

Following a brief period of an active MJO during early May, the MJO became less coherent recently as the enhanced phase advanced east of the Maritime Continent. Short-lived Tropical Storm Alvin developed across the eastern Pacific Ocean, while Tropical Cyclone Mahasen made landfall in Bangladesh during the past week.

Dynamical model MJO index forecasts indicate a weak signal during Week-1 which is partly attributed to interference from other tropical subseasonal variability. Beyond Week-1, models indicate renewed organization with the enhanced phase across the Western Hemisphere and Africa.

The Week-1 outlook is based primarily on anomalous convection associated with subseasonal modes of variability and dynamical model forecasts. The suppressed phase of an equatorial Rossby wave favors below average rainfall across the central Indian Ocean, while dynamical model forecasts indicate below average rainfall across the Philippines. Anomalous low-level convergence is expected to result in below average rainfall across western Africa. An atmospheric Kelvin wave elevates the chances for tropical cyclone development across the East Pacific. Convection is expected to increase over

the eastern Pacific and Central America due to the aforementioned Kelvin wave and the expected enhanced phase of the MJO organizing over the Western Hemisphere by the end of Week-1.

The Week-2 outlook is based on the expectation of a renewed organization of the MJO with its enhanced phase across the Western Hemisphere and Africa. Although dynamical MJO index forecasts differ on the exact evolution of the MJO signal, models generally agree on the enhanced phase of the MJO centered over the Western Hemisphere. Below average rainfall is expected to continue across the Philippines and expand east across the western Pacific Ocean. The Indian Ocean, south India, Sri Lanka, and western Africa are expected to become more convectively active which is consistent with MJO precipitation composites. Above average rainfall is likely to persist across the eastern Pacific Ocean, Central America, and shift east into the western Caribbean Sea. Warmer than normal SSTs and enhanced convection maintains elevated chances for tropical cyclone development across the eastern Pacific Ocean. A large scale ridge predicted over the southern CONUS and Gulf of Mexico during Week-2 is expected to reduce wind shear and provide favorable conditions for tropical cyclone development across the northwestern Caribbean Sea. Due to the reduced wind shear in an area of enhanced convection, the development of an early season tropical cyclone is favored for the northwest Caribbean Sea. The GFS model has been consistent in developing a potential tropical cyclone in the northwestern Caribbean Sea in early June.