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THE SIDS PROGRAMME OF ACTION

AGENDA TWENTY ONE

THE ROAD TO JOHANNESBURG 2002

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Preface

As the small island developing States of the Caribbean prepare for Johannesburg 2002, the World Summit on Sustainable Development, a review of the status of implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (SIDS POA) in the subregion was recognized to be the major contribution that could be made by them to the overall process. Recalling earlier references to Rio + 10 which immediately signalled the connection between what is now referred to as Johannesburg 2002, with UNCED which convened in Rio de Janeiro, Brazil, in 1992, it is to be recognized that, from the perspective of the Caribbean subregion, it is that Programme of Action that constitutes the major expression of the implementation of Agenda 21 which was itself the principal outcome of UNCED in operational terms. That POA, it will also be recalled, was approved at the United Nations Global Conference on the Sustainable Development of Small Island Developing States, (UNGCSIDS) which convened in Barbados, in 26 April-6 May 1994.

In this context, as was the case of the Caribbean Ministerial Meeting on the implementation of the SIDS POA, convened by the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean in Barbados in November 1997, and the twenty-second special session of the United Nations General Assembly, which convened in September 1999, Johannesburg 2002 provides another significant benchmark for the evaluation of the outcomes of what might be referred to as "the UNCED process" in the Caribbean subregion, among others. Set out in the following pages, therefore, are Caribbean perspectives on the implementation of the SIDS POA. Particular emphasis is placed on the achievements recorded by the subregion and also on the challenges that have been encountered as Caribbean SIDS set about mobilising and even energising the POA towards their sustainable development, utilizing for the most part, their own financial and other resources. Reference is also made to related outcomes of the UNCED process, including, more specifically, a number of international sustainable development agreements.

This presentation of Caribbean perspectives on the implementation of the SIDS POA and other UNCED outcomes was facilitated by the pivot role played by the ECLAC Subregional Headquarters for the Caribbean, which constitutes the operational and technical arm of the secretariat created by Caribbean SIDS to function, inter alia, as a regional coordinating mechanism in respect of all the follow-up activities that are required to advance the implementation of the SIDS POA in the subregion. The present volume represents an updating of the information contained in its predecessor volume published by the ECLAC Subregional Headquarters for the Caribbean, entitled "Implementation of the SIDS POA: A Caribbean Perspective" which was developed in the context of the Caribbean Ministerial Meeting of 1997.

The presentation of Caribbean perspectives on the implementation of the SIDS POA and related international sustainable development agreements is set out in four Chapters. Chapter 1 commences with a summary review of UNCED and the UNGCSIDS and assesses the extent to which the expectations of Caribbean SIDS in relation to the respective outcomes of these countries, have been met through the activities of the key national, regional and international development agencies in the context of initiatives and events related to the implementation of the SIDS POA. Chapter 2 examines the status of Caribbean SIDS within the new global economic environment and provides a context for the development of the discussion on the implementation of the SIDS POA. Chapter 3 assesses the performance of Caribbean SIDS in the implementation of the 15 critical programme areas set out in the respective chapters of the SIDS POA, namely: 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 (Capacity Building); Regional Institutions and Technical Cooperation; Transport and Communication; Science and Technology; Human Resource Development; and Implementation, Monitoring and Review. Chapter 4 sets out the critical future development imperatives for Caribbean SIDS and assesses the possible contribution of Johannesburg 2002 towards their attainment.

As regards the conclusions from the Caribbean perspective on the implementation of the SIDS POA and related international sustainable development agreements, the major finding recognizes modest, though encouraging, successes on the part of the SIDS of the subregion. More inspiring, in this regard, is the fact that these successes, at both national and regional levels, have been achieved largely through the mobilization by Caribbean SIDS of their own financial and other resources, under very trying circumstances. The conclusion is nevertheless reached to the effect that the preservation of these successes requires greater infusions of resources, including from the wider international community, supported by the strengthening, at the national and regional levels, within the Caribbean, of institutional arrangements for the planning and coordination of the implementation of sustainable development programmes.

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LIST OF ACRONYMS

ACP	African, Caribbean and Pacific
ACS	Association of Caribbean States
AOSIS	Alliance of Small Island States
APL	Adaptable Program Lending
BSS	Barbados Statistical Service
CAEAL	Canadian Association of Accredited Environmental Laboratories
CANARI	Caribbean Natural Resources Institute
CAREC	Caribbean Epidemiology Centre
CARIBNECE	Caribbean Network for Environmental Compliance and Enforcement
CARICAD	Caribbean Centre for Development Administration
CARICOM	Caribbean Community
CAST	Caribbean Alliance for Sustainable Tourism
CBD	Convention on Biological Diversity
CBO	Community-based Organization
CBWMP	Caribbean Basin Water Management Programme
CCA	Caribbean Conservation Association
CCHI	Caribbean Cooperation in Health Initiative
CCMC	Committee of Caribbean Member Countries
CCST	Caribbean Council for Science and Technology
CDB	Caribbean Development Bank
CDCC	Caribbean Development and Cooperation Committee
CDERA	Caribbean Disaster Emergency Response Agency
CDM	Clean Development Mechanism
CDMP	Caribbean Disaster Mitigation Project
CEHI	Caribbean Environmental Health Institute
CEIS	Caribbean Energy Information System
CEPIS	Pan American Centre for Sanitary Engineering and Environmental Sciences
CERMES	Centre for Resources Management and Environmental Studies
CERO	Central Emergency Relief Organization
CET	Common External Tariff
CGCED	Caribbean Group for Cooperation for Economic Development
CHA	Caribbean Hotels Association
CIDA	Canadian International Development Agency
CIMH	Caribbean Institute for Meteorology and Hydrology
CITES	Convention In the Trade in Endangered Species
CLI	Caribbean Law Institute
CoP	Conference of Parties

CORE	Coastal and Oceanographic Resources Exploration Project
COTED	Council for Trade and Economic Development
CPACC	Caribbean Planning for Adaptation to Climate Change
CPD	Central Planning Division
CPDC	Caribbean Policy Development Centre
CREDP	Caribbean Renewable Energy Development Project
CRIS	Coastal Resource Inventory System
CSC	Commonwealth Science Council
CSD	Commission on Sustainable Development
CSME	CARICOM Single Market and Economy
CTO	Caribbean Tourism Organization
CZMU	Coastal Zone Management Unit
DARE	Drug Abuse Resistance Programme
DFID	Department for International Development
ECCB	Eastern Caribbean Central Bank
ECLAC	Economic Commission for Latin America and the Caribbean
ECTEL	Eastern Caribbean Telecommunications Authority
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMA	Environmental Management Authority (Trinidad/Tobago)
EMLUP	Environmental Management and Land-Use Planning for Sustainable Development
ENACT	Environmental Action Programme
EOC	Emergency Operations Centre
EPU	Environmental Police Unit
ESEP	Education Sector Enhancement Programme
FAA	Federal Aviation Administration
FAO	Food and Agriculture Organization
FCCC	Framework Convention on Climate Change
FTAA	Free Trade Area of the Americas
GCC	Global Climate Change
GEF	Global Environment Fund
GIS	Geographic Information Systems
GMDSS	Global Maritime Distress and Safety System
GSP	Generalized System of Preferences
HRDC	Human Resource Development Centre
HWAC	Hazardous Waste Advisory Committee
IACG	Inter-Agency Collaborative Group
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ICRI	International Coral Reef Initiative
IDB	Inter-American Development Bank
IHEI	International Hotels Environment Initiative
IICA	Inter-American Institute for Cooperation on Agriculture

ILO	International Labour Organisation
IMA	Institute of Marine Affairs
IMO	International Maritime Organization
IMPACC	Implementing Caribbean Adaptation to Global Climate Change
ISDA	International Sustainable Development Agreement
ISM	Island Systems Management
ISWMP	Integrated Solid Waste Management Plan
IT	Information Technology
ITU	International Telecommunications Union
JWP	Joint Work Programme
MEA	Multilateral Environment Agreement
MEE	Ministry of the Environment, Energy and Natural Resources
MTESP	Medium-Term Economic Strategy Paper
NAFTA	North American Free Trade Area
NBSAPs	National Biodiversity Strategies and Action Plans
NCA	National Conservation Authority
NCSP	National Communications Support Programme
NEPA	National Environmental and Planning Agency
NGO	Non-governmental Organization
NICU	National Implementation Coordinating Unit
NIEO	New International Economic Order
NIHERST	National Institute for Higher Education, Research, Science and Technology
NJHQ	National Joint Head Quarters
NRMU	Natural Resources Management Unit
OAS	Organization of American States
ODA	Overseas Development Assistance
OECD	Organization for Economic Cooperation and Development
OECS	Organisation of Eastern Caribbean States
OFDA	Office of Foreign Disaster Assistance
OLADE	Latin American Energy Organization
PAHO	Pan American Health Organization
PCDPPP	Pan Caribbean Disaster Preparedness and Prevention
PDM	Participatory Decision Making
POA	Programme of Action
PROUD	Programme for the Rationalisation of Unplanned Developments
RCM	Regional Coordinating Mechanism
REIA	Renewable Energy Initiative of the Americas
RPIU	Regional Project Implementing Unit
SDC	Sustainable Development Council
SDNP	Sustainable Development Networking Programme
SEDU	Sustainable Economic Development Unit

SIDS	Small Island Developing States
SIDSNET	Small Island Developing States Network
SLHTP	Saint Lucia Heritage Tourism Program
SMMA	Soufriere Marine Management Area
SPA	System of Protected Areas
SRC	Scientific Research Council
SRU	Seismic Research Unit
SSWPU	Sewerage and Solid Waste Project Unit
SWAMP	Solid Waste Management Project
SWMCOL	Solid Waste Management Co. of Trinidad & Tobago Ltd.
TCDC	Technical Cooperation among Developing Countries
UNCED	United Nations Conference on Environment and Development
UNCHS	United Nations Centre for Human Settlements
UNCLOS	United Nations Conference on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDESA/DSD/SIDS	United Nations Department of Economic and Social Affairs/Division for Sustainable Development/Small Island Developing States
UNDP	United Nations Development Programme
UNEP/RCU	United Nations Environment Programme/Regional Coordinating Unit
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNGCSIDS	United Nations Global Conference on Small Island Developing States
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
UWI	University of the West Indies
UWICED	University of the West Indies Centre for Environment and Development
VAT	Value-Added Tax
WHO	World Health Organization
WRM	Water Resources Management
WTO	World Tourism Organization

CHAPTER 1
BACKGROUND

CHAPTER 1 BACKGROUND

1.1 Introduction

At the international level, the manifestation of the transcendental nature of *sustainable development* concerns at the international level, reached its climax with the convening in Rio de Janeiro, Brazil, over the period, 3-14 June 1992, of the United Nations Conference on Environment and Development (UNCED). The nomenclature of that event rendered totally unambiguous, the explicit and intimate relationship that was to be explored in its deliberations, namely, that between "*Environment*", on the one hand, and "*Development*", on the other. The "*Earth Summit*", as the Conference also came to be popularly known, reaffirmed the Declaration of the 1972 United Nations Conference on the Human Environment, "*the Stockholm Conference*" and sought to "*build on it*". The profound, comprehensive and epoch making outcomes of that Conference are enshrined in the "*Rio Declaration on Environment and Development*" and in "*Agenda 21*", the latter having been conceived and adopted as a blueprint for global sustainable development.

During the Preparatory Meetings for UNCED, delegates from island States in the Caribbean, the Pacific and the Mediterranean coined the phrase "*Small Island Developing States*" (SIDS) to call attention to the special circumstances and characteristics of these geo-political entities. During the course of these meetings, which were held between 1990 and 1992, a suite of arguments were advanced in support of a call for "*new and additional resources*" to be channelled to SIDS in order to help them to more effectively confront the challenges posed by their unique circumstances.

Exploiting the momentum generated by the work of the Alliance of Small Island States (AOSIS) in the negotiations on a United Nations Framework Convention on Climate Change (UNFCCC), which began in the late 1980s, the delegates of SIDS to the Preparatory Meetings on UNCED sought to eke out "*concessions*" from the developed countries. The primary concession envisaged was an acknowledgment on the part of the developed countries, that SIDS were naturally disadvantaged and therefore warranted special treatment in the economic and environmental relations that were forged at bilateral and/or multilateral levels, between developed and developing countries.

1.2 RIO+5

The results of the "*Five-year Review*" of the implementation of Agenda 21 undertaken by the Special Session of the General Assembly in 1997, were viewed as being less than encouraging. The main obstacles identified, in this regard, were *finance, transfer of technology* and *trade-related issues*. Against this background, it will be recalled that *Agenda 21* was adopted in the context of a global consensus and a political commitment at the highest political level, to development and environment cooperation. At UNCED, it was also agreed that such cooperation was to be responsive to the special circumstances and particular vulnerabilities of countries, through adequate and specific approaches.

1.3 The United Nations Global Conference on the Sustainable Development of Small Island Developing States (UNGCSIDS) and the Small Island Developing States Programme of Action (SIDS POA)

A significant concession won by the representatives of SIDS in the UNCED process, was the decision of the United Nations General Assembly (UNGA) to convene the UNGCSIDS. That Conference convened in Barbados over the period, 25 April-6 May 1994. The "*Barbados Declaration*" and the *SIDS POA* adopted at that Global Conference by 111 governments, elaborate principles and set out strategies for development that are intended to protect the fragile environments of small island developing States. These documents build on the "*Rio Declaration on Environment and Development*" and "*Agenda 21*". Moreover, the UNGCSIDS itself, was seen as the first test of the global partnership that was formed at UNCED, by virtue of which, rich and poor countries agreed to work together for sustainable development. In the "*Introduction*" to the SIDS POA, "*sustainable development*" is defined as "*development that meets present needs without jeopardising the welfare of future generations by undermining the environment on which all life depends.*"

Principle 6 of the *Rio Declaration on Environment and Development* provides that:

"The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries."

It is in the convening of the UNGCSIDS that this perceived need to direct particular attention to "*the special situation and needs of developing countries*" has found its maximum expression, to date. That Conference was convened at the request of the United Nations General Assembly in December 1992, on the recommendation of UNCED itself. The Conference represented an attempt to translate "*Agenda 21*" into specific policies that are set out in 15 Chapters, each representing a priority area relevant

to addressing the special challenges faced by SIDS in the context of their sustainable development. The policies comprise actions to be implemented at the national, regional and international levels. The specific Chapters of the SIDS POA cover, respectively:

- 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;
- Implementation, Monitoring and Review.

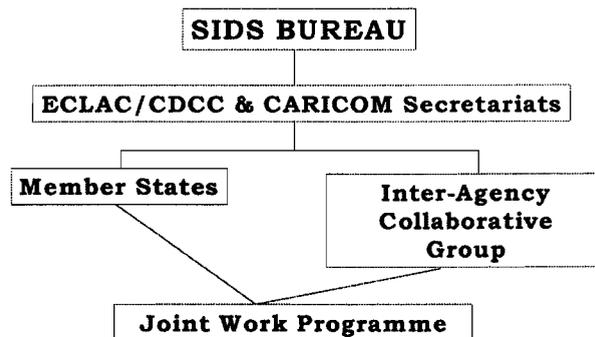
Within the SIDS POA, activities developed in the context of this collection of conceptually discrete, as well as "*cross-cutting issues*" for implementation at the national, regional and international levels, provided the regional operational context for sustainable development of SIDS within the wider global framework that was developed at UNCED.

At the operational level within the subregion, the need was recognized at a very early stage for a mechanism or a coordinated system of mechanisms to promote and generally facilitate the implementation process.

1.4 The Caribbean model for the implementation of the SIDS POA

The *Caribbean Model for the implementation of the SIDS POA* crystallized by virtue of the adoption, though in most cases, the formalization by the Caribbean Ministerial Meeting of November 1997, of arrangements that had been fashioned and promoted by the ECLAC Subregional Headquarters for the Caribbean. This development conveys the recognition by the subregion of the need to develop and implement mechanisms that would help it to overcome the financial, technical, manpower and other constraints which had hitherto foreclosed many options identified by its SIDS towards their sustainable development within the specific framework of the SIDS POA. As adopted by the Ministers, the model comprises four elements, namely, a *Secretariat*, a *SIDS Bureau*, and an *Inter-Agency Collaborative Group (IACG)* for the implementation of a *Joint Work Programme (JWP)*.

Structure for Implementation



The *Secretariat*, which has already acquired the character of an entrenched institution, was nevertheless conceived as a temporary regional coordinating mechanism whose functions were entrusted to the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean and the Caribbean Community (CARICOM) Secretariat. Within this mechanism, the former functions as the operational or technical secretariat, while the latter engages in the political outreach needed to maintain issues related to the SIDS POA on the international agenda, among other important aspects. The principal functions of the *Interim Secretariat* are in respect of the coordination of follow-up activities; the convening of meetings; the dissemination of information; reporting; and acting as an intermediary body between the *Inter-Agency Collaborative Group* and the *SIDS Bureau*.

1.5 The SIDS Bureau

The Ministerial Meeting entrusted its own Bureau, commonly referred to as “*the SIDS Bureau*”, with the task of political oversight of the implementation of a *Joint Work Programme* extrapolated from the several Chapters of the SIDS POA. In addition, reflecting the context in which the Meeting was convened, the SIDS Bureau was entrusted with preparations for the 1999 review of the SIDS POA by the United Nations General Assembly.

1.6 The Inter-Agency Collaborative Group (IACG)

The JWP was envisaged for implementation by an IACG, comprising, inter alia, some 24 regional institutions, regional non-governmental organizations (NGOs) and United Nations agencies, including, the Caribbean Development Bank (CDB), the Caribbean Policy Development Centre (CPDC), the United Nations Development Programme (UNDP), the Secretariat of the Organisation of Eastern Caribbean States

(OECS), the University of the West Indies (UWI), the Caribbean Centre for Development Administration (CARICAD); the Caribbean Environmental Health Institute (CEHI); and the United Nations Environment Programme/Regional Coordination Unit (UNEP/RCU).

The concept of an IACG, conceived by the ECLAC Subregional Headquarters for the Caribbean and formalized by the Ministerial Meeting, may also be viewed as a major innovative device to promote inter-agency collaboration of a scope unprecedented in the region. Significantly, the agencies concerned supported the JWP, fully aware that no extrabudgetary funds would have been forthcoming for its implementation. In addition to its direct involvement in the literal implementation of the projects that comprise the JWP, the IACG supports the secretariat principally in the execution of the reporting function, in the context of which lead agencies have been identified in the implementation of specific projects.

Through the IACG, ECLAC is centrally involved in the coordination of implementation at the regional level. ECLAC's basic contribution is to maintain a focus on the implementation of the SIDS POA across the region. More generally, its contribution also spans the convening of meetings for the development of regional positions for presentation at international forums; the representation of regional concerns at international meetings such as the *Donors' Meeting* of February 1999, Meetings of the Commission on Sustainable Development (CSD) and Special Sessions of the United Nations General Assembly; the preparation of documents and other publications; and the provision of periodic briefings to Caribbean representatives in such strategic diplomatic centres as Brussels, New York and Washington.

1.7 The Joint Work Programme

In an effort to accelerate the modest rate of implementation of the SIDS POA as was evident up to the time of its convening, as well as to facilitate a system of monitoring and reporting, the ministerial meeting adopted a JWP comprising some 130 concrete activities extrapolated from the several Chapters of the SIDS POA and agreed to for implementation by the IACG. The amplified scope of implementation of the SIDS POA, through the explicit incorporation of socio-economic issues, by the twenty-second special session of the United Nations General Assembly which convened in September 1999, presented the subregion with new opportunities when it set about the preparation of an updated JWP in March 2001, as will be detailed in a subsequent section.

In the course of the implementation of the SIDS POA, the SIDS of the Caribbean have had to grapple with a number of disappointments in a number of critical areas. Chief among these is what is now commonly referred to as *the retreat on the part of the international community from the financial and other commitments made at UNCED*. This disappointment was perhaps most keenly experienced in the context of the Conference of Representatives of Donors and Representatives of SIDS which convened

in New York, United States of America, over the period, 24-26 February 1999. As has been widely documented, this Conference produced very little by way of tangible results.

On the other hand, faced with the unavailability of the effective means, including adequate, predictable, new and additional financial resources that were to be provided by the international community in accordance with chapter 33 of Agenda 21, the SIDS of the Caribbean were motivated to maximize the benefits that could be derived from the utilization of the very limited resources at their disposal. The creation of the Caribbean Model for the implementation of the SIDS POA in the subregion, as depicted above, cogently illustrates this phenomenon. The disappointment encountered by Caribbean SIDS has therefore functioned to unleash their creative energies towards self-reliance, recognizing that solutions to many aspects of their sustainable development problematique necessarily had to be home grown.

Another major disappointment encountered in the course of the implementation of the SIDS POA by Caribbean SIDS refers to the restricted coverage of the POA itself. Reflecting its genesis in the UNCED, the SIDS POA, in its substantive chapters, is devoted, almost exclusively, to environmental concerns as the basis for pursuing the sustainable development of SIDS. From the earliest stages of the implementation process, Caribbean SIDS had come to realize that many obstacles to their sustainable development lay outside the domain of the physical environment and encompassed, in addition, issues in the social and economic spheres, such as the HIV/AIDS pandemic, crime and drugs, in addition to issues relating to international trade and finance, among others. The need to transform the SIDS POA into a wider operational instrument, subsequently endorsed by the twenty-second special session of the United Nations General Assembly, represented a major plank of the campaign on the part of Caribbean SIDS during the period that elapsed between the adoption of the POA and the convening of the special session of the General Assembly just mentioned.

Notwithstanding the disappointments with the outcomes of the UNCED and the UNGCSIDS and with the corresponding processes and procedures that were adopted to govern their implementation, a number of noteworthy achievements have been recorded by Caribbean SIDS, among them, the following:

- The invaluable experience acquired by Caribbean representatives to these Conferences in the negotiation of international environmental and sustainable development agreements;
- The commitment adopted by the World Bank and the CARICOM Secretariat to undertake an in-depth study on economic and environmental vulnerability prompted by the substantive arguments advanced at those conferences. A report was tabled and approved at the Commonwealth Finance Ministers Meeting in Malta and while Caribbean SIDS are not entirely happy with its content, it is regarded as providing an adequate basis on which to proceed. Importantly, the Bretton Woods Institutions

have developed related internal programmes in keeping with their respective mandates;

- The creation of the Caribbean Model for the implementation of the SIDS POA based on existing regional capacity;
- The promotion of a transformed scope of operationalization of the SIDS POA, in conjunction with the SIDS of other geographical regions and an eventual endorsement by the twenty-second special session of the United Nations General Assembly.

1.8 Review of progress since UNCED and UNGCSIDS

As reported to the Seventh Meeting of the Commission on Sustainable Development (CSD-7) which convened in April 1999, the Small Island Developing States of the Caribbean have attached the greatest priority to such issues as "*Coastal and Marine Resources*"; "*Natural and Environmental Disasters*"; and "*Tourism*", as they pursue the implementation of the SIDS POA. In addition to the substantive areas, a number of cross-sectoral issues have acquired high degrees of salience, chief among these being those relating to "*National Institutions and Administrative Capacity*".

Nevertheless, there is consensus among Caribbean SIDS, that all 15 priority areas enshrined in the SIDS POA are profoundly relevant to their sustainable development and significant progress has been made by many of these SIDS in their implementation. Reviews conducted on an individual country basis in preparation for the *Caribbean Ministerial Meeting on the implementation of the SIDS Programme of Action* convened by ECLAC, in Barbados, in November 1997, nevertheless served to highlight the unevenness of progress in implementation, as a marked feature of the Caribbean experience. Accounting for this factor was, clearly, the difference in capability among the respective countries.

Notwithstanding this state of affairs, encouraged by the generally acceptable levels of progress in the region, Caribbean SIDS have been striving to maintain and even enhance the contribution of the implementation of the SIDS POA to national, as well as regional development, through a focused and sustained effort. However, a number of constraints have been encountered. Overcoming these constraints would involve, inter alia, the following:

- The explicit integration of the SIDS POA into national planning and decision-making across the region;
- The adoption of more rigorous sustainable development approaches;
- The acquisition of much needed financial resources;
- Effective programmes of education and public awareness of the Programme of Action.

Two factors worthy of mention in connection with the foregoing as elements that also help to explain the situation refer, respectively, to the fragmented institutional arrangements that exist to deal with sustainable development issues at both national and regional levels and the absence in the POA, until quite recently, of socio-economic elements which are also major factors to be taken into account in the sustainable development process.

Notwithstanding the constraints that have been encountered, there are nevertheless many positive aspects of the experience of Caribbean SIDS in the implementation of the SID POA. Among the lasting achievements in this regard, is the fundamental element of a vastly enhanced understanding of sustainable development issues that continues to emerge from the process. Evidence of this is afforded by, inter alia, the improved identification of environmental as well as socio-economic concerns and projects throughout the region. In addition, Caribbean governments and civil society have responded to the demands of the SIDS POA by seeking to forge innovative partnerships for collaboration at unprecedented levels, both in terms of intensity as well as scope. Further, the role of civil society, including the private sector, in identifying, as well as achieving the objectives of the SIDS POA, has been recognized and encouraged through novel attempts at co-management of natural resources, in setting standards and in preparing environmental policies and action plans.

Related to the priority concerns, as well as to the constraints encountered by the subregion, the appreciation of the importance of the critical area of “*institutional strengthening*” must also be enumerated among the lasting gains from the implementation of the SIDS POA. Such institutional strengthening has been pursued through capacity-building, the enactment of environmental legislation, the application of management tools such as Environmental Impact Assessments (EIAs) and the adoption and implementation of environmental action plans. These forms of institution-building, together with the establishment of Environmental Ministries and Authorities, are among the mechanisms through which Caribbean SIDS have given explicit recognition to the need for an adequate institutional framework for the promotion and advancement of their sustainable development endeavours.

Further efforts at co-management of natural resources are exemplified by the establishment of Sustainable Development Councils or Commissions that have been established in a number of Caribbean SIDS to provide for broad-based participation in national sustainable development planning and policy formulation. For a number of reasons, however, including lack of resources, the establishment of these bodies was not evenly spread across the region. Moreover, while the establishment of these bodies has not been an unmitigated success and their basic objectives remain to be achieved in a number of instances, in the countries in which they have been established, they were approached as key mechanisms in the organization of national consultations on issues related to sustainable development. The basic point, however, is the recognition, on the part of Caribbean SIDS, of the need for coordinating mechanisms, whether in the form of Sustainable Development Councils or Commissions, or through integrated approaches to

planning, in which the social, economic, environmental and other policies are to be coordinated, in the context, for example, of a national budget.

Finally, as Caribbean SIDS give further expression of their global citizenship, strenuous efforts were made to ensure their ratification and implementation of a number of vitally important Multilateral Environmental Agreements (MEAs), among them the Convention on Biological Diversity (CBD) and the UNFCCC, which, themselves, constitute significant elements of the “*UNCED process*”.

A major difficulty encountered in evaluating the progress of implementation of the SIDS POA in the Caribbean, arises from the lack of effective monitoring of the funds that have been explicitly directed to sustainable development projects and programmes. Such an evaluation would require the assessment of all projects implemented, on an individual country basis, with reference, in the case of each project, to, inter alia, the source of funding. Some significant efforts are already being made to remedy this situation and, as the subregion pursues the further implementation of the POA, these efforts will continue with a view to achieving a more specific identification and tracking of inputs of resources into the sustainable development process, on a continuous and consistent basis.

In this regard, mention might be made of the Small Island Developing States Information Network (SIDSnet), which represents the response to the need for a mechanism to facilitate the exchange of information and experiences among SIDS and which also provides a very useful tool in the tracking of inputs and related activities. Attention might also be drawn to the project being implemented by the ECLAC Subregional Headquarters for the Caribbean with UNDP funding, which is directed towards the identification of projects related to the implementation of the SIDS POA, by reference to, inter alia, their operational area of focus; their status, whether already implemented, in progress or envisaged; and the source, as well as the quantum of their funding.

In respect of the foregoing, a most significant observation in the evaluation of the Caribbean experience in implementing the SIDS POA is the fact that many activities relevant to that POA and undertaken in the subregion, were neither conceived nor implemented in direct response to the adoption of that international instrument. Indeed, the commencement of such activities, in many cases, pre-dated the adoption of the SIDS POA and some of these activities continue to be pursued in the context of national sustainable development action plans. Significantly, though, the SIDS POA has been able to impact these activities, imparting greater focus and renewed emphasis on them, in a comprehensive sustainable development context. By this means, the POA contributes to a more holistic approach to their management and also to the development of new projects and programmes in response to national needs.

1.9 Post-UNGC SIDS-developments

1.9.1 *The Caribbean Ministerial Meeting on the Implementation of the SIDS POA, 10-14 November 1997: The watershed in subregional implementation*

This meeting, which was hosted by the Government of Barbados, was convened by the ECLAC Subregional Headquarters for the Caribbean, with the support of a number of regional and international agencies, including: CARICAD, CARICOM, CDB, the Department of Economic and Social Affairs-Division for Sustainable Development-Small Island Developing States of the United Nations (UNDESA-DSD-SIDS), the Food and Agriculture Organization (FAO) of the United Nations, the Organization of American States (OAS), the OECS, the United Nations Centre for Human Settlements (UNCHS), the UNDP and UNEP.

The meeting was attended by representatives of 18 Caribbean SIDS, 10 United Nations bodies; 18 other intergovernmental organizations; 24 NGOs; and four developed country observers, in addition to Special Guests. Fundamentally, the meeting was convened with an eye to the twenty-second special session of the United Nations General Assembly which was to convene in September 1999 and to provide the subregion with an opportunity to identify and prioritize actions to effectively allocate resources, to share information and to generally recommit to the process of implementation of the SIDS POA. By the time of its conclusion, it was evident that, overall, the meeting had served its major underlying purpose, namely, that of providing the context for an urgently needed process of reflection on the status of implementation of the SIDS POA in the subregion.

Perhaps, the fundamental realization in that context, as might be gauged from the decisions adopted by the ministers, was the dire need for a system of coordination as a means of coming to terms with the very modest degree of progress that had been recorded to date. Already three years into the five-year period at the end of which the review of progress was to be undertaken by a special session of the United Nations General Assembly, the subregion had little to report, nor was there a reporting mechanism.

Reflecting the success of the meeting, more specifically, the fact that its decisions effectively set the stage for the significant achievements that have since been recorded in the implementation of the SIDS POA in the subregion, the convening of this high-level event constitutes a veritable watershed in the Caribbean sustainable development experience. In effect, the corpus of decisions adopted by the Caribbean Ministerial Meeting, has served to define the structures and mechanisms that have now become entrenched within the subregion for the implementation of the SIDS POA. Attention has already been drawn to *the Caribbean Model for the Implementation of the SIDS POA* within whose framework, in accordance with the request by the ministers, the Subregional Headquarters of ECLAC for the Caribbean serves as the operational arm of the secretariat through the exercise of the basic coordination function.

1.9.2. Meeting of Representatives of Prospective Donors and Representatives of SIDS, 24-26 February 1999

Of the 312 projects proposals submitted to the *Donors' Meeting* by SIDS of the three designated geographical regions, Caribbean SIDS accounted for 149, or almost fifty per cent. Of the Caribbean project proposals presented, 20 per cent were devoted to *Human Resource Development*; 11 per cent to *Biodiversity*; 11 per cent to *Management of Waste*; and 9 per cent to *National Institutions and Administrative Capacity*. Other projects were distributed among all the other priority areas of the SIDS POA, with the exception of *Transport and Communication*.

In addition to the project proposals submitted by the SIDS, four Regional Project Proposals were submitted by the Caribbean subregion for execution in the context of the SIDS POA. Respectively, these project proposals referred to:

- The establishment of a Regional Coordinating Mechanism (RCM) for the Implementation of the SIDS Plan of Action;
- Application of Economic Instruments in the Caribbean;
- Strengthening Information Management for Sustainable Development in the Caribbean;
- National Legislation to Implement International Conventions.

Contrary to the expectation harboured by many SIDS, the *Donors' Meeting* did not materialize in the form of a "*Pledging Conference*", with expressions of commitment to the provision of resources for the implementation of specific project proposals presented by SIDS. Indeed, by the eve of the meeting, it had become all too clear that, in any event, a forum of that size and composition would not have been appropriate for the review of such a large number of proposals, even if arrangements were made and, in fact, exploited, for a number of bilateral contacts between representatives of SIDS and prospective donors. From the perspective of the Under-Secretary-General of DESA, as stated in his *Introductory Remarks*, the *Donors' Meeting* was in the nature of "*a special and unique and, in some ways experimental Meeting in the implementation of the decisions of United Nations Conferences.*"

In effect, the *Donors' Meeting* provided the occasion for the elaboration of procedures for the reformulation and resubmission of project proposals, together with a recommendation for the regionalization of projects wherever this was deemed feasible. The basic conclusion to be drawn from this *Meeting of representatives of Prospective Donors and representatives of SIDS*, is to the effect that the results of this encounter did not meet the expectations of Caribbean SIDS, among others, which were eager to exploit the benefits of international cooperation promised by the implementation of the SIDS POA. The benefits anticipated were expected to accelerate the implementation process: a development that would have enhanced the level of commitment of Caribbean SIDS to the continued implementation of the SIDS POA.

Notwithstanding this development, Caribbean SIDS have continued to express commitment to the SIDS POA, encouraged in the belief that the positive results achieved, to date, in a number of areas, could be further enhanced and even replicated in others, subject, however, to the satisfaction of certain conditions. Moreover, Caribbean SIDS have made explicit the observation that the identification of constraints to the rapid implementation of the POA is by no means to be interpreted as diminishing the fundamental relevance, validity and viability of that instrument. It was on the basis of this summary rationale that Caribbean SIDS advanced their primary expectation from the twenty-second special session of the General Assembly in the form of a recommendation to the effect that the POA be maintained. In the event, however, reflecting a consensus among Caribbean SIDS, the proposal, as tabled, was to the effect that, while the SIDS POA should be maintained, it should nevertheless, be supplemented and reinforced by means of the incorporation of those social and economic issues which had long been recognized to present obstacles to the sustainable development of the small island developing States of the Caribbean, among others.

1.9.3 The twenty-second special session of the United Nations General Assembly, 27-28 September 1999

This session remedied a major shortcoming of the SIDS POA, as identified by Caribbean SIDS, among others, through the incorporation of elements that presented major challenges to their sustainable development but which to date, had found no expression in the SIDS POA, in explicitly operational terms. Among these elements are *trade, investment, commodity issues, capital markets, unemployment, and poverty eradication*. In summary terms, the emphasis on the need to incorporate socio-economic issues into the implementation of the SIDS POA may be illustrated by reference to the corresponding emphasis placed in the Report of the Special Session, on the fact that *"Eradication of poverty is therefore a serious issue and an objective of high priority for small island developing States, and requires the integration of economic, environmental and social components of action to achieve sustainable development."*

This amplified scope for the implementation of the SIDS POA presents interesting opportunities for the development of *"SIDS Projects"* within a wider framework that permits the incorporation of social, economic and other related elements, in addition to the environmental dimension, which was the hallmark of the POA, as originally drafted. Against this background, Caribbean SIDS have drawn up a plan of activities towards the further implementation of the SIDS POA within the subregion. The exercise was basically one of updating the Joint Work Programme adopted at the Caribbean Ministerial Meeting of November 1997 and implemented by the corpus of regional and regionally based organizations in accordance with their respective mandates. The agencies, which constitute the IACG, were active collaborators in the process. Necessarily, the membership of the IACG has been amplified to reflect the incorporation of the new socio-economic elements for implementation in the context of the SIDS POA. The updated Joint Work Programme as developed by the subregion is annexed to this document.

1.10. The role of the ECLAC Subregional Headquarters for the Caribbean in supporting the implementation of the SIDS POA, 1997-2001

The period 1997-2001 spans the convening of a number of significant meetings at the regional and wider international level related to the implementation of the SIDS POA. Among these meetings were the Caribbean Ministerial Meeting on the implementation of the SIDS POA, 10-14 November 1997; the Meeting of Representatives of Prospective Donors and Representatives of SIDS, the so-called “*Donors’ Meeting*”, 24-26 February 1999; the Seventh Meeting of the Commission on Sustainable Development, 19-30 April 1999; the twenty-second special session of the United Nations General Assembly for the review and appraisal of the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, 27-28 September 1999; and the twelfth Meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean, 2-7 March 2000.

The activities of the ECLAC Subregional Headquarters for the Caribbean in relation to these meetings, together with other related activities at the subregional level, will provide the basis of the review of its role in supporting the implementation of the SIDS POA over the period indicated.

1.10.1 The Caribbean Ministerial Meeting on the implementation of the SIDS POA

With responsibility as a regional commission to undertake activities associated with global summits and prompted by the concern with respect to the recognised deficit in implementation, the ECLAC Subregional Headquarters for the Caribbean, with the support of a number of agencies, convened the subregion’s first and, to date, the only ministerial meeting in the specific context of the POA. This meeting was hosted in Barbados, over the period, 10-14 November 1997 and was geared to address three main aspects, among others, namely, the status of implementation of the Programme of Action, in the context of, inter alia, the pending review of the process by the United Nations General Assembly in 1999; the level of political commitment to the process; and the way forward.

In the context of what has already been referred to as “*the Caribbean Model for the implementation of the SIDS POA*”, the Ministerial Meeting requested the Subregional Headquarters for the Caribbean of ECLAC, in collaboration with the CARICOM Secretariat, to continue to act as the Joint Interim Secretariat for the implementation process of the Barbados POA. This request had been made since 1995, with the Subregional Headquarters of ECLAC entrusted with responsibility for operational and substantive issues. For its part, the CARICOM Secretariat was entrusted with responsibility for the political outreach required.

Secondly, the Meeting requested its Bureau, now referred to as “*the SIDS Bureau*”, to maintain political oversight of all subregional SIDS-related activities, with

the Joint Interim Secretariat acting as Secretariat to the Bureau. Thirdly, regional and regionally-based agencies and organizations were requested to play key roles in the implementation of activities in areas falling within their respective mandates. This concept of grouping project activities in accordance with the respective Chapters of the SIDS POA, to be supported by agencies responsible for implementation, had been earlier initiated by ECLAC and was merely formalized by the ministerial meeting. This format, together with the corresponding activities identified evolved into the region's Joint Work Programme (JWP). Thus, with ECLAC at the centre of the process, from very modest beginnings, the Caribbean model for the coordination of implementation of the SIDS POA, evolved.

1.10.2 The Donors Meeting; CSD-7; the twenty-second special session of the United Nations General Assembly; the twelfth meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean; and related activities at the regional level

In 1998, the Interim Secretariat convened no fewer than four meetings of the SIDS Bureau and the IACG, either jointly or separately. Documents were prepared and disseminated by the Subregional Office for the Caribbean of ECLAC, as the region prepared for the *Meeting of representatives of Prospective Donors and Representative of SIDS*, “the *Donors’ Meeting*”, organized by DESA of the United Nations Secretariat in collaboration with the UNDP. A similar process was followed in connection with CSD-7 and the twenty-second special session of the General Assembly.

In November 1998, the ECLAC Subregional Headquarters for the Caribbean prepared and circulated across the Caribbean, a “*Report on the state of implementation in the Caribbean of the Programme of Action for Small Island Developing States*”. This document was at the focus of attention at a regional meeting convened by the Subregional Office in an effort to generate consensus on a Caribbean position on the implementation of the POA as an input into CSD-7 and the overall process of preparation for the Special Session of the General Assembly.

In addition to the activities conducted within the region, as outlined above, in an effort to ensure even greater cohesion through the effective flow of information, this ECLAC Subregional Headquarters for the Caribbean held briefing sessions with Caribbean representatives in such strategically important diplomatic centres as Brussels, New York and Washington. The organization of such briefing sessions and the regular provision of information packages on issues of concern to the region is in the nature of an ongoing activity. Further, in the context of the need identified by the donor community at the *Donors’ Meeting* in February, 1999, this Office, with the permission of member States, embarked on the process of consolidating into regional projects, a series of overlapping project proposals originally presented in the form of national submissions. A regional overview of regional projects was presented by this ECLAC Subregional Headquarters for the Caribbean to the *Donors’ Meeting*.

Also, in 1999, the ECLAC Subregional Headquarters for the Caribbean hosted a one-day meeting on 14 August to engage the region in final preparations for the twenty-second special session of the United Nations General Assembly to review and appraise the implementation of the SIDS Programme of Action. At this meeting, a document entitled "*The Caribbean Consensus on the Further Implementation of the SIDS Programme of Action*", developed by the secretariat, was circulated for discussion. This document was intended to provide the last comprehensive briefing for Caribbean delegations in the final days leading to the special session. The content of that document was endorsed by the Meeting.

Finally, in its intervention at the special session, the ECLAC Subregional Headquarters for the Caribbean, in outlining its role in the regional process of implementation of the SIDS Programme of Action, also drew attention to the need to deepen the POA to encompass, in a focused, operational sense, the social and economic issues, which, in addition to their environmental counterparts, had been recognised to present major obstacles to the sustainable development of Caribbean SIDS, among others. This element was also incorporated into "*the Caribbean Consensus.*" At the special session, as indicated above, agreement was reached on the need for "*integration of economic, environmental and social components of action to achieve sustainable development.*" Reference was made to the role of the ECLAC Subregional Headquarters for the Caribbean in a number of interventions at the special session.

The Special Session also provided the occasion for the formal and explicit recognition of the role played by regional commissions. For example, the special session recognised, inter alia, that the United Nations should continue to play its catalytic and supportive role, particularly through the regional commissions, which were regarded as playing an integral role in the overall implementation of the SIDS POA. Reference was also made to the need for strengthening of the institutional arrangements through more efficient use of resources in the United Nations to maximize support for small island developing States, so that the United Nations, its agencies and regional commissions become more effective in promoting and assisting sustainable development in island States.

In early 2000, the ECLAC Subregional Headquarters for the Caribbean, in its continuing pursuit of collaboration toward the sustainable development of the Caribbean subregion, was part of a larger ECLAC delegation that accepted an invitation to attend the Twelfth Forum of Ministers of the Environment of Latin America and the Caribbean, which convened on 2-7 March, under UNEP auspices. At that meeting, the ECLAC delegation was successful in advancing the incorporation into one of the resolutions adopted, the agreement of the ministers to support the further implementation of the SIDS POA and to promote its recognition as the framework for the pursuit of sustainable development by the small island developing States of the Caribbean subregion.

1.11 Subregional activities for 2001 and beyond

In order to advance the further implementation of SIDS POA in the subregion, the Subregional Headquarters of ECLAC for the Caribbean convened a meeting of representatives of Caribbean SIDS and of regional and regionally-based organizations, on 7 March 2001. The meeting was directed towards two major objectives, namely, to undertake a final review of the status of implementation of the Joint Work Programme adopted in 1997 and to develop an updated version, even as the region prepared for *Johannesburg 2002*.

In adopting an updated version of the JWP, attention was given to the few outstanding elements of the 1997 prototype, to the extent that they remained relevant, as well as to the new socio-economic elements that were incorporated into the implementation of the SIDS POA in explicitly operational terms, by the twenty second special session of the United Nations General Assembly. These elements include *poverty, unemployment, capital markets, trade and investment* and complemented the almost exclusively environmental focus of the Programme of Action. Attention was also given to issues such as *crime*, including the illicit traffic and use of drugs, which are also recognized to very closely impinge on the sustainable development prospects of the SIDS of the Caribbean, among others.

CHAPTER 2

CARIBBEAN SIDS AND THE NEW GLOBAL ECONOMIC ORDER

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Recent changes in international economic relations and technological innovations have transformed what were still perceived as a series of national economies into an almost seamless global market for commodities, services, technology and other factors. The major aspects of the debate over the New International Economic Order (NIEO) which dominated the 1970s have literally been turned upside down. Gone are many of the ideals which characterised the NIEO, among them: the regulation of the activities of multinational corporations; the creation of an enforcement code of conduct to govern the transfer of technology; the promotion of economic cooperation among developing countries; increasing resource flows from the developed countries (to the developing countries) to a level, equivalent to 0.7 per cent of their GDP, by 1980; and generally, the reform of institutional mechanisms and structures to support the development objectives of developing States.

It is now a matter of record that the promised levels of assistance did not materialise. The recent debate over the price of HIV/AIDS drugs being sold by pharmaceutical companies to the developing world, has confirmed that, despite the presence of the United Nations Conference on Trade and Development (UNCTAD), little control is being exercised on the conduct of multinational corporations. Further, many of the trade and trade-related aspects of the NIEO have since been incorporated into the rules and disciplines of the World Trade Organization (WTO), in a manner that was not envisaged even two decades ago. In particular, the insistence on reciprocal arrangements in trading relationships runs counter to the spirit of non-reciprocity embodied in the General System of Preferences (GSP) and successive Lomé Conventions. The implications of other developments such as the North American Free Trade Agreement (NAFTA); the progression towards the establishment of a Free Trade Area of the Americas (FTAA); and the further erosion of preferences in post-Lomé arrangements affecting Caribbean SIDS that are members of the African, Caribbean, and Pacific (ACP) Grouping in their relations with the European Union, have already become sources of further economic disadvantage to the SIDS of the Caribbean. The basic observation in this regard is to the effect that Caribbean SIDS are being forced to become internationally competitive, in very short order, as a precondition of survival in the new and still emerging international environment many of whose features may not be supportive of their sustainable development.

The implicit thrust of the current changes in the global environment is towards allowing market forces to determine the scope, structure and outcomes of all economic activity. The contention of the developed world is to the effect that measures to ensure the contestability of markets would enhance the efficiency of the global economy and increase the welfare of all of the world's peoples. However, like much of the neo-liberal thinking that underlies the framework, the distribution of welfare gains and the long standing issues of market failure - which prompted government interventions in the first place and which are likely to pose asymmetrical burdens on developing countries - are

not being addressed. Caribbean SIDS are particularly at risk because of the pervasive impacts of economic shocks and natural disasters on their economies. The internationalisation of systemic risk to the financial system, international corruption and increasing levels of poverty that are normally associated with pronounced shifts in the pattern of international production and exchange, are among the many risks of market failure that Caribbean SIDS are unable to withstand.

The advent of globalisation and trade liberalisation is already posing major challenges to the development process in Caribbean SIDS. Already, the more immediate effects of this new global reality are evident in the reduction in external aid flows; problems in accessing traditional preferential markets and adversely changing debt profiles. These developments are of concern because preferential market access and assistance from external sources were the main drivers of the social and economic progress of Caribbean SIDS until the past two decades. This is reflected in the performance of OECS economies. During the 1980s the combined GDP of all OECS States (with the exception of the British Virgin Islands) increased at an average of 5.8 per cent per year, from US\$700 million at the start of the decade to US\$ 1.3 billion at its end. Despite two international recessions and natural disasters, which occurred during this period, real growth ranged from 4.4 per cent to 6.0 per cent¹. However, during the period, 1990-1999, the average real rate of economic growth in the subregional economy slumped to 2 per cent, due to a worldwide recession in the early 1990s, changes in the international trade regime and the economic dislocations of hurricanes, in the Northern Caribbean.

The economic downturn in the OECS economies in the 1990s, underscored the structural weaknesses of Caribbean SIDS linked to the following classic characteristics of smallness:

- The limitations posed by small population size on the range of activities, skills, institutional capacities (especially the extent and depth of markets) that may be found or developed in small States, and the extreme economic openness and production specialization which is demanded, as the only means of achieving sustained GDP growth;
- The limited production possibilities implied by a narrow physical resource base (except where technological capacity permits large-scale importation for processing and re-export). Efforts to obtain scale economies in small states tend to further restrict the product range, and increase vulnerability to earnings fluctuations arising from adverse price movements or adverse impact on supply caused by, among other things, natural disasters. Small size tends to increase the importance of environmental concerns, with the consequence that certain types of economic activity cannot be undertaken;
- The limited range of industrial, agricultural and commercial activities;

¹ OECS Development Strategy: OECS Secretariat and Eastern Caribbean Central Bank.

- Low aggregate GDP;
- Low domestic savings and investment capacity;
- Susceptibility to natural disasters, the effects of which are more devastating and difficult to recover from than in the case of large States, since a greater proportion of the small State is affected;
- Underdeveloped domestic real and financial markets deriving from the existence of a small number of actors, limited range of products and small GDP in absolute terms and characterized by higher transaction costs and participation risks.

Caribbean States recognise fully that the processes of accelerated globalisation, trade liberalisation and technological innovation offer some opportunities which they are keen to exploit. The Medium-Term Economic Strategy Papers (MTESPs) tabled by Caribbean SIDS at the 2000 Caribbean Group for Cooperation for Economic Development (CGCED), all reflect determined efforts to identify and to adopt focused policies and strategies aimed at building capacity at all levels and at determining the mix of economic activities in which their economies can be internationally competitive. Sustained development of such States will require, inter alia, the capacity to develop and maintain:

- Access to external markets (for exports and imports including import of producer goods);
- Access to external resources for infrastructural development, especially for States which are vulnerable to natural disasters, (frequent capital replacement multiplies the cost of long-term infrastructure);
- Access to private investment (portfolio and direct) under conditions which eliminate or significantly reduce the destabilising effects of speculative inflows; and
- The mobilization of financial and technical resources to deal with external shocks in both a transitional or adjustment phase and in a long-term sustainable phase will have implications for domestic as well as international policy action.

A critical issue, therefore, becomes the speed at which Caribbean SIDS can adjust to the myriad challenges posed by the emerging global economic environment.

CHAPTER 3

REVIEW OF THE IMPLEMENTATION OF THE SIDS POA

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A major observation in the review of the implementation of the SIDS POA across the Caribbean subregion, refers to the uneven rate of progress in all the priority areas identified in the several Chapters of the SIDS POA. By and large, this situation reflects the varying degrees of access to the required resources on the part of individual SIDS, quite apart from the degree of priority assigned to each priority area. However of greater relevance, in the context of the subregional meeting to which this review is specifically addressed, the review of the implementation of the SIDS POA will be undertaken primarily from a subregional perspective. The priority areas identified in the POA provide the headings for the review, even if in some cases, these are amplified so as to be more directly relevant to the peculiar concerns of Caribbean SIDS. The review is set out in the following sections:

3.1 Climate Change and Sea Level Rise

Over the past few years, Global Climate Change (GCC) has emerged as one of the world's major long-term challenges. Anticipated global warming and consequent changes in sea level, sea-surface temperatures, precipitation, wind and ocean currents can have a serious impact on the sustainable development of the SIDS and low lying coastal states of the Caribbean.

Low-lying SIDS depend on the protective functions performed by tropical coastal ecosystems for their economic survival, physical existence, and social viability. Global climate change will compromise the integrity of these ecosystems (coral reefs, sea grass beds and mangroves), undermining their ability to deliver the protection that they offer to coastlines, anchorages, beaches, buildings and coastal infrastructure². It will also compromise their ability to provide food (fisheries), employment (tourism, fishing, recreation), and building materials. These impacts will occur at the very time when the natural protection of coastal ecosystems will be needed most, in the face of sea level rise and an escalation in the frequency and intensity of tropical cyclones.

Five years after the adoption of the SIDS POA, the United Nations General Assembly convened a Special Session (September 1999) to review the progress made in the implementation of the BPOA. The United Nations Secretary-General's report on the status of the implementation of the SIDS POA highlighted two key constraints related to institutional capacity building: the limited availability of human resources and a lack of financial resources for developing and strengthening institutions and their mechanisms.³

² IPCC WG2 Third Assessment Report, Chapter 17.

³ UN Economic and Social Council, "Report of the Secretary-General: Addendum, National Institutions and Administrative Capacity in Small Island Developing States," p.5. and "Report of the Secretary General: Addendum:

Both of these constraints create significant challenges for effective and timely action to address Global Climate Change in individual Caribbean SIDS.

Caribbean SIDS are highly vulnerable to natural disasters, especially those caused by short-term climate variability manifested in extreme weather events. The consequences of this vulnerability are destruction of infrastructure and productive capacity, interruption of economic activity and irreversible changes in the natural resource base. Affected by a series of hurricanes since 1995 as before, many Caribbean SIDS are facing situations in which scarce resources that were earmarked for development projects have had to be diverted to relief and reconstruction following disasters, thus impeding sustainable growth.

In the area of climate change, there have been two major initiatives in the Caribbean, both financed by the Global Environment Fund (GEF).

(a) Caribbean Planning for Adaptation to Global Climate Change

Following the United Nations Global Conference on SIDS, a number of CARICOM member countries in collaboration with the OAS took the initiative to formulate a regional project - the Caribbean Planning for Adaptation to Global Climate Change (CPACC). The project was approved for funding by the GEF in mid-1997 and will be completed in December 2001. It is being executed by the Organization of American States and the University of the West Indies Centre for Environment and Development, (UWICED) for the World Bank as the GEF implementing agency.

The project's overall objective is to support Caribbean countries in preparing to cope with the adverse effects of GCC, particularly sea-level rise in coastal areas, through vulnerability assessment, adaptation planning, and capacity-building linked to adaptation planning.

The project has developed a successful approach to regional cooperation in addressing the countries' concerns about the impact of climate change. This approach, acknowledged as a model for the Caribbean and other regions, is based on a coordinated effort, in which all 12 countries participate in national pilot/demonstration actions and regional training and technology transfer activities. Project activities are focused on planning for adaptation to GCC in vulnerable areas and include the collection and dissemination of sea-level and climate data in each country; impact and vulnerability studies; and the assessment of policy options to address adaptation issues. These enabling activities are being complemented by selective capacity-building activities, aimed at creating or strengthening endogenous conditions and capabilities necessary to prepare and implement a long-term programme for adaptation to GCC.

The project has achieved a fair degree of country ownership as well as support from key regional institutions. At the national level, representatives from government agencies, private sector and non-governmental organizations actively participate in the project through the National Implementation Coordinating Units (NICUs). At the regional level, a Regional Project Implementation Unit (RPIU) has been established at the Cave Hill Campus of the University of the West Indies in Barbados under the aegis of UWICED. Other centres of the University participate directly in the project, as do other regional institutions whose mandates cover meteorology and marine affairs.

Through CPACC, the region now has access to data derived from state-of-the-art sea level and climate monitoring stations installed across the region. Each participating country is in the process of developing a Coastal Resource Inventory System (CRIS) which will be an essential tool for decision-making in integrated coastal zone management.

Since its inception, CPACC has facilitated capacity-building in an impressive array of areas such as:

- Environmental information management;
- Use of Geographic Information Systems (GIS) for coastal inventories;
- Coastal vulnerability assessment ;
- Coral reef monitoring;
- Economic valuation of coastal and marine resources and design of economic/regulatory instruments

Public awareness efforts to date have been directed at the regional media and regional private sector. As a result, there is more visibility of climate change issues in the regional press, and the regional private sector has expressed interest in supporting activities addressing the question of risk assessment and climate change.

CPACC has also succeeded in generating interest in climate change issues at the University of the West Indies. It has spearheaded the development of a Climate Change Master of Science Programme at the UWI - Cave Hill, Barbados and has established a sea level and climate data management centre at the University of the West Indies, St. Augustine, Trinidad and Tobago. CPACC also supports a network of researchers working on down-scaling the global climate models at the UWI campuses in Jamaica, Barbados and also at the Caribbean Institute for Meteorology and Hydrology (CIMH) in Barbados.

(b) Enabling Activities - UNDP National Communications Support Programme (NCSP)

The UNDP/NCSP provides technical support to CPACC- participating countries, Haiti, Suriname and the Dominican Republic. Regional experts in the field of climate change are used to provide technical assistance and backstopping to the countries, and to undertake technical assistance missions, where appropriate. In addition, the support programme is responsible for the dissemination of information on climate change to each participating country.

The UNDP/NCSP in the Caribbean is being implemented UWICED. While the support programme aims to help countries in the region finalize their national communications, one of the objectives is to promote regional discussions on a regional mechanism for implementing climate change activities in the region. In addition, the UNDP support programme has begun to build linkages with CPACC through UWICED.

An important outcome resulting from the implementation of CPACC and the UNDP Enabling Activities Project is the establishment of national climate change committees, which embrace a wide cross-section of national stakeholders, including the private sector. Through these Committees, the countries address matters related to the UNFCCC and also, in several countries, matters relating to the Montreal Protocol (ozone depleting substances phase-out). These Committees may serve as precursors to more permanent national mechanisms for addressing the wider range of issues under the sustainable development umbrella.

3.1.1 CPACC evaluation results to date

The World Bank reviews of CPACC to date have concluded that implementation performance has been satisfactory and has constituted a sound basis on which to continue corresponding activities. The review team was of the opinion that CPACC had:

- Made good progress towards the achievement of the expected technical and institutional outputs;
- Provided critical inputs to improved knowledge on mitigation and adaptation issues in the region;
- Contributed to increased awareness of CARICOM countries and their participation in the global forums on climate change;
- Played a major role in support of regional consultation process for the UNFCCC.

3.1.2. GEF Secretariat review of performance of GEF-funded projects in climate change in the Caribbean

During the second quarter of 2000, the GEF Secretariat commissioned an evaluation of the GEF-UNDP funding for national communications, the GEF-UNDP National Communications Support Programme, (a regional project), and the CPACC.⁴ The report concludes that the GEF-funded efforts are generally meeting the objectives of assisting CARICOM countries to:

- (a) Develop the capacity to assess and adapt to the possible adverse impacts of climate change; and
- (b) To meet their respective obligations under the UNFCCC, with respect to initial national communications.

A very important point to be made in this regard, is to the effect that prior to the start of CPACC, the Caribbean was characterized by a general weakness of the policy and institutional arrangements for environmental management and sustainable development, and that this weakness has constrained the results of the capacity-building activities of CPACC. In this regard, a more thorough assessment of this weakness during the design of CPACC might have led to a more successful implementation of the project. Moreover, this perceived weakness might be viewed as a principal cause for less than ideal linkages between climate change and the other areas of environmental and economic management in the countries. Finally, the sustainability of CPACC and the national communications process appears to be threatened by a low appreciation of climate change issues at the level of the political directorate and the lack of adequate capacity for in-depth research into these issues.

The following recommendations in the report are of relevance to CPACC and its follow-up:

- Future interventions should be preceded by a thorough assessment of the policy and institutional arrangements for addressing sustainable development;
- An in-depth evaluation of the effectiveness of training provided under both projects should be undertaken and should be set within an overall review of the human resources management in each country;
- Future training activities should be broadened beyond the narrow focus of the project's activities and long-term training in critical areas should be considered;

⁴ A Synthesis of Performances and Experiences of Caribbean States Participating in GEF-Financed Climate Change Projects, Impact Consultancy Services, Castries, Saint Lucia, July 2000.

- A concerted effort is required, preferably with support from the political directorate, to integrate climate change into the curriculum of non-scientific disciplines;
- The Caribbean should seek technical and financial support for the establishment of a Regional Sustainable Development Agency, which would, amongst other things, help strengthen cooperation and collaboration among regional environmental agencies.

As a result of the CPACC project and the national communications support process, participating countries have identified critical data gaps and capacity needs, e.g. data management, vulnerability assessment, public awareness and education, regional climate models, localized emission factors, development of economic and regulatory instruments to address issues pertaining to climate change. The initial output from the National Communications prepared by member countries speaks to the need for a regional approach to address several of the issues highlighted in their reports.

Countries in the region face many obstacles to their full participation in the UNFCCC flexibility mechanisms. In addition to limited human and institutional capacity, perhaps the main challenge to participation of Caribbean countries in the Clean Development Mechanism (CDM) is their small size. Economies of scale dictate that larger developing countries offer more attractive conditions for CDM projects. A regional approach to establishing baselines and benchmarks could introduce some economies of scale and identify opportunities for CDM in Caribbean countries.

The regional institutional home of CPACC, the University of the West Indies, appears in many requests to be less than ideally suited to support the widening of responsibilities assumed by the project's implementation mechanism. Its academic orientation and administrative system often appear to militate against the more flexible and pro-active response required of the RPIU.

The need for a new mechanism has been discussed extensively by CPACC with project *National Focal Points*, representatives of the countries' public and private sectors and of regional institutions. The concept of a regional mechanism has received endorsement from the highest political levels in the Caribbean. The new mechanism will likely take the form of an articulated network, with the University and key regional agencies as full members of the network. It is intended to reinforce the region's efforts to establish a Regional Sustainable Development Agency, and would be integrated in such an agency, once established. The proposed project will study the institutional, financial and operational aspects of the different design options during the PDF phase.

Conscious of the absence of any regional coordinating mechanism or institution dealing with global climate change, the political directorate of the region has given CPACC the mandate to pursue a strategy that will ensure continued support to countries and institutions in this area. This initiative by the region's leaders is fully supported by

the Declaration adopted by the twenty-second special session of the United Nations General Assembly, which calls on “*the international community to provide support for capacity-and institutional-building programmes and projects in small island developing States*” and, “*where appropriate, to support the establishment of training centers and other relevant capacity building efforts.*”

The 1997 Caribbean Ministerial Meeting on the implementation of the SIDS Programme of Action called for the establishment of a permanent mechanism to ensure the sustainability of climate change activities after the completion of the CPACC project. The Seventh Meeting of the CARICOM Council on Trade and Economic Development (COTED) which also addresses environmental issues, held in February 2000, authorized the CPACC implementation team, (UWICED, OAS, World Bank and the CARICOM Secretariat) to develop a proposal and seek funding for the establishment of a permanent capacity to address climate change, in the form of a Caribbean Climate Change Center. This proposal received further endorsement from the CARICOM Heads of Government at their recent meeting in Canouan, in July 2000. The establishment of the Centre has also been endorsed by the OAS General Assembly and the Inter-American Commission for Sustainable Development. Furthermore, the Forum of Ministers of the Environment of Latin America and the Caribbean, at its twelfth meeting, held in Barbados in March 2000, endorsed the establishment of the Centre.

3.2. Natural and environmental disasters

As recognized in the SIDS POA, disadvantages deriving from small size are themselves magnified by precisely the fact of the smallness of these entities. Among the disadvantages attached to SIDS is their vulnerability to extremely damaging natural disasters, particularly in the form of hurricanes, volcanic eruptions, extensive droughts and floods. Of these hazards, hurricanes have been the major cause of loss of life, with 1,745 deaths recorded between 1990 and 1998. Floods have claimed 155 lives over a similar period⁵. Haiti with 2,598 deaths and the Dominican Republic with 1,862 fatalities, together account for almost 70 per cent of the deaths, which have occurred in the region between 1964 and 1998. These figures are perhaps a reflection of the social vulnerability caused by poverty, environmental degradation and policy failures.

While data on the long-term economic impacts of natural disasters are less readily available, the link between economic vulnerability, environmental vulnerability and size was reinforced by the experiences of the north eastern Caribbean, during the second half of the 1990s. During 1995, Hurricanes Marilyn and Luis and Tropical Storm Iris caused a drop in the annual rate of GDP growth from 3.0 per cent to 0.7 per cent in the OECS area, although Grenada and Saint Vincent and the Grenadines - which were not affected by these disasters - continued to register high rates of growth. The impact on the individual countries was even more severe, with Antigua and Barbuda and Anguilla

⁵ Source: The OFDA/CRED Database, Universite Catholique de Louvain, Brussels, Belgium.

experiencing a decline in their growth rate to -5.0 and -4.1 per cent, respectively. In the Dominican Republic, Hurricane Georges caused an estimated US\$2.2 billion in damages in 1998. The volcanic eruptions in Montserrat wreaked havoc on that island's economy and society. Real GDP declined from US\$45 million in 1994 to US\$27 million in 1998.

The traditional approach to disaster management in the Caribbean, which prevailed until the late 1970s, was characterised by an uncoordinated and often ad-hoc response to rescue victims and the repair of damages. Preparedness planning was introduced during the 1980, due largely to the efforts of the Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) which also succeeded in raising general awareness on the need for preparedness and prevention. Upon completion of the PCDPPP, CARICOM Heads of Governments recognized the need for a permanent mechanism to coordinate regional disaster management activities and created the Caribbean Disaster and Emergency Response Agency (CDERA) in 1992. The mandate of this agency is focused on disaster preparedness and the coordination of disaster response.

Disaster mitigation in housing and infrastructure was the focus of a recently completed, six-year Caribbean Disaster Mitigation Project (CDMP), financed by the United States Agency for International Development (USAID) Office of Foreign Disaster Assistance (OFDA), and executed by the OAS. The CDMP focused on hazard vulnerability reduction in six primary areas: community preparedness, hazard assessments and risk mapping, hazard-resistant building practices, vulnerability audits of lifeline infrastructure, linking property insurance to quality of construction, and comprehensive mitigation planning. Since the early 1980s, the Pan American Health Organization (PAHO) has operated an extensive programme of disaster preparedness and response in the health sector. It also made significant contributions to vulnerability reduction in health sector infrastructure.

In 1999, the World Bank launched the Emergency Recovery and Disaster Management loan and credit programme for the OECS countries (OECS/ERDMP). The programme aims to support the physical and institutional efforts of five member countries of the OECS in disaster-recovery and emergency preparedness and management.⁶ The programme consists of individual country-lending operations in the five countries. It is structured as an Adaptable Program Lending (APL) activity and will be phased over approximately six years. The loan and credit program totals \$55.0 million and supports the following activities:

- **Physical investments:** Key social and economic infrastructure will be protected and strengthened before disasters strike so as to reduce the likelihood of loss of life and assets—alternatively, they will be rehabilitated or reconstructed in the aftermath of a disaster;

⁶ The countries associated with the programme are: Dominica, Grenada, St. Kitts & Nevis, Saint Lucia, Saint Vincent and the Grenadines.

- Capacity building: The capacity of national emergency management agencies will be strengthened to enable them to perform more effectively;
- Institutional strengthening: Steps will be taken to increase the ability and interest of the private insurance industry to share disaster-related risks, and to improve and support the enforcement of building codes and sound land-use planning;
- Community preparedness: Community-level disaster committees will be organized, trained and equipped to enhance their role in disaster preparedness, mitigation and recovery;
- Contingency funding: To assist participating OECS member nations in case a severe natural disaster strikes them during the program period

The Inter-American Development Bank (IDB) has several lending programmes addressing aspects of coastal vulnerability reduction in Caribbean SIDS. The South Coast Sustainable Development programme in Jamaica (\$15m) includes investments in conservation of coral reefs and infrastructure for low impact tourism development. In the Bahamas, a \$30m loan is under preparation for rehabilitation of coastal infrastructure damaged by Hurricane Floyd. In Barbados, the IDB has completed a first loan programme in support of coastal conservation, and a second phase for \$21m. is starting. The Barbados government established a Coastal Zone Management Unit (CZMU) to implement these loan programs. The CZMU has been and still is an important resource to the CPACC project, especially in the area of vulnerability assessment.

Belize is the beneficiary of a Hurricane Rehabilitation and Disaster Preparedness loan, with \$21 million IDB funding and co-financing of \$8 million by the CDB. The project aims to reduce the country's vulnerability and improve its response capacity to disasters through:

- (a) The adoption of structural vulnerability reduction measures; and
- (b) The improvement of institutional capacity focused on national and local emergency management, building codes, hazard analysis and risk assessment, public awareness, education and training programmes.

Text Box 1
Post-disaster assistance to Belize

The provision of assistance to Belize was based on a post-disaster assessment undertaken by the Subregional Headquarters of ECLAC for the Caribbean, utilizing the methodology developed by the Regional Commission. The mission was undertaken over the period, 12-20 December 2000 and was mounted in response to a request from the national authorities following the passage of Hurricane Keith from 30 September-1 October 2000. The assessment embodied sectoral analyses leading to an overall damage assessment and in addition to appraising the macroeconomic, social and environmental impacts, it also proposed guidelines for rehabilitation and reconstruction in the form of a number of project profiles. The mission was supported not only by the national authorities, but also, by a number of international agencies. The Mission Report was presented to a meeting of bilateral donors and international financial agencies, among them, the Department for International Development (DFID), the Inter-American Institute for Cooperation on Agriculture (IICA), the International Monetary Fund (IMF) and the World Bank, on 7 December 2000 to discuss the damages resulting from Hurricane Keith, as well as rehabilitation plans including financing and technical assistance requirements. The ECLAC Mission Report, which had been earlier identified as a key document for the discussions, was well received and pledges were made in respect of some of the accompanying project proposals.

In the aftermath of 1997/1998 El Nino, Guyana received an emergency loan from the World Bank for regeneration of agriculture, improving drainage and irrigation, and restoration of flood protection.

The CDB has approved capital loans, equity participation and technical assistance grants for regional projects with the emphasis on sectors that are at risk from climate variability and change, particularly agriculture/forestry/fishing, tourism, water, health and housing sectors. Loans were also available for the energy and transportation sectors and disaster rehabilitation. The Bank has also established a Risk Management Program in borrowing member countries.

The International Maritime Organization (IMO) and the International Telecommunications Union (ITU) collaborated with the design of the Global Maritime Distress and Safety System (GMDSS) which provided means of locating vessels anywhere in the world. Workshops have been held in the Caribbean countries in developing plans for the introduction of this system.

In an attempt at meeting the needs of Caribbean SIDS, in the area of natural disasters, the Subregional Headquarters of ECLAC for the Caribbean has identified as a priority and has commenced action on two main fronts, namely:

(a) The conduct of post-disaster assessments utilising the ECLAC Methodology for Assessing the Macroeconomic, Social and Environmental Impact of Natural Disasters. In this regard, assessments have been conducted in Anguilla, Belize, the British Virgin Islands and St. Kitts and Nevis. Similar assessments have also been carried out throughout Central and South America, including Venezuela, which was severely affected by heavy rains, mud slides and floods in 1999;

(b) The conduct of training workshops at national and regional levels, on the use of the ECLAC Methodology. To date, such workshops have been conducted at the Subregional Headquarters for regional participants; and also in the British Virgin Islands. The purpose of the workshops is to develop a cadre of expertise with multidisciplinary skills, across the region for rapid deployment of assessment teams in the aftermath of natural disasters. In the British Virgin Islands, participants in the Training Workshop represented a range of private as well as public sector agencies, including government departments, the Chamber of Commerce and Hotel Association; and a number of insurance companies.

Some of the more pressing needs identified by Caribbean SIDS are as follows:

- Training in information collection for disaster assessment;
- Additional support beyond that provided by USAID/UNDP to initiate a Regional Strategic Programming framework for Disaster Management. This is required for undertaking stakeholder consultations in key sectors, such as agriculture, tourism, education and infrastructure; institutionalization of disaster management training and research in regional universities; hazard mapping and vulnerability assessment.

3.2.1 Framework for collaboration on natural disasters

There is ongoing collaboration between ECLAC/CDCC and CDERA in the management of responses to natural disasters. The issue remains therefore, one of expanding the scope for collaboration between the two organizations taking into account the differences in their respective focii. Further areas of collaboration might include:

- Undertaking joint missions in the aftermath of natural disasters with funding possibly from IDB and UNDP⁷;
- Continued collaboration in the implementation of the SIDS POA;

⁷ Both IDB and UNDP have in the past provided partial funding to countries for their emergency response missions of CDERA and/or the macroeconomic/social assessments of ECLAC.

- Structured exchange of information;
- Collaboration in appropriate areas of research, including joint formulation of technical assistance packages for presentation to prospective donor agencies;
- Coordination of regional positions for presentation at forums, such as the general meeting between representatives of the United Nations System and the CARICOM and its associate institutions.

3.3 Management of wastes

Seven years after the UNGCSIDS, waste management has maintained its ranking as one of the major environmental issues in Caribbean SIDS. There is now a better understanding of the process by which waste is generated; the behaviour of waste under various climatic conditions and the constituents of waste which are potentially hazardous to human health and the health of the environment.

3.3.1 *Solid waste management*

Encouraging progress has been made with the management of solid waste. The Solid Waste Management Company of Trinidad and Tobago Limited (SWMCOL) is widely regarded as a success story in this field. SWMCOL was established as a limited liability company in 1980, to implement a Solid Waste Master Plan. The Plan, which was designed in the late 1970s, outlined options for developing a system that addressed the collection, treatment and disposal of waste, including hazardous waste. The operations of SWMCOL are rooted in the following principles:

- The public must be challenged to care for the environment and to actively participate in and demonstrate such care;
- Appropriate training must be provided for the necessary capacity building towards continuous development;
- The solid waste function must be a national concern;
- There must be a close working relationship with local government agencies, as a means of strengthening the operational arm for the implementation of the solid waste master plan. ⁸

⁸ Sharing Innovative Experiences: Examples of Successful Initiatives in SIDS - Volume 2. - UNDP/TCDC/CARICAD

Initiatives in the OECS, have been located within the context of the US\$50 million - OECS Solid Waste Management Project (SWAMP) funded by a consortium of agencies including the World Bank, the GEF, the CDB and the six participating countries within the OECS⁹. The project has:

- Facilitated the joint procurement of specialised collection and disposal equipment;
- Produced harmonised legislation on solid waste management;
- Established solid waste management entities in all countries;
- Identified new sites for sanitary landfills;
- Remediated existing dump sites;
- Completed an analysis of the viability of waste recycling options;
- Identified mechanisms for waste reduction recovery and reuse;
- Ensured waste collection.

Like the CPACC Project, the SWAMP has been affected by weaknesses in institutional capacity at the national level. The institutional requirements for effective project management were grossly underestimated by the designers of the project, with the result that, with less than six months left in the life of the four year project, new landfill sites are yet to be commissioned in any of the countries. The project failed to bring all the disparate elements (legislation, training, education etc.) together as an integrated solid waste management project.

Despite the lack of economies of scale, encouraging progress has been made with recycling of solid wastes. Most Caribbean SIDS do not generate enough waste to run a viable, local recycling facility. However, some Caribbean companies - such as *Caribbean Glass* and the *Solid Waste Management Company of Trinidad and Tobago*, *Envirotech of Barbados* and *Caribbean Container Inc. of Guyana* - are overcoming this problem by combining local waste with imported waste, from the Dutch and French-speaking Caribbean: Curacao, Martinique and Guadeloupe, as well as from Guyana, St Kitts and Nevis, Anguilla and Saint Lucia.

Caribbean Glassworks, which has been in the recycling business for about 51 years, combines 40 per cent broken glass (cullet) with silica sand and other materials to produce better glass, more quickly with less energy.

Envirotech - the plastic bottle recycling facility in Barbados, is the result of enlightened government regulations and a high level of private initiative. In Barbados, manufacturers and importers of plastic bottles must operate a deposit and return system, thus enabling Envirotech to buy the bottles from the public and charge the bottling companies to destroy them. The bottles are then ground and shipped to China where the residue is used to make polyester fabric for T-shirts and other garments. Government-

⁹ Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines,

imposed levies on the disposal of used motor vehicle tyres have enabled Envirotech to get involved in recycling tyres into non-slip floor mats, for use in schools and hotel kitchens. Envirotech also collects discarded car batteries, which are shipped to Venezuela, where the lead and electrolyte are re-used.

The Solid Waste Management Company of Trinidad and Tobago collects paper and sorts cardboard from high-grade-office paper and other types, to produce approximately 3,300 half ton bales for export to a recycling plant in Venezuela. However, the operation has sometimes been rendered uneconomical, by frequent price fluctuations and high transportation costs. The advent of Caribbean Container Inc. has helped to reduce transportation costs. The company has begun recycling used cardboard from Barbados, Jamaica, Suriname, and Trinidad and Tobago, to make paper for new boxes.

3.3.2. Liquid waste management

Sizeable investments have been made by Caribbean SIDS, most notably, Barbados, Cuba, the Bahamas, Belize and Saint Lucia, in a bid to improve the management of liquid waste. However, overall progress has been slow, largely because of the high costs of installing appropriate sewerage systems. Growth in urban population, industrial activity and tourism continue to outstrip infrastructural capacity to handle waste. In the absence of adequate sewage collection systems, waste treatment has in many instances been undertaken in an ad hoc and unsanitary fashion. The use of septic tanks and soakaway systems is still the dominant method of disposal of liquid waste in nearly all Caribbean SIDS, especially the OECS countries. In the vast majority of cases, these septic tanks are not properly designed and/or maintained, resulting in disposal of effluent into storm drains and directly into coastal waters. Where sewage treatment facilities have been installed, there are deficiencies in plant capacity and less than adequate plant operation, maintenance and monitoring practice.

This unsatisfactory situation has spawned a catalogue of adverse impacts on the human and bio-geophysical environment, severely eroding the foundation of social and economic development in the process. These impacts include: river, beach, and marine pollution, as evidenced by high faecal coliform counts; eutrophication effects in coastal waters; the death of coral and other vital marine life; and contamination of surface and groundwater supplies.

There is considerable potential for a GEF-funded programme to assist Caribbean SIDS to come to terms with the varied dimensions of waste management.

3. 4. Coastal and marine resources

Under the United Nations Convention on the Law of the Sea (UNCLOS) Caribbean SIDS have acquired rights to vast areas of ocean space which constitute their Exclusive Economic Zones (EEZs). However, the islands have lacked the resources to derive greater benefits from these zones. The priority areas identified include:

- The development of national ocean policies inclusive of coastal zone management accompanied by the necessary legislation and regulations;
- The strengthening and development of institutional, administrative, scientific and technological capacity to effectively manage and utilise the resources of the EEZ;
- The development of a comprehensive inventory of living and non-living resources of the EEZ;
- The establishment of additional marine protected areas;
- Reduction of land-based sources of marine pollution;
- The adoption of measures and procedures for the effective prevention of pollution from ships and the establishment of mechanisms for rapid response to emergencies such as oil spills; and
- The establishment of monitoring mechanisms for marine eco-systems and development of an integrated environmental database, utilising technologies such as remote sensing and geographic information systems (GIS).

The coastal environments of the Caribbean possess a diversity of habitats including coral reefs, seagrass beds, mangrove, wetlands and rocky shores. All the islands have established some aquatic preserves to protect valuable habitat, but the authorities lack the necessary manpower and funding to enforce the corresponding regulations. The threats to the coastal ecosystems include both sea-based and land-based contamination, development, over-fishing, sand mining, and increased storm activity. These threats are discussed below.

3. 4.1. Threats to sustainable development of coastal and marine resources

3.4.1.1. Living and non-living marine resource exploitation

The impact of the exploitation of non-living marine resources varies across Caribbean SIDS. Sand mining is a particular problem in Saint Vincent and the Grenadines and Saint Lucia due to the existence of an active construction industry in these islands. The respective governments have introduced policies to encourage sand importation. Relevant legislation has also been drafted. However, these legal instruments have either not been enacted or are not being adequately enforced.

Extraction of living marine resources is a significant threat in all reporting countries. Jamaica reports that coral harvesting, particularly harvesting of the black coral,

continues to be a problem.¹⁰ Other threats to coral include physical damage from anchorages, fishing equipment and divers. In addition, the use of bleach to harvest reef fish has damaged coral in the Bahamas.¹¹ Fisheries have been severely depleted in some countries. In Barbados, a three-year moratorium has been established on the harvesting of sea urchins in an attempt to restore the population.¹² Many islands report the deforestation of mangroves for fuelwood, often by squatters. In the Dominican Republic, mangrove roots are cut during the harvesting of oysters (*Crassostrea rizophorae*).¹³

Aquaculture is practiced on many islands but has not been found to have a significant impact on any coastal areas. Cuba's aquaculture industry produces over 1,600 tons of white-shrimp annually.¹⁴

3.4.1.2. Climate change and natural disasters

There is a widespread need for disaster management plans within Caribbean SIDS. The past five years have seen an increase in the number and intensity of tropical storms. As Saint Vincent and the Grenadines reports, "If climate change is responsible for the intensity of storms and storm surges over the last five years, then it is responsible for major coastal erosion on Saint Vincent. Some areas on the northern windward side of the island have had as much as 25 meters of shoreline recession over the last five years. Hurricane Lenny destroyed 10 meters of coastal forest that had stood for over 50 years."¹⁵

The possible effects of climate change on coastal water levels and temperatures are a threat to the fragile coral-reef ecosystems. The coastal region is the most economically valuable area on most islands and even small changes could produce permanent environmental damage, severely affecting the islands' economies.

3.4.1.3. Transboundary threats

The most common transboundary threats to the islands are oil spills. Thousands of large vessels transporting oil, gas, and chemicals pass through the islands annually.¹⁶ In several countries, National Oil Spill Contingency Plans are in place. However, a regional spill-response plan is needed. This might best be pursued within the initiative being piloted through the United Nations General Assembly by Caribbean SIDS for Promoting an Integrated Management Approach to the Caribbean Sea Area in the context of Sustainable Development, with due regard to other regional and wider international

¹⁰ Jamaica National Report, p. 26.

¹¹ The Bahamas National Report, p. 23.

¹² Barbados National Report, p. 32.

¹³ Dominican National Report, p. 25.

¹⁴ Cuban National Report, p. 115.

¹⁵ St. Vincent and the Grenadines National Report, p. 20.

¹⁶ Trinidad and Tobago National Report, p. 70.

initiatives. In addition, the discharge of solid waste, wastewater and bilge water by both commercial and cruise ships, pollutes the coasts. All nations are signatories to the MARPOL Convention and the 1989 Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal, but none has signed the Basel Protocol on Liability and Compensation.

The Dominican Republic reports that Haitian nationals are overexploiting the fisheries in border regions of the Dominican Republic, particularly shrimp and lobster. Cross-border trade creates a lucrative market for Haitian fishermen who sell their catch to the Dominican market.¹⁷

The southern islands, particularly Trinidad and Tobago, face a transboundary threat from the Orinoco River on the South American mainland. The river brings a heavy sediment load to the waters, notably increasing turbidity on the west coast of Trinidad.¹⁸

3.4.1.4. Land-based pollution

Many nations lack coastal zone management and development plans. Trinidad and Tobago is examining, in detail, the components, implementation and integration of coastal management plans with development plans.

There is general concern over land-ownership issues and a need for better coordination between the central government and local town councils regarding land planning and the approval of construction projects.¹⁹ Canal building and dredging to create harbours has damaged many mangrove forests and wetland areas.

Rapid population growth and urbanization have resulted in increased solid and liquid pollution. Wastewater treatment facilities are inadequate in many locations. For instance, in Castries, Saint Lucia, the wastewater is discharged directly into the sea without treatment, and only 13 per cent of the population is connected.²⁰

Surface-water runoff is a problem on all the islands and is a significant cause of pollution in coastal areas. Rivers carry solid waste directly to the coast because of the lack of adequate solid waste disposal. Point-source pollution, such as mining and industrial waste discharges, has been measured in rivers and can be assumed to reach coastal regions although no specific studies have been undertaken to validate this. Cuba reports that increased development has brought with it, an increase in the amount of hazardous chemicals and biomedical waste. Over 1.2 million tons of industrial hazardous

¹⁷ Dominican Republic National Report, p.27.

¹⁸ Trinidad and Tobago National Report, p. 71.

¹⁹ The Bahamas National Report, p. 18.

²⁰ Saint Lucia National Report, p. 31.

wastes are produced in Cuba annually.²¹ In an effort to reduce such waste, Cuba is encouraging the inclusion of methods to reduce hazardous waste production in the design of new industrial plants, as well as retrofits, whether through source reduction or recycling.

Non-point-source pollution such as agricultural runoff, fertilizers, pesticides, and herbicides is a significant problem for all Caribbean SIDS. Nutrient loading from nitrogen and phosphorus is causing eutrophication of rivers and increasing algae and turbidity in coastal areas. Many islands report uncontrolled deforestation by land squatters for fuelwood and agriculture.²² Cuba reports that 11.8 per cent of its forestland has been converted to agriculture in recent years, resulting in increased water turbidity in deforested areas.

3.4.1.5. Tourism impacts

Tourism is an important factor in coastal area management. Tourist activities and developments significantly affect the health of the area through buildings that are sited too close to high water marks, harbour dredging, cutting down of mangroves, mooring on reefs and sea-grass beds, exceeding carry capacity, and pollution. The issue of construction in coastal areas is illustrated in Antigua and Barbuda, where 39 of the country's 55 hotels have a beach-front location.²³

3.4.1.6. Health impacts

Health concerns related to coastal area management are generally linked to land-based pollution, such as the disposal of untreated sewerage and surface run-off from agricultural and industrial sectors, streets, and construction sites. These pollutants have been known to cause diseases such as gastroenteritis, diarrhoea, jaundice, rashes and various other infections, in Caribbean SIDS.

3.4.2 Data, information management and research

Similar to the situation with freshwater resources, data information management and research is conducted by a variety of agencies and organizations, including:

- Non-governmental organizations;
- Private consultants;
- Government agencies responsible for environment, fisheries, natural resources, transportation, forestry, etc.;
- Academic institutions;
- International organizations.

²¹ Cuba National Report, p. 131.

²² Trinidad and Tobago National Report, p. 66.

²³ Antigua and Barbuda National Report, p. 13.

Data, information management and research needs are generally related to capacity-building. Some countries have highlighted the need for additional water level, meteorological, and pollution monitoring and equipment, as well as studies on various coastal ecosystems.

3.4.3 Stakeholder participation/awareness and education

Throughout the region, there are reports of increased stakeholder participation in the decision-making process for coastal area management and increased awareness and education programmes. Government agencies are making a point to reach out to non-governmental organizations and community-based organizations and to promote public awareness regarding coastal area issues. Listed below are some examples of governmental efforts in this area:

- Educational and training programmes for students, teachers, public sector officials, and other stakeholders;
- Establishment of Local Area Management Authorities;
- Involvement of stakeholders in monitoring, management, and conservation activities;
- Media campaigns;
- Public awareness activities ;
- Public consultations;
- Training on sustainable tourism.

Notwithstanding these activities, many countries still do not consider that there is sufficient public involvement in the decision-making process for coastal area management. Saint Lucia is moving to address this problem, by developing an Integrated Approach to Development Planning.

Significant strides are being made in Trinidad and Tobago in the promotion of the role of women in coastal resource management. The Gender Studies Department of the University of the West Indies, St. Augustine, has been working towards the empowerment of women and the sustainable development of the communities in the area of the Nariva Swamp.”²⁴

3. 4. 4 Ocean management

Caribbean SIDS recently secured the passage of the United Nations General Assembly resolution 54/255 later amended by resolution 55/203, entitled: *Promoting an Integrated Management Approach to the Caribbean Sea in the Context of Sustainable Development*.

²⁴ Trinidad and Tobago National Report, p. 81.

Text Box 2

United Nations resolution 55/203: Promoting an Integrated Management Approach to the Caribbean Sea in the Context of Sustainable Development

In its resolution 55/203, which was adopted on 8 February 2001, the General Assembly reiterates the importance of adopting an integrated management approach to the Caribbean Sea area, in the context of sustainable development. The General Assembly also encouraged the promotion of this approach and called on the United Nations System and the international community, to assist Caribbean countries and their regional organizations, to ensure the protection of the Caribbean Sea from degradation, as a result of pollution from a number of identified sources.

Notwithstanding the epoch-making characteristics of resolutions 55/203 and 54/225, they omit several concepts that informed the original proposal. Among these concepts were:

- The concept of the Caribbean Sea as a Zone of Peace and as a Nuclear Free Zone; and
- The concept relating to the implementation of measures to promote certain social and economic activities on land, in order to avoid excessive pressure being placed on the marine environment and its resources.

Resolution 55/203 requests the Secretary-General to report at the fifty-seventh session, under the sub-item entitled "further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States". This provision essentially allows a two-year window for Caribbean SIDS to advance the implementation of this important resolution.

Efforts are underway to mount a second Coastal and Oceanographic Resources Exploration Project (CORE), following on the first in 1990 which sought to build capacity in marine sciences and to develop an inventory of the resources of the Caribbean Sea. Discussions are also being held with the Canadian International Development Agency (CIDA) on a Programme of Ocean Governance for the Region.

The IMO has provided substantive support through the appointment of a Regional Maritime Safety Adviser. This has been accomplished through a project that has so far completed four main outputs namely: a broad assessment of existing capacities and limitations for the effective administration of the region's maritime sector; promotion of the acceptance of IMO Treaty instruments dealing with maritime safety and maritime environment protection; preparation of a package of model technical regulations to give effect to the said instruments and to establish standards for small merchant vessels; and the organization of a high-level symposium on international development in the Caribbean (Barbados, March 1999) which adopted a ministerial resolution on the sustainable development and management of the region's maritime sector.

UNEP is working with CARICOM to establish a regional network to monitor resources of the Caribbean Sea. Aspects to be included in this approach include:

- Environmental and safety aspects of shipping;
- Pollution monitoring and assessment;
- Control of pollution from land based sources;
- Development of common methodologies for integrated coastal zone management;
- Conservation of biological diversity;
- Exploitation of fisheries and other marine resources;
- Exploitation of non-living resources;
- Information and data exchange;
- Security concerns;
- International and regional cooperation and coordination.

A Protocol to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean “the Cartagena Convention” on Land-Based Sources of Marine Pollution has been developed. UNEP/RCU has also implemented projects on appropriate and environmentally sound technologies for sewerage treatment and best management practices. In addition, a Waste Oil Management Programme for the Caribbean is being developed by UNEP in collaboration with the Basel Secretariat and PAHO.

3.4.5 Fisheries development

Fisheries play an important and sometimes underrated role in the economies of Caribbean SIDS, providing employment and contributing to food security and national income. Current methods of evaluating the contribution of fisheries to economic and social development have tended to overlook any incremental economic benefit of the export market as well as support services.

At an OECS Regional Symposium on Fisheries Management and Development, attended by fishermen, fisheries officers and permanent secretaries responsible for fisheries, the following issues were identified:

- Near-shore demersal fisheries resources are coming under increasing pressure and, in some instances, are already showing signs of collapse;
- Exports are constrained and regulated;
- Strong internal markets exist in the region;
- There is an increased need to diversify the industry;
- There is limited knowledge of potential resources;
- Accessing financial resources is difficult;
- Human and financial resources are limited.

Sustained fisheries development will require action in the following areas:

- Improving national fisheries management framework, through training in fisheries management planning, compliance and conservation;
- Increasing accessibility to varied markets through the diversification and improved quality of fisheries products;
- Increasing the overall production by the fisheries sector; and
- Facilitating regional action by inter alia defining mechanisms for the exploitation and management of shared resources and outlining roles and responsibilities of various regional and international agencies.

The following actions are already underway:

- The Caribbean Law Institute (CLI) is in the process of developing legislative apparatus in relation to the integrated management of fisheries;
- UNDP has held Workshops to promote a methodology for resource management in the Caribbean Sea;
- The OECS Secretariat has developed a Fisheries Development Strategy. Financial support is being sought for its implementation.

3.5 Freshwater resources

As has been noted earlier, the emerging developments in international markets, fuelled by globalisation and the recent WTO ruling on preferential access for agricultural commodities, present serious threats, while also offering new opportunities for Caribbean economies. However, those sectors that are widely regarded as providing opportunities for investment and growth, such as agriculture and tourism, face a critical constraint to their sustained development. That constraint is water.

In all Caribbean SIDS, rainfall is the primary source of water, yielding three basic water resources types: direct rain, surface water and ground water. In Antigua and Barbuda, the Bahamas, Barbados, Saint Lucia and Trinidad and Tobago, desalination is used to augment the water supply. In the Eastern Caribbean States, surface water is the main water type and exhibits variability in flow. In the dry season, yields decline significantly, with livestock and farm irrigation being the main casualties. In Belize, a high incidence of cholera and diarrhoeal diseases is reported to be associated with the domestic supply, while in Jamaica, discharges from the rum and bauxite/alumina industries are reported to have polluted significant surface and groundwater resources. Saline intrusion is a major constraint to water availability in Antigua and Barbuda as well as in Barbados.

Groundwater availability varies significantly from country to country. In some countries, such as Antigua and Barbuda, Grenada, Saint Lucia, Saint Vincent and the

Grenadines, no groundwater is utilized.²⁵ On the other extreme, all freshwater in the Bahamas and Barbados is in the form of groundwater within limestone aquifers. The Bahamas has no surface water.²⁶

Trinidad and Tobago has both surface water and groundwater available. In the past, saltwater intrusion has been a problem as a result of over-exploitation of groundwater resources. The government has responded by limiting abstraction in order to permit recovery. Additionally, measures are now in place to avoid this problem in the future, including safe-yield amounts, the siting of wells farther inland and frequent monitoring.²⁷

Text Box 3

Cuba's Water Resources Monitoring Network

Cuba has developed a monitoring system for its groundwater resources, which include three nationwide networks: the Systematic Observation Network for Groundwater (Red de Observación Sistemática de los Niveles de las Aguas Subterráneas), the Network for Observation of Hydrochemical and Bacteriological Composition (Red de Observaciones de la Composición Hidroquímica y Bacteriológica), and the National Basic Hydrogeological Network (Red Básica Nacional Hidrogeológica). The first two networks monitor water quality and, specifically, salinity. The hydrogeological network is made up of over 1,900 wells (observation stations) and monitors their status regularly. Some of the other countries in the region do not have any sort of monitoring or evaluation system established. This is partly because they may not be exploiting their groundwater resource.

Apart from Barbados, Cuba, Jamaica and Trinidad and Tobago, no other Caribbean SIDS has completed a full assessment of its water resources. Jamaica has the most complete assessment, with an inventory of water availability, as well as present and projected demands.

Notwithstanding these deficiencies, all Caribbean SIDS are moving to expand their agriculture and tourism sectors, while improving the delivery of water to the local population.

If this goal is to be achieved, Caribbean SIDS would need to urgently address the following deficiencies:

(a) *Fragmentation in water resources management*: in all countries, there are multiple institutions involved in water resources management and conservation.

²⁵ St. Vincent and the Grenadines National Report, p. 10.

²⁶ The Bahamas National Report, p. 10.

²⁷ Trinidad and Tobago National Report, p. 32.

Information provided suggests that the number of national institutions vary from 9 to 23. Moreover there is no mechanism to facilitate integration of the respective priority actions, or to predict their individual or combined impact on development planning for water resources management;

(b) *Inadequate data collection*: The paucity of information on water resources and on water demand and supply, points to weaknesses in data-gathering and information generation;

(c) *Poor inventory of water resources*: Adequate assessment of the nature and distribution of water resources, including current and future demands, are essential to effective management;

(d) *Weak technical capabilities*: Human resource development is a major concern in the water sector. Training and research programmes at the tertiary level are lacking;

(e) *Failure to treat water as an economic good*: Water rights, water markets and pricing are not used to improve water resources management and to ensure that water is treated as an economic good. Issues relating to reuse, recycling and conservation are addressed in only a few of the States and on a very limited basis;

(f) *Absence of participatory and integrated approaches to planning*: There is a general lack of participatory and integrated approaches to policy formulation for water resources management in general and watershed management in particular. Stakeholder participation is not widely practiced in the design, organization and management of these resources, in order to enhance ownership and sustainability;

(g) *Lack of interaction between freshwater, groundwater and coastal waters*: All but three Caribbean SIDS are Island Systems. In addition, Antigua and Barbuda, the Bahamas, Guyana and Jamaica are experiencing saltwater intrusion into their freshwater systems. Yet the coastal waters are not included in the planning processes for freshwater management.

3.5.1 Threats to sustainability of water resources

The major threats to the management of watersheds and freshwater ecosystems are primarily related to supply/demand dynamics, land-use patterns, pollution, and the competing interests of different stakeholder groups. These threats are not mutually exclusive. As watersheds and ecosystems demand an integrated and holistic approach to their management, the threats must necessarily be viewed in like manner.

3.5.1.1. Supply and demand dynamics

Due to economic and demographic changes, demand for water resources is increasing rapidly. Some Caribbean SIDS still have more than sufficient available water resources but find that their infrastructure capacity is inadequate to provide the necessary services. Others simply lack the necessary water resources.

Exacerbating this issue is the structure of water tariffs and rates. For the most part, there is no incentive for consumers to use water efficiently. For example, in Barbados, all metered customers must pay a minimum charge. Accordingly, customers within this category end up paying for water they may not have used. Fixed-rate (un-metered) customers also have no incentive to conserve because they pay the same amount regardless of the volume of water used.²⁸ Additionally, many countries have noted that water charges generally do not cover the base cost of the necessary construction and maintenance of infrastructure and the base environmental protection/conservation costs. Essentially, the government subsidizes water use. This, in turn, creates unsustainable market conditions and significant destruction of the environment.

In particular, the agricultural sector is stressing the system with its increasing demand for water for irrigation. Increasingly, both small and large-scale irrigation practices are being used. In Barbados, irrigation is the second highest water consumer, after domestic use, amounting to 16.2 million cubic metres a year. This amount has been forecast to increase by 15 to 20 per cent over the next 10 to 15 years if export markets can be gained and by about 8 per cent, if only local markets are supplied.

The issue of food security as it relates to irrigation is also articulated in the National Report of Saint Vincent and the Grenadines. It reads, "The system is being used by the banana industry to maintain fruit quality and quantity during the dry season, thus maintaining a place in the European market. The irrigation system is just emerging, hence its demand for water is still growing. Currently the system supports 1,200 acres, with plans to extend to 2,000 acres by 2001. This acreage is expected to utilize most of the available dry season river flow in the country."²⁹ There are plans to improve extension services available to farmers regarding rain-fed agriculture. This is a deliberate attempt on the part of the Government to encourage crop diversification, improve food security and lessen the increasing water demand by the agricultural industry.

Another concern regarding irrigation was highlighted by Barbados, where there is also a growing demand for water, due to the development of golf courses. It is estimated that, given current plans, the demand for irrigation water for golf courses will increase to five times its present level.³⁰ Supply and demand are also closely related to the tourism

²⁸ Barbados National Report, p. 16.

²⁹ St. Vincent and the Grenadines' National Report, p. 5.

³⁰ Barbados National Report, p. 15.

industry. Other issues pertaining to that sector will be addressed below in the section dedicated to *tourism resources*.

It is also important to note that the interests of stakeholders often conflict when it comes to the use of water resources, watersheds and freshwater ecosystems. For example, a particular agricultural stakeholder may promote the diversion of a stream for irrigation reasons, whereas hydro-electricity stakeholders might require that flow for a dam. Or, for ecological reasons, a decision may be made to keep the public out of a particular watershed, whereas, simultaneously, the population might assume that it is their right, as citizens, to use it.

As the availability and use of these resources vary significantly country to country, so does the approach to their conservation. Some countries have reported a sense of complacency and very little acceptance of water reuse, recycling, and conservation. Others encourage conservation through their pricing schemes, licensing fees for drilling and systematic control of the resource.

3.5.1.2. Land use

Improper land use is one of the factors that most strongly affects the health of freshwater ecosystems and watersheds in the region. As the proposed Land Policy document of Jamaica points out, there is a *“direct relationship between the use of land for domestic, commercial, industrial or agricultural purposes, the generation of waste by these uses and the impact on the quality of both surface and groundwater resources.”*³¹

In most countries, land-clearing practices, inefficient and unsustainable irrigation and the use of agrochemicals in the agricultural sector are causing significant damage. Within the domestic sector, land clearing and construction on previously uninhabited land are producing sedimentation, deforestation, and pollution. Ecotourism is also not a benign activity. Nature walks through watersheds are resulting in sedimentation, erosion, and pollution. Some nations also report problems related to industrial effluents and their impact on freshwater resources, although, for the most part, this appears to be more significant in the larger islands.

Within the agricultural sector, land use presents potential conflicts, since it involves issues of land tenure, traditional use, and economic livelihood. Some farmers are often not using sustainable farming techniques. This may be due to insecurity regarding land tenure, limited economic resources, or lack of knowledge of different farming techniques. The Dominican Republic has noted an increase in the use of agro-chemicals over the last decade because of reduced soil fertility and increased resistance to pests and diseases.³² Also contributing to this development is the growing use of low-lying wetlands for rice cultivation, which brings with it, increased pesticide use. Saint Vincent

³¹ Jamaica National Report, p. 11.

³² Dominican Republic National Report, p. 14.

and the Grenadines reports that poorer farmers are increasingly deforesting protected areas or planting crops on marginal lands because they have been driven off farmland that they have traditionally cultivated.

Floods and drought are obviously of concern, and their impact is often exacerbated by unsustainable land-use patterns. Jamaica and Saint Lucia have experienced severe floods over the past 10 years. Droughts occur periodically throughout the region, Antigua and Barbuda has noted that animal grazing on sparse vegetation during droughts exposes topsoil to the elements. Later, during periods of precipitation, these areas are more prone to erosion.³³

3.5.1.3. Climate change and natural disasters

While Caribbean countries have not yet been able to measure whether the sea level has risen as a result of global climate change, they are nonetheless examining the possible scenarios and the corresponding methods of dealing with them. The national report of Trinidad and Tobago outlines the potential impact in the various sectors. This analysis is consistent with the expectations of the other Caribbean nations.

National disasters constitute a serious issue for the Caribbean. The region is routinely hit by hurricanes. Less frequent, but still damaging, are tornadoes, oil spills, earthquakes and volcanic eruptions. These events often bring about flooding and landslides due to anthropogenic activities, such as deforestation and construction in vulnerable areas. Owing to the frequency of hazards, and the extensive damage caused, many countries have focused their efforts on post-disaster response, rather than on mitigation. Not all countries have early-warning systems in operation, nor do all countries have disaster management plans.

Because of its petroleum-based industry, Trinidad and Tobago continues to have a higher risk of occurrence of oil spills both inland and within its coastal and marine regions. In fact, serious spills have continued to occur up to as recent as the year 2000. Such spills have had short term damaging impacts on the coastlines, particularly within the Gulf of Paria. The beaches of Vessigny, La Brea and Mayaro in the south of Trinidad continue to be affected by the presence of petroleum-based residues emanating from the nearby oil industries and oil tankers.³⁴

3.5.1.4. Transboundary threats

The only countries that experience transboundary threats in their freshwater ecosystems and watersheds are the Dominican Republic and Haiti. Four watersheds are shared by these countries, which share the island of Hispaniola. On the Dominican side, the principal threat to these watersheds is the indiscriminate exploitation of natural

³³ Antigua and Barbuda National Report, p. 4.

³⁴ Trinidad and Tobago National Report, p. 32.

resources by Haitians who are reportedly in the area illegally. Specifically mentioned are indiscriminate fishing practices, which have reportedly affected 15 species.³⁵

3.5.1.5. Pollution

Land-based pollution is a noteworthy problem in the Caribbean region emerging from activities in all sectors. In the agricultural sector it is primarily due to agro-chemical leaching, direct agro-chemical influx from aerial spraying and the indiscriminate and improper disposal of solid waste. Another source of agricultural pollution is waste from agricultural production.³⁶ St. Kitts and Nevis also reports a problem of pollution from the agricultural industry, partly because a significant water source is located at a lower elevation than agricultural activities.³⁷

The industrial sector contributes to the problem through the discharge of liquid waste. Countries indicate that, often, their industrial sectors discharge effluents directly into rivers and/or store them in unlined holding ponds. Jamaica also contends with the problem of the “*discharge of industrial effluent into sinkholes, resulting in the rapid movement of waste towards local aquifers and nearby springs.*”³⁸ Industrial pollution is a particularly pressing problem for Trinidad and Tobago, given its high level of industrialization, in comparison with its neighbours. Its industries range from sugar and oil refining, rum distillation, manufacturing of petro-chemicals, paint and metal finishing, and agroprocessing. The impact of industrial effluents on the water resources is predominant along the foothills of the Northern Range and the western coast of Trinidad. Industrial activity in Tobago is relatively modest, being concentrated in the south-west part of the island. Effluents from oil and sugar cane refining particularly affect the rivers in south Trinidad. Other areas in the country are also affected by petroleum products, which are discharged into the water courses from leaking tanks, washings, and improper disposal of waste oils.³⁹

Waste from households continues to be a problem. Throughout the region, the countries lack sufficient solid-waste-collection systems and wastewater-treatment systems. As a result, many citizens inappropriately dispose of their waste in gullies and along riverbanks, thereby polluting rivers, streams, and ultimately the coastal waters into which they drain.⁴⁰

All these pollution problems are compounded by sedimentation and erosion, due to deforestation. Siltation is so significant that, often, water for domestic use is heavily

³⁵ Dominican Republic National Report, p. 11.

³⁶ Dominican Republic National Report, pp. 13, 14.

³⁷ St. Kitts and Nevis National Report, p. 10.

³⁸ Jamaica National Report, p. 14.

³⁹ Trinidad and Tobago National Report, p. 37.

⁴⁰ Jamaica National Report, p. 14.

laden with sediment, despite having passed through the treatment processes. Additionally, as *“a further consequence of the erosion of this thin layer of soil cover, there is also a reduction in the pollution attenuation capacity of the watershed, with potential negative impact on groundwater quality.”*⁴¹

3.5.1.6 Tourism impacts

The tourist industry is having a significant impact on freshwater resources, for a variety of reasons. Often, when large hotels or golf courses are developed, vegetation is cleared from the area, which can lead to flooding, soil erosion, destruction of habitat, and poor aquifer recharge. The high demand for freshwater contributes to over-extraction from aquifers and the rapid depletion of surface resources. Waste produced by the tourist industry can contaminate the watershed. The Dominican Republic groups the principal impacts of tourism on watersheds into four categories: (a) changes in natural drainage patterns due to reductions in vegetation and surface absorption; (b) excessive use of water and other resources; (c) pollution of watersheds; and (d) transformation of land and water habitats.⁴²

Watersheds are also being damaged by the emerging ecotourism industry. Tour operators are now leading groups through forest reserves. The trails that are being cut for mountain biking and hiking are causing additional erosion, resulting in sedimentation. Additionally, many groups leave waste behind in the forest. The Jamaica National Report explains, *“The more recent focus on tourism based on natural ecological systems such as wetlands, natural forests and geological features such as the Cockpit Country requires a system of control. The number of persons accessing these natural environments and the types of activities, which are allowed within these natural environments, if not regulated, may result in the gradual or rapid destruction of these natural environments. The challenge therefore is to meet the need to generate foreign exchange and increase economic activity throughout Jamaica, with the need to maintain the integrity of these environments, through carefully considered guidelines and restrictions on the use of these ecosystems.”*⁴³

3.5.1.7 Health impacts

Caribbean SIDS have expressed serious concerns regarding water quality and its relation to the health of their populations. Cuba reports that its health problems related to water supply primarily affect the rural population. In order to address and combat the related illnesses in the rural population, the National Institute of Water Resources, together with the United Nations Children’s Fund (UNICEF), is constructing aqueducts and basic sanitation projects, with a view to providing all rural communities with populations of over 300 people, with access to water.

⁴¹ Barbados National Report, p. 20.

⁴² Dominican Republic National Report, p. 18.

⁴³ Jamaica National Report, p. 15.

3.5.2 *Data, information management and research*

In many countries, the data information management and research on water resources are carried out in a fragmented manner by a variety of agencies and offices. The data are often not easily accessible or well organized. This appears to be caused, principally, by inadequate human and institutional capacity, including substandard or insufficient equipment, lack of training, poor organization, high levels of dependency on outside consultants and inadequate funding.

Additional research and data interests and needs include:

- Alternative treatments and reuse of waste water;
- Assessment of effectiveness of zoning policy and restrictions;
- Climate and agro-climate studies;
- Conservation of biological diversity;
- Design and application of a GIS for watershed management;
- Determination of hydrogeological parameters;
- Early alert system for droughts;
- Environmental education;
- Evaluation of potential impact of climate change on watersheds and water resources;
- Identification and quantification of spring sources;
- Impact of agriculture and other land uses on water quality;
- Impact of brackish water abstractions on freshwater lenses;
- Modelling of the groundwater systems;
- Routine measurement of sediment loads in primary river systems;
- Soil conservation, management, improvement;
- Soil management;
- Use and management of natural resources on a watershed basis.

3.5.3 *Stakeholder participation/awareness and education*

The countries consistently report an increase in stakeholder participation in regard to freshwater resources. Activities promoting this management approach include:

- Agricultural extension courses and training on sustainable farming practices and other technical workshops;
- Media campaigns and regular coverage;
- Annual exhibitions;
- Production and distribution of brochures and pamphlets;
- Use of national television stations for broadcasting short educational films on watershed/coastal area management;
- Educational program for students;
- Teacher training;
- Public involvement in environmental impact assessments.

Saint Vincent and the Grenadines provided examples of stakeholder participation in watershed rehabilitation projects:

Text Box 4

Examples of Stakeholder Participation in Saint Vincent and the Grenadines

The Marriaqua watershed rehabilitation project is a case in point. This project, which is supported by the NRMU, is designed to involve the local community in managing its watershed. The watershed has been negatively impacted by encroachment. Now, through the efforts of the Forestry Department, a management team has been put in place. The core group comprises farmers, community members, Forestry Officers and Officers from the CWSA. The group has so far conducted two community consultations and has several other activities planned for 2001. Forestry officers from Saint Lucia and Grenada recently visited the area and spoke with the management team. This activity is being seen as a model for community watershed management in the subregion.

Similar activities have been conducted in the past, with varying degrees of success but records of these exist mainly in the minds of participants. A good example is the Zion Hill project in Barrouallie. Here, a denuded hillside overlooking the town was converted to an agro-forest through the effort of the extension officer and some community members. The project encountered resistance in many forms but, today, the green hillside is testimony of the success, however, there are no data on this project. The point is thus made that public awareness programmes are not sufficiently institutionalized bearing in mind the contribution they have made to environmental development and sustainability.

Some Caribbean SIDS place a high premium on consultations with women and women's groups. Cuba, for example, considers women as integral stakeholders in the watersheds. The Cuba Report acknowledges the need to remain vigilant in ensuring female participation in the management of watersheds, which can be done through training, education, employment opportunities and incorporation of the tenets of sustainable development in the mountainous region.⁴⁴ St. Kitts and Nevis, on the other hand, cited the treacherous location of watersheds as an impediment to female input into their management.⁴⁵

⁴⁴ Cuba National Report, p. 73.

⁴⁵ St. Kitts and Nevis National Report, p. 22.

3.5.4 *Institutional frameworks*

The above weaknesses cited above, reinforce the need in the water resources sector, for an adequately resourced and properly mandated regional organization to:

- Design efficient and cost effective projects and programmes that will help build national capacity in Water Resources Management (WRM);
- Coordinate the management of all elements of programming for an integrated approach to WRM, especially resource mobilisation, implementation, monitoring and evaluation aspects;
- Interact with national governments and regional and international institutions on WRM-related issues;

A fair amount of work is being done CEHI, which was designated by Caribbean Ministers of the Environment, as “*Lead Agency*” for WRM under the SIDS POA. The Institute has been undertaking extensive research on water quality. World Health Organization (WHO) Guidelines for Safe Recreational Water Environments have recently been released. Regional workshops have been convened on certification of laboratories on micro-biological testing, and a Global Drinking and Sanitation Survey is being conducted.

CEHI and PAHO through the Pan American Centre for Sanitary Engineering and Environmental Sciences (CEPIS) are collaborating to further the accreditation of laboratories within CARICOM Member States. This is being done through a Project entitled: *Monitoring and Surveillance in Relation to Water Quality*. These efforts will build on the work already conducted jointly and would also involve the Canadian Association of Environmental Accredited Laboratories (CAEAL)

Other initiatives being pursued by CEHI include:

- Strengthening of Environmental Health Units in collaboration with PAHO;
- Implementation of Waste Minimisation/Reduction Projects with the United Nations Industrial Development Organization (UNIDO) Cleaner Production and Environmental Management Branch;
- Establishment of a Caribbean Network for Environmental Compliance and Enforcement (CARIBINECE) with UNEP;
- Establishment of a Workers Health Surveillance System with PAHO and the International Labour Organisation (ILO);
- Preparation of Environmental Health Status Report for the Caribbean with PAHO, the Caribbean Epidemiology Centre (CAREC) and CEPIS;
- Development of Environmental Health Indicators for Sustainable Development with CAREC.

CEHI has secured Block B funding from the GEF for the design of an Integrated Watershed and Coastal Area Management in CARICOM SIDS, Haiti, Cuba and the Dominican Republic. The main objective of this project is to assist participating countries in improving watershed and coastal zone management practices in support of sustainable development. Focal areas include:

- Integration and coordination of water resources management;
- Data collection and information management;
- Education and training;
- Research and development, including the identification of strategies to determine the social, economic and ecological value of water;
- Land use;
- Public education and community awareness;
- Networking.

3. 6. Land resources

Generally, the approach to land management in Caribbean SIDS still leaves much to be desired. Many governments including (Saint Lucia, Jamaica, Trinidad and Tobago) have introduced Land Conservation Boards. Some have introduced programmes for the rationalisation of unplanned settlements, while others have established policies mandating the use of environmental impact assessments (EIAs) as part of the process for appraising development projects. The use of Geographic Information Systems as a planning tool, is steadily gaining popularity among the countries.

Saint Lucia is seeking to strengthen the management of its land resources. With technical assistance provided through the Subregional Headquarters of ECLAC for the Caribbean and financial assistance from loan and grant sources, the following actions are being undertaken:

(a) The formulation of a National Land, Housing and Shelter Policy and Strategy. This initiative is benefiting from broad stakeholder participation and involvement. It is anticipated that the policy will establish a framework for decision-making by agencies engaged in land use planning and development control. The policy and strategy will also serve as a guide to those agencies engaged in the design and delivery of housing and shelter programmes.

(b) The drafting of a new Physical Planning and Development Control Act, which will, inter alia, make EIAs mandatory for various classes of development;

(c) The design and implementation of a Programme for the Rationalisation of Unplanned Developments (PROUD). This initiative aims at the general improvement of squatter settlements, primarily in the urban areas. A feature of this Programme is that it

allows those squatters with prescription rights over lands, which they occupy, to own these lands, provided that the lands are not in critical areas. The Programme also allows for land exchanges, as well as for outright purchase of lands, by squatters having the means to do so.

The foundation of Barbados' management of its land resources is provided by the new Physical Development Plan and the Environmental and Natural Resources Management Plan. These instruments were generated with a view to infusing future national progress and development with an awareness of, and consideration for, the need to foster sustainable national development.

Barbados is a member of the WTO and is expected to harmonise national standards with international standards and also to upgrade export certification procedures and laboratory facilities in support of export certification. From this standpoint, the uncontrolled use of pesticides needs to be urgently addressed. At present, there is no system to determine whether the health of the population is being affected by pesticide residues in food that is being consumed. Current legislation, though comprehensive, is not supported by additionally required enactments, such as, might pertain to:

- Controlling the use of pesticides in agriculture, generally, or on particular crops or pests;
- Controlling the use of pesticides on produce during its storage and transportation;
- Prescribing the permissible levels of any pesticide in any particular kind of produce at the time of marketing.

Text Box 5

"Land for the Landless Project" in Barbados

This Project seeks to provide farmers with land, irrigation facilities and capital. Additionally, the project, which is being implemented by the island's Rural Development Commission, is preparing small farmers for self-management, through training in the areas of financial management, farm management and food preservation and processing. In conjunction with this training programme, the Government is decentralising its marketing and distribution systems for local goods and services, through the establishment of community market facilities.

As part of its housing strategy and plan, the Government of Barbados has established a General Workers Housing Loan Scheme and a Housing Credit Fund, to encourage low-income earners to acquire their own homes. A 100 per cent mortgage programme is also available to low-income earners, purchasing house spots, terraced units and houses from the National Housing Corporation, under the General Workers Loan Scheme.

An important regional initiative is the development of the concept of Island Systems Management (ISM).

Text Box 6

The Island Systems Management (ISM) Concept

The ISM concept was developed by the OECS/NRMU and is intended to operate as a framework and process for integrated development. It is being piloted in St. Lucia, Antigua and Barbuda, St. Kitts and Nevis and Dominica. Significant progress has been made with the process in St. Lucia which, under the Ministry of Planning is establishing a framework for the utilization of *Integrated Development Planning* as a tool for the operationalization of the Island Systems Management Approach. This approach seeks to involve the participation of all stakeholders and can form an effective mechanism for addressing the sustainable development agenda in the OECS countries. There has been no significant movement with this activity in the other three island states.

Despite these laudable developments, comprehensive zoning plans are non-existent in many Caribbean SIDS. Where such plans do exist, they reflect use classifications based mainly on soil type. The requirements of resource management and sustainable land use are not sufficiently being taken into account. Some countries like Saint Lucia, for example, have, at great expense, commissioned comprehensive land use zoning plans, but these plans have not been implemented because of high compensation costs which governments will have to bear, especially where the value of land depreciates as a result of a particular zoning regime.

Unplanned physical development is still the norm in many Caribbean SIDS with clear, negative, environmental impacts, including: soil erosion, desertification, reduced land availability for cultivation, siltation of water bodies, death of sensitive marine and freshwater resources and destruction of watersheds.

Another failing of the land management system in the Caribbean, is the low regard for regional planning at the national level. Where districts have been created, these have been influenced more by electoral and administrative considerations, rather than the characteristics of space. Consequently, the tendency is to apply policies "*across the board*" without due consideration given to the economic and environmental impacts of these policies on a particular district. It is not uncommon to find the same agricultural policies being applied equally to flat and hilly areas.

The situation warrants the following critical actions at the national and regional levels respectively:

At the national level:

- The introduction of land reform programmes as a means of ensuring more equitable access to and rational use of land resources;
- The development of procedural and legislative action to ensure the integration of EIAs in the decision-making process;
- The design and implementation of systems plans for parks and protected areas;
- The introduction of proper land capability assessment programmes;
- The control of location of human settlements in disaster-prone and important natural areas;
- The use of appropriate technology in flood control, soil conservation and stabilisation and irrigation schemes;
- The introduction of a phased programme of restoration of derelict/unproductive land through reforestation, flood control measures, flood plain management, changes in cultivation patterns and methods;
- Strengthening the capacity of Physical Planning Departments/Development Control Authorities.

At the regional level:

- The implementation of human settlement projects emphasising community-based activities;
- The formulation of standards for agro-chemical use;
- The design of model legislation and regulations on resource management pertaining to land;
- Capacity building in the use of satellite technology in land use planning and management.

3.7 Energy resources

The energy sector in Caribbean SIDS is very similar, yet diverse. In nearly all the islands, the dominant source of energy is imported fossil fuel. The diversity lies in the fact that only Barbados, Cuba and Trinidad and Tobago produce oil and gas, while only Barbados, Cuba, Dominica, the Dominican Republic and Saint Vincent and the Grenadines have significant amounts of power generated from geothermal, solar, wind, wood and waste products.

The dependence on fossil has not only deepened the vulnerability of the region to global fuel price increases, but also it has placed a heavy demand on precious foreign

exchange reserves - a key macroeconomic determinant for Caribbean SIDS. Current trends give little hope that energy production costs will stabilize or decrease, in the short to medium term. Also, indications are that consumption will also increase, as the expansion of urbanization and the growth in industry and hospitality services continue to fuel an increased demand, for electric power in homes and in the tourism and transportation sectors.

The dramatic increase in electricity consumption is vividly depicted in Saint Lucia and the Dominican Republic. Between 1995 and 1999, demand in Saint Lucia increased from an average of 16.33 megawatts to 21.56 megawatts and is projected to increase to 33.3 megawatts by 2010. Peak power demand is approximately 30 per cent above average. The consumption of diesel for electricity generation is expected to move from 411,457 barrels of diesel fuel in 2000 to 604,343 barrels in 2010. The consumption of diesel and gasoline in the transportation sector is also expected to rise from 82,214 barrels of diesel and 338,454 barrels of gasoline in 1999 to 148,380 barrels of diesel and 610,841 barrels of gasoline in 2010.

Demand for electricity in the Dominican Republic is growing at a rate of 7 per cent per year. The Government has sought to alleviate shortages by buying power from private producers and privatising power plants. However, privatisation has so far not resolved the fundamental challenge of assuring a steady supply of electricity to the population

Ever since the energy crisis of the 1970s, Caribbean SIDS have been giving increasing attention to the development of renewable energy sources. During the past two decades, over 120 projects and studies, estimated at US\$30m., have been undertaken on various aspects of renewable energy. According to the data available, solar energy studies account for some 35 per cent, biomass 35 per cent, hydropower 18 per cent, wind 8 per cent and geothermal projects 3 per cent of the total⁴⁶.

Two countries that have given strong attention to encouraging energy efficiency and conservation, as well as the use of renewable sources of energy development, are Barbados and Saint Lucia. Barbados now has a significant number of solar water heaters both in residential and hotel properties, partly due to government's fiscal incentives. Also, solar driers have been profitably used, for example, in drying onions, hay and plastics in Antigua and Barbuda, Barbados and Trinidad and Tobago, respectively. Financial support for these research projects was obtained from international funding agencies. The sugar factories, which burn bagasse for processing and electricity, contribute approximately 15–18 per cent of Barbados' primary energy supply. The power company is interested in photovoltaic (PV) energy which is also used to power air conditioners and ice machines, as well as for lighting at some natural touristic attractions.

⁴⁶ Presentation by Mona Whyte to Regional Symposium on Energy Management and energy Efficiency - February 2001

The intention is that Barbados will have 40 per cent renewable energy capability by the year 2010 through bagasse co-generation, wind turbine farms, waste combustion, ocean thermal energy conversion, distributed PV and the production of hydrogen from renewable energy to power fuel cell vehicles.

The Saint Lucia government has, over the last few years, pursued the following initiatives:

- The removal of taxes and duties on renewable energy technologies;
- The removal of consumption taxes on energy efficient compact fluorescent lamps;
- The promotion of Solar Photovoltaic system as a demonstration unit in a remotely located school (Bouton) in the southwest of the island;
- The removal of consumption taxes on table top stoves in order to discourage wood burning in rural poor households;
- The development of a wind farm capable of adding 13.5 megawatts to the national electricity grid;
- The resumption of geothermal explorations on the island.

The private sector has also stepped up its profile in energy conservation schemes. Here, the efforts of the Caribbean Alliance for Sustainable Tourism (CAST) are particularly noteworthy⁴⁷. CAST's main interest in energy is driven by the exceedingly high cost of energy, which ranks as the second highest operational cost for a hotel. A study undertaken in Jamaica approximately three years ago, indicated that the main user of electrical energy in a typical hotel is air conditioning, followed by artificial lighting. Using the benchmarks set by the International Hotel Environment Initiative (IHEI) which are based on kilowatt hours per metre squared (kwh/m²), it was determined that for hotels under 75 rooms - which account for approximately 60 per cent of the hotel base in the Caribbean - the most efficient hotels used 12 kwh/m² per guest night. For those hotels larger than 75 rooms, the most efficient ones used 16 kwh/m² per guest night. CAST has been assisting hotels in reducing their energy consumption working with hotels by conducting energy audits of hotel plants. It has also been a leading advocate for:

- Incentives for using energy efficient technology;
- Attractive rates of interest to purchase efficient technology;
- Development of standards and building codes.

⁴⁷ CAST is a fully owned subsidiary of the Caribbean Hotel Association. Its mission is to enhance the region's hotel and tourism operators by providing high quality education and training related to sustainable tourism.

Text Box 7
**Energy Conservation with the Hotel Sector: Morgan Bay Wyndham Hotel
 in Saint Lucia**

The Morgan Bay Wyndham Hotel in Saint Lucia has moved aggressively to address its high energy consumption. About two years ago, an audit and gap-analysis were undertaken. These analyses indicated that there were a number of opportunities to make minor changes, which would achieve energy savings.

In terms of hot water heating, the situation existed whereby every two guest rooms used 2.5 kilowatt water heaters, resulting in extremely high electricity usage. Therefore, throughout 2001, a conversion to solar thermal is being made which is expected to generate savings of up to 20 per cent of the hotel's entire electricity bill. With respect to boilers providing the hot water needs of the kitchen, the flat roof was found to offer an ideal opportunity to install an ITS solar system. This resulted in the ability to switch off one boiler completely and hence generate significant savings. With regard to electrical energy, many of the compressors of the refrigeration unit in the hotel's kitchen were over 10 years old. More highly efficient units were bought and changed from a two-speed pump system to one of greater capacity, allowing it to be shut down for six hours every night. The low efficiency 15,000 BTU air conditioning units were replaced with 12,000 BTU units obtaining the same high cooling environment in every room.

Despite these investments, except for a few isolated cases, the use of solar energy in Barbados for example, the impact of renewable energy on the economic development of the respective countries within the region continues to be minimal.

OECS member States are seeking to address this. Acting on a mandate from the OECS Environmental Policy Committee, the Natural Resources Management Unit, with assistance from CIDA, convened a Regional Symposium on Energy Management and Energy Efficiency in Saint Lucia in February 2001. The Symposium recommended, inter alia, that:

- Attention be paid to technology transfer methodologies, such that appropriate technologies which are developed or adapted for the sub-region will find broad acceptance amongst stakeholders;
- In developing and adapting technologies, a primary objective should be the development of new employment and business opportunities within the energy sector, for the people of the OECS;
- As far as possible, mature technologies should be chosen over experimental ones, such that the technology's reliability and cost effectiveness are assured;
- An action plan should be developed, which clearly outlines the energy issues facing the OECS and the measures needed to resolve them;
- Energy use in the transportation sector requires addressing. Strategies are required at the national level to rationalise and optimise the use of hydrocarbon fuels. Issues in this regard include the import of second-hand or refurbished fuel inefficient vehicles and the need to promote the use of more fuel efficient vehicles;

- The OECS Secretariat develop a harmonised framework for Energy Management and Energy Efficiency Policy that could then be adopted at the national level by OECS countries. The required policy should address institutional restructuring in order to ensure a reliable supply of energy within a framework that establishes, and creates opportunities for: (i) energy efficiency; (ii) flexible options for the generation and distribution of electricity; (iii) application of renewable energy; (iv) more effective regulation of the energy sector; and (v) fiscal and other incentives for application of renewable energy and energy efficient technologies;
- All institutional restructuring initiatives should include consideration of the sustainability, financial and otherwise, of those institutions independent of donor funding;
- Public awareness activities need to be linked to policy, institutional and legislative frameworks, particularly those that reduce import tariffs for renewable energy and energy efficient equipment and through programmes such as "green certification" initiatives.

Other renewable energy and energy efficiency initiatives in Caribbean SIDS include:

(a) Renewable Energy Initiative of the Americas (REIA)

This is an initiative being undertaken by the OAS through the Unit for Sustainable Energy and the Environment, which involves a number of areas outside energy. Currently, REIA is engaged in the services aspects of renewable energy especially on clean energy technology and the provision of regulatory services between the private and public sectors. REIA seeks to respond to the needs of member countries through partnerships with organizations. The Sustainable Energy Caribbean Islands Initiative is one such activity in which REIA is currently engaged, in collaboration with the Climate Institute, WINROCK International, OAS and other organizations. Saint Lucia is being assisted with the development of a sustainable energy plan. In the Dominican Republic, REIA is involved in privatisation; in assessing the impact of clean energy; and in providing alternatives for the incorporation of clean energy technologies. In this area of policy and regulatory reform, REIA has prepared a Renewable Energy Policy Manual. REIA is working specifically with the governments of Guyana and Suriname to develop proposals for rural electrification.

(b) UNDP/GEF/OLADE project on the development of energy efficiency in the Caribbean.

Caribbean SIDS are pinning their hopes on the outcome of this project which is aimed at dismantling barriers to energy efficiency in the electric energy sector of 16 Caribbean countries: nine Latin American Energy Organization (OLADE) member countries and seven non-member countries. Taking into account the current situation of the electric power sector, the CREDP seeks to tap the subsector's potential to improve efficiency in electric power distribution and use. It is perceived that the project's activities should focus on the region's electric power distribution utilities, because they would be able to provide the means to gain access to the consumers of electric power service.

The project is inspired by the results of a survey of barriers to renewable energy technologies in the Caribbean, which was jointly undertaken in October 1997, UWICED; the UWI Centre for Resource Management and Environment Studies (CERMES); the Scientific Research Council's (SRC) and the Caribbean Energy Information System (CEIS)⁴⁸. The Survey results pointed to a number of barriers to renewable development and stressed issues related to policy, capacity, awareness and financing, as the major inhibiting factors.

As a result of the findings of the 1997 Survey, a UNDP/GEF/PDF "Block B" project on the Caribbean Renewable Energy Development (CREDP) was developed to investigate the removal of barriers to renewable energy through broad-based information gathering, analysis and documentation of the natural energy resources of each Caribbean island. This was seen as a feasibility phase and as a precursor to a much larger project for the region that would enhance understanding of the barriers to renewable energy development, which had existed.

(c) Clean Development Mechanism⁴⁹

The Clean Development Mechanism (CDM) is a proposed method by which developing countries could benefit by selling carbon dioxide credits from projects that achieve greenhouse gas reduction. The overall objective of this Mechanism or Project is to examine regional capacity building in the Caribbean, in order to enable the region to develop regional capacity on CDM and related areas.

The goal, from a regional standpoint, was to simplify and renew projects, attract investment and achieve development. Work in this area focused mainly on plant filter

⁴⁸ The participating countries, included Antigua and Barbuda, Barbados, The Bahamas, Belize, British Virgin Islands, Cuba, Dominica, Guyana, Grenada, Jamaica, Montserrat, St. Kitts and Nevis, St. Vincent and the Grenadines, St. Lucia, Suriname, Trinidad and Tobago.

⁴⁹ Extracted from Paper presented by Mona Whyte; Caribbean Energy Information System to Regional Symposium on Energy Management and Energy Efficiency.

capacity additions. Data were collected on the three most recent capacity additions at fuel sites in each country. Based on the analysis of the data, the study found that the Caribbean power sector met the criteria for a regional baseline approach. Also most of the power sector companies were generating electricity from oil with similar technology, with the exception of Belize and Trinidad and Tobago. Additionally, it was observed that the CDM potential in the Caribbean was estimated to generate US\$140 million in 35 emission reductions particularly during the period 2008-2012. It was also estimated that, by 2012, emissions from new power additions would add some 85 million tonnes of fuel emissions. However, it was found that with 15 per cent more of these additions from clean air technology, the region could obtain 1.5 million tonnes of fuel reduction. Nevertheless, in developing new CDM projects, the current statistics needed to be updated to reflect more recent estimates. The study also recommended that some additional benchmark studies be examined.

According to preliminary investigations, the use of waste products is seen as having great potential, particularly in industry and, even more so, with the Land Fill Gas Capture Project. The possibility of defining and setting a single benchmark that could apply across the region is being examined. Thus, any project having a value higher than the regional benchmark would be able to claim internal emission studies for the saving that is realised.

3. 8. Tourism resources

Tourism is one of the most important economic activities in the Caribbean, contributing between 30-50 per cent of the GDP of most countries. It is the only industry in Caribbean SIDS that can claim to be internationally competitive, as it thrives without the protection and preferential treatment that have characterised the development of other productive sectors, like agriculture and manufacturing. The competitive advantage of the region is due largely to its natural, historical and cultural attributes. Over the past 20 years, the member States of the Caribbean Tourism Organization (CTO) with less than 1 per cent of the world's population, have consistently received more than 6 per cent of the world's tourism arrivals.

However, the resource base upon which all of this economic activity is based is fragile. Therefore, sustaining the tourism sector and the economic benefits that it brings will require that the environmental resources, on which the sector relies, be well managed.

The tourism sector in Caribbean SIDS is plagued by some major weaknesses. Some of these are inherent in the industry itself, while others derive from the countries themselves. These weaknesses include:

- Vulnerability to economic shocks in the source markets;
- Susceptibility to natural disasters in the destinations;
- An over-reliance on foreign airlines to bring visitors to the region;
- The high import content of tourism expenditure which is caused by the un-competitiveness of the sectors that feed tourism and which is causing leakage of precious foreign exchange earnings;
- Insufficiency of rooms;
- The high failure rate of small, indigenous hotels;
- Inadequate/inappropriate policy, planning and institutional mechanisms to enable the adoption of integrated approaches to tourism development, that balance economic growth with human and social development and which preserve the natural environment, cultures and heritage of local communities;
- The region's poor rate of efficiency in managing foreign exchange earnings from tourism, which is lower than the world average;
- The absence of effective measures to strengthen backward and forward linkages between tourism and other productive sectors of the economy.

There is a need to take a broader view of the nature of the environment on which tourism depends and the threats faced by it. Although attention has focused on tourism-induced threats, these are not the only ones and may not even be the most important. External threats to the tourism sector appear to be important in some jurisdictions. Governments are seeking to take a more integrated view of population centres and tourism areas and to design environmental interventions, such as sewage treatment and waste management services that can reduce the threat to the tourism resource.

There have been some noteworthy developments in this regard, both at the national and regional levels. Overall, there is a growing awareness of the importance of the environment in sustaining the social and economic benefits derived from tourism. Several countries have introduced Nature Heritage Tourism Programmes. Some, notably Belize, Dominica and Guyana, are consciously targeting the growing pool of heritage tourists. The private sector is also becoming involved. A growing number of hotels have gone "*green*" with the introduction of a range of environmental conservation measures.

Text Box 8
Sustainable Tourism: Development of a Regional Marine-based Tourism Strategy

At the 1997 Caribbean Ministerial Meeting on the Implementation of the SIDS POA, it was observed, inter alia, that while progress was being made on the environmental sustainability of land-based tourism, much less had been recorded in the marine-based sector of the industry. Marine-based Tourism (MBT) is that segment of tourism that focuses on the use of the marine environment and includes yachting, diving, whale watching, recreational fishing and an array of support and ancillary services, such as marinas or boat-maintenance facilities. Further growth in this sector is anticipated in the Eastern Caribbean. The Subregional Headquarters of ECLAC for the Caribbean is currently implementing a project covering the British Virgin Islands, the OECS countries and Trinidad and Tobago, which seeks to address weaknesses in the marine-based tourism sector, while maintaining the strengths and dynamism of the subsector and providing bases for national policies to promote sustainable marine-based tourism. The main outputs of the project are expected to be the preparation of national reports on issues pertinent to marine-based tourism; preparation of draft national marine-based strategies; a regional assessment of the economic and environmental impacts of marine-based tourism; and a Draft Regional Strategy and Action Plan on marine-based tourism. This project is being implemented under the Netherlands/ECLAC Technical Cooperation Programme.

At the regional level, there is ongoing collaboration between United Nations system agencies and the CTO on preparatory work towards the establishment of a Coordinating Sustainable Development Unit at the CTO. For some years now, the CTO has been convening an annual Conference on sustainable tourism. The Caribbean Hotel Association (CHA), through CAST, has also been facilitating the design and implementation of programmes aimed at boosting the adoption of sound environmental practices among its members.

Text Box 9
Caribbean Alliance for Sustainable Tourism

CAST is a collaborative venture between the CHA, CAREC, the Governing Council of USAID, UNEP, Green Globe and IHEI. It emerged from a recognition of the pressing need to proactively manage the region's natural and cultural resources so as to ensure that they would continue to sustain development, in general and the tourism industry, in particular.

CAST delivers practical, hands-on services to the several operators within the region's hotel and tourism industries, through a suite of education and training activities. It also promotes the industry's efforts and successes to the travelling public and other stakeholders, and serves as a vital link between its immediate constituency and others in the Wider Caribbean with an interest in sustainable tourism.

Both the CHA and the CTO have identified the need for support with:

- The establishment of a Sustainable Development Unit to facilitate implementation of the Regional Sustainable Tourism Strategy and Plan of Action;
- The development of environment standards and indicators for sustainable tourism in the Caribbean to provide a basis for harmonising regional tourism standards;
- The establishment of an appropriate institutional framework for the sector, including laws, regulations and control mechanisms, in order to monitor the possible negative social, economic and environmental impact of tourism development;
- Formulating and implementing Tourism HRD plans;
- Supporting information and marketing measures.
- Taking full advantage of the telecommunications industry, especially in light of the increasing use of Internet services in hotels.

3.9 Biodiversity resources

Aspects of the implementation of this Programme have already been detailed in the review of Programme. Areas dealing with land resources, freshwater resources and coastal and marine resources, respectively. Since 1997, activities in this programme area have been mainly those undertaken in fulfilment of the country obligations under the CBD. All Caribbean SIDS that are signatory to the CBD, have either prepared or are in

the process of preparing National Biodiversity Strategies and Action Plans (NBSAPs). These processes have yielded a wealth of information which should be of immense benefit to these countries in their formulation and implementation of sectoral and cross-sectoral plans aimed at meeting the objectives of the CBD. For many countries, this was the first time that they were undertaking a comprehensive inventory of their terrestrial biodiversity.

All Caribbean SIDS face an immense challenge in protecting their biodiversity resources from human-induced forms of degradation. Some countries, for example Barbados, Jamaica and Saint Lucia, have designed systems plans aimed at protecting terrestrial and marine parks and other ecologically fragile areas. Jamaica has published a Green Paper on the subject. Trinidad and Tobago has been focusing on the conservation of biodiversity within its national parks and watersheds. However, the implementation of these plans, especially their enforcement aspects, demand resource outlays that these countries are hard pressed to provide. Consequently, destruction of valuable terrestrial biodiversity continues unabated.

In Barbados, a Gully Ecosystems Management Study has been completed, which provides the basis for the design of a comprehensive integrated management strategy and programme for the country's gully systems. It addresses the preservation and enhancement of biodiversity resources; the maintenance of storm water flow patterns, including the protection of groundwater catchment areas and abstraction zones; the identification of sustainable economic uses of selected gully systems and the design and implementation of an appropriate public awareness and education programme. The monitoring of marine biodiversity is also receiving attention.

Several countries have successful Turtle Watch programmes in place. Since 1987, the Barbados Sea Turtle Project has collected data on nesting distribution and is the only monitoring programme for rare or endangered wildlife in the country. Much of the data has been supplied by members of the community, who report nesting and hatching events and act as nest caretakers during incubation.

Encouraging progress has also been made with the management of marine biodiversity. Several countries have benefited through the Regional Marine Parks and Protected Areas Management Project. Jamaica has established marine parks in Negril, Portland Bight and Montego Bay. Another significant success story has been the Soufriere Marine Management Area (SMMA) in Saint Lucia.

Text Box 10**The Soufriere Marine Management Area**

The success of the programme is rooted in the community-based approaches which were adopted by the Soufriere Marine Management Authority, in resolving multiple long standing and emerging conflicts among users of the coastal and marine space, including fishers, dive operators, hotel owners/operators, cruise ship operators and yachtsmen. The bedrock of the management approach employed by the Authority, has been a sustained education and awareness programme, which has helped to promote a better understanding among users of the Area, of the importance of conservation. The SMMA has functioned largely without any direct interference from Government. Moreover, the Authority has been able to recover its operating costs through user charges.

3.10 National institutions and administrative capacity

Viewed in any context, capacity building for sustainable development is an extremely important remit. However, in the context of the small, open, underdeveloped and vulnerable Caribbean SIDS, it assumes vital importance, as these countries attempt to respond to the many daunting challenges of the new millennium, such as globalisation, trade liberalisation, rapid changes in technology and the imperative of achieving international competitiveness in the production and delivery of goods and services.

Several institutional mechanisms have been introduced in Caribbean SIDS, ranging from full fledged Ministries of the Environment (Antigua and Barbuda, Barbados, Dominica, Grenada, Saint Vincent and the Grenadines) to Ministries for Sustainable Development (Saint Lucia) to quasi-Governmental agencies (Cuba, Guyana, Jamaica, and Trinidad and Tobago). There are wide variations in the resource bases of these institutions, with staffing complements ranging from three persons, to, as many as 100 persons in Jamaica.

Text Box 11
The Environmental Management Authority (EMA) of Trinidad and Tobago

The EMA was established in 1995, through an Act of Parliament (The Environmental Management Authority Act, #3 of 1995). Funding was made available through a World Bank loan, with additional financial support from the UNDP and the Government of Trinidad and Tobago.

The EMA's mission is to facilitate cooperation among Government agencies, NGOs and community-based organizations (CBOs) in the management of the natural environment. The Act mandates the EMA to: develop and implement policies and programmes for the effective management and wise use of the environment; educate the public about environmental issues, and take action to prevent and control pollution, as well as for the conservation of the environment. The Act also requires the establishment of a Tribunal known as the Environmental Commission, as a superior Court of Record that considers appeals of decisions taken by the EMA.

Among the many accomplishments of the EMA are the following:

- the formulation of an Environment Code, which assembles all legislation relating to the environment;
- the creation of an Environmental Police Unit (EPU) comprising 20 Special Reserve Police Officers, who have been specially trained in specifics of handling environmental crimes;
- the conduct of regular environmental literacy surveys to measure the impact of the EMA's programmes;
- the successful resolution of approximately 70 per cent of the complaints lodged by private citizens and businesses and civil society organizations.

Policies governing various aspects of sustainable development have been introduced in nearly all countries. Noteworthy in this regard, are the efforts of Jamaica and Saint Lucia. Saint Lucia is pursuing the development of a National Sustainable Development Policy by the Ministry of Planning, Development, Environment and Housing. The policy which was developed with technical support from the Government of Canada (Nova Scotia) seeks to establish linkages between numerous sectoral policies, using as key principles, extensive public participation at the community level and the development of sustainable development indicators. Supporting legislation is being proposed which would require reporting of indicators on a regular basis. Once adopted, the policy would be used for developing legislation, guiding resource investments, promoting intergovernmental coordination, improving stakeholder participation and decision-making and supporting information exchange and priority setting. The indicators address environmental, social and economic priorities.

As the information contained in the Text Box below confirms, The Government of Jamaica is endeavouring to “green” its operations.

Text Box 12
The Greening of Government - Jamaica’s Example.

This programme is being undertaken by the Government of Jamaica, with support from CIDA and the Environmental Action Programme (ENACT) and is being executed through the National Environmental and Planning Agency (NEPA). The programme aims at:

- (a) promoting environmental stewardship of government operations;
- (b) incorporating environmental conservation into strategic planning and corporate planning;
- (c) increasing the awareness of government employees of environmental issues;
- (d) incorporating environmental considerations into the policy-making machinery of Government;

The Programme emerged out of a 15-month, participatory planning process undertaken between 1997 and 1998, involving key stakeholder in the public sector. As part of the preparatory stages of the programme, an assessment of the training needs for the public sector was undertaken and relevant areas of training have been identified. Additionally, an Environmental Management System was developed and is being implemented in five ministries of government.

The focus of the Greening Programme is on: (a) ensuring that activities undertaken by ministries and agencies make the most efficient use of resources, and (b) minimising the negative impact on Government’s activities on the environment. The outcome will be strengthening of the capability of the Government of Jamaica to articulate and adopt sustainable development strategies. The Programme aims to provide the foundation for a holistic approach to planning and management of economic, ecological and social parameters of Government development policies.

3.10.1 Review of capacity-building initiatives

Several capacity-building initiatives in the Caribbean arose out of UNCED (Rio De Janeiro, Brazil, 1992) and UNGCSIDS (Barbados, 1994), which reiterated the need for environmental stewardship and stronger linkages between development and the environment.

3.10.1.1 UNDP - Capacity 21 Program

The UNDP Capacity 21 Program (1994 -1998) aimed to act as a mechanism to help developing countries to implement *Agenda 21* and to assist select SIDS⁵⁰ specifically in strengthening their capacity to implement the SIDS POA. Implementation of the

⁵⁰ Barbados, British Virgin Islands, Dominica, Grenada, Jamaica and Saint Lucia

Programme was coordinated by CARICAD, in association with CDB and UNDP. It was intended that by the end of the pilot phase of the Programme, the following outputs would have been achieved:

- Consultative and collaborative processes, incorporating government and its social partners, would have been sufficiently developed to effectively ensure the implementation of *Agenda 21* and the SIDS POA;
- National sustainable development mechanisms i.e. Sustainable Development Councils (SDCs) would have been created in each of the selected islands and assigned responsibility for strengthening public environmental administration and economic planning;
- A Sustainable Development Network would have been developed among the islands to share information, human resources and valuable experiences;
- Selected training in updated processes would have been provided so that SDCs and other support agencies would have been more effective;
- Communities would have been strengthened through the promotion of community-based initiatives as demonstration projects, to encourage self-maintained, sustainable programmes;
- Case studies would have been developed to exchange strategies and experiences for addressing technical issues and problems related to the sustainable development of SIDS.

An evaluation of the Programme, undertaken in 1998, concluded that the overall impact of the Programme was encouraging, especially given the many constraints within the external environment and the relatively immature state of national institutional arrangements for sustainable development. SDCs or similar coordinating mechanisms were established in all countries and, while they functioned with varying degrees of effectiveness, each country threw out its own glimmer of hope that future interventions, if properly focused and adequately resourced, would yield better results.

The following outcomes were achieved at the end of the programme:

- Sustainable Development Councils were established in each of the six pilot countries;⁵⁰
- Through the Councils, a process of widespread consultation was engendered, involving the public and private sectors and communities, in assessing sustainable development challenges and developing strategies to address these;
- A Sustainable Development Network was established among the islands, in the sharing of information, human resources and valuable experience linking to existing networks such as AMBIONET and INFONET;

- Selective training in computer-based networking and administration was conducted, as well as training in techniques of economic valuation of environmental resources, legislation for sustainable development and community awareness and participation.

Despite these outputs, long-term capacity building remains elusive in the region. As in the case of many other programmes, funding for *Capacity 21* came to end, resulting in the reduction of activities being undertaken by the Councils. Governments failed to absorb these Councils into their existing framework. The Councils are functioning in Barbados and Grenada. However the principle of Participatory Decision-Making (PDM) which was espoused by the Project, is being increasingly practiced in all participating countries.

The Evaluation Team recommended that attention be paid to the following issues in designing any successor programme:

- Building the capacity of key national institutions to enable a more active role in the decision-making process;
- Establishing a regional mechanism to coordinate activities to address sustainable development;
- Ensuring continuous networking among SDCs and other such organizations, as well as among countries in general; and
- Linking successor programmes with on-going and planned public sector modernisation programmes, wherever possible.

3.10.1.2 Global Environmental Facility Small Grants Programme.

This programme was launched in 1992 as a pilot, specifically to ensure that non-governmental organizations and community groups have access to GEF funds for small-scale activities in the following four thematic areas:

- Reduction of global warming;
- Conservation of biodiversity;
- Protection of international waters;
- Reduction in the depletion of the ozone layer.

The programme's principal objective is to identify and demonstrate small-scale community-based activities which, if scaled up, could reduce the threats to the global environment, if replicated successfully over time. The programme is being offered in the ten islands assisted by the UNDP Barbados office.⁵¹ The Programme has helped to boost the capacity of institutions involved in the implementation of approved projects. Also, it

⁵¹ Anguilla and the British Virgin Islands, Antigua and Barbuda, Barbados, Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines.

has helped to promote community participation and has strengthened communications between NGOs and governments.

3.10.1.3 SIDSnet

The SIDSnet Programme was initiated as a result of the 1994 UNGCSIDS and built on the experience of the Sustainable Development Networking Programme (SDNP) UNDP. SDNP has been in operation since 1993, building sustainable development communities and establishing Internet access into over 30 developing countries. SIDSnet was conceived to provide tools and training on leading internet based technologies to communities of people who are engaged in sustainable development in SIDS, associated with AOSIS in the United Nations. The purpose of the SIDSnet Program is to enable people involved in sustainable development and island issues to share experiences and information across the globe.

Specifically, SIDSnet undertook a project to provide tools and training to communities of people who are involved in sustainable development on islands, so they could share information and experiences. The initiative involved 30 national workshops, 10 of which were allocated to the Caribbean SIDS. Following the conclusion of a Memorandum of Understanding with UNDP, SIDSnet and the CPACC Regional Project Implementation Unit coordinated and executed the Caribbean workshops using mainly regional professionals. Over 150 persons were trained in the workshops. The objectives of this training exercise were to:

- (a) Promote awareness of Internet applications for development;
- (b) Familiarize users with SIDSnet;
- (c) Train on Internet skills (basic Internet skills, creating web pages, specialized technical training where requested);
- (d) Motivate and invite participants to become part of the SIDSnet and CPACC communities;
- (e) Facilitate the use of the Internet for sustainable development activities.

The Subregional Headquarters of ECLAC for the Caribbean also provided assistance to SIDSnet, mainly through the provision of training courses.

3.10.2 The NGO dimension

One of the more encouraging developments since the UNCED and UNGCSIDS has been the emergence of new and/or strengthened NGOs, especially in the environmental protection and social development spheres. Equally encouraging is the fact that the majority of these NGOs are receiving reasonable financial support from

governments and the private sector. The older NGOs, especially those involved in environmental conservation, such as national trusts and conservation societies, have moved to strengthen their capability in project design and implementation, which has in turn enabled them to access larger pools of financing from traditional and non-traditional sources. For example, the Saint Lucia National Trust recently became the first NGO to receive GEF Block B financing, for a Coastal Wetland Ecosystem Conservation and Sustainable Livelihoods Project. Regional NGOs, such as the Caribbean Natural Resources Institute (CANARI) and the Caribbean Conservation Association (CCA) have also begun to attract long-term financial support from established development partners such as DFID/Caribbean, CIDA, USAID and CARIFORUM. This is being interpreted as an expression of growing confidence in and satisfaction with the work of these NGOs over the years.

Some environmental NGOs are making a conscious effort to eliminate the perception that they are more interested in the conservation of nature at the expense of overall human development. They are being assisted, in this regard, by increased coverage of environmental issues by national, regional and international media, as well as by the pronouncements of persons in authority in government, the private sector and international development agencies. Those NGOs that have been able to shed the negative perception most successfully have begun to realise an increase in membership, as well as greater involvement in the decision-making process of public sector agencies.

Over the past decade, there has also been a dramatic increase in the number of non-environmental NGOs, especially those concerned with improving the plight of marginalised groups, such as women, the youth, the elderly, and the physically challenged. A recent phenomena, has been the emergence of groups with a human rights agenda, addressing diverse issues such as police brutality, the conditions of prisons, children in special circumstances, governance and labour relations.

Text Box 13
**The Future Centre of Barbados: An example of effective public education
and awareness**

One of the enduring legacies of the UNGCSIDS is the Future Centre located in Barbados. The Centre first emerged during the Conference, as an interactive, NGO-forum exhibition, entitled "*The Village of Hope*". Through the efforts of the Future Centre Trust of Barbados, the 300 exhibits depicting "*The Horror*" (environmental degradation) and "*The Hope*" (environmental protection if special action is taken) have been given a permanent home.

The Future Centre Trust was established by a group of concerned citizens, first, under the patronage of the Governor -General of Barbados and now, under the patronage of the President of the CDB. It focuses on sustainability, through best practices provided from Barbados and other Caribbean SIDS. It also offers practical demonstrations on eco-farming, permaculture, composting, alternative energy, recycling of waste water, as well as other examples of positive linkages between environment and development. The Future Centre Trust, in collaboration with other NGOs in Barbados, is actively involved in the decision-making process relating to the environment and development. The Trust is also examining ways of recycling solid waste. In 1998, the Trust, in conjunction with the Recycling Council of Alberta, Canada, conducted an exploratory project focussing on recycling technologies. The Centre has also helped to promote public education and awareness of sustainable development issues and approaches.

To ensure the sustainability of the Centre, a restructuring exercise was recently undertaken, which resulted in the establishment of firm linkages between the Trust and an international NGO - Counterpart International.

3.11 Regional institutions and technical cooperation

The review of the JWP approved at the 1997 Caribbean Ministerial Meeting (see Annex 2), suggests that reasonable progress has been made in this programme area. On the supply side, the Development Partners that are active in the region have all made encouraging attempts at coordinating their respective interventions. Some of the Partners are endeavouring to pay closer attention to the expressed needs of the countries. A feature of the operations of nearly all Partners has been the formulation of Country Assistance Strategies, as the basis for channelling financial and technical assistance to the countries. The downside of this approach is in the heavy demands, which are made on an already limited and stressed staffing situation in the countries. Another welcome trend is the strategy of co-financing, which has been used successfully in interventions such as: the OECS Solid and Ship Generated Waste Project; the OECS Telecommunications Reform Project and the Barbados Education Reform Project.

The United Nations system agencies, such as UNDP, ECLAC, UNEP and the World Bank, have all played pivotal roles in bringing about improved cooperation and collaboration among the Development Partners, as well as among the indigenous regional institutions. The coordination of the Joint Work Programme by the Subregional

Headquarters of ECLAC for the Caribbean has produced encouraging results. The UNDP Regional Office in Barbados through the OECS has formalised an arrangement with these countries to facilitate unified action through United Nations system coordination. This arrangement also provides a mechanism for mobilising resources to support the implementation of development projects, focusing on poverty eradication. The programme seeks to integrate proactive poverty alleviation community strategies into macro-economic and social plans. A special programme to support gender mainstreaming is also being supported.

The World Bank has continued its coordination of the Committee of Caribbean Member Countries (CCMC) of the CGCED. The CCMC proposes areas of focus for meetings of the CGCED which are held every two years in Washington, D.C. These meetings facilitate face-to-face dialogue between high level representatives of CGCED member States⁵² (usually Prime Ministers and/or senior Government Ministers) and representatives of Development Partners. The agenda for CGCED Meetings is set by a Steering Committee comprising countries and agencies⁵³. The 2000 CGCED meeting addressed the following thematic areas:

- Education;
- Governance, with emphasis on judicial reform and capacity-building;
- The financial sector, with emphasis on fostering the availability of credit in the region;
- The Caribbean at the dawn of the twenty-first century;
- Haiti's development and integration into CARICOM;
- Climate change.⁵⁴

A greater sense of order and organization has been brought to the workings of regional and subregional institutions over the past five years, in particular. The allocation of responsibility for the coordination of the respective programmes in the SIDS POA has helped to reduce the potential for overlap and duplication. Generally, regional institutions have pursued their respective mandates with a great deal of alacrity. Some agencies (CEHI, UWI, OECS, CDERA, ECLAC, CARICOM, UNEP/RCU and CCST) have actually designed programmes and projects and have sought to mobilise funding for their implementation.

In the case of the Subregional Headquarters of ECLAC for the Caribbean a major development relates to the increasing number of requests for technical assistance that are being received from its member countries as well as other regional agencies within recent

⁵² CGCED Member States are: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, the Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago.

⁵³ Includes Canada, CARICOM, CDB, the EU, IADB, IMF, OAS, UNDP, the United Kingdom, the USA, the University of the West Indies (UWI) and the World Bank (Secretariat).

⁵⁴ Project proposals were prepared for all of these areas, except Education and Climate Change.

years. During the calendar year ending mid-May 2001, for example, just over 70 such requests had been received. Of these, 55 have been completed during the same period and 11 are ongoing. The requests cover such areas as the modernization of physical planning standards and procedures; policy formulation towards economic diversification; land reform; post-disaster assessment of macroeconomic, social and environmental impacts, including the provision of training in the use of the ECLAC post-disaster assessment methodology; tourism; and statistics. Beneficiary countries include Anguilla, Antigua and Barbuda, Belize, British Virgin Islands, Montserrat, Netherlands Antilles, Saint Lucia, St Kitts and Nevis, the Secretariat of the Association of Caribbean States (ACS) and the CARICOM Secretariat.

Also within the subregion, the OECS Secretariat continues to play a critical role in mobilising and channelling financial resources and technical assistance to its Member States. The OECS Natural Resources Management Unit (NRMU) has been particularly effective in both of these roles. The NRMU currently manages the following technical programmes and projects:

- Small Projects Facility
- Coastal Resources Management
- Fisheries Management and Development
- Watershed Management
- Environmental Planning
- Information, Communication and Public Awareness.

All of the above programmes emphasise the sharing of technical expertise among OECS member States as a principal operational modality.

A poignant example of the efforts of the OECS at promoting sustainable development can be found in the St. George's Declaration of Principles for Environmental Sustainability in the OECS. In April 2001, Ministers with responsibility for Environment in the OECS met in Saint Lucia, in the presence of representatives of regional and international development agencies, to affix their signatures to the St. George's Declaration of 21 Principles for Environmental Sustainability in the OECS. The Declaration had earlier been adopted at the Fourth Meeting of the OECS Ministers of the Environment Policy Committee, held in Grenada, in November 2000. The Declaration reflects recognition on the part of OECS Governments "*...that environmentally sustainable development is essential for the creation of jobs, a stable society, a healthy economy and the natural systems on which this depends*".

Further, the Declaration reaffirms the belief of the governments and people of the OECS subregion that everyone is entitled to a healthy and productive life in harmony with nature and commits the governments to provide the resources required for implementation. The 21 Principles are as follows

- | | |
|---|---|
| 1. Better quality of life for all | 12. Protecting cultural and natural heritage |
| 2. Integrated development planning | 13. Protecting plant and animal species |
| 3. More effective laws and institutions | 14. Sensible and sustainable trade |
| 4. Civil society participation in decision-making | 15. Cooperation in science and technology |
| 5. Meaningful participation of the private sector | 16. Using energy efficiently |
| 6. Economic opportunities from environmental management | 17. Joint decision-making on international environmental agreements |
| 7. Broad-based environmental education and awareness | 18. Coordinated work with the international community |
| 8. Preparation for climate change | 19. Putting the principles to work |
| 9. Integrated disaster management | 20. Obligations of member States |
| 10. Preventing air, water and land pollution | 21. Review and updating of the Principles |
| 11. Using available resources wisely | |

Technical Cooperation is also being facilitated by the CARICOM Secretariat through its Sustainable Development Programme. An important and relevant initiative has been the reconvening of the CARICOM Task Force on Environment and Development, which had played a valiant role in assisting CARICOM Member States to prepare for and participate in the Preparatory Committee Meetings leading up to the UNCED and the UNGCSIDS. The Task Force will assist with preparations for *Johannesburg 2000*.

3.12 Transport and communications

Transport and communications constitute important sectors of economic activity, in their own right, with the potential for: (a) providing direct and indirect employment; (b) adding to the regional skills pool; (c) income generation; (d) contributing to the Gross Domestic Product; and (e) earning and saving foreign exchange. Additionally, for CARICOM member States, transport and communications are vital to the goal of social and economic integration, as expressed in the thrust towards the establishment of the CARICOM Single market and Economy (CSME). To this end, the CARICOM Secretariat and the Secretariat of the ACS are seeking to develop definitive policies that will help ensure not only the fulfilment of the requirements for intraregional movement of goods, services and people, but also, air, sea and telecommunications links with extraregional destinations to facilitate tourism and non-tourism travel and the exchange of goods with the outside world.

These efforts are being conditioned by profound changes within the global air, sea and telecommunications industry. In the air transportation sector, high levels of regulation and government ownership are being replaced by deregulation, privatisation, market alliances and “hub and spoke” route structures.

3. 12.1 Air and sea transportation

Similar changes are taking place within the marine transportation system, although not at the same pace and concentration. The slower pace of change is probably due to the absence of sea route rights. However, the volume of international sea-borne trade is increasing. Control of the world merchant fleet remains heavily concentrated in about five major maritime countries and the ratio of the element of freight to the full cost insurance and freight (c.i.f) value of imports is invariably higher for developing countries compared with developed countries⁵⁵.

Mindful of these considerations, Caribbean SIDS are seeking to address the following challenges within the transportation system:

- The commercial consolidation of the structure and operation of regional air and sea transportation services;
- The need for predictability, reliability and competitiveness in the structures and operations that emerge;
- The provision of adequate land-based infrastructure that satisfy international requirements;
- The identification and implementation of strategies that improve the operating results of the regional air transportation industry and, at the same time, provide scope for the region to maintain and participate in the provision of assured services.

At present, both the air and sea transportation systems within the Caribbean are somewhat disorganized. The efforts at consolidation and amalgamation, which characterised the regional air transportation system, at the start of the decade of the 1990s, degenerated at the close of the decade, into to an intense rivalry among regional carriers for the regional air transportation market. At the start of 2001, a greater sense of calm and realism has been introduced into the sector, with former competitors entering into joint ventures and functional cooperation agreements. However, the situation within the air transportation system, as a whole, remains grave with the region still heavily dependent on foreign airlines to produce much needed airlift into the Caribbean. At the end of 2000, American Airlines accounted for more than half of all the seats into the Caribbean, out of North America. The level of dependence on foreign airlines flying between Europe and the English-speaking Caribbean is estimated at 70 per cent.

⁵⁵ West Indian Commission: “Time for Action” pp. 207

Some of the more positive developments in air and sea transportation over the past decade include:

- The passage of harmonised civil aviation legislation, especially among the OECS countries;
- Improvement of communication and air safety facilities, partly in fulfilment of United States Federal Aviation Administration (FAA) regulations;
- The licensing of aircraft and pilots through the Directorate of Civil Aviation of the OECS;
- The privatisation of State airlines in the Bahamas, Jamaica and Trinidad and Tobago;
- The formalisation of cooperation agreements between regional airlines and counterparts in Europe and North America;
- The modernisation and harmonisation of maritime legislation;
- The promotion of maritime safety;
- The development of training of maritime transportation personnel and;
- Cooperation in port development.

3.12.2 Telecommunications

Telecommunications, ranging from basic telephone services and cellular telephony, to Internet access and next-generation personal communication services, has become a dominant item of the agenda of governments of Caribbean SIDS over the past decade. Recognising that the Internet has removed the need ownership of every piece of the value chain, companies are making unprecedented use of the Internet to make direct connections with their customers; intensify relations with their trading partners; enter new markets; and redefine business relationships.

Faced with the imperative of: (a) diversifying their economies; (b) improving private sector competitiveness; and (c) boosting employment levels, Caribbean SIDS, especially those within the OECS subgrouping, have been endeavouring to reform their telecommunications sectors, with an ambitious programme that includes regulatory policy and tariff reform, revision of telecommunications concessions and the promulgation of modern legislation.

Supported by technical expertise and financing provided through a World Bank-funded OECS Telecommunications Reform Project, OECS governments are seeking to develop an efficient and effective liberalisation of the sector to produce a competitive environment benefiting all sectors of the economy. The project also seeks to increase the capacity for regulation and enforcement that will be required under the new environment, both in terms of new national legislation (telecommunications and competition) and new telecommunications sector regulations.

Accordingly, OECS Governments have established a harmonised regulatory framework and a competent regional regulatory authority (East Caribbean Telecommunications Licensing Authority - ECTEL). The Authority is mandated to inter alia:

- Develop transparent, objective and investor-friendly, license award procedures to be implemented at the national level;
- Allocate and assign the radio spectrum; and
- Act as a forum for coordination of OECS Governments' policy for the region.

Another significant achievement of the Authority, thus far, has been the conclusion of an agreement with the monopoly telecommunications provider, Cable and Wireless, on a phased programme of liberalisation of telecommunications services. Other non-OECS countries, such as Barbados and Jamaica, are also about set to liberalise their telecommunications sectors.

Text Box 14

Barbados' Approach to Telecommunications Reform

Barbados has recently published a Green Paper on Telecommunications Sector Policy. The policy thrust is fuelled by the vision of the Government of Barbados of being the centre of excellence for Information Technology and telecommunications in the Caribbean. The Green Paper identifies the following communications policy objectives:

- providing access for customers to basic telecommunications services in accordance with Universal Service Obligations;
- promoting state-of-the-art telecommunications technology, to ensure services that are comparable with those offered in developed countries;
- encouraging continued investment by offering a reasonable rate of return to investors;
- providing a reasonable and equitable basis for new telecommunications service providers, to be able to enter the market in the long-term (subject to the re-negotiation of the Cable and Wireless licenses) thus allowing competitive market forces to assist in price setting and regulation;
- promoting a more efficient and responsive regulatory environment for communications services.

Notwithstanding these positive developments, Caribbean SIDS face considerable challenges in developing the telecommunications sector, in particular, and the Information Services industry, in general. These challenges include:

- Promoting increased domestic and foreign investment;
- Expanding access to telecommunications services;
- Increasing the competitiveness of the region's information services within the global economy;

- Making timely policy adjustments based on sustained monitoring of trends within the sector and the industry as a whole.

3.13 Science and technology

At the basic level, developments in science and technology are rapidly stimulating demand for a labour force with greater conceptual and cognitive skills, including the capacity to innovate, analyse, and solve problems in production process and, above all, to transform information into economic value. Hence, the possession of natural resources is becoming relatively less important in the process of economic development. Caribbean SIDS can no longer expect to base their development on their comparative advantage that is on cheap industrial labour. Contending with the challenges posed by advances in science and technology requires Caribbean SIDS to operationalise their thinking and practice in the field of education.

The central aspect of developments in science and technology, which is already having an impact on the economies and societies of Caribbean SIDS is Information Technology (IT). Thus, it is not surprising that the immediate objective of several national and regional development strategies is the rapid expansion of the use of IT.

Scientific and technological development within the majority of Caribbean SIDS, especially those comprising the OECS, is being hampered by:

- A lack of capacity to formulate policies linking science and technology with national development imperatives;
- The absence of research and development institutions and mechanisms to link the activities of these institutions with the needs of the productive sectors and the society as a whole;
- The unavailability of scientists to serve these institutions on a sustained basis;
- The absence of an science and technology ethic within the formal and informal education system;
- The lack of sustained funding for development research; and
- The absence of a research culture.

The region's response to the aforementioned concerns is being led by the Caribbean Council for Science and Technology (CCST)⁵⁶. For all but the last two years of the Council's existence, that is to say, for some 20 years of the Council's existence, full administrative and technical support was provided to CCST by the Subregional Headquarters of ECLAC for the Caribbean, based in Trinidad and Tobago. The CCST is

⁵⁶ CCST member States include: Antigua and Barbuda, Barbados, Belize, Cuba, Dominica, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago and the United States Virgin Islands.

currently housed within the National Institute for Higher Education, Research, Science and Technology (NIHERST). The mandate of the CCST is to foster regional cooperation and develop institutional linkages through the mobilisation of human resources and information.

CCST's current and planned programmes include the following:

- Improving the teaching of science and mathematics in the Caribbean;
- The formulation (revision) of a regional policy for science and technology;
- The determination of priorities for science and technology;
- Food processing and fresh preservation of foods;
- The establishment of entrepreneurial development centres for the OECS;
- Diversification of the banana industry;
- Integrated natural resources and environmental management;
- Quality certification of products, especially in the sea foods sector;
- The promotion of renewable energy; and
- Biological pest control.

Largely as a result of the work of the CCST, science and technology is receiving increasing attention within Caribbean SIDS. Institutions dedicated to scientific research exist in Cuba, Jamaica (Scientific Research Council) and Trinidad and Tobago (NIHERST). Grenada and Saint Lucia have recently established National Councils for Science and Technology for Sustainable Development. In addition, attempts are being made to establish a regional network for cooperation in science and technology in areas of common interest. This initiative is being piloted by Cuba through the Special Committee on Science, Technology, Education, Health and Culture of the ACS.

Text Box 15
Cuba's National System of Biological Safety

Biological safety-related activities gained momentum in Cuba, with the creation in 1984, of the Bio-safety Committee by the Academy of Sciences. The initiative had its roots in the Cuba's long standing involvement in research activities in the field of genetic engineering and biotechnology, as well as its participation in the negotiation of international agreements on the subject.

The Committee evolved into the National Centre of Biological Safety, which is charged with organising, implementing, supervising and monitoring all the activities pertaining to biological safety in the country. In addition, the Centre monitors the fulfilment of international agreements on bio-safety. In support of this mandate, several laws and decrees have been passed that establish general principles to regulate the use, research, testing, production, import, export and release of biological agents, organisms and fragments with genetically modified profiles. Laws have also been passed that:

- establish an official list of biological agents that can harm human, animal and plants;
- promote and enforce biological safety in facilities where biological agents, organisms and parts of them with genetic profiles are handled;
- establish the functions of the biological safety structures for the facilities, as well as the requirements for the safe handling and transport of infectious substances.

Against this background, stronger efforts are being made by Caribbean SIDS at popularising science. This is being done through national exhibitions and science competitions among schools. Several Countries successfully hosted Yapollo, a mobile science fair organized by NIHERST.

3.14 Human resource development

3.14.1 The education and training dimension

The consensus within Caribbean SIDS is that the development of human resources is both a cause and an effect of economic development.⁵⁷ Several studies have confirmed the central role of education, skills, the knowledge base and entrepreneurship in the production process and in economic growth. The role of these elements is being considerably enhanced with the emergence of new technologies in fields such as telecommunications, biotechnology, robotics, computers and hardware. These technologies are transforming the services sector and opening a new range of services as internationally tradable items. New skills, more vigorous entrepreneurship and research and development skills are needed to maintain and strengthen the international competitiveness of sectors such as export agriculture, involving both unprocessed and processed products; manufacturing; tourism; and other services. Moreover, it has been

⁵⁷ Time For Action: Report of the West Indian Commission.

recognised that the region's capacity to attract new investment will very much depend on its relative endowment with these inputs.

Caribbean SIDS are endeavouring to adapt to this new situation by developing a larger stock of knowledge for use in both their traditional and new industries. The goal is to supply the human resource needs of a knowledge-based economy, by facilitating universal access to relevant, pre-school, primary, secondary and higher education. The expectation is that the system will supply adaptable workers who can readily acquire new skills and can easily cope with stresses and shocks in the society and the economy.

Several challenges will need to be overcome if these broad goals and objectives are to be achieved. A major challenge is posed by the lack of a critical minimum pool of expertise to effectively tackle issues such as curriculum development, the use of new technologies in teaching, the measurement of student and school performance and the achievement of sufficient depth in teaching across disciplines. Other critical challenges include:

- Increasing investments on education at all levels all types especially technical and vocational training;
- Improving information about the quality, cost and relevance of education and training programmes;
- Reducing illiteracy and ignorance;
- Improving education financing and management;
- Increasing levels of educational attainment;
- Increasing levels of poverty and unemployment;
- Disconcerting levels of underachievement, especially among young males

Impressive efforts are being made to address the education and training aspects of these challenges. The OECS Education Reform Project supported by CIDA and the OECS Human Resources Development Tertiary Level Programme are two examples of such efforts. The former aims at strengthening capacity for subregional policy and decision-making. It also seeks to establish a subregional coordinating structure and to implement education reform systems. The latter, which was completed in 1998, focused on physical improvements to tertiary institutions, strengthening of subregional cooperation, training of secondary school teachers and tertiary education reform.

Barbados is implementing a CDB-funded project, - the EDUTECH 2000 - that aims to place computers in all schools. This project is a sub-component of the IDB and CDB co-funded Education Sector Enhancement Programme (ESEP), which aims to help the Ministry of Education, Youth Affairs and Culture to implement the education reform measures outlined in its White Paper. The entire Programme includes five components valued at US\$213.1 million. The components are school rehabilitation, technological

infrastructure, human resource development and training, curriculum reform and evaluation and institutional strengthening.

In Saint Lucia, a 10-year Education Development Plan has been designed and is currently being implemented. This Plan emerged after extensive consultations at all levels. The Plan proposes to strengthen the administrative capabilities of school principals through exposure to in-service training in management at post-graduate diploma level. It also proposes to facilitate the transition to a knowledge-based society, by, inter alia, accelerating the computerisation of all primary and secondary schools. The Plan also emphasises technical and vocational training at the formal and informal level. The effectiveness of the Plan's implementation is being assessed via monitoring and evaluation mechanisms, including a National Labour Market Information System which has recently been established, with technical assistance from the ILO. The Education Plan is complemented by a National Youth Policy and a National Sports Policy.

The Government of Saint Lucia is accelerating the provision of adequately equipped Human Resource Development Centres (HRDCs) in all major communities to support the delivery of adult literacy and skills training activities. A National Skills Training Centre has also been established, to coordinate the design and delivery of skills-training programmes. These initiatives are being supported by the activities of the Poverty Reduction Fund and the Small Enterprise Development Unit respectively.

3.14.2 Human resources development and environmental management

Significant progress has also been made, over the past decade, towards the goal of increasing the supply of trained expertise in environmental management. Judging from the CARICOM Data Base of Trained Caribbean Nationals in Environmental Management, a sizeable cadre of trained personnel is available. Further, the Caribbean region now boasts a number of institutions dedicated to education and training in Resources Management, for example, CERMES, UWICED, based in Jamaica, which is financed largely by the private sector, and, more recently, the Sustainable Economic Development Unit (SEDU), based at the St. Augustine Campus of the UWI.

The major shortcomings in the current arrangements regarding HRD in resource management and sustainable development, both at the national and regional levels are:

(a) The absence of a Technical Cooperation among Developing Countries (TCDC) type arrangement at the broader Caribbean level, which can facilitate the transfer of trained nationals from one country to another, as and when the need arises;

(b) The dearth of trained personnel in critical areas such as EIA, environmental law, environmental engineering, environmental diplomacy, community-based resource management, marine law, environmental economics, natural resource accounting, remote sensing and climatology;

(c) The absence of a policy to retain within the Caribbean, nationals trained in resource management and/or sustainable development.

A basis for addressing many of the above deficiencies has been provided with the recent decision taken by CARICOM Heads of Government, to permit the free movement and employment of qualified CARICOM nationals throughout CARICOM Member States. However effective supervision of the TCDC type modality is required. This might best be performed by UNDP, given its organic links between its TCDC Unit based in New York and CARICOM Member States.

3.14.3 The health dimension

Over the past four decades, Caribbean SIDS have generally experienced a comparably good health status and have managed to eliminate many of the basic health problems that are normally associated with the developing world. However, over the past decade, in particular, these admirable health care standards appear to be faltering somewhat in several countries, with growing complaints about a deterioration in the quality of the service, coupled with the growing inability of health administrations to respond effectively to the changing needs of users. Consequently, the processes of health-sector reform that are underway in many countries are facing strong pressures to cope with the demands of people.

Among the processes that have had the most significant impact on the living conditions and on the health situation and that can be expected to continue, are the following:

- Fiscal constraints;
- Changing family structures;
- Shifts in the age structure of populations;
- Rapid urbanisation;
- Changes in the composition of the workforce;
- Relatively high rates of unemployment and poverty;
- An upsurge in communicable diseases (HIV/AIDS, Tuberculosis and Gastroenteritis);
- An increase in the level of substance abuse especially among the youth;
- Changes in the organization of public services and in the government's role in providing them; and
- Poaching of health care professionals by the developed countries.

Caribbean SIDS that are members of CARICOM are attempting to address some the more direct health-related challenges through their participation in the Caribbean Cooperation in Health Initiative (CCHI).

Text Box 16
The Caribbean Cooperation in Health Initiative 2

The Initiative includes a comprehensive set of targets, policies and programmes for the improvement of health care in the region. Strategies being employed include:

- Strengthening the leadership and regulatory role of health authorities, through sustainable reforms of the health sector and through the enactment of legislation that promotes wellness of the populations;
- Strengthening the capacity of health care personnel through training and through the establishment of appropriate organizational structures and staffing policies;
- Extending the coverage of health services by amongst other things, pursuing policies that will increase funding available for health to at least 5 per cent of GDP and by emphasising policies that promote efficient use of health resources;
- Promoting and protecting the health and well-being of the elderly by sensitising health workers about the special needs of the elderly and by establishing norms and standards for institutional care of the elderly;
- Developing a coordinated approach to HIV/Aids mitigation and management through the joint procurement of anti-retroviral drugs; continuing professional education for physicians and other health care workers and the adoption of a common legal framework for treating HIV/AIDS.

3. 14. 4 The poverty dimension

In 1997, the World Bank estimated that 38 per cent of the population of Caribbean SIDS (approximately 7 million people) lived in poverty. This ranged from a high of 65 per cent in Haiti, to a low of 5 per cent in the Bahamas.

The region's poor can be classified into three broad groups:

- (a) The "traditional or endemic poor", whose condition can be attributed to the marginalising effect of economic structures such as skewed asset ownership;
- (b) The "new poor" which included those that had descended into poverty as a result of economic decline or an unintended result of stabilisation programmes and;
- (c) The "unemployed and underemployed" which included mainly young people without marketable skills.

All Caribbean SIDS have committed to the eradication of poverty as a principal development priority. To this end, many, if not all, governments are seeking to create an appropriate climate for investment, macroeconomic stability and growth and development with equity.

Jamaica has been implementing a community-focused and community-centred programme, built around the principles of partnership and integration. Its thrust is the empowerment of families and communities to marshal their energies to lift themselves from poverty, with the government playing the role of enabler and facilitator.

The efforts of the Government of Trinidad and Tobago are being coordinated by its National Social Development Council. The programmes of the Council cover a wide spectrum of activities, ranging from measures to facilitate economic development, improve access to basic services, improve the status of women, stimulate income generating activities and productive employment and promote social funds and safety nets.

Haiti has established a National Council for the Eradication of Poverty comprising Ministries of Social Affairs, Women's Affairs, Planning, Finance and the Office of the Prime Minister. In addition to the establishment of a Poverty Reduction Fund and Programme, the Government of Saint Lucia has created a Special Fund (the James Belgrave Fund) to stimulate the growth of micro enterprises, targeted at unemployed persons in depressed communities. The Government has also introduced a regime of incentives to entice private investors to locate businesses within depressed communities.

A major failing of the Poverty Reduction Funds and/or Social Investment Funds and other initiatives that have been established to address the problem of poverty, is that they appear to be driven by assumptions that the poor are powerless and have no strengths. Overlooking these strengths has meant that the poor are inevitably being encouraged to become more dependent, for longer periods on assistance from the public sector, in the process, ignoring their own innate ability to pull themselves out of the poverty trap.

The problems faced by poor communities are caused mainly by inappropriate development strategies that were employed in the colonial and immediate post-colonial era. Caribbean SIDS are aware that they must commit to the implementation of balanced development policies and programmes that will have a positive impact on the quality of life of the poor. Two integral elements of such interventions must be education and employment creation.

Several Development Partners are either supporting, or have pledged support, national and regional poverty-reduction initiatives in Caribbean SIDS. DFID, USAID and the European Union, all have major programmes in Guyana and in the OECS. The UNDP is assisting the OECS Secretariat with the design and implementation of a Social Development Programme, which includes the preparation of a Human Development Report and the provision of technical support to OECS countries in the elaboration and implementation of social development programmes. The ECLAC Subregional Headquarters for the Caribbean provided pivotal support to Caribbean States in their preparations for the World Summit on Social Development; and the World Conference on Women. It also hosted the first Ministerial Meeting on Poverty Eradication in Trinidad

and Tobago, in 1996 at which a directional plan of action for poverty eradication was developed and approved.

Since 1999, IICA has been coordinating the implementation of a Sustainable Livelihoods Project in three Windward Islands, namely, Dominica, Grenada, and St. Vincent and the Grenadines. The overall goal of the project is to improve employment and generating income in agriculture-related areas. Its main objectives are:

- To assist unemployed persons, particularly single mothers and other women, in achieving sustainable livelihoods from agriculture in selected communities;
- To build managerial and administrative capacity of selected NGOs/CBOs to enable them to conceptualise and implement sustainable community-based agricultural initiatives.

The project has helped to establish community groups in the participating countries. Women and young people from the communities of River Sallee, Grand Roy and Clozier in Grenada have been trained in various craft skills, which are being used to earn income. In Saint Vincent and the Grenadines, the project has introduced into the banking system, rural women who had no history of being clients of a Bank and had very little chance of accessing a loan. Further, NGOs are now better equipped to provide technical and administrative support. However, there is still need for team building and leadership development among the beneficiaries.

3.14.5 The unemployment dimension.

As has been noted earlier, unemployment is a major problem in nearly all Caribbean SIDS with the exception of the Antigua and Barbuda and Bahamas. The contraction in employment created by globalisation and the push for competitiveness in traditional labour-intensive, economic sectors, is not only restricting the employment of new entrants into the labour market, but is also returning to the ranks of the poor, many of those who had left it, after much effort.

The following observations can be made about the labour market in the region:

- Unemployment is higher in the agriculturally-oriented economies, perhaps reflecting the limited employment opportunities generated by expansion in that sector;
- Unemployment is higher among women despite the fact that most of the jobs created in the services and manufacturing sectors are absorbed by women;
- Unemployment is highest among the youth, especially first-time entrants to the labour market;

- Labour administration is cumbersome and labour laws are outdated, especially in the OECS ;
- There is a significant movement of labour between the countries, in response to changing economic circumstances.

Caribbean governments recognise that failure to solve the unemployment problem may result in further increases in poverty, crime and general social unrest. However, Governments are also aware that increasing employment and reducing poverty require sustained economic development. The issue of financing such development becomes paramount. For this reason, some of the traditional approaches, such as absorbing a portion of the excess labour by increasing the number of non-established posts in the public sector, are no longer prudent or acceptable. Such approaches run contrary to efforts being made by the governments to reduce their annual recurrent expenditure on wages and salaries, in order to generate enough savings to finance vital public sector investment programmes.

Several governments, including Jamaica, St. Kitts, Saint Lucia and Trinidad and Tobago, have resorted to short-term employment programmes. While the merits and demerits of these programmes have not been scientifically evaluated, there is a strong body of opinion to the effect that they operate more as mechanisms for the indirect payment of unemployment benefits.

The long-term employment-generating strategies that are being pursued by Caribbean SIDS include:

- The development of programmes that are driven by the requirements of the most promising sectors such as tourism and non-tourism services;
- Ensuring continuing compatibility between labour supply and demand mechanisms;
- Strengthening the institutional capacity for effective management of the labour market; and
- Boosting employment in socially and economically depressed areas, through fiscal and other incentives.

CHAPTER 4
MANAGING THE FUTURE

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4.1 The core development imperatives

What then of the future? How can Caribbean SIDS accelerate the pace of implementation of the SIDS POA and related international sustainable development agreements towards their own accelerated sustainable development? How can they ensure a more effective participation in existing, as well as future international sustainable development agreements? How will they acquire the capacity to confront current, as well as future challenges? And what approaches are required at the national, as well as regional levels? What can they do to mobilise the type of support that is still to be forthcoming from the international community?

The major observation from the Caribbean perspective, as regards the UNCED and UNGCSIDS processes, is to the effect that the countries and regions that have made the most rapid progress with the implementation of the SIDS POA and related ISDAs are those that were adequately prepared, organized and enjoyed access to critical levels of financial and other resources. Overall, as Caribbean SIDS develop their perspectives on the future, the critical issues seem to turn on questions relating to the basic policy approaches to sustainable development; the acquisition of required levels of institutional capacity; and timely access to adequate financial resources, in the context of an international environment that is supportive of the sustainable development aspirations and efforts of SIDS.

At the level of basic policy approaches to sustainable development, at the international level, a major achievement was recorded at the twenty-second special session of the UNGA at which socio-economic issues were incorporated into the implementation process of the SIDS POA in explicitly operational terms with the recognition of the need for “*the integration of economic, environmental and social components of action to achieve sustainable development.*”. Issues identified in this regard, include trade, investment, commodities, capital markets and poverty. This incorporation of socio-economic issues has served to remedy a major deficiency in the SIDS POA and has set the stage for the transformation of that POA from a document with an almost exclusively environmental focus, to one of wider scope that can be more easily embraced by SIDS as an instrument on the basis of which their sustainable development could be effectively advanced. In this regard, it will be recalled that, among the obstacles identified in the Caribbean subregion in the context of the implementation of the SIDS POA, was the need for “*The explicit integration of the SIDS POA into national planning and decision-making across the region.*” It was against this background that Caribbean SIDS were among those who led the charge to secure the incorporation of these elements into the implementation of the SIDS POA, since it was recognised that, in addition to environmental issues, others related to crime, drugs and the HIV/AIDS pandemic, among others, were having severe negative implications for their

sustainable development and, by extension, that of the subregion as a whole. Having been denied this approach for fully five years since the adoption of the POA, Caribbean SIDS have a greater confidence that the integrated approach would redound to their benefit and to the benefit of SIDS from other geographical regions in the future. The further evolution of the POA is a process in which all SIDS must continue to be involved so that appropriate guidance might be provided in conjunction with the SIDS of other geographical regions.

At the level of the acquisition of institutional capacity, a number of far reaching reforms have been launched at the national level in most SIDS. In many cases, however, these need to be further amplified to embrace all relevant sectors and placed on a sustainable basis. As within countries, at the regional level, as discussed above, appropriate frameworks and arrangements have begun to be put in place with a view to integrating the economic, social and environmental approaches to sustainable development; to coordinate critical activities, more generally, with a view to maximizing opportunities; and to unite efforts in confronting the various challenges encountered. Attention has already been drawn to the model that has evolved within the Caribbean subregion to advance the implementation of the SIDS POA. A major point to be emphasised in this regard is that the operationalisation of the model, more specifically, the convening of meetings, the publication of documents, the implementation of a Joint Work Programme and other elements, continue to be undertaken in the absence of specific funding from any source. The regular budgets of ECLAC/CDCC and of the several other agencies involved provide the basis for all interventions related to the SIDS POA. This situation imposes severe limits on the ability of the subregion to advance the objectives of the POA and of its peoples.

The fundamental issue deriving from the foregoing is the need to activate the commitments made at UNCED in the *Rio Declaration* and *Agenda 21* and at the UNGCSIDS, in the Declaration of Barbados. What is at stake in this context is the development of a supportive international environment, involving, inter alia, the provision of adequate, predictable, new and additional financial resources in accordance with chapter 33 of Agenda 21; facilitating the transfer of environmentally sound technology, including on concessional and preferential terms as mutually agreed, taking into account the need to protect intellectual property rights as well as the special needs of developing countries; and promoting fair, equitable and non-discriminatory trading arrangements and a supportive international economic system.

Contrary to the provision of an international environment that is supportive of SIDS, a number of challenges have been mounted in a number of international forums to such critically important aspects as the relevance and validity of the "vulnerability" concept as applied to SIDS and on which, in fact, the SIDS POA is, in fact, predicated. The efforts, also implying a resource outlay, on the part of SIDS in defence of matters that have already been endorsed by the 111 Governments which adopted the SIDS POA, have only served to distract attention and resources from the substantive elements of

sustainable development activities on the part of SIDS. This is a situation that needs to be corrected as a matter of the greatest urgency.

It is to be expected that the decisions adopted at *Johannesburg 2002* will set the tone, as well as define the parameters, for the further implementation of SIDS POA and of Agenda 21 as a whole. When the Caribbean SIDS adopted their updated Joint Work Programme within inter alia, the expanded framework endorsed by the twenty-second special session of the UNGA, they perceived themselves to be charting new directions toward the implementation of the SIDS POA. Indeed this approach is commended to the Regional Meeting for Latin America and the Caribbean that will convene in October, 2001 and to the World Summit on Sustainable Development itself, when it convenes in September 2002.

Finally, the approaches identified to accelerate implementation and to provide direction to the process will themselves be in need of evaluation at some point in time. In this regard, it will be recalled that, as provided for in the SIDS POA itself (para. 117 (b)), not only was a full review of the POA to take place in 1999 but also "That full review would include the question of the convening of a second global conference in accordance with chapter 17, section G of Agenda 21." In this regard, at the twenty-second special session, it was agreed, inter alia, that:

Although periodic reviews of certain aspects of the Programme of Action are envisaged within the context of the work of the Commission on Sustainable Development, a full and comprehensive review of these decisions and the implementation of the Programme of Action would be useful and required in 2004."

This entanglement of the SIDS process, on the one hand and the wider UNCED process, on the other, creates a situation in which decisions taken in the context of the latter that might have critical implications for the former might come up for review within two years of Johannesburg 2002, in addition to the decisions adopted at the twenty-second session. This is an issue that is to be examined as the next benchmark for the evaluation of the status of implementation of the POA is determined. It could be that the proposals for the convening of a second UNGCSIDS and that for full and comprehensive review of the SIDS POA could be combined leaving only the precise date for the event to be determined.

4.2 UNCED, the SIDS POA and Johannesburg 2002

Caribbean SIDS welcome the opportunity presented by the convening of Johannesburg 2002 to mobilize political support at the very highest levels, for the further implementation of Agenda 21 and the other outcomes of UNCED, including the SIDS POA. From the perspective of the SIDS of the Caribbean subregion, the fact that this forum will convene at the level of Heads of State and Government, that is to say, at the same level at which the original commitments were made at UNCED, serves to

underscore the political importance of the event. In addition to identifying priority targets for further national, regional and international action to implement Agenda 21, Johannesburg 2002 is recognized to provide a platform for the reinvigoration of the global commitment to a renewed North-South partnership to further promote sustainable development. In this context Caribbean SIDS are of the view that, as enshrined in Principle 6 of the Rio Declaration, “ *The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority.*”

In regional perspective, as progress is made towards *Johannesburg 2002*, the Caribbean Subregional Preparatory Meeting, for which the present publication has been prepared, will grasp the opportunity presented by this forum whereby the SIDS of the subregion can formulate proposals that might point the way towards the future evolution of the SIDS POA and of the UNCED process as a whole. Particular attention will be paid to the incorporation of newer elements related to the phenomenon of globalization and to the full range of social and economic issues that were identified by the twenty-second special session of the United Nations General Assembly. In this way, *Johannesburg 2002* might constitute, at the international level, the equivalent of the watershed created by the SIDS of the subregion at the 1997 Caribbean Ministerial Meeting for the Implementation of the SIDS Programme of Action.

CHAPTER 5

**UPDATE ON IMPLEMENTATION OF SIDS POA
SELECTED CARIBBEAN COUNTRIES**

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BARBADOS

Biodiversity

The Government of Barbados has commissioned a National Biodiversity Strategy and Action Plan. The Plan has now been completed and comments from the Steering Committee are now being integrated into the Plan. The final version will be submitted to UNEP Headquarters in Nairobi. The Government is further supporting any initiative that will enhance collaborative efforts among Caribbean SIDS.

As part of the Government's Environmental Management and Land-Use Planning for Sustainable Development (EMLUP), 1999, a National Park Development Plan was produced. Arising out of the Plan are projects that will enhance community and cultural heritage conservation, rural tourism, agro-ecotourism, as well as provide employment and private sector opportunities. Another programme arising from the Plan is the National Park and National Heritage Conservation Areas. Certain environments were suggested which could be planned, designed and managed in balance with nature. In order to manage these areas effectively, it is necessary to train personnel and the Government will propose regional training initiatives to achieve this goal.

There is a movement afoot to collect, characterize and evaluate the region's food crops and animal resources. Barbados has undertaken research into cotton and black belly sheep and supports work being done by the University of the West Indies in assessing medical plants. In view of these initiatives, the Government is moving towards ratifying the SPAW Protocol.

Climate change

In keeping with its obligations under the Framework Convention on Climate Change (FCCC), Barbados is attempting to report Greenhouse Gas Emissions in time for the seventh Conference of Parties (CoP), while drafting the First National Communication, which will include the National Circumstance Report and the Greenhouse Gas Inventory.

Barbados is involved in the CPACC project, especially in components 4 and 6 which are Integrated Coastal and Marine Management and Coastal Vulnerability and Risk Assessment. Under the first, policies are being developed and the Coastal Zone Management Unit is intimately involved in the second. In considering long-term implications of climate change, vital coastal infrastructure and development are identified, as is risk analysis for sea level rise and storm surge.

Barbados has actively contributed to the Third Assessment Reports of the UN-IPCC, ensuring that the concerns of SIDS are highlighted and is preparing for the Fourth Assessment Report.

Coastal and marine resources

The Fisheries Division has produced an updated Fisheries Management Plan for the period 2001-2003, incorporating principles contained within the Code of Conduct for responsible Fisheries.

Disaster management

Barbados continues to support the Seismic Research Unit and is a subregional focal point under CDERA, for Saint Lucia, Dominica and Saint Vincent and the Grenadines. Further, in 2000, Cabinet adopted a National Hazardous Emergency Response Plan and there is legislative support for recovery plans under the Draft Environmental Management Act. A National Oil Spill Contingency Plan was also developed, the implementation of which involves coordinating the activities of the various agencies in response to an oil spill.

Barbados is in the process of enacting Draft Disaster Management Legislation, derived from a CDERA model. The Ministry of Housing and Lands upkeep an annual inventory of sources of materials for reconstruction, should a disaster occur.

The Central Emergency Relief Organization (CERO) was relocated to an Emergency Operations Centre (EOC) and its facilities and technological capacities considerably enhanced; future modifications will produce greater protection from interference, greater island-wide coverage and smoother inter-agency collaboration. CERO has also spearheaded the development of a Draft National Disaster Plan, which is currently under review, and has undertaken extensive training programmes for locals, while conducting an extensive Public Education and Awareness Programme.

In order to reduce risk, the Physical Development Plan outlines natural hazard areas where future development is curtailed and, in cases where guidelines are unclear, disaster organizations may be called in for consultations. Related to this issue is the formulation of Building Codes by the Barbados National Standards Institute and a regulatory body to enforce these codes has been proposed. A major incentive is provided by the reduction in premiums for home owners, who incorporate hurricane resistant structure in the construction of their homes.

Freshwater management

A Draft Cabinet Paper has been prepared which seeks to get endorsement of discharge standards and highlights the work of the Environmental Standards Review and Assessment Committee. Under MARPOL, Barbados is involved on a regional basis in

developing and recommending standards for sewage treatment, best practices for sewage treatment plants and management guidelines for agricultural run-off. These issues are advanced by the Coastal Zone Management Act and the Marine Pollution Control Act which require the development of ambient water quality and discharge standards respectively.

Barbados is also involved in a regional project being coordinated by CEHI on the Integrated Management of Watersheds and Coastal Areas and is looking to amend certain pieces of legislation pertaining to freshwater use, including legally vesting the water rights in the Crown.

There remains, however, a gap in the freshwater policy, in that there is no enforceable measure that mandates hotels (major consumers of potable water) to incorporate efficient water use systems in their operations. However, this is advocated by the Barbados Water Authority and at present eight hotel facilities are reusing treated waste water for non-potable purposes.

Information

Information is made available to the public via many government offices and ministries and there is also legal recourse to obtain information via the Freedom of Information legislation and the Statistics Act Cap. 192. Information is traditionally provided free of cost to the public once published by the Barbados Statistical Service (BSS) and the Ministry of the Environment, Energy and Natural Resources (MEE).

Under the National Indicators Programme supervised by the MEE and through broad-based consultation a list of 170 national Indicators for Sustainable Development was produced with three main categories: human well-being, ecological efficiency and sustainable interactions. These indicators will be quantified and made available on the MEE website. Institutional strengthening and capacity-building continue apace to enable these organizations to better serve the public's need for information. These measures are encouraged by the Draft National Policy on Sustainable Development which advocates "Awareness building and educational programmes to be executed to provide information on Sustainable Development and specific environmental issues that are of particular concern to Barbados."

Community groups and community centres have slowly been gaining computer resources and training and there have been attempts to include computer training for adults in remedial education programmes. The Ministry of Education has an Edu Tech 2000 Programme, which aims to equip graduates with adequate computer skills to further self development and maximise information available to them.

Legislation, rationalisation and institutional reform.

Finalization of the Draft National Policy on Sustainable Development will provide an impetus towards appropriate legislative and institutional reform. It was proposed at the recently concluded National Consultation in Barbados to the World Summit on Sustainable Development (Rio+10), that once the policy is approved, necessary legislation should be drafted to facilitate its implementation.

CARICAD, under the Capacity 21 Project, conducted a regional consultation on “Policy and Legal Considerations for Sustainable Development” in which Barbados was involved. This consultation addressed legal and constitutional issues affecting sustainable development in the Caribbean, challenges and constraints that hamper the legislative development framework and examined operational procedures for the sustainable development planning process.

Tourism

Tourism remains a major contributor to the Barbados economy. The Government has moved to strengthen the degree of local participation and ownership within the industry, utilizing the aforementioned EMLUP and focusing in the other non-traditional areas, such as community tourism. This is in tandem with the thrust towards sustainable tourism and this is brought to the fore in the Ministry of Tourism’s draft document “Sustainable Development of Tourism in Barbados - A Policy Framework”. The policy outlines the necessity for Social Impact Assessment, identification of funding, provision of fiscal incentives for ventures, which showcase the indigenous culture and life of Barbados, providing community persons with basic business skills and sensitisation of communities to opportunities in tourism. Examples of these are seen in the agro-tourism project in the Scotland district (started in 1998), the tourism Loan Fund for small tourism ventures, the drafting of a new Tourism Bill which will legalise fiscal incentives for environmentally sensitive undertakings and the community-based management approach in Harrison’s Cave, Carlisle Bay and Folkstone Park and Marine Reserve.

The Barbados Tourism Development Program mandated sustainable, nature-based tourism as an area that needs strengthening and established guidelines for such. The thrust is assisted by the Coastal Zone Management Unit which protects the coastal resources under the Coastal Conservation Pre-Investment Program and the Coastal Conservation Programme Phase 1.

The Draft National Development Plan (Amended 1998) outlined policies to be followed in “Access and Views to the Sea”, which aim to preserve vistas for and access to the coast by the population. The previously cited document on sustainable tourism in Barbados requires that Town and Country Planning Legislation incorporate more strongly “Conservation Areas” and procedures for their use, the use of environmentally friendly technologies, indigenous materials and products in tourism enterprises and the education of the populace on the unique aspects of the built and cultural heritage of Barbados.

Mindful of the damage that can be done to the environment by unregulated and traditional tourism, the Barbados Government has embarked on a tourism development programme that seeks to protect the natural resources that form the base of the tourism sector, as a means of ensuring the sector's long-term sustainability.

Waste management

The Sewerage and Solid Waste Project Unit (SSWPU), together with the CDB, have developed a profile of the solid waste sector. Nationally the SSWPU is considering carrying out a survey on recycling, but in the context of the national Integrated Solid Waste Management Plan (ISWMP), the primary focus is waste reduction followed by reuse and then recycling. A long-term 20-year view towards management of solid waste in Barbados has been initiated under a project funded by the Government of Barbados and the IDB (mainly), with assistance from other regional and international funding organizations. In order to forge links with the private sector with regard to waste management, a full economic package is being developed under the Integrated Solid Waste Management Programme.

To deal with hazardous wastes, a Chemical Waste Storage Facility is being built and a Draft Policy Paper on Hazardous Substance Management is being prepared. In 2000 the MEE presented to Cabinet.

- The Hazardous Chemicals/Substances Survey and Inventory (1995-1998);
- The National Hazardous Materials Emergency Response Plan; and
- Recommendations for a Revised Administrative Framework for the Management of Hazardous Substances.

The Ministry of Health also has a Draft National Oil Spill Contingency Plan for Barbados.

Under the ISWMP an education project is being developed which encompasses education materials such as physical and computer models, videos, curricula for schools and school activities.

The ISWMP is developing legislation and operating standards accompanied by monitoring and mitigating programmes to ensure a high standard of environmental protection. Training workshops and other forums will be used to sensitise the judiciary, law enforcement personnel and the public on environmental impacts and legislation.

Two important pieces of legislation that are now being drafted include:

- The Comprehensive Solid Waste Management Act which will provide a regulator framework for solid waste management in Barbados;
- The proposed Environmental Management Act which will integrate and synergise several elements of environmental protection.

Socio-economic issues included in the SIDS POA

Globalisation and trade

Domestic reforms: The Government of Barbados instituted a Value-Added Tax (VAT) in 1997 to meet the fiscal challenges associated with the forthcoming reduction in tariffs as a result of trade liberalisation on imports. Most of the government's revenue is derived from taxes on imports.

The Government has started to reform its tariff and non-tariff barriers to trade in line with its commitments as a WTO member and to come into compliance with the terms and conditions of the CSME. In addition, there has been a reform of investment policy so that the rights of non-national investors are the same as those of national investors.

The Government of Barbados is an active participant in the wider trade initiatives such as the FTAA and the ACP-EU Lome agreement and helps to finance the Regional Negotiating Machinery which prepares pre-agreed strategies for CARICOM for discussion in larger forums. In the area of capital markets, the Government has reduced its borrowing from the Central Bank and relies more on local capital or international financial markets to fund economic growth. This has seen value of local loans rise rapidly in the last five years.

The focus is on non-inflationary sustainable growth and the Central Bank sets a minimum deposit rate which serves as a guide for interest rates.

Competitiveness: To improve its competitive position in the world market, Barbados has forged a Prices and Income Protocol among the private sector, government and trade unions; established a Commission on Competitiveness; given incentives to business via reduction in tax rates and an approved Small Business Programme; established a Centre for International Services to promote and develop the services sector; and has a National Policy on Sustainable Development which provides an overarching framework for economic and social development.

In developing human resources to cope with the globalization phenomenon, the Government of Barbados has sought to train public officers in negotiation skills, implemented legislation governing e-commerce and reviewed its legislation to ensure compliance with the CSME, FTAA, WTO and other organizations to which it has obligations. The Government also strives to persuade the international community of the

higher levels of vulnerability faced by SIDS, within international bodies with whom it is associated. In this respect it is allied with AOSIS.

The Government of Barbados seeks input from the private sector before arriving at its bargaining position in trade talks: NGOs and trade unions are kept abreast of the status of negotiations.

In coming to terms with the necessity for dispute settlement skills, a national committee on External Relations has been set up. Work is done through CARICOM's COTED which seeks to establish a consensus position for the subregion. These options, among others, are also used to address difficulties which may arise in obtaining market access.

In order to diversify the economy the Government has embarked upon a concerted attempt to enable the services sector to maintain its competitiveness. Incentives have been provided on a cost sharing basis to encourage the certification of businesses to ISO 9000 standards; incentives have been offered to the manufacturing and tourism sectors since these have suffered disproportionately in the globalisation process; and the National Productivity Council was created in the early 1990s to assist businesses in improving their competitive positions regionally and internationally.

Financial institutions, such as the Enterprise Growth Fund and Fund Access, have been created to aid small businesses, through venture capital and loan financing. The Youth Entrepreneurship Scheme and the establishment of the urban and rural development commissions also assist with loans to upgrade businesses.

Safety Nets: To assist the part of the populace which may be impacted negatively by Globalisation the Government of Barbados has:

- Set up a Ministry of Social transformation to coordinate the provisions of services to the disadvantaged;
- Provided grants and tax concessions on the provision of training and retraining of workers; and a technical and Vocational Educational Council has been established to assist the process;
- Set up a poverty alleviation fund which also provides training for unskilled workers and a National Plan of Action for the Alleviation of Poverty is being developed within the context of a National Strategic Plan for the social sectors as a whole. A National Insurance Scheme also assists unemployed and underemployed individuals.

Crime and drugs

The Police Service conducts lectures to community groups, distributes literature and has outreach programmes to unemployed young men. There are also summer camps, sporting activities for youths in 'volatile' areas and a Drug Awareness Resistance Programme targeted at primary schools.

The National Council on Substance Abuse was established as a statutory corporation in 1995 and has adopted the strategy known as Integrated Demand Reduction, which focuses on school prevention, community prevention, research and coordination and treatment and rehabilitation.

At the national security level, Barbados is part of the CARICOM initiative called the Regional Security System, which also includes money laundering and other illegal activities within its ambit. The Mutual Assistance in Criminal Matters Act Cap. 148 provides for collaboration between Barbados and other Commonwealth countries and the Shiprider Agreement with the United States allows for drug interdiction and arrests.

The Proceeds of Crime Act and The Anti-Money Laundering Act (2000) have been passed and a Financial Investigation Unit was established in 2000, to seize earnings from illegal activities. Within the Juvenile Justice System, the Juvenile Offenders Act has been updated and a Juvenile Liaison Scheme provides an alternative to prison. The death penalty has been abolished for those under the age of 18.

The AIDS phenomenon

Barbados is working to decrease the mortality/morbidity of AIDS by 50 per cent over the next five years and is expected to spend Bds\$150M on this programme. The AIDS prevention campaign operates out of the Office of the Prime Minister and facilitates a coordinated approach by several ministries. There is also the Highly Active Anti-Retro-Viral therapy that is being utilized and which is expected to cost Bds\$10M in the first year (2001).

Migration

There is no stated policy on immigrant labour. Work permits are granted by Immigration according to the law. With respect to returning migrants there is a Facilitating Unit for returning nationals which assists such persons in relocating. A study is being proposed to determine the impact of this return migration both on the migrants and the society. Policies for the rehabilitation of deported criminals do not currently exist.

Natural and man-made disasters

In addition to that stated in the POA Chapter on Natural Disasters, Barbados has adopted and complied with the resolutions of the International Civil Aviation Organisation (ICAO) and has signed on to approximately 26 international conventions dealing with shipping including MARPOL. A maritime safety organization, which will be composed of a broad range of agencies and ministries, will improve Barbados' ability to implement the requirements of the international shipping conventions.

In the event of a disaster, contingency measures exist in the National Estimates and the Government of Barbados has a vote in place for looking at putting recovery measures in place.

In terms of insurance opportunities for home owners, United Insurance has a publication dealing with retrofitting for homeowners. Once approved by an engineer, a reduced premium is offered to homeowners.

SAINT VINCENT AND THE GRENADINES

Socio-economic issues included in the SIDS POA

Globalization and trade

Domestic reforms: Within Saint Vincent and the Grenadines, there has been a phased reduction of the Common External Tariff (CET), the liberalization of the exchange and the continued removal of price controls/ subsidies. These same measures, in addition to the implementation of the WTO/GATS protocols, have been used to improve competitiveness.

Parliament is now in the process of passing legislation which will impact on the capital markets and the development of investment opportunities.

With respect to participation in multilateral trade negotiations, Saint Vincent and the Grenadines has attached itself to the Regional Negotiating Machinery; this is also the mechanism used to enhance human resource capacity towards handling international trade issues. In addition, Saint Vincent and the Grenadines remains an active participant in the World Trade Policy Review Process, which was agreed on during the Uruguay Round in 1993.

Saint Vincent and the Grenadines (SVG) has taken part in activities related to dispute settlements through the CRNM/IDB project, which utilizes workshops designed to promote a better understanding of the concept of dispute settlement. On a related matter, SVG has engaged in active lobbying for preferential treatment of the banana

industry and has taken action locally to improve the quality of the product and the efficiency of the industry. In preparation for the inevitable erosion of preferences which will occur in the globalized markets, there has been instituted a policy of economic diversification, which is clearly spelled out in the MTESP 2000-2002, as part of the government's development goals.

To assist micro-enterprises, a Small Enterprise Development Unit has recently been established, which works in collaboration with other institutions such as the Development Bank and the National Development Foundation.

In terms of having a policy framework for integrated and sustainable development, SVG now has an integrated planning process in place and EIAs are required for all development projects. SVG is also a signatory to the Grenada Declaration on Principles for Sustainable Development.

To dampen the possible negative effects which may be generated by globalization, Saint Vincent and the Grenadines has in place a Poverty Alleviation Project and a study which assessed the "Socio-Economic Impact of the Restructuring of the Banana Industry". This has been completed and appropriate interventions have been identified.

There are no measures at present to address retraining or retooling of redundant or excess labour, but some opportunities are provided via the National Development Foundation and the recently established Development Bank.

Drugs and crime

To combat the problem of the trade and the use of illegal drugs, the United States-backed Drug Abuse Resistance Programme (DARE) has been implemented. There is a proposal for the establishment of a Drug Reduction Programme and the appointment of a National Drug Coordinator. Further, Saint Vincent and the Grenadines is involved with the Regional Security System, while being a signatory to the Shiprider Agreement with the United States.

In order to prohibit the use of assets obtained via the illegal drug trade, the Proceeds of Crime Legislation has been enacted and a Drug Trafficking Offences Act has been passed.

Juvenile Justice System

To reach those youths pre-disposed to getting involved in drug use, Police Youth Clubs are being established together with a Youth on the Move Programme. Reforms within the juvenile justice system are being prepared with the assistance of UNICEF and the National Children's Home.

The AIDS phenomenon

To come to terms with the health threat of AIDS, there are presently three ongoing programmes, namely, The Youth Guidance Programme on AIDS, the Community Outreach Programme and the HIV/AIDS and You programme. Treatment for persons living with AIDS focuses on mother-to-child transmission in collaboration with the Caribbean Epidemiological Centre.

Returning migrants and immigration

Saint Vincent and the Grenadines has enacted legislation to remove restrictions on the entry of skilled nationals of qualifying CARICOM States, but there is no policy with respect to deported criminals or returning migrants.

Natural and man-made disasters

To enhance the resilience of the population and State in the event of natural disasters, a World Bank Disaster Management Project has been implemented. Further, emergency shelters are being refurbished and the Physical Planning Unit of the Central Planning Division (CPD) is developing standards, which will ensure that structures are designed to be more resistant to natural and man-made disasters. For early warning and preparedness, an independent Emergency Operation Centre will be established, as will an Office of Disaster Preparedness. The Monitoring System of the Meteorological Centre will also be upgraded. The Disaster Unit conducts seminars and workshops throughout the country regularly and simulation exercises are conducted annually at the national level.

To spread out risks associated with natural disasters, SVG is assisting the OECS subregion in implementing physical mitigation measures. The World Bank and other development partners are in the process of helping the subregion set up national disaster insurance schemes which would provide relief in the event of a disaster.

For marine disasters there is an agency responsible for overall management of disasters in the marine environment and there is also in place an oil spill response committee, with personnel trained in oil spill contingency measures. However, the Land Based Source Protocol to the Cartagena Convention has not been ratified.

The Government of Saint Vincent and the Grenadines has signed on to many treaties under the IMO. While the required legislation is in place, however, the institutional and organizational capacity for efficient enforcement is still lacking.

SAINT LUCIA

Climate change and sea level rise

The Government of Saint Lucia has ratified and is participating in the CPACC Project including its workshops. However, legislation for implementation is still lacking. Saint Lucia continues to participate in the Conference of Parties meetings, but needs to be better represented at the Intersessional Meetings.

Institutional mechanisms are currently being established for sustainability and further participation in the follow-up project called IMPACC - Implementing Caribbean Adaptation to Global Climate Change. The Meteorological Office is currently responsible for the care and maintenance of the monitoring station for Climate Change, along with the dissemination of data generated to the Institute of Marine Affairs (IMA) in Trinidad and Tobago. The IMA processes the data and makes it available on the CPACC web page. CPACC has promised training for the meteorological officers in the use of the data generated.

The GIS Unit in the Ministry of Planning, Development, Environment and Housing is the data repository for the CPACC project.

The focal point of CPACC, along with a local team of officers from other governmental agencies, is undertaking the study on Economic Valuation of Coastal resources for Saint Lucia and a local team has undergone training in the methodologies used in this evaluation.

Through its National Communications Project, Saint Lucia will ensure its needs and concerns are included in UNFCCC assessment reports.

Natural and environmental disasters

Saint Lucia already has a working relationship with the Seismic Research Unit (SRU) and cooperates, whenever possible, in the monitoring and reporting on seismic events.

Many public, private and quasi-government agencies have begun addressing disaster preparedness and many have developed draft disaster recovery plans. Comprehensive integrated disaster plans are presently available at <http://slunemo.i.am>. The plan is under review and will be resubmitted to the Cabinet of Ministers for adoption upon completion

A resettlement policy following disasters has not yet been established. Both CDERA and NEMO have recognized the need for such a policy but no work has been undertaken in the area.

The national office and local communities are in need of institutional strengthening and there is a need for national disaster organizations to be present at the review and comments stage of Environmental Impact Assessments. Building codes and standards have been promulgated, but are still awaiting government approval.

NEMO assists the CMO and the Ministry of Health, whenever possible, in efforts to upgrade its data access and transmission capabilities. However, national consultations to examine the Draft Convention on the Provision of Telecommunications Resources for Disaster Mitigation and Relief have not taken place.

An ongoing simulation is conducted by the Ministry of Information together with several agencies in the public and private sectors to help promote a culture of mitigation, preparedness, public safety and security. In addition, NEMO, Saint Lucia Red Cross, Saint Lucia Adult Education Program and CDERA are conducting a Community-Based Disaster Management Project while the Ministry of Tourism and Civil Aviation has begun a campaign of sanitization.

Hazard Mapping and Risk Analysis will be done under a World Bank Project. Incentives for incorporating mitigation practices in all major sectors of the economy will be included in the review of the Draft Mitigation Plan. The model legislation developed by CDERA, Overseas Development Assistance (ODA) and the Caribbean Law Institute (CLI) was passed in 2000.

Management of wastes

The Saint Lucia Solid Waste Management Authority has reached an agreement with a private company to set up a centre for paper recycling. The Authority now receives in excess of EC\$2 million from the Environmental Levy to fund its operations. A committee has been established to make recommendations to the Ministry of Finance on other possible cost recovery mechanisms.

The Authority has established a Hazardous Waste Advisory Committee (HWAC) to make recommendations on hazardous waste management and the Committee is considering, in addition, substances such as asbestos, waste oil, Polychlorinated Biphenyls (PCBs) and spent agricultural chemicals. The HWAC has developed a project on Lead Acid Batteries and the Hazardous Waste Management Plan and the Biomedical Waste Plan are being developed through the HWAC.

The Solid Waste Management Authority has over the last two years developed and implemented a successful comprehensive public awareness and education program

Cabinet has approved a policy for the management of shore and ship-generated waste and legislative instruments are being prepared for environmental monitoring and enforcement.

In accordance with Annex V of MARPOL 73/78, port/marina reception facilities have been proposed but are not established at this time, nor have methods for their use.

There is no policy on the use of clean technologies and recycling programmes exist only for glass, metals and paper. There are as yet no laws banning the importation of hazardous waste from OECD States. However the Government has promoted public awareness and has conducted educational campaigns.

Baseline data has been developed with respect to waste management, but no data have been developed for pollution control.

Coastal and marine resources

In order to encourage ICZM, the Government has established coastal zone and watershed administrations and advanced plans for the establishment of a Coastal Zone Management Unit. Studies such as the Marine Management Areas and the Northwest Coastal Conservation Project have been initiated, but legislation is still lacking for coastal zone and watershed management and in areas related to the EEZ.

Comprehensive research and monitoring programmes for coastal and marine resources have been designed, as has capacity to ensure sustainable harvesting and processing of fisheries. Educational and awareness programmes promoting the sustainable use of coastal and marine resources have also been promulgated.

There are new and/or strengthened existing programmes and polices to address oil spills, land-based sources of pollution, effluent standards and water quality.

Saint Lucia has ratified UNCLOS, the Cartagena Convention and the Convention on Straddling Fish Stocks and Highly Migratory Fish Stocks. The Government adheres to the International Coral Reef Initiative (ICRI) and Global Programmes of Action for the Protection of the Marine Environment from Land-Based Activities.

Freshwater resources

The Ministry of Agriculture has established a Water Resources Management Project to focus on water quality and the Northwest Coastal Conservation Project carried out studies on the improvement of water quality in Saint Lucia. The Ministry of Agriculture is also undertaking Saint Lucia's component CEHI's region-wide Integrated Watershed and Coastal Areas Management Project.

Improvements in Saint Lucia's freshwater management have been attempted on a small scale in the Talvern Water-Catchment, and the lessons learnt have been shared with Saint Vincent and the Grenadines, by Saint Lucia's Forestry Department. The OECS-NRMU project, is supporting the project financially.

Saint Lucia is presently working with or participated in other global and regional water resource initiatives as follows:

- Workshop on Integrated Water Resource Management in Small Island Developing States held in Trinidad and Tobago, under the auspices of the CCST and the Commonwealth Science Council (CSC);
- CLAWRNET Symposium and ATM: a database, which is being produced for Caribbean Land and Water Resources Network.

Even so, barriers still exist with regards to access to water quality information.

UNEP-CAR/RCU UNEP-TIE, CAST is working with CEHI on a Blue Flag Feasibility Evaluation Scheme for the Caribbean. It is envisaged that regional water guidelines will be developed from this initiative.

At present, there is no national water resources management plan and Saint Lucia is working on reviewing its legislation pertaining to water management with assistance from the European Union and the World Bank. However tools and capacities for decision-making are still lacking.

Reclaimed wastewater use is presently being undertaken by the hotel industry, but there is no policy or promotion of its use for other sectors of the economy.

Land resources

The Government of Saint Lucia has prepared, implemented and adopted land-use plans using an integrated development planning approach and a Planning Act and Building Code have been established to guide overall physical development. The Government, along with public and private sector agencies, is currently in the process of developing a National Land Policy for the island which will seek to resolve conflicts in allocation and appropriate uses of land. Land information Systems and GIS have been developed as decision-making tools.

A Housing Department has been formed within the Ministry of Planning to address the various issues of housing and is in the process of implementing a project funded by the Central Development Bank to address low-income housing on the island. A house plan/strategy has not been formulated to address the issues of shelter.

Energy resources

A Sustainable Energy Plan is being developed to focus on diversification of the local energy market. It will promote exploitation of renewable and indigenous sources of energy as well as energy conservation. A regulatory framework for independent power

production is also in the plan and solar energy is being promoted through the removal of duties/taxes on solar water heaters.

Tourism resources

The Government has established the community-based nature heritage tourism programme to increase the participation of local communities in the tourism industry.

The National Conservation Authority (NCA) has been established with a mandate to assist with natural resource management and coastal/beach zoning as well as management for the tourism industry. The NCA Act has been passed.

The implementation of the planned environmental systems for the sites and attractions managed by the Saint Lucia Heritage Tourism Program (SLHTP) will further strengthen natural resource management initiatives undertaken by the industry.

Funds have been sourced from the European Stabex Programme, the OAS Small Hotels Initiatives, and the French Mission, to conduct a series of programmes with the SLHTP and the OECS-NRMU in support of sustainable tourism initiatives.

The SLHTP has established an auditing system to be carried out on all nature heritage sites and a tourism policy mechanism to address environmental issues in relation to tourism on the island is being developed. At present there are no incentives within the tourism industry for the use of sustainable technology.

Biodiversity resources

The Saint Lucia Government ratified the SPAW Protocol in April of 2000

Saint Lucia's National Biodiversity Strategy Action Plan had been prepared along with its Country Study Report, which has been published. The plan has been submitted to the Ministers of Cabinet for endorsement.

The Saint Lucia National Trust and the Forestry Department have been working with landowners in the management of cultural and natural heritage. A System of Protected Areas (SPA) was produced which focused on the better management of privately owned lands. This still has to be endorsed by the Ministers of Cabinet.

The Saint Lucia National Trust along with CANARI and government agencies have been working on the development of management plans for certain areas. The Saint Lucia World Heritage Committee is also investigating the development of management plans for the Piton Complex, being considered for designation of a World Heritage Site. Biodiversity considerations are an important component of these plans.

A biodiversity project aimed at the inventory and monitoring of biodiversity has recently been submitted to GEF since none exist at present.

Ownership of intellectual property rights has not been adequately and effectively protected and a similar situation exists with respect to adequate and effective protection to indigenous/local technology, knowledge and traditional practices.

National institutions and administrative capacity

New environmental legislation and regulations have been developed within the legal system. The Government will, in the near future, review the entire legal system and make the necessary amendments. An Institutional Review in support of enhanced environmental management on the island had been completed

Regional institutions and technical cooperation

In an effort to encourage coordination and collaboration among regional bodies, the Government continues to participate in several regional conferences and views membership in regional organizations and financial support of regional initiatives as crucial to the success of these efforts. Regarding efforts between the international community and regional programmes, the Government advocates channelling of international initiatives through regional institutions and supports regional projects being taken to the international level.

Transport and communication

To a large degree, transport services have not been developed in accordance with a sustainable development strategy.

Science and technology

The Government is in the process of establishing a National Science and Technology Council and the first set of science and technology indicators for the island are presently being compiled. The Government is currently seeking the best way to strengthen the existing scientific and technological services being offered.

Human resource development

Sustainable development ideas have not been infused into the education curricula at any level. The use of traditional knowledge and skills has not been encouraged as a tool of environmental resource management.

ST. KITTS/NEVIS

Socio-economic issues included in the SIDS POA

Globalization and trade

Domestic reforms: The St. Kitts/Nevis Government (SKN) is involved in phase 3 of a regional CARICOM programme involving the removal of tariff and non-tariff barriers. Policies are now primarily focused on trade in services and the use of technology to create new service industries.

The Government has no restrictions on repatriation of profits by foreign investors and a free foreign exchange movement is allowed up to the value of \$US100,000. In the face of liberalisation, the Government is associating with other States to get the best possible deals for its traditional exports. Capital market issues are dealt with through membership of the CSME, the Eastern Caribbean Central Bank (ECCB) and other financial groupings, since the economy is too small to generate much activity on its own.

Competitiveness: There is little assistance to businesses in their formation and operation. However there is a flexible immigration policy to support businesses which need to hire personnel from foreign countries. The establishment of the Bureau of Standards is part of the drive to ensure the quality standards of goods produced.

Human resources development to enhance trade include the introduction of new administrative and legislative procedures, the accommodation of e-commerce and an education reform project to enable individuals to create opportunities within the knowledge revolution, especially within the realm of e-commerce.

Participation in multilateral trade negotiations takes place via regional bodies and mechanisms, due to constraints in size. Lobbying for recognition internationally is done mostly via AOSIS, CARICOM and the ECLAC Caribbean Development and Cooperation Committee (CDCC) secretariat. Due to size and financial constraints, activities to promote capacity in dispute settlement within international forums are too costly. With difficulties related to market access, negotiation and lobbying are done via the EU and representation is made to the United States government via diplomatic channels.

Economic diversification has centred around a growing services sector linked to the tourist industry and a small export-oriented marketing sector is present. Training is provided for those involved in small businesses via the Small Enterprise development Unit together with the SKN Development Bank, which assist with financial and other transactions.

With respect to a framework for sustainable development, the coordinating structure that links social, economic and environmental issues are located within the Planning Unit in the Ministry of Finance, Development and Planning. Various parts of the unit contribute relevant data needed for planning national development. A more explicit framework is to be designed.

Safety nets: Most of the initiatives that would be available to those negatively affected by the globalisation phenomenon would be found within the health, housing and education sector. These are mainly social assistance programmes.

Crime and drugs

Most public awareness programmes for drugs are done by groups within the civil society and are funded by the private sector and the United States-backed DARE programme. In SKN, drug education is provided in the context of a content-based approach to health and family life education.

The National Joint Head Quarters (NJHQ) in St. Kitts/Nevis was officially opened in August 2000. This formed part of the region-wide strategy for maritime counter-drug cooperation in the Caribbean. The NJHQ is built around the concept of inter-agency collaboration and makes linkages among the surveillance, detection, monitoring and interdiction arms of Government. It is designed to serve as a focal point for the collection and dissemination of counter-drug information and intelligence among the law enforcement agencies and will operate seven days a week, 24 hours a day.

To combat the profits being obtained from engaging in the drug trade, the Government is a signatory to several international conventions and is in the process of adopting several others. Domestically, there are the Drugs Prevention and Misuse Act (Act11), The Proceeds of Crime 2000, the Financial Intelligence Unit 2000, among others.

Local legislation is being reviewed, though technical support in legislative drafting is lacking. The Government is also attempting to ensure that local legislation is in harmony with that of surrounding States.

Juvenile Justice System: The Justice Reform Conference was held in St. Kitts 5-6 April 5-6 2001 and the recommendations, when implemented, will aid conformity with the United Nations Convention on the Rights of the Child as well as other treaties and instruments and prevent, reduce and control delinquency.

The AIDS phenomenon

A study was done in March and April 2000 to determine the groups at risk as well as the circumstances fuelling the AIDS epidemic. The Government was assisted by CAREC, PAHO and the WHO. Based on the study, a multisectoral workshop was

convened in January 2001 to elucidate a strategic planning process; as a result the Ministry of Health and Environment is now working on a 2-5 year national AIDS response plan.

There is currently no treatment available for the HIV/AIDS virus itself; however counselling, free testing for the HIV virus and hospital care is provided. The Government is currently consulting on plans/proposals to address in vitro mother to child transmission.

Returning nationals and migrants

The SKN Government established a Secretariat for returning nationals in December 1999. The Secretariat is to continue developing until it is a full fledged government department. The core programme of the Secretariat includes import duty concessions and a house lot for returning nationals, but a number of programmes have been added as resources have become available including information via the Internet.

To deal with the issue of deported criminals, deportees were invited to a meeting in March 2001 and a second one in April 2001. Treatment meted out to them both abroad and on their return was discussed and possible assistance that may be required by them to solve any outstanding issues was elucidated. A report has been prepared for the Prime Minister.

Unemployed and underemployed persons

There are no retooling and retraining programmes for workers that have been made redundant, but opportunities for assistance are present within the Small Enterprise Development Unit and the St. Kitts/Nevis Development Bank. There is also the Department of Co-operatives which assist the underemployed in being more efficient and productive. In addition, the Ministry of Education's Youth Skills programme provides training in a wide range of skills to school leavers. There has been no investment in direct employment schemes since 1995.

Disasters: Natural and man-made

The Government has invested heavily in disaster mitigation projects over the past five years (aided by USAID, the International bank for Reconstruction and Development (IBRD), EU, CDB) and now has a full-time Disaster Management Office, a National Disaster Plan and a National Disaster Mitigation Council which provides policy direction and is overseeing the development of a National Development Plan. SKN is also benefiting from a 16-month USAID funded \$US500,000 Post Georges Disaster Mitigation Project. This will strengthen the country's capacity for disaster mitigation and loss reduction, in addition to complementing and expanding several of the institutional components already included in the World Bank financial initiative, Emergency Recovery and Disaster Management Project.

As part of the disaster mitigation project, the Government has provided training on building code regulations, carried out vulnerability and hazard assessments of State-owned buildings and infrastructure and trained key staff from the building and construction industry. The country has access to the Met Office in Miami, which provides functions as part of an early warning system. The local Red Cross is currently engaged in public sensitization for disaster preparedness and the disaster mitigation project has public awareness as one of its goals and this will be enlivened in a public campaign due to start in June/July 2001.

Reducing risks to the population via insurance or other schemes has proved to be particularly difficult. Disaster organizations and insurance companies continue to hold discussions on the matter. Consideration is being given to linking lower premiums and reductions in premiums to the application of proper building practices. SKN is now participating in the World Bank-sponsored OECS Catastrophe Risk Management and Insurance Reform.

The Government of SKN also has an adaptable loan agreement with the World Bank which provides contingency resources for immediate human relief and can access up to \$US500,000 from the CDB to assist with immediate response to a national disaster/emergency.

With respect to man made disasters, the Government of SKN has a Draft Oil Spill Plan that is being updated, an Airport Emergency Plan and is preparing policy, legislation and regulations which will put in place measures to address ship-generated and land-based solid waste pollution. Litter legislation is also being updated.

Treaties related to the ICAO and the IMO: SKN is not a member of the ICAO, but is represented via the Civil Aviation Directorate of the OECS. The Government, however, has adopted all the measures and implements all the policies of the ICAO. SKN is not a member of the IMO, but has a Department of Maritime Affairs (1999) which has been developing and introducing modern maritime legislation in accordance with IMO guidelines.

BAHAMAS

Climate Change

The Bahamas has ratified the Montreal Protocol, the UNFCCC and is participating in CPACC. However it has no legislation pertaining specifically to climate change and has not developed technology to reduce emissions. Activities have been undertaken to develop national inventories of greenhouse gas resources, greenhouse gases sinks and to address anthropogenic emissions. The Bahamas Government continues to cooperate with NGOs and international organizations in climate change issues

Disaster mitigation

The Government has established management institutions and policies and has strengthened disaster management plans. Economic and fiscal instruments are in place to facilitate disaster preparedness and public participation is encouraged. In addition, there is a disaster emergency fund and a plan for integrating disaster policy into national development planning.

Waste management

The Bahamas has ratified the Basel Convention though not the London Convention (1972). Economic instruments are present to encourage proper waste disposal and there are drafted regulations pertaining to waste management. There are public education programmes and recycling programmes for glass and paper. The Government is working on developing baseline data for waste management. There are proposed port/marina reception facilities in accordance with Annex V of MARPOL 73/78, but these have not been established, except for large commercial craft. There has been no introduction of clean technologies, no laws regarding importation of hazardous wastes from OECD countries or developed information systems for pollution management.

Coastal and marine resources

Institutions that deal with Coastal Zone Management issues have been strengthened as have those concerned with watershed and EEZ management, but there is no specific legislation to address these issues. However, feasibility studies in CZM have been started. There are no research and monitoring programmes for coastal and marine resources, but legislation and capacity are in place for harvesting and processing of fisheries and marine resources, though these are non-binding guidelines. The Bahamas has not ratified UNCLOS or the Convention on Straddling Fish Stocks and Highly Migratory Fish Stocks. The country has nevertheless adhered to guidelines elaborated by the ICRI and those governing the protection of the marine environment from land-based sources of pollution.

Freshwater resources

With respect to management of freshwater resources, watershed protected areas have been established as have programmes to reduce water loss in the distribution system. At present, there is no irrigation policy, but a national water resources management plan exists and the Government also has economic incentives, forest management and regulatory measures in place. Water quality standards have been advanced and there has been strengthening and institutional cross linking and cooperation among agencies that are involved in freshwater management.

The Government also has systems to monitor impact on water resources, effective sewerage disposal systems, desalination systems and recycling waste water programmes. In addition, there are policies to address oil spills, sanitary water quality and effluent standards.

Land resources

The Bahamas has prepared, implemented and reviewed land use plans and has enlisted the use of GIS in planning. There has been regulation with regard to the cutting of trees, free ranging of animals and improved land administration systems. However, there are no policies in place to mandate soil conservation methods. The Government has supported reforestation programmes, developed parks and protected areas, formulated laws for beach use and a housing strategy using credit and site services for housing. Decentralization policies have been developed and physical planning offices have been strengthened.

Energy resources

The Government uses economic incentives and has promoted the development of environmentally sound energy resources, such as solar energy.

Tourism resources

The Government has formulated policies based on sustainable tourism including eco-tourism, marine based tourism and cultural tourism. Awareness for sustainable tourism has been generated using fiscal incentives, regulatory measures and public participation. There are plans afoot for increasing local ownership within the tourist sector and for energy, water and waste incentives within the tourism industry.

Biodiversity resources

The Bahamas has ratified the Convention in the Trade in Endangered Species (CITES), the Convention on Biological Diversity and has enacted legislation to deal with the conservation of biodiversity of the terrestrial and marine resources. Biotechnology is advocated, but there are no gene banks or programmes to generate buffer stocks. Methodologies have been used to attempt to quantify the intrinsic and cultural value of the biological resources, management systems have been formulated, inventories of stocks have been conducted, Integrated Pest Control has been applied and there is legislation to protect intellectual property rights. Fiscal and regulatory measures for biodiversity continue to be developed.

National institutions and administrative capacity

Inter-agency cooperation continues to be strengthened. Implementation strategies and schedules, including financing and the drafting of environmental laws, are ongoing to design a development strategy that takes sustainability into account. There is, nevertheless, a need to enact local legislation that is consonant with international conventions.

Regional institutions and technical cooperation

The Bahamas has joined, encouraged and financially supported regional organizations.

Transport and communication

Transport systems still need more safety guidelines and environmental standards to be energy efficient and low cost. The outlying islands have had their telecommunication facilities upgraded.

Science and technology

Science and technology is promoted in agriculture, to minimize import dependency and school curricula are designed with modern technologies in mind. There remains little promotion of indigenous technologies or access to databases on such for local use.

Human resource development

The Bahamas has adopted gender mainstreaming in its decision-making and planning process. Sustainable development ideas are promoted at the primary, secondary and tertiary levels. At present there is an underutilization of local knowledge and traditional skills. To further assist human development, the Government tries to provide basic needs in urban settlements, to eliminate poverty in rural areas and to use distance learning to facilitate environmental training. There are plans underway to facilitate the role of communities, youths and women in national development.

Annex 1

SELECTED SIDS-RELATED REPORTS



SELECTED SIDS-RELATED REPORTS

NAME OF DOCUMENT	OFFICIAL DOCUMENT NUMBER	DATE OF PUBLICATION
The Vulnerability of the Small Island Developing States of the Caribbean	LC/CAR/G.588	13 March 2000
Implementation of the SIDS-POA – A Caribbean Perspective	LC/CAR/G.520	27 March 1998
Summary Report of the Meeting of Representatives of Prospective Donors and Representatives of Small Island Developing States, United Nations Headquarters, New York, USA, 24-26 February 1999		2 March 1999
Supplementary Report (<i>Priorities, Recommendations and Criteria articulated by selected potential donors</i>) of the Meeting of Representatives of Prospective Donors and Representatives of Small Island Developing States, United Nations Headquarters, New York, USA, 24-26 February 1999		12 March 1999
Report of the Joint Meeting of the SIDS Bureau and the Inter-Agency Collaborative Group	LC/CAR/G.575	3 November 1999
The Caribbean Consensus on the Further Implementation of the SIDS programme of Action: Issues presented to the Special Session of the United Nations General Assembly to review the implementation of the SIDS Programme of Action, New York, USA, 27-28 September 1999		September 1999
Report of the Joint Meeting of the SIDS Bureau and the Inter-Agency Collaborative Group	LC/CAR/G.551	12 December 1998
Report of the Meeting of the SIDS Bureau	LC/CAR/G.545	1 September 1998
Summary Report of the Caribbean Meeting of Experts on Implementation of the SIDS Plan of Action, 17-19 May 1995, Port-of-Spain	LC/CAR/G.447	26 July 1995
Report of the Caribbean Ministerial Meeting on the Implementation of the Programme of Action for SIDS	LC/CAR/G.514	15 December 1997
SIDS Ministerial Decisions	LC/CAR/G.528	15 December 1997
Report of the State of Implementation in the Caribbean of the Programme of Action for SIDS	LC/CAR/G.569	9 May 1999
Report of the Meeting on issues related to the further implementation of the POA for the Sustainable Development of SIDS and RIO + 10	LC/CAR/G.641	23 April 2001

Annex 2

**REVIEW OF IMPLEMENTATION OF THE
1997 JOINT WORK PROGRAMME
OF CARIBBEAN SIDS**

STATUS OF IMPLEMENTATION OF THE 1997 JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS

Issues	ID	Subactivities	Agencies	Status
Biodiversity	72	Co-ordinate efforts toward identifying strategic elements of the CBD which lend themselves for co-ordination at the regional level	UNEP CANARI	CANARI awaiting action by UNEP. UNEP identified co-operative and programmatic linkages with CDB, to be circulated for inputs to serve as the basis for developing the strategic elements. UNDP/GEF convened the Regional Expert Workshop on Biodiversity Strategies and Action Plans (BSAPS) to assess and identify support activities to be included in the GEF Global Support Program for Enabling Activities. This workshop: 1. Facilitated the exchange in experiences and lessons learnt in the implementation of Enabling Activities for Biodiversity (EA/BD) in Latin America and the Caribbean region. 2. Allowed the identification of priority support areas for EA/BD project implementation, and on the basis of this assessment, design the Global Enabling Activities Support program for ratifying countries of the Convention on Biological Diversity
Biodiversity	127	Undertake identification process to determine: a) CBD priorities; b) institutional competence; c) recommended actions; d) costing, and e) prepare proposal for funding	UNEP/RCU CANARI	Workshop on Biodiversity Strategies and Action Plans (BSAPS)
Biodiversity	128	Considered establishment of Regional Biodiversity Steering Committee	UNEP/RCU	Proposed to discuss thgis issuse at the next Scientific and Technical Committee of the SPAW Protocol, which was held in August 1999 (Meeting on the Protocol Concerning Special Protected area). With respect to UNEP involvement:

STATUS OF IMPLEMENTATION OF THE 1997 JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS

Issues	ID	Subactivities	Agencies	Status
				<p>Specific resources have not yet been made available by member governments and donors for the development and convening of a Biodiversity steering Committee or for consultations on the identification of priorities. However the following have been done:</p> <p>Dialogue and exchanges with the CBD Secretariat to identify joint priorities within the region and possible areas of collaboration to avoid any duplication and to optimise the utilisation of the available resources. Preliminary priority areas that have been identified include marine protected areas (MPAs) strengthening, capacity building and promotion of best practices on Integrated Coastal Zone Management (ICZM), with emphasis on coral reefs and coastal tourism.</p> <p>Collaboration with CANARI in strengthening the capacity of the insular Caribbean in coral reef assessment and monitoring; analysis of sediment impacts; and watershed management, including the development of a subregional report on the status of Coral reefs presented at the IX International Coral reef Symposium, October 2000) and subsequently to be published as part of the Global Coral Reef Monitoring Network (GRCMN) global report on the status of coral reefs</p>

STATUS OF IMPLEMENTATION OF THE 1997 JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS

Issues	ID	Subactivities	Agencies	Status
				<p>in early 20001.</p> <p>Development of a list-serve of managers of MPAs and relevant organisations through which biodiversity and MPA-related information and assistance are circulated on a regular basis.</p> <p>Plans for activation of the existing network of MPAs (CAMPAM) and updating of the existing MPA database with approximately 300 MPAs are included in the exercise.</p> <p>Development of a Small Grants Fund to provide technical assistance to MPAs of the region (launched in June 2000). Information is available on a website.</p> <p>Launching and implementation of the Training of Trainers Programs for MPA managers on all aspects of MPA management, with 2 regional courses already convened and local training activities in preparation in many SIDS.</p> <p>Collaboration with the CTO, CHA/CAST and the tourism sector for the promotion of the best sustainable tourism practices and the implementation of the capacity building and pilot projects in several Caribbean SIDS, as well as launching of the Blue Flag Campaign in the region which will involve SIDS countries as pilot projects.</p> <p>Preliminary development of a PDF-B project proposal to GEF on MPA</p>

STATUS OF IMPLEMENTATION OF THE 1997 JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS

Issues	ID	Subactivities	Agencies	Status
				<p>strengthening in the insular Caribbean, in consultation with UNDP and other partners.</p> <p>Continue serving as contact point within the region for the International Coral Reef Initiative (ICRI) through the dissemination of information to relevant partners and stakeholders and implementation of some of the above mentioned activities.</p>
Biodiversity	129	<p>Develop a program element in its work program specifically devoted to assisting Caribbean countries in streamlining efforts re. biodiversity conservation under various regional and int'l agreements relevant to region and CBD</p>	<p>UNEP/RCU CCA, CANARI</p>	<p>CCA initiated activities on public awareness marine biodiversity.</p> <p>UNDP/GEF assisted Carib. SIDS in developing National Biodiv. Strategy and Action Plans. At present 10 SIDS have developed project documents, 6 of which have been signed and are under implementation. UNDP assisting 5 countries with Biodiversity strategies.</p> <p>UNDP is demonstrating biodiversity conservation linked to community sustainable livelihoods at a World Heritage Site in Dominica (UN Foundation). The project links poverty, governance and environmental issues relating to community co-management. It also serves as a model for sustainable livelihoods linked to protected areas management in the Caribbean. The Dominican project also measures the impact of community based management on protected areas.</p>

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Issues	ID	Subactivities	Agencies	Status
Biodiversity	130	Take advantage of current focus by Caribbean SIDS in preparing their national biodiversity strategies to collaborate and co-ordinate implementation efforts on the next steps	Governments	See UNDP initiatives with governments.
Biodiversity	131	Develop and use creative forms of land stewardship arrangements that can persuade landowners to become active participants in land management and natural and cultural heritage conservation	Governments	Some work done by UNDP in protected areas management in response to the decline in the banana industry. In these efforts, communities were engaged in Protected Area Management on lands in the vicinity of the community. Work also being done by the Barbados government in preservation of cultural heritage.
Biodiversity	132	Ratify SPAW Protocol of the Cartagena Convention (recom)	Governments	By June 2000, the SPAW Protocol had entered into force, following the deposit of the required 9 instruments of ratification. Among the ratifying countries are six Caribbean SIDS, namely, Cuba, the Dominican republic, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, The Netherlands, in addition to Colombia, Panama and Venezuela. Jamaica, together with France, Guatemala, Mexico, the United Kingdom and the United States of America had by then signed the Protocol but had not, as yet, ratified it. The First Meeting of parties of the Wider Caribbean to consider the SPAW Workplan will take place in latter part of 2001.

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Issues	ID	Subactivities	Agencies	Status
Biodiversity	133	Acknowledge need to develop management plans for existing protected areas as a means of ensuring biodiversity conservation	Governments	4 Member States of the OECS have draft versions of, or completed Biodiversity Action Plans, but none have been implemented as yet. The OAS has an Integrated Coastal Zone Management (ICZM) project in Montego Bay in Jamaica to restore a coral reef ecosystem and manage a watershed. The program will transfer the information and technology to 20 other countries throughout the wider Caribbean. Most countries of the region have at least initiated work on management plans. Funding sources include GEF for the Greater Antilles and Continental countries; some countries have also instituted stakeholder management e.g., Trinidad (marine turtles), Jamaica (Portland Bight).
Biodiversity	135	Support regional training programmes for managers of protected areas		Training for managers of MPAs done by UNEP. Workshops undertaken in Saba in November 1999 and the Dominican Republic (for the Spanish speaking Caribbean) in May 2000.
Biodiversity	136	Take advantage of the opportunity offered by Iwokrama Program especially in training, policy development and biodiversity research		UWICED and Iwokrama involved in sustainable tourism workshop. Iwokrama project still ongoing collecting and analysing natural products.
Biodiversity	137	Relevant regional institutions and NGOs civil society to participate fully in the implementation of the IWOKRAMA Program (recom)	IWOKRAMA	UWICED involved, IWOKRAMA ongoing, also management of tropical forests program included.

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Issues	ID	Subactivities	Agencies	Status
Capacity Building and Technical Assistance	18	Extend network of Sustainable Development Councils to whole region	CARICAD Governments Other	Expected resources from the CARIFORUM/Caribbean Regional Environmental Program (CREP) under the 8th EDF have not been obtained by CARICAD, on account of continuing delays in the inauguration of the CREP. As a result, no specific activities have been undertaken by CARICAD and the Caribbean Law Institute (CLI) other than the regular enquiries and representation to the Caribbean Conservation Association (CCA), which is apparently designated the Executing Agency for CREP. The Sustainable Council of Grenada has remained vibrant and meets on a regular basis. Moreover, the government of Dominica (July 2000) recently requested CARICAD's assistance for the design of a suitable legal framework to make the SDC, a statutory body. Environmental attorney Ms Judy Daniel, with support from CARICAD will begin to provide technical assistance pending the release and disbursements of funds by CARIFORUM. CARICAD impressed the urgency for disbursements.
Capacity Building and Technical Assistance	19	Facilitate exchanges among and co-ordination of National Sustainable Development Councils or similar mechanisms.	UNDP CARICAD	SDC's were established in 6 countries (facilitated by UNDP) and had been exchanging experiences. This was explored further in the Forward Evaluation Exercise that took place Aug.-Sept.1998. Report available from UNDP.

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Issues	ID	Subactivities	Agencies	Status
				SDC's have not survived as organisations for change save in Grenada and Dominica.
Capacity Building and Technical Assistance	20	Document experiences and lessons learnt from initiatives in the area of capacity building in the Caribbean, including the UNDP/CDB pilot project, and make these available to all sectors of society	CARICAD	4 case studies completed-Management of a Tourism Nature Centre (Asa Wright Centre in Trinidad and Tobago), Coastal Zone Management (coastal conservation in Barbados), Community Resource Management (Soufriere Marine Park) and Solid Waste Management in Trinidad and Tobago. Eventually coverage of all SIDS POA chapters envisaged. CARICAD is in the process of reviewing case studies on innovative NGO/CBO strategies with assistance from Technical Co-operation among Developing Countries (TCDC). UNDP contracted brochure detailing the experiences and lessons learnt from this project (being prepared for publication).
Capacity Building and Technical Assistance	21	Facilitate the establishment of a regional sustainable development network for documenting and sharing Caribbean-specific and other relevant information through modalities such as SIDSnet	CARICAD UNDP	UNDP has taken the lead role and the Senior Sustainable Development Advisor is in close collaboration with SIDSnet.
Capacity Building and Technical Assistance	30	Strengthen current efforts to revise the regional policy for science and technology recognising the need to identify regional strengths and common ground.	ECLAC/CCST CARICOM	A draft revised document on Regional Science and Technology Policy was prepared by CCST. A final document was completed. N.B. ECLAC/CCST secretariats are no longer coincident. Document available.

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Issues	ID	Subactivities	Agencies	Status
Capacity Building and Technical Assistance	114	Establish Sustainable Development Councils (or similar mechanisms) in those Caribbean countries where they presently do not exist (recom).	Governments	Awaiting release of funds from CARIFORUM. Sustainable Development Councils have been established in OECS countries but have not been long lasting in many instances. The SDC of Grenada remains vibrant and meets regularly; the SDC in Dominica is devising a legal framework to make it a statutory body.
Capacity Building and Technical Assistance	115	Endorse Sustainable Development Councils as national mechanisms for facilitating development policy and planning in collaboration with civil society.	Governments	Six SDCs established, but not all remain vibrant and relevant to the sustainable development process.
Climate Change	71	Support Caribbean States in developing their scientific and technical capacity and the use of scientific information being generated by CPACC for development policy formulation	CARICOM OAS, GEF, UWICED, World Bank	Installation of tidal gauges and other climate sensors is ongoing. Special training in maintenance, calibration and repair ongoing at regional (CMI) and national level. UNEP-CAR/RCU has some projects in the past but none currently. A pilot project was done in St. Lucia entitled: Vulnerability Assessment of Low-lying Coastal Areas and Small Islands to Climate Change and Sea Level Rise. The General Secretariat of the Organisation of American States (OAS) is the executing agency in collaboration with the CARICOM Secretariat. Since the project's start in April 1997 significant progress has been made. The following projects are active: Design and establishment of Sea Level and Climate Monitoring Network, Establishment of Databases and Geographic Information Systems, Inventory of Coastal Resources

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Climate Change	122	Incorporate climate change considerations in national long term development plans (recom)	Governments	<p>and Uses, Coral Reef Monitoring and Coastal vulnerability and risk assessment.</p> <p>Note: There is as of 2000 an initiative to develop and establish a Caribbean Climate Change Centre as a mechanism to address Global Climate Change and related issues in the region in furtherance of the work already achieved through the CPACC Project. The Co-ordinator of the CPACC Project has expressed confidence that the required funding is assured. At the Twelfth Meeting of Ministers of the Environment of Latin America and the Caribbean, held in Barbados, over the period, 5-7, March, 2000, a Decision was adopted conveying support for the initiative. The text of the Decision is available. A mid-term review of the CPACC Project conducted by the World Bank over the period 27 September-1 October, 1999, concluded that implementation performance throughout the first half of the Project was satisfactory and provided a sound basis on which the activities of the project could be continued. The mid-term review also recommended that further efforts be made to ensure the long-term sustainability of the Project and supported the initiative for the establishment of a Caribbean Climate Change Centre with a suggestion that funding support be</p>

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				<p>explored with, inter alia, the World Bank Institutional Development Facility. The proposed centre is to serve as a regional co-ordinating mechanism to deal with issues relating to Climate Change. Its proposed functions cover, in the context of a "preliminary listing":</p> <p>Technical Assistance and Capacity Building; Information Support and Clearinghouse; Publication and Advocacy; Project Execution; Co-ordination of Research and Training.</p> <p>In the documentation provided by CPACC, a number of activities are detailed under each of the above headings.</p> <p>A Draft Project Concept for a "mid-size grant has been prepared for presentation to the GEF. Financial support is also anticipated from other organisations. The main objectives of the project are: Establishment of the Caribbean Climate Change Centre; The promotion of co-ordination for regional participation in the Conferences of Parties to the UNFCC; Promotion of private sector participation in climate change; and Promotion of increased awareness of</p>

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Climate Change	123	Participate in the ongoing negotiations under the FCCC, in particular 3rd COP and present unified position on all important issues	Governments	climate change issues. The process is now at the stage of COP-6 i.e. the Sixth Conference of Parties, which convened in November 2000. The COP- 6 was suspended with no decision being reached. Supposed to resume in May 2001.
Climate Change	124	Co-ordinate positions with other AOSIS countries and ACP-EU Subcommittee on Climate Change (recom)	Governments	Statement of Co-operation Principles agreed on focus for COPs: support earliest entry into force of Kyoto protocol; analyse effects of Kyoto commitments on SIDS; review operation of Clean Development Mechanism. Kyoto Protocol needs 55 signatories for ratification. To date only 30 have been received.
Climate Change	125	Co-ordinate execution of national communications strategies required by FCCC among Caribbean SIDS by exchanging experiences and lessons (recom)	Governments	UNDP convened Regional Workshop which included: 1. Assisting in development and implementation of GEF Enabling Activities related to implementing the United Nations Framework Convention on Climate Change. 2. Review/Analyse latest developments in the production of National Communications. 3. Identification of problems and proposing solutions to effective implementation of enabling activities. 4. Share experiences between countries and agencies, examination of issues and concerns related to participation by SIDS and Caribbean countries at the Third

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Issues	ID	Subactivities	Agencies	Status
				Conference of the Parties of the United Nations Framework Convention on Climate Change. The South Pacific delegation to the COP4 meeting (November 2-13, 1998) in Buenos Aires requested to use SIDSnet applications to distribute daily reports on issues from Buenos Aires to island stakeholders.
Climate Change	126	Support the development of the necessary institutional mechanism to ensure that critical programs initiated under CPACC are sustained beyond the lifetime of the project	Governments	CPACC project is still ongoing. UNDP laid the groundwork for the "Caribbean Climate Change Support Project" now executed through UNDP- Jamaica. In addition 6 countries have been assisted by the UNDP (B'dos) towards the First National Communications to the UNFCCC.
Coastal and Marine Resources	69	Initiate activities that will allow Caribbean States to present a formal proposal to the 1999 UNGA Special Session to review the SIDS POA on having the Caribbean Sea recognised as a Special Area for sustainable development.	CARICOM ACS	Proposal submitted to the UNGA and was validated. A Resolution was adopted at the fifty fifth session of the General assembly, but more work has to be done on the proposal.
Coastal and Marine Resources	70	Assist Caribbean States with the adaptation of the Code of Conduct of Responsible Fisheries to the Caribbean region and with the ratification of the Fish Stocks Agreement and their implementation	FAO CFRAMP	Technical guidelines have been prepared. Further to be discussed at 26th FAO regional conference for LAC which was held on the 10th -14th April 2000. The 27th regional conference will take place in Trinidad from 26th -29th March 2001 for the WECAFC region. An inter-regional programme of assistance to developing countries for the implementation of the Code was been prepared and submitted to the International donor community. Norway

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				is sponsoring the project "Assistance to Developing Countries to Implement the Code of Conduct for Responsible Fisheries" (Fish Code). Fisheries department of FAO is planning to conduct a series of workshops to facilitate the better implementation of the Code and to pursue the process of regional adaptation. The Code needs 25 signatories for acceptance. So far, 20 have been received.
Coastal and Marine Resources	120	Prepare a paper for Caribbean ministers which defines concept of Special Area, presents rationale, lists enabling activities, estimated costing and implementation plan	CARICOM ACS	Caribbean Sea Proposal adopted at 55th Session of General Assembly.
Coastal and Marine Resources	203	Support implementation of the FAO Programme of Fisheries Assistance for SIDS, development of a common approach to Sustainable Development of the fisheries sector in the Caribbean, CFRAMP and the EU Fisheries Research initiative for ACP countries	Funding agencies	With respect to sustainable fisheries, CEHI has instituted research on fish kills phenomena in the Caribbean, seafood safety management and a monitoring program for marine biotoxins and other harmful micro-organisms(CEHI, CFRAMP with IDRC funding). Ongoing. An OECS Fisheries Management and Development Strategy and Action Plan has been prepared.
Coastal and Marine Resources	204	Implement fully the Code of Conduct for Responsible Fisheries (encouraged)	Governments	A sub-regional Workshop to promote understanding and adaptation of the Code of Conduct for responsible Fisheries was held for countries of the Lesser Antilles. FAO (Sub regional Office for Latin America and the Caribbean -SLAC). FAO-SLAC continued to assist the

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Coastal and Marine Resources	205	Caribbean States to accept the Compliance Agreement and the UN Fish Stocks Agreement (encouraged) ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	Governments	<p>countries by providing technical Guidelines and advice, on how the articles of the "Code" can be incorporated in their National Fisheries Management Planning. Thus far, 127 countries have declared their assent to the Code of Conduct. The project to facilitate Caribbean participation is sponsored by Norway (see above).</p> <p>Compliance Agreement has yet to take effect. It has been accepted by 10 FAO members and it will enter into force as from the date of receipt by the Director-General of the 25th instrument of acceptance. As of October 2000, 18 signatories had been obtained. As the Secretariat to the FAO Regional Fishery Body-WECAFC, SLAC responded to the requests of six member countries by facilitating the initiation of information exchanges, discussions and co-operation in the management of their shared (straddling) flying fish stock. The initiative was endorsed by the IX WECAFC Meeting in St. Lucia Sept. 1999); follow up activities are ongoing. 3 Independent Caribbean SIDS, Belize and all of the UK Dependent Territories have ratified the UN-High Seas Agreement on Migratory and Straddling Fish Stocks (27 in all). Three more countries need to deposit ratification instruments for the</p>

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				agreement to come into force.
Coastal and Marine Resources	206	Stakeholder participation in the implementation and enforcement of the Code of Conduct for responsible Fisheries (encouraged)		Strategy for FAO and WB to address sustainable fisheries was promulgated in draft form in September 1997. This strategy seeks to create the maximum synergy from the utilisation of technical and human resources of FAO and the financial. No further information available
Communications for Sustainable Living	197	Develop a communications strategy for sustainable living to; a) develop feedback systems, b)publish activities of the SIDSPOA, c) Facilitate exchange of Best Practices d) create a culture in the media supporting the SIDSPOA, e) strengthen regional media	Taskforce	SU/TCDC, UNDP and CARICAD published "Sharing innovative Experiences" in October 1999. ECLAC has material relating to the SIDS PoA on its website and the UNDP is intimately involved with SIDSNET.
Disaster Management	91	Request UWI to establish policy on disaster management, training and research	Governments, UWI	The following initiatives have been undertaken: (i) CDERA has been collaborating with the UWI's Faculty of Engineering and the University of Technology in the development of training for the Building Inspectorate. To date, 40 persons have been trained. The material is available for use by others. (ii) Modules in Disaster Management have been incorporating courses in Education, Sociology, International Relations, Mass Communications, Community Medicine and Public Health. Special course offerings are being offered by the Department of Geography and Geology, Medicine, Public Health and Engineering. With the support of USAID, CDERA,

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Disaster Management	170	Undertake Hazard Mapping and Risk Analysis (recom)	Governments	<p>Mexico and the John D and the Catherine T. Mac Arthur Foundation, material is being developed and exchanged. (ii) Two regional inter-university consultations have already been convened. A key decision is the establishment of a Graduate Diploma in Disaster management in three years. (iv) UWI's Policy on Disaster Management Training and Research; efforts are underway towards this goal.</p> <p>CDERA's involvement is the main initiative (see above). CDERA has a basic methodology. Various levels of hazard analysis, mapping and risk assessment have been undertaken in Jamaica, Barbados, Antigua/Barbuda, Belize, Trinidad and Tobago, Montserrat and Guyana. The IACDNR of the OAS has a working group on vulnerability assessment. Co-operation with Japan on the application of GIS technology in hazard mapping and risk analysis (CDERA). Assessment of hazard mapping and vulnerability practices for floods (CDERA/US-Mexico). Co-operation in programming with ACS, CTO, PAHO, ITU, UWI, UNDP, OECS. From within the OAS the Inter American Committee for Natural Disaster Reduction (IACNDR) Working Group on Vulnerability Assessments and Indexing</p>

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Disaster Management	171	Provide incentives for incorporating mitigation practices in all major sectors of the economy (recom)	Governments	<p>(VAI) continues to report to Member States through the Permanent Council on the varying national, regional and global vulnerability assessments and indexing processes, sponsors, objectives and impacts.</p> <p>No information available. CDERA has taken lead role. 15 of the 16 CDERA participating States now have a full time co-ordinator. National Disaster Organisations are now being included in the comment and review of the development process in the British Virgin Islands, Jamaica, Trinidad and Tobago and Barbados as a routine process. The results from the Comprehensive Disaster Management project of the UNDP is expected to assist or be incorporated into the national planning process in the Caribbean. The OAS and USAID finance the Post Georges Disaster Mitigation (PGDM) which started in February 2000 and is nearing completion. The project attempted to reduce the vulnerability of the population and economic activities in St. Kitts/Nevis and Antigua/Barbuda to natural hazards, including tropical storms, flooding, seismic and volcanic hazards, through enhanced capacity for hazard mitigation.</p>

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Disaster Management	172	Establish and enforce building codes and standards (recom)	Governments	CDERA has legislation which is being adopted by Caribbean SIDS. UNDP has implemented the Hurricane Lenny Project in 4 countries (Grenada, St. Lucia, Dominica, Antigua/Barbuda) to assist low income families in retrofitting their houses damaged by hurricanes. The reports have been disseminated to participating countries and other stakeholders. It is expected that this will assist countries in terms of better preparation and recovery from future natural disasters.
Disaster Management	173	Implement national programmes for strengthening the Building Inspectorate (recom)	Governments	The Caribbean Disaster Mitigation Project (CDMP) is a joint effort of the OAS and the US Agency for International Development (USAID). CDMP has had a successful hurricane-resistant home improvement programme: Through pilot projects in several Eastern Caribbean countries, the CDMP aims to assist large and small contractors, artisans and others working in the formal and informal building sectors in adopting effective natural hazard vulnerability reduction measures. In these pilot countries, the project's safer housing activities are coordinated by local NGOs with technical assistance from the CDMP. Under OAS and USAID the Coastal Infrastructure Design, Construction and Maintenance Training Project enhances the capacity

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Disaster Management	174	Request all major public and private sector entities to have written disaster recovery plans for their operations by the year 2000 (recom)	Governments	<p>for design, construction and maintenance of coastal infrastructure in Antigua and Barbuda, Dominica, St. Lucia and Grenada. As part of the project, UWI (St. Augustine) will organise a training program for the public and private sector engineers of each of these countries.</p> <p>Private sector is increasingly beginning to view Recovery Planning as part of the Business Planning Process, since 1998. CDERA has facilitated several workshops involving the private sector in the tourism, utilities and commerce sectors. Evidence suggest that the focus of the private sector is primarily hurricanes. This needs to become more multi-hazard.</p>
Disaster Management	175	Develop a resettlement policy following major hazard impacts bearing in mind the lessons learnt in Montserrat (recom)	Governments	<p>ECLAC has assisted in producing a post disaster tourism policy for Montserrat. UNDP has a "Montserrat Post-Emergency Resettlement Programme" which commenced in April 2000 in collaboration with the DFID. The project provides institutional strengthening and capacity building by relieving critical technical bottlenecks in certain Gov't dep'ts. An Integrated Vulnerability Analysis is due to start soon aimed at incorporating disaster prevention and mitigation into the physical and infrastructural design and development of new communities in the safe zone. USAID has a "Post George" mitigation</p>

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				project in Antigua/Barbuda and St. Kitts/Nevis. World Bank has projects in St.Lucia, Dominica and Grenada. CDERA has a Model Emergency Housing Policy and a Model Mitigation Plan developed by COMP/CDERA/DERMS.
Disaster Management	176	Provide adequate resources to national disaster organisations (recom)	Governments	CDERA, ECLAC and UNDP the major institutions dealing with natural disasters in the Caribbean. UNDP has a Comprehensive Disaster Management (CDM) Project with USAID/OFDA which seeks to reduce vulnerability to loss of life and property damage in the Caribbean. It will aid in the development of a regional CDF strategy and the strengthening of CDERA. A team of consultants has already started work and the recommendations will be adopted via a stakeholder consultative process at the national and regional level. The Inter-Agency Task Force on Bolivia Summit Follow-up (IATF) Working Group on Mainstreaming Disaster Reduction in Development (MDRD) continues hemispheric work, with regional case studies on development and application of vulnerability assessment, indexing techniques and applications in the Americas.

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Disaster Management	177	Include national disaster organisations in the review and comment process of proposals for major development (recom)	Governments	Some governments have included disaster planning in their National Development Plans e.g. British Virgin Islands, Jamaica, Trinidad and Tobago and Barbados.
Disaster Management	178	Request educational and training institutions in the region to incorporate appropriate elements of the disaster management agenda in their curricula (recom)	Governments	CDERA has a Disaster Management Resource Guide for teachers. Disaster Management Facility to come on stream in 2001 with support from CDB. The EDUPLAN hemisferico continues to support activities of technical secretariats in the Caribbean and other regions to carry out local disaster reduction activities.
Disaster Management	179	Develop comprehensive integrated disaster plans (recom)	Governments	Effort gained some headway from the USAID/CDMP intervention. The UNDP/CDERA project implemented DERMS Project has provided a conceptual framework and process outline for integrated disaster plans. This is being pursued within the context of Comprehensive Disaster Management (CDM). Under the Emergency Assistance Facility, technical assistance was provided for the formulation of National Hurricane Disaster Preparedness Plans by the FAO subregional office for Latin America and the Caribbean. Country delegations at a regional workshop were assisted in the development of outlines of National Mitigative strategies for their Fisheries Operations, for e.g. the development or

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				adaptation of fishing practices, technology and materials that minimise loss of gear or damage to habitats during hurricanes and the integration of Fisheries into Coastal Area Management Planning.
Disaster Management	180	Support the SRU in its efforts to upgrade and to incorporate new communications technology in the monitoring and reporting on seismic events (recom)	Governments	Seismic Research Unit at UWI, St. Augustine continues to assist the Caribbean SIDS. Seismic Unit still needs more funding.
Disaster Management	182	Review the model legislation developed by CDERA, ODA and CLI (recom)	Governments	CDERA's legislation being adopted or considered by some 13 Caribbean SIDS, namely Anguilla, Bahamas, Barbados, Belize, British Virgin Islands, Dominica, Grenada, Guyana, Montserrat, St. Lucia, St. Kitts/Nevis, Trinidad and Tobago and Turks and Caicos.
Disaster Management	184	Request the Ministers of Information, through the Government Information Services and private media in public education and information to promote a culture of mitigation, preparedness, public safety and security (recom)	Governments	National Disaster organisations being given prominence in planning and in comment and review process, legislation being passed, 15 of 16 CDERA Participating States have full time Disaster Co-ordinators (see above)
Disaster Management	185	Support comprehensive disaster management in the region through the designation of CDERA as regional focal point (recom)	Governments	CDERA given the lead in the Caribbean for Disaster Mitigation and Preparedness.
Energy	95	Actively pursue project opportunities which exist at the international level, in particular in the World Solar Summit and the Summit of the Americas processes.	ECLAC/CCST UWICED CARICOM	CCST has been able to identify a source of funding for renewable energy projects. Left up to project proponents to access. (ECLAC no longer functions at the Secretariat for CCST)

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Energy	96	Seek international support for the strengthening of the Caribbean Energy Information System (CEIS) network, in particular as regards computer-based communication between focal points and the secretariat and public awareness of its services.	ECLAC/CCST UWICED CARICOM	CEIS hosted regional consultation in May 1998. Draft and proposal update from ACS, CCST,OLADE meeting. CCST is working along with the CEIS on implementation of projects related to Energy in the Caribbean SIDS.
Energy	97	Examine existing mechanisms for technology certification, focussing on renewable energy and energy efficiency technologies, and identify possible mechanisms for ensuring that such technologies can be certified for use in the Caribbean	CARICOM UWI Regional Standards Bureaux	UNDP/GEF held a consultation on Renewable Energy in the Caribbean, in May 1998, Barbados. Out of this, participants produced a draft proposal in application for PDF (B) funds. This was refined and circulated to each network member country for comments and endorsements before being submitted to the GEF. It was agreed that CEIS take the lead in the management of the Regional Energy Project Proposal arising out of UWI.
Energy	98	Actively seek increased support for efforts to establish a graduate program in energy;	UWI	No program established as yet. Some graduate projects done at the University in Barbados on Ocean Thermal Energy and Solar Energy.
Energy	99	Undertake project activity to assist governments in formulating appropriate policies, legislation and economic incentives to increase the use of renewable energy, in particular solar energy, at the national level;	ECLAC/CCST UWI	Being implemented by the CEIS under a 4 year project program. ECLAC has monitoring role. The OAS under the Proposal for Global Sustainable Energy Islands Initiative (GSEII) is attempting to develop 3-5 SIDS in addition to St. Lucia as 100% sustainable energy nations and replicate and expand country commitments to global and regional levels by building partnerships and

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				sharing experiences.
Energy	100	Undertake project activity to assist governments in formulating appropriate policies, legislation and economic incentives to increase the economic feasibility of sale of energy produced from renewable sources by utilities, in particular, wind energy	ECLAC/CCST UWI	UWICED commissioned: Barriers to the Implementation of Renewable Energy Technologies in the Caribbean & A Comparison of Social and Env. Cost of Conventional vs. Renewable Energy in the Caribbean. The OAS hosted the Renewable Energy in the Americas Initiative (REIS) 2000 conference in Washington D.C., which offered leading energy decision makers the opportunity to share best practices regarding the use of energy and energy efficient technologies and furthered the networking of energy sector representatives.
Energy	101	Undertake project activity to assist governments in formulating appropriate policies, legislation and economic incentives to increase cogeneration activity	ECLAC/CCST UWI	Discussed in meetings. Project now underway with GTZ and GEF funding. The OAS continues to provide technical support to the Caribbean Is. For renewable energy and energy efficiency initiatives through the GEF, the OECS/NRMU and other agencies and organisations.
Energy	102	undertake project activity to assist governments in formulating appropriate policies, legislation and economic incentives to encourage energy efficiency via demand side management	ECLAC/CCST UWI	Part of the 4 year project being done by the CEIS with GTZ and GEF funding.
Energy	103	Require utilities to demonstrate that renewable energy and energy efficiency (through demand-side management) have both been seriously examined, and integrated where possible, as approaches to minimising expenditure on capacity expansion;	ECLAC/CCST, UWI	As above.

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Energy	150	Encourage the use of cleaner vehicular fuels, such as CNG and unleaded gasoline, through financial and other incentives as well as education (recom)		Several workshops and projects have been designed to date and an assessment of the state of Renewable Energy development in the Caribbean was held in June, 1999. The UNDP, CCST and ECLAC with GEF funding, have an ongoing renewable Energy Development Programme in the Caribbean. A project which has been funded by the GEF, which started in September 2000, addresses the need to require utilities to demonstrate energy conservation efforts and to encourage the use of cleaner fuels by fiscal and other incentives. The Proposal for Global Sustainable Energy Islands Initiative (GSEII) out of the OAS' Unit For Sustainable Development seeks to (1) Develop regional energy efficiency (2) Develop renewable energy private business activities including solar, thermal, photovoltaic, biomass and wind turbines (3) Increase awareness and build capacity to take advantage of renewable energy utilisation
Energy	151	Urge GEF to fast track the recently submitted regional Energy Project Proposal arising out of UWI	GEF	GEF to pursue opportunities which may exist at international fora such as the World Solar Summit of the Americas. CCST located funding for renewable energy, since CCST was responsible for determining sources of funding to undertake renewable energy projects. This information was passed on to

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Freshwater Management	87	Seek assistance in the development of a regional mechanism for freshwater management, and develop complementary national freshwater management plans	Governments, OECS, CEHI, UWI, UNEP	<p>member states in early 1998. CEIS implementing a major 4 year energy project in the Caribbean</p> <p>CEHI to prepare action oriented activities based on the decision. This is the first stage. Once funds are available (possibly from the GEF) the project will be elaborated. On the issue of Freshwater Planning, from May 4-14th 1999, FAO participated in the Caribbean Workshop on Water resources management which was organised by the Inter American Institute for Co-operation on Agriculture (IICA) and the Caribbean Environmental Health Institute (CEHI); and hosted by the Ministry of Agriculture in St. Lucia. The meeting was attended by technical officers who are employed in the regional, water management sector. The main outcome of the meeting was a position paper entitled 'Policy Framework for sustainable Water Resources Management in the Caribbean. That paper was presented at the Second Inter American Conference on Water resources management which was held from June 15-18, 1999 in Montevideo.</p>
Freshwater Management	88	Promote the integration of freshwater management plans into forestry and other biodiversity policy and planning frameworks and strategies;	FAO, UNDP	UNDP has not yet undertaken freshwater management activities. (See above for FAO's contribution to Freshwater Management).

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Freshwater Management	90	Seek assistance to develop regional water quality standards and guidelines.	Governments, UNEP, CEHI	Two pilot projects in Belize and Guyana to improve drinking water quality are expected to inform development of regional drinking water quality standards. The Belize project is at the analysis stage and it is ongoing. The Guyana project is being discussed. CEHI is investigating in Guyana under its own initiative whereas it was invited in by the Belize government. CEHI also made recommendations on Caribbean sanitary water quality standards for recreational areas. A regional programme matrix developed at a Regional Workshop on "Water Quality Improvement" in 1999, which is to be refined (PAHO, CBWMP, USEPA AND CDB). Ongoing.
Freshwater Management	163	With assistance from appropriate agencies, review legislation pertaining to water management and amend as necessary	Governments	OAS will provide financial and technical counterpart support in the preparation of a regional project to be financed by the Global Environmental Facility. (Ongoing)
Freshwater Management	164	Support the CARICOM Conference of Health endorsement of CEHI recommendations for improvement of water quality in the region	Governments	No further information available
Freshwater Management	167	Become involved and actively participate in regional and global water resource initiatives	Governments	CEHI designated the Caribbean Focal Point for the International Water Resources Network. A regional Wkshop on Water Resources Management which developed an appropriate plan of action (IICA, CWWA and gov. St. Lucia). The OAS is co-ordinating Caribbean input to

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Freshwater Management	168	Remove barriers restricting access to water quality information being generated in the region	Governments	<p>the IWRN 4th Dialogue in Brazil, Sept. 2-6th, 2001. The meeting will focus on water resources management in transboundary river basins, climate vulnerability, water resources management in urban river basins and water resources management in arid and semi-arid regions: also on the program is the Water Vision and the Framework for Action for the Caribbean region.</p> <p>Research conducted on the state and development of drinking water quality in representative Member States of the OECS and providing recommendations for meeting WHO's Guidelines (Grenada, St. Lucia and Montserrat). Freshwater website being developed by OAS/CEHI (due in 2001) to facilitate access to information on best practice methods and appropriate technologies.</p>
Freshwater Management	169	Promote the use of reclaimed waste water	Governments	A "Review of Water Conservation Practices and Potential for Tourist Facilities in Barbados and St. Lucia. (USAID, completed)
Implementation and Negotiation	1	Produce in layman's language versions of designated international conventions and relate them to national and regional sustainable development objectives. Distribute these documents to decision makers and other stakeholders.	CARICAD, CLI	Request for funding to support this activity is being undertaken by the Caribbean Environmental Law and Policy Agency (CELPA), a civil society grouping of professionals from Caribbean regional, international and academic institutions. CELPA was inaugurated on April 20 1999 in Port of Spain, under the

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				auspices of CARICAD and is registered as a "not for profit" organisation in Trinidad ad Tobago, with Judith Daniel as Co-ordinator. Funding support is under consideration by UWICED for a CELPA website to be created as a device for reporting and dissemination, in layman's language, issues on environmental Treaties, Conventions and related institutions.
Implementation and Negotiation	2	Develop public awareness programmes in collaboration with OECS, CARICOM and ACS, to ensure that the regional implications of the global conventions, treaties and agreements are understood by all stakeholders	CARICAD, CLI OECS, CARICOM ACS	No further information has been obtained with respect to the progress of this activity.
Implementation and Negotiation	3	Undertake activities to rationalise similar international agreements, and to facilitate the adoption of harmonised mechanisms and legislation for their effective implementation and enforcement	CARICAD, CLI, IMO	Need funding to proceed with activities (CLI, CARICAD). IMO has regional project to develop capacities in the maritime administrations and training centres in the Caribbean for the effective implementation of the revised STCW Convention dealing with the training and certification of seafarers IMO and International Transport Workers' Federation). Runs from 1997 to 2001.
Implementation and Negotiation	4	Review the status of enabling legislation and programmes for the implementation of international conventions to which Caribbean governments are signatories, in particular those conventions referred to in the SIDS POA;	CARICAD, CLI, IMO	Awaiting source of funds to proceed (CLI, CARICAD). IMO established the Regional Maritime Pollution Emergency, Information and Training Centre (REMPEITC-Caribbean) to support the Wider Caribbean in implementing the OPRC Convention (dealing with response

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				and control of marine pollution caused by ships). The Centre is institutionalised as a Regional Activity Centre under the Cartagena Convention. The Centre provides on scene co-ordination and technical advice during marine pollution emergencies, assists in the preparing, updating and exercising contingency plans and trains personnel engaged in marine pollution combat operations. (Sponsored by Gov't of Netherlands, Netherland Antilles and USA. Funding available up to the end of 2001). Further programmes to develop the capacities of the Caribbean in maritime safety administration and to implement the MARPOL and OPRC Conventions are slated for 2002 -2003.
Implementation and Negotiation	5	Focus on one appropriate convention with a view to preparing model enabling legislation and programmes of enabling activities, submitting this to the Bureau at its intersessional meeting in 1998.	CARICAD, CLI	Awaiting disbursements, not done.
Implementation and Negotiation	7	Strengthen regional and national capacity to participate in the negotiations of new or revised agreements, by, where appropriate, providing briefs, or facilitating consultations prior to key meetings.	CARICOM OECS ACS	CARICOM providing support to Framework Convention on Climate Change meetings. ECLAC contributes to and is represented at the Free Trade Area of the Americas meetings.
Implementation and Negotiation	8	Carry out an assessment of the capacity of national institutions to participate in and follow up on international conventions including non-binding agreements	CARICOM OECS ACS	ACS has made no progress in the area of conventions. No further information regarding progress of other institutions.

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Implementation and Negotiation	9	Establish a databank of persons with particular skills, e.g. international environmental law, upon which the region can draw	CARICOM OECS ACS	Organisations have made no progress towards establishing the databank. The OAS' Inter-American Forum for Environmental Law (FIDA) is an initiative to create a network of environmental experts and officials in environmental law, enforcement and compliance. Currently a monthly meeting on Water Policy in the Americas Roundtable at OAS Hqt. Allows professionals working on Water Resources in DC an opportunity to discuss issues such as climate change and SIDS, irrigation, hydroelectricity and other pertinent issues to SIDS.
Implementation and Negotiation	11	Establish links and exchange information with relevant organisations and groups in other regions, such as the South Pacific Regional Environment Programme, and the Forum Secretariat in the Pacific Region.	CARICOM OECS ACS	Inter regional meeting held February 1998. Another was planned for January 1999, but was not convened. Some information exchange possible through SIDSNET.
Implementation and Negotiation	12	Assess the trade implications of international environmental conventions and non-binding agreements, and the environmental implications of international trade agreements	CARICOM OECS, RNM National standards organisations	Inter regional meeting held February 1998. Another was planned for January 1999, but was not convened. No information concerning any further meeting. The NRMU is currently undertaking a review of multi-lateral environmental agreements and documents (MEADS) to which Member States (MS) are party and MEADS not in force in order to identify (a) key requirements of those MEADS; the status of the ratification/acceptance of MS with those

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				MEADS ; (b) for MEADS not yet in force the anticipated requirements of MS that choose to participate in the MEADS will be identified. The Agreement on Technical Barriers to Trade and the Agreement on Sanitary and Pytosanitary Measures will be considered in terms of their environmental implications.
Implementation and Negotiation	13	Develop guidelines on the environmental requirements necessary to prevent non-tariff barriers and/or trade sanctions	CARICOM OECS, RNM, National standards organisations	Ongoing participation in the FTAA meetings, (especially by ECLAC) but no regional meetings devoted to developing guidelines on environmental requirements.
Implementation and Negotiation	14	Assess and report on the extent to which process and production methods and product characteristics of the region's exports diverge from international standards.	CARICOM OECS, RNM, National standards organisations	No regional initiatives have been forthcoming. Local Bureaux of Standards attempt to help in this respect
Information	22	Convene meeting of experts from both within and beyond the region to discuss with government representatives an outline framework for a regional indicators programme	CDB, ECLAC OECS-NRMU CARICAD, ECCB CARICOM, UWI	Initial discussion between CDB and ECLAC. CDB will take lead role. CDB Convened a Regional Meeting 22-23/Oct on Environmental Indicators (Meeting funded through CIDA grant). At the meeting it was decided ECLAC/CDCC would act as regional co-ordinating mechanism on sustainable indicators. Possible case studies were discussed. Questionnaires have been sent to various organisations and institutions in the region and replies have been forthcoming. Analysis to determine the type of indicators necessary and useful will be forthcoming.

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Information	23	Determine a consensus set of potential indicators appropriate to the region, considering suitable targets, where applicable, assessing national mechanisms and capacity for implementing such an initiative and identifying sources of funding	CDB, ECLAC OECS-NRMU CARICAD, ECCB CARICOM, UWI	ECLAC/CDCC to absorb office expenses. Ongoing as stated above.
Information	24	Conduct national workshops to introduce the concept of indicators, their purpose, their practical implementation and their use in guiding the sustainability of current development patterns	CDB, ECLAC OECS-NRMU CARICAD, ECCB CARICOM, UWI	A Regional workshop on Sustainable Development Indicators (22-23 October 1998) discussed close collaboration between a CDB proposed indicator project and a recently approved UNDP/OECS social indicator project which would be active in all nine OECS countries.
Information	26	Collaborate with international and regional agencies involved in this field to introduce advances in techniques to the region, tailor these techniques to regional circumstances and channel potential external funds to such exercises	CDB, ECLAC OECS-NRMU CARICAD, ECCB CARICOM, UWI	ECLAC has done presentations for the Caribbean Association of Law Librarians, has an online Caribbean Digital library and will embark on a project examining the use of information technology in selected public institutions. No further info. from other institutions
Information	27	Prepare a regional overview of Sustainable Development Indicators for the Caribbean;	CDB, ECLAC OECS-NRMU CARICAD, ECCB CARICOM, UWI	ECLAC plus other organisations will prepared a document for the Commission on Sustainable Development meeting in 1999. UWICED has submitted the first draft of the Caribbean Report, relating to the World Environmental Report, to UNEP's headquarters.
Information	47	To take the lead role in identifying existing initiatives for electronic networking in the Caribbean	UNDP	UNDP/IRF have commenced a Caribbean SIDSnet mailing list. SIDSnet virtual workspace enables members to share documents, hold discussions on notice boards, post announcements and vote on

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				issues in a secure environment. SIDSnet has purchased chat software that will enable live moderated chat conferences. Offers a search engine offering issue focused searching by SIDS region or Barbados themes.
Information	48	Include biodiversity among the thematic areas of the SIDSnet Pilot Project	UNDP	Biodiversity theme with searches and e-linkages present on SIDSNET.
Information	49	Facilitate the co-ordination and integration of networks through SIDSnet	UNDP	UNDP/IRF have commenced a Caribbean SIDSnet mailing list and the network has links to all areas mentioned in the SIDS PoA.
Information	50	Convene a meeting as soon as possible with a view to developing a working arrangement with the Latin American Group, with respect to the SDNP network	UNDP, CCA, CARICOM, CARICAD, UNDP	The ACS' environmental strategy encourages agencies in the region and hemisphere to meet and proposes the ACS might be involved in "Requesting the extension to all Member States of the technical assistance (SIDS/TAP) and information (SIDS/NET) programmes of the World Conference on Sustainable Development in Small Island Developing States."
Information	51	Assess continuously SIDSnet	UNDP, CCA CARICAD, UWI IABIN, OECS CARICOM ECLAC	UNDP/SIDSNET hosted regional interagency meeting in Trinidad and Tobago in March 1998. UWICED participates in dialogue clarifying roles and partnerships. This is ongoing.
Information	52	Prepare a project proposal for national implementation of the Caribbean Strategy for Environmental Information Management		ECLAC/CDCC/UNEP has prepared draft proposal. No further funding has been forthcoming. Project being implemented by the Caribbean Energy Information System, under GTZ and GEF funding

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Information	53	Establish an inter-agency task force for sustainable development information management	CCA ECLAC	ECLAC/CDCC chaired an inter-agency taskforce on information management. Meeting held March 1998. CCA to take lead role for environmental information management. CCA has continued to update its web page and its delivery of information via the web (user lists) to members and others. CCA has participated recently in the INTERAISE and IABIN Information Workshops and expects to be involved in developments with IIED. CCA is currently working with ECDPM on a web based development of its information system. The Information Systems Consultant under the IDB Project has presented a draft Information Systems Action Plan, which will be used to implement activities in the future. CCA has accepted an invitation to sit on the Caribbean SIDSNET Working Group and to develop training modules jointly with Island Resources Foundation (IRF) and SIDSNET (N.Y.). CCA is awaiting review of training packages developed to date promised by SIDSNET.
Information	54	Host/mirror the Caribbean Sustainable Development Website developed by ECLAC/CDCC, and other Caribbean Websites on Sustainable Development in particular the UWICED gateway	UNDP (SIDSnet) ECLAC UWI	Mirror established for the Caribbean Sustainable Development Pages Website. Several SIDS also have sites mirrored on SIDSnet. UWICED established a framework for their Web Page along with Small Island Information Network. Links

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				many Caribbean environmental organisations. UNEP-CAR/RCU is currently working on a major project called the Project for Strengthening the Capabilities for Managing Coastal and Marine Environmental Resources in the Wider Caribbean Region (CEPNET/IDB). The project seeks to establish an Internet-based environmental information network within the region and is currently working with 6 Pilot Network Program countries .
Information	55	Continue updating information on the Caribbean Sustainable development Pages and other sites and link environmental data and information with socio-economic data and information;	ECLAC	1998-1999, continuous updating. ECLAC/CDCC library now on line. ECLAC web homepage has link to SIDSNET
Information	58	Co-ordinate a regional approach to telecommunications providers so as to increase accessibility to information services at affordable rates;	CARICOM	ITU, UNESCO, PAHO and UNDP undertook a pilot project on Access to telematics services in the Caribbean. This covered health, education and environment sectors. The project recently ended and possibilities for continuing are being examined. This project was undertaken in Barbados, St. Lucia and St. Vincent and the Grenadines. ITU has introduced the concept of Multipurpose Community Centres (MCTs). These are telecommunication centres which persons can utilise for making telephone calls, send and receive faxes and also to access the Internet. MCIs have been introduced in Suriname and studies are underway in

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				other Caribbean countries. The "Access to telematics Services in the Caribbean" has ended and there is a need for further funding to extend the project.
Information	108	Seek ways to provide, through universities or other means, cheaper access to the Internet for non-governmental organisations and community-based organisations	Governments	Possibility may exist through SIDSnet. No further information.
Information	186	Develop training programmes for media and communications professionals in the design of messages on sustainable development for target groups at the grass roots level in Caribbean SIDS		Regional training programme focusing on pesticides was held for media personnel in St. Vincent. National workshops for media on developing media products on watershed management issues recently held in Grenada, St. Lucia, British Virgin islands and Dominica.
Information	195	Establish national programme to collate, disseminate and use national sustainable development indicators	Government	Work continuing on developing sustainable development indicators, especially in Barbados. Focus is more towards developing Vulnerability Indices.
Land Resources	153	Continue and expand assistance to the Caribbean Human Settlements Programme Office in collaboration with other partners (encourage)	UNCHS	UNCHS Caribbean office no longer functional.
Land Resources	154	Support efforts by Caribbean SIDS to further develop human settlements and environmental information databases which also may enhance the introduction or expansion of computer based GIS to inform policy decisions		ECLAC to take lead role and prepare action oriented activities based on the decision. ECLAC has launched the Caribbean Planners Network which also has ties with the UWI (which has a GIS program) .

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Land Resources	155	Comprehensive land use plans need to recognise the philosophy of Islands Systems Management (ISM)		ECLAC through the Planners network will be examining land use in the Caribbean and alternative land use systems. Also implemented a new land policy system for St. Lucia. The Natural Resources Management Unit (NRMU) of the Organisation of Eastern Caribbean States (OECS) has taken the lead in the OECS in formulating and utilising ISM. UNDP has under preparation a PDF Block B project "Implementation of An Integrated Archipelagic Ecosystem Management and Sustainable Development Programme for the Eastern Caribbean " with the NRMU of the OECS. The project is multisectoral and broad based and will develop a long term strategic regional framework for sustainable development and ecosystem management. CEHI has developed a project to assist participating countries in improving watershed and coastal zone management practices in support of sustainable development. The project encompasses multi sectoral planning and management of island ecosystems (CEHI/UNEP/RCU/OAS/UNDP, ongoing).
Land Resources	156	Support the systematic assessment and mapping of hazardous areas and the use of this information in the formulation of land use regulations and building standards.		ECLAC was to take lead role, but works along with the Caribbean Disaster and Emergency Relief Association (CDERA), which has developed a basic

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				methodology. This has been elaborated with technical input of the USAID/CDMP. Various levels of Hazard Analysis, Mapping and Risk Assessment have been undertaken in Jamaica, Barbados, Antigua and Barbuda, Belize, Trinidad and Tobago, Montserrat and Guyana. There is a need for the process to be nationally structured with a view towards having a multi-hazard risk scenario for each state. Several CDERA Participating States have reviewed and are beginning the process of the adopting and adaptation of the CDERA Model Legislation, developed with British funding; these include Anguilla, Bahamas, Barbados, Belize, British Virgin Islands, Dominica, Grenada, Guyana, Montserrat, St. Lucia, St. Kitts/Nevis, Trinidad and Tobago and Turks and Caicos.
Land Resources	157	Integrate National Forestry Policies into the larger frameworks for natural resources management		CARICAD has provided consultancy services for drafting of legislation in the Forestry sector in Guyana.
Land Resources	158	Promote the Iwokrama Rainforest Programme as a model for appropriate land use and natural resources management policies at the national, regional and international level		Iwokrama ongoing.
Land Resources	159	Pursue at national and regional levels an approach for integrating human settlements, land use, disaster mitigation and other related programmes, projects and policies		ECLAC has 1) assisted in updating the Disaster Assessment Method to reflect the needs of Caribbean SIDS. 2) done training in natural disaster assessment in

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				several Caribbean SIDS. 3) Convened a regional training workshop on the Methodology for Disaster Assessment for several Caribbean states and 4) has done macroeconomic assessments of damage from natural disasters for St Kitts/Nevis, Anguilla and Belize and a tourism policy for Montserrat in the aftermath of the volcanic eruption.
Land Resources	160	Support the development of a land registration and titling system throughout the region		Assistance to St. Lucia, St. Kitts/Nevis in developing land policy /development plan and the reports done on the loss of land from locals due to the tourism industry.
Land Resources	161	Invited support for related integrated information initiatives by UNEP GRID and the UN Centre for Regional development at the int'l level; UWI, the Trinidad and Tobago GIS Association and the OECS-NRMU at the regional level.		ECLAC has launched the Caribbean Planners network over the Internet. Some collaborative efforts being forged with the University of the West Indies.
Legislation Rationalisation and Institutional Reform	59	Prepare an inventory of case law reporting in the field of environmental law.	CARICAD, CARICOM, OECS, ACS, CLI, UNEP	Project has not started due to lack of funding.
Legislation Rationalisation and Institutional Reform	118	Provide technical expertise and training in the area of legislative drafting	CARICAD	CARICAD has not undertaken any specific training in legislative drafting but consulting services on drafting for the Forestry sector and Environmental Protection Agency of Guyana have been undertaken. ECLAC is assisting the Caribbean Supreme Court in legislative reform on Domestic Violence.

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Legislation, Rationalisation and Institutional Reform	119	Rationalise the roles and responsibilities of existing institutions involved in sustainable development	OECS	Assistance being provided by the OECS NRMU to some Member States with rationalising roles and responsibilities of existing institutions involved in environmental management.
Legislation, Rationalisation and Institutional Reform	60	Promote Harmonisation of Standards since they have to deal with the requirements under NAFTA, WTO etc.	CARICOM ACS OECS,IMO	ACS has not been involved in legislative activities. IMO has a regional project providing support to maritime administrations in legislative drafting to give effect to international maritime standards and develop model technical regulations. Assistance to adapt the models to country situations also being given (IMO, UNDP, Gov't France). To be completed in 2001.
Legislation, Rationalisation and Institutional Reform	61	Undertake an examination of existing legislation on standards so as to ensure consistency	CARICOM ACS OECS	ACS has not been involved in legislative activities. No further information from other institutions.
Legislation, Rationalisation and Institutional Reform	188	The Island Systems Management Approach being promoted by the OECS/NRMU be given further study as a primary vehicle to integrate the legislative framework for the sustainable development of Caribbean SIDS (recom)	OECS/NRMU	The ISM system accepted and used in planning in the OECS.
Legislation, Rationalisation and Institutional Reform	193	Accepted the need for the State to build a more sensitive partnership with civil society on the basis of participation and sharing of responsibilities, costs and benefits		CEP has conducted a workshop on developing national legislation for the implementation of the SPAW Protocol. Social contract signed between government and the populace in Barbados.
Regional Implementation Mechanism	65	Establish interim secretariat to the Bureau and the preparatory process until a permanent mechanism is established	CARICOM ECLAC	Done, ECLAC/CARCOM continue to function as the Secretariat.

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Regional Implementation Mechanism	66	Establish inter-agency collaborative group	CARICOM, ECLAC, CDB, CPDC, CTO, UNDP, OECS, UWI. CCA ACS, CARICAD UNEP/RCU, CEHI	Established with ECLAC co-ordinating the IACG (Inter-Agency Collaborating Group).
Regional Implementation Mechanism	67	Appoint government/agency focal points	Governments Institutions	Focal points for each state have been established.
Regional Implementation Mechanism	116	Establish a permanent mechanism for consultation and co-ordination of the implementation of the SIDS POA	Bureau Governments CARICOM ECLAC/CDCC	One of the objectives to be addressed is a longer term Program of Action. ECLAC/CARICOM still remain the Secretariat for the SIDS Bureau and the Inter Agency Collaborating Group.
Regional Implementation Mechanism	117	Make available technical personnel and resources to assist the Interim Secretariat	Government, regional and international agencies	ECLAC funds Secretariat activities from its budget.
Resource Mobilisation	42	Establish a regional focal point in consultation with institutions designated at this meeting	UWI (UWICED, UWISEDU) PIOJ Governments Others	UWICED acted as the regional focal point for the preparation of the draft of the Caribbean Report relating to the World Environmental Outlook 2. Publication has since been done.
Resource Mobilisation	43	Carry out national and regional training exercises aimed at enhancing the understanding and appreciation of the use of economic instruments	UWI PIOJ	3/98 Regional meeting convened in Trinidad and Tobago by Comsec, World Bank, UWICED, ECLAC, GOTT. Barbados to approach World Bank for national workshop. UWICED involved in a preliminary report in urban environmental management with World Bank to point the best practice use of indicators to policy makers. ECLAC has

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				prepared a project proposal and is seeking funding.
Resource Mobilisation	44	Assist interested countries in identifying key issues and options confronting Caribbean governments considering the use of economic instruments.	UWI PIOJ	On going research by SEDU (UWI, St. Augustine) in promoting economic policy for the sustainable use of natural resources. No further information as regards specific use of economic instruments.
Resource Mobilisation	45	Collaborate with National Sustainable Development Councils where appropriate to compile and disseminate relevant experiences and other information to all interested stakeholders;	UWI PIOJ CARICAD	UWICED co-sponsored a workshop with the Natural Resources Conservation Authority of Jamaica, International Development Research Centre and Strategies International Fish Research. This was concerned with institutional capacity and looked at the ability of the government of Jamaica in pursuing objectives in relation to international environmental conventions.
Resource Mobilisation	46	Prepare a project proposal on a medium term strategy for using economic instruments in the Caribbean that is regional in scope but is to be implemented at the national level	UWI PIOJ	UWICED with the National Resources Conservation Authority, the Ministry of Environment and Housing working together to develop a national framework for the use of economic instruments in environmental management and sustainable development.
Resource Mobilisation	84	Establish clarity in policy objectives and identify areas with the most promising possibilities for incorporating economic instruments	Governments UWI PIOJ, OECS	ECLAC has designed a project to study the effectiveness of introducing or designing economic instruments in the Caribbean. Funding not yet available. No further information from other agencies. The OECS NRMU commissioned a study on the economic opportunities associated

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				with environment in the OECS Member States. The paper discusses policy options available to the Member States in the use of economic instruments.
Science & Technology	28	Give support to strengthening of national intellectual property systems, including patent information use, and inventors' associations.	WIPO	Copyright organisations and laws are present in many countries. ECLAC is examining intellectual property systems under the WTO regulations with respect to the Caribbean.
Science & Technology	31	View as priority efforts to enhance the teaching of science and mathematics in the Caribbean, teacher training in the use of computers, and access to computers by schools	ECLAC/CCST CARICOM	CCST survey of Science, math and env't education in progress. There is also an assessment of the current and potential role of the Internet as a teaching tool in progress. Both reports were due in June, 1998. Teacher training workshop-July. As of Sept. 1998 a joint MSc . Degree in Development and Environment is to be offered in collaboration with the Consortium Graduate School in the Faculty of Social Sciences, Mona.
Science & Technology	32	Recognise the role of the Caribbean Examinations Council in tailoring syllabi to the needs of the region	ECLAC/CCST CARICOM	The Science and Mathematics Integrated Learning Experience (SMILE) Report contains recommendations on syllabi selections on the teaching of mathematics and science which were submitted to the Council of CARICOM IN 1998.
Science & Technology	33	Seek assistance for programmes for the popularisation of science and technology, with a view to developing a culture of science in the entire population so as to ensure that science is not perceived as an elitist activity.	ECLAC/CCST CARICOM	CCST trying to extend Yapollo (science fair) experience of Trinidad and Tobago to other Caribbean countries.

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Science & Technology	34	Undertake further institutional analyses and to seek regional and international support for ECLAC/CCST and for programmes to address the needs of research and development organisations	ECLAC/CCST	Document on the operation and management of the agencies and institutions working in the field of S&T has been completed by CCST. Analysis of strengths and weaknesses and possibilities for TCDC activities to be provided in final document.
Science & Technology	35	Assist governments in the articulation of specific policies and fiscal incentives which promote the use of environmentally friendly technologies, in particular renewable energy technologies, biological pest control and reduction of wastes	UWI Other	Ongoing research at UWI, Barbados in solar power and Ocean Thermal Energy Conversion (OTEC)
Science & Technology	36	Identify appropriate mechanisms to increase the availability of information on environmentally friendly technologies to the private sector, to go hand in hand with fiscal incentives and regulations at the national level.	UWI	No further information available out of UWI, but many countries have recycling initiatives.
Science & Technology	37	Identify and document best practices in science and technology in the region as tools for exchanging experiences and learning opportunities.	UWI UNDP	UNDP has been demonstrating community based methodologies in the protection of the global environment, building NGO and CBO capacity to address GEF issues and encouraging advocacy and the dissemination of lessons learnt via the provision of GEF Small Grants Programme (GEF/SGP) funding directly to NGOs and community groups.

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Issues	ID	Subactivities	Agencies	Status
Science & Technology	38	Seek international and regional support for the articulation and implementation of a comprehensive regional research programme in marine resources;	IMA	A proposal for the transformation of the Institute of Marine Affairs of Trinidad and Tobago into a regional Institution was put forward, by the IMA, at the Caribbean Sea Forum June, 1998, but the suggestion has not been ratified.
Science & Technology	39	Share experiences in biodiversity research on sustainable use of tropical forest ecosystems in collaboration with relevant NGOs and academic institutions;	Iwokrama Rainforest Programme	Functioning information/communication unit established. UWICED was involved in a sustainable tourism workshop with Iwokrama in Sept. 1998. Iwokrama still in operation. UNDP is helping to develop baseline data on biodiversity towards developing biodiversity strategies and action plans. The UNDP B'dos office has already assisted 5 countries.
Science & Technology	40	Keep updated on progress of the specific recommendations for international action re. Recognition of the needs of SIDS in Integrated Coastal Zone Management training activity being developed by the United Nations System.	UN	Studies published by UNEP Regional Seas Program.
Science & Technology	41	Be updated on progress of the specific recommendations for international action re. Acceleration of the development of the coastal module of the Global Ocean Observing System, due to its relevance to SIDS.	UN agencies	IMA-IOCARIBE/GOOS launched in Miami in April 2001, from which projects should emerge.
Tourism	74	Prepare a proposal on means to mitigate land use conflicts in order to ensure, inter alia, continued access to land by local citizens.	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	ECLAC has done studies in St. Lucia on land reform policy and in 3 Caribbean states on the impact of Tourism on Land Market prices and possible solutions.
Tourism	75	Carry out an evaluation of the social and economic impact of migration in response to the labour demands of the tourism sector.	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	ECLAC completed studies in Antigua/Barbuda and St. Kitts/Nevis on return migration.

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Issues	ID	Subactivities	Agencies	Status
Tourism	76	Prepare a draft regional strategy for sustainable marine-based tourism in the Caribbean	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	CTO prepared strategy for sustainable tourism including marine based sustainable tourism. CTO believes there is a need to develop a strategy for implementing the Code of Conduct. ECLAC is implementing a project for developing sustainable marine based tourism.
Tourism	77	Prepare a strategy with proposals to increase the participation by citizens in the tourism industry;	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	Although CTO encourages community participation it is not with respect to particular projects. Studies by ECLAC on impact of tourism on land prices addresses this issue in part.
Tourism	78	Develop an integrated approach to tourism to encompass sustainability with particular reference to the linkages between tourism and other sectors, such as agriculture and culture, and ensuring stakeholder participation	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	ACS is working towards the establishment of the Caribbean Sustainable Tourism Zone. The Declaration of Santo Domingo on the Sustainable Tourism Zone of the Caribbean, The Memorandum of Understanding for the establishment of the Zone and a Plan of action for the development of the tasks (disaggregated into 12 strategies) were among the documents signed/approved at the second Summit of the Heads of State and governments of the ACS, Santo Domingo, 1999. CTO is co-ordinator of the Caribbean Sustainable Tourism Zone.

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Issues	ID	Subactivities	Agencies	Status
				<p>Labour demands are considered in CTO's decisions towards sustainable tourism in the region. UNEP-CAR/RCU-CEP is currently implementing the Caribbean Environmental Network (CEN) project. CEN's objectives are to promote best practices among the tourism sector (public, private and civic sectors) with the aim of protecting coastal and marine resources on which the sector depends. The project has developed pilot projects.</p> <p>CEP will complete its work with CEN in 1998. UWISEDU has planned research on linkages between tourism and other sectors of society.</p>
Tourism	79	Revive and update the Sustainable Tourism and Environmental Health Initiative with a view to strengthening the linkages between health and tourism	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	<p>CTO established Tourism and Health Managers in May 1998 in collaboration with Pan American Health Organisation (PAHO). ECLAC and the Caribbean Alliance for Sustainable Tourism published a book "Environmental Technology in Caribbean Hotels", in 2000, which outlined technologies that could be used in waste management which can mitigate health problems.</p>
Tourism	80	Carry out a study on the impact of climate change on the tourism industry;	CPACC	<p>Terms of reference was drawn up for the study. Consultation with the Caribbean Tourism Organisation has not led to a finalised position on the position of the</p>

STATUS OF IMPLEMENTATION OF THE 1997 JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS

Issues	ID	Subactivities	Agencies	Status
				Terms Of Reference. CPACC has no budget line that may be used to fund the project and has suggested collaboration with ECLAC for proposal development. Recently interest has been shown by UKCIP. CPACC working to develop a joint project with UKCIP.
Tourism	198	Put in place or strengthen mechanisms to ensure the functional articulation of physical planning, environmental principles and objectives in planning for the tourism sector (recom)	Governments	Environmental agencies set up or being set up in Caribbean SIDS. ECLAC assisting in devising land use policy and disaster assessment methodologies and tourism/land market studies
Tourism	199	Ensure continuity of local access to coastal resources through the use of creative zoning and other mechanisms (recom)	Governments	Barbados government procuring land for such. ECLAC examined such issues in evaluating the transfer of land from local ownership due to the tourism industry.
Tourism	200	Allocate the resources required to manage natural resources that form the basis of the tourism sector in the region to ensure long term sustainability and viability (recom)	Governments	See ECLAC work above
Waste management	81	Pursue further activities which will allow Caribbean states to develop environmental monitoring capabilities, strengthen institutional capabilities in waste management, and implement pollution prevention programs.	CEHI	CEHI played a role in training and providing equipment to allow for water quality monitoring. CEHI/ CAST conducted a seminar to sensitise hotel owners on the importance of efficient sewage plant operation and acceptable water quality. CEHI continues to implement the OECS solid waste

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Issues	ID	Subactivities	Agencies	Status
				management. Implementation of a regional programme for landfill monitoring and training for sewage treatment plants operators by CEHI and member states.
Waste Management	82	Support a multi-step process for setting regional and national standards consisting of: recommending Guidelines, adopting Regional Guidelines, and enacting National Standards	CEHI	Effluent standards relate to compliance with the BASEL Convention. Continued efforts (with UNEP) at establishment of national intersectoral groups to assist in setting of standards. For some Caribbean countries with support from OAS. Strategic planning meeting of Solid Waste Managers for needs identification (CEHI/GTZ).
Waste Management	83	Develop training programs for environmental and public health inspectors to approve applications and licenses, inspect and monitor waste facilities, including control sampling, and enforce acts and regulations	CEHI	Training for sewage treatment plant operators took place in November 1998. Pursuing training opportunities with USEPA for health inspectors. CEHI has planned training for sewage treatment plant operators in CARICOM countries
Waste Management	94	Collaborate with CDB, OECS WNP and the private sector to identify and promote strategies and participate in regional initiatives for waste minimisation and recycling	Governments	ECLAC and the Caribbean Alliance for Sustainable Tourism published a book " Environmental Technology in Caribbean Hotels", in 2000, which outlined technologies that could be used in waste management.

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Issues	ID	Subactivities	Agencies	Status
Waste Management	105	Develop information systems and baseline data for waste management and pollution control, and monitoring of wastes (recom)	Governments, CEHI	Demo project baseline data for waste management and pollution control now generated for number of hotels in St. Lucia. Info dev't cont'd with equipment and training to OECS. Regional database to be established.
Waste Management	140	Collaborate with the Government of Trinidad and Tobago in the establishment of a subregional centre for training and technology transfer for the implementation of the Basel Convention, at CARIRI	Governments, Trinidad and Tobago, CEHI	MOU between CEHI and CARIRI prepared. Both organisations agreed with Basel Secr. to conduct joint training. Training programme in Asbestos management one of the first activities. ECLAC designed a project and is seeking funding for its implementation.
Waste Management	141	Identify and institute realistic and appropriate cost recovery mechanisms in order to sustain waste management institutions (recom)	Governments	No further available information
Waste Management	143	Make provision for the management of hazardous wastes (recom)	Governments	In 1994, CEP sponsored some work on the transboundary movement of hazardous waste in the region. CEP was also involved with Secretariat of the Basel Convention on a workshop to assess hazardous waste management. Completion of Project on Inventory of Hazardous Chemicals and development of model policy for HWM (for 2001). Asbestos Management Program and Waste Oil Management Program to be developed (2001)

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Issues	ID	Subactivities	Agencies	Status
Waste Management	144	Establish and/or tangibly support dedicated institutions to manage the solid and liquid waste sectors (recom)	Governments	<p>UWICED/ gov't to develop a framework for the management of solid waste in Jamaica.</p> <p>UWICED has developed a Concept Paper relating to the rehab. of the Riverton Dump site for Gov't and the National Steering Committee for Solid Waste Management in Jamaica.</p> <p>Barbados and Jamaica had designed projects for submission to the SIDS Donors meeting in 1999. No funds available yet.</p>
Waste Management	145	Mandate that EIAs which consider the management of wastes be conducted for all major developments (recom)	Governments	Some countries working on legislation. Environmental Authorities set up in some Caribbean SIDS. EIAs mandated as a rule for major project undertakings.
Waste Management	146	Encourage the design and implementation of public awareness and education programmes (recom)	Governments	Co-ordinate and support the implementation of a regional waste Management public awareness programme (for 2001).
Waste Management	147	Develop and enact appropriate legislation for the safe and efficient management of wastes. Support this legislation by adequate institutional and regulatory frameworks for environmental monitoring and enforcement (recom)	Governments	Some governments have signed on to the BASEL Convention. Some need help in amending domestic legislation to conform to international conventions.
Waste Management	148	Use the outputs of WCISW with respect to the legal and technical strategies for the implementation of MARPOL 73/78 and the establishment of waste		Amendments made to MARPOL and special areas established under the convention.

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Issues	ID	Subactivities	Agencies	Status
		reception facilities and waste management infrastructure.		
Waste Management	208	Ratify and implement relevant conventions such as Basel Convention, London Convention 72, Cartagena Convention as well as other relevant conventions (recom)	Governments, CARICAD, CEHI	CEHI- revised project proposal to conduct an inventory of hazardous chemicals and wastes in certain Caribbean countries (BASEL Convention). SIDS that have ratified the BASEL Convention are: Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, St. Kitts and Nevis and Trinidad and Tobago. CEHI seeking to use St. Lucia as a pilot for the development of national hazardous waste management policies and plans.

Note: For a more detailed view of country activities/projects and other institutions concerned with sustainable development in the Caribbean, reference can be made to the SIDS Database or ECLAC's Sustainable Development homepage, both of which may be accessed at <http://www.eclacpos.org/>

Annex 3

**NEW JOINT WORK PROGRAMME (JWP)
OF CARIBBEAN SIDS 2001
INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP**

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Biodiversity	73	Study possibilities for the establishment of a regional natural history museum	UNESCO	No further progress on this initiative.
Biodiversity	131	Develop and use creative forms of land stewardship arrangements that can persuade landowners to become active participants in land management and natural and cultural heritage conservation		Some work done by UNDP in protected area management in response to the decline in the banana industry. Communities involved in protected areas management. Land policy project done in St. Lucia by ECLAC.
Biodiversity	134	Development of mechanisms and resources for the collection, characterization and evaluation of region's food crop and animal resources to maximise benefits from indigenous materials		Ongoing research at the UWI, some focus on natural products extracts for pharmaceutical use. Most biodiversity strategies tend to be global or country/company specific. Caribbean nations have participated in the FAO plant genetics program. Bio development project in Suriname and Meso America. OAS has project dealing with economic botany of medicinal and nutritional tropical plants.
Climate Change	121	Support the continuing work of the UN-IPCC to ensure that the needs and concerns of SIDS are included in the Third Assessment Reports (recom)	Governments	UNEP/ROLAC is attempting to convene a meeting of experts to collaborate on a Caribbean view. Funds have been requested to assist SIDS in adaptation for climate change. The Third Assessment Report has been completed.
Climate Change	126	Support the development of the necessary institutional mechanism to ensure that critical programs initiated under	Governments	CPACC project is still ongoing, but coming to a close at the end of

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Issues	ID	Subactivities	Agencies	Status
		CPACC are sustained beyond the lifetime of the project		2001. Funding not yet secured for continuance of program. UNDP laid the groundwork for the "Caribbean Climate Change Support Project" now executed through UNDP-Jamaica. All Caribbean countries have received funding for National Communication.
Coastal and Marine Resources	203	Support implementation of the FAO Programme of Fisheries Assistance for SIDS, development of a common approach to Sustainable Development of the fisheries sector in the Caribbean, CFRAMP and the EU Fisheries Research initiative for ACP countries	Funding agencies	IDRC funding to enable CFRAMP and CEHI to work on causes of fish kills. CFRAMP Subregional program ongoing, among others
Coastal and Marine Resources	234	To keep abreast of the development of the coastal module of the Global Observing System due to its relevance to SIDS	CPACC and other relevant agencies	Institute of Marine Affairs (IMA)/IOCARIBE will launch the GOOS project in Miami in April 2001 and projects should emerge from this initiative.
Communications for Sustainable Living	63	Establish taskforce to develop a communications strategy for sustainable living	UNIC ACS	Taskforce to include OECS, CERN, CEHI, CCA, CAMWORK, CARIMAC, CANA, CBU and UNIC and operate during 1998. Project has not commenced with all listed but the ACS is developing a communications strategy to promote sustainable living under its sustainable tourism strategy. CEHI will host a workshop in July 2001 which will involve lead agencies as well as national governments and media personnel in order to develop

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
				a sustainable communication network towards resource mobilisation.
Communications for Sustainable Living	197	Develop a communications strategy for sustainable living to; a) develop feedback systems, b) publish activities of the SIDSPOA, c) Facilitate exchange of Best Practices d) create a culture in the media supporting the SIDSPOA, e) strengthen regional media	Taskforce	ECLAC has SIDS PoA and its follow up for various Caribbean SIDS on the PoA , in addition to Caribbean Institutions on its website and UNDP maintains links via SIDSNET to various relevant institutions and their work.
Crime and Drugs	236	Establishment of local initiatives, laws and institutions to combat drug activities.	Governments, UNDCP	UNDCP assisting Caribbean states to upgrade legal status, managerial, technical and networking skills to more effectively co-ordinate domestic and regional drug initiatives. UNDCP/OECS are finalising a handbook on the mutual legal assistance framework of OECS countries.
Crime and Drugs	237	Drafting of legislation and collaborative activities to address the transnational nature of the drug trade and criminal activities	UNDCP and national governments	UNDCP assisting in review of drug legislation which concerns the UN 1988 Convention. Workshops and advisory assistance to promote ratification of the UN Convention against Transnational Organised Crime (UNDCP/CARICOM). UNDCP provides mentors to establish Financial Intelligence Units (FIUs) and prosecute money laundering cases.

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Issues	ID	Subactivities	Agencies	Status
Crime and Drugs	238	Provision of opportunities to allow young people especially to engage in non drug related activity. Public education schemes for drug awareness.	National Governments	Improving drug awareness in school, parent, community populations through national drug education programmes. Barbados, Dominican Republic, Haiti, Guyana and Trinidad are developing curricula for primary and secondary schools geared towards behavioural modification via positive influences on attitudes and values. CAMH/AFR provided an in-depth regional certificate programme in addiction studies for demand reduction professionals and other workers (completed). CMC/CCC engaged in activities to promote sports among young people, support of anti drug and anti-corruption policies and actions and publication of a regional magazine called "FOCUS".
Crime and Drugs	239	Establishment of procedures at various ports of entry to intercept drug importation.	CCLEC, governments	CCLEC is working to strengthen the Customs' Enforcement Network (CEN) in the Caribbean to collect and disseminate information on the movement of small vessels and light aircraft.
Crime and Drugs	240	Reform of the penal system to meet the demands of international standards, especially in terms of sentencing and rehabilitation.	UNDCP, governments	UNDCP promotes the establishment of drug treatment institutions, courts, community service, training of prison officers, probation officers

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Issues	ID	Subactivities	Agencies	Status
				and magistrates. The UNDCP and the OECS are working on guidelines for sentencing options. UNICEF/UNDCP working on legal reform of juvenile justice to meet international guidelines.
Crime and Drugs	242	Measures to access external resources to combat the influence of the drug trade on the society.	Justice Reform Group and national governments	Barbados, Jamaica, Haiti, Dominican Republic have quarterly meetings for collaborative purposes. A Justice Reform Support Group (DFID/CIDA/IDB/UNICEF) formed for the co-ordination of legal assistance programs; the OECS and ECCB also involved.
Crime and Drugs	243	Devising regional and subregional strategies to combat the drug trade and its influence on Caribbean societies		A study is underway to determine the feasibility, structure and information sharing protocol of regional FIUs for the OECS (UNDCP/CDB/CFATF). Preparation of country profiles for countries of the region by the UNDCP.
Disaster Management	170	Undertake Hazard Mapping and Risk Analysis across the region (recom).	Governments	CDERA's involvement is the main initiative. CDERA has a base methodology. Various levels of hazard analysis, mapping and Risk Assessment have been undertaken in Jamaica, Antigua/Barbuda, Belize, Trinidad and Tobago and Guyana. IMO has instruments to handle pollution, drafting of model

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Issues	ID	Subactivities	Agencies	Status
				legislation and is working on sensitivity index mapping. ACS has a special committee on Natural Disasters (with CDER, OAS, UNDP). Belize in collaboration with civil society has prepared and passed the Disaster Preparedness and Response Act in 2000.
Disaster Management	175	Develop a resettlement policy in the aftermath of major hazard impacts bearing in mind the lessons learnt in Montserrat (recom)	Governments	ECLAC has assisted in producing a post disaster tourism policy for Montserrat. UNDP has a "Montserrat Post-Emergency Resettlement Program" which commenced in April 2000 in collaboration with the DFID. The project provides institutional strengthening and capacity building by reviewing critical technical bottlenecks in certain Gov't. departments. An Integrated Vulnerability Analysis is due to start soon aimed at incorporating disaster prevention and mitigation into the physical and infrastructural design and development of new communities in the safe zone.
Disaster Management	177	Include national disaster organisations in the review and comment process of proposals for major development (recom)	Governments	Some governments have included disaster planning in their National Development Plans e.g. Jamaica, British Virgin Islands, Trinidad and Tobago and Barbados.

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Issues	ID	Subactivities	Agencies	Status
Disaster Management	180	Support the SRU in its efforts to upgrade and to incorporate new communications technology in the monitoring and reporting on seismic events (recom)	Governments	Seismic Research Unit at UWI, St. Augustine continues to assist the Caribbean SIDS. Need for more funding for the SRU to fulfil its mandate to assist Caribbean SIDS.
Disaster Management	225	Provide technical assistance and training in overcoming natural disasters and in disaster management, analysis and reduction techniques		FAO has published a Mitigation Plan which takes into account the Agricultural, Fisheries and Forestry sectors. CDERA is also involved in community programmes for Disaster Preparedness.
Energy	98	Actively seek increased support for efforts to establish a graduate program in energy;	UWI	No program established as yet. Some graduate projects done at the University in Barbados on Ocean Thermal Energy and Solar Energy.
Energy	99	Undertake project activity to assist governments in formulating appropriate policies, legislation and economic incentives to increase the use of renewable energy, in particular solar energy, at the national level;	ECLAC/CCST UWI	Being implemented by the CEIS under a four year project. ECLAC in a monitoring capacity
Energy	101	Undertake project activity to assist governments in formulating appropriate policies, legislation and economic incentives to increase cogeneration activity	ECLAC/CCST UWI	GEF, UNDP, GTZ funding was used to implement the project and the executing agency was the CEIS.
Energy	102	Undertake project activity to assist governments in formulating appropriate policies, legislation and economic incentives to encourage energy efficiency via demand side management	ECLAC/CCST UWI	Being implemented by the CEIS under a four year project. ECLAC has a monitoring role
Energy	103	Require utilities to demonstrate that renewable energy and energy efficiency (through demand-side management) have both been seriously examined, and integrated where possible, as approaches to minimizing expenditure on capacity expansion;	ECLAC/CCST, UWI	Being implemented by the CEIS under a four year project. See above.

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Issues	ID	Subactivities	Agencies	Status
Energy	230	Provide assistance for the development of governmental or NGOs in the design of institutions concerned with the promotion of renewable energy technologies.		New element in JWP. Some work being done by UWI (Barbados). Four-year project sponsored by GEF in collaboration with the , German government (GTZ), ECLAC , being undertaken: called the Caribbean Renewable Energy Program. The project is examining solar, hydro and wind energy as alternative energy sources.
Freshwater Management	88	Promote the integration of freshwater management plans into forestry and other biodiversity policy and planning frameworks and strategies;	FAO, UNDP	UNDP has not yet undertaken freshwater management activities. (See above for FAO's contribution to Freshwater Management).
Freshwater Management	89	Develop modes of information exchange on best practice methods and appropriate technologies for sustainable freshwater management and resource augmentation.	Governments OECS, CEHI, UWI, UNEP/RCU	Freshwater website being developed at CEHI in 2001
Freshwater Management	162	Support ongoing initiatives and develop new ones for integrated watershed management	Governments	No further information update. FAO has continued to train Technical Officers from the Forestry sector through its assistance programs. This is an ongoing part of its mandate.
Freshwater Management	163	With assistance from appropriate agencies, review legislation pertaining to water management and amend as necessary	Governments	No further information available on this specific area. FAO assisting in drafting legislation for watershed management.
Freshwater Management	164	Support the CARICOM Conference of Health's endorsement of CEHI recommendations for improvement of water quality in the region	Governments	CEHI designated the Caribbean Focal Point for the International Water Resources Network.

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Issues	ID	Subactivities	Agencies	Status
Freshwater Management	165	Support the recommendation of the 1993 Car. Ministerial Meeting on Tourism and Env. Health, to increase the efficiency in the use of water and the reduction of its wastage in the tourism sector.	Governments	A study on water use has been published with CEHI as lead agency, sponsorship coming from USAID (A Review of Water Conservation Practices and Potential for Tourist Facilities in Barbados and St. Lucia).
Freshwater Management	166	Encourage countries which have made significant progress in any aspect of fresh water management to provide guidance and support to other SIDS in the implementation of similar programmes.	Governments	No further information available. Website being developed by CEHI on best practices and appropriate technology may prove useful.
Freshwater Management	167	Become involved and actively participate in regional and global water resources initiatives.	Governments	Caribbean involved in the International Water Resources Network (IWRN) 4th Dialogue in Brazil, 2001.
Freshwater Management	168	Remove barriers restricting access to water quality information being generated in the region	Governments	CEHI is working with various governments to obtain water quality information generated on water quality, within respective countries.
Freshwater Management	169	Promote the use of reclaimed waste water	Governments	CEHI and USAID have developed a project for such in Barbados and St. Lucia (see above) in tourism. No sustained regional initiatives
Globalisation	218	Organisation of seminars/workshops for developing negotiating skills for participation in international fora.		ILO is convening an August 2001 meeting of Ministers of Labour in the Caribbean in preparation for an October Meeting in Canada, informing on and discussing labour rights. The OAS at the request of the Western Hemisphere

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Issues	ID	Subactivities	Agencies	Status
				Transportation Initiative will carry out a proposed study of regional mechanisms for mutual assistance in the Caribbean. ECLAC conducted workshops (Oct/Nov. 1999) on issues related to the FTAA, Competitiveness and Standards for several OECS countries to assist their integration into the global economy.
Globalisation	219	Provide assistance to draft enabling legislation for the implementation of international treaties ratified by member states		A project proposal is being developed by ECLAC.
Globalisation	220	Train personnel and provide information to states that will assist in accessing financing for projects and co-ordinate the activities donor agencies		OECS has an EC Donor Co-ordinating Group which meets twice a year. ECLAC assisted in preparation of a brief towards the UN Financing For Development initiative.
Globalisation	221	Develop and implement policies for the transfer of appropriate technology to member states for sustainable resource use		Elaborated on at the workshops done by ECLAC on the FTAA, Competitiveness and Standards (Oct. Nov. 1999). ECLAC had done a paper on technology transfer for the region (1999).
Globalisation	222	Pursue the further development of socio economic and environmental vulnerability indices and provide timely advice and strategies to assist SIDS in overcoming inherent vulnerabilities and building on particular strengths		CARICOM and UN Statistical Office in New York implementing a project to collect environmental, social and economic statistics/ ECLAC and CARICOM want to link databases and ECLAC is

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Issues	ID	Subactivities	Agencies	Status
Globalisation	244	Make use of available communication technologies to provide timely information to the Caribbean region and to integrate its economy into the global system		willing to train CARICOM staff in the use of its database. The ACS is working to get feedback from the private sector and obtaining skilled personnel to assist in making businesses more competitive. ILO has an online market guide for investors. Studies by ECLAC on the impact of Globalisation on financial markets (June 1999) and the impact of trade liberalisation on commodity prices and consequently on government revenue (Jan. 1998) will assist in this.
Globalisation	245	Provide assistance to Caribbean States in acceding to developing practices and procedures that meet international standards.		ITU has proceeded with the reform of the telecommunications sector in accordance with the WTO and ITU agreements, by addressing legal, financial and technical issues and providing relevant advise on projects. The ITU has assisted the Maritime Sector in the development of national and regional plans for the introduction of the Global Maritime Distress and Safety system. Seminars have been convened by the ITU and IMO. Through the ITU's Electronic Commerce for Developing countries, assistance is being given to Caribbean nations in

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Issues	ID	Subactivities	Agencies	Status
				this area. The ITU will convene a seminar later in 2001 on e-commerce.
Health	229	Initiate and support studies to calculate the impact of the AIDS epidemic on the SIDS' populations and provide strategies for mitigating the inherent negative consequences		ILO has regional Strategic Plan for AIDS which draws upon the US' Ministry of Labour guidelines on AIDS in the workplace. Barbados has initiatives such as A Draft Action Plan and a Plan of Action for combating AIDS. In February 2001 focus was on the role of key line Ministries in the AIDS battle. In tandem with FAO and in last quarter of 2000, the government met with pharmaceutical companies for collaboration on the AIDS issue. The ILO has a new subregional HIV/AIDS project which is under preparation and for which funding is assured.
Implementation and Negotiation	3	Undertake activities to rationalize similar international agreements, facilitate the adoption of harmonized mechanisms and legislation for implementation and enforcement: in particular legislation related to conventions referred to in the SIDS PoA.	CARICAD, CLI	Need funding to proceed with activities.
Implementation and Negotiation	5	Focus on one appropriate convention with a view to preparing model enabling legislation and programmes of enabling activities, submitting this to the Bureau at its intersessional meeting in 1998.	CARICAD, CLI	Lack of funding to progress past the proposal stage.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Implementation and Negotiation	9	Establish a databank of persons with particular skills, e.g. international environmental law, upon which the region can draw	CARICOM OECS ACS	Organizations have made no progress towards establishing the databank. However ECLAC has a sustainable development web page which outlines key institutions in the Caribbean concerned with Sustainable Development and contains documents, statistics and legislation
Implementation and Negotiation	11	Establish links and exchange information with relevant organizations and groups in other regions, such as the South Pacific Regional Environment Programme, and the Forum Secretariat in the Pacific Region.	CARICOM OECS ACS	Inter regional meeting held February 1998. Another was planned for January 1999, but was not convened. Some information exchange possible through SIDSNET.
Implementation and Negotiation	12	Assess the trade implications of international environmental conventions and non-binding agreements, and the environmental implications of international trade agreements	CARICOM OECS, RNM National standards organizations	Inter regional meeting held February 1998. Another was planned for January 1999, but was not convened. No information concerning any further meetings available.
Implementation and Negotiation	14	Assess and report on the extent to which process and production methods and product characteristics of the region's exports diverge from international standards.	CARICOM OECS, RNM, National standards organizations	No regional initiatives have been forthcoming.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Information	26	Collaborate with international and regional agencies involved in this field to introduce advances in information technology to the region, tailor these technologies to regional circumstances and channel potential external funds to such exercises	CDB, ECLAC OECS-NRMU CARICAD, ECCB CARICOM, UWI	ECLAC has done demonstrations and presentations for the Caribbean Association of Law Librarians, has an online Caribbean Digital library and will embark on a project examining the use of information technology in selected public institutions. No further information from other institutions.
Information	52	Prepare a project proposal for national implementation of the Caribbean Strategy for Environmental Information Management		ECLAC/CDCC/UNEP had prepared draft proposal but no funding was obtained. The project has now been taken over by the EU and the UN Statistical Office (New York).
Information	56	Develop strategies to improve accessibility of data and information to all sectors of society including the use of existing channels and mechanisms but not exclusively through the Internet and to enable human and institutional components to achieve this;	Governments	No further available information.
Information	57	Enact national information policies and provide support to relevant agencies for the management and dissemination of sustainable development information.	Governments	Selected countries have prepared information acts e.g. Trinidad and Tobago and Jamaica. ECLAC involved in the production of science and technology indicators.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Information	108	Seek ways to provide, through universities or other means, cheaper access to the Internet for non-governmental organizations and community-based organizations	Governments	SIDSnet offers a possibility. ITU involved in the setting up of Multi-Purpose Community Centres in various Caribbean territories. They will provide telephone, fax and Internet services and information on issues such as health, agriculture, education and children's affairs.
Information	109	Greater re-packaging of information and use of other information vehicles, since most people do not have access to computers and the Internet	Governments	No further available information. Most grass roots efforts being piloted by NGO in social and environmental areas.
Information	110	Encourage the design and implementation of public awareness and education programmes (recommendation)	Governments	UNEP is preparing the Caribbean Environmental outlook for publication. The IDB and UNEP are collaborating with Caribbean Environmental Ministries to design a website.
Information	195	Establish national programme to collate, disseminate and use national sustainable development indicators	Governments	Ongoing research in the region especially Barbados, but focus more on developing Vulnerability Indices for SIDS.
Institutional Strengthening	223	Development of project activities that will provide planning assistance to SIDS in designing for sustainable land use, together with advice on the required funding.		New element in JWP. Some assistance being provided to St. Lucia by ECLAC in the area of Land Use Planning.
Institutional Strengthening	224	Identify and implement in collaboration with Member States, modalities for institutional strengthening in watershed management		FAO has several initiatives in Forestry and watershed management.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Institutional Strengthening	226	Devise programs for technical personnel in SIDS to assess the carrying capacity of natural resources and the impact of national or local policies on such		Ongoing work by CANARI in several Caribbean states.
Institutional Strengthening	227	Assist member states in developing National Sustainable Development Strategies		ILO produced a paper for ECLAC which outlined the impact of world trade and liberalisation on the Caribbean economies and possibilities within this context.
Labour/ Employment	214	Identification of Ecotourism initiatives that enable sustainable use of natural resources, as a basis for advising member States		Several projects are ongoing under the auspices of the UNDP and CANARI.
Labour/ Employment	215	Identification of areas for development in non traditional agricultural activities, e.g. aquaculture and the development, in collaboration with SIDS of corresponding project outlines for consideration	Government/private sector	New element in JWP; no further information available.
Labour/ Employment	216	Encourage and support tourism ventures that are targeted towards small and medium sized enterprises and are labour intensive	Government	This is being considered under various (especially eco) tourism initiatives in several states and is enhanced by work done by CANARI in Community Based Management of natural resources.
Labour/ Employment	217	Design and provide training in the use of economic instruments that encourage investment in human resource and training		ILO is involved in the design and implementation of the EU's social dialogue project which focused on industrial relations practices and a model of consultation and collaboration among employers' and workers' organization. A symposium was held in Port of Spain in April 2000.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Land Resources	157	Integrate National Forestry Policies into the larger frameworks for natural resources management	Governments and relevant agencies	CARICAD has provided consultancy services for drafting of legislation in the Forestry sector and for the Environmental Protection agency in Guyana.
Legislation Rationalization and Institutional Reform	59	Prepare an inventory of case law reporting in the field of environmental law.	CARICAD, CARICOM, OECS, ACS, CLI, UNEP	Project has not started due to lack of funding.
Legislation Rationalization and Institutional Reform	118	Provide technical expertise and training in the area of legislative drafting		CARICAD has not undertaken any specific training in legislative drafting but consulting services on drafting for the Forestry sector and Environmental Protection Agency of Guyana have been undertaken. ECLAC is assisting the Eastern Caribbean Supreme Court in legislative reform on Domestic Violence.
Legislation Rationalization and Institutional Reform	119	Rationalize the roles and responsibilities of existing institutions involved in sustainable development		No further available information. Most rationalization tends to be sectoral e.g. the Coastal Zone Management Unit in Barbados.
Legislation, Rationalization and Institutional Reform	60	Promote Harmonization of Standards since they have to deal with the requirements under NAFTA, WTO etc.	CARICOM ACS OECS	ACS has not been involved in legislative activities. No further information from other institutions.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Legislation, Rationalization and Institutional Reform	61	Undertake an examination of existing legislation on standards so as to ensure consistency	CARICOM ACS OECS	ACS has not been involved in legislative activities. No further information from other agencies.
Legislation, Rationalization and Institutional Reform	62	Prepare comparative analyses of legislative models such as the NRCA Act of Jamaica, the EMA Act of Trinidad and Tobago, and the Sustainable Development Bill of Fiji as a resource document for discussion and distribution within the region;	OECS	Environmental legislation or legislation which takes into account environmental imperatives (Planning Act in St. Lucia) being considered in OECS countries.
Legislation, Rationalization and Institutional Reform	86	Recommended that countries incorporate the principles of sustainable development into their legal statutes and enhance the awareness and technical skill of judicial and legal personnel with regard to sustainable development issues	Governments	No further information available
Poverty Alleviation/ Social Equity	228	Design and support programmes that promote education of disadvantaged or socially dispossessed groups.		St. Lucia has established a Poverty Reduction Fund as a pilot project. UNDCP has an Integrated Demand Reduction Program with the IDB focussing on poverty and drugs. The IDB and ILO are also working on the "Socio Economic Integration of Disabled Persons". A regional seminar is set to convene in March 2001 in Trinidad.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Poverty Alleviation/ Social Equity	231	Provide or promote projects that enhance the delivery of social services to the most vulnerable sectors in society		ECLAC assisted the government of Belize in conducting a series of national consultations towards a Plan of Action for poverty eradication in Belize. ECLAC also assisting the gov't of Montserrat in carrying out a poverty assessment study and UNESCO on a study on education and its impact on poverty and is convening a meeting in June 2001 to evaluate progress in national plans for poverty eradication as part of the follow up to WSSD.
Poverty Alleviation/ Social Equity	241	Establish programmes to reduce incidence of drug use among poorer communities, targeting Youth at Risk	UNDCP/CBD, UNICEF	Examination of relationship between poverty areas and "drug communities" (ongoing). UNDCP/UNICEF collaborating in Jamaica and Dominican Republic to provide activities, employment skills to youth in conflict with the law (coming onstream).
Regional Implementation Mechanism	117	Make available technical personnel and resources to assist the Interim Secretariat	Government, regional and international agencies	ECLAC funds Secretariat activities from its budget.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Resource Mobilization	84	Clarify policy objectives and identify areas with the most promising possibilities for the intensified use of economic instruments	Governments UWI PIOJ	ECLAC has designed a project to study the effectiveness of introducing or designing economic instruments in the Caribbean. Funding not yet available. No further information from other agencies.
Resource Mobilization	85	Identify positive and negative incentives in support of environmental conservation	Governments UWI PIOJ	OECS commissioned a study (published) on the economic opportunities associated with the environment in the OECS Member States.
Resource Mobilization	106	Conduct national and regional consultations with all stakeholders with the aim of achieving national implementation strategies	Governments UWI PIOJ	Barbados has "social contract" with civil society. ILO assists in providing mediation skills and other training to the labour sector.
Science & Technology	28	Give support to strengthening of national intellectual property systems, including patent information use, and inventors' associations; in collaboration with governments and relevant regional organisations.	WIPO	No further information available.
Science & Technology	35	Assist governments in the articulation of specific policies and fiscal incentives which promote the use of environmentally friendly technologies, in particular renewable energy technologies, biological pest control and reduction of wastes	UWI Other	Ongoing research at UWI, Barbados in solar power and Ocean Thermal Energy Conversion (OTEC).
Science & Technology	40	Promotion of Integrated Coastal Zone Management, recognizing specific recommendations for international action re. Recognition of the opportunities for SIDS to take advantage of training activities being developed by the United Nations System.	UN	Publications from the UNEP Regional Seas Program available.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Tourism	74	Prepare a proposal on means to mitigate land use conflicts in order to ensure, inter alia, continued access to land by local citizens;	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS	ECLAC has done studies in St. Lucia on land reform policy and in 3 other Caribbean states on the impact of Tourism on Land Market prices and possible solutions.
Tourism	77	Prepare proposals with a view to developing a strategy for increasing the participation by citizens in the tourism industry; strengthen mechanisms that will serve to advance this end.	ACS, OECS, ECLAC, UNDP, UNEP, UWI, CTO, CEHI, OAS: Governments	Although CTO encourages community participation it is not with respect to particular projects. Studies by ECLAC on the impact of tourism on land market addresses this issue in part.
Tourism	80	Carry out a study on the impact of climate change on the tourism industry;	CPACC	The terms of reference were drawn up for the study. Consultation with the Caribbean Tourism Organization has not led to a finalised position on the Terms of Reference. CPACC has no budget line that may be used to fund the project and has suggested collaboration with ECLAC for proposal development. Recently interest has been shown by UKCIP. CPACC working to develop a joint project with UKCIP.
Tourism	139	Use all available opportunities to obtain resources from global funds, such as the GEF, to support sustainable tourism initiatives in the Caribbean (recom)	Governments	Funds being accessed mostly from the EU or World Bank for tourism initiatives or projects which have such potential.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Tourism	199	Ensure continuity of local access to coastal resources through the use of creative zoning and other mechanisms (recom)	Governments	Barbados government procuring land for such. ECLAC examined such issue in evaluating the transfer of land from local ownership due to the tourism industry in the British Virgin Islands, Tobago and St. Vincent and the Grenadines.
Tourism	201	Establish or strengthen mechanisms that will increase the degree of local participation in the industry	Governments	Some work being done under the ACS initiative of a Caribbean Sustainable Tourism Zone. ILO is doing research on and promoting new Human Resources Development strategies in the hotel and tourism industry to encourage investment in people.
Trade	212	Design and implement projects that have the potential to produce foreign exchange for member states.		OAS has a project in Trade Negotiation out of UWI, Georgetown. Project will be evaluated this year. ECLAC did a study on the offshore financial sector and its contribution to employment, revenue and foreign exchange in selected Caribbean countries, outlining areas for more effectiveness. ILO's Caribbean office has produced and disseminated publications related to entrepreneurship development and support services in the small enterprise sector.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Trade	213	Design and advise on policies, plans and programmes to assist member states to benefit within the trade liberalisation process		The OAS/Unit for Sustainable Development is continuing review and comment on vulnerability of existing and emerging trade corridors by region. ECLAC did two studies on (i) the implications of Trade Liberalisation and Fiscal Policies on the Smaller economies of Latin America and the Caribbean (Sept. 1999) and (ii) a study on Trade Policy in the Caribbean, with an overview of the main trade measures utilised in the region and their effectiveness.
Waste Management	93	Develop fiscal and other policy initiatives to encourage environmentally sustainable imports	UWICED, CDB	No further information available
Waste Management	141	Identify and institute realistic and appropriate cost recovery mechanisms in order to sustain institutions concerned with waste management.	Governments	Mostly private sector initiatives in glass, tyre and plastic recycling.
Waste Management	142	Implement adequate mechanisms for the management of hazardous wastes from all communities, with an appropriate mix of public and private sector participation (recom)	Governments	Most of the initiatives are related to stopping the importation of trade waste (under LOME IV) or the banning of waste imports. The disposal of lethal wastes generated within country remains a problem. Countries need help in acceding to the BASEL convention. CEHI is completing a Project on Inventory of Hazardous Chemicals and Development of model policy for Hazardous Waste Management.

NEW JOINT WORK PROGRAMME (JWP) OF CARIBBEAN SIDS 2001 INCLUDING OUTSTANDING ELEMENTS FROM 1997 JWP

Issues	ID	Subactivities	Agencies	Status
Waste Management	145	Mandate that EIAs which consider the management of wastes be conducted for all major developments (recom)	Governments	Some countries working on legislation. Environmental Authorities set up in some Caribbean SIDS. EIAs mandated as a rule for major infrastructural projects. CEHI conducted a workshop on Environmental Health Impact Assessment (together with CDB and Health Canada). A project is now before CIDA for training in such. The OECS Member States have country specific programmes which are focused on Waste Recycling.
Waste Management	147	Enact appropriate legislation for the safe and efficient management of wastes. Support this legislation by adequate institutional and regulatory frameworks for environmental monitoring and enforcement (recom)	Governments	Some states have signed on to the BASEL Convention. Some need help in amending domestic legislation to conform to international conventions.

Annex 4

TABLES OF SELECTED SOCIO-ECONOMIC INDICATORS

Table 1
Net inward FDI flows to Caribbean countries (1990-1997)
(US\$ millions)

Countries	1990	1991	1992	1993	1994	1995	1996	1997
Anguilla	11	6	15	6	13	na	na	na
Antigua and Barbuda	61	55	20	15	25	31	19	28
Aruba	131	185	-37	-18	-73	-6	84	196
The Bahamas	-17	-1	40	11	22	10	11	17
Barbados	11	7	14	9	13	12	22	18
Belize	17	14	16	9	15	21	17	12
Cuba	1	10	7	3	14	9	12	13
Dominica	13	15	21	13	23	54	18	20
Dominican Republic	133	145	180	225	360	404	394	414
Grenada	13	15	23	20	19	20	18	22
Guyana	8	13	147	70	107	74	81	90
Haiti	na	-2	-2	-2	-3	7	4	5
Jamaica	138	133	142	78	170	245	273	137
Montserrat	10	8	5	5	1	na	na	na
Netherlands Antilles	8	33	40	11	22	10	11	17
St Kitts & Nevis	49	21	13	14	15	20	17	25
Saint Lucia	45	58	41	34	32	30	23	45
St. Vincent & Grenadines	8	9	15	31	47	31	18	42
Suriname	-77	19	-54	-47	-30	-21	7	na
Trinidad and Tobago	109	169	178	379	516	299	320	1000
Annual total	672	912	824	866	1308	1250	1349	2101

Source: ECLAC LC/G.2042-P, p.42, 1998.

Table 2
Official Development Assistance Committee flows to the Caribbean (1990-1998)
(US\$ millions)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	Avg 90-98
Antigua & Barbuda	0	0	0	-1	0	0	-	-	0	0
Aruba	-	0	-	-	-	-	-	-	-	0
Bahamas	0	2	-	0	0	-	-	-	-	1
Barbados	0	-1	-1	-1	-6	-5	-5	-4	-23	-5
Belize	5	0	0	4	-3	-1	-	-	-1	1
Bermuda	42	-5	-5	-5	-12	-	-4	-8	-	0
Cayman Islands	-	-1	-1	-1	-1	-1	-2	-1	-	-1
Cuba	11	-	-	-	-	-	-	-	0	6
Dominica	5	2	2	1	2	1	1	-1	0	1
Dominican Republic	27	7	-10	347	-8	12	-6	-7	-8	39
Grenada	-	2	0	1	3	0	0	0	0	1
Guyana	32	-23	7	-1	0	14	-	1	8	5
Haiti	12	-78	1	0	-1	3	9	11	2	-5
Honduras	111	-339	43	47	31	56	3	6	28	-2
Jamaica	129	-17	83	-33	30	8	-13	0	-37	17
Netherlands Antilles	-10	-3	-	-	-	-	-	-	-	-7
St. Kitts & Nevis	1	0	0	0	0	0	4	6	3	2
St. Lucia	0	6	8	2	1	0	4	2	-1	2
St. Vincent & Grenadines	0	0	0	2	1	0	0	0	0	0
Suriname	0	0	5	4	6	5	-	0	0	3
Trinidad & Tobago	21	5	11	-1	-13	-23	-25	-22	-19	-7
Total	386	-443	143	365	30	69	-34	-17	-48	50

Source: World Bank Debt Tables, 1999

Table 3
Official grants to the Caribbean
(US\$ millions)

Country	1990	1991	1992	1993	1994	1995	1996	1997	Av. 90-98
Barbados	1.3	1.0	0.0	19.6	2.2	1.2	2.3	2.0	3.7
Belize	4.4	3.0	6.0	17.7	13.0	7.0	2.8	3.7	7.2
Dominica	3.1	3.0	5.0	5.3	12.0	23.5	22.8	6.6	10.2
Dominican Republic	29.0	18.0	23.0	43.0	39.0	40.0	55.0	49.0	37.0
Grenada	4.2	9.0	4.0	2.3	11.3	7.4	4.8	4.1	5.9
Guyana	74.0	158.0	42.0	61.0	32.0	21.0	37.0	195.0	77.5
Haiti	65.0	178.0	60.0	72.0	598.0	512.0	158.0	130.0	221.6
Jamaica	117.0	282.0	57.0	242.0	91.0	63.0	40.0	38.0	116.3
St. Kitts & Nevis	2.0	2.0	1.0	0.2	0.4	0.8	1.6	-0.3	1.0
St. Lucia	3.1	7.0	5.0	14.3	17.8	42.2	29.2	5.0	15.5
St. Vincent & Grenadines	3.4	3.0	8.0	2.7	2.8	45.3	21.0	4.3	11.3
Trinidad & Tobago	13.0	2.0	8.0	5.0	9.0	10.0	7.0	8.0	7.8
Total	319.5	666.0	219.0	485.1	828.5	773.4	381.5	445.4	514.8

Source: The World Bank, Global Development Finance, 1999

Table 4
Per cent change in GDP (constant) for the period 1990-1998

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Average Growth Rate
Anguilla	7.0	-3.6	7.1	7.5	7.1	-4.2	3.5	9.2	5.5	4.3
Antigua & Barbuda	2.3	2.7	0.9	5.1	6.2	-5.0	6.1	5.6	3.9	3.1
Aruba	-	-	-	5.0	6.0	6.0	4.0	4.0	...	5.0
Barbados	-3.1	-4.2	-6.2	1.5	3.8	2.7	5.5	...	...	0.0
Belize	10.3	3.1	9.5	4.4	1.5	3.9	1.1	4.0	1.4	4.4
Cuba	1.0	-11.0	-12.0	-15.0	1.0	2.0	8.0	2.0	...	-3.0
Dominica	6.3	2.2	2.7	1.9	2.2	1.6	3.1	2.0	3.5	2.8
Dominican Republic	-4.8	-0.5	...	3.0	4.3	4.8	7.3	8.2	...	3.2
Grenada	5.3	3.6	1.1	-1.2	3.3	3.1	2.9	4.2	5.8	3.1
Guyana	-3.0	6.0	7.8	8.2	8.5	5.0	8.0	6.2	-1.3	5.0
Haiti	-0.6	-1.4	...	-2.4	-8.3	4.4	2.8	1.1	...	-0.6
Jamaica	5.5	0.7	1.5	1.5	1.0	0.8	-1.4	-2.1	-0.7	0.8
Montserrat	14.3	-20.9	2.7	2.5	0.9	-7.6	-21.5	-26.5	-3.2	-6.6
Netherlands Ant.	-	-	...	-1.8	1.7	1.3	-1.0	-2.5	...	-0.5
St Kitts & Nevis	3.1	2.3	3.1	5.4	5.4	3.5	5.9	7.3	1.6	4.2
Saint Lucia	4.2	0.1	7.4	1.1	1.8	1.7	1.4	0.6	2.9	2.4
St. Vincent & Gren.	6.7	1.4	6.9	1.8	-2.9	8.3	1.2	3.1	5.7	3.6
Suriname	0.2	-	...	-4.4	-4.2	5.2	3.0	5.6	...	0.9
Trinidad & Tobago	1.5	2.7	-1.6	-1.5	3.6	3.8	3.5	3.4	3.2	2.1

Source: ECLAC, based on national data

Table 5
Fiscal balance as a per cent current GDP

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Anguilla	2.38	-2.52	-1.67	-1.53	0.48	0.24	-0.85	-1.24	0.38
Antigua & Barbuda	-1.79	-1.99	-0.48	-1.42	-2.82	-2.97	-1.88	-3.72	-4.83
Aruba	...	...	-2.07	0.95	0.19	0.24	-3.09	-2.46	-0.92
Bahamas	-2.42	-4.29	-2.88	-1.53	-0.69	-1.30	-3.98	-1.78	...
Barbados	-7.21	-1.58	-1.64	-2.08	-1.04	-0.77	-3.21	-1.18	-0.82
Belize	0.25	-5.09	-6.94	-5.72	-7.60	-4.01	-0.73	-1.59	-2.61
British Virgin Islands	...	...	...	-1.64	-1.15	1.34	2.88	3.42	2.96
Cuba	...	...	...	...	...	-3.52	-2.46	-1.99	...
Dominica	-10.04	-3.29	-5.66	-0.26	-4.83	-5.77	-1.88	-2.30	-3.13
Dominican Republic	...	...	...	...	-0.77	0.70	-0.33	0.70	...
Grenada	-12.96	-4.82	-0.63	-0.87	-1.87	0.06	-3.35	-2.70	-4.92
Guyana	-24.60	-27.26	-19.79	-8.08	-8.06	-3.90	-1.93	-7.38	-9.47
Haiti	...	...	...	...	-3.31	-4.81	-1.63	-2.26	...
Jamaica	...	4.36	4.12	3.70	3.63	1.85	-7.46	-9.05	-7.98
Montserrat	-0.89	-1.19	-14.53	-4.14	0.14	2.08	0.44	-0.68	3.03
Netherlands Antilles	...	...	22.91	23.37	23.32	24.28	...	...	...
Puerto Rico	...	...	...	...	...	...	...	...	...
Saint Kitts & Nevis	-0.28	-2.27	-1.20	-2.04	-2.99	-6.69	-5.22	-4.64	-6.50
Saint Lucia	0.97	0.67	-1.40	-0.76	-0.82	-1.73	-1.91	-0.92	-2.73
St. Vincent & Grenadines	-0.82	-0.25	-4.32	-4.84	-0.31	-2.44	0.76	-5.15	-3.94
Suriname	...	...	...	...	...	...	...	...	...
Trinidad & Tobago	-1.25	-0.19	-2.78	-0.16	-0.02	0.17	0.50	-0.11	-0.11
US Virgin Islands	...	...	...	...	...	...	...	...	...

Source: ECLAC, based on national data

Table 6
External debt
(as a percentage of GDP)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Antigua and Barbuda	101.9	85.2	80.5	79.0	70.5	67.7	60.6	54.2	54.3	47.5
Barbados	28.3	29.6	26.4	28.2	26.9	25.3	25.2	24.5	22.9	21.5
Belize	48.0	46.7	41.7	39.2	39.3	34.3	37.2	39.6	37.3	42.3
Dominica	62.0	55.6	57.6	62.1	43.2	58.3	53.3	53.9	53.8	51.7
Grenada	49.4	46.3	40.5	54.8	43.7	39.2	39.0	40.0	37.9	36.3
Guyana	382.4	342.7	417.2	520.4	617.0	613.7	512.7	451.2	353.8	215.3
Jamaica	137.7	112.9	111.8	109.4	185.5	111.4	122.7	93.8	84.6	56.0
St. Kitts and Nevis	23.6	24.9	26.6	27.2	26.4	28.5	28.0	27.8	27.3	26.2
St. Lucia	11.6	15.1	17.2	21.1	22.5	24.0	24.3	24.6	24.1	26.1
St. Vincent and the Grenadines	32.1	33.8	35.1	34.4	36.8	35.6	38.1	42.8	39.5	37.4
Trinidad and Tobago	30.6	36.8	33.7	30.5	29.6	28.4	38.5	34.8	32.2	31.1

Source: ECLAC based on national data

Table 7
Foreign Direct Investment flows

	1995	1996	1997	1998	1999
Antigua/Barbuda	40	33	38	42	51
Aruba	146	130	128	158	160
Bahamas	121	119	168	246	299
Barbados	147	201	196	180	-
Belize	25	41	44	31	52
Dominica	15	16	18	20	23
Dominican Republic	246	244	290	356	502
Grenada	25	25	32	33	37
Guyana	181	229	234	196	195
Haiti	71	75	57	-	-
Jamaica	458	612	506	504	404
Netherlands Antilles	137	131	159	176	193
St. Kitts/Nevis	23	23	27	33	36
St. Lucia	42	39	45	50	54
St. Vincent & the Grenadines	20	21	23	28	31
Suriname	89	67	81	75	-
Trinidad and Tobago	241	378	524	556	689

Source: International Monetary Fund: International Financial Statistics
Yearbook 2000

Table 8
Selected socio-economic indicators for Caribbean countries

	Infant Mortality rates per 1000 live births ¹	Maternal mortality ratio/ 100,000 live births ¹	Fertility Rates	Unemployment Rates**			Poverty Rates*
	1998	1990-1998	1995-2000	1997	1998	1999	
Antigua/Barbuda	17	150	na	-	-	-	12
Aruba				7.4	-	-	na
Bahamas	18	na	2.6	13.1	14.8	12.3	5
Barbados	13	0	1.5	24.3	23.0	17.2	8
Belize	35	140	3.7	12.5	9.0	9.8	33
Dominica	17	65	na	23.1			33
Dominican Republic	43	230	2.8				20.6
Grenada	23	0	na	-	15.2	-	32.1
Guyana	58	190	2.3	-	-	-	43.2
Haiti	91	na	4.4	-	-	-	65.0
Jamaica	10	120	2.5	16.5	15.5	15.7	34.2
Netherlands Antilles							na
St. Kitts/Nevis	na	130	na				15
St. Lucia	18	30	na	20.5	21.6	18.1	25.1
St. Vincent and the Grenadines	20	43	na				37.5
Suriname	28	110	2.2	10.5	10.6		47
Trinidad and Tobago	16	na	1.7	15.0	14.2	13.1	21.2

¹ Source: UNDP Human Development Report 2000

* Source: ECLAC, Poverty Statistics, Santiago Seminar 7-9 May 1997. ECLAC, Santiago, Chile. L/CR.1814. Pub. 17 April 1998, and KAIRI CONSULTANTS: Poverty Assessment Report, Grenada: Volume 1 Of 2 (19998).

** Source: ILO Caribbean database of Labour Statistics 2000

Table 9
Selected education statistics for Caribbean countries

	Adult Illiteracy Rates (1995)*	Educational Access (% of age group in secondary school) 1997**	Education Access rates (% of age group in secondary school) 1997**
Antigua/Barbuda	na	na	na
Bahamas	1.8	94.6	84.6
Barbados	2.6	97.4	85.7
Belize	7.3	99.9	63.6
Dominica	na	na	na
Dominican Republic	17.9		78.5
Grenada	na	99.9	na
Guyana	1.9	92.8	74.9
Haiti	55.0		34.2
Jamaica	15.0	95.6	69.8
St. Kitts/Nevis	na	na	na
St. Lucia	na	na	na
St. Vincent & the Gren.	na	na	na
Suriname	7.0	99.9	na
Trinidad and Tobago	2.1	99.9	71.5

* UNESCO Yearbook 1998

**UNDP Human Development Report 2000

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