

An Examination of the Development Path Taken by Small Island Developing States:
Jamaica a Case Study

by

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Abstract

Small Island Developing States (SIDS) are threatened by myriad of economic, environmental, and social issues, most of which are structural in nature and beyond the control of SIDS. To date, SIDS have collectively and unanimously endorsed only one policy document that comprehensively addresses these issues, and outlines a strategy that seeks to mitigate the vulnerabilities facing islands. This document is the 1994 United Nations Programme of Action on the Sustainable Development of Small Island Developing States (BPOA). However, close to a decade and a half after the implementation of the BPOA, SIDS continue to be extremely vulnerable to the issues identified in the blueprint for development; indicating that even though SIDS policy makers are acutely aware of the vulnerabilities and long-term threats facing their islands, there exists an inconsistency between the goals outlined in the development plans SIDS governments have collectively negotiated, drafted, and implemented; and the outcomes SIDS are collectively experiencing. In order to investigate this issue, this paper seeks to elucidate the ideological inconsistencies in the development process SIDS have embarked upon. By undertaking an analysis of the BPOA, it is shown that the concept of sustainable development has been conceived primarily through the lens of economic growth as a means to improve the quality of life for island peoples. To this end, we place particular emphasis on Jamaica's path towards development and document the islands ecological-history, as well as follow the major trends in Jamaica's economy, environment, and society since the islands independence, but particularly since the adoption of the BPOA. The central thesis of this paper is that SIDS are trapped into perpetuating a mode of development that is increasing their economic, environmental, and social vulnerabilities.

Chapter 1 – Small Islands' Predicament

“[It] should be quite feasible to arrive at a correct analysis of a problem without (yet) having developed a good solution.” [Hornborg 2003: 209]

“Island Studies is not the mere study of events and phenomena on sites which happen to be islands ...”¹ [Baldacchino 2004b: 278]

The very existence of island states, collectively and formally referred to as Small Island Developing States (SIDS), is threatened by “environmental conditions not of their own making”² (Lewis 1990a: 77). That SIDS are: “ecologically fragile,” and considered to be extremely “vulnerable” to global warming and sea level rise (Malé Declaration 1989: 2; Lewis 1990b: 242; United Nations 1993b: 271; United Nations 1994: 4; Briguglio 1995: 1618) are sentiments that were unanimously accepted by the international community at the historic United Nations Conference on Environment and Development in 1992, popularly known as the Earth Summit³. Since that time, the threats facing SIDS have intensified, particularly because of the unsustainable economic, environmental, and social actions of the international community; but also because many islands have themselves formulated national policies along such unsustainable practices (United Nations 2002c: 3; United Nations 2004c: 2; United Nations 2005d: 4; Malé Declaration 2007: 1).

Problematic Situation

Islands face myriad issues, many of which “are directly and indirectly affected by events occurring on a global scale, be they economic, political or ecological in character [and which are] beyond the capacity of island states to control or influence” (Byrne and Inniss 2002: 4). The structural nature of the issues facing islands need to be identified and explained. For example, climate change and sea level rise are perhaps the two most immediate threats islands are faced with (Intergovernmental

1 The sentence continues “- or, for better or worse, *small* islands.”

2 Lewis is paraphrasing the Commonwealth Secretary-General, Sir Shridath Ramphal at the 1989 *Small States Conference on Sea Level Rise* in Malé, Republic of the Maldives. The conference was proposed by the Maldivian President, Maumoon Abdul Gayoom, at the Commonwealth Heads of Government Meeting in Vancouver the year before. The Malé conference was hosted and chaired by the Government of the Maldives, and was funded by The Commonwealth and Australia, with delegates attending from the Caribbean, Indian Ocean, Mediterranean, and Pacific island states; and various metropolitan countries and international organisations (1990a: 77).

3 Or the “Rio Earth Summit,” in recognition of Rio de Janeiro, the city where the ground-breaking conference took place.

Panel on Climate Change 1995, 2001, 2007; Whittaker 1998: 252; Byrne and Inniss 2002: 10; Lebel 2002: 108; Nunn 2003: 226; Ghina 2005: 187; Quarless 2007: 99)⁴. Even though island states have been at the forefront of ratifying international agreements such as the United Nations Convention on Climate Change and the Kyoto Protocol (Byrne and Inniss 2002: 14-15; Vossenaar 2004: 69; Fry 2005: 96), islands have had very little influence over the implementation of such agreements⁵ (Pelling and Uitto 2001: 56; Barnett and Adger 2003: 322; Nurse and Moore 2007: 103). Another example of the structural problems facing islands is manifested in their economies. Island states are “characterized by resource and market scarcity and intense openness [which results in a] heavy dependence on basic and intermediate imports” (McElroy 2002: 51). Furthermore, the structure of the hegemonic-economic-paradigm⁶ necessitates that island states “depend heavily on their natural resources [to trade for] the food, fuel, and industrial products they require to live” (Lee 2002: 491). As with their environmental vulnerabilities, islands’ “economic vulnerabilities” exist outside their locus of control or influence, and island states have little choice but to participate within the parameters of an economic system which weakens and threatens their physical existence (Briguglio 2002: 73; Lebel 2002: 107; Quarless 2007: 100). Island societies are equally vulnerable to growing social disparities, evidence of which is reflected in a polarisation of their populations’ ability to access food, safety, education, health care, and income. Indeed, it is rather surprising that overall life expectancies on islands have actually been decreasing over the course of the past decade (United Nations 2001, 2007d)⁷. The cumulative effects

4 However, Barnett and Adger note that for the most vulnerable of islands, atoll countries, “sea-level rise is a mid- to long-term problem ... the more immediate problems are likely to arise from enhanced climatic variability and extreme weather events (2003: 325). These events will immediately impact on the ability of atoll countries’ to access their freshwater reserves, and cultivate their agricultural lands for food production. In terms of those islands most at risk from sea level rise, Quarless notes that Pacific islands are at particular risk as “the current IPCC predictions [show that] ... Tuvalu faces the likelihood of complete submersion, as do islands in the Federated States of Micronesia, the Marshall Islands, Papua New Guinea and Vanuatu” (2007: 99).

5 With respect to the carbon-dioxide reduction targets established by the Kyoto protocol, Bryne and Inniss note “[t]he overriding concern for SIDS is that OECD countries as a group are likely not to meet their collective targets” (2002: 20).

6 This is what Douglass C. North described in his 1993 acceptance-lecture of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel (shared with Robert W. Fogel) as the “[result] of a gradually evolving belief system in *competition* among fragmented political/economic units producing economic institutions and political structure that produced modern economic growth” (1997, my emphasis).

7 Taken in the aggregate, the life-expectancies of the 19 small island developing states the United Nations Population Fund annually monitors have fallen by roughly three months between 2001 and 2007; of which, Barbados, Jamaica, Trinidad and Tobago, Papua New Guinea, Fiji, Micronesia, and the Solomon Islands have revealed decreases of greater

of these vulnerabilities on most island regions have, over the course of industrialised modernity, reached a point where the threats facing islands are becoming increasingly irreversible (McElroy 2002: 55; Persoon and Osseweijer 2002: 112). In short, island peoples are faced with an escalating degradation of their existing qualities of life.

The social-sciences contain analyses that assist our understanding of the causes of this degradation, and we see lucid explanations in the dependency and world-systems analyses (Frank 1966; Wallerstein 1979; Jorgenson and Kick 2003)⁸. However, dependency and world-systems analyses are sympathetically critiqued on the grounds they pay little attention to “class analysis” (Allahar 1995: 115), nor to the “limited agency marginalised states (and citizens) have despite the structural forces which constrain them” (Campling 2006: 238). As the validity of these criticisms become ever more obvious, it is also important to note two additional critiques: (1) that “the literature on SIDS *vulnerability* has an underdeveloped critical voice ... [which] often stops short of investigating the structural relationships that govern decision-making and policy implementation [on SIDS]” (Pelling and Uitto 2001: 49, my emphasis)⁹; and (2) that studies involving islands are routinely contextualised

than one year.

- 8 Until the mid-twentieth century, western-style industrialisation was regarded as the only path available for the developing world to deal with their problems. During the 1960s and 70s, two analyses (dependency and world-systems) began to challenge the existing development paradigm. For dependency theorists, developing countries could never achieve the same level of ‘advancement’ as industrialised countries because pursuing the ‘western-path’ locked them into a permanent structure based on a unidirectional resource flow from the underdeveloped to the developed countries. World-systems analysis built upon this analysis and offered the view that the world is singularly connected by a capitalist economic order. World-systems analysis “has four central postulates: [1] the current world economy took on its defining features in Europe between 1500 and 1650; [2] among these features are a stable tri-part international stratification system of core, semi-periphery, and periphery through which individual countries may move (up or down), but which itself has not changed; [3] the ability of countries to achieve upward mobility is constrained by their trade relations with the world economy and their geo-political role and power, which together influence their structural location within this hierarchy; [4] this structural location – their world-system “position” – plays an important role in shaping their class structure and internal political battles” (Roberts et al. 2003: 282). It should be noted that although neither of these analyses consider the issue of environmental sustainability outright, they do provide a framework (particularly the “last two postulates”) for “understanding both national environmental policies and levels of damage by country” (Roberts et al. 2003: 282).
- 9 Binger et al. note that “‘vulnerability’ refers to proneness to damage from external forces” whether it be in the economic, environmental, or social arena (2002: 8). A rather informative discussion detailing the concept of (social) vulnerability can be found in an unpublished paper by Arielle Kristan, titled: *Against Rising Tides: Global Climate Change*. In it, Kristan argues that vulnerability is 1) structural in nature, and 2) a relative term; as such, Kristan states that “[v]ulnerability can only be quantified in the context of its effects on people” (2002: 2). Pelling and Uitto note that “vulnerability is a product of access to economic, political, social, environmental and geographical assets ... [t]hese forces are seen to act as a consequence of the interaction of structural forces (such as labour markets or exchange relations) with individual agency (such as participation in community based organisation or lifestyle choices)” (2001:

within the parameters of the discipline of the researcher studying them, meaning that an overall-integrative approach is rarely produced (Persoon and Osseweijer 2002: 113; Tsai and Clark 2003: 187).

Regarding the question of identifying those structural problems affecting islands, Byrne and Inniss note that “[t]he *consensus* of opinion is that while all developing countries share several problems, their impacts are more pronounced in the case of small island states, especially very small islands” (2002: 5, my emphasis)¹⁰. This issue is commonly understood within the framework of environmental and developmental sustainability. Put another way, island societies are a reflection of the unsustainable practices humankind has engaged in, and are as a result being increasingly marginalised, albeit in varying degrees, both in the aggregate and particular. Such, then, is the challenge for researchers within Island Studies, we must be tasked with webbing the numerous issues facing islands so we can be better positioned to address the numerous interconnected issues facing the wider world (Smith 2006: 230).

Island Studies minded researchers are uniquely positioned to study islands in a manner that allows them to tease out, interpret, and translate interconnected natural and social experiences on islands “for their suggestive answers to very big questions” (Baldacchino 2004b: 276). Thus, the relevancy of the “bold” assertion by Baldacchino that “islands tend to be advance indicators of what is happening elsewhere” (2004b: 278); and the analogy posited by Byrne et al. that “island states are the canaries in the mine” (2005: 16), both these points buttress Smith's assertion that island societies can be

51). Lebel adds that “[f]or nations, vulnerability is determined by institutional and market structures ... [and those nation-states] now disadvantaged for various political, social or economic reasons, will often also be those most vulnerable to global environmental change (2002: 106). It should be noted that discussions on *vulnerability* are sometimes coupled with its perceived reciprocal, *resilience*; with the latter presented as a strength waiting to be exploited. This author suggests that such discussions tend to obfuscate the problem of vulnerability if only because “resilience puts [an] emphasis on coping with disasters rather than promising to control or avoid their underlying [causes] ... [t]his puts the burden of adjustment on the recipients rather than the producers of risk” (Pelling and Uitto 2001: 52). Indeed, SIDS should continue utilising the concept of vulnerability “to better illustrate [their] intrinsic disadvantages” (Hein 2004: 11). With respect to the utility of including a discussion on resilience (in the manner described above) whenever SIDS' vulnerabilities are addressed, this author is of the opinion that until Briguglio's assertion that “the successes of some SIDS [have been] achieved **in spite of** and not **because of** their small size and insularity” (2002: 84) is refuted, any discussions surrounding SIDS resilience are unlikely to assist SIDS contend with their structural issues.

¹⁰ Byrne and Inniss are careful to qualify their claim by stating that there are some who do not accept this position, most notably “Bloomestein et al. (1996) and Farrel (1991)” (2002: 5).

regarded as a kind of “early warning system,” where investigators can document and analyse natural and social processes derived from the modern, complex global network (2006: 228). Indeed, SIDS’ “size, insularity and remoteness” are the main reasons for their vulnerability (Briguglio 1995: 1615; Pelling and Uitto 2001: 60; Barnett and Adger 2003: 322; Byrne et al. 2005: 3); and it would be prudent at this time to review the major structural issues identified and accepted by the international and scientific community to be affecting SIDS. The following two descriptions best portray the challenges currently faced by SIDS; the first articulated by a past-chair of the Alliance of Small Island States (AOSIS)¹¹, and the second is embedded within the United Nations Programme of Action on the Sustainable Development of Small Island Developing States¹².

“Small island developing States (SIDS) have in common a number of structural problems: smallness, remoteness; narrow resource base; ecological fragility; low resilience to natural disasters; and economic vulnerability” (Slade 2000).

“[S]mall island developing States have their own peculiar vulnerabilities and characteristics ... th[e]se disadvantages include a narrow range of resources, which forces undue specialization; excessive dependence on international trade and hence vulnerability to global developments; high population density, which increases the pressure on already limited resources; overuse of resources and premature depletion; relatively small watersheds and threatened supplies of fresh water; costly public administration and infrastructure, including transportation and communication; and limited institutional

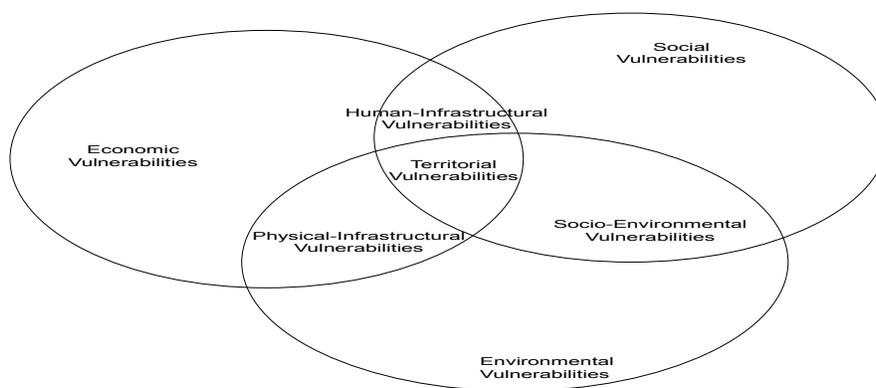
11 AOSIS was established in 1990 during the Second World Climate Conference in Geneva; its current membership includes thirty-eight independent countries: (Pacific) Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu; (Caribbean) Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago; (Atlantic) Cape Verde, Guinea-Bissau, and Sao Tome and Principe; (Indian Ocean) Comoros, Maldives, Mauritius, and the Seychelles; (Mediterranean) Cyprus; (South China Sea) Singapore. The Pacific island of Niue is also a member of AOSIS, however it is not fully independent. AOSIS observers include American Samoa, Guam, the Netherlands Antilles, and the U.S. Virgin Islands. Together these islands represent one fifth of the total membership of the United Nations (Davis 1996: 18). Hein notes that AOSIS “calls itself a coalition rather than a formal organization. It has no charter, budget or secretariat. It functions mainly as an *ad hoc* lobby and negotiating voice within the United Nations system, primarily through its members’ diplomatic missions to the United Nations in New York” (2004: 10). Yet, despite these limitations, “AOSIS members pushed for recognition of their special circumstances during negotiations of Agenda 21... [and] AOSIS members successfully negotiated [the inclusion] of a programme area on small island developing [s]tates in Chapter 17 of Agenda 21” (Chasek 2005: 131-132).

12 Byrne and Inniss note that the Programme of Action “is perhaps the most comprehensive statement on the sustainability of island countries” (2002: 3).

capacities and domestic markets, which are too small to provide significant scale economies, while their limited export volumes, sometimes from remote locations, lead to high freight costs and reduced competitiveness. Small islands tend to have high degrees of endemism and levels of biodiversity, but the relatively small numbers of the various species impose high risks of extinction and create a need for protection” (United Nations 1994: 7).

The “structural problems” facing SIDS can, in fact, be classified under seven overlapping headings which neatly encompass almost every single characteristic or *vulnerability*¹³ SIDS have been associated with. These headings are: Territorial, Environmental, Socio-Environmental, Social, Human-Infrastructural, Economic, and Infrastructural. The headings should be seen to exist within a three-set Venn diagram, where the headings: Environmental, Social, and Economic are each allotted one set; the headings: Physical-Infrastructural, Socio-Environmental, and Human-Infrastructural are each allotted one overlapping section; and finally, the heading: Territorial is allotted the centred overlapping section. An illustration of the diagram (Figure 1.1) can be seen below; following the illustration are seven tables listing each heading and its respective characteristics/vulnerabilities.

Figure 1.1: SIDS Structural Vulnerabilities



13 Returning to the topic of SIDS' vulnerability, it should be noted that Ghina has provided a valuable analysis on the subject of “[v]ulnerability and small islands”; Ghina defines *vulnerability* to mean “the extent to which the environment, economy or social system is prone to damage or degradation by external factors. *Economic vulnerability* is taken to refer to the risks faced by these economies from exogenous shocks to the systems of production, distribution and consumption. *Environmental vulnerability* is concerned with the *risk* of damage to the island’s natural ecosystems or environment. *Social vulnerability* reflects the degree in which societies or socioeconomic groups are affected negatively by stresses and hazards ... Among the three components of vulnerability, issues relating to environmental vulnerability are of the greatest significance. A healthy environment is the basis of all life-support systems, including that of human well-being and development” (2005: 187).

Table 1.1: Territorial Vulnerabilities

<ul style="list-style-type: none">• Poor natural resource endowment• Large coastal zones• Single urban centre• Geographically dispersed and distant• Limited arable land area• Intense competition between agricultural land and land for housing and industry• At great risk to a wide variety of environmental hazards• Highly vulnerable to climate change and sea level rise• Small watersheds and threatened supplies of fresh water• Limited freshwater• Food insecure• Dependence on marine and coastal resources• Dependence on imported fossil fuels• Dependence on strategic imports• Lack of waste disposal sites
Sources: Briguglio 1995; Mossler 1996; Kakazu 2002; Lebel 2002; McElroy 2002; Byrne et al. 2005; Ghina 2005

Table 1.2: Environmental Vulnerabilities

<ul style="list-style-type: none">• Prone to natural disasters (flooding, drought, earthquakes, landslides, wind)• Impact of natural disasters tend to be large• Very fragile ecosystems• High rates of endemism and biodiversity• Life-sustaining ecosystems such as coral reefs living near the limit of thermal tolerance• Decline in marine species• High degree of land and soil erosion
Sources: Briguglio 1995; Byrne et al. 2005; Ghina 2005; Nurse and Moore 2007

Table 1.3: Socio-Environmental Vulnerabilities

<ul style="list-style-type: none">• Deterioration in water quality• Land and soil degradation• Increasing number of people vulnerable to natural and human-made disasters because of their informal and inadequately constructed houses
Source: Pelling and Uitto 2001

Table 1.4: Social Vulnerabilities

<ul style="list-style-type: none">• Standard of living pegged to remittance and foreign assistance inflows• Increasing consumerism• Increasing populations and population densities• Communities tend to be concentrated along coastal zones• Growing poverty• Extremes of poverty and inequality• Increasing crime rates• Emergence of chronic diseases (diabetes, obesity, hypertension, tuberculosis, malaria)• Increases in gastrointestinal illness
Sources: Briguglio 1995; Pelling and Uitto 2001; Byrne et al. 2005; Ghina 2005

Table 1.5: Human-Infrastructural Vulnerabilities

<ul style="list-style-type: none">• Densely populated• Rapid population growth• Limited labour base

- Women underrepresented in decision making at the political level
- High levels of migration of skilled peoples (brain and skill drain)
- Skewed population distribution towards the higher and lower age ranges due to high rates of migration
- Increasing urbanisation (particularly within young people)
- Low penetration of services to rural areas
- High costs of secondary and tertiary education leading to low rates of enrollment and loss of trained population to emigration
- High degree of dependence on remittances from emigrants

Sources: Briguglio 1995; Mossler 1996; Pelling and Uitto 2001; Byrne and Inniss 2002; Byrne et al. 2005; Ghina 2005

Table 1.6: Economic Vulnerabilities

- Economies are highly dependent on (non-renewable) natural resources
- Dependence on a single or narrow range of products/commodities
- Limited ability to influence prices of goods sold domestically
- Limited scope for specialisation
- Inability to influence international prices
- Limited ability to exploit economies of scale (diseconomies of scale)
- Highly dependent on exports and imports
- High cost of transportation
- Highly dependent on foreign exchange earnings (to pay for import bills)
- Chronic trade-balance deficits
- Dependence on international trade
- Dependence on preferential access to markets in developed countries
- Domestic competition is limited
- High levels of oligopolistic and monopolistic conditions in production and trade
- Increasing dependence on remittances
- Dependence on development assistance
- Economies are dependent on service sectors catering to foreign consumer tastes
- Economic performance heavily affected by any changes in primary overseas markets, by any shift in consumer preferences or by actions of competitors
- Very susceptible to potential adverse external shocks beyond their control

Sources: Briguglio 1995, 2002; Pelling and Uitto 2001; Byrne and Inniss 2002; Kakazu 2002; McElroy 2002; Byrne et al. 2005

Table 1.7: Physical-Infrastructural Vulnerabilities

- High cost of developing and maintaining public infrastructure
- Development and physical assets are usually concentrated along narrow coastal zones
- Underinvestment in infrastructure
- High degree of dependence on imported technologies
- Government services and functions are more expensive to administer (than in other jurisdictions)
- Dependence on marine and coastal resources
- Food insecure
- Vulnerable to shipping hazards
- Reliance upon larger states, generally the ex-colonising country, for certain specialized aspects of public administration
- Inadequate enforcement of legislation

Sources: Briguglio 1995, 2002; Tsai 2002; Barnett and Adger 2003; Byrne et al. 2005; Ghina 2005

Problem Statement and Objectives

There is a need to assess the prospects SIDS have of mitigating the consequences of the structural vulnerabilities outlined above. To date, SIDS have collectively and unanimously endorsed only one policy document that comprehensively addresses the economic, environmental, and social development vulnerabilities facing islands, while outlining strategies that seek to mitigate the vulnerabilities SIDS face. This document is the United Nations Programme of Action on the Sustainable Development of Small Island Developing States, popularly referred to as the Barbados Programme of Action (BPOA), and it was drafted and released at the first Global Conference on the Sustainable Development of Small Island States¹⁴. Byrne and Inniss note the “Conference documented the sustainability issues confronted by small islands worldwide, and established the international political recognition, long ought after by island countries, for the peculiar problems of economic and environmental sustainability which they confront [and] problems that render them particularly vulnerable to the state of the global environment and political economy” (2002: 3). Despite the BPOA's wide-scope and relevancy, very few researchers have actually undertaken a thorough analysis of the document, much less critically evaluated it. Indeed, Binger et al. have appropriately questioned whether “any significant improvement in the situation of SIDS has taken place since the adoption of the Barbados Programme of Action” (2002: 4). As such, one objective of our study is to assess the BPOA, that is, critically analyse “the key framework” outlining the development strategy SIDS have unanimously committed themselves to following (Commonwealth Secretariat 2004a: 3).

Secondly, and based on this analysis, we will offer an in depth case study from a trans-

¹⁴ The Barbados Programme of Action is a comprehensive policy document that was developed in light of the principles outlined in Agenda 21, which is itself a document formulated at the Earth Summit and reflects “global consensus and political commitment at the highest level on development and environment cooperation” (United Nations 1994: 7). The document is called the Barbados Programme of Action in recognition of the island of Barbados, which hosted the unprecedented meeting between late April and early May of 1994. It should also be noted that the BPOA underwent a comprehensive review in January of 2005 in Port Louis, Mauritius and is now in its second (incarnation) edition. Both editions will be discussed in significant detail in chapter 3.

disciplinary perspective; something that the emerging discipline of Island Studies¹⁵ seeks to utilise in its approach to analysing contemporary problems facing islands (and the world) (Depraetere 2008b: 25). Focusing on Jamaica, the case study seeks to illustrate the trajectory of SIDS' vulnerabilities in the post-BPOA world. Jamaica is studied because of its significant ties to mainstream development-plans, particularly through its relationship with international production, distribution, and finance. Indeed in this way, Jamaica is a SIDS that is arguably one of the most developed and integrated into the global system, and foreshadows the path other SIDS are on (Charles et al. 1997: 32; Panth et al. 2008: 5). This being stated, Jamaica continues to be plagued with significant economic, environmental, and social peculiarities that are closely linked to its economic-growth led development strategy. As such, the Jamaican experience should be seen as being representative and generalisable to SIDS at large.

15 With this statement, this author is deviating from the “emerging consensus” surrounding *Nissology*, or Island Studies, which supports the idea “that 'island studies' should not necessarily be seen as a discipline, and perhaps not even as a 'discipline in waiting' [and that] it need not have a distinctive methodology” (Baldacchino 2006: 9). Certainly, one perspective of thought which has thus far governed almost all disciplines, including Island Studies, is the notion that “islands suggest themselves as *tabulae rasae*: potential laboratories for any conceivable human project, in thought or in action” (Suggs 1961: 194, Sahlins 1963, Friedman 1981: 275, Bayliss-Smith et al. 1988: 284 in Baldacchino 2004b: 272; Baldacchino 2006: 5). Thus, one need only browse through the plethora of natural and social scientific journals to see that every discipline has, at one time or another, and with their particular analytical approaches, deemed islands as a subject worthy of study. Therefore, if simply studying islands is a sufficient condition to be considered a *Nissologist*, then neither the introduction of Island Studies, nor the various “institutional recognition [accorded to] studying islands on their own terms” (Baldacchino 2006: 7) in the very-late 20th century need have happened. Furthermore, analytical gaps within Island Studies have been found. Depraetere notes that Island Studies, “in the 21st century ... requires a holistic and normative approach” (2008b: 20), and Persoon and Osseweijer note that “little effort has been undertaken to search for common and integrative characteristics [of island societies]” (2002: 113). It is precisely for these deficits that Island Studies should be regarded as an emerging science, with an emerging analytical approach, so that we can begin addressing the analytical gaps that exist when islands are studied within other fields. This author would therefore suggest that Island Studies can and should be shown to differ analytically from other disciplines if its researchers seek to examine islands with a view to observe only interconnected interdisciplinary phenomena whose findings can be extrapolated onto the wider world. This point has been alluded to by others, most notably by Tsai and Clark who note that it is “easier to perceive [scientific] divides in the context of island microcosms” (2003: 187), and by Baldacchino who writes “[t]he adoption of 'island studies' as a focus of inquiry, straddling as well as going beyond conventional disciplines, can be a powerful force towards a better understanding of the world and the furtherance of knowledge” (2006: 6). However, to do so requires that Island Studies researchers undertake a broad socio-historical perspective irrespective of the methodology they employ in their work (Jessamy 2003: 2). Thus the Secretary-General of the United Nations recognition that islands are at the frontline of many of the main problems surrounding the environment and development (Annan 1999; Baldacchino 2006:6) is most important to note, as is DeLoughrey's observation that “islands embody the earliest structures of capitalist modernity as well as its contemporary global inequities” (2004: 308). Indeed, the potential to understand societies, cultures and their relations with the natural environment within a complex structure such as globalisation, while accepting that we are seeking to do so because humanity has not only contributed to, but is likely solely responsible for its problems, is by far the most intriguing and promising aspect of *nissology* (Tsai and Clark 2003: 187; Baldacchino 2004a: 270; Clark 2004: 284). More simply put, Island Studies is positioned to reveal that social and natural problems are interconnected, and an interdisciplinary approach rooted in a structural analysis, derived from the integration of human ecology and political economy, can explain the linkages in an undistorted way (Mossler 1996: 91; Nagarajan 2003, 2006b).

The two objectives of this paper can be concisely expressed in the following terms:

1. Critically analyse the Barbados Programme of Action.
2. Outline the development path taken by the small island developing state of Jamaica.

The literature review in Chapter 2 concentrates on two closely related issues: the concept of sustainable development, and the relationship between SIDS and globalisation. It is shown that the concept of sustainable development has been conceived primarily through the lens of economic growth as a means to improve the quality of life for island peoples. It is hoped that contextualising these concepts will assist the reader in following the objectives of this paper. Chapter 3 provides a detailed analysis of the BPOA and its subsequent reviews. This analysis illustrates the extent to which the document is oriented towards market-driven economic development as the primary strategy to improve the lives of island peoples and their environments. Particular emphasis is placed on Jamaica's path towards development in Chapter 4 as we document Jamaica's ecological-history, and follow the major trends in Jamaica's economy, environment, and society since the islands independence, but particularly since the adoption of the BPOA. Finally in the concluding chapter, we discuss our findings and offer directions for future research.

Chapter 2 – Review of Literature: Conceptual Framework

“[D]evelopment, when based on inadequate diagnosis, is dangerous *because* of the likelihood that it will achieve results of some kind.” [Caldwell 1972: 930]

“In recent years there have been sudden, major changes in the world economy. They have radically affected the economic situation of all underdeveloped countries, though in different directions and degrees ... For by far the larger part of the peoples in underdeveloped countries, these changes have been worsening their development prospects and in many countries are now threatening the survival of large numbers of their poor masses ... At the World Food Conference in November a declaration was passed on the eradication of hunger and malnutrition, establishing the right of "every man, woman and child... to be free from hunger and malnutrition", and stressing the "fundamental responsibility of the governments to work together" for reaching that goal. The new commitments made by the developed countries fell, however, far short of assuring even a modest beginning of implementing these ideals or even to prevent a further serious deterioration of the food situation in underdeveloped countries ... All underdeveloped countries which depend on oil imports will suffer a setback to their development programs. It can be shown to be broadly true, however, that the poorest among the underdeveloped countries, which also generally have had least of development, or no development, are particularly hard hit by the oil crisis ... The oil crisis has had, and has, serious implications for agricultural production in underdeveloped countries, particularly but not only by raising the prices for fertilizers. The technocratic euphoria some years ago about a "green revolution" had already earlier been shown up as having nurtured undue optimism ... *The blunt truth is that without rather radical changes in the consumption patterns in the rich countries, any pious talk about a new world economic order is humbug.*” [Gunnar Myrdal Lecture to the memory of Alfred Nobel, March 17, 1975]

“Environmental degradation, first seen as mainly a problem of the rich nations and a side effect of industrial wealth, has become a survival issue for developing nations. It is part of the downward spiral of linked ecological and economic decline in which many of the poorest nations are trapped ... Many of the development paths of the industrialized nations are clearly unsustainable. And the development decisions of these countries, because of their great economic and political power, will have a profound effect upon the ability of all peoples to sustain human progress for generations to come ... What is needed now is a new era of economic growth, growth that is forceful and at the same time socially and environmentally sustainable ... [and] based on policies that sustain and expand the environmental resource base ... We are serving a notice – an urgent notice based on the latest and best scientific evidence – that the time has come to take the decisions needed to secure the resources to sustain this and coming generations.” [Brundtland Commission Report 1987: 13-18]

“It is only when knowledge of ecological trends is coupled with an understanding of capital accumulation that the full extent of our global ecological crisis is apparent.” [Foster 2002: 74]

The concept of sustainable-development can be traced to the historic 1972 Declaration of the United Nations Conference on the Human Environment (popularly known as the Stockholm Conference¹⁶) which stated that “[e]conomic and social development is essential for ensuring a favourable living and working environment for [humanity] and for creating conditions on earth that are

16 The Stockholm Conference was the United Nations' first major conference on international environmental issues. It is credited with inspiring many governments to create either Ministries for the Environment and/or national agencies for environmental monitoring and regulation (Chi 2002: 437).

necessary for the improvement of the quality of life.” Indeed, increasing the quality of life for human beings was central to the concept of development (Gallopín 2001: 10). To this end, the term *sustainable development* was popularised, defined, and elaborated upon some fifteen years later with the release of the 1987 Report of the Brundtland Commission¹⁷; the following three passages from the Report relay the conceptual discussion that has antedated our understanding of the term:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits – not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities ... Sustainable global development requires that those who are more affluent adopt lifestyles within the planet's ecological means ... Yet in the end, sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs. We do not pretend that the process is easy or straightforward. Painful choices have to be made. Thus, in the final analysis, sustainable development must rest on political will” (Brundtland and Khalid 1987: 24-25).¹⁸

17 Convened by the United Nations, the Brundtland Commission released a “unanimous report”, entitled *Our Common Future*. The document was the culmination of a “900 day” international-exercise which catalogued, analysed, and synthesised: written submissions and expert testimony from “senior government representatives, scientists and experts, research institutes, industrialists, representatives of non-governmental organizations, and the general public” held at public hearings throughout the world; “[d]eliberative meetings, site visits, and/or Public Hearings of the Commission were held in Jakarta, Indonesia, 27-31 March 1985; Oslo, Norway, 21-28 June 1985; Sao Paulo and Brasilia, Brazil, 25 October-4 November 1985; Vancouver, Edmonton, Toronto, Ottawa, Halifax, and Quebec City, Canada, 21-31 May 1986; Harare, Zimbabwe, 15-19 September, Nairobi, Kenya, 20-23 September 1986; Moscow, USSR, 6-12 December 1986; and Tokyo, Japan, 23-28 February 1987. Special working group meetings of the Commission were also held in Geneva, Moscow, and Berlin (West)” (1987: 349). The Brundtland Commission's mandate was to: “[1] re-examine the critical issues of environment and development and to formulate innovative, concrete, and realistic action proposals to deal with them; [2] strengthen international cooperation on environment and development and to assess and propose new forms of cooperation that can break out of existing patterns and influence policies and events in the direction of needed change; and [3] raise the level of understanding and commitment to action on the part of individuals, voluntary organizations, businesses, institutes, and governments” (1987: 347). “The Commission focused its attention in the areas of population, food security, the loss of species and genetic resources, energy, industry, and human settlements - realizing that all of these are connected and cannot be treated in isolation one from another” (1987: 27).

18 It should be noted that orienting this definition towards the “needs of future generations” was a clear indictment of the culture of short-sightedness and immediate gratification the post Second World War generation had cultivated, adopted, and promoted. As such, this definition is best contextualised by the paragraph preceding it, and which states that: “[H]uman progress, human needs, and human ambitions are simply unsustainable – in both the rich and poor nations. They draw too heavily, too quickly, on already overdrawn environmental resource accounts to be affordable far into the future without bankrupting those accounts. They may show profits on the balance sheets of our generation, but our children will inherit the losses. We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift ways, but they can never collect on our debt to them. We act as we do

“Human resource development is a crucial requirement to create new values to help individuals and nations cope with rapidly changing social, environmental, and development realities” (Brundtland and Khalid 1987: 27).

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: [1] the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and [2] the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs” ... [Therefore,] [l]iving standards that go beyond the basic minimum are sustainable only if consumption standards everywhere have regard for long-term sustainability ... Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecological possible and to which all can reasonably aspire ... [S]ustainable development clearly requires economic growth in places where such needs are not being met. Elsewhere, it can be consistent with economic growth, provided the content of growth reflects the broad principles of sustainability and non-exploitation of others. But growth by itself is not enough. High levels of productive activity and widespread poverty can coexist, and can endanger the environment. Hence sustainable development requires that societies meet human needs both by increasing productive potential and by ensuring equitable opportunities for all” (Brundtland and Khalid 1987: 54-55).

The Brundtland Commission Report recognised that human resource development in the form of poverty reduction, gender equity, and wealth redistribution was crucial to formulating strategies for environmental conservation, and it also recognised that environmental-limits to economic growth in industrialised and industrialising societies existed. As such, the Report offered “[the] analysis, the broad remedies, and the recommendations for a sustainable course of development” within such societies (1987: 16). However, the Report was unable to identify the mode(s) of production that are responsible for degradation of the environment, and in the absence of analysing the principles governing market-led economic growth¹⁹, the Report postulated that such growth could be reformed

because we can get away with it: future generations do not vote; they have no political or financial power; they cannot challenge our decisions” (1987: 24).

19 A very good example of this assertion can be found in the Brundtland Reports suggestion for stimulating economic

(and expanded); this lack of analysis resulted in an obfuscated-introduction of the term sustainable development²⁰. Indeed the Earth Summit, which took place five-years after the release of the Brundtland Report, and established international consensus in support for sustainable development with the adoption of Agenda 21, which in turn established the United Nations Commission on Sustainable Development (among other institutions designed to monitor and analyse trends in environmental degradation), was unable to even consider that development guided by market-led economic growth had limits (Sachs 1996: 242)²¹. In fact, a major tenet of Agenda 21 is to promulgate the idea that market-led economic growth, in the form of “trade liberalization,” could and should be pursued as a pathway to practicing sustainable development (United Nations 1993b: 16). As will be shown later, the Barbados Programme of Action closely follows this formulation of sustainable development, and has implemented it in its policy suggestions for SIDS.

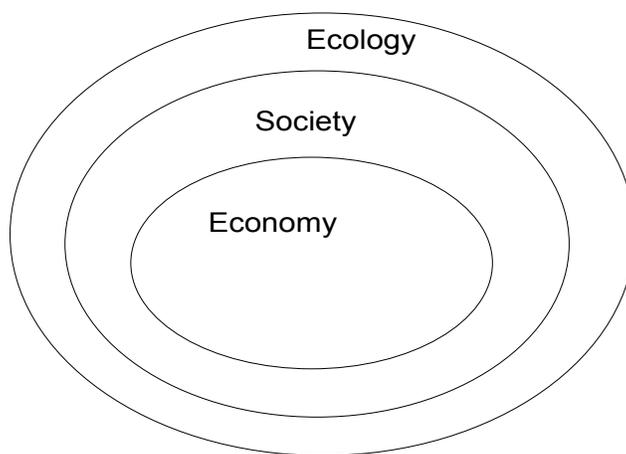
As such, sustainable development remains largely undifferentiated from sustainable growth, which is itself “almost exclusively associated with aggregate economic growth” (Calhoun 2004: 8)²². Simply put, “the term 'sustainable development' has been incorporated into the dominant growth-oriented economic system” (Chi: 2002: 433). This makes for a problematic situation because

growth, with the goal of reducing poverty in developing countries. The Report noted that “capital flows” from industrialised countries to developing countries were crucial “for any improvements in living standards” (1987: 77), and that high levels of debt (and therefore debt-servicing) in the developing world made it difficult for such countries to invest in their social infrastructure (1987: 79); however the Report could suggest little more than “greater concessional capital flows” (in the form of aid and debt-forgiveness) from industrialised governments and international lending agencies to developing countries (1987: 96). The question concerning how or whether this strategy would stem the necessity for developing countries to again raise capital to build the infrastructure needed in order to attract foreign capital (which is in many cases, the reason for their indebtedness) could not be assessed.

- 20 Misra notes that the concept of sustainable development “has generated a vast body of literature and almost an equal amount of controversies within two decades of [its] usage ... [there are] something like 300 definitions of sustainable development [and] the concept still remains as polemical as ever” (2002: 179). Yeh adds “[although] sustainable development remains a subject in search for its content ... the term has become ubiquitous in contemporary culture ... [as such] it is more imperative to understand the nature and spirit of sustainable development beyond its textual construction in order to facilitate its substantive linkage to the dynamics of development in the real world” (2002: 339-340). This author would suggest that the multifaceted ambiguity surrounding the term makes for a strong argument for social-scientists to view the concept through the postmodernist lens.
- 21 Readers should note that in the years between the release of the Brundtland Report (1987) and the convening of the Earth Summit (1992), the world witnessed the collapse of Soviet-communism. The ideological repercussions of this collapse on Western-capitalism are still being uncovered.
- 22 It should also be noted that “‘development’ is often shorthand for ‘economic development’” (Caldwell 1972: 930). In this sense, it can be argued that there are indeed few qualitative differences between *sustainable development* and *development*.

development through sustained economic growth will compromise the overall ecological system, even though sustained economic growth “is often made more compatible with ecological considerations by insisting that environmental costs be internalized by the market” (Foster 2002: 79). As such, Daly reminds us that the concept of sustainable growth is tantamount to “a bad oxymoron” because the economy will always be limited by the “earth's ecosystem, which is finite, nongrowing, and materially closed” (1996: 193)²³. Therefore, the “indefinite growth in the consumption of energy and materials” is ultimately incompatible with the “process of improvement of the human condition (or better, the socio-ecological system to which humans pertain)” (Gallopín 2001: 5). Understood in this way, the three-set Venn-diagram represented in Chapter 1 is more accurately conceptualised if depicted within “the nested system model which recognises that the economy is a sub-set of ecology, and that human society is totally constrained by the natural ecology of our planet” (McGregor 2003: 3).

Figure 2.1: Biosphere; Ecology, Economy, Society



According to Jesinghaus, any attempt at reconciling the contradiction between economic growth and the material limits of the earth will require the acceptance of two principles: (1) that the scientific debate has managed to give us a fair description of the physical system and (2) that the economic debate has reached a point which allows us to objectively assess the results of the application of its

²³ Daly adds “[t]o delude ourselves into believing that growth is still possible and desirable if only we label it *sustainable* or color it *green* will just delay the inevitable transition and make it more painful” (1996: 193).

theories on the socio-economic system (2002: 289). Until then, the term sustainable development will continue to be used as a justification for extracting natural resources and creating waste in the name of economic growth (Chi 2002: 447).

The sustainable development strategies most SIDS follow are rooted in market-based economic development (Kakazu 2002: 215), and this drive for sustained economic growth (in the name of sustainable development) has compromised every aspect of their societies, as witnessed by the continual, or sustained:

“expansion of industry, tourism and transport and the chemicalization of agriculture; rural-to-urban migration and the proliferation of formal and informal housing settlements; and population growth. The ecological impact of these developments includes large-scale deforestation; degradation of watersheds and of the coastal and marine environment; mounting unmanageability of sewage and solid waste disposal; rapid deterioration of air and water quality in heavily populated areas; and notable deterioration on the physical quality of life in urban areas” (Girvan, 1997: 27).

Chi has noted these outcomes are rooted in a model of sustainable development which is tied to economic growth; describing it as a “treadmill of production”, requiring the constant expansion of economic output at the expense of the environment (2002: 439); while Burkett adds that this productive model also takes place at the expense of social development (2005).

Despite these limitations, contemporary discourse surrounding SIDS development routinely encourages island states to pursue economic growth by way of “full integration” into a globalised free trade regime, whose primary goal is to promote economic growth (Tigerstrom 2005: 416). Bourély notes that “[i]n an era of globalisation, market oriented integration is presented as the only possible way to achieve further economic growth and development” (2000: 6). The globalised free trade regime, or *globalisation*, should be understood as a process that seeks to link the world's economies by instituting various economic, political, and social conditions necessary to facilitate and encourage both, the movement and growth of capital (Girvan 1997: 22; Calhoun 2004: 30)²⁴. At its most basic level, the

²⁴ By way of “reducing the role of the state in the administration of social services, by privatising government enterprises and services; reducing the state's role in economic management, by deregulating controls over pricing, marketing,

value of capital can only increase if the rate of profit derived from the productive process increases as well. The rate of profit is governed by adjustments in the basic element of the production process, which is: the cost of producing the good relative to the price at which that good will be sold. The movement of capital is one mechanism by which conditions conducive to increasing the rate of profit can be created. This is because capitals mobility allows it to locate environments where the cost of producing goods is less expensive. Coupled with this need to continuously decrease the cost of production, the holders of capital also seek to expand the marketplace in which those goods can be sold. It is in this context that globalised free trade becomes relevant. The expansion of markets, largely defined as political entities (states), is dependent upon the entrenchment of particular and wide-ranging economic, political, and social conditions. Globalisation therefore is a process through which these conditions can be implemented.

With respect to trade policies formulated by *developing states*²⁵ in general, Bourély notes that most “have adopted market-driven liberal approaches [and] have opened their economies to world trade flows in the hope of finally achieving a sustainable economic development (2000: 6). It is within this framework that one can appreciate the extent to which SIDS are “excessively dependent” (Tsai 2002: 404) on current modes of globalised free trade to meet the demands of their populations (Lee 2002: 491). Although the extent of the relationship between globalised free trade and sustainable development is still emerging²⁶, it should be understood that both processes: (1) facilitate economic growth (Goldsmith 1996: 254-255), and (2) affect the physical and social environment (Lee 2002: 495).

investment, and finance; and the liberalisation of trade and investment by reducing import tariffs, subsidising export-led production, attracting foreign investors, and exempting foreign companies from taxes and labour codes” (Haque 1999: 204-205).

25 With respect to the term *developing states/countries*, this author agrees with the qualification made by Bourély who argues that the term does not imply the existence of a bloc of homogenous states. However as oversimplified as an attempt is to divide the world along the underdeveloped-developed axis, there remains a need to conceptually describe the marked difference in the socio-economic conditions of the relatively small populations of the industrialised 'North' and the vast majority of the world's people in the industrialising 'South' (2000: 3).

26 Indeed islands have been at or close to the forefront of all globalising structures; specifically global colonisation and capitalism, both of which began in the fifteenth century (Foster 2002: 84). This legacy was based partly in a demand for their “natural resources (real or imagined)” (Roberts et al. 2003: 285) and helped the colonising powers subjugate much of the non-European world.

It is within this context that “small island [developing] societies and environments have been fundamentally reshaped” on their path towards development (Pelling and Uitto 2001: 53)²⁷.

Although SIDS governments are acutely aware of the vulnerabilities and long-term threats facing their islands, there exists an inability to locate the inherent contradiction between market-led sustainable economic development on SIDS and their longterm preservation; this contradiction is manifested in every major development plan concerning SIDS²⁸. The result of such folly is that SIDS are trapped into perpetuating a mode of existence that is increasing their economic, environmental, and social vulnerabilities (Nagarajan 2006a)²⁹. Indeed, in his opening address at the Global Conference on the Sustainable Development of Small Island Developing States, then Prime Minister L. Erskine Sandiford of Barbados reminded delegates that the Earth Summit two-years prior resulted in the international community “reach[ing] a consensus on the need to change our course and to put an end to the vicious cycle of environmental degradation, economic decline and social deprivation in which the vast majority of countries appeared to be locked ... [and that the] task in Barbados [was] to convert that

27 Islands were some of the first territories to be formally and completely colonised in the modern era; and they were some of the last territories to have been accorded formal independence, and let us not forget that some islands persist as colonies through today (Depraetere 2008a: 14). The National Geographic notes “[n]early 50 years after the UN said colonialism must end, that organization lists 16 places, and 1.2 million people, still under foreign rule” (2008: 30) - [On a side note, the online version of the article has rephrased (sanitized?) the statement made in the print-edition to read: “[a]lmost half a century after the United Nations called for independence for all colonies, the organization lists 16 places with 1.2 million people that are still ruled by foreign powers.”] - Indeed, fifteen of the sixteen *Territories* the United Nations considers “Non-Self-Governing” are islands; these colonised territories are: American Samoa (U.S.), Anguilla (U.S.), Bermuda (U.K.), British Virgin Islands (U.K.), Cayman Islands (U.K.), Falkland Islands or Malvinas (U.K.), Gibraltar (U.K.), Guam (U.S.), Montserrat (U.K.), New Caledonia (France), Pitcairn (U.K.), St. Helena (U.K.), Tokelau (New Zealand), Turks and Caicos Islands (U.K.), and United States Virgin Islands (U.S.). The only non-island included under the United Nations' classification of Non-Self-Governing Territories is Western Sahara (Spain) (2007c: 1). It should also be noted that although the political status of Puerto Rico has not been discussed at the General Assembly since 1953 (United Nations 2007b: 16-18), the archipelago's status remains under “continuous review” of the United Nations (2007c: 9). As such, DeLoughrey's assertion that: “[t]he sun never did set on the British empire in a large part due to its extensive island colonies from the Caribbean to the Pacific in one hemisphere, and from the Indian Ocean to the Mediterranean in the other” (2004: 300), is therefore quite relevant.

28 For example, even the targets set out for SIDS in the United Nations Millennium Development Goals advance the idea of market-led growth being central to the idea of development (Tigerstrom 2005: 408).

29 Nagarajan's analysis of Nauru's path to development via its phosphate mining industry is another very good example of this. The 21 square kilometer islands phosphate reserves allowed it to have one of the highest per capita incomes in the developing world which brought so much material prosperity to its residents that they were able to purchase entire office buildings in Melbourne and Hawaii. However, within twenty-five years of mining phosphate, the island saw the near complete depletion of this resource, leaving a thoroughly devastated “wasteland” with close to 80 percent of the islands natural vegetation and topsoil removed. Nauru's phosphate industry has since subsided and the island is now witnessing a near collapse of every system on the island. Nagarajan aptly notes that “the collapse of Nauru harbingers unsustainability of most countries, particularly small islands” (2006a).

resolve into concrete action by outlining realistic policies and setting attainable targets in the search for patterns of sustainable development” (United Nations 1994: 67). Ten years later, at the International Meeting to Review Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, in Mauritius, another Barbadian Prime Minister, Owen S. Arthur, noted the following: “the reality for SIDS over the last decade has been that our vulnerability and the economic, social, and environmental challenges we face in pursuit of sustainable development have not diminished but rather have intensified. The prognosis for our fragile environment has worsened ... [our economic] development even more drastically reduced ... [and] our social cohesion has come to be severely tested” (United Nations 2005e: 3).

There is clearly an inconsistency between (1) the goals outlined in the development plans SIDS governments have collectively negotiated, drafted, and implemented; and (2) the outcomes SIDS are collectively experiencing (Jessamy 2003: 21). Despite this state of perplexity, it should be noted that research highlighting gaps surrounding various elements of SIDS' path to development exist; specifically within the context of SIDS' blueprint for development, the Barbados Programme of Action. This research should be consulted in order to arrive at an explanation for the inconsistencies SIDS are experiencing. For example, in his analysis of SIDS' contribution to the development of international environmental law, Fry contextualises the BPOA as the latest “of a series of soft law documents referring to SIDS embodying non-committal, non-specific and non-conclusive UN-style language requiring further planning and documentation with little supported action on the ground” (2005: 91)³⁰. Considering the impact of implementation of the BPOA at the local level, Campling notes that the blueprint for SIDS development makes almost no provision for island peoples to exercise agency in their islands' path to development (2006). More so, in their analysis of SIDS self-assessment reports

30 Fry notes that SIDS contribution remains firmly in the sphere of “soft law agreements with little commitment to action [which] could, to some extent, be tolerated if SIDS were convinced that this would lead to something more legally binding or the belief that accumulative enunciation of their concerns and aspirations made by numerous non-binding texts may help to express the *opinio juris* of the world community. Unfortunately, for those countries in the world most vulnerable to various environmental and economic threats, the development of *opinio juris* is far too slow” (2005: 90).

gaging their own efforts to implement the BPOA, a research team from the University of West Indies Centre for Environment and Development has noted “while [the] BPOA is not yet fully implemented, 70 per cent of the tasks and actions it stipulates have been carried out by the SIDS themselves” (Binger et al. 2002: 5); while Ghina aptly notes “that the 'paper' path from Rio to Barbados to Johannesburg has made significant progress. However, much remains to be done at the practical level” (2005: 206). Sentiments such as these reveal that in the absence of delegating blame (which is very much warranted) to various international players for not following the policy prescriptions laid out for them, there is little explanation for why conditions for SIDS are progressively worsening.

This apparent inconsistency, which is manifested in the growing pressures on the economic, environmental, and social spheres of SIDS in particular (and the biosphere in general), can be explained when analysed as an outcome of neoliberalism, “[whose] central claim is that free and individual exchange operating among enterprises and countries in competitive markets tends to equilibrium ... [and] that optimal [development] outcomes are *only* possible with economic liberalization” (Campling 2006: 242)³¹. An understanding of the ideological inconsistencies in the development process SIDS have embarked upon is therefore crucial if SIDS and the international community are to address their growing vulnerabilities.

³¹ That this claim remains conjectural and is largely ignored by popular culture and academe, have caused critics of neoliberalism to confuse its dominant position with descriptions of monolithism.

Chapter 3 – A Critical Analysis of the Barbados Programme of Action

“Very often between one historical period and another, ten years suddenly might be enough to reveal the contradictions of a whole century.” [Quotation from Gillo Pontecorvo's 1969 film *Queimada*; as found in Foster 2007a: 2]

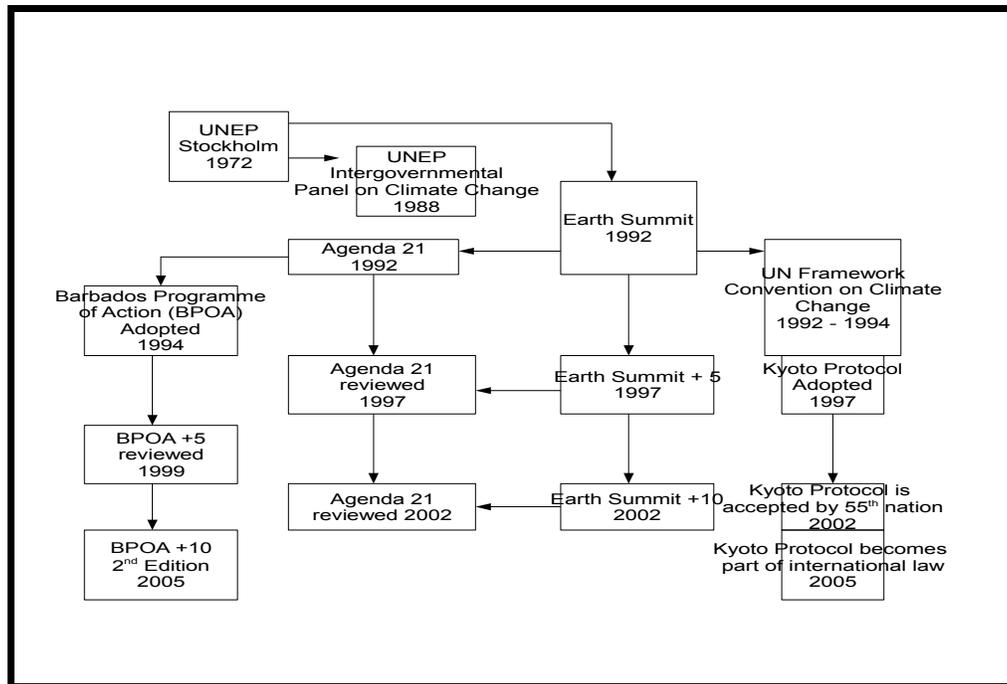
When world leaders and representatives met in Bridgetown, Barbados in late April of 1994 for the first Global Conference of Small Island Developing States (SIDS), under the auspices of the United Nations³², they repeated the *raison d'être* made clear in every conference seeking to advance the practice of sustainable development, which is that sustainable development is meant to improve the standard of living for people. As such, world leaders revealed an understanding that sustainable development should be approached in a manner which prioritises human development. This understanding was made evident in their joint affirmation that “all efforts must be taken to ensure the central position of people in the process of sustainable development” (United Nations 1994: 3). However, the policy prescriptions formulated at the conference, which were codified in the Barbados Programme of Action (BPOA), failed to incorporate key insights, specifically those insights surrounding human development that world leaders and representatives had touted throughout the Declaration of Barbados. As such, the BPOA has affected little change in the way SIDS and the international community addressed sustainable development. This chapter offers a critical assessment of the BPOA by examining: the Declaration of Barbados; the statements made by SIDS world leaders and representatives at the Conference; the Barbados Programme of Action; and the subsequent reviews of the Programme. We begin with contextualising the relevance of the BPOA, after which we demonstrate that the idea of human development as being central to sustainable development was gradually removed from the BPOA, and finally it is shown that the BPOA closely follows the dominant approach of market-led sustained economic development. Figure 3.1 charts the key conferences,

³² The conference was mandated by United Nations General Assembly resolution 47/189 (United Nations 1993a); and took place from April 25 – May 6 1994. Hein notes that “it constituted a landmark, as it was the first time a UN conference was entirely devoted to this group of countries” (2004: 1). The Barbados Programme of Action was endorsed by 111 Governments (United Nations 2004d: 1).

meetings, and documents that have informed our conceptualisation of sustainable development.

Furthermore it contextualises the BPOA within the much larger framework of international agreements governing sustainable development, and will assist readers navigate through the various conferences and documents that are referred to in this chapter³³.

Figure 3.1: Frameworks of Sustainable Development Applicable to SIDS



Contextualising the Barbados Programme of Action

The Barbados Programme of Action (BPOA) is a comprehensive policy document that both:

³³ Although the 1972 United Nations Conference on Human Environment (the Stockholm Conference) is widely credited with bringing forth international attention to the environmental crisis, it should be noted that the Stockholm Conference was itself the outcome of a number of international conferences and agreements. Writing in 1972, Lynton K. Caldwell noted “international efforts that could lead toward a global system for protection of the biosphere have already been undertaken” (1972: 940). Among the “international efforts” Caldwell listed, this author feels particular attention should be drawn to the following: “The Establishment of the United Nations Organization, UNESCO, and FAO in 1945; The Establishment of the World Health Organization in 1946; The United Nations Scientific Conference on the Conservation and Utilization of Resources in 1949; The International Technical Conference on the Conservation of the Living Resources of the Sea in 1955; The Adoption of the Geneva Convention (Treaty) on Fishing and Conservation of the Living Resources of the High Seas in 1958; The Antarctic Treaty establishing the South Polar region as an international scientific reserve in 1959; The Conference on Application of Science and Technology for the Benefit of Less Developed Areas in 1963; The Inauguration of the International Biological Program in 1964; The International Treaty on the Peaceful Use of Outer Space in 1966; The Implementation of World Weather Watch, under sponsorship of the World Meteorological Organization in 1967; The UNESCO Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere in 1968; The adoption of United Nations General Assembly Resolution 2398 on the Problems of Human Environment; and The Establishment of the Scientific Committee on Problems of the Environment (SCOPE) by the International Council of Scientific Unions in 1970” (Caldwell 1972: 940). Indeed the adoption of UN Resolution 2398 in particular paved the way for the United Nation Environment Programme's Stockholm Conference (Caldwell 1972: 941).

assesses some of the developmental and environmental challenges facing small island developing states (SIDS), and formulates mechanisms through which these challenges can be mitigated (Byrne and Inniss 2002: 3; Vossenaar 2004: 57; Tigerstrom 2005: 410). It was produced in 1994 at the “first Global Conference on the Sustainable Development of Small Island Developing States” (United Nations 1993a). The need for an islands specific, but more precisely, small-developing islands specific conference was highlighted some two years prior, in Rio de Janeiro, at the United Nations Conference on Environment and Development, commonly referred to as the Earth Summit (Ghina 2005: 185). It was at the Earth Summit where the international community revealed Agenda 21, a document which “reflect[ed] a global consensus and political commitment at the highest level on development and environment cooperation” (United Nations 1993b: 12). More significantly, Agenda 21 revealed a detailed programme designed to provide “the basis for action, objectives, activities and means of implementation ... to deal with global environmental problems and to accelerate sustainable development” (United Nations 1993b: 12). As such, the Earth Summit not only “produced the landmark blueprints for the world community jointly to redress the environmental destruction, poverty and frightening inequality” (Nagarajan 2002)³⁴; but also “represented the boundless hope that humanity could come together to solve its mounting global ecological problems” (Foster 2007a: 3).

Within Agenda 21 was an acknowledgment that SIDS constituted a “special case,” or group, of nations. This classification is rooted in the geographies of SIDS, and more specifically, in the environmental and developmental challenges SIDS face in light of their geographies (United Nations 1993b: 271). Of the challenges identified by Agenda 21, “meeting essential human needs ... and improving the quality of life for island people” was identified as the key objective governing all policy considerations that applied to SIDS (United Nations 1993b: 272). This aspect of Agenda 21 found its way into the: Declaration, Preamble, and Presidential Summary of the High-Level Segment of the

³⁴ The “landmark documents” Nagarajan is referring to consist of: the Framework Convention on Climate Change (UNFCCC); the Forest Principles; the Convention on Biological Diversity (Biodiversity Convention); Agenda 21; the Rio Declaration on Environment and Development.

BPOA, where, it was affirmed respectively that:

“[A]ll efforts must be taken to ensure the central position of people in the process of sustainable development” (United Nations 1994: 3).

“[D]evelopment initiatives in small island developing States should be seen in relation to both the needs and aspirations of human beings and their responsibility towards present and future generations” (United Nations 1994: 7).

“[S]ustainable development [is] a people-centred process that require[s] the active involvement, both as contributors and beneficiaries, of all social groups, in particular women and youth” (United Nations 1994: 74).

However, the policies articulated within the BPOA were ultimately written in a manner which excluded, from the decision making process surrounding the application of the policies, the very people it aimed to affect. There were “fourteen priority areas” identified by the BPOA (United Nations 1994: 9), from which two hundred and twenty-six policies were drafted³⁵; yet, only twice did the programme consider that consulting island peoples was central to the administration of the policy set forth.³⁶ Indeed, the BPOA “[did] not affirm the centrality of island citizens as key *agents* in [sustainable] development” (Campling 2006: 236); and instead, focused almost exclusively on market-led economic growth.

At the conference, SIDS world leaders and representatives explored how sustainable development might be approached. An examination of the chasm between the candid speeches, statements, and declarations made by delegates; and the subsequent reviews of the policy prescriptions laid out in the BPOA reveals that sustainable development is a notion which cannot be realised, or at least realised in the manner by which delegates envisaged sustainable development to occur.

Delegates to the conference advanced particularly novel notions of what actions constituted sustainable development. For example, at the opening ceremony of the conference, the president of the

35 Each of the fourteen “priority areas” were expanded upon (under the heading “Basis for action”), and each “priority area” articulated specific “actions” that were to be taken at the “national”, “regional”, and “international” levels.

36 Actions A.i and C.xi in Priority XIV: “Human Resource Development.”

conference³⁷ stated clearly that sustainable development could not precede human development, and that the former was dependent upon the realisation of the latter, specifically in the form of “sound health and healthy lifestyles, good education, poverty alleviation, the creation of wealth leading to greater employment opportunities, and good governance” (United Nations 1994: 69). Following this, the Declaration of Barbados presented a prescription for raising the “quality of life for all people, including people of small island developing States,” by calling for the “reduction and elimination of unsustainable patterns of production and consumption, and the promotion of appropriate demographic policies” (United Nations 1994: 5). Unfortunately, while the discourse surrounding sustainable development was grounded in calling for the participation and empowerment of island citizens through human development, the policy prescriptions that followed were not. Rather, they were largely limited to minimising the role of island peoples and expounding the virtues of economic growth.

The Programmes lack of analyses and understanding of human development began showing itself as soon as five years after it was adopted, when a “review of the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States” was discussed at the Twenty-second Special Session of the United Nations General Assembly (United Nations 1999c). The BPOA +5, as the review is commonly referred to, is an amalgamation of three assessment reports³⁸, published by the United Nations' Commission on Sustainable Development, and is meant to measure: “Progress in the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States.”

Although the five-year review cited “perceptible progress in implementation” of the BPOA (United Nations 1999b: 3), very little had actually been accomplished by means of action. Most of the “progress” was limited to enacting “numerous seminars, workshops, expert meetings, conferences and regional and subregional ministerial meetings,” aimed to cultivate “[an] understanding of sustainable

37 The President of the Conference was L. Erskine Sandiford, then Prime Minister of Barbados.

38 The Commission on Sustainable Development reviewed “all chapters of the Programme of Action for the Sustainable Development of Small Island Developing States” at its fourth session, in 1996, at its sixth session, in 1998, and at its seventh session, in 1999 (United Nations 1999a).

development issues and greater environmental consciousness (United Nations 1999b: 3).

Implementation of the Programme, it seemed, was dependent upon the “ongoing deliberative process” (United Nations 1999b: 4).

Curiously, the lack of action surrounding the Programmes implementation was blamed on the economic performances of SIDS. Indeed, the five-year review stated “small island developing States in all regions have been affected by adverse economic developments which have impaired their financial capacity to implement even priority sustainable development measures” (United Nations 1999b: 6). An examination of what the review meant by “adverse economic developments” reveals that the Programme did not foresee that small island developing states, would have to cope with globalisation, specifically in the form of trade liberalisation in the spheres of production, distribution and finance (United Nations 1999c: 4). Thus, emerging from the review, was a tacit acknowledgment that the implementation of the Programme was being hampered by the economic-paradigm the Programme was meant to operate within. Ultimately however, the reviews focus on the economic performances of SIDS displaced the primacy of human development with that of economic growth, and masked the incompatibility of people centred sustainable development with market-led sustained economic growth.

Building up economic growth

As stated earlier, the rhetoric preceding the adoption of the BPOA has its roots in Agenda 21. It is in Agenda 21 where human development was identified as the key objective to be striven towards (United Nations 1993b: 272). However, the Programme and Agenda 21 also shared a common vision as to what facilitated both human development and sustainable development. That is, both documents regard human development to follow from sustainable development, sustainable development to follow from the implementation of their respective policies, and finally, the implementation of their respective policies was based upon individual states allocating financial resources for that implementation. Indeed, according to the BPOA +5, the main obstacle preventing SIDS from implementing the

Programme was “the insufficiency of financial resources relative to the enormity of the tasks to be accomplished ... [thus] financial constraints present[ed] insurmountable handicaps to essential effort at the establishment and strengthening of infrastructure, institutions and capacity-building” (United Nations 1999b: 7).

Recalling the specifics of the BPOA, it is clear the Programme placed the onus of financing its implementation on both the national and international levels. Meaning, that while individual SIDS were responsible for mobilizing financial resources endogenously (United Nations 1994: 38), the international community would be called upon to strengthen SIDS' national efforts “through mechanisms [that would] maximize access to concessional financial and technical assistance, and grant assistance, at the levels necessary to support their sustainable development” (United Nations 1994: 41). Furthermore, both SIDS and the international community were expected to generate financial resources in “accordance with chapter 33 of Agenda 21” (United Nations 1994: 41), which itself was based upon chapter-two of Agenda 21, and called upon developing countries to look inwardly for sources of financing; and further called upon the international community, particularly developed countries and development banks to: (1) meet and increase their international obligations to the official development assistance fund (ODA)³⁹, (2) provide resources on concessional and other favourable terms, (3) increase access to bilateral assistance programmes, and (4) provide debt relief for countries pursuing structural adjustment programmes (United Nations 1993b: 2-4). All of these prescriptions were meant to, among other things, “encourage free trade and access to markets [that would] help make economic growth and environmental protection mutually supportive for all countries, particularly developing countries and countries undergoing the process of transition to a market economy” (United Nations 1993b: 2). Thus, the economic basis for the implementation of the Programme was tied to the dominant ideology governing sustainable development, that is, the notion that conflated economic growth with sustainable development and human development (Byrne and Inniss 2002: 4). Paragraph nineteen in chapter two

³⁹ Whereby, developed countries annually contribute 0.7 per cent of their GNP to “official” development assistance (ODA) which is then transferred to developing and least-developed countries (United Nations 1993b: 414).

of Agenda 21 is the embodiment of this idea:

“An open, multilateral trading system makes possible a more efficient allocation and use of resources and thereby contributes to an increase in production and incomes and to lessening demands on the environment. It thus provides additional resources needed for economic growth and development and improved environmental protection. A sound environment, on the other hand, provides the ecological and other resources needed to sustain growth and underpin a continuing expansion of trade. An open, multilateral trading system, supported by the adoption of sound environmental policies, would have a positive impact on the environment and contribute to sustainable development.”

As such, sustained economic growth within an economic system embodying a free market or a liberalised trading regime was seen as central to realising sustainable development. It is important to note that adjusting to this economic-paradigm became a major priority for SIDS. However, the review questioned SIDS' chances at generating economic growth without first addressing their economic vulnerabilities, that is, their “small population[s], lack of technological sophistication, narrow resource base[s] ... poor infrastructure, brain drain and absence of legislative frameworks conducive to foreign direct investment” (United Nations 1999b: 10). Indeed, in an attempt to forecast the “major issues of particular concern to small island developing States”, the review highlighted “economic fragility and vulnerability to exogenous shocks; globalization of production, distribution and finance; and trade liberalization” among the seven “specific issues” affecting SIDS (United Nations 1999b: 10)⁴⁰. Further noting that “there [was] an urgent need to facilitate the integration of [SIDS] into the world economy,” and putting forth a list of mechanisms through which this goal could be implemented (United Nations 1999a: 12).

Minimising the role of island peoples

In September of 2002, the international community convened at the World Summit on

⁴⁰ The other four “issues” were: “[the] transfer of environmentally sound technologies; adaptation to climate change and sea level rise; the operationalization of the Small Island Developing States Network (SIDSNET); and the operationalization of the Small Island Developing States Technical Cooperation Programme (SIDSTAP)” (United Nations 1999b).

Sustainable Development, popularly referred to as the Earth Summit 2002, in Johannesburg, South Africa, to review the progress it had made since the Earth Summit ten years earlier (Brown and Firmin 2004: 1; Ghina 2005: 186). Upon the recommendation of the Report of the World Summit on Sustainable Development, popularly referred to as the Johannesburg Plan of Action, the United Nations General Assembly was mandated to “[u]ndertake a full and comprehensive review of the implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States” (United Nations 2002c: 43).

It should be noted that by this time, several other major international conferences, aside from the Earth Summit 2002 had been held reinforcing the notion that economic growth would indeed be the bedrock onto which SIDS and the international community approached sustainable development⁴¹. This notion inevitably found its way into the analysis leading up to the decennial review of the BPOA.

For example, thirteen months prior to the review, and in a bid to “reaffirm the continued validity of the BPOA” (Brown and Firmin 2004: 4), various Ministers and senior representatives of the Governments of the Small Island Developing States gathered in Nassau, Bahamas for the “Interregional Preparatory Meeting for the International Meeting to Review Implementation of the Barbados Programme of Action on the sustainable development of Small Island Developing States” and issued the Nassau Declaration. This declaration was written primarily to “recognize that international trade [was] important for the building of resilience and sustainable development of SIDS.” Although the Nassau Declaration was centred on issues surrounding trade and financing facing SIDS, it must be noted that unlike previous declarations from the SIDS community, this particular statement did not include even a trace of the usual rhetoric linking sustainable development to human development.

Four months after the Nassau Declaration, the United Nations' Commission on Sustainable Development (CSD) released a “Review of progress in the implementation of the Programme of

41 Some of the more noteworthy United Nations conferences aside from the World Summit on Sustainable Development (which produced the Johannesburg Plan of Implementation) are: The International Conference on Financing for Development (Monterrey Consensus) which took place in March of 2002; and the Millennium Summit (which established the Millennium Development Goals) which took place in September of 2000 (United Nations 2005d: 7).

Action for the Sustainable Development of Small Island Developing States,” which was essentially a review of the actions taken by SIDS and the international community since the 1999 publication of the BPOA +5. Repeated in the CSDs assessment was the familiar mantra that SIDS' economic performances “presented significant challenges to implement effectively the Programme of Action for their sustainable development” (United Nations 2004a: 3), and that a “transition to the free market” would require “compensatory mechanisms and adjustment measures to mitigate losses from the erosion of preferences” (United Nations 2004a: 23); however, it is interesting to note that the CSD altered the “priority areas”⁴² of the BPOA as well. Aside from the slight rewording of some of the original “priority areas” identified in the BPOA, there was one priority in particular, that was removed from the CSDs “follow-up” document (and eventually the BPOA +10), that being: Human Resource Development. Another significant alteration was the addition of three “emerging issues” to the list of issues that had been identified in 1994. An analysis of the addition of the “priority areas” labeled: HIV/AIDS; Security and Governance; and Culture (United Nations 2004a: 2); and the removal of the “priority area” labeled: Human Resource Development (United Nations 1994: 34) follow.

In order to understand the significance of the removal of chapter XIV: Human Resource Development from the BPOA, we must first comment on the chapters' own particular significance. It can be said that every “priority area” contained within the BPOA was ultimately concerned with “environmental and development planning” as they all, in some way, relate to “small island developing States small communities” (United Nations 1994: 9). However, this link remained largely implicit throughout the BPOA and was not elaborated upon. The specific claim that sustainable development was intimately connected to human development can be largely attributed to “priority area” XIV of the BPOA, titled: “Human Resource Development.” For instance, the chapter opens with the following sentence: “Human beings are at the centre of concerns for sustainable development and thus significant

42 Of the fourteen “priority areas” identified in the BPOA, five had their names slightly altered in the review of the BPOA +5. “Natural and Environmental Disasters” was changed to “Natural Disasters”; “Management of Wastes” changed to “Water, Sanitation and Waste; Energy Resources to Energy”; “Biodiversity Resources” to “Biodiversity”; and “Science and Technology” was changed to “Technology”. These changes did not carry over to the BPOA +10.

attention must be given to projects that will enhance the quality of human life in small island developing States” (United Nations 1994: 34). Furthermore, chapter XIV is rooted in chapter-six of Agenda 21, which itself “recognizes the close dependency of human health on a healthy environment” (United Nations 1994: 35). In fact, the opening paragraph of chapter-six in Agenda 21 states “the primary health needs of the world's population ... are integral to the achievement of the goals of sustainable development and primary environmental care,” thus at least equating the realisation of human development with the realisation of sustainable development, if not placing it before sustainable development. Chapter XIV of the BPOA was also important because, as stated earlier in this paper, it was the only “priority area” that accorded island peoples any *agency* in the sustainable development process. Finally, the most significant contribution made by the “priority area” discussing Human Resource Development was that it linked several issues facing island peoples together, creating a basis for the emergence of the concept of “human development.” As such, “population issues, education, training, health and social services, nutrition and housing, family planning, and island carrying capacity” were not viewed independently of one other, instead they were approached in a manner that understood that these issues were interrelated and influenced one another. Therefore, removing chapter XIV from the BPOA, not only eliminated a significant portion of the Programme's ideological foundation (in the sense that an important link to Agenda 21 was lost), but the spirit of the BPOA was irrecoverably altered as well.

Conflating human development with economic growth

The CSDs assessment report leading up to the review of the BPOA included three “emerging issues” that, while important to SIDS, further reinforced the notion that market-led economic growth should be a necessary component of human development; as such, the addition of “HIV/AIDS”, “Security and Governance”, and “Culture” were presented in a way that prioritized economic growth over human development issues. The following three passages from the assessment report are taken

from each of the three “emerging issues” respectively:

“HIV/AIDS is particularly devastating for countries with limited skilled workforces, taking a severe toll on their economies as the economically active succumb to AIDS-related illnesses, income levels are reduced and the social fabric is undermined.”

“There is a growing reluctance among international investors and donors to allocate funds to countries lacking stability ...”

“The potential for transforming the creativity that resides in the people into commercially viable activities and exports for job and wealth creation is considered significantly and largely untapped in small island developing States.”

An analysis of these passages reveals that each of the “emerging issues” are rationalized by their influence on SIDS' economic trajectories. A question one could ask is: If HIV/AIDS, Security and Governance, and Culture ceased to negatively influence economic growth, would they also cease to be given any immediacy as well?

A final comment on the CSDs assessment report is that it offered a window into the sorts of “development” policy analysts considered noteworthy. Here, I am speaking to the review of “priority area V” of the BPOA, “Freshwater Resources”⁴³ (United Nations 1994: 11). While commenting on the “continuing threat to limited freshwater sources” on SIDS, the report noted that “[a] cost-effective approach to improving water supplies is rainwater harvesting: although it has historically been neglected, it is gaining popularity in many small island developing States and other developing countries” (United Nations 2004a: 11). It is rather surprising that the report would choose to describe increases in the number of peoples collecting rainwater in a manner that can, at best, be described as economically-positivist, yet ignore both the reasons behind why the practice was “gaining popularity” and what the affects of “rainwater harvesting” meant for the standard of life of those island peoples. Indeed, the assessment stated that “there [was] a need to promote *at the community level* greater

43 The review of the BPOA +5 amalgamated “priority area V” with “priority area III” of the Programme: “Management of Wastes”; and labeled the amalgamated priority area: “Water, Sanitation and Waste” (United Nations 2004a).

awareness and understanding of the impact of economic activities such as mining, forestry and agriculture on water resources” (United Nations 2004a: 11, emphasis added); however, the assessment stopped short of calling for such “awareness” to be extended to the mining, forestry, and agricultural industries that were undoubtedly, at least partly, responsible for the the degradation of freshwater. Such an approach to sustainable development, characterized by an inability to confront the underlying issues facing SIDS, plagued the final and most important review affecting the BPOA to date, that being: The International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, held in January of 2005 in Port Louis, Mauritius.

The final nail in the 'human development' coffin

As stated earlier, the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States was the result of a recommendation from the Johannesburg Plan of Implementation produced at the Earth Summit +10⁴⁴. As with Agenda 21, the Johannesburg Plan of Implementation included a section discussing the “[s]ustainable development of small island developing States,” and reinforced the notion that SIDS constituted a “special case both for environment and development” (United Nations 2002c: 41). Subsequently, the United Nations General Assembly mandated that the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States press for “a renewed political commitment by the international community [by focusing] on practical actions for the further implementation of the [BPOA]” (United Nations 2004b). It was at this meeting where both: The Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, popularly referred to as the BPOA +10 was adopted, and the Mauritius Declaration released. What follows is an assessment of the BPOA +10.

44 Hein notes “[t]hough it has been a UN practice to reconvene thematic world conferences 10 years after the original landmark conference, the Barbados Global Conference of 1994 [was] followed 10 years later, not by another global conference, but by a downgraded *international meeting*” (2004: 16, emphasis added).

The role of “financial constraints” in preventing the Programmes implementation was a recurring theme found throughout the various reviews of the BPOA. Furthermore, while noting that SIDS had endogenous-based financial constraints that contributed to the problem, every review of the Programme also highlighted the lack of action on part of the international community, and focused on the international community's inaction as being partly responsible for the ineffective implementation of the BPOA (United Nations 1999b: 7; United Nations 1999c: 3). This sentiment was echoed at the opening ceremony of the January 2005 international conference in Mauritius by virtually every high level dignitary who spoke, as demonstrated by the following excerpts taken from the opening remarks made by the Secretary-General of the International Meeting⁴⁵, the President of the International Meeting⁴⁶, and the Secretary-General of the United Nations⁴⁷ respectively:

“Despite the efforts made by small island developing States, the expectations for international support and cooperation for the implementation of the Programme of Action have not materialized”

(United Nations 2005d: 66).

“Today more than 10 years later, as we meet to review its implementation, we find that the progress made can at best be described as mixed. In fact, in most small island developing States, the results have been unsatisfactory, and those who have been able to do better have generally done so through their own efforts. This failure can be attributed to several factors, the most important one being the absence of resources as promised by the international community” (United Nations 2005d: 68).

“On the whole, implementation of what was agreed and promised at Barbados remains disappointing at best” (United Nations 2005d: 73).

And while the United Nations called for “renewed political commitment by the international community [based] on practical actions for the further implementation of the [BPOA]” (United Nations Resolution 2004b), drafts of the BPOA +10 were systematically edited so that the final version lacked the capacity to enable action. Instead, the BPOA +10 relied upon little more than open-ended wordage

45 Anwarul K. Chowdhury.

46 Paul Raymond Berenger, then Prime Minister of Mauritius.

47 Kofi Annan.

and diplomatic encouragement in its call to revitalize international support for the Programme. A comparison of the “Draft strategy for the further implementation of the [BPOA]” (United Nations 2005a) with the “Mauritius strategy for the further implementation of the [BPOA]” (United Nations 2005d) reveals there were attempts to chart a new approach to implementing the Programme; however, the final version of the BPOA +10 did not differ significantly from any of its predecessors in the way it approached implementing the Programme. Furthermore, this inability to offer an alternative approach, begs the question as to why this was the case.

Perhaps the best way to illustrate this point is to identify, in a generalised manner, the sorts of things that were removed from the final version of the Mauritius strategy. The most glaring omissions were those which specified the shortcomings of the industrialised nations in implementing the Programme, of which industrialised nations' inability to meet their “official development assistance (ODA)” responsibilities⁴⁸ (United Nations 2005a: 3) and curb their greenhouse gas emissions (United Nations 2005a: 5) were the most pointed criticisms. A second noticeable difference between the draft and final versions of the BPOA +10 was the softening of those verbs suggesting any specific action on part of the international community. For example, the draft Mauritius strategy contained the passage “the international community must/will/commit,” two, three, and two times respectively⁴⁹; however, in all of these instances, the verbs presented in the final draft of the BPOA +10 were either changed to a more ambiguous “should” or, the action(s) proposed by the draft strategy were removed entirely. The

48 The draft version of the BPOA +10 noted that ODA had “declined by over 50 per cent between 1994 and 2004” (United Nations 2005a: 3).

49 The phrase “**the international community must**” appeared under: Chapter I: “Climate change and sea-level rise” where it called for five specific actions to be taken (United Nations 2005a: 5); and Chapter III: “Management of wastes” where it called for financial support (United Nations 2005a: 8). The phrase “**the international community will**” appeared under: Chapter XX.A: “Implementation – Access to and the provision of financial resources” in the context of calling for “the international community to facilitate access to existing funding and decides to urgently put in place new and additional dedicated financial resources for investment” (United Nations 2005a: 28); Chapter XX.C: “Implementation – Capacity development” in the context of supporting SIDS to enhance their “human and institutional capacity development” through three specific actions (United Nations 2005a: 30); and Chapter XX.D.2: “Implementation – National and international government – International enabling environment” where it called for the international community to “pay appropriate attention to the need and priorities of [SIDS]” (UN 2005a: 31). The phrase “**the international community commits**” appeared under: Chapter XX.B: “Implementation – Science and development and transfer of technology” in the context of providing SIDS access to a “dedicated technology transfer” (UN 2005a: 29); and Chapter XX.C: “Implementation – Capacity development” in the context of supporting SIDS to enhance their “human and institutional capacity development” through three specific actions (UN 2005a: 30).

result of these edits was that the BPOA +10 did not address the international community's inaction. Thus, the Mauritius strategy was in no better position to offer a viable route to the Programmes implementation than the original Barbados strategy.

Concluding Remarks

It would be a mistake to assume that the policies formulated in Barbados would remain uninfluenced in an ever-changing environment, the United Nations General Assembly recognised this and therefore devised the BPOA review process to monitor the Programmes effectiveness over time. However, the many reviews and subsequent recommendations were not held in a static environment either, rather they occurred and are occurring over a period of time that, like all periods, offer shifts in what Campling refers to as “analytical focus”; where such shifts are accompanied by changes in “policy prescriptions” as well (2006: 238). The period of time between the years 1994 and 2005 correspond neatly with the entrenchment of neoliberal political concepts globally, as such, there has been an acute appreciation on the part of vulnerable countries that “measures which fit into the existing economic system are more successful than those which call [it] into question” (Brunnengräber 2006: 214). Therefore it should be unsurprising that the policy prescriptions found in the latest version of the Programme (BPOA +10) have themselves incorporated the changed political-economic landscape over the past decade and half.

The BPOA +10 emerged as a culmination of a decades worth of shifts in analytical focus which ultimately disconnected the, albeit fleeting, notion of human development from that of sustainable development, both of which existed in rhetoric in the original version of the Programme. Furthermore, the path to the BPOA +10 discarded human development and identified the notion of economic growth as the key issue for SIDS to pursue, recall the emphasis on economic integration in the 1999 review (United Nations 1999a; United Nations 1999c: 4), and the removal of chapter XIV: Human Resources Development from the 2004 review (United Nations 2004a: 2). Indeed, neither the opening statements

at the Mauritius conference, the Mauritius declaration, or the Mauritius strategy even considered utilising island peoples in implementing the Programme or linked sustainable development to the lives of island peoples. Furthermore, the shifts in analytical focus that gave way to the BPOA +10 were themselves informed by theoretical shifts in international political economy, specifically towards those shifts advancing neoliberalism, whose “central claim is that free and individual exchange operating among enterprises and countries in competitive markets tends to equilibrium ... [in] other words, the market will supply solutions to all of humanity's needs through the mechanism of comparative advantage combined with the free interplay of purportedly 'natural' market forces” (McMichael, 1996; Albo, 1997; Oman, 1999, cited in Campling, 2006: 242).

This emphasis on neoliberalism affected the way the Programme advised SIDS on how to approach trade policies. Recalling the original Programmes approach to trade, one will note that there existed a distinct focus on market access, specifically the economic impacts SIDS could face if they lost their preferential market access. As a result, the BPOA repeatedly called for SIDS to be accorded preferential access to the markets of developed countries (United Nations 1994: 8, 9, 42, 70, 72). The Mauritius strategy however, deemphasized the pursuit to locate preferential market access for SIDS, and instead steered SIDS towards adjusting to globalisation (United Nations 2005d: 8, 22, 68, 83, 87, 88, 95), a mechanism it claimed would facilitate trade and economic growth. This focus on trade liberalism and economic growth as a means to achieve sustainable development became an official objective of the Mauritius strategy, and delegates to the conference “reaffirm[ed] [their] commitment to trade liberalization [so as] to ensure that trade play its full part in promoting economic growth, employment and development for all” (United Nations 2005d: 22). This way, the revised Programme attempted to reassure SIDS that the negative impacts from a loosening of trade-preferences could be mitigated if SIDS followed particular economic reforms, such as trade liberalisation. As a result, the Programme did not actually offer a plan for SIDS to secure trade agreements in as much as it changed the focus of where SIDS should concentrate their energies, specifically towards attempting to influence

international lending institutions such as the World Trade Organization and international economic negotiations in Doha (United Nations 2005d: 22).

The Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States verified what previous reviews were alluding to, that the implementation of the BPOA had been largely unsuccessful. Yet, the Mauritius strategy did not offer an alternative. What emerged from it was a reorganising of the Programmes “priority areas” and an entrenched commitment to the notion that economic growth within a free market system would ultimately contribute to sustainable development. The root causes of what had led SIDS and the international community to the point of searching for sustainability were ignored, as was the notion of “people-centred development” (United Nations 2004a). Fry suggests, somewhat sarcastically, that “[p]erhaps in [2010], when the [United Nations General Assembly] decides to hold a review of the Mauritius Strategy, things will change” (2005: 99).

The environmental, economic, and social conditions prevailing in contemporary Jamaica have been shaped by the framework postulated in development plans such as the BPOA. It is in the context of the assessment of the BPOA offered above that the following chapter seeks to explore Jamaica's experience in facilitating economic-growth led sustainable development with the explicit aim to better the quality of life for its citizens. We begin with a physical description of Jamaica, within the context of an historical overview of the island. This overview, which is itself framed by the colonialising record, is provided in order to illustrate to the reader the extent to which Jamaica has been physically transformed since its incorporation into the hegemonic economic system. The historical overview is followed by an outline of the environmental, social, and economic situation within Jamaica in the contemporary period. It is here where we trace the environmental, social, and economic patterns that have emerged in Jamaica since the island achieved its overtly-independent status over four decades ago. It is concluded that the overall quality of life in Jamaica has not improved despite the islands orientation towards market-led sustained economic growth.

Chapter 4 – Jamaica's Development Trajectory

“Traditional societies and natural ecosystems have passed the evolutionary test of survival. It is conjectural whether [humanity's] deliberate manipulation of [its] culture and [its] environment will, in the aggregate, produce better results in human health, happiness, and survival than the results produced by trial and error extended over millennia” [Caldwell 1972: 934]

“Our vision of the possible and the feasible is so restricted by industrial expectations that any alternative to more mass production sounds like a return to past oppression or like Utopian design for noble savages” [Illich 1973: xii]

A Physical Description of Jamaica: The Land of Wood and Water

With a total land area of 11,400 square kilometers (sq km) (Lee 2006: 89; Watts 1987: 4), Jamaica (Figure 4.1) is the third-largest⁵⁰ island in the Caribbean Sea⁵¹ (Figure 4.2) (Jamaica is roughly twice the size of Prince Edward Island⁵²). Jamaica is defined as an archipelagic state under the *United Nations Maritime Areas Act* of 1996. Although Jamaica has yet to concretely define its maritime boundary, the total area of Jamaica's Exclusive Economic Zone (EEZ) is estimated to be 274,000 sq km (Kong 2006: 47). The main island of Jamaica is located approximately 145 km south of Cuba and 161 km west of Haiti (Kong 2006: 47). The island is approximately 230 km from west to east and ranges in width between 35 and 82 km depending on where one is (Evelyn and Camirand 2003: 354; Kong 2006: 47). Jamaica is endowed with a diverse range of ecosystems created by the island's varied topography, geology, and hydrology (Martin et al. 2006: 9; Tole 2001: 456). There is a mountainous range that runs west to east through the interior of the island, and reaches a height of 2,256 meters (7,402 ft.) at Blue Mountain Peak (Kong 2006: 47; Watts 1987: 11). More than half of the country is above 305 meters (1,000 ft.) in elevation (Aspery and Robbins 1953: 360; Government of Jamaica 2000: 1). Flat coastal plains surround the mountainous range and comprise 20 percent of the total land area (Government of

50 Cuba is the largest with an area of 110,860 square kilometers, followed by the island of Hispaniola which is 76,130 sq km (Haiti is 27,750 sq km; the Dominican Republic is 48,380 sq km); at 8,870 sq km, Puerto Rico is only slightly smaller than Jamaica.

51 The Caribbean Sea is 2,750,000 square kilometers in area (about the size of Prince Edward Island, New Brunswick, Nova Scotia, Quebec, and Ontario combined). On its northern and eastern boundaries, the sea is flanked by “thousands of islands of varying sizes that stretch like an inclined backbone” from the southeastern tip of Florida to South America (Knight 1990: 4); the sea's western and southern boundaries are formed by the eastern coastlines of Mexico and Central America and the northern coastline of South America.

52 P.E.I. is 5,660 sq km (Government of Prince Edward Island)

Jamaica and United Nations Food and Agriculture Organization 1989: 3). Geologically, the island is two-thirds limestone, the rest is composed of igneous rocks, sedimentary shales and alluvium (Lee 2006: 89; Watts 1987: 4). The plains are composed of soils derived from the island's bedrock (Government of Jamaica 2000: 1)⁵³. The island also contains an intricate network of caves, rivers, bays, and harbours.

Jamaica has a particularly high proportion of endemic species of fauna⁵⁴ and flora⁵⁵ and ranks fifth among the world's islands with respect to percentage of endemic flora (Lee 2006: 94; Killmer et al. 2006: 1). Furthermore, the marine life in Jamaica is extremely rich and varied, and includes fishes, invertebrates, and several marine mammals (United Nations 2002a: 17).

Figure 4.1: Map of Jamaica⁵⁶



53 65 percent of Jamaican soil is derived from limestone, the remaining areas are composed of soils from igneous and metamorphic rock (Government of Jamaica 2000: 1).

54 There are many: mammals (5); birds (30); reptiles (33); amphibians (21); and fish (3) that are endemic to the island. (Lee 2006: 96)

55 “28 per cent of all flowering plants; 31 per cent of orchids and bromeliads; 14 per cent of ferns” are species that are found nowhere else in the world (Lee 2006: 94). The Government of Jamaica along with the Food and Agriculture Organization of the United Nations (UN FAO) estimates that 27 percent of Jamaica's flowering plants are endemic; furthermore the UN FAO states “[t]his represents a very important gene pool, since many of those plants may be expected to have horticultural, genetic, and pharmaceutical values, many of which have yet to be determined” (Government of Jamaica 1989: 14).

56 Image taken from McGill University.

Figure 4.2: Map of the Caribbean⁵⁷



Jamaica's climate is governed by tropical weather systems, namely: tropical waves, tropical depressions, tropical storms and hurricanes; the Atlantic hurricane season is from June to November (Government of Jamaica Meteorological Service). The islands mountainous terrain causes variation in temperature according to ground elevation, and average diurnal temperatures at sea level, range between 23°C and 28°C throughout the year (Kong 2006: 47). The rainfall pattern in Jamaica is “marked by monthly, annual and spatial variability” (United Nations 2003: 6). Average annual rainfall measures to 1,288 mm; however, as noted, accumulation varies dramatically across the island. Jamaica

⁵⁷ Reproduced with permission from owner: Moen 2007. The Caribbean islands or West Indies, refer to twenty-five island and archipelagic territories, and four continental territories all of which are located in, or along, the Caribbean Sea (Figure 2). Although these twenty-five island and archipelagic territories can be categorised in a number of ways; by way of political status, social and economic theory, anthropology, geography, geology, agronomy, ecology, etc. (Green 1977: 509), the author will delineate them into four subgroups for the purpose of describing the physical setting of the region. The first of which is the Bahamian archipelago, a grouping of seventeen islands on the northern boundary of the Caribbean Sea, running in a southeastern direction from the southeastern tip of Florida. The second subgroup is the Lesser Antilles, which are a chain of twelve island and archipelagic territories (Guadeloupe; Martinique; Dominica; Saint Lucia; Antigua and Barbuda; Barbados; Saint Vincent and the Grenadines; Grenada; Saint Kitts and Nevis; Montserrat; Netherlands Antilles; Anguilla) that form an eastward directed arc from the Bahamian archipelago to the shores of Venezuela to form the eastern boundary of the Caribbean Sea. The third subgroup is what Keegan refers to as the “Southern Caribbean,” a line of islands (from west to east: Aruba, Bonaire, Curacao, and Margarita) situated parallel to Venezuelan coastline (1994: 258). The fourth subgroup is the Greater Antilles, which are a grouping of the four largest islands in the Caribbean (Cuba, Jamaica, Puerto Rico, and Hispaniola, which Haiti and the Dominican Republic share), situated roughly perpendicular to the Bahamian archipelago in the north, with its two eastern islands intersecting the northern point of the Lesser Antilles.

also lies within a seismically active area of the Caribbean tectonic plate (Cuervo et al. 2007: 2).

A Brief History of the Land of Wood and Water

Ever since Jamaica was first located by Christopher Columbus in 1494⁵⁸, European explorers and natural historians have stressed the natural wealth of the island citing in particular its dense forests, clean air, numerous rivers, cascades, and mountain-streams (Blome 1678: 2; Long 1774: iii; Edwards 1793: 181-2; Stewart 1823: 26; Johnston 1909: 653-4). According to Sloane, “Columbus was extremely pleas'd with this Island, thinking it surpassed any he had yet seen, for Verdure, Fertility, Victuals, etc. which he judged to come from its being water'd with Showers drawn thither by the Woods” (1707: 1). In fact, the name *Jamaica* reflects the island's natural wealth, and is an Anglicised derivation of the Spanish pronunciation⁵⁹ of the indigenous-Antillean word *Shaimaka*⁶⁰ which has been interpreted to mean: “[A] country abounding in springs” (Edwards 1793: 121)⁶¹ or “Land of springs” (Lynch 1856: 98) or “Wooded land of water” (Johnston 1909: 661) or “Land of Wood and Water” (Atkinson 2006a: 1).

The following excerpts best capture the general sentiments towards the island at the time of the industrial revolution:

“Jamaica present[s] a splendid panorama of high mountains, embosomed in clouds, and vast savannahs or plains, hills and vales, rivers, bays, and creeks” (Martin 1836: 41) ... [t]he beauty of the island is

58 Jamaica was located by Columbus on May 3rd 1494, on his second voyage to the New World (Phillippo 1843: 8-9); however, Columbus and his crews soon left the island in search for other lands, only to return nine years later, in 1503, under the most dire of circumstances, as Columbus' fleet of ships became shipwrecked “beyond the possibility of repair” (Edwards 1793: 122), and the crew ended up marooned for “twelve months and four days” (Long 1774: 344; Stewart 1823: 2) on the island. Permanent Spanish settlement of the island did not begin until 1509 (Deagan 1988: 199). Consequently, Spanish induced slavery and disease “effectively depopulated” Jamaica of its indigenous peoples by the year 1520 (Deagan 1988: 198), and they were “entirely exterminated” by 1558 (Phillippo 1843: 18; Martin 1836: 10). Indeed, Howard states that the “Jamaican Arawak were exterminated so early and so effectively by the Spaniards that they were able to contribute virtually nothing ethnically or culturally to the history of the island in the historic period” (1956: 45). There is little doubt in this author's mind that the fifteen years in-between the island's “discovery” and “occupation” could be the stuff of a great fictitiously-romantic story, encapsulating the tragedy, horror, and drama associated with great epics, should someone choose to write it.

59 The Spanish pronounced *Shaimaka* as *Xaymaca* (Johnston 1909: 661).

60 Atkinson notes that the indigenous name for the island may also have been *Yamaye* (2006a: 1).

61 Edwards' use of the term “country” reflects a specific conceptualisation of a term rooted in political geography and international politics, most commonly associated with the notions of state or nation and government. A better translation is provided by later scholars, who have translated *Xaymaca* to mean “land abounding with springs” (Atkinson 2006a: 1; Phillippo 1843: 8).

further enhanced by its numerous rivers, upwards of two hundred of which have been enumerated.”

(Martin 1836: 46)

“Jamaica, in a word, may be reckoned among the most romantic and highly-diversified countries in the world, uniting the rich magnificent scenery which waving forests, never-failing streams, and constant verdure can present, heightened by the pure atmosphere, and the glowing tints of a tropical sun.”

(Phillippo 1843: 38)

Jamaica's forests were once a source of the island's beauty and prosperity. It is estimated that over 95 percent of the land area in Precolumbian Jamaica was forested⁶² (World Resources Institute 2003: 1; United Nations 2002a: 27; Government of Jamaica 1989: 11). These forests contained an “abundance of wild fruits and vegetables, including palms, guava berries, and *gudyiga*, a cycad with edible roots” (Atkinson and Fisher 2006: 99); many species of terrestrial and subterranean fauna (many of which would be endemic to the island) (McNab 2001: 58); and many species of flora including diverse classes of trees (Fiske 1899: 204; Coke 1808: 56).

Describing Jamaica's forests, Long (1774: 354) wrote “The noble woods which decorate most parts of the island are filled with trees whose bulk and tallness exceed any in England, many of them being from one hundred to one hundred and thirty feet in height, and for a considerable part of their height entirely disencumbered of branches; which gives them a most stately and majestic appearance. Cotton and cedar trees have been cut here which measured ninety feet from the base to their limbs; and several mahoganies, little inferior ... the largest I have found are in the middle region of the island ... it is not probable that they have ever been affected by the most violent hurricanes known here. These storms are most destructive on the coast; and even here the thickness of the woods is a protection to the trees.” Edwards (1793: 15) too, wrote at length of Jamaica's vast forests and asked “[w]hat European forest has ever given birth to a stem equal to that of the ceiba [wild cotton tree], which alone, simply

62 Evelyn and Camirand note that “[w]hen Christopher Columbus landed on the island in 1494, most of it was densely populated with forests, except for scattered clearings by the [native Jamaicans]” (2003: 354). Although, Evelyn and Camirand do not provide an estimate as to the total forest coverage of the Precolumbian Jamaica, they do include a table listing estimates of partial coverage of the island at the time of Columbus' landing (2003: 356).

rendered concave, has been known to produce a boat capable of containing one hundred persons? or the still greater fig, the sovereign of the vegetable creation,-itself a forest?" In fact, the tress that stood out most for many were the cedar and mahogany, "each of which the trunk frequently measures from eighty to ninety feet from the base to the limbs" (Edwards 1793: 15) along with other "excellent timbers ... such as lignum vitae, dog-wood, iron-wood, pigeon-wood, green-heart, braziletto, and bully-tress" (Edwards 1793: 187). Archaeological remains from sites utilised by indigenous Jamaicans reveal that the forests were not only a source of nutrition, but also for "material equipment [such as] fibres for clothing, construction material for tools and houses [and canoes]" (Atkinson 2006b: 101-102).

The Jamaican forests were once home to a wide range of birds, and accounts of the range of diversity have been recorded until as recently as the nineteenth century. For example, Coke wrote "[t]he mountains and woods abound with a variety of birds, some of them remarkable for their variegated and beautiful plumage, and others for their melodious notes" (1808: 388). He identified "blue finches; dark brown thrushes; wood-peckers of various kinds; black-birds; blue sparrows; long and short-tailed humming-birds; blue and red throat, and orange-coloured bull-finches; and brown petrels ... several species of doves ... the nightingale ... the mountain hawk ... the blue mackaw ... the gabbling crow ... two species of parrots and parroquets" as being endemic to the island (1808: 388-391).

The water systems in Jamaica were known to contain a pristine quality. Blome wrote "[t]he Mountains are full of fresh Springs, whence flow the many Rivers that so plentifully waters the Island, to the great refreshment and accommodation of the Inhabitants" (1678: 2). These sentiments were confirmed a few years later, when Sloane noted "[t]he most common Drink here is Water. 'Tis reckoned the most wholesome Drink by many, amongst whom I am one" (1707: xxvii). Almost seventy years after Sloane's work, Long estimated the presence of "two hundred rivers ... with their branches and smaller streams ... so essential to their being in a wholesome state for human drink" (1774: 357); and fifty years later, Stewart proclaimed "[t]here is no country in the world better supplied than Jamaica

with ... rivers varying in breadth from twenty to an hundred feet or more ... [m]ost of these abound with the finest fish” (1823: 31-2). And twenty years after Stewart's descriptions, Phillippo confirmed the healthy state of the islands waterways by writing “[t]he sea-coast, rivers, bays, creeks, with the ponds of sea and fresh water, abound with fish” (1843: 55).

The diversity of aquatic life was captured by many naturalists who carefully documented the “[i]nnumerable tribes of fishes” (Coke 1808: 385). For example, Martin noted “[t]he rivers and sea-coast abound in fish of various quality ... [t]he sprat, herring, dolphin, anchovy or silver fish; the flying, sword, sun, parrot, rock, king, and gar fishes; flounder, sole, eel, bream, snapper, mullet, perch, boneeto, Spanish mackerel, sea devil (weighing from 100 to 300 lbs.), old wife, shark, porpoise, sting, ray, thrasher, &c. &c. may be caught; sea and land turtle are plentiful, and good eating” (1836: 84).

Indeed, a telling example of the abundance of fish is found in the diary of the physician and naturalist Sir Hans Sloane, which recorded his voyage to Jamaica from England in 1707. Sloane wrote “[w]e had several days without any remarkable matter happening, save that flying-Fishes were here very frequent: the Description and Figure of which is common in most Natural Historians, therefore I shall not say more, only that it is a kind of Herring with very large Fins ... [t]hey came on Board our Ship every where between the Tropicks, flying out of the Water and lighting thereon by accident ... [t]hey are common in most parts of the West-Indies ... [t]hey leap into our Boats” (1707: 27-8). These sentiments were echoed by Coke a century later when he wrote of the same fish: “[i]t often happens, that in their aerial excursions they light on ships, or in their boats; and as this is in their descent towards the water, they are taken with the utmost ease” (1808: 387).

It is therefore of little surprise that indigenous peoples of Jamaica and the wider Caribbean would have sustained themselves facing little adversity from their natural surroundings. The following section reveals the degree to which Precolumbian populations in the Caribbean were adapted to their surroundings.

Estimates of the population of the Precolumbian Caribbean range from a very low 100,000

people to a very high 6 to 8 million people (Keegan 1996: 277). According to Blouet, the eighteenth century British natural historian Bryan Edwards estimated by way of Spanish sources, that the Caribbean was inhabited by 3 million people at the time of contact with Europeans (2000: 218); although it should be noted that Edwards acknowledged that the accepted population at the time of his writing was 6 million⁶³ (1793: 57).

Much attention needs to be paid to the material infrastructure existing at the time of European contact. Accounts of the Precolumbian Caribbean islands indicate that they contained complex societies, as evidenced by the varied village structures, material goods, and languages that existed at the time of European contact. The existence of a multitude of languages throughout the Greater Antilles was documented in the late-fifteenth and early-sixteenth centuries by Spanish priest Bartolomé de las Casas, and differences in the material culture of different groups residing on the same island was reported by Columbus (Keegan 1996: 276-7). Edwards noted that indigenous villages “resemble[d] European encampments, [with] cabins made of wooden poles and roofed by palm-tree leaves,” and each village had at its centre “a building of superior magnitude to the rest ... and served as a public hall or state house” and he further noted that indigenous culture produced a “variety of domestic utensils and furniture [including] earthenware, woven beds, and implements of husbandry.”(1793: 82). In the case of Jamaica, Bridges described the engineering and construction of the residential structures and revealed that they were well suited for the islands environment, writing:

“[t]he houses of these islanders were built [with] fixed posts in the ground, in the form of a circle, and at distances of four feet; upon these they placed thick plates, which supported a conical roof, covered with transverse layers of wild canes, and thatched with palm-leaf, or the tops of the canes themselves. To form the walls, they bound canes to the posts with the China withes, called by them *boschiuchi*; and to that parasite they attributed all the medicinal virtues for which we now esteem it.

The canes were so well secured by these means, that they resisted the most impetuous hurricanes;

63 Edwards himself could not imagine a number as high as 6 million, because in his words: “Indeed such are the accounts of the horrible carnage of these poor people by the Spaniards, that we are naturally led to hope that their original numbers must have been greatly exaggerated” (1793: 58).

and were so strait, and closely bound, that the walls were impervious to the tropical rains which beat so fiercely upon them. The building was completed by the erection of a post in the centre, to which the extremities of all the poles, forming the apex of the conical roof, were united” (1828: 87).

In fact, the sophisticated nature of the structures and tools used by the indigenous peoples of the region lead Edwards to declare that: “[t]he industry and ingenuity of [the] Indians [sic] must have greatly exceeded the measure of their wants” (1793: 83).

Regarding prehistoric island peoples in general, it should not be lost on us today that islands were, after all, inhabited by peoples who had the ability to build boats and understand navigational principles (Nunn 2003: 222; Boomert and Bright 2007: 13; Fitzpatrick 2007: 82; Depraetere 2008a: 12). In fact Christopher Columbus documented, in his *diario*, that after shipwrecking in Hispaniola he was met by at least “a thousand canoes” (Edwards 1793: 65); and the journals of Bartholomew Columbus, the younger brother of Christopher Columbus, reveal that some of the canoes “were navigated with forty oars ... eight feet in breadth, and in length equal to a Spanish galley”⁶⁴ (Edwards 1793: 82). A similar greeting awaited Columbus and his crews as they sailed towards the Jamaican north-coast. A contemporary of Columbus', Andrés Bernaldez, is cited as stating “They have more canoes than in any other part of those regions, and the largest that have yet been seen, all, as has been said, made each from a single tree trunk ... One of these large canoes which the Admiral measured was ninety-six feet long and eight feet broad” (Henriques 1960: 17). Sloane added that Columbus found a “great Number of Canoes and armed Inhabitants, who had better Understandings than those of the other Islands, and who oppos'd his Landing” (1707: 1). Indeed, Atkinson notes that the massive canoes would have been ideal for deep-sea fishing, as indicated by fish-bones remains found in kitchen midden sites in Jamaica (2006b: 102).

A number of scholars have commented that most of the sixteenth-century Spanish colonies in the Caribbean “mirrored” the subsistence practices of the native economies that preceded them, and

⁶⁴ Atkinson quotes the early sixteenth-century historian and chronicler of Columbus, Andrés Bernaldez, as writing “one Jamaican canoe measured later by Columbus proved to be no less than 96 feet in length and 8 feet wide” (2006b: 102). Howard notes that the canoes were “elaborately carved” (1956: 56).

that the Spanish “domestic strategy” in the Caribbean was influenced heavily by “Indian [sic] cultural elements in the kitchen” (Deagan 1988: 206; Keegan 1996: 270-1). It is therefore reasonable to accept that the material (and social) infrastructure existing in the Precolumbian Caribbean played a significant role in sustaining the regions imperial conquerors (Knight 1990: 18)⁶⁵. Especially since over the course of his first years of voyaging to the Caribbean, Christopher Columbus shipwrecked nine vessels throughout the Greater Antilles and Central America: “*Santa Maria* was wrecked off Haiti on Christmas eve of his first voyage; the entire fleet of his fourth voyage was lost, *Vizcaina* and *Gallega* off the coast of Central America and *Capitana* and *Santiago* in Jamaica, in 1494 (Smith, 1992a; Keith et al., 1990); and four caravels, including *Nina*, were sunk in a hurricane at La Isabela in August 1495 (Lyon, 1989)” (Keegan 1996: 272). And, as stated earlier, in June of 1503, Christopher Columbus and the crews of “his little squadron”⁶⁶ (Coke 1808: 216) found themselves shipwrecked “beyond the possibility of repair” (Edwards 1793: 122) on the island of Jamaica for “twelve months and four days” (Long 1774: 344; Stewart 1823: 2). Reviewing Columbus' journal entries and letters, Jane wrote that after being “marooned” on Jamaica, Columbus was “racked by illness, the prey of acute depression, inadequately supplied with food, forced to contend with mutiny ... and denied any certain hope that he would ever be rescued” (1930: 122).

Edwards has written at length about the indigenous subsistence practices the Spanish would have observed, noting that:

“Among [the] islanders, to whom the use of iron was unknown, instruments were ingeniously formed

65 It is in this light that one can fully appreciate the existence of the complex social and material organisation that would have greeted Columbus. Sued-Badillo notes that there is plenty of archaeological evidence indicating that complex practices for food cultivation such as irrigation, terraced fields, mounds, and companion-planting (a process whereby farmers plant different crops in close physical proximity on the theory that they will benefit each other) were widely in use (1992: 603). Watts writes that Precolumbian agricultural practices “devolved around the planting of crop species which [would] reproduce vegetatively from cuttings; and seed plants [would have] played a very minor role ... [and that] there was no one staple” (1987: 53). Watts further notes that food returns from [Precolumbian] subsistence systems were dependable year-round” (1987: 64). This would explain the prevalence of carbonised remains throughout the Caribbean of a range of domesticated edible plants such as: maize, chili peppers, palm fruits, and tubers, and “a variety of wild or quasi-domesticated plants” such as: palm fruits, sea grapes, pigoen plum, and panicoid grasses (Keegan 1996: 277). In fact, Edwards noted that maize made up only a small portion of indigenous diet, that the “considerable part” came in the form of vegetables (1793: 14).

66 The “little squadron” Coke is referring to consisted originally of four ships; of which two were lost before Columbus decided to shipwreck the remaining two onto Jamaica in order to repair them (1808: 217).

of stone, and of a certain species of durable wood, which were endowed with nearly equal solidity and sharpness. We find them felling large trees, building canoes and houses, and forming domestic utensils of exquisite workmanship. Possessing the tools and materials necessary for these purposes, they could not be destitute of proper implements for the ruder operations of husbandry, on a soil incapable of much resistance.” (1793: 80)

It is therefore fitting that Sued-Badillo makes it a point to dispel “[t]he prevailing historical vision of a depopulated, impoverished, [and] ruined Caribbean” (1992: 602) and quotes, at length, the following passage written by noted archaeologist and ethnologist Laurette Séjourné:

“[In] spite of extreme demographic density and the lack of machinery and work animals, the members of Precolumbian societies enjoyed physical health, individual independence, security, some leisure, which implies a distribution of resources and an integration to the collectivity that in our days would seem a utopia.”⁶⁷ [(Séjourné 1971:7-8) in Sued-Badillo 1992: 605]

Turning our attention specifically to Jamaica, archaeologists have revealed that the island contained a high degree of material infrastructure and organisation. Carbon dating estimates place the current archaeological record concerning initial human settlement on Jamaica at 1,300 +/- 120 years BP⁶⁸ [AD 650 +/- 120] (Keegan, 1995: 411; Burney 1997: 446). However, Precolumbian human migration to Jamaica was unlikely to have occurred as a one-off. In their examination of the stylistic differences of indigenous cultural artefacts such as pottery⁶⁹, Keegan and Atkinson have suggested “that there were two separate migrations to Jamaica ... the first after AD 700 [1250 BP] [and] the

67 The passage continues: “From all of this follows that if we refuse to analyze the invasion that destroyed a civilized world and laid the seed of a system in which hunger, humiliation, and bloody repression constitute the only form of survivorship, contemporary underdevelopment should be a result of congenital incapacity, of the irremediable racial inferiority that justified extermination and vassalage” [(Séjourné 1971:7-8) in Sued-Badillo 1992: 605]. In fact, the sentiments of Séjourné and Sued-Badillo were being made at least two centuries before, when natural-historians such as Edwards were asserting statements such as the following: “How ill informed, or prejudiced, are those late writers, therefore, who, affecting to disbelieve, or endeavoring to palliate, the enormities of the Spanish invaders, represent these once delightful spots, when first discovered by Columbus, to have been so many impenetrable and unhealthy deserts!” (1793: 13). It should be noted that “the enormities” Edwards was referring to concerned, for the most part, the genocide of the various indigenous peoples throughout the Caribbean. The British of course were responsible for their own “enormities” throughout the region as well.

68 The current earliest ages indicating initial settlement for other islands in the Greater Antilles are: Puerto Rico, 3010 +/- 70 years B.P.; Cuba, 5140 +/- 170 years B.P.; and Hispaniola, 5580 +/- 80 years B.P. Burney notes that “[s]uch discrepancies between large adjacent islands seem improbable, and may simply reflect the need for more emphasis to be placed on finding early sites [and that] it could [also] be a reflection of low human population densities” (1997: 446).

69 Howard notes that “Jamaican [Precolumbian] pottery is of coiled construction, the coils being set by and shaped by anvil and paddle technique rather than scraping ... The finished pots were [then] fired by the open hearth method” (1856: 52).

second around AD 1000 [950 BP]” (2006: 25-26). Estimates of the Precolumbian Jamaican population range from 20,000 (Knight 1990: 7) to 60,000 (Martin 1836: 10; Blome 1678: 2) to 80,000 to 100,000 (Phillippo 1843: 18) people who were divided into many principalities (Edwards 1793: 70), living in village sites themselves ranging between 1,000 to 5,000 inhabitants (Wilson 2001: 523; Knight 1990: 16; Watts 1987: 69; Cosculluela 1946: 14).⁷⁰ Village sites were built “almost without exception, on or near the tops of low lying hills ... [and] [t]he majority of midden sites [have been] located fairly close to a source of fresh water supply and near land suitable for agriculture” (Howard 1956: 47). Allsworth-Jones et al. have found a distinct pattern of settlement, indicating that most settlement sites were located at altitudes ranging from 60 meters to just over 600 meters above sea level (2006: 37)⁷¹. Furthermore, the pattern of archaeological evidence indicates that the Precolumbian human populations residing on the island did not have uniformed access to material and aesthetic goods, as exemplified by localised remains of wood and stone carvings, ceramics, and tools that differ in concentration throughout the island (Wilson 2001: 523), leading some archaeologists to suggest that domestic trade must have existed within the island (Roobol and Lee 2006: 142).

The following excerpt from George Wilson Bridges' *The Annals of Jamaica*, published in 1828, chronicles the works of two prominent early-sixteenth century Spanish historians⁷², Peter Martyr d'Anghiera and Bartolomé de Las Casas, and reveals that Precolumbian Jamaican society had a standard of civility not unknown to the Spaniards of the day⁷³:

“Martyr declares, that the island of Jamaica was inhabited by a race of Indians more enlightened, kind,

70 Keegan notes that Precolumbian Jamaica is thought to have had a large population (1994: 262).

71 The hill top locations of village sites have been explained by some to be a defensive response against neighboring warring tribes; however, this explanation has been discredited by most archaeologists, as “there is no evidence of [accompanying] earthworks or palisades, [instead] [t]he simplest explanation is that the hill tops, exposed to sea breezes, were, then as now, the most healthful and pleasant places to live in tropical Jamaica” (Howard 1956: 47).

72 The historical record documenting Precolumbian Caribbean societies is actually reliant upon the works of three late-fifteenth/early-sixteenth century figures. Watts puts it best when he states: “much of our written knowledge of aboriginal conditions comes from three primary sources, the works of Peter Martyr [d'Anghiera], Bartolomé de las Casas, and Oviedo y Valdes ... Oviedo and Las Casas frequently took opposing positions over matters of indian [sic] policy in the New World, and this in part devolves from their varying experience and background” (1987: 43-44).

73 This sentiment was shared by Phillippo, who wrote “the island is said to have been densely populated by Indians, a race of men benevolent and mild in their dispositions; of great simplicity of manners; and by no means unskilled in some arts of civilized life” (1843: 8-9).

and gentle, than any its discoverers had met with. Columbus described it as by far the most beautiful island in these seas; and said, that the innumerable canoes which came off to him, attested an abundant population ... Las Casas, who declares that the island abounded with inhabitants “as an ant-hill with ants” ... [t]here can be no doubt, therefore, that Jamaica was thickly populated, and its favoured spots, the savannahs, richly, though rudely, cultivated. ... [v]ery little labour earned for them the gratification of every want, and induced an apathetic indolence which it required some extraordinary occasion to disturb. They possessed, however, in some degree of perfection, the art of manufacturing the cotton which grew spontaneously in their Eden, and they wrought it into hammocks or beds, variously dyed with much brilliance and beauty ... [t]heir island was to them an untainted paradise, yielding abundantly to the full gratification of their desires” (Bridges 1828: 77-80).

For hundreds of years, the Precolumbian Jamaican people lived in relative harmony with their environment. The reasons why this was possible are today seen to border the enigmatic. It is relative to this arcane existence that we can discuss the conditions facilitating the development of peoples in contemporary Jamaica.

The Land of Wood and Water Today

“The environment of Jamaica has been summarized in the past by reference to the country as the land of wood and water ... It is now debatable whether the island can be so characterized today, as significant environmental modification has accompanied the development of the island over the last four centuries.” [Government of Jamaica 1995, 1997]

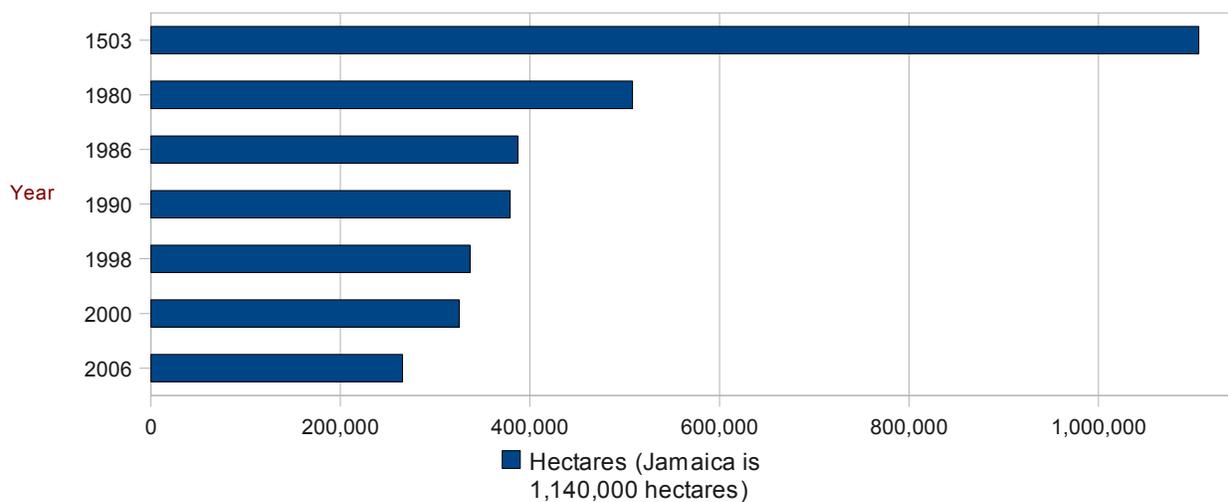
Forests

Tole notes that Jamaica's forests “maintain soil productivity, and protect watersheds, wildlife habitats, and biodiversity ... [and are] essential to the economic life of the island, particularly to its poor, who depend directly on them for a variety of building supplies, medicines, fruits, and wood-based fuels” (2001: 455). Much of the islands original “moist tropical limestone forest” are located along the *Cockpit Country*, a range of karst terrain on the western part of the island (Environment News Service 2006); while secondary forest cover the *Dry Harbour Mountains* located in the north (Tole 2001: 459). The rate of deforestation has averaged 1.2 percent per year since 1990⁷⁴. Figure 4.3 depicts the area of

74 From 379,000 hectares in 1990, to 325,000 hectares in 2000, to 265,000 hectares in 2006 (Lee 2006: 96; Wilke et al. 2002: 259).

forestation over the island throughout the past twenty-five years. It should be noted that the statistics indicating forest coverage in Jamaica can vary considerably according to the particular methodological approach used by researchers (Evelyn and Camirand 2003: 355; Camirand and Evelyn 2004: 32). For example, Tole's study of the rate of deforestation in Jamaica between the years 1987 and 1992 revealed that forest coverage accounted for only 20.3 percent of the island (2001: 466)⁷⁵, yet the Government of Jamaica have calculated that forest coverage on the island is closer to 30 percent (2004: 48). Of the forest coverage found along areas which are relatively accessible, the government of Jamaica has reported that only 6 percent of undisturbed forest now cover the flatter Jamaican landscape (Government of Jamaica 1997)⁷⁶. The United Nations Human Development Report for the year 2000 noted that Jamaica was being deforested at a rate of 7.5 percent between 1990 and 1995 (2000: 233). Unsurprisingly the World Resources Institute⁷⁷, in 1995, ranked Jamaica as the country with the greatest deforestation rate in the world.

Figure 4.3: Total forest coverage on Jamaica⁷⁸



⁷⁵ According to Tole, their study “represent[ed] the first island-wide estimate produced using satellite images and consistent forest definitions” (2001: 466).

⁷⁶ Most of Jamaica's forests have since been radically affected by clearing, fire, and introduced species (United Nations 1996b).

⁷⁷ A Washington D.C. based environmental think tank.

⁷⁸ Data was taken from four sources: Lee 2006: 96; United Nations 2005b: 9; Wilke et al. 2002: 259; Government of Jamaica and United Nations Food and Agriculture Organization 1989: 4.

Freshwater

Ground and surface-water are the primary sources of freshwater for Jamaicans⁷⁹, with eighty-four percent of the island's freshwater derived from groundwater sources and the remaining sixteen percent from surface-water (Emanuel 2004: 5)⁸⁰. Limestone aquifers comprise the single largest source of groundwater for the population; “30% of [which] is used to meet the demand for potable water [and the] remaining 70% is used for irrigation” (Government of Jamaica 2003: 16)⁸¹.

According to the Government of Jamaica, 25 percent of the island's developed groundwater sources have been closed due to contamination, and an additional 40 percent of groundwater sources “are at risk from contamination” (Government of Jamaica 2003: 16). An environmental assessment of Jamaica, submitted to the Inter-American Development Bank, noted that “most surface waters fail to meet the recreational water quality standard because of microbial organisms contamination” (Matheson 2007: iii). Rates of groundwater contamination in the Kingston Metropolitan Area (KMA), the island's most urbanised and densely populated region, is significantly higher than that found throughout the rest of the island; furthermore, groundwater contamination within the KMA affects 60 percent of all of the available sources (Government of Jamaica 2003: 16). According to the International Water and Sanitation Centre (IRC)⁸², the main reason for well-closures in Jamaica is the detection of high levels of nitrate, sodium, and chloride in the ground water (2002)⁸³; and Matheson notes that all but one river-basin are affected by “one or more industrial effluents, saline water

79 Rainwater catchment is also considered to be a source of freshwater, although it should be noted that this is a most insignificant source.

80 Groundwater sources are wells and springs; while surface-water sources are rivers and streams (Government of Jamaica 2003: 16). A further point of interest is that 65% of the population have household connections through which they receive water; the remaining 35% of the populations rely upon “standpipes, water trucks, wayside tanks, community catchment tanks and rivers and streams” (Government of Jamaica 2003: 17).

81 95 percent of all groundwater extracted comes from limestone aquifers (Kundell 2007: 3).

82 A Netherlands based not-for-profit research institution monitoring water quality and access globally. The organisation is funded in large part by the Dutch Ministry of Foreign Affairs.

83 According to the IRC, the sources of these compounds are “seawater intrusion of coastal aquifers; caustic soda contamination of groundwater and surface water from alumina plants; organic and bacteriological contamination of both groundwater and surface water by wastewater from agro-industrial waste; nitrate and bacteriological contamination of groundwater; and groundwater contamination by seepage from unlined solid waste dumpsites and leaking underground petroleum storage tanks” (2002).

intrusion, or the presence of microbial organisms” (2007: iii). Of course compounding the issue of access to freshwater, is the increasing frequency of water shortages in both the KMA and the heavily irrigated areas along the south coast of the island (Silvera 2007; Seaga 2005; United Nations 2003: 6; Government of Jamaica 1995: 7). In fact, water withdrawals have increased by more than 350 percent since the 1960s, whereas the population has grown by little over 60 percent in that period of time (Lahmeyer 2003). Tole notes that “at least 19 of the 26 identified Watershed Management Units on the island are [at a] critical condition due to declining water supplies and 60 named rivers no longer flow annually” (2001: 458).

In his account of the water systems on the island, Long estimated the presence of “...sixteen large harbours, and thirty bays or shipping-places which have good anchorage” (1774: 357)⁸⁴. Almost fifty years later, Stewart proclaimed “[t]here is no country in the world better supplied than Jamaica with harbours and other shelters for shipping...” (1823: 31)⁸⁵. Indeed, Jamaica has the world's seventh largest natural harbour⁸⁶, which continues to be used for various industrial activities, making it today, one of the most contaminated harbours in the wider Caribbean area (Emanuel 2004: 4)⁸⁷.

Generally, the environmental problems facing the island today are rooted in the island's drive for economic prosperity. The following passage from Lundy synthesizes the environmental issues facing Jamaica:

“[Jamaica] suffers from a variety of environmental problems typical of un[der]-developed countries (Girvan and Simmons, 1991). These include high rates of deforestation (Eyre, 1990) and degradation of coastal ecosystems (Bacon, 1990). There is pollution of air, land and water by industrial and agricultural

84 The following statement preceded Long's comment: “[there are] about two hundred rivers, seventy of which [are] navigable by small craft ... with their branches and smaller streams ... so essential to their being in a wholesome state for human drink” (1774: 357).

85 Stewart's comment continued: “[and] no less than forty rivers varying in breadth from twenty to an hundred feet or more ... [m]ost of these abound with the finest fish” (1823: 32).

86 This would be Kingston Harbour, which is “roughly ten miles long and two miles wide” (Port Authority of Jamaica), and is also home to the third largest port in the Caribbean and Latin America (Government of Jamaica 2005). As such, the Kingston Port is an important transshipment port in the Western Hemisphere (Government of Jamaica 2005).

87 Matheson notes the main industries polluting the Kingston Harbour are “bauxite, alumina, sugar, distillery, agri-processing, food and beverage, and brewing industries” (2007: ii). As such, the standard for drinking water is exceeded 9 times in the Kingston Basin (Matheson 2007: 17).

development. In particular, bauxite mining has caused considerable environmental damage (Silva, 1990; Coke et al., 1987). The need for foreign exchange earnings from tourism has led to the overexploitation of the country's natural landscape, even though the industry is based on the 'unspoiled beauty of the country's natural heritage' (Bell, 1990).” (1999: 84)

These sentiments are echoed by Emanuel (2004: 5), who states that an emphasis on economic generating activities such as tourism, mining, and cash-crop cultivation, and other productive sectors place “competing demands” on the islands natural resources and have ultimately altered most of the natural areas within Jamaica. Indeed, “[t]he noble woods which [once] decorate[d] most parts of the island” described by Long in the late eighteenth century are today reduced to covering between 24 percent and 29 percent of the country (Atkinson 2006b: 97; Evelyn and Camirand 2003: 357; United Nations 2002a: 27)⁸⁸, most of which cover the largely remote and inaccessible mountainous central spine of the island; and the words of Edwards (1793: 181) which read that “[in] [n]o part of the West Indies, that I have seen, abounds with so many delicious streams” are today replaced with warnings from environmental agencies such as the International Water and Sanitation Centre, who warn that Jamaica's “[w]ater quality for household, agricultural, industrial and other uses is being threatened by human activities in several areas” (International Water and Sanitation Centre 2002). It is therefore somewhat tragic that the 'woods and waters' of Jamaica which were so romantically written about by eighteenth and nineteenth-century British natural historians are ruined, and that “[i]n many areas [of the island] the current economic incentives are for overuse of resources” (Government of Jamaica 1995: 5).

Indeed, ever since the island was first located by Christopher Columbus in 1494, Jamaica's socio-economic trajectory has been closely intertwined with its natural resources and beauty, and economic interests have played a most important role in the colonial Caribbean⁸⁹. As such, many

⁸⁸ Roughly 265,500 hectares (Atkinson 2006b: 97).

⁸⁹ Deagan notes that “Spanish presence was concentrated in the Caribbean until about 1517, when the focus of colonial attention shifted to mainland Central and South America. This also corresponded to the point in time at which the human and mineral resources of the Caribbean Islands were largely depleted” (1988: 197).

accounts of Jamaica's natural beauty have hinted overtly at the potential economic value of the island's natural infrastructure⁹⁰.

Natural resource extraction⁹¹ (including the mode of labour used to extract these resources) from their colonies was designed to alter British (and European) society (Long 1707: 377; Sheridan 1965: 304)⁹². Commodities from the colonies allowed for an expansion of consumer goods available to the expanding British middle class in the eighteenth-century (Edwards 1793: 187); furthermore, these resources also influenced British militarism, specifically its demands for building material (Stebbing 1941: 34-6). Such demands created the conditions for a fantastic rate of deforestation in Jamaica (and Britain's other colonies)⁹³.

The fact that Jamaica has been continuously deforested and polluted over a period of 500-years (and it persists to this day), with accelerated rates of deforestation and water pollution beginning in the

90 By the close of the eighteenth century, the mountains of Jamaica were still “covered with extensive woods, containing excellent timbers ... such as lignum vitae, dog-wood, iron-wood, pigeon-wood, green-heart, braziletto, and bully-tress; most of which sink in water [for preservation], and are of a compactness and impenetrability inconceivable by European workmen ... of softer kinds, for boards and shingles, the species are innumerable; and there are many beautiful varieties adapted for cabinet-work, among other the bread-nut, the wild-lemon, and the well-known mahogany” (Edwards 1793: 187).

91 Deagan writes that “Spanish presence in the circum-Caribbean established exploitive practices (mining, lumbering, sugar production, livestock, turtling) that were continued and intensified by later colonists. The greatest impact to the region, however (other than the depletion of mineral and human resources), was not during the sixteenth century but, rather, during the later periods (post-1650) of European presence in the Caribbean” (1988: 222).

92 Commenting on the institutionalisation of slave labour by Europeans on their colonies, Paul Harrison wrote that “without [such] exploitation, one may doubt whether the West would ever have industrialized in the first place ... It was the cash of Liverpool, centre of the triangular trade in slaves, cotton and rum between West Africa, the West Indies and Britain, that financed the mills of South Lancashire, the cradle of the industrial revolution” (1981: 40).

93 It should be noted that Britain's own forests were “exhausted” in the seventeenth-century, therefore making “England definitely dependent on foreign supplies” (Stebbing 1941: 29). In fact, England had been “importing timber as early as the 11th century; in the 13th and 14th centuries it was brought in, in considerable quantities, from the Baltic countries to the north-east coast; though as late as the 15th century, timber was still being exported from the Weald” (Stebbing 1941: 29). As such, the colonies were seen as a ready and inexpensive way for Britain to procure timber. Thus, Indian Teak, Nigerian Ceiba, and West Indian Mahogany, among other colonies and species of tree, were ferociously cut and exported throughout the eighteenth and nineteenth centuries so that they could be used for consumer goods such as furniture (Aspery and Robbins 1953: 360), material to build houses with (Edwards 1793: 187), and supplies for the British armies in Mesopotamia during the First World War and again in the lead-up to the Second World War (Stebbing 1941: 34-6). As an additional point of interest, and one that is particularly relevant to the geopolitical issues of today, it should be noted that Stebbing was cognisant of the environmental stresses accompanying war. Of the military build up of European armies throughout Africa in the years leading up to the Second World War, he wrote: “Warfare of the present day ... mechanised warfare – is a very different proposition [than wars of past epochs]. The armies are or will be operating over extensive regions of the African bush or savannah upon which the people so commonly depend for their farming or grazing their herds and flocks. What will be the condition of these areas when Hitler has been beaten? It appears to be a point worthy of consideration now, and not relegated to a belated future” (1941: 36).

middle of the seventeenth century, should not be underestimated (McElroy 2002: 54)⁹⁴. It should also be remembered that such degradation is almost wholly attributable to the drive for economic growth; whether in the form of economic growth for the metropolitan powers during Jamaica's overtly-colonial history⁹⁵, or for the central government in post-independence Jamaica. The effects of this development strategy on its supposed beneficiaries, the Jamaican people, needs to be identified⁹⁶. Indeed, Matheson notes that “the linkages between environmental stressors and socio-economic development are both complex and strong ... environmental stressors arise in part from economic activity (e.g., tourism, mining, agriculture, construction, manufacturing) ... [and] can lead to adverse environmental and health outcomes (e.g., loss of biodiversity, degraded natural resources, increased vulnerability to natural hazards, etc.)” (2007: 10). Thus, we turn our attention to the contemporary social and economic landscape of the island and trace its respective trajectories since Jamaica gained independence, so that we can eventually unpack the linkages that exist between Jamaica's economic, environmental, and societal vulnerabilities.

The template used to describe Jamaica in an holistic manner is quite similar to the case-study method employed by other small island scholars; specifically research done by: Pelling and Uitto (2001), who examined Barbados with a view to identify the “structural relationships” between SIDS and global processes; Ghina (2005), who produced a detailed characterization of the Maldives in order to explore the implications of the “special” status placed upon SIDS in international policy making; and the work of Nagarajan (2006), who detailed non-sustainable practices and decline of Easter Island

94 Indeed, the British colonial office of the *Chief Conservator of Forests* (based in Madras, India) pointed to the problem of Jamaican deforestation in 1835, stating: “During the 400 years under consideration there was ... a most pernicious system under which an area of woodland is cut down and burnt in order that the land may be made to produce a crop of foodstuffs ... and so on until a whole countryside has been denuded of its original forest growth” (Wimbush 1935: 4).

95 These sentiments were raised as early as 1823 by Stewart who pointed out that Jamaican mahogany was growing increasingly scarce mahogany as a result of the British domestic and export market. Similarly, writing of the demand in Britain for timber from those Caribbean territories held by the British in the seventeenth, eighteenth, and nineteenth centuries, Stebbing noted that “[a]s a people, therefore, we [have] failed to recognise ... that, in fact, a laissez-faire policy in permitting the unchecked exploitation of the timber forests ... might result in a quicker degradation of the forests and their ultimate disappearance with disastrous effects to the country concerned” (1941: 30).

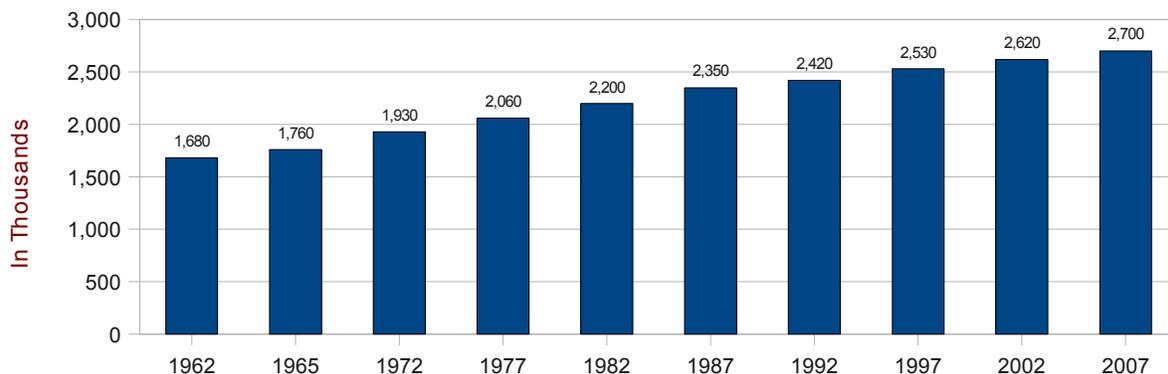
96 Emanuel notes that “Jamaicans generate approximately 1kg/per person/day of waste (2002 estimate) ... The quantities of waste generated in Jamaica are similar to that of first world countries, high consumption patterns but inadequate infrastructure and resources to deal with these large quantities of waste” (2004: 5-6).

civilization to elucidate the pitfalls of contemporary approaches to sustainability.

Demography

Of the four islands comprising the Greater Antilles, Jamaica is the third largest in terms of land area and smallest in terms of human population, which is estimated to be 2.7 million (United Nations 2007a)⁹⁷. Similar to the other islands in the Greater Antillean chain, Jamaica has a somewhat densely organised population at 244 persons/sq km, slightly less than the Greater Antillean average of 265 persons/sq km (United Nations 2007a)⁹⁸. Jamaica's population has steadily increased over the past fifty years (Figure 4.4), and is projected to do so over another twenty years, albeit at a lower rate, after which the population base is projected to stabilize and then decline as indicated by current declining fertility rates and an aging population (United Nations 2007a; United Nations 2007e: 46, 56, 62, 75). This being noted, the overall population is young, whereby 57 percent of the current population is under 30 years of age (Killmer et al. 2006: 1).

Figure 4.4: Total population of Jamaica 1962-2007⁹⁹



97 The Caribbean islands have a combined land area of 227,665 square kilometers (an area almost exactly twice the size of the island of Newfoundland) and a combined population of 41.3 million people (United Nations 2007a). Of the total land area in the Caribbean, 91 percent (206,691 square kilometers) is distributed over the four islands (or, the five island states) of the Greater Antilles. Furthermore, the Greater Antilles contain 90.3 percent (37.3 million people) of the regions population (United Nations 2007a).

98 The Caribbean region is the most densely populated region in the Western Hemisphere, its population density is measured to be 173 people per square kilometer. In contrast, Central America's is measured to be 58 people per square kilometer; South America's is measured to be 21 people per square kilometer; and Northern America – which consists of: Greenland, Canada, Saint-Pierre-et-Miquelon, the United States, and Bermuda – is measured to be 15 people per square kilometer.

99 Data taken from L'Université de Sherbrooke World Perspective Statistical Database.

Statistics tracking the net-migratory rate in Jamaica have consistently shown that a significant number of citizens leave the island every year¹⁰⁰. Figures from the past ten-years reveal that the exodus has consisted of roughly 7,800 Jamaicans per year (Government of Jamaica 2006). High rates of migration from Jamaica mean that “for every three Jamaicans living in Jamaica, there is at least one Jamaican living abroad. In other words, at least 25% of Jamaica's citizens currently live overseas, mostly in the United States, Canada, and the United Kingdom” (Kim 2007: 7). Of these migrants, a significant percentage (ranging from 25 to 33 percent) are either skilled workers or professionals with secondary and tertiary-level education (Mishra 2006: 16).

Settlement patterns within the island indicate a growing urban populace (Figure 4.5), currently estimated to be 54 percent of the total population (United Nations 2007d: 93; Killmer et al. 2006: 1; Emanuel 2004: 4)¹⁰¹. Roughly half of all urbanites are concentrated in Kingston, the country's capital. The Kingston Metropolitan Area (KMA) covers an area of 554 sq km and overlaps three of the islands fourteen parishes¹⁰², the KMA has a population of 700,000 and a population density of approximately 1,528 persons per sq km (Jamaica Red Cross 2004: 2). Increasing urbanization and overcrowding have affected the composition of Jamaica's urban centres, specifically with respect to the size of urban-slums¹⁰³, which comprise roughly 36 percent¹⁰⁴ of all urban centres on the island (United Nations 2007d).

100Indeed, the Caribbean region has one of the highest rates of emigration in the world and “almost all the Caribbean nations are among the top 20 countries in the world with the highest tertiary-educated migration rates” (Mishra 2006: 3-4).

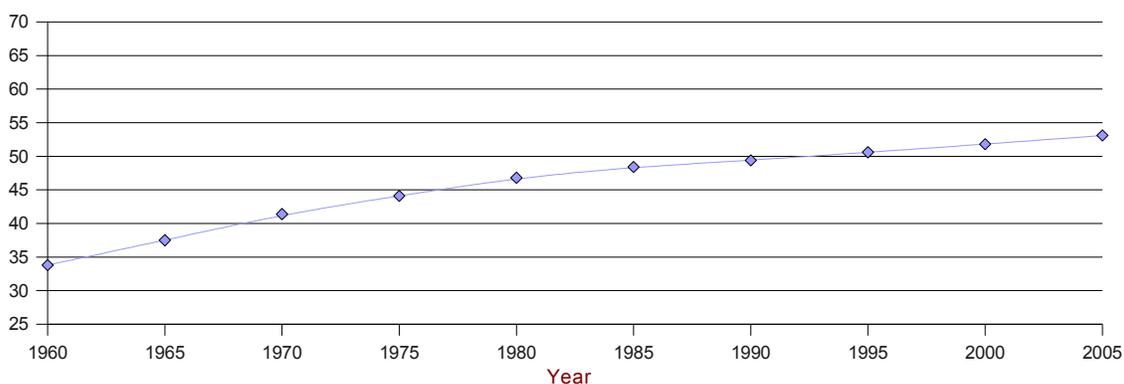
101In 1975, 44% of the Jamaican population were located in urban centres (United Nations 2006a: 298); projections for 2015 indicate that 63.5% of the population will be living in urban areas (United Nations 2006a: 298).

102Jamaica is divided into 14 parishes: Clarendon, Hanover, Kingston, Manchester, Portland, Saint Andrew, Saint Ann, Saint Catherine, Saint Elizabeth, Saint James, Saint Mary, Saint Thomas, Trelawny and Westmoreland. The Kingston Metropolitan Area covers an area of 554 sq km in the parishes of Kingston, St. Andrew, and southeastern municipality of Portmore in St. Catherine (Jamaica Red Cross 2002: 2).

103The United Nations has defined “urban-slums” to mean those households that have “unacceptable access” to: improved water, improved sanitation, sufficient living area, durable housing, secure tenure (United Nations 2007d).

104This is a 2001 statistic, a more current estimate would be closer to 40 percent. The United Nations reveal that 20% of the population were considered to have been living in urban slums in 2001 (2006d).

Figure 4.5: Urban population (% of total population) 1960-2005¹⁰⁵



Although the per capita Gross National Income is recorded to be USD 3,390 (World Bank 2007: 121), income distribution is extremely uneven. The wealthiest 20 percent of the population account for more than 51.0 percent of the country's share of income; whereas the poorest 20 percent account for 5.3 percent (United Nations 2007/2008: 292); moreover, this disparity has been widening over the past decade¹⁰⁶. Furthermore, an average of 18.7 percent of Jamaica's population have been living below the national poverty line since 1987 (United Nations 2002b: 157; United Nations 2007/2008: 239)¹⁰⁷.

Indices of morbidity in Jamaica are largely related to “changes in lifestyle behaviour” (United Nations 2003: 8). The Inter-American Development Bank notes that “hypertension, diabetes, cancers, arthritis, asthma and major depression, dominate the disease profile ... [a]lmost one in every two adults has a chronic condition and estimated prevalence rates for some conditions such as hypertension, prostate cancer and diabetes are among the highest in the Americas” (Barrett and Lalta 2004: 9). This is confirmed by the World Health Organization, who have noted that sedentarism, overweightedness, and obesity¹⁰⁸ are “the main risk factors” affecting the likelihood of developing chronic

¹⁰⁵Taken from L'Université de Sherbrooke World Perspective Statistical Database.

¹⁰⁶The statistics for 2006 were: 51.0 percent and 6.7 percent for the wealthiest fifth and poorest fifth respectively (United Nations 2006a: 336). The statistics for 2000 were: 46.0 percent and 6.7 percent for the wealthiest fifth and poorest fifth respectively (United Nations 2002b: 195).

¹⁰⁷The United Nations statistic from the 2002 Human Development Report contrasts somewhat strikingly with a Government of Jamaica sponsored report which calculated that an average of 25.1 percent of Jamaica's population lived below the national poverty line between the years 1989 and 2001 (2004: 19). According to the United Nations, 23% of the Jamaican population were living below the poverty line in 2002 (2002b: 23). The United Nations Statistics Division reveal that 11% of the population are considered to be living chronically undernourished, that is receiving less than the internationally agreed upon “minimum level of dietary energy consumption” that constitutes being 'nourished'; this statistic has not changed since 1991 (2006d).

¹⁰⁸The Food and Agriculture Organization of the United Nations (UN FAO) note that there has been “an increase in the

noncommunicable diseases in Jamaica (2007: 451). The table below lists the “ten leading causes of death” in Jamaica as compiled by the World Health Organization.

Table 4.1: Ten leading causes of death, by rank, Jamaica, 2002.¹⁰⁹

Disease Category	Total number	Rate per 100,000 population
Malignant neoplasms	2,686	102.3
Cerebrovascular diseases	1,905	72.6
Heart disease	1,774	67.6
Diabetes mellitus	1,477	56.3
Homicide	1,045	39.8
HIV disease	989	37.7
Hypertension	784	29.9
Acute respiratory infections	479	18.2
Chronic lower respiratory disease	437	16.6
Transport accidents	408	15.5

Murder rates in Jamaica remain among the highest in the world (Blavy 2006: 6; Martin et al. 2006: 9)¹¹⁰. The homicide rate has, since 1982, more than quadrupled (Maertens and Anstey 2007: 8). Headley notes that “[a] more or less consistent pattern of escalating violent crime and recurring violence ha[s] been building steadily over the [past] 25 to 30 years” (2002: 66). Figure 4.6 shows the progression of the homicide rate over the past three decades. Indeed, a telling indication of the worsening rate of homicides can even be derived from the increases over the past decade¹¹¹. Kathuria et al. note that the increase in the crime rate “reflect[s] the serious social problems associated with

number of meals consumed outside of the home since 1992 [and that] this has contributed to the high availability of fats in total dietary energy supply and may explain, in part, the high prevalence of overweight and obesity observed among adults” (United Nations 2003: 4). The UN FAO further noted that the prevalence of obesity was almost three to four times higher in women than in men (2003: 4).

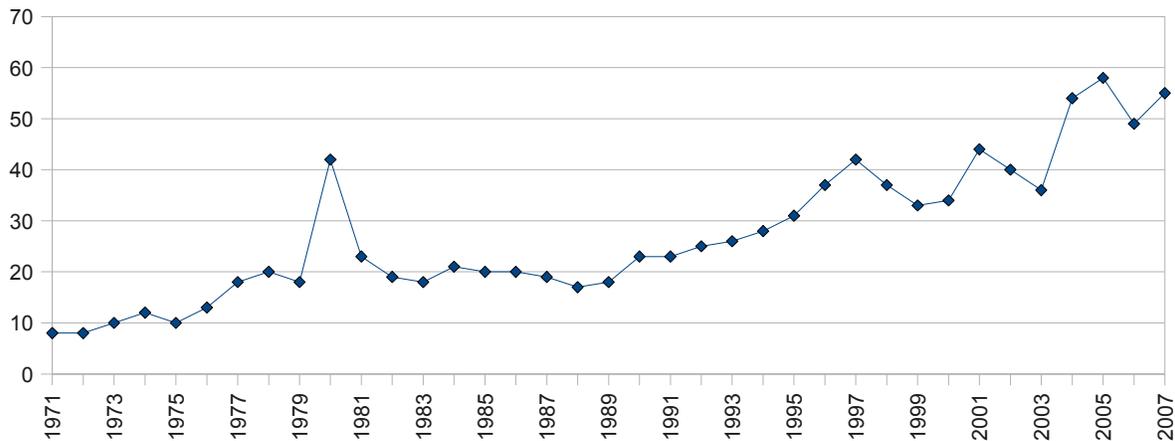
¹⁰⁹World Health Organization 2007: 451

¹¹⁰Murder rates in the Caribbean - at 30 per 100,000 population annually - are higher than for any other region of the world and have risen in recent years for many of the region’s countries, and assault rates (including incidents of rape) are significantly above the world average as well (Maertens and Anstey 2007: 4). As can be expected, there are implications of high rates of crime and violence on the regions overall human welfare, economic stability, and social development (Maertens and Anstey 2007: 41).

¹¹¹In 2005 Jamaica recorded 1,674 homicides, the most the island has ever had (Doz Costa 2008: 4). Homicide rate time series data are available for the Dominican Republic, St. Lucia, and Trinidad and Tobago as well, and all three countries show rapidly rising rates over the 1999-2005 period. In the Dominican Republic, the homicide rate almost doubled, from 14 per 100,000 to 27; in St. Lucia, the rate more than doubled, from 9 per 100,000 to 20, and in Trinidad and Tobago the rate more than quadrupled, from 7 per 100,000 to 30 (Maertens and Anstey 2007: 9).

growing urbanization, including high levels of unemployment, formation of gangs, creation of slums, and an escalation of drug trafficking” (2003: 25). It is therefore of little surprise that the World Health Organization describes the violence in Jamaica as having “reached epidemic proportions” (2007: 450).

Figure 4.6: Homicides per 100,000 in Jamaica 1971-2007¹¹²



It should be noted that the United Nations Population Fund has reported that life expectancy in Jamaica has actually decreased over the past seven years, from an average of 75.8 years in 2001 to an average of 71 years in 2007 (2001: 69; 2007d: 89).

Macroeconomic Performance

Within the framework of contemporary political economy, Jamaica is considered to be a Small Island Developing State SIDS¹¹³, and is classified as a middle-income country (Commonwealth Secretariat 2004b: 166). However, despite it having “a solid endowment in natural beauty and mining resources and in human capital with a well-educated, English-speaking workforce” (Blavy 2006: 4; Panth et al. 2006: 6), the island's economy has failed to initiate positive social change in over a generation. The most recent United States Department of State report on Jamaica states that “high

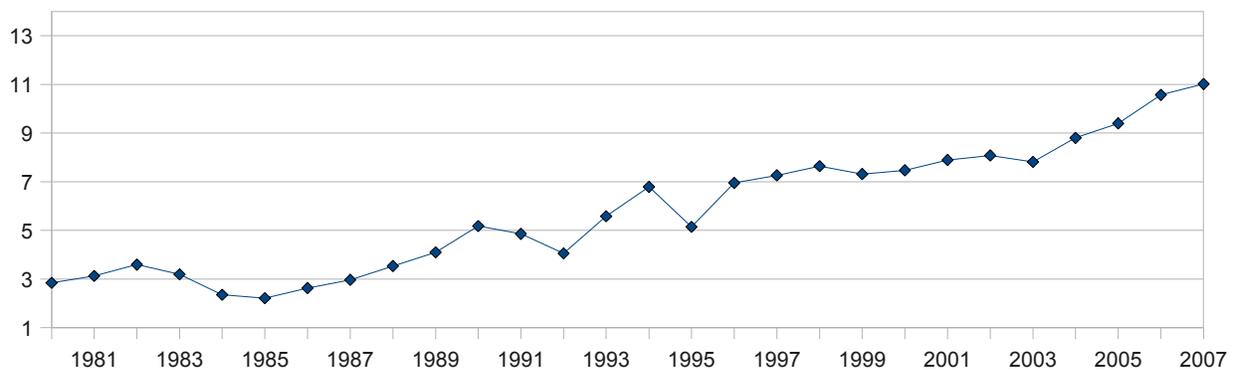
¹¹²Data taken from Maertens and Anstey 2007: 10. The 2007 statistic is an estimate.

¹¹³Nunn argues that the word *small* is a “pejorative, demeaning, and unhelpful” label that functions to minimise the relevancy of islands in social thought, and that it “should be done away with altogether” or changed to *smaller* when islands are to be discussed in comparative ways to one another (2004: 313). It should also be noted that the descriptive term *developing* used to define island states has been questioned as well. Jesinghaus notes that “[s]mall island states cannot be classified into the “industrialized vs. developing countries” dichotomy; they may be rich or poor, more or less developed, more or less dependent from single sectors such as tourism” (2002: 315).

unemployment, burdensome debt, an alarming crime rate, and anemic growth continue to darken the country's prospects” (Government of the United States of America 2007a).

Curiously, and consistent with all development plans Jamaica has agreed to follow, economic growth as measured by GDP, has been steadily expanding over the past twenty-five years (Figure 4.7). This is evidenced by “increases in the growth of domestic investment, foreign investment, labor, total exports, total imports, human capital, and agricultural export diversification” (Francis 2003: 178). Simply put, the island's goods and services producing sectors have themselves recorded steady growth (Government of Jamaica 2007b: vii). However, even though the total value of exports have increased, these values have failed to keep pace with the rising value of imports (World Trade Organization Secretariat 2005: 9; Government of Jamaica 2007b: vii); the widening difference between these values have contributed to the increasing debt-load Jamaica is carrying.

Figure 4.7: Gross Domestic Product (current prices in billions of USD) 1980-2007¹¹⁴



Similar to the vast majority of SIDS, Jamaica is considered a natural resource economy which is dependent on its limited sources of foreign exchange¹¹⁵. As such, the island's economy relies heavily on tourism, bauxite-alumina mining, and remittances (Hyett 1993: 131; Emanuel 2004: 4; Blavy 2006:

¹¹⁴Statistics taken from the International Monetary Fund (2007).

¹¹⁵Jamaica is heavily dependent upon the export of its minerals (largely alumina/bauxite) to attract foreign exchange. The United Nations Conference on Trade and Development ranks it as the fifth highest in the world based on this qualification (United Nations 2007f: 87).

19)¹¹⁶. Over two million people visit Jamaica annually, “making it the fifth most popular tourist destination in the Caribbean” (Kingsbury 2005: 122). Figure 4.8 depicts the numbers of tourists visiting Jamaica over the past decade. Tourism is the leading source of foreign exchange, “generat[ing] as much foreign exchange as all exports of goods”¹¹⁷; whereas investment in the bauxite industry have accounted for significant increases in the flows of foreign direct investment in recent years¹¹⁸ (World Trade Organization Secretariat 2005: 15). Indeed, Emanuel notes that “Jamaica [ranks as] the third largest producer of bauxite ore in the world and the fourth in the production of alumina” (2004: 7). Figure 4.9 represents the quantities of bauxite and alumina extracted from Jamaica over the past decade¹¹⁹. However, it should be noted that if the retention rates of foreign exchange flows into Jamaica are to be considered, then remittances would surpass tourism and bauxite-alumina mining; former Prime Minister Edward Seaga notes that “after deducting outflows from all export earners, retention from net remittances considerably exceeds all other foreign exchange inflows” (2006). Agriculture is another important industry, particularly as a source of employment, as it has traditionally been the country's single largest employer (Calhoun 2004: 2). However, its overall contribution to the economy, as measured by GDP, is small¹²⁰. With respect to agriculture, it should be noted that agricultural land represents approximately 44 percent of the island's total land cover (United Nations 2003: 10), yet Jamaica is considered to be a “food-deficit country,” in that there is a high dependence on food imports to meet the nutritional needs of the population (Beckford et al. 2007: 275). Figure 4.10 depicts the quantities of domestic food production in Jamaica over the past decade.

116Martin et al. note that Jamaica's economy relies equally upon the “informal sector” (2006: 2).

117 Tourism accounted for fifteen percent of GDP in 2002 (World Trade Organization Secretariat 2005: 15).

118It should be noted that communications, insurance, banking, information technology, tourism, manufacturing, and to a lesser extent, agriculture and the film industry account are sources of FDI as well (World Trade Organization Secretariat 2005: 15).

119Large and accessible deposits of bauxite ore were located in Jamaica during the 1950s (Hyett 1993: 131). Consequently, the island has become a leading exporter of: bauxite ore, the base material used in the production of aluminum; and alumina, a crystalline found in bauxite and commonly used as a thermal and electrical insulator. Black notes that the impetus for bauxite production “was brought about by the shortage of aluminum that developed during the Second World War” (1965: 218).

120Agriculture contributed 8.2 percent to GDP in 1980, however the sector's income-generation has since fallen, reaching 6.4 percent in 2001 (Francis 2003: 69).

Figure 4.8: Number of visitors to Jamaica 1995-2007¹²¹

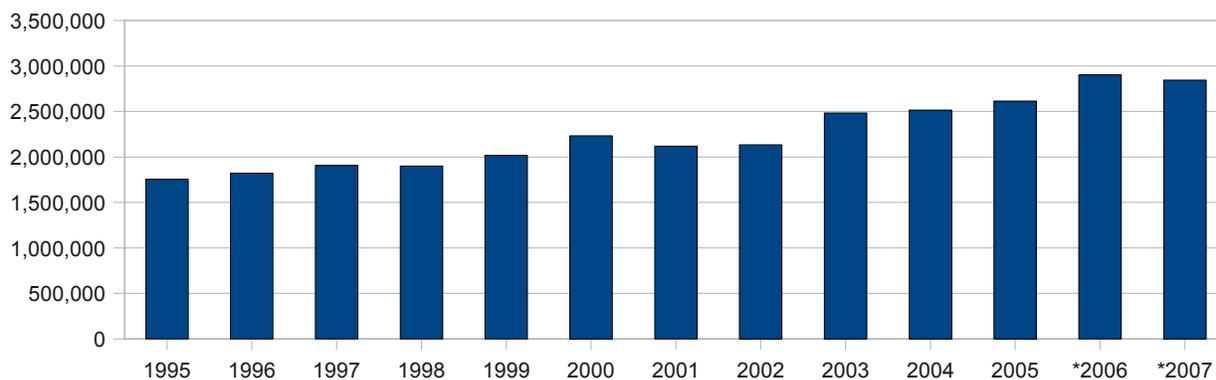


Figure 4.9: Quantity of extracted metals in Jamaica (in tonnes) 1994-2006¹²²

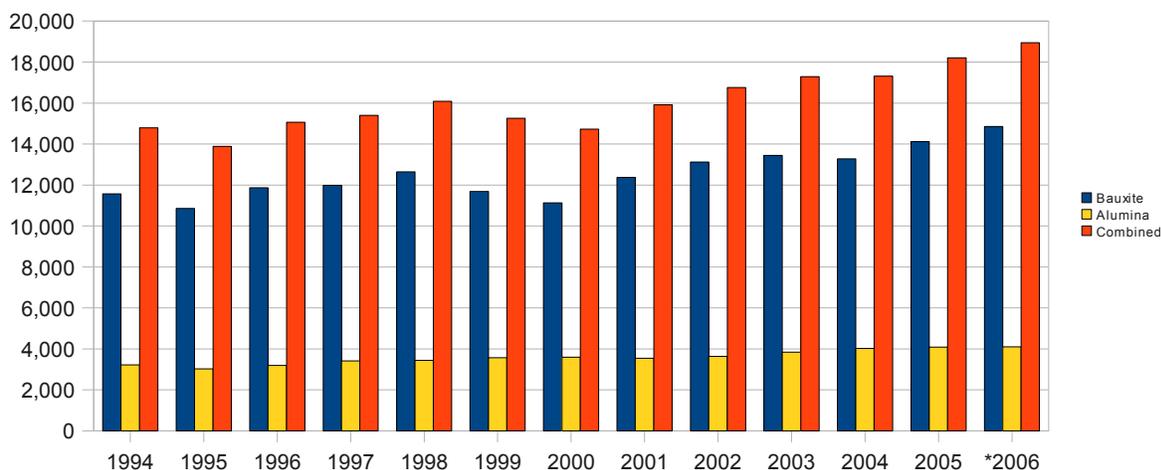
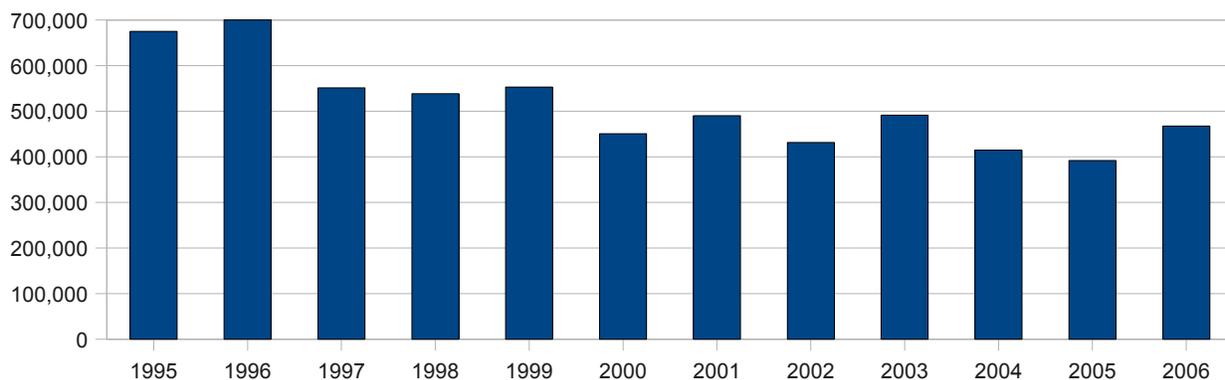


Figure 4.10: Domestic food production in Jamaica (in tonnes) 1995-2006¹²³



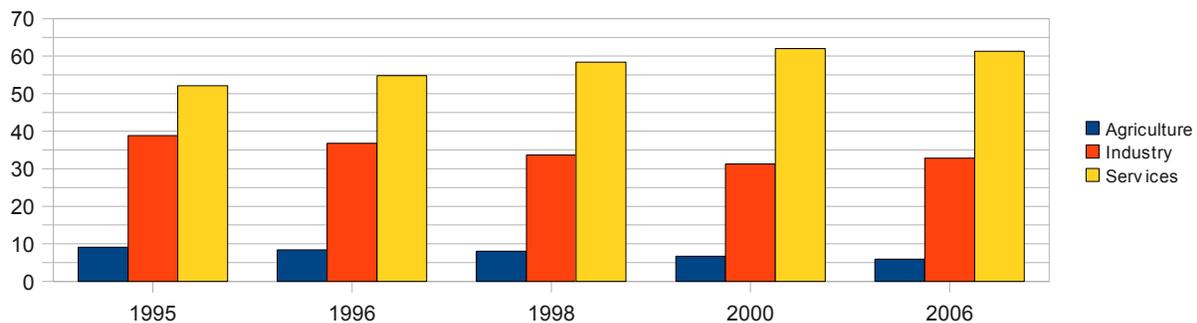
¹²¹Statistics taken from the Bank of Jamaica; values for the years 2006 and 2007 are projections and have not been confirmed.

¹²²Data for years 1994-2005 taken from the United States Geological Survey (Government of the United States of America 2000, 2007b); data for 2006 taken from the Statistical Institute of Jamaica (Government of Jamaica 2006).

¹²³Data taken from the: Ministry of Agriculture (Government of Jamaica).

Trends since the 1990s indicate that the Jamaican economy is shifting away from primary economic activities, particularly agriculture and manufacturing, and moving towards a service oriented one (World Trade Organization Secretariat 2005: 1; Kim 2007: 2). Figure 4.11 reflects the relative weight of each sector in Jamaica's economy as a percentage of the country's total GDP. As can be seen, services account for the strongest area of economic activity, the value of which has increased from 52.1 percent of GDP in 1995 (World Bank 2000) to 61.3 percent of GDP in 2006 (World bank 2006).

Figure 4.11: Sectoral performance as a percentage of overall GDP¹²⁴



Trade

Kathuria et al. describe Jamaica as being “a very open economy ... [and] a 'globalizer', meaning that it is in the top one-third of a group of 72 developing countries in terms of the increase in trade relative to GDP” (2003: 156). This being stated, Jamaica has a narrow export base comprising mainly of alumina/bauxite and some non-traditional exports, and the island is strongly dependent on imported raw materials, oil¹²⁵, and capital goods (World Trade Organization Secretariat 2005: 9). Jamaica's major exports are alumina, bauxite, sugar, bananas, chemicals, citrus fruits, rum, and coffee; and its major imports are machinery, transportation and electrical equipment, food, fuels, fertilizer (Government of the United States of America 2007a: 4). Lundy notes that “[a] very large percentage of what Jamaica produces is exported rather than used locally, while a high proportion of what the society consumes is imported from abroad” (1999: 84). Thus, import costs of goods and services represent nearly 60 percent of GDP, heavily outweighing exports, which represent less than 40 percent of GDP

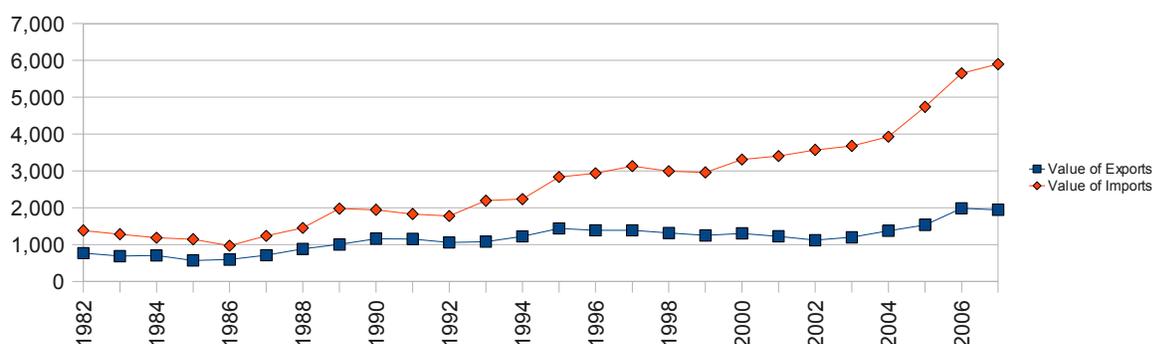
¹²⁴Data taken from the World Bank (2000; 2006).

¹²⁵“Jamaica's energy is provided primarily by heavy fuel oil (56.7%), diesel (16.9%) and gasoline (17%). The Consumption of energy is dominated by bauxite and alumina processing (36.3%), electricity generation (23.8%) and transportation (22.4%)” (Government of Jamaica 2007a: iv).

(World Trade Organization Secretariat 2005: 8).

The volume and value of imports are expanding faster than that of exports, as evidenced by the increasing share of total imports to GDP and the declining contribution of total exports to GDP since the 1980s. The share of total imports to GDP, mainly in the form of food and capital goods, has increased, from 51.0 percent in 1980 to 55.8 percent in 2001 to 58 percent in 2004 (Francis 2003: 72; Calhoun 2004: 28), while total exports have been reduced from 51.1 percent in 1980 to 41.5 percent in 2001 to 41 percent in 2004; thus, reflecting weak performances in both the traditional and non-traditional export sectors (Francis 2003: 72; Calhoun 2004: 28)¹²⁶. Compounding this imbalance is the uneven value structure of total imports and exports, whereby the former is measured to be almost three times the value of the latter (Figure 4.12).

Figure 4.12: Value of exports and imports (in millions of USD) 1982-2007¹²⁷



Although exports of primary products (mainly agriculture and mining¹²⁸) have increased, there has been a contraction in Jamaica's manufactured goods industry, which itself is heavily influenced by the garment-industry (World Trade Organization Secretariat 2005: 10-11).

¹²⁶A telling example of the state of Jamaica's balance of trade woes is found in the performance of the island's agricultural industry; whereby despite having preferential trade agreements with western countries, Jamaica "has had to import sugar and bananas from neighboring Latin America in recent years to service its [export] quotas" (Calhoun 2004: 28).

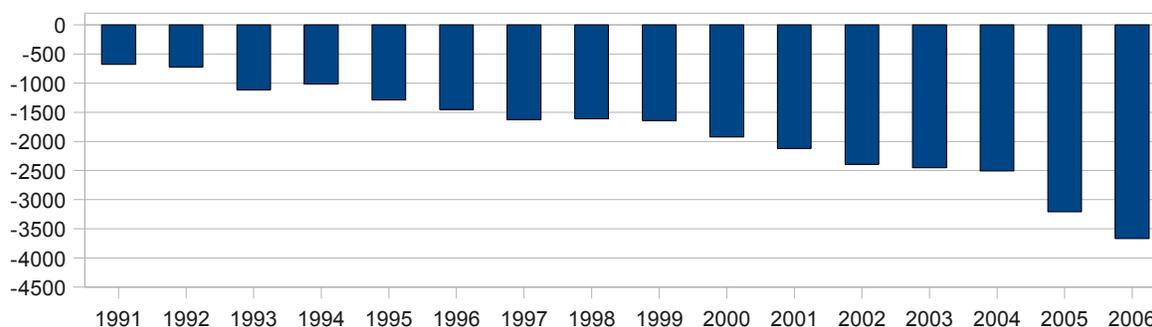
¹²⁷Values from 1982-2007 were derived from the Statistical Institute of Jamaica (Government of Jamaica 2006), however at the time of writing, the Institute had not finalised the values from 2005-2007.

¹²⁸Bauxite production recorded its highest output in 32 years in 2006 (Government of Jamaica 2007b: vii); Indeed, Jamaica's bauxite and alumina exports accounted for 60.5 percent of its total exports that year (Government of Jamaica 2007a). Matheson notes that Jamaica's bauxite reserves are estimated to last "in the order of 106 years at current production rates" (2007: 49).

Debt-to-GDP ratio

Based on these trends in Jamaica's balance of trade (Figure 4.13 & Figure 4.14), it is of little surprise that Jamaica's debt-to-GDP ratio currently stands at approximately 135 percent (Government of the United States of America 2007a: 4; United Nations 2008a: 140), of which “[r]oughly 45% of the public debt is external and 55% is domestic” (United Nations 2008a: 140). Indeed, the island's high level of public debt which, averaging between 130-150 percent of GDP, places Jamaica among the most indebted countries in the world (Kathuria et al. 2003: 71; Panth et al. 2006: 5-6)¹²⁹. This inordinately high level of debt means that “almost 60 cents on every dollar earned by the Jamaican Government goes to debt servicing” (Government of the United States of America 2007a: 4)¹³⁰. In fact, just the interest payments on the country's debt amounts to roughly 16 percent of GDP (Kathuria et al. 2003: 15; World Bank 2007), while debt servicing accounts for over two thirds of the budget in recent years and is increasing (World Trade Organization Secretariat 2005: 4). Furthermore, Jamaica's “total gross external debt” is not anticipated to subside anytime soon, as indicated by the continuous increases of debt over the past ten years (Figure 4.15) (United Nations 2006c: 146).

Figure 4.13: Jamaica Balance of Visible Trade (in millions of USD) 1991-2006¹³¹



¹²⁹Total public debt was 144 percent of GDP during the 2003-04 fiscal year, its share of domestic debt was 67 percent of GDP (which is considered unusually large) and external debt totaled 77 percent of GDP (Panth et al. 2006: 8).

Furthermore, domestic debt increased from 37% of GDP in 1997 to almost 90% in 2002 (Kathuria et al. 2003: 18; World Trade Organization Secretariat 2005: 6).

¹³⁰Jamaica's debt repayment woes have persisted now for well over a decade and a half; in 1995 the Government of Jamaica stated “[t]he most fundamental aspect of Jamaica's fiscal economy is the large proportion of debt repayment in the fiscal budget ... The repayment of domestic debt is even larger, and combined debt repayment accounts for almost 50% of the public sector budget” (1995: 3).

¹³¹Data taken from International Monetary Fund (2007).

Figure 4.14: Total External Debt (as a percentage of GDP) 1997-2003¹³²

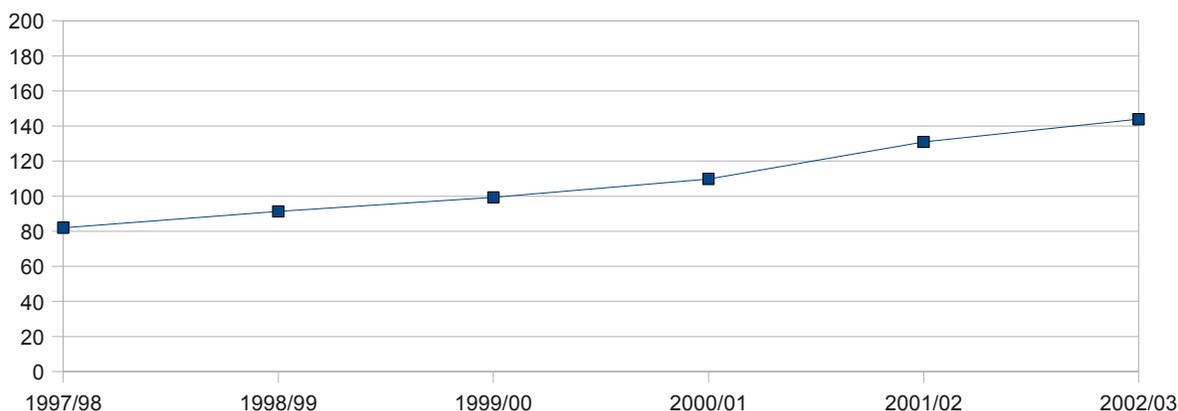
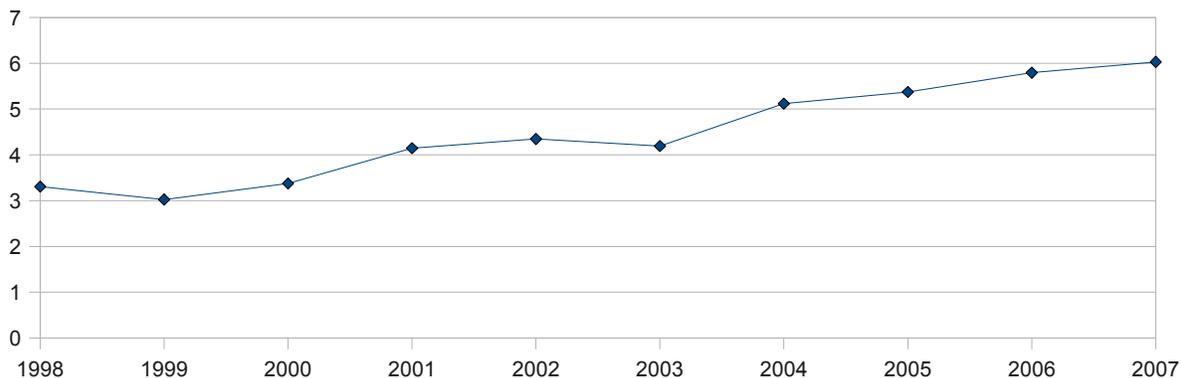


Figure 4.15: Total Gross External Debt (in billions of USD) 1998-2007¹³³



Economic paradigm

Policies governing Jamaica's economic strategy are growth-centred and “encourage foreign investment in areas that earn or save foreign exchange, generate employment, and use local raw materials” (Government of the United States of America 2007a: 4). In order to reach these goals, the Jamaican government offer a wide range of incentives to entice potential investors including “remittance facilities to assist them in repatriating funds to the country of origin; tax holidays which defer taxes for a period of years; and duty-free access for machinery and raw materials imported for approved enterprises” (Government of the United States of America 2007a: 4). These policies are the

¹³²Data taken from World Trade Organization Secretariat 2005: 5.

¹³³Statistics taken from the Economic Commission for Latin America and the Caribbean (United Nations 2008a: 166). It should be noted that the value for 2007 refers only to the “first semester” of the fiscal year, and is therefore likely to increase further.

result of Jamaica adopting two economic strategies: structural adjustment and export promotion, whereby it is theorized that “openness to foreign competition, foreign capital, and elimination of export biases [will] engender structural change in accordance with dictates of comparative advantage” (Francis 2003: 7). Successive Jamaican governments have followed this programme, popularly identified either as *neoliberalism*¹³⁴ (Marable 2007: 1) and/or the *Washington Consensus*¹³⁵ (Francis 2003: 8), to actively “deemphasize” sectors such as agriculture that are incompatible with the above mentioned policies, and instead divert capital to strengthen “seemingly more promising sectors” such as garment manufacturing, mining and tourism (Calhoun 2004: 2). As such, these latter sectors have been bolstered by a conscientious effort by economic planners to attract textiles companies to locate on the island¹³⁶, facilitate the flow of mining and quarrying technology, and increase its tourist carrying

¹³⁴Defined as “the elimination of all state protections for the population and [on] all limits on the movement of capital” (Foster 2007b: 3); and “neoclassical economics enforced by finance capital and imperialist power” (Lebowitz 2006: 39).

¹³⁵“The term *Washington Consensus* was coined in 1989 by economist John Williamson and refers to a list of policy recommendations for countries interested in reforming their economies. These recommendations have been instrumental in shaping economic reforms in the developing and post-communist worlds. The recommendations are as follows: fiscal discipline; redirected public expenditure; tax reform; financial liberalization; adoption of a single, competitive exchange rate; trade liberalization; elimination of barriers to foreign direct investment; privatization of state owned enterprises; deregulation of market entry and competition; and ensuring secure property rights” (emphasis added, Callhoun 2004: 26).

¹³⁶The garment-manufacturing industry in Jamaica is, in many ways, a residual of previous attempts at establishing an industrialised economy in the island. Industrialisation in Jamaica was initiated at the end of the 1940's and at the beginning of the early 1950's along the lines of Nobel Prize winning economist W. Arthur Lewis' *dual economy* strategy; whereby “the development of a dominant urban economic sector [would occur] alongside a subsistence rural economy ... [t]he articulation between the two was to be the supply of labour which could be drawn from the rural to the urban sector” (Grugel 1995: 175). This was followed by another strategy in the 1960s and 1970s, known commonly as *Import Substitution Industrialisation* (ISI), whereby it was believed that developing economies could promote domestic industrialisation by producing goods which they would otherwise import (Francis 2003: 3).

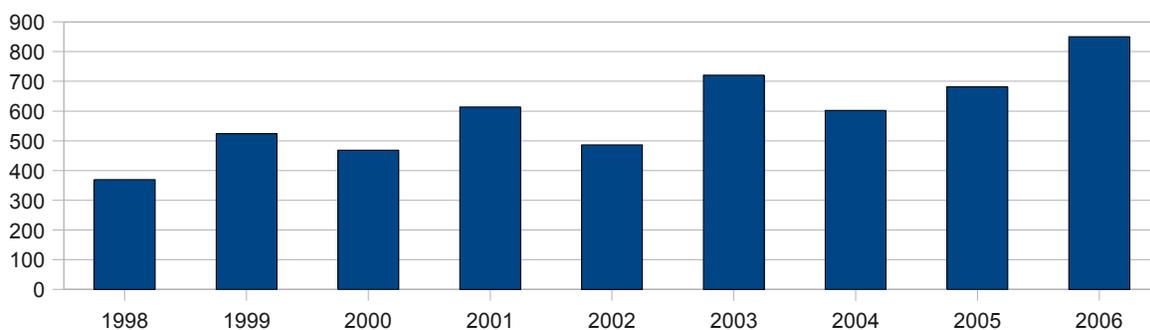
It is argued that both of these economic strategies eventually deemphasised and weakened the island's agriculture sector and altered its demography by way of diverting labour from the rural areas and increasing the pools of potential labourers in the urban centres (Grugel 1995: 175), thus laying the groundwork for the implementation of the structural adjustment led model of export development of the 1980s, itself embodied in the U.S. sponsored *Caribbean Basin Initiative* (CBI) of 1984 (Grugel 1995: 159; Kathuria et al. 2003: 168). It should be noted that aside from being an economic-program designed for the region, the CBI was also an “expression” of a very particular “geopolitical world view ... defined by three principal indigenous developments: (1) the Cuban revolution and its consolidation; (2) the political independence of former British and Dutch colonies; and (3) a growing crisis in Central America” (Serbin 1990: 126). Indeed Medina notes that the CBI “was intended to reassert U.S. influence over Central America and the Caribbean by isolating countries that had embraced social revolutionary movements (1998: 30).

The CBI implemented structural adjustment policies in Jamaica (and the region) which included the reduction of import controls, the liberalisation of foreign exchange policies, the devaluation of national currency, anti-inflation programmes based on credit restriction, reduction in state expenditure, wage controls, and the ending of price controls (Grugel 1995: 182); it should be noted that the garment manufacturing industry was only one of seven manufacturing sub-sectors targeted for development under structural adjustment (Hyett 1993: 143). These measures were designed specifically to “counter balance-of-payments problems so that [the Jamaican] economy could continue to import, to facilitate export expansion and to assure private capital of the will of the government to embark on liberalizing reform” (Grugel 1995: 182).

capacity.

It is unclear whether the adoption of structural adjustment policies has proven beneficial for Jamaicans. For example, despite increases in foreign investment¹³⁷ (Figure 4.16) and real wages, high levels of unemployment have persisted, accompanied by “declining and even negative productivity growth” (World Trade Organization Secretariat 2005: 3; Kim 2007: 2). What is certain is that Jamaica's economic path has not curtailed the persistent degradation of the most important input in the island's economy, the island's labour force.

Figure 4.16: Total Foreign Direct Investment (in millions of USD)¹³⁸



The garment manufacturing industry was established during the 1980s and quickly became “one of the most vibrant branches of the Jamaican economy ... [and] also became the single largest employer in the manufacturing sector” (Hyett 1993: 144). Premised on the belief that attracting export manufacturers would alleviate some of the island's economic and employment woes, large industrial parks called *Export Processing Zones* (EPZs) were built to house companies wishing to locate on the island. Companies were enticed by being offered “a huge array of publicly subsidized services and [the ability to] operate with fewer import and exchange-control restrictions than elsewhere on the island” (Hyett 1993: 132).

Although the EPZs increased employment within the manufacturing sector, they did so at the expense of the agriculture industry, and gains in productivity and foreign exchange earnings in the garment manufacturing sector were eliminated by losses in others, and the Jamaican economy was not bolstered (Grugel 1995: 188). In fact, the lifting of import restrictions in order to entice textiles companies served to facilitate an “influx of foreign consumer goods” (Hyett 1993: 136) and “manufacturing components” (Hyett 1993: 146), which proved devastating for large sections of local industry, who were simply unable to compete with the imports. As such, it became quite evident that the garment manufacturing industry was reliant “entirely on imported raw materials and other inputs, [and that] the [only] value-added locally [was] restricted to the labour costs involved at the Jamaican end of the production process” (Hyett 1993: 147). Thus, it is of little surprise that most manufacturers have, over the past twenty-five years, relocated to countries that have been able to offer greater concessions and an even cheaper labour force than Jamaica (Kathuria et al. 2003: 51). In fact, by 2006, “only one [EPZ] apparel manufacturer remained in the island” (Government of Jamaica 2007b: viii). Indeed, most middle-income SIDS will find that there is an ocean full of “externally competitive” countries who are able to offer tax breaks and curtail workers' wages so that multinational companies will relocate to their shores.

¹³⁷As stated earlier, foreign investment has increased over the past two and a half decades, from 15 percent of GDP to 33 percent between 1980 and 2004 (Panth et al. 2006: 5). Since the 1990s, investment in the bauxite industry has accounted for most of the flows; although communications, insurance, banking, information technology, tourism, manufacturing, and to a lesser extent, agriculture and the film industry remain sources of FDI as well (World Trade Organization Secretariat 2005: 15).

¹³⁸Data for 1998-2002 taken from World Trade Organization Secretariat 2005: 15. Data for 2003-06 taken from the United Nations Conference on Trade and Development (United Nations 2007f: 253).

Labour Force

Almost two thirds of the Jamaican labour force is employed within the service sector; the remaining third of the labour force are split almost evenly between the agricultural industry and the manufacturing industry (Government of the United States of America 2007a: 4). With reference to the earlier discussion on the changing nature of Jamaica's economy, it should be noted that the island's employment structure has shifted, and the economy has been unable to create jobs, leading to what many call a “jobless growth” economy (Kathuria et al. 2003: xii; Caribbean Net News 2007). In his analysis of the distribution of the Jamaican labour force between 1991 and 2000, Taylor noted that both the agriculture and light-manufacturing industries have witnessed a contraction in employment, with the former experiencing “a sizeable net loss [relative] to other sectors”, and the latter, specifically the garment industry, has experienced the “largest reduction of employment of all sub-groups in the manufacturing sector” (2002: 3). Indeed, Kathuria et al. note that “employment rose less than 0.3 percent per year from 1991-2001 [and that] between 1996-2001, only public sector employment rose” (2003: xii).

Not unlike other SIDS, the Jamaican labour force is facing particular stresses. The island's labour force is aging¹³⁹ and declining in size (Taylor 2002: 5; Kim 2007: 2). However, it is the outward migration of large segments of the labour force which accounts for the main reason why the labour force is contracting (Kim 2007: 2). Indeed, Jamaica has lost roughly 35 percent of its labour force to OECD countries between 1965-2000 (Mishra 2006: 14). Unemployment rates in Jamaica have fluctuated from between 11 percent and 22 percent over the past two decades¹⁴⁰. Furthermore, employment rates for men and women differ considerably, as women account for a smaller proportion of the labour force and total employment than men¹⁴¹, but with an unemployment rate nearly double of

¹³⁹The average age of the labour force has increased by six percent, from 36.2 in 1990 to 38.5 over the past fifteen years (Kim 2007: 6).

¹⁴⁰The urban unemployment rate has tended to be double the national rate (Bussolo and Medvedev 2006: 4).

¹⁴¹In 2006, the male labour force participation rate was 73.5 percent, while the female rate was 56.3 percent (Government of Jamaica 2007b: x).

men¹⁴² (Taylor 2002: 2; Dunn and Mondesire 2002: 22; World Health Organization 2007: 449; Bank of Jamaica).

Migration

Migration has negatively affected the island's labour supply in terms of its average age and level of education¹⁴³ (Kim 2007: 5). For example, between the years 1965 and 2000, it is estimated that Jamaica has lost upwards of 16 percent of its primary-school educated labour force, 35 percent of its secondary-school educated labour force, and 85 percent of its tertiary educated labour force (Mishra 2006: 16). In practical terms, this means Jamaica loses a significant proportion of every designation of worker, with considerable losses in the professional fields¹⁴⁴ such as medicine and teaching. In fact, “the very high migration rate of the best educated from Jamaica means that the number of expatriates with a tertiary education actually exceeds the number of local residents with this level of education” (Adams 2003: 13). As such, the likelihood of the society being able to produce skilled workers is seriously challenged as well, as the exodus of skilled professionals such as nurses and doctors are only exacerbated by the migration of their trainers, the teachers. It is quite discouraging when one considers that 6 percent of Jamaica's teachers left the island in 2003 alone (Parkinson 2004)¹⁴⁵. Jamaica further “looses roughly 8% of its registered nurses and 20% of its specialist nurses annually to the US and UK” (Cunningham 2006: 17). Writing in the *New England Journal of Medicine*, Mullan notes that 41.4 percent of Jamaica's doctors have left the island to work abroad (mainly to the United Kingdom, Canada, and the United States) (2005: 1814)¹⁴⁶. Furthermore, the World Health Organization notes there is a “severe shortage of health personnel in many [other] key categories ... [such as] among

142In 2006, the unemployment rate for was 14.5% and 7.0% for women and men respectively (Bank of Jamaica).

143From 5.6 years of education in 1995 to 4.5 of education in 2002 (Kim 2007: 5).

144It should be noted that “the Jamaican authorities have been sensitive to the problems [of migration] for many decades. As early as 1970 they were bemoaning the loss of skilled personnel as a result of migration patterns already well established” (Cooper 1985: 742).

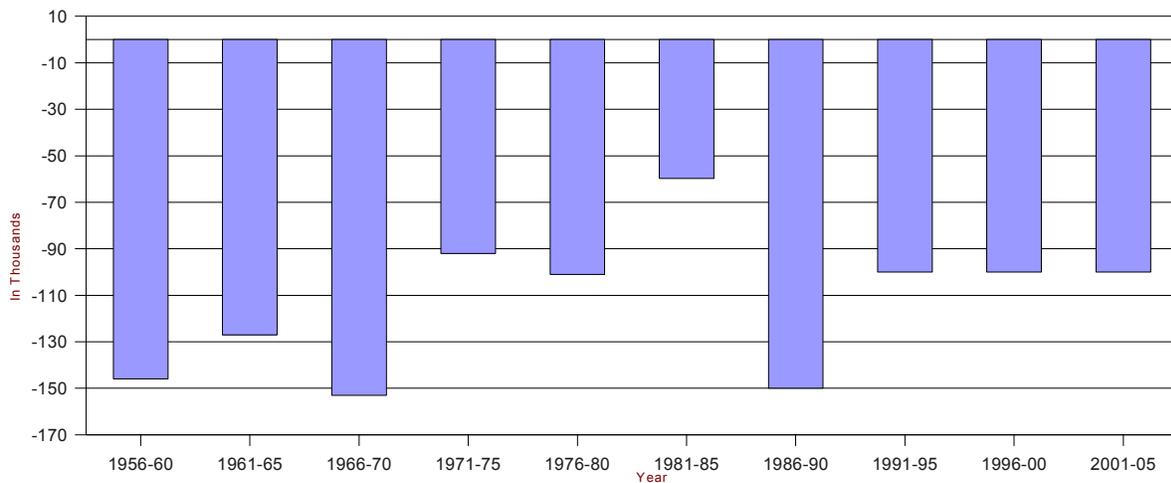
145500 of its 22,000 teachers went to the UK alone, and an additional 700 to the US (Parkinson 2004).

146Compared with the rest of the Caribbean and Latin America, Jamaica has the highest rate of “inhabitants per physician”; the only years Jamaica has reported this statistic to the Economic Commission for Latin America and the Caribbean are for 2002-2004, where the island reported that there were 3,595; 3,651; 3,791 inhabitants per physician respectively (United Nations 2008b: 68).

registered pharmacists, radiographers, community mental health workers, health educators, and public health inspectors” (2007: 462). Thus, Adams is justified in pointing out that “international migration does cause brain drain ... [as] migration takes a large share of the best educated” (2003: 19)¹⁴⁷.

The effects of migration on the Jamaican economy are worth noting¹⁴⁸. Jones (2005: 72) and Mishra (2006: 9) have found that the productivity of the island's labour force is negatively affected by migrating skilled workers. At the aggregate level, the overall effect has been that “[n]ationally, productivity seems to be in fact declining, not increasing” (Kim 2007: 4). Of course, migration has had consequences for the social fabric of the island as well, as “migration has created social dislocation among families and communities” (Cunningham 2006: 17). Figure 4.17 represents the net-migratory rate in Jamaica over the past half-century.

Figure 4.17: Net migration from Jamaica 1956-2005¹⁴⁹



¹⁴⁷The issue of departing medical personnel has been a problem for Jamaica for decades. Jamaica has been accepting Cuban medical personnel since the late 1970s in an attempt to mitigate the effects migrating nurses and doctors have on Jamaican society (Scott 2007). The Jamaican Ministry of Health renewed the Cuban Jamaican Technical Cooperation Agreement in July of 2007, which assigns “100 Cuban medical personnel, including pharmacists, pharmacy technicians, nurses, cytotechnologists, among others ... [to Jamaica] for one year”; the agreement entails that “Jamaica provide a passage for the workers to and from Cuba as well as accommodation, while the Cuban Ministry of Health pay their salaries (The Jamaica Gleaner 2007).

¹⁴⁸The causes of migration are worth noting as well. As early as 1985, Cooper noted that “the key to understanding why Jamaica has lost a disproportionately large number of professional, technical, administrative and managerial workers on the one hand, and skilled “blue-collar” workers on the other, seems to lie far more in the legislation of foreign governments than in the policy orientation of the domestic administration ... the immigration legislation in the three receiving countries [Canada, the UK, and the US] plays a much more significant role ... as long as receiving countries continue to make the opportunity for departure available [the] loss of skilled labor [will] remain a chronic aspect of Jamaican society. The economic pull is a permanent feature; legislative pull, though, is the key” (742-43).

¹⁴⁹Taken from: L'Université de Sherbrooke World Perspective Statistical Database.

Remittances

Although migrants are an important source of foreign exchange and generate consumer spending¹⁵⁰, as evidenced by the increasing contribution of remittances in the overall GDP (Figure 4.18)¹⁵¹ (Adams 2003: 4; World Trade Organization Secretariat 2005: 10; Bussolo and Medvedev 2007: 5), it would be erroneous to view remittances as an equal trade-off for the swaths of departing skilled and semi-skilled workers. In fact, recent studies are beginning to show that remittances actually alter a country's economic landscape and are not adequate replacements for the expenditures economies sustain in having their workforce migrate¹⁵². Mishra (2006: 27) found that for most of the Caribbean, government expenditure on education (as a percent of GDP) summed with the foregone tax revenue of migrants is greater than the remittances entering the country (as a percent of GDP), thus, she concludes “the losses outweigh remittances for most countries.” With respect to Jamaica, Mishra found that as a portion of GDP, the cost of training those citizens who remit funds combined with the estimated value of foregone taxes those citizens would have contributed to the economy is far greater than the contribution remittances make to the island's economy¹⁵³ (2006: 27). Kathuria et al. put it more bluntly and state “[t]he large emigration of educated Jamaicans raises the issue of the high cost of ... the Jamaican taxpayer subsidizing the education of people who ... [will] remit only a small fraction of the income they earn” (2003: 63).

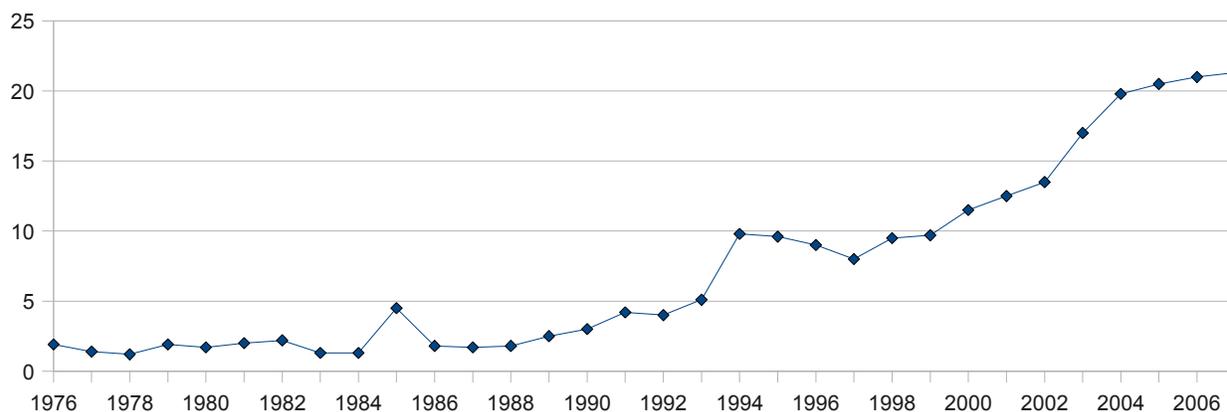
150See for example the arguments put forth by: the Department of Economic and Social Affairs' “balance sheet of economic effects of migration on countries of origin” (United Nations 2004e: 97); and the Economic Commission for Latin America and the Caribbean (ECLAC) report titled “Migration in the Caribbean: Brain-Drain - Remittances - Diaspora” (United Nations 2006b: 2).

151In 1990 remittances stood at US\$164.2 million, growing to US\$806.5 million by 2000, and registered at US\$1.87 billion in 2005 (Morrison 2006). Bussolo and Medvedev note that remittances have increased at an average annual rate of 18.2 percent over the past 10 years (2007: 5-6). Remittances accounted for 13 percent of GDP in 2002 (World Trade Organization Secretariat 2005: 10); 15 percent of GDP in 2005 (Morgan 2006); and 17 percent of GDP by 2007 (Panth et al. 2008: 4).

152The Caribbean is also the world's largest recipient of remittances as a share of GDP (Adams 2003: 6; Mishra 2006: 5), with remittances accounting for more than a tenth of the region's GDP in recent years (Orozco et al. 2005: 5).

153Mishra has calculated that “emigration loss and estimated education expenditure” account for 20.4 percent of the island's GDP per year, a value greater than the average contribution remittances have made to Jamaica's economy between 1980 and 2002 of 7.4 percent (2006: 27).

Figure 4.18: Remittances as a percentage share of GDP 1976-2007¹⁵⁴



Other studies indicate that remittances alter the “consumption and investment behavior” of the receiving population (Adams 2003: 4). In Jamaica, the consumption of imported goods have increased alongside increases in remittances, so much so, that the consumption of imported goods and services has outpaced consumption of domestically produced goods (World Trade Organization Secretariat 2005: 2)¹⁵⁵. Indeed, that remittances are used primarily to purchase consumer goods, as opposed for productive activities (such as investment, education, or savings) has been singled out as a source of concern by many (Oppenheimer 2004; Morgan 2006; Cunningham 2006: 18). Of course, receivers of remittances cannot be blamed for their inability to channel funds into productive activities because many basic goods are quite expensive in the first place and serious choices have to be made. As such, “[i]n some rural areas, 40% of households derive significant financial support from [remittances] ... [which] are widely used to purchase needed goods such as food, medicine, clothes, and childcare” (Cunningham 2006: 18).

Remittances have also had an adverse affect on the Jamaican labour supply, particularly labour market participation (Kathuria et al. 2003: 63). Kim has demonstrated that “[h]ouseholds with a remittance income have [a] higher reservation wage and have reduced the supply of labour by moving

¹⁵⁴Data taken from Bussolo and Medvedev (2007: 6). Data for 2007 taken from the World Bank.

¹⁵⁵Consumer spending accounts for roughly 70 percent of GDP, the majority of this spending is spent on imported goods (World Trade Organization Secretariat 2005: 2).

out of the labour force” (2007: 16). This of course has consequences for the nations overall productivity.

Finally, remittances are not a source of long-term economic stability. Cortina and de la Garza (2004) argue that the value of remittances fall over time as migrants become increasingly settled in the host country (Oppenheimer 2004; Morgan 2006).

Concluding remarks

Although the above-mentioned economic-growth led sustainable development strategies have statistically increased macroeconomic indicators such as per capita gross national income, overall trade, and foreign investment; the qualitative effects of these increases are rarely examined¹⁵⁶. There are many contradictions emerging on the sustained economic development path Jamaica is following. For example, the Economic Commission for Latin America and the Caribbean (ECLAC) reported the island's 2006 economic performance as follows: “Jamaica's economic performance improved with respect to the previous year (2.6% in 2006, up from 1.4% in 2005), with the upturn led by agriculture and tourism ... [however,] [t]he increased current account deficit (USD 1.117 billion in 2006 compared with USD 1.079 billion in 2005) was attributable to a large rise in merchandise imports (16%) which canceled out the gains in exports of traditional goods and growth in the tourist sector” (United Nations 2006c: 123-124). Another contradiction is reported by Lundy, who points out that a very large percentage of what Jamaicans produce is exported rather than used locally, while a high proportion of what the society consumes is imported from abroad (1999: 84). These contradictions are best summarised by the following statements made by Francis and Calhoun respectively:

“Jamaica's economic experiences can be described as a pathology of change over time from euphoria to gloom, from hope to despair, from success to failure and from progress to crisis” (Francis 2003: 85);

¹⁵⁶Serbin, a decade ago, pointed out that “strategies for economic growth” in the Caribbean were “promoting values, expectations and habits [similar] to insutrialised societies” albeit within a context of widening income disparities; as such, [b]road sectors of the population [were] being marginalised from the conspicuous consumption promoted by globalisation ... within this context, the different forms of consumption ... generates deprivation and exclusion which lead to political or psychological attitudes of rejection and questioning, or to patterns of anomie and frustration, frequently ignored by [those who] support the regional and global processes” (1998: 114).

“[A]fter four decades of independence Jamaica remains a primary commodity producer that is highly dependent on its metropolitan trading partners for everything from inputs, financing to markets ... [i]f anything, Jamaica seems worse off with severely diminished food security, ubiquitous tracts of mined-out unproductive land, and a tourist industry that is so susceptible to external shocks that it cannot be counted on long-term as a sustainable source of national revenue” (Calhoun 2004: 2).

Furthermore, the “negative implications of adjustment programs on Jamaica's social sector” remains detached from most analyses surrounding the country's economic trajectory (Francis 2003: 84)¹⁵⁷. Socio-economic indicators reveal that very little has improved for the vast majority of Jamaicans over the past twenty years. As stated previously, the United Nations Human Development Report suggests that an average of 18.7 percent of Jamaica's population have been living below the national poverty line since 1987 (United Nations 2002b: 157; United Nations 2007/2008: 239). It is also worth repeating that the United Nations Population Fund has implied that the standard of life for the population of Jamaica has worsened since the decade began, as reported by the declines in the life expectancy for the population overall. Indeed the IMF have stated that “[c]ombined with high unemployment, emigration, and rising crime rates, macroeconomic uncertainty created by this large debt overhang likely had negative feedback effects and may have dampened further output growth” (Panth et al. 2006: 8). The economic, environmental, and societal developmental trajectories of the island can be seen as influencing one another and creating feedback effects which have in turn exacerbated the vulnerabilities discussed in chapter 1. Jamaica is indeed “at a crossroad in its development – facing economic, social and environmental problems – foreign debt is high, crime rates are high and many of the island's ecosystems are degrading” (Emanuel 2004: 2). Therefore it should be of little surprise that the “logic of development” taken by Jamaica (and other SIDS) is being questioned. To this end, Calhoun puts it rather bluntly by stating: “Clearly, Jamaica is not developing such that the average Jamaican is better off now than he was 30 years ago ... [t]his, of course, raises

¹⁵⁷For example, patterns of settlement, access to life-sustaining and improving resources, and social behaviour are rarely discussed in analyses of the economy.

questions of what constitutes 'better off'. Clearly, consumption has increased due to the ever-expanding amount and variety of imported goods flowing into the country. However, the jury is still out on whether development in the form of expanded societal and national economic well-being is occurring in Jamaica” (2004: 16).

Chapter 5 – Conclusion: Directions for further research

“In the middle of the 20th century, we saw our planet from space for the first time. Historians may eventually find that this vision had a greater impact on thought than did the Copernican revolution of the 16th century, which upset the human self-image by revealing that the Earth is not the centre of the universe. From space, we see a small and fragile [island] dominated not by human activity and edifice but by a pattern of clouds, oceans, greenery, and soils. Humanity's inability to fit its activities into that pattern is changing planetary systems, fundamentally. Many such changes are accompanied by life-threatening hazards. This new reality, from which there is no escape, must be recognized...” [Brundtland and Khalid 1987: 18]

“The history of human civilization is replete with unsustainable societies, of which many subsequently collapsed, and others changed their ways and survived by switching to a different kind of economic trajectory ... In fact, our present day predicaments are nothing new. They are as old as civilization.” [Nagarajan 2006b: 290]

The idea that sustainable development exists as a process to better the lives of people by facilitating market-led economic growth was popularised by both the 1987 Brundtland Commission Report and the 1992 Agenda 21, and has “likewise [been] used in the [Barbados] Programme of Action on Sustainable Development for SIDS” (Byrne and Inniss 2002: 4). Indeed, more than twenty later, this conceptualisation of sustainable development continues to steer SIDS' approach to human development; particularly the idea that “liberalisation of trade, abolition of tariffs, subsidies and other restrictions, free flow of capital, investment and labour, and the increasing global interconnectivity through information and communications technologies ... [will create a] global system of human rights and humanitarian principles and norms complemented by a series of regional agreements and institutional arrangements” (United Nations 2007g: 8-9). Yet, close to a decade and a half after the implementation of the BPOA, the small island developing state of Jamaica continues to contend with severe economic, environmental, and societal vulnerabilities which have not improved the lives of its citizenry. In spite of this reality, policy makers continue to call for a “stronger recognition of the importance of sustainable development ... [and are] committed to sustainable development and policies built around the objectives of social equity, conservation of the environment, sustainable use of natural resources and sustained economic growth and employment” (Government of Jamaica 2004: 3-4). The time has come to jettison this idea, so that policy makers can begin considering development

alternatives that positively affect the quality of life for Jamaica's population, in the aggregate.

Speaking in reference to development policy adopted in the Caribbean and Latin America, Benn noted that “[b]ased on the perceived inadequacies of the existing neoliberal orthodoxy which has failed to deliver the expected benefits and in a situation in which poverty not only persists at the national level but in which income disparities between rich and poor countries continue to increase, the formulation of a new development paradigm has become an urgent necessity” (2004: 12). Nagarajan adds that “our conceptual and analytical frameworks, based on traditional academic disciplines, for understanding and dealing with complex human-induced changes ... are becoming increasingly inadequate” (2006b: 288). Our case study examining Jamaica's economic, environmental, and societal trajectory over the course of the past four decades lends critical support to these statements, as we see that the islands vulnerabilities have persisted and are interacting in ways that make them increasingly difficult to unpack. Although this paper has focused primarily on the vulnerabilities faced by Jamaica in relation to market-led sustainable development, many of them are shared by most SIDS in varying degrees.

Indeed, our findings are further bolstered when we piece together the findings of other SIDS researchers and policy makers examining the implementation of the BPOA. What is revealed is that as a group, SIDS are closely adhering to the BPOA framework, yet the quality of life for their populations are not being improved. For example, in their analysis of assessment reports concerning SIDS' own efforts to implement the BPOA, a research team from the University of West Indies Centre for Environment and Development noted “while [the] BPOA is not yet fully implemented, 70 per cent of the tasks and actions it stipulates have been carried out by the SIDS themselves” (Binger et al. 2002: 5). Although the Government of Jamaica's decennial National Assessment Report of the BPOA does not estimate the degree to which the Programme's policies have been implemented, the report does offer its commitment to market-led economic growth via the: “integration [of its] economy into the world market through ... the liberalisation of [its] market” (2004: 16); “movement of people and increase [of] the flow of income from overseas assets” (2004: 17); and the “adoption of fiscal and economic reforms

that encourages entrepreneurship and [foreign direct] investment” (2004: 18). That is, policy makers in Jamaica are committed to doing more of what they have been doing for the past three decades.

Despite of the high degree of commitment and implementation to the BPOA at the national level, the Secretary-General of the United Nations reports that “small island developing States still face major challenges to their sustainable development ... [of which a] key emerging challenge includes those related to the implementation of effective strategies for poverty eradication and the pursuit of people-centred development” (United Nations 2004a: 22). It is important to note that these findings do not contradict each other, inasmuch as they point to a widening gap between what is expected from market-driven development policies and what is being achieved. It is in this confusing context that policy makers in Jamaica make telling pronouncements that they “seek to develop a greater understanding of the linkages between trade, environment and development ... in order to secure the crucial objective of sustainable development” (Government of Jamaica 2004: 69). However, even four years after such statements, the trajectory of Jamaica's economic, environmental, and societal vulnerabilities are clear.

Indeed, almost fifteen years after the BPOAs formulation and implementation, the concept of market-led sustainable development has actually created “unsustainable global patterns of settlement, resource [conservation], social organization, and political economy” in SIDS (Mileti and Peek 2002: 34). As such, it is time to recognise that “our economic 'development' model – globalisation and its institutions – has not only failed to reduce poverty, it has actually made it worse” (Juhasz 2002: 409). Unfortunately, within this context, “there are [now] clear indications of our inability to solve [development related] problems effectively” (Nagarajan 2003: 4), and in the case of most SIDS, even the “basic problem” remains to be clearly identified¹⁵⁸.

¹⁵⁸This of course is “the shaky and faulty methodological foundation [of market-led economics] which continues to ignore that the human economy is, after all, a subsystem of the larger ecological system, with biophysical limits to the size and growth of the economy” (Nagarajan 2003: 2). Foster notes that “[d]uring the last half-century the world economy has grown more than seven-fold while the biosphere's capacity to support such expansion has if anything diminished due to human ecological predations” (2005: 5).

Formulating alternatives to the unsustainable market-led development strategy they are currently wedded to need not be a difficult or painful task for SIDS, as there exist analytical frameworks that SIDS such as Jamaica can utilise to build alternatives upon. A good starting point is offered through a framework that appreciates the limitations to decision making and problem solving within an economically liberalised democratic structure. Expanding upon such limitations, Odum applies “Alfred E. Kahn's 1966 observation of the tyranny of small decisions” to environmental decision making and problem solving and notes that policy decisions in economically liberalised democratic structures are arrived through “[a] series of small, apparently independent decisions made by individuals or small groups of individuals”, without an overall appreciation of its potential outcomes (1982: 728). Odum elucidates his point with the following example:

“The ecological integrity of the Florida Everglades has suffered, not from a single adverse decision, but from a multitude of small pin pricks. These include a series of independent choices to add one more drainage canal, one more roadway, one more retirement village, and one more well to provide Miami with drinking water. No one chose to reduce the annual surface flow of water into the Everglades National Park, to intensify the effects of droughts, or to encourage unnaturally hot, destructive fires. Yet all of these things have happened, and, at this point, it is not clear how the “decision” to degrade the Everglades can be reversed.” (1982: 729)

Odum further notes that arriving at decisions from this process “does not produce an optimal, desired, or preferred solution for society ... [because] it is not so simple to do anything of a corrective nature” (1982: 728-729)¹⁵⁹. Indeed, the limitations of such a process may be inherent in the political

¹⁵⁹Another good example of our inability to analyse or forecast longterm problems (and therefore their solutions) can be found in the current global food crisis. In 2002 the Food and Agriculture Organization of the United Nations released a “[Briefing] Paper Relating to the World Trade Organization Negotiations on Agriculture” (the paper itself is not of particular significance, what is however, is the dominant analysis found in it and other papers concerning agricultural commodities). In the brief, the FAO noted that “most agricultural commodities have experienced sluggish world demand and a downward trend in real prices [and] long-term forecasts are not encouraging as real prices of most agricultural commodities are projected to remain below their 1990s peaks ... sluggish world demand for commodities is likely to lead to a general decline in the share in world trade for commodity exporters” (2002d: 222-223). The shortsightedness of such pronouncements are cruelly evident five years later, as food prices have more than tripled since 1997 and more than doubled since 2002. Indeed, Magdoff notes: “The increases in the world market prices over the past few years have been nothing short of astounding. The prices of the sixty agricultural commodities traded on the world market increased 37 percent last year and 14 percent in 2006. Corn prices began their rise in the early fall of 2006 and within months had soared by some 70 percent. Wheat and soybean prices also skyrocketed during this time and are now at record levels. The prices for cooking oils (mainly made from soybeans and oil palm) - an essential foodstuff in many poor countries -

behaviour and decision making within economically liberalised democracies (Caldwell 1972: 943; Brown 1994: 301). Writing about the intersection of “presidential-electoral and [environmental] regulatory practices in the United States,” Brown commented that normative electioneering structures “may directly assist the long-term degradation of our environment” further noting that “a substantial benefit for environmental [conservation] would be to reduce the impact of party policy differences on ecological cycling” (1994: 301). Indeed, Campling notes that “policy-making amongst SIDS governments is a reflection of the hegemonic discourse of the high-income countries; perhaps this is why 'the social' [read human development] has been missing from contemporary conceptualizations of SIDS (just as it has been reduced in importance in the domestic frameworks of most governments in the core)” (2006: 264). Viewed in this way, we can postulate that the overall ecological (read economic, environmental, and societal) integrity of Jamaica has most likely suffered because of decisions made within a framework that produced not a single adverse decision, but a multitude of “small decisions”, each of which are based in market-led development strategies.

Although it is important to understand the limitations to existing frameworks. Nagarajan notes that “[m]ere cognizance of the problems confronting [SIDS] ... is of no use, unless it is followed by the adoption of a new paradigm to deal with the impending crisis” (2006b: 289). This cogent point can be acted upon if researchers undertake a critical analysis of the dominant sustained economic growth strategies. Foster notes that any ecological critique of the sustained economic growth development

have rocketed up as well. Rice prices have also risen over 100 percent in the last year” (2008: 3). Yet, one can be assured that the analysis and forecasts provided by international agencies prior to the food crisis have significantly contributed to the decisions by governments and the private-sector to “[cut] investment [and] public spending in farming and the things that sustain it, such as irrigation” (Economist 2007: 11), thereby setting the conditions for their extreme vulnerability to events that are currently at play. The result has been that humanity's capacity to sustain: “the [3 billion] food insecure people who are malnourished or lacking critical nutrients [is severely diminished] ... The severity of this situation is made clear by the United Nations estimate of over a year ago that approximately 18,000 children die *daily* as a direct or indirect consequence of malnutrition” (Magdoff 2008: 1). In response to the grave crisis, the Food and Agriculture Organization, and the Organisation for Economic Co-operation and Development have again forecasted the direction of agricultural commodity prices, this time until the year 2017: “When compared to the average for 1998 to 2007, prices projected for the period 2008 to 2017 will – in nominal terms – on average be around 20% higher for beef and pork, some 30% for raw and white sugar, 40 to 60% for wheat, maize and skim milk powder, more than 60% higher for butter and oilseeds and over 80% higher for vegetable oils” (Boonekamp and Merritt et al. 2008: 25).

strategy should rest on three propositions: that a development strategy geared to endless exponential growth is (1) unsustainable; (2) disconnects people from all sense of being native to some place and all ecological roots; and (3) divides the planet between rich and poor (2002: 88). Foster further asserts that “historically addressing the question of the [capitalist mode of production based] ecological transformation of society means that we need to ascertain: (1) where the world capitalist system is heading at present, (2) the extent to which it can alter its course by technological or other means in response to today's converging ecological and social crises, and (3) the historical alternatives to the existing system” (2005: 3)¹⁶⁰. Indeed this framework should assist SIDS policy makers formulate and popularise *alternatives* to the sustained economic growth development strategies they are currently wedded to¹⁶¹.

That, after twenty years of developing-sustainably, we are noticing increases in SIDS' vulnerabilities, and continue to suggest that the “first priority for islands must be to prevent *further* damage to their members and to lower their future risks from human-induced global climate change” (Byrne and Inniss 2002: 21, my emphasis)¹⁶² should be evidence enough to indicate that market-led decision making, as a mechanism to curb SIDS' economic, environmental, and social vulnerabilities have dire consequences. Indeed, Barnett and Adger note that “a possible future in which [the most vulnerable of island] countries become effectively uninhabited radically challenges international norms of justice, sovereignty, and human and national security” (Barnett and Adger 2003: 321). There have been numerous well prepared declarations and statements from the SIDS community (Figure 5.1), all of

¹⁶⁰To this end, Foster's paper summarises six potential scenarios as offered by the Stockholm Environmental Institute. The Institute was established in 1989 by the Swedish Government with the expressed goal of developing an international environment/development research organisation; as such, the Institute has a strong mandate to provide intellectual and research leadership to develop sustainable development strategies and initiatives throughout the world.

¹⁶¹Michael Lebowitz' 2006 book “Build It Now” offers an important framework to consider while challenging the existing dominant mode of production.

¹⁶²Byrne and Inniss propose three “strategies for [SIDS] to consider ... [1] advocate an international policy of penalty assessments on OECD countries until they reach an agreed-upon sustainability condition ... [2] [SIDS] join with others in supporting a global strategy to accelerate recent dematerialization trends in technology development ... [3] while island countries must continue to find suitable strategies within the context of the Conference of the Parties to the UNFCCC, they should also consider non-traditional channels of action, specifically, greater collaboration with civil society efforts to grapple with the problem of climate change” (2002: 22-23).

which indicate the precarious existence of SIDS within a system perpetuating such an approach to development (some notable excerpts follow below), however neither SIDS policy makers, development planners, or island researchers are able to articulate that it is the dominant approach of market-led economic growth that governs our conception of sustainable development which is primarily responsible for SIDS' vulnerabilities.

“Sea level rise threaten[s] the very survival of some island States ... Paradoxically the catalyst in this disturbing state of the global environment has been the rapid development of industrialization that was intended to lead to material progress” (1989 Malé Declaration on Global Warming and Sea Level Rise).

“States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies” (1992 Rio Declaration on Environment and Development & 1994 Declaration of Barbados).

“The experience of the past decade reveals considerable constraints now exacerbated ...” (Declaration by the Alliance of Small Island States at the Johannesburg Summit).

“The global environment continues to suffer. Loss of biodiversity continues, fish stocks continue to be depleted, desertification claims more fertile land, the adverse effects of climate change are already evident ... and developing countries [are] more vulnerable, and air, water, and marine pollution continue to rob millions of a decent life ... We shall continue to pay special attention to the developmental needs of small island developing States and the least developed countries” (2002 Johannesburg Declaration on Sustainable Development).

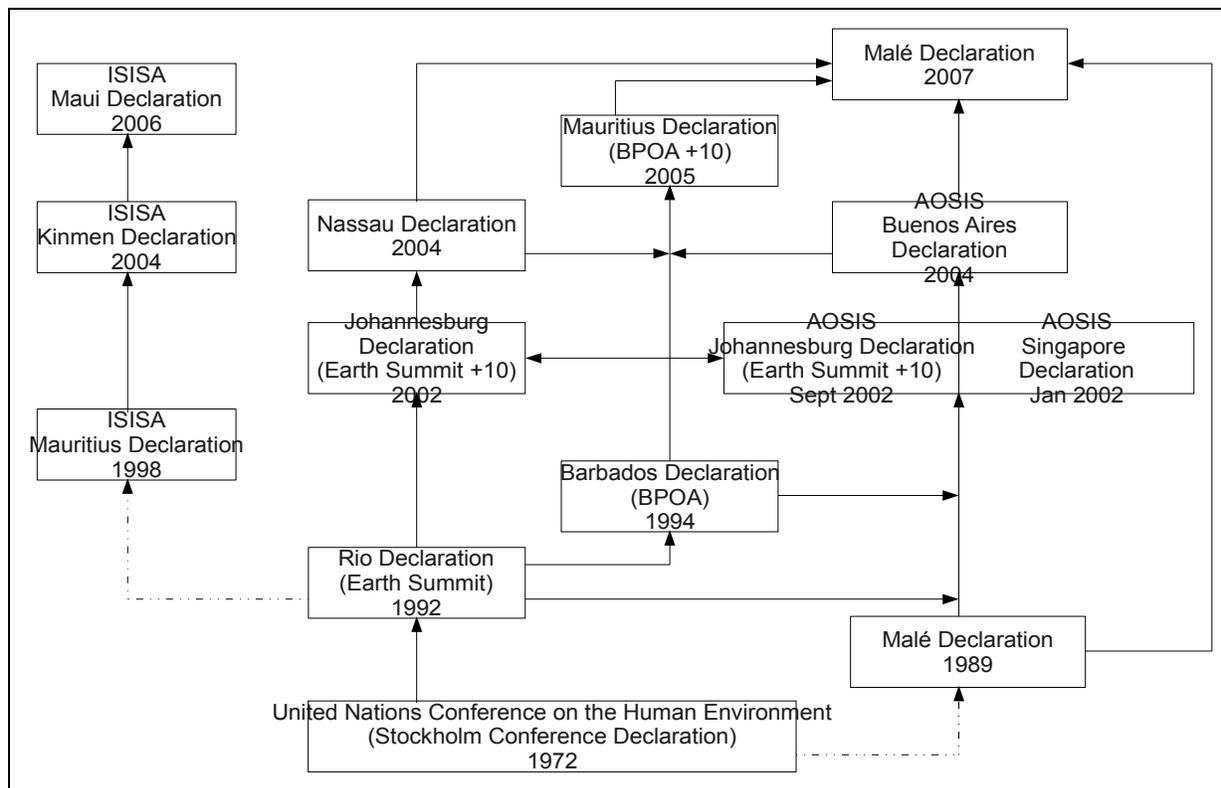
“We note that since the adoption of the BPOA the changing external and internal circumstances are further exacerbating the challenges faced by SIDS” (2004 Nassau SIDS Ministerial Declaration).

“We strongly urge OPEC countries and other large greenhouse gas emitting countries, particularly the United States, to desist from their ongoing efforts to undermine action to address climate change and call on them to recognize that their efforts to undermine progress is seriously affecting the right of people within small island developing States to a future” (2004 Buenos Aires AOSIS Ministerial Declaration on Climate Change).

“The acknowledged vulnerability of small island developing States continues to be of major concern and this vulnerability will grow unless urgent steps are taken” (2005 Mauritius Declaration)

“Climate change has clear and immediate implications for the full enjoyment of human rights including *inter alia* the right to life, the right to take part in cultural life, the right to use and enjoy property, the right to an adequate standard of living, the right to food, and the right to the highest attainable standard of physical and mental health” (2007 Malé Declaration on the Human Dimension of Global Climate Change).

Figure 5.1: Key Declarations Submitted by the SIDS Community¹⁶³



Of the excerpts exemplified above, the last one is particularly interesting because it reveals that SIDS understand that both “[t]he human rights of people living in [island] countries ... [and] the physical basis of national sovereignty of [island] countries (broadly defined as the right to self determination) [are] at risk” (Barnett and Adger 2003: 327)¹⁶⁴. However, even this position, which is

¹⁶³The dotted lines in this flow chart represent those ideas which can loosely be attributed to the declarations to which they are linked to; the solid lines represent direct/explicit commonalities with the declarations they connect. It is interesting to note that the declarations released by the International Small Islands Studies Association (ISISA), largely a grouping of scholars who are based in industrialised countries, are for the most part detached from the declarations released by the United Nations or the Association of Small Island States, both of which are organisations whose memberships include democratically elected representatives of island states. That said, the declarations listed in this flow chart provide an excellent history of the challenges faced by SIDS for the past three and a half decades.

¹⁶⁴Barnett and Adger do note that “[although] ‘justice’ has no universally shared meaning; its operationalization proceeds

itself derived from past declarations that essentially call for “the production and consumption patterns of the central capitalist countries [be] held responsible for the deteriorating ecological conditions of the planet” (Foster and Clark, cited in Campling 2006: 266), is vulnerable to being incorporated into a market-based compensatory initiative, albeit, one that is cloaked in the vernacular of “a potential[ly] radical agenda”; as demonstrated by Campling's recommendation that SIDS follow an agenda seeking “financial compensation for those most affected by [ecological degradation]” as a means to “create working linkages with other Third World social movements and sympathetic governments around this agenda” (2006: 266)¹⁶⁵. As effective as such a strategy may be, we should remind ourselves that no amount of compensation constitutes an adequate recompense for the environmental and cultural loss of island countries (Barnett and Adger 2003: 331).

only with consensus among parties in specific contexts ... We can look to various international treaties to find more formal benchmarks of justice. For example, the Universal Declaration of Human Rights states simply that 'everyone has the right to a nationality' (Article 15.1), and that 'no one shall be arbitrarily deprived of his [sic] property' (Article 17.2). The United Nations Covenant on Civil and Political Rights states that 'in no case may a people be deprived of its own means of subsistence' (Article 1.2). In the case of climate change's effects on [island] countries, these basic rights are at risk” (2003: 332).

¹⁶⁵Campling notes that “pursu[ing] the concept of 'ecological debt' ... is in theory a more realistic form of cooperation because SIDS governments and peoples are linked negatively (that is, all agree upon this issue) by the impact of ecological imperialism on two levels: (1) the social-ecological destruction and exploitation that takes place within nations under the influence of ecological imperialism; and (2) the imperialist appropriation of global commons and the unequal use (exploitation) of the absorption capacity of these commons” (2006: 266-267).

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