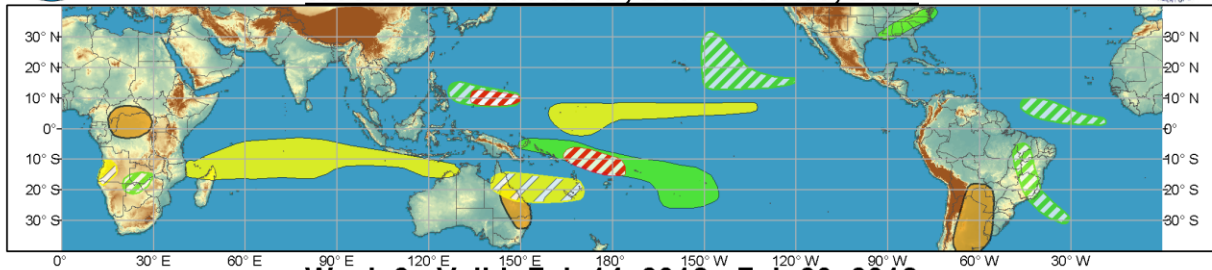




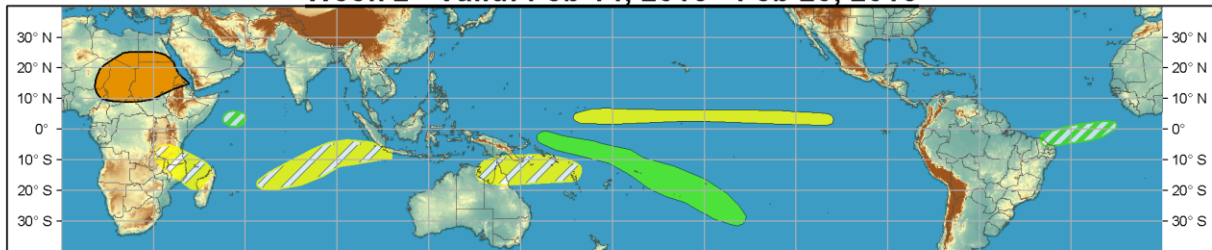
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



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



Week 2 - Valid: Feb 14, 2018 - Feb 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.

Produced: 02/06/2018

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The Madden-Julian Oscillation (MJO) remained active during the past week, progressing eastward over the West Pacific. The active MJO envelope is currently approaching the region of suppressed convection in the Central Pacific, thus some destructive interference may occur between the two competing signals over the next two weeks. Dynamical model guidance generally brings the signal from the West Pacific during Week-1 (Phase 7) to the Western Hemisphere at some point during Week-2 (Phase 8). The ECMWF exhibits the most progressive solution, bringing the signal nearly into Phase 1 by the end of Week-2. The CFS is a slower solution, just reaching Phase 8 by the end of Week-2 as this model emphasizes Rossby wave activity in the Central Pacific. The GEFS is the slowest of all, playing up Rossby wave activity to the greatest extent, and keeping the signal in Phase 7 throughout the next 15 days. Given the range of model forecasts, anticipating the MJO to be in Phase 7 during Week-1 and a combination of Phases 7 and 8 during Week-2 appears most appropriate.

No tropical cyclone (TC) development occurred during the past week, although Tropical Storm Cebile continues to impact the South Indian Ocean at the time of release for this outlook. The anticipated progression of the MJO over the West Pacific during Week-1 and approaching the Western Hemisphere by Week-2 suggests a continued uptick in TC development odds for the South Pacific. ECMWF

ensembles indicate formation potential stretching east of the Solomon Islands towards Samoa. Historically this region sees enhanced development potential while the MJO is in Phase 7. Elsewhere, the Joint Typhoon Warning Center currently has low confidence for formation over the next 24 hours for a system presently near 3N/156E. Dynamical models shift this system westward and deepen it over the course of Week-1. Given the longer forecast period relative to the Joint Typhoon Warning Center and fairly consistent intensification signals among model guidance, tropical cyclogenesis potential for this system is moderate during Week-1. As the active intraseasonal envelope reaches the Western Hemisphere, tropical cyclogenesis odds are historically reduced across the globe during February. Further, dynamical models show limited development potential for tropical systems during Week-2, thus no regions of enhanced TC formation risk are indicated during the latter period.

The precipitation outlook during the next two weeks is tilted towards historical expectations when the MJO is in Phase 7 during Week-1, with a combination of Phase 7 and 8 favored the following week. The background La Nina state also influences both weeks, with high confidence of below-median rainfall favored just north of the equator in the Central Pacific for the full period. High confidence is favored for above-median precipitation in the South Pacific Convergence Zone across both forecast periods, tied to possible TC activity and the active MJO presence in the region. Suppressed convection is likely across the equatorial Indian Ocean in both weeks as the inactive phase of the MJO crosses the basin. Confidence is higher here for anomalous dryness in Week-1, with the signal approaching the Maritime Continent during Week-2 potentially yielding some destructive interference with convection that would otherwise be enhanced here from La Nina. The MJO in Phase 7 during Week-1 also favors enhanced precipitation in the tropical Atlantic and over Brazil, here indicated with moderate confidence. High confidence for above-median precipitation exists from Louisiana through the Mid-Atlantic as a cold front brings moisture from the Gulf of Mexico northward. Moderate confidence of above median precipitation during Week-2 in the far western Indian Ocean is tied to Phase 7 and 8 MJO composites, while also indicated by the CFS and ECMWF ensembles. Remaining areas of above- or below-median precipitation during Week-1 and Week-2 are attributed to a consensus among dynamical model guidance, without a clear tropical forcing mechanism.

Lastly, high confidence for above-normal temperatures exists in Week-1 across parts of Central Africa, the Southern Cone of South America, and eastern Australia. Each of these regions is indicated by the GEFS to experience mean maximum temperature anomalies of 12 degrees F or greater during Week-1, and average high temperatures above 95 degrees F. High confidence exists for heat to linger across portions of northern Africa during Week-2. The GEFS probabilistic extremes tool gives a better than 40% chance for daily record high temperatures to occur across the highlighted area during early Week-2, while a better than 60% chance of being in the 95th percentile of climatological daily high temperatures is anticipated. Signals have waned for potential anomalously cold air across the eastern U.S. to develop during the next two weeks, as strong westerlies are forecast over Canada that would help limit intrusion of this air into the mid-latitudes.

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