

The MJO remained weak during the past seven days. Atmospheric Kelvin waves and Equatorial Rossby Waves (ERW) are dominating the distribution of tropical convection, as tropical cyclone activity has been below average this year for most basins. The MJO is not predicted to strengthen significantly or contribute to tropical convection during the next two weeks. Other modes of variability are likely to contribute to signals in the RMM-based and CPC Velocity Potential Index, so those indices are still used as proxies for locations of convection across the globe.

Tropical Storm Cindy developed over the Gulf of Mexico and moved northward, making landfall in Louisiana. Hurricane Dora formed over the eastern Pacific, and is forecast to move away from major landmasses. During the next week, tropical cyclone formation odds are elevated for portions of the tropical Atlantic and portions of the western North Pacific. Odds for formation over the Atlantic ramp up later in Week-1, so the indicated area on the CPC outlook is further west and north relative to the area indicated on the NHC 5-day tropical weather outlook. NHC also indicates a low threat of tropical cyclone formation for the eastern Pacific, again with a signal increasing through day 5. Signals for an increased threat of tropical cyclogenesis over the Western North Pacific are present in multiple dynamical model and statistical model tools, and also increase throughout the week. Tropical cyclone formation odds remain enhanced for tropical Atlantic into Week-2, though further north and west of the Week-1 area. Over the Western North Pacific, two areas are highlighted by different models (GEFS and multiple statistical models), both of which are included in the official outlook. Some dynamical models indicate an uptick in tropical cyclone potential over the eastern Pacific into Week-2, so that is included in the outlook. The signals ramping up in the eastern Pacific and Atlantic are consistent with the likely progression of a Kelvin wave into the region, and potential interaction with an ERW over the Americas.

A northward surge in the Southwest Monsoon and possible monsoon depression support an enhanced threat of heavy rains over Pakistan and Northern India, while drier than average conditions are likely over southern India and Southeast Asia. Predicted interactions between a Kelvin wave and an ERW result in small spatial scale anomalies over the Maritime Continent, though the available model tools favor slightly enhanced rainfall. The recent active period in the West African Monsoon is likely to be begin to wane with some easterly waves enhancing precipitation over western Africa.

During Week-2, some enhanced rains are likely over central Africa. A relaxation of the Southwest Monsoon associated rains over India is likely to shift northward during Week-2, while convection starts to rebuild near Sumatra. The Kelvin wave over the Maritime continent during week-1 is likely to move eastward and increase rainfall and tropical cyclone potential over the eastern Pacific and western tropical Atlantic, near the Lesser Antilles.

Forecasts over Africa are made in consultation with CPCs international desk, and can represent localscale conditions in addition to global-scale variability.