Caribbean Climate Outlook Newsletter - November to January 2022-23

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: July 2022 to January 2023

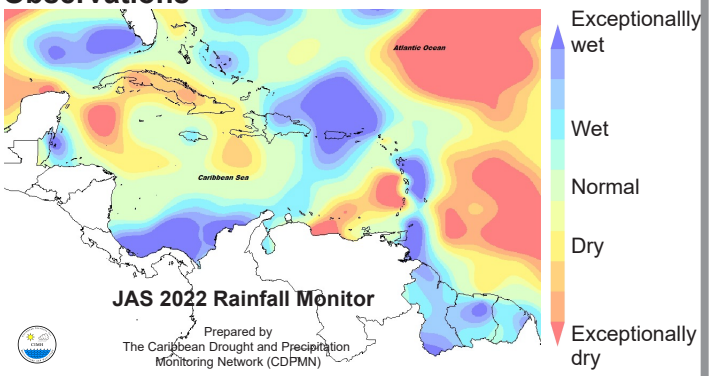
July to September 2022: With La Niña unfolding in the Pacific, only few areas received less than the usual amount of rainfall. Most areas recorded at least seasonably high -- or even higher -- rainfall totals for this portion of the wet season. Fewer heatwaves occurred than in recent hot years (such as 2020), but high humidity led to a peak in heat stress in September.

November 2022 to January 2023: This transition between wet and dry season is forecast to feature frequent wet days, excessive rainfall in the ABC Islands, Belize and the Lesser Antilles until December and the coastal Guianas through January. This results in frequent disruptions of outdoor activities and rising water levels in soils, rivers and reservoirs. The potential for floods and cascading hazards is high to extremely high in the ABC Is., Cayman Is., coastal Guyana, Dominican Rep., Lesser Antilles, western Jamaica and Suriname, and moderate to high in most other areas. Strong tropical cyclone activity may still develop until the end of the year, particularly over the Caribbean Sea. Temperatures return to being comfortable.

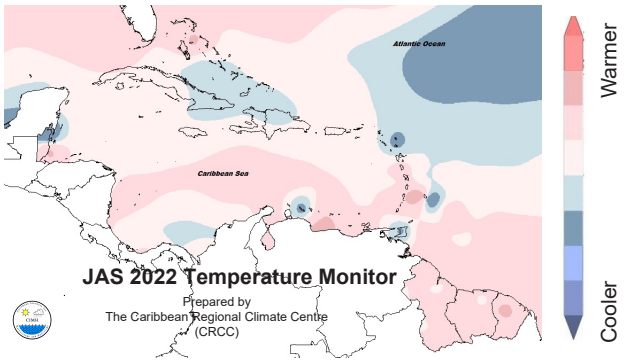
LOOKING BACK:

July - August - September (JAS) 2022

Observations



- **RAINFALL:** Parts of Cuba, St. Vincent very dry; Barbados Central Bahamas, Dominica, Dom. Rep., Guadeloupe, much of Guyana, Saint Lucia, Suriname and Trinidad & Tobago very wet.



- **TEMPERATURE:** Near average temperatures in much of the Caribbean, but Antigua, parts of Barbados, northern Belize, Curaçao and Trinidad were significantly cooler than usual.

Notable Climate Records:

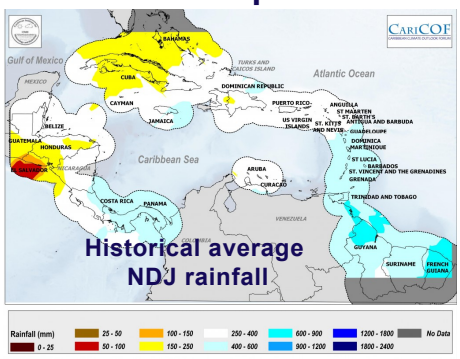
WET: *JAS:* 1 location in Dominica, 1 in Guyana, 1 in Martinique, 1 in Tobago recorded their highest rainfall totals for this period (~150-180% of avg.).

DRY: *JAS:* no lowest rainfall totals records measured for this period.

HOT: *JAS:* 1 location in Dominica recorded its highest daytime maximum temperature for this period.

WHAT NEXT?

Rainfall patterns Nov. - Dec. - Jan. (NDJ)



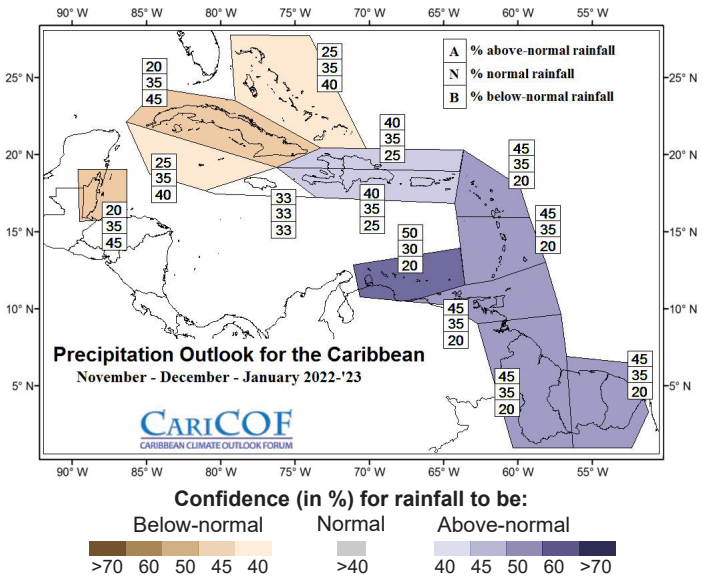
Guianas:
Nov to Jan - wet season. Frequent, heavy showers.

Belize :
Nov to Dec - wet season. Frequent heavy showers.
January - dry season. Few heavy showers in some years.

C'bean Islands north of 16°N:
Nov to Dec - transition to dry season. Decreasing shower frequency & intensity.
January - sunny days and some days with showers.

C'bean Islands south of 16°N (incl. ABC Islands):
Nov - wet season. Frequent heavy showers.
Dec to Jan - transition to dry season. Decreasing shower frequency & intensity.

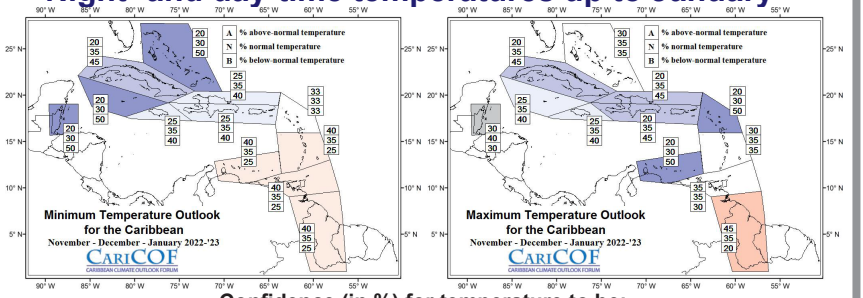
NDJ 2022-23 Rainfall Outlook



Confidence (in %) for rainfall to be:

Below-normal					Normal	Above-normal				
>70	60	50	45	40	>40	40	45	50	60	>70

Night- and day-time temperatures up to January



Confidence (in %) for temperature to be:

Below-normal					Normal	Above-normal				
>70	60	50	45	40	>40	40	45	50	60	>70

NDJ night-time (min.) and daytime (max.) temperatures are forecast to be close to the usual or slightly lower in many areas, except for Guyana and, at night, in Antilles south of Guadeloupe. Heat stress should rapidly decrease in the Guianas and, in the remainder of the region, no longer be a regular concern as the region transitions to the cool season.

Wet days and wet spells up to January

What usually happens from November to January?

- Number of wet days: roughly 35 to 50 (ABC Is: 20 to 45; coastal Guianas: 30 to 50).
- # of wet spells: 2 to 5, of which 1 to 3 are very wet (coastal Guianas: up to 2).
- # of extreme wet spells: up to 2 (Belize & Greater Antilles: up to 1)..

Forecast and Implications:

- **Flash flood, long-term flooding, land slide, rock fall and widespread soil erosion potential** remain a concern across Belize, the Islands and, from late-November, the coastal Guianas due to very wet spells and extreme wet spells.
- Decreasing surface wetness makes environmental conditions progressively less conducive to **mosquitoes & moisture related pests** Belize and the islands.

Drought conditions

Lastest drought situation: (*as of October 1st, 2022*)	Severe (or worse) short-term drought has developed in parts of Cuba and in St. Vincent; severe (or worse) long-term drought has developed in Antigua, Western Cuba, southwest Haiti, eastern Jamaica, Martinique, St. Barts, and St. Vincent.
Shorter term drought (at the end of Jan. 2023)	There is no concern for short term drought for the region at the end of January 2023.
Long term drought (at the end of Nov. 2022)	Long term drought might possibly develop or continue in western Belize, Sint Maarten / St-Martin, St. Vincent, and the USVI.

BRIEF CLIMATE OUTLOOK - February to April 2023

Indications are that the peak of the 2022-23 dry season may be characteristic of a La Niña event. Wetter than usual conditions are likely in the Guianas, the ABC Is. and the Lesser Antilles. However, it may possibly be even drier than usual in the Bahamas and the Greater Antilles westwards of Haiti. Frequent dry spells may impact crop production, particularly in the northwest of the region. Temperatures usually remain comfortable through March as the Caribbean cool season draws to an end, but tend to increase in April. It should be noted that Saharan dust incursions into the region may increase during this period. *For temperature and precipitation outlooks for FMA 2023, 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 NDJ (95% confidence), possibly reverting to neutral conditions by FMA (55-60% confidence).

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall NDJ and FMA, except in the northern Caribbean where it tilts the odds to less rainfall. ENSO neutral offers little contribution to seasonal rainfall or temperature prediction in the Caribbean.

Climate conditions in the Tropical North Atlantic and Caribbean

Recent observations: SSTs have risen to 0.5-1°C above average in much of the Caribbean Sea and the Tropical North Atlantic (TNA), and remain at that level in the sub-tropical North Atlantic.

Expected conditions: Models are forecasting observed SST to return to between 0°C and 0.5°C above average across the Caribbean Sea and the TNA.

Expected impacts: Warm SSTs in and around the Caribbean tends to contribute to higher air temperatures with above-average humidity, but also higher Atlantic Hurricane Season activity, seasonal rainfall totals in an increased frequency of extreme rainfall except in the north.

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 thay may provide.

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