

The MJO remained active during the past week with the enhanced convective phase shifting from the Maritime continent to the western Pacific and its focus is primarily north of the equator. Atmospheric Kelvin wave (KW) activity continues to be superimposed on the slower ongoing MJO variability and an equatorial Rossby wave (ERW) has contributed to maintaining enhanced convection across Southeast Asia. The Asian monsoon circulation was much weaker than in previous weeks. Enhanced convection was observed from Southeast Asia across the western Pacific and also across much of west-central Africa. Drier-than-average conditions were observed over India, the western Maritime continent and various areas across the tropical western hemisphere. Super typhoon Nalgae impacted the Philippines with dangerous winds and heavy rainfall during the past week.

The WH MJO index showed continued eastward propagation during the past week, but this movement has slowed in recent days most likely because it is being impacted by westward moving convective activity in the far western Pacific and Southeast Asia. The observed evolution of the MJO index was somewhat well forecast from both one and two weeks ago, although the amplitude of the index as forecast by the models was too weak and in some instances too fast.

The MJO is forecast to remain active with MJO index model forecasts indicating continued eastward propagation of the enhanced convective phase from the western Pacific to the western hemisphere (WH phase 6 to 8) over the next two weeks. There is very good model agreement in this forecast. At the current time, the amplitude of the MJO index forecasts favors at least moderate strength MJO activity.

For Week-1, enhanced convection is forecast from the South China Sea into the western Pacific and suppressed convection is favored from India across the eastern Indian Ocean to Indonesia primarily associated with the MJO. tropical cyclone Nalgae is expected to result in heavy rainfall very early in the period across parts of southeast Asia. Tropical cyclone development remains a threat east of the Philippines as the enhanced phase of the MJO exits this region. The MJO favors tropical development in the eastern Pacific and enhanced rainfall across portions of Central America and northern South America during this period. A frontal boundary and general low pressure favors enhanced rainfall for the Bahamas and parts of the Caribbean islands and Florida and increases the threat for tropical devlopment north of Cuba in close proximity to Florida during Week-1. Model forecast guidance continues to favor above-average rainfall for areas in west central Africa.

The area of suppressed convection in the eastern hemisphere is forecast to shift eastward and encompass the Maritime continent and begin to impact the western Pacific. Later during Week-2, there is some potential for convection to increase across east central Africa and the western Indian Ocean ahead of the next enhanced convective phase of the MJO. During Week-2, the MJO signal continues the threat for tropical cyclone development in the eastern Pacific and enhanced rainfall in the Americas as well as increases the chances of tropical cyclone development in the western Caribbean Sea.

For local U.S. interests, the forecast MJO phase would favor continued potential for above-average precipitation for the Northwest quarter of the U.S. during much of the period including parts of California. The MJO also increases the threat for tropical cyclogenesis in the western Caribbean Sea during Week-2 and if development occurs the Southeast U.S. should monitor for a potential track to the north and east.