



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 (June - August 2021) 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 will present a challenge to 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: February - April 2021



This period in the dry season stood out in terms of short term drought in many areas north and west of Guadeloupe contrasted with wetter than usual conditions to the south. This pattern was, at least in part, driven by a fading La Niña event.

Curaçao, large parts of the Guianas, and Trinidad were wet to exceptionally wet compared to average for this season. By contrast, even drier than average conditions for this part of the dry season led to **short-term drought** in Antigua, most parts of The Bahamas, southwest Belize, Cuba, southeastern-most Hispaniola, St. Kitts and Sint Maarten/St-Martin. Although last year's wet season rains were plenty in a majority of locations, **long-term drought** has developed in southwest Belize, along the south coast of Hispaniola, St. Croix, St. Kitts and the west coasts of the Windward Islands.



With February and March being the second half of the Caribbean **cool season**, and despite that April marks the transition out of the cool season and into the Caribbean Heat Season, comfortable temperatures were felt throughout most of the region. Some places even recorded slightly cooler than average temperatures, including Guadeloupe, much of Guyana, southeastern Jamaica and parts of Suriname.

Climate Advisories: Caribbean

June through August forms part of the Caribbean Heat Season and marks: 1) part of the long Dry Season in the ABC Islands, 2) the early Wet Season in Belize and the Lesser Antilles, 3) the summer portion of the Wet Season in the Greater Antilles, and 4) the transition from the Wet to the Dry Season in the Guianas. What should you do?



The **2021 Atlantic Hurricane Season** officially starts on June 1st and is forecast to be active with the consensus suggesting close to 18 named storms (i.e. tropical storm, hurricane or major hurricane), including around 8 hurricanes, of which around 3 could intensify into a major hurricane (i.e. category 3, 4 or 5 on the Saffir-Simpson scale) over the entire season. One named storm (Ana) already occurred in late May. The CIMH further forecasts around 7 named storms for June to August, but with a large uncertainty of between 2 and 10 storms.



Severe weather systems, including but not restricted to named storms, can come with a range of hazards, including high winds, landslides, flash floods, among others, which are expected to affect Caribbean territories. 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 and the required protocols, tourism operators should maintain an updated state of readiness, including communication plans and response protocols to deal with sudden eventualities, at all times.

Climate Advisories: Caribbean Cont'd



Climatically, June to August forms the **first half of the Caribbean Wet Season** with a fair number of wet days and longer wet spells, and a decreasing number of short dry spells. These trends result in a decrease in dryness, wildfire potential and dust levels, as well as an increase in water levels in soils, rivers and reservoirs. However, when dry spells lasting several days do occur, they may coincide with incursions of **Saharan dust**, which tends to be most frequent around this time of the year, particularly in the Lesser Antilles. The combination of dryness and dust may impact on respiratory and ocular illness in employees and visitors.



The intensity and frequency of heavy showers tends to be relatively high and, at times, clustered in **very wet spells**, with even a strong chance for the occurrence of **extreme wet spells** throughout the period, particularly towards August. By consequence, the potential for flash floods, long-term flooding and cascading impacts will increase from *moderate* (i.e. occurs two to five times in 10 years) to *high* (i.e. occurs once every other year or even more often) by August throughout the Bahamas, Belize, the Greater Antilles and the Lesser Antilles. By contrast, in the Guianas, this potential will decrease from *high* to *moderate* by August, whereas, in the ABC Islands, this potential remains *limited* (i.e. occurs once or twice in 10 years) throughout the period. Extreme wet spells may coincide with thunderstorms and high winds, and may result in flash floods, land slippage or rock fall, power outages and possible contamination of food and water supplies. Therefore, proper planning / contingencies for these scenarios is imperative for tourism operators, especially those operating outdoors. Tourism facilities should clear their drainage and clean catchment systems as soon as possible.

Climate Advisories: Caribbean Cont'd



Over this three month period, we expect at least the usual amount of rain across most parts of the Caribbean, with the possible exception of the ABC Islands, Barbados, Belize, Trinidad and Tobago, and the Windward Islands where less rain may fall than usual. The drier conditions would be driven by a cooler than usual Tropical North Atlantic Ocean and Caribbean Sea. By consequence, places currently affected by **short-term drought** should see notable improvements in coming months, with virtually no major drought impacts expected by the end of August. Until then, short-term drought may impact food production, potable water availability, as well as, water availability from small streams and small ponds. With the forecasted short term drought relief for most, the potential for bushfires should largely subside, reducing the occasional increases in smoke and soot concentrations in the air.



Ongoing **long-term drought**, which can affect water availability across a multitude of socioeconomic sectors in a country, should similarly subside by the end of November, with the possible exception of western parts of central Belize and St. Vincent and the Grenadines. Nevertheless, 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



Night-time and day-time **temperatures** in the Caribbean are set to remain high throughout this portion of the Caribbean's annual heat season which starts in April/May and ends in October. The exception is the Guianas which tend to be slightly cooler during their primary wet season lasting through the end of July. At the same time, humidity and the associated **heat stress** will steadily increase through August, and will peak during heatwaves. Note that, over the three-month period as a whole, night-time low temperatures may be higher than usual in the ABC Islands, the Bahamas, the Cayman Islands and Cuba, but possibly cooler than usual in Guyana and the Leeward Islands. In addition, the usual or higher daytime (high) temperatures are forecast for the Cayman Islands and locations southwards of Guadeloupe. In the Caribbean Islands, the monthly number of **heatwaves** (and heatwave days) strongly increases from June (between 0 and 8 heatwave days depending on the location) to August (6 to 12 heatwave days) (*high confidence*). Tourism practitioners should expect an increase in demand for cooling/hydration services (e.g. AC use, use of pools and showers, and drinking water) in the upcoming period.



There is a high risk of skin damage due to intense ultraviolet (UV) light emitted by the sun. During this period, the **UV index** will be very high to extremely high 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.

Climate Advisories: Caribbean Cont'd



Ocean temperatures will warm up into August, but are not yet expected to become so warm as to trigger **coral bleaching** throughout the period, with the possible exception of northern portions of the Bahamas and Tobago. 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 peak during this period. (Access more detailed forecast information on dust and air quality in the Caribbean here: <http://dafc.cimh.edu.bb/>). Local dust levels should be decreasing as prolonged dry spells become rare in July and August. Tourism practitioners should be aware that there may be an increase in symptoms in visitors and staff with respiratory ailments.

Climate Advisories: Caribbean Source Markets

June to August marks the summer season in the source markets. What should you do?

Although most source markets are still not fully open to foreign travel, they tend to experience the warm and sunny summer conditions vacationers are seeking at this time, with the exception of northern Europe. Tourism operators are therefore recommended to focus on enhanced marketing efforts to attract visitors. Additionally, they should differentiate themselves through innovative package offers, memorable customer service (bearing in mind COVID-19 protocols), and activities that take advantage of the pristine natural environments on offer.

Furthermore, 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 summer weather in Canada and northern Europe. Finally, a few competing markets in the ASEAN region of South East Asia (Bali, Indonesia in particular) are expected to likely see wetter than usual conditions with increased chance of flooding. In addition, most of the Mediterranean markets in Europe and Asia (particularly Turkey), as well as the Southwestern US may be particularly hot during summer this year, potentially causing a surge in heat stress among vacationers. Marketing efforts should focus on attracting visitors to the generally sunny, warm and breezy weather, and general health and safety, in the Caribbean Islands, as well as, in the coastal areas of Belize and the Guianas.

Climate Outlook for the Caribbean

Except in the ABC Islands, it is the wet season. What do we expect for the Caribbean?

How wet?

Rainfall totals from June to August are likely to be the usual or drier in the ABC Islands, Barbados, Belize, Trinidad and Tobago and the Windward Islands, but at least as high as usual in other countries (*medium confidence*).

How dry?

Short term drought (on a 3-6 months timescale) is not expected to pose any major concerns by the end of August (*medium to high confidence*).

Long term drought (on a 12 months timescale) may possibly develop in west-central Belize and in St. Vincent and the Grenadines (*medium confidence*), but should not pose any major concerns by the end of November in most other places (*high 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://www3.cimh.edu.bb/>

How hot?

June-July-August night-time (low) temperatures are forecast to be the usual or higher in the ABC Islands, the Bahamas, the Cayman Islands and Cuba, but possibly cooler than usual in Guyana and the Leeward Islands. The usual or higher daytime (high) temperatures are forecast for the Cayman Islands and locations southwards of Guadeloupe. Heat stress would peak during heatwaves.

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?

Though the skill of seasonal forecasts for the summer months is usually low in the source markets, there are signs that the eastern half of Canada may be warmer than usual during summer.



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Upcoming Events



CHTA:

June 9: COVID-19 Essential Health Guidelines for the Hospitality Sector. Check out www.caribbeanhotelandtourism.com for more upcoming events

CTO:

Multi-Hazard Risk Management Guide for the Caribbean Tourism Sector Online Course. Registration opens June 7th, 2021. Register at www.CTOTourismTraining.org

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/>