

Weather & Climate

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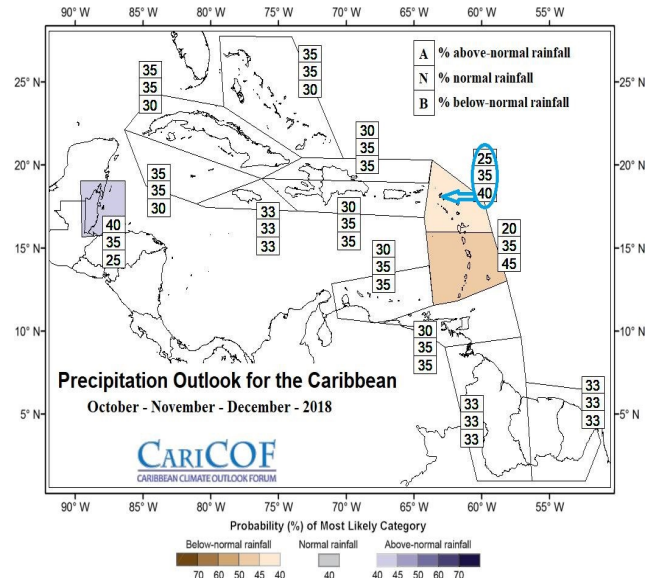
Seasonal Outlook for October to December (OND) 2018

Rainfall Forecast

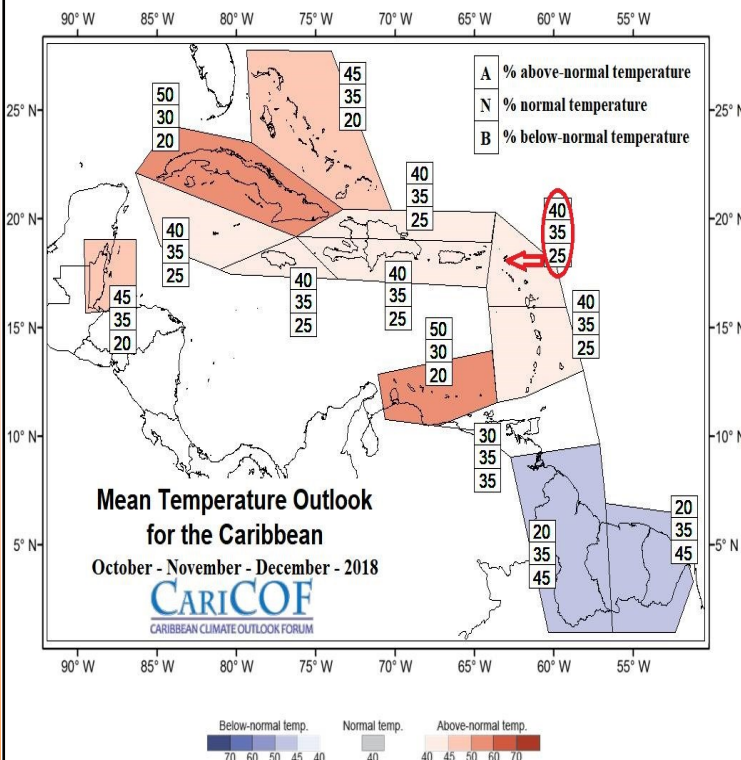
Rainfall for the season Oct-Nov-Dec 2018, is likely to be the usual or drier across the Lesser Antilles. The forecast is for the possibility of 3 to 6 wet spells and up to 4 very wet spells within that period.

Within the 92 days of Oct-Nov-Dec, the normal rainfall total for St. Maarten ranges from 307 mm – 499mm/ 12-20 in. with about 36-50 wet days. Oct. and Nov. are usually wet with frequent heavy showers while in Dec. there is usually a decrease in shower activity.

This season rainfall totals and number of wet days are likely to be the usual or lower than usual on St. Maarten.



Temperature Forecast



Temperatures for both day and night across the Caribbean are likely to be warmer than usual, except in Guyana.

In St. Maarten, temperatures for both day and night are expected to be warmer than usual.

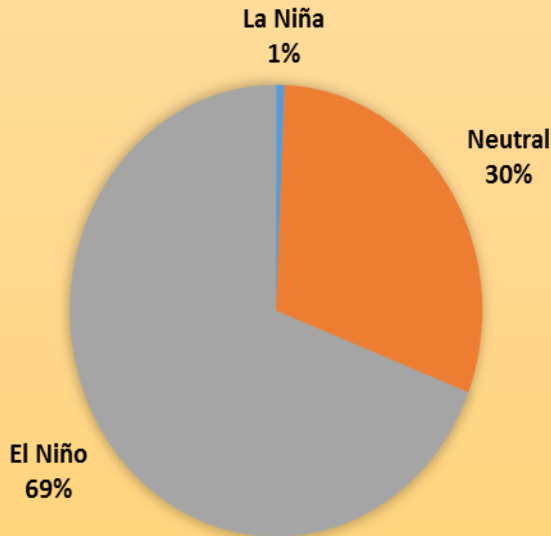
The forecast is for a 40% chance of having at least 7 heat wave days this season. Most heatwave days occur in October. Temperatures become comfortable from December to March.

Heat wave days are days when it becomes uncomfortably hot and humid. There were eight (8) such days recorded in September.

ENSO FORECAST

(El Niño Southern Oscillation)

ENSO FORECAST PROBABILITIES



In mid September 2018, the east-central tropical Pacific waters reflected Enso-neutral conditions with near to slightly above average SST. The subsurface water temperatures continued to be above average.

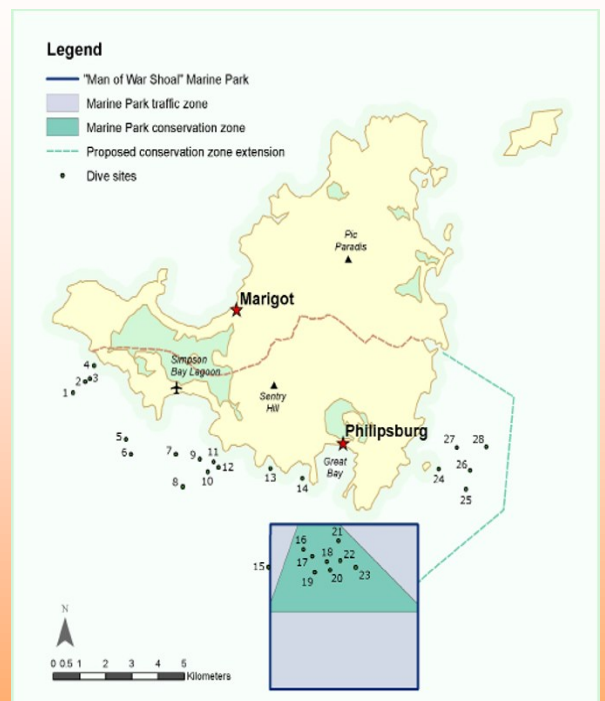
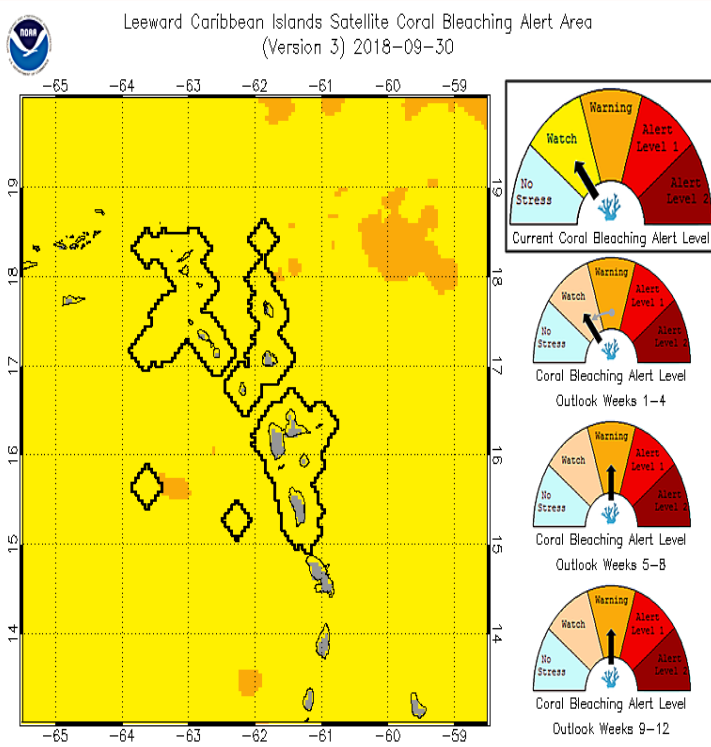
The latest forecast models collectively favour a weak El Niño development (68%) this season and most likely maintaining a weak strength through the first half of 2019. An El Niño Watch is in effect.

An El Niño state will tend to tilt the odds to drier conditions. Although this effect is more dominant with stronger El Niño phases.

A Coral Bleach Watch remains in effect.....

Presently sea surface temperatures (SST) around the Leeward Islands and St. Maarten are about 28.9°C (84°F). This is slightly above average for this time of year however, temperatures still remain below the bleaching threshold (29.3°C/85°F).

As a result low-level thermal stress on corals is expected to continue at this time. Thermal stress is expected to accumulate during the next months but not expected to reach bleaching levels.



St Maarten 'Man of War Shoal' Marine Park.
Photo compliments: Nature Foundation St. Maarten.

SEPTEMBER 2018 IN REVIEW

Total Rainfall	91.7 mm	3.6 in.
2018 Cumulative Rainfall	525.1 mm	20.7 in.
Max. 24-Hr. Rainfall	Sept.13th	21.1mm/ 0.8 in.
No. Rain Days (>=1.0 mm)	12 days	
No. Heavy Rain Days (>=10.0 mm)	3 days	
No. Thunderstorm Days	6 days	
Avg. Wind Speed	6 kts.	7 mph
Avg. Temperature	29.0 °C	84 °F
Max. Temperature	Sept. 10th	33.8 °C / 93°F
Min. Temperature	Sept. 29th	22.8°C / 73°F

Rainfall for the month of August was below the normal range (95-133mm). A total of 91.7 mm/ 3.6 inches was recorded in twelve (12) rain days. There were three (3) heavy rainfall days.

The 2018 Atlantic Hurricane Season

The last update from the National Oceanic & Atmospheric Administration (NOAA) was for 9-13 named storms, 4-7 hurricanes with 0-2 major hurricanes. An average season produces 12 named storms, 6 hurricanes and 3 major hurricanes.

So far we have had twelve (12) named storms, five (5) of which have reached hurricane status and one (1) was a major hurricane. Two hurricanes formed in July; Beryl and Chris while two storms; Debby and Ernesto formed in August. Florence, Gordon, Helene, Isaac, Joyce, Kirk and Leslie formed in September. The next named storm will be Michael.

As we approach the last two months of the season, (Oct. & Nov.) we should not be complacent. Remain alert and prepared to take action to protect life and property in the event of any storm or hurricanes approaching our area. Get credible information.

Maximum and daily average temperatures were above normal for the month of September while the minimum was near normal.

The warmest days were the 10th, 19th & 20th with an average temperature of 29.9°C/86°F.

The day with the most sunshine hours was the 9th (11hrs :30min).

The day with the least sunshine hours was the 14th (3hrs:42 min).

The longest dry spell was nine (9) days from September 3rd to 11th.

The windiest day was the 13th, with a daily average wind speed of 14 kts. / 16 mph. The highest gust on that day was 34 kts./39 mph

Season	La Niña
Sept.—Nov. 2018	0%
Oct.— Dec. 2018	1%
Nov.-Jan. 2018	1%
Dec.-Feb. 2018	1%
Jan.- Mar. 2019	1%
Feb.—Apr. 2019	0%
Mar.—May 2019	0%
Apr.—Jun. 2019	0%
May—Jul. 2019	2%

Year in Review (Oct. 2017– Sept 2018)

For the last 12 months, rainfall has been below the normal range. December, March, June, July and September were below normal while November and February were above the normal range. Overall there is a deficit in the amount of rainfall for the past year.

Seasonal Review (Jul-Aug–Sept. 2018)

Total rainfall for the last 3 months was 223.2 mm this amount was below the usual range (264-349mm). There were seven (7) days with slightly heavy rainfall. (>10mm)

These last 3-months were drier than the same period in 2017.

2018 Atlantic Storms Names

Alberto	Helene	Oscar
Beryl	Isaac	Patty
Chris	Joyce	Rafael
Debby	Kirk	Sara
Ernesto	Leslie	Tony
Florence	Michael	Valerie
Gordon	Nadine	William

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.

Summary of Forecast for October to December 2018

- Oct.-Nov-Dec., rainfall totals are expected to be lower than usual.
- Both daytime and night-time temperatures are expected to be warmer than in most recent years. Temperatures will get more comfortable from November.
- Thermal stress is increasing on corals, it is expected that by the end of October thermal stress will accumulate, however bleaching is not expected.

Implication of Forecast for Sectors

Health

- High temperatures with a peak in air humidity may make it feel uncomfortable until the end of October. This may cause heat stress in vulnerable persons.
- The presence of stagnant water after rainy events may promote breeding of mosquitoes and lead to an increase in water borne diseases.
- Episodes of Saharan dust may occur at this time ahead of tropical systems. In the event of Saharan dust persons with respiratory illness are to take the necessary precaution and be monitored.

Energy Sector

- Need for power for cooling will continue to increase until the end of October as day-time and night-time temperatures are expected to be warmer than usual.

Tourism Sector

- November is the wettest month of the year on St. Maarten therefore there is the possibility for disruptions to outdoor activities. Some dry days and dry spells are expected as well.
- On hot days, there will be an increase demand for cooling & hydration particularly during the day-time hours.
- Tourists are encouraged to use sunscreen and seek shaded areas between the hours of 10am to 3pm to avoid risk of skin damage on sunny days.
- We are in the hurricane season; Tourism operators should monitor all advisories/ warnings issued by the Meteorological Department.

Agriculture

- Some irrigation may become necessary as rainfall totals are expected to be below the average for this time of year.

NORMAL OCTOBER CONDITIONS

Rainfall Total	99.9 mm – 180.9 mm	4– 7 in.
Avg. No. of Rain days	14 days	
Daily Average Temperature	28.2°C	83°F
Avg. Max. Temperature	31.4°C	89°F
Avg. Min. Temperature	25.8°C	78°F
Avg. Daily Hours of Sunshine	8 hrs	

Things you should know.....

SAHARAN DUST

Hundreds of millions of tons of mineral dust are transported thousands of miles through the atmosphere from the Sahara in Africa to the Caribbean and the Americas every year. It is most often seen during the months of June through December. The dust is referred to as haze, makes the sky look milky and very difficult to see the horizon.

Here are some positive and negative impacts of the Saharan dust:

1. The dust acts as a fertilizer and has supplied plant nutrients as well as enriching dry land.
2. Another positive benefit is that Saharan dust clouds can reduce the chances of hurricane formation.
3. It has also been found to coincide with coral declines in the Caribbean islands.
4. The fine dust can cause existing respiratory problems to flare up.
5. It causes air pollution.