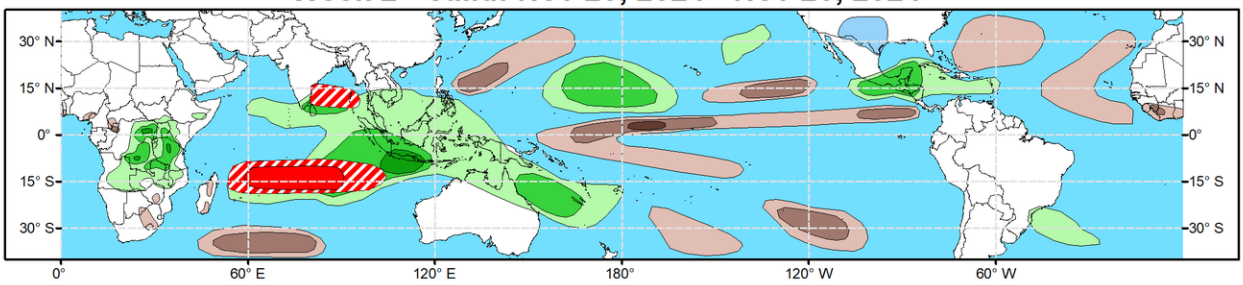
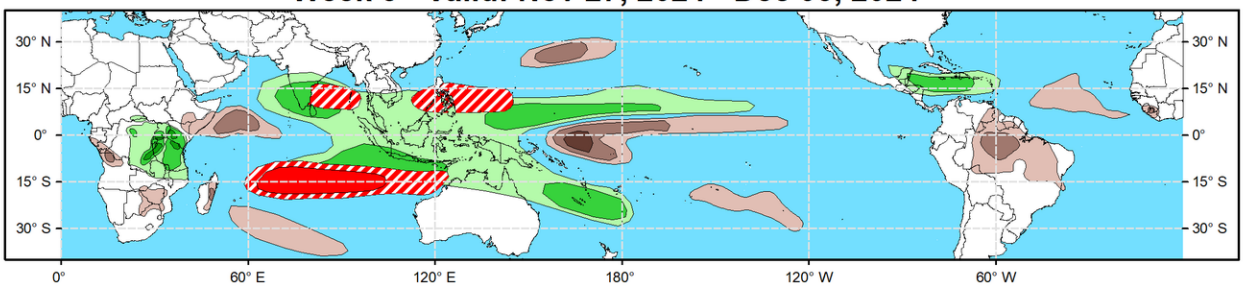
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Nov 20, 2024 - Nov 26, 2024



Week 3 - Valid: Nov 27, 2024 - Dec 03, 2024



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: 11/12/2024
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.

ï»¿The Madden Julian Oscillation (MJO) has been active during the past month, completing a full circumnavigation of the globe. Associated with the MJO is a pronounced wave-1 asymmetry pattern in the spatial upper-level velocity potential field with a clear eastward propagation during the past several weeks. Currently, the enhanced convective envelope stretches from the eastern Americas to Africa, with the suppressed phase beginning to move into the Western Hemisphere. The ECENS, CFS, and GEFS models indicate a relatively slower eastward propagation of the MJO compared to the past month, with the intraseasonal signal forecast to move across the Indian Ocean and Maritime Continent, and the GEFS depicting a faster propagation into the Western Pacific during early December. An MJO associated resurgence of enhanced low-level westerlies may develop across the Maritime Continent later in November but its eastward propagation is uncertain due to a predicted trade wind surge across the tropical Pacific which may destructively interfere with the incoming westerlies.

The Western North Pacific has been active with three TC formations during the past week. Tropical Storm Man-Yi and Typhoon Toraji both developed on 11/9, with Tropical Storm Usagi forming on 11/11. According to the Joint Typhoon Warning Center (JTWC), Toraji is forecast to dissipate over the South China Sea. Man-Yi and Usagi are predicted to gradually strengthen and take similar tracks toward the northern Philippines and possibly Taiwan, with Usagi located to the west of Man-Yi. Following this burst of activity, TC formation chances are favored to diminish across the basin. However, a favorable convective environment aloft is forecast to return by week-3 as the main convective envelope moves closer to or over the Western Pacific. Therefore, a 20-40 percent chance of TC development is posted for week-3 stretching from the South China Sea eastward to the Mariana Islands.

The MJO slowly moving over the Indian Ocean is forecast to lead to an uptick in TC activity. The JTWC is monitoring 95S over the Southern Indian Ocean for potential development during the next week. Conditions are forecast to remain conducive for additional TC development over this region into weeks 2 and 3, with 40-60 percent chances posted for both periods. By week-3, TC formation probabilities in the ECMWF increase toward Australia supporting an extension of the 20-40 percent probabilities to near the Kimberley Coast, although these higher chances may be delayed into week-4. TC formation is also possible across the Bay of Bengal, although models are borderline in terms of timing with TC formation being depicted in both periods. Therefore, only 20-40 percent chances are highlighted for both week-2 and week-3 despite some stronger signals in the guidance.

The National Hurricane Center (NHC) indicates a 90 percent chance of TC formation across the Caribbean during the next 7-days. Given that this system is most likely to develop by the start of week-2, no related TC formation probabilities are highlighted over the region in this outlook. However, interests in the western Caribbean and Florida are advised to monitor updates from NHC regarding this system and any potential impacts.

Forecasts for above- and below-average rainfall during Weeks 2 and 3 are based on historical composites of Indian Ocean and Maritime Continent MJO events, a low frequency state leaning towards La NiÃ±a, and a skill-weighted consolidated blend of dynamical model guidance. Above-normal rainfall is forecast across much of the Indian Ocean and Maritime Continent during both periods, and spreading more into the Western Pacific by week-3. Below-normal rainfall is indicated across the equatorial and eastern Pacific tied to the suppressed phase of the MJO. Above-normal rainfall remains forecast across Central America and the Caribbean. Below-normal temperatures are favored across parts of the southwestern U.S. and the Southern Plains.

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.