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# Meteorological Department St. Maarten

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## Weather & Climate

Volume 5, Issue 4

April 2020

### Summary

- MDS implements a Quality Management System
- Drought conditions are possible across St. Maarten by May/June 2020.
- Temperatures are expected to gradually become uncomfortably hot this season.

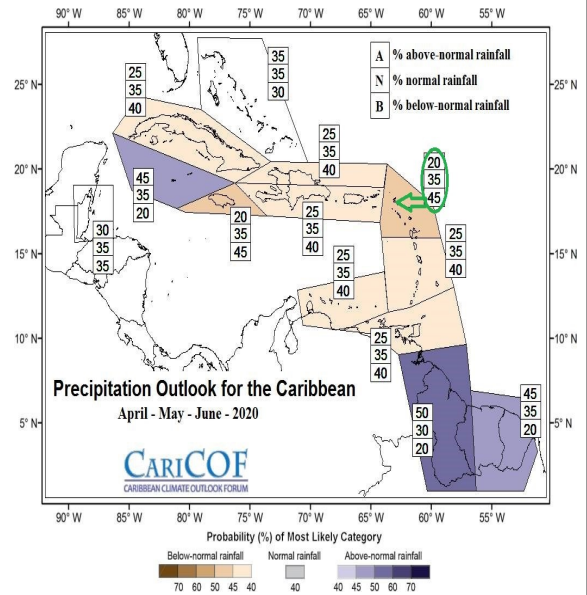
### Seasonal Outlook for April to June (AMJ) 2020

#### Rainfall Forecast

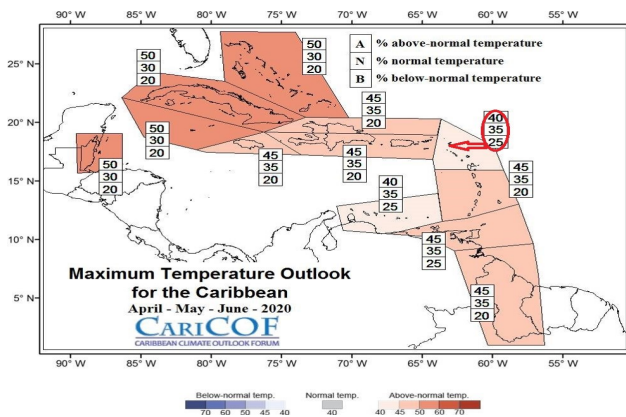
Rainfall totals for the season Apr-May-Jun 2020 are likely to be drier than usual in St. Maarten and the rest of the Antilles while it is likely to be wetter than usual in the Cayman Islands and the Guianas.

Within the 91 days of Apr-May-Jun, the normal rainfall total for St. Maarten ranges from 155.7mm–253.2mm/ 6-10in with 23-35 wet days. The forecast goes for up to 4 (7-day) wet spells and up to 7 (7-day) dry spells this season.

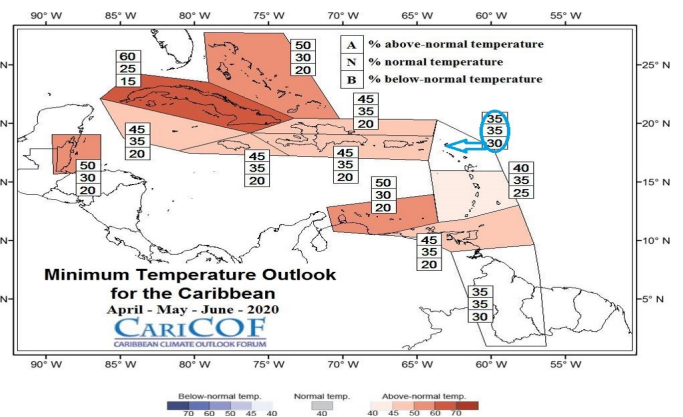
The dry season will continue through the end of April with mostly sunny days more frequent showers can be expected during May and June as we transition into the wet season.



#### Temperature Forecast



Day-time Temperatures

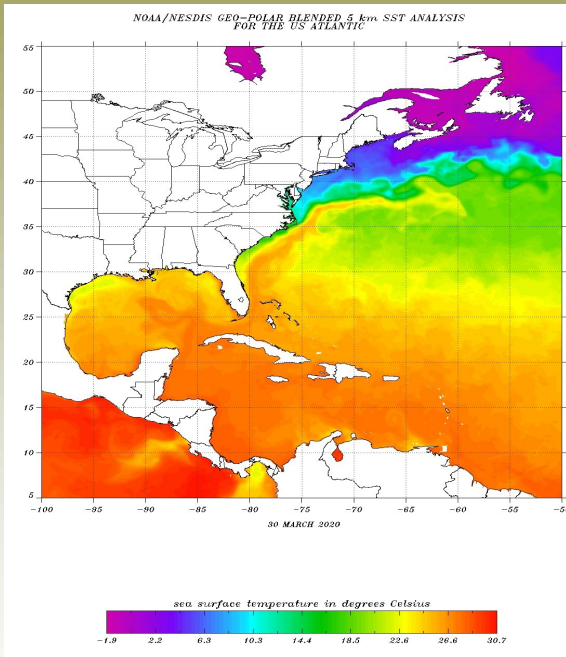


Night-time Temperatures

Both day-time and night-time temperatures are expected to be at least as warm as usual across most of the Caribbean and may become uncomfortably hot at times.

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

## WHAT INFLUENCES THIS SEASON'S CLIMATE?



Sea surface temperatures (SST) in the east-central Pacific were neutral, but above average during mid-March.

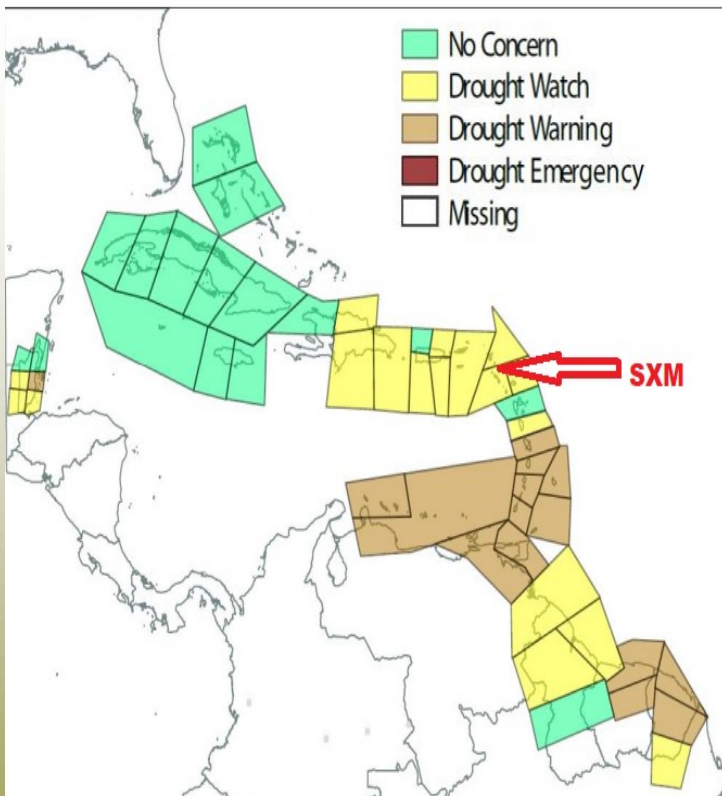
Patterns in the atmosphere have split between neutral and borderline El Nino conditions. Most models favor warm-neutral SST conditions during this season cooling to average by early summer.

The ENSO neutral conditions have little contribution to the seasonal rainfall or temperature in the Caribbean. At this time, climate conditions in the Caribbean continue to be affected by the North Atlantic Sea Surface Temperatures (SST).

SSTs remains near average east of the Tropical North Atlantic. Anomalies of up to 1°C are expected across the Caribbean and in the Gulf of Mexico. Continued warm SST's may contribute to above average seasonal temperature across the region and a wetter transition from the dry to wet season towards May and June.

### Drought Watch: Drought Conditions possible by end of May 2020.

January was moderately wet while February and March were slightly wet. Rainfall continues to vary across the Caribbean over the past three months, the impacts of the current dry season are likely to play out differently across the region. However drought is already evolving in some of the islands.



Shorter term drought continues to evolve in the ABC Islands and the Windward Islands except Dominica, Barbados, parts of Belize, French Guyana, and Trinidad & Tobago. By the end of May/June 2020, Drought is possible in St. Maarten/St. Martin and the Leeward Islands.

In countries where drought is evolving management plans should be implemented, conservation and recycling of water should be considered.

For St. Maarten drought conditions are possible, therefore this means dry conditions are possible this season therefore management plans should be put in place for bush fires, irrigation of crops, shelter for animals and management of pond-water levels for fish survival.

**MARCH 2020 IN REVIEW**

Total Rainfall	77.0 mm	3.0 in.
2020 Cumulative Rainfall	276.7mm	10.9 in.
Max. 24-Hr. Rainfall	Mar. 21 <sup>st</sup>	16.9mm/ 0.7in.
No. Rain Days (≥1.0 mm)	13 days	
No. Heavy Rain Days (≥10.0 mm)	4 days	
No. Thunderstorm Days	0 day	
Avg. Wind Speed	9 kts.	10 mph
Max. Wind Gust	23kts.	26 mph
Avg. Temperature	26.2°C	79°F
Max. Temperature	Mar. 18 <sup>th</sup>	30.5°C / 87°F
Min. Temperature	Mar. 21 <sup>st</sup>	21.7°C / 71°F

**Long /Short Term Seasonal Review****Year in Review****(Apr. 2019— Mar. 2020)**

Total rainfall over the past twelve (12) months was within the normal range. A total of 1094.5mm/43 inches of rainfall was recorded at the Princess Juliana International Airport.

**Seasonal Review (Jan-Feb-Mar. 2020)**

Total rainfall for the last three (3) months was 276.7mm/11 inches, this amount was above the normal range (145-200 mm). There were eleven (11) days with heavy rainfall (>10mm) within that period.

Rainfall for the month of March was above the normal range (32-58 mm). Temperatures were generally above normal for this time of year.

The average daily temperature for February was 26.2°C/79°F.

The warmest days were the 18<sup>th</sup>, 27<sup>th</sup> & 28<sup>th</sup> with an average temperature of 26.9°C/80°F.

The coolest day was the 21<sup>st</sup> with an average temperature of 24.8°C/77°F.

The day with the most sunshine hours was the 24<sup>th</sup> (11 hrs :18min).

The day with the least sunshine hours was the 21<sup>st</sup> (3hrs:54min).

The windiest day was the 21<sup>st</sup>, with a daily average wind speed of 14 kt./ 16 mph.

The day with the highest wind gust was the 21<sup>st</sup> with a gust of 23kt/26 mph.

Skies were mostly fair throughout the month of March.

Small craft advisories were issued due to above normal swells and strong winds due to northerly swells in the area.

**NORMAL APRIL CONDITIONS**

Rainfall Total	41.3 mm – 74.9 mm	2– 3 in.
Avg. No. of Rain days	8 days	
Daily Average Temperature	26.6°C	80°F
Avg. Max. Temperature	29.9°C	86°F
Avg. Min. Temperature	24.2°C	76°F
Avg. Daily Hours of Sunshine	9 hrs	

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.

## Implication of Forecast for Sectors

### Tourism Sector

- A decrease in the frequency of wet days and an increasing number of dry days and dry spells will lead to less disruption to outdoor activities this season.
- Day-time and night time temperatures are expected to be as warm as usual and become uncomfortably hot at times.

### Health

- UV radiation will be on the increase this season. Excessive exposure can cause skin damage across the population on sunny days. The use of sunscreen and other protective gears are advised.

### Agriculture

With decreasing rainfall totals and possible drought conditions by the end of May, management plans should be put in place for water storage/irrigation, bush fires and shelter for animals.

### Energy/Water Sector

Energy demand for cooling purposes is expected to increase throughout this season.

## QUALITY MANAGEMENT SYSTEM AT METEOROLOGICAL DEPARTMENT ST. MAARTEN (MDS)

The MDS is in the process of implementing a Quality Management System (QMS) and the development of a strategic plan for 2021-2025. A consultant experienced with the work of the World Meteorological Organization (WMO) and meteorological services; Mrs. Yvette Ramos of the YNOVAIMO consulting firm in France has been hired to complete the above mentioned activities.

The WMO and the International Civil Aviation Organization (ICAO) has mandated all Meteorological services to implement a QMS and be ISO 9000 certified. It is with this mandate that the MDS has embarked on this very important endeavor. So far meetings have been held with stakeholders as well as staff training sessions, the regularization and documentation of procedures and processes used at the MDS and various internal audits are being conducted.

A policy statement has been drafted and endorsed by the Department Head and will soon be presented to the Secretary General of the ministry of Tourism, Economic Affairs, Transport and Telecommunication (TEATT) for final approval.



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