



Weather & Climate

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KEY POINTS

- Rainfall for January 2024 was below the normal range.
- Temperatures are forecast to be above normal this season throughout the Caribbean.
- Drought Conditions are possible by the end of April 2024 on St. Maarten.

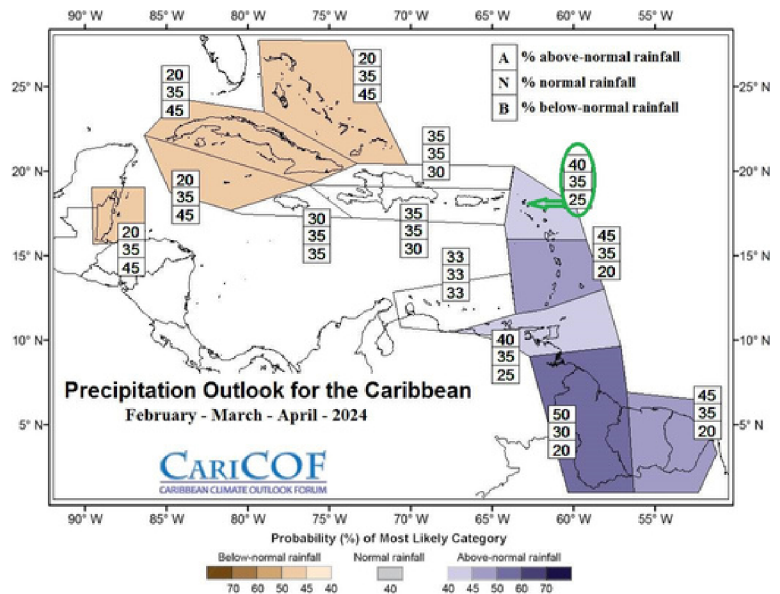
SEASONAL OUTLOOK FOR FEBRUARY TO APRIL (FMA) 2024

RAINFALL FORECAST

Models are indicating that rainfall totals for the season Feb-Mar-Apr 2024 are likely to be above the normal range in St. Maarten and the rest of the region.

The normal rainfall for the Feb-Mar-Apr season on St. Maarten ranges 132mm–168mm/5-7 inches with 22-32 wet days. This season there are usually sunny days and some days with showers.

The forecast is for about 4 (7-day) wet spells and about 5 (7-day) dry spells on St. Maarten during this season.



TEMPERATURE FORECAST

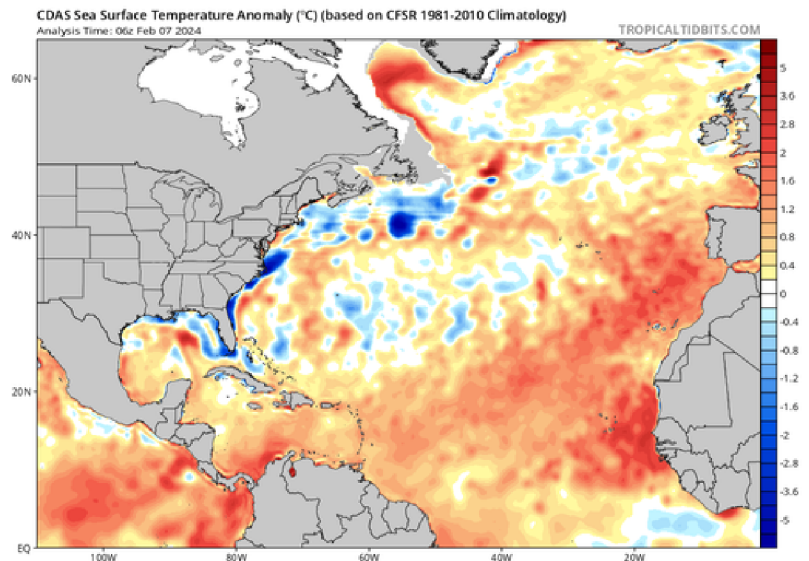
Day-time and night-time temperatures are forecast to be higher than usual this season. Heat stress is expected to increase after March, additionally, heat waves may be possible as early as March in some areas.

WHAT INFLUENCES THIS SEASON'S CLIMATE ?

In mid-January, 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 remained in place for January and the majority of the forecast models predict that the El Nino will persist through March and to rapidly weaken thereafter.

Enso-neutral is expected to become the most likely phase from the Apr-May-Jun season with Enso-neutral and **La Nina** nearly equal in the Jun-Jul-Aug season and La Nina the most probable phase by the Jul-Aug-Sep season.

A transition out of El Nino more often than not is associated with increased chances of showers and higher rainfall totals in April.

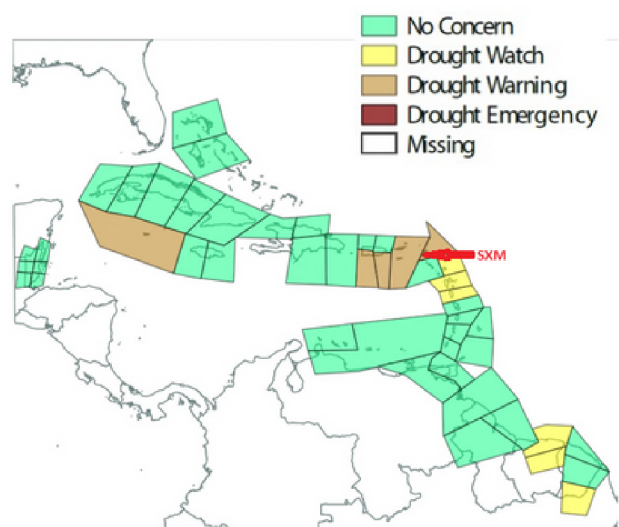


DROUGHT ALERT!

Short term drought may evolve in St. Maarten and portions of the northeast Caribbean by the end of April 2024. While drought conditions are possible in Antigua, Guadeloupe and Dominica.

Long-term drought is also possible in many countries across the region by the end of May 2024.

At this time resources should be monitored and management plans implemented.



Short term drought alert levels
at the end of April 2024



JANUARY 2023 IN REVIEW

Warmest day: January 4th
Average temperature of 28.0°C/82°F

Coollest day: January 24th
Average temperature of 25.2°C/77°F

Sunshine hours:
Most: January 30th (10hrs:54min)
Least: January 12th (3hr:42min)

Windiest day: January 24th
Daily average wind speed of 16kt./18mph.

Highest wind gust: January 24th
(39kt./45mph).

Longest dry spell: 6 days

One cool night: 25th
Minimum temperature of 22.4°C/72°F.

Total Rainfall	49.5 mm 1.9 in
2023 Cumulative Rainfall	49.5 mm 1.9 in
Maximum 24-hr. Rainfall	23.7 mm 0.9 in
No. of Rain Days	7 days
No. of Heavy Rain Days	1 day
No. of Thunderstorm Days	0
Average Wind Speed	9 kt 10 mph
Maximum Wind Gust	39 kt 45 mph
Average Temperature	26.6°C 80°F
Maximum Temperature	31.1°C 88°F
Minimum Temperature	22.4°C 72°F

NORMAL FEBRUARY CONDITIONS

Total Rainfall	31-57 mm 1-2 in
Average No. of Rain Days	11 days
Daily Avg. Temperature	25.6°C 78°F
Avg. Max. Temperature	28.7°C 84°F
Avg. Min. Temperature	23.3°C 74°F
Avg. Daily Hrs. of Sunshine	9 hours

LONG/SHORT TERM SEASONAL REVIEW

YEAR IN REVIEW (FEB 2023-JAN 2024)

Total rainfall for the last 12 months was below the normal range. (973 -1237mm). A total of 882.4mm/35in. of rainfall was recorded at the Princess Juliana International Airport.

SEASONAL REVIEW (NOV-DEC-JAN 2023/24)

Total rainfall for the last three (3) months was 151.3mm/6.0in, this amount was below the normal range (272-320mm). There were four (4) days with heavy rainfall (>10mm) during that period.

IMPLICATION OF FORECAST FOR SECTORS

HEALTH

- Persons with respiratory illnesses should take the necessary precautions during Saharan dust episodes and monitor daily forecasts for more information.
- UV radiation will gradually increase this season.

TOURISM

- Some interruptions to outdoor activities.

AGRICULTURE

- Schedule irrigation during dry spells.
- Apply mulch for moisture conservation in the soil.

ENERGY/WATER

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

EL NIÑO-SOUTHERN OSCILLATION (ENSO)

El Niño and La Niña are opposite phases of the El Niño-Southern Oscillation (ENSO), which is a climate pattern that occurs in the Pacific Ocean. Here's a simple summary of the differences between the two and their effects on the Caribbean climate:

El Niño:

- During an El Niño event, warmer-than-average sea surface temperatures occur in the central and eastern Pacific Ocean.
- This warming disrupts normal weather patterns, leading to changes in global atmospheric circulation.
- In the Caribbean, El Niño typically brings drier and warmer conditions, with decreased rainfall and an increased risk of drought in some areas.
- It can also lead to a reduction in the number of hurricanes in the Atlantic.

La Niña:

- La Niña is characterized by cooler-than-average sea surface temperatures in the central and eastern Pacific Ocean.
- This cooling also affects atmospheric circulation but in the opposite way compared to El Niño.
- In the Caribbean, La Niña tends to bring wetter and cooler conditions, with increased rainfall and a higher likelihood of flooding and landslides.
- La Niña can also contribute to a more active hurricane season in the Atlantic.

Overall, while El Niño and La Niña events have opposite effects on sea surface temperatures and atmospheric circulation patterns, both can significantly influence weather patterns and climate conditions in the Caribbean, affecting rainfall, temperature, and the frequency and intensity of tropical storms and hurricanes.