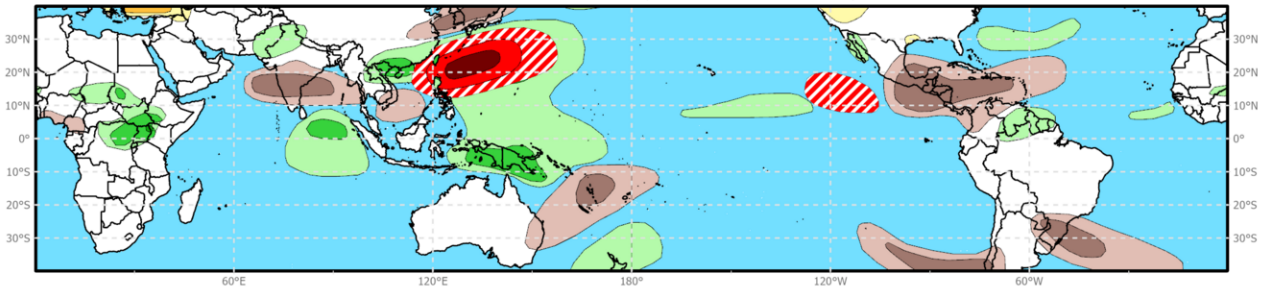
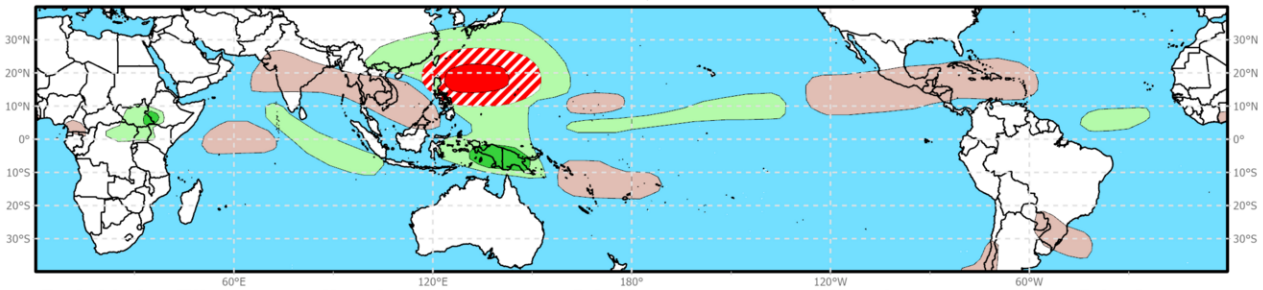
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Jul 09, 2025 - Jul 15, 2025



Week 3 - Valid: Jul 16, 2025 - Jul 22, 2025



Tropical Cyclone (TC) Formation Probability
>20% >40% >60%
Tropical Depression (TD) or greater strength

Above-Average Rainfall Probability
>50% >65% >80%
Weekly total rainfall in the Upper third of the historical range

Below-Average Rainfall Probability
>50% >65% >80%
Weekly total rainfall in the Lower third of the historical range

Above-Average Temperatures Probability
>50% >65% >80%
7-day mean temperatures in the Upper third of the historical range

Below-Average Temperatures Probability
>50% >65% >80%
7-day mean temperatures in the Lower third of the historical range

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Forecaster: Novella

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

The MJO continues to be disorganized with other tropical modes of variability continuing to prevail throughout the global tropics. Although upper-level velocity potential anomaly observations reveal more of a wave-1 pattern taking shape during late June, there is little indication of eastward propagation of the enhanced and suppressed divergence envelopes, with the pattern being more reflective of low frequency variability dominating. The lack of coherent subseasonal activity is likewise supported by RMM observations, which have shown the MJO signal meandering over phases 4 and 5 at a weak amplitude during the 2nd half of June. Looking ahead, RMM forecasts generally do not depict a meaningful MJO signal during the next few weeks, with many ensemble means and their respective members generally confined within the RMM unit circle. One exception is the GEFS, which shows the mean signal gaining amplitude over the Maritime Continent and Western Pacific at the longer leads. Notably, the GEFS heavily favors the development of an envelope of enhanced westerlies aloft from the central equatorial Pacific into the Indian Ocean along the equator, with the other models beginning to follow suit with this anomalous feature. Such a pattern would project well with phase 5 and 6 MJO events in RMM space, however, it is unclear whether this is true MJO activity reemerging or the low frequency response growing stronger with the upper-level velocity potential pattern favored to remain stationary throughout much of July. Regardless of any renewed MJO activity, this shift in the large-scale circulation being advertised is significant, as such an environment would become much less favorable for additional tropical cyclogenesis in the western Hemisphere during the next several weeks. Conversely, the persistence of enhanced divergence aloft favored from the western Indian Ocean to the central Pacific, with enhanced upper-level easterlies focused near 120E would support elevated chances for Tropical Cyclone (TC) development in the western Pacific, following a sluggish start of the 2025 season.

During the past seven days, two TCs developed in the western Hemisphere, and one in the eastern Hemisphere. As a short-lived and poorly structured system, TC Barry formed in the Bay of Campeche on 6/28 and quickly tracked into eastern Mexico bringing locally heavy rainfall and an elevated risk of flooding and mudslides while dissipating on 6/30. In the eastern Pacific, TC Flossie formed on 6/29 to the south of Mexico and steadily intensified where it is currently a

category 2 strength Hurricane. The National Hurricane Center (NHC) expects Flossies to continue strengthening and peak as a category 3 system during the next day or so before rapidly weakening under the influence of cooler waters and dry air environment as it approaches the tip of Baja California. Despite this weakening, its track near the Gulf of California looks to initiate a gulf surge event and bring added tropical moisture into the Desert Southwest favorable for thunderstorm activity and gusty winds over this part of the U.S during the next few days. In the western Pacific, a short-lived tropical cyclone (TD03W) formed in the South China sea on 6/25 but quickly dissipated after making landfall in China.

For week-1, the NHC is eyeing an area in the eastern Gulf of America and western Atlantic where surface low formation is possible associated with a frontal boundary stalling over the region later this week. This low could gain tropical characteristics and there are 30% chances for development. On the heels of TC Flossie, the NHC expects another area of low pressure to develop to the south of Mexico where there are 40% chances of TC formation during the next seven days. Beyond this time, the environment in the eastern Pacific looks to become less favorable for development, however, another Kelvin wave passage is favored to encroach the basin where probabilistic guidance shows a regeneration of signals to the south of Mexico. Therefore, 20% chances for TC development are posted for week-2 from approximately 105W to 125W where shearing is favored to be more minimal. In the Atlantic basin, no TC areas are posted for week-2 given a lack of support in the tools. By the middle of July, the emergence of strong upper-level westerlies and convergence aloft is favored to take hold over the tropical Americas and the Atlantic to suppress formation potential. While additional development is certainly possible with an increasingly active climatology for July, there is not enough confidence to post any TC areas in the eastern Pacific and Atlantic basins for week-3 based on the latest extended range probabilistic guidance and the large-scale environment favored.

In contrast to the western Hemisphere, the western Pacific appears poised for additional TC development during the next few weeks. There is good agreement in the GEFS and ECMWF favoring strong anomalous lower-level westerlies along an axis from the South China Sea extending to the north of the Marianas, consistent with a reverse oriented monsoonal trough persisting across the basin. With enhanced divergence aloft favored to strengthen by the middle of July, high chances (>60%) for TC development are posted, with a broader area of moderate (40-60%) and slight chances (20-40%) issued for week-2 associated with the trough feature. Based on continued elevated signals in the probabilistic tools, 40% chances for development are posted for week-3, with coverage expanding a bit further southward in the Philippine Sea with the monsoonal trough expected to flatten some later in July.

Given the uncertainties associated with renewed subseasonal activity later in July, the precipitation outlook heavily relies on a historical skill weighted blend of GEFS, ECMWF, and CFSv2 dynamical model ensemble guidance, anticipated TC tracks, with consideration of the strengthening low frequency response. Tied to amplified 500-hPa ridging in the extratropics, above-normal temperatures with possible extreme heat conditions are favored over parts of eastern Europe, western Asia, as well as over parts of the western U.S. during week-2. Enhanced subtropical ridging over the Caribbean also may bring above-normal temperatures protruding into the southern tier of the CONUS with below normal precipitation possibly leading to drought development over parts of Puerto Rico. For hazardous weather concerns in your area during the next two weeks, please refer to your local NWS office, the Medium Range Hazards Forecast from the Weather Prediction Center (WPC), and the CPC Week-2 Hazards Outlook. Forecasts issued over Africa are made in coordination with the International Desk at CPC.