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Weather & Climate

Volume 8, Issue 4

May 2023

Summary

- Rainfall for April 2023 was below the normal range.
- The Caribbean Heat Season begins.
- No drought concern expected by the end of July for St. Maarten.
- An El Niño event is predicted to begin this season May-July through 2024.

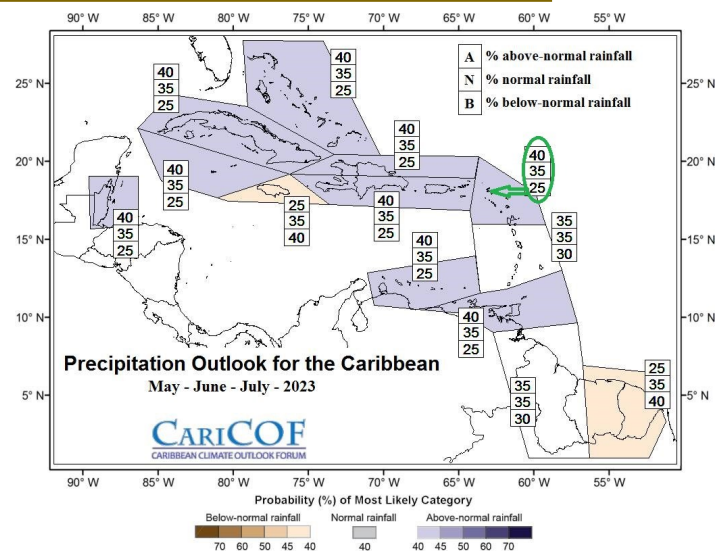
Seasonal Outlook for May to July (MJJ) 2023

Rainfall Forecast

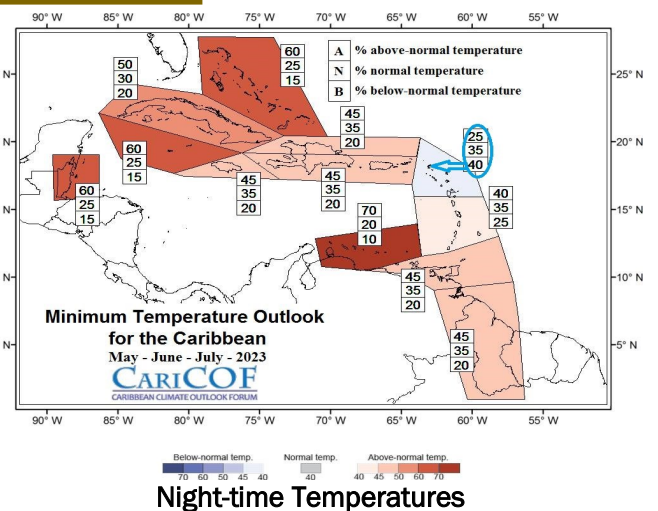
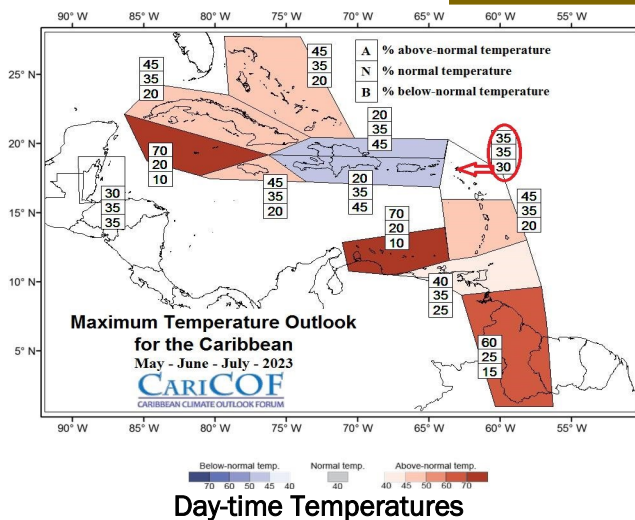
Models are indicating that rainfall totals for the season May-Jun-Jul 2023 are likely to be near the normal range in St. Maarten and the rest of the Caribbean.

The normal rainfall for May-Jun-Jul season on St. Maarten ranges 167mm–295mm/7-12 inches, with 28 to 36 wet days. May to June we transition to the wet season where rainfall may be more frequent while in July there is often a summer dry spell.

The forecast is for up to 5 (7-day) wet spells, up to 3 very wet spells and about 5 (7-day) dry spells on St. Maarten during this season.



Temperature Forecast



Day-time and night-time temperatures may become uncomfortable at times this season. Heat stress and the occurrence of heat waves will be on the increase.

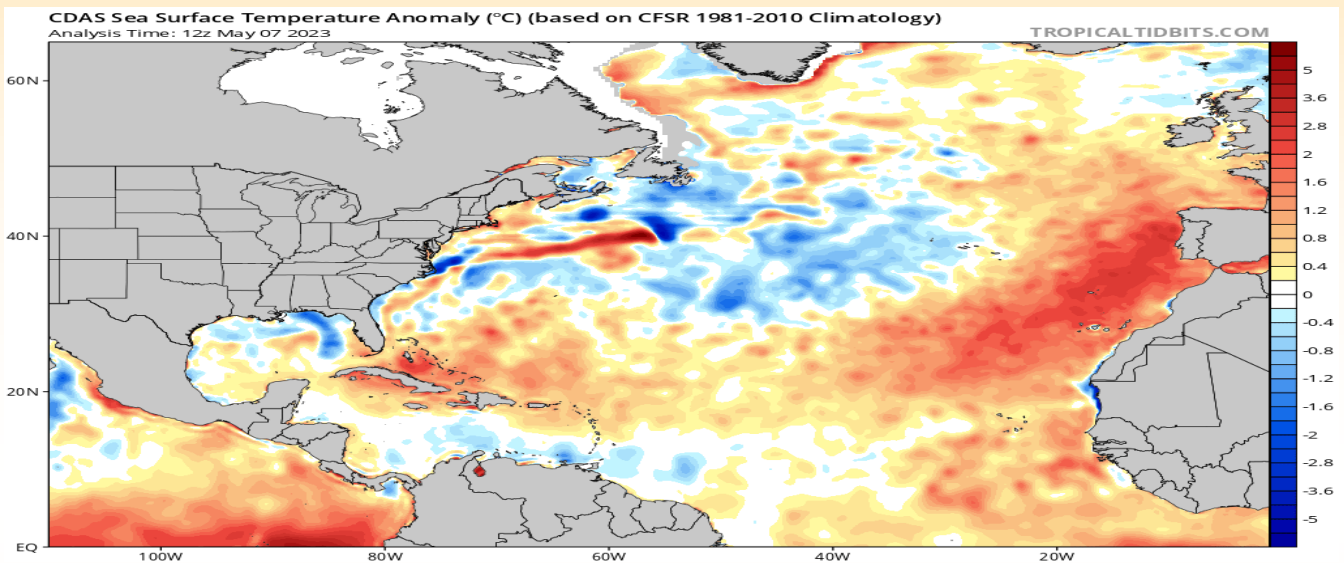
For more information on other Caribbean Outlooks go to <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

WHAT INFLUENCES THIS SEASON'S CLIMATE?

In mid April, the previous negative sea surface temperatures (SST) anomalies in the east-central Pacific weakened further and the basin is now in an ENSO-neutral state. The key atmospheric variables are now consistent with ENSO-neutral conditions. An El Nino watch was issued in April which marked the start of the warm phase of the ENSO.

Majority of the forecast models predict that an El Nino will start this season May-Jul 2023 (73% chance). There is a likelihood that the El Nino phase will persist through early 2024.

The wet season in the Caribbean may be drier than normal in view of the likely development of El Nino. The combined high ocean temperatures and humidity may increase the risk of heatwaves. Although, El Nino slows down deep convection for the development of storms/hurricanes, the current unusually high SSTs may increase such activity.



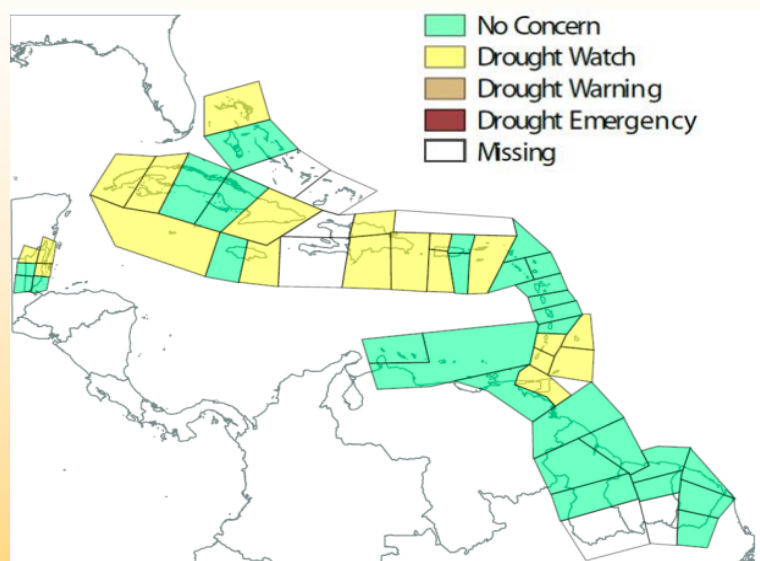
Drought Alerts

Currently, short term drought has developed in Barbados, Belize, southeast Cuba, USVI, Martinique and St. Vincent while long term drought has also developed in other areas across the Caribbean.

Although 'drought' conditions will persist on St. Maarten through May, models indicate that by the end of July there will be no drought concern.

Actions to be taken at this time:

- ◆ Keep Updated on the situation
- ◆ Maintain adequate water level in Ponds for fish survival.
- ◆ Make sure fire hydrants are functional
- ◆ Avoid burning of garbage.
- ◆ Make sure irrigation systems are in order



Short term drought alert levels at the end of June 2023

APRIL 2023 IN REVIEW

Total Rainfall	28.6 mm	1.1 in
2023 Cumulative Rainfall	157.9 mm	6.2 in.
Max. 24-Hr. Rainfall	7.0 mm	0.3in.
No. Rain Days (≥1.0 mm)	8 days	
No. Heavy Rain Days (≥10.0 mm)	None	
No. Thunderstorm Days	1 day	
Avg. Wind Speed	8 kt.	9 mph
Max. Wind Gust	29 kt.	33 mph
Avg. Temperature	26.8°C	80°F
Max. Temperature	31.7°C	89°F
Min. Temperature	22.7°C	73°F

Long /Short Term Seasonal Review**Year in Review
(May 2022–April 2023)**

Total rainfall over the past twelve (12) months was below the normal range. (957 –1181mm). A total of 845mm/33in. of rainfall was recorded at the Princess Juliana International Airport.

**Seasonal Review
(Feb- Mar –Apr 2023)**

Total rainfall for the last three (3) months was 91mm/4in, this amount was below the normal range (132-168mm). There was only one (1) day with heavy rainfall (>10mm) during that period.

Rainfall was below the normal range while temperatures for the month of April were near the normal range.

The warmest days in April were the 29th & 30th with an average temperature of 28.4°C/83°F. The coolest day was the 6th with an average temperature of 24.5°C/76°F.

The day with the most sunshine hours in April was the 29th (12hrs:06min).

The day with the least sunshine hours was the 6th, (0hrs:00min)

The windiest day in April was the 1st with a daily average wind speed of 14kt./16mph.

The day with the highest wind gust was the 29th (27kt./33mph).

Skies were Mostly fair.

There were eight (8) days with rainfall in April however, none were heavy rainfall days (>10mm).

The longest dry spell in April was seven (7) days long. (24th to 30th).

April 28th recorded the highest maximum temperature (31.7°C/89°F)

There was one (1) cool night in April (6th) with 22.7°C/ 73°F.

**NORMAL
MAY CONDITIONS**

Rainfall Total	49 – 121 mm	2-5 in.
Avg. No. of Rain days	10 days	
Daily Average Temperature	27.5°C	82°F
Avg. Max. Temperature	30.4°C	87°F
Avg. Min. Temperature	25.3°C	78°F
Avg. Daily Hours of Sunshine	8 hrs	

Implication of Forecast for Sectors

Energy/Water Sector

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

Tourism Sector

- On hot days, there will be an increase demand for cooling & hydration.

Agriculture

- Irrigation should be considered during dry spells.
- Drought conditions will persist till the end of May.
- Increase cooling and ventilation for livestock.

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.

The Caribbean Heat Season.

The Caribbean Heat Season is from May to October every year. The peak of the heat season in St. Maarten is August and September. The likelihood of the development of an El Nino this summer may exacerbate the risk of heatwaves across the Caribbean.

A **heat wave** is considered when there are two (2) or more consecutive days of unusually high temperatures. (32.2°C /90°F PJIAE records).

The **heat index** is what the temperature feels like to the human body when relative humidity is combined with the air temperature. For example, very high levels of humidity can make a 32°C/90°F degree temperature feel like it's well over 38°C/100°F!

For the month of May so far, the highest maximum temperature recorded at PJIAE was 31.6°C or 89°F (May 5th) combine with a relative humidity of 66%, the heat index at that time was 38°C/100°F. For 2023 thus far, there is no evidence of a heat wave occurring in St. Maarten.

During the heat season be advised that prolonged exposure to these conditions can be damaging to the human body.

- ⇒ Limit outdoor activities especially between the hours of 11am and 3pm.
- ⇒ Drink lots of fluids, especially water, before feeling thirsty.
- ⇒ Wear hats, sunglasses or use an umbrella when outdoors.
- ⇒ Dress appropriately in light-weight, light-colored, and loose-fitting clothing.
- ⇒ Avoid getting sunburned. It decreases the body's ability to cool.
- ⇒ Never leave infants, children or pets inside a parked vehicle.
- ⇒ Remember to check on elderly family members, neighbors and friends to make sure they are comfortable and safe.