

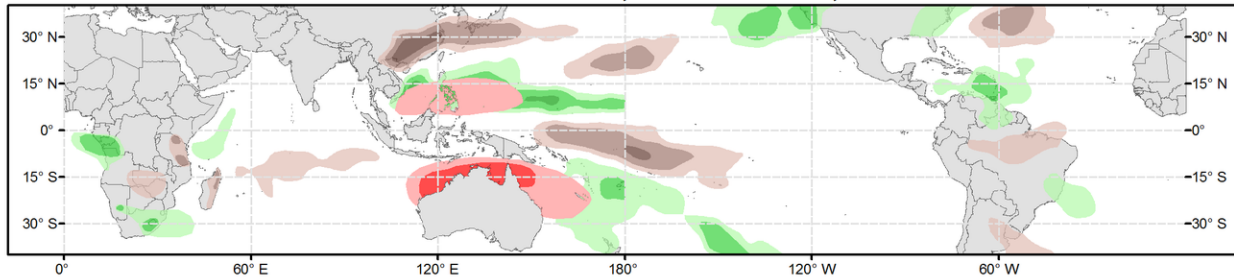


Global Tropics Hazards Outlook

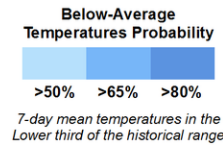
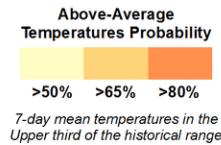
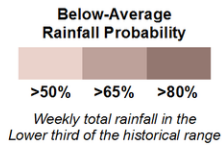
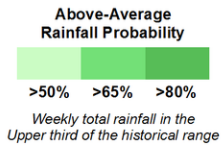
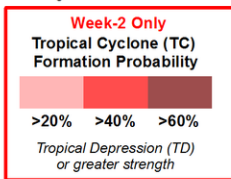
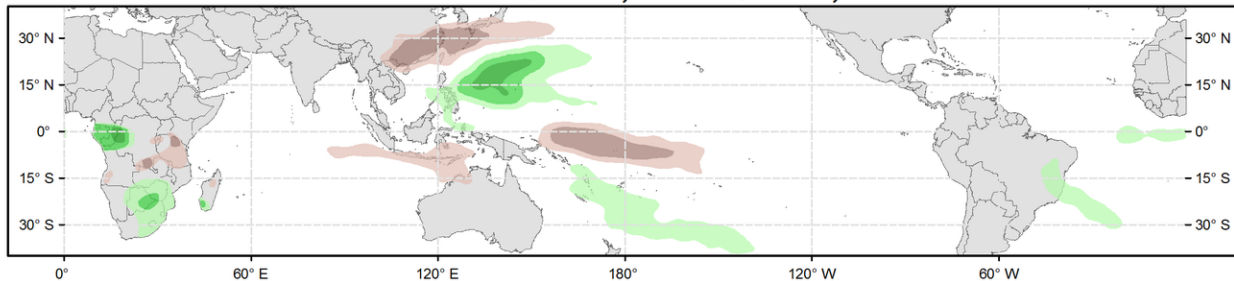
Climate Prediction Center



Week 2 - Valid: Jan 04, 2023 - Jan 10, 2023



Week 3 - Valid: Jan 11, 2023 - Jan 17, 2023



Issued: 12/27/2022
Forecaster: Allgood

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.

Recent observations, including both the CPC upper-level velocity potential based and RMM-based MJO indices, reflect an active MJO signal, with the enhanced phase currently crossing the Maritime Continent. Rossby wave interference over the Indian Ocean that led to a weaker projection of the MJO onto the RMM index for much of December has relaxed, and clear eastward propagation has been established over the past week. A Maritime Continent MJO tends to constructively interfere with the La Niña base state, and trade winds have recently strengthened across the west-central Pacific. Dynamical model MJO forecasts are in fair agreement supporting continued evolution of the MJO, with the signal propagating to the West Pacific during Week-1, and possibly the Western Hemisphere by Week-2. Many ensemble members from both the GEFS monthly and extended ECMWF depict the signal returning to the Indian Ocean by Week-4. During the Boreal winter months, the MJO teleconnects well into the downstream midlatitude pattern, and the anticipated warmth over the eastern U.S. during Week-2 is consistent with a lagged response to an Indian Ocean and Maritime Continent MJO. As the signal crosses the West Pacific, the MJO response favors a pattern change towards increased troughing over the eastern US, and recent Weeks 3-4 forecasts over the US are beginning to reflect this signal; however, a lack of substantial cold air over Canada may help limit the potential for severe cold air outbreaks.

Two tropical cyclones formed over the Indian Ocean basin during the past week. Tropical Storm Ellie formed on 22 December north of Australia, and made landfall over Northern Territory, causing generally light damage. Cyclone Darian formed over the eastern Indian Ocean on 18 December, strengthening to a strong Category-4 intensity on the Saffir-Simpson scale while moving generally westward. Now well southeast of Diego Garcia, Cyclone Darian is forecast to weaken while recurving over the southern Indian Ocean. During the Week-2

period, an MJO crossing from the Maritime Continent to the West Pacific tends to favor tropical cyclogenesis north of Australia and over the Coral Sea, as well as the Northwest Pacific in the vicinity of the Philippines. Despite a fairly strong South Pacific Convergence Zone (SPCZ), dynamical models do not favor tropical cyclone development east of the Coral Sea.

Forecasts for above- and below-normal precipitation are based on a consensus of dynamical model inputs, with an anticipated continuation of La Niña conditions and an active MJO crossing the West Pacific towards the Western Hemisphere. Due to destructive interference between the MJO and the base state, widespread enhanced convection is not favored near the Equator, but dynamical models indicate widespread MJO-associated convection both north and south of the Equator, in the vicinity of Guam, north of New Guinea, and near the Philippines, and along the SPCZ. The wet signal over the Northwest Pacific is favored to shift slightly poleward during Week-3.

For hazardous weather concerns in your area during the next two weeks, please refer to your local NWS office, the Medium Range Hazards Forecasts from the Weather Prediction Center (WPC), and the CPC Week-2 Hazards Outlook. Forecasts issued over Africa are made in coordination with the International Desk at CPC.