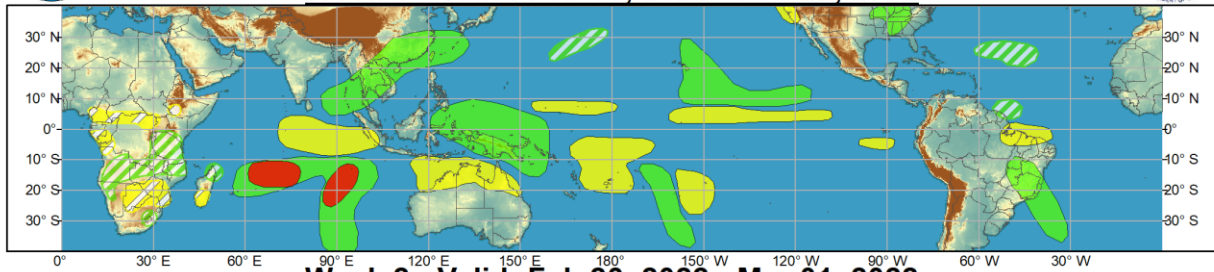




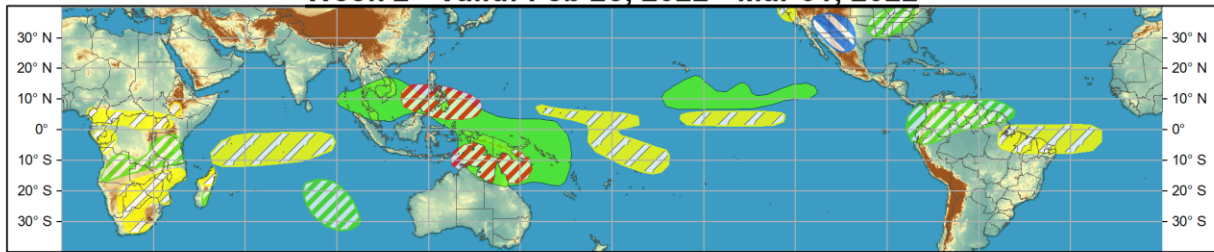
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Feb 16, 2022 - Feb 22, 2022



Week 2 - Valid: Feb 23, 2022 - Mar 01, 2022



Confidence
High Moderate

- Tropical Cyclone Formation** ■ ▨ Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Above-average rainfall** ■ ▨ Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** ■ ▨ Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** ■ ▨ 7-day mean temperatures in the upper third of the historical range.
- Below-normal temperatures** ■ ▨ 7-day mean temperatures in the lower third of the historical range.

Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

Produced: 02/15/2022

Forecaster: Collow



Following a weakening of the Madden Julian Oscillation (MJO) during late January, enhanced convection has developed across the Indian Ocean in response to increased equatorial Rossby Wave Activity. This favors a reemergence of the intraseasonal signal, with the ECMWF and GEFS ensembles depicting eastward propagation of the signal toward the Maritime Continent and far Western Pacific during the next 2 weeks (RMM phases 3-5). The JMA, however, meanders the MJO in phase 3 with little eastward propagation. While there is some uncertainty in how far east the MJO propagates, its emergence over the eastern Indian Ocean is expected to constructively interfere with the ongoing low frequency La Nina signal. This favors an atmospheric response typical of La Nina across the extratropical regions of the Pacific and North America during late February and early March, with relatively warmer conditions becoming increasingly likely over the eastern half of North America.

In the absence of the MJO, other higher frequency modes of variability have contributed to the convective pattern across the globe. Equatorial Rossby Waves resulted in enhanced convection and subsequent tropical cyclone (TC) formation across the southern Indian Ocean, and in the southwest Pacific. Tropical Storm Dumako developed over the southwest Indian Ocean on 2/13 and is currently approaching Madagascar where it is expected to dissipate as it moves across the island. Over the

southwest Pacific, Tropical Cyclone Dovi formed on 2/8 and made landfall on New Caledonia bringing widespread flooding and high winds to the island, along with Vanuatu. The system continued to strengthen into a Severe Tropical Cyclone (equivalent to a category 2 hurricane) before impacting northern New Zealand as an extratropical system bringing extensive flooding to the region.

A more coherent velocity potential pattern is observed across the globe during the past few days compared to the weeks prior, with suppressed (enhanced) convection mainly dominant across the western (eastern) Hemisphere. This pattern is consistent with La Nina, in addition to a reemergence of the MJO over the eastern Indian Ocean. Future TC activity is expected to coincide with the areas of enhanced convection, with conditions over the Southern Indian Ocean remaining favorable for TC development during the next weeks. Two potential TCs (96S and 97S) are given a high confidence for TC formation during week-1. Based on model guidance, 97S is forecast to track southwestward and remain over open waters, and 96S is predicted to track westward, perhaps reaching Madagascar later in week-1 or early week-2. During week-2, the most favorable area of TC formation is forecast to shift eastward toward the Maritime Continent, tied to the MJO propagation. Some ECMWF and GEFS ensembles continue to indicate TC development to the north of Australia during week-2, where a moderate confidence shape is depicted. Additional TC development is also possible across the far Western North Pacific as supported by CFSv2 ensembles. While this would be outside of the typical climatological development period, favorable conditions associated with the MJO, combined with positive sea surface temperature anomalies could lead to TC development over the region, and therefore a moderate confidence area is depicted in today's outlook.

The precipitation outlook during the next two weeks is based on a consensus of GEFS, CFS, and ECMWF model solutions, and MJO precipitation composites for phases 3, 4, and 5. High confidence for above average rainfall continues across the southern Indian Ocean during week-1, tied to predicted TC tracks. The highest rainfall chances are forecast to shift eastward by week-2, with the high risk area encompassing parts of the Maritime Continent and West Pacific. Increased chances for below normal rainfall are highlighted throughout the equatorial Central Pacific during the next 2 weeks, although extratropical influences are likely to bring some areas of enhanced rainfall, particularly in the vicinity of Hawaii. Enhanced rainfall is also possible across parts of the east-central contiguous U.S. tied to predicted frontal activity. Cold overnight temperatures (below 40 deg F) are possible across parts of the Southern Plains, Desert Southwest, and northern Mexico early in week-2 associated with mid-level troughing forecast to move across the region, which may result in some agricultural impacts for areas not acclimated to these colder temperatures.

For hazardous weather concerns during the next two weeks across the U.S., please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's

Week-2 Hazards Outlook. Forecasts over Africa are made in consultation with the International Desk at CPC and can represent local-scale conditions in addition to global scale variability.