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

Long-term drought concerns are rising in Cuba.

The frequency of short dry spells will peak across the Antilles, increasing wild-fire potential and the likelihood of heatwaves in Belize, Cuba, Jamaica and Trinidad.

The potential for flooding, flash floods and cascading hazards will be slight for most areas in March but, with the exception of the ABC Islands, will increase to moderate or high into May.

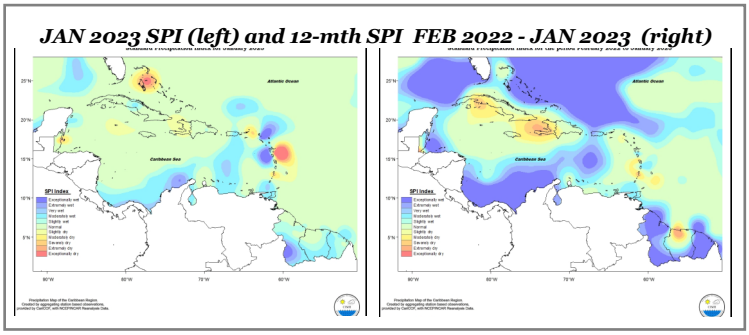
JANURARY IN REVIEW

Mixed conditions prevailed throughout the islands of the eastern Caribbean during the month of January. Grenada was moderately wet to normal; Barbados slightly dry in the south to predominantly normal; St Vincent severe to slightly dry; Saint Lucia slightly wet to normal; Martinique ranged from normal in the south to slightly wet on the northern coast and moderately dry in the east; Dominica ranged from extremely wet in the south to slightly wet in the north and severely dry in the northeast; Guadeloupe ranged from extremely wet in the west to severely dry in the east; Antigua predominantly slight to moderately wet in the north; St Kitts and St Maarten normal to very wet; Anguilla normal to moderately wet; St Croix normal and St Thomas normal to slightly dry. In the Guianas, conditions ranged from exceptionally wet in southwestern Guyana to normal in northern areas of Guyana and Suriname as well as north-eastern French Guiana. Aruba was normal and Curacao normal to slightly wet.

Puerto Rico ranged from normal to moderately wet. The Dominican Republic was predominantly normal with slightly dry areas in the extreme west and a slightly wet area in a south-central area. Jamaica was normal. Grand Cayman was slightly dry. Cuba was predominantly normal ranging to moderately wet in central areas and slightly dry in the extreme east. Northern Bahamas ranged from normal to exceptionally dry and Belize was predominantly normal ranging to severely dry in the east.

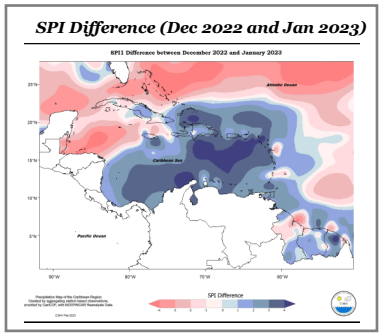
A review of the 12-month period (February 2022 to January 2022), showed predominantly normal to exceptionally wet conditions across the region. However, Suriname, Haiti, and western Cuba were normal to exceptionally dry.

JAN 2023 SPI (left) and 12-mth SPI FEB 2022 - JAN 2023 (right)



Rainfall totals across the month of January had been predominantly relatively wetter than December across most of the region with the exception of north-western Bahamas, part of Cuba, Belize, Barbados and Guyana.

SPI Difference (Dec 2022 and Jan 2023)



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

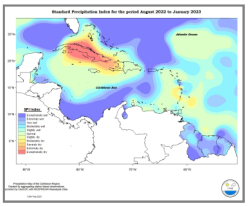
ABOUT CariSAM

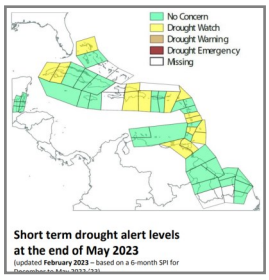
The Caribbean Society for Agricultural Meteorology (CariSAM) is an online platform that hosts forums, provided online weather and climate information for agro-meteorologists, and much more. Agricultural interests can register and access relevant information and be a part of future capacity building exercises,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

REGIONAL OUTLOOKS

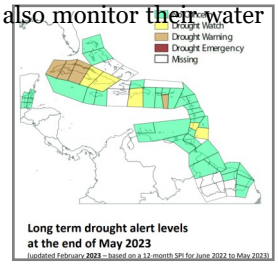
DROUGHT

By the end of January, severe (or worse) short term drought has developed in Central and Eastern Cuba, Jamaica and northern Martinique. Severe (or worse) long term drought has developed in Central and Eastern Cuba, parts of Haiti, northern Martinique and in St. Vincent.



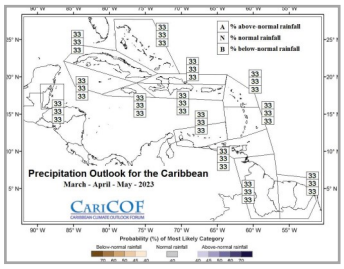


There is some concern over short-term drought that can impact small rivers, streams and ponds, across western Cuba by the end of April. Interests in Antigua, Eastern Cuba, Guadeloupe, northern Hispaniola, southwest Puerto Rico, and St. Kitts should also monitor their water resources.



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. Interests in Northern Bahamas, Barbados, Western Cuba, Dominica, Dominican Republic, Martinique, Puerto Rico, St. Barts, Sint Maarten/St-Martin, St. Vincent, Trinidad and Tobago, and the USVI. should also monitor their water resources.

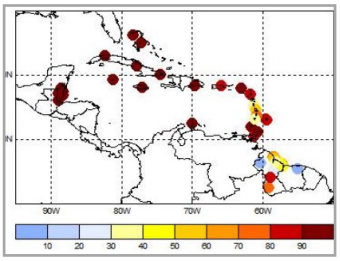
RAINFALL, WET/DRY SPELLS, TEMPERATURE and HEATWAVE DAYS (MARCH—MAY 2023)



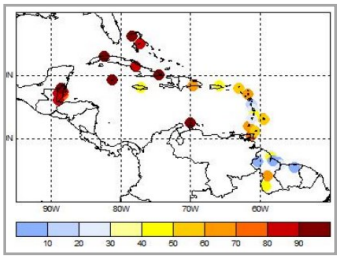
There is much uncertainty regarding rainfall totals from March through May.

However, slight flooding, flash flood, landslide/rockfall and soil erosion potential exists in March. Moderate potential in the northern Guianas and mountainous areas in April, as well as in most areas in May in view of the likelihood of very and extreme wet spells. Increasing wildfire potential and local airborne dust from Hispaniola westwards with a lower potential from Dominica southwards.

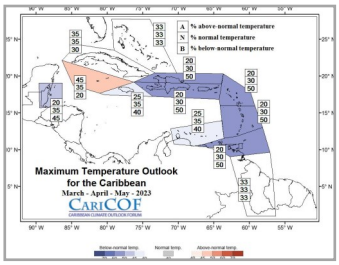
Probability of at least THREE 7-day dry spells in MAM

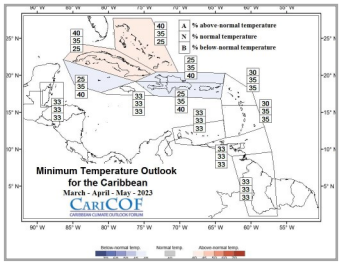


Probability of at least ONE 15-day dry spell in MAM



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 The ABC Islands, Belize, Cayman Islands, Cuba, and north-western Bahamas.





Day-time (maximum) and night-time (minimum) temperatures are expected to be close to the usual or slightly lower in most areas, but possibly higher temperatures at night in Cuba and the Bahamas and during the day in Cayman Islands. Regardless, heat stress should not be a significant concern through March. However, heatwaves do occur in April (outside of the defined Caribbean Heat Season), especially in Belize and Trinidad, and in areas in drought.

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:

- 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 field can be satisfied may be paramount.
- Applying mulch for moisture conservation in the soil.

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 the threat from bush fires:

- Keep farm clean and free from trash and combustible material
- Store combustible substances (e.g. fuel) safely
- Ensure that machinery is free from any faults or mechanical defects that could start a fire
- Have a supply of water readily available in case of fire.

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.

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