DOMINICA CLIMATIC NEWSLETTER

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Seasonal Climate Outlook Summary

Previous Season Forecast; Sept-Oct-Nov (SON) 2020– The rainfall model forecast was uncertain (little predictability), but there was high confidence in day and night-time temperatures being above normal.

SON Actual: Rainfall accumulation at both stations was above normal. Daytime temperatures were warmer than usual with significant heatwaves. Night-time temperatures were usual to slightly cooler than usual.

Current Season Forecast; Dec-Jan-Feb (DJF) 2020/21- Usual to wetter than usual rainfall amount is forecast with above normal day and night-time temperatures; though temperatures are expected to be comfortable as this period marks the beginning of the Caribbean's cool season.

THE 2020 ATLANTIC HURRICANE SEASON

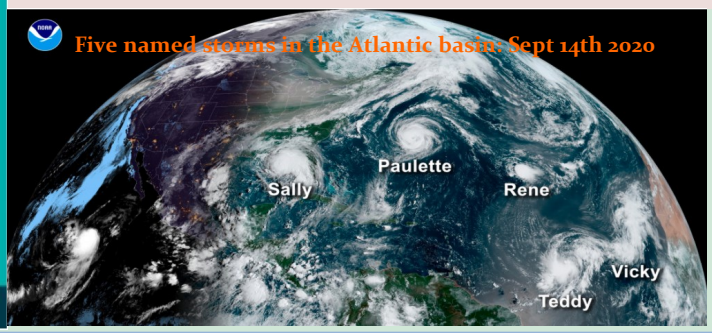
By the official end of the Tropical Atlantic hurricane season on November 30th, the region had seen the formation of 30 named storms of which, 13 became hurricanes, including six major hurricanes. This was above the August forecast update from the National Hurricane Centre (NHC) which called for 19-25 named storms, of which 7–11 could become hurricanes, including 3-6 major hurricanes.

This is the most storms on record, surpassing the 28 from 2005, and the second-highest number of hurricanes on record. This is the fifth consecutive above normal season (NHC).

Warmer than average ocean temperatures, an enhanced African monsoon and an unfolding La Nina event provided excellent conditions for tropical cyclone formation and development.

Tropical cyclone formation continued in earnest during the most active half of the season and on September 18th, Tropical Storm Wilfred formed which exhausted the annual list. That same day, the NHC began the use of the Greek alphabet (second time in history) with the formation of Tropical Storm Alpha in the north-east Atlantic.

Apart from Tropical storms Josephine and Laura which moved near the Leeward Islands, Dominica and the rest of the eastern Caribbean were spared direct tropical cyclone impacts.



Looking Back…..September-October-November 2020

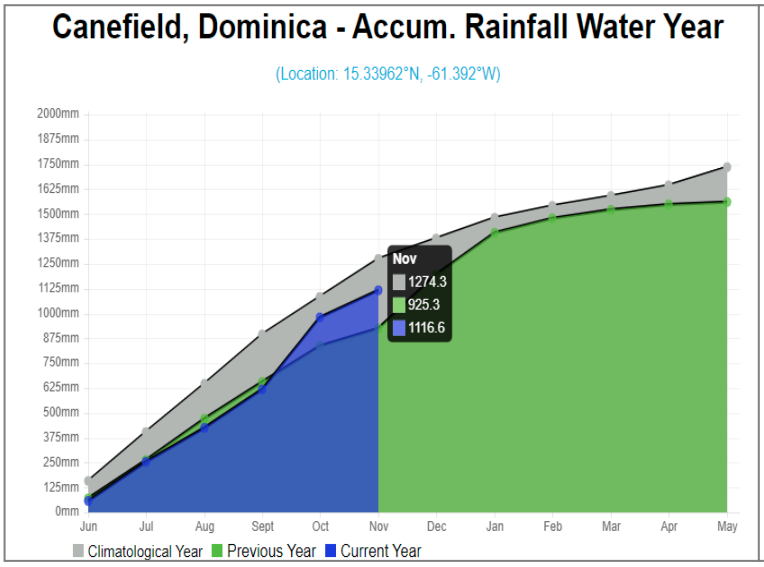
The second half of the wet season began with slightly less than normal rainfall amounts at both airport stations. In spite of this, there were no significant dry spells and localized flooding events were recorded.

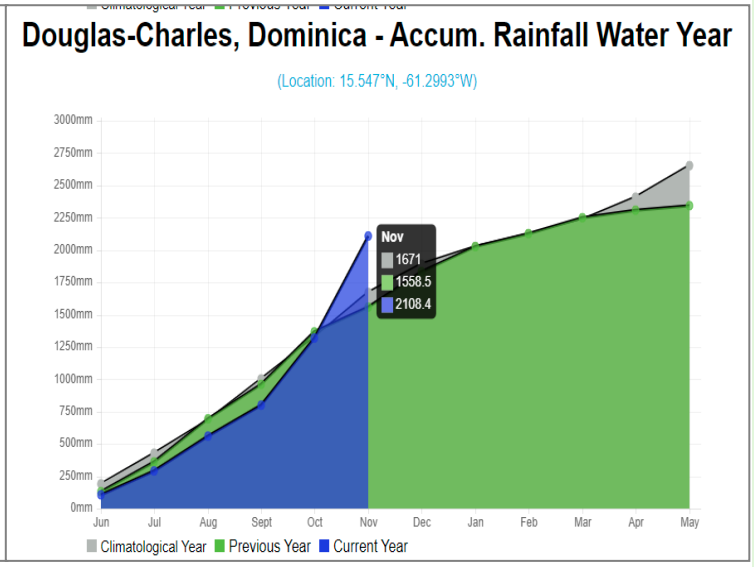
From October and into November, there were more significant rainfall events which resulted in flooding and landslides across parts of the island. Rainfall total for October was above normal setting a new 30-year record at Canefield (362.1mm/ 14in) while total for November was normal. Both October and November recorded above normal rainfall totals at Douglas-Charles.

There were 52 wet days at Canefield and 69 at Douglas-Charles during the period, which is normal.

Temperatures were warmer than usual as the Caribbean heat season peaked in October. All time high maximum temperature was observed at Canefield on September 15th (35.7°C 97°F). In September, there was a 5 and 8 day heatwave and 4 and 5 days heatwave during October, at Canefield and Douglas-Charles respectively. Temperatures became more comfortable in November.

Overall, rainfall during the wet season at Canefield was normal with a total of 1116.6mm/ 437.66in. At Douglas–Charles, rainfall was above normal with a total of 2108.4mm/ 83.01in; about a third of this was recorded in November.





SEASONAL OUTLOOK FOR DEC-JAN-FEB (DJF) 2020/ 2021

INFLUENCING FACTORS

- El Niño Southern Oscillation (ENSO)

La Niña conditions are in place (cooling of the eastern Pacific). The models strongly favour La Niña to persist through DJF and possibly through MAM. La Niña tilts the odds to more frequent and more intense rainfall, but allows for cooler temperatures for most of the region from December to March or April.

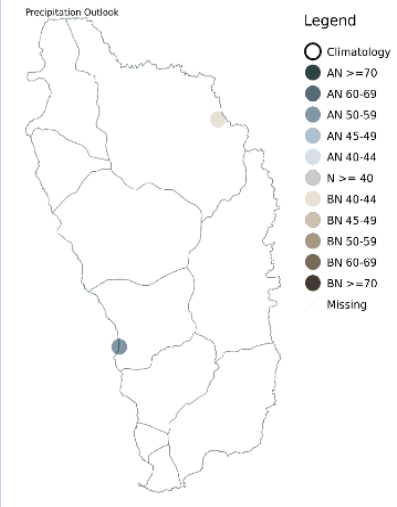
- Climate conditions in the Tropical North Atlantic and Caribbean:

SSTs along the shores of the Caribbean and in parts of the Tropical North Atlantic (TNA) and sub-tropical North Atlantic are projected to be slightly warmer or near to average. Continued warm SSTs tends to contribute to above-average humidity, seasonal rainfall totals, reduced dry spell frequency and drought, but higher night-time air temperatures in adjacent areas.

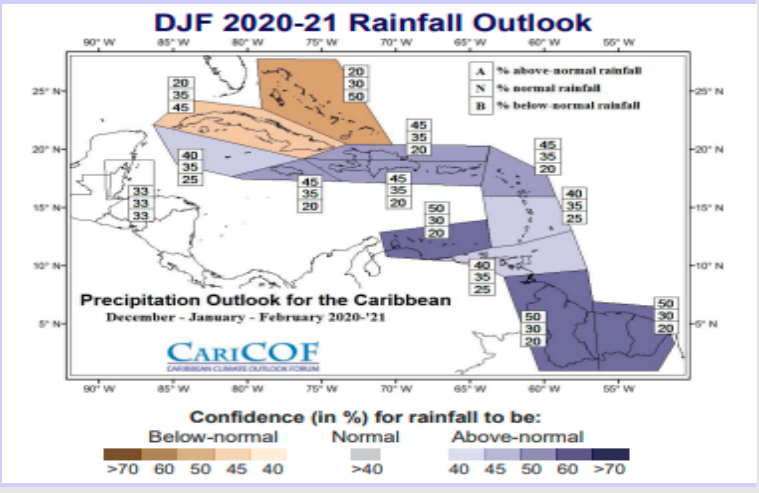
CLIMATOLOGICAL AVERAGES FOR DJF		
Parameters	***Canefield Airport***	***Douglas-Charles Airport***
Accumulated Rainfall (30 years)		
Normal	204.1 to 333.5mm	314.8 to 470.1mm
Wet days	36 to 53	48 to 62
7 day wet spell	1 to 4	1 to 3
7 day dry spell	NA	1
Temperature (15 years)		
Average Maximum	29.8 to 30.2°C	28.5 to 28.9°C
Mean	25.8 to 26.1 °C	25.5 to 25.8°C
Average Minimum	21.6 to 22.0°C	22.3 to 22.8°C

RAINFALL FORECAST

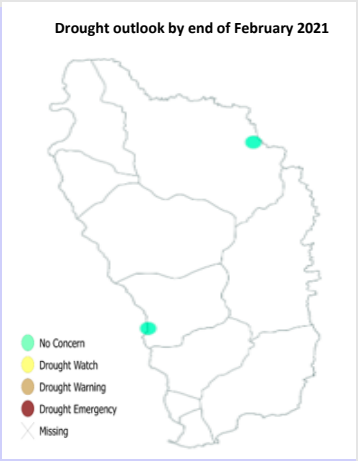
- Normal to above normal rainfall accumulation is expected, with most of this occurring during December into early January, as the island transitions into the dry season.



- There is a higher probability for wetter conditions along the west coast.
- A few more wet days than usual is expected by the end of March with 1 to 2 very wet 7-day spells.
- At least one extreme wet spell is possible which could result in flash-flooding mainly during the 1st half of the season, that is, into early January.

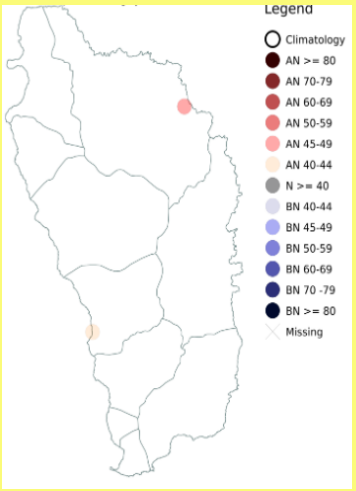


- The chance of a 7 day dry spell is very low. No more than the usual, 1 period, is expected.
- Drought is not a concern by the end of February 2021.



TEMPERATURE FORECAST

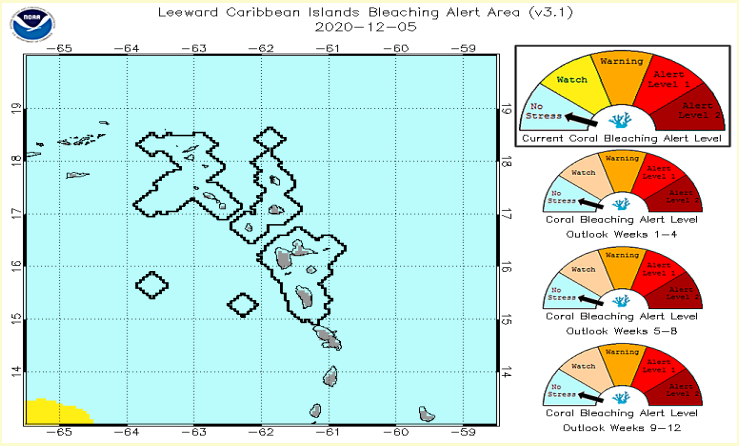
- Night-time minimum temperatures expected to be as cool as usual while day-time peak temperatures are likely to be usual to warmer than usual.



- Overall, temperatures are expected to be comfortable, even cold in the interior and higher elevations, as the island moves into the cool season.

Bleaching Alert Area and Outlook

Thermal stress on coral reefs is not a concern by the end of March 2021 with sea-surface temperatures below the coral bleaching temperature threshold and forecast to continue cooling to near normal.



SECTORAL IMPLICATIONS

AGRICULTURE

- Water availability for rain-fed crops may not be much of a concern.
- With the possibility of flood-producing rains early in the season, maintain drains around crop beds and/ or plant crops on raised beds, house animals on high ground or in raised pens and store fertilizer away from water sources and moisture.
- Plan for an increase in dry spells and the need for alternate sources of irrigation during the second half of the dry season (March to May).

TOURISM

- Maintain a state of readiness including communication plans and response protocols to deal with sudden eventualities, especially given the Covid-19 pandemic.
- Monitor weather and Covid-19 progress in source regions and enhance marketing strategies.
- Practitioners may potentially see a slight reduction in demand for cooling/ hydrations services (AC use and drinking water).
- Ultraviolet radiation levels expected to return to high levels by end of February leading to an increasing risk of UV damage. All should apply high SPF sunscreen lotion regularly and seek shaded areas between the hours of 10am and 3pm. The use of reef-safe sunscreen is encouraged.
- Frequency of outdoor activity disruptions due to rainfall should be decreasing towards February.
- This is a good season to engage in coral reef restoration activities that build coral resilience.

HEALTH

- As the number of dry days and dry spells increases towards February, drying surface and foliage may increase the potential for wildfires and airborne particulates.
- The probability of heatwaves is very low, close to non-existent and therefore, risk of heat related stress and heat strain is very low.
- Minimize direct sun exposure. Stay hydrated.
- Local Saharan Dust levels may increase towards February, increasing the likelihood of respiratory and allergic reactions in susceptible persons.
- Manage water storage containers properly to reduce mosquito breeding areas and the incidents of vector-borne diseases such as Dengue, Chikungunya and Zika.
- Ensure face masks are breathable. If feeling ill, remove masks in a private space. Sweaty masks should be changed.

HYDROLOGY

- Flashflood, landslides/rock falls and soil erosion potential is expected to be moderate in December becoming slight, thereafter.
- The chance of runoff, overflow of gutters and ravines and flooding over low-built bridges remains moderate in times of heavy rainfall.
- Normal river flows expected to decrease during the second half of the dry season.

STAY INFORMED ON DAILY AND SUB-SEASONAL WEATHER UPDATES!!

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