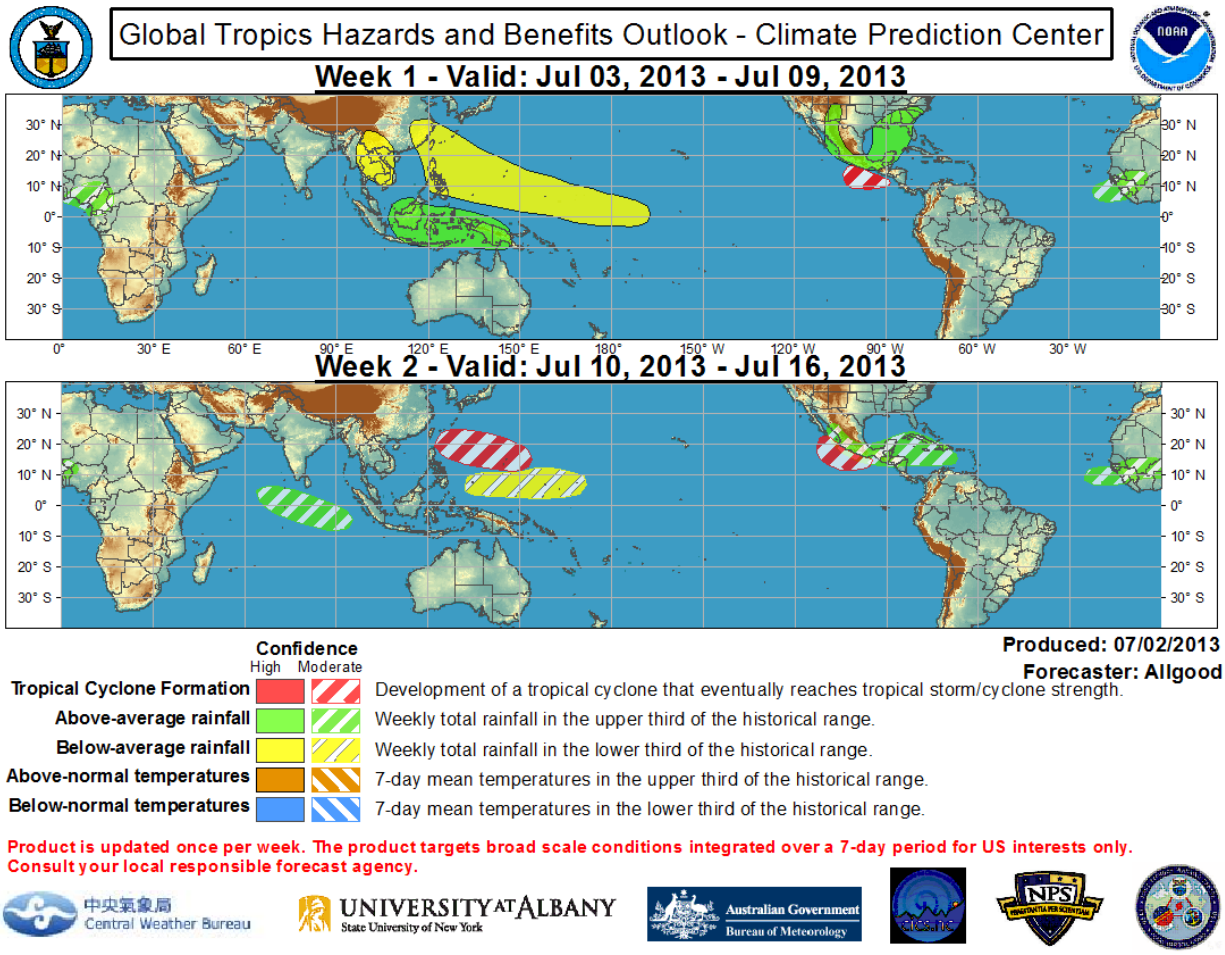

The MJO maintained a robust amplitude and propagated eastward across the Western Hemisphere and Africa during the previous week according to the Wheeler-Hendon MJO Index. The CPC MJO Index also indicated the eastward propagation of a robust MJO convectively active phase across the Western Hemisphere, with a weakening of the index at the end of the period. Other modes of subseasonal variability are still apparent in the tropical convective pattern, including a tropical cyclone and persistent anomalous convection over the Maritime Continent.

Dynamical and statistical model outputs depict a wide variability of the forecast state of the MJO during the next two weeks. The GFS model does not propagate the active convective phase of the MJO into the Indian Ocean at all, while the bias corrected European model propagates a rapidly weakening MJO signal into the Indian Ocean. Statistical model forecasts such as the Constructed Analog MJO Forecast bring the MJO signal into the central and eastern Indian Ocean by week 2.

The tropics remained active during the previous week, with Typhoon Rumbia forming in the West Pacific on 28 June and Tropical Storm Dalila developing over the eastern Pacific on 30 June. Rumbia crossed

the Philippines as a tropical storm and strengthened into a minimal Typhoon over the South China Sea, skirting the northeastern coast of Hainan before making landfall as a tropical storm over extreme southwestern Guangdong Province in China. Dalila remained offshore, although minor impacts occurred over the coastline of west-central Mexico. The probability of tropical cyclogenesis remains enhanced over the eastern Pacific basin during both week 1 and week 2. A disturbance is currently over the Gulf of Tehuantepec, an area that may become more conducive for tropical development during week 1. Although most MJO associated tropical cyclogenesis in the Atlantic basin occurs in phase 2, wind shear currently remains too high for tropical cyclone development. Tropical cyclone development is also not expected across the western Pacific during week 1, but conditions are forecast to become more conducive to tropical cyclogenesis by week 2.

The week 1 outlook is based on an MJO propagating from phase 1 into phase 2, but with a decrease in confidence regarding the amplitude, allowing greater contribution from other modes of anomalous tropical convective activity. Enhanced rainfall associated with the North American Monsoon is expected to continue, with heavy rainfall also anticipated across the Gulf of Mexico and southeastern contiguous United States. Local enhancements of the African monsoon are also expected, with the greatest chances of anomalous rainfall over western Africa and the Gulf of Guinea region. A continuation of enhanced convection is expected across the Maritime Continent, which may weaken the onset of convective anomalies expected over the western Indian Ocean as the MJO propagates into phase 2. In contrast, drier than average large scale conditions are forecast for Southeast Asia and the western Pacific region.

During week 2, enhanced convection near the equatorial Indian Ocean becomes more likely, with enhanced dryness persisting over the western Pacific, although with increasing chances of tropical cyclogenesis east of the Philippines. Enhanced rainfall is forecast to linger over Mexico, central America, the Caribbean, the eastern Atlantic, and western Africa.