

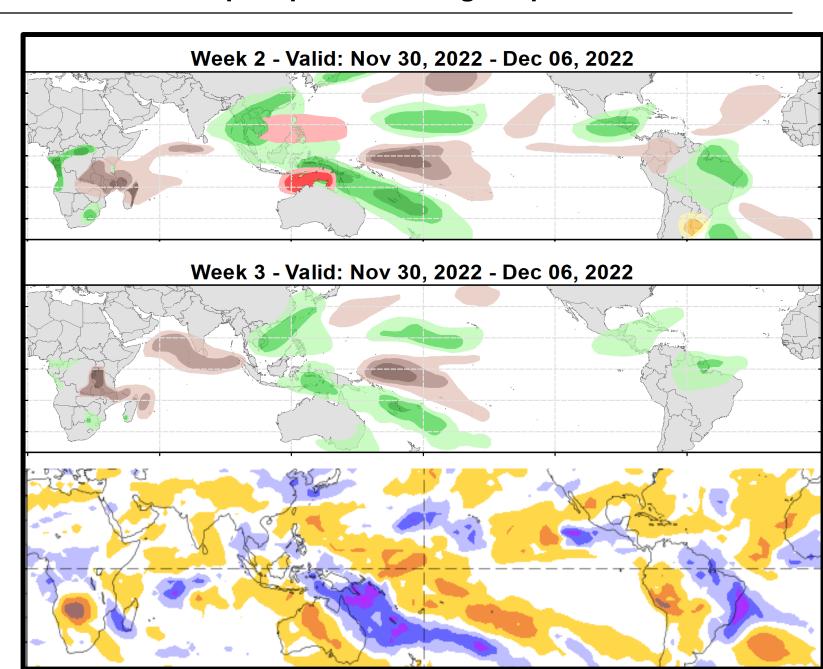


# Weeks 2-3 Global Tropics Hazards Outlook 12/6/2022

Brad Pugh
NWS / NCEP / Climate Prediction Center

# Outlook Review: TC development & anomalous precipitation during the past week

No tropical cyclones formed during the past week, consistent with the suppressed phase of the MJO over the Eastern Hemisphere



## **Synopsis of Climate Modes:**

#### ENSO: (Nov 10, 2022 Update) next update on Thursday, Dec 8th

- ENSO Alert System Status: <u>La Niña Advisory</u>
- La Niña is expected to continue, with chances for La Niña gradually decreasing from 76% in the coming season to 57% of ENSO-neutral during Feb-Apr 2022-23.

#### **MJO** and other subseasonal tropical variability:

- Following the strongest MJO in months during November, the MJO began to weaken at the beginning of December.
- A remnant MJO signal is expected to propagate eastward from the Indian Ocean to the West Pacific during the next two weeks.
- Therefore, conditions are likely to be more favorable for tropical cyclone development over the Indian Ocean basin through week-2.

#### **GTH Outlook:**

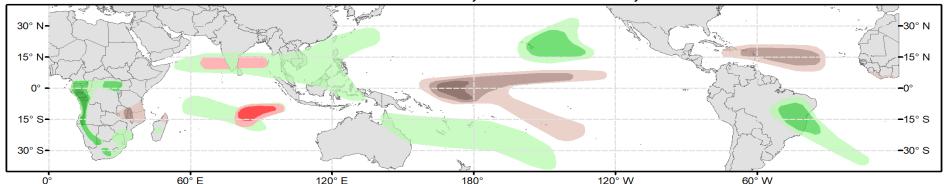


#### Global Tropics Hazards Outlook

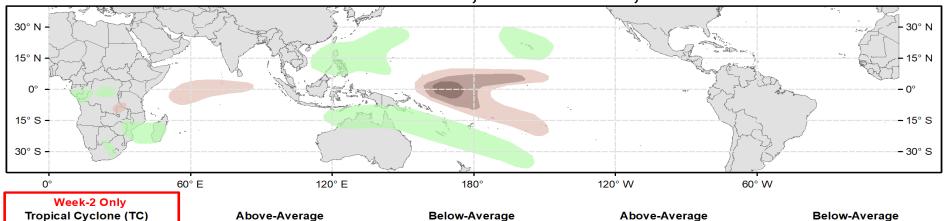
Climate Prediction Center



Week 2 - Valid: Dec 14, 2022 - Dec 20, 2022



Week 3 - Valid: Dec 21, 2022 - Dec 27, 2022



**Formation Probability** >20% >40% >60% Tropical Depression (TD) or greater strength

Rainfall Probability >50% >65% >80% Weekly total rainfall in the Upper third of the historical range

Rainfall Probability >50% >65% >80% Weekly total rainfall in the Lower third of the historical range

**Temperatures Probability** >50% >65% >80% 7-day mean temperatures in the

>50% >65% >80% Upper third of the historical range

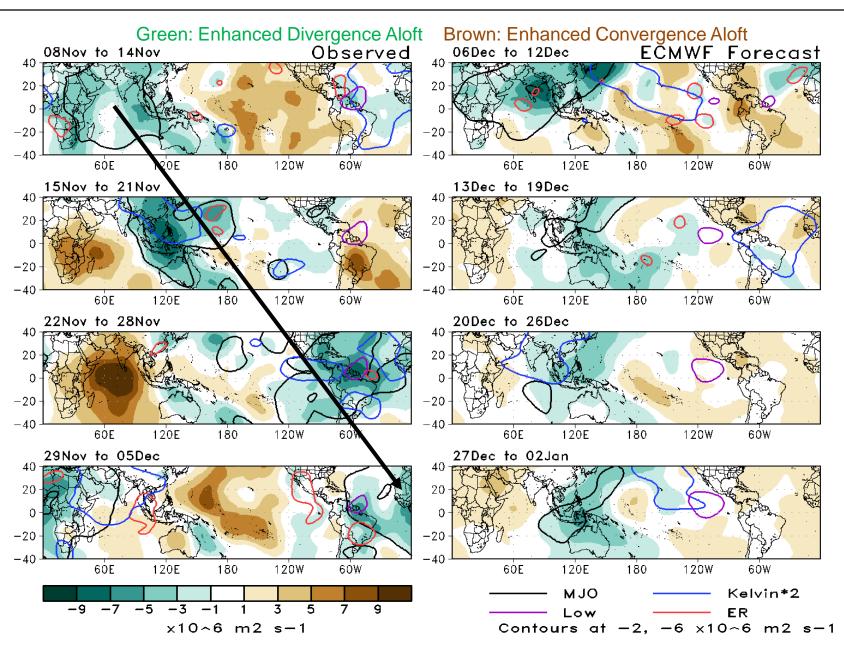
**Temperatures Probability** 

7-day mean temperatures in the Lower third of the historical range

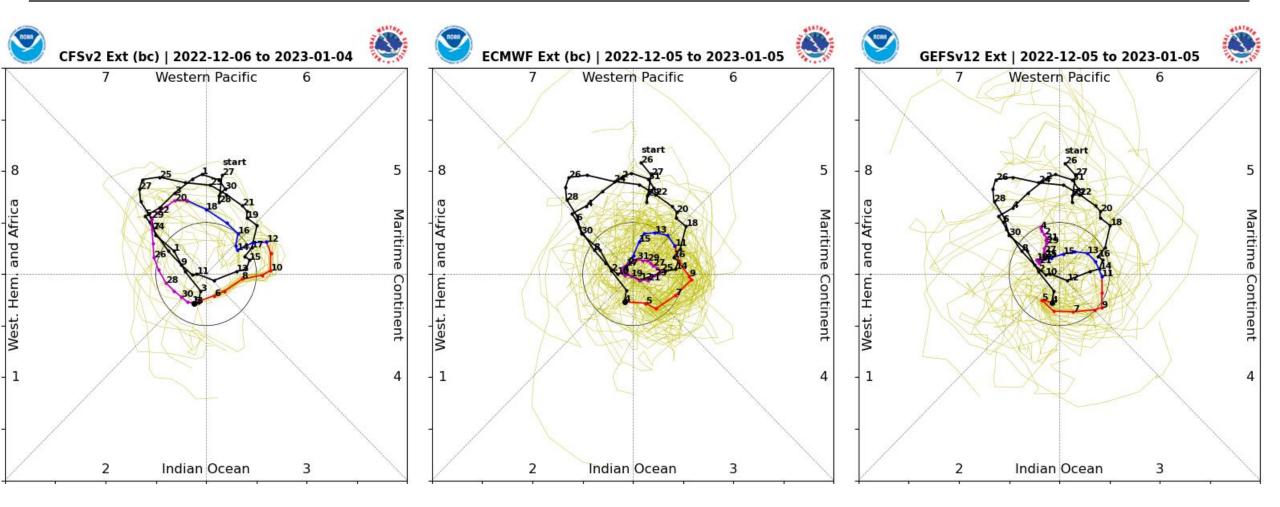
Issued: 12/06/2022 Forecaster: Pugh

# 200-hPa Velocity Potential Anomaly Maps:

- Eastward propagation of the MJO enhanced phase during November.
- Weeks 1 and 2: continued eastward propagation to the West Pacific.
- Week 3: more stationary pattern emerges driven by La Nina

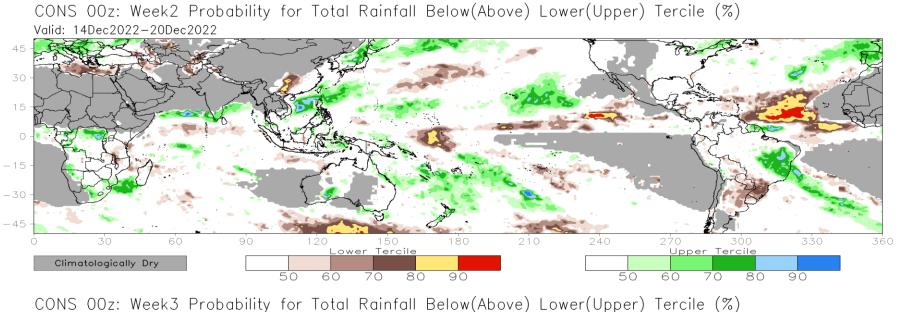


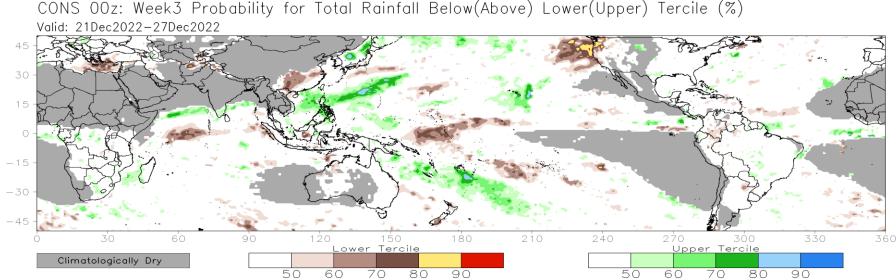
#### **RMM Index Observations & Forecasts:**



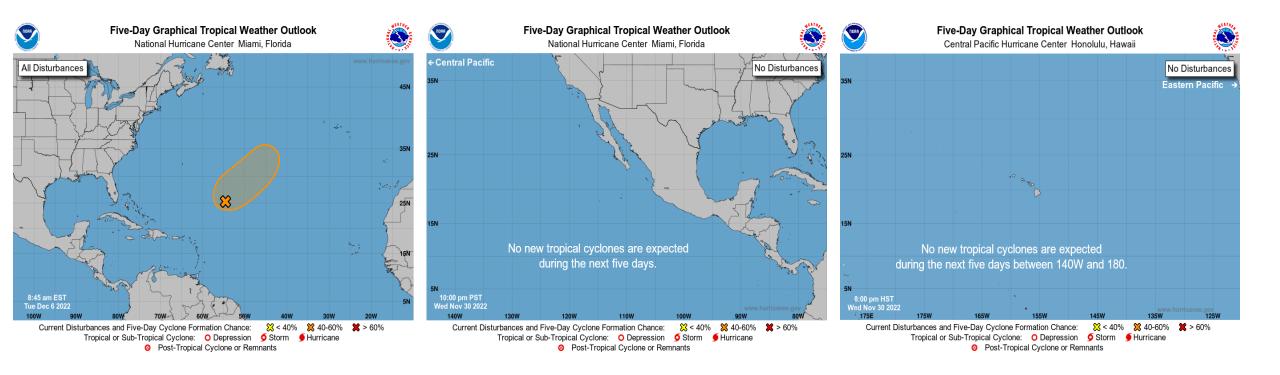
- CFS model is bullish on a continuation of the MJO into the beginning of the New Year.
- Very large spread among the ECMWF and GFS ensemble members.

# Consolidated Probabilistic Precipitation: Weeks 2 & 3





# **Tropical Cyclone Monitoring/Forecast: NHC**

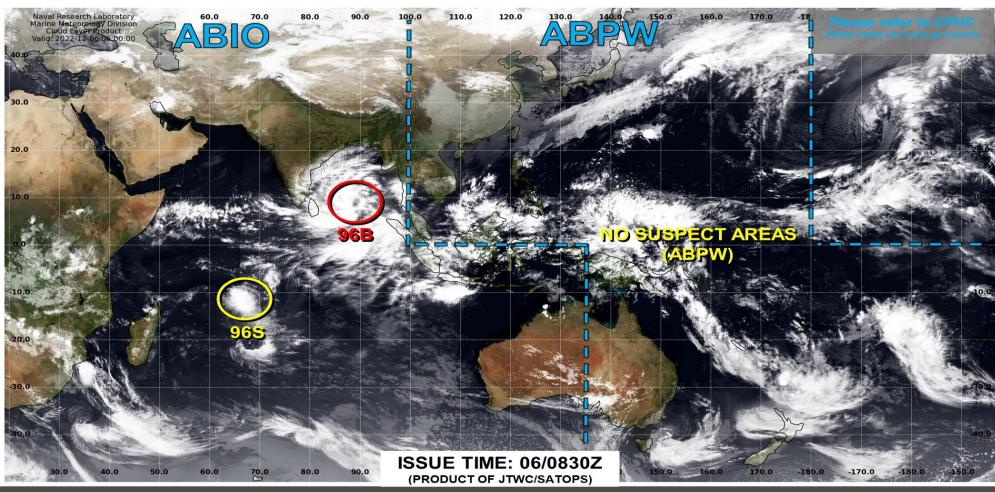


# **Tropical Cyclone Monitoring/Forecast: JTWC**



#### **JOINT TYPHOON WARNING CENTER**











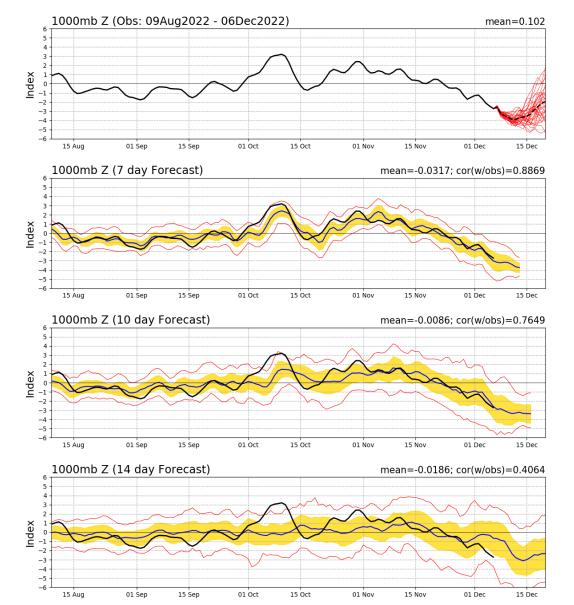


### **Teleconnection Indices: PNA / AO:**

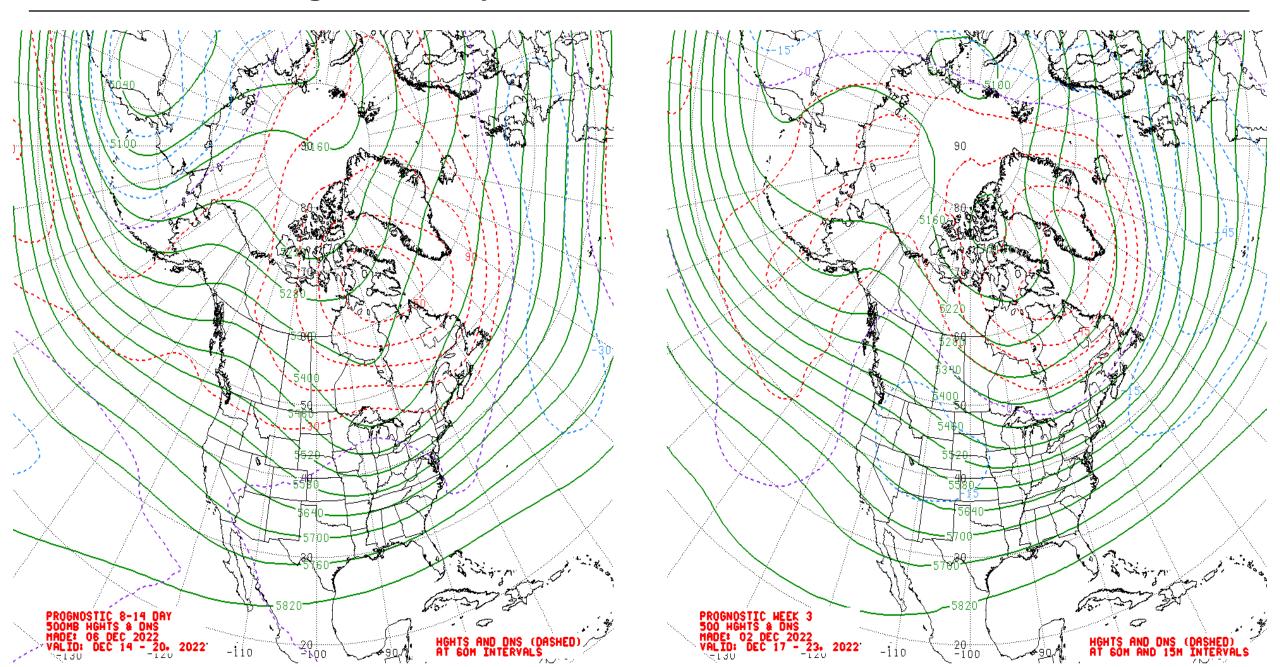
#### **PNA Index: Observed & GEFS Forecasts**

#### 500mb Z (Obs: 09Aug2022 - 06Dec2022) mean = -0.159515 Aug 01 Sep 15 Oct 15 Nov 15 Dec 01 Oct 500mb Z (7 day Forecast) mean=-0.0278; cor(w/obs)=0.9121Index 01 Sep 15 Oct 15 Dec 500mb Z (10 day Forecast) mean=-0.0071; cor(w/obs)=0.706115 Aug 01 Sep 15 Sep 01 Oct 15 Oct 15 Nov 15 Dec 01 Nov 500mb Z (14 day Forecast) mean=0.0764; cor(w/obs)=0.624815 Aug 15 Sep 15 Oct 15 Nov 15 Dec 01 Sep 01 Oct 01 Nov 01 Dec

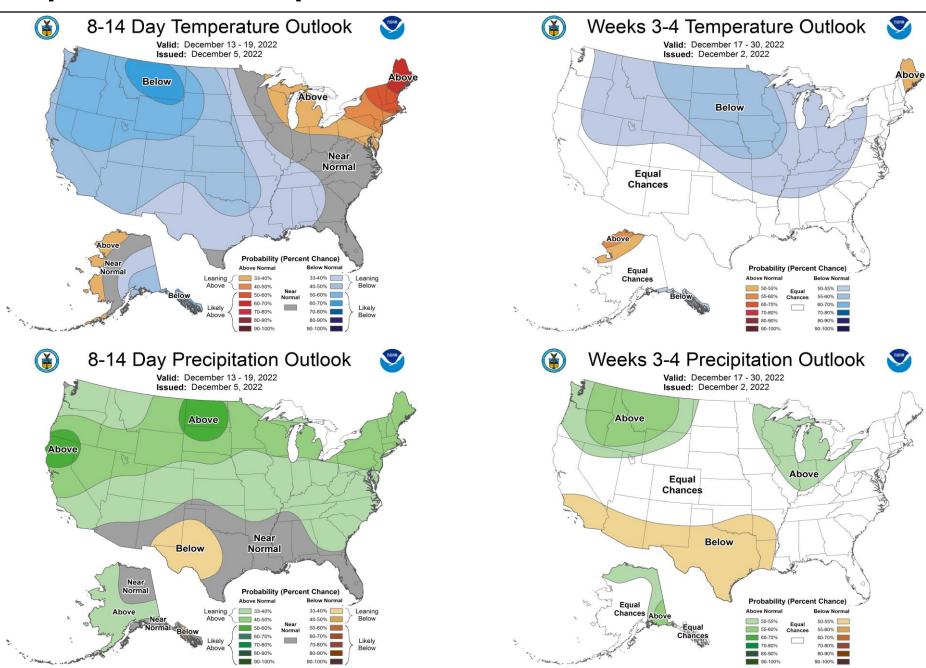
#### **AO Index: Observed & GEFS Forecasts**



# **Mean 500-hPa Height Anomaly Forecasts:**



## **Official Temperature & Precipitation Forecasts:**



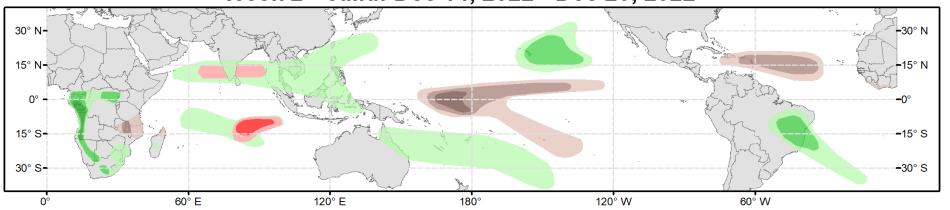


### Global Tropics Hazards Outlook

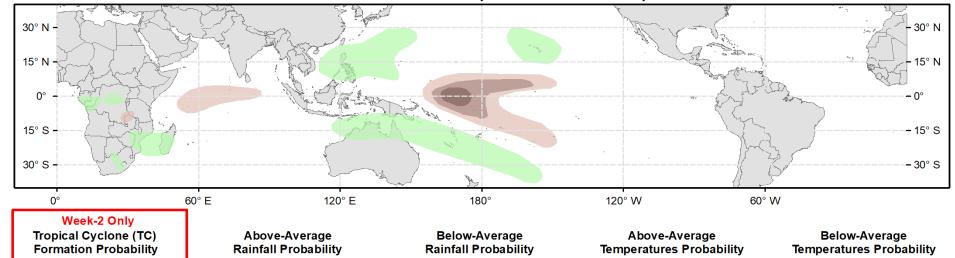
**Climate Prediction Center** 



Week 2 - Valid: Dec 14, 2022 - Dec 20, 2022



Week 3 - Valid: Dec 21, 2022 - Dec 27, 2022



>65%

Weekly total rainfall in the

Lower third of the historical range

>80%

>50%

Tropical Depression (TD) or greater strength

Issued: 12/06/2022

>60%

>40%

Forecaster: Pugh

>20%

>65%

Weekly total rainfall in the

Upper third of the historical range

>80%

>50%

This product is updated once per week and targets broad scale conditions integrated over a 7-day period for US interests only.

Consult your local responsible forecast agency.

>50%

>65%

7-day mean temperatures in the

Upper third of the historical range

>80%

>50%

>65% >80%

7-day mean temperatures in the

Lower third of the historical range