Global Tropics Hazards And Benefits Outlook
August 30, 2016

Adam Allgood

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


From Left to Right: Hurricane Madeline, Hurricane Lester, TD-9, TD-8
Synopsis of Climate Modes

**ENSO:**
- **La Niña Watch**
- La Niña is slightly favored to develop during August - October 2016, with about a 55-60% chance of La Niña during the fall and winter 2016-17

**MJO and other subseasonal tropical variability:**
- MJO is currently weak, as the upper-level pattern (suggesting enhanced phase over the EPac) and OLR anomalies (enhanced convection from East I.O. through Maritime Continent/WPac) are out of phase.

- An Equatorial Rossby Wave over the Maritime Continent, ongoing tropical cyclone activity, and an enhanced and northward displaced Monsoon Trough over the West Pacific are all influencing the pattern.

- MJO Index forecasts depict a wide range of solutions. Bias corrections result in weak RMM Index amplitude forecasts.

**Extratropics:**
- The primary influence from the tropics on both the tropical and extratropical U.S. territories during this outlook period comes from tropical cyclone activity.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Aug 31, 2016 - Sep 06, 2016

Week 2 - Valid: Sep 07, 2016 - Sep 13, 2016

Preliminary

Produced: 08/30/2016
Forecaster: Allgood

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.

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

Generally incoherent pattern with respect to the equator

Increased pattern coherence from a MJO standpoint, with Wave-1 asymmetry

Fairly fast eastward propagation of anomalous upper-level convergent and divergent flow
Bias-corrected RMM-based MJO index forecasts have ensemble means inside the circle throughout the period.

Note that the GFS tilts towards Phases 8/1 at the end of Wk2, whereas the ECMWF tilts towards 5/6. Difficult forecast.
Average Conditions when the MJO is present

The current pattern does not strongly reflect canonical MJO influence

CAVEAT: These panels are representative of robust MJO events.
Atlantic TCs

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

**Current Information:**
- **Center Location:** 94.2° N 75.2° W
- **Max Sustained Wind:** 35 mph
- **Movement:** Stationary

**Forecast Positions:**
- Tropical Cyclone
- Post-Tropical
- S < 39 mph
- M < 110 mph

**Watches:**
- Hurricane
- Tropical Storm

**Warnings:**
- Hurricane
- Tropical Storm
Connections to U.S. Impacts
NCEP Ensemble-based Probability (%) of TC genesis for forecasts during the 00–120h period from initial time = 2016083012

- ◯ = position at 00 or 12 UTC

Forecast hour shown at beginning of each track is first lead time the storm was detected in model
AO: Observed & ENSM forecasts

1000mb Z (Obs: 03May2016 – 30Aug2016)  
mean = 0.1442

1000mb Z (7day Forecast)  
mean = -0.0107  
cor(w/obs) = 0.8946

1000mb Z (10day Forecast)  
mean = -0.1679  
cor(w/obs) = 0.6934

1000mb Z (14day Forecast)  
mean = -0.3852  
cor(w/obs) = 0.4392
Week 2 – Temperature and Precipitation

8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 29 AUG 2016
VALID SEP 06 - 12, 2016
DASHED BLACK LINES ARE CLIMATOLOGY
VALUES ABOVE 70% OR BELOW 30% NORMAL
UNSHADED AREAS ARE NEAR-NORMAL

8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 29 AUG 2016
VALID SEP 06 - 12, 2016
DASHED BLACK LINES ARE CLIMATOLOGY
VALUES ABOVE 70% OR BELOW 30% NORMAL
UNSHADED AREAS ARE NEAR-NORMAL

Probability of Below
90% 80% 70% 60% 50% 40% 30% 20% 10% 0%
Normal
Probability of Above
90% 80% 70% 60% 50% 40% 30% 20% 10% 0%

Map showing temperature and precipitation outlook.
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Confidence
High Moderate

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