Global Tropics Hazards And Benefits Outlook

2/1/2022

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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

X = Tropical Cyclone Batsirai (SW Indian Ocean)
X = TC 09P (Coral Sea)

Cool shading clouds/rain
Warm shading less clouds/rain
Synopsis of Climate Modes

**ENSO: (January 13, 2022 Update)**

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

- La Niña is likely to continue into the Northern Hemisphere spring (67% chance during March-May 2022) and then transition to ENSO-neutral (51% chance during April-June 2022).

**MJO and other subseasonal tropical variability:**

- The MJO remained weak, with a potential new event initiating over the Indian Ocean currently disrupted by an unusually strong equatorial Rossby wave.

- Dynamical models favor rapid strengthening of the MJO signal over the Indian Ocean as the suppressed phase of the Rossby wave moves westward towards Africa.

- Some models show eastward propagation of the MJO across the Maritime Continent as far west as the West Pacific. Other models show slower evolution over the Indian Ocean, potentially linked to tropical cyclone activity.

- The MJO may play an increasingly important role in the evolution of the global circulation.
The MJO weakened rapidly during mid-January as the signal tried to cross the Pacific.

The La Niña atmospheric response was somewhat disrupted by late January, but the overall pattern was chaotic.

Strong convection over the southern Maritime Continent. I.O. Rossby wave more apparent in wind fields than OLR.
MJO Observation/Forecast

All three model systems depict a fairly rapid amplification over the Indian Ocean.

Many ensemble members depict a “hairpin turn” of the index with eastward propagation to the Maritime Continent, suggestive of relaxing interference from a particularly strong Rossby wave.

Some ensemble members slower and stronger over the I.O., some reach the Pacific.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
MJO activity is shifting from Africa to the I.O., but disrupted by Rossby wave activity.

Kelvin wave activity over the Western Hemisphere may help kick up the MJO amplitude next week.

Low frequency contours depict ENSO cold conditions.
No new tropical cyclones are expected during the next five days.
Connections to U.S. Impacts
PNA: Observed & ENSM forecasts

500mb Z (Obs: 05Oct2021 - 01Feb2022) PNA index

mean = -0.0760

16 OCT 2021 1 NOV 18 NOV 1 DEC 16 DEC 1 JAN 2022 16 JAN 1 FEB

500mb Z (7day Forecast) PNA index

mean = -0.1228 cor(w/obs) = 0.9491

16 OCT 2021 1 NOV 18 NOV 1 DEC 16 DEC 1 JAN 2022 16 JAN 1 FEB

500mb Z (10day Forecast) PNA index

mean = -0.1262 cor(w/obs) = 0.8851

16 OCT 2021 1 NOV 18 NOV 1 DEC 16 DEC 1 JAN 2022 16 JAN 1 FEB

500mb Z (14day Forecast) PNA index

mean = -0.0865 cor(w/obs) = 0.6845

16 OCT 2021 1 NOV 18 NOV 1 DEC 16 DEC 1 JAN 2022 16 JAN 1 FEB
Week 2 – Temperature and Precipitation

8-14 Day Temperature Outlook
Valid: February 8 - 14, 2022
Issued: January 31, 2022

8-14 Day Precipitation Outlook
Valid: February 8 - 14, 2022
Issued: January 31, 2022
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Feb 02, 2022 - Feb 08, 2022

Confidence

<table>
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<th>High</th>
<th>Moderate</th>
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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: 02/01/2022
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.