

Second WMO RCC-Washington International Training Workshop

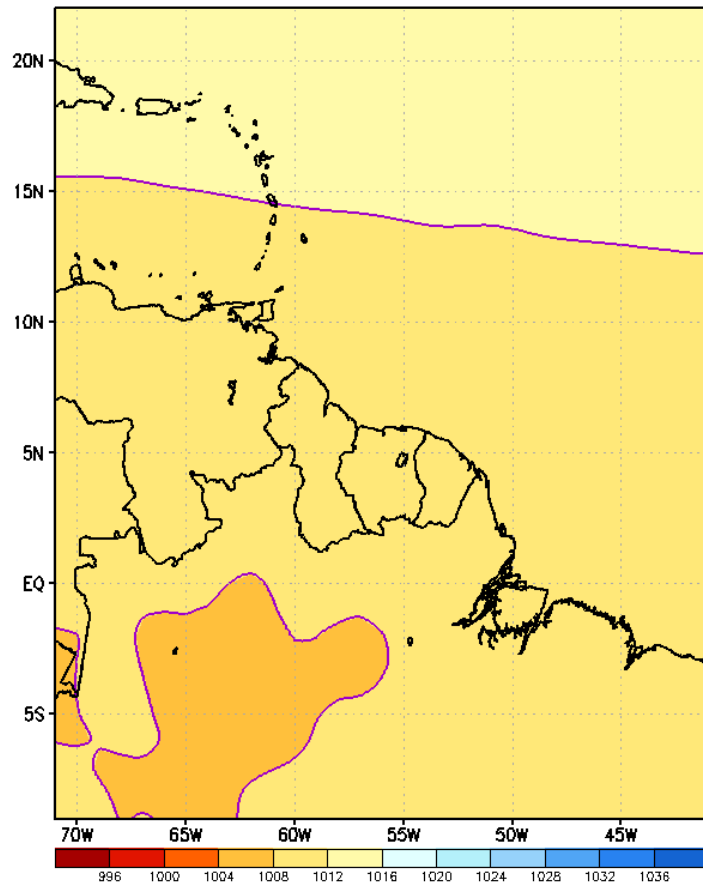
Real-time week-2 extreme temperature outlook

8 – 10 November 2021

Mean Sea Level Pressure

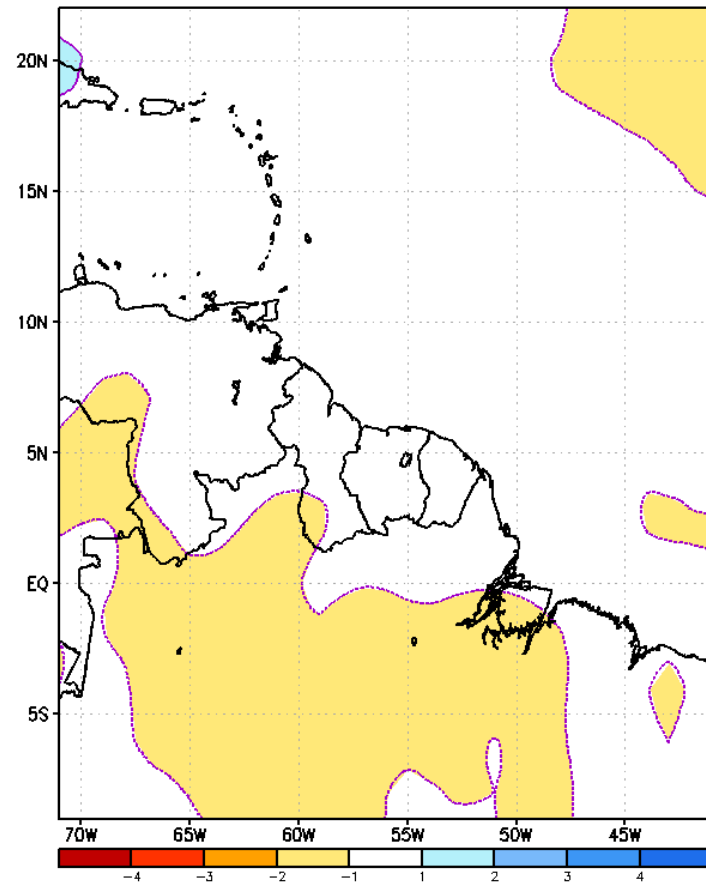
Total

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



Anomaly

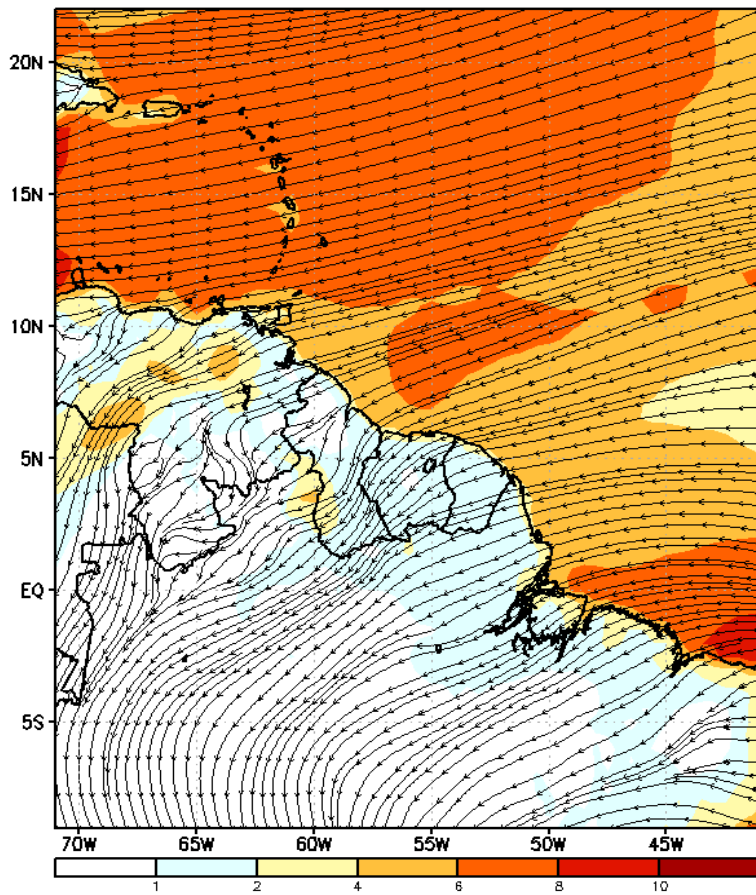
GEFS Week-2 Mean Sea Level Pressure Anomaly
Valid: 20211117 - 20211123



10m Wind

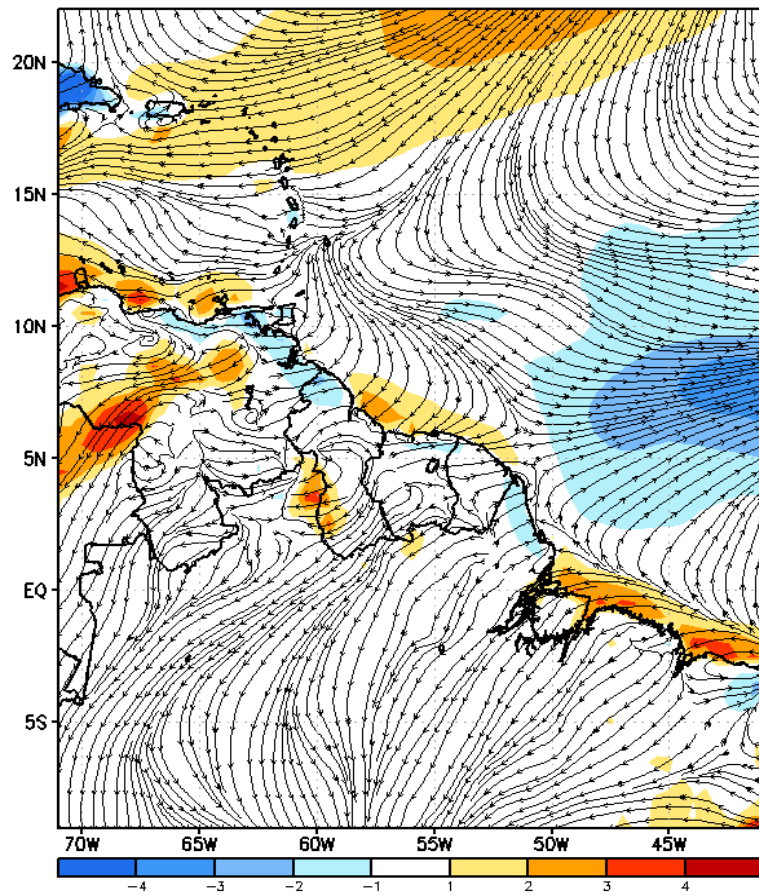
Total

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



Anomaly

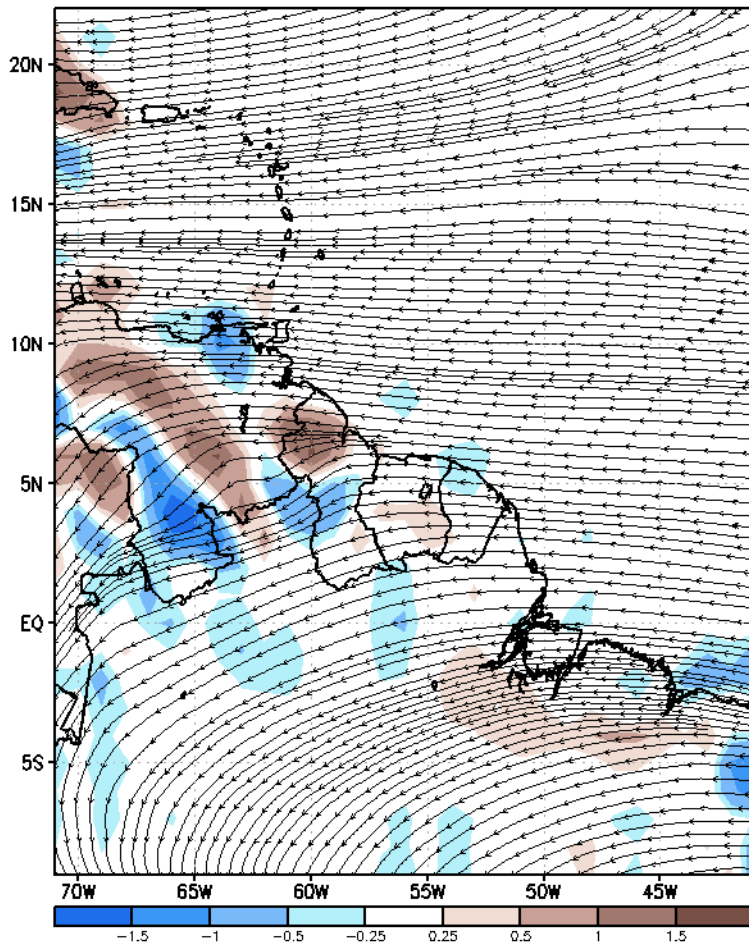
GEFS Week-2 10m Wind Speed Anomaly
Valid: 20211117 - 20211123



850-hPa Wind

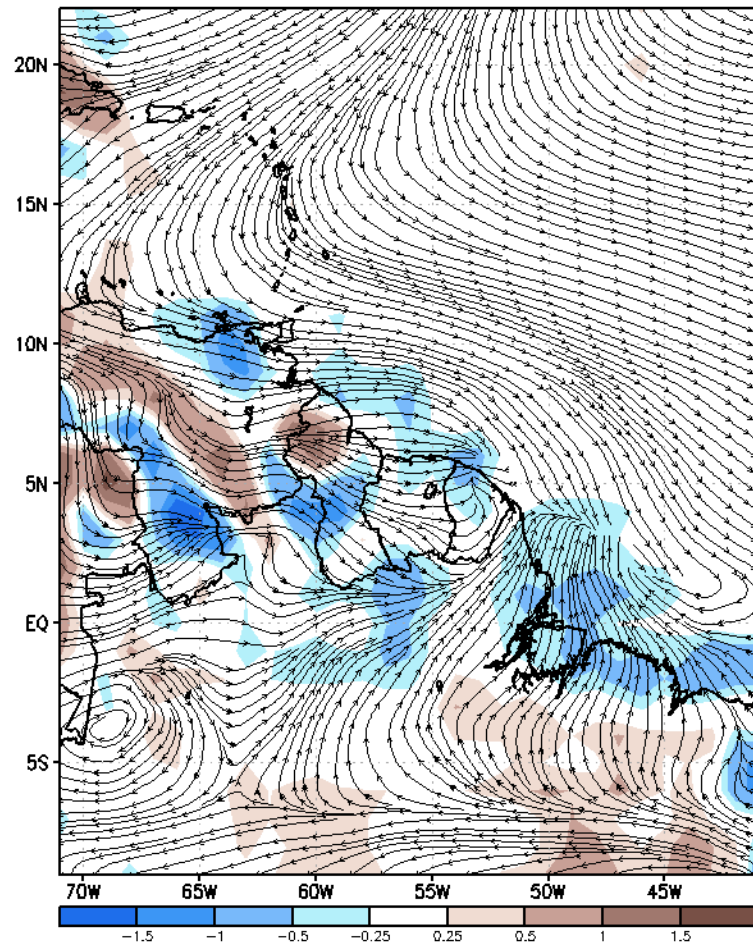
Total

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



Anomaly

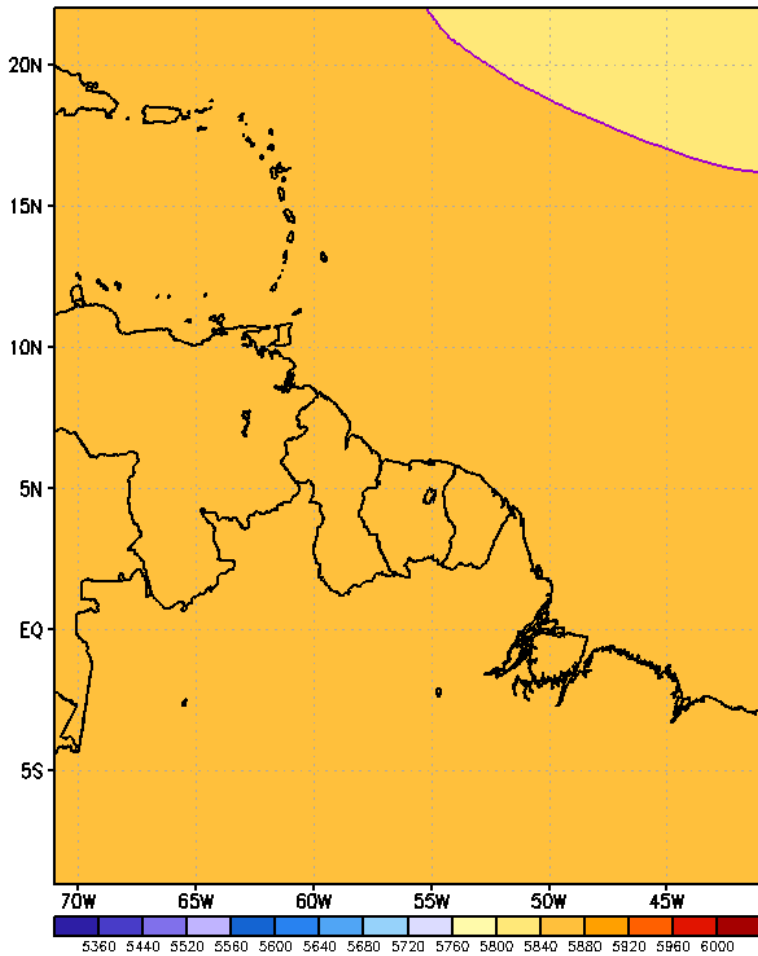
GEFS Week-2 850-hPa Divergence and Wind Anomaly
Valid: 20211117 - 20211123



500-hPa Height

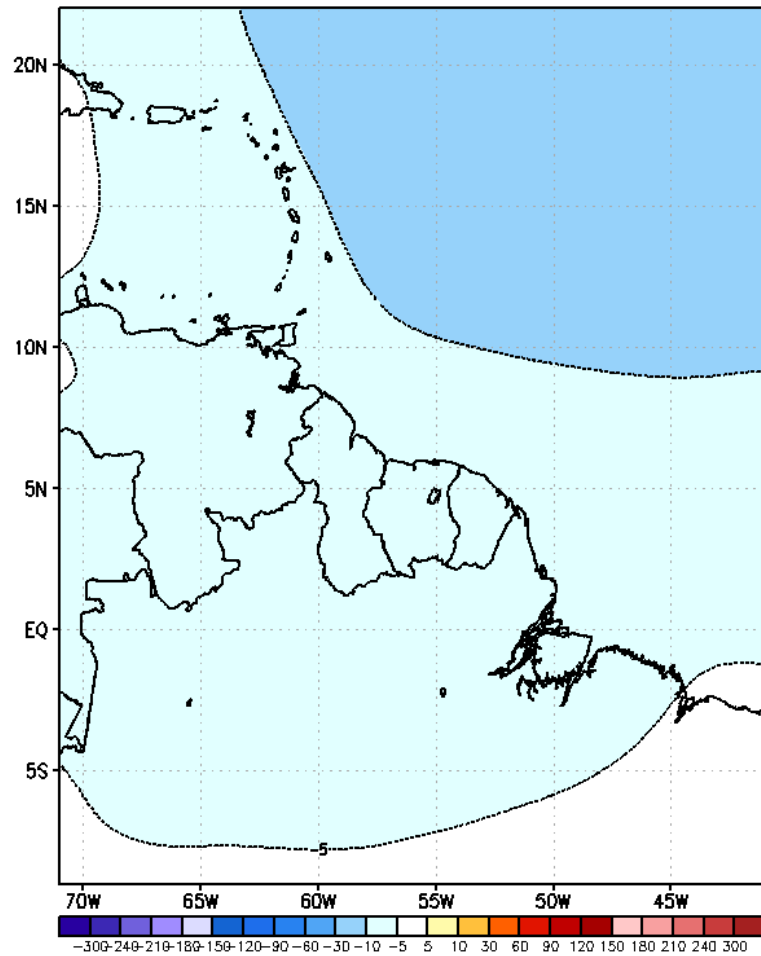
Total

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



Anomaly

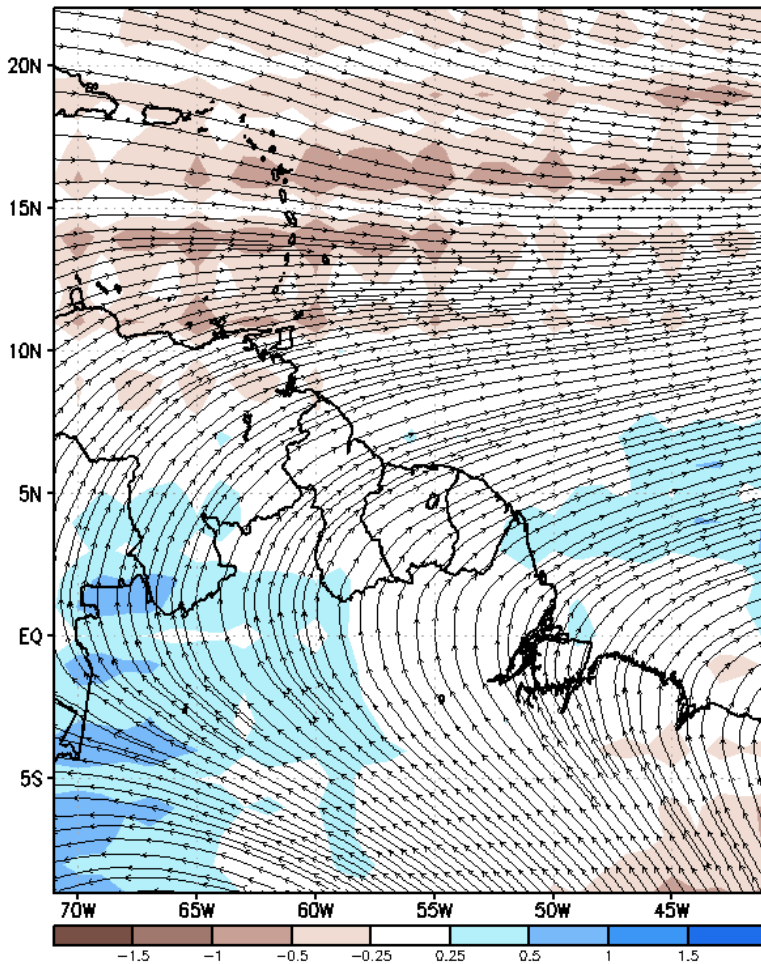
GEFS Week-2 500-hPa Geo-Potential Height Anomaly
Valid: 20211117 - 20211123



200-hPa Wind

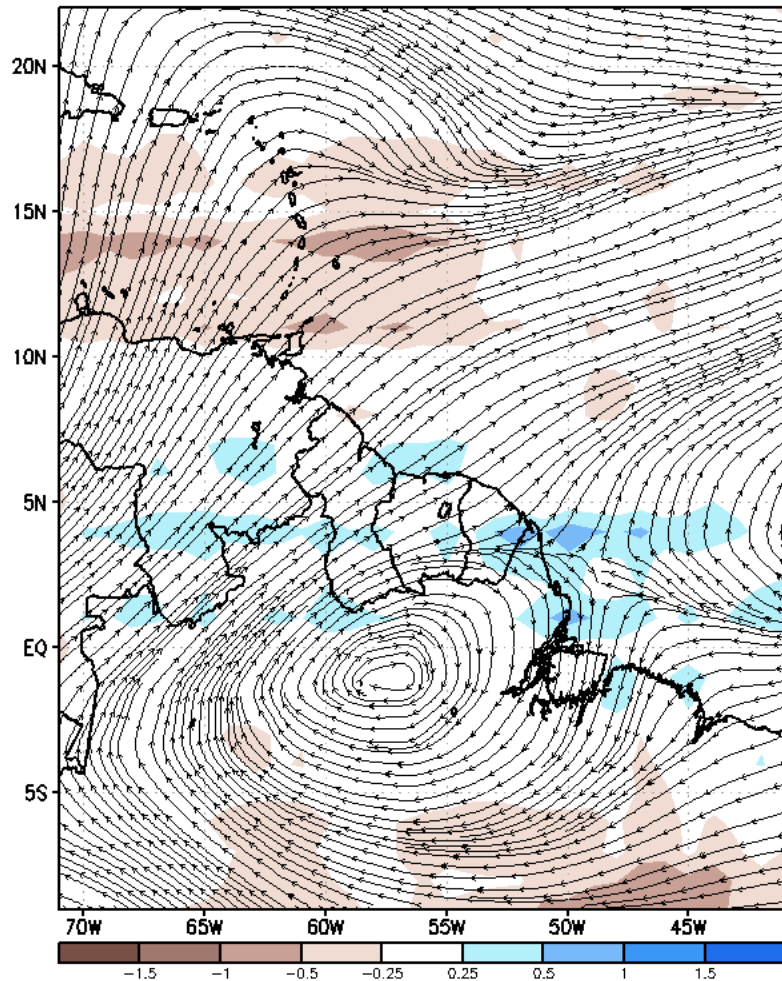
Total

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



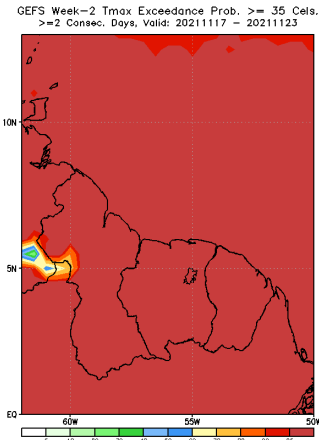
Anomaly

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

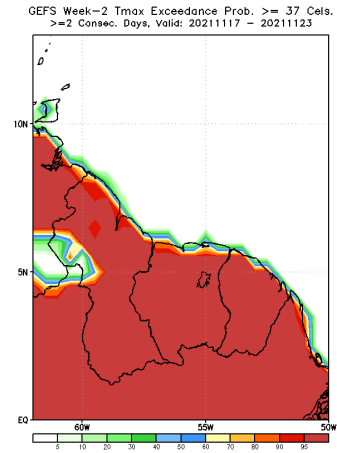


Tmax Exceedance Probability for at least 2 Consecutive Days

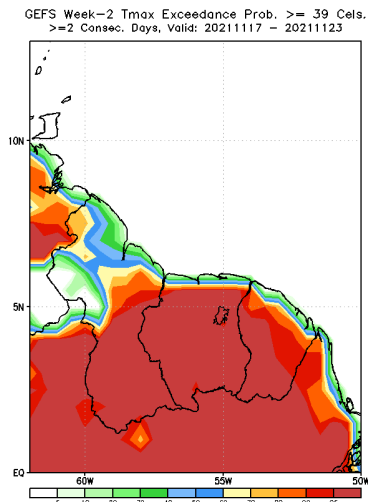
$\geq 35^{\circ}\text{C}$



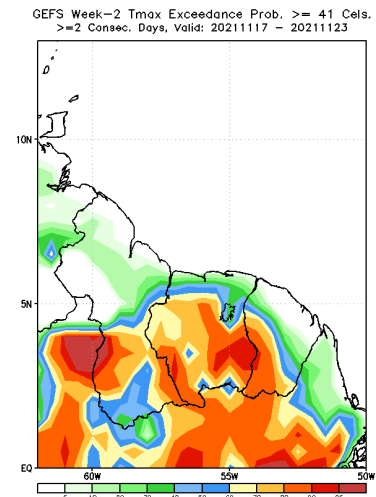
$\geq 37^{\circ}\text{C}$



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



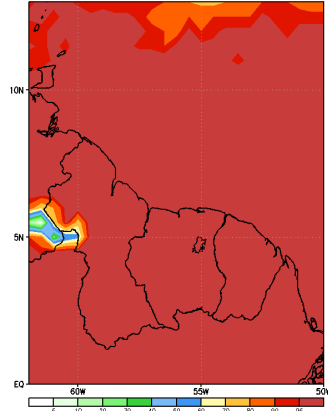
$\geq 41^{\circ}\text{C}$



Tmax Exceedance Probability for at least 3 Consecutive Days

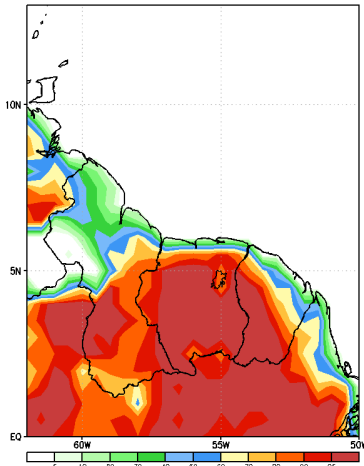
$\geq 35\text{ }^{\circ}\text{C}$

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



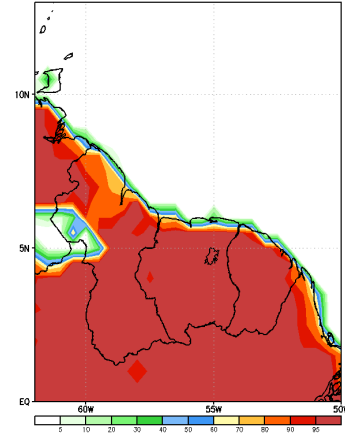
$\geq 39\text{ }^{\circ}\text{C}$

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



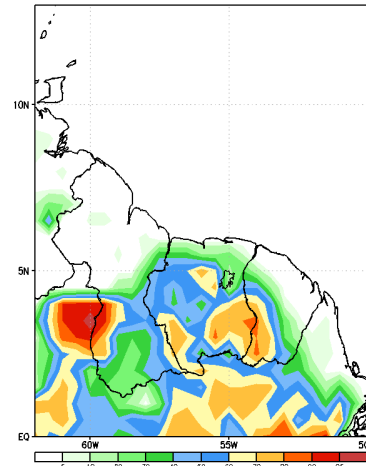
$\geq 37\text{ }^{\circ}\text{C}$

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



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

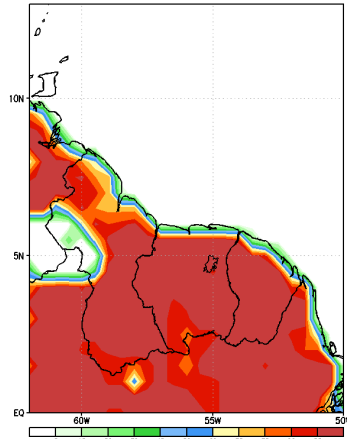
GEFS Week-2 Tmax Exceedance Prob. ≥ 41 Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123



HI Exceedance Probability for at least 2 Consecutive Days

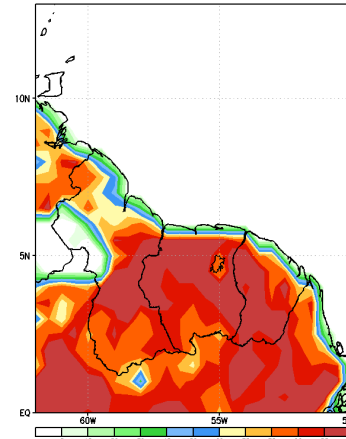
$\geq 41^{\circ}\text{C}$

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



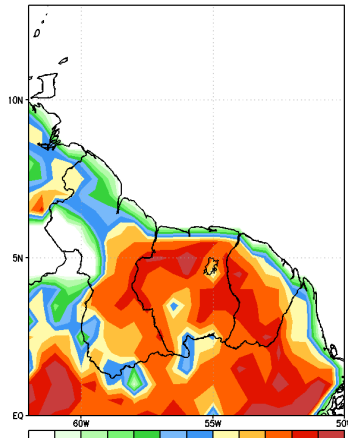
$\geq 43^{\circ}\text{C}$

GEFS Week-2 HI Exceedance Prob. ≥ 43 Deg. Cels.
>=2 Consec. Days, Valid: 20211117 - 20211123



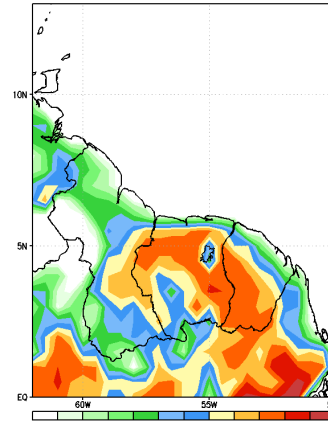
$\geq 45^{\circ}\text{C}$

GEFS Week-2 HI Exceedance Prob. ≥ 45 Deg. Cels.
>=2 Consec. Days, Valid: 20211117 - 20211123



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

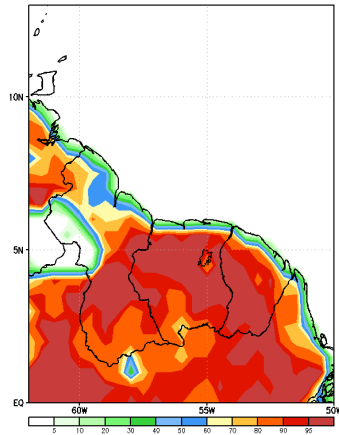
GEFS Week-2 HI Exceedance Prob. ≥ 47 Deg. Cels.
>=2 Consec. Days, Valid: 20211117 - 20211123



HI Exceedance Probability for at least 3 Consecutive Days

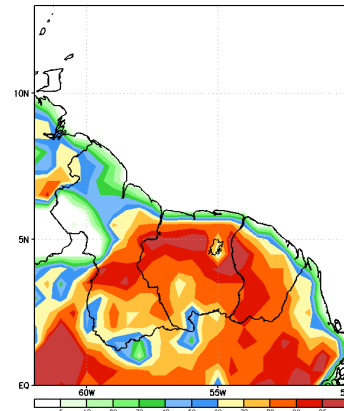
$\geq 41^{\circ}\text{C}$

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



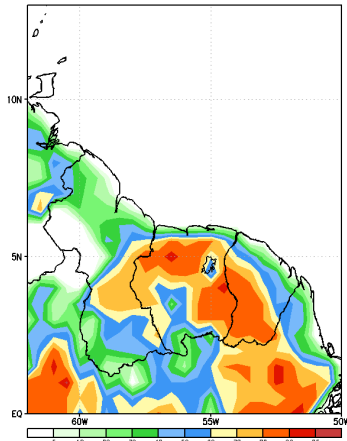
$\geq 43^{\circ}\text{C}$

GEFS Week-2 HI Exceedance Prob. ≥ 43 Deg. Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123



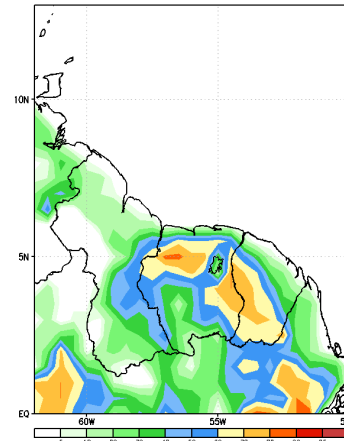
$\geq 45^{\circ}\text{C}$

GEFS Week-2 HI Exceedance Prob. ≥ 45 Deg. Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123



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

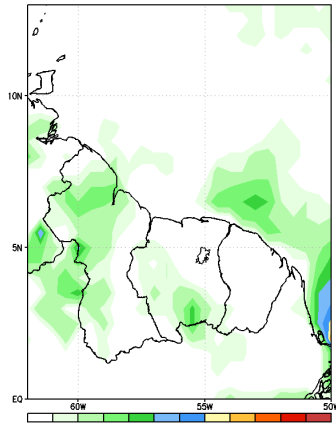
GEFS Week-2 HI Exceedance Prob. ≥ 47 Deg. Cels.
>=3 Consec. Days, Valid: 20211117 - 20211123



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

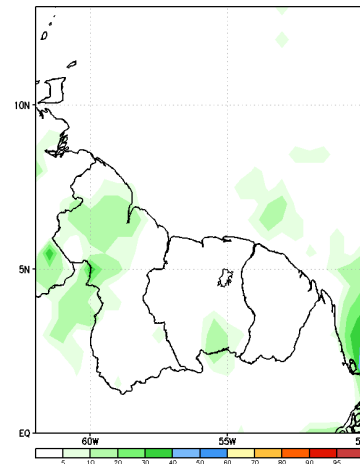
$\geq 80^{\text{th}}$ percentile

GEFS Week-2 Tmax Exceedance Prob. $\geq 80^{\text{th}}$ Pctl.
>=2 Consec. Days, Valid: 20211117 - 20211123



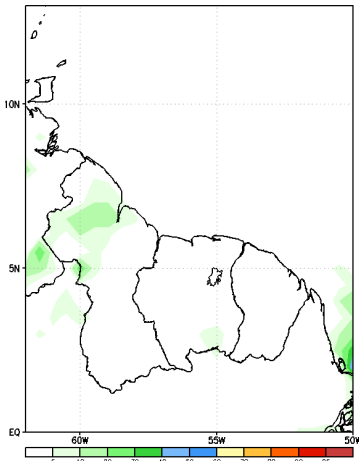
$\geq 85^{\text{th}}$ percentile

GEFS Week-2 Tmax Exceedance Prob. $\geq 85^{\text{th}}$ Pctl.
>=2 Consec. Days, Valid: 20211117 - 20211123



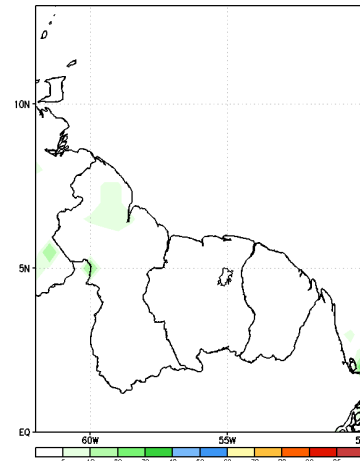
$\geq 90^{\text{th}}$ percentile

GEFS Week-2 Tmax Exceedance Prob. $\geq 90^{\text{th}}$ Pctl.
>=2 Consec. Days, Valid: 20211117 - 20211123



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

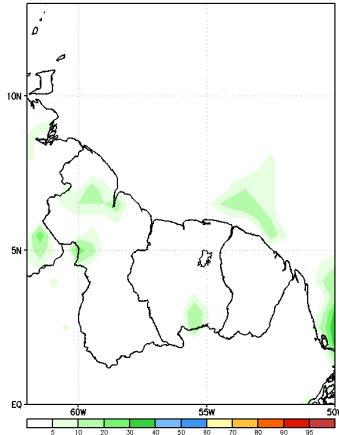
GEFS Week-2 Tmax Exceedance Prob. $\geq 95^{\text{th}}$ Pctl.
>=2 Consec. Days, Valid: 20211117 - 20211123



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

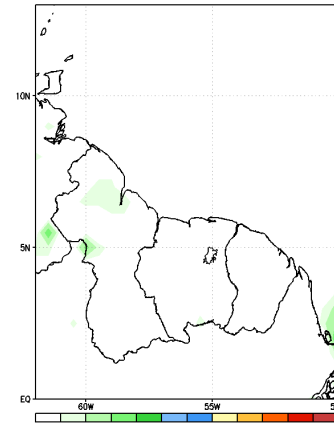
$\geq 80^{\text{th}}$ percentile

GEFS Week-2 Tmax Exceedance Prob. $\geq 80^{\text{th}}$ Pct.
>=3 Consec. Days, Valid: 20211117 - 20211123



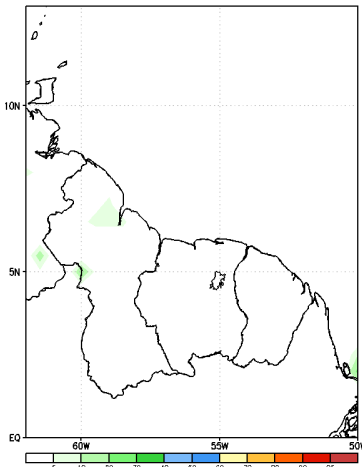
$\geq 85^{\text{th}}$ percentile

GEFS Week-2 Tmax Exceedance Prob. $\geq 85^{\text{th}}$ Pct.
>=3 Consec. Days, Valid: 20211117 - 20211123



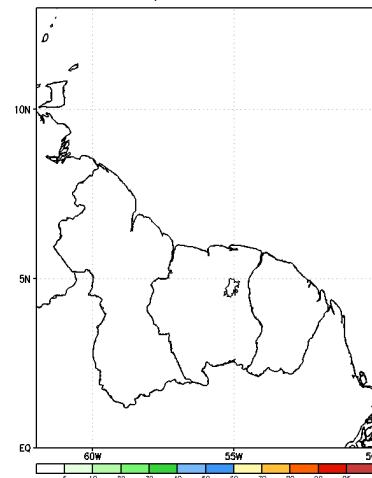
$\geq 90^{\text{th}}$ percentile

GEFS Week-2 Tmax Exceedance Prob. $\geq 90^{\text{th}}$ Pct.
>=3 Consec. Days, Valid: 20211117 - 20211123



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

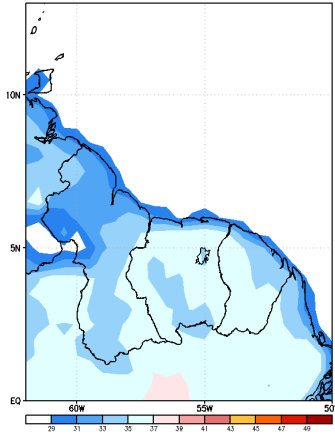
GEFS Week-2 Tmax Exceedance Prob. $\geq 95^{\text{th}}$ Pct.
>=3 Consec. Days, Valid: 20211117 - 20211123



Tmax Percentile Climatology

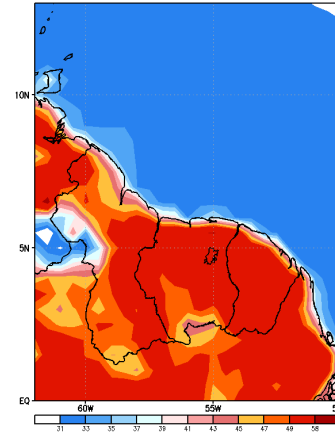
80th percentile

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



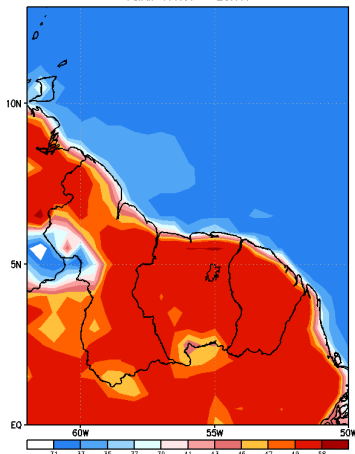
85th percentile

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



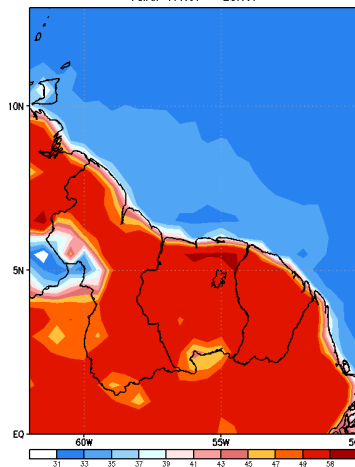
90th percentile

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



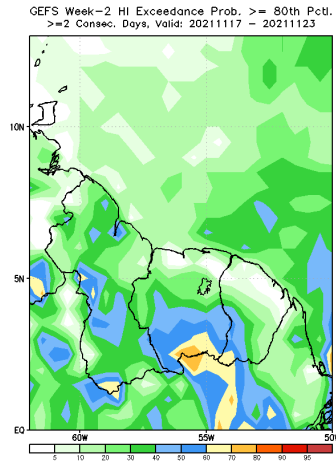
95th percentile

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

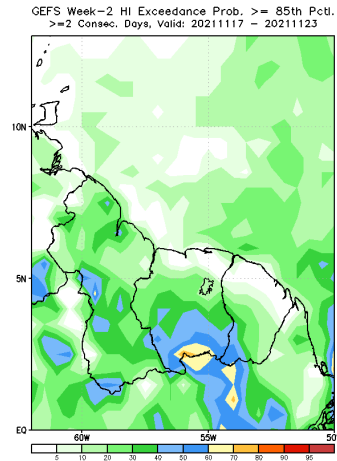


HI Exceedance Probability with respect to Percentiles for at least 2 Consecutive Days

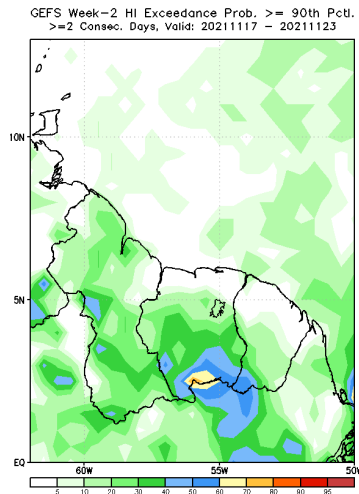
$\geq 80^{\text{th}}$ percentile



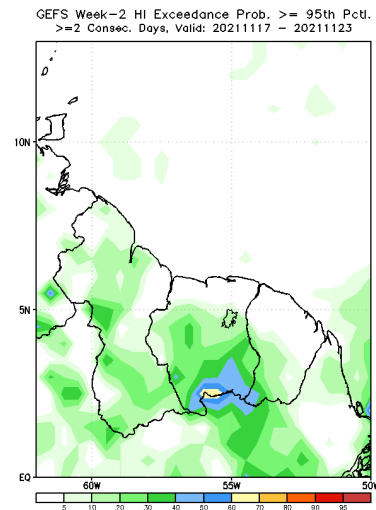
$\geq 85^{\text{th}}$ percentile



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

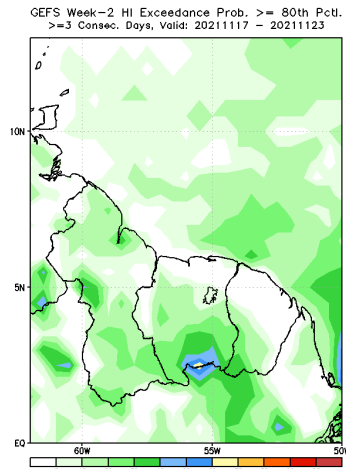


$\geq 95^{\text{th}}$ percentile

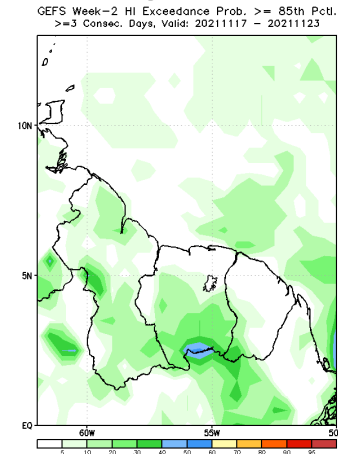


HI Exceedance Probability with respect to Percentiles for at least 3 Consecutive Days

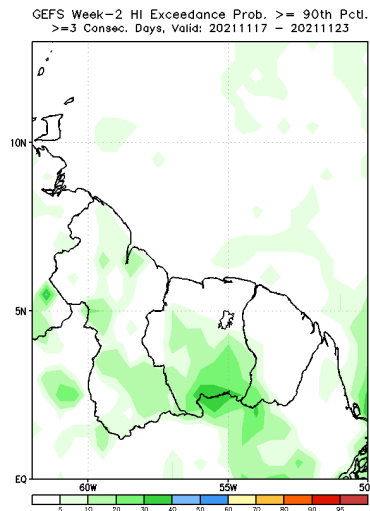
$\geq 80^{\text{th}}$ percentile



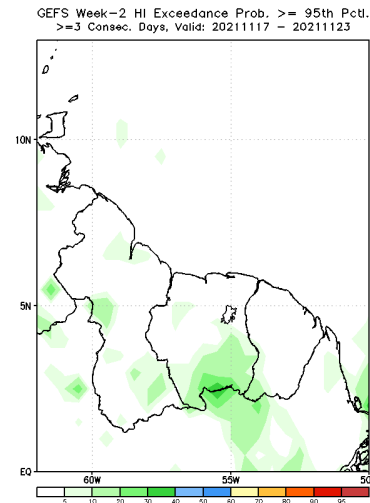
$\geq 85^{\text{th}}$ percentile



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

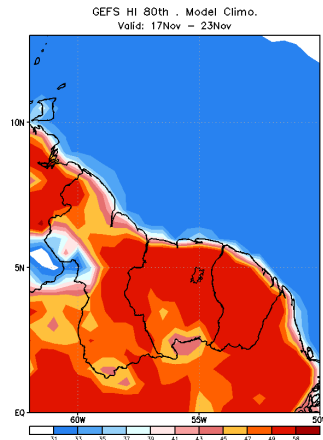


$\geq 95^{\text{th}}$ percentile

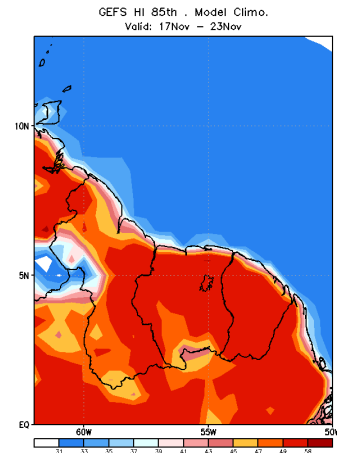


HI Percentile Climatology

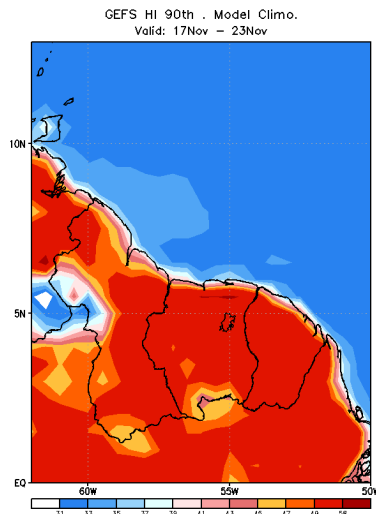
80th percentile



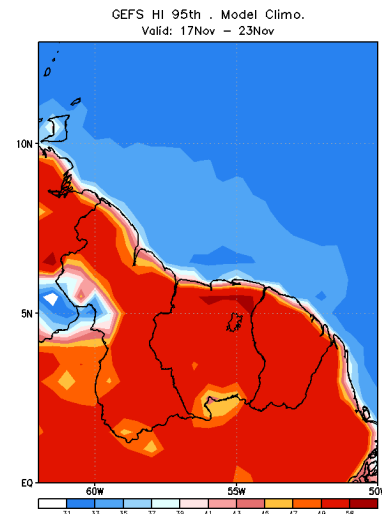
85th percentile



90th percentile



95th percentile



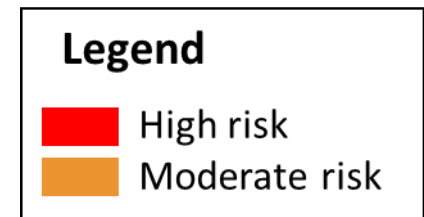
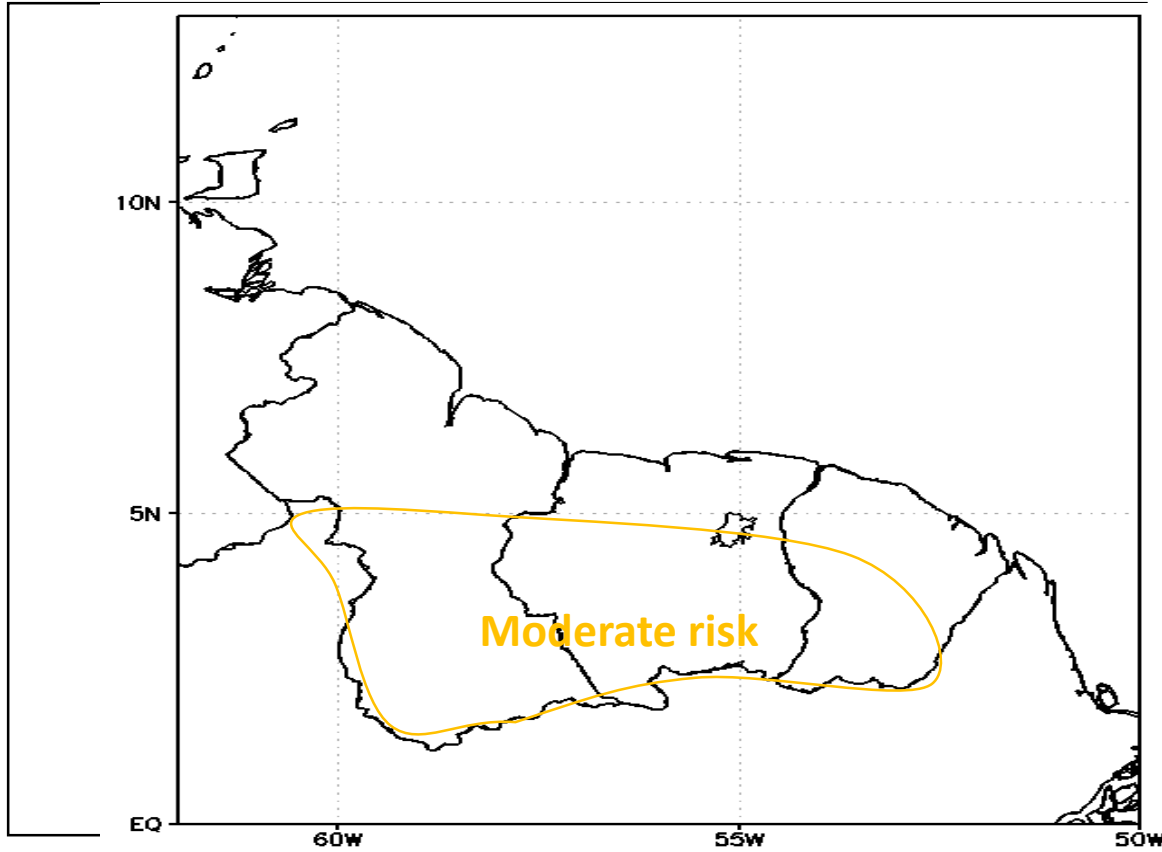
Summary

- Weak surface and low level winds in the eastern Atlantic ocean, south eastern Caribbean and Guianas couple with upper level convergence.
- 500hpa shows anomaly of low geopotential heights for eastern Caribbean and Guianas.
- Generally pockets of low level convergence on coast of Guianas and upper level support while interior has neutral conditions.
- Heat season still occurring over Guianas while its ending over Trinidad and Tobago and this is seen in the climatology
- Possible localise convective build up along the coast prior to Tmax occurring in Trinidad and Guianas which may limit max temp and max Heat Index, while the savannahs in along the Guianas interior clear skies and forest evapotranspiration (moisture) will definitely aid to excessive heat.

Summary

1. There is a very high probability $T_{max} \geq 35$ C over the interior of the Guianas and consequently extremely high heat index values.
2. T_{max} Exceedance probability with respect to $\geq 80, \geq 85, \geq 90$ and ≥ 95 percentiles for at least 2 consecutive days have generally low probability of occurring.
3. T_{max} Exceedance probability with respect to $\geq 80, \geq 85, \geq 90$ and ≥ 95 percentiles for at least 3 consecutive days have generally lower probability of occurring.

Excessive Heat Outlook



Insert your justification

Justification

1. The outlined area over the interior of the Guianas will experience moderate excessive heat conditions owing to the fact that they are still in their heat season and the lack of cloud cover, light winds and available moisture (relative humidity), particularly in open savannah areas.
2. 2 consecutive days high temperatures $\geq 80^{\text{th}}$ percentile have generally low probability of occurrence.
3. 3 consecutive days high temperatures $\geq 80^{\text{th}}$ percentile have even lower probability of occurrence.