

Caribbean Climate Outlook Newsletter - January to March 2023

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: September 2022 to March 2023

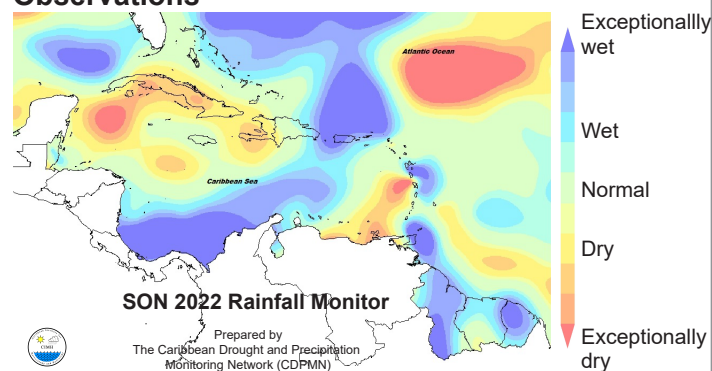
September to November 2022: As is often the case during a La Niña, Cuba received less than the usual amount of rainfall, while most areas recorded at least seasonably high -- or even far higher -- rainfall totals for the late wet season. Until October, episodes of heat stress occurred, but fewer than in recent hot years (e.g., 2020). Heat discomfort faded in November.

January to March 2023: With the likely exception of The Bahamas, Cayman Is. and Cuba, this period is forecast to feature a slower than usual decrease in rainfall, wet days, wet spells, and a slower increase in dry spells. Meanwhile, the likelihood of excessive rainfall resulting in high potential for flooding, flash floods and cascading hazards in the coastal Guianas will decrease to limited or moderate. Meanwhile, in the Caribbean Islands and in Belize, this potential should be marginal to limited. In contrast, drought concerns arise in Cuba, which may end up even drier than usual. No significant episodes of heat discomfort is expected in this part of the cool season.

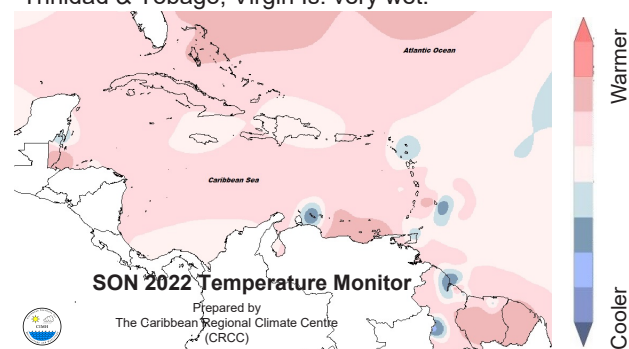
LOOKING BACK:

Sept. - Oct. - Nov. (SON) 2022

Observations



- **RAINFALL:** Central Cuba, southwest Haiti very dry; Central Bahamas, Dominica, French Guiana, Guadeloupe, much of Guyana, Puerto Rico, parts of coastal Suriname, Trinidad & Tobago, Virgin Is. very wet.



- **TEMPERATURE:** Near average temperatures for most; but parts of Barbados, Curaçao, parts of Guyana were significantly cooler than usual, while the Northwestern Bahamas, southern Belize, French Guiana and Suriname were signif. warmer than usual.

Notable Climate Records:

WET:SON: The majority of locations in Trinidad & Tobago, 2 locations in Guyana, 1 in Puerto Rico, recorded their highest rainfall totals for this period (~165-390% of avg.).

DRY:SON: 1 location in Puerto Rico recorded its lowest rainfall totals for this period (~40% of avg.).

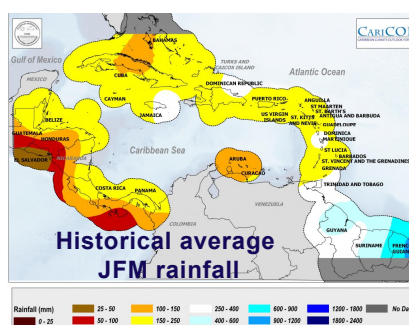
HOT:SON: 1 location in The Bahamas and 1 in Guyana recorded their highest daytime maximum and nighttime minimum temperature for this period, respectively.

December 2022

find out more by using the clickable images and headings or visit rcc.cimh.edu.bb

WHAT NEXT?

Rainfall patterns January-February-March (JFM)



Guianas:

Jan - wet season. Frequent, heavy showers.
Feb - Mar - dry season; occasional heavy showers and thunderstorms.

Belize :

Jan - start of dry season; occasionally still wet.
Feb to Mar - dry season. Mostly without heavy rainfall.

C'bean Islands north of 16°N:

Jan to Mar - sunny days and some days with showers.

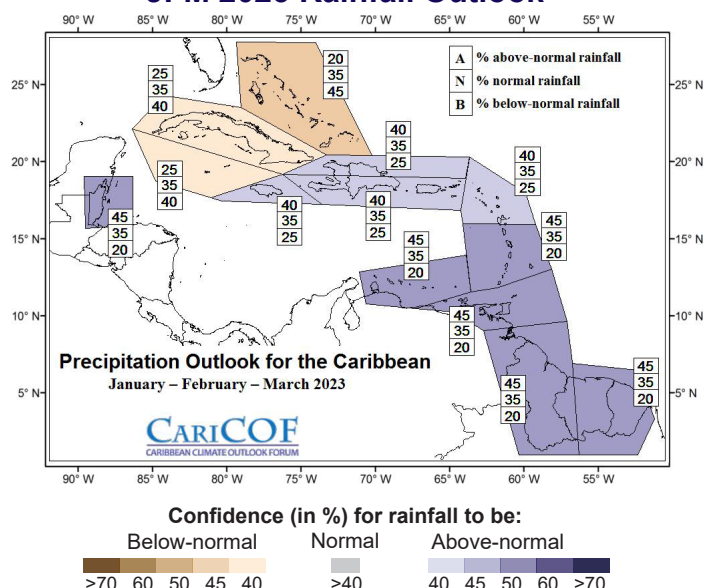
C'bean Islands south of 16°N (except ABC Islands):

Jan to Mar - sunny days and some days with showers.

ABC Islands:

Jan - wet season ending.
Feb to Mar - generally dry.

JFM 2023 Rainfall Outlook

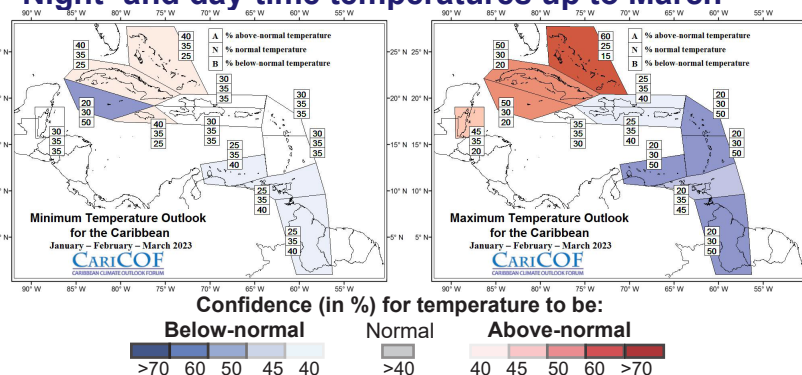


Rainfall totals from January to March are likely to be no higher than, but possibly even lower usual in The Bahamas, Cayman Is. and Cuba; but at least as high as usual in the rest of the region.

White areas show where the forecast indicates little information on rainfall totals.

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Night- and day-time temperatures up to March



JFM night-time (min.) and daytime (max.) temperatures are forecast to be close to the usual or slightly lower in most areas, except for The Bahamas, Belize, Cayman Is. and Cuba during the day. Heat stress should not be a significant concern as the Caribbean will be in its cool season, although areas in drought might see a heatwave in March.

Wet days and wet spells up to March

What usually happens from January to March?

- Number of wet days: roughly 15 to 30 (ABC Is: 10 to 25; coastal Guianas: 20 to 50).
- # of wet spells: up to 3 (ABC Is.: 1 to 4; Guianas: up to 4), of which up to 1 is very wet (ABC Is.: up to 2; Guianas: up to 3).
- # of extreme wet spells: up to 1 or two in the northern Guianas, virtually none elsewhere.

Forecast and Implications:

- High potential for flooding, flash floods and cascading hazards arising from very wet and extreme wet spells in the coastal Guianas through February; only slight potential elsewhere.
- Slower than usual depletion of large water reservoirs, except in the Bahamas, Cayman Is. and Cuba.
- Often favourable conditions for outdoor tourism activities, but rapidly increasing wildfire potential in Cuba.

Drought conditions

Latest drought situation: Moderate (or worse) short-term drought has developed in much of Cuba, western Haiti and in northwestern Martinique; moderate (or worse) long-term drought has developed in Antigua, Eastern and Western Cuba, southwest Dominican Republic, Haiti, eastern Jamaica, northwest Martinique, St. Barts, St. Vincent and northwest Suriname.

Short-term drought Short-term drought is evolving across Western Cuba and might possibly develop in southwest Belize, Grand Cayman, Central and Eastern Cuba, Guadeloupe, and southwest Puerto Rico.

Long-term drought Long-term drought is evolving along Western Cuba and might possibly develop or continue in western Belize, Grand Cayman, Central and Eastern Cuba, and eastern Jamaica.

BRIEF CLIMATE OUTLOOK - April to June 2023

Indications are that the transition between the dry and wet seasons may mark the end of an ongoing La Niña event. Shower intensity should slowly increase, but shower frequency may not increase before May (Guianas and Belize) or June, with a high frequency of dry spells until then. Drought concerns may further grow in Cuba and in small pockets of other areas. Flood potential will be increasing from limited in early-April to moderate by late-May across the region. Heat stress in the vulnerable population and small livestock will increase from April (Belize, Cuba and Trinidad) or May (elsewhere), especially in areas experiencing drought and during dry spells.

For temperature and precipitation outlooks for AMJ 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 a return to ENSO neutral conditions is possible in JFM (50-60% confidence) and likely by AMJ (65-70% confidence), with the possible development of El Niño conditions from then onwards.

Expected impacts on rainfall and temperatures: La Niña tilts the odds to more rainfall JFM, 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 hovered around 0.5°C above average in much of the sub-tropical North Atlantic, but returned to near average in the Caribbean Sea and the Tropical North Atlantic (TNA).

Expected conditions: Models are forecasting observed SST to remain 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 tend 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 they may provide.

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