

Like us on Facebook:

www.facebook.com/  
sxmweather

# Meteorological Department St. Maarten

Follow us on twitter:

@sxmweather



## Weather & Climate

Volume 7, Issue 1

January 2022

### Summary

- Rainfall total for the month of December 2021 was 57% below average;
- Temperatures were above normal in December, expected to be comfortable through January.
- Drought is not a concern in the short term however by the end of May 2022 drought is possible.

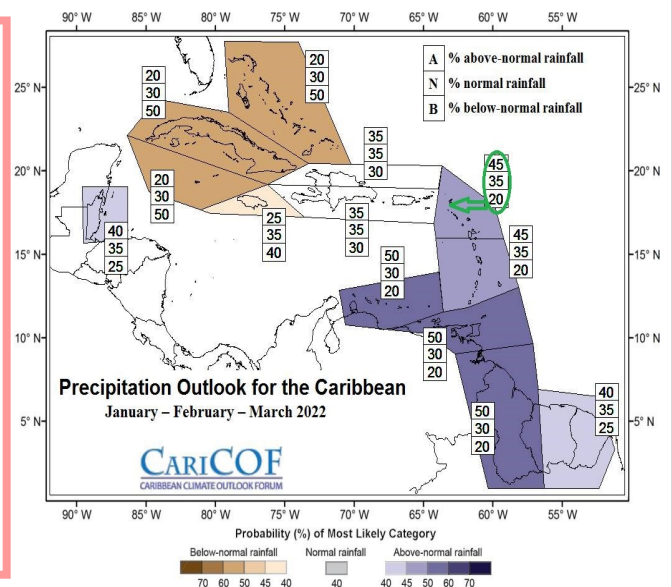
### Seasonal Outlook for January to March (JFM) 2022

#### Rainfall Forecast

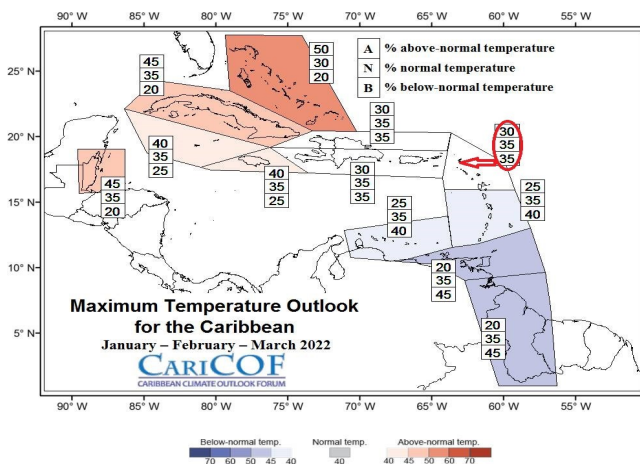
Models are indicating that rainfall totals for the season Jan-Feb-Mar. 2022 are likely to be the usual or higher in St. Maarten and across the Lesser Antilles.

Normal rainfall on St. Maarten during the Jan-Feb-Mar season ranges 136 mm–180 mm/5-7 in, with 27 to 37 wet days. There are usually sunny days throughout the Jan-Feb-Mar. season with showers on some days.

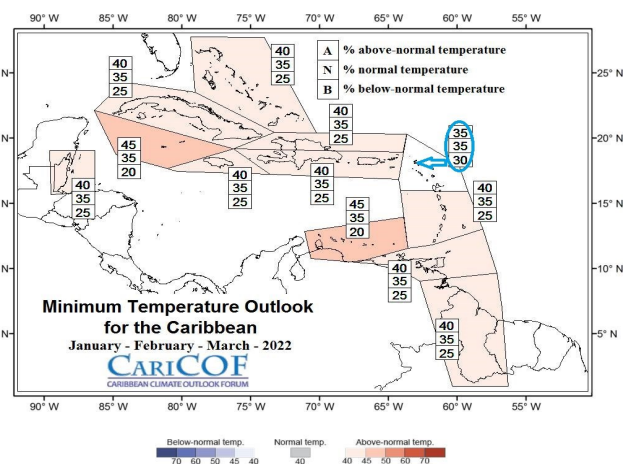
The forecast is for 2 to 6 (7-day) wet spells and up to 5 (7-day) dry spells on St. Maarten during the season. There is no drought concern until the end of March however in the long term, drought is possible by the end of May 2022.



#### Temperature Forecast



Day-time Temperatures



Night-time Temperatures

Day-time temperatures are likely to be usual or cooler while night-time temperatures are expected to be usual or warmer across the Leeward Islands.

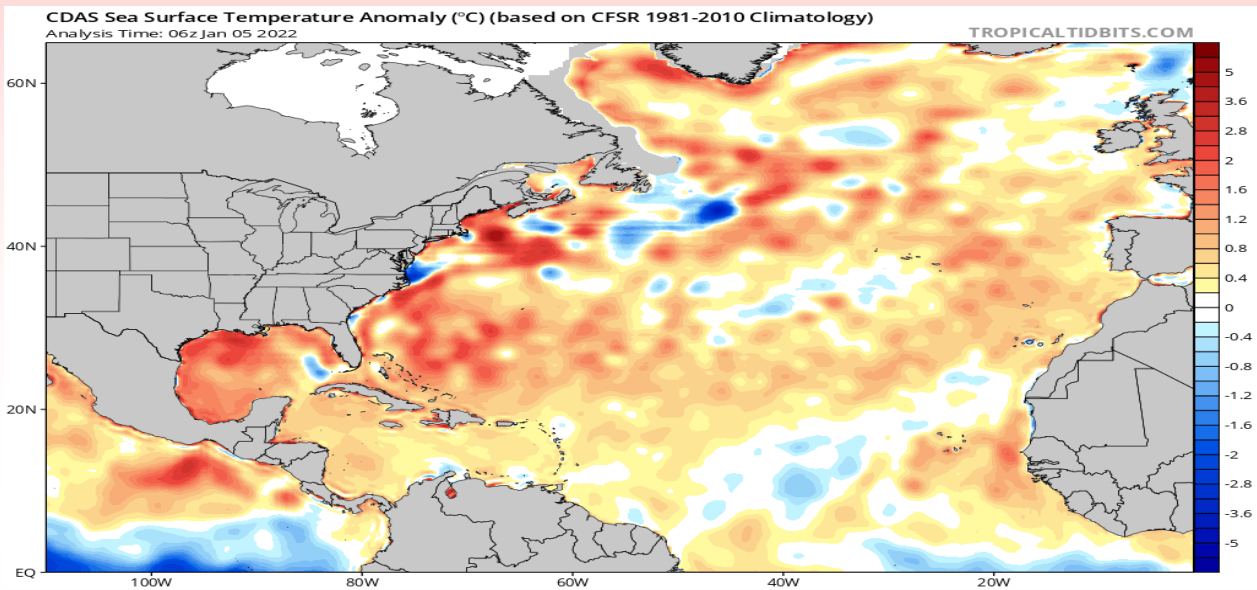
For more information on other Caribbean Outlooks go to <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

## WHAT INFLUENCES THIS SEASON'S CLIMATE?

In mid December, sea surface temperature (SST) in the east-central Pacific remained well below normal ( $-0.8^{\circ}\text{C}$ ). The key atmospheric variables were consistent with weak La Nina conditions and therefore a La Nina Advisory remains in place.

Majority of the forecast models predict SSTs will remain below normal through the Feb-Mar-Apr. season and return to ENSO-neutral levels by the Mar-Apr-May season.

SSTs have warmed to  $1^{\circ}\text{C}$  above average around the Caribbean and up to  $2^{\circ}\text{C}$  in portions of the Tropical North Atlantic and Gulf of Mexico. Models are forecasting observed SST to remain around average to above average across the Caribbean Sea. Warm SSTs in and around the Caribbean tend to contribute to higher air temperature, above-average humidity, seasonal rainfall totals and an increase in the frequency of extreme rainfall.



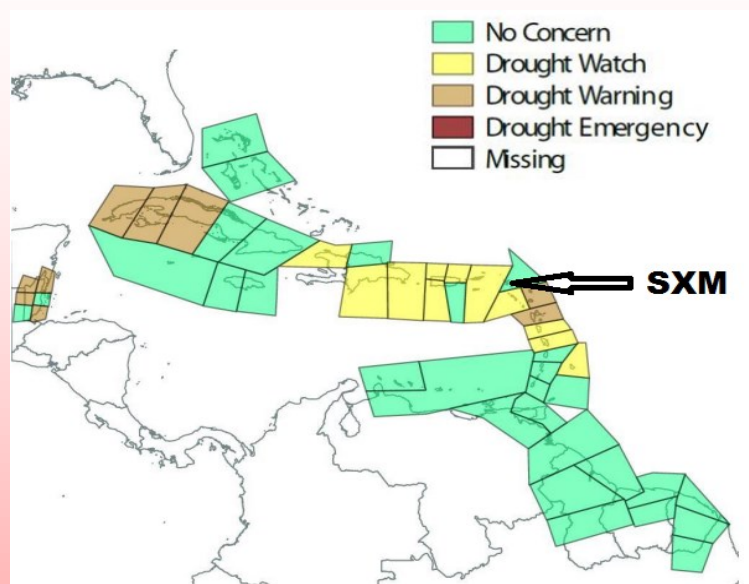
### Drought Outlook

#### Alert Level: No Concern

**In the short term:** By the end of March 2022 there is no drought concern in St. Maarten however in portions of W. Cuba, Belize, Antigua and Guadeloupe drought is evolving.

**In the long term:** By the end of May 2022 drought conditions are possible in St. Maarten.

**Keep monitoring monthly updates.**



**Short-term drought alert levels  
at the end of March 2022**

**DECEMBER 2021 IN REVIEW**

Total Rainfall	43.7 mm	1.7 in.
2021 Cumulative Rainfall	770.0 mm	30.3 in.
Max. 24-Hr. Rainfall	12 <sup>th</sup> Dec.	7.8mm/ 0.3 in.
No. Rain Days (≥1.0 mm)	13 days	
No. Heavy Rain Days (≥10.0 mm)	NONE	
No. Thunderstorm Days	NONE	
Avg. Wind Speed	10 kts.	12 mph
Max. Wind Gust	28 kts.	32mph
Avg. Temperature	27.0°C	81°F
Max. Temperature	3 <sup>rd</sup> & 4 <sup>th</sup> Dec.	31.6°C / 89°F
Min. Temperature	19 <sup>th</sup> Dec.	23.2°C / 74°F

**Long /Short Term Seasonal Review****Year in Review  
(January 2021– December 2021)**

Total rainfall over the past twelve (12) months was below the normal range (976-1246mm). A total of 770.0mm/30in. of rainfall was recorded at the Princess Juliana International Airport. 2021 was the driest year since 2015, rainfall was 31% below average.

**Seasonal Review  
(Oct-Nov-Dec. 2021)**

Total rainfall for the last three (3) months was 306mm/12 inches, this amount was below the normal range (325-415mm). There were seven (7) days with heavy rainfall (>10mm) during that period. This was the driest Oct-Nov-Dec season since 2015.

December 2021 was the driest December since 2012, rainfall was 57% below normal. Temperatures were above the normal range for the month.

The average daily temperature for December was 27.0°C /81°F.

The warmest days were the 1<sup>st</sup> & 2<sup>nd</sup> with an average temperature of 27.9°C/82°F. The coolest days were the 21<sup>st</sup> & 25<sup>th</sup> with an average temperature of 26.1°C/79°F.

The days with the most sunshine hours were the 5<sup>th</sup>, 6<sup>th</sup> & 27<sup>th</sup>. (10hrs:06min).

The day with the least sunshine hours was the 1<sup>st</sup> (5hrs:12min).

The windiest day was the 11<sup>th</sup>, with a daily average wind speed of 14 kt./ 16 mph.

The day with the highest wind gust was the 19<sup>th</sup> with a gust of 28kt/32 mph.

Skies were mostly fair during the month of December.

There were thirteen (13) days with rainfall in December none of which were heavy rainfall days.

**NORMAL  
JANUARY CONDITIONS**

Rainfall Total	58 mm – 74 mm	2– 3in.
Avg. No. of Rain days	13 days	
Daily Average Temperature	25.7°C	78°F
Avg. Max. Temperature	28.7°C	84°F
Avg. Min. Temperature	23.3°C	74°F
Avg. Daily Hours of Sunshine	8 hrs	

## Implication of Forecast for Sectors

### Energy/Water Sector

Energy demand for cooling purposes will slowly increase through March.

### Tourism Sector

- Continue to observe all health protocols.
- Fewer interruptions to outdoor activities are possible.

### Agriculture

- There is no drought concern in the short term (by the end of March)
- Frequent short dry spells are expected through this season.

### Health

- UV radiation will be at its annual minimum in January, increasing to high from February. Excessive UV exposure can cause skin damage across the population on sunny days.
- Increased use of containers for water storage may potentially create more breeding sites for mosquitoes, especially those associated with mosquito borne diseases, such as Dengue, Chikungunya and Zika.
- Proper management of water storage containers e.g. covering with protective mesh helps to reduce the risk.

## 2021 in Review

According to the World Meteorological Organization, the past seven years are on track to be the seventh warmest on record. Record-breaking heat and rainfall, devastating fires and debilitating drought were among the extreme weather, climate and water events of 2021, with human, economic and environmental impacts which will far outlast the calendar year.

Here on St. Maarten, 2021 was a comfortable year with no records broken or extreme weather experienced. Based on records taken at the Princess Juliana International Airport, in terms of temperature; 2021 was one of the warmest years on record however was not as warm as 2020.

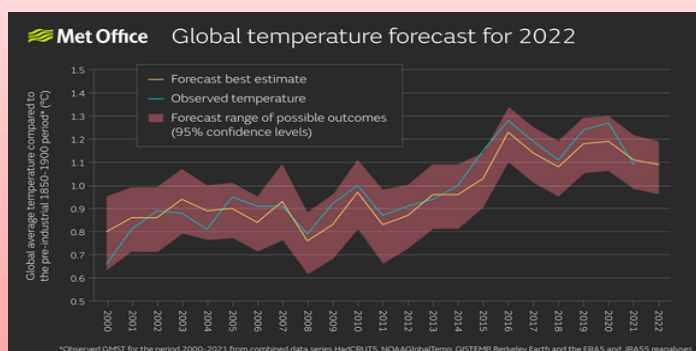
On average, September was the warmest month while January was the coolest. The highest daytime temperature was recorded on September 7<sup>th</sup> as 34.1°C/ 93°F and the lowest night time temperature was recorded on February 20<sup>th</sup> as 21.3°C/ 70°F

The annual rainfall total for 2021, was 770mm/30 inches this was the lowest total since 2015, the average annual rainfall is 1112mm. November was the wettest month while March was the driest.

The 2021 Atlantic hurricane season was above normal as predicted by the National Oceanic and Atmospheric Administration (NOAA). The season produced twenty-one (21) named storms, seven (7) hurricanes including four (4) major hurricanes. St. Maarten was spared from significant impacts from these systems.

In 2022 the Meteorological Department St. Maarten remain committed to monitoring all aspects of weather and keeping the public informed and updated on any possible impacts with the aim of protecting life and property.

**Have a productive and safe year!!!**



The U.K Met Office is forecasting average global temperature for 2022 at between 0.97°C and 1.21°C above 1850-1900 average.

This would be 8<sup>th</sup> straight year with temperatures at least 1.0°C above pre-industrial levels.

**DISCLAIMER:** This information contained in this newsletter is produced with the understanding that the Meteorological Department of St. Maarten., makes no warranties, either implied or expressed concerning the accuracy, completeness, reliability, or suitability of the forecast. The information may be used freely by the public with appropriate acknowledgement of its source .