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# Meteorological Department St. Maarten

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## Weather & Climate

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### Summary of Forecast for July to September 2019

- Rainfall totals are forecasted to be usual or drier in July–September 2019.
- There is the possibility of up to 3 very wet spell during this season.
- The heat season (Aug. to Oct) will likely be significantly hotter than the past two years.
- Three or more heat wave days are possible this season.

### Seasonal Outlook for July to September (JAS) 2019

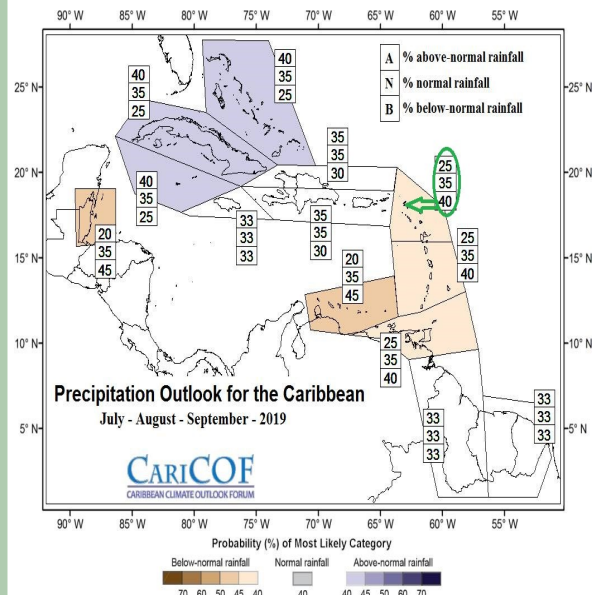
#### Rainfall Forecast

Rainfall totals for the season Jul-Aug-Sept. 2019, are likely to be as usual or drier across most of the Eastern Caribbean however in Cuba and the Bahamas it is expected to be wetter than usual.

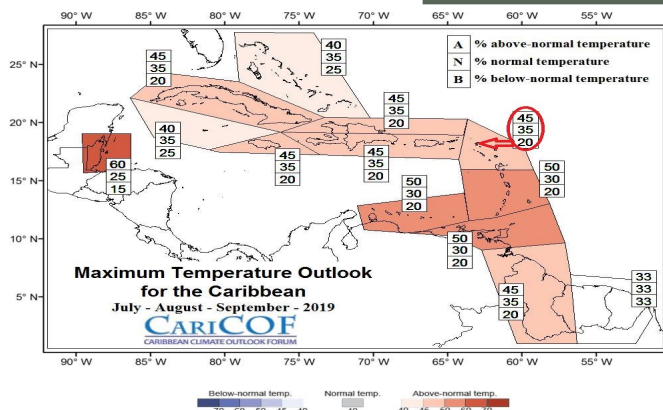
Within the 92 days of Jul-Aug-Sept, the normal rainfall total for St. Maarten ranges from 264.2 mm – 348.5 mm/ 10-14 in. 38-45 wet days, at least 3 very wet spell this season and up to 3 dry spells (7-day) can be expected during this period; July to August.

We are in the wet season, however there is often a mid-summer dry spell in the month of July to August and in September more frequent showers may occur.

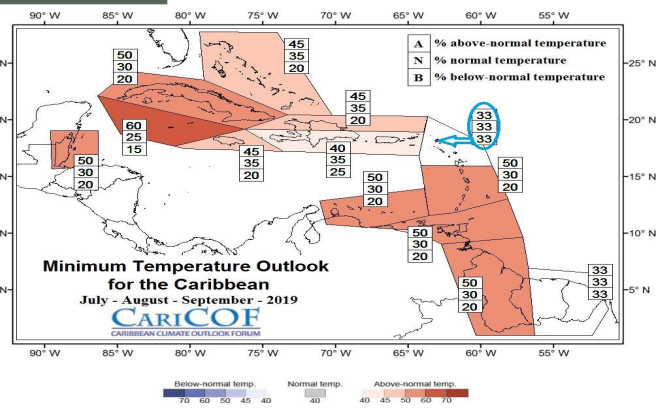
According to the predictions rainfall totals for this season are expected to be drier than usual on St. Maarten.



#### Temperature Forecast



#### Day-time Temperatures



#### Night-time Temperatures

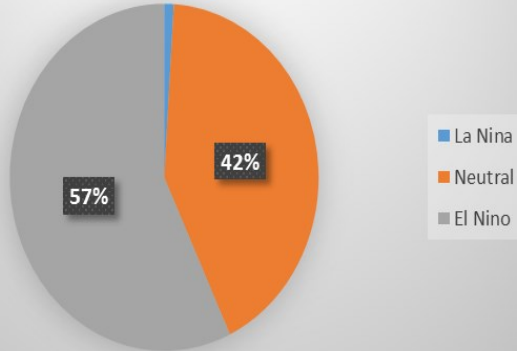
Day-time and Night-time temperatures are expected to be as warm as usual or warmer across most of the Caribbean with a build up of heat stress towards August and September.

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 Jul-Aug-Sept 2019

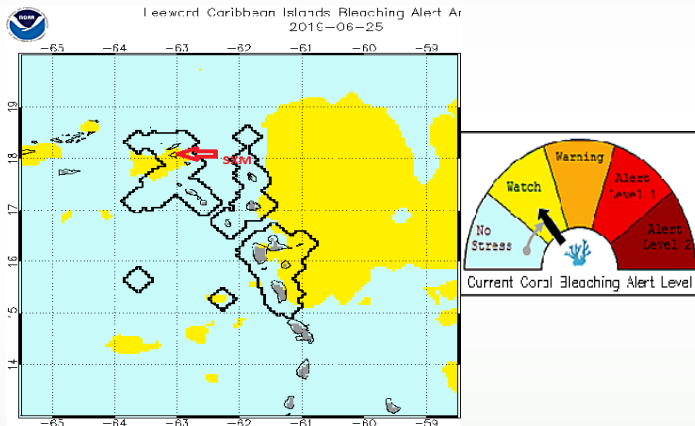


Sea surface temperatures in the Pacific have maintained a weak El Niño level during May and early June while subsurface waters were slightly above average. Patterns in the atmosphere continue to show weak El Niño conditions.

The latest forecast models collectively indicates a 57% chance of El Niño prevailing during Jul-Aug-Sept 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.

### Coral Bleaching Watch: Low-level Thermal Stress



Low-level thermal stress is expect during the next 4 weeks while thermal stress is expected to accumulate by the end of September 2019.

### Drought Forecast

We are currently in the wet season however, drought concerns continue throughout parts of the Caribbean.

By the end of September 2019, drought is still expected in parts of Belize, Dominica, Martinique, St. Kitts, St. Maarten and the USVI.

In the long-term; by the end of November 2019, drought conditions are expected in Dominica, French Guiana, Martinique, St. Maarten and Trinidad.

Long-term drought continues to evolve in St. Maarten as rainfall over the past 12 months remains below average.

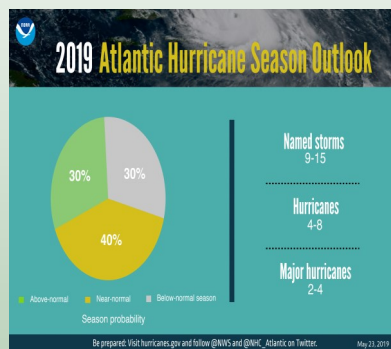
## The 2019 Atlantic Hurricane Season

### 2019 Storm Names

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

**Be Prepared !!!!!**

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Subtropical Storm Andrea formed in the western Atlantic on May 20th 2019 and quickly dissipated the following day.

A trough of low pressure located over central Georgia is forecast to move southward toward the northeastern Gulf of Mexico, where a broad area of low pressure is expected to form in a couple of days.

### JUNE 2019 IN REVIEW

Total Rainfall	36.8 mm	1.4 in.
2019 Cumulative Rainfall	199.6 mm	7.9 in.
Max. 24-Hr. Rainfall	Jun. 1 <sup>st</sup>	10.8mm/ 0.4 in.
No. Rain Days (>=1.0 mm)	8 days	
No. Heavy Rain Days (>=10.0 mm)	1 day	
No. Thunderstorm Days	1 day	
Avg. Wind Speed	10 kts.	12 mph
Avg. Temperature	28.5°C	83°F
Max. Temperature	Jun. 26 <sup>th</sup>	32.3°C / 90°F
Min. Temperature	Jun. 1 <sup>st</sup>	22.7°C / 73°F

Rainfall for the month of June was once again below the normal range (40-66 mm).

Temperatures throughout the month of June varied. Night-time temperatures were warmer than average while daytime temperatures were slightly below the average.

The warmest day was the 29<sup>th</sup> with an average temperature of 29.2°C/85°F. On the 26<sup>th</sup> the maximum temperature reached 32.3°C/90°F making it the first heatwave day for 2019.

The coolest day was the 1<sup>st</sup> with an average temperature of 25.8°C/78°F.

The day with the most sunshine hours was the 12<sup>th</sup> (11hrs :48min).

The day with the least sunshine hours was the 1<sup>st</sup> (6hrs:18min).

The windiest day was the 28<sup>th</sup>, with a daily average wind speed of 13 kts. / 15 mph. There was a maximum wind gust of 29 kt/31 mph that same day.

Partly cloudy skies prevailed throughout the month of June accompanied by episodes of Saharan dust.

### Long /Short Term Seasonal Review

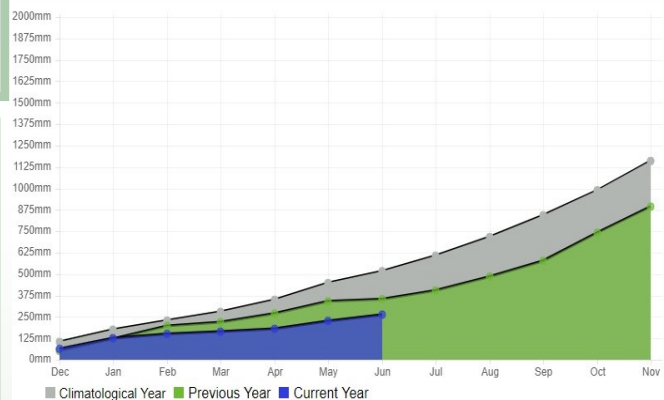
#### Year in Review (July 2018— June 2019)

Rainfall over the past year continues to remain below normal. There is a 30% rainfall deficit. There were eight (8) months within the past year with below normal rainfall.

#### Seasonal Review (Apr –May –Jun 2019)

Total rainfall for the last 3 months was 99.3 mm, this amount was below the normal range (156-253 mm). There was only one day with heavy rainfall (>10mm) within that period. This has been the driest Apr-May-Jun. since 2016 (98.9mm).

#### Rainfall Totals for PJIA



#### NORMAL JULY CONDITIONS

Rainfall Total	63.4 mm – 106.4 mm	3– 4in.
Avg. No. of Rain days	13 days	
Daily Average Temperature	28.6°C	84°F
Avg. Max. Temperature	31.7°C	89°F
Avg. Min. Temperature	26.2°C	79°F
Avg. Daily Hours of Sunshine	8 hrs	

## The Heat Season is on!!!!

August to October is normally the hottest time of year on St. Maarten.

Drink lots of water.

Wear protective clothing, hats and sunshades if you work outdoors.

### Implication of Forecast for Sectors

#### Health

- More frequent episodes of Saharan dust into the Caribbean region 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 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.
- 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 HEAT IS ON....

During the last month temperatures have soared across the globe. There are reports of very high temperatures in parts of Europe and even the Caribbean. In France a temperature of 45.1°C/113°F was reported and Jamaica reported 39.1°C / 102°F towards the end of June. There can be a significant difference between the temperature measured at the thermometer and what is actually felt by humans which is referred to as the heat Index. The heat felt is hotter if the humidity is high and winds are very light.

Based on historical data at the Princess Juliana International Airport; hot days are considered days when the maximum daytime temperature reaches 32.3°C/90°F; very hot days when maximum reaches 32.7°C/91°F and any day when maximum temperature exceeds 33.6°C/92°F is considered extremely hot. On St. Maarten most hot days occur between the months of July to September. In July of 1991 there were 29 such days, August 1991 29 such days and September 2001 there were 27 such days. Heat waves are 3 or more consecutive hot days.

The predictions for Jul-Aug-Sept. indicates that, this year the hot season will be hotter than the last two years. During extremely hot and humid weather, your body's ability to cool itself is challenged. It is important to know the symptoms of excessive heat exposure or heat exhaustion and the appropriate responses. Some of the symptoms are: Heavy sweating, weakness, pale, weak pulse, possible muscle cramps, dizziness and Fainting .

- ◆ If you work out doors it is important to wear loose protective clothing, shades, hats, stay hydrated and take frequent breaks in the shade.
- ◆ At home check on the elderly, sick and those without air-condition.
- ◆ Never leave kids or pets in vehicles unattended.