

The sustainable small state

Sustainable development in SIDS and national sustainable development strategies

This chapter offers the basis for identifying the characteristics of an 'ideal case' of a sustainable small state.

Since the first call for NSDS was made at the United Nations Conference on Environment and Development (Earth Summit) in Rio de Janeiro in 1992, SIDS have had to prepare, develop and implement such strategies, often with low institutional and individual capacities; '... while SIDS have made commendable progress in recent years, they still have a far way to go in creating the kind of systemic, institutional and individual capacity commensurate with the challenges of sustainable development'¹. Subsequent international meetings also noted that NSDS must address the Barbados Programme of Action (BPOA, 1994), the Millennium Development Goals (MDGs, 2000), the World Summit on Sustainable Development (WSSD, 2002), and the Mauritius Strategy (2005).

Small states and SIDS working separately face severe challenges such as limited funding, inappropriate scale and scope, scarcity of technical expertise, and poor infrastructure. These have persuaded many to turn to regional institutions for specialised assistance. In addition, international donor agencies also find it more cost effective to fund projects through regional institutions. The Pacific SIDS have developed a well-organised structure of regional intergovernmental organisations, co-ordinated through the Council of Regional Organisations in the Pacific (CROP). In the Caribbean, the establishment of the CARICOM Single Market and Economy (CSME) is seen as a critical element of the growth and development strategy of the Caribbean Community. The main objective of the strategy is to help Caribbean countries transform their regional integration process into an effective instrument of global integration, competitiveness and economic growth.

Mauritius, Cape Verde, Seychelles, and Maldives have adjusted policy and planning systems to focus on sustainable development as distinct from programmes for environmental protection. The process of policy-making within these countries is varied. Some of the countries have changed their institutional frameworks for policy-making and planning by adding a new advisory body to oversee issues which distinguish sustainable development from previous policies, where some countries with already complex policy formulation networks merely referred to sustainable development issues.

Whilst most SIDS have some form of NSDS and/or integrated development plans, it was recognised at the UN 2005 Mauritius meeting that there is a need to intensify national efforts by giving greater priority to the NSDS, to develop mechanisms for regional collaboration, and for sources of international assistance to be identified. The Caribbean Region has since implemented under ECLAC, the Regional Coordinating Mechanism on the Mauritius Strategy. The lack of basic data and statistics to build sustainable development indicators as well as poor understanding of their role in decision-making, together with the lack of political will, finance and human resources, and decrease in ODA, all act as major barriers in the implementation of NSDS. Additionally, emerging challenges such as the high cost of oil and food during the period 2007 through 2008, the HIV/AIDS pandemic, global security concerns and the 2008/2009 economic crisis are impacting the progress made in sustainable development in recent years. Until these issues are resolved, it will be very difficult for SIDS to meet national sustainable development targets and goals.

Benchmarking the ‘ideal case’ of a sustainable small state

An analysis of the sustainable development policies and strategies employed by SIDS and the resulting progress toward sustainable development show many to be fractured, distant and disconnected from the ‘ideal’ of a sustainable small state. My view of the ideal state is one whose development is:

- a) grounded in the principle of synergy and sector integration, with the energy sector playing a pivotal role against the background of state-owned utilities;
- b) driven by active citizen participation and successful partnerships that lead to harmonisation, reduce duplication and sustain interventions;
- c) led by a cadre of focal points central to governments that act as ‘catalysts’;
- d) supported by a high level of capacity to negotiate, plan, implement and monitor programmes and activities; and
- e) informed by an up-to-date socio-economic, environmental and governance database.

In key sectors that pose severe challenges – such as energy, water and waste management, land use, tourism, the marine environment, trade, disaster risk reduction, and adaptation to climate change – two SIDS (Mauritius and Barbados) provide valuable lessons in making progress with NSDS and an integrated approach to sustainable development, which can serve as a model for other SIDS. The main reason for progress with implementation of select policies and strategies in these SIDS seems to be attributable to informed political leadership committed to the integration of sectors and ministerial portfolios and to providing resources to achieve sustainable development goals.

In many SIDS, Government structures have been modelled on those of the United Kingdom. Today, it is still a reflection of the system in big countries, with individual ministries managing sectors and national development progress being treated as the sum of parts, rather than as contributors toward the attainment of defined milestones reflecting a high degree of synergy and integration. The sector-based approach to measuring progress may function more effectively in larger countries where natural resources are not as limited, but, as the existing situation in SIDS shows, it presents special problems for many small countries. For example, one of the main uses of electricity in SIDS is for the distribution of

potable water; however, there are no linkages between the water and energy sectors. The tourism sector is the fastest growing user of energy and water, but these three sectors have very limited synergy and integration.

For SIDS, sustainable energy is the foundation of sustainable development and access to affordable energy is a major component in how SIDS address sustainable development. Energy dependence is a major source of economic, social and environmental vulnerability for many SIDS. Many remote and rural communities in SIDS have little or no access to modern and affordable energy services. At the same time, inability to expand electricity generation to meet growing demand is likely to remain the single most important constraining factor in the economic development of the majority of SIDS. Ideally, the sectors with which energy has to be better integrated are waste management, water supply, agriculture and forestry. This strategy helps promote and contribute to sustainable development.

An integrated water resources management (IWRM) plan ensures that water policies are developed to complement and be consistent with NSDS, land and environment and key policies, thus ensuring an integrated and co-ordinated approach between all agencies. Lack of IWRM plans and failure to implement plans is contributing to several SIDS not meeting the MDG 7. Efforts by the Pacific to formally develop the IWRM management approach within governance structures at the national level were inhibited due to, 'inherited colonial government structures with their inherent line ministries and poor inter-ministerial liaison and collaboration, with a general tendency for government administrations to be inadequately resourced and weak compared to local and traditional governance structures'².

Barbados has implemented an integrated approach to planning and management of its natural resources through the National Sustainable Development Policy which was passed in Parliament in 2004 as a means to strengthen the ability of the country to implement national policy priorities for natural resource management and update national land use policy and planning to improve its responsiveness to future physical and economic development³. The policy seeks ultimately to provide a framework which will promote the development of the island's economic and social capital while ensuring the wise and proper stewardship of environmental capital.

As clearly outlined in the BPOA, most aspects of environmental management in SIDS are directly dependant on, and influenced by, the planning and utilisation of land resources, which in turn is intimately linked to coastal and marine management and protection. The Pacific Islands are heavily reliant on their tuna-based offshore fisheries for the livelihoods of their peoples. The region supplies 55 per cent of the world's canning tuna, yet the majority of Pacific Islands that are party to the Pacific Plan⁴ do not have NSDS-linked sectoral plans and priorities involving coastal and marine resources. However, at least three countries, Fiji, Samoa and Tuvalu, whose NSDS are based on an integrated approach, are showing early positive results. For example, in Fiji all sector-level corporate plans are being developed to reflect priorities in the NSDS and activities that focus on community level outcomes.

The Caribbean faces similar challenges. The two most important aspects of the Caribbean common fisheries policy pertain to:

- 1 agreement on access to the resources of the CARICOM Fisheries Zone by Member States; and
- 2 resource access of Third Parties (distant water fishing states) that have a historic presence in the region⁵.

However, the Caribbean Community (CARICOM) Regional Fisheries Mechanism (CRFM) has not been involved with the management of the exploitation of regional stocks, an indispensable requirement for sustainable fisheries development⁶.

SIDS continue to face many challenges in the sustainable management of their forest and tree resources, uniquely planning in the most biologically diverse environment characterised by a high degree of endemism of many species. Mauritius was the first country to sign and ratify the Convention on Biological Diversity in 1992, and intends to achieve the 2010 target. The Mauritius National Biodiversity Strategy Action Plan 2006–15, is divided into three thematic areas: Forest and Terrestrial Biodiversity; Freshwater, Coastal and Marine Biodiversity; and Agricultural Biodiversity, Biotechnology and Biosafety. Five strategic objectives are addressed: Establishment of a Representative and Viable Protected Area Network (PAN); Management of Key Components of Biodiversity; Enabling of Sustainable Use of Biodiversity; Maintenance of Ecosystem Services; and Management of Biotechnology and its Products. The country's Third National Report states that many native fauna species have become extinct but, in some cases (e.g. some bird species), population has increased due to successful species recovery programmes.

Other lessons learned from the Pacific Islands include integration of environmental concerns into the tourism and fisheries sectors, a number of policy and regulatory measures taken at the national level to mitigate and reduce the threat of pollution and habitat degradation, and concerns regarding the potential impacts of climate change on resources – these have all been taken into consideration in the National Development Strategies as well as in recent conservation programmes.

SIDS tend to be particularly vulnerable because of their small size and insularity. Their small size encourages them to resort to international trade. They need to find export markets due to their small domestic market, and they need to import heavily, due to lack of natural resources. At the same time, the small market size limits possibilities for diversification. Over the last two decades, the share of SIDS in global merchandise trade diminished by half (from 0.4 per cent of world exports of goods in 1980 to 0.2 per cent in 2003), while their share of global trade in services remained stable (0.7 per cent of world exports of services). SIDS are estimated to be economically 34 per cent more vulnerable than other developing countries, partly for the following reasons: agricultural production in SIDS has been 31 per cent more unstable than that of other developing countries, and their exports of goods and services have been 10 per cent more unstable, mainly due to their exposure to natural disasters⁷.

Negotiations between African, Pacific and Caribbean (APC) countries and the European Union for a new Economic Partnership Agreement (EPA) saw APC SIDS using regional mechanisms in their trade negotiations, i.e., the Pacific Regional Economic Integration Programme (PACREIP), Caribbean Regional Negotiation Machinery (CRNM). Both entities

support regional economic integration. In seeking to integrate into the global economy, ACP SIDS have accepted that an integrated regional approach is the most effective strategy for engagement in the global economy.

Tourism is emerging as a major economic strategy for many SIDS due to its multiplier and spill-over effects on the rest of the economy. Prior to the 2008/2009 global economic recession, tourism was a US\$7 trillion dollar economy, accounting for a tenth of global GDP and 8.3 per cent of employment (231 million jobs). It was projected to grow at an annual growth rate of 3.9 per cent expanding to a \$13 trillion industry by 2017. These projections bode well for tourism-dependent SIDS, given the direct relationship between the growth of international tourism arrivals and the growth of economic output as measured in GDP⁸.

Like the integration of energy with all sector plans, so too is the integration of tourism critical for sustainable development in SIDS, given their vulnerability to global events, which are almost always beyond their control. Knowledge and understanding of destination vulnerability are key factors in planning for and managing resiliency. For example, in Barbados, the Ministry of Tourism, in collaboration with the Central Emergency Relief Organisation and the Caribbean Disaster and Emergency Response Agency, is in the process of developing a comprehensive disaster management strategy for the tourism sector⁹.

SIDS need to improve their disaster preparedness and emergency planning, and integrate and mainstream these into development planning. Disaster Risk Reduction (DRR) measures have a high benefit-to-cost ratio, save lives and property, and are also highly cost-effective in bringing significant developmental benefits in normal times, a lesson that is reinforced by the current focus on climate change. The South Pacific Applied Geosciences Commission (SOPAC) has developed a comprehensive set of guidelines for Comprehensive Hazard and Risk Management (CHARM), defined as a tool and/or process within the context of an integrated national development planning process.

In addition, the Pacific Dialogue on Water and Climate was established as a 'platform through which policy-makers and water resource managers have better access to and make better use of information generated by climatologists and meteorologists' in order to 'improve the capacity in water resources management to cope with the impacts of increasing variability of the world's climate'. The Caribbean Disaster Emergency Response Agency (CDERA) is the agency of the Caribbean Community and Common Market (CARICOM) responsible for disaster response in any of the 16 participating states. CDERA works to create a methodical and preventative approach for comprehensive disaster management through the assessment of vulnerability.

SIDS face a wide range of challenges and concerns in implementing social development programmes thus integration of these programmes into the wider planning process is imperative. The management of the spread of HIV/AIDS, poverty, migration, trade, education, food security, environmental considerations, population growth, youth development, the physically challenged, and the needs of vulnerable and disadvantaged groups has begun to warrant special attention in all social policies and social development programmes. HIV/AIDS is devastating for SIDS, and exerts severe pressure on SIDS economies that have

the potential to undermine the social fabric. The Caribbean now ranks second to sub-Saharan Africa among the regions that are hardest hit by HIV/AIDS, with a 2.3 per cent adult HIV prevalence rate, while in the Pacific, although known prevalence has remained relatively low, the prevalence of risk factors for HIV transmission is considered high. Papua New Guinea has the highest reported rate of HIV infection, with an estimated HIV prevalence of over 1 per cent among pregnant women attending antenatal clinics in three urban sites around mining areas in Port Moresby¹⁰.

Achieving social development will require that the initiators of social development policies and programmes – usually the State – fully appreciate that consultation and participation cannot be treated as light switches to be turned on and off at the whim or fancy of Government officials. Further, because of the integrated nature of social policy, a firm and irrevocable commitment to these twin principles is required if the legitimacy and integrity of any development policy is to be achieved and maintained. Civil society organisations, the private sector, the public and the international development community are essential elements of social development.

Young people, particularly those with higher education, are increasingly migrating to other countries. It is going to be difficult to engage them without providing and pointing to concrete opportunities. Initiatives such as the Youth Visioning for Island Living initiative of the United Nations Educational, Scientific and Cultural Organization (UNESCO) allows some young people to become involved and take the lead in implementing their own ideas on sustainable living and development in their communities.

Lessons learned from implementing a national sustainable development plan: Best practice lessons from Mauritius

Mauritius, an African SIDS, is considered an ideal example of a SIDS that has developed and implemented an NSDP, and from which best practice concepts might be drawn that might lead to positive development outcomes in other countries.

In 2005 the government launched a wide ranging reform strategy that has begun to bear fruit. Trade and investment were liberalised, some price controls were lifted, taxes were reduced, a fiscal consolidation strategy was initiated, and monetary policy was strengthened.

Mauritius has made strong progress with many of the MDG targets. According to the latest UNDP Human Development Report, Mauritius ranks among the countries with a high Human Development Index of 0.804 in 2005¹¹. In 2006/2007, the proportion of people living in extreme poverty was approximately 1 per cent, and the country has already achieved Goal 2 by reaching nearly 100 per cent enrolment in primary education and a literacy rate estimated at 95 per cent for 15–24 year olds. Mortality rate for children under five (per 1000 live births) has decreased from 23.1 per cent in 1990 to 17.0 per cent in 2007¹².

In 2007 the HIV prevalence rate among pregnant women aged 15–24 years declined to 0.25 per cent (from 0.31 per cent in 2006), a notable success given that the rate had been steadily increasing from 2000 to 2006. The Government is currently carrying out public

awareness campaigns on HIV and AIDS, along with instituting preventive measures. The whole population of Mauritius enjoys sustainable access to clean water and sanitation. The rate of growth in CO₂ emissions has begun to decline.

The Government undertook a bold economic reform programme in 2006 to address major issues relating to national output, budget deficit, debt, unemployment and the business environment in the country. There are already clear signs of recovery with higher GDP growth and investment, and lower budget deficit and unemployment in 2007. The World Bank and the International Finance Corporation have rated Mauritius second on the *Ease of Doing Business* among the 33 SIDS economies, in its *Doing Business Report 2009*. While Singapore is the easiest place in the world to do business, Mauritius is leading the way in Africa, and placed 24th on the *Ease of Doing Business* globally. During the period 2005–07, Mauritius registered a steady increase in its annual growth rate – from 2.2 per cent in 2005 to 5.4 per cent in 2007. Unemployment has dropped from 9.6 per cent in 2005, to 8.5 per cent in 2007¹³.

Forty years ago, Mauritius was a low-income agriculturally-based economy with a single crop, sugar, which accounted for over 90 per cent of the total value of merchandise exports. Today, Mauritius is a middle-income SIDS, with a diversified economy with growing manufacturing, tourism and financial sectors and where agriculture, although important, no longer dominates the economy. This steady growth started in 1983 with the introduction of Export Processing Zones (particularly the textile sector) to promote greater economic diversification and which led to a manufacturing boom.

In 1997 Mauritius redefined its development agenda to articulate a national vision up to year 2020 (Vision 2020) and a framework for long-term socio-economic development for the country. In 2000, the government presented the National Strategy for Sustainable Development 1999–2005, which identified an action programme to achieve the goals of Vision 2020 and to provide a programme for its implementation. In 2005, the government took a number of measures to reform the economy which was being negatively impacted by a number of economic shocks including loss of EU preferences, increasing energy costs, and the erosion of its textile markets.

Three years later, these efforts have delivered results including the doubling of annual employment creation since 2005 and an increase in the economy's growth rate from 5.5 per cent in 2007.

A plan for economic transition

Following the elections of July 2005 the authorities designed and proposed a 'plan for economic transition' which included:

- Passage of a Business Facilitation Act simplifying procedures for incorporating business, opening up the economy to foreign investors, reducing bureaucratic procedures and streamlining regulations that affect business start-ups.
- Faster procedures to obtain work and resident permits.
- Simpler procedures for acquiring property for business development.
- Phased tariff reduction to achieve a duty-free country.

- Unification of tax and regulatory regimes for EPZ and non-EPZ enterprises.
- Reduction of international private leased circuits (IPLCs) to turn the country into an ICT Free Trade Zone.

Energy access and security – Synergy and sector integration

- The way forward for Mauritius is through the **Maurice Ile Durable** vision, and shift to local renewable sources of energy away from imported fossil fuels and to protect the environment through recycling, to encourage more efficient use of energy and to increase reliance on renewable energy¹⁴.
- The Mauritius Research Council (MRC) set up in May 1992 acts as a central body to advise Government and to influence the direction of technological innovation by funding research projects in areas of national priority and encouraging strategic partnerships. Their work has included a *Synthesis Report on Renewable Energy* and a review of the prospects for biofuels, recommendations from which emerged from broad discussions and consensus by participants to a two-day workshop. This document has been used as an input to the forthcoming Energy Policy for the Republic of Mauritius¹⁵.
- **Land Based Oceanic Industry (Ocean Thermal Energy Conversion – OTEC)** is a new mechanism for the commercial exploitation of the deep Indian Ocean water of Mauritius's EEZ, to generate new wealth from the ocean and provide direct and indirect jobs over the next five years, drawing on successful technology already in use in Hawaii¹⁶.

Lessons from Barbados: The merits of sustainable development in a small state

Barbados provides another model case study for SIDS. It started with a national process to implement the BPOA for sustainable development in SIDS. The country shifted from an agrarian dominated by sugar to a service-based economy, with tourism now being the single largest foreign exchange earner. Barbados, a small island of 430 km² with a population of 293,894, has been classified by the World Health Organization (WHO)¹⁷ in the top ten most arid countries in the world, and has one of the highest population densities in the world (654 persons per sq. km).

In Barbados, economic growth has been matched by steady social progress, a central feature of the country's development profile. This is evident in the development of a wide and strong social safety net including education and services for the improvement of health. Government is the dominant provider of these services¹⁸.

Barbados is an upper-middle-income country ranked 31 on the United Nations Development Programme (UNDP) 2007/2008 Human Development Index (HDI). Only two countries in this hemisphere – the USA and Canada – have surpassed Barbados on this Index.

The UNDP 2007/2008 Human Development Report ranked seven SIDS with high levels of human development, all Caribbean SIDS except for Mauritius.

Table 15.1. Human Development Index – Value and Rank: Top 7 SIDS (2005)¹⁹

Country	HDI Value	HDI Rank
Barbados	0.892	31
Bahamas	0.845	49
Cuba	0.838	51
St Kitts and Nevis	0.821	54
Antigua and Barbuda	0.815	57
Trinidad and Tobago	0.814	59
Mauritius	0.804	65

Progress towards the attainment of the Millennium Development Goals in Barbados has been strong. Specifically, the country has achieved Goal 1, the eradication of extreme poverty and hunger; Goal 2, universal primary education; Goal 3, the promotion of gender equality and the empowerment of women, although only 10 per cent of seats in the national parliament are held by women; Goal 4, the reduction of child mortality; Goal 5, improvement in maternal health; Goal 6, halting the spread of malaria and other diseases.

With the economic and social progress have also come new challenges to the well-being of Barbadians. Chronic non-communicable diseases are now the leading causes of death, illness and disability in Barbados and other health and social problems are emerging including HIV/AIDS, drug abuse, violence, accidents and migration of skilled workers.

The country has moved to the introduction of MDG-Plus²⁰, with localisation of the existing MDGs to better reflect national realities and address specific country issues.

In pursuing its specific country development issues, Barbados provides lessons in the areas of:

- Energy security and access.
- Sustainable tourism.
- Coastal and marine resources management.
- Citizen participation.
- Economic diversification.

Energy security and access

Barbados has some indigenous energy consisting of oil and natural gas reserves of 2.2 million barrels and 141.6 million cubic metres respectively. Despite this endowment and sound impressive economic data, the country's energy security situation is critical, as it must still import petroleum to provide nearly 90 per cent of its energy needs. In 2007, the country produced 1,111 barrels of oil per day, but consumed in excess of 8,674 barrels per day²¹.

Barbados, like most SIDS, is dependent on petroleum imports of which takes massive amounts of foreign exchange earnings. The government of Barbados aims to have renewable energy contribute 40 per cent of the island's primary energy by 2010. The main renewable energy sources are sugar cane bagasse and solar which contribute about 15 per cent of the island's primary energy supply; solar photovoltaic (PV) systems currently produce 37,000

watts peak (Wp); solar crop dryers and solar stills for producing distilled water are also employed. Further projects include a cogeneration plant to burn bagasse and fossil fuel, a waste combustion plant, wind farms, ocean thermal energy conversion plant, distributed photovoltaic systems, and wave power²².

The solar water heater industry of Barbados is one of the best known examples of the exploitation of a renewable energy technology in the Caribbean. The industry benefited from the Fiscal Incentives Act of 1974, which allowed manufacturers to benefit from import preferences and tax holidays. In 1980, the Government introduced the Homeowner's Tax Benefit which allowed homeowners to claim the cost of the solar water heater on their income taxes, and the industry received a major boost. The solar water heater promotion has been so successful that in 2007 the Government announced that it would invest in developing and protecting the intellectual property rights (documentation, legal cost and technical details) of the Barbados' solar water heater model. This will include the global advertising of this 'model' to other developing countries²³.

In 2000, there were over 32,000 solar water heaters installed in homes, commercial businesses and hotels in Barbados, saving the country approximately US\$6.8 million per year in imported fuel representing 5.3 per cent of total fuel imports²⁴. Additionally, consumers save about \$US19.2 million, under the assumption that they would have used electricity at normal rates to heat the water. Over 50 hotels now use the renewable energy method. The large-scale integrated designs cover a hotel roof with solar collectors which allow the heat from the central air conditioning system to be used to preheat the water²⁵.

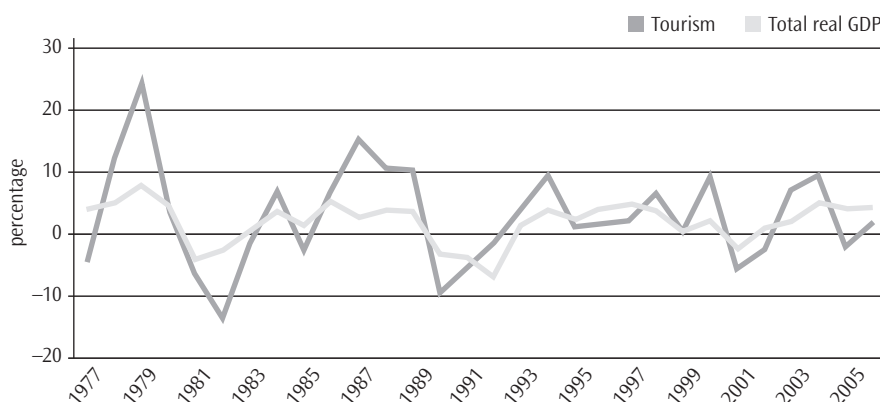
The promotion of solar water heating systems demonstrates Barbados' ability to achieve sustainable development using renewable energies, namely solar power. With the necessary technology and political will, solar energy can replace fossil fuel technologies. This generates national as well as global benefits insofar as international efforts to decrease GHG emissions are concerned.

Sustainable tourism

By the end of 2007, tourism's value-added in Barbados accounted for 15.5 per cent of real GDP, surpassing both manufacturing and agriculture, both of which had declined considerably during those three decades (from 12.3 per cent to 6.6 per cent and from 10.7 per cent to 5.4 per cent, respectively). Furthermore, downturns in tourism activity as shown pictorially in Figure 15.1 tended to lead to downturns in total value added, indicating that Barbados' strong reliance on the sector²⁶.

The Government of Barbados has identified in its sustainable tourism strategy the need to build strong linkages between tourism and other sectors as one way of promoting growth in other sectors and broadening the benefits of tourism in the local economy. The Commonwealth Secretariat is working with the Barbados Ministry of Tourism and International Transport and with the Inter-American Institute for Cooperation on Agriculture (IICA) Caribbean regional office to develop a strategy for Barbados aimed at promoting linkages between the tourism and agriculture sectors²⁷.

The project was conceived from a Caribbean regional workshop on export competitiveness

Figure 15.1. Relationship between growth in tourism, value-added and total real GDP expansion.

organised by the Trade Section in Barbados in May 2006. The workshop identified weak linkages between tourism and other sectors as one of the main hindrances to competitiveness and sustainable development. It was recognised that despite the flourishing tourism sector other sectors and local entrepreneurs have failed to capitalise on the opportunities that the tourism market provides. Thus, the project will look at supply factors affecting farmers, demand factors on the tourism side, marketing and contractual arrangements, logistical support services, infrastructure, institutional framework and capacity building needs. The results of the project are expected to be applied in other countries in the region²⁸.

The Ministry of Tourism is in the process of developing a comprehensive disaster management strategy for the tourism sector. According to the Ministry of Tourism and International Transport, this is being done in collaboration with the Central Emergency Relief Organisation and the Caribbean Disaster and Emergency Response Agency. Additionally, the Ministry has established a Tourism Emergency Management Committee (TEMC) and a Tourism Emergency Operations Centre (TEOC). The TEMC plans and co-ordinates the tourism sector's response during emergencies, while the TEOC will mirror the operations of the National Emergency Operations and will serve as a command centre from which persons will jointly co-ordinate the management of disasters in the tourism context. The Ministry has collaborated with the Royal Barbados Police Force and stakeholders in the industry to address the area of safety and security codes of practice for all tourism establishments, and initial draft standards are being developed.

Coastal and marine resources management

Barbados has a highly varied coastline of unique geological formation that is one of the island's most valuable economic and social assets. The Government of Barbados considers the implementation of integrated coastal zone management (ICZM) as the best way forward for the effective management of Barbados' coastal resources. Over the last 25 years, the Government has systematically developed its capacity to implement ICZM through the Coastal Zone Management Unit (CZMU), established in 1996, which is responsible for advancing the knowledge, use, development, conservation and management of the coastal zone and its resources. The Unit's strategic objectives and policies are summarised in the

Integrated Coastal Management: The Barbados Policy Framework. Barbados has also completed detailed Draft ICZM Plans for the west, south and east coasts of the island²⁹.

Barbados has put in place several strict regulations to sustainably protect and manage its coastal zone resources. The primary statutes used by the Coastal Zone Management Unit include:

- **Coastal Zone Management Act 1998** – provides a comprehensive, statutory basis for coastal zone management and planning in Barbados.
- **Fisheries Act 1993** – covers formulating and reviewing fisheries management and developed schemes; also gives the Minister responsible for fisheries the authority to create new regulations for the management of fisheries as and when necessary.
- **Fisheries (Management) Regulations 1998** – Regulations stipulate: mesh size restrictions for seine nets and fish traps; mandatory installation of escape panels and identification marks on fish traps; and prohibits the use of trammel nets and other entangling nets among other regulations. The maximum penalties for breaking any of these regulations are a fine of Bds \$50,000 and/or two years imprisonment.
- **Draft Recreational Diving Operations Regulations 1998** – governs dive operations for hire and reward. The focus of the regulations is to ensure the safety of dive operators and their clients and the preservation of fragile marine ecosystems.

Targets include resolving the following issues:

- Removal of coastal vegetation.
- Coastal erosion and beach mining.
- Illegal dumping into the marine environment.
- Drainage of storm water and waste water into the marine environment.
- Driving on beaches.
- Illegal development in the coastal zone.

Barbados model for coastal erosion risk mitigation: Lessons learned³⁰:

Pre-event

- 1 Monitoring of priority beaches for reference change.
- 2 Designing protection structures for specific return period events (e.g. design for 1:50 storm; inclusion of a freeboard of 0.5m to compensate for water level fluctuations; and engineering design has to allow for a reasonable component of increased sea level using IPCC predictions for region or local projections when they become available).
- 3 Monitoring wave climate (internet) to estimate (1) how soon the event will arrive and (2) the length of time the event will affect the island.

Post-event

- Processing nearshore wave data to determine the wave parameters associated with the storm event especially wave height and wave period.
- Performing beach profiles and reef assessments at select locations around the island; detailed documentation of observed damage (measurements photographs/video and descriptions of shoreline damage) at the beaches and beach front properties along

the coastline. An equivalent evaluation is also prepared for the marine environment; post-monitoring of significantly eroded beaches to determine rates of recovery or non-recovery.

- Report preparation on shoreline damage (on and off shore); coastal structures maintenance/inspections.
- Respond to property owner requests for site visits and advice on possible options for repair to the property or its protective structure.
- Public education and outreach information dissemination on event, damage caused and current action being taken.

Citizen participation

Democratic principles are based on citizen participation – at least indirect participation through elected representatives – in decisions that affect them. Barbados is an independent democratic state with a two-party system of governance that revolves around a Westminster model of parliamentary democracy.

The newly elected Government of Barbados is seeking to strengthen both the quality of democracy and the delivery of social services through a new initiative called Constituency Councils, ‘a legally established body of local representatives, who have been appointed and given the authority to voice the concerns of the residents of the Constituency; to maintain links with Central Government and other agencies; and to effectively and efficiently manage resources for the development of the given Constituency’ (CCB, 2009). The matter of the establishment of Constituency Councils is a new form of local governance in Barbados, and is a proposal which will create history by introducing fundamental changes in the way Barbados is governed and will affect many stakeholders³¹. The Government plans to establish 30 such councils. Initial start-up funding for the Councils was made by the People’s Republic of China. The Government, under the newly created Ministry of Social Care, Constituency Empowerment, Urban and Rural Development established a website inviting all community organisations, NGOs, political organisations and special interest groups to nominate candidates to participate in the process of establishing Constituency Councils³².

Public participation is ensured by the Town and Country Planning Act, whereby Environmental Impact Assessments (EIA) cannot be approved without public consultation. During this discussion period, or prior to this whilst the EIA is being conducted, the Town and Country Planning Office co-ordinates a public consultation about the project, or requires the developer to do so. The inter-agency Government Committee reviews comments arising out of the public consultation. The Chief Town Planner submits the comments of the inter-agency Committee on the EIA report and on the public consultation to the proponent. The legal policy document currently used by the Town and Country Planning Office to request an EIA in Barbados is the National Physical Development Plan (1998). This was ratified in 2000³³.

In Barbados, advocacy is under-girded by provision of mechanisms for technical consultation, financial subventions to NGOs, as well as popular participation. Examples of these include continued provision of financial support to institutions such as the Barbados Family Planning Association, purchase of accommodation for the Barbados Cancer Society and

more recently, the provision of land to allow the Heart Foundation of Barbados to construct a permanent base for its preventive education and rehabilitation efforts. In addition to the interagency mechanisms used in the planning process, town hall meetings are fast becoming standard processes to obtain public inputs and comment on specific policies and programmes at both national and community level³⁴.

The high cost of living – rising world fuel and food prices – has had a significant impact on external balances in the Caribbean. All CARICOM countries are oil importers (with the exception of Trinidad and Tobago) and net food importers. In 2007, CARICOM countries spent in excess of US\$3 billion on food imports³⁵ and over US\$12 billion for fuel imports, up from US\$6.5 billion in 2004–5³⁶. The Government moved to involve as many interest groups and the wider society in its ongoing efforts to address the matter of the cost of living. To this end, in June 2008, the Cabinet hosted a one-day Consultation on the Cost of Living. Several public and private sector entities, the social partnership, heads of government departments, academia, NGOs and the news media were represented at the forum. According to the Government, ‘the rationale behind hosting such a session is Government’s desire to hear the views of the representatives of the various sectors; so, we can interface, put our heads together, seek to build consensus and come up with appropriate strategies to address this present day phenomenon. We expect them to bring serious and practical contributions to the table that would help us as a collective body to earnestly tackle this problem’³⁷.

Economic diversification

Given the heavy dependence that Barbados has on tourism, and the vulnerability of the main elements of the tourism product to climate change impacts, it is imperative that Barbados implements strategies to diversify its economy. In this regard, Barbados awarded its first offshore oil-exploration rights. In January 2009, the Government licensed the Melbourne, Australia-based company BHP Billiton to evaluate two undersea blocks south-east of the island. Barbados plans to open as many as 26 blocks for exploration and believes multinational oil companies could boost the island’s energy production enough to rival tourism as its biggest industry. Barbados has considered offshore drilling since the 1990s, when a study by a US oil company noted promise in nearby areas³⁸.

Further, with the end of market preferences for sugar – which the country has not fully abandoned due to social implications – the Government has come up with a novel idea to save the sugar industry. Rather than trying to compete in the bulk-commodity sugar market, Barbados has capitalised on its strong historical reputation by claiming to make the ‘best sugar in the world,’ and has developed a new generation of sugars that it believes distinguishes it from its competition, allowing it to supply niche markets around the globe.

Barbados has been partially successful at diversifying its economy away from sugar which still dominates trade as the sector continued to reduce the acres of sugarcane planted in its ongoing struggle to realign itself following the removal of preferential trade arrangements. Relative to many in the region, the Barbados economy is significantly more diversified, and the economic importance of agriculture and manufacturing is relatively low, with agriculture in long-term decline but manufacturing growing – in 2007, manufacturing contributed US\$32 million to GDP, while agriculture contributed US\$25 million.

Conclusion

The ideal sustainable small state operates on the principle of synergy and sector integration. It has active citizen participation and successful partnerships, adequate capacity to negotiate, plan, implement and monitor programmes and activities, and possesses an informed socio-economic, environmental and governance database. The case study on Mauritius highlights the benefits derived to the economy through synergy and sector integration and the emphasis placed on sustainability of the energy sector. The Barbados case study highlights integrated planning in the tourism sector and coastal and marine resources management as well as the role played by citizen participation in sustainable development planning. As shown in both case studies, diversification of the economic base is an important step in pursuit of a sustainable small state.

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