

## Caribbean cruise tourism: issues, challenges and sustainability

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**ABSTRACT** Cruise tourism is the fastest growing segment of the travel and tourism industry. With its growth has come concern about the impact of cruise tourism on coastal and marine environments, local economies, and on the socio-cultural nature of port communities. These three areas are key elements in any analysis focused on Caribbean sustainable tourism development and form a critical base from which to consider strategies to ensure the sustainable development of cruise tourism. A qualitative methodology was utilized to analyze literary texts. The objectives of this paper are to identify cruise sustainability and analyze how cruise tourism in the Caribbean adheres to these principles with some suggestions for management. Challenges faced by Caribbean Islands, communities, and the cruise industry are identified and described. Analysis of these issues and challenges gives direction for policy and management of how cruise tourism can grow in ways that are both sustainable and benefit all the stakeholders.

**Keywords:** Caribbean, cruise tourism, impacts, issues, challenges, development, sustainability

### 1. INTRODUCTION

Over 900 million tourists traveled internationally in 2007, with more than half traveling for pleasure (WTO, 2008). Tourist spending in 2007 reached US\$856 billion, 5.6 percent more than in 2006 (WTO, 2008). Macroeconomic figures identify tourism as the biggest industry in the world, making up 11.7% of Gross Domestic Product and providing one in every twelve jobs on the planet (Álvarez, Martín, Casielles, 2007). The growth continues, One billion tourists have travelled the world in 2012, marking a new record for the international tourism sector that accounts for one in every 12 jobs and 30% of the world's services exports (WTO, 2013). Receipts from international tourism in destinations around the world grew by 4% in 2012 reaching US\$ 1,075 billion. This growth is equal to the 4% increase in international tourist arrivals over the previous year which reached 1,035 million in 2012. An additional US\$ 219 billion was recorded in receipts from international passenger transport, bringing total exports generated by international tourism in 2012 to US\$ 1.3 trillion (WTO, 2013). While the economic benefits of tourism are well known, the benefits of tourism are rarely equitably distributed among stakeholders in traditional tourism development. These economic benefits also come with environmental and cultural costs that are unfairly borne by some stakeholders (Mortz, Ray, & Jain, 2005). To move away from this traditional tourism model towards sustainable tourism development, benefits and costs must be justly distributed among stakeholders. Jamal and Getz (1995) argued that residents are important stakeholders whose participation is necessary to move towards sustainable tourism.

Tourists' transportation, accommodation, and activities at a destination can alter the environment and consume resources. While tourism has some positive environmental impacts

such as raising environmental awareness (Cohen, 1978), lack of good tourism planning causes many more environmental costs. Cohen (1978) examined the environmental costs of tourism development based on the following characteristics: (i) intensity of destination use and development; (ii) resiliency of the destination's environment; (iii) investment return schedule of a destination's stakeholders; and (iv) transformational character of the tourism development. The intensity of destination use and development can be related to Butler's (1980) destination life cycle. Destinations pass through the life cycle stages based on the volume and type of tourist it attracts. A small number of exploratory and adventurous travelers 'discover' the destination and are followed by mass tourism as the destination becomes more popular.

Destination planners and tourism companies must supply the needed tourism development and infrastructure to accommodate increasing numbers of tourists. As tourist arrivals increase, the cumulative impact of tourists on the environment and demand for resources also increase (Christensen & Beckmann, 1998; Gössling, 2002). Moreover, Warnken, Bradley, and Guilding (2004) argued that leisure travelers are more indulgent while on vacation, increasing demands for resources per capita.

The Caribbean has been intensely used by tourists for decades, its proximity to the North American market accounts for its strategic location. Cruise tourism has been growing significantly and about 40% of the cruise market visit the Caribbean, Cruise Lines International Association, (CLIA, 2012). As a result of tourism development, many Caribbean islands cities were transformed from quiet towns to densely-developed urban areas in order to support the large number of visitor arrivals. The destination's absorptive capacity for tourists and tourist impacts is another important feature for determining tourism impacts (Cohen, 1978). Urban infrastructure can better receive and accommodate large numbers of visitors compared to natural areas; therefore, natural environments give way to development. Impacts to islands are more intense because of resource limitations, increasing competition between tourists and residents for those resources (Cronk, 1997). The time horizon of tourism development investments is the third destination feature identified by Cohen (1978). Developers who demand short-term returns develop with less regard to the overall vitality of the destination and its potential to continue to attract tourists long into the future (Cohen, 1978).

These speculative developers receive the economic benefits without paying the non-financial costs. Wen (1998) argues that "one fundamental cause for environmental problems is that those who exploit natural resources can obtain benefits immediately without having to pay the full cost (both economic and social) of depletion, while these costs, paid either now or in the future, are transferred to the society as a whole." This type of development can be controlled by government through zoning and permits and when tourism development is properly controlled by stakeholders with a longer-term perspective, resource exploitation and environmental and social costs can be reduced. Tourism development transforms its destination, usually with many negative outcomes (Cohen, 1978). The natural environment or culture that originally attracted tourists was replaced by development and commercialization. Transformational tourism development, however, also alters the relationship that residents have with the environment (Ahn, Lee, & Shafer, 2002). Residents' relationships with the local environment become decontextualized (Gössling, 2002). Residents in mass tourism destinations face congestion,

noise, neighborhood and environmental dereliction, and higher prices resulting from competition with tourists for scarce resources consequently resulting in decreased community satisfaction (Cavus & Tanrisevdi, 2003; Liu & Var, 1986).

## **2. CONCEPTUAL BACKGROUND - SUSTAINABLE TOURISM**

Since the 1992 Earth Summit in Rio de Janeiro, there is increasing awareness of the importance of sustainable forms of tourism. Although tourism, one of the world largest industries, was not the subject of a chapter in Agenda 21, the Program for the further implementation of Agenda 21, adopted by the General Assembly at its nineteenth special session in 1997, included sustainable tourism as one of its sectoral themes. Furthermore in 1996, The World Tourism Organization jointly with the tourism private sector issued an Agenda 21 for the Travel and Tourism Industry, with 19 specific areas of action recommended to governments and private operators towards sustainability in tourism. The Caribbean region has been identified as a cultural, social, and economic unit, biologically rich and diverse. These factors, along with its geographical location, determine that its tourism development must be conditioned to sustainability and the principles of integration, cooperation, and consensus to facilitate integral development by all stakeholders. According to studies made by the World Tourism Organization of the United Nations (UNWTO), it is foreseen that the Caribbean will continue to be the most visited destination for cruise tourism for years to come, with a market share of over 37% of passengers.

Cruise tourism is the fastest growing segment of travel and tourism, increasing 7.2% annually since 1990, doubling every decade (CLIA, 2012), see Table 1. While cruise tourism growth has typically been greatest in North America, growth in recent years increasingly has happened at a quicker pace elsewhere in the world. Between 2006 and 2009 passenger numbers in North America were virtually unchanged, compared to a 68% increase (an average 17% annually) outside North America (CLIA, 2010) especially Australia and New Zealand. This growth is in part a result of redeployment of older ships from North America to other parts of the world, including Europe, Asia, and Australia (Davies, 2009). The growth also reflects construction of ever-larger ships. The size of the cruise ships continue to increase, surpassing 100,000 tons, with capacities ranging from 3,200 to 6,000 people (Klein, 2005a). As the size of ships has grown, and the number of ships has increased, new ports have been established and existing ports have found ever-growing numbers of cruise passengers day-visitors. Overall, the number of cruise passengers has grown more than 30 fold between 1970 and 2012, which poses a much greater environmental threat.

Embedded in the concept of sustainable tourism are three main areas of concern; the environmental impacts, economic impacts and social-cultural impacts. Tourism is recognized as a resource-intensive industry; it needs, therefore, to be accountable in terms of sustainability at both local and global scales. Sustainable tourism (ST) is a major focus in the debate on environmentally integrated tourism development, but existing research shows that sustainability is a complex concept, and one that requires more critical and comprehensive

analysis (Butler, 1999; Mowforth & Munt, 2003). Several influential papers have enhanced the understanding of the highly complex and intertwined issues of ST, quality of life, equity and the environment (Butler, 1999; Collins, 1999; Farrell & Twining-Ward, 2004; Hunter, 1997; Wall, 1997). It is argued that ST needs to be conceptualized in a more comprehensive way so as to appraise meaningfully and critically its interconnectedness with the natural, social and economic elements at multiple scales and time periods (Farrell & Twining-Ward, 2004; McKercher, 1999). ST therefore can be best construed either as an “adaptive paradigm” (Hunter, 1997) or as “adaptive management” (Farrell & Twining-Ward, 2004), which addresses issues of unpredictability of events, uncertainties about the outcome of events and complexities of scale and times. An important point about the concept of sustainability is that it is defined, interpreted and implemented differently by individuals, stakeholders and social groups; it is often referred to as a “balance” or “wise” use of resources. Four basic principles for the concept of sustainability have been considered: (1) the idea of holistic planning and strategy-making; (2) the importance of preserving essential ecological processes; (3) the need to protect both human heritage and biodiversity and (4) development based on the idea that productivity can be sustained over the long term for future generations (World Commission on Environmental Development, 1987)

Table 1 - Worldwide Cruise Passengers Market

Year	North America	Europe	Rest of the World	Total Cruise Passengers	% Growth Worldwide
2000	4,364,470	1,947,780	901,750	7,214,000	22.94%
2002	5,882,000	2,162,500	605,500	8,650,000	19.91%
2004	6,328,300	2,824,200	1,307,500	10,460,000	20.92%
2006	7,263,630	3,241,620	1,500,750	12,006,000	14.78%
2008	9,546,295	4,260,330	1,972,375	15,779,000	31.43%
2010	11,144,705	4,973,670	2,302,625	18,421,000	16.74%
2012	11,616,000	6,284,000	2,160,000	20,060,000	8.90%

Source: Cruise Line International Association, Florida Caribbean Cruise Association  
Cruise Market Watch

### 3. CRUISE ENVIRONMENTAL ISSUES AND CHALLENGES

A cruise ship produces a number of waste-streams. Some, such as oily bilge water, ballast water, and air emissions from fuel are common to most ocean-going vessels. Other waste-streams are specific to cruise ships, such as the volume of human waste and grey-water, solid waste, and incinerator emissions and ash (Copeland, 2009; EPA, 2009). Many notable technological advances have been applied to cruise ships in recent years (Seatrade Insider, 2010a), including systems for treating the roughly seven gallons of sewage and 90 gallons of grey-water per person per day. These new systems, however, can produce as much as 28,000 gallons of sewage sludge per week (National Marine Sanctuaries, 2008, p. 43). While land-based tourism also produces grey-water and sewage, treatment systems on board cruise ships are often less effective given the limited space available for the full suite of treatment systems commonly found on land. Grey-water; i.e. water from sinks, showers, galleys, etc. has typically been discharged overboard

untreated, which by international regulation is legal. Human waste typically has been treated by a Type 2 Marine Sanitation Device (MSD). A slow shift to Advanced Wastewater Purification System (AWTS) began in the early 2000s after testing in Alaska demonstrated that MSDs failed to meet operational specifications: 79 of 80 samples from cruise ships were seriously out of compliance and posed an environmental risk (Klein, 2002). Alaska is unique in that it is the only jurisdiction where onboard observers (Ocean Rangers) are placed on cruise ships permitted to discharge in state waters. Observers monitor waste treatment systems and regularly sample effluent (Klein, 2009, pp. 23-24). While these systems are likely to be installed on ships sent to Alaska, they are not necessarily on ships deployed in the Caribbean and there is no government agency similar to Ocean Rangers monitoring discharge. Additionally, there is variation by cruise company, Norwegian Cruise Line had AWTS on their entire fleet by 2008, whereas only one of Carnival Cruise Lines' 22 ships was equipped with this technology (Brannigan, 2008). The other major cruise lines, Royal Caribbean International, despite an assurance in May 2004 that it would have AWTS on all of its ships by 2008 (Klein 2005a, pp. 147-148), still had 11 ships, almost half its fleet without AWTS at the start of 2010 (RCI, 2010). Perhaps more troubling is that cruise ships neglect their corporate social responsibility by having different practices based on the regulations within different jurisdiction.

Air emissions from cruise ship engines are an obvious source of pollution, cruise ships comprise 12% of the world's commercial ships (Sutton, 2010), however, they pose a unique problem as they run auxiliary engines while in port to drive their onboard power plant. Some ports have introduced 'cold ironing,' a requirement that ships plug into the power grid for electricity while in port; e.g. Charleston, South Carolina, however, the practice is still quite limited (Klein, 2008, 2009). Conventionally a cruise ship's daily emissions are likened to the impact of 12,000 automobiles (Oceana, 2003, p. 1). Waymer, 2007, study found that bunker fuel on average has almost 2,000 times the sulfur content of highway diesel fuel used by buses, trucks, and cars and that one ship can make as much smog-producing pollution as 350,000 cars which varies widely depending on the fuel being burned. Current international standards set maximum sulfur content for ocean going vessel fuel at 4.5%, making it easy for cruise lines to say they meet or exceed international regulations since bunker fuel averages 3% sulfur content (low sulfur fuels such as on-road diesel have sulfur content as low as 0.0015%). Limits will reduce to 3.5% in 2012 and 0.5% in 2020 (Annex VI, 2008). To date, cruise lines have been resistant to using fuels below 2.5% sulfur because of its higher cost, except where cleaner fuels are required. Following developments in Europe, the US and Canada partnered to establish the North America Emission Control Area extending 200 miles from the coast, which was ratified by the International Maritime Organization on March 26, 2010 (Lagan, 2010). It limits sulfur content in fuel to 1.0% effective 2012 and 0.1% by 2015. No such agreement exist in the Caribbean region.

A cruise ship produces a large volume of non-hazardous solid waste, including huge volumes of plastic, paper, wood, cardboard, food waste, cans, glass, and the variety of other wastes disposed of by passengers. It was estimated in the 1990s that each passenger accounted for 3.5 kilograms of solid waste per day (Herz and Davis, 2002:11). With better attention to waste reduction this volume in recent years has been cut nearly in half. But the amount is still significant, more than eight tons in a week from a moderate sized cruise ship. Twenty-four per

cent of the solid waste produced by vessels worldwide comes from cruise ships (Copeland, 2008). While land-based tourism also produces solid waste, cruise ships pose a unique problem given the amount of waste discharged at sea and, some would argue, the greater volume of waste per guest. Glass and aluminum are increasingly held on board and landed ashore for recycling, but only when the itinerary includes a port with reception facilities; it is otherwise discharged at sea.

Food and other waste not easily incinerated is ground or macerated and also discharged into the sea, legally beyond three miles from shore. These '... food waste can contribute to increases in biological oxygen demand, chemical oxygen demand, and total organic carbon, diminish water and sediment quality, adversely affect marine biota, increase turbidity, and elevate nutrient levels' (EPA, 2008, pp. 5-11). They may be detrimental to fish digestion and health and cause nutrient pollution (Polglaze, 2003). An additional problem with discharging food waste at sea is the inadvertent discharge of plastics. Under Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL), throwing plastic into the ocean is strictly prohibited everywhere. Plastic poses an immediate risk to sea life that might ingest or get caught in it (Reid, 2007). Solid waste and some plastics are incinerated on board, and then the incinerator ash is dumped into the ocean. Incinerator ash and the resulting air emissions can contain furans and dioxins, both found to be carcinogenic (Klein, 2009), as well as heavy metal and other toxic residues. For this reason Annex V of MARPOL recommends, but does not require, that ash from incineration of certain plastics not be discharged into the sea (EPA, 2008). At the very least, incinerator ash should be tested before each overboard discharge in order to determine whether it should be categorized as solid waste or hazardous waste (EPA, 2008). Although cruise ships have reduced their volume of solid waste, the total amount is still significant. Royal Caribbean's commitment in 2003 to not dump any trash overboard is admirable (Fain, 2003), however, there is no independent verification of the implementation of this policy. According to the environmental group Oceana, the average cruise ship produces the following immense amount of pollution every day:

- 25,000 gallons of sewage from toilets;
- 143,000 gallons of sewage from sinks, galleys and showers;
- 7 tons of garbage and solid waste;
- 15 gallons of toxic chemicals; and
- 7,000 gallons of oily bilge water.

During 2012 many cruise companies stated their commitment to environmental practices which set a high standard for excellence and responsibility. They insisted that many of their ships currently go beyond what is required by law and include a zero solid waste discharge policy, state-of-the-art environmental technology and waste management equipment, programs to minimize waste generated, and recycling where possible.

#### 4. CRUISE ECONOMIC ISSUES AND CHALLENGES

There are debates about the economics of cruise tourism, the value of cruise passenger spending and costs associated with infrastructure required to host ships, including cruise terminals that can cost \$100 million or more. Cruise ships ports of call are a focal point of the cruise business because they provide value to passengers and some economic benefits to local businesses and tour providers. Economic benefits are not always distributed equitably between the cruise ship and the port and cruise port operations can be a muddy business leaving local business interests outside. Often, the cost of rental space at the port is a challenge for local businesses and larger outside companies with better access to capital often have shops at different cruise ports in different cruise destinations, example St.Thomas, St.Maarten, St.Kitts, Antigua, St.Lucia, Aruba and Curacao in the Caribbean A second issue of concern is that ports increasingly feel pressure to construct new cruise terminals to accommodate the new much larger ships and often compete with neighbors for business. In Belize passengers arrive by tender at Fort Street Village in the center of Belize City. The village is contained by a wall and security fence and has within a range of shops and eateries and bars, many of which are found in other Caribbean ports including Diamonds International, which until 2011 co-owned the Fort Street Village with Royal Caribbean. The retail space is expensive so few local merchants can afford to be there; there is a small crafts market for them in another area, but the rents again are relatively significant given the degree of potential income. The result is that merchants in the Fort Street Village have income, despite heavy overhead costs, but merchants outside do less well given the relatively few cruise passengers who venture independently from the Fort Street Village. Many taxi drivers are left behind the security gate entrance to the cruise terminals. Most passengers take shore excursions. These are major money makers for the cruise ship, which holds back 50% or more of what passengers pay on board for a tour. This creates two problems. First, a passenger spending US\$80 for a shore excursion expects a \$80 product, but the shore excursion provider only receives US\$40. While the cruise ship walks away with its cut, the shore excursion provider must provide a quality product that pleases passengers and the cruise line while still retaining a small profit. If passengers are unhappy they will blame the shore excursion provider, unaware of the cruise line's cut, which can exceed 50%; one cruise line retains 90% of the cost of a shore excursion in St Vincent and the Grenadines (Caribbean Media Corporation, 2007).

In many Caribbean islands with cruise tourism a small hand full of individuals make a little amount money from cruise tourism, but that the majority of tourism businesses realize little benefit to the locals. In fact, cruise tourism earns considerably less for the local economy than traditional land-based tourism. A 2007 study found cruise visitors spent less than half as much per day as land-based visitors (US\$44 vs. US\$96). Cruise passengers accounted for 75% of arrivals to Belize, but only 10% of employment in the tourism industry (Centre of Ecotourism and Sustainable Development, 2006). While cruise tourism brings many more visitors, its economic impact is relatively small and concentrated in a few hands. The situation in Belize became more problematic in early 2011 when Carnival Cruise Lines announced it would no longer use locally owned tenders to transport passengers from the ship to shore. The cruise line

changed its requirements and insisted that tenders must accommodate at least 200 passengers. Many local tender owners fear going out of business, especially given the debt incurred to purchase vessels that previously met the cruise corporation's requirements. Subsequent to its initial demand, Carnival cruise line called on tender operators to reduce their fees and it boycotted the port (Kelly, 2011a, 2011b).

New, larger ships dictate renovations. The financial burden for construction and maintenance of these cruise facilities is often on local Caribbean governments that may or may not recoup their investment. The Government of Jamaica spent more than US\$120 million on a new US\$225 million cruise terminal at Falmouth. Like many other ports, they may end up subsidizing the cruise industry. They feel forced to make investments, but at the same time are pressured to keep cruise passenger head taxes as low as possible (in the Caribbean considerably lower than fees paid by those arriving or departing by air). However, some ports appear to negotiate better deals than others. St. Maarten received a \$34.5 million loan from Carnival Corporation in 2007 for construction of a new pier. Royal Caribbean loaned it an additional \$10 million for a fixed berth on the new pier. Given terms of the loans, agreed to passenger head taxes, and maintenance costs, the port is likely to end up subsidizing the construction project--anticipated revenues will barely keep up with expenses (Klein, 2008). At the same time, Port Everglades (Fort Lauderdale) agreed to renovate one of its new terminals at a cost of \$37.4 million in order to accommodate Royal Caribbean's Oasis of the Seas and Allure of the Seas, two of the biggest cruise ships in the world, but in that case neither the port nor taxpayers will foot the bill. Royal Caribbean will instead pay for the work through a \$5.70 surcharge on passengers when they leave and arrive. That's in addition to a \$9.95 port user fee all passengers pay. The result is that while St. Maarten has to pay for its new piers with existing port fees and is left at the margin with regard to generating enough income to cover all expenses, Port Everglades maintains its usual port fees and collects an additional fee to specifically cover construction costs (Klein, 2005a, p. 126).

An increasingly common arrangement that avoids this problem is that cruise corporations are building and operating their own cruise terminals, some on Caribbean "private islands". Carnival owns terminals in Cozumel, Roatan, Turks and Caicos, Long Beach California and elsewhere; controls a terminal in Savona, Italy; and in partnership with Royal Caribbean holds the concession for the cruise terminal at Civitavecchia (Rome). Royal Caribbean holds the concession for cruise terminals at Falmouth, Jamaica and Kusadasi, Turkey, and in partnership with Diamonds International owned the terminal in Belize. The effect of these arrangements is that income generated from cruise tourism increasingly goes into corporate coffers rather than local businesses, this goes against the principles of sustainable tourism development. As well, as was seen in Kusadasi, shops within the cruise terminal take business away from shops traditionally visited by cruise passengers (Klein, 2008). The economic value of cruise tourism to local constituents and stakeholders is dwindling while the cruise line's profits increases. This does not constitute sustainable cruise tourism for the Caribbean. These corporate owned terminals in some regions compete with other ports and may factor in bargaining as nearby ports negotiate with the cruise industry. Ports are potentially played off against one another. This is certainly the case in British Columbia where five ports have been encouraged to build terminal facilities,

yet the number of cruise passengers is not increasing (Klein, 2005b). With alternatives, cruise lines are able to ensure they get the best possible deal while some ports win and others lose. At the same time that a cruise corporation is responsible to stockholders for generating profit, it has a responsibility to the ports and communities it visits. Port communities should receive fair, equitable, and widely disbursed benefits from cruise tourism.

## 5. CRUISE SOCIO-CULTURAL ISSUES AND CHALLENGES

Caribbean governments have the absolute authority to make decisions regarding cruise tourism, many islands will accommodate as many cruise ships as want to come and not seriously consider socio-cultural impacts; people city overcrowded and homogenization of the port experience. Over crowded cities at which the carrying capacity of a port is exceeded has increasingly become a concern as the number of cruise ships has increased and the size of these ships have grown e.g. St.Thomas US Virgin Island and St.Maarten. In the 1990s, five ships calling at a port would have offloaded 8,000 cruise passengers or less; today five ships could easily bring more than twice that number of passengers. The experience of passengers is impacted, however, more importantly local inhabitants are forced to deal with overcrowding and other problems associated with this growth. These problems are in many ways unique to cruise tourism given the short-term daily influx of large numbers of people and that land-based visitors stay at their resort or are disbursed more broadly across each island. Crowds disrupt usual routines and the activities associated with cruise tourism can themselves be a problem with impacts on quality of life. (Klein, 2008, pp. 99-100). Quality of life is directly impacted by the volume of visitors. The United Nations Committee on Sustainable Tourism notes that when the social carrying capacity of an island is surpassed, cost of living increases along with overcrowding, traffic congestion, and noise pollution. A lower standard of living results for a significant segment of the population and an attitude shift occurs whereby the tourist is blamed for the majority of social problems (Baron, 1999).

Concern is with whether visitors have an opportunity to interact with and to experience local culture, and that local cultures are treated respectfully. Here again the sheer volume of cruise passengers can compromise the experience for both. In Belize for example, locals warn visitors not to visit Xunantunich on 'cruise day,' one of the main Mayan sites in Belize for cruise passengers (Krohn, 2010). Passengers' experience of the sacred site is limited by both the length of time spent and by the number of other cruise passengers sharing the site, on most days the site is quiet. The Caribbean has been associated with cruise ships no fewer than sixty years and is an example of a mature cruise destination. As such, ports have to a degree become homogeneous; jewelry stores, duty free shops for liquor and other goods, and an assortment of tourist-oriented products. A number of companies like Little Switzerland, Diamonds International, Colombian Emeralds to name a few, have stores in many Caribbean ports. While this homogenization may have economic value to the outside corporations that own the stores, it takes its toll on the local people. Not only have these stores changed the character of the downtown city, but the volume of cruise tourists makes the downtown unattractive to local

citizens, who have to wait until the end of the cruise season to again enjoy their quiet city. In addition, these foreign own stores take their profits with them at the end of the season. It is essential that the growth of cruise tourism not have a negative impact on the quality of life of citizens in and around a port. If anything, the impact should be positive. As quality of life is a largely qualitative concept, the best indicator is people in and around the port, all walks of life and all segments of society. All of the major stakeholders; cruise ship companies, governments and the local communities must work together to ensure the sustainable growth of cruise tourism providing more opportunities to the locals so that as much economic benefit as possible be available to as wide a segment of the community as is possible.

Cruise tourists consider health, safety, and security issues to be very important aspects of an attractive, enjoyable cruise. Cruise lines also take these concerns very seriously, and pay a considerable amount of attention to ensuring the health, safety, and wellbeing of both guests and employees on-board ship and while visiting ports. The level of shore side crime and guests' perception of health and safety has a considerable impact on the attractiveness of Caribbean destinations. Visitor health and safety remains an important topic worldwide. Perceived or real threats to visitor safety have immediate impacts on a destination's reputation and can dramatically affect visitation. If visitor health and safety is not well managed, adverse incidents can significantly impact on the profitability and sustainability of an individual business, community or destination. Ports and destinations also need to take these issues into account, as well as ensuring the health and safety of their own employees, and minimizing potential negative impacts on the health of surrounding communities. There are several important ethical issues that arise with the increase of tourism. One that is of particular interest to stakeholders within the tourism industry is crime generation.

There are many reasons why crime rates tend to be higher among tourists than among local residents. One is because tourists have certain personal and behavioral attributes which tend to make them "desirable" victims. For instance, tourists often carry large sums of money or valuable items such as cameras and jewelry which can easily be sold easily by criminals. Furthermore, tourists sometimes engage in activities which may increase their risk of victimization, such as frequenting night clubs and bars at late hours, or accidentally venturing into unknown parts of the community which residents consider "unsafe." With the growing animosity towards tourists in local regions and the increase in drug use, the level of violence directed against tourists has increased visibly since in the early 2000s. These violent acts range from verbal harassment, to incidences of physical assaults, robbery, rape, and a few murders. If a destination develops a negative image for visitor safety this will likely result in a declining visitor market for the region. Crime against tourists can cause foreign governments to announce travel advisories, thereby inducing their nationals to alter their travel plans, which might include choosing alternative vacation destinations. Even isolated incidents can produce a ripple effect throughout a country when victims warn their friends and family and/or are encouraged to tell their stories to the news media. Among the immediate impact of such decisions are loss of revenue for airlines, hotels and the industry as a whole. However, the longer-term impact may include fewer repeat visitors and permanent damage to the image of the destination as a location for tourism investment.

## 6. CRUISE TOURISM MANAGEMENT SUGGESTIONS FOR SUSTAINABILITY

If Caribbean islands want to be sustainable destinations they must be managed by well-trained and committed personnel with up-to-date tourism plans that focuses on sustainable tourism. The islands governments must exercise their authority to have the personnel, resources, and political commitment to implement and monitor the plans. Achievements should be tracked and made available to the general public. Both the local population and the visiting tourists' health and safety should be taken seriously and plans and policies exist for crisis, security, fire, health and safety. Sustainable destinations reinvest the profits from their tourism activities in environmental conservation and historic restoration and preservation. They demonstrate a thriving culture, strong social networks and increasing biodiversity. They show effective planning, substantial land and marine protection, increased energy and water conservation, and a reduction in solid waste per guest over time. They have an effective recycling and wastewater sanitation program that is carefully managed and take steps to reduce the carbon footprint of their activities.

Sustainable island destinations can be internationally recognized if they are committed to do the following:

- The whole Caribbean Sea and reef zone and its coastal strip should be managed as a single ecosystem.
- Policy should be initiated to guide strategies, plans, programs, projects, and activities of government authorities, municipal governments, and private enterprise. The maximum acceptable number of cruise tourists i.e. the carrying capacity should be identified for each port city.
- Exert strict control over all ships whether cruise or otherwise in the Caribbean Sea, based on best practices with regulations to address dumping wastes and pollution from cruise ship.
- Charge cruise ships and cruise tourists increasingly for environmental services and for quality services, while maximum acceptable visitor numbers are established for ecosystems and use zones, thereby enabling the region to receive less cruise visitors and obtain more income.
- Develop and adopt an instruction manuals for tour operators and guests orientation for visitors who intent to use the ecosystems or marine environments.
- Establish a Caribbean Regional Plan for Contingencies to face natural disasters, cruise ships accidents, etc.
- Characterize reef zones in enough detail to allow the adoption of management measures and use prohibitions according to their carrying capacity or limits of acceptable change.

## **7. CONCLUSION**

Generally, sustainable tourism development (STD) is a long-term approach that cultivates economically viable tourism without harming residents' environment or society while simultaneously ensuring fair distribution of costs and benefits. Decisions are based on economic, environmental, and cultural impacts; how wealth is generated and distributed; and the relative power and interactions among the stakeholders (Bramwell, 2006; Twining-Ward & Butler, 2002). STD balances industry's goal of profit with the needs of the environment and stakeholders (Bramwell, 2006). Stakeholder cooperation is necessary for sustainable tourism; otherwise only the most powerful will benefit (Dyer, Gursoy, Sharma, & Carter, 2007). To keep stakeholders satisfied with tourism development and their community, the environment and culture must be protected (Ahn et al., 2002; Hjalager, 1996). When tourism development enhances, rather than erodes the natural environment, a more sustainable tourism product can be offered to support the destination's economy (Batra & Kaur, 1996). A government that effectively manages tourism creates benefits for all stakeholders (Jamal & Getz, 1995). Effective management is avoiding negative impacts through a combination of general protective measures; regulations to control development; and financial restraints (Cohen, 1978; Hjalager, 1996). Improvement of the environment can be achieved by ensuring that development is harmonious with the overall plan for the destination (Batra & Kaur, 1996). Necessary tourism infrastructure such as roads, airports, parks, and visitor centers are also the responsibility of government (Jamal & Getz, 1995). Maintenance of infrastructure and facilities is expensive and residents, through property taxes, should not be the only group to bear this burden (Wong, 1996). Residents benefit when tourists spend money in the local economy and create jobs, as well as from the development of infrastructure that residents also utilize (Wong, 1996).

In the Caribbean the big question is, can cruise tourism be sustainable? The answer is yes, with government legislation and good management practices. Large cruise ships are not great for the environment at all, especially the oceans. There's a tremendous amount of electricity used, fuel burnt, garbage, sewage and even hazardous waste created, and a massive amount of wastewater disposed in the sea. Then there are the negative effects on ports of call. Cruises are essentially all-inclusive vacations, where everything is paid in advance to the cruise company, so locals see very little benefit from shore excursions, aside from a small amount of money spent on souvenirs, and the large amount of waste left. In the Caribbean, the disposal of plastic water bottles left by day-trippers is a very serious problem, as is the impact of the ships on erosion of the islands from new port development which sometimes cause a shift in ocean currents and waves direction resulting in shore erosion. On the contrary, cruise companies have responded to public pressure, they are becoming much more environmentally conscious. As of 2012 many cruise companies are producing their own environmental sustainability reports. The various reports all claim that more eco-friendly improvements are being introduced by cruise companies every day. These include things like more aerodynamic designs, itineraries that make better use of tides, installation of solar power panels, LED lights, low-flow showerheads, and heat-transfer windows to cut down on cooling, reducing air-conditioning emissions and allowing more natural light, use of cleaner burning fuels and non-toxic cleaning supplies, onboard crushing of

aluminum, tin and glass for recycling, re-using used cooking oil as an alternative fuel, replacing plastics with bio-degradable materials, and sourcing local sustainable produce for meals. Some researchers have argued that cruise ship travel is even worse than flying for the amount of carbon emissions created. However, it's very tricky to compare the carbon footprint of a cruise ship voyage with that of a flight, because a cruise ship is not just a means of transport, but includes accommodation, meals, entertainment, and leisure activities.

Cruise tourism's pace of growth and the nature of its product presents many challenges to the Caribbean tourism industry and to ports and port communities. While it is easy to think about sustainability in terms of shipboard operations, when considering the interaction of cruise tourism with local communities the concept of sustainability is also critical. One obvious reason is the mobile nature of cruise ships. Its passengers are day visitors and the ship itself is not part of the communities it visits. Impacts must be measured from the perspective of the Caribbean islands and port community. This becomes even more important as ships get larger given the greater volumes of waste and the increasing number of visitors. While some stakeholders may benefit greatly, others may not. There is no question that the cruise industry has made many strides when it comes to environmental practices. It shouldn't detract from its achievements by not embracing internationally sanctioned regulations such as emissions control areas and by not handling solid waste as well as they can. Several areas related to the socioeconomic benefits of cruise tourism were also discussed. As was seen, the distribution of benefits between cruise ships and shore excursion providers appears to be tipped heavily in favor of the cruise ship. Not only is the shore excursion provider apparently short-changed, but their low level of income means others in the supply chain also receive less. The scenario around cruise terminals also appears to put port communities at an economic disadvantage compared to the cruise industry. Cruise corporations are out to make a profit, and they do that very well, however they can do better at sharing the profits from cruise tourism with the ports on which they depend for attractions and entertainment for their passengers in the Caribbean islands. This income needs to reach all segments of the society, not just the relatively few merchants and guides who come into contact with the cruise passengers.

Within the socio-cultural impacts: the problem of overcrowding, homogenization of the port experience. The most immediate problem to address is the issue of overcrowding port cities. Governments, local communities, ports and cruise companies together need to determine the realistic carrying capacity of port, port cities, and tourist attractions and then design itineraries and port calls that stay within these limits. A port can absorb only so many cruise passengers at a time, and can tolerate only a certain number of days being inundated by cruise passengers. This paper contribute to the debate on sustainability and helps focus the analysis of sustainability on Caribbean governments, cruise companies, the local community and other stakeholders that are effected by cruise tourism development. To address these challenges, major stakeholder groups need to work together to maintain, protect and preserve the quality of natural and cultural resources in Caribbean cruise island destinations. Practical implications for sustainable cruise tourism in the Caribbean is limited to prevailing political-economic, socio-cultural and environmental contexts but governments of the region must implement some common sense policies. From cruise lines and governments to civil society organizations and

shore operators, all of these groups have a stake in ensuring a healthy future for each destination, the Caribbean as a whole and for sustainable cruise tourism development.

Our discussion is consistent with the International Organization for Standardization (ISO) which implies (Guidance on social responsibility: ISO 26000:2010):

- both transparent and ethical behavior that contributes to sustainable development,
- is in compliance with applicable law and is consistent with international norms of behavior,
- is integrated throughout the organization,
- is practiced in its relationships
- and takes into account the interests of stakeholders.

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