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Weather & Climate

Volume 8, Issue 7

August 2023

Key Points

- July 2023 was the warmest July since 1995. Night-time temperatures were the warmest on record.
- There were four (4) heat wave periods in July; the longest lasted sixteen (16) days.
- Temperatures expected to remain uncomfortably high through October.
- We are in the Hurricane Season. Be Prepared!.

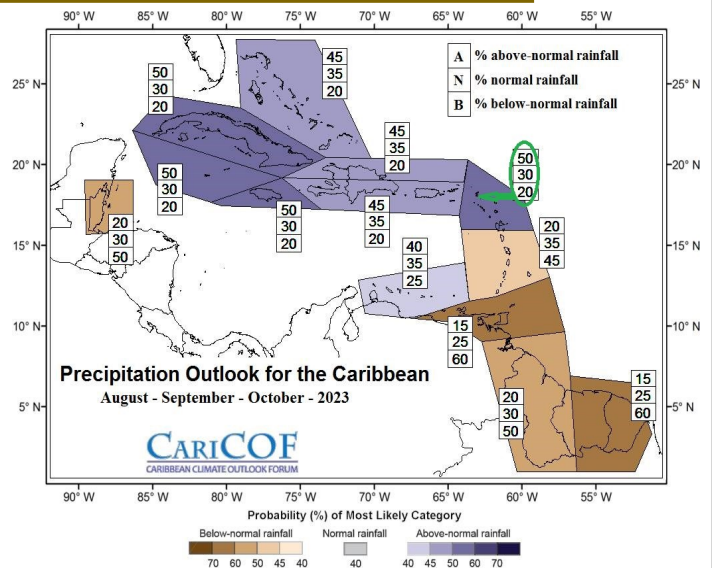
Seasonal Outlook for August to October (ASO) 2023

Rainfall Forecast

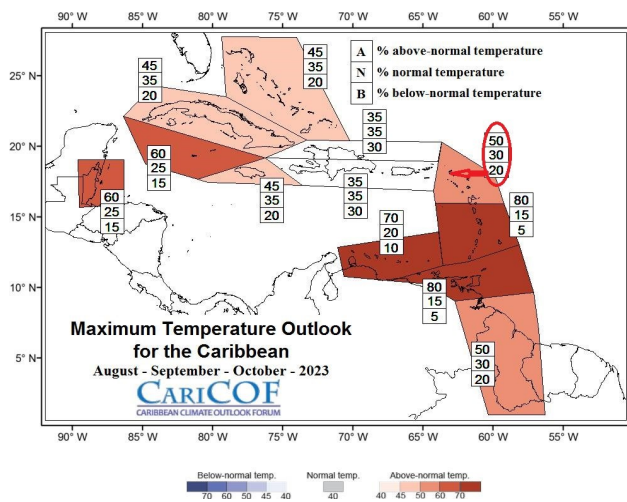
Models are indicating that rainfall totals for the season Aug-Sept-Oct 2023 are likely to be above the normal range in St. Maarten and the rest of the Leeward islands and northern Caribbean.

The normal rainfall for Aug-Sept-Oct. season on St. Maarten ranges 290mm-408mm/11-16 inches, with 37 to 45 wet days. Throughout this season there are usually heavy and more frequent showers.

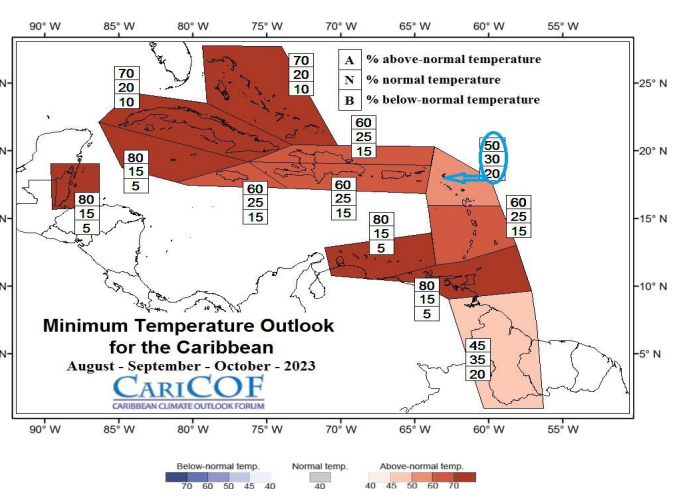
The forecast is for up to 6 (7-day) wet spells, up to 4 very wet spells and about 5 (7-day) dry spells on St. Maarten during this season.



Temperature Forecast



Day-time Temperatures



Night-time Temperatures

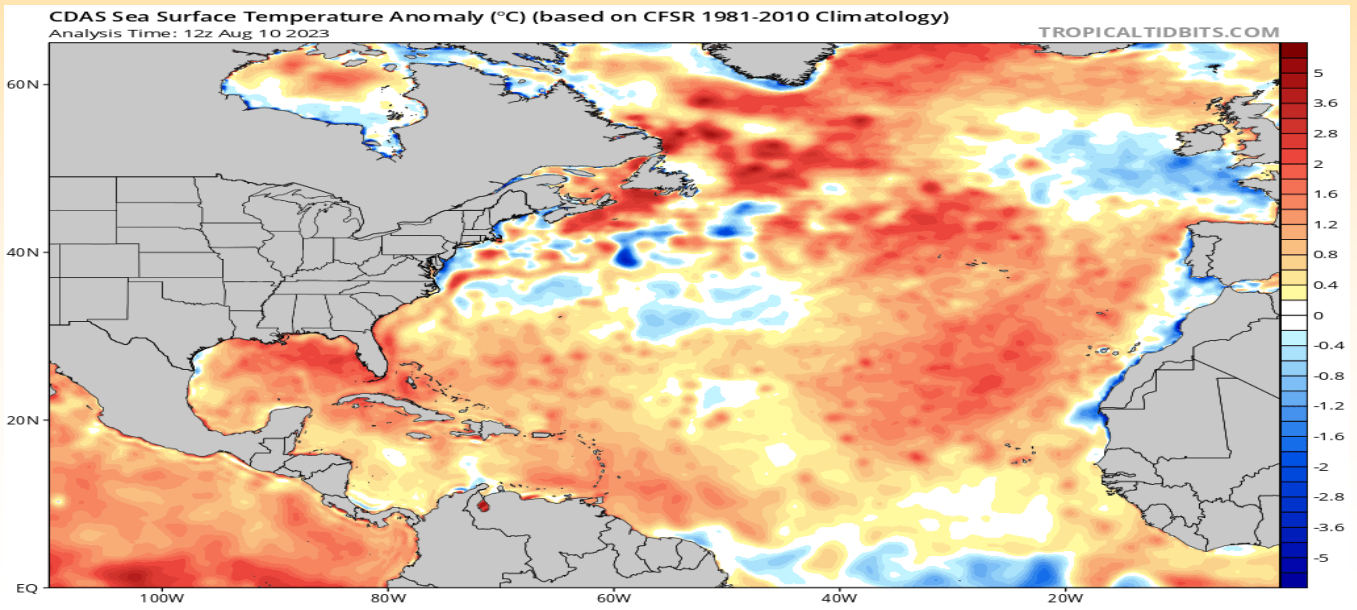
Day-time and night-time temperatures are forecast to be uncomfortably high this season. Humidity and the frequency of heatwaves are expected to increase in August and September making this summer as hot as 2020 or even hotter.

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?

In mid July, the eastern and central Pacific have transitioned to weak-to-moderate El Nino conditions. The key atmospheric variables are consistent with a weak El Nino. The El Nino advisory remains in place and the majority of the forecast models predict that an El Nino will persist through the first quarter of 2024.

El Nino more often than not is marked by a warmer heat season, drier summer, and reduced tropical cyclone activity especially from September to November. Warm SSTs in and around the Caribbean tend to contribute to higher air temperatures with above average humidity and increase frequency of heatwaves. However, the current unusually high SSTs may increase hurricane activity.



2023 Atlantic Hurricane Season

One (1) named storm formed during the month of July.

T.S Don formed on July 14th over the northern Atlantic Ocean.

Don had many transitions it went from tropical to subtropical back to tropical and also became a hurricane for a short period of time between July 22nd and 23rd.

Don was the 1st hurricane of the 2023 season.

As we head to the peak of the hurricane season, All residents should evaluation their surrounding and make the necessary preparations in the event of any system heading our way.

Be Prepared!!

2023 Atlantic Storm Names		
Arlene	Harold	Ophelia
Bret	Idalia	Philippe
Cindy	Jose	Rina
Don	Katia	Sean
Emily	Lee	Tammy
Franklin	Margot	Vince
Gert	Nigel	Whitney

JULY 2023 IN REVIEW

Total Rainfall	41.4 mm	1.6 in
2023 Cumulative Rainfall	328.5 mm	12.9 in.
Max. 24-Hr. Rainfall	10.1 mm	0.4 in.
No. Rain Days (≥1.0 mm)	10 days	
No. Heavy Rain Days (≥10.0 mm)	1 day	
No. Thunderstorm Days	5 days	
Avg. Wind Speed	10 kt.	12 mph
Max. Wind Gust	28 kt.	32 mph
Avg. Temperature	29.5°C	85°F
Max. Temperature	33.5°C	92°F
Min. Temperature	25.4°C	78°F

Long /Short Term Seasonal Review

Year in Review (August 2022— July 2023)

Total rainfall over the past twelve (12) months was below the normal range. (929 –1198mm). A total of 908mm/36in. of rainfall was recorded at the Princess Juliana International Airport.

Seasonal Review (May—Jun –Jul 2023)

Total rainfall for the last three (3) months was 171mm/7in, this amount was within the normal range (167-295mm). There were five (5) days with heavy rainfall (>10mm) during that period.

For the month of July, rainfall was below the normal range while temperatures were above the normal range. July 2023 was the warmest July since 1995. Night-time Average temperatures were the warmest on record.

The warmest days in July were the 18th, 19th & 24th with an average temperature of 30.0°C/86°F. The coolest days were the 12th & 23rd with an average temperature of 28.6°C/84°F.

The day with the most sunshine hours in July was the 24th (11hrs:18min).

The day with the least sunshine hours was the 12th, (0hr:24min)

The windiest day in July was the 11th with a daily average wind speed of 15kt./17mph.

The day with the highest wind gust was also the 11th (28kt./32mph).

Skies were mostly cloudy throughout July.

There were ten (10) days with rainfall in July, one (1) of which had heavy rainfall (>10mm).

The longest dry spell in July was seven (7) days long. (17th to 23rd).

July 28th recorded the highest maximum temperature (33.5°C/92°F)

There were four (4) heat wave periods in July the longest lasted sixteen (16) days; July 16-31.

Twenty-five (25) warm nights were recorded; the 19th was the warmest night with a minimum temperature of 28.6°C/84°F.

NORMAL AUGUST CONDITIONS

Rainfall Total	75 – 122 mm	3-5 in.
Avg. No. of Rain days	14 days	
Daily Average Temperature	28.8°C	84°F
Avg. Max. Temperature	31.8°C	89°F
Avg. Min. Temperature	26.5°C	80°F
Avg. Daily Hours of Sunshine	9 hrs	

Implication of Forecast for Sectors

Energy/Water Sector

Energy demand for cooling purposes will continue to increase significantly this season.

Health

- UV radiation will continue to increase this season. Excessive UV exposure can cause skin damage across the population on sunny days.
- Keep hydrated and limit outdoor activity between 11am and 3pm.
-

Tourism Sector

- On hot days, there will be an increase demand for cooling & hydration.
- Significant potential for coral reef bleaching

Agriculture

- Irrigation should be considered during dry spells.
- Increase cooling and ventilation for livestock.

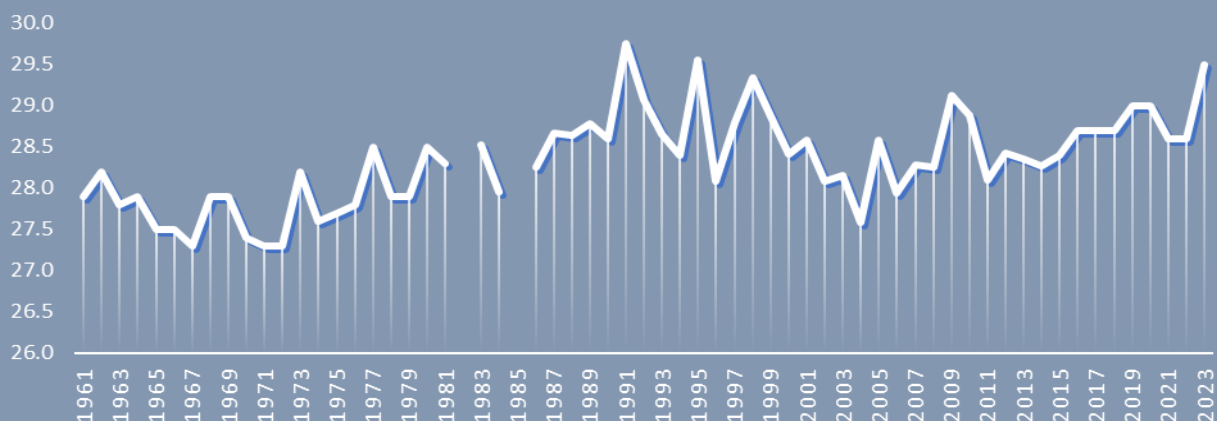
EXCESSIVE HEAT

August through October, high humidity and temperatures will cause the 'feel-like temperature' (heat index) to increase. Intense night-time and daytime heat is expected in much of the Caribbean from August to October, then temperatures are expected to cool steadily from November.

Global temperatures for the month of July has been reported to be the warmest on record according to Copernicus report published on August 8, 2023. Heat waves and extreme temperatures have been reported in many cities and regions across the globe.

- ◆ July average temperature on St. Maarten as recorded at the Princess Juliana International Airport (PJIA) was as warm as July 1995. (29.5°C/85°F).
- ◆ 0.9°C warmer than the 30year (1991-2020) average for July.
- ◆ 0.5°C warmer than July 2020 which was considered one of the warmest most recent years.
- ◆ There were four (4) heatwave periods in July ; the longest lasted 16days.

JULY AVERAGE TEMPERATURE (1961-2023)



Stay Hydrated, Wear protective clothing, Never leave infants, children or pets inside a parked vehicle, check on elderly family members, neighbors and friends to make sure they are comfortable and safe.

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