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## Meteorological Department St. Maarten

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# Weather & Climate

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May 2019

### Summary of Forecast for May to July 2019

- A Drought Warning is in effect for in St. Maarten and most of the Leeward Islands. Protect Resources!
- Rainfall totals are forecasted to be the usual or drier in May-June-July 2019.
- There is the possibility of at least one (1) very wet spell during this season.
- Both Day-time and night-time temperatures are expected to be warmer than usual this season.

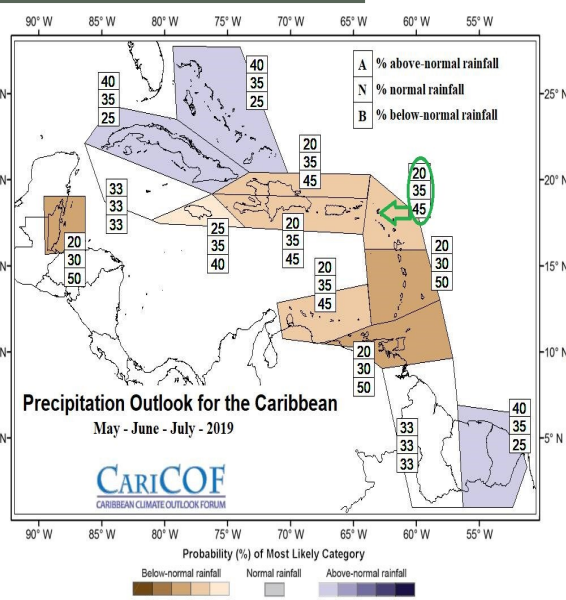
### Seasonal Outlook for May to July (MJJ) 2019

#### Rainfall Forecast

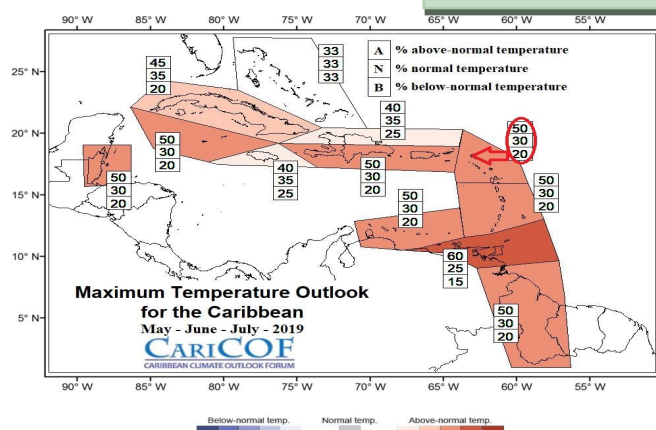
Rainfall totals for the season May-Jun-Jul 2019, are likely to be as usual or drier across most of the Caribbean except for the Cuba, the Bahamas, Suriname and French Guyana where it is expected to be wetter than usual.

Within the 92 days of May-Jun-Jul, the normal rainfall total for St. Maarten ranges from 194 mm – 281mm/ 8-11 in. 20-36 wet days, up to 3 dry spells (7-day) and at least 1 very wet spell can be expected during this period.

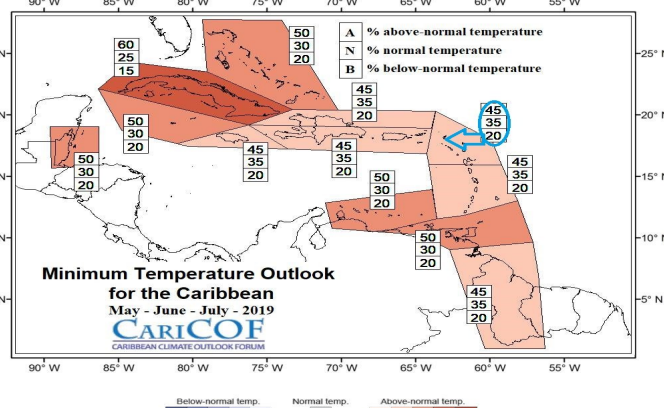
May can be either wet or dry as transition into the wet season begins. There is often a mid-summer dry spell in July. According to the predictions these months are expected to be drier than usual on St. Maarten.



#### Temperature Forecast



Day-time Temperatures



Night-time Temperatures

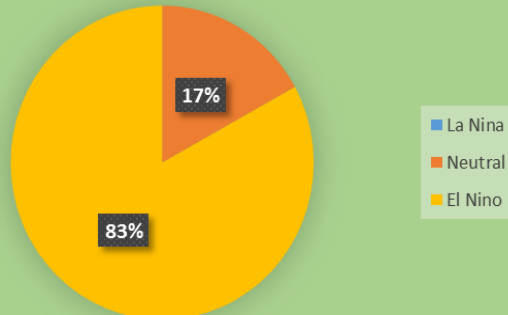
Both day-time and night-time temperatures in the Eastern Caribbean are likely to be usual or warmer during May-Jun-Jul 2019.

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

## ENSO FORECAST

(El Niño Southern Oscillation)

### Enso Forecast Probabilities May-Jun-Jul 2019



Sea surface temperatures in the Pacific have maintained a weak El Niño level during March and April while subsurface waters have decreased somewhat but continued to be warmer than average. Patterns in the atmosphere continue to show weak El Niño conditions.

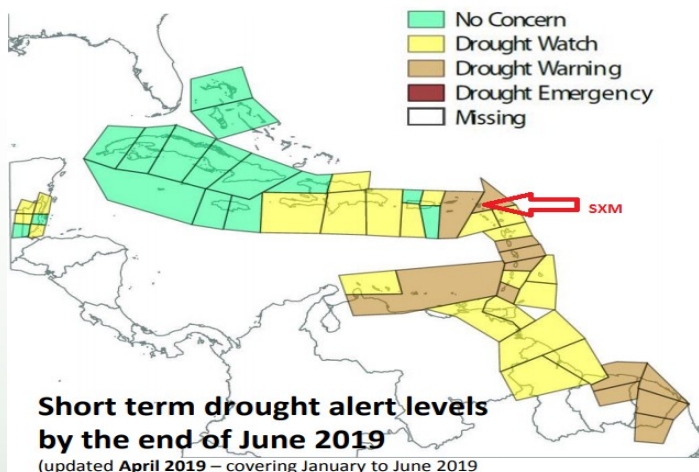
The latest forecast models collectively indicates an 83% chance of El Niño prevailing during May-Jun-Jul 2019. The forecast also indicate that, a weak El Niño will continue through 2019.

An El Niño phase usually produces warmer and drier conditions with less rainfall activity in most parts of the Caribbean and also tends to suppress storm development.

**No Thermal Stress on Corals is expected this season..**

## Drought Forecast

### Current Outlook



Most of the islands in the Caribbean have experienced low rainfall activity over the past six months to a year.

Severe drought has developed and water rationing has begun in Antigua and St. Eustatius. Severe drought has also developed in Aruba, Barbados, Northern Guyana, Martinique and St. Kitts among others.

The alert level for St. Maarten and the most of the Leeward Islands has been upgraded to Warning.

A drought warning means drought is evolving therefore management plans should be implemented and water should be conserved and/or recycled.

## The 2019 Atlantic Hurricane Season

The 2019 Atlantic Hurricane season begins in less than one (1) month time.

### 2019 Storm Names

Andrea	Fernand	Karen	Pablo	Wendy
Barry	Gabrielle	Lorenzo	Rebekah	
Chantal	Humberto	Melissa	Sebastien	
Dorian	Imelda	Nestor	Tanya	
Erin	Jerry	Olga	Van	

**Be Prepared !!!!!**

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**APRIL 2019 IN REVIEW**

Total Rainfall	16.5 mm	0.6 in.
2019 Cumulative Rainfall	116.8 mm	4.6 in.
Max. 24-Hr. Rainfall	Apr. 10 <sup>th</sup>	6.9 mm/ 0.3 in.
No. Rain Days (≥1.0 mm)	5 days	
No. Heavy Rain Days (≥10.0 mm)	0 days	
No. Thunderstorm Days	None	
Avg. Wind Speed	11 kts.	13 mph
Avg. Temperature	26.5°C	80°F
Max. Temperature	Apr. 21 <sup>st</sup> , 28 <sup>th</sup> & 29 <sup>th</sup>	30.4°C / 87°F
Min. Temperature	Apr. 11 <sup>th</sup>	22.5°C / 73°F

Rainfall for the month of April was below the normal range (32-58 mm). Average daily temperatures for the month of April were within the normal range.

Daytime temperatures were slightly below the normal range while night time temperatures were near the normal range for the month of April.

The warmest day was the 27<sup>th</sup> with an average temperature of 27.1°C/81°F.

The day with the most sunshine hours was the 26<sup>th</sup> (12hrs :06min).

The day with the least sunshine hours was the 28<sup>th</sup> (6hrs:48min).

The windiest day was the 13<sup>th</sup>, with a daily average wind speed of 14 kts. / 16 mph.

Fair to partly cloudy skies prevailed throughout the month of April as the Atlantic High Pressure System influenced stable conditions across the region.

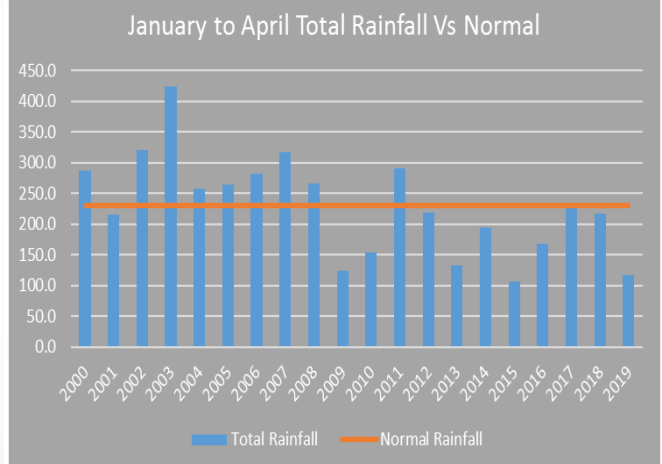
The longest dry spell was 22 days from March 18<sup>th</sup> to April 8<sup>th</sup>.

**Long /Short Term Seasonal Review****Year in Review (May 2018— Apr. 2019)**

Rainfall over the past year continues to remain below normal. There is a 30% rainfall deficit. There were seven (7) months within the past year with below normal rainfall.

**Seasonal Review (Feb-Mar-Apr 2019)**

Total rainfall for the last 3 months was 54.7 mm, this amount was below the normal range (148-179 mm). There were no days with heavy rainfall (>10mm) within that period.

**NORMAL MAY CONDITIONS**

Rainfall Total	56.4 mm – 115.2 mm	2– 4in.
Avg. No. of Rain days	10 days	
Daily Average Temperature	27.5°C	82°F
Avg. Max. Temperature	30.7°C	87°F
Avg. Min. Temperature	25.2°C	77°F
Avg. Daily Hours of Sunshine	8 hrs	

## Caribbean Climate Outlook Forum (CARICOF)

St. Maarten will host the **Wet/Hurricane Season Caribbean Outlook Forum** from May 21<sup>st</sup> to 24<sup>th</sup> 2019 at the Simpson Bay Resort & Marina. Meteorologist, Climatologists and Stakeholders involved in Disaster Management from across the region and International Agencies will make technical presentations and discussions on the upcoming hurricane season.

### Implication of Forecast for Sectors

#### Health

- More frequent episodes of Saharan dust into the Caribbean region as well as dust due to drought conditions may increase the risk of respiratory illnesses. Persons suffering with Asthma and other such illness should take the necessary precaution.
- Heat waves may become an issue from this season onwards therefore, the need for hydration and protection from repeated exposure to dangerous UV radiation is advised.

#### Tourism Sector

- The possibility for disruptions to outdoor activities expected to increase this season.
- The UV index continues to increase this season therefore, sunscreen application is encouraged.
- On hot days, there will be an increase demand for cooling & hydration.

#### Agriculture

- Irrigation is necessary as rainfall totals continue to be below the usual for this time of year.
- Provide adequate water and shade for Livestock.
- Potential for bush fires is high. Be Alert!!!
- Conserve and recycle water. Collect rain water in a safe way to avoid mosquito breeding.

#### Energy/Water Sector

Energy demand for cooling purposes will continue to increase as both day-time and night-time temperatures are expected to increase this season.

The demand for water for irrigation and other purposes will increase.

### Things you should know.....

#### **HOW ACTIVE WILL 2019 ATLANTIC HURRICANE SEASON BE....**

Ahead of the official start of the 2019 Atlantic Hurricane Season, many Institutions and Scientific Agencies make predictions as to how active they think the upcoming season is going to be. Most predictions are made using statistical methods and historical data. A normal season in the Atlantic produces twelve (12) named storms six (6) of which are hurricanes and three (3) become major hurricanes.

So far the Tropical Storm Risk (TSR) of the University College London, UK made their first prediction in December 2018 and recently updated their forecasts. The TSR forecast calls for slightly below average activity with twelve (12) named storms, five (5) hurricanes with two (2) major hurricanes. Within this forecast TSR goes on to predict that two (2) tropical storms and one (1) hurricane making landfall in the USA and one (1) tropical storm making landfall in the Caribbean. The TSR bases its below normal activity on the presence of weak to moderate El Nino conditions expected during the peak of the season.

The Colorado State University (CSU) also released their forecast on April 4<sup>th</sup> 2019. The CSU predicts thirteen (13) named storms, five (5) hurricanes with two (2) major hurricanes; near normal activity. CSU is predicting a 39% chance of at least one major hurricane tracking through the Caribbean.

Note that the seasonal forecasts have little operational value. This means that no matter how many tropical cyclones are forecast to develop, there is no way to predict so many weeks or months in advance where a certain tropical cyclone is going to develop or what country will it make landfall.

**Remember preparation is key. Let's use the next few months to prepare adequately in order to protect life and property.**

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