

# SEYCHELLES NATIONAL CAPACITY SELF-ASSESSMENT (NCSA)

## CAPACITY ASSESSMENT REPORT

April 2005



## Table of Contents

EXECUTIVE SUMMARY .....	iii
ACRONYMS .....	vi
1. Introduction .....	1
1.1 What is an NCSA? .....	1
1.2 The Seychelles NCSA .....	2
2. Approach and Methods .....	4
3. Capacity Assessment: Priority Issues .....	6
3.1 International Convention Management .....	6
3.2 Donor Project Development and Management .....	7
3.3 Financing and Economic Instruments .....	8
3.4 Institutional Framework .....	9
3.5 Integrated Management (IM) .....	11
3.6 Information Management .....	13
3.7 Technology Development and Transfer .....	14
3.8 Human Resources Development (HRD) .....	15
3.9 Education, Awareness and Advocacy .....	17
3.10 Stakeholder Involvement .....	18
4. Next Steps: Action Plan .....	19
ANNEXES .....	20
ANNEX A: Capacity Development Definitions .....	20
ANNEX B: Strategic Overviews of Obligations under the Conventions - Executive Summaries .....	21
ANNEX C: International Environmental Conventions Signed by Seychelles .....	28
ANNEX D: References .....	29
ANNEX E: Participants in the Capacity Assessment .....	31
ANNEX F: Seychelles NCSA Documents .....	33
ANNEX G: Detailed Matrix of Capacity Strengths, Constraints and Needs .....	35

## EXECUTIVE SUMMARY

The goal of the Seychelles NCSA is to determine the priority needs and establish a plan of action for developing Seychelles' capacity to meet its commitments to global environmental management. The focus of the NCSA is primarily on the "Rio Conventions", i.e. the Convention on Biological Diversity (CBD), the Framework Convention on Climate Change (FCCC), and the Convention to Combat Desertification (CCD) (including Sustainable Land Management). The NCSA is being done through a country-driven consultative process in four phases:

1. Project management and implementation mechanisms (completed Dec. 2003).
2. Strategic overview of obligations under the conventions (completed June 2004).
3. Capacity Assessment, an in-depth analysis of capacity development needs.
4. Action Plan, for addressing priority capacity needs (forthcoming May 2005).

This *Capacity Assessment Report* presents the results of phase 3. The main data collection methods used were desk studies; stakeholder interviews; Project Team meetings and mini-workshops; and a one-day Stakeholder Workshop. The information gathered was analyzed in a comprehensive matrix, which listed "Strengths, Constraints, Capacity Needs and Possible Actions" for 10 Priority Issues that were cross-cutting for all three conventions. This Report presents the "Strengths, Constraints and Capacity Needs", while the "Proposed Actions" will be refined and prioritised in an *Action Plan*, which will be submitted for Government approval.

### Key Findings

<b>1. International Convention Management</b>	
<p><b>Strengths</b> Seychelles is a signatory and active participant in the three Rio Conventions and numerous other Multilateral Environmental Agreements.</p> <p>Focal Points are in place and there is an International Convention Unit in the Ministry of Environment and Natural Resources.</p>	<p><b>Capacity Needs</b> Improved convention management, including better-defined responsibilities and improved record-keeping. Prioritization among conventions and more systematic implementation of commitments in national programmes.</p> <p>More and better-qualified delegates to international meetings, using expertise inside and outside government. Better dissemination of convention information and greater stakeholder involvement.</p>
<b>2. Donor Project Development and Management</b>	
<p><b>Strengths</b> Seychelles is relatively effective in accessing donor funds from multi &amp; bilateral organisations, NGOs and academia. It is the highest per capita Global Environment Facility (GEF) recipient in the world (pop. 83,000). NGOs and the private sector have undertaken numerous ecosystem rehabilitation projects, often supported by donor and/or private funding.</p>	<p><b>Capacity Needs</b> Diversification of donor base through information on new sources of international funding, including convention-related programmes.</p> <p>Improved capacity in donor project design and management within staff of government and NGOs. Standardized procedures for processing donor projects.</p> <p>Better links to donors and diverse models for donor support, such as innovative partnerships and revolving funds.</p>
<b>3. Financing and Economic Instruments</b>	
<p><b>Strengths</b> Government spends a significant sum on environmental management in per capita terms.</p> <p>There is substantial private capital spending on environment on islands</p>	<p><b>Capacity Needs</b> Innovative funding mechanisms and partnerships among government, private and NGO sectors to create sustainable financing for environmental management.</p> <p>More systematic implementation of key national environmental plans, e.g., EMPS, NBSAP, SINC,</p>

<p>with tourism and ecotourism.</p> <p>The Environment Trust Fund (ETF) provides a vehicle for business financing of environmental projects.</p>	<p>including long-term national budget support, combined with diverse foreign financing.</p> <p>Improved individual and organizational capacity to use environmental economics to integrate conservation and sustainable use of resources into decision-making.</p> <p>Financial and non-financial incentives to leverage support for “environmental best practices” from the private sector, including greater use of the Environment Trust Fund.</p>
<p><b>4. Institutional Framework</b></p>	
<p><b>Strengths</b></p> <p>There is a significant body of environmental and land use laws, regulations &amp; plans. Many existing laws conform with the three GEF-related conventions. An Environmental Legal Unit operates under MENR-PPS to advise on, and secure compliance with, environmental laws and regulations.</p> <p><i>Environment Management Plan of Seychelles (EMPS) 1990-2000</i> achieved many goals and implemented numerous programmes. EMPS 2000-2010 seeks to build on these successes and continue to integrate sustainable development into key sectors</p> <p>The EMPS Steering Committee includes numerous key Government, NGO and private sector stakeholders.</p>	<p><b>Capacity Needs</b></p> <p>More systematic implementation of existing laws, policies and plans through greater political will and better funding. A legislative review to harmonize and streamline existing legislation.</p> <p>Improved enforcement, compliance and success in gaining convictions through: political direction; more consistent application of laws and regulations; more and better trained enforcement officers, Police, Attorney-General and court personnel; and public awareness programmes to promote voluntary compliance.</p> <p><i>Environment Management Plan Seychelles 2000 – 2010:</i> Better mechanisms to implement the plan, design projects and secure funding. Clearer mandate, accountability, and reporting relationships for Steering Committee. Possible revised structure to increase efficiency and effectiveness. Improved reporting on EMPS implementation, and linking of member organizations’ programmes to the Plan. Strengthening of EMPS Coordinating Unit.</p>
<p><b>5. Integrated Management (IM)</b></p>	
<p><b>Strengths</b></p> <p>Many EMPS 2000-2010 programmes promote integrated management. Several initiatives on sustainable tourism and integrated coastal zone management are underway. Seychelles is part of regional collaborations on IM.</p> <p>There is a national mobilization on Invasive Alien Species (IAS), including a multi-stakeholder committee preparing a national IAS Strategy, and a National Plant Conservation Strategy. Several IAS regulations are in place and there are good examples of IAS control and eradication on small private and NGO-managed islands.</p>	<p><b>Capacity Needs</b></p> <p>Increased use of integrated management for (1) priority topics, i.e., land use planning, physical <i>planning</i> and infrastructure, ecotourism; EIA; (2) priority sectors, i.e., fisheries, tourism, agriculture, infrastructure; and (3) priority areas, i.e., outer islands, private islands, highlands and coastal lowlands.</p> <p>Dissemination of the results of successful IAS initiatives and new partnerships to build on these successes. Completion and implementation of the IAS Strategy and Action Plan with new and/or revised laws and regulations. Increased capacity for IAS research and management, including knowledge of interactions and feedback mechanisms among invasive species, biodiversity, climate change and land degradation.</p>
<p><b>6. Information Management</b></p>	
<p><b>Strengths</b></p> <p>Seychelles is active in several international and regional country groupings which are promoting</p>	<p><b>Capacity Needs</b></p> <p>Increased capability to conduct credible field and lab research as well as data analysis and interpretation. Standard protocols for data-gathering on key topics.</p>

<p>information exchange and improved data systems and data-sharing, e.g., African Environmental Information Network (AEIN).</p> <p>There is good baseline data for some topics, e.g., birds, fisheries, higher plants, some island ecosystems, and some aspects of climate.</p>	<p>Mechanisms and incentives to promote more locally driven research. Better protocols with foreign researchers to ensure proper referencing, co-authorship and “repatriation” of data from overseas.</p> <p>Centralized documentation showing which environmental information is held where within government, possibly expanded to outside organizations (“meta-databases”).</p> <p>Multi-party agreements on data management, including incentives for data-sharing and joint research.</p>
<p><b>7. Technology Development and Transfer</b></p>	
<p><b>Strengths</b></p> <p>Several key national policies and plans recognize the importance of identifying appropriate, environmentally-friendly technologies as part of promoting sustainable development.</p>	<p><b>Capacity Needs</b></p> <p>Policy direction on science and technology development and transfer within Seychelles and internationally, including technical assistance. Public and private sector capacity to transfer and adapt environmentally-friendly, especially related to energy and water conservation, and information technologies.</p>
<p><b>8. Human Resources Development (HRD)</b></p>	
<p><b>Strengths</b></p> <p>Dramatic increase in numbers and skills of environmental professionals and technicians over the past decade, through local and foreign scholarships, technical workshops and meetings, and donor projects incorporating capacity development.</p>	<p><b>Capacity Needs</b></p> <p>Better communication of needs for environmental expertise to national manpower authorities for inclusion in national HRD planning.</p> <p>Diverse options for developing environmental capacity, e.g., professional development, overseas and local training, peer exchange, mentoring, and donor projects.</p>
<p><b>9. Education, Awareness and Advocacy</b></p>	
<p><b>Strengths</b></p> <p>The National <i>Environmental Education (EE) Policy</i> promotes environmental values, knowledge and skills among staff and students. It is supported by an EE Unit, website, newsletter, multi-stakeholder Coordinating Committee, teacher training, EE curriculum, and extra-curricular activities.</p> <p>Numerous awareness-raising campaigns by Government, NGOs, and the media have produced extensive materials and widespread public awareness of environmental issues.</p>	<p><b>Capacity Needs</b></p> <p>In-depth curriculum and extra-curricular materials on priority environmental topics in Seychelles. More EE specialists and training for non-specialists. More and better labs, tools and equipment for student research projects.</p> <p>More effective public awareness and education campaigns, which:</p> <ul style="list-style-type: none"> <li>• are integrated with other environmental programmes, including work related to international conventions;</li> <li>• define specific objectives, key target groups and behaviours; and</li> <li>• evaluate success, using qualitative and quantitative measures.</li> </ul>
<p><b>10. Stakeholder Involvement</b></p>	
<p><b>Strengths</b></p> <p>The EMPS Steering Committee includes diverse stakeholders. NGOs and civil society have their own environmental management projects. Diverse stakeholders have cooperated on numerous projects.</p>	<p><b>Capacity Needs</b></p> <p>Good governance mechanisms, including greater transparency and increased stakeholder consultation and engagement. Improved communication, collaboration and innovative partnerships among Government, non-government and private sectors.</p>

## ACRONYMS

ACP:	African Caribbean and Pacific (EU grouping of countries under under Cotonou Agreement)
AIMS:	Atlantic, Indian Ocean, Mediterranean and South China Sea (grouping of countries within Small Island Developing States (SIDS))
AOSIS:	Alliance of Small Island States
BPoA:	Barbados Programme of Action
C&SU:	Conservation and Sustainable Use.
CA:	Capacity Analyst (Seychelles NCSA)
CAADP:	Comprehensive African Agriculture Development Programme
CBD:	Convention on Biological Diversity
CCD:	Convention on Combating Desertification
CDI:	Capacity Development Initiative (GEF)
CDM:	Clean Development Mechanism
CITES:	Convention on the International Trade of Endangered Species
CMS:	Convention on Migratory Species or Bonn Convention
COI:	Commission de l'Océan Indien (Indian Ocean Commission)
COMESA:	Common Market for Eastern and Southern Africa
COP:	Conference of Parties (signatories to a convention)
EE:	Environmental Education
EIA:	Environmental Impact Assessment
EIC:	Education, Information and Communication (Unit under MENR)
EIMS	Environment Information Management Committee (under MENR)
EMPS:	Environment Management Plan of Seychelles
EPA:	Environmental Protection Act.
ETF:	Environment Trust Fund
EU:	European Union
EWS:	Early Warning System
FAO:	Food and Agriculture Organization (United Nations)
FCCC:	Framework Convention on Climate Change
GCOS:	Global Climate Observing System
GDP:	Gross Domestic Product
GEF:	Global Environment Facility (Financial Mechanism for several global conventions)
GHGs:	Greenhouse Gases
GIS:	Geographic Information Systems
GISP:	Global Invasive Species Programme
GO's:	Government organizations
GOS:	Government of Seychelles
HDI:	Human Development Index
HRD:	Human Resource(s) Development
IAS:	Invasive Alien Species
IC:	International Consultant
ICU:	International Conventions Unit (in Ministry of Environment, Policy and Planning Services)
ICZM:	Integrated Coastal Zone Management
IMCAM:	Integrated Marine and Coastal Area Management
IMPASP:	Integrated Marine Protected Area Systems Plan
IOC:	Indian Ocean Commission
IOC:	Intergovernmental Oceanographic Commission
IPCC:	Inter-governmental Panel on Climate Change
ISO:	International Standards Organisation
IUCN:	World Conservation Union
LLC:	Lead Local Consultant
LMO(s):	Living Modified Organism(s).
LUNGOS:	Liaison Unit for Non Governmental Organizations Seychelles
MAMD:	Ministry of Administration and Manpower Development
MARPOL:	Convention: Prevention of Marine Pollution by the Dumping of Wastes and Other Matter
MEA:	Multilateral Environment Agreement
MEC:	Ministry of Education and Culture
MENR:	Ministry of Environment and Natural Resources
MENR-PPS:	Policy Planning & Services (Division of MENR)

MERP:	Macro-Economic Reform Programme
MFA:	Ministry of Foreign Affairs
MLUH:	Ministry of Land Use and Habitat
MOU:	Memorandum of Understanding
MPA(s):	Marine Protected Area(s)
MPA:	Marine Parks Authority
NAFP:	National Agricultural and Fisheries Policy
NAP:	National Action Programmes
NBSAP:	National Biodiversity Strategy and Action Plan
NCCC:	National Climate Change Committee
NCSA:	National Capacity Self-Assessment
NEPAD:	New Partnership for African Development
NGO:	Non-governmental Organization
NLUP:	National Land Use Plan
ODA:	Official Development Assistance
OVI(s):	Objectively Verifiable Indicator(s)
PA(s):	Protected Area(s)
PDF-A:	Project Development Funds – Block “A” (GEF)
POPS:	Convention on Persistent Organic Polluting Substances
PPS:	Policy Planning & Services (Division of MENR)
PSIP:	Public Sector Investment Programme
PUC:	Public Utilities Corporation
SBS:	Seychelles Bureau of Standards
SCMRT:	Seychelles Centre for Marine Research & Technology.
SEACAM:	Secretariat for Eastern African Coastal Area Management
SFA:	Seychelles Fishing Authority
SIDS:	Small Islands Developing States
SINC:	Seychelles Initial National Communication
SLR:	Sea Level Rise
SR:	Seychelles’ Rupees
TCPA:	<i>Town and Country Planning Act</i>
UN:	United Nations
UNCCD:	United Nations Convention to Combat Desertification
UNCED:	United Nations Conference on Environment and Development (Rio de Janeiro, 1992)
UNCLOS:	United Nations Convention on the Law of the Sea
UNCLOS:	United Nations Convention on the Law of the Sea
UNDP:	United Nations Development Programme
UNEP:	United Nations Environment Programme
UNESCO:	United Nations Educational, Scientific and Cultural Organization
UNFCCC:	United Nations Framework Convention on Climate Change
UNITAR:	United Nations Institute for Training and Research
USD:	United States Dollars

# 1. INTRODUCTION

## 1.1 What is an NCSA?

The goal of a National Capacity Self-Assessment (NCSA) is to identify, through a country-driven consultative process, priorities for capacity development to protect the global environment (Box 1). While preparing an NCSA, a country assesses its ability to participate effectively in Multilateral Environmental Agreements (MEAs)<sup>1</sup> and defines its needs and priorities for improving its capacity. Annex A provides more detail on components of capacity development at the individual, institutional/organizational and systemic levels.

The core focus of an NCSA is the three so-called “Rio Conventions”, which were initiated at the UN Conference on Environment and Development (UNCED), or “Earth Summit” in Rio de Janeiro in 1992. These include:

- Convention on Biological Diversity (CBD),
- Framework Convention on Climate Change (FCCC), and
- Convention to Combat Desertification (CCD), which has been expanded to include land degradation/sustainable land management.

NCSAs are funded by the Global Environment Facility (GEF), and implemented through two of its executing agencies, the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP). The NCSA Programme resulted from the GEF “*Capacity Development Initiative 2000-01*”, which made a global assessment of environmental capacity needs in developing countries in relation to sustainable development.

The GEF requires that all NCSA's address the following objectives (GEF-UNITAR, 2001):

- Identify priority issues for action within the thematic areas of biodiversity, climate change and desertification/land degradation;
- Find synergies among capacity needs across the three thematic areas;
- Catalyse targeted and coordinated actions and requests for external assistance; and
- Link country actions to protect the global environment to the broader national environmental management and sustainable development framework.

The potential benefits of an NCSA are as follows (adapted from UNDP, 2003):

- Identifies critical capacity constraints which can impede national development;
- Can be used as a strategic planning tool to improve environmental management;
- Structures and focuses discussions on improving environmental management within and among government agencies, and with NGO and private sector stakeholders;
- Builds awareness among participants re: new approaches to environmental management and sustainable development; and
- Encourages efficient and effective use of limited human and financial resources.

Box 2 outlines “Key Principles for an Effective NCSA”, as prescribed by the GEF. The Seychelles NCSA has incorporated all of these principles in its approach, which is summarized in Section 1.3. An NCSA is not a precondition for future GEF funding, but provides useful groundwork for all future national and donor projects with a capacity development component. The NCSA Report is not meant to be definitive and final – but rather should initiate a dynamic process of on-going assessment and action to improve national environmental capacity.

### Box 1: Capacity Development

“Capacity Development” is:

the actions needed to enhance the ability of individuals, institutions and systems to make and implement decisions, and to perform functions in an effective, efficient and sustainable manner.

“Environmental Capacity Development” is the application of this idea to environmental management and, in the case of NCSAs, to *global* environmental management.

(UNDP-GEF, 2001)

<sup>1</sup> “Multilateral Environmental Agreements” refer all global environmental conventions, treaties and protocols.

### **Box 2: Key Principles for an Effective NCSA**

- a) Ensure national ownership, leadership, and high level political commitment, including the use of national and regional experts;
- b) Use existing structures and mechanisms for coordination;
- c) Take into account decisions and programmes under the three core conventions;
- d) Ensure multi-stakeholder participation, consultation and decision-making;
- e) Build on past capacity assessment work done under GEF-supported enabling activities and national reports to the conventions, as well as non-GEF projects;
- f) Adopt a holistic approach to capacity development that addresses capacity needs at the systemic, institutional and individual levels, with particular attention to the systemic level and to issues that cut across the three conventions;
- g) Adopt a long-term approach to capacity development as part of national and global sustainable development.

(UNDP-GEF 2004)

## **1.2 The Seychelles NCSA**

### **1.2.1 Seychelles and the Environment**

Seychelles is a Small Island Developing State (SIDS), with a population of around 83,000. It consists of an archipelago of over 110 diverse islands, both granitic and coralline, extending over 1000 kilometres. Mahé, the largest island, is approx. 30 by 5 km. The country has made considerable socio-economic advances in recent years, resulting in the highest UNDP Human Development Index in the African region. It has a multi-racial society and a predominant Creole culture, with strong traditions and its own language.

Since Independence in 1976, the economy has been transformed from a quasi monocrop agricultural economy (cinnamon and copra) to a dual economy heavily dependent on tourism and fishing. The conservation and sustainable use of natural and biological resources are considered essential to the country's sustainable development.

Seychelles has all the classical limitations and vulnerabilities of Small Island Developing States (SIDS). These include a disproportionate per capita requirement for skilled human resources and infrastructure; a limited resource base, including very little land suitable for development; and a narrow economic base that is prone to external international forces. The normal logistical challenges for island nations, which must import raw materials and export goods, are heightened by Seychelles' isolation. It is more than 1000 miles from the nearest continental land mass and markets (Eastern Africa) and even further from any developed country markets.

The country has a solid environmental management record. Over 40% of the area is within protected areas and it was one of the first countries in the region to set up marine national parks. It was the first African country to complete a *National Biodiversity Strategy and Action Plan* (under the Convention on Biological Diversity) and is now implementing its second multi-sectoral strategic *Environment Management Plan Seychelles* (EMPS 1990-2000 and 2000-2010). Seychelles is active in international environmental negotiations and often plays key roles in the African regional group and SIDS affiliations.

### **1.2.2 Goals and Objectives of the NCSA**

Seychelles is a signatory to the three Rio Conventions – it was one of the first countries to sign the CBD and FCCC) – and is a party to numerous other Multilateral Environmental Agreements (Annex C). As a SIDS and biodiversity “hotspot”, Seychelles is particularly vulnerable to threats from declining biodiversity, increased global warming and sea level rise, and unabated land degradation. As with other SIDS, Seychelles also has limited capacity (human resources, expertise, funds) to implement international conventions. Thus, Seychelles requested GEF assistance to develop an NCSA to address capacity issues.

The Seychelles NCSA has as its overall objective:

*To determine the priority needs, and establish a plan of action, for developing Seychelles' capacity to meet its commitments to global environmental management, as a signatory of Global Environmental Conventions (CBD, FCC, CCD).*

One participant phrased the objective of the NCSA as follows:  
"What is stopping Seychelles from fully implementing the global environmental conventions?"

The Seychelles NCSA was organized into four phases, with four outputs:

1. Establishment of project management and implementation mechanisms;
2. Strategic overview of obligations under the Conventions;
3. Capacity assessment: an in-depth analysis of capacities and of capacity development needs at systemic, institutional and individual levels<sup>2</sup>; and
4. Development of Action Plan for addressing priority capacity needs.

At the outset of Output 3, *Capacity Assessment*, the Seychelles NCSA Project Team identified the following specific goals and objectives, which elaborated on the above overall objective.

**Goal 1:** "Bring the conventions home", by showing the relevance of global environmental conventions to Seychelles, and developing a well-researched environmental capacity analysis as the basis for an Action Plan to guide national and donor activities.

**Objectives:**

- a) Increase awareness and knowledge of the three core GEF-related conventions, and their relevance to the Seychelles' domestic agenda.
- b) Assess national capacity to be fully involved in these (and other) global environmental conventions.
- c) Provide realistic analysis and practical proposals for action.

**Goal 2:** Go beyond the conventions to link global with national issues.

**Objectives:**

- a) Build on past environmental capacity initiatives and relevant technical work.
- b) Use the NCSA to trigger action on capacity development aspects of the Environment Management Plan Seychelles (*EMPS 2000-2010*).
- c) Ensure that the NSCA focuses on the ultimate goals of environmental protection.

**Goal 3:** Use the NCSA process to develop national capacity in environmental management and in capacity development itself.

**Objectives:**

- a) Build on past experience and lessons learned in other NCSA's and capacity development initiatives.
- b) Build knowledge of, and support for, implementation of the NSCA.
- c) Develop broader societal interest and "ownership" of the NCSA and capacity development in general.

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<sup>2</sup> After considerable discussion, the Project Team decided to address individual, institutional and systemic capacity needs in a holistic and integrated manner, as they were seen to be completely interconnected.

## 2. APPROACH AND METHODS

This section summarizes the approach and methods used for the Seychelles NCSA. Annex D lists References used; Annex E lists all participants, including the Project Team and stakeholders consulted, and Annex F lists all NCSA project documents. (A detailed description of methods used and “Lessons Learned” is available from the Ministry of Environment and Natural Resources: International Conventions Unit.)

### 2.1.1 Country-driven Approach

In accordance with the GEF NCSA Guidelines, the Seychelles NCSA was implemented as a country-driven process, taking into account specific national circumstances and constraints (Box 3). Seychelles' small size and population combined with its vast geographical extent means that there is only limited human and financial capacity for managing its environment and natural resources. Thus, members of the Project Team aimed to achieve the NCSA objectives in the most efficient manner possible, optimizing the use of time and resources. They did so by focusing on strategic issues that are relevant to both global and national environmental management. They also consulted key stakeholders throughout the process to ensure that the analysis was sound and that the resulting Action Plan would be practical.

#### Box 3: NCSA, a country-driven process

NCSA's are intended to be entirely country driven processes, undertaken in accordance with country priorities and situations. Countries are encouraged to use any approach that they feel will enable them to accomplish the goals and objectives for undertaking their NCSA. (GEF-UNITAR 2001)

### 2.1.2 Phases and Methods

The NCSA was organized around four outputs, as described below.

#### **Output 1: Project Management and Implementation Mechanisms**

The NCSA's first output was a structure and work plan, which said that the NCSA was to be:

- Undertaken over a period of 18 months, from December 2003 to May 2005.
- Implemented by the Ministry of Foreign Affairs (MFA) and the Ministry of Environment and Natural Resources (MENR), through the Division of Policy Planning & Services (PPS).
- Overseen by the 40-member Steering Committee of the *Environmental Management Plan Seychelles 2000-2010*, the national plan to promote sustainable development.
- Administered by the Project Officer, International Conventions Unit (ICU), MENR- PPS.
- Coordinated and managed on a continuous basis by a Lead Local Consultant (LLC), assisted by an International Consultant to provide specific expert inputs.
- Undertaken by a series of three Project Teams, one for each of phases 2, 3, and 4, to be drawn from representatives of key government and NGO organizations.

As part of a preparatory PDF-A project, a *Stakeholder Workshop* was held in November 2002 to establish criteria for full NCSA project development. An *NCSA Launching Workshop* was then held in December 2003 to inform stakeholders about the NCSA and invite their participation.

#### **Output 2: Strategic Overviews of Obligations**

Three Working Groups were established, each with a Group Leader, to research and write three reports on “*Strategic Overview of Obligations*”, one for each convention (CBD, FCCC, and CCD). Annex B provides the *Executive Summaries* of these reports. The reports analysed the following topics in a matrix format:

- Main convention obligations,
- Current national initiatives to address the obligations,
- An assessment how well obligations are being addressed, and
- Constraints to better implementation of convention requirements.

A 2nd NCSA Stakeholder Workshop was held in May 2004 to present the reports' findings and invite refinements. As part of the *NCSA Communication Plan*, the national media were invited to this event and publicized the findings (e.g. "The Nation" newspaper, 01/06/2004). The findings were also summarized in three colour brochures, one for each convention, which were intended to raise public and stakeholder awareness of the Conventions and the NCSA. (Available from MENR-PPS or at [www.env.gov.sc](http://www.env.gov.sc))

### **Output 3: Capacity Assessment**

The research for Output 3, the *Capacity Assessment*, was conducted by a Project Team, consisting of by three national Capacity Analysts, guided by a Review Committee of seven key stakeholders (Annex E lists the team). The Project Team prepared a *Capacity Assessment Plan* (NCSA 2004) to guide their work. It set out objectives, priority issues, data collection and analysis methods, and a work plan for this phase. The *Plan* was implemented in a flexible manner, with refinements over time to take account of limited resources and changing circumstances. A list of *Priority Issues* for further investigation (Box 4) was created, based on the list of cross-cutting issues provided in the *Strategic Overviews* plus changes and additions made by the Project Team.

The main data collection methods were:

- *desk studies* (review of all existing relevant documents);
- *personal interviews* with key stakeholders;
- *Project Team meetings and mini-workshops* at key milestones; and
- *a Stakeholder Workshop*.

The main data analysis method was a variation on the "Strengths, Weaknesses, Opportunities, Threats (SWOT)" analysis. The Project Team listed "Strengths, Constraints, Capacity Needs and Possible Actions" for each of the 11 Priority Issues in a Matrix format. The "Possible Actions" were removed from the final Matrix, to be further used in the development of the Action Plan. Annex G presents the comprehensive findings of the Capacity Assessment, in the form of a Matrix.

<b>Box 4</b>	
<b>Capacity Assessment: Priority Issues</b>	
1.	International Convention Management
2.	Donor Project Development and Management
3.	Policy, Legal & Regulatory Framework
4.	Financing and Economic Instruments
5.	Integrated Management (ICZM, IEM, etc.)
6.	Data Identification, Collection, Management, Monitoring & Reporting, later changed to "Information Management"
7.	Technology Development & Transfer
8.	Invasive Alien Species (later included in 5. "Integrated Management")
9.	Human Resources Development (HRD)
10.	Education, Awareness & Advocacy
11.	Stakeholder Engagement & Empowerment / Partnerships, later changed to Stakeholder involvement

### **Output 4: Development of Action Plan**

During Output 4, a reformulated Project Team will develop a detailed *Capacity Development Action Plan*. Team members will investigate and prioritise all of the actions which were proposed to address the priority capacity needs identified during Output 3 *Capacity Assessment*. This will be done in consultation with key stakeholders who are able to influence change in the country. The *Action Plan*, including recommendations on implementation, will be submitted for comments and approval by the Steering Committee for the Environmental Management Plan Seychelles (EMPS), and then to Government for approval. The Action Plan will then be discussed in a Round Table meeting, intended to engage high level political and managerial support and involve key parties, including potential donors, in devising implementation strategies (See Section 5, Next Steps).

## 3. CAPACITY ASSESSMENT: PRIORITY ISSUES

This section reports on the findings of the Capacity Assessment phase, it summarizes capacity strengths, constraints and needs for the *Priority Issues* that are cross-cutting for all three conventions. It was found that this analysis applies to Seychelles' ability to effectively undertake both global and national environmental management.

### 3.1 International Convention Management

#### 3.1.1 Strengths

##### ***Participation and Reporting***

- Seychelles participates in many convention-related meetings and negotiations.
- The Rio Conventions (CBD, UNFCCC, CCD) are signed and ratified and Country Focal Points are in place. Numerous other environment conventions, protocols, etc. are signed and ratified (Annex C).
- Seychelles has a solid record on the CBD, especially protected areas and conservation of biodiversity, with involvement by GOS, NGOs and private islands.



##### ***Institutional Arrangements***

- MENR has established an International Convention Unit (ICU) to better manage the International Environmental Conventions ratified by Seychelles.
- There is reasonable stakeholder awareness/ knowledge of some conventions, especially CBD.
- Some successful CBD activities provide models for other countries, especially SIDS, e.g., rehabilitation of small island ecosystems, species recovery.

#### 3.1.2 Constraints

##### ***Participation and Reporting***

- Effectiveness of participation at international meetings has been uneven since the delegation consists usually of only one person, there is little continuity in representation, and negotiating skills are weak.
- Success in meeting convention obligations and benefiting from involvement is uneven since: there is no prioritization of conventions; responsibilities of key parties are poorly defined; tracking of conventions is poorly coordinated; follow-up on international obligations is weak; and there is little dissemination of convention information within and outside government.
- NGOs participate in convention management to some extent, but they are underutilized, given their awareness and knowledge of (some) conventions.
- Reporting to international conventions is challenging due to demands of different reporting formats and cycles among conventions and limited resources (time, knowledge, funds).

#### 3.1.3 Capacity Needs

##### ***Participation and Reporting***

- Increased political and senior management support for international commitments.
- More and better-qualified delegates to international meetings, drawing on a "roster" of national experts inside and outside government.
- Improved convention management, including procedures for selecting and briefing delegates, record-keeping, and implementing international commitments at the national level.
- Harmonization and reduced duplication in Conventions reporting.

*"Don't put all your eggs in one basket; use teams and committees rather than relying on individuals."*

### ***Institutional Arrangements***

- Delineation of roles for key parties vis-à-vis conventions and better coordination among them, possibly managed by a central body, including the ICU and other key agencies.
- A stronger ICU, with a clearer mandate.
- Increased technical, financial and manpower resources to manage conventions, including within the ICU.
- Strategic priorities among convention commitments and programmes, based on national needs. Better dovetailing of convention obligations with national priorities in relevant sectors and linkage of conventions to EMPS implementation.
- More widely available convention-related information, possibly a “one-stop” information clearinghouse, accessible by the public.
- Greater participation by stakeholders (both inside and outside government) in convention management, including opportunities to contribute expertise and information for national positions and to help implement convention commitments.

*“Stakeholder involvement in international conventions will help to keep government on its toes.”*

## **3.2 Donor Project Development and Management**

### **3.2.1 Strengths**

#### ***Strategies***

- Seychelles is relatively effective in accessing donor funds from multi & bilateral, NGOs and academia in environment, in part because donors recognize existing capabilities in Seychelles.
- Seychelles is the highest per capita GEF recipient in the world and has several GEF projects underway or in the pipeline as of 2005.
- Several NGOs have attracted international partnerships and funding for biodiversity conservation.
- NGOs and the private sector have successfully undertaken ecosystem rehabilitation on several small islands, often assisted by national or international donors.

**CBD:** As of early 2005, GEF projects include:

- biodiversity pilot projects on the principal granitic islands,
- National Biosafety Framework (NBF) under the Cartagena Protocol,
- Africa region project on “Reduction of environmental impacts from coastal tourism”, and
- a Full-size Project on “Mainstreaming Biodiversity” (in the pipeline).

**UNFCCC:** The Seychelles Initial National Communication (SINC) for the UNFCCC proposes six projects in five thematic areas for possible donor funding. A 2<sup>nd</sup> Report is underway (April, 2005).

**CCD:** As of April 2005, the first Seychelles National Report to the CCD is submitted, a Sustainable Land Management Programme is underway, and a GEF project is in the pipeline.

### **3.2.2 Constraints**

#### ***Donor Strategies***

- Reliance on a small number of donors.
- Lack of established connections with diverse donors.
- Lack of strategic approach to integrating donor assistance into national environmental frameworks, such as EMPS, National Biodiversity Strategy and Action Plan (NBSAP), SINC and sectoral programmes.

#### ***Project Management***

- Lack of standard procedures to seek funding and develop projects. Often inadequate time is spent on researching and writing project proposals.
- No clear mechanism for donor project approval and implementation. Project financing procedures are cumbersome, with no clear guidance regarding tax, foreign exchange, etc.
- Limited awareness and knowledge regarding donor requirements and project design, negotiation, implementation and monitoring.
- Poor coordination among donor projects and poor project sustainability.

### 3.2.3 Capacity Needs

#### ***Donor Strategies***

- Information (made available through a lead agency) on new sources of international funding (multi & bilateral donors, international NGOs, private sector, academic/ research, foundations), gathered through the Internet and donor directories, including information on funding under convention-related programmes.
- Better ways to link to donors such as networking through Seychelles overseas ambassadors, delegates to international meetings and foreign embassies in Seychelles.
- Diverse models for donor support, such as: revolving funds; innovative government / NGO / private partnerships; multi-country (regional) initiatives; and appeals to specialist organisations.
- Strategic use of donor funding to implement projects and programmes in national plans.

#### ***Project Management***

- Standardized, transparent project management procedures for approval and financing.
- Increased multi-stakeholder involvement in design and implementation of donor projects.
- More and better-trained staff with skills in design and management of donor projects, including donor requirements and procurement and disbursement procedures.



## 3.3 Financing and Economic Instruments

### 3.3.1 Strengths

#### ***National Financing***

- Government spends a significant sum on environmental management in per capita terms.
- There is substantial private capital spending on environmental management on islands with tourism and eco-tourism (e.g., Fregate, Bird, Denis, Cousine, Cousin, and North Islands).

#### ***Environmental Economics***

- EMPS 2000-2010 includes “Environmental Economics and Mainstreaming and Sustainable Financing” as a thematic area. It also lists “sustainable financial mechanisms for land use and coastal zone management” as a priority.

#### ***Economic Incentives***

- A national committee to promote “ISO 14001 Environmental Management Systems” in businesses is established.
- An Environment Trust Fund (ETF) promotes business financing of projects.
- Concessions are given to assist NGOs on a case-by-case basis, e.g., waiver of work permits for visiting consultants and tax exemptions.

### 3.3.2 Constraints

#### ***International Trade & Finance***

- Seychelles access to international trade and finance is limited because of its distance from markets, its high Gross Domestic Product (GDP) and Human Development Index make it ineligible for Official Development Assistance (ODA) and regional programmes.
- It is difficult for Government to raise funds on concessionary terms.

#### ***National Financing***

- There are insufficient budgets to implement EMPS 2000-2010, NBSAP, SINC and other environmental projects, e.g., MENR’s Conservation Section has less than SR 1 million (\$US 200,000) per annum for all programmes.
- Many environmental projects are not sustained once external funding ends, i.e., there is no “sustainable financing”.

### ***Environmental Economics***

- The environment and natural resources are not perceived as having economic value.
- Environmentally derived economic benefits (e.g. from tourism and fisheries) do not feed back into environmental programmes, except through general revenue.
- EMPS thematic “Environmental Economics and Mainstreaming Sustainable Financing” is not implemented, since no potential lead agency (MENR, MOF, MFA) assumed responsibility.
- Lack of capacity in environmental economics (including valuation of natural resources, green accounting, and economic instruments) impedes integration of conservation and sustainable use into decision-making.

### ***Economic Incentives***

- Uneven adoption by private sector of ISO 14001 Environmental Management Systems.
- The Environment Trust Fund is thought by some to be under-publicized and not living up to its potential. There are few other private sector incentives for environmental protection.

## **3.3.3 Capacity Needs**

### ***International Trade & Finance***

- Innovative funding mechanisms to create sustainable financing for environmental management.
- New partnerships among government, private and NGO sectors at international and national levels, e.g., co-financing of projects, research and technology development, co-management of resources; and stewardship agreements with private investors.

### ***National Financing***

- More systematic implementation of key plans, e.g., EMPS, NBSAP, SINC, including long-term national budget support combined with diverse foreign and in-country financing mechanisms.

### ***Environmental Economics***

- A lead agency and implementation strategy for EMPS Thematic Area: “*Environmental Economics, Mainstreaming and Sustainable Financing*”.
- Improved individual and organizational capacity on how to use environmental economics to integrate conservation and sustainable use of resources into decision-making.
- Trained environmental economists.



### ***Economic Incentives***

- Financial and non-financial incentives to leverage support for “environmental best practices” from the private sector.
- Increased use of Environmental Management Systems (e.g., ISO 14001) to help enterprises such as hotels comply with EIA and other environmental laws.
- Economic incentives and information on cost savings to businesses and residents to encourage environmentally friendly technologies.
- Review of the ETF to make procedures more transparent and promote benefits for business.

## **3.4 Institutional Framework**

### **3.4.1 Strengths**

#### ***Environmental Legislation***

- Commitment to a healthy environment is enshrined in the Constitution.
- There is a significant body of environmental and land use laws, regulations and plans, convention-related and otherwise (Annex G, Priority Issue #4: Institutional Arrangements).
- Many existing laws conform with the three GEF-related conventions.
- An Environmental Legal Unit operates under MENR-PPS to advise on environmental law and regulations and to secure compliance and prosecutions for violations.
- An MENR Legislative Committee exists and is reviewing conservation legislation.

### ***Environment Management Plan Seychelles (EMPS)***

- EMPS 1990-2000 achieved many goals and programs. EMPS 2000-2010 seeks to build on these successes and continue to integrate sustainable development into key sectors.
- EMPS 2000 – 2010 aims to strengthen laws and institutions on convention-related topics.
- The EMPS Steering Committee includes most of the key national Government, NGO and private sector stakeholders with a role in environmental management.

### **3.4.2 Constraints**

#### ***Environmental Legislation***

Enforcement and compliance of the extensive range of legislation is inconsistent due to:

- unclear mandates and responsibilities of key agencies,
- lack of complete understanding of environmental laws among enforcement officials (MENR, Attorney-General (A-G), Coast Guard, Customs),
- weak communication between MENR and AG re: compliance,
- weak Legislative Committee limited only to MENR staff, and
- challenges in enforcing laws in small island communities.



Poor success in gaining convictions and many pending cases due to:

- low numbers and skills gaps among enforcement personnel;
- lack of support from the Police, A-G and courts, e.g., charges not laid, summons not delivered;
- uneven/selective enforcement; and
- weaknesses in the court system.

#### ***Environment Management Plan Seychelles (EMPS)***

- The 2004 “EMPS Sectoral Awareness Study” on awareness and implementation of the EMPS (Nevill, 2004), involving consultations with EMPS stakeholders, identified numerous weaknesses in EMPS management and coordination.

#### ***Land & Resource Planning***

- Scarcity of level land means competition among land uses and pressure for land reclamation. Poorly planned reclamation projects have negative impacts on coastal / marine ecosystems.
- The *Town and Country Planning Act 1972* has been used very little since the 70's and 80's. Lack of planning, zoning and integrated management of government land leads to *ad hoc* land and water development, resulting in pollution, erosion and conflicting uses.
- The *Plan d'Amenagement du Territoire* (National Land Use Plan) was never officially promulgated and implemented, as it lacked political backing.
- Environmental Impact Assessments (EIA) are done inconsistently, with little impact monitoring.
- Earlier National Disaster Response Plans were weak, focusing mostly on response, not prevention, preparedness, and mitigation.

### **3.4.3 Capacity Needs**

#### ***Environmental Legislation***

- More systematic implementation of laws, policies and plans already in place, e.g., EMPS, through greater political will and funding.
- A legal review to harmonize and streamline existing legislation, in order to meet international environmental obligations and national priorities. Cross-referencing of environmental legislation with sectoral programmes in relevant productive sectors, e.g. tourism, fisheries.
- Revival of the MENR Legislative Committee, with more diverse stakeholders.
- Improved skills among government staff to design and manage institutions and programmes to effectively meet international commitments and improve national environmental management.
- Improved enforcement, compliance and success in gaining convictions through: (1) political direction/will; (2) more consistent application of laws and regulations; (3) more and better trained enforcement officers, Police, Attorney-General and court personnel; and (4) public awareness programmes to promote voluntary compliance.

## ***Environment Management Plan of Seychelles 2000 – 2010 (EMPS)***

*Note:* EMPS is the core document to promote sustainable development in Seychelles. There was considerable debate during the Capacity Assessment about the appropriate role of the Plan; its 40-member, multi-stakeholder Steering Committee (S.C.); and the EMPS Coordinating Unit. The “EMPS Sectoral Awareness Study” also reported that there are mixed feelings about the effectiveness of the EMPS. Some interviewees feel that the EMPS is already outdated and needs revision. Others suggested that the S.C. should be completely redesigned. A summary of the suggestions is provided below, with the comprehensive list provided in the matrix in Annex G.

### *EMPS Steering Committee (S.C.)*

- Clearer accountability and reporting relationships, possibly to a political office or body, e.g, the President’s office.
- Clearer mandate for the committee and its members vis-à-vis the EMPS as well as projects outside it.
- Possibly revised structure to increase efficiency and effectiveness, e.g., more use of sub-committees, working groups, and/or a two-tiered body, with executive and technical levels.

### *EMPS Operations*

- Improved reporting on EMPS implementation to more explicitly link organizational programmes and projects to EMPS objectives.
- Mechanisms to design projects and seek funding to implement the EMPS.
- Strengthening of the Coordinating Unit through increased human, technical and financial resources.
- “Champions” within stakeholder organizations to integrate the EMPS into all relevant government, NGO and private sector organisations.
- Action-oriented initiatives to move the EMPS forward, and associated awareness and education initiatives for key stakeholders on priority topics.

### ***Land & Resource Planning***

- Better integration of land use planning and environment through updating the *National Land Use Plan* and cross-linking it with EMPS.
- Updating and/or better implementation of the *Town and Country Planning Act 1972* and the *Environment Protection Act 1994*, with cross-referencing to MENR legislation and EMPS.
- Strengthened EIAs through improved capacity to scope (design), undertake and review EIAs, and improved quality of EIA reports through better data and monitoring/reporting protocols.

## **3.5 Integrated Management (IM)**

**(Includes Integrated Ecosystem Management, Integrated Coastal Zone Management, Invasive Species Management, etc.)**

### **3.5.1 Strengths**

#### ***General***

- Many EMPS 2000-2010 programmes and cross-cutting themes promote integrated management (IM)
- Membership in SIDS, AIMS, COMESA and the IOC promotes regional collaboration on IM.
- A GEF major project (in the pipeline 2005) aims to mainstream biodiversity in production landscapes and sectors, using an integrated approach.
- Several initiatives are underway on sustainable tourism, including an Ecotourism Strategy and regional initiatives by COI (Indian Ocean Commission) and NEPAD (New African Partnership for development)
- Seychelles is active in integrated coastal zone management (ICZM), also through regional programmes such as the Secretariat for Eastern African Coastal Area Management (SEACAM).

### ***Invasive Alien Species (IAS)***<sup>3</sup>

- There is national mobilization on IAS, including a multi-stakeholder committee which is preparing a national IAS Strategy over 2004-5.
- A National Plant Conservation Strategy, with a section on IAS, is underway (an NGO/GOS collaboration).
- A GEF major project on “Mainstreaming Biodiversity” (in pipeline) has an IAS component.
- A port survey on marine invasive species is underway as a baseline for a possible further project (by SCMRT and IUCN, funded by Total Oil Company).
- Several IAS regulations are in place, re: quarantine measures, etc.
- Good examples of IAS control and eradication on small private and NGO-managed islands.

### **3.5.2 Constraints**

#### ***General***

- Integrated management is being done on an *ad hoc* basis, but lessons learned are often not applied elsewhere, as there are few mechanisms and incentives for collaboration.
- There are inherent challenges in managing diverse tropical ecosystems.
- Some outdated resource management approaches prevail, e.g. focus on a single species or sector, as resources for new approaches are limited.
- The EMPS Steering Committee has not effectively fulfilled its role in coordinating cross-sectoral actions and there are no other organisations responsible for Integrated Management.

#### ***Invasive Alien Species (IAS)***

- Inability to address the issue of IAS in a coordinated and comprehensive way on the principal granitic islands, as eradication is costly and labour-intensive.
- Lack of centralized and accessible information and related technical expertise on IAS detection, monitoring and response.
- Focus has been on terrestrial species; more information is needed on marine species.
- Lack of national expertise in taxonomy and IAS.
- No research on economic impacts of IAS, and costs and benefits of ecosystem restoration.
- Little legislation to deal with IAS and limited controls preventing IAS spread in-country.



### **3.5.3 Capacity Needs**

#### ***General***

- Increased use of integrated management in specific sectors and areas for:
  1. priority topics, i.e., land use planning, physical planning and infrastructure, economic development, ecotourism; EIA;
  2. priority sectors, i.e., fisheries, tourism, agriculture, infrastructure; and
  3. priority areas, i.e., outer islands, private islands, highlands and coastal lowlands (especially those with tourism).

#### ***Invasive Alien Species (IAS)***

- Dissemination of results of successful IAS initiatives and innovative partnerships and projects which build on past successes.
- Implementation of the multi-sectoral IAS Strategy and Action Plan with new and/or revised laws, regulations, protocols and codes of conduct.
- Increased capacity for IAS research and management for government, NGOs and private sector personnel, including detection, identification, control, and eradication.
- Information on economic impacts of IAS, and costs and benefits of measures for restoring degraded ecosystems.

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<sup>3</sup> There was considerable discussion throughout the Capacity Assessment phase as to whether *Invasive Alien Species* should be a separate priority issue (#11) and whether it is relevant to all three conventions. The Project Team concluded that IAS is a key national issue which is relevant to each convention, in that it both affects, and is affected by, climate change, land degradation and loss of biodiversity. However, they also decided that IAS fits well under the topic of Integrated Management since IAS detection and response requires multiple strategies.

- Knowledge of interactions and feedback mechanisms among invasive species, biodiversity, climate change and land degradation in Seychelles' ecosystems.
- Early Warning System to prevent introduction of IAS and inter-island transfers and Rapid Response systems once IAS are introduced.

## 3.6 Information Management

### 3.6.1 Strengths

#### **Research Capacity**

- The AIMS regional grouping (Atlantic, Indian Ocean, Mediterranean and South China Sea) of Small Island Developing States (SIDS) provides a framework for information exchange among member countries.
- Seychelles Bureau of Standards (SBS) has responsibility for developing scientific standards and laboratory facilities, archiving scientific information and authorizing foreign research.

#### **Information Management**

- Seychelles is active in the African Environmental Information Network (AEIN), a UNEP pilot project to encourage improved data systems and data-sharing and is developing an Action Plan.
- Good baseline data for some topics, e.g., birds, fisheries, higher plants, some island ecosystems and some aspects of climate.
- Good knowledge of data gaps vis-à-vis conventions and other environmental issues.
- The *Statistical Act* requires that all data to be archived and monitored by MISD.
- Ministry of Environment and Natural Resources has an operational website in place, with an Environment Information Management Committee (EIMS) to make provision to update and collate information from research/projects/documents.



### 3.6.2 Constraints

#### **Research Capacity**

- Limited research capacity within the country due to lack of time and funds; much capacity lies within NGOs.
- Research is often driven by foreign scientists and institutions, as well as donor agendas.
- Continuing problems in obtaining the results of research from national and international experts. Foreign researchers sometimes fail to acknowledge co-authorship or collaboration from Seychelles organisations.
- Poor expertise in developing proper research/ scientific standards and protocols. Where they exist, they are not always respected.
- Number of graduates and post-graduates leave the country, taking research capacity with them.

#### **Information management**

- No lead agency responsible for coordinating collection and management of information.
- Incomplete knowledge of what environmental information is available and data gaps. Data are scattered among GO, NGO & private organisations in-country and abroad.
- MENR and other government ministries have weak information management systems.
- Data is often in different formats and there are few protocols to standardise methods or resources for conversion.

#### **Information dissemination and use**

- The pace of development in the last decade has outstripped the capacity of both Government and NGOs to assess, mitigate, and monitor adverse impacts of development.
- Lack of proper identification of data needs for decision-making.
- Widespread tendency not to exchange information among individuals and organizations due to: concerns about copyright and intellectual property rights; competitiveness regarding publications (perceived advantage for funding); and bad experiences with data-sharing (data

sources not acknowledged in academic and popular publications and/or data not returned to source person/organisation).

- Weaknesses in use of data in EIAs due to inadequate EIA requirements, weak data analysis skills, and lack of post-construction monitoring.

### 3.6.3 Capacity Needs

#### **Research Capacity**

- Capability to conduct credible field and lab research as well as data analysis and interpretation. Improved scientific and technical facilities and equipment.
- Mechanisms and incentives (financial and non-financial) to promote locally driven research and joint government/ non-government research, including access to labs and equipment
- Better protocols with foreign researchers to ensure appropriate referencing, co-authorship and “repatriation” of data from overseas.
- Standardized and tested methods & protocols for data collection, analysis, management and dissemination for priority topics.
- Research programmes to address key data gaps, e.g., outer islands, lower animals/ plants, coastal dynamics and climate.
- Provision of inexpensive methods and training to enhance data collection by volunteers.

#### **Information management**

- Better coordination of data collection and management with one or more lead institutions (e.g., MENR and SBS) and/or creation of a multi-stakeholder group.
- Standardised methods and systems for data management, exchange and dissemination.
- Centralized documentation showing which environmental information is held where within government and possible outside organizations (meta-database).
- MENR needs to better manage information and to scan and/or digitise key information to improve accessibility.
- A first step towards a full computerized information and resource library might be a virtual Information Clearinghouse for environment & land use data, with a central portal linked to various databases (e.g. MENR website).

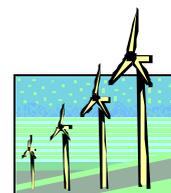
#### **Information dissemination and use**

- Greater government, NGO and private sector capacity to identify data needed for decision-making and affective use of it, once collected.
- Directory of environmental organisations, experts and information sources.
- Greater use of modern technology in environmental decision-making, e.g., Geographic Information Systems (GIS) and modelling.
- Improved public access to environmental data and information.
- National multi-party agreements on data management, including incentives for data sharing and joint research and protocols on data sharing and intellectual property rights.
- Improved use of data in EIAs, including better databases, and protocols for monitoring and reporting.

## 3.7 Technology Development and Transfer

### 3.7.1 Strengths

- EMPS 2000-2010, SINC, and the Seychelles Energy Policy highlight the importance of identifying appropriate, environmentally-friendly technologies.
- *National Agricultural and Fisheries Policy 2003-2013* aims to achieve sustainable land management in part through promoting sustainable agricultural technologies.
- Islands Development Company (IDC), which manages many Seychelles' islands, has introduced some environmentally friendly technologies on outer islands.



### 3.7.2 Constraints

- Lack of protocols and limited experience in international technology transfer and adaptation.
- Eco-friendly technologies are often more expensive than traditional technologies.
- Technology research and development function has no designated line ministry or budget.
- Insufficient capacity in information technology and computer network administration in some organizations.

### 3.7.3 Capacity Needs

- Policy direction on science and technology development and transfer within Seychelles and internationally, including technical assistance.
- Public and private sector capacity to assess, transfer and adapt new technologies, including indigenous ones, to assist conservation and environment protection.
- Policies and programmes to encourage the use of “green” technologies within government and promote adoption by the private sector and public.
- Increased capacity in information technology and network administration. Greater use of modern information technologies (e.g., GIS, modelling, databases) to improve data collection, dissemination and use in decision-making.

## 3.8 Human Resources Development (HRD)

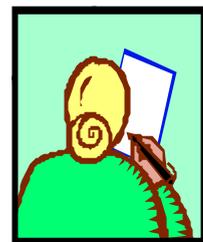
### 3.8.1 Strengths

#### ***Creating Capacity***

- Dramatic increase in environmental professionals and technicians over the past decade.
- Individual capacity built through local and foreign scholarships; technical workshops and meetings, e.g., for convention; and multilateral and bilateral donor projects with capacity components.
- Ministry of Administration and Manpower Development conducted an HRD inventory (2004) as the basis for a proposed national *Human Resource Development Policy and Plan (2005)* (function moved to Ministry of Education and Youth in 2005).

#### ***Enhancing Existing Capacity***

- EMPS 2000-2010, *Action Plan of the National Agricultural and Fisheries Policy (NAFP) 2003-2013* and *SINC* all address human resources development and capacity building.
- MENR has an HRD coordinator, a Staff Training Policy with provision for training plans, and a Training Committee with a mandate to discuss training needs and options.
- Seychelles Institute for Management (SIM) offers high quality continuing education courses based on modern training methods at excellent facilities.
- As of early 2005, an expatriate consultant has started a comprehensive review of the public service salary and benefits structure, with a view to improving incentives for staff.



### 3.8.2 Constraints

#### ***Creating Capacity***

- Absence of strategies for national HRD in environment and natural resource fields.
- Inadequate number and quality of trained environmental professionals and technical personnel, and lack of specialists on key convention-related topics.
- Environmental capacity needs are not clearly communicated to national agencies.
- Small population size prohibits higher education. There are limited funds to send graduates abroad for environmental training. Supplemental overseas options are often determined by providers, not necessarily through needs assessment.

### **Enhancing Existing Capacity**

- A number of returning graduates and other qualified people feel they are not properly used as per their qualifications. This is likely due in part to the small job market, weak economy and lack of budgetary resources within government and NGOs.
- There are problems retaining skilled professionals due to limited chances for advancement and competition for qualified people from the expanding international job market.
- Existing capacity within government is not always deployed efficiently due to lack of strategic management and effective human resources development strategies.
- Underutilization of the large pool of trained and experienced persons outside of MENR, in NGOs, civil society and the private sector.
- No initial training or continuing education neither for environmental field staff in MENR nor for staff in Ministries with activities affecting the environment.
- Competition among government and NGOs for environment specialists.
- Foreign scientists do most of the research in Seychelles, with little provision for local capacity development in research and development.
- Shortage of some specialized environmental expertise within MENR, as well as human resources management / manpower expertise.
- Inadequate coordination among, and documentation of, various environmental training initiatives occurring within MENR and donor projects.

*What would be an incentive to stay? Managers that value what I am doing and show it.*

### **3.8.3 Capacity Needs**

#### **Creating Capacity**

- Better communication of needs for environmental expertise to national manpower authorities for inclusion in national HRD planning.
- Diverse options for developing environmental capacity, e.g., overseas and locally based education and training; peer exchange with personnel who have trained overseas; professional development (short courses); and mentoring by specialists.
- Upgrading of the skills of environmental professionals and technicians in these topics:
  - *Research, monitoring and field methods* at technical and professional levels.
  - *Environmental economics and law*, especially postgraduate.
  - *Donor project design, implementation and monitoring*.
  - *Effective stakeholder involvement* in environmental management; and
  - *Effective training*, i.e., “train-the-trainer” course on how to design participatory training.
- Trained personnel in sectors affecting the environment. Specific topics are listed in Annex G under the headings: (1) Environment and Natural Resource Management; (2) Meteorology, Oceanography And Climate Change; and (3) Biodiversity, Agriculture and Land Management.

#### **Enhancing Existing Capacity**

- More professional development opportunities within technical assistance projects, e.g., formal and informal training (such as short courses, training/working sessions, mentoring) for counterparts by all international consultants.
- Enhanced capacity of HRD Unit in MENR and other ministries to effectively execute HRD duties, e.g. conduct needs assessments, source training options, document training undertaken (who has studied what?), and carry out follow-up and evaluation.
- More effective human resource development, including development of financial and non-financial incentives to retain qualified personnel in government and within the country, such as appropriate salaries and benefits; opportunities for advancement; interesting work opportunities; professional development, and feedback from managers.

*To retain staff, offer opportunities and an environment conducive to professional and personal development and advancement.*

## 3.9 Education, Awareness and Advocacy

### 3.9.1 Strengths

#### **Education**

- “Education, awareness and advocacy” is a cross cutting theme In EMPS 2000-2010.
- *National Education Strategy 2002-6* (Ministry of Education and Culture) proposes education goals, actions, and a performance measurement framework.
- National *Environmental Education Policy* (Ministry of Education and Culture, 1997) promotes environmental education (EE) values, knowledge and skills among staff and students.
- The EE Policy is being implemented through a three-person EE unit, website, newsletter; multi-stakeholder EE Coordinating Committee, teacher training; and EE curriculum and extra-curricular activities from crèche to Polytechnic levels.
- A comprehensive EE resource for lower secondary level, “*Learning for Sustainable Living in Seychelles*” (2004), was developed through a partnership of Ministry of Education, Nature Seychelles (an NGO) and the Environment Trust Fund.

#### **Awareness/ Advocacy**

- Considerable environmental awareness among the scientific and technical community.
- Numerous awareness-raising campaigns organized by government, NGOs, and the media have produced extensive materials and widespread public awareness of environmental issues.
- An active “Education, Information and Communication (EIC) Unit” in MENR conducts numerous public awareness campaigns and activities, and works with schools.
- Good national dissemination of environmental information through networking, training, expert missions, donor projects and international networking through organisations such as AIMS, AOSIS and SIDS.

### 3.9.2 Constraints

#### **Education**

- Lack of teachers with specialist training in environmental education.
- Weaknesses in the ability of officials to identify and communicate to national manpower and training officials, the need to send more graduates abroad for environment-related degrees.
- The current secondary school system, based on a British core curriculum model (GCSE “O” and “A’ level exams), is not conducive to integrating new and topical environmental issues.

#### **Awareness/ Advocacy**

- Weaknesses in environmental awareness campaigns in targeting key audiences and behaviours, “messaging” about what can be done, finding incentives for behaviour change, and measuring effectiveness.
- Insufficient public understanding of some environmental issues, especially convention-related topics.
- Limited environmental awareness with local government, e.g. District Administrators.
- Lack of public and community debate about and participation in environmental decisions.
- Some national and donor-supported projects with public awareness components are not communicated to MENR – EIC, and/or do not draw on their solid expertise.



### 3.9.3 Capacity Needs

#### **Education**

- In-depth curriculum and extra-curricular materials on priority topics in Seychelles. When the *Environmental Education Policy* is updated in 2006, climate change, land degradation and biodiversity issues could be integrated.
- More environmental education (EE) specialists and more training for teachers integrating EE into other courses. More and better labs, tools and equipment for science and environmental projects, including student research.

## **Awareness/ Advocacy**

- Widespread capacity among government, NGOs and the private sector to design awareness programmes that are integrated with broader environmental programmes.
- Campaigns on those convention-related topics that (1) match national priorities and (2) require awareness and action by key stakeholders (e.g., farmers, dive companies, hotels.)
- More effective awareness and education campaigns, through setting specific objectives, targeting key groups and behaviours, and evaluating success, using qualitative and quantitative measures.
- Public awareness campaigns that incorporate both “carrot” and “stick” approaches, i.e., positive social marketing messages combined with fines and social disapproval.

## **3.10 Stakeholder Involvement**

### **3.10.1 Strengths**

- EMPS 2000-2010 aims to develop human resources and promote partnerships and community involvement. The EMPS Steering Committee includes over 40 diverse stakeholders.
- Multi-stakeholder cooperation has occurred through various collaborative projects.
- NGOs and civil society are involved in environmental management through their own projects and campaigns and participation in government’s stakeholder consultations. NGOs have a solid track record in protected areas, species conservation, ecotourism, and environmental education.
- The coordinators of the Environmental Education Unit (Ministry of Education), and of the Education, Information and Communication Unit (MENR) sit on several key national environmental committees to facilitate school and community outreach as part of various environmental initiatives.



### **3.10.2 Constraints**

- The potential of NGOs, private island owners, and civil society to participate in environmental and sustainable development initiatives appears to be under-utilised by government, given their knowledge and interest.
- Government takes mostly a regulatory and implementation role, and involves stakeholders only to a limited extent.
- Communication and collaboration within and among government, NGOs, civil society organizations, and the private sector has been uneven because of: conflicting objectives and views; competition and lack of trust; a legacy of negative experiences and interpersonal conflicts; the small size of NGOs and their staff; and limited resources within Government.
- Lack of support and incentives for stakeholder and local community involvement.
- Lack of public “ownership” and responsibility for environmental decisions, because of the public perception that environment is largely a Government concern.
- Limited financial resources within NGOs and other civil society organisations due to limited sources of funding.

### **3.10.3 Capacity Needs**

- Good governance mechanisms, including transparency, multi-stakeholder involvement and Government / non-government cooperation.
- Greater sense of participation and ownership of the EMPS among Steering Committee members/ organizations, through systematic multi-stakeholder programme implementation.
- Diverse incentives to promote multi-stakeholder collaboration, including greater use of NGO and private sector expertise and resources, increased stakeholder consultation, better communication channels, and innovative partnerships to address international and national environmental priorities, building on their respective strengths.

## 4. NEXT STEPS: ACTION PLAN

This *Capacity Assessment Report* is a result of Output 3, the Capacity Assessment phase. The next step is "Output 4: *Development of Action Plan*". The objective of this final phase is:

*To develop, in close consultation with relevant stakeholders, an Action Plan for addressing priority capacity needs, based on earlier NCSA documents, and referring particularly to the "Capacity Needs" and "Possible Actions" identified in the "Capacity Assessment Report".*

The original Seychelles NCSA *Project Document* and *Workplan* (2003) made a clear distinction between Output 3, *Capacity Assessment*, and Output 4, *Action Plan*, which were to be undertaken as two separate phases. In the revised *Workplan* (July 2004), the Project Team decided to include a preliminary assessment of *Possible Actions* as part of the capacity assessment, and further develop them during the *Action Plan* phase. Members felt that this would be a more efficient use of scarce human resources because they could ask stakeholders about both "capacity needs" and "actions to address them" at the same time.

The Team collected a list of "*Possible Actions*" during the *Capacity Assessment*, but decided to leave all reporting on actions until the *Action Plan*. During the Output 4 phase, the Project Team will investigate which of these *Possible Actions* could be realistically implemented. They will conduct additional research, including selective stakeholder consultation and desk studies, on four capacity development themes (incorporating the 10 Priority Issues addressed in the *Capacity Assessment Report*) (Box 5).

The Project Team has been reformulated for the new tasks, with Terms of Reference based on the revised *Workplan*. These will be implemented in a flexible manner, adapting to changing circumstances, as needed, over February to May 2005. The final output will be a comprehensive, realistic, and broadly-supported "*Capacity Development Action Plan*", based on the "*Strategic Overviews*" (Output 2) and "*Capacity Assessment*" (Output 3), and developed in a participatory manner.

The completed *Action Plan*, including proposed Implementation Strategies, will be sent for comments and approval to the EMPS Steering Committee and then submitted to Government for approval and adoption. A Round Table meeting is planned for key national organisations and possibly international donors on implementation and monitoring of the *Action Plan*.

### Box 5: Themes for Further Investigation during Development of the Action Plan

1. **International Relations and Financing** (including Priority Issues "*International Convention Management*", "*Donor Project Development and Management*" and "*Financing and Economic Instruments*")
2. **National Capacity** (including Priority Issues "*Institutional Framework*" and "*Integrated Management*")
3. **Research and Development** (Including Priority Issues "*Information Management*" and "*Technology Development and Transfer*")
4. **Education, Training and Public Participation** (Including Priority Issues "*Human Resources Development*", "*Education, Public Awareness and Advocacy*" and "*Stakeholder Involvement*")

## ANNEXES

### ANNEX A: Capacity Development Definitions

**Capacity Development** is: The actions needed to enhance the ability of individuals, institutions and systems to make and implement decisions and perform functions in an effective, efficient and sustainable manner. This may involve the creation of new capacity as well as redeployment of existing capacities and the releasing of latent capacities.

At the *individual* level: Expanding the awareness, knowledge and skills of individuals through training and other professional development activities. Promoting changes in management, motivation, morale and systems of individual accountability and responsibility.

At the *institutional* level: Improving organizational structure, function and performance, including its flexibility and adaptability. (infrastructure, but also clarification of missions, structures, responsibilities, accountabilities and reporting lines, procedures and communications, and deployment of human resources).

At the *systemic* level: Creating “enabling environments” for sustainable development throughout society, i.e. improving the overall policy, economic, regulatory, and accountability frameworks within which institutions and individuals operate.

#### **NCSA “Levels of Capacity Development” (adapted from UNITAR-GEF 2001 and UNDP-UNDP 2002)**

At the *systemic* level, capacity development aims to:

- create “enabling environments” for better environmental management within society;
- improve the overall political, economic, policy, regulatory, incentive and accountability frameworks within which organizations and individuals operate;
- improve formal and informal communication and collaboration among organizations and individuals; and
- promote the participation of all sectors of society in reaching environmental goals, through improved awareness, education and involvement.

At the *institutional* level, capacity development aims to:

- improve organisations’ performance and functioning, making them more effective, efficient and responsive to change;
- increasing coordination and collaboration among groups/departments within the organization;
- building better relationships with the “outside environment” (other organizations within or outside the country);
- improve organizational processes, such as mission, structure, responsibilities, accountabilities, communications, and deployment of human resources; and
- provide better infrastructure and equipment to support the work.

At the *individual* level, capacity development aims to:

- improve the ability of individuals to manage and protect the environment, both within organizations and in the larger society;
- change individual attitudes, knowledge and behaviors, through education and training, including awareness-raising, learning-by-doing and peer learning;
- improve individual performance through promoting greater participation, ownership, motivation, incentives and morale;
- improve individual performance through better performance management and accountability systems.

## ANNEX B: Strategic Overviews of Obligations under the Conventions - Executive Summaries

for

1. Strategic Overview of Obligations under the Convention to Biological Diversity (CBD)
2. Strategic Overview of Obligations under the Framework Convention on Climate Change (FCC)
3. Strategic Overview of Obligations under the Convention to Combat Desertification (CCD)

This Annex reproduces the Executive Summaries of the three “*Strategic Overviews of Obligations*” produced over the first half of 2004 by the three NCSA Working Groups for their respective conventions (CBD, FCCC and CCD). These reports summarized Seychelles’ obligations under each convention, assessed how well these are being implemented, and provided the basis for the Capacity Needs Assessment. They also helped to inform stakeholders about national commitments and opportunities under these global accords. (Note: these reports are the Seychelles “Thematic Assessments”, as called for under GEF requirements for NCSAs.)

The reports were also summarized in three coloured brochures, one for each convention, which were used to build public awareness of the conventions and their relevance for Seychelles. The full documents are available from the Seychelles Ministry of Environment and Natural Resources – Policy and Planning Services and at [www.env.gov.sc](http://www.env.gov.sc)

**Cross-cutting Issues:** The NCSA process includes identification of issues that cut across the three main conventions under review, in order to identify opportunities for synergy and inter-convention cooperation. The main cross-cutting issues identified during preparation of the Strategic Overviews for the three conventions are as follows (not in order of priority):

- Financial Instruments and Mechanisms;
- Policy, Legal and Regulatory Framework;
- Data Identification, Collection, Management, Monitoring and Reporting;
- Technology Development and Transfer;
- Integrated Management;
- Invasive Alien Species;
- Education, Awareness and Advocacy; and
- Stakeholder Engagement and Empowerment / Partnerships.

The topics of “International Convention Management”, “Donor Project Development and Management”, and “Human Resources Development” were added to the above list before beginning the capacity assessment.

## 1. STRATEGIC OVERVIEW OF OBLIGATIONS UNDER THE CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

The Seychelles signed the Convention on Biological Diversity (CBD) on 10/06/1992 and ratified it on 22/09/1992. The Convention came into force on 29th December 1993. The CBD has three primary objectives:

- The conservation of biological diversity,
- The sustainable use of its components, and
- The fair and equitable sharing of benefits arising out of the use of genetic resources.

The CBD defines “Biological Diversity” as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

The Convention is particularly significant because it:

- Is the overarching global mechanism to address the issue of biodiversity,
- Recognises the common responsibility of biodiversity conservation and sustainable use, and
- Established mechanisms to assist in the attainment of Convention objectives.

The Conference of the Parties (COP), the Convention’s supreme body, has elaborated six thematic programmes, of which the following are relevant to Seychelles:

- Marine and Coastal Biological Diversity,
- Forest Biological Diversity,
- Inland Waters Biological Diversity,
- Dry and Sub-humid Lands Biological Diversity, and
- Agricultural Biological Diversity.

A thematic programme on “Island Biological Diversity”, which is most pertinent to Seychelles, is under development.

The COP has established fifteen cross-cutting issues, which generally arise from specific text in the Convention. The timeline and budget for this report limited a full investigation of the ramifications of all of these cross-cutting issues, but three were identified as being of central importance to Seychelles’ ability to implement its obligations:

- Ecosystem Approach,
- Invasive Alien Species, and
- Protected Areas.



The “ecosystem approach” has been adopted as the fundamental paradigm for the Convention’s activities. The Convention has furthermore negotiated the Cartagena Protocol on Biosafety (addresses risks from biotechnology), which came into force in 2003, and to which Seychelles is a signatory.

The primary “**obligations**” of the Convention in the Seychelles context pertain to the following issues, based on the Articles of the Convention:

- Development of national strategies for the Conservation and Sustainable Use (C&SU) of Biodiversity,
- Identification and Monitoring,
- Conservation and Sustainable Use,
- In-situ Conservation (in the field),
- Ex-situ conservation (in seed banks and greenhouses, etc),
- Sustainable Use of Components of Biological Diversity,
- Incentive Measures (economic/social measures that encourage C&SU),
- Research and Training,

- Public Education and Awareness,
- Impact assessment and minimizing adverse impacts,
- Access to and Transfer of Technology of Genetic Resources,
- Exchange of Information, and Technical and Scientific Cooperation, and
- Handling of Biotechnology and Distribution of its Benefits (further detailed in the Cartagena Protocol).

The following are the main **plans, strategies and legislation** that address the above issues in Seychelles:

- Environmental Management Plan of Seychelles, 2000 – 2010,
- National Biodiversity Strategy and Action Plan,
- Vision 21: Tourism Development Strategy,
- Seychelles Ecotourism Strategy,

*Environmental Protection Act*, including Environment Impact Assessment regulations,

- *Wild Animals and Birds Protection Act*,
- *National Parks and Nature Conservancy Act*,
- *State Land and River Reserves Act*,
- *Breadfruit and Other Trees Act*,
- *Fisheries Act*,
- *Birds Egg Act*, and
- *Town and Country Planning Act*.

Based on a preliminary analysis, the Working Group concluded that, most the obligations of the Convention were “partially” addressed by the mechanisms listed above, while some issues are addressed “well”, and a few have not been addressed at all to date. The following key **constraints to implementation of the CBD** were identified:

- The full harnessing of available national capacity to implement the Convention,
- Invasive Alien Species,
- Lack of linkage of national programmes to international obligations, and
- Lack of recognition of the real and potential values of biodiversity.

## 2. STRATEGIC OVERVIEW OF OBLIGATIONS UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

In 1992, the world's governments adopted the UNFCCC. Seychelles signed the convention on 10/06/1992 and ratified it on 22/09/1992. In 1997, governments adopted the Kyoto Protocol, with its legally binding constraints on greenhouse gas (GHG) emissions and innovative "mechanisms" aimed at cutting the cost of curbing emissions. To date, 188 countries are Parties to the Convention, and the entry into force of the Kyoto Protocol is expected in the near future. The Convention divides countries into two main groups: Developed countries, known as Annex I Parties, and developing countries, known as non-Annex I Parties, wherein Seychelles falls. Seychelles is also part of the Alliance of Small Island States (AOSIS) negotiating group.

The vast majority of scientists now believe that rising concentrations of "greenhouse gases" in the earth's atmosphere are leading to potentially irreversible climate change. The Convention sets an ultimate objective of stabilizing atmospheric concentrations of Greenhouse Gases at levels that would prevent "dangerous" human interference with the climate system. The Kyoto Protocol further details this, and commits countries to at least 5% cuts in carbon dioxide emissions from 1990 levels over the first commitment period of 2008-2012.



The Conference of the Parties (COP) is the "supreme body" of the Convention. The Convention established two additional permanent bodies. The Subsidiary Body for Scientific and Technological Advice (SBSTA) advises the COP on scientific, technological and methodological matters, while the Subsidiary Body for Implementation (SBI) advises on all matters concerning Convention implementation. A secretariat based in Bonn, Germany provides support to all of these institutions.

The **Guiding Principles** of the Convention include:

- Promotion of sustainable development; and
- Recognition of common but differentiated responsibilities: Although climate change must be tackled as a global issue, industrialized countries have historically contributed most to the problem and have more resources to address it. Thus, they have accepted the main responsibility and agreed to provide financial assistance and technology to developing countries to address climate change.

The main **obligations and commitments** stemming from the articles of the convention can be summarized as follows:

- Publish national inventories of anthropogenic emissions by sources and removals by sinks of greenhouse gases;
- Implement national and regional programmes to mitigate climate change;
- Co-operate in the development and transfer of technology that prevents anthropogenic emissions of greenhouse gases;
- Promote sustainable management, conservation and enhancement of sinks and reservoirs of greenhouse gases;
- Co-operate in the adaptation to the impacts of climate change;
- Take climate change considerations into account where feasible, in relevant social, economic and environmental policies and actions;
- Co-operate in research, exchange of information, education, training, public awareness and the widest possible participation; and
- Report to the Conference of the Parties.

The following are the main **programmes, plans, studies** that address these obligations in Seychelles:

- Seychelles Initial National Communication, a report to the COP for the UNFCCC,
- Environmental Management Plan of Seychelles, 2000-2010,

- Vulnerability Assessment Study,
- Technologies and Measures for the mitigation of GHG in Seychelles,
- Barbados Plan of Action for sustainable development of small island states,
- Seychelles Energy Policy,
- Victoria Traffic Management Programme, and
- Global Climate Observing System (GCOS).

The Working Group assessed that the obligations of the convention were partially addressed by above plans and programmes. The main identified **constraints in addressing these obligations** are:

- Limited financial resources;
- Limited technical and institutional capacity to undertake relevant research, studies, activities or projects;
- Lack of participation of the private sector;
- Lack of capacity in data acquisition, analysis, management and dissemination;
- Lack of public awareness on climate change issues;
- Lack of public participation and a regular forum for exchange of information;
- Limited base of local expertise in atmospheric and ocean sciences; and
- High transition cost of alternative technologies.

### 3. STRATEGIC OVERVIEW OF OBLIGATIONS UNDER THE CONVENTION TO COMBAT DESERTIFICATION (CCD)

This report is one of three produced over the first half of 2004 by three NCSA Working Groups, each of which prepared a strategic overview of obligations for one of the conventions. The reports will provide the basis for the capacity needs assessment to follow and will inform stakeholders about national commitments and opportunities under these global accords.

The United Nations Convention to Combat Desertification (UNCCD) was adopted on 17<sup>th</sup> June 1994, and entered into force on 26<sup>th</sup> December 1996. The objective of the Convention is: *To combat desertification and mitigate effects of drought particularly in Africa through effective actions at all levels to achieve sustainable development in affected areas.* The Convention defines “Desertification” as: *Land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities.* The aims of combating desertification are:

- Prevention and/or reduction of land degradation;
- Rehabilitation of partly degraded land; and
- Reclamation of desertified land.



The Conference of the Parties (COP) is the supreme decision-making body of the Convention. The “Committee on Science and Technology” (CST), advises the COP on scientific and technological matters, and there is also a “Committee for the Review of the Implementation of the Convention” (CRIC).

Seychelles does not appear to fit strictly in the group of “affected countries” under the definition for “arid”, “semi-arid” or “sub-humid areas” of the CCD; for outer islands there are insufficient climate data to precise this fit. Following the GEF guidelines, this report has adopted the term “Land Degradation” to deal with the Convention for Seychelles. This is defined as: The reduction of land resource potential through desertification and deforestation, with the contributing factors being:

- Soil erosion, denudation, pollution, loss of organic matter, and loss of fertility;
- Loss of vegetation cover, and invasive alien species that result in loss of cover;
- Habitat conversion (urban or agricultural); and
- Aquifer degradation, leading to loss of soil cover.

The steep topography of the “inner” granitic islands leads to erosion during peak rainfall periods and to water shortages during the dry season. The “outer” coralline islands, which can be classified as “drylands ecosystems”, have historically suffered land degradation, e.g. through agriculture (coconut plantations), guano mining and introduction of invasive species. The Working Group has assessed the extent to which the development activities in agriculture, forestry, physical planning, water and drylands ecosystems/outer islands management contribute to land degradation.

The main **obligations** stemming from the articles of the convention are as follows:

#### *General Obligations:*

- Adopt integrated approach;
- Strengthen sub-regional, regional and international coordination;
- Cooperate with relevant intergovernmental organisations;
- Promote the use of existing bilateral and multilateral financial mechanisms; and
- Formulate National Action Programmes (NAP).

#### *Obligations of affected country parties:*

- Give priority to the effects of drought and land degradation, and allocate adequate resources according to circumstances;
- Establish strategies and priorities within the framework of sustainable development;
- Promote awareness and facilitate participation;

- Provide an enabling environment, strengthen legislation and establish long-term policies and action programmes.

*Obligations of African country parties:*

- Rationalise and strengthen existing institutions;
- Promote information exchange on appropriate technology;
- Develop contingency plans to mitigate drought, desertification and land degradation;
- Identify and mobilise new and additional financial resources.

The following are the main **programmes, plans, policies and studies** that address these obligations in Seychelles:

- 1993 Constitution of Seychelles,
- Environmental Management Plan of Seychelles 2000-2010,
- National Agricultural and Fisheries Policy and Action Plan 2003-2013,
- National Biodiversity Strategy and Action Plan,
- Seychelles' Initial National Communication to the UNFCCC,
- *Environmental Protection Act*, including Environment Impact Assessment regulations,
- Social Development Strategy for Seychelles Beyond 2000,
- Morne Seychellois Management Plan,
- Seychelles Forest Management Plan/Sector Study,
- Seychelles Forest Fire Contingency Plan,
- *Town and Country Planning Act* (1972),
- Plan d'Amenagement du Territoire (Land Use Plan) (1992),
- Habitat II: National Report and Plan of Action for Sustainable Human Settlements Developments 1996-2000,
- Barbados Plan of Action + 10 Report (2004),
- Millennium Development Goals: Status Report (2004), and
- Comprehensive African Agriculture Development Programme of the NEPAD.

Based on this preliminary analysis, the Working Groups concluded that the obligations of the convention were only partially addressed by the above plans and programmes. The main **constraints identified in addressing these obligations** are:

- Lack of technical capacity/assistance to undertake studies on land degradation,
- Lack of awareness/knowledge or lack of relevant data on extent of land degradation in certain ecosystems, and
- Inadequacy/inability to raise financial resources to implement sustainable development plans and programmes.

## **ANNEX C: International Environmental Conventions Signed by Seychelles**

- 1. Convention on International Trade in Endangered Species of Wild Fauna and Flora, CITES** (acceded to 1977)  
Focal Point: Mr. Selby Remie ([s.remie@env.gov.sc](mailto:s.remie@env.gov.sc)), Ministry of Environment and Natural Resources (MENR)
- 2. United Nations Law of the Sea** (signed 1982, ratified 1991)  
Focal Point: Captain Ernesta, Seychelles Coast Guard
- 3. United Nations Convention on Biological Diversity, CBD** (signed 1992, ratified 1992)  
Focal Point: Mr. Selby Remie ([s.remie@env.gov.sc](mailto:s.remie@env.gov.sc)), MENR  
**Cartagena Protocol for Biosafety (signed in 2001)**  
Focal Point: Joseph François ([j.francois@env.gov.sc](mailto:j.francois@env.gov.sc)), MENR
- 4. United Nations Framework Convention on Climate Change** (signed and ratified 1992) and **Kyoto Protocol to the United Nations Framework Convention on Climate Change**  
Focal Point: Mr. Francis Bijoux, PPS/MENR ([f.bijoux@pps.gov.sc](mailto:f.bijoux@pps.gov.sc))
- 5. Montreal Protocol on Substances that Deplete the Ozone Layer** (signed 1993)  
Focal Point: Miss Inese Chung-Waye ([i.chung-waye@pps.gov.sc](mailto:i.chung-waye@pps.gov.sc)), National Meteorological Services
- 6. Basel Convention - On the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal** (acceded 1993)  
Focal Point: Mr. Flavien Joubert ([f.joubert@env.gov.sc](mailto:f.joubert@env.gov.sc)), MENR
- 7. UNESCO World Heritage Convention**  
Focal Point: Mr Lindsay Chong-Seng ([sif@seychelles.net](mailto:sif@seychelles.net)), Seychelles Island Foundation, P.O.Box 853
- 8. United Nations Convention on Desertification, CCD** (signed 1994, ratified 1997)  
Focal Point: Mr. Didier Dogley ([d.dogley@env.gov.sc](mailto:d.dogley@env.gov.sc)), MENR
- 9. International Plant Protection Convention** (acceded 1996)  
Focal Point: Mr. Wills Dogley ([pqr@seychelles.net](mailto:pqr@seychelles.net)), MENR
- 10. Convention of the Meteorological Organisation**, (ratified 1996)  
Focal Point: Mr. Rolph Payet ([ps@gov.env.sc](mailto:ps@gov.env.sc)) MENR
- 11. Stockholm Convention - On Persistent Organic Polluting Substances. (POPS)** (signed 2002)  
Focal Point: Mr. Jude Florentine ([j.florentine@env.gov.sc](mailto:j.florentine@env.gov.sc)), MENR
- 12. RAMSAR Convention** (signed 2004)  
Focal Point: Mr Murugaiyan ([p.murugaiyan@pps.gov.sc](mailto:p.murugaiyan@pps.gov.sc)), MENR
- 13. Convention on Migratory Species, CMS** (in the process of being signed)  
Focal Point: Mr. Selby Remie ([s.remie@env.gov.sc](mailto:s.remie@env.gov.sc)), Ministry of Environment and Natural Resources (MENR)
- 14. Wild Flora and Fauna in the Eastern African Region**  
Focal Point: Mr. Didier Dogley ([d.dogley@env.gov.sc](mailto:d.dogley@env.gov.sc)), MENR

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#### **WEBSITES:**

Ministry of Environment website: <http://www.env.gov.sc>

NCSA website: (<http://www.env.gov.sc/knowledgebase/> )

UNDP-GEF Websites (<http://www.undp.org/gef/>) ;

GEF (<http://www.gefweb.org/> );

UNEP (<http://www.unep.org/> ).

UNFCCC Convention text and other material (see website: <http://unfccc.int/> )

CBD Convention text and other material (see website: <http://www.biodiv.org/> )

CCD Convention text and other material (see website UNCCD: <http://www.unccd.int/main.php> and for Global Mechanism: <http://www.gm-unccd.org/default.html> )

## ANNEX E: Participants in the Capacity Assessment

### NCSA Project Team – Capacity Assessment Phase

#### Capacity Analysts:

- Wills Agricole, MENR
- Kerstin Henri, Nature Seychelles
- Antoine-Marie Moustache, MENR

#### Review Committee:

- Rolph Payet: Principal Secretary, MENR
- Francis Bijoux, MENR & Focal Point for UNFCCC
- Didier Dogley, MENR & Focal Point for CCD
- Selby Remie, MENR & Focal Point for CBD
- Katy Beaver, Independent consultant, writer, editor
- Marina Confait, DG Manpower Development Division
- Rebecca Loustau Lalanne, NCSA Project Officer, MENR-PPS

**Lead Local Consultant:** Jan Rijpma

**International Consultant:** Susan Abs, Canada

The following people were consulted during the needs assessment either through interviews and/or at the December 2004 Stakeholder Workshop.

1. Alain De Comarmond, Coastal Management Unit, MENR
2. Alone Edmond, Director General, Ministry of Tourism and Land Transport
3. B. Nageon de Lestang, EMPS Coordination Unit, MENR
4. Bernadette Racombo, Cascade District Administrator, Ministry of Local Government
5. Beryl Joubert, Seychelles Tourism Marketing Association
6. Beven Vidot, EMPS Coordination Unit, MENR.
7. Chantale Bijoux, Seychelles Association of Women Professionals (SAWOP)
8. Damien Ally, Grand'Anse Praslin District Administrator, Ministry of Local Government
9. Daniel Rosette, Project Officer, Environment Impact Assessment and Pollution Control
10. Danny Poiret, Director Environmental Health, Ministry of Health
11. David Jean-Baptiste, Department of Finance
12. David Rowatt, Marine Conservation Society, Seychelles
13. Dawson Labodo, Water Division, PUC
14. Denis Matatiken, Director, Botanical Gardens, MENR.
15. Dereck Rioux, Department of Finance
16. Elizabeth Charles, Legal Affairs Unit, MFA
17. Elvina Henriette, Senior Project Officer, MENR
18. Flavien Joubert, Pollution Control, MENR
19. Francis Bijoux, Director General, PPS, MENR
20. Francis Coeur de Lion, GIS Centre, Ministry of Land Use and Habitat
21. Franky Dupres, Water Engineer, Public Utilities Corporation (PUC)
22. Frauke Dogley, Ministry of Tourism & Transport
23. Gerys Cole, Ministry of Industry and International Business
24. Hans Albert, Takamaka District Administrator, Ministry of Local Government
25. Herline Rosette, Director of Human Resources and Administration, MENR
26. Herve Barois, Island Conservation Society
27. Iris Carolus, Private Consultant
28. Jane Victor, Ministry of Social Affairs
29. Jason Jacqueline, Legal Unit, PPS, MENR

30. Jeanette Larue, Environmental Education Coordinator, Ministry of Education
31. John Nevill, Marine Conservation Society, Seychelles
32. Joseph Faure, Technical Adviser, MENR
33. Joseph Francois, Director Forestry, MENR
34. Jude Bijoux, Seychelles Centre for Marine Research & Technology (SCMRT)
35. Justin Moustache, Operations Manager, Islands Development Corporation
36. Justin Prosper, MENR-PPS
37. Kandambi, Attorney General's office
38. Lindsay Chong Seng, Executive Director, Seychelles Island Foundation
39. Lynn Bastienne, MENR - EIC
40. Marc Naiken, Director of Agricultural Research, MENR
41. Marlene Khan, Ministry of Land Use and Habitat
42. Marsha Parcou, Ministry of Tourism & Transport
43. Michael Rosette, Seychelles Coast Guard
44. Michel Vielle, Director General, Disaster Management, President Office
45. Nirmal Jivan Shah, Nature Seychelles / LUNGOS
46. Pamela Camille, Human Resources, MAMD
47. Pat Matyot, Seychelles Broadcasting Corporation (SBC)
48. Patrick Andre, Ministry of Tourism and Land Transport
49. Riaz Aumeeruddy, Aquaculture, Seychelles Fishing Authority (SFA)
50. Robert Lajoie, National Meteorological Services
51. Ronald Cafrine, Ministry of Economic Planning
52. Ronny Ah-tive, Ministry of Finance
53. Sandra Michel, Legal Affairs Unit, Ministry of Foreign Affairs
54. Stephen Rousseau: Managing Director, Water Division of Public Utilities Corporation
55. Terence Coopoosamy, Seychelles Bureau of Standards
56. Theodore Marguerite, National Meteorological Services
57. Vivianne Fock-Tave, Ministry of Finance
58. William Belle, Legal Affairs Unit, Ministry of Finance

## **ANNEX F: Seychelles NCSA Documents**

### **Project Document**

*National capacity Self Assessment for global environment management, 2003*

### **Thematic Assessments / Strategic Overviews**

*Seychelles NCSA, July 2004: Strategic Overview of Obligations Under the Convention on Biological Diversity*

*Seychelles NCSA, July 2004 Strategic Overview of Obligations Under the Convention to Combat Desertification*

*Seychelles NCSA, July 2004: Strategic Overview of Obligations Under the UN Framework Convention on Climate Change*

### **Plans and Workplans**

*Seychelles NCSA January 2004: Communication Plan*

*Seychelles NCSA July 2004: Capacity Assessment Plan*

*Seychelles NCSA March 2005: Capacity Assessment Report*

*NCSA revised Workplan, January 2004*

*NCSA Revised Workplan Phase 3, July 2004*

*NCSA Revised Workplan Phase 4, January 2005*

### **Public Awareness Brochures**

*Seychelles NCSA 2004. Seychelles and the Convention on Biological Diversity*

*Seychelles NCSA 2004. Seychelles and the Convention to Combat Desertification*

*Seychelles NCSA 2004. Seychelles and the UN Framework Convention on Climate Change*

### **Stakeholder Workshop Reports**

*Launching Workshop, December 2004*

*Capacity Assessment Workshop #1: May 2004*

*Capacity Assessment Workshop #2: December 2004*

### **Progress Reports:**

*Monthly Progress Reports 1 – 14*

### **Terms of Reference (TOR)**

*TOR for Group Leaders, January 2004*

*TOR for Working Groups, January 2004*

*TOR for International Consultant, January 2004*

*TOR for Capacity Analysts, July 2004*

*TOR for Review Committee, July 2004*

*TOR for National Consultants, January 2005*

### **NCSA Website:**

<http://www.env.gov.sc/knowledgebase/>



## ANNEX G: Detailed Matrix of Capacity Strengths, Constraints and Needs

<b>PRIORITY ISSUE #1: INTERNATIONAL CONVENTION MANAGEMENT</b>		
<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p style="text-align: center;"><b><i>Participation and Reporting</i></b></p> <p>Key GEF-related Conventions (CBD, UNFCCC, CCD) are signed and ratified and Country Focal Points.</p> <p>Other environment-related conventions (protocols, etc.) are signed and ratified, and implementation committees are in place. (CITES, CMS / Bonn Convention, World Heritage Convention, Basel Convention, Stockholm Convention, Rotterdam Convention, UN Convention on Law of the Sea, MARPOL, Ramsar Convention – soon to be ratified).</p> <p>For a SIDS, Seychelles participates in many convention-related meetings and negotiations.</p> <p>Seychelles has a solid record on the CBD, especially protected</p>	<p style="text-align: center;"><b><i>Participation</i></b></p> <p>Effectiveness of participation at international meetings has been uneven since:</p> <ul style="list-style-type: none"> <li>• delegations are often limited to one person,</li> <li>• representation for each convention is often inconsistent,</li> <li>• delegate is not always the most suitable person,</li> <li>• few individuals are involved,</li> <li>• information on conventions is rarely disseminated within or outside government,</li> <li>• documentation of meeting results is not systematic or centralized, and</li> <li>• technical and negotiation skills need strengthening.</li> </ul> <p>Success in meeting convention obligations and benefiting from involvement is uneven since:</p> <ul style="list-style-type: none"> <li>• responsibilities of key national parties are poorly defined,</li> <li>• management and tracking of conventions is <i>ad hoc</i>, fragmented and poorly coordinated,</li> <li>• there is little systematic translation of obligations into national programmes,</li> </ul>	<p style="text-align: center;"><b><i>Participation and Reporting</i></b></p> <p>Increased high-level support for meeting international obligations among politicians and senior managers.</p> <p>Standard procedures for convention management, including who attends meetings, briefing of delegates and record-keeping. Better harmonization and reduced duplication in reporting to Conventions.</p> <p>More and better-qualified delegates to international meetings, drawing on a broader range of national experts inside and outside GOS. Greater ability for convention Focal Points and ICU to draw on other expertise, as needed e.g., “roster” of national experts inside and outside government.</p> <p>Regular peer exchange and consultation among delegates, ICU staff and relevant stakeholders (inside/outside government).</p> <p style="text-align: center;"><b><i>Institutional Arrangements</i></b></p> <p>Increased technical, financial and manpower resources to manage conventions.</p> <p>Strategic priorities among convention commitments and programmes, based on national needs. Government-approved implementation strategies for these priority conventions, with the goal of dovetailing convention obligations with national priorities in relevant sectors and Ministries.</p> <p>Linkage of conventions to EMPS and other national initiatives to enable better assessment of performance.</p> <p>Clearer delineation of roles for key parties vis-à-vis conventions and better coordination among them, possibly managed by a central body, including the ICU and other key agencies.</p> <p>A stronger International Convention Unit, with:</p> <ul style="list-style-type: none"> <li>• more clearly defined and publicised mandate, and</li> <li>• training for personnel, e.g., UNITAR course on legal aspects of global environmental conventions.</li> </ul> <p>More widely available convention-related information, perhaps a “one-stop” information clearinghouse (directory / repository), accessible by the public, with a document centre, website and/or linked databases, showing where materials are held</p>

<p>areas and biodiversity – GOs, NGOs, private islands.</p> <p>Some national reporting to conventions is done, but other reports are overdue.</p> <p><b>Institutional Arrangements</b> International Convention Unit (ICU) exists in MENR and is collaborating with other agencies to clarify its mandate.</p> <p>Reasonable stakeholder awareness/ knowledge of some conventions, e.g. CBD.</p> <p>Some successful CBD-related activities provide model approaches for developing countries (especially SIDS), e.g., rehabilitation of small island ecosystems, species recovery.</p>	<ul style="list-style-type: none"> <li>• until the NCSA, knowledge of obligations has been limited to a few individuals and follow-up has been weak,</li> <li>• stakeholder awareness of conventions and their relevance is low, and</li> <li>• there is no prioritisation of implementation activities within and among conventions.</li> </ul> <p>NGOs participate in convention management to some extent, but they are underutilized, given their awareness and knowledge of conventions.</p> <p><b>Reporting</b> Reporting to international conventions is often untimely due to limited capacity (manpower, knowledge and experience in reporting).</p> <p>Streamlining of national reporting to international conventions is hampered by different reporting formats and cycles.</p>	<p>Greater participation by stakeholders (both inside and outside government) in determining national positions on international issues, using one or more of the following:</p> <ol style="list-style-type: none"> <li>1. A “Global Convention Stakeholder Working Group” which would review documents and help define national positions before international meetings;</li> <li>2. <i>Ad hoc</i> stakeholder consultation meetings pre and post key international meetings for interested Ministries and NGOs; and/or</li> <li>3. Annual Global Convention Stakeholder Workshops, looking at multiple accords.</li> </ol> <p>Better defined roles for non-government stakeholders in convention management, which might include:</p> <ol style="list-style-type: none"> <li>1. contribute expertise and information.</li> <li>2. advise on national priorities and activities as part of formulating national positions.</li> <li>3. provide information on national activities relating to conventions.</li> <li>4. advise on international positions.</li> <li>5. increase accountability of government by monitoring convention activity.</li> <li>6. possibly participate in delegations, if appropriate.</li> <li>7. help implement conventions nationally.</li> <li>8. disseminate information on conventions to stakeholders and the public.</li> <li>9. network with international NGO, research and business contacts on related topics.</li> <li>10. seek sources of funding for convention-related projects, with government approval.</li> </ol> <p>Dissemination of information on national obligations under the conventions, and how they can be integrated into key sectors and ministries, to relevant stakeholders inside/outside government.</p> <p>More public awareness and education activities on convention-related topics which (1) match national priorities and (2) require awareness and action by key stakeholders (e.g., farmers, dive companies, hotels.)</p> <p><b>UNFCC</b></p> <ul style="list-style-type: none"> <li>• Strengthening of National Climate Change Committee (NCCC).</li> <li>• Possible new climate change agency/ unit within government.</li> </ul>
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**PRIORITY ISSUE #2: DONOR PROJECT DEVELOPMENT AND MANAGEMENT**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p align="center"><b>Strategies</b></p> <p>Seychelles is relatively effective in accessing donor funds from multi &amp; bilateral, NGOs, academia/research organizations, in part because donors recognize existing capabilities in Seychelles.</p> <p>Seychelles is the highest per capita GEF recipient in</p>	<p align="center"><b>Strategies</b></p> <p>Reliance on a small number of donors to date.</p> <p>Limited capacity regarding donor requirements and project design, implementation and monitoring. There</p>	<p align="center"><b>Strategies</b></p> <p>Greater institutional and individual capacity to find funding and to develop and implement projects.</p> <p>Information on new sources of international funding (multi &amp; bilateral, NGO, academic/ research, private donors) using the Internet and donor directories, combines with networking and “face-to-face”</p>

<p>the world and has several GEF projects underway or in the pipeline as of 2005.</p> <p>Seychelles is party to numerous international environmental conventions, as well as International (UN) and Regional (COMESA, COI) bodies, and has received bilateral assistance from France, Germany, UK, USA, among others.</p> <p>National policies and plans promote international cooperation projects, including:</p> <ul style="list-style-type: none"> <li>• EMPS 2000-2010,</li> <li>• National Agricultural and Fisheries Policy (NAFP) 2003-2013, and</li> <li>• Seychelles Initial Communication to UNFCCC.</li> </ul> <p>Several NGOs have attracted international partnerships and funding for biodiversity conservation projects.</p> <p>There are outstanding examples of ecosystem rehabilitation on small islands, done by private sector and NGOs, often assisted by international and local donors.</p> <p style="text-align: center;"><b>GEF Funding</b></p> <p><b>CBD:</b> GEF-funded pilot projects ongoing on the principal granitic islands of Mahe, Praslin and La Digue.</p> <p>The GEF-funded development of a National Biosafety Framework (NBF) under the Cartagena Protocol is underway.</p> <p>A regional (Africa) GEF project is underway (2005) on "Reduction of environmental impacts from coastal tourism".</p> <p>A full GEF-funded project on Integrated Ecosystem</p>	<p>are only a few individuals involved and their skills are uneven.</p> <p>Lack of knowledge about, and established connections with, convention-related funding sources, including programmes available through GEF and the financial mechanisms of other conventions.</p> <p><i>Ad hoc</i> approach to seeking and implementing donor projects, without a strategic approach to integrating assistance into national frameworks, such as EMPS and NBSAP.</p> <p style="text-align: center;"><b>Project management</b></p> <p>Poor coordination among donor projects; poor project sustainability and integration into national initiatives, such as the EMPS.</p> <p>Lack of standard institutional procedures for project development and the search for donor funding.</p> <p>No clear mechanism for donor project approval and implementation, which hampers project work inside and outside government.</p> <p>Project financing procedures are cumbersome with no clear guidance regarding tax, foreign exchange, etc.</p> <p style="text-align: center;"><b>Staff capacity</b></p> <p>Few well-trained, experienced personnel with the skills to identify,</p>	<p>connections. Greater knowledge of funding sources under convention-related programmes.</p> <p>An agency or individual with responsibility for finding new funding (possibly through MFA) and "marketing" to new donors, using multiple strategies, such as revolving funds.</p> <p>A more strategic approach to seeking donor support for projects and programmes identified as priorities in national plans, e.g., EMPS, NBSAP, SINC.</p> <p>Increased activity by Seychelles overseas ambassadors and delegates to international meetings (e.g., COPs) to find new funding.</p> <p>Increased involvement by foreign embassies in Seychelles in linking global conventions to national priorities and finding new donors.</p> <p>Innovative GO/NGO/private partnerships to diversify the donor base and increase resources available, e.g., appeals to international NGOs and foundations.</p> <p>Increased use of global and regional organisations (SIDS, AOSIS) as channels to find funding for multi-country initiatives.</p> <p>Search for targeted donor support for specific topics, like waste management and energy management from specialist organisations, e.g. marine issues, waste, energy conservation / alternative energy (e.g., EU, FFEM<sup>4</sup>.)</p> <p style="text-align: center;"><b>Project management</b></p> <p>Standardized, transparent project management mechanisms, describing project approval, implementation and financing.</p> <p>Increased multi-stakeholder involvement in design and implementation of donor projects in order to strengthen implementation.</p> <p>Greater linkage of donor projects to national frameworks through:</p> <ul style="list-style-type: none"> <li>• More systematic implementation and monitoring of existing</li> </ul>
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<sup>4</sup> The Fonds Français pour l'Environnement Mondial (FFEM) and Global Environment Facility (GEF) provide funding to encourage developing countries to incorporate protection of the global environment into development programmes. (Funds are additional to official development aid.) [http://62.23.232.174:81/anglais/news\\_fem.html](http://62.23.232.174:81/anglais/news_fem.html)

<p>Management, with a focus on biodiversity, is in the pipeline.</p> <p><b>UNFCC:</b> The SINC proposes six project concepts covering five thematic areas for possible funding by GEF and other donors.</p> <p><b>CCD:</b> As of early 2005, the first <i>Seychelles National Report to the CCD</i> is being finalized.</p> <p>Seychelles is initiating a Sustainable Land Management Programme under the CCD, and a GEF project is in the pipeline.</p> <p style="text-align: center;"><b>Other donors</b></p> <p>NEPAD provides opportunities for African Union (AU) member states to mobilise financial resources for sustainable development.</p> <p>FAO assists in developing national action plans, programmes and projects, e.g. "Comprehensive African Agriculture Development Programme".</p> <p>ACP-EU Grouping under the Cotonou Agreement is negotiating Economic Partnership Agreements (EPA) as part of the Eastern and Southern Africa (ESA) Group.</p>	<p>prepare, negotiate, implement, monitor and report on projects.</p> <p>Often an inadequate amount of time is spent on researching and writing project proposals.</p> <p><b>UNFCC:</b> Lack of capacity to design and implement climate change projects, policies and measures, including those under the Clean Development Mechanism (CDM) (Developed countries can negotiate projects with developing countries to achieve global GHG abatement and carbon sinks.)</p> <p><b>CCD:</b> No CCD-related GEF funding to date since Seychelles has not completed its National Action Programmes.</p> <p><b>CBD:</b> There were only limited funds for direct implementation of the NBSAP.</p> <p>The original NBSAP had a timeframe of five years (1998 – 2003), thus is out-of-date.</p>	<p>national plans, e.g. EMPS, NBSAP, SINC, with strategic use of donor funding to leverage progress.</p> <ul style="list-style-type: none"> <li>• Procedures for organizations undertaking donor projects to link these activities more explicitly to the EMPS, both in project design and when reporting on progress.</li> <li>• Increased sustainability of donor projects through better integration with national initiatives, such as the EMPS and sectoral programmes.</li> </ul> <p style="text-align: center;"><b>Staff capacity</b></p> <p>More and better-trained staff with the skills to identify, prepare, negotiate, implement, monitor and report on projects. Need increased knowledge of donor requirements and procurement and disbursement procedures.</p> <p>Greater use of training, peer exchange and/or technical assistance to share and expand existing institutional and individual capacity in project design and management (both government and NGOs).</p> <p><b>UNFCC:</b> Knowledge and skills to design projects to access Clean Development Mechanism (CDM) funding and to develop guidelines for climate change adaptation projects.</p> <p><b>CCD:</b> CCD National Action Programme.</p> <p><b>CBD:</b> Update of NBSAP (including biodiversity assessment)</p>
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**PRIORITY ISSUE # 3: FINANCING AND ECONOMIC INSTRUMENTS**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p><b>National Financing</b></p> <p>Government spends a significant sum in field of environmental management, especially in terms of per capita investment.</p> <p><i>The Action Plan of the National Agricultural and</i></p>	<p><b>International Trade &amp; Finance</b></p> <p>Seychelles access to international trade and finance is limited because:</p> <ul style="list-style-type: none"> <li>• It does not easily benefit from ODA and regional cooperation programmes because of its high GDP and Human Development Index.</li> <li>• It is hard for Government to raise funds at concessionary rates and terms and it might not accept long-term loans.</li> <li>• International trade is insignificant and Seychelles would have to renegotiate preferential access to</li> </ul>	<p><b>International Trade &amp; Finance</b></p> <p>The ability to identify, design and implement a range of innovative funding mechanisms to facilitate a sustained flow of financial resources to environmental management.</p> <p>Innovative partnerships among government, private and NGO sectors to address environmental issues (both national and international organizations), e.g., co-financing of projects, co-management or resources, research or technology development.</p> <p>More agreements with private investors for projects that promote conservation.</p> <p>Skills in international trade and finance, especially negotiating agreements with other</p>

<p><i>Fisheries Policy</i> (NAFP) 2003-2013 proposes a list of bankable projects with associated costs, a percentage of which would be met through national budgets.</p> <p>There is high private capital spending on environmental management on islands with tourism and eco-tourism (e.g., Fregate, Bird, Denis, Cousine, Cousin, North Islands).</p> <p><b>Environmental Economics</b> EMPS 2000-2010 includes “Environmental Economics and Mainstreaming and Sustainable Financing” as a thematic area.</p> <p>EMPS lists “sustainable financial mechanisms for land use and coastal zone management” as a priority.</p> <p><b>Economic Incentives</b> ISO 14001 Environmental</p>	<p>EU markets.</p> <p><b>National Financing</b> The EMPS 2000-2010, NBSAP and SINC have not been able to generate necessary financial resources to implement proposed programmes.</p> <p>The annual recurrent budget of MENR cannot support all existing plans, especially due to limited human resources, e.g., the annual budget for the conservation section of MENR is less than SR 1 million (\$US 200,000).</p> <p>Many environmental activities are initiated through one-off projects, and are not sustained over time.</p> <p>There is little investment in watershed management.</p> <p><b>Environmental Economics</b> People do not usually place a monetary value on biodiversity and conservation. The environment and resources are not perceived as having economic value.</p> <p>Environmentally derived economic benefits (e.g. from tourism and fisheries) do not feed back into environmental programmes, except indirectly through general revenue.</p> <p>A 2004 evaluation of EMPS found that the thematic area “Environmental Economics and Mainstreaming Sustainable Financing” has not been implemented, as none of the potential implementing agencies (MENR, MOF, MFA) took responsibility.</p> <p>Lack of capacity in environmental economics (including valuation of natural resource and economic instruments, e.g. tax incentives), impedes integration of conservation &amp; sustainable use into decision-making. For example, there are no qualified environmental economists in Seychelles.</p>	<p>countries and donors.</p> <p>Ability to explain to donors Seychelles’ vulnerability and specific needs as a small island developing state (SIDS).</p> <p>Good governance mechanisms that allow for better use of national capacity outside GOS to access international and national conservation financing.</p> <p><b>National Financing</b> More strategic national resource allocation for systematic implementation of key plans, e.g., EMPS, NBSAP, SINC.</p> <p>More long-term budget commitment supported by diverse foreign and national financing mechanisms to sustain environmental plans and programmes.</p> <p><b>Environmental Economics</b> A lead agency and implementation strategy for EMPS Thematic Area: “<i>Environmental Economics, Mainstreaming and Sustainable Financing</i>”.</p> <p>Greater awareness and knowledge among high-level government financial personnel regarding the use of environmental economics to integrate conservation &amp; sustainable use into decision-making in specific sectors.</p> <p>Greater use of natural resource accounting to encourage better government and private sector valuation of natural resources in sectoral planning and developments.</p> <p>Greater government use of economic instruments (“green accounting”), e.g., user fees, “green” taxes and subsidies, to discourage waste and promote environmentally sound practices and technologies.</p> <p>Improved individual and organizational capacity in environmental economics and its application in key sectors and for key target groups, e.g., MENR, MEP, MFA, parastatals, plus interested NGOs. This includes knowledge and skills on specific topics:</p> <ul style="list-style-type: none"> <li>• Economic value of the environment, including natural resources and environmental services (e.g., soils, clean air and water).</li> <li>• Natural resource accounting to show how environmental resources contribute to GNP, e.g., “environment satellite accounting” to quantify benefits of environmental protection.</li> <li>• Use of economic instruments in fiscal policy and sectoral policies and programmes, e.g., (1) incentives to invest in conservation through tax breaks or subsidies; (2) green taxes to ensure that the “polluter pays” and reward environmental best practices.</li> </ul>
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<p>Management Systems” has been adopted.</p> <p>An Environment Trust Fund (ETF) has been established to encourage the private sector to sponsor environmental projects.</p> <p>Some concessions are given to assist NGOs on a case-by-case basis, e.g., waiver of work permits for visiting consultants and tax exemptions.</p>	<p>Valuation of forest resources is emphasized in forestry sub-sector programme documents. Yet the sector has data gaps, is undervalued, and is perceived as contributing negligibly to GNP.</p> <p style="text-align: center;"><b>Economic Incentives</b></p> <p>Level of interest and adoption of ISO 14001 Environmental Management Systems by private sector is uneven.</p> <p>The Environment Trust Fund, which aims to promote business involvement in financing environmental projects, is under-publicized and not living up to its potential. There are few other private sector incentive programmes.</p> <p>Specific measures, such as the “Gold Card” concept of paying a lump sum for life-long entrance to accessible nature reserves were unsuccessful here, although it works in some countries.</p>	<ul style="list-style-type: none"> <li>How to ensure that sectors who benefit financially from the country’s good environmental policies (e.g., tourism, fisheries) reinvest profits into the environment.</li> </ul> <p style="text-align: center;"><b>Economic Incentives</b></p> <p>Increased use of Environmental Management Systems (e.g., ISO 14001) in large enterprises, e.g., hotels, to help them comply with EIA and other environmental laws.</p> <p>Provision of economic incentives and information on cost savings to businesses and residents to encourage environmentally friendly technologies, e.g., water and energy conservation, waste management.</p> <p>Review of the ETF and revision as needed, making procedures more transparent; and increasing business awareness of the benefits of contributing, especially tax relief.</p> <p>Financial and non-financial incentives to leverage support for “environmental best practices” from the private sector. Financial measures include, tax concessions, subsidies, matching funds. Non-financial measures include awards, publicity, sponsorship opportunities (e.g., adopt-a-species), openness to in-kind support.</p> <p>Strategies to increase private sector involvement in environmental protection, e.g. Barclays Bank adoption of environment areas, “environmental” credit cards (a percentage of profits goes to environment).</p>
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**PRIORITY ISSUE #4: INSTITUTIONAL FRAMEWORK**

**4.a. Environmental Legislation, Policies and Plans**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p style="text-align: center;"><b>Environmental Legislation</b></p> <p>Commitment to the maintaining a healthy environment is enshrined in the Constitution.</p> <p>There is a significant body of environmental and land use laws, regulations, policies and plans, convention-related &amp; otherwise.</p>	<p style="text-align: center;"><b>Environmental Legislation</b></p> <p>Although there is extensive environmental legislation, enforcement and compliance are inconsistent because:</p> <ul style="list-style-type: none"> <li>The relative mandates and responsibilities of key agencies are</li> </ul>	<p style="text-align: center;"><b>Environmental Legislation</b></p> <p>Increased institutional &amp; individual capacity in all convention topics, i.e., biodiversity (CBD), climate change / sea level rise (UNFCC) and sustainable land management (CCD).</p>

<sup>5</sup> e.g., *Wild Animals and Birds Protection Act, Fisheries Act, National Parks and Nature Conservancy Act* (sustainable land management), *State Land and River Reserves Act, Breadfruit and Other Tees Act* (controls felling of protected trees), *Coco de Mer Management Decree* (includes illegal trade in kernels); *Environmental Protection Act* (lists 304 sites of high ecological and morphological value, with development controls), *Environment Impact Assessment Regulations, Bird Egg Act*.

<sup>6</sup> No cats, dogs and poultry, no high input agricultural activities, no plant introduction without pest and disease inspection and treatment, no docking of boats without clearance and limited use of local timber. Goats have been eliminated, except on Aldabra.

<sup>7</sup> Water Plans will cover short and long term measures, such as fixing system leaks, water storage and distribution and water conservation measures such as drought response, water saving devices, fiscal incentives and water tariffs.

<p>Many of these conform with the three GEF-related conventions. <i>The rest of this column summarizes Seychelles' legislation, plans and activities related to topics addressed by the three Rio Conventions, for which the GEF is the Financial Mechanism.</i></p> <p>Environmental Legal Unit operates under MENR-PPS to secure compliance and prosecutions of violations of environmental law and regulations, as well as to provide advice on review of environmental legislation and regulation.</p> <p>An MENR Legislative Committee exists and is reviewing conservation legislation. Additional reviews of selected environmental legislation have been done, involving diverse stakeholders, e.g., under the first EMPS, the NBSAP and the Commission de l'Océan Indien (COI).</p> <p style="text-align: center;"><b>CBD – Legislation</b></p> <p>Extensive legislation addresses various aspects of conservation and use of biological resources.<sup>5</sup></p> <p>A national multi-stakeholder committee is developing an Invasive Species Strategy.</p> <p style="text-align: center;"><b>CBD – Protected Areas (PAs)</b></p> <p>PAs represent 47% of the total national land area. An extensive Protected Area system and diverse legislation provides the basis for effective protection. Two new PAs have recently been declared and 370 sites are designated as "Sensitive Areas". Morne Seychellois National Park Management Plan includes zoning and measures for soil conservation and rehabilitation of degraded areas.</p> <p>A Forest Rangers Unit and Marine Park Rangers Unit are in place to ensure protection of National Parks</p> <p>Seychelles has two UNESCO World Heritage Sites: Vallée de Mai on Praslin (island) and Aldabra (island).</p> <p style="text-align: center;"><b>CBD – Biodiversity Plans &amp; Activities</b></p> <ul style="list-style-type: none"> <li>• <i>National Biodiversity Strategy and Action Plan (NBSAP),</i></li> </ul>	<p>sometimes unclear.</p> <ul style="list-style-type: none"> <li>• Communication between MENR and AG Office on compliance issues is weak.</li> <li>• Legislative Committee consists only of MENR members and was not functional in 2004.</li> <li>• There is a lack of understanding among enforcement officials of the importance of environmental laws; they tend to focus on "people" issues.</li> <li>• There are challenges in enforcing laws in small island communities where "everyone knows everyone". Enforcement can be uneven.</li> </ul> <p>There is poor success in gaining convictions and many pending cases due to:</p> <ul style="list-style-type: none"> <li>• low numbers and capacity gaps of enforcement personnel (MENR, AG Office, Coast Guard, Customs, etc.),</li> <li>• lack of support of the police, Attorney-General and courts, e.g., charges not laid, summons not delivered, court cases thrown out; enforcement / conviction is challenging in small communities, and</li> <li>• general weaknesses in the court system: many laws have not been tested in court to find flaws and ensure their applicability.</li> </ul> <p style="text-align: center;"><b>CBD – Legislation</b></p> <p>Environmental laws and policies addressing biodiversity are fragmented.</p> <p>There is no comprehensive legislation, regulations, and management framework to address invasive species.</p>	<p>More systematic and consistent implementation of the laws, policies and plans already in place, e.g., EMPS, NBSAP, SINC, etc., through a combination of greater political will and funding.</p> <p>A legal review to harmonize existing legislation, update old laws and promulgate new laws, as needed, to meet international environmental obligations and emerging national priorities. (Most stakeholders believe that updating of environmental legislation to address new circumstances is more important than new laws since many laws are out-of-date (e.g., <i>Breadfruit Act 1917</i>).</p> <p>Streamlining of the extensive body of environmental legislation, plans and programmes, and cross-referencing with those of relevant productive sectors.</p> <p>Revival of the MENR Legislative Committee, with a broader array of agencies and stakeholders</p> <p>Improved government staff skills in designing and managing institutions to meet international commitments and improve national environmental management, including:</p> <ul style="list-style-type: none"> <li>• design and implementation of effective organizations, legislation, policies and programmes,</li> <li>• drafting of legal tools,</li> <li>• use of strategic planning and performance management (e.g. results-based management, log frame analysis) to get better results, and</li> <li>• involvement of stakeholders in decision-making.</li> </ul> <p>Improved enforcement, compliance and success in gaining convictions through:</p> <ul style="list-style-type: none"> <li>• More consistent application of laws and regulations.</li> <li>• Increased number and quality of enforcement officials.</li> <li>• Direction from political and managerial levels to enforcement personnel to make environment a priority (reaching politicians and managers first).</li> <li>• Increased accountability of enforcement agencies,</li> </ul>
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<p>completed in 1997. Major biodiversity threats were identified as fire, IAS, disease and habitat fragmentation.</p> <ul style="list-style-type: none"> <li>• Seychelles negotiations with Mauritius, Kenya, Madagascar etc, to determine the limits of its EEZ.</li> <li>• MENR Wetlands Unit in place (18 people in 3 units on 3 main islands).</li> <li>• A <i>Wetland Conservation and Management Policy</i> was approved by Cabinet.</li> <li>• Seychelles ratified the Ramsar Convention on Wetlands and is proposing three sites for designation.</li> <li>• Barbarons Biodiversity Centre being developed – a national centre for <i>ex-situ</i> plant management and possibly some faunal <i>ex-situ</i> capacity.</li> <li>• Inshore Fishery Management Plan provides controls (e.g., closed season, licensing) for some species (e.g., sea cucumber and lobster).</li> <li>• Controls on utilisation of species such as coco-de-mer and giant tortoise.</li> <li>• Intensive management programmes for four endangered endemic land bird species, enabling capture/ management for translocation and ecosystem rehabilitation, e.g., rat eradication.</li> <li>• Customs and Immigration regulations on the importation of plants and livestock.</li> <li>• MENR Conservation Unit protects and controls exploitation of flora and fauna</li> <li>• Strict controls on outer islands under the jurisdiction of the Islands Development Company.<sup>6</sup></li> <li>• Seychelles Fishing Authority is gradually expanding its focus beyond fisheries to other marine issues. It celebrated its 20<sup>th</sup> anniversary in 2004 with the slogan “Promoting Responsible Fishing For Sustainability.”</li> </ul> <p style="text-align: center;"><b>CBD – Forest Sector</b></p> <ul style="list-style-type: none"> <li>• National Park and Forestry Service manage state forests and regulates forest resources on private land.</li> <li>• Forest Policy Paper aims for sustainable forest management and protection of water catchments.</li> <li>• Forestry Plan 1993 identifies biodiversity priorities.</li> <li>• Forestry Sector Study is a framework for sustainable management of forest resources, including protection of</li> </ul>	<p style="text-align: center;"><b>CBD – Protected Areas (PAs)</b></p> <p>Protected areas are numerous and difficult to manage and patrol with existing resources.</p> <p>Until 2005, there were no national guidelines for PAs (emerging 2005). A 1971 White Paper was based on IUCN criteria of that time. Proposals have been made (e.g. under <i>Integrated Marine Protected Area System Plan</i> &amp; the stalled framework <i>Biodiversity Act</i>) to re-classify PA categories to reflect new IUCN criteria and changing national circumstances.</p> <p>Some management regimes (e.g. Fishery Regulations) are difficult to enforce because too few people monitor too vast an area.</p> <p><b>CBD &amp; SLM – Land &amp; Resource Planning</b></p> <p>Land use management is poorly connected to environmental protection.</p> <p>The scarcity of level land leads to severe competition among potentially conflicting uses as well as pressures for land reclamation projects in coastal areas.</p> <p>The <i>Plan d’Amenagement du Territoire</i> (National Land Use Plan) was never officially promulgated and implemented, in part because the term “Land Use Plan” had a negative connotation for development and hence lacked political backing.</p> <p>The <i>Town and Country Planning Act 1972</i> was used in the 70’s and 80’s, but is not actively used now. Lack of planning, zoning and integrated management of government land (e.g., when leasing) often leads to <i>ad</i></p>	<p>e.g., use of ombudsman. Consider having the current ombudsman’s office trained or expanded to review environmental topics.</p> <ul style="list-style-type: none"> <li>• Greater awareness and knowledge of environmental laws among Police, Attorney-General and courts.</li> <li>• Greater government – non-government cooperation in enforcement and compliance, e.g., involvement of grassroots communities and NGOs in promoting enforcement and voluntary compliance.</li> <li>• Increased public awareness of regulations in order to promote voluntary compliance, e.g., guidance to landowners on best environmental practices on land cutting, coastal protection, invasive species.</li> <li>• Possible use of “Green Police”, similar to the existing “Green Line” which allows the public to report law-breakers quickly.</li> </ul> <p style="text-align: center;"><b>CBD – Legislation</b></p> <p>Review of biodiversity-related legislation to look at options for updating and streamlining existing laws and/or combining into one comprehensive framework (<i>Biodiversity Act</i>).</p> <p style="text-align: center;"><b>CBD – Protected Areas (PAs)</b></p> <p>Review of the Protected Area (PA) system and gap analysis, with re-designation of PAs and new or re-delineated PAs.</p> <p>Increased resources to manage and patrol PAs.</p> <p style="text-align: center;"><b>CBD – Biodiversity Plans &amp; Activities</b></p> <p>The <i>National Biodiversity Strategy and Action Plan</i> (NBSAP) was developed for a 5-year period (1998-2003). Due to a lack of national and external funding for specific initiatives and monitoring, no major activities were undertaken. Although many NBSAP recommendations were integrated into the EMPS 2000 –2010 or other initiatives, the NBSAP needs to be updated, possibly as part of a review of the EMPS.</p>
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<p>water catchments, reforestation, fire protection, and soil and biodiversity conservation.</p> <p style="text-align: center;"><b>Land &amp; Resource Planning</b></p> <ul style="list-style-type: none"> <li>• EMPS calls for consolidated zoning to restrict development in sensitive, protected, and high elevation areas, and proposes natural resource assessments and resource use strategies.</li> <li>• <i>Environmental Impact Assessment Regulations</i> (EIA) and <i>Guidelines 1996</i> are in place. MENR has 13 guidelines that require that preliminary environment assessments be undertaken to help meet minimum environmental guidelines and enhance sustainability.</li> <li>• <i>Town and Country Planning Act 1972</i> requires permission for land development.</li> <li>• Ministry of Tourism policies and procedures assess, approve and guide tourism development.</li> <li>• <i>Seychelles Ecotourism Strategy</i> was launched in 2003, with a focus on local community involvement. A first project is underway at Anse Royal.</li> <li>• <i>Lighting of Fire (Restriction) Act</i> and the <i>National Forest Fire Contingency Plan</i> provide response strategies for fires of national magnitude. A project in training and procurement of equipment to address forest fire surveillance and early response has been implemented.</li> </ul> <p style="text-align: center;"><b>Water management</b></p> <ul style="list-style-type: none"> <li>• Public Utilities Corporation (PUC), Water Division, manages national water resources, allocates abstraction rights and undertakes most capital water supply projects.</li> <li>• Rivers Committee handles communal and private aspects of water abstraction.</li> <li>• MENR administers small reservoirs and communal irrigation water distribution.</li> <li>• A multi-stakeholder Working Group on Water is assessing national consumption requirements and will propose mechanisms to achieve water security through 2005-2025.<sup>7</sup></li> <li>• New legislation is being considered under the Public Utilities Corporation Act.</li> </ul> <p style="text-align: center;"><b>UNFCC</b></p>	<p><i>hoc</i> land and water development, including infrastructure, and results in problems such as pollution, erosion and conflicting uses.</p> <p>Large and small-scale (sometimes unplanned and uncontrolled) reclamation projects have negative impact on immediate surrounding ecosystems.</p> <p>The <i>Town and Country Planning Act 1972</i> and the <i>Environment Protection Act 1994</i> were weakened by recent incentives to promote investment.</p> <p>Environmental Impact Assessments (EIA) are done for every application to the Planning Authority (MLUH &amp; other Ministries), however, technical analysis could be improved, and monitoring is often lacking.</p> <p>Some tourism establishments undertake uncontrolled beach and wetland modification.</p> <p>An outdated <i>Breadfruit Act</i> poses disincentives to nursery and forest management.</p> <p>Earlier National Disaster Response Plans focused mainly on response, not on a comprehensive programme of prevention, preparedness, response and mitigation. Some resources for disaster management were not properly used: Red Cross, GIS (MLUH), Meteorological Services, SNOC. Post-Tsunami efforts have addressed some of these issues.</p> <p style="text-align: center;"><b>Water Management</b></p> <p>The Public Utilities Corporation, Water</p>	<p>Update of wetland mapping and increased public education and sensitisation on the importance of wetlands.</p> <p style="text-align: center;"><b>Land &amp; Resource Planning</b></p> <p>Better integration of land use planning and environment through updating the Public Sector Investment Programme (PSIP) and National Land Use Plan (NLUP) and cross-linking them with the EMPS.</p> <p>Updating and/or better implementation of the <i>Town and Country Planning Act 1972</i> and the <i>Environment Protection Act 1994</i> (with cross-referencing to other regulations and the EMPS) to better implement land use guidelines and promote more sustainable development.</p> <p>Strengthen EIAs through:</p> <ul style="list-style-type: none"> <li>• improved in-country capacity to scope, undertake and assess EIAs;</li> <li>• mechanisms to address cumulative impacts of development; and</li> <li>• improved quality of EIA reports through better data, especially on biodiversity, and protocols for monitoring and reporting data.</li> </ul> <p style="text-align: center;"><b>CBD – Forest Sector</b></p> <p>Existing legislation allowing forestry reserves should be used to create reserves.</p> <p>Updating of the <i>Fire Contingency Plan</i>.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>Creation of GOS units to address climate change (UNFCC) and sustainable land management (CCD) and upgrading of knowledge and skills of personnel.</p> <p>Improved capacity and greater clout for the National Climate Change Committee to develop and implement the National Climate Change Programme.</p>
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<ul style="list-style-type: none"> <li>National Climate Change Committee (NCCC) coordinates implementation of the National Climate Programme.</li> <li>The EMPS 2000-2010 (Thematic Area Energy and Transport), SINC, and Seychelles Energy Policy promote environmentally-friendly energy technologies.</li> <li>Victoria Traffic Management Programme limits emissions of air pollutants and GHGs.</li> <li>National Disaster Committee is in place, as well as National Risk and Disaster Management Secretariat, which is the executive arm of committee, headed by a DG.</li> <li>A proposal for <i>National Risk and Disaster Management Strategy</i> has been submitted to UNEP, and National Disaster Plan is being developed.</li> <li>National Disaster Fund with recurrent budget of SR 25,000,000 in place under President's Office as of 2005.</li> <li>Post-tsunami 2004, many initiatives to address disaster preparedness, mitigation and early warning have come forward from multilateral, bilateral and national sources.</li> </ul> <p style="text-align: center;"><b>CCD/SLM</b></p> <p>A multi-agency <i>ad hoc</i> drainage committee, chaired by MLUH, was appointed to address flooding and drainage issues. Since that time, this responsibility has moved to MENR and plans will be developed.</p>	<p>Division, cannot easily access the outer islands, which are under the jurisdiction of the Islands Development Corporation (IDC), to assess water resources in their dry-land ecosystem.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>Weak institutional and technical capacity to develop climate change mitigation and adaptation measures.</p> <p>Lack of legislative and regulatory basis to regulate sectors influencing GHGs (e.g., energy, industry, transport, agriculture, forestry).</p> <p>In certain sectors and areas, the location and functional status of disaster management equipment is not well known.</p> <p>The status of public-private National Disaster Emergency Fund initiated early 2005 is not clear (i.e., is it only for recent disasters or is it more permanent?).</p>	<p>A stronger NCC, including measures for climate change mitigation and adaptation and integration into key sectors.</p> <p>Improved disaster preparedness and management institutions and plans, to address natural and environmental disasters, including:</p> <ul style="list-style-type: none"> <li>a Comprehensive Knowledge Management System to help prepare and plan effectively for disasters;</li> <li>integration of disaster preparedness into other sectors and development plans;</li> <li>clear criteria and procedures for accessing the National Disaster Fund as a major financing mechanism for disaster management; and</li> <li>professional level leadership and senior level training in Risk and Disaster Management; and</li> <li>regular maintenance and upgrading of equipment for disaster management.</li> </ul> <p style="text-align: center;"><b>CCD/ SLM</b></p> <p>Institutions, laws and programmes to address land degradation and mitigate the effects of drought on the outer islands.</p> <p>Long-term policies and programmes for outer islands.</p>
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**4.b. Environment Management Plan of Seychelles 2000-2010(EMPS)**  
(a national cross-sectoral strategic plan to promote sustainable development)

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p>EMPS 1990-2000 was considered a success in the evaluation done in 2000-1, as it achieved many goals and programs. EMPS 2000-2010 seeks to continue to integrate environmental issues, including biodiversity and sustainable land use planning, into all development sectors.</p> <p>EMPS 2000 – 2010 lists several programmes and activities aimed</p>	<p><b>Accountability of EMPS Steering Committee (S.C.):</b> There is on-going uncertainty regarding reporting and accountability of the EMPS Steering Committee, e.g., who are the responsible implementing agencies, given that the EMPS is cross-sectoral?</p> <p><b>Mandate of EMPS S.C.:</b> The mandate of the S.C. is unclear and is complicated by the fact that non-EMPS decisions are brought to the committee for response (it is sometimes used as a <i>de facto</i> interministerial advisory committee). In these cases, it is unclear in what capacity is S.C. is acting: Is it advising the Minister and/or Principal Secretary of MENR and/or Cabinet?</p>	<p><b>Accountability of EMPS Steering Committee:</b></p> <ul style="list-style-type: none"> <li>Clearer accountability and reporting relationships.</li> <li>Make the EMPS more effective through assigning responsibility to an overarching organisation.</li> </ul> <p><b>Mandate of EMPS S.C.:</b></p> <ul style="list-style-type: none"> <li>Clearer mandate for committee and its members vis-à-vis the EMPS and projects outside the EMPS.</li> <li>Incentives linked to EMPS implementation and demonstrated benefits for implementing organisations.</li> <li>Possible inclusion of EMPS targets within negotiated contracts, plans and targets for government managers</li> </ul>

<p>at strengthening laws and institutions on convention-related topics (among others): (a) Water, Sanitation and Waste, and (b) Forestry, Biodiversity and Agriculture.</p> <p>The EMPS S.C. includes most of the key government, NGO and private sector stakeholders with a role in environmental management, including some of the best expertise in the country.</p> <p>Many members of the EMPS Steering Committee (S.C.) have been involved with the EMPS for many years, thus providing continuity in environmental management.</p> <p>The EMPS S.C. has the potential to be a very effective forum for design and implementation of national environmental initiatives as well as advising on Seychelles involvement in international conventions.</p>	<p><b>Role of EMPS S.C. members:</b> Roles and lines of accountability, e.g., can members make commitments on behalf of their organisations or do they only represent a sectoral viewpoint, helping to “air” the pros and cons of a decision?</p> <p><b>Structure of EMPS S.C.:</b> Most agenda items are considered in “committee of the whole” meetings, yet not all members are interested in every topic. This may not be an effective use of the time and expertise of senior managers.</p> <p><b>Operation of EMPS S.C.:</b> It is difficult to ensure continuity with such a large group (expanded to over 40 in 2004) and because senior managers often send junior staff. This has undermined the EMPS profile and the S.C. authority to act.</p> <p>Weaknesses in coordination of EMPS through the existing Coordinating Unit were well documented in the 2004 “EMPS Sectoral Awareness Study”, which was based in part on consultations with EMPS members and stakeholders (These conclusions were supported by the NCSA capacity assessment research.)</p> <p><b>Support for the EMPS from members</b> EMPS 2000 – 2010 lacks the profile and institutional backing which supported the first EMPS (1990- 2000).</p> <p>There is little sense of ownership and responsibility for the EMPS among GOS, NGOs and private sector member organisations.</p>	<p>to make EMPS work complementary to organization’s work.</p> <p><b>Structure of EMPS S.C.:</b></p> <ul style="list-style-type: none"> <li>Revised EMPS structure so that it is more efficient and effective, e.g., greater use of sub-committees, working groups, or possibly a two-tier structure with executive and technical levels.</li> </ul> <p><b>Operation of EMPS S.C.:</b></p> <ul style="list-style-type: none"> <li>Improved reporting on EMPS implementation to more explicitly link organizational programmes and projects to EMPS objectives.</li> <li>Mechanisms to design EMPS projects and seek funding.</li> <li>Strengthening of the EMPS Coordinating Unit through increased human and technical resources.</li> </ul> <p><b>Support for the EMPS from Government and stakeholders</b></p> <ul style="list-style-type: none"> <li>Action-oriented initiatives to move the EMPS forward.</li> <li>Education and awareness programmes for relevant stakeholders on key EMPS topics.</li> <li>“Champions” to integrate the EMPS into all relevant sectors, including government, and private sector.</li> <li>Incentives for greater private sector and NGO participation in the EMPS.</li> </ul>
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**PRIORITY ISSUE #5: INTEGRATED MANAGEMENT (IM)**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p align="center"><i>General</i></p> <p>EMPS 2000-2010 adopts sustainable development, which requires integrated management, as its central theme. Many national plans and programmes emphasize integrated management within and among sectors.</p> <p>Seychelles’ membership in SIDS, AIMS, COMESA and the IOC provide vehicles for regional collaboration.</p> <p>The Seychelles “Barbados Plan of Action + 10 Report” highlights needs for assistance in sustainable land management and water resource conservation.</p>	<p align="center"><i>General</i></p> <p>Some integrated management is being done on an <i>ad hoc</i> basis, but there is a lack of mechanisms and sometimes motivation and incentives to collaborate among sectors and individuals.</p> <p>Lessons learned in one place are often not disseminated and applied elsewhere.</p>	<p align="center"><i>General</i></p> <p>Increased use of integrated management in specific sectors and areas, especially for:</p> <ul style="list-style-type: none"> <li>priority topics, i.e., land use planning, physical planning and infrastructure, economic development, ecotourism; Environmental Impact Assessment;</li> <li>priority sectors, i.e., fisheries, tourism, agriculture, health;</li> </ul>

<p>A GEF major project in the pipeline (2005) is designed to mainstream biodiversity in production landscapes and sectors, using an integrated approach.</p> <p>There are new mechanisms and facilities to enable coordinated research programmes and facilities within Seychelles.</p> <p>There are several initiatives to promote sustainable tourism, including:</p> <ul style="list-style-type: none"> <li>• the Tourism Policy “VISION 21”, which advocates a coordinated national effort to maintain and expand tourism in an environmentally and socially sustainable manner.</li> <li>• “Seychelles: Towards an Ecotourism Strategy for the 21st Century”, takes a holistic approach to tourism and sustainable development.</li> <li>• COI (Indian Ocean Commission) has a regional initiative on Environment and Tourism.</li> </ul> <p>In the area of integrated coastal zone management (ICZM), Seychelles is:</p> <ul style="list-style-type: none"> <li>• an active party in the Arusha Resolution (1993) and Seychelles Statement (1996) on ICZM, and</li> <li>• part of the Secretariat for Eastern African Coastal Area Management (SEACAM), whose objective to assist 10 Eastern African coastal countries to implement ICZM, initially by focusing on Capacity Building and Information Dissemination.</li> </ul> <p style="text-align: center;"><b><i>Invasive Alien Species (IAS)</i></b></p> <p>There is national mobilization on IAS, including a multi-stakeholder committee which is preparing a national IAS Strategy over 2004-5.</p> <p>A Plant Conservation Strategy, with a section on IAS, is being undertaken in 2004-5 by a national NGO in collaboration with MENR.</p> <p>A FFEM funded project recently started (2005), implemented through GO-NGO collaboration, in which a major component is habitat restoration which includes control and eradication of IAS.</p> <p>A large GEF project (“Mainstreaming Biodiversity” theme) in the pipeline (2005) has a substantial IAS component.</p> <p>A port survey on marine invasive species in Marine Protected Areas is underway by SCMRT and the IUCN, as a baseline for a possible further project.</p>	<p>There are inherent challenges in managing highly diverse tropical ecosystems.</p> <p>Some outdated approaches to natural resource management still prevail and capacity to implement new approaches is constrained by limited resources.</p> <p>The EMPS Steering Committee has not consistently or effectively fulfilled its role in coordinating cross-sectoral action. There are no other organisations responsible for integrated management.</p> <p><b><i>Invasive Alien Species (IAS)</i></b> Inability to address the issue of IAS in a coordinated and comprehensive way on the principal granitic islands, as eradication is costly and labour-intensive.</p> <p>Lack of centralized and accessible information on IAS detection, monitoring and related technical expertise.</p> <p>Lack of national expertise in taxonomy and the related science of IAS. Seychelles must rely on international expertise, as some expertise is not available locally.</p> <p>Focus to date has been on terrestrial species; more information is needed on marine species, as threats of IAS in the marine environment are poorly understood. (There was only one small IUCN - World Conservation Union project before the current 2005 IUCN /</p>	<ul style="list-style-type: none"> <li>• priority areas, i.e., outer islands, private islands, highlands and coastal lowlands (especially those with tourism).</li> </ul> <p>Greater dissemination of results of successful IM initiatives.</p> <p>Innovative partnerships and projects which demonstrate integrated management and build on past successes.</p> <p style="text-align: center;"><b><i>Invasive Alien Species (IAS)</i></b></p> <p>Implementation of the multi-sectoral IAS Strategy and Action Plan which is underway, with new and/or revised laws, regulations, protocols, codes of conduct, as needed. Use of both “carrot and stick” measures: i.e., incentives and awareness programs, along with regulations and penalties.</p> <p>Increased awareness, knowledge and skills on IAS research and management for relevant government, NGOs and private sector personnel.</p> <p>Greater expertise on IAS data collection and analysis, detection, identification, taxonomy, control, disposal and eradication.</p> <p>Greater knowledge and skills in assessing the economic impacts of IAS, and the costs and benefits of various approaches to restoring degraded ecosystems.</p> <p>Greater knowledge and research of the interactions and feedback mechanisms</p>
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<p>There is good research on IAS invasion in montane forests.</p> <p>Surveys of occurrence and distribution of endemic plants have been done.</p> <p>Several IAS controls are already included in the <i>Plant Protection Law</i> and <i>Veterinary Law</i>. Customs has posters for those arriving at the airport.</p> <p>There is commercial value for harvest of some species: Albizia and Cinnamon trees.</p> <p>There are excellent examples of IAS control and eradication on smaller private and NGO-managed islands. Small private islands have demonstrated the feasibility and benefits of ecosystem rehabilitation, including IAS eradication.</p> <p>MENR has a IAS public awareness campaign, with brochure, posters and displays, e.g., at the Annual Horticultural Fair.</p> <p style="text-align: center;"><b>Integrated Management related to the CBD</b></p> <p>EMPS 2000-2010 Forestry and Biodiversity sub-themes link directly to the CBD and the UNFCCC goals.</p> <p>Objective of EMPS 2000-2010 Water, Sanitation and Waste thematic area is “to promote an effective integrated water management system.”</p> <p>National Agricultural and Fisheries Policy (NAFP) 2003-2013 promotes sustainable agricultural development and land management, and an integrated approach to water use.</p> <p>Seychelles’ commitment to “Conservation and Sustainable Use” of biodiversity (CBD goal) is demonstrated by its terrestrial Protected Areas system (47% of land is protected) and regional leadership in developing Marine Protected Areas.</p> <p>There are good examples of IM successes in Protected Areas, island rehabilitation and forestry, as follows:</p> <ul style="list-style-type: none"> <li>• National Biodiversity Strategy and Action Plan (NBSAP) aims to manage natural resources in an integrated way.</li> <li>• Forest Management Plan, Sector Study and Forest Policy Paper address forest conservation and protection in an integrated manner.</li> <li>• The initial network of Protected Areas, based on the 1971 colonial Government White Paper, incorporated tourism realities into the needs of PAs.</li> </ul>	<p>SCMRT project on IAS in MPAs.)</p> <p>No research on economic impacts of IAS, and costs and benefits of restoring degraded ecosystems.</p> <p>Little legislation to deal with IAS.</p> <p>Limited internal controls preventing IAS spread within the country.</p> <p style="text-align: center;"><b>CBD</b></p> <p>General lack of the financial, human and information resources needed for an ecosystem approach.</p> <p>Some Protected Areas and private islands were managed for only one or two species with little integrated ecosystem management, but this is changing.</p> <p>While PA Management Plans encourage IM, results have been mixed due in part to limited resources, yet attitudes and practices are changing.</p> <p>The PA system was established under criteria that do not reflect the current biodiversity situation or Codes of Best Practice (COBP).</p> <p>Additions to the PA system were made on an <i>ad hoc</i> basis in recent years, with no clear strategy.</p> <p>Some privately management areas that might benefit from PA status have trouble getting it.</p> <p>SEACAM is not active because of</p>	<p>among IAS, biodiversity, climate change and land degradation in Seychelles’ ecosystems.</p> <p>Awareness and incentives for the private sector and the public to participate in IAS control programmes.</p> <p>Greater role for non-technical, public participation programs in the early warning, control and monitoring of IAS, e.g. involve Wildlife Clubs.</p> <p>Transfer and adaptation of best practices on IAS control and eradication from small islands to larger islands.</p> <p>Exploitation of commercial value of some invasive species (e.g., albizia trees, cinnamon).</p> <p>Early Warning System to prevent introduction of IAS into the country as well as inter-island transfers. Rapid Response systems once IAS are introduced, e.g., response kit to identify species and act.</p> <p style="text-align: center;"><b>CBD</b></p> <p>Knowledge &amp; skills in IM topics relevant to Seychelles’ biodiversity, e.g., integrated ecosystem management, coastal zone management, sustainable land management and management of invasive species.</p> <p>Improved skills in integrated management among PA staff, including site managers and wardens.</p> <p style="text-align: center;"><b>UNFCC</b></p>
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<ul style="list-style-type: none"> <li>• An Integrated Marine Protected Areas System Plan (IMPASP 2004) has been drafted, based on IUCN criteria for MPAs, and emphasizing integrated management and co-management of MPAs.</li> <li>• Activities are underway to establish buffer zones and management guidelines for PAs, e.g. re-delineation of Morne Seychellois and Praslin National Parks.</li> <li>• An ecosystem approach has been used in PAs such as Cousin, Aride and Aldabra Special Reserves and Curieuse National Park.</li> <li>• Integrated island-based approaches include Aride and Cousin, which have had successful rehabilitation schemes for 30 years.</li> <li>• Excellent practices are seen in some privately managed areas. Denis, Cousine, Fregate, North, Conception, D'Arros and Anonyme islands have integrated rehabilitation programmes that seem quite successful</li> <li>• In some areas, protected areas management has been expanding beyond management for one or two species to address whole ecosystems.</li> </ul> <p style="text-align: center;"><b><i>Integrated Management related to the UNFCC</i></b></p> <ul style="list-style-type: none"> <li>• SINC addresses reduction of GHGs in an integrated manner, describing sources and sinks for GHGs, mitigation options, and vulnerability to climate change and SLR. These are reiterated in EMPS 2000-2010 and the Barbados Plan of Action.</li> <li>• SINC and EMPS 2000-2010 highlight sectors needing adaptation strategies in response to climate change.</li> <li>• A Vulnerability Assessment Study done under UNFCCC proposes response strategies in these sectors: Natural Habitats &amp; Biodiversity, Coastal Zone &amp; Human Settlements, Agriculture, Water Resources, Human Health, Disasters &amp; Insurance.</li> </ul> <p style="text-align: center;"><b><i>Integrated Management related to the CCD / SLM</i></b></p> <ul style="list-style-type: none"> <li>• A National Wetlands Policy is proposed to protect and conserve wetlands and promote their importance as natural functioning ecosystems. It aims to reverse the trend in loss, modification and degradation of wetlands.</li> <li>• A Project on Sustainable Land Management, using integrated approaches, is in the pipeline.</li> </ul>	<p>funding constraints.</p> <p style="text-align: center;"><b><i>UNFCC</i></b></p> <p>There is limited capacity to cope with climate change and SLR in an integrated manner, especially threats posed to marine and coastal resources.</p> <p style="text-align: center;"><b><i>CCD/SLM</i></b></p> <p>Sustainable management of outer islands is limited by:</p> <ul style="list-style-type: none"> <li>• difficult logistics and high costs;</li> <li>• lack of effective water resource management;</li> <li>• limited capacity within responsible organizations;</li> <li>• heavy degradation from historical land use, e.g. coconut production, guano mining; and</li> <li>• isolation, making effective policing impossible with current resources.</li> </ul> <p>Agricultural development is often poorly integrated with land use planning; many agricultural lands end up in housing.</p> <p>Conflicting agricultural uses are often not well integrated, even within designated agricultural zones.</p>	<p>Mitigation and adaptation policies and plans to address climate change and Sea Level Rise through integrated coastal area management.</p> <p>Increased capacity to assess and manage the effects of climate change and SLR, including:</p> <ul style="list-style-type: none"> <li>• vulnerability, adaptation and response strategies related to: agricultural production, water resources, biodiversity, fisheries, disease occurrence, forestry, Invasive Alien Species;</li> <li>• specialist expertise in mapping of areas vulnerable to SLR and climate change scenarios and modelling; and</li> <li>• tapping into international research on climate change and SLR.</li> </ul> <p>Increased capacity in coastal processes and planning, including:</p> <ul style="list-style-type: none"> <li>• Integrated Marine and Coastal Area Management (IMCAM),</li> <li>• coastal dynamics and erosion,</li> <li>• GIS mapping,</li> <li>• coastal engineering, and</li> <li>• understanding of coral reef ecosystems.</li> </ul> <p style="text-align: center;"><b><i>CCD/SLM</i></b></p> <p>Improved plans for outer islands, based on integrated management.</p>
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**PRIORITY ISSUES #6: INFORMATION MANAGEMENT**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p align="center"><b>Research Capacity</b></p> <p>Seychelles active in the African Environmental Information Network (AEIN), a UNEP pilot project to encourage improved data systems and data-sharing and develop an Action Plan for the region.</p> <p>The Small Island Developing States (SIDS) AIMS regional grouping provides a framework for information exchange among member countries.</p> <p>Seychelles Bureau of Standards (SBS) establishes scientific standards and laboratory facilities, and is responsible for archiving scientific information and authorizing foreign research.</p> <p align="center"><b>Information Management</b></p> <p>Good baseline data for some topics, e.g., birds, fisheries, higher plants, some island ecosystems and some aspects of climate.</p> <p>Good knowledge of data needs and gaps vis-à-vis conventions &amp; other environmental issues.</p>	<p align="center"><b>Research Capacity</b></p> <p>Limited research capacity within the country; much of it is within NGOs, while capacity within government is extremely limited due to lack of time and funds.</p> <p>Research is often driven by foreign scientists and institutions, as well as donors and their respective agendas.</p> <p>Continuing problems in obtaining the results of research, i.e., data, papers and publications, from national and international experts, including: Foreign researchers are required to send all publications to SBS, but this is difficult to enforce. Data collected is often lost to Seychelles when the foreign publications do not include the full data sets. When they publish, many foreign researchers fail to note co-authorship and/or acknowledge Seychelles organisations (GOS, NGO) that have assisted them.</p> <p>Poor expertise in developing proper research/ scientific standards and protocols. Where standards do exist, they are not always respected (research methods are sometimes changed along the way).</p> <p>Lack of scientific basis of some data collection, management and monitoring programmes undermines their validity.</p>	<p align="center"><b>Research Capacity</b></p> <p>Greater national capability to conduct credible field and lab research as well as data analysis and interpretation. This includes improved scientific and technical facilities and equipment, e.g., laboratories, computer/ software, vehicles, and instruments.</p> <p>Mechanisms and incentives (financial and non-financial) to promote locally-driven research, research outside of government and joint government/ non-government research e.g., a Memorandum of Understanding or other type of agreement to encourage cooperation between government and NGOs in data collection and research.</p> <p>More frequent and widespread NGO access to MENR labs and equipment, which are hard for NGOs to acquire themselves.</p> <p>Better protocols with foreign researchers to ensure appropriate referencing, co-authorship and “repatriation” of data from overseas and implementation methods, e.g., follow-up after researchers leave the country and sanctions for universities who do not send promised publications or data.</p> <p>Standardized methods &amp; protocols for data collection, analysis, management, exchange and dissemination for priority topics, e.g., reef monitoring, IAS (not necessary for all topics).</p> <p>Research programmes to address key data gaps, e.g., outer islands, lower animals/ plants, coastal dynamics and climate.</p> <p>Measures to ensure that new scientific methods and protocols are tested in the field and are “backward compatible” with past data sets to maintain continuity for time series data.</p> <p>Continued use of “para-scientific” data, i.e. data collected by amateurs and volunteers, as it:</p> <ul style="list-style-type: none"> <li>• complements scientific research (e.g. shoreline monitoring by coastal businesses, NGOs and residents under UNESCO “Small Island Voice” project),</li> <li>• is a low-cost way to collect data,</li> <li>• can provide an “early warning system” for environmental issues, as volunteers may find something worth further scientific investigation (e.g., a U.K. undergraduate found evidence of a possible second colony of endangered bats on Silhouette Island in 2004), and</li> </ul>

<p>The <i>Statistical Act</i> requires that all data be archived and monitored by MISD.</p> <p>Seychelles' GIS data management system is a good example of efficient data management.</p> <p>Ministry of Environment and Natural Resources has an operational website in place, with an Environment Information Management Committee (EIMS) to make provision to update and collate information from research and project documents.</p> <p><b>CBD</b> Intensive systematic monitoring for terrestrial bird populations and related data, e.g. habitat.</p> <p>Long-term monitoring programmes for Aldabra giant tortoises, marine turtles and whale sharks, and detailed surveys of coco-de-mer palms.</p> <p>Baseline biodiversity assessments on the principal islands were used as a basis for the Sensitive Areas Atlas under the EPA, mapping of the occurrence of indigenous higher plants, and identifying Important Bird Areas for</p>	<p>Many graduates and post-graduates leave the country, taking with them research capacity.</p> <p style="text-align: center;"><b>Information management</b></p> <p>No lead agency responsible for coordinating collection and management of environmental data.</p> <p>Incomplete knowledge of what environmental information is available, where it is held, and what the gaps are. Data are scattered among various government, NGO &amp; private organisations in-country &amp; abroad.</p> <p>Data often in different formats and there are few protocols to standardise methods or resources for proper conversion.</p> <p>MENR and other government ministries have weak data management, e.g., Research publications and other documents are poorly indexed and filed. There is no centralized documentation of publications that are held in different departments and buildings.</p> <p style="text-align: center;"><b>Information dissemination and use</b></p> <p>General constraints on Seychelles' ability to assess the impacts of other countries' actions on its environment.</p> <p>The pace of development over the last decade has outstripped the capacity of both Government and NGOs to assess, mitigate, and monitor adverse impacts of development.</p> <p>Lack of proper identification of data needs for decision-making. Tendency to collect</p>	<ul style="list-style-type: none"> <li>• increases environmental public awareness and participation, among both Seychellois and foreign visitors.</li> </ul> <p>Make volunteer-collected data more useful by standardizing inexpensive methods that can be used by volunteers and training them on techniques and equipment (MENR and/or NGOs could do this).</p> <p>Enhanced research capability of SCMRT, especially in the areas of joint GO-NGO research and training.</p> <p style="text-align: center;"><b>Information management</b></p> <p>Standardised methods and systems for data collection, management, exchange and dissemination, including government policies on GIS data availability and pricing. One or more institutions (e.g., MENR and SBS) or a multi-stakeholder organization or committee should take the lead on this. (Build on interest within MENR to better document what environmental information is held where and to scan and/or digitise environmental information to improve accessibility.)</p> <p>Centralized documentation, with indexing ("Metadata sets") showing which environmental information is held where within government and possible extending to outside organizations over time. Over the long run, a "university-style" computerized information and resource library is needed. A first step might be a virtual Information Clearinghouse for environment &amp; land use data, with a central portal (i.e., a single web page "entry point") linked to various databases.</p> <p>Possible expansion of the MENR website to become a "super web pages" and/or portal to environmental information in Seychelles, once technical problems are addressed.</p> <p style="text-align: center;"><b>Information dissemination and use</b></p> <p>Greater government, NGO and private sector capacity to identify data needed for decision-making and to collect and analyse it for planning and management.</p> <p>Inventory and production of a directory of information sources, experts and organisations involved in environmental management and conservation in the Seychelles.</p> <p>Greater use of modern technology in environmental decision-making, e.g., Geographic Information Systems (GIS) and modelling. An interdisciplinary modelling team of sector experts from the fields of agriculture, energy, technology assessment, economics and finance, and social analysis.</p> <p>Better data on economic values of biodiversity/ natural resources in each economic</p>
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<p>island ecosystem rehabilitation.</p> <p>Increasingly, data collection is going beyond the species level to include ecosystems, primarily for specific island ecosystem restoration projects.</p> <p>Considerable resources are devoted to monitoring particular commercial fish species.</p> <p>Extensive research has been undertaken on higher plants, along with surveys of some priority faunal species.</p> <p>Some NGO and private organizations, e.g., private islands, have good long-term data sets for areas they manage and/or monitor.</p> <p>There are recent initiatives to promote structured research e.g. SCMRT.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>The <i>Global Climate Observing System (GCOS)</i> report assesses capacity needed in Seychelles to perform systematic observation and research projects.</p> <p>The National Beach Monitoring Programme, launched in 2003, provides</p>	<p>large amount of data and spend little time analysing it for use in management actions.</p> <p>Widespread tendency among individuals &amp; organisations not to exchange information due to:</p> <ul style="list-style-type: none"> <li>• concerns regarding copyright, intellectual property rights and proprietary rights for data collected with private funding, e.g. turtle and bird monitoring;</li> <li>• perceived advantage from holding data (possibility of publication may improve chances of project funding or raise the reputation of the individual or organisation); and</li> <li>• bad experiences when sources of data were not acknowledged in academic and popular publications and reports, and/or data was not returned to the source person / organization.</li> </ul> <p>Weaknesses in use of data in EIAs:</p> <ul style="list-style-type: none"> <li>• Challenges in preparing and reviewing EIAs for new projects due weak data and analytical skills.</li> <li>• EIA procedures do not include cross-referencing, and reporting is not based on indicators.</li> <li>• Environmental monitoring in the post-capital phase is rare.</li> </ul> <p style="text-align: center;"><b>CBD</b></p> <p>Biodiversity data management weak in most national organizations, with the notable exception of the Seychelles Fishing Authority.</p> <p>Lack of biodiversity baseline and monitoring data inhibits adaptive management.</p>	<p>sector, and knowledge of how to devise economic accounting tools based on this information.</p> <p>Improved public access to environmental data and information to facilitate informed participation by all parties in environmental management.</p> <p>National multi-party agreements and incentives for data gathering, management and sharing, including possible joint research and protocols among parties sharing information to address concerns regarding equitable data sharing and intellectual property rights.</p> <p>Improved use of data in EIAs, including better databases, protocols for monitoring and reporting, training on writing and reviewing EIAs, and options for post-project environmental monitoring.</p> <p>Increased expertise in environmental monitoring and its role in EIA and other environmental programmes.</p> <p style="text-align: center;"><b>CBD</b></p> <p>Greater knowledge of invertebrates, lower plants and microorganisms for a fuller understanding of national biodiversity resources.</p> <p>Expertise in taxonomy.</p> <p>More strategic thinking when managing threatened species – moving beyond the focus on charismatic species to include key components of biodiversity such as habitat requirements, and also moving from species to population studies.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>Infrastructure, technical capacity and analytical tools to assess climate change, including increased capacity in GIS and modelling. Capacity to survey, monitor and collect data on climate change and SLR, including:</p> <ul style="list-style-type: none"> <li>• assess and archive gas emissions on an inter-sectoral basis, especially in the land use and forestry sectors;</li> <li>• develop local emission factors and assess vulnerability of agriculture, forestry and land use; and</li> <li>• assess coastal dynamics, erosion and degradation for the three main islands and others, with identification of areas of potential flooding from SLR.</li> </ul> <p>A climate change data centre.</p>
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<p>valuable data for designing Sea Level Rise adaptation measures.</p> <p>Some modelling is used for predicting future climate trends.</p> <p><b>CCD/SLM</b> GIS units are in place in Ministry of Land Use and Habitat (MLUH) and MENR, with several qualified specialists.</p>	<p style="text-align: center;"><b>UNFCC</b></p> <p>Lack of a national data collection and management system and expertise to assess and monitor all aspects of climate change and SLR.</p> <p>Lack of capacity to collect, manage and disseminate information for disaster preparedness and response.</p> <p style="text-align: center;"><b>CCD/SLM</b></p> <p>Lack of data on land degradation and lack of data and studies of land degradation on the outer islands.</p>	<p>Greater capacity to collect, manage and disseminate information on disaster preparedness, including pre-disaster planning, early warning, response and recovery strategies.</p> <p style="text-align: center;"><b>CCD/SLM</b></p> <p>Data on land degradation, including current soil erosion conditions, soil loss and erosion rates and historical trends.</p> <p>Ways to facilitate access to the outer islands possibly through partnering with private island owners, NGOs and civil society groups with an interest in sustainable management.</p> <p>Capacity (trained personnel, software and hardware, literature) to undertake studies on land degradation particularly on the outer islands.</p>
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**PRIORITY ISSUE #7: TECHNOLOGY DEVELOPMENT AND TRANSFER**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p>EMPS 2000-2010, SINC, and the Seychelles Energy Policy highlight the importance of identifying appropriate, environmentally-friendly technologies.</p> <p><i>National Agricultural and Fisheries Policy 2003-2013</i> aims to achieve sustainable land management in part through promoting sustainable agricultural technologies.</p> <p>Islands Development Company (IDC) has introduced environmentally friendly technologies on outer islands, e.g., desalination plants, solar energy, liquid petroleum gas, waste treatment, incinerators, export of non-biodegradable plastic.</p> <p>Under NAFF, Government aims to acquire technology to mitigate the effects of drought through a revolving fund.</p> <p style="text-align: center;"><b>CBD</b></p> <p>Forestry researchers, in combination with</p>	<p>Lack of protocols and limited experience in international technology transfer and adaptation to Seychelles.</p> <p>Eco-friendly technologies are often more expensive than traditional technologies.</p> <p>Technology research and development function has no designated line ministry or budget.</p> <p>Insufficient capacity in information technology and computer network administration.</p> <p style="text-align: center;"><b>CBD</b></p> <p>Limited knowledge on marine environment in Seychelles at greater than 20 m. depth (beyond reef environment).</p> <p>Possible concerns if LMOs are</p>	<p>Policy direction on science and technology development and transfer within Seychelles and internationally. Possible National Policy (and/or protocols) on Science and Technology, including technology transfer to address priority environmental issues.</p> <p>Greater capacity within the public and private sector to assess, transfer and adapt new technologies, including indigenous ones, to assist conservation and environment protection.</p> <p>Policies and programmes to encourage the use of “green” technologies within government operations, and to promote adoption by the private sector and public, through increasing awareness and incentives.</p> <p>Possible revolving fund for importation and use of eco-friendly technology.</p> <p>Fiscal incentives to encourage small-scale production of affordable technologies appropriate to Seychelles, especially in energy and water conservation.</p> <p>Transfer of knowledge and skills (“know-how”) as part of technology transfer, not just physical technology, e.g. Seychelles has “imported” ideas from Australia for water conservation for seasonal drought/dryland ecosystems, use of firebreaks and anti-erosion techniques.</p> <p>Updating of sections of the Oil Spill Contingency Plan relating to technology transfer.</p>

<p>Geo-botanic Institute (Zurich), have developed transferable technologies on habitat restoration and IAS.</p> <p>Good quantity of research and data on marine and coastal environment as result of number of research projects (with SCMRT)</p> <p>Possible threats from Living Modified Organisms (LMO) are not currently relevant.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>Technology development and transfer needs are well defined for some aspects of climate change and sea level rise.</p> <p>Good in-country knowledge regarding renewable energy and its applications.</p> <p>Seychellois have historically been skilled in adapting foreign technologies to the local situation, including “learning fast” on topics such as erosion control and coastal engineering.</p> <p>Seychelles’ UNFCC-funded “Top-Up Report on Technology Transfer” assesses the technology needed for climate change mitigation and adaptation in specific sectors.</p> <p>Seychelles could benefit from Clean Development Mechanism (CDM) under the FCCC by attracting project investment from Annex 1 (industrialized) countries.</p>	<p>used in mariculture and fruit production in future.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>Lack of public and private sector capacity and experience in identifying and transferring energy efficient and environmentally sound technologies.</p> <p>No international technology transfer exchange programmes, e.g. between non-Annex I and Annex I Parties under FCCC (developed and developing countries).</p> <p>No UNFCC Clean Development Mechanism proposals submitted to date.</p> <p>Little research into renewable energy sources including solar, wind, wave, and biomass</p> <p>Little attention to climate change adaptation technologies.</p> <p>No technologies for assessing Seychelles’ carbon sinks and reservoirs.</p> <p style="text-align: center;"><b>CCD</b></p> <p>Previous soil laboratory is defunct (rampaged and equipment stolen).</p>	<p>Greater use of modern technologies (e.g., GIS, modelling) to improve data collection, dissemination and use in decision-making. Greater capacity in information technology and network administration.</p> <p>Need for Information Technology (IT) equipment and tools such as higher resolution regional models; mapping facilities and relevant computer accessories (hard- and software) for databases and meta-databases.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>Technology transfer on climate-related research and response measures: e.g., for monitoring climate change and SLR, coastal engineering, adaptation and energy conservation.</p> <p>Greater public and private sector capacity to transfer technologies helpful in climate change/SLR mitigation and adaptation, e.g.,</p> <ul style="list-style-type: none"> <li>• energy-efficient, clean technologies in energy, transport, agriculture and residential sectors;</li> <li>• Early Warning Systems, including risk assessment and disaster preparedness;</li> <li>• technologies to assess Seychelles’ sinks and reservoirs; and</li> <li>• coastal engineering and adaptation technologies.</li> </ul> <p>Clear guidelines on CDM project proposals and greater capacity to develop projects.</p> <p>Energy conservation programmes developed in collaboration with priority energy-using sectors.</p> <p style="text-align: center;"><b>CBD</b></p> <p>Better understanding of Seychelles needs for technology transfer vis-à-vis CBD goals of “protection”, “sustainable use” and “benefit-sharing”.</p> <p>Identification of potential genetic resources within Seychelles.</p> <p style="text-align: center;"><b>CCD</b></p> <p>Fully equipped soil laboratory, including data storage and reporting facilities</p>
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**PRIORITY ISSUE #8: HUMAN RESOURCES DEVELOPMENT (HRD)**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p><b><i>Creating Capacity</i></b> Dramatic increase in the number of environmental and natural resource professionals and technicians in the past decade.</p> <p>Capacity (knowledge and skills) have been built among Seychellois through foreign scholarships; technical workshops and meetings, e.g., convention meetings; and multilateral and bilateral donor projects that have included formal and informal training, and/or “learn by doing.”</p> <p>The Ministry of Manpower and Administration conducted an HRD inventory (2004) as the basis for a proposed national <i>Human Resource Development Strategy</i>.</p> <p><b><i>Enhancing Existing Capacity</i></b> EMPS 2000-2010 includes human resources development.</p> <p><i>Action Plan of the National Agricultural and Fisheries</i></p>	<p><b><i>Creating Capacity</i></b> Absence of a clear direction and strategies for national human resource development in the environment and natural resources fields.</p> <p>Limited number and quality of trained environmental professionals and technical personnel, and lack of specialists and specific skills on key topics to follow up on international meetings, and implement global and national programmes and actions (affects GOs and NGOs).</p> <p>Population size prohibits the establishment of centres for higher education. Limited funds to send graduates abroad for environmentally related training.</p> <p>Environmental training needs not communicated clearly to authorities sending graduates abroad.</p> <p>Overseas training opportunities often steered by funders, not based on proper needs assessment.</p> <p><b><i>Enhancing Existing Capacity</i></b> Many returning graduates and other qualified people cannot find suitable work due to the small job market, weak economy and lack of budgetary resources.</p> <p>Problems retaining skilled professionals in the department or sector, and in the country, due to limited chances for advancement and competition for qualified people from the expanding international environmental job market.</p> <p>Existing capacity within GOS is not always deployed efficiently due to lack of strategic thinking</p>	<p><b><i>Creating Capacity</i></b> More trained personnel in: environmental sciences, planning &amp; management, EIA, ICZM, GIS, environmental law &amp; economics, meteorology / oceanography, etc.</p> <p>Better communication of needs for environmental expertise to national manpower authorities for inclusion in national HRD planning. (The NCSA will provide good needs assessment information, including organizational and individual needs.)</p> <p>Diverse options for developing environmental capacity, e.g., overseas and locally based education and training; peer exchange with personnel who have trained overseas; professional development (short courses); and mentoring by specialists.</p> <p>Better match of professional and technical education and professional development to specific needs, e.g., field and monitoring personnel can have basic technical knowledge; other cadres can be trained as specialists.</p> <p>Upgrading the skills of environmental professionals and technicians in these areas related to the Rio conventions:</p> <ul style="list-style-type: none"> <li>• Research, monitoring and field methods and techniques at technical and professional levels (especially for outer island work).</li> <li>• Environmental economics and law, especially at postgraduate level.</li> <li>• Donor project negotiation, formulation, implementation and monitoring.</li> <li>• Designing effective stakeholder involvement in environmental management.</li> <li>• Training of trainers, including design of participatory training.</li> </ul> <p>Trained personnel for all sectors involved in environment on these priority topics: <i>Environmental/ natural resource management</i></p> <ul style="list-style-type: none"> <li>• All aspects of environmental institutions: law, regulations, enforcement, policy, programme and project planning and management</li> <li>• Strategic planning and performance evaluation, including monitoring and reporting;</li> <li>• Writing and interpreting environmental impact assessments;</li> <li>• Earth, atmospheric, ocean and environmental sciences (ecology, biology);</li> <li>• Land use planning;</li> <li>• Environmental and land use law;</li> <li>• Environmental economics, and</li> <li>• GIS, remote sensing and surveys.</li> </ul>

<p><i>Policy (NAFP) 2003-2013</i> has a plan for human resources development.</p> <p>SINC incorporates strategies for human resource, scientific, technical and institutional capacity building on climate change.</p> <p>HRD provisions in MENR include:</p> <ul style="list-style-type: none"> <li>• HRD coordinator in Administrative Division,</li> <li>• Participation in quarterly meetings of HRD coordinators in line ministries, chaired by Director, Training MAMR.</li> <li>• Training Policy for staff, including specifications for Training Plan, Succession Plan and Local Training, and</li> <li>• a Training Committee, where training needs are discussed.</li> </ul> <p>Seychelles Institute for Management (SIM) offers high quality continuing education programmes based on modern training methods, as well as world-class facilities and expertise for HRD and training programmes.</p>	<p>about human resource management, e.g., some capable people are underutilized and many are “spread thin” over too many projects.</p> <p>Underutilization use of the large pool of trained and experienced persons outside of MENR, in NGOs, civil society and the private sector.</p> <p>No initial training or continuing education for environmental field staff and staff in agencies with activities affecting the environment.</p> <p>Shortage of funds and resources for continuing education and training.</p> <p>Competition among GOs and NGOs for environment specialists.</p> <p>Research often carried out by foreign scientists, with little provision for development of local capacity through skills transfer.</p> <p>Limited GIS capacity.</p> <p>Senior government managers do not always understand the need for fieldwork and scientific research as part of environmental management.</p> <p>HRD issues in MENR:</p> <ul style="list-style-type: none"> <li>• HRD Unit short of manpower and expertise, especially in training needs assessment.</li> <li>• No documentation, monitoring or evaluation of training completed by staff.</li> <li>• No established communication and approval channels to promote training options; some divisions and units manage their own training.</li> <li>• HRD Unit has no overview of training needs and activities within national and donor-supported projects.</li> </ul> <p><b>UNFCC.</b> Inadequate human resources to participate in the Clean Development Mechanism.</p>	<p><i>Meteorology / Oceanography / Climate change</i></p> <ul style="list-style-type: none"> <li>• ICZM, coastal engineering and adaptation;</li> <li>• Climate change/SLR research, including monitoring, mapping and design of response and adaptation strategies;</li> <li>• Disaster preparedness (including Early Warning Systems);</li> <li>• Technical expertise on: Standards Technicians, Quality Assurance Specialists,</li> <li>• Electro-mechanical technicians and engineers, Calibration and standardization of meteorological and oceanographic instruments; and</li> <li>• Maintenance of ocean and hydrological observing equipments.</li> </ul> <p><i>Biodiversity / agriculture / land management</i></p> <ul style="list-style-type: none"> <li>• Biotechnology, especially handling of living modified organisms (LMO),</li> <li>• Taxonomy,</li> <li>• Environmental field methodologies,</li> <li>• Veterinary and animal husbandry,</li> <li>• Captive management of fauna,</li> <li>• Soil chemistry, microbiology and physics, and</li> <li>• Ecosystem and habitat restoration/rehabilitation.</li> </ul> <p style="text-align: center;"><b><i>Enhancing Existing Capacity</i></b></p> <p>More professional development opportunities within technical assistance projects, e.g., inclusion of formal and informal training for counterparts in the Terms of Reference for international consultants.</p> <p>Multiple incentives to retain qualified personnel within Government and within the country, including human resources programmes which offer incentives such as:</p> <ul style="list-style-type: none"> <li>• better financial recompense;</li> <li>• improved benefits packages;</li> <li>• opportunities for advancement;</li> <li>• diverse and interesting work opportunities, e.g., large projects, travel, field work, multi-disciplinary work;</li> <li>• on-the-job training of recent graduates by senior staff;</li> <li>• professional development through attending overseas meetings and courses, training and peer exchange;</li> <li>• recognition, appreciation and acknowledgement from managers; and</li> <li>• proper structure/cadre to develop future professionals (“environment cadre”).</li> </ul> <p>Enhanced capacity of HRD Units in MENR and other sectoral ministries to act as “clearinghouses” for HRD in Ministries, conducting needs assessment; finding training options to meet needs; doing evaluation and follow-up, and documenting training.</p> <p>Expansion and decentralisation of GIS capacity.</p>
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**PRIORITY ISSUE #9: EDUCATION, AWARENESS AND ADVOCACY**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p align="center"><b>Education</b></p> <p>Seychelles has a long-term strategy for environmental education (EE) within the formal education sector, and training for teachers.</p> <p>“Education, awareness and advocacy” is a cross cutting theme In the EMPS 2000-2010.</p> <p><i>National Education Strategy 2002-6</i> (Ministry of Education and Culture) proposes goals, actions and a performance measurement framework. Environmental education provisions will be reinforced, as part of current revisions.</p> <p>National <i>Environmental Education Policy</i> (Ministry of Education and Culture - MEC 1997) commits to:</p> <ul style="list-style-type: none"> <li>• integrating specific environmental values into all activities by Ministry employees and students;</li> <li>• promoting environmental education (EE) values, knowledge and skills among staff and students;</li> <li>• partnering with the MENR, other ministries and NGOs to promote EE in formal education;</li> <li>• establishing a EE Coordinating Committee;</li> <li>• promoting school level environmental activities, including clubs, projects, newsletters, etc., and</li> <li>• training staff to implement EE.</li> </ul> <p>A comprehensive environmental education resource for lower secondary, <i>“Learning for Sustainable Living in Seychelles”</i> (released 2004) was developed/ funded by a partnership of an NGO and the Environment Trust Fund.</p> <p>Seychelles’ UFCCC-funded “Top-Up Report” proposes that peer education on climate change occur through secondments of personnel among ministries.</p> <p align="center"><b>Awareness/ Advocacy</b></p> <p>Considerable general environmental awareness among the scientific and technical community.</p>	<p align="center"><b>Education</b></p> <p>Lack of teachers with specialist training in environmental education.</p> <p>Inability of education officials to convince manpower and training officials (MMA) of need to send more graduates abroad for environmental degrees. (See Issue #8, HRD.)</p> <p>The current secondary school system, based on a British core curriculum model (e.g. British GCSE and “A” level exams), is not always conducive to integrating new and topical issues. Students often have to cover environmental topics outside school hours.</p> <p>Weaknesses in teachers’ ability to integrate environmental issues into existing curriculum, given the controversial nature of the issues and the lack of resources and training.</p> <p align="center"><b>Awareness/ Advocacy</b></p> <p>Weaknesses in environmental awareness campaigns in targeting key audiences and behaviours, “messaging” about what can be done, finding incentives for behaviour change, and measuring effectiveness. For e.g., there are few pre- and post-</p>	<p align="center"><b>Education</b></p> <p>In-depth curriculum and extra-curricular materials on specific environmental topics of importance to Seychelles, e.g., convention-related topics.</p> <p>More environmental education (EE) specialists and more training for all teachers integrating EE into other courses. (Most individuals are trained in environment OR communications, but there would be benefits from more cross-fertilisation.)</p> <p>More and better labs, tools and equipment for science and environmental projects, including student research. (See notes under “Priority #6: Information Management, re: importance of “amateur” science.)</p> <p align="center"><b>Awareness/ Advocacy</b></p> <p>More widespread capacity to designing effective environmental awareness programmes that are linked to broader environmental goals.</p> <p>Awareness campaigns on priority issues related to the conventions, with specific objectives, targeted groups and behaviors and evaluation indicators.</p> <p>More effective awareness and education campaigns, through setting specific objectives, targeting key groups and behaviors, and evaluating success, using qualitative and quantitative evaluation, e.g., Objectively Verifiable Indicators (OVIs).</p> <p>Greater direct community and public participation in awareness campaigns.</p> <p>Use of modern interactive techniques, e.g., video, art, theatre, in public awareness campaigns.</p> <p>Public awareness campaigns that incorporate both “carrot” and “stick” approaches, i.e., positive social marketing messages combined with disincentives such as fines and social</p>

<p>Good national dissemination of environmental information (thematic reports and case studies). Considerable exchange of information through networking, training, expert missions, donor cooperation projects and international networks such as AIMS, AOSIS and SIDS.</p> <p>Numerous awareness-raising campaigns and activities undertaken by Government, NGOs and the media have produced extensive materials, i.e., brochures, manuals, books, TV programmes, and resulted in widespread public awareness of basic environmental issues. Activities include:</p> <ul style="list-style-type: none"> <li>• Annual Environment Week and theme days, e.g., Biodiversity;</li> <li>• Weekly Environment Page in newspaper;</li> <li>• support to grassroots NGO “Wildlife Clubs”;</li> <li>• MENR environment website; and</li> <li>• “Green Line”.</li> </ul> <p>Awareness &amp; education initiatives have reached some key sectors and target groups, e.g. science, tourism, fisheries and agriculture.</p> <p>An active “Education, Information and Communication (EIC) Unit” in MENR conducts numerous campaigns and activities, is a member of Environmental Education Committee, and is active in extra curricular school activities.</p> <p><i>National and Agricultural Policy (NAFP) 2003-2013</i> promotes awareness of sustainable agricultural practices.</p> <p>The SINC proposes public awareness and education on climate change and implications for Seychelles. These topics are currently covered to some degree by schools and public awareness campaigns under the Montreal Protocol on Ozone Depletion (implemented by the Ozone Unit-MENR).</p>	<p>assessments to gauge the impacts of campaigns.</p> <p>Insufficient public understanding of some environmental issues (e.g., convention topics).</p> <p>Limited environmental awareness at local government level (e.g. District Administrators).</p> <p>Lack of public and community debate about / participation in environmental decisions and programmes.</p> <p>Lack of awareness of sustainable land management among private island owners and employees on outer islands.</p> <p>Difficulty in reaching some segments of the population that remain unconvinced of the value of the environment and the need for resource management.</p> <p>Some awareness and education components of national and donor-supported project are not communicated to MENR – EIC or do not draw on their expertise.</p>	<p>disapproval.</p> <p>Campaigns targeted to key sectors and stakeholders, and involving them in campaign design, e.g.:</p> <ul style="list-style-type: none"> <li>• contractors and builders re: environmentally-friendly land preparation and building techniques,</li> <li>• hoteliers, re: “Green Operations” and certifications,</li> <li>• enforcement officers especially re: new laws and regulations,</li> <li>• post-youth group, i.e. 35 – 55 years, who are often workers and parents</li> </ul> <p>Improved dissemination of environmental information to tourism operators and tourists.</p> <p>Increased skills among media to communicate environmental issues.</p> <p>Greater access to media by NGOs and private sector.</p> <p style="text-align: center;"><b>UNFCC</b></p> <p>Improved public and political understanding of climate change impacts and options through outreach to educational institutions, government agencies, NGOs and the private sector.</p> <p>Greater capacity for NCCC to develop climate change awareness campaigns for the public and decision-makers, and training for specialists.</p> <p>Enhanced public awareness of CCD/SLM and their role in combating land degradation.</p>
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**PRIORITY ISSUE #10: STAKEHOLDER INVOLVEMENT**

<b>STRENGTHS</b>	<b>CONSTRAINTS</b>	<b>CAPACITY NEEDS</b>
<p align="center"><b><i>Participation / Ownership</i></b></p> <p>EMPS 2000-2010 aims to develop human resources and promote partnerships and ongoing community involvement.</p> <p>EMPS Steering Committee includes diverse stakeholders from all relevant sectors.</p> <p>Multi-stakeholder cooperation has occurred through various collaborative projects.</p> <p>NGO's have a historic success rate in Seychelles in the management of protected areas, species conservation and environmental education</p> <p>NGOs and civil society are involved environmental management through their own projects and campaigns, sitting on advisory groups and participation in stakeholder consultations. Examples include the annual Environment Week and youth activities through the UNESCO Small Islands Voice programme.</p> <p>NGOs have launched national strategies and programmes, e.g.:</p> <ul style="list-style-type: none"> <li>• Action Plans for endemic land bird species,</li> <li>• management of turtle populations, and</li> <li>• Strategy for Plant Conservation.</li> </ul> <p>Several newly formed NGOs focused on island conservation have recently benefited from Government support.</p>	<p align="center"><b><i>Participation / Ownership</i></b></p> <p>The potential of NGOs, private island owners and civil society to participate in sustainable development initiatives appears to be under-utilised, given the strengths of these sectors in Seychelles.</p> <p>GOs and NGOs can collaborate on public awareness and education through the Information and Education Section (Environment), but this has sometimes been challenging; they need to be partners instead of competitors.</p> <p align="center"><b><i>Communication / Consultation</i></b></p> <p>Government takes mostly a regulatory and implementation role, and involves stakeholders only to a limited extent.</p> <p>Communication and collaboration within and among government and non-government organizations has been uneven because:</p> <ul style="list-style-type: none"> <li>• prevailing perception that there is insufficient critical mass among civil society organisations to influence decisions,</li> <li>• conflicting objectives and views, competition and lack of trust within and among GO – NGO's – private sector,</li> <li>• interpersonal conflicts among individuals and organisations,</li> <li>• legacy of negative experiences e.g. project failures or conflicts;</li> <li>• relevant stakeholders are sometimes difficult to identify; e.g., certain groups such as farmers, do not readily form viable associations;</li> <li>• lack of community and stakeholder participation on outer islands; and</li> <li>• the small numbers of NGOs and small staff numbers mean they are often overstretched.</li> </ul> <p>There is a lack of communication about, and involvement in international environmental conventions among GOS, foreign donors and stakeholders, because:</p>	<p align="center"><b><i>Participation / Ownership</i></b></p> <p>Good governance mechanisms, including transparency, multi-stakeholder involvement and Government / non-government cooperation and partnerships.</p> <p>GOS role expanded from regulator/ implementer to facilitator, including involving key stakeholders in environmental management and helping them to build capacity.</p> <p>Greater sense of participation and ownership among all EMPS members, through more active multi-stakeholder EMPS programme implementation.</p> <p>New and innovative partnerships among Government, NGOs, private sector and civil society to address international and national environmental priorities, building on their respective strengths and networks.</p> <p>Greater awareness among farmers of the benefits of associations, and involvement of farmer associations in international and national sustainable agriculture programmes.</p> <p align="center"><b><i>Communication / Consultation</i></b></p> <p>More effective communication and collaboration among Government, environmental NGO's, private sector and civil society organisations.</p> <p>Protocols and partnerships, or possibly a formal MOU, on government – stakeholder collaboration. (Note: As of 2005, the Ministry of Social Affairs is develop an GO – NGO collaborative framework. All Ministries will have "focal points" to collaborate with NGO's. This could be used as a model.)</p>

<p>The government, an NGO and the Environment Trust Fund (private sector funds) worked in partnership to develop the new 2004 Environmental Education Curriculum.</p> <p>MENR has indicated its commitment to promote collaboration with NGOs and civil society.</p> <p>Private businesses are involved in the fields of waste management and ecotourism.</p> <p>There is a drive to decentralise conservation management from government to the broader community, including NGO/ private sector partnerships.</p> <p><b>Communication / Consultation</b> The coordinators of the Environmental Education Unit; Ministry of Education and Culture, and of the Education, Information and Communication Unit; MENR sit on several key national environmental committees to ensure that there is a public awareness component to environmental programmes.</p>	<ul style="list-style-type: none"> <li>• stakeholders may not see the benefits of international conventions for their work,</li> <li>• there are few communication pathways between stakeholders and international organizations;</li> <li>• there is little communication between those managing international conventions and other stakeholders, and</li> <li>• conventions deal directly with Governments as parties to the agreements.</li> </ul> <p>Lack of support and incentives for community involvement in environmental initiatives due to:</p> <ul style="list-style-type: none"> <li>• limited Government support for civil society groups,</li> <li>• limited involvement of stakeholders in designing projects and mobilizing funding and resources to implement them,</li> <li>• Government reluctance to involve local communities in managing donor projects,</li> <li>• lack of incentives for working in isolated areas and under difficult conditions, and</li> <li>• lack of awareness of opportunities offered by international conventions.</li> </ul> <p>Lack of feeling of public ownership in environmental decision-making because of:</p> <ul style="list-style-type: none"> <li>• a perception that it is largely a Government concern,</li> <li>• a common view that benefits from projects are secured only by Government, and</li> <li>• a lack of awareness and ownership of the EMPS among all sectors of the public.</li> </ul> <p>NGOs and other civil society organisations have limited financial resources.</p>	<p>Diverse incentives to promote multi-stakeholder collaboration, including:</p> <ul style="list-style-type: none"> <li>• Greater use by government of NGO and private sector expertise and resources.</li> <li>• Greater representation of NGOs and private sector on Government boards and committees.</li> <li>• Communication channels among GO, NGO's, private sector and civil society organisations, e.g., workshops, newsletters, working groups.</li> <li>• Invitations to experts and/or high profile people to participate in collaborations to give higher profile and attract participants.</li> <li>• Innovative partnerships among GOS, NGOs, private sector and international organisations to better tap into available funding and other resources (expertise, labs, equipment).</li> <li>• Greater outreach to private sector to enhance collaboration, e.g., tax breaks for businesses and NGO's who protect the environment.</li> </ul> <p>Innovative partnerships (GO, NGO, private sector, civil society and/or research organisations) on specific environmental issues such as:</p> <ul style="list-style-type: none"> <li>• Nature interpretation, e.g., Hotels and tour companies could contract nature guides and speakers from NGOs.</li> <li>• Waste and water management; coastal and marine management; habitat restoration.</li> <li>• Shared use of scientific facilities and equipment, e.g., laboratories by GO and NGOs.</li> <li>• Infrastructure development/ land use planning.</li> <li>• Energy conservation and reduction in vehicle emissions.</li> </ul>
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