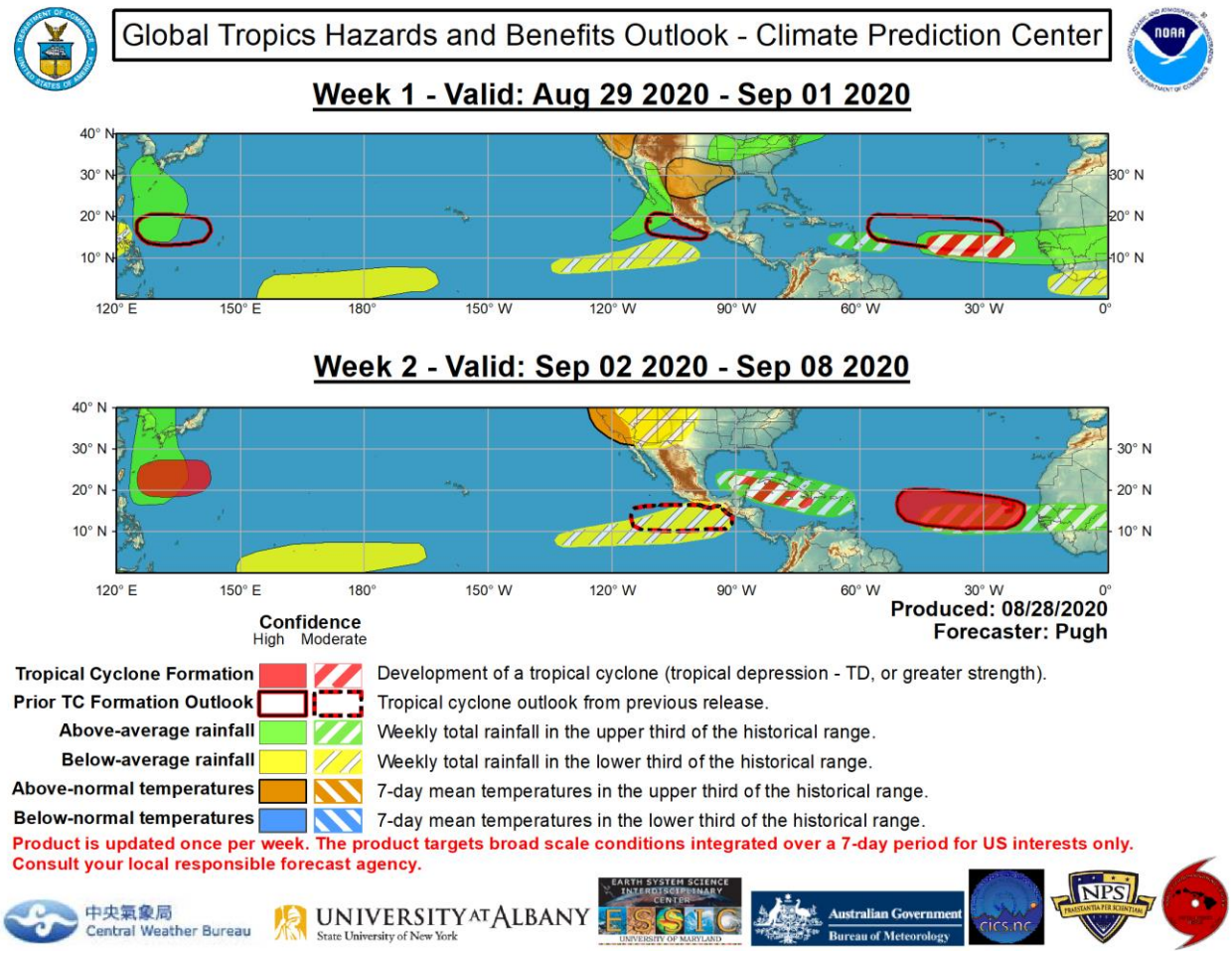

The Madden-Julian Oscillation (MJO) continued propagating eastward during late August with its enhanced phase overspreading Africa and the western Indian Ocean. As it reemerges over the Indian Ocean, it will be completing a global circumnavigation in about a 5-week span. Although dynamical models differ on the MJO amplitude, its enhanced (suppressed) phase is forecast to shift east over the Indian (Pacific) Ocean through the beginning of September. Robust easterly waves, associated with the ongoing MJO along with the low-frequency base state and climatology, support an active Atlantic basin through at least early September.

Powerful Category-4 Hurricane Laura made landfall near Cameron, Louisiana during the early morning hours of August 27, with maximum sustained winds of 150mph and a minimum central pressure of 938-hPa. Since its landfall in southwest Louisiana, the weakening tropical cyclone tracked north into Arkansas. The remnants of Laura are forecast to accelerate east and merge with a cold front crossing the eastern United States. On August 29, heavy rain (locally more than 1 inch) is forecast across the mid-Atlantic. Localized heavy rain could trigger flooding due to antecedent wet conditions. A tropical wave, crossing the central Atlantic, is forecast to enhance rainfall across the Windward Islands from August 29 to September 1. Model solutions continue to indicate gradual tropical cyclone (TC) development across

the eastern Atlantic as a tropical wave tracks west from the Cabo Verde Islands early next week. A moderate confidence of TC development over the central and western Caribbean Sea is added for the Sep 2-8 period, due to good model support from the GEFS and ECMWF. High confidence remains for TC development across the main development region of the Atlantic basin during this same time period as discussed earlier.

A pair of relatively weak tropical cyclones, Hernan and Iselle, developed over the East Pacific on August 26. Both of these TCs are forecast to weaken during the next few days. Based on the latest model guidance, which is consistent with the suppressed MJO phase overspreading the Pacific Ocean, the moderate confidence of tropical cyclone development (Sep 2-8) is removed from the previous outlook.

Typhoon Bavi (maximum sustained winds of 75mph) made landfall to the northwest of Pyongyang, North Korea on August 26. Meanwhile, Tropical Depression 10W (Maysak) recently developed to the east of the Philippines and is forecast to strengthen as it takes a similar northward track to that of Bavi. As of August 28, model solutions are in good agreement and depict Maysak approaching southern Japan or South Korea early next week as a strong typhoon. Please refer to the Joint Typhoon Warning Center for the latest updates. The predicted track of Maysak and additional tropical cyclones recurving across the Northwest Pacific are expected to reinforce the high amplitude pattern over North America well into September.

Modifications to the favored areas of above- and below-average rainfall from the previous outlook are based on GFS, CFS, and ECMWF precipitation output. As a number of tropical waves and/or tropical cyclones emerge from the main development region (MDR) of the Atlantic basin, above-average rainfall is probable across the Carribean Sea and the Greater Antilles from September 2 to 8.

The original discussion released August 25 follows.

A coherent Madden-Julian Oscillation (MJO) continued to propagate eastward since late July with its enhanced (suppressed) phase centered over Africa (the Maritime Continent). During the final week of August, dynamical model forecasts depict the MJO shifting east to the western Indian Ocean which would complete a global circumnavigation in a 5-week span. The GFS model indicates a decrease in the MJO amplitude but this is likely due to interference from an equatorial Rossby wave. The favored

Canadian model, and to some extent the ECMWF, feature the MJO continuing to propagate eastward to the eastern Indian Ocean and western Maritime Continent during early September.

The passage of the MJO and its associated anomalous upper-level divergence and reduced vertical wind shear likely aided the development of multiple tropical cyclones across the East Paific and Atlantic basins during mid to late August. Tropical Depression Marco formed in the west-central Caribbean Sea on August 20 and briefly attained hurricane strength as it tracked north over the central Gulf of Mexico. Increasing wind shear rapidly weakened Marco as it neared the Gulf Coast on August 24. As of August 25 at 11am EDT, Hurricane Laura is forecast to track northwest across the Gulf of Mexico and make landfall along the southwest Louisiana or upper Texas coast on Wednesday night or Thursday morning. Heavy rain and a flooding risk are likely to accompany the remnant low as it tracks across the east-central United States later this week. Please refer to the Hurricane Center for the latest updates on Hurricane Laura. Based on the MJO, low-frequency base state, and climatology, high confidence exists for tropical cyclone development across the main development region of the Atlatnic through at least early September.

Following Tropical Storm Fausto and Hurricane Genevieve (Category-4), convection remained enhanced across the East Pacific into late August. One or two tropical cyclones (TCs) are likely to form at the beginning of week-1 offshore of the southwestern coast of Mexico. Although the chances for additional TC development across the East Pacific are expected to decrease heading into early September, a moderate confidence shape is posted due to model guidance but this will be reevaluated on the updated outlook, released August 28.

Typhoon Bavi is currently located a few hundred miles east of Shanghai, China and Bavi is forecast to track north to near or over the Korean Peninsula on August 26. Model solutions remain in excellent agreement that a tropical cyclone forms east of the Philippines during Week-1 with a similar track northward. The future track of this TC will have to be closely monitored since it may recurve over the North Pacific and influence the longwave pattern downstream over North America.

The precipitation outlook during the next two weeks is based on the model consensus among the CFS, ECMWF, and GFS models, MJO precipitation composites for Phases 1 through 3, and influences from the low frequency base state. Above-average rainfall is likely to expand east from Africa to the Indian Ocean during week-1, while constructive interference between the MJO and low-frequency base state strongly supports below-average rainfall across the west-central equatorial Padific. During early September, above-average rainfall is most likely across parts of the Indian Ocean and western Maritime Continent with a persistence of below-average rainfall along the west-central equatorial Pacific.

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