



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 2020 - February 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.

Table of Contents

COVID-19 Pandemic	Page 3
Climate conditions and dengue in 2020	Page 4
Looking Back: Aug - Oct 2020	Page 5
Climate Advisories: Caribbean	Page 6
Climate Advisories: Caribbean Source Markets	Page 12
Climate Outlook for Caribbean	Page 13
Climate Outlook for Caribbean Source Markets	Page 14
Upcoming events and contact information	Page 15
Glossary	Page 16

COVID-19 PANDEMIC

The impact of COVID-19 to tourism activities and businesses across the region has been unprecedented. 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 the busiest Atlantic Hurricane Season on record, the intense heat season and the many flooding rains of the wet season** presented 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.

Be assured that the CTO, CHTA, and CIMH will continue to closely monitor the situation and issue the relevant climate outlooks.

Climate conditions and dengue in 2020

Climate conditions in the Caribbean have been optimal for **mosquito proliferation and dengue outbreaks** throughout 2020, resulting in increased mosquito breeding sites, breeding rates, biting and disease transmission rates, particularly in the eastern Caribbean.



Looking Back: August - October 2020



As of 27 November 2020, the **2020 Hurricane Season has already become the busiest since at least 1850** with 30 named storms. Of those storms, 13 had developed into hurricanes and 6 into major hurricanes (Laura, Teddy, Delta, Epsilon, Eta and Iota).



Much of the Caribbean has recorded at least the usual rainfall accumulations over August to October, with northwestern parts to The Bahamas, parts of Barbados, Western Cuba, parts of French Guiana, Jamaica and Trinidad were very wet to exceptionally wet. By contrast, short term drought has developed in western Puerto Rico, but eased in previously affected areas. Although **the wet season rains** were plenty throughout Belize and the islands, long term drought is continuing from the 2019-2020 drought, though with diminished impacts on recharge of our largest water reservoirs, in southern and easternmost Belize, central parts of the Dominican Republic, easternmost Guadeloupe, Saint Lucia, and St. Vincent. Long term drought has developed in western and northern French Guiana, northernmost Guyana and parts of eastern Suriname.



With the period forming the **second half of the Caribbean heat season**, temperatures remained high across virtually the entire Caribbean. The Bahamas, Grenada, Martinique and locations in Guyana, Puerto Rico and Suriname observed their warmest daytime maximum, daily mean or nighttime minimum temperatures averaged over the three-month period. By contrast, Antigua and parts of Guadeloupe were the only areas where slightly below-average temperatures were recorded over these three months.

Climate Advisories: Caribbean

December through February marks: 1) the early dry season in Belize and the Caribbean Islands, 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 **2020 Hurricane Season officially ended November 30th**, but severe weather systems, storms and hurricanes have occurred after the official end date. Severe weather systems, which can come with a range of hazards, including high winds, landslides, flash floods, coastal flooding, among others, may still affect Caribbean territories in December and into early January, after which this risk should be reduced throughout the islands and Belize.



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, the **first half of the Caribbean Dry Season** in Belize and the Caribbean Islands is characterized by a steady decrease in the frequency of wet days and the reduced intensity of heavy showers. Conversely, the number of dry days and dry spells typically increases steadily towards February, drying the surface and foliage, which may increase the potential for wildfires and airborne particulates.



A **La Niña has been developing since September** and is likely to continue until April 2021. La Niña tilts the odds towards an intense secondary wet season in the Guianas. La Niña also favours a less intense early dry season in much of the Antilles. Conversely, in the far north (i.e. the Bahamas and Cuba), even sunnier, but drier than usual conditions become more likely.



In the Guianas, intense and frequent heavy showers during the secondary wet season tend to be clustered in very wet spells and **extreme wet spells** throughout the period. This results in high potential for long-term flooding in flood-prone areas, as well as, flash floods (high confidence). Although Belize and the Caribbean have entered their dry season, there is still potential for flooding and flash floods until late-December or early-January, after which the likelihood decreases.

Climate Advisories: Caribbean Cont'd



Besides often resulting in flash floods, extreme wet spells may coincide with thunderstorms and high winds, land slippage or rockfall, soil erosion, power outages and possible contamination of food and water supplies. It should be emphasized that, while tropical cyclones typically produce **extreme wet spells**, a majority of extreme wet spells occur during the passage of other weather systems. Therefore, proper planning / contingencies for these scenarios is imperative for tourism operators, especially those operating outdoors. Tourism facilities should continue to regularly clear their drainage and clean catchment systems.



The forecasts suggest that the **early dry season** may be even drier than usual in the Bahamas and Cuba, but potentially wetter than usual elsewhere. In The Bahamas, Turks and Caicos Islands and Cuba, the potentially very dry conditions are forecasted to include frequent short dry spells, which are likely to steadily increase wildfire potential.

Climate Advisories: Caribbean Cont'd



In the Guianas, rainfall totals may be much higher than usual. Within the period, a higher than usual number of very wet spells and a higher chance for extreme wet spells is forecasted in the Guianas and the islands south and east of Hispaniola. This will further increase the potential for flood-related hazards, particularly in the Guianas (medium to high confidence). A higher number of wet days in the Guianas suggests that surfaces may remain damp and moist for prolonged periods of time.



The **2019-2020 regional drought has largely subsided** and should generally not be a significant concern during this period. Short term drought (on a 3-6 months timescale) is unlikely to be a major concern by the end of February, apart from western Belize and northwest Puerto Rico, where it is likely to evolve, and in Antigua, other parts of Belize, the Dominican Rep. and southern Puerto Rico, where it is possible (medium confidence). Short term drought may impact food production, water quality and quantity from small streams and small ponds and other surface sources. Long term drought (on a 12 months timescale), which may affect water availability across a multitude of socio-economic sectors in a country, should not be a significant concern by the end of May. However, long term drought should evolve in southern parts of Belize and northwest Puerto Rico, and may possibly develop or persist in eastern Cuba, eastern Dominican Republic, and southeast Puerto Rico (medium to high confidence).

Climate Advisories: Caribbean Cont'd



This period forms the core of the **Caribbean cool season**, during which night-time and day-time temperatures are comfortable across the region (high confidence). The forecast suggests that a number of cold nights may be expected in Belize and high-altitude locations across the region (medium confidence). Heat waves are virtually nonexistent during the coolest three months of the year in any area of the Caribbean (high confidence). Tourism practitioners may potentially see a slight decrease in demand for cooling/hydration services (e.g. AC use and drinking water) in the upcoming period. Persons (i.e. both staff and visitors) should be sensitised to the importance of staying cool and properly hydrated.



The **UV index** on sunny days will start increasing from high (6-7) in the northern Bahamas and very high (8-10) elsewhere in December and January, to very high (8-10) and extremely high (11-12) by the end of February (on a scale from 1 to 12. For more information, see: <https://www.epa.gov/sunsafety/uv-index-scale-1>). UV exposure is set to be dangerously elevated by February leading to an increasing risk of skin damage due to intense UV radiation. 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 when working outdoors.

Climate Advisories: Caribbean Cont'd



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. The Caribbean Coral Reef Watch in its latest bleaching outlook suggests that the ABC Islands and Trinidad and Tobago may remain under Alert Level 2 (i.e. widespread bleaching is expected) until the end of 2020. This is a good season 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.



Climate Advisories: Caribbean Source Markets

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

Although there are some restrictions to foreign travel from some northern source markets, 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 and the southeastern United States. Due to La Niña, drier and sunnier weather than usual is expected. 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 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 Guianas, it is the Dry Season. What do we expect for the Caribbean?

How wet?

Regionally, rainfall totals from December to February are likely to be at least as high as usual in the Guianas and most of the Antilles; but likely the usual or even drier in The Bahamas and Cuba (medium confidence).

How dry?

Short term drought (on a 3-6 months timescale) is unlikely to be of significant concern by the end of February, with the possible exception of western Belize and northwest Puerto Rico (medium confidence). Long term drought (on a 12 months timescale) should not be a significant concern in most areas by the end of May, but may still evolve in southern parts of Belize and northwest Puerto Rico (medium to high confidence).

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 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

CIMH Climate Services Webinar: Heat and other climate extremes in the Caribbean - Implications for sectoral response. Friday December 4th, 2020

Official launch of deliverables for the ACP-EU-CDB NDRM funded "Supporting a Climate Smart and Sustainable Caribbean Tourism Industry Project." Tuesday December 15th, 2020 11:00am-12:30pm (AST)

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.

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.

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.

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/>