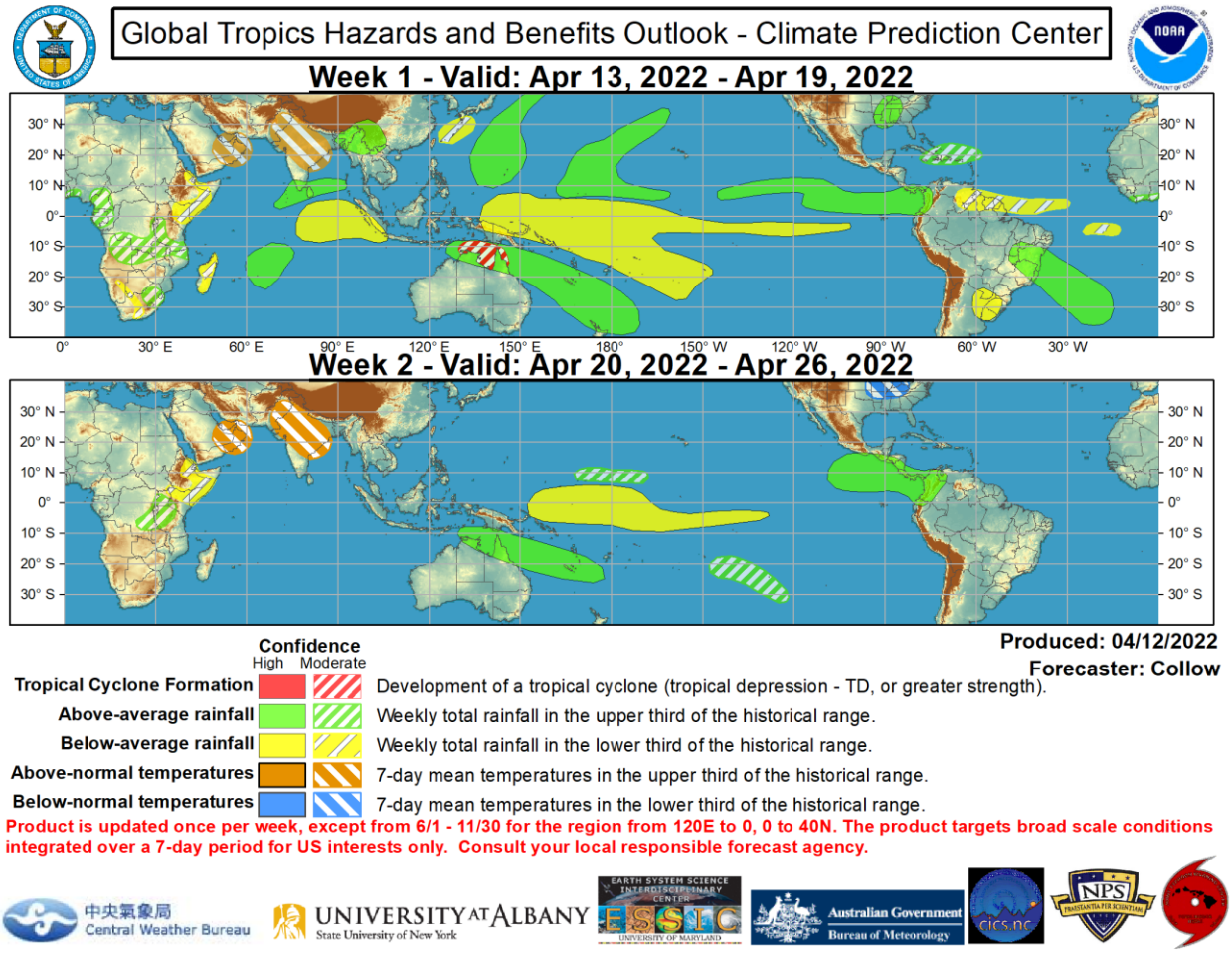

Following an active Madden Julian Oscillation (MJO) signal that propagated eastward across the Indian Ocean and Maritime Continent during March, the intraseasonal signal has since decayed into the RMM-based unit circle. A recent increase in the amplitude of the RMM-based MJO signal within the unit circle is likely tied to enhanced Rossby Wave activity and associated increased convection across the Western Pacific. Models are uncertain regarding the evolution of the MJO, given the well established La Nina base state. The GEFS and ECMWF depict a large amount of spread among its ensemble members, although some renewed MJO propagation emerging over the Western Hemisphere is possible by week-2.

As a result of the increased convection across the Western Pacific, there has been an uptick in tropical cyclone (TC) activity in the region. Typhoon Malakas developed on 4/7 and is forecast to recurve across the North Pacific in the coming days, likely remaining to the southeast of Japan. Tropical Storm Megi formed on 4/9, and moved slowly over the Philippines, leading to a prolonged period of heavy rainfall and flooding. During the next week, an eastward shift of the convective envelope toward the Americas and Atlantic is favored, which would result in an expansion of suppressed convection across the Indian Ocean and Western Pacific. This would limit TC development, and therefore no TC formation areas are

designated in todayâ€™s forecast over these areas during the next 2 weeks. In the southwest Pacific, some dynamical model ensembles, particularly the GEFS, suggest increased potential for TC development in the vicinity of the Gulf of Carpentaria late in week-1, and a corresponding moderate risk for TC formation is highlighted over the region.

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. Increased upper-level divergence forecast over the Americas favors heavy rain persisting across the equatorial eastern Pacific and northwestern South America, resulting in additional flooding impacts. 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 deg C across much of India and Pakistan, and extending through the southern Arabian Peninsula. The recurving of Typhoon Malakas across the North Pacific may result in an amplification of the troughing across the northeastern Pacific, and perhaps an atmospheric river event into the west coast of the contiguous U.S. The evolving mid-level pattern as well as the potential for the MJO to reemerge in RMM phases 8 or 1 favors a relatively cool pattern for the eastern CONUS, with continued chances for spring frosts across parts of the region.

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.