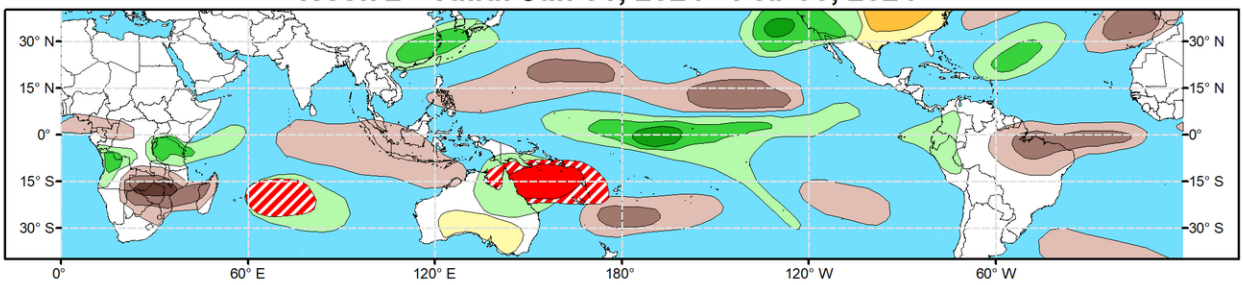
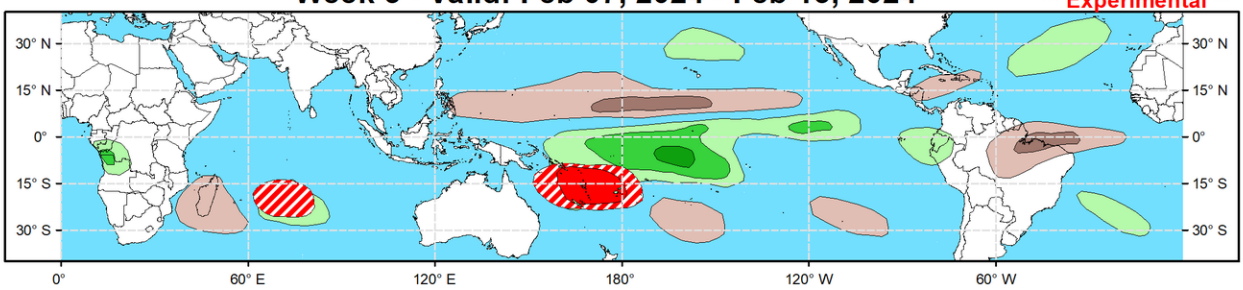
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Jan 31, 2024 - Feb 06, 2024



Week 3 - Valid: Feb 07, 2024 - Feb 13, 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: 01/23/2024
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.

Following a period of competing interference with other modes of tropical variability, the MJO became more coherent as it propagated eastward over the Maritime Continent and into the Western Pacific. Good agreement exists in the dynamical models looking ahead, which initially favor a high amplitude MJO signal over the Western Pacific that weakens and slows after the week-1 period. Enhanced convection associated with MJO activity is expected to provide favorable conditions for Tropical Cyclone (TC) development over the South Pacific Ocean, while a lingering potential for TC activity for the western Indian Ocean remains despite an unfavorable position of the MJO. The extratropical response with wintertime Maritime Continent and West Pacific MJO events typically leads to the development of warmer than normal temperatures over the central and eastern U.S. Strong subtropical westerly flow is forecast both near the surface and aloft, potentially leading to atmospheric river activity to affect the West Coast of the U.S. during the week-2 period.

There has been one TC that formed in the last week. On January 23 TC 07P formed in the Coral Sea several hundred kilometers southeast of New Guinea. Current forecasts favor a southwest track towards the northeastern coast of Australia, while increasing modestly in intensity. For the latest information on TC 07P please refer to the Joint Typhoon Warning Center (JTWC).

Model consensus for the week-2 period places the MJO in either phase 6 or 7, with enhanced convection moving from the Maritime Continent into the Western Pacific, resulting in elevated probabilities for TC formation for the South Pacific. The ECMWF extended range TC genesis forecast reflects this with probabilities of formation well over 40% for both weeks 2-3. During week-2 the highest probabilities (>40% chance) for TC genesis are centered over the Coral Sea with lower probabilities extending westward to the Gulf of Carpentaria. The

GEFS extended range forecasts also indicate the enhanced potential for TC development in the Coral Sea. The South Indian Ocean has seen increased TC activity recently, and the Joint Typhoon Warning Center is currently monitoring an area of disturbed weather east of Madagascar, which is favored to become a TC in the near future. Extended range solutions from the ECMWF favor a continuation of enhanced probabilities for TC formation during week-2 for the southwestern Indian Ocean.

Ensemble model solutions suggest a slowing in MJO propagation during week-3 with the RMM-index remaining in phase 6 or 7. Velocity potential anomaly forecasts indicate that the MJO should shift eastward at least modestly though, thus the moderate risk for TC genesis from week-2 continues but is shifted slightly eastward in week-3. In the South Indian Ocean, the ECMWF continues to indicate an enhanced potential for increased TC activity during the week-3 time period despite an unfavorable position of the MJO.

The precipitation outlook for the next two weeks is based on anticipated TC tracks, the anticipated state of the MJO, and consensus of GEFS, CFS, Canadian, and ECMWF ensemble mean solutions. Above-normal precipitation continues for the Equatorial Eastern Pacific for both weeks, a response to the El Nino conditions, while suppressed precipitation is favored to the north of the El Nino-enhanced precipitation. Continued below-normal precipitation are indicated for the lower Amazon Basin for both weeks. Atmospheric river conditions are likely along the West Coast of the U.S. resulting in above-normal precipitation for the region while phase 6/7 MJO teleconnection forcing favors above-normal temperatures for much of the Contiguous 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.