

Weather & Climate

Volume 9, Issue 05

May 2024

KEY POINTS

Be Prepared!

- Temperatures / Rainfall are forecast to be above normal this season throughout the Caribbean.
- There is no drought concern by the end of July 2024.
- The 2024 Atlantic Hurricane/ Heat Season is forecast to be record breaking.

SEASONAL OUTLOOK FOR MAY TO JULY (MJJ) 2024

RAINFALL FORECAST

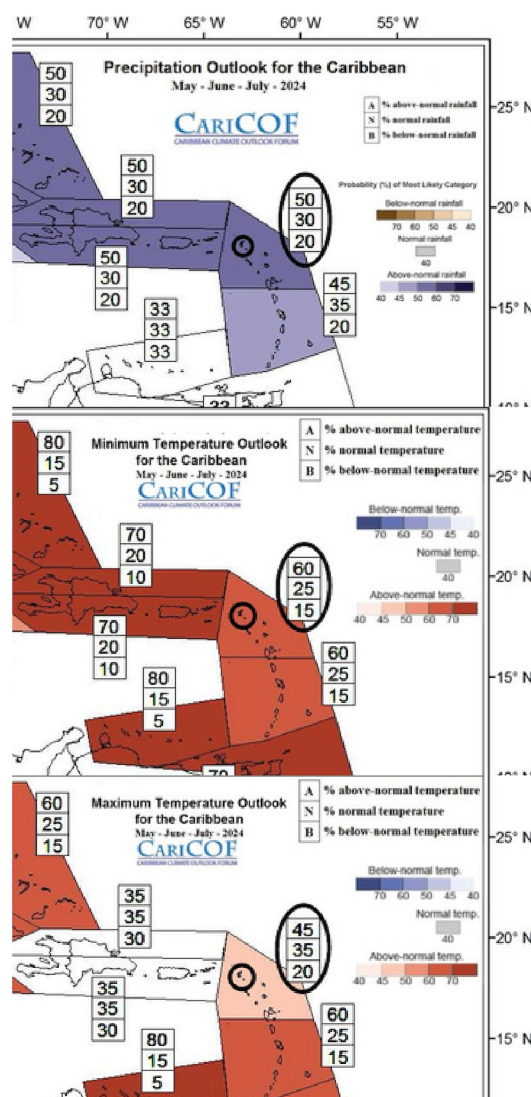
Models are indicating that rainfall totals for the season May-Jun-Jul 2024 are likely to be above the normal range in St. Maarten and most of the Caribbean.

The normal rainfall for May-Jun-Jul season on St. Maarten ranges 167mm–295mm/ 7-12 inches, with 28 to 36 wet days. In May and Jun, there is usually frequent showers while in July there is usually a mid summer dry spell.

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

TEMPERATURE FORECAST

Day-time and night-time temperatures as well as humidity are forecast to be considerably higher than usual. Frequent episodes of heat stress is expected as the region is set to enter a near-record Heat Season.

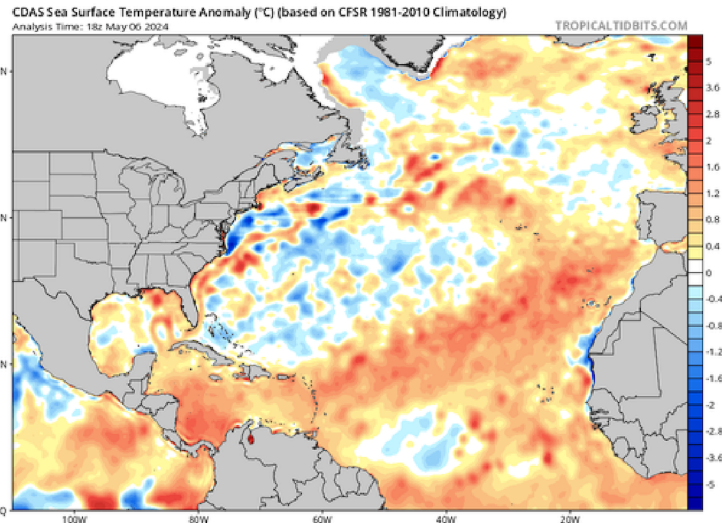


WHAT INFLUENCES THIS SEASON'S CLIMATE ?

In mid-April, El Niño conditions still persist in the eastern and central Pacific with key oceanic and atmospheric variables aligning with the ongoing El Niño event which is gradually diminishing. The majority of the forecast models predict that an ENSO-neutral phase will be the most likely phase this season through the Jun–Aug season followed by the La Niña phase from the Jul–Sept season.

A transition out of El Niño more often than not is associated with increased chances of heavy showers and higher rainfall totals in the May–Jun–Jul season as well as higher temperatures.

Sea Surface Temperatures (SSTs) in much of the Caribbean Sea and the tropical Atlantic are currently 1 to 2°C above normal since summer of 2023. Models are confidently forecasting increasing warm SSTs across the Caribbean. Warm SSTs in and around the Caribbean contribute to higher air temperatures with above-average humidity, seasonal rainfall totals, increased frequency of extreme rainfall and tropical cyclone activity throughout the Atlantic Hurricane Season.

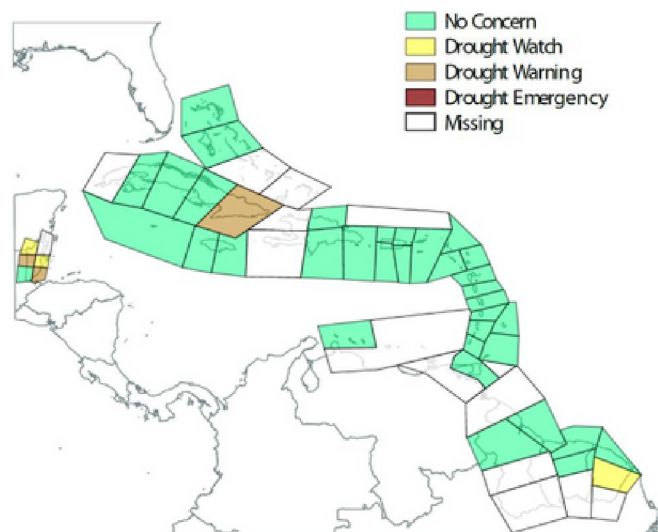


DROUGHT ALERT!

Models indicate that by the end of July 2024 there will be no drought concern in St. Maarten. Short term drought may evolve in parts of the Belize, French Guiana and eastern Cuba.

As more frequent showers come in throughout May drought conditions will not be a concern.

The issue of flooding in low lying areas will be more of a concern this season. Monitor weather forecasts, be alert and prepare for the upcoming hurricane season.



Short term drought alert levels at the end of July 2024



APRIL 2024 IN REVIEW

Warmest days: April 6th & 17th
Average temperature of 28.8°C/84°F

Coollest day: April 29th
Average temperature of 26.2°C/79°F

Sunshine hours:
Most: April 17th (11hrs:48min)
Least: April 30th (3hr:18min)

Windiest day: April 11th
Daily average wind speed of 16kt./18mph.

Highest wind gust: April 11th
32kt./37mph

Longest dry spell: 8 days

Highest maximum temperature:
April 8th

Total Rainfall	68.3 mm 2.7 in
2023 Cumulative Rainfall	298.9 mm 9.1 in
Maximum 24-hr. Rainfall	5.2 mm 11.8 in
No. of Rain Days	9 days
No. of Heavy Rain Days	2 days
No. of Thunderstorm Days	0
Average Wind Speed	9 kt 10 mph
Maximum Wind Gust	32 kt 37 mph
Average Temperature	27.6°C 82°F
Maximum Temperature	32.5°C 91°F
Minimum Temperature	23.8°C 75°F

For the month of April, rainfall was within the normal range. Temperatures were above the normal range.

LONG/SHORT TERM SEASONAL REVIEW

YEAR IN REVIEW (MAY 2023 - APR 2024)

Total rainfall for the last 12 months was within the normal range. (956-1181mm). A total of 1041mm/41in. of rainfall was recorded at the Princess Juliana International Airport.

SEASONAL REVIEW (FEB-MAR-APRIL 2024)

Total rainfall for the last three (3) months was 249.4mm/10in, this amount was above the normal range (132-168mm). There were five (5) days with heavy rainfall (>10mm) during that period.

NORMAL MAY CONDITIONS

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

IMPLICATION OF FORECAST FOR SECTORS

HEALTH

- UV radiation will continue to increase this season. Wear protective clothing, hats, or shades, limit outdoor activities and keep hydrated.
- Proper management of water storage containers e.g. covering with protective mesh helps to reduce the risk of mosquito breeding.

ENERGY/WATER

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

TOURISM

- More interruptions to outdoor activities can be expected as we move into the wet season.
- Monitor weather forecasts.

AGRICULTURE

- No drought concern by the end of July. Irrigate during dry spells.
- As moisture increases pests and diseases are likely to increase.

HEAT & HEATWAVES

Scientists are predicting that 2024 will rank among the five warmest years on record. The earth's average temperature has gone up tremendously over the years. In 2023 ocean and land average temperature was the highest in 174 years.

Based on the records at PJIA 2023 was the warmest year in the last 25 years. September 2023 was the warmest September on records. In 2023 there were 109 hot days on average there are about 40 hot days a year. Apart from the daytime hours being hot we have noticed that the nights are also getting warmer.

In the United States, excessive heat is currently the leading cause of weather-related deaths. Heat events are expected to become more frequent, more extreme, and longer in duration therefore we need to understand how heat impacts human health and what we can do to prevent impacts.

So, it is evident that global warming and excessive heat will continue to impact our communities and governments and other stakeholders must work together to help communities and especially vulnerable groups; the elderly and children prepare for this extreme heat.

The Caribbean heat season runs from June to November however we have noticed that many countries have already recorded hot days and even heat waves in March and April this year.

