



# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Apr 01, 2015 - Apr 07, 2015



## Week 2 - Valid: Apr 08, 2015 - Apr 14, 2015



Produced: 03/31/2015

Forecaster: Allgood

- | 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 CPC velocity potential and RMM based MJO indices both indicate continued MJO activity, with the enhanced convective phase emerging over the Indian Ocean. The phase speed of the MJO has been quite rapid during the past two weeks, similar to Kelvin Wave propagation speeds, but it is typical for MJO events to propagate more rapidly across the Western Hemisphere, where the upper level signal is less coupled with convection. The low frequency El Nino state is currently destructively interfering with the subseasonal signal, with above normal SSTs promoting persistent convection across the western and central Pacific, which is out of phase with the current MJO projection. Other modes, including Equatorial Rossby Wave activity over the central Pacific, are also influencing the tropical convective pattern.

Dynamical model MJO index forecasts generally support additional rapid propagation over the Indian Ocean during Week-1, but subsequently weaken the signal rapidly, with the enhanced phase not reaching the Maritime Continent. This forecast weakening of the subseasonal signal may be due in part to continued destructive interference with the El Nino signal, which favors suppressed convection over the Maritime Continent, as well as anticipated tropical cyclone development over the southern Indian Ocean. Statistical models favor continued MJO propagation to the Maritime Continent during Week-2.

Based on the dynamical guidance, the MJO is anticipated to play a significant role in global tropical convective anomalies during Week-1, while there is considerable uncertainty regarding the continued evolution of the signal during Week-2 as it continues to interact with the base state.

Super Typhoon Maysak developed southeast of Guam on March 27 and strengthened to Category 5 intensity on the Saffir-Simpson Scale as it moved westward across the Caroline Islands. Forecasts from the Joint Typhoon Warning Center maintain a west-northwestward track, with gradually diminishing intensity before approaching the Philippines at typhoon intensity. During the upcoming week, additional tropical cyclogenesis is possible near or east of Guam over the northwestern Pacific. Tropical cyclogenesis is also favored over the south-central Indian ocean, with the potential for two cyclones to form. Dynamical models indicate greater favorability for development of a tropical cyclone east of 75E, with a southeastward track favored, although several GFS ensemble members develop a second cyclone that moves westward or southwestward. Additionally, there is a low to moderate potential for brief tropical cyclogenesis over the far south-central Pacific before the disturbance undergoes extratropical transition in the mid-latitudes. During Week-2, there is little indication from the dynamical models for any regions favorable for tropical cyclone formation.

Enhanced convection over a wide swath of the northwestern Pacific is favored during Week-1, extending from the Date Line to the Philippines, and partly associated with tropical cyclone activity. Enhanced precipitation is also favored over the south-central and southeastern Indian Ocean, and may possibly extend as far east as southwestern Australia. Areas of enhanced precipitation are also possible across interior parts of east-central and southern Africa. In contrast, suppressed convection is favored across the central and eastern Maritime Continent, which is consistent with both the El Niño background state and the MJO, as well as subsidence associated with Super Typhoon Maysak. Suppressed convection is also anticipated from southeastern Africa across northern Madagascar, as well as central and northern Brazil.

There is increased forecast uncertainty during Week-2 due to significant divergence among model forecasts as they resolve interactions between the subseasonal and ENSO signals. Suppressed convection is favored over the central Maritime Continent and southwestern Pacific, as well as the far western Pacific just north of the equator. Enhanced convection is favored to persist over the equatorial Pacific near the Date Line, while the GFS and ECMWF models favor continued suppressed rainfall over the northern Amazon Basin.