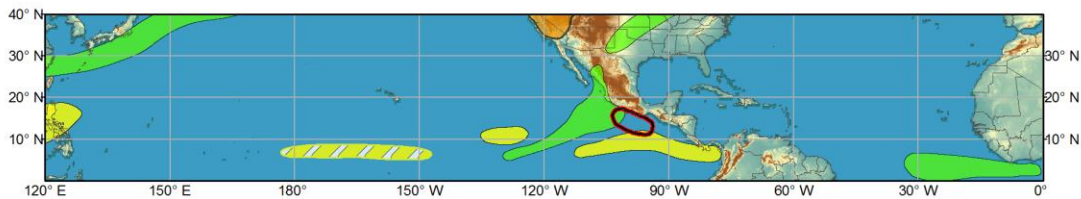




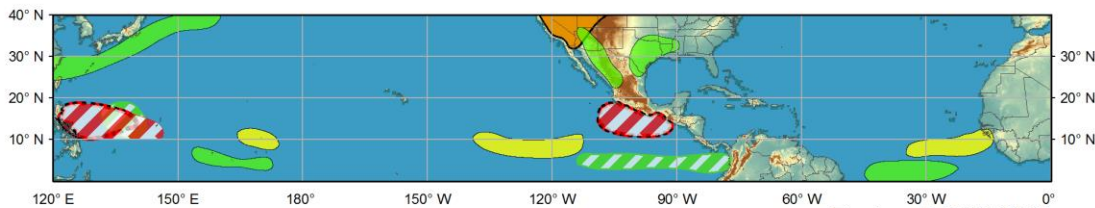
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 26 2021 - Jun 29 2021



Week 2 - Valid: Jun 30 2021 - Jul 06 2021



Confidence
High Moderate

Produced: 06/25/2021
Forecaster: Harnos

- 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 original outlook from Tuesday remains on track, with a slight complication being introduced by way of a third atmospheric Kelvin wave emerging to further muddy the intraseasonal perspective. The nascent Kelvin wave is near 90E, while the longer-lived features are near 150W and the Prime Meridian at present. The feature near 150W is likely to yield an increasingly favorable environment for convection over the East Pacific during the next 7 to 10 days, supporting the intensification of Tropical Storm Enrique and possible genesis of another tropical cyclone (TC) in its wake. Model forecasts of the RMM index continue to focus on the Kelvin wave presently near the Prime Meridian as the primary intraseasonal player through early July, with the GEFS aligning with the ECMWF forecasts from Tuesday and showing the Kelvin wave crossing the Western Hemisphere and Indian Ocean through mid-July.

Tropical Storm Enrique formed near 15N/101W on the 25th of June. The National Hurricane Center (NHC) forecasts Enrique to parallel the Mexican coastline during the next five days while tracking toward Baja California and intensifying to become a hurricane. Enrique's track has shifted northward relative to Tuesday's outlook, further increasing the likelihood of a surge of moisture up the Gulf of California and increased precipitation in association with the North American Monsoon. For the latest on Enrique, please follow the NHC at <https://www.hurricanes.gov>. Elsewhere, the NHC is monitoring an easterly

wave across the far Eastern Atlantic for TC development. The 2 PM EDT advisory on the 25th of June gives this system a 10% (20%) chance of developing over the next 48 hours (5 days) while tracking westward. A few ensemble members track this system into Week-2, but development remains unlikely. Moderate confidence for tropical cyclogenesis remains over the East Pacific from Tuesday's original outlook, although the latest ECMWF run shows this area may be a bit too far north and west, despite climatology and the GEFS aligning better with the targeted area. The GEFS continues to highlight the southwestern Caribbean for TC formation chances during Week-2, but has noted false alarm issues with this region on top of being an outlier relative to other models. The Philippine Sea continues to see moderate confidence for TC formation during Week-2, with some extension of this area to the south and east toward Guam based on the latest ensemble guidance. Temperature and precipitation outlooks for each of the next two weeks are updated to align with the latest Weather Prediction Center forecasts, Days 6-10 outlook from CPC, and consensus among the CFS, ECMWF, and GEFS ensembles.

----- The original discussion from Tuesday, June 22nd follows below. -----

Little evidence is apparent to support the presence of an active Madden-Julian Oscillation (MJO) event at this time, with the global tropical circulation instead being dominated by a pair of atmospheric Kelvin waves that are roughly 180 degrees out of phase with one another. The RMM index is having difficulty in capturing the intraseasonal state of the tropics, and reflects a transitioning signal from emphasizing the Kelvin wave currently approaching the Date Line to the other presently near the Prime Meridian. The ECMWF ensembles consistently highlight the latter Kelvin wave, projecting onto Phases 1 and 2 over the next two weeks. The GEFS generally does this as well, but has substantially more spread than the ECMWF ensembles, particularly in RMM1 space, where the 2-week forecast varies by up to 6 units (i.e. concluding over Africa or the Maritime Continent). Altogether the lack of an apparent MJO, the two Kelvin waves being 180 degrees out of phase, and large spread in GEFS RMM forecasts underscore the limited predictability and decreased confidence in the upcoming forecast. Despite this, the Kelvin waves are likely to increase tropical cyclogenesis chances over the East Pacific through early Week-2 and over the West Pacific during Week-2.

During the past week three tropical cyclones (TCs) developed. The first to form was Tropical Storm Dolores, near 14N/101W on June 18th. Dolores attained a peak intensity of 60 knot winds on the 19th shortly before making landfall near the border of Colima and Michoacan in Mexico. Elsewhere, Tropical Storm Claudette formed near 30N/91W late on June 18th just prior to landfall along the Central Gulf Coast. Claudette brought up to a foot of rainfall to the region, and caused a dozen fatalities across Alabama due to falling trees and poor road conditions leading to auto accidents. Lastly, Tropical Storm Six formed near 11N/148E on June 21st. Tropical Storm Six is forecast by the Joint Typhoon Warning Center to recurve northward along roughly the 140th parallel through the weekend, with some accompanying intensification during the next few days.

The NHC is currently monitoring disturbances with the potential to undergo tropical cyclogenesis over both the Atlantic and East Pacific. Over the Atlantic, an easterly wave located approximately 500 miles east of the Windward Islands is given a 20% chance of becoming a TC over both the next 2 and next 5 days by the NHC's 2 PM EDT outlook on June 22nd. While development appears unlikely with this system, it could bring needed precipitation to the Virgin Islands and Puerto Rico to help drought-stricken areas. Elsewhere in the Atlantic, while climatologically early, easterly waves exiting Africa have been strong thus far during 2021, with a nonzero chance of something developing over the Main Development Region late in Week-1 or during Week-2. A handful of GEFS members also support the possibility of a disturbance tracking from the southwestern Caribbean to near the Yucatan Channel by the end of Week-1, although this remains an outlier among guidance. A disturbance over the East Pacific is anticipated to have more favorable odds to develop by the NHC, with a 30% (80%) chance of forming during the next 48 hours (5 days) as of 2 PM EDT on the 22nd. This translates to high confidence for genesis during Week-1. Later in Week-2, the presence of an atmospheric Kelvin wave is likely to bring a favorable large-scale environment, which when coupled with the typical East Pacific climatology supports moderate confidence for TC formation similar to the region being monitored during Week-1. The presence of a Kelvin wave and forecast Rossby wave activity also result in moderate confidence for TC formation over the Philippine Sea during Week-2.

The precipitation outlook during the next two weeks is largely based on a consensus among the CFS, GEFS, and ECMWF ensemble means, anticipated TC tracks, and large-scale modes of tropical variability. Reforecast guidance supports the potential for above-normal temperatures across portions of the northwestern U.S. the next two weeks (high confidence), parts of Africa and Europe during Week-1 (high confidence), and parts of Africa, Europe and the Middle East during Week-2 (moderate confidence). This is in addition to reforecast guidance supporting a high risk for much below-normal temperatures that could lead to a frost or freeze across portions of Argentina, Bolivia, Brazil, Paraguay, and Uruguay during Week-2. Some of the cold weather anticipated could impact coffee-growing regions across parts of southern Brazil, while ECMWF reforecast guidance gives up to an 80% chance for daily record lows to be observed in portions of Bolivia. For hazardous weather concerns across the U.S., please refer to regular tropical updates from the NHC, as well as 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.