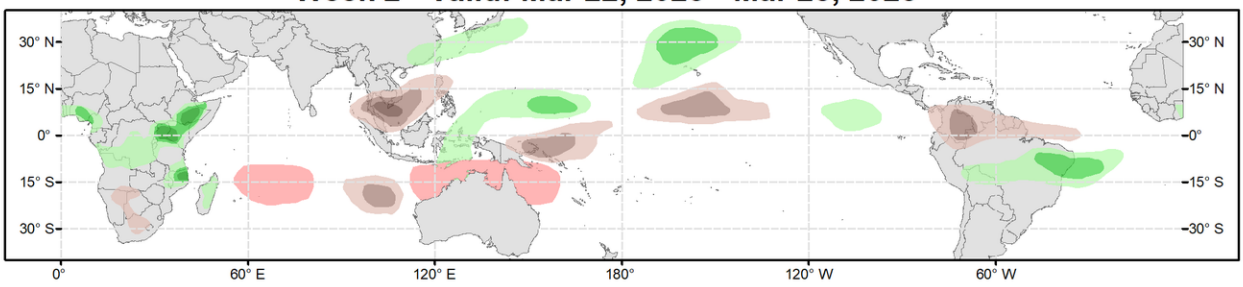
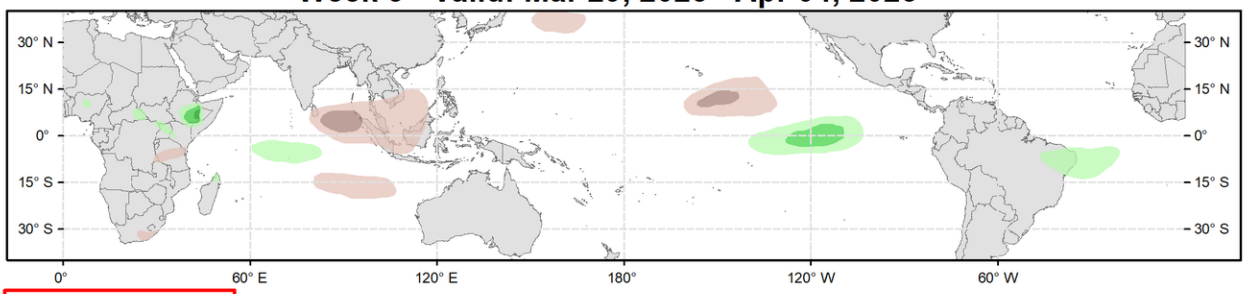
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Mar 22, 2023 - Mar 28, 2023



Week 3 - Valid: Mar 29, 2023 - Apr 04, 2023



Week-2 Only
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: 03/14/2023
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 Madden-Julian Oscillation (MJO) has strengthened significantly over the first half of March after being subject to interference from the La Nina base state and copious Rossby Wave activity and is currently in phase 8 at very high amplitude. Dynamical model MJO index forecasts are in good agreement that the MJO propagates eastward during the next two weeks with a steadily decreasing signal strength. There is more uncertainty for week-3, with the GEFS and ECMWF extended runs suggesting continued eastward propagation of MJO signal. CFS and BOMM favor a slowdown of eastward movement, with diverging solutions as to signal strength. La Nina conditions are weakening as enhanced trade winds over the tropical Pacific subside and periodic anomalous low-level westerlies continue to erode anomalously cold upper-ocean heat content of the Equatorial Pacific.

It has been a quiet week for tropical cyclone (TC) activity in the tropics. There have been a series of tropical disturbances over the South Pacific Ocean, which all dissipated rather than organizing into TCs.With the MJO forecast to gradually weaken and shift east into the Indian Ocean, conditions remain favorable for tropical cyclone (TC) formation along the northern coast of Australia and extending from the Timor Sea to the Coral Sea, which is also supported by guidance from GEFS and ECMWF. Due to increasingly favorable conditions over the Indian Ocean tied to the MJO, along with ECMWF guidance, a slight chance (20% probability) for TC genesis is also posted in the southern Indian Ocean east of Madagascar.

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, and ECMWF ensemble mean solutions. Suppressed convection near the Date Line due to La Nina is rapidly breaking down, but is still present during week-2; this signal

weakens during the week-3 time period. Below-normal precipitation is also indicated for portions of Southeast Asia and the Maritime Continent during both weeks, particularly during week-2. Enhanced precipitation is indicated during week-2 for the Hawaii region. Enhanced precipitation is also favored for eastern Brazil for both weeks, while below-normal precipitation is favored for northern South America during week-2.

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.