Global Tropics Hazards and Benefits

Outlook Briefing

January 21, 2014

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Outline

- Review of recent tropical conditions
- Synopsis of Climate Variability
- GTH Outlook and Forecast Discussion
- Connections to U.S. Impacts
X → Tropical cyclone formed during the period.
Synopsis of Climate Variability

**ENSO:**
- ENSO-neutral is expected to continue into the Northern Hemisphere summer 2014.

**MJO:**
- The MJO remained weak despite strong convection across parts of the West Pacific, Maritime Continent, and northern Australia. Little eastward propagation is expected.
- The MJO is not expected to contribute substantially to the pattern of anomalous convection during the outlook period.

**Other types of subseasonal tropical variability:**
- Atmospheric Kelvin wave activity remains ongoing but large scale persistent impacts are difficult to assess. Low-frequency variability unrelated to ENSO favors convection across parts of the eastern Maritime Continent and West Pacific.

**Extratropics:**
- AO and NAO favored to reside near neutral/positive over next 2 weeks, PNA forecast to go negative.
- Multiple areas of enhanced tropical convection make it difficult to confidently assess mid-latitude linkages. However, persistent convection in the far western Pacific is consistent with buildup of Arctic air in Canada.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jan 22, 2014 - Jan 28, 2014

Week 2 - Valid: Jan 29, 2014 - Feb 04, 2014

Preliminary

Confidence

High

Moderate

Tropical Cyclone Formation
Development of a tropical cyclone that eventually reaches tropical storm/cyclone 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: 01/21/2014
Forecaster: Baxter

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.
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence  Brown: Enhanced Convergence

MJO Status
MJO Index Model Forecasts

- The triangular areas indicate the location of the MJO enhanced convective phase.
- Counter-clockwise motion is indicative of eastward propagation. Large dot most recent day.
- Distance from center proportional to strength.
- Line colors distinguish different months.
- Forecast is the green (mean) and yellow lines.
Continuation of very warm waters – many areas > 30°C
Ensemble GFS – Tropical Cyclone Guidance

Days 1-4

Days 5-8

Days 9-12

Days 13-16
Low frequency mode shifting east.
Mean height in Green

Higher than normal heights in red

Lower than normal heights in blue
Days 8-14 Temperature and Precipitation Outlooks
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

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Lagged 850-hPa Temperature Composite

Phase 7

T = 0

T + 5

T + 10

T + 15

T + 20

T + 25
Average Conditions when the MJO is present (Nov-Mar)