

Generating Week-2 Real Time  
Forecasts, Valid 11 – 17 October 2019

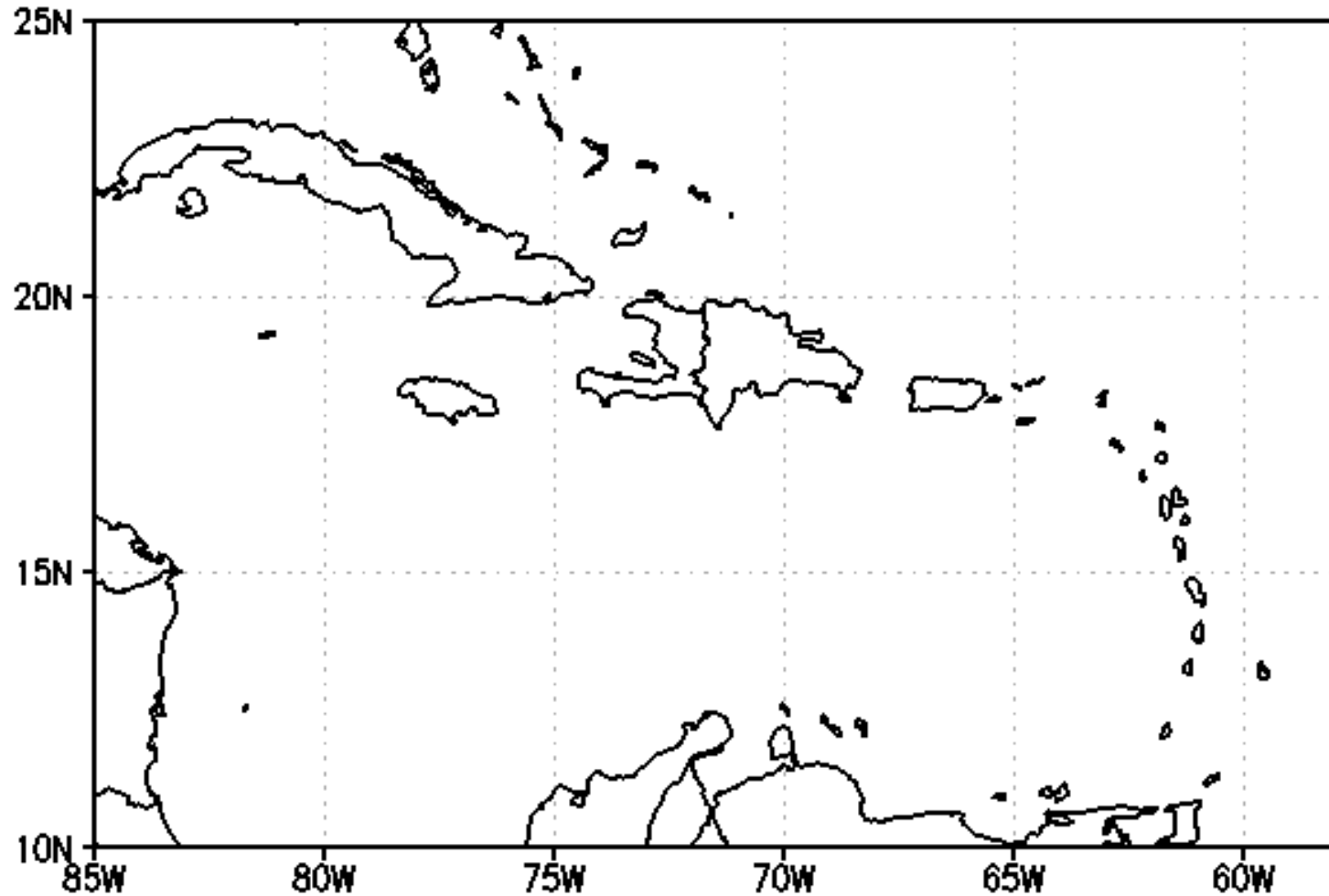
Group 3

Caribbean (Greater and Lesser Antilles)

Kidar Kisson, Shontelle Stoute, Trisha Millar, Tia Browne

First WMO RCC-Washington Training Workshop  
Washington DC, USA,  
30 September 2019 – 4 October 2019

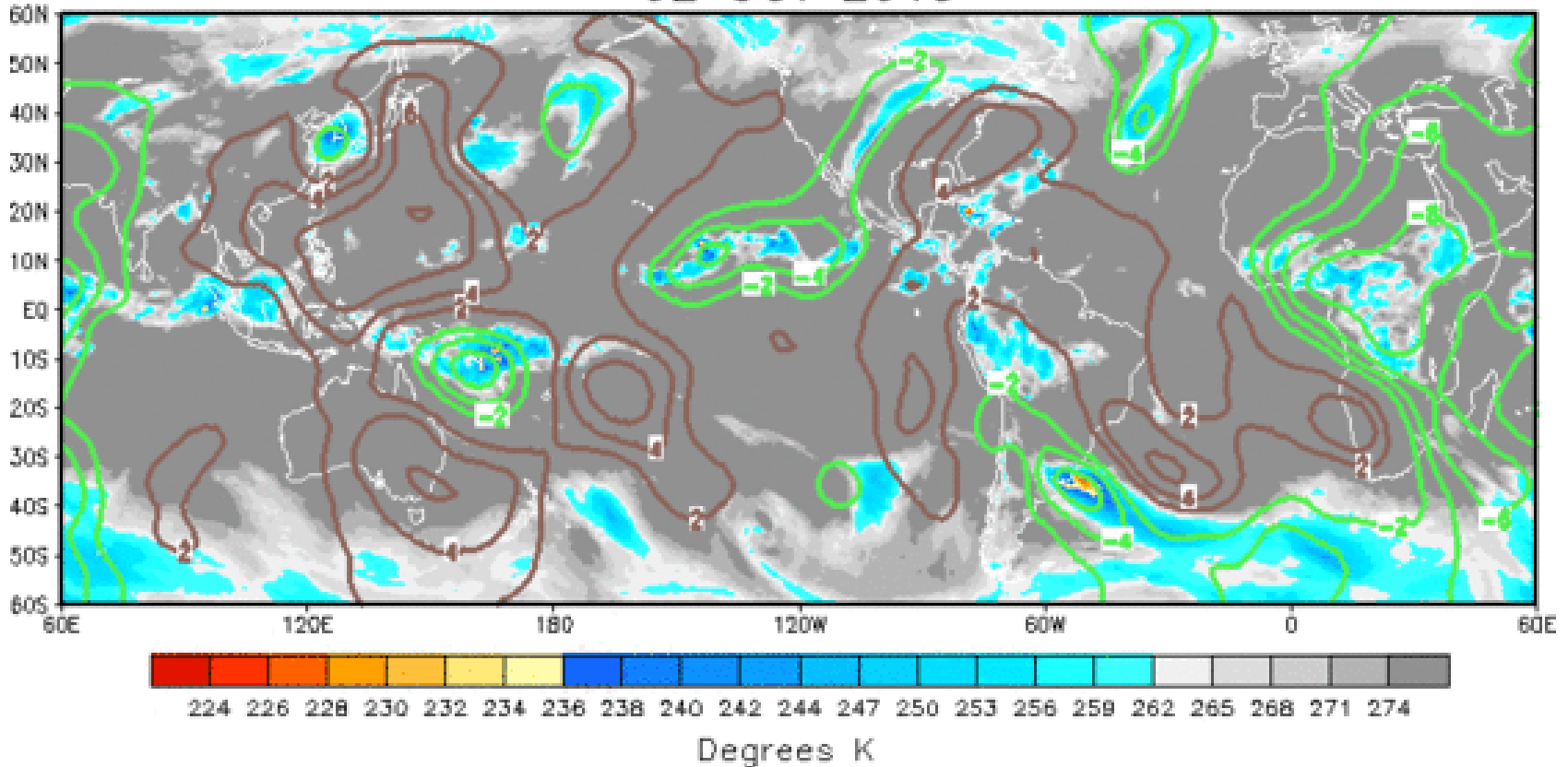
# FORECAST AREA (-85, -58, 10, 25)



# 200-hPa Velocity Potential Anomaly

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/ir\\_anim\\_monthly.shtml](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/ir_anim_monthly.shtml)

02 OCT 2019

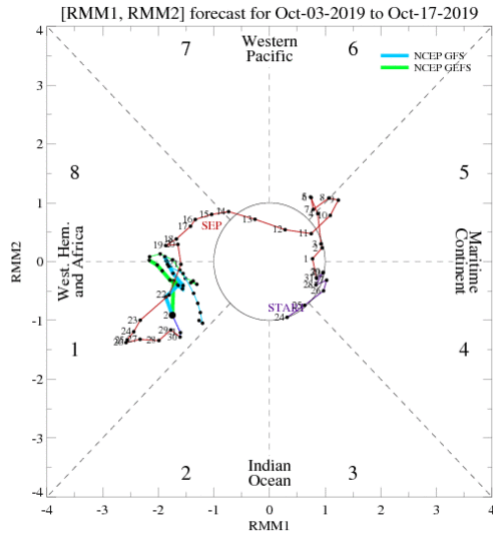


- Green shade indicates areas of upper level divergence and convection or precipitation at surface. Brown contours indicate areas of upper level convergence or subsidence and suppressed precipitation at surface.

# Wheeler-Hendon Index - Forecasts

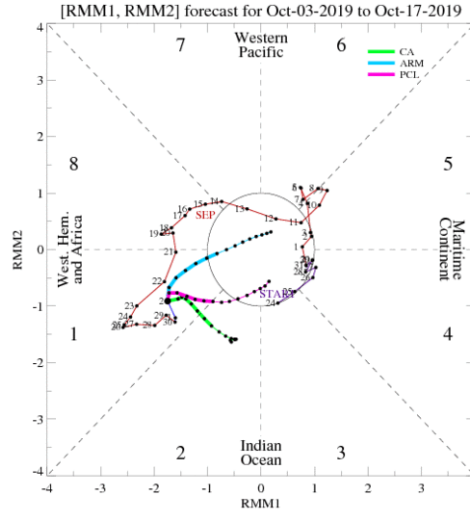
## GFS/GEFS

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/combphase\\_noCFSfull.gif](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/combphase_noCFSfull.gif)



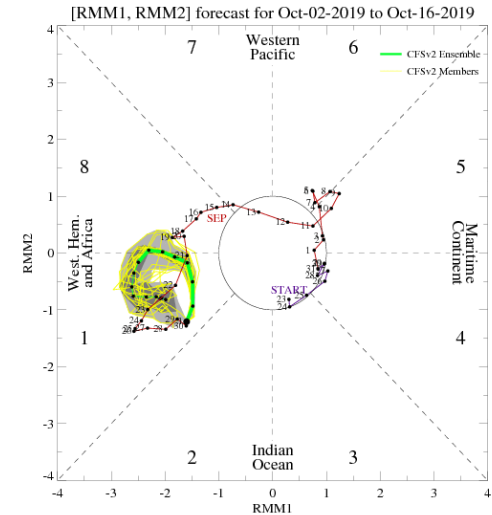
## Statistical

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/statphase\\_full.gif](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/statphase_full.gif)



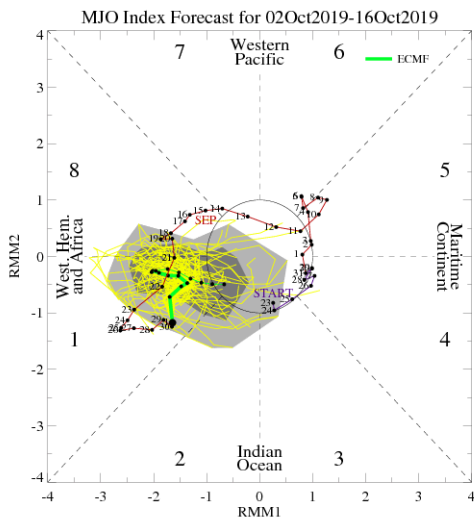
## CFSv2

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/CFSO\\_phase\\_small.gif](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/CFSO_phase_small.gif)



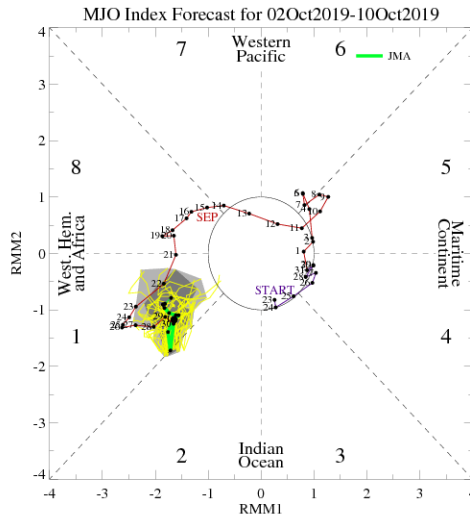
## ECMWF

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/ECMF\\_phase\\_MANOM\\_51m\\_small.gif](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/ECMF_phase_MANOM_51m_small.gif)



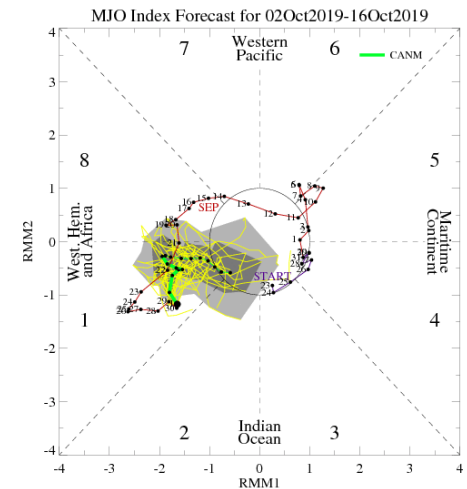
## JMAN

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/JMAN\\_phase\\_51m\\_small.gif](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/JMAN_phase_51m_small.gif)



## CMET

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/CANM\\_phase\\_20m\\_small.gif](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/CLIVAR/CANM_phase_20m_small.gif)

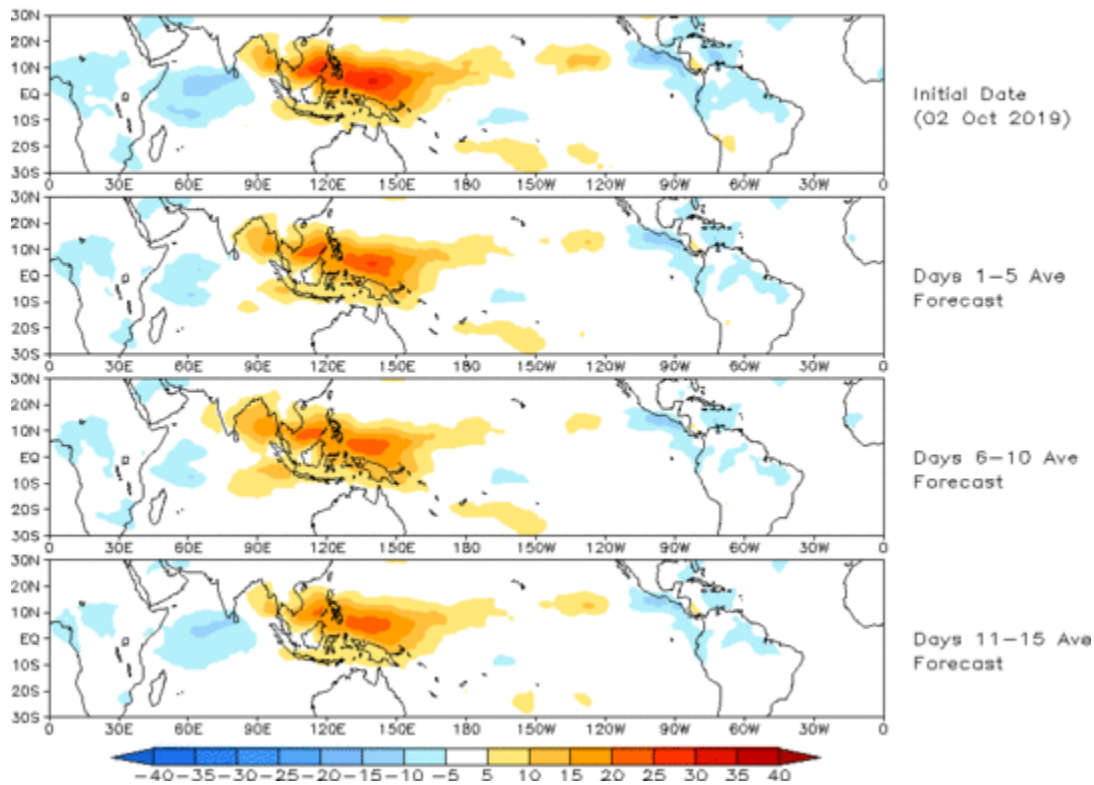


# Evolution of MJO-related anomalies

**Initial date: 2 October 2019**

[https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/spatial\\_olrmap\\_full.gif](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/spatial_olrmap_full.gif)

Prediction of MJO-related anomalies using GEFS operational forecast  
Initial date: 02 Oct 2019  
OLR



**Red shade indicate areas of suppressed convection**

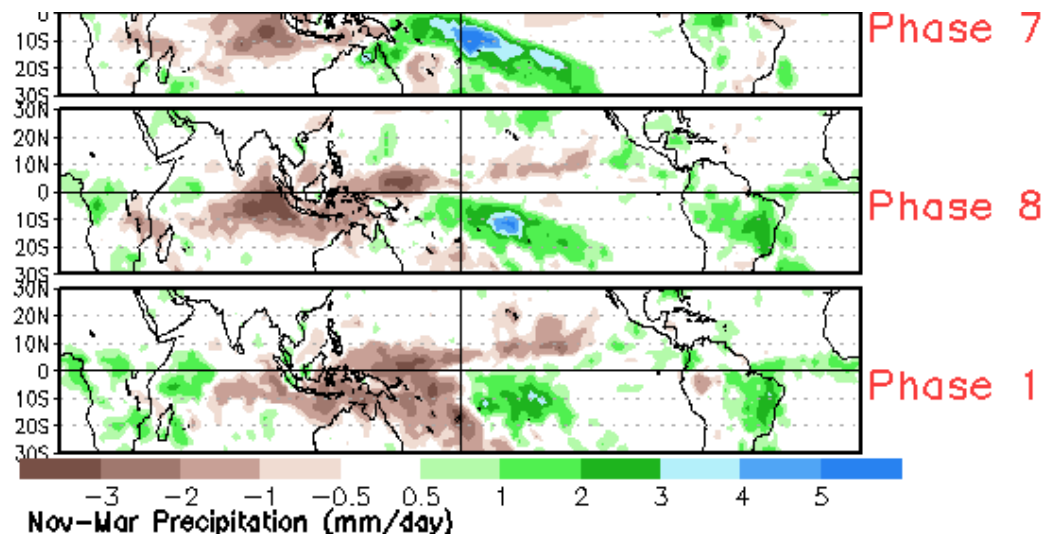
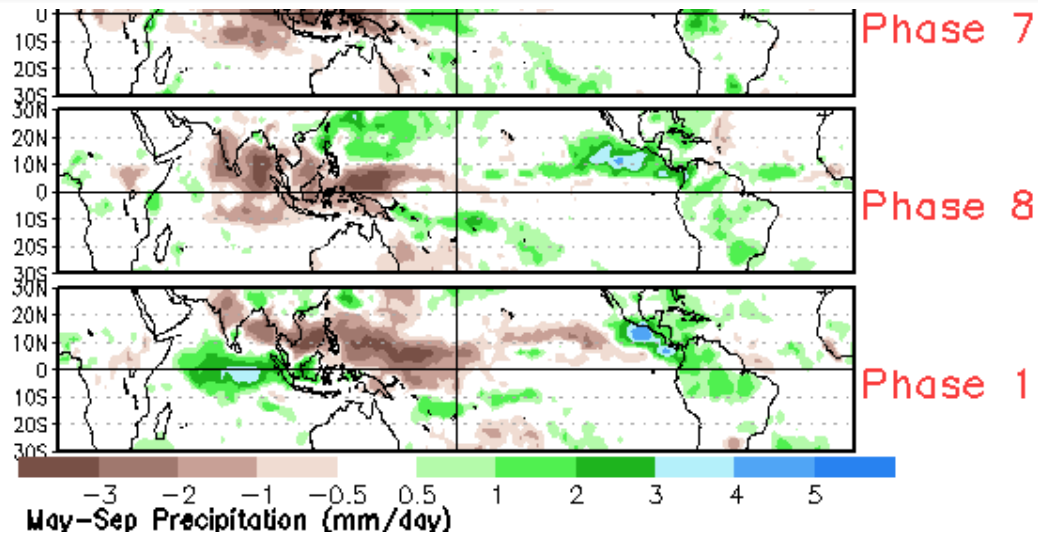
**Blue shade indicate areas of enhanced convection**

1 - 5 days ave. Forecast

6-10 days ave. Forecast

11-15 days ave. Forecast

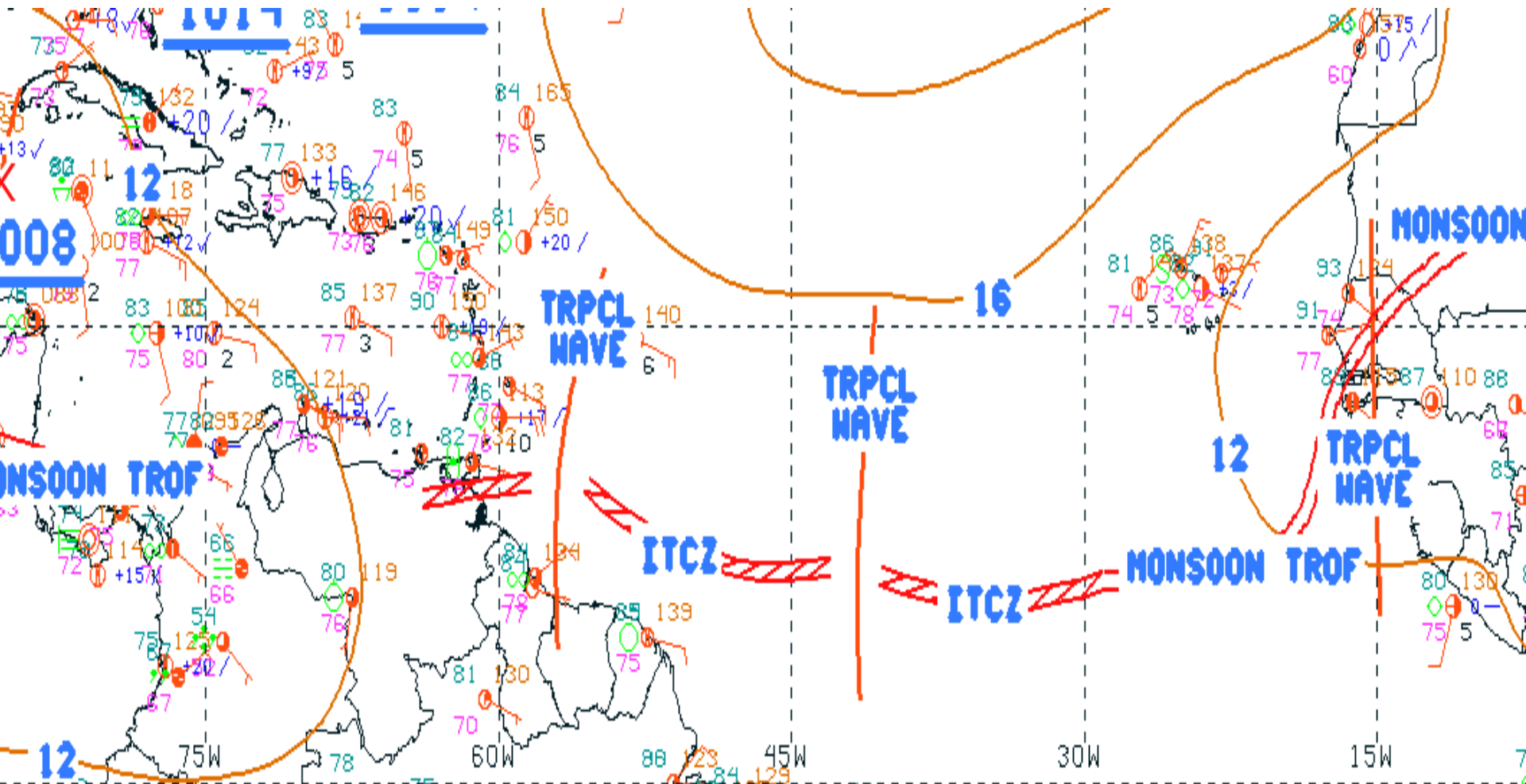
# MJO Rainfall Composites - Global Tropics



# Week2, MJO Contribution?

- MJO suggest neutral conditions across the eastern Caribbean in phase 1 and enhanced rainfall across the western Caribbean.

# Tropical Cyclone Activity





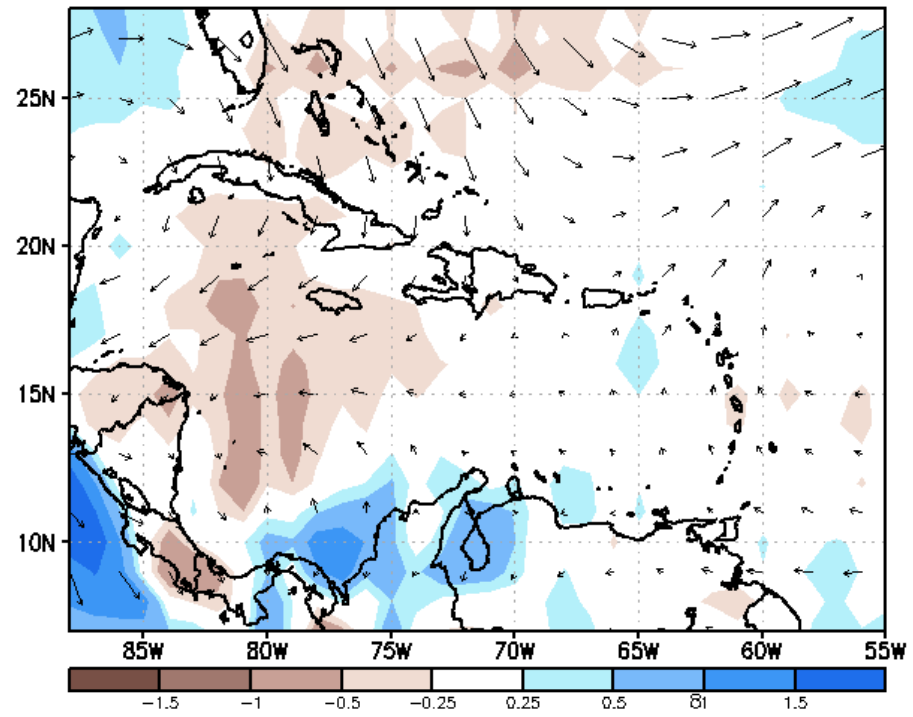
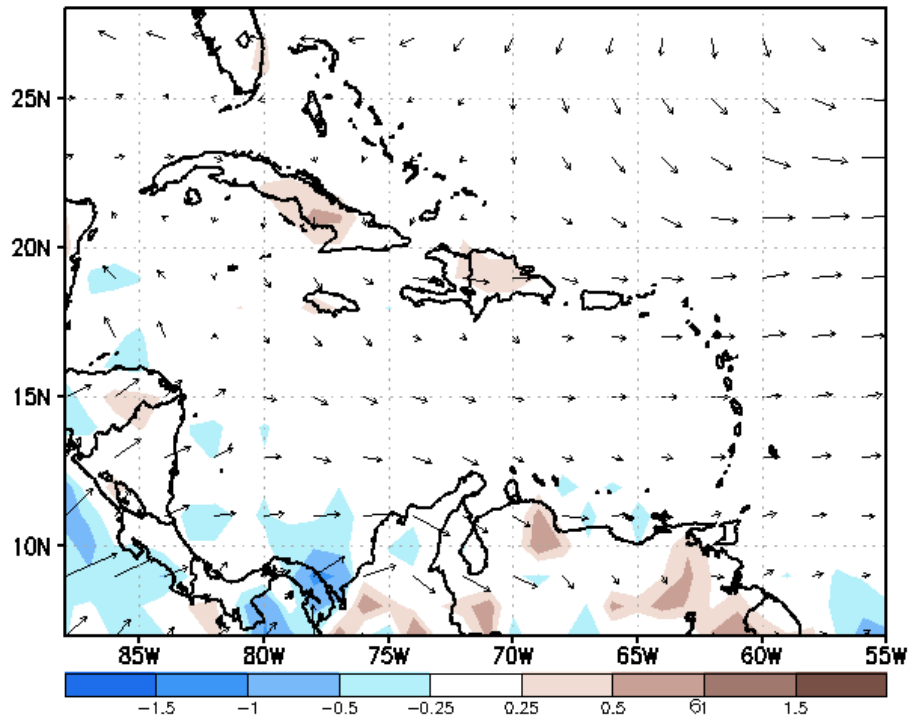
# NCEP GEFS Wind and Divergence Anomaly Forecast Week-2, Valid: 11 - 17 October 2019

**850-hPa or 700-hPa**

**200-hPa**

GEFS Week-2 850-hPa Divergence and Wind Anomaly  
Valid: 20191011 - 20191017

GEFS Week-2 200-hPa Divergence and Wind Anomaly  
Valid: 20191011 - 20191017



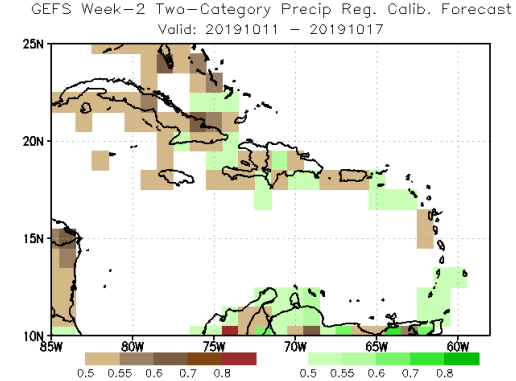
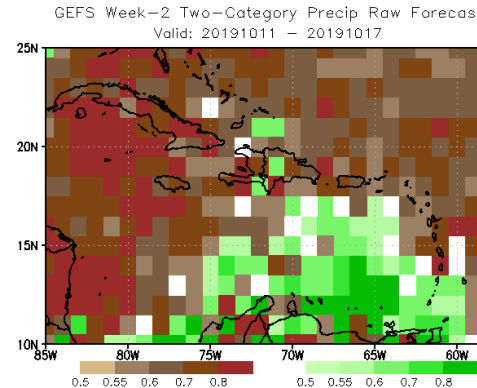
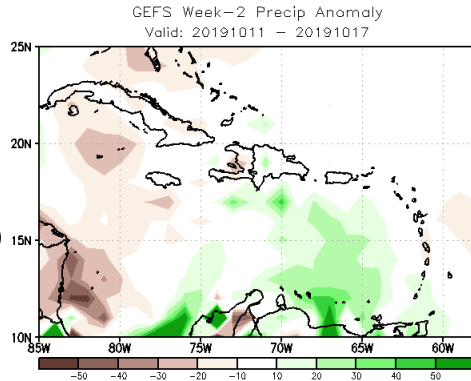
# NCEP GEFS/CFSv2, Precip forecasts for Week-2, Valid: 11 - 17 October 2019

Ensemble Mean Anomaly

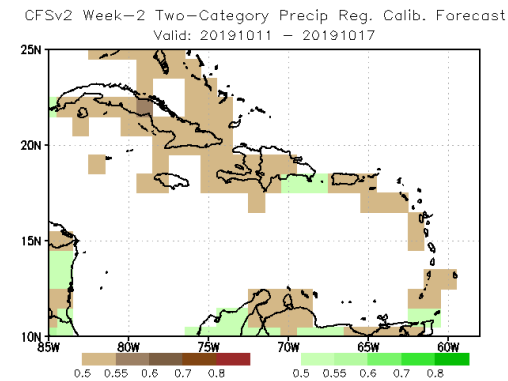
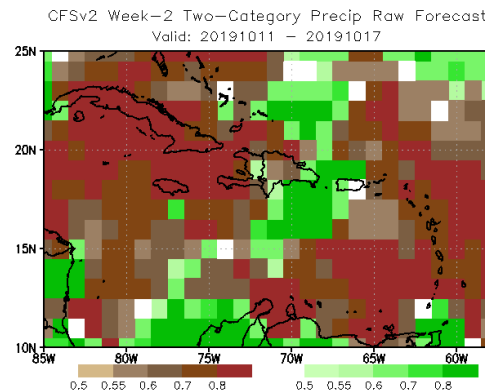
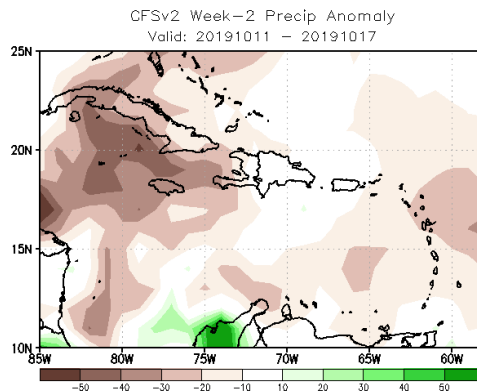
Two-category Probabilistic  
Forecast - Raw

Two-category Probabilistic  
Forecast – Reg - Calibrated

GEFS



CFSv2



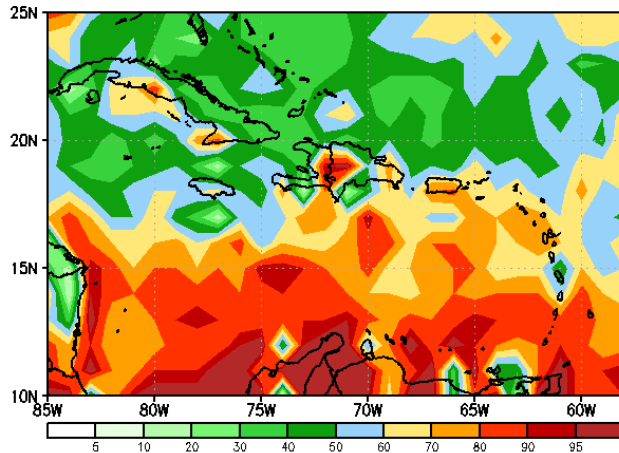
# GEFS Week-2 Exceedance Probability, Valid: 11 - 17 October 2019

**>25mm**

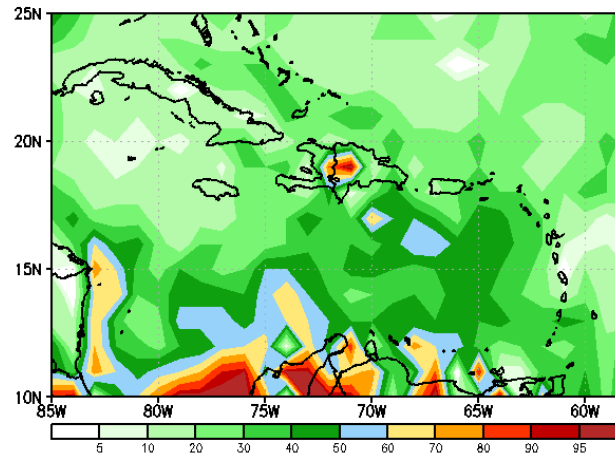
**>50mm**

**>100mm**

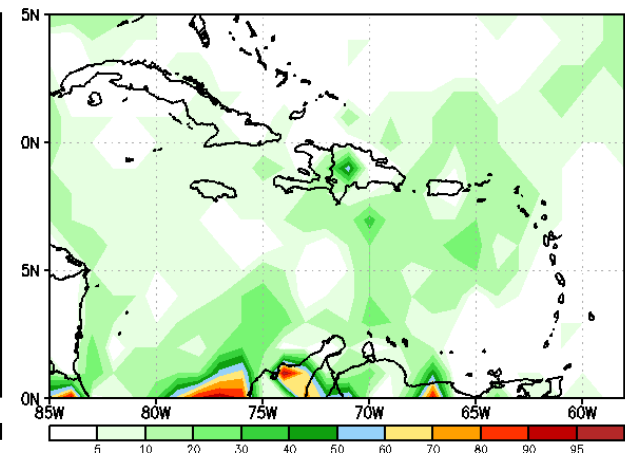
GEFS Week-2 Exceedance Prob. > 25mm  
Valid: 20191011 - 20191017



GEFS Week-2 Exceedance Prob. > 50mm  
Valid: 20191011 - 20191017



GEFS Week-2 Exceedance Prob. > 100mm  
Valid: 20191011 - 20191017



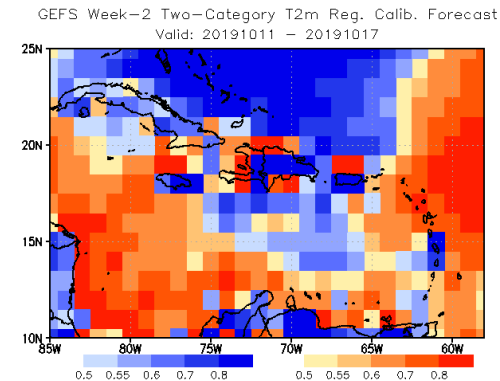
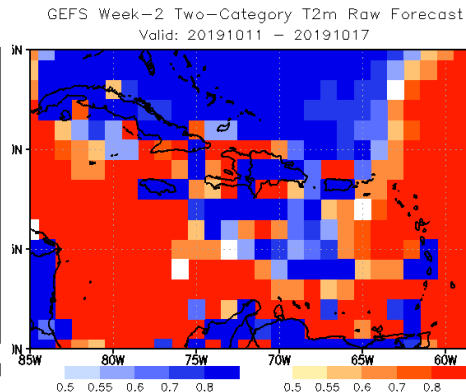
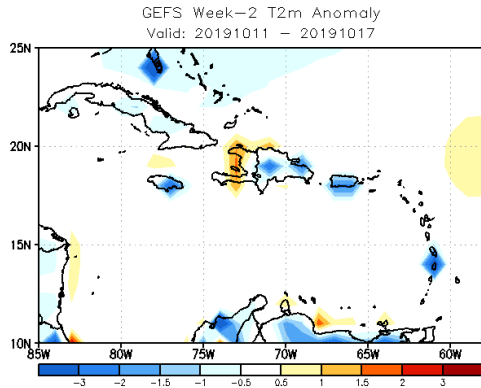
# NCEP GEFS/CFSv2, 2m Temp. forecasts for Week-2, Valid: 11 - 17 October 2019

Ensemble Mean Anomaly

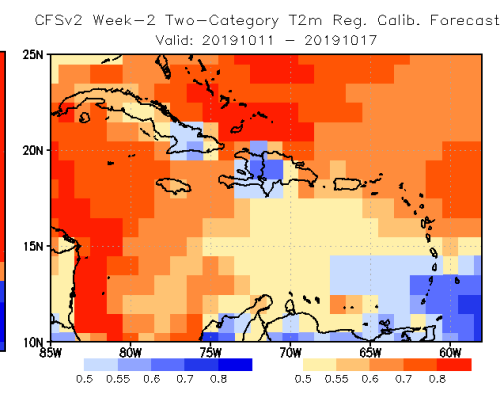
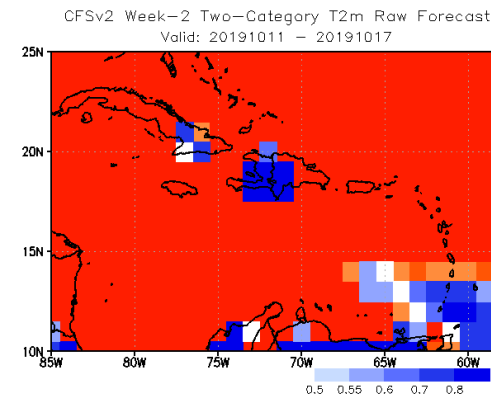
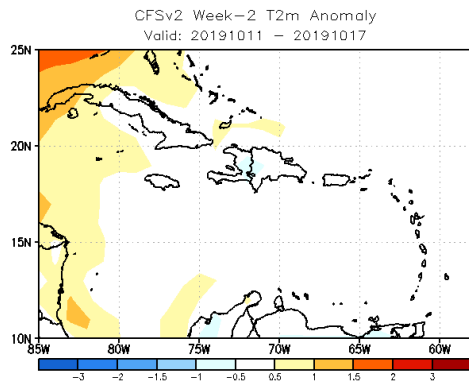
Two-category Probabilistic  
Forecast - Raw

Two-category Probabilistic  
Forecast - Reg - Calibrated

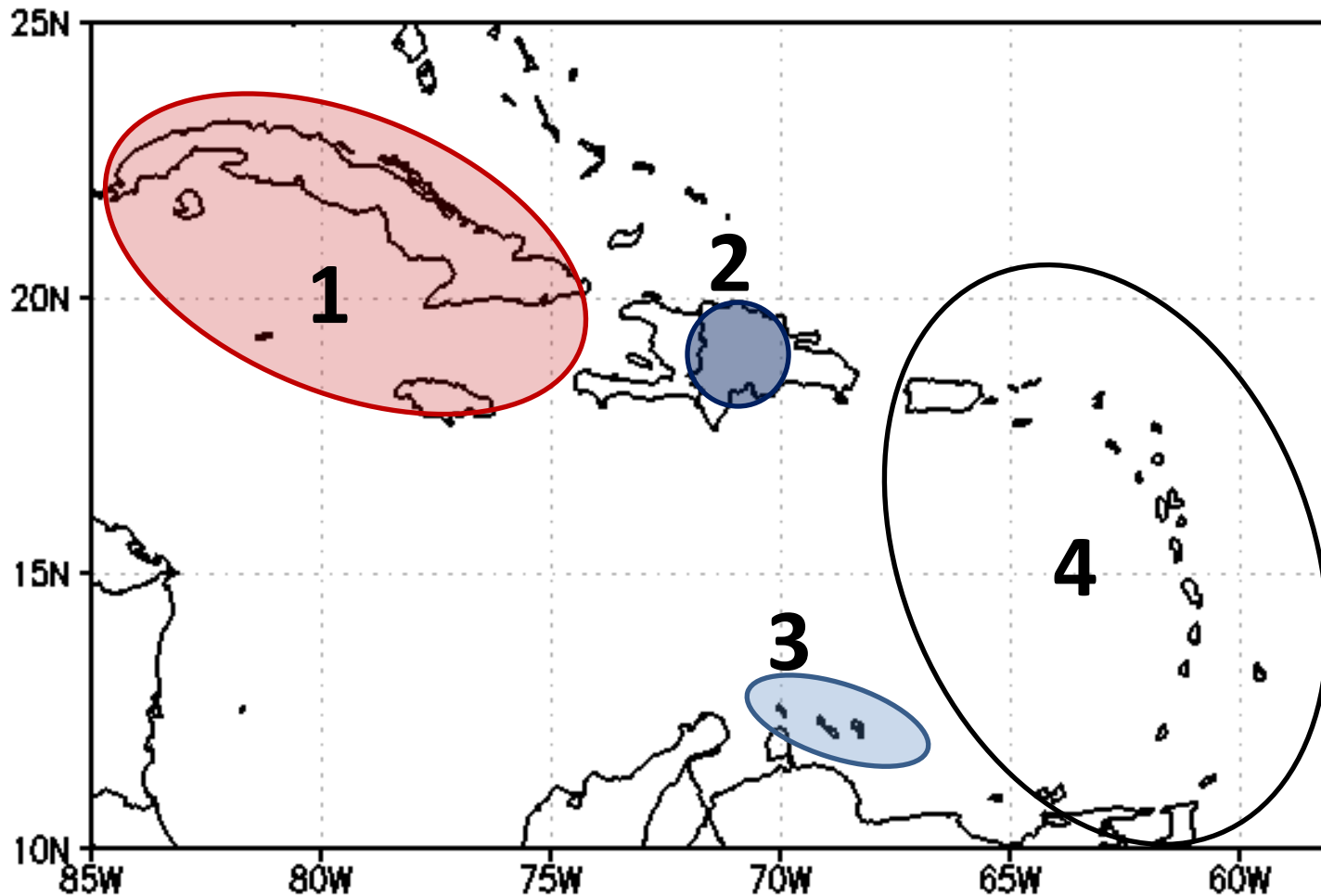
## GEFS



## CFSv2

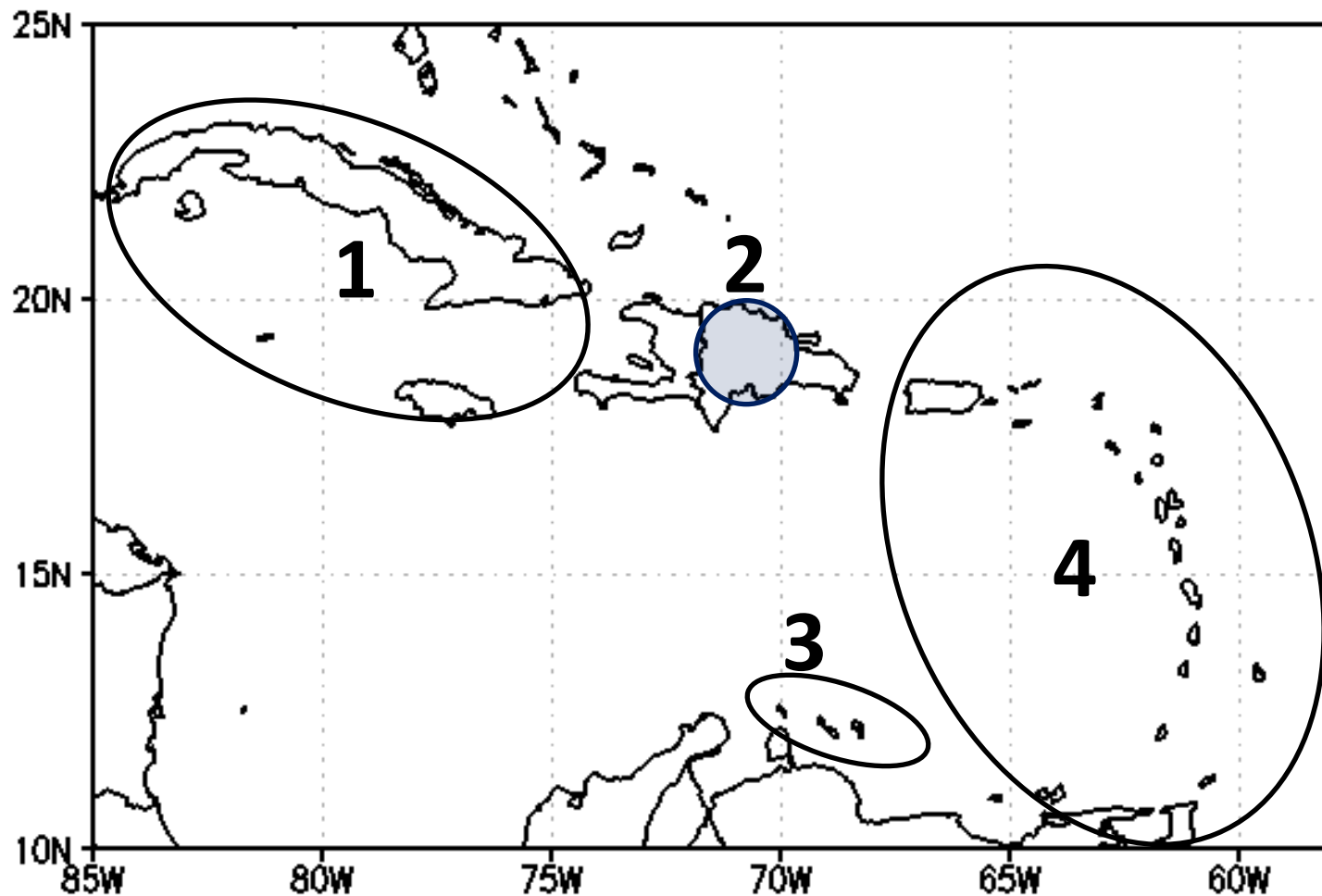


# Week-2 Rainfall Outlook, 11 – 17 October 2019



1. Forecast: Below average rainfall expected.
2. Forecast: Above average rainfall expected.
3. Forecast: Above average rainfall expected.
4. Forecast: Climatology

# Week-2 **2m Temp** Outlook, 11 – 17 October 2019



1. Forecast: Climatology
2. Forecast: Below average temperature
3. Forecast: Climatology
4. Forecast: Climatology