

CARIBBEAN AGRO-CLIMATIC BULLETIN OF THE CARISAM



JANUARY 2023 • VOLUME 6 • ISSUE 8

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

KEY MESSAGES

The likelihood for below normal rainfall in Cuba can result in short and long term drought, by the end of March and May respectively, particularly in western areas.

Slower than usual decrease in rainfall, wet days, wet spells, and a slower increase in dry spells across the region, with the likely exception of The Bahamas, Cayman Islands and Cuba.

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.

No significant episodes of heat discomfort is expected in this part of the cool season.

NOVEMBER IN REVIEW

Predominantly normal to above normal conditions prevailed throughout the islands of the eastern Caribbean during the month of November. Trinidad ranged from normal to predominantly exceptionally wet; Tobago exceptional to very wet; Grenada and Saint Lucia moderate to slightly wet; Barbados slightly dry in the south to predominantly normal; St Vincent, St Kitts and St Croix normal; Martinique and Guadeloupe moderately wet to moderately dry; Dominica and St Maarten normal to moderately wet; Antigua and St Thomas normal to slightly wet and Anguilla moderate to very wet. In the Guianas, conditions ranged from slightly dry to exceptionally wet. Aruba was normal to slightly wet and Curacao was moderate to predominantly very wet.

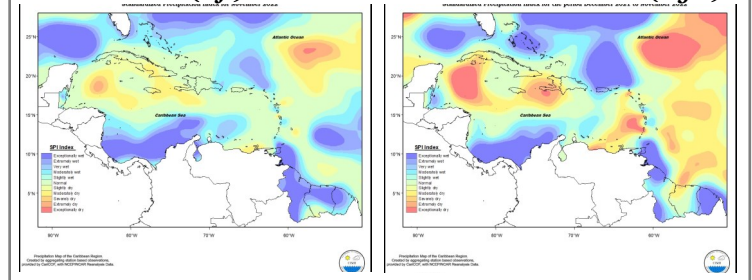
Puerto Rico was normal. Hispaniola was predominantly normal ranging to moderately dry in the extreme southwest of Haiti and to very wet in the extreme east of the Dominican Republic. Jamaica ranged from normal in the west to moderately dry in the east. Grand Cayman was normal. Cuba ranged from moderately wet in the extreme west to moderately dry in the southeast. Both Northern Bahamas and Belize ranged from normal to extremely wet.

ABOUT CarisAM

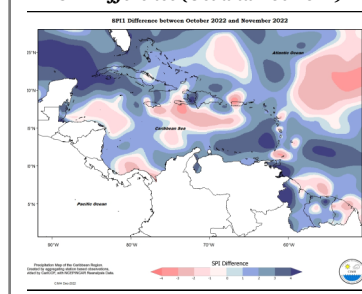
The Caribbean Society for Agricultural Meteorology (CarisAM) is an online platform that hosts forums, provided online weather and climate information for agro-meteorologists, and much more. Agricultural interests can register and access relevant information and be a part of future capacity building exercises,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

A review of the 12-month period (December 2021 to November 2022), showed a mixture of conditions across the Caribbean with exceptionally wet conditions across Puerto Rico, Trinidad and Tobago and parts of the Guianas and exceptionally dry across St. Vincent and the westernmost tip of Haiti.

NOV 2022 SPI (left) and 12-mth SPI DEC 2021–NOV 2022 (right)



SPI Difference (Oct and Nov 2022)



Rainfall totals across the month of November had been predominantly relatively wetter than October across most of the region and drier across Puerto Rico, Barbados, Tobago, western tip of Haiti, much of Jamaica, and parts of the Guianas.

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

AGRI-NEWS

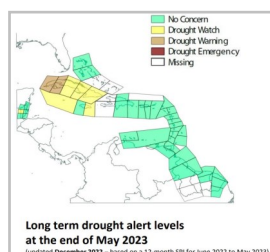
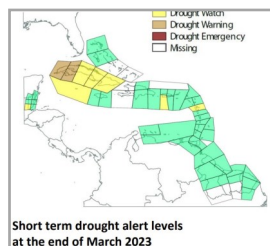
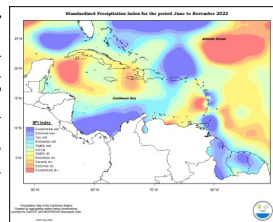
Cuba: Droughts, Rising seas put Cuba's agriculture at risk. Read more <https://apnews.com/article/business-cuba-caribbean-droughts-economy-be688d051fc0c9f4bab6bd9c72d7c205>

Guyana: Flood waters affected livestock and farmlands. Read more <https://newsroom.gy/2022/12/13/flood-waters-receding-in-some-regions-affected-livestock-and-farmlands-being-monitored/>

REGIONAL OUTLOOKS

DROUGHT

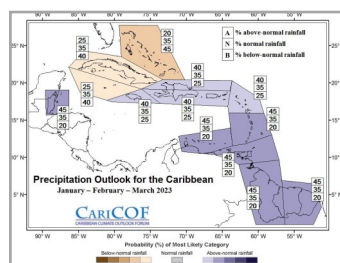
By the end of November, severe (or worse) short term drought has developed in Cuba and Haiti. Severe (or worse) long term drought has developed in Western Cuba, southwest Haiti, eastern Jamaica, Martinique, Sint Maarten, and St. Vincent.



By the end of March 2023, there is some chance of impacts from short-term drought across western Cuba and possibly southwest Belize, Grand Cayman, Central and Eastern Cuba, Guadeloupe, and southwest Puerto Rico.

There is some possibility 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, particularly in western Cuba. Interests in western Cuba, Grand Cayman, Central and Eastern Cuba, and eastern Jamaica should continue to monitor their water resources.

RAINFALL, WET/DRY SPELLS, TEMPERATURE and HEATWAVE DAYS (JANUARY–MARCH 2023)



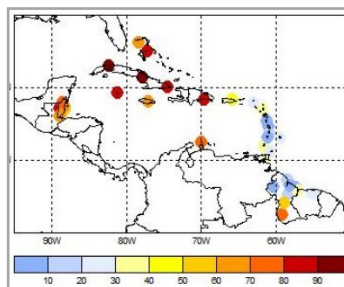
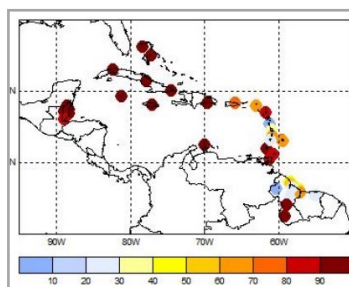
Rainfall totals from January through March could be normal to below normal across The Bahamas, Cuba and Cayman Islands and normal to above normal elsewhere.

Concerns remain for the potential of flash floods, long-term flooding, landslides, rock-fall and soil erosions across coastal Guianas

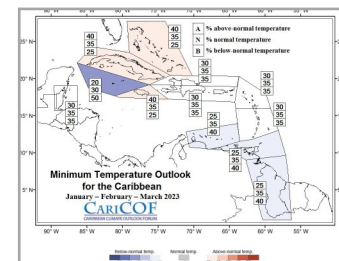
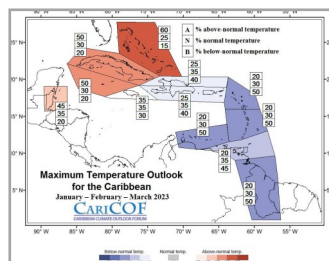
through February. Slower depletion of large water reservoirs except in The Bahamas, Cayman Islands and Cuba. Rapidly increasing wildfire potential across Cuba.

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

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



The occurrence of at least three 7-day dry spells is highly favourable across most of the region. The occurrence of at least one 15-day dry spell is favourable across the region (except the eastern Caribbean and Guyana).



Day-time (maximum) and night-time (minimum) temperatures are expected to be close to the usual or lower in many areas, except for The Bahamas, Cuba and Belize during the day and The Bahamas, Cuba and Cayman Islands at night. Heat stress should not be a concern as the Caribbean will soon be in its cool season, although areas in drought might see a heatwave in March.

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

CLIMATE-SMART ADVISORIES

In the event of flooding from very wet and extreme wet spells across coastal Guianas:

- ◆ Ensure that livestock are housed on high ground; be prepared to evacuate animals in low lying areas and pastures which are prone to flooding and erosion.
- ◆ Secure inventory: Store chemicals, fertilizers, feeds, machinery etc. on high ground away from moisture prone areas and livestock.
- ◆ Maintain drains around crop bed to ensure proper drainage of water. Also, to improve soil drainage, plant crops on raised beds

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 short term drought (particularly Cuba), implement drought management plans by employing water management practices to enhance conservation and efficient use of water, some of these may include:

- ◆ Irrigation scheduling (irrigating early mornings and late afternoons to reduce evaporation and transpiration rates)
- ◆ Applying mulch for moisture conservation in the soil.

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

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.

CONTACT US:

Adrian Trotman
Agro-meteorologist/ Chief of Applied Meteorology and Climatology, CIMH
Email: atrotman@cimh.edu.bb

Shontelle Stoute
Technical Officer, CIMH
Email: [sstoute@cimh.edu.bb](mailto:ssoute@cimh.edu.bb)

Kistian Flemming
Climate Change Development Specialist, CARDI
Email: kflemming@cardi.org