

Second WMO RCC-Washington International Training Workshop

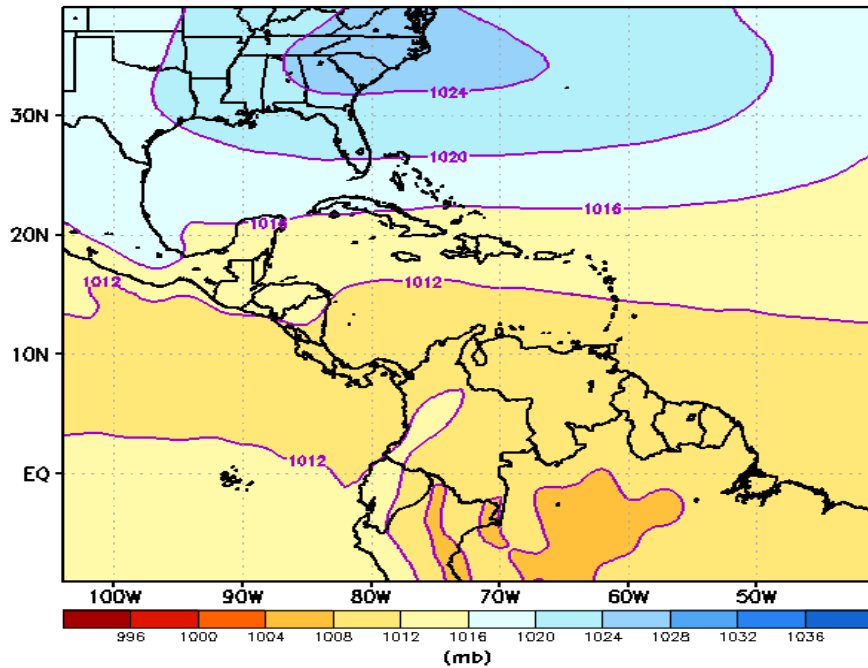
Real-time week-2 extreme temperature outlook

8 – 10 November 2021

Mean Sea Level Pressure

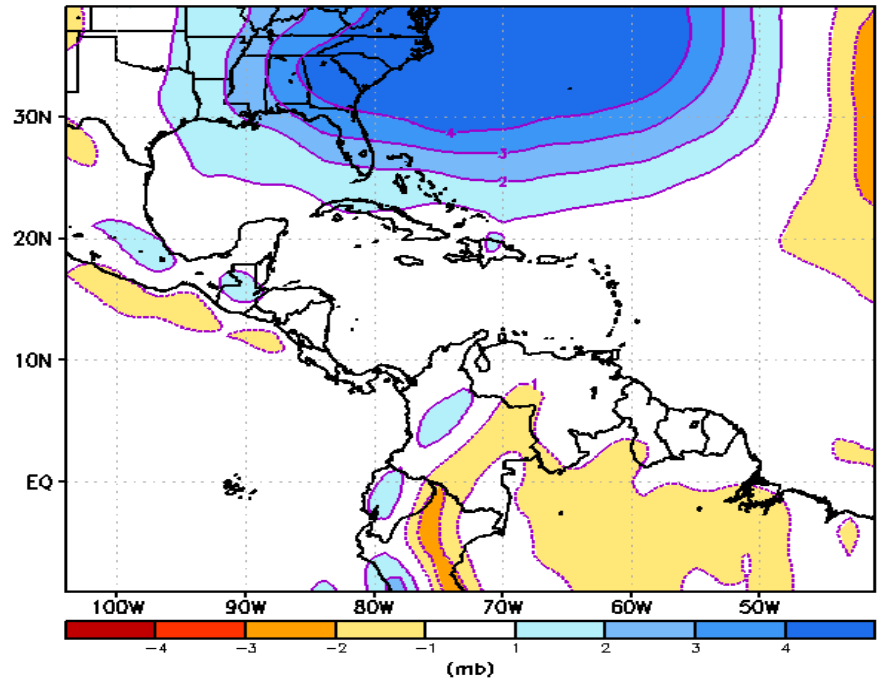
Total

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



Anomaly

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

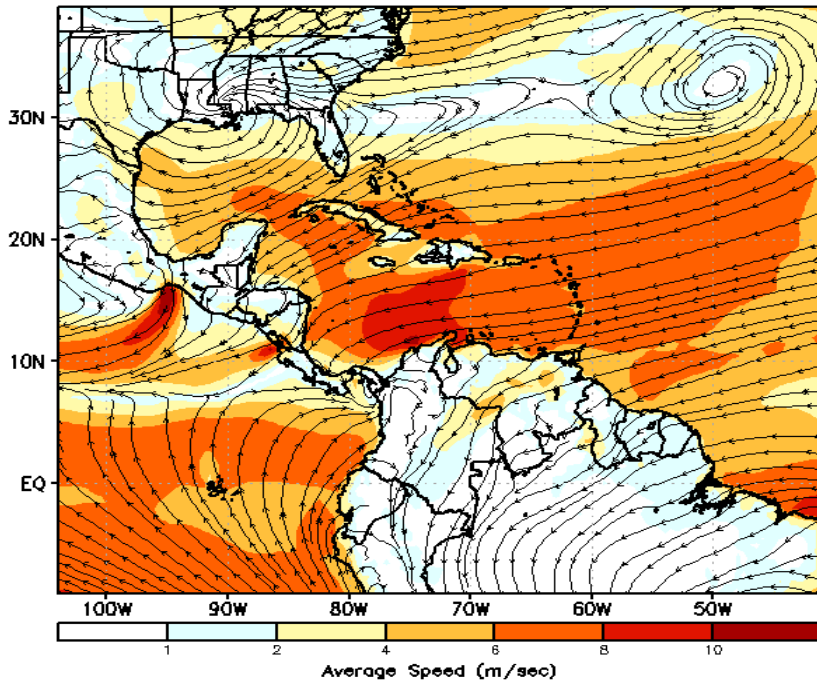


Anti-cyclonic anomaly over E. US and N. Bahamas= high divergent flow in these areas

10m Wind

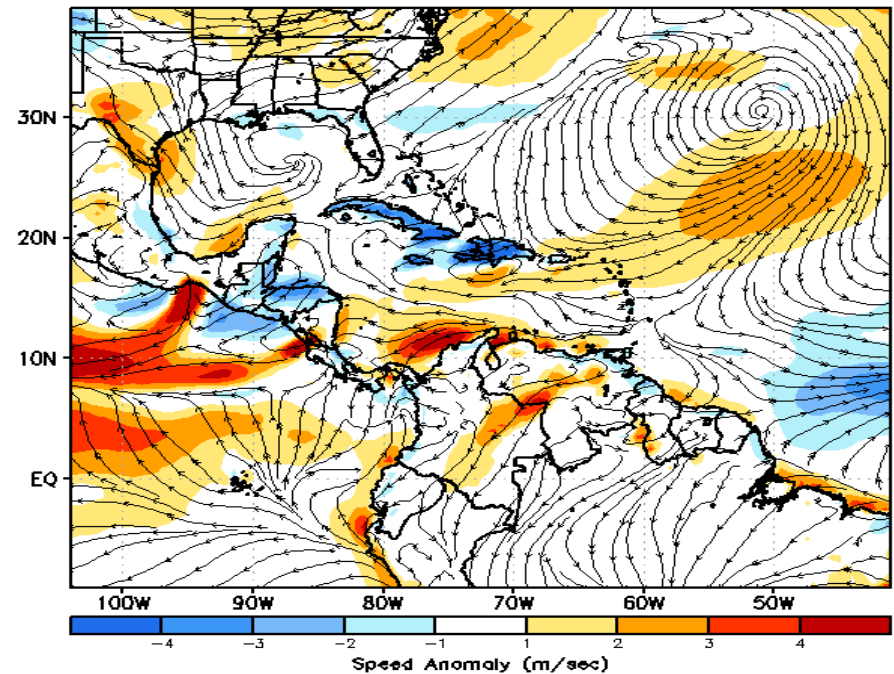
Total

GEFS Week-2 10m Wind Speed Total
Valid: 20211117 - 20211123



Anomaly

GEFS Week-2 10m Wind Speed Anomaly
Valid: 20211117 - 20211123



Lower than normal wind speed over Greater Antilles= less ventilation.

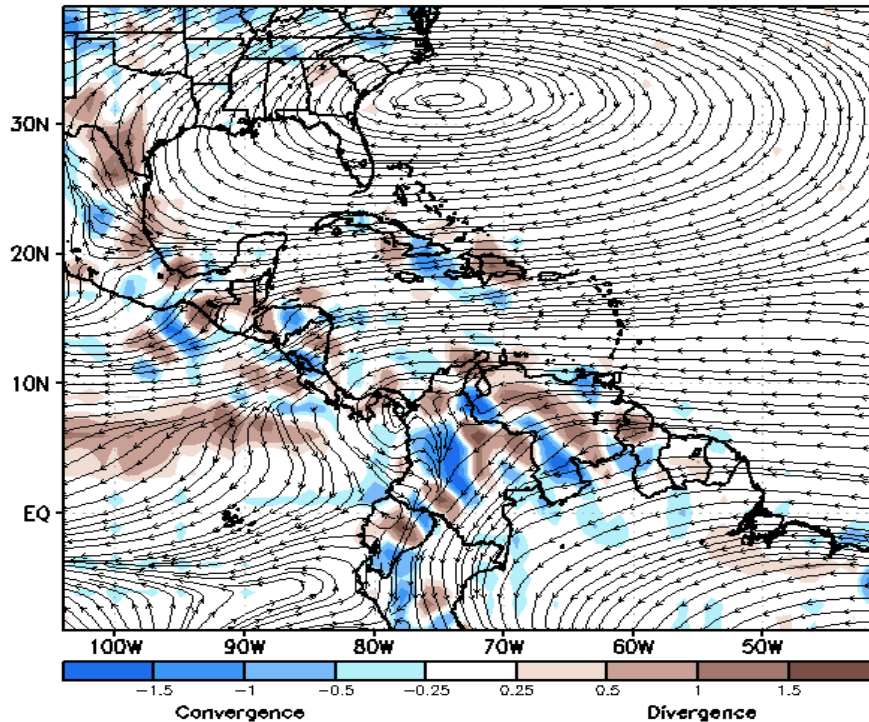
Slightly higher than normal winds speeds over P. Rico, virgin & Leeward Islands and ABC Islands.

850-hPa Wind

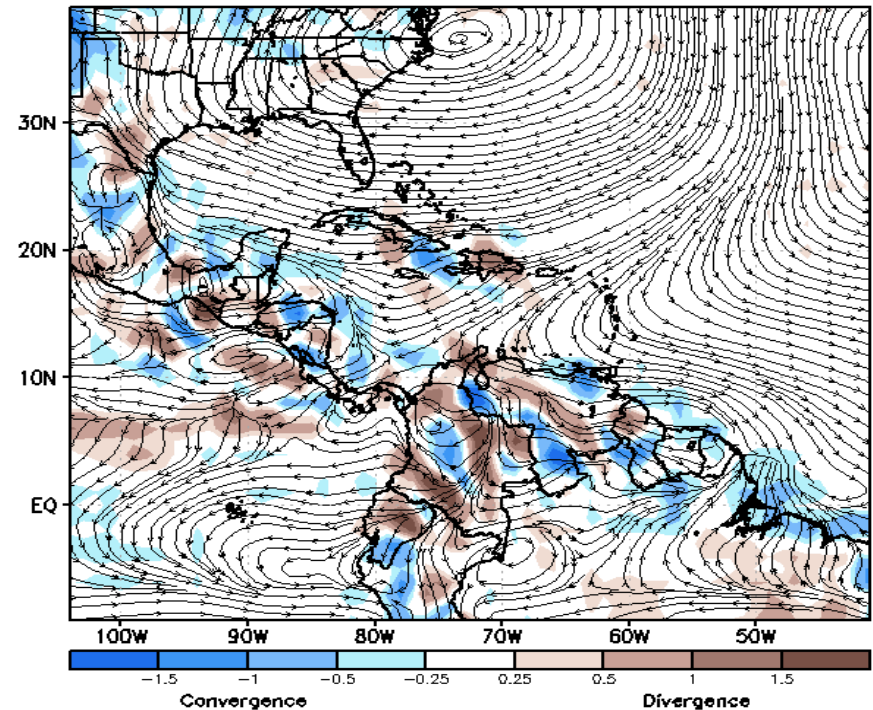
Total

Anomaly

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



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

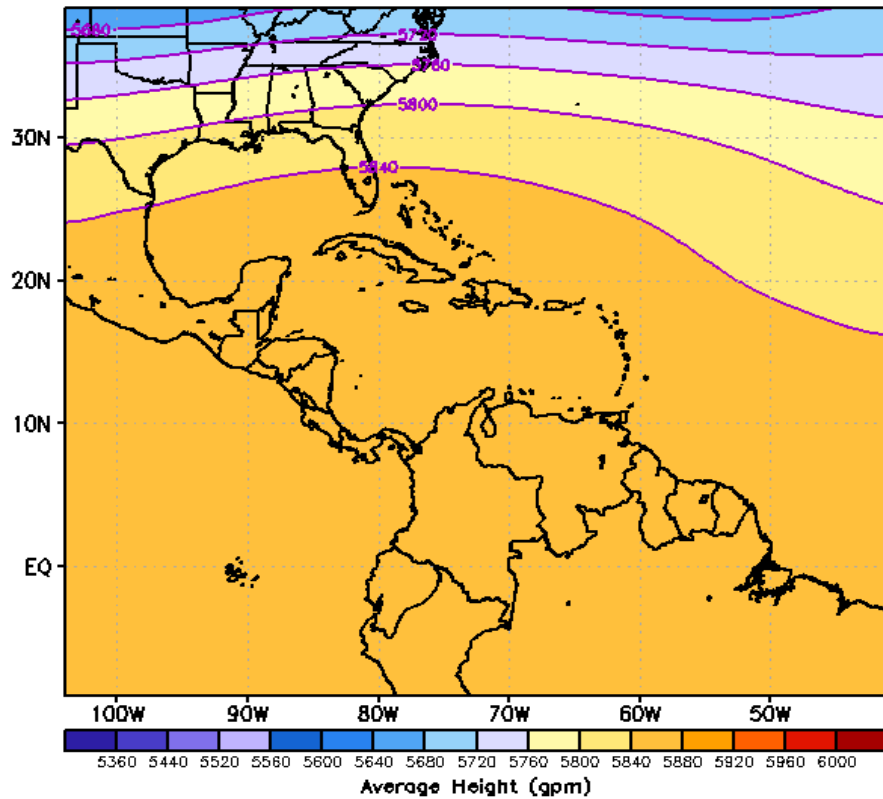


Anticyclonic anomaly over W. Caribbean and US cyclonic anomaly over E Atlantic stretching into Lesser Antilles.

500-hPa Height

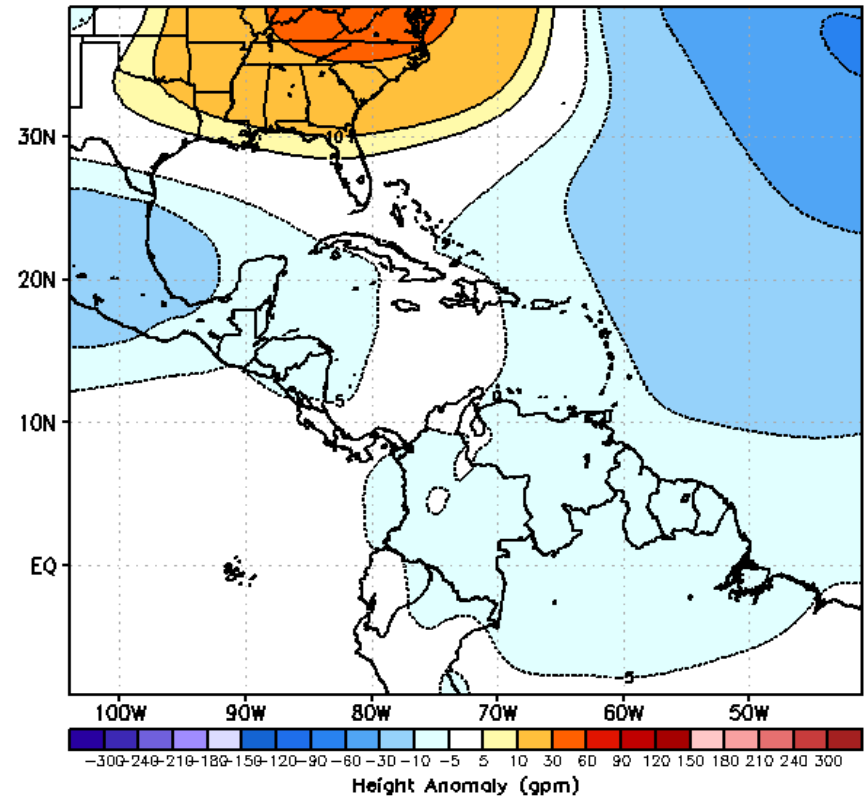
Total

GEFS Week-2 500-hPa Geo-Potential Height Total
Valid: 20211117 - 20211123



Anomaly

GEFS Week-2 500-hPa Geo-Potential Height Anomaly
Valid: 20211117 - 20211123

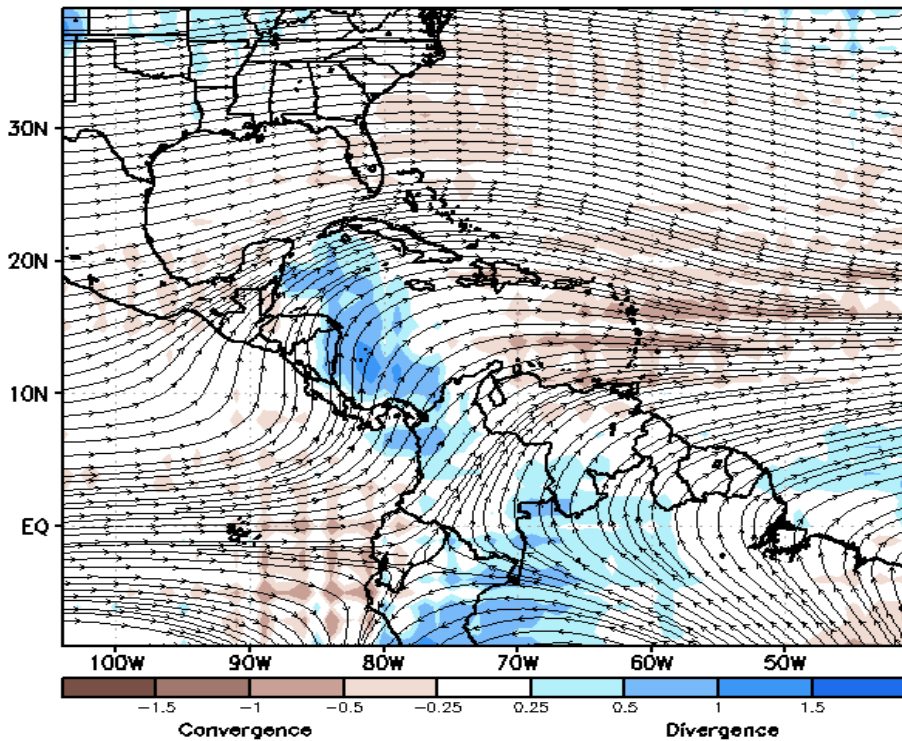


Positive anomaly (subsidence) over the US, Negative anomaly over the Atlantic into Lesser Antilles

200-hPa Wind

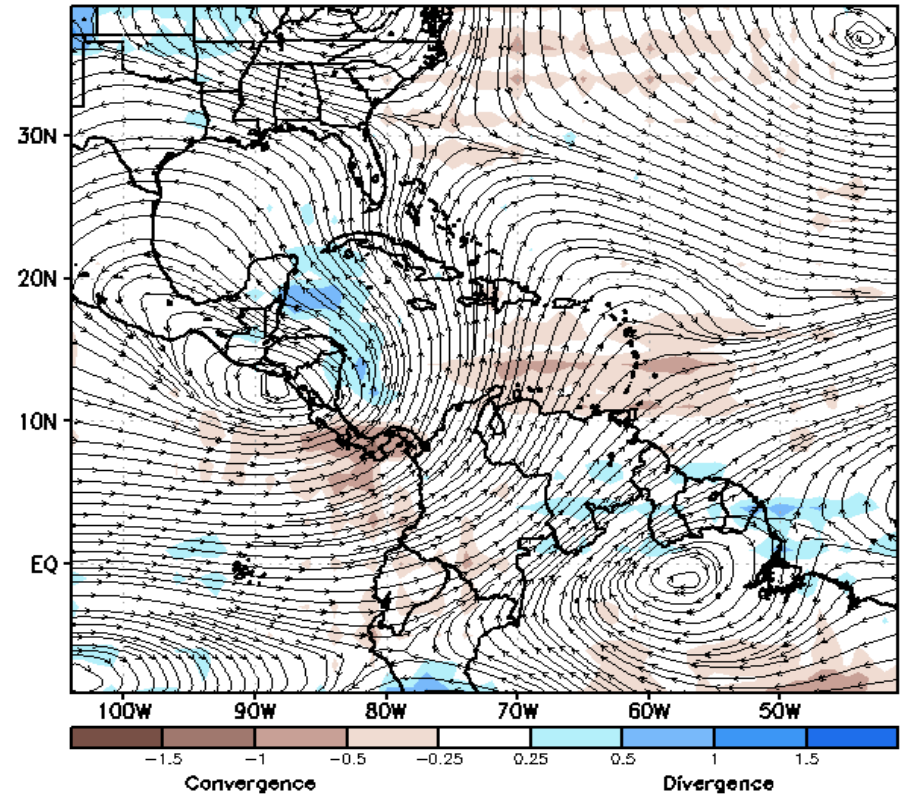
Total

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

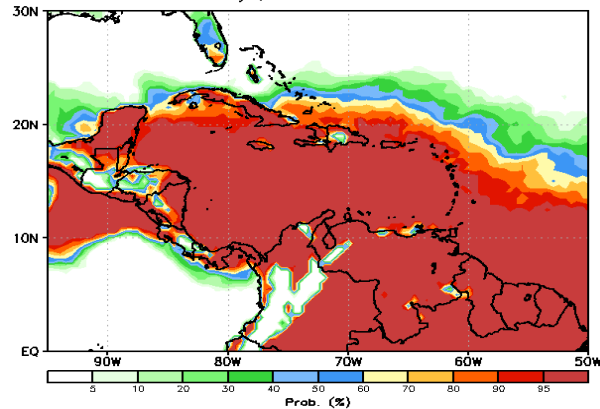


Some upper-level convergence over the windward Islands and near ABC Islands

Tmax Exceedance Probability for at least 2 Consecutive Days

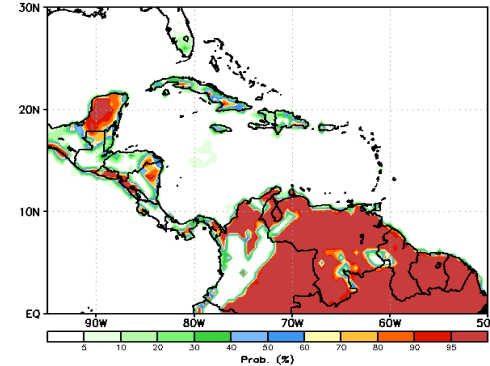
$\geq 35^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 35 Cels.
>=2 Consec. Days, Valid: 20211117 - 20211123



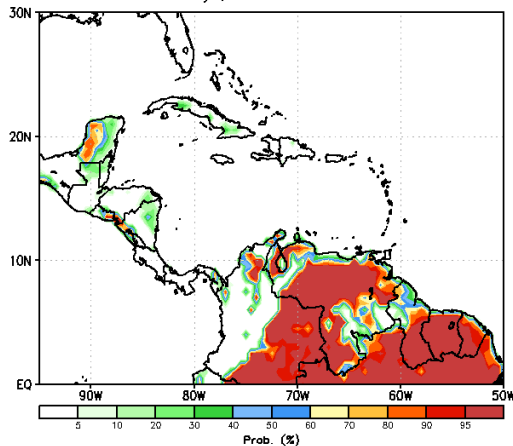
$\geq 37^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 37 Cels.
>=2 Consec. Days, Valid: 20211117 - 20211123



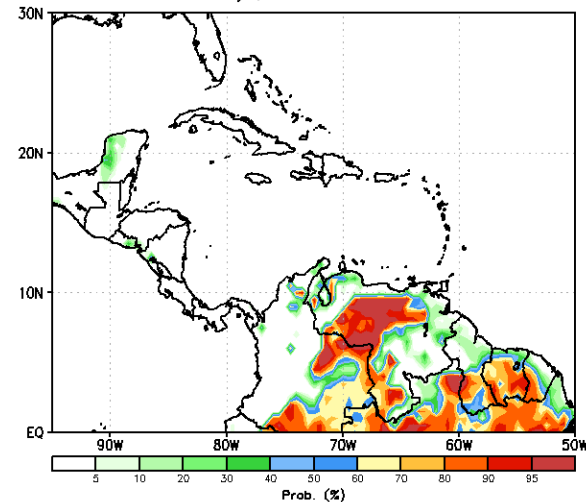
$\geq 39^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 39 Cels.
>=2 Consec. Days, Valid: 20211117 - 20211123



$\geq 41^{\circ}\text{C}$

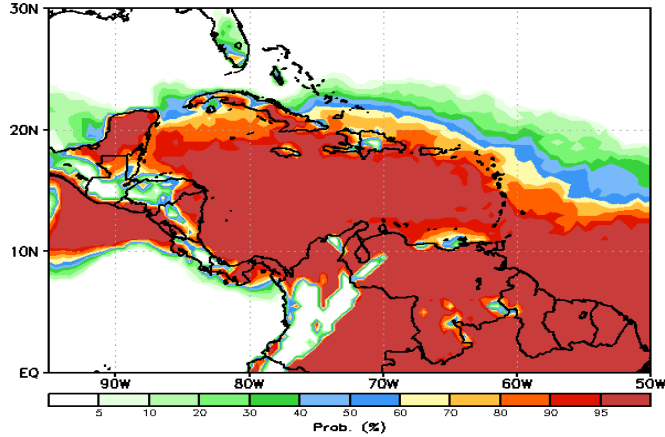
GEFS Week-2 Tmax Exceedance Prob. ≥ 41 Cels.
>=2 Consec. Days, Valid: 20211117 - 20211123



Tmax Exceedance Probability for at least 3 Consecutive Days

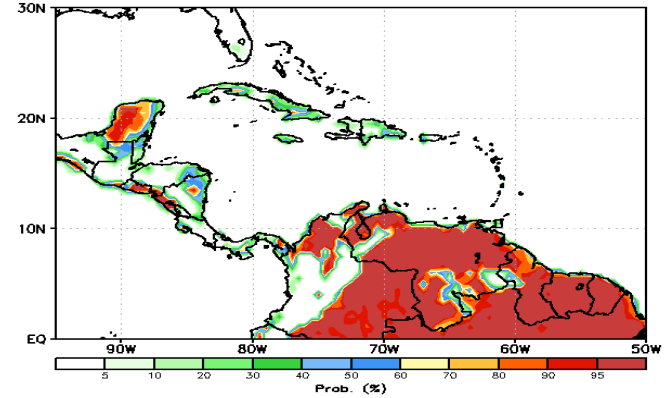
$\geq 35\text{ }^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 35 Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123



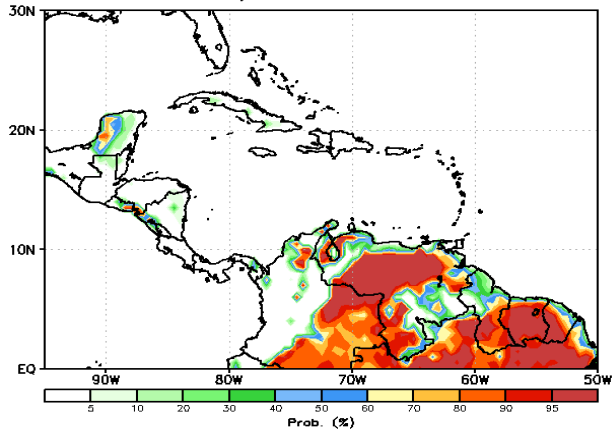
$\geq 37\text{ }^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 37 Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123



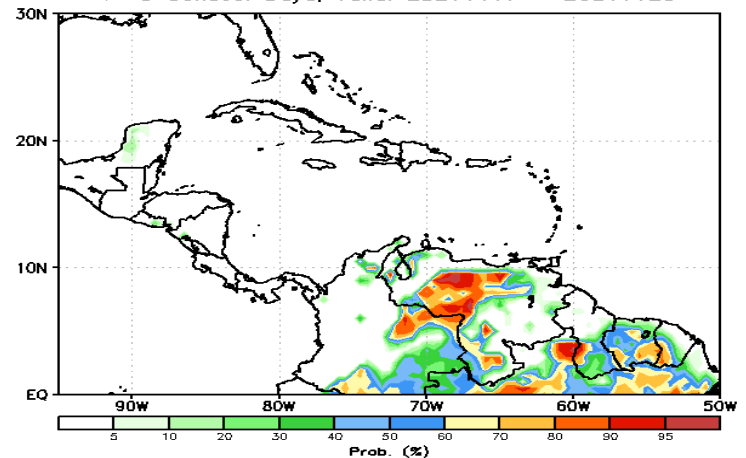
$\geq 39\text{ }^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 39 Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123



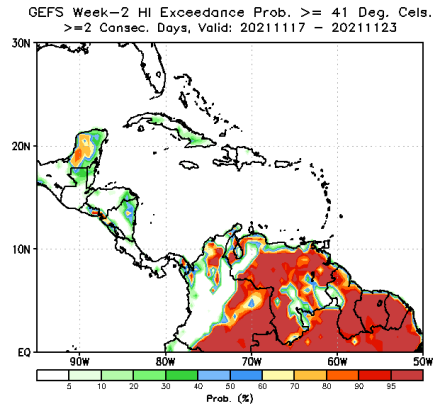
$\geq 41\text{ }^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 41 Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123

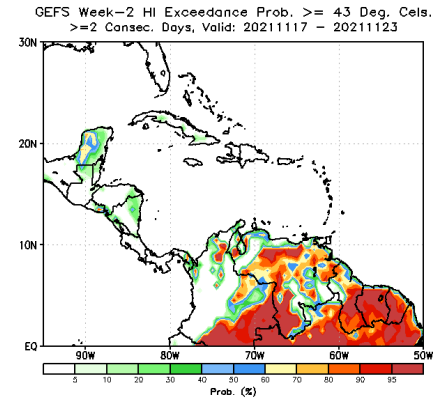


HI Exceedance Probability for at least 2 Consecutive Days

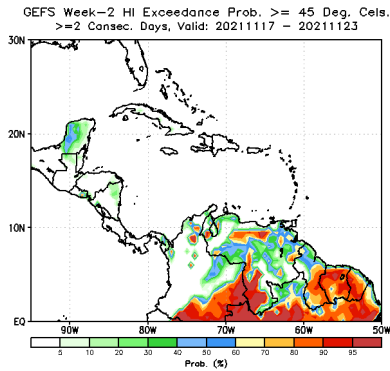
$\geq 41^{\circ}\text{C}$



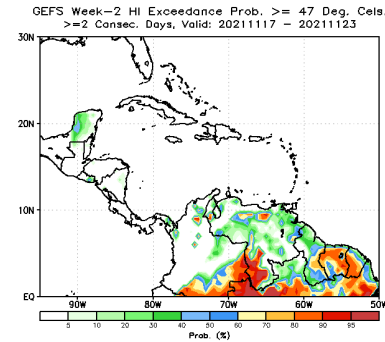
$\geq 43^{\circ}\text{C}$



$\geq 45^{\circ}\text{C}$

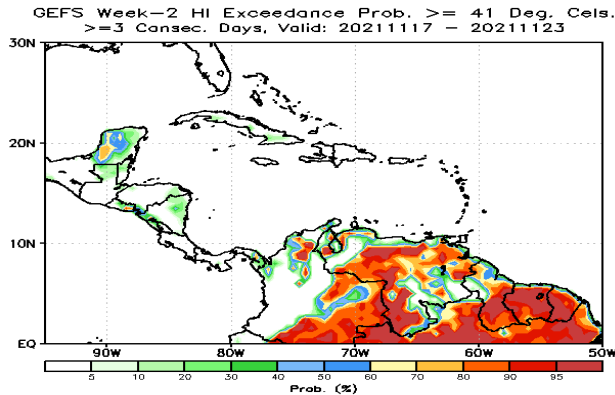


$\geq 47^{\circ}\text{C}$

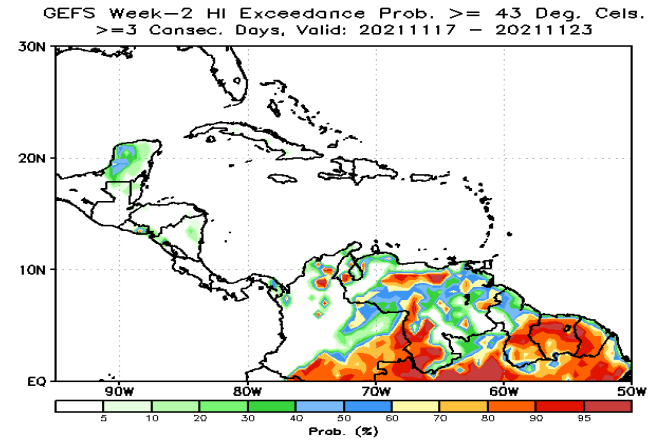


HI Exceedance Probability for at least 3 Consecutive Days

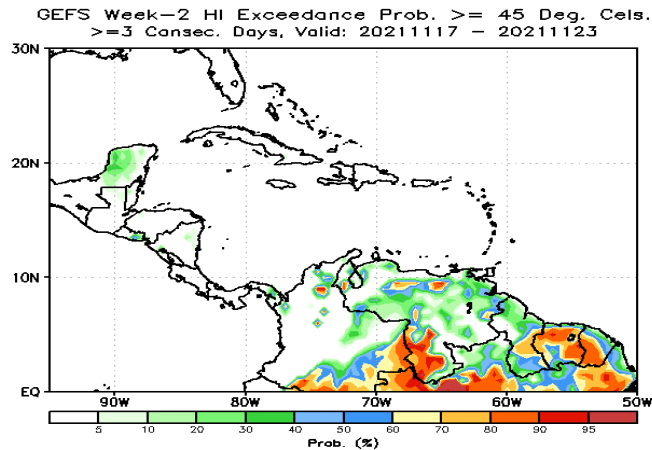
$\geq 41^{\circ}\text{C}$



$\geq 43^{\circ}\text{C}$



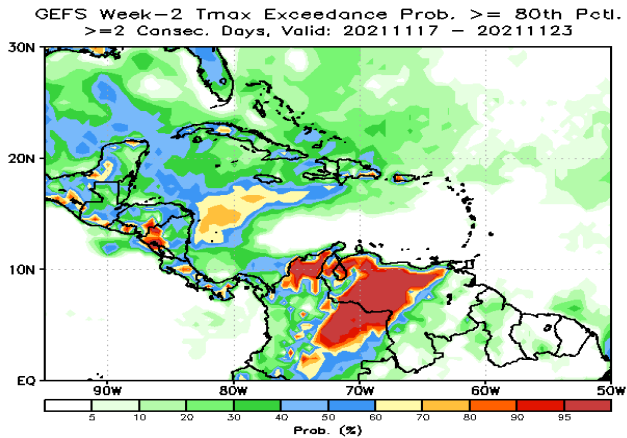
$\geq 45^{\circ}\text{C}$



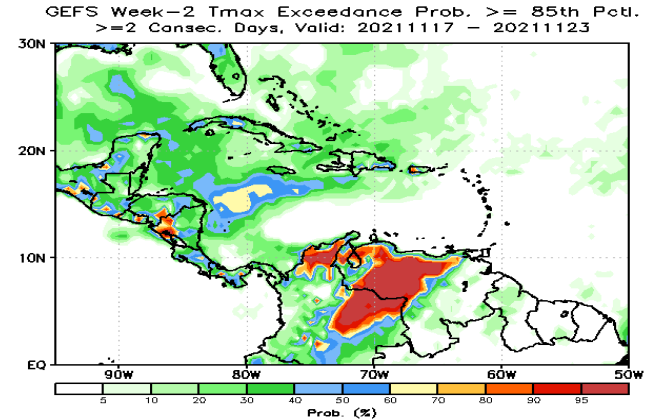
$\geq 47^{\circ}\text{C}$

Tmax Exceedance Probability with respect to Percentiles for at least 2 Consecutive Days

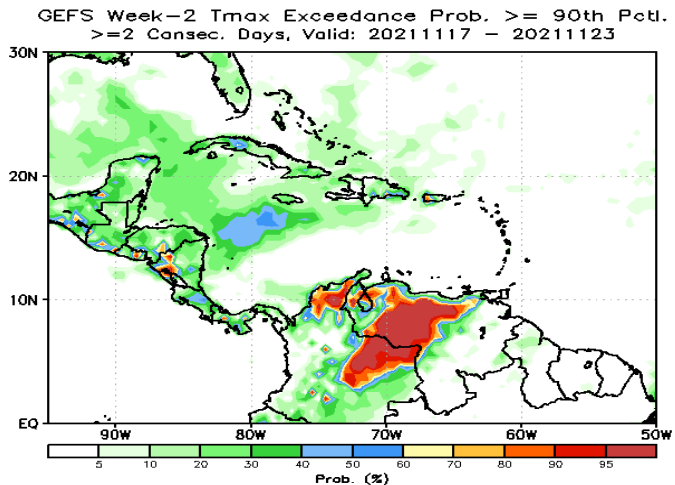
$\geq 80^{\text{th}}$ percentile



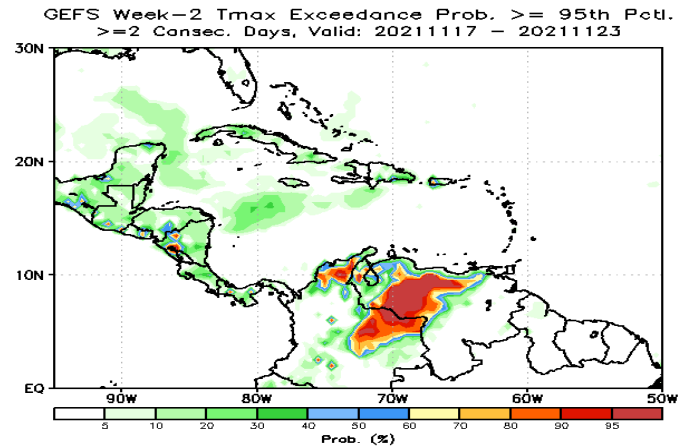
$\geq 85^{\text{th}}$ percentile



$\geq 90^{\text{th}}$ percentile

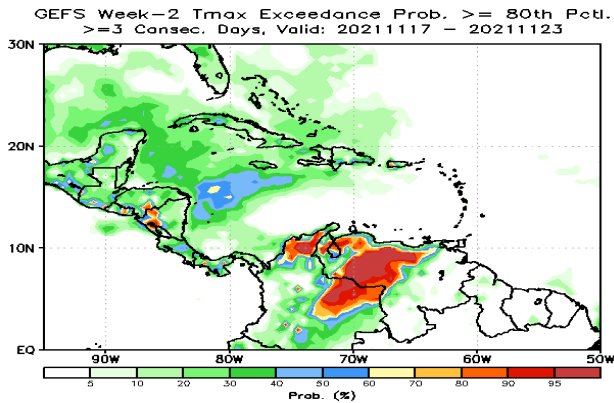


$\geq 95^{\text{th}}$ percentile

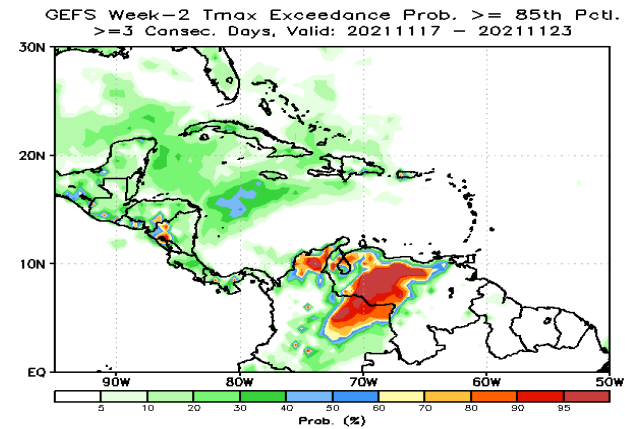


Tmax Exceedance Probability with respect to Percentiles for at least 3 Consecutive Days

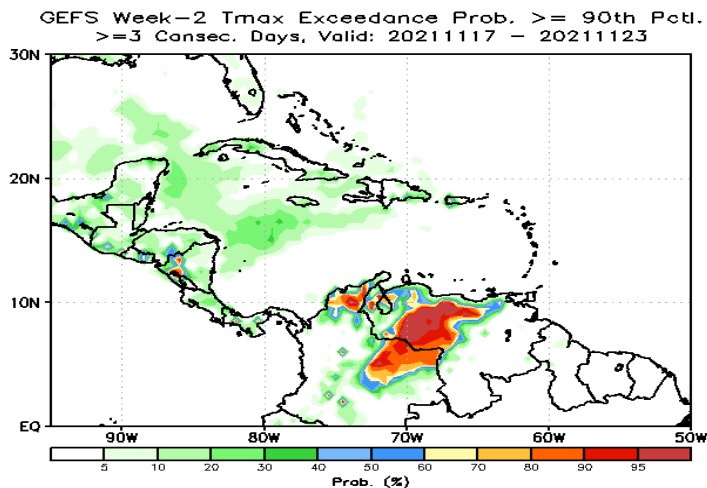
$\geq 80^{\text{th}}$ percentile



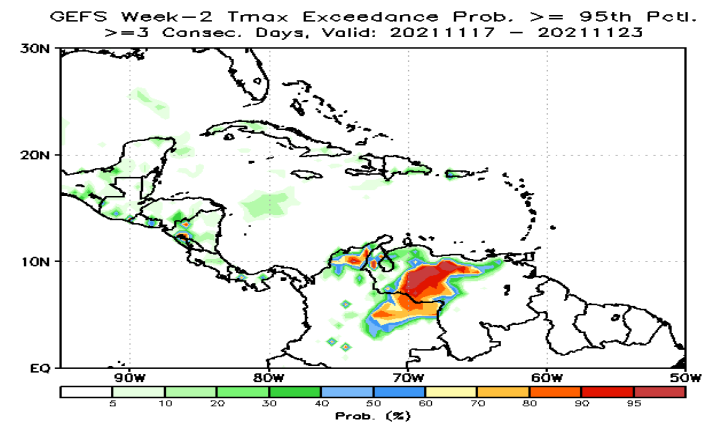
$\geq 85^{\text{th}}$ percentile



$\geq 90^{\text{th}}$ percentile



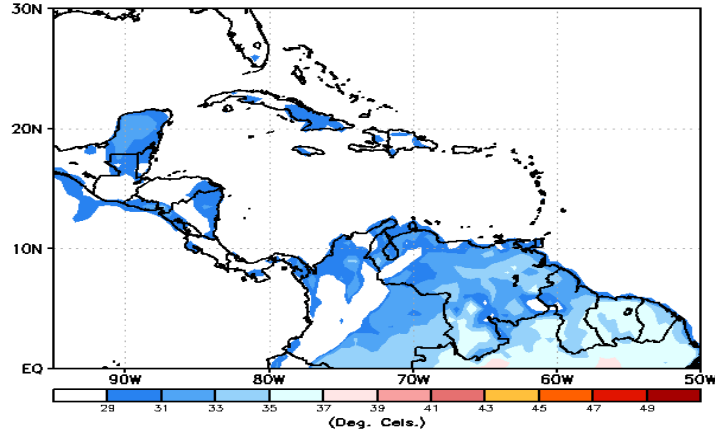
$\geq 95^{\text{th}}$ percentile



Tmax Percentile Climatology

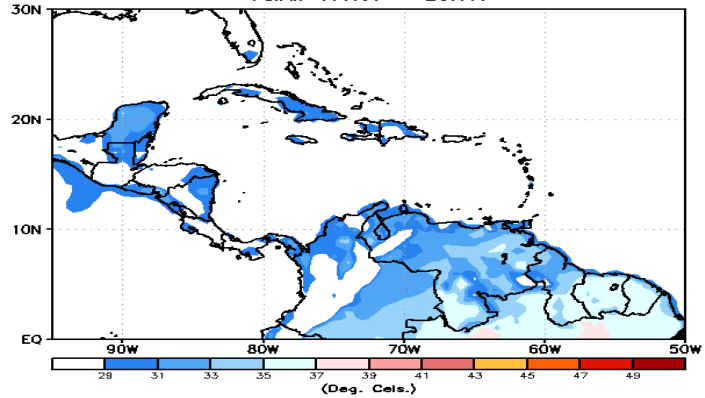
80th percentile

GEFS Tmax 80th . Model Climo.
Valid: 17Nov - 23Nov



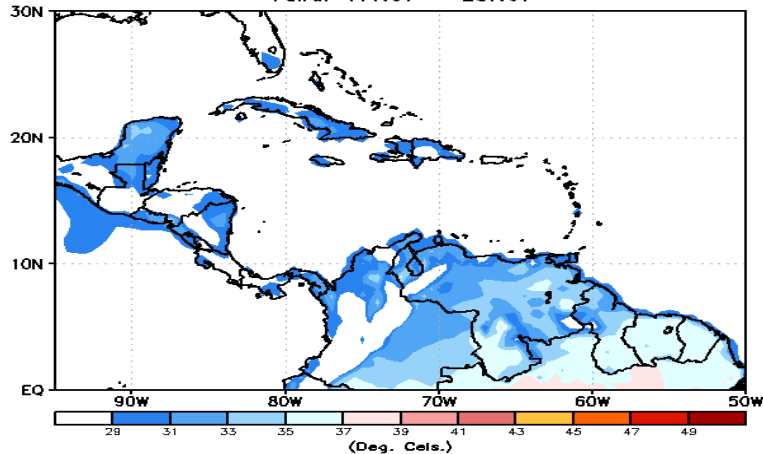
85th percentile

GEFS Tmax 85th . Model Climo.
Valid: 17Nov - 23Nov

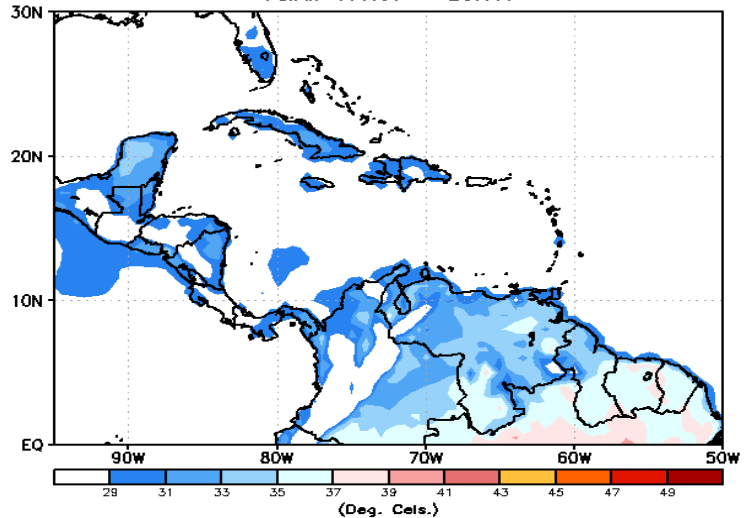


90th percentile

GEFS Tmax 90th . Model Climo.
Valid: 17Nov - 23Nov

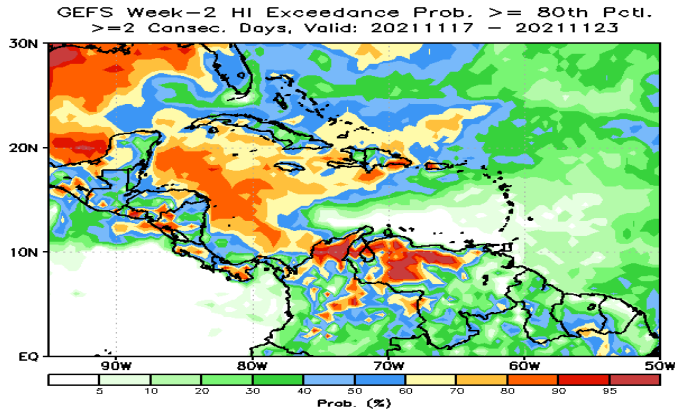


GEFS Tmax 95th . Model Climo.
Valid: 17Nov - 23Nov

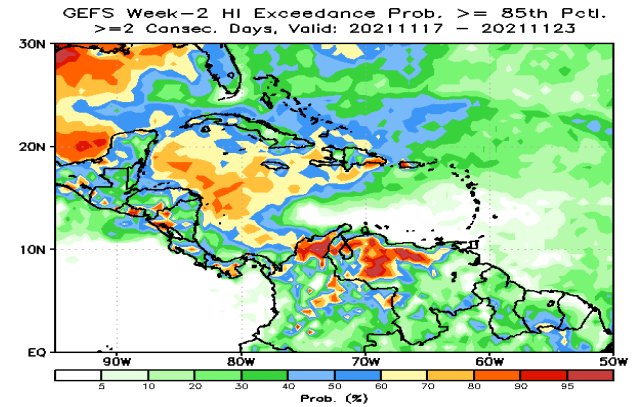


HI Exceedance Probability with respect to Percentiles for at least 2 Consecutive Days

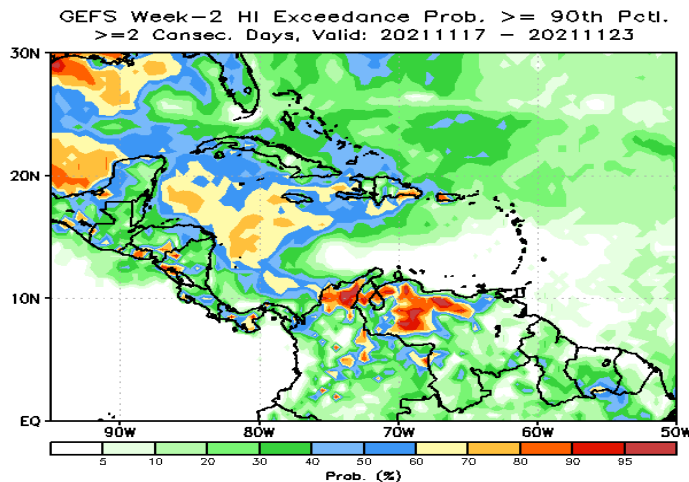
$\geq 80^{\text{th}}$ percentile



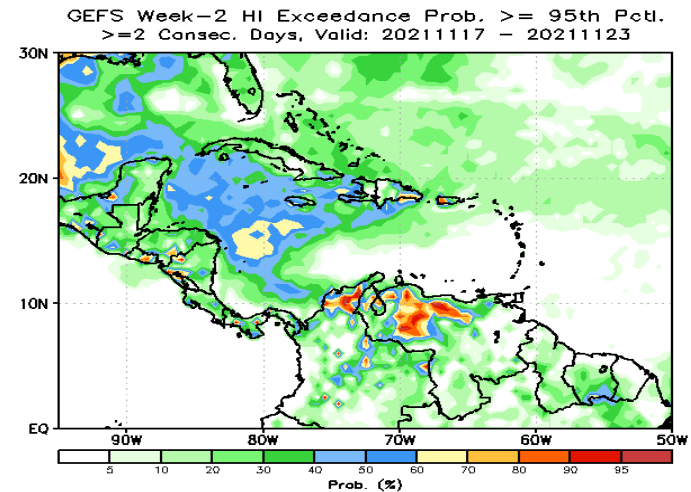
$\geq 85^{\text{th}}$ percentile



$\geq 90^{\text{th}}$ percentile

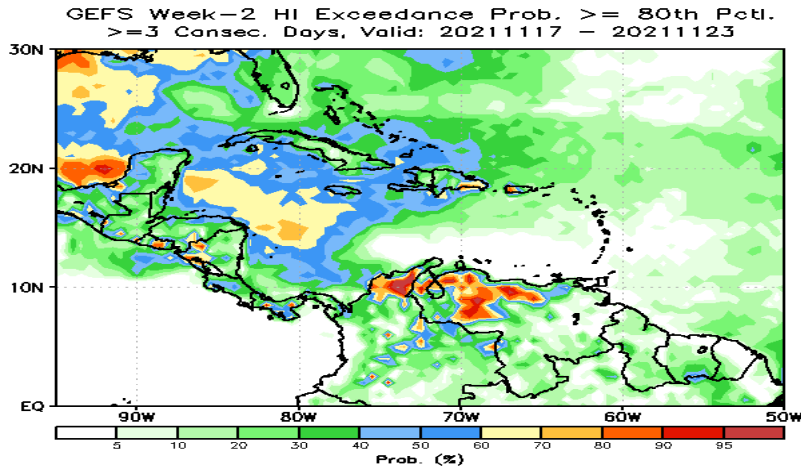


$\geq 95^{\text{th}}$ percentile

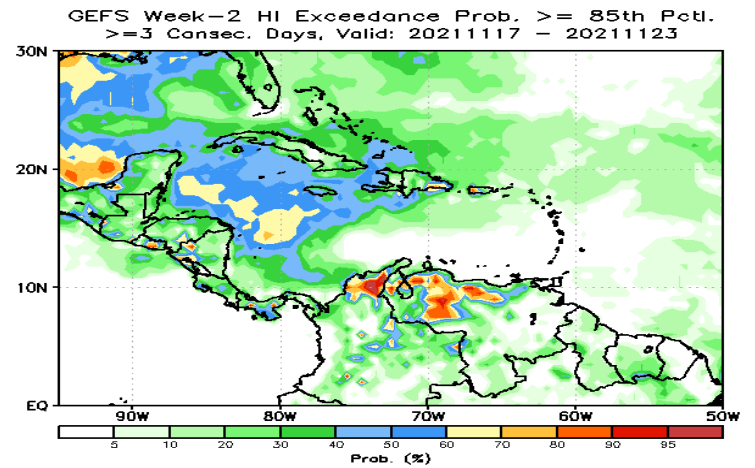


HI Exceedance Probability with respect to Percentiles for at least 3 Consecutive Days

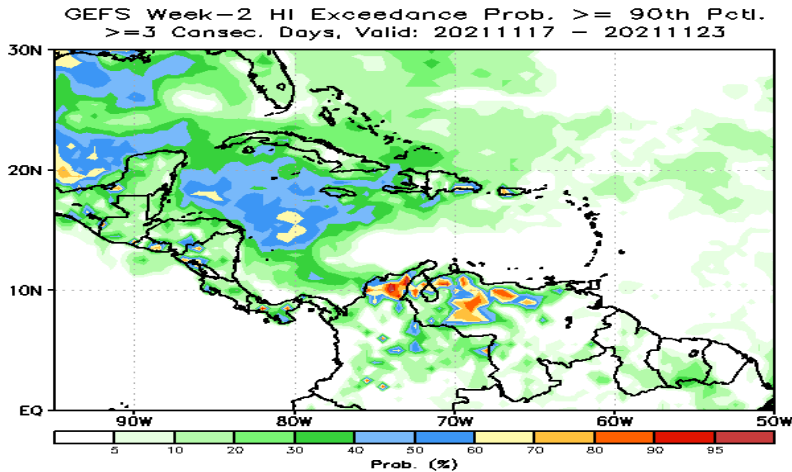
$\geq 80^{\text{th}}$ percentile



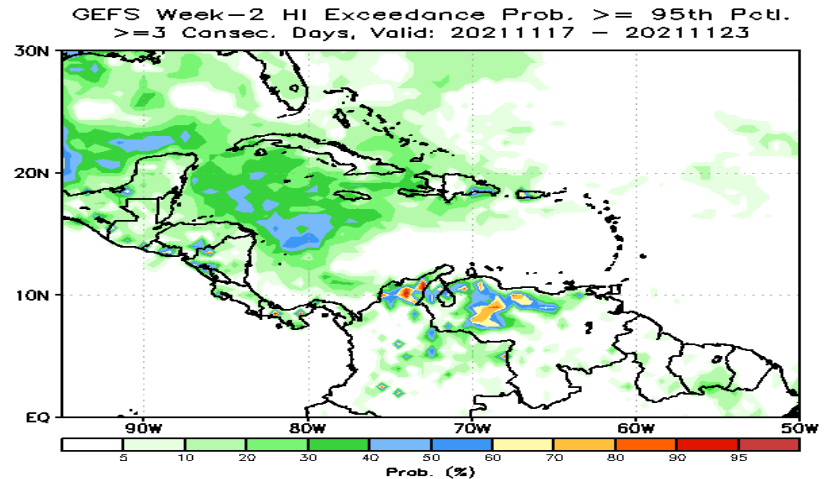
$\geq 85^{\text{th}}$ percentile



$\geq 90^{\text{th}}$ percentile

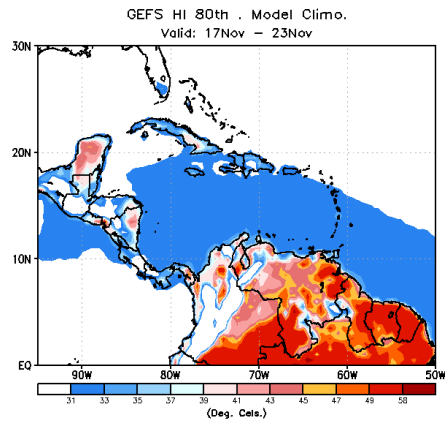


$\geq 95^{\text{th}}$ percentile

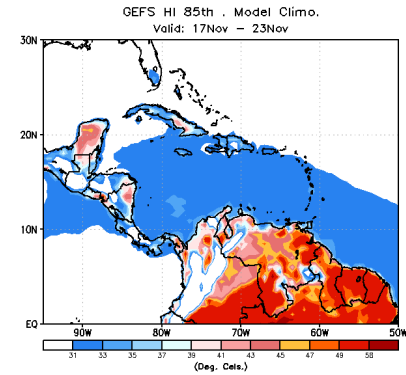


HI Percentile Climatology

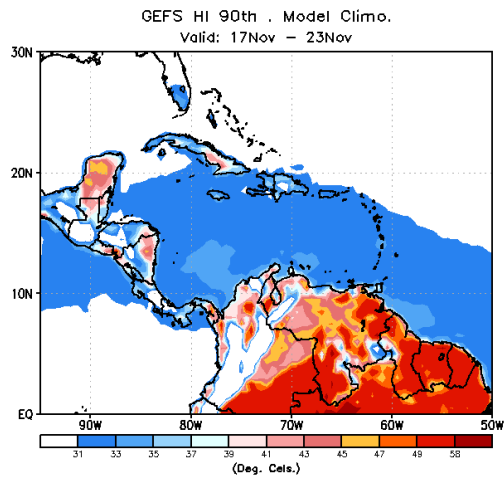
80th percentile



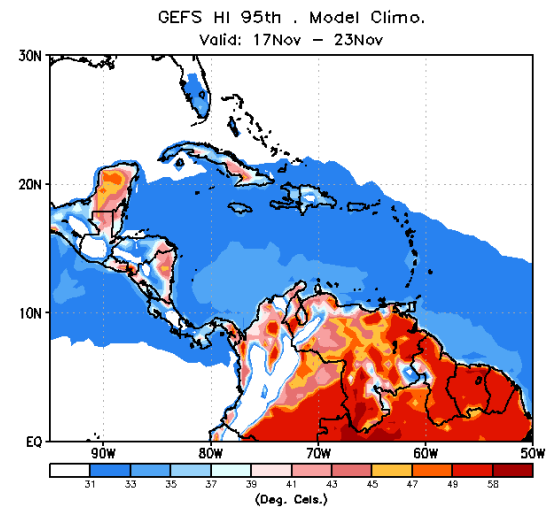
85th percentile



90th percentile



95th percentile



Summary

Anti- cyclonic anomaly over E. US and N. Bahamas= high divergent flow in these areas

Lower than normal wind speed over Greater Antilles= less ventilation. Slightly higher than normal winds speeds over P. Rico, virgin & Leeward Islands and ABC Islands.

Anticyclonic anomaly over W. Caribbean and US cyclonic anomaly over E. Atlantic stretching into Lesser Antilles.

Positive anomaly (subsidence) over the US, Negative anomaly over the Atlantic into Lesser Antilles

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

Exceedance probability forecast=> higher probability exceedance for HI 85 percentile in W. Caribbean and

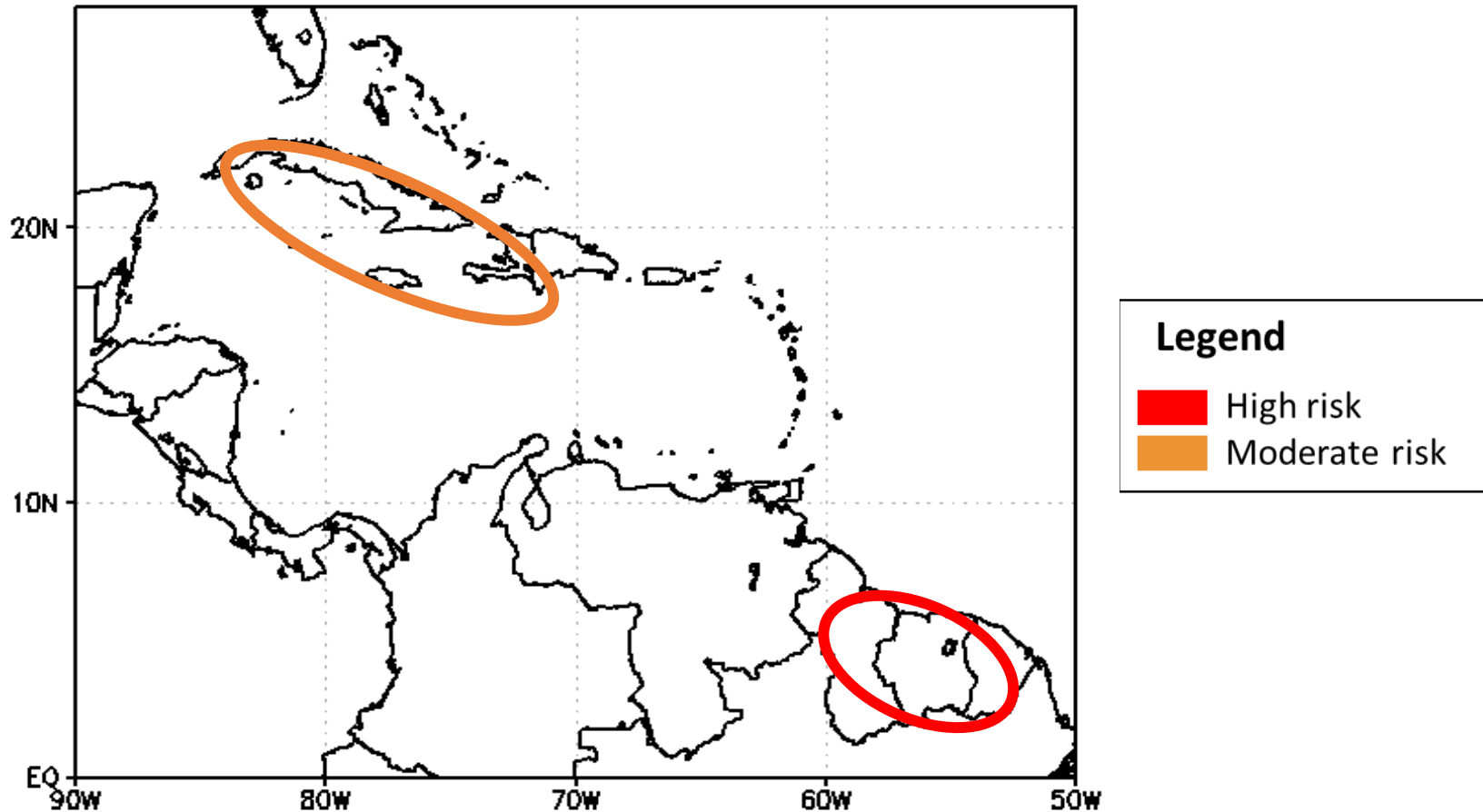
Higher probability of exceedance for $T_{max} \geq 39^{\circ}\text{C}$ in Guyana and Suriname

$T_{max} \geq 35^{\circ}\text{C}$ for rest of region

Higher probability of exceedance for $HI > 47^{\circ}\text{C}$ in Suriname and French Guyana

$HI > 45^{\circ}\text{C}$ in Guyana

Excessive Heat Outlook



There is a high risk for the Guianas because there is higher exceedance of probability for Tmax and HI. Moderate risk for G. Antilles due to calmer winds less ventilation.