



DOMINICA METEOROLOGICAL BULLETIN

VOL 4 ISSUE 03

July - September

YEAR 2019

Seasonal Climate Outlook Brief Summary

April-May-June (AMJ) 2019– Below to normal rainfall totals were recorded for the season. Drought conditions persisted along the western regions. Daytime peak temperatures were normal. However, for nighttime temperatures the western coast experienced warmer than normal nights while the eastern coast had cooler nights.

Forecast: There were uncertainties for the rainfall outlook. Slightly warmer to normal temperatures were forecast.

July-August-September (JAS) 2019– A Drought Watch Alert is now in effect especially along the western coast. Slightly below to normal rainfall amounts with a decrease from the usual in the frequency of wet days. Warmer than normal conditions are forecast.

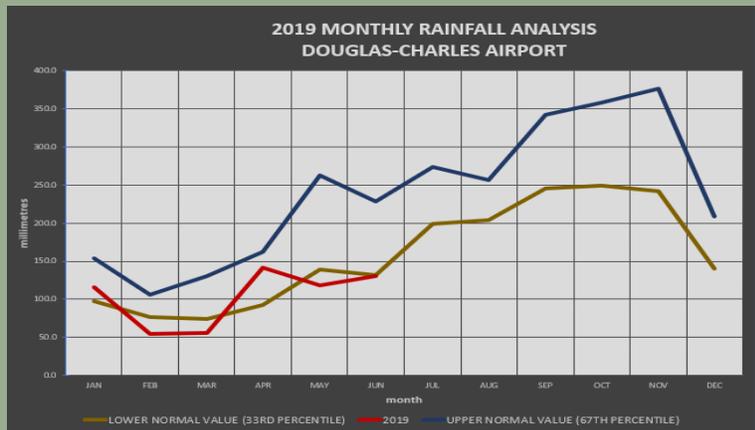
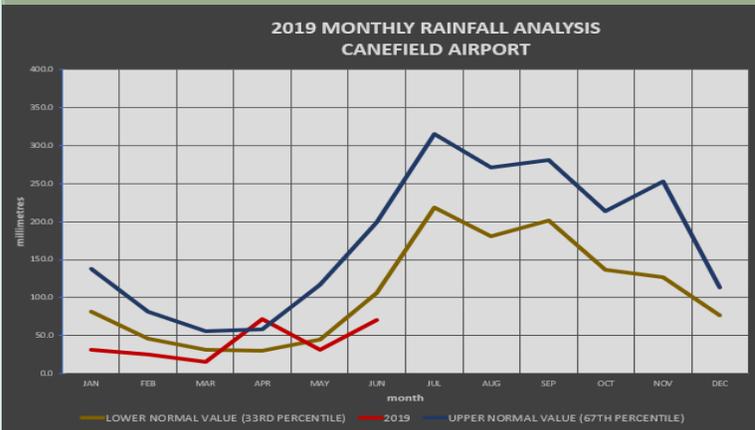
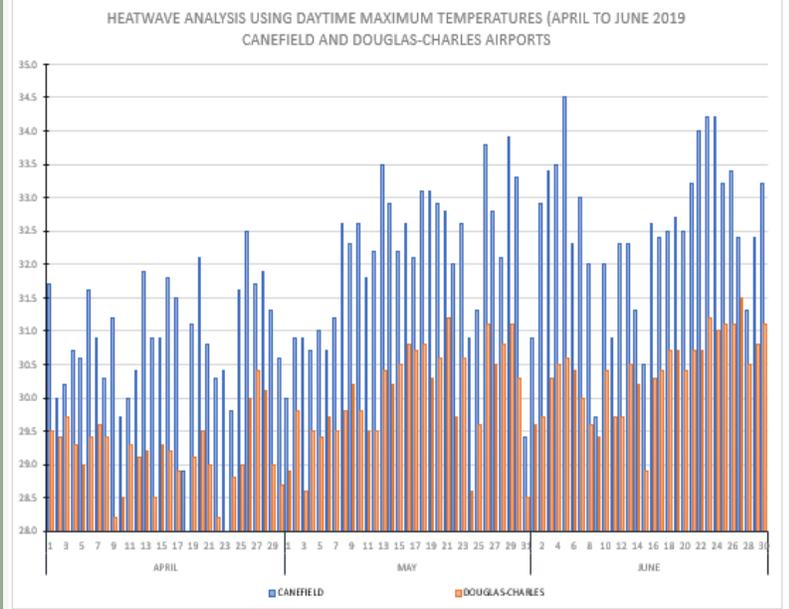
Climate Observations for April-May-June (AMJ) 2019

With the exception of April, both the Canefield and Douglas-Charles Airports continued to record drier than normal monthly rainfall totals for the season April-May-June 2019.

Drought conditions were observed across the island, especially along the western coast where dry air and frequent bush fires were observed, with the highest frequency of occurrence during early April. Frequent haze was observed from May.

A 10-day dry spell was recorded at the Douglas-Charles Airport while the dry spell prolonged further to 20-days at Canefield starting from the first week in May.

Daytime highs were generally normal across the island. The Canefield Airport recorded heatwaves in May and June, with June 5th and 22nd to 24th being extremely hot (34.0°C and higher). While the west coast experienced warmer nights, the east coast recorded cooler than normal nighttime temperatures. (A heatwave is two or more consecutive hot days with peak temperatures of 32.8°C and higher at Canefield and regions along the west coast and 31.5°C at Douglas-Charles and neighbouring regions.)

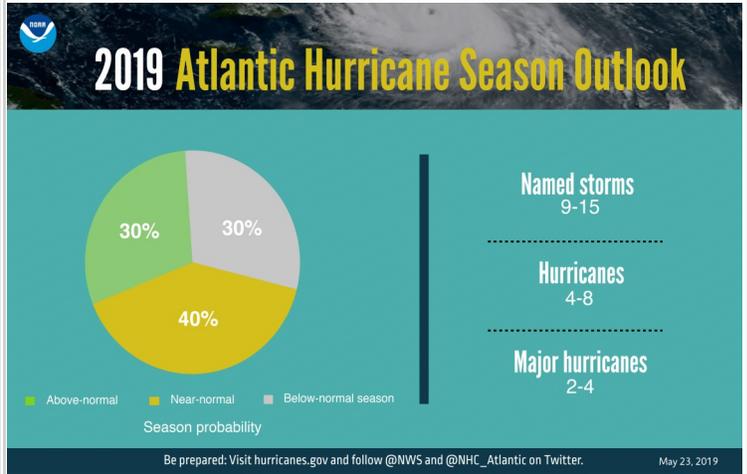


Influencing factors

- * Recent Sea Surface Temperature (SSTs) observation in the tropical Pacific Ocean showed that the weak El Niño maintained its' level with SST anomalies about 0.5-1°C above average.
- * Most models suggest that this condition will be maintained as a weak El Niño during JAS (with 55-60% confidence) and the majority maintains El Niño through October-November-December (OND)2019 (50-60% confidence.)
- * An El Niño event tends to tilt the odds to warmer and drier conditions with less shower activity in most parts of the Caribbean.
- * Countering El Nino, is the expected combination of warmer than average SSTs in the tropical Atlantic Ocean and Caribbean Sea and an enhanced West African monsoon, both of which favour increased hurricane activity.

2019 Atlantic Hurricane Season Forecast

The Atlantic Hurricane Season extends officially from the 1st of June to the 30th of November. The prediction for this year is that a near-normal season is most likely. Forecasters at the US National Oceanic and Atmospheric Administration (NOAA) are predicting a 40 percent chance of a near-normal season, a 30 percent chance of an above-normal season and a 30 percent chance of a below-normal season. An average hurricane season produces 12 named storms, of which 6 become hurricanes, including 3 major hurricanes.

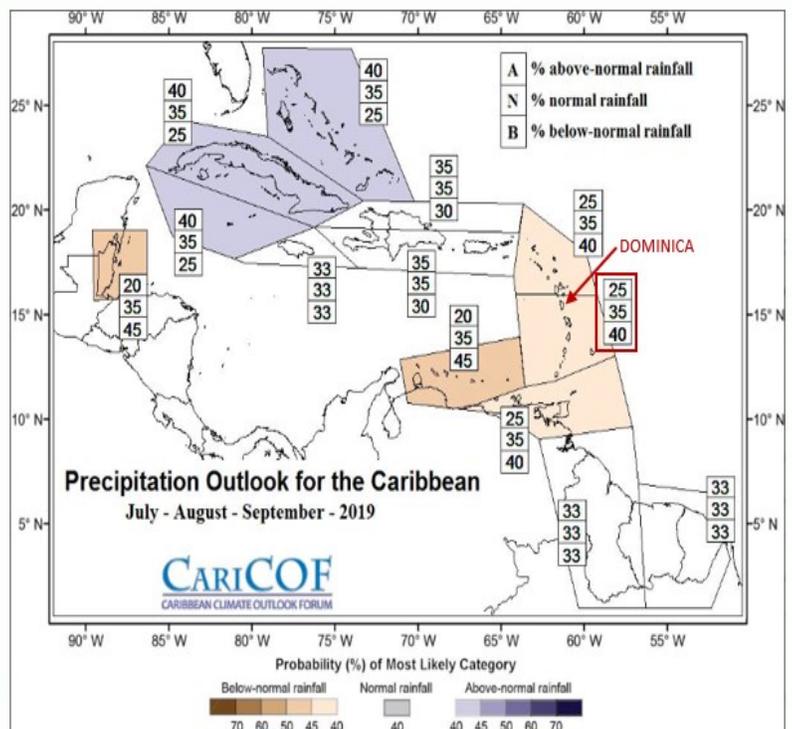


2019 Atlantic Hurricane Names

Andrea, Barry, Chantal, Dorian, Erin, Fernand, Gabrielle, Humberto, Imelda, Jerry, Karen, Lorenzo, Melissa, Nestor, Olga, Pablo, Rebekah, Sebastien, Tanya, Van, Wendy

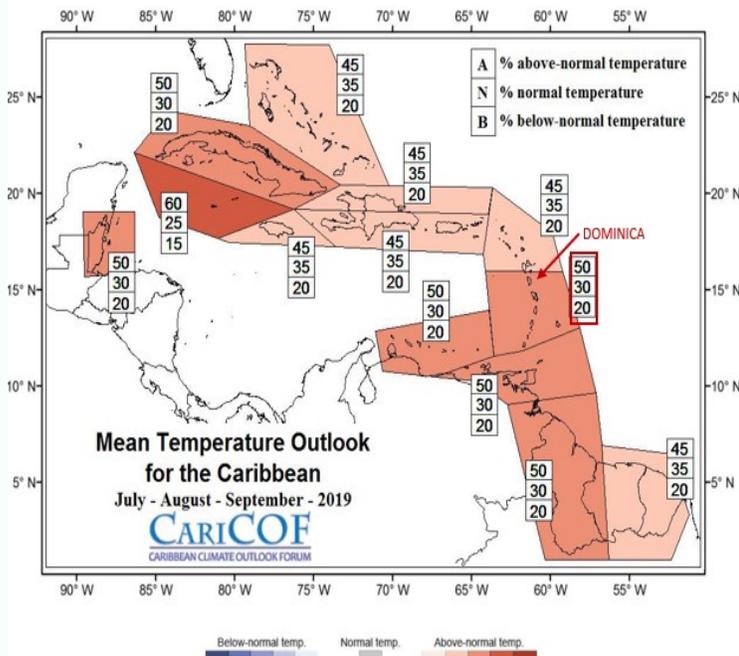
Rainfall Outlook

- ◆ Normally there is an increase in rainfall amounts during the wet season (June to November) as compared to the dry season. However, for 2019 that increase is forecast to be below normal.
- ◆ Regions, especially along the west coast, already experiencing drought conditions may not receive a significant amount of rainfall to alleviate the current drought situation and should continue to monitor as a Drought Watch Alert remains in effect for the season.
- ◆ Fewer wet days (1mm or more) than usual is also expected. Wet spells chances remains with at least two extremely wet 3-day wet spells increasing the chances of flooding.



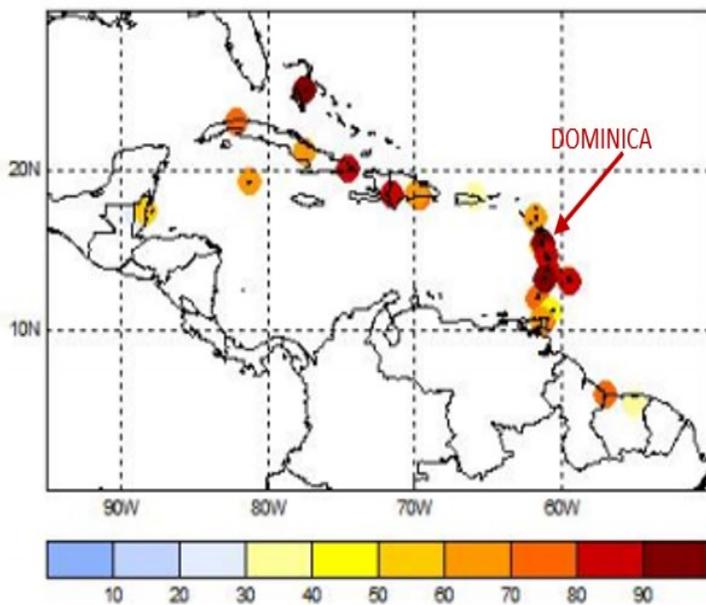
Temperature Outlook

- ◆ The heat season which runs from May to October in the Lesser Antilles is forecast to be warmer than normal.
- ◆ It is expected that the heat season will be significantly hotter than in the past two years, with potentially dangerous heat exposure during dry spells between August and October.
- ◆ Daytime highs and nighttime lows are forecast to be above normal.



- ◆ The chances of having at least 7 to 14 heatwave days are extremely high (over 90%).

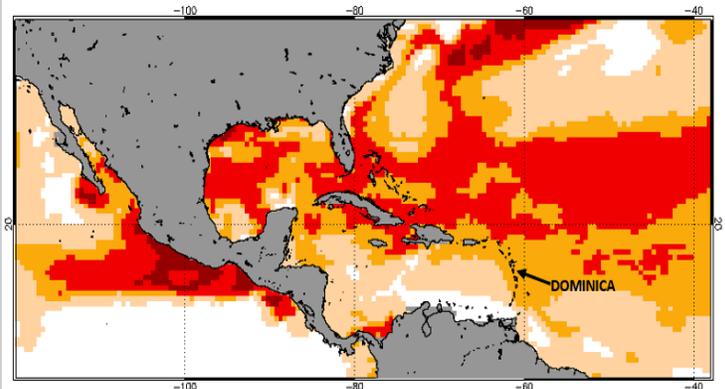
Prob. at least 7 heatwave days between Jul & Sep 2019



Coral Reef Bleaching Outlook

Sea Surface Temperatures (SSTs) around the Windward Islands for June ranged from 27 to 28°C which is near normal and below the bleaching threshold of about 29.3°C. Currently there is no thermal stress around the island. However, with increasing SSTs in the coming weeks, thermal stress is forecast to accumulate into early October. (Warning Alert Level)

2019 Jul 9 NOAA 90% Probability Coral Bleaching Heat Stress for Jul-Oct 2019
Experimental, v5.0, CFSv2-based, 28 to 112 Ensemble Members



Legend:
No Stress (White) | Watch (Light Orange) | Warning (Orange) | Alert Level 1 (Red) | Alert Level 2 (Dark Red)

Alert Level	Interpretation
No Stress	No Thermal Stress
Watch	Low-level thermal stress
Warning	Thermal stress is accumulating
Alert level 1	Bleaching expected
Alert level 2	Widespread bleaching and some mortality expected

JULY-AUGUST-SEPTEMBER CLIMATOLOGY

ACCUMULATED RAINFALL CLIMATOLOGICAL NORMAL (30YEARS)

	CANEFIELD AIRPORT	DOUGLAS-CHARLES AIRPORT
Rainfall	601.6 to 867.4mm	648.6 to 873.3mm
Wet-days	52 to 64 days	56 to 69 days
7-day wet-Spell	3.7 to 7.2 spell	2.9 to 6.6 spell
7-day Dry-spell	n/a	0 to 1 spell

TEMPERATURE AVERAGE (15YEARS)

Average Maximum	31.7 to 32.3°C	30.8 to 31.3°C
Average	28.0 to 28.2°C	27.7 to 28.0°C
Average Minimum	24.1 to 24.4°C	24.5 to 24.8°C

SECTORAL IMPLICATIONS

Agriculture

- Farmers are encouraged to continue carrying out measures to conserve water, especially in areas along the west coast where the effects of drought are more elevated.
- Water conservation techniques (e.g. mulching) as well as water management practices (e.g. irrigation and rain harvesting) may be employed in areas with low water availability.
- Farmers should ensure that adequate water and shade are provided for livestock and themselves in order to prevent heat stress.
- Farmers are advised to maintain drains around farms as flash floods may occur during tropical disturbances. Making raised beds, housing of animals on high grounds, raised pens and storing fertilizer away from moisture and water sources will help in reducing loss.
- Disaster plans should be in place in the event that any disaster should affect Dominica.



Tourism

- Tourism operators should always maintain a state of readiness, including communication plans and response protocols to deal with sudden eventualities.
- Tourism facilitators should keep their drains cleaned and have water catchment systems cleaned regularly.
- Operators should always advise staff and guests of the need for water conservation .
- Tourism practitioners should expect an increase in demand for cooling/hydration services .
- There is a high risk of skin damage due to intense UV radiation. Visitors and outdoor tour operators should be encouraged to apply high SPF sunscreen lotion (preferably reef safe) and seek shaded areas between the hours of 10 AM and 3 PM.

Health

- Excessive heat due to high temperatures and increasing humidity, especially during heat waves can cause morbidity especially among the elderly.
- An increased risk of dehydration especially from August into October may present an increase in symptoms such as lethargy, general weakness, dizziness, fainting and in extreme cases, kidney failure.
- With less rainfall than normal, along with periods of dry spells there may be increased use of containers for water storage, as well as water accumulating in any unattended open containers. This may potentially create more breeding sites for mosquitoes, especially those associated with diseases, such as Dengue, Chikungunya and Zika. Proper management of water storage containers e.g. covering with protective mesh helps to reduce this risk.
- There is increased risk of Leptospirosis following a flood event as there will be displaced rodents that could contaminate flood waters, household items and food containers.
- Psychosocial impacts from previous disasters, such as anxiety among survivors may increase when alerts on isolated events arise. Health care professionals are therefore advised to be sensitive to these issues, as they interact with patients.
- During extreme disasters, the vulnerable population may have an increased need for medical care as they face a greater risk of poor health and even death. Health care providers and other stakeholders should clearly define various vulnerable populations and develop tailored strategies for assisting them.



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

DOMINICA METEOROLOGICAL SERVICE

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Source: Caribbean Institute for Meteorology and Hydrology (CIMH)
& National Oceanic and Atmospheric Administrative (NOAA)