

Ongoing interactions between a Kelvin wave and Rossby wave mentioned last week promoted widespread convection over the Indian Ocean, and an increase in amplitude of the RMM-based MJO index. The CPC velocity potential index remains active due to a fairly coherent Wave-1 asymmetry, with the enhanced envelope currently centered over the western Indian Ocean. Based on these observations, the MJO appears to be more active, and dynamical and statistical model forecasts depict eastward propagation over the Maritime Continent during the upcoming week. Uncertainty increases during Week-2 as the model-based RMM projections struggle to resolve competing areas of enhanced convection lingering over the Indian Ocean, possibly related to tropical cyclone activity, and the West Pacific due to constructive interference between the intraseasonal signal and the low-frequency base state. Due to these competing signals, it is difficult to ascertain the extent to which a developing MJO would teleconnect to the evolving midlatitude pattern. CPC's official 8-14 day outlooks are fairly consistent with such teleconnections, with ridging south of the Aleutians and over the eastern CONUS.

No new tropical cyclones developed during the past week, although the remnants of Tropical Storm Esther continue to bring enhanced rainfall to the desert regions of Australia. During the upcoming week, dynamical models depict a fairly active pattern across the southern Indian Ocean, with GEFS ensemble members developing tropical cyclones over the Mozambique Channel, east of Madagascar, over the south-central Indian Ocean, and over the eastern Indian Ocean south of Sumatra. The Joint Typhoon Warning Center is currently monitoring a disturbance east of Madagascar (Invest 91S) that has a low potential for development over the next 24 hours. During the Week-1 period, there is a moderate potential for this system to become a tropical depression before recurving towards the southeast. The next area of greatest formation potential is over the south-central Indian Ocean in late Week-1 or early Week-2, in association with widespread enhanced convection. During Week-2, new tropical cyclone development is possible in the vicinity of Australia, with the potential shifting from the Coral Sea early in the period to the Gulf of Carpentaria.

During Week-1, dynamical models favor enhanced precipitation across northern Pakistan, northern India, and Nepal, as well as the southern Indian Ocean. Consistent with the MJO and the base state favoring convection near the Date Line, enhanced rainfall is favored across the Maritime Continent and much of the tropical Pacific. Enhanced precipitation across eastern Australia is also associated with the remnants of Tropical Storm Esther. Suppressed convection is favored over the far West Pacific south of Guam. Atmospheric River activity may bring enhanced rainfall to parts of California, while a slow-moving frontal system is expected to bring widespread heavy rainfall and thunderstorms to the U.S. Southeast. Enhanced (suppressed) rainfall is forecast for northeastern Brazil (northern South America and southern Brazil through northern Argentina). During Week-2, enhanced convection is favored across the southcentral Indian Ocean, the Coral Sea, and the central Pacific, while enhanced convection is possible across the northern Caribbean through the north-central Atlantic. The precipitation anomaly pattern across South America is forecast to persist from Week-1 into Week-2.

Forecasts over Africa are made in consultation with CPC's international desk, and can represent localscale conditions in addition to global-scale variability.