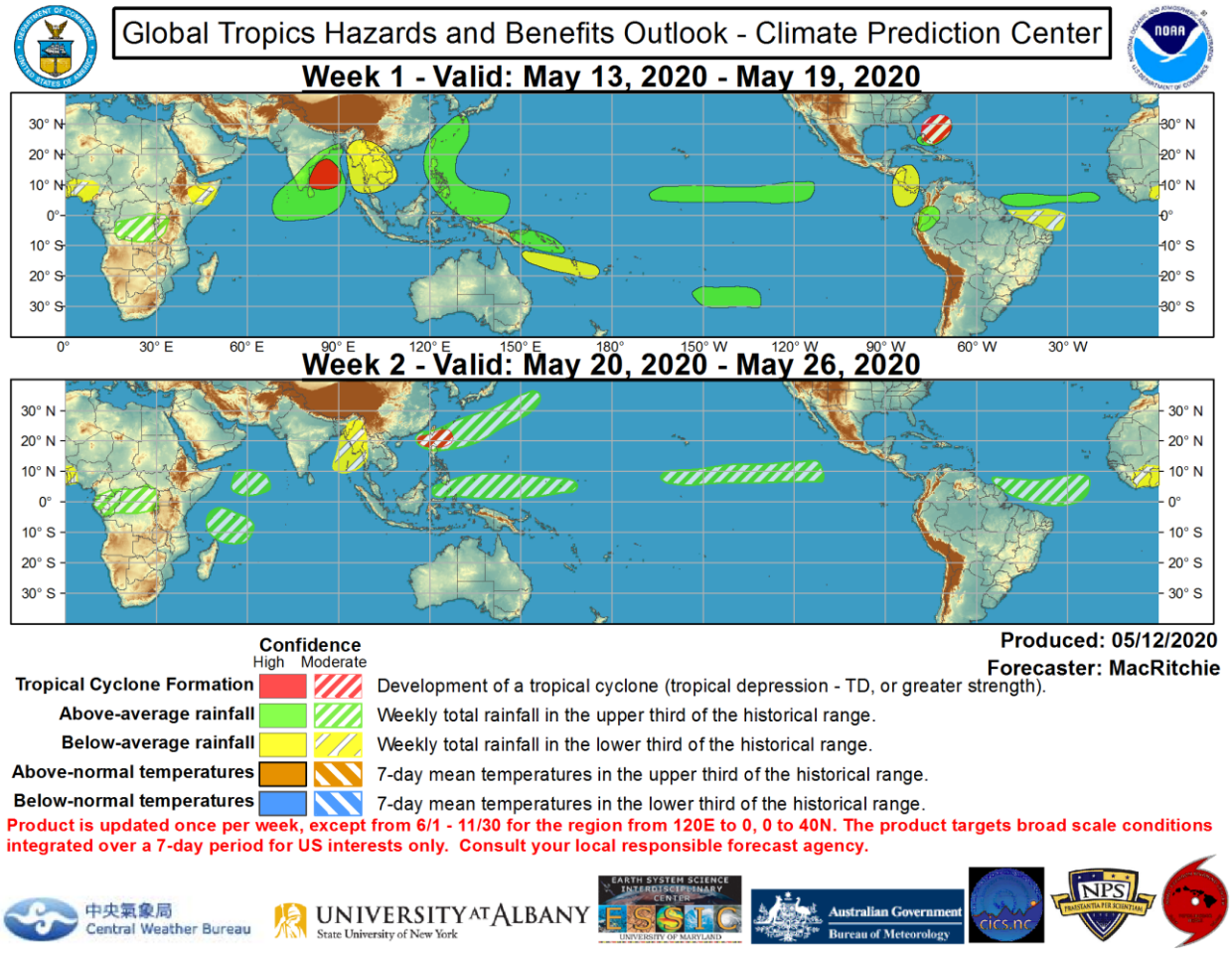

The MJO is weak and there is mixed evidence from dynamical models as to whether it will find its way over the Indian Ocean during the next two weeks. The bias corrected ECMWF is the only ensemble system that has a substantial number of members predicting a reemergence of the MJO in RMM Phase 2 during Week-1. The other ensembles suggest that the MJO will remain within the unit circle for the duration of the forecast period. There are, however, several higher frequency waves forecast throughout the tropical strip. Kelvin and Rossby wave activity over the Indian Ocean and West Pacific is expected to enhance the probabilities of tropical cyclone formation during Weeks 1 and 2 in the Bay of Bengal and just north of the Philippines, respectively.

There is also moderate confidence that a (sub)tropical cyclone will develop during Week-1 off the US East Coast. The National Hurricane Center has a 50% probability of this storm developing over the next five days. The standard Kelvin and Rossby wave OLR filters suggest that the collocation of these modes is the main culprit behind the storm's potential development. This would provide a favorable large scale environment for development, but the main source of rotation seems to be a filament of high potential vorticity (PV) associated with a cyclonic PV wrap-up just south of Greenland.

Models forecast the midlatitude Rossby wave train to remain active during the next couple of weeks over the North Atlantic and the North Pacific. Wavebreaking over the two basins is common during the boreal spring due, in part, to a climatological weakening of the polar jets. The wavebreaking process deposits high PV air into the tropics, which often helps tropical wave development. The CFS forecasts equatorial Rossby wave development over the east Pacific during Week-1, which is the basis of an enhanced rainfall forecast east of the antimeridian in Weeks 1 and 2 and above average rainfall over the Solomon Islands in Week-1.

Tropical Storm Vongfong, east of the Philippines, is forecast by the Joint Typhoon Warning Center (JTWC) to track northwestward over the islands and then recurve northeastward around May 17. Our above average rainfall forecast reflects this track. If model guidance is correct, then this storm will be absorbed within the midlatitude flow over the Pacific during Week 2, potentially amplifying extratropical ridging throughout the East Pacific.

Forecasts over Africa are made in consultation with CPC's international desk as well as dynamical model consensus, and can represent local-scale conditions in addition to global-scale variability.