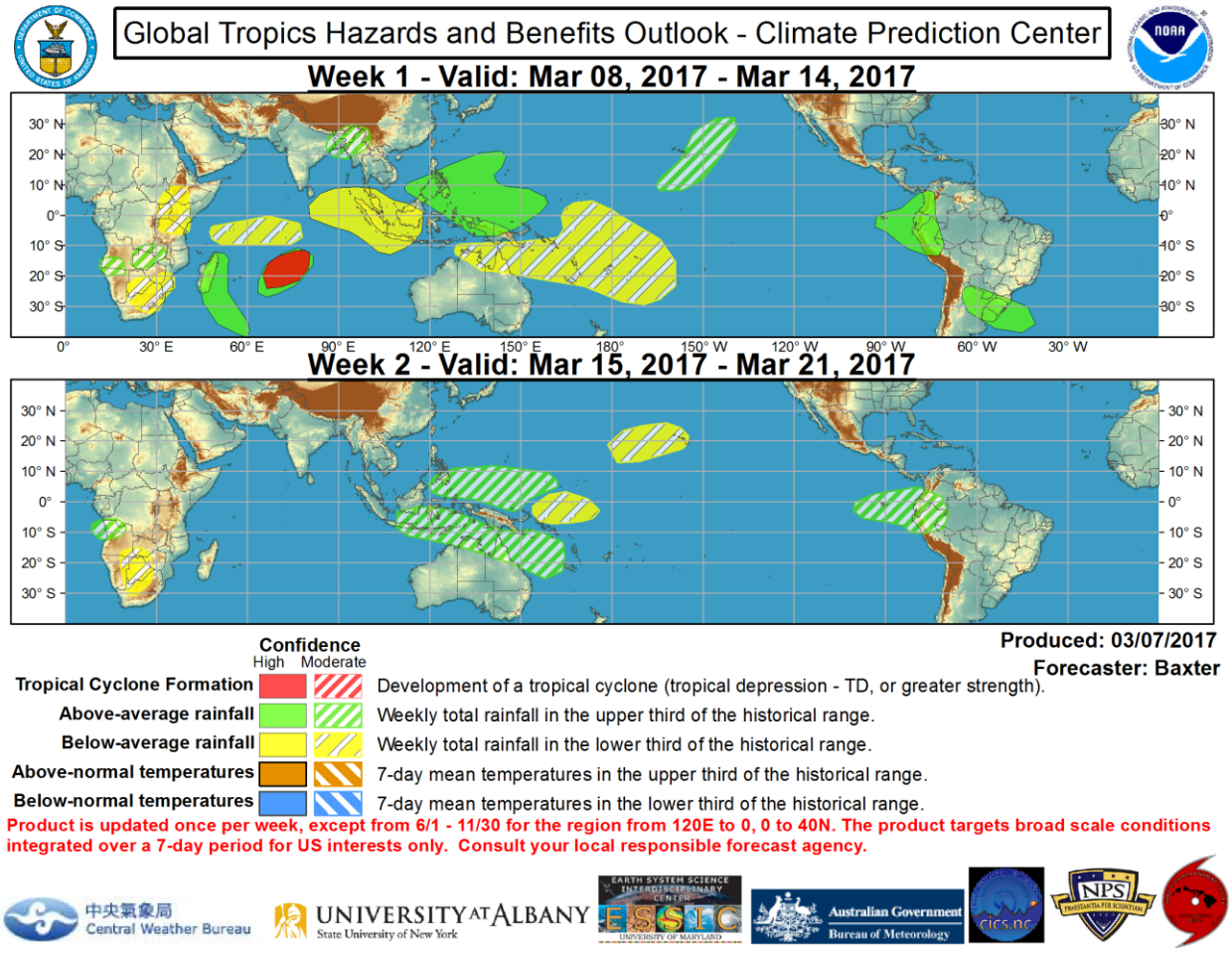

The MJO has remained active during the past week, with the RMM-based index and the CPC velocity potential index both indicating a robust signal centered over the eastern Indian Ocean and Maritime Continent. Mixed signals over the Pacific lead to a wave-2 pattern in 200-hPa velocity potential over the global tropics, though a strong dipole is observed with anomalous convergence over the Atlantic and Africa, and anomalous divergence over the Indian Ocean and Maritime Continent. Enhanced convection over the East Pacific is likely related to a Kelvin wave moving ahead of the main MJO envelope. Constructive interference between the MJO and the low-frequency state is now ongoing over the Maritime Continent. Equatorial Rossby waves, along with tropical cyclones, are also contributing to the pattern of convection observed from the Indian Ocean to the West Pacific.

The MJO signal is forecast to weaken over the next couple of days according to the consensus among the dynamical models. This weakening is likely due to interference between the MJO signal and other tropical variability. Therefore, while the MJO as observed by various monitoring indices is likely to weaken, it is expected to have some impact on the pattern of tropical convection for the next one to two weeks.

Tropical Storm Blanche formed off the Kimberley Coast of Australia on 05 March and dissipated over northwest Australia. Tropical Cyclone Enawo formed over the southwestern Indian Ocean on 03 March, and reached a peak intensity of 125 knots. It is making landfall today, 07 March, over Madagascar. Tropical cyclone (TC) formation is most likely at the beginning of Week-1 over the south-central Indian Ocean, where the various dynamical model ensemble means are in good agreement.

Areas favoring above- or below-average rainfall are depicted in Week-1 based on the consensus of model guidance, which is somewhat consistent with MJO phase 4 tropical precipitation composites. Parts of South America are expected to be fairly active, as well as a small region of the far eastern Pacific where SSTs remain well above-average. Above-average rainfall is favored parts of the north-central Pacific including the Big Island of Hawaii. Suppressed convection is favored for much of the southwestern Pacific, while above-average rainfall is more likely over parts of the northern Maritime Continent and West Pacific. Below-average rainfall is favored for parts of on the Indian Ocean and the forecast tracks of tropical cyclones are highlighted as regions expected to see above-average rainfall.

The forecast for Week-2 is more uncertain, with the state of the MJO amidst the evolving background state unclear. Enhanced convection is likely over the Maritime Continent and West Pacific, where any potential remaining MJO signal would constructively interfere with the remnant low-frequency pattern. Model guidance broadly supports below-average rainfall for parts of the equatorial West Pacific and in the area near and west of Hawaii. Above-normal SSTs over the far eastern Pacific favor above-average rainfall for that region and adjacent areas of South America.

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