

The MJO remained active through early January but recently weakened following a period of constructive interference with the ongoing El Nino. The CPC velocity potential and Wheeler-Hendon RMM based index values indicate a weaker MJO with its enhanced phase crossing the Indian Ocean during mid-January. OLR anomalies indicate Kelvin Wave activity near 120E. Dynamical model forecasts of the MJO index support a continued weak signal early in Week-1 but a re-emerging signal with eastward propagation towards the Maritime Continent during Week-2.

Tropical Cyclone Victor developed on January 14 in the South Pacific Ocean, a few hundred miles east of Pago Pago, American Samoa. On January 18, Victor achieved its maximum intensity with sustained winds of 90 knots. Victor is likely to weaken as it tracks south into colder waters, but above-average rainfall is favored along the track well northeast of New Zealand. The most likely area for new tropical cyclone development exists across the South Indian Ocean (10-20S/70-80E). A Kelvin Wave recently initiated convection across this region and the GFS model indicates TC development during the next 72 hours. Due in part to a weaker MJO signal, tropical cyclone development is not enhanced for any areas beyond Week-1.

The MJO is expected to play at least a minor role in the pattern of anomalous convection across the global tropics, with the ongoing El Nino remaining the major contributor during the next two weeks. Therefore, above-average rainfall is likely to persist across the Central Pacific, although a Kelvin Wave is expected to offset the typical dry signal across the Maritime Continent during Week-1. The residual MJO signal and model guidance support below-average rainfall near the Philippines and across parts of the South Pacific during Week-1. El Nino is expected to result in below-average rainfall across parts of northern South America and Hawaii during the next two weeks, while above-average rainfall across southeast Brazil is related to frontal activity during Week-1.

The precipitation outlook during Week-2 is based largely on dynamical model guidance, anomalies typically associated El Nino, and MJO precipitation composites for Phase 3 as the MJO signal potentially re-emerges over the eastern Indian Ocean. Model guidance indicates that above (below)-average rainfall will persist across parts of the South Indian Ocean (Mozambique, Madagascar, and northern Australia). The potential for a re-emerging MJO signal leads to high uncertainty in the precipitation outlook across the Maritime Continent during Week-2.

Forecast over Africa are made in consultation with CPCs international desk, and can represent local-scale conditions in addition to global-scale variability.