

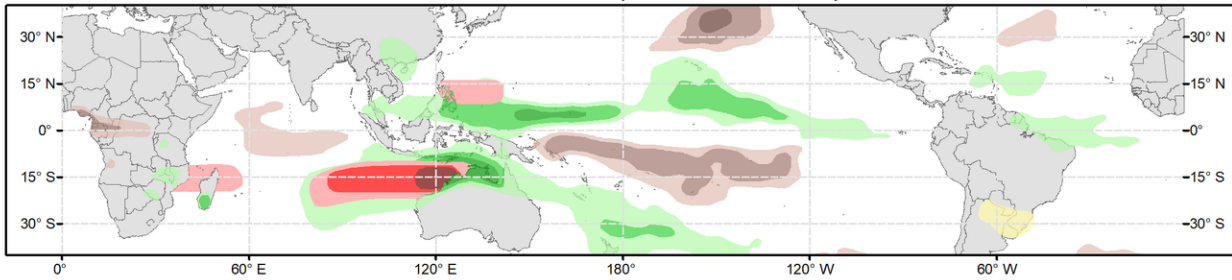


Global Tropics Hazards Outlook

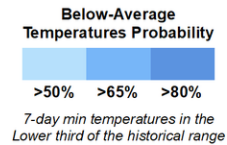
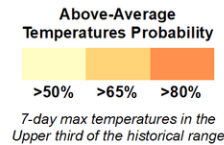
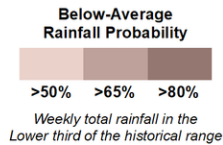
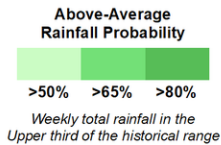
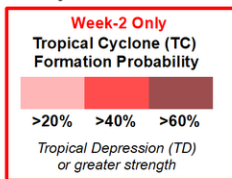
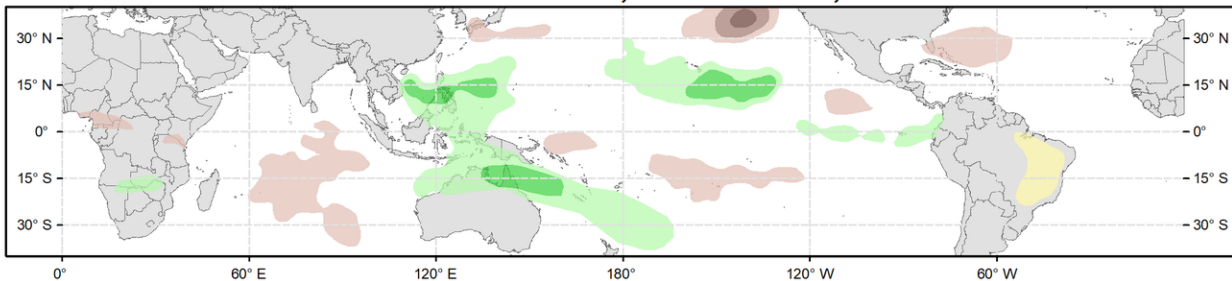
Climate Prediction Center



Week 2 - Valid: Feb 08, 2023 - Feb 14, 2023



Week 3 - Valid: Feb 15, 2023 - Feb 21, 2023



Issued: 01/31/2023

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.

The amplitude of the RMM-based Madden-Julian Oscillation (MJO) index increased during late January, but its eastward propagation recently slowed over the Indian Ocean. The 200-hPa velocity potential anomaly field depicts a coherent wave-1 pattern with a strong magnitude of anomalous upper-level divergence (convergence) centered over the Indian Ocean (Americas). The dynamical model MJO forecasts are in good agreement that the MJO resumes its eastward propagation through mid-February as it shifts to the Maritime Continent and West Pacific. Many of the GFS ensemble members have trended towards a stronger MJO event by week-2 when it reaches the West Pacific, while the ECMWF ensemble members are weaker with its amplitude. The MJO is likely to influence global tropical rainfall and modulate tropical cyclone (TC) development during the next two to three weeks. In addition, the week-2 dynamical model output for the mid-latitude circulation/temperature pattern for the North Pacific and North America matches up well with lagged MJO composites (phase 3). An MJO propagating from the Indian Ocean to the Maritime Continent typically contributes to above-normal temperatures across the eastern and central U.S. 10 to 20 days from the present time.

The MJO provided an increasingly favorable pattern for TC development across the Indian Ocean basin by late January with enhanced convection and reduced wind shear. Following Tropical cyclone Chensho in the southwestern Indian Ocean, the Joint Typhoon Warning Center is currently monitoring two areas for potential TC formation, near Sri Lanka and also across the southern Indian Ocean. Based on the likelihood that the MJO propagates eastward to the Maritime Continent and West Pacific during the next two to three weeks, the favored TC development area is forecast to expand towards Australia during week-2. Dynamical model output along with MJO composites for phases 4 and 5 result in a >40 and >60 percent chance of TC genesis across the southern Indian Ocean

(along and east of 90E) and near the Kimberley coast of Australia from February 8 to 14. Recent deterministic GFS and ECMWF model solutions along with their ensemble members support a 20 percent chance of TC formation in the Mozambique Channel and near Madagascar. A 20 percent chance of TC genesis is posted for the West Pacific, east of the Philippines for week 2, with support from the GEFS and CFS model.

The precipitation outlook for weeks 2 and 3 are based on a historical skill weighted blend of the GEFS, CFS, ECCO, and ECMWF models, MJO precipitation composites for phases 4, 5, 6, and 7, and considerations on the ongoing La Nina background state. The most likely areas for above-average rainfall include parts of the Maritime Continent, northern Australia, and the west-central Pacific, to the north and south of the equator. This favored wet area extends north to Hawaii. By Week-3, a drying trend is expected across the Indian Ocean as the suppressed phase of the MJO overspreads this region. Model solutions support a 50 percent chance of above-average temperatures shifting north from northern Argentina and Uruguay to Brazil during weeks 2 and 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.