

# CARIBBEAN AGRO-CLIMATIC BULLETIN OF THE CARISAM



MARCH 2021 • VOLUME 4 • ISSUE 11

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

## KEY MESSAGES

**Moderate to high potential for flooding, flash floods and related hazards, particularly in the Guianas due to recurrent very wet spells.**

**By the end of the 2021 dry season there may be concern for short-term drought across the Greater Antilles and the Lesser Antilles from Hispaniola eastwards. Long term drought may be of concern particularly for Antigua and St. Kitts.**

**Frequent dry spells are expected in Belize and the islands, and may spark some heatwaves in Belize and Trinidad and, as of May, elsewhere.**

## FEBRUARY IN REVIEW

Mixed conditions prevailed throughout the islands of the eastern Caribbean during the month of February. Trinidad, Barbados, Saint Lucia and Martinique moderately wet to normal; Tobago and Dominica normal to very wet; Grenada slightly wet to normal; St Vincent, St Maarten, Anguilla and St Thomas normal; Guadeloupe extremely wet in the west to moderately dry in the east; Antigua slight to moderately dry; St Kitts slightly dry and St Croix slightly dry to normal. Conditions in the Guianas ranged from very wet in the vicinity of the southern border of Guyana/Suriname to moderately dry in northeastern Guyana and northern French Guiana. Curacao moderately wet and Aruba normal.

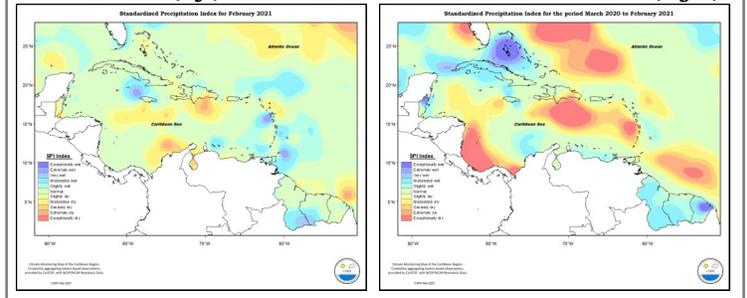
Puerto Rico ranged from moderately dry in western areas to slightly wet in the northeast. Hispaniola ranged from severely dry to slightly wet. Jamaica ranged from moderately dry in southern areas to very wet in the west and to moderately wet in the east. Grand Cayman was normal. Cuba was predominantly normal ranging to slightly dry in the extreme east and to moderately wet in the southeast. Northern Bahamas ranged from normal to slightly dry and Belize ranged from severely dry in the west to normal in eastern and northeastern areas.

## ABOUT CariSAM

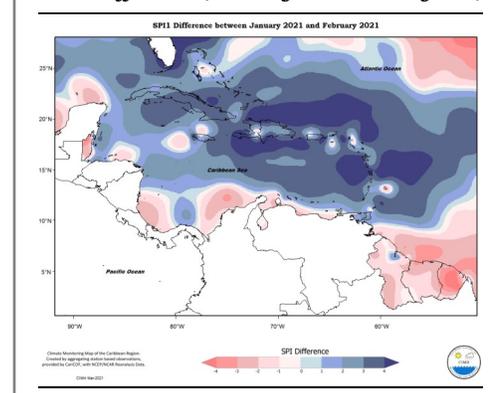
The Caribbean Society for Agricultural Meteorology (CariSAM) is an online platform that hosts forums, provided online weather and climate information for agro-meteorologists, and much more. Agricultural interests can register and access relevant information and be a part of future capacity building exercises,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

For the 12-month period rainfall was well above normal in the north-western section of The Bahamas and Cuba, northern Belize, parts of Jamaica and the Guianas.

### FEB 2021 SPI (left) and 12-month SPI MAR 2020–FEB 2021 (right)



### SPI Difference (January and February 2021)



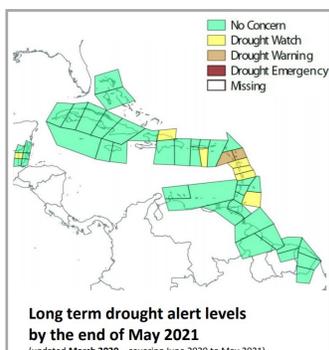
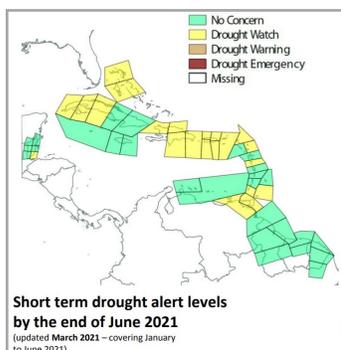
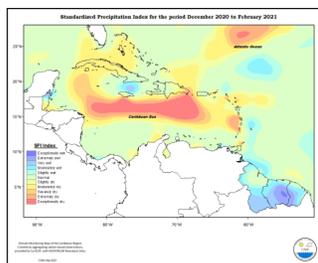
Relatively high moisture levels were experienced in February across the region in comparison to January, with the exception of Belize, Barbados, and the Guianas.

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

## REGIONAL OUTLOOKS

### DROUGHT

As at the end of February 2021, moderate (or worse) shorter term drought has developed in Antigua, the northwestern and central Bahamas, Grand Cayman, south Belize, central and western Cuba, southwest Dominica, eastern Dominican Republic, southernmost Jamaica, Martinique, St. Kitts, St. Thomas, St. Vincent, Tobago. Moderate (or worse) long term drought has developed along the southern coast of Hispaniola, St. Kitts and along the west coasts of the Windward Islands.



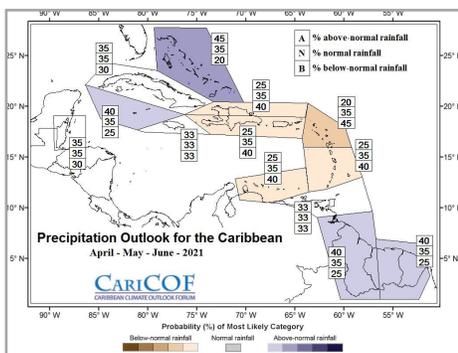
By the end of June 2021, there is some chance for impacts from short-term drought in Antigua, the north-western Bahamas, southeast Belize, Dominica, Central and Western Cuba, Grenada, Hispaniola, Puerto Rico, Sint Maarten/St-Martin, Trinidad and Tobago and US Virgin Islands. **This situation should continue to be monitored.**

However, long-term drought that can impact large reservoirs, large rivers or groundwater would likely present a challenge in farming across Antigua and St. Kitts, by the end of May 2021. This situation might possibly develop in parts of western Belize, Dominica, northern parts of the Dominican Republic, Guadeloupe, Martinique, southeast Puerto Rico, and Tobago.

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

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

Rainfall totals from March to May are likely to be at least as high as usual in The Bahamas, Cayman Islands, and the Guianas; but likely at most the usual in the ABC Islands, Hispaniola, the Leeward and Windward Is. and the US Caribbean Territories.

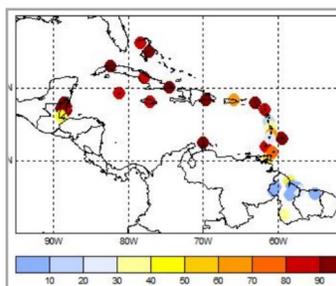


There is growing concern for flash floods and flooding where there are extremely wet spells especially across the Guianas.

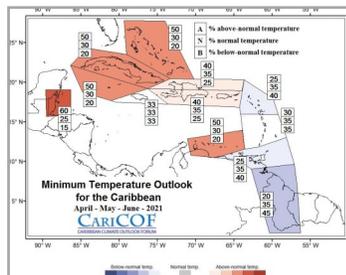
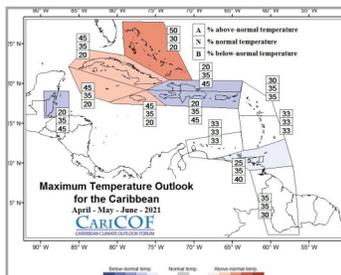
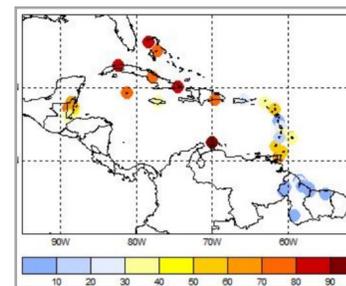
Relatively fast depletion of large water reservoirs across the Caribbean islands until the end of the dry season due to the low frequency of wet spells is likely.

The occurrence of at least three 7-day dry spells is highly likely across the region with the exception of the Guianas. The occurrence of at least one 15-day dry spell is highly likely across Cayman Islands, The Bahamas, northwest Cuba, and the ABC Islands.

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



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



Day-time (maximum) and night-time (minimum) temperatures will progressively warm into May, which marks the start of the Caribbean Heat Season. Temperatures are likely to be at least as warm as usual in the islands westwards of Hispaniola (and, at night, also in the ABC Is. and Belize), where heat stress may become apparent.

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

### CLIMATE-SMART ADVISORIES

With the possibility of flood producing rains, particularly in the Guianas:

- ◆ Maintain drains around crop beds and/or plant crops on raised beds; house animals on high ground and/or on raised pens; store fertilizer away from moisture and water sources

Consider on-farm drought management plans in the event of a likely occurrence of dry spells and short-term drought conditions. These may include:

- ◆ Identifying alternate water sources for on-farm activities; employing water management techniques such as irrigation scheduling and mulching; installing water-saving devices
- ◆ Selecting drought tolerant crops and varieties and planting them with careful thought of the availability of water resources

Pest and diseases may increase in extreme dry and wet conditions. 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.

### CONTACT US:

**Adrian Trotman**  
Agro-meteorologist/ Chief of Applied Meteorology and Climatology, CIMH  
Email: [atrotman@cimh.edu.bb](mailto: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](mailto:kflemming@cardi.org)