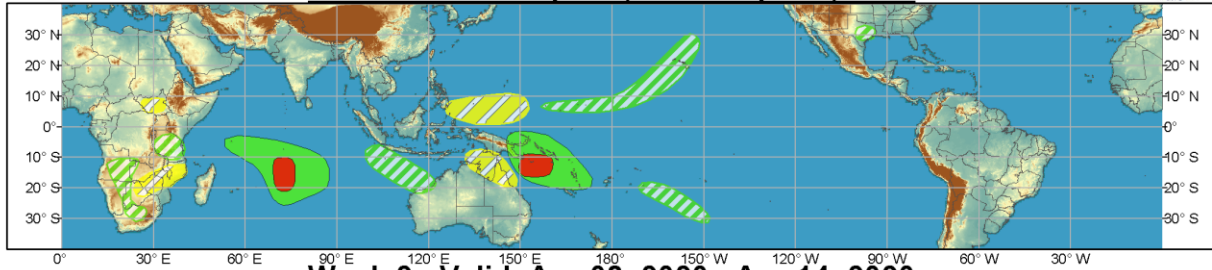




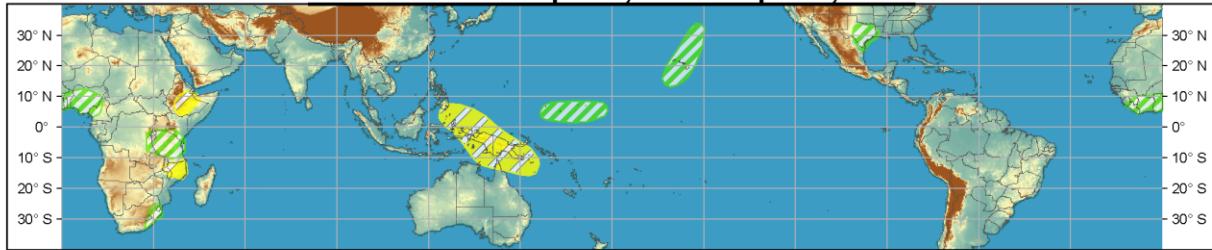
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Apr 01, 2020 - Apr 07, 2020



Week 2 - Valid: Apr 08, 2020 - Apr 14, 2020



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.

Produced: 03/31/2020

Forecaster: Artusa



During the past 1-2 weeks, an enhanced intraseasonal signal was noted across the Indian Ocean and Maritime Continent region (Phases 2-4 in RMM space). This signal is more evident in the upper-level wind field than it is with tropical convection, indicating a clear lack of convective coupling. Convection currently located over the western Pacific is associated with the passage of a rapidly moving Kelvin wave. Most dynamical model forecasts are in good agreement during week-1 on a rapidly decaying intraseasonal signal in Phase 4, with the RMM index retracting to within the unit circle. However, there is considerable disagreement as to what transpires in week-2. The bias-corrected GEFS maintains a very weak signal within the unit circle, with considerable ensemble spread. The Canadian model predicts the MJO index will continue to propagate slowly eastward across the Maritime Continent and western Pacific while gradually weakening, and the ECMWF predicts the signal will re-emerge during week-2 in the Western Hemisphere (Phase 8). The CFS model forecasts the subseasonal signal will re-emerge in Phase 8 during week-2, with a robust MJO event propagating eastward and reaching the Indian Ocean by the conclusion of week-2. During the past few months, the low frequency signal featured enhanced convection and 200-hPa westerly wind anomalies near the Date Line. It appears this long-lasting low frequency signal has broken down in March.

Tropical cyclone (TC) activity was relatively quiet across the global tropics during the past two weeks, with the exception of TC Herold in the southwestern Indian Ocean, which had peak sustained winds of 110 mph. Cyclone Herold mainly affected Madagascar and Tromelin Island with heavy rainfall, flooding, downed trees, and electrical power outages. For the upcoming two-week period, there are two areas of potential tropical cyclogenesis. The first area is the southwestern Pacific (Coral Sea region). The GEFS and ECMWF models agree on the development of a TC in week-1, near the Solomon Islands (high confidence). Its exact track and duration are uncertain, as it appears this potential cyclone could persist well into week-2. This is likely to be associated with MJO and/or Kelvin wave activity. The second region of potential tropical cyclogenesis in week-1 is the central portion of the South Indian Ocean (high confidence). One of several surface low pressure centers is predicted to develop and track towards the south and southeast over time. This potential system is thought to be associated with Kelvin wave activity. No TC development is anticipated during week-2.

The precipitation anomaly areas are based largely on a consensus between ECMWF and CFS precipitation forecasts, with consideration of other factors as described below. During week-1, anticipated TC activity and associated rainfall patterns are indicated over the central portions of the South Indian Ocean and the Coral Sea/Solomon Islands region (high confidence). These TC and above average rainfall areas are associated with MJO and/or Kelvin wave activity. Anomalous wetness is also favored from the Kimberley Coast of Australia northwestward towards the island of Java. Above average rainfall is also forecast over the low latitudes of the west-central North Pacific to beyond Hawaii (associated with the Inter-Tropical Convergence Zone), and the central South Pacific (associated with the South Pacific Convergence Zone). Both are of moderate confidence. Several low pressure systems are predicted to bring heavy rain (1.5-2.5 inches) to portions of the south-central contiguous U.S. during week-1 (moderate confidence). There are two areas of below-average rainfall anticipated over the Maritime Continent and northern Australia (moderate confidence). During week-2, it is thought that the heavy rainfall area anticipated over the south-central CONUS in week-1 may linger (moderate confidence). Other areas of above average rainfall are predicted along the ITCZ, similar to week-1. A fairly extensive area of below-average rainfall is indicated from the southern Philippines southeastward to the Coral Sea, with moderate confidence. Given the lack of agreement at the week-2 time range between ECMWF and CFS precipitation forecasts, and the uncertainty associated with how the MJO may evolve, no other anomalous precipitation areas were included on the map, except for those over Africa.

Forecasts over Africa are made in consultation with CPCs international desk in addition to dynamical model consensus, and can represent local-scale conditions in addition to global-scale variability.