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# Meteorological Department St. Maarten

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## Weather & Climate

Volume 4, Issue 3

March 2019

### Summary of Forecast for March to May 2019

- Mar-Apr-May, rainfall totals are expected to be the usual or drier.
- Both Day-time and night-time temperatures expected to increase this season.
- Drought is possible in St. Maarten by the end of May 2019. Monitor keep updated!

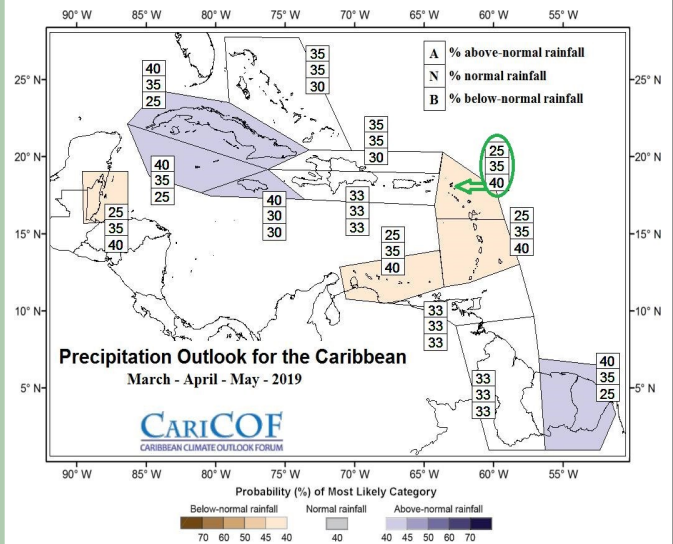
### Seasonal Outlook for March to May (MAM) 2019

#### Rainfall Forecast

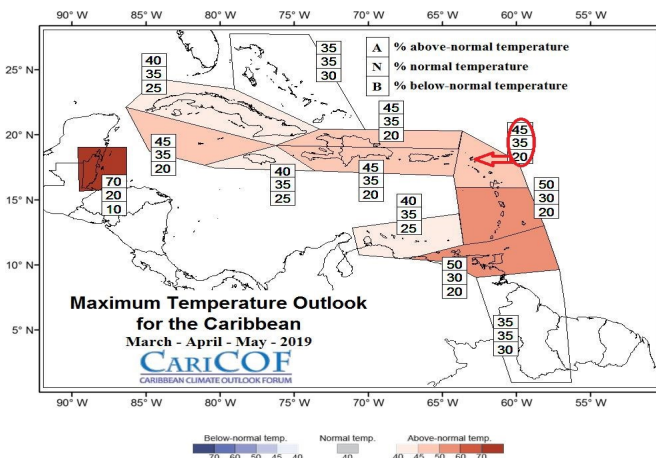
Rainfall totals for the season Mar-Apr-May 2019, are likely to be the usual or drier across the Lesser Antilles, the ABC Islands, Belize and the Lesser Antilles but likely to be the usual or wetter in Cuba, Caymans, Jamaica and eastern Guianas.

Within the 92 days of Mar-Apr-May, the normal rainfall total for St. Maarten ranges from 163 mm – 262mm/ 6-10 in. with about 22-33 wet days and up to 6 dry spells (7-day).

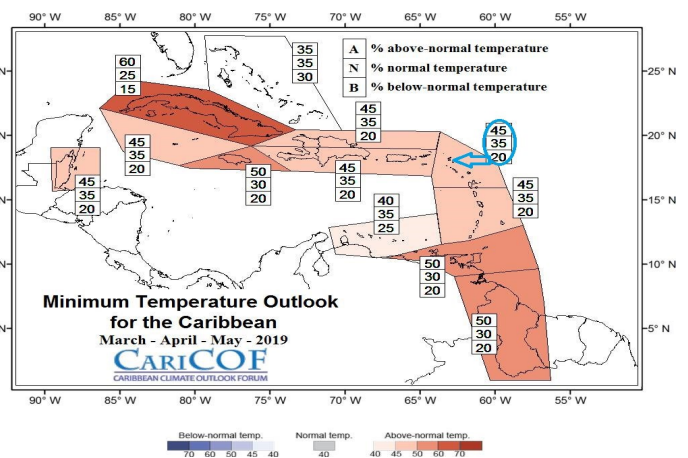
March is the driest month of the year. In April and May some heavy showers are likely as transition into the wet season begins.



#### Temperature Forecast



Day-time Temperatures



Night-time Temperatures

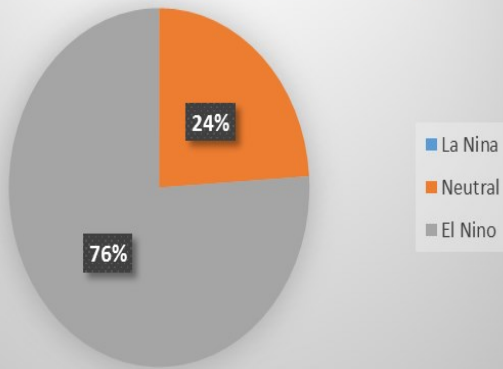
Both day-time and night-time temperatures in the Eastern Caribbean are likely to be usual or warmer during Mar-Apr-May 2019

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 Mar-Apr-May 2019



Sea surface temperatures across the east-central tropical Pacific have cooled to borderline El Niño conditions.

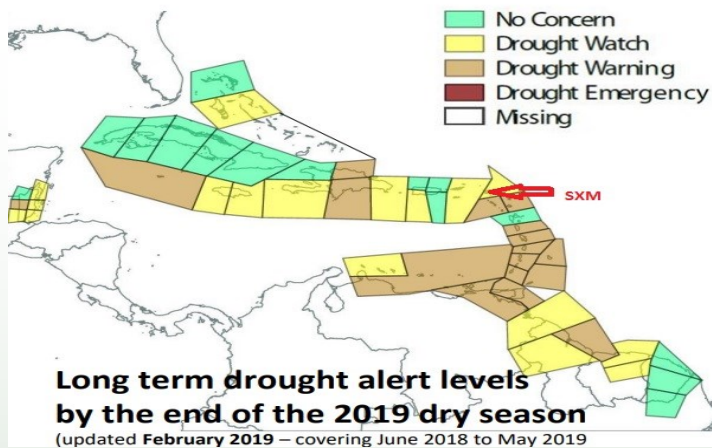
The latest forecast models collectively indicate a 76% chance of El Niño prevailing during Mar-Apr-May 2019. The forecast also indicate that a weak El Niño will continue through September. However, there is a 50% chance that this could shift to ENSO neutral in the Jun-Jul-Aug season.

An El Niño phase usually produces warmer and drier conditions across the eastern Caribbean and slightly wetter conditions over the portions of the Greater Antilles and the Bahamas.

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

### Drought Forecast

#### Current Outlook



Most of the region will have a long term drought concern by the end of the dry season (May 2019).

Severe short term drought has developed in Barbados, Cuba, Hispaniola, St. Vincent and Trinidad & Tobago.

Drought is possible on St. Maarten by the end of the dry season (May-June).

Watches and warnings have been issued for a number of countries. All stakeholders are advised to monitor and look out for monthly updates.

### The 2019 Atlantic Hurricane Season

The 2019 Atlantic Hurricane season begins in less than four (4) months 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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## FEBRUARY 2019 IN REVIEW

|                                   |  |                 |
|-----------------------------------|--|-----------------|
| Total Rainfall                    | 24.8 mm                                    | 0.9 in.         |
| 2019 Cumulative Rainfall          | 86.9 mm                                    | 3.4 in.         |
| Max. 24-Hr. Rainfall              | Feb. 9 <sup>th</sup>                       | 4.4 mm/ 0.2 in. |
| No. Rain Days<br>(≥1.0 mm)        | 10 days                                    |                 |
| No. Heavy Rain Days<br>(≥10.0 mm) | 0 days                                     |                 |
| No. Thunderstorm Days             | None                                       |                 |
| Avg. Wind Speed                   | 11 kts.                                    | 13 mph          |
| Avg. Temperature                  | 25.7 °C                                    | 78 °F           |
| Max. Temperature                  | Feb. 8 <sup>th</sup> &<br>22 <sup>nd</sup> | 29.6 °C / 85°F  |
| Min. Temperature                  | Feb. 11 <sup>th</sup>                      | 21.5°C / 71°F   |

Rainfall for the month of February was below the normal range (31-57 mm). This was the driest February since 2013 (25.1mm).

Average daily temperatures for the month of February were above normal this year. February 2018 was cooler.

Daytime temperatures were within the normal range while night time temperatures were slightly above the usual range for the month of February.

The warmest day was the 16<sup>th</sup> with an average temperature of 26.4°C/80°F.

The day with the most sunshine hours was the 11<sup>th</sup> (10hrs :48min).

The day with the least sunshine hours was the 23<sup>rd</sup> (5hrs:54min).

The windiest day was the 24<sup>th</sup>, with a daily average wind speed of 14 kts. / 16 mph.

Small craft advisories were issued several times during the month of February due to above normal swells.

Skies were fair to partly cloudy during the month.

## Long /Short Term Seasonal Review

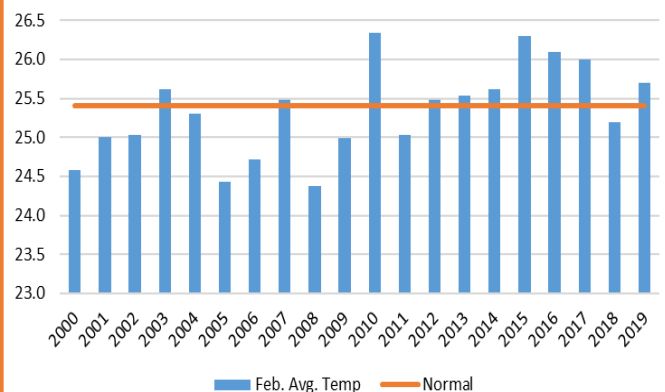
### Year in Review (Mar 2018— Feb. 2019)

For the past twelve (12) months, there has been a 27% rainfall deficit. There were six (6) months which produced below normal rainfall.

### Seasonal Review (Dec-Jan-Feb)

Total rainfall for the last 3 months was 150.6 mm, this amount was below the normal range (173-258 mm). There were only three (3) days with heavy rainfall (>10mm) within that period.

Average February Temperatures at PJIA



## NORMAL MARCH CONDITIONS

|                              |                      |         |
|------------------------------|----------------------|---------|
| Rainfall Total               | 32.4 mm<br>– 58.3 mm | 1– 2in. |
| Avg. No. of Rain days        | 9 days               |         |
| Daily Average Temperature    | 25.7°C               | 78°F    |
| Avg. Max. Temperature        | 29.2°C               | 84°F    |
| Avg. Min. Temperature        | 23.4°C               | 74°F    |
| Avg. Daily Hours of Sunshine | 9 hrs                |         |

## Implication of Forecast for Sectors

### Health

- There may be an increase in allergens and Saharan dust in the atmosphere this season persons with respiratory illnesses should take necessary precaution.
- There may be accelerated mosquito proliferation in areas where water is stored in containers without protective mesh or settles after shower activity.
- The risk of dehydration and other associated symptoms increases this season.

### Tourism Sector

- Less disruptions to outdoor activities expected in March however from April the risk of disruptions increases.
- 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 will become necessary as rainfall totals are expected to be below the usual for this time of year.
- Provide adequate water and shade for Livestock.
- The risk of brush fires increases this season.

### Energy Sector

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

Demand for water for irrigation and other purposes will increase.

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

#### **EL NIÑO**

The El Niño-Southern Oscillation (ENSO) is one of the most important and longest-studied climate phenomena on the planet. It can lead to large-scale changes in sea-level pressures, sea-surface temperatures, precipitation and winds—not only in the tropics but across many other regions of the world.

ENSO describes the natural year-to-year variations in the ocean and atmosphere in the tropical Pacific. Sea-surface temperatures in the central and eastern equatorial Pacific cycle between above and below-average.

An El Niño state occurs when the central and eastern equatorial Pacific sea-surface temperatures are substantially warmer than usual.

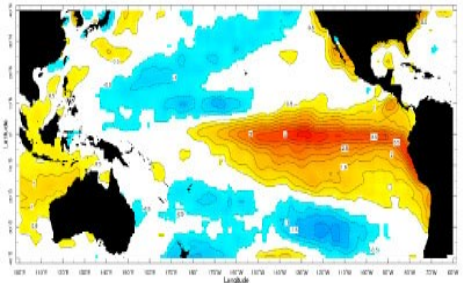
La Niña conditions occur when the central and eastern equatorial Pacific waters are substantially cooler than usual. A La Niña event is usually, although not always, follows an El Niño event.

El Niño and La Niña events tend to develop during the period April to June and they tend to reach their maximum strength during October to February. Typically persist for 9-12 months, though occasionally persisting for up to 2 years and recur every 2 to 7 years.

#### El Niño Episode Sea Surface Temperatures

Departure from average in degrees Celsius

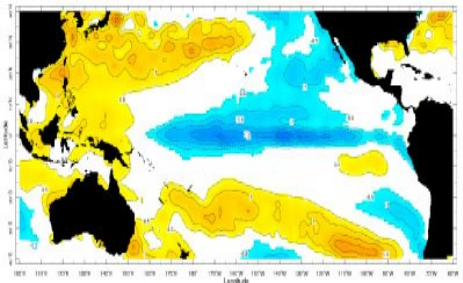
Dec 1982 - Feb 1983



#### La Niña Episode Sea Surface Temperatures

Departure from average in degrees Celsius

Dec 1998 - Feb 1999



World Meteorological Day is celebrated on March 23rd each year. The theme this year is .....

**THE SUN  
THE EARTH  
AND THE WEATHER**  
23 MARCH 2019  
WORLD METEOROLOGICAL DAY

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