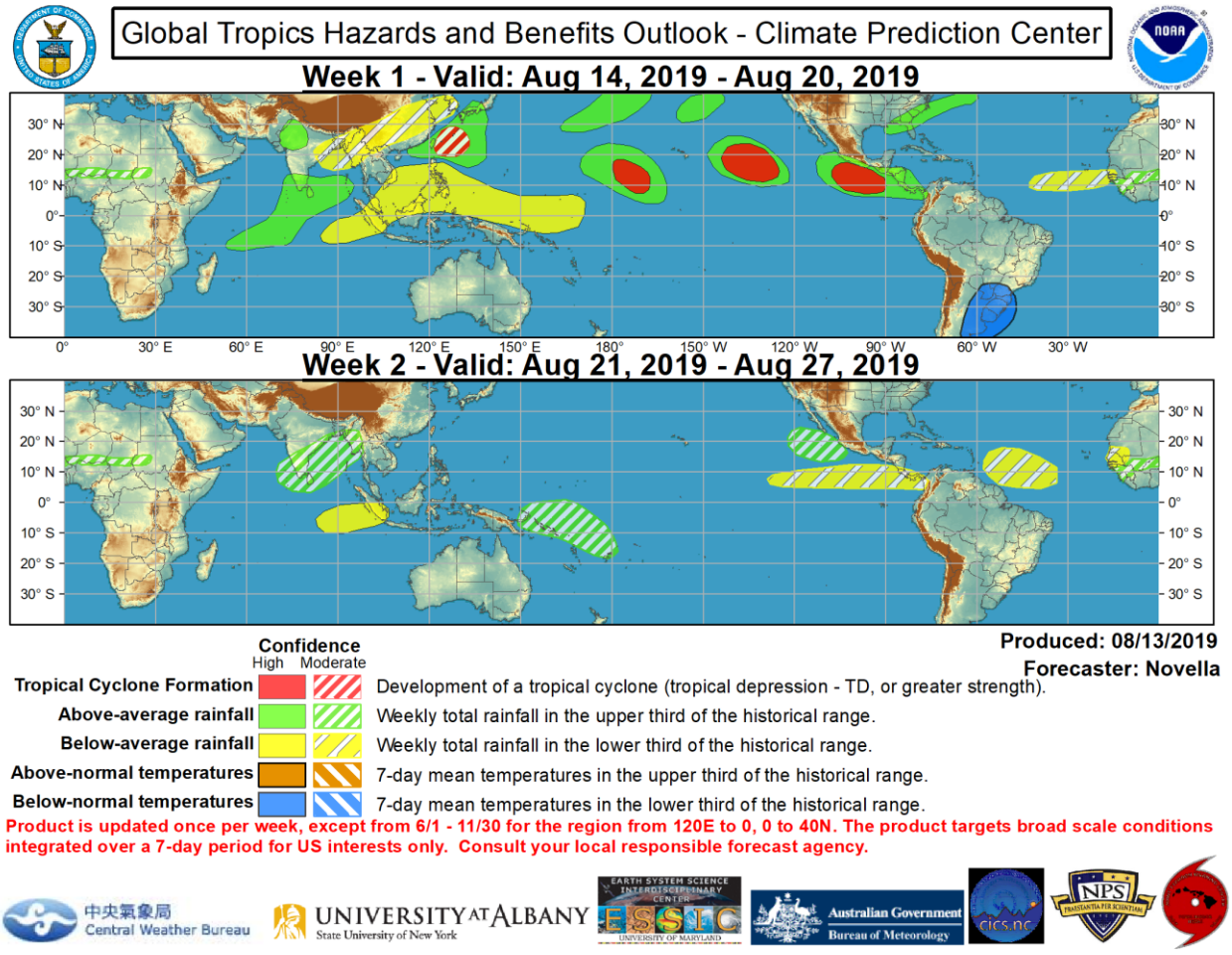

During early August, the MJO continues to be incoherent and weak. According to the RMM index, the MJO signal showed signs of strengthening and some eastward propagation over the Maritime continent during the last week; however it is likely this signal is more reflective of an enhancement of lower level easterly winds near the Dateline, producing a spurious increase in RMM space. Both GEFS and ECMWF models are in good agreement this week that any MJO activity in RMM space is forecast to rapidly weaken during the beginning of Week-1, and remain within the unit circle throughout remainder of Week-1 and Week-2. However, some ensemble members do suggest some re-strengthening and eastward propagation of the MJO during Week-2.

With westward moving subseasonal variability prevailing in the model forecasts, enhanced precipitation and increased tropical wave activity are forecast across the Pacific Ocean during Week-1, with generally suppressed convection across the Maritime Continent during Weeks 1 and 2. In the eastern Pacific, above-average observed sea surface temperatures and forecast low environmental shear are expected to support the gradual development of two tropical disturbances. First, NHC is currently monitoring a cluster of thunderstorms 1100 miles southwest of the southern tip of Baja California with an increased chance (70%) of formation this week, and a likely northwestward track before weakening before the end

of the Week-1 period. The second eastern Pacific disturbance is forecast to form off the Gulf of Tehuantepec and also track northeastward through Week-1. Deterministic model guidance suggests a higher potential for the second low to rapidly deepen (<970 hPa), increasing the risk for impacts. While this disturbance is not currently forecast to make landfall, its expected track in the vicinity of the Gulf of California may trigger a gulf surge event to increase moisture availability for heavy rainfall associated with the North American Monsoon.

Over the Central Pacific, there is a moderate chance another tropical disturbance forming west-southwest of Hawaii. Model guidance depicts this low tracking westward before weakening northeast of Wake Island in the western Pacific by the end of Week-1. In the wake of Tropical Storm Krosa in the West Pacific basin, models depict both a broad and persistent area of low pressure centered in the Philippine Sea which could result in another tropical low developing in the region towards the end of Week-1. Both GEFS and ECMWF models do not show much strengthening of the disturbance once it forms, as it is forecast to track towards the west over eastern China. During Week-2, conditions are expected to become less favorable in the Pacific for tropical cyclogenesis. The GEFS model depicts a stronger tropical low developing over Philippine Sea during the earlier portion of Week-2; however, confidence for the development of this system remains low.

Forecasts for suppressed and enhanced rainfall were made using a consensus of dynamical model forecasts and anticipated tropical cyclone tracks. Over eastern Asia and the Maritime Continent, a broad of area of mean upper-level convergence is expected to suppress precipitation in the region. Conversely, parts of the equatorial Indian Ocean and India subcontinent are expected to be under the influence of lower-level convergence and upper-level divergence to enhance precipitation during Week-1. In the western hemisphere, a stalled frontal boundary forecast over the southeastern CONUS is expected to produce above-average precipitation during Week-1. Model guidance depicts heavy rainfall amounts in excess of 2 inches which may trigger local flooding in the region. In the southern hemisphere, the passage of a strong cold front over southern South America is forecast to bring anomalously cold temperatures (10-12 degrees C below average), with some local areas in southern Brazil, Uruguay, and Argentina expected to experience near to below freezing temperatures during the early portion of Week-1. Forecasts over Africa are made in consultation with CPCs international desk, and can represent local-scale conditions in addition to global-scale variability.