

The MJO has become better organized during the past week as several observational indicators are now more coherent. Dynamical model MJO index forecasts indicate an eastward propagating signal during the upcoming week, but spread and uncertainty increases during the week-2 period. Based on the latest observations and most model forecasts, the MJO is forecast to be active with the enhanced convective phase propagating eastward across the Maritime Continent to the western Pacific during the next two weeks.

Two hurricanes that developed over a week ago (Leslie and Michael) continued moving northward in the Atlantic Ocean. Leslie brought heavy rainfall to Bermuda during the past week while TD14 formed in the central Atlantic and is forecast to move northwestward. In the West Pacific, Tropical Storm Sanba formed east of the Philippines and is forecast to move northwestward toward eastern China and southern Japan.

The enhanced convective phase of the MJO is forecast to move across the Maritime Continent (phases 4 and 5) during Week-1. Anomalous rainfall forecasts (both above and below average areas) are heavily

based on MJO rainfall composites for these two phases. Above average rainfall is forecast from southern India to the Philippines into the western Pacific, while below average rainfall is forecast for the eastern equatorial Indian Ocean and the Caribbean Islands. Model guidance and current satellite imagery also support enhanced rainfall for parts of India, Southeast Asia, and the Bay of Bengal. Above average sea surface temperatures also support enhanced precipitation for the western Pacific.

The MJO increases the odds for tropical cyclone development in the western Pacific, east of the Philippines. Above average rainfall is forecast for the East China Sea, along the forecast track of Tropical Storm Sanba. Tropical cyclone development is also likely is the eastern Pacific, just south of Mexico, associated with a broad area of low pressure and consistent with the approach of an atmospheric Kelvin wave. Environmental conditions are conducive for development early in the forecast period. The is a slight chance of tropical cyclone development in the northwest Atlantic, off of the U.S. Southeast Coast, associated with a weakening frontal boundary forecast in the region, however, forecast confidence is low at the current time so no area is highlighted. There is an increased chance for below average rainfall over part of western Africa associated with anomalous northerly winds, and there is an increased chance for above average rainfall over the Gulf of Guinea region of Africa, associated with anomalous southwesterly winds and low level convergence.

The enhanced phase of the MJO is forecast to move into the western Pacific (phase 6) during Week-2, and rainfall forecasts are heavily based on MJO rainfall composites for this phase. Above average rainfall is forecast for northern India and from Southeast Asia to the Philippines and western Pacific, while below average rainfall is forecast for the eastern Indian Ocean and western Maritime Continent. Model guidance also supports enhanced precipitation across parts of southern and southeast Asia. There are enhanced chances for tropical cyclone development in the western Pacific, east of the Philippines, due to the enhanced phase of the MJO over the region. There are also enhanced chances for tropical cyclone development in the tropical Atlantic associated with much above average sea surface temperatures, generally reduced wind shear across eastern areas of the mid development region, and the forecast period is near the climatological peak of the hurricane season in this region. The exiting suppressed convective phase of the MJO, however, counteracts these factors so confidence is only moderate.