



DOMINICA CLIMATIC NEWSLETTER

VOL 8 ISSUE 02

MARCH-APRIL-MAY

YEAR 2023

Seasonal Climate Outlook Summary

Previous Season Forecast; Dec-Jan-Feb (DJF) 2022/23: Rainfall was expected to be at least as high as usual, while the usual mean temperature was likely.

DJF Observed: The accumulated rainfall was higher than usual at Canefield and lower than usual at Douglas-Charles. Daytime high temperatures were higher than usual while night-time lows were cooler than usual.

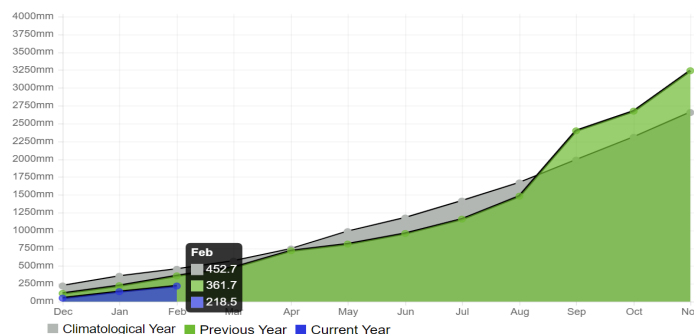
Current Season Forecast; Mar-Apr-May (MAM) 2023: There is little predictability for western regions while eastern regions may receive less than usual amounts of rainfall. Temperatures are likely to be close to the usual or cooler than usual.

The Dry Season...so far

- March to May forms the late dry season
- Characterized by relatively few wet days and quite a few dry spells and comfortable temperature
- May marks the transition into the wet season and start of the Caribbean Heat Season
- A generally strong Atlantic high pressure system generates moderate to fresh breezes and agitated seas.
- Trade wind moisture contributes to a lot of the rainfall, along with troughs or lines of low pressure usually associated with North Atlantic frontal systems.

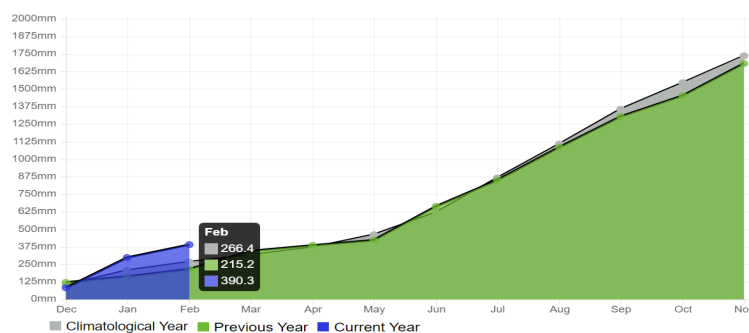
Douglas-Charles, Dominica - Accum. Rainfall Dec-Nov Year

(Location: 15.547°N, -61.2993°W)



Canefield, Dominica - Accum. Rainfall Dec-Nov Year

(Location: 15.33962°N, -61.392°W)



Canefield Airport:

- ◆ Rainfall was normal in December, way above normal in January and February
- ◆ Flooding reported in some areas, Jan 7th
- ◆ Record maximum temperature for December of 33.2°C/ 91°F observed on the 3rd.
- ◆ One 7-day dry spell reported in December

Douglas-Charles Airport:

- ◆ Record low rainfall observed in December, less than normal in January and normal in February.
- ◆ There was a 6-day dry spell in December

OBSERVATIONS FOR DEC-JAN-FEB (DJF) 2022/ 23

Parameters	Canefield Airport	Douglas-Charles Airport
<i>Rainfall (30 years)</i>		
Accumulated rainfall	390.3mm (above normal)	218.5mm (below normal)
Wet Days	44 (normal)	45 (normal)
7-Day Dry Spells	0	0
<i>Temperature (15 years)</i>		
Average Maximum	30.1°C (warmer than usual)	28.7°C (usual)
Mean	25.8°C (usual)	25.1°C (cooler than usual)
Average Minimum	21.4°C (cooler than usual)	21.5°C (cooler than usual)

INFLUENCING FACTORS

- Sea Surface Temperatures (SSTs) in the eastern Pacific have risen from La Niña to ENSO neutral conditions by mid-February (i.e. less than 0.5°C below average). The models forecast that ENSO neutral conditions is likely in MAM (90% confidence), with 35-45% confidence of remaining so in JJA and 50-60% confidence of transitioning to El Niño conditions thereafter. ENSO neutral offers little contribution to seasonal rainfall or temperature prediction in the Caribbean, but a transition into El Niño more often than not is marked by a delayed onset of the wet season and a drier summer season.
- 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

The Pacific is transitioning into ENSO neutral -- or possibly even El Niño conditions, making it difficult to forecast unusual climate conditions in the Caribbean.

- The March to May forecast indicates little information on rainfall accumulation at this time in western regions and the usual amount is possible, with a slight tendency towards drier than usual conditions in the east;
- The chance of widespread, extremely high or extremely low rainfall totals is forecast to be low;
- The number of wet days is expected to be normal, Canefield (22 to 36) and Douglas-Charles (37 to 63);
- No concern for extreme rainfall events;
- At least three 7-day dry spells are possible with a greater chance of this over the southern half of the island;
- Drought-like conditions are very likely across parts of the island, if there is any shift towards below rainfall amounts this season and into Jun-Jul-Aug.

CLIMATOLOGICAL AVERAGES FOR MARCH-APRIL-MAY (MAM)

Parameters	Canefield Airport	Douglas-Charles Airport
<i>Rainfall (30 years)</i>		
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	NA

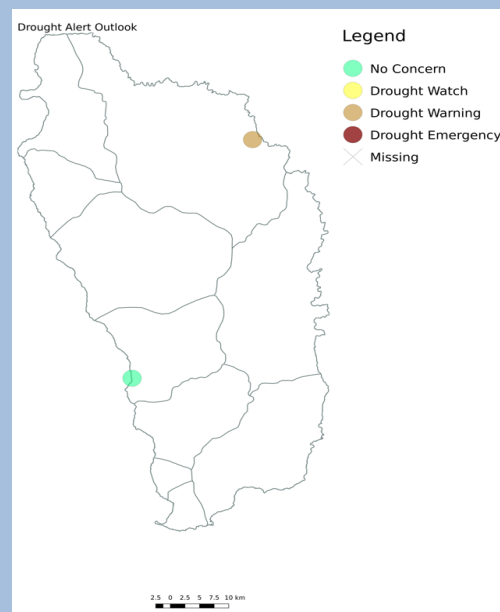
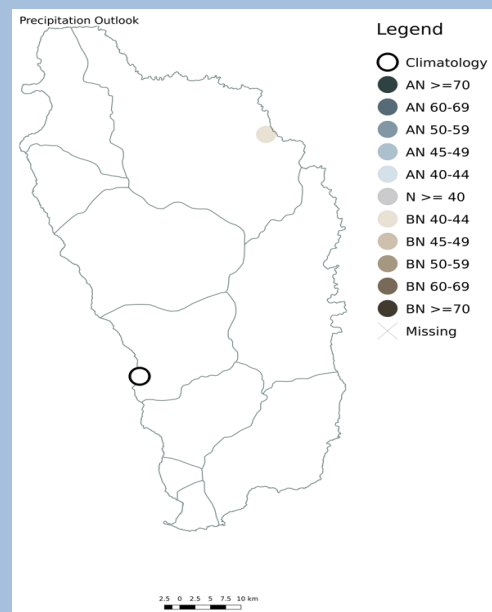


MOON PHASES

Mar: FM 07th, LQ 15th, NM 21st, FQ 29th,

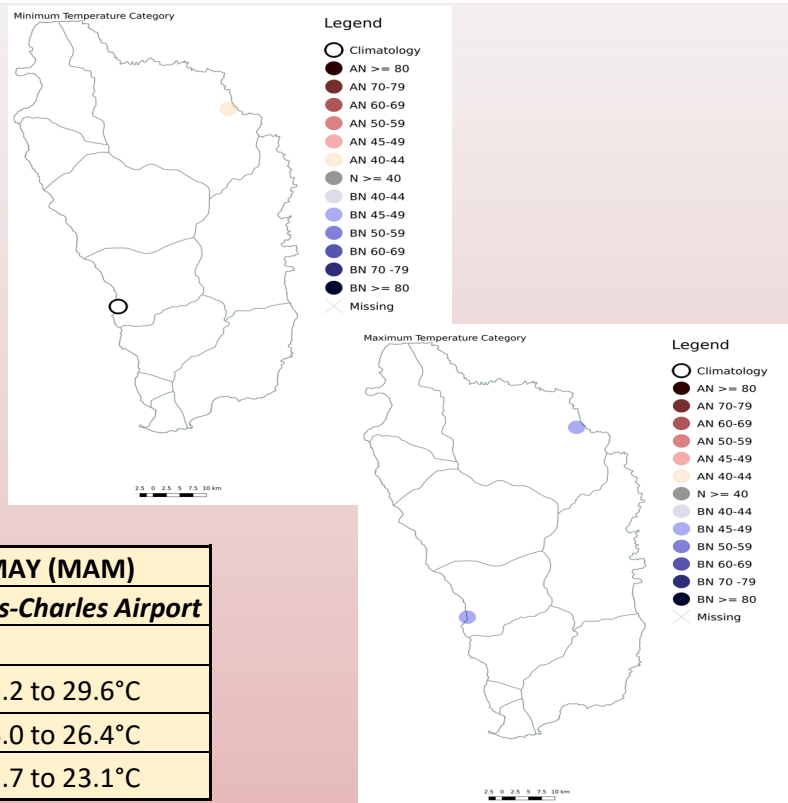
Apr: FM 06th, LQ 13th, NM 20th, FQ 27th,

May: FM 05th, LQ 12th, NM 19th, FQ 27th



TEMPERATURE FORECAST

- ◆ Daytime temperatures are likely to be cooler than usual, while night-time temperatures are likely to be close to usual;
- ◆ Heat stress is not of significant concern through March, but an increase in heatwaves is possible from May;
- ◆ Temperatures generally begin to progressively warm during this period, but are expected to remain comfortable.



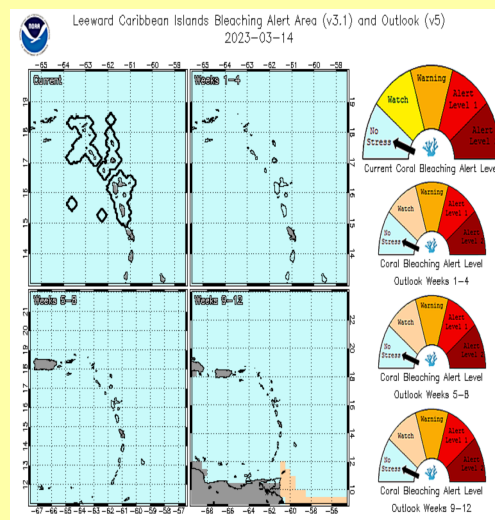
CLIMATOLOGICAL AVERAGES FOR MARCH-APRIL-MAY (MAM)		
Parameters	Canefield Airport	Douglas-Charles Airport
Temperature (15 years)		
Average Maximum	30.8 to 31.4°C	29.2 to 29.6°C
Mean	26.7 to 27.2°C	26.0 to 26.4°C
Average Minimum	22.6 to 23.0°C	22.7 to 23.1°C

SECTORAL IMPLICATIONS



TOURISM

- ◆ Drier surfaces and foliage increase wildfire potential and the concentration of airborne particulates;
- ◆ Minimize sun exposure particularly during 10am and 3pm and utilize sun screen lotions;
- ◆ Surfers, divers, fishers and marine craft operators should consult the 3-day outlook before planning activities <https://weather.gov.dm/forecast/extended-forecast>;
- ◆ For information on seaweed/ sargassum incursion visit <https://www.cavehill.uwi.edu/cermes/projects/sargassum/outlook-bulletin.aspx>;
- ◆ Coral bleaching is of no concern this season.



HEALTH

- ◆ 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;
- ◆ Increased allergens in the atmosphere from plant materials (pollen) driven by increased wind speeds and reduced washing out by rain may trigger incidences of upper respiratory tract symptoms;
- ◆ Higher temperatures and the occurrence of heatwaves in May can increase heat related health effects;
- ◆ A state of readiness should be developed ahead of the 2023 Atlantic hurricane season;
- ◆ Keep cool and hydrated.



AGRICULTURE

- ◆ If El Niño manifests, possible delayed start of the rains in the wet season;
- ◆ Short-term drought could impact food production and water quantity from small streams and rivers in regions experiencing rainfall deficits;
- ◆ In the event of extended dry periods this season, farmers should weed regularly to reduce competition and further stress to crops, schedule irrigation (early morning and late afternoon), use irrigation techniques and devices to apply the right amount of water for the crop and to avoid runoff;
- ◆ There is a higher chance of bush fires. To reduce the threat, ensure that farms are kept clean and free from trash and combustible material, store combustible substances such as fuel safely, ensure that machinery is free from any defects that could start a fire, have a supply of water readily available in case of fire, avoid burning trash on dry, windy days and avoid leaving fires unattended;
- ◆ Maintain proper records of inputs and the crop under cultivation and/or livestock being reared.



HYDROLOGY

With a forecast for reduced rainfall during MAM:

- ◆ river discharge is expected to decrease significantly;
- ◆ A decrease in water level is expected;
- ◆ Soil moisture is expected to decrease. Expect the soil to get compacted, particularly in western and southern regions;
- ◆ With little rainfall, infiltration will be minor and an increase in evaporation and transpiration rates is likely.



WORLD METEOROLOGICAL DAY 2023

We live on an interconnected planet. We share one Earth, with one atmosphere and one ocean. Our weather and climate and the water cycle know no national or political boundaries. International cooperation is essential. This philosophy has driven the work of the world's meteorological community since 1873 and will guide us as we translate science into services for society for present and future generations.

World Meteorological Day 2023 takes place during WMO's 150th anniversary. It highlights past achievements, present progress and future potential. Compared to 150 years ago, our weather is more extreme, our ocean is warmer and more acidic, sea levels have risen and glaciers and ice are melting. The rate of change is accelerating. We need urgent action now to slash emissions and to ensure that future generations can both survive and thrive on our planet.

There has been significant progress to monitor, simulate and project the global climate to support decision-making. Our weather, climate and water cycle will be different in future than in the past. Weather, climate and hydrological services will help us tackle the associated challenges and seize the opportunities.

(<https://public.wmo.int/end/resources/world-meteorological-day/future-of-weather-climate-water-across-generations-2023>)

Disclaimer: The **Dominica Meteorological Service** makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability or suitability of this newsletter and will not be held liable for any actions taken in reliance thereon. The information is free for use with the understanding that content may not be modified and presented as original material.

Contact Us: dmsclimate@dominica.gov.dm; Tel: 618 4494/ 4490/ 4458; www.weather.gov.dm

For Regional Sectoral Bulletins (Agriculture, Health and Tourism). Visit: <https://rcc.cimh.edu.bb/>