Global Tropics Hazards And Benefits Outlook

12/26/2017

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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

Week 1 - Valid: Dec 20, 2017 - Dec 26, 2017

Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Week 2 - Valid: Dec 20, 2017 - Dec 26, 2017

7-Day Average OLR Anomaly
2017/12/18 - 2017/12/24
**Synopsis of Climate Modes**

**ENSO:**
- ENSO Alert System Status: **La Niña Advisory**
- La Niña is likely (exceeding ~80%) through the Northern Hemisphere winter 2017-18, with a transition to ENSO-neutral most likely during the mid-to-late spring.

**MJO and other subseasonal tropical variability:**
- The MJO is currently propagating over the Western Hemisphere, although there is weakened amplitude on the MJO indices due to destructive interference with the La Niña base state.
- Dynamical models fairly consistently indicate a continued weak signal as the MJO propagates across the Western Hemisphere, followed by a strengthening signal over the Indian Ocean during Week-2.

**Extratropics:**
- Western Hemisphere MJO events generally do not teleconnect well to the North American midlatitude pattern; however, an Indian Ocean MJO event does teleconnect well, and may contribute to a substantial pattern change over North America during January.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Dec 27, 2017 - Jan 02, 2018

Week 2 - Valid: Jan 03, 2018 - Jan 09, 2018

- **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: 12/26/2017
Forecaster: Allgood

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.
Disorganized pattern as other modes (La Niña, Rossby wave, Kelvin wave) influenced the intraseasonal signal.

Constructive interference between a Rossby wave and the MJO over the West Pacific yielded a more organized response.

Weaker projection as the MJO traverses the Western Hemisphere and interferes with the base state.
Wheeler-Hendon based analyses of model forecasts show a consistent eastward propagation and strengthening of the signal over the Indian Ocean.
CAVEAT: These panels are representative of robust MJO events.
MJO influence seen more in the disruption of the enhanced Maritime signal than overcoming the suppressed convection over the Pacific.
December Tropical Storm Formation by MJO phase

Phase 1 (46 days) 7 storms
Phase 4 (72 days) 13 storms
Phase 7 (103 days) 19 storms

Phase 2 (67 days) 11 storms
Phase 5 (73 days) 14 storms
Phase 8 (76 days) 9 storms

Phase 3 (101 days) 16 storms
Phase 6 (69 days) 15 storms
Null (416 days) 52 storms
Days 1-4

Day 5-8

Day 9-12

Day 13-15
Connections to U.S. Impacts
Week 2 – Temperature and Precipitation
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Dec 27, 2017 - Jan 02, 2018

Week 2 - Valid: Jan 03, 2018 - Jan 09, 2018

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.

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