

The MJO maintained a robust amplitude and propagated eastward over the Indian Ocean during the previous week according to the Wheeler-Hendon MJO Index. The CPC MJO Index also indicated eastward propagation of the MJO convectively active phase over Africa and the Indian Ocean, with a slowed propagation speed towards the end of the period. Other modes of subseasonal variability are apparent in the global tropical convective pattern, including the convectively enhanced phase of a westward propagating Rossby wave over the Maritime Continent, and several tropical cyclones.

Dynamical and statistical model outputs depict modest agreement that the MJO signal will propagate into phase 3 during the upcoming week, with some models maintaining a robust amplitude and others weakening the signal. There is greater variance among the models in Week-2, with the GFS depicting a loss of MJO coherence, and the UKMET and European models continuing an eastward propagation of the signal. Statistical model forecasts continue the eastward propagation of the MJO signal over the Maritime Continent.

The tropics were active across multiple basins during the previous week. Typhoon Soulik formed over the western Pacific on 7 July and is currently moving west-northwestward and is favored to strengthen east of Taiwan. Hurricane Erick formed on 4 July in the eastern Pacific and passed just to the south and west of Baja California while weakening. Tropical Storm Chantal developed on 8 July over the central tropical Atlantic and is currently moving west northwestward through the Lesser Antilles. The probability of tropical cyclogenesis remains moderate over the tropical Atlantic, as a vigorous easterly wave is forecast to emerge south of the Cape Verde Islands and translate westward during the upcoming week. Upper-level conditions are conducive for tropical cyclogenesis. Tropical cyclogenesis is less likely over the eastern Pacific basin, as the suppressed phase of the MJO propagates over the Western Hemisphere. Subsidence behind Typhoon Soulik reduces the chances for near term tropical cyclone formation over the western Pacific, but the probability of cyclogenesis increases by Week-2.

The Week-1 outlook is based on the anticipated propagation of the MJO signal through phase 2, with continued interactions among other large scale tropical circulation features. Enhanced rainfall associated with a weakness in the subtropical ridge and potential tropical cyclone activity is favored over the southeastern CONUS, the Bahamas, and the northern Caribbean. A moisture surge over the Gulf of California associated with the remnants of Erick is forecast to maintain enhanced monsoon activity over western Mexico and the southwestern CONUS. Enhanced convection is also possible over parts of the African monsoon regions, India, and the central Indian Ocean based on the MJO phase. Enhanced convection is also favored over the Maritime Continent as the enhanced convective phase of an equatorial Rossby wave propagates westward, while suppressed convection is anticipated over the Philippines and western Pacific basin.

During Week-2, suppressed convection is favored to propagate eastward over the eastern Pacific and Central America. Enhanced convection is forecast to develop eastward over the Bay of Bengal and Maritime Continent in association with the MJO. Enhanced monsoon rainfall is forecast to continue over Africa, while tropical cyclogenesis becomes more likely over the western Pacific.