

# CARIBBEAN AGRO-CLIMATIC BULLETIN OF THE CARISAM



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

## KEY MESSAGES

A decrease in water levels of surface reservoirs and ponds are quite likely across southwest and western Belize and there is some chance of similar conditions across eastern and south-eastern Belize, Barbados, Saint Lucia and St. Vincent.

Frequent dry spells from the Dominican Republic westwards would increase the need for irrigation and local airborne dust.

From April onwards, the potential for flood-related hazards and progressively rising heat discomfort are expected across the region.

## DECEMBER IN REVIEW

The islands of the eastern Caribbean were predominantly normal to below normal during the month of December. Trinidad and Tobago ranged from normal to extremely dry; Grenada slightly wet to normal; Barbados, Antigua, St Kitts and St Croix normal; St Vincent and Saint Lucia moderately dry; Martinique slightly dry in the southeast to severely dry in the northwest; Dominica and Guadeloupe moderately dry to normal; St Maarten normal to Moderately dry; Anguilla normal to slightly dry; and St Thomas slightly dry. In the Guianas, conditions ranged from exceptionally wet in the vicinity of the central and southern Suriname/French Guiana border, to extremely dry in south-eastern French Guiana, and to slightly wet in northeast and southern Guyana. Aruba and Curacao were normal.

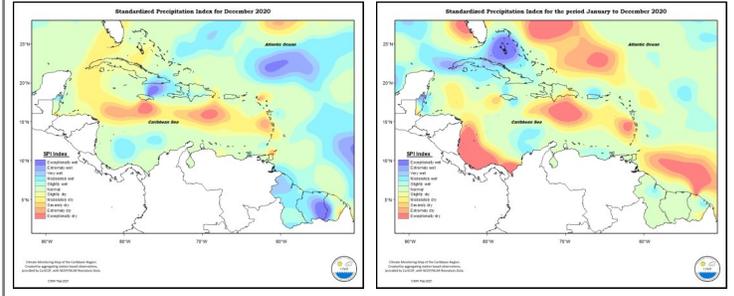
Puerto Rico was normal. Hispaniola ranged from moderately wet in the extreme northwest of Haiti and on the southern border to slightly dry in the north and moderately dry in the extreme east of the Dominican Republic. Jamaica ranged severely dry in southern areas to extremely dry in the north. Grand Cayman was normal. Cuba ranged from moderately dry in the west to extremely wet in the east. Northern Bahamas was normal to moderately dry and Belize ranged from moderately dry in the south to moderately wet in the north.

The 12-month review of rainfall shows dry conditions have been alleviated across most of the region with the exception of some territories of the Eastern Caribbean, and a portion of the Dominican Republic.

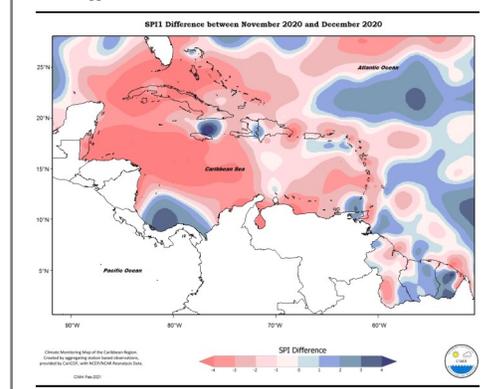
## ABOUT CariSAM

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)

## DEC 2020 SPI (left) and 12-month SPI JAN - DEC 2020 (right)



## SPI Difference (November and December 2020)



The month of December was predominantly relatively drier than November across most of the region.

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

## AGRI-NEWS

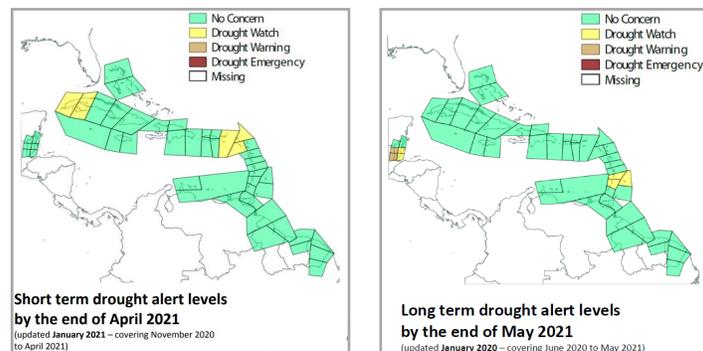
Jamaica Agriculture Ministry preparing for dry season. Several measures are being implemented "to manage, in a proactive way, the execution of the drought management plan for the sector". Read more <https://jis.gov.jm/agriculture-ministry-preparing-for-dry-season/>

In Guyana, several emergency measures have been put in place to address flooding. Read more <https://agriculture.gov.gy/2021/01/05/pm-agri-minister-assess-flooding-in-charity/>

## REGIONAL OUTLOOKS

### DROUGHT

As at the end of December 2020, moderate (or worse) shorter term drought has developed in southernmost parts of Hispaniola. Moderate (or worse) long term drought has developed in southwestern Belize, along the southern coastline of Hispaniola, along the Windward Islands, Tobago and on the north coast of French Guiana.



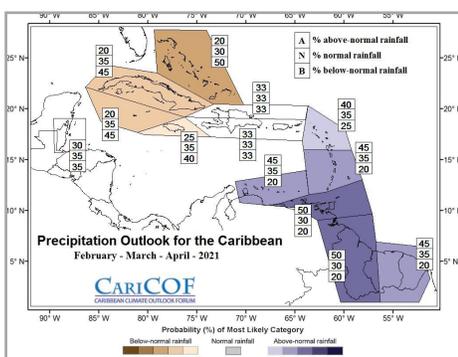
By the end of April 2021, there is some chance for impacts from short-term drought in Western Cuba, St. Kitts, Sint Maarten, and the US Virgin Islands. **This situation should be monitored.**

However, concerns for long-term drought (by end of May 2021) could present a challenge in farming, especially where water supply is sourced from larger reservoirs, large rivers or groundwater, across southwest and western Belize and could possibly develop across Barbados, eastern and southeastern Belize, Saint Lucia and St. Vincent.

**Interests across the region should continue to monitor their water status.**

### RAINFALL, WET/DRY SPELLS, TEMPERATURE and HEATWAVE DAYS (FEBRUARY–APRIL 2021)

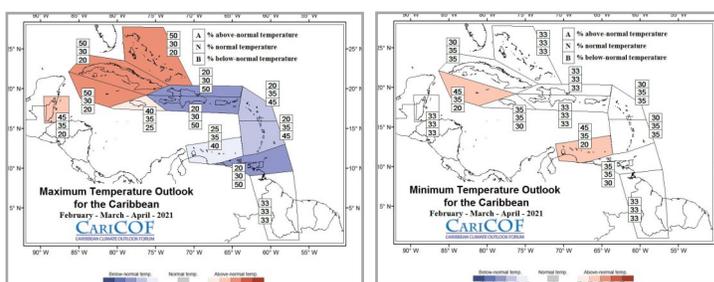
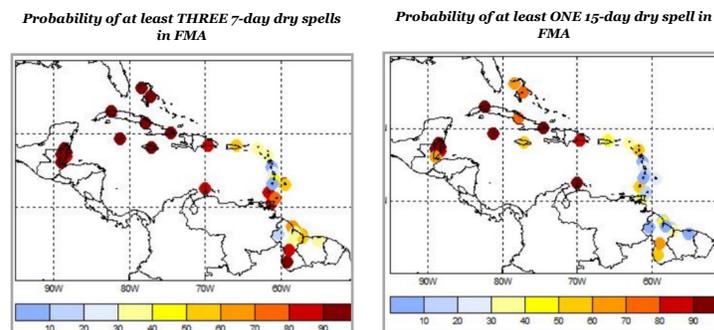
Rainfall totals from February to April are likely to be at least as high as usual in the ABC Islands, the Guianas and the Lesser Antilles; but likely the usual or drier in the Bahamas, the Cayman Islands, Cuba and Jamaica.



The likelihood/chance for flooding, flash flood, landslide/rockfall and soil erosion in Belize and the islands through March is marginal. Moderate potential in the northern Guianas and mountainous areas, particularly in April, in view of very wet and extreme wet spells.

Slower depletion of water reservoirs than usual for the core of the dry season from Dominica southwards in view of a higher than usual number of wet spells. Increasing wildfire potential and local airborne dust from Hispaniola westwards. Slower increase from Dominica southwards.

The occurrence of at least three 7-day dry spells is highly likely across The Bahamas, Belize, most of the Greater Antilles, The ABC Island, Trinidad and Tobago and parts of the Guianas.



Night-time (minimum) and day-time (maximum) temperatures will progressively warm into April, but remain comfortably cool until March. Daytime temperatures are likely to be at least as warm as usual in Belize and Cuba (where heatwaves are expected in April), as well as The Bahamas and Jamaica, but possibly cooler than usual in other islands. At higher elevations and in Belize, some cold nights are expected through early March.

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

### CLIMATE-SMART ADVISORIES

- ◆ Supplemental irrigation may be necessary for areas likely to be impacted by dry 7-day and 15-day dry spells.
- ◆ Irrigation supplies in the south and southwestern area of Belize will be limited by the end of May.
- ◆ Agricultural pest and diseases may increase after excess periods of precipitation. Monitor and employ recommended treatment as necessary.

**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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