Dominica Meteorological Service

DOMINICA CLIMATIC NEWSLETTER

VOL 8 ISSUE 01 DECEMBER-JANUARY-FEBRUARY YEAR 2022/ 23

Seasonal Climate Outlook Summary

Previous Season Forecast; Sept-Oct-Nov (SON) 2022– Rainfall total for the period was likely to be at least as high as usual. Maximum and minimum temperatures were likely to be as usual.

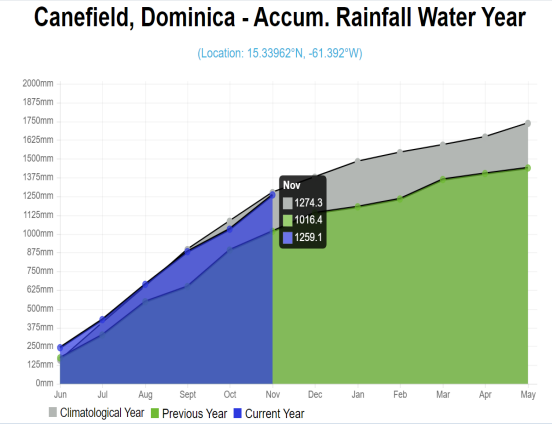
SON Observed: The accumulated rainfall was usual at Canefield but higher than usual at Douglas-Charles. Daytime highs were at least as high as usual, while night-time low temperatures were generally cooler than usual.

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

The Wet/ Atlantic Hurricane Season

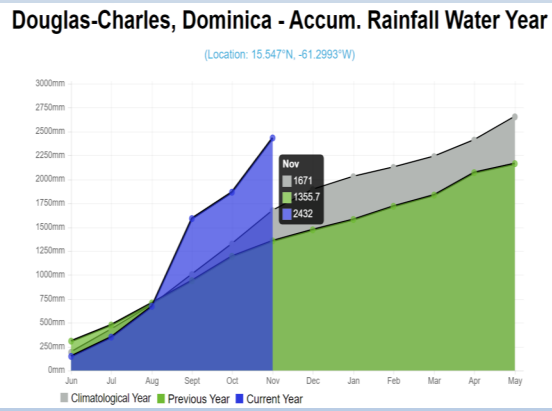
Canefield Airport:

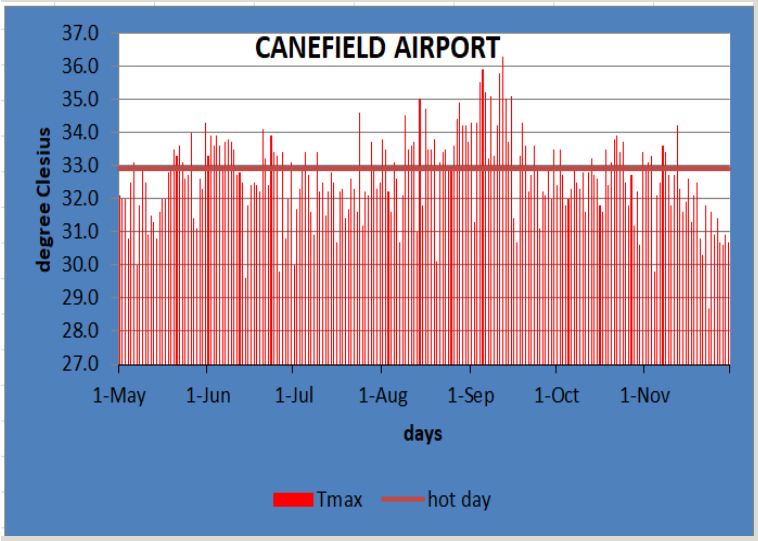
- 1251.9mm/ 49.29in. was recorded which is usual. the first half of the wet season (June to August/ JJA) was slightly wetter than the second (September to November/ SON) with 662.7mm/ 26.10in. and 596.4mm/ 23.48in. respectively;
- Highest daily amount was 85.3mm/ 3.36in. on 26th June followed by 54.5mm/ 21.5in. on September 16th;
- There was a 6-day dry spell in September (7th to 12th) and two 5-day dry spells in October (12th to 16th and 20th to 24th);
- There were 60 rainfall days during JJA (usual) and 53 during SON (usual);
- Daytime high temperatures were higher than usual averaging 32.7°C/ 91°F. Night-time lows were slightly cooler than usual from JJA but was usual from SON;
- There was a 13 days heat wave in September.

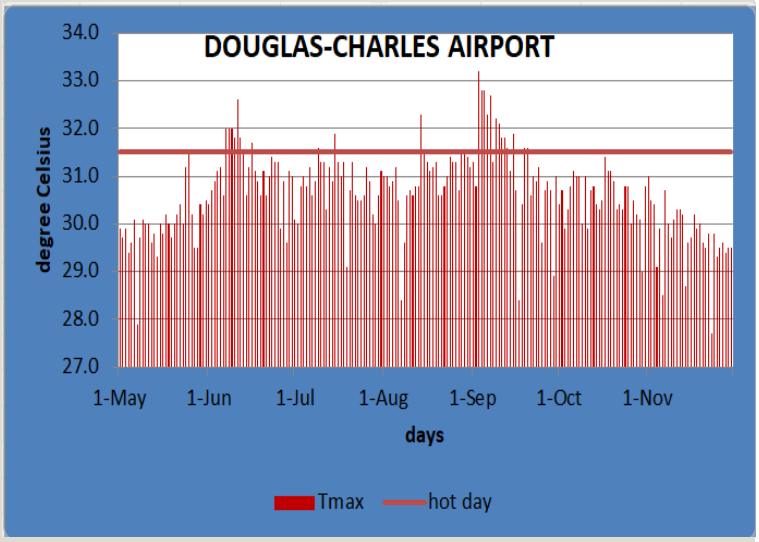


Douglas-Charles Airport:

- Rainfall was way above normal. 2432.0mm/ 95.75in was observed which is about 95% of the average annual rainfall total. September rainfall broke all time monthly record with 917.0mm/ 36.10in.;
- Maximum daily rainfall was 300.2mm/ 11.82in observed September 17th followed by 206.5mm/ 8.13in. on the 30th. These resulted in flooding and landslides in north-eastern communities;
- There were no significant dry spells;
- There were 60 rainfall days during JJA (usual) and 67 during SON (usual);
- Daytime temperatures were as warm as usual while night-time temperatures were cooler than usual, with an average maximum of 30.7°C/ 88°F and average minimum of 24.0°C/ 75°F;







Heat waves were predominant during the months of August to September, particularly on the western side of Dominica. These were 2 or more consecutive days when peak daytime temperatures (Tmax) were >=32.9°C at Canefield and >=31.5°C at Douglas-Charles. All-time record high observed at Canefield on September 4th, with a maximum temperature of 36.7°C/ 99°F. Temperatures became cooler and more comfortable from November.

The hurricane season saw 14 named storms of which 8 became hurricanes and 2 intensified into major hurricanes. A normal season has 14 named, 7 hurricanes with 3 becoming major.

The season began quietly but ramped up in September with the formation of 7 named storms.

Activity associated with tropical cyclones was generally low across the Lesser Antilles. In September, heavy showers from Tropical Storm Fiona resulted in landslides in Marigot from the 16th to 17th.

Extensive flooding and landslide in the eastern part of Dominica in early November which resulted in one death, occurred as a trough system lingered in the area.

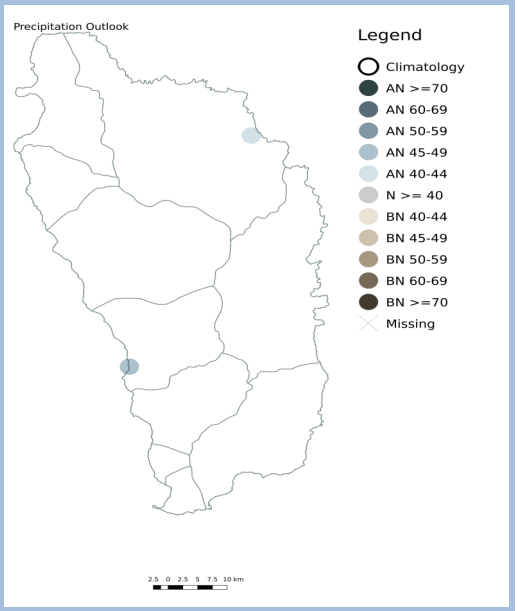
SEASONAL OUTLOOK FOR DECEMBER-JANUARY-FEBRUARY (DJF) 2022/2023

INFLUENCING FACTORS

- Sea Surface Temperatures (SSTs) in the eastern Pacific remain below –1.0°C; La Niña conditions have persisted for the year thus far. The models forecast La Niña conditions may maintain into DJF, likely reverting to ENSO neutral in MAM. La Niña tilts the odds to more rainfall activity while neutral conditions offers little contribution to rainfall and temperature forecasts.
- SSTs have hovered around 0.5°C above average in the tropical and sub-tropical North Atlantic and much of the Caribbean Sea. Models are forecasting SST to maintain between 0 and 0.5C above average. Warm SSTs in the Caribbean and sub-tropical North Atlantic may contribute to higher air temperatures with above-average humidity, seasonal rainfall totals and an increased frequency of extreme rainfall.

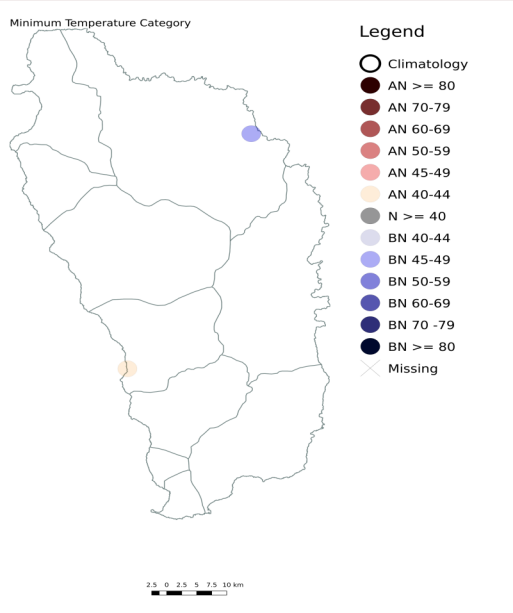
RAINFALL FORECAST

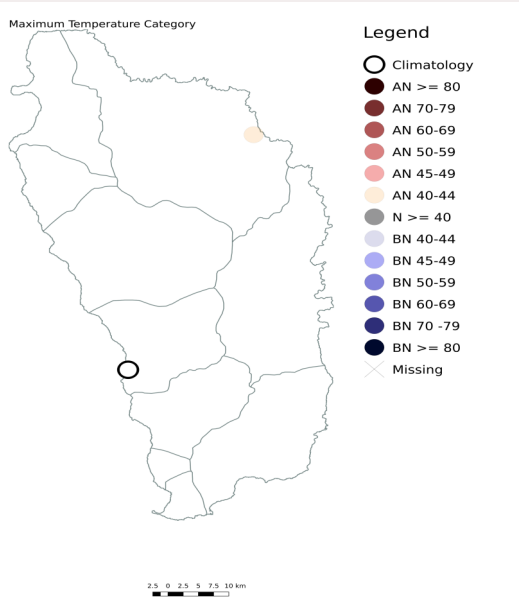
- At least the usual rainfall totals are likely during the first half of the dry season;
- There may be a slight increase in the number of wet days (>=1mm) (low confidence);
- A slight increase in the number of 7-day wet spells and very wet spells is likely (low to med. confidence);
- At least three 7-day dry spells is likely particularly towards February (high confidence);
- No significant shift in the usual number of 3-day extreme wet spells which would increase the potential for flash floods and associated hazards;
- There is no concern for drought at this time.



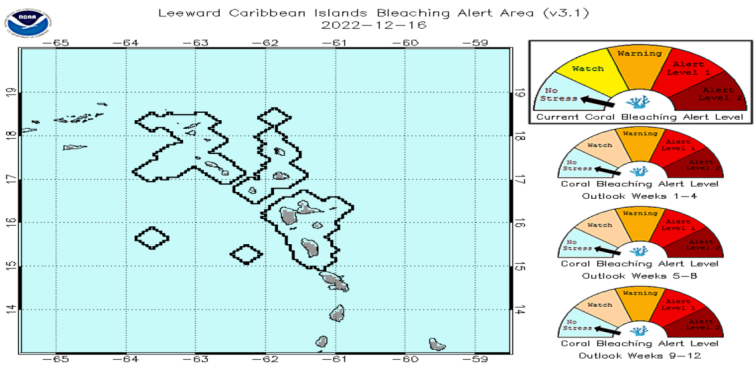
TEMPERATURE FORECAST

- The usual mean temperature is forecast;
- The seasonal average daytime maximum temperatures are likely to be as warm as usual;
- Night-time minimum temperatures may likely be slightly cooler in the east and usual in the west;
- Heat stress is not of much concern.





CLIMATOLOGICAL AVERAGES FOR DECEMBER-JANUARY-FEBRUARY (DJF) 2022/ 2023		
Parameters	***Canefield Airport***	***Douglas-Charles Airport***
Rainfall (30 years)		
Normal	202.1mm to 357.7mm	323.3mm to 480.5mm
Wet Days Normal	38 to 53	52 to 64
7-day Dry Spells Normal	-	0 to 1
7-day Wet Spells Normal	1 to 4	1 to 4
Temperature (15 years)		
Average Maximum	29.9 to 30.4°C	28.7 to 28.9°C
Mean	25.8 to 26.1°C	25.4 to 25.8°C
Average Minimum	21.6 to 22.0°C	22.8 to 23.1°C



BLEACHING ALERT AREA AND OUTLOOK

Thermal stress on coral reefs is not expected to be a concern by the end of March 2023, with sea-surface temperatures expected to be below the coral bleaching temperature threshold .

SECTORAL IMPLICATIONS

HYDROLOGY

- Discharge of the rivers is expected to decease slightly towards the month of February;
- Soil moisture is likely to be adequate into January, with an expected decline thereafter;
- Rivers could rise to flood levels during a heavy rain-fall event;
- Overflow of gutters and ravines is likely during heavy rainfall;
- Ponding is inevitable during significant rainfall.

AGRICULTURE

- Water availability for rain-fed crops may not be of much concern until the March to May period;
- Plan for likely increase in dry spells and the need for alternate water sources and employing water management and conservation techniques from March to May;
- Frequency of outdoor activity disruptions should decrease towards February.

MOON PHASES

Dec: FM 7th, LQ 16th, NM 23rd FQ 29th,
Jan: FM 6th, LQ 14th, NM 21st, FQ 6th,
Feb: FM 5th, LQ 13th, NM 20th, NM 27th

TOURISM

- Demand for cooling/ hydration services may decline slightly until April, May;
- All are encouraged to apply high SPF sunscreen lotion regularly (preferably reef safe) and to seek shaded areas between the hours of 10am and 3pm;
- Ideal season to engage in coral reek restoration activities that build coral resilience.

HEALTH

- Increasing dryness of surfaces and foliage is likely to increase the potential for wildfires and airborne particulates;
- The risk of heat related stress and heat strain is low;
- Manage water storage containers properly to reduce mosquito breeding areas and incidents of vector-borne diseases such as Dengue, Chikungunya and Zika;
- Take breaks in cool and shaded areas to reduce body temperature;
- Wear sunscreen and protective clothing outdoors;
- Saharan dust levels may increase this season, increasing the likelihood of respiratory and allergic reactions .

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

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