VOL 9 ISSUE 2

# Meteorological Service

Dominica

World Meteorological Day March 23rd, 2024

### SEASONAL CLIMATE OUTLOOK SUMMARY

# Previous Season Forecast; Dec-Jan-Feb (DJF) 2023/24:

Below normal to normal rainfall totals are likely (low to medium confidence). Warmer than to the usual Day and nighttime temperatures are possible.

### Dec-Jan-Feb (DJF) 2023/24

#### **Observations:**

Above-normal to normal rainfall totals were recorded with warmer than usual temperatures.

# Current Season Forecast; Mar-Apr-May (MAM) 2024

Above normal rainfall totals with warmer than usual temperatures are possible (medium to high confidence).

# At the Frontline of Climate Action

World Meteorological Day is celebrated annually on March 23rd to highlight the work done by Meteorological Services worldwide. This year's theme is "At the Frontline of Climate Action."

Weather and climate predictions help boost food production and move closer to zero hunger. Integrating epidemiology and climate information helps understand and manage diseases sensitive to climate. Early-warning systems help to reduce poverty by giving people the chance to prepare and limit the impact of extreme weather.

WMO, its members and partners drive the full value cycle, from science to services to action for the good of society. It advances knowledge of our Earth system, monitors the state of the climate and water resources, provides scientific information to inform greenhouse gas emissions reductions and delivers climate services and early warnings to support climate adaptation.

WMO will remain at the Frontline of Climate Action as we embrace a journey of cooperation and innovation, leveraging collective expertise to overcome challenges and achieve our shared vision of a safer, more resilient world for future generations.

## Looking Back (December 2023 - January - February 2024 Season)

# DOUGLAS-CHARLES AIRPORT RAINFALL ACCUMULATION AT THE DOUGLAS-CHARLES AIRPORT



- Wetter than usual conditions were observed at the Douglas-Charles Airport for the first half of the dry season with an accumulated total of 533.6mm.
- There were 40 wet days with one significant wet spell of 15 days.
- Two significant dry spells were recorded in February (9 days and 8 days).
- Warmer than usual temperatures were recorded. There was a record-breaking daytime high for January of 30.7°C.







- Drier than usual conditions were observed at the Canefield Airport for the first half of the dry season with an accumulated total of 170.1mm.
- There were 31 wet days with no significant wet spells.
- Three significant dry spells were recorded during the season with the longest being 26 days from December into January. The others were 9 days and 11 days long.
- Warmer than usual temperatures were recorded at Canefield.
- Record breaking daytime highs were recorded in December (33.6°C), January (34.2°C) and February (34.0°C)
- Two heatwaves of 4 days and 3 days long were also recorded.
- The coastal regions especially the western half recorded the lowest rainfall totals with the most elevated and central stations recording the highest amounts.
- The lowest accumulated rainfall total was at Canefield with a total of 170.1mm and the highest was at Boeri Lake with 2408.6mm

CLIMATOLOGY			
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	

## Looking Ahead

#### **INFLUENCING FACTORS**

- Recent observations showed a transition from El Niño to ENSO Neutral conditions in the Eastern Equatorial Pacific Ocean during the April-May-June 2024 season (79% chance) with increasing chances of La Niña evolving during the June-July-August season (55% chance). These phases usually lead to wetter conditions across the Eastern Caribbean and an abovenormal Atlantic Hurricane Season.
- Warmer than usual Sea Surface Temperatures (SSTs) continue to be maintained across the Caribbean Sea and Tropical North Atlantic Ocean. This is expected to continue during the upcoming season. Warmer than usual SSTs often result in warmer than usual air temperatures, a more humid environment and an increased frequency of rainfall events which could be extreme.

March-April-May (MAM) 2024 Outlook



- While the usual dry conditions may be experienced during March, a rapid increase in rainfall amounts from April into May is possible (medium to high confidence).
- Moderate potential for flash floods in March (40 to 50%), however, from April there is an extremely high potential for flash flood (80 to 90%).
- The total number of wet days may range from 24 to 40 days at Canefield and 42 to 73 at Douglas-Charles.
- Up to four 7-day wet spells are forecast for Canefield of which 2 to 3 spells are expected to be very wet. At Douglas-Charles, up to six 7-day wet spells are expected with about 4 being very wet. At least three extremely wet 3-day spells are possible.
- Meanwhile, there is a 50% probability for about three 7day dry spells and a 30-40% probability for one 15-day dry spell for Dominica.
- There is no major drought concern for Dominica at this time. However, people along the western coast should continue to conserve water.

• This wetter than usual pattern is expected to persist into the June-November 2024 Wet/ Hurricane Season.



- Warmer than usual conditions are expected to continue during the March to May 2024 Season.
- Heat concerns are expected to begin as early as April and continue well into October/ November 2024.

### Climatology March-April-May (MAM) 2024

March-April-May Season CLIMATOLOGICAL NORMAL (1991-2020)			
Normal	105.2 to 234.4mm	290.6 to 530.2mm	
Wet Days Normal	22 to 35 days	36 to 60 days	
7-Day Wet Spells Normal	0 to 3	1 to 4	
7-Day Dry Spells Normal	n/a	0 to 4	
TEMPERATURE AVERAGE (2006-2020)			
Average Maximum	30.8°C to 31.4°C	29.2°C to 29.6°C	
Average Mean	26.7°C to 27.2°C	26.0°C to 26.4°C	
Average Minimum	22.6°C to 23.0°C	22.7°C to 23.1°C	

## SECTORAL IMPLICATIONS



## HYDROLOGY

An increase in the river flow was observed in January and February as the interior regions experienced elevated rainfall totals.

Expect additional increases in the volumetric flow and the monthly average water levels of rivers, as wetter than normal conditions are possible, especially from April.

During prolonged and heavy rainfall events, caution should be exercised as the following hazards could occur;

- Low-lying bridges and low-water crossings can become inundated. Low dips in a road that crosses a dry creek bed are known as low-water crossings. These crossings may fill with swiftly rising, swift-moving water during periods of heavy rainfall, posing a hazard to life.
- Gutters and drains can overflow and lead to urban flooding. Urban flooding occurs when town landscapes are unable to absorb surplus water during prolonged, intense downpours.
- Ponding

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• Moist and saturated soils could become vulnerable to land movements.

### TOURISM

Increased frequency of wet days and spells means frequent disruption of outdoor activities especially from April.

- Tourism operators are advised to keep informed of the daily weather forecast issued by the Met. Office before venturing out.
- A state of preparedness and readiness for any sudden eventualities should be maintained.
- Heat discomfort is expected to increase and as such, the need for keeping cool is likely to increase on dry and hot days.
- Visitors and operators are advised to apply SPF sunscreen to protect the skin against extremely high temperatures and exposure to harmful UV light on sunny days and to reduce direct exposure to sunlight between 10 AM and 3 PM.
- A Watch Alert Level for coral bleaching is forecast towards the end of the season. Sargassum levels are expected to be low to mild.



To minimize loss farmers are encouraged to select crop varieties that can thrive in adverse weather conditions and are susceptible to pests and diseases which usually become more prevalent during wet conditions.

- Weed management is essential in farm practices.
- Livestock species should be de-wormed and vitamins given to strengthen animals' immune systems.
- Application of slug bait might be necessary to keep away slugs and snails in areas where their population is high.
- Improve drainage system on farms to allow for proper water flow and contours should be made on steep sloping lands to minimize land slippage during heavy rainfall.
- Maintain proper records of inputs and the crop under cultivation and/or livestock being reared.
- Preparation for the upcoming hurricane season should begin.



### HEALTH

With increased chances for above-normal rainfall totals, vector-borne illnesses like Dengue may increase as mosquito breeding grounds are likely to increase. However, during intense rainfall activities where flooding may arise mosquitoes' eggs, larvae and pupae may be swept away by flood waters.

- When flooding occurs the risk for Leptospirosis increases due to the displacement of vectors such as rodents into houses, increasing the risk of contamination of household surfaces and food-stores.
- Flooding, landslides and other weather-related hazards could result in increased casualties. Healthcare providers should always maintain a state of readiness to deal with sudden eventualities. Cases of gastroenteritis may also increase.
- An increase in temperatures could result in heat stress and discomfort which could significantly worsen the symptoms of people suffering from non-communicable diseases, the senior citizens and other vulnerable populations.

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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