

The MJO has remained weak over the past week, despite fairly good forecast model consensus to the contrary. The convective phase of the weak signal is likely located over Africa and the Indian Ocean, though tropical convective anomalies appear to be dominated by other modes including atmospheric Kelvin waves, equatorial Rossby (ER) waves, and lower-frequency variability.

Dynamical model MJO index forecasts are split with the GFS ensemble suggesting continued weak MJO activity, while the ECMWF and UKMET ensembles support eastward propagation of the MJO through Wheeler and Hendon phases 3 and 4 (possibly 5) at low amplitude over the next one to two weeks. The latter solution is currently favored based on recent model performance and support from statistical tools.

The Week-1 outlook is based primarily on anomalous convection associated with subseasonal modes of variability, dynamical model forecasts, and, to lesser extent, MJO composites. Above-average precipitation is favored across parts of India and the Indian Ocean (IO), especially north of the Equator. This area has been fairly active recently and continued convection is supported by ER wave activity

constructively interfering with the weak MJO signal. Enhanced odds of above-average precipiation are also depicted across an area extending from the far northeastern Yucatan Peninsula to the southeastern US associated with an ongoing tropical disturbance. TC formation is not likely, though there remains a small chance that this disturbance could become the first named storm in the Atlantic basin this season.

Lower-frequency variability, possibly combined with an ER wave, support continued convection northwest of Australia. Between that region and the convectively active area in the northern IO lies a region favoring below-average rainfall consistent with model guidance and recent drying in that region. Model guidance supports above-average precipitation across western near-equatorial Africa which is somewhat consistent with the weak MJO signal early in the period.

Tropical cyclogenesis is favored during Week-1 in the West Pacific east of the Philippines where model guidance suggests favorable environmental conditions. Statistical guidance also supports development in that region.

The Week-2 outlook is based largely on the weak MJO signal in Wheeler and Hendon phase 4 augmented by model guidance and low-frequency variability, where necessary. Above-average (below-average) rainfall is across much of northeastern IO, India, and the Maritime Continent (western Pacific).