

**SMALL ISLANDS, LARGE OCEAN STATES:
A REVIEW OF OCEAN AND COASTAL MANAGEMENT IN
SMALL ISLAND DEVELOPING STATES
SINCE THE 1994 BARBADOS PROGRAMME OF ACTION
FOR THE SUSTAINABLE DEVELOPMENT OF SMALL
ISLAND DEVELOPING STATES (SIDS)**



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ACTION FOR THE SUSTAINABLE DEVELOPMENT OF
SMALL ISLAND DEVELOPING STATES (SIDS)**

Prepared by Christen E. Loper, Miriam C. Balgos, Janice Brown,
Biliana Cicin-Sain, Peter Edwards, Christina Jarvis,
Jonathan Lilley, Isabel Torres de Noronha,
Adam Skarke, Joana Flor Tavares, and LaVerne Walker

University of Delaware

Series Editor: Dr. Biliana Cicin-Sain
Co-Chair, and Head of Secretariat, Global Forum on Oceans,
Coasts, and Islands

Note from the Co-Chairs of the Global Forum on Oceans, Coasts, and Islands:

This paper series aims to contribute to the deliberations related to the International Meeting to Review Implementation of the 1994 Barbados Programme of Action for the Sustainable Development of Small Island Developing States (in Mauritius in 2005), and to efforts to implement the Mauritius Strategy developed at the 2005 International Meeting.

This paper is based, in large part, on the 2004 National Assessment Reports prepared by small island developing States for the 2005 Mauritius International Meeting, the 2002 Country Profiles developed by SIDS in anticipation of the 2002 World Summit on Sustainable Development, the regional reports prepared in preparation of the Mauritius meeting, and on other literature.

The work of University of Delaware research staff, Nippon Foundation Fellow, and graduate students, on a volunteer basis, is gratefully acknowledged by the Global Forum on Oceans, Coasts, and Islands.

FOREWORD

Agenda 21, the Barbados Programme of Action for the Sustainable Development of Small Island Developing States (BPoA), the World Summit on Sustainable Development (WSSD) and more recently the Mauritius Strategy have each underscored the complexities and challenges facing small island states as they seek to attain sustainable development. As Agenda 21 recognized:

Small island developing States and islands supporting small communities are a special case both for environment and development. They are ecologically fragile and vulnerable. Their small size, limited resources, geographic dispersion and isolation from markets, place them at a disadvantage and prevent economies of scale.

As underscored in the Co-chairs report from both the 2003 and 2001 Global Conferences on Oceans, Coasts and Islands, small island developing States (SIDS) also have special problems and opportunities related to the oceans which need to be recognized and addressed. These nations, small in land area, typically have control and stewardship responsibilities over huge expanses of ocean within their Exclusive Economic Zones. The ocean zones under the stewardship of SIDS contain high biological diversity, the most extensive coral reef systems in the world, and significant seabed minerals. Small islands have a critical role to play in the sustainable development of oceans.

The WSSD addressed the special issues of SIDS in the Johannesburg Plan of Implementation by setting forth a number of targets and timetables related to SIDS, and called for a review of the implementation of the 1994 Barbados Programme of Action for the Sustainable Development of Small Island Developing States leading to an international meeting in Mauritius in January 2005.

The Global Forum on Oceans, Coasts and Islands, with funding from UNEP/GPA, has prepared a series of papers to assist in the preparation for Mauritius 2005 and in subsequent implementation efforts. In this paper, the authors assess the efforts and progress by small island developing States in implementing oceans and coasts components of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States through the analysis of national reports prepared by small island developing States for the Mauritius meeting. Future directions for SIDS in oceans and coasts management are also discussed.

We hope that this analysis will be useful to SIDS in evaluating the BPoA ten years later.

The research work of University of Delaware research staff, Nippon Foundation Fellow, and graduate students, on a volunteer basis, in the preparation of this paper, is acknowledged with sincere thanks.

Co-Chairs, Global Forum on Oceans, Coasts and Islands

Dr. Biliانا Cicin-Sain
Director
Gerard J. Mangone Center for
Marine Policy
University of Delaware

Dr. Patricio Bernal
Executive Secretary
Intergovernmental Oceanographic
Commission,
UNESCO

Dr. Veerle Vanderweerd
Coordinator
UNEP/GPA (Global Programme
of Action for the Protection of the
Marine Environment from Land-
Based Activities)

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Small Islands, Large Ocean States

A Review of Ocean and Coastal Management in Small Island Developing States since the 1994 Barbados Programme of Action for the Sustainable Development of Small Island Developing States (SIDS)

For small island states, the health of the oceans is of paramount importance; so vital is the exerted influence of the oceans over islands that they impact directly on a spectrum of island issues, including its people, culture, economy, and the environment. Indeed, islands and oceans are an integral part of a single environment. For small island developing States, the protection and management of their marine environment are intrinsically linked to their sustainable development aspirations.

H.E. Ambassador Jagdish Koonjul, Chair, Alliance of Small Island States, Global Conference on Oceans, Coasts, and Islands, November 12, 2003.

1. INTRODUCTION

1.1 The Importance of Oceans and Coasts to SIDS

For small island developing States (SIDS), the ocean is essential to their way of life. The fates of SIDS and the oceans are inseparable and thus, what happens to the oceans will have a significant impact on SIDS. As the name suggests, one of the key characteristics of SIDS is that they are small islands. What the name fails to convey, however, is that they are also typically large ocean states. With the adoption of the 200 nautical mile Exclusive Economic Zone (EEZ) as the standard seaward limit of a coastal State's authority, many SIDS have found themselves with jurisdiction over ocean areas far greater than their respective land masses. As Table 1 shows, the total coverage of the EEZs of the SIDS is more than one-quarter of global EEZ coverage. This aspect of international law has given SIDS jurisdiction over vast ocean areas and concomitant control over the resources they contain such as fish stocks, oil and gas deposits, minerals, and renewable energy.

SIDS face a wide number of opportunities and challenges related to ocean and coastal governance. For many SIDS, tourism represents a substantial portion of their gross domestic product (GDP) and employment sector and is a vital source of foreign exchange. For example, it is estimated that tourism comprises 60% of the GDP of the Bahamas and two-thirds of its employment sector. Marine and coastal tourism is a primary draw to SIDS visitors, particularly those seeking the traditional "sun, surf, and sand" experiences. While oceans and coasts provide vast opportunities for economic development, unsustainable management and poor planning can lead to environmental degradation and can

damage the resources upon which tourism economies depend (Table 1).

The fishing regions that fall under the jurisdiction of SIDS are among the most productive in the entire world; for example the Pacific tuna stock is thought to be the largest in any ocean (Koonjul, 2003). However, despite the tuna stocks falling under the jurisdiction of SIDS and the conclusion of multilateral fishing agreements, often distant foreign fleets reap the greatest reward from fishery resources, with SIDS only receiving a small fraction of the total benefits (Koonjul, 2003). Although there are ancillary benefits to SIDS from foreign fleets – such as providing their refueling and re-supplying needs – these are minor in comparison to the total economic potential of fisheries in the EEZs of SIDS. The challenges of EEZ management are not limited to fisheries. For example, although a large offshore oil field was recently discovered within the EEZ of Sao Tome and Principe, it remains to be seen exactly what percentage of the benefits the country will receive and how much will flow to foreign nations.

One of the more pressing concerns facing SIDS at present is the threat of climate change and an associated rise in global sea levels. Current predictions from the Intergovernmental Panel on Climate Change estimate that global sea levels will rise by somewhere between 20-70 cm over the next 100 years (IPCC, 2001). Given their small land-mass and low lying nature, many SIDS are particularly vulnerable to sea level rise. The first country likely to feel the effects of a rising sea is thought to be Tuvalu. In 2001 much of the island disappeared under water during an extreme La Niña event and in February 2004 the country once again suffered significant flooding related to cyclonic activity. In addition to flooding, rising sea level can result in contamination of groundwater and food supplies through saltwater

Table 1 Exclusive Economic Zones of Small Island Developing States

Country	Region	km ²	World %
Antigua and Barbuda	Caribbean	102,867	0.10 %
Bahamas	Caribbean	369,149	0.36 %
Bahrain	AIMS	--	--
Barbados	Caribbean	183,436	0.18 %
Belize	Caribbean	12,839	0.01 %
Cape Verde	AIMS	742,438	0.73 %
Comoros	AIMS	161,993	0.16 %
Cook Islands*	Pacific	1,830,000	1.79 %
Cuba	Caribbean	222,204	0.22 %
Cyprus	AIMS	--	--
Dominica	Caribbean	24,917	0.02 %
Dominican Republic	Caribbean	246,454	0.24 %
Federated States of Micronesia*	Pacific	2,980,000	2.92 %
Fiji	Pacific	1,260,000	1.23 %
Grenada	Caribbean	20,285	0.02 %
Guinea-Bissau	AIMS	86,670	0.08 %
Guyana	Caribbean	122,017	0.12 %
Haiti	Caribbean	86,398	0.08 %
Jamaica	Caribbean	234,780	0.23 %
Kiribati*	Pacific	3,600,000	3.53 %
Maldives	AIMS	870,623	0.85 %
Malta	AIMS	--	--
Marshall Islands*	Pacific	2,131,000	2.09 %
Mauritius	AIMS	1,274,638	1.25 %
Nauru*	Pacific	436,490	0.43 %
Niue*	Pacific	390,000	0.38 %
Palau*	Pacific	600,900	0.59 %
Papua New Guinea*	Pacific	3,120,000	3.06 %
Samoa*	Pacific	109,932	0.11 %
Sao Tome and Principe	AIMS	142,563	0.14 %
Seychelles	AIMS	1,288,643	1.26 %
Singapore	AIMS	--	--
Solomon Islands*	Pacific	1,630,000	1.60 %
St. Kitts and Nevis	Caribbean	20,400	0.20 %
St. Lucia	Caribbean	11,483	0.01 %
St. Vincent and the Grenadines	Caribbean	32,320	0.03 %
Suriname	Caribbean	119,050	0.12 %
Tonga*	Pacific	700,000	0.69 %
Trinidad and Tobago	Caribbean	60,659	0.06 %
Tuvalu*	Pacific	757,000	0.74 %
Vanuatu*	Pacific	680,000	0.67 %
Total		23,062,148	26.3 %

Data sources: Tuqiri, 2001 for entries with asterisks (*). All other data from Earthtrends, 2003.

Note: This compilation of EEZs does not include dependencies such as the U.S. Virgin Islands.

Note: Several States (Bahrain, Cyprus, Malta, and Singapore) have not declared EEZs. This may be for various reasons, including, inter alia, boundary disputes with neighboring States.

intrusion. Tuvalu authorities are so concerned about the effects of sea level rise that they have formally asked New Zealand to accept Tuvalu's 11,000 citizens should the island ultimately disappear. In January 2004, the nearby island of Niue (population 2,100) was hit by a force 5 cyclone which flattened the capital, Alofi (BBC, 2004). Although not a direct result of sea level rise, increased tropical storm frequency and intensity is another anticipated effect of climate change. Niue residents hold New Zealand

citizenship and should large storm events become more common, it is likely that they would also seek to be repatriated to New Zealand.

1.2 The Importance of Integrated Coastal and Ocean Management for SIDS

Integrated coastal and ocean management can be defined as "a continuous and dynamic process by which decisions

are taken for the sustainable use, development, and protection of coastal and marine areas and resources” (Cicin-Sain and Knecht 1998). The goals of ICM are to attain sustainable development of coastal and marine areas; to reduce vulnerability of coastal areas and their inhabitants to natural hazards; and to maintain essential ecological processes, life support systems and biological diversity in coastal and marine areas.

ICM acknowledges the interrelationships that exist among coastal and ocean uses and the environments they potentially affect, and is designed to overcome the fragmentation inherent in the sectoral management approach (whereby each major ocean/coastal activity—e.g. fisheries, offshore oil, etc.—is managed separately and independently from the others). ICM is multi-purpose oriented, it analyzes and addresses implications of development, conflicting uses, and interrelationships between physical processes and human activities, and it promotes linkages and harmonization among sectoral coastal and ocean activities (Cicin-Sain and Knecht, 1998). Ideally, an ICM program should operate within a closely integrated, coherent management framework within a defined geographical limit (Chua, 1993).

In SIDS, because of their small land areas, ICM may have to operate within watersheds that drain to a river or water body. The quality of the freshwater in the watershed indicates the health of the natural resources and environment in downstream ecosystems. Thus, another layer of management, watershed management, needs to be incorporated into ICM, not only to protect the marine environment and ecosystems from land-based sources of pollution, but also to make sure that there is ample freshwater to supply the domestic needs of SIDS communities.

The major functions of ICM include area planning, promotion of economic development, stewardship of resources, conflict resolution, protection of public safety, and proprietorship of public submerged lands and waters. ICM involves the application of a set of over-arching principles, including 1) sustainable development, and 2) integration (e.g., intersectoral integration, intergovernmental integration, spatial integration, science-management integration, international integration).

Integrated coastal and ocean management is of particular importance to small island developing States, mainly because land area in islands is primarily coastal. Consequently, the human population depends heavily on the marine life in the coastal waters for food and income. Additionally, island culture is tightly intertwined with the coastal areas and the sea. Concerted efforts are needed to deal effectively with the complex coastal and ocean issues in SIDS, including overexploitation of coastal living resources, pollution, siltation, and other threats brought by unregulated/

uncontrolled development, and inadequacy of government structures for coastal and ocean governance. There is a recognized need, as well, for mechanisms to coordinate government assistance across sectors in SIDS, where intersectoral cooperation remains weak.

1.3 Ten-year Review of the 1994 Barbados Programme of Action (BPoA): A Key Time for Assessment and Refocusing of the SIDS Oceans and Coasts Agenda

Following the 1992 United Nations Conference on Environment and Development and mandates developed in Chapter 17 of Agenda 21, the SIDS were the first group of nations to develop a detailed blueprint of actions to achieve sustainable development. The United Nations Global Conference on the Sustainable Development of Small Island Developing States, held in Bridgetown, Barbados (25 April to 6 May 1994) resulted in the adoption of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States (BPoA), a fourteen point program which identified the following priority areas as requiring action:

- Climate change and sea level rise
- Natural and environmental disasters
- Management of wastes
- Coastal and marine resources
- Freshwater resources
- Land resources
- Energy resources
- Tourism resources
- Biodiversity resources
- National institutions and administrative capacity
- Regional institutions and technical cooperation
- Transport and communication
- Science and technology
- Human resource development

In addition to the above fourteen priority areas, the BPoA also identified a number of cross-sectoral areas in need of attention:

- Capacity building
- Institutional development at the national, regional and international levels
- Cooperation in the transfer of environmentally sound technologies
- Trade and commerce diversification
- Finance

The Conference adopted the Barbados Declaration—a statement outlining the political commitment to the agreements contained within the BPoA. The UN Commission on Sustainable Development (CSD) was charged with overseeing the implementation of the BPoA (ENB, 2004).

Since the Barbados Conference, SIDS issues have been reviewed a number of times at the international level. In 1999, the 22nd Special Session of the UN General Assembly (UNGASS-22) met to review the progress of the BPoA and adopted the “State of Progress and Initiatives for the Future Implementation of the Programme of Action for the Sustainable Development of SIDS.” This document listed six of the original fourteen priority areas as needing urgent consideration: climate change; natural and environmental disasters and climate variability; freshwater resources; coastal and marine resources; energy; and tourism (ENB, 2004). During UNGASS-22, member States also reaffirmed their commitments to sustainable development for SIDS.

At the Millennium Summit in 2000, world leaders addressed the special requirements of SIDS and, through the UN Millennium Declaration resolved to implement the BPoA and the outcomes of UNGASS-22 “rapidly and in full” (ENB, 2004). Two years later, SIDS were on the agenda once more, this time at the World Summit on Sustainable Development (WSSD) in Johannesburg. The WSSD again reaffirmed the unique needs of SIDS, adopted a number of specific targets with timetables to achieve sustainable development of SIDS, and called for a ten year review of the BPoA in 2004 (ENB, 2004). These goals are outlined in Table 2.

In December 2002, during its 57th session, the UN General Assembly passed resolution 57/262, which established the need for an international meeting to review the progress achieved on the Barbados Programme of Action. It was initially decided that this meeting would be held in 2004 and the Government of Mauritius offered to host the meeting. It was agreed that the review should look for a renewed political commitment to the BPoA and that the focus should be on “practical and pragmatic actions” to further implement the plan (ENB, 2004). In accordance with draft reso-

lution A/C.2/59/L.27 and United Nations General Assembly resolutions 58/213 A and B (A/RES/58/213), the high-level meeting to review BPoA implementation was held from January 10 to 14, 2005 and included a high-level segment to allow for a detailed review of the implementation of the BPoA to date (ENB, 2004).

1.4 Purpose of this Paper

The Mauritius International Meeting represents a landmark occasion to review and assess what has been accomplished at national, regional, and international levels since the 1994 Barbados Programme of Action. This is a crucial time for Small Island Developing States. What problems/constraints have been encountered? What lessons have been learned? What has worked and what has not? What trends are present now that were not present ten years ago? What efforts need to be refocused or redirected? What targeted recommendations should be made for the SIDS agenda for the next decade?

The purpose of this paper is to assess the efforts and progress achieved (or lack thereof) in ocean and coastal management and related issues in SIDS since the BPoA. The paper thus:

- Examines the available data on the extent to which major goals of the BPoA related to oceans and coasts have been achieved, largely by analyzing the national reports SIDS nations prepared for the 2005 Mauritius International Meeting and for the 2002 World Summit on Sustainable Development;
- Examines the oceans and coasts issues highlighted by SIDS nations in three regional meetings in preparation for the Mauritius International Meeting;
- Makes reference to broad international trends in the field of ocean and coastal management;
- Provides a synthesis of trends in implementation of the BPoA in SIDS related to oceans and coasts;
- Presents a set of observations on possible future directions in ocean and coastal management in SIDS.

1.5 Research Approach

Our analysis of the progress of SIDS towards the goals of the BPoA began with an examination of the Barbados Programme of Action and the particular goals it set out for oceans and coasts and for the related areas of climate change

Figure 1 Graph showing number of completed reports

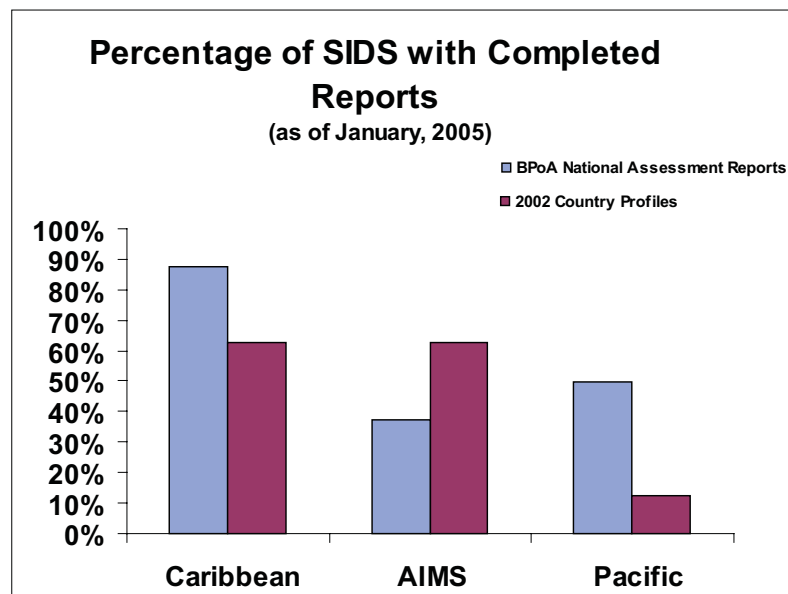


Table 2 Table showing number of SIDS with completed reports

Regions	Caribbean	AIMS	Pacific
BPoA National Assessment Reports	14	6	8
2002 Country Profiles	10	10	2
Total Number of Countries per Region	16	11	14

and sea level rise, tourism, and waste disposal. For each set of goals, indicators to measure progress were developed, and national-level data on these indicators were compiled in Appendix A, *Assessment of Barbados Programme of Action Goals related to Oceans and Coasts*; Appendix B, *Assessment of Barbados Programme of Action Goals related to Climate Change and Sea Level Rise*; Appendix C, *Assessment of Barbados Programme of Action Goals related to Tourism*; and Appendix D, *Assessment of Barbados Programme of Action Goals related to Waste Management*. Each appendix contains three tables, one each for the three main SIDS regions: Pacific, Caribbean, and Atlantic, Indian Ocean, Mediterranean and South China Seas Island Countries (AIMS).

The major sources of information utilized in this study were: The 28 National Assessment Reports prepared by SIDS countries in preparation for the Mauritius International Meeting held in January 2005, the 21 UN country

profiles series on SIDS countries prepared for the 2002 Johannesburg World Summit on Sustainable Development, and information from other documents, websites, and national communications. The main source of information was from National Assessment Reports, prepared for the Mauritius International Meeting. These reports were produced by 28 of the SIDS (68%) by January 2005. The other sources of information were the country profiles prepared for the WSSD in 2002.

Some of the challenges faced in carrying out the analysis were primarily related to the quality of the information contained within the National Assessments and the UN country profiles. It must be noted that the country profiles were not prepared with the explicit purpose of addressing the question of implementation of the BPoA (as were the National Assessment Reports), hence this made the identification of data specific to BPoA implementation difficult. In addition there were also problems of incomplete informa-

tion in the National Assessment Reports, making it difficult in some cases to determine the extent of commitment to or implementation of specific activities and projects.

In the discussions that follow, we have attempted, whenever possible, to provide a quantitative assessment of trends on ocean and coastal management (and on related areas of climate change and sea level rise, tourism, and waste management) in SIDS countries since Barbados. **Given the absence of data for a number of nations, however, this means that the data discussed below provide only a partial view and that values for the trends reported may, in reality, be higher than those noted in the analysis.**

We turn now to a brief review of the major components of the Barbados Programme of Action related to oceans and coasts, and to a discussion of additional targets and timetables related to oceans, coasts and SIDS agreed to by the international community at the 2002 World Summit on Sustainable Development.

2.0 MAJOR INTERNATIONAL PRESCRIPTIONS ON OCEANS AND COASTS IN SIDS COUNTRIES: BARBADOS PROGRAMME OF ACTION AND THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

2.1 The Oceans and Coasts Components of the Barbados Programme of Action

The Barbados Programme of Action addresses different aspects of policy development and implementation related to oceans and coasts—particularly on: the development of institutional mechanisms for policy implementation of integrated coastal and ocean management; marine resources management, with emphasis on fisheries management; biodiversity; and capacity building issues. The major aspects of ocean and coastal policy development and implementation addressed directly by the BPoA are summarized in Table 4 (page 8). Table 4 categorizes the BPoA components related to ocean and coastal management into five specific dimensions: policy creation and implementation, analyses, monitoring plans, capacity building, and assistance, and summarizes actions called for at national, regional, and international levels.

2.2 Other Components of the BPoA Related to Oceans and Coasts

The management of oceans and coasts is intimately affected by land-based activities, especially so in the case of SIDS

where land resources are very limited, resulting in a more intensive dependence on coastal resources. Thus, a number of other components of the BPoA are relevant to the BPoA goals for management of ocean and coastal areas, as is noted in Table 4.

Given the close interrelationship between ocean and coastal management, and issues related to **climate change and sea level rise, tourism, and waste management**, these issues are also covered in the analyses that follow.

2.3 Reinforcement of the Oceans and Coasts Agenda in SIDS at the 2002 World Summit on Sustainable Development (WSSD)

Oceans, coasts, and islands were not initially on the WSSD agenda, which emphasized issues concerning water and sanitation, energy, health, agriculture, and biodiversity. However, thanks to the mobilization of interested governments (particularly SIDS), nongovernmental organizations, and UN agencies, early in the WSSD preparatory process, advances in oceans, coasts, and islands represent one of the most important outcomes of the World Summit. Government delegates negotiated and agreed on an action plan for oceans, coasts, and islands, with specific targets for action, as shown in Table 3. Important targets were established on issues relating to SIDS—most notably, specifically calling for a ten-year review of the BPoA in 2004. The targets and timetables found in the WSSD Plan of Implementation represent an important advance because they have enshrined, as global imperatives by the world's political leaders, many of the goals previously posited by expert groups and specialized agencies. There is now a global consensus reached at the highest political levels that there is an urgent need to take specific action to achieve sustainability of oceans, coasts, islands, and SIDS (Cicin-Sain et al. 2004).

The WSSD targets and timetables, however, are not “self-implementing.” Instead, governments around the world need much assistance and support from all parts of the oceans, coasts, and SIDS community to operationalize what needs to be done, to mobilize the requisite knowledge and financial resources, and to maintain the high-level political support essential to achieve the sorely needed “on-the-ground” improvements in the health and condition of marine ecosystems and in the well-being of coastal communities.

Table 3. Major Targets and Timetables Adopted at the World Summit on Sustainable Development on Oceans, Coasts, and SIDS

<p><i>Integrated ocean and coastal management</i></p> <ul style="list-style-type: none"> • Encourage the application of the ecosystem approach by 2010 for the sustainable development of the oceans, particularly in the management of fisheries and the conservation of biodiversity. • Establish an effective, transparent and regular inter-agency coordination mechanism on ocean and coastal issues within the United Nations system • Promote integrated coastal and ocean management at the national level and encourage and assist countries in developing ocean policies and mechanisms on integrated coastal management. • Assist developing countries in coordinating policies and programs at the regional and subregional levels aimed at conservation and sustainable management of fishery resources and implement integrated coastal area management plans, through the development of infrastructure. <p><i>Fisheries</i></p> <ul style="list-style-type: none"> • Implement the FAO International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing by 2004 • Implement the FAO International Plan of Action for the Management of Fishing Capacity by 2005 • Maintain or restore depleted fish stocks to levels that can produce their maximum sustainable yield on an urgent basis and where possible no later than 2015 • Eliminate subsidies that contribute to illegal, unreported and unregulated fishing and to overcapacity <p><i>Conservation of biodiversity</i></p> <ul style="list-style-type: none"> • Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012 <p><i>Protection from marine pollution</i></p> <ul style="list-style-type: none"> • Advance implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities in the period 2002-2006 with a view to achieve substantial progress by 2006 <p><i>Science and observation</i></p> <ul style="list-style-type: none"> • Establish a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socioeconomic aspects, by 2004 <p><i>Small Island Developing States</i></p> <ul style="list-style-type: none"> • Develop community-based initiatives on sustainable tourism in small island developing States by 2004 • Reduce, prevent, and control waste and pollution and their health-related impacts in small island developing States by 2004 through the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities • Support the availability of adequate, affordable and environmentally sound energy services for the sustainable development of small island developing States, including through strengthening efforts on energy supply and services by 2004 • Undertake a comprehensive review of the implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States in 2004
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3.0 TRENDS IN THE IMPLEMENTATION OF THE OCEANS AND COASTS COMPONENTS OF THE BARBADOS PROGRAMME OF ACTION AT GLOBAL AND REGIONAL LEVELS

The BPoA called for a wide number of actions at national, regional, and global levels. Action at all of these levels is essential to achieve the sustainable development of SIDS.

In this paper, we focus particular attention on national-level data related to BPoA implementation, while providing some general references to activities at the global and regional levels.

3.1 Global Level

The BPoA called for a number of actions at the global level, including ratification of multilateral environmental agreements and increased international funding to support the

Table 4 Components of the Barbados Programme of Action Specifically Related to Oceans and Coasts

	National	Regional	International
Policy Creation and Implementation	Establish and/or strengthen, where appropriate, institutional, administrative and legislative arrangements for developing and implementing integrated coastal zone management plans and strategies for coastal watersheds and EEZs , including integrating them within national development plans. Ratify and/or adhere to regional and international conventions concerning the protection of coastal and marine resources and combat unsustainable fishing and related practices.	Harmonize policies and strategies for the coordination of the sustainable management and utilization of coastal and marine resources . Develop a methodology for integrated coastal zone management appropriate to SIDS, particularly very small, low elevation and coral islands.	Cooperate in facilitating mutually advantageous fishing agreements between SIDS and foreign fishing groups; take account of the concerns and characteristics of those States within the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks; and encourage and facilitate the full participation of small island developing States in the Conference and in the implementation of the Conference outcomes.
Analyses		Develop and/or strengthen regional clearinghouses for coastal and marine environmental information to facilitate the collection, synthesis and sharing of relevant information, knowledge and experience among SIDS in a structured and systematic way.	Use the relevant results of the World Coast Conference , held at Noordwijk, the Netherlands, from 1 to 5 November 1993 as well as the ongoing work within the UNEP Regional Seas Programme to assist SIDS with the development and implementation of integrated coastal zone management plans, to improve international coordination in that field and to develop strategies to prevent further marine and coastal degradation . Monitor the results of the Meeting of Government-designated Experts Focusing on the 1985 Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-Based Sources , held in Montreal from 6 to 10 June 1994.
Monitoring Plans	Design comprehensive monitoring programmes for coastal and marine resources , including wetlands, in order to determine shoreline and ecosystem stability, and also document and apply, as a basis for integrated coastal zone planning and decision-making , traditional knowledge and management practices that are ecologically sound and include the participation of local communities.	Develop and/or strengthen regional capabilities for the effective surveillance and monitoring of activities in the EEZs of SIDS.	Develop mechanisms for the gathering and sharing of information and expertise, particularly interregionally among SIDS, including geographic information systems (GIS) techniques and facilities for the assessment of coastal and marine resources , including the regional nodes of the UNEP Global Resource Information Database. Support SIDS in establishing national and regional capabilities for the effective surveillance and monitoring of activities within their EEZs , setting up regional and other joint-venture fishing enterprises, developing inventories of marine resources and regional approaches to the sustainable management of their EEZs , and strengthening regional marine research centres .
Capacity Building	Develop and/or strengthen national capabilities for the sustainable harvesting and processing of fishery resources and provide training and awareness programmes for the managers (government and local communities) of coastal and marine resources .	Develop and/or strengthen the capacity of regional organizations to undertake activities in coastal and marine areas , including research into commercial and non-commercial fisheries with a view to sustainable harvesting and utilization, as well as surveys on reef, estuary, wetland and lagoon resources. Also monitor and promote innovative ways to sustainably develop territorial waters and EEZs , including providing support for aquaculture, mariculture, coral reef and mangrove programmes. Develop programmes to enhance negotiating and related skills for the management and exploitation of coastal and marine resources , including the negotiation of fisheries agreements.	Improve means of building capacity for integrated coastal zone management planning and implementation, strengthening regional and international networks, including South-South relationships; increasing public awareness and participation; enhancing relevant education and increasing training activities; ensuring the involvement and participation of non-governmental organizations and other major groups; supporting the development of concepts, methodologies and tools; and supporting and strengthening international research and improvements in monitoring, the results of which should be integrated into policy development, planning and decision-making.
Assistance			Assist with the establishment and/or strengthening, where necessary, of new institutional and administrative arrangements for the development of integrated coastal zone management plans and their implementation.

carrying out of the BPOA.

Ratification of International Agreements

The full implementation of multilateral environmental agreements (MEAs) is one of the major goals of the BPOA (BPOA, Paragraph 26 A.IV), and development of strategies and implementation plans for MEAs are also encouraged. The BPOA specifically calls for the ratification and implementation of several MEAs, including the following:

- 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention);
- 1972 Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter (London Convention);
- 1992 Convention on Biological Diversity (CBD);
- 1973 Convention on International Trade in En-

Table 5. Other Components of the Barbados Programme of Action Related to Oceans and Coasts

Climate change and sea level rise: Formulate comprehensive strategies and measures on adaptation to climate change, including the formulation of comprehensive adjustment and mitigation policies for sea level rise in the context of integrated coastal area management, as well as to assess the effects of the socio-economic and marine resources implications of the impact of climate change, climate variability and sea level rise.
Biodiversity Resources: Formulate and implement integrated strategies for the conservation and sustainable use of marine biodiversity, including protection from the introduction of certain non-indigenous species, the identification of sites of high biological significance for the conservation of biological diversity, ensure that local or indigenous intellectual property rights are protected for eco-tourism and other sustainable development opportunities, such as sustainable agriculture, training and research
Management of Wastes: Establish mechanisms to protect the oceans, seas and coastal areas from land-based sources of marine pollution as well as from ship-generated wastes, oil spills, transboundary movement of toxic and hazardous wastes;
Transport and Communications: Continue efforts to strengthen maritime transport services and facilities, at both the national and local levels, paying particular attention to environmental protection, safety, and innovative energy-efficient and low-cost transport solutions;
Land Resources: Support appropriate afforestation and reforestation programmes in order to ensure watershed and coastal protection;
Freshwater resources: Strengthen procedures to monitor and respond to the impacts on water resources of natural and environmental hazards, in particular the impacts of climate change and climate variability, including drought and sea level rise;
Energy Resources: Promote the efficient use of energy and the development of environmentally sound sources of energy and energy-efficient technologies, paying special attention to the possibilities of using, where appropriate, the increasing economic possibilities of new and renewable sources of energy, including wind, solar, geothermal, hydroelectric, wave and biomass energy, and ocean thermal energy conversion.
Tourism Resources: Ensure that tourism development and environmental management are mutually supportive, adopting integrated planning and policies to ensure sustainable tourism development, with particular attention to land-use planning and coastal zone management, requiring environmental impact assessments for all tourism projects, as well as the continuous monitoring of the environmental impact of all tourism activities;
Natural and Environmental Disasters: Integrate natural and environmental disaster policies into national development planning processes;
Science and Technology: Ensure that science and technology policy is closely linked to national environmental strategies and sustainable development plans, including coastal zone management and marine and ocean sciences data, and is responsive to local and sectoral sustainable development needs;
National Institutions and Administrative Capacity: Strengthen institutional arrangements and administrative capacity, including cross-sectoral/inter-ministerial committees and task forces, in order to integrate environment and economic policy into national planning and across sectors and ensure the capacity to implement oceans and coasts policies;
Regional Institutions and Regional Cooperation: Support and enhance participation and coordination within regional organizations;
Human Resource Development: Develop curricula for sustainable development, and other needs for policy development and implementation, including on oceans and coastal management.

dangered Species of Wild Fauna and Flora (CITES); and

- “Other relevant international and regional conventions.”

Every SIDS has ratified the CBD (100% of SIDS versus 98% of non-SIDS States ratifying). However, SIDS exhibit lower than average ratification or accession on the Basel Convention (63% of SIDS are parties while 89% of non-SIDS States are parties to the convention) and CITES

(61% of SIDS are parties to CITES compared to 93% of non-SIDS States). The London Convention is not extensively ratified among SIDS or non-SIDS states, with ratification at 46% and 41% respectively (Loper et al 2004).

Although their ratification was not specifically called for, the BPoA also mentioned the:

- United Nations Framework Convention on Climate Change (with 100% of SIDS ratifying versus 98% of non-SIDS States);

- United Nations Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks (with 41% of SIDS ratifying versus 23% of non-SIDS States);
- United Nations Convention on the Law of the Sea (with 93% of SIDS ratifying versus 71% of non-SIDS States); and
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat (RAMSAR) (with 39% of SIDS ratifying versus 81% of non-SIDS States).

With the exceptions of the Basel Convention, CITES, and RAMSAR, SIDS show a higher ratification of MEAs mentioned in the BPOA than do non-SIDS States. However, SIDS face serious constraints in fulfilling their convention commitments. The funding and assistance provisions within the conventions themselves have not proven adequate to assist SIDS to fully implement the agreements. As called for in Agenda 21, additional funding, technical support, and capacity building are needed from the international community to assist SIDS in full implementation of MEAs. Assistance is particularly needed in nations with low participation in MEAs, such as Bahrain, Guinea-Bissau, Singapore, Sao Tome & Principe, Cook Islands, Federated States of Micronesia, Kiribati, Niue, and Haiti (each with about 20-35% participation in MEAs).

Funding

According to the UN Economic and Social Council, official development assistance (ODA) from Organisation for Economic Cooperation and Development (OECD) countries to SIDS dropped from US \$2,688.29 million in 1994 to US \$1,652.34 million in 2001 (Benn 2003). Reasons for the drop in aid are unclear, but follow worldwide trends in declining aid. The levels of assistance that have been received by the small islands states have been far lower than anticipated, or needed, to implement the 1994 BPoA, which detailed the actions that were necessary to achieve sustainable development in small island states (UN Economic and Social Council 2004).

Another cause for concern related to SIDS funding is that some SIDS have high GDP per capita among developing nations and therefore may not be seen by OECD countries as needing substantial aid, particularly in the face of a worldwide decline in aid. It should be recalled, however, that SIDS countries are very vulnerable to natural disasters and to economic collapse. Although the economies of some SIDS may appear stronger than those of other developing nations, the fragility of small island economies should be taken into account. For example, in 2003, the Committee

for Development Policy of the UN Economic and Social Council recommended that Cape Verde and the Maldives be graduated from the list of Least Developed Countries (LDC) due to, among other criteria, increases in GDP per capita. While graduation is ostensibly a positive step, it can render these SIDS less likely to receive certain types of aid. Consequently, each case of SIDS graduation should thoroughly consider SIDS' economic, social, and environmental vulnerabilities (UN Economic and Social Council, 2004).

Also, while funding for SIDS is available in connection with the implementation of international multilateral environment agreements (Loper et al, 2004), one problem with implementation of the funds associated with specific conventions, such as the Convention on Biological Diversity or the Framework Convention on Climate Change, is that although the conventions call for protecting biodiversity or addressing climate change effects in the context of integrated coastal and ocean management, actual funded projects often tend to fund smaller scale and separate activities, not part of an overall coastal management effort, leading to sectoral, rather than comprehensive and cross-cutting management.

Given the decline in overseas development assistance, SIDS are turning to alternative sources of funding. The Global Environment Facility (GEF), for example, has played a substantial role in funding certain activities in SIDS. Since 1991, the GEF has allocated \$365.1 million for 225 projects to address global environmental problems through sustainable development in SIDS. These projects have also attracted \$571.6 million in co financing from other organizations (GEF, 2004). GEF has funded work on a number of the major provisions of the BPoA agenda. For example, the GEF, along with UNDP and the South Pacific Regional Environment Programme (SPREP), has funded projects such as the Pacific Islands Climate Change Assistance Project to help efforts in the realm of climate change and sea level rise. SPREP and the Caribbean Disaster and Emergency Response Agency, along with other international agencies, have funded efforts related to the preparation for and response to natural disasters (UN Economic and Social Council 2004).

3.2 Regional Level

Regional institutions have played a key role in interpreting and implementing the requirements of the BPoA in all three SIDS regions—Pacific, Caribbean, and AIMS, since 1994.

Regional institutions have, in a number of instances, made considerable progress in interpreting and operationalizing the Barbados Programme of Action. For example, the Pacific Region is implementing a Pacific Regional Ocean Policy adopted by Pacific Forum Leaders in 2002. The

Pacific regional organizations regularly come together through the Council of Regional Organizations of the Pacific (CROP). CROP's marine sector working group is an excellent example of a regional coordinating mechanism on oceans. A Pacific Islands Global Ocean Observing System has also been established.

Within the Caribbean, climate change and sea level rise have been addressed at the regional level through the Caribbean Planning for Adaptation to Climate Change Project (CPACC) and subsequent efforts, including the Mainstreaming Adaptation to Global Change (MACC) project. Efforts have been made to establish the Caribbean Sea as a Special Area through the United Nations (United Nations General Assembly, 2004). While those efforts have not yet been successful, they represent a landmark in Caribbean regional cooperation on ocean issues. Other examples of regional cooperation in the Caribbean include the CARICOM Regional Fisheries Mechanism, the GEF Integrated Coastal Area and Watershed Management Project, the IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE) Large Marine Ecosystem Project, and the Meso-American Reef System Project.

Given the heterogeneous nature and geographical dispersion of the AIMS region, regional cooperation requires perhaps more effort in the AIMS region than in the Pacific and Caribbean. The Indian Ocean Commission was given the lead in 2003 as an interim regional mechanism. In terms of multilateral environmental agreements the AIMS regions have made great strides since 1994, including 100% ratification of LOS, CBD, and UNEP regional seas conventions among AIMS nations, initiation of national biodiversity strategic action plans, and establishment of marine protected areas.

4. TRENDS IN THE IMPLEMENTATION OF THE OCEANS AND COASTS COMPONENTS OF THE BARBADOS PROGRAMME OF ACTION AT THE NATIONAL LEVEL

In the sections that follow, we present the results of the analyses of national-level data on the implementation of the oceans and coasts components of the BPoA and of three other related components: climate change and sea level rise, tourism, and waste disposal. As noted earlier these analyses rely on summary tables which are found in the Appendices (Appendix A for Ocean and Coastal Management, Appendix B for Climate Change and Sea Level Rise, Appendix C for Tourism, and Appendix D for Waste Management). As noted earlier, the analyses are based largely on the national reports submitted by countries for the

Mauritius BPoA+10 meeting and for the World Summit on Sustainable Development. Because there were gaps in the country-level data, in addition to these common data sources, we searched for other information in relevant publications and websites. All data sources utilized in the summary tables are presented as footnotes in the summary tables. Especially useful sources included Sorensen's global survey of efforts in integrated coastal management (Sorensen 2000) and Cicin-Sain et al's comparisons of progress achieved on ocean and coastal management, at a global level, between 1993 and 2000 (Cicin-Sain et al, 2000). For each major component of the Barbados Programme of Action, we discuss: The nature of the BPoA goals, data sources utilized, general trends in all SIDS for which data are available, regional variations, and observations/policy implications.

4.1 Ocean and Coastal Management

Introduction

As described earlier in this paper, oceans and coasts are vitally important to SIDS. This section examines the extent to which BPoA goals related to ocean and coastal management have been implemented. Countries all over the world, including SIDS, are grappling with issues of ocean and coastal management, and attempting to implement an integrated ocean and coastal management approach, moving away from the sector-by-sector approach to management, and considering the implications of development on the environment and of each ocean/coastal use on other ocean/coastal uses.

Barbados Programme of Action Goals on Oceans and Coasts

In relation to oceans and coasts and as detailed in Table 2, the Barbados Programme of Action called for the following actions:

- (i) Establish and/or strengthen, where appropriate, institutional, administrative and legislative arrangements for developing and implementing integrated coastal zone management plans and strategies for coastal watersheds and EEZs, including integrating them within national development plans.
- (ii) Design comprehensive monitoring programmes for coastal and marine resources, including wetlands, in order to determine shoreline and ecosystem stability, and also document and apply, as a basis for integrated coastal zone planning and decision-making, traditional knowledge and management practices that are ecologically sound and include the participation of local communities.

- (iii) Develop and/or strengthen national capabilities for the sustainable harvesting and processing of fishery resources and provide training and awareness programmes for the managers (government and local communities) of coastal and marine resources.
- (iv) Ratify and/or adhere to regional and international conventions concerning the protection of coastal and marine resources and combat unsustainable fishing and related practices

Data Sources

Analysis of the implementation of ocean and coastal policy from the Barbados Programme of Action was carried out based on National Assessment Reports prepared for BPoA+10 and on the Country Profiles developed for the 2002 Johannesburg Summit. Both the National Assessment Reports and the 2002 Country Profiles address oceans and coastal issues within a specific chapter.

General Trends

The following results are based on analysis of the information collected from the national reports. Whenever possible, additional sources were used to fill data gaps. The discussion below reports on the percentage of SIDS countries (from a total of 41 SIDS countries) implementing a particular provision of the BPoA on oceans and coasts.

- 20% of SIDS nations (8 nations) have developed specific institutions or interagency mechanisms for the coordination of integrated coastal and ocean management;
- 44% of SIDS nations (18 nations) have entrusted the coordination of marine and coastal issues to national environmental institutions. Some of these mechanisms and environmental institutions are part of the National Sustainable Development Plan coordination (6 countries of 18, or 15% out of the total).
- No SIDS has delimited its EEZ and deposited EEZ coordinates with the UN Division of Ocean Affairs and Law of the Sea (DOALOS), nor has any SIDS filed an extended continental shelf claim.
- Several countries have enacted relevant legislation regarding marine management. Most of the enactments are under jurisdiction or coordination of national environmental institutions, most notably, National Environmental Acts (63% of SIDS or 26 countries) and laws that provide for Environmental Impact Assessment (32% of SIDS, or 13 countries).

The Environmental Acts often encompass waste and watershed or pollution-related issues, and to a lesser extent legislation on MPAs and fisheries management.

- 44% of SIDS (18 countries) have developed National Sustainable Development Plans, and Biological Diversity National Strategies. The Cook Islands, Marshall Islands and Samoa have developed Marine Resources Plans.
- 7% of all SIDS (or 3 countries from the Caribbean) have enacted National Coastal Zone Acts (Barbados, Belize, and Cuba).
- 46% of SIDS (19 countries) have developed national initiatives for integrated coastal management, which are in the form of national plans (17% or 7 countries; national strategies (17% or 7 countries); and national programs (12% or 5 countries).
- 27% of SIDS (11 of 41) have enacted legislation on watershed planning, which includes coastal watershed management. These are the Cook Islands, Marshall Islands, Samoa, Barbados, Belize, Dominican Republic, Jamaica, St. Lucia, Antigua & Barbuda, and Suriname.
- Other initiatives closely related with integrated coastal management are the establishment of Marine Protected Areas (MPAs). 61% of SIDS, or 25 countries, have established MPAs while at least seven more have recommended or proposed MPA development. Only five SIDS have not established or recommended the establishment of MPAs, and information is needed for six SIDS. Interestingly, the Cook Islands and Samoa have declared their entire EEZ as MPAs, presenting a unique solution for management.

Regional Variations

The three regions: Pacific, Caribbean, and AIMS, have achieved various levels of implementation of the BPoA related to ocean and coastal policy. The reports analyzed show a great deal of diversity, particularly with respect to the AIMS region. Therefore, it is difficult to attempt generalizations; however, the following regional trends are emergent:

Pacific

- One country had developed interagency mechanisms for ICZM (Cook Islands);

- 29% of Pacific SIDS reported having ICZM strategies and plans;
- None reported having a dedicated Coastal Zone Management Act;
- 57% of the 14 Pacific SIDS have established MPAs as part of their EEZ/ocean management initiatives;
- Two countries or 14% of Pacific SIDS reported having EIA Acts;
- Three of the Pacific (21%) SIDS carry out cross-sectoral coordination of ocean management issues through national environmental institutions.
- 29% were involved in some form of environmental monitoring in the coast.

A complete evaluation of some these initiatives and activities was not possible given the limited information in the national reports. From the reports however, it was evident that Pacific SIDS relied on regional initiatives and joint programmes to address some of their key ocean and coastal concerns.

Caribbean.

- Of all the SIDS regions, the Caribbean has the highest number of countries with institutions dedicated to ICZM activities (6 countries or 38%);
- Nine Caribbean nations (56%) reported development of national integrated coastal management initiatives; however, the information available did not allow for evaluation of the extent of implementation of these initiatives;
- Compared to the other SIDS regions, the Caribbean is the only region where 3 nations (19%) have passed Coastal Zone Management Acts;
- Ten Caribbean nations (63%) have developed mechanisms for ocean management coordination through MPAs;
- 50% have legislated EIA Acts;
- 50% of Caribbean nations carry out cross-sectoral coordination of ocean management issues through environmental institutions;
- 38% of Caribbean SIDS reported some form of coastal monitoring activities.

AIMS

The AIMS region is the most diverse region, both geographically and economically and this heterogeneity can inhibit regional cooperation. The Indian Ocean Commission was changed in 2003 to coordinate with the efforts of the AIMS nations in preparing for BPoA+10.

- No dedicated ICZM institutions were identified;
- 45% of the AIMS nations (5 countries), developed National ICZM initiatives; however, the information available did not allow for evaluation of the extent of implementation of these initiatives;
- No AIMS countries had dedicated Coastal Zone Management Acts;
- 55% of the AIMS nations (6 out of 11) carry out cross-sectoral coordination of ocean management issues through national environmental institutions;
- MPAs were established in 7 countries (64 %);
- 27% have legislated EIA Acts;
- 55% of AIMS SIDS were engaged in some form of coastal monitoring, however, from the reports, no clear information was available on how comprehensive these monitoring programmes were.

Observations

Based on the analysis of the available reports, it is possible to state with reasonable confidence that most countries recognize the importance of the marine environment and its resources to their sustainable development and economic stability. Aspects of ocean management are usually considered under the auspices of National Sustainable Development Strategies, derived from the implementation of the Agenda 21 as well as the BPoA, and are often coordinated by national environmental institutions.

Institutional Capacity and Integrated Coastal and Ocean Management

- Institutional capacity and integrated coastal and ocean management initiatives are constrained by weak institutions and administration processes as well as lack of human, technical and financial resources to develop and implement ocean policies. This is evidenced by the fact that only 20% of all SIDS have dedicated ICZM institutions.

- Nations recognize the need for integrated management of oceans, but they lack the necessary capacity. Financial constraints have prevented further development and implementation of ICZM. There is need for coordination and capacity building to develop and implement policies and integrated strategies.
- SIDS are implementing coastal zone sectoral policies, and some plans on specific uses and problems regarding oceans. Most of the issues regarding ocean management are primarily focused on environmental issues, pollution and marine resources, including fisheries and biodiversity.
- Many nations lack specific institutions or administrative processes to implement a crosscutting approach to planning and management of oceans and coasts. Most of the burden of addressing cross-sectoral issues is left to environmental management institutions.

EEZ Management

- No SIDS has delimited its EEZ due to lack of capacity and/or boundary delimitation conflicts with neighboring states.
- The SIDS acknowledge the difficulty of surveillance and enforcement within their EEZs, due to logistical and financial constraints, as well as the expansive nature of the areas they control. Fisheries enforcement within EEZs is a primary concern and difficulty.
- Most SIDS have not developed EEZ management plans. Rather, they have created localized plans to manage fisheries and pollution issues.
- The Pacific islands present several cases where the whole EEZ was classified as a protected area or a marine sanctuary. This strategy presents a unique method of EEZ management.

Marine Biodiversity

- Some SIDS have developed a National Biodiversity Plan and others are in various stages of development. These strategies may potentially play an important role in the integration and coordination of biodiversity and fisheries management plans.
- Many countries are developing or implementing local projects regarding aquaculture, fisheries, and

protected areas. However, it seems that they are not being designed in the context of a national strategy. A number are isolated actions, promoted by individual funding institutions.

Environmental Impact Assessment

- SIDS recognize Environmental Impact Assessment (EIA) as a tool to support better-informed decision-making related to oceans and coasts. Taking into account the impacts of projects on the coastline and on marine resources, many have enacted EIA legislation, meant to guide all future coastal projects. EIA represents a means of better management and coordination of cross-cutting coastal issues, including the implementation of integrated coastal management.
- Nations have been developing legislation which encompasses issues related to oceans and coasts, such as pollution, EIA, biodiversity, marine conservation, watershed management, fisheries, and shipping. There is a need, however, for more coordination of coastal legislation with pre-existing regulations such as fisheries and urban planning.

4.2 Climate Change and Sea Level Rise

Introduction

Here, the progress SIDS have made towards the climate change and sea level prescriptions presented in the BPoA is assessed. As noted earlier, analysis is complicated by the limited availability of information from the participant countries. The most useful information has come from the National Assessment Reports produced in preparation for BPoA+10 (as noted earlier, only 68% of the SIDS had submitted these documents as of the preparation of this analysis (March 2005)). Additional information was found in the national country profiles produced by the ECLAC/ CDCC Secretariat in 1998. Unfortunately, those only pertained to 12 Caribbean nations out of a total of 41 SIDS countries. A third major source of information was the national communications on the United Nations Framework Convention on Climate Change (UNFCCC), which provided limited information on each country's direct actions towards the goals of BPoA. Finally, some countries have published documents and web-based resources independently which pertain to climate change and sea level. However, these resources vary widely in their comprehensiveness. Appendix B summarizes the actions of the SIDS in response to the goals on climate change and sea level rise of the BPoA. Below is an assessment of those actions.

Barbados Programme of Action Goals on Climate Change and Sea Level Rise

The BPoA set forth nine national actions, policies, and measures for SIDS related to climate change and sea level rise:

- (i) Ensure early ratification of or accession to the United Nations Framework Convention on Climate Change, the Montreal Protocol on Substances that Deplete the Ozone Layer, and other related legal instruments.
- (ii) Monitor, survey and collect data on climate change and sea level rise.
- (iii) Formulate comprehensive adjustment and mitigation policies for sea level rise in the context of integrated coastal area management.
- (iv) Assess the effects and the socio-economic implications of the impact of climate change, climate variability and sea level rise on Small Island Developing States.
- (v) Map areas vulnerable to sea level rise and develop computer-based information systems covering the results of surveys, assessments and observations as part of the development of adequate response strategies, adaptation policies and measures to minimize the impact of climate change, climate variability and sea level rise.
- (vi) Improve public and political understanding of the potential impacts of climate change.
- (vii) Formulate comprehensive strategies and measures (including the preparation, facilitation and collection of information) on adaptation to climate change that would contribute to a better understanding of the range of issues associated with the development of methodologies to facilitate adequate adaptation to climate change.
- (viii) Promote a more efficient use of energy resources in development planning and use appropriate methods to minimize the adverse effects of climate change on the sustainable development of those resources.
- (ix) Increase participation in the bilateral, regional and global research, assessment, monitoring and mapping of climate impacts, including the adoption of oceanographic and atmospheric measures and policies and the development of response strategies.

General Trends

- Approximately 63% of SIDS countries (26 SIDS) have produced or are in the process of producing a national adaptation plan (action iii), while 27% have not produced one (11 SIDS), and information is unavailable for the remaining 10% (4 SIDS). A national adaptation plan is an official document that explains how a country will address the problems created by sea level rise. Additionally, 22% (9 SIDS) of those countries have national offices dedicated to issues of climate change and sea level rise, while 68% do not (28 SIDS) and information is unavailable for the remaining 10% (4 SIDS). Most of these offices are at the ministerial or sub-ministerial level.
- Among the SIDS, 61% (25 SIDS) have a national disaster preparation and response plan (actions vii and v), 12% (5 SIDS) do not, and information is unavailable for 27% (11 SIDS). Twenty SIDS (49%) have a national office or agency dedicated to addressing disaster issues, 24% do not (10 SIDS), and information is unavailable for 27% (11 SIDS). Systems for early warning of citizens when disasters, such as cyclones, are imminent, have been installed by 29% of the SIDS (12 SIDS), while 44% of the countries (18 SIDS) have not yet installed early warning systems, and information is unavailable for 27% (11 SIDS).
- Of the SIDS, 37% or fifteen countries have some sort of renewable energy system installed (action viii), eighteen SIDS (44%) have not yet installed a renewable energy system, and information is unavailable for 19% (8 SIDS). A majority of projects are isolated small-scale solar installations, however, some countries have implemented significant renewable energy infrastructure. For example, Fiji and Belize have large-scale hydroelectric producing plants that provide energy for a significant portion of their populations.
- Greenhouse gas (GHG) emissions assessments (action ii) have been completed by 54% of the SIDS (22 countries), 34% (14 SIDS) have yet to do so, and information is unavailable for 12% of the nations (5 SIDS). Reporting by SIDS indicates that only 20% (8 SIDS) have actually installed equipment for environmental monitoring such as tidal gauges and meteorological stations (action ii), 68% (28 SIDS) have yet to do so, and information is unavailable for 12% (5 SIDS). However, recent communications with SIDS representatives indicate that new installations of monitoring equipment has taken

place in a number of nations, and that tidal gauges are pervasive especially among the Pacific SIDS and Caribbean SIDS through regional efforts.

- Of the SIDS, 34% (14 SIDS) have implemented projects for public education about climate change and sea level rise (action vi), 44% (18 SIDS) have yet to do so, and information is unavailable for 22% (9 SIDS). Six SIDS (15%) teach about climate change and sea level rise in public school curricula, 63% do not (26 SIDS), and information is unavailable for the remaining 22% (9 SIDS). It is important to note that a number of SIDS that haven't yet incorporated climate change topics in primary school curricula have public awareness programs for the general public.
- Several SIDS have developed innovative plans such as scholarships for citizens to study climate issues at a university (Tonga) and the establishment of an Oceanographic Institute to attract international expertise on sea level change (Mauritius).
- Only 10% of SIDS (4 countries) have produced a specific assessment that pertains to the socio-economic impact of sea level rise and climate change, while 66% (27 SIDS) have yet to do so, and information is unavailable for the remaining 24% (10 SIDS). It is worth noting, however, that most countries seem keenly aware of the socio-economic challenges presented by climate change and sea level rise, as evidenced by ancillary information provided in country reports. It may be that an innate understanding of the challenges presented by this issue among the SIDS precludes the necessity or urgency for the production of an assessment document (iv).

Regional Variations

Pacific. While the Pacific region has a moderate level of national reporting, it seems to have the most sophisticated enactment of the climate change and sea level action points presented in the BPoA. In the Pacific region, 57% of the SIDS countries have produced a National Assessment Report. National plans for sea level rise and climate change adaptation and mitigation exist or are in preparation for 71% of the Pacific SIDS, 14% have (to date) not begun preparation, while information is unavailable for the remaining 14%. About 21% of the SIDS have undertaken projects to develop infrastructure for sea level change adaptation, 72% have yet to do so, and information is unavailable for 7%. For example, Tuvalu has constructed seawalls and Tonga has planted coastal trees and built foreshore embankments. About 50% of reporting countries have undertaken disaster preparedness planning as well, and have established national

plans and offices to that end, while 14% have yet to do so, and information is unavailable for 36%. Tuvalu has gone a step further by placing disaster equipment such as generators and desalination units at strategic points around the country. Additionally, Tuvalu, Fiji, Niue, Palau, Samoa, Tonga, and the Cook Islands, have undertaken disaster early warning projects in association with broadcasting entities in their countries.

In the Pacific 43% of SIDS have implemented some sort of renewable energy infrastructure, while 36% have not, and information is unavailable for 21%. While Pacific countries have done the most to implement renewable energy sources, the scale of these projects varies greatly. Many countries have initiated small-scale solar projects, while a few such as Vanuatu and Fiji have much more sophisticated and ambitious plans and infrastructure for renewable energy production. Overall, there seems to be an appreciation of the potential of renewable energy among the SIDS of the Pacific.

Based on Pacific SIDS reporting 79% of the countries have conducted a greenhouse gas (GHG) inventory, while 14% have not and information is unavailable for 7%. In the Pacific, only 14% of SIDS have installed climate and sea level monitoring instruments, 79% have not and information is unavailable for 7%. Public education about climate change and sea level rise is conducted by 43% of the nations, while 21% have not yet commenced and information is unavailable for 36%. The most common initiative is through the inclusion of climate change topics in primary school curricula. Additionally, Samoa educates the public through service announcements on television and radio broadcast. The BPoA goal that seems to have received the least attention is the assessment of the socio-economic impact of sea level rise and climate change, with only 21% of countries producing a related document, 36% not doing so, and information unavailable on 43%. Few countries have noted in their national assessment reports, or other documents, substantial development on this issue. However, it is worth noting that this issue may hold less significance for SIDS citizens relative to other more pressing climate and sea level change goals in the BPoA.

Caribbean. The Caribbean region has the most comprehensive national reporting among the SIDS, and a number of regional trends emerge from the available information. In the Caribbean, 88% of the SIDS have produced a National Assessment Report. The development of a climate change and sea level rise adaptation and mitigation plan was undertaken by 50% of the Caribbean SIDS, while 50% have yet to do so. Only 19% have national offices dedicated to climate and sea level issues, while 81% do not. However, 88% of Caribbean SIDS have established a national disaster preparedness plan or office, while 12% have

not. Antigua and Barbuda has established a disaster fund to help defray the economic impact of recovering from a natural disaster and Belize has conducted community awareness campaigns in order to inform the public of what to do in a disaster. It is important to note that in this hurricane prone region only 13% of the SIDS have established an early warning system to alert the public in the event of a disaster.

Approximately 82% of SIDS in the Caribbean have promoted or assessed their countries potential for renewable energy production, while 18% have not. However, only 25% have some sort of renewable energy infrastructure installed, while 75% do not. Based upon Caribbean SIDS reporting, 44% of the countries have conducted a GHG inventory, while 56% have not. In the Caribbean region 19% of countries have installed environmental data recording instruments and 81% have yet to do so. Public education about climate change and sea level rise has been undertaken by 38% of the Caribbean SIDS, with 62% of the SIDS lacking public awareness programs. Finally, no countries from the Caribbean produced an assessment of the socio-economic impact of climate change and sea level rise.

AIMS. Most of the AIMS nations have established a solid foundation for enacting climate and sea level change related policies. Among the AIMS, 54% of the SIDS have produced a National Assessment Report. Approximately 54% of AIMS countries have a climate and sea level rise adaptation and mitigation plan, 19% do not, and information is not available for the remaining 27%. Among the AIMS countries, 36% have governmental offices dedicated to these issues, 37% do not, and information is needed for the remaining 27%. 45% of AIMS countries have a disaster preparedness plan for climate-related catastrophes, 10% do not and information is unavailable for the remaining 45%.

A limited number of AIMS countries have implemented renewable energy plans and projects. Approximately 45% of the AIMS SIDS have installed renewable energy infrastructure, while 18% have not, and information is needed for the remaining 37%. While 45% of AIMS nations have completed a GHG inventory, 18% have not and information is unavailable for the remaining 37%. Public awareness and education projects are limited to only 27% of the AIMS nations, while 36% of the countries have no programs, and information is needed for the remaining 37%. Like the Caribbean, none of the AIMS nations produced an assessment of the socio-economic impact of climate change and sea level rise. Overall, there seem to be very few overriding trends in the AIMS group, which may be attributed to the geographic distribution of the islands as well as their economic and political heterogeneity.

Observations

While an analysis of the state of implementation of the BPoA goals on climate change and sea level rise among the SIDS would benefit from more data, a number of significant conclusions can be drawn from the available information. The SIDS have made significant progress towards the BPoA climate change and sea level rise goals related to adaptation and mitigation programs as well as disaster preparedness. First, a relatively high number of SIDS have produced both National Assessment Report documents and national adaptation and mitigation policies. The production of these documents is an indication of an overall commitment of the SIDS to the goals of BPoA. That commitment is further reflected in the relatively high number of SIDS that have produced GHG inventories. The GHG inventory is an important first step in understanding the role each nation plays in global warming, and in a geopolitical context, it signals to the international community a dedication to the principals of the Kyoto Protocol. Additionally, a relatively high number of SIDS have developed a national disaster preparation and response plan. This indicates a sincere concern and understanding of the threats posed to their nations by climate change and sea level rise.

Overall, the SIDS have made less significant progress toward the BPoA climate change and sea level rise goals related to implementation of renewable energy as well as climate and sea level monitoring. The slower progress towards these specific goals by the SIDS does not reflect a lack of commitment to the BPoA, but rather a dearth of financial and technical capacity. Many of the SIDS lack the funds and technical knowledge to produce the infrastructure related to renewable energy production, and climate and sea level monitoring.

While the SIDS as a whole have made a number of important strides towards the prescriptions of the BPoA in the last 10 years, they must overcome additional obstacles in order to meet all climate and sea level change goals. Nonetheless, it is evident in their national reports and communications that the SIDS all have a genuine concern and appreciation for the threats posed by climate change and sea level rise, and a commitment to the goals of the BPoA. All SIDS seem to have a resolve and determination to face these threats and meet the goals of BPoA. It is important to note that the ability of the SIDS to fulfill all the goals prescribed in the BPoA relative to climate change and sea level rise is not limited by governmental commitment to the plan of action, but rather by the financial and technological capacity of each nation.

For most of the SIDS the financial capacity, and to a lesser extent, technical capacity necessary to fulfill the goals of

the BPoA must emanate from an external source. A number of SIDS are already working with international partners to develop renewable energy and sea level monitoring infrastructure. However, greater support is needed in order for all SIDS to achieve the goals of the BPoA. That support will likely only be solicited by presenting potential benefactors with convincing and quantitative evidence of the imminent threat climate change and sea level rise pose to the SIDS.

In order to garner the attention and concern of the international community to the plight of the SIDS they must quantitatively demonstrate the threat of rising sea level to their islands. This can most effectively be done by the installation of instruments to monitor, survey and collect data on climate change and sea level rise, pursuant to point (ii) in the Barbados Programme of Action Goals on Ocean and Coastal Policy. While recent communications indicate an increase in tidal gauges among the SIDS, an effective means of accessing the data collected by them does not yet exist. Given the state of environmental monitoring technology and global communication infrastructure it would be possible to create a SIDS global network of tidal gauges and meteorological stations that report and collect sea level and climate data around the world in a consistent manner. Such a comprehensive set of data would demonstrate the threat of rising sea level to SIDS on a global scale and provide indisputable evidence of sea level fluctuation.

4.3 Tourism

Introduction

Tourism is very important to the livelihood SIDS, comprising a significant portion of many SIDS' GDPs and employment sectors. If properly planned and managed, tourism may provide a sustainable development option for future growth in these nations. However, SIDS are environmentally and culturally fragile, and thus poorly managed tourism could threaten the very resources upon which they depend. The Barbados Programme of Action sets forth goals at the national, regional, and global levels to guide sustainable tourism development.

Barbados Programme of Action Goals on Tourism

At the national level, the goals outlined in the Barbados Programme of Action are relatively general, as noted below:

- (i) Ensure that tourism development and environmental management are mutually supportive.
- (ii) Adopt integrated planning and policies to ensure

sustainable tourism development, with particular attention to land-use planning and coastal zone management, requiring environmental impact assessments for all tourism projects; the continuous monitoring of the environmental impact of all tourism activities; and the development of guidelines and standards for design and construction taking into account energy and water consumption, the generation and disposal of wastes and land degradation, the proper management and protection of eco-tourism attractions, and the carrying capacity of areas for tourism.

- (iii) Identify and develop facilities to meet specific niche markets, particularly in eco-tourism, nature and cultural tourism, and involve local populations in the identification and management of natural protected areas set aside for eco-tourism.
- (iv) Adopt measures to protect the cultural integrity of small island developing States.

Data Sources

Sources of information for assessment of the implementation of these goals include the National Assessment Reports prepared in preparation for the Mauritius process, the 2002 Country Profiles prepared for the World Summit on Sustainable Development, World Tourism Organization publications, information from regional tourism organizations (e.g., Caribbean Alliance for Sustainable Tourism), national tourism websites (e.g., Tonga Visitors Bureau), and other sources. Although tourism data are not available for all SIDS, analysis of available data has revealed several trends.

General Trends

- 88% of SIDS, or 36 countries have some kind of tourism agency at the national level, while 7% of SIDS (3 countries) do not have national tourism agencies and information is needed for 5% of SIDS (2 countries). For some nations, this national office serves as a "chamber of commerce" or visitor's bureau whose main purpose is to attract more tourists, while other organizations serve more of a regulatory role.
- At least 49% of SIDS (20 countries) have installed these organizations at the ministry or secretary of state level, such as a Ministry of Tourism or Secretary of State of Tourism. Although not specifically called for in the BPoA, the presence of a national body to regulate and promote tourism is important to the furtherance of BPoA goals, as the BPoA calls

for actions at the national level that would be very difficult without a specified agency with the resources and authority to develop policies and standards.

- 59% of SIDS (24 countries) have developed national tourism strategies or plans (Action ii); however, there is little information on the implementation or status of these plans. 12% of SIDS (5 countries) reported a lack of a national plan, while 29% of SIDS (12 countries) did not report having a plan but did not clearly state the absence of one; more information is needed for these 17 SIDS. Several of those 6 SIDS currently lacking national plans have recognized the need to develop a national strategy in the near future and one, Cape Verde, is in the process of preparing a National Strategic Development Plan for Tourism.
- 54% of SIDS (22 countries) have adopted sustainable tourism standards or an ecotourism accreditation scheme (Action ii). For example, Samoa has adopted a Sustainable Tourism Indicators Programme, and several Caribbean SIDS are participating in the pilot phase of the Blue Flag program, a European-based eco-label program for beaches. However, information is needed for 44% of the SIDS.
- With respect to Environmental Impact Assessment (EIA) for tourism infrastructure (Action ii), although at least 37% of SIDS (15 countries) have some kind of national legislation for EIA, it is very difficult to discern which nations specifically require EIA for tourism projects. Since information regarding tourism regulations is usually reported separately from information directed at tourists, the nexus between the two is not clear, as very few nations have specifically reported that they require EIAs for tourism projects. For example, the tourism section of Cuba's 2002 national report discusses the use of the EIA, but does not explicitly state whether it is required. Further investigation of the relevant national EIA legislation for each nation may clarify this issue.
- Examples can be found in practically all countries of initiatives or projects that involve local communities in eco-tourism (Action iii); however, it is difficult to determine whether these projects are indicative of extensive ecotourism programmes or merely represent pilot projects. At least 63% of SIDS (26 countries) have shown positive evidence of ecotourism or community-based tourism, but it is not clear what proportion of overall tourism ac-

tivities are eco-tourism and/or involve local communities. Some of the countries provided information of various eco-tourism projects, but information is still needed for 37% of the SIDS. Ecotourism and community-based initiatives are, almost by definition, implemented on a smaller scale than massive resort developments. Several SIDS, particularly those in the early stages of tourism development, are trying to build reputations as premier ecotourism destinations, such as Guyana. This type of tourism development strategy may be contrasted with traditionally developed tourism destinations, such as the Bahamas, and Jamaica which are well known for their resort developments.

- Capacity building for tourism, including training of local workers, is taking place primarily at the regional level through workshops and courses. Evidence of capacity building is seen in at least 46% of SIDS (19 countries), although information is still needed for 49% of SIDS. These initiatives are split between internal capacity building (such as, for example, the University of Malta has a new tourism degree), and external capacity building where an outside organization or agency is providing capacity building for a SIDS. Examples of external capacity building include the United States federal government's program in the Marshall Islands to train tour guides for World War II sites. Of the two SIDS that reported a lack of capacity building initiatives for tourism, one, Cape Verde, is in the process of establishing a national school for hotel and tourism activities.
- Little information has been reported on initiatives for cultural preservation within SIDS related to tourism (Action iv); however, at least 10 SIDS (24%) have indicated projects to promote cultural heritage. Retention of traditional cultural values and traditions in the face of extensive tourism development and outside influence is a difficult issue for SIDS and should be seriously considered as part of environmental impact assessments for tourism facilities.

Regional Variations

Pacific. For the Pacific regions, the bulk of tourism planning seems to be occurring at the regional level through the South Pacific Tourism Organization and investment by donor nations at the regional level. Although at least 11 of the 14 Pacific SIDS have some sort of tourism agency, only three of those agencies are at the ministerial level. The Pacific region does, however, show strong evidence of community-based tourism, with over 70% of Pacific SIDS hav-

ing locally-run programs such as village homestays. Although several Pacific SIDS such as Fiji have well-established tourism industries, the tourism industry is just developing in some of the smaller and more remote islands such as Nauru.

Caribbean. The Caribbean region shows strong national tourism planning; all 16 Caribbean SIDS has a national tourism body with 11 of these at the ministry or secretary of state level within the national government. Over 87% of Caribbean SIDS have in place a national tourism plan or strategy. An impressive 69% of Caribbean SIDS have in place capacity building programs and an equal number (69%, or 11 countries) have community-based tourism initiatives. However, only two Caribbean SIDS reported relevant national legislation such as a Tourism Act while two others recommend that such efforts be undertaken. It should be noted however that in some cases tourism is addressed by less obvious legislation such as urban planning and development. Regionally, the Caribbean region is somewhat heterogeneous with respect to levels of tourism development. As compared to the Pacific and AIMS regions, the Caribbean has more opportunities for tourism development due to its proximity to North America, extensive tourism industry on some islands such as Jamaica, and a thriving cruise industry.

AIMS. Within the AIMS region, several States show very strong evidence of tourism planning, such as Mauritius and Seychelles, while in other AIMS nations there is little evidence of tourism planning. Regional leadership on tourism in the AIMS region is not as coordinated as in the Pacific and in the Caribbean; the AIMS region does not have a regional tourism organization analogous to the Pacific and Caribbean regional organizations. At least nine of the 11 AIMS SIDS have a national body for tourism, with six of those agencies at the ministry level. However, based on the data reported, only four SIDS have developed a national plan for tourism development.

Observations

Overall, SIDS are characterized by widely varying levels of tourism development and very different approaches to tourism management. While almost every SIDS has a national tourism agency, almost half of those seem to serve a promotion, rather than a regulatory, role. The Pacific region has strong regional planning through the South Pacific Tourism Organization, while the Caribbean has several agencies dealing with tourism at the regional level, including the Caribbean Alliance for Sustainable Tourism. The AIMS region has not implemented regional tourism planning. Within each region, there are examples of countries with mature resort-based tourism industries and those

with fledgling industries, whose further development may be limited by constraints such as lack of access (e.g., direct plane flights) to the island from major population centers. For example, although Dominica is fairly close to the United States, there are no direct flights available to the island; US mainland tourists must first fly to Barbados or Antigua or another neighboring island. Similarly, each region shows a spectrum of approaches to tourism management, from those SIDS striving to attract large resort developments to those promoting ecotourism. These approaches are reflected in tourism plans, which have been developed by at least 59% of SIDS.

In addition to the recommendation of environmental impact assessment for tourism facilities as called for in the BPoA, SIDS should consider undertaking benefit-cost analysis for new tourism facilities and identifying increased opportunities for local, rather than foreign, investment. Environmental impact assessment for tourism infrastructure should include a component for considering social and cultural impacts (e.g., the retention of traditional cultural values and traditions in the face of extensive tourism development and outside influence).

Those states without a national body for the promotion and regulation of tourism should consider developing such an institution. Those institutions, such as visitors' bureaus, that do not serve a regulatory role should perhaps be vested with the authority to regulate, as well as to promote, tourism activities. Those states that have not completed a national tourism strategy should consider doing so as soon as possible. These strategies should include identification of desirable tourism types (e.g. nature-based tourism), plans for promoting and marketing the state, and information on tourism carrying capacity.

Given the disparate levels of tourism development intra-regionally, SIDS with developed tourism programs such as, for example, The Bahamas or Belize, should work with nations such as Suriname with developing international tourism industries. Such South/South collaboration would provide opportunities for sharing of lessons learned.

4.4 Waste Management

Introduction

The environmental, social, and economic impacts of increasing quantities of man-generated wastes pose major problems in most urban centers, and the efficient sustainable management of those wastes has become a worldwide challenge. This issue is even more critical for SIDS, considering their unique situation of restricted land area, limited freshwater resources, high dependence on the coastal/

marine environment, and high vulnerability to contamination. These characteristics, associated with increasing population growth rates, urbanization, tourism, industrialization, changes in consumption patterns, and the economic constraints faced by SIDS, have resulted in underground water and freshwater resource contamination as well as marine pollution and coastal degradation, among other impacts.

BPoA Goals on Waste Management

In response to both the above concerns and an awareness that a combination of short and long-term mechanisms for the appropriate management of wastes are required, SIDS agreed to adopt and implement the following eight actions at the national level, as prescribed in the third chapter of the BPoA:

- (i) Develop fiscal and policy incentives and other measures to encourage environmentally sustainable imports and local products with low waste or degradable waste content.
- (ii) Develop and implement appropriate regulatory measures, including emission discharge and pollution standards, for the reduction, prevention, control and monitoring of pollution from all sources; for the safe and efficient management of toxic, hazardous and solid wastes, including sewage, herbicides, pesticides industrial and hospital effluent; and for the proper management of disposal sites.
- (iii) Ratify and implement relevant conventions, including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention of 1972), as well as relevant regional conventions.
- (iv) Formulate and implement public awareness and education campaigns designed to gain local recognition of the need to control wastes at the source; of the value of reuse, recycling and appropriate packaging; and of the possibilities for converting wastes to resources in culturally appropriate ways.
- (v) Introduce clean technologies and treatment of waste at the source and appropriate technology for solid waste treatment.
- (vi) Develop information systems and baseline data for waste management and pollution control, monitoring the types and quantities of wastes, for both sea- and land-based sources of pollution.

(vii) Establish port reception facilities for the collection of waste in accordance with Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78).

(viii) In conformity with the Basel Convention and relevant decisions taken by the parties to that Convention, formulate and enforce national laws and/or regulations that ban the importation from States that are members of the Organization for Economic Cooperation and Development (OECD) of hazardous wastes and other wastes subject to the Basel Convention, including hazardous wastes and other wastes destined for recycling and recovery operations.

Data Sources

Sources of information for this section include the National Assessment Reports prepared by SIDS; the UN 2002 Country Profiles published for the Johannesburg World Summit on Sustainable Development and the concept papers presented at the UN Expert Meeting on Waste Management in SIDS held in Havana, Cuba in November 2003. Two important sources of information for the Pacific Region SIDS were the 2003 SPREP report *Port Improving Ships' Waste Management in Pacific Islands Ports*; and the SPREP/Sinclair Knight Merz Ltda. (1991) *Solid Waste Characterization and Management Plans Project*, a series of reports commissioned by SPREP to assess the solid waste management of eight Pacific Region Countries, including Fiji, Tonga, Vanuatu, Papua New Guinea, Kiribati, Tuvalu, and Solomon Islands. For the assessment of the waste management of the Caribbean SIDS, important sources of information were the 1998 national country profiles produced by the ECLAC/CDCC Secretariat 1998 on the basis of questionnaires submitted by SIDS governments.

General Trends

The overall progress of the 41 SIDS on implementation of BPoA goals related to waste management is summarized in Appendix D and presented here:

- Little information was available regarding the development of policy and/or fiscal incentives to reduce the generation of wastes (Action i). Information was not found for 46% of the 41 SIDS. Nevertheless, at least 39% (16) have developed some sort of incentives for the minimization of wastes, including the 19% (8) that have implemented those incentives. At least 14% (6) have not developed any incentives.

- No less than 90% (37) SIDS have some kind of regulatory measures for the management of wastes and the control of pollution (Action ii), but only in some SIDS (between 46% and 66% of the 41 SIDS) are those measures part of some sort of comprehensive waste management program, plan or strategy (WMP). Only 4 SIDS reported the establishment of a WM Authority.
- Regarding Action (iii), 83% (34) SIDS are members of the International Maritime Organization (IMO). 95% (39) SIDS are parties to the United Nations Convention on the Law of the Sea (UNCLOS). Only 46% (19) are parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention of 1972). Four SIDS have signed the London Convention's 1996 Protocol and only two SIDS have signed both London and the 1996 Protocol. 63% (26) SIDS are parties to the Basel Convention. 28 SIDS (68%), including the recently acceded Vanuatu, are parties to Annexes I and II of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). Three SIDS reports did mention that, although they are not parties to MARPOL, its provisions have been given effect through national legislation instruments (Loper et al, 2004).
- For 19% (8) of the SIDS, no information was found regarding educational initiatives designed to gain local recognition of the importance of participating in the waste management process (Action iv). Of the 41 SIDS, no less than 49% (20) have formulated and/or implemented some kind of public awareness program or regular educational campaign, while 32% (13) reported a complete lack of initiatives or cited unsatisfactory programs, although a number of SIDS (24% or 10) have made explicit their recognition of the need to start or intensify educational initiatives.
- Regarding the introduction of new technology for clean production and/or for the treatment of the different classes of wastes (e.g., solid, sewage, domestic, agricultural, industrial, hospital, etc.; Action v), for 22% (9) of the SIDS no information was available regarding this action. Most of the improvements reported for SIDS on the application of waste treatment techniques have been related to the collection and disposal of solid domestic wastes, such as the transformation of open dumping sites into controlled sanitary landfills (e.g. the modernization of landfills in Samoa, St. Lucia, Mauritius and Seychelles). 11 of the 41 SIDS have mentioned the accomplishment or the current development of such improvements in the disposal of solid domestic wastes. Small and large scale recycling initiatives were mentioned by 39% (16) of the SIDS. Many SIDS report the existence of some kind of public, private and/or community-based initiative for the recycling of glass, paper, aluminum, and a few countries have initiated plastic recycling programmes. Composting is also used, although less extensively; at least Mauritius, Nauru, Samoa, and Seychelles have been carrying out composting and other SIDS, such as Barbados, have proposed, but not implemented, composting. Hazardous and chemical wastes from hospitals are in most cases incinerated in small incinerators, often reported as inappropriate, either being too old or unable to satisfy the demand for hazardous waste disposal. No information was available regarding the treatment of agricultural wastes, such as pesticides, and little information was available regarding sewage treatment facilities. A few SIDS (e.g., Niue, Palau, Seychelles, Solomon Islands) reported the use of home septic tanks, which may be suitable in cases of undeveloped areas, if properly constructed and maintained. Other SIDS, such as Kiribati, reported no sewage treatment at all; the sewage is discharged directly into the sea (Action v).
- At least 21 (51%) SIDS have performed specific or comprehensive surveys related to the characterization of wastes and/or establishment of monitoring programs (Action vi). Eight SIDS have made explicit their recognition of the importance and need of such studies.
- Limited information is available regarding the establishment of port reception facilities for the collection of wastes, as prescribed in Annex V of the MARPOL Convention. Although eight SIDS were reported to have established some kind of facilities, only four have been able to satisfy the demand for waste reception at their ports. Six other SIDS have reported that the establishment of reception facilities has been proposed (Action vii).
- Although 63% of SIDS have signed to the Basel Convention, only 7 (17%) have reported the production and enforcement of national legislation that bans the importation of wastes in compliance with the Basel Convention (Action viii).

Regional Variations

Pacific (total of 14 SIDS; the percentages presented in this section are relative only to this region.) Many initiatives have been undertaken at the regional level over the past decade to assist the SIDS of the Pacific region in developing policies and improving the treatment techniques for the proper management of wastes. Thus, a number of SIDS in the Pacific have developed or are currently developing some sort of comprehensive national waste management plan, program or strategy (WMP). However, it is not clear to what extent these WMPs are articulated within coastal management plans or other national environmental plans, nor the extent to which policy and fiscal incentives to minimize the generation of wastes in SIDS have been considered in those plans. The other obvious outcome of the regional assistance is the overall improvement on the management of the solid wastes disposal sites in some SIDS. Approximately 36% of the Pacific SIDS have reported the creation, and/or the recovery of sanitary landfills either as accomplished or as in process. However, the application of suitable alternative technologies for the treatment of domestic wastes, such as recycling, composting, and on-site sewage treatment, is urgently needed. Educational initiatives have also been largely carried out in the Pacific SIDS. At least 50% have some kind of educational program and/or public awareness campaign in place, with more intensive educational initiatives, being carried out by Nauru and Kiribati. Other important contributions of the regional cooperation concern shipping-related marine pollution, through the SPREP/SPC Regional Maritime Programme's ships waste management plan, which is expected to be integrated with the National Waste Management Plans. An area that requires urgent attention is the regulation of movement and import of hazardous substances in the region. Although 57% of the SIDS of the Pacific Region are signatories to the Basel Convention, except for the Samoa (Government of Samoa NAR, 2004), none of them provided information and/or indications that they have formulated and enforced national laws and/or regulations to ban the importation of hazardous wastes in compliance with the Basel Convention.

Caribbean. (total of 16 SIDS; the percentages presented in this section are relative only to this region). Regional (and sub-regional) cooperation in the Caribbean, as in the Pacific region, has been crucial to the improvement of waste management, and has occurred through initiatives such as the OECS (Organization of East Caribbean States) Solid Waste Management Program. 62% of the Caribbean SIDS mentioned the development of some comprehensive national WMP; at least 2 nations, Barbados and Jamaica, are already implementing the plans. The existence of incentives for the minimization of wastes generated is not clear. 37% of the Caribbean SIDS are the beneficiary of the OECS Solid and

Ship-generated WMP. As in the Pacific, most efforts in the waste management sector have been towards the creation and conversion of dumping sites into sanitary landfills, and no substantial improvements have been made, regarding alternative treatment techniques of wastes. Exceptions are the recently introduced clean techniques reported by Jamaica (i.e. biodigestors) and St. Kitts and Nevis (i.e. intensive recycling). Educational programs and/or public awareness campaigns have been carried out in at least 56% of the Caribbean SIDS. Many SIDS of the Caribbean have carried out some kind of survey and developed a baseline for the management of wastes (at least 69%). However, no monitoring is known to be taking place in any of the Caribbean SIDS. Although 88% of the Caribbean Region SIDS are signatories to the Basel Convention, only 28% have reported the formulation and enforcement of national laws and/or regulations that ban the importation of wastes in conformity with the convention, and 38% have reported that such national legal instruments were not developed. No information is available for the other SIDS.

AIMS (total of 11 SIDS; the percentages presented in this section are relative only to this region.) AIMS is by far the group with the least amount of available information on waste management. In contrast to the Pacific and the Caribbean, the AIMS regional cooperation doesn't seem to be providing substantial assistance for the management of wastes. Although much progress has apparently been made in some countries of the AIMS group, such as in Mauritius, Seychelles, and Singapore in many others, such as in Comoros, the problems related to the lack of appropriate waste management are of urgent concern. The development of some kind of National WMP has been mentioned for 45.5% of the AIMS SIDS, but only Mauritius is known to have started implementation. For 45% of SIDS in the AIMS region, regulations and standards for waste management and pollution control have been reported to exist under health and environmental legal instruments. At least 46% of SIDS in the region have some kind of educational program and/or public awareness campaign in place, although many are considered unsatisfactory and/or inefficient by the nations themselves. Little information was found regarding the application of technologies for the treatment of wastes, but as in the other two regions, it seems that most of the efforts have been concentrated on converting dumping areas into sanitary landfills. Sewage treatment is provided and some recycling is taking place but on a very small scale in Mauritius and Seychelles, while Singapore cited the use of composting techniques, but also on a small scale.

Observations

Analysis of available information indicates that most SIDS do recognize the crucial importance of having environmen-

tally sound management of wastes for their sustainable development. Either implementation of the BPoA or from initiatives started prior to 1994, some SIDS have made significant progress in dealing with the sustainable management of wastes in the last ten years. Nevertheless, for most SIDS, the achievement of this goal is still far from becoming a reality.

Many SIDS have developed, or at least drafted, some kind of legal framework or provisions to regulate the management of wastes and control pollution, but only a few have done so in a comprehensive manner. Even fewer have developed a waste management legal framework articulated within a national strategy for sustainable development and/or within an integrated coastal management strategy.

Few countries have begun to implement waste management strategies due to obstacles related to inadequacy of financial resources, weak institutional capacity, and trained personnel.

The “clean” technology applied in most of the SIDS (of those that have any applied technology), is not best suited for the limitations and special needs of those islands. The most frequently mentioned progress in terms of technology applied to the management of wastes, the creation and/or modernization of sanitary landfills, may function in the short run, but without also taking strong proactive measures to reduce the generation of wastes and applying recycling mechanisms (including composting), landfills may not be a lasting solution. These difficulties should be addressed in the regional and sub-regional levels to promote the exchange of knowledge and experience between nations with similar characteristics.

5. CONCLUDING STATEMENT

The analysis of the data has shown that although in many instances SIDS have been successful in implementing some of the goals outlined in the BPoA, in relation to ocean and coastal management and the related issues of biodiversity conservation, waste management, tourism, climate change and sea level rise, much more still needs to be achieved by SIDS. For the most part, management of oceans and coasts in SIDS countries remains sectorally-based, possibly due, in part, to the sectoral nature of the BPoA itself. Thus, for example, the institutions and processes that have been created for management of oceans and coasts, in many cases, do not incorporate related issues, such as biodiversity conservation, waste management, tourism, climate change and sea level rise. It is often the case that institutional arrangements need to be streamlined in order to reduce overlap and conflict between ocean-related agencies and sub sectors (such as tourism and environmental protection). Only

a few countries have developed integrated coastal and ocean management institutions, laws, and processes to address both the environment and development dimensions of their oceans and coasts.

Although, as was indicated previously, the goal of this paper is to assess the implementation of the BPoA by SIDS, the outcome of the January, 2005 Mauritius meeting cannot be ignored when addressing the future directions for SIDS in relation to ocean and coastal management. The Mauritius Strategy, the outcome of the Mauritius International Meeting, reaffirmed many of the goals outlined in the BPoA, and placed many issues previously outlined in the BPoA back on the priority list for implementation by SIDS, including the need for an integrated and holistic approach when working towards sustainable development (Mauritius Strategy, paragraph 12).

At the regional level, there has been some progress in improving the capacity of SIDS to develop National Ocean Policy Strategies, a major example being the development of the Regional Ocean Policy by the Pacific Islands leaders. If sufficiently funded and implemented, this policy will provide guidance and assistance to the nations in the region for the establishment of regimes for sustainable development of EEZs and coastal areas in the nations of the Pacific.

The data show that the AIMS region appears to have the lowest level of implementation of the BPoA goals related to oceans and coasts. This is possibly a result of the cultural heterogeneity, as well as the large geographical spread of the AIMS region. As has been mentioned previously, there are examples of countries in this region with good progress in achieving the goals outlined in the BPoA (such as Singapore and Mauritius). These countries could take the lead in raising the awareness and helping provide answers on how other AIMS countries can be more effective in the implementation of the BPoA. This will involve finding creative mechanisms for collaboration, participation and awareness-raising of the cross-sectoral issues facing SIDS in this unique region.

The data confirm also, that although SIDS have, by and in large, signed and ratified international agreements related to oceans and coasts, implementation continues to be impeded by financial constraints and a lack of capacity. Appropriate funding is critical to successful implementation of the BPoA and this is also reaffirmed in the Mauritius Strategy as an area for special focus. It is, therefore, necessary to raise the profile of ocean and coastal related issues at all levels (i.e., national, regional and international levels). The SIDS governments, along with the support of the international community, should focus on building capacity in the following key areas;

Successful management of their EEZs is critical to the socio-economic success of SIDS. This would include identification of biodiversity resources and areas that need to be protected and the establishment of regularized processes for EEZ decision-making. SIDS require capacity building and financial assistance in order to: delimit their maritime boundaries; submit any claims to the Continental Shelf Commission by 13 May 2009; and engage in the study and assessment of seabed living and non-living resources within their national jurisdictions (Mauritius Strategy, paragraph 27).

Increased capacity of relevant SIDS agencies would also serve to improve nearshore coastal management of both land and sea, incorporating a multi-purpose approach that considers all issues in the coastal area, including management of economic uses such as fisheries, tourism and aquaculture; vulnerability to climate change, sea level rise, and natural hazards; protection of sensitive areas and habitats; land use planning and rules for siting settlements and structures in coastal areas; and waste management. This would also increase the capacity of SIDS to engage in the development of integrated ocean and coastal policies, and assist in implementation and enforcement of relevant legislation. Capacity building must be aimed at training the next generation of professionals in the field, as well as at existing public officials and NGO practitioners to enable them to acquire the skills and orientations needed for integrated management of oceans and coasts.

Another challenge facing SIDS in the next decade is the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities. SIDS with their particular economic and environmental vulnerabilities are in need of the support of the international community, relevant UN agencies and development partners. The issue of Land-Based Sources of Marine Pollution (LBSMP) while not explicitly addressed in the BPoA is highlighted in the Mauritius Strategy (paragraph 32). Balancing economic growth and minimizing land-based sources of marine pollution will be particularly challenging to SIDS. The role of coordinated ocean policies at the regional level is critical to the successful management of this emerging issue. Capacity building and training, therefore, have an important role to play in addressing this issue.

Assessing achievements of the BPoA and post Mauritius 2005 will also require the development of appropriate indicators of implementation. This is particularly true with respect to the development of ocean and coastal policy, its implementation and subsequent achievement of measurable targets. These measurable indicators should be consistent with the UN Millennium Development Goals, particularly

with respect to goals 7 and 8 (Environmental Sustainability and Global Partnerships for Development). As SIDS attempt to fulfill the BPoA and Mauritius goals, these issues should also be taken into account.

In summary, in the past ten years since the Barbados summit, SIDS nations have made some progress on particular aspects of the Barbados Programme of Action agenda related to oceans and coasts, especially with respect to issues of climate change, sea level rise, tourism, and waste management, at both the national and regional levels. Progress has been attained despite decreases in international funding which have taken place since 1994. However, the level of progress (or improvement) varies from country to country as well as between regions. The Mauritius Strategy which was produced from the January 2005 International Meeting on the 10-year review of the BPoA reinforces a number of the issues raised in this paper. The outcomes from the Mauritius meeting have served to re-energise the efforts of SIDS and have brought ocean-related SIDS issues back on to the international agenda. A most important challenge for the next decade in SIDS countries, therefore, continues to be the development of nested regimes for ocean and coastal management by national governments, with the involvement of civil society and the private sector, and with regional and international support and collaboration.

REFERENCES

- 1st National Communication-1999. UNFCCC. Nauru Department of Island Development and Industry. October 1999.
- Antigua and Barbuda National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>.
- Bahrain's General Commission for the Protection of Marine Resources, Environment & Wildlife (2003). "The Kingdom Of Bahrain National Assessment of the Barbados Programme Of Action". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- Barbados National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>.
- BBC, 2004 Page 2 para 2
- Benn, J. 2003. Monitoring Aid Flows with the Help of DAC – CRS Aid Activity Database. Presentation at the Global Conference on Oceans, Coasts, and Islands, November 12-14, 2003, UNESCO, Paris. Available: <http://www.globaloceans.org/globalconference/pdf/JuliaBenn.pdf>.
- Chua, T.-E. 1993. Essential elements of integrated coastal zone management. *Ocean and coastal management* 21: 81-108.

B. Cicin-Sain and R. W. Knecht, *Integrated Coastal and Ocean Management: Concepts and Practices* (Washington, D.C.: Island Press, 1998) (517 pages).

B. Cicin-Sain, R.W. Knecht, A. Vallega, and A. Harakunarak., *Education and Training in Integrated Coastal Management: Lessons from the International Arena, Ocean & Coastal Management* (2000)

Cicin-Sain, B., P. Bernal, V. Vandeweerd, M. Balgos, and J. Barbieri. 2004. *Mobilizing for Implementation of the Commitments Made at the 2002 World Summit on Sustainable Developments on Oceans, Coasts, and Small Island Developing States. Co-Chairs' Report of 2003 Global Conference on Oceans, Coasts, and Islands, UNESCO, Paris, November 12-14, 2003 and Subsequent Developments.*

Climate Change National Communication *Federated States of Micronesia, 1997. <http://unfccc.int/resource/docs/natc/micncl.pdf>

Climate Change National Communication-1997. UNFCCC. FSM National Government Climate Change Program. 1997.

Cyprus Water Resources and Climate Change: www.iucn.org/places/medoffice/CDCambio_climatico/contenido/C/PDF/CyprusN.Tsiourtis.pdf.

Dominica National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>.

Dominican Republic National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>.

Draft Working Report of the Federated States of Micronesia National Multi-Stakeholder Consultation. "A National Review of Progress in the Implementation of the Earth Summit Commitments and Agenda 21" Kolonia, Pohnpei, Federated States of Micronesia, 8-9 November 2001.

ECLAC/CDCC secretariat. "Barbados Country Profile" report prepared on the basis of questionnaires submitted by Governments, 1996.

ECLAC/CDCC secretariat. St Kitts and Nevis. Grenada Country Profiles report prepared on the basis of questionnaires submitted by Governments, 1996?

ECLAC/CDCC secretariat St. Vincent and the Grenadines country profile report prepared on the basis of questionnaires submitted by Governments, 1996?

ECLAC/CDCC secretariat Trinidad e Tobago country profile report prepared on the basis of questionnaires submitted by Governments, 1996? <http://www.sdn.undp.org/~eclac/CARMIN/DOCS/trinidad.htm>

ECLAC/CDCC secretariat. "Antigua e Barbuda's Country Profiles Reports" prepared on the basis of questionnaires submitted by Governments, 1996.

ECLAC/CDCC secretariat. "Dominica country profile" report prepared on the basis of questionnaires submitted by Governments, 1996? <http://www.sdn.undp.org/~eclac/CARMIN/DOCS/dominica.htm>

ECLAC/CDCC secretariat. Dominican Republic country profile report prepared on the basis of questionnaires submitted by Governments, 1996? <http://www.sdn.undp.org/~eclac/CARMIN/DOCS/domrep.htm>

ECLAC/CDCC secretariat. Grenada country profiles reports prepared by the on the basis of questionnaires submitted by Governments, 1996? <http://www.sdn.undp.org/~eclac/CARMIN/DOCS/grenada.htm>

Earth Negotiations Bulletin 2004, <http://www.iisd.ca/vol08/>

Esther Richards/ SWMU 2003 Composting Program in St. Vincent and the Grenadines. Available at <http://topics.developmentgateway.org/oecsaidd/>

First National Communication of the Republic of Maldives to the UNFCCC. Maldives Ministry of Home Affairs, housing, and Environment. 2001.

First National Communication on Climate Change. UNFCCC. The Bahamas Environment, Science, and Technology Commission. April 2001.

Global Environment Facility (2004). "GEF and Small Island Developing States – How the Global Environment Facility is Working with SIDS for a Sustainable Future".

Government of Belize (2003). "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

Government of Fiji (2003). "National Assessment Report of Fiji". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

Government of Samoa (2003). "Samoa Barbados Plan of Action (BPoA) National Assessment Report". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

Government of Seychelles (2000), Initial National Communications under the United Nations Framework Convention on Climate Change; Ministry of Environment and Transport, Republic of Seychelles.

Government of St. Lucia: www.stlucia.gov.lc/.

Government of the Cook Islands (2003) "National Assessment Report For Barbados Programme of Action + 10." SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

Government of the Marshal Islands "National Assessment Report for the Barbados Plan of Action +10" SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, 2003.

Government of Tonga "National Assessment Report for the Barbados Plan of Action +10" SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, 2003.

Government of Tuvalu (2003). "National Assessment Report of Tuvalu". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

- Government of Vanuatu: www.vanuatu.gov.vu
- Grenada National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>
- Guyana EPA: www.epaguyana.org
- Initial Communication Under the UNFCCC. Kiribati Government Ministry of Environment and Social Development. September 1999.
- Integrated Analysis of Climate Change Impacts in Cuba: www.onu.org/cu/havanarisk/documents2.html
- Intergovernmental Panel on Climate Change (2001), *Climate Change 2001: The Scientific Basis* http://www.grida.no/climate/ipcc_tar/wg1/ ,
- Jamaica National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>
- Kingdom of Tonga (2003). “Tonga National Assessment Report” SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- Kiribati Solid Waste Project description/ Concept Paper for Tarawa Solid Waste Reduction Project for UNDP/ Kaoki Mangle! Kiribati SWM Project NEWS UPDATE, 2003.
- Kiribati Tourism Site (2001). <http://www.kiritours.com/Tourism/tourism.htm>. Accessed March 29, 2004.
- Konjool J. 2003 Speech Presented by Ambassador Jagdish Konjool at the Global Conference on Oceans, Coasts, and Islands , Paris, France | 10 - 14 November 2003 <http://www.iisd.ca/sd/sdune/12november.htm>
- Christen E. Loper, Danielle M. Tesch, Kevin Goldstein, and Isabel Torres de Noronha (2004). *Global Multilateral Environmental Agreements and Small Island Developing States*, Paper Series No. 2004-2: UNEP/GPA and the Global Forum on Oceans, Coasts, and Islands, Gerard J. Mangone Center for Marine Policy, University of Delaware
- Maldives National Adaptation Programmes of Action to Climate Change: www.unitar.org/ccp/bhutan/05-%20Maldives%20NAPA.pdf
- Marshall Islands Draft Report on the Barbados Programme of Action (BPOA). SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- Marshall Islands’ Office of Environmental Planning and Policy Coordination (OEPPC), Economic Policy, Planning and Statistics Office (EPPSO) & Ministry of Foreign Affairs (MOFA) (2003). Republic of the Marshall Islands Draft Report on the Barbados Programme of Action (BPoA). SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA.
- National Assessment of the Barbados Programme of Action+10 Review: Cape Verde. January, 2004.
- Niue Island Initial Communication. UNFCCC. June 2000.
- Niue Tourism Office (2004). Official Website. <http://www.niueisland.com/>. Accessed March 29, 2004.
- Papua New Guinea Initial National Communication. UNFCCC. November 2000.
- Payet, R.A., Sogun, N., Ranaivoson E., Payet, R.J. & F. Ali Abdallah. UNEP/ GEF/ MALMAR Global International Waters Assessment (GIWA) Regional Assessment 45b “Indian Ocean Islands”, 2003.
- Republic of Cape Verde “Republic of Cape Verde National Assessment Report of the BPoA +10” SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2003.
- Republic of Mauritius (2003). “Republic of Mauritius National Assessment Report of the BPoA +10” SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- Republic of Seychelles (2004). “Seychelles - National Assessment of the Barbados Programme of Action+10 Review.” SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- Singapore Ministry of the Environment: <http://www.env.gov.sg/3loops/>
- Sorenson, J. (2000). Baseline 2000. Background paper for Coastal Zone Canada 2000: Coastal Stewardship—Lessons learned and the paths ahead. September 17-22. New Brunswick, Canada, <http://www.sybertooth.ca/czc2000/>.
- South Pacific Region Environment Programme (SPREP) “Port Improving Ships’ Waste Management in Pacific Islands Ports” Report, 2003.
- South Pacific Tourism Organization (2003). Table A2: Economic Importance of Tourism in Countries Within the Region http://www.tcsp.com/invest/table_A2.shtml. Accessed March 29, 2004.
- SPREP/ Sinclair Knight Merz Ltda. “Solid Waste Characterization and Management Plans Project”. Report commissioned by the South Pacific Regional Environment Programme (SPREP) to assess the solid waste management of 8 Pacific Region Countries: Fiji, Tonga, Vanuatu, Papua New Guinea, Kiribati, Tuvalu, Solomon Islands and Western Samoa, 1991. http://www.sprep.org/ws/solid_waste/report_doc.asp
- St. Kitts and Nevis National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>
- St. Lucia National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>
- St. Vincent and Grenadines National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>
- Sweeney V. SIDS CASE STUDY IN WASTE MANAGEMENT Evolution and Implementation of a Solid Waste Management Strategy in St. Lucia, Presented at the 2003 UN Expert Meeting on Waste Management in SIDS held in

Havana, Cuba, 1994. <http://www.sidsnet.org/workshops/expert-meetings.html>.

Trinidad and Tobago National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>

Union of Comoros (2003). "Evaluation Nationale du Programme d'Action de Barbade +10" Written in French. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

United Nations (2002). Antigua e Barbuda Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Bahamas Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development

United Nations (2002). Bahrain Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Barbados Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development

United Nations (2002). Comoros Country Profile. (Written in French). 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Cuba Country Profile. (Written in Spanish). 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Cyprus Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Dominican Republic Country Profile (Written in Spanish). 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Fiji Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Guinea-Bissau Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development

United Nations (2002). Guyana Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development

United Nations (2002). Haiti Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development

United Nations (2002). Jamaica Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Malta Country Profile. 2nd UN

Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Mauritius Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Saint Lucia Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Samoa Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Seychelles Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Singapore Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Suriname Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations (2002). Tonga Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.

United Nations Division for Sustainable Development. SIDS Ecotourism Success Stories. <http://www.sidsnet.org/ecotourism/>.

United Nations General Assembly (2004). Fifty-ninth Session, Second Committee

Agenda item 85 (b) Sustainable development: Further implementation of the Programme of Action for the Sustainable Development of Small Island Developing States" "Draft resolution Promoting an integrated management approach to the Caribbean Sea area in the context of sustainable development."

United Nations Economic and Social Council. 2004. "Review of progress in the implementation of the Programme of Action for the Sustainable Development of SIDS" Report of the Secretary-General at the Twelfth session of the Commission on Sustainable Development, 14-30 April 2004, New York.

United Nations Environment Program. Maldives: State of the Environment. 2002. Publication of the UNEP Global Environmental Outlook Series, 2002.

UN Economic and Social Council 2004 page 15 last line on page

United Nations Environment Programme World Conservation Monitoring Centre. World Database on Protected Areas. <http://www.unep-wcmc.org/>. Accessed May 19, 2004.

Vanuatu National Communication to UNFCCC. July 1999 committee

Vasanth Chase Peter Norville (Head of Unit, OECS Environment and Sustainable Development Unit/ Consultant

Programme Officer on Solid Waste Management, OECS
Environment and Sustainable Development Unit)

ORGANISATION OF EASTERN CARIBBEAN STATES
(OECS) Marine Waste Management in the OECS Presented at
the Regional Symposium on “Solid Waste Management in the
OECS; Past, Present and Future” Grenada June, 2003.

World Tourism Organization (2001). Tourism Market
Trends: Africa. Printed by the World Tourism Organization.
Madrid, Spain.

World Tourism Organization (2001). Tourism Market
Trends: Americas. Printed by World Tourism Organization.
Madrid, Spain.

Appendices

APPENDIX A

Assessment of Barbados Programme of Action Goals related to Oceans and Coasts

Appendix A. Implementation of BPoA Goals for Oceans and Coasts

Table A-1. Pacific Nations

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Cook Islands	Ministry of Marine Resources ¹ Ministry of Transport ¹ Environment Services ¹ Environment Council ¹ Natural Heritage Trust ¹ Coordination among several ministries ¹	2 nd ND Strategy (2005-2010) ¹ National Environmental Strategy ¹ Environmental Impact Assessment ¹ Environment Act 2003 Marine Pollution Act	EEZ is a whale sanctuary ¹ Suarrow wildlife sanctuary ¹	National Policy Coordination Division ¹ National Strategic Development Plan 2003 ¹	National Marine spill Prevention Plan (NATPLAN) in preparation	*	*	*
Federated States of Micronesia	National Environmental Institution	*	ICM under NEPA ³⁵	*	Kosrae Shoreline Management Project ³⁵	*	*	*
Fiji	Sector Standing Committee on Natural Resources ² National Economic Development Council ² Institute of Applied Science (U. South Pacific)	Environmental Act 2003 ² Endangered Protected Species Act 2002 ² National Implementation Plan for POPs (under development) ² Strategic Development 2003-2005 ² Ratified CBD, CITES	Integrated Coastal Resources Management Plan (under development) ²	Development Strategy of Fiji 1997 ² Strategic Plan for the New Century – SD of Fiji 1999 ² Fiji Biodiversity Strategy and Action Plan Project 1999 ²	Mangrove management program (1985)	Vulnerability and Adaptation Assessment Coastal Impact of Sea Level Change 1996 ² Provisional EIA for the extraction of Coral Reef Products 1999 ² Coastal Erosion Investigation 1999 ² Status report of the collection of coral and other benthic reef organisms ² POPs Project ²	Fiji Coral Reef Conservation Project (2002). Coral reef survey program	Institute of Applied Science (USP)

Table A-1 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub- national management plans	Environmenta l Assessment	Monitoring	Capacity Building
Kiribati	*	*	*	*	Marine Protected Area(s) implemented ⁷	*	*	*
Marshall Islands	Marshall Islands Marine Resources Authority (MIMRA) ³	MIMRA Act 1998 ³ EPA Act 1984 ³ MIVA Act ³ OEPPC Act 2003 ³	*	National Action Plan for Terrestrial and Marine Biodiversity (strategy and plan) ³ Committee of Biodiversity under the RMI National Commission on SD ³ Fisheries Management Plan	Jaluit Conservation Project ³ Traditional Environmental Management Strategies Project ³ Biodiversity Project ³ Community-based MPA(s) established ⁷ Coastal Resources Management Program in two atoll communities ³	*	*	*
Nauru	*	*	*	*	*	*	*	*

Table A-1 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Niue	*	*	*	*	*	*	*	*
Palau	<p>Division of fish & Wildlife protection (DFNP)</p> <p>Division of Marine Law Enforcement</p> <p>Bureau of Marine Resources</p> <p>Palau International Coral Reef Centre</p>	*	<p>*Palau Fisheries Advisory Committee (PFAC)</p> <p>Palau National Tuna Fisheries Management Plan.</p>	<p>National Environmental Management Strategy (NEMS)</p> <p>Palau Protected Area Network (PAN) 2003</p> <p>National Biodiversity Strategy and Action Plan (NBSAP)</p>	<p>16 Marine protected area(s) established⁷</p> <p>Ngaremeduu Conservation Area (NCA).</p>	*	<p>Joint coral reef monitoring with US Coral Reef Task Force (USCRTF) 2004</p>	*
Papua New Guinea	National Environmental Institution ³⁵	*	ICM (under the NEMS) ³⁵	<p>National Environmental Management Strategy³⁵</p> <p>Biodiversity Strategic Action Plan (1999)³⁵</p>	Marine protected area(s) established ⁷	*	*	*

Table A-1 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environ-mental Assessment	Monitoring	Capacity Building
Samoa	Division of Environment and Conservation of MNRE and the Fisheries Division of the MAFFM ⁴	Part VIII Land Surveys & Environment Act 1989 (related to coastal sand mining)	Whole EEZ is the National Marine Sanctuary for sharks, dolphins, turtles and whales Management plan is being developed by the Division of Environment and Conservation of MNRE and the Fisheries Division of the MAFFM ⁴	Development of the Marine Resources Use Policy undertaken as part of the National Environmental Management Strategy (NEMS 1994), should be ready for approval before the end of 2004 ⁴ National Biodiversity Strategy and Action Plan (in preparation)	Community inshore fisheries reserves managed by the communities: 117 villages ⁴ Partnership with the World Bank and IUCN and selected communities set up pilot projects to verify the concept of Community-based Marine Protected Areas (CBMPA) ⁴	*	*	*
Solomon Islands	*	*	*	*	*	*	*	*
Tonga	Extended Continental Shelf Committee (for EEZ delimitation) Ministry of Fisheries and Ministry of Lands, Survey and Natural Resources ⁵ Agency for Sustainable Development (not operational) ⁵	Humpback Whale moratorium – banning the whaling in Tongan waters ⁵ Aquaculture Management Act Fish and Birds Preservation Act (not implemented) ⁵ EIA Act 2003 ⁵ Development of appropriate legal framework – new fisheries bill for inshore fisheries management	Draft of marine reserves management plan ⁵	No integration ⁵	Tonga Fisheries Management Project (coastal fisheries management project funded by AusAid) ⁵ Offshore Fisheries Project (includes inventory of offshore fisheries) ⁵ TEMPP project – Watershed and lagoon management planning for Fanga’uta and Fangakakau Lagoon System Seaweed (Mozuku) Farming Project (FAO, SPADP) ⁵ Marine protected area(s) established ⁷	*	Coral Reef Monitoring using GCRMN techniques TEMMP study Dept of Environment Coral reef seagrass and water quality monitoring.	*

Table A-1 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environ-mental Assessment	Monitoring	Capacity Building
Tuvalu	*	Regulation and enforcement of sand and gravel extraction from coastal areas ⁶ Controls catching of under-sized fish and use of small-size nets ⁶ Establishment of protected areas ⁶	National Environment Management Strategy	*	Protected area on a number of islets in the Funafuti Atoll, for coral and biodiversity protection ⁶ Initiation of a pilot project on shellfish (clams and trochus) farming ⁶ Initiation of a workshop on protected areas ⁶	Studies on coastal inshore dynamics in order to improve coastal management (1993-1996) ³⁵	Monitoring programme on ciguatera fish poisoning ⁶	SPREP and Australian Volunteers Abroad have provided support to manage conservation areas
Vanuatu	*	*	*	*	*	*	*	*
<p>* Information needed</p> <p>References:</p> <p>(1) Government of the Cook Islands. 2003. National Assessment Report for Barbados Programme of Action+10. SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA.</p> <p>(2) Government of Fiji. 2003. National Assessment Report for Barbados Programme of Action+10. SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA.</p> <p>(3) Marshall Islands Office of Environmental Planning and Policy Coordination (OEPPC). Economic Policy, Planning and Statistics (EPPSO) & Ministry of Foreign Affairs (MOFA). 2003. Republic of the Marshall Islands Draft Report on the Barbados Programme of Action (BPOA). SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA.</p> <p>(4) Government of Samoa. 2003. Samoa Barbados Plan of Action (BPoA) National Assessment Report. SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA.</p> <p>(5) Kingdom of Tonga. 2003. Tonga National Assessment Report. SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA.</p> <p>(6) Government of Tuvalu. 2003. National Assessment Report of Tuvalu. SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA.</p> <p>(7) UNEP World Conservation Monitoring Centre. World Database on Protected Areas. http://www.unep-wcmc.org/. Accessed May 19, 2004.</p>								

Appendix A. Implementation of BPOA Goals for Oceans and Coasts

Table A-2. Caribbean Nations

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Antigua and Barbuda	National Sustainable Coordination Body under development ⁸ Ministry of Tourism, Culture, and Environment ⁸	EIA Act ⁸ Environmental Management Act	National Physical Development Plan (under consideration)	*	Marine protected area(s) established ¹⁹	*	*	*
Bahamas	Several institutions manage different sectors of oceans and coasts ⁹ Departments of Lands, Surveys and Public Works, and Ports are responsible for coastal management aspects ⁹ Fisheries department responsible for management and conservation of marine resources ⁹ Bahamas Environment, Science and Technology Commission (BEST) – commission responsible for coordinating activities for sustainable development, including National Policies; BEST Commission is establishing an administrative and legal process to identify relationships and overlaps of the international conventions; BEST coordinates the biodiversity sub-commission ⁹ Includes Director of Fisheries Bahamas National Trust (manages Parks) ⁹	Coast Protection Act ⁹ Continental Shelf Act ⁹ Archipelagic Waters and Maritime Jurisdiction Act ⁹ Bahamas Maritime Authority ⁹ Fisheries Resources Act and Amendment ⁹ Agriculture and Fisheries (Protected Areas) Rules ⁹ Marine Mammal (Dolphin) Legislation Act ⁹ EIA Act ⁹ National Biodiversity Strategy and Action Plan (1997) ⁹ Recommendation to become party to the Agreement to Promote Compliance with International Conservation Measures by Fishing Vessels on the High Seas Adopted the FAO Code of Conduct for Responsible Fisheries ⁹	National Creeks and Wetlands Initiative Integrated Coastal area Management Program (IDB sponsored in progress)	BEST coordinates policies	Marine protected area(s) established ¹⁹	Project for the development of a National Invasive Species Strategy ⁹	Monitoring of coral reef bleaching and sea level rise ⁹ Biodiversity Management Database ⁹ Implemented technologies to identify and monitor major sources of pollution in the marine environment from land-based sources ⁹ Database for ICM available ⁹	*

Table A-2 Continued

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Barbados	Ministry of Physical Development, Health, Environment ¹⁰ National Commission on Sustainable Development ¹⁰ Coastal Zone Management Unit ¹⁰ Environment Unit ¹⁰ Fisheries Division ¹⁰ National Conservation Commission ¹⁰ Ministry of Foreign Affairs ¹⁰	National Strategic Plan ¹⁰ Environmental Management and Land Use Planning ¹⁰ EIA Act ¹⁰ Environmental Management Act ¹⁰ (proposed) Marine Areas (preservation and management) Act ¹⁰ Coastal Zone Management Act ¹⁰ Fisheries Management Act ¹⁰ Marine Pollution & Control Act National Conservation Commission Act ¹⁰ National Biodiversity Strategy and Action Plan is under development ¹⁰	ICZM Plan (proposed)	*	Marine protected area(s) established ²²	*	Coral Reef Monitoring Program ¹⁰ Beach Profiling Program ¹⁰ Tide Monitoring Program ¹⁰ Current Monitoring ¹⁰ Coastal Resources Inventory	*

Table A-2. (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Belize	Coastal Zone Management Authority ¹¹ Coastal Zone Management Institute Fisheries Department ¹¹ National Sustainable Development Council (not working) ¹¹	Coastal Zone Management Act ¹¹ National Biodiversity Strategy and Action Plan (1998) ¹¹ National Protected Areas System Plan for Belize (1995) ¹¹ National Environmental Action Plan ¹¹ Environmental Protection Act ¹¹	National ICZM Strategy ¹¹	*	13 MPAs ¹¹ Conservation and Sustainable Use of the Belize Barrier Reef Project network of 6 MPAs ¹¹	*	Compiling an inventory of coastal resources under UNFCCC ¹¹	*
Cuba	Ministry of Science, Technology and Environment ¹² Ministry of Fisheries ¹² Ministry of Transportation ¹²	Environmental Act ¹² Fisheries Act ¹² National Biodiversity Strategy and Action Plan (1998) ¹² Coastal Zone Management Act ¹² System of MPA ¹² EIA Act ¹²	National Program of ICZM ¹²	National Environmental Strategy ¹² National Environmental Action Plan ¹²	Marine protected area(s) established ²²	*	*	*
Dominica	Land and sea resources management capacity component of the National Environmental Management Strategy (1997)	Territorial Sea, Contiguous Zone, EEZ Act 1981 Beach Control Act 1966 Fisheries Act 1987 Marine Resource Statutory Rules and Orders	*	*	2 MPA's Proposed	*	Beach Monitoring. Reef Health (Fisheries Division)	*

Table A-2. (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Dominican Republic	Institute for the Environmental Protection ¹³ Centre of Research on Marine Biology (ICZM), Autonomous University of St. Domingo ¹³ Cooperation between institutions on different aspects of marine management ¹³	EIA Act ¹³ Dominican Emergency Standards for LBA ¹³	Coastal Marine Environmental Programme Coastal Salination Plan of St. Domingo ¹³ Integrated management of marine-coastal resources strategy ¹³	*	Marine protected area(s) established ²²	Planning of Fisheries biodiversity (GERF-PNUD/ONAPLAN) ¹³ Marine Biodiversity of Dominican Republic ¹³	*	*
Grenada	Grenada Sustainable Development Council ¹⁴	*	Integrated Watershed & CZ Project	Biodiversity Strategy and Action Plan ¹⁴ National Environmental Management System	*	Assessment of Fisheries, Marine and Coastal Areas ¹⁴	*	*
Guyana	Natural Resources Environmental Advisory Committee (NREAC) ICZM Committee ¹⁵	Maritime Boundaries Act	Coastal Management Program ¹⁵	National Environmental Action Plan (2001-2005)	Shore Zone Management Program	Design and Feasibility Study	*	*

Table A-2. (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub- national management plans	Environmental Assessment	Monitoring	Capacity Building
Haiti	Ministry of the Environment and Natural Resources ¹⁶ Commission Haiti-Dominican for Transfrontier Environmental Issues ¹⁶	Code of the Environment (Draft)	National ICZM (1998) ¹⁶	National Environmental Action Plan ¹⁶ Biodiversity Strategy and Action Plan ¹⁶	Transfrontier Environmental Program ¹⁶ Coasts of Haiti Resource Assessment and Management needs (1996) ¹⁶	*	*	Caribbean Planning for Adaptation to Climate Change ¹⁶
Jamaica	Sustainable Development Council of Jamaica (SDC-J) ¹⁷ National Environment and Planning Agency ¹⁷ Center for Marine Sciences (UWI) National Council on Ocean & Coastal Zone Management Min of Land & Environment Fisheries Division (Min of Agriculture)	Natural Resources Conservation Act 1991 ¹⁷ Wildlife Control Act ¹⁷ Beach Control Act Maritime Act 1996	Atlas for ICZM (under development) ¹⁶ White Paper on Protected Areas ¹⁷ Draft IZCM Policy 2002	National Environmental Action Plan ¹⁷ Draft bill on Fisheries industry ¹⁷	ICRI ¹⁷ MPAs cover 1.1% of the EEZ ¹⁷ Fisheries Management Plan. Kingston Harbour Rehabilitation Project	Policy on System of protected Areas ¹⁷ Jamaica Coral Reef Action Plan ¹⁷	Beach water quality monitoring (Blue Flag) ¹⁷	Caribbean Planning for Adaptation to Climate change ¹⁷

Table A-2. (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
St. Kitts and Nevis	Conservation Commission Department of Environment (assumed role of Consvr.Comm.)	National Conservation & Environmental Protection Act 1987 Fisheries Act 1984 Development Control and Planning Act 2000	*	National Environmental Action Plan 1994	Plan to declare 2 areas as MPAs	*	*	*
St. Lucia	Sustainable Development and Environmental Unit of the Ministry of Planning ¹⁸ Coastal Zone Management Unit Department of fisheries of Ministry of Agriculture, Forestry, and fisheries ¹⁸	Fisheries Act #10 1989 Fisheries Regulations #10 1994 Maritime Act 1984 ¹⁸	Integrated Development Planning ¹⁸ Integrated Watershed Management & Coastal Area Management ¹⁸ Coastal Zone Management Policy ¹⁸	Coastal Zone Management Project National Biodiversity Strategy and Action Plan ¹⁸	Soufriere Marine Management Area Canaries and Ans-La-Rayé Marine Management Area ¹⁸	Physical Planning Act	*	*
St. Vincent and the Grenadines	*	Fisheries Act 1986 Marine Parks Act Maritime Areas Act 1983 Town & Country Planning Act High Seas Fishery Act 2001 ²⁰	*	National Biodiversity Strategy and Action Plan ²⁰	Marine protected area(s) established (Tobago Cays) ²⁰	*	*	*

Table A-2. (Continued)

Entry	Institutions	Legislation	ICZM Plans/Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Suriname	Ministry of Natural Resources, Forest Service ¹⁹ Council for the Environment (proposed) ¹⁹ Min Agriculture, Animal Husbandry and Fisheries. National Institute for Environment and Development	Ongoing National Strategic Plan Environmental ¹⁸ National Biodiversity Strategy and Action Plan is under development ¹⁹ Sea Fisheries Law ¹⁹ Fisheries Resolution 1992 Environmental Act 2002 (Draft)	Coastal Multiple Management Areas (MUMAs) (one implemented and more to develop in the future) ¹⁹	*	Galabi Nature Reserve (Sea Turtles)	*	Fisheries Information System ¹⁹	*
Trinidad and Tobago	Institute of Marine Affairs ²¹ Land and Marine Resources National Wetlands Committee ²¹ Environmental Management Authority Town & Country Planning Division ²¹	Environmental Management Act 2000 ²¹ National Parks & Conservation of Wildlife Act ²¹	*	National Environment Policy ²¹ Wetland Policy ²¹ National Biodiversity Strategy and Action Plan ²¹	Marine protected area(s) established ²¹	Marine Contaminations Studies ²¹	Fish Age and Growth Bacteriological Water Quality (recreational waters) Wetland and Seagrass Monitoring ²¹	*

* Information needed

References:

- (8) United Nations. 2002. Antigua e Barbuda Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (9) United Nations. 2002. Bahamas Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (10) United Nations. 2002. Barbados Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (11) United Nations. 2002. Belize Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (12) United Nations. 2002. Cuba Country Profile (in Spanish). 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (13) United Nations. 2002. Dominican Republic Country Profile (in Spanish). 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (14) United Nations. 2002. Grenada Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (15) United Nations. 2002. Guyana Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (16) United Nations. 2002. Haiti Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (17) United Nations. 2002. Jamaica Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (18) United Nations. 2002. St. Lucia Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (19) United Nations. 2002. Suriname Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
- (20) United Nations. 2003. St. Vincent and the Grenadines Country Profile. Report to the Regional Consultation on SIDS Specific Issue
- (21) United Nations. 2003. Trinidad and Tobago Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development
- (22) UNEP World Conservation Monitoring Centre. World Database on Protected Areas. <http://www.unep-wcmc.org/>. Accessed May 19, 2004.

Appendix A. Implementation of BPoA Goals for Oceans and Coasts

Table A-3. AIMS Nations

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Bahrain	Central Committee for the Implementation of the BPOA Sub-Committee for the Conservation of the Marine Environment ²³ National Commission for Wildlife Protection coordinates cross-sectoral issues and integrates environmental issues	Enactment of Fisheries control legislation EAI for all new projects ²³	No ICZM ²³	Charter of Environmental Action (2001) ²³ National Environmental Strategy (NES) ²³	Declared as Ramsar protected sites mangrove stands at Tubi Bay and Hawar islands and their marine surroundings ²³	*	Monitoring Program aims to establish sound management of effluent discharge to the marine environment ²³	*
Cape Verde	Ministry of Environment, Agriculture and Fisheries (MAAP) Directorate General for the Environment (DGE) coordinates environmental policies National Institute for Fishing (INDP) ³⁴	Implementation of the FAO Code of Conduct for Responsible Fisheries and of the International Commission for the Conservation of Atlantic Tuna (ICCAT) and in the national legislation regulation of sand extraction on beaches ³⁴	Coastal Zone Master Plan (2002) Atlas of the coastline ³⁴	2002-2012 National Environment Plan of Action (NEPA2) National Biodiversity Strategy and Plan of Action ³⁴	Cabo Verde Biosphere Reserve (Islands of Boavista, Maio, Sal) Integrated participatory ecosystem management in and around protected areas ³⁴	*	Project Natura, assessment of the characteristics of the country's ecosystems (1999-2001) ³⁴ . Experimental Fishing campaign (INDP) ³⁴	*

Table A-3 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Comoros	General Commission of the NDP for the coordination of Sustainable Development Policies ²⁴ Creation of the National Directorate for the Environment ²⁴ Decentralization to local communities ²⁴	Adoption of the Environmental Framework Law ²⁴	Presentation of a Project to fight marine land-based pollution (C. Nairobi) ²⁴	Strategy of growth 2002-2010 for the sectors and sustainable exploitation of marine resources ²⁴	Creation of marine protected areas; National Marine Park of Moheli, marine turtle observatory ²⁴	*	*	*
Cyprus	Council of Ministers Minister of Agriculture, Natural Resources, and Environment (MANRE) ²⁵ Council for the Environment Minister of Communications ²⁵	Program of adoption of the EU Environmental Framework ²⁵ National Plan for Sustainable Development 2000 EIA ²⁵ Strategic EIA in implementation Fisheries Regulations ²⁵ National Action Plan for the Development of Aquaculture ²⁵ Water Pollution Control Law ²⁵	*	*	Marine protected area(s) established ³³	*	MED-POL Fishing vessels monitoring through satellite (under development) ²⁵	*
Guinea-Bissau	*	*	Coastal Management 2002 ²⁶ Coastal Planning Project initiated in 1989 ²⁶ Coastal and Biodiversity Management Program ²⁶	*	*	*	*	*

Table A-3 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmenta l Assessment	Monitoring	Capacity Building
Maldives	Ministry of Home Affairs, Housing and environment ²⁷	Environment Protection and Preservation Act (1993) ²⁷ National Biodiversity Strategy and Action Plan (2001) ²⁷	Integrated Reef Resources Management Programme ²⁷	Marine resources and biodiversity under NEAP ²⁷	Marine resources and biodiversity under NEAP ²⁷ Marine protected area(s) established ³³	Marine resources and biodiversity under NEAP ²⁷	Marine resources and biodiversity under NEAP ²⁷	Marine resources and biodiversity under NEAP ²⁷
Malta	Planning Authority ²⁸ Environmental Protection Department ²⁸ Malta Maritime Authority ²⁸ Commission on Sustainable ²⁸	Marine Mammals Protection Regulation ²⁸ Environmental protection Act (1991) ²⁸	Coastal Area Management ²⁸ CZM Programme ²⁸	*	*	*	Biodiversity Monitoring Programme. Tagging of Marine Turtles ²⁸	*

Table A-3 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Mauritius	Institutional and Legislative Development Strategy ²⁹	GMO bill is being finalized ²⁹ Secondary legislation controlling the import and export of wild flora and fauna, the Wildlife Regulations of 1998, abides by the CITES list of proscribed species ²⁹ Environmental Protection Act 2002 ²⁹	Response plans, e.g., oil spills contingency plans ²⁹ Sustainable fisheries management, including conservation of reosurces ²⁹ ICZM Strategy Framework with ecosystem based approach ²⁹ National programmes on control of pollution from land-based and marine sources; and on control of coastal developments ²⁹	National Environmental Strategies (2000- 2010) ²⁹ National programmes on control of land- based and marine sources of pollution ²⁹ ; control of coastal developments Research on the lagoon and the high seas ²⁹ National Biodiversity Strategy & Action Plan (NBSAP) ²⁹	Establishment of marine parks in Balaclava and Blue Bays as part of EIP- I projects (1997) ²⁹ Identification of other marine protected areas ²⁹ The Task Force on Islets has also recommended the creation of marine protected areas of 1 km around each of the 16 islets which will form part of the National Park ²⁹	*	Monitoring programme of the coral reefs (1995) ²⁹ GIS coupling aerial photography of the coastal region together with an inventory of coastal resources ²⁹ Monitoring of sea level rise and associated issues ²⁹ Research on the lagoon and the high seas, e.g., water quality, bathymetric surveys, current measurements Long term monitoring programme is under development for the MPAs in place ²⁹	Biotechnology centre is being established

Table A-3 (Continued)

Country	Institutions	Legislation	ICZM Plans/ Strategies	Integrated with NDP	Local/Sub-national management plans	Environmental Assessment	Monitoring	Capacity Building
Sao Tome & Principe	National Commission on Sustainable Development ³⁰ Environmental Inspection 2000 ³⁰	National Plan for Sustainable Development 1999 ³⁰ EIA Act ³⁰ Environmental Act ³⁰ Sand Extraction Act ³⁰ Fisheries Act ³⁰ National Park Act ³⁰	*	*	*	*	*	*
Seychelles	Marine Parks Authority ³¹ Seychelles Fishing Authority ³¹ Public Utilities Corporation ³¹	Incomplete marine parks legislation	Currently developing ICZM guidelines ³¹	Environment Management Plan of Seychelles (EMPS) 2000-2010 ³¹ .	Marine protected area(s) established ³¹	*	Seychelles Marine Ecosystem Project to address the impact of Climate Change on coral reef ecosystems ³¹ National Beach Monitoring Plan ³¹ Wetlands Management Programme ³¹	Seychelles Biosafety Framework to develop the capacity to deal with Living Modified Organisms ³¹
Singapore	Maritime Singapore Port Authority ³² Ministry of the Environment ³² Coordination by MPA consultation of other bodies and stakeholders ³²	Prevention and Pollution Sea Act ³² Merchant Shipping Act ³²	*	*	*	*	*	*

* Information not available

References:

- (23) United Nations. 2002. Bahrain Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (24) United Nations. 2002. Comoros Country Profile (in French). 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (25) United Nations. 2002. Cyprus Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (26) United Nations. 2002. Guinea-Bissau Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (27) United Nations. 2002. Maldives Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (28) United Nations. 2002. Malta Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (29) United Nations. 2002. Mauritius Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (30) United Nations. 2002. Sao Tome & Principe Country Profile (in French). 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (31) United Nations. 2002. Seychelles Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (32) United Nations. 2002. Singapore Country Profile. 2nd UN Country Profiles Series published for the 2002 Johannesburg World Summit on Sustainable Development.
 (33) UNEP World Conservation Monitoring Centre. World Database on Protected Areas. <http://www.unep-wcmc.org/>. Accessed May 19, 2004.
 (34) Government of Cape Verde. 2004. National Assessment Report of Cape Verde. SIDS National Assessment of the Barbados Programme of Action+10 requested by UN DESA

APPENDIX B

Assessment of Barbados Programme of Action Goals related to Climate Change and Sea Level Rise

Appendix B. Assessment of Barbados Programme of Action Goals related to Climate Change and Sea Level Rise
Table B-1. Pacific Islands

PACIFIC ISLANDS	Adaptation and mitigation programs/initiatives	Disaster preparedness plans (relating to climate and sea level change)	Renewable energy plan/ implementation	Climate and sea level data collection/ monitoring	Public education on climate and sea level	Assessment of the socio-economic impact of climate and SL change
Cook Islands	Has conducted a national vulnerability assessment. Has constructed seawalls. ¹	Has national office and plan. An early warning system and shelters exists. ¹	Limited solar power infrastructure has been implemented. Wind power in development ¹	GHG inventory ¹	none ¹	Conducted a social vulnerability assessment. ¹
Federated States of Micronesia	Has drafted a national policy. ²	information needed	information needed	GHG inventory ²	information needed	information needed
Fiji	Has conducted a vulnerability and adaptation assessment. ³	Has national office and plan. Early warning system exists. ³	Has established an office for the promotion of renewable energy. Major hydroelectric system in operation-serves a majority of population. Projects involving solar, geothermal, and bio-fuel energy are in development. Assessed potential for wave, wind, and hybrid energy. ³	GHG inventory. Has done computer modeling to predict SL rise effects. ³	Has held community workshops on vulnerability and adaptation. ³	none ³
Kiribati	Has drafted a national policy. ⁴	information needed	information needed	Installed tide gauge and metrological stations. GHG inventory. ⁴	information needed	none ⁴

Table B-1 (Continued)

PACIFIC ISLANDS	Adaptation and mitigation programs/initiatives	Disaster preparedness plans (relating to climate and sea level change)	Renewable energy plan/ implementation	Climate and sea level data collection/ monitoring	Public education on climate and sea level	Assessment of the socio-economic impact of climate and SL change
Marshall Islands	Has conducted mitigation workshops, a vulnerability index assessment, and an adaptation simulation. Has an office of environmental planning and policy coordination. ⁵	none ⁵	Has a solar energy program. ⁵	GHG inventory ⁵	Proposed but not implemented. ⁵	none ⁵
Nauru	Has drafted a national policy. ⁶	information needed	none ⁶	GHG inventory ⁶	Has TV and radio programs. Included in primary school curricula. ⁶	information needed
Niue	Has drafted a national policy. ⁷	Cyclone warning system. ⁷	none ⁷	GHG inventory ⁷	information needed	In national communication. ⁷
Palau	none ⁸	Has national office and plan. Limited early warning system exists. ⁸	Solar power project. ⁸	GHG inventory ⁸	none ⁸	none ⁸
Papua New Guinea	Has a national office and has drafted a national policy. ⁹	Has national office and plan. Limited early warning system exists. Introduced flood and wind resistant crops. Trained homebuilders in storm resistant construction methods. ⁹	Limited hydro and solar power implemented. ⁹	GHG inventory ⁹	Limited inclusion in primary school curricula. ⁹	none ⁹
Samoa	Climate change policy in final stage of preparation. Localized coastal management plans exists. ¹⁰	Has national office and plan. Early warning system exists. Disaster fund exists. ¹⁰	Policy exists. No implementation. ¹⁰	Extensive inventory and database on GHG and SL rise. ¹⁰	Nat. climate awareness day. TV and radio programs. Included in primary school curricula. ¹⁰	Conducted a community vulnerability and adaptation assessment (2003). ¹⁰

Table B-1 (Continued)

PACIFIC ISLANDS	Adaptation and mitigation programs/initiatives	Disaster preparedness plans (relating to climate and sea level change)	Renewable energy plan/ implementation	Climate and sea level data collection/ monitoring	Public education on climate and sea level	Assessment of the socio-economic impact of climate and SL change
Solomon Islands	information needed	information needed	information needed	information needed	information needed	information needed
Tonga	Extensive coastal project for tree planting and foreshore building. National plan for phasing out ozone depleting substances. ¹¹	Has national office and plan. Early warning system exists. ¹¹	Solar power is used on a small scale. Potential for wind and wave power has been assessed. Fuel wood planting projects undertaken. ¹¹	Installation of a tidal gauge. ¹¹	Scholarships for Tongans to study issues related to climate change. ¹¹	none ¹¹
Tuvalu	Plan currently in preparation. Sea walls have been constructed. ¹²	Has national office and plan. Early warning system exists. Annual national disaster day. Disaster equipment distributed to all islands. ¹²	Minor progress, but no implementation. ¹²	none ¹²	Included in primary school curricula. ¹²	Has assessed impact and arranged for emigration of populus ¹²
Vanuatu	Has drafted a national policy. ¹³	information needed	Has established an initiative to make all energy production 100% renewable. ¹⁴	GHG inventory ¹³	information needed	information needed

REFERENCES:

- (1) Government of the Cook Islands (2003) "National Assessment Report For Barbados Programme of Action + 10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (2) Climate Change National Communication-1997. UNFCCC. FSM National Government Climate Change Program. 1997.
- (3) Government of Fiji (2003). "National Assessment Report of Fiji". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (4) Initial Communication Under the UNFCCC. Kiribati Government Ministry of Environment and Social Development. September 1999.
- (5) Marshall Islands' Office of Environmental Planning and Policy Coordination (OEPPC), Economic Policy, Planning and Statistics Office (EPPSO) & Ministry of Foreign Affairs (MOFA) (2003). "Republic of the Marshall Islands Draft Report on the Barbados Programme of Action (BPOA)". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (6) 1st National Communication-1999. UNFCCC. Nauru Department of Island Development and Industry. October 1999.
- (7) Niue Island Initial Communication. UNFCCC. June 2000.
- (8) Republic of Palau (2004) "National Assessment Report For Barbados Programme of Action + 10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (9) Government of Papua New Guinea (2004) "National Assessment Report For Barbados Programme of Action + 10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (10) Government of Samoa (2003). "Samoa Barbados Plan of Action (BPoA) National Assessment Report". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (11) Kingdom of Tonga (2003). "Tonga National Assessment Report" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (12) Government of Tuvalu (2003). "National Assessment Report of Tuvalu". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (13) Vanuatu National Communication to UNFCCC. July 1999 committee
- (14) Government of Vanuatu: www.vanuatu.gov.vu

Appendix B. Assessment of Barbados Programme of Action Goals related to Climate Change and Sea Level Rise
Table B-2. Caribbean Nations

CARIBBEAN NATIONS	Adaptation and mitigation programs/ initiatives	Disaster preparedness plans (relating to climate and sea level change)	Renewable energy plan/implementation	Climate and sea level data collection/ monitoring	Public education on climate and sea level	Assessment of the socio-economic impact of climate and SL change
Antigua and Barbuda	National mitigation assessment produced. ¹⁵	Preliminary plan. ¹⁵	none ¹⁵	none ¹⁵	none ¹⁵	none ¹⁵
Bahamas	Currently drafting a national policy. Has an oversight committee. ¹⁶	Has a national office and plan. ¹⁶	none ¹⁶	Extensive tide gauge system and climate recording stations. ¹⁶	none ¹⁶	none ¹⁶
Barbados	none ¹⁷	Has a national office and a disaster mitigation plan exist. ¹⁷	Has implemented a solar energy project. Has constructed a renewable energy center. Has assessed the potential for wind, ocean thermal, and wave energy. ¹⁷	none ¹⁷	none ¹⁷	none ¹⁷
Belize	Has drafted a national policy. ¹⁸	Has a national office and plan. Family disaster preparedness plan program. Has a TV and radio early warning system. ¹⁸	Has implemented hydroelectric production of energy. ¹⁸	Has established a network of tide gauges and climate monitoring stations. ¹⁸	none ¹⁸	none ¹⁸
Cuba	Has a national adaptation plan and office for climate change. An extensive assessment of climate change impact on country has been carried out. ¹⁹	information needed	Has promoted renewable energy. ¹⁹	GHG inventory ¹⁹	Public awareness campaign (not specific). ¹⁹	information needed

Table B-2 (Continued)

CARIBBEAN NATIONS	Adaptation and mitigation programs/initiatives	Disaster preparedness plans (relating to climate and sea level change)	Renewable energy plan/implementation	Climate and sea level data collection/monitoring	Public education on climate and sea level	Assessment of the socio-economic impact of climate and SL change
Dominica	Has drafted a national policy. ²⁰	Has a disaster preparedness unit. ²⁰	Has implemented a hydroelectric energy program and is developing a geothermal project. ²⁰	none ²⁰	Has a conducted a public awareness campaign. ²⁰	none ²⁰
Dominican Republic	none ²¹	Has national office and plan. ²¹	Has promoted renewable energy. ²¹	none ²¹	none ²¹	none ²¹
Grenada	Has established a regional climate change center. ²²	Has a national plan. ²²	Has studied the potential for renewable energy. ²²	GHG inventory ²²	none ²²	none ²²
Guyana	Has a national adaptation plan and office for climate change. Has enacted ICM. ²³	none ²³	Has drafted a national energy policy. Has assessed the potential for hydroelectric and wind energy. ²³	GHG inventory ²³	Included in primary school curricula. Has conducted a public awareness campaign. ²³	none ²³
Haiti	Has a national adaptation plan ²⁴	Has national office and plan. ²⁴	Has assessed the potential for wind, solar, and hydroelectric power. ²⁴	none ²⁴	none ²⁴	none ²⁴
Jamaica	none ²⁵	Has national office and plan. Has an extensive early warning system. ²⁵	Has promoted and installed wind energy infrastructure. ²⁵	none ²⁵	none ²⁵	none ²⁵
St. Kitts and Nevis	none ²⁶	Has national office and plan. ²⁶	none ²⁶	GHG inventory ²⁶	none ²⁶	none ²⁶
St. Lucia	none ²⁷	Has national office and plan. ²⁷	Has promoted renewable energy. ²⁷	Has installed climate and sea level monitoring stations. ²⁷	Has conducted a public awareness campaign. ²⁷	none ²⁷
St. Vincent and the Grenadines	Has national plan. ²⁸	Has national office and plan. ²⁸	Has assessed the potential for geothermal energy. ²⁸	GHG inventory ²⁸	Has conducted community presentations. ²⁸	none ²⁸
Suriname	none ²⁹	Has national office and plan. ²⁹	Has assessed the potential for geothermal energy. ²⁹	GHG inventory ²⁹	none ²⁹	none ²⁹
Trinidad and Tobago	none. ³⁰	Has national office and plan. ³⁰	Has limited solar infrastructure. ³⁰	GHG inventory ³⁰	Awareness campaign in preparation ³⁰	none ³⁰

Table B-2 (Continued)

REFERENCES:

- (15) Government of Antigua and Barbuda (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (16) The Commonwealth of the Bahamas (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (17) The Government of Barbados (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (18) Government of Belize (2003). "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (19) Integrated Analysis of Climate Change Impacts in Cuba: www.onu.org/cu/havanarisk/documents2.html
- (20) The Commonwealth of Dominica (2003) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (21) Dominican Republic National Country Profile. ECLAC/CDCC Secretariat. Available at: <http://www.sdn.undp.org/~eclac/CARMIN/natsids.htm>
- (22) The Government of Grenada (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (23) The Government of Guyana (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (24) Republic of Haiti (2004). "Rapport National Barbade +10 Petits Etats Insulaires" Written in French. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (25) The Government of the Jamaica (2003) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (26) The Federation of St. Kitts and Nevis (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (27) The Government of St. Lucia (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (28) The Commonwealth of St. Vincent and the Grenadines (2003) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (29) The Republic of Suriname (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (30) The Republic of Trinidad and Tobago (2004) "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

Appendix B. Assessment of Barbados Programme of Action Goals related to Climate Change and Sea Level Rise

Table B-3. AIMS (Atlantic Ocean, Indian Ocean, Mediterranean Sea And South China Sea) Nations

AIMS NATIONS	Adaptation and mitigation programs/ initiatives	Disaster preparedness plans (relating to climate and sea level change)	Renewable energy plan/implementation	Climate and sea level data collection/ monitoring	Public education on climate and sea level	Assessment of the socio-economic impact of climate and SL change
Bahrain	Has conducted a national vulnerability assessment and has adopted mitigation measures. ³¹	none ³¹	none ³¹	Has installed air pollution monitoring stations GHG inventory ³¹	none ³¹	none ³¹
Cape Verde	Has a national adaptation plan. ³²	Has national plan. ³²	Has established a policy ³²	GHG inventory ³²	none ³²	none ³²
Comoros	Adaptation plan in production. ³³	Has national office and plan. An early warning system exists. ³³	Solar energy project exists. Has assessed potential for wind, hydroelectric and geothermal energy. ³³	none. ³³	Included in primary school curricula. Public awareness campaign on radio. ³³	none ³³
Cyprus	Has a national adaptation plan and office for climate change. ³⁴	information needed	information needed	information needed	information needed	information needed
Guinea-Bissau	information needed	information needed	information needed	information needed	information needed	information needed
Maldives	Has an agency responsible for climate change activities. ³⁵	information needed	information needed	GHG inventory ³⁶	Included in primary school curricula. ³⁶	information needed
Malta	information needed	information needed	information needed	information needed	information needed	information needed
Mauritius	Has a national adaptation plan and office for climate change. ³⁷	Has a cyclone emergency plan, which is updated annually. ³⁷	Government subsidizes solar water heater purchases by homeowners. It also provides energy efficient light bulbs to public. ³⁷	GHG inventory. Metrological data collection network. ³⁷	Public awareness campaign in place. Oceanography institute established. ³⁷	none ³⁷

Table B-3 (Continued)

AIMS NATIONS	Adaptation and mitigation programs/ initiatives	Disaster preparedness plans (relating to climate and sea level change)	Renewable energy plan/implementation	Climate and sea level data collection/ monitoring	Public education on climate and sea level	Assessment of the socio-economic impact of climate and SL change
Sao Tome & Principe	information needed	information needed	information needed	information needed	information needed	information needed
Seychelles	Has a national adaptation plan. ³⁸	Has national office and plan. A disaster fund exists. ³⁹	Solar and photovoltaic projects in place. Public awareness campaign for energy efficiency exists. ³⁹	GHG inventory ³⁸	none ³⁸	none ³⁸
Singapore	Has a national adaptation plan and office for climate change. ⁴⁰	Has a national plan and regular disaster preparedness training. Has an early warning system. ⁴⁰	Has established a limited solar energy program. ⁴⁰	Has installed meteorological monitoring stations. ⁴⁰	none ⁴⁰	none ⁴⁰
<p>REFERENCES:</p> <p>(31) The Kingdom of Bahrain (2003) “National Assessment Report Barbados +10”. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(32) The Government of Cape Verde (2004) “National Assessment Report Barbados +10”. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(33) Union of Comoros (2003). “Evaluation Nationale du Programme d’Action de Barbade +10” Written in French. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(34) Cyprus Water Resources and Climate Change: www.iucn.org/places/medoffice/CDCambio_climatico/ contenido/C/PDF/Cyprus_N.Tsiourtis.pdf</p> <p>(35) Maldives National Adaptation Programmes of Action to Climate Change: www.unitar.org/ccp/bhutan/05-%20Maldives%20NAPA.pdf</p> <p>(36) First National Communication of the Republic of Maldives to the UNFCCC. Maldives Ministry of Home Affairs, housing, and Environment. 2001.</p> <p>(37) Republic of Mauritius (2003) “National Assessment Report Barbados +10”. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(38) Government of Seychelles (2000), Initial National Communications under the United Nations Framework Convention on Climate Change; Ministry of Environment and Transport, Republic of Seychelles.</p> <p>(39) Republic of Seychelles (2004) “National Assessment Report Barbados +10”. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(40) Government of Singapore (2004) “National Assessment Report Barbados +10”. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p>						

APPENDIX C

Assessment of Barbados Programme of Action Goals related to Tourism

Appendix C. Assessment of Barbados Programme of Action Goals related to Tourism Management

Table C-1. Pacific Islands

PACIFIC ISLANDS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Cook Islands	47% ⁽⁸⁾	information needed	Cook Islands Tourism Corporation ⁽¹⁾	information needed	information needed	Hospitality and Tourism Training Centre ⁽¹⁾	Used, but info is needed determine whether it its required for all tourism projects	information needed	Working towards adoption of APEC/PATA code for Sustainable Tourism ⁽¹⁾	Information needed
Federated States of Micronesia	information needed	information needed	No national body; tourism offices decentralized at the state level	information needed	information needed	information needed	information needed	Huvalu Forest Conservation Tours ⁽¹⁰⁾	information needed	Information needed
Fiji	12.8% ⁽⁸⁾	9.5% ⁽⁸⁾	Ministry of Tourism and National Tourism Council ⁽²⁾	Fiji Tourism Development Plan, 1998-2005; Ecotourism and Village Based Tourism Policy and Strategy ⁽²⁾	Sustainable Development Bill, parts XII through XVII ⁽⁷⁾	Community Workshops through Ministry of Tourism and Fiji Locally Managed Marine Protected Areas Network ⁽⁷⁾	information needed	Ecotourism Grant Program for indigenous Fijians: 60 local ecotourism projects; Fiji Locally Managed Marine Protected Areas Network ⁽²⁾	Green Globe 21- Best Practice & Benchmarking Program ⁽²⁾	Information needed
Kiribati	14.5% ⁽⁸⁾	1.7% ⁽⁸⁾	Kiribati Visitors Bureau, Ministry of Commerce Industry and Tourism ⁽⁹⁾	information needed	information needed	information needed	information needed	local guest houses, eco-tours ⁽⁹⁾ Specific initiatives????	information needed	Information needed

Table C Continued

PACIFIC ISLANDS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Marshall Islands	Information needed	information needed	Marshall Islands Visitors Authority ⁽³⁾	information needed	information needed	Marshall Islands Visitors Authority training seminars; Workers Investment Act: WWII tour guide training (US federal program) ⁽³⁾	information needed	Jaluit Atoll Conservation Area (JACA): canoe tours, culture tours; Laura Farmers Association, etc. ⁽³⁾	information needed	Amimono Association: promotes Marshallese handicrafts; Traditional Canoe Building and Sailing Courses ⁽³⁾
Nauru	information needed	information needed	information needed	information needed	information needed	information needed	information needed	information needed	information needed	Information needed
Niue	13% ⁽⁸⁾	information needed	Niue Tourism Office ⁽¹¹⁾	Niue Action Plan Policy, Home Stay or Visit Programme ⁽¹¹⁾	information needed	information needed	information needed	information needed	Niue Accreditation Scheme ⁽¹¹⁾	Information needed
Palau	information needed	information needed	Palau Visitors Authority ⁽¹²⁾	STPAP: Sustainable Tourism Policies and Action Plan (created but not yet implemented) ⁽¹⁵⁾	efforts to form National Tourism Unite integrate STPAP into national policy ⁽¹⁵⁾	Pacific Asia Travel Association training ⁽¹⁵⁾	information needed	Homestays offered at several locations; ⁽¹²⁾ State Tourism Representatives; Palau Conservation Society efforts ⁽¹⁵⁾	Environment Friendly Restaurant Program; efforts to establish green management guidelines and certification training ⁽¹⁵⁾	Sam's Land Tours-Cultural Historical Sites and Villages; WWII Tours ⁽¹²⁾ ; recommended efforts to inventory and register all cultural sites ⁽¹⁵⁾

Table C Continued

PACIFIC ISLANDS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Papua New Guinea	6.3% ⁽⁸⁾	3.2% ⁽⁸⁾	Papua New Guinea Tourism Promotion Authority, falls under Ministry of Culture and Tourism ⁽¹³⁾	PNGTPA 2004-2008 Corporate Plan; Tourism Policy ⁽¹⁶⁾	Tourism Promotion Authority Act 1993 ⁽¹⁶⁾	recognized need for human resource development strategy for tourism sector ⁽¹⁶⁾	information needed	Ecovitality: village home-stays for tourists & conservation and development projects in cooperation with the local communities ⁽¹⁰⁾	information needed	Information needed
Samoa	9.5% ⁽⁸⁾	10% ⁽⁸⁾	Samoa Tourism Authority ⁽⁴⁾	Tourism Development Plan 2002-2006 ⁽⁴⁾	National Land Use Policy, National Policy for Cultural and Natural Heritage ⁽⁴⁾	information needed	Yes, EIA Guidelines and Regulations adopted by STA for all tourism projects ⁽⁴⁾	STA supports community-based tourism ⁽⁴⁾	Sustainable Tourism Indicators Program ⁽⁴⁾	National Committee for Cultural and National Heritage ⁽⁴⁾
Solomon Islands	2.9% ⁽⁸⁾	1.6% ⁽⁸⁾	Solomon Islands Visitors Bureau	information needed	information needed	information needed	information needed	Solomon Island Village Stays: network of over twenty village homestays ⁽¹⁰⁾	information needed	Information needed

Table C Continued

ACIFIC ISLANDS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
onga	5% ⁽⁸⁾	3.2% ⁽⁸⁾	Tonga Visitors Bureau ⁽⁵⁾	Six year plan (title?), Tourism Annual Awareness Plan ⁽⁵⁾ , Nature Tourism Project (sponsored by NZAID)	information needed	Community Development Training Center 18-month tourism certificate, Ahopanilolo College ⁽⁵⁾	Used, but info is needed determine whether it its required for all tourism projects	Nuku'alofa Beautification Project, mooring bouy project in Vava'u ⁽⁵⁾	information needed	Information needed
uvalu	3% ⁽⁸⁾	information needed	No, but recognition of need to enact legislation, set ecotourism standards, and promote tourism ⁽⁶⁾	information needed	information needed	information needed	information needed	Yes: some guest houses, some conservation areas, great potential ⁽⁶⁾	No, but recognized need to set ecotourism standards ⁽¹⁴⁾	Recognized need to preserve traditional knowledge, practices and artifacts ⁽¹⁴⁾
anuatu	16.6% ⁽⁸⁾	12% ⁽⁸⁾	Vanuatu Tourism Office www.vanuatutourism.com	information needed	information needed	information needed	information needed	information needed	information needed	Information needed

REFERENCES:

NATIONAL ASSESSMENT REPORTS, Pacific

- 1) Government of the Cook Islands (2003) "National Assessment Report For Barbados Programme of Action + 10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- 2) Government of Fiji (2003). "National Assessment Report of Fiji". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- 3) Marshall Islands' Office of Environmental Planning and Policy Coordination (OEPPC), Economic Policy, Planning and Statistics Office (EPPSO) & Ministry of Foreign Affairs (MOFA) (2003). Republic of the Marshall Islands Draft Report on the Barbados Programme of Action (BPOA)" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- 4) Government of Samoa (2003). "Samoa Barbados Plan of Action (BPoA) National Assessment Report". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- 5) Kingdom of Tonga (2003). "Tonga National Assessment Report" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- 6) Government of Tuvalu (2003). "National Assessment Report of Tuvalu". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- 7) Caribbean
- 8) United Nations (2002). Fiji Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.
- 9) South Pacific Tourism Organization (2003). Table A2: Economic Importance of Tourism in Countries Within the Region http://www.tsp.com/invest/table_A2.shtml Accessed March 29, 2004
- 10) Kiribati Tourism Site (2001). <http://www.kiritours.com/Tourism/tourism.htm>. Accessed March 29, 2004.
- 11) United Nations Division for Sustainable Development. SIDS Ecotourism Success Stories. <http://www.sidsnet.org/eco-tourism/>
- 12) Niue Tourism Office (2004). Official Website. <http://www.niueisland.com/>. Accessed March 29, 2004.
- 13) Palau Visitors Authority. <http://www.visit-palau.com/> Accessed March 29, 2004.
- 14) Papua New Guinea Tourism Promotion Authority. www.pngtourism.org.pg/. Accessed March 29, 2004.
- 15) Government of Tuvalu (2004). SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- 16) Government of Palau (2004). Barbados Programme of Action +10 Review. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA. Compiled by Ministry of Resources and Development.
- 17) Government of Papua New Guinea (2004). SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.

Table C Continued

Appendix C. Assessment of Barbados Programme of Action Goals related to Tourism Management										
Table C-2. Caribbean Nations										
CARIBBEAN NATIONS	% GDP	% employe nt sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Antigua and Barbuda	informati on needed	information needed	Ministry of Tourism and the Environment ⁽²⁾	information needed	information needed	Small Tourism Enterprises Project (with 30 small enterprises participating) ⁽²⁰⁾	Used, but info is needed determine whether it its required for all tourism projects ⁽²⁾	Bendals Community Group: Greencastle Hill ⁽²⁰⁾	Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	information needed
Bahamas	over 50% ⁽¹⁹⁾	50% ⁽¹⁹⁾	Ministry of Tourism	Sustainable Tourism Policy, Guidelines and Implementati on Strategy for the Out Islands of the Bahamas (1994) ⁽¹⁹⁾	New legislation encouragin g developme nt of timeshare properties ⁽⁸⁾	Birdwatching tour guide courses ⁽¹⁹⁾	Used, but info is needed determine whether it its required for all tourism projects	Tiamo Resort ⁽⁹⁾	Quality Tourism for the Caribbean Participant ⁽¹⁰⁾ ; Blue Flag Program Pilot Phase ⁽¹¹⁾	information needed
Barbados	informati on needed	information needed	Ministry of Tourism ⁽²¹⁾ ; Barbados Tourism Authority	Tourism Development Programme ⁽²¹⁾	information needed	information needed	Used, but info is needed determine whether it its required for all tourism projects	information needed	Quality Tourism for the Caribbean Participant ⁽¹⁰⁾ ; Blue Flag Program Pilot Phase ⁽¹¹⁾	information needed

Table C-2 Continued

CARIBBEAN NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Belize	18% 2002 ⁽¹⁾	~25% ⁽¹⁾	Ministry of Tourism ⁽¹⁾	Tourism Development Project 4 yr \$14M US project ⁽¹⁾	information needed	Tourism Training Unit (3 yr project), Small Tourism Enterprises Program for Sustainability (STEPS) tech assistance for small hotels ⁽¹⁾	information needed	Belize Ecotourism Association ⁽⁹⁾ ; Community Management of Marine Protected Areas Tour Guiding Project, Advanced Marine Guiding Program ⁽¹⁾	tour guide license ⁽¹⁾	information needed
Cuba	information needed	information needed	Ministry of Tourism (MIT) in accordance w/ the Ministry of Science, Technology and the Environment ⁽³⁾	Developmental Program ⁽³⁾	information needed	information needed	Used, but info is needed determine whether it its required for all tourism projects ⁽³⁾	information needed	information needed	information needed
Dominica	information needed	information needed	National Development Corporation ⁽⁸⁾	National Tourism Plan, which will be part of Integrated National Development Plan ⁽⁸⁾	information needed	Funding from European Union to support tourism human resource development ⁽¹²⁾	Used for most major national development projects that are likely to have a negative effect on the environment (under Physical Planning Act) ⁽¹²⁾	National Trail includes 20 villages and promotes community tourism (proposed but not implemented) ⁽¹²⁾	Nature Islands Standards of Excellence ⁽⁸⁾ ; Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	information needed

Table C-2 Continued

CARIBBEAN NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Dominican Republic	information needed	information needed	Secretary of State of Tourism (SECTUR) ⁽⁴⁾	SECTUR's National Strategy for the Development of Ecotourism ⁽⁴⁾	Law #85/68; Law # 67/74; The Resolution 247/98; the Judicial decree 303-87; & the Judicial decree 531-90 ⁽⁴⁾	information needed	Used, but info is needed determine whether it its required for all tourism projects	Ecotourism Project of the Oviedo Lagoon, the EcoDevelopment Project of the Samana Bay (CEBSE) ⁽⁴⁾ ; Cruz Verde	Blue Flag Program Pilot Phase ⁽¹¹⁾	information needed
Grenada	information needed	information needed	Grenada Board of Tourism	National Plan for Tourism Development (1997) ⁽²²⁾ ; 1996 Tourism Policy ⁽⁸⁰⁾	information needed	Small Tourism Enterprise Project provides technical assistance to small hotels. ⁽²²⁾	information needed	Grenada Community-based Nautical Tourism Project; St. Davids Community Tourism Project ⁽²²⁾	Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	information needed
Guyana	information needed	information needed	Guyana Tourism Authority and Ministry of Tourism Industry and Commerce	Chapter 20 of National Development Strategy	information needed	March 2003 charette hosted by MTIC, WWF and supported by USAID and UNDP ⁽¹⁸⁾	information needed	Iwokrama International Centre for Rain Forest Conservation and Development; Saxacalli tourism development project ⁽¹⁸⁾	information needed	Georgetown Heritage District ⁽¹⁸⁾
Haiti	information needed	information needed	Secretary of State for Tourism	Le Plan Directeur du Tourisme	information needed	information needed	information needed	information needed	information needed	information needed

Table C-2 Continued

CARIBBEAN NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Jamaica	information needed	information needed	Ministry of Industry and Tourism	Master Plan for Sustainable Tourism Development 2001-2011 (completed Nov. 2001) ⁽⁵⁾	Tourism Board Act	Public education program geared towards enhancing tourism education in schools and tertiary institutions ⁽⁸⁾	Required for all major projects under the NRCA Act	Valley Hikes: local guides ⁽⁹⁾	Blue Flag Program Pilot Phase ⁽¹¹⁾ ; Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	information needed
St. Kitts and Nevis	information needed	information needed	St. Kitts Tourism Authority	St. Kitts and Nevis Tourism Master Plan (1993) ⁽¹⁷⁾	information needed	information needed	Required for all major projects under Development Control and Planning Act 2000 ⁽¹⁷⁾	information needed	Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	Comprehensive survey and assessment of historic properties in Tourism Master Plan ⁽¹⁷⁾
St. Lucia	information needed	information needed	St. Lucia Hotels and Tourism Association (only private sector body with Environmental Committee) ⁽⁶⁾	No, but SLHTA in beginning stages of formulating major Environmental Management Programme ⁽¹⁶⁾	No current legislation, but recommendation for comprehensive Environmental Mgmt Act and Resource Mgmt Act ⁽¹⁶⁾	St. Lucia receiving help from regional organizations CARICOM and CAST ⁽¹⁶⁾	information needed	information needed	Recommendation for tourism planning guidelines (e.g. setbacks) ⁽¹⁶⁾ ; Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	St. Lucia Heritage Tourism Programme ⁽¹⁶⁾
St. Vincent and the Grenadines	information needed	information needed	Ministry of Tourism and Culture ⁽¹⁵⁾	Tourism Sector Strategic Plan 2002-2006 ⁽¹⁵⁾	information needed	Ministry of Tourism conducts ongoing tour guide training; STEP resource ⁽¹⁵⁾ center; UNESCO Youth Path Project	Information needed	Biabou Community Group, Union Island Eco-tourism Committee ⁽¹⁵⁾	Green Programme, Best Practices ⁽¹⁵⁾ ; Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	North Leeward Tourism Association (heritage village at Fitz-Hughes) ⁽¹⁵⁾

Table C-2 Continued

CARIBBEAN NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Suriname	information needed	information needed	Ministry of Transport, Communication, and Tourism; Suriname Tourism Foundation ⁽¹⁴⁾ ; Tourism Union of the Republic of Suriname (TOURS) ⁽⁷⁾	National Integrated Tourism Development Programme 2002-2005 ⁽¹⁴⁾	None, but Tourism Act being formulated to establish Suriname Tourism Authority ⁽¹⁴⁾	Small Tourism Enterprise Project, Caribbean Regional Human Resources Development Programme for Economic Competitiveness; plans to establish a Hotel & Tourism Training Centre ⁽¹⁴⁾	no, but draft Environmental Impact Assessment Regulations have been developed ⁽¹⁴⁾	Sustainable Tourism Development and Conservation Program; community-based products and services in the Upper Suriname River ⁽⁷⁾	Norm and Standards being developed ⁽¹⁴⁾ ; Suriname Sustainable Tourism Development Assessment and Guide ⁽⁷⁾	information needed
Trinidad and Tobago	information needed	information needed	Ministry of Tourism ⁽¹³⁾ ; Tourism & Industrial Development Company ⁽⁸⁾	Tourism Master Plan ⁽¹³⁾	None	Expansion of Trinidad and Tobago Hospitality and Tourism Institute ⁽⁸⁾	Required for some activities under Environmental Management Act 2000 ⁽¹³⁾	Renaissance Districts being established; Footprints Eco-resort ⁽⁹⁾	Trinidad and Tobago Tourism Industry Certification Programme implements tourism industry standards ⁽⁸⁾ ; Quality Tourism for the Caribbean Participant ⁽¹⁰⁾	Carnival on Trinidad and Heritage Festival on Tobago ⁽¹³⁾

Table C-2 Continued

REFERENCES:

- (1) Government of Belize (2003). "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (2) United Nations (2002). Antigua e Barbuda Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.
- (3) United Nations (2002). Cuba Country Profile (Written in Spanish). 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development. Translated into English by Carlos Sanchez.
- (4) United Nations (2002). Dominican Republic Country Profile (Written in Spanish). 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development. Translated into English by Carlos Sanchez.
- (5) United Nations (2002). Jamaica Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.
- (6) United Nations (2002). Saint Lucia Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.
- (7) United Nations (2002). Suriname Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.
- (8) World Tourism Organization (2001). Tourism Market Trends: Americas. Printed by the World Tourism Organization. Madrid, Spain.
- (9) United Nations Division for Sustainable Development. SIDS Ecotourism Success Stories. <http://www.sidsnet.org/eco-tourism/>
- (10) Quality Tourism for the Caribbean. http://www.carec.org/projects/hotels/qtc_project.htm. Accessed March 2004.
- (11) Blue Flag Program. http://www.blueflag.org/Other_new.asp. Accessed March 2004.
- (12) Government of Dominica (2003). Dominica's National Report on Barbados Programme of Action +10. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (13) Government of Trinidad and Tobago (2003). National Assessment Report, Republic of Trinidad and Tobago. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (14) Government of Suriname (2004). Final National Assessment Report. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (15) Government of St. Vincent and the Grenadines (2003). Report to the Regional Consultation on SIDS Specific Issues. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (16) Government of St. Lucia. Draft Final Report. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (17) Government of the Federation of St. Kitts and Nevis (2003). National Assessment of the BPOA+10. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA. Prepared by the Planning Unit, Ministry of Finance, Development and Planning.
- (18) Government of Guyana (2004). Guyana's Assessment Report on the Barbados Programme of Action Plus 10. National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (19) Government of the Bahamas (2004). National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (20) Government of Antigua and Barbuda (2004). National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.
- (21) Government of Barbados (2004). Barbados National Assessment Report on the Implementation of the Barbados Programme of Action. Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA. Prepared by the Ministry of Housing Lands and the Environment.
- (22) Government of Grenada (2004). Grenada National Report on Sustainable Development. Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA. Submitted by Ministry of Finance.

Appendix C. Assessment of Barbados Programme of Action Goals related to Tourism Management
Table C-3. AIMS (Atlantic Ocean, Indian Ocean, Mediterranean Sea, and South China Sea) Nations

AIMS NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Bahrain	information needed	information needed	Not really, but tourism governed by National Commission for Wildlife Protection(?) ⁽¹⁾	no, but recognizes need for tourism planning at national level ⁽¹⁾	information needed	information needed	Used, but info is needed determine whether it its required for all tourism projects ⁽¹⁾	information needed	information needed	information needed
Cape Verde	information needed	information needed	PROMEX (Promotion of Tourism and Investment of Cabo Verde) ⁽⁸⁾	National Strategic Development Plan for Tourism in preparation ⁽¹¹⁾	information needed	National school for hotel and tourism activities being established ⁽¹¹⁾	Used, but info is needed determine whether it its required for all tourism projects ⁽¹¹⁾	Yes, and under further development ⁽¹¹⁾	still in period of tourism attraction-not yet at regulation ⁽⁸⁾	information needed
Comoros	information needed	information needed	Ministère des Transports, Tourisme, Postes, and Télécommunications ⁽⁸⁾	No ⁽⁸⁾	None	No training structures for the tourism, hotel, and craft sectors ⁽⁸⁾	no	Yes, but information needed on details ⁽²⁾	No ⁽⁸⁾	Restoration and development of the historical, cultural, and artistic heritage (FESNACO) ⁽⁸⁾

Table C-3 Continued

AIMS NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Cyprus	information needed	information needed	Cyprus Tourism Organization-coordinates Blue Flag program ⁽⁵⁾	Strategy on Tourism ⁽⁵⁾	information needed	information needed	Used, but info is needed determine whether it its required for all tourism projects ⁽⁵⁾	Cyprus Agrotourism Programme ⁽⁹⁾	Code of Environmental Behavior ⁽⁵⁾ ; Blue Flag Program participant	information needed
Guinea-Bissau	information needed	information needed	information needed	information needed	information needed	information needed	information needed	information needed	information needed	information needed
Maldives	information needed	information needed	Ministry of Tourism ⁽¹⁰⁾	information needed	"One island one resort" policy; Resort building height must be lower than highest palm tree ⁽¹⁰⁾	information needed	information needed	information needed	The President of Maldives Green Resort Award and other international awards ⁽¹⁰⁾	information needed
Malta	24% ⁽⁶⁾	27% ⁽⁶⁾	Ministry of Tourism and Malta Tourism Authority ⁽⁶⁾	information needed	Malta Travel and Tourism Services Act ⁽⁶⁾	new Tourism Degree at University of Malta ⁽⁶⁾	information needed	information needed	information needed	information needed

Table C-3 Continued

AIMS NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Mauritius	11% ⁽³⁾	information needed	Ministry of Tourism ⁽³⁾	2 Tourism Master Plans, Tourism Environment Charter ⁽³⁾	National Tourism Policy, Sustainable Ecotourism Sector in National Biodiversity Strategy and Action Plan, Tourism sector in National Environment Action Plan ⁽³⁾	information needed	information needed	Chameral Integrated Development Project ⁽³⁾	information needed	information needed
Sao Tome & Principe	information needed	information needed	Tourism Department and Ministry of Planning and Financial ⁽⁸⁾	none as of 2001, but Tourism Master Plan was projected ⁽⁸⁾	information needed	information needed	Used, but info is needed determine whether it its required for all tourism projects	Treks into protected "obô" areas ⁽⁸⁾	information needed	information needed
Seychelles	20% ⁽⁴⁾	17% ⁽⁴⁾	Ministry of Tourism and Transport ⁽⁴⁾	Vision 21: Tourism Development in Seychelles: 2001-2010 (December 2001) ⁽⁴⁾	information needed	information needed	information needed	information needed	setback limits for hotels on coast, aesthetic standards ⁽⁴⁾	information needed

Table C-3 Continued

AIMS NATIONS	% GDP	% employment sector	National Body	National Plan	Relevant Legislation	Capacity Building	EIA Required	Community-based Initiatives	Standards	Cultural Preservation
Singapore	12% in 1996 ⁽⁷⁾	9.5% in 1996 ⁽⁷⁾	Singapore Tourism Board ⁽⁷⁾	Tourism 21 Blueprint ⁽⁷⁾	None ⁽⁷⁾	Singapore Confederation of Industries and Singapore Hotel Association; STB tour guide training program "Exploring the Nature Trails of Singapore"; other efforts ⁽⁷⁾	information needed	information needed	information needed	information needed
<p>REFERENCES:</p> <p>(1) Bahrain's General Commission for the Protection of Marine Resources, Environment & Wildlife (2003). "The Kingdom Of Bahrain National Assessment of the Barbados Programme Of Action". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(2) Union of Comoros (2003). "Evaluation Nationale du Programme d'Action de Barbade +10" Written in French. SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(3) Republic of Mauritius (2003). "Republic of Mauritius National Assessment Report of the BPoA +10" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(4) Republic of Seychelles (2004). "Seychelles - National Assessment of the Barbados Programme of Action+10 Review" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p> <p>(5) United Nations (2002). Cyprus Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.</p> <p>(6) United Nations (2002). Malta Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.</p> <p>(7) United Nations (2002). Singapore Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development.</p> <p>(8) World Tourism Organization (2001). Tourism Market Trends: Africa. Printed by the World Tourism Organization. Madrid, Spain.</p> <p>(9) United Nations Division for Sustainable Development. SIDS Ecotourism Success Stories. http://www.sidsnet.org/eco-tourism/</p> <p>(10) Maldives Ministry of Tourism. www.visitmaldives.com/. Accessed March 2004.</p> <p>(11) Government of Cape Verde (2004). SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA.</p>										

APPENDIX D

Assessment of Barbados Programme of Action Goals related to Waste Management

Table D-1 Continued

Appendix D. Assessment of Barbados Programme of Action Goals related to Waste Management								
Table D-1. Pacific Nations								
PACIFIC NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Cook Islands	User Pay System, educational campaigns & regulations on packaging of imports and local products prescribed in the WM Plan ⁽¹⁾	Sewage, agriculture, packaging, and disposal of heavy machinery are expected to be regulated by the National WM Plan currently under elaboration ⁽¹⁾	R UNCLOS; Applied to become sign. MARPOL (has adopted its provisions) ⁽²⁾ ;	WM Plan is expected to conduct them ⁽¹⁾	Construction of engineered landfills, sewage treatment plants and new recycling centers are prescribed in the WM Plan ⁽¹⁾	Information needed	Rudimentary facilities cope with little demand. Cargo ships/ tankers are encouraged to retain their wastes ⁽²⁾	Information needed
Federated States of Micronesia	Information needed	Information needed	A UNCLOS; A Basel	No much transparency; limited sharing/exchanging info between government and public ⁽³⁾	No adequate collection/treatment of domestic wastes, nor of industrial wastes ⁽⁴⁾	Lack of information is identified as a main constraint for public policy and decision-making ⁽³⁾	unsatisfactory ⁽²⁾	Information needed
Fiji	Provisions for W minimization included in Sustainable Development Bill (under review) ⁽⁵⁾	Public Health Act/ Local Govern. Act: control collection/disposal of W/sewage; 1991's Litter Decree: poorly implemented. Sustainable Development Bill (under review) has provisions on W mgnt. and pollution control ^(5 and 6)	R UNCLOS	Department of Environment, NGO and regional initiatives ^(5 and 6)	Establishment of proper landfills in process ⁽⁵⁾ proposed facilities: reducing W/ separation at source would be encouraged and recycling established; some companies recycle papers and scrap metals; ⁽⁶⁾ .	1991 SPREP commissioned Solid Waste Characterization Report of Lautoka and Nadi ⁽⁷⁾ ; virtually no information on hazardous wastes ⁽⁶⁾	unsatisfactory ⁽⁷⁾	Information needed

Table D-1 Continued

PACIFIC NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Kiribati	Little import of glass bottles is permitted ⁽²⁾	WM Plan under development ^(2 and 8)	IMO member; A UNCLOS; R London; and A Basel ⁽²⁾ ;	Sld WMP* has Community + Ministry of Environment and Social Development + NGO's participation; waste Reduction Pilot Project designed with consultation of stakeholders ⁽⁸⁾ ;	sewage system direct discharges into sea and is limited to one municipality; collecting solid waste but no selection/treatment ⁽²⁾	GIS based information/ monitoring system under development ⁽⁸⁾	relatively small demand; no port WMP* nor W reception facilities for oily wastes ⁽²⁾	Information needed
Marshall Islands	Information needed	WM Plan under development ⁽²⁾	IMO member; A UNCLOS; A Basel; A MARPOL Annexes (given effect in national law) /SPREP Conv. + Dumping Protocol and Pollution Protocol ⁽²⁾	Public debate and discussion is under way ⁽²⁾ more Information needed	Very small scale recycling; Ebeye Health and Infrastructure Project (1999):New equipment for SW collection, landfill mgmt/expansion/fencing/recycling ⁽⁹⁾	Information needed	Relatively minor demand for the reception of ship W ⁽⁷⁾	Information needed
Nauru	Information needed	Nat. Envir. Coordination Committee established to implement Action Plan prepared as part of the Nat. Envir. Manag. Strategy more Info needed ⁽²⁾	R UNCLOS; R London; A Basel; A SPREP Conv. ⁽²⁾	Env Unit's environmental education programme (school study kits, posters to encourage retention of rubbish by boats and participation in World Cleanup Day) ⁽²⁾	SW collection; Some composting; New dumpsite will be selected and subjected to EIA; No recycling; some waste oil used as supplementary fuel at the phosphate mine; Hospital W management requires revision (Quarantine Service Act) ⁽²⁾	Information needed	little demand for the reception of waste ⁽²⁾	Information needed

Table D-1 Continued

PACIFIC NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions (23)	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Niue	Government policy bans import of glass bottled beverages (excluding hard liquor) ⁽²⁾	Nat. WM Plan as part of an AusAID W management project; Nat. building code: requirements for the construction of septic tanks (often ignored-less than 50% of households on the island/many not meeting design specifications); Amendments to this Code and more monitoring is expected to improve the situation ⁽²⁾	S UNCLOS; Not S MARPOL or London but adopted both in National Law ⁽²⁾	Information needed	Modern landfill under WMP*; domestic W collection; some recycling; Hospital W incinerated; Some hazardous/ chemical W are to be packaged/ stored for disposal under SPREP program. Asbestos disposed at government's site; sewage treatment: septic tanks, water seal longdrop, and longdrops; Health Dept. operates septic sludge removal service ⁽²⁾ .	A waste stream analysis study was carried out in June/July 2000 under the AusAID WMP project; A hazardous waste audit was carried out in July 2000 ⁽²⁾	information needed	Information needed
Palau	No formal long term program ⁽¹⁰⁾	A WMP* completed/ implemented, currently under review (w/ emphasis upon recycling); Nat. Environmental Quality Protection Board's regulations address specific issues, including marine pollution. Nat. regulations are continuously under review/ modified as necessary to suit emerging requirements. Env. regulations are enforced (fines) ⁽²⁾	A UNCLOS; not S MARPOL nor London but both are given effect & observed in Nat. Law; S SPREP Conv., Dumping Protocol and Pollution Protocol ⁽²⁾ R Waigani ⁽¹⁰⁾	Population does not recognize W disposal as a problem; inappropriate dumping is a common; some awareness campaigns are in place ⁽²⁾ but the need for more effective programs is recognized ⁽¹⁰⁾	Domestic W only partially collected; limited recycling; Quarantine/ hospital W incinerated (may be burnt in open pits when incinerators are not operating or quantity exceeds capacity); Some of the urban sewage is treated but most of it is disposed to septic tanks or village-based systems that discharge untreated sewage to the sea ^(2, 10) ; No facilities or procedures for hazardous W (but addressed in the Nat. WMP) ⁽²⁾	Information needed	Small demand; Envir. Quality Protection Boards enforces strict disposal laws and fines are issued ⁽²⁾	Ratified Waigani ⁽¹⁰⁾

Table D-1 Continued

PACIFIC NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Papua New Guinea	Information needed	National Environment Act 2000 will integrate Env. Planning Act+Env. Conatminants Act+water resources Act (all in place) ⁽¹¹⁾	IMO member; R UNCLOS; R London; A Basel; S MARPOL; S SPREP Conv./1993 Tokyo MOU ⁽²⁾	Unsatisfactory; hampered by resource constraints + high level of illiteracy; need for efficient programs recognized ⁽¹¹⁾	Domestic and industrial W collected separately; Direct dumping is employed (no containment of leached liquids or fencing to keep out scavengers); several recycling initiatives are in effect ⁽²⁾	No; little information available and lack of monitoring systems ⁽¹¹⁾	Limited demand; some facilities available in the 2 ports ⁽²⁾	A Waigami
Samoa	Fiscal and policy incentives to encourage low-waste or degradable imports and local products ^(3 and 12)	Guidelines, draft standards, codes of environmental practices and legislation in force; management strategies ^(3, 12)	IMO member; R UNCLOS; 96 Protocol; S Basel	Yes; both for general public and as part of school curriculums ^(3,12)	Yes including composting projects and onsite sewage treatment ^(3, 12)	Characterization of wastes, land based sources of pollution, estimation of persistent organic pollutants, identification of contaminated sites ^(3,12)	There are some facilities ⁽¹²⁾ ; more information needed	R Waigami; National laws and regulations are in place ⁽¹²⁾
Solomon Islands	Unsatisfactory ⁽⁷⁾	1980's Public Health Act & Regulation; 1993 Honiara Litter By-Law; 1998 Envir. Bill 1998 & Envir. Act (regulating the discharge of pollutants to the air, water or land; the transport, collection, treatment, storage and disposal of W; promoting recycling, re-use and recovery of materials in economically viable manner; and to comply and give effect to regional and international conventions and obligations relating to the environment.) ⁽⁷⁾	IMO member; R UNCLOS; R London; Observer to Tokyo MOU ⁽²⁾	Limited (radio programs or the newspaper/ annual week-long "Keep Honiara Clean" Campaign) ⁽⁷⁾	Domestic W collection inadequate for the demand; No segregation; unsatisfactory landfills; Sewage facilities: septic tanks/ municipal sewage systems w/ ocean outfalls (primary treatment) ^(2 and 7)	No monitoring; some isolated waste assessment surveys ⁽⁷⁾	W reception facilities are rudimentary or non-existent ⁽²⁾	Information needed

Table D-1 Continued

PACIFIC NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Tonga	No ⁽⁷⁾	Several projects including a solid WM Plan under development ⁽⁴⁾	IMO member; A UNCLOS; R London/ 96 Protocol; S MARPOL, 1990 OPRC ⁽²⁾	Yes, but unsatisfactory ^(7and 13)	collection of domestic W, but no segregation; little recycling ⁽²⁾	Information needed	Information needed	Information needed
Tuvalu	No ⁽⁷⁾	No sewage legislation/stand ards; Pilot WMP (2001-2002 on Funafuti w/ assistance of AusAID) ⁽²⁾	R UNCLOS; S MARPOL Annexes (given effect in Nat. Law) ⁽²⁾	Lack of public awareness is mentioned as a management challenge ⁽⁷⁾	unsatisfactory ^(2 and 7)	1995 W study; insufficient data; no monitoring ^(2 and 7)	unsatisfactory ⁽²⁾	Information needed
Vanuatu	No ⁽⁷⁾	WM legislation in draft stage; current regulatory measures poorly enforced ⁽⁷⁾	IMO member; R London/ 96 Protocol; S Basel; A MARPOL	unsatisfactory ⁽⁷⁾	unsatisfactory ⁽⁷⁾	Information needed	Ship WM facilities/ procedures are deficient ⁽⁷⁾	Information needed

REFERENCES:

- [1] Government of the Cook Islands “National Assessment Report for the Barbados Plan of Action +10”. SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, 2003.
- [2] South Pacific Region Environment Programme (SPREP) “Port Improving Ships' Waste Management in Pacific Islands Ports” Report, 2003.
- [3] Draft Working Report of the Federated States of Micronesia National Multi-Stakeholder Consultation. “A National Review of Progress in the Implementation of the Earth Summit Commitments and Agenda 21” Kolonia, Pohnpei, Federated States of Micronesia, 8-9 November 2001.
- [4] Climate Change National Communication *Federated States of Micronesia, 1997. <http://unfccc.int/resource/docs/natc/micnc1.pdf>
- [5] Government of Fiji “National Assessment Report for the Barbados Plan of Action +10” SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, 2003.
- [6] United Nations’ Fiji Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.
- [7] SPREP/ Sinclair Knight Merz Ltda. “Solid Waste Characterization and Management Plans Project”. Report commissioned by the South Pacific Regional Environment Programme (SPREP) to assess the solid waste management of 8 Pacific Region Countries: Fiji, Tonga, Vanuatu, Papua New Guinea, Kiribati, Tuvalu, Solomon Islands and Western Samoa, 1991. http://www.sprep.org.ws/solid_waste/report_doc.asp
- [8] Kiribati Solid Waste Project description/ Concept Paper for Tarawa Solid Waste Reduction Project for UNDP/ Kaoki Mange! Kiribati SWM Project NEWS UPDATE, 2003.
- [9] Government of the Marshal Islands “National Assessment Report for the Barbados Plan of Action +10” SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, 2003.
- [10] Government of Palau “National Assessment Report for the Barbados Plan of Action +10” SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, June 2004.
- [11] Government of Papua New Guinea “National Assessment Report for the Barbados Plan of Action +10” SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, June 2004.
- [12] Government of Samoa “National Assessment Report for the Barbados Plan of Action +10” SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, 2003.
- [13] Government of Tonga “National Assessment Report for the Barbados Plan of Action +10” SIDS National Assessment of the Barbados Plan of Action +10 Reviews Requested by UN DESA, 2003.

Appendix D. Assessment of Barbados Programme of Action Goals related to Waste Management								
Table D-2. Caribbean Nations								
CARIBBEAN NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Antigua and Barbuda	No, but the need is recognized ^(1, 2)	OECS Solid and ship generated WMP beneficiary: WMP ready but not enacted yet ⁽³⁾ ; Regulations, economic instruments and public participation developed ⁽⁴⁾ but not in force still ⁽¹⁾	IMO member; R UNCLOS; S MARPOL and R Annex V ⁽³⁾ ; R London; A Basel	Some public awareness and educational campaigns have been promoted ⁽⁴⁾	Clean technologies, such as the disposal of solid waste in landfills have been proposed but not applied ^(1 and 4)	Some info systems and baseline data have been developed ^(3 and 4)	OECS Sld and Ship Generated WMP beneficiary ⁽³⁾ some port/reception facilities have been developed ^(3 and 4)	No ⁽⁴⁾
Bahamas	Information needed	Environmental Health Services Act ⁽⁵⁾ ; amendments to better specify standards +regulations are under review ⁽⁶⁾	IMO member; R UNCLOS; A Basel	Some educational programs and campaigns are in place ⁽⁶⁾	Lack of available appropriate technology ⁽⁵⁾	One survey to categorize waste ^(5 and 6)	Information needed	Yes ^(5 and 6)
Barbados	Campaigns to incentive public minimization of wastes ⁽⁷⁾ environmental levy on non-recyclable goods has been implemented ⁽⁸⁾	Integrated long-term solid WM Plan implemented; Environmental standards (including for wastewater) in prep. ^(7 and 8)	IMO member; R UNCLOS; R London; A Basel;	Educational and public awareness initiatives as part of the Integrated Solid WM Plan ^(7 and 8)	Use of clean technologies (composting/ hazardous waste disposal) have been proposed; recycling programs for glass/paper/oil; members of the business sector are involved in recycling programs ^(7 and 8)	Indicators have been developed and included in the National List of Indicators of Sustainable Development ⁽⁷⁾	Yes ⁽⁷⁾	No ⁽⁷⁾
Belize	Information needed	National Solid WMP* at pre-implementation stage ⁽⁹⁾	IMO member; UNCLOS; A Basel	Inadequate but foreseen in the Solid WMP* ⁽⁹⁾	Information needed	Monitoring prescribed in the Solid WM Plan ⁽⁹⁾	Information needed	Information needed

Table D-2 Continued

CARIBBEAN NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Cuba	Information needed	information needed	IMO member; R UNCLOS; R London; A Basel	Public awareness campaigns ⁽¹⁰⁾	Information needed	National survey of the main sources of contamination ⁽¹⁰⁾	Information needed	Yes ⁽¹⁰⁾
Dominica	Information needed	Solid WM Act revised in 2002; OECS Solid and ship generated WMP ^(3 and 11) ; Regulations/ economic instruments and public participation developed ⁽¹²⁾	IMO member; R UNCLOS; S MARPOL and R Annex V (26); A Basel; S Cartagena Convention (Oil Spills Protocol);	Gov.- promoted public awareness/ educational campaigns ⁽¹²⁾	No but recognizes the need ⁽¹²⁾	Info systems/ baseline data developed for waste management; baseline data developed for pollution control ⁽¹²⁾	OECS SId and ship generated WMP beneficiary ⁽³⁾ facilities proposed but not established ⁽¹²⁾	National laws have been developed ⁽¹²⁾
Dominican Republic	Information needed	Regulations have been developed ⁽¹³⁾ more info needed	IMO member; S UNCLOS; R London; A Basel	Gov-promoted public awareness/ educational campaigns ⁽¹³⁾	Use of clean technologies, including the use of filters to trap gases have been proposed; Recycling programs for glass/paper/oil. NGO's recycling programs for plastic; business sector involved in glass recycling/ reuse ⁽¹³⁾	Baseline data has for waste management ⁽¹³⁾	Proposed but not established ⁽¹³⁾	No ⁽¹³⁾

Table D-2 Continued

CARIBBEAN NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Grenada	Waste minimization project ⁽¹⁴⁾ ; more information needed.	OECS WMP project; WM Act (2001) called for a National Strategy, established a WM authority + legal & regulatory framework ^(14 and 15)	IMO member; R UNCLOS; S MARPOL and R Annex V ⁽³⁾	No ⁽¹⁵⁾ ; lack of population awareness & information identified as a major constraint ⁽¹⁴⁾	None in place nor proposed; no recycling ⁽¹⁵⁾	Baseline data for waste management ⁽¹⁵⁾	OECS WMP beneficiary ⁽³⁾ facilities proposed but are not established ⁽¹⁵⁾	No ⁽¹⁵⁾
Guyana	Information needed	Draft National Solid WM Policy provides legal & regulatory framework ⁽¹⁶⁾	IMO member UNCLOS A Basel	Some isolated campaigns ⁽¹⁶⁾ more information needed	No ⁽¹⁶⁾ but recognizes the need ⁽¹⁷⁾	Information needed	Information needed	Information needed
Haiti	Information needed	Municipal governments use guidelines from the Ministry of Environment ⁽¹⁸⁾	IMO member; R UNCLOS; R London; A Basel	Information needed	Unsatisfactory ⁽¹⁹⁾	Information needed	Information needed	Information needed
Jamaica	Information needed	National Solid WMP implemented by National SWM Authority ⁽²⁰⁾ ; guidelines are being developed; sewage effluent standards are in place ⁽²¹⁾	IMO member; R UNCLOS; R London; A Basel	Recognizes the need for widespread public education ⁽²¹⁾	Some improvement: currently upgrading major landfill site to sanitary landfill; introduction of biodigesters and septic tanks ⁽²⁰⁾	Information needed	Docs. under prep. for the construction of facilities in Kingston Harbor ⁽²⁰⁾	Information needed

Table D-2 Continued

CARIBBEAN NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
St. Kitts and Nevis	Not in place but prescribed in the Nat. WM Plan ⁽²²⁾	OECS Solid and Ship generated WM Program; WM Act (2000) ⁽²²⁾ ; Nat. WM Plan in prep. w/ economic instruments & regulations ^(22 and 23)	IMO member; R UNCLOS; S MARPOL and R Annex V ⁽³⁾ ; A Basel;	Information needed	Two sanitary landfills constructed ⁽²²⁾ ; recycling programs for glass supported; members of business sector involved in recycling programs ⁽²³⁾ ; Sewage treatment is recognized as unsatisfactory ⁽²²⁾	Some info system and baseline data developed ⁽²²⁾	OECS Sld and ship generated WMP beneficiary ⁽³⁾ ; systems developed for small recreational craft/ large commercial craft ⁽²³⁾	No ⁽²³⁾
St. Lucia	No specific incentives ⁽²⁴⁾ more info needed	OECS Solid and Ship-generated WM Program; Solid WM Act & Authority (1996); Water and Sewage Act (1999); Shore Generated WM & Ship Generated WM Policies (2000); new WM legislation (in draft) defines roles & responsibilities ^(3, 24 and 25)	IMO member; R UNCLOS; R London; A Basel; S MARPOL and R Annex V ⁽³⁾	Programs in schools ^(24 and 25) ; public awareness & education integrated into the operations of the Solid WM Authority ^(24 and 25)	Many improvements in the collection and disposal (landfills) of domestic wastes after the WM Authority establishment/privatization of services. Bio-hazardous wastes management have improved ^(24 and 25)	Contracts are monitored by the Operations Manager, Enforcement Officers and Landfill Monitoring Officer of the Solid WM Authority ⁽²⁴⁾	Modest reception facilities provided at the main ports and marinas (seems to cope w/ little demand) ^(3 and 24)	Information needed

Table D-2 Continued

CARIBBEAN NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
St. Vincent and the Grenadines	Solid WM Unit initiatives (TV ads.; school programs, exhibitions, tech and financial assistance) ⁽²⁶⁾	OECS Solid and Ship-generated WMP*: WMP enacted; Central Water e Sewage Authority & Solid WM Unit (1999) ^(3, 26 and 27)	IMO member; R UNCLOS; S MARPOL and R Annex V ⁽³⁾ ; R London; A Basel; S Cartagena Convention (Oil Spills Protocol);	Solid WM Unit's public awareness and educational campaigns ^(26, 27 and 28)	No clean technologies/ recycling (only for glass); no paper/ oil/ hazardous chemicals recycling; bottling companies engaged in reuse programs ⁽²⁶⁾ ; One sanitary landfill constructed, one restructured, several closed ⁽²⁷⁾ ; composting in landfills ⁽²⁸⁾	One waste characterization study in St Vincent ⁽²⁸⁾	Facilities proposed but not established ^(26 and 28)	Information needed
Suriname	Information needed	Legislation in prep for the establishment of a semi-governmental company & provision of integrated WM Act ⁽²⁹⁾	IMO member; London	Unsatisfactory; identified as a major constraint ⁽²⁹⁾	Unsatisfactory; some restructuring of sanitation equipment occurred during Urgency Program; programs and plans exist ⁽²⁹⁾	Information needed	Information needed	Information needed
Trinidad and Tobago	Information needed	Regulations in prep w/ public participation; framework for WM (treatment & disposal of waste) in prep ^(30 and 31)	IMO member; R UNCLOS; S 96 Protocol; A Basel ; S Cartagena Convention (Oil Spills Protocol)	Gov.- promoted public awareness & educational campaigns ^(30 and 31)	Use of clean technologies not officially proposed but some recycling programs exist; informal programs for recycling glass/ plastic by local community groups/ private sector ⁽³⁰⁾	Some baseline data for WM; info systems for WM & pollution control are in prep ⁽³⁰⁾	Proposed ⁽³⁰⁾	National laws not yet formulated ⁽³⁰⁾

Table D-2 Contin-

REFERENCES:

-] United Nations Antigua e Barbuda Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.
-] Government of Antigua e Barbuda. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
-] Vasantha Chase Peter Norville (Head of Unit, OECS Environment and Sustainable Development Unit/ Consultant Programme Officer on Solid Waste Management, OECS Environment and Sustainable Development Unit) ORGANISATION OF EASTERN CARIBBEAN STATES (OECS) Marine Waste Management in the OECS Presented at the Regional Symposium on "Solid Waste Management in the OECS; Past, Present and Future" Grenada June, 2003.
-] ECLAC/CDCC secretariat. "Antigua e Barbuda's Country Profiles Reports" prepared on the basis of questionnaires submitted by Governments, 1996. (available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/antigbarb.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/antigbarb.htm))
-] United Nations The Bahamas Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.
-] Government of The Bahamas. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
-] ECLAC/CDCC secretariat "Barbados Country Profile" report prepared on the basis of questionnaires submitted by Governments, 1996. Available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/barbados.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/barbados.htm).
-] Government of Barbados. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
-] Government of Belize. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2003.
- 0] United Nations Cuba Country Profile (Written in Spanish). 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.
- 1] Government of Dominica. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 2] ECLAC/CDCC Secretariat. "Dominica country profile" report prepared on the basis of questionnaires submitted by Governments, 1996. Available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/dominica.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/dominica.htm).
- 3] ECLAC/CDCC secretariat. Dominican Republic country profile report prepared on the basis of questionnaires submitted by Governments, 1996. Available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/domrep.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/domrep.htm).
- 4] Government of Grenada. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 5] ECLAC/CDCC Secretariat. Grenada country profiles reports prepared by the on the basis of questionnaires submitted by Governments, 1996. Available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/grenada.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/grenada.htm).
- 6] Government of Guyana. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 7] United Nations Guyana Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.
- 8] United Nations Haiti Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.
- 9] Government of Haiti. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, December 2003.
- 0] Government of Jamaica. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 1] United Nations Jamaica Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.
- 2] Government of St. Kitts and Nevis. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 3] ECLAC/CDCC secretariat. St Kitts and Nevis Country Profiles report prepared on the basis of questionnaires submitted by Governments, 1996. Available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/stkittsnevis.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/stkittsnevis.htm)
- 4] Sweeney V. SIDS CASE STUDY IN WASTE MANAGEMENT Evolution and Implementation of a Solid Waste Management Strategy in St. Lucia, Presented at the 2003 UN Expert Meeting on Waste Management in SIDS held in Havana, Cuba, 1994. <http://www.sidsnet.org/workshops/expert-meetings.html>.
- 5] Government of St. Lucia. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 6] Esther Richards/ SWMU 2003 Composting Program in St. Vincent and the Grenadines. Available at <http://topics.developmentgateway.org/oecsaidd/>
- 7] Government of St. Vincent and the Grenadines. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 8] ECLAC/CDCC secretariat St. Vincent and the Grenadines country profile report prepared on the basis of questionnaires submitted by Governments, 1996. Available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/stvicentgrenad.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/stvicentgrenad.htm)
- 9] Government of Suriname. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.
- 0] ECLAC/CDCC secretariat Trinidad and Tobago country profile report prepared on the basis of questionnaires submitted by Governments, 1996. Available at [tp://www.sdn.undp.org/~eclac/CARMIN/DOCS/trinidad.htm](http://www.sdn.undp.org/~eclac/CARMIN/DOCS/trinidad.htm)
- 1] Government of Trinidad and Tobago. "National Assessment Report Barbados +10". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2004.

Appendix D. Assessment of Barbados Programme of Action Goals related to Waste Management
Table D-3. AIMS (Atlantic Ocean, Indian Ocean, Mediterranean Sea, South China Sea) Nations

AIMS NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions (23)	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Bahrain	Government incentives to industries to convert to clean production and minimize waste is mentioned ⁽¹⁾ ; more information is needed	Standards for healthcare and industrial wastes have been developed and implemented; ministerial orders and decrees aiming to control, reduce and threats; ⁽¹⁾	IMO member; R UNCLOS; R Basel	Information needed	Information needed	Lack of information is mentioned as a main constraint; Integrated Environmental (including Waste access) approach had been proposed ⁽¹⁾	Information needed	Information needed
Cape Verde	Ecologic tax has been introduced on the CIF value of imported goods in non-biodegradable packages ⁽²⁾	Information needed	IMO member; R UNCLOS; R London; A Basel	General environmental education programs ⁽²⁾	Information needed	Information needed	ports are not equipped with waste collection or treatment plants for wastewaters and trash ⁽²⁾	Information needed
Comoros	information needed	EPA enacted in 1994 but no WM authority or plan ⁽³⁾	R UNCLOS; A Basel ; S MARPOL	information needed	W collection/disposal virtually non existent; limited recycling ⁽³⁾	No ⁽³⁾	No ⁽³⁾	Information needed
Cyprus	Proposed Law on Waste Management will include prevention and reducing of generation of wastes ⁽⁴⁾	Waste Management Strategy is being finalized by consultants (more information needed); Proposed Law on Waste management ⁽⁴⁾	IMO member; R UNCLOS; R London; A Basel	Household Recycling Project in 5 municipalities ⁽⁴⁾	Information needed	Municipal Solid Waste Recycling Study: composition of waste in landfills; more information needed ⁽⁴⁾	information needed	Yes ⁽⁴⁾

Table D-3 Continued

AIMS NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Guinea-Bissau	Government policy has attempted to reduce wastes through campaigns ⁽⁵⁾	Mentioned Water and Sanitation Master Plan and a Plan for Urban Solid Wastes; more information needed ⁽⁵⁾	IMO member; UNCLOS A Basel	Information needed	Information needed	Information needed	information needed	information needed
Maldives	Information needed	National WMP* in process of development ⁽⁶⁾	IMO member; R UNCLOS; A Basel	Information needed	Information needed	1998 Study on the Solid Waste Management for Male City ⁽⁶⁾	information needed	information needed
Malta	Information needed	National WMP* approved in 2000; Strategy approved in 2001 ⁽⁷⁾	IMO member; R UNCLOS; R London; A Basel	Intends to give prominence to the issue in educational curriculum and programs ⁽⁷⁾	Information needed	Intends to establish Information System ⁽⁷⁾	information needed	information needed
Mauritius	Considered as priority in the New Solid WMP* ⁽⁸⁾	Nat. Sld WMP*; Nat Sewage Plan and specific regulations for hazardous wastes ⁽⁸⁾ detailed pollution control provisions; effluent and emission standards ⁽³⁾	IMO member; R UNCLOS; S MARPOL; A Basel	Campaigns and School Programs ⁽⁸⁾	Composting and Recycling Projects ⁽⁸⁾ ; overall sewage facilities improved; collection and disposal of sld W in sanitary landfills ⁽³⁾	Some baseline information but monitoring has been identified as a main constraint ⁽⁸⁾	No ⁽³⁾	Yes ⁽⁸⁾
Sao Tome & Principe	Information needed	Information needed	IMO member; R UNCLOS	Information needed	Information needed	Information needed	information needed	information needed
Seychelles	Information needed	detailed pollution control provisions; effluent and emission standards in their EPA (enacted in 1994) ⁽³⁾	IMO member; R UNCLOS S MARPOL; R London; A Basel	National one-week campaigns; recognizes the need for a more comprehensive program ⁽³⁾	septic tanks most common treatment; only 2% of the pop w/out proper sanitary facilities; solid W collection/disposal in sanitary landfills; composting; small incinerator for hospital W; limited recycling ⁽³⁾	Information needed	No ⁽³⁾	Information needed

Table D-3 Continued

AIMS NATIONS	Incentives for minimization of wastes	Regulatory measures and management	Conventions ⁽²³⁾	Educational campaigns/ programs	Introduction of clean technology + treatment	Information System and baseline data	Port reception facilities	Ban importation of Hazardous wastes
Singapore	Public policy & educational programs; Green productivity & green labeling ^(9 and 10)	Environmental Public Health Act & regulations; Codes of Practices ^(9 and 10)	IMO member; R UNCLOS; A Basel	Yes; public awareness programs ⁽⁹⁾	Incineration plans with generation of electric energy & recycling programs ^(9 and 10) ;	Some information system ⁽¹⁰⁾ ; more information needed	Information needed	No, but dispose of Hazardous Wastes Act (1998) & regulations w/ a permits system ⁽¹⁰⁾
<p>REFERENCES:</p> <p>[1] Bahrain's General Commission for the Protection of Marine Resources, Environment & Wildlife "The Kingdom Of Bahrain National Assessment of the Barbados Programme Of Action". SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2003.</p> <p>[2] Republic of Cape Verde "Republic of Cape Verde National Assessment Report of the BPoA +10" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2003.</p> <p>[3] Payet, R.A., Sogun, N., Ranaivoson E., Payet, R.J. & F. Ali Abdallah. UNEP/ GEF/ MALMAR Global International Waters Assessment (GIWA) Regional Assessment 45b "Indian Ocean Islands", 2003.</p> <p>[4] United Nations Cyprus Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.</p> <p>[5] United Nations Guinea- Bissau Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.</p> <p>[6] United Nations Environment Program Maldives: State of the Environment 2002. Publication of the UNEP Global Environmental Outlook Series, 2002.</p> <p>[7] United Nations Malta Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development, 2002.</p> <p>[8] Government of the Republic of Mauritius "National Assessment Report of the BPoA +10" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, 2003.</p> <p>[9] United Nations Singapore Country Profile. 2nd UN Country Profiles Series published on the 2002 Johannesburg World Summit on Sustainable Development. (2002).</p> <p>[10] Government of Singapore "National Assessment Report of the BPoA +10" SIDS National Assessment of the Barbados Programme of Action +10 Reviews requested by the UN DESA, January 2004.</p>								