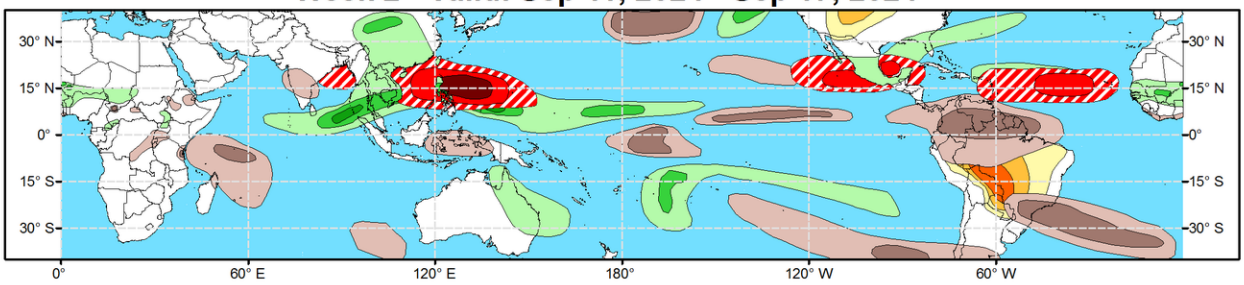
Global Tropics Hazards Outlook

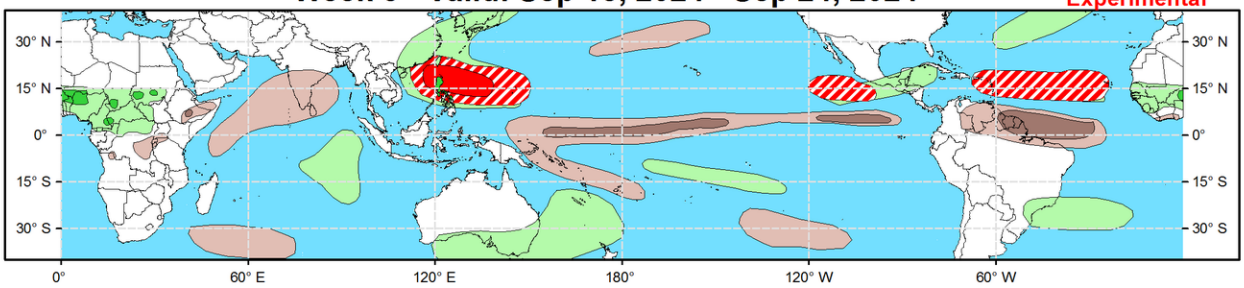
Climate Prediction Center

Week 2 - Valid: Sep 11, 2024 - Sep 17, 2024



Week 3 - Valid: Sep 18, 2024 - Sep 24, 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: 09/03/2024
Forecaster: Barandiaran

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 MJO has been fairly coherent since early August, having propagated from the Western Hemisphere into the Indian Ocean. The RMM signal has strengthened lately after the MJO emerged from destructive interference from Rossby wave activity. RMM forecasts suggest this modulating signal is likely to continue, as dynamical models indicate the potential for further interference from Rossby waves, or the development of fast-moving Kelvin waves. The large-scale environment is expected to continue to be favorable for Tropical Cyclone (TC) Development in the Western Pacific during the next several weeks. Should the MJO remain coherent over the Maritime Continent and Western Pacific, this historically supports increasingly less favorable conditions for TC formation in the East Pacific and the Main Development Region of the Tropical Atlantic. However, any lowered TC potential is counteracted by an active climatology as well as other modes of tropical variability that contribute to genesis.

One tropical cyclone (TC) formed over the last week. On September 1 TC Yagi formed over the Philippine Sea and tracked over the Philippines and into the South China Sea. The Joint Typhoon Warning Center (JTWC) is forecasting Yagi to intensity to typhoon strength while continuing to track west and make landfall in the coming days near Hainan. For the latest on TC Yagi please refer to the JTWC.

With the MJO favored to be over the Maritime Continent/Western Pacific for both weeks 2&3, TC activity in the West Pacific basin is very likely to be enhanced, on top of an already active climatology as well as very warm SSTs, with anomalies > 2C almost universal, not just for the Western Pacific but for nearly all of the tropical waters of the northern hemisphere. Therefore a high risk (>60% probability) of TC genesis is posted for the Philippine Sea, a moderate risk (>40%) is posted for the eastern South China Sea (SCS) and east

to the Marianas islands, and a slight risk (20%) for the remainder of the SCS and portions of the Bay of Bengal, all for week-2. The Western Pacific continues to be favored for TC activity into week-3, with a moderate risk for TC genesis highlighted for the Philippine Sea and a slight risk eastward to the Marianas and west into the SCS.

The TC outlook for the western hemisphere has been, and continues to be, a murky picture. As mentioned above, very warm SSTs argue for high chances of TC activity, while the predicted phase of the MJO (4-5) generally suppresses TC activity over the East Pacific and Atlantic. The synoptic picture over Africa indicates at least decent potential for easterly wave generation, yet ensemble guidance is having a hard time latching onto any given potential wave, at least in todayâ€™s solutions. The fundamentals are there though, and the models are not entirely devoid of signal. During week-2 three areas are the focus of those signals, and each is given a moderate risk for TC genesis: the southern coast of Mexico and south of Baja California, the Bay of Campeche, and west of the Cape Verde islands (i.e. the Atlantic Main Development Region, MDR). A slight risk of TC genesis is also posted for the western Caribbean and much of the Eastern Pacific Basin, as well as the remainder of the MDR. The ECMWF indicates an increasing potential for TC genesis south of Mexico into week-3, although this is not supported by the GEFS, so a slight risk of TC genesis is posted for the East Pacific for week-3, as well as for the Atlantic MDR, where both the GEFS and ECMWF continue to give at least some indication of TC activity during week-3.

The precipitation outlook for weeks 2 and 3 is based on potential TC activity, the anticipated state of ENSO and the MJO, and informed by GEFS and ECMWF ensemble mean solutions. Enhanced precipitation is favored over portions of Southeast Asia throughout the forecast period with enhanced TC activity anticipated in the region. Increased chances for above-normal precipitation are also indicated for portions of Central America for both weeks. Below-normal precipitation is favored over the equatorial Central Pacific for both weeks, a pattern reminiscent of the canonical La Nina footprint, as well as for the western Indian Ocean as the MJO moves into the Western Pacific. Above-normal temperatures are indicated for the extended Amazon Basin, particularly in the lee of the Andes during week-2, as well as portions of the central U.S.

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.