

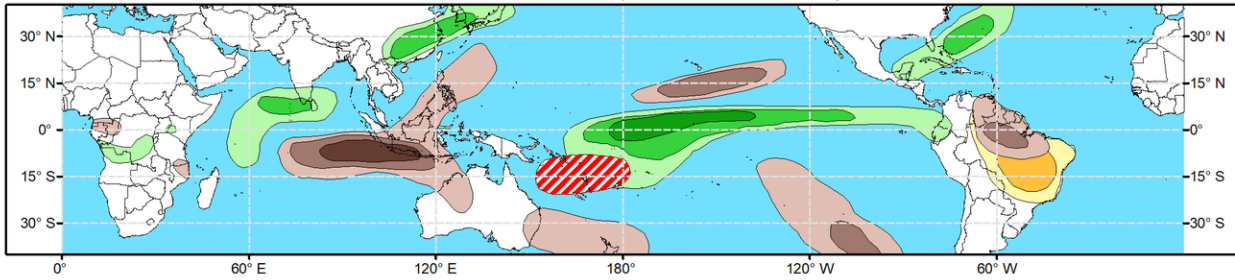


Global Tropics Hazards Outlook

Climate Prediction Center

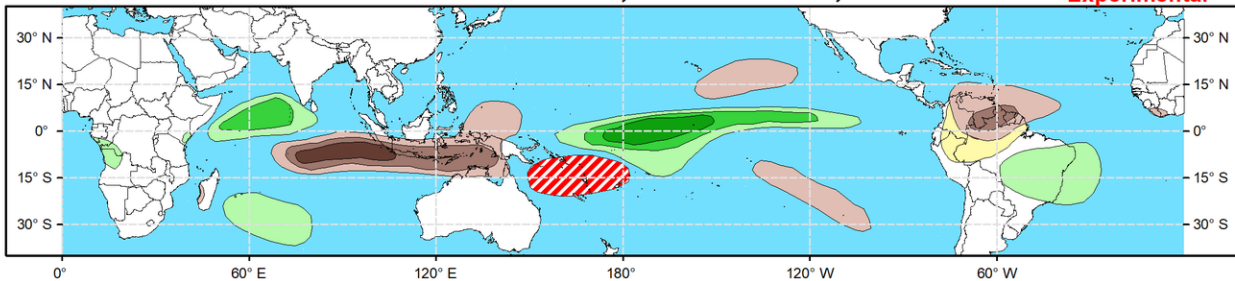


Week 2 - Valid: Dec 13, 2023 - Dec 19, 2023

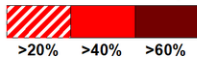


Week 3 - Valid: Dec 20, 2023 - Dec 26, 2023

**** Experimental ****

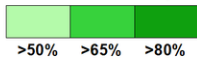


Tropical Cyclone (TC) Formation Probability



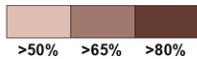
Tropical Depression (TD) or greater strength

Above-Average Rainfall Probability



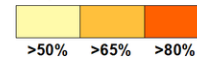
Weekly total rainfall in the Upper third of the historical range

Below-Average Rainfall Probability



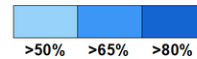
Weekly total rainfall in the Lower third of the historical range

Above-Average Temperatures Probability



7-day max temperatures in the Upper third of the historical range

Below-Average Temperatures Probability



7-day min temperatures in the Lower third of the historical range

Issued: 12/05/2023

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.

The dominance of low-frequency modes (ENSO, IOD) in the global tropics has been declining over the last several weeks as the MJO has become stronger and more coherent. Starting in mid-November the RMM-based MJO signal increased in amplitude, moving out of the unit circle as the MJO propagated steadily across Africa and the Indian Ocean. Currently the MJO continues to propagate eastward with a high amplitude, with the enhanced convective envelope moving into the Maritime Continent. Dynamical models depict continued eastward propagation and fairly strong signal strength during the next 2-3 weeks. Models are also indicating a generally quiet period for tropical cyclone (TC) development, with enhanced TC activity favored for the South Pacific only during the coming forecast period.

There have been two TCs that formed in the last week. On 12/3, Michaung formed in the Bay of Bengal. It tracked west-northwest and intensified, making landfall north of Chennai, India on 12/5. It is expected to dissipate over land in the coming days. TC Jasper formed on 12/4 near the Solomon Islands east of New Guinea. Current forecasts indicate that Jasper will intensify as it moves southwestward towards the Gold Coast of Australia. For the latest information on TC Jasper or TC Michaung please refer to the Joint Typhoon Warning Center (JTWC).

Model consensus places the MJO in phase 6 during the week-2 period, enhancing convection over the Maritime Continent and the South Pacific and suppressing convection over the Indian Ocean. While phase 6 generally enhances TC genesis probabilities over the Western and South Pacific, guidance from the ECMWF and GFS is less supportive of a TC spinning up in these basins during the forecast period. Nonetheless, both ensembles indicate some potential for the South Pacific, so a 20% probability of TC genesis is posted for much of the Coral Sea

and extending eastward to Fiji for week-2. Models depict increased shear over the Western Pacific, reducing the impact of organizing enhanced convection from the MJO and the potential for TC genesis. With strongly suppressed convection over the Indian Ocean, no areas of potential TC development are highlighted for any of the ocean's TC formation regions throughout weeks 2-3. Model consensus for the week-3 period places the MJO in either phase 6 or 7, shifting the enhanced convective envelope slightly further away from the Maritime Continent. In either case, the South Pacific basin would continue to have elevated probabilities for TC formation. The ECMWF extended range TC genesis forecast reflects this potential with probabilities of formation exceeding 30% for both weeks 2-3. Accordingly the area highlighted for enhanced TC genesis in the South Pacific for week-2 extends to week-3 as well.

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. Below-normal rainfall is also indicated for the western Maritime Continent and eastern Indian Ocean throughout the forecast period. Continued below-normal precipitation as well as above-normal temperatures are indicated for much of northern South America for both weeks, though central Brazil is favored for above-normal precipitation 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.