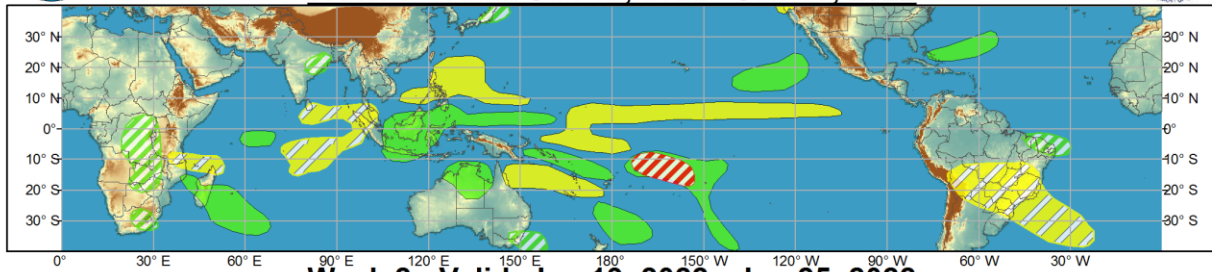




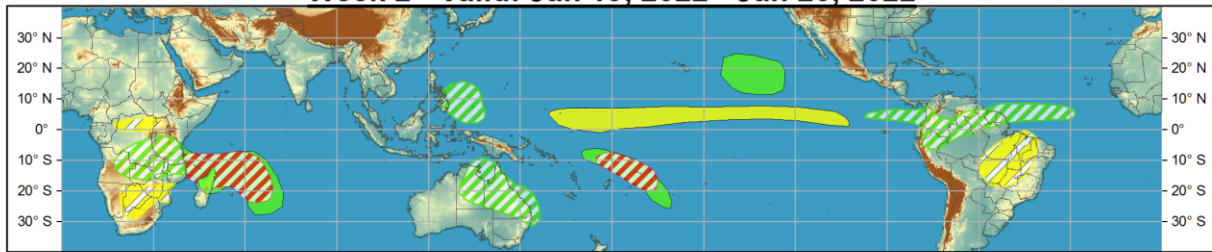
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



**Week 1 - Valid: Jan 12, 2022 - Jan 18, 2022**



**Week 2 - Valid: Jan 19, 2022 - Jan 25, 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: 01/11/2022**

**Forecaster: Allgood**



While the RMM-based MJO index continues to depict an enhanced signal over the West Pacific that has propagated eastward towards the central Pacific in recent days, the upper-level velocity potential anomaly field is weak and incoherent, indicating a lack of a robust intraseasonal signal. Recent observations of zonal wind and OLR anomalies reflect repeated Rossby wave generation over the Pacific, likely induced by strong midlatitude circulations intruding into the tropics. These Rossby waves are destructively interfering with the ongoing La Nina signal, and have occasionally caused a weakening of the trade wind regime. The Rossby wave activity has been reflected on the RMM-based MJO index as a meandering signal over the West Pacific, with alternating eastward advancements and westward retreats of the index. Dynamical model MJO index forecasts indicate new Rossby wave activity over the central Pacific, with a brief enhancement near Phase-8 that quickly weakens and shifts westward back towards Phase-6 over the next two weeks, followed by a strengthening West Pacific signal once again. Based on these outlooks, the MJO is not favored to play a substantive role in the evolution of the global tropical convective pattern or the extratropical response. Additionally, while a westerly wind burst during December initiated a strong downwelling oceanic Kelvin wave, the westerly winds generated by the Rossby wave activity has been primarily off-equator, and thus less effective at generating new downwelling waves. These events may help to weaken the upwelling phase of the ongoing oceanic Kelvin wave.

Two tropical cyclones formed during the past week. Tropical Storm Tiffany formed north of the Gulf of Carpentaria, moved over the Coral Sea, then reversed course and made landfall over northern Queensland at Category-1 intensity on the Saffir-Simpson scale. The system is now over the Gulf of Carpentaria, and forecasts from the Joint Typhoon Warning Center (JTWC) show continued westward movement with a second landfall over Northern Australia. Tropical Storm Tiffany is favored to bring widespread heavy rainfall to northern Australia during Week-1, with rainfall remaining enhanced over Northern Australia and Queensland during Week-2. Further east, Tropical Storm Cody formed west of Fiji, and JTWC forecasts depict a generally southward track towards colder waters north of New Zealand. During the upcoming two weeks, continued Rossby wave activity over the central and western Pacific raises the potential for additional South Pacific tropical cyclogenesis. Dynamical model forecasts show a potential closed low formation near or east of American Samoa during Week-1, with a second cyclone formation possible further west during Week-2, also in the vicinity of American Samoa. Elsewhere, an enhanced convective signal over the southwestern Indian Ocean may provide a favorable environment for tropical cyclone development over the Mozambique Channel or in the vicinity of Madagascar during Week-2.

The precipitation outlook is based on dynamical model consensus, anticipated tropical cyclone tracks, an ongoing response to La Nina as sea surface temperatures remain well below normal in the Nino 3.4 region, and strong Rossby wave activity over the Pacific. The South Pacific Convergence Zone (SPCZ) is favored to remain active, while enhanced rainfall over Australia may generate hazardous flooding conditions. In contrast, abnormally dry conditions favored across south-central Brazil may continue to exacerbate drought conditions and crop stress. 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.