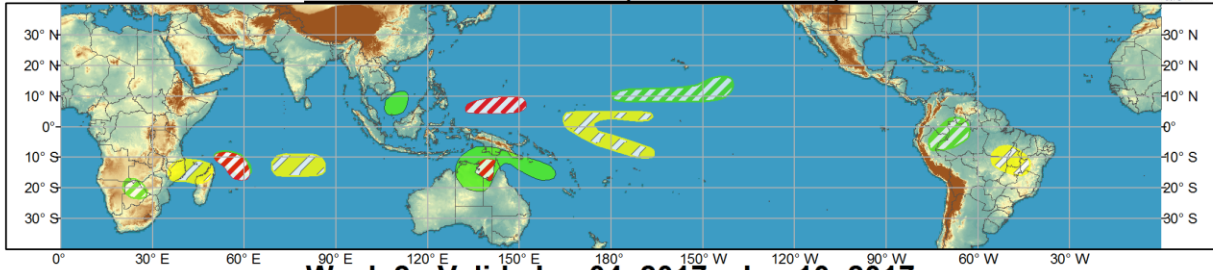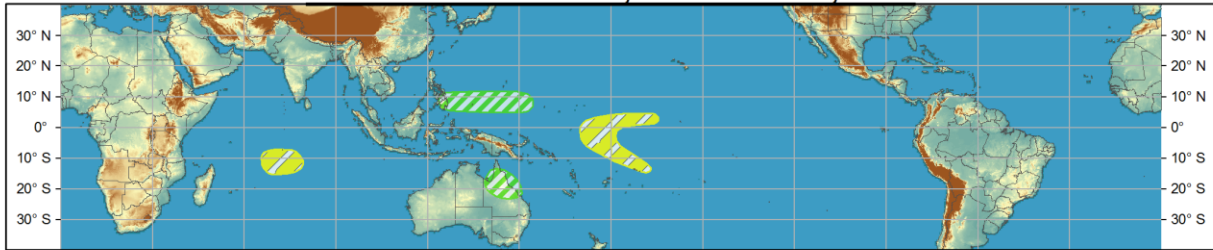**Global Tropics Hazards and Benefits Outlook - Climate Prediction Center**

Week 1 - Valid: Dec 28, 2016 - Jan 03, 2017

Week 2 - Valid: Jan 04, 2017 - Jan 10, 2017

Produced: 12/27/2016
Forecaster: Pugh

Confidence
High Moderate

Tropical Cyclone Formation		Development of a tropical cyclone (tropical depression - TD, or greater strength).
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, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

中央氣象局 Central Weather Bureau   UNIVERSITY AT ALBANY State University of New York   EARTH SYSTEM SCIENCE INTERDISCIPLINARY CENTER ESSIC UNIVERSITY OF MARYLAND   Australian Government Bureau of Meteorology   cics.nc   NPS PRAESTANTIA PER SCIENTIAM

Although the CPC velocity potential-based MJO index features a more coherent MJO recently, the RMM index has depicted a MJO signal of low amplitude since the end of November. The background La Nina continues to influence the pattern of anomalous tropical convection. Dynamical model forecasts of the RMM index generally maintain a weak MJO signal during the next two weeks. Therefore, its contribution if any to anomalous convection across the global tropics and its effects on the extratropical circulation are unclear.

During the past week, Tropical Cyclone Yvette resulted in heavy rainfall (more than 200 mm) along the Kimberley coast of Western Australia. Elsewhere, powerful Typhoon Nock-Ten (maximum sustained winds of 135 knots) made landfall in the Catanduanes province of the central Philippines, south of Manila, on December 25. Nock-ten was the strongest typhoon to strike the Philippines this year. It weakened as it crossed the Philippines and is forecast to dissipate over the South China Sea by December 28. During Week-1, tropical cyclone development is favored across the following areas: West Pacific (5-10N/135-150E), the Gulf of Carpentaria, and northeast of Madagascar. The GFS model indicates that the area over the Southwest Indian Ocean (10-15S/50-60E) is most likely to have tropical cyclone development during Week-1.

Given the expectation of a continued ill-defined MJO signal, the favored areas of anomalous rainfall across the global tropics during the next two weeks are based on consensus among the CFS, GFS, and ECMWF models along with La Nina conditions. The highest confidence for above-average rainfall during Week-1 exists across northern Australia, the Gulf of Carpentaria, parts of the Coral Sea region, and parts of the Southwest Indian Ocean. Enhanced moisture associated with the remnant low of former typhoon Nock-ten is likely to bring above-average rainfall to parts of the South China Sea. Suppressed convection, consistent with the base state, is expected to persist across parts of the central Indian Ocean and central Pacific Ocean during the next two weeks. Elsewhere, during Week-2, the CFS and ECMWF models are in good agreement for above-average rainfall across northern Queensland of Australia and parts of the West Pacific (5-10N/125-155E), including Mindanao of the Philippines. The region east of the Philippines will have to be closely monitored for tropical cyclone development in next week's outlook.

Forecasts over Africa are made in consultation with CPCs international desk, and can represent local-scale conditions in addition to global-scale variability.