Global Tropics Hazards And Benefits Outlook
February 9, 2015

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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

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO:**
- **Current:** [El Niño Advisory](#)
- **Nino 3.4:** 2.6°C - Slight tick up.
- **Outlook:** A strong El Niño is expected to gradually weaken through spring 2016, and to transition to ENSO-neutral during late spring or early summer.

**MJO and other subseasonal tropical variability:**
- Some MJO indices are indicating a signal over the Maritime Continent, but the spatial pattern is not quite coherent yet.
- Most dynamical model MJO index forecasts depict eastward propagation of a signal through Week-2. The amplitude of the signals vary widely from weak to extremely strong by the end of Week-2. Uncertainty due to early period destructive interference with the ongoing El Nino increases uncertainty.

**Extratropics:**
- The extended range temperature and precipitation forecasts for the U.S. are likely to impacted by the MJO as it’s likely to disrupt the ENSO signal early, then amplify it later in Week-2 and beyond.
Base state emerged again.

Other modes constructively interfering now.
Wheeler-Hendon based analyses of model forecasts indicate an signal over the Maritime Continent.

Most models depict continued signal, although amplitude is uncertain.
CAVEAT: These panels are representative of robust MJO events, with all phases of ENSO.
MJO likely to become more aligned with background El Nino.
February Tropical Storm Formation by MJO phase

Phase 1 (41 days) 7 storms
Phase 2 (51 days) 7 storms
Phase 3 (69 days) 16 storms
Phase 4 (82 days) 21 storms
Phase 5 (70 days) 14 storms
Phase 6 (92 days) 12 storms
Phase 7 (125 days) 24 storms
Phase 8 (84 days) 13 storms
Null (308 days) 80 storms
No new tropical cyclones are expected during the next five days.
Connections to U.S. Impacts
AO: Observed & ENSM forecasts

1000mb Z (Obs: 13Oct2015 – 09Feb2016)  
AD index
mean=0.5697

1000mb Z (7day Forecast)  
AD index
mean=0.5562  cor(w/obs)=0.9182

1000mb Z (10day Forecast)  
AD index
mean=0.2436  cor(w/obs)=0.7980

1000mb Z (14day Forecast)  
AD index
mean=0.1187  cor(w/obs)=0.5998
Week 2 – Temperature and Precipitation