

The MJO strengthened during the past week, with eastward propagation across the Western Hemisphere towards Africa (RMM Phase-8 into Phase-1). Enhanced convective anomalies were observed over the tropical Americas, Africa, and the equatorial Indian Ocean, while a large area of suppressed convection overspread the western Pacific basin. Other modes of subseasonal tropical convective variability continued to influence the global pattern, with large scale enhanced upper level convergence observed over the western Atlantic. In fact, the CPC Extended Empirical Orthogonal Function (EEOF) analysis of upper-level velocity potential indicates a weak MJO signal. No tropical cyclogenesis occurred over the Atlantic basin during the previous week, while two tropical storms developed over the eastern Pacific with no landfalls. A tropical storm formed northeast of Taiwan, and is expected to make landfall in southern Japan within 24 hours.

Dynamical model forecasts favor a weakening of the MJO signal during the upcoming week, while statistical models support a continued propagation of the convective phase into the Indian Ocean. Several ensemble models, including the GEFS, European, and the UKMet forecast an increase in MJO amplitude during Week-2, with the active phase over the western Pacific. These forecasts do not support a coherent eastward propagation of the MJO. Based on current observations and the dynamical forecasts, the MJO is anticipated to play a decreasing role in the global tropical convective pattern during the upcoming two weeks. GFS and CFS model forecasts diverge considerably during Week-2, particularly over the western Pacific.

A tropical disturbance currently near the southwestern shore of Mexico is situated in an environment favorable for tropical cyclogenesis. The National Hurricane Center indicates an 80-percent chance of formation of this system during the upcoming five days. Additional tropical cyclone formation is possible over the eastern Pacific during Week-2, although with lower confidence. A tropical wave currently over the Yucatan Peninsula has a moderate chance of development once it emerges over the Bay of Campeche. Regardless of development, the system is likely to bring widespread rainfall to eastern Mexico. Further east, a weak tropical wave has some potential for development as it progresses west-northwestward just north of the Leeward Islands. The current MJO phase also supports possible tropical cyclogenesis over the eastern Atlantic main development region (MDR) during the upcoming two weeks. Although the tropical cyclone season typically begins in October over the southern Indian Ocean, there is a slight chance for tropical cyclone formation northeast of Madagascar during the Week-1 period.

During Week-1, enhanced rainfall is anticipated over the eastern Indian Ocean and western Maritime Continent, including southern India. The North American Monsoon is forecast to remain active, with ongoing tropical cyclone activity near the Baja Peninsula supporting northward surges of Gulf moisture. A large area of suppressed convection associated with the MJO is forecast over the western Pacific, extending from the South China Sea eastward to the Date Line. During the Week-2 period, enhanced convection is possible over the Maritime Continent and the equatorial western Pacific. A continuation of enhanced North American Monsoon activity is anticipated, with additional Gulf Surges possible. There is considerable forecast uncertainty regarding the convective patterns over the Indian Ocean and central Pacific.