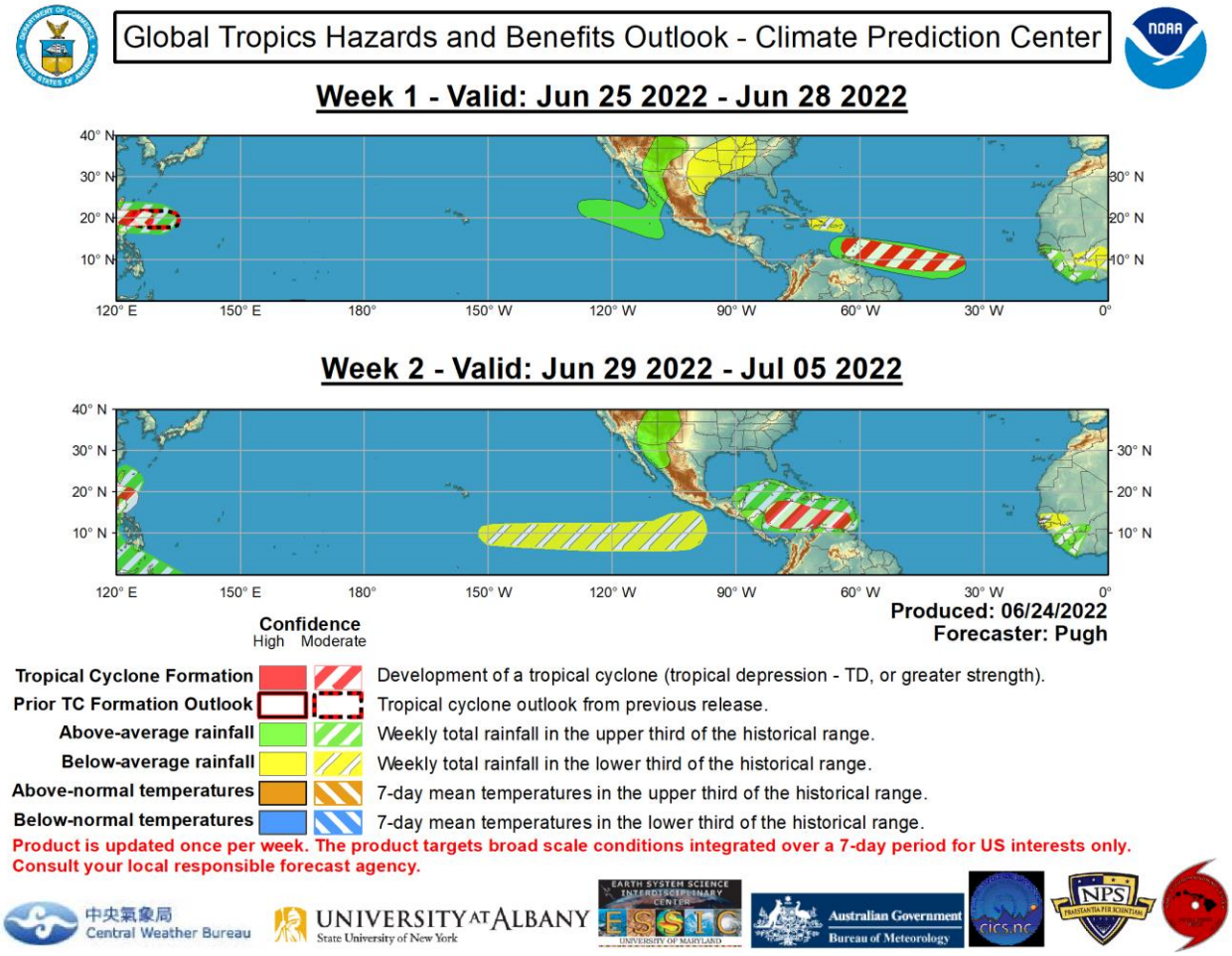

A tropical wave located over the eastern tropical Atlantic is forecast to approach the Windward Islands by early next week. The ECMWF model has remained consistent that this wave becomes a tropical cyclone (TC) either near the Windward Islands or over the Caribbean Sea, and the past few GFS model runs have trended towards the ECMWF model solution. Since environmental conditions appear conducive for development (National Hurricane Center: 60 percent chance during the next five days, as of June 24 at 2pm EDT), a tropical depression could form by June 28. Therefore, a moderate confidence area for TC development was added to the updated GTH map for June 25-28 and since a TC may form later, this area is maintained beyond that time period and extends from the Windward Islands westward over the Caribbean Sea. From July 29-July 5, a moderate confidence for above-average rainfall area was added to the U.S. Virgin Islands, Puerto Rico, Hispaniola, Cuba, Jamaica, the Caribbean Sea, and parts of Central America. This broad area was needed due to uncertainty on where the potential TC tracks but also there is likely to be an increase overall for wetter conditions, regardless of any TC effects. This above-average rainfall area includes drought-stricken Puerto Rico and the U.S. Virgin Islands. By the beginning of July, large ensemble spread exists on the future track of this potential TC with outcomes ranging from the southwestern Caribbean Sea and Central America to farther north including Hispaniola, Jamaica, and Cuba. Please refer to the National Hurricane Center (NHC) for the latest updates on this increasing chance of a tropical cyclone developing over the Atlantic basin during late June.

The North American Monsoon is forecast to remain enhanced through at least early July, associated with a favorable 500-hPa height pattern over the mid-latitudes and the likelihood of a northward surge of moisture from the Gulf of California.

A broad area of low pressure is forecast to form well offshore of southern Mexico during the final week of June with potential for slow TC development. A lack of strong model support precludes designation of a TC area over the East Pacific on the updated GTH map.

An elevated chance of TC development remains for the West Pacific, near Luzon of the Philippines and Taiwan, from June 25-28. This favored area for TC formation may shift west to the South China Sea at the beginning of July.

----- Previous discussion released on June 21 follows -----

The MJO remains weak as the RMM index and 200-hPa velocity potential anomaly field depict a nearly stationary pattern with anomalous upper-level divergence (convergence) centered over Africa and the Indian Ocean (Pacific Ocean). Many of the GFS and ECMWF ensemble members feature eastward propagation resuming during late June with a strengthening MJO shifting east from the Indian Ocean to the Maritime Continent by early July. If this were to occur, then the large-scale environment would become less favorable for tropical cyclone (TC) development over the East Pacific and Atlantic basins during early July.

Tropical Depression (TD) Celia developed on June 16, a couple of hundred miles to the south of El Salvador in the eastern Pacific. Celia is forecast to become a hurricane by June 24 as wind shear decreases. Please refer to the National Hurricane Center for the latest updates on Celia. Model solutions remain consistent that Celia takes a favorable northwest track and results in a northward surge of moisture from the Gulf of California into northern Mexico and the southwestern United States. Therefore, an enhanced North American Monsoon is likely to persist through the beginning of July. A tropical wave is forecast to track westward from the Windward Islands to the Caribbean Sea late in week-1 into week-2. The ECMWF model is the most bullish with TC development with this wave. Given

the lack of strong model support from the GFS model and this would be an atypical area for development at this time of year, forecast confidence is too low to depict a favored TC area at this time. This will be reassessed on Friday's update. Based on good continuity from the GFS model, a moderate confidence of TC development is forecast at a relatively high latitude of the western Pacific.

The precipitation outlook during the next two weeks is based on a consensus of GEFS, CFS, and ECMWF model solutions, La Nina precipitation composites, and MJO precipitation composites for phases 2, 3, and 4. A northward shift in above-average rainfall is forecast across the Indian Ocean along with South and Southeast Asia during the next two weeks which is consistent with a MJO propagating eastward from the Indian Ocean to the Maritime Continent during the summer. The low-frequency dryness is likely to persist for parts of the western and central Pacific, while a drying trend is anticipated along the ITCZ in the eastern Pacific by week-2.

For hazardous weather concerns during the next two weeks across the U.S., please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's Week-2 Hazards Outlook. Forecasts over Africa are made in consultation with the International Desk at CPC and can represent local-scale conditions in addition to global scale variability.