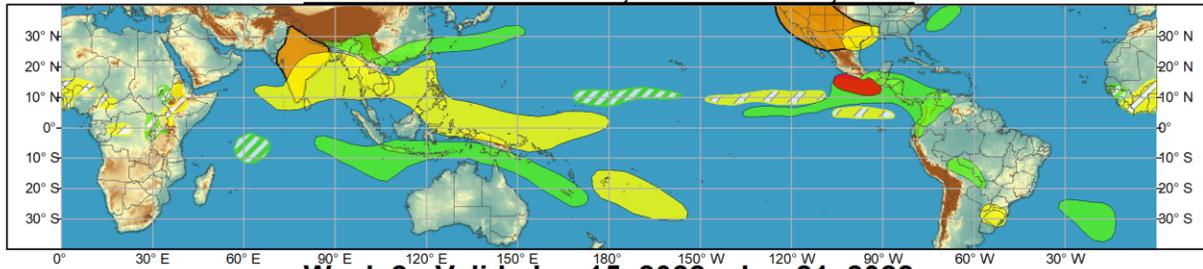




Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 08, 2022 - Jun 14, 2022



Week 2 - Valid: Jun 15, 2022 - Jun 21, 2022



Produced: 06/07/2022

Forecaster: Collow

Confidence		
High	Moderate	
		Tropical Cyclone Formation Development of a tropical cyclone (tropical depression - TD, or greater strength).
		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, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



Fast moving Kelvin Wave activity has been the dominant signal across the equatorial regions of the globe during the past month. This has projected onto the RMM-based Madden Julian Oscillation (MJO) index, where the signal has completed a full circumnavigation, and now resides over the Atlantic. Constructive interference with Rossby Wave activity is resulting in an enhancement of the convective signal over the region, but both the ECMWF and GEFS ensembles both depict the signal weakening during the next week, with the JMA ensemble depicting faster eastward propagation of the signal toward Africa. While a meandering convective envelope over the Western Hemisphere is more likely in the next 2 weeks, there are indications in some of the longer range guidance of the signal eventually becoming more MJO-like in terms of phase speed. This is apparent in wave filtering analyses of the ECMWF upper-level velocity potential forecast, which depicts a coherent MJO signal returning to the Indian Ocean towards the end of June and into early July.

The aforementioned enhanced convective activity increased tropical cyclone (TC) development across the East Pacific and Atlantic basins. In the East Pacific, Hurricane Agatha was the strongest system to make landfall in May across southern Mexico as a high-end category 2 storm. The remnant circulation of Hurricane Agatha contributed to the development of a new area of low pressure over the Gulf of Mexico

that resulted in flooding rains over south Florida during the past week. After moving east of Florida, the disturbance was able to further organize into the Atlantic hurricane season's first tropical storm of 2022, Alex, on June 5th. Alex was a short-lived system, rapidly moving east-northeastward, skirting Bermuda, before becoming extratropical.

Environmental conditions are expected to remain favorable for additional TC development across the East Pacific beginning later in week-1, with several ECMWF and GEFS ensemble members indicating a TC forming to the south of Mexico. A high confidence area for TC formation is depicted in today's outlook over the East Pacific. There are also increasing signals for TC development in the northwest Caribbean and southern Gulf of Mexico, particularly in the GEFS, which indicates possible development late in week-1 into week-2. The ECMWF is not as robust, and generally delays any potential development until week-2, and is more focused across the Bay of Campeche with the lowest surface pressures displaced more to the west compared to the GEFS. However, given the favorable convective environment, a moderate risk for TC development is highlighted across parts of the northwest Caribbean and southern Gulf of Mexico during week-2. Please refer to the latest updates from the National Hurricane Center regarding potential TC development in both the East Pacific and Atlantic basins.

The precipitation outlook for the next two weeks is based on a consensus of dynamical model forecasts, the ongoing La Nina response, Kelvin wave activity, and ongoing Central American Gyre and Meiyu front activity. Enhanced convection over the next two weeks will be primarily off-equator across the Maritime Continent, with late season enhanced precipitation forecast across northern Australia. The Meiyu front has shifted a bit northward compared to last week, but widespread heavy rainfall remains forecast across parts of eastern Asia and northern Taiwan, and suppressed rainfall to the south of this feature. A delayed monsoon onset across South Asia remains favored, with areas of dryness and extreme temperatures likely across portions of India, although relatively cooler conditions are indicated during week-2, particularly in the ECMWF ensemble. Across the CONUS, above normal temperatures are favored for much of the western and south-central CONUS during week-1.

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. Forecasts made over Africa are made in coordination with the International Desk at CPC.