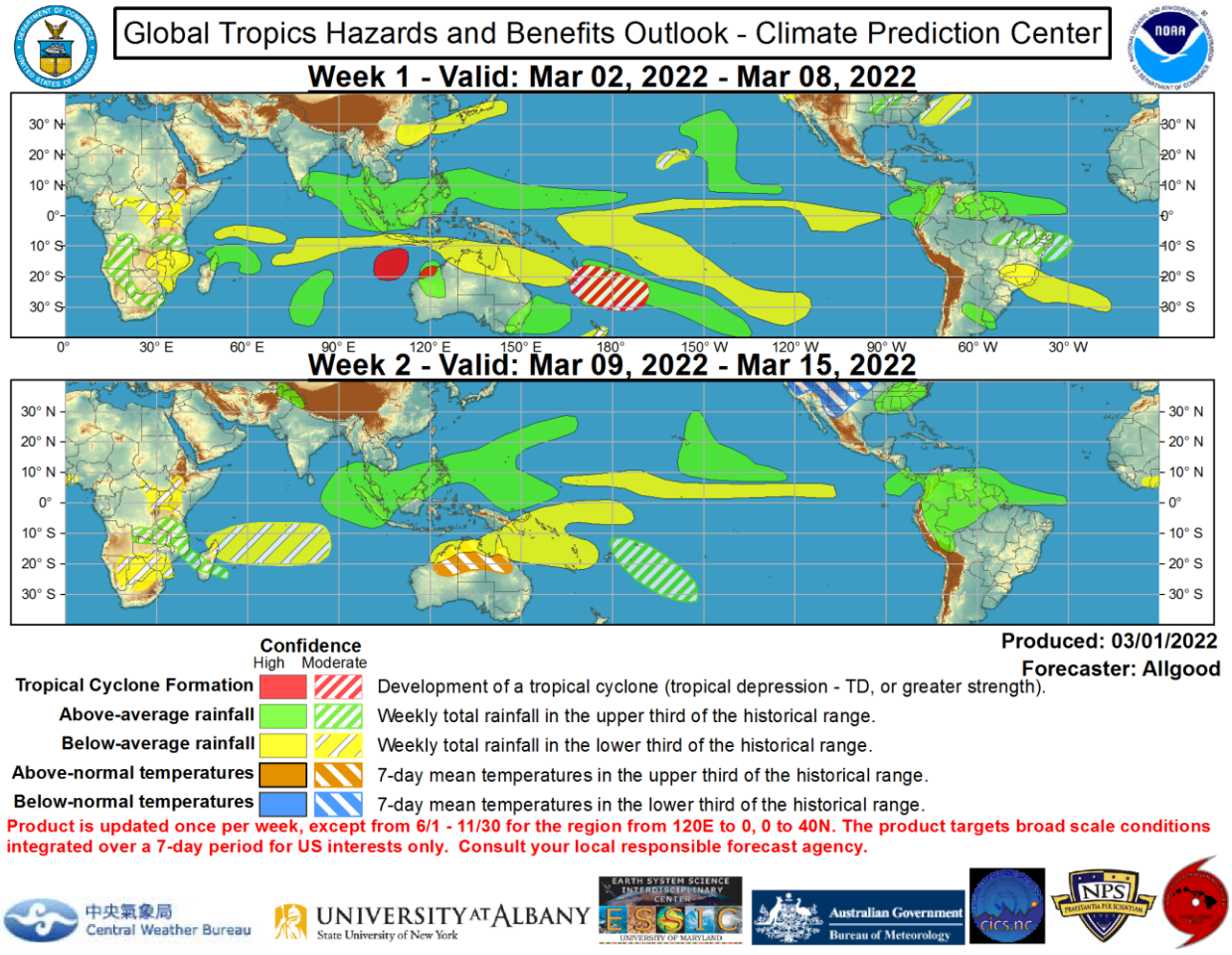

Analyses of recent observations are reflective of an active Madden-Julian Oscillation (MJO) pattern, with the enhanced convective phase propagating across the Maritime Continent. The CPC velocity potential based MJO index exhibits a robust signal, with an eastward propagating Wave-1 pattern, although the RMM-based MJO index has weakened substantially over the past several days. Recent constructive interference between the La Nina base state and the emerging MJO over the Indian Ocean promoted a resurgent La Nina response, with enhanced trade winds now spanning the entire Pacific basin, the South China Sea, and Southeast Asia. This low frequency signal is beginning to destructively interfere with the leading edge of the MJO enhanced convective envelope, and the MJO impacts to the wind field are limited to the Southern Hemisphere. Given the lack of a shift towards low-level westerly wind anomalies across the West Pacific, La Nina conditions are favored to remain in place, and the future evolution of the MJO is uncertain. Dynamical model MJO index forecasts which previously depicted a signal reaching the Pacific now exhibit a weak or incoherent pattern, though some ECMWF ensemble members continue to depict propagation over the Pacific. There is some indication from the GEFS and ECMWF extended run of a faster moving mode circumnavigating the globe and initiating renewed MJO activity beyond the Week-2 period. Therefore, the MJO may play a role in the global tropical convective pattern during Week-1, but its influence is more uncertain beyond that period. The upper-level signature is

more likely to cross the Western Hemisphere, which may promote enhanced rainfall across northern South America during the outlook period.

Two new tropical cyclones (TCs) formed over the southern Indian Ocean during the past week. TC Vernon formed near the Cocos Islands on 25 February, strengthening to a peak intensity of 115 kt sustained winds while moving generally westward. Now at tropical storm intensity, TC Vernon is forecast by the Joint Typhoon Warning Center to move south-southwestward over the next five days over the open ocean. Further east, TC Anika formed north of Australia before making landfall over the northern tip of Western Australia. The remnants of TC Anika are now just off the Kimberley Coast, and there is a high potential for redevelopment before the circulation center moves back onshore. During the upcoming week, there is a high potential for new tropical cyclogenesis over the southeastern Indian Ocean east of the Cocos Islands. A moderate potential for TC formation exists over the southern Pacific Ocean near New Caledonia and Fiji, as the MJO contributes to an enhanced South Pacific Convergence Zone (SPCZ). Additionally, enhanced convection and warm SSTs may promote early tropical cyclone development over the Bay of Bengal, though confidence in a March TC formation is too low to include a hazard on the outlook. During Week-2, there are no areas specifically favored for TC formations.

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 historical MJO and La Nina conditions. A break in monsoon activity over northern Australia may promote a period of hot temperatures during Week-2, while troughing over western North America favors a cold outbreak for the southwestern US and parts of northern Mexico. 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.