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
Billy (3/13)

Cool shading
More clouds/rain

Warm shading
Less clouds/rain
ENSO: (March 10, 2022 Update)  

**next update on Thursday, April 14th**

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

- La Niña is favored to continue into the Northern Hemisphere Summer (53% chance during June-August 2022), with a 40-50% chance of La Niña or ENSO-neutral thereafter

### MJO and other subseasonal tropical variability:

- The MJO has strengthened with the enhanced phase entering the Indian Ocean during the last week.

- There is good model agreement among the dynamical models for the continued eastward propagation of the MJO across the Indian Ocean (week-1) and into the Maritime Continent (week-2), with several ensemble members suggesting the possible development of a high amplitude event.

- The enhanced phase of the MJO, as well as predicted Rossby and Kelvin Wave activity, is expected to contribute to TC formation mainly over the Indian Ocean during the next two weeks.

- Potential extratropical impacts include increased chances for above-normal temperatures across eastern North America later in March.
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Mar 16, 2022 - Mar 22, 2022

Week 2 - Valid: Mar 23, 2022 - Mar 29, 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.

Produced: 03/15/2022
Forecaster: Novella

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.
After stalling over phase 3, eastward propagation of MJO became more apparent by the end of February.

MJO became incoherent due to destructive interference with La Nina. Kelvin wave apparent over northern South America.

As the Kelvin wave shifted eastward over Africa, its phasing helped renew the MJO, leading to a more coherent upper-level pattern. Rossby wave is seen developing over western Pacific.
MJO activity is coming through the filtering over the Indian Ocean, similar to the previous event during mid-February.

A convectively coupled Kelvin wave is seen crossing the Prime Meridian in the obs field.

Low frequency contours depict low frequency variability, where the MJO looks to constructively interfere with La Nina.
Following an increase in amplitude in phase 2 during the last week, models favor continued eastward propagation of the MJO across the Indian Ocean (Maritime Continent) during week-1 (week-2). Of note, several members of the GEFS and ECMWF showing a potentially high amplitude event.

ECWMF is more on the fast end relative to other models, but phase speed appears to fall more in-line with MJO than Kelvin wave activity in RMM space.
Average Conditions when the MJO is present

CAVEAT: These panels are representative of robust MJO events.
March Tropical Storm Formation by MJO phase
Valid from: 20220315 - 6UTC
72hr forecast (JTWC)
Lat: -20.2 Lon: 88.2
Wind Speed: 30kts
Connections to U.S. Impacts
Week 2 – Temperature and Precipitation

8-14 Day Temperature Outlook
Valid: March 22 - 28, 2022
Issued: March 14, 2022

8-14 Day Precipitation Outlook
Valid: March 22 - 28, 2022
Issued: March 14, 2022
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Mar 16, 2022 - Mar 22, 2022

Week 2 - Valid: Mar 23, 2022 - Mar 29, 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.

Produced: 03/15/2022
Forecaster: Novella

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.