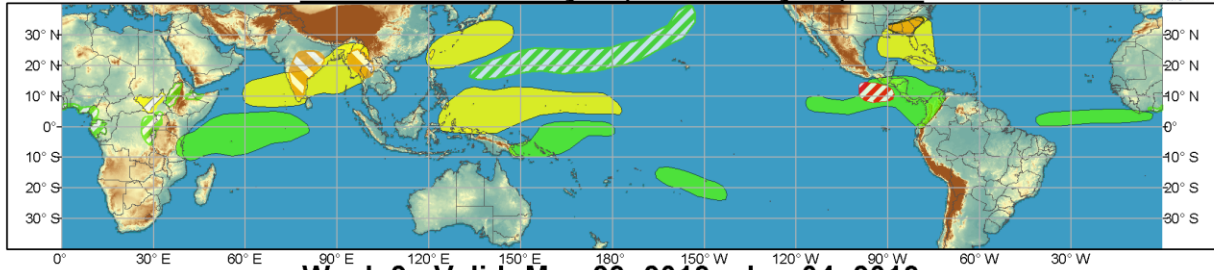




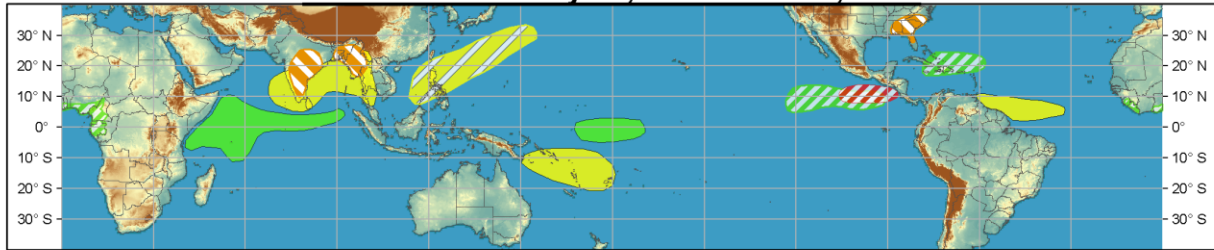
## Global Tropics Hazards and Benefits Outlook - Climate Prediction Center













**Week 1 - Valid: May 22, 2019 - May 28, 2019**



**Week 2 - Valid: May 29, 2019 - Jun 04, 2019**



**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.

Produced: 05/21/2019

Forecaster: Novella



The enhanced convective phase of the MJO is currently located over the Western Hemisphere (primarily Phase 8 in RMM space), with the suppressed convective phase over the Indian Ocean and Maritime Continent (Phases 2-5). As the enhanced convection associated with the active phase of the MJO propagates slowly through Phase 8, it's in the process of coupling with enhanced El Niño-related convection (i.e., constructive interference). The strong and persistent westerly wind burst (WWB) that initiated recently over the Western Pacific continues to drive the RMM components (850-hPa and 200-hPa wind anomalies, and the Outgoing Longwave Radiation field) associated with the MJO signal. A strong easterly equatorial Rossby wave over the Central Pacific briefly interrupted the eastward propagation of the WWB. The WWB is also responsible for initiating a notable downwelling oceanic Kelvin wave, though how much this downwelling may invigorate the current El Niño is unclear.

The ECMWF model predicts eastward propagation of the MJO signal across the Western Hemisphere, Africa, and the western Indian Ocean over the next two weeks, with gradual deamplification of the signal during Week-2. The GEFS model predicts slower eastward propagation across the Western Hemisphere and Africa during the ensuing two weeks, with considerable spread apparent among ensemble members during Week-2. The CFS model predicts rapid eastward propagation of a moderate

MJO across Phases 8 and 1 during Week-1, and then rapidly deamplifies and decelerates the signal in Phase 2 (over the western Indian Ocean) during Week-2. The main question at this time is how quickly the active phase of the MJO will re-emerge over the Indian Ocean.

Subtropical Depression Andrea formed during May 20th about 335 miles southwest of Bermuda, and about a week and a half prior to the official start of the Atlantic Hurricane Season (June 1st). Andrea briefly attained subtropical storm status, with peak sustained winds (May 21, 5am AST) near 40 mph. This subtropical depression is currently moving northward over the Western Atlantic, and is expected to turn northeastward later today. Interests in Bermuda should monitor the progress of this system. The National Hurricane Center (NHC) is also monitoring a disorganized area of showers and thunderstorms in association with a broad area of low pressure several hundred miles south of Guatemala and El Salvador in the far eastern Pacific. NHC predicts a moderate chance (50%) of tropical cyclone (TC) formation during the next 5 days as this disturbance meanders over the far eastern Pacific. During the past two days, GFS and ECMWF model runs have forecast TC formation over the eastern Pacific either towards the end of Week-1 or early in Week-2. Given this uncertainty, an area of TC formation (moderate confidence) is also posted for this region during the Week-2 period.

The precipitation outlooks during the next two weeks are based on influences from El Nino, model consensus among the CFS, ECMWF, and GFS models, and MJO precipitation composites for Phases 8 and 1. Above-average rainfall is predicted over the western and central tropical Indian Ocean during Weeks 1 and 2, related to a persistent low-frequency wet signal. The suppressed phase of the MJO is likely to be associated with below-average rainfall across portions of the Arabian Sea, the Indian subcontinent, the Bay of Bengal, and parts of Southeast Asia during Weeks 1 and 2. The suppressed phase of the MJO, and the MJO-related easterly anomalies currently there, are expected to delay the onset of the Indian Monsoon by perhaps two weeks. Above-average temperatures are likely to accompany the suppressed convection across much of India and Southeast Asia during the two-week period. Gradual moistening is expected over the Maritime Continent and Southeast Asia later in Week-2 and beyond, associated with the climatological onset of the Asian Monsoon. Below-average rainfall is also anticipated over parts of the Western Pacific associated with the suppressed phase of the MJO and low-frequency El Nino base state. In contrast, above-average rainfall is favored over west-central and central portions of the Pacific, due to the convectively active phase of the MJO and the low-frequency El Nino base state. Over the far eastern Pacific/Central America region, above-average rainfall is attributed to potential TC development and the expected proximity of the ITCZ. Over the Southeast, above-average temperatures and below-average rainfall are forecast, related to a mid-level ridge over the region. This is likely to be the first bona fide heat wave of the season, with maximum temperatures ranging from 95 deg F to perhaps as high as 105 deg F. The area of anticipated below-average rainfall was removed from the Southeast during Week-2, due to increasing uncertainty among model runs. Above-average rainfall is favored near the equator in the Atlantic during Week-1, attributed to the expected proximity of the ITCZ; and over the Greater Antilles (Week-2) due to the possible development of a disturbance initially over the

western Caribbean. The suppressed convection favored near northern Brazil is related to the regional low-frequency El Nino dry signal.

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