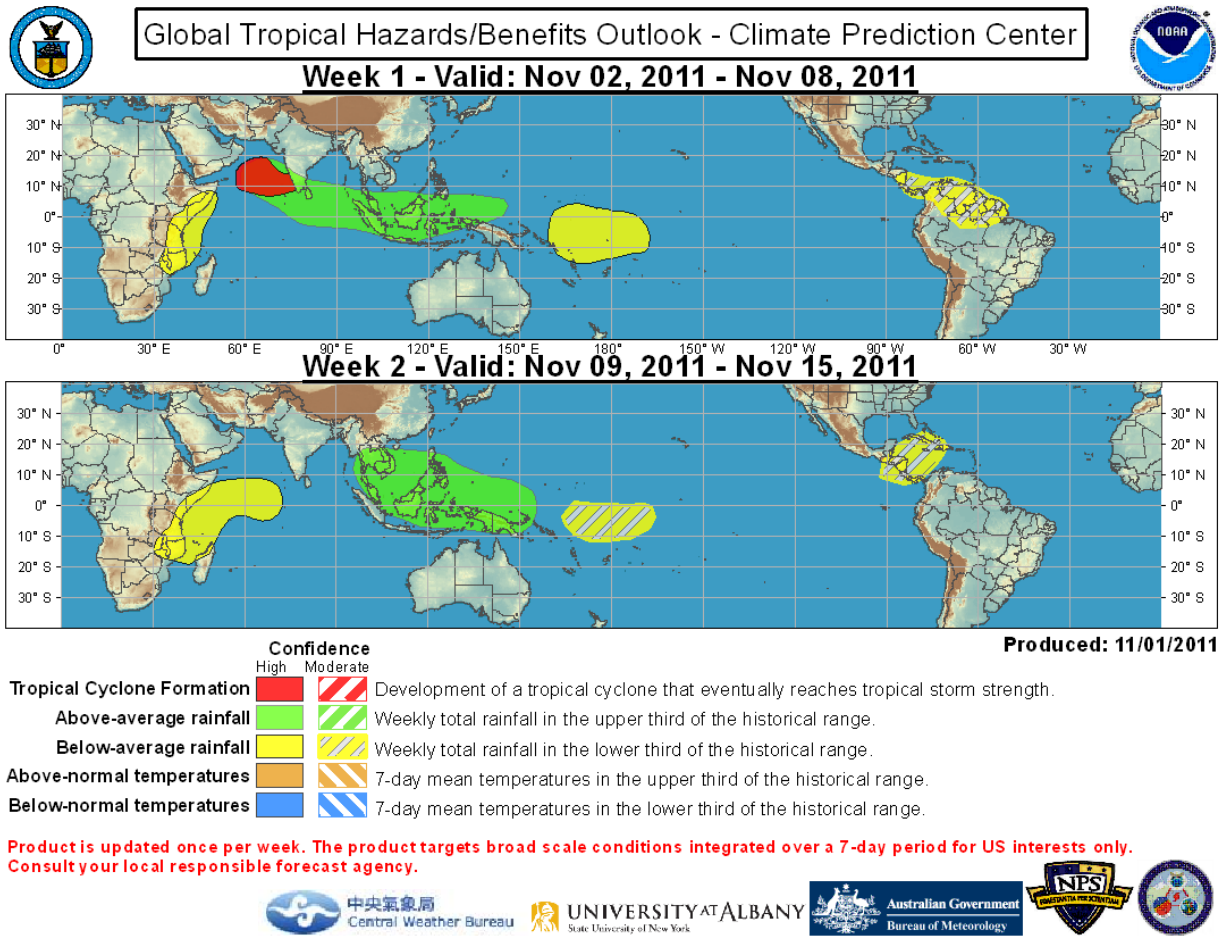

The MJO remained active during the past week with the enhanced convective phase now centered over the Indian Ocean (IO). The enhanced phase of an atmospheric Kelvin wave (KW) shifted eastward across the Pacific Ocean during the period and excited convection for some areas in the central and eastern Pacific north of the equator. The enhanced convective phase of a second KW also increased convection over parts of Africa and the IO during the week. In addition, the suppressed phase of an equatorial Rossby wave (ERW) contributed to suppressed convection for parts of Southeast Asia, the South China Sea and the western Pacific.

Weekly averaged Outgoing Longwave Radiation anomalies show enhanced convection was observed across parts of the Greater Horn of Africa, the Arabian Sea and many areas of the western and central equatorial IO. Suppressed convection was observed from the northern Bay of Bengal across the Philippines to the western Pacific. Easterly low-level wind anomalies remain entrenched across the eastern IO and Maritime continent (MC), while weak westerly anomalies were observed along the equator in the western Indian Ocean. Positive sea-surface temperature anomalies remain present across most of the equatorial Indian Ocean, but have cooled some over the past week.

The WH MJO index showed only a slight eastward propagation during the past week as several other forms of variability tended to focus the phase of the index farther west and limited its progression eastward. In recent days, however, propagation has returned with respect to the WH index. The observed evolution of the MJO index was generally well forecast by most models, especially two weeks out when a stronger, eastward propagating signal was forecast to decrease in amplitude and slow in eastward propagation.

No tropical cyclone formations occurred during the past week.

The current forecast for Week-1 calls for continued propagation of the MJO signal with enhanced precipitation across most of the Maritime Continent. A westward extension of above-average precipitation is forecast across the Northern Indian Ocean due to the potential formation of a tropical cyclone. Potential forecast tracks for the anticipated tropical cyclone indicate landfall anywhere from eastern Yemen to Pakistan, with significant rains at landfall. Composite maps of TC formations that are stratified by MJO phase indicate that Week-1 should be favorable for TC formation across most of the Bay of Bengal; the subsident phase of the ERW mentioned above is anticipated to suppress TC formation and rainfall across the Bay of Bengal. Due to the eastward propagation of the MJO signal, drier than average conditions are expected across eastern Africa and from Central America to Northern Brazil.

During Week-2, the convectively enhanced phase of the MJO is expected to move eastward and become centered over the Maritime Continent. The forecast pattern calls for constructive interference of the ERW and MJO to enhance precipitation across the Maritime Continent and Southeast Asia. Drier than average conditions are forecast to expand in coverage from eastern Africa to the Western Indian Ocean, and across the Western Caribbean Sea and Central America. La Nina background conditions are also expected to contribute to below-average rainfall across the Central Pacific. TC formation is considered unlikely during Week-2.