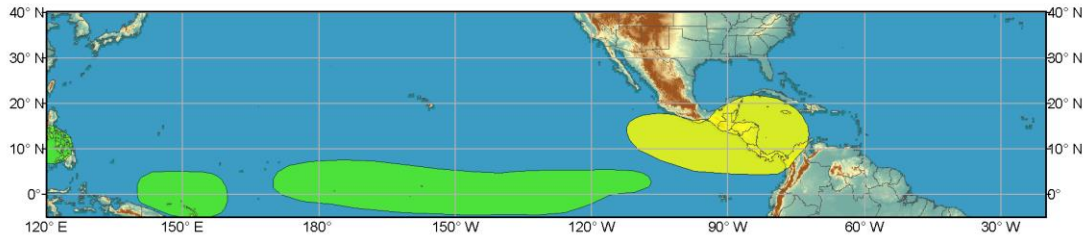




# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



**Week 1 - Valid: Jun 20 2015 - Jun 23 2015**



**Week 2 - Valid: Jun 24 2015 - Jun 30 2015**



Confidence  
High Moderate

Produced: 06/19/2015  
Forecaster: Allgood

- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Prior TC Formation Outlook** Tropical cyclone outlook from previous release.
- 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.



Eastward propagation of a coherent MJO signal continues, with the RMM Index indicating that the enhanced phase is over the Maritime Continent. A strong equatorial Kelvin Wave (KW) is propagating over the east-central Pacific, and is currently constructively interfering with the El Nino base state and generating enhanced convection over much of the Pacific. As the intraseasonal signal continues propagating eastward to the Pacific, a return to more canonical El Nino convective anomalies is anticipated.

Tropical cyclogenesis is not anticipated over the Atlantic, eastern Pacific, or northwestern Pacific basins during the remainder of the Week-1 period. During Week-2, dynamical models have shifted the area for potential development over the western Pacific to the west, with a slight decrease in confidence for a tropical cyclone. Additionally, KW activity and the El Nino background state may contribute to eastern Pacific cyclogenesis towards the end of Week-2.

Forecasts for areas of enhanced or suppressed convection have been modified based on the latest dynamical guidance. There is increased confidence for suppressed convection over the western

Caribbean during the remainder of Week-1, as well as enhanced convection pushing east of 120W over the equatorial eastern Pacific.

The original discussion from 16 June 2015 follows.

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The MJO remains coherent, with the RMM and CPC velocity potential indices both depicting the enhanced phase over the western Maritime Continent. The spatial pattern of upper level velocity potential anomalies exhibits an eastward propagating coherent Wave-1 symmetry, which is also consistent with MJO activity. The 850-hPa zonal wind anomaly pattern, however, is inconsistent with the MJO signal, and continues to reflect the low frequency El Nino base state, with westerly (easterly) anomalies over the central and eastern Pacific (eastern Indian Ocean and much of the Maritime Continent). Additionally, an equatorial Kelvin Wave (KW) is propagating over the western Pacific ahead of the main MJO envelope, and is promoting enhanced convection near and west of the Date Line as it constructively interferes with the base state.

Most dynamical model MJO index forecasts depict the signal to continue propagating eastward over the Maritime Continent to the West Pacific, with a wide range of amplitudes. Other models, most notably the GFS, weaken the MJO signal substantially by Week-2. Destructive interference between the MJO and the El Nino base state may be contributing to these varying solutions. Any remnant subseasonal signal emerging over the West Pacific from the Maritime Continent will begin to constructively interfere with the low frequency El Nino signal, and could promote widespread enhanced convection over much of the Pacific basin during Week-2 and Week-3.

Hurricane Carlos continues to move parallel to Mexico's southern coast, and is expected to weaken substantially well south of the Baja. Tropical Storm Bill developed over the western Gulf of Mexico on 15 June, and is making landfall along the Texas coastline. Heavy rainfall is expected across the southern Plains and mid-Mississippi Valley as the remnants of Bill interact with a frontal system. No additional tropical cyclogenesis is anticipated over the eastern Pacific or Atlantic basins during Week-1, but there is a low potential for tropical cyclone formation over the eastern Pacific during late Week-2 due to KW influence. There is a moderate potential for tropical cyclogenesis over the South China Sea during Week-1, as enhanced convection is anticipated to persist in a relatively low shear environment. Additionally, there is a low potential for tropical cyclogenesis over the Bay of Bengal during Week-1, although shear values may be too high. Regardless of tropical cyclone development, any monsoon low

formation over the Bay of Bengal has the potential to bring widespread heavy rainfall across parts of South Asia. During Week-2, conditions are anticipated to become increasingly favorable for tropical cyclone formation over the northwestern Pacific.

During Week-1, dynamical models and MJO composites favor an enhancement of the South Asian Monsoon. The potential for a monsoon low over the Bay of Bengal also supports the potential for widespread heavy monsoon rainfall, including over Nepal and other regions still recovering from the April 2015 earthquake. Enhanced convection is also anticipated from the South China Sea southeastward to the Solomon Islands, which is consistent with the MJO, but confidence is reduced due to disparities among the dynamical model solutions and interference from the base state. Kelvin Wave activity and the low frequency signal are expected to contribute to a return of widespread convection across the equatorial central Pacific. Suppressed convection is forecast for the equatorial central and eastern Indian Ocean, and the eastern Pacific.

During Week-2, dynamical models support a continuation of enhanced South Asian monsoon activity, excluding southern India, although forecast confidence is reduced. Suppressed convection is anticipated to lift northward across the central Indian Ocean towards far southern India. As any remnant MJO signal emerges over the West Pacific, destructive interference with the El Niño signal will be reduced, and widespread enhanced convection is favored across much of the equatorial Pacific.