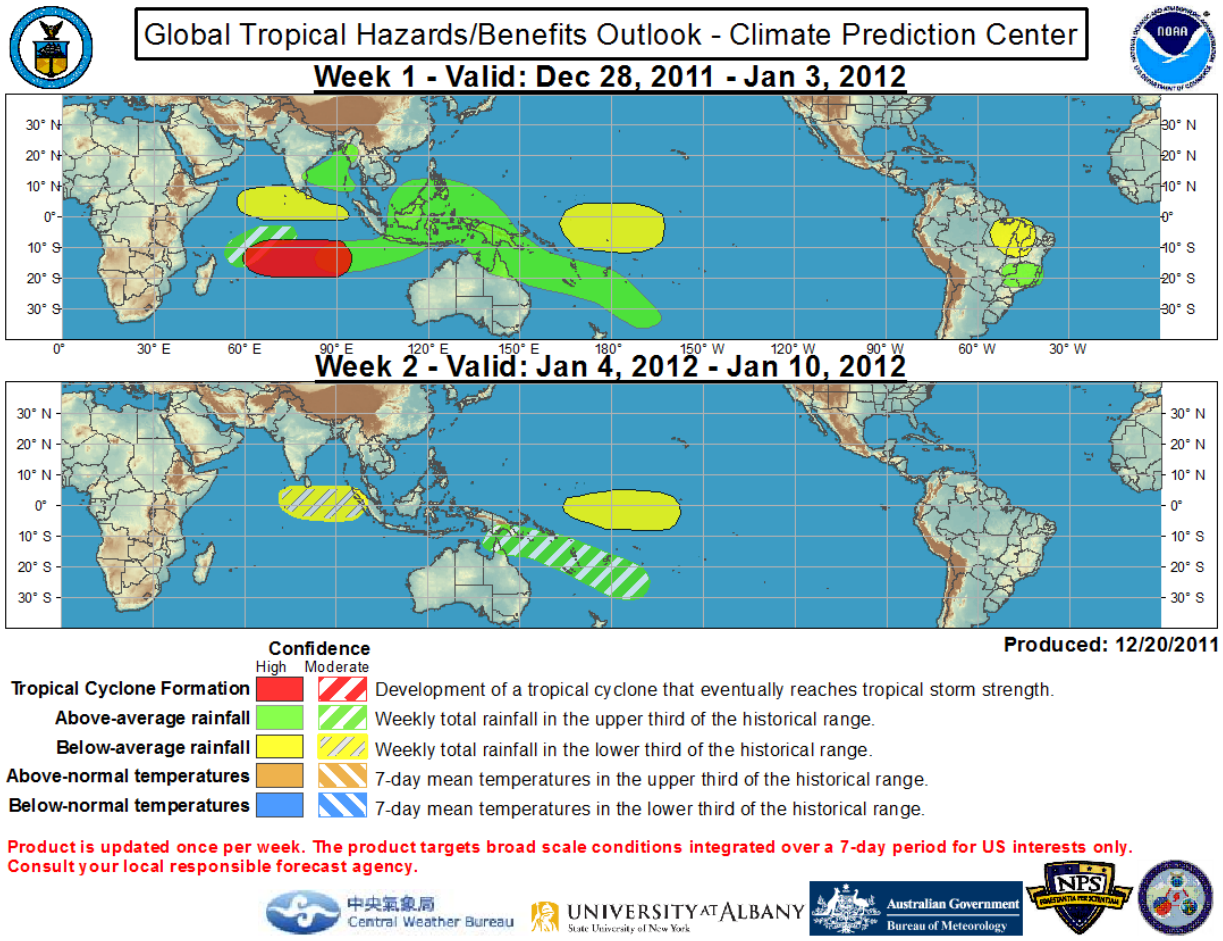

The MJO weakened during the past two weeks as a number of observational indicators and eastward propagation became less coherent. Although most dynamical model MJO index forecasts indicate a more coherent signal with renewed eastward propagation during the next week, it remains unclear whether the MJO will strengthen to what was observed during the late fall as some of this signal may be related to a robust atmospheric Kelvin wave.

Weekly averaged Outgoing Longwave Radiation (OLR) anomalies for the past week indicate enhanced convection across the eastern Indian Ocean, parts of the Maritime Continent, northern Australia, and the South Pacific Convergence Zone (SPCZ). Tropical Storm Grant developed on December 25 and quickly made landfall in northern Australia where very heavy rainfall (more than 200 mm) was observed. Meanwhile, Tropical Storm Thane developed in the Bay of Bengal. Suppressed convection was observed across the central Pacific Ocean and extended from southeast Africa eastward to Madagascar. Westerly low-level wind anomalies have strengthened during the past week across the equatorial Indian Ocean, while easterly low-level wind anomalies continue across the central Pacific. Positive sea surface temperature (SST) anomalies remain across the southern Indian Ocean. Negative SST anomalies are entrenched across the central and eastern equatorial Pacific, consistent with La Nina.

During Week-1, forecasts of anomalous convection were based on the ongoing La Nina, numerical model guidance, and a potential eastward propagating MJO signal. These factors favor above-average rainfall extending from the Maritime Continent southeast into the SPCZ. Smaller areas of enhanced rainfall are also favored over the Bay of Bengal, parts of the Indian Ocean, and southeast Brazil. The potential suppressed phase of the MJO and numerical model guidance favor below-average rainfall over the north Indian Ocean and northeast Brazil. The increased chances for below-average rainfall across the central equatorial Pacific Ocean are consistent with La Nina. Elevated chances for tropical cyclogenesis exist across the south Indian Ocean from 60E to 95E. Numerical model guidance remains consistent indicating a pair of tropical cyclones developing in this region.

Forecast uncertainty during Week-2 is considerably higher than Week-1. Numerical model guidance favors enhanced rainfall across the SPCZ and suppressed rainfall across the eastern Indian Ocean. Below-normal rainfall is favored for the central equatorial Pacific Ocean which is consistent with the ongoing La Nina.