

DOMINICA CLIMATIC NEWSLETTER



December- January-
 February
 2024/ 2025

SEASONAL CLIMATE OUTLOOK SUMMARY

Previous Season Forecast: Sept-Oct-Nov (SON) 2024

There was little forecast skill for rainfall accumulations. The usual wet conditions were likely with warmer than usual temperatures, though Douglas-Charles could see usual or cooler nights.

Sept-Oct-Nov (SON) Observations:

Below to normal rainfall totals with warmer than usual temperatures.

Current Season Forecast:

Dec-Jan-Feb (DJF) 2024/ 25

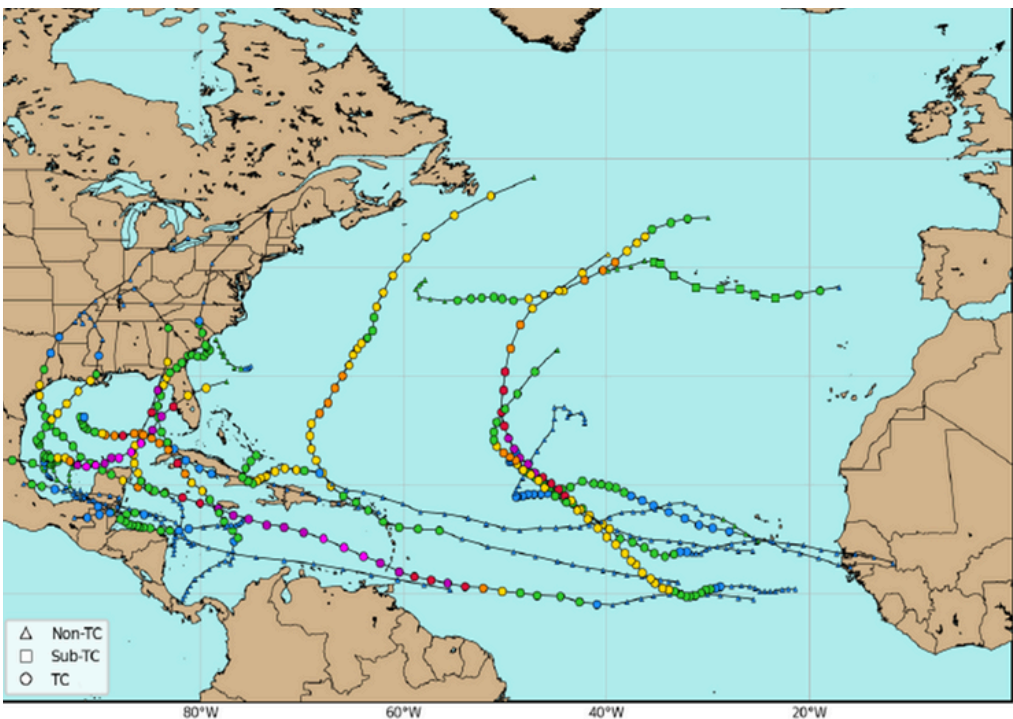
Rainfall accumulations are likely to be higher than usual (medium confidence).

Warmer-than-usual daytime temperatures are anticipated (medium to high confidence); night-time temperatures likely to be as cool as usual (medium confidence)

2024 ATLANTIC HURRICANE SEASON

- Atlantic seasonal activity fell within the predicted ranges for named storms and hurricanes;
- Hurricane Beryl was the earliest Cat 5 in the Atlantic;
- Hurricane Milton was the Gulf's strongest late-season storm on record 180mph;
- Seven hurricanes formed in the Atlantic since September 25- the most on record for this period.

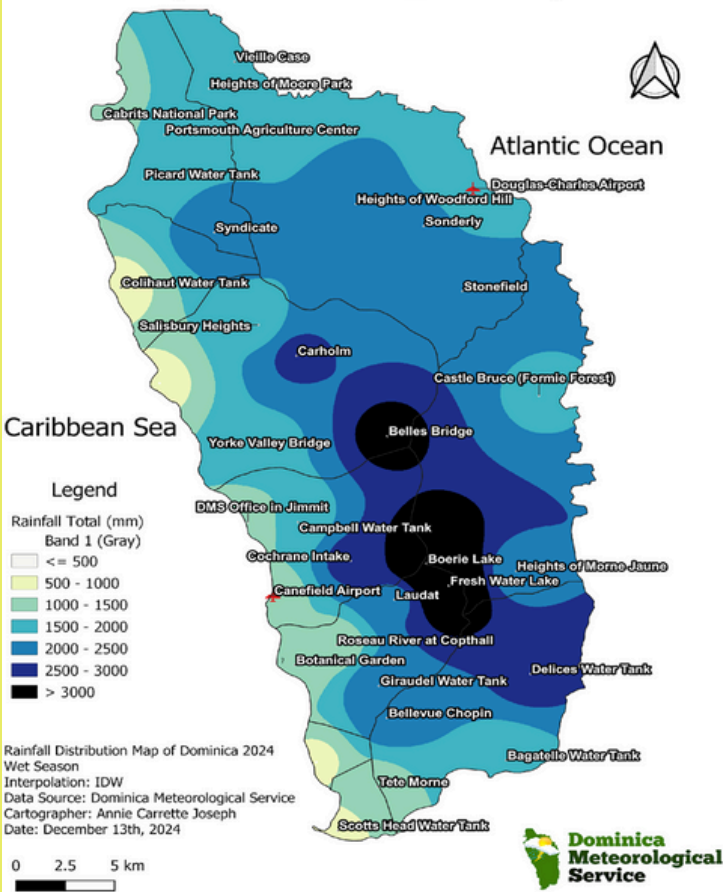
	NOAA forecast	Annual Average	Observed
Named Storms	17-24	14	18
Hurricanes	8-13	7	11
Major Hurricanes (3+)	4-7	3	5



Storm tracks of the 2024 Atlantic tropical cyclones. Debby passed through the Leeward Islands while, Beryl went through the southern Windward Islands

Looking Back: Sept-Oct-Nov (SON) 2024

RAINFALL DISTRIBUTION MAP
(JUNE - NOVEMBER 2024_ WET SEASON)



Canefield Airport Douglas-Charles Airport

RAINFALL CLIMATOLOGICAL NORMAL (1991-2020)

	Sept-Oct-Nov 2024	Sept-Oct-Nov 2024
Accumulated Normal	434.3 to 699.0mm	730.4 to 1051.1mm
Forecast	Normal to above normal	Normal to above normal
Observed	394.3mm (below normal)	899.0mm (normal)
Wet Days Normal	42 to 54 days	57 to 69 days
Forecast	37 to 54 days	51 to 67 days
Observed	43 days (within range)	59 days (within range)

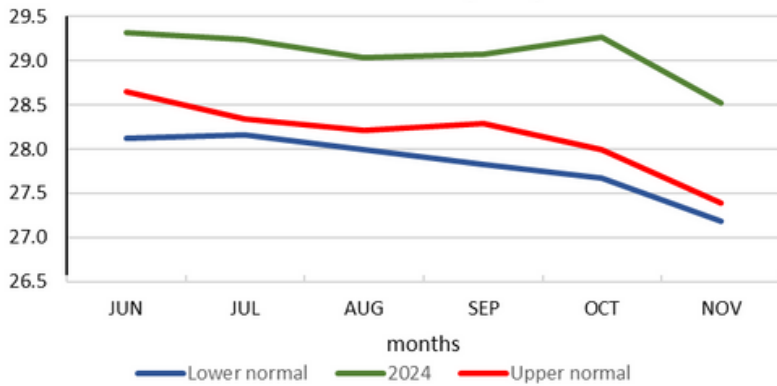
TEMPERATURE AVERAGE (2006-2020)

Average Maximum	31.8°C to 32.2°C	30.6°C to 31.0°C
Forecast	Warmer than usual	Warmer than usual
Observed	33.3°C (warmer)	31.4°C (warmer)
Average Mean	27.6°C to 27.9°C	27.1°C to 27.4°C
Forecast	Warmer than usual	Warmer than usual
Observed	29.0°C (warmer)	27.8°C (warmer)
Average Minimum	23.4°C to 23.7°C	23.6°C to 23.9°C
Forecast	Warmer than usual	Warmer than usual
Observed	24.5°C (warmer)	24.1°C (warmer)

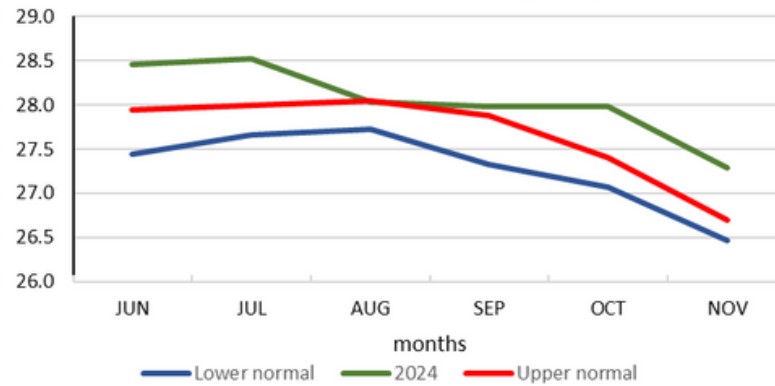
While total rainfall during the wet season was normal at both airports, Canefield's total was somewhat low as accumulations during the second half (SON) were below normal.

Day and night temperatures were generally warmer than usual during the season, though Douglas-Charles observed normal temperatures in August and September.

MEAN TEMPERATURE
CANEFIELD AIRPORT (2024)



MEAN TEMPERATURE
DOUGLAS-CHARLES AIRPORT (2024)



Looking Ahead: 2024/25 Dry Season

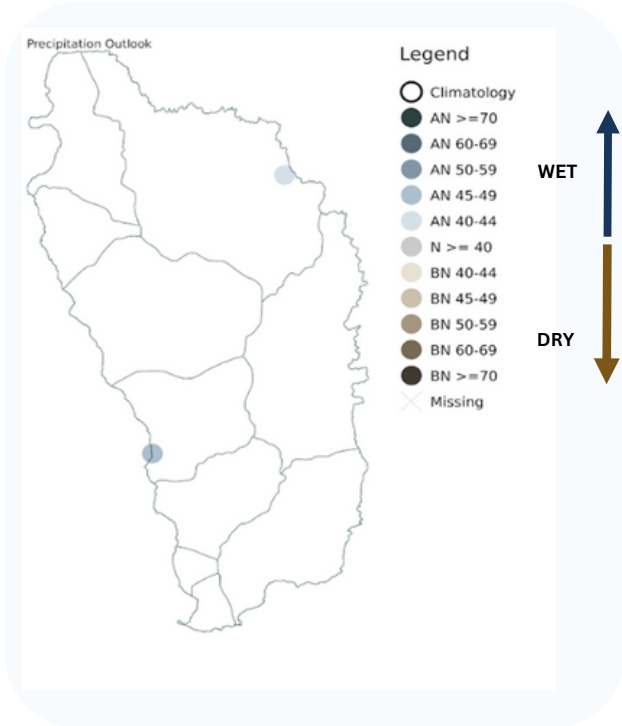
INFLUENCING FACTORS

- Eastern Equatorial Pacific Ocean shows near-normal sea surface temperatures (ENSO-neutral conditions). Models are predicting continued cooling, leading to La Niña conditions in DJF (medium confidence). La Niña conditions are often associated with increased heavy shower activity and rainfall totals in the southeastern Caribbean.
- Record-warm SSTs in the Caribbean Sea and the Tropical North Atlantic (TNA) have been observed across vast ocean areas since the summer of 2023. Models are confidently forecasting warm SST anomalies for DJF, cooling slightly by MAM. Warm SSTs tend to contribute to higher air temperatures with above-average humidity, seasonal rainfall totals and increased frequency of extreme rainfall. The likelihood of extreme rainfall is higher than usual, even in the Dry Season.

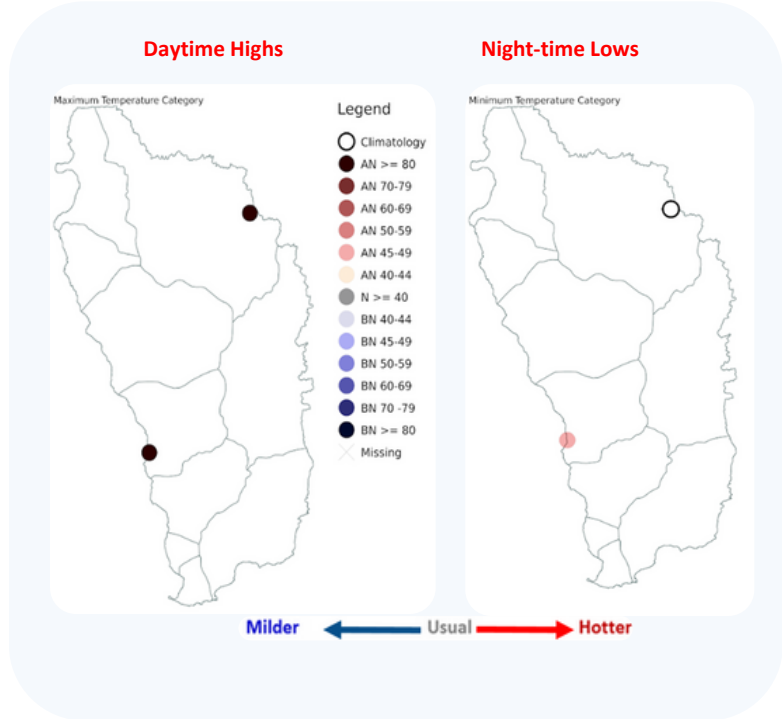
INFLUENCING FACTORS

- Saharan dust haze intrusions are not forecasted seasonally but weekly. Climatologically, a reduction in the concentration and frequency of dust plumes is observed until February. A few incursions are likely.

DJF RAINFALL PROBABILITY FORECAST (%)



TEMPERATURE PROBABILITY FORECAST (%)



- Delayed start to the dry season;
- Low to medium confidence that rainfall is likely to be more than usual, particularly at Canefield in DJF, while MAM is likely to be as dry as usual;
- Models indicate a higher than usual number of wet days (up to 59 at Canefield and 71 in Marigot), an increase in the number of wet spells, with at least two 7-day very wet spells from December to January. No extreme wet spells are expected;
- Moderate to high potential for at least two flash flood events from December into January;
- Low chance of at least one 7-day or 15-day dry spell into January;
- There is some concern for short-term drought by the end of February.

- Currently in the Caribbean cool season until April/May;
- Daytime temperatures, as well as air humidity, will likely be considerably higher than usual;
- Night-time lows are likely to be warmer than usual at Canefield, but as cool as usual at Marigot.

USUAL DECEMBER-JANUARY-FEBRUARY (DJF) VALUES

December-January-February Season CLIMATOLOGICAL NORMAL (1991-2020)		
RAINFALL	CANEFIELD AIRPORT	DOUGLAS-CHARLES AIRPORT
Normal	209.6 to 367.8mm	323.3 to 480.4 mm
Wet Days Normal	36 to 53 days	49 to 63 days
7-Day Wet Spell Normal	1 to 4 spells	1 to 3 spells
7-Day Dry Spell Normal	n/a	0 to 1
TEMPERATURE AVERAGE (2006-2020)		
Average Maximum	29.9°C to 30.4°C	28.7°C to 28.9°C
Average Mean	25.8°C to 26.1°C	25.4°C to 25.8°C
Average Minimum	21.6°C to 22.0°C	22.2°C to 22.7°C



AGRICULTURE

- Relatively wet conditions during December and January could extend the planting season for some crops;
- Less than usual rainfall impacts may be more evident by end of February into March. This can be exacerbated by increased evapotranspiration rates due to the higher than usual temperatures and stronger winds, particularly in the drier months;
- Warmer temperatures and high humidity in December and January may create ideal conditions for the proliferation of certain pests (e.g., whiteflies and aphids) and plant diseases (e.g., fungal infections such as rust and mildew).
- Reduction in environmental conditions which are conducive to moisture-related pests and diseases is likely by end of February
- Water management techniques (water harvesting, irrigation scheduling, mulching) may be more necessary in MAM to maintain adequate soil moisture.



HYDROLOGY

- The potential for flooding, flash floods and related hazards arising from very wet and extremely wet spells remains high into January;
- Prolonged periods of rainfall could lead to
 - saturated soils, which heighten the risk of landslides in hilly or mountainous regions;
 - contamination of surface water sources. Stormwater runoff washes pollutants (fertilisers, pesticides, sediments) into water bodies. This could degrade water quality and affect drinking water supplies;
 - the increased likelihood of rivers being in flood stage which can increase the chance of water turbidity, forcing the closure of potable water systems;
 - the buildup of stones and other debris on the roads which may impede traffic flow.
- Short-term drought can impact small rivers, streams and ponds by the end of February.



TOURISM

- Tourists may face road closures or difficulties accessing remote areas due to flooding or landslides during December and January;
- Fewer disruptions to outdoor activities are likely as the dry season progresses and rainfall activity decreases;
- Heat stress in the Atlantic Ocean corals has led to a mass coral bleaching event this year which is expected to continue through December 2024. Recently bleached corals may recover in cooler, clear and clean water. Therefore, minimize runoff of pollutants into coastal waters and encourage the use of reef-safe sunscreen which can increase the survival chances of coral reefs;
- This is a good season to engage in coral reef restoration activities;
- Coastal tourism destinations may experience beach erosion and damage to marine ecosystems due to long period/ ground swells and rough seas. This can affect beachgoers, as well as water sports businesses (diving, surfing, snorkelling);
- If the total amount of Sargassum in the eastern Atlantic continues to remain at historical record levels in the next 1-2 months, then 2025 may be another major Sargassum year.



HEALTH

- Episodes of hazardous heat stress across a wide section of the population are not expected;
- Less frequent episodes of Saharan dust incursions may reduce the risk of exacerbations of allergic rhinitis and asthma in susceptible persons;
- Morbidity associated with excessive, humid heat across the region should not be an issue until April/ May;
- Wear protective clothing and sunscreen to prevent skin damage on sunny days;
- Use of containers for water storage can maintain breeding sites for mosquitoes. Mosquito-borne diseases, such as Dengue, Chikungunya and Zika are of great concern in these areas. Proper management of water storage containers e.g., covering with protective mesh helps to reduce this risk.
- Warm night-time temperatures could be uncomfortable for some this season.

For Regional Sectoral Bulletins (Agriculture, Health and Tourism)

Visit: <https://rcc.cimh.edu.bb/>

Source: Dominica Meteorological Service (DMS) in collaboration with the Caribbean Institute for Meteorology and Hydrology (CIMH) & National Oceanic and Atmospheric Administrative (NOAA) ; UWI-CERMES

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