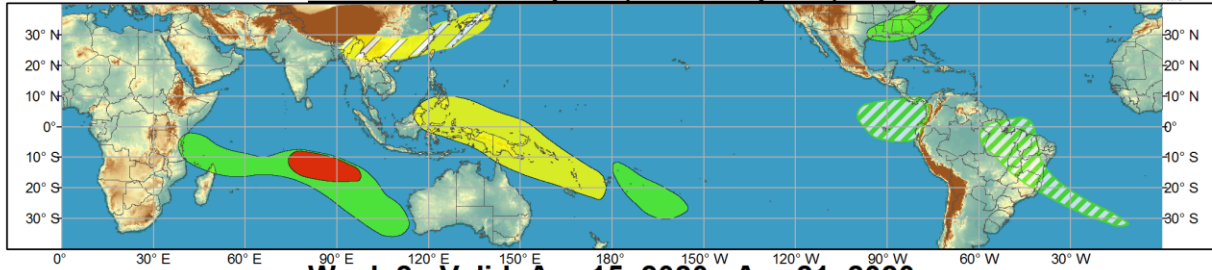




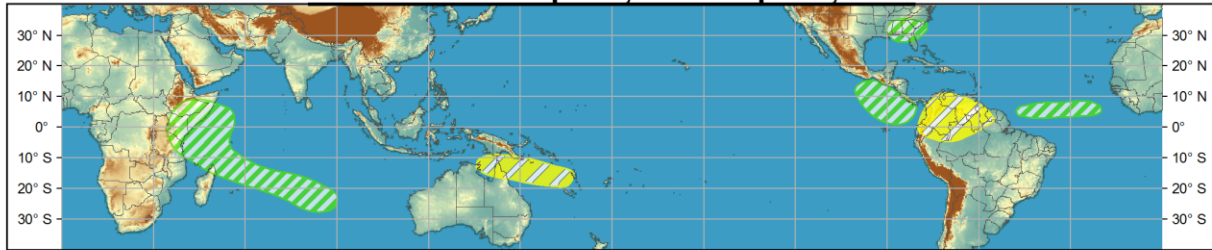
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



**Week 1 - Valid: Apr 08, 2020 - Apr 14, 2020**













**Week 2 - Valid: Apr 15, 2020 - Apr 21, 2020**



**Produced: 04/07/2020**

**Forecaster: Harnos**

Confidence		
High	Moderate	
<b>Tropical Cyclone Formation</b>		 Development of a tropical cyclone (tropical depression - TD, or greater strength).
<b>Above-average rainfall</b>		 Weekly total rainfall in the upper third of the historical range.
<b>Below-average rainfall</b>		 Weekly total rainfall in the lower third of the historical range.
<b>Above-normal temperatures</b>		 7-day mean temperatures in the upper third of the historical range.
<b>Below-normal temperatures</b>		 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.**



A rapidly eastward propagating envelope of convection crossed the Maritime Continent over the past week. The phase speed of the envelope is highly suggestive of it being a convectively-coupled Kelvin wave, although anomalous westerlies of 10-15 m/s at 200-hPa across the global tropics raise the prospect of it possibly being a Madden-Julian Oscillation (MJO) event on the fast end of its spectrum. Regardless, model guidance from the GEFS and ECMWF clusters closely together in tracking this feature across the West Pacific during Week-1 (projecting onto RMM Phases 6, 7) and the Western Hemisphere, eventually reaching the Indian Ocean by Week-2 (projecting onto RMM Phases 8, 1, 2). The rapid phase speed of this envelope makes extratropical coupling unlikely. Even if the envelope were to slow, teleconnections can be tenuous in boreal Spring for the Northern Hemisphere given weakening vorticity gradients.

A pair of tropical cyclones (TCs) developed over the Southern Hemisphere since the last outlook was issued. The first system, TC Irondro, formed over the Southern Indian Ocean on 2 April. This system tracked east-southeastward in the basin reaching a peak intensity of 95 knots on the 4th. Despite its intensity, Irondro did not impact any landmasses. Later on 2 April TC Harold formed near 10S/160E and has slowly intensified until reaching a peak strength of 145 knots on 6 April. Unfortunately, Harold

impacted the Solomon Islands (killing at least 7, with 21 remaining missing) before making landfall on Vanuatu with severe winds, crippling storm surge, and torrential rains. For the latest information on Harold please refer to the most recent advisories from the Joint Typhoon Warning Center (JTWC). The most recent JTWC forecast suggests potential strikes, or at least impacts, from Harold while it remains a powerful TC on both Fiji and Tonga in the coming days.

Highest confidence for TC development over the coming two weeks looks to be in the southern Indian Ocean with a broad band extending across much of the basin. Multiple disturbances are forecast to possibly develop within this band, some of which could develop into a TC during Week-1, with the highest confidence between approximately 8-18S and 75-85E. No TC areas have sufficient confidence to be included on the forecast graphic during Week-2, although significant consideration was given to the East Pacific for the possibility of a preseason system in the Gulf of Tehuantepec. With the MJO or Kelvin wave forecast to transit the Western Hemisphere during Week-1, anomalous low-level westerlies are likely between 5-15N over the East Pacific. In the wake of these anomalies, it is often typical to develop a westward-propagating vortex that could strengthen into a TC, with this scenario further supported by historical composites of TC genesis with the RMM index is in Phases 7, 8, or 1. Sea surface temperatures of near 30 degrees C are in place for this region (anomalies of +1 degree C or more) which further suggests the region is primed for TC genesis. The primary factor working against this system would be timing, in that the East Pacific hurricane season is not underway until May 15th, and the region west of Panama has not seen a TC develop throughout the historical record during late April or the first week of May. Despite this, the GFS, CFS, and Canadian models all advertise elevated odds for TC formation during the second half of week-2 for an area west of Panama that parallels the coast of Central America. This area is likely to be revisited in the subsequent outlook given how abnormal any development would be in the East Pacific coupled with a reduction in lead time. Currently this area is only highlighted for a moderate risk for above-normal rains during Week-2, with no TC potential denoted.

Above-normal precipitation odds are elevated across much of the southern Indian Ocean tied to the aforementioned TC potential (high confidence in Week-1, moderate confidence in Week-2). Below-normal precipitation is favored behind the intraseasonal envelope for an area across the Maritime Continent (high confidence during Week-1) and Coral Sea (moderate confidence during Week-2). Additional high confidence for above-normal rains during Week-1 are tied to the forecast track of TC Harold. The Gulf of Tehuantepec looks to be active for disturbances during both weeks of the outlook resulting in moderate confidence for above-normal rains, with the possibility of a TC developing around 17 April in Week-2 in the wake of the intraseasonal envelope. Mid-latitude frontal activity is likely to lead to above-normal rains for parts of the southeastern U.S. (high confidence during Week-1, moderate confidence during Week-2). Remaining areas that favor above- or below-normal precipitation are generally a result of consensus among the GFS, CFS, and ECMWF ensemble systems.

Forecasts over Africa are made in consultation with the CPC International Desk in addition to dynamical model consensus, and can represent local-scale conditions in addition to global-scale variability.