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Weather & Climate

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December 2023

Key Points

- Rainfall for November 2023 was 72% below the normal .
- Below normal rainfall expected for the next 3 months.
- Temperatures remained warm in November. Making it the 10th consecutive month with above normal temperatures for 2023.

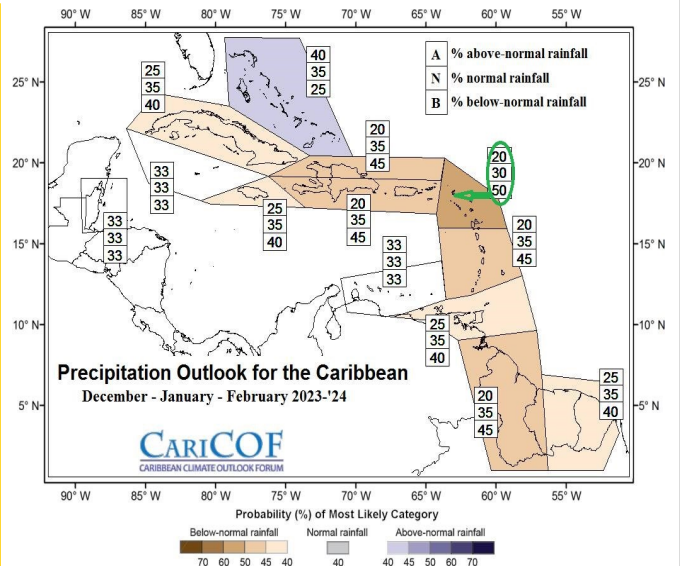
Seasonal Outlook for December to February (DJF) 2023

Rainfall Forecast

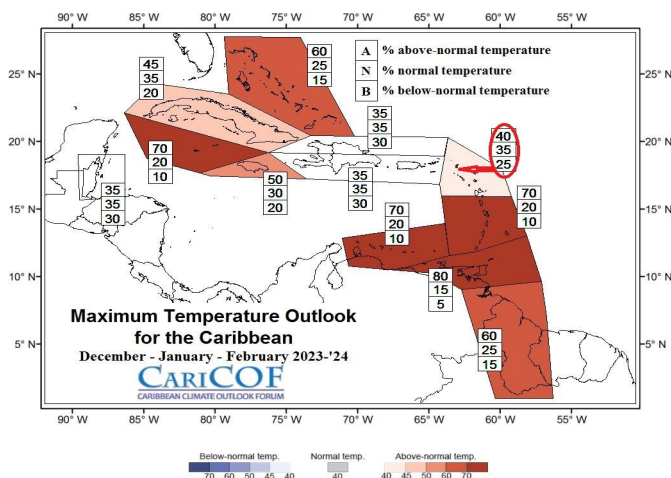
Models are indicating that rainfall totals for the season Dec-Jan-Feb 23/24 are likely to be below the normal range in St. Maarten and the rest of the region.

The normal rainfall for Dec-Jan-Feb season on St. Maarten ranges 160mm–249mm/6-10 inches, with 39 to 42 wet days. In December we transition to the dry season and rainfall decreases in frequency. In January to February mostly sunny days with few showers.

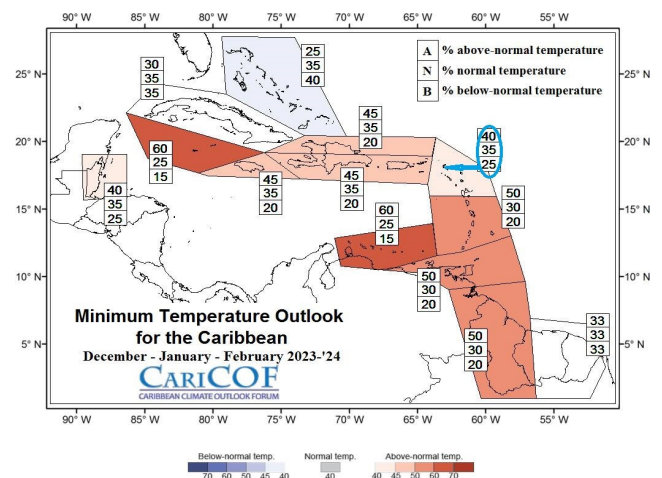
The forecast is for about 6 (7-day) wet spells, up to 3 very wet spells and about 5 (7-day) dry spells on St. Maarten during this season.



Temperature Forecast



Day-time Temperatures



Night-time Temperatures

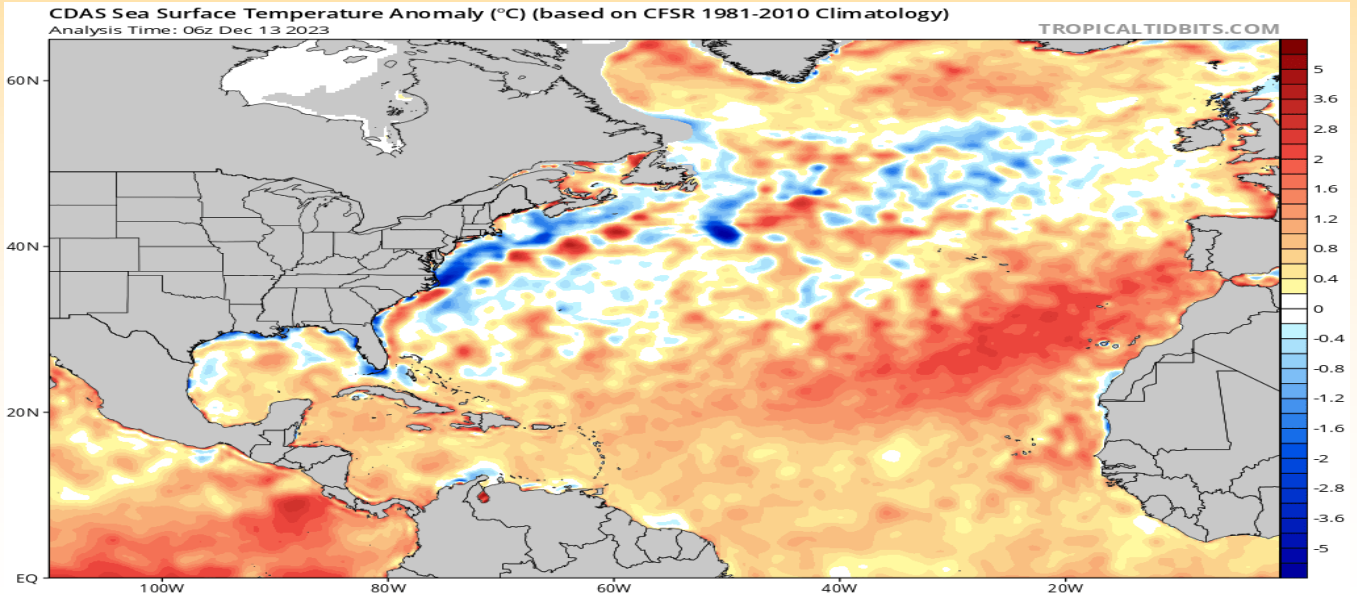
Day-time and night-time temperatures are forecast to be higher than usual this season, however, no significant heat stress is expected during the Caribbean's cool season.

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, the El Nino conditions in the eastern and central Pacific remained strong with key oceanic and atmospheric variables consistent with the ongoing El Nino. The El Nino advisory remains in place and the majority of the forecast models predict that an El Nino will persist through the Apr-May-Jun 2024 season followed by the neutral phase the most likely phase from May 2024.

El Nino more often than not is marked by a warmer cool season. Rainfall tends to be less than usual in the southern Caribbean but higher than usual in the far north.

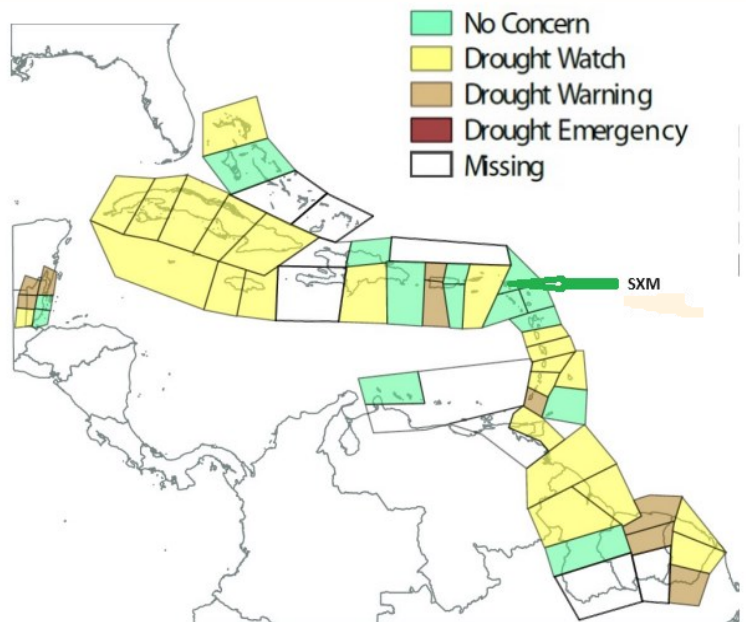


Drought Alert

Drought conditions are not expected to be a concern by the end of February 2024 in St. Maarten and the rest of the Leeward Islands.

Based on the forecast most of the other islands of the Caribbean could experience some drought conditions.

At this time resources should be monitored, management plans should be ratified and updated and infrastructure upgraded.



Short term drought alert levels at the end of February 2024

NOVEMBER 2023 IN REVIEW

Total Rainfall	45.3 mm	1.8 in
2023 Cumulative Rainfall	843.2 mm	33.2 in.
Max. 24-Hr. Rainfall	15.0 mm	0.6 in.
No. Rain Days (≥1.0 mm)	12 days	
No. Heavy Rain Days (≥10.0 mm)	1 day	
No. Thunderstorm Days	None	
Avg. Wind Speed	8 kt.	9 mph
Max. Wind Gust	21 kt.	24 mph
Avg. Temperature	28.3°C	83°F
Max. Temperature	32.0°C	90°F
Min. Temperature	24.3°C	76°F

Long /Short Term Seasonal Review

Year in Review (December 2022— November 2023)

Total rainfall over the past twelve (12) months was below the normal range. (986 –1231mm). A total of 881.4mm/35in. of rainfall was recorded at the Princess Juliana International Airport.

Seasonal Review (Sept –Oct –Nov 2023)

Total rainfall for the last three (3) months was 356.1mm/14in, this amount was within the normal range (320-466mm). There were six (6) days with heavy rainfall (>10mm) during that period.

For the month of November, rainfall was below the normal range, this was the driest November since 2019. Temperatures remained above normal, this was the warmest November since 2017.

The warmest day in November was the 7th with an average temperature of 29.3°C/85°F. The coolest day was the 21st with an average temperature of 26.4°C/80°F.

The day with the most sunshine hours in November was the 29th (10hrs:48min).

The day with the least sunshine hours were the 8th, (0hr:12min)

The windiest days in November were the 11th & 12th with a daily average wind speed of 12kt./14mph.

The day with the highest wind gust was the 9th (21kt./24mph).

There were twelve (12) days with rainfall in November and one (1) had heavy rainfall (>10mm).

The longest dry spell in November lasted for ten ((10) days (11-20).

November 7th & 18th recorded the highest maximum temperature (32.0°C/90°F).

There were no heat waves in the month of November.

Six (6) warm nights were recorded; one (1) very warm night with a minimum temperature of 27.8°C/82°F. (Nov. !8)

NORMAL DECEMBER CONDITIONS

Rainfall Total	69 – 123 mm	3-5 in.
Avg. No. of Rain days	14 days	
Daily Average Temperature	26.4°C	80°F
Avg. Max. Temperature	29.3°C	85°F
Avg. Min. Temperature	24.1°C	75°F
Avg. Daily Hours of Sunshine	8 hrs	

Implication of Forecast for Sectors

Health

- Proper management of water storage containers e.g. covering with protective mesh helps to reduce the risk of potential breeding sites for mosquitoes.
- Persons with respiratory illnesses should take the necessary precautions during Saharan dust episodes and monitor daily forecasts for more information.

Agriculture

In the event of dry spells:

- Ensure regular weeding to reduce competition and further stress to crops
- Schedule irrigation
- Utilize irrigation techniques to apply the right amount of water for the crop and to avoid runoff.

Tourism Sector

- Although we are in the cool season, daytime and nighttime temperatures are still forecast to remain up to 1-2 degrees Celsius higher than usual.

Energy/Water Sector

Energy demand for cooling purposes may be slightly higher than usual for this time of year.

2023 Atlantic Hurricane Season

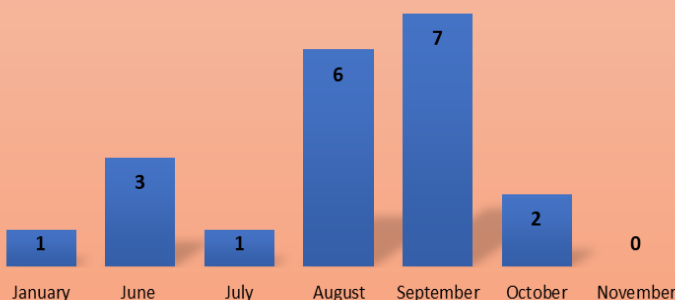
The Atlantic Hurricane season officially came to an end on November 2023. There were twenty (20) named storms which ranks fourth for the most-named storms in a year since 1950. This season produced seven (7) hurricanes three (3) of them were major.

The 2023 Atlantic seasonal activity fell within the NOAA Climate Prediction Center's predicted ranges for named storms and hurricanes in the August updated outlook.

There was no significant impacts from any hurricanes in the Caribbean this season.

Matthew Rosencrans, the lead hurricane forecaster at NOAA's Climate Prediction Center, stated that the Atlantic basin experienced the highest number of named storms in any El Niño-influenced year in modern history. He attributed this phenomenon to the unusually warm ocean temperatures in the Atlantic, which offset the typical effects of El Niño.

2023 Atlantic Hurricane Season Storm Activity



Number of named storms monthly

2023 Atlantic Storm Names

Arlene	Harold	Ophelia
Bret	Idalia	Philippe
Cindy	Jose	Rina
Don	Katia	Sean
Emily	Lee	Tammy
Franklin	Margot	Vince
Gert	Nigel	Whitney

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