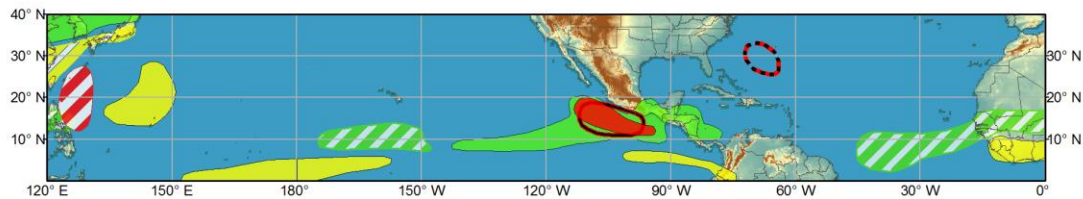




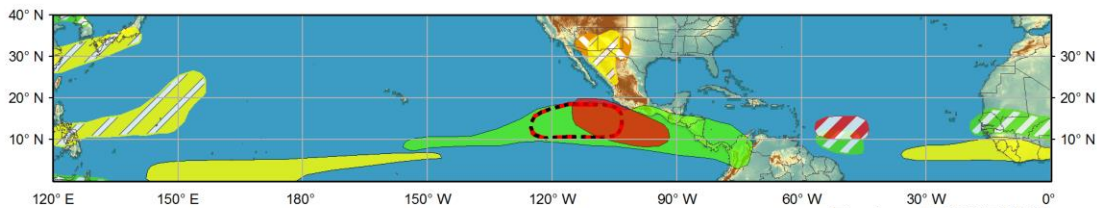
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Aug 08 2020 - Aug 11 2020



Week 2 - Valid: Aug 12 2020 - Aug 18 2020



Confidence
High Moderate

Produced: 08/07/2020
Forecaster: Allgood

- 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 amplitude of the MJO on both the CPC velocity potential and RMM-based MJO indices increased over the past several days, with a substantial dipole of enhanced (suppressed) convection evident over the Maritime Continent (Western Hemisphere), and a robust northwestward extension of the enhanced convection into the South and Southeast Asia monsoon regions. Little eastward propagation of the signal was noted over the past few days, but dynamical models are beginning to come closer into agreement suggesting that robust Kelvin wave (or fast MJO) activity will shift the region of enhanced convection back to the Western Hemisphere by the end of Week-2.

As indicated in the initial outlook, tropical cyclogenesis is likely just southwest of Mexico within the next several days, and the latest NHC tropical weather outlook has a 90 percent chance of formation within the next five days. Given the potential for Kelvin wave activity during the outlook period, additional tropical cyclogenesis is likely for the Week-2 period as well. In fact, the operational GFS depicts three distinct tropical cyclones forming southwest of Mexico during the Week-2 period. Across the Atlantic,

significant tropical cyclone activity is not anticipated, but the NHC is currently monitoring a weak tropical wave crossing the MDR. While formation chances are low over the next five days, there is a moderate potential for a brief formation of a tropical cyclone during the Week-2 period before conditions become increasingly unfavorable. Elsewhere, the Joint Typhoon Warning Center is monitoring a disturbance just east of the Philippines for possible development. Dynamical model tracks bring this potential tropical cyclone northward towards southern Japan over the next several days.

The original discussion released on 4 August 2020 follows.

The Madden-Julian Oscillation (MJO) continued to project well on both the CPC velocity potential based index and the RMM index during the past week. The zonal wind field at both the upper and lower levels of the atmosphere correspond well to a Maritime Continent MJO event, helped in part by midlatitude wavebreaking from the Southern Hemisphere onto the Equator north of Australia. Analyses of recent OLR anomalies centered north of the Equator show interactions between a low-frequency signal favoring enhanced convection over the Indian Ocean, a robust Rossby wave now crossing the Maritime Continent, and Kelvin wave activity moving ahead of the broader envelope to the Pacific. Dynamical model MJO index forecasts diverge considerably, with the GEFS depicting continued fast eastward propagation of the signal across the Pacific, possibly tracking robust Kelvin wave activity, while the ECMWF shows no Pacific signal, but brings the index rapidly back to the Western Hemisphere by Week-2. Despite the uncertainty regarding the future evolution of the signal, the overall MJO-forced pattern is likely to play a role in the global tropical convective field over the next week or two. In particular, the suppressed phase of the MJO may help bring a period of relative quiet to the Atlantic MDR tropical cyclone basin during the outlook period. Beyond Week-2, however, conditions may become more favorable for renewed Atlantic tropical cyclone activity.

On 30 July, Hurricane Isaias developed over the eastern Caribbean, bringing widespread rainfall to Puerto Rico, Hispaniola, and the Bahamas before turning northward just east of Florida. The hurricane weakened to tropical storm intensity after encountering increasing vertical shear, but regained hurricane intensity just before landfall near the South Carolina and North Carolina border. The storm is currently moving rapidly northeastward, bringing impacts to much of the U.S. East Coast. Tropical Storm Sinlaku formed over the South China Sea on 1 August, making landfall over Vietnam and bringing

widespread heavy rainfall across the region. On 2 August, Typhoon Hagupit developed east of China, strengthening to Category-1 intensity on the Saffir-Simpson scale before making landfall well south of Shanghai. The remnants of Hagupit are forecast to bring widespread rainfall to parts of northern China, the Korean Peninsula, and western Japan over the next several days. The two West Pacific tropical cyclone formations are strongly tied to the aforementioned Rossby wave now crossing the Maritime Continent.

During Week-1, the NHC is monitoring a disturbance north of Puerto Rico for potential development. Confidence in formation has decreased somewhat as dry air intrusion began limiting convection, but a moderate confidence for formation has been maintained on this outlook due to weak steering currents that will allow the disturbance to stall for most of the week south of Bermuda. Over the East Pacific, dynamical models favor a potential formation southwest of Mexico late in the period, with the threat beginning over the weekend and extending into Week-2. Kelvin wave activity crossing the Pacific may help contribute to this potential formation. Elsewhere, tropical cyclogenesis is not anticipated, but conditions may become increasingly favorable for renewed activity across the Western Hemisphere basins beyond the Week-2 period.

Forecasts for above- and below-average precipitation were based on dynamical model consensus. Consistent with a Maritime Continent MJO event, enhanced monsoon rainfall is favored across parts of South and Southeast Asia during the outlook period, extending southeastward to the equatorial Maritime Continent. In contrast, the low frequency base state favors continued suppressed convection across parts of the West Pacific basin, including the Mariana Islands and Guam, where drought conditions have worsened. Enhanced rainfall associated with frontal interactions with the remnants of Typhoon Hagupit may generate additional floodwaters across parts of the northern Yangtze River basin, though drier conditions are favored for the lower portions of the basin. Storm systems are favored to bring precipitation to Australia's core winter wheat growing regions, while Kelvin wave activity may enhance convection across the East Pacific and Central America. A continued lackluster monsoon is forecast to continue across northwestern Mexico and the U.S. Southwest.

During Week-2, enhanced rainfall is favored to persist across parts of South Asia and East Asia, with the Rossby wave potentially contributing to persistent enhanced rainfall across the equatorial Maritime Continent. Suppressed convection is favored to continue across much of the west-central Pacific, but Kelvin wave or MJO activity is favored to bring additional enhanced convection to the East Pacific and Central America. Renewed heatwave conditions are possible across parts of the U.S. Southwest. Please see the CPC U.S. Probabilistic Hazards Outlook for more information.

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