



A Joint Bulletin of the CTO, the CHTA and the CIMH

CARIBBEAN TOURISM CLIMATIC BULLETIN

for Tourism Businesses and Policymakers

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Purpose

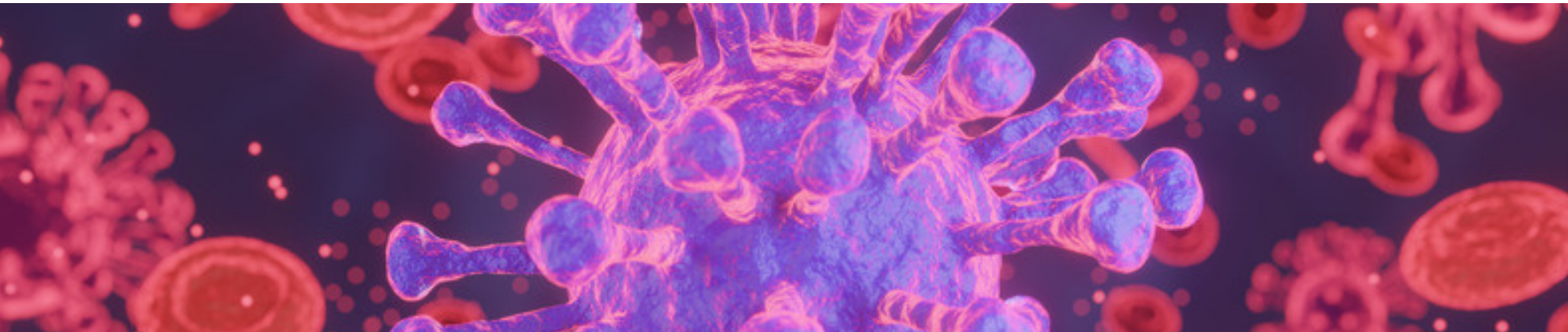
This Bulletin is a joint effort between the Caribbean Tourism Organization (CTO), the Caribbean Hotel & Tourism Association (CHTA) and the Caribbean Institute for Meteorology and Hydrology (CIMH) to help tourism businesses and policymakers identify and prepare for favourable or inclement climate conditions in the Caribbean and source markets, before they occur. It is recommended that industry stakeholders use the seasonal climate forecast information for the upcoming period (December 2023 - February 2024) presented in this Bulletin in tandem with weather forecasts (1-7 days). This suite of information can inform strategic and operational decisions related to the use of environmental resources, marketing, and enhancement of the visitor experience.

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CLIMATE RISK MANAGEMENT & VISITOR HEALTH

Climate risk management linked to enhancing visitor health and safety, remains a critical factor in ensuring tourism sector resilience and managing the overall visitor experience. Tourism interests across the region should be prepared to deal with weather and climate emergencies in addition to ongoing concerns related to managing COVID-19, as well as other possible health threats as they arise. The CTO, CHTA, and CIMH will continue to closely monitor the situation.



Climate Advisories: Caribbean

December through February marks: 1) the early dry season in the Caribbean Islands and Belize, except for the ABC Islands which transition into the long dry season; and 2) the secondary wet season in the coastal Guianas.

What should you do?

Climatically, December to February forms the **first half of the dry season** in the Caribbean Islands, Belize, and the continuation of the long dry season in the far interior of the Guianas. Historically, during this period, the number of wet days and wet spells usually decreases towards February in these areas. At the same time, the frequency of short dry spells tends to increase rapidly in areas westwards of Puerto Rico, but more slowly in islands further east and south. In the far interior Guianas the number of wet days and wet spells remains low throughout the period.



By contrast, the coastal Guianas are in their **secondary wet season** until early February, then moving into their secondary dry season. Hence, wet days and wet spells are usually frequent while dry spells are few in December and January.



Climate Advisories: Caribbean

In this period, **flood and flash flood potential** (i.e., the chance of occurrence of an excessive rainfall event that can trigger floods and cascading impacts – such as land slippage, rock fall, soil erosion, river damming, mud flows – in flash flood-prone areas) is typically high (i.e., occurs at least once every two years) to extremely high (i.e., occurs in most years) in the Guianas and southern Belize, but slight (i.e., occurs once every five to ten years) to moderate (i.e., occurs at least once every five years) elsewhere.

December to February further marks the return of the entire Caribbean region to the **cool season**. Generally, more comfortable temperatures and decreasing humidity are the historical norm for this period.

This year, a strong **El Niño** event has developed in the tropical Pacific Ocean. El Niño more often than not is marked by higher temperatures, a drier start to the dry season in the ABC Islands and Lesser Antilles and increasing drought concern in any location that has experienced rainfall deficits during the wet season. Furthermore, El Niño typically reduces the chance of excessive rainfall in the coastal Guianas.

Climate Advisories: Caribbean Cont'd



By contrast, **near record-high temperatures in the North Atlantic Ocean** and the Caribbean Sea also contribute to higher air temperatures, but also to increased air humidity and rainfall throughout the Caribbean, as well as the frequency of severe weather during the dry season.

The unusually warm waters in these two ocean basins will increase temperatures and humidity during the cool season, but unlikely to the point of significant heat stress.

- The **2023 Hurricane Season** officially ended on November 30th. With 20 tropical cyclones reaching at least tropical storm strength this year, 2023 ranks 4th since 1950, marking another active season. The peak of the season was particularly active, with at least one named storm on all calendar days from August 16th till October 4th. By contrast, the season matched the historical average of 7 hurricanes, among which 3 major hurricanes. These numbers closely align with the seasonal outlooks. Fortunately, losses and damages were far lower in 2023 than in most recent years, thanks to a large number of storms tracking in the open waters of the North Atlantic without making landfall.

Climate Advisories: Caribbean Cont'd



Whereas tropical cyclone activity typically decreases after mid-October, **severe weather systems** related to tropical cyclones, as well as heavy showers can still affect Caribbean territories, particularly during December. In particular, the El Niño event increases flood and flash flood potential to high in Western Cuba, whereas the warm Atlantic raises this potential to high in Guadeloupe, St. Vincent, and Trinidad & Tobago. In the coastal Guianas, the potential remains high (medium confidence).


Tourism operators are advised to **constantly monitor weather advisories** issued by National Meteorological Services and other information provided by the Caribbean Disaster Emergency Management Agency (<http://cdema.org/>) and the US National Hurricane Center (<https://www.nhc.noaa.gov/>), and abide by any official advisories issued by the National Meteorological Service in their country. At all times, tourism operators should maintain a state of readiness, including communication plans and response protocols to deal with sudden eventualities.




Despite having cooled since the peak of the 2023 heat season in September, the more comfortable daytime and nighttime **temperatures** are still forecast to remain up to 1-2 degrees Celsius higher than usual on most days (medium confidence). Nonetheless, tourism practitioners should expect an slightly higher demand for cooling/hydration services (e.g., AC use and refrigeration use, use of pools and showers, and drinking water) than usual for the period, and should advise their guests accordingly in the upcoming period.

Climate Advisories: Caribbean Cont'd

Apart from the Bahamas, seasonal **rainfall amounts** are forecast to be close to usual or even less (*medium confidence*). Especially where less than the usual rainfall totals have been recorded in previous months, such rainfall deficits increase the chances of drought. In addition, forecasts for the weeks running up to Christmas day suggest that relatively dry conditions are expected across most of the region, with only a small chance for severe weather and resulting heavy rainfall.



As such, **short-term drought** is expected to be a *significant* concern by the end of February 2024 in northwest Belize, southern French Guiana, Grenada, western Puerto Rico and Suriname (*medium to high confidence*), but also *possible* in most other areas (*medium confidence*). Short-term drought may impact food production, water quality and quantity from small streams, small ponds and other surface sources.



Long-term drought is evolving by the end of May 2024 in Belize, southern French Guiana, and southwest Puerto Rico (*high confidence*) and might possibly develop or continue in the Cayman Islands, Eastern Cuba, central parts of French Guiana, Jamaica, and in St. Vincent (*medium confidence*). Long-term drought (on a 12 months timescale) affects water availability across a multitude of socio-economic sectors in countries where the main freshwater resource is from very large rivers, large reservoirs or groundwater. Tourism facilities should continue to enhance/upgrade their water conservation practices, as well as, rainwater harvesting and repairs to leaky pipes, etc., and advise staff and guests of the need to reduce water wastage on an ongoing basis.

Climate Advisories: Caribbean Cont'd



In view of the *high to extremely high* exposure to **harmful UV light** on sunny days, visitors should be encouraged to apply high SPF sunscreen lotion regularly (preferably reef safe), and seek shaded areas between the hours of 10 AM and 3 PM. Outdoor tourism operators and staff should also be mindful to minimise skin exposure during these times, and to wear sunscreen and protective clothing when they work outdoors.



Owing to the near-record ocean temperatures, heat stress in corals in the Atlantic Ocean has led to significant **coral bleaching** this year and is still expected through December 2023. It should be noted that a portion of the recently bleached corals may recover in cooler, clear and clean water. Therefore, It is imperative to minimise runoff of pollutants into coastal waters and to encourage the use of reef-safe sunscreen by guests and locals alike, which can increase the survival chances of coral reefs. This is a good season to engage in coral reef restoration activities, especially in destinations where there is an on-going standalone program or partnership between tourism practitioners and coastal managers.

The frequency of Saharan **dust** incursions into the Caribbean tends to be low during this period, though, in some years, significant episodes occur as early as February. Though initially low, local dust levels may increase towards February, particularly in areas under short-term drought. Tourism practitioners should be aware that there may be an increase in visitors and staff experiencing respiratory and eye-related concerns.

Climate Advisories: Caribbean Source Markets

December to February marks the Winter season in the source markets.

What should you do?

Northern source markets will experience winter cold, short days and limited sunshine. This may create a climate-driven increase in demand for Caribbean vacations, as well as vacations to Florida, the desert southwest and the southeast of the United States. Due to El Niño, wetter and less sunny weather than usual is expected in the latter areas of the US. Tourism operators are therefore recommended to monitor the weather forecasts, as well as focus on enhanced marketing efforts to attract visitors. Additionally, they should differentiate themselves through innovative package offers, memorable customer service (bearing in mind appropriate health protocols where applicable), and activities that take advantage of the pristine natural environments on offer.

In addition, some competing markets in the ASEAN region of Southeast Asia are expected to likely see much drier and warmer than usual conditions, with increased wildfire potential and resulting smoke haze. Marketing efforts could focus on attracting visitors to the generally sunny, warm, breezy weather in the early dry season, as well as the anticipated, excellent air quality in this season and general health and safety in the Caribbean region.



Surf and Sargassum Outlook

Surf's Up

Surfers, divers, fishers and marine craft operators should consult the 7-day wave forecast before planning activities. Click here to access this product: <http://ww3.cimh.edu.bb/>

Sargassum Outlook

Tourism operators may consult the University of the West Indies / Centre for Resource Management and Environmental Studies (UWI/CERMES)'s Sargassum sub-regional Outlook Bulletin for the Eastern Caribbean or the monthly University of South Florida (USF)/NASA Sargassum Outlook Bulletin for the entire Caribbean before planning activities. Click here to access the latest UWI/CERMES product: <https://www.cavehill.uwi.edu/cermes/projects/sargassum/outlook-bulletin.aspx>.

Click here to access the USF/NASA product: <https://optics.marine.usf.edu/projects/SaWS.html>.

Additionally, a Sargassum resource guide is available from the Caribbean Alliance for Sustainable Tourism (CAST) and can be accessed here: <https://caribbeanhotelandtourism.com/publications/>

Additional resources and publications for Sargassum management are also available from CTO here: <https://www.onecaribbean.org/our-work/sustainable-tourism-dept/sargassum-resources/>



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Upcoming Events



Disclaimer

Websites

Caribbean Tourism Organization:
www.onecaribbean.org

Caribbean Hotel and Tourism Association:
www.caribbeanhotelassociation.com

Regional Climate Centre:
<http://rcc.cimh.edu.bb>

This Bulletin provides a broad overview of climate conditions up to 3 months in advance. It is based on insights drawn from CIMH's suite of technical climate information products and industry insights from the CTO and the CHTA. The information contained herein is provided with the understanding that the CTO, the CHTA, and the CIMH make no warranties, either expressed or implied, concerning the accuracy, completeness, reliability or suitability of said information. The Bulletin may be freely used and distributed by the public with appropriate acknowledgement of its source but shall not be modified in content and then presented as original material. CTO, CHTA and CIMH disclaim any liability with respect to the use of any information within this document by any person or entity

Glossary

Seasonal climate forecast - the guidance offered by a forecaster or forecast centre on climate conditions during the coming months.

Forecast information in this Bulletin pertains to the 3 months highlighted in the Issue.

Short-term drought – A rainfall deficit over a total period of 6 months.

Long-term drought – A rainfall deficit over a total period of 12 months.

Dry day – A 24 hour period during which the rainfall total is less than 1 mm.

Dry spell – A succession of at least 7 consecutive dry days.

Wet Day – A 24 hour period during which the rainfall total is at least 1 mm.

Wet Spell – A multi-day period during which the rainfall total is large enough to cross a certain threshold.

Extreme wet spell – 3 consecutive days of which the total rainfall is extremely high, with increased flash flood potential.

Caribbean Heat Season - most heatwaves and the associated spikes in heat stress occur between April or May and October in the Caribbean

Caribbean Cool Season - occurs between December and February or March when the Caribbean experiences comfortably cool weather

The Guianas – French Guiana, Guyana and Suriname.

US Caribbean Territories – Puerto Rico, U.S. Virgin Islands.

Leeward Islands – Anguilla, Antigua and Barbuda, British Virgin Islands, Guadeloupe, Montserrat, Saba, St. Barthélemy, St. Eustatius, St. Kitts and Nevis, St. Maarten and St. Martin.

Windward Islands – Dominica, Grenada, Martinique, St. Lucia and St. Vincent and the Grenadines.

Lesser Antilles – Leeward and Windward Islands along with, Barbados and Trinidad and Tobago.

Greater Antilles – Cayman Islands, Cuba, Dominican Republic, Haiti, Jamaica and Puerto Rico.

ABC Islands – Aruba, Bonaire, Curacao

Lucayan Islands – The Bahamas, Turks and Caicos Islands.

For more technical climate terms:

<https://rcc.cimh.edu.bb/glossary-of-terms/>



**Best Wishes for a Safe,
Prosperous & Productive 2024!**