METEOROLOGICAL DEPARTMENT ST.MAARTEN

Volume 10, Issue 04 | April 2025

Weather & Climate

Key Points

- Temperatures remain **above normal** since April 2023.
- There is **no drought concern** for St Maarten by the **end of June 2025**.
- There is a **moderate to high chance for flooding** to occur this season (AMJ).

SEASONAL OUTLOOK FOR APRIL TO JUNE (AMJ) 2025

Rainfall Forecast

Normal Rainfall *Apr-May-Jun Season*	148 mm - 253 mm | 6 -10 inches 23 - 31 wet days
Apr-May-Jun 2025	• Likely to be usual • up to 4 (7-day) wet spells • up to 8 (7-day) dry spells

During April, showers are usually limited while in May and June, showers become more frequent as we transition into the wet season.

There is a moderate to high chance of flooding and flash flooding potential through June.

Temperature Forecast

Day-time Temp. **Night-time Temp.**	Near normal to above normal

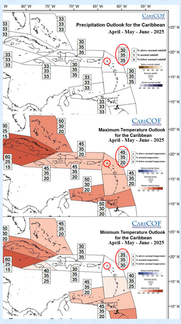
Episodes of hazardous heat may appear in April and continue to increase thereafter.

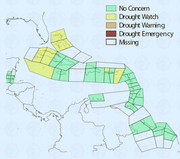
Drought Alert

There is no drought concern for St.Maarten and the eastern Caribbean by the end of June 2025. However, it is advised to monitor resources and monthly updates, and upgrade infrastructure and management plans.

Flash Flood Potential

Moderate to High Chance *50% - 60%*	Atleast **1** event could cause flash flooding/ flooding





Short term drought alert levels at the end of June 2025

IMPLICATION OF FORECAST FOR SECTORS

Health

- UV radiation will gradually increase this season.
- An increase in Saharan Dust incursion is likely; persons with respiratory illnesses should be vigilant.

Tourism

- As heat gradually increases, ensure adequate hydration.
- Some interruptions for outdoor activities.

Energy/ Water

- Energy demand for cooling purposes will gradually increase this season.

Agriculture

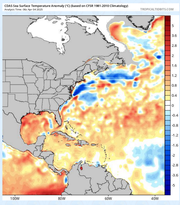
- Use mulch and drip irrigation to conserve water, retain soil moisture, and regulate soil temperature.
- Schedule irrigation during dry spells.

What Influences This Season's Climate ?

As of mid-March, the equatorial Pacific is transitioning from a weak La Niña to an ENSO-neutral state. The IRI ENSO Plume forecast indicates a high probability (86%) for ENSO-neutral conditions for Apr-Jun 2025 season. The ENSO-Neutral phase is favored through Sep-Oct-Nov 2025 season. Thereafter, there are equal chances for the La Niña or the ENSO-Neutral phase.

Sea Surface Temperatures (SSTs) in the Caribbean Sea and the Tropical North Atlantic remain warm through February around 0.5 to 1.5°C above normal. Models are confidently forecasting above average SSTs across the Caribbean Sea and the Tropical North Atlantic to persist through the Jul-Aug-Sep 2025 season.

Warm SSTs in and around the Caribbean contribute to higher air temperatures with above-average humidity, seasonal rainfall totals, and increased frequency of severe weather.



March In Review

Average Temperature	**26.8°C | 80°F**
Maximum Temperature	**March 21st** 32.1°C | 90°F
Minimum Temperature	**March 2nd** 23.1°C | 74°F

Most Sunshine Hours	**March 16th** 11hrs:12mins
Least Sunshine Hours	**March 2nd** 02hrs:48mins

Average Wind Speed	**8 kt | 9 mph**
Windiest Day *Daily Average Wind Speed*	**March 30th & 31st** 15 kt | 17 mph
Highest Wind Gust	**March 29th** 32 kt | 37 mph

Warmest Day *Average Temperature*	**March 22nd & 23rd** 27.9°C | 82°F
Coolest Day *Average Temperature*	**March 5th** 25.8°C | 78°F
Longest Dry Spell	**21 days** *March 3rd - 23rd*

Total Rainfall	**22.1 mm | 0.9 in**
2025 Cumulative Rainfall	**106.4 mm | 4.2 in**
Maximum 24-hr. Rainfall	**6.5 mm | 0.3 in**
No. of Rain Days	**6 days**
No. of Heavy Rain Days	-
No. of Thunderstorm Days	-

For the month of March, rainfall was slightly above the normal range. Temperatures continue to be above the normal range since April 2023.

LONG / SHORT TERM SEASONAL REVIEW

Year In Review
Apr 2024 - Mar 2025

Normal Rainfall Recorded Rainfall	**963 mm - 1195 mm** 1182 mm | 47 inches

Seasonal Review
Jan-Feb-March 2025

Normal Rainfall Recorded Rainfall *Heavy Rain Days (>10 mm)*	↓	**136 mm - 180 mm** 106 mm | 4 inches

Normal April Conditions

Total Rainfall	41 - 58 mm | 2 in
Average No. of Rain Days	8 days
Daily Average 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 hrs

NEWS

State of the Climate

The World Meteorological Organization (WMO) has released its **State of the Global Climate** report, highlighting significant climate developments in 2024:

- **Record-Breaking Global Temperatures**: 2024 marked the warmest year in the 175-year observational record, with a global mean near-surface temperature of 1.55 ± 0.13°C above the 1850-1900 average.
- **Surpassing the 1.5°C Threshold**: For the first time, a calendar year exceeded the 1.5°C warming threshold set by the Paris Agreement, though long-term warming (averaged over decades) remains below this level.
- **Unprecedented Greenhouse Gas Concentrations**: Atmospheric carbon dioxide levels reached their highest in 800,000 years, contributing to the record heat experienced in 2024.
- **Irreversible Sea-Level Rise and Ocean Warming**: The report indicates that sea-level rise and ocean warming have accelerated, with changes that are irreversible for centuries to millennia.
- **Decline in Polar Ice Extents**: The Arctic and Antarctic regions recorded their lowest sea-ice extents in the past three years, signaling significant environmental shifts.
- **Accelerated Glacier Mass Loss**: The past three years witnessed the largest loss of glacier mass on record, underscoring the rapid pace of glacial melting.
- **Doubling of Sea-Level Rise Rate**: Since the advent of satellite measurements, the rate of sea-level rise has doubled, posing increased risks to coastal communities.

This newsletter is produced by

the Meteorological Department of St. Maarten.

We would appreciate your comments and feedback.

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

Please note that all data was recorded at the *Princess Juliana International Airport* and may not necessarily reflect conditions at other points on country St Maarten.

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