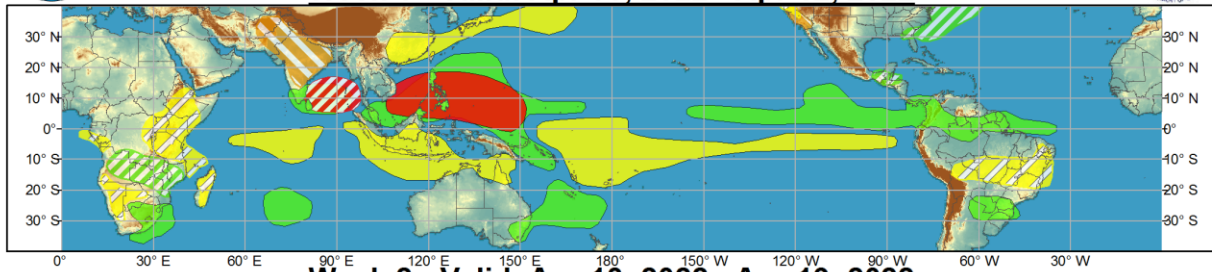




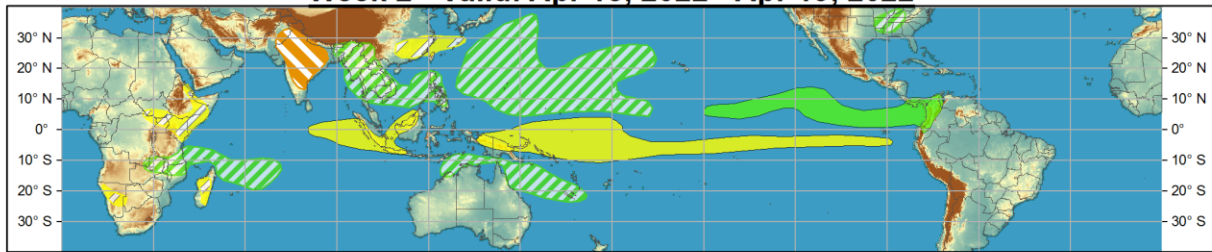
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Apr 06, 2022 - Apr 12, 2022



Week 2 - Valid: Apr 13, 2022 - Apr 19, 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: 04/05/2022

Forecaster: Allgood



The Madden-Julian Oscillation (MJO) remained weak as projected on the RMM-based MJO index, though an amplified eastward propagating upper-level signal remains distinct on the CPC 200-hPa velocity potential based index. Destructive interference between the MJO and ongoing La Nina conditions prevented the development of enhanced convection over the central Pacific, with OLR anomalies near and west of the Date Line remaining strongly positive. This interference decoupled the upper-level signal from active convection, causing the weakening RMM signal. What is left of the MJO enhanced phase is now over the Western Hemisphere, and low-level westerlies along with enhanced convection have been observed recently over the East Pacific. The juxtaposition of enhanced convection and westerly anomalies across the East Pacific and suppressed convection and enhanced trades near the Date Line has resulted in a complex and chaotic pattern across the Pacific. Dynamical model MJO index forecasts do not appear to propagate this remnant MJO signal across the Indian Ocean; in fact, both the GEFS and ECMWF depict an amplifying enhanced convective signal developing over the West Pacific. The ECMWF is more progressive with this signal, showing a rapid eastward propagation from the Maritime Continent back to the East Pacific or Western Hemisphere over the next two weeks, while the GEFS favors a slower evolution overall, with some ensemble members achieving fairly high amplitude over the West Pacific. It is possible that tropical cyclone (TC) activity in the dynamical model forecasts is playing a role in this quick transition towards the West Pacific, as a potential for multiple TCs in the

region may help promote westerly wind bursts closer to the Equator. Should this pattern unfold as forecast, new downwelling oceanic Kelvin wave activity may initiate, resulting in a weakening of La Nina conditions later in the boreal spring season.

During the past week, one tropical cyclone formed globally. Tropical Storm Fili formed to the west of the Vanuatu archipelago on 4 April 2022, and is currently moving southeastward while slowly intensifying. Forecasts from the Joint Typhoon Warning Center (JTWC) bring this TC near or west of New Caledonia over the next several days, with a potential brief strengthening to Category-1 intensity on the Saffir-Simpson scale before slow weakening begins south of New Caledonia as the system encounters cooler sea-surface temperatures (SSTs). During Week-1, dynamical model forecasts indicate a potential for substantially increased tropical cyclone activity across the Northern Hemisphere. The JTWC is currently monitoring two invest areas over the West Pacific, 94W just east of the Philippines, which has a low to moderate potential for development, and 95W north of New Guinea, which has a moderate to high potential for development. Additional development appears likely over the South China Sea, with recent runs of the GFS depicting the potential for powerful TCs forming over both the West Pacific and South China Sea. Due to the likelihood of multiple TCs forming in this region, a broad high-confidence TC formation hazard is included on the outlook for Week-1. Across the Indian Ocean, dynamical model forecasts indicate a moderate potential for tropical cyclogenesis over the Bay of Bengal during Week-1 in association with a broad disturbance. While TC activity is likely to persist into Week-2, confidence in new TC formation decreases. Some dynamical models, notably the CFS, depict pre-season tropical cyclone formation along the enhanced East Pacific ITCZ. Confidence in this outcome remains very low, however, and both the GFS and ECMWF show any closed low formations over the East Pacific having durations of under a day.

The precipitation outlook is based on a consensus of GEFS, CFS, and ECMWF bias-corrected model forecasts, existing or anticipated TC activity, and climatological patterns during La Nina and MJO events. Above-normal SSTs are likely to continue contributing to enhanced precipitation near and along the western coast of South America near the Equator, with an increased potential for flooding events. Although pre-monsoonal heat is climatologically typical across South Asia, there are enhanced chances for extreme heat in the upper range of the climatological distribution, with maximum temperatures exceeding 40 degrees Celsius across much of India and Pakistan. Much above-normal temperatures are also favored for eastern Asia during Week-1 and the eastern CONUS during Week-2, but hazardous temperatures are not anticipated at this time.

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.