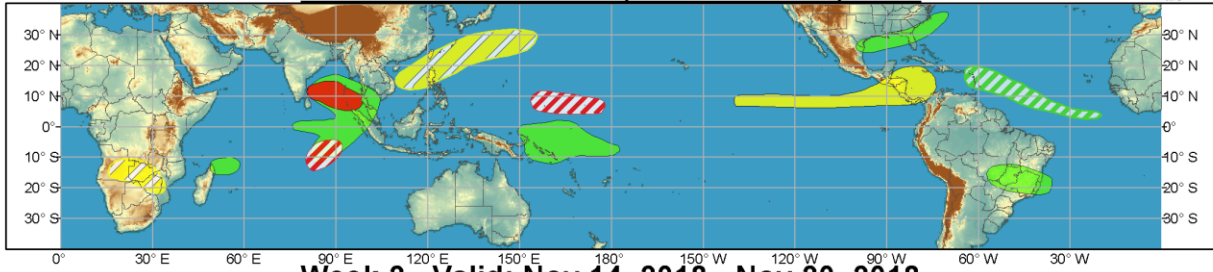




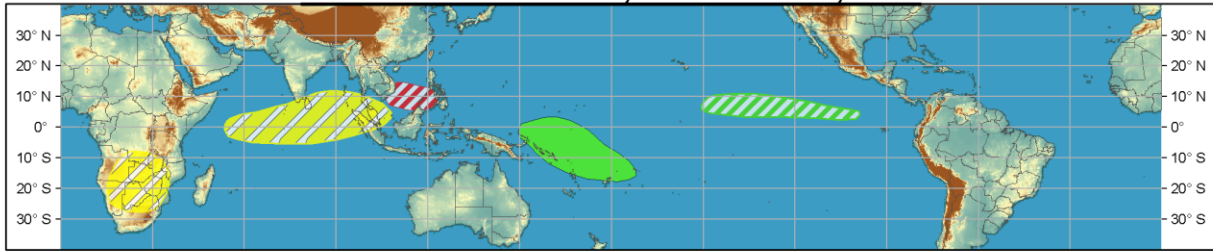
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Nov 07, 2018 - Nov 13, 2018



Week 2 - Valid: Nov 14, 2018 - Nov 20, 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.

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.

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Forecaster: D.Harnos



The RMM and CPC velocity potential-based indices each indicate an active Madden-Julian Oscillation (MJO) with its enhanced phase presently over the Indian Ocean. The phase speed of the event is on the very fast end of canonical MJO values, thus there is some uncertainty whether this event is more of a Kelvin wave or simply aliasing in Kelvin wave activity emerging from the MJO envelope. Dynamical and statistical forecasts are consistent in continuing the rapid eastward propagation of this event. During Week-1, the MJO is forecast to be in Phases 2 and 3 (predominantly 3), while in Week-2 the MJO will be in a combination of Phases 4 and 5. Some of the faster propagating members even bring the signal into the West Pacific late in Week-2. Models do show decrease in RMM amplitude in Phases 3 and 4, although this is discounted due to aliasing of the low frequency signal into the RMM index, where Phases 7 and 8 are favored due to the building El Nino event over the last 120 days. Ensemble mean forecasts of the RMM index are also to be taken cautiously late in Week-2, as the broad spread in phase speed of the individual members when averaged together is washing out the signal, resulting in a mean forecast near the origin, despite the actual ensemble members not supporting a weakening of the RMM index.

During the previous week a pair of tropical cyclones (TCs) formed. Tropical storm Xavier developed in the East Pacific on 3 November, and brought heavy rains to southwestern Mexico. More recently, Tropical Cyclone 3 developed in the southwestern Indian Ocean on 6 November. This system is forecast to track to the southwest and potentially brush Madagascar during the coming week.

TC activity is forecast to be focused primarily across the Indian Ocean during the coming week, tied to the eastward propagating low-level westerly anomalies associated with the intraseasonal envelope propagating towards the Maritime Continent. A number of equatorial Rossby waves are forecast in the wake of this envelope, with twin tropical cyclones possible in the Bay of Bengal (high confidence) and southeastern Indian Ocean (moderate confidence). Also in Week-1, a Rossby wave is forecast to track from near the antimeridian towards 150E between 5-10 N and may become a TC (moderate confidence), despite the suppressed phase of the MJO acting to oppose any development. In Week-2, models indicate the potential for a TC to develop in the South China Sea and track towards Vietnam, resulting in the only TC formation area on the map for that lead.

During Week-1, high confidence for above-average rainfall exists: across the eastern Indian Ocean associated with the enhanced phase of the intraseasonal event and pair of possible TCs, southwestern Indian Ocean tied to Tropical Cyclone 3, over southeastern Brazil tied to the MJO in Phase 2, along the Gulf of Mexico and eastern seaboard of the U.S. tied to midlatitude frontal activity, and east of the Maritime Continent tied to the low frequency state. High confidence for below-normal precipitation extends across much of the East Pacific and into the Western Caribbean in Week-1, linked to large-scale positive velocity potential anomalies out ahead of the MJO envelope helping to suppress convection. Remaining precipitation areas of moderate confidence during Week-1 are tied to model agreement between the GFS, CFS, and ECMWF ensembles.

In Week-2, high confidence remains for the low frequency area of above-normal rainfall to the east of the Maritime Continent, which may also be constructively interfered with by the intraseasonal envelope if some of the faster model solutions emerge. Below-normal rains are forecast across the Indian Ocean in the wake of the enhanced phase of the intraseasonal envelope.

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