



Government of Seychelles

United Nations Development Programme

Capacity Development for Sustainable Land Management in Seychelles

Brief description

The project is submitted under the global UNDP-GEF Targeted Portfolio Project for SLM in LDC and SIDS.

The granitic islands of the Seychelles are composed of a core of ancient granitic rock which forms the steep uplands, with narrow surrounding coastal plains formed by beach sand. Both types of soils are physically and chemically poor. Over 80% of Seychelles land area is under some form of forest or vegetation cover, though less so on the more urbanized main islands. Land degradation has mainly occurred because of forest fires, clearing of forest for development purposes (agriculture, including plantations; housing; infrastructure), effects of invasive alien species, unsustainable agriculture and construction practices, and landslides or rock falls.

Prevention and control of forest fires is taking place, but needs a comprehensive all-encompassing strategy, including models for rehabilitation of degraded areas. Unsustainable harvesting of forest products is on the increase and made worse because of lack forest management models. Invasive alien creepers that are smothering the forest is a relatively new phenomenon of which little is known, and no control measures are established. Soil conservation in agriculture is not effectively addressed because of non-conducive lease agreements of state agricultural land, non-effective extension work, and lack of adequate soil testing facilities. Risks of landslides are not well incorporated in land use planning and construction practices. Seychelles has no National Action Plan or Investment Plan for sustainable land management.

The project aims to increase capacity in prevention and control of forest fires, rehabilitation of degraded areas, control of IAS creepers, development of forest management plans, soil conservation in agriculture, and minimizing risks of land movements. It also aims to mainstream SLM in relevant policy and regulatory frameworks, and it will assist in developing a National Action Plan and Medium Term Investment Plan.



SIGNATURE PAGE

Country: Seychelles

Expected Outcome(s): 1. Individual and institutional capacity for SLM enhanced; 2. SLM mainstreamed into economic and sectoral development; 3. National Action Plan completed; 4. Medium Term Investment Plan being financed and implemented

Expected Output(s): Capacities for forest fire prevention, detection and suppression are strengthened; Cost-effective techniques for the rehabilitation of burned/deforested land are tested and developed; Cost-effective techniques/capacities for controlling deforestation by IAS creepers are developed; Sustainable production forest management systems are developed; Improved capacities for soil conservation in agriculture are developed; Capacity for minimizing risks of landslides is developed; Capacity on Environmental Economics in SLM developed; Sustainable Land Management principles integrated in relevant national policies and strategies; Legal and regulatory framework concerning Sustainable Land Management reviewed, updated and harmonized; Stakeholders are aware of and apply SLM practices; NAP prepared, disseminated and monitored; Medium Term Investment Plan for SLM developed, financed and implemented.

Implementing partner: National Parks & Forestry Services, Crop Development & Promotion Division, Ministry of Environment and Natural Resources.

Other Partners: Ministry of Foreign Affairs, Ministry of Land use and Habitat, NGOs, Farmers Association, Food and Agriculture Organization

Programme Period: 2007-2011
Programme Component: Energy and Environment for Sustainable Development
Project Title: Capacity Development for Sustainable Land Management in Seychelles

UNDP Project ID: 00048158
 ATLAS Award ID: 00042076
 PIMS No. 3390

Project Duration: 4 years
Management Arrangement: National Execution

Total Budget:
Regular (GEF): 500,000.-
 • PDF-A : 25,000.-
 • MSP : 475 ,000.-

Allocated resources:
Government: 140,000.- in cash / 1,003,000.- in kind
In Kind (others):
 • National NGOs : 167,000.-

Parallel funding:
 • UNDP: 100,000
 • FAO : 235,000.-
 • GM: 10,000.-

Agreed by:

On Behalf of:	Signature	Date	Name/Title
Government of Seychelles:		21/06/07	Mrs. Jeannette d'Offay Technical Advisor Ministry of Foreign Affairs and International Cooperation
Implementing partner:		21/06/07	Mr. Rolph Payet, GEF OFP Principal Secretary Ministry of Environment and Natural Resources
UNDP		21/06/07	Mr. Claudio Calderone UNDP Resident Representative



Table of Contents

LIST OF ACRONYMS AND ABBREVIATIONS.....	4
PART I: SITUATION ANALYSIS	6
BACKGROUND AND CONTEXT	6
Environmental context	6
Land degradation.....	8
Socio-economic context	10
Policy, institutional and legal context	12
Causes of land degradation	17
PART II: PROJECT STRATEGY	20
PROJECT DESCRIPTION	20
Baseline course of action.....	20
Capacity and mainstreaming needs for SLM	23
Project rationale and objective	25
Expected project outcomes, and outputs	26
Global and local benefits.....	28
Linkages to UNDP activities and programs	28
Sustainability (including financial sustainability).....	31
Replicability	31
Stakeholder Involvement Plan	31
FINANCIAL PLAN.....	35
Streamlined Incremental Costs Assessment.....	35
Project Budget.....	37
PART III: MANAGEMENT ARRANGEMENTS.....	42
PROJECT IMPLEMENTATION PROCESS.....	42
Institutional framework and project implementation arrangements	42
PART IV: MONITORING AND EVALUATION	45
MONITORING AND REPORTING	45
Project Inception Phase	45
Monitoring responsibilities and events	45
Project Monitoring Reporting	47
INDEPENDENT EVALUATION	49
AUDIT CLAUSE.....	50
ANNEXES	52
ANNEX I: THREATS, ROOT CAUSES, BARRIERS, SOLUTIONS AND BASELINE MATRIX	52
ANNEX II: STRATEGIC RESULTS FRAMEWORK.....	63
ANNEX III: NATIONAL MSP ANNUAL PROJECT REVIEW FORM	73
ANNEX IV: TERMS OF REFERENCE FOR STEERING COMMITTEE AND PROJECT MANAGER.....	91
ANNEX V: GEF OPERATIONAL FOCAL POINT ENDORSEMENT LETTER.....	94
ANNEX VI : LPAC Minutes.....	96
ANNEX VII: REFERENCES	96

LIST OF ACRONYMS AND ABBREVIATIONS

AG	Attorney General	MISD	Management Information and Statistics Division
AIMS	Atlantic, Indian Ocean, Mediterranean and South China Seas (grouping under SIDS)	MLGCS	Ministry of Local Government, Culture and Sports
APR	Annual Project Report	MLUH	Ministry of Land Use and Habitat
AWP	Annual Work Plan	MOF	Ministry of Finance
BD	Biological Diversity (Biodiversity)	MOU	Memorandum of Understanding
BIPP	Bankable Investment Project Profile	MSP	Medium Sized Project
CAADP	Comprehensive Africa Agriculture Development Programme	NBSAP	National Biodiversity Strategy and Action Plan
CBD	Convention on Biological Diversity	NC	Nature Conservation (Division of MENR)
CCA	Common Country Assessment	NCSA	National Capacity Needs Self Assessment
CO	Country Office (UNDP)	NEPAD	New Economic Partnership for African Development
COI	Commission de l'Océan Indien	NGO	Non-Governmental Organization
COMESA	Common Market for Eastern and Southern Africa	NPTS	Nature Protection Trust Seychelles
DA	District Administrator	PA	Protected Areas
DNR	Department of Natural Resources	PAT	Plan d'Aménagement du Territoire (Land Use Plan)
DOE	Department of Environment	PCA	Plant Conservation Action Group
DOF	Department of Finance	PIR	Project Implementation Reviews
DOTT	Department of Tourism and Transport	PCU	Programme Coordination Unit
EEZ	Exclusive Economic Zone	PMU	Project Management Unit
EIA	Environmental Impact Assessment	PPS	Policy Planning & Services (Division of MENR)
ENGO	Environmental Non-Governmental Organization	PS	Principal Secretary (of ministerial Department)
EMPS	Environment Management Plan of Seychelles 2000-2010	PSC	Project Steering Committee
EPA	Environmental Protection Act (1994)	PUC	Public Utilities Corporation
EU	European Union	RCU	Regional Coordinating Unit
FAO	Food and Agriculture Organization	SAHTC	Seychelles Agriculture and Horticulture Training Centre
FFEM	Fond Français de l'Environnement Mondial	SBS	Seychelles Bureau of Standards
GDP	Gross Domestic Product	SCCI	Seychelles Chamber of Commerce and Industries
GEF	Global Environment Facility	SCMRT	Seychelles Center for Marine Research and Technology
GIS	Geographic Information System	SHTA	Seychelles Hospitality and Tourism Association
GM	Global Mechanism (under UNCCD)	SIB	Seychelles Investment Bureau
GOS	Government of Seychelles	SIDS	Small Island Developing States
IBRD	International Bank for Reconstruction and Development (World Bank)	SIF	Seychelles Island Foundation
IAS	Invasive Alien Species	SLM	Sustainable Land Management
ICS	Island Conservation Society	SMB	Seychelles Marketing Board
ICU	International Conventions unit (under DOE)	SR	Seychelles Rupee
ICZM	Integrated Coastal Zone Management	SWIOFP	South West Indian Ocean Fisheries Project (GEF-UNDP)
IDC	Island Development Company	TCPA	Town and Country Planning Act
IOC	Indian Ocean Commission	TPR	Tripartite Review (UNDP)
IOTC	Indian Ocean Tuna Commission	TTR	Terminal Tripartite Review
IUCN	World Conservation Union	UNCCD	United Nations Convention on Combating Desertification
LIS	Land Information System	UNDP	United Nations Development Programme
LME	Large Marine Ecosystem	UNDP CO	UNDP Country Office
LUNGOS	Liaison Unit for NGO's	UNEP	United Nations Environment Programme
MCSS	Marine Conservation Society, Seychelles	UNWTO	United Nations World Tourism Organization
MDG	Millennium Development Goal	WHS	World Heritage Site (UNESCO)
MENR	Ministry of Environment and Natural Resources	WIOLab	Western Indian Ocean Land based activities (GEF-UNEP Project)
MEPE	Ministry of Economic Planning and Employment	WTO	World Trade Organisation
MEY	Ministry of Education and Youth	WWF	World Wide Fund for Nature
MPA	Marine Protected Area / Marine Parks Authority		
MFA	Ministry of Foreign Affairs		

The official exchange rate as of January 2007 of Seychelles Rupee (SR) : US dollar = 1 : 5.65

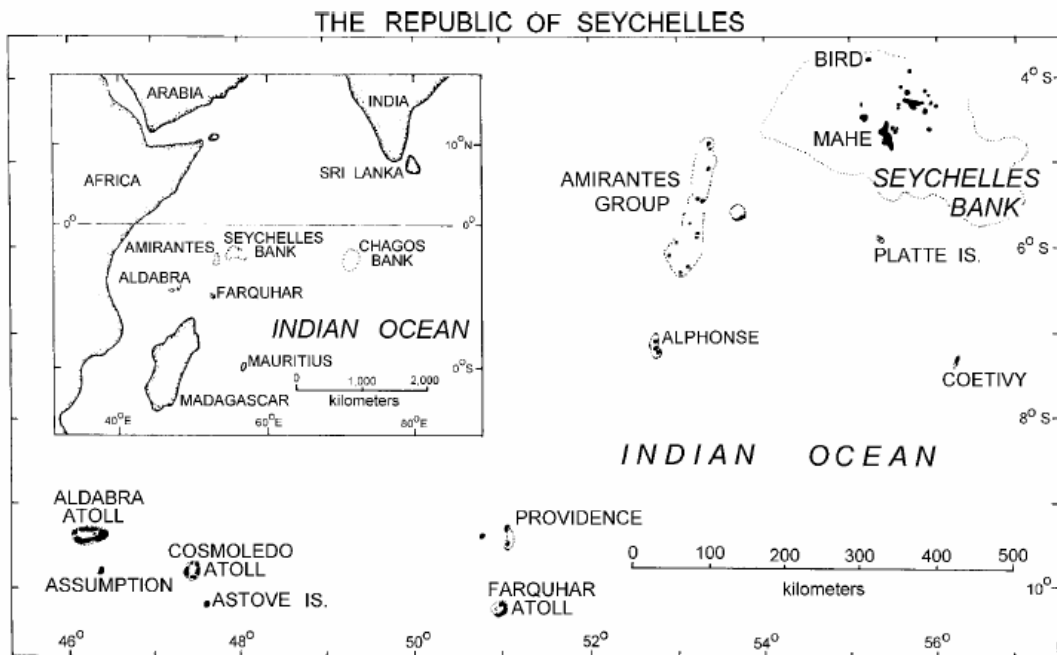
PART I: SITUATION ANALYSIS

BACKGROUND AND CONTEXT

Environmental context

1. The Seychelles is an island archipelago in the Western Indian Ocean located between 3 and 10 degrees south of the equator and between longitude 46 and 57 degrees east. It has a total land mass of 455 square km, and an Exclusive Economic Zone (EEZ) covering 1.374 million square km. Seychelles consists of 155 islands, as laid down in the constitution, of which 42 are granitic and the rest of coralline origin. The main granitic islands, in descending order of size, are Mahé, Praslin, Silhouette and La Digue. Together with other smaller granitic islands these are known as the “inner islands”. The coralline islands are small in size and known as the “outer islands”. Map 1 shows the physical location of the Seychelles archipelago, while Map 2 shows the location of the granitic islands.

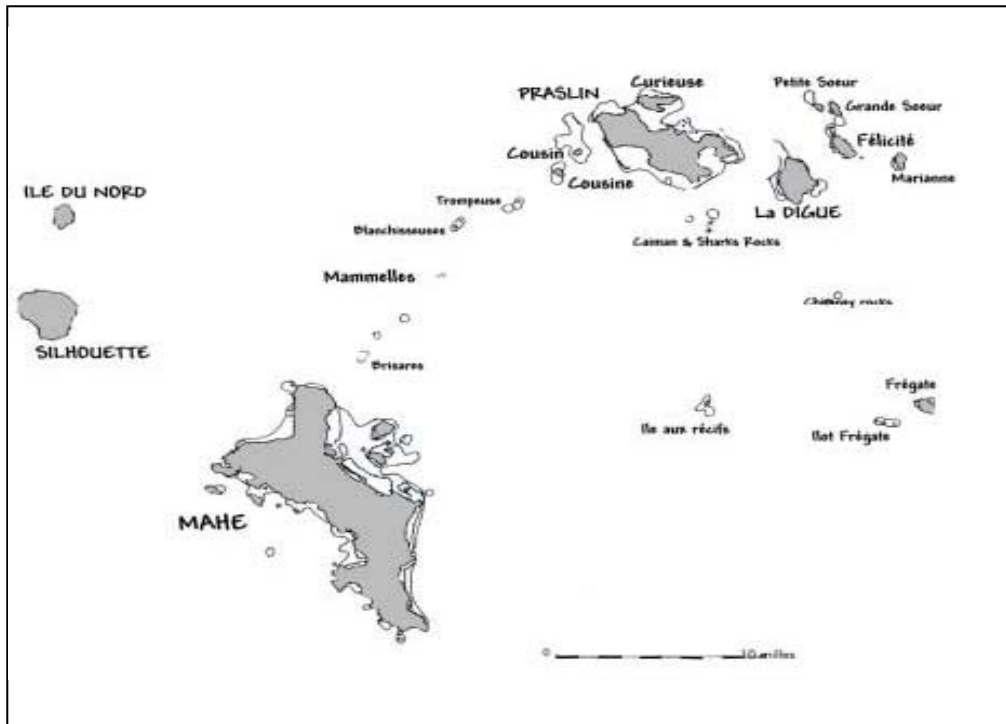
Map 1. Location of the Seychelles Archipelago



2. The climate is equatorial with an average annual rainfall of 2,200 mm. Humidity is uniformly high, and mean temperatures at sea level range from 24°C to 30°C. The prevailing winds bring the wet northwest monsoon from December to March and the drier southeast monsoon from May to October, with heavier wind. Climatic conditions, however, vary considerably between islands, mainly in relation to their altitudes and positions; the mean annual rainfall in the country decreases from the north-eastern to the south-western islands. Rainfall can be as high as 5,000 mm per year on the top of Morne Seychellois (900 m.) on Mahé, and as low as 867 mm on the coralline island of Assumption (Walsh 1984). High intensity rainfall, with intermittent heavy downpours and even occasional torrential rains (up to 250 mm/day) may occur from December to March. The main granitic islands lie to the north of the Western Indian Ocean cyclone belt, but they can occasionally suffer from storm surges from cyclonic activity to the south. Recent meteorological research has shown that with on-going climate change the drought periods may become longer and the frequency of extreme

weather, including torrential rains, may increase.

Map 2. Inner Granitic Islands



3. The granitic islands are generally characterized by a rugged central range of hills (highest point: Morne Seychellois, Mahé, 900m above sea level) with many steep, smooth, bare rock inselbergs known as “glacis”. These islands are ancient remnants of ancient Gondwanaland, and have been separated from the continental landmasses of Africa and the Indian sub-continent for more than 65 million years. The coralline islands are small, flat and have developed from the slow accretion of coral, and are geologically much younger than the granitic islands. The island of Aldabra, a World Heritage Site, is the largest raised coral atoll in the world, and is considerably older than the other coralline islands. Because of its long geological history of isolation, the region to which Seychelles belongs has been classified as one of the world’s “hottest biodiversity hot spots”.

4. The granitic islands of the Seychelles are composed of a core of granitic rock in excess of 600 million years old, which form the uplands, with the narrow surrounding coastal plains formed by beach sand (being a more recent deposit of about 6,000 years). The granite has been weathered to produce a lateritic soil on the uplands, which is high in kaolinitic clay, acidic in nature and low in nutrients and organic matter, therefore with low infiltration rate, low waterholding capacity and very difficult to work when dried. These upland soils are often shallow, overlying granitic bedrock, but deeper and more fertile (with more organic matter) in the valley bottoms. These soils are often found on strong slopes, sometimes in excess of 15 degrees, and therefore extremely prone to erosion.

5. The sandy soils on the narrow coastal plains and the coralline islands (“Shioya Series”) are alkaline in nature, coarse, porous, loose, with no soil structure and no clay content, thus with high water infiltration rates. It contains very little nutrients, apart from calcium (98%), and is very low in organic matter. On certain outlying islands its fertility has been enhanced through bird guano deposits (forming a soil known as the “Jemo Series”). These soils can be easily worked and therefore very sought for intensive agriculture, with consequently high water

and nutrient input.

6. Over 80% of Seychelles land area is under some form of forest or vegetation cover. However for the islands of Mahé, Praslin and Curieuse the vegetation cover is less as much of the areas have either been urbanized or degraded. The main terrestrial habitats of the granitic islands are; a) beach and dune vegetation; b) lowland and coastal forests up to 200-300m; c) intermediate forests from 200 to 500m altitude; d) mountain mist forests over 400-500m; and e) granite inselbergs or “glacis” outcroppings at all altitudes. The coralline islands are characterised by a mixed scrub vegetation. Where sea water commonly penetrates the limestone, the Pemphis thicket type is commonly found.

Land degradation

7. The terrain on the granitic islands is often steep and prone to soil erosion if vegetative cover is removed. Deforestation of the land has mainly occurred through the effects of forest fires, removal of vegetation for development purposes (agriculture, housing, infrastructure), over harvesting of forest products, and increasing prominence of invasive alien species. Furthermore, the coastal zones of the granitic islands and the low-lying coralline or sand cays are most vulnerable to beach erosion and impacts of global climate change and the ensuing sea level rise. Seychelles has also suffered from coral bleaching, which may further affect coastal areas in the long term. Seychelles has recently experienced several extreme weather conditions causing on three occasions (1997, 2002 and 2004) major widespread landslides and flooding. “Extreme” dry periods have caused forest fires and water shortages, which usually happens during the south east monsoon, from June – September.

8. Historical records prior to the establishment of the first settlement indicate that granitic islands like Praslin, Curieuse and la Digue were already suffering from erosion as evidenced through exposed upland red earth, as recorded by early seafarers. Establishment of coconut, cinnamon, vanilla and patchouli plantations by the early settlers early in the 19th century caused widespread deforestation, because of the required **clearing of the original vegetation** during different stages of cultivation, as well as for firewood for the cinnamon distilleries. These plantations eventually covered most of the islands, up to an elevation of some 700m above sea level (Kueffer et al., 2004).

9. **Deforestation by fire** is the most severe and widespread form of land degradation at present in the Seychelles. More than 80% of the land area of Praslin and Curieuse has been affected by forest fires and consequent severe erosion. On Mahé there have been major forest fires in the past as well, though much less severe and causing less damage than on Praslin. Dry weather conditions coupled with steep slopes create ideal conditions for forest fires to occur. The exposed top soil with its little organic matter then erodes easily by runoff after torrential rains. After losing the vegetative cover, top soil and organic matter, these affected soils will crust and bake in the sun, and become rock-hard. A complicating factor is that most burned, severely degraded land is privately owned and private land owners are required neither to rehabilitate degraded lands nor to provide government with access for land rehabilitation.

10. **Unsustainable harvesting** of timber and forest products also played a major role in removing vegetation and exposing soil layers to the climatic elements in the past. After the first settlement of humans some 235 years ago there was widespread exploitation of hard wood forest for various use including housing and boat construction. At present the importation of timber is insufficient to meet the demand for construction; this has increased the need for more local timber to be harvested. The demand for wood and other non-timber forest products for the craft industry, as well as charcoal for the tourist industry (barbecues) is also on the rise. There

is localized overcutting in some of the plantations, e.g. mahogany. Other forest products such as of the coco de mer (*Lodoicea maldivica*) nuts and latannier (*Phoenixophorium borsigianum*) leaves for thatching, are harvested in unsustainable volumes and at times in a destructive manner.

11. Another threat to forest ecosystems in Seychelles are **invasive alien creepers** that invade forests. These invasive creepers are well distributed on main granitic islands and are currently spreading to unaffected areas. These creepers may be native or introduced, and growth and spread may be triggered by opening up space for these creepers to occupy, usually after vegetation removal by construction or otherwise. Some of the indigenous creepers have become menacing after abandoning cinnamon plantations. The creepers smother trees, shrubs and any other vegetation in the area, depriving them of the necessary sunlight and resources they need to survive. Effects of climate change may further exacerbate this trend.

12. Agriculture has been taking place both on the coastal plains and on the upland slopes following the settlement of man in the Seychelles. At first this was for food self sufficiency of the settlers, through slash and burn agriculture. This was followed by the establishment of plantations early in the 19th century, mainly coconut and cinnamon. The land settlement schemes for commercial agricultural production in the late 1950s saw the introduction of communal farming with fairly intensive use of agricultural inputs such as fertilizers, pesticides, along with intensive soil tillage and weeding operations. At the beginning of the 1970s, the rapid expansion of the tourism industry necessitated further local production of food. In the agricultural census of 1978, there were 10,500 ha of agricultural land, while currently about 3,100 ha can potentially be used for agricultural production, as land was progressively secured for housing and tourism developments. This has been especially prevalent on the coastal plains, which therefore caused a migration of agricultural activities uphill. All these historical trends have increased **soil erosion**, especially on uplands.

13. The inherent low **soil fertility** of the soils is further decreased under intensive crop cultivation, because of the high decomposition rate of organic matter (which apart from improving soil physical attributes also contains the bulk of the plant nutrients), and the insufficient compensation for the loss of plant nutrients through application of manures and fertilizers. This is also due to the high prices and even at times general unavailability of these inputs.

14. **Flooding of the coastal plains** from rainwater after high intensity rains is prevalent during the rainy periods from November to March. This is a natural phenomenon but is aggravated by deforestation of the uplands and increasing infrastructure developments on the coastal plain. This may result in crop loss and in severe cases may cause long term land degradation, by leaving the land unfit for further cultivation. Apart from negatively affecting the physical and chemical attributes of the soil, rain water also encourages subsequent weed growth, and it further introduces a number of adverse soil borne organisms. There is no current information on the extent and the amount of land affected by flooding. More frequent extreme weather may increase flooding of the coastal plains.

15. **Sea water intrusion** into the coastal plains, where about 70% of the cultivated agricultural soils are found, is linked with flooding mentioned above. This is a relatively new phenomenon, possibly caused by rise in sea level and increasing wave surges. This is being particularly observed around the months of March and September during high tides coinciding with strong sea surges and can last for several days each time. Salt water intrudes

imperceptibly into the low lying coastal plain soils, thereby destroying crops, and affecting soil physical and chemical properties, usually inhibiting further plant growth.

16. Land degradation from **physical development / construction** is mainly due to increased urbanization of the main granitic islands, and aggravated through unsustainable building practices on steep slopes, which, compounded with the geomorphological nature, creates land movements. The most prominent feature of this are landslides, which recurrently take place after high intensity rainfall and may damage infrastructure (e.g. at Vista do Mar, Glacis) and cause deforestation and land degradation. Rock falls from bigger or smaller boulders is another threat that may equally damage land and infrastructure, e.g. Gorilla Rock at Beau Vallon which was blasted because of the impending threat.

Socio-economic context

General

17. The Seychelles has been inhabited by humans since 1770. It was sequentially colonised by both the French and the British, and obtained independence from Britain in 1976. At the last census (2002), the population was 81,200 inhabitants, and projected to reach 100,000 by the year 2016. The bulk of the population and economic activities are concentrated on the narrow coastal plains of the three main granitic islands of Mahé, Praslin, and La Digue. Mahé in particular has about 90% of the total population, with some 40% located on the east coast in a belt of 7 km by 1 km to the south of the capital, Victoria. Coastal population density on the East Coast of Mahé is expected to grow from 161 persons per square km in 1995 to 203 persons per square km in 2015. The scarcity of land has prompted the reclamation from the sea of more than 500 hectares of land on the North East of Mahé, also with a view to avoid encroachment of the forests.

18. The Seychelles has been transformed from a quasi mono-crop agricultural economy (based on cinnamon and coconut) to a dual economy heavily dependent on tourism and fishing, but which is vulnerable to external factors, see table 1 for some pertinent economic statistics. A generous welfare system has allowed Seychelles to achieve impressive progress, as shown by the country's socio-economic indicators. The Human Development Report 2005 classified Seychelles among the list of countries having achieved medium human development, with GDP per capita around US\$ 8500, a HDI of 0.786, HDI rank of 51 (highest in Africa), life expectancy of 71 years, school enrolment ratio of 76%, literacy rate of 84% and population growth of 1%. However, since the beginning of the 1990s, Official Development Assistance (ODA) flows have fallen by over 90% and this has placed a financial burden on the Government's budget. Together with the increased need to borrow from commercial institutions, this has led to a slowdown of the economy resulting from a shortage of foreign exchange.

Table 1: Seychelles Economy: Miscellaneous Statistics
(The official exchange rate in July 2006 is 5.6 Seychelles Rupees (SR)/US\$)

<i>Year</i>	2000	2002	2004
Gross Domestic Product SR million.	3513.3	3825.5	3867.0
Agriculture, forestry, fishing	99.4	110.3	100.7
Industries	995.7	1128.4	1055.5
Tourism	630.8	707.0	725.8
Government	433.0	458.0	492.5
Other services	1354.4	1421.8	1492.5
Employment (numbers)	39381	41687	41169
Private sector	19753	21715	20590
Parastatals	5550	5957	5905
Government	14078	14015	14674

Forest Sector

19. Total forest cover of the Seychelles has been estimated at 40,600 ha. The contribution of forestry to the GDP has considerably declined during the last two decades and is now low in narrow economic terms, not including the value of ecosystem services rendered. Although Seychelles has substantial forest plantations covering an area of 4,420 ha of Mahogany (*Swietenia macrophylla*) and other high priced timber trees (see Table 2), the exploitation of the wood is very limited with most of it being wasted in the transformation process.

Table 2. Timber tree species in plantations

Latin Name	Local Name
<i>Swietenia macrophylla</i>	Mahagony
<i>Eucalyptus camaldulensis</i>	Eucalyptus
<i>Sandoricum indicum</i>	Santol
<i>Pterocarpus indica</i>	Sandragon
<i>Pinus spp</i>	Pine
<i>Casuarina equisetifolia</i>	Casuarina
<i>Tabebuia pallida</i>	Calice du Pape

20. Seychelles imported US\$ 421,187 worth of wood and wood products during 2004 (NSB, 2005); it has been estimated that Seychelles has the capacity to produce and process this same volume of wood per year. In 2005 timber sold by Forestry was recorded at 7500 m³, in the form of standing trees from plantations at a value of US\$ 128,157. The direct employment in forestry amounts to some 200 persons (Forestry Section of DOE, timber merchants, charcoal production, forest guides, etc).

21. The Vallée de Mai, a coco de mer palm forest, is one of the main tourist attraction on Praslin Island, which earns over US\$ 700,000 per year from entrance fees. The craft industry is also dependent on Non- timber Forest products derived from the forest; it is estimated that this industry contributes about US\$ 7.5 million into the Seychelles economy per annum. Forests also support a wide range of other economic values (for which there is little data): Watershed protection, erosion control, aesthetic value, and supply of medicinal plants.

Agriculture Sector

22. Agriculture in Seychelles is at present characterized by small farms with an average size of 0.75 ha and rarely exceeding 2 ha. Farmers employ various levels of technology and management, some of it fairly sophisticated. Currently, about 500 registered farms are dispersed throughout the major granitic islands of Mahé, Praslin and La Digue, where they are found on both the coastal plains and the uplands. Out of a potential agricultural area of 3,100 ha, 600 ha are under some form of agricultural production, and only about 200 hectares are under intensive cultivation. There are about 400 registered crop farmers, some 1,500 legal pig farmers and 45 licensed poultry farmers. Farm land is either leased from the State, or is privately owned. In addition, an estimated 1/3 of the national households practice some form of agricultural production, or “backyard farming” (estimated to a total of 45 ha vegetable and fruit crops).

23. Current agricultural production meets about 4% of the local demand for beef, 50% for pork, 60%-70% for vegetables and fruits, 80% for poultry and 100% for eggs. Agriculture employs around 3,200 persons and currently accounts for about 2.9% of GDP. The sector consumes annually about 125 metric Tons (MT) of fertilizers, 95% of which are soil applied, with the balance being single fertigation fertilizers, plus some 1000 MT of poultry manure (from poultry rearing). An important portion of pig slurry is also used in crop production.

Apart from fertilizers some 12 MT of a wide range of pesticides are applied annually.

Infrastructural development

24. Seychelles has made great strides insofar as infrastructural development is concerned, mainly generated by foreign aid during the cold war era which allowed for heavy investments in social infrastructure. The Seychelles government committed to providing adequate shelter for all, and it embarked on a highly ambitious campaign of land redistribution in the early 80's. This resulted in the compulsory acquisition of large estates previously owned by few private land owners. Land bank projects in the early 90's availed further land plots for construction of individual houses and housing estates. To date the land bank is responsible for the construction of over 3000 houses and some 300 km of roads. By early 2001, there were 5,348 families applying for housing with the Seychelles Housing Development Corporation (SHDC), a demand that is likely to grow in the future.

Policy, institutional and legal context

Policy

25. There is a strong policy framework for environmental management in the Seychelles. Environmental concerns are embedded in the Seychelles' constitution (Article 38). Environmental management in Seychelles is guided by the second Environment Management Plan of Seychelles (EMPS 2000 - 2010), which has the following goal: "*The promotion, coordination and integration of sustainable development programmes that cut across all sectors of society in the Seychelles*". It covers ten thematic areas covering all major social and economic sectors, including, with relevance for this document: "*Land Use, Coastal Zones and Urbanization*" and "*Biodiversity, Forestry and Agriculture*". EMPS also covers cross cutting themes such as "Education, awareness and advocacy"; "Partnerships, public consultation and civil society participation"; "Training and capacity building". The EMPS is overseen by a national steering committee that includes some civil society stakeholder participation.

26. A number of other policies/plans relate directly to land management:
- i. The National Biodiversity Strategy and Action Plan (NBSAP, 1997) addresses conservation and sustainable use of biodiversity.
 - ii. The Seychelles Forest Management Plan (INDUFOR, 1993) proposes a framework for forest policy and additional development activities in the forest sector. Some revisions of the original Plan have been proposed and several studies were done, e.g. on the production, transformation and utilization of wood, through the cooperation with the French Department of La Reunion (2003). To date the Seychelles does not have a comprehensive and clear policy specific to the forestry sector.
 - iii. The Draft National Agricultural Policy 2003-2013 lays the framework for sustainable agricultural development and focuses on achieving a higher national food security status. This will require the engagement of an additional 250 hectares of land. It also proposes that all agricultural land in the Seychelles is bound into an agricultural land bank.
 - iv. The "Plan Indicative d'Aménagement du Territoire" (PAT, or Land Use Plan, 1992) lays the ground rules for land use planning, based on sustainable development. It only covers the three main granitic islands and it has never been made into law.
 - v. The National Strategy for Plant Conservation (2005) was recently completed by an NGO in collaboration with the MENR. This Strategy addresses the conservation and sustainable use of plants, especially the indigenous plants, containing 5 objectives and 14 targets.
 - vi. The Tourism Policy and Vision (Vision 21, 2002) encourages protection of natural

- resources to underpin tourism development.
- vii. The Ecotourism Policy (2003) promotes increased emphasis on ecotourism development in Seychelles.
 - viii. The recently (July 2006) adopted National Wetland Conservation and Management Policy attempts to to address and reverse the degradation of wetlands in the Seychelles.
 - ix. The Draft National Policy on Disaster Management (2006) aims at addressing the increasing incidences and emergence of both slow and rapid on-set disasters, which result into serious human distress and suffering, destruction of property and infrastructure, disruption of the environment and overall welfare of the society

27. Several reports to international organizations or for conferences have been produced. The report to the World Summit on Sustainable Development (WSSD) in 2002, records the achievements and constraints in implementing “Agenda 21”. The Report for the Barbados Plan of Action (BPoA + 10 report), elaborates on the economic and environmental vulnerability of Small Island Developing States (SIDS), and assesses the progress made and problems encountered in the implementation of BPoA. This report prioritizes capacity building and coordination, and emphasizes the “building of resilience for the sustainable development of our fragile economic, environment and social systems”. The Millenium Development Goals (MDG) Status Report (2004) highlights the achievements so far in achieving Goal 7: “*Ensure environmental sustainability*”; Target 9: “*Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources*”. This report further assesses that financial assistance and capapcity building are the 2 priority areas where Seychelles requires assistance and support.

28. Seychelles completed its first Initial National Communication (SINC) to the UN Framework Convention on Climate Change (UNFCCC) in 2000. This laid down the mitigation and adaptaptation framework to Climate change. It also invluded description of capacity building needs and priorities. Seychelles is currently working on its second National Communication, assisted by UNDP-GEF.

29. Seychelles also completed a UNDP-GEF supported National Capacity Self Assessment (NCSA) for global environmental management, in 2005. The accompanying Action Plan calls for, among other relevant issues: Revision of the institutional framework; an effective environmental information management system; and promotes integrated management approaches and for more sustainabale development. At present (July 2006) the UNDP is undertaking a Common Country Assessment (CCA), which will form the basis of its country programme for 2007 – 2009.

Legislation

30. Numerous pieces of legislation address land management in general. The *Environment Protection Act 1994* provides for the protection, preservation and improvement of the environment, including land. *Environment Impact Assessment (EIA)* fall under the Environment Protection (Impact Assessment) Regulations [EP (EIA) Regulations]; the legislation requires that an EIA study be carried out and that an environmental authorisation is obtained if any person commences, proceeds with, carries out, executes or conducts development. These regulations list categories of projects or activities requiring environmental authorisation as well as protected and ecologically sensitive areas that will trigger an EIA.

31. The *Town and Country Planning Act* of 1972 provides the basis for land use planning. The Act provides sufficient basis for environmental protection, but is based on a top-down,

Government-driven approach to land use planning with little provision for stakeholder involvement and integration of conservation objectives into planning efforts, and is currently out of date. This Act also suffers from the absence of a statutory Land Use Plan, and enforcement is difficult as developments continue to outpace the regulatory framework.

32. Protected Areas are regulated under different pieces of legislation, with some of these laws being quite outdated. Some of the potential categories are not used up to the present. Most of the relevant protected areas (National Parks and Special Reserves) have been set up under the *National Parks and Nature Conservancy Act*. Few of these protected areas have management plans and qualified professional and technical staff to implement the plans. Some 47% (210 km²) of the Seychelles land area is protected through the different categories, as well as some 228km² of ocean. An additional 20-25 % of the land area is classified as being sensitive, e.g. water catchments.

33. Other relevant ordinances and Acts that impact on Land management are:

- (i) Breadfruit and Other Trees Act (Cap 122) of 1917, amended schedule of 1988, 1994
- (ii) State Land and River Reserves Ordinance (Cap 150) of 1903;
- (iii) Forest Reserves Ordinance (Cap 153) of 1955;
- (iv) Lighting of Fires (Restriction) Ordinance (Cap 232) of 1940.
- (v) The Coco de mer (Management Decree) of 1979, amended in 1994.

Institutional context

Government

34. The Department of Environment (DOE), under the Ministry of Environment & Natural Resources (MENR), has prime responsibility for environmental management. The Divisions under DOE are: Nature Conservation (NC), Pollution Control and Environmental Impact (PC&EI), and Policy Planning and Services (PPS). The National Parks & Forestry Section under NC has the mandate to manage, protect and exploit the forests and forest plantations in Seychelles, whilst the Conservation Section deals with biodiversity conservation. The Environmental Impact Assessment Unit under PC&EI handles all administrative issues related to the EIA process. A Wetlands Unit under PPS deals with conservation of wetlands. A newly formed Environmental Engineering Section deals primarily with drainage and flood control.

35. The Department of Natural Resources (DNR), which used to fall under the Ministry of Agriculture and Marine resources, until this Ministry merged with the Ministry of Environment to become MENR in 2004, is responsible for Agriculture and Fisheries,. The Agricultural Extension Services Section under the Crop Development & Promotion Division provides advice to the farmers on a continuous basis. Information is also provided through the media (television, radio, newspaper articles), as well as through occasional field demonstrations. The Vegetable Research Section is responsible for agricultural research, including soil fertility management. The Plant Genetic Resources Section manages and conserves the crop genetic resources.

36. The Ministry of Land Use and Habitat (MLUH) is responsible for oversight of land and infrastructure development, land reclamation, land use planning, planning and building applications under the under the Department of Land Use (Lands & Territories Division, Geo-Informatics Division); and for urban and architectural guidelines, monitoring and control, under the Department of Habitat (Development Control Division and Habitat Division). The Local Government Division under the Ministry of Local Government, Culture and Sports

(MLGCS) also has a Planning Section for infrastructural projects requested by District Administrators.

37. A National Disaster Secretariat has been created in the President’s Office. The role of this body is to coordinate all the activities related to natural disaster awareness. A Disaster Coordination Committee coordinates relief efforts in case of disaster.

Parastatals

38. Marine Parks Authority (MPA) manages Marine Parks, some of which include land areas, e.g. Curieuse island.

39. The Public Utilities Corporation (PUC) is responsible for provision of water and electricity to the country’s consumers; it is divided into two divisions - water and electricity, and MENR is parent Ministry. The Water Division of PUC manages all national water resources, allocates abstraction rights and it is the main body that undertakes all national capital water supply projects.

40. The Islands Development Company (IDC) manages a number of outer islands and Silhouette and is responsible for their economic and physical development.

41. The newly formed Seychelles Investment Bureau (SIB) is a one-stop shop for potential investors, and thereby dealing with feasibility studies and pre-planning applications for physical developments, e.g. in tourism and agriculture.

42. The Seychelles Bureau of Standards (SBS) has the mandate on research management (approval of research applications; maintaining a research database). SBS also maintains a comprehensive laboratory, and issues certificates.

43. The Small Enterprises Promotion Agency (SEnPA), under the aegis of the Ministry of Economic Planning and Employment, promotes and supports craft and small industries.

Non Government sector

44. Several Environmental NGOs (ENGOS) and private organizations are involved in terrestrial biodiversity protection and conservation, see table. Some are directly involved in land management, as they manage islands (ICS – Aride, Nature Seychelles – Cousin, Seychelles Island Foundation – Aldabra and Vallée de Mai, Praslin). Some of them have also considerable experience in habitat restoration, especially on privately owned small islands in partnership with island owners. There has been increasing cooperation and partnerships with governmental organizations, NGOs and private agencies in forest management over the past decade. The Liaison Unit for NGOs (LUNGOS) offers centralized co-ordination services to members.

Table 3: ENGOS involved in Biodiversity Conservation
(in alphabetical order).

NGOs	Roles & Responsibilities	Partners and Activities (specific to SLM)
Island Conservation Society (ICS)	Biodiversity conservation, public education and awareness	ICS manages Aride Island Special Reserve and is leading the eradication and habitat rehabilitation work on North Island in partnership with North Island Resort. ICS has a special interest in biodiversity conservation on the Outer Islands.

NGOs	Roles & Responsibilities	Partners and Activities (specific to SLM)
Marine Conservation Society, Seychelles (MCSS)	Research, conservation and management of Seychelles' marine ecosystems	MCSS' partners include hotel operators and other groups on Denis, Cousine, Bird, North, D'Arros and Aride islands. They work with Banyan Tree Resort on sea turtle and beach monitoring.
Nature Protection Trust of Seychelles (NPTS).	Biodiversity conservation, research, awareness and management.	NPTS is based on Silhouette Island. They undertake small scale conservation, research and rehabilitation work, some of it in collaboration with volunteers from Global Vision International, and receive support from IDC and have begun work with Universal Hotels.
Nature Seychelles	Supports conservation, including research, public education and training.	Nature Seychelles is affiliated with Birdlife International. They have developed partnerships with tourism operators/island owners on Frégate, Denis, Cousin, Cousine and Bird Islands where they have done pioneering work on IAS eradication and habitat restoration. Nature Seychelles directly manages Cousin Special Reserve.
Plant Conservation Action Group (PCA)	Main focus is plant species, habitat and ecosystem protection and conservation	PCA's partners include North Island Resort, the Geobotanical Institute of Zurich and SIF. PCA published the National Plant Conservation Strategy in collaboration with MENR and have developed the database for the Red Data List of Seychelles plants. They are working together with MENR to establish the legal framework for plant conservation.
Seychelles Islands Foundation (SIF)	Manages two UNESCO World Heritage Sites in Seychelles, research and public awareness	SIF was created by Government Decree to manage the Aldabra Atoll World Heritage Site. Later, the Foundation was also given responsibility for the management of the Vallée de Mai WHS on Praslin.
Wildlife Clubs of Seychelles	Environmental education for young people along with broader public education and awareness.	The main partners of Wildlife Clubs are Nature Seychelles and the Ministry of Education and Youth. They conduct annual competitions amongst schools and other environmental awareness programmes for youths.

Private Sector Organizations

45. The Seychelles' Chamber of Commerce and Industries (SCCI) represents the interests of the private business community including tourism and related businesses. Nearly all private businesses in the Seychelles are members, and the SCCI is often consulted in matters concerning policy development and legislation. The Seychelles Farmers' Association, including the Praslin farmers and the association of farmers of Val d'Endor, represent the interests of their members.

46. A number of individual private land owners, either on small islands or the large granitic islands, are engaged in conservation and rehabilitation efforts, some of them in collaboration with ENGO's.

47. Many hotels are to some extent engaged in conservation activities, especially the high end hotels on private islands (North, Denis, Bird, Frégate, Cousine), or on the larger granitic islands (Lemuria, Banyan Tree), most in collaboration with ENGO's. Most of these hotels have full time conservation staff.

Committees / Authorities

48. The Planning Authority (PA) is set up under the Town and Country Planning Act, chaired by the Principal Secretary of the MLUH, with membership of all relevant ministries, parastatals and some non government stakeholders, and is mandated to prepare land use plans. The PA is legally required to request an environment authorization from the Department of Environment (DoE) in advance of deciding a planning application.

49. A 25 member EMPS Steering Committee with participation from mainly GOS and some NGO and private sector representatives, oversees the implementation of the EMPS

50. A Drainage Task Force was created by the President following serious flooding incidents in 2004, with a view to come up with a plan of action to alleviate future risk of flooding.

51. A UNCCD committee has been set up in 2004, to guide the necessary actions to implement the UNCCD in Seychelles.

52. A National Climate Change Committee has been set up in 1992 to coordinate the development and implementation of the national climate programme, as well as acting as the interface between the national climate programme, government and the private sector.

53. The Rivers' Committee handles communal and private issues pertaining to water abstraction.

54. A multi stakeholder Invasive Alien Species Committee meets irregularly to discuss matters concerning the prevention and control of Invasive Alien Species.

Causes of land degradation

55. The main causes of land degradation and barriers to Sustainable Land Management are detailed in the Threats, Root Cause, Barriers, Solutions & Baseline Matrix which is included in ANNEX I. This matrix tackles Threats to Forests, Unsustainable Agriculture and Land Use/Physical Development as main contributors to land degradation. These are further described here below.

Threats to forests

56. The main Threats to Forests in Seychelles are especially (past and present) forest fires, unsustainable harvesting of forest products and the effect of invasive alien species, in particular creepers.

57. There are three main conditions that must exist for catastrophic **forest fires** to occur: Adequate fuel load, extended dry and windy climatic conditions, and an ignition source, either from accidental or malicious activities. All these are available on the main inhabited islands of Seychelles, especially during the south-east monsoon from April to October. There is evidence to support that climate change will increase the occurrence of forest fires and land degradation because of an increase in extreme weather conditions, e.g. longer drought periods. The main source of ignition is from the local population. The local population has an established culture of burning unwanted vegetation and other waste instead of composting or depositing them. Fires is also at times utilised as a form of revenge amongst feuding families or for achieving political aims.

58. Some species that colonise burned areas prevent other species from regenerating, while creating highly flammable conditions and increasing risk of repeated fires (e.g. bracken fern). Many of the upland forest soils are lateritic soils, high in plinthite, that are subject to surface crusting / hardening, when exposed, with as consequence that natural regeneration and rehabilitation becomes nearly impossible. A significant percentage of burned and degraded areas are on private land. There are no real economic incentives for private land owners to rehabilitate their land, or to allow the government to rehabilitate. No cost-effective strategies have been developed, tested and proven to be successful for large scale rehabilitation of burned and degraded lands. There is insufficient strategic planning on how to assess, confront, control and suppress large forest fires. This is coupled with inadequate fire risks assessments, fire prevention planning and awareness raising among the local population. In addition the enforcement of the *Lighting of Fires (Restriction) Act* (Cap 232) of 1940 is still inadequate.

59. The need for forest products, especially timber in the construction industry, has increased. The current rate of **exploitation** of some **of the forests** for timber or non-timber forest products such as leaves for thatching and coco de mer for the tourist industry is unsustainable. Monitoring and enforcement remain major challenges to adequately control poaching, destructive harvesting and wastage of forest resources. The current wood conversion equipment and methodologies are outdated and wasteful. Due to a lack of qualified human resources it is difficult to implement the existing Forest Management Plan (1993), the Morne Seychellois National Park Management Plan (which addresses also plantations and other uses within the Park) and other similar plans. Some of these documents also need to be reviewed.

60. **Alien invasive creepers** pose a particular threat to the forests in Seychelles, especially on the main islands of Mahé and Praslin, by smothering and killing trees. The destruction of parts of the forest through invasive creepers is a very complex field with very limited competence available in the country to monitor its spread, establishment and the impact that they have on vegetation cover and land degradation. No effective control mechanism for any of these species is known in Seychelles. No legislation banning their introduction or spread to other islands is currently available. Seychelles does not have research capacity to conduct the necessary research, it has to therefore depend on other foreign research institution for support.

Unsustainable agriculture

61. **Soil erosion** on the upland cultivated soils is principally linked to the strong slope (sometimes in excess of 15 degrees) and the heavy rains, which is compounded by the fact that these lateritic and shallow upland soils have a poor structure, with low water holding capacity. Annual, intensive crop cultivation also exposes the soil to the elements. Most of the soil conservation structures originally present have not been adequately maintained. There is no real engagement on the part of the farmer to implement soil management measures, partly because (s)he does not perceive immediate benefits, and there are no incentives for costly soil conservation measures.

62. Most farmers lease the land from the government. The individual lease agreements have been revised of late and are presently for a minimum of 5 years for crop farmers and a minimum of 10 years for livestock farmers. Still, these relatively short term leases do not encourage costly investment in terraces and retaining walls on the upland slopes. These agreements make reference to agricultural production, but do not specifically include conditions for soil conservation.

63. **Soil fertility loss** on the inherently infertile and sandy coastal plains is linked to the periodic loss of top soil during floods. A longer term factor is the inadequate compensation for

the loss of plant nutrients in intensive cropping through proper fertilizer and organic matter application. High ambient temperatures and high annual rainfall contribute both to elevated organic matter decomposition. Again, on the coastal plains the current lease agreements do not encourage long term soil conservation or soil fertility maintenance measures, especially since fertilizers and manure are relatively costly inputs. There is inadequate capacity to monitor soil fertility on cultivated fields, nor adequate soil testing facilities, and the field agents of the Agricultural Extension Services Section seem inadequately trained to convey the appropriate messages.

64. The close proximity of the low-lying coastal plains to rivers, streams and marshes make them very prone to **rainwater flooding** during the rainy period. After heavy downpours water may be standing for well over 36 hours. A hard pan of calcium carbonate at about 3 m depth in the coastal soils along with the superficial water table of the plains inhibits flood water infiltration. Since the coastal plains slope inland, usually towards marshy areas, this renders evacuation of water towards the sea difficult. The low lying nature of the plains also encourages salt water intrusion during very high tides. On some coralline islands this is aggravated by the excessive pumping of the fresh water aquifer, mainly for irrigation.

Land use / physical development

65. The main cause of land degradation in Seychelles associated with the physical development sector is attributed to **landslides**. Apart from the heavy rains, the main causes of landslides have been observed as the high slope of the terrain, shallow soils on weak and fractured bedrock, intense vehicular movement, deforestation due to infrastructure, haphazard construction of buildings and lack of mitigative measures. In the absence of a statutory land use plan, decisions on planning applications are sometimes subjective and discretionary in nature. Effective enforcement of the regulations poses a major challenge as the gap between the institutional capacity to monitor ongoing developments and the increasing need and complexity of infrastructural projects continues to widen. This is further aggravated by a lack of public awareness on the potential devastating impact of unscrupulous construction.

PART II: PROJECT STRATEGY

PROJECT DESCRIPTION

Baseline course of action

66. The baseline is a description of the programmes, initiatives and projects that are related to sustainable land management and that would take place even in the absence of this proposed UNDP-GEF project. After the baseline is presented it is then analyzed to identify gaps and capacity development needs in relation to what is needed to overcome the root causes of land degradation as identified in the earlier sections in this document.

Threats to Forest

67. The devastating effect of **forest fires**, which is particularly prominent on Praslin and Curieuse islands, has long been recognized by the authorities in Seychelles. The Department of Environment has been given the mandate to control and suppress forest fires, in close collaboration with the Fire Brigade. There exist Emergency Brigade Units at district level (1 per district with around 15 members), that somehow manage to deal with localised fires, or even more important fires waiting for the national services, but there is generally little involvement of civil service groups, NGOs, private land owners and the local communities in forest fire management and control. Some of the necessary infrastructure, tools and equipment exist. Out of two fire towers planned for Praslin, one already exists at Glacis Noir and another is scheduled to be built soon. Having a base of the Fire Brigade on Praslin is also currently under discussion. An elaborate system of fire breaks exists on Praslin and these are being maintained adequately on an annual basis; though not much is known about their effectiveness. Training needs of staff are being addressed on an ad hoc basis; there is no comprehensive programme to train staff in fire prevention and suppression techniques. Research in fire ecology is limited and not much is understood of the processes that take place after an area is burned, nor are there models for rehabilitation of burned areas.

68. A small project has been started to map all burned areas on Praslin. Various attempts to rehabilitate burned sites have taken place in the past and currently there is one scheduled for implementation in 2006. However, there is little data and knowledge on the effectiveness of these. A Fire Contingency Plan that defines responsibilities for forest fire fighting exists, though is outdated. The Lighting of Fire Act and the Coco de mer Decree are currently under review by DOE. A permit from the Forestry section is required before lighting open fires. Bans are put into force during the dry period and these are monitored and enforced by the staff of the Ministry of Environment. Radio and TV messages contain general awareness programmes on fire.

69. To address the **unsustainable harvesting of forest products** some restrictions already exist. About 45% of the land area of Seychelles, mostly forested areas, is under some form of protection, although these areas are not all properly managed. Management plans are available for some of these protected areas and some plans are currently on the drawing board. The main challenge here is the implementation of these plans and enforcement of the existing laws. Some effort has been made to train forestry staff and staff from NGOs in law enforcement methodologies, but these are too limited and not comprehensive enough to make an impact. A Forest Resource Management Unit to collect data, coordinate forest product inventory and provide timely statistics to decision makers is now in place. Plans to reduce wastage through modernization of timber conversion methodologies and valorize the locally produced timber

and non-timber product are being developed. A PhD thesis has been conducted on the sustainable harvesting of Coco de mer.

70. Several PhD and masters degree studies from students of the Geobotanical Institute of Zurich have been conducted on woody invasive species, but only one short study has been completed on the distribution of **invasive creepers** on Mahé. The spread and impact of these are not well understood, although it is clear that they do destroy all other existing vegetation in the areas that they invade. Some sensitization efforts have taken place in the past but these have been limited to one poster, a few radio programmes and TV spots. No effective control mechanism is currently available for any of these species.

Unsustainable agriculture

71. Considerable research work on **soil management and crop production** in agriculture was done from mid 80s to the early 90s. The ensuing recommendations addressed fertilizer use, including the use of soil ameliorants such as farmyard and green manure, but also physical soil conservation (terraces, retaining walls, etc). Currently there are only few ad hoc research trials planned or on-going that address these issues.

72. A comprehensive soil laboratory was established in the 1980's at Grand Anse, Mahé, under a USAID grant, but became dysfunctional, dilapidated, and was finally abandoned in the 1990's. At present there exist only minimal soil testing facilities with the Crop Development Division at Grand Anse, Mahé. These are mainly quick tests for the major nutrients N, P, K along with pH and electrical conductivity, which are offered as a free service to farmers.

73. The islands of Mahé and Praslin comprise of a total of four administrative agricultural zones each under the jurisdiction of an agricultural extension agent, who does a round trip among his region's farmers in 6-8 weeks, and provides advice on fertilizer use, soil organic resources, terracing, use of fire for clearing, etc. The extension method is based on the outdated "training and visit" approach, which does not engage farmers and is very prescriptive in nature. This is reflected in the low level of adoption of the proposed approaches. Members of the farming community benefit from at least one group training annually, and information on soil management is at times available through the media. The yearly Agricultural and Horticultural Show shows recommended practices and provides some information to farmers. These events and programmes are perceived to be inadequate to bring about changes in soil conservation.

74. There are some bilateral agreements with countries such as Cuba, Egypt and Israel, which provide few ad hoc, short duration training programmes at the technician level, addressing issues of soil degradation among others. The Seychelles' Agricultural and Horticultural Training Centre (SAHTC), presently under the jurisdiction of the Ministry of Education and Youth, conducts training in agriculture and horticulture at certificate (for farm hands) and diploma (for agricultural technicians) level, which offers basic courses in soil conservation. The centre runs a number of specialized courses for practicing farmers as well, but which to date do not include soil conservation.

75. An FAO Project on "Land Information Management" is being implemented, which introduces a Geographic Information System in the Department of Natural Resources, with a view to capture, provide data and analyze the national agricultural land resources for better management.

76. The Environmental Engineering Section and the Wetlands Unit of the Department of Environment are currently instrumental in ensuring proper drainage for water from the marshes

and streams on the coastal plains, thereby minimizing the risk of flooding. The Ministry of Local Government has submitted a project proposal to the German Government with a view to seek additional resources of heavy machinery to help in this undertaking.

77. The National Disaster Secretariat in the President's Office has been entrusted to carry out a country wide risk and vulnerability assessment, dealing amongst others with land slides / land movements. This comprises of the stocktaking of past landslides and establishes the likelihood of future landslides, based on the qualitative analysis of the slope types, geology, alongside historical information on past land movements in the respective areas. The information gathered will be used to prepare a **land movements risk map** for every district, including both risks of landslides and rock falls. The Secretariat is also working in partnership with the Ministry of Education to help create awareness and preparedness on natural disasters in schools, of which landslides features as one of the five natural disasters identified.

78. The Drainage Task Force has completed **flood risk studies** of some areas, looking at the contributing factors to flooding, using GIS. The Environment Engineering Section of MENR ensures that development proposals cater for adequate and effective drainage systems, and monitors ongoing developments with regards to drainage.

79. The Ministry of Land Use and Habitat is presently drawing up **district land use plans**, with the input of local stakeholders and with the assistance of a French Technical Advisor. Hazard risks management and best practices in construction will feature in this exercise.

80. MENR will continue to undertake **environment impact assessments** for development proposals. All these are administered by the EIA section of MENR. For the more complex cases the proponent hires an appropriate consultant to prepare a document usually referred to as a class 1 EIA which is subjected to public inspection. Less complex class (2) EIA are undertaken by inspectors from the EIA section.

81. When development plans are finally approved by the Planning Authority, the prospective developers are being called in by the Development Control Section of the Ministry of Land Use and Habitat to discuss the pre-conditions of starting the development. Such conditions include the appointment of a suitable qualified and licensed building contractor, amongst others. The Section also monitors ongoing developments such that good building practices and SLM principles are being adhered to.

82. A National **Geographical Information Systems (GIS)** was put in place in 1993 to assist the decision making in Land Use Planning. This system is now under MLUH and has been used in different areas like planning, cadastral, terrain modelling, etc. A similar, smaller system operates in DOE to assist in environmental monitoring, and a new GIS will be installed in DONR.

83. Seychelles completed its 1st National report for the UNCCD in 2004, but has not yet started developing its **National Action Plan**.

84. Seychelles has not embarked on a **Medium Term Investment Plan** under the UNCCD. A similar National Medium Term Investment Plan was done with assistance by FAO in 2004, under the New Partnership for Africa's Development's (NEPAD) Comprehensive Africa Agriculture Development Programme (CAADP). This process produced 5 Bankable Investment Project Profiles on:

- I. Sustainable pork and poultry production;

- II. Sustainable vegetable and fruit production;
- III. Evaluation and commercialization of underutilized marine resources;
- IV. Support to wood exploitation and utilization;
- V. Agro-Processing Pilot Project.

These project profiles have not yet ensured funding.

Capacity and mainstreaming needs for SLM

85. The existing forest fire suppression response strategy is relatively effective against small fires. However, the forestry team is not adequately prepared and equipped to tackle major fires. The *Lighting of Fires (Restrictions) Act* and the Fire Contingency Plan needs to be updated and its scope enlarged. No strategic- or master-plan exists for forest fire prevention, control, mitigation and post-fire rehabilitation. There is a need to build awareness, train and engage the civil society, private land owners and NGOs into forest fire management and control. The second fire tower on Praslin, for which the parts are available, needs to be set up and manned. Monitoring and enforcement of fire prevention are inadequately applied because of a lack of qualified staff and limited availability of transport. The communication system is relatively effective but there are insufficient relay stations and hand held walkie-talkies. There is a total reliance on government to rehabilitate burned and degraded areas. Although there has been and continue to exist various attempts to rehabilitate burned areas these are inadequately planned, researched and suffer from a lack of resources, and therefore are not sustainable. The introduction of pioneer species of non-invasive aliens may present the only cost effective strategy for large scale, cost effective rehabilitation of these areas. Pioneer species can colonize open, degraded areas, but cannot regenerate in the shade in stands of remaining natural forests.

86. There is a general lack of research capacity within the Department of Environment and in Seychelles in general. Most of the research on forests, forest fires, unsustainable use of forest products and invasive creepers has been conducted by students and researchers from the Geobotanical Institute in Zurich, Switzerland. Although, this has provided the decision makers with valuable scientific information, it also underscores the dependence of the department on foreign research institutions for scientific data. Research capacity needs to be developed, not only on forest fire ecology and rehabilitation programmes, but also for sustainable use of forest products and the control of invasive creepers. This should help in devising suitable guidelines, protocols and cost effective models to manage these threats. Trials are needed to test these models. The role of GIS in compiling spatial information and assessing risks on these issues will become more important.

87. Forest production activities, i.e. harvesting of timber and non timber products, take place within and outside National Parks, but only few management plans exist and are followed. There is no definitive forest policy; policy is based on the quite comprehensive but outdated Forest Management Plan (1993).

88. There have been limited efforts to integrated SLM concepts and principles into the commercial component of the forestry sector. There is a specific need to develop forest management systems, as well as a sustainable financing system for forest management. There is major scope to include SLM principles into a new Policy document for the forestry sector which will be developed by GOS, as well as into the EMPS and NBSAP when these are revised. Forestry is not considered a major economic sector, although it has the potential to reduce importation of wood and create employment. Apart for a few Mahogany and Santol plantations within the National Parks and in unprotected forested areas, forests are mostly

considered important for their environmental services including their primordial support to biodiversity and the tourism industry.

89. The budget for the management of the forests by the government is inadequate and opportunities to secure foreign funds have diminished over the years. Development of sustainable financing mechanisms for improved forest management is needed, including the necessary legal reform to establish these mechanisms.

90. The Forest Resource Management Unit requires specialized training in data collection, processing and analysis.

91. The agricultural training plans proposed in the EMPS 2000-2010 as well as that in the Action Plan of the National Agricultural Policy (NAP) 2003-2013 are not being implemented fully, mainly due to financial constraints. There is a need for qualified sector support personnel ranging from university graduates in agricultural extension to certificated soil laboratory technicians. This may increase the threat to land degradation in the sector when the planned future agricultural production activities take hold. Apart from outside opportunities for training, the curriculum of the SAHTC needs to be strengthened, especially with regards to soil conservation, and including training opportunities for farmers in this respect.

92. Farmers' training is paramount in achieving sustainable agriculture production. Current extension and training approaches do not seem to be effective. There is a need to revamp the modality and approach of the Agricultural Extension Services in information dissemination and farmer training. Capacity should also be built in communication and outreach programmes for proper information dissemination to farmers.

93. The limited soil testing facilities are not sufficient to guide efficient fertilization of agricultural soils. It will be paramount to install adequate soil testing facilities with the relevant equipment, including added capacity to test leaf tissues and water. The laboratory facilities at the Seychelles Bureau of Standards (SBS) should be equipped and capacities developed to conduct these tests. This should also include more sustainable financing for this service, in the form of (partial) payment by clients for these services, to cover (part of) the recurrent costs.

94. Best practices in soil conservation, i.e. soil erosion prevention, soil fertility management and flood management, should be compiled and disseminated. In this respect earlier work on soil conservation / soil fertility needs to be considered, but this should also take into account farmers' knowledge (e.g. the use of sea weeds, cow dung and urine, coconut husks and leaves, dried grass, fern mulch and decomposing leaves from forest floor, terracing, etc). This should be combined with tools such as GIS, which would also serve in conducting risk analyses for soil erosion, soil fertility problems, rainwater flooding, salt water intrusion, etc. Once developed, the best practices need to be demonstrated on farmers' fields.

95. The current system of state land leases has recently been revised, with longer term and more flexible lease agreements (5 years for crop farmers; 10 years for livestock farmers). Still, it is felt that this does not give sufficient incentives for proper, long term soil conservation measures by farmers. In this light the agreements need to be reviewed, also by introducing more stringent soil conservation conditions in the lease.

96. Landslide risks are currently being assessed by the National Disaster Secretariat, as part of an overall effort on multi hazard risk assessments. These would be included in a national GIS and used for land use planning purposes, i.e. by including those assessments in the District

Land Use Plans, which are currently being developed by MLUH with input from local stakeholders. These assessments would also be included in a local GIS (district level), intending to give an overall database for local planners and emergency responders.

97. According to the National Disaster Secretariat, a major percentage of landslides occur as a result of poor construction techniques (housing, roads / pathways). Awareness and training activities on proper planning and building on slopes should be conducted for engineers, contractors and other stakeholders.

98. The *Town and Country Planning Act* is currently under review, to bring it up to speed with the pace of development. Provisions for landslide prevention and best practices for building on slope need to be included. There is also a need to introduce better guidelines in the building regulations to ensure proper construction procedures on slopes. Enforcement protocols need to be streamlined for more effective results.

99. The *Licensing Act* should provide for an improved approach to granting contractors license. The current procedure involves consultation with MLUH, but there is no systematic way of assessing an application for a new building contractor license or an upgrade to a higher license. This is usually done by the Development Control Committee based on a qualitative approach. There has to be clearer guidelines and more broad based approach involving more professional stakeholders in a participatory and transparent manner. The Development Control Section of MLUH should furthermore be empowered (by the revised TCPA) to take enforcement action against developers and contractors that do not respect the conditions of approval of a planning application, with possible penalties, e.g. the suspension of a license.

100. The GIS unit under MLUH needs improved resources, both human and equipment, in order to fulfill its functions in assisting with land use planning and providing risk assessments. This needs also better linkages with the GIS unit under MER, and the new agricultural FAO-supported GIS under DONR.

101. Capacity building in terms of equipment and skills is required within the Seychelles Bureau of Standard (SBS) to be able carry out tests on the geotechnical properties of soils, and others as relevant.

102. Seychelles has not embarked on developing a National Action Plan, as is required under the UNCCD. Neither has an Investment Plan been prepared, to help implementing the NAP and other Sustainable Land Management actions

Project rationale and objective

103. The situation analysis has described and analyzed the land degradation problems in Seychelles. The main causes of land degradation are defined as: Threats to forests (fires, unsustainable harvesting, invasive creepers), unsustainable agriculture (soil erosion on uplands and declining soil fertility) and Physical development / land use planning (most prominent in landslides). From the threat and root cause analysis (ANNEX I) the direct and root causes of land degradation, barriers to SLM have been identified and prioritized, solutions have been identified and the Baseline has been determined. The following outcomes and outputs have been developed to fill priority gaps between the identified solutions and the on-going baseline in order to reach the stated goal and objective,

104. The long term Goal to which the project will contribute is: “*Sustainable land management is practiced and mainstreamed into national development in Seychelles.*” This not

only reflects the overall, global Goal of the UNDP-GEF Targeted Portfolio Project for SLM in LDC and SIDS, of which this project forms part, but also fits into the national Goal of the EMPS, which is: “*The promotion, coordination and integration of sustainable development programmes that cut across all sectors of society in the Seychelles*”

105. The Objective of the Project is stated as follows: “*Capacity enhanced in Sustainable Land Management (SLM) and SLM principles applied in national policies, plans, processes and practices*”. This also reflects the Targeted Portfolio Objective, and is specifically focused on capacity development and mainstreaming. The indicators for the Objective are as follows (see also the LFA, ANNEX II):

- Individual and institutional capacities concerning SLM in place;
- SLM reflected in National Policies, Laws, Development & Investment Plans
- Cost-effective techniques for rehabilitation of deforested areas developed;
- Forest management model developed and tested;
- Agricultural area under improved soil conservation practices ;
- Landslide risk map and zoning available and used;
- Awareness of decision makers, land users and general public of SLM

106. If there was no GEF funding available to complement the baseline activities, then the threats of land degradation would not be adequately addressed. The country would continue to suffer from land degradation in all its forms, and will have less chance in achieving its sustainable development goals.

Expected project outcomes, and outputs

107. The Project will have 5 Outcomes, which reflect the overall outcomes for the UNDP-GEF Targeted Portfolio Project on SLM for LDC’s and SIDS, see also the Logical Framework Matrix in ANNEX II. The project has a further 19 Outputs, which are specific and are developed by a team of national consultants in consultation with different sector stakeholders, assisted by a National Lead and International Consultant. Outputs and Activities are further detailed in ANNEX II: Seychelles SLM Output / Activity Table. The Outcomes and Outputs are the following:

108. **Outcome 1:** *Individual and institutional capacity for SLM enhanced.* The indicators are:

- Baseline information on forest fires and rehabilitation documented and disseminated;
- Number of professionals trained in managing: Forest fires, invasive alien creepers, soil erosion, loss of soil fertility, land slides and environmental economics;
- Guidelines, Manuals, Protocols outlining Best Practices and toolkits in SLM developed and used
- Revamped agricultural extension service, recommending sustainable land management practices following participatory extension approaches
- Standard soil testing services operational, with payment for services
- Fire prevention and control strategy / master plan in place;
- Land risk zoning included in Land Use Plans
- A functional inter-sectoral mechanism for SLM in place

109. Outcome 1 will be achieved through 7 outputs:

- 1.1. Capacities for forest fire prevention, detection and suppression are strengthened;
- 1.2. Cost-effective techniques for the rehabilitation of burned/deforested land are tested and developed;

- 1.3: Cost-effective techniques/capacities for controlling deforestation by IAS creepers are developed;
- 1.4: Sustainable production forest management systems are developed;
- 1.5: Improved capacities for soil conservation in agriculture are developed;
- 1.6: Capacity for minimizing risks of landslides is developed.
- 1.7 Capacity on Environmental Economics in SLM developed

110. **Outcome 2:** *SLM mainstreamed into economic and sectoral development.* The indicators are:

- Relevant policies contain specific sections on and follow principles of SLM;
- Acts & regulations pertaining to SLM updated and harmonized;
- Lease arrangements for state agricultural land revised to enhance SLM;
- Stakeholders aware of SLM issues and principles.

111. Outcome 2 will be achieved through 3 Outputs:

- 2.1: Sustainable Land Management principles integrated in relevant national policies and strategies;
- 2.2: Legal and regulatory framework concerning Sustainable Land Management reviewed, updated and harmonized;
- 2.3: Stakeholders are aware of and apply SLM practices.

112. **Outcome 3:** *National Action Plan (NAP) completed and monitored.* The indicators are:

- Completed National Action Plan.
- NAP monitoring system in place

113. Outcome 3 will be achieved through 3 Outputs:

- 3.1: NAP prepared according to UNCCD guidelines;
- 3.2: NAP disseminated.
- 3.3. NAP monitored

114. **Outcome 4:** *Medium Term investment Plan being financed and implemented.* The indicators are:

- Completed Medium Term Investment Plan (MTIP);
- Financing for MTIP established;
- MTIP monitoring and review system in place

115. This outcome will be achieved through 3 outputs:

- 4.1. Medium Term Investment Plan for SLM developed;
- 4.2. Financing for Medium Term Investment Plan ensured;
- 4.3. Medium Term Investment Plan implemented and monitored.

116. **Outcome 5:** *Adaptive Management and Learning in place.* The indicators are:

- Project Outputs and targets achieved;
- Project Monitoring reports prepared
- Yearly audits
- Lessons learned disseminated

117. This outcome will be achieved through 3 outputs:

- 5.1. Effective project management in place
- 5.2. Monitoring and Evaluation work plan implemented
- 5.3. Lessons learned collected, prepared and disseminated

118. Key assumptions underpinning the project design are as follows (see for further details the LFA, ANNEX II):

- National decision makers see the interest / need and importance of SLM for National and Sectoral development;
- National Development and Sectoral Plans will continue to be updated and developed;
- Sufficient manpower available for training, and continued availability of training opportunities through bilateral and multilateral cooperation;
- Institutions will be receptive to change and are able to retain the trained manpower;
- Government willing to further revise land lease arrangements to include better incentives for introducing SLM practices
- Stakeholders are willing to share information
- Donors and other potential investors remain interested in investing in Seychelles Sustainable Land Management.
- Management culture is conducive for adaptive management and capacity is available.

Global and local benefits

119. The national benefits of the project would include a more sustainable forest and agriculture production, while at the same time safeguarding against land degradation. This is even more pertinent, since SLM has not been effectively implemented in Seychelles, whilst land degradation is an apparent and upcoming threat. It is expected that this project will assist in addressing the main land degradation threats and thereby facilitates in achieving the national development goals in the Seychelles, in terms of improved ecological and economic underpinning for sustainable development. The Portfolio SLM Project has been specifically designed for SIDS, and being a SIDS with its typical economic, social and environmental vulnerabilities, the experiences in Seychelles with this project could assist and be replicated in other SIDS. The perceived global benefits are exemplified in improved ecosystems integrity, functions and services. The project will also assist in improved adaptation to climate change, in particular sea level rise. Achieving the objective, through the defined Outcomes and Outputs, will have direct and indirect benefits for the terrestrial and marine biodiversity in Seychelles, which is of global importance.

Linkages to UNDP activities and programs

120. The project is in line with the major development challenges identified in the Draft UNDP Common Country Assessment (CCA), which is currently being finalized for the Seychelles. The CCA identifies sound environmental management as one of several key development challenges to be confronted in spearheading sustainable development. This work will be complemented by an EU-funded and UNDP-implemented decentralized cooperative governance programme starting in 2006 for capacity building of state and non-state actors in project management.

121. The project will contribute to meeting the objectives as set out in the UNDP Country Programme 2003-2006 for Seychelles (CPD 2003-2006). The following components of the 2003-06 Programme are particularly relevant:

- Proposed Programme (III) on 'Bio-diversity conservation, including community participation': *Improve the institutional capacity for the conservation and management of terrestrial ecosystems of the granitic island.* The project is particularly consistent with the agreed terms of "...focus on key forest ecosystems and identified priority threats...."

- Under the Programme on ‘Climate change and energy efficiency’: “*Enhancement of regional and international cooperation in land use and coastal management*”.

At present UNDP is developing its Country Programmes 2007-2009, based on the CCA.

122. The project is also in line with the *Millennium Development Goals* (MDGs) adopted by the Seychelles, especially MDG-7 on “Environmental Sustainability”, and its target 9. Seychelles is part of the Atlantic and Indian Ocean, Mediterranean, and South China Seas (AIMS) grouping within SIDS, where it has assumed a leadership role, and it is currently active in fulfilling the SIDS Plan of Action (Barbados and Mauritius Strategy), which is also aiming for sustainable development.

123. The project is highly complementary with a number of national and regional GEF projects. The links are elaborated below (Table 4).

Table 4: On-going/ planned GEF projects in Seychelles with relevance to SLM

Project Name	Focal Area	Implementing Agency	National Executing Agency	Description and Linkages
Mainstreaming Biodiversity management into Production sector activities	Biodiversity	UNDP;	MENR	The Seychelles is developing a full sized project (GEF grant US\$ 3.7 million) to mainstream Biodiversity concerns in the main production sectors, i.e. tourism and fisheries. The Project Document is currently under consideration by the GEF council. The project is planned to start in early 2007, for a period of 6 years. The development of the SLM project has been done in concurrence with the PDF-B, involving the same main consultants (national lead and international consultant). Linkages and synergies have therefore been ensured.
Prevention and control of introduction and spread of Invasive Alien Species (proposed)	Biodiversity	UNDP;	MENR	A small full sized IAS Project (US\$ 2.0 million) is currently being developed, as an off-shoot of the Mainstreaming Biodiversity Project, dealing mainly with prevention (Biosecurity) and management of main IAS in Seychelles. This is developed by the same Project Coordinator, and some of the other collaborators are involved in development of both projects, therefore linkages and synergies have been ensured.
Improving Management of NGO & Privately Owned Nature Reserves & High Biodiversity Islands	Biodiversity	IBRD;	Nature Seychelles	The project seeks to improve management of two biodiversity-rich islands owned by civil society and private organizations (Cousin and Cousine). The activities involve research and monitoring of species and habitats, including eradication and restoration programmes; establishing a conservation resource center; and public education and advocacy programmes. The project will be completed by 2007, and is executed by a local NGO (Nature Seychelles). Possible lessons learned in this Project will be taken on board the SLM project.
Capacity Development for improved national and international environmental management in Seychelles	Cross Cutting Capacity Building	UNDP	MENR	Seychelles is requesting funds for a follow on the NCSA project to strengthen its capacities to plan and oversee implementation of actions to address the provisions of three global environmental conventions. The main focus will be on strengthening the role of the EMPS; develop capacities for state of the environment reporting; and implementing pilot integrated watershed management activities. These activities will facilitate the coordination and implementation of the SLM.

Project Name	Focal Area	Implementing Agency	National Executing Agency	Description and Linkages
Enabling activities to facilitate early action on the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in Seychelles	POPs	UNIDO	MENR	The project aims to get rid of the 12 Persistent Organic Pollutants (POPs) by 2025, through development of a National Plan. This will have relevance for agriculture and thereby activities need to be coordinated with soil conservation activities proposed in SLM.
Reduction of Environmental Impact from Coastal Tourism through Introduction of Policy Changes and Strengthening Public-Private Partnerships	International Waters (Regional)	UNEP/ UNIDO ;	MENR, DOTT	This regional project has been submitted to GEF for approval and aims at reducing contaminant discharge into coastal waters from tourism developments in coastal areas in 10 African countries. The Seychelles will participate in regional activities aimed at distilling and disseminating best practices and knowledge, and providing training. The SLM project may benefit from the developed capacity in Seychelles.
Atlantic and Indian Ocean SIDS Integrated Water Resource and Wastewater Management	International Waters (Regional)	UNEP	MENR / PUC	Develop Integrated Water Resource Management mechanisms that will reduce deforestation and land degradation which will enhance the quality and sustainability of inland water resources and reduce LBS discharges into watersheds and coastal waters.
Addressing Land-based Activities in the Western Indian Ocean (WIO-LaB)	International Waters (Regional)	UNEP	MENR	Reduce stress to the ecosystem by improving water and sediment quality, Strengthening regional legal basis for preventing land based sources of pollution, Develop regional capacity by determining and satisfying training needs in the region. Lessons learned from this regional project will be taken on board the SLM project

124. The Project has also linkages with other, non-GEF projects currently planned or implemented in Seychelles, in particular the following:

- An “Island ecosystems rehabilitation” project (€1.3 Million) is being implemented by the Island Conservation Society, supported by the Fond Français pour l’Environnement Mondial (FFEM). Other partners are private Hotels (e.g. North Island), the NGO Plant Conservation Action Group (PCA) and the Geobotanical Institute, Zurich. Lessons learned, in particular concerning rehabilitation, will be exchanged with the SLM project.
- An EU supported (€18 Million) “Regional programme for the sustainable management of the coastal zones of the countries of the Indian Ocean coastal zone” will start soon and aims at sustainable management and conservation of natural coastal resources through capacity building and establishing Integrated Coastal Zone Management (ICZM) plan. Activities relevant to SLM will be coordinated with this project.
- FAO is currently implementing a (US\$ 235,000) “Establishment of Agricultural GIS” project, whereby it is installing a GIS system for managing agricultural land in DONR. The capacity installed through this project will be fully used by the SLM project.

- UNDP Expertise / Capacity Building Project for Disaster Risk Reduction (\$400,000, in collaboration with French bilateral aid), in which several areas concerning Disaster Risk reduction will be addressed (risk assessment, guidelines, policies, standards, education, ...)
- Regional cooperation with La Réunion, where a project about land movements may be included.

Sustainability (including financial sustainability)

125. Sustainability has been a major consideration throughout the development of this project. The design of the project centers around “capacity building” and “mainstreaming”, hence institutionalizing sustainability. The project builds on the already existing “baseline”, and will not introduce new organizations, systems or programmes. For instance, the project will strengthen the already existing fire prevention strategy, as well as review and strengthen existing management plans for sustainable forest production and agriculture. It will also contribute towards individual capacity development through training on fire prevention, sustainable forest management, risk assessments and soil conservation (e.g. through the curriculum of the Seychelles Agricultural and Horticultural Training Centre).

126. The project will assist in developing a Medium Term Investment Plan (MTIP), based on the National Action Plan (NAP) and further priorities identified. The MTIP will leverage funds and will therefore ensure financial sustainability of land degradation activities for the medium term. Long term financial sustainability will be further ensured, e.g. through the setting-up of sustainable forest management systems, where private sector will be involved in sustainable management of forest, and fees and costs will be channeled back to the Forestry Service. Land property rights in agriculture will also be reviewed, to better ensure sustainability of soil conservation measures by farmers.

127. Linkages with other projects activities are also created to ensure further sustainability of project activities and to prevent that they are implemented in isolation, e.g. with other UNDP-GEF Projects through common Project Coordination, with the FAO supported GIS project, the UNDP-French supported activities under the National Disaster Secretariat and the eradication and restoration efforts of the FFEM project and contributing NGOs.

Replicability

128. The project is a national project and as such the lessons learned and best practices will be introduced nationally. Sustainable Land Management best practices in the Seychelles would provide substantial lessons to replicate regionally or in other Small Island Developing States (SIDS), facing similar challenges. Specifically, the forest fire prevention and rehabilitation, as well as the mitigation of Invasive Alien creepers are novel approaches that could be replicated in other SIDS. Dissemination of results and best practices will be actively sought, nationally through existing networks, and through the help of information networks set-up by other UNDP-GEF Projects (e.g. Biodiversity Mainstreaming, Biosecurity and Climate Change Projects). This may be further extended regionally and globally.

Stakeholder Involvement Plan

129. The main stakeholders that will be involved or are influenced by the project are described below in the Table 5, whereby the expected level of involvement is also mentioned, as well as their perceived capacity development needs.

Table 5: Stakeholder Involvement Plan

Stakeholder	Description (Relevant to SLM)	Involvement in SLM Project				Capacity development needs
		Imple- menta- tion	Benefi- t from project	Affect- ed by outco- me	Interes- ted	
Government						
Forestry Section (DOE, MENR)	The Forestry Section within the Department of Environment has the mandate to manage, protect and exploit the forests and forest plantations in Seychelles	√	√	√	√	<ul style="list-style-type: none"> • Training of staff in SLM principles, concepts and methodologies. • Strengthen capacities to conduct research and data management • Provision of new equipment and tools to upgrade existing capacities • Strengthen capacity to implement Forest management Plans. • Improve knowledge base about creepers and strengthen ability to control them
Crop Developmen t and Promotion Division (DNR, MENR):	Provide support to sustainable practices through policy statements and financial resources	√	√	√	√	<ul style="list-style-type: none"> • Information on the best practices in soil management
Agricultural extension Service (DNR, MENR)	Major agents involved in imparting knowledge on soil management and best practices	√	√	√	√	<ul style="list-style-type: none"> • Training on best practices in soil management
Vegetable Evaluation and Research Station (DONR, MENR)	Agents involved in conducting studies and providing empirical evidence on best practices on soil management measures	√	√	√	√	<ul style="list-style-type: none"> • Training on research on best practices in soil management
National Disaster Secretariat (President's Office)	coordinate all the activities related to natural disaster awareness and management	√	√	√	√	<ul style="list-style-type: none"> • Training on awareness raising for landslide risks;
Developmen t Control Section (MLUH);	Regulates, monitors and controls developments.	√	√	√	√	<ul style="list-style-type: none"> • Training on awareness raising for landslide risks; • Training on knowledge management on SLM
Geo- Informatics Section (MLUH)	Maintains national GIS	√	√	√	√	<ul style="list-style-type: none"> • Updating of GIS in SLM; • Risk assessments concerning Land Degradation.
District Administrati ons (MLGSC)	Have a major say in land use and development activities in districts. Involved in environmental activities especially control of creepers.		√	√	√	<ul style="list-style-type: none"> • Awareness raising and training in SLM concepts and principles • Upgrade ability to conduct economic analysis of cost/benefits of natural forest management • Training in rehabilitation of degraded lands

Stakeholder	Description (Relevant to SLM)	Involvement in SLM Project				Capacity development needs
		Implementation	Benefit from project	Affected by outcome	Interested	
Attorney General	Drawing up laws	√				<ul style="list-style-type: none"> • Effects of SLM on development; • Environmental law
Fire Brigade	Prevention and control of fires		√	√	√	<ul style="list-style-type: none"> • Training and expertise on forest fires (ecology, prevention, control); • Knowledge systems on forest fires
Parastatals						
IDC	Manages Silhouette Island and a number of outer islands. Sustainable harvesting of forest products and sustainable land management.		√	√	√	<ul style="list-style-type: none"> • Awareness and training in SLM concepts especially forest fire risk assessment, mitigation, control and suppression. • Training in Sustainable harvesting of forest products • Training in rehabilitation of degraded lands • Mapping and Control of spread of creepers • Sustainable financing on SLM
Marine Park Authority	Manages Curieuse island	√	√	√	√	<ul style="list-style-type: none"> • Awareness and training in SLM concepts especially forest fire risk assessment, mitigation, control and suppression. • Training in rehabilitation of degraded lands • Training in sustainable forest management
Praslin Development Fund	Manages coco de mer forest on Praslin. Interested in both sustainable harvesting of coco de mer and forest fires.	√	√	√	√	<ul style="list-style-type: none"> • Awareness and training in SLM concepts especially forest fire risk assessment, mitigation, control and suppression. • Training in Sustainable harvesting of forest products • Training in rehabilitation of degraded lands • Sustainable financing on SLM
Seychelles Bureau of Standards	Database and management of research applications. Testing and issuing of certificates	√	√	√	√	<ul style="list-style-type: none"> • Training on knowledge management • Training and equipment on soil tests
Senpa	Promote and support craft and small industries Sustainable harvesting of timber and non-timber product.		√	√	√	<ul style="list-style-type: none"> • Training in Sustainable harvesting of forest products
NGO's						
ICS	Active in the conservation of the biodiversity of the outer islands and Aride Island.	√	√	√	√	<ul style="list-style-type: none"> • Training in rehabilitation of degraded lands • Training on forest fire management • Mapping and control of spread of creepers • Sustainable financing mechanisms for SLM
NPTS	Active in the conservation of the biodiversity on Silhouette island	√	√	√	√	<ul style="list-style-type: none"> • Training in rehabilitation of degraded lands; • Training on forest fire management • Mapping and control of spread of creepers

Stakeholder	Description (Relevant to SLM)	Involvement in SLM Project				Capacity development needs
		Implementation	Benefit from project	Affected by outcome	Interested	
						<ul style="list-style-type: none"> • Sustainable financing mechanisms for SLM
Nature Seychelles	Active in the conservation of the biodiversity at all levels. Manages Cousin Island	√	√	√	√	<ul style="list-style-type: none"> • Training in rehabilitation of degraded lands; • Training on forest fire management • Mapping and control of spread of creepers • Sustainable financing mechanisms for SLM
Seychelles Island Foundation	Manages coco de mer forest on Praslin. Interested in both sustainable harvesting of coco de mer and forest fires.	√	√	√	√	<ul style="list-style-type: none"> • Awareness and training in SLM concepts especially forest fire risk assessment, mitigation, control and suppression. • Training in Sustainable harvesting of forest products • Training in rehabilitation of degraded lands • Sustainable financing mechanisms for SLM
Plant Conservation Action Group	Main focus is plant species, habitat and ecosystem protection and conservation	√	√	√	√	<ul style="list-style-type: none"> • Training in rehabilitation of degraded lands • Plant and habitat conservation and sustainable use of plant products • Mapping of forest fire high risk areas • Spatial fuel availability analysis
Wildlife Club	Active in the conservation of the biodiversity at all levels and awareness of school children.		√	√	√	<ul style="list-style-type: none"> • Training on awareness raising programmes for SLM • Training in rehabilitation of degraded lands • Mapping and control of creepers; • Training on forest fire management
Seychelles Farmers' Association	Represents interests of their members.	√	√	√	√	<ul style="list-style-type: none"> • Learning of best practices to include the use of such infrastructure as terraces etc,
Private Sector						
Farmers	Major agents involved in soil manipulation and agricultural production	√	√	√	√	<ul style="list-style-type: none"> • Learning of best practices to include the use of such infrastructure as terraces etc,
Private land owners	Own and manage land under forest areas	√	√	√	√	<ul style="list-style-type: none"> • Awareness and training in SLM concepts especially forest fire risk assessment, mitigation, control and suppression. • Training in Sustainable harvesting of forest products • Training in rehabilitation of degraded lands • Develop incentives to engage them in SLM
Timber merchants	Sustainable harvesting of timber and non-timber product		√	√	√	<ul style="list-style-type: none"> • Training in Sustainable harvesting of forest products
Craftpersons	Sustainable harvesting of timber and non-timber product		√	√	√	<ul style="list-style-type: none"> • Training in Sustainable harvesting of forest products
Architects	Designing infrastructure		√	√	√	<ul style="list-style-type: none"> • Sensitization and awareness programmes;

Stakeholder	Description (Relevant to SLM)	Involvement in SLM Project				Capacity development needs
		Imple- menta- tion	Benefi- t from project	Affect- ed by outco- me	Interes- ted	
						<ul style="list-style-type: none"> • Training on slope management; • Best practices
Engineers	Designing infrastructure		√	√	√	<ul style="list-style-type: none"> • Sensitization and awareness programmes; • Training on slope management; • Best practices
Building Contractors	Building		√	√	√	<ul style="list-style-type: none"> • Sensitization and awareness programmes; • Training on slope management; • Best practices

FINANCIAL PLAN

Streamlined Incremental Costs Assessment

130. The global environmental objectives of the project are to develop capacity for sustainable use of the country's land resources. The project will secure GEF incremental funding to complement other financing sources from GOS, FAO and EU which are undertaking activities to address land degradation.

131. The costing for the **baseline** as it would be carried out during the period 2007 – 2010 has been estimated below, which all directly relate to the Outcomes and Objective of the Project and may therefore count as **co-financing**. Incremental GEF funding will ensure that the capacity development and mainstreaming elements include global environmental benefits.

132. Under outcome 1: *Individual and institutional capacity for SLM enhanced*, the baseline is as follows:

133. In terms of forest fire management and control, the Department of Environment is expected to continue funding some US\$120,000 towards this aim, in cash and in kind, including setting up of the 2nd fire tower in Praslin, maintaining of fire breaks, ad hoc training, some small scale ad hoc rehabilitation, issuance of permits, media messages, sensitization, awareness, etc. NGO's (US\$30,000) and private land owners are also expected to continue spending for forest fire prevention, management and control.

134. Cost of maintaining and managing the National Parks and other terrestrial protected areas (Marine Parks, Special Reserves; in cash and in kind) is estimated at US\$287,000, including the DOE (US\$120,000), MPA (US\$32,000) and NGOs (US\$95,000). This includes recurrent and budgets and other costs like training, etc. The cost of maintaining the Forest Resource Management Unit is estimated at US\$40,000.

135. Continuing work on invasive alien creepers is estimated @ US\$50,000 for the next 4 years for government (DOE), and US\$42,000 for NGOs. This includes limited prevention and management activities, plus some awareness and sensitization programmes. Private land owners and Hotels will also continue to eradicate IAS and rehabilitate certain areas.

136. The DONR will continue with its Agricultural Extension activities, specifically on soil management, at an estimated cost of US\$68,000, including farmers training and mass

sensitization & awareness programmes. Agricultural research work pertaining to soil management over the period 2006–2010 is estimated at US\$80,000, this includes the estimated cost of running the soil testing facilities. The SAHTC is expected to spend an approximate US\$70,000 on specific soil management training for students.

137. The National Disaster Secretariat will carry out a country wide hazard risk assessment; the information gathered will be used to prepare a land movements risk map for every district. The National Disaster Secretariat is also expected to establish an awareness and sensitization campaign with regards to landslides risk. UNDP, with assistance of French bi-lateral aid, will assist the national Disaster Secretariat with a capacity building project that has relevance to the SLM activities, i.e. risk assessment, guidelines, policies, standards, education, etc., for some US\$100,000.

138. National Geographical Information Systems (GIS) under MLUH, DOE and DONR will continue to be used in different areas like planning, cadastral, terrain modelling, etc. These GIS are estimated to contribute around US\$363,000 towards improved sustainable land management. An FAO Project on “Land Information Management” is being implemented, which introduces a Geographic Information System in the Department of Natural Resources, with a view to capture, provide data and analyze the national agricultural land resources for better management with a grant of US\$ 235,000.

139. Activities within the EU supported and COI implemented Regional Coastal Zone Project, which will be implemented over the next 4 years, and with direct bearing on Capacity Development for SLM are estimated at US\$70,000, but not counted in the co-financing and budget, as the COI can not yet commit to these amounts because the activity planning of this project has not yet started. The Island Rehabilitation Project conducts activities rehabilitation work on North Island in collaboration with Geobotanical Institute, Zurich.

140. Total estimated baseline for Outcome 1 is therefore: US\$1,780,000, with US\$943,000 under GOS, US\$ 167,000 for local NGOs (both in cash and in kind), and US\$335,000 from donor organizations in cash. The GEF increment for US\$ 335,000 will ensure specific capacity development activities to address the root causes by overcoming the identified barriers, and with attention to achieving global environmental benefits.

141. Under Outcome 2: *SLM mainstreamed into economic and sectoral development*; the following baseline cost, and confirmed co-financing, is estimated at US\$80,000, all from GOS, as follows:

142. The *Environment Protection Act*, *Lighting of Fire Act* and the *Coco de Mer Decree* are currently under review, this is costed at US\$20,000 for the DOE, including costs for the Attorney General’s Office. A National Forestry Policy will be developed by DOE, in collaboration with its partners and stakeholders, with an estimated cost of US\$ 50,000, together with possible other donors (to be identified). The GOS will continue to report on Sustainable Land Management for the BPOA, MDG, which is estimated for US\$10,000 (DOE and Foreign Affairs). Some activities within the EU Regional Coastal Zone Project which support review of the regulatory and policy framework and developing an Integrated Coastal Zone Management Plan, which have direct relevance to SLM are estimated at US\$ 40,000, but not confirmed. The GEF increment of US\$75,000 is geared to ensure mainstreaming of particular SLM elements in the revision of *Acts* and policies.

143. Under Outcome 3: *National Action Plan completed*; there is no baseline cost, as this activity would not have been undertaken without project support. This outcome will be co-financed by the UNCCD Global Mechanism and GOS (DOE and DONR: US\$20,000).

144. Under Outcome 4: *Medium Term Investment Plan being financed and implemented*. The baseline is provided by the FAO, which has already established a similar MTIP under their Common African Agricultural Development Programme during 2003-04. This will be further reviewed and tailored, with co-financing from GOS (DOE, DONR and MLUH: US\$30,000). Assistance is also expected from the UNCCD Global Mechanism, but not yet confirmed. GEF will contribute with US\$15,000 to this Outcome, to ensure global environmental benefits are included in the MTIP.

There is no baseline under Outcome 5: *Adaptive Management and Learning in place*, as this relates specifically to the implementation of the Project. However, co-financing from GOS for effective management and dissemination of lessons learned is available for US\$ 80,000 (both cash and in kind). The GEF increment takes up the Monitoring & Evaluation requirements (see also Table 8), Project Management costs and collection and dissemination of Lessons Learned, which combined add up to US\$130,000

145. Some US\$1,550,000 can be accounted for as **Associated Financing**, all under the GOS budget. This is financing needed for the overall Goal of the Project, but not included in the specific outcomes and objectives in this project, and therefore not counted as co-financing. This includes mainly activities of DOE, i.e. concerning the Environmental Impact Assessment (EIA) Section, with regards to sustainable building practices and ensuring the protection of sensitive areas (estimated at US\$1,000,000). The Environmental Engineering Section and Wetlands Unit under DOE implement drainage and flooding works which are pertinent for SLM practices, especially on the coastal plains (estimated at US\$250,000). The Ministry of Land Use and Habitat supports all efforts towards improved land use planning, e.g. they are presently drawing up district land use plans, with the input of local stakeholders and with the assistance of a French Technical Advisor (estimated at US\$200,000). The Development Control Section of MLUH discusses the pre-conditions and monitors on-going developments such that good building practices and SLM principles are being adhered to (relevant activities estimated US\$100,000).

Project Budget

146. Table 6a gives the Project Budget per Outcome, disaggregated per source of funding (GEF, GOS, other co-finance). Tables 6b and 6c give the details of project management and cost of consultants respectively. In accordance with both UNDP and GEF policies no GEF project resources will be used to pay any government agency or NGO staff personnel. Table 7 gives more details on sources of co-financing.

Table 6: Project Outcome Budget (in US\$)

Outcome	GEF	Co-finance		Total
		GOS Co-finance	Other co-finance	
1: Individual and institutional capacity for SLM enhanced	335,000	943,000	502,000 (UNDP, FAO, NGOs)	1,780,000
2: SLM mainstreamed into economic and sectoral development	77,500	80,000	0	157,500

3: National Action Plan completed	0	10,000	10,000	20,000
4: Medium Term investment Plan being financed and implemented	15,000	30,000	0	45,000
5. Adaptive Management and Learning in place	47,500	80,000		127,500
TOTAL MSP	475,000	1,143,000	512,000	2,130,000

Table 6b: Project management costs¹

Component	Estimated consultant Weeks	GEF	Other Sources	Project Total
Locally recruited consultants	208	47,500	40,000	90,000
Internationally recruited consultants	0	0	0	0
Office facilities, equipment and communication		0	20,000	20,000
Travel		0	20,000	20,000
Miscellaneous		0	0	0
Total		47,500	80,000	130,000

Table 6c: Consultants working for technical assistance component²

Project component/outcomes	Estimated consultant weeks	GEF	Other sources	Total
Personnel	0	0	0	0
Local consultants	150	82,000	115,000	197,000
International consultants	85	30,000	200,000	230,000
Total	235	112,000	315,000	427,000

Table 7: Project Summary - Detailed description of estimated co-financing sources – see details in the TBWP

Source of Funds	Yr1	Yr2	Yr3	Yr4	Total	Status
GEF	160,000	131,000	110,000	74,000	475,000	Confirmed
Government of Seychelles	325,000	325,000	250,000	233,000	1,143,000	Confirmed
UNDP	45,000	40,000	15,000	0	100,000	Confirmed
GM	0	0	10,000	0	10,000	Confirmed
FAO	120,000	115,000	0	0	235,000	Confirmed
NGOs	42,000	42,000	42,000	41,000	167,000	Confirmed
Project Total	702,000	653,000	427,000	348,000	2,130,000	Confirmed

¹ In accordance with both UNDP and GEF policies no GEF project resources will be used to pay any government agency or NGO staff personnel

² In accordance with both UNDP and GEF policies no GEF project resources will be used to pay any government agency or NGO staff personnel

TOTAL PROJECT WORKPLAN AND BUDGET

TOTAL PROJECT WORKPLAN AND BUDGET											
1	Award ID:	00042076									
	Award Title: PIMS 3390 LC PDF-A: Capacity Development and Mainstreaming										
	Project ID: 00048158										
Project Title:		Capacity Development for Sustainable Land Management in Seychelles									
Executing Agency (Implementing Partner):		UNDP									
	GEF Outcome/Atlas Activity	Responsible Party (Implementing Agent)	Source of Funds	Atlas Budgetary Account Code	ERP/ATLAS Budget Description/Input	Amount (USD) Year 1	Amount (USD) Year 2	Amount (USD) Year 3	Amount (USD) Year 4	Total (USD)	
	OUTCOME 1: Individual and Institutional Capacity for SLM are developed	MENR, MLUH, NOG'S, Disaster Secretariat, Private Land Owners, managers, farmers	GEF	71200	International Consultants	10,000	10,000	5,000	5,000	30,000 ⁱ	
				71300	Local Consultants	10,000	10,000	10,000	10,000	40,000 ⁱⁱ	
				71400	Contractual Services	60,000	57,000	50,000	30,000	197,000 ⁱⁱⁱ	
				72200	Equipment and furniture	11,000	7,000	7,000	7,000	32,000 ^{iv}	
				72500	Supplies	0	0	0	0	0	
				74500	Misc Exp	0	0	0	0	0	
				71600	Travel	10,000	10,000	8,000	8,000	36,000 ^v	
							Subtotal		101,000	94,000	80,000
	OUTCOME 2: Mainstreaming of SLM into economic and sectoral development	MENR AND Attorney General	GEF	71,200	International Consultants	0	0	0	0	0	
				71300	Local Consultants						
				71400	Contractual Services	40,000	20,000	15,000	2,500	77,500 ^{vi}	
				71600	Travel						
				74500	Misc Exp					0	
				Subtotal		40,000	20,000	15,000	2,500	77,500	
	OUTCOME 4: Medium Term Financial investment plan implemented	MENR	GEF	71400	Contractual Services	7,000	5,000	3,000	0	15,000 ^{vii}	
					Subtotal		7,000	5,000	3,000	0	15,000

	Outcome 5 Adaptive Management and Learning in place		GEF	71200	International Consultants	0	0	0	0	0
				71300	Local Consultants	10,000	10,000	10,000	10,000	40,000 ^{viii}
				71400	Contractual Services					
				72200	Equipment and furniture	0	0	0	0	0
				72500	Supplies	0	0	0	0	0
				74500	Misc Exp	0	0	0	0	0
				71600	Travel	2,000	2,000	2,000	1,500	7,500
				Subtotal		12,000	12,000	12,000	11,500	47,500
	TOTAL GEF					160,000	131,000	110,000	74,000	475,000

¹ Like all other Small Island States, Seychelles has limited numbers of trained professionals. International consultants will be hired to work alongside the national consultants and the Service contracts in particular to train local professionals on managing forest fires, establishing a fire prevention strategy, management and control of invasive alien species, use of environmental economics as a tool for decision making in SLM and establishment of payment for ecosystem services

² Local consultants will be hired to work alongside international consultants to establish land risk zoning as an aspect of land use planning, provide baseline information on forest fires and rehabilitation and produce guidelines, manuals and protocols outlining best practices and tool kits for SLM

³ A local company will be identified and contracted to play the lead role in capacity building for SLM. The company will coordinate the work of the international and national consultants ensuring that their inputs are channelled towards the development and implementation of a training programme on SLM, fire management and the control of invasive species. In addition, the local company will have a key role in revamping agricultural extension services ensuring that a functional inter-sectoral mechanism for SLM is established and actively guide the project and SLM work. It will also establish standard soil testing services as a basis for land use planning. Finally, it will facilitate the design and implementation of a performance and impact monitoring system. In this regard, it will facilitate identification of performance and impact indicators to monitor local and international benefits and build the capacity for SLM monitoring.

⁴ The bulk of the project equipment will be financed by the GOS. This budget will cater for specialized equipment for the control of fire, alien invasive species, soil testing and land use mapping

⁵ Cost of travel for international consultants and local car and boat hire, including DSAs.

⁶ A local company will be identified and hired to lead the work on mainstreaming SLM principles into economic and sectoral development. The company will develop and implement a public awareness campaign on the importance of mainstreaming SLM; it will then facilitate the review of relevant policies, legal and regulatory frameworks governing SLM, identifying strengths, weaknesses and gaps. It will facilitate the formulation of recommendations and lead an advocacy process to ensure revision of the policies, legal and regulatory frameworks in order to mainstream SLM.

⁷ A local company will be identified and hired to lead the development of the medium term investment plan (MTIP) for SLM. Building on the NAP, the company will lead a national level dialogue on SLM that brings together the key stakeholders to review the needs for SLM in Seychelles. The MTIP will adopt/incorporate aspects of the guidelines for the development of the TerrAfrica/SIP CSIF (Country Strategic Investment Framework) for SLM.

⁸ Cost for hiring a project manger, organizing internal and external reviews and facilitating a learning and adaptive management process.

PART III: MANAGEMENT ARRANGEMENTS

PROJECT IMPLEMENTATION PROCESS

Institutional framework and project implementation arrangements

147. The project will be implemented over a period of four years beginning in April 2007. The Implementing Agency for the project will be the UNDP Mauritius and Seychelles Country Office. The project will be executed under UNDP/GEF National Execution (NEX) procedures, with the Ministry of Environment and Natural Resources (MENR) as the executing agency. The project will be implemented under a UNDP-GEF Programme Coordination Unit under supervision from a Programme Coordinator, contracted by UNDP-GEF to coordinate all UNDP-GEF projects in Seychelles under the different Focal Areas (see organogram, Fig. 1). This will ensure a more effective and coordinated implementation of all projects, taking into account synergies in implementation these projects. The project will be managed on a daily basis by a National Project Manager who reports to the UNDP Programme Coordinator. The Financial Reporting is processed through the Administrative staff of the Programme Coordination Unit and reported to the Programme Coordinator. The UNDP-GEF Programme Coordinator in turn reports to the Steering Committee, Project Director and UNDP Country Office.

148. The Project will be implemented in close consultation with all implementing agencies and pertinent stakeholders, and in conformity with the EMPS. The national executing agencies for the project will be the National Park & Forestry Section of MENR; the Crop Development & Promotion Division of DONR (Agricultural Extension; Agricultural Research); National Disaster Secretariat; Geo-informatics, Land Use Planning & Development Control Divisions of MLUH; MPA; NGOs; private entities (Hotels, individuals) managing private lands; and Farmers Associations.

149. The project will receive guidance and steering from a Project Steering Committee (PSC), which is co-chaired by MENR and with further 8 – 10 members selected from amongst the most appropriate stakeholders from the EMPS Steering Committee, ensuring a balanced representation amongst GOS, NGO and private sector (see Terms of Reference, ANNEX III). The primary task of the PSC is to set the policies and provide guidance (institutional, political and operational) and direction for the Project to ensure that it remains within the agreed framework and achieves its outcomes and objectives. The PSC will report periodically to and receive strategic guidance from the EMPS Steering Committee. Technical guidance will be received from the UNCCD National Committee, which comprises of stakeholders pertaining to Sustainable Land Management.

150. The Programme Coordination Unit (PCU) will manage the selection process for all contracts and recruitment of local consultants; this will include preparation of TORs, call for bids and organization of the selection process. Final evaluation of bids will be done by the Project Steering Committee, strictly following established UNDP guidelines and regulations. The PCU will manage and coordinate the execution of all local contracts. Criteria and procedures will be developed for performance-based contracts with service providers. Under performance-based contracts, the service provider will be paid only for work completed. Work partially completed will be paid on a pro rata basis.

151. GEF funds will be administered by UNDP. The PCU will manage all contracts with local service providers. UNDP will advance funds for a three-month period. At the end of the

three-month period, the PCU will submit justification for expenses and the funds spent will be renewed by UNDP.

152. The responsibility for Project delivery/impacts ultimately rests with UNDP, acting as the GEF implementing agency. UNDP will monitor all activities and outputs. UNDP will ensure that the activities are being conducted in close co-ordination with the government and other stakeholders. UNDP will provide technical backstopping services and monitor adherence to the work plan. The project will comply with UNDP's monitoring, evaluation and reporting requirements, spelled out in the UNDP Programming Manual, see also PART IV.

153. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear alongside the UNDP logo on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgement to GEF.

Legal Context

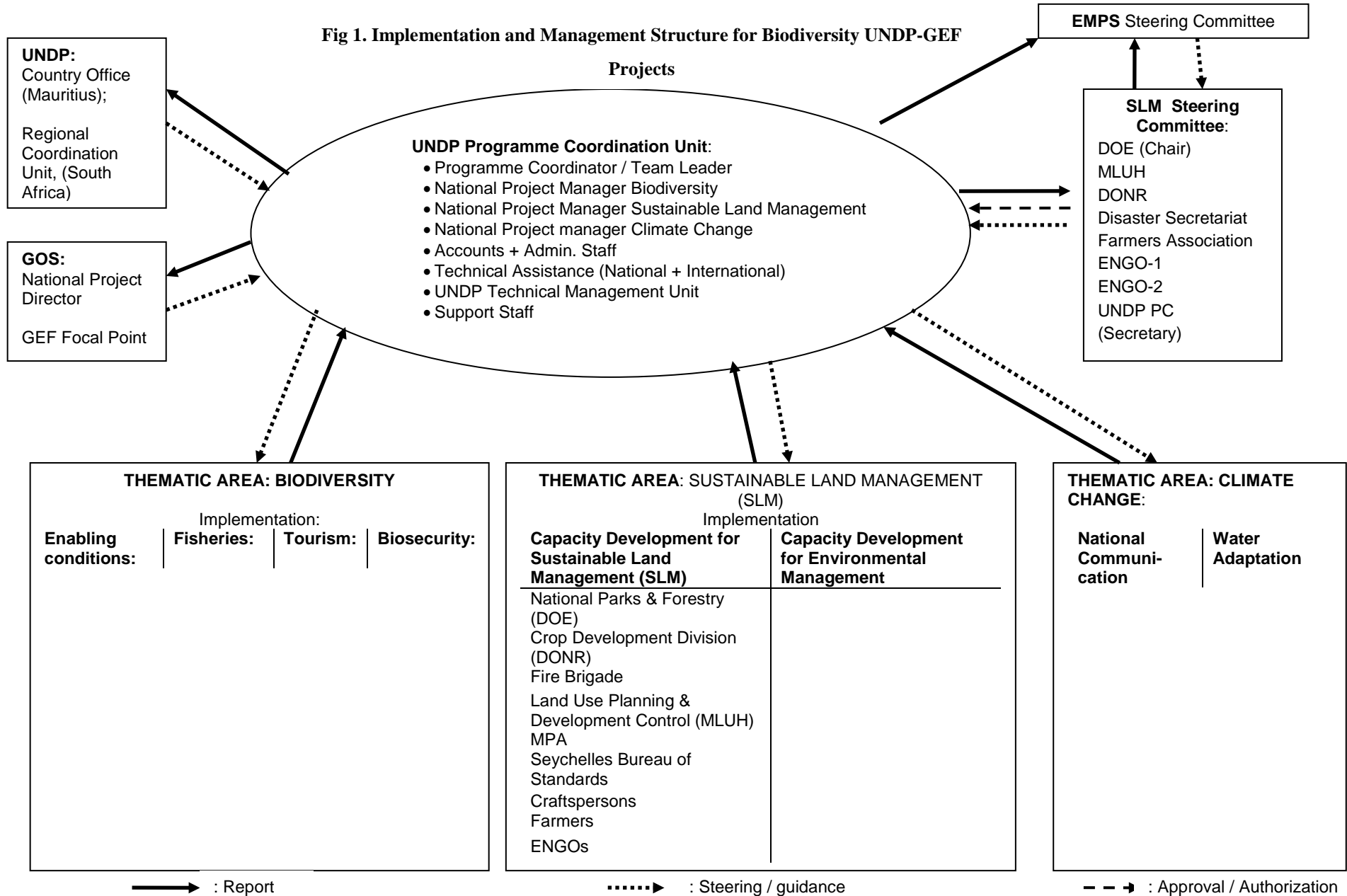
154. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Seychelles and the United Nations Development Programme, signed by the parties on 17 November 1977. The host country-implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

155. UNDP acts in this Project as Implementing Agency of the Global Environment Facility (GEF), and all rights and privileges pertaining to UNDP as per the terms of the SBAA shall be extended mutatis mutandis to GEF.

156. The UNDP Resident Representative is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- i. Revision of, or addition to, any of the annexes to the Project Document;
- ii. Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- iii. Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- iv. Inclusion of additional annexes and attachments only as set out here in this Project Document

Fig 1. Implementation and Management Structure for Biodiversity UNDP-GEF



PART IV: MONITORING AND EVALUATION

157. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Logical Framework Matrix in Annex 2 provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. These will form the basis on which the project's Monitoring and Evaluation system will be built. The project will also comply with the resource kit for "Monitoring, Evaluation and Reporting for SLM". The "MSP Annual Project Review Form" for 2006 has already been filled in during the PDF-A and submitted to the Global Support Unit (see ANNEX III)

MONITORING AND REPORTING

Project Inception Phase

158. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit as appropriate. A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

159. Additionally, the purpose and objective of the Inception Workshop will be to: (i) introduce project staff with the UNDP-GEF *expanded team* which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the Inception Workshop will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings. There are separate M&E requirements for this Global; Portfolio SLM projects, which need to be submitted annually, see ANNEX III.

160. The Inception Workshop will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase.

Monitoring responsibilities and events

161. A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time

frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

162. *Day to day monitoring of implementation progress* will be the responsibility of the Project Manager based on the project's Annual Work Plan and its indicators. The Project Manager will inform the PCU and if necessary the UNDP CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

163. The UNDP Programme Coordinator will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

164. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop and tentatively outlined in the indicative Impact Measurement Template. The measurement, of these will be undertaken through subcontracts or retainers with relevant institutions (e.g. populations of key species through inventories) or through specific studies that are to form part of the projects activities (e.g. measurement of carbon benefits from improved efficiency of ovens or through surveys for capacity building efforts) or periodic sampling such as with sedimentation.

165. *Periodic monitoring of implementation progress* will be undertaken by the UNDP-CO through quarterly meetings with MENR or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

166. UNDP Country Offices and UNDP-GEF RCUs as appropriate, will conduct yearly field visits, or more often based on an agreed upon schedule to be detailed in the project's Inception Report / Annual Work Plan to assess first hand project progress. Any other member of the Steering Committee can also accompany, as decided by the Committee. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.

167. *Annual Monitoring* will occur through the *Tripartite Review (TPR)*. This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to Tripartite Review at least once every year. The first such meeting will be held within the first twelve months of the start of full implementation. The Programme Coordinator will prepare an Annual Project Report (APR) and submit it to UNDP-CO and the UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.

168. The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR preparation

on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTR)

169. The terminal tripartite review is held in the last month of project operations. MENR is responsible for preparing the Terminal Report and submitting it to UNDP-CO and GEF's Regional Coordinating Unit. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation of formulation.

170. The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks are provided in will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

Project Monitoring Reporting

171. The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature is project specific to be defined throughout implementation.

(a) Inception Report

A Project Inception Report will be prepared immediately following the Inception Workshop, to be submitted within 3 months of the project start-up date. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

172. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

173. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the Inception Report, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

Annual Project Report (APR)

174. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self-assessment report by project management to

the CO and provides input to the country office reporting process, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.

175. The format of the APR is flexible but should include the following:
- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
 - The constraints experienced in the progress towards results and the reasons for these
 - The three (at most) major constraints to achievement of results
 - AWP, CAE and other expenditure reports (ERP generated)
 - Lessons learned
 - Clear recommendations for future orientation in addressing key problems in lack of progress

(b) *Project Implementation Review (PIR)*

176. The Project Implementation Review (PIR) is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the CO together with the project. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.

177. The individual PIRs are collected, reviewed and analyzed by the RCs prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyse the PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.

178. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings.

179. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference.

(c) *Quarterly Progress Reports*

180. Short reports outlining main updates in project progress and key issues/constraints encountered will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team. See format attached.

(d) *Periodic Thematic Reports*

181. As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered.

UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

(e) Project Terminal Report

182. During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

(f) Technical Reports (project specific- optional)

183. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

(g) Project Publications (project specific--optional)

184. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

INDEPENDENT EVALUATION

185. The project will be subjected to at least two independent external evaluations as follows:-

(i) Mid-term Evaluation

186. An independent Mid-Term Evaluation will be undertaken at the mid-point of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-

term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

(ii) Final Evaluation

187. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

AUDIT CLAUSE

188. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

TABLE 8: INDICATIVE MONITORING AND EVALUATION WORK PLAN AND CORRESPONDING BUDGET

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Inception Workshop	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO ▪ UNDP GEF 	\$2,000	Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO 	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members 	To be finalized in Inception Phase and Workshop. Indicative cost Jan – you need to do this based on your	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Technical Advisor and Project Coordinator ▪ Measurements by regional field officers and local IAs 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF 	None	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit 	None	Every year, upon receipt of APR
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO 	None	Following Project IW and subsequently at least once a year
Periodic status reports	<ul style="list-style-type: none"> ▪ Project team 	None	To be determined by Project team and UNDP CO
Technical reports	<ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed 	\$6,000	To be determined by Project Team and UNDP-CO
Mid-term External	<ul style="list-style-type: none"> ▪ Project team 	\$20,000	At the mid-point of

Evaluation	<ul style="list-style-type: none"> ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 		project implementation.
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project team, ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	\$30,000	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc) 	\$4,000	Yearly
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project team 	\$4,000 (average \$1000 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives 	\$5,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		\$67,000 (included under Outcome 5 of Project Budget)	

ANNEXES

ANNEX I: THREATS, ROOT CAUSES, BARRIERS, SOLUTIONS AND BASELINE MATRIX

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
Threats to Forests				
<p>Infrequent, but catastrophic forest fires. Forest fires, historically, are one of the main causes of deforestation and the ensuing land degradation in the Seychelles. In the past years no catastrophic fires have taken place; a number of smaller fires occurring every year (especially on Praslin) have been suppressed in time. But this may change because of perceived changes in climate, with the dry season becoming drier, and therefore an increased risk of potentially devastating forest fires.</p>				
<p><i>Physical impacts</i></p> <ul style="list-style-type: none"> • Partial to complete destruction of the forest; • Destruction of the litter layer and partial to complete destruction of soil organic matter <p><i>As a result of forest fires</i></p> <ul style="list-style-type: none"> • Severe erosion with complete loss of topsoil • Exposed and baked soil which has lost the potential to re-vegetate • Loss of capacity to catch and retain water 	<ul style="list-style-type: none"> • Frequency of fires highly increased due to human activities • Population growth, more people means more sources of ignition. • Cultural tradition of burning refuse and vegetation • Change of climatic conditions increased frequency and severity of drought • Fires set as a form of revenge amongst feuding families or for political reason (infrequent) • Unaware and insensitive visitors e.g. Vallée de Mai • Some species that colonise burned areas create highly flammable conditions and increasing risk of repeat fires (e.g. bracken fern) • The natural forests of Seychelles are less adapted, ecologically, to regenerate after fire; • Many of the upland forest soils are lateritic soils, high in plinthite, that are subject to surface crusting / hardening, 	<p><i>Institutional & human resource capacities</i></p> <ul style="list-style-type: none"> • Insufficient human resource capacities and experience in large fire suppression • Inadequate systems and insufficient human resources for detection of forest fires • Insufficient capacities for fire prevention and planning. • Insufficient capacities for the rehabilitation of lands degraded by fire <p><i>Legislation, policy & regulatory frameworks and their enforcement</i></p> <ul style="list-style-type: none"> • Insufficient enforcement of legislation (Lightening of Fire Act) • Lightening of Fire Act outdated, revision of act was attempted but never completed • Most burned, severely degraded land is privately owned & private land owners are not required to rehabilitate degraded lands nor to provide government with access for 	<p><i>Institutional & human resource capacities</i></p> <ul style="list-style-type: none"> • Improve forest fire detection -- transport & assembly of parts for 2nd fire lookout tower on Praslin • Training in fire risk assessment, prevention, suppression and post-fire site rehabilitation • Develop capacities for rapid, effective fire suppression including the evaluation of new fire fighting techniques, e.g. making use of helicopters • Develop fire fighting check list to identify which fire fighting measures are to be taken when • Identify exact responsibilities and line in command for all agencies involved <p><i>Legislation, policy & regulatory frameworks and their enforcement</i></p> <ul style="list-style-type: none"> • Revise Lightening of Fire Act including enforcement procedures, incentives, etc. • Analyze potential for strategic use of limited, controlled burns to minimize risks of forest fires • Investigate incentives for private owners for rehabilitation of degraded lands + regulatory requirements <p><i>Planning</i></p> <ul style="list-style-type: none"> • Develop and implement plan for fire prevention • Develop strategic fire suppression plan • Plan a staged increase in precautionary measures to 	<p><i>Institutional & human resource capacities</i></p> <ul style="list-style-type: none"> • Ad hoc fire suppression training • One fire tower at Glacis Noir • Purchase of fire fighting equipments under the Dutch Trust Fund • Fire brigade is active, and may establish unit on Praslin • Emergency Brigade Units at district level (1 per district with around 15 members) <p><i>Legislation, policy & regulatory frameworks and their enforcement</i></p> <ul style="list-style-type: none"> • Workshop and consultations held

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
	<p>especially after fire, making natural regeneration & rehabilitation nearly impossible</p>	<p>land rehabilitation.</p> <ul style="list-style-type: none"> Insufficient economic incentives for rehabilitation of degraded private lands <p style="text-align: center;"><i>Planning</i></p> <ul style="list-style-type: none"> Inadequate fire prevention planning and awareness raising. No meaningful analysis of fire risks Insufficient strategic planning on how to assess, confront and suppress large forest fires. No risk analysis and fire management planning for humid islands (Mahe & Silhouette) for fire prevention and suppression during infrequent severe droughts. Outdated Fire contingency plan, specifically on Praslin, due to the delegation of management of some protected areas on Praslin to Praslin Development Fund (creating a new and extended line of command) <p style="text-align: center;"><i>Knowledge management</i></p> <ul style="list-style-type: none"> Effectiveness and effects of existing fire prevention measures e.g. fire breaks, need to be researched The effectiveness of fire retarding species remains unknown No cost-effective techniques & strategies developed & proven for the large scale rehabilitation of burned/ degraded and eroded lands, especially on private lands <p style="text-align: center;"><i>Awareness raising</i></p>	<p>implement as risk categories increase</p> <ul style="list-style-type: none"> Update the fire contingency plan; Develop a post-fire vegetation rehabilitation plan <p style="text-align: center;"><i>Knowledge management</i></p> <p>GIS-based fires risk analysis:</p> <ul style="list-style-type: none"> Past occurrences of fire need to be researched and mapped; Correlation between rainfall and frequency of droughts, Steepness of slopes and fires to be identified Geographic location of fire permits issues over last 10 years Spatial fuels analysis – quantity, flammability, dangers of surface fires versus crown fires, rate of fire spread, etc. Spatial identification of biodiversity priorities & catchment priorities and of houses and infrastructure in need of protection with risk analysis for each area <ul style="list-style-type: none"> Conduct trials to identify suitable species and techniques for cost-effective, large scale rehabilitation of burned, degraded lands <p style="text-align: center;"><i>Awareness raising</i></p> <ul style="list-style-type: none"> Define target groups Define messages for each target group Select and use appropriate media for each group/message Development of operational system of ranking and of awareness-raising of current fire risk – Low, Medium, High, Extreme Risk 	<p>for review of the Lightening of Fire Act</p> <p style="text-align: center;"><i>Planning</i></p> <ul style="list-style-type: none"> Fire contingency plan exists and in use <p style="text-align: center;"><i>Knowledge management</i></p> <ul style="list-style-type: none"> Fire breaks maintained A first study was conducted in 2002 in a Msc thesis Some permanent sample plots exist Mapping of burnt areas started; Paper on effect of climate change on occurrence of fire is prepared <p style="text-align: center;"><i>Awareness raising</i></p> <ul style="list-style-type: none"> Radio messages to cancel burning permits, very often combined with general awareness programmes on fire

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
		<ul style="list-style-type: none"> Limited awareness with general public and users of forests on the catastrophic and long-term effects of fires 		
<p>Unsustainable harvest of forest products: Although not very important in national economic terms, the continuing harvesting of forest products has some impacts on forest biodiversity and ecosystem integrity, and may cause occasional and localized deforestation. Most of the harvesting of timber and Non Timber Forest Products (NTFP) takes place without management plans and monitoring.</p>				
<p><i>Physical impacts</i></p> <ul style="list-style-type: none"> Swietenia macrophylla (mahogany) and other plantations are being depleted as trees are harvested without replanting Severely distorted age structure of plantations e.g. Tabebuia pallida (calice du pape) nearly all large have been cut and only young trees remain. Insufficient regeneration of Lodoicea maldivica (coco de mer); over 90% of all seeds are collected and the nuts sold as souvenir and the 	<ul style="list-style-type: none"> Forest management plan not implemented and outdated Only one management plan exists for National Parks (Morne Seychellois) Lack of funds and human resources for forests management Trees are harvested more rapidly than they grow back. No harvest regimes exists for collection of Lodoicea nuts Limited monitoring schemes for Lodoicea populations Palm leaves are cut in a destructive fashion that weakens or kills the trees. No monitoring of collection of (endemic) plants for medicinal purposes 	<p><i>Institutional and human resources capacities</i></p> <ul style="list-style-type: none"> Insufficient capacity for development and implementation of sustainable forest management plans <p><i>Knowledge management</i></p> <ul style="list-style-type: none"> There are no fully developed and operational sustainable forest management systems. Timber harvesting based on diameter limits is a very rudimentary form of management that provides no guarantee of adequate regeneration and of sustainable use. Sustainable harvest schemes are often difficult to calculate and establish and need long term monitoring The economic potential of natural forest management is poorly quantified Limited capacities for determination of sustainable yields. Insufficient understanding of forest ecology <p><i>Enforcement</i></p> <ul style="list-style-type: none"> Inadequate monitoring of harvest 	<p><i>Institutional and human resources capacities</i></p> <ul style="list-style-type: none"> Training of middle and senior management in principles of sustainable forest management Training to improve capacity in development, implementation of management plans and their monitoring <p><i>Knowledge management</i></p> <ul style="list-style-type: none"> Develop and implement management plans/systems for forests; Conduct economic analysis of the costs/benefits of natural forest management options <p><i>Enforcement</i></p> <ul style="list-style-type: none"> Modify policies, regulatory and enforcement systems to emphasize those measures needed to ensure sustainable forest use <p><i>Planning</i></p> <ul style="list-style-type: none"> Develop specific detailed Forest Management Plans <p><i>Land tenure</i></p> <ul style="list-style-type: none"> Undertake the reforms needed to make it possible for the private sector to invest in forest and plantation management and in rehabilitation of degraded lands for commercial purposes <p><i>Sustainable financing</i></p> <ul style="list-style-type: none"> Undertake legal and regulatory reform to create a dedicated forest management fund from some percentage of the 	<p><i>Institutional and human resources capacities</i></p> <ul style="list-style-type: none"> Management Plan of Morne Seychellois National Plan exists Draft of a Management Plan for Praslin National Park exists Curieuse Management Plan in preparation Fond Ferdinand Draft Action Plan exists Review of Coco de Mer Management Plan completed National Park Committee exists A Forest Resource Management Unit to collect data and coordinate forest product inventory and provide timely statistics is in place.

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
<p>kernel as raw material to South East Asia</p> <ul style="list-style-type: none"> • Harvest of Phoenixophorium (Latannier) leafs and other forest products of endemic species e.g. leaves of (Koko Maron, Kafe Maron, sticks) as much as Raffia, Bambou and Vakwa, or plants or medicinal purposes without monitoring of harvest regimes 		<p>operations by forestry staff</p> <p><i>Planning</i></p> <ul style="list-style-type: none"> • No specific Forest Management Plans <p><i>Land tenure</i></p> <ul style="list-style-type: none"> • High risks and long time periods before returns can be realized, which serve as disincentives for private investments in forest products <p><i>Sustainable financing</i></p> <ul style="list-style-type: none"> • Budget allocations for natural forest management are insufficient and unreliable • No legal mechanism under which revenues from harvest of forest products on State lands could be reinvested directly back into forest management. • No direct income from indirect use of forests e.g. tourism 	<p>revenues derived from the commercial harvest of forest products.</p> <ul style="list-style-type: none"> • Identify and develop new sources of funding, e.g. tour operators, tour guides, tourists 	<p><i>Knowledge management</i></p> <ul style="list-style-type: none"> • PhD research towards sustainable management of Lodoicea completed <p><i>Enforcement</i></p> <ul style="list-style-type: none"> • Review of Nature and Conservancy Act ongoing <p><i>Land tenure</i></p> <ul style="list-style-type: none"> • Consultation with private land owners to get them involved <p><i>Sustainable financing</i></p> <ul style="list-style-type: none"> • Leaflets for Morne Seychellois National Park exist • National Environment Trust Fund (ETF) operational
<p>Deforestation by invasive alien species including creepers: Invasive Alien Species (IAS) are a big threat to biodiversity in Seychelles. Of these IAS, only creepers may potentially cause direct deforestation and land degradation. These are introduced or non-introduced species that are triggered to invade, usually by clearing, and may eventually smother substantial tracts of vegetation and forests, causing dying of trees and eventual deforestation.</p>				
<p><i>Physical impacts</i></p> <ul style="list-style-type: none"> • Complete destruction of the forest • Forest replaced by carpet of creepers 	<ul style="list-style-type: none"> • Susceptibility of both indigenous and exotic forest species to smothering by IAS creepers. • Quasi open-entry and inter-island movement of IAS 	<p><i>Institutional and human resource capacities</i></p> <ul style="list-style-type: none"> • No effective controls on introduction of IAS including creepers into Seychelles, or on inter-island and intra-island spread. 	<p><i>Institutional and human resource capacities</i></p> <ul style="list-style-type: none"> • Conduct legal reforms and develop institutional capacities for effective control of entry of IAS and for minimizing inter and intra-island spread <p><i>Knowledge management</i></p>	<p><i>Institutional and human resource capacities</i></p> <ul style="list-style-type: none"> • Quarantine services operational under Plant Protection Service of MENR

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
<p>that prevents all natural forest regeneration</p> <ul style="list-style-type: none"> Increased risk and occurrence of landslides on susceptible sites as the stabilizing root systems of large trees decay Loss of water holding capacity of the forest <p><i>Loss of qualitative forest habitats through invasive woody species</i></p> <ul style="list-style-type: none"> Reduction in forest diversity Minimizing the potential of the forest to regenerate Enriching of soil with foreign substances such as alloids, changing the flora and fauna of the soil necessary for regeneration of forest Loss of water retaining capacity e.g. mono-stands of Albizzia 	<ul style="list-style-type: none"> Spread of IAS creepers greatly facilitated by disturbances from road and infrastructure construction, and from fires. Creepers also advance and spread along streams or wherever sunlight reaches the ground 	<ul style="list-style-type: none"> Insufficient monitoring of the spread of IAS creepers <p><i>Knowledge management</i></p> <ul style="list-style-type: none"> Insufficient knowledge on which species of IAS creepers cause deforestation, Insufficient development of cost-effective models for elimination or control 	<ul style="list-style-type: none"> Develop information management system on creepers that cause deforestation GIS mapping of creepers distribution including remote sensing Conduct trials for development of cost effective techniques for eliminating/controlling creepers 	<ul style="list-style-type: none"> Invasive species committee meets occasionally UNDP-GEF IAS / Biosecurity Project being developed <p><i>Knowledge management</i></p> <ul style="list-style-type: none"> Some mapping initiated Comprehensive study prepared under the PDF B Mainstreaming Biodiversity project UNDP-GEF IAS / Biosecurity Project will be developed. Some sensitization and awareness programme ongoing 2 PhD research on woody invasive species completed

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
Unsustainable Agriculture				
Soil Erosion on sloping upland soils: Soil erosion takes place mainly on cultivated upland soils, with slopes sometimes in excess of 15°. These are lateritic, inherently unfertile soils, which have lost the top soil and become hard under exposed and dry conditions. Although some earlier soil conservation structures are in place, these are not maintained and hence presently very little soil conservation takes place. Currently farming activities are "moving upland", mainly because of development pressures on the flat coastal plains, thereby increasing the risk of soil erosion.				
<p>Physical Impacts:-</p> <ul style="list-style-type: none"> Loss of fertile topsoil with its soil organic matter, its nutrients and its beneficial effects on the holding capacity and on soil structure; Decreased yields and biomass production Sedimentation of lower river reaches, along with threats to fringing and barrier coral reefs; <p>Chemical Impacts:-</p> <ul style="list-style-type: none"> Loss of plant important nutrients through leaching, 	<p>Fields are cultivated on sloping land without adequate soil conservation measures</p> <p>At least 30% of the total cultivated agricultural soils are on slopes in excess of 15°;</p> <p>Present crop and animal production practices entail initial land clearing and regular cropping which expose soil surface to erosion;</p> <p>The acidic upland lateritic soils have low waterholding capacity;</p> <p>Extremely low soil organic matter (OM) content, because of high OM decomposition rate due to high ambient temperature;</p> <p>Limited organic matter input into cultivated agricultural soils as it is a costly resource;</p> <p>High annual rainfall with regular high intensity episodes that lead to nutrient loss especially of base elements through leaching;</p> <p>The practice of the use of fire for</p>	<p><i>Land tenure / property rights</i></p> <p>Most of the registered farmers do not own the land they cultivate giving them little incentive to invest in soil conservation measures such as the construction of terraces on slopes, retaining walls etc;</p> <p>The lease system for State agricultural land states that the resources on the leased land should be handled in a husband-like manner, it does not have a system in place to police the lease conditions.</p> <p>Farmers do not see immediate benefits of adequate soil conservation measures</p> <p><i>Financing / investments / Incentives</i></p> <p>Soil conservation measures require costly infrastructure such as drains, retaining walls, terraces etc.</p> <p>Lack of incentives for investments</p> <p>Most new farmers find it much more cost effective in the face of labour shortages to clear land using fire, especially where the land is covered with a lot of vegetation.</p>	<p><i>Land tenure / property rights</i></p> <ul style="list-style-type: none"> Revise the lease system of State agricultural land as firstly it is of short term duration and does not encourage the farmers to invest in relatively costly infrastructure for soil conservation; Develop and apply new regulatory framework for sustainable agriculture which will include clauses in the lease agreement which would mandate the farmers particularly on State agricultural land to practice a minimum level of soil management; <p><i>Financing / investments / incentives</i></p> <ul style="list-style-type: none"> Provision of incentives to farmers for implementing soil conservation practices; <p><i>Knowledge Management / Skills</i></p> <ul style="list-style-type: none"> Review of lessons learned Promote best practices among farmers through field and farm demonstrations; Develop adaptive management approaches – e.g. conduct farmer managed trials, participatory diagnostic analysis, farmers’ field schools, farmers clubs, etc. Enter all agricultural lands into a GIS,; Categorize agricultural lands with the help of GIS by erodibility, proximity to watercourses, risk of ground water contamination by saline water intrusion, location upstream from important marine ecosystems such as reefs, proneness to flooding; <p><i>Human resources / Capacity</i></p>	<p>The National Agricultural Policy 2003-2013 (NAP 2003-2013) calls for an inventory of all agricultural land, binding them into an agricultural land bank and promulgating a regulation to protect them from encroachment by any other economic sectors;</p> <p>At least once a year there is a workshop with farmers coming from various agricultural regions of Mahe and Praslin on agricultural soil management;</p> <p>Agricultural extension agents visit and advise farmers once every eight weeks on average; Advice covers fertilizer use, soil organic resources, terracing and terrace maintenance, use of fire for clearing etc</p> <p>There are bi-monthly</p>

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
	<p>land clearing is still evident and is especially significant on slopes;</p> <p>Insecure land tenureship;</p>	<p><i>Knowledge Management / Skills</i> Limited Knowledge base and management skills of farmers, with gaps in agricultural soil management and the need for soil conservation measures;</p> <p><i>Human resources / Capacity</i> Very few trained agronomists, even fewer with soil management background.</p> <p>Lack of a dedicated programme of training for agriculturalists at the undergraduate and graduate level.</p> <p><i>Extension approach</i> The current extension approach to farmer training is very prescriptive and does not include the contribution of farmers' experience and possibly proven field practices; consequently it does not encourage farmer adoption.</p>	<ul style="list-style-type: none"> • Create training opportunities for agronomists • Training of farmers / agriculturists on soil management <p style="text-align: center;"><i>Extension approach</i></p> <ul style="list-style-type: none"> • Review of the agricultural extension system both in terms of calibre of its personnel and in terms of applied extension methods; • Develop new extension materials to include soil conservation and soil fertility management practices; • Redefine role for government in the provision of agricultural extension service and promote private sector involvement; • Develop a system of payment for services rendered 	<p>television programmes, regular news paper articles and radio programmes covering some aspects of soil management;</p> <p>A new GIS project assisted by the FAO is being executed within the Agricultural Planning Section of the MENR with the principal objective of doing an inventory of all agricultural land, assessing their physical state and associated on-farm facilities such as feeder roads, water supply, electricity supply, vegetation cover, sloppiness etc.</p> <p>The NAP 2003-13 also calls for a revision of the free services currently offered by the state (e.g. soil testing, extension), with a move toward the consumers paying token fees for the goods and services</p>

Loss of Soil Fertility. Loss of soil fertility, other than that resulting from soil erosion, is mainly caused by ineffective soil fertility management, i.e. no or unbalanced compensation of plant nutrients taken up by crops; little addition of soil organic matter to compensate for loss through decomposition, etc. Together with the already inherently low soil fertility of the main cultivated soils, this leads to increased risk of degrading cultivated soils.

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
<p>Impacts:-</p> <ul style="list-style-type: none"> • Loss of plant important nutrients through leaching and adsorption and immobilization; • Decreased productivity / lower yields; • Reduced biomass production and less recycling; less organic matter build up • Reduction of water holding capacity of the soil; • Nutrient pollution • Increased erosion 	<p>Agricultural practices that do not sustain soil organic matter content and/or not replace lost soil nutrients;</p> <p>Prevailing environmental conditions of high ambient temperature and moisture lead to rapid breakdown of soil organic matter with consequent loss of nutrients partly through leaching during heavy rains;</p> <p>Acidic upland lateritic and the alkali coastal plains sandy soils have inherent low soil fertility;</p> <p>Extremely low soil organic matter (OM) content, because of high OM decomposition rate due to high ambient temperature;</p> <p>Limited organic matter input into cultivated agricultural soils as it is a costly resource;</p> <p>Insecure land tenureship;</p> <p>Irregular availability of proper fertilizers</p>	<p><i>Knowledge Management / Skills</i></p> <p>Limited knowledge base and management skills of farmers in soil fertility management;</p> <p>Limited knowledge of research and extension on proper soil fertility management</p> <p>Outdated soil fertility recommendations</p> <p>Often suboptimal application of fertilizers and other soil ameliorants such as lime because of lack of understanding and/or availability of inputs;</p> <p>Limited soil testing facilities.</p> <p><i>Extension approach</i></p> <p>The current extension approach to farmer training is very prescriptive and does not include the contribution of farmers' experience and possibly proven field practices. Consequently it does not encourage farmer adoption.</p>	<p><i>Knowledge Management / Skills</i></p> <ul style="list-style-type: none"> • Review of lessons learned • Promote best practices among farmers through field and farm demonstrations; • Develop adaptive management approaches in soil fertility management –for example conduct farmer managed trials, participatory diagnostic analysis, farmers' field schools, farmers clubs, etc • Enter all agricultural lands into a GIS, with provision of analysing data, including risk analyses, etc. • Need for revising / updating the soil fertility recommendations, taking into account integrated plant nutrient management (IPNM) systems • Establish an operational full fledged soil testing service with payment for services; • Develop human and institutional capacities for making the soil testing service adequate and sustainable; <p><i>Extension approach</i></p> <ul style="list-style-type: none"> • See above under Soil Erosion. 	<p>Currently farmers are encouraged by the agricultural extension services to have their soils freely tested for the main nutrients, the organic matter content and pH.</p> <p>Fertilizer schedules are prepared by the soil laboratory technicians for various crops on the basis of the soil analysis results.</p> <p>Some research on soil fertility management being done by the Vegetable Evaluation and Research Station (Anse Boileau)</p>
<p>Regular flooding of the Coastal Plains. The Coastal Plains, which are the main areas for agricultural and physical development, are at times flooded by run-off rainwater, during periods of heavy rains, usually during the North West Monsoon (November – February), which is aggravated by longer periods of stagnant water, especially during high tides. This causes disruption of economic activities and sometimes with lasting negative effects on the soil properties.</p>				
<p>Physical Impacts:-</p> <ul style="list-style-type: none"> • Significant loss and destruction of 	<p>Low-lying cultivated coastal plains, where at least 70% of the cultivated agricultural soils are</p>	<p><i>Financing / investments / incentives</i></p> <p>Costly investment required in putting flood water drainage infrastructure on</p>	<p><i>Financing / investments / incentives</i></p> <p>Need to invest in the maintenance or even reconstruction of proper surface drains,</p>	<p>Farm infrastructure such as a drainage reticulation on the</p>

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
<p>cultivated crops;</p> <ul style="list-style-type: none"> • Reduce cultivable agricultural land; • Irreversible damage to soil physical properties; • Encourage the proliferation of weeds and soil borne diseases; <p>Chemical Impacts:-</p> <ul style="list-style-type: none"> • Leaching of plant nutrients beyond root zone; • Lead to the formation of inaccessible nutrient complexes; • Loss of soil organic matter through providing conditions for reduced organic matter build-up and rapid oxidation • Alkali reaction in coastal soils, high in calcium carbonate, which encourages the proliferation of certain root knot nematodes species; 	<p>found, are barely 2 m above the mean high tide mark with a typical gradient that slopes down inland. Most times the inland portions are below the mean high tide mark;</p> <p>Most cultivated coastal plains are flanked by streams, rivers and marshes which empty onto the plains under heavy rainfall conditions;</p> <p>Contains a naturally occurring hard pan of calcium carbonate at about 3 m depth which does not encourage drainage;</p> <p>High calcium carbonate soils with alkali reaction, negatively influencing chemical properties of soil;</p> <p>Lack of adequate and effective drainage infrastructure on farms on coastal plains to remove flood water;</p>	<p>farms on the coastal plains;</p> <p>High maintenance cost of drainage structures</p> <p>many farmers do not perceive any immediately visible benefits for putting up the drainage infrastructure as they want to derive the benefits or recover the expenses before the land lease agreement expires;</p> <p>No incentives for investment or maintenance of drainage structures</p> <p><i>Knowledge Management / Skills</i> Non following of proper cultivation practices to counter negative effects of floods (soil cultivation, type of crops, inputs)</p>	<p>Incentive measures for farmsteads which invest in farm infrastructure such as retaining walls, terraces, surface drains etc.</p> <p><i>Knowledge Management / Skills</i> Incorporation of best practices used on coastal plains to counter the effects of the flooding actions of the rainy period (although these should not include the practice of fallow during the rainy period);</p> <p>Using the GIS tool to assess as well as map out risk of flooding.</p>	<p>coastal flats/plains is a mandatory requirement stipulated by the new lease agreement for state leased agricultural land. It is also being proposed as a major requirement for farming entities that want to subscribe to the new farm insurance scheme;</p> <p>The Environmental Engineering Section of the Department of Environment has been set up to provide adequate drainage channels for a number of the rivers and streams behind coastal plains;</p> <p>The Seychelles' Government has sought the assistance of the German Government through an elaborate project proposal to provide the necessary heavy equipment to maintain adequate drainage channels for important coastal plains of Mahé, Praslin and La Digue;</p>

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
Threats related to Land Use/Physical Development				
Landslides: Landslides may cause heavy damage to infrastructure (houses, roads) and to the land, which may result in localized deforestation and land degradation. The main causes of the landslides are, apart from intensive rain: steep slopes of the terrain, heterogeneous geology reflected on weak and fractured bed rock, intense weathering of rocks, intense vehicular movement, deforestation due to settlements and intensive agriculture, haphazard construction of buildings and roads and local hydrological conditions.				
<p><i>Physical impacts –</i></p> <ul style="list-style-type: none"> • Massive deposition of sediments in streams, wetlands and coastal marine ecosystems. • Flooding as sediments are deposited in drains and water channels; • Pollution of drinking water catchments • Destruction of infrastructure s, potentially life threatening 	<ul style="list-style-type: none"> • Heavy clay soils on steep slopes; • Impermeable layers of heavy clay or granite bedrock • Deforestation and loss of deep root systems of large trees • Design proposals not in concurrence with terrain condition resulting in excessive cutting exposing large areas of often unstable embankments; • Excessive clearing of land plots for developments leading to loss of vegetative cover and rehabilitation usually not attended to expeditiously; • Ineffective or complete lack of storm and surface water drainage; • Construction of roads is poorly implemented without giving due consideration to drainage provision • Unauthorized developments usually by 	<p><i>Information management & Awareness</i></p> <ul style="list-style-type: none"> • Conditions imposed on developments are not readily understandable by the lay men, technical jargon too complicated; • Lack of public awareness on the predicaments of unscrupulous construction <p><i>Knowledge management</i></p> <ul style="list-style-type: none"> • Lack of knowledge on the geotechnical properties of the different soil types in the country <p><i>Land use planning, EIS and construction guidelines</i></p> <ul style="list-style-type: none"> • Inadequate criteria/safeguards for the siting and construction of roads and other infrastructure on slopes susceptible to erosion. • Inadequate incorporation of landslide risks into land use planning/zoning • Lack of pre-planning feasibility studies and geotechnical surveys are very rarely carried out owing to its high cost resulting in a number of uncertainties in design proposals; • There is no systematic approach to granting licenses to building contractors; <p><i>Enforcement</i></p> <ul style="list-style-type: none"> • Inadequate application and enforcement of criteria for siting and construction of houses/residential areas 	<p><i>Information management & Awareness</i></p> <ul style="list-style-type: none"> • Proper transfer of information/guidelines, possibly in Creole as well as English; • Sensitization of all stakeholders, including architects, contractors and the public on the impact of landslides; <p><i>Knowledge management</i></p> <ul style="list-style-type: none"> • A full study on the geotechnical properties of soils to incorporate in GIS to assist engineers; <p><i>Land use planning, EIS and construction guidelines</i></p> <ul style="list-style-type: none"> • Incorporate landslide risks in Land Use Plan, elaborating on the type of development, building techniques most applicable and associated mitigative measures for different soil types; • The legislations such as the Town and Country Planning Act need reviewing to include regulations pertaining to landslides; <p><i>Enforcement</i></p> <ul style="list-style-type: none"> • The enforcement procedure has to be streamlined for more effective output; <p><i>Political and social</i></p> <ul style="list-style-type: none"> • The creation of a professional association with statutory status regrouping all construction professionals. This association should be the mainstay to address issues of code of conduct and ethics in the construction industry. Any professional or contractor will be required to be a member of such an association to be able to operate; 	<ul style="list-style-type: none"> • The Planning Authority meets weekly; • Relevant pieces of legislations such as TCPA, EPA, EMPS are in place; • A disaster committee is in place with the portfolio to adopt a proactive stance to help limit the occurrence of natural disasters, including landslides • Environmental Engineering Section set up under MENR to look at and remedy drainage and flooding problems; • Functioning GIS section in MLUH to act as the mainstay in remote sensing, collection and storage of spatial data, production of maps as relevant, etc; • Development Control section under MLUH responsible to monitor ongoing developments to ensure compliance with conditions imposed by the

Threat / Impact	Root Causes	Management Issues/Key Barriers	Solutions: Interventions from Project/Barrier Removal Activity	Baseline Activity
	squatters in remote and environmentally sensitive areas (at times in the National Parks) employing unsustainable building practices;	<p style="text-align: center;"><i>Political and social</i></p> <ul style="list-style-type: none"> • Insufficient political will for application and enforcement of regulations • Political pressure for further construction of houses • Inadequate consultation between government agencies; 	<ul style="list-style-type: none"> • Improved and effective granting of contractor's licences and enforcement of conditions relating to such building licences to be bolstered by such a professional body; 	<p>relevant authorities</p> <ul style="list-style-type: none"> • UNDP-GEF Project on Mainstreaming Biodiversity will look at integrating Biodiversity concerns into Land Use Planning, including regulatory review, etc.
<p>Wetland Depletion / Reclamation of wetlands: These few remaining wetlands in Seychelles are important for their ecosystem services, e.g. spawning areas for fish, filtering of water and their biodiversity (endemic flora). These areas are under threat from physical development, e.g. housing and tourism developments.</p>				
<ul style="list-style-type: none"> • Ecosystem destroyed or degraded; • Loss of hydrological function; • Loss of biodiversity ; 	<ul style="list-style-type: none"> • Unauthorized or approved filling (reclamation) of marshes and wetlands for construction ; • Strong pressures (especially with big tourism projects) for development of the wetlands; • Enforcement and control relating to conservation of wetlands problematic on outlying islands • Poorly maintained drainage system resulting in sediment deposition in wetlands; 	<p style="text-align: center;"><i>Land use planning, EIS and construction guidelines</i></p> <ul style="list-style-type: none"> • Plans submitted and approved by the planning authority do not address the requirements of drainage of entire wetlands; <p style="text-align: center;"><i>Enforcement</i></p> <ul style="list-style-type: none"> • Ineffective enforcement of conditions relating to reclamation and drainage provisions; <p style="text-align: center;"><i>Awareness</i></p> <ul style="list-style-type: none"> • Lack of public awareness on effective storm and surface water management for coastal areas / wetlands; 	<p style="text-align: center;"><i>Land use planning, EIS and construction guidelines</i></p> <ul style="list-style-type: none"> • Systematic maintenance of drains and water channels in and around wetlands; <p style="text-align: center;"><i>Enforcement</i></p> <ul style="list-style-type: none"> • More effective enforcement of ratified conventions relating to conservation of wetlands; • Streamlined and more effective enforcement of the EIA; <p style="text-align: center;"><i>Awareness</i></p> <ul style="list-style-type: none"> • Create public awareness on the importance of wetlands; 	<ul style="list-style-type: none"> • Wetland Unit in Policy Planning and Services (PPS) Division of MENR; • Environmental Engineering Section under MENR looks at draining problem affecting wetlands; • Ratification of Ramsar convention accepted by Cabinet and tabled in assembly;

ANNEX II: STRATEGIC RESULTS FRAMEWORK

LOGICAL FRAMEWORK MATRIX

Project Strategy	Objectively verifiable indicators			Sources of verification	Risks and Assumptions
	Indicator	Baseline	Target		
Goal: Sustainable land management is practiced and mainstreamed into national development in Seychelles					
Objective of the project: Capacity enhanced in Sustainable Land Management (SLM) and SLM principles applied in national policies, plans, processes and practices.	Individual and institutional capacities to deal with forest fires, invasive alien creepers, sustainable forest management, soil conservation and land slides in place.	No or little specific capacities on these issues in the different sectors.	Specific capacities in place for managing: Forest fires, invasive alien creepers, sustainable forest production, soil erosion, loss of soil fertility and land slides.	National Annual reports; Official gazette	Continued political support for mainstreaming SLM; National Development and Sectoral Plans will continue to be updated and developed.
	SLM reflected in National Policies, Laws, Development & Investment Plans	No specific mention of SLM in policies, laws, etc. No NAP; Indicative MTIP for certain sub-sectors, developed by FAO	SLM mentioned in new EMPS NAP approved and disseminated and actions started; Comprehensive MTIP approved and funds committed.	Project Progress Reports; Project Evaluation Reports; Surveys;	
	Cost-effective techniques for rehabilitation of deforested areas developed.	No cost effective techniques available	Cost effective rehabilitation techniques developed for: <ul style="list-style-type: none"> ▪ burned areas; ▪ areas affected by invasive creepers; ▪ areas affected by landslides 	GIS; Monthly forest products sales reports	
	Sustainable forest harvest schemes tested.	None of the productive forest area have harvest schemes	25% of productive forest area test harvest schemes	District Land Use Plans; Disaster Risk maps;	
	Agricultural area under improved soil conservation practices	0 Ha	200 Ha	Environmental Management Plan of Seychelles (EMPS)	
	Landslide risk map and zoning available and used	No landslide risk assessed	Map available in GIS format, land risk zoning included in District Land Use Plans and Disaster Risk Maps.	National Action Plan;	

Project Strategy	Objectively verifiable indicators			Sources of verification	Risks and Assumptions
	Indicator	Baseline	Target		
	Awareness of decision makers, land users and public of SLM	Very little awareness with decision makers and no awareness with general public about SLM	80% decision makers and 50% of land users (farmers, foresters, construction companies) and 30 % of general public aware of land degradation and SLM	Medium Term Investment Plan Surveys	
Outcome 1: Individual and institutional capacity for SLM enhanced	Baseline information on forest fires and rehabilitation documented and disseminated	No baseline information on forest fires and rehabilitation available	Complete collection and compilation of baseline information on forest fires and rehabilitation	National Annual reports; Management Plans	Continued interest in collaboration by international research institutions
	No. professionals trained in managing: Forest fires, invasive alien creepers, soil erosion, loss of soil fertility and land slides.	Estimated trained professionals: Forest fires: 2 persons Invasive alien creepers: 0 Sustainable forest production: 2 Soil erosion: 0 Soil fertility: 2	Trained professionals available: Forest fires: 6 Invasive alien creepers: 3 Sustainable forest production: 3 Soil erosion: 3 Soil fertility: 4	Workshop / Training / Mission / Back to Office Reports; Minutes of Committees	Sufficient interested, receptive individuals available for training
	Standard soil testing services operational, with payment for services.	Soil testing laboratory which is offering minimum, free service	Standard Soil Testing Service operational, demanding payment for services;	Evaluation Reports; Fire prevention and control strategy	Continued availability of training opportunities through bilateral and multilateral cooperation
	Fire prevention and control strategy / master plan in place.	Fire Contingency Plan (1997) in place; No fire fighting checklist;	Comprehensive Fire prevention and control strategy / master plan in place, including updated Contingency Plan, fire fighting checklist, etc.	Surveys, including customer satisfaction surveys;	
	Guidelines, Manuals, Protocols outlining Best Practices and toolkits in SLM developed and used	No guidelines on re-forestation; 1 outdated National Forest Management Plan; No soil conservation guidelines / manuals; Inadequate Construction protocols regarding slope management No SLM Toolkits available	Guidelines / best practices on reforestation; Manual on Soil fertility management; Manual on Soil Conservation; Updated Forest management Plan; Updated Architects / Construction protocols on “sustainable slope management”.	GIS; Database SLM Toolkits (economic valuation, land functionality analysis.)	Institutions receptive to change Institutions are able to retain the trained manpower Capable

Project Strategy	Objectively verifiable indicators			Sources of verification	Risks and Assumptions
	Indicator	Baseline	Target		
	<p>Revamped agricultural extension service, recommending sustainable land management practices following participatory extension approaches</p> <p>Land risk zoning included in Land Use Plans</p> <p>An inter-sectoral mechanism for SLM in place and functional</p>	<p>Agricultural extension service in place without proper soil conservation recommendations, following top-down extension approach</p> <p>National Disaster Secretariat is doing landslide risk assessment; Landslide risk zoning not included in Land Use Planning, nor in Disaster Risk maps.</p> <p>UNCCD Committee exists, but meets irregularly. EMPS Steering Committee in place, but does not specifically address SLM</p>	<p>Two SLM tools in use (e.g. economic valuation, land functionality analyses)</p> <p>Revamped, dynamic agricultural extension service recommending improved soil conservation practices to farmers, following participatory approaches.</p> <p>Landslide risk zoning included in District land use plans and disaster risk maps</p> <p>UNCCD Committee meets quarterly and disseminates minutes. EMPS Steering Committee discusses SLM in its monthly meetings</p>		<p>technicians available to develop and maintain knowledge and information management systems</p> <p>Stakeholders willing to share information</p>

Project Strategy	Objectively verifiable indicators			Sources of verification	Risks and Assumptions
	Indicator	Baseline	Target		
Outcome 2: SLM mainstreamed into economic and sectoral development	Relevant policies contain specific sections on and follow principles of SLM.	The Agriculture Policy 2003-13 mentions “sustainable agriculture”; No Forest Policy; No specific mention of SLM in the following: EMPS 2000 – 2010; National Strategy for Plant Conservation, National Biodiversity Strategy & Action Plan NBSAP (1997)	SLM principles integrated in: New National Forest Policy; Updated EMPS; Updated NBSAP. (Development / revision / updating of above policies to be undertaken by GOS)	Policy documents; Notifications of Acts / Regulations in Official Gazette National Annual Sector Reports; Evaluation Reports; Surveys;	National decision makers see the interest / need and importance of SLM for National and Sectoral development Government willing to revise land lease arrangements to include better incentives for introducing SLM practices
	Acts & regulations pertaining to SLM updated and harmonized.	Following acts + regulations in place: Lighting of fires Act; State Land & Rivers Act; Town and Country Planning Act; Environmental Protection Act; Licensing Act	Updated and harmonized Acts and regulations promulgated: Lightning of fires Act; State Land & Rivers Act. Licensing act		
	Lease arrangements for state agricultural land revised	Lease agreements for agricultural land outdated and not conducive for undertaking soil conservation measures by farmers;	Updated lease agreements for agricultural land, providing sufficient incentives for undertaking soil conservation measures		
	Stakeholders aware of SLM issues and principles.	No awareness campaigns	40 % of land users (foresters, farmers, timber merchants, building contractors, etc.) aware of Land Degradation and SLM		
Outcome 3: National Action Plan (NAP) completed	National Action Plan (NAP) completed and linked to the Resource Plan of the Medium Term investment Plan	No NAP	NAP prepared, adopted and disseminated.	NAP document; Distribution List	Capacity to draft NAP available
	NAP Monitoring mechanism in	No NAP monitoring	NAP yearly reviewed	NAP Monitoring and review documents	

Project Strategy	Objectively verifiable indicators			Sources of verification	Risks and Assumptions
	Indicator	Baseline	Target		
	place				
Outcome 4: Medium Term investment Plan being financed and implemented	Completed Medium Term Investment Plan MTIP; Financing for MTIP established MTIP monitoring and review system in place	An indicative MTIP assisted by FAO exists for livestock production, fruit and vegetable production as well as forestry products. No specific SLM principles mentioned. No financing committed No MTIP monitoring	Completed and adopted MTIP, based on SLM principles 80% Financing for MTIP committed MTIP yearly reviewed	Investment Plan (document); Minutes of Meetings / Workshops/ Conferences MTIP review documents	Donors and other potential investors interested in investing in Seychelles SLM
Outcome 5: Adaptive Management and Learning in place	Project Outputs and targets achieved on time and budget; Project technical and Monitoring reports prepared and disseminated Project audits and evaluations undertaken, recommendations incorporated into project process to the extent possible Lessons learned disseminated	No project	Project Outputs and targets achieved All required project monitoring reports prepared Yearly financial audits Important and relevant lessons learned collected and disseminated	Project documents and reports Monitoring reports Audit documents Technical documents Website	Adaptive management culture and capacity available

Output / Activity Table

Output	Activity	Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Outcome 1: Individual and institutional capacity for SLM enhanced																	

Output	Activity	Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1.1. Capacities for forest fire prevention, detection and suppression are strengthened	1.1.1. Conduct forest fire risk assessments, including drought occurrence, spatial analysis, fuel analysis, identification of priority areas to be protected, etc.	■	■	■	■												
	1.1.2. Review and develop institutional capacity for forest fire fighting			■	■	■	■										
	1.1.3. Update fire contingency plan						■	■									
	1.1.4. Develop a forest fire prevention and control strategy				■	■	■	■	■								
	1.1.5. Train forest managers on: Forest fire risk assessment, -prevention, -suppression, and implementation of the fire prevention and control strategy									■	■	■	■	■	■		
1.2. Cost-effective techniques for the rehabilitation of burned/deforested land are tested and developed.	1.2.1. Research in post-fire rehabilitation of burned / degraded lands	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	1.2.2. Training on ecological & economic principles of cost effective strategies for rehabilitation of burned/deforested areas.		■	■													
	1.2.3. Develop and test cost effective methods for rehabilitation of burned / degraded lands in selected sites on Praslin.			■	■	■	■	■	■	■	■						
	1.2.4. Develop guidelines for restoration of burned and degraded areas										■	■	■	■			
	1.2.5. Training on best practices for post-fire rehabilitation of burned / degraded lands														■	■	■
1.3: Cost-effective techniques/capacities for controlling deforestation by IAS creepers are developed.	1.3.1. Conduct risk assessment of deforestation by invasive creepers, including identification, listing and prioritization of species, vectors, current distribution and spatial risk analysis of future spread.	■	■	■	■												
	1.3.2. Develop and test methods for management of invasive creepers in forests in selected sites			■	■	■	■	■	■	■	■	■	■				
	1.3.3. Develop manuals / protocols for management of invasive creepers in forests										■	■	■	■			

Output	Activity	Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	
	1.3.4 Training in: Suppression and management of invasive alien creepers, and restoration of affected forests.								///	///						///	///	
1.4: Sustainable production forest management systems are developed.	1.4.1 Develop and test methods for sustainable harvest schemes in production forest in selected sites	///	///	///	///	///	///	///	///									
	1.4.2 Develop sustainable financing systems for model sites.					///	///	///	///	///								
	1.4.3 Compile best practices and develop a management plan for model sites;									///	///	///						
	1.4.4 Prepare guidelines for sustainable harvest schemes in production forest												///	///	///			
1.5: Improved capacities for soil conservation in agriculture are developed	1.5.1. Institutional review and restructuring of Agricultural Extension service, including possible privatization or “fees for services”.		///	///	///													
	1.5.2. Conduct a review of best practices in soil conservation and soil fertility management for farmers.	///	///	///														
	1.5.3. Develop guidelines / manuals for best practices in soil conservation and soil fertility management for farmers.			///	///	///												
	1.5.4. Assess soil erosion risk for agricultural cultivation, including slope/aspect, past occurrence, land use, cultivation practices, location, priority areas (biodiversity, water catchments, etc.), etc., for integration into land use planning systems and soil conservation recommendations for farmers.	///	///	///														
	1.5.5. Train agronomists and extensionists on: Soil conservation, soil fertility management, participatory extension approaches.						///	///								///	///	
	1.5.6. Strengthen the curriculum of the SAHTC on soil conservation issues, including Best Practices.									///	///	///	///					
	1.5.7. Develop a “fees for service” standard Soil Testing Service for soil chemical and physical attributes.			///	///	///	///											
1.6: Capacity	1.6.1. Develop a GIS map of the risks of landslides	///	///	///														

Output	Activity	Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
for minimizing risks of landslides is developed	1.6.2. Include landslide risk zoning based on landslide risk map in District land Use Plans				■	■	■	■	■	■	■						
	1.6.3. Develop best practices and protocols for slope management for architects / constructors					■	■	■	■								
1.7 Capacity on Environmental Economics in SLM developed	1.7.1 Environmental Economics Management training following SLM toolkit developed					■											
	1.7.2 Environmental Economics Management training in SLM conducted						■	■					■	■			
Outcome 2: SLM mainstreamed into economic and sectoral development																	
2.1: Sustainable Land Management principles integrated in relevant national policies and strategies.	2.1.1. Integrate SLM principles in new National Forest Policy			■	■	■	■	■	■								
	2.1.2. Strengthen Sustainable Land Management principles when updating Environmental Management Plan Seychelles (EMPS) 2000-2010.											■	■	■	■		
	2.1.3. Strengthen Sustainable Land Management principles, when updating National Biodiversity Strategy and Action Plan											■	■	■			
2.2. Legal and regulatory framework concerning Sustainable Land Management reviewed, updated and harmonized.	2.2.1. Revise lease system + conditions for state agriculture lands, to take into consideration SLM concerns and create incentives for adhering to best practices					■	■	■	■								
	2.2.2. Update State Land & Rivers Act, to include SLM concerns							■	■	■	■						
	2.2.3. Update Lighting of Fires Act, to include SLM concerns					■	■										
2.3. Stakeholders are aware of and apply SLM practices.	2.3.1. Develop targeted awareness campaigns for land users (farmers, forest managers, timber merchants, architects, building contractors) on land degradation and sustainable land management.									■	■	■	■	■	■		

Output	Activity	Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
	2.3.2. Sensitization of decision makers of Land Degradation and Sustainable Land Management.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Outcome 3: National Action Plan (NAP) completed and monitored																	
3.1. Preparation of NAP according to UNCCD guidelines	3.1.1. Develop draft NAP in participatory manner	/	/	/	/	/											
	3.1.2. Finalize NAP, taking into account concerns and feedback of stakeholders						/	/									
3.2. NAP disseminated	3.2.1. NAP adopted by government and stakeholders								/								
	3.2.2. NAP published									/							
	3.2.3. NAP disseminated										/						
3.3. NAP monitored	3.3.1. Develop NAP Monitoring and review mechanism									/							
	3.3.2. Yearly NAP review												/				/
Outcome 4: Medium Term investment Plan being financed and implemented																	
4.1. Medium Term Investment Plan for SLM developed	4.1.1. Review FAO funded Medium Term Investment Plans for different sub-sectors			/	/												
	4.1.2. Develop draft MTIP in participatory manner					/	/										
	4.1.3. MTIP adopted by government and stakeholders							/									
4.2. Financing for Medium Term Investment Plan ensured	4.2.1 Disseminate MTIP to all potential donors / investors								/								
	4.2.2 Seek and negotiate pledges from potential investors									/	/						
	4.2.3 Negotiate commitments with investors / donors;										/	/					
4.3. Medium Term Investment Plan implemented and monitored	4.3.1. Devise proper implementation mechanism for MTIP												/				
	4.3.2. Devise monitoring set-up for MTIP												/				
	4.3.3. Yearly MTIP review																/

Output	Activity	Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
Outcome 5: Adaptive Management and learning in place																	
5.1. Effective project management in place	5.1.1. Project Management Unit installed	■															
	5.1.2. Project Equipment purchased	■															
	5.1.3. Annual Audits undertaken																
5.2 M&E Work Plan implemented;	5.2.1. Inception Workshop and Report delivered	■															
	5.2.2. APR /PIR documents prepared and presented to Steering Committee Meeting				■				■				■				■
	5.2.3. Technical reports			■	■	■	■	■	■	■	■	■	■	■	■	■	■
	5.2.4. Mid Term and Final external Evaluations held								■								■
	5.2.5. M&E GSU Toolkit forms completed and submitted		■				■				■				■		
5.3. Lessons learned collected and disseminated	5.3.1. Lessons Learned collected				■	■	■	■	■	■	■	■	■	■	■	■	■
	5.3.2. Lessons Learned prepared					■	■	■	■	■	■	■	■	■	■	■	■
	5.3.3. Lessons Learned disseminated									■	■	■	■	■	■	■	■

ANNEX III: NATIONAL MSP ANNUAL PROJECT REVIEW FORM

For all UNDP/GEF Projects approved under the Global SLM SIDS and LDC Portfolio Project

This Form is to be completed annually by each MSP Project Team by 1st July (starting 2006), and submitted through the UNDP CO to the Global Support Unit in Pretoria.

SECTION I – PROJECT IDENTIFIERS

Basic Project Identifiers

Country	Seychelles
Project Title	
GEF Number	
UNDP Number	
Date of Prodoc signature	
Project duration	
Estimated closing date	
Principal Sector (s)	Agriculture, forestry, physical development

Project Stakeholders

List of representatives of key stakeholders groups involved in the project (e.g. could be members of the National Coordinating Body)

Stakeholder Group	Representative (title)

UNDP Identifiers

SRF Goal	
SRF Sub-Goal	
Strategic Area of Support	

SECTION II – MONITORING IMPACT AND PERFORMANCE

The following sub-sections include both *scorecard* questions and *quantifiable indicators*.

For scorecard questions, five possible answers are given in a table, and the responder should choose the most appropriate to his/her in-country situation. These are rated 1(poor) to 5 (high).

For quantifiable indicators, the project team should determine the baseline situation before the project starts, and *measure* the status of the indicator each year.

1. Measuring Impact.

These questions relate to measuring how successful the project is in achieving the project objective.

The Project Objective of each MSP is **‘capacity developed for sustainable land management in concerned government agencies, non-governmental and civil service organisations, user groups, etc. and sustainable land management principles mainstreamed into national policies, plans and processes’.**

Compulsory Indicators

An SLM related national policy or law: **2**

1	Is not yet officially planned
2	Is officially planned
3	Has been drafted
4	Has been approved
5	Has been developed and approved in a fully participatory manner

National development plans (e.g. five year plans, PRSP, budget): **3**

1	Contain only plans that will have a negative impact on sustainable land management
2	Pay no attention to sustainable land management
3	Pay some, but inadequate, attention to sustainable land management
4	Pay adequate attention to sustainable land management
5	Place sustainable land management at the heart of the development process

NGOs and CSOs are: **2**

1	Not active in promoting sustainable land management
2	Active at some levels (local or national) in promoting sustainable land management
3	Active at all levels but not very effective in promoting sustainable land management
4	Active and effective in some levels in promoting sustainable land management
5	Active and effective at all levels.

The public has: **1**

1	Low awareness and no understanding of sustainable land management
2	Low/medium awareness/understanding
3	Medium/medium awareness/understanding
4	Medium/high awareness/understanding
5	High awareness and high understanding

The knowledge of senior decision-makers in all sectors of importance to land degradation: 2

1	Less than 20% are aware of the importance of Land degradation
2	20 – 40% are aware of the importance of Land degradation
3	40 – 60% are aware of the importance of Land degradation
4	60 – 80% are aware of the importance of Land degradation
5	All are aware of the importance of Land degradation

The role of the UNDP/GEF MSP in strengthening sustainable land management capacity and mechanisms has been: 1

1	Negligible
2	Weak
3	Supportive of national and other efforts
4	Leading
5	Critical

Does the national budget make a specific allocation to sustainable land management? **No.**

For those countries answering yes, what is the percentage increase over Year 2004?

Attribution

What have been the major factors contributing to improvements in the above impact indicators over the past 5 years?

Place the following factors in declining order of level of contribution: Economic growth; increasing political stability; changes in overall governance framework; climatic conditions; international assistance; GEF/UNDP projects and programmes; Other

Optional Indicators

Each national MSP will be very specific in nature, and hence the monitoring framework and indicators will vary enormously from country to country. The optional indicators presented cannot cover all possibilities nor all eventualities. This section gives examples, suggestions and possibilities. Each national project team must select and/or modify from amongst the indicators and monitoring tools listed. Further, UNDP and UNDP/GEF have developed substantial material to assist the development of monitoring frameworks and choosing indicators. This material should also be consulted.

The no. of voluntary actions taken by private sector to incorporate SLM into production (e.g. banana plantation owners adopt low tillage operations, adopt low chemical inputs, adopt IPM; E.g. road construction company adopts minimal disruption or rehabilitation practices).

The percentage of sales of (agricultural, forestry or livestock) products that are *certified* sustainable.

2. Measuring Performance.

Outcome 1 Individual and institutional capacity for SLM developed;

Compulsory Indicators

An inter-ministerial or inter-sectoral institution or mechanism for SLM: 3

1	Does not exist
2	Exists on paper but meets irregularly
3	Meets regularly but is largely ineffective

4	Meets regularly, and is overall sustainable, but does not have full financial independence or full budget security
5	Meets regularly to discuss SLM related issues, has a clear workplan and financial independence, has a well-staffed secretariat and a secure budget and legislative status, follows-up on all decisions, and is able to enter into dialogue with all agencies represented

OR (GAC TO DECIDE)

The National Agency responsible for sustainable land management: 1

1	Has not been established
2	Has been established, but has no clear mandate, staff, equipment and authority.
3	Has reasonable mandate, staff, equipment and authority
4	Has strong mandate, staff, equipment and authority
5	Has strong mandate, staff, equipment and authority, and is actively promoting and mainstreaming SLM principles

Innovative tools for SLM, such as land functionality analysis, economic valuation techniques, integrated assessment, multi-criteria decision-making: 1

1	Are non-existent in the country
2	Exist, but have been borrowed from international experience, and have not been adapted to local and national needs
3	^{ix}
4	Exist, have been adapted, but are not fully functional
5	Exist and are fully functional

Indicator The percentage of land-users satisfied with available technical support (from either extension services or government technical agency or other service suppliers)^x.

Optional Indicators

Each national MSP will be very specific in nature, and hence the monitoring framework and indicators will vary enormously from country to country. The optional indicators presented cannot cover all possibilities nor all eventualities. This section gives examples, suggestions and possibilities. Each national project team must select and/or modify from amongst the indicators and monitoring tools listed. Further, UNDP and UNDP/GEF have developed substantial material to assist the development of monitoring frameworks and choosing indicators. This material should also be consulted.

(The following starts with indicators of individual capacity, and then deals with institutional and organisational capacity.)

The organisations responsible for capacity building for sustainable land management: 2

1	Have little idea of the capacity needs
2	Have some idea of capacity needs at either individual, institutional and systemic level
3	Have a good idea of capacity needs at most levels
4	Have a full understanding of capacity needs
5	Have a full idea of the individual, institutional and systemic capacity needs, and of the measures that should be taken to develop capacity

Research into indigenous knowledge related to sustainable land management is: 1

1	Not undertaken
2	Undertaken, but by a very small number of experts
3	Undertaken by many experts, in a random and arbitrary manner
4	Undertaken systematically
5	Undertaken by a formal, sustainably financed network of capable researchers

Training programmes and awareness raising programmes for local communities: 1

1	Are non-existent
2	Exist, but are of poor quality and are not affordable by most local communities
3	Exist but are of irregular quality
4	Are being implemented in a financially sustainable manner
5	Are being implemented in a financially sustainable manner and cover all technical requirements and alternative practices (e.g. reseeded, water point networks; IPM, drip irrigation, sustainable logging)

Training programmes and awareness raising programmes for marginalized communities: 1

1	Are non-existent
2	Exist, but are of poor quality and are not affordable by most local communities
3	Exist but are of irregular quality
4	Are being implemented in a financially sustainable manner
5	Are being implemented in a financially sustainable manner and cover all technical requirements and alternative practices (e.g. reseeded, water point networks; IPM, drip irrigation, sustainable logging)

The school curriculum: 1

1	Does not address land degradation or sustainable land management
2	
3	Addresses land degradation and sustainable land management for some age groups
4	
5	Addresses land degradation and sustainable land management appropriately for all age groups

Understanding of links between economy and land degradation: 1

1	The extent and economic costs of land degradation are poorly understood and unknown
2	The extent of land degradation is partly understood and known by a small number of scientists and a limited number of activists
3	The extent of land degradation is understood and known by a limited number of people in the environment and land sectors
4	The extent <i>and economic costs</i> of land degradation are understood and known by a limited number of people in the environment and land sectors
5	The extent <i>and economic costs</i> of land degradation are understood and known by decision-makers and the general public

The principal national agencies responsible for environment and land: 4

1	Do not have staff with required skills
2	Have some staff with required skills, but face regular shortages
3	
4	Do have staff with skills, but they are stretched and not always available
5	Have available staff with adequate skills

(Staff may be replaced with 'equipment' or 'resources')

NOTE: AS MANY PROJECTS WILL TARGETS NGOS, CBOS OR LAND-USER GROUPS, IN EACH CASE "PRINCIPAL NATIONAL AGENCY" CAN BE REPLACED BY "TARGETED NGO" OR "TARGETED CBO" OR "TARGETED LAND-USER GROUP".

The principal national agencies, local agencies and extension services: 2

1	Are unaware of integrated land-use planning approaches
2	Are aware of integrated land-use planning but lack technical knowledge
3	Are committed to integrated land-use planning but lack tools
4	Are using integrated land-use planning to a limited extent
5	Are fully using integrated land-use planning

The principal national agencies, local agencies and extension services: 1

1	Have not heard of the landscape approach to sustainable land management
2	Are committed to the landscape approach but are not technically competent
3	
4	Are starting to use the landscape approach
5	Are successfully using the landscape approach

Human resources of the principal national agencies, local agencies and extension services: 2

1	Are poorly qualified and unmotivated
2	Are of mixed quality, with some qualified staff but generally lacking motivation
3	
4	Are in general well qualified, but many lack motivation and some lack qualifications
5	Are generally well qualified and well motivated

Individuals: 2

1	Do not have the skills matching their job description
2	Have some, poor skills related to their job description
3	
4	Are reasonably skilled but skills could be better matched to job requirements
5	Are appropriately skilled, in line with job description

Staff development: 3

1	There are no mechanisms in place for training, mentoring, and learning.
2	Some mechanisms exist, but they are insufficient to develop enough people and unable to provide the full range of skills needed
3	
4	Mechanisms generally exist to develop professional skills, but there is either a shortage, or they do not cover the full range of required skills
5	There are adequate mechanisms in place for training, mentoring, and learning in order to maintain a continuous flow of new staff

Knowledge and capacity to develop payment schemes and markets for ecosystem functions and services related to sustainable land management is: 1

1	Non-existent
2	available, but only through regional or international bodies
3	Exists with a small number of people in the country
4	Exists and is starting to be applied
5	Exists and is applied regularly.

The Staff of a *named* department/organisation have/have not the ability tostate a specific task of the organisation, e.g. obtain and use satellite data; organise fully participatory consultations; etc..)

((Note that some countries will have very specific individual capacity requirements: e.g. developing individual capacity related to trade, debt,))

Percentage of targeted land-users having access to appropriate credit schemes.

Percentage of targeted land-users having access to insurance schemes.

(Following indicators focus on 'institutional' level capacity)

Membership of the national coordinating body or inter-sectoral committee: 4

1	Is limited to environment and land agencies
2	Involves all concerned national government agencies
3	
4	Involves governmental (national and local) agencies and non-governmental agencies
5	Involves governmental (national and local) agencies and non-governmental agencies, in an appropriately equitable manner, with each representative having a clear role and responsibilities

The principal national agencies responsible for environment and land: 3

1	Have no plans or strategies
2	Have plans/strategies, but they are out of date or were prepared in a top-down fashion
3	Have a mechanism to prepare plans and strategies, but it is irregular or top down
4	Regularly prepare plans and strategies
5	Regularly prepare plans and strategies in a fully participatory manner

Indigenous knowledge: 1

1	Is largely ignored in national policy, programmes and policy
2	
3	Occasionally feeds into national policy, programmes and policy
4	
5	Is mainstreamed into national policy, programmes and policy via a sustainable, effective formal mechanism

SLM policy: 1

1	There is no policy or it is old and not reviewed regularly
2	Exists, but is only reviewed at irregular intervals
3	
4	Is reviewed regularly, but not annually
5	Is reviewed annually, and updated

The principal national agencies, local agencies and extension services: 4

1	Resist changes
2	Do accept change, but only very slowly
3	
4	Tend to adapt in response to change, but not always very effectively or with some delays
5	Are highly adaptive, responding effectively and immediately to change

The principal national agencies, local agencies and extension services have: 2

1	No mechanisms for monitoring, evaluating or reporting on their own performance
2	Some mechanisms for monitoring, evaluating, reporting, but they are limited and weak
3	
4	Have reasonable mechanisms for monitoring, evaluating and reporting, but they are not as strong or comprehensive as they could be
5	Have effective internal mechanisms for monitoring, evaluating and reporting

The principal national agencies, local agencies and extension services are well managed: 4

1	Have totally inadequate internal management
2	Have a management system that is largely ineffective and does not deploy resources effectively
3	

4	Are reasonably well managed, but resources are not always deployed effectively
5	Are well managed with effective, efficient deployment of resources

The principal national agencies, local agencies and extension services: 2

1	Operate in isolation
2	Have established some partnerships, but they are irregular and with many gaps
3	
4	Have many partnerships with a wide range of partners, but there are still some gaps and the partnerships are not always operational
5	Have effective and operational partnerships with all government, non-government and local stakeholders

The principal national agencies, local agencies and extension services have: 2

1	Virtually no information for monitoring land quality
2	Limited information for monitoring land quality and for monitoring strategies and action plans
3	
4	Easy access to most required information and it is mostly of good quality, but there remain some gaps in quality, coverage and availability
5	Access to all the information they need to develop and monitor strategies and action plans

Local governments have: 4

1	None of the following: expertise, information, budgetary control and financial resources
2	One of the following: expertise, information, budgetary control and financial resources
3	Two the following: expertise, information, budgetary control and financial resources
4	Three of the following: expertise, information, budgetary control and financial resources
5	Adequate expertise, information, budgetary control and financial resources

Society's role in monitoring the state of land: 2

1	There is no dialogue on the state of the land at all
2	There is some dialogue ongoing, but is restricted to specialized circles and not with the wider public
3	
4	There is a reasonably open public dialogue ongoing, but certain issues remain taboo
5	There is an open and transparent public dialogue about the state of the land

Self-organisations amongst farmers/herders/forest gatherers: 3

1	Are not allowed
2	Are allowed, but discouraged and do not exist
3	Exist, with low capacity and few resources
4	
5	Are active and involved in the national debates on sustainable land management

The no. of independent NGOs accredited to the National Coordinating Body.

The percentage of violations of land-use regulations that are processed.

The percentage of a surveyed (or targeted) population that adopt at least one SLM practice by the project end.

The number of functioning land management networks or platforms developed at the village or community level

Outcome 2 SLM mainstreamed into economic and sectoral development:

Compulsory Indicators

The Ministry of Economic Development and/or Finance and/or Planning: 1

1	Is unaware of land degradation issues
2	
3	Has a stated aim of halting and where possible reversing land degradation.
4	
5	Uses environmental economic analyses of land-use options as a tool in development planning and in preparing economic/development policies and/or budgets.

Political commitment to SLM is present: 4

1	There is no political will at all, or the existing political will is against sustainable land management
2	Some political will exists, but it is not strong enough to make a difference
3	
4	Reasonable political will exists, but it is not always strong enough
5	There are very high levels of political will

Statement (answer 'Yes' or 'No')	Sector	Agriculture	Forestry	Rangelands	Economic dev.	Energy	Other
Impacts of sector policy/national plans on SLM are important but are not being assessed		Y	Y	N	Y	?	
Impacts of sector policy/national plans on SLM are being assessed in a participatory manner		Y	N	N	N	N	
Impacts of sector policy/national plans on SLM have been assessed		Y	N	N	N	N	
Impacts of sector policy/national plans on SLM have been <i>adequately</i> assessed and mitigation measures proposed		Y	N	N	N	N	
Impacts of sector policy/national plans on SLM have been <i>adequately</i> assessed and mitigation measures implemented		N	N	N	N	N	

Attribution

What have been the major factors contributing to improvements in the above indicators over the past 5 years?

Place the following factors in declining order of level of contribution: changes in overall government programme; international assistance; UNDP/GEF projects and programmes; Other.

Optional Indicators

Mainstreaming in General or integration into all Sectors

The SLM agenda: 1

1	There is no recognizable national SLM agenda
2	The agenda exists, some persons or institutions or actively pursuing the agenda but they have little influence
3	
4	A number of champions are promoting the agenda, but more is needed
5	There is an adequate number of leaders and champions effectively promoting the agenda

Public support for SLM: 1

1	The public has little knowledge or interest in SLM
2	There is limited support for promoting SLM amongst the public
3	
4	There is general public support and some lobby groups (e.g. NGOs) pushing strongly for SLM
5	There is tremendous public awareness and support

Statement (answer 'Yes' or 'No')	Sector	Agriculture	Forestry	Rangelands	Economic dev.	Energy	Other
SLM considerations are <i>adequately</i> mentioned in sector policy/national plans		Y	N	N	N	N	
SLM considerations are <i>adequately</i> mentioned in sector policy through specific legislation		Y	N	N	N	N	
Regulations are in place to implement the legislation		Y	N	N	N	N	
The regulations are being <i>adequately</i> enforced		N	N	N	N	N	
Enforcement of regulations is monitored		N	N	N	N	N	

A *named* law (e.g. **Forestry Law, Agricultural Code, Law on Water...**) is developed/approved and fully addresses SLM concerns, with specific sections on land degradation and/or sustainable land management.

National land-use planning guidelines and legislation provide clear instructions related to SLM.

X projects affecting land in *named* (e.g. **forestry, agriculture, rangelands, watershed management, transport or energy**) sector have integrated SLM aspects.

The number of functioning tools/incentives established with SLM objectives (e.g. trust funds for land rehabilitation, payments for environmental services, certificates or labels for 'land friendly products' - includes organic labels).

Economic Development

The UNCCD Focal Point and the inter-sectoral committee: 2

1	Are not consulted on the preparation of NEAP and PRSP
2	Are consulted, but inadequately, on the preparation of NEAP and PRSP
3	
4	Are consulted and play a small role in the preparation/supervision of development plans, PRSP, NEAP, and other sector plans and strategies
5	Play a full role in the preparation/supervision of development plans, PRSP, NEAP, and other sector plans and strategies

National Sectoral and Provincial Governments have a department mandated to ensure land is sustainably managed.

The Ministry of Economic Development/Finance/Planning use environmental economic analyses of land-use options as a tool in development planning and in preparing economic/development policies.

The Five Year Plans have a chapter on sustainable land management and/or implementation of the National Action Plan.

Agriculture

A label for organic and sustainable products: 1

1	Is not envisaged
2	Is being developed
3	
4	Exists but is not fully functioning
5	Exists and is functioning nationally and internationally

The degraded agricultural areas: 1

1	Are of unknown extent
2	Are generally known
3	
4	Have been clearly identified and mapped
5	Have been identified and response plans have been prepared

Expertise and inputs related to (Integrated Pest Management/conservation farming/environmentally sustainable irrigation/crop diversification according to land functionality analysis): 2

1	Is unknown
2	Is not readily available
3	
4	Is available, but availability and/or quality is irregular
5	Is readily available and of adequate quality

The incentives for *inappropriate* practices (such as crop intensification, overuse of chemicals, over-extraction of water): 1

1	Have not been identified
2	Have been identified
3	Have been identified and response measures proposed
4	
5	Have been identified and removed

Named agricultural enterprises have revised regulations/practices incorporating SLM

The percentage of land-users using or intending to use Integrated Pest Management/conservation farming/environmentally sustainable irrigation/crop diversification according to land functionality analysis

Forestry

The degraded forestry areas: 2

1	Are of unknown extent
2	Are generally known
3	
4	Have been identified and mapped
5	Have been identified and response plans have been prepared

The incentives for inappropriate practices (e.g. land clearing, mono-plantations, burning): 1

1	Have not been identified
2	Have been identified
3	Have been identified and response measures proposed
4	
5	Have been identified and removed

Across the country, **Y** hectares of forestry land are managed with sustainable land management as the priority objective (and/or certified)

Named Forest enterprises have revised their regulations/practices incorporating SLM

Rangelands

The degraded rangeland areas: 1 / na

1	Are of unknown extent
2	Are generally known
3	
4	Have been identified and mapped
5	Have been identified and response plans have been prepared

The incentives for inappropriate practices (e.g. over-stocking of animals, conversion of rangelands to crops, blocking of transhumance corridors, mismanagement of fire, inappropriate supplemental feeds, unsustainable sylvo-pastoral systems): __

1	Have not been identified
2	Have been identified
3	Have been identified and response measures proposed
4	
5	Have been identified and removed

The root causes of over-grazing: __

1	Are not known
2	Are known for a small number of pilot areas
3	
4	Are generally known in many areas and largely understood
5	Are known and understood for all areas

Existence of new legislation targeting sustainable impact of rangeland management

Existence of new Guidelines to be implemented

Energy

Targets for the penetration of renewable energy in rural areas vulnerable to land degradation/desertification (do they exist? Are they being met?)

Rural energy agencies have full awareness of and commitment to SLM

Transport

Existence of new Guidelines

Local development

Local community decision-making processes and planning processes: 1

1	Do not acknowledge the issue of land degradation
2	Acknowledge land degradation
3	
4	Acknowledge land degradation and set out measures for mitigation
5	Take full account of the need for sustainable land management

The need to promote traditional/indigenous practices: 1

1	Has not been acknowledged at the local level
2	Has been acknowledged at the local level
3	
4	Has been acknowledged and measures tentatively identified
5	Has been acknowledged and is fully incorporated into local plans

Land tenure: 1

1	Does not account for land degradation
2	
3	
4	
5	Is designed to fully account for and protect the value of land

Resource pricing (e.g. water): 1

1	Does not account for land degradation
2	
3	
4	
5	Is designed to fully account for and protect the value of land

There is a national process underway to develop land management plans for each community, driven by the communities.

Outcome 3 National Action Programme completed

Compulsory Indicators

NAP monitoring and review: 1 / na

1	There is no mechanism for monitoring NAP implementation or for NAP reviews
2	There is a stated aim of regular monitoring of NAP implementation, and reviews, but there is no formal mechanism for doing this
3	
4	There is a stated formal monitoring mechanisms, but it has no fixed funding source
5	There is an annual review process, covering state (of land, locally and nationally), pressure (level of threats), response resources allocated (nationally and site specific); capacity (individual, institutional and systemic), with adaptive management.

The National Budget or Medium-Term Development Plan or PRSP allocate funding to the NAP.

Optional Indicators

This will depend very much on the contents of the NAP - which should have its own indicators. For example, is the NAP an *orientation* framework or a *programming* framework? Contents, approval process and monitoring will vary for these two extremes.

The National Action Programme: **Not under preparation**

1	Is under preparation
2	Has been drafted
3	Has been finalized and approved by the lead agency
4	Has been approved and funds committed by all concerned agencies
5	Has been approved, funds have been committed by all concerned agencies, institutional measures have been taken, projects have commenced and are being monitored

The National Action Programme: NA

1	Does not identify roles and responsibilities and does not include measures to strengthen the institutional framework and local institutions
2	
3	Identifies measures to strengthen the institutional framework and local institutions, yet does not clearly set out roles and responsibilities.
4	
5	Clearly sets out roles and responsibilities, and identifies measures to strengthen the institutional framework and local institutions.

Information regarding land and land management: 1

1	Is difficult to access
2	Is available to the institutions responsible for collecting the information
3	Is partly available to some stakeholders
4	Is readily accessible to all stakeholders
5	Is readily accessible in systemised format to all stakeholders and the general public

Grade the following stakeholder groups in terms of their involvement in the National Action Programme on a scale of 1 (low involvement) to 5 (very high involvement): N/A

Group	Stage	Role in NAP Preparation	Envisaged role in NAP Implementation Mechanism
National Government			
Local Governments			
NGOs			
Communities			
Scientific Community			
International development partners			
Small scale private sector			
Large scale private sector			
Holders of indigenous knowledge			
Other			

The number/volume of internationally funded projects in direct support of the National Action Programme.

Outcome 4 Medium Term investment Plan being financed and implemented:

Compulsory Indicators

International partners: N/A

1	Show no interest in the Investment Plan
2	Some partners finance some projects through the Investment Plan, most prefer to finance projects separately
3	
4	Most partners finance most related projects through the Investment Plan
5	Partners finance all related programmes and projects through the Investment Plan

Financing for the Investment Plan has been secured (e.g. trust fund fully capitalized);

fixed commitment from Ministry of Finance from annual budget; innovative one-off (e.g. debt swap, donor) and sustainable (e.g. service payments) financial mechanisms secured):

1	No financing secured
2	Initial financing secured
3	
4	Considerable financing secured
5	Fully financed

Optional Indicators

The medium term investment plan: __

1	Is under preparation with limited involvement of stakeholders
2	Is under preparation with full involvement of stakeholders
3	Has been prepared and submitted for approval
4	Has been prepared and approved by government agencies, and secured some government funding
5	Has been prepared in a fully participatory manner, has been approved, and initial funding from government and development partners has been committed

Implementation mechanism: __

1	None of the following have been established: body responsible for Plan implementation with authority and budget; independent monitoring mechanism; <i>chef de file</i> from amongst development partners; permanent consultative mechanism involving most donors and national stakeholders
2	One of the above is established and functioning
3	Two of the above are established and functioning
4	Three of the above are established and functioning
5	All of the above are established and functioning

To what extent are donors coordinated and harmonised in their approach to financing SLM initiatives:

1	No coordination or harmonisation
2	Limited, but increasing, coordination and harmonisation
3	
4	Donors are coordinated and harmonised.
5	All donors are fully coordinated within the framework of the Medium Term Investment Plan

Percentage of surveyed/targeted land-users, NGOs, private sector with information on and access to the financial mechanisms associated with the Plan

3. Monitoring the GEF requirements

Participatory nature of the project.

Compulsory Indicator

How successful has the project been in forging the involvement of representatives of all concerned stakeholder groups? __

		NGOs	Land-users	Women	Marginalised communities	Indigenous people
1	Not at all					
2	Success with some					

	stakeholders					
3	Success with many stakeholders, some of the time					
4	Success with most stakeholders					
5	Full					

For those respondents indicating '4' or '5', examples should be provided.

Optional Indicators

Does the project have specific mechanisms for involving the stakeholders in project decision-making or monitoring?: **N/A**

1	No mechanisms
2	Mechanisms were envisaged in the project design documents, but were never established
3	
4	Mechanisms envisaged in project design documents were established, but do not function fully
5	Mechanisms established and functioning

The number and level of participation by sectoral agencies, provincial governments, local communities in the project has been:

1	Almost inexistent
2	
3	Acceptable
4	
5	Very satisfactory

What is the project budget for activities that directly target participation (e.g. by developing co-management mechanisms, or by addressing decentralization)?

Has the project directly led to the finalization of one (or more) MoU between stakeholders?

Contribution to achieving the MDGs?

Compulsory Indicator

The project: **3 (during PDF-A stage)**

1	Makes no linkages with either MDG goals or bodies responsible for MDG in the country
2	
3	Is clearly linked to MDG, but no operational linkages have been established
4	
5	Clearly articulates the linkages with MDG and operationalises these linkages

Optional Indicators

The project management has established mechanisms for monitoring and reporting on the MDGs. **State the specific MDG and national target.**

The project promotes a land management policy that will have a direct impact on poverty alleviation or other MDGs

Integration with other in-country UNCCD implementation mechanisms.

Compulsory Indicator

The UNCCD National Focal Point and Inter-Sectoral Committee: **4 (during PDF-A stage)**

1	Played no role in project design or implementation
2	Played an active role in project design, but are not involved in implementation;
3	
4	Play a role in project design and implementation
5	Play a strong and active role in both project design and implementation

Optional Indicator

The Project has operational linkages to projects supported by the Global Mechanism and/or other GEF projects in the Sustainable Land Management portfolio.

Linkages with key SLM related capacity development processes in country (including GEF and internationally funded projects)

Optional Indicator

Co-management arrangements (for example, joint project office or joint project steering committee) have been established with UNDP GEF projects in other focal areas, or with other UNDP natural resource management projects.

Does the project create or promote linkages with the implementation of UNFCCC and UNCBD?

Compulsory Indicator

Has the project implemented joint activities with projects implemented within the framework of UNFCCC and/or UNCBD?

Optional Indicator

Does the project have activities and/or budget to specifically promote coordination amongst Focal Points and/or national teams/committees of the global environmental conventions?

Contribution to the in-country gender situation, as it relates to SLM.

Compulsory Indicator

Do the project outputs (e.g. NAP, Investment Plan, Guides, Training programmes) make specific allowance for the gender dimension? **N/A**

1	Almost inexistent
2	
3	Sometimes
4	
5	Always

Optional Indicators

Is the gender dimension a specific component of any project activity?

Is the gender dimension of the project budgeted separately?

Promote the use and value of indigenous knowledge related to SLM.

Compulsory Indicator

Are custodians of indigenous knowledge related to sustainable land management formally included in the project implementation or technical support mechanisms?

Optional Indicators

The project outputs (e.g. NAP, Investment Plan) target the use and valorization of indigenous knowledge __

1	Almost never
2	
3	Sometimes
4	
5	Always

Do any project activities focus on indigenous knowledge related to sustainable land management (e.g. creating a database, capacity building)?

Sustainability

This is covered under Section III, Question 3

Replicability

Compulsory Indicators

Does the project specify activities to replicate project successes and allocate budget to these activities?

Optional Indicators

What is the budget for replication?

Is there a clear replication strategy for promoting incentive measures and instruments (e.g. certificates, payments) within and beyond the project boundaries?

ANNEX IV: TERMS OF REFERENCE FOR STEERING COMMITTEE AND PROJECT MANAGER

PROJECT STEERING COMMITTEE (PSC)

The PSC will provide high-level policy guidance and orientation to the project, and will be composed of the principal stakeholders and decision-makers, i.e. the Principal Secretaries (PS) of the key ministries related to SLM, and other decision-making stakeholders. The PS of the Department of Environment will chair the PSC with a further 7 members ensuring balanced representation from different stakeholders. There will be 4 observers that will attend meetings and deliberations but will not have decision powers. Other members may be co-opted for regular or special meetings/sessions. The UNDP-GEF Programme Coordinator will act as secretary to the PSC. Members of the Steering Committee will be remunerated as per sitting (from GOS budget). The Steering Committee has a budget which it can use to commission technical studies and Monitoring & Evaluation activities.

The Project Steering Committee consists of:

1. PS DOE (Chair)
2. PS, Department of Natural Resources
3. PS Department of Land Use, Ministry of Land Use and Habitat
4. Director General National Disaster Secretariat
5. Farmers' Association
6. ENGO-1
7. ENGO-2
8. UNDP-GEF Programme Coordinator (Secretary)

The following entities are Observers

9. Seychelles Chamber of Commerce and Industries (SCCI)
10. UNDP Country Office
11. LUNGOS
12. Ministry of Foreign Affairs and International Cooperation
13. (ENGO-3)
14. (ENGO-4)

The principal tasks of the SC are the following:

1. Provide high level orientation and guidance for the project (institutional, political and operational)
2. Ensure that the project develops in accordance within the agreed framework and achieves its outcomes and objectives.
3. Perform Monitoring & Evaluation Function.
4. Approve annual progress reports, workplans and budgets
5. Pay special attention to the assumptions and risks identified in the logframe, and seek measures to minimize these threats to project success;
6. Ensure collaboration between institutions.
7. Pay special attention to the sustainability of activities developed by the project.
8. Ensure the integration and coordination of project activities with other related government and donor-funded initiatives.
9. Report periodically to EMPS Steering Committee.

PROJECT MANAGER

Context and Background

The national Project Manager will be responsible for the management of the UNDP-GEF “Capacity Development for Sustainable Land Management Project” in Seychelles. This Project is part of a portfolio of UNDP-GEF projects in Seychelles, which will be coordinated by a UNDP Programme Coordination Unit, headed by a Programme Coordinator. The National Project Manager will report to the Programme Coordinator. The administrative matters surrounding the project will be dealt with by the Programme Coordination Unit accounts and administrative section. This will include procurement of inputs and services as well as financial reporting. The Project will be guided by a Project Steering Committee.

Duties and Responsibilities

1. Ensure overall daily management of the project;
2. Prepare technical and progress reports and submit timely to Programme Coordinator.
3. Prepare workplans and budgets for timely submission to Programme Coordinator
4. Certify accounts statements prepared by the accounts section, for onwards submission to Programme Coordinator;
5. Supervise and co-ordinate project activities, in line with project outputs and outcomes, and in close collaboration with stakeholders.
6. Ensure the technical coordination of the project activities
7. Assist Programme Coordination Unit in mobilizing all project inputs in accordance with UNDP procedures;
8. Draft TORs for the consultants and sub-contractors;
9. Supervise and coordinate the work of project consultants and sub-contractors;
10. Assist the UNDP Coordination Unit in budget planning and control.
11. Implement Monitory and Evaluation activities according to work plan and project Document.
12. Assist the Programme Coordination Unit as Secretary in the PSC;
13. Oversee the exchange and sharing of experiences and lessons learned with relevant conservation and development projects nationally and internationally.
14. Undertaking any other activities that may be assigned by the Programme Coordination Unit or the Steering Committee.

Outcomes to achieve:

1. Individual and institutional capacity for SLM enhanced.
2. SLM Mainstreamed into economic and sectoral development
3. National Action Plan completed
4. Medium Term Investment plan being financed and implemented

Required Qualifications, experience and skills:

Qualifications: Minimum BA or BSc in Natural Resources Management or equivalent, with particular background in land management / land degradation.

Experience: Minimum 5 years experience as project manager, managing Natural Resources projects with particular relevance to Sustainable Land Management. Experience in one or more of the following: Sustainable forest management, forest fire prevention, sustainable agriculture (countering erosion and soil nutrient depletion) and/or natural risk assessments. Experience with multi-stakeholder participatory approaches. Prior UNDP-GEF project experience an advantage.

Required Skills

- Professionalism – skills that indicate capability to analyze and organize different tasks; Capacities for strategic thinking and planning.
- Planning, coordinating and organizing – Ability to establish priorities and to plan and coordinate work; ability to effectively coordinate a multi-stakeholder project;
- Communications - Excellent communication skills and effective interpersonal and negotiation skills, proven through successful interactions with all levels of stakeholder groups, including senior government officials, business executives, farmers and communities;
- Teamwork and respect for diversity – Ability to lead, manage and motivate teams of international and local consultants and other stakeholders to achieve results
- Commitment and diligence – Committed to and diligently working towards achieving results for sustainable change.
- Knowledge of UNDP-GEF project implementation procedures, including procurement, disbursements, and reporting and monitoring would be an advantage.
- Fully Computer literate

Language: Fluency in English and knowledge of French and Creole an asset.

ANNEX V: GEF OPERATIONAL FOCAL POINT ENDORSEMENT LETTER



Republic of Seychelles Ministry of Environment & Natural Resources

The Principal Secretary (Environment)

Wednesday 24th January 2007

Monique Barbut
Chief Executive Officer and Chairman
GEF Secretariat
1818 H. Street, NW
Washington, DC 20433
United States of America

Dear Ms. Barbut,

In my capacity as the GEF Operational Focal Point, and on behalf of the Government of Seychelles and the Ministry of Environment and Natural resources, I would like to give my strongest support to this Medium Size Proposal (MSP), entitled “Capacity Development for Sustainable Land Management in Seychelles”.

The proposal has been developed by consultants through the Ministry of Environment and Natural Resources, in close consultation with stakeholders, and it has been reviewed and technically approved by the CCD Focal Point and the EMPS Steering Committee. The Government of Seychelles considers that the project meets its capacity development priorities for the UNCCD implementation and sustainable land management in Seychelles.

The project has four main outcomes:

Outcome 1: *Individual and institutional capacity for SLM enhanced.*

Outcome 2: *SLM mainstreamed into economic and sectoral development*

Outcome 3: *National Action Plan (NAP) completed.*

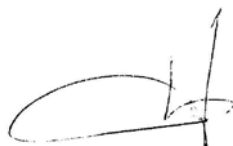
Outcome 4: *Medium Term investment Plan being financed and implemented.*

Through these Components and related Outputs, the project will address key environmental issues as highlighted in the Environmental Management Plan of Seychelles, 2000-2010.

The co-financing that has been confirmed for this project amounts to a total of US\$1,765,000. The Government of Seychelles’ contribution amounts to US\$1,153,000; other co-financing will come from FAO (US\$ 235,000), EU (US\$ 110,000), UNDP (US\$100,000) and National NGO’s (US\$167,000).

I therefore fully endorse this project for submission to the GEF for expedited approval, and I further wish to express our appreciation for the continuing support that is being provided by UNDP and the GEF in this important programme of work.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'R. Payet', with a large loop on the left and a vertical stroke on the right.

Rolph Payet
PRINCIPAL SECRETARY
and GEF Operational Focal Point

CC: Mr Claude Morel, Foreign Affairs, PS and GEF Political Focal Point
Mr Didier Dogley, UNCCD Focal Point
Mr. Claudio Caldarone, UNDP Resident Representative, Mauritius

ANNEX VI: LOCAL PROGRAMME ADVISORY COMMITTEE (LPAC) MINUTES (CCD COMMITTEE AND EMPS)

MINUTES

MEETING WITH UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION (UNCCD) COMMITTEE
ON:

UNDP-GEF PROJECT "CAPACITY DEVELOPMENT FOR SUSTAINABLE LAND MANAGEMENT IN THE
SEYCHELLES"

DATE & TIME:

Thursday 17 May 2007 (13:30 – 15:00 hrs)

VENUE:

Conference Room, Policy Planning & Services Division, Ministry of Environment and Natural Resources, English River (Ex English River Clinic)

PRESENT:

Mr. Didier Dogley	Director General, Ministry of Environment & Natural Resources (MENR), Chairperson
Ms. Lisette Rose	Secretary (UNCCD), Nature Conservation Division, MENR
Mr. Antoine-Marie Moustache	Special Advisor, MENR
Mr. Basil Esther	Forestry, MENR
Ms. Elvina Payet	Senior Conservation Officer, MENR
Mr. Francis Coeur de Lion	Director (GIS), Ministry of Land Use & Habitat
Mr. James Mougat	Research Officer, Terrestrial & Ecological Research Centre
Ms. Katy Beaver	Plant Conservation Action Group (PCA)
Mr. Jan Rijpma	Consultant, UNDP-MENR
Ms. Sara Price	Programme Officer, UNDP

WELCOME

The Chair welcomed all members present at the meeting and explained the purpose of the meeting which is to discuss and validate the recently approved UNDP-GEF "Capacity Development for Sustainable Land Management in Seychelles" (SLM) Project Document.

PRESENTATION

Mr. Jan Rijpma briefly presented the project document, with an overview of the project's background, as well as all outcomes, outputs and implementation arrangements.

DISCUSSION

A few points were raised by members:

- National Action Plan (NAP): The Chair clarified that although this is a fixed output for the project, the GEF does not finance this component. Funding must come from government contribution or other sources.
- Some members expressed concern that emerging issues related to land degradation are not covered in this project, e.g. salt water intrusion on the coastal plains (which is the main area for infrastructure and agriculture). The Chair and the Consultant clarified that although this issue was in fact discussed within the framework of the project, it could not be included in view of the capacity-building focus and limited budget of the project, which does not cater for major infrastructural activities. This was also the advice of UNDP-GEF when this issue was put forward to them, where it was also mentioned that this issue would fit better under a Climate Change Adaptation Project.
- OUTCOME 1:

- A member asked if pilot projects will be included in the activities for this outcome. The consultant said that it could be included as part of output 1.2 (Cost-effective techniques for the rehabilitation of burned/deforested land) and Output 1.3: (Cost-effective techniques/capacities for controlling deforestation by IAS creepers)
 - When reviewing output 1.3, one member asked why creepers are the only invasive species considered. The Consultant and the Chair clarified that this is the IAS specifically related to land degradation issues. It was found that especially the creepers smother and kill off parts of the forest and thereby may cause soil denudation and subsequent land degradation. Other IAS don't directly cause land degradation (land is still covered with vegetation) and will be dealt with within the framework of the biodiversity/biosecurity projects.
 - One member questioned the 'sustainability' approach of the project considering there is little real knowledge on sustainability in the country. It was agreed that the project will try to address this gap as it is a capacity building project.
- OUTCOME 2:
 - One member queried the representative of MLUH on the status of the land use plans. MLUH said that the development of land use plans is proving to be a lengthy process. It was also clarified by the Consultant that land use planning will be addressed under the UNDP-GEF Mainstreaming Biodiversity project.
 - OUTCOME 3:
 - Members were in agreement with this output
 - OUTCOME 4
 - It was agreed that there should be close linkages with the FAO Medium Term Investment Plan (MTIP), which has already been taken into account during the Project development, and which is currently being reviewed by FAO.
 - OUTCOME 5
 - Members were in agreement with this output

CONCLUSION

The Chair thanked all participants and concluded the meeting.

MINUTES OF ENVIRONMENTAL PLAN OF SEYCHELLES (EMPS) STEERING
COMMITTEE MEETINGS
(Overarching committee for Environmental Management in Seychelles, comprising of some 40
stakeholders)

EXCERPTS ON UNDP-GEF SUSTAINABLE LAND MANAGEMENT PROJECT

Minutes Meeting 3rd May 2006:

The selection for the International and National consultant has taken place.

Mr. Roy Hagen has been selected as the International consultant and Mr. J. Rijpma as the national consultant.

Minutes Meeting 3rd August 2006:

A presentation was made on the SLM by the Consultant J. Rijpma and it will be circulated to members.

Minutes Meeting 6th September 2006:

The Project Document has been finalized and submitted to UNDP.

Minutes Meeting 4th October 2006:

The Project Document has been finalized and submitted to UNDP.

Mr Rijpma reported that there had been no negative comments from UNDP. There was the need to tackle implementation issues which would be dealt with in a workshop.

Minutes Meeting 8th November 2006:

The SLM Project is at the same status as the Biodiversity Mainstreaming Project, in that co-financing letters need to be sought and implementation modalities finalized.

Minutes Meeting 6th December 2006:

The project document is being finalized. Co-financing is being sought from different organizations.

Minutes Meeting 7th February 2007:

The project document has been finalised and submitted to GEF for approval.

ANNEX VII: REFERENCES

- Breadfruit and Other Trees Act (1994), *Law of Seychelles, Chapter 122*, Government Printer, Mahé, Republic of Seychelles.
- Carlström A., (1996). Endemic and threatened plant species on the granitic Seychelles.
- Central Bank of Seychelles (2005) *Annual Report 2004*, Victoria, Seychelles
- Coco de Mer (Management) Decree (1994), *Law of Seychelles, Chapter 37*, Government Printer, Mahé, Republic of Seychelles.
- Cronk, Q.B. & Fuller, J.L. (1995), *Plant invaders*, London, UK.
- Environment Protection Act (1994), *Law of Seychelles, Chapter 71*, Government Printer, Mahé, Republic of Seychelles
- Fleischer-Dogley, F. & Kendle, T. (2002), *The conservation status of the Coco-de Mer, Lodoicea maldivica (Gmelin) Persoon: a flagship species*, in: *Plant Conservation in the Tropics - Perspectives and Practices: 371 – 382*, Eds: Maunder, M., Clubbe, C., Hankamer, C. & Groves, M., The Cromwell Press Ltd, UK
- Fleischer-Dogley, F., (2006) *Towards a sustainable Management Plan for Lodoicea maldivica*, PhD Thesis-University of Reading
- Fleischmann, K. (1997), *Invasion of alien woody plants on the islands of Mahé and Silhouette, Seychelles*, in: *Journal of Vegetation Science* 8: 5-12.
- Fleischmann, K. (1998), *Vallée de Mai*, Geobotanical Institute at The Federal Institute of Technology, Zuerich, Switzerland.
- Fleischmann, K., Edwards, P.J., Ramseier, D. and Kollmann J., (2005), *Stand structure, species diversity and regeneration of an endemic palm forest on the Seychelles*, in: *African Journal of Ecology*, 43: 291-301.
- Fleischmann, K., Porembski, S., Biedinger, N. & Barthlott, W. (1996), *Inselbergs in the sea: vegetation of granite outcrops on the islands of Mahe and Praslin and Silhouette (Seychelles)*, in: *Bulletin of the Geobotanical Institute at The Swiss Federal Institute of Technology* 62: 61-74
- Forest Reserves Ordinance (1955), *Law of Seychelles, Chapter 153*, Government Printer, Mahe, Seychelles
- Food and Agriculture Organization (2006): Establishment of an agricultural geographic information system; TCP/SEY/3101 (A); Project document: Department of Natural Resources; Ministry of Environment.
- Government of Seychelles (2006): Issues and Solutions: Agricultural Land. Draft document. Agricultural Planning Section, Department of Natural Resources, Ministry of Environment and Natural Resources
- Government of Seychelles (2005). National Capacity Self Assessment Report; Action Plan for Environmental Capacity Development. (NCSA)
- Government of Seychelles (2005): The National Agricultural Policy 2003-2013. Draft document. Department of Natural Resources, Ministry of Environment and Natural Resources.
- Government of Seychelles (2004). Statistical Abstract 2003, (Management & Information Systems Division)
- Government of Seychelles (2004). Millennium Development Goals, Status Report.
- Government of Seychelles (2004). National Assessment of the Barbados Programme of Action+10 Review
- Government of Seychelles (2003). Towards an ecotourism strategy for 21st century (SETS-21). Thematic working group on ecotourism. (Ministry of Tourism and Transport)
- Government of Seychelles (2002). Seychelles Initial National Communication under the UN Framework Convention on Climate Change. (MENR)
- Government of Seychelles (2002). VISION 21: Tourism Development in Seychelles 2001-2010, (Ministry of Tourism and Land Transport)

- Government of Seychelles (2000): The Action Plan to the National Agricultural and Fisheries policy 2003-2013. Draft document. Department of Natural Resources, Ministry of Environment and Natural Resources.
- Government of Seychelles (2000). Environment Management Plan of Seychelles (EMPS) 2000-2010.
- Government of Seychelles: Meteorological Reports
- Government of Seychelles (1998). National Biodiversity Strategy and Action Plan of Seychelles (NBSAP).
- Government of Seychelles (1996). Sensitivity Atlas for the Seychelles.
- Government of Seychelles (1992). National Land Use Plan (Plan Indicatif d'Aménagement du Territoire)
- Indufor, (1993), *Seychelles Forest Management Plan/Sector Study*, Ministry of Foreign Affairs Planning and Environment, Mahe, Seychelles
- Kendle, T., Rose, J, Lloyd-Bostock, K., Pitman, T., Beaver, K., (2002), *Vallée De Mai Management Plan*, Seychelles Island Foundation, Mahe, Seychelles
- Kueffer, C. & Vos, P. (2004), *Case Studies on the Status of Invasive Woody Plant Species in the Western Indian Ocean: 5.Seychelles*, in: Forest Health and Biosecurity Working Papers FBS/4-5E, Forestry Department, FAO, Rome, Italy.
- Kueffer C., and Vos P, (2003). Woody Invasive Species: A regional assessment. Regional Workshop on Invasive Alien Species and Terrestrial Ecosystem Rehabilitation for Western Indian Ocean Island states. Workshop proceedings.13-17 October 2003. Seychelles.p22-33.
- Lighting of Fires (Restriction) Ordinance (1940) *Law of Seychelles, Chapter 232*, Government Printer, Mahe, Seychelles.
- Lundin C. T., and Linden O., (1995). Integrated Coastal Zone Management in the Seychelles. (GOS, SIDA and World Bank)
- Meuwly, C. (2002), *Fire & Vegetation on Praslin and in the Fond Ferdinand*, Geobotanical Institute at The Federal Institute of Technology, Zuerich, Switzerland
- Ministry of Environment (1998) *Morne Seychellois National Park Management Plan*, Seychelles
- Ministry of Environment (1998) *National Biodiversity Strategy and Action Plan*, Seychelles
- Ministry of Environment (2004) *Praslin National Park Management Plan*, Draft document
- Ministry of Environment and Natural Resources (2005) *Forestry Monthly Sales Report, 2005*, Seychelles
- Ministry of Environment and Natural Resources (2005) *UNCCD – Country Report*, Seychelles
- Ministry of Environment and Natural Resources (2006) *Forestry Monthly Sales Report, 2006*, Seychelles
- Ministry of Environment and Transport (2000) *Environment Management Plan of Seychelles 2000-2010”Managing for Sustainability “*, Seychelles
- National Parks and Nature Conservancy Act (1991), *Law of Seychelles, Chapter 141*, Government Printer, Mahe, Seychelles.
- Nevill, J. (2005) *Unpublished - Fond Ferdinand Action Plan*, Praslin Development Fund, Praslin, Seychelles.
- National Statistics Bureau (2005) *Statistical Abstract 2004*, Victoria, Seychelles
- Piggot, C.J. 1968: A soil survey of the Seychelles. Technical Bulletin no2 Land resources Division, directorate of Overseas surveys, Tolsworth, Surrey , England.
- Sekhon, G. S., (1990). Draft Report on soil fertility problems and fertilizer use status for vegetable crops. FAO Fertilizer Programme.State Land and River Reserves Ordinance (1903), *Law of Seychelles, Chapter 150*, Government Printer, Mahe, Seychelles
- Stoddart, D.R. (1984), *Biogeography and Ecology of the Seychelles Islands*, The Hague, The Netherlands.
- Town and Country Planning Ordinance (1978) *Law of Seychelles, Chapter 160*, Government Printer, Mahe, Seychelles
- UNEP, UN Office for the coordination of Humanitarian Affairs (2003), *Tropical Depression Storm over Praslin and it' Satellite Islands in Seychelles, Assessment Report*, Seychelles.
- Vielle, M.M. (1997) Seychelles forest fire contingency plan, Division of Environment, Mahé Republic of Seychelles.

Walsh, R., (1984). Climate of the Seychelles. In D.R. Stoddart, ed. Biogeography and ecology of the Seychelles islands, pp. 39–62. The Hague, Boston, USA & Lancaster, UK, Dr W.Junk.



**Expedited Medium Size Project proposal
under the
LDC-SIDS Portfolio Project for Sustainable Land Management
REQUEST FOR GEF FUNDING**

AGENCY'S PROJECT ID: PIMS No. 3390
GEFSEC PROJECT ID: 2441
COUNTRY: Seychelles
PROJECT TITLE: Capacity Development for Sustainable Land Management in Seychelles
GEF AGENCY: UNDP
OTHER EXECUTING AGENCY(IES): MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES (MENR)
DURATION: Four years
GEF FOCAL AREA: Land Degradation
GEF OPERATIONAL PROGRAM: OP 15
GEF STRATEGIC PRIORITY: SP 1
ESTIMATED STARTING DATE: May 2007

FINANCING PLAN (US\$)	
GEF PROJECT/COMPONENT	
Project	475,000
PDF A	25,000
<i>Sub-Total GEF</i>	500,000
Co-financing	
GEF Agency (UNDP)	100,000
Government	1,143,000
Multilateral	235,000
NGOs	167,000
GM	10,000
<i>Sub-Total Co-financing:</i>	1,655,000
<i>Total Project Financing:</i>	2,130,000
FINANCING FOR ASSOCIATED ACTIVITY	
IF ANY:	1,550,000

ⁱ **Country Eligibility:** Seychelles ratified the United Nations Convention to Combat Desertification on 26 June 1997 and is eligible for funding under paragraph 9(b) of the GEF Instrument

CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN: The project will build capacities for sustainable land management in Seychelles, with environmental benefits accruing to forest lands, agricultural and coastal lands estimated at 45,000 ha.

^{ix} In some cases it is not possible to provide five alternative responses. Three or four are provided in such cases.

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

^x A survey will be developed by GSU, implementation to be financed through UNDP by (Month, day, year)

Operational Focal Point Endorsement: 9th August, 2006

Claude Morel, Principle Secretary, Ministry of Foreign Affairs

CCD national Focal Point: 26th June 1997

Didier Dogley, Director General Nature Conservation, Ministry of Environment and Natural Resources

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for a Medium-sized Project under the LDC-SIDS Targeted Portfolio Project for Sustainable Land Management.

Name & Signature

Y. Glemarec

Yannick Glemarec
UNDP/GEF Deputy Executive Coordinator

Date: 17 April 2007

Project Contact Person:

Veronica Muthui, UNDP-GEF Regional
Technical advisor

Tel. and email: 27-12-3548124,
veronica.muthui@undp.org