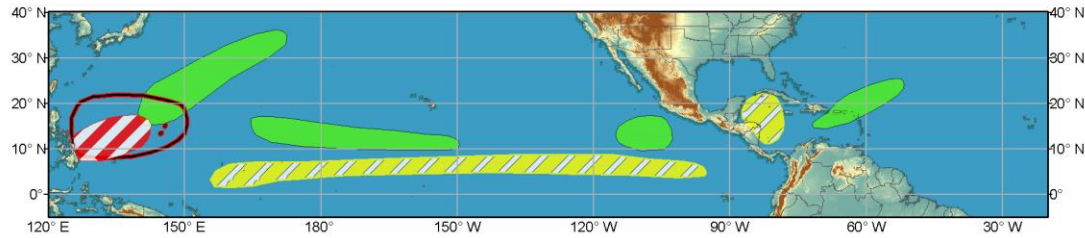




# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



**Week 1 - Valid: Nov 05 2016 - Nov 08 2016**



**Week 2 - Valid: Nov 09 2016 - Nov 15 2016**



**Confidence**  
High Moderate

**Produced: 11/04/2016**  
**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.**



The MJO continued to remain weak during the past few days, but there are some indicators of an emerging intraseasonal signal with the enhanced (suppressed) phase over the Maritime Continent (East Pacific and Western Hemisphere). The anomalous upper-level velocity potential pattern has amplified and become increasingly coherent, which is indicated on the CPC velocity potential-based MJO index. Dynamical model RMM-index forecasts continue to depict a developing MJO event, although some models either have weak amplitude over the Pacific, or propagation that is faster than the typical MJO propagation speed and could be due to Kelvin wave aliasing. Based on these recent observations and forecasts, the MJO is anticipated to play an increasing role in the global tropical convective pattern during the Week-2 period, but impacts early in the outlook period are less certain.

Tropical Storm Meari developed west of Guam on 2 November. The Joint Typhoon Warning Center forecasts a strengthening to typhoon intensity as Meari recurves to the northeast well east of Japan. Dynamical model guidance still indicates a potential for tropical cyclogenesis east of the Philippines over the next several days, but confidence has diminished since the initial outlook release. Elsewhere, there is a potential for late-season tropical cyclone development south of Mexico either late in the remaining Week-1 period, or during the Week-2 period, but confidence is too low to include a shape at this time.

The National Hurricane Center is not currently monitoring any disturbances in the East Pacific or Atlantic basins for development over the next 5 days.

Forecasts for enhanced and suppressed convection were adjusted in this outlook to reflect the latest model guidance and forecasted tropical cyclone tracks.

The original forecast discussion released on 1 November follows.

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The MJO remained weak during the past week, with no amplitude depicted on either the RMM-based or velocity potential based MJO indices. The upper-level velocity potential field is incoherent and reflects a Wave-3 pattern. The dominant mode remains the low frequency state favoring enhanced (suppressed) convection over the Maritime Continent (central Pacific), driven by the negative IOD phase and a potentially developing La Nina event. There is a robust atmospheric response to this signal, with relatively symmetric large areas of anomalous upper-level anticyclonic circulation poleward of the Maritime Continent enhanced convective region. A robust Kelvin wave (KW) is also apparent in the OLR anomaly field, with the enhanced phase currently over the Maritime Continent. Despite the weak intraseasonal signal at the outset of the forecast period, dynamical model guidance is now consistently depicting the evolution of a robust MJO event during the outlook period. The UKMET solution develops this signal the fastest over the Maritime Continent, with rapid propagation to the West Pacific by the end of Week-1. This solution potentially reflects the existing KW over the Maritime Continent. The GFS depicts a slightly slower evolution beginning over the eastern Maritime Continent, while the ECMWF is even slower and initiates the event over the West Pacific. The CFS is on the slowest end of the guidance, with no MJO event depicted until Week-2, and places the enhanced phase over the East Pacific. Given the robust model support, the MJO is anticipated to play a role in the evolution of the global tropical convective pattern, with greater confidence for impacts during the Week-2 period than during Week-1. Given the time of year, any development of a robust intraseasonal signal over the Pacific could effect a substantial pattern change in the northern hemisphere mid-latitude circulation.

No tropical cyclone formations were observed during the past week. During Week-1, increased activity over the northwestern Pacific is favored, with high confidence for the development of at least one tropical cyclone, and a potential for two or three systems. The Joint Typhoon Warning Center is currently monitoring three disturbances in the monsoon trough extending from just east of the Philippines to east of Guam. Dynamical model track forecasts from the GFS and ECMWF depict a

westward motion for the westernmost disturbance, with a potential for impacts across the Philippines should it develop, while recurving paths are more likely for the disturbances closer to Guam. Additionally, there is a high potential for tropical cyclone development in the Bay of Bengal in association with a disturbance that recently moved over water from Southeast Asia. There is also some dynamical model support for tropical cyclogenesis over the South China Sea near Vietnam, but confidence is moderate for the formation of a depression here at this time. Overall confidence diminishes for tropical cyclone development during Week-2, but new formations remain possible over the Northwest Pacific basin in similar areas to Week-1.

During Week-1, the low frequency state and a potentially developing intraseasonal signal support enhanced (suppressed) convection across Southeast Asia, the northwest Pacific, and the central Pacific north of 10N (the central Indian Ocean). Due to a potential for destructive interference among the potential MJO, the existing KW, and the base state, there is uncertainty regarding the evolution of any widespread convective features over the central Pacific. Given the potentially developing La Nina conditions and dynamical model consensus, a broad area of suppressed convection remains favored across much of the equatorial Pacific. There is little support, however, for widespread convection north of New Guinea during Week-1, despite the potential for a developing West Pacific MJO signal. Across the western hemisphere, enhanced (suppressed) convection is favored over the northeastern Caribbean and central Atlantic, including Puerto Rico (western Caribbean and central and southeastern Brazil).

During Week-2, suppressed convection is favored across the central Indian Ocean, the southern tip of South Asia, the equatorial West Pacific, and the East Pacific south of 10N. Enhanced convection is forecast for the northwest Pacific, the south-central Pacific (including American Samoa), the northeastern Pacific, the southern coast of Mexico, and eastern Brazil. These anticipated precipitation patterns are more reflective of canonical MJO activity, but the extent of the anomalies depicted by the dynamical model guidance remains somewhat limited.

No forecast areas were included over Africa in this outlook due to a lack of consistent signals among the dynamical models.