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Weather & Climate

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September 2021

Summary

- Rainfall total for August 2021 was 53% below normal; this was the driest August since 2017.
- Predictions for the 2021 Atlantic Hurricane Season continue to show above average activity.
- Heat waves are possible during the months of September and October .

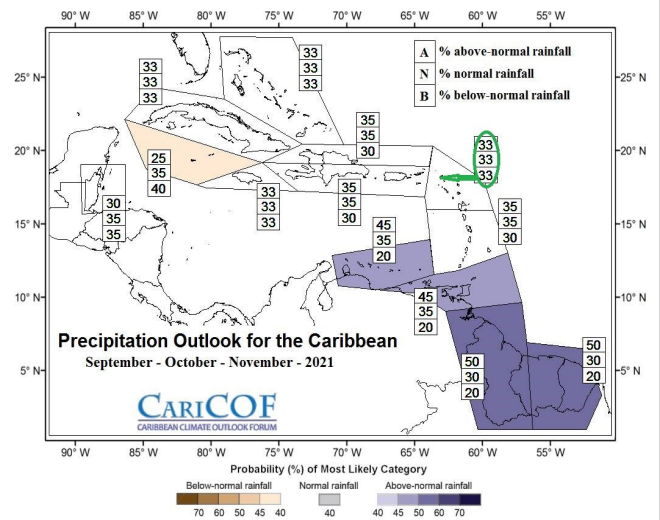
Seasonal Outlook for September to November (SON) 2021

Rainfall Forecast

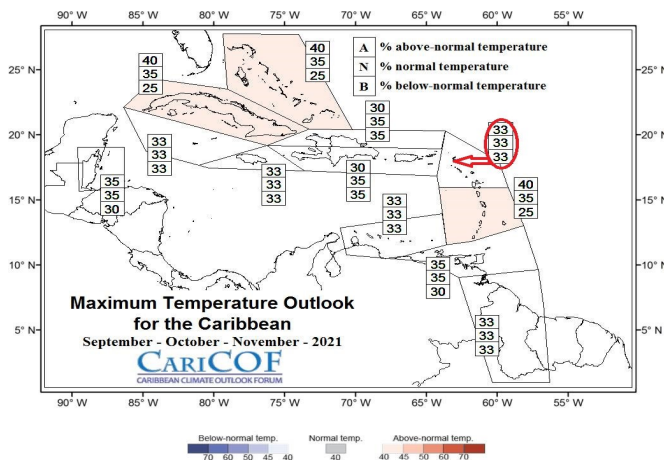
Models are indicating that rainfall totals for the season Sept-Oct-Nov. 2021 are likely to be the usual in St. Maarten and the Leeward Islands.

The Sept-Oct-Nov. season is the wettest on St. Maarten with a normal rainfall total from 320 mm–466 mm/13-18in, and with 37 to 45 wet days. There is usually frequent heavy showers.

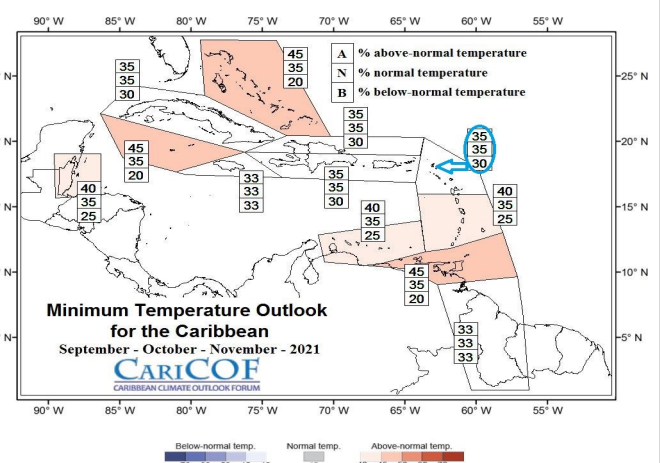
Up to 6 (7-day) wet spells and up to 2 (7-day) dry spells are likely on St. Maarten during the season. There is no drought concern until the end of November.



Temperature Forecast



Day-time Temperatures



Night-time Temperatures

Day-time and night-time temperatures are expected to be near normal or slightly higher in some areas across eastern Caribbean. Heat stress is expected to peak in September especially during heatwaves.

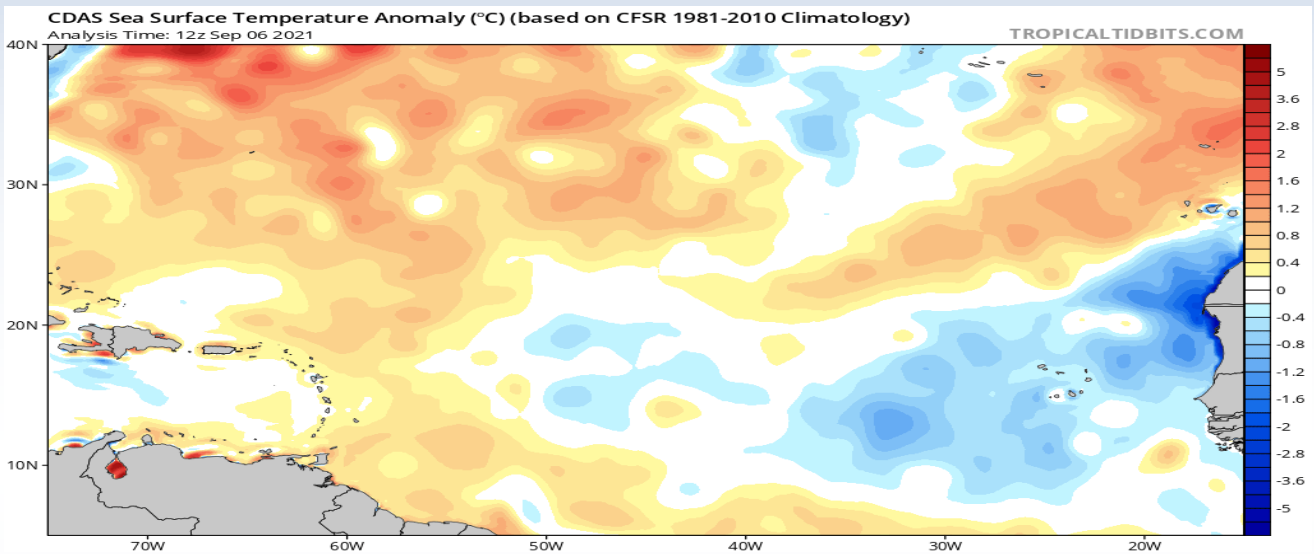
For more information on other Caribbean Outlooks go to <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

WHAT INFLUENCES THIS SEASON'S CLIMATE?

In mid August, sea surface temperature (SST) in the east-central Pacific was 0.4 degrees C below average and most key atmospheric variables were consistent with ENSO-neutral conditions.

Majority of the forecast models predict SSTs to remain cool but near normal throughout this season. The latest ENSO models are indicating the likelihood for a neutral phase to persist through Sept-Oct-Nov, some further cooling towards the end of the year and the return of the neutral phase early 2022, however large uncertainties remain. ENSO neutral offers little contribution to seasonal rainfall or temperature in the Caribbean.

SSTs are near average in much of the Caribbean Sea and the Tropical North Atlantic but is around 0.5-2°C above average in the sub-tropical North Atlantic. Models are forecasting observed SST around anomalies between 0-0.5°C above average across the Caribbean Sea through Dec-Jan-Feb. Warm SSTs in and around the Caribbean tend to contribute to higher air temperature, above-average humidity, seasonal rainfall totals, an increase in the frequency of extreme rainfall and a more active Atlantic Hurricane Season.



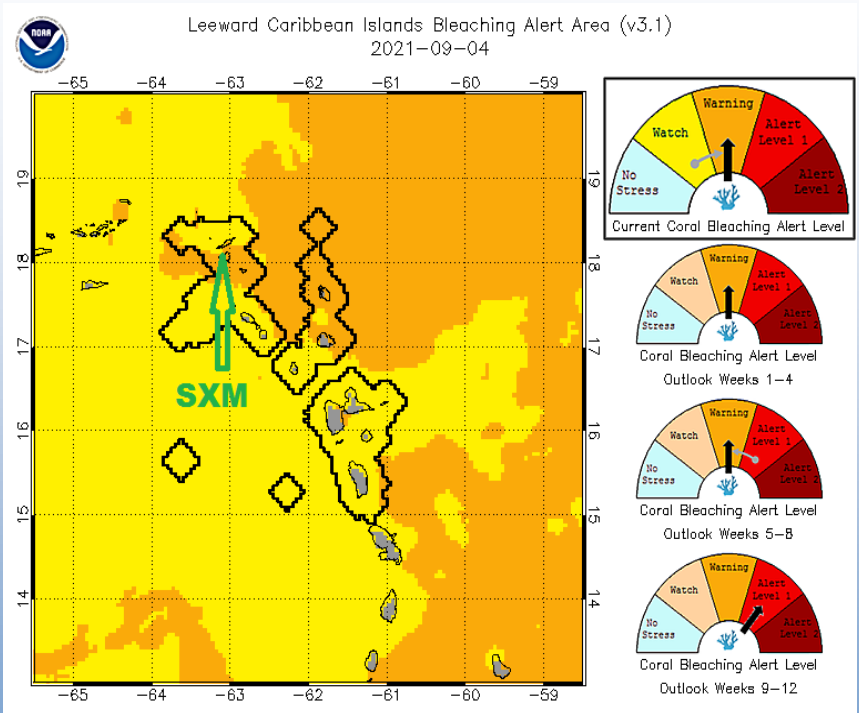
Coral Reef Outlook

Alert Level:
WARNING

Thermal stress is accumulating. Bleaching is possible within 8 to 12 weeks.

Sea Surface Temperatures are currently near the bleaching threshold.

Bleaching expected around the Leeward Islands and parts of the eastern Caribbean by November.



AUGUST 2021 IN REVIEW

Total Rainfall	56.7 mm	2.2 in.
2021 Cumulative Rainfall	383.8 mm	15.1 in.
Max. 24-Hr. Rainfall	10 th Aug	22.3mm/ 0.9in.
No. Rain Days (≥1.0 mm)	10 days	
No. Heavy Rain Days (≥10.0 mm)	2 days	
No. Thunderstorm Days	7 days	
Avg. Wind Speed	9 kts.	10 mph
Max. Wind Gust	33 kts.	38 mph
Avg. Temperature	29.0°C	84°F
Max. Temperature	28 th Aug.	33.3°C / 92°F
Min. Temperature	10 th Aug.	24.5°C / 81°F

Long /Short Term Seasonal Review**Year in Review
(September 2020— August 2021)**

Total rainfall over the past twelve (12) months was below the normal range (957-1216mm). A total of 914.4mm/36in. of rainfall was recorded at the Princess Juliana International Airport.

**Seasonal Review
(Jun-Jul-Aug. 2021)**

Total rainfall for the last three (3) months was 203mm/8inches, this amount was within the normal range (201-267mm). There were five (5) days with heavy rainfall (>10mm) during that period.

Generally, temperatures were near to above the normal range for the month of August 2021. Rainfall was below the normal range; this was the driest August since 2017.

The average daily temperature for August was 29.0°C /84°F.

The warmest days were the 27th & 28th with an average temperature of 29.8°C/86°F. The coolest day was the 10th with an average temperature of 27.6°C/82°F.

There were 15 hot days, 7 of which were very hot.

The warmest night was the 27th with minimum temperature of 28.2°C/83°F. The coolest night was the 10th with a minimum temperature of 24.5°C/76°F.

The day with the most sunshine hours was the 31st (11hrs:30min).

The day with the least sunshine hours was the 10th (0hrs:03min).

The windiest day was the 22nd, with a daily average wind speed of 14 kt./ 16 mph.

The day with the highest wind gust was the 10th with a gust of 33kt/38 mph.

Skies were mostly fair during the month of August.

There were ten (10) days with rainfall in August. Two (2) of which had heavy rainfall.

The longest dry spell was twelve (12) days from the 15th to 26th August.

**NORMAL
SEPTEMBER CONDITIONS**

Rainfall Total	83 mm – 120 mm	3– 5 in.
Avg. No. of Rain days	12 days	
Daily Average Temperature	28.8°C	84°F
Avg. Max. Temperature	31.7°C	89°F
Avg. Min. Temperature	26.4°C	80°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 through this season as heat intensifies.

Tourism Sector

- Continue to observe all health protocols.
- UV index will be very high to extremely high on sunny days. Visitors should be encouraged to apply sunscreen lotion regularly, and seek shaded areas between the hours of 10 AM and 3 PM.
- Increased possibility of interruptions to outdoor activities.

Health

- Wear protective clothing, especially on sunny days as exposure to dangerous UV radiation can cause skin damage.
- Keep hydrated.
- As shower activity becomes more frequent there is the likelihood of an increase in vector borne diseases.
- Proper management of water storage containers e.g., covering with protective mesh helps to reduce this risk.
- High humidity may cause discomfort when wearing masks.

Agriculture

- Increased potential for flooding and waterlogged soils.
- Shelter livestock from excessive heat.
- Pests and diseases may increase in extreme dry and wet conditions.

The 2021 Atlantic Hurricane Season

There were six (6) named storms in the month of August, two (2) of which became hurricanes. In August 2020, there were nine (9) named storms. So far for the 2021 season we have had twelve (12) named storms four (4) hurricanes.

Based on the last predictions (August 4, 2021) from the National Oceanic Atmospheric & Administration (NOAA) and (August 5, 2021) the Colorado State University (CSU), forecasts continue to indicate above average activity for the 2021 Atlantic Hurricane Season. Although sea surface temperatures are not expected to be as warm as they were during the 2020 season other climatic factors could contribute to above average activity across the Atlantic this year. There is the possibility of the re-emergence of La Nina conditions later into the season, a reduction in vertical wind shear and an enhanced west African monsoon can all promote the formation and development of storms and hurricanes across the Atlantic and the Caribbean.

It is therefore important that we make the necessary preparations ahead of time, remember it only takes one hurricane or storm to make landfall in our area to make it an active season for us. As we continue to focus on protecting our families and ourselves during this present global health crisis, it is essential that we remain vigilant and monitor weather updates from the Meteorological Department St. Maarten (MDS).

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BE PREPARED!!!

DON'T WAIT!!!!

2021 ATLANTIC HURRICANE SEASON

STORM NAMES

- | | | |
|------------------------|---------------------|----------|
| • Ana | • Honri | • Odette |
| • Bill | • Ida | • Peter |
| • Claudette | • Julian | • Rose |
| • Danny | • Kate | • Sam |
| • Elsa | • Larry | • Teresa |
| • Fred | • Mindy | • Victor |
| • Grace | • Nicholas | • Wanda |

2021 ATLANTIC HURRICANE SEASON

SUPLIMENTARY LIST STORM NAMES

- | | | |
|-----------|-----------|------------|
| • Adria | • Heath | • Orlanda |
| • Braylen | • Isla | • Pax |
| • Caridad | • Jacobus | • Ronin |
| • Deshawn | • Kenzie | • Sophie |
| • Emery | • Lucio | • Tayshaun |
| • Foster | • Makayla | • Viviana |
| • Gemma | • Nolan | • Will |

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