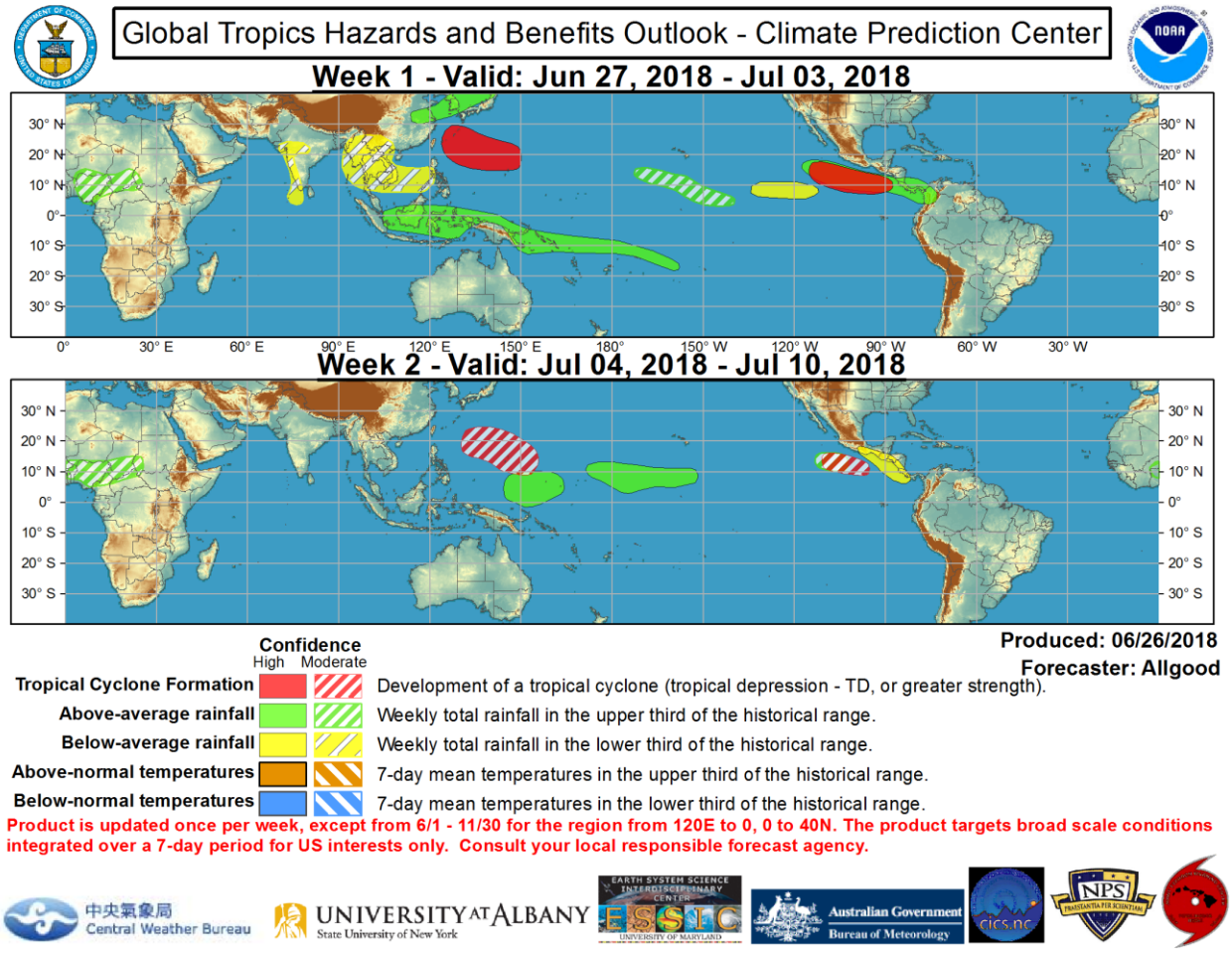

There is a weak MJO signal apparent in both the RMM-based and CPC velocity potential-based indices, with the enhanced (suppressed) phase over Africa and the far western Indian Ocean (western and central Pacific). The presence of an intraseasonal signal is more apparent in the wind field than the convective anomalies, and other modes continue to interfere with the overall picture. The suppressed phase of an equatorial Rossby wave over the west Pacific appears to be constructively interfering with the suppressed phase of the MJO, but Kelvin wave activity over the East Pacific is restricting the eastern extent of the signal. There is considerable uncertainty among the dynamical model RMM-index forecasts, with the ECMWF generally supporting weak MJO activity that strengthens by the end of Week-2 over the Maritime Continent, and the GEFS depicting no eastward propagation and instead bringing the index outside of the circle back in Phase-1. It is possible that model forecasted tropical cyclone activity over the East Pacific is interfering with the RMM-index forecasts, acting to pull the index back towards the Western Hemisphere, especially given the lack of a robust intraseasonal convective signal. Therefore, the MJO may be active during the next two weeks, but there is too much uncertainty to project potential impacts of this signal on the global tropical convective pattern.

Tropical Storm Daniel formed over the East Pacific on June 24, and remained well out to sea before becoming post-tropical. No additional tropical cyclone development occured across the global basins during the past week. During Week-1, the East Pacific is anticipated to become extremely active, partly due to the aforementioned recent Kelvin wave activity. The National Hurricane Center (NHC) is currently monitoring a broad area of disturbed weather approximately 600 miles south of Acapulco, Mexico, and forecasts a 90 percent chance of tropical cyclone formation over the next 5 days. Additionally, a tropical wave currently over Central America has a 90 percent chance of development per NHC during the next 5 days after emerging over the East Pacific and moveing westward to the south of El Salvador, Guatemala, and Mexico. The GFS forecasts both of these systems to become intense hurricanes, and also shows a third tropical cyclone formation during late Week-1 or early Week-2. Based on these forecasts, a broad high confidence tropical cyclone formation area is depicted on the outlook during Week-1. A smaller moderate confidence region is maintained during Week-2, in case the potential third system develops at the beginning of that period. Over the West Pacific, the GFS ensembles show potential development early in the period east of the Philippines, with a second potential tropical cyclone forming near or north of Guam. Both of these potential formation regions were covered with a single high confidence shape during Week-1 of the outlook period. For Week-2, additional tropical cyclone development is possible once again in the vicinity of Guam, with the threat extending northwestward well east of the Philippines. No tropical cyclone formation is anticipated over the Atlantic basin, but NHC is monitoring a non-tropical low pressure system anticipated to move offshore of the Carolinas along a frontal boundary, with a low potential existing for tropical or subtropical development.

In the absence of robust MJO-related convective anomalies in the recent observations, the forecasts for enhanced or suppressed rainfall rely primarily on a consensus of dynamical model forecasts and anticipated tropical cyclone activity. The CFS and ECMWF both depict a continued reduction in monsoon precipitation over South and Southeast Asia, which is fairly consistent with the low-level zonal flow anomalies associated with potential MJO activity over the western Indian Ocean. Enhanced convection is forecast over the equatorial Maritime Continent, extending south-southeastward to the central Pacific near 10S. An active ITCZ is anticipated south of Hawaii, with a small area of suppressed convection between this region and the potential East Pacific tropical cyclones due to subsidence. During Week-2, enhanced precipitation is favored across parts of the West Pacific, with potential ongoing tropical cyclone activity generating enhanced convection to the south and southwest of Mexico. Broad suppressed rainfall is favored to overspread southern Mexico and parts of Central America later in Week-2, due in part to subsidence and reduced SSTs in the wake of the earlier tropical cyclone activity. There is too much uncertainty in both model guidance and MJO forecasts to depict regions of enhanced or suppressed rainfall over the Indian Ocean basin or Maritime Continent for Week-2.

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