

Weather & Climate

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KEY POINTS

- Temperatures for March 2024 were above the normal range.
- Temperatures / Rainfall are forecast to be above normal this season throughout the Caribbean.
- There should be no drought concerns by the end of May 2024 on St. Maarten.

SEASONAL OUTLOOK FOR APRIL TO JUNE (AMJ) 2024

RAINFALL FORECAST

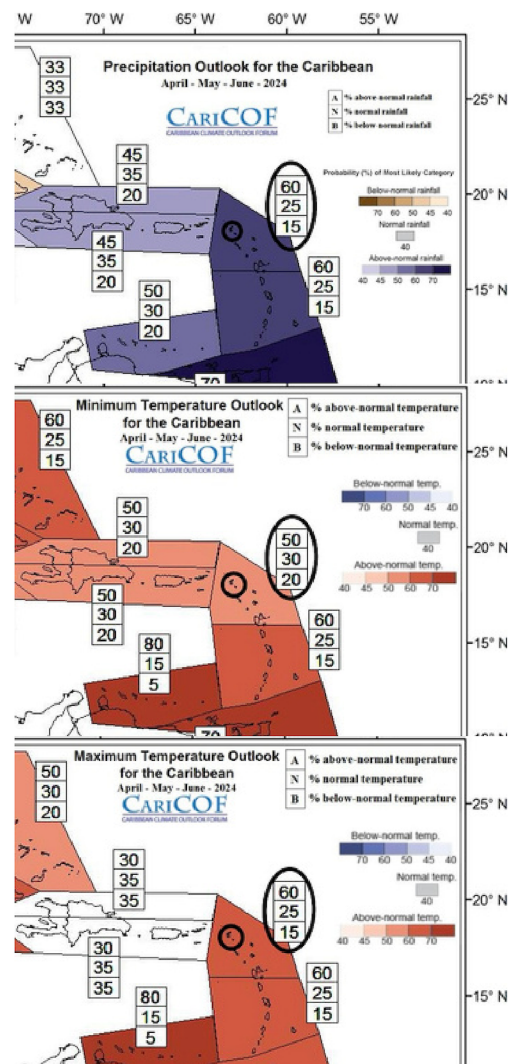
Models are indicating that rainfall totals for the season Apr-May-Jun 2024 are likely to be above the normal range in St. Maarten and the eastern Caribbean but drier in the northern and western Caribbean.

The normal rainfall for Apr-May-Jun season on St. Maarten ranges 148mm–253mm/ 6-10 inches, with 23 to 31 wet days. This is the latter part of the dry season, there are usually sunny days with some days with showers. In May and June, showers are more frequent and heavy.

The forecast is for about 5 (7-day) wet spells and about 5 (7-day) dry spells on St. Maarten during this season.

TEMPERATURE FORECAST

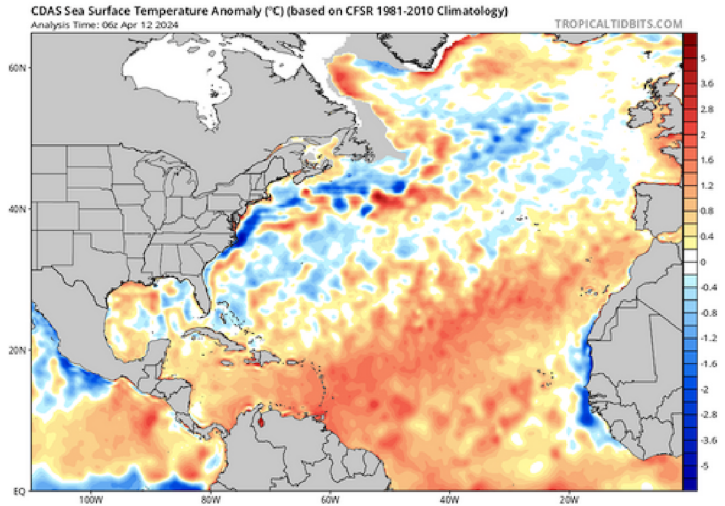
Day-time and night-time temperatures as well as humidity are forecast to be considerably higher than usual. Frequent episodes of heat stress is expected as the region is set to enter a near-record Heat Season.



WHAT INFLUENCES THIS SEASON'S CLIMATE ?

In mid March, moderate to strong El Niño conditions persisted in the eastern and central Pacific with key oceanic and atmospheric variables aligning with the ongoing El Niño event which is gradually diminishing. The majority of the forecast models predict that an ENSO-neutral phase will be the most likely phase this season through Jun-Aug season and La Niña phase from the Jul-Sept season.

A transition out of El Niño more often than not is associated with increased chances of heavy showers and higher rainfall totals in April as well as higher temperatures.

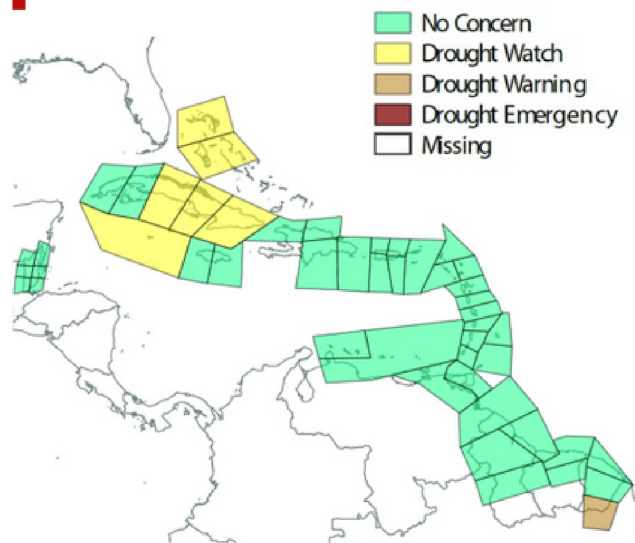


Sea Surface Temperatures (SSTs) in much of the Caribbean Sea and the tropical Atlantic are currently 1 to 2°C above normal. Models are confidently forecasting increasing warm SSTs across the Caribbean. Warm SSTs in and around the Caribbean contribute to higher air temperatures with above-average humidity, seasonal rainfall totals, increased frequency of extreme rainfall and tropical cyclone activity throughout the Atlantic Hurricane Season.

DROUGHT ALERT!

Models indicate that by the end of June 2024 there will be no drought concern in St. Maarten. Short term drought may evolve in parts of the Bahamas, the Cayman Islands and Cuba.

There may be occurrences of dry spells throughout the month of April therefore, conditions should be monitored closely and infrastructure upgraded and management plans should be ratified and updated.



Short term drought alert levels at the end of June 2024



MARCH 2024 IN REVIEW

Warmest days: March 19th & 20th
Average temperature of 28.0°C/82°F

Coollest day: March 27th
Average temperature of 25.6°C/78°F

Sunshine hours:
Most: March 30th (11hrs:24min)
Least: March 15th (1hr:00min)

Windiest day: March 2nd
Daily average wind speed of 14kt./15mph.

Highest wind gust: March 2nd
27kt./31mph

Longest dry spell: 6 days

Highest maximum temperature:
March 31st

Total Rainfall	26.7 mm 1.1 in
2023 Cumulative Rainfall	230.6 mm 9.1 in
Maximum 24-hr. Rainfall	5.2 mm 0.2 in
No. of Rain Days	10 days
No. of Heavy Rain Days	0
No. of Thunderstorm Days	0
Average Wind Speed	8 kt 9 mph
Maximum Wind Gust	27 kt 31 mph
Average Temperature	27.0°C 81°F
Maximum Temperature	31.3°C 88°F
Minimum Temperature	22.6°C 73°F

For the month of March, rainfall was within the normal range. Temperatures were above the normal range, March 2024 was the warmest March since 2010 and also recorded the highest maximum temperature since 1993.

LONG/SHORT TERM SEASONAL REVIEW

YEAR IN REVIEW (APR 2023 - MAR 2024)

Total rainfall for the last 12 months was within the normal range. (963-1195mm). A total of 1001mm/39in. of rainfall was recorded at the Princess Juliana International Airport.

SEASONAL REVIEW (JAN-FEB-MAR-2024)

Total rainfall for the last three (3) months was 230.6mm/9in, this amount was above the normal range (136-180mm). There were four (4) days with heavy rainfall (>10mm) during that period.

NORMAL APRIL CONDITIONS

Total Rainfall	41-58 mm 2 in
Average No. of Rain Days	8 days
Daily Avg. Temperature	26.6°C 80°F
Avg. Max. Temperature	29.7°C 85°F
Avg. Min. Temperature	24.3°C 76°F
Avg. Daily Hrs. of Sunshine	9 hours



IMPLICATION OF FORECAST FOR SECTORS

HEALTH

- UV radiation will continue to increase this season. Wear protective clothing, hats, or shades, limit outdoor activities and keep hydrated.
- Proper management of water storage containers e.g. covering with protective mesh helps to reduce the risk of mosquito breeding.

TOURISM

- More interruptions to outdoor activities can be expected by April.
- Monitor weather forecasts.

AGRICULTURE

- No drought concern by the end of June. Irrigate during dry spells.

ENERGY/WATER

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

2024 ATLANTIC HURRICANE SEASON

2024 TROPICAL ATLANTIC HURRICANE SEASON					
	1991 – 2020 AVERAGE	2023	C.S.U	TSR	WC
Named Storms	14	20	23	23	24
Hurricanes	7	7	11	11	11
Major Hurricanes	3	3	5	5	6

The 2024 Atlantic Hurricane Season predictions are out. All institutions are predicting that the 2024 hurricane season is going to be an active season.

Reasons for the above normal season are the warmer than usual sea surface temperatures and the forecast of the onset of a La Nina during the peak of this year’s hurricane season.

Please note that the seasonal forecasts have little operational value. This means that no matter how many tropical cyclones are forecast to develop, there is no way to predict so many weeks or months in advance where a certain tropical cyclone is expected to develop or what country it will make landfall.

Remember, that it takes only one major hurricane to make landfall on our island to make it an active season for us. We must also be conscious of the fact that, it does not have to be a storm or a hurricane, an active tropical wave or just 2 to 3 hours of heavy rainfall can have devastating impacts on our lives. The geographical location of our islands make us vulnerable to these forms of natural disasters consequently being prepared and well informed is key. It is not too early to start your preparations for the 2024 Hurricane Season.

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