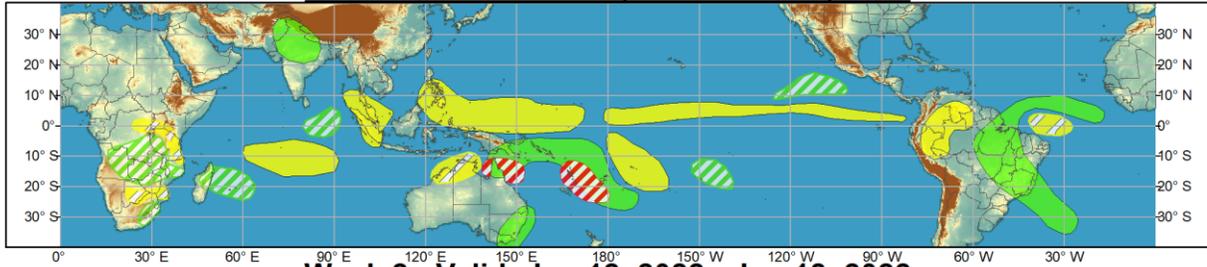




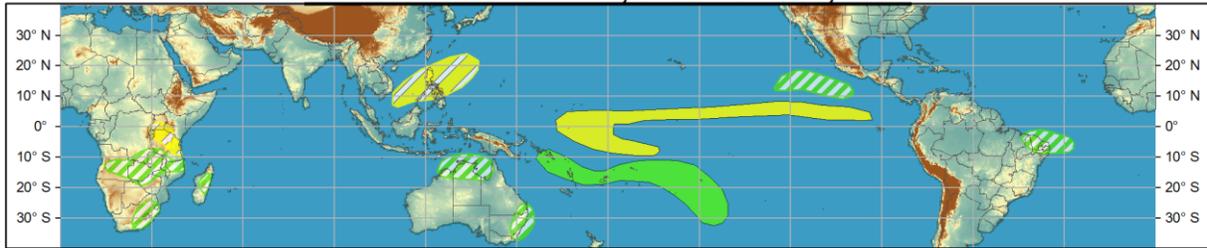
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Jan 05, 2022 - Jan 11, 2022



## Week 2 - Valid: Jan 12, 2022 - Jan 18, 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.

Produced: 01/04/2022

Forecaster: Collow

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.



A robust Madden Julian Oscillation (MJO) signal emerged during the month of December over the Western Pacific, and is now situated near the border of RMM phases 7 and 8. Its eastward propagation has slowed and meandered during the past two weeks due to ongoing destructive interference with the low frequency base state. A persistent cyclonic storm system over the North Pacific is also resulting in a disruption of the trades over the equatorial Pacific, further reducing the coherency of the intraseasonal signal. Dynamical model forecasts from the GEFS indicate large ensemble spread regarding the evolution of the MJO, with a meandering signal in the ensemble mean during the next two weeks. The ECMWF indicates quicker weakening of the MJO compared to the GEFS. Despite the weakening MJO, there are indications that the enhanced convective signal may continue to propagate around the globe via a Convectively Coupled Kelvin Wave, and this is evidenced by the JMA ensemble, which indicates a low amplitude signal (near the RMM-unit circle) reaching Africa by mid-January.

The only new tropical disturbance during the past week was Tropical Cyclone Seth over the South Pacific. Seth originated from a low over the Arafura Sea, which tracked eastward across northern Australia, eventually reemerging into the Coral Sea where it developed into a tropical cyclone on 12/31, peaking at an intensity of 60-mph. Enhanced chances of tropical cyclone (TC) development continue to

be favored across the southwestern Pacific, tied to the MJO. Model guidance, particularly the ECMWF, depicts TC development near northeastern Australia late in week-1 (moderate confidence), with a track across the northern part of the continent through early week-2 leading to enhanced chances of heavy rainfall. Conditions also remain favorable for TC development in the vicinity of Vanuatu and Fiji, where a broad moderate risk area is designated during week-1. A weakening MJO, along with suppressed convection across the Indian Ocean, and the climatology for this time of year decreases the chances of TC formation in week-2, and no areas are depicted in the outlook.

The precipitation outlook during the next two weeks is based on consensus of GEFS, CFS, and ECMWF guidance, anticipated TC tracks, and contributions from the MJO and La Nina conditions. Overall, below normal precipitation is forecast across the equatorial Pacific, with above normal precipitation favored for portions of the Pacific south of the equator. The lack of coherency of the higher frequency signals in the tropics reduces forecast confidence going into week-2. 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.