

A well-defined Madden-Julian Oscillation (MJO) nearly completed a circumnavigation of the global tropics since early July, but its eastward propagation recently stalled due to interference with equatorial Rossby waves. Dynamical models are in good agreement that the eastward propagation resumes with the enhanced phase shifting east from the Indian Ocean to the western Maritime Continent during week-1. Later in August, spread among GFS ensemble members becomes very large with outcomes ranging from a continued MJO, rapidly weakening of the MJO, or an atmospheric Kelvin wave becoming more dominant. Most of the ECMWF ensemble members depict a weakening MJO during week-2. Based on the latest model solutions, the MJO is likely to continue influencing anomalous global tropical rainfall and modulating tropical cyclone development through week-1. However, forecast uncertainty on the MJO evolution and its impacts is high beyond that time.

The MJO likely contributed to the development of multiple tropical cyclones (TCs) across the East Pacific and Atlantic basins during early to mid-August. On August 16, Tropical Storm Fred made landfall near Cape San Blas in Florida's Panhandle. Heavy rainfall, associated with the remnant low of Fred, is forecast to expand north into the Central Appalachians and Mid-Atlantic through the beginning of week-1. Tropical Storm Henri recently developed to the south of Bermuda and is expected to track west to around 70W and then begin to turn northward. Tropical Storm Grace formed over the Main Development Region (MDR) of the tropical Atlantic on August 13 and tracked west, bringing heavy rain to Hispaniola. Grace is currently resulting in very heavy rain and flooding in Jamaica and is forecast to track west to the Yucatan Peninsula, Bay of Campeche, and eventually northeast Mexico. Hurricane Linda has tracked west across the East Pacific during the past week and is likely to weaken during week-1 as it moves over cooler waters to the northeast of Hawaii. Please refer to the National Hurricane Center for the latest updates and forecasts on the ongoing TCs across the East Pacific and Atlantic basins.

Although there are no imminent signs of TC development across the East Pacific and eastern MDR of the Atlantic basin, model guidance maintains consistency and depicts an increasing chance later in week-1. Therefore, moderate confidence of TC development exists for these regions during week-1. An elevated chance of additional TC development continues through week-2 for the East Pacific, but the large-scale environment is expected to become less favorable for TC formation across the tropical Atlantic. As the MJO propagates eastward, there are increasing chances of TC development across the South China Sea and near the Philippines during week-2.

The week-1 precipitation outlook is based on predicted TC tracks, MJO composites (phases 2 and 3), and dynamical model output. A model consensus is relied upon largely for the week-2 precipitation outlook as forecast uncertainty increases regarding the fate of the MJO. The favored area of above-average rainfall is likely to shift north across Southeast Asia during the next two weeks which is typical during the summer. For hazardous weather concerns during the upcoming two weeks across the U.S. please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's Week-2 U.S. 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.