

The MJO remained active this past week with its enhanced convective phase shifting east to the eastern Maritime Continent. Dynamical and statistical models generally indicate a continued MJO signal propagating across the West and Central Pacific during the next two weeks. However, these models differ on the amplitude and speed of the MJO signal.

Enhanced convection was observed across much of the Maritime Continent, the northwest Bay of Bengal, and extending from Mozambique east to Madagascar during the past week, while northeast Brazil experienced suppressed convection. No tropical cyclones developed so far during the New Year, but model guidance is indicating tropical cyclone (TC) development across the northwest Pacific (5-15N/135-155E), Coral Sea, along the Kimberley coast of northern Australia, Mozambique Channel, and southwest Indian Ocean during Week-1. These favored areas of tropical cyclogenesis are based largely on dynamical model guidance but are also consistent with MJO composites of TC development. Also, sea surface temperatures are above-normal across the aforementioned areas. Moderate confidence exists for TC development during Week-2 across the South Pacific, based on the forecast of enhanced convection in this region and climatology. The outlook during the next two weeks is based on MJO precipitation composites (Phase 6, 7, and 8) along with model consensus between the GFS and CFS precipitation anomalies. Current satellite imagery and recent OLR anomalies were also used as guidance for the Week-1 shapes. Above-average rainfall is favored for the eastern Maritime Continent, northern Australia, and the along the South Pacific Convergence Zone (SPCZ). Above-average rainfall is also forecast along the expected track of a tropical cyclone east of the Philippines.

Below-normal temperatures are likely during Week-1 along the Rio Grande Valley and northeast Mexico as a pair of strong surface highs originating from northern Canada are forecast to progress south across the Great Plains.

During Week-2, the GFS model has a wetter signal for the southwest Pacific than the CFS model. The above-average and below-average rainfall areas depicted on the outlook map for Week-2 are consistent with MJO precipitation composites for Phase 7.

Precipitation forecast shapes over Africa for both weeks are made through coordination with CPC's Africa Desk, and are supported by dynamical model consensus. The GFS and CFS models indicate above-average rainfall extending east from Mozambique to the southwest Indian Ocean.