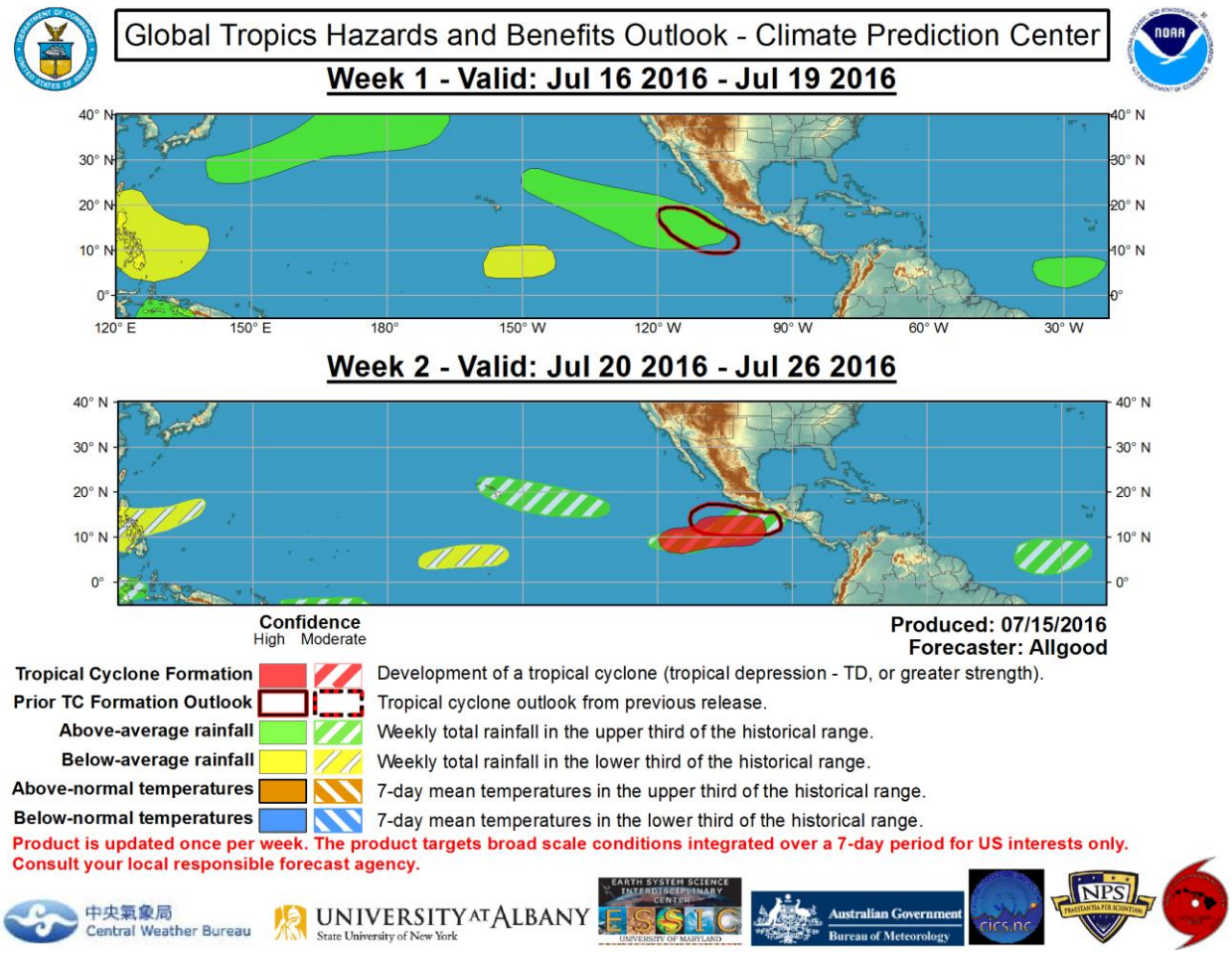

Most diagnostic tools, including the RMM based and velocity potential based MJO indices continued to depict a weak MJO signal during the past several days. The spatial pattern of upper-level velocity potential anomalies exhibits a Wave-2 structure, with large scale anomalous divergence (convergence) over the East Pacific, Africa, and the central Indian Ocean (Atlantic and west-central Pacific). Most dynamical model MJO index forecasts do not depict a coherent evolution over the next two weeks, with the exception of the non-bias-corrected ECMWF. Therefore, the MJO is not anticipated to play a substantial role in the global tropical convective pattern during the remainder of the forecast period.

Tropical Depression 6-E recently formed over the East Pacific. Therefore, the high confidence TC formation shape has been removed from the forecast map. NCEP Ensemble forecasts indicate the potential for additional tropical cyclogenesis south of Mexico during the Days 5-11 period, with numerous ensemble members also depicting a second tropical cyclone forming south of 10N and east of 120W. Therefore, the high confidence TC formation shape is maintained for the Days 5-11 period, with a southwestward adjustment in its position. Some models indicate a potential for low-latitude tropical cyclogenesis over the central Atlantic during the period; however, confidence is too low at this time to depict a TC shape on the outlook.

Forecasts for above-average rainfall were adjusted based on the latest track forecasts for TS Celia, Hurricane Darby, and TD 6-E. The remnants of Darby may bring enhanced rainfall and sea swells to Hawaii during the Days 5-11 period. Areas of enhanced convection along a front are also anticipated east of Japan. Enhanced rainfall is also forecast for the central Atlantic in association with tropical wave activity.

The original forecast discussion released on 12 July follows.

Various measures of the MJO indicate a weak signal, with only the upper-level anomalous velocity potential depicting a coherent signal from the previous weeks. The RMM based index indicates a weak signal, although strengthening, over Africa, while the CPC Velocity Potential EOF based index indicates a breakdown of the signal over the Americas. OLR fields reveal activity more consistent with Kelvin wave activity rather than MJO activity. Outlooks indicate a high level of uncertainty during the next two weeks, with some model forecasts strengthening the MJO over Africa and propagating the signal to the Maritime Continent, while other models strengthen the signal over Africa then lock onto a westward moving signal over the Americas and Africa (tropical cyclones and easterly waves).

During the last week, Hurricane Celia and Tropical Storm Darby formed over the eastern Pacific. During the next 5 days, the National Hurricane Center currently indicates a 70% chance of formation for an area over the eastern Pacific. Model forecasts continue a signal for elevated chances for tropical cyclone formation through Week-2 over the eastern Pacific. The Joint Typhoon Warning Center is also monitoring a disturbance over the Southern Indian Ocean, assigning a low threat of tropical cyclone formation. Some models indicate a slight increase in the odds for formation over the eastern tropical Atlantic during the latter half of Week-2, though that is normal for this time of year and given the current state of the MJO with the residual signal over Africa. Over the western North Pacific, odds for tropical cyclone formation are low during Week-1 and increase only slightly during Week-2, likely continuing the overall quiet season for another two weeks.

During Week-1, above average rains are likely over an area from just northeast of Hawaii, east-southeast to near Panama associated with tropical cyclone activity and a weak Kelvin wave moving in from the west. A wet period, associated with the residual from the MJO signal, is forecast over western Africa.

Observations indicate a Kelvin wave is moving near 80E, and that is forecast to continue moving eastward, enhancing rains over the Indian Ocean and eventually the southern Maritime Continent. Model forecasts also indicate a connection to the Southern Hemisphere mid-latitudes is likely to support anomalous rains over northeast Australia. A break in the monsoon rains is likely over South Asia, with dryness also forecast over the Philippines.

Uncertainty about a coherent MJO signal limits predictability during Week-2. The monsoon break forecast in Week-1 should shift northward over South Asia and expand over Southeast Asia, with some moisture recharge over southern India. The East Pacific is likely to remain active. Some smaller areas of enhanced precipitation are likely over the Maritime Continent, but model signals are weak, as are empirical tools based on a currently weak MJO.

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