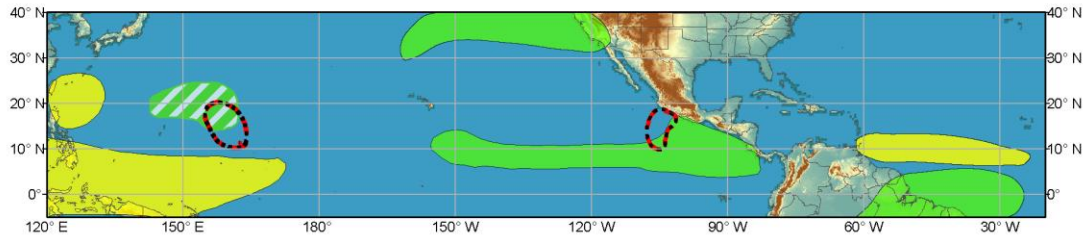




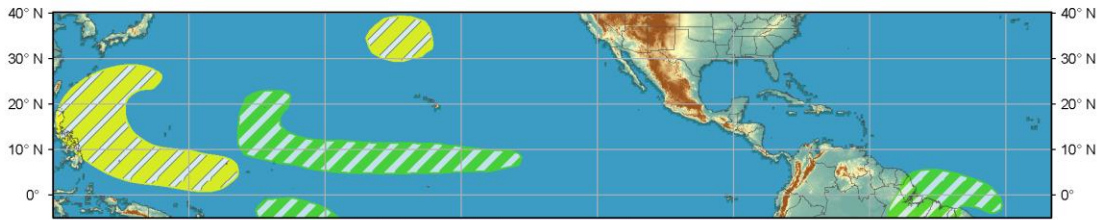
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



**Week 1 - Valid: Dec 01 2018 - Dec 04 2018**



**Week 2 - Valid: Dec 05 2018 - Dec 11 2018**



**Confidence**  
High Moderate

**Produced: 11/30/2018**  
**Forecaster: MacRitchie**

- 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.**



As expected, the MJO has advanced to Phase 8 and is still forecast by most models to continue propagating around the globe over the two week forecast period. The ECMWF model propagates the MJO faster and keeps it stronger than the GFS and CFS, forecasting it to be comfortably within Phase 3 by the end of Week-2. Since the current and forecast states of the MJO have not changed, our precipitation forecasts remain similar with only slight adjustments to the shapes of the below-average rainfall regions just east of the Maritime Continent and north of Hawaii in Week-2.

The potential threats of TC formation in the East Pacific and northern West Pacific have been removed. Dynamical model guidance suggests that there will be no new TC development in the Friday update region before the end of the forecast period; however the area of moderate confidence in the Solomon Sea that was mentioned in Tuesday's discussion is still valid.

This is the final Friday update of this product for the 2018 Atlantic Hurricane Season, which ends today. Friday updates will resume on Friday, June 7, 2019. Tuesday forecasts will continue as normal.

--- Original discussion released November 27, 2018 follows: ---

This week's forecast is driven primarily by current and anticipated MJO activity over the next two weeks. The MJO is in Phase 7 and is forecast by nearly every dynamical model to continue propagating over the Atlantic, Indian Ocean, and Maritime Continent as it traverses Phases 8, 1, and 2 by the end of Week-2. There is also an Equatorial Rossby Wave in the West Pacific that is expected to constructively interfere with the active convective portion of the MJO envelope. This may lead to enhanced convection and the potential for tropical cyclogenesis.

The characteristic twin cyclones of the equatorial Rossby wave may develop into tropical cyclones during Week-1. The GFS is most confident about development of the southern cyclone over the Solomon Sea. There is also a chance for development of the northern cyclone, but model guidance is also split. The Joint Typhoon Warning Center is monitoring this area, Invest 93W, for potential development.

The evolution of the MJO over the next two weeks could prove to be a significant key to the development, or lack of development, of El Niño this Winter. There is a particularly broad region of anomalously warm sea surface temperatures over the equatorial Pacific, but there isn't much anomalous convection coupled to those warm waters. Subsurface data taken from the TAO buoy array shows that there is much warmer water just below the surface - temperatures in the East Pacific about 50 meters below the surface are as high as 4 degrees C above climatology.

If the MJO evolves as forecast, there is a good chance that a westerly wind burst over the Central and Eastern Pacific will be able to reduce the trade winds enough to allow warm subsurface water to rise to the surface. This situation would improve the odds for an El Niño and its corresponding atmospheric teleconnection to form. We will monitor the situation closely; the next ENSO update from CPC is scheduled for December 13, 2018.

The MJO forecast favors below-average rainfall over much of the Maritime Continent for Weeks 1 and 2 and above-average rainfall over the south-central Pacific during Week-2. There is also a chance for above-average rainfall just north of the Equator in the Eastern Pacific. The National Hurricane Center has moderate confidence that a tropical cyclone could form in this strip off the southwestern coast of

Mexico during the next five days. Above-average rainfall during Weeks 1 and 2 is also likely over parts of South America as the convectively active phase of the MJO moves over that region.

The dynamical guidance is confident that a plume of moisture, associated with a southward displacement of the jet over the North Pacific, will develop during Week-1 and provide parts of Central and Southern California with above-average rainfall. This situation is fluid and interested parties are encouraged to closely monitor forecasts from the Weather Prediction Center and local forecast offices over the next few days.

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