

The MJO remained active during the past week with the enhanced convective phase now generally centered across Africa. Enhanced convection associated with the MJO developed strongly over areas in the Americas and Africa while suppressed convection dominated the eastern Indian Ocean (IO) and much of the western Pacific. A strong atmospheric Kelvin wave (KW) shifted eastward through and out ahead of the main MJO convective envelope during the past week and is already increasing convection across the equatorial Indian Ocean (IO) over the last few days. Easterly low-level wind anomalies have increased across the equatorial Indian Ocean and Africa in advance of the upcoming enhanced convective phase of the MJO. Tropical Depression 12 developed close to the Mexico coast in the last week but did not strengthen to tropical storm strength, although it did produce heavy rains.

The WH MJO index showed continued eastward propagation with an increase in amplitude during the past week as the enhanced convective phase shifted to Phase 1. The observed evolution of the MJO index was well forecast by most of the models from both one and two weeks ago, although they were a bit slow with forecasts from two weeks ago.

The MJO is forecast to remain active with most MJO index model forecasts indicating continued eastward propagation well into Phase 3 by the end of the two week period. It is interesting to note that all models forecast a decrease in amplitude over the period and slow eastward propagation, primarily later in Week-2. Some of this decrease in amplitude is most likely related to other forms of subseasonal variability destructively interfering with the slower MJO mode. For example, the suppressed phase of the KW currently moving through the region may act to temper enhanced convection associated with the MJO across the IO during part of the period.

For Week-1, The MJO favors enhanced convection for equatorial Africa, much of the Indian Ocean and areas in the Americas. Model guidance also strongly supports enhanced rainfall over the regions in the Americas. The MJO favors suppressed convection over portions of the western Pacific. The combination of the MJO and La Nina increases chances for suppressed convection over the central equatorial Pacific. There still remains a threat for tropical cyclogenesis for mainly the Caribbean Sea during this period associated with MJO phase. The Joint Typhoon Warning Center is monitoring a system in the Bay of Bengal for potential development and so this rea is highlighted for potential development. Some model guidance also indicates potential tropical development across the eastern Pacific basin, but there is considerable model disagreement so no hazard area is depicted.

During Week-2, enhanced convection in the eastern Hemisphere is forecast to shift eastwards with the MJO and include the Indian Ocean and western Maritime continent. The threat for tropical development in both the Arabian Sea and Bay of Bengal increases due to the MJO and the climatological relaxation of the monsoon circulation, although confidence is somwhat low. The combination of the MJO and La Nina continue to increase chances for suppressed convection over the central equatorial Pacific during this period as well.

An early look at the beginning of Week-3 favors the continuation of enhanced convection across the eastern sections of the IO and the MC with some drying across the western areas of the IO, but uncertainty is increasing and considerably higher than what has been observed during the past few weeks.