

The MJO remained active during the previous week, with the CPC 200-hPa velocity potential based index indicating that the enhanced convective phase is currently propagating over Africa. Other coherent modes of tropical convective variability continue to strongly influence the pattern. A strong Kelvin Wave propagating ahead of the main MJO envelope is promoting enhanced convection over the eastern Indian Ocean and parts of the Maritime Continent. The Kelvin Wave is apparent both in the spatial upper-level velocity potential field and on the RMM MJO Index, which showed fast propagation across the Indian Ocean during the past several days. Additionally, above normal sea surface temperatures over the eastern Pacific are promoting continued enhancement of the ITCZ. A low frequency state evolving towards potential El Nino conditions in the Pacific continues to modulate the subseasonal signals.

Dynamical model MJO index forecasts present varying solutions for the evolution of the MJO as it propagates over the Indian Ocean. The GFS and UKMet models weaken the signal as the low frequency mode favoring suppressed convection over the Indian Ocean and Maritime Continent destructively interferes with the MJO enhanced phase. In contrast, the ECMWF model maintains a more robust MJO signal propagating over the Indian Ocean. Based on recent observations of the robust MJO propagation,

the MJO is anticipated to continue an eastward propagation over the Indian Ocean towards the Maritime Continent during the outlook period, although the strength and coverage of convective anomalies associated with the MJO is uncertain due to influence from the base state.

No tropical cyclones developed during the previous week, and limited activity is anticipated to continue early into the forecast period. The GFS and CFS ensembles indicate a potential for tropical cyclogenesis during the late Week-1 or early Week-2 period over the eastern Pacific in association with lingering enhanced convection. Additionally, as the Kelvin Wave emerges over the western Pacific, there is a chance for tropical cyclone formation east of the Philippines, most likely during the Week-2 period. There is also a low and decreasing potential for a developing tropical cyclone over the Bay of Bengal, based on several ensemble GFS and CFS members.

During Week-1, enhanced convection associated with the MJO is favored over the Gulf of Guinea and adjacent African nations. Enhanced convection is also forecast for the equatorial central Indian Ocean, the northeastern Indian Ocean, and parts of the Maritime Continent in association with both Kelvin Wave activity and the MJO. Enhanced convection is anticipated to linger over the eastern Pacific, with some moisture influx possible over southern Mexico and northern Central America. Further east, suppressed convection is favored for southern Central America, northern South America, and the adjacent southern Caribbean. Suppressed convection is also favored over the South China Sea and the Philippines, which is consistent with both the MJO and the low frequency base state. A trough of low pressure over the Bahamas is forecast to generate enhanced convection early during Week-1.

Suppressed convection is forecast to persist over northern South America and southern Central America during Week-2, with lingering enhanced convection favored over the eastern Pacific and Gulf of Guinea region. Enhanced convection is forecast over the Horn of Africa and northwestern Indian Ocean, as well as the northeastern Indian Ocean. As the suppressed phase of the MJO propagates away from the central Pacific, above normal sea surface temperatures favor enhanced convection along and north of the equator from the Date Line eastward to 135W.