

The MJO remained generally weak over the past week and not well defined by a number of common monitoring tools. There has continued to be a gradual eastward propagation of a low amplitude MJO like signal over the past several weeks with the center of any MJO enhanced convective phase located across the western Pacific. The strong suppressed convective phase has failed to materialize across the Indian Ocean in part associated with active phases of atmospheric Kelvin waves (KW) passing through this region persisting enhanced convection in some of these areas contributing to the weak projection in a number MJO indices. There is also other KW activity in other areas in the Tropics, namely crossing the Pacific Ocean at the current time.

The main large areas of enhanced convection observed over the past week were located across the western Pacific Ocean north of Papua New Guinea to the Date Line south of the equator, areas in the eastern Indian Ocean and western maritime continent and substantial portions of southern Africa. Strong suppressed convection was evident over northern Australia and northeast Brazil. Three tropical cyclones developed in the past week, one east of Sri Lanka, Bejisa east of Madagascar and Ian in the south Pacific near the Date Line.

MJO index model forecasts do not indicate strengthening of the MJO during the next two weeks and based on the latest observations and model forecasts, the MJO is forecast to remain weak but may in part, contribute to enhanced convection across parts of the western South Pacific and suppressed convection across parts of the Indian Ocean and Brazil.

Given the strength and uncertainty of some of subseasonal tropical variability moving forward, the outlook is largely driven by dynamical model guidance and highlighted areas are very regional. An upper-level low pressure system is forecast to create a very unstable environment in proximity to the Hawaiian Islands during Week-1 and favors above-median precipitation and locally heavy rainfall. Strong easterly flow and a couple low-latitude frontal systems favor enhanced rainfall across the Yucatan Peninsula. An area of active convection moving westward favors enhanced rainfall for the Philippines and parts of the western Pacific to its east and in fact there is some potential for this region of disturbed weather to organize into a tropical cyclone during the period. Continuation of a strong anticyclone favors drier than average conditions for northwest Australia. Model guidance is consistent in forecasting suppressed rainfall for parts of southern Africa and Brazil, the latter being consistent with any MJO signal. Frontal activity favors continued wet conditions for areas of south central South America. The ensemble GFS indicates strong signals for tropical cyclone development in the southern Indian Ocean southwest of Sumatra as well as in the southern Mozambique Channel, accompanied by heavy rainfall.

Confidence is low during Week-2 and highlighted areas are mainly related to model guidance and in some cases above-average SSTs as well as persistence. Enhanced rainfall is favored for areas in the western Pacific, the eastern Maritime continent and northern Australia while suppressed rainfall is forecast to persist over northeast Brazil. The potential for tropical cyclone development is also elevated for waters north of Australia.