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

As the 2025 Caribbean Heat Season gradually ramps up, prepare for possible impactful heatwaves, though unlikely to match 2023 and 2024 seasons.

In May, the occurrence of high evaporation rates, short dry spells and the possible extension and intensification of ongoing drought increases heat and wildfire potential.

Rainfall intensity and shower frequency should rise in May (the Bahamas, Guianas and Greater Antilles) or June (Belize and the Lesser Antilles), resulting in high to extremely high potential for flooding, flash floods, cascading hazards and associated impacts.

Episodes of Saharan dust intrusion will likely be frequent; the more frequent, the more dryness and heat, and the more erratic the occurrence of severe weather - including intense tropical cyclone activity.

MARCH IN REVIEW

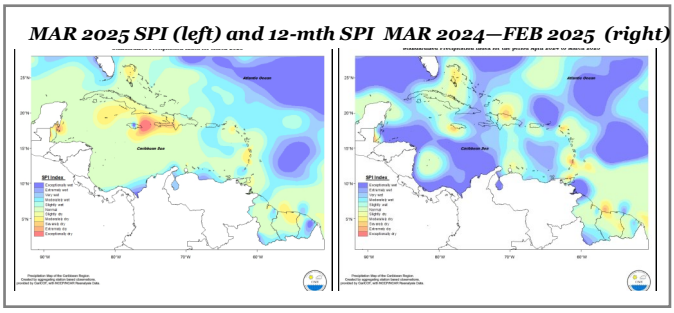
Mixed conditions were experienced during the month of March throughout the eastern Caribbean. Trinidad, Tobago and St Maarten slightly dry to normal; Grenada very to slightly wet; Barbados slightly wet; St Vincent moderately dry; Saint Lucia moderately dry to normal; Martinique normal to severely dry; Dominica moderately wet to normal; Guadeloupe, Antigua, St Kitts and Anguilla normal and St Thomas moderate to slightly wet. In the Guianas, conditions were mostly normal ranging to exceptionally wet in northeastern French Guiana and to moderately dry in northern Suriname and northwestern French Guiana. Aruba was normal to slightly dry and Curacao predominantly normal to slightly wet.

Puerto Rico ranged from normal to moderately wet. The Dominican Republic was mostly normal ranging to severely dry in the southwest and to slightly wet in northern areas. Jamaica was exceptionally wet in central areas ranging to normal in the west and to exceptionally dry in the east. Grand Cayman was moderately dry.

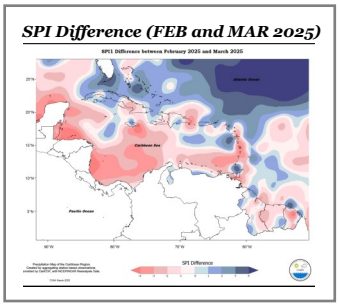
Cuba was mostly normal ranging to slightly wet on the northwestern coastline and to moderately dry in southeastern areas. Northern Bahamas was normal to moderately dry and Belize normal ranging to extremely dry in the west and northeastern coastal areas.

During the 12-month period (March 2024 to February 2025), normal to extremely wet conditions prevailed across much of the region.

MAR 2025 SPI (left) and 12-mth SPI MAR 2024—FEB 2025 (right)



SPI Difference (FEB and MAR 2025)



The month of March was relatively wetter than February across most of The Bahamas, most of Cuba, and Trinidad but drier across Belize, The Lesser Antilles and much of the Guianas.

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

AGRI-NEWS

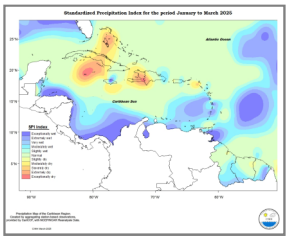
Belize: Belmopan is set to host the highly anticipated 53rd National Agriculture and Trade Show (NATS) from May 30 to June 1 under the theme "Integrating Sustainable Food Systems: Mitigating Climate Change, Strengthening Agricultural Resilience.". *Read more https://www.breakingbelizenews.com/2025/05/02/belize-gears-up-for-53rd-national-agriculture-and-trade-show/.*

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*

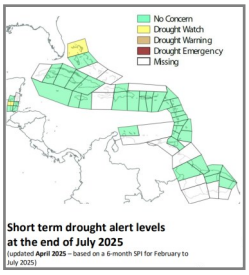
REGIONAL OUTLOOKS

DROUGHT



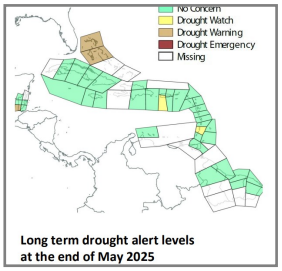
Moderate (or worse) short term drought has developed in northwestern parts of The Bahamas, the Cayman Islands, Central Cuba, far southwest Dominican Republic, Haiti, Sint Maarten.

Moderate (or worse) long term drought has developed in the northwestern Bahamas, southwest Belize, northern Dominican Republic, southwest Jamaica, northwest Trinidad, St. Vincent and along the western coast of Suriname.

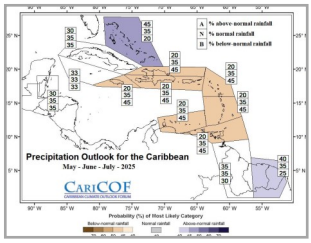


There is some concern over short term drought that can impact small rivers, streams and ponds by the end of July 2025 across western Belize and the northern Bahama Islands.

There is immediate concern for long-term drought, that can impact large reservoirs, large rivers or groundwater, to present a challenge in farming by the end of May 2025 across The Bahamas an far southwest Belize. Interests in southeast Puerto Rico and St. Vincent.

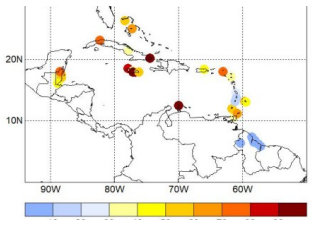


RAINFALL, WET/DRY SPELLS, TEMPERATURE and HEATWAVE DAYS (MAY — JUL 2025)

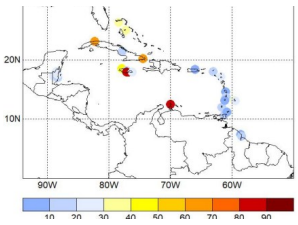


Rainfall totals from May through July are likely to be usual or higher in the Bahamas and eastern parts of the Guianas, but, likely, the usual or less in the ABC Islands, Hispaniola, Jamaica, the Lesser Antilles and Puerto Rico. The potential for flooding, flash floods and cascading impacts arising from runoff during intense rainfall events will be high, particularly in mountainous areas and in the Guianas. Water recharge rates in surface reservoirs and rivers will likely rapidly accelerate, particularly in the Guianas.

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

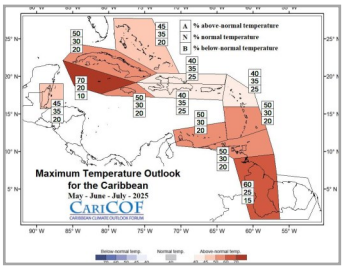


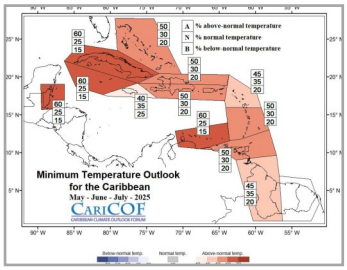
MAXIMUM number of 15-day dry spell in MJJ



Moderate to High potential for the occurrence of at least three 7-day dry spells across the region (except The Guianas). High potential for at least one occurrence of a 15-day dry spell across The ABC Islands, Jamaica and northwestern and southeastern Cuba.

Day-time (maximum) and night-time (minimum) temperatures will likely be higher than usual in most areas. Episodes of hazardous, extreme heat with heatwaves could ramp up into July. Wind exposed areas in the Lesser Antilles will unlikely experience intense heatwaves. However, increased risks exists in wind-sheltered areas , particularly when the air is dusty and humid.





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

CLIMATE-SMART ADVISORIES

Where there is the greater likelihood of drought (The Bahamas, southwest Belize and south Puerto Rico) and dry spells and heatwaves:

- Protect health and wellbeing, by staying hydrated, even if not thirsty.
- Farmers should wear light-coloured, breathable clothing and protective gear.
- Schedule irrigation during cooler hours to reduce evaporation losses.
- Use mulching and drip irrigation to conserve water, retain soil moisture, and regulate soil temperature.
- Apply biostimulants (e.g., Bio-Forge®) to enhance crop tolerance to heat and drought stress.
- Provide adequate shade, ventilation, and clean water for all livestock.
- Watch for signs of heat stress in animals, such as panting or wing-spreading in poultry and take prompt action to reduce exposure to extreme heat

Where there is the greater likelihood of flooding (in mountainous areas and the Guianas):

- Maintain drainage channels to reduce waterlogging
- Construct raised beds or ridges to protect root zones from saturated soil.
- Avoid fertilizing before heavy rain; watch for pests and diseases
- Move livestock to higher ground; evacuate from flood-prone areas.

Maintain records of inputs and crop and livestock

Please also keep updated and take into consideration your local weather and climate advisories.

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