

Weather & Climate

Volume 9, Issue 07

July 2024

KEY POINTS

BE PREPARED!

- There was a 13-day heatwave recorded from June 7th – 19th
- June 2024 was the warmest June on the 63-year record.
- The 2024 Atlantic Hurricane/ Heat Season is forecast to be record breaking.

SEASONAL OUTLOOK FOR JULY TO SEPTEMBER (JAS) 2024

RAINFALL FORECAST

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

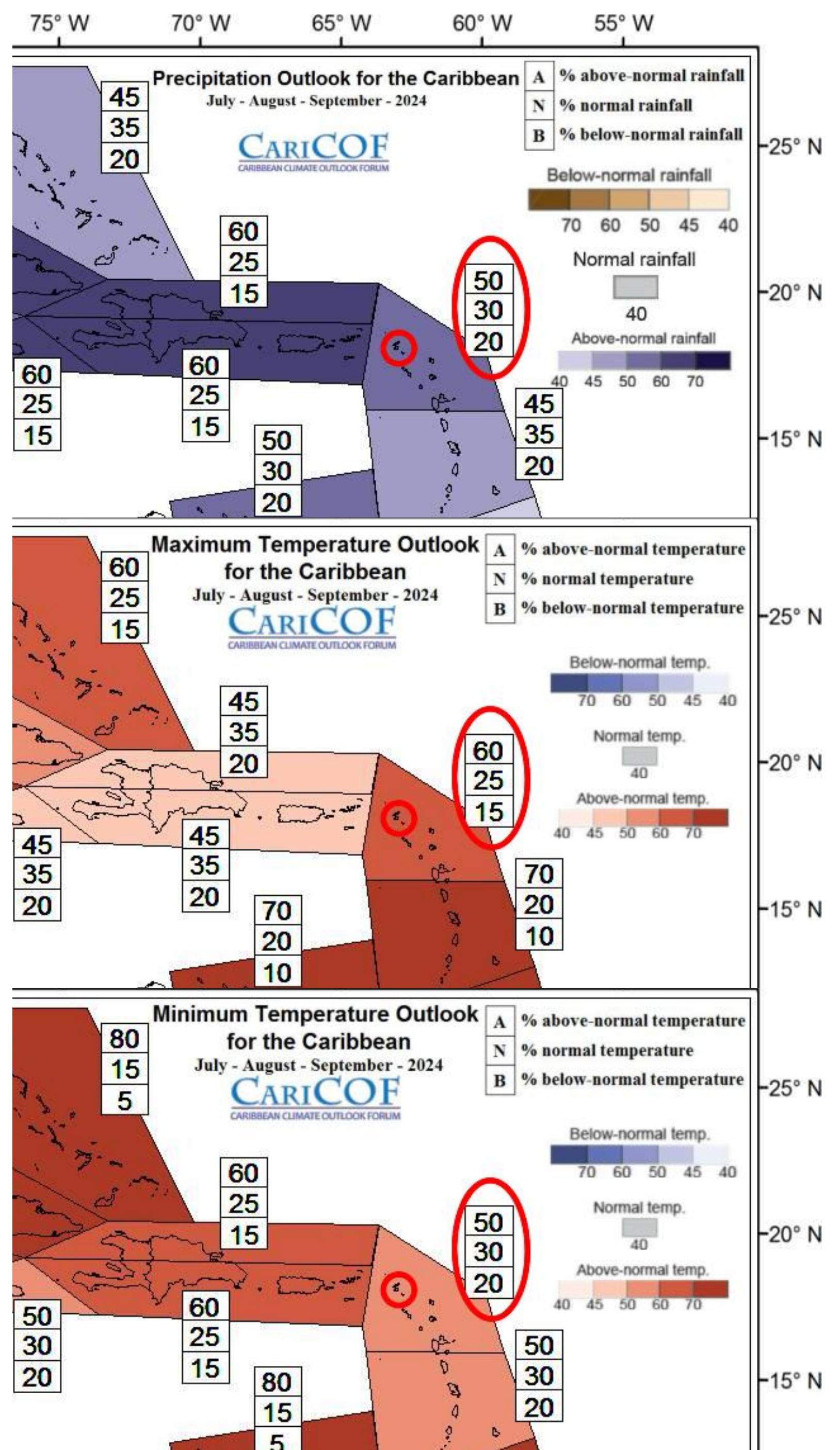
The normal rainfall for the Jul-Aug-Sep season on St. Maarten ranges 250mm–349mm/10–14 inches, with 37 to 45 wet days. The wet season continues in July and August with a mid-summer dry spell. In September, there is usually more frequent showers.

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

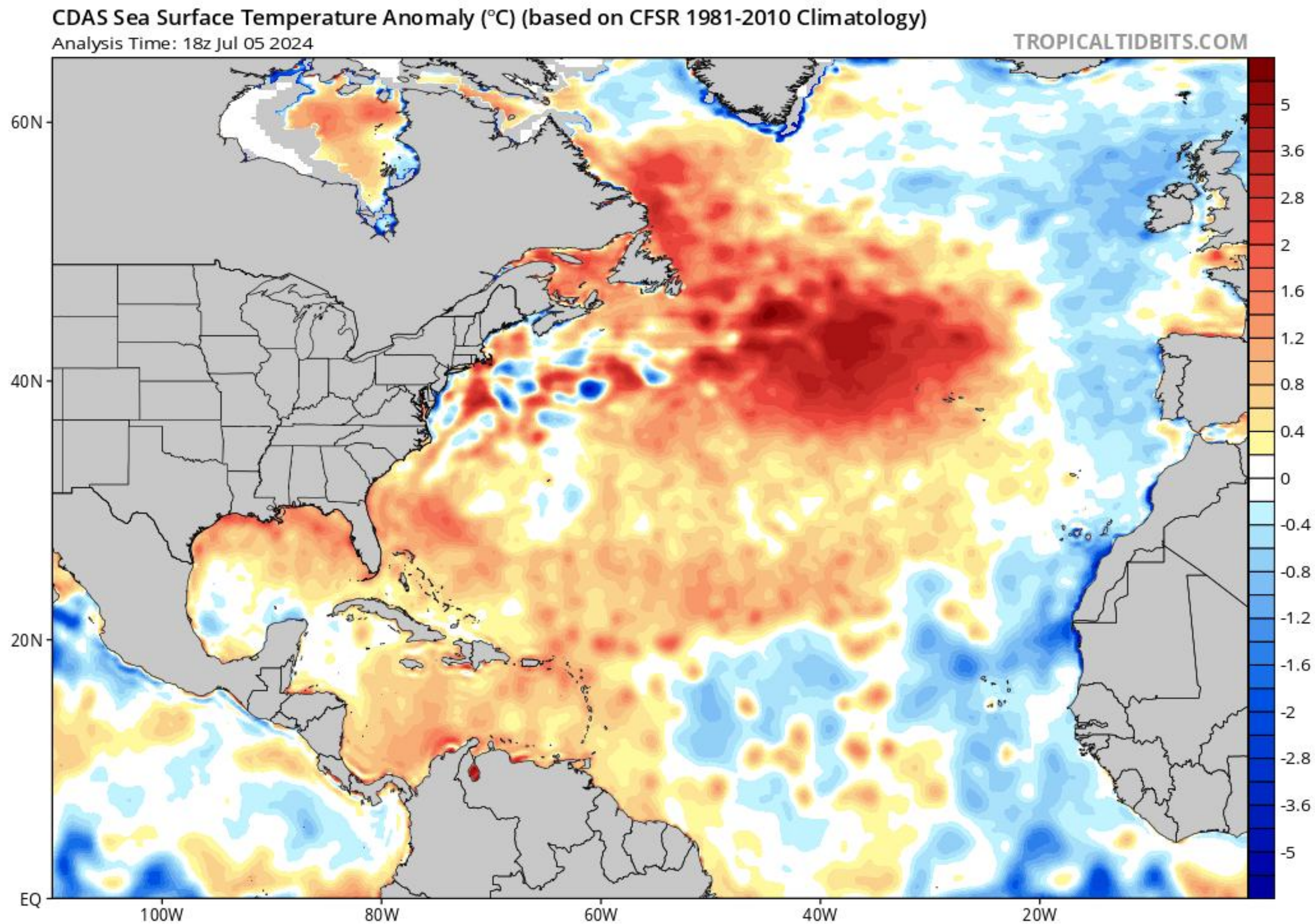
July to September, is the peak of the Caribbean Heat Season. It is forecast to be considerably hotter than usual with intense night-time and daytime heat.

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 June, waning El Niño conditions persist only in the western equatorial Pacific, while other key oceanic and atmospheric variables now align with the ENSO-neutral conditions. Almost all forecast models predict that an ENSO-neutral phase will persist through July to September and August to October 2024. La Niña becomes the most probably phase from September to November 2024 season through January to March 2025 season.

A transition into La Niña is often associated with increased chances of heavy showers and higher rainfall totals and higher temperatures in the Jul. to Sep. 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.

CORAL REEF BLEACHING ALERT

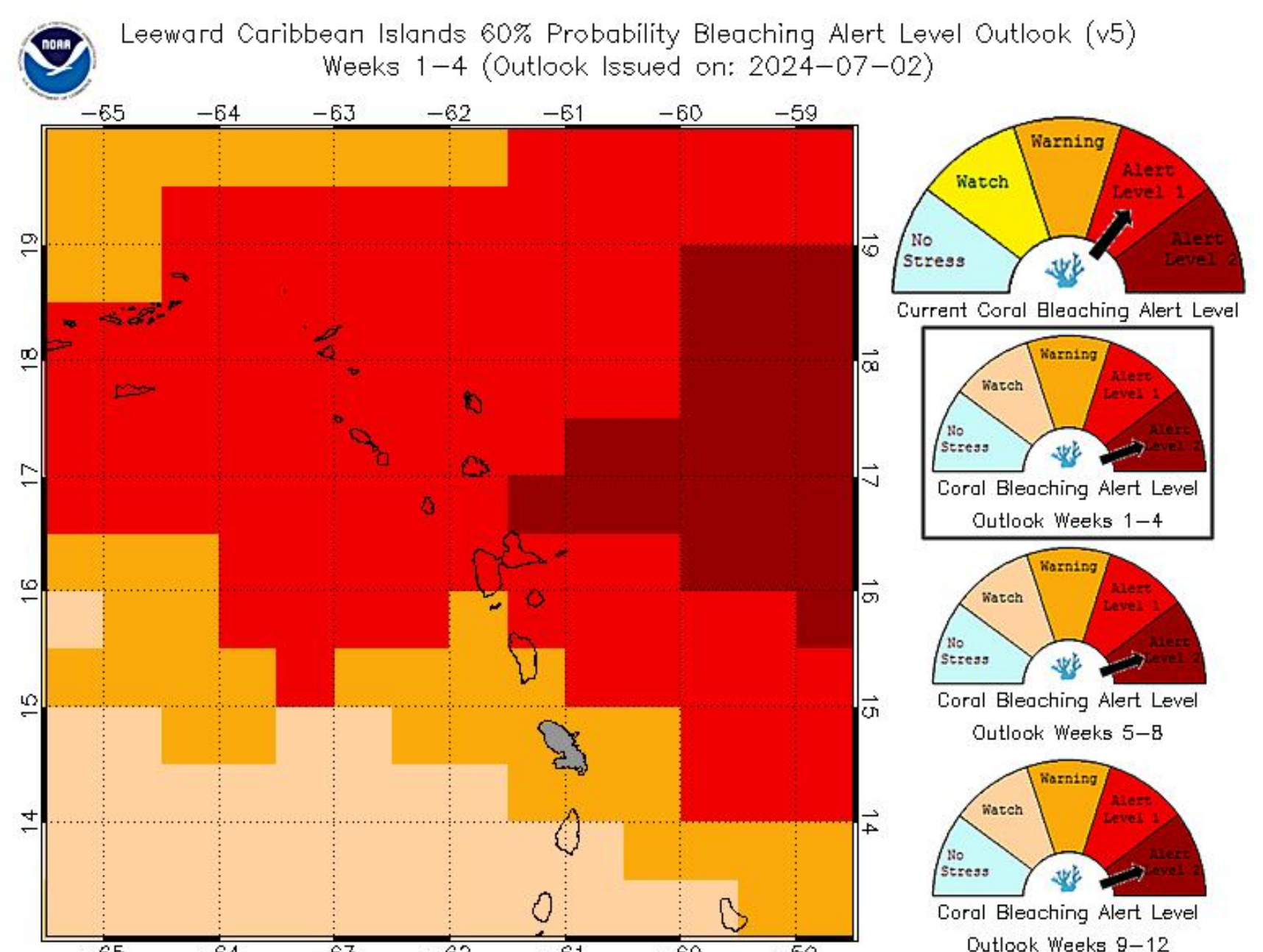
Currently, a **Bleaching Alert** is in effect for St. Maarten and the Leeward Islands, a **Warning** is in effect for the northern Windwards and Barbados and a **Watch** is in effect for the Southern Windward Islands.

NEXT 4 WEEKS:

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

Thermal stress is expected to accumulating around Dominica and the northern Windward Islands.

A **Bleaching Watch** is in place for the southern Windward Islands.





JUNE 2024 IN REVIEW

Warmest day: June 29th

Average Temperature of 30.3°C/87°F

Coollest day: June 8th

Average Temperature of 26.4°C/80°F

Most Sunshine hours: June 12th & 18th
(11hrs:48mins)

Least Sunshine hours: June 6th *(3hrs:00mins)*

Windiest day: June 30th

Daily Average Wind Speed of 12kt./14mph.

Highest wind gust: June 25th

Longest dry spell: 9 days

Highest Maximum Temperature: June 26th

Heatwave: 3

Longest: 13 days

Hot days(>= 32.2°C/90°F): 24 days

Extremely hot: June 26th

Warm nights(>= 27.2°/81°F): 24 nights

Extremely warm night: 8 nights

Minimum Temperature of 28.2°C/83°F

Total Rainfall	34.5 mm 1.4 in
2024 Cumulative Rainfall	490.8 mm 19.3 in
Maximum 24-hr. Rainfall	10.8 mm 0.4 in
No. of Rain Days	10 days
No. of Heavy Rain Days	1 day
No. of Thunderstorm Days	3 days
Average Wind Speed	9 kt. 10 mph.
Maximum Wind Gust	25 kt. 29 mph.
Average Temperature	29.6°C 85°F
Maximum Temperature	33.5°C 92°F
Minimum Temperature	25.1°C 77°F

For the month of June, rainfall was below the normal range. Generally, temperatures were above the normal range making June 2024 the warmest June on record.

LONG/ SHORT TERM SEASONAL REVIEW

YEAR IN REVIEW

(JUL 2023 - JUN 2024)

Total rainfall for the last 12 months was within the normal range. (970-1188mm). A total of 1103mm/43in. of rainfall was recorded at the *Princess Juliana International Airport*.

SEASONAL REVIEW

(APR-MAY-JUN 2024)

Total rainfall for the last three (3) months was 260mm/10in; this amount was slightly above the normal range (148-252mm). There were six (6) days with heavy rainfall (>10mm) during that period.

NORMAL JULY CONDITIONS

Total Rainfall	65-115 mm 3-5 in
Average No. of Rain Days	13 days
Daily Average Temperature	28.6°C 84°F
Average Maximum Temperature	31.5°C 89°F
Average Minimum Temperature	26.3°C 79°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 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.

So far there has been three (3) named storms; **Alberto, Beryl and Chris**.

Alberto formed on June 19th in the Gulf of Mexico and cause major flooding in Mexico.

Beryl formed just east of the Lesser Antilles on June 28th and rapidly intensified to a category 5 hurricane. Beryl was the first category 4 hurricane to form in June and the earliest category 5 to form in the Atlantic Basin.

Beryl left a trail of impacts in Barbados, St. Vincent and the Grenadines, Grenada, Jamaica and the Cayman Islands.

Tropical storm **Chris** formed in the Gulf of Mexico on June 30th but was a short lived storm.

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

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).

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