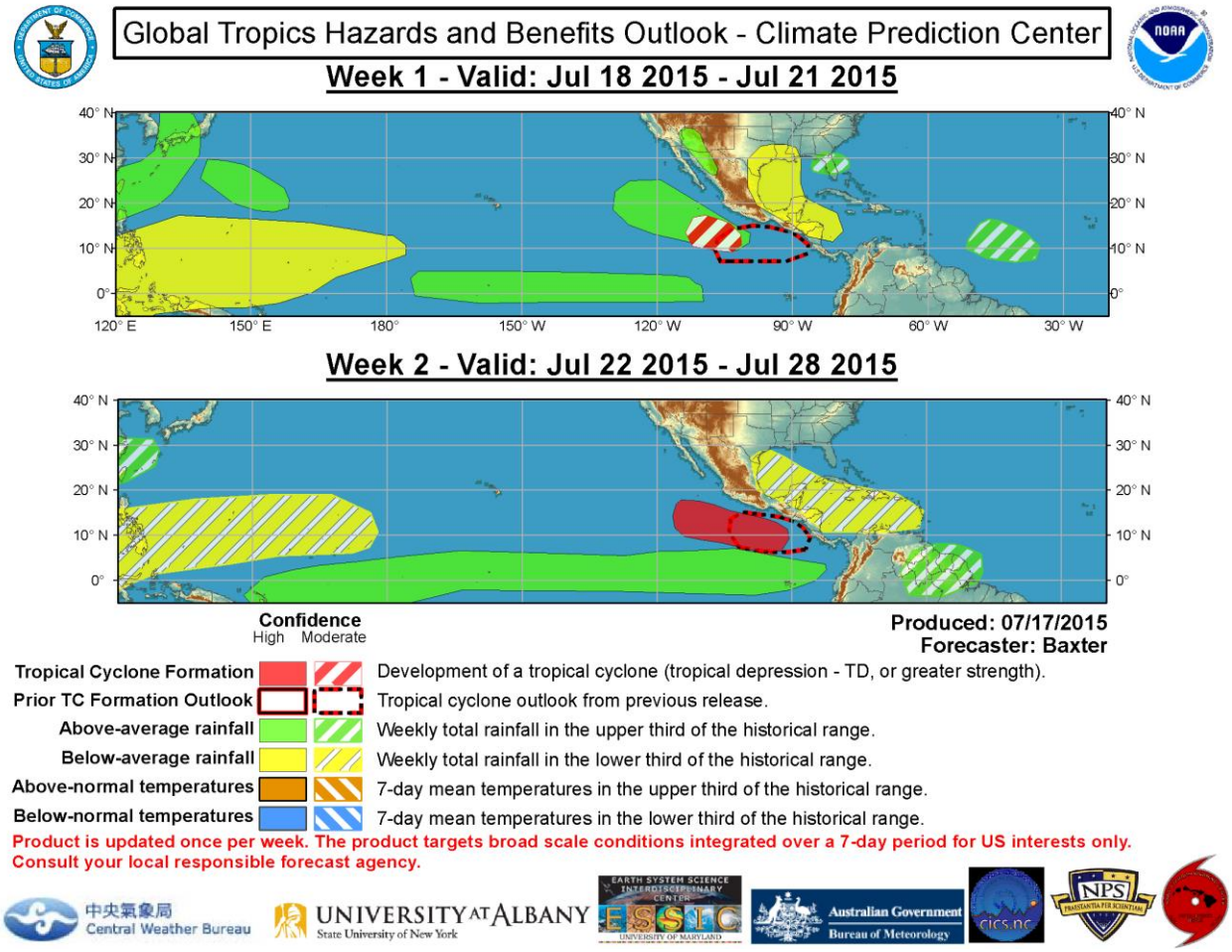

The MJO weakened as expected over the past few days, as observed by both the Wheeler-Hendon RMM and CPC Velocity Potential based indices. Over the next two weeks, the ENSO base state is forecast to dominate much of the global tropics, though Kelvin wave activity is likely to be important as well.

Ongoing tropical cyclone (TC) activity continues to influence the pattern of tropical convection, though no new storms have formed since the primary outlook issued on Tuesday. Tropical Storm Halola is forecast to continue its movement west-northwest over the Northwest Pacific, while regaining typhoon status. Typhoon Nangka made landfall over southern Japan on July 16. In the East Pacific, Tropical Storm Enrique is forecast to continue weakening, while category-1 Hurricane Dolores is forecast to slowly weaken as well. The latter poses a greater threat to interests over North America, though it appears that it will not have any direct impact except high surf for parts of southern California and Baja California into early next week.

The National Hurricane Center is monitoring a tropical wave over the Atlantic, which has a low probability of developing into a TC; upper-level winds are expected to be prohibitive by early next week. This area is denoted on the map by a moderate chance of above-average rainfall.

Over the East Pacific, tropical cyclogenesis is more likely, with a moderate shape depicted for the remainder of Week-1, and a high confidence shape depicted for Week-2. Upper-level winds are expected to become somewhat more favorable with time over this region.

Elsewhere, areas favoring above- or below-average rainfall are updated to reflect the latest dynamical guidance from the CFS and ECMWF ensemble systems.

The previous discussion, issued July 13, follows:

The MJO remained active during the past week, though the amplitude has backed off the record highs observed earlier in the month. The enhanced convective phase is currently located over the East Pacific and Americas, with both the CPC velocity potential index and the Wheeler-Hendon RMM based index indicating the same general geographic region for enhanced activity. Propagation has slowed and the amplitude has continued to decrease over the past several days. Upper-level anomalies of velocity potential and zonal winds continue to indicate a wave-1 structure. The MJO is currently constructively interfering with the strong ENSO signal.

Most dynamical model forecasts of the MJO indicate significant weakening during the next week, with some suggesting some westward propagation. This is likely due to the westward movement of ongoing TC activity, as well as the reemergence of the ENSO state as the dominant pattern of variability over the global tropics. Our team agrees with the model consensus, though uncertainty is fairly high regarding how atmospheric Kelvin waves, emanating from the main envelope of enhanced convection, will interact with the large-scale tropical pattern over the next two weeks.

Several tropical cyclones developed during the past week. Hurricane Dolores and Tropical Storm Enrique formed in the East Pacific; the latter has a small chance of contributing moisture to parts of the Southwest U.S. late in Week-1 into Week-2. A weak tropical depression formed southwest of Hawaii, while Typhoon Halola formed near the Date Line. The latter is expected to track west-northwestward

while strengthening over the next week. Ongoing Typhoon Nangka is forecast to make landfall over southern Japan later this week. Over the North Atlantic basin, a weak tropical storm, Claudette, formed, but is not forecast to be a major player for that region. Tropical cyclogenesis is most likely late in Week-1 Week-2 over the East Pacific, where climatic conditions remain favorable.

Precipitation outlooks for Week-1 and Week-2 harvested the model consensus between the CFS and ECMWF coupled systems, the ENSO background state, and ongoing/predicted tropical cyclone activity. Enhanced rainfall is favored over much of the central and eastern Pacific basins, while large-scale suppression is forecast for much of the Maritime Continent and the western Atlantic for the next two weeks. Below-average rainfall is favored over western India during the period, while enhanced rainfall is more likely over parts of Southeast Asia and China. Favorable MJO activity makes enhanced rainfall over parts of southeastern South America likely during Week-1, with increased uncertainty beyond that.

Forecasts for enhanced or suppressed rainfall across Africa are provided in collaboration with CPC's Africa Desk and are based on regional scale anomaly features.