

Weather & Climate

Volume 9, Issue 08

August 2024

KEY POINTS

BE PREPARED!

- There were 4 heatwave periods recorded in July.
- July 2024 was as warm as July 2023.
- We are in the peak of the 2024 Atlantic Hurricane/ Heat Season.

SEASONAL OUTLOOK FOR AUGUST TO OCTOBER (ASO) 2024

RAINFALL FORECAST

Models are indicating that rainfall totals for the season Aug-Sep-Oct 2024 are likely to be the usual or higher across St. Maarten and most of the region.

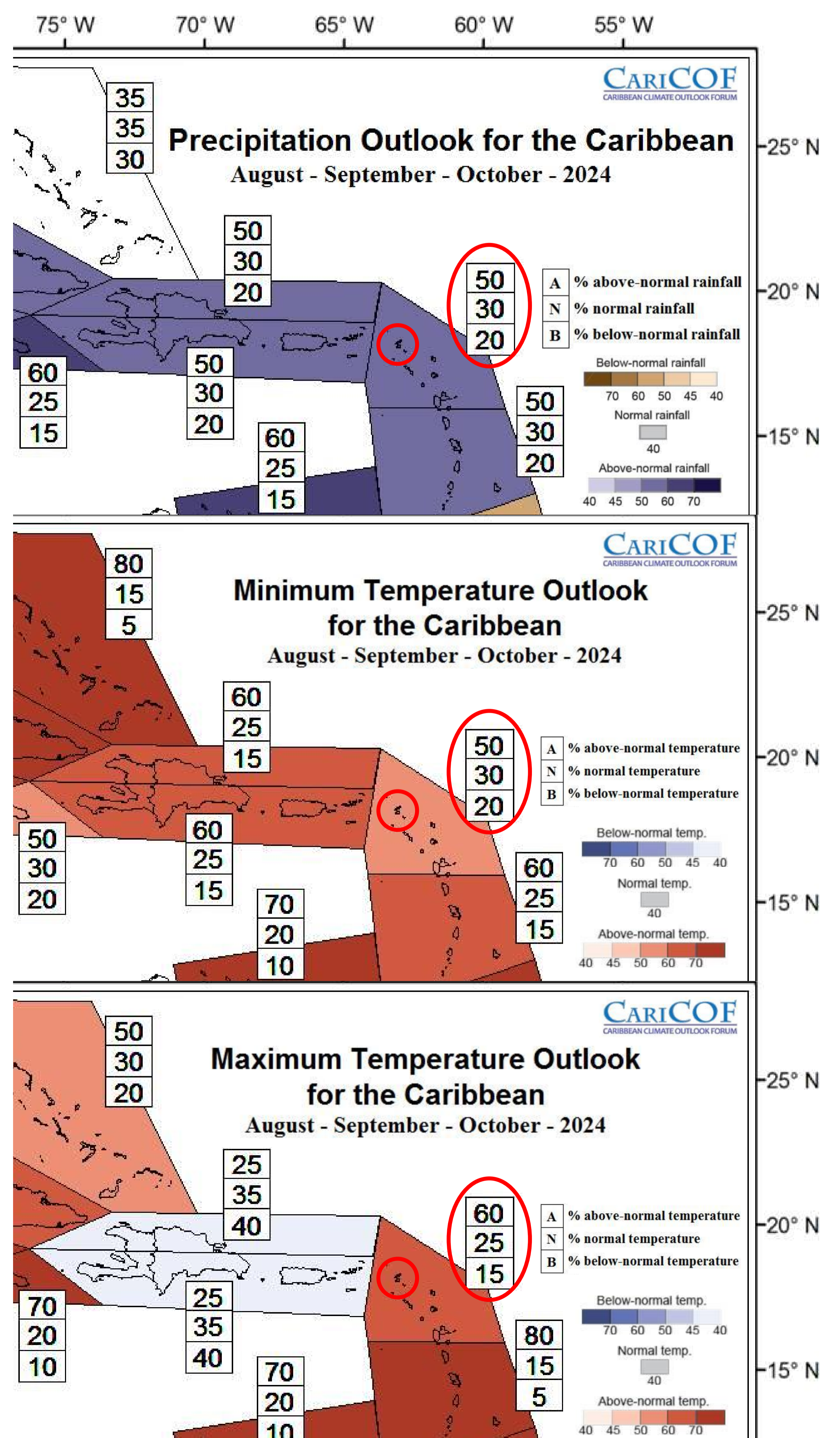
The normal rainfall for the Aug-Sep-Oct season on St. Maarten ranges 290mm–408mm/11–16 inches, with 37 to 45 wet days. The wet season continues in August with a mid-summer dry spell and in September and October, there is usually more frequent showers.

The forecast is for up to 8 (7-day) wet spells and about 4 (7-day) dry spells on St. Maarten during this season.

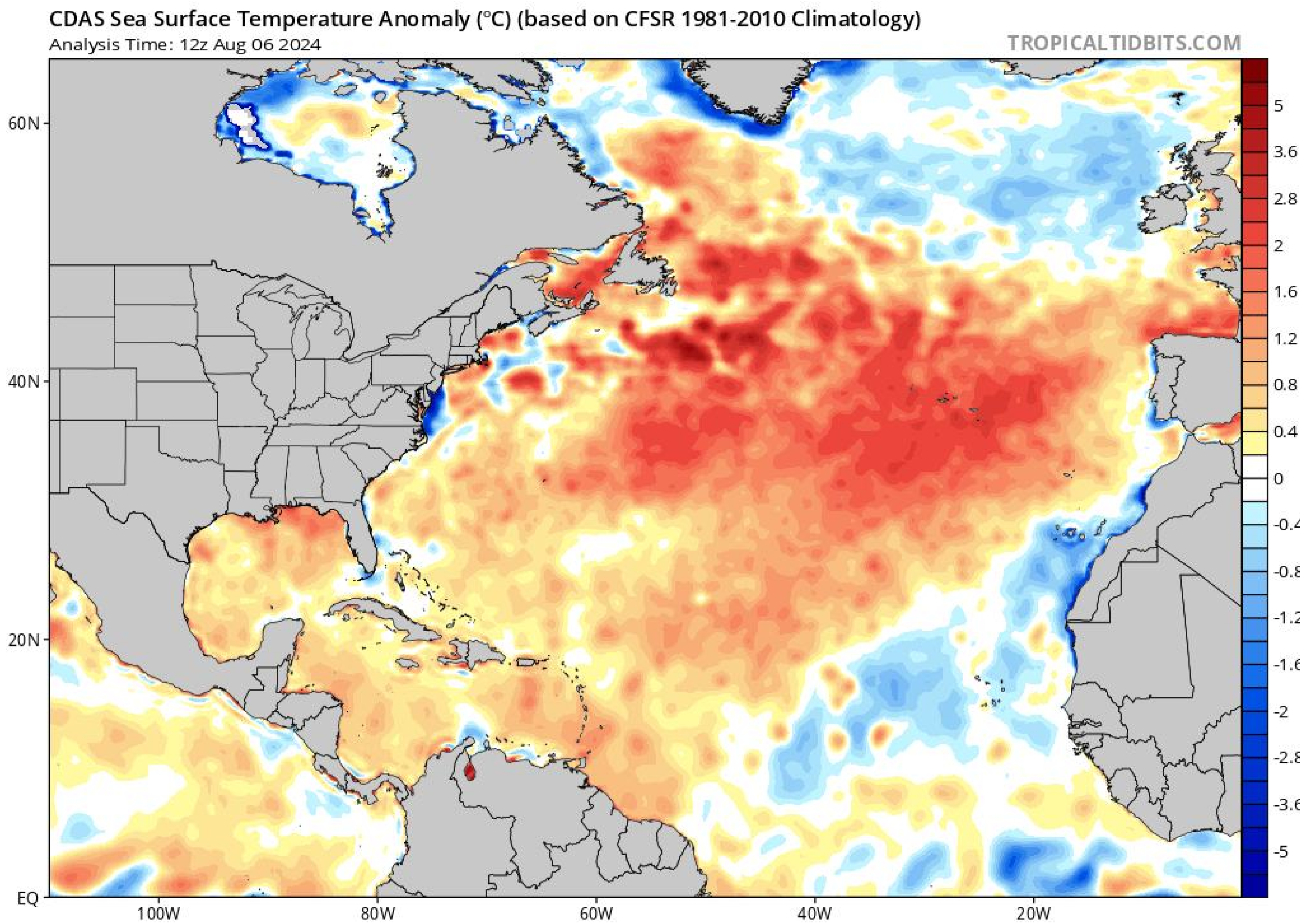
August to October is the peak of the Hurricane Season which may result in severe weather and potential for flooding and flash flooding.

TEMPERATURE FORECAST

Day-time and night-time temperatures as well as humidity are likely to be considerably higher than usual. Frequent episodes of heat stress is expected as the region is likely to continue to be in a potentially record Heat Season. Heat stress may increase even further if Saharan dust incursions are more frequent.



WHAT INFLUENCES THIS SEASON'S CLIMATE?



In mid July, ENSO-neutral conditions persist in the western equatorial Pacific, while other key oceanic and atmospheric variables aligned with the ENSO-neutral state. Models are not in agreement on the onset of a La Niña phase, some models are predicting La Niña conditions will begin this season (Aug-Oct) while others are predicting La Niña will begin in the Sept-Nov. season. If the later is true and the La Niña onset is delayed it is possible to have hurricane activity late in the season.

Record 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 above average SSTs across the Caribbean Sea and the Tropical North Atlantic. 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.

A transition into La Niña is often associated with increased chances of heavy showers, higher rainfall totals and higher temperatures from September onwards.

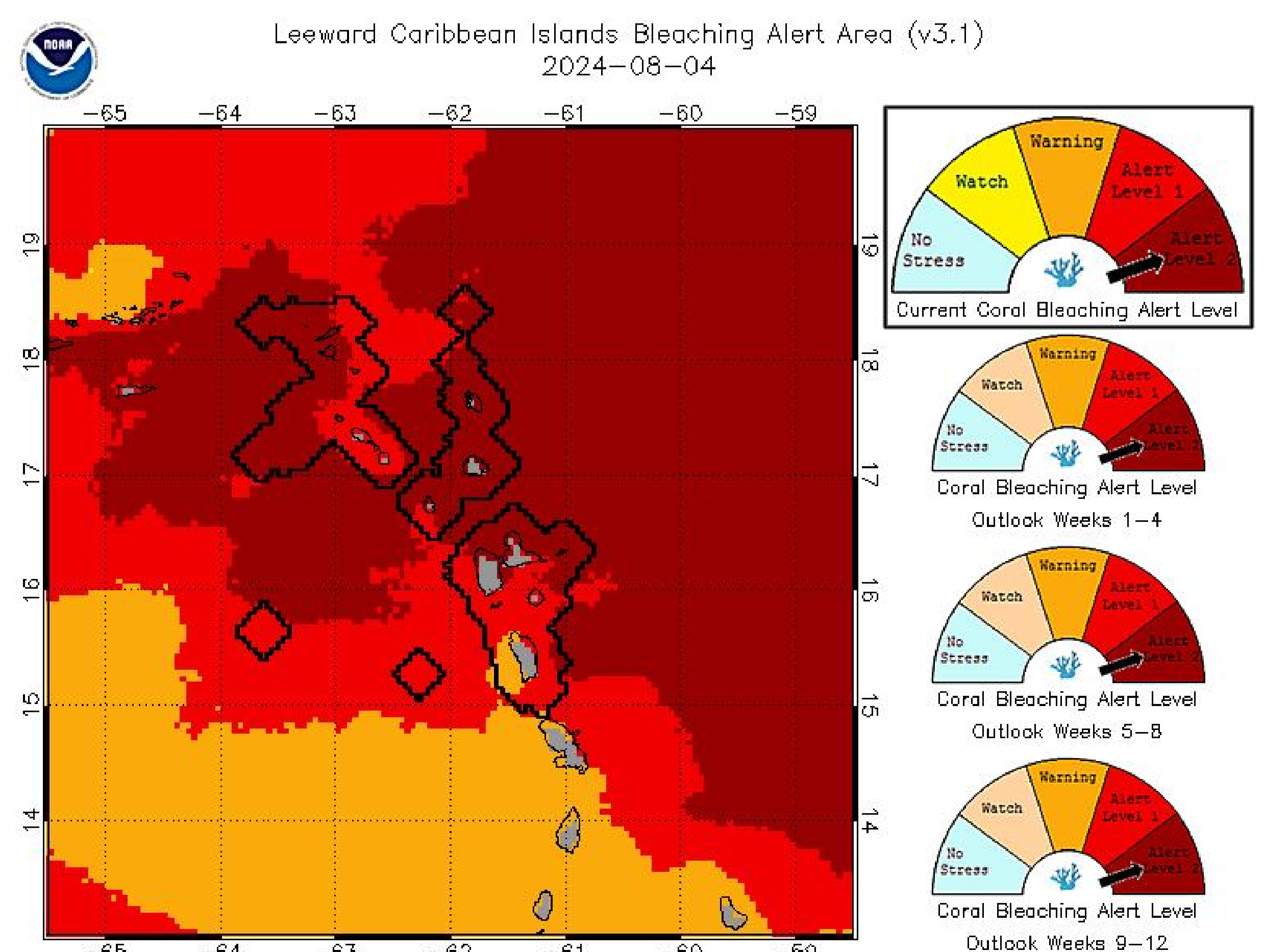
CORAL REEF BLEACHING ALERT

Currently, a **Bleaching Alert Level 2** is in effect for St. Maarten southward to Guadeloupe, a **Bleaching Alert Level 1** is in effect for Dominica and Martinique, and a **Warning** is in effect for the other islands in the south.

NEXT 4 WEEKS:

Widespread Coral Bleaching and mortality is expected around St. Maarten and the Leeward Islands.

Thermal stress is expected to accumulate around Dominica through the southern Caribbean and bleaching is also expected.





JULY 2024 IN REVIEW

Warmest day: July 9th

Average Temperature of 30.3°C/87°F

Coollest day: July 31st

Average Temperature of 27.5°C/82°F

Most Sunshine hours: July 11th (12hrs:06mins)

Least Sunshine hours: July 8th (0hrs:18mins)

Winiest day: July 1st

Daily Average Wind Speed of 14kt./16mph.

Highest wind gust: July 1st & 18th

Longest dry spell: No significant dry spells

Highest Maximum Temperature: July 25th

Heatwave: 4 periods

Longest: 4 days

Hot days(>= 32.2°C/90°F): 14 days

Warm nights(>= 27.2°/81°F): 19 nights

Extremely warm: 7 nights

Minimum Temperature of 28.2°C/83°F

Total Rainfall	140.7 mm 5.5 in
2024 Cumulative Rainfall	631.5 mm 24.9 in
Maximum 24-hr. Rainfall	26.7 mm 1.1 in
No. of Rain Days	19 days
No. of Heavy Rain Days	6 days
No. of Thunderstorm Days	8 days
Average Wind Speed	10 kt. 12 mph.
Maximum Wind Gust	31 kt. 36 mph.
Average Temperature	29.5°C 85°F
Maximum Temperature	33.0°C 91°F
Minimum Temperature	23.9°C 75°F

For the month of July, rainfall was above the normal range. Generally, temperatures were above the normal range. July 2024 was as warm as July 2023.

LONG/ SHORT TERM SEASONAL REVIEW

YEAR IN REVIEW

(AUG 2023 - JUL 2024)

Total rainfall for the last 12 months was slightly above the normal range. (933-1198mm). A total of 1203mm/47in. of rainfall was recorded at the *Princess Juliana International Airport*.

SEASONAL REVIEW

(MAY-JUN-JUL 2024)

Total rainfall for the last three (3) months was 332.6mm/13in; this amount was slightly above the normal range (167-295mm). There were nine (9) days with heavy rainfall (>10mm) during that period.

NORMAL AUGUST CONDITIONS

Total Rainfall	75-122 mm 3-5 in
Average No. of Rain Days	14 days
Daily Average Temperature	28.8°C 84°F
Average Maximum Temperature	31.8°C 89°F
Average Minimum Temperature	26.5°C 80°F
Average Daily Hrs. of Sunshine	9 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/consumption will continue to significantly increase this season.

TOURISM

- Interruptions to outdoor activities can be expected to be more frequent.
- Potential for mass coral reef bleaching.
- Monitor weather forecasts as we are in the peak of the hurricane season.

AGRICULTURE

- Irrigation may be needed during dry spells.
- As moisture increases pests and diseases are likely to increase.
- Increase cooling and ventilation need to mitigate heat stress in small and large livestock.

2024 ATLANTIC HURRICANE SEASON

The 2024 Atlantic Hurricane Season has been predicted to be a hyper-active season.

July was a very quiet month with no cyclone activity.

Sea surface temperatures remains at record high and La Nina is predicted to develop in the upcoming months as a result, the 2024 Atlantic Hurricane Season predictions for above normal activity remains in place.

So far there has been four (4) named storms; **Alberto, Beryl, Chris** and **Debby**.

History will tell us that the busiest time of the Hurricane season for St. Maarten is the month of September. As we head into the peak of the season let's continue our preparation and most importantly keep our eyes on the Atlantic.

Remember, that it takes only one major hurricane to make landfall on our island to make it an active season for us.

BE PREPARED !

Tropical Depression	<38 mph
Tropical Storm	39-73 mph
Hurricane	74+ mph

2024 ATLANTIC STORMS

ALBERTO	HELENE	OSCAR
BERYL	ISAAC	PATTY
CHRIS	JOYCE	RAFAEL
DEBBY	KIRK	SARA
ERNESTO	LESLIE	TONY
FRANCINE	MILTON	VALERIE
GORDON	NADINE	WILLIAM

CATEGORY	WIND SPEEDS
1	74-95 mph
2	96-110 mph
3	111-129 mph
4	130-156 mph
5	157+ mph

The Meteorological Department St. Maarten (MDS) will monitor the development of all tropical systems closely and will issue watches or warnings when it becomes necessary using various communication mediums; radio, newspaper, its website (www.meteosxm.com) and Facebook (www.facebook.com/sxmweather).

DISCLAIMER: This information contained in this newsletter is produced with the understanding that the Meteorological Department of St. Maarten makes no warranties, either implied or expressed concerning the accuracy, completeness, reliability, or suitability of the forecast. The information may be used freely by the public with appropriate acknowledgement of its source.