THE UNIVERSITY OF THE WEST INDIES
MONA CAMPUS
JAMAICA, WEST INDIES

CARIBBEAN UNDER THREAT!

10 Urgent Take-Aways for the Caribbean

from the latest global climate assessment report of the IPCC

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INTERGOVERNMENTAL PANEL ON climate change

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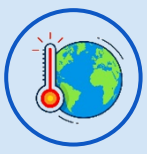
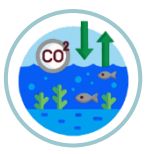
On August 9, 2021 the Intergovernmental Panel on Climate change (IPCC) released **Climate Change 2021: The Physical Science Basis Full Report, Summary for Policymakers (SPM) and the Technical Summary.**

The report represents the first in a series of global assessments of climate change and its impacts that will be released by the IPCC in their current cycle over the next few years. This report covers the latest scientific knowledge. It paints a stark picture of climate change to date and what is to come.

At a glance, here are **10 urgent 'take-aways' for the Caribbean** from the new global report.

10 Urgent Take-Aways	What the IPCC Report says	Why the Caribbean needs to pay attention
1  **Global warming has not slowed.**	Global surface temperature was 1.1 °C higher in 2011–2020 than 1850–1900, with larger increases over land than over the ocean.	The Caribbean rallied around the slogan "1.5 to stay alive". The region argued that life in the Caribbean will teeter on the edge of viability if global temperatures reach 1.5 degrees above pre-industrial periods. We have now seen 1.1 of the 1.5 degrees. The pace of warming is outstripping the pace of the region's response!
2  **The world will exceed 1.5 degrees (above pre-industrial levels) sometime between now and 2040.**	Global average temperature is expected to reach or exceed 1.5°C above 1850-1900 levels in the next 20 years.	The Caribbean lobbied that the globe should not see 1.5 degrees of global warming (over pre-industrial levels) before the end of the current century. At the current pace of warming and without drastic global action we will see 1.5 degrees before 2040. Some individual years before will likely hit 1.5 degrees before then. If there ever was a time to step up the global campaign for 1.5 degrees, ***it is now!***
3  **We can still limit global warming to 1.5 or 2 degrees but only if global greenhouse gas emissions are reduced drastically.**	Limiting human-induced global warming to a specific level requires limiting cumulative carbon dioxide emissions, reaching at least net zero carbon dioxide emissions, along with strong reductions in other greenhouse gas emissions.	The Caribbean must collectively lobby for greater global greenhouse gas reductions by the whole world at the upcoming Conference of the Parties (COP26). Net zero carbon dioxide emissions by mid-century can limit global warming to 1.5 or 2 degrees within this century. It will not be easy and will require everybody to play their part. This means the Caribbean must also reduce its own emissions through greater use of renewable energy, preservation of blue and green forests, and reducing emissions from waste and transportation.
4  **We are more certain now that some extreme weather phenomena are due to global warming.**	Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy rainfall, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since the Fifth Assessment Report (AR5).	We used to say that we cannot take one extreme event and attribute it to climate change. The balance of attribution science has however shifted such that we can now say with greater certainty that climate change is making our weather worse. It is affecting the intensity of heatwaves, droughts, floods and hurricanes, all of which are impacting the Caribbean. We must be prepared for even more extreme weather in the near future.
5  **Heat extremes are part of the new normal globally including small islands and will only get worse even if we manage to limit global warming.**	Small Islands, including the Caribbean, have seen warming that can be attributed to human influence. As warming continues more frequent and intense heat extremes and heat stress will be observed.	The intensity and frequency of heat extremes in the Caribbean are increasing and will only continue to do so. In the Caribbean, this impacts energy usage, water demands, agricultural productivity, health, and thermal comfort, among other things. We take being hot for granted, but we now have to plan for more hot extremes, more of the time.

10 Urgent Take-Aways	What the IPCC Report says	Why the Caribbean needs to pay attention
6  **Rainfall during the summer months in the Caribbean, i.e., when we expect rain, is decreasing and will continue to do so.**	Caribbean rainfall for June–July–August has likely declined since the 1950s and will continue to decline. There is limited evidence and low agreement on cause of the drying trend already observed.	The evidence is clear now that water availability will continue to be one of the most significant challenges for the Caribbean under climate change. Major decisions, plans and projects need to be made, conceptualised, and implemented to enable a water secure Caribbean future. The impact of inconsistent and variable water supply will be widespread and affect all areas of Caribbean life. Significant water projects are needed.
7  **Sea levels continue to rise at increasing and alarming rates.**	Global mean sea level increased by 0.20 m between 1901 and 2018 and increasing rates have been noted since 1971. Sea levels will continue to rise in Small Island regions including the Caribbean and will result in increased coastal flooding.	With nowhere to retreat to and primarily coastal cities, towns and major infrastructure, sea level rise is already a concern for the Caribbean and will continue to be so beyond the current century, even with efforts to limit global warming. Sea level rise together with storm surges and waves, especially from more intense hurricanes, will worsen coastal inundation and the potential for aquifers to be impacted by increased saltwater intrusion. Sea level rise will also cause shorelines to retreat for most Small Islands. Protecting coastal assets using hard and soft measures must be a priority in development planning.
8  **It's not just land areas that are impacted, it's also our oceans!**	Globally there has been an increase in ocean acidification and in the frequency and intensity of marine heatwaves in some areas of the Atlantic. Marine heatwaves and ocean acidification will increase further with 1.5°C of global warming and with larger increases at 2°C and higher.	The Caribbean is increasingly looking to the ocean and the blue economy for future economic development. The Caribbean waters and its biodiversity currently support many livelihoods, including fisheries, and tourism; is important for recreation; has potential for renewable energy generation; provides protection against storms; and are part of the allure of the Caribbean. But the marine environment is already under threat due to global warming, and that threat will only increase. Global warming is directly challenging the developmental potential of the blue economy. What is the Caribbean doing to ensure it is still a viable development option?
9  **We must brace for it! Regions like the Caribbean will experience multiple threats due to climate change.**	With further global warming, every region is projected to increasingly experience concurrent and multiple changes in climatic impact-drivers. Changes in several climatic impact-drivers would be more widespread at 2°C compared to 1.5°C global warming and even more widespread and/or pronounced for higher warming levels. For example, at 2°C global warming and above, the Caribbean is projected to experience an increase in frequency and/or severity of agricultural and ecological droughts.	It will not be one climate threat or the other. It will be concurrent multiple threats. Hot and dry conditions will have significant implications for the agriculture and water sectors; more intense hurricanes and sea level rise will severely impact infrastructure and coastal living, while ocean acidification and marine heatwaves will impact coastal livelihoods. Can the Caribbean say that regional planning for climate change factors in the complexity that compound events will bring?
10  **How bad it becomes will depend on how bad we let it become!**	With every additional increment of global warming, changes in extremes continue to become larger.	The world, and the Caribbean, have a say in how bad climate change eventually becomes and also how bad the impacts will eventually be. The Caribbean has to intensify efforts to get limits on global warming. But even then, the world has already committed itself to some level of increase and impact. This means adaptation planning takes on even greater importance for the Caribbean as well as issues such as 'loss and damage'. Does the region have collective positions on mitigation, adaptation, and loss and damage? Is it making that position known to the world and its own citizens? Is everybody aware of what they can do? The stark message to the region is that everybody has to be part of the solution!

Note: [1]*The SPM of the Working Group I contribution to the IPCC Sixth Assessment Report (AR6) was drafted by a team of global science experts. Prof. Tannecia Stephenson, from the Climate Studies Group, Mona (CSGM) at The UWI, Mona was among the team of drafters. She is the only Caribbean small island scientist in the team.*

[2]*The Climate Studies Group, Mona is a consortium member of The UWI's Global Institute of Climate Smart and Resilient Development (GICSRD) which harnesses UWI expertise in climate change, resilience, sustainable development and disaster risk reduction across all UWI campuses.*

[3] **Climate Change 2021: The Physical Science Basis Full Report, Summary for Policymakers (SPM) and the Technical Summary** *can be accessed at: https://www.ipcc.ch/report/ar6/wg1/*