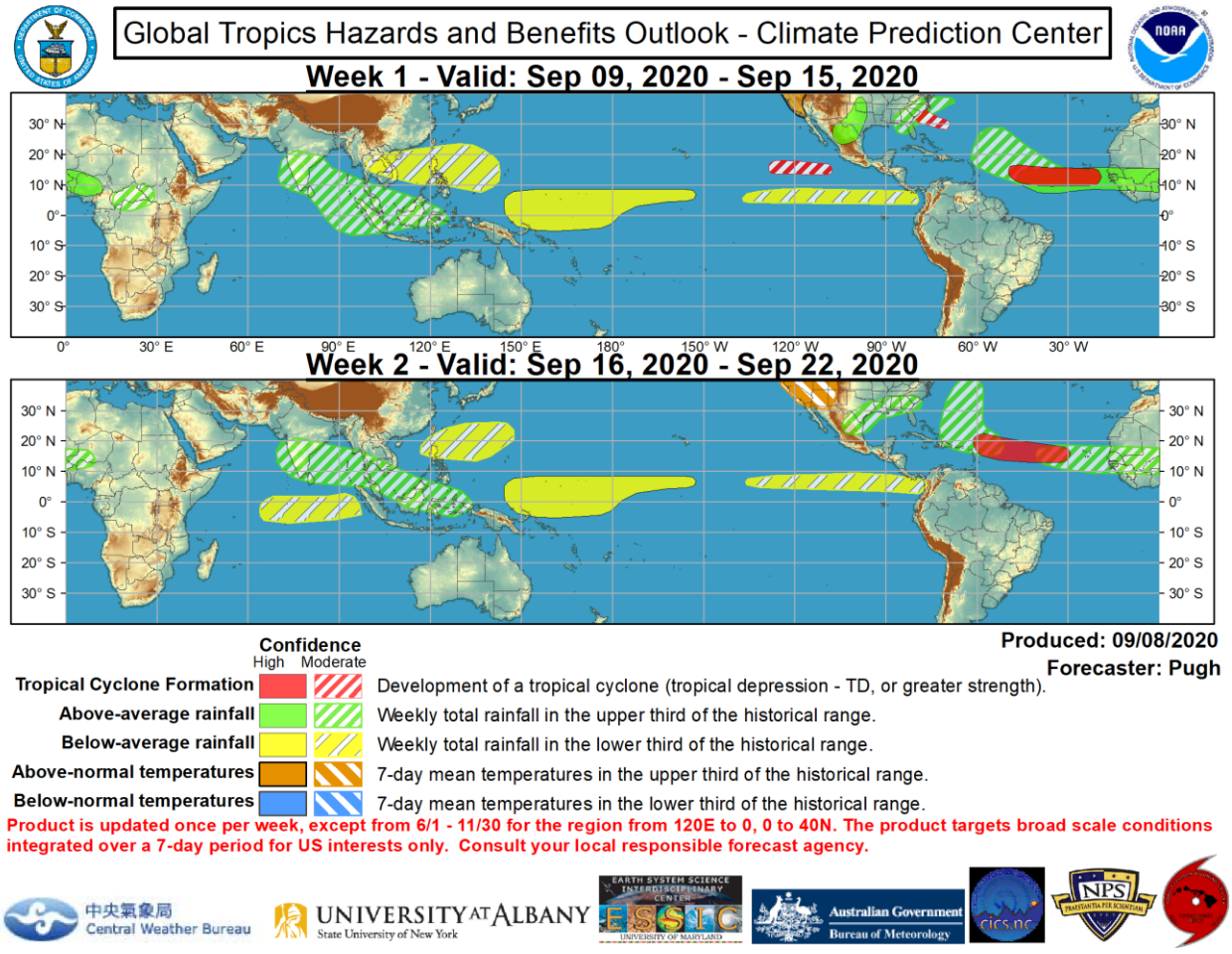

The Madden-Julian Oscillation (MJO) began to weaken during the first week of September, following a 5-week circumnavigation of the globe since late July. The decrease in the amplitude of the RMM index may be related to destructive interference with the low-frequency base state. The GFS and ECMWF models depict a nearly stationary MJO signal during week-1 with eastward propagation of a weak MJO resuming over the Maritime Continent during week-2. Considering the MJO has weakened and continued destructive interference with the low-frequency base state, the MJO is not expected to to play a major role in anomalous global tropical rainfall and modulation of tropical cyclone development through mid to late September.

The recent passage of the MJO and low-frequency base state continued to enhance convection over equatorial Africa since late August. A couple of waves that emerged off the west coast of Africa developed into current Tropical Storms Paulette and Rene. Both of these tropical cyclones are forecast to track more northward later in week-1, as a weakness develops in the subtropical ridge over the Atlantic. Earlier last week on September 3, Hurricane Nana (maximum sustained winds of 75 mph) made landfall on the Belize coast, between Dangriga and Placencia. A low pressure system is currently located a few hundred miles southwest of Bermuda and it may become a tropical depression during the next 48

to 72 hours, before moving west into the Carolinas. Multiple tropical waves are forecast to continue to emerge from west Africa during the next week to ten days. High confidence exists for tropical cyclone (TC) development later in week-1 across the eastern Atlantic. The future track of this TC will have to be closely monitored as it could approach the Leeward Islands next week. During week-2, a broader TC development area (also high confidence) is posted for the main development region of the Atlantic basin. Please see the updated GTH outlook on Friday, September 11 for modifications to the TC favored areas along with associated above-normal rainfall.

The East Pacific became less active since late August as the suppressed phase of the MJO overspread this region. Only short-lived Tropical Storm Julio developed during the first week of September. Model guidance supports a TC development area (moderate confidence) during week-1 across the East Pacific, but any TC that forms is unlikely to influence the United States as it tracks westward.

Since late August, three typhoons (Bavi, Maysak, and Haishen) have made landfall on the Korean Peninsula. Most recently Typhoon Haishen (maximum sustained winds of 85 mph) made landfall in Ulsan, South Korea on September 7. Following this active period over the Northwest Pacific, no additional tropical cyclones are expected to develop at this time.

The precipitation outlook during the next two weeks is based primarily on the model consensus among the CFS, ECMWF, and GFS models and influences from the low frequency base state. Below-average rainfall is likely to persist across the west-central equatorial Pacific during the next two weeks. A couple of other areas of suppressed rainfall include the Northwest Pacific and equatorial eastern Pacific. The remnant MJO, albeit with a weaker amplitude, is forecast to result in above average rainfall from southern India east to the western Maritime Continent during weeks 1 and 2. The favored areas of above normal temperatures and above normal precipitation during the next two weeks across the United States are related to an amplified mid-latitude circulation pattern.

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