# Climate Change Policies and Tourism Competitiveness in Small Island Developing States


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## *Introduction*

The climate change literature and debate has largely focussed on the mitigation actions to be taken by the main contributors to greenhouse gas emissions and global warming, which are the developed market economies as well as the large rapid industrializing economies like China, India and Brazil. In contrast, Small Island Developing States (SIDS) are not large contributors to the problem of climate change but are the group of countries estimated to be impacted the most. However, while the key issue for SIDS is adaptation, they are highly dependent on the tourism and travel industries that are considered to be major emitters and so are vulnerable to the climate change policies in these sectors.

This paper will examine the challenges and opportunities for SIDS that climate change poses to tourism and travel, as well as on relevant policy tools and instruments that are being used to address this issue. In so doing, the paper will outline what is being done within national, regional, international, intergovernmental, corporate and non-governmental arenas through climate change fora, trade policy and relevant groupings and organisations to address this growing threat to the environmental and economic security of SIDS.

## *Climate Change Impact*

The land or population size, the national income and/or the level of development required for states to qualify to be referred to as SIDS are somewhat difficult to define[1]. As such, these requirements and prescriptions vary. What is more certain however, are the problems that such nations face. According to the Barbados Plan of Action; SIDS primarily are "limited in size, have vulnerable economies [and are] dependent upon narrow bases and on international trade, without having the means to influence that trade" (Annex 1, Part 1 [IV], Barbados Plan of Action).

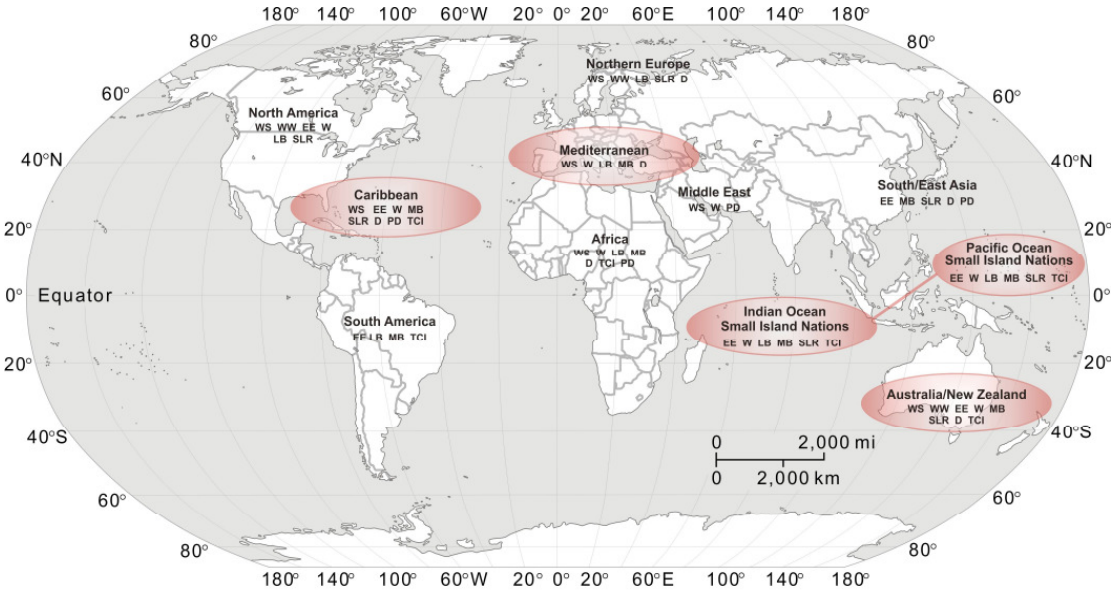
The predictions of scientist suggest that SIDS are highly vulnerable to the impacts of global warming, particularly in terms of sea level rise, temperature rises, rainfall changes, coral bleaching and increased storm frequency. SIDS are "hotspots"[2] (see Figure 1) and are one of the groups of countries that are estimated to be most affected by climate change. For example, it is suggested that:

> Sea level rise will exacerbate inundation, erosion and other coastal hazards, threaten vital infrastructure, settlements and facilities, and thus compromise the socio-economic well-being of island communities and states. [3]

Yet even further, warming seas threaten the livelihood of commercial and artisanal fisheries and of coral reefs. This by extension, has the potential to result in widespread unemployment, of fishermen and of tourism-related service providers (e.g. scuba tourism) whose income is dependent upon the existence of healthy coral reefs. To add to this, if climate change does result in changing rainfall distribution patterns, then many SIDS will be forced to find

new and innovative ways to establish a consistent and reliable water supply. Moreover, the absence of a consistent water supply can also lead to a severe decline in agricultural production (subsistence and commercial) thus threatening food security within these island states along with the competitiveness of the tourism sector.

Figure 1
Geographic Distribution of Major Climate Change Impacts Affecting Tourism Destinations




| | | |
|---|---|---|
| WS = warmer summers | LB = land biodiversity loss | D = increase in disease outbreaks |
| WW = warmer winters | MB = marine biodiversity loss | TCI = travel cost increase from mitigation policy |
| EE = increase in extreme events | W = water scarcity | |
| SLR = sea level rise | PD = political destabilization | |

Hotspot

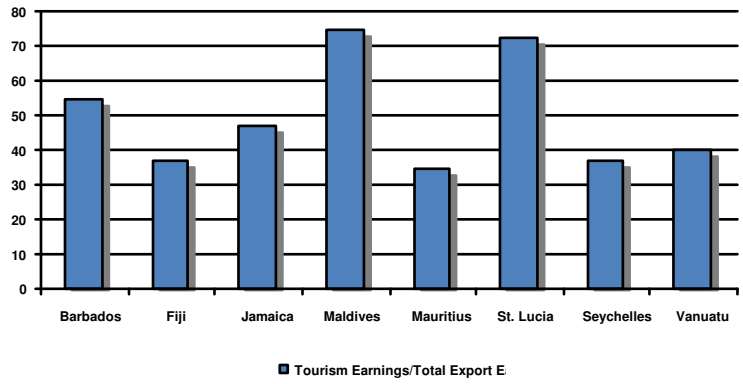
Source: UNWTO/ UNEP/WMO

The challenges of climate change are no longer futuristic. For example, Kiribati with a population of 100,000, is estimated to become "the first sovereign victim of man-made climate change"[4]. President Anote Tong, blames global warming for his country's uncertain future and says he is "fed up with begging powerful countries for financial aid that wouldn't be needed at all if they tackled their gas emissions"[5]. The issue of relocation of populations affected by climate change is a key concern raised by President Tong, a consideration that many SIDS will have to confront in the not too distant future.

As illustrated by Kiribati the adaptation costs can be quite devastating. This predicament is exacerbated is by the fact that many SIDS are dependent upon mono-crop agricultural production and export and tourism and its associated services for foreign exchange earnings, employment and contribution to GDP. These countries are also highly dependent on the importation of food and energy for domestic consumption and for the tourism sector.

The travel and tourism sector is the key economic sector for SIDS in terms of earnings and jobs. Indeed, many SIDS are highly dependent upon revenue earned from tourist arrivals and through tourist-related activities. As table illustrates, tourism earnings account for a significant share of the foreign exchange earnings in most SIDS. Further, with regards to the Caribbean, Travel and Tourism accounts for 14.8% of GDP, 12.9% of employment and 14.6% of total exports. Oceania also has a similar economic profile with GDP shares of 11.7%, employment 12.4% and exports of 16.9%. However, for both regions ten-year forecasts (2018) by the World Travel and Tourism Council (2008) suggest declining contributions to GDP and employment but not to exports.

Figure 2:
Tourist Receipts as a Share of Total Export Earnings, Selected SIDS (2004)




Source: Commonwealth Secretariat (2007)

The air travel sector and the cruise ship industry provide key services to the tourism sector in small island states which are generally long-haul destinations from key source markets like North America and Europe. Notwithstanding this, the travel sector is considered a major contributor to green house gases. There is potential threat from tourism source countries in terms of taxation schemes and consumer movements that may deter holiday-makers from long-haul travel. The intersection of these factors makes for a critical scenario for SIDS in the evolving context of climate change and trade in international services.

In addition, there are concerns among tourism authorities in SIDS that as the Climate Change agenda becomes more accepted by the general public, that this might result in many tourists choosing to remain within their own country or region during their vacation period, but has also prompted governments and companies to adopt and promote environmentally friendly charges, levies and technologies; some of which has caused the cost of travel and transportation to increase. Increased travel and transportation costs will likely have adverse effects on travel and tourism to SIDS. Table 1 below provides three scenarios in terms of alternative growth rates in terms of arrivals from North America over the period 2000 to 2050. It suggests that the Caribbean

could have a drop-off in arrivals from North America of some 13 million when the best and worst cases are compared.

Table 1
Hypothetical results of alternative growth rates in the international tourism flows to the Caribbean region 2000-2050 (Millions arrivals)

| Flows | Growth rate( % pa) | 2000 (the base year for the flows | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|
| Base case exploitation | | | | | | |
| N America to Caribbean | 3.0 | 8 | 14 | 19 | 26 | 35 |
| Half point growth rate reduction | | | | | | |
| N America to Caribbean | 2.5 | 8 | 13 | 17 | 21 | 27 |
| Full point growth rate reduction | | | | | | |
| N America to Caribbean | 2.0 | 8 | 12 | 14 | 18 | 22 |

Source: Travel Research International

Recent estimates of the impact of Climate Change on the Caribbean region paints an even more dismal picture. Key findings of a study[6] on the cost of inaction concludes that:

1. The costs of inaction will amount to 22 percent of gross domestic product (GDP) for the Caribbean as a whole by 2100;
2. The costs of inaction will reach an astonishing 75 percent or more of GDP by 2100 in Dominica, Grenada, Haiti, St. Kitts & Nevis and Turks & Caicos;
3. The Caribbean's largest island, Cuba, faces a nearly 13 percent economic hit by mid-century, and a 27 percent loss by 2100, unless there is swift action to address climate change;
4. Losses from inaction would be less severe but still significant in Puerto Rico, reaching nearly 3 percent by 2050 and 6 percent by the end of the century;
5. The nation of Colombia, with its long Caribbean coastline, faces permanent flooding of 1,900 square miles in low-lying coastal areas, affecting 1.4 million people.

## *Climate Change Policies and SIDS*

To a large extent the discourse on the climate change agenda has been five-fold (see Figure 2). There have indeed been a plethora of mechanisms deployed to varying degrees in different countries, to combat this common concern in a way that is congruent with international consensus on the issue. In seeking therefore, to comprehensively examine these measures, each level or category of responses will be addressed separately.

*Inter-State level:*

Developed countries, as mentioned earlier, seem to be moved by a somewhat internationally accepted obligation to lower emissions from local industries. Thus, OECD nations (for example) have signed onto the Kyoto Protocol which is aimed at achieving this goal. All OECD nations except the Republic of Korea, Mexico and Turkey have made specific commitments to limit or reduce the emissions emanating from within their borders. Notwithstanding this, many of these countries have also adopted other strategies and measures geared towards lowering the carbon footprint of their country. Developed nations (such as the USA) have also invested in research geared towards increasing energy efficiency, fuel economy, and use of renewable sources of energy.[7]

Developing countries, on the other hand, particularly SIDS, recognise their state of vulnerability to climate change and therefore urge the development, dissemination and transfer of efficient energy technologies that can assist them in mitigating the effects of climate change. As such, developing countries recognise the importance of developed countries 'taking the lead' in this regard[8]. Notwithstanding this SIDS have also acknowledged their responsibility to collect data on the effects and implications of climate change and sea-level rise, to improve public understanding of the issue, to promote more efficient energy use and to formulate their own comprehensive adjustment and mitigation policies to be able to cope with and respond to climate change. In sum therefore, developed and developing nations tend to respond to the threat of climate change in a way that is consistent with international consensus (as expressed through the UNFCCC), where nations take measures to protect the earth's ecological system through policies and instruments that reflect their common but differentiated responsibility[9].

*Inter-Governmental level:*

The discourse on the issue of climate change has been very diverse and has manifested itself in many forms. Notwithstanding these discussions, have been facilitated by several key international agreements and institutions and influenced by a plethora of other governmental and non-governmental international organisations. The result of this dialogue has been a series of policy tools and instruments ranging from declarations, to conventions, to international agreements all geared towards addressing the challenge that climate change presents to the world. However, only a handful of these measures to address climate change also seek to safeguard the interests of the tourism industry and that of SIDS. Nonetheless, there are many Multilateral Environmental Agreements that can be said to have the potential to serve the interest of the tourism industry, particularly in SIDS (see Table 2).

In tandem, it is important to note that these policy instruments vary in scope and strength (i.e. their ability to be legally binding). International Conventions express the will of the international community to show their support for specific principles or regulations that they have agreed upon. Conventions aim to transform mutually agreed upon principles into international norms in order for such principles to become more accepted internationally, and

therefore, legally binding. Naturally, states also maintain the right to agree to certain parts of a convention and to reject others. The legal status of a convention is determined by the instrument itself and the punitive measures for breech of the terms of the convention are also stipulated by each individual convention, along with mechanisms for dispute settlement. International Conventions can therefore aid countries' efforts to preserve their domestic eco-tourism industry (for example) by providing a more stable platform for the survival and proliferation of migratory species worldwide. In the same way, the United Nations Framework Convention on Climate Change (UNFCCC) can also be said to represent international consensus pertaining to abating the threat of climate change as its explicit ultimate objective is to achieve the "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[10]

The Convention on International Trade in Endangered Species of Wild Flora and Fauna of 1973 (CITES) therefore represents the will of the international community to aid countries' efforts to prevent the illegal trade of endangered species of animals in order to ensure their survival. Notwithstanding this, the CITES agreement can also be said to serve the additional purpose of safeguarding the survival of species which provide a somewhat stable platform the domestic eco-tourism industry of many countries, including SIDS. One example of such can be found in Trinidad and Tobago, where the leatherback turtle, attracts tourists every year to the east coast of Trinidad, to witness the turtles coming ashore to lay their eggs. Similarly, the Convention for the Protection of the World Cultural and Natural Heritage can also serve assist the aims of nations wishing to promote heritage tourism.

International Protocols to Conventions usually contain very specific goals and objectives and are often optional (like the Kyoto Protocol to the UNFCCC). Protocols seek to enhance the aims of international conventions, usually by setting legally-binding targets or requirements for signatory states to abide by. As a result protocols tend to elaborate upon the provisions stated within a convention in an attempt to gain support for objectives that may not have been widely accepted or applicable to the entire international community. Hence the Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (hereafter, the SPAW Protocol) requires its signatories to "take the necessary measures to protect, preserve and manage in a sustainable way… areas that require protection to safeguard their special value and threatened or endangered species of flora and fauna."[11] It also obliges states to "prohibit activities [which would have an] adverse effect on these areas and species."[12] Objectives of this nature, should not only help to strengthen environmental protection in SIDS but also helps to safeguard the future of eco-tourism in such regions.

International Declarations are statements by a group of nations in support of a particular cause or ideal (the Universal Declaration of Human Rights is a case in point). As such nations use declarations quite often, to assert their collective perspective on what should obtain *(de jure)* within the international

community. Resultantly, the Millennium Development Goals which voices the mutually accepted aspirations of the international community were expressed through the Millennium Declaration. Due to the fact that they often highlight the *de jure* perspective of an issue, declarations are usually not legally binding upon states. Instead, declarations frequently require states to endeavour to accomplish a specific objective.

Resolutions are similar, however, these emanate from the United Nations General Assembly (UNGA) and are used to highlight and document consensus and agreement among member states of the United Nations (UN) on issues of mutual concern. Resolutions are usually issue-based decisions and are written after hours upon hours of debate within the UNGA. Notwithstanding this member states of the UN are not obligated to abide by all resolutions. They can choose not to agree to a resolution or they can sign with reservations to specific clauses of the agreement. However, by signing a resolution, states agree to abide by its requirements or stipulations. As such, they can be useful policy tools in addressing issues like the sustainability of tourism in SIDS. In fact, one might argue that the work of the UNGA in producing Resolutions aids the survival of the tourist industry worldwide, by helping to ensure international peace, security and stability. Yet even more importantly, resolutions can be used to decide upon issues which need to address through different fora. In this regard, one should note that the UN Global Conference on the Sustainable Development of SIDS (1994) which adopted the Barbados Programme of Action on the Sustainable Development of SIDS (BPOA) – which address *inter alia,* climate change, natural disasters and tourism; was established by the UNGA resolution 47/189. Thus resolutions can be used as avenues to other forms of action by the international community.

Table 2

Conventions, Protocols and UN Resolutions/Declarations that can be said to serve the interest of the tourism industry, particularly in SIDS (some examples.

| Year | Type of policy tool: International Conventions |
|---|---|
| 2001 | Convention on the Protection of the Underwater Cultural Heritage |
| 1995 | Conventions to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (The Waigani Convention) |
| 1992 | United Nations Framework Convention on Climate Change |
| 1992 | Convention on Biological Diversity |
| 1983 | Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region |
| 1982 | United Nations Convention on the Law of the Sea |
| 1973 | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| 1972 | Convention for the Protection of the World Cultural and Natural Heritage |
| Year | Type of Policy Tool: Protocols to International Conventions |
| 1997 | The Kyoto Protocol to the United Nations Framework Convention on Climate Change |
| 1990 | Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region |
| 1990 | Protocol for the Protection of the Marine Environment Against Pollution from Land-Based Sources |
| 1989 | Protocol for the Protection of the South East Pacific Against Radioactive Contamination |
| Year | Type of policy tool: UN Resolutions, Decisions and Declarations |
| 2003 | Djerba Declaration on Tourism and Climate |
| 2002 | Johannesburg Plan of Implementation and the Johannesburg Declaration |
| 2000 | Millennium Declaration (UNGA A/55/2) and Millennium Development Goals |
| 1997 | Programme for the Further Implementation of Agenda 21 |
| 1997 | Nairobi Declaration on the role and mandate of UNEP |
| 1992 | Rio Declaration and Agenda 21 |
| 1987 | Report of the World Commission on Environment and Development, UNGA/43/427 |
| 1972 | Report of the United Nations Conference on the Human Environment |

Sources: UNEP, UNWTO

*Industry level:*

The International Air Transportation Association (IATA), for example, estimates that aviation is responsible for 2% of Carbon Dioxide emissions and 12% of emissions from all transport sources. IATA has adopted a four-pronged approach to reducing emissions from the industry[13]. To begin, IATA's strategy focuses upon technological advancements through research and development (R&D) in order to improve the fuel efficiency of aircrafts. Secondly, aircraft operators are encouraged to improve their internal operations and to ascribe to high environmental standards. Further, IATA urges governments to correct infrastructural inefficiencies (particularly in airports) and to take steps to make global airspace more free for air transport carriers. Finally, economic measures are suggested as a means to boost R&D and to improve environmentally friendly practices within the industry. As such, tax credits and direct funding for eco-friendly measures, as well as an open emissions trading scheme are asserted as possible mechanisms that can be utilised to decrease the aviation industry's contribution to climate change. As the global discourse on climate change continues to grow, more and more tourists may decide to stay at home or within their region during their vacation period since they wish to lower their own Carbon footprint by travelling shorter distances. If the aforementioned measures suggested by IATA were successful in lowering emissions from the aviation industry; this might encourage more tourists to fly longer distances to SIDS (such as those in the Caribbean and the Pacific) during their vacation period.

The cruise ship industry has also been taking steps to decrease their contribution to environmental degradation (particularly the destruction of coral reefs) and to global warming. One such initiative was announced in January 2008 when stakeholders from the cruise industry, the Mexican government and Conservation International (hereafter referred to as CI) unveiled a plan to "protect coral reefs and other ecosystems in Cozumel [Mexico], the world's most-visited cruise destination."[14] This arrangement is part of the Mesoamerican Reef Tourism Initiative (MARTI) and it aims to facilitate cooperation between industry and government officials as well as representatives from civil society. As such, the agreement aims to raise environmental awareness on and off of cruise ships, to improve management of waste and infrastructure, to promote increased protection of the reef system in addition to enhanced enforcement of existing laws and regulations. The MARTI was also extended to Belize in May 2008 when cruise industry, government and NGO signed a Declaration of Commitment to sustainable tourism practices. The agreement in Belize was very similar to its counterpart in Mexico as it differed only in its commitment to enhance marine and coastal resource use management and to promote "conservation awareness among cruise ship visitors about Belize's natural heritage"[15].

Individual cruise liners have also taken steps to lower their emissions, through *inter alia,* partnering with institutions engaged in research on the subject. For example, in 2005 Princess Cruise Lines "launched a programme with the ports of Seattle and Juneau to reduce its harbour air emissions by plugging its ships in to land-based electricity supplies at dockside rather than running

diesel-powered generators while in port."[16] In addition to this, in the same year the European Commission Joint Research Centre, Climate Change Unit (the CCU) and the Italian Cruise Liner "Costa Crociera" signed an agreement which gave the former the opportunity to monitor air pollution on the Mediterranean Sea by installing an air pollution monitoring station on the cruise ship "Costa Fortuna". According to the CCU, the monitoring station would enable them "to obtain some useful data to identify the source of Air Pollution and assess if ship emissions really contribute to Climate Change in the open sea of the Mediterranean Area."[17]

These initiatives are yet to be implemented in SIDS but they point to the new directions that the cruise ship industry can adopt to reduce emissions and bolster consumer confidence in the climate change agenda.

*Non-Governmental Organisations (NGOs):*

International and National NGOs have helped to shape not only the discourse but also the social movement related to the issue of climate change. In effect they have been able to lobby governments, corporations and other international organisations to take action to combat climate change. Organisations such as World Wildlife Fund (WWF), Oxfam and Greenpeace have also engaged in widespread public awareness and education campaigns that have assisted in spreading knowledge about climate change. They have also played an integral role in outlining the effects of climate change on the environment, the global economy and on specific industries (like the tourism industry). Their contribution to the global response to the threat of climate change is therefore invaluable. As an example, WWF, through its "Climate Savers" Initiative is partnering with 15 companies worldwide to establish emission reduction targets. Using WWF's estimates,

> By 2010, the Climate Savers companies will collectively cut carbon emissions by some 14 million tons annually – the equivalent of taking more than 3 million cars off the road every year.[18]

Additionally, the WWF makes a very interesting link between conservation and tourism. In so doing, the organisation promotes arctic tourism as an avenue to alert persons about the effects of climate change. Furthermore, the WWF also asserts that tourism and conservation are compatible and as such seeks to give tourists useful hints on how they can enjoy their vacation in an environmentally friendly way[19]. Thus this international NGO utilises the global climate agenda to mitigate the effects of climate change and to promote tourism.

*Regional Organisations:*

Many nations, including SIDS have chosen to respond to the threat of climate change through regional institutions. Nations often choose such an avenue not only to gain wider consensus on this global issue, but also because this approach may in many instances be more cost-effective (as the states involved would be able to share the cost involved). Examples of such

organisations exist among developed nations as well as SIDS. The European Environmental Agency (EEA) seeks to tackle climate change through its European Topic Centre on Air and Climate Change (ETC/ACC). The centre assists the EEA with policy making through the European Union (EU) on the issue of climate change and monitors and reports upon the progress made by EU member states. Additionally, the EEA conducts environmental assessments (of different environmental indicators, like greenhouse gases) and also issues reports pertaining to the application of current EU policies and schemes that pertain to climate change (and other environmental issues) such as the EU Emissions Trading Directive. Similarly, the Caribbean Community Climate Change Centre (CCCCC) seeks to act as:

> A centre of excellence for the development of policy, technical research and the mobilization of financial and other resources to address climate change and related matters within the community.[20]

As a result, the CCCCC aims to deliver information to member states of the Caribbean Community (CARICOM) that would assist them in making policy geared towards adopting measures to mitigate and adapt to the effects of climate change. The organisation (which is comprised of SIDS) also serves as an information node (for data on climate change), to facilitate networking between the public and private sector, knowledge-based institutions and individuals. Furthermore, the CCCCC engages in forecasts and analyses of the impact of climate change upon the environment (especially coral reefs and other coastal and marine resources), the economies and specific industries, such as tourism in the Caribbean region. This approach to addressing the threat that climate change poses to the global environment helps to build international solidarity around the issue and also gives region-specific analysis of the problems that a warmer earth will pose to individual countries. Such a perspective, should indeed be helpful when probing the effects that climate change might have on tourism in SIDS in different atmospheric regions of the world.

*Policy Recommendations for SIDS*

In order therefore to move from a position of vulnerability and dependence to one of resilience, policy tools within the international trade arena can be used to boost the capacity of tourism services providers within SIDS. The services sector, and in particular tourism; represent a genuine opportunity for such countries to expand their economic activity while earning foreign currency.

To begin, countries can liberalise trade in energy efficient goods in a bid to decrease their collective carbon footprint. Such a policy instrument can therefore include tax incentives or zero-tariff measures for environmentally friendly products. Notwithstanding this, in seeking to adopt trade policies and instruments to combat climate change, countries need to ensure that such initiatives do not become or constitute a barrier to international trade. This principle is embraced by the UNFCCC which states that “measures taken to combat climate change, including unilateral ones, should not constitute a

means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade."[21] If a country's ability to trade (or simply to export a good or service) were adversely affected by an environmentally-friendly measure adopted by a nation then the country negatively affected by the measure would have the right to submit the matter to the Dispute Settlement Body at the WTO (if the two countries in question are WTO members).

Nonetheless, to date only three cases involving environmental issues have been brought before the Dispute Settlement Body under the WTO[22]. One such case occurred in 1990, when the United States of America (USA) amended their Clean Air Act; the US Environmental Protection Agency (the USEPA) instituted a 'Gasoline Rule' on the composition and emissions effects of gasoline, in an attempt to reduce domestic air pollution.[23] The Gasoline Rule essentially established standards pertaining to gasoline quality for domestic refiners and importers of gasoline. It was hoped that this would raise the quality of gasoline used, and in so doing decrease emissions and air pollution in the USA. However, Venezuela and Brazil asserted that the regulation instituted by the USEPA was inconsistent, *inter alia,* with the General Agreement on Tariffs and Trade (GATT) Articles III (National Treatment on Internal Taxation and Regulation) and XX (General Exceptions to the GATT). The USA on the other hand argued that the Gasoline Rule was in accordance with Article XX (g), which allows WTO members to take measures:

> "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production and consumption."[24]

The USA argued that clean air is an exhaustible natural resource, which the Gasoline Rule aimed to conserve. The dispute settlement panel at the WTO held that the Gasoline Rule was inconsistent with Article III as the regulations for domestic and imported gasoline differed. They disagreed with this perspective of the US, that clean air was an exhaustible that could be covered by Article XX (g). The Appellate Body (AB) however, did not concur, and upheld the US viewpoint that clear air is an exhaustible natural resource and as such fell within the terms of Article XX (g). However, the AB found that the Gasoline Rule was a means of arbitrary or unjustifiable discrimination and a disguised restriction to international trade. The AB found that the USA had not taken sufficiently into account the costs that the standards imposed would incur upon importing countries. The Gasoline Rule was therefore found to be in violation of the chapeau (introductory paragraph) of Article XX of the GATT. As a result, if a country or group of countries, in their bid to combat climate change wished to take measures to conserve 'cool air' as an exhaustible natural resource, they would need to ensure that such initiatives would not constitute a means of arbitrary or unjustifiable discrimination or a barrier to international trade.[25]

In 1997, India, Malaysia, Pakistan and Thailand issued a joint complaint to the WTO, against a ban imposed by the USA on the importation of certain shrimp and shrimp products.[26] After passing the US Endangered Species Act of 1973 (ESA), the USA required all domestic and importing shrimp trawlers to use

"Turtle Excluder Devices" (TEDs) so as to avoid catching endangered species of turtles. As a result shrimp harvested without TEDs, which could have adversely affected certain turtles could not have been imported into the USA unless "the harvesting nation was certified to have a regulatory programme and an incidental take-rate comparable to that of the United States or that particular fishing environment of the harvesting nation did not pose a threat to sea turtles".[27] When brought before the dispute settlement panel, the USA argued that its measures were permissible under Article XX (g), in order to conserve turtles as a exhaustible natural resource. The Panel postulated that the measure could not be justified under Article XX, however the AB reversed this, by positing that this could be justified by Article XX (g). Notwithstanding this, the AB ruled that the requirements of the ESA violated the chapeau of Article XX. In a ruling that bore some resemblance to that of the "*US – Gasoline"* case, the AB found that the USA had not taken sufficiently into account the costs that the standards imposed would incur upon importing countries, and reflected insufficient field research to ascertain whether such devices and standards were relevant in all importing countries. This issue affected Caribbean SIDS:

> Trinidad and Tobago and Suriname were the first countries (together with French Guiana) to have a ban imposed on imports of their shrimp…because they were not using turtle excluder devices (TEDs) in their nets…This ban was repeated yearly until the fishing industry complied.[28]

Stewart goes on to add to that the certification system and ban were withdrawn after research revealed that turtles did not feed where shrimp were being harvested in Trinidad and Tobago. As such, the "TED that was installed merely collected rubbish and reduced the shrimp catch."[29]

Moreover, another interesting fact to note with regards to the Turtle/Shrimp ruling was that the AB outlined that there were alternative avenues such as MEAs, that the USA could have utilised to achieve the objective of conserving endangered turtles. Pointing to the Inter-American Convention for the Protection and Conservation of Sea Turtles (the "Inter-American Convention"), the AB noted that, "The Inter-American Convention demonstrates the conviction of its signatories, including the United States, that consensual and multilateral procedures are available and feasible for the establishment of programs for the conservation of sea turtles."[30] They therefore concluded that;

> The Inter-American Convention thus provides convincing demonstration that an alternative course of action was reasonably open to the United States for securing the legitimate policy goal of its measure, a course of action other than the unilateral and non-consensual procedures of the import prohibition under Section 609 [of the ESA].[31]

The AB therefore advocated the use of MEAs to address environmental issues, in lieu of unilateral trade measures. In cementing this principle, the AB

endorsed the report of the WTO Committee on Trade and the Environment (CTE), which suggests

> *Multilateral solutions based on international cooperation and consensus as the best and most effective way for governments to tackle environmental problems of a transboundary or global nature*. WTO Agreements and multilateral environmental agreements (MEAs) are representative of efforts of the international community to pursue *shared goals*, and in the development of a mutually supportive relationship between them, *due respect must be afforded to both* (emphasis added).[32]

It may therefore be prudent to assert that countries seeking to adopt policy measures and instruments to combat climate change should not try to influence the way merchandise is processed, harvested or produced in other countries through unilateral trade measures. Instead, international consensus should be sought, particularly through MEAs, to formulate innovative mechanisms to conserve 'cool air' as an exhaustible natural resource without creating barriers to international trade.

The trade arena can also be utilised to facilitate the transference of technologies that can contribute the development of capacity among service providers. This can indeed be particularly useful as practitioners from SIDS within the tourism industry (and other industries as well) may sometimes find the cost of technological devices to be prohibitive. Moreover, a lack of access to technology can also act as a technical barrier, preventing service providers from operating at international standards. As a result, trade negotiations, (especially as it pertains to North-South trading arrangements) often feature facilities for the transfer of technology. This is a particularly useful policy instrument for governments seeking a cost-effective way to acquire more environmentally friendly technologies for local industries. Furthermore, the transfer of meteorological technology can help to inform tourists and industry officials of impending bad weather, especially severe natural hazards to enable officials to take pre-emptive action to ensure the safety of citizens and tourists. Even more so, such technology has the potential to dramatically improve climate forecasts, which can enhance the ability of governments and tourism officials to warn prospective tourists of potentially dangerous and extreme weather patterns and events brought about by climate change.

*Utilising relevant groupings and organisations:*

Relevant groupings of nations can also be used to forge comprehensive trading as well as other types of agreements into being which take into account contemporary concerns of the parties involved. Such arrangements can involve formal regional bodies/organisations (such as those considered earlier in this paper), established by treaties or less formal bodies, such as the Alliance of Small Island States (AOSIS), a coalition formed to establish cooperation on issues of mutual interest. With regards to climate change, AOSIS has suggested that relevant linkages be made between science and climate change in order for SIDS to be in a position to design and implement policies from an informed position. As stated by the chairman of the

organisation in 2000, AOSIS sees "science as providing an essential component in the search for feasible pathways towards the management of the environment and towards sustainable development."[33] As a consequence, the organisation views the participation of scientists from developing countries in research programmes pertaining to climate change to be of vital importance. Moreover, in determining the policy tools that should be used to abate the effects of climate change, the organisation's chairman noted that "there is already established knowledge and much already identified in regional and international arrangements,"[34] that SIDS can utilise to make informed policy decisions. In this regard, AOSIS is not only committed to taking early, preventative steps to abate the effects of climate change but also aims to "press for the ongoing review of the adequacy of existing commitments and to propose ways to strengthen commitments"[35] and targets set under the Kyoto Protocol, which in the opinion of AOSIS, have been insufficient thus far.

Perhaps one of the most direct and legally - binding approaches that a group of nations can adopt would be to sign a trade agreement which addresses issues closely related to climate change. An example of such an approach can be found in the recently initialled Economic Partnership Agreement (EPA) between the Caribbean Community and the Dominican Republic (CARIFORUM) and the European Union (EU). The EPA represents a comprehensive trading arrangement between an archipelago of SIDS and a group of developed nations. However, more importantly, in addition to expressing the overall objective of trade for sustainable development, the agreement does address trade related issues, and as such contains a chapter on the Environment. Parties to the agreement were able to utilise this chapter to reaffirm their commitment to;

> Conserve, protect and improve the environment, including through multilateral and regional environmental agreements to which they are parties" and to "promoting the development of international trade in such a way as to ensure sustainable and sound management of the environment, in accordance [with]…international conventions to which they are party and with due regard to their respective levels of development.[36]

Thus, while the chapter (or the entire agreement) does not specifically mention or target climate change, it does provide the scope and framework for measures to be adopted in the interest of tackling the threat of climate change. Additionally, the EPA contains provisions pertaining to cooperation on issues pertaining to the environment, through technical assistance, trade in natural resources and through public education campaigns to foster trade in environmental goods and services.[37]

In tandem, it should also be noted that the EPA seeks to foster trade in goods and services; which

> Parties [to the agreement] consider to be beneficial to the environment. Such products may include environmental technologies, renewable – and energy efficient products and services and eco-labelled goods.[38]

Another alternative open to nations or groups of nations wishing to take measures to abate the effects of climate change is to adopt a closed or open emissions trading scheme or programme. Under such a programme, companies from countries party to the agreement would be obligated to pay for a license to emit greenhouse gases above a specific quota or cap. If this is done, the relevant administrative body would need to determine a maximum amount of emissions allowed for an allotted period of time and then proceed to divide the total amount of emissions into a specific allowance for every company within the trading scheme. If a company wished to emit more than their allotted quota, they would need to purchase the right to do so from another company operating below their specified allowance. This system, in essence rewards companies that produce emissions below their quota, as it allows them to earn revenue from emitting less greenhouse gases into the atmosphere. Trading schemes of this nature that are limited to a particular industry are known as 'closed' emissions trading schemes. Other schemes that permit emissions trading among different industries are known as 'open' emissions trading schemes. However, both give firms to the incentive to lower their carbon footprint, through best production methods and investment in efficient energy use. Hence such programmes which reward companies that maintain low carbon emissions can be adopt by any group of countries. Emissions permits can even be traded between groups of countries (between CARICOM and MERCUSOR, for example).

Notwithstanding this, emissions trading schemes may have a distortive effect on international trade as companies from countries with such schemes may face higher production costs (perhaps because of having to pay for an emissions permit) than companies from countries that do not have such schemes. As a result, an emission trading scheme may have the adverse side-effect of causing entities that are part of the scheme to become less internationally competitive. This may in turn require governments to offer incentives (such as tax-breaks and tax allowances) to companies that participate in emission trading schemes in order to ensure that they can still be internationally competitive. In order to ensure WTO compliance however, governments or regional bodies would need to ensure that any fiscal or other incentives that they would like to offer to firms participating in such schemes does not constitute or translate into a means of arbitrary or unjustifiable discrimination or does not restrict international trade for entities not participating in the emissions trading scheme.

## Endnotes

[1] See Hein, P (2004). *"Small island developing states: origin of the category and definition issues" Chapter 1 in "Is a special treatment of small island developing states possible?" UNCTAD/LDC/2004/1*
[2] See "Climate Change and Tourism: Responding to Global Challenges: Advanced Summary" October 2007 p.10
[3] Mimura, N., L. Nurse, R.F. McLean, J. Agard, L. Briguglio, P. Lefale, R. Payet and G. Sem, 2007: Small islands. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK. p. 3.
[4]Kiribati: A Neighbour's Dire Situation. Solomon Times Online. Available at http://www.solomontimes.com/news. Accessed 08 June 2008.
[5] Ibid.
[6] Ramón Bueno, Cornelia Herzfeld, Elizabeth A. Stanton, and Frank Ackerman. *The Caribbean and Climate Change: The Costs of Inaction*. Tufts University, May 2008. Available at http://ase.tufts.edu/gdae/Pubs/rp/Caribbean-full-Eng.pdf.
[7] For examples in the USA see the "Biofuels Research and Development Enhancement Act," the "Energy Storage Technology Advancement Act of 2007", and the "FutureGen – Coal – Fired, Zero-Emissions Electricity Generation" Programme
[8] See the United Nations Framework Convention on Climate Change, Articles 3(1) and 4 (2) (a) as well as the Lake Victoria Commonwealth Climate Change Action Plan, Commonwealth Heads of Government Meeting 2007, (5).
[9] Ibid.
[10] The United Nations Framework Convention on Climate Change, Article 2
[11] Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region. Article 3 (1). Available at http://www.cep.unep.org/pubs/legislation/spaw.html. Accessed on 14 June 2008.
[12] Ibid, Article 3 (2)
[13] See http://www.iata.org/whatwedo/environment/climate_change.htm. Accessed on 14 June 2008.
[14] The New York Times, "Can Cruise Ships and Coral Coexist." Available at http://dotearth.blogs.nytimes.com/2008/01/15/can-cruise-ships-and-coral-coexist/ . Accessed on June 19, 2008.
[15] Conservation International, "New Agreement Works To Balance Cruise Ship Tourism and Conservation." Available at http://www.celb.org/xp/CELB/news-events/press_releases/051208.xml . Accessed on June 22, 2008.
[16] Climate Change Corp, "Pollution overboard" Available at http://www.climatechangecorp.com/content.asp?ContentID=3513 . Accessed on June 22, 2008.
[17] See EUROPA, Climate Change Unit, Cruise Ship "Costa Fortuna". Available at http://ccu.jrc.it/costa.php. Accessed on 22 June 2008.
[18] See http://www.worldwildlife.org/climate/item3799.html. Accessed on 14 June 2008.
[19] See "How You Can Help: Travel Smart" at http://www.panda.org/how_you_can_help/at_home/travel/index.cfm. Accessed on 14 June 2008.
[20] The Caribbean Community Climate Change Centre Presentation delivered at the UNFCCC Pilot Network on Technology Information Centres. See

http://www.ttclear.unfccc.int/ttclear/presentations/Bonn2/CCCCC.ppt. Accessed on 14 June 2008.
[21] See the United Nations Framework Convention on Climate Change, Article 3(5)
[22] Under the WTO, three environment-related disputes arose, namely; "US - Gasoline", "US – Shrimp" and "EC-Asbestos". It is however to note that six cases pertaining to environmental issues arose under the GATT; namely "US-Canadian Tuna", "Canada-Salmon and Herring", "Thailand-Cigarettes", "US-Tuna (Mexico)","US- Tuna (EEC)", "US-Automobiles"
[23] *United States – Standards for Reformulated and Conventional Gasoline,* Appellate Body Report and Panel Report, adopted on 20 May 1996. (commonly referred to as the "US – Gasoline" case)
[24] General Agreement on Tariffs and Trade, Article XX (g)
[25] For more on this see Gary Sampson "WTO Rules and Climate Change: The Need for Policy Coherence"
[26] *United States – Import Prohibition of Certain Shrimp and Shrimp Products,* Appellate Body Report and Panel Report adopted on 6 November 1998.
[27] World Trade Organisation, "Trade and Environment at the WTO" p 63
[28] Taimoon Stewart, "Interest of the Caribbean Community in Trade-Related Environmental Issues: Some Considerations." IISD-ICTSD Southern Agenda on Trade and Environment. p 8.
[29] Ibid.
[30] *United States – Import Prohibition of Certain Shrimp and Shrimp Products,* Appellate Body Report and Panel Report adopted on 6 November 1998. paragraph 170.
[31] Ibid. paragraph 171.
[32] Ibid. paragraph 168.
[33] 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. Accessed on June 19, 2008.
[34] Ibid.
[35] Ibid.
[36] Economic Partnership Agreement between the CARIFORUM States, of the one part, and the European Community and its Member States of the other part. Article 183, (3) and (4). Available at: www.crnm.org. Accessed on March 12, 2008
[37] Ibid. Article 190.
[38] Ibid. Article 183 (5)