



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jan 27, 2021 - Feb 02, 2021



Week 2 - Valid: Feb 03, 2021 - Feb 09, 2021



Confidence		Produced: 01/26/2021 Forecaster: Novella
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.



The RMM index suggests the intraseasonal signal has become better organized with an increase in amplitude over the western Pacific during the last week. Analysis of recent trends in the observed zonal wind and OLR fields suggests that the increase in RMM2 is likely tied to the strengthening of anomalous easterlies aloft over the Indian Ocean and the Maritime Continent and increasing convection over the western Pacific mainly south of the equator. There is fair agreement in the dynamical models favoring a westward shift of the signal during week-1 likely tied to Rossby wave activity predicted near the Maritime Continent and the Date Line, followed by an eastward propagating signal indicative of a canonical MJO event during late week-1 and into week-2. Compared to previous forecasts, ensemble spread appears less pronounced, with several members favoring a robust MJO event moving across the western Pacific during early February. Despite this, there is still some uncertainty in the forecast which concerns the lack of continued eastward propagation of the intraseasonal signal in RMM space, as well as the ongoing destructive interference with La Nina. Should the MJO become more coherent and propagate across the western Pacific, this would favor increased chances for below-normal temperatures across the CONUS into February. Additionally, the enhanced phase of the MJO is anticipated to increase chances for tropical cyclogenesis over the eastern Indian Ocean and across the western Pacific during the next two weeks.

During the last week, two tropical cyclones (TCs) formed over the southern Indian Ocean. Tropical Storm 13S formed on 1/21 near the Keeling Islands and is currently located near 18S/95E. The Joint Typhoon Warning Center (JTWC) forecasts this system to slowly intensify while tracking west across open waters during week-1. Farther east, Tropical Low 08U developed into TC 14S on 1/21 near the Kimberly coast and made landfall near Broome in Western Australia. For the remainder of January and into early February, ensemble and deterministic guidance continue to favor increased chances for TC activity across the southern Indian and Pacific Oceans. For week-1, high confidence areas for TC formation are posted along the Kimberley Coast and in the Gulf of Carpentaria due to good support from probabilistic tools and run-to-run continuity in the models depicting Rossby wave activity and deepening areas of low pressure. Deep convection is becoming established based on this morning's latest satellite imagery in the Gulf of Carpentaria and TC formation is likely within the next several days, while TC development in the Timor Sea looks to occur during the later portion of week-1. Farther east, there is good support from the models and probabilistic tools for TC development in the Coral Sea and in the South Pacific. A high confidence region is highlighted from 165E to the east of the Date Line between 10-20S for week-1 due to consistently elevated probabilities in the TC tools and support from the ensemble guidance over the past few days. Similarly, increased chances for TC development also exist over the Coral Sea; however, a moderate confidence region is issued for week-1 due to some disparities between the deterministic GFS and ECMWF solutions. With Rossby wave activity also predicted to continue into early February and as suggested in the tools, a moderate confidence region for TC development is also posted from the Gulf of Carpentaria extending eastward to Vanuatu for week-2.

The precipitation outlook during the next two weeks is based on the consensus among the CFS, GEFS, and ECMWF ensemble means, the low frequency state, MJO composites, and anticipated TC tracks. There is a high confidence for below-normal precipitation to persist across the central equatorial Pacific associated with the ongoing La Nina. Towards the south, an elongated band of above-normal precipitation is favored from the Timor Sea to the South Pacific associated with anticipated TC and Rossby wave activity. In the north-central Pacific, mid-level troughing is likely to bring enhanced precipitation to parts of the Hawaiian Islands. Similarly, mid-level troughing is expected to bring above-normal precipitation and high-elevation snow to many parts of the western CONUS, while suppressed precipitation across the Gulf of Mexico may worsen moisture deficits being experienced in parts of Florida during week-1. Over South America, an area of low pressure is expected to promote above-normal precipitation over parts of Paraguay, Uruguay, northern Argentina and southern Brazil early in week-1. Forecasts over Africa are made in consultation with the International Desk at CPC and can represent local-scale conditions in addition to global-scale variability.