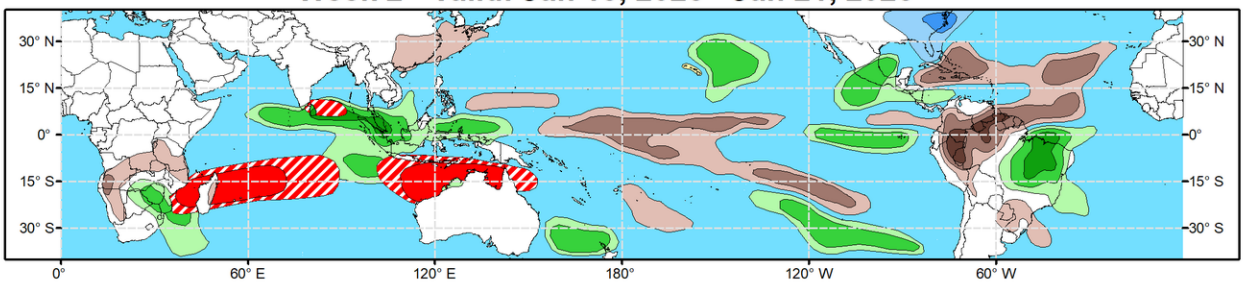
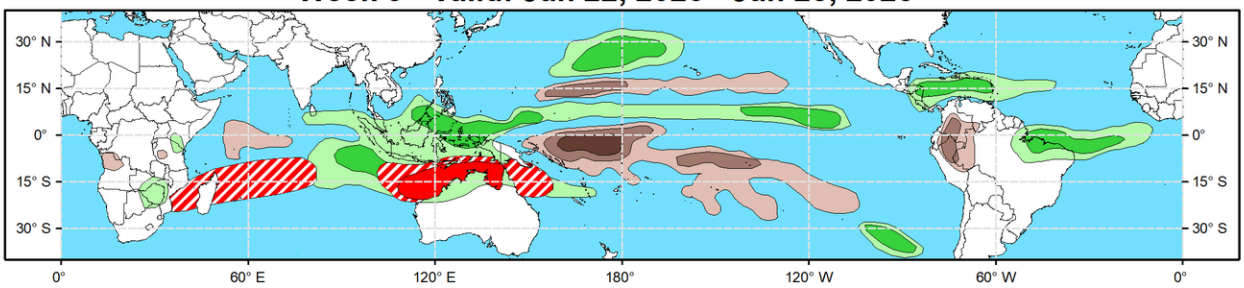
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Jan 15, 2025 - Jan 21, 2025



Week 3 - Valid: Jan 22, 2025 - Jan 28, 2025



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: 01/07/2025
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.

During the past week, the RMM-based MJO index propagated into the Western Hemisphere and weakened into the unit circle. By week-2, the intraseasonal signal is predicted to re-amplify over the Indian Ocean and constructively interfere with the low frequency enhanced convective state tied to the emerging La Nina and negative phase of the Indian Ocean Dipole (-IOD). The ECMWF and GEFS also indicate a more coherent wave-1 symmetry pattern developing in the spatial upper-level velocity potential field by the second half of January, with enhanced (suppressed) convection across the Indian Ocean and Maritime Continent (east of the Date Line). This evolution, along with climatology, favors enhanced chances of tropical cyclone (TC) development during the forecast period across the Indian Ocean and also spreading across the Maritime Continent and to the north of Australia.

No new TCs have formed in the past week. The Joint Typhoon Warning Center (JTWC) is monitoring two areas of disturbed weather for potential TC formation over the next few days, specifically 94S over the south-central Indian Ocean (15 deg S, 80 deg E) and 96P over the southwestern Pacific (20 deg S, 170 deg W). The strongly enhanced convective envelope predicted over the Indian Ocean during week-2 supports at least a 20 percent chance of TC formation across the south-central and southwestern Indian Ocean and to the north of Australia. Higher chances (40-60 percent) are forecast across the more climatologically favored areas from the Mozambique Channel to roughly 70 deg E. Enhanced tropical cyclone formation probabilities in the GEFS and ECMWF ensembles also support 40-60 percent chances of TC formation along the Kimberley Coast and in the Gulf of Carpentaria. Dynamical models also depict multiple surface lows tracking across the Bay of Bengal toward India with associated above-normal precipitation. While seasonal climatology is low, TC development is not ruled out given the favorable environment aloft. Therefore, 20-40 percent chances are

highlighted over the region.

The week-3 TC formation outlook is generally similar to week-2, with a slight eastward progression of the enhanced convective envelope. This favors increasing TC development chances extending east of Australia, with the 20-40 percent region encompassing more of the Coral Sea. Conversely, TC development probabilities are reduced across the southwestern Indian Ocean, but remain in the 20-40 percent range given the enhanced low frequency convective signal. A 40-60 percent chance for TC formation remains highlighted across the Kimberley Coast and Gulf of Carpentaria.

Above and below normal precipitation forecasts for weeks 2 and 3 are based on the anticipated continuation of low frequency variability (developing La Nina, -IOD), Indian Ocean MJO composites, anticipated TC tracks, and a skill weighted historical blend of CFSv2, GEFS, ECMWF ensemble forecast systems. The MJO propagation would favor moderation of temperatures across the eastern half of the contiguous U.S. (CONUS), although latest CPC outlooks (8-14 day and week 3-4) still favor below-normal temperatures over the central and eastern CONUS persisting through late January. However, it is plausible that a warmer pattern could begin to take shape by the end of the month based on lagged MJO composites .

For hazardous weather conditions in your area during the next two weeks, 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 issued over Africa are made in coordination with the International Desk at CPC.