



# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Apr 26, 2017 - May 02, 2017



## Week 2 - Valid: May 03, 2017 - May 09, 2017



Produced: 04/25/2017

Forecaster: Pugh

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.



The MJO remained weak during the past week with a recent decrease in the amplitude of the RMM index. Since early April, a pair of atmospheric Kelvin Waves continue to play a significant role in anomalous convection throughout the global tropics. Dynamical model forecasts indicate another increase in the amplitude of the RMM index which is likely related to the Kelvin Wave propagating east over the Western Hemisphere. An equatorial Rossby Wave may also influence the convective pattern over the Pacific Ocean during the next two weeks. The MJO is expected to remain weak into early May and not be a major factor in tropical convection or the extratropical circulation.

The multiple atmospheric Kelvin Waves during the past month have likely contributed to a number of tropical cyclones across the Indian and Pacific Oceans. On April 20, Tropical Storm Arlene briefly attained tropical characteristics at the relatively high latitude of 36 degrees N over the Atlantic Ocean. Recently, on April 24, a weak tropical cyclone formed over the West Pacific (12N/136E). This tropical cyclone is forecast to become entrained into the westerlies and turn northeast away from the Philippines.

Current satellite imagery indicates an area of low pressure developing over the Arafura Sea. Moderate confidence exists for this low pressure system to become a tropical cyclone (TC) as it tracks west into the Timor Sea. Regardless of tropical cyclone development, this system is likely to bring heavy rainfall along northern coastal areas of Australia, including Darwin. Elsewhere, no areas are favored for TC development during the next two weeks. The East Pacific will have to be more closely monitored by mid-May for an early season TC since dynamical models indicate an increase in rainfall over Central America during the next couple of weeks.

Anomalous rainfall across the global tropics during the next one to two weeks is expected to be influenced by a Kelvin Wave, currently over the East Pacific, and potentially an equatorial Rossby Wave across the West Pacific. The favored areas of anomalous rainfall are also based on a consensus of the precipitation forecasts among the dynamical models. During Week-1, the highest confidence for above-average rainfall is related to the tropical cyclone over the West Pacific and the disturbance tracking just north of Australia. Meanwhile, during the final week of April, a highly amplified mid-latitude trough is likely to result in a large area of heavy to excessive rainfall (5 to 10 inches, or more) across the central United States. During the next week, the Kelvin Wave is expected to result in a return of above-average rainfall to parts of Colombia, Ecuador, and Peru. Model guidance generally features small rainfall anomalies across the global tropics during Week-2 with below-average rainfall persisting from Sri Lanka east to Cambodia and Thailand, while above-average rainfall shifts west across the South Pacific. Recent dynamical models have been consistent with a wet signal over Central America during early May.

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