

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

North Atlantic temperatures should remain well above average, continuing to (1) fuel unusually strong tropical cyclone activity; (2) amplify heat stress through October with higher temperatures, humidity and heatwave frequency (fueling a record-breaking Caribbean Heat Season); and (3) increase shower intensity during the peak of the Wet Season, leading to a high potential for flooding and cascading hazards.

A moderate to strong El Niño in the Pacific should dampen rainfall frequency in Belize and the southern Caribbean, where drought concerns arise. Heat and drought are a growing concern in the coastal Guianas, as is flood potential through December.

AUGUST IN REVIEW

Predominantly normal to below normal conditions were seen throughout the eastern Caribbean during the month of August, except for St Maarten and Anguilla which were moderately wet. Trinidad ranged from moderate to exceptionally dry; Grenada moderately dry; Barbados, Martinique, Antigua, St Kitts and St Croix normal; St Vincent moderate to predominantly slightly dry; Saint Lucia, Dominica, Guadeloupe and St Thomas slightly dry to normal. In the Guianas conditions ranged from mostly normal to exceptionally dry in northern parts of Guyana, Suriname and French Guiana and to extremely wet in northwestern French Guiana, and to moderately wet in southern Guyana. Aruba and Curacao were normal.

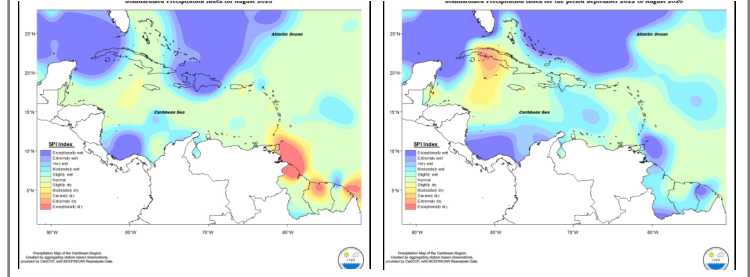
Puerto Rico ranged from slightly wet on the northwestern coast to slightly dry in the east. The Dominican Republic was predominantly exceptionally wet with extremely wet conditions in the extreme east. Jamaica ranged from slightly dry in the west to predominantly normal. Grand Cayman was normal. Cuba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

ABOUT CariSAM

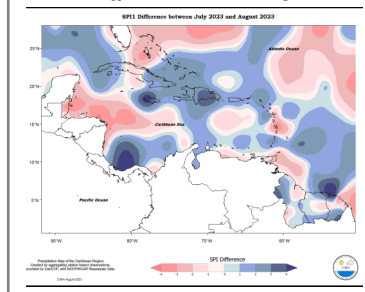
The Caribbean Society for Agricultural Meteorology (CariSAM) is an online platform that hosts forums, provided online weather and climate information for agro-meteorologists, and much more. Agricultural interests can register and access relevant information and be a part of future capacity building exercises,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

Predominantly normal to exceptionally wet conditions prevailed across the Caribbean Islands during the 12-month period (September 2022 to August 2023) with the exception of Cuba and The Cayman Islands, which were normal to extremely dry.

AUG 2023 SPI (left) and 12-mth SPI SEP 2022 - AUG 2023 (right)



SPI Difference (Jul and Aug 2023)



A mixture of conditions were observed across the region over the months of July and August.

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

AGRI-NEWS

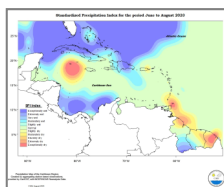
Jamaica: Jamaicans should expect higher night-time temperatures for September to November. Read more <https://www.jamaicaobserver.com/latest-news/jamaicans-should-expect-higher-night-time-temperatures-for-september-to-november/>

Regional: Rampant Heatwaves Are A Growing Threat To Caribbean Food Security. Read more <https://www.forbes.com/sites/daphneewingchow/2023/09/26/rampant-heatwaves-are-a-growing-threat-to-caribbean-food-security/?sh=3568fb86735>

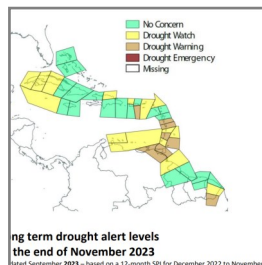
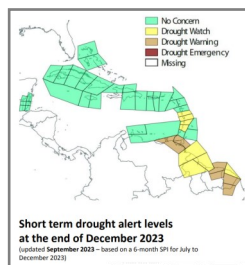
REGIONAL OUTLOOKS

DROUGHT

By the end of August, severe (or worse) short-term drought had developed in the Grand Cayman, central and northeastern French Guiana northernmost Guyana, eastern Suriname, and Tobago. Severe (or worse) long-term drought has developed in Grand Cayman, northern and central parts of Cuba.



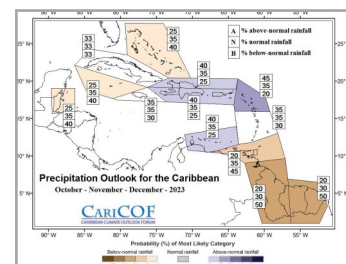
There is some concern over short-term drought that can impact small rivers, streams and ponds, across the region by the end of December across central and southern French Guiana, Suriname, Trinidad and possibly across Dominica, Guyana, Martinique, Saint Lucia, St. Vincent, and northern French Guiana. Interests in these territories should monitor their water resources.



There is some concern for long-term drought, that can impact large reservoirs, large rivers or groundwater, to present a challenge in farming by the end of November 2023 across western

Belize, Dominica, southern French Guiana, Martinique, southeast Puerto Rico, St. Vincent, Trinidad & Tobago and possibly across ABC islands, Barbados, northern and eastern Belize, Grand Cayman, Western and Central Cuba, northern Dominican Republic, central French Guiana, Grenada, northwest Puerto Rico, US Virgin Islands, Saint Lucia, and Sint Maarten/St-Martin. Interests in these countries should monitor their water resources.

RAINFALL, WET/DRY SPELLS, TEMPERATURE and HEATWAVE DAYS (OCTOBER–DECEMBER 2023)

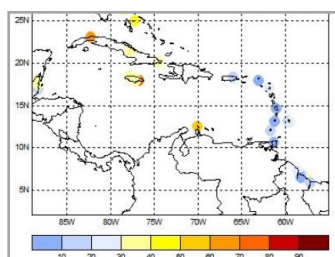
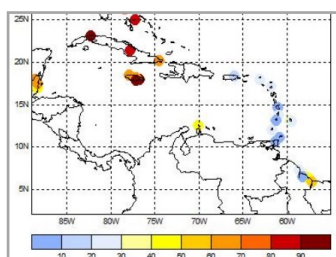


Rainfall totals from October through December are likely to be the usual or higher across the ABC Islands, Hispaniola, the Leeward Islands and the U.S. Caribbean Territories. By contrast, the Bahamas, Belize, the Cayman Islands, the Guianas, Trinidad & Tobago are likely to record the usual rainfall amounts or less.

High to extremely high potential for long-term flooding, flash floods and related hazards exists across the Caribbean islands and Belize; moderate potential in the Guianas, increasing to high after November in coastal and northern areas in view of the likelihood of very wet spells and extreme wet spells. In northern Guyana, lower rainfall frequency up until the end of the dry season (late October/early November) will likely lead to opposite trend in implications.

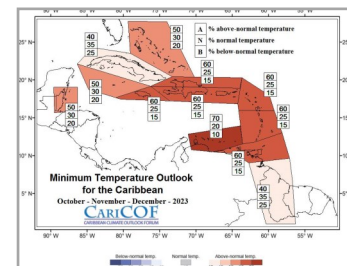
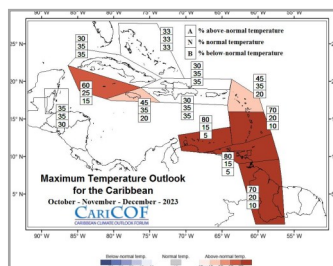
Probability of at least THREE 7-day dry spells in OND

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



The occurrence of at least three 7-day dry spells is likely across Jamaica, Cuba, northern Bahamas and northern Belize.

October – the last month of this year’s record-breaking Caribbean Heat Season – will very likely continue to be warmer than normal trend, coupled with high humidities with intense night-time and daytime heat and the possibility of heatwaves possibly extending into early-November. Heat stress should steadily decrease in November, going into the Cool Season from December.



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

CLIMATE-SMART ADVISORIES

As the region approaches the 2023/24 Dry Season, farmers should review their drought management plans/techniques and be prepared in the event of the occurrence of short/long-term drought or significant dry spells.

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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