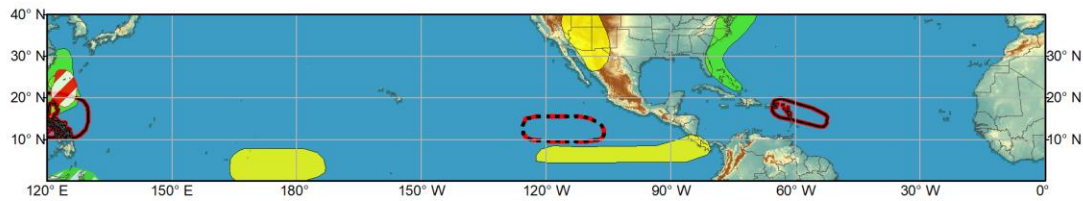




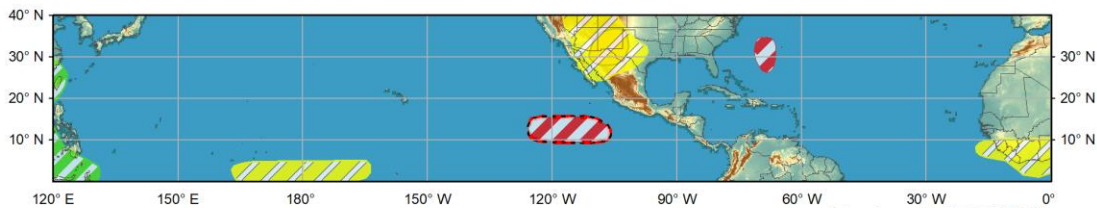
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Aug 01 2020 - Aug 04 2020



Week 2 - Valid: Aug 05 2020 - Aug 11 2020



Confidence
High Moderate

Produced: 07/31/2020
Forecaster: Pugh

- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Prior TC Formation Outlook** Tropical cyclone outlook from previous release.
- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
- Below-normal temperatures** 7-day mean temperatures in the lower third of the historical range.

Product is updated once per week. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



The Madden-Julian Oscillation (MJO) strengthened during late July with its enhanced phase propagating eastward from the Indian Ocean to the western Maritime Continent. Conversely, the suppressed phase recently shifted east to the Americas. Dynamical models diverge with the evolution of this MJO during early August, which may be related to increasing destructive interference with the low-frequency base state. The suppressed MJO phase during early August is expected to be a limiting factor in tropical cyclone (TC) development across the East Pacific and Atlantic basins. If the enhanced phase of the MJO crosses the Western Hemisphere or a Kelvin wave emerges, there would likely be a more favorable large-scale environment for TC development later in August.

On July 29, Tropical Storm Isaias developed 155 miles to the south of Puerto Rico and then tracked west-northwest to Hispaniola. According to the NWS in San Juan, Isaias brought heavy rainfall (2 to 8 inches, locally more) to Puerto Rico. The heaviest amounts (more than 10 inches) occurred on the eastern end of the island. Isaias strengthened to become a hurricane late on July 30 as it moved away from Hispaniola and approached the southeastern Bahamas. Hurricane Isaias is forecast to turn more north-northwest this weekend, around a weakening western Atlantic subtropical ridge. An amplified mid-latitude trough over the east-central United States is expected to influence the track of Isaias as it nears

the East Coast. Isaias is likely to result in heavy rainfall and potentially life-threatening flash flooding and mudslides across the Turks and Caicos and Bahamas. Heavy rain along with flash and river flooding may affect parts of the East Coast from August 1 to 4. Please refer to the National Hurricane Center for the latest updates and forecasts on Hurricane Isaias.

Elsewhere in the tropical Atlantic, a small area of low pressure is located a couple of hundred miles east-southeast of the Cabo Verde Islands. Since it became less organized during the past 24 hours, it is unlikely to develop into a TC. A tropical wave, located about 1000 miles east of the Lesser Antilles, is only producing a limited amount of shower activity. As of 2pm EDT on July 31, the National Hurricane Center states that this system has a 30 percent chance of TC formation through early next week. By August 5, the deterministic GFS and Canadian models indicate a weak closed surface low to the west or southwest of Bermuda. Therefore, a moderate chance of TC development is posted for the August 5 to 11 period. The TC development shape (moderate confidence) is maintained in the East Pacific from August 5 to 11, since the model consensus favors genesis late in this period.

A pair of surface lows have formed to the east of the Philippines and over the South China Sea. A TC is more likely to develop near Hainan Island and this system would bring heavy rainfall to northern Vietnam as it tracks westward. Confidence is lower for TC genesis with the area of low pressure lifting north to the east of Taiwan.

Modifications to the favored areas of above- and below-average rainfall from the previous outlook are based on the predicted track of Hurricane Isaias along with recent GFS, CFS, and ECMWF precipitation output. Model guidance remains consistent and in good agreement that the 500-hPa ridge axis persists along the U.S.-Mexico border through early to mid-August, which is likely to suppress Monsoon rainfall across the southwestern United States and northern Mexico. Above normal temperatures are likely from August 5 to 11, within this favored area of below normal precipitation.

The original discussion released July 28 follows.

The Madden-Julian Oscillation (MJO) is beginning to strengthen as its enhanced phase has propagated eastward across the Indian Ocean during late July. The RMM index reveals that a MJO signal has shifted to the east from Phases 2 to 3. A Kelvin wave continues to cross the Western Hemisphere, from the East

Pacific to the tropical Atlantic during the past week. A low frequency state with suppressed (enhanced) convection has persisted over the West-Central Pacific (Indian) Ocean since the Boreal spring. Dynamical model solutions depict that the MJO propagates eastward to the Maritime Continent at the beginning of August. Beyond that time, spread among ensemble members increases as the MJO begins to destructively interfere with the low-frequency base state.

Hurricane Douglas developed on July 20 over the East Pacific (13.7N/119.8W) and eventually tracked very close to the Hawaiian Islands on July 26 and 27. Douglas has since weakened due to increasing vertical wind shear and is forecast to dissipate by July 31 across the Central Pacific. On July 23, a Tropical Depression formed over the Gulf of Mexico and rapidly intensified to Hurricane Hanna (maximum sustained winds of 90mph) only two days later. Hanna made landfall on Padre Island, Texas and resulted in heavy rainfall (locally more than 10 inches) across the Lower Rio Grande Valley.

As of 2pm EDT on July 28, a broad area of low pressure is located several hundred miles east of the Lesser Antilles. Environmental conditions are favorable for a tropical depression to form and this system is likely to become a Tropical Storm before it reaches the Leeward Islands. Early in Week-1, heavy rainfall is likely from the Lesser Antilles northwest to Hispaniola. Since there is considerable model spread regarding the track later in Week-1, a broad moderate confidence of above average rainfall is posted, including the Bahamas, Cuba, and the southeastern United States. As this potential tropical cyclone approaches the southeastern United States, an amplified mid-latitude trough, extending from the Ohio Valley south to the Gulf Coast, is expected to influence its future track. Please refer to the National Hurricane Center for the latest updates and forecasts on this system.

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 3 and 4, and influences from the low frequency base state. Above average rainfall is likely from southern India eastward to Southeast Asia, the South China Sea, and the northern Philippines during Week-1. Also, model guidance remains consistent that a tropical cyclone forms either just east of the Philippines or over the South China Sea. Only two tropical cyclones have formed this year across the Northwest Pacific basin. During Week-2, above average rainfall is expected to expand and shift north across South and Southeast Asia. The low frequency base state continues to strongly favor below average rainfall across the equatorial west-central Pacific.

Although the predicted evolution of the MJO would tend to suppress tropical cyclone development across the East Pacific during the next two weeks, model guidance indicates a moderate chance of at least one TC forming. This will be reevaluated on the Friday update, July 31. The 500-hPa ridge axis is

likely to remain in an unfavorable location for monsoon rainfall across the southwestern United States through early August.

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