

# CARIBBEAN AGRO-CLIMATIC BULLETIN OF THE CARISAM



MAY 2023 • VOLUME 6 • ISSUE 12

A joint bulletin of the Caribbean Agricultural Research and Development Institute (CARDI) and the Caribbean Institute for Meteorology and Hydrology (CIMH).

## KEY MESSAGES

**Long-term drought concerns are rising in Cuba, while the effects of frequent dry spells across the Islands and Belize will likely continue through May or June, with a peak in wild fire potential and Saharan dust intrusions.**

**Recurring heatwaves are possible in the Islands, but unlikely in the Leeward Islands.**

**The potential for flooding, flash floods and cascading hazards will be moderate.**

**Tropical cyclones may develop as early as May.**

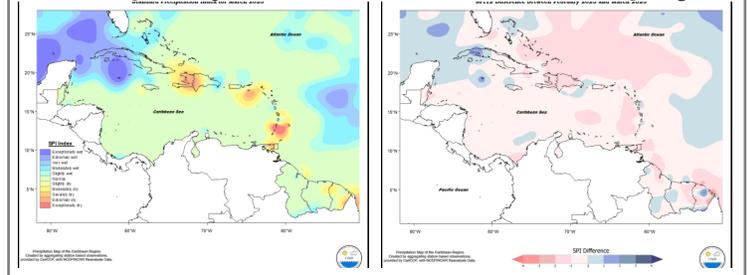
## MARCH IN REVIEW

Conditions throughout the eastern Caribbean were predominantly normal to below normal during the month of March, with the exception of Dominica which was slightly dry to predominantly slightly wet. Trinidad ranged from extremely dry in western areas to normal in the east; Grenada slight to severely dry; Barbados extreme to slightly dry; St Vincent exceptional to severely dry south to north; Saint Lucia, Guadeloupe, Antigua and St Thomas normal; Martinique, St Maarten and Anguilla moderately dry; St Kitts normal to slightly dry; and St Croix extreme to moderately dry. In the Guianas, conditions were predominantly normal, ranging from moderately wet on the southern Guyana/ Suriname border to extremely dry in south-eastern French Guiana. Aruba was normal to predominantly slightly wet and Curacao was normal.

Puerto Rico ranged from moderately dry in western areas to normal in the east. The Dominican Republic ranged from exceptionally dry in the extreme west to moderately wet in eastern areas. Jamaica was predominantly normal with slightly dry conditions in the west and slightly wet conditions in the north. Grand Cayman was exceptionally wet. Cuba ranged from extremely wet in the west to moderately dry in the extreme east. Northern Bahamas ranged from normal to moderately wet and Belize was moderately dry in the west to normal in the east.

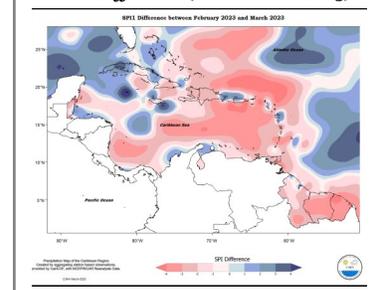
A review of the 12-month period (April 2022 to March 2023), showed predominantly normal to exceptionally dry conditions across the region (with the exception of Jamaica, Cuba and The Bahamas, which was normal to exceptionally wet).

MAR 2023 SPI (left) and 12-mth SPI APR 2022 - MAR 2023 (right)



The month of March was predominantly drier than February across most of the region.

SPI Difference (Feb and Mar 2023)



Read more at <https://rcc.cimh.edu.bb/spi-monitor/>

## AGRI-NEWS

**Jamaica:** Even though rainfall totals have increased, drought still continues to affect the country. Read more <https://jamaica-gleaner.com/article/news/20230426/rainfall-rebounded-march-drought-still>

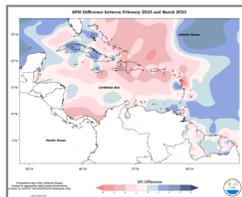
## ABOUT CariSAM

The Caribbean Society for Agricultural Meteorology (CariSAM) is an online platform that hosts forums, provided online weather and climate information for agro-meteorologists, and much more. Agricultural interests can register and access relevant information and be a part of future capacity building exercises, and more. Visit us at: [www.carisam.cimh.edu.bb](http://www.carisam.cimh.edu.bb)

**REGIONAL OUTLOOKS**

**DROUGHT**

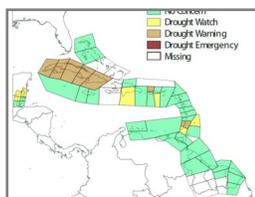
By the end of March, Moderate (or worse) short term drought has developed in Barbados, northeast Belize, southeast Cuba, most parts of Hispaniola, east Martinique, St. Vincent, U.S. Virgin Islands. Moderate (or worse) long term drought has developed in southwest Belize, westernmost Dominican Republic, Haiti, western and southern Jamaica, northern Martinique, western Puerto Rico, St. Kitts, and St. Vincent.



Short term drought alert levels at the end of July 2023  
Updated April 2023 – based on a 6-month SPI for January to June 2023

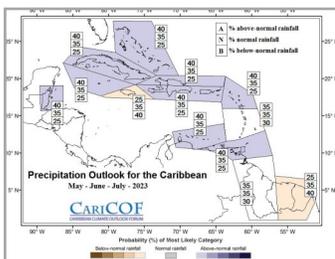
There may be some concern over short-term drought that can impact small rivers, streams and ponds, across western Belize, southern French Guiana by the end of July. Interests in these areas should monitor their water resources.

There is much concern for long-term drought, that can impact large reservoirs, large rivers or groundwater, to present a challenge in farming by the end of May 2023 across Cuba, northwest Puerto Rico, and St. Vincent. Interests in Barbados, northwest Belize, southern Dominican Republic, Grenada, and southeast Puerto Rico should also monitor their water resources.



Long term drought alert levels at the end of May 2023  
Updated April 2023 – based on a 12-month SPI for June 2022 to May 2023

**RAINFALL, WET/DRY SPELLS, TEMPERATURE and HEATWAVE DAYS (MAY—JULY 2023)**

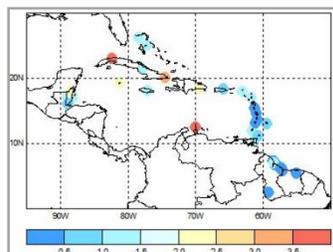
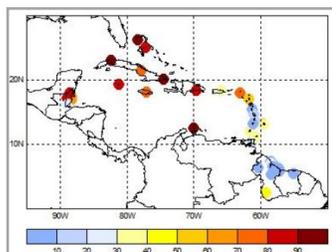


Rainfall totals from May through July are likely to be the usual or higher in Belize and The Bahamas, and across the Antilles. By contrast, eastern parts of the Guianas and Jamaica are likely to record the usual rainfall amounts at most.

Moderate flooding, flash flood, landslide/rockfall and soil erosion potential exists across the region in view of the likelihood of very wet spells and extreme wet spells. Decreasing surface dryness could make environmental conditions more conducive to moisture related pests, particularly in Belize and the Guianas.

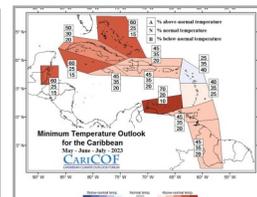
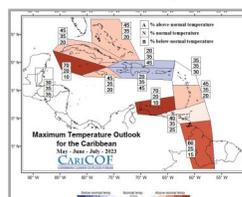
Probability of at least THREE 7-day dry spells in MJJ

Probability of at least ONE 15-day dry spell in MJJ



The occurrence of at least three 7-day dry spells is highly favourable across The ABC Islands, Belize, The Bahamas and the Greater Antilles.

Day-time (maximum) and night-time (minimum) temperatures are forecast to be close to the usual or higher in most areas, but possibly higher temperatures at night in the Leeward Islands and during the day in Hispaniola and Puerto Rico. The first part of the Heat Season (which lasts from April/May to October) may manifest in recurring heatwaves, sharply increasing heat stress.



Visit <http://rcc.cimh.edu.bb/climate-outlooks/> to access the latest climate outlooks.

**CLIMATE-SMART ADVISORIES**

**In the event of drought**, implement drought management plans by employing water management practices to enhance conservation and efficient use of water, some of these may include:

- ◆ Assess water resources and availability.
- ◆ Where irrigation resources are satisfactory, irrigation scheduling (irrigating early mornings and late afternoons to reduce evaporation and transpiration rates) with efficiency in water use would be necessary; where resources may be insufficient, determining what size field can be satisfied may be paramount.

**In the event of dry spells:**

- ◆ Ensure regular weeding to reduce competition and further stress to crops
- ◆ Schedule irrigation
- ◆ Utilize irrigation techniques to apply the right amount of water for the crop and to avoid runoff

**In the event of heat waves:**

- ◆ Take heed of signs of heat stress in ruminants (e.g., panting, drooling, sweating) and poultry (e.g., spreading out of wings, panting etc)
- ◆ Minimize the transportation of livestock as much as possible during the hottest times of the day. This can increase their body temperature and furthermore heat stress (consider transporting animals at night).
- ◆ Keep a reliable, clean, and cool source of water available to poultry and livestock. Monitor and maintain soil moisture during extremely hot and dry conditions to reduce impact of heat stress on crops.
- ◆ Farmers should avoid foods that increase dehydration and take breaks in cool, shady areas to reduce body temperature.

**Maintain proper records** of inputs and the crop under cultivation and/or livestock being reared.

**Be hurricane prepared!**

*Please also keep updated and take into consideration your local weather and climate advisories.*

**Disclaimer**

The information contained herein is provided with the understanding that the CARDI, and the CIMH make no warranties, either expressed or implied concerning the accuracy, completeness, reliability or suitability of said information. This bulletin provides a broad overview of climate conditions up to 6 months in advance. It is recommended that stakeholders should use this information in combination with nearer term weather forecasts to guide operational decision making. The bulletin may be freely used by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material.

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