Global Tropics Hazards And Benefits Outlook
1/11/2022

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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

Week 1 - Valid: Jan 05, 2022 - Jan 11, 2022

Cool shading
More clouds/rain
Warm shading
Less clouds/rain
ENSO: (December 9, 2021 Update)

- ENSO Alert System Status: La Niña Advisory

- La Niña is favored to continue through the Northern Hemisphere winter 2021-22 (~95% chance) and transition to ENSO-neutral during the spring 2022 (~60% chance during April-June).

MJO and other subseasonal tropical variability:

- The MJO remained weak, with enhanced convection meandering over the West Pacific due primarily to repeated Rossby wave events.

- Dynamical model forecasts depict another Rossby wave moving from the central to the West Pacific during the outlook period.

- The MJO is not favored to substantially impact the tropical or extratropical patterns.

- Tropical cyclone formations in the vicinity of American Samoa are possible due to Rossby wave activity.

- The Rossby waves are destructively interfering with the ongoing La Niña.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jan 12, 2022 - Jan 18, 2022

Week 2 - Valid: Jan 19, 2022 - Jan 25, 2022

Produced: 01/11/2022
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

Wave-2 pattern with active (suppressed) Maritime Continent/SPCZ, South America and Africa (Indian Ocean and East Pacific)

Enhanced convection over the central Pacific was generated by Rossby wave activity.

The pattern has become incoherent, though enhanced convection continues across the SPCZ region.
The GEFS forecast is unavailable today due to technical difficulties.

The ECMWF RMM-index forecast is heavily influenced by Rossby wave activity, with enhanced convection shifting from the central Pacific to the West Pacific by Week-2.

The JMA forecast is more progressive with the signal.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
Rossby wave activity coming through the filtering on the wider band analysis (mostly off-equator and generated by extratropical intrusions into the tropics)

Kelvin wave activity is also modulating the pattern, causing eastward shifts of convection.
Connections to U.S. Impacts
AO: Observed & ENSM forecasts

1000mb Z (Obs: 14Sep2021 - 11Jan2022) AD index
mean = 0.0321

1000mb Z (7day Forecast) AD index
mean = -0.0833 cor(w/obs) = 0.6676

1000mb Z (10day Forecast) AD index
mean = -0.1536 cor(w/obs) = 0.7523

1000mb Z (14day Forecast) AD index
mean = -0.1495 cor(w/obs) = 0.5214
Since we are in an amplified, stable pattern today’s outlooks are likely to be similar.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jan 12, 2022 - Jan 18, 2022

Week 2 - Valid: Jan 19, 2022 - Jan 25, 2022

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.

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