Global Tropics Hazards And Benefits Outlook

8/11/2020

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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

TS Jangmi
August 8-11
Peak: 40 kt

TS Six
August 9-present
Peak: 45 kt

Typhoon Mekkhala
August 9-present
Peak: 70 kt

Hurricane Elida
August 9-present
Peak: 85 kt

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
Synopsis of Climate Modes

**ENSO:** (9 July, 2020 Update)  
next update on 13\textsuperscript{th} of Aug.!

- ENSO Alert System Status: [La Niña Watch](#)

- ENSO-neutral is favored to continue through the summer, with a 50-55% chance of La Niña development during Northern Hemisphere fall 2020 and continuing through winter 2020-21 (~50% chance).

**MJO and other subseasonal tropical variability:**

- The MJO is presently over the Maritime Continent, with a pair of Kelvin waves over the Central Pacific and Atlantic.

- RMM forecasts track intraseasonal activity to the Western Hemisphere during the next two weeks, likely tied to the Kelvin wave responses.

- The Kelvin waves are likely to improve TC formation odds over the East Pacific the next week, and the Atlantic the following. The MJO is likely to prolong the favorable conditions a subsequent week for each basin.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Aug 12, 2020 - Aug 18, 2020

Week 2 - Valid: Aug 19, 2020 - Aug 25, 2020

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: 08/11/2020
Forecaster: 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-1 MJO-like structure with a Kelvin wave superimposed with low frequency enhancement of convection over the Indian Ocean.

Eastward propagation of the signal to the Maritime Continent is evident, with increased South/Southeast Asia Monsoon activity. A break in suppressed convection over the East Pacific is tied to a Kelvin wave.

Continued eastward progression, with a Kelvin wave now apparent over the East Pacific and another approaching the Prime Meridian that destructively interfere with the suppressed signal from the MJO.
Both models show rapid eastward progression across the Pacific the next two weeks, with the intraseasonal signal becoming established over the Western Hemisphere by the end of Week-2.

The GEFS is faster initially and at higher amplitude over the Western Hemisphere, likely emphasizing the Kelvin wave initially and then Rossby wave activity. The ECMWF is a likely combination of the Kelvin wave and MJO contributions.
Average Conditions when the MJO is present

Phase 2
Phase 3
Phase 4
Phase 5
Phase 6
Phase 7
Phase 8
Phase 1

Week-1: Phases 6-8
Week-2: Phases 8, 1

CAVEAT: These panels are representative of robust MJO events.
The **MJO** is analyzed near 120E, but may well be further east than this analysis suggests.

Multiple **Kelvin waves** are analyzed over the Western Hemisphere, with the most prominent one currently over the Atlantic.

The **low frequency** state continues to enhance convection over the Indian Ocean, and suppress it near the Date Line.
August Tropical Storm Formation by MJO phase

- Week-2
  - Phase 1 (101 days) 38 storms
  - Phase 2 (79 days) 31 storms
  - Phase 3 (51 days) 27 storms

- Week-1
  - Phase 4 (40 days) 12 storms
  - Phase 5 (117 days) 40 storms
  - Phase 6 (101 days) 50 storms

- Week-1 & Week-2
  - Phase 7 (43 days) 17 storms
  - Phase 8 (26 days) 17 storms

- Week-1
  - Pale (466 days) 150 storms
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.

Hurricane Elida
Tuesday August 11, 2020
9 AM MDT Advisory 11
NWS National Hurricane Center

Current information: x
Center location 21.3 N 113.8 W
Maximum sustained wind 100 mph
Movement NW at 14 mph

Forecast positions:
- Tropical Cyclone
- Post/Potential TC

Sustained winds:
- D < 39 mph
- S 39-73 mph
- H 74-110 mph
- M > 110 mph

Potential track area:
- Day 1-3
- Day 4-5

Watches:
- Hurricane
- Trop Stm

Warnings:
- Hurricane
- Trop Stm

Current wind extent:
Tropical Depression Six

Typhoon Mekkhala
Take home messages:
East Pacific likely to be active the next two weeks.
Likely one more quiet week in the Atlantic, before things pick up in late August.
Storm Track Density Distribution, IC=20200810
Week 1 Forecast: 0812–0818

TRACK DENSITY

CFS

ECMWF

ECCC, IC=20200806

FILTERED

CFS, ENP=2.5  ATL=1.6

ECMWF, ENP=2.6  ATL=1.1

ECCC, ENP=2.6  ATL=2.5
Storm Track Density Distribution, IC=20200810
Week 2 Forecast: 0819–0825

TRACK DENSITY

CFS

FILTERED

CFS, ENP=2.5  ATL=2.2

ECMWF

ECMWF, ENP=2.2  ATL=1.5

ECCCG, IC=20200806

ECCCG, ENP=1.7  ATL=3.5

Legend:

- 0
- 0.1
- 0.2
- 0.3
- 0.4
- 0.5
- 0
Storm Track Density Distribution, IC=20200810
Week 3 Forecast: 0826–0901

TRACK DENSITY

CFS

ECMWF

ECCC, IC=20200806

FILTERED

CFS, ENP=1.9  ATL=2.2

ECMWF, ENP=2.0  ATL=1.6

ECCC, ENP=1.7  ATL=4.0

Legend:

- Yellow: Low Density
- Orange: Medium Density
- Red: High Density

Scale:

- 0.0 to 0.4

- Red line indicates the range of the scale.
Connections to U.S. Impacts
Week 2 – Temperature and Precipitation

Today’s forecast likely to be similar.

Increased dryness across the Central Lower-48 states the biggest change.
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