Global Tropics Hazards And Benefits Outlook

10/24/2017

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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
Tropical Storm Saola – formed south of Guam on 23 October
Synopsis of Climate Modes

**ENSO:**
- ENSO Alert System Status: La Niña Watch
- La Niña conditions are favored (~55-65%) during the Northern Hemisphere fall and winter 2017-18

**MJO and other subseasonal tropical variability:**
- An active and high amplitude MJO event is ongoing, with the enhanced phase now over the Pacific.
- Dynamical models indicate a continued eastward propagation of the MJO, with a fast phase speed (nearing the Indian Ocean by the end of Week-2). Bias-corrected model forecasts weaken the signal more rapidly, but this is unlikely given the incipient amplitude.
- Recurring tropical cyclones over the West Pacific may influence the pattern as well

**Extratropics:**
- The extended range temperature and precipitation forecasts for the U.S. are likely to be impacted by MJO activity, with Day 8-14 troughing over the central U.S. consistent with lagged MJO composites.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center


- 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: 10/24/2017
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.
Very robust and organized Wavenumber-1 asymmetry in the upper-level VP field. Eastward propagation of the signal is quite evident.
• Note fast propagation speed over past few days
• GEFS shows signal reaching eastern Indian Ocean by the end of Week-2
• Bias-corrected ECMWF forecast rapidly weakens the signal (non-corrected ECMWF shows a bit more propagation)
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
CFS depicts much slower evolution, with the intraseasonal signal slowing over the Wpac and becoming low-frequency. Eastward propagation is favored.
CFS Precipitation Anomalies (mm) Issued 23Oct2017
Week-1 Forecast Ending 31Oct2017

CFS Precipitation Anomalies (mm) Issued 23Oct2017
Week-2 Forecast Ending 07Nov2017
October Tropical Storm Formation by MJO phase

Phase 1 (34 days) 34 storms
Phase 2 (76 days) 11 storms
Phase 3 (41 days) 12 storms
Phase 4 (65 days) 18 storms
Phase 5 (153 days) 46 storms
Phase 6 (70 days) 30 storms
Phase 7 (49 days) 16 storms
Phase 8 (66 days) 12 storms
Null (422 days) 119 storms
No new tropical cyclones are expected during the next five days.
Days 1-4

Day 5-8

Day 9-12

Day 13-15
Connections to U.S. Impacts
AO: Observed & ENSM forecasts

1000mb Z (Obs: 27Jun2017 - 24Oct2017)  AD index
mean=0.2185

1000mb Z (7day Forecast)  AD index
mean=0.1507  cor(w/obs)=0.8320

1000mb Z (10day Forecast)  AD index
mean=0.0036  cor(w/obs)=0.6151

1000mb Z (14day Forecast)  AD index
mean=-0.3018  cor(w/obs)=0.3224
Week 2 – Temperature and Precipitation

8-14 Day Outlook
Temperature Probability
Made: 23 Oct 2017
Valid: Oct 31 - Nov 06, 2017

8-14 Day Outlook
Precipitation Probability
Made: 23 Oct 2017
Valid: Oct 31 - Nov 06, 2017
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center


Week 2 - Valid: Nov 01, 2017 - Nov 07, 2017

Confidence
High Moderate

Tropical Cyclone Formation
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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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