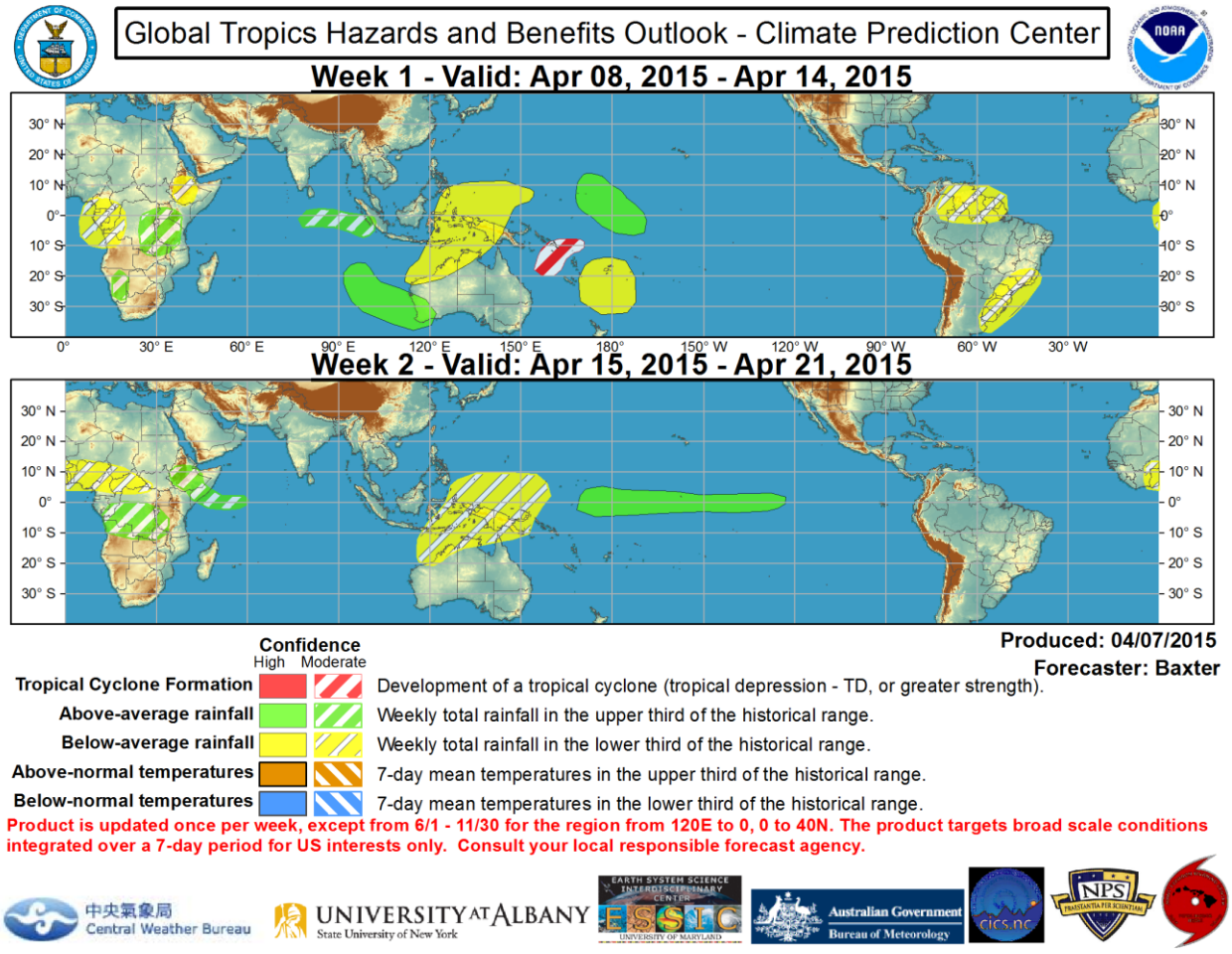

The RMM index and CPC velocity potential index both indicate continued MJO activity over the past week, though the latter shows a clear weakening compared to the robust activity a few weeks ago. The enhanced phase is currently centered over the eastern Indian Ocean and western Maritime Continent, though there is now destructive interference between the MJO and low-frequency ENSO state, which favors enhanced convection over the central Pacific and suppressed convection over the Maritime Continent. Additionally, the evolution of the observed convective pattern reveals signatures consistent with atmospheric Kelvin waves and equatorial Rossby waves.

Dynamical model MJO index forecasts indicate a weakening of the signal with no further eastward propagation. This forecast is likely due in part to continued destructive interference with the El Nino signal, which favors suppressed convection over the Maritime Continent, as well as ongoing tropical cyclone activity over the southern Indian Ocean. Statistical models favor slow eastward propagation of a stronger signal over the next two weeks. Based on the dynamical guidance, the MJO is forecast to play a lesser role over the next two weeks as the ENSO base state becomes more important, especially over the Maritime Continent and Pacific Ocean.

Two tropical cyclones, Ikola and Joalane, formed over the southern Indian Ocean during the past week. Ikola is forecast to weaken as it heads toward southwestern Australia during the next week, while Joalane is forecast to become a strong cyclone (possibly reaching Category 5 on the Saffir-Simpson scale) while slowly drifting south between 60E and 70E. Weak Tropical Storm Haishen formed over the northwestern Pacific last week, but has already dissipated. There is a moderate risk of tropical cyclone formation during Week-1 over the South Pacific, where the GEFS members indicate a high probability of formation. Elsewhere during the two-week period, odds of tropical cyclone formation are low.

Regions depicted favoring enhanced or suppressed rainfall over the next two weeks are based mostly on the consensus between the CFS and ECMWF coupled model systems, the ENSO state, and weak MJO activity. In general, enhanced convection is favored over the central Pacific, expanding eastward with time, while suppressed convection is more likely over parts of the Maritime Continent. Enhanced convection is forecast during Week-1 over parts of the equatorial Indian Ocean, where the model guidance and MJO phase are supportive. Over South America, drier-than-average conditions are favored for parts of the continent based on the MJO phase in Week-1, and supported by model guidance. By Week-2, enhanced rainfall is anticipated over parts of the continent as the suppressed MJO phase shifts eastward. Smaller-scale shapes elsewhere are largely based on the aforementioned model consensus.

Depicted areas of enhanced or suppressed rainfall over Africa are produced in collaboration with CPC's Africa Desk.