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# Meteorological Department St. Maarten

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## Weather & Climate

Volume 8, Issue 3

April 2023

### Summary

- Rainfall for March 2023 was below the normal range and this was the driest March since 2015
- Temperatures for March were near normal.
- No drought concern expected by the end of June.
- An El Niño event is predicted from Jun-Jul-Aug season onwards.

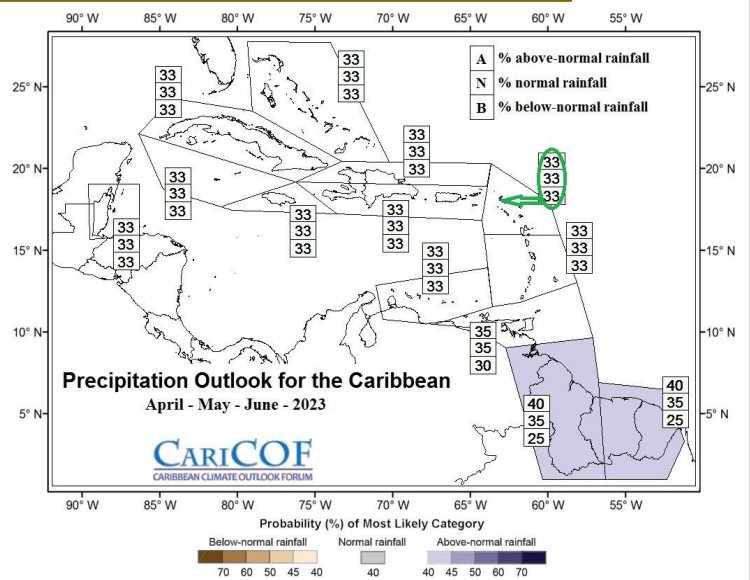
### Seasonal Outlook for April to June (AMJ) 2023

#### Rainfall Forecast

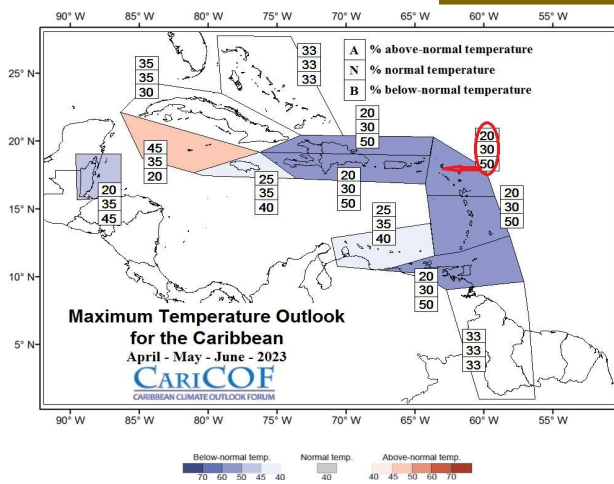
Models are indicating that rainfall totals for the season Apr-May-June 2023 are likely to be near the normal range in St. Maarten and the rest of the Caribbean.

The normal rainfall for Apr-May-June season on St. Maarten ranges 148mm–253mm/6-10 inches, with 23 to 31 wet days. In April, mostly sunny day with a few showers are expected. May to June we transition to the wet season where rainfall may be more frequent.

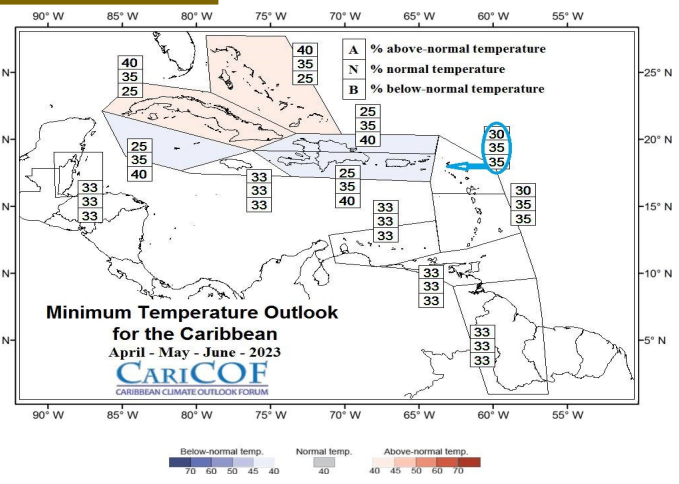
The forecast is for up to 4 (7-day) wet spells, up to 3 very wet spells and about 7 (7-day) dry spells on St. Maarten during this season.



#### Temperature Forecast



Day-time Temperatures



Night-time Temperatures

Day-time and night-time temperatures are expected to be near the usual or slightly lower this season. Heat stress is not expected to gradually increase this season.

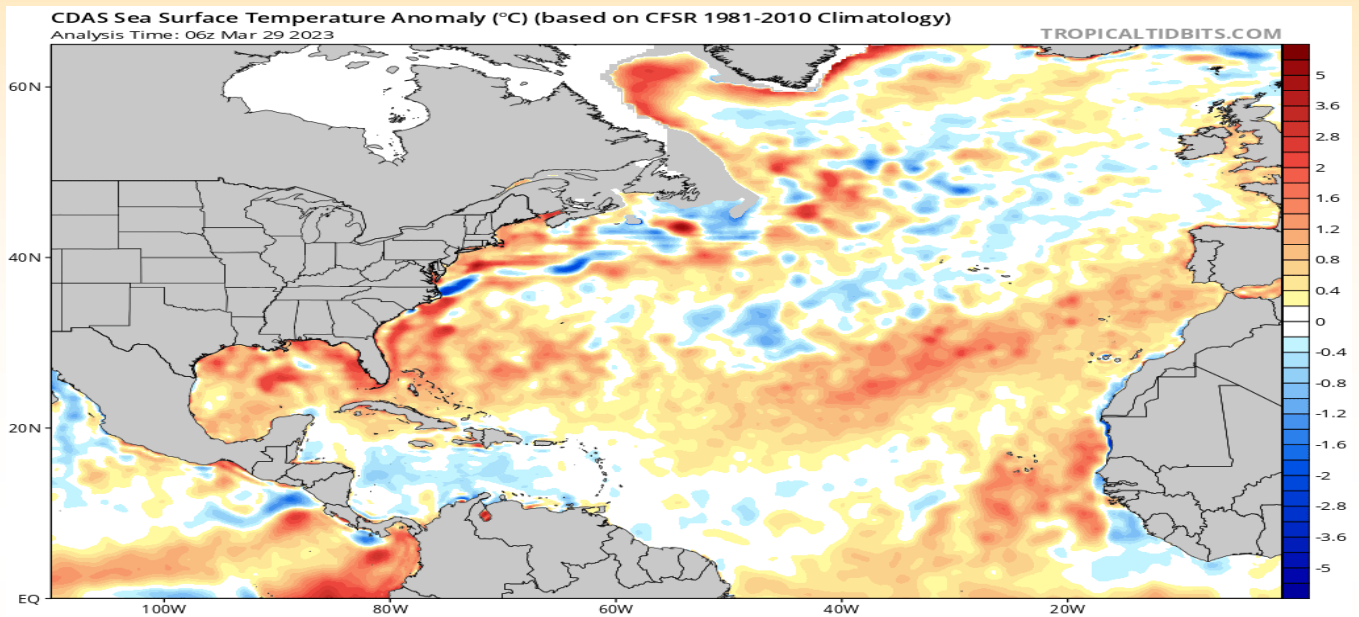
For more information on other Caribbean Outlooks go to <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

## WHAT INFLUENCES THIS SEASON'S CLIMATE?

In mid March, the previous negative sea surface temperatures (SST) anomalies in the east-central Pacific weakened further and the basin is now in an ENSO-neutral state. The key atmospheric variables are now consistent with ENSO-neutral conditions. The final La Nina Advisory issued in March signaled the end of the event.

Majority of the forecast models predict that SSTs will remain between 0°C and 0.5°C across the Caribbean Sea and the Tropical North Atlantic. The ENSO-neutral phase is expected to persist through July while the likelihood of an El Nino phase increases thereafter.

Warm SSTs in and around the Caribbean tend to contribute to higher air temperatures, high humidity and increased frequency of heat waves also higher hurricane season activity and seasonal rainfall totals.



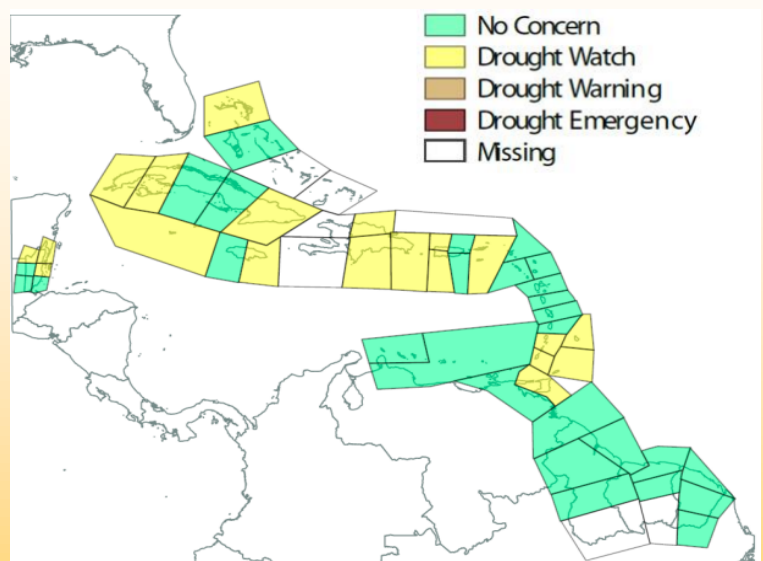
## Drought Alerts

Currently, short term drought has developed in western Cuba, Jamaica, USVI, Martinique, St. Vincent and Trinidad and Tobago.

Short-term drought is possible in several other countries across the Caribbean including St. Maarten by the end of May. However, models indicate that by the end of June there will be no drought concern.

Some actions that need to be taken in the meanwhile are to:

- ◆ Keep Updated on the situation
- ◆ Implement management plans
- ◆ Maintain adequate water level in Ponds for fish survival.
- ◆ Check and repair fire hydrants
- ◆ Set up irrigation systems



## Short term drought alert levels at the end of June 2023

**MARCH 2023 IN REVIEW**

<b>Total Rainfall</b>	<b>11.9 mm</b>	<b>0.5 in</b>
<b>2023 Cumulative Rainfall</b>	<b>129.3 mm</b>	<b>5.1 in.</b>
<b>Max. 24-Hr. Rainfall</b>	<b>6.6 mm</b>	<b>0.3in.</b>
<b>No. Rain Days (≥1.0 mm)</b>	<b>3 days</b>	
<b>No. Heavy Rain Days (≥10.0 mm)</b>	<b>None</b>	
<b>No. Thunderstorm Days</b>	<b>None</b>	
<b>Avg. Wind Speed</b>	<b>9 kt.</b>	<b>10 mph</b>
<b>Max. Wind Gust</b>	<b>27 kt.</b>	<b>31 mph</b>
<b>Avg. Temperature</b>	<b>26.0°C</b>	<b>79°F</b>
<b>Max. Temperature</b>	<b>30.3°C</b>	<b>87°F</b>
<b>Min. Temperature</b>	<b>22.0°C</b>	<b>72°F</b>

**Long /Short Term Seasonal Review****Year in Review  
(April 2022– March 2023)**

Total rainfall over the past twelve (12) months was below the normal range. (959 –1195mm). A total of 834mm/33in. of rainfall was recorded at the Princess Juliana International Airport.

**Seasonal Review  
(Jan-Feb-Mar 2023)**

Total rainfall for the last three (3) months was 129mm/5in, this amount was below the normal range (136-180mm). There were two (2) days with heavy rainfall (>10mm) during that period.

Rainfall was below the normal range while temperatures for the month of March were all within the normal range.

The warmest day in March was the 16<sup>th</sup> with an average temperature of 26.7°C/80°F. The coolest days were the 1<sup>st</sup> & 8<sup>th</sup> with an average temperature of 25.4°C/78°F.

The day with the most sunshine hours in March was the 27<sup>th</sup> (11 hrs:12min).

The day with the least sunshine hours was the 24<sup>th</sup>, (7hrs:42min)

The windiest day in March was the 22<sup>nd</sup> with a daily average wind speed of 13kt./15mph.

The day with the highest wind gust was the 27<sup>th</sup> (27kt./31mph).

Skies were Mostly fair.

There were three (3) days with rainfall in March none were heavy rainfall days (>10mm).

The longest dry spell in March was eighteen (18) days long. (10<sup>th</sup> to 28<sup>th</sup>).

There were no hot days or warm nights in March.

There were four (4) cool nights in March with the 8<sup>th</sup> recorded as the coolest with 22.0°C/ 72°F.

**NORMAL  
APRIL CONDITIONS**

<b>Rainfall Total</b>	<b>41 – 58 mm</b>	<b>1-2 in.</b>
<b>Avg. No. of Rain days</b>	<b>8 days</b>	
<b>Daily Average Temperature</b>	<b>26.6°C</b>	<b>80°F</b>
<b>Avg. Max. Temperature</b>	<b>29.7°C</b>	<b>85°F</b>
<b>Avg. Min. Temperature</b>	<b>24.3°C</b>	<b>76°F</b>
<b>Avg. Daily Hours of Sunshine</b>	<b>9 hrs</b>	

## Implication of Forecast for Sectors

### Energy/Water Sector

Energy demand for cooling purposes will continue to increase this season.

### Tourism Sector

- Fewer interruptions to outdoor activities are possible through April chances for interruptions increases from May.

### Agriculture

- Frequent dry spells are expected this season. Irrigation should be considered.
- Drought is possible by the end of May.
- Pest and disease may increase in extreme dry and wet conditions. Monitor and employ recommended treatments as necessary.

### Health

- UV radiation will continue to increase this season. Excessive UV exposure can cause skin damage across the population on sunny days.
- Proper management of water storage containers e.g. covering with protective mesh helps to reduce the risk of mosquito breeding.

## The Hurricane Committee Retires Fiona and Ian

At the 45th session of the RAIV Hurricane Committee in San Jose, Costa Rica, 29 March 2023 - The World Meteorological Organization (WMO) Hurricane Committee has retired **Fiona** and **Ian** from the rotating lists of Atlantic tropical cyclone names because of the death and destruction they caused in Central America, the Caribbean, the United States, and Canada.

**Farrah** will be used to replace Fiona in the lists of names, whilst **Idris** will replace Ian. WMO uses lists of names to help communicate storm warnings and to alert people about potentially life-threatening risks. In this region, the names are repeated every six years, unless a storm is so deadly that its name is retired. In total, 96 names have now been retired from the Atlantic basin list since 1953, when storms began to be named under the current system.

The naming convention – whilst attracting the most public attention – is only a small part of the life-saving work of the Hurricane Committee, which focuses on operational priorities including the provision of forecasts and warnings for wind, storm surge and flooding hazards, as well as impact assessments.

Fiona was a large and powerful hurricane, which hit communities in the Lesser Antilles, Puerto Rico, Dominican Republic and the Turks and Caicos. It then moved northward over the western Atlantic and struck Canada as a strong post-tropical cyclone in September 2022, bringing significant damage and loss of life along its path. The storm brought devastating freshwater flooding to Puerto Rico where it made landfall as a category 1 hurricane. The storm produced over \$3 billion (U.S. dollars) in damage across the Caribbean and Canada and was responsible for 29 direct and indirect fatalities. Fiona is the costliest extreme weather event on record in Atlantic Canada. (Source: [wmo.int](https://www.wmo.int))