear may become less of an inhibiting factor. TC development over the northwestern Caribbean or Gulf of Mexico is also not out of the question later in week-2 or week-3, but confidence is too low to include a formation region, with only the GEFS indicating an elevated signal at this time.

Forecasts for enhanced and suppressed precipitation for weeks 2 and 3 are based on historical composites of Indian Ocean and Maritime Continent MJO events, anticipated TC tracks, and a skill weighted consensus of the CFS, GEFS, ECMWF, and ECCM model systems, with some consideration of ENSO cold phase composites. Increased chances for above-normal temperatures are forecast for the southeastern CONUS during week-2. 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 (WPC), and the CPC Week-2 Hazards Outlook. Forecasts issues over Africa are made in coordination with the Africa Desk at CPC.