Global Tropics Hazards And Benefits Outlook
April 8, 2013

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Outline

1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
Outlook Review

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO:**
- ENSO-neutral conditions are favored to continue through Northern Hemisphere spring 2013.

**MJO and other subseasonal tropical variability:**
- The MJO remained active over the past week, although some observational indicators are less coherent than in previous weeks as other subseasonal variability are playing a large role in the pattern of anomalous tropical convection. The MJO enhanced phase is centered over the eastern Indian Ocean.
- Dynamical model MJO index forecasts generally support continued eastward propagation. The statistical tools also support continued MJO activity, although those reflect a weaker signal.

**Extratropics:**
- The extended range forecast for the U.S. aligns well with the typical circulation patterns based on the current and forecast phases of the MJO. These include a trend towards above-normal temperatures across the eastern U.S. and a more active across the central U.S.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Apr 10, 2013 - Apr 16, 2013

Week 2 - Valid: Apr 17, 2013 - Apr 23, 2013

Preliminary

Produced: 04/09/2013
Forecaster: Rosencrans

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.

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 Observation/Forecast

MJO Index Forecast for 09Apr2013-23Apr2013

GFS

ECMWF

UKMET
Average Conditions when the MJO is present (May-Sep)

CAVEAT: Connection of downstream precipitation patterns to MJO phase is not as robust during spring.
Atmospheric Kelvin waves and active phase of the MJO forecast to impact Indian Ocean and Maritime Continent.

Indications of other modes of variability, including mid-latitude influence near the Date Line.
April Tropical Storm Formation by MJO phase

Phase 1 (70 days) 7 storms
Phase 2 (65 days) 4 storms
Phase 3 (68 days) 4 storms
Phase 4 (85 days) 17 storms
Phase 5 (77 days) 15 storms
Phase 6 (65 days) 6 storms
Phase 7 (87 days) 8 storms
Phase 8 (76 days) 7 storms
Null (308 days) 43 storms
Indicates a shift toward warmer conditions across the eastern half of the CONUS. 5-15 days out. Slightly offset from current dynamical model outputs.

Would also support some moisture return over the central portions of the country, although a bit later and north (minimal southern stream energy).
Week 2 – Temperature and Precipitation
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

**Week 1 - Valid: Apr 10, 2013 - Apr 16, 2013**

**Week 2 - Valid: Apr 17, 2013 - Apr 23, 2013**

**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.

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