Global Tropics Hazards And Benefits Outlook

10/10/2017

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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

W. Pacific
TD 23: 8th-10th

E. Pacific
TS Ramon: 4th-5th

Atlantic
Hurr Nate: 4th-9th
TS Ophelia: 9th-now

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO:**
- **La Niña watch in effect.** There is an increasing chance (~55-60%) of La Niña during the Northern Hemisphere fall and winter 2017-18.

- A recent uptick in sea surface temperatures in the Central Pacific associated with an atmospheric Kelvin wave may delay La Niña onset some.

- The next ENSO diagnostic discussion will be released **Thursday, October 12th**.

**MJO and other subseasonal tropical variability:**
- The MJO has emerged and is presently analyzed over the western Maritime Continent. Dynamical models forecast strengthening of this feature and its propagation across the Maritime Continent it to approach the West Pacific by late in Week-2.

**Extratropics:**
- Observed teleconnections between the tropics and extratropics continue to be weak to nonexistent. Tropical cyclone formation odds will be increasing (decreasing) in the West Pacific (East Pacific and Atlantic) for the next two weeks. If this tropical cyclone formation area was to shift further eastward there are potential for recurvature of these systems and subsequent amplification of the flow over North America but this appears premature at present.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Oct 11, 2017 - Oct 17, 2017

Week 2 - Valid: Oct 18, 2017 - Oct 24, 2017

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: 10/10/2017
Forecaster: D.Harnos

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.
Wave-2 or higher pattern, with no clear link to MJO activity.

Continued higher wave number mode with no distinct ties to intraseasonal activity.

Wave-1 signal with enhanced (suppressed) convection over the Eastern (Western) Hemisphere. Clear ties to emerging MJO over Maritime Continent.
RMM analyses of model forecasts indicate propagation to the east at varied amplitudes and speeds. GFS is stronger in Week-2, while the ECMWF is faster throughout.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
MJO and Kelvin wave influences on the pattern.

Low-frequency footprint may have some impact on the RMM magnitude getting so high during Week-1.
October Tropical Storm Formation by MJO phase

Phase 1 (34 days) 34 storms
Phase 2 (76 days) 11 storms
Phase 3 (41 days) 12 storms
Phase 4 (65 days) 18 storms
Phase 5 (133 days) 48 storms
Phase 6 (78 days) 30 storms
Phase 7 (48 days) 16 storms
Phase 8 (66 days) 12 storms
Null (422 days) 119 storms
No new tropical cyclones are expected during the next five days.
Beyond 5-day Tropical Cyclone Formation Potential

North Atlantic: 6-10 days

East Pacific: 6-10 days
W. Pacific Tropical Cyclone Formation Potential

Consensus-based Probability (%) of TC genesis using deterministic models: GFS, NAVGEM, CMC, ECMWF
For forecasts during the 00–120h period from initial time = 2017101000

Ensemble-based Probability (%) of TC genesis using these global ensembles: NCEP CMC ECMWF
For forecasts during the 120–240h period from initial time = 2017101000

Through 5-days

6-10 days
Connections to U.S. Impacts
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