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Achieving Sustainability in Hazard-Prone Territories: A Case Study

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Abstract

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MPA, Metropolitan College of New York, 2006

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Dissertation Submitted in Partial Fulfillment

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Abstract

Achieving sustained economic growth and development has been an area of concern for policy-makers in the Anglophone Caribbean since the transition from colonial rule to self-governance. To date, the researcher did not find any research that has explicitly examined the role of policy-making effectiveness as a strategy for achieving the goals of sustainable development. This qualitative multiple case study of Barbados and Grenada was conceptualized from the perspective of critical theory from the World Commission on Environment and Development to explore and understand why sustainability has not been sufficiently realized and how sustainable development may be pursued in territories that are small and prone to hazards. Purposive sampling was used to identify 30 candidates for the study. Eighteen key policy-makers participated in semi-structured interviews. Secondary data from publicly available government documents in Barbados and Grenada were acquired. All data were inductively coded and data analysis was carried out at three levels using thematic, content, and cross-case analyses. Key findings suggest a need exists to increase understanding of the concept of sustainable development and the unique characteristics of the territories to enable policy-makers to better define the safe operating space for human development. Recommendations for positive social change include advice to strengthen institutional capacity across the full spectrum of policy-making practice for sustainable development including mechanisms to promote a learning culture and accountability in policy-making practice in the Anglophone Caribbean, particularly among those territories that are small and prone to hazards.

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Dedication

This work is gratefully dedicated to my parents, my children, and the key policy-makers in the Anglophone Caribbean. To my parents.., because they wanted the best for their four children. They worked hard to meet our basic needs. They taught us the value of hard work, money, and education, and inspired in us a love of reading and reasoning. Of course, we had to submit to their rules. They often reminded us that we would have to follow rules throughout our lives - even the ones we may not appreciate. Having been raised by strict, but sober parents is something I am truly grateful for. It has provided me with a sense of purpose, taught me self-discipline, and laid the foundation for me to develop the kind of mental fortitude that is not easily disturbed. My dissertation journey required this type of focus, mental toughness, and resilience.

To my children, Janelle and Josh, as well as my youngest sister - Shira, whom I helped raise..., because they challenged me. Interacting with them has fueled in me a willingness to act on my curiosity - to explore, discover, and find deeper meaning in phenomena rather than simply accept things as they appear on the surface.

To the key policy-makers in the Anglophone Caribbean..., because they struggle to successfully develop and implement sustainability-oriented policies.

My hope is that the insights gained from this inquiry will serve as a bridge for linking the knowledge, tools, and actions required to move policy-making practice from ambiguities, contradictions, and ad hoc approaches to clarity of meaning and purpose; and from knowledge-gaps to evidenced-based, sustainability-oriented policies.

Acknowledgments

So many people have been instrumental in the process of bringing this dissertation to fruition. I am grateful to my professors, mentors, and the members of my dissertation committee for the knowledge, skills, nurturance, direction, guidance, and enlightenment I received under their tutelage. I wish to thank my Chair, Dr. Richard DeParis, for critiquing my work and providing pointers on how to approach aspects of my dissertation differently. I am grateful for his patience during our exchanges and the new learning that has taken place during the process.

I appreciated Dr. Singh's enthusiasm for my topic. During my third residency in Virginia, he made me a subject in the classroom when he called on me to make an impromptu presentation on the problem statement and purpose of my dissertation. It was a bit challenging at first, but in the end, the exercise was instructive and necessary.

This work has come to fruition through the efforts of many other people. I wish to thank the study participants who shared their perspectives for the sake of enhancing policy-making practice. I am also thankful to my family who have lived through my thoughts and discourses during the last few years. I feel grateful to have had the knowledge and wisdom of Cecil Gittens, Lucia and Richard During, Gail and Bernard Bourne, and Gerry Hopkin who read the manuscript and provided timely feedback. To Denis Charles, Gatty and Yvonne James, Monty Alexander, and Shane Ross, e*se gan* (thank you much [Yoroba language]) for the deep and enlightening conversations we have had over the years. Thanks also to Danica Roberts and Josh Roberts for helping me to understand better how to work with the table of contents.

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Chapter 1: Introduction to the Study

Introduction

Since the emergence of the concept of sustainable development, there has been consensus among policy-makers worldwide about the need to strengthen policy-making practice as a strategy for attaining sustainability. This need is particularly salient in the Anglophone Caribbean where reports reveal that the development achievements of the islands were disparate in the early postcolonial era (United Nations Development Program [UNDP], 2010; 2004; World Bank Report, 2008; 1982; 1978; 1975; De Hass, 2005). It is important to point out that the concepts of sustainable development and sustainability, as they relate to integrated development outcomes, were not in the discourse of Caribbean politicians until the late 1990s or pursued before that time. Instead, policy-makers pursued development using the economic growth dictates of classical and neoclassical economic models. Key insights from literature reviews seem to suggest that the islands in the English-speaking Caribbean did not experience the same high-performing economic growth and development achievements, as did some other developing nations around the world. According to the literature, their development pursuits fell short in meeting basic human needs and the essential needs of a large number of the population for food, shelter, education, health care, productive employment, and, in general, basic needs have not been adequately met (United Nations Development Program [UNDP], 2010; World Bank Report, 2008; 1982; 1978; 1975).

Apart from the basic needs, many people have genuine aspirations for improved living standards and quality of life. Some wish to reside in communities where poverty and inequity are alleviated, and every citizen has an opportunity to adequately improve and maintain his or her well-being. Others wish to reside in communities that are safe, well planned, emphasize good quality architecture, and promote opportunities for healthy lifestyles (Duany & Plater-Zyberck, 2006). This includes living and working in proximity to main streets, businesses, essential services, bike paths and parks, and having opportunities for walking, biking, shopping, enjoying nature, and reducing stress. Improved living standards and quality of life also entail having good environmental quality by reducing land, air, and water pollution, and maintaining a healthy natural environment. Duany and Plater-Zyberck (2006) viewed such spaces as communities that promote freedom, independence, and support for individuals and families, and encourage a better quality of life. The authors also regarded such communities as livable and sustainable spaces.

The literature shows that the development achievements of the islands in the Anglophone Caribbean were disparate and inadequate for achieving sustainability. However, the success of Barbados in achieving the highest Gross Domestic Product (GDP) per capita rating (World Bank Report, 2008) and the highest Human Development Index (HDI) rank for living standards of life (United Nations Development Program [UNDP] - Human Development Report [HDR], 2010; 2008; 2007) warrants a deeper

understanding of the factors that facilitate and hinder progress toward sustainable development. The collective failure of both Barbados and Grenada to successfully integrate the activities of economic growth, environmental stewardship, and social equity to achieve sustainability overall requires a vastly deeper understanding of the factors necessary to design credible policy solutions for territories that are small and vulnerable to hazards. Identifying these factors might help policy-makers to successfully develop and implement policies that support the goals of sustainable development.

Background and Context

Barbados and Grenada possess many similar characteristics and features. Black (2006) and other authors regarded both islands as Small Island Developing States (SIDS). Both islands are located in the Anglophone Caribbean (World Bank Indicators, 2010). Barbados is the most easterly of the islands. It is located in the western area of the North Atlantic, east of the Windward Islands and the Caribbean Sea, with a surface area of 34 km long and 23 km wide and a population of approximately 295,000 (World Bank Indicators, 2010). Grenada, a tri-island state widely known as the "Isle of Spice", is the southernmost of the islands. With a population of approximately 107,000, this tri-island nation, consisting of Grenada, Carriacou and Petite Martinique, is located 160 kilometers (km) north of Venezuela and 145 km south-west of Barbados (World Bank Indicators, 2010). These islands and their surrounding waters provide habitat to diverse marine plants and animals and support a high ratio of endemic plants and animal species

(Ricklefs & Lovette, 1999). Their coastal areas are critical sources of food and income for many residents (United Nations Department of Economic and Social Affairs [UNDESA], 2013).

Barbados and Grenada share many other similarities. They include climatic conditions, ethnic composition, political structure - British Style Westminster System, a common language - English, and a shared legacy of British colonial rule, plantation-slavery, and monoculture production. They also share contemporary attempts to find a sense of place in a new development theater replete with contradictions and uncertainties as they journeyed toward self-governance, self-reliance, and the pursuit of sustainable development. Historically speaking, the islands in the Anglophone Caribbean had been dependent on sugarcane cultivation and cane sugar export to European nations for their economic mainstay (Black, 2006; World Bank Report, 1975). However, since the late 1970s and early 1980s, policy-makers have diversified the economies into tourism and other emerging sectors (World Bank Report, 1982; 1975). Due to their relatively small physical size, these islands have a narrow range of resources, which hinders attainment of economies of scale (Briguglio, Cordina, Farrugia, & Vella, 2009). Briguglio et al. also pointed out that high transportation and communications costs occur because of the remoteness of the islands from the North American market. A 2013 UNDESA report noted that the fragile ecosystems and relatively small watersheds of these small islands threaten people's livelihoods and a range of plant and animal species. Food insecurity is

also a major concern for SIDS. More and more, these islands have been depending on food imports, which expose them to the vagaries of international markets and the effects of climate change (FAO, 2015). Island agriculture is facing increasing competition for land from tourism and commercial housing uses (Niles, 2013). Environmental hazards and the vicissitudes of the global economy have played a significant role in hampering the development efforts of Caribbean islands (Briguglio et at., 2009). Briguglio et al., (2009) noted further that due to mass migration and emigration, the human and institutional capacities to manage and use natural resources on a sustainable basis are becoming more and more limited in these territories.

The starting point for Barbados and Grenada since gaining political independence from the United Kingdom (UK) was eight years apart (Barbados in 1966, and Grenada in 1974). Despite the challenges and constraints, these islands have made a tremendous impact on the world's development economically, academically, culturally, and scientifically. Though similar in many ways, it is possible to distinguish Barbados and Grenada from each other by a number of unique characteristics and features.

Barbados

Barbados is relatively flat, compared to its mountainous neighbor - Grenada, and has a high population density with 40 percent of the residents residing in urban areas (UNDESA, 2010). The island offers free primary, secondary, and tertiary education. The literacy rate is 97% among individuals aged 15-24 (UNDESA, 2010). Before gaining its

independence from Great Britain, the Barbadian economy relied heavily on the production of sugarcane and export of cane juice products, including sugar, rum, and molasses to European nations (Roberts, 2006). Barbados eventually dominated the Caribbean sugarcane industry (World Bank Report, 1975). The government succeeded in obtaining preferential treatment from the European Economic Community (EEC) through the Sugar Protocol of the Lomé Convention in the mid-1970s (Gruhn, 1976). However, the sugar industry, which generated more than one-third of the island's revenue, rapidly declined (World Bank Report, 1975).

The policy-makers in Barbados sought to develop and promote alternative sectors of economic activities. Tourism became the island's mainstay during the early 1970s. Barbados increased its GDP per capita by 68% in 1977 from the 1966 level of US $523.96, the third highest GDP in the region during that decade (World Bank Report, 1975). The island had also experienced notable periods of economic downturn (See Figure 1.1 for illustration). According to the World Bank Report, the deepest downturns were in the late 1970s through 1981 and the early 1990s when the economy contracted by a cumulative 14 percent over a three-year period.

The economy rebounded during the early 1980s after policy-makers took measures to diversify into manufacturing, financial, and information services, and expand the tourism sector (World Bank Indicators, 1982). Offshore finance and light manufacturing became important foreign exchange earners (World Bank Indicators,

2010). Nevertheless, macroeconomic performance began to decline in 2001 following the

9/11 terrorist attacks in the USA (Caribbean Development Bank [CDB] Report, 2001).

Outputs of goods and services began to grow toward the end of 2002 with modest GDP

per capita growth and the island experienced high economic performance from a range of

sectors. However, a World Bank Report (2008) revealed that a sharp decline in tourism

and financial services in 2008 adversely affected the island's GDP.
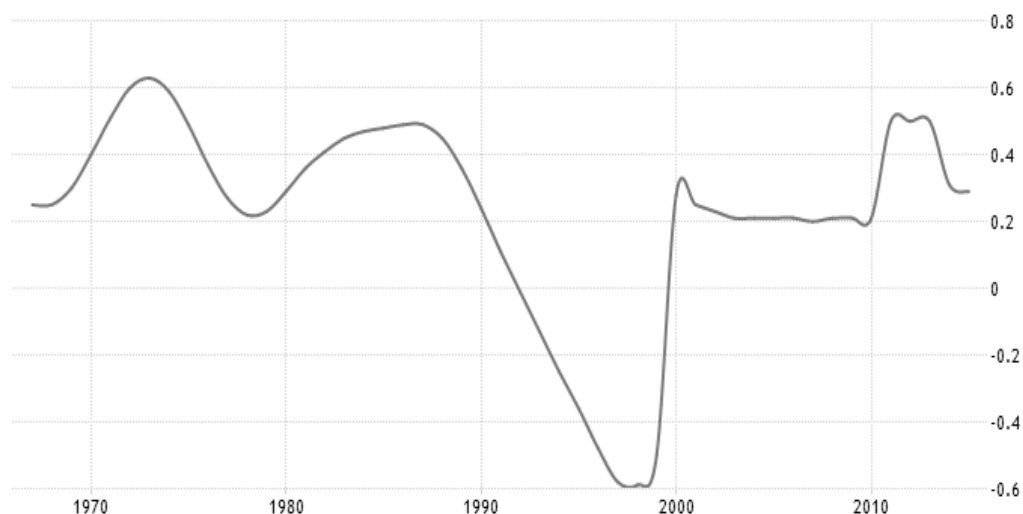
Notes: Data is in the public domain

Figure 1.1 GDP per capita annual growth rate in Barbados between 1970 and 2010.
Adapted from Trading Economics data files, retrieved on February 5, 2016 from:
http://www.tradingeconomics.com/barbados/population-growth-annual-percent-wb-data.html

Despite the fluctuation in economic performance, having experienced four major

economic downturns, the Barbadian financial system has remained resilient (World Bank

Report, 2010). Barbados has a well-developed mixed economy. It boasts the highest level of GDP per capita in the Anglophone Caribbean (World Bank Report, 2008). In 2007, the United Nations Human Development Report (HDR) classified Barbados as the 51st richest nation in the world. For five consecutive years, Barbados has also received the highest HDR ranking for living standards in the region (UNDP- HDR, 2010; 2008; 2007). The island has achieved many of the targets set by the Barbados Programme of Action (BPOA), Mauritius Strategy for the Implementation of the BPOA (MSI), Agenda 21, and the Millennium Development Goals (MDG), according to the 2010 Barbados National Assessment Report (BNAR). The BNAR revealed that Barbados was one of the few islands in the Anglophone Caribbean to develop and implement a national policy to guide the island's activities toward sustainable development. Despite having a national framework to guide the policy-making practice toward the goals of sustainable development, Barbados has failed to achieve sustainability overall.

Grenada

Grenada is predominantly of volcanic origin (CIA: World Fact Book, 2015). Its topography is mountainous and rugged. Clay and sandy loam dominate the soil. A report on the geographical distribution of the population indicates that most people reside along the coastlines (Grenada National Report on Sustainable Development [GNRSD], 2008). Sixteen percent of the population is over 50 years old while 47 percent are under 20 years. The island offers free education for people ages 5-16, and the literacy rate is 96%

(Government of Grenada Report, 2010; 2009).

Grenada has had a tumultuous history. The island was captured and ceded several times, by Dutch, French, and British colonists (Pomeranz & Topik, 2008; Black, 2006). This tri-island state relied heavily on revenue from cocoa, nutmeg, and bananas, and the export of those products to European nations (World Bank Report, 1978; 1975). Cocoa, nutmeg and banana had replaced cotton, sugarcane and its value added products (World Bank Report, 1978; 1975). Grenada eventually became a world leader in the production of nutmegs (Asare & Bennett-Lartey, 2004). The island benefited from the preferential trading arrangement provided by the EEC through the Lomé Convention during the mid-1970s (Gruhn, 1976). A rapid decline in international demand for agricultural products from the Anglophone Caribbean, along with decreased production, and lowered prices for domestic goods, led to a generally weak economy (Paulino, Naudé & McGillivray, 2010) (see illustration in Figure 1.2), depicting economic growth in Grenada 1974-2008.
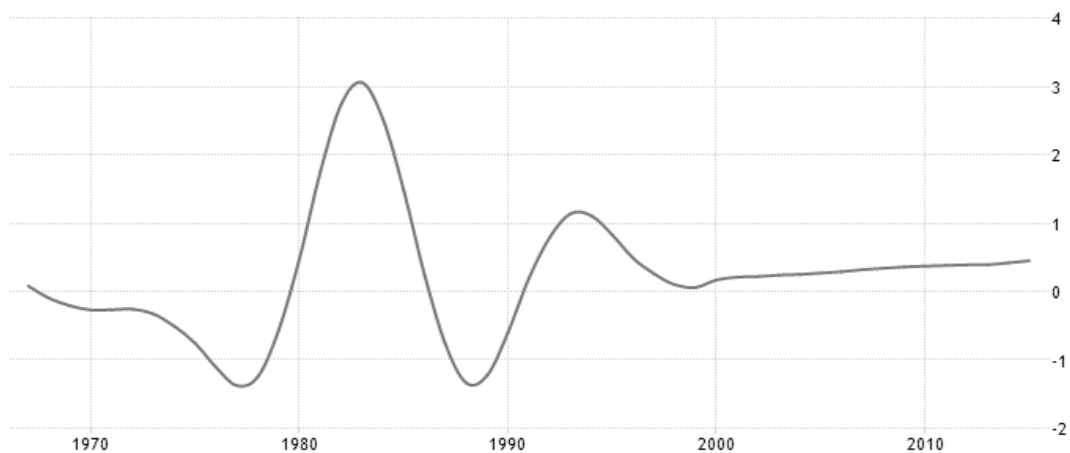
Note: Data is in the public domain

Figure 1.2 GDP per capita annual growth rate in Grenada between 1970 and 2010.
Adapted from Trading Economics data files, retrieved on February 5, 2016 from:
http://www.tradingeconomics.com/grenada/population-growth-annual-percent-wb-data.html

The early post-independence years in Grenada were devastating. Some of the aforementioned authors characterized the economic growth pattern during the early 1970s as slow and decreasing growth. From 1979 through 1983, optimism began to emerge through the growth that occurred in agriculture, agro industry, tourism, fisheries, and light manufacturing. After this period, the economy started to show signs of exhaustion, and the dynamism, which boosted the economy in the previous period, had begun to disappear. Like Barbados, there were significant economic fluctuations between 1984 and 2010. The Grenadian economy is particularly vulnerable to exogenous shocks, fluctuations in global demand for local exports, erratic shifts in the terms of trade, and the effects of globalization (Briguglio et al, 2009). Environmental hazards, high dependence on foreign aid and remittances, political instability, and austere conditionalities imposed by international capital administrations have all played a role in hampering the island's progress toward achieving sustained economic growth and development during the early independence period (World Bank, 2010; Briguglio et al, 2009; and Pelling & Uitto, 2001). A self-study regarding Grenada's experience with sustainable development revealed that some progress has been made in improving the island's economic growth, environmental protection, and social development programs (GNRSD, 2008). Nevertheless, a 2010 National Environmental Survey (NES), conducted by PNUMA - a

United Nations Environment Program (UNEP) revealed that the tri-island state has failed to achieve sustainability overall.

The inability of Barbados and Grenada to attain sustainability overall in the early postcolonial period has led to questions as to 'why' and 'how' of policy-making practice in SIDS, especially in the territories that are vulnerable to environmental and anthropogenic phenomena.

Statement of the Problem

Sustainability has not been sufficiently achieved in the Anglophone Caribbean, nor has the concept been adequately integrated into the institutional frameworks for policy-making practice. Some studies have shown ongoing struggles to find an adequate approach to maintain long-term macroeconomic stability in territories that are small and vulnerable to environmental hazards and global economic shocks (e.g., United Nations, 2007, 2005; ECLAC, 2006b). Other studies (e.g., United Nations, 2009; 2005) suggested that the prevailing approaches to policy-making practice and socio-economic development often lead to unsustainable solutions. Still, other authors pointed to significant challenges in integrating the activities of economic growth, environmental protection, and human development to achieve sustainability (HDR, 2010). Various assessments showed indications of economic fluctuation, high unemployment, and rising demand for food, housing, education, health care, and productive employment. Other assessments, including those conducted by the UNDP (2010; 2004) and De Hass (2005)

showed increasing rates of poverty, rapid urbanization, mass emigration to developed

nations, increasing and more complex environmental hazards, increased land pollution,

deforestation, biodiversity loss, habitat degradation, reduced government budgets and

fiscal space, and increased economic uncertainties.

The aforementioned challenges are complex in nature. Some represent

conspicuous ambiguities, uncertainties, contradictions, and paradoxes in policy-making

practice, requiring comprehensive approaches rather than single solutions. In other

instances, there are knowledge gaps in understanding and addressing particular problems

and issues within and across the development systems. The complexity and enormity of

these challenges make the practice of policy-making multifaceted, complex, and arduous.

By gaining a deeper understanding of how to address these problems and issues

effectively, it may be possible to successfully develop and implement policies that

support the goals of sustainable development in territories that are small and prone to

hazards.

Purpose of the Study

The purpose of this qualitative case study was to explore and understand why

sustainability has not been sufficiently achieved, and conceptualize how sustainable

development may be pursued in territories that are small and prone to hazards. To

achieve this aim, the researcher explored existing concepts and theoretical models of

sustainable development and brought these concepts into the specific context of policy-

making practice. The researcher examined development outcomes in Barbados and Grenada. The researcher used semistructured interviews to explore and describe the perceptions of key policy-makers about their practices and experiences with policy-making in pursuit of the goals of sustainable development. Archival document analysis added complementary data by providing insights from the behavioral patterns and trends found in archival documents. Four triangulation mechanisms were used to add robustness and richness to the inquiry.

Research Questions

Literature reviews provided background information on the concepts and context of sustainable development and sustainability. This knowledge enabled the researcher to formulate appropriate questions for this inquiry. The researcher drew key insights for the development of research questions from Yin (2009), who noted that qualitative research studies tend to focus on "how" and "why" of phenomena, the appropriateness of questions to address a research problem, the extent of control over behavioral events and the extent of focus on contemporary events as opposed to historical events. Yin (2009) stated that formulating questions about a problem under investigation is important to establish a firm focus on the case and delineate its boundaries. Yin noted further that formulating adequate research questions entails determining an appropriate approach for a study, for example, exploratory, descriptive or explanatory.

The central question addressed in this exploratory, multiple case study was "How

do policy-makers successfully develop and implement sustainability-oriented policies in territories that are small and prone to hazards?" Other questions explored in the study include the following:

1. What factors do policy-makers perceive as having facilitated progress in developing and implementing sustainability-oriented policies in territories that are small and prone to hazards?

2. What factors do policy-makers perceive as having impeded, or continue to impede progress in developing and implementing sustainability-oriented policies in territories that are small and prone to hazards?

3. How do policy-makers evaluate the effectiveness of sustainability-oriented policies in territories that are small and prone to hazards?

4. How do policy-makers propose to enhance the implements they perceive as being necessary for positive action in policy-making practice toward sustainable development?

5. What opportunities do policy-makers need to consider for achieving sustainability in territories that are small and vulnerable to hazards?

Conceptual Framework

A critical review of the literature produced a plethora of studies that espoused concepts, theories, principles, and tools for gaining a deeper understanding of sustainability. However, these studies failed to provide practical examples of how to

achieve sustainability, particularly in territories that are small and prone to environmental hazards and global phenomena. One reason for this failure lies in the inadequate theoretical understanding of the concept of sustainability and its complexities (Ramirez, 2012).

Sustainability generally refers to the ability of development systems and processes to flourish within the ecological limits of the Earth's biological capacity (WCED, 1987). The organizing principle for sustainability is sustainable development. Sustainable development is comprised of three interconnected development systems: ecology, human society, and the economy (WCED, 1987) (see Figure 1.3 for illustration). In the absence of a theoretical framework from which to build a scientific understanding of sustainability, there are different approaches to, and treatments of sustainable development in policy-making practice. Nevertheless, by incorporating pieces of work from various sources, the researcher secured sufficient tether to construct a logical and coherent conceptual framework for the research inquiry. These sources include works by the World Commission on Environment and Development, Sachs (2015), Naess (2010), Rawls (as cited in Woodridge & Gooden, 2009), Savitz & Weber (2006), Hausmann, Rodick & Velasco (2005), Robinson (2004), Malthus (as cited in Urdal, 2005), Meadows, Rangers & Meadows (2004), Elkington (1994), Romer (1994), and Catton (1982).

The WCED defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their

own developmental needs" (Our Common Future, 1987, p.43). Under this paradigm, development concerns itself with strengthening the capacity of the three key development systems: ecology, the economy, and human society (development) to attain the quality of life that brings health, happiness, and prosperity to all peoples in the long term.
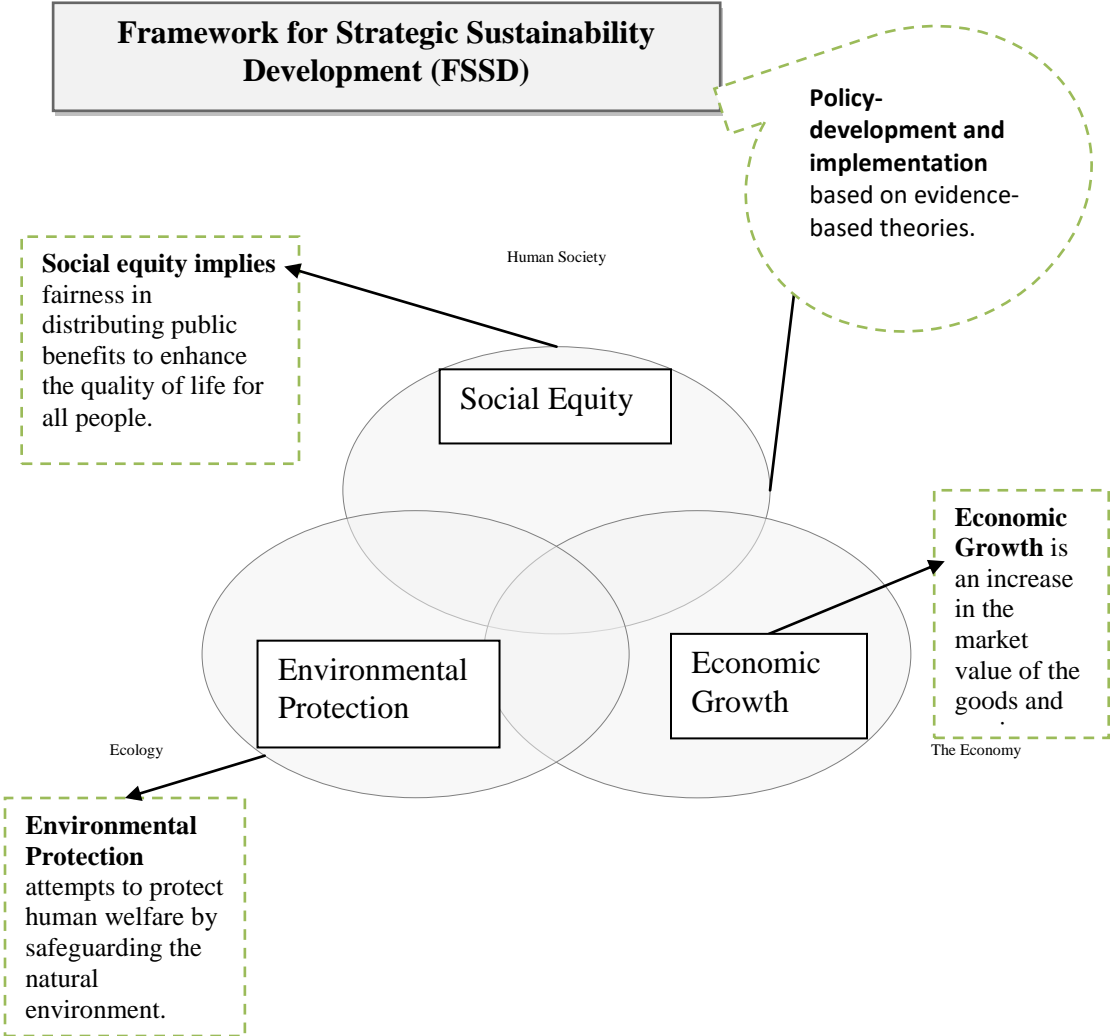
Figure 1.3 The sustainable development conceptual framework

As interpreted by many actors, sustainable development is an attempt to rise above the narrow, compartmentalized approach of classical and neoclassical economic growth theories. For Drexhage & Murphy (2010) and Stiglitz, Sen, & Fitoussi (2010; 2009), sustainable development promotes practices that integrate the activities of the three key development systems: the economy, society (human development), and ecology (protecting and preserving the natural environment), ensuring that current and future generations of humans can access diverse and productive biological systems. For Yang & Yu (2006), the practice of sustainable development promotes having an abundance of clean, breathable air, drinkable water, productive soils, clean oceans, and plant and animal life. The utilization of sustainable development as a strategy and model for development can help to facilitate mutually beneficial relationships among the key development systems. By making sense of the interconnections, interactions, and competing objectives of the three complex development systems, policy-makers might be able to achieve long-term sustainability.

Sustainable development addresses several questions. For example, how can the Earth's ecological systems meet the developmental needs of human and eco-systemic communities in the long term? How can policy-makers integrate and harmonize the activities of economic growth with the needs of human communities and the natural environment to avoid a collision? Is there a safe operating space for socially just human development and the building of environmentally resilient societies? How does a society

of inequality of income, wealth and power function harmoniously? Why does poverty

persist, and can policy-makers alleviate it? What opportunities exist to mitigate social

inequities in societies, environmental degradation, and sustain Earth's biological systems?

Drawing from "Our Common Future" (1987) and other works, which informed

the conceptual framework, it appears as if policy-makers can use the concept of

sustainable development to create societies where economic progress is widespread,

where social equity is encouraged and poverty alleviated, and where the natural

environment is adequately preserved and protected from human-induced degradation to

achieve long-term sustainability.

Although sustainable development has become popular in Caribbean political

discourse, and has broad appeal, the concept has also drawn many criticisms. One of the

most common criticisms to emerge in the literature reviews is that there is a lack of clear

understanding of its meaning based on inherent ambiguities, paradoxes, and

contradictions (Ramirez, 2012; Drexhage & Murphy, 2010; Connelly, 2007; Krueger &

Gibbs, 2006; Robinson, 2004). Undoubtedly, this challenge raises important questions

regarding integrating, harmonizing, and evaluating the objectives of sustainable

development. Without a clear understanding of the meaning of sustainable development,

it is difficult to determine whether sustainability is achievable and how to move forward.

Another criticism leveled against sustainable development is that competing

interests from three diametrically different development systems tend to define and

promote their particular agendas in development decisions (Jabareen, 2008). As noted by

Jabareen, the range of emphasis from the various interests often leads to stakeholder

subjectivity. This, in turn, creates conflict of various kinds that hinders progress toward

sustainable development.

Other critiques of sustainable development found methodological inadequacies in

the model. To Biggs and Carpenter & Brock (2009) and Faila (2008), the lack of a

common unit to monitor and measure the progress of sustainable development tends to

stymie progress in integrating and harmonizing the activities of economic growth,

environmental protection, and human social development. For Robinson (2004), being

able to adequately monitor and measure the progress of sustainable development is

important to understand, improve, and evaluate the overall performance of each

development system. Likewise, the inability to adequately monitor and measure the

progress of sustainable development presents a formidable challenge that could delay

adaptation to the sustainable development model.

Another criticism focused on the ethics behind sustainable development. Kothari

(as cited in Jabareen, 2008) claimed that sustainable development spouts vacuous

rhetoric, which lacks a specific model for outlining how to effectively apply the concept.

To Kothari, economic growth has been in conflict with environmental protection and

social equity since the classical and neoclassical economic growth models took center-

stage in the development theater. For example, since the emergence of the concept,

sustainable development advocates have advanced the idea that judicious use and management of natural resources in the present will guarantee adequate amounts of natural capital stock to sustain future generations. However, policy-makers have not successfully adjusted their practices to accommodate this notion. According to this criticism, while the panoptic nature of sustainable development gives it political potency, without specific guidelines for operationalzing the concept, the term remains an allegorical concept rather than a meaningful proposition. Hence, the concept of sustainable development provides hollow promises for achieving sustainability and improving quality of life.

In light of the criticisms leveled at sustainable development, practitioners can view the concept as "a perplexing one, comparable to democracy, fairness, freedom, justice, equality, and good governance" (Robinson, 2004). According to Robinson, sustainable development "means different things to different people and its goals remain elusive after three decades of having been coined". While the concept of sustainable development has been widely accepted as an important strategy for achieving sustainability and improving quality of life, policy-makers have not bridged the gap between a promising strategy and the successful development and implementation of that strategy.

Despite these criticisms, many scholars held the view that sustainable development is an important organizing strategy for achieving sustainability. Based on

the challenging scenario presented, sustainable development can be defined as a exploration or journey - a metaphor to suggest a movement away from mundane practices to new ways of organizing, adapting, and progressing in the activities to attain sustainable development. It pushes the ambit beyond the classical and neoclassical approaches to development based on the notion of perpetual development of a finite planet to consider ways in which to engender the quality of life that brings protection to the natural environment, health, happiness, and material prosperity to all people.

Defining sustainable development as an exploration or journey is important for several reasons. It can help to strengthen the human-nature relationship by bringing greater awareness of the finite carrying capacity of planet Earth (Meadows, Rangers & Meadows, 2004; Wackernagel & Rees, 1997; Catton, 1982). It can also help to bring greater attention to the importance of protecting the ecological system for the benefit of current and future generations of human and eco-systemic communities (Leopold, as cited in Nelson, 2003; Catton, 1982). Framing sustainable development as an exploration or journey is also important for bringing greater attention to the mindset and attitudes that humans must adopt to integrate and harmonize their development activities with those of the natural environment. Visualizing sustainable development as an exploration or journey can further help to galvanize discussion and engagement among stakeholders around how to pursue the goals of sustainable development in territories that are relatively small and prone to significant challenges and constraints that can hinder

development progress.

Methodology for Operationalzing Sustainable Development

      The Framework for Strategic Sustainable Development (FSSD) is a comprehensive methodology for understanding the complexities of sustainable development and planning amidst the complexities (The Natural Step [TNS], 2011). The FSSF uses a five-level framework based on systems thinking, purpose, strategy, actions, and tools to capture insights and shed light on the interactions and interplays taking place between and among the development systems and their sub-systems. The systems level attempts to visualize the economic, social, and environmental pressures that are affecting development and find possible solutions to overcome such issues to attain sustainability. The purpose level attempts to understand the nature of sustainability. At the strategy level, there are guidelines to follow in implementing the framework for achieving the goals of sustainable development. At the actions level, there are steps to pursue on the path toward sustainable development. At the tools level, there are instruments that monitor, measure, and manage the path toward achieving sustainable development. The FSSD recognizes that what happens in one part of a system affects the whole system. It provides a shared mental model of sustainability to help practitioners see and understand the whole system, communicate effectively, build consensus, and move together toward the vision for sustainable development. Through analysis and modeling of the multi-dimensional process, the FSSD enables practitioners to traverse the complex interactions

and behaviors taking place in sustainable development and provide a deeper understanding of what possible solutions can look like. The FSSD is openly published and free for use.

The FSSD can be a valuable tool for gaining a richer understanding of the complexities inherent in sustainable development. It provides instruments for performing gap analyses and closing performance gaps. It also provides the context and strategic vision for progressing toward sustainable development. By understanding the interactions and interplays taking place between and among the key developmental systems and their subsystems, the FSSD can provide a clearer understanding of the factors that facilitate and hinder progress toward the attainment of sustainable development.

Nature of the Study

The researcher proposed a qualitative case study approach for this inquiry. The researcher considered other methodologies and ruled them out because they were inadequate for finding richer, deeper meaning in people's experiences (Denzin & Lincoln, 2008). Denzin and Lincoln (2008) found that the qualitative research approach is appropriate to grasp deep meaning in social phenomena. Qualitative research is grounded in relativist constructivist ontology, which assumes there is no objective reality; rather, multiple realities do exist that are subjective (Gergen & Gergen, 2003). Qualitative research is located in interpretivist epistemology, which assumes that reality is socially constructed and fluid (Denzin & Lincoln, 2008). It seeks to understand depth, richness,

and complexities in human experiences. Qualitative researchers place emphasis on entering into the world of informants to illuminate, extrapolate, and interpret the meaning they ascribe to their unique experiences (Patton, 2007). To Patton (2007), a qualitative researcher becomes part of the process that shapes the knowledge of people who experienced a phenomenon under investigation. She or he must immerse in that process through close interaction with informants to gain a deeper understanding of the unique meaning of their perceptions. Denzin and Lincoln (2008) pointed out that knowledge in the interpretivist approach is accommodated through an inductive process of comparison in which themes, categories, and patterns emerge from the data obtained from questions that a researcher asks respondents about a phenomenon they have experienced. Yet, the ontological and epistemological agents that shape qualitative research are not alone (Merriam, 2009). The biography of a researcher, his or her values, knowledge, perspectives, and experiences also play a pivotal role in shaping the course of such studies.

Many scholars have found the qualitative research approach to be appropriate for adding to scientific knowledge. Yin (2009) posited that the procedures in qualitative research are rigorous and sufficiently thorough to explore, analyze, interpret, compare, contrast, and corroborate data, ensuring the credibility and trustworthiness of the data results. Corbin & Strauss (2008), Denzin & Lincoln (2008), Davies & Dodd (2002) and Stenbacka (2001) agreed with the notion that qualitative research has brought vitality,

insight, and decision-making support to social science. These substantive perspectives on qualitative research provided a basis for the approach chosen for this study.

The research methodology associated with this inquiry is case study. The case study research strategy enables researchers to explore and describe phenomena within their context using a variety of data sources (Stake, 2010). To Stake, the case study strategy provides unique methods and techniques for collecting, analyzing, describing, and understanding complex data. Yin (2003) recommended the use of a multiple case design to facilitate the investigation of multiple cases, draw deep, meaningful insights about the phenomenon under examination, and make predictions about the data. I employed a multiple case design to explore the perceptions within and across the cases in this inquiry. I used semistructured interviews to collect and describe primary data from key policy-makers. Secondary data from archival document reviews complimented the primary data. The research results were analyzed using thematic, content, and cross-case analyses.

There were 18 participants in the sample for this qualitative multiple case study. They were recruited using purposive sampling (Given, 2008; Onwuegbuzie & Leech, 2007). I assumed that this sample size would be adequate to achieve data saturation, i.e., the point at which no new data emerges to shed light on the phenomenon under exploration (Onwuegbuzie & Leech, 2007).

This study was restricted to the period 1966-2010 to assess the role of policy-

making practice in shaping development outcomes in the four decades since gaining political independence from the United Kingdom. The researcher sought to gain a deeper understanding of policy-making practices in Barbados and Grenada and what enables policy-makers to operationalize sustainability concepts in policy-making practice. The findings from the study may contribute to the body of knowledge on how to pursue the goals of sustainable development in territories that are small and prone to both environmental and anthropogenic hazards. A study that seeks to understand the structures and processes required to successfully develop and implement sustainability-oriented policies may provide insights on the specific frameworks, strategies, competences, and attitudes required to achieve sustainability, despite prevailing constraints. The researcher anticipates that policy-makers who are interested in the successful development and implementation of sustainability-oriented policies would embrace an evidence-based approach to policy-making practice.

The implications for social change are to adapt policy-making practice in Barbados and Grenada to the sustainable development agenda for small islands and direct future research on how to embed sustainability concepts into policy-making practice. The direction for future research is of benefit to key policy-makers, students of public policy, evaluators of public policies and sustainable development advocates.

Definition of Terms

For the purposes of this research study, I will define the following six terms:

Development: Development refers to a specified state of growth in an economy. It

describes the dynamic changes that occur in systems; be it social, economic,

environmental, political, cultural or environmental (Oxford online Dictionary,

2012).

Economic Contraction: Economic contraction refers to a period of time in which GDP

declines or economic growth rate is negative (World Bank Statistical Manual,

2012).

Economic Growth: Economic Growth is a positive change in the level of production of

goods and services by a country over a certain period of time (Dickinson, 2010).

Ecological Footprint: Ecological Footprint is a measurement of the land area required to

sustain a population (Wackernagel & Rees, 1996).

Gross Domestic Product (GD): Gross Domestic Product is the market value of all

officially recognized goods and services produced in a country within a given

period; usually one year. GDP per capita is one of the primary indicators used to

gauge the health of a nation's economy (World Bank Statistical Manual, 2012).

Sustainable Development: Sustainable Development has been defined in a myriad of

ways. The most common among the definitions is the World Commission on `

Environment and Development (WCED), also known as The Brundtland Report.

The WCED defined Sustainable development as "development that meets the

needs of the present without jeopardizing the ability of future generations to meet

their own needs" (WCED, 1987).

Sustainability: Sustainability has been defined as having the capacity to persevere or be

maintained at a certain level in the long term (The Oxford online Dictionary,

2012). For humans, this means having long-term economic and social

responsibilities and the efficient management of natural resources. For ecology, it

speaks to the ability of biological systems to remain diverse and productive over

time (Meadows et al., 2004; Leopold, as cited in Nelson, 2003; and Catton, 1982).

Taken together, sustainability means maintaining the diverse and productive

biological systems to protect the natural environment and sustain the well-being

of human and ecosystemic communities in the long term. In other words,

sustainability means flourishing within the ecological limits of the Earth's

biological capacity.

Assumptions, Scope, Delimitation and Limitations

Assumptions

The researcher has made several assumptions in this inquiry. One assumption was

that policy-makers could achieve sustainability with the use of appropriate policy-making

approaches. Another assumption was, if policy-makers possess the requisite knowledge,

competences, and attitudes, they could enhance policy-making practice toward the goals

of sustainable development. The researcher also assumed that the research design and

methodology chosen was suitable to address the research purpose and questions. The

researcher assumed further that the sample size would be adequate for achieving data

saturation and making discovery progress. The researcher also assumed that the

participants will willingly share their experiences and perspectives regarding policy-

making practice; that the instruments used in the study will be adequate for establishing

credibility and trustworthiness of the research results, and the data obtained from

respondents will be accurate and adequate to draw conclusions that appropriately address

the research purpose and central question.

Scope and Delimitation

      This exploratory multiple case study focused on the factors that facilitate and

hinder progress in achieving the goals of sustainable development in Barbados and

Grenada. By understanding these factors, it was possible to identify opportunities that

exist for the successful development and implementation of policies that support the

goals of sustainable development in territories that are small and prone to hazards.

      I delimited the research study to examination of the experiences, perceptions, and

self-efficacy of key policy-makers in practice toward achieving the goals of sustainable

development. It covered the period 1966-2010, restricting analysis of development

outcomes in Barbados and Grenada to economic growth, environmental protection, and

social development. This delimitation made it difficult to generalize the research results

to other settings. However, it is important to point out that the study aimed to find

meaning in policy-making practice rather than generalize the data results. On the other

hand, the prospect of transferability to other similar settings may be possible through use

of replication and verification of the inquiry's audit trail for conformity (Patton, 2007).

Limitations of the Study

While the case study strategy has several advantages in qualitative research, some

quantitative researchers have faulted it for its lack of scientific rigor in data collection,

construction, and analysis (Riege, 2003). Individuals involved in the qualitative research

process attribute this lack of rigor to potential biases and reactivity. This argument may

be attached to the 'gold standard' of randomized controlled trials in research,

misunderstanding the aims of qualitative research (Creswell, 2008; Lincoln & Guba,

2005). To several authors, e.g., Creswell (2007), Davies & Dodd (2002), and Stenbacka

(2001), this argument ignores the fact that qualitative researchers use a different set of

strategies and techniques to establish credibility and trustworthiness in research studies

than in quantitative inquiries. Stenbacka, Davies & Dodd, and Creswell supported the

usefulness of scientific rigor in qualitative research studies but suggested that rigor in

such studies needs to be flexible enough to reflect the meanings that respondents ascribe

to their unique experiences while also minimizing the threat to trustworthiness and

legitimizing the research findings.

To minimize the potential lack of scientific rigor and increase confidence in the

study, I employed a systematic approach of utilizing multiple sources of data, methods,

and perspectives to check, monitor, corroborate, and verify the research results (Creswell, 2008; Rothbauer, 2008; Lincoln & Guba, 2005, and Patton, 2002). The strategies of member checking, peer reviewing, collecting data from multiple sources, and using multiple methods to collect data and analyze the results has potential to increase confidence in the research process and findings.

A second potential limitation involved possible researcher bias. Since the researcher is of Caribbean heritage, concerns may be raised about possible biases in collecting, analyzing, and interpreting data collected in a familiar setting (Patton, 2002). To the contrary, Corbin & Strauss (2008) posited that there might be advantages to having a researcher who is familiar with the research-setting serve as the main instrument in the data collections, data analysis, and data interpretation process. Yet, when a researcher relies on her or his own inclinations and abilities throughout a research process, it may spark concerns about the potential for bias.

To minimize potential researcher bias, I used several built-in strategies in the study design to identify and mitigate the possibility of harm and strengthen the quality of the data. For example, I used a protocol of questions appropriate to address the research purpose and central question (McNamara, 2009). I used effective interviewing skills to obtain rich, thick, and meaningful data by asking clear, precise, and unambiguous questions (McNamara, 2009). I used good listening skills to allow the informants to express their perspectives, and asked relevant follow-up questions to seek clarity on

unclear responses (Kvale, 2008). I used multiple sources of data to address the research questions appropriately (Yin, 2003). I used member-checking (Lincoln & Guba, 2005), eidetic reduction to become more consciously aware of the occurrences in the research process (Janesick, 2010; Gearing, 2004; Moustakas, 1994), and triangulation mechanisms to verify the research results (Rothbauer, 2008).

A third possible limitation might exist when respondents perceive the gender of the researcher negatively. Ridgeway (2001) observed that traditional gender stereotypes tend to create biases and prejudices against women, in particular, which in turn may negatively affect interpersonal interactions between the genders in a qualitative study. The fact that this study is being conducted in a region where strong patriarchal values still exist and most respondents are male, being a female investigator could evoke resistance from some participants.

To minimize this potential limitation, I incorporated several strategies into the research design. I followed the recommendations of Rubin & Rubin (2012) and Kelsey (2008) who argued that researches could overcome defenses and resistance from study participants when the appropriate strategies are used. To Kelsey, self-efficacy provides self-confidence. This enables an investigator to employ the behaviors and attitudes necessary to effectively manage challenges and achieve excellent performance outcomes. For Rubin and Rubin (2012), resistance from respondents is not necessarily a negative response; rather, the researcher can turn it into a positive experience if she or he knows

how to engage responsively in an exploration of the respondents' perceptions, emotions, and experiences. Rubin and Rubin (2012) further argued that by being empathic, the researcher assumes the role of the respondent in seeking to understand and experience their private world. I used icebreakers in a pre-briefing session prior to asking the interview questions to help create a relaxed, pleasant, comfortable, and non-threatening ambience where the respondents felt safe to articulate their stories (Kvale, 2008). Janesick's (2010) copious note taking, Gearing's (2004) epoche, and Moustakas' (1994) bracketing were techniques used to manage my thoughts and conceive of the appropriate actions required for solving emerging problems or issues.

Significance of the Study

Studies on how to pursue the goals of sustainable development in territories that are small and prone to both environmental and anthropogenic hazards are uncommon. For this reason, this research inquiry stands in a position of great importance. The study has produced significant insights by identifying the specific factors that facilitate and impede the successful development and implementation of sustainability-oriented policies and opportunities available to further progress toward sustainability in territories that are small and vulnerable to hazards. Following this study, policy-makers may be able to take a more proactive approach in developing and implementing policies that support the goals of sustainable development.

I will present a scholarly paper to key policy-makers and a wider audience of

practitioners in Barbados and Grenada on how to pursue the goals of sustainable development. The paper will highlight the potential barriers to sustainable development and opportunities for enhancing policy-making practice toward attainment of the goals of sustainable development for SIDS. I will make recommendations about strategies to pursue sustainable development in territories that are small and prone to hazards. I will demonstrate how adequate policy-making approaches can play an instrumental role in achieving the goals of sustainable development.

Summary

This qualitative, multiple case study is about understanding the factors that facilitate and hinder progress toward achieving the goals of sustainable development, and how achieving sustainability can be pursued in territories that are small and prone to hazards. The study is presented in five chapters. Following the chapters, I provided a section of references of the works cited and appendices.

In chapter one, I provided an overview of the problem to be addressed, the purpose of the inquiry, research questions, the conceptual framework for the study, and the nature of the study. I provided a definition of terms, along with assumptions, scope and delimitations, and an analysis of the potential limitations of the study. To address these elements, I viewed the phenomenon through the lens of the Sustainable Development framework presented by the World Commission on Environment and Development (1987) and the Framework for Strategic Sustainable Development adapted

from The Natural Step organization. Through these lenses, the findings from an exploration of how pursue the goals of sustainable development in territories that are small and prone to hazards could benefit policy-makers in Barbados, Grenada, and any other islands in the Anglophone Caribbean similarly situated.

In chapter two, I provided an overview of the literature on sustainable development, sustainability, development outcomes in Barbados and Grenada, and the best practices for pursuing the goals of sustainable development in small territories. In the first section, I provided a historical and theoretical overview of the concepts of sustainable development and sustainability to locate the terms into a broader theoretical space. In the following section, I provided a context for understanding the development path of Barbados and Grenada during the early post-independence period. In the next section, I provided an analysis of the development outcomes of both nations, and referred to specific events that have influenced development. I analyzed the factors that hindered and facilitated progress in economic growth, environmental protection, and social equity and their implications for achieving sustainability, followed by an examination of the policy-making trends toward achieving sustainability in the delimited area. In the following section, the researcher discusses a significant knowledge gap in the practices that support policy-making toward achieving the goals of sustainable development. In the next section, I discussed how the proposed research would help to bridge the knowledge gap and create greater understanding of how to pursue the goals of sustainable

development in hazard-prone territories. I provided a summary of the salient points in the chapter.

In chapter three, I provided a detailed account of the research design and methodology I will use in the study. I discussed the role of the researcher, along with strategies for reducing biases and strengthening the rigor and trustworthiness of the research results. I addressed ethical considerations relating to the study.

In chapter four, I presented a comprehensive analysis of the research findings by comparing the data from within and across the cases.

In chapter five, I discussed the study findings and implications for future research.

Chapter 2: Literature Review

Introduction

Sustainability has not been sufficiently achieved in the Anglophone Caribbean, and the concept has not been adequately integrated into the institutional and policy frameworks for guiding and supporting policy-making practice. In this qualitative multiple case study, I sought to explore and understand 'why' sustainability has not been sufficiently realized and conceptualize 'how' achieving the goals of sustainable development may be pursued in territories that are small and prone to hazards. I used key policy-makers in Barbados and Grenada as the case studies. The previous chapter provided an overview of the problem addressed, the purpose of the inquiry, the research questions, the conceptual framework, and the nature of the study. In this chapter, I present a review of the literature examined to support this dissertation.

The literature the researcher reviewed for this study included peer-reviewed journal articles that were accessible through online databases such as EBSCO Host, ProQuest, and Google Scholar. I verified these journal articles by using Ulrichsweb, which brings together the latest bibliographic details in one location and enables the researcher to avoid the time-consuming process of gathering serial information in bits and pieces from multiple sources. The literature reviewed included policy reports, assessments, and other relevant documents from the Governments of Barbados and Grenada and affiliate agencies. In addition, I reviewed reports and assessments from

well-established international agencies. These include regional banks, the World Bank, and International Capital Administrators, including the International Monetary Fund (IMF), United Nations Economic Commission for Latin America and the Caribbean (ECLAC) - all are accessible through their websites.

My initial search protocol entailed using the Business Source Complete (EBSCOhost) databases because of its major academic publications and practitioner journals. Using sustainability in Small Island Developing States (SIDS), and adding other relevant key words as I went along, e.g., sustainable development in Barbados and Grenada, EBSCO returned 365 published articles. Since many of the topics I anticipated were not found, I performed searches in JSTOR. Performing searchers for economic growth produced returned 1,624 articles. Searches for environmental protection returned 1,124 published articles. Searchers for social development produced 1,225 published articles and reports and searches for natural hazards in the Caribbean produced 1,450 articles. There were additional searches in Google Scholar about concepts and theories that inform sustainable development, in particular, the historical, conceptual and theoretical background of economic growth, environmental protection and social equity. Altogether, these topics produced over 50,000 published articles, reports, conference proceedings, and books. By imposing restrictions to the search, I was able to narrow the results to 10,000.

I did not confine the literature reviews to a specific number of articles, reports,

conference proceedings, or books, nor was it delimited to a particular time-frame for completion. Rather, I continually revised the literature reviews throughout the dissertation process. Much of the literature reviewed for this study had been published during the period 2012-2017. However, it was necessary to include some earlier published works to capture data that were crucial to illuminate important points to the inquiry when current research was unavailable.

Finally, I used the ProQuest research library to obtain case study dissertations for review. I reviewed six dissertations, placing special focus on the literature reviews section to become better acquainted with the style and structure used in case studies. I paid special attention to the methodological sections, particularly to the dissertations that had designs similar to this study, in which the investigators made significant discovery progress and achieved data saturation. These dissertations provided insights for the development of the research design, providing direction for the sampling design, stylistic approach, and systematizing the research process.

Much of the literature found for review focused on development based on the economic growth paradigm, i.e., the model that guided the process for development, wealth building, and prosperity in industrialized societies during the 19th and 20th centuries. However, several studies found deficiencies in this model, particularly toward the sustainability of SIDS. Using Rostow's modernization theory of the five stages of growth of an economy, Armstrong and Read (as cited in Baldacchino, 2006) argued that

small, underdeveloped or developing states may not possess the appropriate implements,

for example, financial capital, relevant education, knowledge-base or the business

acumen required for achieving sustained economic growth. The authors further argued

that the smallness of an economy makes it difficult to achieve economies of scale, and by

extension, economic viability. Armstrong and Read contended that most islands in the

Caribbean, with the exception of a few larger states, have output structures based on

indigenous resources, which may be inadequate for achieving long-term sustainability.

For example, strong dependence on a few selected commodities as the principal sources

of export earnings leads to a narrow range of locally available expertise since a small

population does not allow for the building of critical mass, except in a few selected

sectors. Armstrong and Read argued further that the lack of expertise in some sectors

tends to hamper the efforts of SIDS at diversification. Concerns over the sustainability of

economic growth in these small territories have been the focus of policy makers since

their transition from colonial rule to self-governance. Several authors have argued that

SIDS may not possess what is required to achieve sustainability in the long term.

There was recognition of the importance of creating diverse development

pathways to achieve sustainability in a number of parallel studies. The term, integrated

development emerged as a strategy for operationalzing sustainable development concepts

to attain sustainability (UNDP, 2005). Integrated development seeks to satisfy the well-

being of citizens by harmonizing and balancing the activities of the economic, social, and

environmental systems. According to the authors of the 2005 UNDP article, policy-makers may be able to achieve integrated development by embracing a new paradigm for human development. Integrated development entails social and environmental justice, solidarity, political, economic, social democracy, and respect for the various cultures of human beings. Despite this novel approach, the policy-makers in the Anglophone Caribbean have failed to achieve sustainability overall.

A key theme to emerge from the literature reviews was that recurring threats from environmental hazards have hampered progress toward achievement of the goals of sustainable development in SIDS. Crowards (2002) noted that environmental hazards form the largest category of recurrent threats to attaining sustainability in the Caribbean. Hurricanes, heavy rainfall with flooding and landslides, volcanoes, drought, and occasional earthquakes have had significant negative effects on economic growth, social development, and environmental quality within the last century (UNDP, 2005). This trend could have a significant effect on the prospects for attaining long-term sustainability throughout the region.

Another common theme to emerge in the literature review called attention to the role of anthropogenic activities in hampering development progress. To Meadows, Rangers and Meadows (2004) and Catton (1982), overexploitation of natural resources, overconsumption, toxic chemicals, increased pollution, ineffective waste management, overuse of transportation, built environments that discourage physical activities, and the

cutting down of trees are all examples of human activities that cause degradation to the biophysical system that sustains the existence of human communities. Additionally, SIDS' extensive dependence on tourism, food imports, international trade, and remittances could be affected by external threats. Under such circumstances, the likelihood of achieving long-term sustainability is reduced (Sahay, Robinson, & Cashin, 2006).

The case of Barbados in achieving one of the highest levels of economic growth and the highest ranking for living standards and quality of life in the Anglophone Caribbean, amidst considerable constraints, seems to suggest that the fatalistic interpretation of the potential of SIDS for achieving sustainability should be rejected. However, the knowledge of why Barbados has achieved greater levels of economic growth and social development success than Grenada is lacking. The literature also points to a lack of knowledge of how achieving sustainability can be pursued in territories that are small and prone to environmental and anthropogenic hazards. The key problem addressed in this inquiry was how to successfully develop and implement policies that support the goals of sustainable development in territories with limited resources for development and significant vulnerabilities. The literature review provided a context for understanding the development trajectories and outcomes of Barbados and Grenada. By exploring the divergence in their development outcomes and policy-making trends, I sought to identify the factors that hindered and facilitated the successful development and

implementation of policies that support the goals of sustainable development in territories that are small and prone to hazards.

In the first section of the chapter, I provided a historical and theoretical overview of the concepts of sustainable development and sustainability. In the second section, I provided a context for understanding the development path of Barbados and Grenada. In the third section, I provided an analysis of the development outcomes of the islands, making-reference to specific events that have influenced development during the delimited period. In the next section, I analyzed the factors that hinder and facilitate development progress and their implications for attaining sustainability. In the following section, I examined the policy-making trends in Barbados and Grenada toward achieving the goals of sustainable development. In the sixth section, I analyzed a significant knowledge-gap in the practices that support the achievement of sustainable development. In the following section, I discussed how this study might help to bridge the knowledge gap and create greater understanding of how to pursue the goals of sustainable development in territories that are small and prone to hazards. In the final section, I present a summary of the salient points in the chapter.

Historical and Theoretical Background of Sustainable Development

Long before the advent of the sustainable development concept, the term economic growth had been widely used to describe the level of economic progress taking place in an economy. This level of progress was determined by assessing the value of

goods and services produced and consumed, most often using GDP measures (Dickinson,

2010). Some authors viewed the concept of economic growth as the use and

management of resources to create wealth and prosperity and maintain human well-being

in the long term (e.g., Hausmann, Rodrik & Velasco, 2005; Solow, 1994; Romer, 1994;

and Hartwick, 1977). Adam Smith (1723-1790), the "father" of economics, held the view

that economic growth plays a vital role in capital accumulation and development (as cited

in Smith, 2015). Many other classical and neoclassical theorists held similar viewpoints,

for example, David Ricardo, Jean-Baptiste Say, Thomas Malthus, John Stuart Mill, John

Maynard Keynes, Thorstein Veblen, and David Hume. Eventually, economic growth

came to be widely regarded as the basis for development and remedy for the major ills of

the modern world (Dickinson, 2010). The Commission on Growth and Development

(CGD) emphasized the importance of economic growth and wealth creation as strategies

to improve human and societal well-being. The CGD found that the governments of

nations that sustain high rates of economic growth are able to reduce poverty, enhance

social and environmental well-being and improve living standards.

Indeed, the towering performance of economic growth in Britain, France,

Holland, Germany, and other European nations during the industrial era (1750-1850)

provided enormous wealth for Europe and led to important developments in art,

literature, finance, medicine, education, trade, manufacturing, and health care (Williams,

1994). Likewise, the rapid economic growth of the Victorian age (1837-1901) saw

notable achievements in science, technology, commerce, and philanthropy (Siegfried & Roberts, 1991). Rapid economic growth in the United States, South Korea, Japan, China and Taiwan in the modern era has also generated immense wealth and prosperity for the nations (Worldwide Governance Indicators, 2009). Undoubtedly, the commercial success of the Industrial Revolution, the Victorian age, and the Modern era seems to bolster the theories of the classical and neoclassical economic theorists.

In opposition to the classical and neoclassical orthodoxy, reformed thinkers from a number of heterodox schools denounced some of their widely accepted principles and approaches to development. These reformers sought to gain a better understanding of how to enhance human well-being and quality of life in the long term. To Rodney (1981), small, poor, and underdeveloped nations were experiencing disparate economic growth, recurring economic contraction, growing poverty, and a myriad of socioeconomic uncertainties, while Europeans amassed enormous wealth, prosperity, and enhancements. To Catton (1982), economic growth activities tend to sideline environmental concerns, which Leopold (as cited in Nelson, 2003) found to be disheartening. Catton argued that the scale of economic activities undertaken to increase wealth and prosperity and enhance human well-being far exceeds the capacity of the Earth's biological systems. Stiglitz, Sen and Fitoussi (2009) and Meadows et al. (2004) admonished that the growing trend toward relentless production and aggressive pursuit of wealth and prosperity with little concern for the finite capacity of the natural environment would result in unprecedented

negative impacts on the quality of life for humans and eco-systemic communities in the long term.

Classical and neoclassical economists downplayed the importance of the natural environment for achieving sustained economic growth. The rapidly expanding body of literature on sustainable development has suggested that economic growth by itself, though important for improving human well-being and quality of life, is inadequate for achieving sustainability and societal well-being in the long term. In his seminal work *Steady-State Economics*, Herman Daly provided evidence to suggest that economic growth has limitations in a sustainable economy. According to Daly, the amount of economic activities that occurred during the Holocene epoch, i.e., the formerly geologic time-period, was small enough that the degree of interference with ecological systems was negligible. In the current anthropocene epoch, characterized by exponential and unprecedented economic production, there is overwhelming evidence to suggest that human activities significantly alter atmospheric, geologic, hydrologic, biospheric, and other earth system processes by human activities, resulting in disastrous consequences. It is for this reason that Daly (2008) has argued for a steady state, i.e., getting the scale of the economy to the point at which the marginal costs of growth equals the marginal benefits. According to Daly, if marginal costs are less than the marginal benefits, GDP growth is economic. When marginal costs are equal to marginal benefits or higher, economic growth should cease. Daly (2008) argued that continuing to grow an economy

when the costs are higher than the benefits leads to uneconomic growth. The author

posited that uneconomic growth can be avoided by maintaining an optimal scale of the

economy.

The authors of Our Common Future (1987) made the following observations

about uneconomic growth and the environment required for developing a healthy

economy:

> A healthy environment is the foundation of a healthy economy. A healthy
>
> economy requires healthy soils for agriculture, healthy forests for timber, and
>
> healthy oceans for fisheries. Along with clean air for breathing and clean water
>
> for drinking, these are the building blocks of a prosperous economy and a good
>
> life. A growing economy consumes natural resources, produces wastes, and
>
> results in biodiversity loss, air and water pollution, ocean acidification, habitat
>
> degradation, climate destabilization, and other major environmental threats. When
>
> economic growth threatens the natural environment and the achievement of
>
> economic sustainability... national security is compromised (p. 75).

In Our Common Future, the authors noted that uneconomic growth most often

benefits the wealthy. The article further noted that an economy may grow, but

uneconomic growth does not expand opportunities for employment. It may even squash

people's hopes and aspirations for personal fulfillment. According to the authors,

uneconomic growth disregards the principles of democracy and social equity. Thus, it is

difficult to achieve sustainability without protecting and preserving the natural environment, having opportunities for education, poverty alleviation, personal growth and development, sustained economic growth, or the creation of wealth and prosperity for all people.

Practitioners must design economic growth measurements to consider the impact and consequences of economic progress on environmental protection and social development. In 1962, Kuznets (as cited in Van Den Bergh, 2009), pointed to several limitations in GDP measurements. According to Kuznets, GDP measurements failed to take account of human and environmental well-being and a host of factors that can affect understanding of national development. Kuznets argued that if GDP indicators disregard such important elements, these measurements may not provide accurate assessments of national health. In 1968, Robert Kennedy asserted that much of the statistics and indicators that produce findings on national health do not take what truly matters to people into consideration, e.g. health and wellness, educating children, personal satisfaction and happiness (CASSE, 2009). In an interview regarding the 20th anniversary of the Human Development Index, Nobel-Prize-winning economist Amartya Sen noted, "GDP is commodity-centered... while HDI is people-centered…" (2012). Another Nobel Prize winning economist, Joseph Stiglitz (2005) argued that accountants do not look simply at a firm's revenue to assess how well it is doing. They understand that the balance sheet has much greater relevance. The same is true for a nation. Daly and

Farley (2003) suggested that even if it may not be possible to precisely quantify human satisfaction or happiness as GDP can be quantified, practitioners would be better off by being somewhat right than being absolutely wrong in understanding what matters most to human beings. The argument made was that GDP measurements are inadequate to inform practitioners on national health overall.

The conflict between exponential economic growth, environmental protection, and social equity is becoming more visible. From deforestation to biodiversity loss, ozone depletion, ocean acidification, depletion of fishery and loss of pollinators, climate change, and toxic pollution to environmental hazards and cancers, the impact and consequences of continued exponential economic growth and development are telling that planet Earth is facing unprecedented challenges (Rockström et al., 2009). A growing body of compelling evidence indicates that the environmental pressures resulting from human activities are leading to undesired impacts. According to Rockstrom et al, these activities have begun to exceed the safe operating space for human development. Data from the Global Footprint Network revealed that the footprint of all nations have exceeded the biological capacity of planet Earth since the mid-1980s. Rockstrom and several other investigators pointed out modern societies have found themselves in a state of 'overshoot' where they accumulate ecological debt by depleting natural capital to keep the economy growing. Examination of the global ecological footprint reveals that the World economy has become overgrown, exceeding the Earth's biophysical capacity. Yet,

economic growth activities and indicators have remained the same.

Three important messages have emerged from the literature reviews. The first message suggests that a need exists for aggregate indicators that consider the issues of economic growth, environmental protection, and human well-being simultaneously to obtain a clearer understanding of national health. The second message indicates that increasing wealth and prosperity requires better care of the Earth's ecological systems and social fabric. The third message calls for a stronger collective action to achieve the goals of sustainable development in the long term. Based on this new body of knowledge, the overall health of a nation can no longer be defined simply as an increase in outputs, income, and productive capacity, but also as a steady enhancement of environmental quality and human satisfaction. This line of thinking considers ways in which to accommodate people's needs and aspirations for higher living standards and overall improvement in their quality of life. Sustainable development theorists have posited that meeting the needs of current and future generations of human and non-human communities requires careful integration of the activities of economic growth, environmental protection, and humans to achieve equilibrium, and thus, sustainability.

Under the sustainable development paradigm, economic growth and development have been redefined as sustainability, i.e., flourishing within the ecological limits of the Earth's biological capacity (WCED, 1987). Sustainable development attempts to facilitate mutually beneficial relationships between economic growth, environmental protection,

and human activities to achieve sustainability for human and non-human communities in the long term. The concept of sustainability is anchored in the notion of intergenerational equity, which aims to meet the needs of current populations while leaving equal or better opportunities for future generations to meet their own developmental needs (WCED, 1987). Strong and weak sustainability are two key paradigms that emerged in the debate for understanding the concepts of sustainability and sustainable development.

Strong Sustainability versus Weak Sustainability

Strong sustainability posited that natural resources are components of a dynamic, complex and fragile biological system that has a finite capacity (Biggs, Carpenter & Brock, 2009; Rockström et al., 2009; Meadows et al., 2004). Natural resources could deplete when over-exploited or inadequately managed. Once depleted, it may not be possible to regenerate non-renewable natural resources such as fossil fuels, e.g. coal, natural gas, oil, and uranium. For this reason, it is important to protect, preserve and maintain natural resources at adequate levels to meet the sustainability requirements of societies.

On the other hand, weak sustainability argued that sustainability could be achieved by substituting natural capital stock with artificially produced stock. Solow (1994) and Hartwick (1977) argued that producing stock artificially enables societies to overcome the biggest challenge to achieving sustainability - increasing yield. To Figge (2005), having the ability to produce capital stock through artificial means translates to

having a continuous availability of stock to meet the sustainability requirements of societies. The idea of producing capital stock artificially seems to suggest that non-renewable natural capital stock could be allowed to deplete. Having the ability to artificially-produce capital stock highlights innovation and the progress made in development over the years; but the notion of a world with diminishing non-renewable natural resources and limited biological capacity raises serious concerns about the long-term sustainability of the Earth.

Several authors addressed the idea that planet Earth has a limited biophysical carrying capacity for human development. Catton (1982) pointed out that the earth can find itself in a state of "overshoot" when development exceeds its biological capacity. For Malthus (as cited in Urdal, 2005), the load pressure from growing populations could cause a society to exceed its carrying capacity. An essential contribution in this regard was made by Rockström, who, along with several leading scientists found that four of nine planetary life support systems, essential for human survival, have now been pushed beyond their biophysical capacity as a result of anthropogenic activities.

In Limits to Growth: The 30-Year Update, Meadows et al. (2005) provided evidence of a world already in overshoot. Several authors have argued that humans are drawing on the world's resources with relentless production, mass consumption, unmanaged solid waste, and pollutants much more quickly than can be restored. Sachs (2015) noted that in the quest for development and enjoyment of the natural environment,

humans must embrace the reality of the Earth's limited biophysical carrying capacity and

the need to develop today with future generations in mind. The concept of how an

essential life-sustaining system can collapse is illustrated Figure 2.4, which depicts the

story of the Rise and Fall of a Reindeer Herd.
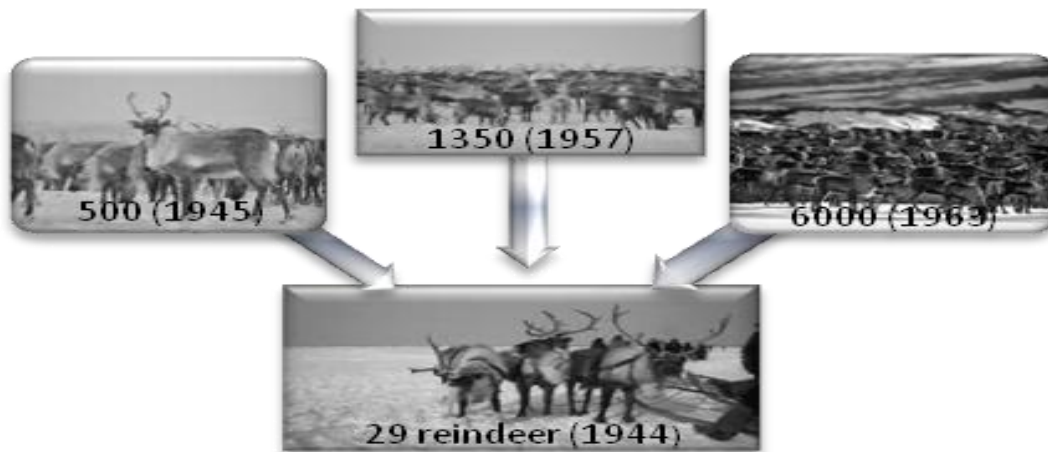
Model A: Reindeer +(*) Reindeer = Exponential Reindeer Population Growth

Model B: Exponential Growth of Reindeer + Increased Consumption of Food Supply = Ecosystem Collapse and Death of Reindeer Population.

Figure 2.4 Strong sustainability vs. weak sustainability

In 1944, farmers brought 29 reindeer to St. Matthew's Island, a remote island in the Bering Sea in Alaska. Researchers had accurately predicted that the area could support between 1600 and 2300 reindeer without depleting the available food resources. As shown in model A, the reindeer population grew to 500 in 1945 and 1350 by 1957. By 1963, the reindeer population grew exponentially to 6000. The growing reindeer population exhausted all of the available food and significantly declined as shown in model B. The evidence revealed that there were no natural controls or predators on the island. Therefore, the population decline occurred due to food exhaustion. It is noteworthy that the reindeer occupied less than one-tenth of one percent of the area available to them at the time of the collapse. This means that the decline took place even as vast forests with available food were in proximity. While the illustration did not address whether the depleted food could have been regenerated or substituted, it affirms the danger of depleting natural capital stock.

The story of the rise and fall of the reindeer herd brings to light a fundamental discrepancy in the sustainability debate between ecological economy enthusiasts and classical economy advocates. The ecological economists, who represent strong sustainability, posited that economic growth must be tempered and harmonized with the capacity of the natural environment to achieve sustainability in the long term. In contrast, classical and neoclassical economists, who represent the concept of weak sustainability, argued that exponential growth is necessary to meet the sustainability requirements of

societies. Proponents of weak sustainability further claim that artificially produced stock can substitute natural resources to achieve sustainability.

This divergence in the sustainability debate seems to suggest that classical and neoclassical economists and ecological theorists are glued to the assumptions of their particular paradigms and may lack understanding of how to move beyond the barriers of their discipline to integrate the activities of the three diametrically different systems, i.e., economic growth, ecology and society. This static state of affairs further suggests that each pillar in the sustainable development triangle model has its own conceptual framework and may be evolving on their own terms. Yet, the concept of sustainable development advances the notion that by gaining a deeper understanding of how to expand the analytical capacity of each discipline, policy-makers can better understand where the sustainability triangle intercepts and how to integrate the activities of the three development systems (Robinson, 2004). Robinson noted that being aware of the impact and consequences of development activities from each development system on the other, and knowing how to effectively integrate and harmonize such activities may make it possible to achieve sustainability.

The literature reviews produced a wide range of concepts and theories that may be useful to help bridge the divide between the approaches of economic growth, social equity, and environmental protection.

The Economic Growth Dimension

Sustainable Development suggests that an economically sustainable environment will support the maintenance of healthy economic, ecological, and social systems. This belief is grounded in neoclassical economic theories that regard economic growth as the basis for contemporary development (Smith, 2015; Friedman, 2001). Elkington (1994) argued that the system of economic growth must work in harmony with the activities for environmental protection and social inclusion to support the overall functionality of societies. The growth diagnosis framework proposed by Hausmann, Rodrik & Velasco (2005) offered a strategy to achieve sustained economic growth while protecting the natural environment and promoting social equity simultaneously. The growth diagnosis framework concerns itself with indentifying the most binding constraints on an economic system and the policies that are likely to provide the best possible solutions for attaining sustained economic growth. Hausmann et al., likened this framework to a decision tree. It begins with questions about what constrains economic growth and development; then looks for the kind of evidence that is likely to help solve the perceived problems. This approach can help policy-makers to identify possible obstacles to achieving economic growth and design policies that pave the way to achieve sustained economic growth, environmental protection, and social equity simultaneously.

The theory of endogenous growth offered a strategy for achieving sustained economic growth amid constraints. Romer (1994) posited that continuous investment in

human capital and technology is a prerequisite for achieving economic viability. He

noted that economic growth does not occur by random chance; rather, it relies on

knowledge, technology, and innovation and their effective application in pursuit of

business solutions. To Romer, human and technological capital plays equally important

roles in development outcomes as financial and natural capital. Romer's view augmented

the findings of Crook, Todd, Combs, Woehr & Ketchen (2011), which suggested that

small developing nations could achieve comparable development success as developed

nations when decision-makers use the appropriate implements for policy and business

decisions.

It is important to point out that the economic growth dimension in the sustainable

development model cannot by itself succeed in achieving sustainability overall. Decisions

about economic growth must be fiscally astute, environmentally sound, and socially

equitable (Savitz & Weber, 2006; Elkington, 1994). The recognition that ecological

systems and human activities provide crucial support for economic growth calls for a new

approach to development. As noted by Elkington (1994), economic growth decisions

should address the potential effects of anthropogenic activities on the natural

environment and human well-being. Elkington pointed out that by measuring the bottom

line of each development system, that is, profit (economic growth), stewardship of the

planet (environmental protection), and human happiness (social equity), evidence of an

organization's true profit or loss and their impact on people and the planet will emerge.

To Elkington, this type of information can provide evidence about the processes of each development system toward achieving sustainability. It can also pave the way to achieve sustainable business solutions, environmental quality, and socially equitable outcomes.

Social Equity

The concept of social equity emerged from the doctrines of fairness, justice, and equality. It espoused the notion of fair and equal access to livelihood resources and full participation in economic, social, political, and cultural life by all humans (Rawls, as cited in Wooldridge & Gooden, 2009). Rawls viewed social equity as an opportunity to challenge economic and social injustices and improve quality of life for all human beings, regardless of their gender, ethnic, religious, political, economic, social or geographical circumstances. Plato and Aristotle lead several discussions on the notion of creating equal opportunities for all people, and across generations. The idea of social equity was later highlighted in a letter written by Dr. Martin Luther King (as cited in Hendrix, 2005) from a Birmingham jail which stated, "...injustice anywhere is a threat to justice everywhere... We are caught in an inescapable network of mutuality, tied in a single garment of destiny... Whatever affects one directly affects all indirectly..." King's line of thought made the point that inequities threaten the possibility of creating fair and equal opportunities for all people, and by extension, the prospect of achieving sustainability.

Social equity plays an important role in supporting humans' civil and political rights, that is, the right to life, fairness, and equality. Rawls (as cited in Wooldridge &

Gooden, 2009) explained that social justice challenges the obstacles that hinder genuine

human progress while social equity ensures that all people have equal access to public

benefits. To Rawls, social justice promotes economic, environmental, and social rights.

By supporting the establishment of an environment in which all people have the right to

manage their own resources, social equity is playing an important role in facilitating

genuine human developmental progress at the community, institutional, and national

levels. The theories of fairness, justice, and equality informed the social equity dimension

of sustainability about recognizing and honoring the needs of human beings.

Environmental Protection

The doctrines of 'shallow ecology' and 'deep ecology', which emerged from the

Rights of Nature theory, provides a foundation for the environmental interpretation of

sustainable development. Shallow ecology theorists viewed the Earth as an amalgamation

of natural resources that requires protection and adequate management to ensure the

sustainability of current and future generations of humans (Naess, 2010). According to

the shallow ecology theorists, industrial development and technological advancements

negatively affect organic life, which often results in devastating effects on the quality of

life for humans.

Deep ecology has distinguished itself from shallow ecology by its advocacy of the

innate value of all living organisms - not only humans (Naess, 2010). The core principle

of deep ecology is that all living creatures are dependent on the existence of one another

for survival; hence, humans should respected and regarded all living organisms as having legal rights to exist and flourish (Pister, 1995). Deep ecologists felt strongly that protecting, preserving, and adequately managing the natural environment can pave the way to strengthen the Earth's carrying capacity to meet the needs of human and ecosystemic communities, mitigate anthropogenic and environmental hazards, and achieve sustainability across generations.

Recognizing the interconnection between the systems of the economy, society, and ecology, the concept of sustainable development is about transcending the compartmentalized approach of practitioners in each system and integrating their activities to achieve sustainability in the long-term.

Overview of the Background to the Study

British settlement in the Anglophone Caribbean began around 1623. Indigenous Amerindians resided in the territories at that time (Pomeranz & Topik, 2008). The British settlement in Barbados began in 1762 (Black, 2006). British explorers captured Grenada from French settlers following a seven-year war and, with the Treaty of Paris signed, the island was formally ceded to Britain (Black, 2006). The French recaptured Grenada in 1779 and, the Treaty of Versailles, the British recaptured the island in 1783 (Black, 2006). By the end of the 1700s, the British had established 18 colonies in the Caribbean (Hingman, 2011).

The settlement of British colonists in the territories, along with the development

of a plantation-slavery-monoculture economic strategy, under the aegis of colonialism, were the most dramatic events recorded in the history of the region (Pomeranz & Topik, 2008). For more than four centuries, wars, captivity, insidious colonial policies, subjugation, brutality, and the dehumanization of colonial subjects defined the region while the colonists dominated and exploited the territories (Pomeranz & Topik, 2008). By exploiting the region, the system of colonialism facilitated the accumulation of wealth for the colonialists, while leading to forced labor, degradation, systematic exclusion from social and economic gains, and underdevelopment of the colonial states (DuBois, as cited in Walker, 2012). With over 300 years of British rule in the Anglophone Caribbean, colonialism significantly transformed the economic, ecological, and social development trajectories of the societies.

A protracted struggle for political independence and self-determination among the colonial subjects culminated in the de-colonialization of most territories after three hundred years of having been colonized (Rodney, 1981). Barbados gained its independence in 1966. Eight years later, in 1974, Grenada gained its independence. Making the transition from colonial rule to self-governance was challenging in many ways. The economies of the emerging independent states had been undiversified with the governments relying exclusively on agricultural production and export to Europe as their main economic activities (World Bank Report, 1975). As the revenue from agricultural production began to decline and international demand for such goods decreased toward

the end of 1960s, these islands struggled to adjust to the emerging reality of the period - a declining economy. Economic growth was also constrained by the small sizes of the economies, i.e., limited endowments of natural resources, inadequate production systems, high labor costs, limited economies of scale, low levels of technology and economic volatility based on internal and external threats (EM:DAT [CRED], 2010; ECLAC, 2008; and Hillaire, 2000). The islands struggled also with impediments associated with their geographical, geological, topographical and climatic circumstances (Crowards, 2002). The early independence period presented considerable challenges, which hindered progress toward the emerging independent states' sustained economic growth and development.

In Barbados, tourism began to emerge as the island's mainstay during the late 1960s. The island went into a deep economic recession during the early 1970s due to increases in oil prices and air transportation, along with declining revenue from tourism (Hillaire, 2000). GDP per capita fell 40 percent from the mid-1960s level (World Bank Report, 1975). After approximately six years of deep recession, activities in the manufacturing sector began to increase. Led by global firms that produced technology products and provided financial services, the Barbadian economy made a remarkable recovery during the late 1970s until another recession loomed in the beginning of the 1980s (World Bank Report, 2009). The island experienced significant growth for about a decade thereafter until another deep economic contraction loomed. A significant decline

in economic activities characterized the period 1990-1995. Real GDP per capita fell by 5.1% due to macroeconomic imbalances (World Bank Report, 2009). This forced the Barbadian Government to seek financial assistance from the IMF, World Bank, and Inter-American Development Bank. The financial aid obtained from these institutions led to a period of economic growth that averaged between 3% - 5% between 1995 and 2000.

In 2001, the economy of Barbados contracted by 2.8% following the September 11 terrorist attacks in the United States. Economic growth declined considerably. The economic downturn was due primarily to a sharp decline in tourist arrivals, as well as fallouts from scrutiny of the offshore financial sector by the G20 Summit and Organization for Economic Cooperation and Development (OECD) (CDB, 2009). The Barbadian economy recovered after a restructuring of the financial sector and a spike in tourist arrivals (World Bank Report, 2010). Economic growth showed an upward trend until the local economy contracted at the start of a global economic downturn in 2008. Real GDP grew by .04 percent before contracting by 4.4 percent in 2009. By 2010, real annual output growth had not surpassed 1.0 percent.

In 1977, Grenada's GDP per capita was EC$134 million, reflecting a 30% increase from the 1974 level at independence (World Bank Report, 1978). The island relied heavily on the production of cocoa, nutmeg, and banana for export to Europe. But with one of the lowest GDP rankings in the region (World Bank Report, 1978), high unemployment, growing poverty and despair, Grenada became a site of socialist

experimentation (World Bank Report, 1982). Following a *coup d'etat* in 1979, the

People's Revolutionary Government (PRG) sought to create a new socio-economic order

in the tri-island State. Economic growth increased in 1982 after the PRG reformed the

productive sectors (World Bank Report, 1982). Among other improvements, the

government created an agri-business sector and established a marketing and importing

board to facilitate the sale and export of locally grown products. The government

negotiated better prices for its products on the world market (World Bank Report, 1982).

The production of livestock increased, abolishing the need to import meats. The PRG

government developed new tourism products, including the construction of an

international airport. The sectors of agriculture, health, education, fishery, and tourism

realized significant improvements (World Bank Report, 1982). A 1982 World Bank

Economic Memorandum indicated that Grenada was one of a few nations in the Western

Hemisphere to experience positive GDP growth during the early 1980s. Nevertheless,

conflicts of various kinds resulted in the collapse of the PRG experiment after four years.

The mid-1980s brought new challenges to Grenada. Massive indebtedness and a

global recession impeded the optimistic development pursuits of the island (ECLAC,

2008). Policy-makers sought solace from the IMF and World Bank, but they imposed

burdensome conditionalities on these struggling societies (Barr & Miller, 2006; Timms,

2008). The financing obtained led to a noteworthy economic recovery in 1986. Yet, a

recession became apparent during the early 1990s. Per capita income increased after an

economic turnaround began to emerge following fiscal adjustment in 1996 (World Bank

Report, 2001). The economy benefited from the manufacturing sector, offshore financial

services, and direct marketing. According to the 2001 World Bank Report, economic

growth averaged 5.7% thereafter.

In 2004, Hurricane Ivan, a Category 4 storm (130-156 miles per hour [mph]

winds) on the Saffir Simpson Hurricane Wind Scale [SSHWS] dealt a devastating blow

to the island's economy (OECS, 2004; UNDP, 2004). Less than one year later, Hurricane

Emily, a Category 2 storm (96-110 mph winds, SSHWS), further devastated the

economy. Damage assessments and GDP indicators painted a grim picture of Grenada's

economic health. The CDB reported economic growth of -3.0% in 2005. Economic

conditions remained difficult until 2006 when the island recorded positive economic

growth of 1.3% (World Bank Report, 2008). Real GDP grew modestly in 2008, but fell

by 6.7% in 2009 and by 0.4 percent in 2010. The global economic recession affected all

sectors (World Bank Indicators, 2009). Although there were reports of improvements in

2010, the 2011 World Bank Indicators showed that growth remained at (-1.3%).

Economic Growth Outcomes of Barbados and Grenada Summarized

Despite the fluctuation in economic performance in the islands, Barbados

successfully transitioned from subsistence agriculture, particularly sugar production, to a

viable modern service-oriented economy (World Bank Report, 2008). Economic growth

on the island has proven to be more resilient than any other island in the Anglophone

Caribbean (World Bank 2010; IMF, 2010). The UNDP-HDR characterized Barbados as the most prosperous nation in the western hemisphere outside of the U.S. and Canada. A salient feature of the Barbadian economic strategy has been dominance of tourism, real estate and financial services in the region - half the GDP and almost 80% of foreign currency receipts (IMF, 2010). The economic strategy includes having relatively modern education and health sectors, a robust international trade sector, offshore banking and light manufacturing. Vigorous growth from these sectors helped to increase the nation's employment, investment grade and foreign currency credit ratings (World Bank, 2010). The World Bank, IMF and UNDP recognized the strength of the Barbadian economy. In 2010, the UNDP ranked Barbados as the most developed nation in the Anglophone Caribbean. Barbados received top rankings for its financial capacity, balance of payments, national accounts and increase in entrepreneurship by Standard and Poors (S & P) - a United States financial research, analysis and credit-rating company. However, a 2011 United Nations analysis of the Development Context in Barbados and the OECS revealed that the institutions in the Caribbean have not been conducive to meaningful economic growth. According to the report, the region's continued reliance on traditional goods and organization of production and the lack of high productivity entrepreneurship by individuals and small and large firms means a slow pace to economic growth.

Grenada's economic performance had been disparate when compared with its neighbor, Barbados. It is important to note that successive governments have

implemented various models for economic growth in attempts to transform the island's

economy (World Bank Report, 1982). Some of these reforms have led to improvements

in Grenada's GDP (IMF, 2010; World Bank Report, 1982). Yet, several indicators have

exposed structural weaknesses in the island's socio-economic models that suppressed

economic growth, challenged macroeconomic stability, and spawned the need to create a

more resilient society. The most common argument made for the prolonged weak

economic performance is that Grenada's small domestic market is a hindrance to

economic growth and development (Armstrong & Read, as cited in Baldacchino, 2006).

The island remains highly dependent on agricultural production, which is not

internationally competitive (World Bank Report, 2010; Sahay et al., 2006). Grenada's

vulnerability to internal and external threats hampers its developmental progress (Sahay

et al., 2006). The island's high risk for environmental phenomena also hinders its

progress toward achieving sustained economic growth and development (CRED, 2010).

Hurricanes, in particular, have played a significant role in hindering socio-economic

progress (OECS, 2004; UNDP, 2004). These factors, along with a history of political and

social instability, austere international trade practices, and conditionalities imposed by

global capital administrations hampers the island's economic and development progress

(Timms, 2008; Loayza, Ranciere, Servén & Ventura, 2007). Compared with Barbados'

high GDP rankings, Grenada's GDP rankings by the World Bank, IMF, CIA, United

Nations, World Bank Indicators, and Standard and Poors have been low to moderate, and

the tri-island state continues to struggle to achieve strong and sustained economic growth and development.

Social Development Outcomes

The policy-makers in Barbados and Grenada gave the social development dimension of the sustainable development model significant attention. Barbados boasts a high level of human and social development based on the United Nation's HDI ranking. Since gaining independence, successive Barbadian governments have placed emphasis on strengthening social development (ECLAC, 2001). This has been an excellent strategy, which resulted in significant progress. In 2007 and 2008, the UNDP HDI ranked Barbados 31st out of 187 nations across the globe, placing it in the "very high" human development category (HDR, 2008/2007). Barbados ranked at the top for life expectancy, literacy, education, health/medical services, housing, employment, livability, conviviality, happiness, and human well-being. The UNDP ranked Barbados as the wealthiest and most competitive nation in the Anglophone Caribbean. The UNDP rated Barbados as having the highest quality of life in the region. In the area of stability, the indicators painted a picture of high and sustained social and political stability. Most regional comparative studies have consistently ranked Barbados at the top of the range of democratic quality. The conspicuous indicators of this stability have been strong institutional frameworks, solidity in policy-making, respect for political rights and human liberties and a generally peaceful democratic culture (UNDP, 2009). Despite the

significant progress made over the years, Barbados tends to lag behind in its social development in comparison with advanced nations.

Grenada's HDI ranking has fluctuated between 'high' and 'medium' at the human development level. In 2008, the HDI ranked Grenada 82nd out of 187 nations, i.e., 'medium' at the human development level (Human Development Report, 2008/2007). In 2009, Grenada ranked at the 'high' human development level, i.e., 74th out of 182 nations. Grenada's HDI ranking in 2010 was 63rd of 187 nations, placing the nation in the 'high' human development category (HDR, 2010). The island received high ratings for literacy, education, life expectancy, health, and happiness.

While some reports show progress in implementing the sustainable development agenda set out in Agenda 21 - the Millennium Development Goals (MDG) (2000) and the 2005 Mauritius Strategy for SIDS (MSI), evidence from the development outcomes in Barbados and Grenada highlight particular challenges in achieving and maintaining social sustainability. The literature reviews highlighted growing rates of unemployment, mass migration from rural areas to cities, mass emigration to developed nations, growing crime rates, food insecurity, gender disparity and growing poverty (UNDP, 2004b; 2003). In some cases, gang-related activities, squatter settlements and teen parenting exacerbate social vulnerability (Berkman, 2007; Pelling, 2003). Despite these shortcomings, the evidence adduced from the literature reviews showed four decades of progress in the efforts of Barbados and Grenada to fulfill their social development and sustainability

agendas.

Environmental Protection Outcomes

In recent years, the discourse on environmental protection has moved from environmental circles to the policy-making arena. The notion of integrating and harmonizing the activities of economic growth and social sustainability with environmental protection remains ambiguous, paradoxical and contradictory, making the concept of environmental protection difficult to integrate fully into policy-making practice. In 2010, a UNEP environmental assessment of Barbados revealed improvements in protected areas, but also showed significant inadequacies in the reliability of energy efficiency, coastal ecosystem management, water and solid waste management, land use, and the management of environmental hazards (National Environmental Survey [NES], 2010). A 2008 ECLAC report revealed that Barbados is vulnerable to food insecurity, heat waves, deforestation, extreme floods, and environmental degradation. The 2007 International Panel on Climate Change (IPCC) revealed that Barbados has a high risk for rising sea levels, flooding, hurricanes, and marine and coastal erosion.

The United Nation's - National Environmental Survey (NES) (2010) reported improvements in Grenada's protected areas, pollution control, reforestation, and purifying water systems. Mangrove forests have played an important role in protecting the land from soil erosion and mitigating flooding (GNRSD, 2008). Despite these efforts, the NES has shown deficiencies in the overall management of natural resources, habitat, coastal

and marine life, solid waste, land use, and environmental hazards. Recent reports from the United Nations indicate that current atmospheric concentrations of carbon dioxide and methane are far higher than they have been in previous years (UNDP, 2010). Rising sea levels, changing sea currents, significant changes in temperature and weather patterns, stronger and more frequent storms, shifting rainfall patterns, and migrating insects reveal the consequences of climate change. A 2007 IPCC report pointed to a high and recurrent risk for hurricanes and moderate risk for drought, tsunamis, earthquakes, and volcanic activities.

The indicators seemed to suggest that both Barbados and Grenada failed to achieve their environmental protection and sustainability agendas. A need exists then to gain a better understanding of the interactions taking place between the activities of economic growth, ecology, and human societies. One question that comes to mind is, how can the divergence in the performance outcomes of Barbados and Grenada be explained? Another question I will address is why were policy-makers unable to incorporate environmental protection concerns into the policy-making practice? Why were the policy-makers unable to successfully integrate the activities of growth, environmental protection, and social equity to achieve sustainability overall?

Theories and Concepts to Explain Performance Outcomes

After gaining independence from the United Kingdom, the emerging independent states in the Anglophone Caribbean faced a myriad of challenges and constraints in

pursuit of sustained economic growth and development. The international exchange rate system had begun to disintegrate, driving fears about rupture of foreign exchange reserves (Hart, 2004). Recession in industrial economies had also led to sharp increases in import prices, inflation, increased unemployment, and generally weak economies (Hart, 2004). At the Mauritius Conference for Sustainable Development in 2005 where it was noted that the sustainable development capacity of SIDS was severely undermined by a number of characteristics and features that are unique to these territories, the challenges of SIDS were acknowledged (Mauritius Conference Highlights, 2005). The characteristics and features identified translate to specific factors that hindered the achievement of sustained economic growth and development during the early independence period. A number of development economists who proposed theories and concepts to gain a better understanding of underdevelopment in SIDS provide explanations for the underdevelopment of SIDS. I classified the explanations under the following five headings: historical, economic, sociological, political, and environmental.

Historical Factors

In one sense, the emerging independent states inherited industries that lacked the conditions necessary to achieve sustained economic growth and development. Hart (2004), who proposed a historical explanation for underdevelopment in former colonial territories, argued that many industries lacked sufficient levels of capital to function normally and place the economies on a trajectory toward growth and sustainable

development. For Williams (1994), the continued influence of the colonial administration

in policy-making practice meant that the patterns of imperial governance remained

practically unchanged in the newly independent territories. Williams attributed the slow

rate of economic growth and development to the excessive pursuit of narrow self-interest

by the colonial actors who maximized their profits while providing minimal

compensation for the endogenous resources and labor obtained from slaves, and later,

apprentices and indentured workers. The discursive practices of the imperial decision-

makers resulted in highly unequal terms of trade between the colonial administration and

emerging economies. According to this argument, these practices served as an

impediment to the progress toward sustained economic growth and development.

Arguing from a different theoretical standpoint to explain underdevelopment in

former colonial territories, Dubois (as cited in Walker, 2012) noted that the systematic

dehumanization of former colonial subjects created a Diaspora of people with

tremendous pain, suffering, distorted identities, and contradictions in understanding the

realities of the new development theater. Along this line of thinking, DeGruy (2009)

argued that the cruelty and humiliation of colonial subjects, which continued long after

the abolition of slavery and colonialism, disrupted their social systems and undermined

the fabric of their lives. To DeGruy (2009), the fractured cultural legacy of Africans in

the Diaspora affected their sense of values, personal well-being, and connectedness to

their communities, which Du Bois (as cited in Walker, 2012) and Easterly, Ritzen &

Woolcock (2006) noted, provides a basis for social cohesion, solidarity, and community enterprise. Alesina & La Ferrara (2005) argued that constant community struggles and fragmentation could hinder developmental progress. These arguments seem to suggest that the negative structural features of colonialism in the early postcolonial period led to long-term economic and social disadvantages, which hindered economic growth and developmental progress in the former colonial territories. Indeed, the turbulence and discord found in Grenada's social and political history in the post independence period may have played or continue to play a role in hampering the nation's progress toward sustained economic growth and development. On the other hand, the relative stability found in the political and social structures in Barbados may have boosted confidence and optimism in the island's economy.

Some authors rejected as conclusive evidence the view that the practices of slavery and colonialism caused underdevelopment or that the history of slavery and colonialism adequately explains underdevelopment in the emerging independent states. One view suggested that the former colonial territories in the Anglophone Caribbean were economically and socially underdeveloped when Europeans arrived and that pattern continued after their departure (De Silva, 2012). Another view seemed to suggest that former colonial subjects lacked the knowledge base required to make adequate decisions for advancing their own development agendas in the early independence period (Lewis, 2013; C.L.R. James, as cited in Schmidt-Nowara, 2008).

In contrast, Robertson-Hickling (2012) highlighted the resilience of the people from the Caribbean in overcoming the impediments of slavery and colonialism and creating a new rhythm of life in the new development theater. It is interesting to note that while De Silva and James saw minimal development progress in the emerging independent island-states during the early independence period, Robertson-Hickling found that former colonial subjects and their descendants have made significant progress in establishing important structures that enabled them to achieve many of their goals and aspirations. Likewise, Sir Arthur Lewis (2013) found that the former colonial territories in the Caribbean had made significant strides toward development during the early postcolonial period. Yet, Lewis argued that having the appropriate implements for effective decision-making is paramount to moving economic growth forward.

Economic Factors

A common theme to emerge in the literature regarding the plight of Caribbean nations towards sustainable development is that small, poor nations may lack the appropriate levels of financial capital to transition from subsistence agriculture to a modern economic model (e.g., Rostow's - *The Five Stages of Growth*, as cited in Mishra, 2010). To Sir Arthur Lewis (2013), the shift from subsistence agriculture to a modern economy requires long-term investments in capital funding, relevant education, institutional reform, trade adjustment, increased consumer demand, modern technology, and labor market flexibility. Armstrong & Read (as cited in Baldacchino, 2006) offered a

different viewpoint, which suggest that small economies cannot adequately align to global markets due to their insignificant economies of scale. On the other hand, dependency theorists claimed that small, underdeveloped territories are kept perpetually subservient and impoverished by the self-interested policies and practices of wealthy nations (Velasco, 2002). In contrast to these viewpoints, free market advocates posited that economic growth is constrained by excessive government intervention (Friedman, 2002). Albeit different, the views of these authors seem to suggest that transitioning from a traditional economy to a modern economy is difficult when the required implements for achieving sustained economic growth and development are unavailable. But the line of thinking in Sir Arthur Lewis' "Dual Sector Economic Model", the "Growth Diagnostics Framework" by Haussmann et al., (2005), and the "Endogenous Growth Theory" by Romer (1994) seems to suggest that SIDS can achieve comparable economic growth and development success as developed nations when appropriate strategies are employed in their policy-making practice. The example of Barbados in achieving sustained progress in economic growth amidst significant constraints seems to affirm the view that growth and development could be achieved in SIDS under extenuating circumstances.

Sociological factors

In her acclaimed book, "World on Fire", Chua (2002) acknowledged that modern technology and formal education have important roles to play in building an economy. Chua argued that these attributes alone are insufficient to achieve sustained economic

growth and boost the standard of living in a population. To Chua, the development of a certain mindset, with accompanying values, principles, attitudes and practices carries more weight as prerequisites for achieving sustained economic growth and development than technology and higher education.

There was ample support for Chua's viewpoint among several economists. In Adam Smith's *Wealth of the Nations (1776)* thesis, the author argued that the pursuit of personal interests involves cultural values. He explained that cultural constraints on individuals could hinder their developmental pursuits. In a more recent work, *The Wealth and Poverty of Nations*, Landes (1998) noted that the success of national economies is driven by cultural factors more than anything else. Max Weber *s*eemed to agree with the view that possessing the appropriate cultural values and attitudes can have a decisive say on whether an economy succeeds or fails. In his thesis, *The Protestant Ethic and Spirit of Capitalism,* Weber (as cited in *Weber, Baehr & Wells, 2002)* argued that the values imposed by the Protestant religion on its followers in the early stages of European capitalistic development pushed them to value hard work. Weber further argued that timeliness, tenacity, frugality, enterprise, and free-thinking laid the foundation for high economic growth rates and sustained increases in human development in Protestant regions such as Holland, Great Britain, and Germany when compared with the heavily populated Catholic areas in Spain and France. Recent proponents of cultural competence in development have argued that integrating cultural values and practices into

development is a dynamic and complex process that may require a sustained effort

(Moule, 2012). It evolves over time, and even when these cultural values are in place,

there may be need for further cultivation of the requisite skills and attitudes before a

nation is sufficiently fertile for sustained economic growth and responsible development

to occur.

Political Factors

In his seminal work, *The Black Jacobins*, C.L.R. James (1989) found that some

emerging leaders during the early independence era were politically naive, inept, and

lacked the knowledge and competencies required to advance their own development

agendas. Hart (2004) made a similar observation. He argued that flawed legislative

systems, weak institutions, corrupt practices in governance and, in general, inadequacies

in policy-making practice have hindered developmental progress in the former colonial

territories. In essence, the authors pointed out that most governments lacked the human

capacity required to advance a meaningful development agenda of the emerging

independent states. On the other hand, the success of Barbados in achieving the highest

GDP and quality of life rankings, and transforming itself from a plantation sugar

economy into the best-performing and most stable economy in the Anglophone

Caribbean, despite being small and vulnerable to exogenous shocks and environmental

hazards, seems to suggest otherwise.

Some economists argued for limited government intervention in an economy. For

instance, free market theorists posited that governments' role in capital markets should be limited to allow market forces to play a decisive role in the allocation of resources. But the success of Barbados in achieving high economic growth rates and sustained increases in human development seems to suggest that government intervention may be essential for the development and sustainability of an economy. Sir Arthur Lewis, a renowned development economist, despite his exposure to the doctrines of the power of the market to grow an economy and ineptness of governments in capital markets, offered support for strong government intervention in the market process. Sir Author Lewis pointed out that governments must play a major role in the planning and development of the market process. Using a set of prerequisites as his constellation, for example, stability in political systems, legislation that is clearly promulgated and enforced, favorable regulatory procedures, government administrators who possess the relevant knowledge and skill-sets for building an economy, and having the ability to adapt to changing circumstances, sir Lewis vehement argued for appropriate government policies.

Environmental Factors

The geographical location, geology, topography, and climatic circumstances of SIDS places the islands in the Caribbean at high and recurrent risk for environmental phenomena. Crowards (2002) found that the Caribbean region has one of the highest rankings of environmental hazards in the world. Crowards noted that environmental hazards form the largest category of recurrent threats to economic sustainability in the

region. During the early independence period, environmental hazard event seriously affected the Anglophone Caribbean region. Hurricanes, in particular, which have become more frequent, severe and complex, have wreaked havoc on communities (UNDP, 2005). Drought, flooding, landslides, volcanoes, and occasional earthquakes have also had significant negative impacts on economic growth and development in the region (UNDP, 2005; 2004). Such events have had wide-ranging negative social impacts, including deaths and injuries to human and non-human species, disruption of school, business, employment, and government activities. The environmental impacts have also been significant. Extensive water damage from hurricanes and floods tends to increase the likelihood of mold contamination. Deforestation negatively affects the natural environment with the most dramatic affect being the loss of habitat for animal and plant species, which global communities rely on for economic and social well-being (Imbert & Portecop, 2008; Martínez-Garza & Howe, 2003;). Deforestation increases the probability of landslides after heavy rainfall. Without trees, there may be larger amounts of greenhouse gases entering into the atmosphere, which can increase the speed and severity of global warming (Imbert & Portecop, 2008). Deforestation could lead to extreme temperature swings that can be harmful to plants and animals (Malhi, Roberts, Betts, Killeen & Nobre, 2008). Some authors argued that deforestation could exacerbate climate change (e.g. Imbert & Portecop, 2008). According to the authors, practitioners blame deforestation for causing the loss of genetic diversity in forests, important for improving

the nutritional quality of foods, feeding populations, and remedying diseases.

It is important to point out that practitioners cannot fully capture the impacts and consequences of environmental hazard events in the assessment of visible structures. The destruction of natural capital stock can have significant long-term effects on factor endowments, income distribution, public indebtedness, regional development, and growth trajectory (Charveriat, 2000). To Charveriat, the economic viability of an affected area is called to question when assets and income losses are significant at the aggregate level. When taking into account less quantifiable effects, such as, the loss of personal belongings, production capacity, disruption flows, environmental damage, employment, anxiety, psychological effects, displacement, and the widening budget deficits, the effects of environmental hazards may be much more significant than estimated in environmental assessments following major hazard events.

Policy-Making Trends

The responses of Barbados and Grenada to the development challenges of the early independence period were strikingly different. The Barbadian policy-makers promoted and facilitated entrepreneurship while the Grenadian approach intimidated entrepreneurs. In its effort to accelerate economic growth and gain competitive advantage over the islands in the Anglophone Caribbean, the Barbadian government responded to the emerging growth and development crisis by pursuing a liberal investment regime using incentives to attract foreign investment. Its most popular strategy, "industrialization

through foreign investment" led to positive outcomes in the tourism, air transportation, manufacturing and technology sectors; and employment (ECLAC, 2003; Barbados Development Plan [BDP], 1969-1972). Barbados benefited from prudent fiscal and monetary policies. To compensate for the myriad of disadvantages, e.g., a small-size economy, limited economies of scale, inadequate production systems, high labor costs, and internal and external threats, Barbados developed a plethora of strong institutions and frameworks for governance, and implemented legislative, regulatory, administrative, and fiscal measures to promote and support alternative sectors of economic activities (Hilaire, 2000). The public and private sectors enjoyed a vibrant partnership through sustained joint effort. In essence, Barbados has shown receptivity to emerging trends and adaptability to changing circumstances by brokering knowledge and crafting innovative policies.

The Grenadian response to the emerging economic crisis in the early independence period was to challenge the colonial plantocracy and create centralized control over the nation's natural resources. In its effort to stimulate economic growth and development, the government expropriated plantations and redistributed small plots of land to poor and underprivileged families in a program named, "Land for the Landless" (Brierley, 1992). Agricultural production significantly declined as the half-acre or less plots were too small for development as farms when the land reform program took effect. These small plots of land were highly uneconomical (World Bank, 1982). Agricultural

production further declined as many estate owners fled the island, fearing the atmosphere

of intimidation and brutality that began to emerge (Brierley, 1992). Brierley argued that

other landowners appeared to have lost interest in agricultural development. Brierley

(1992) found that approximately 43% of previously cultivated lands remained

uncultivated between 1961 and 1981. The author noted that economic hardship and the

rate of unemployment significantly increased during this period. The Grenada

government's 'Land for the Landless Program' for strengthening economic growth in the

early independence period destabilized the economic base and failed to stimulate the

growth as was expected.

Approaches to Governance in the Early Independence Period

The government of Barbados emphasized the importance of creating an anchor

point to support policy-making practice in the early independence period. The measures

taken in the Barbados Development Plan [BDP] (1969-1972) included developing

institutional frameworks and policy directives to guide policy-making activities toward

greater efficiency and effectiveness. Those measures played a significant role in

expanding trade, industry, commerce, and fostering a unified relationship between the

public and private sectors (BNAR, 2010). This approach laid the foundation for

strengthening civil society, public and private sector collaboration. It also paved the way

for the development of plans and programs to create a viable economy and a socially

developed society.

In 1994, the government of Barbados adopted the Barbados Plan of Action (BPOA) for the Sustainable Development of Small Island Developing States (SIDS). The United Nations Conference on Environment and Development set forth this plan (UNCED) (BNAR, 2010). The Barbadian Government appointed a National Commission to advise policy-makers on measures required to achieve the goals of Sustainable Development. The major task of the National Commission on Sustainable Development (NCSD) was to produce a policy for pursuing Sustainable Development in Barbados. The NCSD provided recommendations to Cabinet for achieving the goals of Sustainable Development. The island was active in the follow-up process of the UNCED.

In 2002, The Barbados Sustainable Development Policy (BSDP) was developed to provide a national framework for pursuing the goals of Sustainable Development (BNAR, 2010). The Barbados Parliament made the BSDP one of the documents in its policy framework in 2004. Since then, decision-makers and other stakeholders have used the BSDP to adapt attitudes and behaviors to reflect the principles of sustainable development. The overarching goal of the Policy is to optimize the quality of life for all people by ensuring that economic growth and development do not harm the ecological capital. There are many objectives in the framework. The major objective include formulating a national definition of sustainable development, providing a national framework for decision-making based on their principles of sustainable development, and promoting the principles of sustainable development. The policy encourages Barbadians

to adopt and apply the principles of sustainable development in every aspect of decision-making, and aims to sensitize and educate people in Barbados about key issues and conflicts between development and the natural environment, including the need to make wise consumption and production choices. The policy-makers in Barbados later developed newer policies to promote the goals of sustainable development.

During the early independence period, excessive executive power and ruthless authoritarianism dominated the Government of Grenada (GOG) (Thorndike, 1974). Thorndike described a top-down and fragmented approach to governance where policy-making often took place in narrow settings amidst knowledge-gaps and a self-interested leadership approach. The Prime Minister afforded Government ministers a cursory opportunity to debate legislation and budgets. Therefore, policy-makers did not thoroughly analyze many issues before taking remedial actions. With this top-down and fragmented approach, parliament had little capacity to confront the Prime Minister's contraventions as he aggrandized himself and amassed personal wealth. This situation hindered progress toward economic growth and social development. With growing economic and social development challenges, along with an atmosphere of despondency and hopelessness, the top-down and fragmented approach to governance was challenged by a new revolutionary movement - The New Jewel Movement (NJM), which toppled Sir Gairy's regime in 1979 (Archer, 1985). The newly installed administration - The People's Revolutionary Government (PRG) - considered alternative models for socio-economic

development (Archer, 1985). Their revolutionary approach sought to transcend the weaknesses of the plantocracy and erratic approach to governance by Sir Gairy. A 1982 World Bank Memorandum highlighted significant improvements in economic growth and social development. Additional weaknesses led to the collapse of the revolutionary government four years later.

Successive governments in Grenada have made significant strides in their efforts to advance the goals of sustainable development. In 1994, Grenada became a signatory to the Rio Convention emanating from the UNCED (Grenada National Report on Sustainable Development [GNRSD], 2010). The government also adopted the BPOA following its participation in the first Global Conference on Sustainable Development for SIDS (GNRSD, 2010). Since then, the Government has developed several policies and initiatives in pursuit of the goals of sustainable development. Following the passage of Hurricanes Ivan and Emily, and a global recession, which began in 2007, large deficits persist and vulnerabilities have become significantly more acute (GNRSD, 2010).

Contemporary Policy-Making and Implementation Approaches

Contemporary policy-making approaches in the Anglophone Caribbean reveal a growing trend to promote stakeholder participation as a strategy to involve multiple participants in the shaping of public policy development (Schoburgh, 2009). This approach encourages stakeholder dialog, multi-prong approaches, and consensus-oriented decision-making. It recommends broad participation in policy development, policy

planning, and policy implementation of the management of public resources. Schobugh argued that many policy-makers regard the consensus-building approach as a useful strategy for helping to increase transparency in governance and strengthen democracy.

While the participatory, consensus-building approach has become increasingly popular in political discourse, there is evidence to suggest that policy-making often takes place amidst a flurry of tensions and conflicts. A natural tension arises between rights groups, whose members assume that citizen participation is a necessary part of decision-making, and policy-makers, who assume there is a need to act expeditiously in policy-making practice (Jones & Schoburgh, 2009). Tensions also arise from the differing agendas of policy-makers. One of the manifestations of this tension was in the approach of national policy-makers versus the approach of local policy-makers, and along the lines of varied interests in policy-making practice. Jones & Schoburgh (2004) also found tensions in and between the design and implementation phases of policy development. This tension manifested in the role of key policy-makers in drafting solutions to urban problems versus the role of policy implementers in analyzing and interpreting these proposed solutions for implementation. According to Jones and Schoburgh, such tensions often result in inadequate solutions to the problems policy-makers attempt to address. Jones and Schoburgh, who assessed policy-making practices throughout the Caribbean, described these tensions as "paradoxes". The authors' findings were consistent with those of the UNEP's 2010 National Environmental Surveys of Barbados and Grenada where the

investigators found various contradictions in the legislative and policy-making

frameworks, policy-making strategies, interpretation of international conventions,

integration of policies within and across sectors, and in the general responses to the

demands of sustainable development.

Existing Gaps

The researcher identified several gaps in the literature reviews. They include

fragmented policies, ineptitude, a short fall in resource capacity, methodological

inadequacies, and knowledge gaps. These gaps present a major challenge to the

attainment of sustainability. If, as has been argued, the concept of sustainable

development provides a robust and efficacious alternative to the classical and

neoclassical approaches to development, it is a matter of serious concern that there is no

roadmap with practical steps for achieving its goals. Far more burdensome is the question

of how to pursue the goals of sustainable development in territories marred by recurring

environmental and anthropogenic hazards.

There is an acknowledgement in the literature reviews that achieving

sustainability is crucial for meeting the needs of current and future generations of humans

and ecosystemic communities. The prevailing discourses promote integration of the

activities within and across the three interlinked development systems of the sustainable

development model, and the mitigation of hazards to build resilience and achieve

sustainability. However, the evidence deduced from the literature reviews revealed that

policy-makers have not moved more quickly to successfully integrate and harmonize development activities within and across the sectors of the economy to achieve the goals of sustainable development.

A key insight that emerged from the literature reviews is that development outcomes are linked to knowledge-assets. Thus, nations achieve macroeconomic stabilization, environmental quality, and social development to the extent of the knowledge available to the policy-makers. The divergence in the development outcomes of Barbados and Grenada seems to suggest that policy-makers in Barbados possessed a larger endowment of knowledge-assets than did the policy-makers in Grenada. The divergence in development further suggests that the thinking of policy-makers is glued to the assumptions of particular paradigms and may lack a dynamic understanding of how to integrate the activities of three development systems with diametrically divergent goals. The divergence also suggests there may be a lack of understanding of the safe operating space for human development and effectively managing environmental hazard threats. On the other hand, while the characteristic features of the Barbadian government demonstrated a greater value of best practices, it too has failed to successfully integrate and harmonize its development activities and achieve sustainability overall.

This analysis focuses mainly on closing the knowledge-gap that hinders the achievement of sustainability in the delimited areas. A key theme that emerged in the literature reviews was that there is a lack of understanding of how to operationalize

sustainability thinking into policy-making practice. An adjunct to this finding was there is

a lack of adequate knowledge about the safe operating space for human development and

effectively managing environmental hazard threats. I analyzed three main areas in this

gap analysis:

- Inadequate understanding of the problem;

- Inadequate knowledge for solving the problem; and

- Inadequate knowledge transfer

A key objective of sustainable development is to remove the barriers to attaining

knowledge. It is important then to gain understanding of the obstacles that policy-makers

face in attempting to achieve sustainability and the opportunities that exist for effectively

managing or overcoming such constraints to achieve sustainability. However, the

information to provide insights on how to overcome the specific challenges that hinder

progress toward achieving the goals of sustainable development is scarce. The lack of

understanding about this problem has led to conceptual gaps in policy-making practice,

where policy-makers lack adequate knowledge about the problem to they seek to address.

This, in turn, has produced solutions that do not adequately address the problem. This

lack of a knowledge repository system in the region compounds the fact that most policy-

makers lack access to information, which could provide immediate access to data for

gaining a deeper understanding of how to solve complex urban problems (Engelbart,

2008). Undoubtedly, this challenge raises important questions about how to move

forward in developing and implementing sustainability-oriented policies.

The literature reviews pointed to an encouraging trend with emerging documents that acknowledge the importance of sustainable development as a strategy for achieving sustainability in the long term. This suggests that policy-makers have begun to address the first major hurdle - inadequate understanding of the problem. Yet, a gap still exists between the strategy and actions required to make the concepts in sustainable development more meaningful.

Inadequate Know-how for Problem-Solving

Sustainability is a novel concept. The principles, tools, and strategies proposed for operationalzing sustainability began to emerge only within the last few decades. Many policy-makers may not be privy to such information. Moreover, some authors have hinted that the available data on the instruments for measuring and understanding the progress of sustainability are flawed (Biggs et al., 2009; Faila, 2008; Connelly, 2007; Hák, 2007). This makes operationalzing sustainability doubly challenging. The lack of understanding of how to integrate the activities of three key development systems with diametrically divergent goals may also have a paralyzing effect on policy-making practice. The lack of understanding of how to integrate hazard management into policy-making frameworks may be equally paralyzing. Given these challenges, it is easy to understand why a gap might exist between policy-development and the implementation of the policies. This finding suggests that if the knowledge base of how to overcome the aforementioned

challenges were more readily available, it might lead to viable solutions.

Inadequate Knowledge Transfer

Much of the discourses on sustainability drew attention to the importance of transferring knowledge to develop relevant competences, appropriate attitudes, and behavioral practices as a strategy to enhance policy-making practice. Some authors, for example, Tichenor, Donohue & Olien (1970), viewed knowledge-transfer as an important strategy to elicit and broadly disseminate relevant information about a process. Tichenor et al. found that knowledge-transfer is useful to help build, strengthen, and maintain knowledge systems for personal and organizational development. Yet, the evidence found in the literature reviews points to conceptual gaps in facilitating the broad transfer of knowledge among policy-makers.

The inability to facilitate the broad transfer of knowledge among policy-makers may hamper the dissemination of information about the lessons learned and best practices for developing and implementing policies that support the goals of sustainable development, especially in territories that are small and prone to hazards. Overcoming this challenge may be a key step in helping to close the knowledge-gap that hinders progress toward achieving the goals of sustainable development in territories that are small and prone to hazards.

Bridging the Gaps

Prior research has highlighted the importance of boundary spanners as a strategy for bridging knowledge gaps in organizations (Ibarra, Kilduff & Tsai, 2005). The empirical evidence on the success of boundary spanning has yielded mixed results. On occasions boundary-spanning facilitated progress in generating and transferring knowledge, while in other instances, it impeded progress. Hausmann et al (2005) provided an alternative approach for bridging the knowledge gap. This approach involves the merging of four key elements: knowledge-generation, developing a causal theory regarding the cause and effects of the problem, having relevant tools necessary to close the knowledge-gap, and knowledge-implementation.

Knowledge-Generation

The first step in bridging the knowledge-gap in policy-making practice entails generating knowledge about the problem. Research by Tichenor et al. (1970) noted that wherever there are knowledge gaps, there are also opportunities for learning, understanding, and improving the process. Hausmann et al. (2005) defined knowledge-generation as a long and cumulative process that involves a great number of organizational decision-making activities, ranging from the phase of generating new ideas to implementation of such ideas. According to the authors, this calls for defining the problem and envisioning a possible solution to the problem. For Hausmann et al, the exploration and generation of new ideas requires creativity, learning, innovation, and the

adoption of new knowledge, skills, and behaviors. These processes are strongly

interconnected and may be difficult to separate. Hausmann (2005) pointed out that

generating knowledge is affected by an organization's capabilities and behavioral

practices in pursuing, processing, interpreting, and transferring information during

problem solving. By collectively thinking and generating ideas about the problem,

organizations can creatively imagine possible solutions.

Causal Theory

The second step in bridging the knowledge-gap entails developing a causal theory

of the possible causes, effects and constraints of the problem (Hausmann et al., 2005).

According to Hausmann et al., by linking the causes, effects and constraints of the

problem, it becomes easier to find possible solutions for alleviating the problem. Stone

(2002) acknowledged that the process for developing causal theory is highly complex

based on possible paradoxes, contradictions, ambiguities, and conflicting interests, which

may prevail. Yet, Stone contended that going through the process is necessary to gain a

better understanding of the nature and context of the problem, its effects, constraining

factors; and the best possible interventions that may be available for solving or alleviating

it.

Tools

The third step in bridging the knowledge-gap is to identify the tools necessary to

convert the knowledge generated into action (Hausmann et al., 2005). This process

considers ways in which to address the problem, and the approaches required to make

knowledge more relevant and meaningful. One of the tools that can help policy-makers to

better conceptualize sustainability is System Dynamics (SD) (see illustration in Figure

2.5).
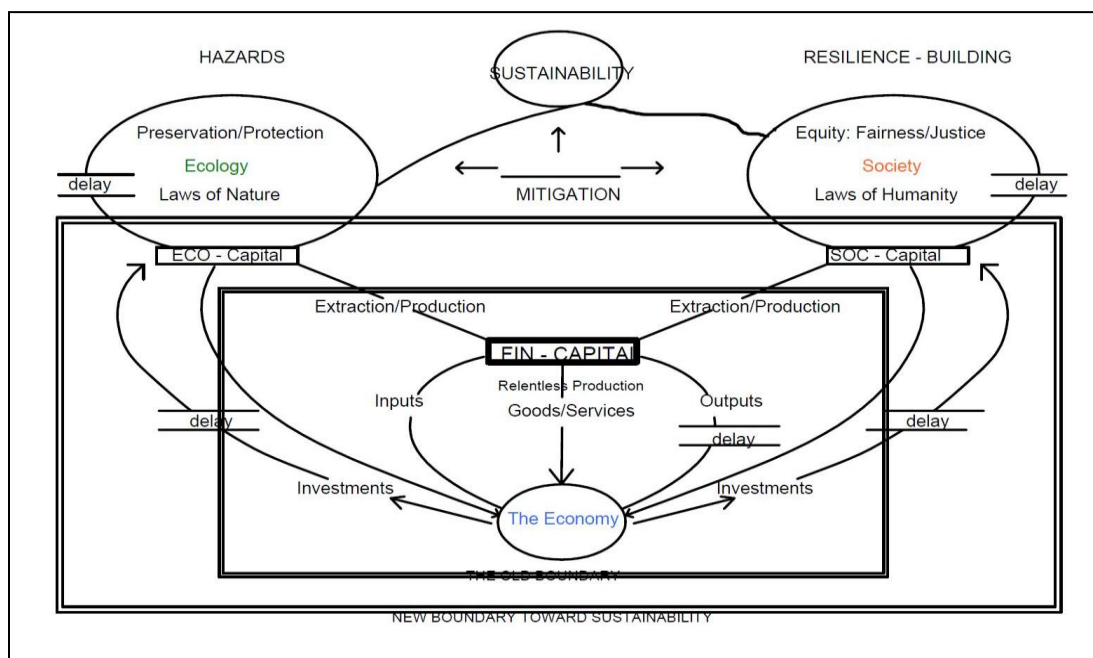
Figure 2.5 A systems dynamics model for achieving sustainability

     SD is a methodology for understanding behavior modes in complex systems

(Radizicki & Taylor, 2008). The authors posited that many dynamic systems tend to be

non-linear in nature. Dynamic mechanisms compound such systems, including the

complex interrelationships between stocks and information delays. According to the

authors, SD helps to transverse the complexity of multiple dynamic systems and their

sub-systems, understand the relationships between and among the components, and organize the relationships into a whole system model. Practitioners accomplish this feat by exploring the internal feedback structures, stocks, and the time delays that affect the interactions of such systems. Meadows et al. (2004) used SD in well-known studies, which examined the interactions of five sub-systems within the global economic system, namely: food production, population, industrial production, pollution, and consumption of non-renewable natural resources.

The illustration in Figure 2.5 shows that a SD simulation can help policy-makers conceptualize how to pursue the goals of sustainable development in a hazard-prone region. This model transcends the neoclassical approach to development, where the focus is placed on the relentless pursuit of economic growth to build wealth, prosperity, and meet human needs but the needs of the natural environment and social systems are ignored (Stiglitz et al., 2009; Daly, 2008). While the economies of some nations have boomed for many centuries using this model, it has also facilitated unrestrained population growth, unrestrained production, over-consumption, and pollution, and led to environmental degradation and hazards to a point where the Earth's sustainable capacity has been threatened (Stiglitz et al., 2009; Daly, 2008; Meadows et al., 2004; Catton, 1982). This suggests that the classical and neoclassical models of economic growth have been inadequate to achieve sustained economic growth, environmental soundness, and social equity simultaneously. The SD model illustrates the departure from the classical

approach to development and a new paradigm for pursuing sustainable economic growth, environmental protection, and social equity simultaneously. It shows that adhering to the laws of human nature and ecology while pursuing the activities of economic growth can lead to sustainability.

The SD model locates sustainable development in the concept of intergenerational equity. Intergenerational equity aims to meet the developmental needs of current peoples while leaving equal or better opportunities for future generations to meet their own needs, as advanced by the authors of Our Common Future (1987). This model defines Sustainability in terms of facilitating mutually beneficial relationships between and across the activities of economic growth, environmental protection, and social equity.

Knowledge-Implementation

The fourth step in bridging the knowledge-gap is implementing knowledge. Fugate, Stank & Mentzer (2009) described this step as a process for linking knowledge, tools, and actions in an effort to close the knowledge-gap. According to Fugate et al., using the appropriate tools can enable practitioners to implement evidence-based knowledge, moving from ambiguities, contradictions, vagueness, and inadequacies to clarity of meaning and purpose; from inconsistencies in policy-making practice to a solution-based approach; and from knowledge-gaps to transformative, evidenced-based policies. By linking evidenced-based knowledge with the appropriate implements, i.e., the appropriate tools and actions, it may be possible for policy-makers to successfully

develop and implement policies that support the goals of sustainable development and make the concept more meaningful.

Summary

The literature reviews provided a context for understanding sustainable development, sustainability, development outcomes in Barbados and Grenada, and the gaps in policy-making practice. Analysis of the literature highlighted a striking divergence in the development outcomes of Barbados and Grenada and identified factors that hindered and facilitated progress toward attainment of the goals of sustainable development. It appeared as though policy-makers generally embrace the notion that sustainable development can be used as an effective strategy to achieve sustainability; but, there is a lack of agreement on what sustainable development and sustainability really mean and how to operationalize the concepts of integration and harmonization of economic growth, environmental protection and social equity in policy-making to achieve sustainability. The evidence adduced from the literature is that policy-making practice in Barbados and Grenada has failed to achieve sustainability overall. It is assumed that by connecting evidenced-based knowledge to the appropriate tools and actions, policy-making practice can be improved, hazard risks can be reduced and sustainability can be achieved in small, hazard-prone territories.

In chapter three, the researcher presents the research methods used to identify the factors that hinder or facilitate the successful development and implementation of

sustainability-oriented policies in Barbados and Grenada. In the first section, the researcher provided an overview of the method of inquiry, the research methodology and a rationale for adopting the research approach. In the second section, the researcher discussed the study setting, target population and sampling design. In the third section, the researcher addressed the role of the researcher in the process. In the fourth section of the chapter, the researcher described the research design, including the data collection and data analysis protocols. Following this section, the researcher addressed the issue of credibility and trustworthiness in the study. The researcher addressed ethical considerations in the sixth section. Then the researcher provided a summary and conclusion statement about the research methodology and design to culminate the chapter.

Chapter 3: Research Methods

Introduction

The purpose of this qualitative multiple case study was to explore and understand why sustainability has not been achieved and conceptualize how achieving it may be pursued in territories that are small and prone to hazards. In the previous chapter, the researcher presented a review of the literature that supports the research inquiry. In this chapter, the researcher presents the research design and methodological procedures used in the study. The chapter begins with an overview of the method of inquiry. The following section includes a discussion of the methodology and rationale for adopting the research approach. In the next section, the researcher provides a description of the study setting, the target population, and sampling design. A discussion on the research design follows. The researcher describes and justifies the use of the data collection instruments, methods, and the data analysis procedures to be undertaken. In the following section, the researcher addresses the role of the researcher in the research process, the trustworthiness of the research results, and ethical considerations. The chapter culminates with a summary statement about the research design and methodology.

Method of Inquiry

This inquiry falls within the qualitative research paradigm. Qualitative research is a nonstatistical approach to scientific inquiry. It seeks to provide descriptions of what people experienced and how it is that they experienced phenomena (Lincoln &

Guba, 2005). To Patton (2002), the research template is important for providing specific

procedural guidelines to shape an inquiry. The qualitative research approach is strong in

eliciting rich, deep, and meaningful understanding of people's lived experiences from

their emic perspective (Denzin & Lincoln, 2008). This depth allows for the emergence of

unexpected ideas and achievement of empathetic understanding about a topic being

explored (Patton, 2002). Qualitative research methods are iterative and flexible, allowing

for spontaneity and adaptability in the interactions taking place between a researcher and

respondents (Merriam, 2009; Patton, 2007). Qualitative research designs can use one of

the following methodologies: phenomenology, ethnography, grounded theory, case study

or the narrative approach (Creswell, 2009). The dominant data collection methods

associated with the qualitative research approach are interviews, observation, focus

group, and archival document analysis (Patton, 2007; Moustakas, 1994). These methods

allow for the integration of planning, data collections, data analysis, and self-evaluation

throughout the research process. By integrating the various dimensions of the research

process, qualitative researchers are able to obtain thick, rich descriptions of phenomena

from patterns and themes that emerge in the data analysis.

Research Methodology: A Case Study

The researcher found the case study methodology suitable to uncover the factors

that hinder or facilitate the successful development and implementation of policies that

support the goals of sustainable development. The case study strategy relies on multiple

sources of evidence, multiple data collection methods, and multiple levels of analysis to gain a deeper and richer understanding of social phenomena (Yin, 2009). Case studies embrace both the constructivist and positivist research paradigms (Guba & Lincoln, 2005). This makes it possible to facilitate the collection of data from both subjective and objective perspectives. Yin (2003) took the constructivist approach, which assumes that truth is relative and dependent on the perspective of an individual who experienced a phenomenon under investigation. Using the constructivist approach, the researcher focused on the subjective meaning that respondents attribute to their unique experiences to gain a better understanding of the phenomenon within its context (Yin, 2003). Stake (2010) indicated that case studies focus on the unit of analysis under investigation rather than the method used for analysis. This allows for the exploration of new ideas, explanation of the phenomenon, and in-depth description of particular processes. Yin (2009) noted that the case study strategy enables the researcher to identify and set the boundaries of the case and remain within such boundaries. To Yin, this bounded system enables the researcher to gain a deeper and richer understanding of the 'why' and 'how' of the behavioral patterns of the phenomenon. Case studies are generalizable to theoretical propositions (Yin, 2009). To Yin (2009), triangulation enhances the credibility and trustworthiness of case study results in qualitative case study research.

Case studies can be single or multiple case designs. I employed a multiple case design to explore and describe policy-makers' perceptions of, and experiences with

policy making practice in Barbados and Grenada, compare the results within and across the cases, and make predictions about the practices. Researchers use multiple case designs to produce predictable results in qualitative research through use of literal replication (Yin, 2003). Literal replication refers to the extent to which a research operation is consistently repeatable (Yin, 2003). According to Yin, if a researcher finds consistency across the cases, the readers place greater faith in the integrity of the research results. Literal replication was accomplished in two phases, one in which the initial cases and the predicted results were similar, and two, when the subsequent cases produced similar results and the predicted results are similar. When the subsequent cases produced similar results, I made a theoretical prediction (analytical generalization) about the practices in policy-making in Barbados and Grenada.

Rationale for the Research Approach

Researchers use the case study approach to address complex phenomena when holistic understanding of a process is needed (Yin, 2003). According to Yin, the case study research approach is useful in exploring contemporary events within a real-life context when there is no strong theory on which to base an inquiry, when the boundaries between phenomena and the context are not clear, and when the research design needs to be flexible. Yin (2003) noted further that case studies are useful when multiple perspectives are required and researchers are not required to exert control over the behavioral events.

Since the object of the study is a complex phenomenon - achieving sustainability in small, hazard-prone territories, the study required multiple perspectives to gain a richer understanding of the multifaceted issues within their context. The study did not require any control over behavioral events. The key requirement needed was for the research design to be flexible enough to hear the emic perspectives of the respondents, allow for spontaneity and adaptability to situations emerging in the process, allow for the integration of planning, data collections, data analysis, and self-evaluation, and to achieve discovery success. Given the multifarious nature of the inquiry, the robustness in the case study approach was appropriate to explore the phenomenon in-depth and produce deeper insights on the actions and motivations of key policy-makers.

The Research Setting

I selected candidates for the study from a list of key policy-makers available from government information services on the internet and the researcher's own contacts. I conducted face-to-face interviews in quiet, disruption-free, neutral locations where the respondents were safe from intimidation or coercion (Kvale, 2008; Wengraf, 2001). I conducted some interviews asynchronously to accommodate respondents who were unavailable for a face-to-face interview (Bampton & Christopher, 2002). I conducted the interviews at various times of the day when it was convenient for the respondents (Kvale, 2008). I recorded the sessions, using a high quality portable audio recorder (Kvale, 2008). This approach to interviewing was useful to capture the respondents' stories and

responses in real time, review the sessions for transcription and verification purposes, and gain clarity on the salient issues emerging from the collected data. The settings were appropriate for gathering data where the privacy of respondents and confidentiality of their participation were assured.

Target Population

There were 18 key policy-makers in the sample for this study. The definition of a 'key policy-maker' in this inquiry refers to an individual whose decisions have fundamental importance in policy-making practice. I sought a voluntary sample of key policy-makers in Barbados and Grenada who were over 18 years of age, and participated in policy-making practice. All the participants expressed an interest in learning how to achieve sustainability. Each participant acknowledged they were willing to share their knowledge, experiences, perceptions, and/or thoughts about policy-making practice in their territory.

The Sampling Design

Sampling is an important procedure in qualitative research studies. Researchers draw samples to reflect the purpose, questions, and design of an inquiry (Morse, 2008; Onwegbuzie & Leech, 2007c). This approach allows a researcher to estimate an appropriate sample size to explore a topic of interest and maximize the potential of an inquiry to achieve data saturation and discovery (Reilly & Parker, 2011; Patton, 2002). Yin (2009) noted that in multiple-case studies, where the cases vary and the researcher

wants to ensure that the sample size is adequate, sampling can help to determine the

extent to which a researcher can make a theoretical prediction about the cases.

Sampling Strategy

The researcher used the purposive sampling strategy to draw a sample non-

randomly from a sampling frame of units that are accessible and meet the qualification

requirements for participation in the study. Given (2008) noted that purposive sampling

allows a researcher to select candidates with characteristics that enable them to answer

the research questions while eliminating the candidates who are unsuited for the research

purpose. According to Given, purposive sampling can help researchers to save time and

money. Given observed that the purposive sampling approach tends to provide more

accurate results than other forms of sampling. Guest, Bunce and Johnson (2006)

recommended the use of purposive sampling to increase the likelihood of discovering all

of the knowledge required to answer the research questions.

The researcher used the critical case sampling technique to select the candidates

who met the qualification criteria for participation in the study. Creswell (2002)

acknowledged that the critical case sampling technique has several benefits in qualitative

research. It is appropriate for selecting candidates that are likely to yield information that

has the greatest impact on the body of knowledge that relates to a topic under

investigation. It focuses on identifying those with exceptional understanding of their

experience as compared to others. To Patton (2010), this decisiveness is important for

explaining and understanding phenomena under investigation. This decisiveness is also

important for researchers to gain a deeper understanding about an underlying process.

The critical case sampling technique has potential to strengthen the quality of the

research.

The Sample Size

The researcher thought that a sample size of 18 would be adequate to address the

phenomenon in this study. I drew the sample from three subgroups within the policy-

making field: six key policy-makers, six key policy-implementers, and six key policy-

evaluators. I chose these categories because they represent three different phases in

policy-making practice, and perhaps, differing theoretical standpoints (Onwegbuzie &

Leech, 2007c). This sampling approach was useful to obtain a rich understanding of the

perceptions and experiences across a range of settings and conditions in policy-making

practice.

Rationale for the Sample Size

Many factors helped to determine the sample size for this inquiry although there

were no clear guidelines for understanding what constitutes an appropriate sample size in

qualitative research. The lack of clear guidelines made deciding on an appropriate sample

size a bit frustrating. Guest et al. (2006) acknowledged that the lack of practical guidance

for determining an adequate sample size in qualitative research prior to data collection is

problematic and troubling. According to the authors, sample sizes, which are too small

may produce a narrow range of perceptions that could impede discovery progress in understanding a phenomenon under scrutiny. On the other hand, sample sizes, which that are too large do not permit the depth required to find the deep meaning desired in an inquiry (Guest et al., 2006). Guest et al. (2006) made it clear that the sample size in qualitative research studies must be adequate to gain meaningful understanding of a topic and avoid discovery failure. According to Guest et al., (2006), having an adequate sample size is crucial to strengthen the rigor in qualitative research, maximize what can be learned, and achieve data saturation.

To determine an appropriate sample size for the study, I examined research studies with similar designs, in which the researchers achieved data saturation. Ritchie, Lewis and Elam (2003) reckoned that a sample size of 50 is adequate to capture the important information needed to achieve data saturation in most qualitative designs. For case studies, Creswell (2002) suggested that three to five interviews would be sufficient to achieve data saturation. Guest et al. (2006) held the view that investigators achieved data saturation more easily with a sample size of 12. Guest et al. further noted that for studies with a high level of homogeneity in its population, a sample size of six would be adequate for finding meaningful themes and useful interpretations. For Onwegbuzie & Leech (2007c), a sample size of three respondents per sub-group would be adequate to achieve the depth required when there is a need to maximize understanding of the perceptions in subgroups. To Onwegbuzie & Leech (2007c), a sample size consisting of

three respondents per subgroup can also maximize the chances for discovery success. These substantive viewpoints provided a reasonable basis for determining the sample size for the study.

Research Design

The research design is widely regarded as a blueprint for the development of a systematic plan for research. Patton (2002) listed several decision-making steps that illustrate how the research procedures are planned, prepared, and evaluated, and how all of the research components work together to address the research problem and questions. This research design emerged amidst the researcher's review of the literature. The research purpose, questions, philosophical assumptions, conceptual framework, and the researcher's reflection on the goals and objectives of the research informed the design. The purpose of the research, research questions, unit of analysis, the degree of interference, data needed, data collection methods and procedures, and data analysis are the components, which provided structure and direction for the study. The research design fitted well with the tradition of the qualitative research paradigm. It also served well in an inquiry that sought to gain in-depth understanding of how policy-makers shape, modify, and reproduce knowledge.

This multiple case study sought to gain a deeper and more meaningful understanding of the practices of policy-makers in Barbados and Grenada toward achieving the goals of sustainable development. At this stage in the research, policy

making practices are generally defined as perceptions, strategies, actions, and performances that policy-makers carry out in the process of developing and implementing public policies. To gain a better understanding of the practices of policy-makers, I addressed the central research question: "how do policy-makers successfully develop and implement policies that support the goals of sustainable development in territories that are small and prone to hazards?"

The sub-questions addressed were as follows:

1.   What factors do policy-makers perceive as having facilitated the successful development and implementation of sustainability-oriented policies in territories that are small and prone to hazards?

2.   What factors do policy-makers perceive as having impeded, or continue to impede progress in implementing sustainability-oriented policies in territories that are small and prone to hazards?

3.   How do policy-makers evaluate the effectiveness of sustainability-oriented policies in territories that are small and prone to hazards?

4.   How do policy-makers propose to enhance the knowledge, skills, and attitudes they perceive as being necessary for positive action in policy-making practice toward achieving sustainability in small, hazard-prone territories?

5.   What are the opportunities policy-makers need to consider in pursuing the goals of sustainable development in territories that are small and vulnerable to hazards?

The unit of analysis analyzed in the study was the practices of key policy makers in developing and implementing policies that support the goals of sustainable development. I kept the researcher's interference at minimal in this study. The data collected fell into three main categories: theoretical data, demographic data, and perpetual data.

Theoretical data consisted of an ongoing review of relevant literature to examine the contributions of other scholars in the broad areas of sustainable development and sustainability prior to the collection of data. The literature reviews provided conceptual and theoretical grounding for the study and enabled the researcher to gain a deeper understanding of what the authors viewed as constraints to, and opportunities for achieving sustainability in territories that are small and prone to hazards.

Demographic data reflected the properties of respondents, which constitute the structure of the research sample. This data included policy-makers' age, gender, employment status, educational attainment and their years of experience in policy-making practice.

The perceptual data was from key policy-makers' own words. The key policy-makers shared their knowledge, beliefs, perceptions, experiences and assumptions about the practices in policy-making toward achieving sustainability. The perspective of these key policy-makers was imperative for the study.

Data Collection Methods

A qualitative case study relies on multiple sources of evidence to gain a richer understanding of phenomena under scrutiny (Stake, 2010; 2006). Given that the study required both primary and secondary data to gain a better understanding of the practices of key policy-makers toward attaining sustainability, semistructured interviews and archival document analysis were the methods used for collecting such data. Yin (2009) argued that the use of multiple data sources in exploratory research is an important strategy for generating insights from various perspectives. This enables the qualitative researcher to address the research problem and questions with greater accuracy. To Corbin & Strauss (2008), obtaining data from multiple sources could provide an opportunity to obtain complementary data. Bloomberg and Volpe (2008) argued that using multiple sources to gather data is important for the purpose of triangulation. In this study, I placed emphasis on ensuring that the data collected were adequate to address the research purpose and questions, gain insights from the different sources, and strengthen the rigor and integrity of the inquiry. This approach was useful for achieving data saturation, facilitating triangulation, and making discovery progress.

Semistructured Interviews

The data required to answer the central research question were policy-makers' beliefs, perceptions, experiences, assumptions, and practices in policy-making toward achieving sustainability. I used a semistructured interview questionnaire as the primary

method to elicit demographic and perceptual data from key policy-makers (Kvale, 2008).

Qualitative researchers use interviews to obtain verbal accounts of the lived experience of

respondents to unfold deeper meaning about their private world (Kvale, 2008). To Kvale,

in-depth interviews provide flexibility and dynamism in facilitating one-on-one

interactions between investigators and informants.

Gall, Borg & Ball (2003) likened semistructured interviews to structured

interviews, in that, researchers carefully design interviews by using standardized topics

and a list of pre-set questions to guide interviews and elicit an informant's ideas or

opinions on a topic of interest. The interview questionnaire consisted of concise, neutral,

and unambiguous questions (Kvale, 2008). I framed the questions in this semistructured

interview questionnaire in a way that allowed for open-ended responses (Kvale, 2008).

This open-endedness enabled the respondents to express their perspectives freely (Kvale,

2008). The open-endedness of the interviews also enabled me to probe for details and

address emerging issues (Kvale, 2008). The use of a pre-determined list of questions

provided structure and uniformity for the interviews (Kvale, 2008). Kvale observed that

data collected from semistructured interviews have a more authentic aura in comparison

with data collected from secondary methods. Hence, semistructured interviews are more

useful for obtaining meaningful data from the respondents' emic perspectives.

Following the recommendations of Kvale (2008), I developed an interview plan to

guide the interviewing process and strengthen the rigor of the inquiry. The plan includes

a guide that consists of a semistructured interview protocol (See Appendix C) with clear instructions for conducting in-depth interviews. Sustainable Development was the conceptual framework used to guide the design of this interview plan. The interview guide included a list of topics and pre-set questions to address the research purpose (Gall et al., 2003). A three-member expert review panel evaluated and pilot-tested the interview-guide to establish content validity (Patton, 2007). I created some of the questions during the interviews in response to emerging issues.

Interviewing Methods

Face-to-face interviewing was the preferred method for data collection. Face-to-face interviewing enables an interviewer to establish rapport with respondents (Wengraf, 2001). It also allows the interviewer to capture non-verbal cues from the body language exhibited by respondents. According to Wengraf, face-to-face interviewing can also elicit in-depth information from respondents. However, face-to-face interviewing presents geographical limitations to candidates who are unable to commute to an interview site.

I used asynchronous interviewing (e.g., SKYPE and telephone) as the secondary data collection method (Bampton & Christopher, 2002). Using this strategy was important to accommodate the respondents who are unwilling or unavailable for a face-to-face interview. According to the authors, interviewing via SKYPE allows for fast and convenient communications. SKYPE also enables investigators to establish rapport with respondents and capture non-verbal cues from their body language. Although an

interviewer's view may be limited to the upper part of a respondents' body, it can provide

indicators to their facial reactions. SKYPE allows for the recording of communications.

This provided an opportunity to review the interview sessions, verify information, and

gain clarity on pertinent questions or issues that emerge.

Interviews conducted by telephone offer convenience for both the interviewer and

the study participants. It means that neither the interviewer nor the respondent is required

to travel or prepare their physical appearance (Opdenakker, 2007). Conducting interviews

by telephone allows the researcher to conduct interviews at a time and location that is

convenient to both parties. This is advantageous to respondents who find it difficult to set

aside a significant amount of time for face-to-face engagement. Telephone interviewing

does not allow for face-to-face interaction. This limits the researcher's ability to capture

non-verbal cues to assess the reactions that respondents exhibit through body language.

Archival Document Analysis

The researcher used archival document analysis as a secondary data collection

method to corroborate the data collected from semistructured interviews. Archival

document analysis is a research method that involves locating, evaluating, extrapolating,

and analyzing sources found in archives to address research questions (Gilliland &

McKennish, 2013). My review of archival documents comprised analysis of government

reports and other pertinent documents to explore new questions, compare existing data,

verify, or challenge existing findings, and draw evidence to understand the bigger picture

regarding policy-making practices toward achieving the goals of sustainable development.

The data needed to address the research problem and central question were behavioral patterns and trends in policy-making toward achieving sustainability. I drew such data from indicators that were available on the websites of government ministries and various institutions, including regional and international banks, consulting firms, United Nations agencies and other international stakeholders. Permission was not required for use of such documents since they are in the public domain.

It is important to acknowledge the helpful support received from government officers of various ministries who provided useful data when needed information was unavailable online. Analyses of the archival documents enabled me to detect actions, opinions, perceptions, and attitudes, and gain a deeper and richer understanding of the patterns and behavioral trends in policy-making practice toward achieving the goals of sustainable development in Barbados and Grenada. Archival document analysis enriched the research process by adding complementary data.

Following the recommendations of Gilliland & McKennish (2013), Roe (2005), and Robyns (2001), I developed an archival document review protocol (see Appendix D) to provide guidance for planning, gathering, analyzing, interpreting, and reporting the research results. The archival research protocol addressed the procedures for collecting, assessing, and reporting archival data. Developing an archival document review protocol

was an important strategy to ensure that the collected data were relevant to the study and adequate to address the research purpose and questions.

Data Collection Procedures

In-depth, Semistructured Interviews

The data collection process began after obtaining approval from Walden University's Institutional Review Board (IRB, no. 04-08-18:25:59-05'00'). I emailed an invitation letter (See Appendix A) to 50 key policy-makers in Barbados and Grenada between April 12, 2015 and May 15, 2015 with the aim of qualifying at least 30 candidates to participate in the study. The letter informed the recipients of the purpose and nature of the study, the basis for selecting potential candidates, data collection procedures, duration of the participants' involvement in the study, potential benefits, risks of participating, and a proposed date and venue for conducting the interviews. The collection of interview data from nine key policy-makers in Grenada began on May 11, 2015 and ran for six weeks. The collection of interview data from nine key policy-makers began in Barbados four weeks later and lasted for six weeks. I expected the duration of an interview to be 60 minutes, but this depended on the interactions taking place between the respondents and the researcher in the research process.

I used the semistructured interview protocol of questions (Appendix C) to gather in-depth information from key policy-makers about their practices and experiences with policy-making toward sustainable development. My objective in conducting the

interviews was to obtain rich, thick information that would adequately address the research problem and central question. I collected in-depth interviewees from six key policy-makers, six key policy planners/implementers, and six key policy evaluators.

In a pre-briefing session prior to asking any interview questions, I thanked the study participants for agreeing to participate in the study. I used icebreakers to create a relaxed ambience and help the respondents feel comfortable (Kvale, 2008). I explained to the respondents the problem to be addressed, the purpose and nature of the study, voluntary cooperation, informed consent, the rights of respondents in the study, terms of confidentiality, anonymity of the respondents, how the data will be protected, the length of time the interview was expected to take, and the researcher's training, interests and contact information. I advised the participants it is possible to call for a follow-up interview to clarify meanings in their statements and verify my interpretation of their statements. Finally, I asked the participants to reflect deeply on the way in which policy-making takes place in their setting and encouraged them to share their stories as freely and accurately as possible. After this briefing, I asked whether the participants had any questions or concerns they needed me to address before proceeding to the interview. After addressing their questions or concerns, the participants completed the consent form. Once the participants granted me permission to conduct the interviews, I started to audio recording the interview sessions.

Using the interview protocol developed for the study, I directed the conversations

by asking questions that pursued themes and concepts. I listened attentively to hear the emic voices of the respondents by allowing them to express their perspectives fully and clearly (Kvale, 2008; Patton, 2002). I asked probing follow-up questions to elicit explanations about specific occurrences and remained open to new and unexpected ideas (Patton, 2002). I asked for examples in some cases to gain clarity and verify the meaning of unclear responses (Kvale, 2008). I took copious notes of the verbal responses and non-verbal cues taking place with the participants (Janesick, 2010). I recorded my thoughts, feelings, and reactions in the research process (Janesick, 2010). At the conclusion of the interviews, I thanked the respondents for participating in the study and reminded them that a follow-up interview may be necessary to clarify meanings in their statements. I also reminded them of a possible need to solicit feedback regarding my preliminary interpretation of their responses to the interview questions.

Archival Document Reviews

I used the archival document analysis protocol to plan, collect, analyze, and interpret the collected data (Appendix D). Before entering into the archives, I conducted a preliminary survey of the documents available for the topic under study in line with the recommendations of Roe (2005) and Gilliland & McKennish (2013). The survey addressed questions such as: what assumptions did the author make? Why does the text say what it does? What is my understanding of what its taking place? Can I believe the document? What does this document mean to the research questions? Are there any

unanswered questions? This preliminary survey provided a context for the documents, allowing me to become acquainted with the material and determine which documents held relevance to the study before data collection.

The collection of archival documents began on September 10, 2015 and ran until October 12, 2015. Using the archival document analysis protocol developed for the study, I searched through reports, memoranda, project proposals, evaluations, press releases, newspaper articles, survey assessments and statistical reports to find relevant data to address the research purpose and questions (Roe, 2005). The process entailed collecting, reviewing, assessing, weeding, arranging, and analyzing written material. I engaged in copious note taking to synthesize the data and capture their essence (Piolat, Olive & Kellog, 2005). I placed the collected data in a Microsoft Excel file using the format recommended by Roe (2005). Roe (2005) recommended the following headings for effective file management: name of the document, author, date of the document, record type, relevant characteristics and key message. Storing the data this way allowed me to sort the data in different ways for analysis, for example by theme, type of idea or by the case. I used an archival box to file and store the data chronologically by date.

Data Analysis

Qualitative data analysis seeks to describe general statements about relationships and themes that emerge from data sets (Creswell, 2007). Iteration plays a role in such analyses, not as a repetitive mechanical task, but as a reflexive process that spark insights

to gain deeper and richer understanding about the meaning of themes and patterns that emerge (Patton, 2002). I conducted the data analysis at three levels, using thematic analysis, content analysis, and cross-case analysis techniques to analyze, interpret, and link the data sets. The use of multiple analytic techniques was an important strategy to analyze the various types of information and get more out of the research syntheses (Leech & Onwuegbuzie, 2008). This strategy was important to increase the likelihood of producing accurate and reliable findings and strengthen the trustworthiness of the research results and the conclusions drawn.

At the first level of the data analysis, I used thematic analysis to conduct a preliminary analysis of the data collected from in-depth interviews (Braun & Clarke, 2006). Thematic analysis is a technique used in qualitative research to identify, examine, and record recurrent patterns within cases (Braun & Clarke, 2006). These patterns are associated with specific research questions and are important to describe and understand themes that emerge (Guest, MacQueen & Namey, 2012). I performed the data analysis in a six-phase process to create meaningful patterns. It followed the steps recommended by Smith, Flowers & Larkin (2009) for conducting an Interpretative Phenomenological Analysis (IPA).

The data analysis process entailed listening to the tape-recorded sessions, transcribing the data, and reading the transcripts to get a sense of the whole picture. I read the transcripts again and examined the text line by line to facilitate a microanalysis of the

data, while also annotating my thoughts, writing memoranda, transcribing the interview notes into text, and sorting these items into proto-themes. I assigned color codes as identifiers for cross-referencing. I examined the proto-themes and attempted initial definitions to evaluate their meaning. I re-contextualized the units, using axial coding to search for emerging patterns and categories within the cases. I moved back and forth, describing and interpreting the meaning of the themes that began to emerge, elaborating on the findings through note taking, and re-examining supporting data for the final construction of each theme.

When it was necessary to clarify meanings in the respondents' statements, I scheduled follow-up interviews within one week. I entered the responses by key words into a Microsoft Excel file on my password-protected computer with only me having access to the password (Creswell, 2007). These key words were entered by the question number, one theme per line, to facilitate coding and analysis (Guest et al., 2012). Placing the collected data into Microsoft Excel made it easy to sort, import, and export said data into data base software, conduct the appropriate analyses, and generate insights.

The final step of the thematic analysis process was to interpret the data. I summarized the patterns and themes that emerged within the data sets and drew a preliminary conclusion about the findings. I contacted some respondents to review the analytic categories, interpretations, and conclusions drawn by the researcher for verification purposes. Lincoln and Guba (2005) viewed member checking as an important

technique for establishing credibility. Two research assistants reviewed the data

transcripts, bringing fresh perspectives to confirm or refute the researcher's preliminary

interpretation of the data sets (Creswell, 2007). They reviewed the results within the data

sets against the pre-defined categories i.e., the headings of the research questions,

searching for similarities or differences. They compared the data to the conclusions

drawn by the researcher. When I confirmed the similar patterns within the data sets, I

made a literal replication about the data collected from the in-depth interviews.

At the second level of the data analysis, I used content analysis to identify

behavioral trends and patterns and make inferences about the meaning of the data

collected from archival documents (Krippendorff & Bock, 2008). I sought to understand

what was said, why, my understanding of what was said, the effect on the research

problem and questions, and address how the data should be analyzed and defined, and

how the boundaries should be set for analysis (Krippendorff & Bock, 2008). This

procedure enabled me to identify concepts, define the relationships between them, and

construct mapping representations of the concepts, focusing on words, concepts, and their

semantic relationships.

The content analysis was a lengthy process that required me to go over the data

several times to ensure that the analysis was thorough. The process involved several

steps. Drawing from Creswell (2009) and Krippendorff & Bock (2008), I read the

archival documents, making notes when I found interesting and relevant information. I

transcribed, hand-coded, and analyzed the data to identify the patterns and trends. Using

the notes, I listed the different types of information found. Then I read the list and

categorized each item in a way that offered a description of idea in the story. I determined

which categories I could link and listed them as major categories. I created a concept map

to highlight the categories that had begun to emerge and help me to gain a better

understanding of the interrelationships (Kane & Trochim, 2007). Then I entered the

categories into matrices in my password-protected Microsoft Excel file - one theme per

line - to facilitate coding and analysis. I entered the categories according to the topics

explored. I coded the themes into positive and negative categories based on answers to

the research questions. I compared and contrasted the categories to identify patterns and

behavioral trends in the concepts. I examined each in detail to consider its relevance to

address the research questions. I reviewed the transcribed data to ensure I categorized the

ideas. Then I reviewed the categories to identify patterns and ascertain whether they were

a true representation of the concepts in the documents. I reviewed the original transcripts

to ensure that all the information that I needed to categorize was completed.

In the next step, two research assistants reviewed the transcripts and cross-

checked the analyzed data, comparing it with my preliminary interpretation of the data to

verify or refute the findings. The next step in the content analysis process involved

comparison of the patterns and trends identified in the archival data for prediction

purposes. When the reviewers confirmed similar patterns within the data sets, I made a

literal replication for the archival data (Yin, 2003; Heiman, 2002).

At the third level of the data analysis, I used cross-case analysis to analyze and compare the results across the cases (Stake, 2006). The process involved a thorough examination of the data sets and making comparisons against pre-defined themes, patterns, and categories, searching for similarities and differences (Creswell, 2008). I examined the results across the data sets to draw conclusions. Two peer-reviewers, one from within and the other from outside the field of policy making, crosschecked the data results (Spillet, 2003). The peer reviewers also reviewed the audit trail for the study. When the peer reviewers confirmed that 80 percent of the patterns in the cross-case analysis were congruent with the patterns identified in the thematic and content analyses, I made a theoretical prediction about policy-making practice in Barbados and Grenada (Yin, 2003).

I had begun to use NVivo software (QSR International Ltd, 2008) to crosscheck and verify the hand-coded data. NVivo has features for media management, writing memos, annotations, classification, project management, self-reflection, and a detailed reference manual (Richards, 1999b). NVivo has the capacity to transcribe interviews, code and analyze sophisticated qualitative and quantitative data, and produce rich, meaningful results. Pattern-based auto coding allowed for quick and easy transfer of transcripts from the Microsoft Excel files, making it easy to synchronize the documents for analysis. The use of NVivo to crosscheck and verify the hand-coded data helped to

strengthen the rigor of the research results. While uncovering patterns and trends in the analysis, the NVivo device malfunctioned and I decided to abandon using it.

The Main Steps in the Research Process

The research conducted for this study followed a uniform protocol to ensure that the interview data and archival documents yielded consistent data with the goals of the study. I created an audit trail to ensure that verifiable steps throughout the research process (See Appendix E):

Trustworthiness of the Data

Establishing trustworthiness has important implications in an inquiry that subscribes to interpretivist epistemology and subjectivist ontology. A commonly held view is that when a qualitative researcher and respondents are bound together through prolonged engagement, it may be possible to become so enmeshed in the process that he or she may find it difficult to separate their world from that of respondents (O'Donoghue & Punch, 2003). While this close interaction between an investigator and respondents is critical for the success of the qualitative inquiry, a researcher can easily lose the ability to interpret research results objectively. Yin's (2009) claim that triangulation enhances the validity and reliability of qualitative research results means that the trustworthiness of a case study may increase when the subjective perceptions of respondents and researchers are verified in a systematic manner, the chain of evidence is consistent and the conclusions drawn from the data analysis are confirmed. The notion that triangulation can

enhance qualitative case study results was addressed by Rothbauer (2008), who stated

that obtaining multiple viewpoints may increase confidence in the assertions made by

respondents and the researcher's interpretation of their perspectives. For Davies & Dodd

(2002) and Stenbacka (2001), triangulation increases understanding of the nature and

reality of a phenomenon under exploration. To Lincoln & Guba (2005), researchers

ascertain trustworthiness by verifying that the preliminary research results are credible,

dependable, transferable, and confirmable. I incorporated several triangulation

mechanisms into the research design to check and verify that the data results are

trustworthy. They include investigator triangulation, data source triangulation, theory

triangulation, and methodology triangulation.

Investigator triangulation entails the use of multiple investigators in a data

analysis process to establish credibility of the research results through verification by the

investigators (Rothbauer, 2008). Credibility refers to the degree to which the results of

the data are believable from the perspective of the study participants. Member checking

was one of the techniques used to ensure that I present a true picture of the phenomenon

under investigation (Lincoln & Guba, 2005). During the data analysis, I asked 12 study

participants to provide feedback on the researcher's preliminary interpretation of the data

collected from their statements. Another technique employed was peer debriefing

(Lincoln & Guba, 2005), where research assistants who were familiar with the research

literature were asked to examine the raw data and the researchers' preliminary

interpretation of the data and offer feedback. Additional techniques used to ensure credibility of the data were prolonged engagement, data saturation, and peer review. When the researcher's preliminary findings were congruent with at least 80 percent of the respondents' statements, credibility of the data results was established.

Data source triangulation entails the use of evidence from multiple sources to confirm the dependability of a study through cross verification of the sources (Rothbauer, 2008). I used secondary data from archival document reviews to corroborate the results of data collected from the in-depth, semistructured interviews. I systematically maintained a documentation system of the research throughout the research process. When peer reviewers confirmed that 80 percent of the findings from the archival documents were congruent with the findings from the in-depth interviews, dependability of the data results was established.

Methodological triangulation entails the use of multiple methods to gain a better understanding of phenomena and establish transferability. In the positivist paradigm, transferability aims to determine the extent to which the findings of one study are transferable to another setting. Stake (2006), Patton (2002) and other authors have argued that transferability is not absolute; rather researchers define their observations based on the context in which a phenomenon occurs. Consequently, no two qualitative studies are identical. Patton suggested that consideration be given to the variations between situations and customize the research process appropriately. Patton posited that the

prospect for transferability exists by providing a thick description of the research process to allow for evaluation of how well the researcher adhered to the principles and standards of qualitative research. When investigators confirmed that the research process was sufficiently thorough and the data collection and data analysis adhered to the principles and standards of qualitative research, transferability was established.

Theory triangulation entails the use of multiple perspectives in the analysis and interpretation of data sets to confirm the research results (Rothbauer, 2008). I engaged investigators from within and outside of the policy-making field to scrutinize the raw data and the researchers' preliminary interpretation of the data and offer feedback. To Lincoln and Guba (2005), the fresh perspective that such individuals may bring could allow them to draw insights that the researcher may have missed. When the investigators confirmed, at least 80 percent of their findings were congruent with the raw data and the researcher's preliminary interpretation of the data, confirmability of the data results was established.

The Role of the Researcher

While the important role of a researcher in generating knowledge in qualitative research is well established, some scholars have charged that research negotiated through the human instrument is subject to possible misunderstandings, incorrect inferences, and distortions, which could lead to biases (Janesick, 2010; Patton, 2002). Qualitative researchers themselves acknowledge that their subjectivity can distort research results and hinder discovery progress (e.g. Patton, 2010; Onwegbuzie & Leech, 2007; Guest et

al., 2006; Gearing, 2004; Moustakas, 1994). The problem of bias exacerbates in qualitative research due to a lack of agreement on the canons for guiding data collections, data analysis, data interpretation, and ensuring the credibility and trustworthiness of the data (Onwegbuzie & Leech, 2007). Janesick (2010) made it clear that misrepresenting a respondent's perspective can negatively influence the conclusions drawn in research studies. Janesick noted further that gaining access to respondents to deeply understand, interpret, and verify their perceptions, feelings, thoughts or attitudes about phenomena requires adequate skills for a disciplined inquiry. Janesick placed an obligation on the qualitative researcher to acknowledge any interests, knowledge, experiences or preconceived notions that can hinder discovery progress and take corrective action to mitigate and/or overcome potential biases in the research process.

There was a possibility that my prior knowledge of public policy and development activities could create biases that might hinder the progress to obtain rich, deep, and meaningful understanding of policy-making practices in Barbados and Grenada. To mitigate such tendencies, I sought to develop the requisite knowledge and skills to draw adequate meaning from the statements of respondents (Patton, 2002). I adopted the philosophical perspective of the interpretivist and naturalist paradigms, in particular, the concept of how people experience phenomena (Denzin & Lincoln, 2008). I adhered to the legal and ethical guidelines for conducting research (The Belmont Report, 2012). I remained attuned to the happenings in the research process, possessing adequate

articulation, listening, and interpretation skills, and demonstrating empathy, respect, and genuine concern for the respondents (Corbin & Strauss, 2008). I created a comfortable interviewing ambience, demonstrated a good sense of humor but with clear boundaries. I remained open to hearing and understanding differing opinions and viewpoints (Janesick, 2010). Being approachable, I showed interest in the respondents and their perspectives, and was sensitive to their anxieties and the subtleties of meaning in the stories they shared (Corbin & Strauss, 2008). I adopted the stances of Janesick (2010), Gearing (2004), and Moustakas (1994) to engage in a sustained effort of epoche and copious note taking, bringing to light potential biases that could hinder discovery progress in hearing and understanding the authentic voices of the respondents, and bracketing such tendencies.

Ethical Considerations

Ethical concerns relating to the protection of study participants has paramount importance in this research inquiry. Although reports of ethical failures in qualitative research studies are rare, Marshall & Rossman (2006) found that the qualitative research process, that is, its aims, methods, procedures, length of time involved with respondents, and their rights in the process could create tensions and conflict. The Belmont Report (2012) recommends establishing ethical standards to protect such rights. To ensure protection of the rights of the study participants, I explained to them the problem addressed in the study, the purpose and nature of the study, and the rights of participants

in the research process. I explained to the participants that the interviews will be audio or video taped, the potential benefits or risks, anonymity, the researcher's commitment to protecting the privacy of study participants, that is, how the collected data will be stored, secured, and disposed of, and voluntary cooperation (Marshall & Rossman, 2006). I informed the participants of the timeframe allotted for the interviews to enable them to decide whether they wish to participate in the study before they provided full, conscious, written consent to participate. I explained that I will encrypt the data collected from participants and secure them with password protection, and only the researcher will have access to the password. I further informed the participants that they had the option of requesting tape erasure if they decided against tape retention. I explained further that I would keep all data safe in a locked location at my home.

Summary

In chapter three, the researcher provided an account of the research design and methodology proposed for this inquiry, which explored policy-making practices toward achieving sustainability in hazard-prone territories. The qualitative research approach benefited the study by allowing for the exploration of policy-making practice in depth. The multiple case study design allowed for comparison of the data sets within and across the cases for the purpose of theoretical replication and making predictions about policy-making practice. The sampling design facilitated the achievement of data saturation. The protocol for the in-depth, semistructured interviews provided a robust framework of

questions to allow for the emergence of new ideas. This helped to facilitate understanding

of the deeper underlying meanings and better explain the phenomenon under study. The

use of archival research enhanced the study by corroborating the data from interviews.

The data collection and analysis protocols helped to produce deeper, richer meaning of

policy-making practices. Triangulation benefited the study by helping to mitigate

possible biases and strengthen the credibility and trustworthiness of the research results.

  In chapter four, the researcher provides a comprehensive analysis of the collected

data within and across the study cases.

Chapter 4: Presentation of the Research Results

Introduction

In the previous chapter, the researcher presented the design and methodology used in the inquiry. In this chapter, the researcher summarizes what semistructured interviews and archival data revealed about policy-making practice in Barbados and Grenada. The researcher also presents the results of the data analysis to address the central research question, "How do policy-makers successfully develop and implement policies that support the goals of sustainable development in territories that are small and prone to hazards?"

Other questions that guided the research inquiry include the following: (a) What factors do policy-makers perceive as having facilitated the development and implementation of sustainability-oriented policies in territories that are small and prone to hazards? (b) What factors do policy-makers perceive as having impeded, or continue to impede progress in developing and implementing sustainability-oriented policies in territories that are small and prone to hazards? (c) How do policy-makers evaluate the effectiveness of sustainability-oriented policies in territories that are small and prone to hazards? (d) How do policy-makers enhance knowledge, skills and attitudes they perceive as being necessary for positive action in policy-making practice toward sustainable development? (e) What are the opportunities that policy-makers need to consider in pursuing the goals of sustainable development in territories that are small and

 vulnerable to hazards?

Using semistructured interviews, I obtained primary data from key policy-makers who represent three key phases in policy-making practice. I audio recorded the interviews and transcribed them at the end of the interviews. During the interviews, the respondents described their perceptions of, and experiences with policy-making practice toward the attainment of sustainable development. Archival documents provided complementary data to enrich the data results from the semistructured interviews. The researcher analyzed the collected data through use of thematic, content, and cross-case analyses.

The chapter is divided into five sections. In the first section, the researcher describes the demographic features of the study participants and the research setting. In the second section, the researcher explains the data collecting process. In the third section, the researcher describes the methodological procedures used to organize, analyze, and interpret the collected data. In the fourth section, the researcher describes the procedures used to strengthen the rigor of the research and ensure trustworthiness of the results. In the fifth section, the researcher presents the findings of the data results to address the research problem and central question. In the final section of the chapter, the researcher provides a summary of the research findings. The research findings demonstrate the potential for merging theory and practice to help facilitate the adjustment that policy-makers need to make to successfully develop and implement policies that support the goals of sustainable development for SIDS.

Research Participants

There were 18 participants in the sample for this research study. The researcher recruited them through use of purposive sampling. This sampling strategy targeted key policy-makers in Barbados and Grenada who possessed important information that could provide insights into the practices that facilitated or hindered progress toward achieving the goals of sustainable development (Given, 2008). The researcher selected the participants on the basis that they served as decision-makers in policy-making practice. Using the critical case sampling technique, the researcher intentionally selected participants who met the qualification requirements for the study and were likely to yield information that has the greatest impact on the body of knowledge that relates to policy-making practice toward sustainable development (Patton, 2010). This sampling strategy was important to gain a thicker and richer understanding of the practices in policy-making from the patterns and trends that emerged in the data analysis.

Demographic Features of Participants

Each research participant self-identified as a key policy-maker. The sample was comprised of six key policy-makers, six key policy-implementers, and six key policy-evaluators. Of the 18 participants, 16 were male and two were female. They ranged in age from 49 - 72 years old. Most had job tenure beyond 10 years. Most completed at least a bachelor's degree. For reporting purposes, and to ensure the identities of the participants were adequately protected, I assigned a number from 001-018 to each participant.

The Research Setting

The researcher conducted 10 face-to-face interviews at times and locations that were convenient to the participants and her. Face-to-face interviewing enabled the researcher to establish rapport with the participants (Wengraf, 2001). The face-to-face interviewing method allowed the researcher to capture non-verbal cues from the body language exhibited by the respondents (Wengraf, 2001). Face-to-face interviewing also enabled the researcher to elicit in-depth information from the respondents (Wengraf, 2001). It is important to point out that face-to-face interviewing presented geographical limitations to eight study participants who were unable to commute to an interview site. The researcher conducted these eight interviews asynchronously (Bampton & Christopher, 2002), seven by SKYPE and one by telephone.

Data Collection

My primary data-collection method was in-depth, semistructured interviews for which I used an interview protocol (Kvale, 2008; Gall et al., 2003) (See Appendix C). The interview protocol involved standardized questions and an interview guide developed prior to the interviews, which I used for all the interview participants. The interview protocol was important to help reduce the chances for random questions and subjectivity by the interviewer (Gall et al., 2003). The interview questions were pilot-tested by a three-member expert panel for weaknesses and inadequacies (Patton, 2002). The panel members provided recommendations for revision of the interview protocol. Following the

revisions that I made, the members of the panel approved the interview protocol before

the actual data collection commenced. I used the interview protocol and guide to engage

the key policy-makers in obtaining information about their practices in policy-making in

pursuit of the goals of sustainable development.

I followed the recommendations of the Belmont Report (2012) to inform

respondents of the description of the study and the procedures to be undertaken to ensure

protection of their rights and well-being in the research process. After the briefing and the

respondents signed a consent form, I proceeded with the interviews. Using the interview

guide (Kvale, 2008), I directed the conversations by asking clear, unambiguous questions

that pursued themes and concepts germane to the research problem and questions (Patton,

2002). The interviews proceeded as informal conversations. I listened attentively to hear

the emic perspectives of the respondents (Kvale, 2008). I allowed the respondents

sufficient time to express their perspectives fully (Kvale, 2008). I asked probing follow-

up questions to elicit explanations about specific occurrences while remaining open to

new and unexpected ideas (McNamara, 2008). I took copious notes of the verbal

responses, nonverbal cues, and physical interactions taking place (Janesick, 2010).

At the conclusion of each interview, I assigned a number from 001-018 to the tape

recording and interview notes (Patton, 2002). I reminded the respondents that I might

contact them for a follow-up interview to clarify meanings in their responses

(McNamara, 2008). Following the recommendation of Kvale (2008), I reminded the respondents that I would contact some participants to provide feedback on my preliminary interpretation of their interview statements.

Immediately following each interview, I found a quiet place alone to reflect on and intuit my perceptions and reactions on a range of matters occurring in the interviews (Gearing, 2004; Moustakas, 1994). I engaged in a sustained effort of eidetic reduction with the use of note taking (Janesick, 2010), epoche (Gearing, 2004), and bracketing (Moustakas, 1994) as the main techniques. Following the process of eidetic reduction, I conducted a preliminary analysis of the data collected from in-depth interviews. I used thematic analysis to analyze the collected data and my field notes to begin identifying patterns and categories that emerged (Braun & Clarke, 2006). Braun and Clarke noted that this inductive approach uses the actual data to derive the structure of analysis in qualitative research.

Following the preliminary analysis of in-depth interviews, I used the archival document analysis protocol (See Appendix D) to plan and collect archival documents. I conducted a preliminary survey of the documents available for review, in line with the recommendations of Roe (2005) and Gilliland & McKennish (2013). The survey addressed questions such as: what and why the author made the assumptions! Why does the text say what it does? What is my understanding of what its taking place? Can I believe the document? What does this document mean to the research questions? Are

there any unanswered questions? This preliminary survey provided a context for the

documents, allowing me to become acquainted with the material and determine which

documents held relevance to the study before data collection. The archival data that I

collected included both electronic and hard copy issues of assessment reports, statistical

data, memoranda, press releases, and government records of policy-making activities.

Data Analysis

Data analysis in qualitative research studies entails iteration between the data

collected and analysis of such data (Corbin & Strauss, 1994). This process involved

executing tasks and systematically repeating them between data collection, data analysis,

discovery, follow-up interviews, deeper analyses, comparison, verification, and making

theoretical predictions about the data. Thematic, content, and cross-case analysis were the

techniques used for conducting the analyses.

I used thematic analysis to identify, examine, and record recurrent patterns within

the cases (Braun & Clarke, 2006). I performed the analysis in a six-phase process to

create meaningful patterns. I followed the steps recommended by Smith, Flowers &

Larkin (2009) for conducting an Interpretative Phenomenological Analysis (IPA). The

data analysis process entailed listening to the tape-recorded sessions, transcribing the

data, and reading the transcripts to get a sense of the whole picture. I re-read the

transcripts and examined the text line by line to facilitate a microanalysis of the data,

while also annotating my thoughts, writing memoranda, transcribing the interview notes

into text, and sorting these items into proto-themes. I assigned color codes as identifiers

for cross-referencing. I examined the proto-themes and attempted initial definitions to

evaluate their meaning. I re-contextualized the units, using axial coding to search for

emerging patterns and categories within the cases. I moved back and forth, describing

and interpreting the meaning of the themes that began to emerge, elaborating on the

findings through note taking, and re-examining supporting data for the final construction

of each theme. When it was necessary to clarify meanings in the respondents' statements,

I conducted follow-up interviews within one week by me scheduling such appointments.

I entered the responses by key words into a Microsoft Excel file on my computer,

protected by a password (Creswell, 2007). I entered the key words by the question

number, one theme per line, to facilitate coding and analysis (Guest et al., 2012).   The

final step of the thematic analysis process was to interpret the data. I summarized the

patterns and themes that emerged within the data sets and drew a preliminary conclusion

about the findings. I contacted 10 respondents to review the analytic categories, my

preliminary interpretation of the perceptions they shared, and the conclusions I made, for

verification purposes (Lincoln & Guba, 2005). Two research assistants evaluated the

data transcripts to confirm or refute my preliminary interpretation of the data (Creswell,

2007). When the evaluation by respondents and peer reviewers confirmed similar patterns

within the data sets, I made literal replication that the cases in the semistructured

interviews were similar.

I used content analysis for the second level of data analysis (Krippendorff & Bock, 2008). Using this technique enabled me to identify behavioral patterns and general trends in the data collected from the archival documents. The content analysis was a lengthy process that involved several steps. After reading through the archival documents and notes, I transcribed, hand-coded, and analyzed the data to identify patterns and trends (Creswell, 2009). I read the list and categorized each item in a way that offered a description of what the idea in the story was about (Krippendorff & Bock, 2008). I determined which categories I could link and listed them as the major categories. Then I entered the categories into matrices in my password-protected Microsoft Excel file - one theme per line - to facilitate coding and analysis. I coded the themes into positive and negative categories based on respondents' answers to the research questions (Creswell, 2009). I created a concept map to highlight the patterns and categories, comparing and contrasting them to identify patterns and behavioral trends in the concepts (Kane & Trochim, 2007; Yin, 2003). I examined the patterns and trends in detail to consider their relevance to the research questions (Yin, 2003). After reviewing the transcribed data to ensure I correctly categorized the emerging themes, I reviewed the categories to ascertain they were a true representation of the perceptions shared by the respondents (Yin, 2003). I compared the patterns and trends identified in the data analysis for prediction purposes. Two research assistants reviewed the transcripts and checked the analyzed data, comparing it with my preliminary analysis and interpretation of the data (Lincoln &

Guba, 2005). When similar patterns and trends were confirmed within the data sets, I

established literal replication that the cases in the archival data were similar (Yin, 2003).

I used cross-case analysis for a third level of analysis (Stake, 2006). My goal in

using this procedure was to analyze further the data results from the in-depth interviews

and archival document analysis (Creswell, 2008). The process involved a thorough

examination of the categories, patterns, themes, and behavioral trends found across the

cases (Creswell, 2008). I summarized the cumulative data, drawing conclusions about the

behavioral trends and patterns that emerged (Patton, 2002). Two peer-reviewers, one

from within and the other from outside the field of policy-making, analyzed the data sets

and my interpretation of the data (Spillet, 2003). The peer reviewers also reviewed the

audit trail to assist in refining and verifying my preliminary interpretation of the analyzed

data (Patton, 2002). When the peer reviewers confirmed that 80 percent of the patterns

they found in the cross-case analysis were congruent with my initial findings, I made a

theoretical prediction (Lincoln & Guba, 2005) about why policy-makers failed to achieve

sustainability overall and how the goals of sustainable development might be pursued in

territories that are small and prone to hazards.

Presentation of the Research Findings

The data analysis yielded several analytic themes and patterns that relate to the

research questions. My intention is to present the data results to address the problem and

central question in the study. I divided the presentation into two sections, highlighting the

findings from in-depth, semistructured interviews in the first section and those from the

archival document reviews in the second section. The findings are presented as a single

interconnected chapter to highlight the themes, categories, and patterns that emerged in

the data analysis. While these themes are reported as being discreet, there was significant

overlap owing to the similar themes emerging from the responses of the respondents.

Wherever this has occurred, the data are presented where they fit best.

In-depth, Semistructured Interviews

Table 4.1 *Summary of Findings from In-depth Semistructured Interviews*

Themes	Categories	Patterns
Factors that facilitated progress	Institutional arrangements Capacity building Support mechanisms	An abundance of SD frameworks Indicators Engagement
Factors that impeded progress	Frameworks Indicators Resource capacity	Inadequate understanding of sustainability Inadequate guidance and support mechanisms Inadequate capabilities
Evaluation and assessment	Evaluation of sustainable development goals Assessment of policy-makers' learning	Scarcity of pertinent data Inadequate testing mechanisms Poorly executed evaluations
Strengthening institutional capacity	Knowledge Competency-base Attitudes	Evidence-informed data; thinking outside the box; Requisite skills/attitudes
Opportunities	A new approach	A paradigm shift

In Table 4.1, I provided a summary of the cumulative transcribed interview data. The data showed differing views on why sustainability has not been sufficiently achieved and how achieving the goals of sustainable development might be pursued in territories that are small and prone to hazards. While there was widespread acknowledgement of the need to achieve the goals of sustainable development among the respondents, there was a range of opinions and emphasis placed on different issues across policy-making practice.

The plethora of institutional frameworks was widely viewed to be an important factor to guide policy-making practice and facilitate progress toward the goals of sustainable development. This applied to a broad range of issues, from institutional reform, capacity building, economic growth and development, urban development, public financing, climate change, reversing ecosystemic degradation, combating environmental crimes, social justice, and civil rights for all people.

At the same time, policy-making practice also faces several challenges. Early in the interview process, there was a range of opinions regarding the meaning of sustainable development. Some respondents associated sustainable development with environmental stewardship, while others viewed the concept through the lens of social justice and equity. Still, others viewed the term sustainable development as being synonymous with economic growth and development. The differing perspectives arose from the unclear and contradictory meanings ascribed to the concepts of sustainable development and sustainability. A related challenge was inadequate guidance, support mechanisms and

resources for implementing the sustainable development frameworks. Overall, the transcribed data showed deficiencies and weaknesses in the institutional arrangements proposed for achieving the goals of sustainable development.

The interviews also focused on the role that evaluation plays in policy-making practice. Evaluating and assessing progress is essential to ensure the process is adequate, and the actors possess the requisite knowledge and competencies for achieving the goals of sustainable development. The transcribed data revealed both strengths and weaknesses in the practices of policy-makers toward achieving the goals of sustainable development.

One of the highlights in the transcribed data was that the effective participation of policy-makers in policy-making practice could make a difference. According to several respondents, by bringing together evidence-based data, decision-makers who think outside the box, who has the requisite skill-sets and attitudes, and can tap into hidden resources, great potential exist to strengthen institutional capacity for achieving the goals of sustainable development.

Given all of the above, it is clear that achieving the goals of sustainable development will require a new approach to policy-making practice. To achieve adequate capacity to implement effectively the sustainable development agenda, policy-makers must develop appropriate policies and practices to integrate and harmonize the activities of economic growth, environmental protection, and human development, while putting in place mechanisms to reverse ecosystems degradation, create a safe and just space for

human development, ensuring the efficient management of natural capital stock.

Table 4.2   *Factors that Facilitate Progress toward Sustainable Development*

Institutional Arrangements	Indicators	Resource Capacity
Institutional frameworks	Indices	Voluntary learning
Legislative frameworks	Monitoring	Staff training and professional development
Regulatory frameworks	Evaluation	Planning for the urban space
Policy frameworks	Measurements	Public awareness
		Stakeholder collaboration
		Support from international agencies

Table 4.2 illustrates the findings from the interview data under the heading 'factors that contribute to, or facilitate progress toward achieving the goals of sustainable development'. The respondents provided a range of perceptions about the factors they perceived as having contributed to, or facilitated progress towards sustainable development. The following were key words the respondents provided: institutional frameworks, policy frameworks, legislative frameworks, regulatory frameworks, resource capacity, indices, measurements, voluntary learning regarding concepts and principles of sustainability, training, professional development, vigilant planning approaches, public

awareness, and stakeholder collaboration. I organized these perceptions into the following three categories: institutional arrangements, indicators, and resource capacity.

Institutional Arrangements

When asked about the strategies to improve policy-making practice toward achieving the goals of sustainable development, 10 of the 18 respondents (8 in Barbados) said that governance, institutional, legislative, and regulatory frameworks play an important role in facilitating progress toward the goals of sustainable development in policy-making practice. Some respondents said that by adopting the BPOA (1994) - a 14-point plan of action -, which provides a blueprint for the sustainable development of SIDS, policy-makers were able to address specific goals, priorities, and targets with actions that were necessary to mitigate hazards, build resilience, strengthen development, and, in general, advance toward the goals of sustainable development.

Other respondents indicated that the Mauritius Strategy for Implementation of the BPOA (MSI), which served as 5 and 10 year comprehensive reviews of the BPOA, was instrumental in addressing some of the constraints that SIDS face in fulfilling the requirements of the sustainable development agenda. One respondent said that by strengthening the original 14 thematic areas of the BPOA and adding new priority areas, the MSI provided greater support for mitigating hazards, building resilience, and strengthening development, in conjunction with, the BPOA framework. Another respondent stated that the MSI is an important instrument for moving forward.

Indicators

Five respondents (four in Barbados) said that indicators play a role in facilitating progress toward the goals of sustainable development. Respondent 010 indicated that policy-makers use indicators in an effort to modernize and strengthen policy development. Respondent 017 said that indicators help to explain the broader context of results-based planning for sustainable development and establish a yardstick against which to assess and objectively report progress. Respondent 018 reported that beneficiary groups, including governments, political parties, academia, and civil society have benefited from the use of indicators in policy-making practice.

Most respondents in Grenada - 80 percent - said the use of indicators has been limited in policy-production. Respondent 002 reported that a variety of methodologies have been used to guide, monitor, measure, and report the progress of sustainable development in conjunction with the mandates of supporting agencies. Respondent 005 said that policy-makers use indicators to communicate results on the progress of sustainable development to aid recipients. He added that many reports were placed on shelves with no dissemination among policy-makers or support staff, and often, there were no follow-up actions. Another respondent indicated that while he does not having any training in the use of sustainable development indicators specifically, he does have knowledge of planning, evaluating, and reporting. He indicated further that he found sustainable development indicators to be inadequate for providing a full understanding of

the complexities in sustainable development. He stated further that he detected many contradictions and inconsistencies with some indicators proposed to guide, plan and evaluate the progress of sustainable development.

Resource Capacity

The transcribed data provided evidence of strategies that help to build resource capacity for facilitating progress toward sustainable development. When asked about their understanding of sustainability, the respondents shared a range of perceptions with environmental protection being the most frequently occurring key phrase in the data analysis. A smaller number of the respondents associated the concept of sustainability with social equity. Some emphasized improving or enhancing the quality of life for all people. The least common perception among the respondents associated with the concept of sustainability was economic growth. Despite the range of perceptions, there was recognition of a need to adopt sustainability thinking into policy-making practice to help quicken the pace of achieving the goals of sustainable development in territories that are small and prone to hazards.

When asked about how policy-makers' understanding of the concept of sustainable development has affected its progress, the transcribed data showed both positive and negative results. On one hand, there was clearly an understanding of the aims of sustainability among the respondents. On the other hand, patterns in the data analysis seemed to suggest that policy-makers' understanding of sustainable development

has not necessarily resulted in clarity on how to embed sustainability-thinking into policy decisions to successfully integrate the activities of the economy, environment, and humans. It became apparent in the data analysis that there are different treatments of, and approaches to the pursuit of sustainable development.

Respondents reported that policy-makers use training, skills-building, public awareness, and stakeholder collaboration to enhance policy-making practice in support of sustainable development. According to respondents, such mechanisms require different levels of support and engagement. Some respondents reported having received training to deepen understanding of sustainability and build competencies for pursuing the goals of sustainable development. Respondent 002 reported that policy-makers in Grenada have gotten an enormous amount of technical and financial support from various agencies [both local and international] in pursuing the goals of sustainable development. They include funds and training workshops, policy frameworks, interventions, assessments, strengthening stakeholder collaboration, and building awareness. Another respondent, 004, acknowledged he gained skills for conducting performance-based evaluation at a training conference in Brazil. He indicated further that he has participated in workshops and roundtable discussions aimed at developing a framework for guiding policy-making practice towards climate change and related issues. Respondent 008 stated that his understanding of the use of indicators deepened after attending training workshops with regional partners. Another respondent, 014, stated that Barbados has benefited from its

participation in the UN Testing Program on Sustainable Development Indicators. This has enabled the island to develop and strengthen its national indicators program. Other respondents spoke of receiving technical and financial support. A common idea among the respondents in Grenada was that collaborative partnerships were instrumental in the response and recovery efforts following the passage of Hurricanes Ivan and Emily.

I asked the respondents about strategies that help to deepen understanding of sustainability in policy-making practice. Three key ideas emerged in the data analysis. They are as follows: round table discussions, training (where teaching and learning occur), and literature reviews (where policy-makers engage in voluntary learning activities). Several respondents in Barbados acknowledged they gained deeper insights regarding sustainability from roundtable conversations with stakeholders who have an interest in sustainable development. Only a few respondents in Grenada acknowledged the same. Forty percent of the respondents in Barbados and 40 percent in Grenada said that training through workshops, conferences, and seminars provide opportunities to learn and deepen understanding of issues regarding sustainability. Fewer respondents indicated that they participated in voluntary learning. There was consensus among these respondents that they gained significant insights from reviewing literature. The respondents further noted that literature reviews could play an important role in deepening understanding of sustainability.

Concerning incentives for producing tangible outputs toward sustainable development, 80 percent of the respondents reported there are currently no incentives for improvement in policy-making practice from the government.

With regard to what motivates policy-makers to use innovative strategies in policymaking practice toward achieving the goals of sustainable development, respondents shared the following perceptions:

New interventions

Creating news headlines to raise public awareness

The realization that there is really no alternative to sustainable development

Recognition and awards

Concerning what is changing in policy-making practice toward achieving the goals of sustainable development, the responses were mixed. Respondent 006 shared that his territory has made strides in the effort to mitigate environmental hazards, but there are lots more work needed to make meaningful headway. Respondent 010 indicated there are many programs that promote and encourage improvement in health and wellness. Respondent 011 reported that product diversification and revitalization of projects help to enhance the quality of tourism. Respondent 015 said the building of a green economy is an important step toward achieving the goals of sustainable development. For respondent 009, despite the increasing discourses and awareness of sustainability, along with a several mandates, protocols, frameworks, and indicators, the performance outcomes have

pretty much remained the same. Likewise, respondent 012 reported that the economic system remains the dominant development system despite the discourses on sustainable development.

Concerning the support that benefits policy-making practice most toward achieving the goals of sustainable development, institutional frameworks and capacity building occurred most frequently in the data analysis. Two respondents said that important learning takes place from the lessons learned and insights that stakeholders share. Some respondents reported they gained significant insights from round table discussions, workshops, conferences, and voluntary reviews of relevant literature. Others reported there was greater enthusiasm for solving the complexities in their territory with insights gained.

The following statements illustrate the perspectives of respondents:

Respondent 003 indicated after attending a conference on sustainable development for SIDS, I recognized that we have to think more about how the effects of development on the natural environment in the long term, and how people feel when they feel marginalized and so forth. Respondent 010 stated that after completing a voluntary course on sustainability online, he changed course in his thinking about sustainable development. He said he became more aware of the severe effects of exponential growth and consumption on the Earth. One respondent said it is frightening to hear that the Earth could collapse because of careless development. Another respondent said that policy-

making practice needs a new paradigm to help bring about real and lasting change in terms of achieving sustainability for current and future generations.

With respect to how the strategies employed for attaining the goals of sustainable development have been working, the responses were mixed. Respondent 001 said that policy frameworks play a central role in guiding policy-makers in the decision-making process. Respondent 002 said that while policy frameworks call for approaches to integrate development activities toward the goals of sustainable development, several gaps in policy-making practice make it difficult to implement the recommendations. Respondent 004 indicated that institutional, legislative, and regulatory frameworks have not provided sufficient support to turn the desired outcomes into reality. Several respondents pointed out that the indicators of sustainable development have several limitations; hence, it is difficult to plan, measure, and evaluate the progress toward sustainability. Respondent 009 said legal and institutional frameworks are of paramount importance to the realization of the sustainable development goals. Respondent 010 said, in terms of support for capacity building, the recommendations made by international agencies often lack adequate, coherent, consistent, and coordinated support mechanisms. Respondent 015 said that attempts to embed sustainability into policy-making practice have fallen short. Respondent 018 stated that the policy-making process require a more coherent approach for linking institutional frameworks with the resources and infrastructure needed to more effectively facilitate progress toward sustainability.

In the analysis of data under the heading, 'factors that facilitated progress toward achieving the goals of sustainable development', the data revealed that policy-makers have taken several measures that helped facilitate progress in attaining the goals of sustainable development. As reported by respondents, I organized the measures taken by policy-makers into three categories, namely institutional frameworks, indicators, and resource capacity. They include policy instruments, training and learning initiatives and other support mechanisms, through training workshops, vigilant planning approaches and stakeholder engagements. According to some respondents, policy-makers gained significant insights, with some progress made due to these strategies. Despite these efforts, the transcribed data depicted knowledge, institutional, and resource capacity gaps in the measures undertaken for achieving sustainable development in the SIDS under study. A key idea that emerged in the data analysis was that the institutional arrangements lack specific focus and guidance on sustainable planning and development for territories that are small and prone to hazards. This gap led to significant deficiencies and weaknesses in policy-making practice.

In the second section of the data analysis, I sought to identify the 'factors that policy makers perceived as having impeded progress' toward sustainable development. I asked the respondents a variety of questions regarding the major challenges that policy-makers face in pursuing the goals of sustainable development. The transcribed data uncovered several deficiencies and weaknesses in policy-making practice. I organized the

perceptions of the respondents into the following three categories: inadequate

frameworks for sustainable development, resource and capacity weaknesses, and

interference from foreign actors (see Table 4.3 for illustration).

Table 4.3   *Factors that Impede Progress toward Sustainable Development*

Inadequate Frameworks	Capacity Weaknesses	Interference from Foreign Actors
Inadequate guidance for implementing policies	Inadequate relevant knowledge	Competition for market share from foreign actors
Inadequate physical planning framework	Lack of access to pertinent data	Displacement of local businesses
Archaic zoning ordinances	Inconsistent and contradictory indicators	Influence on local policy-making practice
Inadequate hazard mitigation		Foreign aid
Inadequate land use	Lack of Evaluation	Influencing local elections
Haphazard development	Inadequate stakeholder collaboration	Overt interventions
Inadequate regulatory frameworks for environmental protection		Lack of transparency
Lack of transparency and accountability	Inadequate resource capacity	Unwelcomed penetration

Inadequate Frameworks for Sustainable Development

I asked the respondents about the challenges and barriers policy-makers face in pursuing the goals of sustainable development. Patterns in the data analysis revealed that the highly publicized documents, which formed the basis for the sustainable development of SIDS - the BPOA, Mauritius Strategy for Implementation (MSI) and Agenda 21 - possess several deficiencies and weaknesses. A significant number of respondents - 60 percent in Barbados and 70 percent in Grenada - reported that sizeable gaps exist between the institutional frameworks for sustainable development and the activities undertaken to implement its goals. These gaps were characterized as inadequate frameworks, inadequate guidance and know- how for the effective implementation of policies, inadequate planning, inadequate zoning ordinances, inadequate land use policies, haphazard development, and expedient planning approaches. Respondents shared the following perceptions:

Respondent 001 said that while policy frameworks are available for advancing the goals of sustainable development, many are inadequate for policy implementation. Respondent 003 stated that legislation to integrate and harmonize the differing goals in sustainable development is inadequate and hampers the progress. Respondent 005 indicated the lack of clarity of administrative jurisdiction hinders progress toward sustainable development. Respondent 007 said that inefficient regulatory frameworks for implementing policy initiatives, especially in the environmental dimension affect the

progress toward sustainable development. Respondent 008 said that inadequate guidance for quantifying and understanding the safe operating space for sustainable development are factors that hinder progress toward sustainable development. Another respondent reported that inadequate guidance for sustainable planning and development of urban spaces and limited institutional capacity are deficiencies that lead to slow progress in policy-making practice toward sustainable development. Respondent 014 stated the lack of understanding of how to integrate the activities of growth, equity, and environmental protection means failure in moving ahead. Several respondents pointed out that the failure of institutional frameworks to guide the process for successfully developing and implementing policies to address the goals of sustainable development reveals a significant challenge in attaining sustainability.

I asked a probing question to gain a better understanding of how policy-makers viewed the perceived barriers to attainment of the goals of sustainable development. The most common views that emerged in the transcribed data were as follows:

Several respondents reported that policy-makers usually possess a positive attitude to their practice; however, many are unhappy with the institutional barriers that obstruct the smooth development and implementation of policies toward sustainable development. One respondent said the barriers in policy-making practice serves as a hindrance to moving the sustainable development ahead. Some respondents reported not having authority to change the practices and procedures in policy-making practice.

Others stated they do not have sufficient time on the job to implement new ideas. With a sarcastic tone, one respondent asked if it is possible to rock the boat without falling out of it. When I probed further what he meant by this statement, he responded that he has a family, and providing for them is his primary concern at this time.

Resource and Capacity Weaknesses

Concerning the respondents' perceptions of the resource capacity available in policy- making practice for facilitating progress toward the goals of sustainable development, the transcribed data depicted significant knowledge gaps. The following key phrases illustrate this gap in knowledge:

Inadequate know how for executing integrated development

Lack of access to important data to inform policy decisions

Inadequate knowledge and understanding of the safe operating space for sustainable development

Lack of knowledge regarding environmental hazards and issues related to climate change

Inadequate human, fiscal and technical capacity

Weak governance structures in some instances, and inadequate fiscal, human, technical, and material capacity

Inadequate knowledge of sustainable planning and the mitigation of environmental hazards.

Several respondents described an approach to planning and development where decisions are made to meet the demands of expediency. Respondent 001 noted that since the transition from colonial rule to self-governance, much of the development has taken place in Grenada's capital city - St. George - the primary administrative and commercial center. The respondent stated that inequality and bias in urban development over the past 40 years has resulted in mass migration by rural dwellers to the city, as well as mass emigration to developed nations, neglect, and the abandonment of lands that are well suited for agricultural development and other productive uses. Another respondent pointed out that development for tourism purposes, [hotel development] in particular, continue to take place in the capital city, despite warnings that such activities threaten harm to the natural environment and the livelihoods of local residents. Respondent 005 stated that development objectives are often incongruent with the sustainable development objectives, focusing more on strategies for economic growth. Respondent 006 said that many developments do not reflect the community context or the goals of sustainable development... development outcomes have included land degradation, biodiversity loss, and displacement of struggling local peoples. Respondent 007 indicated there are discussions on sustainable development while there exist vast amounts of land abundant with trees with no use... food insecurity while lands, well suited for agricultural development, remain abandoned or converted into tourism uses without a plan for integrated development. Respondent 007 said that policy-makers are under immense

pressure to address development issues and often propose solutions that produce short-term benefits with negative long-term effects. Respondent 008 reported policy-makers fail to address some important issues in community health in national planning, such as the elevated cancer rates. He also noted that land use plans to effectively prevent the possible occurrence of chaotic and unsustainable development of communities are unavailable. Respondent 008 noted further that development takes place in an ad hoc, haphazard manner, with the government ignoring recommendations for best practices. Respondent 010 said that high-density sprawling developments with urban congestion are significant contributors to urban environmental problems. Respondent 012 stated that his territory has limited natural resources and a high population density... relentless development may be increasing the load pressure on already limited resources. Respondent 014 stated that Barbadians generally view highly urbanized areas as places of modernity and sophistication, but this also leads to high consumerism... As the population increases, the demand for land drastically increases as well. Respondent 015 said that Green spaces have significantly decreased over the past 10 years as the clearing of trees make way to provide space for tourism development and commercial housing. Respondent 016 reported that in places where development occurs, there is a serious situation of environmental degradation that can affect the health and well-being of urban dwellers in the long term. Respondent 017 said as Barbados' economic standing improves, so should its environmental responsibility, but heavy development, rapid

urbanization, and lack of available land are among the contributors to environmental problems in urban areas... nonetheless, a bit of good news is that the nation is moving towards the building of a green economy.

I asked respondents about their knowledge of available tools for quantifying and understanding the safe space operating for development. Two respondents demonstrated having a conceptual understanding of ecological footprint analysis - an instrument for measuring human consumption of natural resources in comparison to Earth's ecological capacity to regenerate them. The remaining 16 respondents had no knowledge of its use. Without concrete information regarding the carrying capacity of SIDS, policy-makers may not be able to adequately quantity the safe operating space for development or effectively plan, manage, and contribute to the efforts toward sustainable development. Seventy percent of the respondents said that they were acquainted with incentive zoning programs - a regulatory framework for encouraging and stimulating development by offering developers regulatory allowances in exchange for public benefits. Seventy percent of the respondents acknowledged that indicators could help to improve decision-making for sustainable physical planning but only 30 percent of the respondents said that policy makers use indicators in deliberations about sustainability planning and development. Environmental hazards were of special concern to several respondents.

When asked about their knowledge of Hazard-Vulnerability-Risk-Analysis - a tool for indentifying hazards and their potential impacts, 70 percent of the respondents

admittedly heard of the tool, but 40 percent were not knowledgeable of its use as a planning tool.

Despite having a plethora of indicators to capture and provide a fuller picture of sustainable development, respondents pointed to several limitations in the indicators for measuring and understanding the progress of sustainable development. Some respondents claimed that they have relied on single indicators covering the environmental, social, and economic dimensions of sustainable development separately. The data revealed that measuring and understanding natural and human capital is often constrained by interpretations through economic and scientific lens. On the other hand, some respondents claimed that they have instead used a unified framework to gain a better understanding of the progress of sustainable development. The transcribed data revealed that that aggregation of all capital types into a single indicator means that all of the interactions within the development systems may not be adequately captures. Therefore, whether they have used single or aggregated indices to gain a better understanding of the progress of sustainable development, the indicators have often produced inadequate results, providing inconsistent and contradictory conclusions in many cases. The transcribed data further revealed that ecological footprint analysis lacked measures of equity, ignored informal economic activities, which are common in the economic structure of SIDS, and often produced no policy prescriptions. Other respondents acknowledged that pertinent data were often not readily available or accessible for

monitoring or measuring sustainable development progress. One respondent noted that when policy-frameworks are changed, indicators also must also change. According to respondent, these deficiencies limit policy-makers' ability to effectively plan, measure, monitor, and report the progress of sustainable development. There was consensus among respondents that despite the surge of interest in indicators, they may not provide the clarity necessary for adequately understanding the progress of sustainable development.

When asked about their perceptions and experiences with stakeholder participation, the responses were mixed. An overwhelming majority of the respondents - 80 percent - said stakeholder participation is important for implementing sustainable development initiatives. For example, respondent 015 stated that stakeholder participation is important for compliance, in terms of basic human rights... also as a way of helping to make projects better. On the other hand, several respondents claimed that stakeholder participation has many pitfalls. One respondent identified gaps in stakeholders' knowledge and understanding of sustainability. Other respondents spoke of special interests, including foreign influence, lack of a unified approach to the pursuit of sustainable development, lack of benchmarks, differing institutional goals and approaches that hinder progress toward sustainable development.

One hundred percent of the respondents acknowledged that policy-makers often lack access to important data to inform policy decisions on sustainable development. For example, the data depicted a lack of pertinent data to better understand the unique

characteristics and features of SIDS and effectively quantify the safe operating space for human development in territories that are small and prone to environmental and anthropogenic hazards. One respondent said that physical planning and development takes place in an ad hoc and haphazard manner, but in the absence of policy-makers with knowledge and expertise or access to relevant data, this approach will continue. Other respondents reported problems with technology gaps, lack of trained personnel, incompatible data, lack of standardization for collecting data, and lack of current data.

A key idea that emerged in the data analysis was that capacity building should be a long-term, intergenerational dialogue. One respondent stated that having long-term, intergenerational dialog could help to ensure that current and future generations possess the required knowledge base and competencies for achieving the goals of sustainable development. He added that such dialogue could provide support mechanisms for achieving the goals of sustainable development in SIDS.

In addition to knowledge gaps and access to data, the data depicted fiscal gaps, inadequate technical and material resources, and inadequate human capacity dedicated to the sustained implementation of policies that support the goals of sustainable development. The data further revealed that the support mechanisms to help build resource capacity to help quicken the pace toward to the goals of sustainable development tend to lack adequate, coherent, and consistent coordination.

Interference from Foreign Actors

Respondents highlighted interference from foreign actors as a significant barrier to achieving long-term sustainability. Respondents indicated that Caribbean islands have been vulnerable to foreign interference activities since the settlement of European colonists during the 1600s. According to some respondents, the imperial powers were interested in their own development pursuits and imposed structures based on hierarchical assumptions, which promoted inequality and racial prejudice. Thus, their exploits failed to consider the traditional beliefs, values, culture, aspirations or interests of their subjects. One respondent stated that such disregard for the needs of indigenous people have hindered the prospects for attaining sustainable economic growth and development in the early independence period. Another respondent stated that the Caribbean Basin serves as an important source of minerals to the United States. He noted further that the U.S. government developed strong interest in controlling maritime choke points during the early 1980s and provided considerable amounts of aid and assistance to various islands. According to this respondent, being a recipient of foreign aid makes the Caribbean islands susceptible to foreign interference.

Several respondents pointed to new bilateral donors emerging in the Caribbean, for example, The People's Republic of China, Taiwan, and Venezuela, which makes the islands more susceptible to interference from foreign actors. Respondents reported that foreign actors often extend offers of aid and assistance while bribing local politicians,

using the promise of aid to influence local policy decisions and win market share, often

competing with, and displacing local businesses. Some respondents perceived of these

vulnerabilities as emblematic of the intention of foreign actors to secure their expanding

economic interests in the Caribbean region. Others viewed them as structural weaknesses

in governance and the local economic structures. Some respondents indicated that

interference by foreign actors significantly hampers the progress of small developing

nations toward attainment of the sustainable development agenda. According to the

respondents, SIDS must address this emerging challenge and potential proclivity,

especially as they seek to build resilience and attain long-term sustainability.

When asked how the strategies employed to pursue the goals of sustainable

development have been working, the responses were mixed. Most respondents had a

positive view. Seventy percent said that the strategies have contributed to the progress,

albeit limited, in some instances. Sixty percent of the respondents acknowledged there are

significant gaps between the vision for achieving sustainable development and the policy

actions undertaken toward its achievement. One respondent stated that until now, policy-

makers are unclear about the safe operating space for the development of territories with

limited resources and vulnerability to environmental and global threats.

When asked about the main barriers to addressing the challenges and constraints

SIDS face in achieving the goals of sustainable development, the most common

responses of respondents are presented in the following interview quotes:

Lack of will among policy-makers

Lack of relevant knowledge and skill-sets

Competing interests

Lack of cultural incompetence

Inadequate resource capabilities

Inadequate funding

As the final take away from the data analysis regarding the factors that hinder

progress toward sustainable development, one respondent stated that it is obvious that we

are not achieving the goals of sustainable development quickly enough... perhaps we

cannot rely on our current ideas to bring these goals to fruition. Another respondent said

policy-making practice needs a reset to move the sustainable development agenda

forward.

In this analysis of data under the heading, 'factors that impede progress toward

attainment of the goals of sustainable development', the data revealed that despite a

decade of efforts to integrate the activities of economic growth, ecology, and human

development, several weaknesses, and deficiencies persist in developing and

implementing policies that support the goals of sustainable development. The transcribed

data highlighted failures in the institutional instruments to guide policy-making practice,

in the available resource capacity, and in the support mechanisms that policy-makers rely on for support to achieve the goals of sustainable development. One respondent suggested that achieving the goals of sustainable development demands effectiveness and efficiency in policy-making practice, and are predicated upon credible institutions, political and economic stability, and conscious actions by all the stakeholders involved. He pointed out that there are several impediments to effective and efficient policy-making in the Caribbean.

Table 4.4   *Evaluation and Assessment of Progress*

Evaluation of sustainable development goals	Assessment of policy- makers' learning
Paradoxes	No formal evaluation of policies
Inadequate methical frameworks	Occasional focus group
	Survey or questionnaire
Indicators poorly executed	Evaluations not built into the policy framework
Data scarcity	Evaluations are poorly executed
	Haphazard
Time constraints	
Censorship	

In the third section of the interview questionnaire, I sought to gain a deeper understanding of how evaluating and assessing the progress of sustainability-oriented policies takes place in Barbados and Grenada. Table 4.4 illustrates my organization of the data produced in this analysis into the following two categories: evaluation of the goals of sustainable development and assessment of policy-makers' learning.

Evaluation of Sustainable Development Goals

I asked the respondents about how policy-makers evaluate the goals and targets toward sustainable development. The transcribed data showed a trend towards an increased use of instruments to monitor and track sustainable development progress as reflected in the proliferation of performance and indicator reports. These instruments ranged from indicators to case studies, survey, in-depth interview questionnaires, and archival document reviews, which focus on a particular population group or sector of activity through an overarching view of environmental, economic, and social progress.

I asked the respondents about their experience with evaluating the sustainable development goals and targets. Most respondents - 90 percent - acknowledged that policy evaluations are important mechanisms for understanding and communicating the progress of interventions. Two respondents said that policy evaluations are important for ensuring transparency in governance. Most respondents indicated that evaluating sustainability-oriented policies is a complex undertaking that involves many approaches, dimensions and interpretations. Some respondents pointed to paradoxes in evaluating the progress

toward sustainable development. Respondent 001 stated that despite the impressive

strides to take stock of the progress made, quite often, formal methods tend to be difficult

to undertake due to the unavailability of pertinent data. Respondent 003 said that the

current methodological frameworks and evaluating mechanisms are inadequate for

addressing dynamics that are unique to small, vulnerable territories. He noted further that

poorly executed evaluations and inadequate communications about assessments are also

problematic. Several respondents pointed out that many evaluations are inadequately

executed, or performed to meet the needs of expediency. Some respondents emphasized

that data scarcity is in fact a significant constraint in obtaining a clear picture of the state

of sustainable development in SIDS. One respondent said that there are fears among

policy-makers that negative reports could threaten their interests. Another respondent

said that using single indicators provide only a cursory view of policy outcomes, failing

to capture the range of effects policies produce. Another respondent pointed to

difficulties in making causal links between policies and outcomes. One respondent

pointed out that evaluating policies using formal methods take up too much time and

resources while others indicated that informal evaluation methods perforated with biases

quite often. The transcribed data further revealed that sustainable development policies

are difficult to evaluate when they aim to accomplish broad conceptual goals and possess

multiple or competing objectives. Respondents also noted that many evaluations tend to

count data that can most easily be captured; but fail to provide meaningful results of the progress of the sustainability-oriented outcomes.

With respect to who evaluates policies relating to the goals and targets for sustainable development, the transcribed data revealed that key policy-evaluators and key stakeholders conduct some evaluations from local and national governments. In most instances, donor institutions facilitate the monitoring and evaluation of sustainable development goals and targets through funding and support mechanisms. Respondents pointed out that the evaluators use the goals and targets set forth in the BPOA, MSI, Agenda 21 and MDG for the sustainable development of SIDS as the basis for local evaluations and assessments. Following these evaluations, the evaluating agency circulates the final report to a broad spectrum of agencies, organizations, institutions, individuals and other interested stakeholders, which highlights the goals and targets that have been met, the continued challenges that SIDS face in pursuing sustainable development and the critical areas that require greater focus. One respondent pointed out that even when the government commissions local evaluations, often, they are poorly executed, censored, or simply ignored.

Assessments of Policy-Makers' Learning

I asked the respondents about how they assess whether policy-makers grasp the understanding of how to integrate sustainability principles in policy-making practice. Several respondents reported there are no formal evaluation mechanisms for

understanding sustainability learning in policy-making practice. However, some respondents said that engagement through focus group discussions provides an idea of people's understanding of sustainability concepts.

Concerning what kinds of assessment most accurately capture what policy-makers have learned, most respondents said they were unsure. Several respondents said that surveys or questionnaires could be useful for assessing learning. One respondent said that focus groups could be a good way to gain a better understanding of what and how learning takes place.

With respect to how the assessment of learning is used to improve policy-making practice, the transcribed data revealed that while mandates from donor agencies place great emphasis on learning and accountability, evaluations are not built into the policy design, in general.

Concerning how policy-makers put new ways of doing things into practice, the perspectives that respondents shared were as follows:

Top-down, ad hoc, and haphazard approaches

Often, policy-makers are pressured into making decisions

Through critical debate and consensus

Commissions inform and guide policy-making practice

When asked to what extent policy-makers value evaluation, the responses were mixed. Thirty percent of the respondents in Barbados claimed there is a lack of interest in

evaluations while 80 percent of respondents in Grenada said the same. On the other hand, while most respondents agreed that evaluations are useful to provide clarity about the progress of policy interventions, some felt that due to many limiting factors, evaluations might not provide a true picture of the situation.

A key theme to emerge in the data analysis under the heading 'evaluation and assessment' was that low priority was given to evaluation and assessment in policy-making practice given the peculiar challenges that SIDS face in their developmental pursuits. The transcribed data showed that some emphasis has been placed on understanding the progress of sustainable development but little emphasis has been placed on assessing the learning of policy-makers for implementing such goals. There appeared to be emphasis on improving the knowledge and skills of policy-makers, but very low priority was given to understanding whether or how the learning taken place. These findings show a lack of commitment to evaluating sustainable development objectives.

The fourth section of the semistructured interviews addressed 'how enhancing the knowledge, skills and the attitudes required for positive action toward achieving the goals of sustainable development can be pursued in territories that are small and vulnerable to hazards'. Some of the key words and phrases the respondents shared for enhancing the knowledge were as follows: gaining a deeper understanding of the unique characteristics and features of the territories, gaining a clearer understanding of hazards, their potential

risks, and how to mitigate them and build resilience, and gaining a richer understanding

of how to operationalize sustainable development. There were also several ideas in the

data analysis for strengthening competencies and the attitudes needed to move policy-

making toward the goals of sustainable development. In Table 4.5, I illustrate how I

organized the respondents' perceptions into the following three categories: strengthening

the knowledge base, strengthening the competency-base, and attitudinal changes.

Table 4.5 *Enhancing Knowledge, Skills and Attitudes*

Strengthening Knowledge	Strengthening Competencies	Attitudinal Changes
Deeper understanding of the unique characteristics and features of the territories is necessary for developing and implementing sustainability-oriented policies	Skills-building Source learning tools Learn tolls for urban planning, hazard mitigation, and operationalizing sustainability	Openness Willingness to learn, grow and develop See the bigger picture Perseverance Persistence
Clearer understanding of hazards and how to mitigate them Richer understanding of sustainability and how to operationalize sustainable development	Learn research and disseminations skills Learn planning, monitoring, and evaluating process	Being passionate for the cause Thinking outside the box Can-do attitude Receptiveness

Strengthening the Knowledge-base

I asked the respondents about the kinds of knowledge needed to successfully

design and implement sustainability-oriented policies in territories that are small and

prone to hazards. An overwhelming majority of respondents said that a deeper and richer

understanding of sustainability concepts is necessary to make further progress toward the

attainment of sustainable development. Others pointed out that having adequate

institutional, policy and regulatory frameworks is important to move ahead. Several

respondents said that having a deeper understanding of the unique characteristics and

features of the territories, as well as a better understanding of hazards, their potential

risks, and mitigating the hazards is necessary to help policy-makers gain a better grasp of

where to develop and what to preserve or mitigate to development more relevant

sustainability-oriented policies. Some respondents said that having a richer understanding

of sustainability and deeper knowledge of operationalzing the concept in practice.

Strengthening the Competency-base

When asked about the skills that could increase policy-makers' capacity to

successfully implement sustainability-oriented policies, all the respondents acknowledged

the importance of skill-building and strengthening as a strategy for enhancing the human

and institutional capacities in policy-making practice for advancing the goals of

sustainable development. Respondents discussed the need to overcome narrow

approaches to problem solving and identified new approaches. Respondent 006 said there

is a need for policy-makers to better understand and make use of available tools for urban planning, hazard mitigation, and understanding sustainable development. Respondent 009 stated that policy-makers should master the skills for quantifying the safe space for development, identifying hazards with the aim of gaining a better understanding of the nature of the territories and building resilience. Respondent 012 indicated that policy-makers should develop skills for effective research, evaluation, and dissemination, and cultivate a deeper appreciation for learning in policy-making culture... critical and creative thinking. Respondent 014 said the lack of formal education programs to enhance policy-makers' and the publics' awareness of sustainability is hindering progress toward sustainability... governments should establish a training program for policy-makers.

Attitudinal Change

Concerning the kinds of attitudes required to enhance policy-making practice toward achieving the goals of sustainable development, innovation was the key word most frequently observed in the data analysis. Its wide use suggests that having an innovative attitude could help to create viable solutions for addressing the peculiar challenges facing SIDS in the Anglophone Caribbean. The other ideas of the respondents illustrated in the following key words and phrases:

Openness

Willingness to learn, grow and develop.

Seeing the bigger picture

Thinking outside the box

Being passionate for the cause

Perseverance

Persistence

Being receptive to new ideas

In this analysis, there was broad agreement among the respondents that achieving

sustainability in hazard-prone territories requires the use of relevant knowledge, adequate

competencies, and appropriate attitudes.

Table 4.6   *Opportunities for Pursuing the Goals of Sustainable Development*

Institutional	Resource Capacity Development	Professional Development
Develop policy guidelines	Reenergize stakeholder collaboration	Create an online database to facilitate learning, enhance knowledge, and embed sustainability-thinking
Strengthen institutional , policy, and regulatory frameworks	Improve communications	Seminars and workshop to help embed sustainability-thinking in policy-making practice
Develop adequate indicators	Invest in research and development	Refresh mindsets
Change the culture in policy-making practice	Move policy-making practice from ad hoc and expedient approaches	Develop a reward/recognition system
Evidence-based practice		Develop relevant skill-sets

The fifth part of the semistructured interview questionnaire focused on 'opportunities' policy-makers should consider for advancing sustainability-oriented policies toward achieving the goals of sustainable development. The transcribed data suggested that a new approach is necessary to successfully develop and implement sustainability-oriented policies and make the United Nation's vision of sustainable development for SIDS a reality. Table 4.6 shows my organization of the analyzed data into the following three categories: institutional, resource capacity development and professional development.

It was apparent from the data analysis that policy-makers wish to see the vision for the sustainable development of SIDS brought to fruition. There was recognition also of the significant role that stakeholders from within and outside of policymaking practice can play in narrowing the knowledge and competency gaps toward achieving the goals of sustainable development. There was further recognition of the importance of evidence-based data to enhance policymaking practice toward the sustainable development agenda. Further, there was recognition of the importance of re-energizing stakeholder collaboration, refreshing mindsets, improving the communications, investing in research and development, and changing the culture in policy-making practice.

With respect to the role of stakeholders in achieving sustainability, several respondents said that stakeholder forums could serve as a hub for engaging civil society advocates, including businesses, trade unions, academics, professionals, and other

individuals to analyze the balance between the economic, environmental, and social dimensions of sustainability. Respondents from both Barbados and Grenada said that stakeholder analyses have informed and, at times, influenced policy-making practice. However, the transcribed data revealed patterns of ad hoc practices in policy-making, often mired in the demands for political expediency and symbolism. One respondent criticized the ad hoc approach, saying, it does not adequately engage all the stakeholders. Respondent 010 said that more meaningful stakeholder collaboration could help quicken the pace of progress toward the sustainable development agenda.

Concerning the role of businesses toward achieving sustainability, some respondents acknowledged that the relationship between the business and policy-making worlds is often contentious. However, the transcribed data revealed that businesses often engage in on-going dialog about climate change with oil, gas, and electric companies, seeking support for a low-carbon economy and/or business models that facilitate long-term sustainability. The transcribed data further revealed that some business owners promote financial and environmental stewardship by providing incentives to employees to align individual behaviors with sustainability-oriented goals. Further, the transcribed data showed that some business owners frequently reach out to policy-makers to discuss how they can work together to establish policies that support the goals of sustainable development.

Concerning the role of science in policy-making practice toward the attainment of

sustainable development, respondents from both islands said there are no specific guidelines or regulations for science; yet, science is highly regarded in policy-decisions. However, the process is not always smooth. Like policy-making practice and the world of business, science is a competitive, intellectual battle where practitioners differ in terms of the value they place on evidence. Some respondents indicated that prolonged debate often leads to progress. Some indicated that science has influenced policy-decisions on issues such as climate change, waste management, urban development and building approaches, health care, management of chemicals, vaccinations, and hazard management. On the other hand, several respondents reported that policy-makers have used as-of-yet unproven data at times for specific policy advantages.

When asked who may be missing from the discussion, respondents were quick to point out that policy-making practice can greatly benefit from stakeholders with expertise in the following areas: indigenous knowledge; agriculture, agro-processing, architecture, urban planning, heritage preservation, more of science and technology, business and religion.

With respect to the role of research in contributing to attainment of the goals of sustainable development, there was recognition that researchers have an important role to play as "knowledge-brokers", "scientists", "process facilitators", and "change agents" in narrowing the knowledge gap. However, the transcribed data revealed that research evidence is not widely used in policy-making practice.

In probing possible reasons for this situation, one respondent said that research often fails to produce clear outcomes. Another respondent stated that research is time consuming. Some respondents said that researchers often do not go far enough to identify policy implications. One respondent pointed out that more evidence-informed data are need to enhance policy-makers' knowledge of sustainability and develop the requisite skills to advance the goals of sustainable development. Another respondent reported that policy-makers tend to distrust researchers. Still another respondent said that data are not always readily available.

Regarding the kind of policy/action policy-makers envision, one respondent stated that she wished to see policy-making practice move from ad hoc and expedient approaches, and other approaches that lack theoretical grounding and consistent frameworks to evidence-based and systematic approaches.

Concerning where policy-makers would like to see policy-making in the next 10 years, a common theme that emerged in the data analysis was, a new approach is required to make the vision of sustainability a reality in territories that are small and prone to hazards.

In analyzing how policy-making practices are improving toward the attainment of sustainable development, the transcribed data showed progress in a number of policy-making attributes. Respondents reported progress in the development of new indicators. For instance, there was renewed interest in new institutional structures with emphasis on

sustainable development. One respondent pointed to efforts in policy-making practice toward integrated development planning. Another respondent pointed to an effort to increase dialog and collaboration among stakeholders regarding hazard mitigation planning and management. Some respondents spoke of efforts to improve communications within and across the sectors of government and various publics. In Barbados, a Human Resource Development strategy emerged to strengthen capacity for achieving the goals of sustainable development. In Grenada, stakeholder engagement is gaining traction and efforts are made to enhance development planning through a new initiative named Project Grenada. Finally, the transcript revealed increasing discussions among policy-makers regarding making better use of available instruments and support mechanisms to help enhance policy-making practice.

I asked the respondents about the characteristics they associate with policy makers who are interested in innovative policy-making strategies. The most common key words and phrases in the transcribed data were as follows:

Visionary

Thinking outside the box

Risk-taker

Community builder

Receptivity to new ideas

Enthusiastic

A reflective thinker of how to bring about change

Concerning the opportunities that are emerging to improve learning toward sustainability, respondent 006 said the notion that policy-makers may hold the key for achieving sustainability might be true after all. He said that development initiatives should aim at changing the culture in policy-making practice. Respondents 015 stated it is important to reenergize collaborations, refresh mindsets, and develop a rewards and recognition system. Respondents 012 said it is important to create an online database with emphasis on providing a better understanding of the unique characteristics and features of SIDS, hazards threats in the region, mitigating them.

When asked what motivates policy-makers to participate in programs to improve policy-making practice, the most common responses were as follows:

Opportunity to learn and grow

Enhancing knowledge

Rewards and incentives

Wanting to please

Making the news headlines

Archival Documents Analysis

I conducted a comprehensive analysis of archival documents between September 10 and October 30, 2015. This analysis utilized a systems approach to identify the factors that facilitated or hindered progress toward attaining the goals of sustainable

development. I scrutinized national assessment reports, statistical reports, memoranda, policy-making instructions, press releases, newspaper publications, and publications by local and international agencies to explore the sustainable development systems, i.e., the economic, social and environment sectors, and their relevant sub-systems, e.g., disaster management, climate change, land use, governance, and infrastructural capacity to gain deeper insights on these vital aspects of sustainable development. The results that emerged in the data analysis allowed for comparison with the data collected from the in-depth interviews and confirmation of the robustness of the sampling procedure. I illustrated the main findings from the content analysis of data from the archival document analysis in Figure 4.6.
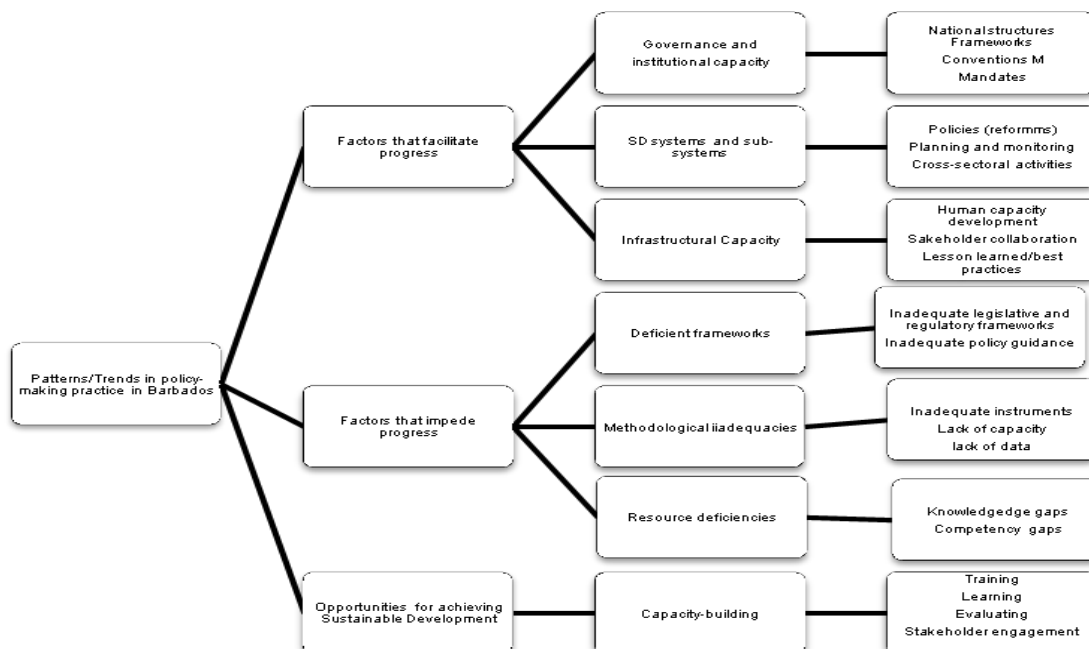

Figure 4.6   Concept map of patterns and trends.

Factors that Facilitate Progress toward Sustainable Development

The multiple challenges SIDS face in attaining sustainable development have

necessitated the use of a holistic approach to integrate the activities of economic growth,

environmental protection and social equity. The BPOA provides a framework for specific

actions and measures to undertake at the national, regional, and international levels in

support of the sustainable development of SIDS (BNAR, 2010). It calls for policies,

plans, programs, and strategies to ensure that the conventions, mandates, goals, priorities,

and targets for the sustainable development of SIDS are implemented effectively, and the

obligations met.

In Barbados, three major national structures are in place for the coordination of

national sustainable development since becoming a signatory to the BPOA, namely: The

National Commission on Sustainable Development (NCSD), National Strategic Planning

and The Environmental and Land Use Planning for Sustainable Development Project

(BNAR, 2010). The NCSD is the most visible of the structures. Following their

establishment, policy-makers established a plethora of policy, legislative, and regulatory

frameworks to implement the island's national policy priorities (BNAR, 2010/2008,

Government of Barbados [GOB], 2003).

In the case of Grenada, since becoming a signatory to the major Conventions

emanating from the UNCED's (Rio Conventions), e.g., the BPOA, MSI, Agenda 21 and

MDG, the government has obligated itself to undertake specific actions and measures in

support of sustainable development (GNRSD, 2010; Government of Grenada [GOG], 2010/2008). Policy makers developed several structures and initiatives for advancing the goals of sustainable development including the establishment of the Multipartite Consultation Committee, Sustainable Development Council, and the St. George Declaration. In addition, policy-makers provided authority to various institutions and committees across the sectors of government and civil society for implementing specific areas in the strategy for addressing the sustainable development agenda.

Sustainable Development Systems and Sub-Systems

In the process of meeting the challenges and constraints that SIDS face in pursuing sustainable development, the Government of Barbados has taken several measures to strengthen economic growth, social equity, and environmental protection, while mitigating environmental hazards and strengthening the urban planning and development processes. With respect to the Barbadian economy, policy-makers have implemented a program of public sector reforms to restructure the economy following external shocks during the early 1970s, 1980s and 1990s (Downes, 2002). In this process, the economy has transformed from a top-down, protective approach to a proactive, participatory, open, transparent, and investment-friendly approach (Grenade & Lewis-Bynoe, 2011). Those reforms led to the development of a service-oriented, innovation-driven economy, as defined by the World Economic Forum (World Bank Report, 2010). Led by tourism, followed by international business and financial services, economic

growth has been modest by comparative standards - approximately three percent annually

from 1995-2010 (CDB, 2010). The World Bank and Caribbean Development Bank

reported fiscal weakening of the economic systems following the global economic crises

of 2001 and 2008 but the economy has remained resilient.

In the social area, the high ranking of Barbados in the UNDP's Human

Development Index (HDI) reflects the great strides made on the island (HDR, 2010,

2008, 2007). The labor market has witnessed an increase in the educational attainment of

residents and significant growth in the number of professional females in employment

although a high percent of women remained in low skill paying jobs (approximately 60

percent), and youth unemployment remained a major challenge in 2010 (UNDP, 2010).

There was an overall improvement in the health conditions and standard of living, but

Barbados remained vulnerable to environmental hazards and global shocks, which led to

a restriction in output, increased unemployment; and consequently, an increase in

transient poverty (UNDP, 2010; Downes & Carter, 2001). Although policy-makers

achieved some progress in the delivery of services in the health and education sectors,

there remained challenges with the health status of the population associated with chronic

non-communicable diseases, as well as the quality of the output from the education

system (UNDP, 2010). The UNDP Report showed improvements in the quantity and

quality of housing, but it highlighted pockets of unsatisfactory living conditions among

the poor and vulnerable population with features of overcrowding in households,

persistent poverty and low human capital.

In the environmental dimension, a 2010 assessment report found inefficiencies in the management of fresh water supply, uses of energy, coastal and land ecosystems, pollution and waste management (National Environmental Summary [NES], 2010). In addition, the BNAR (2010) found patterns of overfishing, degradation of habitats, and loss of marine biodiversity. According to the BNAR, the lack of effective legislative and regulatory frameworks and monitoring systems are factors that hindered progress toward attaining the goals of sustainable development.

With respect to managing environmental hazards, Barbados has embraced the Comprehensive Disaster Management Strategy (CDMS), as recommended by The Caribbean Disaster Emergency Management Agency (CDEMA). This strategy was useful in strengthening its disaster preparedness and management institutions through policies and frameworks that incorporate the all-phases of disaster management cycle (prevention, mitigation, preparedness, and response, recovery and rehabilitation) while focusing on accelerating risk reduction in planning and service delivery. Policy-makers use the integrated approach in the implementation of major projects, enhancing community resilience. The data highlighted several weaknesses in hazard-risk identification, public awareness of potential hazards, and the response actions necessary for effective disaster management (UNDP, 2010; 2005).

In terms of the island's experience with climate change, the conclusions drawn

from several assessment reports was that Barbados ratified key international instruments, including the Vienna Convention on the Protection of the Ozone Layer and the Montreal Protocol on the Phasing out of Ozone Depleting Substances, resulting in the development of adaption measures through institutional mechanisms and public awareness programs. Barbados has met many of the targets but there remain weaknesses in the implementation of the policy measures (BNAR, 2010).

With respect to land resource management, the government has articulated provisions for an integrated approach to land use, watershed, coastal management, and the protection of biodiversity, green spaces, and pollution management (GOB, 2010; 2009). The National Sustainable Development Policy Framework, produced by the National Commission for Sustainable Development (NCSD), takes a holistic approach in addressing these issues, but it is important to note that the NCSD is an advisory body and policy-makers make not necessarily accept its recommendations. A second provision from recommendations made by the Environmental Management and Land Use Planning Project (EMLUP) relates to a requirement for all major development projects to conduct Environmental Impact Assessments (EIA) as one of the conditionalities for approval. While the BNAR (2010) envisaged that an integrated management approach can result from the EMLUP's recommendations, it also highlighted a need to enhance and harmonize the existing body of legal and policy provisions to facilitate and ensure that an integrated approach to watershed and coastal area management is achieved.

The Government of Grenada (GOG) developed a strategy for transformation and took measures aimed at strengthening the economy, achieving macroeconomic stability, and reducing poverty (Grenada Country Experience Report [GCER], 2003). Institutional frameworks and development partners support this strategy and the measures taken. The reform measures included economic management, revenue policy and administration, debt management, public sector enterprise, enhancing the culture for investment and poverty reduction (GCER, 2003). The economy transformed from high dependency on agricultural production to a services-based economy, experiencing significant growth in recent years (GNRSD, 2010). The average annual rate of growth (GDP) in 1998-2000 was 7.06%, a significant improvement from the previous 3-year period, 1994-1997 when the rate was 3.37% (The Country Poverty Assessment [CPA], 2008). This growth rate was achieved through increases in manufacturing, tourism, and construction. Significant construction and rehabilitation of buildings following two devastating hurricanes in 2004 and 2005 characterized the period, 2004-2009 (CPA, 2008). The period 2008 to 2013 elaborated a strategy for economic transformation that designated five transformational sectors: Health, Education and wellness; Tourism and Hospitality services; Agro-business; Energy development, and Information Communication Technology (ICT) (CPA, 2008). In 2007, Grenada faced with the impacts of a global food crises and economic recession, which severely stymied its economic growth and development potential. The problem of poverty remains a major concern to policy-makers. The CPA

(2008) showed that 37.7% of the population lived below the poverty level in 2008.

With respect to the social area, the GOG has elaborated poverty alleviation among its top priorities for achieving the goals of sustainable development. In cooperation with civil society, UNDP, and other regional and international organizations, the government developed a National Social Development Policy and Eradication Strategy (GNRSD, 2010). A (2010) assessment report by Kaira Consultants - CPA, in collaboration with the National Assessment Team of Grenada, found that poverty levels in Grenada remained at 37.7%. The adult literacy rate is 96% (National Statistics Office, 2005), but evidence seem to suggest that the quality of education and attainment level reached by some students have not shown uniformed improvement (GNRSD, 2005). The assessment further revealed that inadequate provision of services at the secondary level, inadequacy of the education infrastructure, and weak management structures at the Ministry and school levels have hindered progress in the education sector. The GNRSD (2005) assessment identified a need for more opportunities for technical and vocational training for those who are unable to follow an academic path. In health, while many indicators have improved in recent years, there is concern that the quality of services delivered is inadequate. A National Capacity Self-Assessment (NCSA) (as cited in GNRSD, 2005) initiated for Grenada in 2003 found that limited institutional and resource capacity stymies progress in the health sector.

In the environmental arena, healthy mangrove, coastal, and marine ecosystems are

at the heart of food security, livelihood development, and economic growth in Grenada. However, with the effects of climate change, environmental hazards, and anthropogenic activities, the health of the ecosystems has been in decline (United Nations - Department of Economic and Social Affairs [UNDESA], 2013). The UNDESA report identified many threats affecting the coastal ecosystems, including deforestation of mangrove and littoral forests. Other threats found by UNDESA include over-fishing, pollution from land-based and marine sources, diebacks, storm surge and wave action, litter, and introduction of invasive species. The authors of UNDESA blamed high ocean temperatures for sea level rise, storm surges, coastal erosion, and the destruction of coral reefs. In addition, the authors pointed out that the gears of fishing boats, yachts anchors, and sand mining destroy sea grass habitats. According to the authors, pollution, inadequate water disposal and treatment of wastewater, and deforestation are key contributors to habitat degradation.

The Government of Grenada has attempted to improve the protection and management of its natural resources. There are currently 10 pieces of legislation and various strategies to address environmental protection on the tri-island state. The development of a plan to identify and select nationally significant marine and terrestrial environments as protected areas is a recent product in a series of national plans, mandates, and commitments to protect Grenada's natural resources. Another strategy to improve protection of the natural environment was the establishment of the St. George's

Declaration of Principles for Environmental Sustainability, which led to the 2005

National Environmental Policy and Management Strategy (Turner, 2009). Another

strategy was the establishment of a policy to stop illegal sand mining (UNDESA, 2013).

A Forest Policy in 1997 emphasized conservation over harvesting (Turner, 2009). Sea

walls have been built for coastal defenses, but these static features impede the exchange

of sediment between land and sea, are susceptible to erosion, and maintenance is costly

(UNDESA, 2013). Mangrove restoration has been a strategy used to address

deforestation and biodiversity loss (UNDESA, 2013). Grenada has promoted

capitalization of its natural resources by using renewable energy methods such as wind

and solar energy (GCP, 2010). Another strategy was Grenada's implementation of a

National Environmental Action Plan and ratification of the Convention on Biological

Diversity, which committed signatories to study its diverse natural resources and develop

programs and initiatives for conservation (GCP, 2010). This commitment has led to a

Biodiversity Strategy and Action Plan in 2000. Despite these efforts, UNDESA pointed

to several factors that impede the effective management of the natural environment. They

include the lack of a clear policy and guidelines for environmental protection, with

accompanying legislation for enforcement and monitoring progress, the lack of an

integrated approach to environmental management, lack of guidelines for cross-sectoral

activities toward building ecosystem resilience, inadequate resource capacity, and

ineffective stakeholder collaborations.

With respect to the management of environmental hazards, the GOG strove to strengthen its disaster management institutions. Following the passage of Hurricanes Ivan and Emily in 2004 and 2005, the National Disaster Management Agency (NaDMA) improved its disaster outreach approaches, enhanced technologies for disaster management, and developed linkages with regional and international agencies to strengthen disaster management (GOG, 2010; 2009; UNDP, 2005; ECLAC, 2005). Policy-makers place considerable emphasis on establishing functional community committees to support the model of district committees, weekly education and awareness programs on TV and Radio. Despite these achievements, studies conducted by the UNDP on the readiness of SIDS for planning, mitigating, responding to, and recovering from environmental and anthropogenic hazard events found that the island was not in a state of sufficient readiness for hazard events.

In terms of climate change management, the Government of Grenada played an important role in addressing the issues associated with climate change and sea level rise in SIDS. At the international level, the Government proposed a National Climate Change Policy and Action Plan. The Prime Minister of Grenada served as chair of the Alliance of Small Island State (AOSIS) for two consecutive terms. During this time, Grenada participated in local, regional and international biodiversity initiatives, including the Convention on Biological Diversity's Program of Work on Protected Areas, the Caribbean Challenge and National Protected Area Systems Plans (MSI SIDS+5: Five

Year Review of the Mauritius Strategy, 2010). The government attempted to interpret and

better understand the implications of climate change (MSI SIDS+5, 2010). The MSI

revealed that education and public awareness campaigns in local communities generated

public interest. The NCSAFR (2010) found that no legal framework is available for the

management of climate change, only a small number of policy-makers had a clear

understanding of the phenomenon, and there were no mechanisms to conduct needs

analyses, systematic observation, mitigation planning or adaptation. The MSI SIDS+5

(2010) assessment found that mainstreaming climate change had been constrained by

limited institutional, human, financial, and technological capacity.

Concerning land-use in Grenada, the human settlement pattern poses a significant

challenge to rational land use and sustainable development (Niles, 2013). Niles pointed to

a proportional disparity between private and public lands, the high concentration of

settlements in high-risk hazard prone areas, rapid population growth in urban and peri-

urban areas, squatting, and limitations in the enforcement of land use regulations as

factors that hinder progress toward sustainable development. The 2010 Grenada Country

Report reported that approximately 60% of the population now resides in two urban

parishes with mass migration and emigration from rural communities, and many of the

unpopulated areas reveal steep slopes unsuited for human settlements or agricultural use.

In the rural flight to urban areas and host countries, some areas that may be suited for

agricultural uses are abandoned. Niles (2013) noted that the decline in the utilization of

land for agricultural purposes has been accompanied by increasing poverty levels and

squatting. Squatter communities lack planning or adequate physical infrastructure. The

importance of the islands' land resources to economic growth and development, poverty

reduction, and the survival and wellbeing of the population was addressed in the Prime

Minister's 2003 budget speech (as cited in the GNRSD, 2010). Niles (2013) found that

rural and urban development continues to take place in an ad hoc, fragmented manner.

Niles argued that the availability of the islands' limited land resources is further

constrained by high rainfall levels, an inefficient land tenure system, uncontrollable land

prices, and unregulated land use. He further noted that growing competition and demands

among multiple land users are increasing the pressures on this limited and diminishing

resource. Niles (2013) pointed out that the land use practices on the island have resulted

in habitat degradation thereby compromising its availability for productive uses. He

pointed out further that poor land use practices pose significant threats to national food

security, human health, resilience to climate variability, and economic and social

instability. According to Niles, without appropriate interventions, these undesirable land

use practices would continue to limit the ability of the island to provide the services that

are essential for the survival and wellbeing of the population.

The GOG recognized the important role that indicators can play in helping policy-

makers make informed decisions concerning sustainable development. Policy-makers

develop indicators in conjunction with the mandates of funding agencies to provide

guidance on measuring and calibrating progress toward sustainable development and facilitating the decision-making process; but the GNRSD (2010) found that inadequate legislation and enforcement, lack of appropriate technology and equipment, and low commitment accorded to data collection have hindered progress toward the attainment of sustainable development.

Infrastructural Capacity

The GOB builds on its national institutional capacity by building human abilities, relationships, and values that enable institutions, stakeholders, and individuals to improve their performance for achieving the sustainable development objectives (BNAR, 2010). One of the NCSD's primary tasks has been to educate decision-makers and publics on the Barbados Sustainable Development Policy (BSDP) and encourage Barbadians to put the recommendations of the policy into practice (BNAR, 2010). Seminars and workshops help to strengthen processes that influence behavior and performance in development endeavors, enhancing people's technical ability to play new developmental roles and adapt to emerging demands (BNAR, 2010). Seminars and workshops assist employees in various industries in understanding, applying, and promoting sustainable tourism (GOB, 2010). These programs also educate policy makers on the concept and policy design of sustainable tourism. At the UN Commission on Sustainable Development in 2007, the Barbadian delegation indicated an interest in establishing a formal sustainable development partnership built on integrating environmental sustainability, local

gastronomy, and rural tourism. The government has committed to initiatives for rural

communities to obtain economic benefits from sustainable use of natural resources

(GOB, 2010). Barbados has achieved approximately 70 % of its sustainable development

objectives utilizing national resources (GOB, 2010). The data analysis found deficiencies

in the governance and institutional arrangements.

Indicators are an integral part of national and international reports in Barbados.

There was a resolution at the United Nations Summit on Environment and Development

held in 1992, it was resolved that a core set of indicators be developed to measure and

assess progress toward Sustainable Development (GPB, 2010). Through its National

Sustainable Development Policy, the GOB has encouraged and supported the

development and use of indicators to monitor and evaluate the implementation of

sustainable development policies (GOV, 2010). The National Indicators of Sustainable

Development Programme spearheaded by a Steering Committee on Indicators of

Sustainable Development identified a list of 169 Indicators of Sustainable Development

for Barbados (BNAR, 2010).

Stakeholder engagement has proliferated in both Barbados and Grenada in recent

years. The Governments of Barbados and Grenada have sought to strengthen policy-

making practice through engagement with local, regional, and international stakeholders.

Collaborative undertakings found in the document reviews involved sharing resources

with, or seeking resources from partners to address community problems or issues. Some

project-based engagements were short-lived, such as community clean-ups, social service

initiatives, the sharing of data and disaster management activities (ECLAC, 2005; UNDP,

2010). Others lasted longer, such as donation of land, hazard mitigation, historic

preservation, community tourism, and educational projects. The data highlighted cases of

stakeholders providing guidance, technical, financial and material support to advance the

goals of sustainable development (UNDESA). Apart from the advantage of receiving

guidance and support for capacity building, monitoring, evaluating, and reporting, other

key benefits of engaging with stakeholders have been the harmonization of contradictory

motifs, creation of knowledge networks, and greater public awareness of sustainability

(UNDP, 2005). The data highlighted the importance of harnessing the talent of

stakeholders and extracting value from collaborative interactions to advance the goals of

sustainable development in territories that are small and prone to hazards.

Factors that Impede Progress toward Sustainable Development

The transcribed data provided a myriad of examples of factors that stymied

progress in advancing the goals of sustainable development. In Barbados, some

institutions are understaffed and lack the necessary tools, data, technology, and financial

resources to progress further toward sustainable development (BNAR, 2010). The data

further depicted weaknesses in enforcing legislative frameworks, providing adequate

guidance and know-how for analyzing and synthesizing the interactions occurring

between economic growth, ecology, and human activities, and mainstreaming disaster

risk management into planning and development decisions. The transcribed data also

showed weaknesses in disseminating information from decision-makers to publics,

providing guidance to facilitate cross-sectoral activities, information transfer, and

conducting risk assessments. The data indicated a lack of adequate guidance for

coordinating the work of other spheres of government in a coherent manner. This

highlights a major shortcoming in the frameworks and mechanisms for implementation.

Of great concern is the finding that equipping individuals with the understanding,

skills, access to information, knowledge, and training that enables them to perform

effectively has been inadequate in many instances. In other cases, policy-makers have

specialized roles but have been unaware of the value of integrating sectoral activities

(NCSAFR, 2010).

Concerning access to technologies, the Governments of Barbados and Grenada

have been proactive in using technologies to mitigate hazards, build resilience, and

advance toward sustainable development; but there were weaknesses with regard to

training, evaluating, enhancing technical capabilities for surveillance, monitoring, and

early warning of potential hazard threats toward mitigation (BNAR, 2010). Singh &

Sealy (2007) pointed out that poorly trained personnel, varied approaches to data

collection, lack of coherent data-request structures and communications among regional

and international institutions make it difficult to rely on collected data for evidenced-

based policy processes. In a 2012 report, compiled by the University of the West Indies

and UNED, to assess the readiness of Barbados for its proposed Green Economy, Singh & Sealy (2007) highlighted a need for policy-makers to put specific indicators in place to ensure that projects and activities, intended to improve living conditions, could be achieved. The BNAR (2010) recommended placing greater importance and emphasis on having the appropriate indicators and reliable data to improve decision-making at the national level.

In the case of Grenada, while the tri-island state is a signatory to many Conventions emanating from the UNCED's Conventions; and participates in a number of regional and international agreements and initiatives toward the attainment of sustainable development, the island is confronted with several challenges in managing emerging initiatives in support of the goals of sustainable development (GOG, 2009; 2010). The 2010 GNRSD found that despite the efforts driven by the GOG to advance the goals of sustainable development, in collaboration with civil society groups and international organizations, the implementation of several plans and initiatives have had serious drawbacks. This is due, in part, to inadequate levels of funding, limited human resource capacity, inadequate policy, institutional, legislative and regulatory frameworks, inadequate mechanisms for interagency collaboration and cooperation, lack of pertinent data to inform public-policy decisions, inadequate data collection mechanisms, and the lack of public awareness and broad public participation in decision-making. For instance, to date, there is no clear policy-framework for the sustainable development of agriculture,

a major economic sector (GCR, 2010). Given the smallness and unique characteristics

and features of the island, there is a lack of guidance on the manner in which sustainable

planning and development should take place (GCR, 2010; UNDESA, 2013). National

environmental legislation lacks adequate protection for the island's prime natural assets.

There is an urgent need for the development of a thorough and decisive land use

plan, with zoning being a critical component (Niles, 2013). There is inadequate

legislation for coastal management (UNDESA, 2013). There is a lack of awareness of

hazards, hazard risk reduction and disaster management strategies, and integration of

hazard risk mitigation into the national and sectoral planning frameworks (GNRSD,

2010). The authors of UNDESA pointed to a need to strengthen the regulatory and

reporting frameworks for hazard risk reduction and disaster management (UNDESA,

2013). There is a lack of commitment and low priority accorded to hazard risk reduction

(GNRSD, 2010). According to the authors of GNRSD, there is a direct link between the

lack of appreciation and effective integration of environmental, economic, and social

concerns and the following deficiencies:

"Lack of understanding of integrated development, lack of clear guidance in

policy-frameworks for coordination and collaboration across sectors of

government and stakeholders, lack of know-how for implementing policy

interventions, ineffective communications, inadequate financing, and inability to

access resources for learning how to integrate the activities of growth, ecology, and society" (GNRSD, 2010).

The data analysis revealed that several challenges persist with stakeholder engagements in advancing the goals of sustainable development. The authors of GCR (2010) pointed out that while stakeholder engagement has proliferated in Grenada, it is not always a feasible option for achieving successful results. Key stakeholders are at times willing or unable to participate in development initiatives. In other cases, there are fundamental ideological differences among partners with little or no room for negotiation. Further, the authors of GCR (2010) noted that when power is unevenly distributed or the institutional culture of stakeholders is not amenable to collaboration, such issues impede progress in achieving successful execution of the initiative toward sustainability.

The trends and patterns in the content analysis of archival data led to the conclusion that improved governance and institutional standards, policy reforms, and infrastructure have been the principal factors supporting the satisfactory rates of economic growth, social development and stable political situation in Barbados. However, the data seem to corroborate earlier findings from in-depth interviews and literature reviews that inadequacies, deficiencies, and weaknesses in these arrangements have hindered achievement of the delicate balance between the activities of the economy, environment, and human development.

Opportunities

The final topic that I explored in this analysis was opportunities to advance sustainability-oriented policies in policy-making practice. In reviewing documents for this part of the research, I targeted literature that focus on strategies to transform policy-making practice from knowledge and competency-gaps to an entrenched culture of evidence- and competency-based practice where policy-makers possess the knowledge, competencies, and tools necessary to successfully develop and implement sustainability-oriented policies. As I reviewed the literature, I asked myself the following questions: who are the actors? What do they wish to accomplish? What have they been doing right? How did they go about it? The analysis of 10 sources revealed strategies that can help to embed sustainability thinking into policy-making culture.

The FSSD provided a model for developing a purposeful and strategic approach to operationalize the concept of sustainability. This five-level framework, consisting of purpose, systems, strategy, actions, and tools as the headings, enabled me to conceive of a model that policy-makers can use to develop and implement sustainability-oriented policies in practice. In line with this framework, the literature reviews have suggested five key approaches to design and execute public policies in territories that are small and prone to hazards. Figure 4.7 illustrates the recommendations from the FSSD and archival data on how to align policy-making practice with the goals of sustainable development.
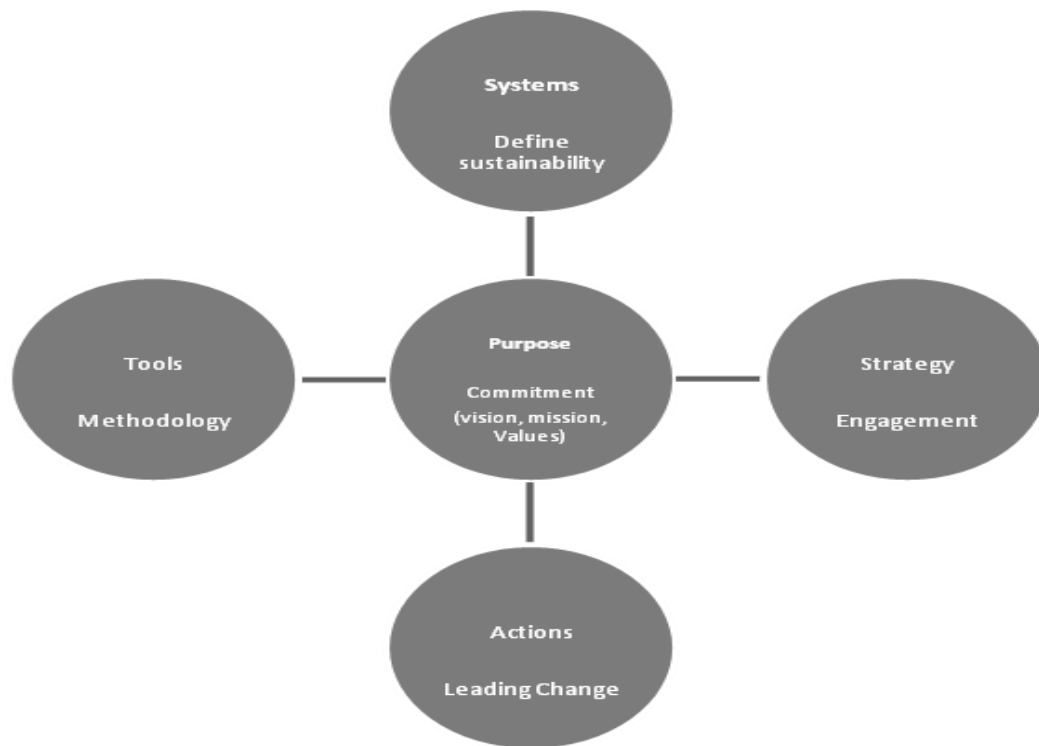
Figure 4.7   A paradigm to advance the goals of sustainable development.

Purpose (commitment through vision, mission and values)

At the purpose level, the FSSD recommends envisioning solutions for achieving

sustainability (TNS, 2011). The authors of TNS used the term back casting to suggest

envisioning desired future conditions and identifying the steps to materialize the vision.

Strandberg (2009) pointed out that leaders must clearly articulate an institution's position

on sustainability to foster alignment in the organization. Harris and Crane (2002) found

by integrating sustainability thinking into an organization's vision and mission, its

managers sensed a change to the treatment of sustainability. Harris and Cane (2002)

further noted that integrating sustainability into an institution's vision, mission, and

values holds all stakeholders accountable for their actions, encouraging them to include

sustainability thinking in decision making. Epstein (2008) asserted that by integrating

sustainability into an organization's vision and values, it inspires and motivates team

members to take obligations to the next level. Harris and Crane (2002) suggested that

formally documenting the vision of an organization sends a clear message about its

commitment to sustainability. To Hopwood, Unerman and Fries (2010), by identifying

key sustainability drivers and incorporating them into an organisation's vision and

strategy, this could help to embed sustainability thinking into its practices.

Systems (define Sustainability)

At the systems level, the FSSD (2011) recommends developing an agreed-upon

definition of sustainability to ensure there is clarity on its meaning and agreement about

the goals, approaches, and ways to move ahead (TNS, 2011). The UNCED, in its 1987

report titled *Our Common Future,* popularized the term, sustainability. The report aimed

to find practical ways of addressing the global realities of habitat destruction,

environmental degradation, and the emerging developmental challenges around the

world. The UNCED viewed sustainable development as the pathway to achieve

sustainability. Subsequent literature advanced the idea of integrating the activities of

economic growth, environmental protection, and social equity to achieve sustainability.

Shiva (1992) and several other authors pointed out that sustainable development has

differing meanings. One meaning is located in nature. Another meaning is located in the

marketplace. Yet, another meaning of sustainable development is located in social equity.

The contested nature of sustainable development is at the heart of the controversy surrounding how policy-makers can integrate the activities of growth, ecology, and social equity to achieve sustainability. Jacobs (1999) pointed out that the vagueness of the definition of sustainability allows businesses, development interests, and policy-makers to talk flippantly about the concept while operating as perpetrators of unsustainability. Robinson (2004) made a similar observation, arguing that without an agreed-upon definition of the concept, different actors in policy-making practice have treated sustainability differently and it has been difficult to determine whether the goals of sustainable development are achievable. Drexhage and Murphy (2010) emphasized the importance of having a clear definition about sustainability to enable institutions to effectively communicate about the goals of sustainable development, develop meaningful strategies to operationalize the concept, deepen the understanding of sustainability, and ensure that all stakeholders understand the institutions' focus and approach for achieving sustainability.

Strategy (engagement)

At the strategic level, the FSSD recommends engagement to deepen the understanding of sustainability (TNS, 2011). Senge (1990) argued that most often humans wish to learn and understand why things are the way they are, but much of the available data for understanding phenomena are fragmented or constrained by the use of

technical jargon. The author suggested that by piecing together the fragmented data, new

meaning and richness begin to emerge, allowing for greater clarity of such issues. Senge

noted that this process helps to deepen understanding of the way in which things work

and generate new insights for possible solutions to problems. A 2005 UNEP report

suggested that increasing awareness and understanding of sustainability is one way to

embed sustainability thinking into policy-making practice. According to the UNEP

report, policy-makers could achieve this feat by widely disseminating information across

the institution through memoranda, newsletters, postings on bulletin boards, workshops,

conferences, trade shows, presentations, and training. McLaughlin, Bessant and Smart

(2008) asserted that embedding sustainability thinking into policy-making practice

requires the creation of shared values. Elkington (1994) supported this viewpoint, striving

to measure the bottom line of profits, the planet, and people in his Triple-Bottom-Line

(TBL) accounting framework. The idea behind the TBL concept is that institutions are

responsible for supporting stakeholders toward achieving the goals of sustainable

development, ensuring that everyone shares responsibility in achieving its goals. The

authors of Communicating Sustainability recommended having well informed, motivated,

and committed team members to help institutions achieve their sustainability goals

(UNEP, 2005). The authors emphasized the importance of considering what to

communicate, as well as how to communicate. Goodman (2000) suggested that messages

about sustainability should be attractive to the point where people can use the emerging

knowledge in their personal lives. Goodman further noted that making sustainability

more approachable and understandable could help to generate greater interest in the

concept. Another way to embed sustainability thinking into policy-making practice is to

encourage the active participation of team members in activities that support the goals of

sustainability (Hopwood et al., 2010). The authors viewed this type of engagement as an

ongoing process of knowledge generation through teaching, learning, and assessment.

Jenkins (2006) viewed engagement as interactive communications, the sharing of lessons

learned and best practices and development of cross-functional structures and relevant

skill-sets. Doppelt (2003) suggested that publicly recognizing and rewarding

sustainability accomplishments could help to motivate individuals to act in ways that

bring an institution closer to attaining its goals.

Actions (leading change)

How does an institution transform itself so that its vision of sustainability drives

the decision-making process and define long and short-term success? A key theme to

emerge from the literature reviews on leading change is that an enormous opportunity

exists for institutions to lead the way in achieving sustainability. Doppelt (2003) argued

that many change initiatives have failed because the underlying thought patterns,

outlooks, and general culture of the institutions have remained the same. According to

Doppelt, vision and leadership are key. Exemplary organizations are clear about their

purpose and define their vision with clarity, conviction, and commitment. The FSSD

recommended creating a transformative vision and taking concrete actions that comply

with the principles of sustainability to forge ahead (TNS, 2011). Doppelt (2003) proposed

a system geared toward altering the culture of organizations toward sustainability.

Doppelt's 'Wheel of Change toward Sustainability' involves the following seven steps:

changing the dominant mindset from which a system arose, rearranging its parts, altering

its goals, adopting new strategies, shifting the flows of information by constantly

communicating the needs, vision, and strategies for achieving sustainability, correcting

feedback loops by rewarding achievements and innovation and aligning systems and

structures with sustainability. Doppelt asserted that to fully harness sustainability's

potential, policy-makers must be aware of the power of sustainability thinking to help

them meet their sustainable development goals and recognize the importance of

integrating sustainability-thinking into their development priorities and strategies.

Andreatta and Ferraro (2009) emphasized the importance of developing a culture of

sustainability to embed sustainability thinking into an institution's culture and everyday

decisions. For Geis and Kutzmatk (2003), policy-making requires a goal-oriented process

of planning and development to achieve sustainability. The Demotechnic index (or D-

index) of Vallentyne (Mata et al. 2012) is a useful contribution to the field of

sustainability. It helps one to focus on the fact that both people and their economic

activities are important factors in determining whether a society can achieve

sustainability. Finally, Meadows et at., (2005) suggested that humanity is approaching a

crisis point with respect to the interlocking issues of population expansion, environmental protection, and sustainable economic growth and development, and governments have an opportunity to mount a concerted effort to confront the human predicament and mobilize support for the benefit of current and future generations.

Tools (methodology)

Several authors addressed the importance of using tools to manage the path toward sustainability. The FSSD likened the tools for planning, monitoring, and evaluating sustainability progress to cutting-edge fitness equipment (TNS, 2011). Through sketching our goals, it becomes easier to combine objectives and discover possible synergies, enabling team members to gain a deeper understanding of where they are, what is needed to move ahead, and what happens when strategies have been implemented. Manderson (2006) pointed out that the methodologies for monitoring and measuring sustainability are important to allow practitioners to develop compliance standards and assess the systems that facilitate sustainable development. The World Bank pointed out that monitoring and evaluation tools are important to track sustainable development progress and facilitate decision-making. These processes allow organizations to answer questions such as what development interventions make a difference? Is the project having the intended results? What should we do advance the goals and objectives of SIDS? According to the World Bank document, by closely examining its work, an organization can design programs and activities that are effective,

efficient, and yield powerful results. Manderson (2006) pointed out that policies should possess a clear monitoring and evaluation framework for gaining a deeper understanding of sustainable development and its progress. Such frameworks should invite feedback from stakeholders, enabling institutions to assess the effectiveness of their policies and make necessary adjustments. For this reason, the availability of sustainability methodologies and tools is important to perform integrated assessments and steer institutions along a sustainable pathway. Manderson (2006) noted that sustainability methodologies could provide deeper levels of understanding about sustainability and play a role in embedding sustainability thinking into policy-making practice.

I completed the process of analyzing, interpreting, and synthesizing the transcribed data at this stage. With all the evidence that emerged in the data analysis, I felt that there were possible answers to address the research problem and central question, "how do policy-makers successfully develop and implement sustainability-oriented policies in territories that are small and prone to hazards?" Five salient findings pointed to the research problem.

Findings

The first finding was that a need exists to increase the effectiveness of national policy frameworks to guide policy-making practice toward sustainability-oriented planning and development. The Governments of Barbados and Grenada presented a series of commitments that support the goals of sustainable development. Policy-makers

have significantly broadened the scope of governance, helping to facilitate progress toward sustainable development; but the evidence adduced from the data analyses revealed that the institutional and policy frameworks failed to provide adequate guidance for the sustainable planning and development of territories that are small and vulnerable to hazards. In particular, respondents presumed that these frameworks favor economic growth over meeting the broad objectives of the sustainable development agenda. In some instances, the lack of relevant knowledge and coordination across the sectors of government for integrating the activities of economic growth, environmental protection, and social equity implementation of sustainable development projects hampered the progress toward sustainability. In essence, the transcribed data revealed that institutional and national policy frameworks for the Sustainable Development of SIDS were weak, fragmented, and compartmentalized.

The second finding was that a need exists to increase understanding of the unique characteristics and features of SIDS to enable policy-makers to better define the safe operating space for human development and enhance their resource capacity to successfully develop and implement sustainability-oriented policies. The emerging data seems to indicate that the complex interactions taking place in the territories based on the islands' geographic, topographic and geological circumstances and between ecology, economic growth, and the socio-political system is surrounded by uncertainties and knowledge gaps that make it difficult to quantify the safe operating space for human

development.

The third finding was that a need exists to strengthen institutional capacity across the full spectrum of policy-making practice for sustainable development effectiveness and accountability. The unique characteristics and peculiar vulnerabilities of SIDS tend to hinder their ability to achieve their sustainable development goals and targets. Coupled with their limited options for economic diversification, high cost of energy, high rates of unemployment, and potential risk for frequent, intense, and complex environmental phenomena, most SIDS struggle to build the required institutional and human capacity for sustainable development processes and outcomes. Even Barbados, with its stellar performance in economic growth and social development, continues to be affected by persistent impediments associated with the peculiar characteristics and features of SIDS; unavailability of data, ineffective data collection, inadequate methodological frameworks for evaluation and inadequate planning and preparedness for monitoring and evaluating sustainable development progress. The evidence found in the data analysis about policy-making practices from the period 1966 - 2010 revealed that policy-makers face a broad array of challenges that require pertinent knowledge, competencies, and resources to determine which policies they should implement and whether a policy has an impact on the indicators of interest. While there was an assumption that policy-makers may hold the key for achieving sustainability, the governments did not place sufficient emphasis on understanding what facilitates the adjustment they need to make to improve their capacity

for developing and implementing effective policies; in particular, policies that seek to integrate and harmonize the activities of three diametrically different development systems.

The fourth finding was that there is a low focus for learning how integrating the activities of economic growth, environmental protection, and social equity and mainstreaming hazard risk management into policy-making practice can be pursued. The data seemed to suggest that teaching and learning could help policy-makers improve their capacity to shape the sustainable development path.

The fifth finding was that a need exists for a new approach to make the vision of sustainability a reality in policy-making practice in territories that are small and prone to hazards.

Trustworthiness of the Research Findings

Member checking was a technique used to provide participant validation (Lincoln & Guba, 2005). During the data analysis and following the preliminary interpretation of the interview data, I telephoned respondents to check the accuracy of the information, which they provided during the data collections. Member checking was an important strategy to facilitate self-awareness for the researcher and take the corrective action required, as well as establish credibility in the data results.

Prolonged engagement helped to strengthen the credibility of the data (Lincoln & Guba, 2005). I spent a substantial amount of time in the field to build rapport and trust

with respondents to the point where they felt safe to share their stories with me. I gained

experiences that enabled me to develop a deeper appreciation of the context of policy

making practice and overcome possible distortions.

Peer validation was another technique used to strengthen the credibility of the

research results (Lincoln & Guba, 2005; Patton, 2002). This technique involved the use

of investigators who were not informants in the study but were willing to provide their

views of the research process. Upon examining the methodology, raw data, interview

transcripts and my preliminary findings, the investigators verified that the emergent

themes were applicable to the cases.

Thick description and replication were the techniques used to establish

transferability. Thick description entailed provision of a detailed account of the

phenomenon to enable readers to evaluate the extent to which the conclusions drawn are

transferable to other settings (Lincoln & Guba, 2005). Replication entailed the use of a

multiple case study design to corroborate the findings of the first cases through repeated

experiences. When investigators confirmed that the research process was sufficiently

thorough and adhered to the principles of qualitative research, and when the initial and

subsequent cases produced literal replication, transferability was established.

Multiple sources and methods of data collection was a strategy used in this study

to gain a deeper understanding of the phenomenon and establish dependability of the

research results. Investigators examined the research process to determine how the

research collected, kept and analyzed the data (Lincoln & Guba, 2005). The use of field

notes and other relevant research records that described the research process was

important to ensure that the data analysis and findings are systematic, objective and

trustworthy. When the findings from the archival data were 80 percent congruent with the

findings from the in-depth, semistructured interviews, dependability of the data results

was established.

Audit trail was one of the techniques used to establish confirmability and

transferability simultaneously (Lincoln & Guba, 2005). Peer reviewers examined the

research process to confirm or refute its thoroughness and determine whether the

researcher adhered to the standards for scientific rigor in qualitative research. In addition,

the researcher engaged in a continuous process of reflection on the research process and

context, becoming aware of situations that could hinder discovery progress. When

multiple investigators from outside the policy-making field verified that the research

findings and interpretation were sufficiently thorough and supported by the research data,

confirmability was established.

<div align="center">Summary</div>

In chapter four, the researcher presented a comprehensive analysis of the research

findings to address the research problem and central question. The fundamental objective

that drove the collection and subsequent analysis of the data was to gain a richer

understanding of policy-practices in pursuit of sustainable development. The researcher

described the systematic application of the methods used to collect and analyze the data and synthesize the emergent themes. The researcher based the research findings on insights drawn from the data analysis of in-depth interview transcripts and archival document reviews. The researcher presented the findings in a manner that addressed the research problem and central question. The first finding was the need to increase the effectiveness of national policy frameworks to guide policy-making practice toward sustainable planning and development. The second finding was the need to increase understanding of the unique characteristics and features of SIDS to enable policy-makers to define the safe operating space for human development and enhance their resource capacity to successfully develop and implement sustainability-oriented policies. The third finding was the need to strengthen institutional capacity across the full spectrum of policy-making practice for sustainable development effectiveness and accountability. The fourth finding was that there is a low focus for learning how to pursue integrating the activities of economic growth, environmental protection and social equity and mainstreaming hazard risk management into policy-making practice. The fifth finding was that a need exists for a new approach to make the vision of sustainability a reality in policy-making practice in territories that are small and prone to hazards.

In chapter five, the researcher discusses and analyzes the research results and highlights how each theme can provide evidence for policy-making construct.

Chapter 5: Discussion, Conclusions and Recommendations

Introduction

The purpose of this qualitative multiple case study was to explore and understand why sustainability has not been sufficiently realized and conceptualize how achieving sustainable development might be pursued in territories that are small and prone to hazards. The central question in this exploratory, multiple case study addressed policy-makers' perceptions about achieving the goals of sustainable development. The researcher conducted research through in-depth, semistructured interviews to explore and describe the perceptions of 18 key policy-makers in Barbados and Grenada about their experiences with policy-making. Archival document analysis added complementary insights to the data from in-depth interviews. In the previous chapter, the researcher presented the research findings. In this chapter, the researcher analyzes and discusses the significance of the research findings in light of the relevant literature. The researcher explains the insights that emerged from the research data and concluded with recommendations, implications of the findings for policy-making practice, and suggestions for further research.

Key Findings

The key findings of this study are as follows:

1. A need exists to increase the effectiveness of national policy frameworks to guide policy-making practice toward sustainability-oriented planning and development.

2. A need exists to increase understanding of the unique characteristics and features of SIDS to enable policy-makers to better define the safe operating space for human development and enhance the resource capacity to successfully develop and implement sustainability-oriented policies.

3. A need exists to strengthen institutional capacity across the full spectrum of policy-making practice for sustainable development effectiveness and accountability.

4. There is a low focus for learning how to pursue integrating the activities of economic growth, environmental protection, and social equity and mainstreaming hazard-risk management in policy-making.

5. The fifth finding was that a need exists for a new approach to make the vision of sustainability a reality in policy-making practice in territories that are small and prone to hazards.

Summary

The findings in this study reveal that achieving the goals of sustainable development requires a comprehensive effort. This effort will bring together institutional, human, and financial capacity to address the factors that hinder progress toward achieving the goals of sustainable development. This comprehensive effort will help to improve the capacity of policy-makers to pursue the United Nations' Sustainable Development agenda. This effort requires greater commitment and strategic direction in

policy-making practice. Policy-makers must weave sustainability thinking into their strategic policy interventions for managing hazard risks and building resilience. Policy-makers must harness the political will and work innovatively with stakeholders to operate safely in spaces that are small and prone to hazards. Policy-makers will make greater progress in achieving the goals of sustainable development from lessons learned and best practices.

Discussion of the Findings

Five fundamental research questions (RQ) framed this inquiry. The first question was as follows:

RQ 1. What are the factors that policy-makers perceive as having contributed to the successful development and implementation of sustainability-oriented policies in territories that are small and prone to hazards?

Respondents reported a number of factors, which they perceived as having contributed to the progress made in attaining the goals of sustainable development. Sustainable development frameworks, (i.e., institutional, policy, legislative and regulatory), along with indicators, and resource capabilities, were the categories drawn from the patterns and themes that emerged in the data analysis associated with the question regarding the factors that facilitated progress toward sustainable development. These factors complement the findings from literature reviews. These findings also corroborate the data from archival document analyses.

Sustainable development frameworks are prescriptive in nature. They provide a perspective of sustainability within the context of the peculiar challenges and constraints that SIDS face in pursuit of sustainability and encourage governments to repurpose and adapt policies to meet the national vision and planning needs of territories (BPOA, 1994). According to the BPOA, sustainable development frameworks can provide a comprehensive path to sustainable development. As capacity-building takes on greater importance in policy-making practice, development activities rely more on properly planned interventions; thus, having the appropriate frameworks is a prerequisite for the success of such interventions (UNCSD, 2012; Polk, 2011; Jones & Schoburg, 2004). The UNCSD noted that having the appropriate legislative and institutional frameworks is essential for establishing roles and responsibilities for the actors involved in designing, administering, delivering and enforcing policy interventions and for the effective functioning of policy-making practice.

The transcribed data revealed that indicators can play an important role in sustainable development planning and accountability. Several authors explored the role of sustainability indicators in policy-making practice. In a report to the Balaton Group, Meadows (1998) asserted that indicators are useful in identifying and analyzing issues, action planning, implementing, monitoring, and evaluating policy interventions toward attainment of the sustainable development goals. A 2004 Global Monitoring Report (GMR) found that indicators help countries develop implementation and monitoring

strategies for attaining the goals of sustainable development. According to the report, indicators can be useful to help simplify a complex array of information and issues concerning the sustainable development nexus. In this respect, indicators are important for generating discussion and informing decision-makers about key sustainable development problems and actions required for their management. The BPOA and MSI call for governments to develop and identify indicators that provide a solid basis for decision-making. Chapter 40 of Agenda 21 calls for the development of indicators to help decision-makers plan, monitor, and measure the progress of sustainability interventions. The emphasis in Agenda 21 has brought attention to the need for indicators that help policy-makers plan, monitor, and measure how well communities are meeting the needs and expectations of their present and future members. The MDG document has brought further attention to the need for indicators that monitor progress toward the goals of the individual and collective dimensions of sustainable development.

The transcribed data revealed attempts among policy-makers to create aggregate indices that provide perspectives on the three dimensions of sustainable development rather than one. Pintér, Hardi, and Bartelmus (2005) found that aggregate indices are important for communicating the progress of sustainable development and generating discussions on what sustainable communities can look like. Although aggregate indices have been gaining momentum in policy-making practice, their effectiveness in influencing policy-making practice toward sustainable development has been limited

(GMR, 2004). This weakness seems to suggest that indicators may not be highly valued in policy-making practice despite their growing popularity. On the other hand, the gap between the potential and actual influence of indicators in policy-making practice seems to suggest that more work is required to ensure that policy-makers integrate these indicators effectively into the policy-making mechanisms. Hopwood et al. (2010) asserted that making progress toward sustainability requires a more serious investment of time, effort, and coordinated action by institutions. A greater effort is needed to develop indicators that help to facilitate progress in attaining quality of life for current and for future generations.

The transcribed data showed that capacity development plays an important role in facilitating progress toward the attainment of sustainable development. Several respondents acknowledged that policy-makers need adequate resources to mainstream sustainable development, integrating economic, social, and environmental aspects and recognizing their linkages and inter-connections to achieve sustainable development in all dimensions. Elkington (1994) emphasized the importance of having the appropriate resources in policy practice to adequately plan for prosperity (economic growth). The author further emphasized the importance of human satisfaction (social equity) and the practice of environmental stewardship in building strong responsive and competitive economies. The 2015 UN Documents acknowledged the need for adequate resource capacity to mainstream sustainable development at all levels, integrating economic, social

and environmental aspects and recognizing their linkages and interconnections to achieve

sustainable development.

The second question addressed in this study was as follows:

RQ 2. What are the factors that policy-makers perceived as having impeded

progress toward the successful development and implementation of sustainability-

oriented policies in territories that are small and prone to hazards?

While the transcribed data showed progress toward attaining the goals of

sustainable development in Barbados and Grenada, albeit to varying degrees, both islands

have failed to achieve sustainability overall. The data revealed that development is

uneven and disjointed and integrating the activities of the economy, the environment, and

humans is difficult to achieve. Equally disturbing in the data analysis was the pattern of

inadequate understanding of sustainability, multiple perspectives on the meaning of

sustainable development, a range of applications by policy-makers, inadequate guidance

and support mechanisms to gain a richer understanding of the concept, and inadequate

resource capabilities. More importantly, the data revealed a lack of adequate

understanding of the unique characteristics and features of SIDS and the safe operating

space for human development. The sentiments of several respondents echoed

disappointment with the scorecard on the progress made toward attaining the goals of

sustainable development. Despite adoption of the United Nations' Sustainable

Development agenda, high unemployment, growing poverty, mass migration from rural

communities to cities, mass emigration to developed nations, high dependence on foreign trade and aid, and government debts that have negative effects on long-term sustainability, tends to saddle the territories in the Anglophone Caribbean. In some cases, environmental hazards and inadequate planning for sustainable development and the mitigation of hazards hinder progress toward sustainable development. Deficiencies and weaknesses in the instruments and mechanisms for guiding and supporting policy-making practice toward solving those problems further burden the territories. The factors that impede progress toward sustainable development rested squarely on deficient institutional frameworks to guide policy-making practice and effectively manage hazards, inadequate resource capacity, dominance of economic-related issues, lack of effective and efficient coordination between and across the sectors of governments, and the absence of available and reliable data to inform policy-decisions.

In the absence of available and reliable data, many policies have been developed, adopted, and implemented without the benefit of having evidence. These inadequacies represent failures across the spectrum of policy-making practice - from key policy-makers to policy-implementers - staff and other stakeholders at the local and international levels. One respondent likened this situation to "wandering in the dark..." The respondent said that without adequate institutional and human resource capacity, it would be impossible to achieve long-term sustainability.

Perhaps Kothari (as cited in Jabareen, 2008) was correct when he argued that the three development systems that comprise the sustainable development triangle model tend to define and promote their own development agendas and trajectories and the term remains an allegorical concept rather than a meaningful proposition. On the other hand, the FSSD suggested that it is possible for practitioners to better understand the scope of the interplays taking place in the sustainable development dimensions and strategically envision possible solutions for solving the problems. Equally useful for overcoming the challenges to attain sustainable development is Senge's (1990) groundbreaking work on building learning organizations. Senge argued that most humans want to learn and understand why things are the way they are. Much of the information required to decipher what is occurring in phenomena or processes tend to be fragmented. Senge posited that when humans find ways to connect the pieces of information, understanding of the complexity and richness of the process begins to emerge, becoming easier to find solutions to the problem. In view of the unprecedented challenges SIDS face in attaining the goals of sustainable development, several authors have argued that addressing these challenges will require policy-makers to put in place adequate frameworks to guide and strengthen the policy-development process (UNEP, 2011; UNDP, 2010). Policy-making practice requires more carefully crafted frameworks to guide understanding of the complexities inherent in sustainable development.

The third question addressed in the study was as follows:

RQ 3. How do policy-makers evaluate the effectiveness of sustainability-oriented policies in territories that are small and prone to hazards?

Evaluating the effectiveness of sustainability-oriented policies has proven to be a complex undertaking. The transcribed data showed a growing trend to use modern instruments to plan, monitor, and track sustainable development progress. However, the transcribed data revealed that policy makers ascribe low priority to gathering pertinent data, addressing dynamics that are unique to small, vulnerable territories, develop appropriate methodological frameworks, and, in general, fill the performance gaps and knowledge deficits that hinder performance progress. Research conducted by several investigators on the development and use of indicators had similar results. The findings collectively signaled interest in policy-making practice to plan, monitor, and better understand sustainable development progress, but there were many knowledge gaps in understanding how to effectively plan, conduct such evaluations, and integrate the results into decision-making.

The 2004 Global Monitoring Report, which examines the experiences of donor communities that support efforts toward sustainable development and aid recipient countries, found that the goals of sustainable development cover a vast array of issues spanning concepts, guidelines, and activities. This wide scope requires collection of large amounts and different types of data involving a host of metrics from across several disciplines. Advancing the sustainability agenda requires a greater effort on the part of

donor institutions and the recipient states. The actors from both worlds must work toward

a more coherent and efficient indicator framework for collecting and managing data and

assessing policy interventions.

Several authors magnified the idea of developing more coherent and practical

frameworks for the development and use of sustainability indicators. Brown (2009)

emphasized the importance of having a conceptual framework to guide the development

of indicators. To this author, a conceptual framework provides a useful method for

organizing and reporting progress in a structured and meaningful way. It also serves as a

valuable tool for building a coherent set of indicators, providing a formal way of thinking

about a topic area, and helping to ensure that the selection of indicators is relevant,

balanced and aids understanding of the links between indicators. According to Brown, in

the absence of a coherent framework, the generation of indicators with no clear rationale

for their selection or relevance to a topic of interest could be the result. Research

conducted by Brown (2009) showed that achieving success requires the development and

testing of indicators, which also requires a considerable amount of time and technical

efforts. The author argued that the process of selecting indicators requires care to ensure

they are appropriate, relevant, objective, timely, easily interpreted, consistent,

analytically sound, valid, measurable, and excite interest. Brown further noted that all

aspects of indicators should be transparent and effectively communicated to reach target

audiences. Brown emphasized despite the pressure to have indicators to measure

sustainable development progress, developing a robust and high quality indicator framework takes time and needs to do in stages.

There are lessons to learn from the UN Office Internal Oversight Services (OIOS). The OIOS recommends establishing a clear, overarching framework for monitoring and evaluation objectives, roles and responsibilities definitions, and coordination mechanisms from the outset. The authors noted that when developing, monitoring, and evaluating frameworks, the following three questions, which tend to emerge often, should be addressed: What is to be monitored? Who will carry out the process? How will it be approached? The authors noted further that lack of clarity on these questions could be a significant hindrance to making progress.

The UN Statistical Commission has recently endorsed a blueprint for developing a comprehensive indicator framework by 2016. A draft released by the Commission contained an initial assessment of more than 300 potential indicators for global monitoring. The designers of the indicator framework took into account the significant challenges that SIDS and developing countries face in monitoring and evaluating sustainable development progress. This challenge raises serious concerns about the available capacity in small nations for performing such undertakings and how can the indicator framework be tailor-made to reflect the unique dynamics of territories that are small and vulnerable. In addition to limiting the indicators that may be irrelevant for SIDS, the Statistical Commission has pointed out that a large number of indicators can be

an enormous challenge for national statistical systems. The Commission emphasized that policy-makers must embrace capacity building and training as strategies to support national statistical monitoring and evaluation of capacity development.

The fourth question addressed in the study was as follows:

RQ 4. How do policy-makers propose to enhance the knowledge, skills and attitudes they perceive as being necessary for the successful development and implementation of sustainability-oriented policies in territories that area small and prone to hazards?

An overwhelming number of respondents agreed that achieving sustainability in hazard-prone territories requires the use of relevant knowledge, competencies, and attitudes. While there was clear interest in enhancing the knowledge- and competency-base for achieving sustainability, the transcribed data revealed that implementing sustainability-oriented interventions pose challenges for many policy-makers in territories that are small and prone to hazards. Recent research has focused on ways to better understand the concept of sustainability and embed sustainability thinking into policy-making practice. Adams and Kelly (2008) found that policy-makers need more scientifically informed and holistic visions for developing sustainable communities, along with relevant competencies, to create and realize these visions. This calls for practitioners to enhance their knowledge base about sustainability and develop the competencies and attitudes required to take positive action toward attainment of the goals of sustainable development (Adams & Kelly, 2008). Amodeo et al. (2008) suggested that there must be

an ongoing commitment to embed sustainability thinking into the minds of practitioners while gaining deeper insights into how sustainability might be achieved. In Doppelt's (2003) leading change guide toward achieving sustainability, the author illustrated that positive change toward sustainability is possible when sustainability-oriented policies are strategically nurtured and implemented. According to the author, having a clear vision, effective leadership principles, appropriate tools, methodological procedures, behaviors, and long-term commitment to the improvement, are strategies to help facilitate the adjustment that policy-makers must make to implement sustainability-oriented policies in SIDS. Doppelt recognized the importance of developing the institutional and human capacity required to successfully develop and implement sustainability interventions. The author emphasized the importance of openness to comprehensive stakeholder engagement, effectively managing risks through robust internal controls and embracing good practices in transparency and accountability. Doppelt also placed emphasis on developing the relevant knowledge base, competencies and attitudes for institutional strengthening, efficient functioning, and optimizing the achievement of sustainable development outcomes.

The fifth question addressed in the study was as follows:

QR 5. What are the opportunities policy makers need to consider in developing and implementing sustainable-oriented policies in small, hazard-prone territories?

There was overwhelming agreement among the respondents that a new approach is necessary to successfully develop and implement policies that support the goals of sustainable development. It was widely recognized that if SIDS are to succeed in developing and implementing sustainability-oriented policies, policy-makers will need to shift their approaches away from ad hoc, expedient, and unsustainable approaches to knowledge-informed, competency-based, and conscientious efforts to pursue the goals of sustainable development. Several authors addressed the need for a new approach to policy-making practice. As a starting point, there must be a common vision and vocabulary for strengthening institutional capacity to achieve the goals of sustainable development (TNS, 2011; Hopwood, Unerman & Fries, 2010; Epstein, 2008; and Harris & Crane, 2002). Policy-makers must commit to a change in their thinking, activities, and attitudes to reflect the appropriate values, principles, perspectives, and priorities of sustainable development (Epstein, 2008). Achieving the goals of sustainable development requires an ability to see the bigger picture, willingness to learn and grow, and possession of a can-do attitude. According to Epstein, Policy-makers must maintain awareness of evidence-based practices through ongoing learning initiatives, remaining open to emerging ideas and trends and ensuring that policy interventions in support of sustainability are appropriate.

Another opportunity that exists to successfully develop and implement knowledge-informed policies is through the creation of a culture of perdurable learning

and self-actualizing, that is, an ongoing process of voluntary and self-motivated learning of sustainability and incorporating the concepts, principles, instruments, and unified methods to carry out the institutional objectives. Garnder, Arnand and Morris (2007) contended that continuous learning is important to embed sustainability thinking into the practices of policy-making and have a positive impact on the development and implementation of public policies. The authors argued that having easy access to learning resources could help to facilitate knowledge sharing and knowledge-transfer of evidence-informed data. This, in turn, will enable policy-makers to gain pertinent knowledge, competencies, and a greater appreciation of the appropriate attitudes required for achieving the goals of sustainable development in their local context. It can also enable policy-makers to embrace approaches toward more open, flexible, and adaptive interventions in pursuit of sustainability. An online knowledge repository system to capture, organize, and catalog pertinent data that policy-makers can easily access can support this iterative process (Engelbart, 1995). Engelbart noted that a dynamic knowledge repository system is helpful to harness the collective human intellect of all peoples. It can be useful therefore to maximize the potential of policy-makers to successfully develop and implement sustainability-oriented policies. On the other hand, by simply increasing research rigor and making information evidence available on a website, this may not be sufficient to effect the change required to further the progress of sustainable development in policy-making practice. Policy-makers will benefit from

ongoing engagement and interactions with other stakeholders (Garnder, et al., 2007).

There is a need to communicate with other interested parties and apply the knowledge

and skills they learned in policy-making practice. Even when they do not have the

answers to their questions, they can collaborate and bring their knowledge from the

repository to the conversations.

Another way in which to help quicken the pace toward achieving the goals of

sustainable development is to develop a formal recognition - reward system to motivate

policy-makers to perform extraordinarily. Based on the evidence uncovered in the data

analysis, an important motivation for policy-makers is the acknowledgement and

recognition of their outstanding contributions to the attainment of sustainable

development in policy-making practice. Hence, a formal recognition and reward of the

extraordinary efforts of individuals or teams in support of the institution's vision toward

sustainability may be an effective strategy to encourage and reinforce positive behaviors

and attitudes toward the attainment of sustainability.

Analysis and Interpretation of the Findings

This study generated five findings. These findings suggest that policy-making

practice is inadequate for achieving the goals of sustainable development overall. The

research results support previous findings, which found that sustainable development is a

novel concept and policy-makers struggle to find an adequate approach for

operationalzing its goals. The findings suggest that by linking evidence-based knowledge

with the appropriate tools and actions, it may be possible for policy-makers to close the knowledge-gap and successfully develop and implement sustainability-oriented policies despite the hazard-risks in the territories.

Recommendations

- The most critical lesson learned from this study is that greater efforts are needed to gain a deeper understanding of the unique characteristics and features of SIDS to enable policy-makers to better define the safe operating space for human development and enhance their capacity to successfully develop and implement sustainability-oriented policies.

- The governments of SIDS need to increase the effectiveness of national policy frameworks to guide policy-making practice toward sustainable planning and development considering the unique characteristics and features of SIDS

- The governments of SIDS need to strengthen institutional and human capacity across the full spectrum of policy-making practice for sustainable development effectiveness and accountability.

- The governments of SIDS should encourage and support meaningful initiatives to help embed sustainability thinking into policy-making practice.

- Policy-makers in SIDS should have access to a knowledge-repository system to help facilitate the adjustment that needs to be made to successfully develop and

implement policies that support the goals of sustainable development in policy-making practice.

Implications for Positive Social Change

By identifying the factors that impede progress toward sustainable development and the corrective measures that can be taken, this study has potential to improve policy-making practice and help quicken the pace of progress toward sustainable development in Caribbean territories that are small and prone to hazards. The first implication for positive social change is that the recommendations made in the study may encourage the governments in the Anglophone Caribbean to strengthen their national policy agendas for attaining sustainable development despite the constraints. In this process, the governments will be able to strengthen their institutional frameworks and policy-making mechanisms and draw important lessons that could help design more appropriate interventions to improve and integrate economic growth, social equity, and environmental protection. Policy-makers might attain positive social change through institutional and human capacity building, stakeholder collaboration, public awareness, and broader public participation.

The second implication for positive social change is to enhance the knowledge- and competency-bases of policy-makers through use of an online knowledge repository system. If the governments implement this recommendation, it could help to narrow the knowledge, competency, and performance gaps in policy-making practice and quicken

the pace of progress toward attainment of the goals of sustainable development. The researcher hopes that this research study might inspire other investigators to engage in similar studies throughout the Caribbean and augment the intellectual capital of Grenada, Barbados, and the entire Caribbean region.

Limitations of the Study

Case studies are purposeful and can produce crucial information about the cases under study (Patton, 2002). Yet, when only 18 out of hundreds of key policy-makers were interviewed, there is a possibility that the data obtained represents only a fraction of policy-makers' overall experiences in policy-making practice toward achieving the goals of sustainable development. Although the performance data is similar to previously published findings, the researcher argues that a larger sample size might have helped to gain a broader understanding of the phenomenon. It is important to note that the purpose of the inquiry was to capture the important information required to produce deep, rich, meaningful data about policy-making practice rather than generate generalizable data (Onwegbuzie & Leech, 2007). It is important to point out also that archival data corroborated the interview data to satisfy triangulation.

Another limitation is that the researcher cannot extend the efindings in this inquiry to wider populations with the same degree of certainty that quantitative studies can. While the researcher cannot test the findings to discover whether they are statistically significant, it was possible to generalize the results of this case study to

theory using replication (Yin, 2009). It may also be possible to generalize the findings to the wider population through falsification (Popper, as cited in Theobald, 2006). It is important to point out that Phillips & Barbules (2000) challenged the concept of falsification. The authors argued that the focus of one particular case might be different from that of another even when researchers are investigating the same topic. One the other hand, Baxter and Jack (2008) concurred with Popper that falsification does provide a plausible way to interpret research results beyond the theory tested.

Despite the potential limitations in this inquiry, the research findings support some general conclusions about patterns and behavioral trends in the experiences of policy-makers in Barbados and Grenada in pursuit of the goals of sustainable development.

Recommendations for Future Research

Future research following the proposed recommendations could provide a clearer understanding of how to embed sustainability thinking into policy-making practice. Examination and determination of the safe and just operating space for human development in SIDS may lead to additional information on how to pursue the goals of sustainable development.

A Personal Reflection

I recall with clarity the impulse that propelled me to apply to Walden University's Public Policy and Administration doctoral program - to enhance my chances for

achieving success in becoming the first female Prime Minister of Grenada, Carriacou and

Petite Martinique. I also recall the excitement I felt when I read my acceptance letter.

Equally important, I remember reading, writing, evaluating my work toward the

dissertation journey; reading, writing, and evaluating some more, and repeating the

process over. The going was easy at times but it got tougher as I moved ahead. When

things got tough, especially in terms of my health and financial challenges, I often

wondered when the journey will end. The reality is that writing this dissertation was

filled with excitement, tension, faith, hope, ups and downs, and successes and obstacles,

which created a unique meandering journey.

As I reflect on the research process, the procedures, and the final product, which I

call my dissertation, I feel particularly proud of my accomplishment. I feel even happier

for the knowledge gained and the learning that has taken place. At the initial stage of the

process, I did not precisely know how to approach the dissertation. I was certain that I

wanted to focus on sustainable development in the Caribbean in the aftermath of

hurricanes, earthquakes, and flooding, which caused severe devastation, along with

economic contractions and global phenomena, but I was unclear about how to effectively

frame and approach the study. As the problem and central research question became

clearer, I considered the grounded theory approach, but following discussions with my

committee chair, it became evident that the case study would be a better approach for my

inquiry. Indeed, the case study approach allowed for in-depth, multi-faceted exploration

of policy-making practice toward sustainable development - a complex process. It provided rich, detailed information and insights into the subjective experiences of key policy-makers in Barbados and Grenada.

I was cognizant that my passion for issues related to sustainable development in the Caribbean could potentially bias my objectivity. But by adhering to the ethical principles of objectivity and thoroughness, listening intently to the emic voices of the respondents, and engaging in a sustained effort of phenomenological bracketing, epoche, and copious note-taking to minimize my potential biases, my preconceived notions began to vanish.

I was impressed with the consistency of the findings across the data sources. At the same time, I was disappointed to see how policy-making practice and development has taken place in both islands. The findings suggest that weaknesses and deficiencies in the policy-making apparatus tend to hinder progress toward the goals of sustainable development.

The entire research process has been a beneficial experience. One of the first lessons I learned was about the importance of being organized. The research process required extensive planning and preparation for each phase of the study. I significantly maximized my time to read. I gained a deeper understanding of scholarly writing and managing data. I improved my skills in time management, despite some continued short-comings. A second lesson I learned was about humility. The probing questions and

feedback from my professors and recommendations from my committee members and colleagues enabled me to gain deeper knowledge, skills, and a clearer understanding of the dissertation process. An important organizational strategy was reviewing various dissertations with similar structural formats that closely related to my content area. I carefully examined each chapter layout, the writing style, how the chapters connected to one another, how findings were explained, how data was delineated and organized, and what information was included in the appendices. I was fascinated with the available technology for organizing my work, formatting the documents, data analysis, creating the creating references and table of contents. I paid special attention to the methodological sections. These dissertations provided insights for the development of the research design, providing direction for the sampling design, stylistic approach and a way to systematize the research process.

The challenge of balancing family responsibilities, my health issues and finances, and the research process was overwhelming at times. Initially, there were challenges that arose at the literature review stage. I underestimated the duration of time required for the literature reviews and fell behind the schedule in terms of the number of literature to review. I resolved this issue by re-adjusting the time-plan for the study, as well as improving my level of discipline. I also faced challenges in saying no to family members regarding invitation to family events and activities during the research process. Attending some of these events did cost me in terms of time and money. I also faced significant

health and financial challenges. I had three major and two minor medical procedures during the research process, which significantly affected my progress. Being unable to work meant significantly reduced earnings. In retrospect, I also realized that I failed to communicate the challenges I faced effectively with the members of my dissertation committee. I wanted to remain focused on my goals and not request special favors. Despite the many challenges that I faced, I persevered.

It is beyond any doubt that I have greatly benefited from the research process. Being engaged in the study has contributed to improvements in my leadership skills. The level of my self-confidence has increased. I am now more passionate about sustainable development issues in the Anglophone Caribbean. My goal is to help guide policy-making practice in the region to exploit the potential of decision-makers, overcome the barriers to attaining the goals of sustainable development, and help quicken the pace toward the successful development and implementation of sustainability-oriented policies in territories that are relatively small and prone to hazards.

Conclusion

The findings of this study speak to the experiences of key policy-makers in Barbados and Grenada in their practice of policy-making toward sustainable development. Viewing the strategies, approaches, actions, and behavioral tendencies of policy-makers and performance outcomes through the lens of sustainability provided valuable insights for enhancing policy-making effectiveness toward sustainable

development. As one of the few studies available on the role of policy-making effectiveness in achieving the goals of sustainable development, the findings may be useful to help policy-makers and advocates of sustainable development to change the trajectory of development. With growing challenges in territories that are small and prone to hazards, policy-makers could look to the principles in the sustainable development framework as a means of merging theory with practice to create positive social change. Clearly, many opportunities exist to embed sustainability thinking in policy-making practice and augment the knowledge, competencies, and skills of policy-makers to achieve the goals of sustainable development. Much of the research in this study centered on having the appropriate knowledge, tools, and attitudes for closing the knowledge-gap in policy-making practice. Although additional studies are required to confirm and extend the findings, this study has laid the groundwork to move the discussion forward. Policy-makers may use findings from this work to develop effective policies and strategies for achieving the goals of sustainable development in territories that are small and prone to hazards.

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Appendix A: Table and Figure Captions

Figure 1.1 GDP per capita annual growth rate in Barbados between 1970 and 2010.

Adapted from Trading Economics data files, retrieved on February 5, 2016 from:

http://www.tradingeconomics.com/barbados/population-growth- annual-percent-wb-

data.html.

Figure 1.2 GDP per capita annual growth rate in Grenada between 1970 and 2010.

Adapted from Trading Economics data files, retrieved on February 5, 2016 from:

http://www.tradingeconomics.com/grenada/population-growth-annual-percent-wb-

data.html.

Appendix B: Sample Letter of Invitation to Prospective Participants

Participants' address

Salutation:

Dear Prospective Participant:

I am a doctoral candidate at Walden University, seeking candidates to participate in a qualitative case study of how to achieve sustainability in hazard-prone territories in the English-Speaking Caribbean. In particular, I am looking for individuals in Barbados and Grenada who: have played or currently play a key role in policy-making, policy-planning/ implementation, and/or evaluating public policies at the national or local government levels; are interested in understanding how to achieve sustainability in hazard-prone territories; and are willing to share his or her knowledge, experiences, perceptions or thoughts on policy-making toward achieving sustainability.

Purpose

The study aims to broaden understanding of what hinders or facilitates the achievement of sustainability in hazard-prone territories. It is assumed that by identifying the constraints, opportunities, and strategies for achieving sustainability, policy-makers can take corrective measures to successfully develop and implement policies that support the goals of sustainable development.

This letter is part of a process called "informed consent" to allow participants to

understand the nature of the study before deciding whether to participate.

Voluntary Nature of the Study

Participation in the study is voluntary. A participant is free to decide whether to

participate. In addition, he or she may withdraw at any time.

Procedures

If you agree to be part of this study, you will be asked to:

- Sign a consent form before participating.
- Participate in a 60 minute face-to-face or asynchronous (skype, ooVoo or telephone) interview at your convenience.
- Participate in a 20-30-minute follow-up interview to clarify issues that might emerge in the analysis of collected data and ensure that the preliminary results accurately reflect the opinions and experiences of respondents.

The questions to be covered relate to the following issues:

- Factors that facilitate progress toward developing and implementing sustainable-oriented policies.
- Factors that have impeded or continue to impede progress toward developing and implementing sustainable-oriented policies.
- How knowledge, skills, and attitudes can be enhanced to achieve policy-making that is aligned to the sustainable development framework.
- Evaluating the effectiveness of sustainable policies in hazard-prone territories.
- Opportunities and strategies to be considered in achieving sustainability in hazard-prone territories.

Commitment to Confidentiality:

If you agree to participate, a specific date, time, and venue will be arranged.

Permission would be sought to audio or video-record your responses. Rest assured that

any, and all information that you provide will be kept anonymous. Your identity will not

be disclosed as numerical codes will be used instead of names. All collected data will be

password protected on my computer, with only me having access to the information.

Risks and Benefits

This study would not pose any risks to your safety or wellbeing. The only types of risks that may be associated with this type of study are the minor discomforts that can be encountered in daily life, such as fatigue, stress or becoming upset.

The benefit of your participation in the study is that policy-makers in Barbados and Grenada and perhaps other nations in the English-Speaking Caribbean with similar circumstances may gain knowledge about achieving sustainability in hazard-prone territories.

Compensation:

There will be no financial compensation provided for participation in this study.

Contact and Questions

If you are willing to participate or have questions about the study, you may contact me at xxx xxx-xxxx or email xxxxxxxxx@gmail.com.

If you have additional questions or wish to speak privately about your rights as a study participant, you can contact Dr. xxxxxxx xxxxxxx, a Walden University representative at xxx xxx xxxx.

Yours respectfully,

PhD Candidate

(Student No. xxxxxxx)

Appendix C: Sample Interview Protocol

PREPARED BY:

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The following interview questionnaire was developed by Denise Roberts on May 1, 2014 for use in the collection of data from policy-makers in the Anglophone Caribbean to better understand policy-making practices. The initial draft of the questionnaire was developed after completing literature reviews and from materials that the researcher deemed necessary and appropriate to address the research's purpose and questions.

The draft was reviewed by an expert panel based on independent, systematic review of relevant literature, panel-identified supplementary documents, and consensus expert opinion. The panel provided recommendations to clarify and refine questions in the initial written draft. Following the revision, the recommendations were then subject to a panel-wide vote. All the questions that received 90 percent or higher agreement were included in the final draft.

APPROVED AND VALIDATED BY EXPERT REVIEW PANEL MEMBERS ON
Approved on 11/9/2014…. Revised on 04/20/2015:
(See section I 6 for Content Validation Procedures)

Interview Questionnaire Sections to be used:
_____ A: Purpose and Nature of the Study.
_____ B: List of Key Policy-Makers and Interview Schedule
_____ C: Copy of Consent Form
_____ D: Pre-Interview Notes
_____ E: Introductory Protocol
_____ F: Demographic Data
_____ G: Interview Questionnaire
_____ H: Strategy to Strengthen the Credibility and Trustworthiness of the Interview.
_____ I: Strategy to Establish Content Validity of the Research Instrument.

A: Purpose and Nature of the Study

The purpose of the study is to better understand the factors that hinder or facilitate the successful development and implementation of policies that support the goals of sustainable development in hazard-prone territories. A qualitative multiple case study approach will be employed to explore the practices of policy-makers in policy-making

geared toward achieving sustainability.

My name is Denise Roberts, a doctoral student in Public Policy and Administration at Walden University. I am conducting research to gain a better understanding of how to achieve sustainability in hazard-prone territories. The study aims to learn more about policy-making practice in Grenada and Barbados and how policy-making can be enhanced to achieve sustainability.

You have been selected to participate in this study because you have been identified as someone who has a great deal to share about policy-making practice in Grenada.

I have planned this interview to last no longer than one hour. During this time, there are several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you to push ahead and complete this line of questioning. I welcome the full expression of your perspective.

To facilitate note-taking, I would like to audio (or video-tape) our conversations. For your information, only researchers on the project will be privy to the tape, which will be eventually destroyed after the information has been transcribed. It is necessary for you to sign the consent form devised to meet our human subject requirements. Just to reiterate, all information will be kept confidential and anonymous, your participation is voluntary and you may stop at any time if you feel uncomfortable, and no harm is intended or expected in this study.

There may be publications based on the information collected. These presentations will use case numbers only; no names.

Thank you for your agreeing to participate.

Interviewee initials: _____

Date: _____ Time: _____

Interviewer: _____

Case No: _____

F: Demographic Data

1. What is your age range?   ▪18-28 ▪29-39 ▪40-49 ▪50 +
2. What agency or government department do you work or have worked for?

   _____

3. How long have you worked in this position? _____
4. How long have you worked in policy-making? _____
5. Briefly describe your role as it relates to policy-making or choose one category:

   _____

   ▪Key policy maker? ▪Key Policy Implementer? ▪Key Policy Evaluator?
6. What is your educational level completed? ▪Vocational ▪Bachelor ▪Master ▪Ph.D. ▪Other _____

7. What is your field of study? _____

G. Interview Questions

A. Factors that policy-makers perceive as having contributed to, or facilitated progress toward achieving sustainability in territories that are small and prone to hazards.

1. What do you understand about sustainability?

2. How has policy-makers' understanding of sustainability affected its progress in policy-making practice?

3. What are the strategies to improve policy-making practice toward the attainment of sustainability in your territory?

4. What resources are available to help embed sustainability thinking into the culture of policy making practice?

5. What incentives do policy-makers receive for engaging in innovative policy-making practices?

6. What motivates policy-makers to use innovation in policy-making practice?

Probe: What is being accomplished through sustainable-oriented initiatives?

7. What is changing in policy-making practice toward achieving sustainability?

8. What kinds of networks are developing to help advance sustainability?

9. What motivates policy-makers to use innovative strategies toward attaining

sustainability.

10. What kinds of support benefit policy-making practice geared toward achieving

sustainability?

Probe: How well have the strategies for attaining sustainability been working?

B. Factors policy-makers perceive as having impeded or continue to impede progress in policy-making geared toward achieving sustainability.

1. What are the most significant barriers to achieving sustainability in territories that are small and prone to hazards?

Probe. How are these barriers viewed in policy-making?

2. How well do policy-makers understand the tools available for sustainable hazard mitigation, sustainable development, and understanding sustainable development progress?

3. What are the biggest challenges to addressing these constraints?

4. Why are there gaps in addressing these constraints?

C. How do policy-makers evaluate the effectiveness of sustainability-oriented policies in territories that are small and prone to hazards?

1. What do you consider to be the most important goals and targets pursued toward the attainment of sustainability in vulnerable territories?

Probe: Why do you think these goals are important?

2. How have these goals been addressed?

3. How have these goals been evaluated?

Probe: Evaluated by whom? What goal have been met, if ever, and sustained? For how long?

4. How do you go about assessing whether policy-makers grasp the concept of integrating the principles of sustainable development into policy-making practice?

Probe: Do you use evidence of policy-makers' learning in your assessment of policy-making strategies?

5. What kinds of assessment tools tell the most about what policy-makers are learning and how they learn?

Probe: What kinds of assessment most accurately capture what policy-makers are learning?

6. Are you involved in evaluating policy-making practices?

Probe: How is this achieved?

7. How is the assessment of learning used to improve policy-making practice?

8. To what extent is policy-making evaluation valued within your discipline?

D. Policy-makers' perceptions of how to enhance the implements they perceive as being necessary for positive action in policy-making practice toward the attainment of sustainability in hazard-prone territories?

1. What kinds of knowledge are needed to enable policy-makers to successfully design and implement sustainability-oriented policies in territories that are prone to hazards?

2. What kinds of skill-sets or competencies can help to increase policy-makers' capacity to successfully design and implement sustainability-oriented policies in hazard-prone regions?

3. What kinds of attitudes are need to enhance policy-making practice toward sustainability?

E. Opportunities that need to be considered for advancing sustainability-oriented policies in policy-making practice.

1. Much of the literature on sustainability emphasizes the importance of involving stakeholders in research and linking knowledge to action. In your view, who is driving the sustainability agenda?

2. What is the role of stakeholders in achieving sustainability?

Probe, if necessary.

3. Who may be missing from the discussion?

Probe, if necessary.

4. What is the role of businesses toward achieving sustainability?

5. What role do scientists play in shaping policies toward achieving sustainability?

Probe: How do you see research contributing to the achievement of sustainability?

6. What kind of policy/action do you envision policy-makers effecting?

7. Where would you like to see policy-making go in the next 10 years?

8. Describe how policy-making practices are improving toward achieving sustainability?

Probe: How do you know? (criteria, evidence)

9. Is the assessment of policy-making a major focus of attention and discussion?

10. Are there any particular characteristics that you associate with policy-makers who are interested in innovative policy-making strategies?

11. What opportunities are emerging to develop strategies for learning to improve the approach to policy-making achieving sustainability?

12. What motivates policy-makers to participate in the development of programs to improve policy-making practice, the responses very varied.

13. How frequently do you participate in such programs?

14. How are these programs advertised to policy-makers?

Appendix D: Sample Archival Document Analysis Protocol

It is essential to develop a consistent method for gathering, assessing, analyzing, interpreting and reporting archival data. Several authors have offered guidelines for conducting archival document research, i.e., exploring and describing a phenomenon of interest by examining pre-developed communications. Gilliland & McKemmish (2004) suggested describing the overall purpose of the research, defining the specific goal(s) to be accomplished, determining the types of data that are required to address the research purpose and questions, defining the role of the researcher in document analysis, and describing the method and procedures for collecting, screening, and analyzing archival data.

1. What is the overall purpose of the research inquiry?

> This qualitative case study seeks to identify the factors that facilitate or hinder the successful development and implementation of policies that support the goals of sustainability in hazard-prone territories.

2. What is the goal of the archival review?

> The goal of the archival review is to better understand the practices of policy-makers in Barbados and Grenada in their attempt to achieve sustainability.

> This document analysis protocol provides guidance for planning, collecting, assessing, analyzing, and interpreting collected data.

3. What types of data are required to address the research purpose and question(s)?

a)   *Documentation*
Documentation e.g., written correspondences, such as notes, memorandums, policy instructions, project proposals and their evaluation, survey assessments, and statistical reports of the sustainable development outcomes (i.e., economic growth, environmental protection, and social sustainability) in Barbados and Grenada since gaining independence from the United Kingdom (1966 - 2010) and generated by government and non-governmental agencies, e.g., Ministries of Finance, Social Development, and Environment in Barbados and Grenada, Caribbean Development Bank (CDC), International Monetary Fund (IMF), World Bank, United Nations agencies or other relevant documents.

b)   *Accessibility*

Archival documents are easily searchable electronically, searching the Agency's website using key terms, such as sustainability outcomes, economic growth, environmental protection, and social development should yield these documents.

c)   ***Security***
Documents would be respected as unique and authentic information that should not be altered in any way by the researcher or research assistants.

4. What is the role of the researcher in the document analysis process?

The role of the researcher is to source and search through archival records to find relevant characteristics of the document properties. The researcher is solely responsible for collecting, evaluating, arranging, analyzing; interpreting the documents, and reporting the data results.

5. Method of Inquiry

This analysis will use the analytical method described in, "Describing Archives: A Content Standard" (DACS) to describe archives. DACS was previously validated and adopted by the Society of American Archivists (SSA) as an official SAA standard in 2004.

6. What are the procedures for collecting and analyzing archival documents?

Collecting and analyzing archival documents require a series of steps to be taken that includes: reviewing, assessing (critical reading and note-taking), weeding, arranging, and analyzing written material.

Before entering into archives, a research should conduct some background research on the topic of interest (Roe, 2005). This helps to provide a context for the documents, allowing the researcher to be become acquainted with the material and determine which documents hold relevance to the topic before data collection. The documents can provide an idea of the type of information available that may be relevant to the investigation, as well as the amount of material required. These steps will be accomplished by conducting a preliminary survey of the documents, using the Document Analysis Worksheet developed by National Archives and Records Administration (2002). The Document Analysis Worksheet addresses questions, such as: who wrote the document? What does the test say? Why does it say what it does? What is my understanding of what is taking place? What does this document mean to the research inquiry? Can I believe this document? Are there any unanswered questions?

Sample Written Document Analysis Worksheet

1. TYPE OF DOCUMENT (Check one):

___ Census Report	___ Parliamentary Record	___ Survey
___ Letter	___ Press Release	___ published
___ Memorandum	___ Policy-Making Instruction	Manuscript
___ Newspaper	___ Statistical Report	___ Other

2. ELIGIBILITY CRITERIA

All raw data, documentation, and records that are relevant to understand the factors that hindered and facilitated progress toward achieving sustainability in Barbados and Grenada during the period 1966-2010. The analysis will be restricted to indicators of economic growth, environmental quality, and social sustainability.

3. UNIQUE PHYSICAL QUALITIES OF THE DOCUMENT (Check one or more):

___ Interesting Letterhead	___ Notations
___ Handwritten	___ Received stamp
___ Typed	___ Other

4. DATE(S) OF DOCUMENT:

_____

5. AUTHOR OR (CREATOR) OF THE DOCUMENT:

_____

6. FOR WHAT AUDIENCE WAS THE DOCUMENT WRITTEN?

_____

7. DOCUMENT INFORMATION

A. List three things the author said that you think are important for this study: In other words, what are the author's arguments, theories or significance points that relate to the study?

_____

_____

_____

B. Why do you think this document was written?

_____

C. What evidence in the document helps you know why it was written? Quote from the document.

_____

_____

D. List two things the document tells you about life in the policy-making world at the time it was written:

_____

_____

E. Take note of a key question that is left unanswered by the document:

_____

7. Re**view, weed, arrange, and analyze** documents to determine what the items are and their context and relationships to the records around them.

(A) REVIEW DOCUMENTS.

1. Read critically

Critical reading of archival documents is important for making strong arguments (Robyns, 2001). It involves reading, listening, reflecting on written text, and making judgments about how the text are used, interpreted, and conclusions have been drawn. Kinginger (2009) suggested that researchers must first determine the purpose of the review to identify and assess how the central claims have been developed or argued. Second, they must think critically about the audience that the text was meant for and the context in which it was written. Third, Robyns (2001) suggested distinguishing the types of reasoning in the text, e.g., what concepts are defined and used? Does the text appeal to a theory or theories? Is any specific methodology laid out? If there is an appeal to a particular concept, theory, or method, how is that concept, theory, or method used to organize and interpret the data? Examine how the text is organized: how has the author analyzed (broken down) the material? Be aware that different disciplines (i.e. history, sociology, philosophy, biology) will have different ways of arguing. Fourth, Robyns suggested examining the supporting evidence. What counts as evidence in the

argument? Is the evidence statistical? literary? historical?, etc. From what sources are the evidence taken? Are these sources primary or secondary? Fifth, Robyns suggested evaluating how the text is argued. Is the argument strong, why? Could it be better or differently supported? Are there gaps, leaps, or inconsistencies in the argument? Is the method of analysis problematic? Could the evidence be interpreted differently? Are the conclusions warranted by the evidence presented? What are the un-argued assumptions? Are they problematic? What might an opposing argument be?

2.   Take Copious Notes

Taking careful and relevant notes is important to synthesize research data and capture the essence of materials (Piolat, Olive & Kellog, 2005). Piolat et al., noted that good notes are critical to the success of research. According to the authors, note-taking allows a researcher to make sense of the material being read and consider how it relates to the topic under review. Notes may be drawn from any document under review. Taking notes can help to facilitate the development of sound conclusions and lead to new sources and ideas. A key advantage of note-taking is that it saves time.

(B) WEED DOCUMENTS

Weeding documents will be accomplished in a two-stage process: (1) compiling the documents that are relevant to the study, and (2) compiling the documents that are obsolete (i.e., documents that are outside of the delimited time-period and geographical boundary of the study, produce overly complex arguments, and missing critical information, such as dates, authors, and critical answers to key questions that are important to the study (Roe, 2005). The documents that have been identified as obsolete will be discarded.

(C) ARRANGE THE DATA

Arrange the documents into files, using the following format (Roe, 2005):
1. Name of Document
2. Author (Creator) of Document
3. Date(s)
4. Record Type
5. Relevant Characteristics of Documents
6. Message in Document

Here is an example:

Name of Document	Author of Document	Date(s)	Record Type	Relevant Characteristics of Documents	Message in Document

Archival Boxes:
Arrange the documents by naming files and arranging them (chronologically, if they cover a range of dates or alphabetically by title, if they tend to be around the same date range - alphabetical lists are easy to scan and add to). When filing chronologically, the item will be filed from earliest year in front; the most recent item should be in the back when one opens the file.

- A box would cover only one main topic (e.g., LTER)
- Each box would contain a paper inventory sheet on top (an Excel Spreadsheet)
- An ID number will be provided for each box
- Box ID numbers would consist of initials-year-sequential number
- Box titles would be descriptive and concise

(D) ANALYZE THE DOCUMENTS

To derive results from collected data, it is necessary to classify the data for the purpose of conducting analyses. Content analysis, a quantitative analytic technique for examining trends, patterns, and categories and finding meaning in the content of written documents, will be used to gain a deeper understanding of the data (Krippendorff & Bock, 2008). Content analysis has been used to identify intentions, communicate trends, emotional states, attitudes, and behaviors (Krippendorff & Bock, 2008). The process involves identifying words, sentences, phrases, or themes within data to reduce the data into manageable categories and search for concepts in the data. A relational analysis, which identifies relationships among concepts, will be conducted to identify meaningful relationships that may exist between the concepts, and construct mapping representations of the concepts (Neuendorf, 2002). These representations will be analyzed to identify patterns, themes, and categories of the concepts and their relationships. A final step in the process involves the comparison of results within data sets to confirm or disprove the patterns identified in literal replication (Yin, 2003). If similar patterns are confirmed, literal replication would be established (Yin, 2003). This will enable the researcher to make objective evaluations about the meaning of the phenomenon under examination. If contrasting patterns are found, theoretical replication would be established and deeper probing of the

differences found within the cases will be conducted to determine the cause of the discrepancy (Yin, 2003).

Credibility and Trustworthiness of Archival Data

The study described in this protocol is subject to quality assurance evaluation. To establish credibility and trustworthiness when collecting, evaluating, and interpreting the content of written texts, a number of strategies can be employed: (1) a researcher must understand "deep structure" in critical reading (Gage & Bergquist, 2006), i.e., ability to read with an open mind; seek knowledge; understand logical consistency; and understand tone and organization of texts; (2) utilize two or more peer reviewers who are adept at rating data in a consistent manner (Doyle, 2007); (3) reflect thoughtfully on the data (Janesick, 2010); epoche hidden knowledge or preconceptions that can produce biases (Gearing, 2004) and bracket (Moustakas, 1994) such tendencies to allow the message of the authors to be heard and understood with clarity; (4) evaluate potential biases, prejudices or propaganda in the texts to better understand differing messages and their relative influence on the research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). (5) Using content analysis has several advantages for strengthening the reliability and trustworthiness of archival data. It can allow for both quantitative and qualitative operations, provide insights into complex patterns of human thought and language use, evaluate differing messages, and allow for replication to thoroughly analyze, compare, and understand the data (Krippendorff & Bock, 2008).

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Appendix E: The Audit Trail

The following represents the audit trail for the multiple case study previously outlined:

1. Philosophical Position: When I commenced this study, my research philosophy was predominantly interpretivist. This was a result of completing quantitative and qualitative courses in my doctoral coursework. I became aware of the strengths and limitations of both approaches and concluded that the interpretivist position was an appropriate foundation for the study due to its holistic nature in attempting to capture depth and richness about phenomena.

2. The Research Problem. At first, I wanted to investigate the economic dimension of sustainable development. But the project was problematic and a policy-maker in the Caribbean highlighted the need to explore sustainable development overall so that themes of how achieving sustainable development can be pursued in territories that are small and prone to hazards can emerge.

3. The research Proposal: Based on this research problem, a proposal was developed and submitted to Walden University's research subcommittee for approval. This proposal included an outline of the study, its aims and objectives, and the research questions.

4. Reviewing the Literature: An in-depth review of the sustainable development literature was undertaken. It focused on performance in the three main dimensions of sustainable development and the difficulties in achieving the goals of sustainable development in the Anglophone Caribbean. The literature reviews highlighted that the body of sustainable development knowledge was fragmented; there was a lack of consensus on how sustainable development should be pursued; and there were several limitations in the evaluation methods used.

5. Designing a Research Framework: The next step involved designing a research framework to support the collection of evidence. The case study strategy was deemed appropriated based on its use of multiple evidence sources.

6. The Interview: The semistructured interview was the primary source of case-study evidence based on issues identified in the literature and in defining the research problem. No instrument was found to be adequate; therefore, I designed an interview protocol of questions and guidelines which was pre-tested by a three-members review panel to determine the clarity of the questions and depth of the research inquiry. I embraced the recommendations from the panel and the interview questions were subsequently refined. The members of the review panel eventually approved the interview questions.

7. Selection of Cases: To achieve breadth and depth of coverage across the research issues, two islands in the Anglophone Caribbean, which differed in a number of respects, were chosen as case study sites. The informants selected had in-depth knowledge of the topic under investigation. Through both purposive and critical case sampling techniques, knowledge informants were identified and invited to participate in the study by the researcher. The letter informed them of the research process, potential benefits and risks.

8. Considering Approaches for Collecting Evidence: I first considered grounded theory for collecting data. But I had difficulty reconciling its requirement to conduct research in a theoretical vacuum and the restrictions of micro-coding on researcher creativity. After gaining deeper insights from my committee chair, the case study method was considered and deemed appropriate to gain deeper insights about the phenomenon under study.

9. Considering Approaches for Data Analysis: Due to my interpretivist position, data analysis was an iterative process that involved interaction with and reflection on the body of evidence on several levels. Thematic, content and cross-case analysis were deemed appropriate techniques to facilitate the data analysis and discovery process. NVivo was considered to be appropriate for linking and managing the data concepts and enabling cross tabulation of the key issues across the cases.

10. Evidence Collection: In total, 20 semistructured interviews were conducted with study participants in their respective settings. These lasted between 50 and 60 minutes and were audio-recorded and transcribed for the purpose of data analysis within a day following the interviews. These transcriptions were later verified by informants. The interview transcriptions, as well as project documentation, independent reports, newspaper articles and website details were used in developing the study's primary narrative.

11. Managing and Analyzing the Evidence: A phenomenological approach was used to analyze the collected evidence. Thematic, content and cross-case analysis were the techniques used for the data analysis. Through constant data comparison, several ideas/points emerged from the interview transcripts and these were coded into key concepts. NVivo software was useful to a certain extent in managing the body of evidence until the software malfunctioned and I abandoned its use. Peer-reviewers from both within and outside the policy-making field were invited to evaluate the raw data, transcripts, the researcher's preliminary interpretation of evidence, and audit trail for verification purposes. Through reflection on the emerging concepts and iterative

interaction with the evidence, these were later conceptualized into higher order categories.

12. Adopting a Narrative Approach: The higher order categories were the basis for developing the study's narrative. This narrative was substantiated by reference to informant's statements. Through extensive reflection on the primary narrative and considering four key questions in the archival document reviews: What does the text say? Why does the text say what it does? What is my understanding of what is taking place? How does it relate to the research problem and questions? My interpretation of the evidence was expanded and the primary narrative was reduced to the principle research findings. Fiver key findings, which centered on the five research questions, were written up as a higher order narrative.
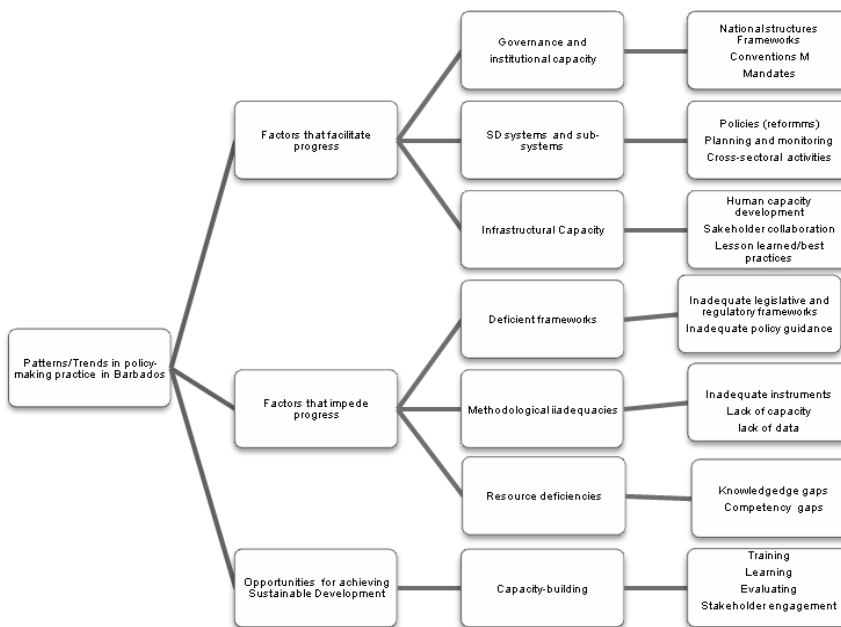
13. Distillation of New Knowledge: Through re-trawling the higher order narrative and reflecting on the findings separately and as a whole, relationships between the key findings were further explored. Through this process the study's theoretical conjecture was distilled. These contributions added to the extant body of theoretical knowledge of why sustainable development has not been sufficiently achieved and how achieving it may be pursued in territories that are small and prone to hazards.

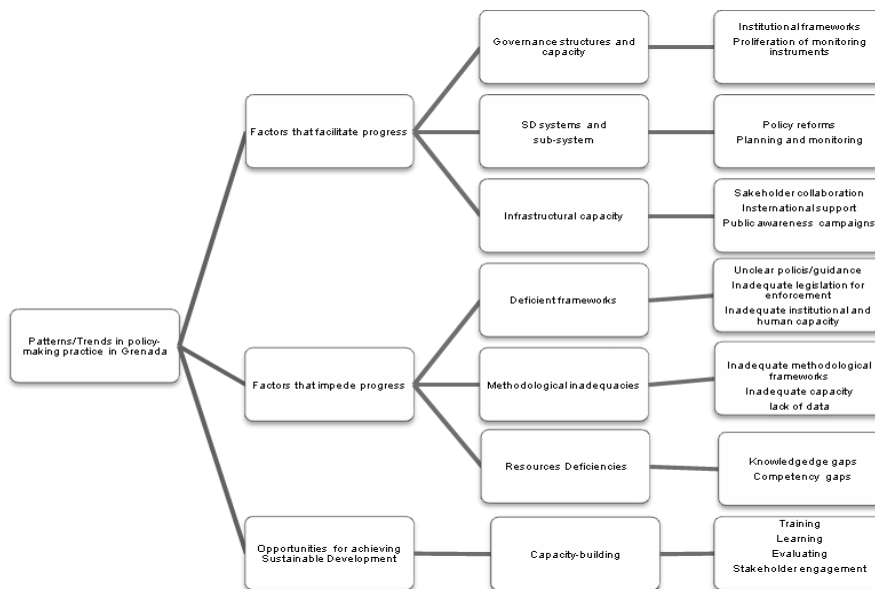Appendix F: Data Summary from Thematic Analysis of in-depth Interviews

Research Question/	Key Words	Coding Category	Patterns
Factors that Facilitate progress	Conventions, mandates, institutional frameworks, indicators, training, learning stakeholder engagement, planning, evaluation	Institutional arrangements Capacity building Support mechanisms	An abundance of SD frameworks, Indicator development Stakeholder engagement; decision support
Factors that impeded progress	Inadequate of understanding of Sustainability; inadequate guidance for SD planning and development; Weak institutional frameworks for SD; Lack of clarity about the safe operating space for development; weak environmental regulatory frameworks... ; weak government incentives; Indicators have been inconsistent and contradictory and methodological inadequacies indicators do not capture data that are important for obtaining a full picture of the issue of concern; data scarcity	Frameworks Indicators Resource capacity	Inadequate understanding of sustainability Inadequate guidance and support mechanisms Inadequate resource capabilities Development is disjointed Integrated development remains exclusive

Evaluation and assessment	Indicators provide different conclusions; Inadequate monitoring and evaluation of the progress of sustainable development	Evaluation of sustainable development goals Assessment of policy-makers' learning	Scarcity of pertinent data Inadequate testing mechanisms Evaluations have been poorly executed
Institutional capacity	Support mechanisms tend to lack adequate, coherent, consistent, and coordinated engagement Inadequate financial support Differing priorities No significant effort to address commitments other than submission of national communications to the agencies	Knowledge Competency-base Attitudes	Inadequate communications Evidence-informed data; thinking outside the box Requisite skills Attitudinal change
Opportunities	Policy-making practice can benefit from new, a new culture; purposeful frameworks; training and learning; a knowledge repository system; incentive program to reward policy-makers for their accomplishments	A new approach	Paradigm shift Capacity-development Cultivate a learning culture through new initiatives

Appendix G: Data Summary from Content Analysis of Patterns and Trends from Archival Documents

Barbados

Grenada