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# Climate Impact and Action: The Travel and Tourism Industry in the Caribbean and Small Island Developing States

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Small Island Developing States (SIDS) like those in the Caribbean region are doubly jeopardized by climate change. They are not major emitters of greenhouse gases, but are amongst the most impacted by the ecological and economic fallout associated with climate change. SIDS are also highly trade and tourism-dependent economies and are therefore very vulnerable to the indirect policy impact from border carbon adjustment measures that would affect international travel and tourism. It is critical therefore to go beyond the ecological impact of climate change to look at its trade effects, especially the impact of mitigation policies on key economic and trade sectors. This brief explores the evolving intersection between climate change and trade governance with an emphasis on the impact of such policies for the travel and tourism industry.

Small Island Developing States (SIDS) like those in the Caribbean region face a double jeopardy with climate change. They are not major emitters of greenhouse gases, yet SIDS are estimated to be one of the groups of countries to be most impacted by the ecological and economic changes associated with climate change, particularly in terms of sea level rise, temperature rises, rainfall changes, coral bleaching and increased health and natural disaster risks such as hurricane damage and storm surges. SIDS are also amongst the highest trade and tourism-dependent economies in the world and are therefore highly vulnerable to the indirect policy impact from carbon mitigation border measures that would affect international travel and tourism.

From this standpoint, it is critical to go beyond the ecological impact of climate change to look at the trade effects and the impact of mitigation policies on key economic and trade sectors. As such, this brief explores the evolving intersection between climate change and trade governance with an emphasis on policy implications for the travel and tourism industry given the recognition that it is not sufficient to cope solely with the challenges of environmental change.

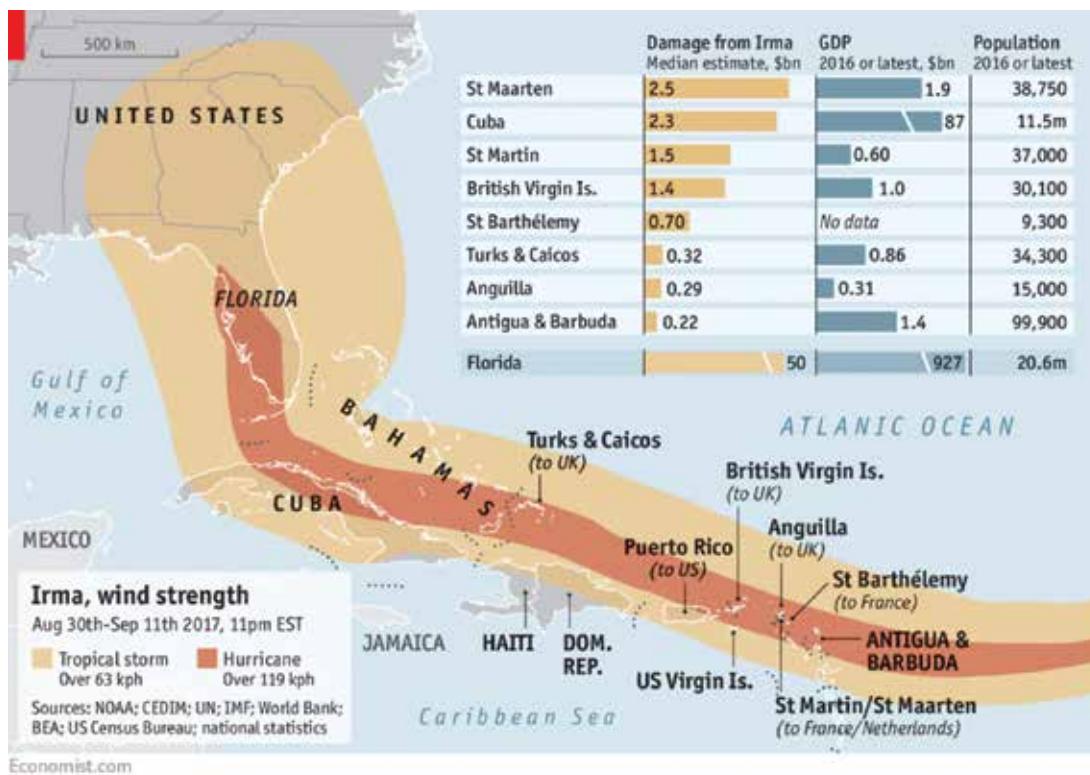
Following the First International Conference on Climate Change and Tourism, a milestone conference held in Djerba, Tunisia, from 9 to 11 April 2003, by the World Tourism Organization, there has been a burgeoning body of research on the topic of the link between the tourism sector and climate change. Central to this theme is the concept of sustainable tourism first considered in 1997 when the nineteenth special session of the United Nations General Assembly (UNGA) was convened to review the first five years of the implementation of Agenda 21. The UNGA highlighted the importance of tourism as "one of the world's largest industrial and one of its fastest growing economic sectors," in many developing countries, including SIDS. The direct effects of climate change include higher prices of travel and transport, a greater perception of risk- including the risk of change in weather patterns- among potential tourists, and a decrease in the quality of natural resources. Climate determines the quality and length of tourism seasons, and affects the environmental conditions that attract and deter visitors.

The Atlantic hurricane season officially begins on 1 June and ends on 30 November, producing an

average of 12 tropical storms. However, the year 2017 will go down as a landmark year given the huge impact that hurricanes had on the economic, social and ecological environments in the wider Caribbean. Hurricane Irma, which ravaged Caribbean communities in 2017 was one of the strongest Atlantic hurricanes on record, with sustained winds of 185mph. These winds were sustained for an unprecedented 37 hours, longer than any tropical system recorded in modern history. According to the World Travel and Tourism Council (WTTC), the 2017 hurricane season caused an estimated loss of 826,100 visitors to the Caribbean, and these visitors could have generated US\$741 million and supported 11,005 jobs (WTTC, 2017). The decimation of several Caribbean island territories such as Dominica, Anguilla, Barbuda, St. Maarten, Turks and Caicos, US and the British Virgin Islands and Puerto Rico resulted in hundreds of casualties and destroyed livelihoods in key sectors like tourism. Take the case of Dominica that had a direct hit from category 5 Hurricane Maria on September 18, 2017.<sup>1</sup> At the time of writing (one month later) assessments were that only 43% of accommodation properties would be able to operate

now or in the near future and that as much as 35% of the reefs at dive sites were damaged. Hurricane Maria went on to hit Puerto Rico with significant damage to property and livelihoods and with thousands displaced several months later.

The economic losses associated with the passing and aftermath of the 2017 hurricane season have been staggering, to say the least. For example, the initial estimates for damages by hurricane Irma are larger than the annual gross domestic product (GDP) of the smaller territories (see diagram below from the Economist)<sup>2</sup>. For example, the GDP impact from the damages from Irma is estimated to be 130% of the GDP for St. Maarten, St. Martin (250%), British Virgin Islands (140%), Turks and Caicos (37%), Anguilla (93%) and Antigua and Barbuda (15%). In contrast, the estimated impacts for the larger territories like Florida and Cuba are 5.3% and 2.6%, respectively. There is a strong linkage between climate change impact and economic distress because Caribbean economies have high debt to GDP ratios partly on account of the rebuilding costs from weather related disasters (Acevedo 2014).



<sup>1</sup> For updates on the situation in Dominica see <http://www.opm.gov.dm>

<sup>2</sup> See:

<https://www.economist.com/news/americas/21729007-region-must-adapt-climate-change-not-simply-rebuild-how-hurricane-irma-will-change>

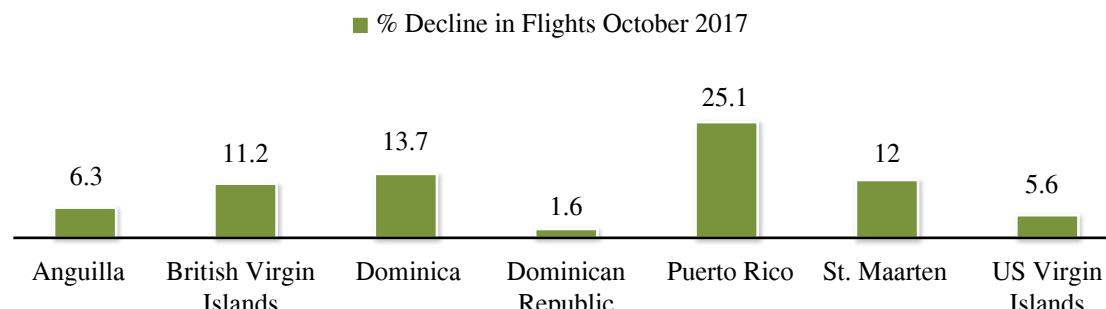
The financial impact of hurricanes on flights and the airlines is also telling. Figure 1 provides data on the loss of flights to key destinations in the Caribbean for the month of October 2017; a month after the devastation wrought by hurricanes Irma and Maria. What the data shows is that Puerto Rico was the most affected territory with a loss of 25% of all flights. Other territories also faced significant losses such as Dominica (14%), St. Maarten (12%) and the British Virgin Islands (11%). Because these islands are dependent on air traffic for the tourism industry, it means that the loss of flights equates to a loss of income from tourism arrivals and expenditures.

Airline companies were also impacted by the decline in flights in terms of lost income. As highlighted in Figure 2 the airline with the greatest losses was United which took a hit of US\$ 185

million. The other airlines with significant losses were Delta (\$120 million), Southwest (\$100 million) and American (\$75 million). Also negatively affected were Jetblue (\$44 million) and Spirit (\$40 million). Leeward Islands Air Transport (LIAT) is the only Caribbean based airline for which there are reported losses. Given the relatively small size of the airline, a loss of \$13.25 million would be a major hit to the balance sheet.

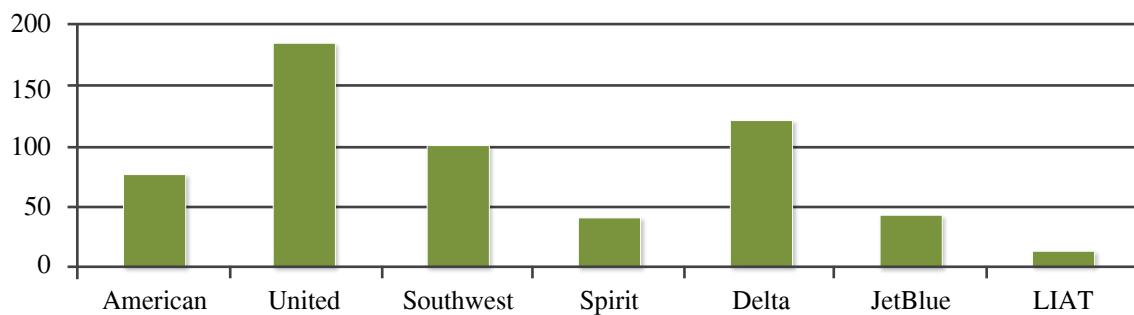
What the above analysis illustrates is that the travel and tourism sector is a victim of climate change given the negative impacts on tourism livelihoods, investments and exports. As such, the direct impact of climate change on trade flows is a key consideration due to the immediate and overwhelming devastation that SIDS experience given their vulnerable location and small geographic and contribution of the airline and

**Figure 1: Impact of Hurricanes On Flights (various countries)**



(Source: Caribbean Tourism Organization 2017)

**Figure 2: Losses to Main Airlines Due to Hurricanes Q3 2017, US\$mn.**



(Source: Caribbean Tourism Organization 2017)

economic size. In short, a major climate-related event (e.g. a hurricane) can easily wipe out or devastate an entire economy and set back a country several years developmentally in terms of trade earnings and broader economic activities.

This acute vulnerability is a pressing challenge for the tourism and travel sector – the major source of economic activity in most SIDS – and for the Caribbean, which is the most tourism-dependent region in the world. As shown in Table 1,

tourism in the Caribbean is the largest contributor to GDP, employment, investment and exports as compared to other developing country regions like Oceania, Latin America and Sub-Saharan Africa. Also, it is important to note that although the Caribbean accounts for approximately only 2% of total global tourist flows it is the number one destination for the cruise ship industry and as such, hurricane damage can affect the bottom line in this industry.

**Table 1: Tourism and Travel in the Developing World, Share of GDP, Employment, Investment and Exports (2017)**

	GDP	Employment	Investment	Exports
Caribbean	14.9	13.4	12.3	20.7
Oceania	12.2	13.2	5.5	12.5
Latin America	8.8	7.8	6.0	7.3
Sub-Saharan Africa	7.1	6.0	5.6	8.6

Source: World Travel and Tourism Council, Economic Impact 2017 Caribbean (2017)

### Travel and Tourism Sector and Climate Change

The promotion of sound climate policies is thus considered necessary for the continued sustainability of the travel and tourism sector, given the significant global economic and social value of these industries and their close links with the climate (Nurse 2010). Climate is an important resource for tourism, as it influences the perceptions of suitability for locations for a wide range of tourist activities, for example, suitability for a beach holiday or a ski trip. Climate also influences seasonality in tourism demand, and by extension the competitiveness of destinations and the profitability of tourism enterprises.

However, the tourism industry is a non-negligible contributor to climate change through greenhouse gas emissions derived especially from the transport and accommodation of tourists. Contemporary international tourism is heavily reliant on 'energy-intensive transport modes' particular-

ly air transport, cruise ships and road transport (Markham et al 2016). The contribution of international tourism to global carbon emissions is expected to exceed 10% by 2035. The travel and tourism sector is a major contributor to greenhouse gas emissions, consequently, there is a potential economic threat from the implementation of climate change policies in tourism source countries in terms of emission and taxation schemes. Shifts in consumer preferences on account of carbon labelling may also deter holiday-makers from long-haul travel. The intersection of these factors makes for a critical scenario facing SIDS in the evolving context of climate change and trade in international services (Nurse et al 2017).

Therefore, the challenge of climate change for SIDS in the context of the travel and tourism industry is twofold: the sector is both a victim of climate change due to factors like sea-level rise, coral bleaching and storm surges; and an indirect vector of climate change through the

cruise ship industry to greenhouse gas (GHG) emissions. This raises concerns regarding the potential adverse impact of prospective climate regulation by the Organization for Economic Cooperation and Development (OECD) countries on international aviation and bunker fuels as well as on corporate policies and consumer preferences towards long-haul destinations. The implications for SIDS are considerable given the varied policy measures, such as border carbon adjustments that are being implemented or contemplated by OECD countries.

For SIDS these shifts in climate change policies are very worrying, notwithstanding the universal need to implement international climate policies due to the impact of climate change on all states. The tragedy is that SIDS are not large GHG emitters, and as such are not major contributors to the problem of climate change. However, it is forecasted that these countries will be increasingly vulnerable to the associated ecological, health and natural disaster risks and that their key industries like agriculture, fisheries, energy and tourism will be heavily impacted. While adaptation is the key issue for these countries, SIDS sensitive climate action at the global level is a must.

### **The Case for Climate Action**

These developments signal that the 'cost of inaction' is high when it comes to climate change adaptation and that SIDS and the Caribbean region need to move with greater urgency on climate action and reinvent their economies. This calls for a more strategic embrace of sustainable development goals and a commitment to pursue innovation governance. Indeed, there are opportunities for SIDS to utilize the United Nations (UN) Sustainable Development Goals (SDGs) agenda as a driver for economic transformation considering the possibilities of restructuring current production and consumption modes to cope with the challenge of climate change.

From this perspective, it is argued that the global community should create frameworks that shield SIDS from the potentially devastating economic impact of travel-related climate policies, as these

states are heavily dependent on international tourism and travel. This theme was central to the debate and discussions of the Third International Conference on Small Island Developing States in Samoa, September 2014, where the Heads of State and government officials affirmed that 'sustainable tourism represents an important driver of SIDS's sustainable economic growth and creation of decent jobs.'

The travel and tourism sector is also captured in international economic policy perspectives such as Goal 12 of the SDGs which urges states to "ensure sustainable consumption and production patterns." Pursuant to target 12b of Goal 12, states should "develop and implement tools to monitor sustainable development impacts for sustainable tourism which creates jobs, promotes local culture and products." The signing of the UN SDGs by the world's leaders in 2015 was a historic move which symbolized the importance of sustainability for international business and global development.

Moreover, the entry into force of the Paris Agreement on Climate Change ("the Paris Agreement") on November 4, 2016, has been welcomed as a watershed moment for international law, as it marked the first occasion on which world governments agreed to binding restrictions to reduce increases in global temperature under the law. As of May 7, 2017, 195 states signed the Paris Agreement, while 144 states ratified the landmark treaty. By their ratification of the Paris Agreement, the leaders of more than 140 nations have demonstrated a firm commitment to decarbonize the global economy by 2050. Such global climate policies governing the travel and tourism sector are indeed necessary as, collectively, travel and tourism constitute a major contributor to carbon emissions. These climate policies are arguably needed for the continued sustainability of travel and tourism, given the industry's close connection with climate (World Tourism Organization /United Nations Environment Programme, WTO/UNEP 2008).

The travel and tourism sector is also captured in broader economic policy perspectives such as the 2007 Davos Declaration, which identifies the tourism sector as an industry that must respond

rapidly to climate change, urging governments to face climate change as one of the greatest challenges to sustainable development and implement climate policies for effective adaptation. The Davos Declaration also urges consumers to consider the climate, economic and environmental impacts of their journeys prior to making decisions to travel, and where possible to reduce their carbon footprint.

However, SIDS lack the financial resources and the technologies required to make the shift towards a low carbon economy, and would require the transfer of efficient and clean energy technologies from developed countries. Therefore SIDS should also pursue innovation policies to facilitate more rapid adaptation responses. For example, the Alliance of Small Island States (AOSIS) advocates for relevant linkages to be made between science and climate change in order to empower SIDS to design and implement policies appropriately (Slade 2000).<sup>3</sup>

### **An Agenda for Adaptation and Innovation**

The movement towards a low-carbon tourism economy is part of the climate change adaptation process that Caribbean countries and SIDS must pursue. In this regard, the November 2017 Sustainable Tourism conference hosted by the World Tourism Organization (UNWTO) and Jamaica points in this direction. Specifically, the Montego Bay Declaration calls for all the key stakeholders to set a common action plan towards 2030.<sup>4</sup> Arising out of the conference was the announcement for the establishment of a Disaster Resilience Centre to be hosted in Jamaica that will be "tasked with creating, producing and generating toolkits, guidelines and policies to handle the recovery process from the minute a crisis takes place."<sup>5</sup> An important area for policy development would be measures such as climate and disaster risk insurance.

These objectives can be further contextualized within the December 2017 charter of the Caribbean Climate Smart Coalition that has been established to promote the region as the first climate proof area.<sup>6</sup> Additionally, SIDS and Caribbean countries can position themselves as carbon neutral tourism zones. This would encourage the development of non-traditional branches of tourism such as "low-volume, high-value tourism" as well as "pro-poor, eco-friendly tourism" thereby facilitating the greening of the tourism product.

Ultimately what is called for is the diversification of the tourism product from an over-dependence on sand, sun and sea. Given evolving climate conditions, Caribbean governments and investors may want to bolster investments in alternative areas such as cultural and heritage tourism which are important for shifting the ethos of the tourism business model towards responsible eco and community tourism. This would also aid in generating higher levels of local impact value-added in the tourism industry redounding to the benefit of local communities and key industry stakeholders.

Another key area of policy engagement resides in the areas of technology upgrading and trade policy. For example, Caribbean countries should pursue the liberalization of trade in energy efficient goods in areas where there is no competitive local production. Such trade policy measures could include tax incentives or zero-tariff measures for environmentally friendly products. As such, Caribbean countries should closely examine the gains to be had from the World Trade Organization (WTO) Environmental Goods Agreement that aims to complement pre-existing efforts towards environmental sustainability and attaining climate protection. The areas addressed include renewable energy, improving energy and resource efficiency, managing waste and the monitoring of the quality of the environment.

<sup>3</sup> Overview Address By H.E. Ambassador Tuiloma Neroni Slade, Permanent Representative of Samoa to the United Nations, Chairman of the Alliance of Small Island States (AOSIS). Statement at the Pacific Islands Climate Change Conference, Rarotonga, Cook Islands, 3-7 April 2000, entitled "Linking Science And Climate Change Policy." Available at: [www.sidsnet.org/aosis/statements/08.html](http://www.sidsnet.org/aosis/statements/08.html). Accessed on June 19, 2008

<sup>4</sup> For further details see: [http://cf.cdn.unwto.org/sites/all/files/pdf/jamaica\\_declaration\\_final\\_clean.pdf](http://cf.cdn.unwto.org/sites/all/files/pdf/jamaica_declaration_final_clean.pdf)

<sup>5</sup> See <http://jis.gov.jm/disaster-resilience-centre-established-caribbean>

<sup>6</sup> See <https://www.americansecurityproject.org/the-caribbean-climate-smart-coalition>

If implemented, the appropriate policies can boost low carbon competitiveness in the tourism sector. For example, investments in the hotel and accommodation sector in solar technologies, rainwater capture and waste to energy systems, to name but a few, may catalyze a process of technological change and green jobs in an otherwise stagnant economic context.

The promotion of a climate change action agenda that prioritizes adaptation and innovation can

additionally reduce the impact of economic volatility while moving up the value chain can increase income and reduce vulnerabilities. From this perspective, the climate change scenario might be an opportunity rather than just a challenge. In short, climate change can be a key driver for production transformation and industrialization in light of the possibilities for restructuring current production and consumption modes.

## Conclusion

Climate change impacts on ecological systems and on the sustainability of key industries. It is on this basis that the brief explores the intersection between climate change and trade with specific consideration for the travel and tourism industries so critical to Caribbean development. It is insufficient for countries to cope solely with the challenges of environmental change. Rather,

strategies are required to identify new opportunities and market spaces, while developing a strategic policy implementation agenda for climate action at the global and regional levels and likewise for the introduction of adaptation measures among governments, the private sector and civil society.

## Further reading

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## Credits

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