



# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Dec 25, 2013 - Dec 31, 2013



## Week 2 - Valid: Jan 01, 2014 - Jan 07, 2014



Produced: 12/24/2013

Forecaster: Allgood

Confidence		
High	Moderate	
		Tropical Cyclone Formation Development of a tropical cyclone that eventually reaches tropical storm/cyclone 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. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



The MJO became more coherent during the previous week, although the amplitude of the signal remains weak due to continued interference from other types of coherent subseasonal tropical variability. Enhanced convection developed over the Maritime Continent during the previous seven days, accompanied by an eastward propagation of low-level westerly (easterly) wind anomalies over the Indian Ocean (western Pacific). Eastward propagation of negative 200-hPa velocity potential anomalies over the Maritime Continent was also observed, consistent with a developing MJO signal in Phases 4 or 5 on the RMM Index. Atmospheric Kelvin Wave activity was observed over the central Pacific ahead of the main MJO convective envelope, and enhanced convection persisted over South America, due in part to mid-latitude interactions. These large scale anomalous convective features destructively interfered with the MJO signal as represented on both the RMM Index and the CPC MJO Index.

Dynamical models generally support a continued eastward propagation of the MJO signal into the western Pacific, although there is considerable spread concerning the amplitude and speed of the event. The ECMWF and UKMet models propagate a weak MJO signal rapidly across the Pacific into the Western Hemisphere, while the GFS depicts a slower propagation with increased amplitude over the eastern Maritime Continent or far western Pacific before weakening the signal in Week-2. Statistical MJO

forecasts depict a slower eastward propagation of the MJO signal into the western Pacific. Based on recent observations and dynamical forecasts, enhanced convective anomalies associated with the MJO are anticipated to propagate into the western Pacific during the upcoming two weeks. This outlook is based primarily on consensus between the GFS and CFS outlooks with respect to MJO anomaly composites for Phases 6 and 7.

Cyclone Bruce formed over the eastern South Indian Ocean on 17 December, strengthening to Category-5 intensity on the Saffir-Simpson scale as it moved in a southwesterly direction over open waters, with maximum sustained winds of 140-kts. Cyclone Amara, which formed to the west of Bruce a day earlier, intensified to Category-4 strength before rapidly weakening over cooler water. During the upcoming week, a disturbance north of Darwin, Australia, has the potential to develop into a tropical cyclone as it moves slowly westward or west-southwestward before turning southward and making landfall along the northern coast of Western Australia. A disturbance near the Solomon Islands also has a moderate potential for tropical cyclone development, with dynamical models bringing it towards the southeast. The southwestern Pacific may remain favorable for tropical development during the Week-2 period as well.

During Week-1, enhanced convection associated partly with tropical cyclone activity is anticipated across the Timor Sea and Western Australia. Dynamical models also support enhanced convection over the South China Sea east of Malay Peninsula. A broader area of enhanced convection is favored across the southwestern Pacific Ocean, extending from the Solomon Islands southeastward of the Date Line. Suppressed convection is anticipated over the eastern Indian Ocean and western Maritime Continent, consistent with the MJO. Suppressed convection is also favored across the Hawaiian Islands as the mid-latitude storm track is displaced to the east, and across the western Amazon Basin southward into northern Argentina.

A continuation of enhanced convection is anticipated during Week-2 across the southwestern Pacific Ocean, while MJO composites and dynamical forecasts support persistence of suppressed convection over the eastern Indian Ocean, with eastward propagation just south of the equator over the Maritime Continent. Suppressed convection is also forecast for northeastern Australia and the adjacent Coral Sea, as well as northeastern Brazil. Continued abnormal dryness is anticipated across Hawaii.

Areas where above- and below-median precipitation are favored across Africa for both Week-1 and Week-2 are primarily based on more regional scale features and consistent with outlooks from the CPC African Desk.