Global Tropics Hazards And Benefits Outlook
April 5, 2016

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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 – Tropical Cyclones

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Week 1 - Valid: Mar 30, 2016 - Apr 05, 2016

Week 2 - Valid: Mar 30, 2016 - Apr 05, 2016
Synopsis of Climate Modes

**ENSO:**
- Current: *El Niño Advisory*
- Nino 3.4 – 1.8°C above normal – Continuing to decrease.
- Outlook: A transition to ENSO-neutral is likely during late Northern Hemisphere spring or early summer 2016, with close to a 50 percent chance for La Niña conditions to develop by the fall.

**MJO and other subseasonal tropical variability:**
- A complex pattern has taken shape, with a remnant intraseasonal signal now over Africa and the far western Indian Ocean, and a zonally narrow but strong couplet of enhanced (suppressed) convection over the West Pacific (Maritime Continent).
- Most dynamical model MJO index forecasts depict weakening of the MJO Index during the next two weeks.

**Extratropics:**
- Recent MJO activity, coupled with persistent convection over the West Pacific has played a substantial role in the evolution of the extratropical pattern, with much above normal temperatures over Alaska, and deep troughing over eastern North America.
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Week 1 - Valid: Apr 06, 2016 - Apr 12, 2016

Week 2 - Valid: Apr 13, 2016 - Apr 19, 2016

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: 04/05/2016
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.
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence   Brown: Enhanced Convergence

A fast eastward signal is evident (blue lines) – enhanced phase now over Africa/western I.O

Persistent convection over the West Pacific is NOT ENSO related (red line)
El Niño enhanced convective anomalies are highlighted with the red box.

Constructive interference with MJO in early March.

Equatorial Rossby Wave (ERW) activity was observed during late March near the Date Line (green box).

During early April, the ERW interacted with an eastward-moving feature.
Wheeler-Hendon based analyses of model forecasts indicate a fast-moving signal over the Indian Ocean.

Most models depict weakening.
ECMWF solution is very different in the I.O.
April Tropical Storm Formation by MJO phase

Phase 1 (70 days): 7 storms
Phase 2 (65 days): 4 storms
Phase 3 (66 days): 4 storms
Phase 4 (85 days): 17 storms
Phase 5 (77 days): 12 storms
Phase 6 (65 days): 6 storms
Phase 7 (87 days): 8 storms
Phase 8 (76 days): 7 storms
Null (368 days): 43 storms
Connections to U.S. Impacts
Enhanced convection over the West Pacific is producing a very MJO-like atmospheric response.
Week 2 – Temperature and Precipitation
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