ADAPTING TO CLIMATE CHANGE IN THE CARIBBEAN: EXISTENTIAL THREAT OR DEVELOPMENT CROSSROADS?

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Abstract

The past two decades have seen a significant shift in the Caribbean's development landscape, with climate change becoming the focal point of regional policy and planning. These initiatives represent a major shift in the region's development policy arena—a shift that is premised on the transformational, if not apocalyptic, implications that anthropogenic climate change seem to pose for the Caribbean. The discourses that have shaped this policy shift and their wider implications for the region's future development trajectory are the central focus of this paper. First, we provide an overview of the current climate change science literature for the Caribbean and discuss some of the main implications for regional development. We then trace and assess the region's major policy responses to climate change, paying keen attention to the Caribbean Community's strategic approach for promoting climate-compatible development over the past two decades. We conclude by critically exploring the notion that global climate change poses an 'existential threat' to the Caribbean, amidst its potential to erode or even reverse whatever developmental gains the region has achieved since the post-independence era and the region's own state of readiness to respond effectively to such an unprecedented challenge.

Keywords: climate change, climate justice, adaptation, vulnerability, SIDS, existential threat

Resumen

Las últimas dos décadas han visto un cambio significativo en el panorama de desarrollo del Caribe, con el cambio climático convirtiéndose en el punto central de la política y planificación regional. Estas iniciativas representan un cambio importante en el ámbito de la política de desarrollo de la región, un cambio que se basa en las implicaciones transformadoras, sino apocalípticas, que el cambio climático antropogénico parece representar para el Caribe. Los discursos que han dado forma a este cambio de política y sus implicaciones más amplias para la futura trayectoria de desarrollo de la región son el foco central de este artículo. Primero, proporcionamos una visión general de la literatura científica actual sobre el cambio climático para el Caribe y discutimos

algunas de las principales implicaciones para el desarrollo regional. Luego, rastreamos y evaluamos las principales respuestas políticas de la región al cambio climático, prestando especial atención al enfoque estratégico de la Comunidad del Caribe para promover un desarrollo compatible con el clima en las últimas dos décadas. Concluimos explorando críticamente la noción de que el cambio climático global representa una "amenaza existencial" para el Caribe; su potencial para erosionar o incluso revertir cualquier ganancia que lograda en la región, en términos de desarrollo, desde la era posterior a las independencias: y el estado de preparación de la región para responder de manera efectiva a un desafío sin precedentes.

Palabras clave: cambio climático, justicia climática, adaptación, vulnerabilidad, SIDS, amenaza existencial

RÉSUMÉ

Au cours des vingt dernières années, la Caraïbe a connu un grand changement en ce qui concerne son développement, puisque le réchauffement climatique est désormais au cœur de la politique et de planification de la région. Les initiatives entreprises représentent un changement majeur dans la politique dédiée au développement de la région, changement qui impliquent des transformations profondes, sinon chaotiques, que le réchauffement climatique lié aux facteurs anthropogènes semble poser pour la Caraïbe. Les discours qui sous-tendent ce changement de politique et leurs implications pour le développement et l'avenir de toute la région sont au cœur de notre contribution. Nous commencerons par une brève présentation de la littérature scientifique sur l'impact du réchauffement climatique pour la Caraïbe et nous discuterons de certaines des principales implications pour un développement régional. Puis nous passerons en revue et évaluerons les réponses politiques de la région au défi climatique, en nous attachant particulièrement à l'approche stratégique de la communauté caribéenne afin de promouvoir un développement tourné vers la préservation de l'environnement au cours des vingt dernières années. Enfin, nous explorerons la notion selon laquelle le réchauffement climatique constitue une "menace existentielle" pour la Caraïbe, en même temps qu'il a le potentiel de menacer, voire de réduire à néant tous les progrès réalisés dans la région depuis le début de la postindépendance, avant de présenter certaines mesures de préparation observables dans la région pour répondre efficacement à ce défi sans précédent.

Mots-clés : changement climatique, justice environnementale, adaptation, vulnérabilité, PEID (Petits Etats Insulaires en Développement), menace existentielle

Introduction

The impending threats posed by a changing global climate system has now become one of the key and defining features of the Caribbean development agenda. There is mounting evidence to suggest that even drastic reductions in global greenhouse gas emissions now will be insufficient to avoid some of the dangerous projected impacts of future climate change (Ramanathan and Feng 2008; IPCC 2014). The Caribbean region in particular, is recognized for the disproportionate risk it faces from climate-induced changes.[1]

The generally small geographic size of most Caribbean states, high concentration of settlements and resources along low-lying coastal strips, narrow natural resource base, and overwhelming reliance on a limited number of climate-sensitive industries, have only served to exacerbate the region's vulnerability to contemporary forces of global economic and environmental change (Hall et al. 2013; Trotz and Lindo 2013; Nurse et al. 2014; McGregor et al. 2016). When superimposed on these existing vulnerabilities, climate change presents new and unprecedented challenges to the region's development. Significant shifts in traditional weather patterns and rising sea levels could cause significant, if not, catastrophic and irreversible damage to regional economies. Adaptation is arguably the only foreseeable means of survival for the majority of Caribbean states, which by and large, are among the most vulnerable countries in the world to anthropogenic climate change (Nurse et al. 2014). Added to that, it is becoming more and more accepted, that if urgent steps are not taken now, global climate change could seriously undermine any future prospects of development for a region so dependent on its weather and climate. Yet the costs of adaptation are quite daunting and generally seem to exceed the capacity of individual nation states to adequately tackle.

The aforementioned realities have formed the basis of the region's recent responses to the current global climate problem. The past two decades have seen a significant shift in the Caribbean's development landscape, with climate change becoming the focal point of regional policy and planning (Bishop and Payne, 2012; Popke et al. 2016). The seeds of which were sown as early as 1994 with the adoption of the Barbados Programme of Action for the Sustainable Development of SIDS (BPOA), that singled out climate change and sea level rise as priority areas of concern requiring urgent attention. Since then, there has been several major policies and programs that have been put in place at the regional level to promote collaboration on climate change related issues, as well as inform, fund and support mitigation and adaptation efforts across the Caribbean. Some of these policies will be elaborated

on further in the paper.

The establishment of the Caribbean Community Climate Change Centre (CCCCC) in February 2002 signaled yet another major step in the region's bid to tackle climate change. One of the main purposes for setting up a regional climate change center was to enhance the region's institutional and technical capacity to co-ordinate and support national strategies within CARICOM related to climate change adaptation and mitigation. The Centre is the official repository and clearing house for regional climate change data, providing climate change-related policy advice and guidelines to the Caribbean Community (CARICOM). The Centre thus functions as the lead agency for coordinating the region's response to climate change, which includes facilitating regional consensus for negotiations pertaining to the United Nations Framework Convention on Climate Change (UNFCCC) and other international forums.

In sum, these initiatives represent a major shift in the region's development policy arena—a shift that is premised on the catastrophic, if not apocalyptic, implications that climate change seem to pose for the Caribbean. The discourses that have shaped this policy shift and their wider implications for the region's future development trajectory are the central focus of this paper. In the following section, we provide an overview of the current climate change science literature for the Caribbean and discuss some of the main implications for regional development. The paper then goes on to trace and assess the region's major policy responses to climate change, paying keen attention to CARICOM's strategic approach for promoting climate-compatible development over the past two decades. We conclude by critically exploring the notion that global climate change could pose an 'existential threat' to the Caribbean, amidst its potential to erode or even reverse whatever developmental gains the region has achieved since the post-independence era and the region's own state of readiness to respond effectively to such an unprecedented challenge.

Climate Change and Caribbean Development

The impending threats that climate change pose for the Caribbean have come into sharp focus of late, evident by the broad range of country-level and basin-wide initiatives that have been instituted in recent years aimed at enhancing the region's capacity to manage and adapt to projected climate-induced impacts (Popke et al. 2016). These initiatives have radically transformed the regional discourse on development, with far greater emphasis now placed on mainstreaming climate change related issues in all spheres of state and public life. This is understandable given the increasing attention being paid to climate change globally, as well as

the unique and precarious position in which many Caribbean countries and territories now find themselves (Rhiney 2015; Sealey-Huggins 2017). The disproportionate vulnerability of the region to the adverse effects of a changing climate is arguably well established, particularly with regards to Caribbean small island and low-lying states which are expected to be amongst the first and most severely impacted over the course of this century (Mimura et al. 2007; Trotz and Lindo 2013; Nurse et al. 2014; Pulwarty et al. 2010).

There is indeed considerable agreement in the scientific community that the global climate is changing and that recent climatic changes are already causing extensive impacts on human and natural systems worldwide (IPCC 2014 2018). Shifting precipitation patterns, rapidly melting polar ice caps, rising sea levels and noticeable changes in the frequency and/or intensity of a range of extreme weather and climate events, have all been linked to anthropogenic increases in greenhouse gas emissions since the start of the industrial revolution in the mid-eighteenth century. There is also a fair degree of consensus that unless major steps are taken now by the international community to significantly curb emissions, the cumulative concentration of atmospheric greenhouse gases will soon reach dangerous levels, thus increasing the likelihood of severe, pervasive and irreversible future climatic impacts (IPCC 2018).

Scientific records indicate that the planet's climate has already warmed by about 1°C above the pre-industrial benchmark, and suggests that aggregate global economic and ecosystems damages will likely accelerate under a warmer global climate (IPCC 2014 2018). In its recently published Special Report on 1.5°C, the IPCC warns that climate-related risks to both human and natural systems are projected to increase with additional warming; and are likely to reach dangerous and irreversible levels if warming exceeds the 1.5 threshold (IPCC 2018). There is consequently a great deal of consensus on the need to drastically reduce the levels of carbon dioxide (CO2) and other greenhouse gases in the atmosphere over the short to medium term. Failure to do so would fundamentally limit our chances of averting the worst-case scenarios of changed climate patterns and global mean sea level rise.

Implicit in these projections however, is the realization (and acceptance) that some future impacts are inevitable. In fact, at current rates of warming, it is projected that the global climate will likely exceed the 1.5°C threshold by the 2050s (possibly earlier), and could climb to 2°C or higher before the end of the century in the absence of drastic efforts aimed at zeroing out fossil fuel emissions and removing carbon dioxide from the atmosphere (IPCC 2018). Needless to say, that these estimates have been a source of much contention, resulting in the Alliance of Small Island States (AOSIS) advocating for a cap of 1.5°C on global warming

above pre-industrial levels (Benjamin and Thomas 2016) and culminating in a decision by world leaders at the Paris Climate Talks in 2015 to curtail total global warming to levels well below 2°C and to pursue efforts to limit warming to 1.5°C.

The position held by leaders of small island nations to limit warming to 1.5°C is not surprising, given the particular and disproportionate vulnerabilities of small islands to the effects of climate change (Pulwarty et al. 2010; Barnett and O'Neill 2012; Beringer 2012; Palanisamy et al. 2012; Nurse et al. 2014; Rhiney 2015; Benjamin and Thomas 2016). In fact, there are signs that indicate that current levels of warming have already had observable, and possibly, irreversible impacts on small islands, including depletion of warm-water coral reefs, noticeable declines in marine fisheries and food production, and rising sea levels (UNFCCC 2015).

In the case of the Caribbean, historical records indicate that the regional climate has changed in significant ways over the recent past (Gamble and Curtis 2008; Taylor et al. 2017). In general, the records point to the emergence of a new and 'unfamiliar' regional climate regime, marked by warmer temperatures, more variable rainfall patterns, more intense storms and other climate extremes and higher sea levels (Taylor et al. 2017). Not surprisingly, both global and regional model predictions suggest that the Caribbean climate will continue to change in significant ways throughout the course of this century. In the main, these projections indicate a sort of deepening of this new and emerging climate characterized by a much warmer and drier regional climate regime, an increase in the intensity of hurricanes and tropical storms when they do occur, and additional increases in regional sea levels. By the end of this century, mean annual temperatures across the Caribbean basin are projected to increase between 1° and 3.5°C relative to present-day temperatures, while annual rainfall is expected to decline by as much as 20% (Taylor et al. 2017). Model outputs also suggest that the region's mean sea level will continue to increase in line with the global mean, with the upper boundary ranging anywhere between 0.6 meters to 1.5 meters for the Caribbean Sea by end of century (IPCC 2013; Perrette et al. 2013; Rahmstorf 2007). And while scientists are still uncertain as to whether the region will experience an increase in the frequency of hurricanes and tropical storms, there seems to be some agreement that the intensity of these events will likely increase under a warmer climate.

The consequences of these climate-induced changes for the Caribbean are immense, with profound implications for the future, particularly in terms of regional development and sustainability. For the most part, the impacts are likely to be negative, non-linear and unevenly distributed across sub-regions, economic sectors and socio-economic groups

(Rhiney 2015). The impacts on human health, water resources, biodiversity, coastal infrastructure, tourism and agriculture are expected to be amongst the worse, with dire implications for future regional development prospects. Rising sea levels and higher sea surface temperatures, for example, pose a severe threat to a range of coastal and marine ecosystems found throughout the Caribbean, especially coral reefs and mangroves. Any widespread devastation of coral reefs will severely threaten the livelihoods of thousands of fisherfolk across the region, not to mention the profound implications for the Caribbean coastal tourism industry (Scott et al. 2012; Chen et al. 2015). Rising sea levels also enhances the risk of coastal flooding, biodiversity loss, saltwater intrusion and the disappearance of valuable coastal lands and beaches due to increased inundation and shoreline erosion (Cashman et al. 2010; Pulwarty et al. 2010; Scott et al. 2012). Likewise, future changes in the intensity and/or frequency of extreme weather events such as droughts and hurricanes, will have a pronounced regional impact on available freshwater resources, agricultural production, tourism and human health (Nurse et al. 2014). By and large, these point to a worrying and uncertain future for the Caribbean, which has been made worse over the years by the inability of the international community to agree to common solutions in tackling this worsening global climate problem.

The recent Paris Agreement adopted in December 2015, offers some semblance of hope given its ambitious target of limiting future warming at 'levels well under 2C' (UNFCC 2015). But for now, many uncertainties remain as to the extent of nation states' commitment to the obligations embedded in this historic climate agreement, and whether the mechanisms set out under the final agreement are even sufficient to keep global warming to tolerable levels (Fawcett et al. 2015; Rogelj et al. 2016; Dupont et al. 2017). In fact, even if all the national pledges made at the Paris Climate Talks to curb emissions were to be met, the world would still be on track to warm between an additional 2-3°C by end of century (Plumer and Popovich 2018). Simply put, the Paris Agreement will be significant to the extent that it can further stimulate fundamental domestic policy changes (especially among high emitting countries) and promote sound technical cooperation between countries aimed at ending our dependence on fossil-based fuels and transitioning towards a low or zero carbon future. These are highly ambitious goals, which success depends overwhelmingly on the actions and commitments of a handful of the world's top greenhouse gas emitting countries. In sum, the inability of the international community to date, to establish effective multilateral action against climate change has placed many developing countries in a precarious position. The Caribbean, being a developing region dominated by small islands and low-lying states, is set to become

one of the first and most severely impacted regions in the world as a direct result of this inaction (Sealey-Huggins 2017).

Any discussion pertaining to climate change and its associated threats for the Caribbean, is inherently developmental in nature. Climate change is seen as a debilitating force that threatens to amplify and deepen existing vulnerabilities and severely undermine regional states' prospects for future development. Mounting pressures to adapt to a changing climate increases regional states' development challenges as scarce resources have to be streamlined to address new and emerging climate risks while tackling long-standing and entrenched structural problems including, amongst other things, unfavorable terms of trade, limited economic diversification, high debt burdens, poverty and inequality (Bishop and Payne 2012; Dodman et al. 2009). Given these realities, it is not surprising that climate change has now taken center stage in the Caribbean policy agenda, and could remain that way for decades to come. The next section thus traces the region's major policy responses to this looming climate problem before segueing into a critical discussion as to the extent to which climate change can be seen as posing a genuine existential threat to the Caribbean.

Regional Policy Responses

As far as policy is concerned, climate change issues have since been part of the Caribbean policy and development landscape for more than two decades. The UN Global Conference on the Sustainable Development of Small Island States, which took place in Barbados in April 1994, served as a catalyst for the ushering of the climate change discourse in the regional policy agenda. A key outcome of the Conference was the adoption of the Barbados Programme of Action (BPoA), which outlined a 14-point strategic plan that explicitly singled out climate change and global sea level rise as priority areas of concern for SIDS that required significant and urgent attention (United Nations 1994). Since then, there has been a string of regional policies and programs aimed at promoting technical and financial cooperation around climate change-related issues in the Caribbean (Table 1).

The Caribbean Planning for Adaptation to Climate Change (CPACC) was the first major regional climate change program, spanning from 1997 to 2001. The CPACC was a direct response to the recommendations emanating from the BPoA, and was partly guided by the findings and predictions of the Supplementary Assessment Report published by the Intergovernmental Panel on Climate Change (IPCC) in 1992—both of which highlighted the urgent need for regional states to protect their shorelines and marine resources from the anticipated

Table 1: Selected Regional Climate Change Policy Initiatives in the Caribbean since 1997

Policy	Duration	Funding Entity	Funds	Scope
Caribbean Planning for Adaptation to Climate Change (CPACC)	1997-2001	Global Environmental Facility (GEF)	US$6.6 million	aimed at building the region's institutional and technical capacity to adapt to future climate change impacts, particularly around sea level rise and shoreline erosion.
Adaptation to Climate Change in the Caribbean (ACCC)	2001-2004	Canadian International Development Agency (CIDA)	CAD$3.5 million	aimed at sustaining and building on activities initiated under the CPACC; included capacity building and public education and awareness initiatives.
Mainstreaming Adaptation to Climate Change (MACC)	2004-2007	Global Environmental Facility (GEF)	US$11 million	enhanced institutional capacity and technical cooperation in climate change adaptation initiatives; strengthened the knowledge and science based around climate change issues; public education and outreach.
Special Program on Adaptation to Climate Change (SPACC)	2007-2011	World Bank and Global Environmental Facility (GEF)	US$2.1 million	involved several coastal adaptation pilot projects across the region focused on biodiversity and land degradation.
Pilot Program for Climate Resilience (PPCR)	2008 (ongoing)	Climate Investment Fund	US$11 million	focuses on capacity building, fostering technical cooperation and raising public awareness around climate change; Country track involves pilot projects in Haiti, Jamaica, Dominica, Grenada, St. Lucia and St. Vincent and the Grenadines; Regional track involves providing climate risk data and information to regional states.
Regional Framework for Achieving Development Resilient to Climate Change	2009-2021	Caribbean Community Climate Change Center	NA	provides blueprint for regional cooperation on all matters related to climate change; aimed at mainstreaming adaptation and mitigation strategies.

Source: Caribbean Community Climate Change Center website

increases in regional sea levels and sea surface temperatures. Funded by the Global Environmental Facility (GEF) to the sum of US$6.6 million, the project was primarily aimed at building the region's institutional and technical capacity to adapt to future climate change impacts, specifically regarding the risks associated with global warming, sea level rise and accelerated shoreline erosion. This resulted in a range of basin-wide activities including the installation of automated sea level and climate monitoring systems throughout the Caribbean and the establishment of an integrated database to facilitate the dissemination of technical and other project-related material to stakeholders. The project supported a number of country-level pilot activities related to coral reef monitoring, coastal vulnerability and risk assessments and economic valuation of coastal and marine resources. The CPACC was also instrumental in funding the first set of country policy papers on national climate change adaptation issues and provided a springboard for the region's participation in the United Nations Framework Convention on Climate Change (UNFCCC).

In 2001, the CPACC regional project was replaced with the Adaptation to Climate Change in the Caribbean (ACCC) project; this time with funding support from the Canadian International Development Agency (CIDA). Funds totaling CAD$3.5 million were secured for the ACCC project before the completion of CPACC (CCCCC 2013a). The ACCC, which lasted from 2001 to 2004, was primarily designed to sustain and build on activities initiated under the CPACC project, as well as further strengthen the region's institutional and technical capacities and raise public education and awareness around climate change issues. Among the most important achievements was the development of the first set of statistically downscaled climate projections for the region, derived from coarser resolution data taken from global climate models. While these scenarios were limited to just a few Caribbean countries, they represented a major milestone in regional climate science and were particularly instrumental in guiding regional adaptation efforts. The ACCC project was also pivotal in the establishment of the CCCCC as a legal regional coordinating entity for climate change matters and facilitated the development of a range of technical guides and risk management tools to assist regional practitioners and policy makers in enhancing the adaptation planning process.

The commencement of the Mainstreaming Adaptation to Climate Change (MACC) project in 2004, signaled the resumption of GEF funding for regional adaptation activities. The MACC project, in effect, represented a continuation of activities and priorities set out under both the CPACC and ACCC with its focus on further enhancing institutional capacity and technical cooperation and strengthening the knowledge and

science base around climate change issues among participating Caribbean states. Under the MACC project, there was sustained emphasis on building regional capacity to identify climate change related risks through ongoing monitoring of the region's climate and sea levels, public education and outreach, and the continued downscaling of global climate models (CCCCC 2013b).

In 2007, the MACC project was replaced by the Special Program on Adaptation to Climate Change (SPACC), made possible by a US$2.1 million grant provided by the World Bank and GEF. The four-year program was intended to complement the goals of the MACC and other past regional projects by piloting adaptation measures in a select number of Caribbean islands aimed at addressing the impending negative impacts of climate change on biodiversity and land degradation along coastal and near-coastal areas (CCCCC 2011).

Since 2011, the Caribbean Community has benefited from several large-scale funding programs designed specifically to support adaptation initiatives throughout the region. While the core elements of capacity building, fostering technical cooperation, and raising public awareness around climate change issues evident in past programs have continued, there has been a much greater emphasis on financing sustainable adaptation initiatives that can potentially be scaled-up and replicated throughout the region. One of the largest of these funds is the Caribbean regional track of the Pilot Program for Climate Resilience (PPCR) which was initiated in 2009. The PPCR is a multimillion-dollar initiative set up under the Climate Investment Fund to aid developing countries in integrating critical climate change considerations into their development planning process. The Caribbean is one of two pilot regions participating in the PPCR. The Caribbean pilot is two-pronged, consisting of two closely aligned and complementary tracks: (i) country-based investments in six pilot countries—Haiti, Jamaica, Dominica, Grenada, St. Lucia and St. Vincent and the Grenadines; and (ii) a regional track supported by key partner entities aimed at providing vital climate risk data and information so that countries can incorporate climate resilience into their national climate change strategies and financing mechanisms.

In terms of policy, the *Regional Framework for Achieving Development Resilient to Climate Change* presents a roadmap for building regional states' resilience to anticipated global climate change impacts. Approved in 2009, the Framework is intended to provide a blueprint for regional cooperation on all climate change-related issues in the Caribbean. The Framework is supported by an Implementation Plan that specifically outlines the region's strategic approach for addressing climate change up to 2021. A key objective of the Framework is to promote the implementation of specific adaptation measures to address

key vulnerabilities in the region, coupled with actions designed to reduce greenhouse gas emissions through decreasing dependence on fossil fuel and shifting towards renewable sources of energy.

In sum, the region has made significant strides over the years in positioning climate change as a policy and development imperative. In addition to the aforementioned regional policies, are a number of country level policies as well as sector-specific policies and programs aimed at promoting adaptation to climate change. Yet, the Caribbean is still considered among the most vulnerable regions in the world to a changing global climate system. On one hand, regional states demonstrate very limited adaptive capacity and the Caribbean has grown heavily dependent on a limited number of externally driven and time-bounded donor project financing to fund its climate adaptation measures. Added to this, significant asymmetries in knowledge and technical capacity still exist among regional states (Rhiney 2015). Inadequate policy co-ordination and the lack of adequate human and institutional capacity have made it difficult for a number of regional states and institutions to satisfy the management and reporting prerequisites needed to access and sustain major climate funds. And in some cases where funds have been accessed, national governments have generally been unable to sustain activities beyond the lifetime of those projects (see Bishop and Payne 2012). On the other hand, the region's future now hangs in the balance as the global community struggles to arrive at a legally binding and universal consensus on climate change. Amidst recent political developments in countries such as the United States, many of the promises and hoped-for achievements emanating from the recent Paris Climate Talks now seem rather tentative at best.

In essence then, climate change is seen as posing a clear and direct material threat to the Caribbean's very existence. This was reflected in the CARICOM-led '1.5 to Stay Alive' campaign that ran primarily in the months leading up to, and during the Paris Climate Talks. Basically, the long-term temperature goal of 1.5°C has been coined as an existential issue for the Caribbean, and has become the hallmark of the region's current position on climate change adaptation and mitigation issues (Sealey-Huggins 2017). In the next section, we engage more critically with the idea of climate change being an existential threat to the Caribbean, in order to tease out some critical insights on precisely what is at stake for the region from a development standpoint, as well as to assess the region's own state of readiness to respond effectively to such an unprecedented challenge.

Existential Threat or Development Crossroads?

> The hurricanes of the last few weeks in the Caribbean have reinforced in my mind a growing sense that Caribbean states may be more and more facing a challenge of existential threats. (I prefer this idea to the discourse of 'failed states,' which I find rather obnoxious and patronising; being associated with a political agenda of 'humanitarian interventionism' and the contemporary incarnation of the doctrine of imperial responsibility.) By existential threats I mean systemic challenges to the viability of our states as functioning socio-economic-ecological-political systems; due to the intersection of climatic, economic, social and political developments. (Girvan 2010)

When the full scope and magnitude of the threats climate change pose for the Caribbean are considered, then one can better appreciate why the future is increasingly being framed in such catastrophic terms. These impending threats are made worse by the fact that regional states seem not to be in a position to respond effectively to the current climate problem on their own. In other words, the costs of adaptation are generally seen as exceeding the resources which are available to individual states; thus, posing a clear and real existential threat to the region as a whole. Added to this is a growing recognition that there are ecological and societal limits to adaptation as well (Adger et al. 2008), and so even if the adaptation needs of Caribbean countries are met, adaptation will not be able to prevent all of the impacts of climate change from occurring (see, for example, Thomas and Benjamin 2018).

While these realities surely point to a kind of apocalyptic imaginary of the future, one that has certainly emerged as a dominant narrative for the Caribbean—the ongoing '1.5 To Stay Alive' campaign being a case in point—we however seek to extend the idea of 'existential threat' to mean more than just the negative biophysical consequences associated with a changing global climate. Instead, we put forward an idea more akin to a sort of *climate dialectic* (see, for example, Goodman 2016), that also recognizes the wider justice and developmental implications of climate change. In other words, the current climate problem is not entirely 'natural' and therefore its root causes and consequences cannot be divorced from an appraisal of a larger set of systemic and historically contingent processes and events that have unfolded and coalesced over several centuries to place the Caribbean in the highly vulnerable position it currently occupies (Baptiste and Rhiney 2016; Sealey-Huggins 2017). The region's disproportionate vulnerability to climate change is as much a function of these historical antecedents, as its geography and physical characteristics. Here, we echo Norman Girvan's sentiments in that we see the dangers presented by climate change as a continuation of a series of pathological threats that challenge the region's existence as a functioning socio-ecological, economic and geo-political space:

> one must wonder if we are not in fact experiencing an overlapping and interconnected series of challenges which in their totality, challenge the assumptions underlying the 'national statehood' dispensation of the region. Suppose, in other words, that we are not dealing simply with a series of 'natural disasters', but rather with a deeper, more systemic threat to the viability of our societies as functional entities in any meaningful sense of the word? (Girvan 2010)

Girvan's question points to the profound and entangled ways natural disasters (including nation states' capacity to recover from their impacts) are linked to wider and systemic concerns around sovereignty and development. The same can be said about climate change. Central to the analysis provided here, is the viewpoint that while climate change is normally reduced to a kind of 'paleotechnic' crisis that can be fixed through greater investments in cleaner sources of energy and the adoption of more environmentally-sound policies, technologies and market instruments, attention must be given to its human and ethical dimensions as well. The idea of a *climate dialectic* partly speaks to the underlying tensions that exist between those countries normally seen as constituting the 'global South' and those of the 'global North' with regards to the justice implications of global climate change. The fact that the Caribbean has contributed so little in terms of greenhouse gas emissions, but is considered one of the most vulnerable regions in the world to future climate change impacts (Baptise and Rhiney 2015), encapsulates this logic. The Caribbean's present-day vulnerability to climate change can indeed be traced back to the debilitating legacies handed down over the centuries by a colonial past that saw the region's forceful insertion into a highly exploitive and vastly unequal global capitalist system. Beginning since the Sixteenth Century, European nations' quest for new territories and natural resources, saw the Caribbean becoming a central hub for exploitation and extraction (Boswell 2009). This history of exploitation and structural dependence is partly responsible for the inability of many regional states to effectively compete in today's highly competitive global economy. And in a perverse twist of fate, these historical antecedents helped form the basis for the emergence and establishment of an industrial era that was instrumental in laying the foundations for the current global climate problem that now threatens the very fabric of Caribbean societies (Sealey-Huggins 2017). Tied to this is the apparent path dependence of some of these historical processes that has resulted in the seeming irreversibility or persistence of some of the structural problems affecting the region, that also serve as barriers to adaptation (see, for example, Look et al. 2019; Rohland 2019).

Given these realities, it is not surprising that the Caribbean has been at the forefront of recent calls advocating for more ambitious targets

for climate change mitigation and adaptation action. What has been largely missing from these ensuing narratives however, is an explicit focus and recognition of the inherent vulnerabilities and inequities that are linked to the type of development pathways and macro-economic models that have been pursued by regional states over the years. For instance, the high reliance on coastal tourism throughout the Caribbean, undergirds the region's disproportionate vulnerability to future sea level rise (Becken and Hay 2007; Scott et al. 2012; Spencer 2019). Likewise, the overwhelming emphasis that have historically been placed on plantation monocrop agriculture—often at the expense of non-traditional small-scale mixed cropping systems—has systematically undermined the adaptive capacity of a large segment of Caribbean farmers to a range of climate-induced shocks (Barker 2012; Rhiney *et al.* 2018). So, while the region's ongoing call for high income nations to shoulder the brunt of the responsibility for combating climate change is indeed valid and necessary, one cannot overlook the long-held and underlying structural and systemic issues that must also be addressed if the Caribbean is to achieve genuinely sustainable and transformative forms of adaptation.

The 2017 hurricane season provides a stark illustration of the complex ways in which the impacts from extreme climate events often compound (and are themselves compounded by) underlying issues of uneven development, inequity, injustice, non/sovereignty and geopolitics. The hurricanes also highlighted just how much the region's vulnerability to future climatic shocks cannot be fully understood without a deep engagement and recognition of the historical forces and formations that have shaped present day Caribbean societies, economies and environments (Rhiney 2018; Look et al. 2019). In the case of Puerto Rico, we are seeing a post/disaster landscape that is being mobilized as a platform for reifying and extending existing post/colonial power relations and hegemonic practices on one hand, and an avenue for the promotion and accumulation of new (and not-so-new) forms of private capital increasingly premised around notions of resilience and 'building back better' on the other (Klein 2018). Puerto Rico's subordinate position to the United States, a looming debt burden and the poor state of its energy and other critical public infrastructure were partly responsible for the severity of the disaster that unfolded after hurricane Maria struck the island. These also warrant greater attention to the ongoing political struggles taking place across the Caribbean in the wake of the 2017 hurricane season and current calls for greater self-determination and reparative justice:

> the persistent loss of black life and the dereliction of poor peoples' materialism in a backward built environment that was designed for the sole purpose of servicing imperial sugar plantations, reside squarely at the core of their respective metropolitan capitols. (Beckles 2017)

In others words, these disasters, like anthropogenic climate change, are not entirely natural, and are best interpreted as a confluence of historical and contemporary forces that are driven by a combination of biophysical and social processes that span multiple spatial and temporal scales (Oliver-Smith 2002; Bankoff 2007; Kelman et al. 2016). This is in line with Girvan's theorizing of the existential threats facing the Caribbean, which challenges us to see what he called "connections among seemingly unrelated phenomena" (Girvan 2010). But Girvan doesn't just stop there. Instead, he uses this theorizing to call for greater strategic thinking; one that attends to the multiple and coalescing threats facing the region:

> Yet isn't strategic thinking, that attempts to discern the connections among seemingly unrelated phenomena, not what is required? Indeed, is it not a necessity for survival? I would think that the first step of such an exercise is for us to admit to ourselves that the problems we face are too wide in scope and too vast in scale for any one Caribbean country to cope with by itself; that the thinking, institutions and structures we have no longer serve us well; and that no one—not government or opposition; not public sector or private; not civil society or academia—can singly provide the answers. Can we begin a conversation nationally and regionally—or rather, take existing conversations to a higher plane? (Girvan 2010)

Ironically, the enormous threats posed by a changing global climate places the region in a kind of development crossroads. This too, should form part and parcel of the wider *climate dialectic*, as Caribbean leaders are now compelled to come to grips with their own roles and responsibilities in combating these underlying forces driving the region's vulnerability to climate change while charting a sustainable future development pathway. Securing greater climate financing, though a necessary and important measure, is just part of the solution. A tremendous amount of effort must be exerted to ensure that these funds are spent in a fair, sustainable and equitable manner. Implicit in these arguments, is a plea for a kind of rights-centered and inclusive approach to regional climate governance, that recognizes and prioritizes the need to safeguard the rights of the most vulnerable in society. An approach that seeks to transcend longstanding societal barriers to genuinely inclusive and sustainable forms of adaptation. As while climate change is oftentimes framed as representing an all-encompassing threat for the Caribbean, there is now a growing body of literature that suggests that its negative impacts will disproportionally affect the most vulnerable and politically disenfranchised groups across the region, including rural communities, women and Indigenous Peoples (see for example, Smith and Rhiney 2015; Baptiste and Kinlocke 2015). The challenge therefore is to foster and make known new ways of being that are attentive not only to future climate

uncertainties and shocks, but also to the various forms of modern-day violence, injustices and inequalities that shape the day to day realities of millions of people across the Caribbean.

Concluding Thoughts

While the idea of the Caribbean facing a genuine existential threat under a changing global climate is indeed valid and timely, we have sought to extend that notion to include more than just the anticipated negative biophysical impacts. Instead, we propose the idea of a *climate dialectic* that also recognizes the wider justice and development implications of climate change. Here we contend that any analysis of the Caribbean and its vulnerability to climate change cannot be divorced from an appraisal of a wider set of societal and historically contingent processes and events that have unfolded and coalesced over several centuries. We make reference to Girvan's notion of an existential crisis whereby the dangers being presented by climate change represent a continuation of a series of pathological threats that challenge the region's existence as a functioning socio-ecological, economic and political space.

The paper also points to the need for a more explicit focus and recognition of the inherent inequities and vulnerabilities that are associated with the type of development trajectories and path dependence that have come to characterize the contemporary Caribbean. We argue that these inequities cannot be sidelined in future adaptation efforts if the region is to achieve truly sustainable and transformative forms of adaptation. Simply put, climate adaptation efforts cannot be divorced from the cultural, economic, historical, political and environmental contexts in which they occur. The social conditions under which people live, the level of reliance on land-based resources, the existence of knowledge and power asymmetries, differences in income, gender and class, and divergent levels of government support to name a few, all create differentiated levels of exposure and sensitivity to climate-induced shocks. Furthermore, adaptation efforts are expected to take place in a socio-ecological landscape characterized by increasing uncertainty and complexity, and one that is shaped by multiple actors with different (if not competing) interests, as well as varying adaptive capacities and vulnerabilities.

In essence, many Caribbean states are now at a development crossroads where on one hand they are being urged to protect whatever developmental gains they have achieved in recent decades partly through building resilience in key economic sectors like agriculture and tourism, while re-envisioning a more sustainable development pathway for the future. Therefore, the threats posed to the Caribbean by climate change also present an opportunity for the region to re-invent itself.

This re-invention process will have to involve addressing longstanding barriers to transformational change, which includes tackling a range of governance, justice and equity issues at the regional, sub-regional and national scales. Failure to seize these opportunities, to effectively re-invent and re-position the region as the international community strives to transition towards a carbon neutral world, will certainly bear the seeds of a genuine existential threat.

Note

[1] The Caribbean is taken to include the islands and mainland countries of the Caribbean Community (CARICOM).

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