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# Meteorological Department St. Maarten

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## Weather & Climate

Volume 5, Issue 12

December 2020

### Summary

- The 2020 Atlantic Hurricane Season officially ended on November 30, 2020 .
- The entire season was extremely active produced 30 named storms, 13 hurricanes including 6 major.
- Temperatures for the next 3 months expected to be comfortable; a few very cold nights are possible.

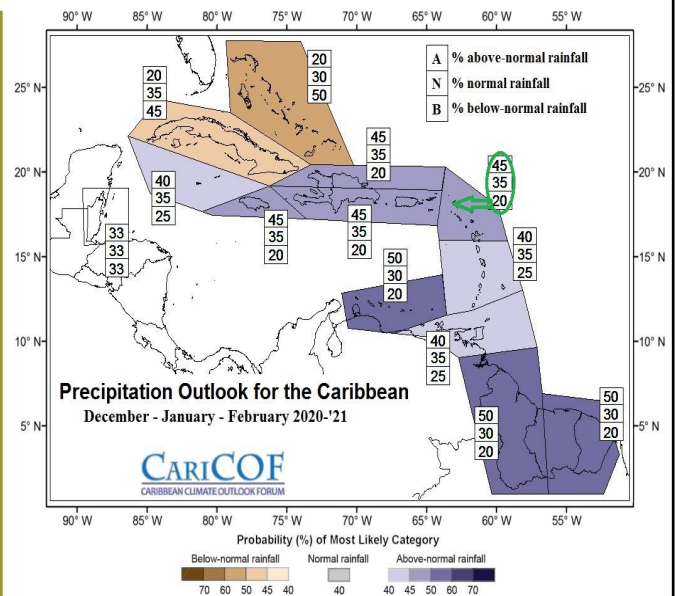
### Seasonal Outlook for December to February (DJF) 20/21

#### Rainfall Forecast

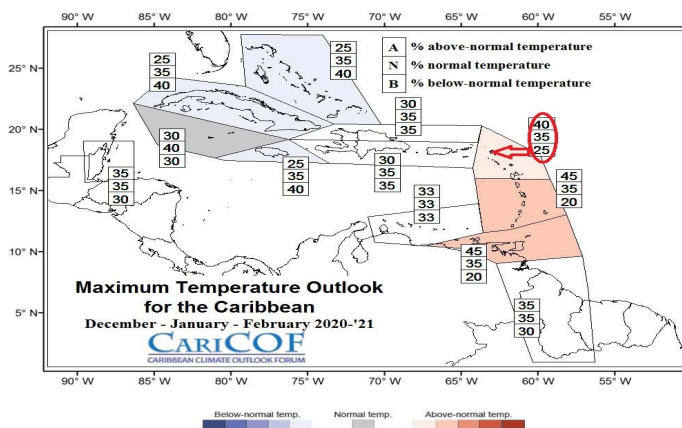
Rainfall totals for the season Dec-Jan-Feb. 20/21 are likely to be higher than usual in St. Maarten and most of the Antilles but likely to be drier than usual in the Bahamas and Cuba.

Within the 90 days of Dec-Jan-Feb., the normal rainfall total for St. Maarten ranges from 173mm–258mm/ 7-10in. with 32 to 44 wet days. There is usually a decrease in the frequency of showers in December as we transition into the dry season but in January and February there is mostly sunny days and some days with showers .

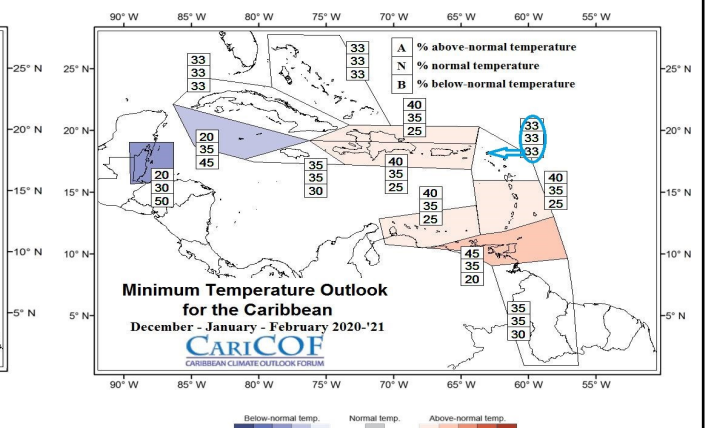
The forecast is for fewer dry spells this season 1-4 (7-day) dry spells in St. Maarten this season.



#### Temperature Forecast



Day-time Temperatures



Night-time Temperatures

Day-time and night-time temperatures are very likely to be comfortably cool as we enter the Caribbean cool season. There is potential for very cool nights throughout the region.

For more information on other Caribbean Outlooks go to <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

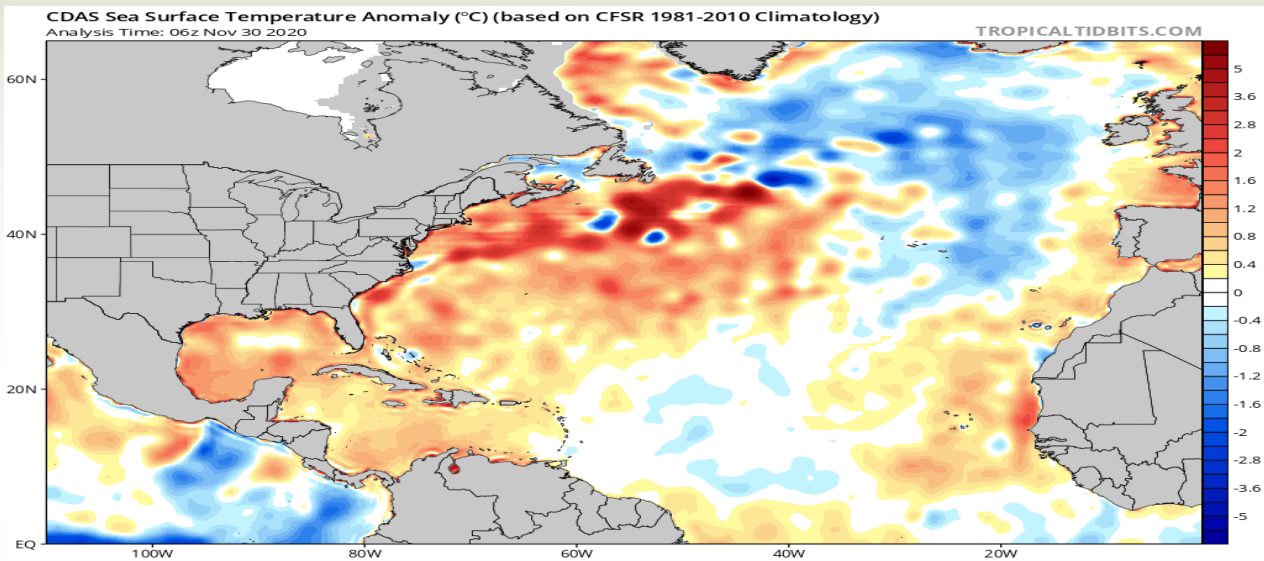
## WHAT INFLUENCES THIS SEASON'S CLIMATE?

In mid November, Sea surface temperatures (SST) in the east-central Pacific were roughly 1 degree Celsius below average, and all key atmospheric variables were consistent with La Nina conditions.

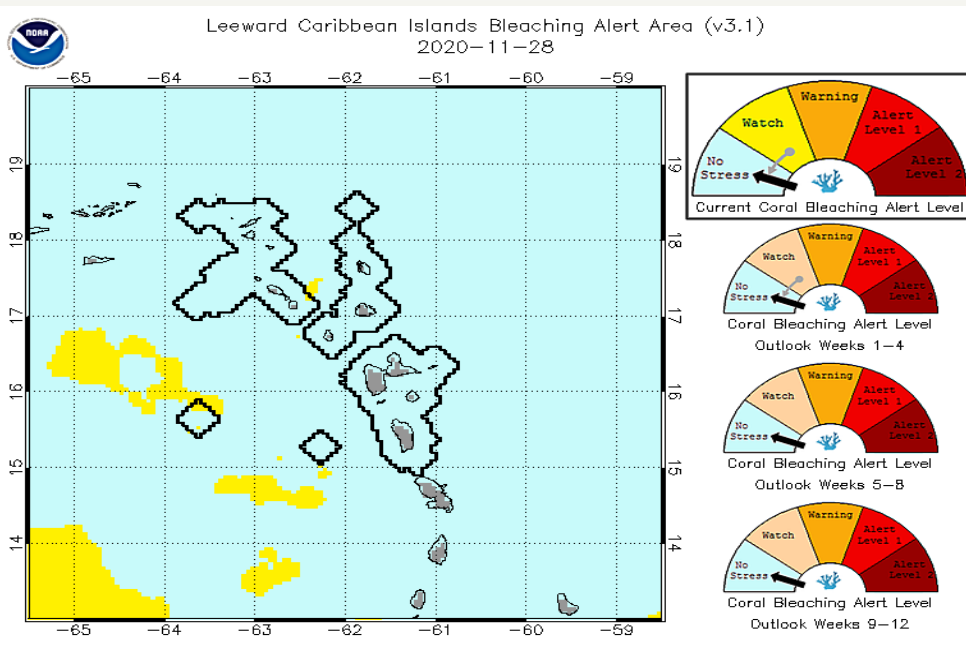
Majority of the forecast models exceed the threshold for La Nina and forecast conditions to persist through Mar –Apr-May 2021 and transition to a neutral phase thereafter. A La Nina Advisory is in effect.

La Nina conditions favor more frequent and intense rainfall but tempers the temperature for most of the Caribbean particularly in the southeastern Caribbean during December to April. In the northwest Caribbean La Nina conditions creates a drier and hotter dry season.

Recent observations show that SSTs along the shores of the Caribbean and in parts of the Tropical North Atlantic are up to 1°C above average. Continued warm SSTs throughout the Caribbean may contribute to above-average humidity, seasonal rainfall totals and reduced dry spell frequency and drought.



## Coral Bleaching Forecasts



There is no Coral Bleaching concern at this time across the Caribbean.

**NOVEMBER 2020 IN REVIEW**

Total Rainfall	93.6 mm	3.7 in.
2020 Cumulative Rainfall	1045.7 mm	41.2 in.
Max. 24-Hr. Rainfall	Nov. 9 <sup>th</sup>	18.7 mm/ 0.7in.
No. Rain Days (≥1.0 mm)	11 days	
No. Heavy Rain Days (≥10.0 mm)	2 days	
No. Thunderstorm Days	0 days	
Avg. Wind Speed	9 kts.	10 mph
Max. Wind Gust	33 kts.	38 mph
Avg. Temperature	27.5°C	82°F
Max. Temperature	Nov. 8 <sup>th</sup>	31.8°C / 89°F
Min. Temperature	Nov. 26 <sup>th</sup>	23.7°C / 75°F

**Long /Short Term Seasonal Review****Year in Review****(Dec. 2019— Nov. 2020)**

Total rainfall over the past twelve (12) months was within the normal range. A total of 1179.3 mm/46in. of rainfall was recorded at the Princess Juliana International Airport.

**Seasonal Review****(Sept-Oct-Nov. 2020)**

Total rainfall for the last three (3) months was 460.0mm/18 inches, this amount was within the normal range (356-498mm). There were 14 days with heavy rainfall (>10mm). September was extremely hot, October was slightly hot while in November the temperature were more comfortable. There were 31 hot days with 6 heat wave periods during the last 3 months all of which occurred in September and October.

Overall temperatures were within the normal range for the month of November.

The average daily temperature for November was 27.5°C /82°F.

The warmest day was the 1<sup>st</sup> with an average temperature of 28.6°C/84°F.

The coolest day was the 10<sup>th</sup> with an average temperature of 25.3°C/78°F.

The days with the most sunshine hours were the 15<sup>th</sup> , 29<sup>th</sup> & 30<sup>th</sup> (10hrs:36min).

The day with the least sunshine hours was the 10<sup>th</sup> (0hrs:00min).

The windiest day was the 1<sup>st</sup> , with a daily average wind speed of 12 kt./ 14 mph.

The day with the highest wind gust was the 20<sup>th</sup> with a gust of 33kt/38 mph.

Skies were mostly fair throughout the month of November.

There were only eleven (11) days with rainfall in November with 2 days of heavy rainfall.

There were no hot days or heat wave periods, temperatures were comfortable.

There was a 5 day dry spell towards the end of November. (26<sup>th</sup>—30<sup>th</sup>)

**NORMAL  
DECEMBER CONDITIONS**

Rainfall Total	75 mm – 110 mm	3– 4 in.
Avg. No. of Rain days	14 days	
Daily Average Temperature	26.2°C	79°F
Avg. Max. Temperature	29.4°C	85°F
Avg. Min. Temperature	23.9°C	75°F
Avg. Daily Hours of Sunshine	8 hrs	

Please note that all data was recorded at the Princess Juliana International Airport and may not necessarily reflect conditions at other points on country St Maarten.

## Implication of Forecast for Sectors

### Energy/Water Sector

Energy demand for cooling purposes especially at nights may be reduced as we move into the cool season.

### Tourism Sector

- Continue to observe all health protocols.
- Monitor weather forecasts as it is possible for systems to form outside the hurricane season.

### Agriculture

- Drought impacts should be limited this season.
- Some irrigation may be require during periods of dry spells. Harvest rain water during rainy events.

### Health

- Little or no heat discomfort until mid March 2021.
- The presence of stagnant water after heavy rainfall events may promote the breeding of mosquitoes and increase the risk of vector-borne illnesses.
- Proper management of water storage containers e.g., covering with protective mesh helps to reduce this risk.

## 2020

## TROPICAL CYCLONE NAMES



Arthur	Omar	Zeta
Bertha	Paulette	Eta
Cristobal	Rene	Theta
Dolly	Sally	Iota
Edouard	Teddy	Kappa
Fay	Vicky	Lambda
Gonzalo	Wilfred	Mu
Hanna		Nu
Isaias	Greek Alphabet	Xi
Josephine	Alpha	Omicron
Kyle	Beta	Pi
Laura	Gamma	Rho
Marco	Delta	Sigma
Nana	Epsilon	Tau

NOVEMBER PRODUCED 2 NAMED STORMS 1 BECAME A MAJOR HURRICANE. (IOTA)

**CONTINUE TO MONITOR WEATHER INFORMATION DAILY !!!!**

### 2020 Atlantic Hurricane Season

By Sheryl Etienne-Leblanc

The 2020 Atlantic hurricane season officially ended on November 30. There were thirty (30) named storms, of which thirteen (13) became hurricane including six (6) major hurricanes. This was the most storms ever recorded in a single season, 2020 exceeded the 28 storms formed in 2005 and produced the second highest number of hurricanes on record.

The 2020 season started way before June 1 and broke many records. The season produced nine named storms from May through July. Activity maximised further, quickly exhausting the 2020 Atlantic storms list by September 18. The Greek Alphabet had to be used for the rest of the season for the second time in history.

This year was the fifth consecutive year with above normal hurricane seasons. This activity was attributed to the Atlantic Multi-Decadal Oscillation (AMO) – which began in 1995 that has favoured more, stronger, and longer-lasting storms. Atmospheric and oceanic conditions linked to the AMO such as warm sea surface temperatures, weak vertical wind shear combined with La Nina, contributed in making this extremely active record-breaking season possible.

The 2020 Atlantic Hurricane season may have officially ended, however it is still possible for storms to form outside the season. Therefore, we must remain vigilant and prepared to take the necessary action when called upon. Monitor weather information from credible sources and remember it does not have to be a storm or hurricane; heavy rainfall events can also have significant impacts on our lives.

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