



PRESS RELEASE

Record-breaking heat in 2020 – a new norm?

As the Caribbean Region's 2020 Heat Season draws to a close, the record shows us how excessive heat is becoming the norm

FOR IMMEDIATE RELEASE

BRIDGETOWN, BARBADOS – OCTOBER 30th, 2020 – A number of heat records were broken in the Caribbean in 2020. Notably, in September, Dominica, Grenada and Puerto Rico broke their national/territorial all-time high temperature records. On September 15th, Canefield in Dominica recorded a daytime high temperature of 35.7°C. One day later, Point Salines in Grenada recorded 34°C. According to the US National Weather Service, Aguirre in Puerto Rico recorded 100°F (37.8°C) on September 17th.

The Caribbean Heat Season, the time of the year during which most heatwaves occur, has since 1995 been from May to October since about 1995. The peak period occurs during the months of August and September when high humidity coupled with reduced wind speeds increases heat discomfort.

The Caribbean Institute for Meteorology and Hydrology (CIMH) -- *with the support of the sixteen National Meteorological Services of the Caribbean Meteorological Organisation, as well as, the National Meteorological Services of Aruba, Curaçao, The Bahamas, Cuba, France, Sint Maarten, Suriname and the United States* – analysed the intense heat recorded in 2020.

According to CIMH Climatologist Dr. Cédric Van Meerbeeck, September 2020 was the warmest of any month in the historical record in terms of daytime high temperatures in Aruba (34.3°C), Mabaruma, Guyana (33.4°C), at Martinique's international airport (32.9°C) and in Saint Lucia (32.4°C at the Hewanorra International Airport). Also, Freeport in The Bahamas, Dominica, and Tobago recorded their warmest September since at least 1980, 1975, and 1968, respectively.

When looking at heatwaves, Dr. Van Meerbeeck details that heat exposure increases with more extreme heat -- *for instance with higher temperatures* -- and with increasing duration. A practical definition of heatwaves used in the Caribbean is "a period of at least two consecutive heatwave days. That is, when daytime high temperature on each of these days is within the top ten percent of the historical record." While the number of heatwave days varies across the region and within-country, most Caribbean residents spent considerably more days enduring heatwaves this year than the historical norm.

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Dr. Van Meerbeeck noted that, for 26 of 30 Caribbean locations -- *that is, weather stations* -- of which heat data were analysed, between 8 and 28 heatwave days occurred in September 2020. For each of these 26 locations, this was above normal. Moreover, there were more than twice as many heatwave days as normal in 18 locations. In Freeport, The Bahamas, there had never been 10 heatwave days in September before.

September alone does not paint the full picture of the intense heat in 2020.

January to September 2020 as a whole has been record warm in Aruba and Dominica, as well as, 6 other locations across the region. This number is only matched by the year 2010. Furthermore, the period January to September 2020 was among the top 3 warmest on record in 23 locations, compared to 14 locations in 2010.

The heat began early on in 2020, with two places in Cuba recording their all-time highs: 38.5°C in Casablanca (near La Havana) and 38.2°C in Camagüey (where the previous record of 37°C was obliterated).

The intensity of the 2020 Heat Season is further demonstrated at Melinda in Belize and Worthy Park in Jamaica which experienced 112 heatwave days, and St. Croix which experienced 133 heatwave days. In the western Caribbean, the 2020 Heat Season had already started in April with up to 29 heatwave days identified in Belize, 23 at Worthy Park, Jamaica and 26 in Camagüey, Cuba.

Where do such statistics leave us?

The scientific literature suggests that the 2020 heat falls within the expectation of very rapid upward trends in extreme temperatures and heatwaves. A 2020 report on climate trends in the Organisation of Eastern Caribbean States (OECS)¹ showed that the amount of time spent in heatwaves has increased from 0% to 10% per heat season before 1995, to nearly 50% of the time by 2020. The same report suggests that, on the basis of future climate projections, the OECS region may expect to spend more than 80% of the annual heat season in heatwaves as soon as the 2030s. Other scientific reports support such findings for the Caribbean and in other regions. It is in this context that the historically record-breaking heat of 2020 is to be seen as a new norm.

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¹ Cédric J. Van Meerbeeck (2020) Climate Trends and Projections for the OECS Region. OECS Climate Change Adaptation Strategy & Action Plan - Technical Report Ref. 8 41 2412. Organisation of Eastern Caribbean States Commission, pp. 80, <https://www.oecs.org/climate-&-disaster-resilience/resources.html?task=document.viewdoc&id=5>

About CIMH:

The Caribbean Institute for Meteorology and Hydrology (CIMH) is an Institution of the Caribbean Community (CARICOM) and the technical Organ of the Caribbean Meteorological Organisation (CMO). Member states of the CMO include: Anguilla, Antigua and Barbuda, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands. The mandate of the CIMH is “to assist in improving and developing the Meteorological and Hydrological Services as well as providing the awareness of the benefits of Meteorology and Hydrology for the economic well-being of the CIMH member states. This is achieved through training, research, investigations, and the provision of related specialized services and advice”. Among other functions, the CIMH is recognised regionally and globally as the World Meteorological Organization (WMO)-designated Regional Climate Centre (RCC) for the Caribbean.

For more regional climatological information on heat in the Caribbean, contact the CIMH’s Caribbean Regional Climate Centre (Caribbean RCC) at rcc@cimh.edu.bb. Visit the Caribbean RCC’s website at <https://rcc.cimh.edu.bb> for regional climate information products. For detailed country-level information, please refer to the country’s National Meteorological and Hydrological Service.