

Caribbean Climate Outlook Newsletter – September to November 2022

For climate information specific to your country, please consult with your national meteorological service.
CariCOF outlooks speak to recent and expected seasonal climate trends across the Caribbean in general.

BRIEF SUMMARY: May to November 2022

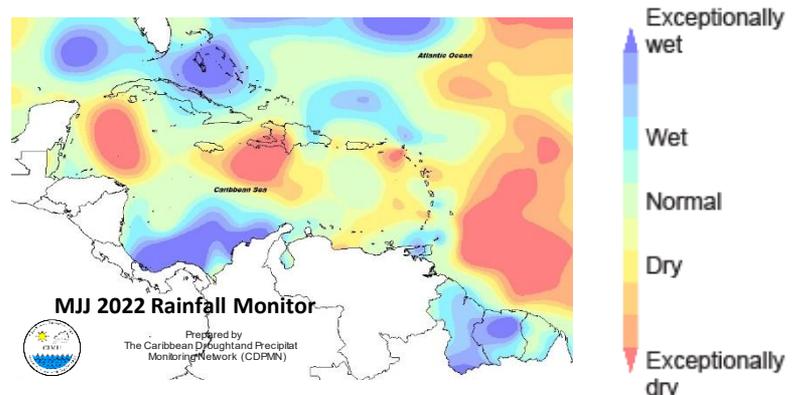
May to July 2022: The transition into the wet season was wetter than usual in the Bahamas (esp. in the northwest), northeast Belize, Cuba, far southern Guyana, and Suriname where disastrous floods occurred. Short-term drought developed in parts of the Dominican Rep., Haiti, Jamaica, the Leeward Is. and Puerto Rico. The transition into the 2022 Heat Season was warmer than usual in the northwestern Caribbean.

September to November 2022: The late portion of the wet/heat/hurricane season in the Caribbean Islands and in Belize is forecast to bring frequent tropical cyclone activity, heatwaves, wet days and wet spells, and high air humidity. This results in frequent disruptions of outdoor activities, heat discomfort and rising water levels in soils, rivers and reservoirs. The potential for flooding and cascading impacts will be high to extremely high. Heat stress will peak in September, but likely less than in recent hot years (e.g., 2020). Ongoing drought concerns should progressively subside. In the Guianas, the primary -- hot -- dry season should last into November, with relatively frequent dry spells, heatwaves and recurrent wet spells.

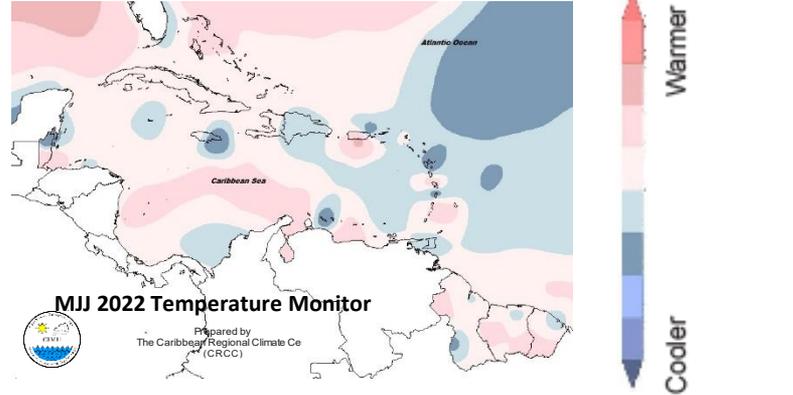
LOOKING BACK:

Rainfall May – Jun. – Jul. 2022

Observations:



RAINFALL: Guadeloupe, southwestern Hispaniola, southernmost Jamaica, St. Barts, St. Croix, Sint Maarten and in St. Vincent very dry; Bahamas, Central Cuba, most of Guyana and Suriname, Tobago very wet.

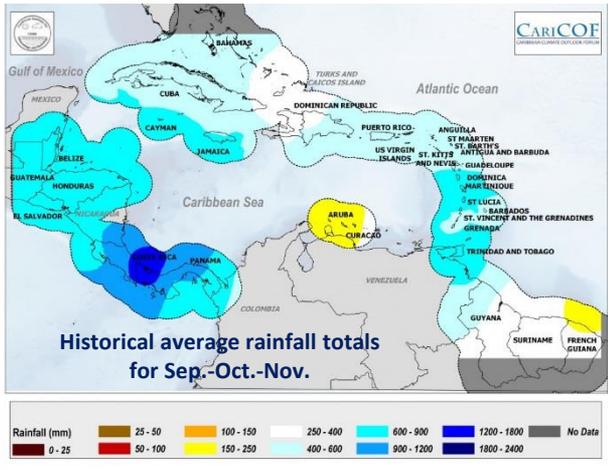


TEMPERATURE: Significantly warmer than usual in southern Puerto Rico, northern parts of The Bahamas, parts of the Guianas; signif. cooler than usual in northern Belize, Curaçao, Guadeloupe, and eastern Jamaica.

May-Jun.-Jul. records: 3 locations in Guyana, 1 in The Bahamas and 1 in Suriname recorded their **highest rainfall totals** for this period (~140-210% of avg.), while 1 location in the Dom. Rep. recorded its **lowest totals** (~5% of avg.).

WHAT NEXT?

Rainfall patterns September – October - November



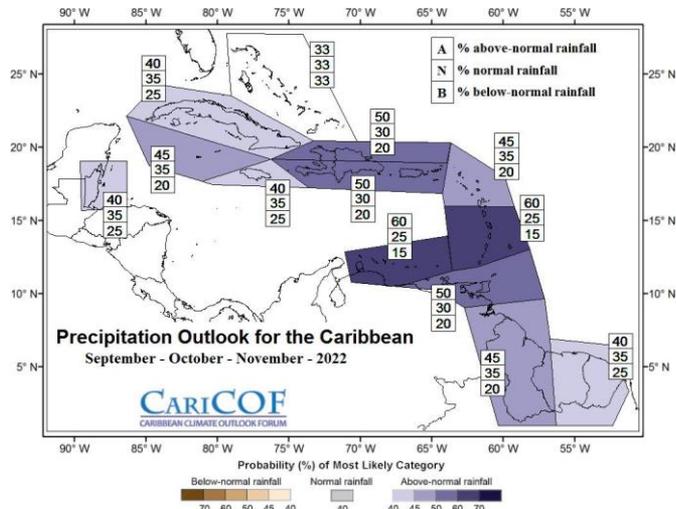
Belize & C'bean Islands north of 16°N:
 Sep. to Nov. – wet season. Usually frequent heavy showers.

C'bean Islands south of 16°N (except ABC Islands):
 Sep. to Nov. – wet season. Usually frequent heavy showers.

ABC Islands: Mostly dry with occasional wet spells.

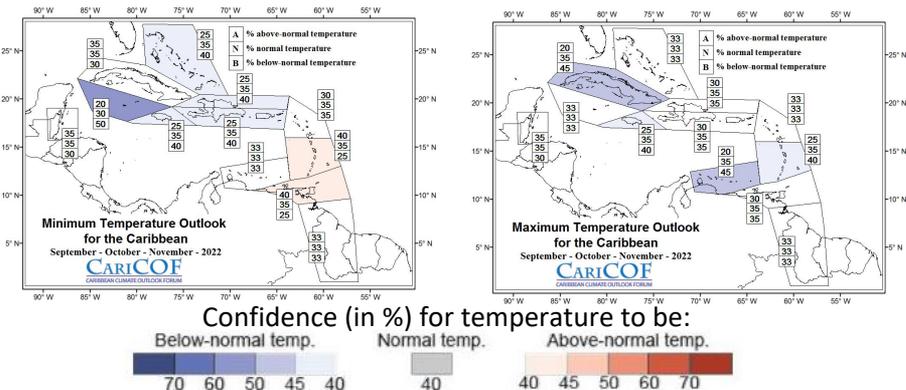
Guianas: Sep. to Oct. - Dry season with heavy showers at times.
 Nov. – Increase in showers.

SON 2022 Rainfall Outlook



Rainfall totals from September to November are likely to be at least as high as usual across most of the Caribbean Islands and the Guianas.
 White areas show where the forecast indicates little information on rainfall totals.

Night/Day – time temperatures up to November



SON night-time (min.) and day-time (max.) temperatures are expected to cool by the end of the season, which coincides with the conclusion of the Caribbean Heat Season. Seasonal average daytime temperatures may be cooler than usual, but recurrent heatwaves are still expected in September and, possibly, in October in the southern half of the region.

Wet days and wet spells up to November

What usually happens from September to November?

- Number of wet days: 35 to 50 (ABC Is.: 10 to 20, coastal Guianas: 20-35)
- # of wet spells: 3 to 6 (coastal Guianas: 1 to 3), of which 1 to 4 are very wet (coastal Guianas up to 2)
- # of extreme wet spells: up to 2. (Guianas: none)

Forecast and Implications for SON 2022:

- High to extremely high **potential for flooding, flash floods, and cascading hazards** in most islands and in Belize due to recurrent very wet & extreme wet spells.
- Fast **recharge rates** of large reservoirs and elevated **soil moisture** associated with frequent wet spells.
- Frequent **disruptions of outdoor activities & favourable conditions for moisture-related pests and diseases** in Belize and the Islands due to wet days.

Drought conditions

- Lastest drought situation (as of August 1st) : Severe (or worse) short-term drought has developed in Guadeloupe, southwestern Hispaniola, southernmost Jamaica, St. Barts, St. Croix, Sint Maarten and in St. Vincent; severe long-term drought has developed in Antigua, Western Cuba, southwest Haiti, Guadeloupe, eastern Jamaica, Martinique, St. Barts, St. Croix, Sint Maarten, St. Lucia, and St. Vincent.
- Short-term drought by the end of November 2022: Short-term drought is not expected to be a concern.
- Long-term drought by the end of November 2022: Long-term drought might possibly develop or continue for parts of Belize, Martinique and St. Vincent.

BRIEF CLIMATE OUTLOOK – December to February 2022 - 23

This period December through February marks: 1) the early dry season in the Caribbean Islands and Belize, except for the ABC Islands which transition into the long dry season; and 2) the secondary wet season in the coastal Guianas. A long lasting, weak La Nina event will likely persist alongside slightly above average sea surface temperatures north of the Caribbean. As a result, along with cooler temperatures, rainfall totals are expected to be the usual at best along the northwest of the region. By contrast, at least the usual rainfall is expected from Dominica southwards. Heat should not be a concern, but the frequency of dry spells will ramp up, potentially affecting rainfed, sensitive crops westwards of the Virgin Islands. *For temperature and precipitation outlooks for DJF 2022-23, please visit rcc.cimh.edu.bb/caricof-climate-outlooks.*

What influences the next season?

El Niño Southern Oscillation (ENSO)

Recent observations: Sea Surface Temperatures (SSTs) in the eastern Pacific remain below normal (i.e. -1°C); La Niña conditions have so far maintained for all of 2022.

Model forecast and guidance: The forecast models indicate La Niña conditions in SON (75-80% confidence), which may maintain into DJF (55-60% confidence).

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall activity in SON and DJF, except in the northern Caribbean where it tilts the odds to less rainfall. La Niña also tilts the odds for higher tropical storm frequency in the Atlantic Basin.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: Warmer than usual SSTs persisted up to 1°C above average around the western subtropical North Atlantic and in the Gulf of Mexico in July. Elsewhere in the Caribbean SSTs remained near normal.

Expected conditions: Models are forecasting SST to be slightly warmer than usual (up to 0.5°C above average) around the Caribbean and in the sub-tropical North Atlantic.

Expected impacts: 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.

Climate outlooks - background

The Caribbean Climate Outlooks are prepared by the Caribbean Climate Outlook Forum (CariCOF). The Caribbean Institute for Meteorology and Hydrology, in its role as WMO Regional Climate Centre, coordinates the CariCOF process. Contributors to the Outlooks are the Meteorological Services from the region. The Precipitation and Temperature Outlooks are issued in the form of a map, which shows regions where the forecast rainfall or temperatures have the same probabilities to be:

- Above-normal (A) - within the wettest/hottest third of the historical record
- Near-normal (N) - within the middle third of the historical record, i.e. a range called the 'usual'
- Below-normal (B) - within the driest/coldest third of the historical record

CariCOF Outlooks offer consensus-based information averaged across multiple territories. In some cases, individual national results may differ from region wide results. To get information on your specific country context, please consult your National Meteorological and Hydrological Services and/or any national level bulletins they may provide.

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