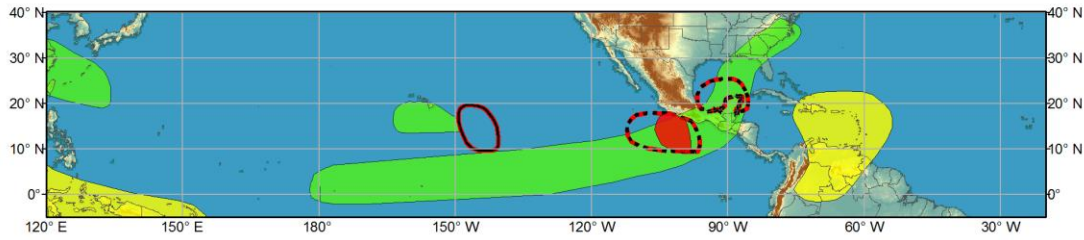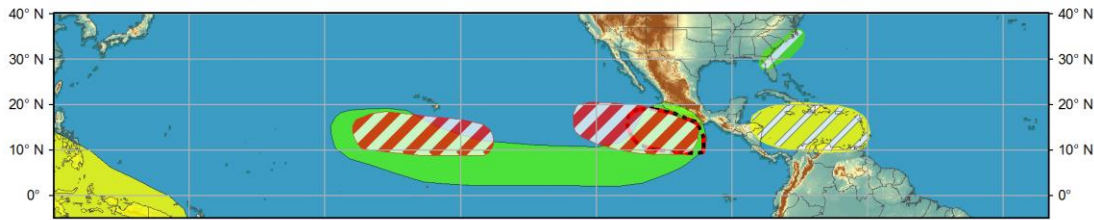Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Sep 26 2015 - Sep 29 2015

Week 2 - Valid: Sep 30 2015 - Oct 06 2015

Confidence
High   Moderate

Produced: 09/25/2015
Forecaster: Pugh

Legend		Description
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.

Since the GTH release on June September 22, diagnostic tools indicate a more coherent Wave-1 structure with upper-level divergence (convergence) across the east and central Pacific (Central Atlantic to the Indian Ocean and Maritime Continent). This more coherent pattern is likely due to atmospheric Kelvin waves constructively interfering with the ongoing, strong El Nino. The MJO is expected to remain weak during the remainder of the outlook period with anomalous convection and tropical cyclone activity influenced mostly by El Nino.

Tropical Storm Niala developed on September 25 southeast of Hawaii in the central Pacific. Although Niala is expected to track south of the Hawaiian Islands, moist flow could result in very heavy rainfall and flooding on Hawaii's Big Island from September 26-29. Meanwhile, a broad area of low pressure, forming south of Acapulco, Mexico, is expected to become a tropical depression by early next week as it moves north. Meanwhile, another low pressure system is expected to move very slowly northwest and bring heavy rain to El Salvador, southern Guatemala, and southeast Mexico during the next few days. Enhanced convection along with anomalous warm water increases the chances for additional tropical cyclone development during the first week of October across the central and eastern Pacific.

A trough of low pressure originating from the western Caribbean region may form a surface low once it moves north into the Gulf of Mexico during the next few days. Although a mid-level trough over the lower Mississippi Valley is expected to inhibit significant tropical cyclone development, the Gulf of Mexico should be closely monitored. Regardless of development across this region, heavy rainfall is likely to shift north to the Gulf Coast and Southeast by early next week. The above-average rainfall predicted across North Carolina and Virginia is associated with a surface trough interacting with anomalous easterly flow and moisture though September 27.

The above (below) average-rainfall areas depicted on the updated map are consistent with the ongoing, strong El Nino and reflect minor changes in the latest model guidance.

---------- Previous discussion follows ------------------------------

The ongoing, strong El Nino continues to remain the major contributor to large scale tropical convective anomalies. The Wheeler-Hendon RMM MJO index indicates no MJO signal, while the CPC Velocity Potential index features a pattern consistent with the background state.

Dynamical model consensus favors a continued weak MJO signal during the next two weeks, although an increase in the amplitude of the MJO index is depicted the GFS and ECMWF models. This amplitude increase is likely related to a pair of atmospheric Kelvin Waves and tropical cyclone activity.

Tropical Storm Ida developed over the central Atlantic during the past week and its movement is erratic. Following Hurricane Linda over the East Pacific earlier in September, Tropical Depression 16E recently developed near the Baja Peninsula and tracked north toward the U.S. desert Southwest. Tropical Storm Malia is currently located northwest of the Hawaiian Islands, while an area of low pressure is southeast of Hilo, Hawaii. Environmental conditions are favorable for this system to become a tropical cyclone with a subsequent track expected east of Hawaii. On September 21, Tropical Depression 21W developed over the west Pacific (16N-142E). TD 21W is expected to strengthen rapidly as it tracks northwest, posing a risk to southern Japan.

Anomalous rainfall during the next two weeks is based largely on El Nino with minor influence from a pair of atmospheric Kelvin Waves crossing the Pacific. Above (below)-average rainfall is likely to persist

across the East Pacific (Maritime Continent, Caribbean region, and northern South America). Tropical cyclone development is expected across the East Pacific sometime during the next weeks. Moderate confidence for Weeks 1 and 2 reflect the timing uncertainty. Above-average rainfall is favored across the equatorial Pacific at the Date Line, due to the Kelvin Waves and is consistent with the CFS precipitation forecast and recent enhanced convection in this region. An early withdrawal of the Indian Monsoon resulted in suppressed convection across northwestern India during early September. During Week-1, below-average rainfall is favored for parts of eastern India where monsoonal rainfall typically continues through the end of September.

Above-average rainfall is likely along and offshore of the Southeast due to a mid-latitude surface trough coupled with anomalous low-level moisture. Model guidance remains consistent that a surface low closes off across the Bay of Campeche or southern Gulf Mexico early next week. A moderate confidence for tropical cyclone development is forecast for this region for Week-1. Above-average rainfall is favored from southern Mexico northward into the Gulf of Mexico during Week-1. Above-average rainfall is expected along parts of the Gulf Coast during Week-2 as a tropical system or moisture shifts north. Uncertainty on the exact location reduces forecast confidence.

Forecasts for Africa are done in collaboration with CPC's Africa Desk and based on model forecast guidance and regional scale anomaly features.