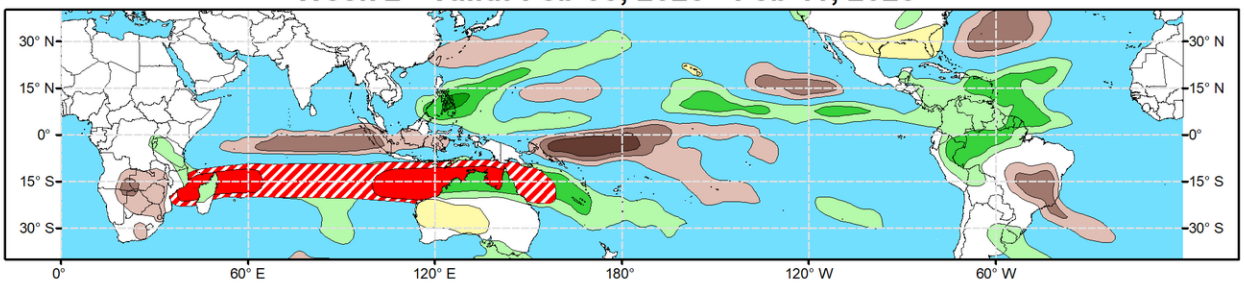
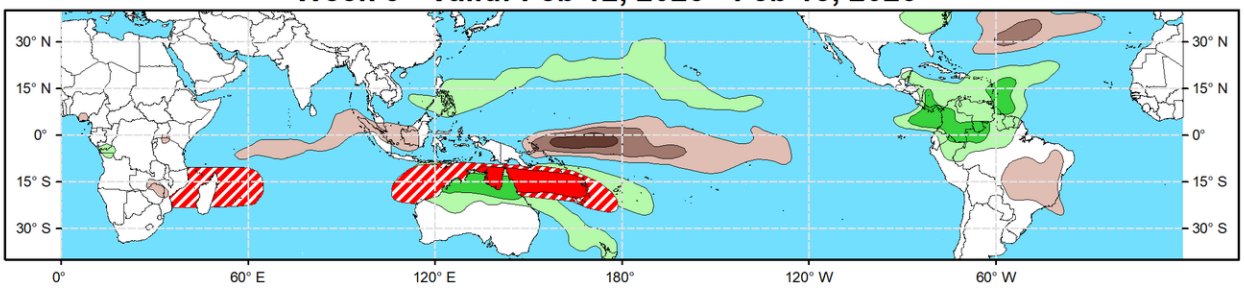
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Feb 05, 2025 - Feb 11, 2025



Week 3 - Valid: Feb 12, 2025 - Feb 18, 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: 01/28/2025
Forecaster: Pugh

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.

A robust Madden-Julian Oscillation (MJO) propagated rapidly east from Africa and the Indian Ocean to the Maritime Continent during mid to late January. From January 21 to 27, anomalous 200-hPa upper-level divergence strengthened as the MJO began to constructively interfere with La Nina with anomalous upper-level convergence overspreading the Western Hemisphere more recently. Dynamical models are in good agreement and remain consistent that the MJO continues its eastward propagation from the Maritime Continent to the Pacific Ocean during the next three weeks. The MJO is expected to remain quite strong through the beginning of February but may weaken as it destructively interferes with La Nina. Although large ensemble spread exists in the GEFS and ECMWF models on the strength of the MJO by mid-February, MJO composites for precipitation and tropical cyclone modulation were weighed heavily in the GTH outlook valid February 5 to 18.

Tropical Cyclone 11S formed on January 28 over the South Indian Ocean (11.7S/76.2E) and is forecast to track southwest by the Joint Typhoon Warning Center. The MJO is likely to contribute to multiple TCs over the South Indian Ocean to near northern Australia through early February. The GEFS remains the most bullish with TC genesis for these areas through week-2 (February 5 to 11). Based on a model consensus between the more bullish GEFS and tempered ECMWF ensemble mean along with MJO composites, a broad 20 to 40 percent chance of TC development extends from the Mozambique Channel and the South Indian Ocean east to the Coral Sea in the South Pacific. A 40 to 60 percent chance of TC genesis is designated for the Mozambique Channel and southwestern Indian Ocean where there is better model agreement. Another 40 to 60 percent chance area is posted from the Kimberley Coast of Australia east to the Gulf of Carpentaria based on the MJO composite for phase 5. For week-3, dynamical model output supports maintaining a broad 20 to 40 percent chance of TC development across the

southwestern Indian Ocean and near northern Australia east to the South Pacific. More than a 40 percent chance is posted for the Coral Sea region where the MJO composite (phases 6 and 7) also have an elevated signal.

The precipitation outlook for weeks 2 and 3 is based on the historical skill weighted blend of the GEFS, CFS, and ECMWF along with MJO precipitation composites for phases 5, 6, and 7. More than a 50 percent chance of above-average rainfall is forecast for parts of Madagascar and Mozambique from February 5 to 11, but exactly where the heaviest precipitation occurs is uncertain at this time range. Based on good model agreement, MJO precipitation composites, and increased potential for heavy rainfall associated with TCs, above-average precipitation probabilities exceed 65 percent for much of northern Australia from February 5 to 18. The South Pacific islands are favored to experience above-average rainfall during weeks 2 and 3, while the South Indian Ocean is expected to have a drying trend by mid-February.

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.