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# Meteorological Department St. Maarten

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## Weather & Climate

Volume 5, Issue 2

February 2020

### Summary

- Drought conditions are possible across St. Maarten by the end of April 2020.
- Temperatures forecast to be seasonably comfortable through March.
- January 2020 was the wettest January since 2006.

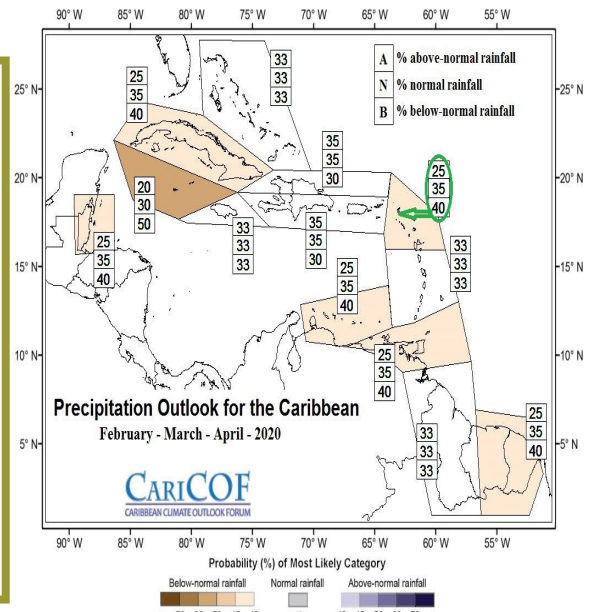
### Seasonal Outlook for February to April (FMA) 2020

#### Rainfall Forecast

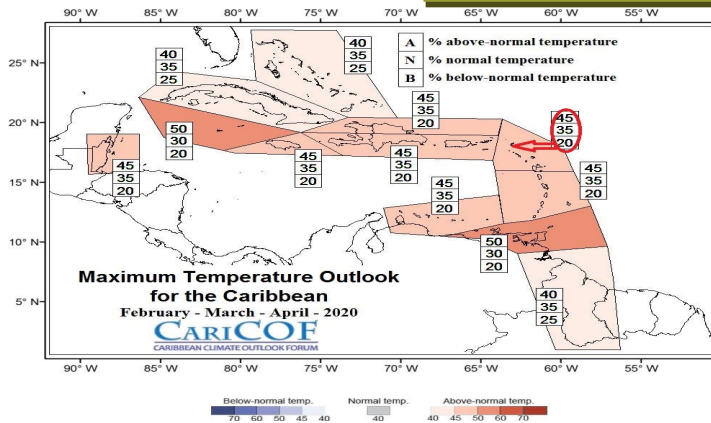
Rainfall totals for the season Feb-Mar-Apr 2020 are likely to be as usual or drier than usual across most of the northwest Caribbean, the Guianas, Trinidad and Tobago and the Leeward Islands including St. Maarten.

Within the 91 days of Feb-Mar-Apr, the normal rainfall total for St. Maarten ranges from 148.1mm–178.9mm/ 6-7in., 22-32 wet days and at least 2 (7-day) wet spells can be expected this season.

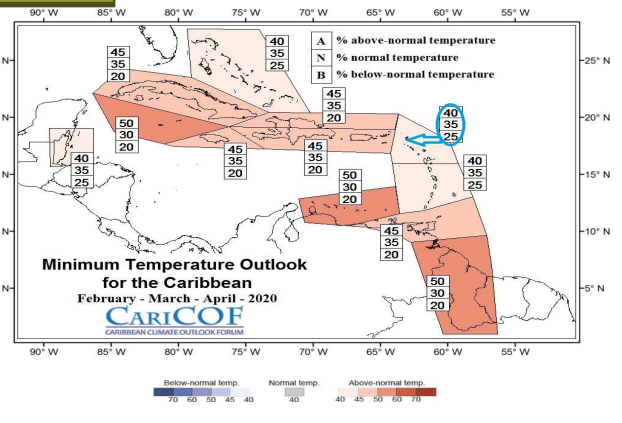
As we continue through the dry season, we can expect mostly sunny days with a few showers.



#### Temperature Forecast



Day-time Temperatures

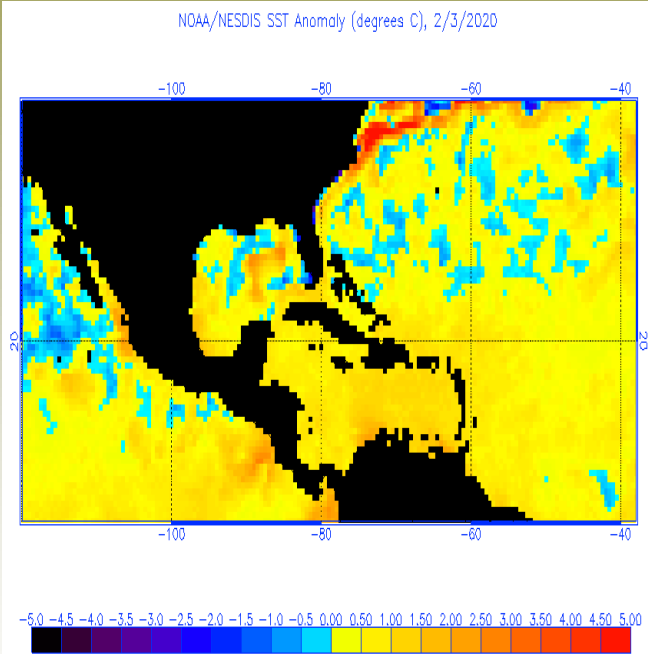


Night-time Temperatures

Day-time and night-time temperatures are expected to be seasonably comfortable across the Leeward Islands through March. Temperatures are expected to be on the increase thereafter.

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

## WHAT INFLUENCES THIS SEASON'S CLIMATE?



Sea surface temperatures in the east-central Pacific were near the borderline of weak El Niño levels during mid-January.

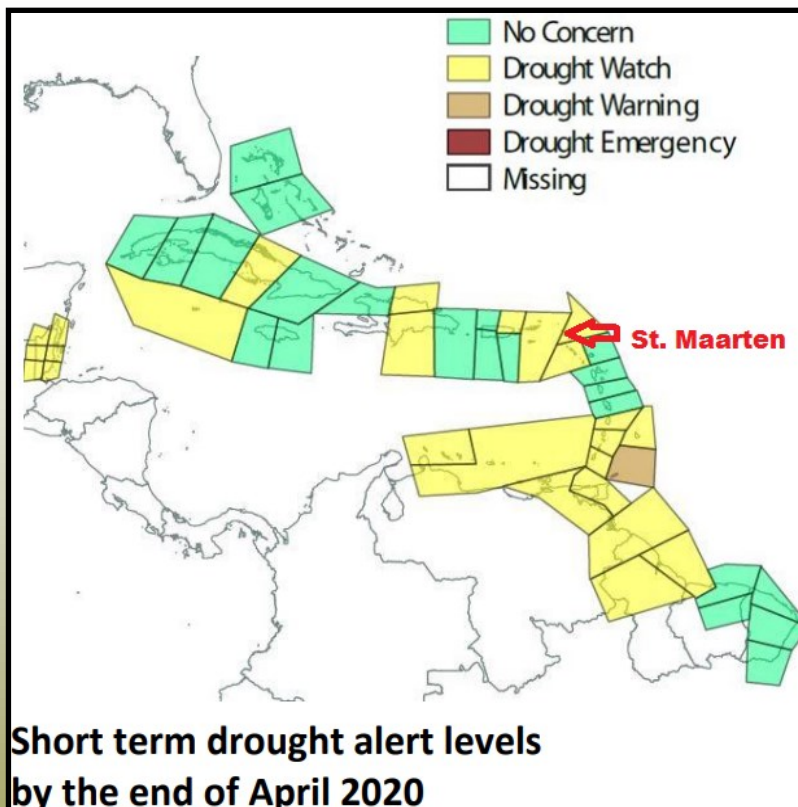
Patterns in the atmosphere have maintained ENSO-neutral conditions. Most models favor weak El-Niño conditions this season and returning to ENSO-neutral thereafter.

The ENSO neutral conditions has 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).

SST throughout the tropical north Atlantic and eastern Caribbean continue to be above average (1°C above). Those environmental factors favor a wetter transition from the dry to wet season towards May and June.

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

November 2019 was very dry across St. Maarten while December and January have been moderately wet. With rainfall varying across the Caribbean over the past three months, the impacts of the current dry season are likely to play out differently across the region.



Short term drought might develop or continue in the ABC Islands, Barbados, Belize, Cayman, central Cuba, Dominican Republic, Grenada, Guyana, NE Puerto Rico, St. Kitts, St. Lucia, St. Vincent, St. Maarten/St. Martin, Trinidad and the US Virgin Islands by the end of April 2020.

This means that the persons in the countries mentioned above should keep updated, monitor and repair infrastructure, implement management plans, protect resources and conserve water.

For St. Maarten drought conditions would mean dry conditions are possible 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.

## JANUARY 2020 IN REVIEW

Total Rainfall	135.5 mm	5.3 in.
2020 Cumulative Rainfall	135.5mm	5.3 in.
Max. 24-Hr. Rainfall	Jan. 19 <sup>th</sup>	20.7mm/ 0.8in.
No. Rain Days ( $\geq 1.0$ mm)	17 days	
No. Heavy Rain Days ( $\geq 10.0$ mm)	5 days	
No. Thunderstorm Days	1 day	
Avg. Wind Speed	9 kts.	10 mph
Max. Wind Gust	10 <sup>th</sup> Jan.	42 kts/48mph
Avg. Temperature	26.2°C	79°F
Max. Temperature	Jan. 1 <sup>st</sup>	30.9°C / 88°F
Min. Temperature	Jan. 14 <sup>th</sup>	21.2°C / 70°F

## Long /Short Term Seasonal Review

### Year in Review (Feb. 2019—Jan. 2020)

Total rainfall over the past twelve (12) months was below the normal range. A total of 991.5mm/39 inches of rainfall was recorded at the Princess Juliana International Airport. This was approximately 14% below the annual average.

### Seasonal Review (Nov-Dec-Jan. 2019/20)

Total rainfall for the last three (3) months was 304.3mm/12 inches, this amount was within the normal range (269-325 mm). There were ten (10) days with heavy rainfall ( $>10$ mm) within that period.

Rainfall for the month of January was above the normal range (60-85 mm). This was the wettest January since 2006.

Temperatures were generally above normal for this time of year. On average, maximum temperature was the highest for the month of January since 2010.

January 2020 had the least sunshine hours (234hrs) for the month of January since 2005.

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

The warmest day was the 9<sup>th</sup> with an average temperature of 27.3°C/81°F.

The coolest day was the 20<sup>th</sup> with an average temperature of 24.8°C/77°F.

The day with the most sunshine hours was the 31<sup>st</sup> (10hrs :54min).

The day with the least sunshine hours was the 2<sup>nd</sup> (0hrs:30min) due to cloudy to overcast skies.

The windiest day was the 11<sup>th</sup>, with a daily average wind speed of 18 kts./ 21 mph.

The day with the highest wind gust was the 10<sup>th</sup> with a gust of 42kts/48 mph.

Small craft / high surf warnings were issued due to strong northerly and northwesterly swells which affected local waters.

## NORMAL FEBRUARY CONDITIONS

February is the coolest month based on both short and long term on records.

Rainfall Total	31.2 mm – 57.0 mm	1– 2 in.
Avg. No. of Rain days	10 days	
Daily Average Temperature	25.4°C	78°F
Avg. Max. Temperature	28.8°C	84°F
Avg. Min. Temperature	23.1°C	74°F
Avg. Daily Hours of Sunshine	9 hrs	

## 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 seasonably comfortable through March.

### 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.
- During the dry season, increased use of containers for water storage may potentially create more breeding sites for mosquitoes, especially those associated with mosquito borne diseases, such as Dengue, Chikungunya and Zika.

### Agriculture

With decreasing rainfall totals and possible drought conditions by the end of April, 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 not expected to increase drastically at least through February, however a gradual increase can be expected thereafter.

## WHAT IS DEW???????

([www.weathertrending.com](http://www.weathertrending.com))

**Have you ever wondered how does dew form Or whether dew fall from the sky?**

Magically, silently, while we sleep through a clear, still night, every blade of grass, every car windscreen, every garden table and chair become coated in millions of minute droplets of fresh water.

Dew, Mother Nature's most delicate of face-washes – is such a familiar sight first thing in the morning, at any time of year, that we take it for granted, perhaps without questioning how or why it forms – and out of a cloudless sky too.

Indeed does dew fall from the sky or rise from the ground? Well actually neither. All air contains water. Much of the time it's an invisible vapour, but it's still there, even on hot sun-kissed days. As the night falls and the day's warmth disappears into space, the ground gets ever colder, chilling the air in contact with it. Cold air can't hold as much water as warm air; and so there comes a point when the air touching the ground, the car or any outdoor object releases the water it can no longer hold. At this precise moment, dew drops form on these object. Therefore, **It is more appropriate to say dew forms rather than dew falls.**

As dawn rises and the sun starts to warm the ground and the air above it, so the water can be re-absorbed again. The dew evaporates – departing as silently as it arrived. And the earth is washed and ready to face a new day.



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