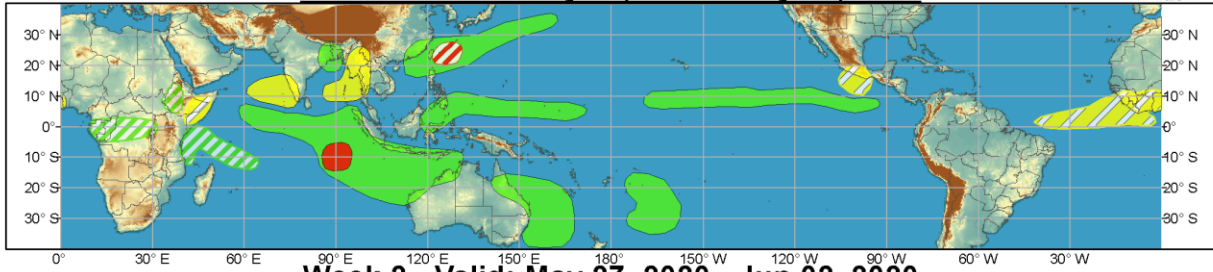




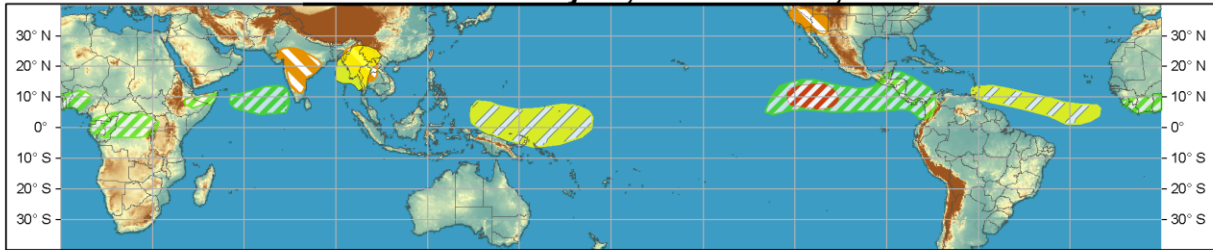
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: May 20, 2020 - May 26, 2020



Week 2 - Valid: May 27, 2020 - Jun 02, 2020



Produced: 05/19/2020

Forecaster: Novella

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.



Following the weakening of the MJO over the Maritime Continent in early May, the latest upper-level velocity potential anomalies suggest the possibility of renewed MJO activity. An envelope of enhanced convection extends from Africa to the eastern Indian Ocean where Tropical Cyclone (TC) Amphan is currently embedded within the dominant global anomalous divergence pattern. Although the RMM observed indices depict a quasi-stationary increase in amplitude likely associated with the northerly track of Amphan during the past several days, dynamical models are in good agreement in propagating an envelope of convection during Week-1, with some decay in amplitude during Week-2. One main feature of note in the RMM forecasts is the phase speed of the predicted event, which appears to lean more towards the Kelvin wave band of the frequency spectrum (i.e. 3-4 days per phase). As a result, a convectively-coupled Kelvin wave is likely to traverse the eastern Indian Ocean and Maritime Continent during Week-1, and uncertainty increases heading into Week-2.

Two TCs formed during the past week in Amphan and Arthur over the Northern Indian and Atlantic Oceans, respectively. Amphan reached peak intensity on 5/18 as a category 5 storm in the Bay of Bengal and is forecast to maintain a northerly track making landfall near the border between northeastern India and Bangladesh by the start of the Week-1 outlook period. Although Amphan is

expected to weaken to a category-1 or 2 strength cyclone prior to landfall, locally heavy rains, high winds and significant storm surges are likely. Ensemble mean guidance shows the highest precipitation totals (local ensemble mean amounts exceeding 100mm) over the West Bengal, Jharkhand, and Orissa States of India. In the western Hemisphere, the formation of TC Arthur north of the Bahamas on 5/16 marks the sixth consecutive year a cyclone has developed prior to the official start of the Atlantic Hurricane Season (June 1). Arthur peaked as a tropical storm and has since dissipated, while forecast to curve to the southeast toward Bermuda by 5/21.

For Week-1, the highest confidence for TC formation is over the southern Indian Ocean associated with Kevin and Rossby wave activity, and a broad area of low pressure south of the equator depicted by the models. Anomalously warm sea surface temperatures (SSTs) and low vertical wind shear favor gradual development over the next several days, which continues to be supported by multi-model ensemble guidance. Over the West Pacific, both the GEFS and ECMWF ensemble guidance have been hinting at the development of a closed low near Taiwan. However, TC tools do not exhibit much support with this scenario, and a moderate confidence shape is posted for the region. With the active convective envelope favored to continue shifting east in Week-2, model guidance and TC tools show elevated chances of TC formation in the East Pacific during late May. Given the uncertainty at this lead, and with the decreased amplitude of intraseasonal signal depicted by some models, a moderate confidence of tropical cyclogenesis is posted over the basin. No additional TCs are anticipated over the Atlantic basin through the end of May.

The precipitation outlook during the next two weeks is based on dynamical model consensus from the CFS and ECMWF models. Outside of the enhanced precipitation associated with forecast TC development, enhanced precipitation is predominately favored across the Indian Ocean, and across portions of the western and southern Pacific during Week-1. In the Western Hemisphere, enhanced rainfall is likely across the equatorial Pacific, with suppressed rainfall likely over the equatorial Atlantic. During Week-2, disagreement between the CFS and ECMWF precipitation solutions reduces much confidence in the outlook. The highest confidence for suppressed rainfall is over Southeast Asia, where reforecast tools also indicate elevated chances for maximum temperatures to exceed the 85th percentile over parts of India, as well as, over parts of Myanmar and Thailand. In India, premonsoonal daytime temperatures are likely to well exceed 40 degrees C during late May. Above-average temperatures are also favored across the southwestern U.S. associated with amplified ridging predicted by the models in the region. Farther south, enhanced (suppressed rainfall) is favored across Central America (tropical Atlantic) during Week-2.

Forecasts over Africa are made in consultation with CPC's international desk, and can represent local-scale conditions in addition to global-scale variability.