

Recent observations of tropical convective anomalies have been more consistent with MJO activity, although there is some aliasing of anomalies from other modes, especially the evolving background state. The Wheeler-Hendon MJO Index indicates very slow propagation over the western Pacific during the past week. The CPC MJO index also indicates a very slow, eastward propagation with the main convective forcings near the Date Line. A slowly evolving base state favoring enhanced convection over anomalously warm sea surface temperatures (SSTs) in the central Pacific also remains a significant contributor to the global tropical convective pattern.

Dynamical model forecasts support a slow eastward propagation during Week-1 of a very weak MJO signal. Some deterministic models indicate a strengthening of the signal over the Americas during Week-2, with bias corrections removing some of that signal. Statitiscal models indicate propagation of a very weak signal without the strengthening over the Americas. Both sets of tools indicate enhanced convection in Phase 8 to Phase 1 of the WH diagram by the end of Week-2.

During Week-1, an atmospheric Kelvin Wave is projected to move across the central and eastern Pacific. Combined with the evolving backgorund state, this favors above-average precipitation across the Central Pacifc, as far east as due south of Hawaii. Also, below-average precipitation is likely over the Maritime Continent and parts of the West Pacific. Some of the signal for below-average precipitation is likely to extend westward over the Indian Ocean due to the passage of an Equatorial Rossby Wave. Tropical Cyclone formation potential is enhanced over the Timor Sea in the wake of the convectively active phase of the Kelvin Wave and the active phase of the Equatorial Rossby Wave.

During Week-2, the low-frequency state, some eastward shift in variability in the MJO band, and an atmospheric Kelvin Wave are likely to contribute significantly to the pattern of convection across the tropics. Above-average rainfall is likely near the Date Line, extending to the eastern Pacific (near 130W) and over the central Indian Ocean, with below-average rains over the Maritime Continent and West Pacific. Tropical cyclone formation chances are elevated over the Southeastern Indian Ocean, although confidence in that is lower than in Week-1.

Forecasts for areas of enhanced or suppressed convection over Africa are based on dynamical guidance for regional scale features.