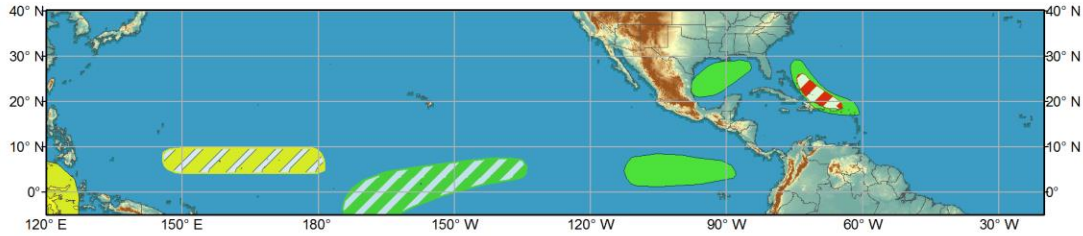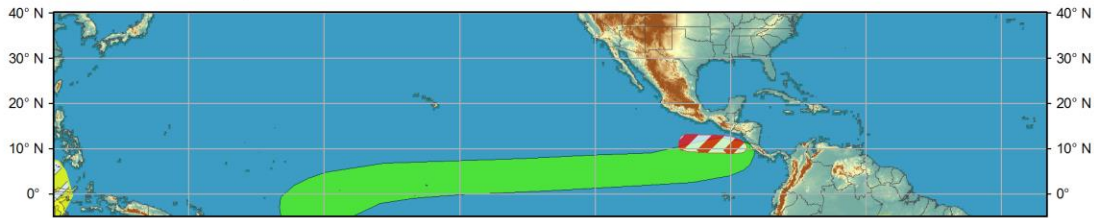Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Nov 07 2015 - Nov 10 2015

Week 2 - Valid: Nov 11 2015 - Nov 17 2015

Confidence
High   Moderate

Produced: 11/06/2015
Forecaster: Pugh

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 late October, the MJO strengthened, with its enhanced phase propagating east from Africa to the Indian Ocean. This eastward propagation resulted in suppressed convection expanding east, north of the equator across the west and central Pacific at the beginning of November. In addition, two tropical cyclones developed across the Arabian Sea during the past two weeks. As the MJO destructively interferes with the ongoing strong El Nino, the MJO signal is expected to weaken. The 200-hpa Velocity Potential anomalies have decreased recently and dynamical models continue to feature a weakening trend of the MJO signal during the next two weeks.

A tropical wave interacting with an upper-level trough is resulting in a large area of showers near the Lesser Antilles. Environmental conditions are expected to become more favorable for tropical cyclone (TC) development by early next week as this disturbance tracks northwest. Please refer to the National Hurricane Center at: www.nhc.noaa.gov for the latest statements and forecasts on this system. Regardless of development, above-average rainfall is likely across the Virgin Islands, Puerto Rico, the Dominican Republic, Turks and Caicos, and the southeast Bahamas.

A broad area of low pressure is currently over the eastern Bay of Campeche and it is not forecast to become a tropical cyclone. The low pressure system is expected to interact with a cold front, resulting in above-average rainfall across parts of the Gulf of Mexico.

Elsewhere, the above (below) average-rainfall areas depicted on the updated map reflect minor changes based on the latest CFS model and are consistent with El Nino becoming the most dominant climate feature by mid-November. Moderate confidence exists for tropical cyclone development across the far eastern Pacific from November 11-17, due to a likely renewal of enhanced convection. This has been a consistent signal from the GFS model for several days.

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

The MJO became more coherent during late October with upper-level divergence (convergence) anomalies shifting east across Africa (West Pacific). The Wheeler-Hendon RMM index and CPC MJO index based on 200-hpa Velocity Potential feature an increase in amplitude with a slight eastward propagation. Dynamical models indicate that this MJO signal is likely to weaken during the next two week as it destructively interferes with the background state associated with a strong El Nino.

Tropical Cyclone Chapala developed in the Arabia Sea on October 28 and rapidly intensified to a Category-4 cyclone with maximum sustained winds of 135 knots. On November 3, Chapala became the first Category-1 strength cyclone on record to make landfall in Yemen. Before dissipating, Chapala could result in heavy rainfall across parts of Yemen which typically receive only several inches of rainfall per year.

Enhanced convection is expected to become more widespread across the central and eastern equatorial Pacific during the next two weeks due to the ongoing, strong El Nino and a weakening MJO signal. The remainder of the above and below-average rainfall favored areas are based on CFS and ECMWF precipitation forecasts along with El Nino precipitation composites for October-December. Moderate confidence exists for tropical cyclone (TC) development during Week-1 across the Arabian Sea and Bay of Bengal due to enhanced convection near these areas and above average sea surface temperatures. The GFS ensemble guidance also supports TC development across the Arabian Sea and Bay of Bengal during Week-1.

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