

Second WMO RCC-Washington International Training Workshop

**Real-time week-2 extreme
temperature outlook**

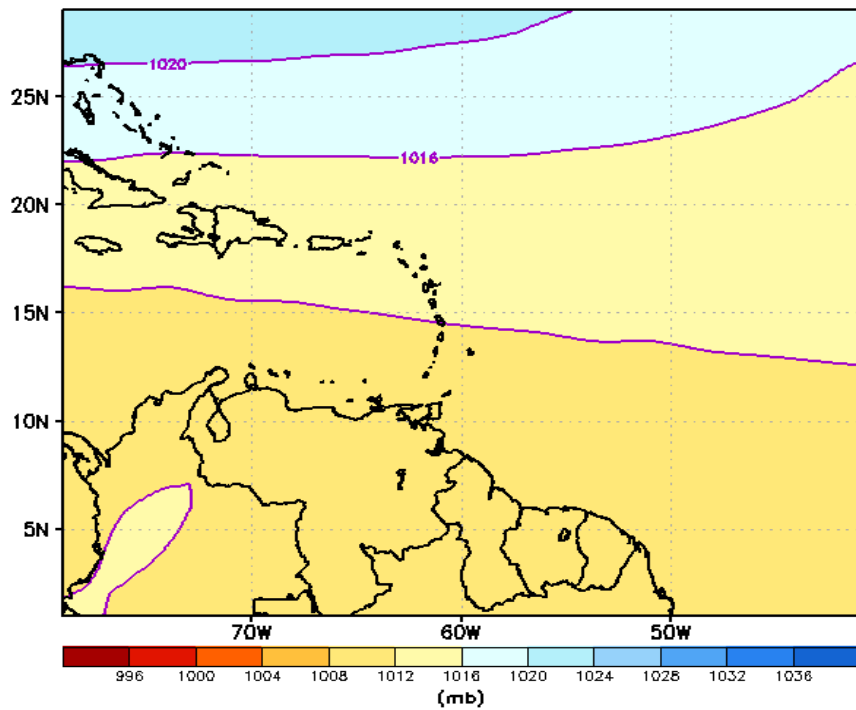
Lesser Antilles

8 – 10 November 2021

Mean Sea Level Pressure

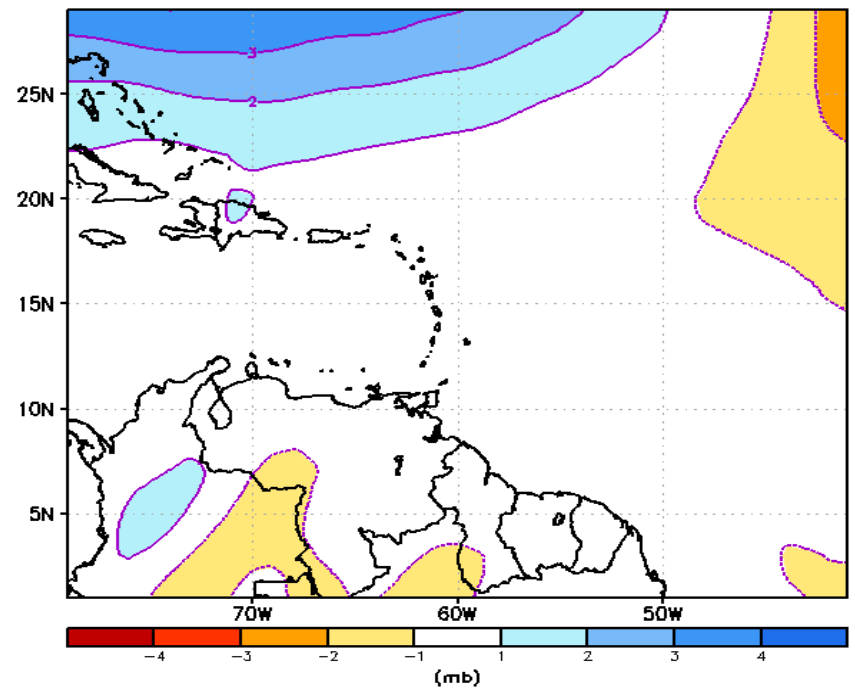
Total

GEFS Week-2 Mean Sea Level Pressure Total
Valid: 20210820 - 20211123



Anomaly

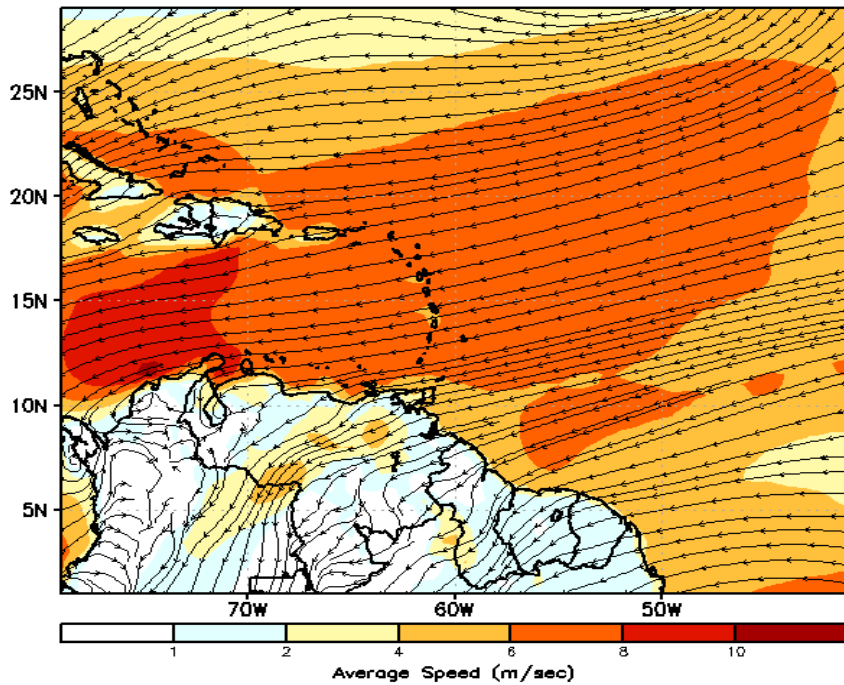
GEFS Week-2 Mean Sea Level Pressure Anomaly
Valid: 20210820 - 20211123



10m Wind

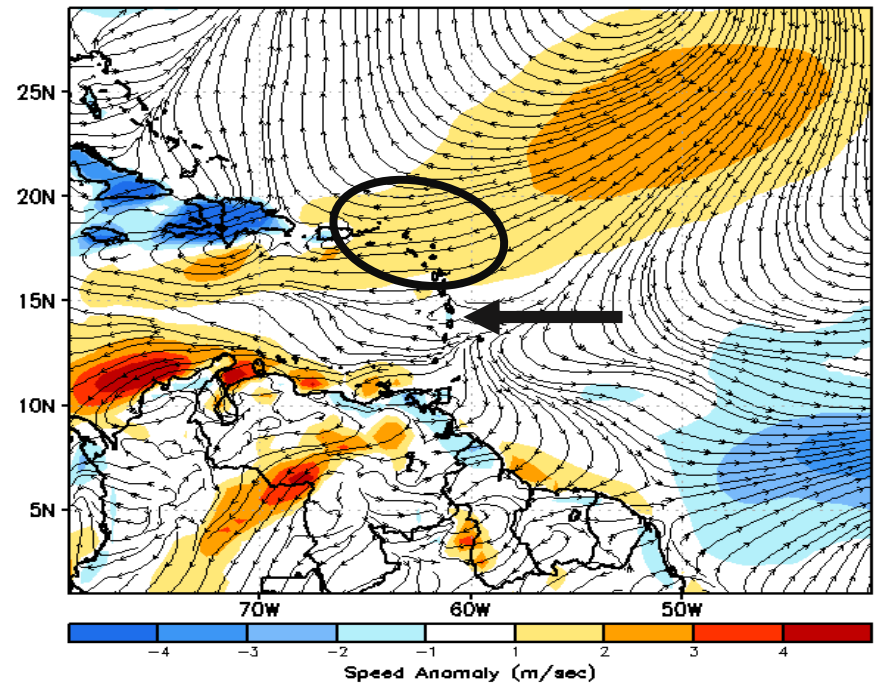
Total

GEFS Week-2 10m Wind Speed Total
Valid: 20210820 - 20211123



Anomaly

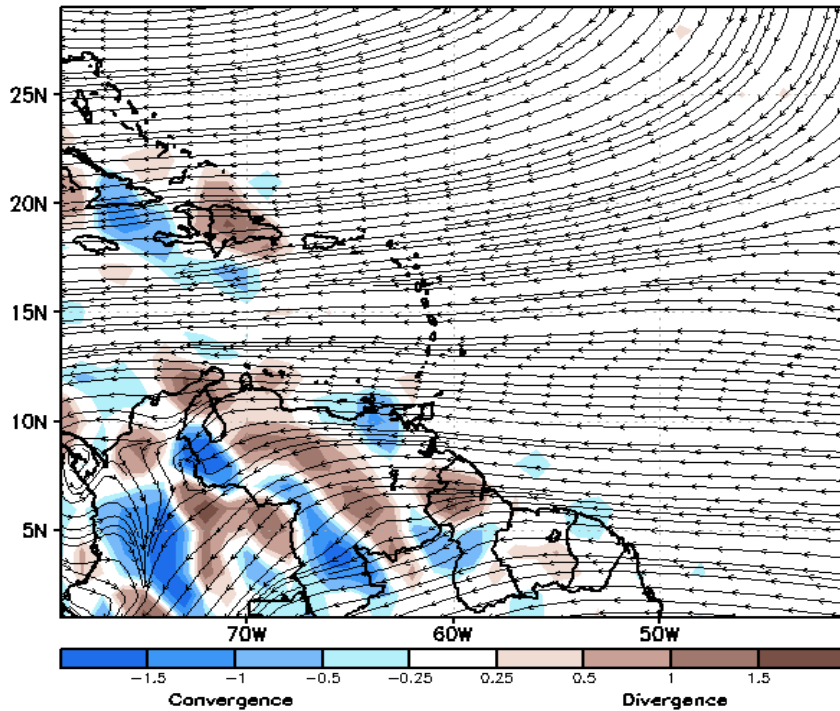
GEFS Week-2 10m Wind Speed Anomaly
Valid: 20210820 - 20211123



850-hPa Wind

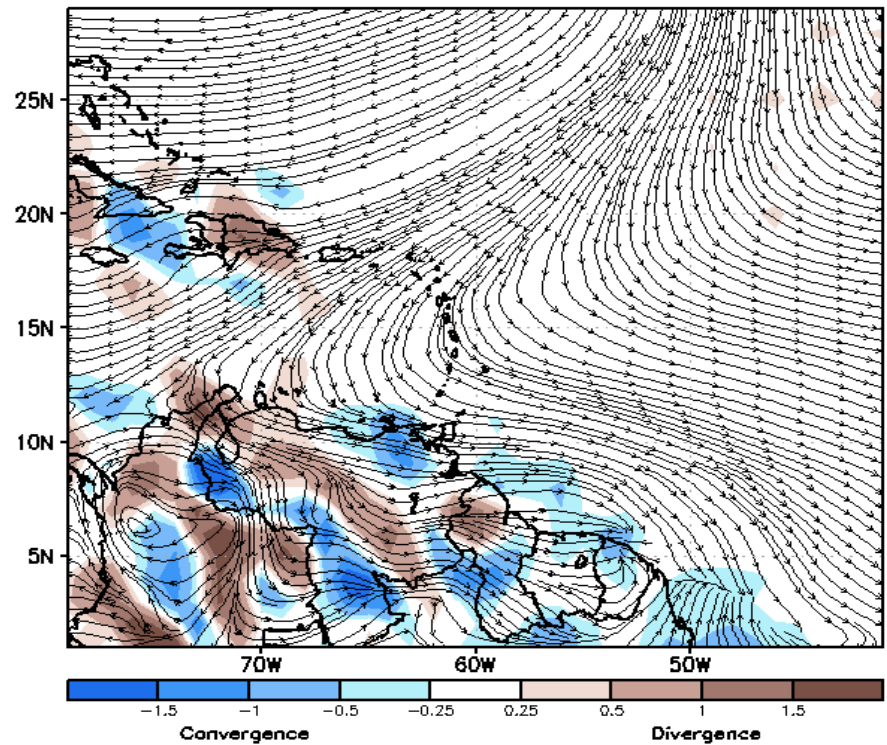
Total

GEFS Week-2 850-hPa Divergence and Wind Total
Valid: 20210820 - 20211123



Anomaly

GEFS Week-2 850-hPa Divergence and Wind Anomaly
Valid: 20210820 - 20211123



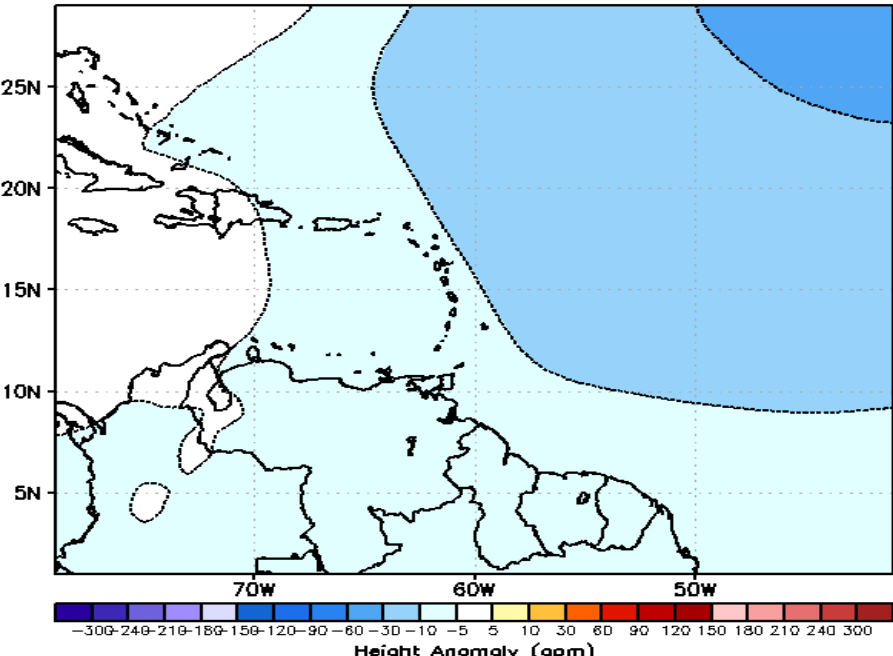
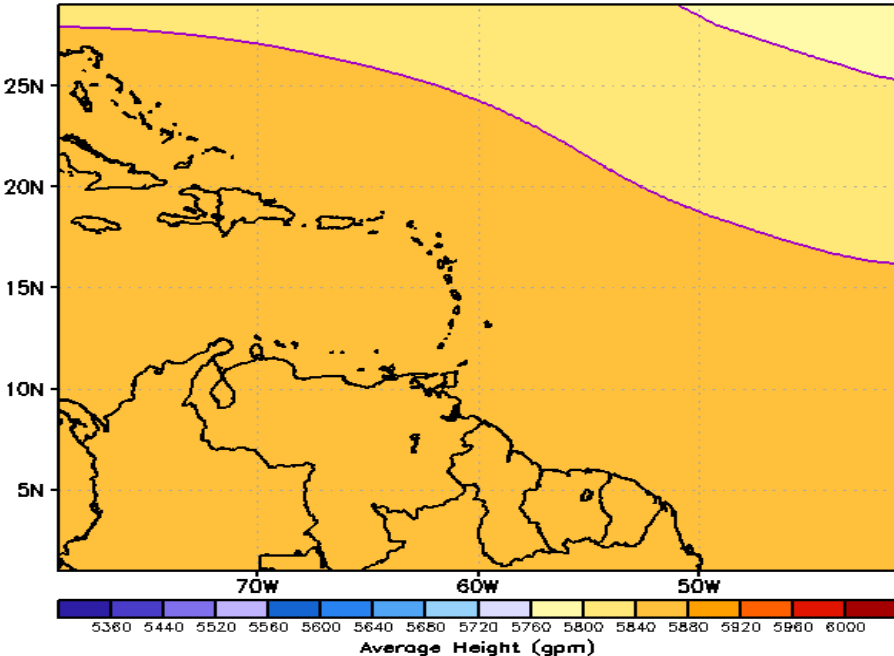
500-hPa Height

Total

Anomaly

GEFS Week-2 500-hPa Geo-Potential Height Total
Valid: 20210820 - 20211123

GEFS Week-2 500-hPa Geo-Potential Height Anomaly
Valid: 20210820 - 20211123

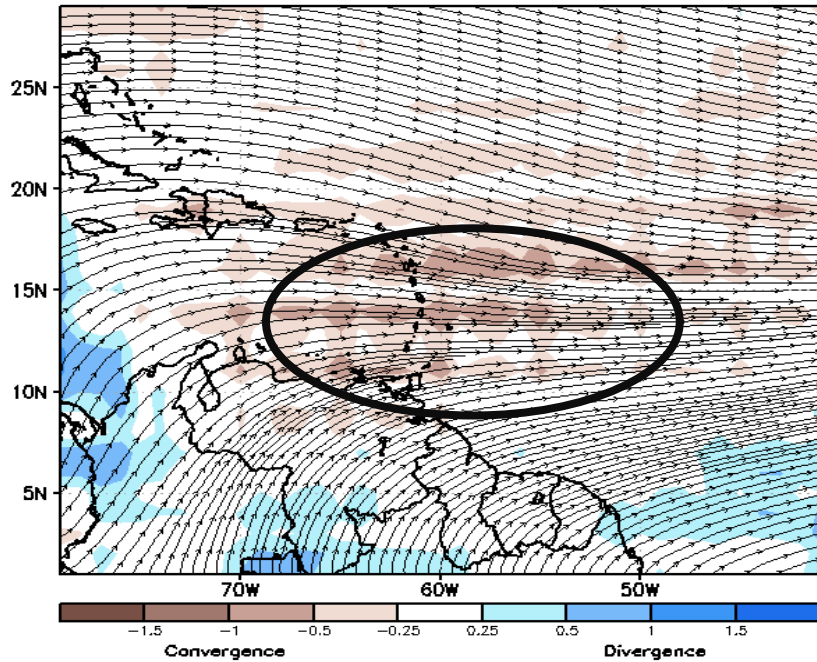


200-hPa Wind

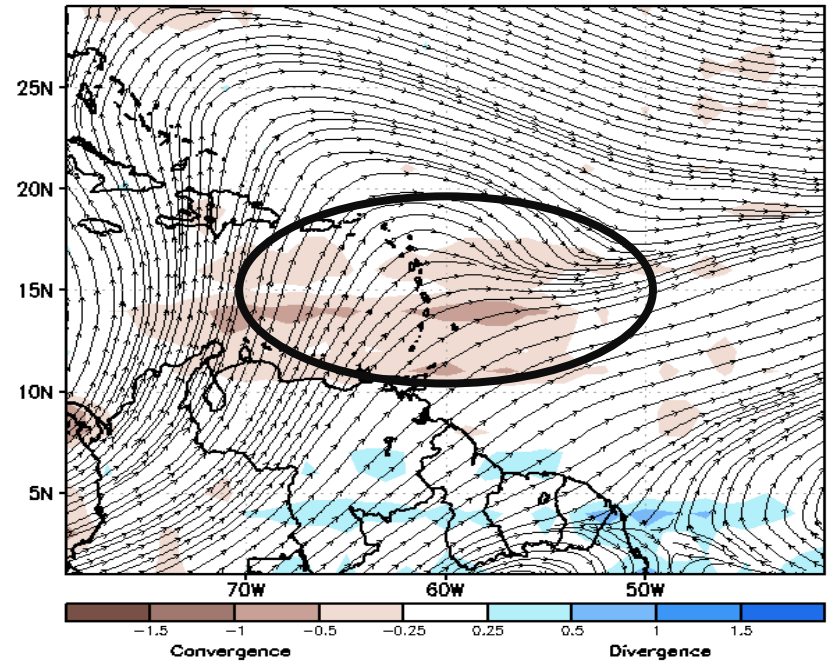
Total

Anomaly

GEFS Week-2 200-hPa Divergence and Wind Total
Valid: 20210820 - 20211123



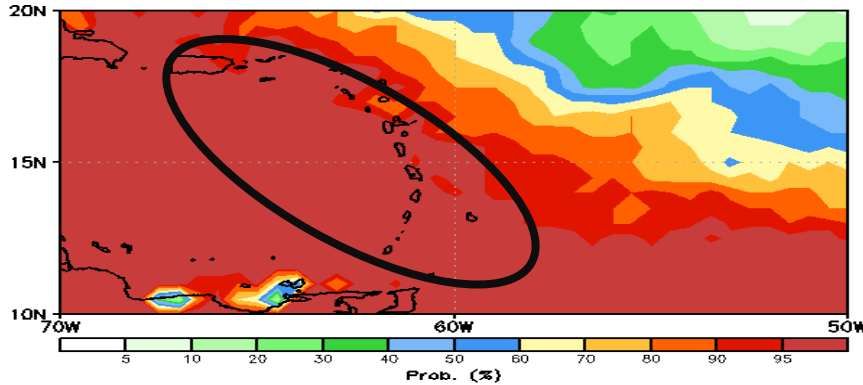
GEFS Week-2 200-hPa Divergence and Wind Anomaly
Valid: 20210820 - 20211123



Tmax Exceedance Probability for at least 2 Consecutive Days

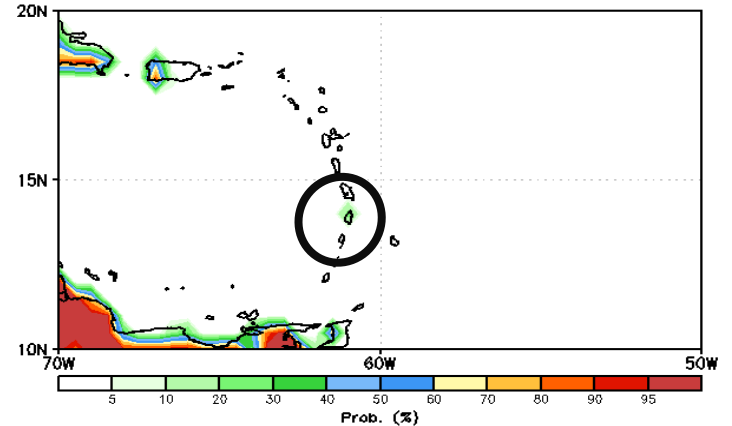
$\geq 35^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 35 Cels.
>=2 Consec. Days, Valid: 20210820 - 20211123



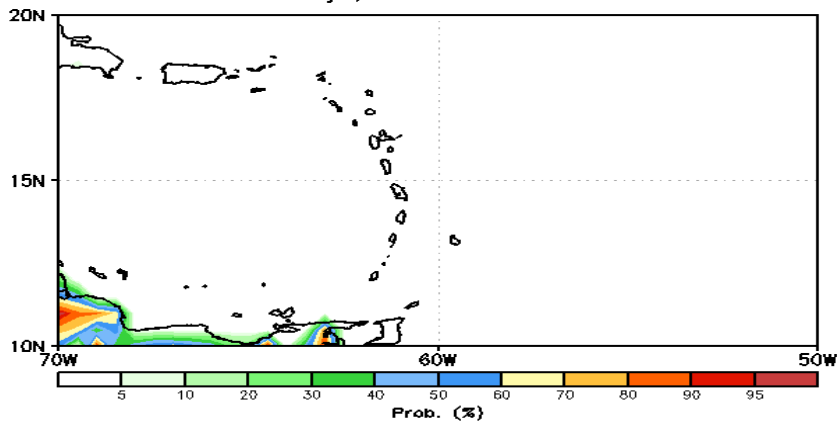
$\geq 37^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 37 Cels.
>=2 Consec. Days, Valid: 20210820 - 20211123



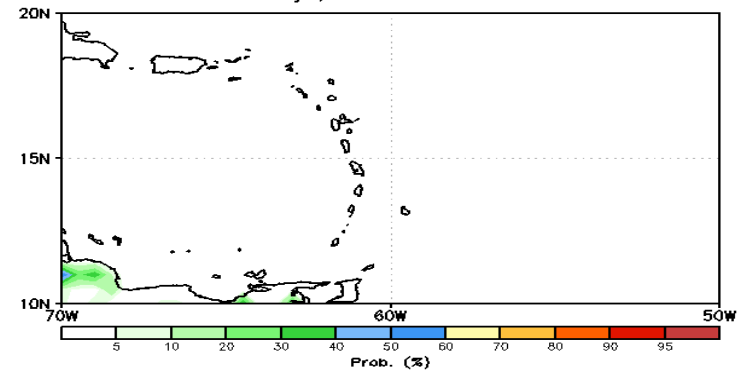
$\geq 39^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 39 Cels.
>=2 Consec. Days, Valid: 20210820 - 20211123



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

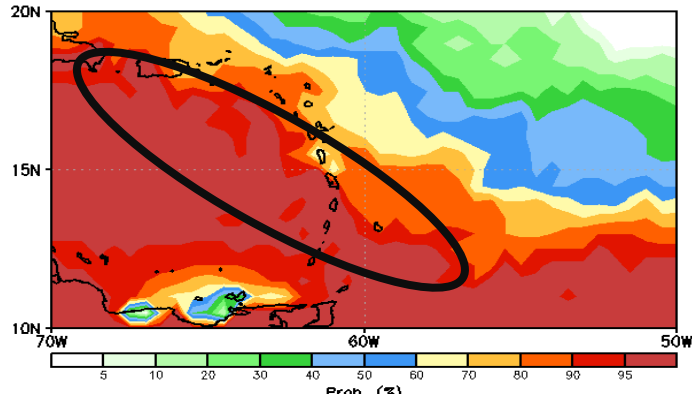
GEFS Week-2 Tmax Exceedance Prob. ≥ 41 Cels.
>=2 Consec. Days, Valid: 20210820 - 20211123



Tmax Exceedance Probability for at least 3 Consecutive Days

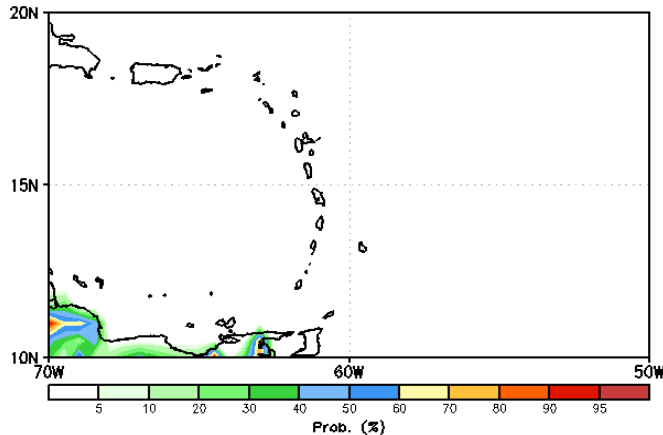
$\geq 35\text{ }^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 35 Cels.
>=3 Consec. Days, Valid: 20210820 - 20211123



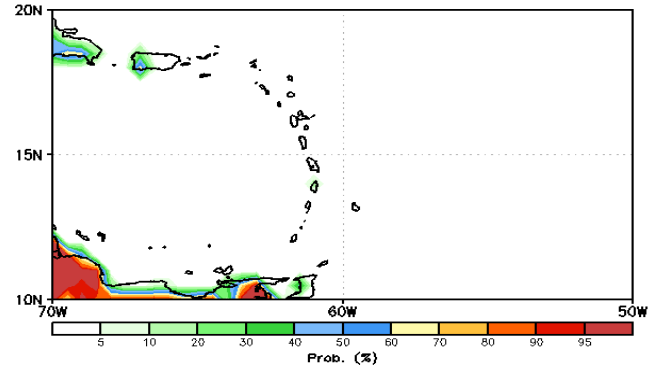
$\geq 39\text{ }^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 39 Cels.
>=3 Consec. Days, Valid: 20210820 - 20211123



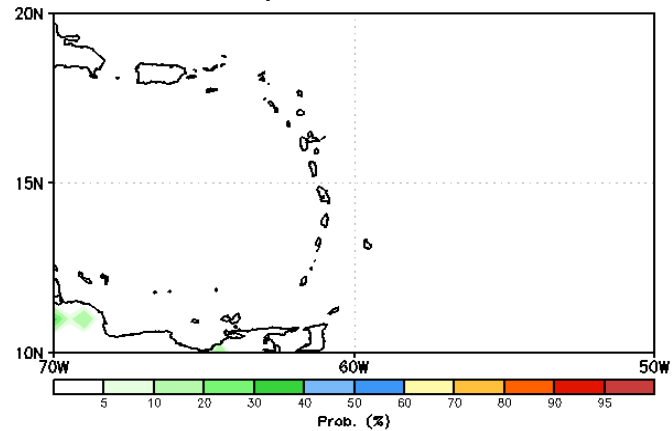
$\geq 37\text{ }^{\circ}\text{C}$

GEFS Week-2 Tmax Exceedance Prob. ≥ 37 Cels.
>=3 Consec. Days, Valid: 20210820 - 20211123



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

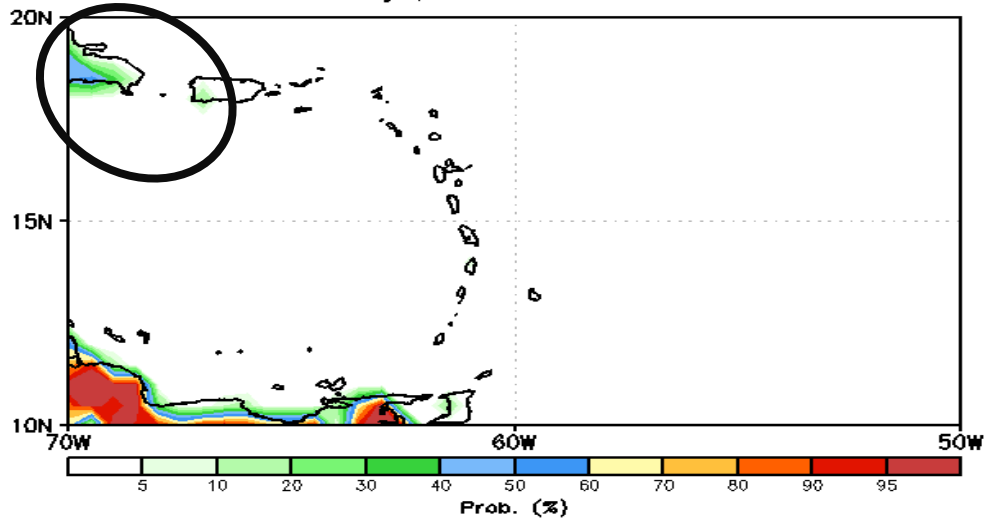
GEFS Week-2 Tmax Exceedance Prob. ≥ 41 Cels.
>=3 Consec. Days, Valid: 20210820 - 20211123



HI Exceedance Probability for at least 2 Consecutive Days

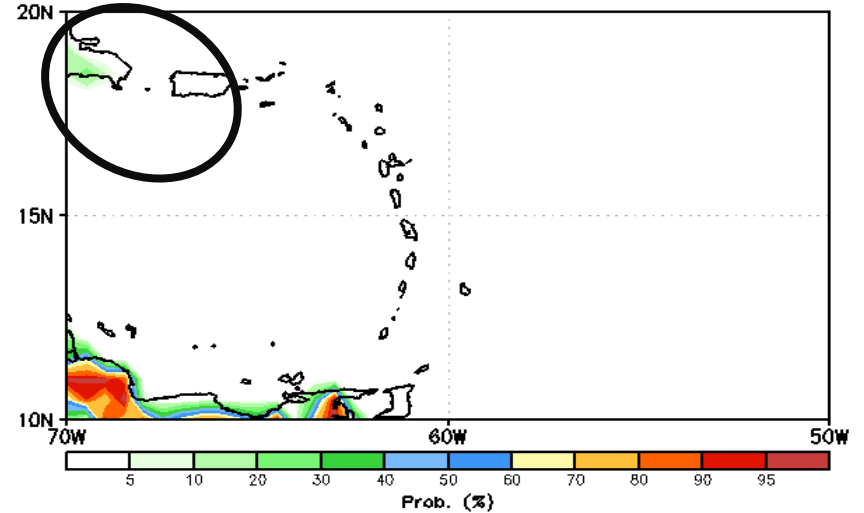
$\geq 37^{\circ}\text{C}$

GEFS Week-2 HI Exceedance Prob. ≥ 37 Deg. Cels.
 ≥ 2 Consec. Days, Valid: 20210820 - 20211123



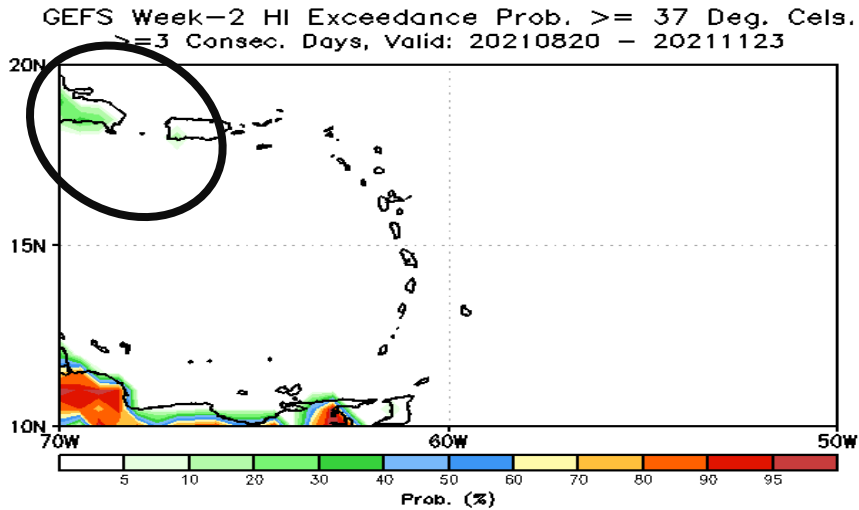
$\geq 39^{\circ}\text{C}$

GEFS Week-2 HI Exceedance Prob. ≥ 39 Deg. Cels.
 ≥ 2 Consec. Days, Valid: 20210820 - 20211123

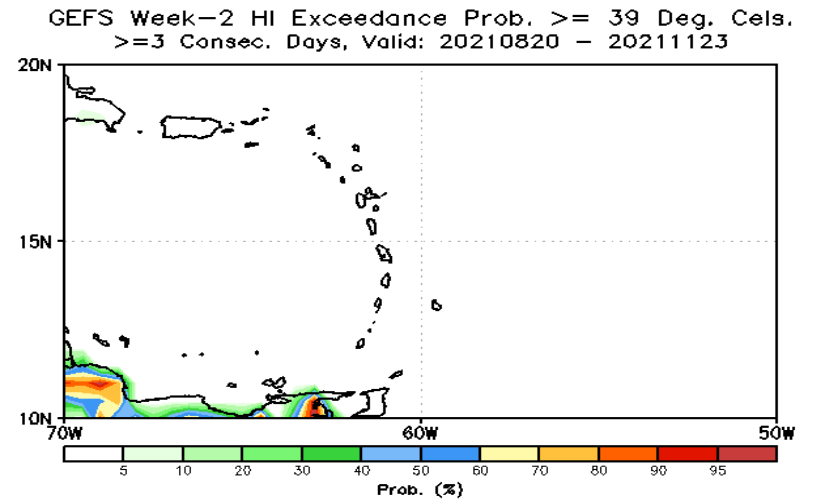


HI Exceedance Probability for at least 3 Consecutive Days

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

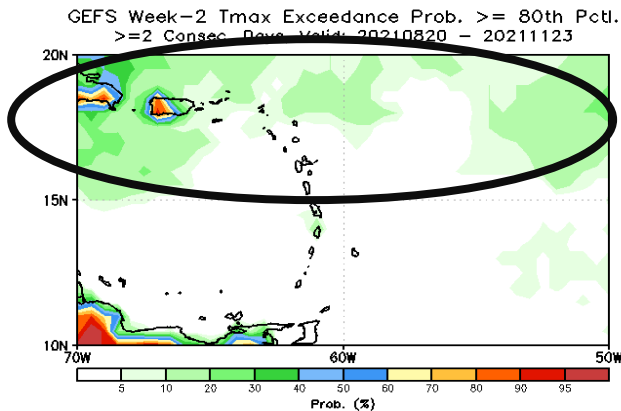


$\geq 39^{\circ}\text{C}$

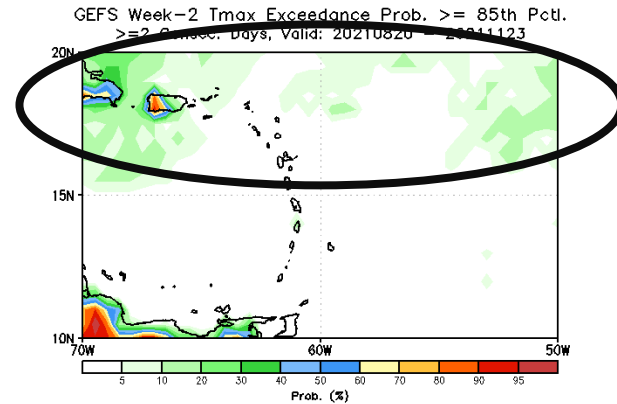


Tmax Exceedance Probability with respect to Percentiles for at least 2 Consecutive Days

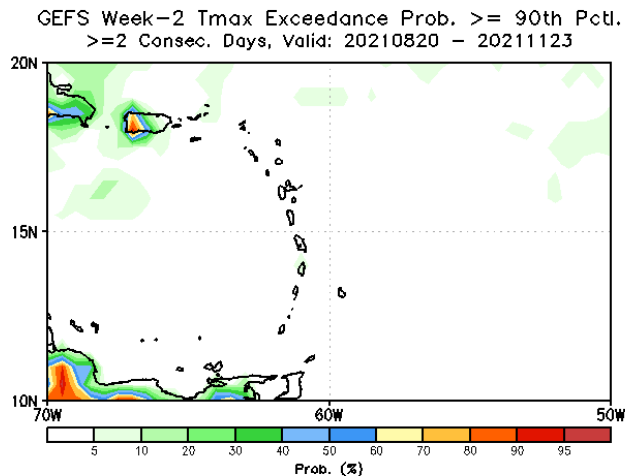
$\geq 80^{\text{th}}$ percentile



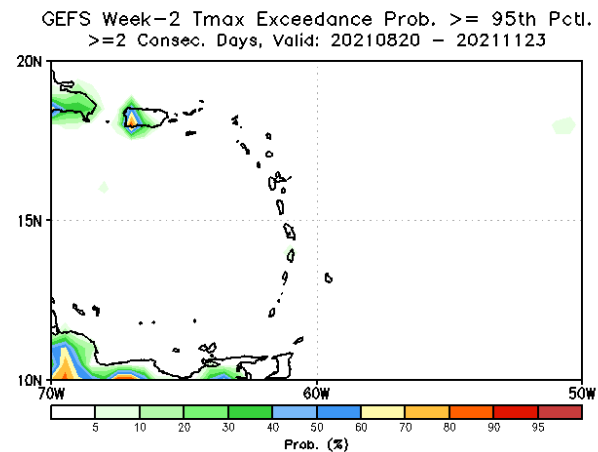
$\geq 85^{\text{th}}$ percentile



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

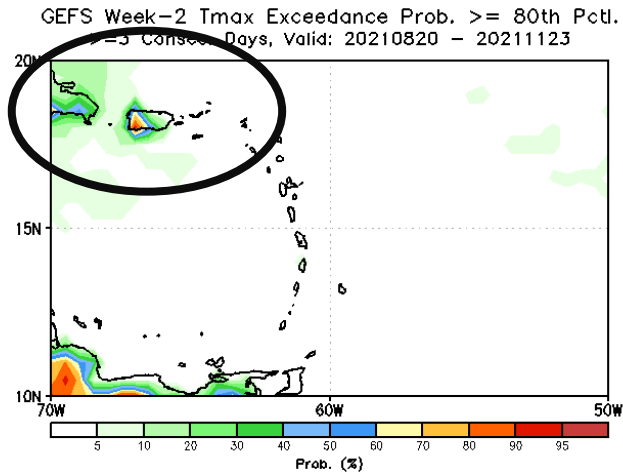


$\geq 95^{\text{th}}$ percentile

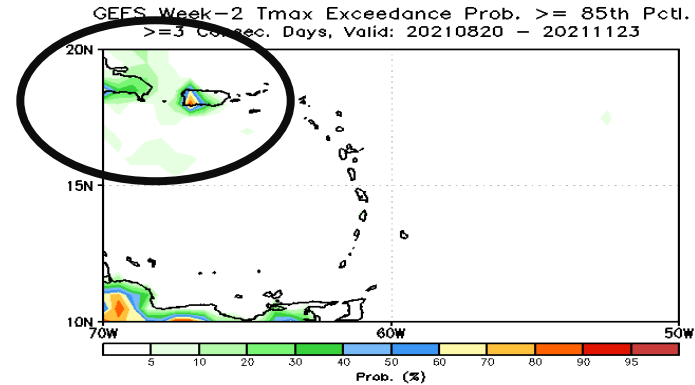


Tmax Exceedance Probability with respect to Percentiles for at least 3 Consecutive Days

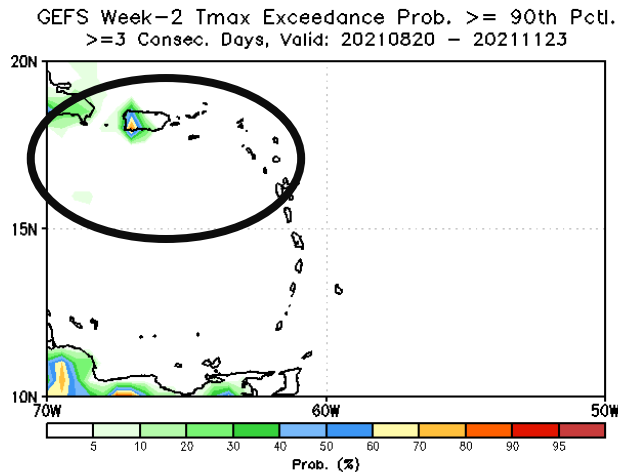
$\geq 80^{\text{th}}$ percentile



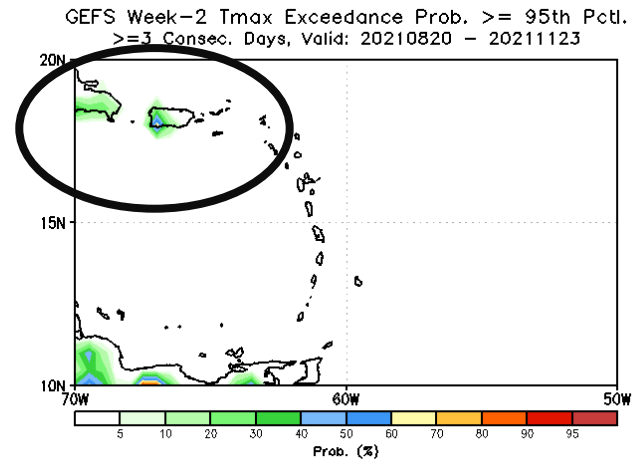
$\geq 85^{\text{th}}$ percentile



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

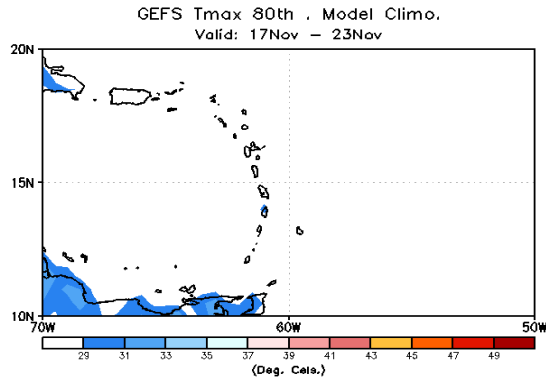


$\geq 95^{\text{th}}$ percentile

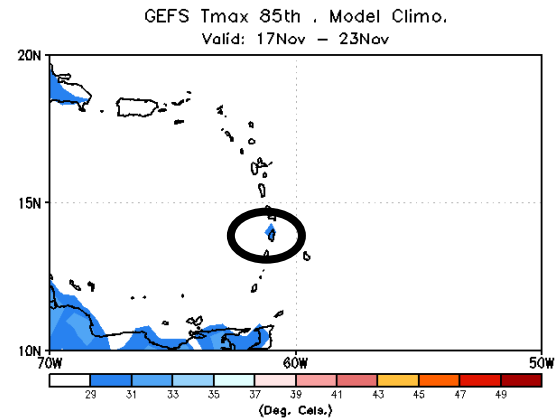


Tmax Percentile Climatology

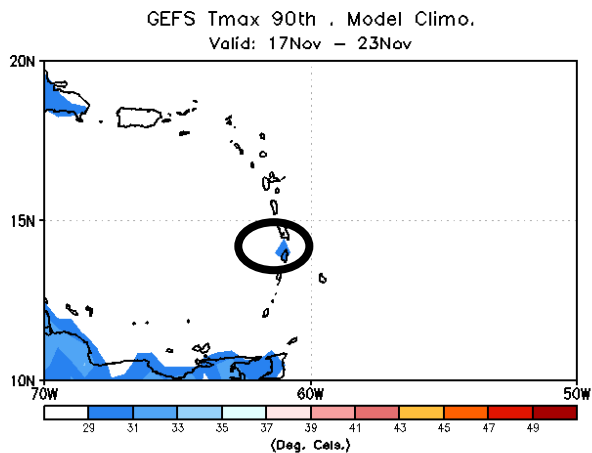
80th percentile



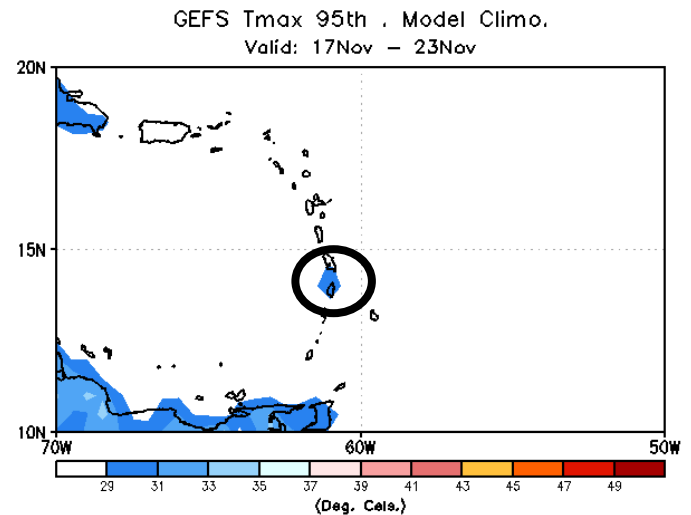
85th percentile



90th percentile

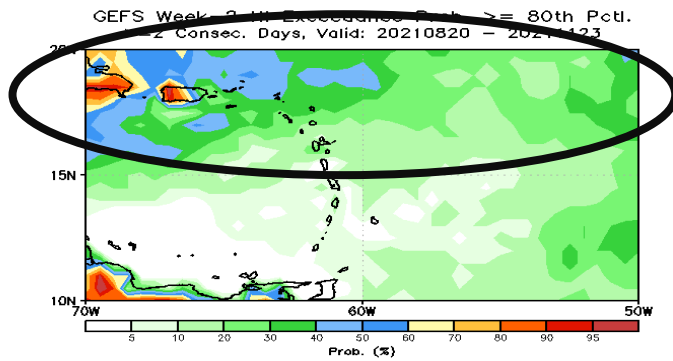


95th percentile

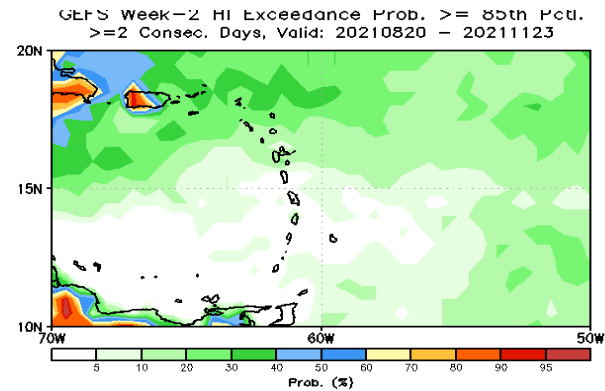


HI Exceedance Probability with respect to Percentiles for at least 2 Consecutive Days

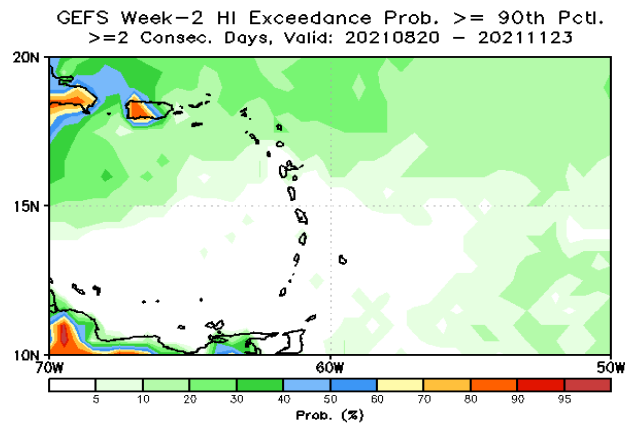
$\geq 80^{\text{th}}$ percentile



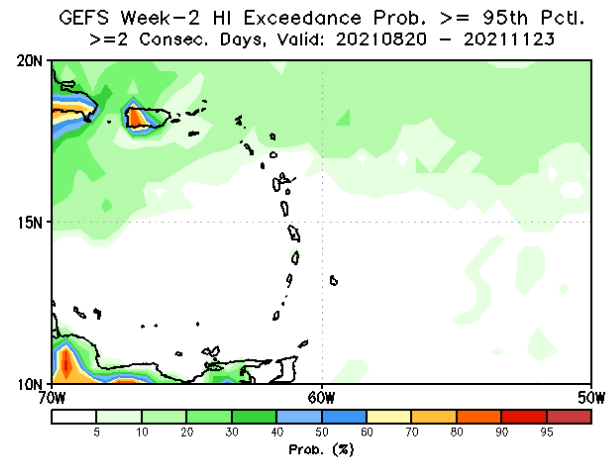
$\geq 85^{\text{th}}$ percentile



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

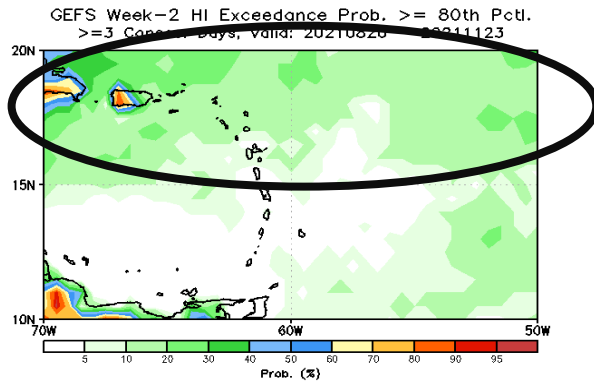


$\geq 95^{\text{th}}$ percentile

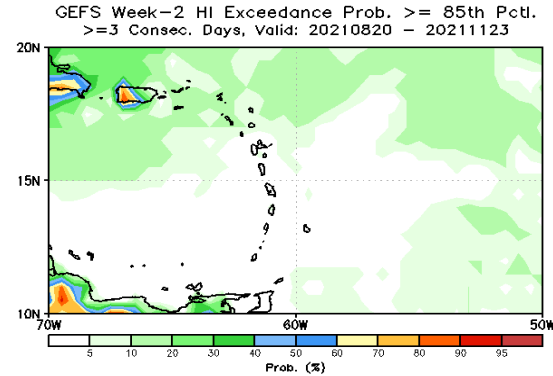


HI Exceedance Probability with respect to Percentiles for at least 3 Consecutive Days

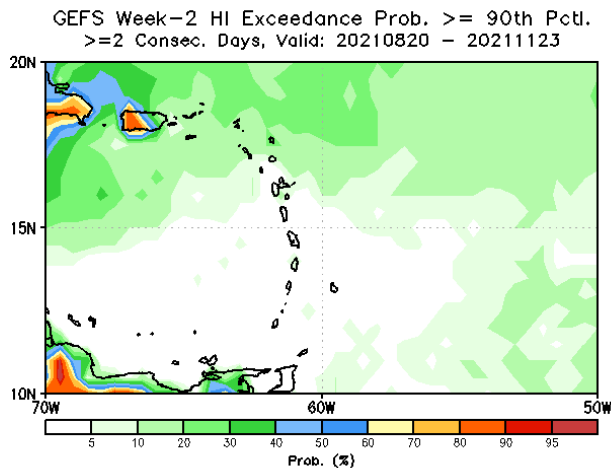
$\geq 80^{\text{th}}$ percentile



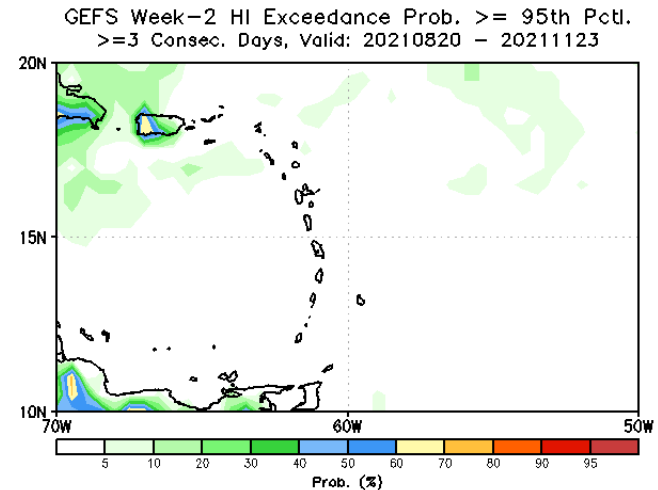
$\geq 85^{\text{th}}$ percentile



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

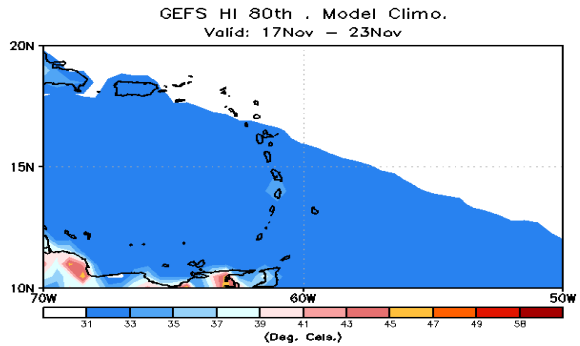


$\geq 95^{\text{th}}$ percentile

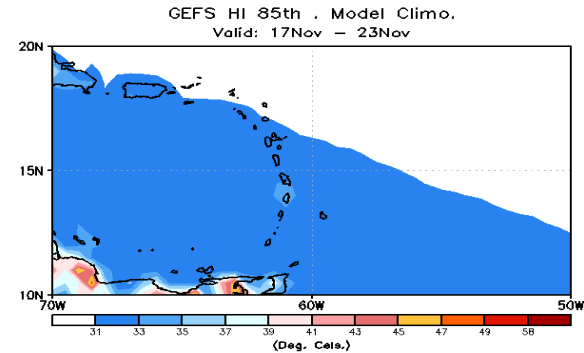


HI Percentile Climatology

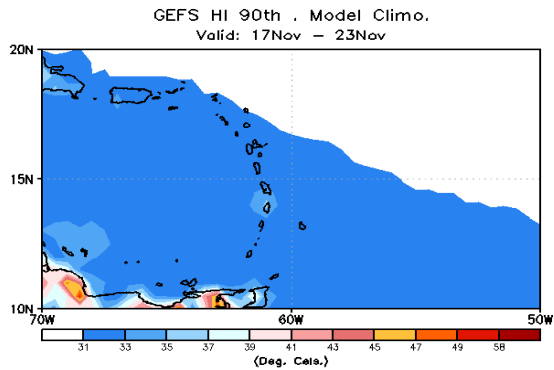
80th percentile



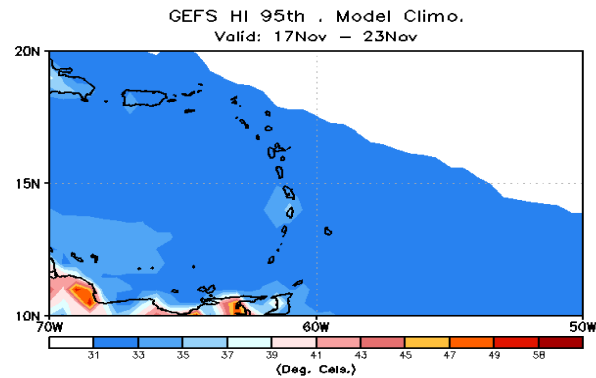
85th percentile



90th percentile



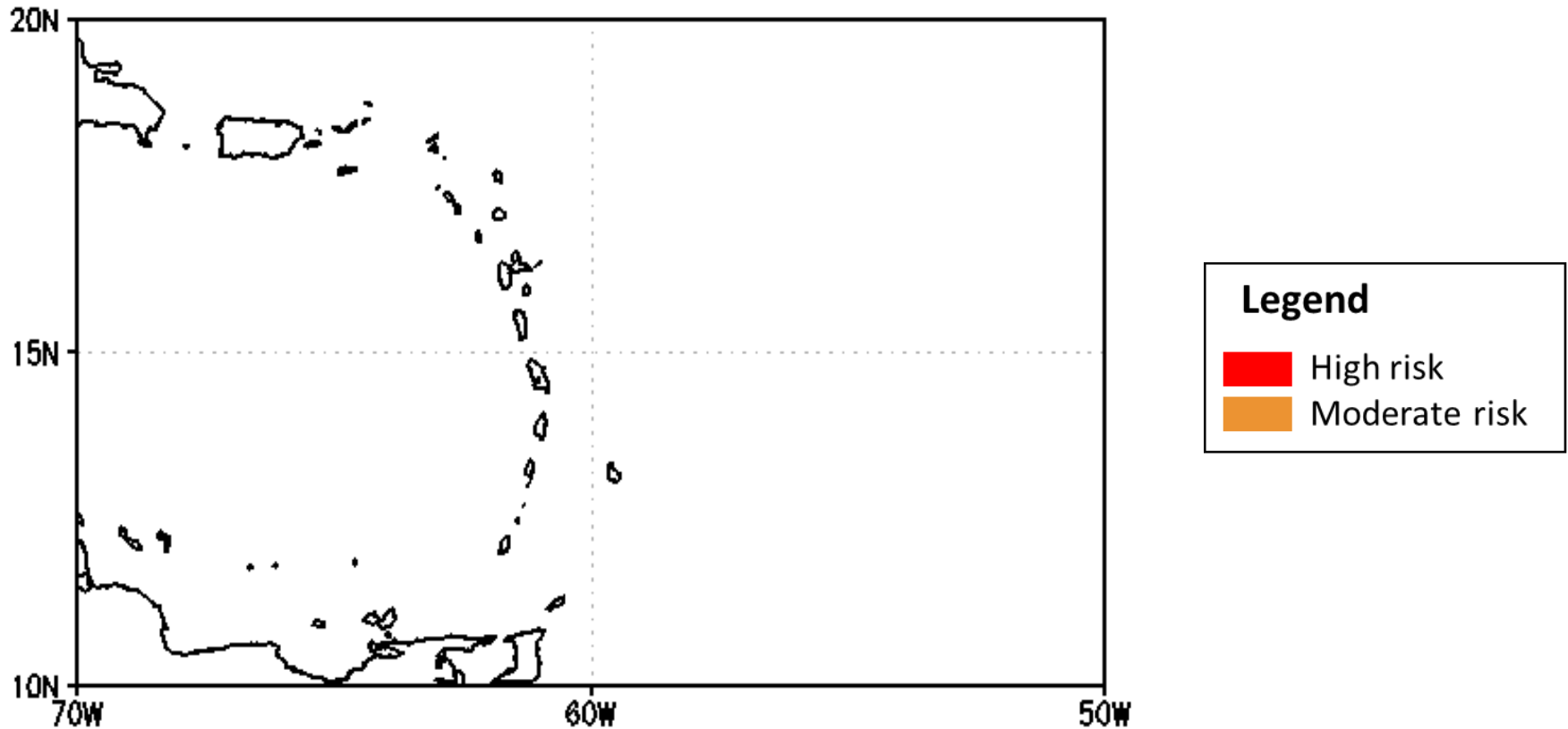
95th percentile



Summary

- Above-average surface wind across the Lesser Antilles
- Negative height anomaly at 500hpa => Subsidence not that great
- **Exceedance probability Forecast** => generally lower probabilities across the northern Lesser Antilles as compared to the Windward islands. 80th, 85th, 90th and 95th percentile
- No signal for temperatures above 39°C
- Isolated areas across inland Puerto Rico

Excessive Heat Outlook



- Average 10m winds across the Lesser Antilles, 12 to 16 knots.
- Negative height anomaly at 500hpa/less of a subsident pattern
- Higher probability of exceeding 35°C over 2 consecutive days across Puerto Rico
- HI exceedance probability higher across Puerto Rico.