Global Tropics Hazards And Benefits Outlook
1/8/2019

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Outline

1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts
Outlook Review

- Penny (12/31)
- Mona (1/2)
- Australian Heat

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO**: (13 Dec, 2018 Update)

- ENSO Alert System Status: El Niño Watch

- El Nino is expected to form and continue through Northern Hemisphere winter 2018-19 (~90% chance) and through spring (~60% chance).

**MJO and other subseasonal tropical variability:**

- The MJO remained of moderate strength, and propagated to Phase 8.

- Dynamical models indicate a weakening of the signal in Week-1, with limited eastward propagation in Phases 8 & 1. For Week-2, a subseasonal signal may re-emerge anywhere from Indian Ocean (ECMWF) to western Pacific (GEFS).

**Extratropics:**

- The large uncertainty in Week-2 MJO forecasts makes it extremely difficult to discern what, if any, MJO impacts may be felt in the U.S.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jan 09, 2019 - Jan 15, 2019

Week 2 - Valid: Jan 16, 2019 - Jan 22, 2019

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.

Produced: 01/08/2019
Forecaster: Artusa

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.
Enhanced Divergence mostly over Eastern Hemisphere;
Enhanced Convergence mostly over Western Hemisphere

Enhanced Divergence mostly over western and central Pacific, Australia. Active SPCZ.

Wave-1; Enhanced Divergence now over WH, Enhanced Convergence over EH. Active SPCZ.
Wheeler-Hendon based analyses of model forecasts indicate limited eastward propagation in Phases 8 & 1 accompanied by rapid deamplification of signal in Week-1. Much more uncertain Week-2. Re-emerging signal anywhere from Indian Ocean (ECMWF) to western Pacific (GEFS). Favoring ECMWF as it has been performing better with this MJO event.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
MJO, Rossby wave & Low-frequency pattern
Connections to U.S. Impacts
Week-2
GFS SuperEnsemble Mean
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