

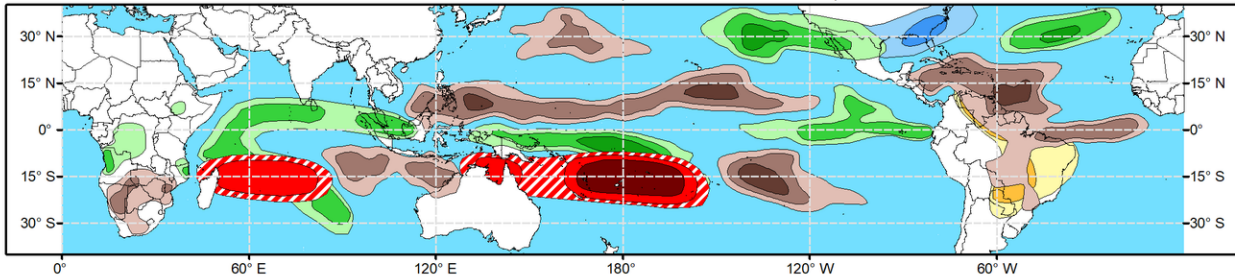


# Global Tropics Hazards Outlook

## Climate Prediction Center

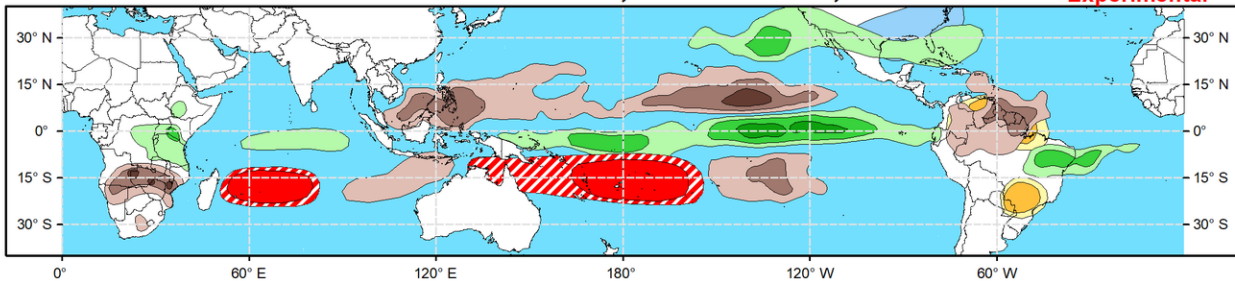


**Week 2 - Valid: Feb 14, 2024 - Feb 20, 2024**



**Week 3 - Valid: Feb 21, 2024 - Feb 27, 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: 02/06/2024**  
**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.**

Several modes of variability continue to influence the global tropics. The low frequency El Nino footprint remains established across the equatorial Pacific, along with an active Madden Julian Oscillation (MJO), which is now slowing down across the Western Pacific (Phase 7). Increased Rossby Wave activity has also been apparent through the outgoing longwave radiation (OLR) and 200-hPa velocity potential anomaly filtering throughout the tropics during the past several weeks. Dynamical models are generally incoherent in terms of the propagation of the MJO, with many individual GEFs and ECMWF ensemble members meandering the intraseasonal signal around the Date Line (phases 7 and 8). While some members ultimately weaken the MJO back into the RMM unit circle, others maintain a healthier propagation back toward Africa and the Indian Ocean. The degree of interaction with the El Nino footprint and the high frequency Rossby Wave activity will influence the behavior of the MJO during the next few weeks.

During the past week, Tropical Depression Nine developed across the southern Indian Ocean (1/31) and Tropical Cyclone Nat formed over the South Pacific (2/5), with other disturbances being monitored across both these basins for additional tropical cyclone (TC) development in the next week. The persistence of increased convection and strong low level westerlies favored across the Date Line favors at least a 60 percent chance of TC development during week-2 and 40 percent chance during week-3. Further west toward the Coral Sea and Australia, there is a bit more uncertainty as the upper-level velocity potential fields indicate a more suppressed convective pattern. However, an MJO meandering in phases 7 and 8 favors increased chances for TC development to the north of Australia and in the Gulf of Carpentaria, and this is also supported by ECMWF ensemble, which depicts elevated probabilities for TC formation. Therefore, at least a 40 (20) percent chance of TC development is indicated across this

region for week-2 (week-3).

Across the southern Indian Ocean, there are increased signals for continued TC formation despite a less favorable convective pattern aloft. The competing modes of tropical variability are likely to induce a series of Kelvin or Rossby Waves propagating across the region which could promote TC development, with the large scale convective environment perhaps becoming more favorable by week-3 as enhanced convection returns to the Indian Ocean. As a result of these factors along with the seasonal climatology, at least a 40 percent chance of TC development is indicated over the southern Indian Ocean to the east of Madagascar for weeks 2 and 3.

The precipitation outlook for weeks 2 and 3 is based on potential TC activity, El Nino composites, the MJO, and a skill-weighted consensus of GEFS, CFS, Canadian, and ECMWF ensemble mean solutions. Increased chances for above-normal precipitation are favored across much of the equatorial Pacific tied to El Nino, with below-normal precipitation favored to the north of the Equator. Following a lull in atmospheric river activity, there are renewed signals for enhanced moisture advection into the West Coast of the U.S. toward the end of week-2 and possibly into week-3. An MJO in phases 7 and 8 combined with a favored negative phase of the Arctic Oscillation is favored to induce a relatively colder pattern across southern and eastern portions of the U.S. by the second half of February. Conversely, there are strong signals for above-normal temperatures across South America, where the hottest temperatures (greater than 35 deg C/95 deg F) are forecast across parts of Venezuela and adjacent northwestern Brazil, Guyana, and Suriname, with similar temperatures also possible across parts of central and southern Brazil, and perhaps expanding further south into Paraguay and northern Argentina. Below-normal precipitation is forecast to accompany these hotter temperatures, with increasing above-normal precipitation chances providing some heat relief to northeastern Brazil by week-3.

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.