



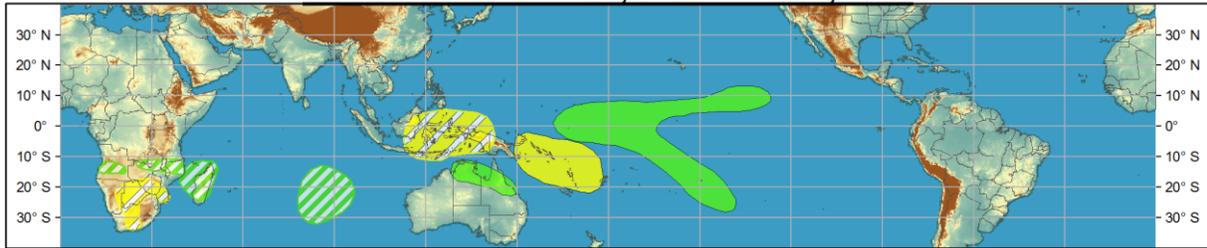
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Feb 19, 2020 - Feb 25, 2020



Week 2 - Valid: Feb 26, 2020 - Mar 03, 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.

Produced: 02/18/2020

Forecaster: Maurin

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.



Enhanced convection in the tropics has organized and strengthened over the western Pacific over the past week. Kelvin wave activity helped shift a second center of enhanced convection from over the Indian Ocean toward the western Pacific, leading to a more coherent envelope. However, several modes of variability in the tropics have led to an obscured signal of the MJO over the past week. In early February, a renewed MJO signal emerged on the RMM index over the Maritime Continent and propagated eastward. Mid last week, interference with an equatorial Rossby wave led to a stall in the signal. This envelope of enhanced convection is forecast to continue eastward propagation in week-1, but weaken as it advances across the equatorial Pacific. Model guidance shows good agreement on the MJO falling back inside the unit circle during week-1. For week-2, models differ on the solutions for this signal, but overall, the MJO becomes incoherent and disorganized, likely not becoming a dominant forcing for the tropics toward late February.

Rossby wave activity over the Indian Ocean and western Pacific is likely to support tropical cyclone activity in the South Pacific and Indian Ocean basins during the next two weeks. Tropical Cyclone Gabekile is currently centered near 80E in the southern Indian Ocean and is expected to deteriorate over the next day or so as it interacts with a region of strong vertical wind shear. Later this week

however, another tropical cyclone is forecast to emerge over the southern-central Indian Ocean, near 75E, as another equatorial Rossby wave crosses the basin. Further east, model guidance shows good agreement on cyclogenesis in the Arafura Sea, along northern Australia, over the weekend. This system will likely make landfall pretty quickly, impacting parts of the Northern Territory, Queensland and Western Australia. For the South Pacific basin, two tropical disturbances are currently being monitored by the Joint Typhoon Warning Center for tropical cyclogenesis. Confidence is high for tropical cyclone formation, supported by the MJO enhanced convective envelope as it propagates further eastward over the Pacific. During week-2, there are no strong signals in these basins for cyclogenesis. The tropical cyclones forecast to form later in the week-1 period will likely persist into week-2.

The precipitation forecasts for the tropics during the week-1 period depict the several modes of tropical variability at play. Regions of above average precipitation east of the Date Line are reflective over the enhanced convection that has organized in the western Pacific. Even though there is likely to be some decay to that organized convective center, it is forecast to push further east, causing higher than normal rainfall totals. Suppressed convection behind this convective center is likely to overspread the Maritime Continent and push into the western Pacific during week-1. Several regions of below normal rainfall are forecast in conjunction with this suppressed envelope. With the tropical cyclone activity forecast along northern Australia, a region of above normal rainfall is expected. For parts of northern Australia, an ongoing heatwave is expected to last into week-1, as forecast by the Bureau of Meteorology for Australia. Over the Indian Ocean, the forecast Rossby wave and tropical activity lead to regions of above normal rainfall in the basin. A front draping over the Gulf Coast and Southeast in the U.S. is forecast to lead to heavy rainfall along this region. For more information on this, please consult the Weather Prediction Center's 3-7 day forecast. Model consensus supports above average rainfall off the east coast of Brazil, with a forecast for drier than normal conditions to the north over Guyana, Suriname and French Guiana.

Moving into week-2, the enhanced convective envelope and corresponding suppressed envelope are forecast to shift further east. Above normal rainfall anomalies will likely extend into the eastern Pacific. Drier conditions are forecast west of and near the Date Line, as well as to remain over the Maritime Continent. With the tropical cyclone likely to form along northern Australia late in week-1, above average rainfall is forecast over parts of the region through week-2. Due to the possible impacts from this system, the forecast for above normal temperatures over parts of the Northern Territory and Western Australia does not extend into week-2. Enhanced convection appears to return to the Indian Ocean in week-2 based on the CFS, leading to regions of above average rainfall in the western part of the basin.

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

