

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

Pacific and Atlantic ocean temperatures should remain well above average, continuing to amplify heat stress in the Caribbean through October by increasing temperatures, humidity and heatwave frequency to rival some of the warmest heat seasons on record (e.g., in 2020).

A moderate to strong El Niño in the Pacific should dampen rainfall frequency and tropical cyclone intensity in Belize and the islands and lead to more short-term dry spells than usual.

Record-warm Atlantic waters are to increase showers intensity, leading to limited drought concern, but a particularly high potential for flooding and cascading hazards. In the Guianas, the hot and dry season will likely be intense.

JULY IN REVIEW

During the month of July the central portion of the eastern Caribbean experienced normal to above normal rainfall, while the north and the south experienced normal to below normal. Trinidad ranged from exceptionally wet to exceptionally dry southwest to northeast; Grenada, St Maarten and Anguilla moderately dry; Barbados and Dominica normal to slightly wet; St Vincent, St Croix and St Thomas slightly dry; Saint Lucia, Guadeloupe and Antigua normal; Martinique slight to moderately wet and St Kitts normal to slightly dry. In the Guianas, conditions ranged from very wet in southern Guyana to exceptionally dry in southcentral French Guiana. Aruba was normal and Curacao slightly wet.

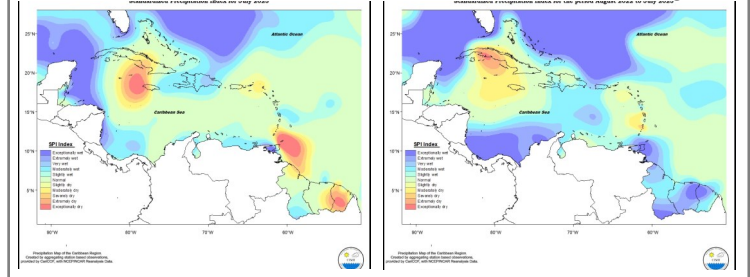
Puerto Rico ranged from normal to slightly dry; The Dominican Republic was very wet in central areas ranging to moderately wet in the west and to slightly wet in the east. Jamaica ranged from exceptionally dry in the west to moderately wet in the east. Grand Cayman was predominantly moderately dry ranging to severely dry in the east. Cuba ranged from exceptionally wet in the extreme west to extremely dry in southeastern areas. Northern Bahamas ranged from normal to very wet and Belize ranged from exceptionally wet in the extreme east to normal in southern and northern areas.

ABOUT CariSAM

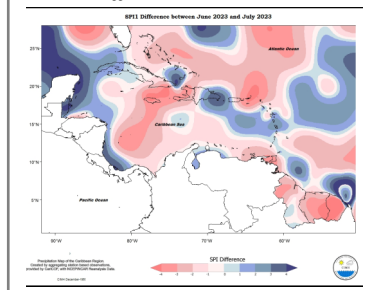
The Caribbean Society for Agricultural Meteorology (CariSAM) is an online platform that hosts forums, provided online weather and climate information for agro-meteorologists, and much more. Agricultural interests can register and access relevant information and be a part of future capacity building exercises,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

Predominantly normal to exceptionally wet conditions prevailed across the Caribbean Islands during the 12-month period (August 2022 to July 2023) with the exception of Cuba, Jamaica, St. Vincent and the Grenadines, and Martinique.

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



SPI Difference (Jun and Jul 2023)



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

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

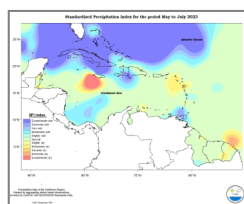
AGRI-NEWS

Guyana: Cassava is a main staple crop central to indigenous farming systems and is used to make a variety of drinks and foods. But in recent years, massive flooding caused by sea level rise and unpredictable weather patterns has severely impacted the future of this crop in many indigenous villages, particularly in Middle Mazaruni, Region Seven. Read more <https://climatetracker.org/how-climate-change-is-affecting-indigenous-staple-in-guyana/>

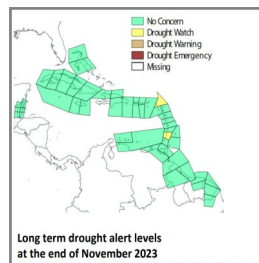
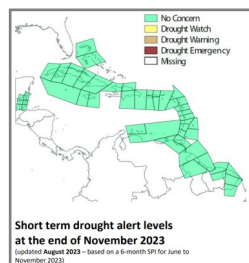
REGIONAL OUTLOOKS

DROUGHT

By August 23rd, short-term drought has developed in parts of Belize, Cuba, Haiti and most of the Guianas. Long-term drought has developed in St. Vincent.



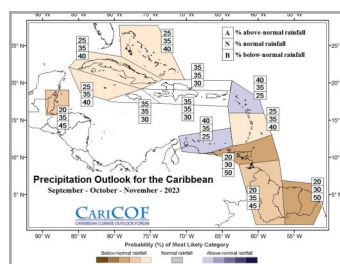
There may be no concern over short-term drought that can impact small rivers, streams and ponds, across the region by the end of November.



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 St. Barts, Sint Maarten/St-Martin and St. Vincent. Interests in these countries should monitor their water resources.

RAINFALL, WET/DRY SPELLS, TEMPERATURE and HEATWAVE DAYS (SEPTEMBER–NOVEMBER 2023)

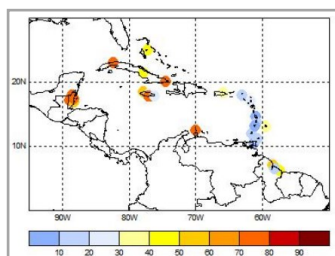


Rainfall totals from September through November are likely to be the usual or higher across the ABC Islands, and the Leeward Islands. By contrast, The Bahamas, Barbados, Belize, Cayman Islands, the Guianas, Trinidad and Tobago, and the Windward Islands are likely to

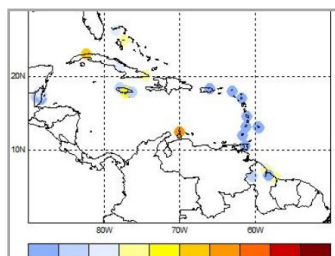
record the usual rainfall amounts at most.

High to extremely high potential for long-term flooding, flash floods and related hazards exists across the Caribbean Islands and Belize in view of the likelihood of very wet spells and extreme wet spells. Surface wetness makes environmental conditions more conducive to moisture-related pests, but prevents wildfires.

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

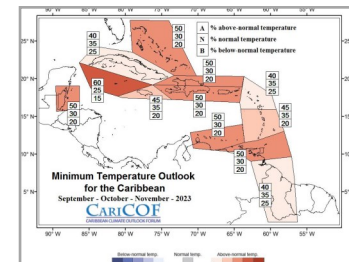
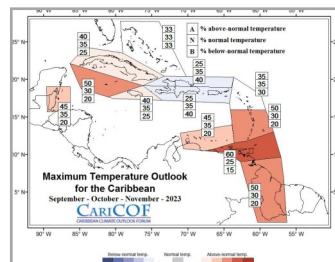


Probability of at least ONE 15-day dry spell in SON



The occurrence of at least three 7-day dry spells is likely across The ABC Islands, Jamaica, Cuba and Belize. The occurrence of at least 15-day dry spell is likely across the ABC Islands.

With the high likelihood of above normal day-time (maximum) and night-time (minimum) temperatures in many parts of the region, conditions would likely be uncomfortably high to many until October, especially because they are likely to end up even higher than usual during the peak of the annual Heat Season. Moreover, humidity and the frequency of heatwaves in September could even surpass previous months, further increasing heat stress and rivaling record hot months in 2010, 2016 and 2020.



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

CLIMATE-SMART ADVISORIES

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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