



# METEOROLOGICAL DEPARTMENT ST. MAARTEN

## WEATHER & CLIMATE

### KEY POINTS

- ◆ January 2025 rainfall was below normal for the 5th consecutive year.
- ◆ The highest maximum temperature for January since 2010 was recorded.
- ◆ Heat will gradually increase through April 2025.

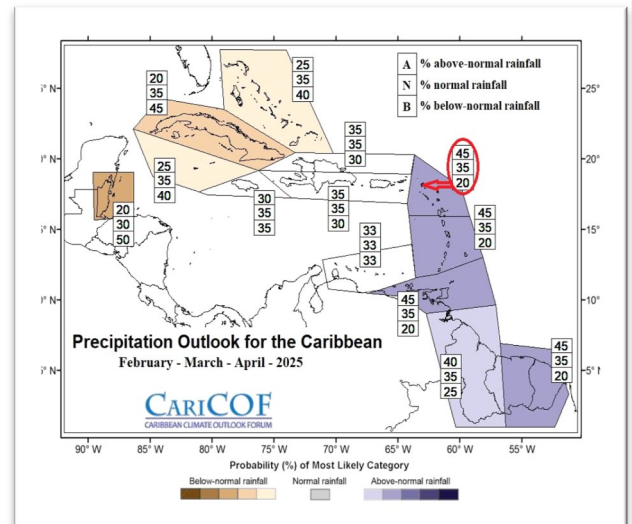
## SEASONAL OUTLOOK FOR FEBRUARY—APRIL 2025

### RAINFALL FORECAST

Model guidance predicts above-normal rainfall for St. Maarten and the Lesser Antilles during the Feb-Mar-Apr season.

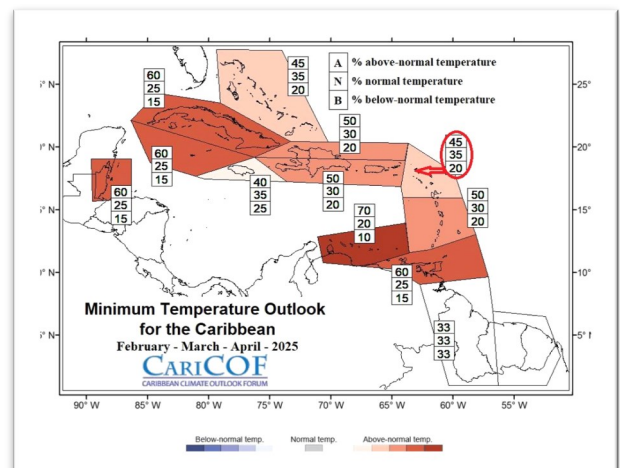
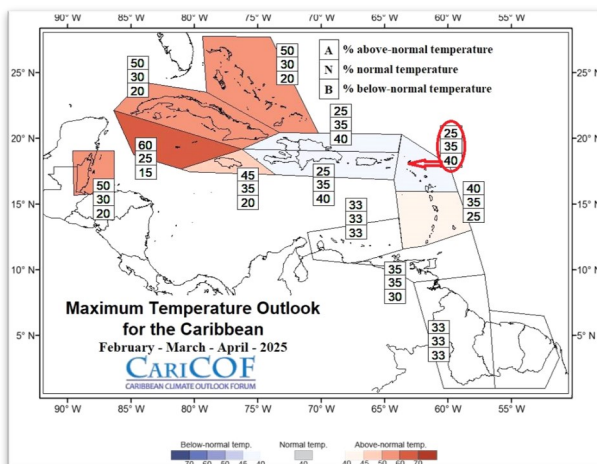
St. Maarten usually experiences 22 to 38 rainy days and 132 mm to 168 mm (5 to 7 inches) of rain during this period. We are in the dry season; hence, primarily sunny days with occasional showers are anticipated.

The forecast suggests there will be 1 to 4 (7-day) wet spells and at least 2 very wet spells. Although up to 7 (7-day) dry spells are expected, there is a moderate risk of flooding and flash floods.



### TEMPERATURE FORECAST

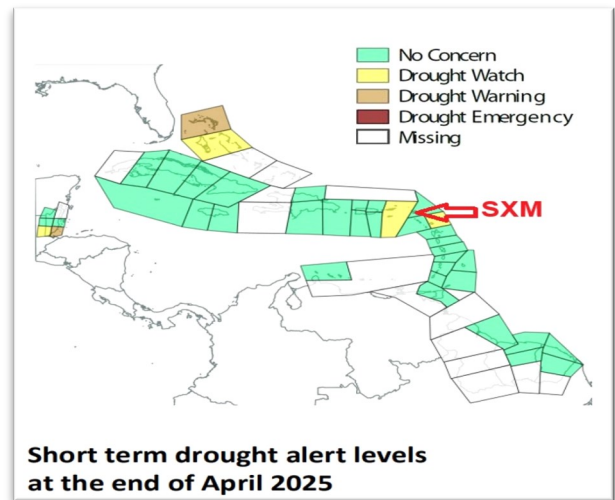
Nighttime temperatures (min.) as well as humidity are anticipated to be higher than usual. Despite the transition from the cool season into the heat season is expected to occur earlier, the temperature during the daytime (max.) is expected to be normal to below normal. Meanwhile, the risk of hazardous heat stress is likely to increase until April.



## DROUGHT OUTLOOK

St. Maarten is not at risk of drought through the end of April 2025. Drought conditions might potentially emerge in countries such as Antigua, the central Bahamas, and the USVI.

St. Maarten and most of the region is not expected to face long term drought by the end of May 2025. However, it is crucial to monitor resources, update management plans, and enhance infrastructure.

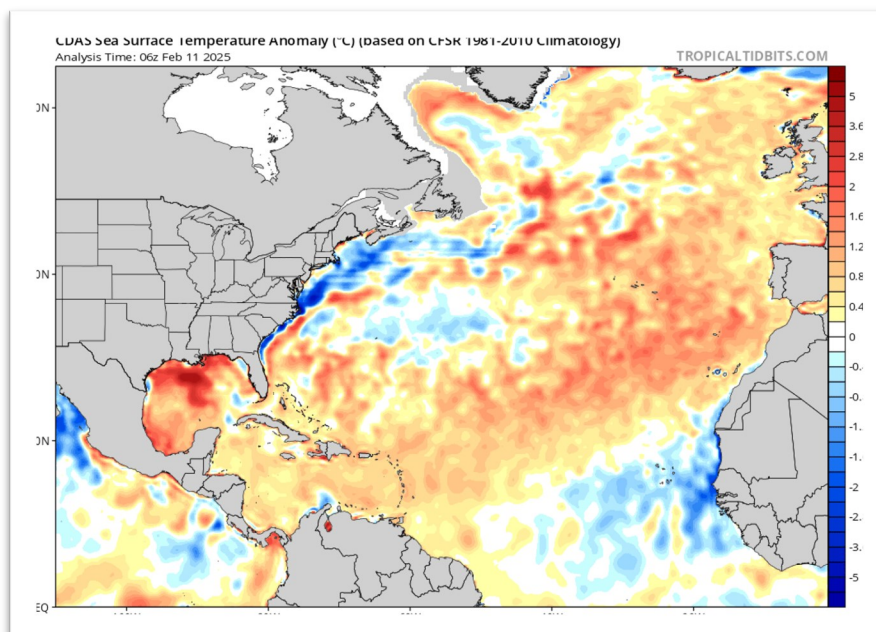


## DUST OUTLOOK

The frequency of Saharan dust incursions may increase during this period. Recent observations indicate a rising trend in these occurrences, with local dust levels starting low and expected to rise from February onward.

## WHAT INFLUENCES THIS SEASON'S CLIMATE?

As of mid-January 2025, La Niña conditions continue to prevail in the equatorial Pacific, with sea surface temperatures in the Niño 3.4 region remaining below the  $-0.5^{\circ}\text{C}$  threshold, a key indicator of La Niña. The IRI ENSO prediction model indicates a 50-60% likelihood of La Niña conditions persisting into February-March-April 2025, with a shift toward ENSO-neutral conditions by March-April-May. La Niña is typically associated with increased heavy rainfall in the Caribbean, including St. Maarten. Additionally, sea surface temperatures in the Caribbean and the Tropical North Atlantic are currently warmer than average, which may lead to higher air temperatures, increased humidity, and a greater frequency of extreme rainfall and tropical cyclone activity.



This newsletter is produced by the Meteorological Department of St. Maarten.

We would appreciate your comments and feedback. Kindly drop us a line at [meteo@sinmaartengov.org](mailto:meteo@sinmaartengov.org) or call us at (1 721) 520 3312/ 545 4226.

## IMPLICATION OF FORECAST TO VARIOUS SECTORS

### HEALTH

- ◆ UV radiation will gradually rise this season.
- ◆ Individuals with respiratory issues should exercise caution during Saharan dust episodes and monitor daily forecasts.
- ◆ The increased use of containers for water storage in the dry season may lead to more mosquito breeding sites, particularly for species linked to Dengue, Chikungunya, and Zika.

### ENERGY

- ◆ Energy requirements for cooling is expected to gradually rise this season.

### TOURISM

- ◆ Some interruptions to outdoor activities.
- ◆ Air temperatures and humidity levels during this cool season are expected to be higher than usual, but not to the extent that would cause significant heat stress.

### AGRICULTURE

- ◆ No drought concerns through the end of May 2025.
- ◆ Schedule irrigation during dry spells.

## JANUARY REVIEW

### Warmest Days:

January 20<sup>th</sup> and 29<sup>th</sup>: Average temperature of 27.3°C/81°F.

### Cooler Day:

January 12<sup>th</sup>: Average temperature of 25.4°C/78°F.

### Highest Temperature:

January 11<sup>th</sup>: Maximum of 31.2°C/88°F.

### Cool Night ( $\geq 22.7^\circ\text{C}/83^\circ\text{F}$ ):

January 12<sup>th</sup>: Minimum of 21.6°C/71°F.

### Temperature Trends:

Consistently above normal throughout January, continuing a trend since March 2023.

### Sunshine Hours:

Most sunshine on January 8<sup>th</sup>, 9<sup>th</sup> & 19<sup>th</sup>: 10 hours 45 minutes.

Least sunshine on January 12<sup>th</sup>: 4 hours 48 minutes.

### Rainfall:

Twelve (12) days of rain, no heavy rain day (> 10 mm).

With a total rainfall of 36.1 mm, **January 2025 marks the fifth consecutive year of below normal rainfall.**

### Wind Conditions:

Significant winds on January 21<sup>st</sup>: Average speed of 14 kt /16 mph.

Highest gusts on January 18<sup>th</sup>: 32 kt/37 mph.

Total Rainfall	36.1 mm	1.4 in
2025 Cumulative Rainfall	36.1 mm	1.4 in.
Max. 24-Hr. Rainfall	6.0 mm	0.2 in.
No. Rain Days ( $\geq 1.0$ mm)	12 days	
No. Heavy Rain Days ( $\geq 10.0$ mm)	0 days	
No. Thunderstorm Days	0 days	
Avg. Wind Speed	9 kt.	10 mph
Max. Wind Gust	32 kt.	37 mph
Avg. Temperature	26.5°C	80°F
Max. Temperature	31.2°C	88°F
Min. Temperature	21.6°C	71°F

## SHORT / LONG TERM SEASONAL REVIEW

### SEASONAL REVIEW (NOV-DEC 2024 - JAN 2025)

The total rainfall for the past 3 months was 380.4 mm/15 in, this exceeded the normal range of 272 to 321 mm (11 to 13 in). This period included nine days with heavy rainfall (>10 mm).

### YEAR IN REVIEW (FEB 2024 - JAN 2025)

Over the past 12 months, the total rainfall surpassed the normal range of 979 to 1,237 mm (39 to 49 inches). At Princess Juliana International Airport, 1,293.1 mm (51 inches) of rainfall was recorded.

### FEBRUARY NORMAL CONDITIONS

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

## WORLD METEOROLOGICAL DAY 2025

On March 23<sup>rd</sup> each year, the World Meteorological Organization (WMO) marks the anniversary of the



Convention that founded it on March 23<sup>rd</sup>, 1950. This day highlights the crucial role of National Meteorological and Hydrological Services in ensuring public safety and wellbeing, celebrated globally through various activities. The themes for World Meteorological Day address current issues related to weather, climate, or water. In 2025, the theme is **"Closing the early warning gap**

**together,"** emphasizing the Early Warnings for All initiative. This year also marks the 75th anniversary of WMO, signifying a milestone in international collaboration in meteorology, hydrology, and related sciences. Stay informed by regularly checking the Meteorological Department St. Maarten (MDS) website and social media platforms for updates on local events and weather conditions. These sources provide timely information on weather forecasts, advisories, and warnings, helping you stay informed, prepared and safe.