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Weather & Climate

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Summary

- 2020 was the warmest year on average for the past 22 years on St. Maarten.
- Temperatures for the next 3 months expected to be comfortable; some cold nights are possible.
- Rainfall for the next 3-Months forecasted to be above normal.

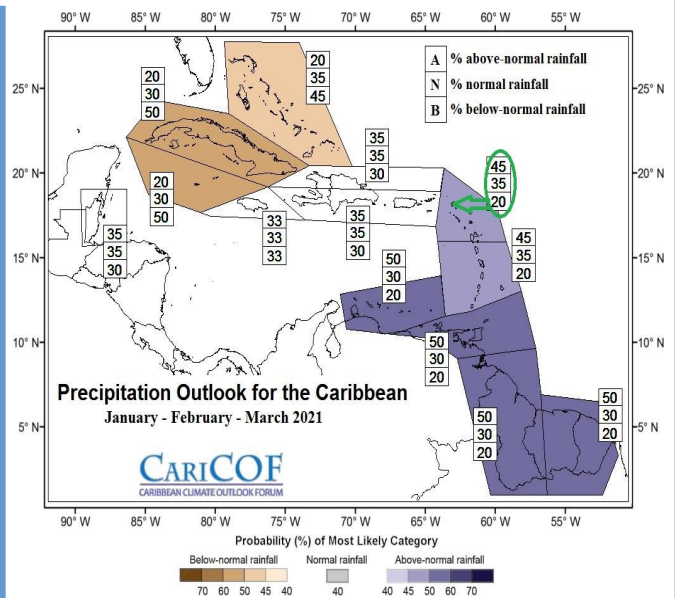
Seasonal Outlook for January to March (JFM) 2021

Rainfall Forecast

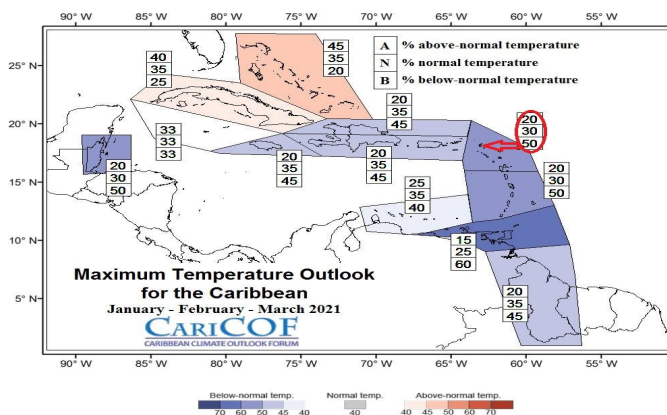
Rainfall totals for the season Jan-Feb-Mar. 2021 are likely to be higher than usual in St. Maarten and most of the eastern Caribbean but likely to be drier than usual in the Bahamas and Cuba.

Within the 90 days of Jan-Feb-Mar., the normal rainfall total for St. Maarten ranges from 145mm–201mm/ 6-8in. with 27 to 38 wet days. There are usually sunny days and some days with showers during this season.

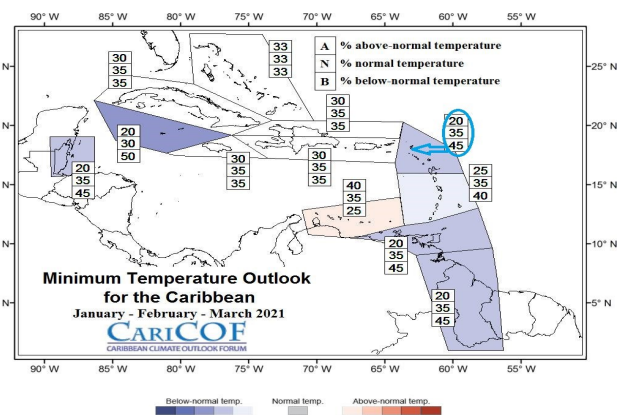
The forecast is for an increase in the number of wet days and for about 1-5 (7-day) dry spells in St. Maarten this season.



Temperature Forecast



Day-time Temperatures



Night-time Temperatures

Day-time and night-time temperatures are expected to be comfortably cool across the Caribbean this season. Some cold nights are likely through early March.

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

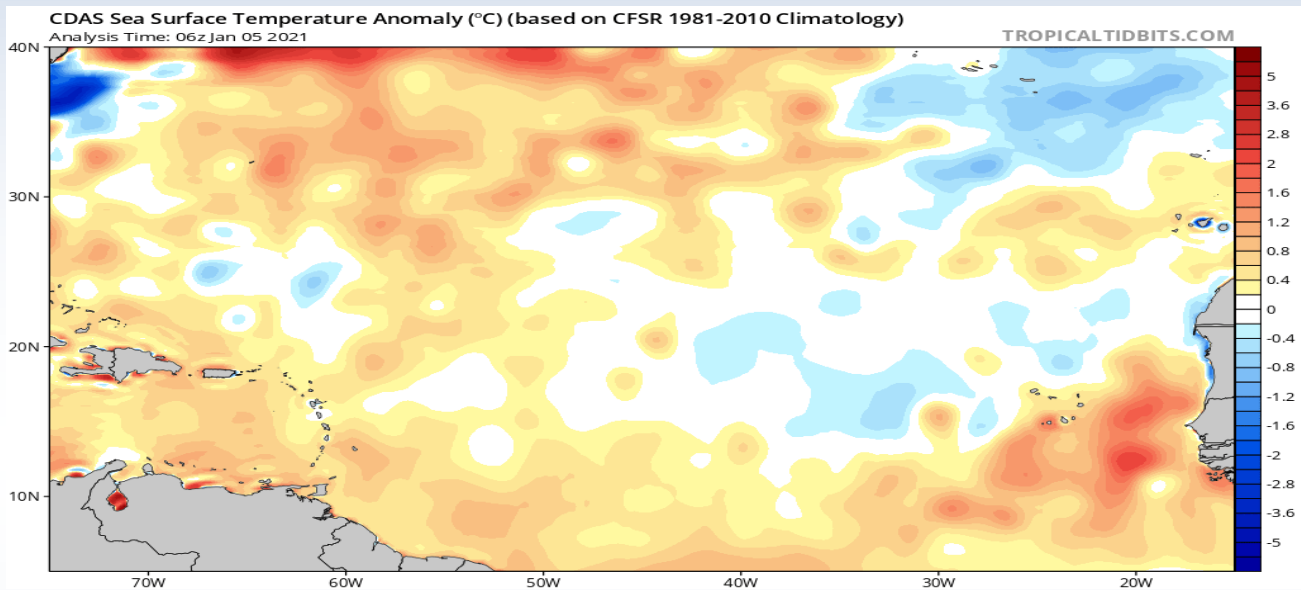
WHAT INFLUENCES THIS SEASON'S CLIMATE?

In mid December, Sea surface temperatures (SST) in the east-central Pacific were roughly 1.2 degree Celsius below average, and all key atmospheric variables were consistent with La Nina conditions.

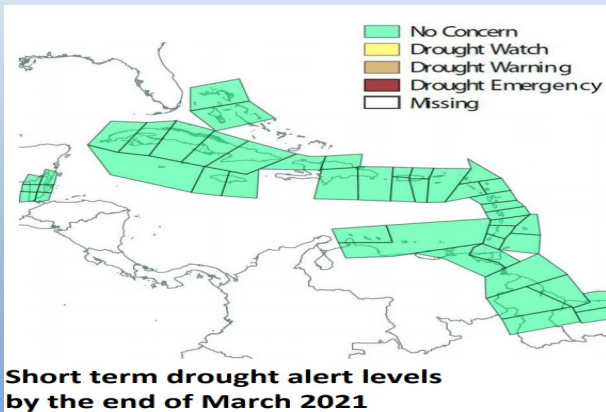
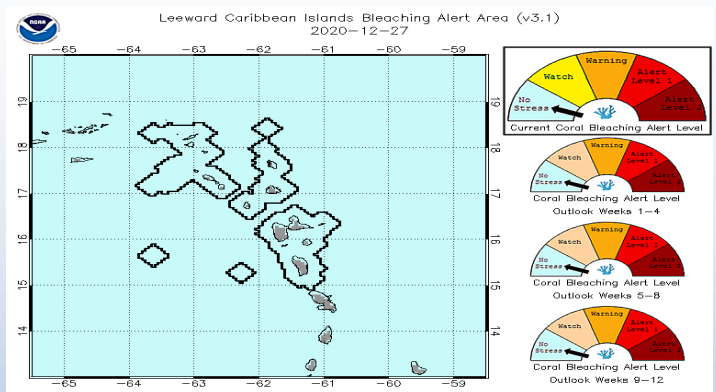
Majority of the forecast models exceed the threshold for La Nina and forecast conditions to persist through Mar –Apr-May 2021 and transition to a neutral phase thereafter. A La Nina Advisory remains in effect.

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.

With the exception of the far northwest of the Caribbean, where SST's still run about 1°C above average, SSTs along the shores of the Caribbean and in parts of the Tropical North Atlantic have cooled to slightly above average. Continued warm SSTs throughout the Caribbean may contribute to above-average humidity, seasonal rainfall totals and reduced dry spell frequency and drought.



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



There is no Drought concern in the Caribbean up till the end of March 2021.

DECEMBER 2020 IN REVIEW

Total Rainfall	70.6 mm	2.8 in.
2020 Cumulative Rainfall	1116.3 mm	43.9 in.
Max. 24-Hr. Rainfall	Dec. 24 th	17.0 mm/ 0.7in.
No. Rain Days (≥1.0 mm)	9 days	
No. Heavy Rain Days (≥10.0 mm)	3 days	
No. Thunderstorm Days	0 days	
Avg. Wind Speed	8 kts.	9 mph
Max. Wind Gust	31 kts.	36 mph
Avg. Temperature	26.6°C	80°F
Max. Temperature	Dec. 8 th	31.3°C / 88°F
Min. Temperature	Dec. 31 st	22.8°C / 73°F

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

Total rainfall over the past twelve (12) months was within the normal range (1026-1274mm). A total of 1116.3 mm/44in. of rainfall was recorded at the Princess Juliana International Airport.

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

Total rainfall for the last three (3) months was 435.3mm/17 inches, this amount was within the normal range (307-499mm). There were 14 days with heavy rainfall (>10mm). October was very wet making it the wettest month of the year. Temperatures were a bit more comfortable than the previous months.

Overall temperatures were above the normal range for the month of December 2020 while rainfall was below the average.

The average daily temperature for December was 26.6°C /80°F.

The warmest day was the 17th with an average temperature of 27.5°C/82°F.

The coolest day was the 9th with an average temperature of 25.8°C/78°F.

The day with the most sunshine hours was the 3rd (10hrs:36min).

The day with the least sunshine hours was the 9th (0hrs:48min).

The windiest day was the 31st, with a daily average wind speed of 17 kt./ 20 mph.

The days with the highest wind gust were the 23rd & 31st with a gust of 31kt/36 mph.

Skies were mostly fair throughout the month of December.

There were only nine (9) days with rainfall in December with 3 days of heavy rainfall.

There were no extreme temperatures during the month of December.

The longest dry spell was 5 days from the 6th to 10th December.

**NORMAL
JANUARY CONDITIONS**

Rainfall Total	60 mm – 85 mm	2– 3 in.
Avg. No. of Rain days	13 days	
Daily Average Temperature	25.5°C	78°F
Avg. Max. Temperature	28.8°C	84°F
Avg. Min. Temperature	23.2°C	74°F
Avg. Daily Hours of Sunshine	8 hrs	

Implication of Forecast for Sectors

Energy/Water Sector

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

Tourism Sector

- Continue to observe all health protocols.
- Interruptions to outdoor activities are possible due to increased number of wet days being forecasted this season.

Agriculture

- Drought impacts should be limited this season as rainfall is expected to be above normal.
- 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.

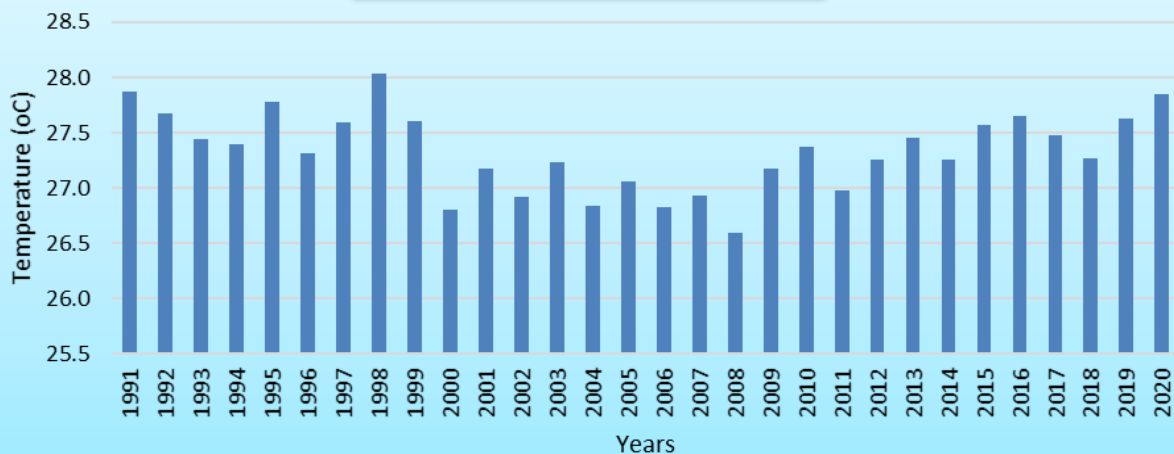
2020 in Review

The World Meteorological Organization (WMO), states that 2020 has ended the warmest decade (2011-2020) on record and was one of the three warmest years on record. Many Caribbean islands reported record-breaking temperatures in 2020. Here on St. Maarten based on records taken at the Princess Juliana International Airport, 2020 was the warmest in the last 22 years and the 2nd warmest in the last 30 years. The months of April to June 2020 were the warmest months in more than 20 years while April 2020 was the warmest April on record.

2020 will also be remembered for its brutal hurricane season which brought a number of fatalities, economic losses, and damages throughout Central America and parts of the Gulf of Mexico. The hurricane season generated an unprecedented 30 named storms, 13 hurricanes (second highest on record), and six major hurricanes (tied for second highest on record).

The 2020 season was notable not only for its record number of named storms, but also for its record number of rapidly intensifying storms (10); and record number of named storms (12) making landfall in the U.S.

Average Annual Temperature At PJIA



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