

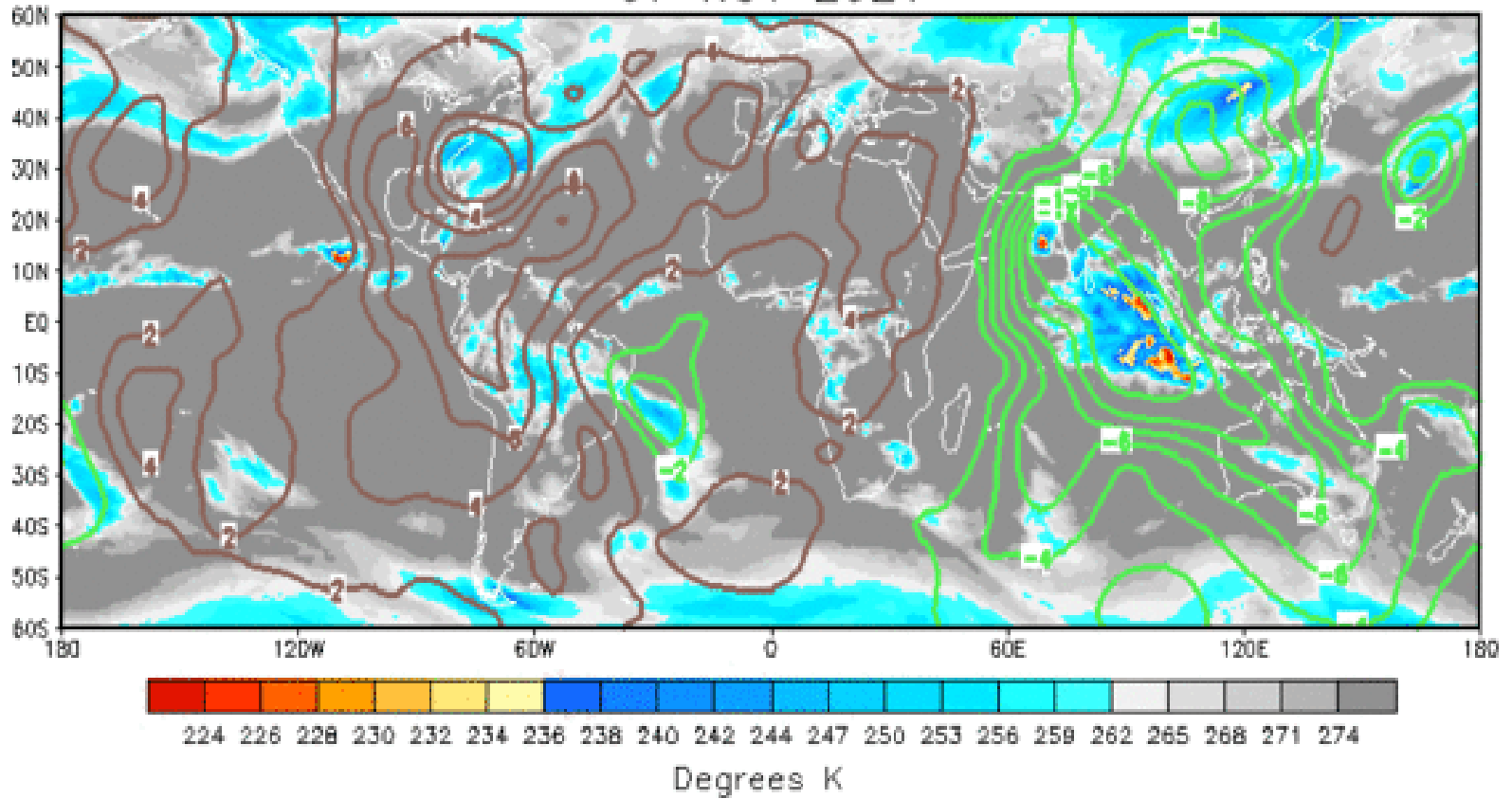
# **Second WMO RCC-Washington International Training Workshop**

## **Real-time week-2 extreme precipitation outlook**

8 – 10 November 2021

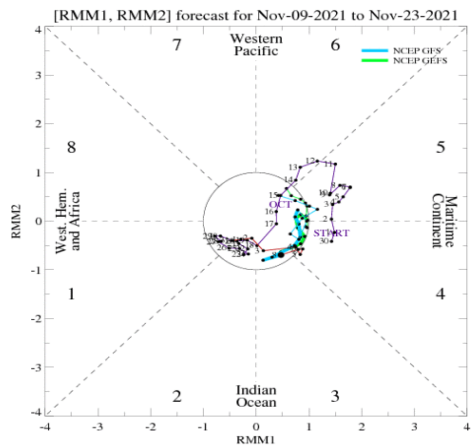
# 200-hPa Velocity Potential Anomaly

07 NOV 2021

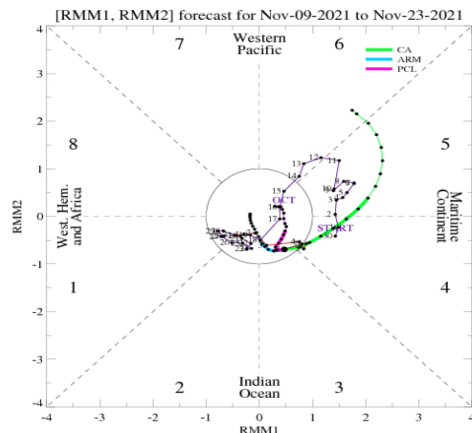


# Wheeler-Hendon Index – Forecasts

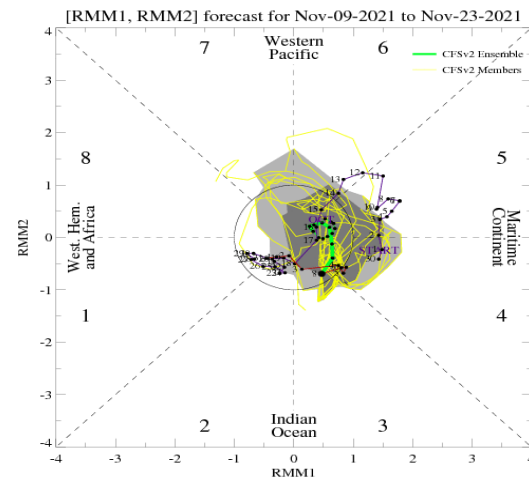
**GEFS**



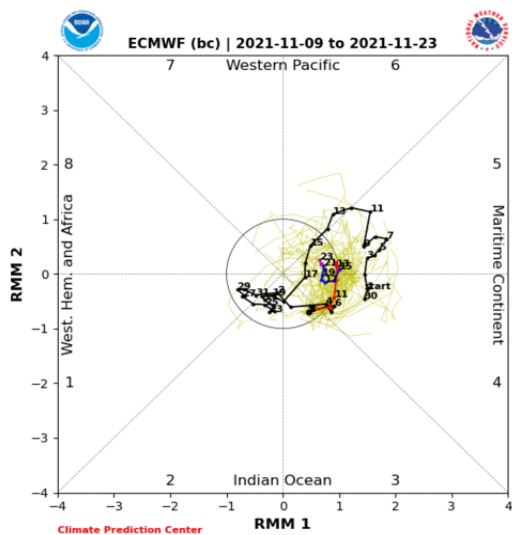
**Statistical**



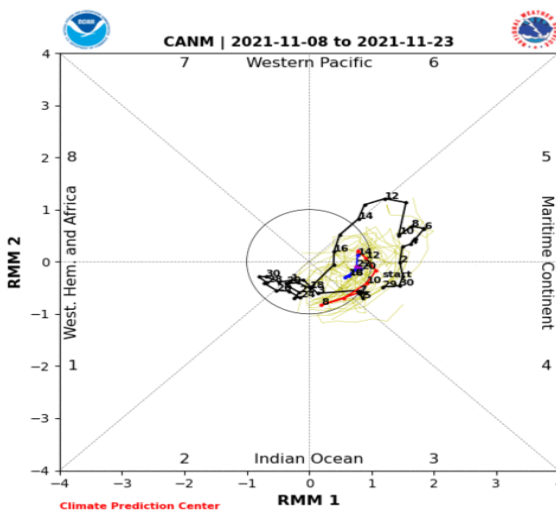
**CFSv2**



**ECMWF**

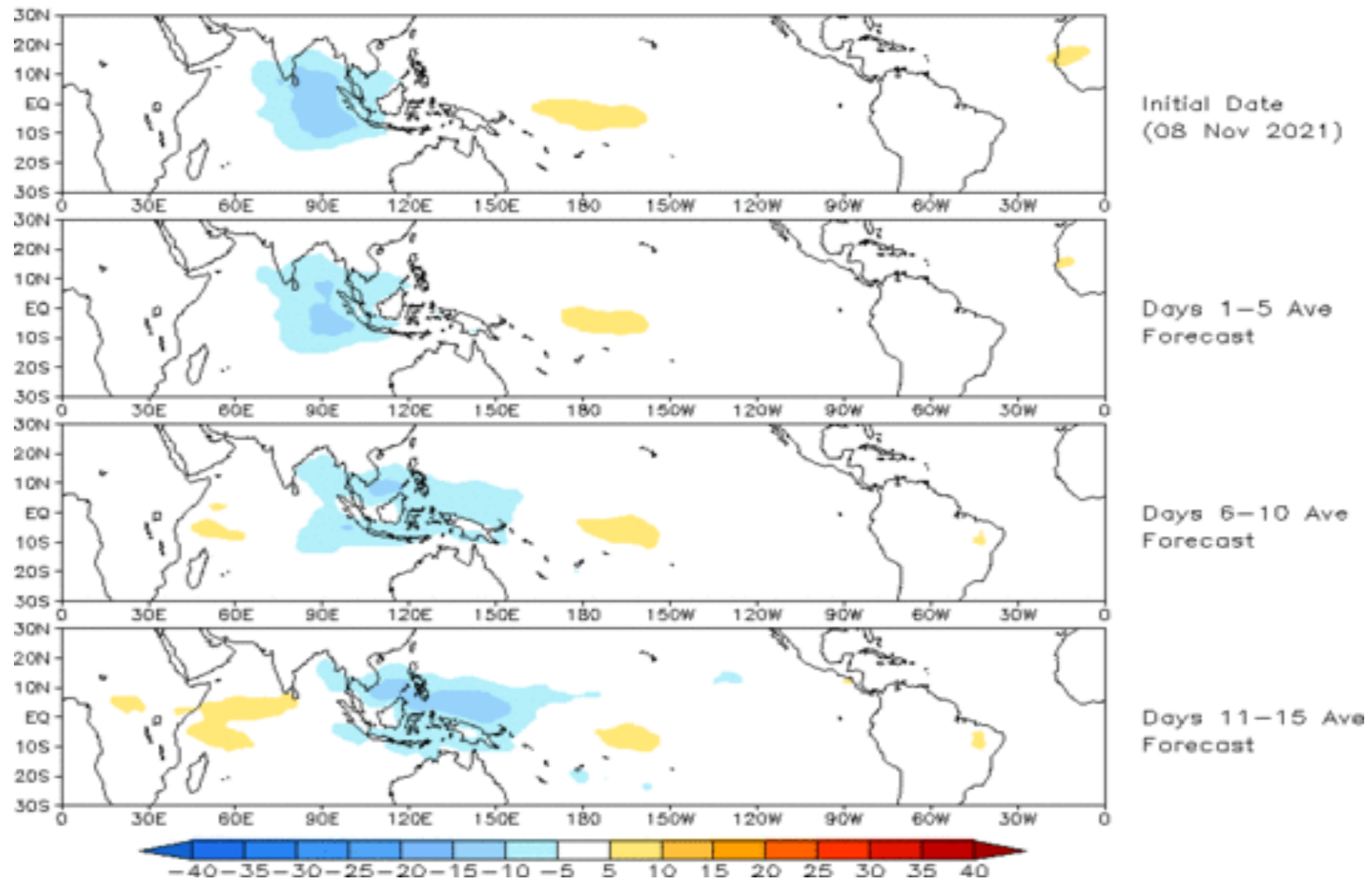


**CMET**



# Evolution of MJO-related Anomalies

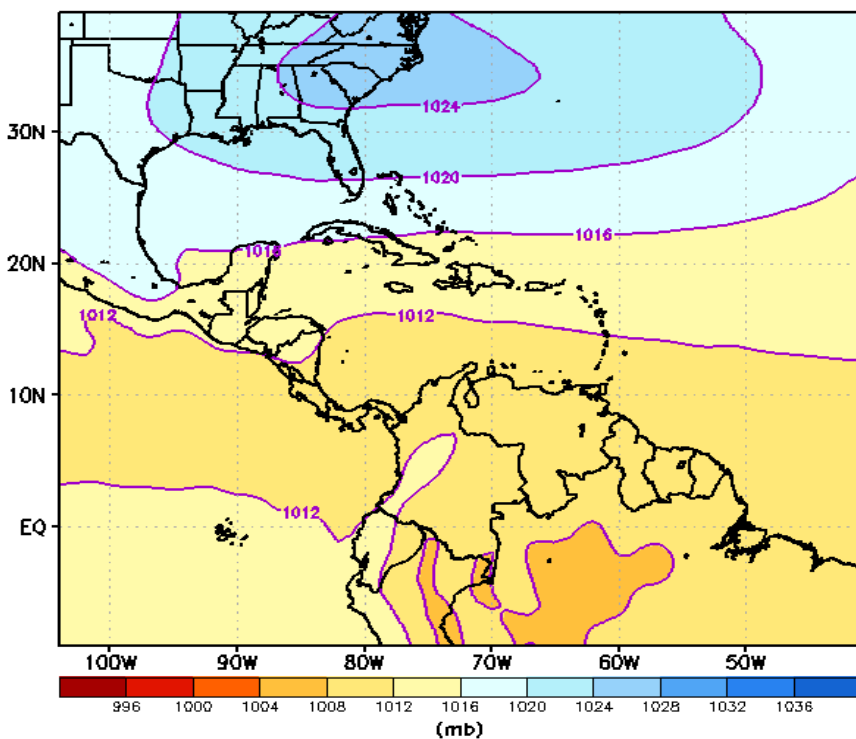
Prediction of MJO-related anomalies using GEFS operational forecast  
Initial date: 08 Nov 2021  
OLR



# Mean Sea Level Pressure

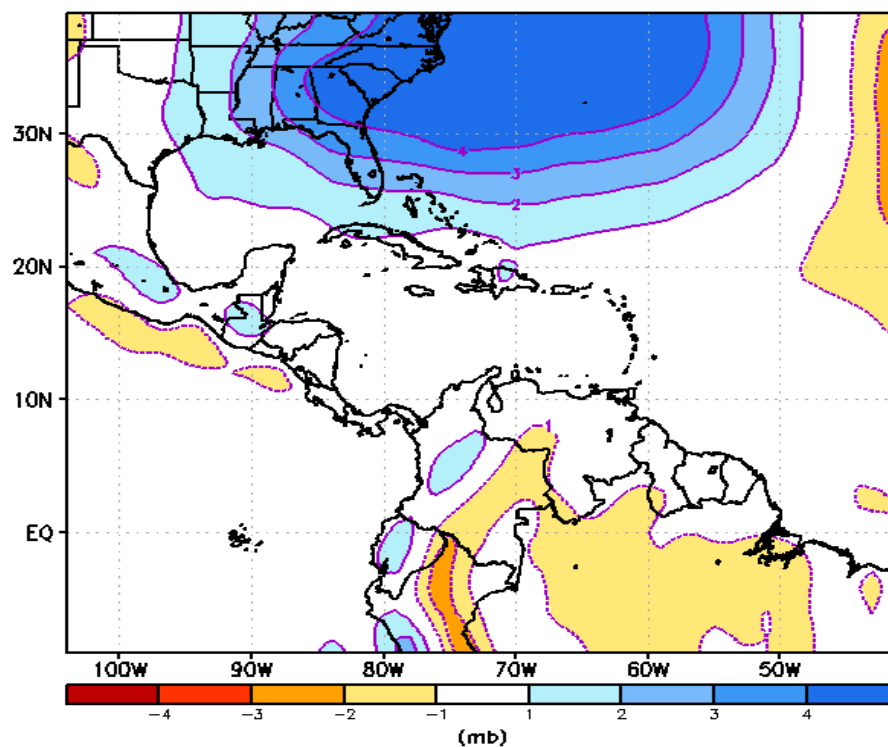
## Total

GEFS Week-2 Mean Sea Level Pressure Total  
Valid: 20211117 - 20211123



## Anomaly

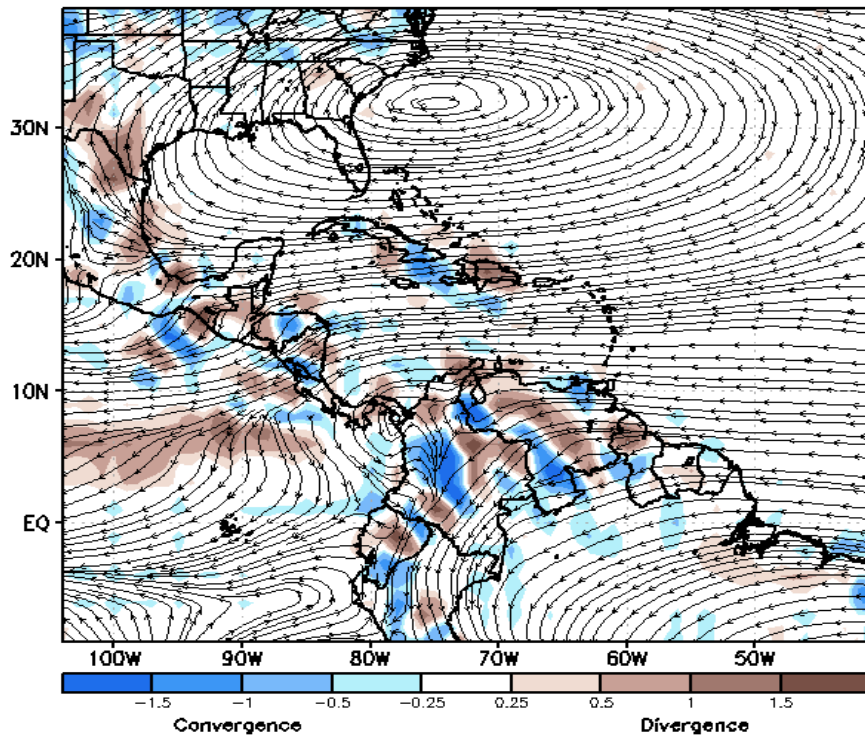
GEFS Week-2 Mean Sea Level Pressure Anomaly  
Valid: 20211117 - 20211123



# 850-hPa Wind

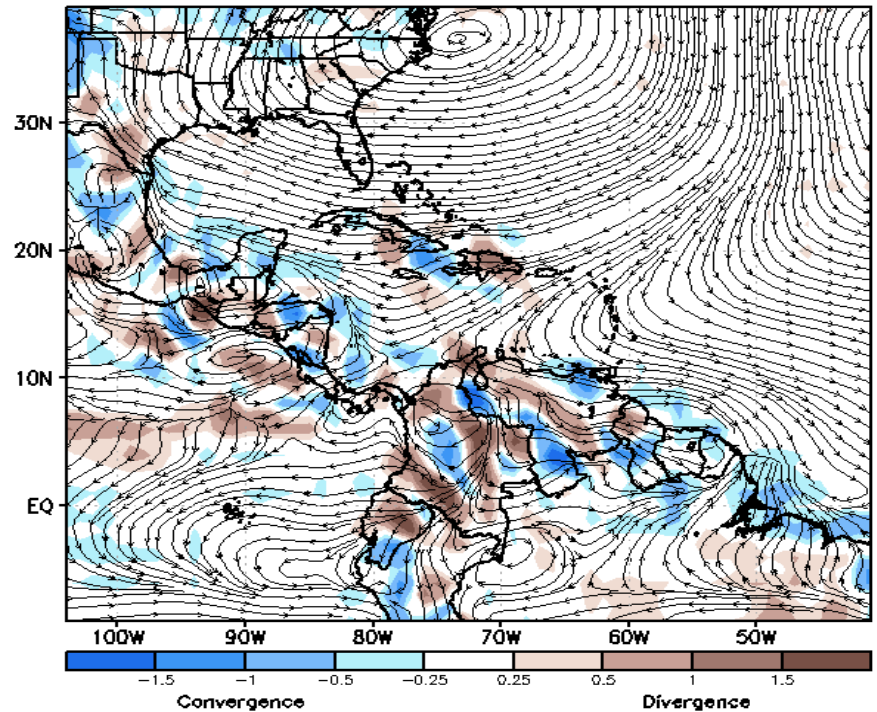
## Total

GEFS Week-2 850-hPa Divergence and Wind Total  
Valid: 20211117 - 20211123



## Anomaly

GEFS Week-2 850-hPa Divergence and Wind Anomaly  
Valid: 20211117 - 20211123

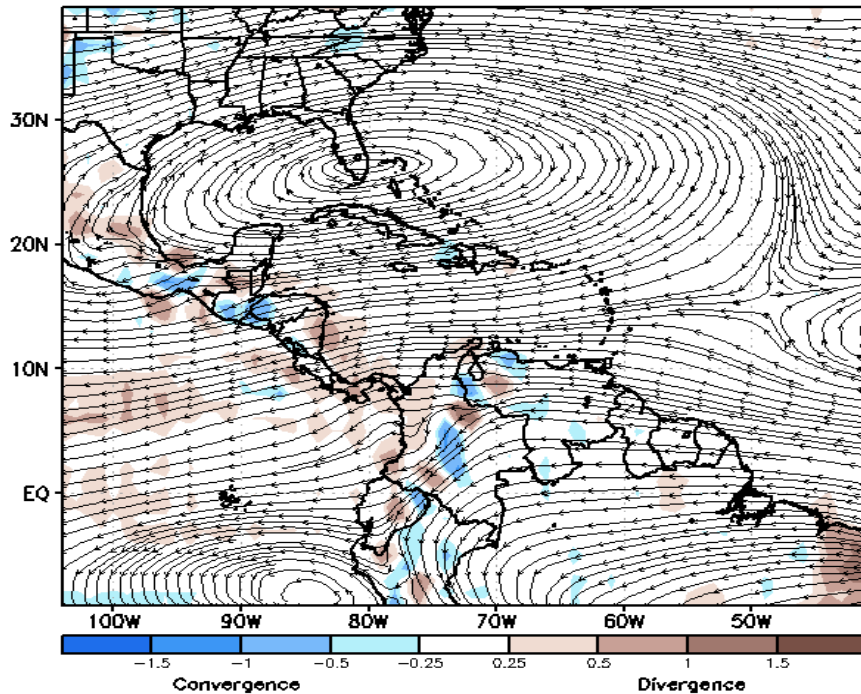


# 700-hPa Wind

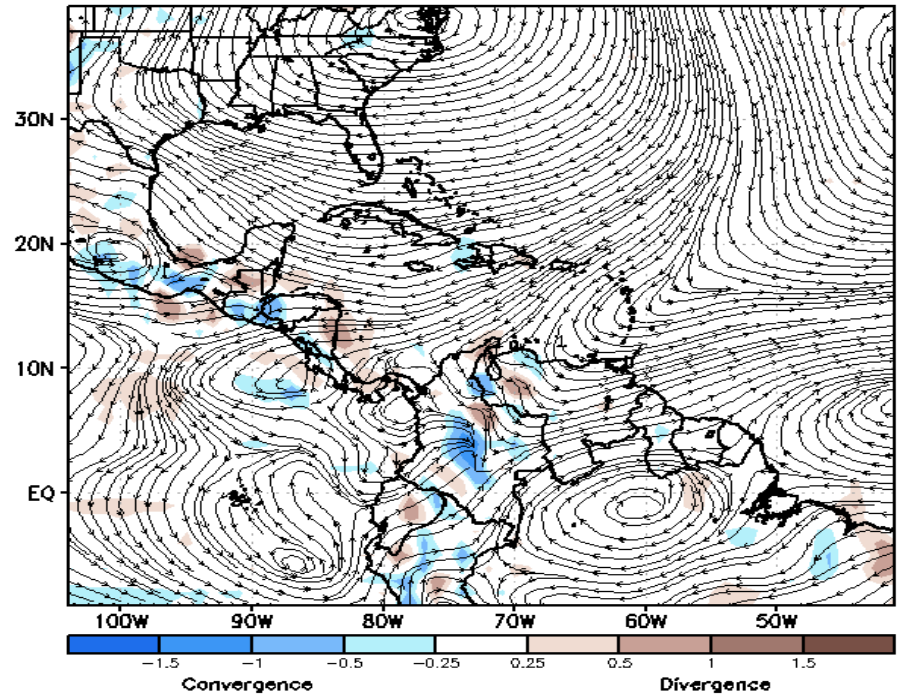
## Total

## Anomaly

GEFS Week-2 700-hPa Divergence and Wind Total  
Valid: 20211117 - 20211123



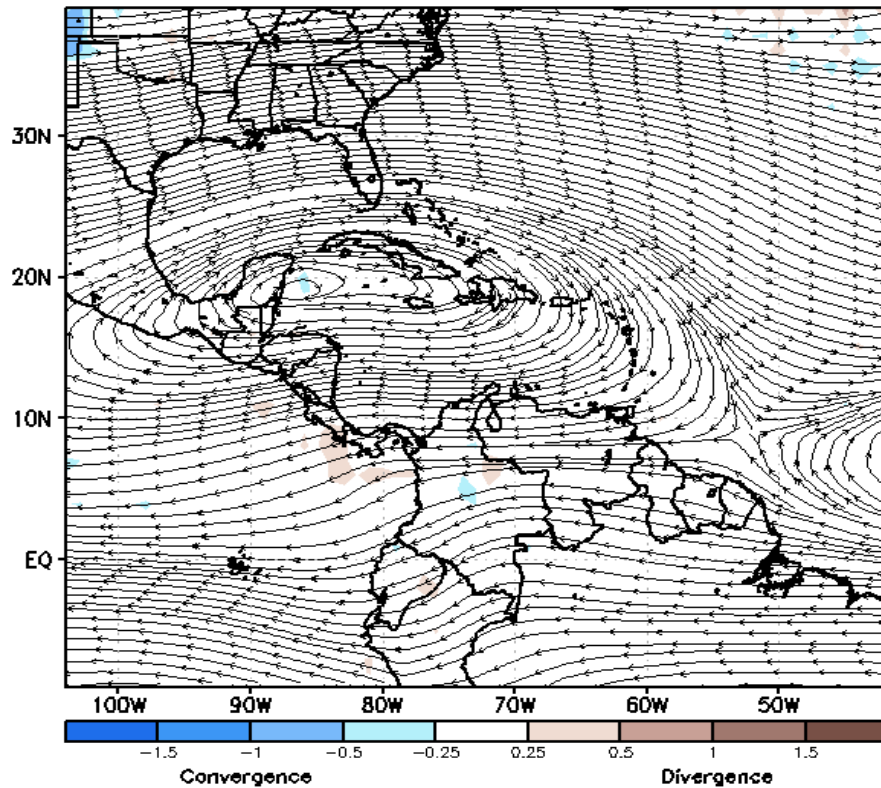
GEFS Week-2 700-hPa Divergence and Wind Anomaly  
Valid: 20211117 - 20211123



# 500-hPa Wind

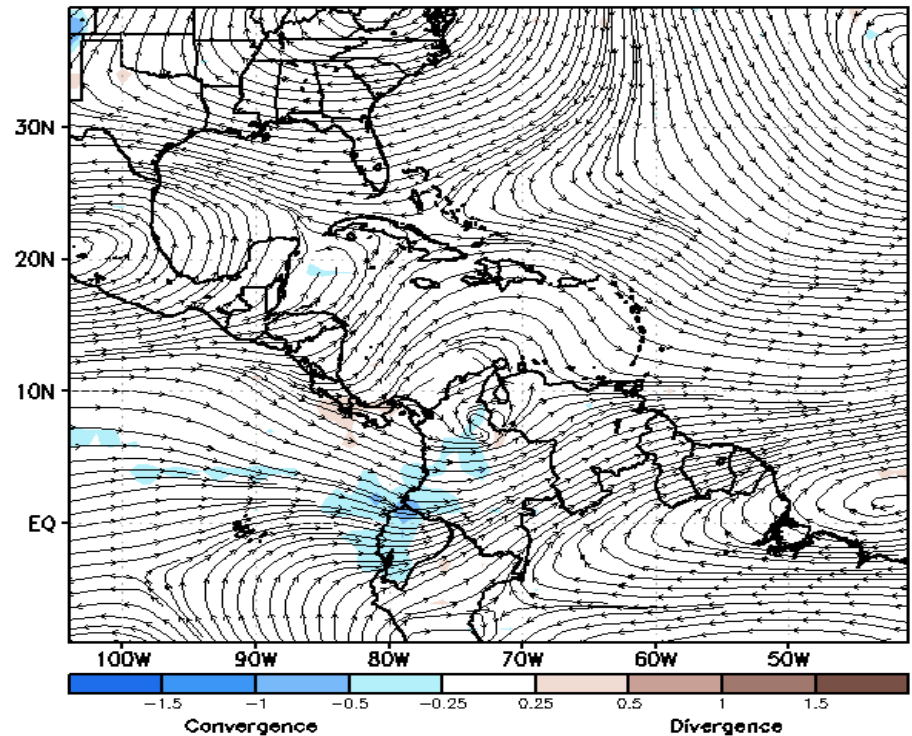
## Total

GEFS Week-2 500-hPa Divergence and Wind Total  
Valid: 20211117 - 20211123



## Anomaly

GEFS Week-2 500-hPa Divergence and Wind Anomaly  
Valid: 20211117 - 20211123

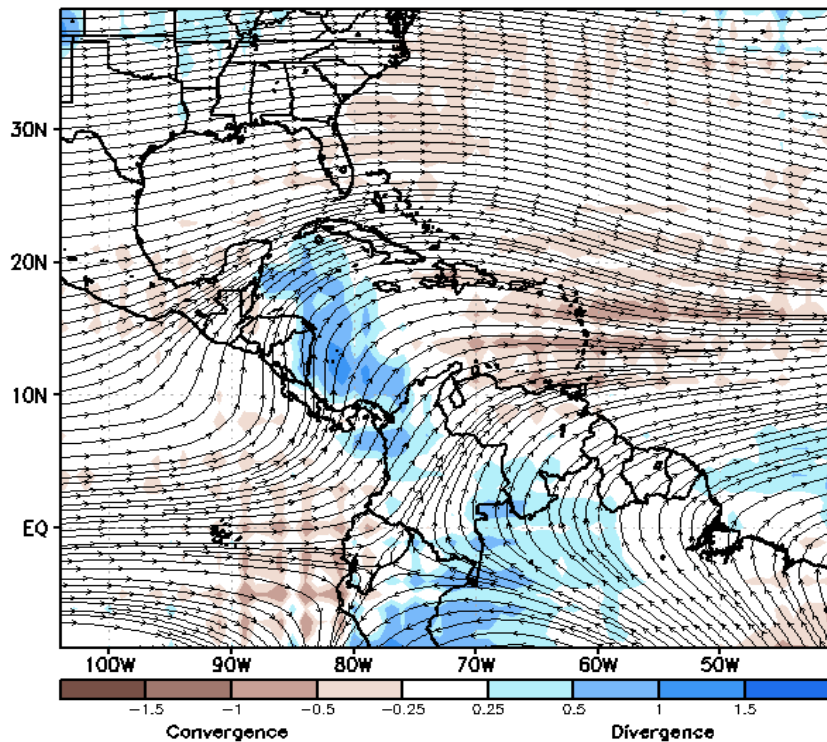




# 200-hPa Wind

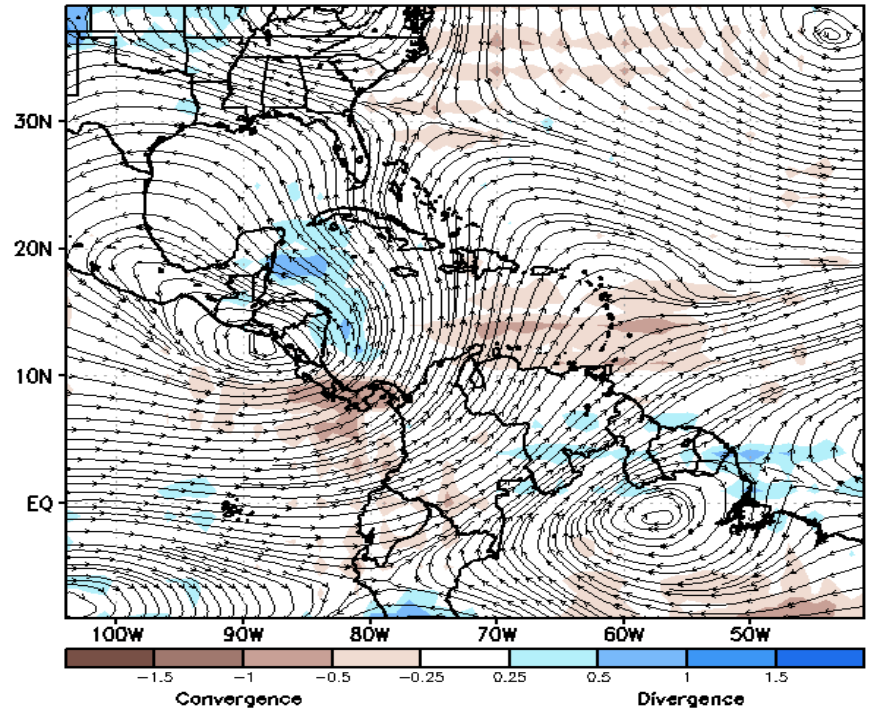
## Total

GEFS Week-2 200-hPa Divergence and Wind Total  
Valid: 20211117 - 20211123



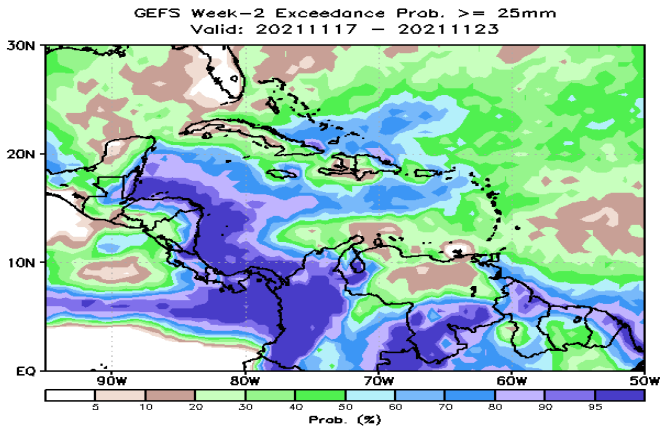
## Anomaly

GEFS Week-2 200-hPa Divergence and Wind Anomaly  
Valid: 20211117 - 20211123

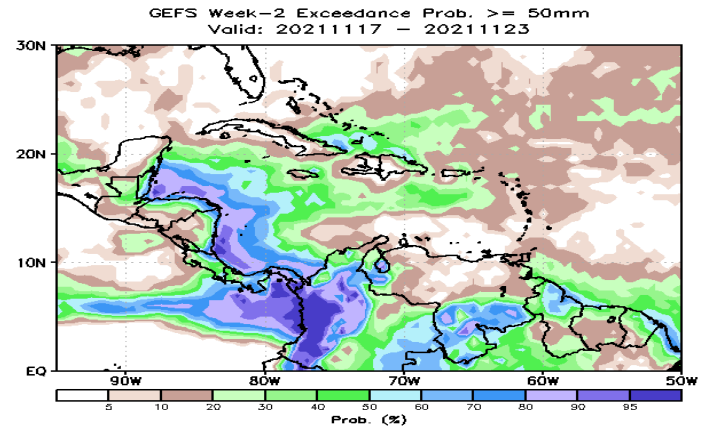


# Precipitation Exceedance Probability

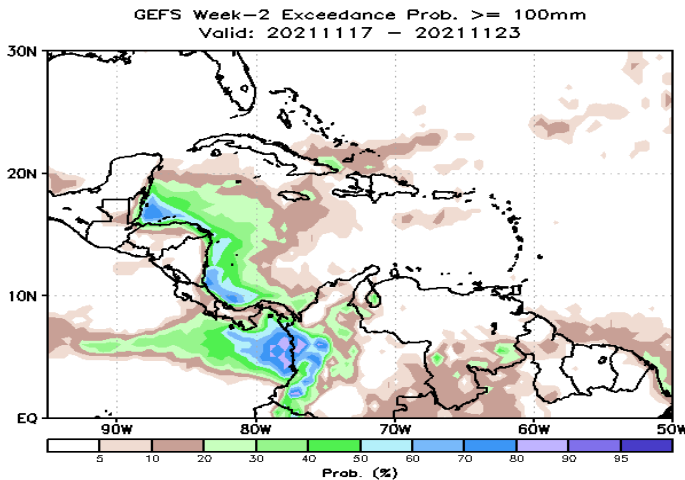
## $\geq 25\text{mm}$



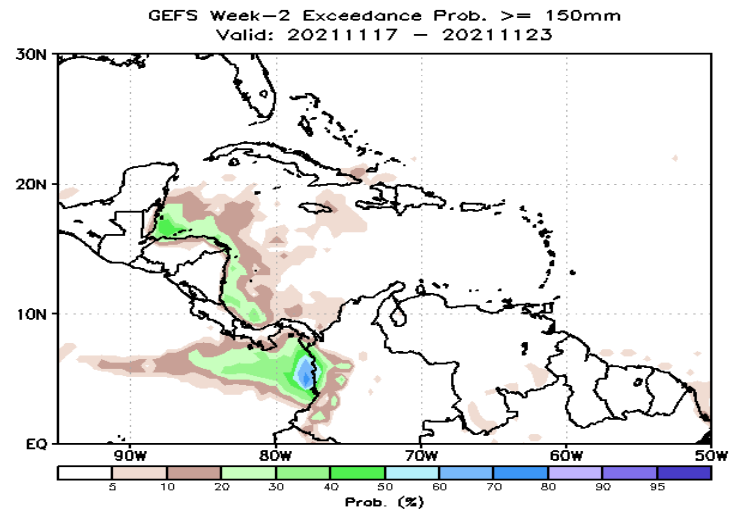
## $\geq 50\text{mm}$



## $\geq 100\text{mm}$



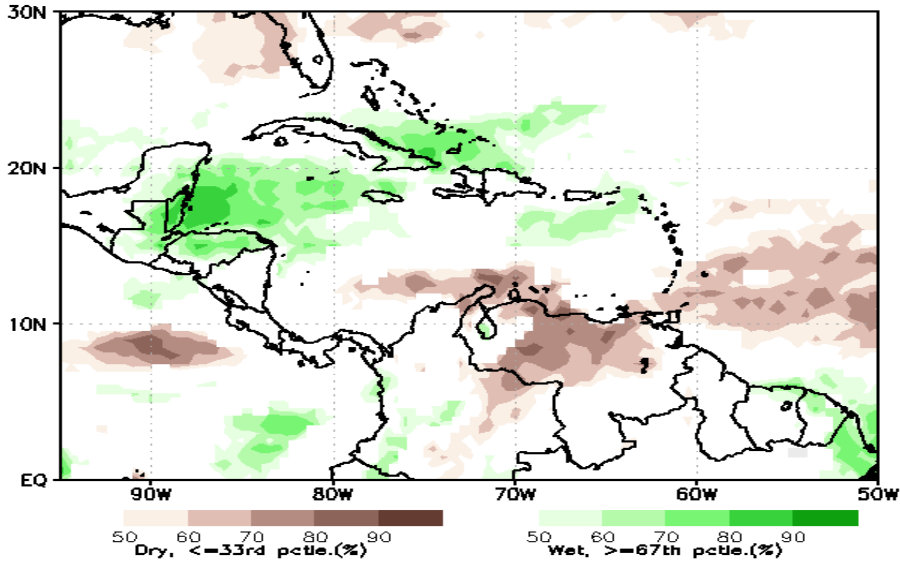
## $\geq 150\text{mm}$



# Precipitation Exceedance Probability ( $\leq 33^{\text{rd}}$ & $\geq 67^{\text{th}}$ percentiles)

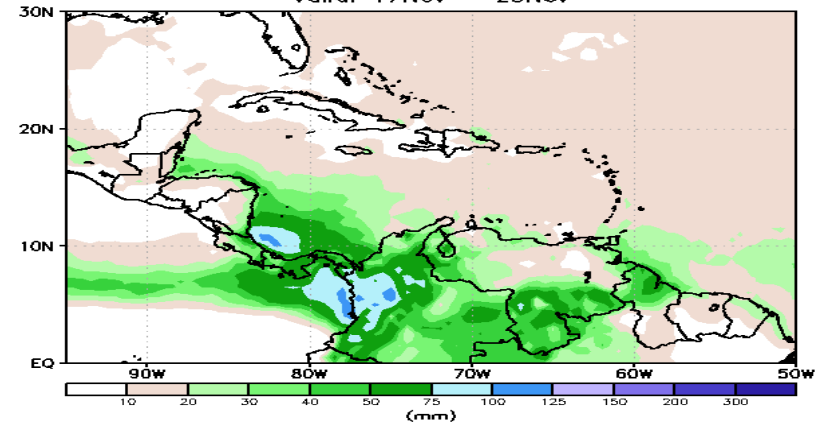
$\leq 33^{\text{rd}}$  &  $\geq 67^{\text{th}}$  percentiles

GEFS Week-2 Exceedance Probability ( $\leq 33^{\text{rd}}/\geq 67^{\text{th}}$  Pctl.)  
Valid: 20211117 - 20211123



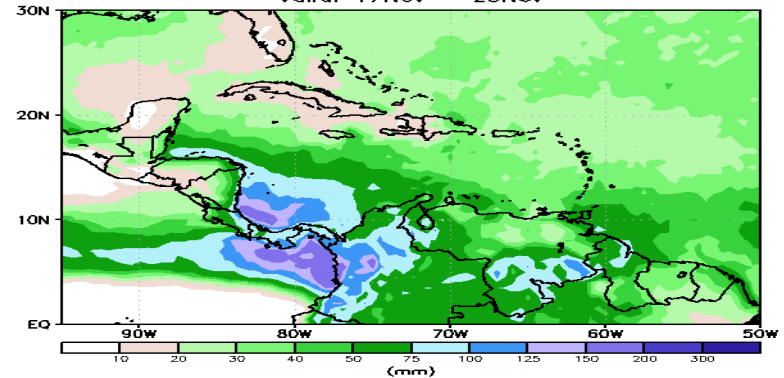
$33^{\text{rd}}$  percentile climo

GEFS 33rd . Model Climo.  
Valid: 17Nov - 23Nov



$67^{\text{th}}$  percentile climo

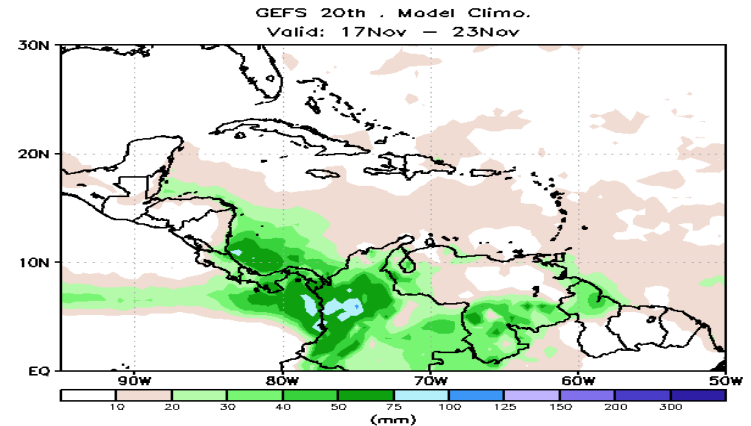
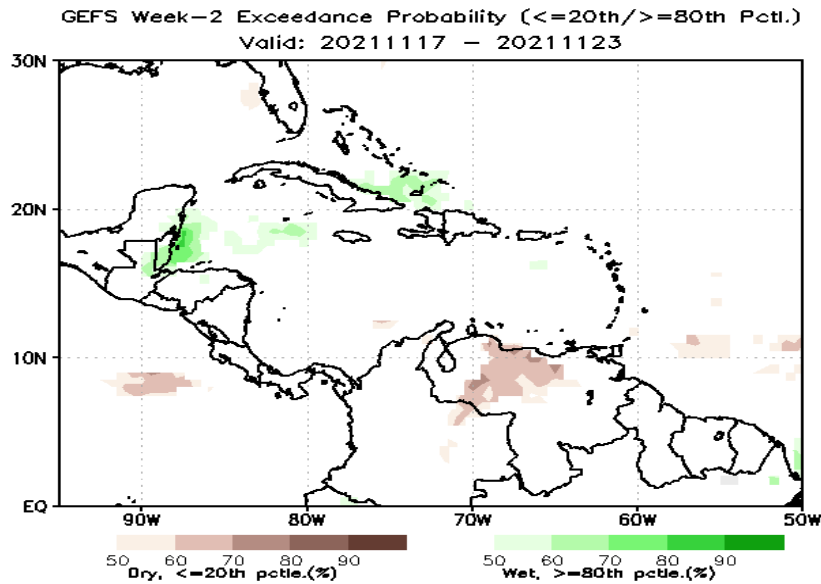
GEFS 67th . Model Climo.  
Valid: 17Nov - 23Nov



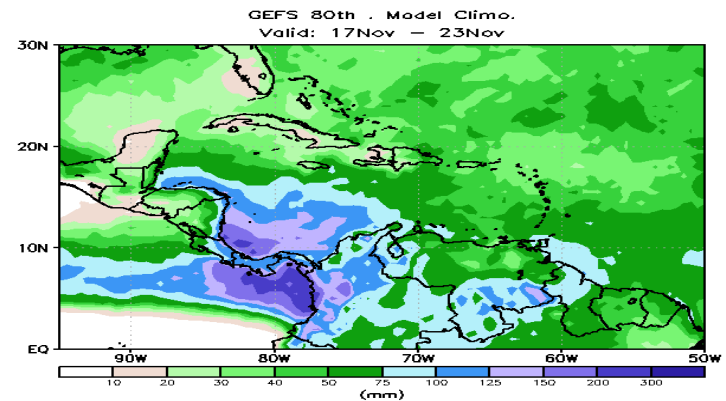
# Precipitation Exceedance Probability ( $\leq 20^{\text{th}}$ & $\geq 80^{\text{th}}$ percentiles)

$\leq 20^{\text{th}}$  &  $\geq 80^{\text{th}}$  percentiles

20<sup>th</sup> percentile climo



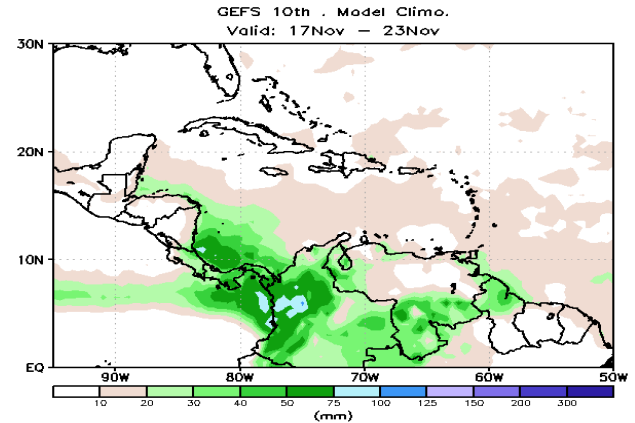
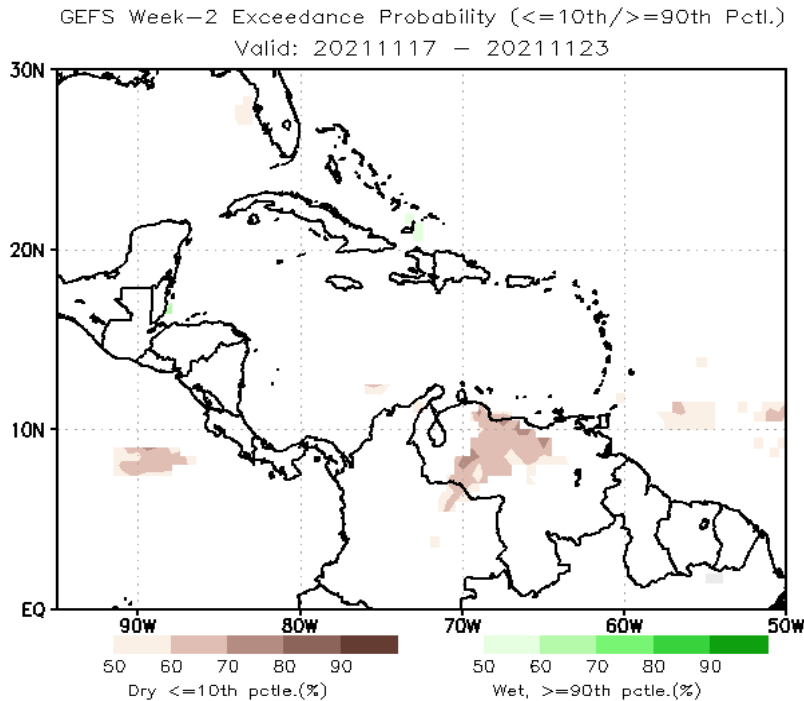
80<sup>th</sup> percentile climo



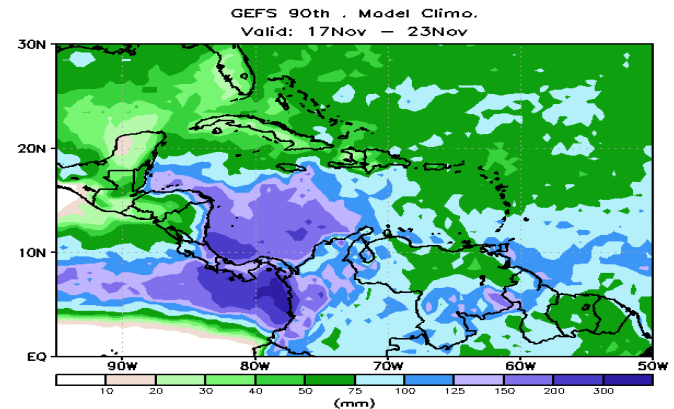
# Precipitation Exceedance Probability ( $\leq 10^{\text{th}}$ & $\geq 90^{\text{th}}$ percentiles)

$\leq 10^{\text{th}}$  &  $\geq 90^{\text{th}}$  percentiles

10<sup>th</sup> percentile climo



90<sup>th</sup> percentile climo



# Summary

Little or no MJO signal.

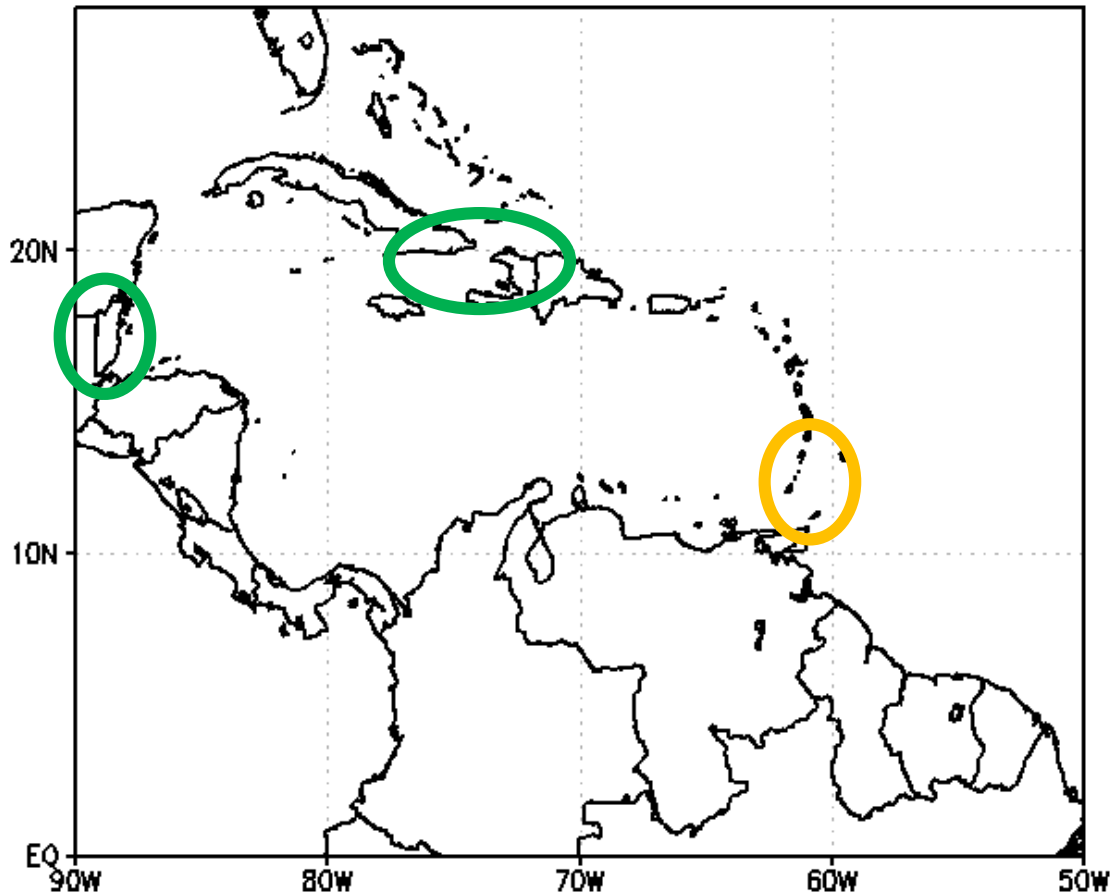
Anticyclonic anomaly at 850 & 700mb (lower levels) over W. Caribbean and US=high divergent flow in these areas and cyclonic anomaly over E. Atlantic stretching into Lesser Antilles.

Some upper-level convergence over the windward Islands and near ABC Islands

Exceedance probability forecasts=>67th & 80th percentile over Belize and portions of Greater Antilles.

Drier Conditions over the S. Windwards & ABC Islands (<33rd percentile)

# Extreme Precipitation Outlooks



## Legend

- Excessive Wet
- Moderate Wet
- Excessive Dry
- Moderate Dry

High exceedance over Greater Antilles and Belize and drier condition (<33<sup>rd</sup> percentile) over S. Windwards.