



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 2021 - February 2022) 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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COVID-19 PANDEMIC

The impact of COVID-19 has been unprecedented to tourism activities and businesses across the region. 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. **The convergence of the COVID-19 pandemic with an active Atlantic Hurricane season presented a challenge to some Caribbean countries.**

Tourism interests across the region should be prepared to deal with weather and climate emergencies in addition to the added concern of managing the current COVID-19 pandemic. The CTO, CHTA, and CIMH will continue to closely monitor the situation and issue the relevant climate outlooks.



Looking Back: August - October 2021



As of December 1st, the busy 2021 **Atlantic Hurricane Season** -- of which the overall activity was very well-forecasted with 21 named storms, including 4 major hurricanes -- has officially ended.



The period August to October marked the peak of the **Caribbean Wet Season** in the Islands and Belize, and parts of the **Long Dry Season** in the Guianas. This period stood out in terms of short-term drought across many parts of the Caribbean contrasted with (near-)record rainfall totals in large parts of the Guianas and in western Trinidad.



With the period forming the second half of the **Caribbean Heat Season**, heat discomfort associated with high temperatures and humidity peaked in September, but was overall lower than in 2020, with fewer heatwaves. Near-average temperatures were recorded in much of the Caribbean, but Barbados, Belize, Dominica and Puerto Rico were around 1°C warmer than usual while parts of the Bahamas, Guadeloupe, Jamaica, Martinique, St. Croix and Suriname were around 1°C cooler than usual. Barbados even recorded its warmest nighttime temperatures for this period.

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?



The **2021 Hurricane Season** officially ended November 30th, but severe weather events, including storms and hurricanes have occurred after the official end date. **Severe weather events** can come with a range of hazards, including high winds, landslides, long-term flooding, flash floods, coastal flooding, among others. The potential for **floods and cascading hazards** - - such as land slippage or rockfall, power outages and possible contamination of food and water supplies -- arising from severe weather events is expected to be moderate (two to five times in 10 years) in December, but limited (once or twice in 10 years) or marginal (seldom) from January onwards across the Caribbean Islands and Belize. In the coastal Guianas, flood potential is high (at least every other year) until early-February and becomes limited by the end of February.



Tourism operators are advised to keenly monitor weather advisories issued by the 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/>). Given the current global COVID-19 pandemic, tourism operators should, at all times, maintain a state of readiness, including communication plans and response protocols to deal with sudden eventualities.

Climate Advisories: Caribbean Cont'd



Climatically, December to February forms the **first half of the Caribbean Dry Season** in the Bahamas, Belize, the Greater and Lesser Antilles. This period is characterized by a steady decrease in the frequency of wet days and the intensity of heavy showers. Conversely, the number of dry days and dry spells is high westwards of Puerto Rico throughout the period whereas, further east, their frequency increases steadily towards the end of February. This dries the surface and foliage, which may increase the potential for wildfires and airborne particulates. By contrast, in the ABC Islands and the Guianas, the **wet season** usually runs until early-February, followed by a dry season.



In August 2021, weak **La Niña** conditions developed in the Pacific Ocean for a second consecutive year. La Niña tilts the odds towards a slightly cooler, more intense wet season in the Guianas and in the ABC Islands. In addition, it tempers heat and favours a less intense early dry season in the Lesser Antilles, but the Bahamas and the Greater Antilles -- Cuba in particular -- can be even drier than usual. This is reflected in the forecast, which suggests that rainfall totals are likely to be at least the usual in the ABC Islands, Belize, Guyana and Trinidad and Tobago, but at best as low as usual in the Bahamas, Cuba, Hispaniola and the US Caribbean Territories (medium confidence).

Climate Advisories: Caribbean Cont'd



Long term drought (on a 12 months timescale), which may affect water availability across a multitude of socio-economic sectors in a country, is evolving in southern Belize (medium to high confidence). It should be noted that, wherever long term drought persists during the dry season, drought impacts related to shortages in water availability typically worsen over time. By comparison, **short term drought** (on a 3-6 months timescale) is evolving in southeast Belize, Cayman Islands, most of Cuba, western Jamaica, and northwest Puerto Rico (medium to high confidence), which may impact food production, potable water availability, as well as, water collecting in small streams, small ponds and other surface sources. Tourism facilities should continue to enhance/upgrade their water conservation practices, as well as, rainwater harvesting and repairs to leaky pipes, etc. ahead of the peak of the dry season, and advise staff and guests of the need to conserve water on an ongoing basis.



This period forms the core of the **Caribbean Cool Season**, during which night-time and day-time temperatures are comfortable across the region and heatwaves are virtually non-existent (high confidence). A number of cold nights may be expected in Belize and high-altitude locations across the region (medium confidence). Persons (i.e. both staff and visitors) should be sensitised to the importance of staying cool and properly hydrated.

Climate Advisories: Caribbean Cont'd



Exposure to **harmful UV light** on sunny days will be high in the northern Bahamas and very high elsewhere until January, and then increase to very high and extremely high by February, respectively. 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.



Ocean temperatures will decrease to their annual minimum by the end of February, but may still be sufficiently high to cause **bleaching to coral reefs** in the far southern Caribbean in December. 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 also 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. (Access more detailed forecast information on dust and air quality in the Caribbean here: <http://dafc.cimh.edu.bb/>). Though initially low, local dust levels may increase towards February, particularly in areas under short-term drought. Tourism practitioners should be aware that visitors and staff may temporarily experience symptoms associated with respiratory ailments during dust episodes.

Climate Advisories: Caribbean Source Markets

**December to February marks the Winter season in the source markets.
What should you do?**

Although there may still be some restrictions to foreign travel from some northern source markets related to COVID-19, they 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 La Niña, drier and sunnier weather than usual is expected in the latter areas of the US. Inbound Tour Operators are recommended to monitor the weather forecasts, as well as, the COVID-19 situation in the source markets during this season. They should be on the lookout for reports of inclement winter weather in Canada, northern US and northern Europe.

In addition, some competing markets in the ASEAN region of Southeast Asia are expected to likely see wetter than usual conditions, with increased chances of flooding and reduced sunshine. Marketing efforts could focus on attracting visitors to the generally sunny, warm and breezy weather, and general health and safety in the Caribbean region.

Climate Outlook for the Caribbean

Except in the ABC Islands and the Guianas, it is the Dry Season. What do we expect for the Caribbean?

How wet?

Rainfall totals from December to February are likely to be at best as low as usual in the Bahamas, Cuba, Hispaniola and the US Caribbean Territories, but at least as high as usual in the ABC Islands, Belize, Guyana, and Trinidad and Tobago (medium confidence).

How dry?

Short term drought (on a 3-6 months timescale) is evolving in southeast Belize, Cayman Islands, most of Cuba, western Jamaica, and northwest Puerto Rico (*medium to high confidence*) and might possibly develop or continue in the northernmost Bahamas, Barbados, western Belize, eastern Cuba, Dominica, southern Dominican Republic, Guadeloupe, eastern Jamaica, Martinique, and southwest Puerto Rico (*medium confidence*) by the end of February 2022.

Long term drought (on a 12 months timescale) is evolving in southern Belize (medium to high confidence), and may possibly develop or persist in the northernmost Bahamas, central Belize, Eastern & Western Cuba, Dominica, southern Dominican Republic, Leeward Islands (except St. Kitts), Martinique, southern Puerto Rico, and St. Vincent (medium confidence) by the end of May 2022.

How hot?

Night-time and day-time temperatures will be comfortably cool (*high confidence*), as this period marks the core of the Caribbean's cool season. In Belize and at higher elevations throughout the region, there is the potential for a number of cold nights (*medium confidence*).

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/docs/bulletin/sargassum_outlook_bulletin_issue_04_mjj_cermes_202.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://www.onecaribbean.org/wp-content/uploads/SargassumResourceGuideFinal.pdf>

Climate Outlook for Caribbean Source Markets

What do we expect in the source markets?

Winter cold affects most source countries, including the often dull skies in European source markets. At the same time, the winter months are likely to be drier and sunnier in the Desert Southwest, along the shores of the Gulf of Mexico and the Atlantic Seaboard of the Southeast US, including Florida. The current rainfall and temperature forecasts provide no specific indication of seasonal climate in the source markets beyond these historical expectations.



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Upcoming Events



No 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 the climate conditions during the coming months.

NB: This forecast information 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.

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/>