

The Madden-Julian Oscillation (MJO) remains weak as Equatorial Rossby and Kelvin Waves continue to drive anomalous rainfall across the global tropics. In addition, a low-frequency pattern with enhanced (suppressed) rainfall has developed over the West Pacific (western Indian Ocean). According to the 200-hPa velocity potential anomaly forecasts from the GEFS and ECMWF ensemble means, anomalous upper-level divergence with enhanced rainfall is forecast to persist over the West Pacific while anomalous upper-level convergence and associated suppressed rainfall expands west from the tropical Atlantic to Central America and the East Pacific by mid-July. There is little to no apparent signal for a strengthening MJO in the RMM index forecasts from the dynamical models during the next two to three weeks.

On June 19, Category 3 Hurricane Erick made landfall in the Oaxaca state of southern Mexico. Since the end of May, five tropical cyclones (TCs) have developed across the East Pacific and a sixth TC is likely to form by July 1st. The National Hurricane Center is monitoring a broad area of low pressure located a few hundred miles offshore of Central America and there is a 70 percent chance of TC genesis during the next seven days. The GEFS and ECMWF ensemble members are in good agreement that this potential TC tracks northwest towards the southern Baja Peninsula which would spread enhanced low to midlevel moisture northward into the southwestern United States. This is expected to increase the chance of above-average precipitation and flash flooding across the Southwest during early July. From July 2-8, the GEFS depicts another Kelvin Wave crossing the East Pacific and there is enough ensemble member support to designate at least a 20 percent chance of TC development. By week-3 (July 9-15), model guidance indicates less favorable conditions, including higher wind shear, across the East Pacific and no TC development is expected.

The first Tropical Storm of the 2025 Atlantic season, Andrea, developed across the central subtropical Atlantic on June 24. It is forecast to dissipate within the next 36 hours. During weeks 2 and 3 (July 2-15), no TC development is expected for the tropical Atlantic. However, the deterministic OZ ECMWF model and a few of its ensemble members are showing a low pressure system, potentially with tropical characteristics, forming along a stalled front offshore of the southeastern United States from July 2 to 4.

Tropical Storm Sepat formed in the West Pacific on June 23 and the Joint Typhoon Warning Center is currently monitoring a potential area for TC development west of the Philippines. Based on predicted constructive interference between the low-frequency state and an Equatorial Rossby Wave, a 40 to 60 percent chance of TC development is forecast for the West Pacific from July 2-8. This region is expected to remain active through mid-July, but TC formation probabilities decrease to 20-40 percent from July 9-15 due to uncertainty on where any TC would form.

The precipitation outlook for weeks 2 (July 2-8) and 3 (July 9-15) is based largely on the historical skill weighted blend of the GEFS, CFS, and ECMWF since the MJO is expected to remain weak through mid-July. The West Pacific and eastern Maritime Continent are likely to remain wetter-than-normal, while the Indian Monsoon overall is forecast to be suppressed. Below-average rainfall is forecast to expand west from the Caribbean Sea to Central America and the East Pacific from week 2 to 3.

For hazardous weather conditions in your area during the coming two-week period, please refer to your local NWS office, the Medium Range Hazards Forecast produced by the Weather Prediction Center, and the CPC Week-2 Hazards Outlook.