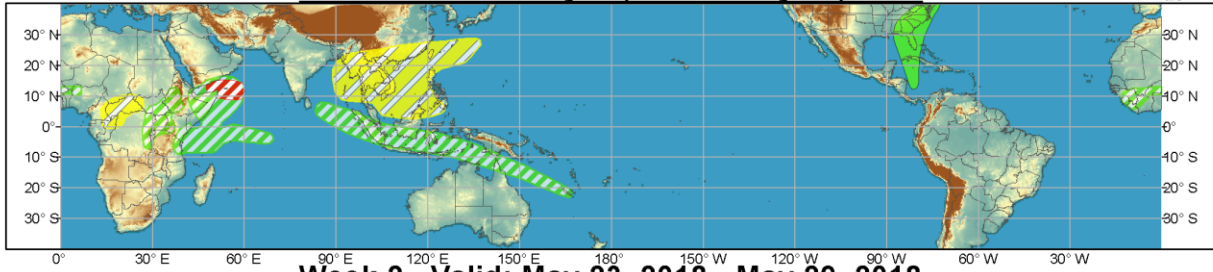




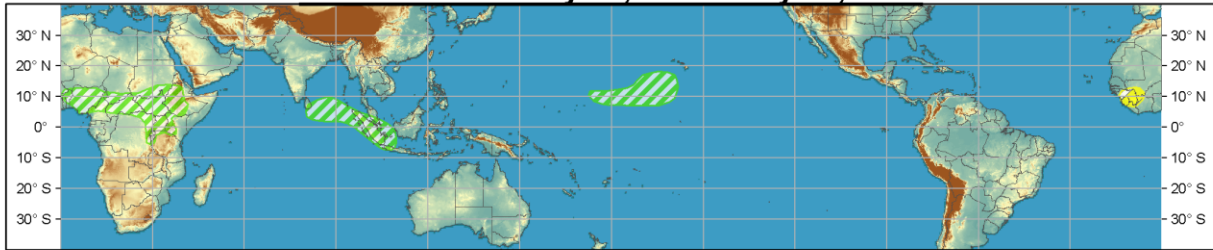
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: May 16, 2018 - May 22, 2018



Week 2 - Valid: May 23, 2018 - May 29, 2018



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.

Produced: 05/15/2018

Forecaster: Artusa

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.



Both the RMM-based and velocity potential-based Madden-Julian Oscillation (MJO) indices depict the active phase of the MJO across the Western Hemisphere. Objective filtering of intraseasonal activity suggests the recent constructive interference between the MJO, a Kelvin wave (KW), an equatorial Rossby wave (ERW), and a low-frequency signal has contributed to increased convective activity in the vicinity of Africa. Upper-level extratropical circulation features in this general area have also been influencing the intraseasonal signal. Dynamical model guidance agrees in predicting a rapidly weakening intraseasonal signal during the next two weeks, but disagrees on how much eastward propagation of the signal occurs. The GEFS forecasts only modest eastward propagation to along the border between phases 1 and 2; the CFS and Canadian models predict a somewhat greater eastward displacement into phase 2; followed by the JMA and finally the ECMWF, which anticipates the signal to reach the border between phases 2 and 3 (Indian Ocean). Lastly, the background state continues to trend away from La Nina in the tropical Pacific, with positive near-surface heat content across nearly the entire basin, limiting low frequency impacts on the Central Pacific.

With an active KW and MJO presence over the Western Hemisphere during the past week, chances of Tropical Cyclone (TC) development were elevated over the East Pacific. Tropical depression (1E) formed

near 12N/125W on May 10th, then dissipated quickly on the 11th. Over the western North Pacific, Tropical Storm Four briefly spun up near 20N/150E between May 12-13. TC development (91A) is anticipated (with moderate confidence) near the Horn of Africa during Week-1. This is due in part to the expected proximity and constructive interference of several competing modes of intraseasonal variability. A second area that is being monitored for potential TC development is on the opposite side of the globe, the eastern Gulf of Mexico. For most of the past week, deterministic and ensemble GFS runs have predicted a disturbance coming out of the western Caribbean, then tracking northward just off the west coast of Florida. Whether or not a TC develops, the primary concern is for heavy rain (high confidence) from the western Caribbean northward across the eastern Gulf of Mexico, Florida, the Southeast, the Tennessee Valley, and the mid-Atlantic during Week-1.

During Week-1, a broad area of above-average rainfall (moderate confidence) is forecast for portions of the western Indian Ocean, related to the expected complex interaction between several modes of tropical variability in addition to the TC potential. Above-average rainfall is also predicted in a band that extends southeastward from near Sri Lanka across much of the Maritime Continent region, to about the New Caledonia/Vanuatu islands of the Southwest Pacific. A large coherent region of below-average rainfall is predicted from the eastern Bay of Bengal across the South China Sea and environs, associated with the suppressed phase of the MJO.

During Week-2, there is considerable disagreement between the GEFS and ECMWF ensemble mean solutions. They agree on two small regions of above-average rainfall over the eastern Indian Ocean and for an area southwest of Hawaii. The first area appears to be related to the interaction between the MJO and an ERW, while the second area is associated with the movement of the Inter-Tropical Convergence Zone (ITCZ).

Forecast areas favoring above- or below-average rainfall over Africa are drawn in consultation with CPC's Africa Desk and may depict mesoscale to synoptic scale variability.