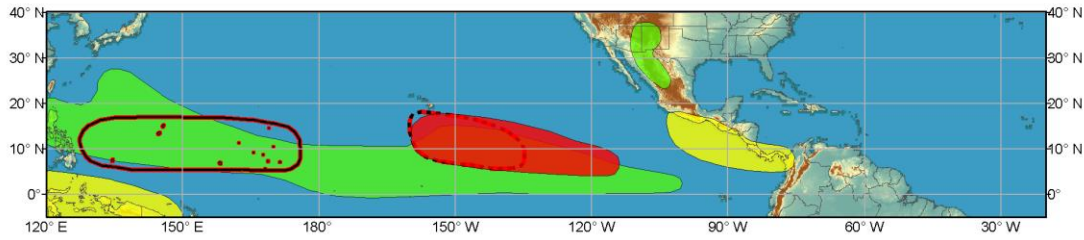




Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jul 04 2015 - Jul 07 2015



Week 2 - Valid: Jul 08 2015 - Jul 14 2015



Confidence
High Moderate

Produced: 07/03/2015
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.



During the past several days, an extremely strong anomalous westerly wind burst, partly caused by tropical cyclone activity, developed over the equatorial western Pacific just west of the Date Line. This feature helped contribute to a very strong Phase-7 projection on the RMM MJO index, more than three standard deviations outside the circle. Dynamical models favor further amplification of the RMM Index, followed by gradual weakening, with the ECMWF continuing to depict further eastward propagation of the intraseasonal signal, while the GFS maintains a more stationary pattern.

Two additional tropical cyclones developed over the northwestern Pacific during the past several days, both within the high confidence formation shape depicted on the 30 June GTH Outlook. Tropical Storm Linfa is currently east of the Philippines, and may make landfall over Luzon over the next several days. Tropical Depression 11W formed near 170E and 10N, and is forecast to move westward or west-northwestward while intensifying. Dynamical models do not favor additional tropical cyclogenesis over the western Pacific, so the TC formation shape was removed from the updated outlook. The enhanced precipitation shape was modified based on the latest tropical cyclone track forecasts.

The National Hurricane Center is currently monitoring two systems that have a potential to develop over the southwestern portion of the East Pacific basin during the next 5 days. Additionally, the Central Pacific Hurricane Center is monitoring a system near 140W and 10N that has a low potential for development during the next 48 hours. For the updated GTH Outlook, a broad high confidence TC formation shape encompasses all three areas of potential development. A moderate confidence TC shape was maintained south of Hawaii for Week-2, and dynamical models, the MJO, and the El Nino base state all favor new potential cyclogenesis over the eastern Pacific during Week-2.

Wet and dry shapes were modified based on the latest guidance. Locally heavy rainfall is possible over monsoon regions of New Mexico, eastern Arizona, and northwestern Mexico. Additionally, suppressed convection is favored over the northeastern Caribbean during Week-2, which may exacerbate drought conditions over Puerto Rico.

The original discussion released on 30 June 2015 follows.

The MJO remained active during the past week, with the enhanced convective phase now over the western Pacific, as indicated by both the RMM and CPC velocity potential based MJO indices. The spatial pattern of upper level velocity potential anomalies continues to exhibit a robust and coherent Wave-1 structure. The MJO is beginning to constructively interfere with the El Nino base state, and Kelvin Wave (KW) activity over the Pacific ahead of the MJO convective envelope has resulted in strong pulses of enhanced convection.

Dynamical models, including the GEFS and ECMWF ensemble systems, indicate strong amplification of the RMM index over the western Pacific. This amplitude is primarily associated with a strong westerly wind burst near the Date Line, which may be further enhanced during Week-1 by several tropical cyclones over the western Pacific, including existing twin cyclones straddling the equator near 160E. The GFS and CFS depict little further eastward propagation of the signal, instead favoring a gradual weakening of the intraseasonal convective anomalies towards the base state. The ECMWF maintains more eastward propagation of the MJO signal, with the enhanced phase approaching the eastern Pacific by the end of Week-2. The extent of the eastward propagation of the MJO signal will play a substantial role in the potential for tropical cyclogenesis over the eastern Pacific, and even the Atlantic, during the next several weeks.

Two tropical cyclones developed on 30 June over the western Pacific near 160E: Tropical Depression 09W (Chan-hom) north of the equator, and Tropical Depression 25 south of the equator. Chan-hom is forecast to gradually intensify as it moves west-northwestward, potentially affecting Guam towards the end of the Week-1 period as a typhoon. TD 25 is forecast to modestly strengthen, but remain a tropical storm as it moves generally southward across the Solomon Islands. During Week-1, additional tropical cyclogenesis is favored across the northwestern Pacific, with a potential for a highly active pattern during the period. There is a moderate potential early in the period for two additional tropical cyclones to form between Chan-hom's current position and the Philippines during the next several days, and there is a higher potential for additional tropical cyclone formation between 155E and the Date Line. Later in the Week-1 period through Week-2, additional KW activity constructively interfering with the El Nino may promote tropical cyclone formation south or southeast of Hawaii. Additionally, relaxing vertical shear and KW activity may increase the potential for tropical cyclogenesis over southwestern portions of the East Pacific basin towards the end of Week-2.

During Week-1, dynamical models, MJO composites, and the base state all favor suppressed convection across southern portions of South Asia, parts of the Indian Ocean, and along the equator across the Maritime Continent. Suppressed convection is also favored across parts of the eastern Pacific and the adjacent Mexico and Central American coastal areas. Widespread enhanced convection is favored from the South China sea and northwestern Pacific, as well as the equatorial central and east-central Pacific. Enhanced convection is also favored across northwestern Mexico, and may impact parts of the southwestern U.S.

During Week-2, the MJO, El Nino, and any subsidence surrounding potential tropical cyclones all favor a continuation of suppressed convection across much of the Maritime Continent. Enhanced convection, associated with frontal activity and potential tropical cyclones, is forecast across much of the South China Sea, Philippines, and northwestern Pacific south of Japan. Enhanced convection associated with El Nino is anticipated to continue along and north of the equator from the Date Line eastward. Continued enhancement of the Monsoon across northwestern Mexico and the southwestern U.S. is also forecast.

Forecasts for enhanced or suppressed rainfall across Africa are provided in collaboration with CPC's Africa Desk and are based on regional scale anomaly features.