



DOMINICA CLIMATIC NEWSLETTER

VOL 7 ISSUE 02

MARCH-APRIL-MAY

YEAR 2022

Seasonal Climate Outlook Summary

Previous Season Forecast; Dec-Jan-Feb (DJF) 2021/22– The first half of the dry season was likely to accumulate more than the usual amounts of rainfall. Temperatures were expected to be generally comfortable.

DJF Observation: The accumulated rainfall totals were normal though at the lower end of the range. Day-time temperatures were the usual to warmer than usual and night-time temperatures were the usual to cooler than usual, particularly at Douglas-Charles.

Current Season Forecast; Mar-Apr-May (MAM) 2022– Uncertainty exists in the rainfall, number of wet days and minimum temperature forecasts. Daytime highs are likely to be cooler than usual.

The Dry Season

Dominica normally begins its transition into the dry season in December. This period is marked by a reduction in rainfall amounts, cooler air temperatures with wind speeds increasing to peak in March to April.

The dry season weather is dominated by a generally strong Atlantic high pressure system which generates moderate to fresh breezes and agitated seas. Ample moisture carried with this trade flow contributes to a lot of the rainfall. Troughs or lines of low pressure usually associated with North Atlantic frontal systems also generate increased cloudiness and showers across the island.

Canefield Airport:

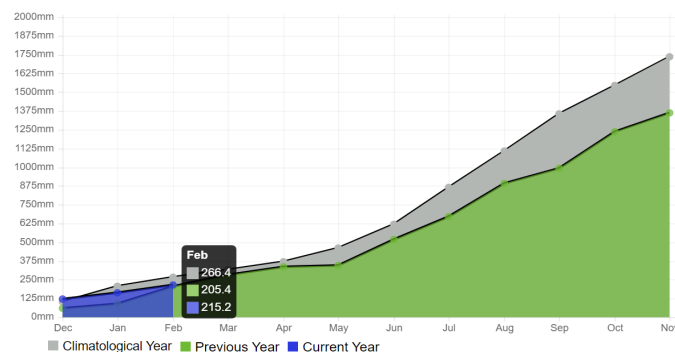
- ♦ 215.2mm of rainfall was accumulated which is normal. December observed normal rainfall while January and February were below normal
- ♦ While no 7-day dry spells were reported during the period, there were at least 3 6-day dry spells
- ♦ Daytime temperatures were warmer than usual while night-time temperatures were as cool as usual. A record maximum was set for January (32.7°C)

Douglas-Charles Airport:

- ♦ 36.1mm of rainfall was recorded, which is normal. Rainfall in December and January were below normal while February was above normal
- ♦ Daytime temperatures were as warm as usual while night-time temperatures were cooler than usual.

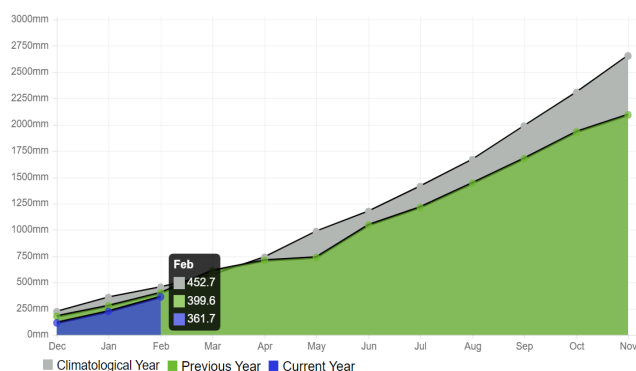
Canefield, Dominica - Accum. Rainfall Dec-Nov Year

(Location: 15.33962°N, -61.392°W)



Douglas-Charles, Dominica - Accum. Rainfall Dec-Nov Year

(Location: 15.547°N, -61.2993°W)



Looking Back –Dry Season so far

OBSERVATIONS FOR DEC-JAN-FEB (DJF) 2022		
Parameters	Canefield Airport	Douglas-Charles Airport
<i>Rainfall (30 years)</i>		
Accumulated rainfall	215.2mm (normal)	361.7mm (normal)
Wet Days	45 (normal)	60 (normal)
7-Day Dry Spells	0	0
<i>Temperature (15 years)</i>		
Average Maximum	30.7°C (warmer than usual)	28.7°C (usual)
Mean	26.1°C (warmer than usual)	25.1°C (warmer than usual)
Average Minimum	21.6°C (usual)	21.5°C (cooler than usual)

SEASONAL OUTLOOK FOR MARCH-APRIL-MAY (MAM) 2022

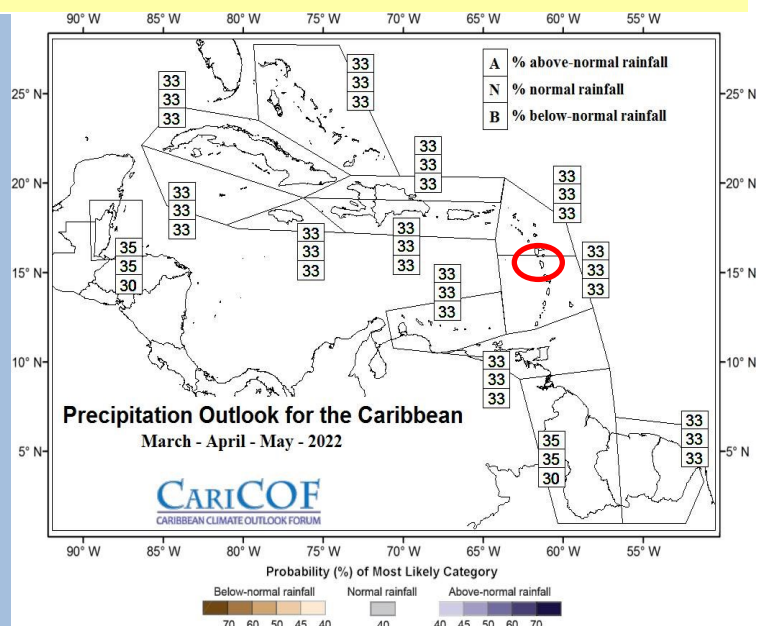
INFLUENCING FACTORS

- Sea Surface Temperatures (SSTs) in the eastern Pacific remain below -0.5°C ; La Niña conditions have maintained into the start of the year. The models forecast La Niña conditions in MAM, which may phase into ENSO neutral into JJA. La Niña tilts the odds to more rainfall activity in MAM and JJA. ENSO neutral offers little contribution to seasonal rainfall or temperature prediction in the Caribbean.
- Warmer than usual SSTs above 1°C have persisted around the northern Caribbean Sea and in the sub-tropical portions of the North Atlantic. Models are forecasting observed SST to remain anomalously warm. Warm SSTs in and around the Caribbean tend to contribute to higher air temperatures with above-average humidity, seasonal rainfall totals and an increased frequency of extreme rainfall

RAINFALL FORECAST

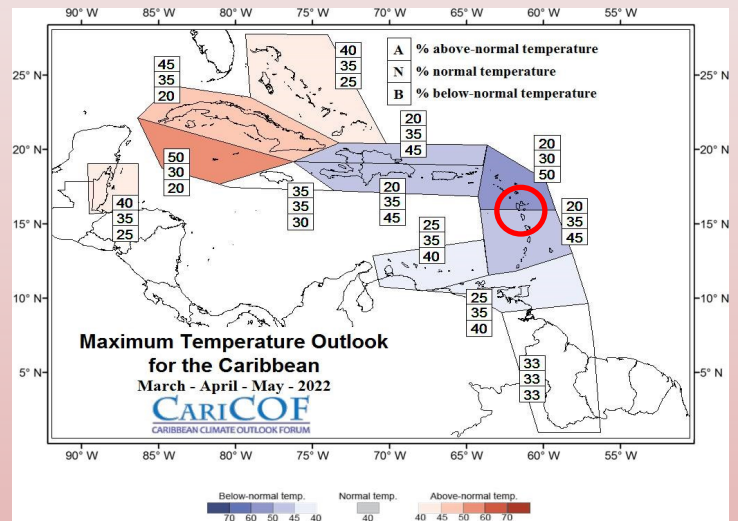
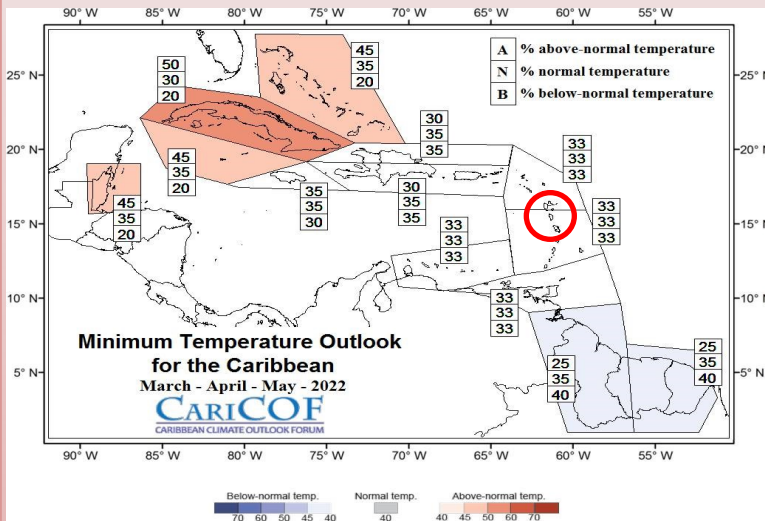
A weakening La Niña drives increasing uncertainty into the forecast

- Equal chances for normal, above normal and below normal rainfall accumulation. There is no clear direction and rainfall amount could most likely be closer to normal
- The usual number of wet days is possible
- There may be a slight increase in the number of wet days (Canefield; 35 to 57; Douglas-Charles; 48 to 68), but the confidence is low
- No concern for extreme rainfall events
- At least three 7-day dry spells during MAM is possible with a greater chance of this over the southern half of the island
- Drought-like conditions are very likely if there is any shift towards below rainfall amounts this season across parts of the island and into Jun-Jul-Aug.



TEMPERATURE FORECAST

- ◆ Daytime temperatures are likely to be cooler than usual
- ◆ More uncertainty exists for night-time lows, with equal chances for above, normal and below normal
- ◆ Temperatures generally begin to progressively warm from this period, but are expected to remain comfortable.



CLIMATOLOGICAL AVERAGES FOR MARCH-APRIL-MAY (MAM)		
Parameters	Canefield Airport	Douglas-Charles Airport
Rainfall (30 years)		
Normal	105.2mm to 234.4mm	290.6mm to 530.2mm
Wet Days Normal	22 to 35	36 to 60
7-day Dry Spells normal	na	0 to 4
Temperature (15 years)		
Average Maximum	30.8 to 31.4°C	29.2 to 29.6°C
Mean	26.7 to 27.2°C	26.0 to 26.4°C
Average Minimum	22.6 to 23.0°C	22.7 to 23.1°C

MOON PHASES

Mar: NM 2nd, FQ 10th, FM 18th, LQ 25th

Apr: NM 1st, FQ 9th, FM 16th, LQ 23rd, NM 30th

May: FQ 8th, FM 16th, LQ 22nd, NM 30th



Weather, climate and water extremes are becoming more frequent and intense in many parts of the world as a result of climate change. More of us are exposed than ever before to multiple related hazards, which are themselves evolving as a result of population growth, urbanization and environmental degradation.

Forecasts of what the weather will BE are no longer enough. Impact-based forecasts that inform the public of what the weather will DO are vital to save lives and livelihoods.

Being prepared and able to act at the right time, in the right place, can save many lives and protect the livelihoods of communities everywhere, both now and in the future.

World Meteorological Day 23 March 2022 therefore has the theme Early Warning and Early Action, and spotlights the vital importance of Hydrometeorological and Climate Information for Disaster Risk Reduction.

(<https://public.wmo.int/end/resources/world-meteorological-day/world-meteorological-day-2022-early-warning-early-action>)



TOURISM

- ◆ A high number of dry days and dry spells increases the potential for bushfires into May.
- ◆ Facilities should continue to enhance/upgrade water conservation practices and advise staff and guests of the need to conserve water on an ongoing basis as well as fire safety.
- ◆ Local dust levels should be increasing towards the end of the dry season. Symptoms of respiratory illnesses may increase in visitors and staff
- ◆ Be aware that tropical cyclones could form before June 1st and affect source regions
- ◆ Climate driven demand for vacations in the Caribbean from source regions experiencing cooler spring weather is likely



AGRICULTURE

- ◆ Farmers should consider planting plots that their limited water resources would satisfy, in the event of frequent dry spells
- ◆ Consider on-farm drought management plans in the event of a likely occurrence of dry spells and drought conditions. These may include:
 - 1) Selecting drought tolerant crops and varieties and planting them with careful thought of the availability of water resources
 - 2) Identifying alternate water sources for irrigation and other on farm activities;
 - 3) Employing water management techniques such as irrigation scheduling and mulching;
 - 4) Installing water-saving devices (e.g. drip lines & timers).
- ◆ Maintain proper records of inputs and the crop under cultivation and/or livestock being reared.



HEALTH

- ◆ Water availability, which is critical for hygiene and sanitization purposes during the COVID-19 pandemic, is not expected to be a concern.
- ◆ Increase in Saharan dust incursions into the Caribbean towards the end of the season and smoke from bush fires, may increase the risk of allergic rhinitis and asthma symptoms in susceptible persons.
- ◆ Keep cool and hydrated.
- ◆ Continue wearing face masks and ensure they are breathable. Avoid crowds during hot days and if feeling ill. Remove masks in a private space. Sweaty masks should be changed.
- ◆ Manage water storage containers properly to reduce mosquito breeding areas and incidents of vector-borne diseases such as Dengue, Chikungunya and Zika.



HYDROLOGY

- ◆ With a possible decline in rainfall which is the usual during the heart of the dry season, river discharge is expected to decrease slightly.
- ◆ A decrease in water level is likely.
- ◆ With a decrease in rainfall, soil moisture is expected to decrease. Expect the soil to get compacted, particularly in the island's western areas.
- ◆ With little rainfall, just a small quantity of infiltration will occur.
- ◆ Anticipate an increase in evaporation in overland water sources and evapo-transpiration in plants.

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