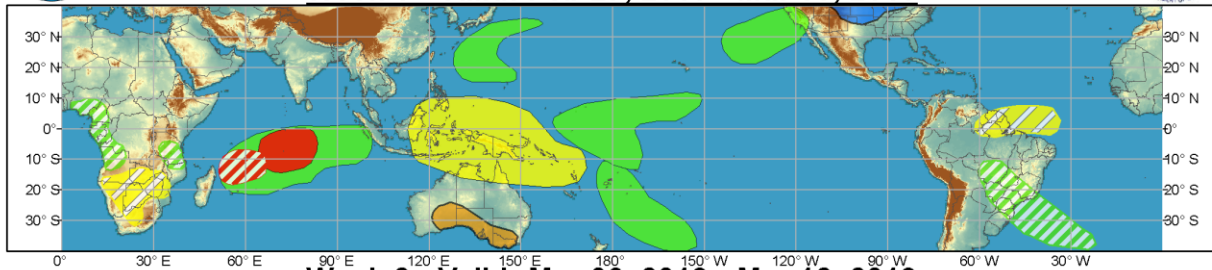




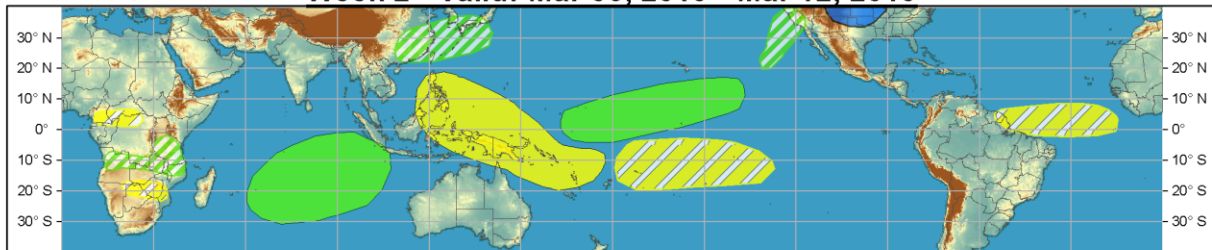
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Feb 27, 2019 - Mar 05, 2019



Week 2 - Valid: Mar 06, 2019 - Mar 12, 2019



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: Maurin



After stalling and meandering through the Pacific over the past few weeks due to interactions with equatorial Rossby waves, the MJO has resumed eastward propagation at a faster pace, moving into Phase 1 on the Whendon-Heeler diagram. Model agreement is high in comparison with last week on a fast propagation through the Western Hemisphere, with the enhanced convective envelope returning to the Indian Ocean by the end of Week-1. The upper-level 200hPa velocity potential field is leading the lower level winds by about a phase, so signs of upper-level divergence are being seen currently. This is likely to aid in the quick movement of the signal in Week-1. For Week-2, the enhanced convection is expected to shift east toward the western Maritime Continent, and the suppressed envelope will progress further into the West Pacific. There is likely to be some destructive interference between El Nino and the MJO as the suppressed convection spreads eastward, but warm waters and the base state are likely to keep the region around the Date Line and equator wet.

The Joint Typhoon Warning Center (JTWC) has two ongoing tropical cyclones it is currently monitoring - Typhoon Wutip in the western Pacific, now north of Guam. This storm is expected to continue tracking westward, before recurving northeastward off the coast of Japan. The second system, Tropical Cyclone Sixteen, formed in the south Pacific basin yesterday and is expected to track southward over Tonga.

Moving through the next week, the southern Indian Ocean basin is expected to be active with the MJO convective envelope strengthening over the Indian Ocean. Two areas of likely cyclogenesis are currently highlighted on the map: one off the coast of Madagascar and one closer to the equator, which would likely track through the southcentral Indian Ocean. The formation of the eastern system has been more consistent between models and model runs, so there is a high confidence in cyclogenesis for this region. Currently, the closed low formation off the coast of Madagascar is not present in the 06Z GFS deterministic run, though it is in the ECMWF deterministic run, so confidence remains moderate in this formation. As the suppressed convection currently over the Maritime Continent pushes further east into the West Pacific, this is expected to limit chances for tropical cyclone development in the western Pacific and southern Pacific basins.

There is high confidence for most of the precipitation forecasts during Week-1, due to either MJO, El Nino or tropical cyclone influences. With convection returning to the Indian Ocean during the phase 1/2 MJO, widespread enhanced precipitation is expected along the equator. The suppressed convection now present over the Maritime Continent is expected to propagate further east, into parts of the western Pacific. With TC Sixteen tracking southward from Togo through the week, a path of above average rainfall is expected northeast of New Zealand. Combined influences of El Nino and MJO lead to a wet area along the equator and Date Line, which is also supported by the models. Enhanced moisture flow is again expected to return to southern California, likely causing a heavy rainfall event toward the end of Week-1. Above and below areas of rainfall over South America have been forecast with support from the models, as well as the MJO phase 1/2 composites. For temperature forecasts, with MJO passing over the Western Hemisphere during the next week, enhanced troughing is expected for the U.S., leading to a cold air outbreak for much of the central and western parts of the lower 48. For more information on this forecast, please see days 3-7 hazards from WPC. In Australia, heatwaves along the southern coast are forecast to continue to be a problem.

During Week-2, much of the ongoing above or below average rainfall regions are expected to persist. The enhanced convection over the Indian Ocean is forecast to continue eastward propagation, shifting toward the western Maritime Continent. The above average rainfall signal over this region is forecast to be more disperse than the previous week; however, the MJO is expected to remain a moderate amplitude, so a wide area of enhanced precipitation is forecast with high confidence. Over the West Pacific and Date Line, enhanced drying is forecast to push further east. Along the equator, El Nino and the warm SSTs currently in around the Date Line lead to an above normal rainfall forecast. Good agreement in the models supports high confidence in this forecast. Several surface low pressure systems are forecast in the models to propagate along eastern Asia into the Pacific, causing above average rainfall for parts of China northeastward into Japan. The troughing over the U.S. is expected to persist through Week-2 while enhanced moisture into the West Coast of the U.S. is likely to remain for the beginning of the week; for more information on these forecasts, please see the U.S. Hazards Week-2 or Extended Range forecast from CPC.

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