



# UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement    Programa de las Naciones Unidas para el Medio Ambiente  
Программа Организации Объединенных Наций по окружающей среде    برنامج الأمم المتحدة للبيئة

联合国环境规划署



## PROJECT DOCUMENT

### SECTION 1: PROJECT IDENTIFICATION

- 1.1 Project title:** Integrated Ecosystem Management and Restoration of Forests on the South East Coast of Saint Lucia
- 1.2 Project number:** 9406
- 1.3 Project type:** FSP
- 1.4 Trust Fund:** GEF
- 1.5 Strategic objectives:**  
GEF strategic long-term objective: CCM1 programme-1; CCM2 programme-4; BD1 programme-2; LD2 programme-3; SFM-3
- 1.6 UNEP priority:** Ecosystem Management, Climate Change
- EM(a):** Use of the ecosystem approach in countries to maintain ecosystem services and sustainable productivity of terrestrial and aquatic systems is increased, delivered through Methodologies, partnerships and tools to maintain or restore ecosystem services and integrate the ecosystem management approach with the conservation and management of ecosystems.
- EM (c):** Services and benefits derived from ecosystems are integrated with development planning and accounting, particularly in relation to wider landscapes and seascapes and the implementation of biodiversity and ecosystem related MEAs, delivered through Biodiversity and ecosystem service values are assessed, demonstrated and communicated to strengthen decision-making by governments, businesses and consumers.
- CC (a)** Ecosystem-based and supporting adaptation approaches are implemented and integrated into key sectoral and national development strategies to reduce vulnerability and strengthen resilience to climate change impacts.
- 1.7 Geographical scope:** National
- 1.8 Mode of execution:** External
- 1.9 Project executing organization:** Ministry of Education, Innovation, Gender Relations and Sustainable Development
- 1.10 Duration of project:** 60 months  
Commencing: 1 January 2018  
Technical completion: 31 December 2022
- Validity of legal instrument:** 60 months

<b>1.11 Cost of project</b>	<b>US\$</b>	<b>%</b>
<b>Cost to the GEF Trust Fund</b>	<b>4,428,145</b>	<b>23.2</b>

**1Co-financing**

## Cash

Ministry of Education, Innovation,  
Gender Relations and Sustainable  
Development 19,705

Ministry of Agriculture, Fisheries  
Physical Planning, Natural Resources  
and Co-operatives 8,425,966

The Organization of Eastern  
Caribbean States 469,431

## In-kind

Ministry of Education, Innovation,  
Gender Relations and Sustainable  
Development 3,853,368

Ministry of Agriculture, Fisheries  
Physical Planning, Natural Resources  
and Co-operatives 781,021

UNEP 100,000  
International Conservation Corps  
Program 300,000

150,000  
Inter-American Institute for  
Cooperation on Agriculture

Saint Lucia National Trust 219,500

IUCN Regional Office for Mexico  
Central America and the Caribbean 306,000

<b>Sub-total</b>	<b>14,624,991</b>	<b>76.8</b>
<b>Total</b>	<b>19,053,136</b>	<b>100.00</b>

### 1.12 Project summary

- The South East (SE) Coast of Saint Lucia is known to be an area rich in biodiversity, and ripe for tourism development. Notwithstanding, the SE Coast has been largely overlooked with its vulnerable and disadvantaged communities increasingly at risk both ecologically and economically. While some knowledge exists of important ecosystem services, and globally significant biodiversity, there is a paucity of data available for this area. The Government of Saint Lucia (GOSL) has therefore identified this area as a priority for intervention.
- The main issue which the project seeks to address is the lack of integrated protection and sustainable management of ecosystems in the SE coastal area. Without sound management, the irreversible degradation of ecological services could adversely impact the socio-economic development and could lead to a gradual impoverishment of the region.

- The proposed project seeks to enable sustainable economic development of the South East Coast by maintaining healthy ecosystems, sustainable livelihoods, and securing global environmental benefits. In order to best achieve this objective, the proposed project will encourage the use of a more cohesive, ecosystem-based approach to development. This will include interrelated aspects related to development planning, as well as the restoration of ecosystem services, and the establishment of sustainable management and natural resource use practices without which the degradation of the South East Coast will lead to further impoverishment of local populations and loss of global environmental goods.
- The project proposes a three-pronged solution to address the problem. The first aspect (Component 1 – Ecosystem Management) is to establish effective ecosystems management mechanisms. For this to occur, the project must facilitate information-generation on ecosystems, species, and ecological services that exist in the region, so that economic decision-making is informed by a consideration of real environmental costs. Where willingness to protect ecosystems and species exist, protection systems should be developed based on sound scientific evidence and regular information flows. The project must also facilitate partnerships among key stakeholders for successful management of ecosystems, and to ensure that all interests are adequately represented in investment decisions. Given the proclivity towards private coastal development, it is necessary that the public and private sector work with civil society for sustainable planning.
- Second (Component 2 – Rehabilitated Landscapes), the project will seek to rehabilitate and further protect degraded landscapes, based on improved mechanisms for land use planning and collaborative investment decision-making. This will help in restoring ecological services in the area, such as food provision (through restored soil productivity and increased water conservation), fibre (through the sustainable management of indigenous species such as Latanye palm and Bamboo and support to sustainable use of local biodiversity), freshwater conservation (through reduced siltation and protection of headwaters), the maintenance of carbon stocks (in forests and soil cover, and through avoided land use change), storm and flood protection (through reduced erosion), as well as recreation and cultural services that form the basis of the tourism industry.
- Third (Component 3- Sustainable Livelihoods), the project design acknowledges that no intervention will be successful unless it creates economic opportunities, incentives and livelihoods for the primary natural resources users. The project will therefore invest in working with communities to support sustainable natural-resource based livelihoods and will support communities to access resources, including the introduction of renewable energy technologies at the community level, capacity building, and inputs to successfully engage in such activities. Activities will be tailored to render tourism and agricultural activities, as the two major sectors contributing to the use of natural resources, more sustainable, and therefore contribute to the maintenance of ecological integrity of the area.

## TABLE OF CONTENTS

<b>SECTION 1: PROJECT IDENTIFICATION.....</b>	<b>1</b>
ACRONYMS AND ABBREVIATIONS.....	6
<b>SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION).....</b>	<b>9</b>
2.1. BACKGROUND AND CONTEXT.....	9
2.2. GLOBAL SIGNIFICANCE.....	13
2.3. THREATS, ROOT CAUSES AND BARRIER ANALYSIS .....	14
2.4. INSTITUTIONAL, SECTORAL AND POLICY CONTEXT.....	17
2.5. STAKEHOLDER MAPPING AND ANALYSIS.....	23
2.6 .BASELINE ANALYSIS AND GAPS.....	35
2.7. LINKAGES WITH OTHER GEF AND NON-GEF INTERVENTIONS.....	37
<b>SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE).....</b>	<b>39</b>
3.1. PROJECT RATIONALE, POLICY CONFORMITY AND EXPECTED GLOBAL ENVIRONMENTAL BENEFITS..	39
3.2. PROJECT GOAL AND OBJECTIVE.....	41
3.3. PROJECT COMPONENTS AND EXPECTED RESULTS .....	42
3.4. INTERVENTION LOGIC AND KEY ASSUMPTIONS.....	53
3.5. RISK ANALYSIS AND RISK MANAGEMENT MEASURES .....	55
3.6. CONSISTENCY WITH NATIONAL PRIORITIES OR PLANS.....	56
3.7. INCREMENTAL COST REASONING.....	58
3.8. SUSTAINABILITY.....	58
3.9. REPLICATION .....	59
3.10. PUBLIC AWARENESS, COMMUNICATIONS AND MAINSTREAMING STRATEGY.....	60
3.11. ENVIRONMENTAL AND SOCIAL SAFEGUARDS .....	61
<b>SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS.....</b>	<b>62</b>
<b>SECTION 5: STAKEHOLDER PARTICIPATION.....</b>	<b>66</b>
<b>SECTION 6: MONITORING AND EVALUATION PLAN.....</b>	<b>68</b>
<b>SECTION 7: PROJECT FINANCING AND BUDGET.....</b>	<b>69</b>
7.1. OVERALL PROJECT BUDGET.....	69
7.2. PROJECT CO-FINANCING.....	70
7.3. PROJECT COST-EFFECTIVENESS.....	70

## APPENDICES

APPENDIX 1: BUDGET BY PROJECT COMPONENT AND UNEP BUDGET LINES.....	SEPARATE FILE
APPENDIX 2: CO-FINANCING BY SOURCE AND UNEP BUDGET LINES.....	SEPARATE FILE
APPENDIX 3: INCREMENTAL COST ANALYSIS.....	75
APPENDIX 4: RESULT FRAMEWORK.....	78
APPENDIX 5: WORKPLAN AND TIMETABLE .....	81
APPENDIX 6: KEY DELIVERABLES AND BENCHMARKS.....	87
APPENDIX 7: COSTED M&E PLAN.....	92
APPENDIX 8: SUMMARY OF REPORTING REQUIREMENTS AND RESPONSIBILITIES.....	95
APPENDIX 9: DECISION-MAKING FLOWCHART AND ORGANOGRAM.....	96
APPENDIX 10: TERMS OF REFERENCE.....	97
APPENDIX 11: CO-FINANCING COMMITMENT LETTERS FROM PROJECT PARTNERS.....	SEPARATE FILE
APPENDIX 12: ENDORSEMENT LETTER OF GEF NATIONAL FOCAL POINT.....	SEPARATE FILE
APPENDIX 13: DRAFT PROCUREMENT PLAN.....	100
APPENDIX 14: TRACKING TOOLS.....	SEPARATE FILE
APPENDIX 15: EXACT METHODOLOGY .....	SEPARATE FILE
APPENDIX 16: RE CO2 CALCULATIONS.....	105
APPENDIX 17: THEORY OF CHANGE.....	107
APPENDIX 18: SOCIAL AND ENVIRONMENTAL SAFEGUARDS.....	108
APPENDIX 19: KEY BIODIVERSITY AREAS.....	116

## Acronyms and Abbreviations

ACAPG	Aupicon Charcoal and Agricultural Producers Group
ADB	African Development Bank
AWP	Annual Work Plan
BAM	Banana Accompanying Measures
BD	Biodiversity
BELFUND	The James Belgrave Micro Enterprise Development Fund
CAR RCU	Caribbean Environment Programme Regional Coordinating Unit
CBD	Convention on Biological Diversity
CBF	Caribbean Biodiversity Fund
CBO	Community Based Organization
CC	Climate Change
CCAP	Climate Change Adaptation Programme
CCCD	Cross-cutting Capacity Development
CEPA	Communication Education and Public Awareness
CL	Control
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> -eq	Carbon Dioxide equivalents
CSOs	Civil Society Organisations
DCA	Development Control Authority
DSD	Department of Sustainable Development
DSH	Desert Star Holdings
DVRP	Disaster Vulnerability Reduction Project
EC	Eastern Caribbean
ECMMAN	Eastern Caribbean Marine Management Areas Network
EIA	Environmental Impact Assessment
EOU	Evaluation and Oversight Unit
EP	Executing Partner
ESV	Environmental Services Valuation
EU	European Union
FFI	Flora and Fauna International
FRC	The Folk Research Centre
FSP	Full Sized Project
GCCA	Global Climate Change Alliance
GDP	Gross Domestic Product
GEB	Global Environmental Benefits
GEF	Global Environment Facility
GEF-6	Global Environment Facility 6 <sup>th</sup> Replenishment
GEF-IWEco	Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States
GEF-SGP	Global Environment Facility Small Grants Programme
GHG	Green House Gases
GIS	Geographic Information System
GOSL	The Government of Saint Lucia
Ha	Hectare
HACCP	Hazard Analysis Critical Control Point
IBA	Important Bird Area
ICI	International Climate Initiative
INDC	Intended Nationally Determined Contributions

IR	Inception Report
IUCN	World Conservation Union
IW	Inception Workshop
IWCAM	Integrated Watershed and Coastal Area Management
IWRN	Integrated Water Resources Management
LD	Land Degradation
LPG	Liquid Petroleum Gas
LPIE	Lead Project Implementation Entity
M&E	Monitoring and Evaluation
M&I	Monitoring and Information
MEIGRSD	Ministry of Education, Innovation, Gender Relations, and Sustainable Development
MMA	Marine Management Areas
MOUs	Memoranda of Understanding
MTDSP	Medium Term Development Strategy Paper
MTR	Mid-Term Report
NAP	National Action Plan
NAPA	National Adaptation Program of Action
NAPSAP	National Action Plan and Strategic Action Plan
NBSAP	National Biodiversity Strategy and Action Plan
NCSA	National Capacity Self Assessment
NCTF	National Conservation Trust Fund
NFTP	Non-Timber Forest Product
NGO	Nongovernmental Organization
NIP	National Indicative Programme
NOAA	National Oceanic and Atmospheric Administration
NPC	National Project Coordinator
NPD	National Project Director
NPFD	National Portfolio Formulation Document
NFTP's	Non-timber Forest Products
OECS	Organisation of Eastern Caribbean States
OPAAL	OECS Protected Areas and Associated Livelihoods
PAs	Protected Areas
PES	Protected Areas Ecosystem Services
PIF	Project Identification Form
PIR	Project Implementation Review
PIU	Project Implementation Unit
PMC	Project Management Costs
PPCR	Pilot Programme for Climate Resilience
PPG	Project Preparation Grant
PPP	Public-Private Partnership
PSC	Project Steering Committee
PSEPA	Pointe Sable Environmental Protection Area
PRSP	Poverty Reduction Strategy and Plan
PV	Photo Voltaic
RAC	Regional Activity Centre
RE	Renewable Energy
REDD+	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
S&T	Science and Technology
SDED	Sustainable Development and Environment Division

SE	South East
SEAs	Socio-economic Assessments
SEED	Supporting Entrepreneurs for Environmental Development Initiative
SFM	Sustainable Forest Management
SFM-EC	Sustainable Financing and Management of Eastern Caribbean Marine Ecosystems Project
SGD	Saint Georges Declaration
SGP	Small Grants Programme
SLAHS	Saint Lucia Archaeological and Historical Society
SLBS	Saint Lucia Bureau of Standards
SLHTA	Saint Lucia Hotel and Tourism Association
SLISBA	Saint Lucia Small Business Association
SLM	Sustainable Land Management
SLNCF	Saint Lucia National Conservation Fund
SLNT	Saint Lucia National Trust
SLTB	Saint Lucia Tourist Board
SMART	Specific, Measurable, Agreed, Realistic, Time-Bound
SNC	Second National Communication
SOP	Standard Operating Procedures
SPAW	Specially Protected Areas and Wildlife
ST	Sub-Total
STAP	Scientific and Technical Advisory Panel
STDC	Saint Lucia Southern Tourism Development Corporation
SWOT	Strengths Weaknesses Opportunities Threats
TC	Technical Committee
TEPA	Saint Lucia Trade Export Promotion Agency
TNC	The Nature Conservatory
TOR	Terms of Reference
T-VET	Technical Vocational Education Certification
UNCCD	UN Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
UNEP	United Nations Environment Programme
UNEP-DEPI	UNEP Division of Environmental Policy Implementation
USAID	United States Agency for International Development

## SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

### 2.1. Background and context

1. Saint Lucia is a small volcanic island located at latitude 13° 59' N, and 61° W within the Eastern Caribbean and is the second largest of the Windward Islands. Its total land area is approximately 616 km<sup>2</sup>, of which 77% is forested. Saint Lucia is a small island developing state of the Eastern Caribbean with an estimated population of around 182,000.



Figure 1: Saint Lucia's position in the Eastern Caribbean

2. Saint Lucia has a very rugged topography with a central ridge of mountains with many fertile valleys made up mostly of alluvial soils<sup>1</sup>. It is estimated that some eighty percent of the country has slopes greater than ten degrees, and nearly 8,000 hectares have slopes of over thirty degrees, making them suitable mainly for forested water catchment and wildlife habitat. The northern and southern tips of the island contain some flat areas in addition to broad flat valleys that run between offshoots off the main central valleys into the sea. Rainfall is the primary source of fresh water with 60% of the annual rainfall occurring between August to November. The uneven distribution tends to be problematic in the drier periods of February to April in the absence of adequate collection and storage facilities. The majority of the rainfall flows to the sea with very little percolating and being stored as ground water due to the rugged topography and the absence of intermediate collection points such as ponds and lakes. In the dry season, the water available is due to river base flows as well as from limited dry season rainfall. The island tends to experience periods of drought especially in the southern region when the stream flows tend to fall

<sup>1</sup> Saint Lucia Statistical Digest 2012, [http://204.188.173.139:9090/stats/images/publications/2012\\_Statistical\\_Digest.pdf](http://204.188.173.139:9090/stats/images/publications/2012_Statistical_Digest.pdf).

below known historic base flows. As a result, the entire residual flow of the sub-catchment is used for water supply leaving the downstream segment completely dry.



**Figure 2:** Map of Saint Lucia

3. Given its geographic location, the island is in a hurricane belt causing it to be very susceptible to disasters, particularly from hurricanes and other extreme weather events. The cost of such disasters to the island has been tremendous, causing it at times to lose much of its gross domestic product (GDP). Additionally, vulnerability studies have as a result profiled the island as one of the “most vulnerable” countries given that the country has a small open economy. Further, the move from an agricultural to a more service based economy through the tourism sector that is very volatile to natural hazards also adds to the island’s vulnerability. Natural ecosystems (e.g. forests, reefs, wetlands, etc.) also suffer hurricane damage. The ability of these ecosystems to recover is affected by climate change and other anthropogenic changes.

4. Saint Lucia possesses a high degree of biological diversity, not only in terms of the ecosystems and habitats found on the island, but also in the variety of biological resources present and the endemic species found in the country. A total of 1,300 known species of plants (including seven endemics) and over 150 species of birds (including five endemics), and approximately 250 reef fish species and 50 coral species, have been identified for the island. Saint Lucia is home to some 201 species of amphibians, birds, mammals and reptiles according to figures from the World Conservation Monitoring Centre. Of these, 6.5% are endemic, meaning they exist in no other place on the planet, and 6.5% are threatened. Saint Lucia is also home to at least 1028 species of vascular plants, of which 1.1% are endemic.

5. Coral reefs in Saint Lucia are particularly biodiverse, with 45 species counted on the west coast alone in 1998. Mangrove ecosystems, though comparatively small on an international scale, play a vital role in coastal stability, and serve as fish breeding and nursery ground, avifauna habitat, silt trap and nutrient exporter. These systems are predominantly found on the east coast, with a total area of 176.33 ha (in 2009). Four (4) species of mangrove are found in St Lucia: *Rhizophora mangale* (Red Mangrove), *Laguncularia racemosa* (White Mangrove), *Avicennia germinans* (Black Mangrove) and *Conocarpus erecta* (Buttonwood). Seagrass beds are common along Saint Lucia's coastline (although the species diversity is low) and comprise *Thalassia testudinum* (Turtle Grass), *Syringodium filiforme* (Manatee Grass) and to a lesser extent *Halodule wrightii* (Shoal Grass) species. Interspersed between seagrass are benthically-rooted algae such as *Avrainvillea*, *Udotea*, *Penicillus*, *Halimeda*, *Amphiroa*, *Caulerpa* species. Biodiversity is important to the country for food, shelter, medicines, ecosystem services, sustainable livelihoods, agriculture and tourism industries and future untapped industries of the country.

6. According to the 2015 State of the Environment Report of Saint Lucia, 25% of the country is forested; of this, 25.5% (12,000 ha) is classified as primary forest, the most biodiverse and carbon-dense form of forest. In 2009, it was estimated that approximately 18 million tons of carbon were stored within the Forest Reserve, and another 1.2 million outside the reserve area. These forests are home to a small number of endangered and endemic bird species, who depend on the forest reserve for habitat.

7. The South East Coast region houses many of the country's important mangrove, sea grass bed and reef ecosystems. The region also includes two recognized Important Bird Area (IBAs), namely the "Pointe Sable" and the "Mandele Dry Forest" areas<sup>2</sup>, which provide habitat for vulnerable and endangered species of flora and fauna, including the White Breasted Thrasher (*Ramphocinclus brachyurus*, EN), Saint Lucia whiptail (*Cnemidophorus vanzoi*, CR), Saint Lucia Amazon Parrot (*Amazona versicolor*, VU), and Saint Lucia Racer (*Erythrolamprus ornatus*, CR). This region also encompasses many fragile ecosystems (mangroves, low-lying wetlands), the Quillesse Forest Reserve, and some remaining stands of coastal forest. However, the region is also the site of areas of intensive agriculture as well as industrial activities (e.g. factories, breweries, airport in Vieux Fort), and is gradually opening up to a higher level of development, particularly in the real estate and tourism sectors. This creates both a challenge and an opportunity, as large-scale infrastructure and investments are being planned without due regard to environmental sustainability. Nevertheless, significant areas of remaining natural ecosystems present the opportunity to intervene in the South East Coast region before irreversible environmental damage is incurred.

8. Saint Lucia's economy is that of a middle-income state, depending on tourism and agriculture as the two main engines of growth. Up until recent years, the economy had depended on banana exports; however, the sub-sector has suffered from the loss of the British import preference regime that has led to considerable loss in revenue in the agriculture sector. This has resulted in a decline in the amount of land under agriculture (from about 20,000 ha to 12,000 ha), as areas under banana cultivation have been abandoned. The hotels and restaurants, real estate, renting and related businesses sectors accounted for 34.9% of the GDP in 2014, according to East Caribbean Central Bank estimates. However, the tourism industry, which contributes over 10% to the Saint Lucian economy, is only beginning to show signs of recovery following the slowdown of the US consumption trends. The tourism industry is highly dependent on the environment, as tourists come to Saint Lucia seeking lush rainforests, white sandy beaches with clear clean water, healthy reef ecosystems and biologically diverse mangroves. Economic diversification, along with a strategy to consolidate and ensure the continued viability of the two main economic sectors, is therefore becoming more important to Saint Lucia.

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<sup>2</sup> <http://www.birdlife.org/datazone/sitefactsheet.php?id=20714> and <http://www.birdlife.org/datazone/sitefactsheet.php?id=20716>

9. The current economic context indicates that economic development in the key sectors could take place at the expense of biodiversity and ecosystems, with potentially severe impacts on local peoples' livelihoods and on the stability of the agriculture and tourism sector. For example, rapid expansion in the tourism sector exerts pressure on renewable and non-renewable resources, including increased demand from fossil fuels, water, transport and land resources, as well as negative impacts from unsustainable construction and landscape alterations. Continued uncontrolled development of tourism and other natural resource-based sectors could lead to unforeseen impacts on the productive base. While the decline of land under banana cultivation has potentially created environmental benefits (return to secondary forest, decline in use of agro-chemicals), however, it is also potentially causing a more systemic threat to the environment as an increased number of people turn to tourism or construction for income. These factors, coupled with negative climate change impacts, and incomplete policy frameworks for land use planning, ecosystem and watershed management, could pose significant threats to sustainability in Saint Lucia.

10. Economic development and tourism has also resulted in an increasing demand for energy. This demand is further exacerbated by rapid growth in the energy intensive tourism sector, which is replacing agriculture as the leading economic sector. Saint Lucia relies almost exclusively on imported fossil fuels to meet its energy needs. The main consumption sectors are in electricity generation (28%), and transport (24%). Combustion of fossil fuels in the Energy Sector is the main source of carbon dioxide (CO<sub>2</sub>) emissions in Saint Lucia. Energy is produced through the combustion of secondary fuels for use in the power-generating utilities, transport, agriculture/fishing, manufacturing, commercial, residential, tourism and international bunkers sectors.<sup>3</sup> According to Saint Lucia's 2nd National Communication Report of 2011, the greatest proportions of CO<sub>2</sub> emissions result from the combustion of Gas/Diesel Oil (59.5 % in 2000) used almost exclusively for thermal electricity production, and from Gasoline (34.6 % in 2000) mainly for vehicular road transport, but also for agriculture and fishing. Smaller amounts of CO<sub>2</sub> emissions also result from LPG use (5.3 %) in the residential and industrial sectors and from the use of kerosene and lubricants. There is no recent data on the continued use of charcoal in rural areas, however there is anecdotal evidence that rising fuel prices have led some communities to revert to charcoal making and use for domestic purposes. The baseline for Saint Lucia on GHG emissions is from 2010, as quoted in the Intended Nationally Determined Contributions (INDC) is: 643 GgCO<sub>2</sub>-eq.

11. Saint Lucia's rich coast has attracted industry and economic activities. While this is more so the case on the Western coast of the island, developments have emerged in the South East as well. The project area is large, measuring 19,583 ha (48,391 acres) and covering multiple communities including three (3) urban areas, thirteen (13) watersheds and four (4) main administrative areas. The project area spans the districts of Laborie, Vieux Fort, Micoud, the southern part of Dennery, south of Mandalay Point. The area has a total population of approximately 40,441 persons with an unemployment rate of 18.4 per cent overall; and with a female unemployment rate of 25.8 per cent, compared to male unemployment of 13.0 per cent. This area of the island is also characterized by high levels of poverty, which average 36.3 per cent across the three major districts. Development in the project area has been characterized by haphazard and undirected planning evident by the growing threat to the sustainability of fragile coastal and marine ecosystems. With a growing population, the development of the island's narrow coastal strip continues to increase. The movement from agriculture to tourism has resulted in an increase in the scale of construction projects in the area. These projects are sometimes constructed in areas of biodiversity significance and result in the loss of habitats and endemic species, and in declining biological resources. Tourism is the main economic pillar and catalyst for economic development and it is located primarily in coastal areas. Resource use in the sector is high (water, energy, waste). In addition, prime real estate is under increased demand for tourism development by foreign owned companies and private buyers.

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<sup>3</sup> St Lucia National Communications

12. Most critical infrastructure such as roads, drains, bridges, airports, seaports, coastal protection works, schools, libraries, emergency shelters, health establishments, tourism, banks and administrative services are located on the near shore or waterfront, resulting in them being vulnerable and expensive to protect and maintain. Land management is a major sustainable development issue in Saint Lucia. This is not only because the land space is limited but also because improper land management can have deleterious effects e.g. soil erosion which can cause siltation of fresh water sources, a reduction in available water supplies and degradation of water quality. In addition, a large proportion of the population depends on the land for their livelihoods so that it has far reaching social implications with respect to poverty and social justice.

## **2.2. Global significance**

13. Saint Lucia as a signatory to several multi-lateral environmental agreements such as the Convention on Biological Diversity (CBD) that promotes the conservation of biological resources, sustainable use and the fair and equitable sharing of genetic resources, the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Convention to Combat Desertification (UNCCD). Saint Lucia is making efforts to mainstream such conventions into national policy development and planning. The effective management of the South East Coast is an example of ensuring that such mainstreaming is achieved at the national level. Consequently, effectively managing the resources of the South East Coast Region is of critical importance to meeting international commitments and protecting the island's biodiversity. Also, effective management of the area is necessary to protect on-going traditional livelihoods and economic activity (agriculture, agro-processing, broom making, etc.) due to available land, coastal waters and forest resources further allowing persons to engage in community based and agro-tourism activities. Additionally, as a party to the St. George's Declaration on Environmental Sustainability in the OECS, the Protocol Concerning Specially Protected Areas and Wildlife (SPAW Protocol; signed in 1990) to the Cartagena Convention, among others, Saint Lucia has a global responsibility to conserve its indigenous plants, animals and their habitats.

14. Specific Global Environmental Benefits under the GEF Biodiversity, Climate Change, Land Degradation (including Sustainable Forest Management) and Sustainable Forest Management (SFM) focal areas can be summarized as follows:

- **Biodiversity (and SFM):** Incorporation of biodiversity and ecosystem services into currently ineffective land use planning will improve the management and regulate the use of biodiversity in the productive sectors, particularly in tourism and agricultural development. The improved management and restoration of degraded forest areas will stem habitat loss and degradation and thereby safeguard habitat for forest plants and animal species of global significance (e.g. Saint Lucia Racer, White Breasted Thrasher, Saint Lucia whiptail lizard, etc.) including migratory species; improve ecosystem services provided by the forest; increase the management effectiveness of forests and sites of high priority conservation value; and restore high value mangrove ecosystems. The project will increase conservation and management effectiveness of coastal marine habitat and ecosystems of global importance. The reduction of pressure on forest ecosystems will also occur through the development of markets for biodiversity friendly sustainable goods and services. Through the development of alternative livelihoods, including agroforestry and non-timber forest products (NTFPs), pressure on forest resources will be relieved while providing opportunities for generation of income in remote coastal communities hard hit by the economic downturn and loss of tourism revenues.
- **Climate Change (and SFM):** Adoption of sustainable forest and land management techniques and restoration efforts will result in enhanced resilience to climate change, rebuilding and conservation of carbon stocks, and a reduction in emissions from deforestation and forest degradation. In terms of carbon benefits, the estimates are based on 2009 inventory data for Saint Lucia. The carbon benefits of the project are estimated at an annual rate of sequestration of 72,494 tons CO<sub>2</sub>, with a potential

total carbon benefit of 1,449,871 tons CO<sub>2</sub> at the end of a 20 year period (calculated using Tier 1 UNFCCC guidelines and the EXACT tool – Appendix 15).

- Land degradation (and SFM): Improved provisioning of ecosystems services through restoration of 2,500 Ha of degraded areas, including riparian buffer zones, resulting in erosion and sediment control benefits, water quality benefits, flood control -- with contributions to carbon sequestration through forest restoration, sustainable forest management, and improved land use planning and management.

## **2.3. Threats, root causes and barrier analysis**

### **Threats**

#### *Biodiversity Loss*

15. Only 2.4% of Saint Lucia is protected under IUCN categories I-V. Poor land-use planning, associated squatter developments, deforestation and development have all contributed to biodiversity loss. Immediate threats as a result of unregulated practices, such as the hunting of iguanas and turtles, sand mining, dumping in mangrove areas, and the clearing of trees; the cutting of coastal vegetation such as mangroves in the area has led to shoreline exposure. In order to safeguard long-term sustainability, “binding mechanisms in terms of legislation and regulatory framework” will be key to ensuring that developers do not pursue interests which may be lucrative in the short term, while compromising long-term benefits.

16. As noted above, the South East Coast region includes two Important Bird Areas (IBAs) and other habitat for vulnerable and endangered species of flora and fauna. These habitats are not clearly demarcated and do not benefit from any legal conservation status, nor do the rare species that inhabit them, and they are beginning to see encroachment from touristic and other development initiatives. In addition, a number of fragile systems, such as marshes and wetlands, are currently held by private landowners (many of whom reside outside the country), with no mechanisms to ensure the sustainable management or conservation of biological resources. A public-private management system could be devised to ensure that biodiversity on private land remains well managed.

17. The South East Coast is also an area where the interface between land use and the coastal environment is more apparent. There is a clear relationship between the management of upper watershed areas and the health of coastal and inshore marine ecosystems. The levels of pollution in the area is unknown, however, it has been reported that there is significant potential contamination from agro-chemicals, particularly those used in banana production. Most hotels have their own sewage treatment facilities, but in cases where these facilities are inadequate or non-functional, untreated effluents have been discharged into the sea. Coral reefs and sea grass beds have been subjected to stress resulting from silt-laden waters due to poor management of human and natural resources, and development, and recent studies indicate that the concentration in nutrient levels in Saint Lucian coastal waters is too high to allow for reef regeneration. Solid waste build-up and excess siltation are also negatively impacting mangrove ecosystems. In addition, coastal development (including tourism development), with consequences such as inadequate sanitation and sewage/waste disposal, and the destruction of mangroves, sea grass beds and beaches, has had significant impacts on reefs and, in turn, on fisheries. It has been estimated that the island has already lost more than 50% of its mangrove wetlands to development, and the remainder are under constant threat.

#### *Land Degradation and Soil Erosion*

18. Soil erosion stemming from inappropriate agricultural practices (indiscriminate land clearing, shifting cultivation, slash and burn practices) and development (inclusive of tourism and road construction) is significantly degrading agricultural lands. Combined with uncontrolled deforestation (see below), these activities are creating significant soil erosion, which in turn results in high sediment loads in watercourses (particularly during rainfall events). This high turbidity not only affects water quality but also river and marine organisms as well as coral reefs.

19. Beaches along the West Coast of Saint Lucia face the relatively calm waters of the Caribbean Sea, while those of the East Coast face the much rougher waters of the Atlantic Ocean. Many beaches along the East Coast are suffering from significant erosion exacerbated by sand mining, as well as high levels of waste (tar balls and garbage) accumulation. A number of efforts have been made to curb sand mining practices, including focusing on alternate aggregate sources such as pumice, importation of sand, enactment of legislation, however this has not curbed all of these activities, in part because many beaches are located in remote area where surveillance activities are difficult to carry out.

#### *Deforestation and Depletion of carbon stocks*

20. Between 1990 and 2010, Saint Lucia lost forests at an average of 150 ha or 0.34% per year. In the South East Coast region, forested areas are mixed with large areas of intensive farming (National Biophysical Resource Inventory). Most of the forest remaining is secondary, disturbed, and fragmented, having been modified by grazing, planting of exotic species and cutting for charcoal. A small area of freshwater swamp forest remains on the South East Coast, around the Ger River near Micoud. Outside of the Pitons area, which is protected, all deciduous seasonal forests are under threat. Deforestation trends have been somewhat compensated by the return of land formerly under banana cultivation to secondary forest, however these forests are less diverse, provide less habitat for endangered species, and are also under threat of fragmentation and encroachment. Furthermore, some land formerly under banana cultivation has been converted to other forms of mono-cropping or is being sold for real estate. Nevertheless, deforestation is a significant ongoing problem in the South East Coast region, with forests being cut for the production of fuelwood and construction timber, as well as land clearing for agriculture and construction. Mangroves in the area are being impacted by clear-cutting for agriculture and by cutting for charcoal production; a cultural view remains that mangroves are mosquito-infested swamps posing a health threat to nearby residents, and this has contributed to mangrove deforestation.

21. Carbon dioxide emissions and removals from the Land Use, Land-Use Change and Forestry sector derive primarily from depletions of forest and other woody biomass stocks through logging and other activities such as charcoal production; from carbon uptake due to regrowth through conversion of forests; from emissions from forest and grassland conversion due to burning and decay of biomass; and from carbon release from forest soils. In recent decades some deforestation (no figures are available) also has occurred due to the production of fuel wood, constituting emissions from off-site burning.

#### *Climate Change*

22. Saint Lucia's vulnerability to climate change is very high, and increasing. Saint Lucia's vulnerabilities are due to and exacerbated by the island's location, small land mass, topography, limited resources and economic dependence on primary production and the service/tourism industry. Increases in the frequency and intensity of extreme weather and climate events, such as heavy rainfall, strong winds, drought and high sea temperatures and levels have been experienced and documented. These and other events have claimed lives, caused severe damage to infrastructure and other economic assets and adversely impacted livelihoods. These changes and their adverse consequences are projected to escalate in the near and longer terms, with negative impacts on the economy, health and safety, and food and water security.

23. Some of the greatest negative impacts being experienced along coastal areas are due to storms and hurricanes. As noted in Saint Lucia's National Climate Change policy, a single extreme climate event can have huge economic costs, such as Hurricane Tomas which cost 43.4% of Saint Lucia's GDP in 2010, or the extreme storm of Christmas 2013, which led to floods, landslides, and the loss of six lives. Increased rainfall has led to massive soil erosion in inland upland areas, dislodging solid waste and the leaching of biological and chemical materials into streams and rivers. As a consequence, reefs and other coastal areas become inundated with sediment, plastics, bacterial, industrial and agro-chemical pollutants. In addition, with climate change the island is experiencing greater variation in rainfall, making it difficult to plan agricultural activities and impacting tourism.

### **Barriers**

#### **a) Insufficient mechanisms, information and capacities for sustainable ecosystem management (to be addressed by component 1)**

24. There is a need for protection systems to be developed based on sound scientific evidence and regular information flows, but the country lacks sufficient information related to species and ecological services, so that decision-making related to ecosystem management is not informed by a consideration of real environmental costs. There is no baseline inventory for species at risk in the area, with the exception of the White Breasted Thrasher, which is monitored by the Wildlife Unit of the Forestry Department. There is also no monitoring or tracking of the extraction of resources, the value of ecosystem services in the area, or baseline information on ecosystems on the South East Coast.

25. Even though the creation of effectively managed protected areas for rare, endangered and globally important species is essential for the conservation of biodiversity in the SE Coast region, at present the only such site is the PSEPA. Other important natural habitats in the South East Coast region are exhibiting signs of encroachment and, although they have been informally identified, they are not clearly demarcated and do not yet benefit from any legal conservation status, nor do the rare species that inhabit them. Furthermore, the management effectiveness of existing and potential protected areas is constrained by inadequate demarcation, a lack of management and zoning plans, and insufficient financing mechanisms. Monitoring and surveillance of activities within mangrove areas are particularly difficult, since marine reserves have never been legally demarcated and ownership often lies in private hands. Although national management authorities recognize the ecological, social and economic benefits of coastal habitats such as mangrove wetlands, the attractiveness of large-scale tourism development makes major infrastructure developments, such as hotels, enticing to the political class.

#### **b) Incomplete or inadequate land tenure regime and land use planning systems (to be addressed by components 1 and 2)**

26. There are many agencies engaged in the administration of land policy and legislation in Saint Lucia. However, there is weak institutional cooperation and coordination among them, and no clear framework for ensuring adequate participation by private landowners, civil society or non-governmental organizations. Saint Lucia has also acceded to a number of international conventions (e.g. the Cartagena Convention and the Specially Protected Areas and Wildlife Protocol) that impact on land management, however the country's ability to meet its obligations under these international conventions is limited by the absence of the requisite human and financial resources.

27. At present, development in the country is largely unplanned, unregulated and based on poor information, with little attempt to avoid or mitigate adverse impacts to critical ecosystem goods and services. Unregulated development has the potential for severe negative impacts on the environment, and

processes such as deforestation, soil erosion, destruction and fragmentation of terrestrial and coastal habitats, pollution (especially of the marine environment) and depletion of biological diversity are already occurring. Conservation and sustainable management efforts in the area are ad hoc, led primarily by the Forestry Department in collaboration with some small NGOs who do not always have the technical means to fully deliver conservation and sustainable management objectives.

28. In the South East Coast region, land use planning is ineffective because it is not data driven. The collection of scientific data on rare and endangered species and other biodiversity, and ecosystem services is an important part of being able to make critical land use and tenure decisions, and the collation, sharing, and use of data by key stakeholders is also important.

*c) Lack of demonstrated models and technologies for sustainable and environmentally benign economic opportunities (to be addressed by components 1 and 3)*

29. Limited economic opportunity coupled with high unemployment puts pressure on the natural resources and biodiversity of the SE Coast from unsustainable activities, resulting in greater forest conversion and soil erosion. Poverty in Saint Lucia is considered mainly a rural phenomenon, with rural districts showing poverty prevalence rates in excess of 35%. Residents are dedicated to farming (short term crops and livestock), extractive use of natural resources (sand mining, charcoal- and timber production), and (largely illegal) hunting and poaching. There is also a growing pressure to sell land for touristic or other economic developments, and real estate speculation is rapidly increasing.

30. The maintenance of a productive and sustainable rural sector is vital to the sustainable growth and conservation of ecosystem services of the region, and creating sustainable livelihoods for local communities will be an important tool to combat the degradation of forests and to create a more tangible understanding of the value of natural resources. However, at present there are inadequate livelihood and income generation options for rural communities, which force people to unsustainably exploit natural resources for income. Subsistence farming as practiced in the SE Coast can result in environmental damage through indiscriminate land clearing, shifting cultivation, slash and burn practices and inappropriate soil and water conservation practices, but few farmers in the area have any experience or familiarity with sustainable farming methods and technologies that can support the transition to sustainable practices so that erosion and land degradation does not occur.

31. Agro-processing is a nascent industry in the South East Coast. Energy use for drying and electricity is incumbent in cocoa, broom making and sea moss initiatives. However, the cost of energy is one of the limiting factors in the development of the industry, and existing technologies that use hydrocarbons to generate electricity and heat contribute to increasing carbon emissions. Charcoal farming and broom making as currently practiced are extractive industries that degrade lands and habitat for rare and endangered species and other biodiversity. Transforming these industries from extractive to sustainable (e.g. fuel wood and tree crop planting and management) and thereby improving practices associated with this livelihood is important in combating land degradation.

32. Tourism activities on the SE Coast are on the rise, but unplanned and uncontrolled tourism development can have deleterious effects on the environment from pollution, waste generation and extractive resource use. The lack of guidelines for tourism development is a key barrier to minimizing environmental impact, as is the need for information and data about ecosystems services provided by the environment, which could lead to better planning and development decisions.

#### **2.4. Institutional, sectoral and policy context**

Institutional context:

33. The following ministries, agencies and groups form the institutional framework for the management of the South East Coast Region:

- **Ministry of Education, Innovation, Gender Relations and Sustainable Development** is a central government ministry that seeks to optimize and sustain economic development and quality of life by creating a functional individual that is accepting of civic responsibility and empowered to compete in a global environment. It houses the Department of Sustainable Development, which is a key institution in the development of this project.
- **Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Co-operatives** has as its mission to sustain a diversified national income base from Agriculture and Fisheries and to enhance the integrity of rural livelihood systems by generating the capacity for efficiency and the competitive production and marketing of respective goods and services. The Ministry includes the Agricultural Division and the Fisheries Department and Forestry Department. The Ministry has a key role to play in the implementation of the project and is the agency responsible for the Banana Accompanying Measures (BAM) support package that is being used as co-financing for this project.
- **Department of Forestry** is located within the Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Co-operatives. The Forestry Department's mission is the collaboration and partnership for the preservation and sustainable use of forests, nature and the benefits they provide. They are a key agency for project implementation activities.
- **Fisheries Department.** The mission of the Department of Fisheries is to provide effective and efficient services in promoting sustainable development of Saint Lucia's fisheries sector through participatory management and sustainable use of the fishery resources. They are a key agency for project implementation activities.
- **Ministry of Equity, Social Justice and Empowerment.** The Ministry is mandated to empower (vulnerable) people to improve their situation in life – economic, social, etc.; focuses on the eradication of poverty; engages the most vulnerable to develop ways and means of improving income; and facilitates the sustainable use of resources. The Ministry will be important during project implementation with regards to the initiatives under Component 3 Sustainable Livelihoods. The Ministry has a mandate for social development including livelihoods that will allow it to partner with the project executing agencies in the implementation of livelihoods activities.
- **Ministry of Tourism, Heritage and Creative Industries.** The Ministry is interested in initiatives in village tourism, heritage tourism, sport tourism, health and wellness. There are a number of home accommodation; apartments; guesthouses, and Airbnb-type shared economy type accommodation in the project site. The Ministry has a mandate for social development including tourism development that will allow it to partner with the project executing agencies in the implementation of tourism-related activities.
- **Constituency Councils** are set up to assist with the delivery of services to constituents; and to make recommendations to the relevant Minister on programmes and projects which will benefit constituencies. These Councils are very knowledgeable about the communities in their constituencies and their use of natural resources in the area. The Councils have been very useful in identifying stakeholders, and are also influential in their constituencies.
- **Development Committees** within the South East Coast Region have been established to assist with the socio economic and cultural development of the communities that they serve. The primary objective of these Committees and Groups is to mobilize the community to implement development projects. They are very knowledgeable of the persons living in the communities that they serve and are important for mobilizing community support for project implementation.
- **Youth and Sports Councils** promote sporting activities that play a vital role in building community cohesion and creating a sense of collective goodwill in the communities in the project area.

- **Department of Sustainable Development's (DSD)** mandate in promoting sustainable development across the country and with the SE Coast along with its current experience in executing the Iyanola Project allows it to take the lead and influence the proposed SE Coast project as its Executing Agency. The Forestry, Fisheries and Physical Planning Departments of the Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Co-operatives are key agencies with mandates that align with all 3 components of the project. Their mandates already place them in the forefront of on-the-ground activities in the SE Coast in matters of Ecosystems Management, rehabilitation of degraded landscapes and seascapes and sustainable livelihoods focusing on agroforestry initiatives.
- **The CSO and CBO sector**, including the Constituency Councils, Development Committees and the Youth and Sport Council, are involved with the day-to-day organization and development of the SE Coast. These organisations have a wealth of information with regard to community development and dynamics, and partnership with the executing agencies increases the likelihood of project success.

Legal context:

34. The following instruments make up the legal framework of the management of the South East Coast Region:

- Forest, Soil and Water Conservation Act (1945) revised (2008)
- Wild Life Act, No.9, 1980 (with revisions in 2001) Cap 6.03
- Fisheries Act (1984)
- Land Conservation and Improvement Act (1992)
- Physical Planning and Development Act (2001)
- The Public Health Act (Cap 11.01)
- The National Conservation Act (Cap 6.01)
- Land Conservation and Improvement Act (Cap 5.10)
- Saint Lucia National Trust No.16 1975 (Chapter 6.02)
- Water and Sewage Act (Cap 9.03)

35. The **Forest, Soil and Water Conservation Act, Revised 2008** has as its purpose the conservation of Forest, soil and water resources. This Act adequately covers the pertinent aspects of preservation and conservation and can be applied to riparian areas and upland areas using either acquisition or encouragement of voluntary protection. Mangroves and wetlands can be similarly declared. In locations where obvious settlement expansion may organically occur the declaration of a reserve for conservation purposes could be reinforced with the declaration of Special Zoning or Protection of Natural Areas.

36. **The Wild Life Act, No. 9, 1980 (with revisions in 2001) Cap 6.03** makes provision for the protection, conservation and management of wildlife in Saint Lucia. Wildlife except for fish, frogs and crustaceans in private ponds are the property of the Crown. There is the power to declare an area of land or water or territorial sea to be a wildlife reserve. Wildlife areas can be established through leases, exchanges, or buying/ selling any property for use as a wildlife reserve. The classes of protection are protected, partially protected wildlife, unprotected wildlife, as specified in Schedule 3. The Act is silent on compulsory acquisition but this can be reasonably assumed. This Act can be applied to select areas for wildlife protection for example dry forest areas or as part of other reserve areas. On its own the Act protects all wildlife in Schedules 1 and 2 and would require effective enforcement.

37. **The Fisheries Act No. 10 1984, (Cap 7.15)** provides for the promotion and regulation of fishing and fisheries in the fishery waters of Saint Lucia. Under Section 20 the Minister may declare any

fishery water, adjacent land or surrounding land to be a marine reserve, to protect flora, fauna, natural breeding grounds, areas of natural beauty, research and habitats of aquatic life. The Fisheries Regulations (No. 9 of 1994) establish conservation measures such as protection of turtle and other marine life. Pollution of the marine environment is prohibited. Permission is required for use of marine reserve and activities such as fishing, construction, dredging, discharging wastewater, and taking or destroying flora and fauna is strictly prohibited. Permission may be granted upon application for research activities in such areas. This Act is vital to the management of coastal areas with important fisheries resources including sea grass, reefs, mangrove etc. It has been applied to the South East Coast where the Savannes /Point Sables area was declared a fisheries reserve. This formed part of the declaration of the Point Sable Environmental Protection Area along with the declaration of Ramsar sites in Savannes Bay and Makote.

38. **The Land Conservation and Improvement Act (Cap 5.10)** provides for making protection orders for conservation and improvement of land and water and can work in tandem with the Forest, Soil and Water Conservation Act (2008). The Act establishes a Land Conservation Board falling under the Ministry of Agriculture to deal with the specific issues of degradation, pollution and water conservation. Given the pressing needs of land degradation in the South East Coast Project area, the implementation of the existing Act can support effective and sustainable management of this area.

39. **The Physical Planning and Development Control Act No. 29, 2001** makes provision for the development of land, the assessment of the environmental impacts of development, the grant of permission to develop land and for other powers to regulate the use of land, and for related matters. In the context of sustainable land management and development, the Physical Planning Act must be applied along with other legislation including the Forest and Soil Conservation Act, National Trust Act, Water and Sewage Act, Fisheries Act among others to have useful effect.

40. **The Public Health Act (Cap 11.01)** makes the Minister of Health responsible for the abatement of nuisances and removal or correction of any condition injurious to public health; prevention, treatment, limitation and suppression of disease; control of food and drugs in the interest of the public health; publishing reports, information and advice concerning public health; and public education on public health issues. The Minister has power to make regulations for the proper carrying out of the provisions of the Act. Regulations under this Act include Nuisances, Water Quality Control, Sewage and Disposal of Sewage and Liquid Industrial Waste Works, Disposal of Offensive Matter, Foods Regulations and Mosquito Control. The Act and the power to make regulations is overly important for sustaining a healthy environment and promoting public health and safety. It is also central to control of pollution from multiple sources and with far reaching local and broad regional impacts. The Act is routinely applied in the processing of planning applications, reacting to complaints and surveillance of the Environmental Health Department despite the capacity issues of that department.

41. **The National Conservation Act (Cap 6.01)** establishes a National Conservation Authority to, among other things, conserve natural beauty and topographic features of Saint Lucia; control, maintain or develop a beach or protected area or a public access to a beach or protected area; secure sanitary conditions on a beach or protected area; advise the Minister on the control of construction in any protected area or beach. This Act is important for the management of beach areas whether or not within a reserve area. Its broad application is essential for sustaining local livelihoods that depend on coastal resources, the general recreation use of the coast and eco-tourism.

42. **The Saint Lucia National Trust No.16 1975 (Chapter 6.02)** provides the legal mandate to the SLNT to conserve both the natural and cultural heritage of the island. Apart from the clear objects that relate to historic buildings, monuments, objects (historic archaeological, artistic or traditional interest) the SNLT has a mandate for the natural environment. The SLNT Act has an important role to play in the identification of areas for protection (conservation and preservation) however apart from the properties

held by the Trust, their role regarding the natural environment appears to be advisory and advocacy. The Physical Planning Act in Section 33 and 34 makes provision for the legal declaration of areas for protection on the advice of the SLNT. The Development Control Authority has the SLNT as an important consultee for advice and for input at the scoping and review stages of EIAs.

43. **The Water and Sewage Act (Cap 9.03)** provides for the management of water resources and to regulate the delivery of water supply services and sewerage services throughout Saint Lucia, and for related matters. The Act establishes a Water Resources Management Agency (WRMA) for the purpose of management of water resources, with responsibilities including promoting the sustainability of the water resources. The WRMA issues abstraction licenses based on hydrological and hydrogeology and other factors as well as licenses to discharge waste (liquid and sewage.). The Act overall has suitable provisions for water supply protection, water resource management including water quality and liquid waste management all of which are applicable to the sustainable development of the South East Coast. It is expected that this current Act is to be repealed as the Water and Sewage Commission covered under Part 3 is now or to be replaced by the National Utilities Regulatory Commission. However, the water resource aspects of the Act relating to the WRMA have remained the same.

#### Policy Context

44. The policy framework that guides the management of the South East Coast includes:

- The current **National Development Plan** that is being prepared and which is aimed at guiding development in all sectors within the country.
- The **Medium Term Development Strategy Paper** (MTDSP) which is a five year development and strategic plan with a vision of an innovative and industrious nation, grounded in the principles of patriotism, integrity and good governance striving towards sustainable and equitable development for all to be achieved through: Stabilisation and the macro-economy, diversification of the productive sectors through private sector development, poverty reduction and promotion of equity, environmental sustainability and human development.
- The overall objectives of the **National Environment Policy** and the **National Environment Management Strategy** are to minimize environmental vulnerability and risk; support sustainable livelihoods; engender food, water and energy security; develop a green economy; and mainstream environmental management principles.
- **National Land Policy** is awaiting formal adoption. The goal of the National Land Policy is to guide the use, management, development and administration of land resources in Saint Lucia in order to optimize the contribution of land to sustainable development.
- A **National Energy Policy** was adopted in 2012. It sets the framework for reducing GHG emissions through the exploitation of renewable energy from geothermal, solar and wind energy sources. Saint Lucia committed through the submitted Nationally Determined Contribution to COP 21, to a 16% reduction in GHG emissions by 2025 and 23% by 2030 against the business-as-usual emissions scenario, with 2010 as the base year for determining reductions.
- **Coastal Zone Management Policy** overall objectives are to maintain the integrity and productivity of the coastal zone and coastal resources; promote the optimal and sustainable use of coastal resources to support equitable social and economic development and to harmonise coastal zone uses through a management and conflict resolution framework.
- **Saint Lucia Climate Change Adaptation Policy** objectives are: Creating the strategic direction and process for ongoing climate adaptation and resilience-building; Creating the appropriate enabling policy, legislative and institutional environment; mainstreaming climate change and climate variability into development processes, strategies and plans; providing the necessary incentives and

economic instruments for ongoing adaptation and resilience building; and identifying, establishing, and accessing mechanisms for ongoing adaptation and resilience-building.

- The Ministry of Agriculture programme of work is guided by the **National Agricultural Policy** which identifies the following strategic areas: - economic viability and competitiveness; expanding production and market base; improvement in technology; enhancing food security; rationalising the use of land; environmental sustainability; generating new opportunities for employment of youth in agribusiness.
- The **Forestry Management Strategy** was developed using a consultative approach and arrived at a five (5) point plan to i) maintaining healthy ecosystems and thriving species; ii) Ensuring sustainable flows of products that support both local economies and biodiversity conservation including the control of timber production and the provision of support and incentives to private forest owners for forest management and forest expansion plans; iii) Protecting water supplies, soils and coastal zones and ensuring resilience to climate change; iv) Promoting awareness, visitation and cultural enrichment; v) Organisational strengthening in line with the achievement of the aforementioned strategy. The GOSL is also keen to pursue a REDD+ strategy with a view to improve carbon stocks and reduce emissions. The REDD+ will be incorporated as an addendum to the Forestry Strategy.
- Saint Lucia as a member of the Organization of Eastern Caribbean States (OECS), is guided by the **St. Georges Declaration of Principles for Environmental Sustainability (SGD)**, which was adopted in 2001 and revised in 2006. The overall aim of the SGD is to Foster Equitable and Sustainable Improvement in the Quality of Life in the OECS Region.
- A Tourism Master Plan was developed to guide the development of the Tourism sector. The **Tourism Policy**, arising out of the Master Plan, sets the following national tourism policy goals: - Establishing tourism as a strategic economic development priority; expanding local participation directly or indirectly in the tourism sector; improving (continuously) the quality of the tourism experience and product and developing a positive and unique identity in generating markets; stimulating and facilitating additional investment in the upgrading, expansion and diversification of the tourism infrastructure and production base; strengthening the backward and forward linkages between tourism and agriculture and other sectors of the economy; capitalising on regional and international opportunities and improving the public's perception of and attitude towards tourism.
- **Invest Saint Lucia Master Plan:** identifies strategic lands, tied to Invest Saint Lucia's objective of investment promotion and non-strategic lands for community development.
- **Vige Plan 2010:** development plan for the rural community of Vige on the SE coast with economic interventions for employment generation in cassava cultivation and agro processing.
- **Strategic Plans under Special Facility of Assistance 2003 for Micoud and Laborie** chart the environmental, social and economic development of these local areas. Both plans identified tourism assets and projects including eco-tourism sites as a means of stimulating local tourism activity and requiring support funding for implementation.
- **Development Control Authority (DCA) Guidelines for Development:** The DCA comprises technical persons from key environment and development agencies in St Lucia to oversee and advise the government on development projects to ensure that guidelines for development are followed.

45. Saint Lucia is also a signatory to a number of **multilateral agreements** with implications for national policy and land use plans. These are as follows:

- Convention Concerning the Protection of the World Cultural and Natural Heritage – 14/10/91
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter – 23/8/5
- International Convention on Trade in Endangered Species of Wild Flora and Fauna (CITES) 15/3/83
- United Nations Convention on the Law of the Sea 27/3/85
- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean

- Region and Protocol on Co-operation in Combating Oil Spills (Cartagena Convention) 27/3/83
- Vienna Convention for the Protection of the Ozone Layer 28/7/93
- The Montreal Protocol on Substances that Deplete the Ozone Layer 28/7/93
- Basel Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal 9/12/93
- Convention to Combat Desertification 30/9/97
- Protocol on Specially Protected Areas and Wildlife to the Cartagena Convention
- United Nations Convention on Biological Diversity 28/7/93
- United Nations Framework Convention on Climate Change 14/6/93
- Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and straddling Stocks and Highly Migratory Fish Stocks 9/8/96

## **2.5. Stakeholder mapping and analysis**

46. There are many stakeholders in the South East Coast Region. Not all the stakeholders will participate in the project; benefit from the project or impact on or be impacted by the project. Nevertheless, it is useful to have a knowledge of all the stakeholders in the communities within the project site and who use the natural resources within the site; all those from outside of the site but who earn livelihoods from the natural resources in the site; and the stakeholders in public and private sector agencies; community organisations, and regional and international agencies that are involved, in some way, in the management and scientific research of the natural resources in the site.

47. In preparing the Stakeholder Plan, the following agencies were consulted, in addition to individuals and groups in the project site:

- Ministry of Agriculture – Extension and Fisheries
- Department of Forestry
- Ministry of Social Transformation for information on community groups, community dynamics, information on stakeholders, etc.
- Ministry of Tourism, Heritage and Creative Industries for information on the ecotourism enterprises in the site
- Constituency Councils for Dennery, Micoud, Vieux Fort and Laborie
- Development Committees
- Broom producers, honey producers, seamoss farmers and herb producer to ascertain where they obtain their raw materials from and the scope to expand production in the project site
- Mothers and Fathers Groups in Dennery, Micoud, Vieux Fort and Laborie to find out about the importance of such groups to livelihood creations in the communities in the site

48. In addition to the information derived from discussions from persons in the agencies identified above, information was also derived from the reports of the Consulting Team hired to prepare the background documents for this Project Document. Secondary information was also derived from a review of the literature.

49. The Stakeholder Map defines who the stakeholders are at the project site. It also provides a description of each of these stakeholders is; their possible interest in the project; and their possible level of participation in the Project. The Participation level is classified into:

- Level of Participation – High (HP) / Low (LP)
- Level of Influence – High (HI) / Low (LI)
- Type of information provided – provide information regularly (HO) / provide information occasionally (LO)

- Key Player in – Conservation (Cn), Livelihoods (Li), or Other (O)

50. Table 1 (below the Project Stakeholder and Participation Plan) presents a Stakeholder Map and Analysis which identifies the range of stakeholders who will have an interest in or who may influence the design, implementation and outcomes of any one or all of the components of the South East Coast Project.

**Table 1: Stakeholder Map and Participation Plan**

Stakeholder	Interest in Project	Level of Participation				Comments
		Participation	Influence	Information	Key Player	
<b>AGENCIES</b>						
<b>DSD</b>	Executing Agency	H P	HI	H O	Cn	
<b>Coastal Zone Management Unit</b>	Cooperating Agency	H P	HI	H O	Cn	Project Output 2.2. Identification of Sea grass beds, reefs, mangroves and productive coastal systems that will be rehabilitated. Generation of maps and fact sheets of the zones, and selection criteria. Development of a strategy for management and rehabilitation that will be further implemented and enhanced during the project.
<b>Forestry Department</b>	Co-Executing Agency	H P	HI	H O	Cn	Project Output 2.1. Enhanced sustainable land management and carbon benefits in critically damaged yet recoverable areas. Delivery of GEBs in through conservation and innovative sustainable use of dry forest, riverine, mangrove, coastal, and marine ecosystems of the SE Coast. Design/Implementation of measures for controlling erosion in areas exhibiting significant soil degradation and siltation.
<b>Fisheries Department</b>	Co-Executing Agency	H P	HI	H O	Cn	Project Output 2.2 Identification of Sea grass beds, reefs, mangroves and productive coastal systems that will be rehabilitated. Generation of maps and fact sheets of the zones, and selection criteria. Development of a strategy for management and rehabilitation that will be further implemented and enhanced during the project.
<b>Agricultural Division / Extension</b>	Cooperating Agency Technology transfer, rural development	H P	HI	H O	Li	Output 2.3. Development of a plan/strategy or draft methodology including key aspects to consider for controlling erosion in areas exhibiting significant soil degradation and siltation. Output 3.3. Identification of farmers and other key partners and stakeholders for the implementation of this Output. Identification of farms that will be converted to agroforestry. Output 3.4. Study for the identification of innovative and sustainable natural-resource based economic activities. This include: selection of intervention sites, definition of activities and undertaking feasibility studies that will include environmental impacts and economic viability.
<b>Biodiversity Office</b>	Cooperating Agency	H P	HI	H O	Cn	Output 3.4. Study for the identification of innovative and sustainable natural-resource based economic activities. This include: selection of intervention sites, definition of activities and undertaking feasibility studies that will include environmental impacts and economic viability.

Stakeholder	Interest in Project	Level of Participation				Comments
<b>Renewable Energy Unit in SDED</b>	Cooperating Agency Technology transfer	H P	HI	H O	Li	Output 3.1. Study/ report including: selection of beneficiary communities, and description of why they've been selected; identification of the renewable energy technologies to be used for each community and description of where these are to be installed. Full list of equipment and subcontracts needed to implement this Output (i.e solar panels, wind mills, etc). Environmental and socio-economic studies should be carried out to support selection of communities, technologies and sites.
<b>MoA/BAM Project</b>	Cooperating Agency	LP	LI	L O	Li	Output 3:3. The BAM project is renovating agro processing facilities thereby allowing these facilities to produce more efficiently and according to Hazard Analysis Critical Control Point (HACCP). This initiative will also promote value chains as a way to add value, diversify the rural economy, and contribute to increasing rural employment and household incomes in Saint Lucia. The focus will be on Root crops (cassava, dasheen, sweet potatoes); vegetables (tomatoes, rosemary, thyme, melons); tree crops (bay leaf, incense, nutmeg, cinnamon) Livestock: broilers, cattle, small ruminants (goats and sheep), swine and rabbits. Many of these commodities are produced in the project site. The BAM Project has completed refurbishing the Cocoa Micro-Fermentry at Anse Ger.
<b>Ministry of Equity, Social Justice and Empowerment</b>	Cooperating Agency The socio-economic benefits for local communities	H P	HI	H O	Li	Output 3. Local communities and women's groups would be involved in the designing and implementation of project interventions for livelihood creation, renewable energy and reforestation. The assistance of Community Development Officers will be necessary to mobilise these community groups. The Ministry: <ul style="list-style-type: none"> <li>• Is mandated to empower (vulnerable) people to improve their situation in life – economic, social, etc.</li> <li>• Focuses on eradication of poverty</li> <li>• Engages the most vulnerable to develop ways and means of improving income</li> <li>• Collaborates with agencies such as GEF</li> <li>• Facilitates the sustainable use of resources</li> </ul>
<b>Ministry of Commerce/Invest Saint Lucia</b>	Cooperating Agency	LP	HI	L O	O	Invest Saint Lucia is responsible for attracting FDI into Saint Lucia. A number of projects have been/are being targeted for the project site. The Government is presently negotiating the terms of a multi-phase development which is earmarked for Vieux Fort. The agreement with the investor, Desert Star Holdings (DSH), is ongoing. Phase One, which has been approved, will include a grandstand, race track, polo field, equestrian lawn, receiving barn, infield park, fractional ownership homestead villas, domestic barns and a race course boulevard. It is not yet clear how this may affect existing operations in and surrounding the PSEPA.
<b>Constituency Councils</b>	Cooperating Agency	H P	HI	H O	O	The Constituency Councils have been set up to assist with the delivery of services to constituents; and to make recommendations to the Minister on programmes and projects which will benefit constituencies. These Councils are very knowledgeable about the communities in their constituencies and their use of natural resources in the area. The Councils have been very useful in identifying stakeholders. They are also influential
<b>Micoud Vieux Fort Laborie</b>						

Stakeholder	Interest in Project	Level of Participation				Comments
						in their constituencies.
<b>Development Committees</b> <b>Micoud</b> <b>Dennery South</b> <b>Laborie</b>	Cooperating Agency	H P	HI	L O	Li	These Committee/Groups have been established to assist with the socio economic and cultural development of the committees that they serve. Generally the primary objective of these Committees and Groups is to mobilise the community to implement development projects. They are very knowledgeable of the persons living in the communities that they serve and are important for mobilising community support for the project and for project implementation
<b>Youth and Sports Councils</b> <b>Micoud</b> <b>Vieux Fort</b> <b>Laborie</b>	Cooperating Agency	LP	LI	H O	Li	Sporting activities plays a vital role in building community cohesion and creating a sense of collective goodwill in the communities in the project area. Community Sporting Organisations are supposed to promote community participation at all levels in sports; to organise competitions and development programmes at the community level; and to administer the development of sports at the community level. Unfortunately most community sporting organisations do not have the financial or trained human resources to meet these objectives. Nevertheless, Communities unite to support their individual sports groups. Unfortunately, after the season these groups disintegrate and are no longer the vehicle for mobilising community cohesion.
<b>Development Control Authority</b>	Cooperating Agency	LP	HI	H O	O	The Executing Agency, the Co-Executing Agencies and a number of partners are referral agencies of the DCA (these are agencies to which the DCA refers projects for inputs). EIAs undertaken for proposed projects in the project area are available at the DCA.
<b>Ministry of Tourism,</b>	Cooperating Agency	H P	HI	H O	Cn . Li, O	Output 3.2. Collection of existing data on Saint Lucia’s tourism, including main areas, attractions, and a SWOT analysis to substantiate future investments. Identification of key partners for this output. The Ministry is interested in initiatives in village tourism, heritage tourism, sport tourism, health and wellness. There are a number of home accommodation; apartments; guesthouses, AirBnb-type shared economy accommodation in the project site.
<b>Economic Development, Housing, Urban Renewal, Transport and Civil Aviation</b>	Cooperating Agency	LP	LI	L O	O	The role of the Ministry is primarily to monitor the use of project funds by the Planning Department
<b>GEF Small Grants Project</b>	Potential Source for co-financing	H P	HI	H O	Cn Li	The SGP accepts projects from civil society organisations and has a database of these organisations. They have an active portfolio in the SE Coast and there is a tremendous potential for synergy.
<b>Saint Lucia National Trust</b>	Cooperating Agency	H P	HI	H O	Cn Li	The SLNT is the premier NGO working on conservation issues. The SLNT implemented the OPAAL and ECMAN projects in the PSEPA and has experiences, which will be useful for consideration in the South East Coast.
<b>Saint Lucia</b>	Cooperating	LP	LI	H	Cn	The SLAHS has continued to maintain an inventory of

Stakeholder	Interest in Project	Level of Participation				Comments
<b>Archaeological and Historical Society</b>	Agency			O		archaeological sites as they are discovered. The Society also has some jasper flakes and some Amerindian shards that were found on Praslin Island and on the Praslin estate. There also are important archaeological sites at Mandele, Troun Gras, Troumasse, Anse Ger, and Pointe deux Cailles. The SLAHS also has access to the history and archaeological artefacts of these sites.
<b>Flora and Fauna International</b>	Cooperating Agency	H P	HI	H O	Cn Li	FFI was commissioned to conduct the most comprehensive surveys to date of the island's forests and terrestrial flora and fauna, and identify priorities for conservation, including within the SE Coast project region
<b>Durrel Wildlife Conservation Trust</b>	Cooperating Agency	H P	HI	H O	Cn	Durrell works closely with the Saint Lucia Forestry Department on a range of conservation projects, particularly the conservation of the Maria Island Lizard ( <i>Cnemidophorus vanzoi</i> ) on Maria and Praslin Islands. Their work also include the restoration of endemic species and the control of invasive species.
<b>Bird Life International</b>	Cooperating Agency	H P	HI	H O	Cn	The BirdLife Important Bird Areas (IBA) programme has identified and mapped key areas for birds in Saint Lucia. This map identifies the coastal strip in the project site to be partially protected and a section to be fully protected.
<b>Folk Research Centre</b>	Secondary stakeholder	LP	LI	H O	O	The FRC has an extensive collection of material related to the culture of Saint Lucia.
<b>St Lucia The James Belgrave Micro Enterprise Development Fund (BELFUND)</b>	Potential Source for co-financing	LP	LI	L O	Li	The James Belgrave Micro Enterprise Development Fund Inc. (BELfund) was established by the Government of Saint Lucia, primarily to promote sustainable development through self-help micro enterprise projects for individuals, families and groups among the less privileged sectors, through the provision of low cost loans, enterprise training, technical assistance and other support services. Some of the business categories include agro/agri business, fishing, farming and animal husbandry, services and trade and tourism. Many of these business categories have potential in the project site.
<b>COMMUNITY GROUPS</b>						
<b>Mothers' and fathers' groups in the Project Site</b>	Secondary Stakeholders	LP	LI	L O	Li	The Mothers' and Fathers' Groups have lost their standing in their communities and they now play only a social function. Nevertheless they are an important source of information.
<b>Anse Ger Rural Women Group</b>	Primary Stakeholder	H P	LI	H O	Li	There are 20 members and some of them operate small food processing enterprises, while some do art and craft work. They have an area in the Premium Cocoa Producers facility where they will be operating from.
<b>Community Disaster Response Teams</b>	Secondary Stakeholder	H P	LI	H O	O	These teams have been trained by the Saint Lucia Red Cross and are very effective in mobilising their respective communities during a hazard event. They have also been trained in the conduct of community based hazard evaluations.
<b>PROCESSING FACILITIES</b>						
<b>Praslin Seamoss Group</b>	Primary Stakeholder	H P	HI	H O	Li	Against the deliberate focus to place agribusiness at the centre of agricultural policy and programmes, the Government shifted its emphasis to create and sustain competitive value chains The Praslin Seamoss group has a factory facility retrofitted with most of the equipment needed for processing seamoss. However, a few minor changes are necessary to have the facility HACCP certified. They will be producing a variety of seamoss drinks,

Stakeholder	Interest in Project	Level of Participation				Comments
						<p>soaps and other products. At present they sell dried seamoss on the open market while a few members make and sell seamoss drinks locally.</p> <p>In the absence of a shared processing facility, several of the seamoss farmers carry out small scale processing on their own but on a small scale. Seamoss-based products which are currently being produced include:</p> <ul style="list-style-type: none"> <li>• Seamoss gel</li> <li>• Seamoss drinks (plain, milk-based, peanut-flavour, guava, passion fruit, sorrel)</li> <li>• Fertiliser</li> <li>• Body products – soaps</li> </ul>
<b>Farine Processing Facility in Vige Vieux- Fort</b>	Primary stakeholder	H P	HI	L O	Li	This processor is in Vige, Vieux-Fort He grows most of his cassava on his farm and obtains cassava from other farmers in the area when the need arises. He makes farine and cassava bread which he sells in Vieux-fort and surrounding areas.
<b>Anse Ger Agro processing plant</b>	Primary Stakeholder	H P	H I	L O	Li	<p>This is a cocoa fermentry but is currently not operational. The Premium Cocoa Producers have expressed an interest in renting the facility which will be equipped with the necessary equipment for producing dried cocoa beans following which there would be an assessment of the potential for moving up the value chain to produce chocolate, cocoa butter, and other processed goods.</p> <p>The Premium Cocoa Producers Association (Saint Lucia) Limited is made up of 89 cocoa farmers (members), including 18 females, who are a part of the Cocoa Rehabilitation Programme. It is, at present, a registered limited liability company. However, there have been discussions regarding the possibility of converting to a cooperative. Members are largely based in the project area from communities such as Anse Ger, Micoud Village, Mon Repos, and Belle Vue.</p> <p>Despite the existence of the Association, cocoa farmers generally have independent sales arrangements. Most of the cocoa produced by the farmers is sold, unprocessed, in the pods or wet out of the pods, to processors and exporters based locally. The Hotel Chocolat, Union Vale Estate, and Fond d'or Estate, all located in Soufriere, are the main buyers.</p>
<b>RESOURCE USER GROUPS/COMPANIES</b>						
<b>Broom producers Superior Brooms</b>	Primary Stakeholder	H P	HI	H O	Li	<p>The brooms are made from Latanyé (Coccothrinax barbadensis )which is a palm native to Saint Lucia. Its leaves are used to make craft and brooms. Latanyé's natural habitat ranges from "littoral and scrub woodlands near the coast, from sea level to 200 metres elevation".</p> <p>Sales occur in rural and urban areas. It faces competition from imported plastic brooms. Statistics on the size of the market and the levels of harvest from the wild are currently unavailable The Latanyé wild stocks are harvested "year round" to maintain livelihoods of people in the project site because of the available market and high demand for leaves for making brooms. In addition, there is limited active cultivation of the plant (primarily in the Dennery area) and harvesters used the younger leaves of plants as materials to tie parts of the broom. These activities have</p>

Stakeholder	Interest in Project	Level of Participation				Comments
						<p>resulted in a decrease in the availability of Latanyé. Due to the demand for Saint Lucian Latanyé Brooms there has been the over-harvesting of the leaves in the forested areas in the project site and the consequent use of smaller and un-mature leaves. Brooms built with un-mature leaves had varied standards of measurements and did not last as long as the once built with older leaves</p> <p>The Forestry Department gave Latanyé seedlings to various farmers in the study area many years ago including Superior Brooms. Today they are self-sufficient in the palms they harvest from their own plantations. Many farmers cannot find sale for their brooms as the market is saturated, the brooms sell slow plus increasing competition from plastic imported brooms.</p>
<b>ECO South Tours</b>	Primary Stakeholder	H P	HI	L O	Li	<p>Eco South Tours was formed by the Saint Lucia National Trust under the OPAAL project in 2011 to manage and oversee tours within the PSEPA, including the Mankote Mangrove Tours, as well as tours to Scorpion Islands are managed by the Eco-South Tours Inc. Several groups fall under the ambit of the Eco-South Tours. These include the Aupicon Charcoal Producers; Savannes Bay Seamoss Farmers; and the Savannes Bay Fishers. The organisation also frequently partners with the Ministry of Agriculture and the Forestry Department.</p> <p>Eco South Tours currently include the following tours and/or attractions:</p> <ul style="list-style-type: none"> <li>• Hiking the Mankote Mangrove Trail – this is a guided tour, which goes through the mangrove forest and along the largest pond in Saint Lucia. The guides also share their knowledge of the value of cultural and ecological value of the eco-systems and highlight the endemic and migratory bird species in the area.</li> <li>• Tours of the Maria Islands Nature Reserve – this begins with a boat ride from the Anse du Sable Beach to Maria Major (the larger of the two Maria Islands), followed by a trek up to the highest point on the island.</li> <li>• A Native Fishing Tour whereby patrons partake in a half-day fishing experience, which involves going out with local fishers on their pirogues and participate in forms of traditional fishing.</li> <li>• Handicraft Production, demonstration and sales. In addition to being able to purchase craft which is made from items in the PSEPA, visitors are also provided with the opportunity to view and participate in the production of these items.</li> <li>• Horse-back riding along the Mankote Mangrove Trail, Point Sable Beach, Bois Chadon and Moule-a-Chique.</li> <li>• Demonstration of the seamoss harvesting process at the Bois Chadon beach.</li> </ul>
<b>Anse Kawet Crafters Association</b>	Primary Stakeholder	H P	HI	H O	Li	<p>This Association was formed to train persons in Laborie in craft skills. The Association now has a centre for the sale of crafts made primarily in Laborie and primarily from natural resources in the community.</p>
<b>Aupicon Charcoal Producers</b>	Primary Stakeholder	H P	HI	H O	Li	<p>The group has 26 members. They make charcoal using mangroves in the Ma Kote mangrove under a sustainable</p>

Stakeholder	Interest in Project	Level of Participation				Comments
						management programme. At present they are undergoing training in Seamoss cultivation and management. They are also constructing an interpretive centre for birdwatching tours in the area. Also under construction are horse stables as they will also be providing horseback riding. Some members in the group also do arts and craft and local confectionaries. In May 2017 they will be undergoing training in beekeeping. They also do turtle watching and Kayaking. The Saint Lucia National Trust in the South sell all of their tours. One of their biggest problems is obtaining public liability insurance.
<b>Sea Moss production in Ma Kôté Mangrove.</b>	Primary Stakeholder	H P	HI	H O	Li	Young unemployed men and women in Aupicon have been trained in the cultivation and production of seamoss products. With the input from the Ministry of Education a Technical Vocational Education Certification (T-VET) in seamoss production has been developed. Persons may now be able to receive a certification in the production of the product. Funds have also been received to conduct research into the development of a wide range of seamoss products. Currently, in the Savannes Bay area, a number of farmers have established seamoss farms and through the ACAPG, a solar drier is being built within the mangrove to facilitate the rapid, sustainable drying of the sea moss crop, once harvested.
<b>Coconut Bay Beach resort and Spa</b>	Secondary Stakeholder	H P	H I	H O	Li	This plant is the only large hotel serving the southern part of the island. It is subject to the vagaries of the Atlantic ocean which it faces. The beach is prone to be covered with sea grass but is also home to nesting turtles. The resort provides employment to many persons from the project site.
<b>Reef Kite and Surf and Reef Restaurant</b>	Primary Stakeholder	H P	HI	H O	Li	The Reef Kite + Surf is located at Anse de Sable. It is a reef-enclosed bay and the kite zone is downwind from The Reef. Conditions are steady cross-shore winds from the left, with chop & hop conditions. It is one of the best kitesurfing locations in the Eastern Caribbean.
<b>RESOURCE USERS</b>						
<b>Landowners</b>	Primary Stakeholders	H P	HI	H O	Li	Land is a critical resource in the project site. Much of the land is privately owned with a number of the landowners being absentee landlords. These landowners own large tracts of land. Family owned land is also a common feature. Privately owned land far surpasses land owned by the State. There are squatters both on Crown Lands and privately owned lands.
<b>Farmers</b>	Primary Stakeholders	H P	LI	H P	Li	Farming still remains a very important economic activity in the project site although there has been a decline in cultivation of most of the traditional crops. The crops that were traditionally grown were sugar, bananas and coconuts. Coconut plantations and the grazing of livestock have been more common along the flatlands. Bananas have, to a large extent, now been replaced with other tree crops and short growing crops.
<b>Mauby Producers</b>	Primary Stakeholders	H P	HI	H O	Li	Many Latanyé farmers also produce mauby. The mauby bark is informally packaged for sale in communities and in the food markets. Some is sold to informal processors who make a syrup drink for sale. It is also used to make herbal tea. The supply is too small to support substantial food-processing operations. As a

Stakeholder	Interest in Project	Level of Participation				Comments
						result, Baron Food Processors, reportedly relies mostly on imports for raw material.
<b>Craft Producers</b>	Primary Stakeholders	H P	HI	H O	Li	There are a number of craft producers in the project site although there are no established associations. The trade is seasonal in nature and depends heavily on major special events. The value of the products depends largely on production time, quality of raw materials/product, availability of materials and customer requests.
<b>Honey Production</b>	Primary stakeholder	H P	HI	H O	Li	Beekeeping in the project site is done by a few farmers. Some have a few hives while others have over 100 bee colonies. Honey is in high demand Island wide. Honey production is at an all-time low due to a number of factors. Vagaries of the weather, bee pest such as the Vaora mite, chalk brood and Wax Moth attacks. Use of agro chemicals is also poisoning honeybees and other factors not yet known. The beekeepers cannot meet the demand of the market. One farmer was making vinegar and other products from honey and selling to Trinidad.
<b>Farine Producers</b>	Primary Stakeholders	H P	LI	H P	Li	
<b>Fishers</b>	Primary Stakeholders	H P	LI	H P	Li	<p>The largest fishing grounds are in the project site with the largest proportion of the catch being landed at the town of Vieux Fort. Other landing sites in the project site are: Praslin, Micoud, Anse Ger, Savannes Bay and Laborie.</p> <p>Analysis of landing data from 1999 to 2016 indicates that:</p> <ul style="list-style-type: none"> <li>• The number of fishers per landing site steadily increased each year;</li> <li>• The number of fish resources landed increased</li> <li>• Human populations enjoyed economic benefits from exploiting the natural resource.</li> </ul> <p>Further assessment of fish landing data indicates that about 70% of fish landings are made up of migrating pelagic species namely dolphin, kingfish, tunas and flying fish. The other 30% of the landings are reef and bank species like snappers, groupers and jacks.</p> <p>Three of the most economically important white sea urchin populations occur off Aupicon, the Maria Islands and Laborie. The Saint Lucia white sea urchin fishery provides an important seasonal source of income for coastal communities in the project site that are adjacent to seagrass and fringing reef habitats</p>
<b>Mauby Farmers</b>	Primary Stakeholder	H P	HI	H O	Li	Mauby farmers in the area only have small areas under mauby cultivation. Most of the farmers received the mauby plants as seedlings from the Forestry Department. Some were interplanted with Latanyé. However, Latanyé is more tolerant of dry conditions and did better than the Mauby. Most of the farmers were disappointed with the mauby growth and sales and there has been sustained cultivation of mauby.
<b>Herbs producer</b>	Primary Stakeholder	H P	HI	H O	Li	A farmer in Grace (Vieux Fort) grows herbs and turmeric in mixed cultivation. Turmeric is lightly processed and sold in powdered form while herbs are sold either as fresh cuttings for consumption or as whole plants. Drying is done on open surfaces, placed in the sun
<b>Broom makers</b>	Primary	H	HI	H	Li	The Latanyé farmers make the brooms themselves. However,

Stakeholder	Interest in Project	Level of Participation				Comments
	Stakeholder	P		O		some of them have difficulty sourcing the broom handles. Broom handles are usually made from Bwa Madam ( <i>Guetarda scabra</i> ), Bwa Gwiye ( <i>Myrcia citrifolia</i> ) or from Ti Bonm blanc ( <i>Croton bixoides</i> ). All these species grow in dry forest areas, but are heavily exploited for poles and stakes by farmers. The slow sale of the brooms coupled with influx of plastic brooms on the local market is hampering the growth of the industry.
<b>Manufacturing of forest products</b>	Secondary stakeholders	H P	LI	H O	Li	There are a few crafts people in the project site. Most of them are located in Monchy, Bougis and Garrand. The community in Des Barras was provided training in craft making but the group was not formalised. Persons use NFTP for the crafts.
<b>Charcoal production</b>	Primary Stakeholder	H P	LI	H O	Li	A few individuals in Vigé Cocoa (Vieux-Fort) and Aupicon Charcoal Producers (Ma Kote) make charcoal in the traditional way for a living. They store the bags of charcoal near their homes and sell on the open market.
<b>Wind- &amp; kite-surfing</b>	Secondary Stakeholder	LP	LI	L O	Li	Kitesurfing St Lucia is the only kitesurfing school operating in the North of the island, in Cas En Bah. The Cas En Bah beach is also considered one of the best beaches on the island for intermediate and advanced windsurfers.
<b>Horse-back riding</b>	Secondary Stakeholder	LP	LI	L O	Li	Locally owned stables in Ma Kote area will soon provide horseback riding on the Bois Chadon beach.
<b>Hiking tours</b>	Secondary Stakeholder	LP	LI	L O	Li	Several visitors to the island do hiking tours (arranged by various tour operators) to Grande Anse.
<b>Ecotourism – waterfalls La Tille Falls</b>	Primary Stakeholder	H P	LI	H O	C O	<p>La Tille falls in Micoud is part of an eco-tourism heritage site. Patrons are treated with local fruits from the site, a few trails one leading to a small waterfall, another leading down river along a riparian forest and others in the orchard. They offer birdwatching, river bathing, pond fishing in an eco-friendly setting. Under construction were 2 cottages, self contained for accommodating stay over visitors.</p> <p>Another waterfall was in the interior of Mamicoud. This site is undeveloped, but the proprietor has plans to develop the site for ecotourism. His plans include putting in trails, planting a variety of fruit trees, interpretive signs and enhancing the pool at the waterfall. The project is still in its infancy.</p> <p>This other waterfall is in the interior of Grace Vieux-Fort. One of the most spectacular waterfalls on the Island. It has a very large and deep pool. However, access to the waterfall is a bit of a challenge as the access route in one area is very steep. The access road leading to the start of the trail is narrow and in need of repair.</p> <p>The Orising Brothers Honey Producers Group in Grace Vieux-Fort have a farm where they grow vegetables, herbs and spices, root and tree crops. They also rear goats and keep bees. They operate over 150 hives and have plans to turn their estate into an eco-tourism enterprise putting in trails, signage, building ponds and offering bee tours, farm tours, pond fishing and the like. The project is still in its embryonic stage.</p>
<b>Mamiku Estate</b>	Primary	H	LI	H	C	A former sugar estate that provides Birdwatching,

Stakeholder	Interest in Project	Level of Participation				Comments
		P	LI	H	O	
	Stakeholder	P		O	O	Educational/historical tours, Garden tours and Plantation hikes
<b>Descartes's nature Trail</b>	Forestry Department – Primary Stakeholder	H P	LI	H O	C O	Central Rainforest Reserves – Hiking and Bird watching
<b>PRIVATE SECTOR PARTNERS</b>						
Massy Supermarkets	Primary Stakeholder	H P	LI	H O	LI	Massy Supermarkets has a programme to work with local producers. To date they are involved in a certification programme with farmers and have introduced standards for some of the local products that they purchase for sale in their supermarkets. Massy now has the opportunity to expand their programme to such products as honey, sea moss, mauby, and herbs and spices, which are being targeted by this project.
Mille Fleur Honey Producers Cooperative	Primary Stakeholder	H P	LI	H O	LI	Mille Fleur Honey Producers' Cooperative Ltd is the premier umbrella association of beekeepers on the island. A number of beekeepers in the project site who will receive training, under Output 3.3 are members of the Cooperative. This training will help them to increase their production and management practices in order to improve productivity, increase opportunities for differentiation, and reduce losses. Mille Fleur will provide the necessary backstopping, product development and marketing opportunities: The Cooperative has embarked on an industry development and expansion initiative that simultaneously seeks to address the various facets of the industry.
St. Lucia Hotel and Tourism Association	Secondary Stakeholder	H P	LI	H O	LI	The SLHTA has a grouping of over two hundred members covering a wide segment of the economic spectrum of St. Lucia which the tourism, manufacturing, agriculture and services sectors. Book St Lucia Now is an online booking tool from the St Lucia Hotel & Tourism Association. By using the SLHTA tool, ecotourism and Air BnB operators in the project site will have access to a cheaper option for marketing their products and services. The SLHTA has agreed to work with the Department of Forestry to help local communities and perspective community based ecotour operators provide a thorough and exciting ecotourism experience for visitors to their area, whilst protecting their local environment and natural resources.

51. It is important to note the extent of the Key Stakeholders identified in the Map. These are stakeholders primarily from government agencies who have a stake in the South East Coast either as managers of the natural resources found in the area; agencies that are interested in the historical and cultural imperatives in the site; agencies that are involved in development opportunities provided by the site; or agencies (primarily international) that are involved in working in the site undertaking research with government agencies. Not all of these Key Stakeholders will be involved in all aspects of the project cycle; it is however likely that even if they are not fully involved in project design and implementation they will still play an influential role in the project, either in terms of providing information or in terms of proposed development activities which will impact on the natural resources in the site.

52. The Stakeholders have been categorized into primary and secondary stakeholders. The primary stakeholders are those who are envisaged to participate and/or benefit from the project. The Secondary Stakeholders are those who will not participate directly in project activities but who could influence the outcome of the project.

53. Participation, for purposes of the South East Coast Project is defined as a process through which people with an interest (stakeholders) influence and share control over development initiatives and the decisions and resources that affect them. In practice, this involves employing measures to: identify relevant stakeholders, share information with them, listen to their views, involve them in processes of development planning and decision-making, contribute to their capacity building and, ultimately, empower them to initiate, manage and control their own self-development.<sup>4</sup>

54. The Participation Plans present the Stakeholders that are likely to be involved in each stage of the South East Coast Project and their anticipated role(s) in each stage; and the Project Component in which they are likely to be involved in. The type of stakeholder involvement has been defined as:

- Inform - I
- Consult - CO
- Partnership - P

55. Every attempt was made to ensure opportunities that maximize social and gender benefits in the Participation Plan. Nevertheless, the stakeholders need to be validated at the time when the planning for each activity is being finalized during project implementation. In addition, discussions were held with all those who have been identified as primary stakeholders in each project component in order to ensure that these stakeholders are informed of proposed activities and contribute to the final design of the activities.

56. Stakeholders who have been identified as secondary stakeholders should also be kept informed of the proposed activities either through the circulation of relevant documentation or through town hall meetings during implementation.

57. The analysis of the Participation Plans reveal that:

- The stakeholders vary between the project's components.
- There are different stakeholders for different project stages in the project cycle for each component
- Stakeholders take on different types of involvement (Inform, Consult, Participate, and Control) in different project components and in different stages in the project cycle within each component.
- Stakeholders also shift in type of stake (primary or secondary) between project components and between different stages in the project cycle with each component.
- DSD, the Forestry Department and the Biodiversity Unit are Key Stakeholders in all project components; other key stakeholders vary with the project component. These 3 Key stakeholders are also important in the Monitoring and Evaluation stage for each project component.

58. This project will generate and input gender dimensions into the elaboration of Component 3 demonstration pilots to promote sustainable use of biodiversity friendly products and services to derive sustainable livelihoods, and in the development of results frameworks, budgets, implementation plans and work plans. To this end the concepts that were developed during project development were reviewed to ascertain the extent to which gender can be incorporated in the activities proposed for each of the concepts. These pilots will be refined and finalized at project inception. For the South East Coast project, gender considerations are not solely a women's issue but rather looks at yielding advantage to whole communities and benefitting both genders.

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4 African Development Bank (2001) Handbook on Stakeholder Consultation and Participation in ADB Operations

## **2.6. Baseline analysis and gaps**

59. In the overall region of the South East Coast, the 1,038 ha Pointe Sable Environment Protected Area (PSEPA), which extends from Savannes to Moule a Chique Vieux-Fort, as well as two off-shore islands managed by the Saint Lucia National Trust, have already been created to protect important species (progress is also being made towards the protection of another habitat area, the Iyanola ecosystems, towards the center-west of the island). To date, a number of efforts have been made in Saint Lucia to prevent the destruction of mangrove ecosystems, and several mangrove areas on the island have been declared as Marine Reserves, including the Mankote Mangroves and the Savannes Bay mangroves, both of which are Ramsar sites in the South East Coast region. Savannes Bay was declared a marine reserve under the Fisheries Act (1984) (Declared list in 15 October 1986 and in 1990); as a marine reserve, no extractive activity is allowed and entry into the reserve is subject to the approval of the management authority. The area was declared an Environmental Protection Area under Section 34 (1) of the Physical and Development Control Act 2001 in August 2007 for the purpose of protecting the natural beauty or interest in the area.

60. The project is closely aligned with the Forest Department's objectives to "meet the socio-economic, cultural, spiritual, and environmental development needs for forest goods and services, in ways that ensure their continued availability in the long term, through the conservation of soil, water, biodiversity, and biological resources." and is consistent with the threat analysis carried out with EC support of the 2009 National Forest Demarcation and Bio-Physical Resource Inventory Project. The project will thus emphasize support to its priorities of: 1) within the Forest Reserves, establish and implement site management plans that integrate biodiversity conservation with other forest uses and services; and 2) safeguard important forests outside of the current Forest Reserves, with particular attention to deciduous and semi-evergreen seasonal forests

61. While there is widespread concurrence that a National Land Use Plan is long overdue, budgetary constraints have precluded this from being previously included in constrained government budgets. The Government expresses its commitment to: "preserving the natural environment and will ensure that such a major initiative is supported by the necessary land use planning requirements to ensure sustainable, quality development in this region." A feasibility study led by the Caribbean Development Bank is currently being launched and in concert with the development of this project with a view towards capitalizing on offsets and environmental sustainable choices. In addition, two donor-supported projects on land policies/planning and climate change resilience (described below) are expected to strengthen land use planning in the country.

62. As reported in its Intended Nationally Determined Contribution (INDC) under the UNFCCC, Saint Lucia developed a Sustainable Energy Plan in 2001 and has committed to providing up to 35% of electricity generation from renewable sources by 2020. The country's commitment is further reflected in its Energy Policy (2010) and the ongoing review of the Electricity Supply Services Act to help to create an enabling environment to achieve this goal. Furthermore, in 2014 Saint Lucia joined the Ten Island Challenge, a program to accelerate the renewable energy transition in the Caribbean. Saint Lucia has further adopted a National Energy Policy (2010), introduced incentives for renewable energy, prepared draft of Revised Electricity Supply Act (2015), passed National Utility Regulatory Commission Bill (establishes an independent regulatory commission to oversee electricity production), prepared a draft Revised Building Code (includes energy efficiency measures) as well as National Energy Efficiency Labelling Standards (Air-Conditioning units, tubular and compact fluorescent lamps). Saint Lucia is presently developing draft Geothermal Development Bill.

### **Baseline Projects**

63. The proposed GEF project will complement several key baseline initiatives:

64. The EU supported Banana Accompanying Measures (BAM) Program (2013-2018) with a budget of US \$37 million, of which US\$ 9,206,987.07 will be co-financing this GEF project. This program is intended to support transformation within the agricultural sector and to support the country in its efforts to diversify from the banana industry. The project seeks to increase competitiveness in the sector, and also implements activities that promote social, environmental, and economic benefits. The BAM program phase which is currently under way focuses on three key areas (1) technical assistance to corporate planning of Ministry of Agriculture; (2) Agri-enterprise facilitation; and (3) Research and Technology. The BAM program is implemented through the Ministry of Agriculture. The activities underway or under planning will contribute to creating a baseline of sound agricultural development upon which this project can build. For example, the BAM program is working to improve data collection systems for agriculture and fisheries as well as value chain analysis, which will provide information on land use and land use change that can be used by this project. The BAM program also supports the development of training and standards for organic agriculture, something that this project can pick up when working with producers towards more sustainable agricultural practices. The program is also working to deploy targeted water harvesting technologies and equipment, farm and agri-business equipment and rural infrastructure, such as roads. The Ministry of Agriculture who implements the BAM program is also a member of the stakeholder group for this project, and will easily pursue coordination between BAM-financed activities and this project's activities.

65. While this baseline project seeks to strengthen other agricultural value chains and the technical capacity of the Ministry of Agriculture, it does not take an ecosystems based approach. The proposed GEF project can build upon this initiative and the baseline capacity it creates in the rural sector, and integrate ecosystems planning into development planning for the South East Coast. Moreover, it can utilize some of the investments already made in the baseline - such as training facilities or the creation of marketing schemes - to support the promotion of environmentally sustainable livelihoods. This is particularly relevant for activities that seek to create markets for new artisanal activities and ecologically sustainable niche products (e.g. cultivation of sea moss by-products) that help sustain ecosystem services and the sustainable use of biodiversity. The BAM program does not consider the potential environmental impacts of its investments and the opportunity costs of moving towards various agricultural commodities. Additional work is required to ensure that this takes place within a framework of sound ecosystem-based planning, in which communities also can participate. The baseline project offers appropriate opportunities to address agricultural and environmental concerns of the South East Coast.

66. The World Bank funded Disaster Vulnerability Reduction Project (DVRP) (2014-2019) with a budget of US \$68 million, of which US\$ 3.75 million constitutes co-financing for this GEF project. The DVRP aims to reduce immediate disaster vulnerability and increase resilience to risks posed by extreme climate events. The project consists of five components, namely: (i) prevention and adaptation investments (rehabilitation of existing infrastructure and construction of new disaster mitigation structures such as river defence walls); (ii) technical assistance for hazards and risk evaluation and application, and hazard data management for improved decision-making; (iii) emergency response investment contingency fund mechanism; (iv) adaptation financing facility; and (v) project management and implementation support. Under the broader umbrella of the DVRP, the most significant investments are occurring in the infrastructure sector. Activities that provide a baseline for this project include the rehabilitation of roads, bridges, drainage systems and river banks throughout the island and on the East Coast, as well as flood protection infrastructure around key point such as airports, ports and cities. This will provide increased development opportunities, but also create the risk of further encroachment into fragile ecosystem areas. The DVRP is also working to strengthen the hydro-meteorological observation network, which will provide useful information for land use planning and monitoring of environmental impacts. This will also include support towards an assessment of major rivers, slopes and landslide risks and subsequent

stabilization works. The Climate Adaptation Facility which is planned under the DVRP is intended to provide loans to households and private sector to support adapted livelihoods. However, it does not include technical support for the identification or implementation of such livelihoods, and its feasibility and sustainability is currently being discussed in relation to the affordability of the financial products offered. The DVRP is implemented through various ministries, including Health, Education, Public Works and Infrastructure, Environment, Forestry, who are all stakeholders in this proposed initiative as well.

67. The DVRP provides the technical infrastructure to address disasters and provides the foundation to address environmental degradation in the South East Coast but, much like the BAM program, it carries associated risks for the environment that are not entirely considered. For example, by creating new roads and transport infrastructure, these projects open up new land for deforestation or encroachment. In addition, the DVRP does not consider the role of healthy ecosystems as providers of sound protection services. While hard infrastructure may be useful to reduce the risk of floods and landslides, if the surrounding ecosystems are degraded and deforested, these investments will not be sustainable. That said, DVRP provides a basis for informing land use planning based on risks and hazards, on which this proposed project will build. The proposed project will complement the DVRP through an ecosystems based approach to disaster management, as well as an emphasis on mitigation for example, rehabilitation of mangroves, reforestation activities and promotion of sustainable livelihoods. The proposed GEF project will benefit from the initial investments made under the DVRP.

68. Saint Lucia is one of nine countries participating in the \$1.2 million project *Supporting the Eastern Caribbean States to Improve Land Policies and Management*, and through the Physical Planning Department and with the support of the Department of Sustainable Development, it is revising the National Land Policy based on the OECS Land Policy guidelines as well as improve Land Records. A draft Land Use Policy is currently under consideration by the Cabinet for approval. Also, working with the Physical Planning Department, the \$27 million project *Saint Lucia Pilot Program for Climate Resilience (PPCR)* will support enhancement and application of the Saint Lucian GIS system, enhancing use of the GEONODE system, slope stabilization and watershed management efforts to specifically increase resilience to climate change, building bridges and roads in accordance with international best practice and building codes. The proposed SE Coast project also will have synergies with the efforts of *Saint Lucia Forest Restoration and Rehabilitation Project* in restoration of forest reserves damaged by Hurricane Tomas in October 2010.

## **2.7. Linkages with other GEF and non-GEF interventions**

### **GEF- Interventions**

69. ***Increase Saint Lucia's Capacity to monitor MEA implementation and sustainable development:*** This cross-cutting capacity development (CCCD) project seeks to strengthen institutional capacity for the implementation and monitoring of international conventions as a follow-up to the National Capacity Self Assessment (NCSA) of Saint Lucia. It also seeks to better integrate environmental concerns, and the value of ecosystems, into its broader development frameworks. The proposed project will feed into the CCCD project directly, by providing data on species, vulnerable ecosystems, GIS mapping, which will then be inputted into the Environmental Information System launched under the CCCD project.

70. ***The Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States*** (GEF-IWEco Regional Project) is a five-year multi-focal area regional project with four components; (1) Development and Implementation of Integrated Targeted Innovative, climate-change resilient approaches in sustainable land management (SLM), integrated water resources

management (IWRM) and maintenance of ecosystem services; (2) Strengthening of the SLM, IWRM and ecosystems Monitoring, and Indicators framework; (3) Strengthening of the Policy, legislative and institutional reforms and capacity building for SLM, IWRM and ecosystem services management taking into consideration climate change resilience building and (4) Enhancing knowledge exchange, best practices, replication and stakeholder involvement. The project will be implemented through a network of international, regional and national partners in accordance with their comparative advantage. The Saint Lucian intervention of IWEco will address problems of land degradation and ecosystem degradation in the upper reaches of the Soufriere Watershed to restore agricultural land productivity, reduce risk to life and property from landslide occurrence and reduction of sedimentation into an adjacent marine protected area (for ecosystem restoration and improved ecosystem management). Lessons will be drawn and resources shared to apply lessons learned to the South Eastern watersheds and degraded areas.

71. ***Sustainable Financing and Management of Eastern Caribbean Marine Ecosystems.*** This regional project which includes Saint Lucia is funded by the GEF and implemented by the World Bank through The Nature Conservancy. Its purpose is to improve the management of existing and expanded marine protected area networks through the establishment of sustainable financing mechanisms. Linkages will be sought on best practices and lessons learned of protecting biodiversity hotspots.

72. ***Iyanola Natural Resource Management of the NE Coast Project.*** A project with the objective of increased management effectiveness and sustainable use of the North East Coast's natural resource base to generate multiple global environmental benefits. It will meet this objective through four components that will enhance land use planning and regulatory framework (as applied to the NE Coast); enhance sustainable land management and carbon benefits in deciduous seasonal and low montane forests; improve management effectiveness of the Iyanola protected area; and enhance the capacity for the production of biodiversity friendly goods and services in inland forest and coastal communities. Because of the similarities between the Iyanola Project and this new proposed project, lessons learned from Iyanola will be of high value for the SE coast interventions.

73. ***Advancing the Nagoya Protocol in countries of the Caribbean Region.*** The project goal is to support countries of the Caribbean to facilitate access to their genetic resources and benefit sharing in a fair and equitable way, in line with the CBD and the Nagoya Protocol, and more specifically, the objective seeks the uptake of the Nagoya Protocol and implementation of key measures to make the protocol operational in Caribbean countries. The project aims to overcome barriers linked to poor understanding of the Nagoya Protocol and ABS and the implications of protocol ratification and requirements for implementation. This project is generating important data on key genetic resources present in the Caribbean region and which may be target for bioprospecting. This data could also be useful for the activities of component 1 of this new proposed initiative.

### **Non-GEF Interventions**

74. ***Saint Lucia Forest Restoration and Rehabilitation Project.*** This \$1M project funded by the Government of Australia and intended to restore forest reserves damaged by Hurricane Tomas in October 2010 has recently ended, but provides many lessons learned and best practices on reforestation activities.

75. ***USAID/OECS Climate Variability, Change and Mitigation Project:*** The USAID regional climate change support for the countries in the Eastern Caribbean will complement overlapping initiatives it previously supported under its biodiversity support to the region. Based on analysis gathered from two broad stakeholder workshops held in Saint Lucia and Barbados, two critical areas were identified as requiring special attention. These are coastal zone management and resilience and freshwater resources management.

76. **Global Climate Change Alliance (GCCA)** project on Climate Change Adaptation and Sustainable Land Management in the Eastern Caribbean: This 3-phase project is to be funded by the European Commission During phase one, a comprehensive gap analysis will be carried out to assess the institutional preparedness and the technical and human capacity level in the land management domain of the OECS Secretariat and for each member state. During phase two, which will run concurrently with this GEF project, the gaps and the weaknesses identified in phase one will be addressed and dealt with. During phase three, the project will support the implementation of those segments of National Land Management Policies dealing with climate change adaptation measures. Within this phase, the project also intends to identify a set of SLM physical investment best practices in relevant sectors and replicate them through pilot or demonstration projects possibly in each Member State. There are important links to be sought here both on building resilience and SLM.

77. Environmental Protection under the Eastern Caribbean Marine Managed Areas Network (ECMMAN) Project funded by the International Climate Initiative (ICI) via The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) grant to The Nature Conservancy (TNC), 2013 – 2017, will invest over EC\$14.7 million, to improve fisheries and conserve and restore marine resources, while providing for sustainable job opportunities in coastal communities in 6 OECS countries including Saint Lucia. The project focus is on: (i) Establishing new and strengthening existing marine management areas; (ii) Supporting fisher organizations and providing support for new livelihood opportunities; (iii) Improving access to data and information regarding management of marine resources; and (iv) Instituting sustainable funding mechanisms to support marine management as part of the Caribbean Challenge Initiative.

78. The project will also benefit from the recognized expertise of the Caribbean Environment Programme Regional Coordinating Unit/Secretariat to the Cartagena Convention in matters related to the marine and coastal environment and in working in a multi-lingual environment, as well as its expertise in implementing the Cartagena Convention and particularly its SPAW Protocols. CAR RCU's specialized Regional Activity Centre for the Implementation of the Protocols on Specially Protected Areas and Wildlife is located in Guadeloupe and supported by the Government of France. The project will include this specialized technical RAC and the newly established UNEP sub-regional office, also in Jamaica, in its networking and coordination activities, in any stakeholder and partnership arrangements. The protected areas component of this project will also assist Saint Lucia to honour its commitments made under the SPAW Protocol.

79. The design of project activities around livelihoods was based in part on analysis of several other sustainable livelihoods projects done in the region, including projects managed by the Environment Foundation of Jamaica, Forest Fund in Jamaica, and the Caribbean Development Bank funded Basic Needs Trust Fund. Within St. Lucia, guidance was derived from the UNDP GEF Small Grants Programme (which has a portfolio of projects in the SE Coast region).

### **SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)**

#### **3.1. Project rationale, policy conformity and expected global environmental benefits**

##### **Project Rationale**

80. The island of Saint Lucia, despite its small size, possesses a high degree of diversity, not only in the ecosystems and habitats found on the island, but also in the variety of biological resources present, and the endemism of species found in the country. Biodiversity is important to the country for food, shelter, medicines, ecosystem services, sustainable livelihoods, agriculture and tourism industries and future untapped industries of the country.

81. While known to be an area rich in biodiversity, and ripe for tourism development, the South East Coast has been largely overlooked, and its vulnerable and disadvantaged communities increasingly at risk both ecologically and economically. While some knowledge exists of important ecosystem services, and globally significant biodiversity, there is a paucity of data available for the proposed area of project intervention, making it critical to prioritize for GEF intervention. Proponents are confident in the zone's potential to generate benefits in several GEF priority areas.

82. The main problem that the project seeks to address is the lack of integrated protections and sustainable management of ecosystems (forests, mangroves, seagrass beds) in the South East coastal areas, which provide livelihoods, ecosystem services, buffers against climate change and extreme events, and sources of economic growth. Without sound management, the economic development of the region could lead to the irreversible degradation of ecological services, which in turn will undermine efforts to achieve growth and could lead to a gradual impoverishment of local communities.

83. Potential environmental threats include habitat destruction to these areas due to deforestation and improper land use management practices, e.g. squatting, itinerant agriculture, over hunting of iguanas, turtles, conchs and other wildlife as well as improper garbage disposal.

84. Farming and settlements have resulted in degradation and fragmentation of the forests and much of the land is in secondary forests, scrubland or open woodland.

85. These threats are further exacerbated by potential impacts of climate change and variability that can have devastating impacts on the freshwater system (GEO Saint Lucia, UNEP 2006) and by extension the forests. According to a Country Paper on National Climate Change Issues done on the island, changes in rainfall patterns will cause concern from two key standpoints namely total precipitation and temporal distribution. When precipitation patterns are affected by climate change, there is the possibility for extended drought periods to occur more frequently or for increased volumes of rain which lead to severe flooding and increase river sedimentation loads, which in turn can have great effects on damage to property, infrastructure and people's lives. To curtail the occurrence of such devastation proper land use management has to be enforced for sustainability.

86. The project's strategy is therefore based on supporting Saint Lucia on its efforts towards addressing the lack of integrated protections and sustainable management of ecosystems in the South East Coast. To do this the project's components are meant to help the local partners in overcoming the barriers as explained on section 2.3. The logic of interventions is to address the problem in a cooperative manner with support and interaction from various stakeholders, and taking advantage of already existing initiatives to ensure that the GEF investment complements previous efforts.

87. A detailed stakeholder mapping has been prepared and will continue to be updated during project implementation to secure participation of the relevant sectors, and to add to the sustainability of the project.

### **Policy Conformity**

88. The policy framework that guides the management of the South East Coast was elaborated in Section 2.4. The project is aligned to key national strategies and plans reports and assessments under relevant conventions, including: Saint Lucia's Draft 5th National Report and Revised 2nd National Biodiversity Strategy and Action Plan (2nd NBSAP), National Action Plan and Strategy Action Plan (NAPSAP) in support of the UN Convention to Combat Land Degradation (UNCCD), National Action Plans (NAPA) and Saint Lucia's Second National Communication (SNC) for the UNFCCC (2012), NIP,

Poverty Reduction Strategy and Plan (PRSP), and the GEF National Portfolio Formulation Document (NPDF) for Saint Lucia finalized in late 2011, among others. In addition, the project is in full alignment with GEF-6 Focal Areas on Biodiversity (BD-1), Land degradation (LD-2), Climate Change (CCM-1 and CCM-2) and Sustainable Forest management (SFM-3).

89. The proposed project is consistent with UNEP's Ecosystem Management sub-Programme of Work for 2014-2017. This project specifically addresses UNEP's expected accomplishment of "use of the ecosystem approach in countries to maintain ecosystem services and sustainable productivity of terrestrial and aquatic systems is increased" and "services and benefits derived from ecosystems are integrated with development planning and accounting, and the implementation of biodiversity and ecosystem related multilateral agreements" and will specifically contribute to output (a) (1) Methodologies, partnerships and tools to maintain or restore ecosystem services and integrate the ecosystem management approach with the conservation and management of ecosystems.

### **Global Environmental Benefits**

90. The project will deliver global environmental benefits along with domestic livelihood support and human development. These benefits are explicitly linked to the impact indicators of the GEF-6 focal area strategies relevant to the project, namely Biodiversity, Climate Change, Land Degradation and Sustainable Forest Management (BD, CC, LD, SFM).

91. Changes in land cover would serve as one of the indicators that assess the project's contribution to delivering benefits in all four of the focal areas. Specific Global Environmental Benefits under the GEF Biodiversity, Climate Change, Land Degradation (including SFM) and Sustainable Forest Management focal areas can be summarized as follows:

92. Biodiversity (and SFM): Incorporation of biodiversity and ecosystem services into currently ineffective land use planning will improve the management and regulate the use of biodiversity in the productive sectors, particularly in tourism and agricultural development. The improved management and restoration of degraded forest areas will stem habitat loss and degradation and thereby safeguard habitat for forest plants and animal species of global significance (e.g. Saint Lucia Racer, White Breasted Thrasher, Saint Lucia whiptail lizard, etc.) including migratory species; improve ecosystem services provided by the forest; increase the management effectiveness of forests and sites of high priority conservation value; and restore high value mangrove ecosystems. The project will increase conservation and management effectiveness of coastal marine habitat and ecosystems of global importance. The reduction of pressure on forest ecosystems will also occur through the development of markets for biodiversity friendly sustainable goods and services. Through the development of alternative livelihoods, including agroforestry and non-timber forest products (NTFPs), pressure on forest resources will be relieved while providing opportunities for generation of income in remote coastal communities hard hit by the economic downturn and loss of tourism revenues.

93. Climate Change (and SFM): Adoption of sustainable forest and land management techniques and restoration efforts will result in enhanced resilience to climate change, rebuilding and conservation of carbon stocks, and a reduction in emissions from deforestation and forest degradation. In terms of carbon benefits, the estimates are based on 2009 inventory data for Saint Lucia. The carbon benefits of the project are estimated at an annual rate of sequestration of 72,494 tons CO<sub>2</sub>, with a potential total carbon benefit of 1,449,871 tons CO<sub>2</sub> at the end of a 20 year period (calculated using Tier 1 UNFCCC guidelines and the EXACT tool – Appendix 15).

94. Land degradation (and SFM): Improved provisioning of ecosystems services through restoration of 2,500 Ha of degraded areas, including riparian buffer zones, resulting in erosion and sediment control

benefits, water quality benefits, flood control -- with contributions to carbon sequestration through forest restoration, sustainable forest management, and improved land use planning and management.

### **3.2. Project goal and objective**

95. The Project Objective is to enable sustainable economic development of the South East Coast by maintaining healthy ecosystems, sustainable livelihoods, and securing global environmental benefits. In order to achieve this objective, the proposed project will encourage the use of a more cohesive, ecosystem-based approach to development, focused on the communities of Praslin, Anse Ger, Vieux Fort and Laborie. This approach will include interrelated aspects related to development planning, the restoration of ecosystem services, and the establishment of sustainable management and natural resource use practices, without which the degradation of the South East Coast will lead to further impoverishment of local populations and loss of global environmental goods.

### **3.3. Project components and expected results**

96. The project objective will be achieved through three components with connected outcomes as follows:

#### **Component 1 – Ecosystem Management**

*Outcome 1: Increased capacity for sustainable development and ecosystem management through the use of tools and practices by government, civil society, and private sector (GEF financing: \$1,267,000; co-financing: \$3,441,622).*

The project will produce the following main outputs:

Output 1.1: A monitoring and information system is in place to support sustainable ecosystem management and scientific capacity of stakeholders.

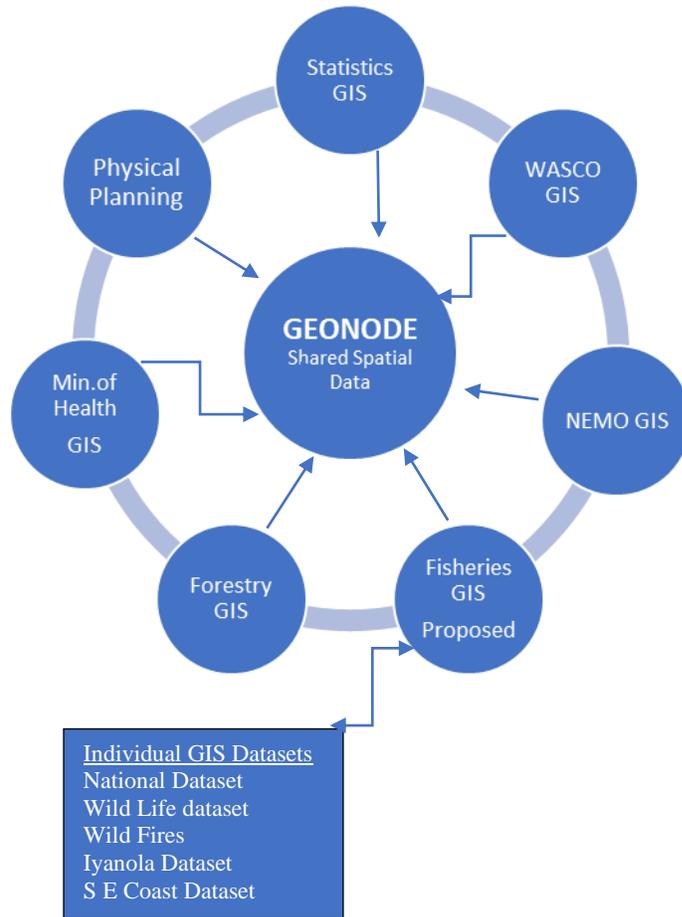
97. The project will seek to build on the baseline of institutional capacity to enable stronger planning and more consistent consideration of conservation priorities within the framework of development decisions in the region. The first step will be to conduct a baseline assessment of biological resources in the SE Coast Region, including forests, coastal areas, mangroves, and coral reefs, which will help in establishing a catalogue of high value species, ecosystem services and habitats. In parallel to this activity, the project will also support the GIS mapping of forests, land uses and biological resources in the South East Coast. This information will be integrated in a monitoring and information system that is being developed as part of the GEF-supported CCCD project being implemented by DSD.

98. This outcome will also support the development of systems and practices to monitor and track global environmental goods, such as carbon stocks in forests and soils, and to assess and measure the global environment benefits arising from the project. Data will be gathered on environmental goods and services in the South East Coast by the Forestry, Fisheries, and Planning Departments during the course of the project as part of a long term terrestrial and marine monitoring protocol. This data will then be uploaded using GEONODE, an open source data sharing platform hosted by the Planning Department, so that it can be shared with all the agencies involved with the project. The data can then be integrated with the GIS mapping described in the paragraph above. An analysis of lessons learnt from other GEF projects on setting up similar biodiversity information systems will be conducted in order to ensure effectiveness and cost-efficiency. This will also enable the government, in cooperation with local stakeholders, to set realistic conservation targets and strategies, and contribute to land use planning for the area, as well as to monitor impacts of development projects as well as impacts of restoration activities undertaken under

outcome 2. GEONODE will be reinforced by the project, in terms of hardware upgrades, training and the acquisition of recent satellite imagery, and DSD will play a role in coordination and preparing mapping products for use in the efforts to conserve high value biodiversity and their habitats. The GOSL will invest in the maintenance and operations of the system after the end of the project.

99. In order to further strengthen planning and the integration of conservation priorities into development decisions in the region, the project also will support the work of key partners (DSD, Forestry, Fisheries) to pursue a range of engagement approaches, including consultations, focus groups, workshops, training events, etc. (additional details are in the project stakeholder and participation plan) in the context of an Integrated Watershed and Coastal Area Management (IWCAM) approach, which the Government of Saint Lucia has designated as its preferred mechanism for integrated planning (experiences have already been made using this method in other regions of the country). Using the IWCAM approach, the project will support the use of the data in the monitoring and information system to enable better information to support planning and investment decisions for sustainable development at the local level. While institutional mechanisms and capacity are in place for policy planning at central levels, participation of local civil society and private sector in decision-making needs to be strengthened, and the monitoring and information system and IWCAM consultative processes will enable key stakeholders such as private land holders, community based associations, user-associations, tourism and real estate developers, NGOs and governments to be engaged to develop opportunities and to design realistic development objectives and investment priorities for the region, taking into consideration the fragility of the environmental resources upon which the coastal economy depends.

**Figure 5: SE Coast Dataset and Relationship with National Spatial Infrastructure**



Output 1.2: Two new protected areas are designated along with relevant connecting corridors, and protected species are officially recognized in gazetted Regulations and Orders (est. 4,000 hectares)

100. As noted in the baseline, the Pointe Sable Environment Protected Area (PSEPA) covers 1,038 ha in an area just south of the proposed project intervention area on the South East Coast. This area, which is jointly managed by the Forestry and Fisheries Departments, is a multiple use area. In addition, two offshore islands in this area are managed by the Saint Lucia National Trust to protect important species. The project will seek to complement these existing conservation efforts in the South East Coast by supporting the demarcation and legal designation of one new terrestrial protected area and one new marine protected area (both IUCN Category V) in this region (see Figure 6 below). The proposed terrestrial protected area encompasses approximately 25% of the Point Sable KBA and approximately 60% of the Mandele Dry Forest KBA. In addition, the proposed marine protected area encompasses approximately 5% of each of those two areas. Details on the Point Sable and Mandele Dry Forest KBAs is provided in Annex 19. This process will involve preparation of management plans (see Output 1.3) that will inform the drafting of regulations for the two PA sites under the Forestry Act and the Fisheries Act. The proposed terrestrial protected area will include coastal dry forests that are important habitat to restricted range species such as the White Breasted Thrasher (limited to two disjunct sub-populations with a combined area of 24 sq. km.). The proposed marine area extends from the already established PSEPA to Praslin, which will establish a continuous marine protected seascape extending from Praslin to Vieux Fort that will protect mangrove forests and offshore islands and support associated fisheries, sea moss

cultivation and other sustainable livelihoods (e.g. eco-tourism) that require a sustainably managed marine space. To enhance the biodiversity conservation functions of the two new PA sites, the project also will seek to establish a set of connecting corridors that can ensure adequate species habitat and movement. Establishment of the two PA sites and the connecting corridors will be carried out within the context of the IWCAM approach (see Output 1.1), which in turn will be line with the national Land Use Plan currently under development.

101. The project will also support the completion of scientific studies and the legal gazetting of rare and endangered species in the area, which are not currently subject to any management or protection requirements. This work will focus on rare and restricted range birds (e.g. White Breasted Thrasher), reptiles (e.g. St. Lucia Racer), and other fauna (including marine species), and will be conducted by the Forestry Department in close cooperation with conservation-minded NGOs, such as the Saint Lucia National Trust or the Durrell Foundation, who have significant expertise and are already conducting similar initiatives in other areas of the country. Key stakeholders in the communities of Praslin and Micoud also will be engaged to participate in the development of the protected areas. It is expected that this output would benefit from collaboration with the UNEP CAR RCU and the SPAW Protocol initiatives in particular.

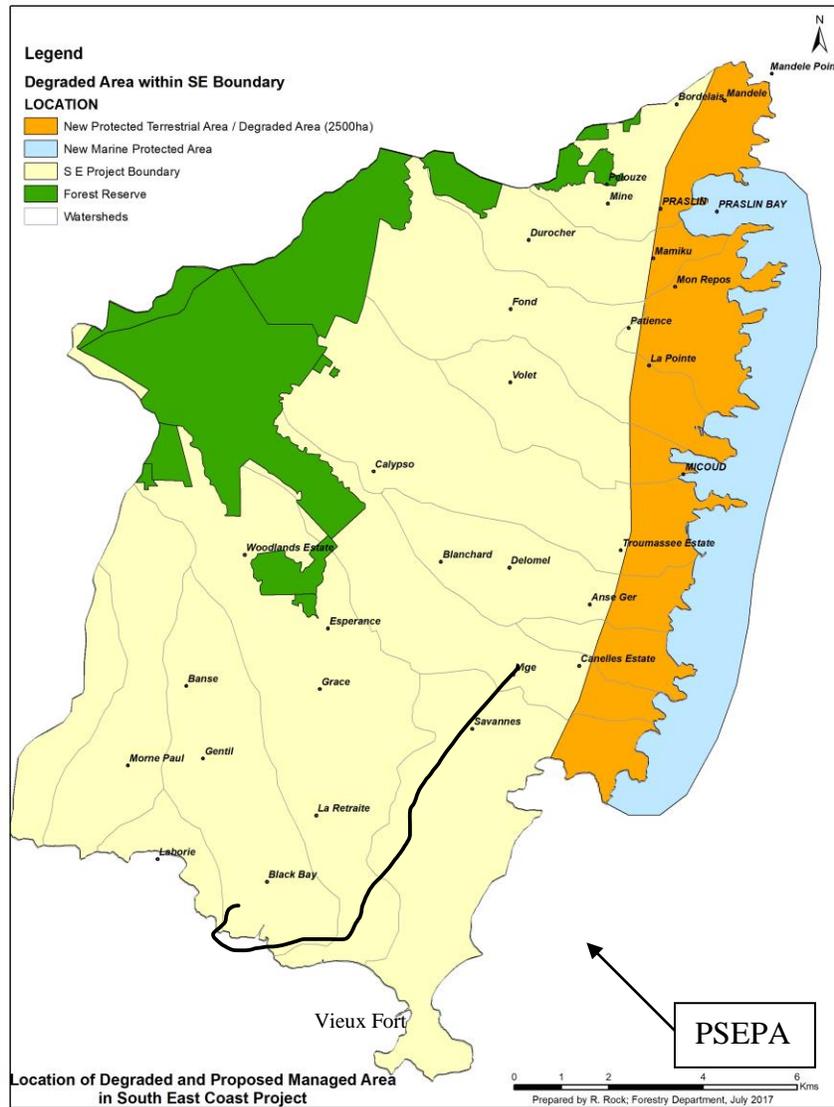
#### Output 1.3: Management tools designed for the new protected areas

102. As well as the information and mapping tools developed under Output 1.1, the project will support the development of management plans and zoning plans to establish the management effectiveness of the two new protected areas. The two new PAs will be managed by the Forestry Department (terrestrial PA) and the Fisheries Department (marine PA). As these departments currently have limited capacity for PA management, the project will support capacity building of their staff in basic processes for PA design and management. The International Conservation Corps (ICC) will provide expert training to national professionals in the Forestry and Fisheries departments to develop their capacity for adaptive PA management by directly supporting in them in developing and updating PA management plans, monitoring plans, visitor management plans, etc. By the end of the project, it is anticipated that the NCTF will provide funding for PA field staff, equipment and basic facilities. The National Conservation Trust Fund (NCTF) has become operationalized and is expected to start grant making activities by 2019<sup>5</sup>. The two new areas proposed for the SE Coast are within the ambit and purview of support from the Fund; as part of the country's system of protected areas, they will be eligible to receive NCTF funds through a grant proposal system that will be developed by the NTCF. Similarly, any new financial support to the new protected areas could attract a matching (1:1) investment from the NTCF. It is expected that this output would benefit from collaboration with the UNEP CAR RCU and the SPAW Protocol initiatives.

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<sup>5</sup> The NCTF has submitted required legal documents to the Attorney General's Office for formal establishment, has established a functional board, and has submitted a request to the Caribbean Biodiversity Fund (CBF) for operationalization of initial funding.

**Figure 6: Map of proposed marine and terrestrial protected area**



Output 1.4: At least 1 public-private partnership or financing mechanism promoting both economic development and ecosystem protection established

103. The project will seek to develop and implement at least one public-private partnership whereby private partners (e.g. already established agro-forestry / agro-processing initiatives or community tourism operators) will work with government agencies to demonstrate a model for sustainable resource use in the SE Coast region that is both profitable and avoids or reduces negative environmental impacts, including those that affect GEBs (e.g. land degradation or habitat destruction associated with agroforestry / agro-processing activities, or negative visitor impacts on fragile terrestrial and marine environments). The PPPs are an important strategy to address sustainable resource use in the SE Coast on private land, to complement the funding mechanisms of the National Conservation Trust Fund (NCTF), which is focused on protected areas. In addition, the project will seek to build partnerships whereby these private partners will clearly understand the link between the resources and services supplied by healthy natural ecosystems and the financial and social viability of their operations, so that they become funding partners (and models

for others in the SE Coast region) who contribute to the NCTF as a mechanism for protecting the environment of the SE Coast.

104. During the PPG phase, the results of several previous studies on public-private partnerships and other conservation financing mechanisms were assessed, and these prior efforts will be used to guide the selection and development of the partnership(s) at the start of project implementation. Among the previous projects assessed was the GEF-funded Sustainable Financing and Management of Eastern Caribbean Marine Ecosystems (SFM-EC) project implemented by the World Bank and TNC, which supported mechanisms to increase the participation of private sector enterprises and landowners in conservation and conservation financing, and as part of its work to establish the National Conservation Trust Fund (NCTF) in Saint Lucia, conducted a thorough assessment of the financial, legal and political feasibility of various financial mechanisms to build revenue for the Fund in the TNC-produced report “Sustainable Finance Tools that Fund the NCTF in Saint Lucia”. Other sources of lessons learned include the GEF-funded Iyanola – Natural Resource Management of the NE Coast project, which identified possible private sector oriented tools (such as conservation easements) for funding of the NCTF. It is important to note that although options for partnerships and other sustainable financing strategies were identified in these assessments, the Government of Saint Lucia has yet to signal which strategies / mechanisms it will support, and thus one of the first tasks of the project will be to encourage and facilitate decision-making by the Government on their use and their integration into the legal and regulatory framework so that they can become operational in Saint Lucia.

## **Component 2 – Rehabilitated Landscapes**

***Outcome 2: Restored / rehabilitated productive landscapes (GEF financing: \$1,686,000; co-financing: \$7,600,000).***

The project will produce the following main outputs:

105. The second outcome of the project will seek to achieve the restoration of degraded or dysfunctional ecosystem services in the area, in order to reduce risks and ensure the continued productivity and maintenance of global environment benefits. The degraded areas identified for rehabilitation are indicated in the diagram below. The project will work on the basis of available land use maps and information to identify the most critically damaged (yet recoverable) areas in the South East Coast.

### Output 2.1: 2,500 ha have been reforested in degraded areas, agricultural areas and headwaters

106. The project led by the Forestry and Fisheries departments will focus equally on land and marine resources. The project will seek to engage in reforestation activities in degraded public lands and around critical watershed areas, including for example river banks and headwaters (see map), or areas prone to rapid erosion, thus rehabilitating ecosystem services and improving restoration at scale. The areas that fall within the two proposed new protected areas will be given priority in terms of the first set of areas to be rehabilitated.

107. This will also be accompanied by measures to engage smallholder agricultural producers in reforestation using multi-purpose productive tree species such as Mauby L’Ansan and Latanye, in order to increase vegetative cover of agricultural lands, reduce erosion, and maintain soil fertility while supporting agricultural diversification. Communities and municipalities identified in the project stakeholder participation plan will be engaged in the design of collective forest management systems and practices, supporting conservation, restoration and alternative livelihood opportunities. An estimated 2,500 ha will be reforested using indigenous species in public and agricultural lands, thus integrating sustainable forest management at the landscape level. The species used for reforestation by the Forestry

Department are listed below. The Forestry Department will establish a central nursery as well as several community nurseries to supply seedlings used for rehabilitation. The community nurseries will be sited dependent on local community support within an area to support several rehabilitation sites to improve logistical reach and efficiencies of scale.

108. The Forestry and Fisheries Department will be responsible for rehabilitative efforts on public lands. Key stakeholders including community groups, small farmers, and private agricultural producers encouraged to take up sustainable agroforestry practices, will be engaged to rehabilitate areas on private lands and also riparian areas.

**Table 2: Trees used by the Department of Forest and Lands in reforestation (species in bold text are native and these species will be used in reforestation activities using GEF funds)**

<b>Purpose</b>	<b>Species (local name)</b>	<b>Scientific name</b>
<b>Fruit trees</b>	<b>Bwi</b>	<i>Chrysophyllum argenteum</i>
	<b>Fat pork/ Ponm zikak</b>	<i>Chrysobalanus icaco</i>
	<b>Kimet</b>	<i>Chrysophyllum cainito</i>
	<b>Gooseberry</b>	<i>Pereskia aculeate</i>
	<b>Soursop</b>	<i>Annona muricata</i>
	<b>Tamarind</b>	<i>Tamarindus indica</i>
	Apricot	<i>Mammea Americana</i>
	Merise	<i>Prunus avium</i>
	Breadnut	<i>Artocarpus heterophyllus</i>
Mangoes	<i>Mangifera spp.</i>	
<b>Spices, beverages</b>	<b>Mauby</b>	<i>Colubrina elliptica</i>
	<b>Ackee</b>	<i>Melicoccus bijugatus</i>
	Nutmeg	<i>Myristica fragrans</i>
	Cinnamon	<i>Cinnamomum verum</i>
	Cloves	<i>Syzygium aromaticum</i>
	Coffee	<i>Coffea liberica</i>
	Cacao	<i>Theobroma cacao</i>
	Jamaican ackee	<i>Blighia sapida</i>
<b>Rare Forest Trees</b>	<b>L'ansan</b>	<i>Protium attenuatum</i>
	<b>Galba</b>	<i>Calophyllum antillanum</i>
	<b>Laurier spp.</b>	<i>Lauraceae</i>
	<b>Latanyé</b>	<i>Cocothrinax barbadensis</i>
<b>Timber Trees</b>	Honduras mahogany	<i>Swietenia macrophylla</i>
	Blue Mahoe	<i>Hibiscus elatus</i>

**Figure 7: Riverine Areas for rehabilitation**

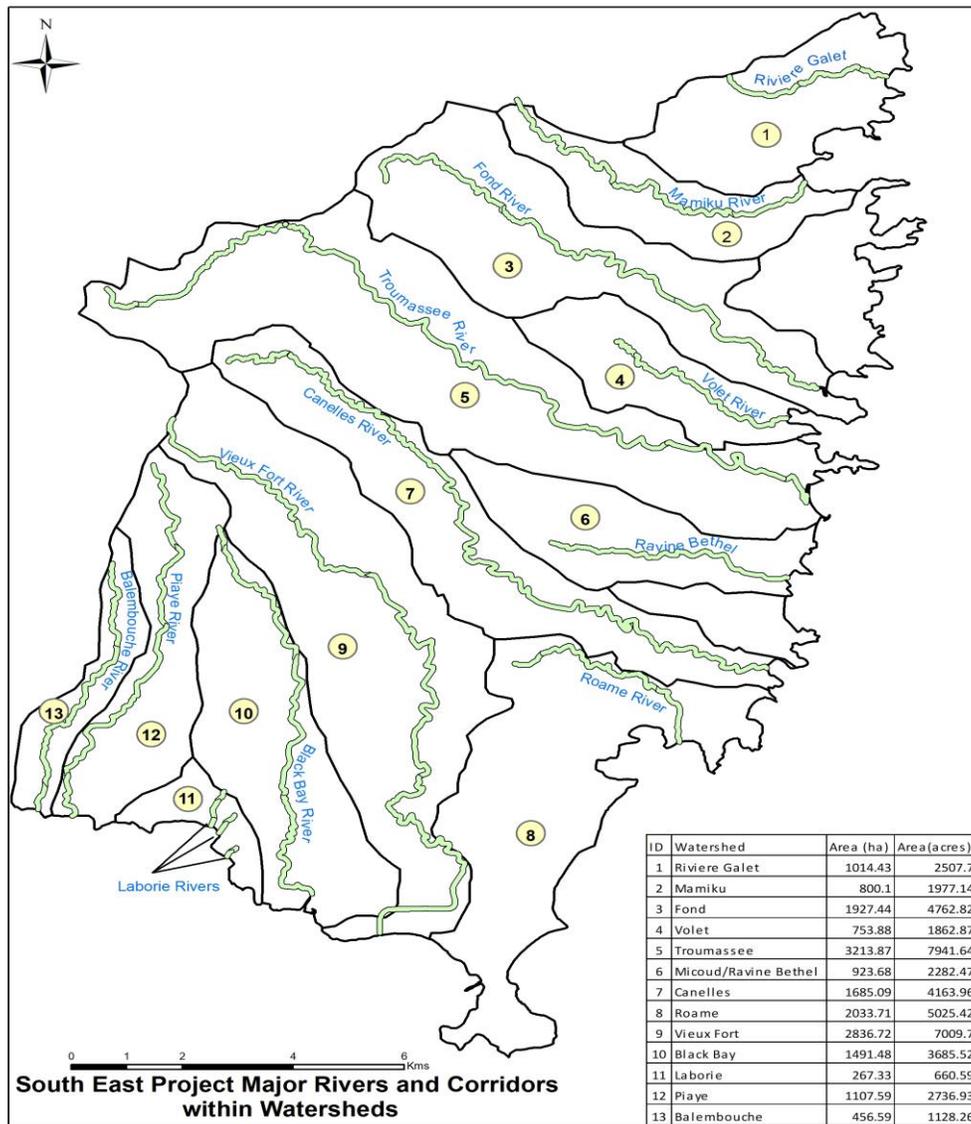
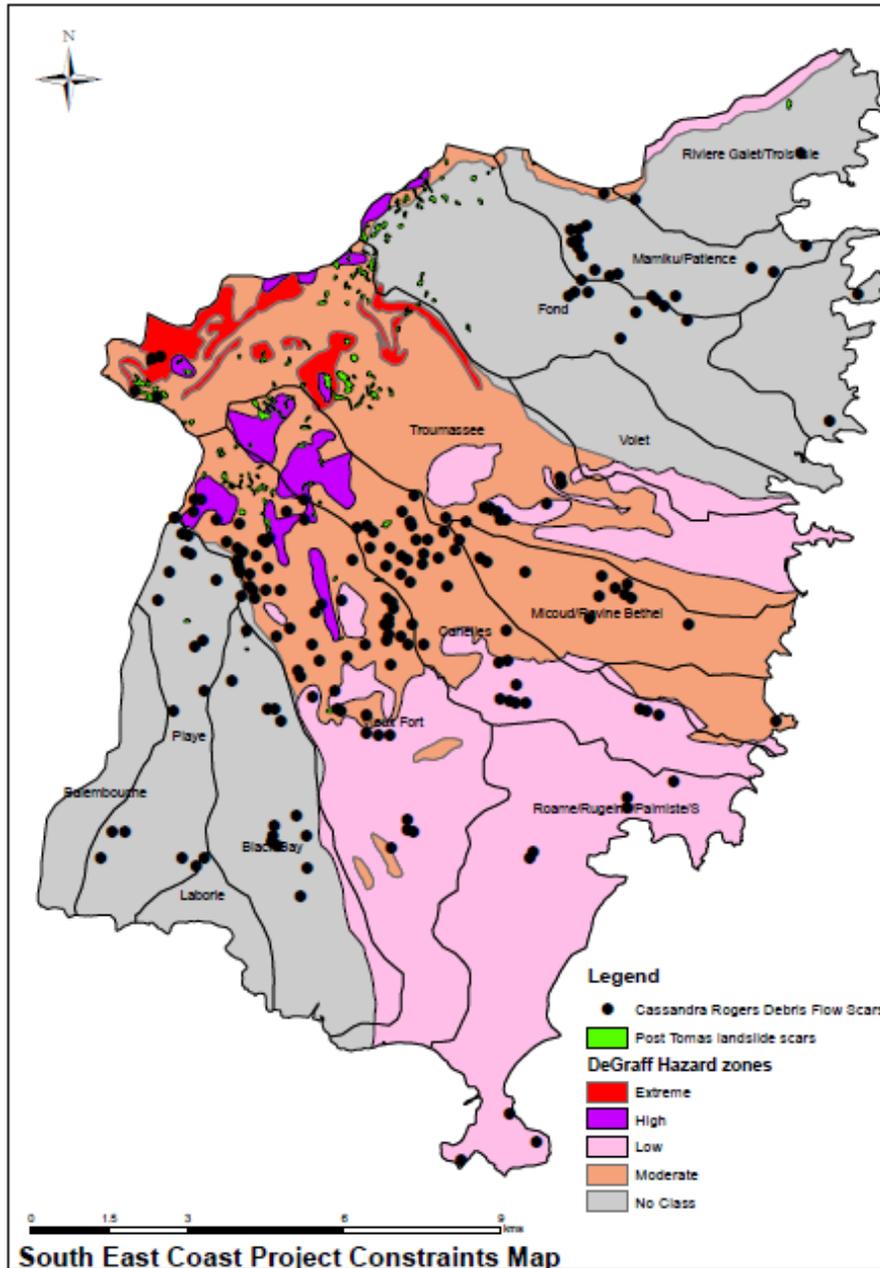


Figure 8: Degraded Areas in the South East Coast (Debris Flow Scars and Post Tomas landslides)



Output 2.2: Sea grass beds, reefs, mangroves and productive coastal systems have been protected and rehabilitated (500 ha)

109. Under this output, the project will support the protection and/or rehabilitation of marine buffer areas, such as sea grass beds, mangroves, and reefs, which have seen significant degradation over recent years. The project will complement the efforts of the Disaster Vulnerability Reduction Project (DVRP), which will strengthen the information base and technical infrastructure to address disasters and environmental degradation in the South East Coast, including strengthening the hydro-meteorological observation network, carrying out assessments of major rivers, slopes and landslide risks; rehabilitating roads, bridges, drainage systems and river banks; and establishing flood protection infrastructure around key point such as airports, ports and cities. However, the DVRP does not consider the role of healthy

ecosystems as providers of sound protection services, and activities under this output will complement the DVRP through an ecosystems based approach to disaster management and conservation of ecosystem functions. The DVRP methodology will be adopted and adapted for sites in the South East Coast region not addressed by the DVRP. It is expected that this output would benefit from collaboration with the UNEP CAR RCU and the SPAW Protocol initiatives in particular

110. Based on consultations, local communities and NGOs will be engaged and their support garnered for rehabilitation of targeted areas of mangrove forest in Praslin Bay, Island and Mangrove, Sandy Beach, Savannes Mangrove and Scorpion Island, and the Ma Kote Mangrove. In addition, the project will undertake targeted revegetation using grass and trees along degraded coastlines in the Sandy Beach, Savannes Bay and Ma Kote areas. These areas are part of the proposed new marine protected area to be placed under special management regimes in order to assist natural regeneration. In total, an estimated 500 ha of mangrove and other coastal vegetation ecosystems will be rehabilitated and placed under special management status. In addition, the Nature Conservancy and NOAA will partner with the project in the conservation of areas of seagrass beds and coral reefs. The carbon benefits from mangrove restoration will be calculated at project inception, when methodologies from the GEF financed Blue Forests project are expected to be ready for use.

#### Output 2.3: Erosion controlled in areas exhibiting significant soil degradation and siltation

111. The project will complement the efforts of the BAM program by working with the Ministry of Agriculture to support the deployment of anti-erosion land use practices on private lands within agricultural landscapes, such as the use of stone terraces or conservation agriculture in areas where the gradient is high and where siltation has become a problem for low-lying and marine zones. Seedlings will be supplied by the Forestry Department and from the Ministry of Agriculture. The use of pilot areas will be used for training in rehabilitative techniques.

### **Component 3 – Sustainable Livelihoods**

***Outcome 3: Sustainable socio-economic development pathways pursued in targeted communities trigger global environmental and social benefits: \$1,141,545; co-financing: \$3,029,045).***

The project will produce the following main outputs:

112. This last outcome is based on a recognition that much of the negative impact on the environment is due to the lack of sustainable economic growth opportunities for communities of the South East areas. Lack of access to reliable sources of energy has led to deforestation, and the lack of land use planning or establishment of protected areas has facilitated land clearance and agricultural production in vulnerable slopes / watersheds and areas of important biodiversity habitat. Therefore, the project will work with local communities to pilot sustainable natural resource use practices, to reduce negative impacts of human activities on the environment, and to pilot innovative development pathways that help conserve healthy ecosystems. The project will focus on existing economic sectors (agriculture, tourism) and drivers of environmental degradation (lack of access to energy, inadequate technologies).

#### Output 3.1: Renewable energy installed to improve livelihoods and reduce deforestation (8,870 tons of CO<sub>2</sub> mitigated over 10 years based on selection of solar for pilots)

113. In order to support efforts to conserve forested areas and maintain carbon stocks in forests, the project will work with the Anse Ger and Vieux Fort municipalities to strengthen access to renewable energy sources. To achieve this, the project will take a value-chain approach to increase installed capacity of a reliable and commercially viable supply of small solar PV systems for the Aupicon Sea

Moss farmers and the Anse Ger women's group of farmers, and to rehabilitate the small solar PV system for the Praslin Sea Moss Farmers. Further, the sea moss farmers, cocoa farmers and broom makers (see Table 4 below) will be provided with 18 solar dryers to increase the efficiencies of the drying process and to avoid the use of LPG and electricity for drying, both of produce greenhouse gas emissions. The communities involved include Vieux Fort, Anse Ger, Praslin, Micoud and Laborie. Based on the selection of solar projects operating at about 15% capacity factor, the pilots could reduce GHG emissions by 8,870 tons of CO<sub>2</sub> over 10 years, which is the technology estimated lifetime and emissions factor of 0.8 (this estimate is calculated as the substitute for grid power; see Appendix 16 for details). This will create economic opportunities while also sustaining efforts to prevent loss of forests and soil cover.

#### Output 3.2: Guidelines for eco-touristic development piloted and adopted

114. The project will support the Saint Lucian government in engaging with tourism sector operators and promoters such as EcoSouth Tours, La Tille Waterfall and Gardens, Orising Brothers, in order to develop opportunities for eco-tourism in the area. This will include for example the conduct of four south-south exchanges with countries in the region who have experience in developing eco-tourism facilities, infrastructures, norms and standards. At present, there are no guidelines for the tourism industry in Saint Lucia regarding ecotourism practices; thus, the project will support the Ministry of Tourism in working with key stakeholders to develop environmental and social management guidelines for the construction and management of tourism facilities, and in piloting management and enforcement of the new guidelines in the South East Coast region.

*Output 3.3: 5,000 ha are under sustainable agro-forestry practices (177,146 tons of CO<sub>2</sub>-eq mitigated over 20 years, or 8,857 tons of CO<sub>2</sub>-eq per year from the operated land use change from conventional agriculture to agroforestry; and 589,875 tons of CO<sub>2</sub>-eq mitigated over 20 years, or 29,494 tons of CO<sub>2</sub>-eq per year from practicing agroforestry)*

115. Working with extension staff from the Agricultural Division, who have experience in provide training to farmers on Good Agricultural Practices (GAP), the project will engage with local agricultural producers and at the community level to conduct technical training on sustainable agro-forestry practices, exploring climate smart agriculture approaches, in order to enable farmers to sustainable agro-forestry practices on 5,000 ha of private or communal lands that are presently under conventional agriculture. The project will also conduct training on agro-ecology and demonstrate the benefits of ecological and biological pest management options through the establishment of a demonstration plot in the area. These activities will support the restoration of land use cover, as well as reduce erosion, maintain soil fertility, and reduce land and water contamination from agricultural chemicals. It is estimated that about 170 persons will benefit from these training events over the course of the project.

116. Project partners (Forestry, Fisheries, DSD, Agriculture) will seek to strengthen government-private sector linkages by developing and promoting a set of voluntary guidelines for private land owners on how to sustainably manage their lands, biological resources and key ecosystem features through a consultative process with the key stakeholders. This will be accompanied by the implementation of an awareness raising campaign focused on the economic and health benefits of sound ecosystems, community action and land use planning.

#### Output 3.4: Additional income generated from sustainable alternative livelihoods through equipment and training for production, transformation and commercialization of selected sectors

117. The project will build on the previous successes of the GEF SGP and other development initiatives to support local communities, private sector and producer groups in the identification and implementation of innovative and sustainable natural resource based economic activities. Activities

supported will include nature based tourism and agriculture/agro-processing initiatives (see table below). The project will provide technical support towards identification and planning for livelihoods activities, as well as training on production, transformation and commercialization and market analysis for improved access to commercial buyers. These activities will support the identification of sustainable local economic development pathways that maintain ecological value and that support diversified sources of income. The project also will seek to encourage financial institutions and microcredit organizations to provide capital and guidance for sustainable livelihood initiatives (i.e. community projects on private land); the work of the GEF Small Grants Programme with credit unions in the Laborie area has had a positive impact in channelling resources to sustainable livelihoods, and a similar mechanism could be replicated throughout the SE Coast. It is expected that these investments will result in more sustainable use of the SE Coast natural resources and therefore better ecosystem management.

118. The provision of sustainable livelihoods options for residents of the SE Coast region is critical to the success of conserving biodiversity and ecosystem services. In part this is due to the fact that in the absence of viable resource-based livelihoods options, more and more residents of the region are participating in the tourism industry, whose impacts on the natural environment (from land clearance and construction, flows of effluents, visitor impacts, etc.) are a significant problem. In addition, those persons who remain reliant on natural resource based livelihoods frequently engage in unsustainable activities in order to supplement their incomes or because they are unaware of the negative impacts of such activities, which include cutting of coastal vegetation (especially mangroves) and forests for fuelwood or construction purposes, clearing of forest areas, illegal hunting (e.g. of iguanas and turtles), over-use of agricultural chemicals, soil erosion stemming from inappropriate agricultural practices (indiscriminate land clearing, shifting cultivation, slash and burn practices), etc. All of these activities have negative impacts on terrestrial, aquatic, and marine ecosystems in the SE Coast region.

**Table 3: Nature-based Tourism Initiatives**

<b>Proposed Intervention</b>	<b>Beneficiaries</b>	<b>Other Key Stakeholders</b>
1. Development of homestay programme – preparation of guidelines and standards for Airbnb type facilities	Local communities (Laborie, Vieux Fort, Micoud) – home owners, business owners/operators, other community members	Ministry of Tourism, SLTB, SLNT, STDC, SLHTA
2. Provision of support for development and rehabilitation of attractions and activities to enhance product offering	Eco-South Tours, Aupicon Charcoal Producers, local communities (Laborie, Vieux Fort, Micoud), Anse Kawet Crafters, Vieux Fort Crafters, etc.	STDC, SLNT, Eco-South Tours, Town and Village Councils, SLNT
3. Creation of Ecotourism and nature based Tour Packages	Tour operators, business owners, local communities	STDC, SLNT, Eco-South Tours, Town and Village Councils, Department of Forestry, community groups and organisations, relevant private sector entities (SLHTA, business owners in project area)
4. Support for development of agro tourism enterprises through training and establishing guidelines and standards	Orising Brothers (Vieux Fort), Latille Waterfalls and Gardens (Micoud), members of Premium Cocoa Growers Association (Micoud)	Ministry of Agriculture, Ministry of Tourism, STDC, Eco-South Tours
5. Establishment of an advisory and oversight structure for tourism operators and partners	STDC, Tour operators, business owners	Ministry of Tourism, SLTB, SLNT, STDC, SLHTA

**Table 4: Agriculture/Agro-processing Initiatives**

<b>Proposed Intervention</b>	<b>Beneficiaries</b>	<b>Other Key Stakeholders</b>
1. Establishment of a business incubator for agro processors (training in business management areas such as accounting, marketing and administration followed by mentoring)	Praslin Seamoss Farmers Association, Aupicon Seamoss Farmers Group, Premium Cocoa Growers Association, Mille Fleur ( <i>Babonneau and other relevant stakeholders outside the project area</i> )	Ministry of Agriculture, Department of Forestry, TEPA,
2. Support towards establishment of a nursery for cocoa farmers	Cocoa farmers in Praslin, Micoud, Laborie, Vieux Fort	Ministry of Agriculture, Fond Doux Plantation & Resort, Hotel Chocolat
3. Provision of ongoing technical support and training for beekeepers (queen rearing, pest control, apiary management)	Mille Fleur and SLAB members along with other beekeepers in Praslin, Micoud, Laborie, Vieux Fort	Ministry of Agriculture, Department of Sustainable Development,
4. Technical guidance for planting / cultivation of select NTFPs (Latanye, Mauby, Lansan); market development / expansion of markets for these NTFPs	Growers of Latanye, mauby and La in Praslin, Micoud, Laborie, Vieux Fort, Superior Brooms, etc.	Ministry of Agriculture
5. Support for product development, testing and market research	Praslin Seamoss Farmers Association, Aupicon Seamoss Farmers Group, Premium Cocoa Growers Association, Mille Fleur	Ministry of Agriculture, TEPA, SLBS

Output 3.5: Knowledge management, replication and increased awareness supported

119. The project will develop a Communications, Education and Public Awareness (CEPA) strategy that will target key project stakeholders, in particular the private sector / landowners and local residents in the South East Coast region, with a focus on creating advocates and stewards for biodiversity and the ecosystem services beneficial to the country's residents and helping communities appreciate existing and identify new enterprises linked to proper biodiversity stewardship. The CEPA strategy will build on and utilise wherever possible existing platforms for messages to raise awareness in the appropriate target audience. Specific tools and activities will also be designed and implemented to specifically raise awareness of, facilitate communication, and encourage participation in the Project by the key stakeholders. Additional details on the CEPA strategy are provided in Section 3.10; an initial strategy will be prepared as part of the project inception activities.

120. In order to provide effective knowledge management, the project will use mechanisms at every level -- administrative, steering committee, inter-agency collaboration, community training and collaboration in key guidelines and other written outputs, the Monitoring and Information System etc. Knowledge management will be measured using documents produced by each component and minutes of inter-agency and multi-stakeholder meetings. The development of guidelines for erosion control, tourism and agroforestry under Component 3, including south-south exchanges, will allow for the transfer of technical knowledge. All of the guidelines developed and training session materials will be documented and shared among the key project shareholders. The documentation of technology, techniques, training, etc. created by the project will be available to the key stakeholders after the project and will facilitate replication and knowledge transfer. The involvement of key stakeholders, outlined in Section 2.7, in all of the project initiatives will lend itself to data and information flow from other similar initiatives that this

project builds upon. Field Officers (e.g. Extension Officers, Forestry Officers, Tourism Officers) from relevant ministries and agencies will play an important role in supporting knowledge sharing aligned to project initiatives; the project is designed to provide these staff with exposure to best practices and relevant new methods and technologies developed by other initiatives in the region, through sharing of technical information, and attendance at training seminars, workshops, and exchange visits. In addition, the project will explore the possibility of establishing virtual work groups or networking teams comprising key stakeholders involved in similar projects across the region.

121. To support replication, the project will promote novel models of public-private partnerships for sustainable livelihoods and help to establish funding mechanisms for these types of initiatives (Output 1.4), which will create additional opportunities for scaling up. The demonstration of a Public Private Partnership (PPP) can be scaled up at the national level and/or replicated at other specific sites within Saint Lucia through collaboration with key partners. For example, business support units within relevant Ministries could work with agencies such as the SEDU (Small Enterprise Development Unit in the Ministry of Commerce) to assist stakeholders to develop concepts/business plans for similar businesses based on lessons learned from the demonstration activities; these concepts/business plans could then be used as a basis for submitting proposals / negotiating funding arrangements as extensions of existing PPPs or for the development of new partnerships. In addition, by creating long-term economic and growth opportunities for local communities, the project will encourage successful initiatives and lessons learned to be replicated in similar projects and ventures across Saint Lucia, and the project will actively document training and technology transfer to support this kind of replication. The lessons learned, marketing and innovative successes under Component 3 will be shared at regularly convened inter-community venues to engender replication, and will have a positive and sustainable impact on women.

#### **3.4. Intervention logic and key assumptions**

122. The project aims to improve the effective management and sustainable use of the natural resource base of the SE Coast of Saint Lucia. It will assist with the development of one new marine and one new terrestrial protected area (IUCN Category V), to safeguard and protect threatened species, ecosystems and habitats.

123. The communities in the South East Coast region will need to be supported by the project to meet their immediate biodiversity challenges and assist them in the implementation of Saint Lucia's biodiversity programme of work. The proposed project activities for implementation benefitted from an extensive consultation process during both the PIF and PPG stages. The project will facilitate the development of priorities into the land use planning, policy and regulatory framework and the development of sustainable management systems into forthcoming development scenarios in the South East Coast region. It is envisaged that the infusion of information on ecosystem values and services will bolster the sustainable use of biodiversity of the SE Coast Region. The project will therefore enhance at the local and national levels the need for the protection of biodiversity while pursuing development. Further, the marketing of biodiversity friendly products and services (e.g. eco-tourism, honey, brooms, cocoa and chocolate, etc.) and creation of networks among local producers/suppliers and buyers, particularly with regard to linkages to tourism, will assist in ensuring that the sustainable use of biodiversity is promoted and enhanced.

124. The project will pilot develop and apply participatory site specific management and zoning plans and guidelines, giving due consideration to existing work on Protected Areas (PAs) and Marine Management Areas (MMAs) in Saint Lucia. The lessons learned will be documented for wider dissemination and applicability. Similarly, lessons learned from the creation of a framework to support the production and marketing of biodiversity friendly products and services in the South East Coast region, will be documented for future replication at the local, national and global levels.

125. In this regard, the long-term benefits to be obtained from the Project are multi-faceted: firstly it addresses some of the key priority areas outlined with regard to biodiversity, SLM, SFM and CC, in the Revised 2<sup>nd</sup> NBSAP, NAPSAP and CCAP. The project also seeks to generate fit-for-purpose solutions with regard to sustainable management and use of natural resources including improved data, monitoring and information systems and to inform development decisions based on the experiences of stakeholders. In addition, processes for information exchange among other areas and regions are well woven into the project, to ensure future replication and upscaling of similar activities. The project will also assist in enhancing data and information management systems to facilitate under-resourced agencies in making informed decision with regard to environmentally sensitive development planning.

126. The project will utilize wide stakeholder engagement as it pursues a distinct focus on community empowerment for the management of their resources. Ongoing engagement at the community level will also ensure concrete buy in and public and political support to build on the gains made. The intention therefore is to enhance the fundamental capacity of communities, resource owners and users, in the South East region, to sustain the externally funded initiative beyond the time frame of this project.

127. The opportunity to secure funding from GEF-6 is recognized as one immediate way of building on existing frameworks towards achieving the overarching goal of enabling sustainable economic development of the South East Coast by maintaining healthy ecosystems, sustainable livelihoods, and securing global environmental benefits

#### Assumptions

128. The following assumptions are part of the intervention logic of the project:

- There will be willingness among key stakeholders, particularly local communities and private landowners, to collaborate and participate in the project and to support its objectives. The creation of a Communication, Education and Public Awareness (CEPA) strategy is an important measure to ensure ongoing engagement of key stakeholders such as local communities, private landowners, and policy makers. The CEPA should be developed early in project implementation;
- That responsible bodies and oversight and technical committees will respond in a timely manner to requests for feedback to keep the project on schedule;
- That there is a mechanism to ensure availability, easy accessibility and accuracy of information required such that there will be no significant delay in project execution caused by the lack of data or additional time needed for verification and validation;
- There is established an appropriate mechanism to facilitate inter-agency collaboration, coordination and participation, and in particular coordination with other projects;
- The services of the requisite technical consultants will be available and easy to procure;
- That project funding will be available on a timely basis so that persons who undertake various activities in each of the work packages can be paid on a timely basis, and that adequate funding is in place to engage the requisite number of specialists.

### **3.5. Risk analysis and risk management measures**

129. A number of risks have been identified that could affect the successful outcome of the project preparation process. These risks have local, national and international dimensions. The following table summarizes those risks that the project will confront because of their significance to the effective management of the resources in the South East Coast region. It is essential to evaluate possible risks that are likely to result from the implementation of development initiatives, given the importance of the South

East region's biodiversity to food security, livelihoods, sustainable development and addressing the challenges of climate change.

**Table 5: Risk Management**

Risk	Risk Level	Mitigation Strategy
Private sector does not support project interventions and design, leading to further ecosystem loss	M-H	Given that most of the land in the area targeted by the project is owned by private parties (many of them living abroad), it is necessary that the private sector buys in and promotes project interventions. For this reason, the project will seek to facilitate public-private partnerships and it will work to identify and sensitize private parties as to the economic benefits of maintaining ecosystems, promoting sustainable tourism practices, and describing the social benefits (security, social cohesion) of carrying out sustainable practices. These interventions will be carried out through activities to establish public-private partnerships or financing mechanism that promote both economic development and ecosystem protection, to support local communities, private sector and producer groups in the identification and implementation of innovative and sustainable natural resource based economic activities, and to implement a communications, education and public awareness (CEPA) strategy that will raise awareness and understanding about the benefits of sustainable practices. The CEPA will be key for project sustainability since some elements of it could be reused or applied beyond project's life.
Slow political process hampers delimitation of biodiversity rich areas	M-H	Vulnerable biodiversity habitats in the South East Coast region are in need of protection, but the process to establish protected areas and legal boundaries may be slow and politicized. The project will manage this in several ways. First, the project will hold ongoing consultations from project inception onward to obtain broad governmental support and establish effective plans. Second, the project will engage the private sector by promoting economic incentives for protecting ecosystems (i.e. helping landowners to generate sustainable economic benefits based on the use natural resources / ecosystem services for agriculture, NTFPs, nature-based tourism, etc.) so that they have an incentive to invest in the health of their lands and resources. Finally, the project will seek to intervene at the community level; by sensitizing, training, and helping strengthen sustainable livelihoods at the local level, it is anticipated that unsustainable behaviours will change regardless of legal decrees.
Environmental regulations (e.g. EIAs) are in place but monitoring and enforcement remain weak	M	Project will include capacity building for environmental management and monitoring, for example through strengthening of the GEONODE information system, at the local and national levels, including CBOs and NGOs – and specifically at sites/areas of GEF interventions. Co-management / participatory approaches will be undertaken in implementing activities between communities and government under all components of the project. Development of standards and guidelines to support the production and marketing of biodiversity-friendly livelihoods will also be carried out.

Biodiversity destruction and disruption of ecosystem services due to impacts of climate change (e.g. drought & intensified storms)	M	The project will manage this risk through activities planned under Outcome 2, including: rehabilitation, reforestation and replanting with native species, and integrating resiliency into forest and mangrove rehabilitation.
Significant climate change related events (e.g. hurricanes) negatively impact the capacity to implement project activities	M	The project will be adaptively managed and if there is the need to respond to disaster relief or climate change impacts, the Project Implementation Unit will develop and present a response workplan regarding BD threats, LD causes and CCM to the PSC in order to ensure that GEBs are maximized even in the post-hurricane circumstances. The PSC in turn will advise appropriately, within the parameters of UN Environment and GEF rules and regulations, and obtain the necessary approvals etc. as quickly as possible in order to respond appropriately.
New land use frameworks are under development and may clash with project plans and activities	L	The project will ensure that it builds on the national processes underway, and feeds into consultative processes. As such, the project will be developed to complement or supplement legislation underway, rather than disrupt.
Project outputs and tasks not completed on time	M	Project Management should utilize project management software to keep track of all the moving parts of the project including key activities and outputs and their deadlines.
Multidisciplinary team and expertise is unavailable in Saint Lucia	M	Procurement of personnel and services should be given a conservative time line. Where necessary, local skills should be augmented with regional expertise.
Changes in ministerial responsibilities, ministers and/or government	M	Although this cannot be fully mitigated, communication about the project to all key stakeholders including political representatives should be undertaken. Public awareness of the project should be as such to garner support from all parties involved in political or governmental changes. The project will also secure funds for sensitisation of new authorities, such that changes in personnel could be mitigated through sharing of information and securing buy in from the new authorities.

### 3.6. Consistency with national priorities or plans

130. National strategies and plans or reports and assessments under relevant conventions, that are applicable to the Project include: NBSAP, NAP, NAPA, 2<sup>nd</sup> National Communication (SNC), NIP, PRSP, NPF, among others.

131. UN Convention on Biological Diversity (CBD): The project will contribute to achievement of the key objectives of biodiversity conservation of Saint Lucia's Draft 5th National Report and Revised 2nd National Biodiversity Strategy and Action Plan (2nd NBSAP) including mainstreaming of biodiversity conservation and sustainable use issues into development planning (incl. land use and sustainable livelihoods). The project will prioritize promotion of innovative, fit-for-purpose (e.g. co-management) approaches to biodiversity conservation and sustainable use, enhance capacity for data

collection and monitoring (for both coastal/marine and terrestrial ecosystems), and build public awareness. The project will thus directly support Saint Lucia’s contribution to the Convention on Biodiversity’s (CBD’s) Strategic Plan, and to the Aichi Targets adopted at the 10th Conference of the Parties of the CBD, as detailed in the table below.

**Table 6: CBD Aichi Targets**

<b>CBD Aichi 2020 Targets</b>	<b>Project activities that will support the achievement of each</b>
Target 1 (awareness of biodiversity values)	Develop/adapt and implement a targeted Public Education and Outreach (Awareness and Sensitization) strategy highlighting the value of biodiversity and ecosystem services values.
Target 2 (BD integrated in local and national poverty reduction strategies...)	Through the development of alternative livelihoods, including agroforestry and non-timber forest products (NTFPs), pressure on forest resources will be relieved while providing opportunities for generation of income in remote coastal communities hard hit by the economic downturn.
Target 4 (sustainable production)	Component 3 of the project will develop and implement a mechanisms for linking sustainable production efforts with markets to support the conduct of trade in biodiversity-friendly products and services
Target 5 (loss of natural habitats)	Rehabilitation and restoration of degraded priority forest areas will be delivered in Component 2.
Target 6 (sustainable use of marine BD)	Rehabilitation and restoration of sea grass beds, reefs, mangroves and coastal systems (500 ha) will be delivered in Component 2.

132. UN Convention to Combat Land Degradation (UNCCD): The Country Report on National Action Programme for Saint Lucia identifies priorities, including land rehabilitation and restoration; increasing public awareness; development of successful model interventions; and promotion of environmental conservation in development and enterprise, which will be supported through targeted project activities.

133. UN Framework Convention for Climate Change (UNFCCC): The project will reforest and restore degraded lands with native species, and sustain the existing forest, including coastal dry forest habitats and mangroves, and it will promote the use of solar technology as outlined in Saint Lucia’s Second National Communication for the UNFCCC (2012). The project is consistent with the Policy directives outlined in Saint Lucia’s National Climate Change Adaptation Policy and Strategy ([http://www.climatechange.gov.lc/NCC\\_Policy-Adaptation\\_7April2003.pdf](http://www.climatechange.gov.lc/NCC_Policy-Adaptation_7April2003.pdf)), particularly those relating to coastal and marine resources and Terrestrial Resources, Terrestrial Biodiversity & Agriculture.

134. Saint Lucia has ratified The Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region – Cartagena Convention and its supporting Protocols. Of particular relevance is the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) in the Wider Caribbean Region, committing to protect, preserve and manage in a sustainable way: 1) areas and ecosystems that require protection to safeguard their special value, 2) threatened or endangered species of flora and fauna and their habitats, and 3) species, with the objective of preventing them from becoming endangered or threatened.

135. Saint Lucia has ratified the Ramsar Convention, whose mission is “the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”. Under Ramsar, Saint Lucia has listed two wetland sites, the Ma Kote and Savannes Bay mangroves, which are both in the SE Coast region.

136. The GEF National Portfolio Formulation Document (NPF) for Saint Lucia (<http://www.thegef.org/gef/sites/thegef.org/files/documents/document/FINALDRAFTofNPFJanuary20132012.pdf>) was finalized in late 2011 on the basis of extensive consultations. The project proposed will contribute to at least seven of the stated priorities (I, II - 1,2,3, III, IV, V, VI, VII) as laid out under three of the focal areas (Biodiversity, Climate Change, and Land Degradation) -- with a Sustainable Forest Management Overlay and focused on the South East Coast – meeting a maximum number of global environmental priorities with incremental GEF resources.

### 3.7. Incremental cost reasoning

137. Project design and elaboration was undertaken in accordance with the GEF Operational Guidelines for the Application of the Incremental Cost Principle<sup>6</sup>. This involved the application of five phases to the process of negotiating incremental costs, and the use of incremental cost analysis to guide result-based management and inform the project cycle. It is expected that these five levels will serve to provide strong incremental reasoning for the project through its implementation:

- Phase (1) - determine the environmental problem, threat, or barrier, and the “**business as-usual** scenario (essentially, ‘what would happen without the GEF project?’);
- Phase (2) - identify of the **global environmental benefits (GEB)** and fit with GEF strategic programs and priorities linked to the GEF focal area;
- Phase (3) – develop the Project **result framework** and log-frame;
- Phase (4) - provide the **incremental reasoning** and GEF’s role; and
- Phase (5) - Clarify the role of **co-financing** resources to ensure a suitable match for the incremental costs of the GEF investment.

138. The proposed project seeks GEF financing to improve the baseline scenario and address the challenges that exist in the current business-as-usual approach. Appendix 3 provides details on the anticipated benefits of the GEF investments and highlights the anticipated alternative scenarios.

### 3.8. Sustainability

139. The project has factored in sustainability of its results through various actions such as:

#### *Institutional Sustainability*

140. Institutional Capacity Building: By developing a monitoring and information system to support sustainable ecosystem management and the scientific capacity of stakeholders, the project will strengthen institutional capacities in planning and in incorporating conservation priorities within the framework of development decisions. The project will also support the development of systems and practices to monitor and track global environmental goods, such as carbon stocks in forests and soils, which will be made widely available on the GEONODE open source data sharing platform hosted by the Planning Department. The project also will promote sustainability at both the institutional and community level by working with, and strengthening, the technical capacities of existing governmental and civil society organization in order that they are able to continue the provision of technical and other support in the long term.

141. Multi-sectoral Approach: As shown in the stakeholder mapping, this project will interact with a wide range of stakeholders from technical partners to communities, the private sector and the government, among others. This contributes to the sustainability of results since it will offer ample

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<sup>6</sup> GEF/C.31/12 May 14, 2007

opportunities for various actors to be engaged with nature-protection activities that will contribute to a better ecosystem management in the country.

#### *Financial Sustainability*

142. **Financing Mechanisms:** The identification of key partners (including co-financiers of this project) is key to ensure that the GEF investment is not a stand-alone effort, so that after project completion there will be interest from other actors who will continue working in the areas where the project has facilitated change. For example, the project will partners with the programme "Sustainable Finance Mechanisms for Marine Conservation in the Caribbean", which is a collaboration between TNC and the German Development Bank (KfW) for a debt-for-nature swap proposed for Saint Lucia. The debt conversion is expected to create US \$1.9 million per year in cash flow for conservation projects in Saint Lucia (to be deposited in the NCTF), as well as putting an additional US\$1 million per year into an endowment fund (managed by the Caribbean Biodiversity Fund). These funds will be key for ensuring sustainability of the results of the proposed project.

143. **Addressing Livelihoods:** Without creating long-term economic and growth opportunities for local communities, the project will not be successful. For that reason, the project has an entire component dedicated to sustainable livelihoods, which will both promote economic opportunities and maintain ecosystem services. While tourism is central to the economy of the Saint Lucia, the project will support eco-tourism which will promote sustainability not just of ecosystems, but of the industry itself which relies on these ecosystems. The project will promote novel models of public-private partnerships that can be scaled up to other parts of the country. In addition, the project will be promoting an ecosystems-based approach in an area where this is not being carried out.

#### *Environmental Sustainability*

144. Through the establishment, protection and management of habitat of important biological diversity, restoration of degraded areas, improved awareness of ecosystem services, and the embracing of IWCAM methodology through a rigorous engagement process, the project will help Saint Lucia to reduce habitat loss and deforestation. In addition, through new research, GIS mapping, tracking, and inventories of species and high value ecosystem services, the project will generate significant new information about biodiversity and ecosystem services that will help to guide policies and plans onto a more sustainable path. This intervention will innovate by seeking to work more actively with the private sector, private landowners and business interests in the region.

### **3.9. Replication**

145. The project will promote novel models of public-private partnerships for sustainable livelihoods that can be scaled up to other parts of the country. The project also will help to establish funding mechanisms for these types of initiatives (Output 1.4), which will create additional opportunities for scaling up. The project's emphasis on market-based solutions linked to sustainable use has the potential to yield concrete and significant financial benefits, increasing the probability that sustainable resource management practices will be continued by the project beneficiaries following the completion of the project. In addition, by creating long-term economic and growth opportunities for local communities, the project will encourage successful initiatives and lessons learned to be replicated in similar projects and ventures across Saint Lucia, and the project will actively document training and technology transfer to support this kind of replication. The lessons learned, marketing and innovative successes of Component 3 will be shared at regularly convened inter-community venues to engender replication, and will have a positive and sustainable impact on women.

146. Tools developed and experiences generated under the Project, such as manuals, guidelines and standards incorporating principles of the Bio Trade Initiative and the Supporting Entrepreneurs for Environmental Development Initiative (SEED) will be shared in other parts of the country and with other producers. The Saint Lucia GEF Small Grants Program will also be utilized as a supportive interface for scaling up or replicating BD friendly activities at the community level.

### **3.10. Public awareness, communications and mainstreaming strategy**

147. The success of project interventions at community, sectoral and national level requires sustained and continuous communications and mainstreaming. Therefore, a Communications, Education and Public Awareness (CEPA) strategy will be developed (see Output 3.5) early in project implementation to raise awareness, support wider integration of biodiversity and ecosystem values, facilitate resource conflict resolution and stakeholder management, and package requisite information suited to each of the various stakeholders (including policy makers, community persons, land owners to mention a few) who impact on or are impacted by the issues in the South East Coast.

148. The CEPA strategy will highlight and profile ecosystem services and biodiversity conservation in terms of their contribution to development, growth and equity, to economists, political leaders and policy makers. The CEPA strategy will seek to address the key messages of:

- i. What is significant about the South East Coast – value and potential benefits
- ii. What is at stake in the South East Coast
- iii. What has been done and what is yet to be done
- iv. Why the South East Coast project

149. At present, there are several related awareness messages being communicated to the Saint Lucian public. Saint Lucians have been urged to preserve the environment and conserve biodiversity but the reasons have largely been related to: Environmental Responsibility, Climate Change, National Pride, the country's Tourism Product, and Biodiversity Conservation.

150. The CEPA strategy will build on and utilise wherever possible existing platforms for these messages to raise awareness in the appropriate target audiences. Specific tools and activities will also be designed and implemented to raise awareness of, facilitate communication, and encourage participation in the Project by the key stakeholders.

151. The CEPA Strategy will target key project stakeholders, in particular the Private Sector / Land owners and the communities, and will have a focus on creating key advocates and stewards for biodiversity, the ecosystem services provided for humans. The strategy will have an objective of helping communities to identify existing and new enterprises linked to proper biodiversity stewardship, and of supporting entrepreneurship in the productive and sustainable uses of biodiversity in order to generate incomes, create jobs and reduce poverty. Mechanisms to incentivize individuals, groups, communities that are crucial in executing the project will be devised and supported through small grants, technical support, training, awards, etc. The mechanisms will include:

- Undertaking rehabilitation of degraded landscapes and seascapes in the SE Coast region
- Participating in the preparation of management and zoning plans of the new protected areas
- Encouraging the adaptation of sustainable agro-forestry on their farms
- Participating in the preparation of tourism guidelines and standards for the SE Coast and to adopt them
- Developing new enterprises based on biodiversity friendly goods and services

152. Finally, the CEPA strategy will devise appropriate templates to facilitate regular bulletins to be used for continuous updates of project status, outputs and outcomes, and to communicate lessons learned to facilitate replication in other communities.

### **3.11. Environmental and social safeguards**

153. In accordance with the UNEP Policy on Environmental and Social Safeguards, safeguard measures will be built into national project design and implementation. UNEP's Social and Environmental safeguard scorecard will be used and applied at 3 times during project (design, implementation and completion) to ensure that particular attention is paid to environmental and social concerns with regard to the project interventions.

154. UNEP's Social and Environmental Safeguard scorecard considers the implications of the Project on biodiversity and ecosystem conservation and on the creation of sustainable livelihoods in the SE Coast. It will also ensure that the interventions identified in the Project components give due consideration to the comments and recommendations of key stakeholders and how they are incorporated into Project implementation. The determination of the extent to which the Project will change prospects for biodiversity conservation and its sustainable use in Saint Lucia will be important. Key general questions to be asked could include inter alia:

- What are the Project's objectives and how do these relate to safeguarding environment and social integrity?
- How important is biodiversity and ecosystems services to persons in the South East Coast and their livelihoods?
- What are the likely impacts of the Project on people who need and use biodiversity and ecosystem services?
- Does the Project provide for interventions which are 'biodiversity friendly' and socially beneficial?
- Does the Project provide for interventions that enhance positive benefits for conservation and sustainable use?
- Will current or traditional biodiversity uses and values be sustained/sustainable following implementation of the Project?
- Does the Project provide opportunities for protected areas and for species protection?
- Does the Project provide opportunities for stakeholder consultation?

155. The Project seeks to maintain or enhance environmental and social safeguards in Saint Lucia through the promotion of the "No Net Loss" principle.

156. Socio-economic indicators will be developed, for the categories of biodiversity friendly goods being promoted, to measure the impact of improved management of forests and ecosystem services, together with increases in income for targeted communities and replication efforts. Restoration efforts also offer gender-neutral opportunities by involving women in nursery operations. The project will generate gender data and input gender dimensions, especially into the elaboration of Component 3 (sustainable use of biodiversity friendly products and services used to derive sustainable livelihoods), and in the development of results frameworks, budgets, implementation plans and work plans. Disaggregated gendered impacts of increased income generation will be tracked as part of the M & E system. The PPG process has however, determined that gender considerations are not solely a women's issue but rather looks at yielding advantage to whole communities and benefitting both genders and vulnerable groups.

157. During the PPG phase, the selection process for livelihood projects was done by engaging community groups that not only included women, but also groups that were exclusively composed of women (for example, some agro-processing initiatives). In Saint Lucia, men are typically the dominant

participants in agriculture and agro-forestry, but women in these sectors also were consulted, and their recommendations influenced the project design. Furthermore, in identifying project livelihoods interventions, the project design team made sure to include work with agricultural associations in which women play a significant role (e.g. in the establishment of a business incubator for agro processors and associated support for product development, testing and market research for members of agro-processing associations), and activities to support the development of a homestay programme (women are frequently in charge of homestay accommodations). In terms of consultation and inputs from government agencies during the PPG phase, more often than not it was women who represented those agencies and so their perspectives and knowledge are implicit in the project design. The Project Committees will be gender balanced.

#### **SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS**

158. This 5-year project will be executed under external national execution modality, according to the standards and regulations of the project cooperation agreement that will be signed. UNEP will be the implementing agency and the Executing Partner (EP) of the project will be the Ministry of Education, Innovation, Gender Relations, and Sustainable Development (MEIGRSD), through the Department of Sustainable Development (DSD). The project's organizational structure is shown in Appendix 9.

159. Institutional arrangements for the administration and implementation of the SE Coast Project are based on recommendations emanating from a stakeholder consultation process, and build on the current portfolios of the relevant government agencies and counterparts. Given the diverse nature of the project, with the impact areas of the three components straddling the gamut of mandates from land use, biodiversity, sustainable forest management, sustainable land management, and sustainable livelihoods including agriculture, fisheries and tourism, among others, the responsibility for project execution and management must be shared, and as such a key responsibility of the executing agencies is to ensure that the requisite elements of various project components be well-embedded into their existing and future programme implementation plans of their sectorial ministries, agencies/organisations, communities and enterprises.

160. One of the first actions that will be undertaken as soon as the Project is approved is the conduct of a situational analysis towards the development of a more detailed Annual Work Plan, and the development of enhanced institutional arrangements for Project implementation.

#### **Roles and responsibilities of Implementing and Executing Agencies and Other Project Structures / Partners**

##### ***UNEP's Ecosystems Division (Project Implementing Agency)***

161. UNEP's Ecosystems Division will be responsible for the following activities:
- Provide consistent and regular Project oversight to ensure the achievement of Project objectives
  - Liaise between the Project and the GEF Secretariat,
  - Ensure that both GEF and UN Environment policy requirements and standards are applied to and are met (reporting obligations, technical, fiduciary, M&E)
  - Ensure timely disbursement/sub-allotment of funds, based on the agreed legal documents
  - Approve budget revision, certify fund availability and transfer funds
  - Organize mid- and end-term evaluations and audit
  - Provide technical support and assessment of the execution of the Project
  - Provide guidance if requested to main TORs/MOUs and subcontracts issued by the Project
  - Follow-up with EA for progress, equipment, financial and audit reports

- Certify project operational completion
- Member of the Project Steering Committee (PSC)

***DSD - Department of Sustainable Development (Project Executing Agency)***

162. The DSD within the Ministry of Education, Innovation, Gender Relations and Sustainable Development (MEIGRSD) will assign from its staff a National Project Director (DNP) to perform the following functions on its behalf:

- Oversee Project execution in accordance with the project results framework and budget, the agreed work plan and reporting tasks.
- Support the Project coordinator in project activities at national and local levels.
- Provide technical expertise through its personnel and networks.
- Ensure technical quality of products, outputs and deliverables, including reports to UNEP.
- Provide guidance and coordination to the co-executing agencies and national stakeholders, in conjunction with the project coordinator.
- Facilitate access to sites and locations.
- Support logistical issues, e.g. through organization of meetings and provision of relevant facilities.
- Support the project coordinator in regular Project reporting, incl. progress, financial and audit reporting to IA.
- Chair the project steering committee in coordination with the national project coordinator.

***Project Steering Committee***

163. The success of project implementation is predicated on the commissioning of a Project Steering Committee (PSC) to provide oversight and guidance. The PSC is a multi-sectoral body, comprising representation at the senior level of the range of national implementation entities (Agencies, CSOs and CBOs), and the GEF Implementing Agency (UNEP) -- all of which have been involved with the project from the project planning phase.

**Table 7. Proposed Composition of the SE Coast Project Steering Committee (PSC)**

<b>Organisation</b>	<b>Department/Unit/Section</b>
United Nations Environment Programme (UNEP)	Member of PSC
Ministry of Education, Innovation, Gender Relations, and Sustainable Development	Department of Sustainable Development (Chair) GEF Operational Focal Point
Ministry of Finance, Economic Growth, Job Creation, External Affairs and the Public Service	Department of Economic Development
Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Co-operatives	Department of Agriculture Forestry Department Physical Planning Section/DCA
Ministry for Equity, Social Justice and Empowerment	Community Development Department
CBOs	3 CBOs within South-East Development Committees
CSOs and Private Sector	Saint Lucia National Trust Saint Lucia Hotel and Tourism Association Saint Lucia Small Business Association Land owners - Representative 2 Private Sector Representative in South East

164. The composition, responsibilities and rules of operation of the PSC will be confirmed during its first meeting. Subject to the decision of this meeting, it is proposed that the PSC will be responsible for approving the operational plans and annual reports of the project. The PSC will also review and comment on the terms of reference and appointments of key project staff which will be developed by the NPC. If there are no comments after 14 days, the TORs and appointments will be submitted for UNEP's clearance.

165. The PSC will be responsible for making executive decisions for the project, in particular when guidance is required by the GEF Implementing Agency, UNEP and the Executing Agency through the National Project Director. The PSC will play a critical role in facilitating inter-ministerial coordination, project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It will ensure that required resources are committed and will arbitrate on any conflicts within the project or negotiate a solution to any problems with external bodies. In addition, it will approve the appointment and responsibilities of the National Project Coordinator and any delegation of its Project Assurance responsibilities. Based on the approved Annual Work Plan, the PSC will also consider and approve the quarterly plans and will also approve any essential deviations from the original plans.

166. The PSC will meet at least four times per year (every quarter) and in addition could be convened extraordinarily by the Chair, or on the request of individual members.

#### ***National Project Director***

167. The project will be under the overall leadership of a National Project Director (NPD), who will be the head of the Department of Sustainable Development, functioning under the supervision of the Permanent Secretary of the Ministry of Education, Innovation, Gender Relations, and Sustainable Development (MEIGRSD). The NPD will be responsible for orienting and advising the National Project Coordinator on Government policy and priorities. The NPD will also be responsible for maintaining regular communication with the lead institutions in the other sectors and ensuring that their interests are communicated effectively to the National Project Coordinator.

#### ***Project Executing Parties - Co-Executing Agencies***

168. The Department of Sustainable Development as the Lead Overall Executing Agency will be responsible for coordinating the implementation of the Project and shall collaborate with relevant stakeholders in executing this mandate. The project cooperation agreement will be signed between the Department of sustainable development and UNEP.

169. Six key responsible parties (co-executing agencies) will be involved in Project Execution:
- Department of Physical Planning supporting the implementation in of parts of Component 1
  - Department of Fisheries supporting implementation in Components 1 and 2
  - Department of Forestry supporting implementation in Components 1 and 2
  - DSD Biodiversity Unit and Renewable Energy Unit will be supporting implementation of Components 1 and 3, respectively
  - Ministry of Agriculture Departments of Agriculture and Extension in the execution of Component 3
  - Ministry of Finance (Tourism) supporting the implementation of Component 3

170. The co-executing agencies will operate through designated Focal Points, (with designated alternates) to provide (i) ongoing guidance on project implementation, with particular focus on administrative related matters and (ii) serve as liaison between the agency and the Lead Project Implementation Entity – DSD and these other relevant agencies.

171. Memoranda of Understanding (MOUs) will be established between the DSD and the project executing parties, including Co-operating Agencies and Project Partners, stipulating roles and functions, as well as specific allocations with regard to staff time and schedules. As far as possible, Project Implementation Entities would be required to incorporate project reporting including monitoring and evaluation parameters, within their respective agency reporting mechanisms.

### ***Project Implementation Unit***

172. A Project Implementation Unit (PIU) will be established within the DSD. The PIU will be led by a National Project Coordinator (NPC), who will be contracted through a selection process by the MEIGRSD, and paid directly from UNEP-GEF funds. The NPC will have specific responsibility for project Outputs through day to day management of project implementation. The NPC will also:

- Be the signing authority of requests to UNEP for disbursements of project funds;
- Ensure the logistical, administrative and financial effectiveness of the IP in fulfilling its roles set out above;
- Provide monitoring, supervision and guidance to the technical teams based in the project areas;
- Promote collaboration and coordination with the MEIGRSD, and the donor agency, other project executing agencies and other project stakeholders, accordingly.

173. The PIU will serve as the Secretariat to the PSC and TC, and the NPC will serve as Secretary to the two entities. The NPC will be supported by a Monitoring and Evaluation Specialist and a Technical/Administrative Assistant. The PIU will also be supported by a designated officer within the Accounts Division of the Ministry of Education, Innovation, Gender Relations and Sustainable Development, with additional support when necessary cooped from staff from other areas of the Ministry such as administration.

### ***SE Coast Project Technical Committee (TC)***

174. The PSC will be supported by a technical advisory grouping, the SE Coast Project Technical Committee (TC) that will meet monthly or as frequently as necessary in the earlier stages of the project, to provide technical expertise to the PIE and other Executing Entities, to support project implementation, assist in oversight of technical elements, and project monitoring.

175. The TC will be a multidisciplinary group drawn from technical personnel in the various executing entities and other relevant bodies, and will utilize and recommend appropriate S&T and information management systems in project implementation. The TC will appoint members on an ‘as needed’ basis. As such, in cognizance of the important role of gender relations, community development and cooperatives, the relevant expertise will be appropriately sourced. The conformation of the TC will be: Ministry of Education, Innovation, Gender Relations, and Sustainable Development, Ministry of Finance, Economic Growth, Job Creation, External Affairs and the Public Service, Ministry of Agriculture, Food Production, Fisheries Rural Development and Cooperatives, Saint Lucia National Trust, Community Development (Micoud Laborie, Praslin).

176. The composition of both the PSC and TC is purposed to engender equitable participation of the various sectors and societal groups in the SE Coast development dialogue, thereby facilitating more effective internalization and integration of ecological considerations in planning and development at the sectoral, business and community level. More so, it provides a platform to facilitate knowledge management and, with the option to co-opt other members, to further extend the reach of knowledge sharing.

### ***Collaborative arrangements with related projects***

177. The project will collaborate with the Saint Lucia Small Grants (GEF- SGP) Programme (SGP), and PPCR projects, and the Saint Lucia Forest Restoration and Rehabilitation Project being funded by Australian Aid, being implemented country wide, and with strong linkages to the issues being addressed in the SE Coast region. These will provide opportunities for productive finance and technical support for community level activities in terms of investment in sustainable/climate resilient livelihood practices, while the project will help to mainstream sustainability issues into the operations of these projects in the SE Coast region, and will help them to identify potential beneficiaries.

178. Several meetings have taken place already to strategize a possible sub-focus on the SE Coast as a possible consideration for SGP programming prioritization. The \$27 M Saint Lucia Pilot Program for Climate Resilience (PPCR) & DVRP: is being developed as targeted programming for different types of vulnerable groups. Elements of relevance and cooperation to the proposed GEF project include discrete targeted land use planning, enhancement and application of the Saint Lucian GIS system, enhancing use of the GEONODE system, slope stabilization and watershed management to increase resilience, building bridges and roads in accordance with international best practice and building codes.

179. Similarly meetings have been held with the ministry of Agriculture on potential areas of cooperation with the BAM Project. The BAM project seeks to assist the diversification of the agricultural sector away from the banana industry. In particular their focus on Agri-enterprise facilitation which has a national focus but there might be synergies between the projects within the SE Coast region.

## **SECTION 5: STAKEHOLDER PARTICIPATION**

180. A Stakeholder analysis conducted during project design identified the range of individuals, groups, or institutions which have an interest or "stake" in the outcome of the Project or will be potentially affected by it. It determined the interests of the primary and secondary stakeholders and which ones are most important for the success of the project. It identified the stakeholder groups that will participate through the life of the project and their capacity needs to allow them to participate effectively in the project. There are very many stakeholders in the SE Coast region who will be impacted upon or will impact the project. In addition to these stakeholders who are from the area itself or who create livelihoods in the area, there are a number of public sector agencies and international agencies who also have a stake in the SE Coast.

181. Stakeholder mapping also provided knowledge of all the stakeholders in the communities within the project site and who use the natural resources within the site; all those from outside of the site but who earn livelihoods from the natural resources in the site; and the stakeholders in public and private sector agencies, community organisations, and regional and international agencies that are involved, in some way, in the management and scientific research of the natural resources in the site.

182. The Stakeholder Map in Section 2.5 above identifies and ranks all stakeholders who presently have a stake in the SE Coast. This Map also includes key agencies that will be involved in some aspect of

the project and/or who have been involved in or will be involved in some aspect of resource management in the project site.

183. Key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, are identified as follows:

**Table 8: Key Stakeholders**

<b>Stakeholder</b>	<b>Interest in Project</b>
<b>United Nations Environment Programme</b>	GEF Implementing Agency
<b>Department of Sustainable Development</b>	Executing Agency
<b>Forestry Department</b>	Co-Executing Agency
<b>Fisheries Department</b>	Co-Executing Agency
<b>Department of Agriculture/Extension</b>	Cooperating Agency Technology transfer, rural development
<b>Biodiversity Office</b>	
<b>Renewable Energy Unit in SDED</b>	Cooperating Agency Technology transfer
<b>MoA/BAM Project</b>	Cooperating Agency
<b>Ministry of Equity, Social Justice and Empowerment</b>	Cooperating Agency The socio-economic benefits for local communities
<b>Ministry of Commerce/Invest Saint Lucia</b>	Cooperating Agency
<b>Constituency Councils (Micoud, Vieux Fort, Laborie)</b>	Cooperating Agency
<b>Development Committees (Micoud, Dennery South, Laborie)</b>	Cooperating Agency
<b>Youth and Sports Councils (Micoud, Vieux Fort, Laborie)</b>	Cooperating Agency
<b>Development Control Authority</b>	Cooperating Agency
<b>Ministry of Tourism</b>	Cooperating Agency
<b>Economic Development, Housing, Urban Renewal, Transport and Civil Aviation</b>	Cooperating Agency
<b>GEF Small Grants Project</b>	Potential Source for co-financing
<b>Saint Lucia National Trust</b>	Cooperating Agency
<b>Saint Lucia Archaeological and Historical Society</b>	Cooperating Agency
<b>Flora and Fauna International</b>	Cooperating Agency
<b>Durrell Wildlife Conservation Trust</b>	Cooperating Agency
<b>Bird Life International</b>	Cooperating Agency
<b>Folk Research Centre</b>	
<b>St Lucia The James Belgrave Micro Enterprise Development Fund (BELFUND)</b>	Potential Source for co-financing
<b>Mothers' and fathers' groups in the Project Site</b>	Secondary Stakeholders
<b>Anse Ger Rural Women Group</b>	Primary Stakeholder
<b>Community Disaster Response Teams</b>	Secondary Stakeholder
<b>Praslin Seamount Group</b>	Primary Stakeholder
<b>Farine Processing Facility in Vige Vieux- Fort</b>	Primary stakeholder
<b>Anse Ger Agro processing plant</b>	

<b>Stakeholder</b>	<b>Interest in Project</b>
<b>Broom producers, Superior Brooms</b>	Primary Stakeholder
<b>ECO South Tours</b>	Primary Stakeholder
<b>Anse Kawet Crafters Association</b>	Primary Stakeholder
<b>Aupicon Charcoal Producers</b>	Primary Stakeholder
<b>Sea Moss production in Ma Kôté Mangrove.</b>	Primary Stakeholder
<b>Coconut Bay Beach resort and Spa</b>	Secondary Stakeholder
<b>Reef Kite and Surf and Reef Restaurant</b>	Primary Stakeholder
<b>Landowners</b>	Primary Stakeholders
<b>Farmers</b>	Primary Stakeholders
<b>Mauby Producers</b>	Primary Stakeholders
<b>Craft Producers</b>	Primary Stakeholders
<b>Honey Production</b>	Primary stakeholder
<b>Farine Producers</b>	Primary Stakeholders
<b>Fishers</b>	Primary Stakeholders
<b>Mauby Farmers</b>	
<b>Herbs producer</b>	Primary Stakeholder
<b>Broom makers</b>	
<b>Manufacturing of forest products</b>	Secondary stakeholders
<b>Charcoal production</b>	Primary Stakeholder
<b>Wind- &amp; kite-surfing</b>	Secondary Stakeholder
<b>Horse-back riding</b>	Secondary Stakeholder
<b>Hiking tours</b>	Secondary Stakeholder
<b>Ecotourism – waterfalls (La Tille Falls)</b>	
<b>Mamiku Estate</b>	Primary Stakeholder
<b>Descartes' Nature Trail</b>	Forestry Department – Primary Stakeholder

## **SECTION 6: MONITORING AND EVALUATION PLAN**

184. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 7. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

185. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.

186. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators.

It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

187. The project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

188. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

187. In-line with UN Environment Evaluation Policy and the GEF's Monitoring and Evaluation Policy the project will be subject to a Terminal Evaluation. Additionally, a Mid-Term Review will be commissioned and launched by the Project Manager before the project reaches its mid-point. If project is rated as being at risk, a Mid-Term Evaluation will be conducted by the Evaluation Office instead of a MTR.

188. The Evaluation Office will be responsible for the Terminal Evaluation (TE) and will liaise with the Task Manager and Executing Agency(ies) throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF, executing partners and other stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget. The Terminal Evaluation will be initiated no earlier than six months prior to the operational completion of project activities and, if a follow-on phase of the project is envisaged, should be completed prior to completion of the project and the submission of the follow-on proposal. Terminal Evaluations must be initiated no later than six months after operational completion.

The draft Terminal Evaluation report will be sent by the Evaluation Office to project stakeholders for comments. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalised and further reviewed by the GEF Independent Evaluation Office upon submission. The evaluation report will be publicly disclosed and may be followed by a recommendation compliance process

189. The GEF tracking tools are attached as Appendix 15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will verify the information of the tracking tool.

## SECTION 7: PROJECT FINANCING AND BUDGET

### 7.1. Overall project budget

**Table 9: Summary GEF budget for project implementation by Year**

<b>Components</b>	<b>Amount Requested from GEF (USD)</b>
Year 1	1,355,400
Year 2	1,219,800
Year 3	802,345
Year 4	522,800
Year 5	527,800
<b>Totals</b>	<b>4,428,145</b>

**Table 10: Summary GEF budget for project implementation by Component**

<b>Components</b>	<b>Amount Requested from GEF (USD)</b>
Component 1	1,267,000
Component 2	1,686,000
Component 3	1,141,545
Project Management	170,500
Monitoring & Evaluation	163,100
<b>Totals</b>	<b>4,428,145</b>

### 7.2. Project co-financing

**Table 11: Project Co-financing**

<b>Co-Financing Partners</b>	<b>Amount (USD)</b>
IUCN-BIOPAMA	306,000
International Conservation Corps	300,000
MEIGRSD	3,873,073
Organization of Eastern Caribbean States	469,431
MAFPPNRC	9,206,987
Saint Lucia National Trust	219,500
IICA	150,000
UNEP	100,000
<b>Total</b>	<b>14,624,991</b>

### 7.3. Project cost-effectiveness

190. The cost-effectiveness of the proposed project relies mainly on combining biodiversity management and protected areas with sustainable livelihoods while promoting actions that are relevant and realistic for Saint Lucia's reality. A framework of collaboration will be built through an effective consultative process focused on delivering project objectives while taking advantage of the respective strengths of each of the key stakeholders across multiple agencies and sectors. Given the nature of the complex problems being addressed, the framework for collaboration will certainly be more efficient than resources being assigned to individual stakeholders in a siloes approach.

191. Representatives from different Ministries will act as co-executing agencies and thereby contribute to the implementation of specific activities and by participating in the Project Steering Committee (see Section 4 for more details on the roles of Project Executing Parties - Co-Executing Agencies). This will allow these partners to bring their own different perspectives, skills and experiences to ensure that the issues that the project attempts to address are tackled in way that reflect the experience, interests and concerns of the widest possible range of stakeholders. Likewise, the involvement of technical personnel from these institutions as well as from other partners will maximize the technical cost effectiveness of the activities.

192. Finally, the cost-effectiveness of the proposed project will be demonstrated through its ability to leverage additional resources for biodiversity conservation and sustainable land management through effective partnerships with various sectors and stakeholders. The success of Component 3 to support sustainable livelihoods will also be key in this regard, by reinforcing the idea that livelihoods are compatible with proper ecosystem management and bio-friendly initiatives.

## **APPENDICES**

**Appendix 1: Budget by project components and UNEP budget lines (separate file)**

**Appendix 2: Co-financing by source and UNEP budget lines (separate file)**

### Appendix 3: Incremental cost analysis

#### Proposed Alternative Scenario & Global Environmental Benefits

The proposed project seeks GEF financing to improve the baseline scenario and address the challenges that exist in the current business-as-usual approach. The following table demonstrates the anticipated benefits of GEF investments and highlights the anticipated alternative scenarios.

Outcome	Baseline	Alternative Scenario	Increment (I=A-B)	Global Environmental Benefits
1. Increased capacity for sustainable development and ecosystem management through the use of tools and practices by government, civil society, and private sector	Without a finalized land-use planning framework, government, civil society and private sector parties are operating ad hoc without a coordinated approach to ecosystems management. Important biodiversity areas and endangered species are under threat from ongoing development and an ecosystems-based approach has not been mainstreamed or promoted. There is a need to improve knowledge on the species, and particularly the species at risk, inhabiting the SE coast, and to increase information about biodiversity in general. Officially designated protected areas do not exist in the project area, and no guides or codes of conduct exist to support the management of vulnerable ecosystems. Civil society parties are unable to intervene or consult on land use or construction.	<p>With the proposed GEF project, important biodiversity and habitats, ecosystems, and ecosystem services will be monitored and tracked. Baseline assessments will be conducted to establish a catalogue of species of high value ecosystem services. GIS mapping of forests, land uses and biological resources on the South East Coast will take place and data gathered will be integrated into the Environmental Information System developed through the CCCD project; thus promoting synergies and enhancing available data.</p> <p>Two Protected Areas will be delineated and connecting corridors established in the South East Coast region. Key stakeholders such as governments, private sector and stakeholders will be sensitized and engaged in protecting natural resources and ecosystem functions through a structured and robust consultative mechanism. It is expected that public-private partnerships will emerge through a structured consultative process that will promote both economic development and ecosystem protection. Guidelines will be developed for private sector partners on how to sustainably manage their lands. Awareness raising campaigns on the benefits of sustainable ecosystems, biodiversity, community action and land use planning will be carried out and an Integrated Watershed and Coastal Area Management Framework (IWCAM) for the South East Coast will be developed and implemented.</p>	\$1,400,000	4,000 Ha of new protected areas in the SE Coast established to protect habitat and assist with conservation of globally significant biodiversity (e.g. white breasted thrasher, Saint Lucia Racer, Saint Lucia Whiptail). Loss of habitat would almost certainly doom these species to eventual extinction

2. Restored / rehabilitated productive landscapes	<p>The SE Coast of Saint Lucia suffers from deforestation due to the production of fuelwood and construction timber, as well as land clearing for agriculture and construction. Soil erosion, the largest contributor to land degradation, is the single most important environmental problem facing the island both with respect to current economic losses (losses of topsoil, nutrients, concentration of run-off and resulting flash flooding, damage to infrastructure) as well as future threats to other sectors (directly to tourism, indirectly through declining agricultural productivity and rural incomes, to the stability of the whole country). Mangroves and sea grasses are under threat, and watersheds are eroded due to uncontrolled agricultural intensification, poor agricultural practices, inappropriate land use, (such as cultivation or construction on steep slopes and along river banks), and direct and or indirect discharge of untreated effluent into waterways.</p> <p>Wetlands in the South East Coast region provide important habitat for a very diverse group of flora and fauna, and are important as regulators of coastal water quality. Some wetlands are located on private property, the owners of which may not be adequately aware of the importance of and approaches to managing these important ecosystems.</p>	<p>With GEF financing, the project will support reforestation activities in degraded public lands and critical watershed areas. The project will also engage smallholder agricultural producers in reforestation using multi-purpose productive tree species to reforest degraded lands. Forest management practices will be established at the municipal and community levels.</p> <p>Anti-erosion land use practices, including within agricultural landscapes, such as stone terraces and conservation agriculture, will be applied. Communities will be sensitized and will pilot these practices.</p> <p>Sea grass beds, reefs, mangroves and productive coastal systems will be replanted and rehabilitated to strengthen marine ecosystems and build resilience against climate change.</p>	\$1,700,000	<ul style="list-style-type: none"> <li>- Reduction of forest loss and degradation of forests through the restoration of 2,500 ha of degraded areas</li> <li>- Improved provision of agro-ecosystem and forest eco-system goods and services through placing 5,000 ha under sustainable agro-forestry practices</li> <li>- Conservation and sustainable use of biodiversity in protected landscapes</li> <li>- Maintenance of the range of environmental services and products derived from forests</li> <li>- Conservation and enhanced carbon stocks in agriculture, forest, and other land use</li> </ul>
3 Sustainable socio-economic development pathways	There is a desire and expressed need to diversify Saint Lucia's natural resources based sector	Investments from the project will support the nature based tourism industry, as unsustainable tourism can lead to negative economic and social	\$1,117,281	- Enhanced sustainable livelihoods for local

<p>pursued in targeted communities trigger global environmental and social benefits.</p>	<p>beyond banana production, but currently there is a lack of economic opportunity. This is particularly important in the SE Coast.</p> <p>The tourism industry, a main staple of the economy, is under threat from potential climate change impacts (extreme weather events, unpredictable weather). The tourism sector itself is also poised to disrupt ecosystems and their services that support biodiversity and livelihoods; this is particularly pertinent in the SE Coast. However, the tourism industry is also highly dependent on the environment, as tourists come to Saint Lucia and the SE Coast seeking rainforests, white sandy beaches with clear clean water, healthy reef ecosystems and biologically diverse mangroves, which are all vulnerable to climate and human activity.</p>	<p>impacts. With the project, Saint Lucia will benefit from expertise and best practices in establishing eco-tourism developed in other countries in the sub-region. Environment and social guidelines will exist to govern tourist facilities.</p> <p>Non-tourism producer groups (agriculture, non-forest timber producers) will receive equipment and training for production, transformation, commercialization and value addition of innovative and promising sustainable livelihoods (e.g. sea moss, seaweed, palm leaves). Appropriate community-based renewable energy systems (e.g. solar, wind, hydro) will be established to support communities in accessing a reliable energy supply.</p> <p>It is expected that these investments will lead to better environmental management of the SE Coast natural resources as well producing sustainable livelihoods which involve the private sector and markets for the goods produced</p>	<p>communities and forest-dependent peoples through the provision of training to 120 persons in techniques and technologies in sustainable use of non-timber forest products</p> <p>- Conservation and enhanced carbon stocks in agriculture, forest, and other land use (i.e. solar pilots could reduce GHG emissions by 8,870 tons of CO2 over 10 years; see Appendix 15)</p>
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#### Appendix 4: Results Framework

Outcome	Indicators	Baseline conditions	Mid-term targets	End of Project targets	Means of Verification	Assumptions
<b>Project objective: To enable sustainable economic development of the South East Coast by maintaining healthy ecosystems, sustainable livelihoods, and securing global environmental benefits</b>						
<b>Component 1: Ecosystem Management</b>						
1.1 Increased capacity for sustainable development and ecosystem management through the use of tools and practices by government, civil society, and private sector	PA Management effectiveness in two new PA units covering 4,000, as measured by: <ul style="list-style-type: none"> <li>Scores on METT (GEF BD Tracking Tool)</li> </ul>	METT <ul style="list-style-type: none"> <li>Proposed Terrestrial PA: 19</li> <li>Proposed Marine PA: 19</li> </ul>	METT <ul style="list-style-type: none"> <li>Proposed Terrestrial PA: 30</li> <li>Proposed Marine PA: 30</li> </ul>	METT <ul style="list-style-type: none"> <li>Proposed Terrestrial PA: 45</li> <li>Proposed Marine PA: 45</li> </ul>	GEF-6 BD 1 Tracking Tool	Inter-agency cooperation mechanism is in place.  That there is a mechanism to verify data accessibility and accuracy
	# of institutions using biodiversity data for sustainable development actions (including ecosystem management and land use planning)	No biodiversity data currently used for physical planning.  No tools to support the coordinated monitoring and track of environmental goods. Some maps, fisheries data, tourism data available, but not linked.  No biodiversity baseline	Baseline assessment of biological resources in the area conducted  Draft catalogue of high value species, ecosystem services and habitats  Work on GIS mapping of forests, land uses and biological resources started	BD M&I system developed, populated and used by at least 5 institutions  Catalogue finalized and used by at least 5 institutions  GIS mapping finalized and used by at least 5 institutions	BD M&I system in place and populated with BD information  Reports from government departments and institutions proving use of the catalogue and the GIS mapping	The needed governmental approvals will be obtained for the gazettement
	Ecosystems protection is promoted by expansion of Protected areas and PPPs	PA boundaries not marked  No PPP presently in place for ecosystem management and protection in the South East Coast	PA boundaries defined  Negotiations in place for PPP	Two PAs gazetted and corridors established  1 PPP MOU signed and implemented	Protected areas gazetted  PPP Agreement  Agreements with NGOs and other partners	
<b>Outputs for Component 1</b>						
Output 1.1: A monitoring and information system is in place to support sustainable ecosystem management and scientific capacity of stakeholders						
Output 1.2: Two new protected areas are designated along with relevant connecting corridors, and protected species are officially recognized in gazetted Regulations and Orders (est. 4,000 hectares)						
Output 1.3: Management Tools designed for the new protected areas						
Output 1.4: At least 1 public-private partnership or financing mechanism promoting both economic development and ecosystem protection established.						
<b>Component 2: Rehabilitated Landscapes</b>						

2.1 Restored / rehabilitated productive landscapes	Restoration of degraded forests to counteract on-going and past land degradation (as measured in SFM and CCM Tracking Tools)	7,300 ha of land on the SE Coast deforested and contributing to soil erosion and flash flooding	1,000 ha reforested	- 2,500 ha reforested - 682,850 tons of CO2-eq mitigated (over 20 years)	Reports from tree nurseries and field surveys	Willingness of key stakeholders to cooperate on meeting project objectives
	Restoration of degraded coastal ecosystems to counteract on-going and past land degradation (as measured in LD Tracking Tool)	- Mangroves & coastal vegetation under threat  - There are no management agreements in place for protected areas in the SE Coast	- 200 ha of mangroves and other coastal vegetation rehabilitated - Special management regimes for marine buffer areas drafted and discussed with stakeholders	- 500 ha of mangroves and other coastal vegetation rehabilitated - 4 collaboration agreements with key partners adopted for marine buffer areas	Satellite imagery of areas of reforestation / rehabilitation  Signed agreements  Field visit reports  EXACT mythology tool	Local weather conditions permitting to undertake field work in selected areas
	Coastal ecosystems showing increase in carbon benefits	No data on carbon benefits from mangrove restoration (will be calculated at project inception)	Carbon benefits estimated for mangrove restoration	Carbon benefits measure tool applied to measure restoration impact.		
	# of activities proving a change from practices that lead to erosion (i.e. slash and burn, rotating cultivation, unsustainable harvesting for charcoal and broom sticks)	Poor agricultural practices and abandonment of farmland is responsible for much of the degraded land in the SE Coast	Draft manuals / guidelines for anti-erosion land use practices within agricultural landscapes	At least 20 smallholder agricultural producers have reforested land using multi-purpose productive tree species	Number of trees planted  List for selection of tree species  Field work reports	

**Outputs for Component 2**

Output 2.1: 2,500 ha have been reforested in degraded areas, agricultural areas and headwaters (682,850 tons of CO2-eq mitigated over 20 years, or 34,143 tons of CO2-eq per year from reforestation of 2,500 ha of degraded land)

Output 2.2: Sea grass beds, reefs, mangroves and productive coastal systems have been protected and rehabilitated (500 ha; carbon benefits to be calculated at project inception)

Output 2.3: Erosion controlled in areas exhibiting significant soil degradation and siltation

**Component 3: Sustainable Livelihoods**

3.1	Vulnerable	Lack of access to reliable	Design, engineering and	2 agro-processing	Renewable energy	Willingness of
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Sustainable socio-economic development pathways pursued in targeted communities trigger global environmental and social benefits.	municipalities without access to renewable energy	sources of energy have led to deforestation  Lack of access to reliable sources of energy for communities and business	purchasing of RE equipment for piloting	initiatives using renewable energy (Aupicon Sea Moss farmers and the Anse Ger women's group of farmers)  8,870 tons of CO2 mitigate (over 10 years) from solar renewable energy pilots	powering agro-processing initiatives	key stakeholders in particular local communities and private land holders to collaborate and participate in the project and support its objectives Willingness of farmers to participate Interest from potential partners (tourism and agricultural sectors) and a willingness to participate
	Improved land management and carbon sequestration (as reported in LD PMAT and CCM Tracking Tool)	0 ha of land under sustainable agro-forestry practices	2,000 ha land in agro-forestry	- 5,000 ha land in agro-forestry - 767,012 tons of CO2 eq sequestered from 5,000 ha under agroforestry	Field Reports  Plants supplied  Ha planted	
	# of opportunities for improving local incomes being derived from potentially ecologically friendly economic activities and taking into account gender considerations	Need to diversify economic activity for communities on SE Coast by transforming existing agroforestry, bee keeping, cocoa and chocolate production, and broom making initiatives into sustainable businesses  Tourism under threat from un-planned developments and degraded landscapes and seascapes	5 sustainable livelihood projects on ecologically friendly economic activities (Agriculture / Agro-processing and nature-based tourism initiatives) launched  Guidelines drafted for touristic developments	10 sustainable livelihood projects on ecologically friendly economic activities carried out; at least 50% of beneficiaries are women.  Guidelines implemented for touristic developments on the SE Coast	Agreements with tourism and agricultural partners  # of women participating in the pilots and benefiting from the changes derived from them  Guidelines developed	

**Outputs for Component 3:**  
Output 3.1: Renewable energy installed to improve livelihoods and reduce deforestation (8,870 tons of CO2 mitigated over 10 years based on selection of solar for pilots)  
Output 3.2: Guidelines for eco-touristic development adopted  
Output 3.3: 5,000 ha are under sustainable agro-forestry practices (177,146 tons of CO2-eq mitigated over 20 years, or 8,857 tons of CO2-eq per year from the operated land use change from conventional agriculture to agroforestry; and 589,875 tons of CO2-eq mitigated over 20 years, or 29,494 tons of CO2-eq per year from practicing agroforestry)  
Output 3.4: Additional income generated from sustainable alternative livelihoods through equipment and training for production, transformation and commercialization of selected sectors  
Output 3.5: Knowledge management, replication and increased awareness supported

**Appendix 5: Workplan and timetable**

Component	Activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
		Q1	Q2	Q3	Q4																
<b>Component 1: Ecosystem Management</b>																					
<b>Outcome 1: Increased capacity for sustainable development and ecosystem management through the use of tools and practices by government, civil society, and private sector</b>																					
Output 1.1 A monitoring and information system is in place to support sustainable ecosystem management and scientific capacity of stakeholders	Activity 1.1.1. Baseline Assessment of Biological Resources (High value species, ecosystem services and habitats)																				
	Activity 1.1.2. GIS Mapping of Forests, Land Uses, Biological Resources																				
	Activity 1.1.3. Integration of information gathered into GEF-Cross-cutting Capacity Development (CCCD) monitoring and information system																				
	Activity 1.1.4. Monitoring and Tracking Systems and Practices for Global Environmental Goods & Benefits																				
	Activity 1.1.5 Training on the use of the GIS mapping and M&I system.																				
	Activity 1.1.6 Track all meetings and consultations with regards to IWCAM methods																				
Output 1.2 Two new protected areas are designated along with relevant connecting corridors, and protected species are officially recognized in gazetted Regulations and Orders (est. 4,000 ha)	Activity 1.2.1. Delineate and Legally Designate two managed areas and associated connecting corridors																				
	Activity 1.2.2. Scientific studies of rare and endangered species																				
	Activity 1.2.3. Legal Gazetting, under Wildlife Protection Act, of rare and endangered species in the project area.																				

Component	Activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
		Q1	Q2	Q3	Q4																
Output 1.3 Management tools designed for the new protected areas	Activity 1.3.1 Develop management plans, zoning plans																				
Output 1.4 At least 1 public-private partnership or financing mechanism promoting both economic development and ecosystem protection established	Facilitate decision-making by the GOSL (through dissemination of information / studies and convening of meetings with decision-makers) on PPP mechanisms that will be allowed, and draft the regulations necessary for the selected PPP mechanisms to become operational in Saint Lucia																				
	Develop sustainable land management guidelines for private sector partners to ensure that environmental mitigation measures will be in place in PPP agreements																				
	Identify feasible public-private partnership(s) (using the results of several previous studies on public-private partnerships that were assessed during the PPG phase, and working with the framework of those mechanisms that are allowed)																				
	Raise awareness among agro-forestry / agro-processing initiatives or community tourism operators in the SE Coast region on the link between the resources and services supplied by healthy natural ecosystems and the financial and social viability of their operations, the opportunities provided by PPPs, and the mechanisms for participating in PPPs																				
	Develop and implement at least one public-private partnership between government agencies and already																				

Component	Activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
		Q1	Q2	Q3	Q4																
	established agro-forestry / agro-processing initiatives or community tourism operators																				
<b>Component 2: Rehabilitated Landscapes</b>																					
<b>Outcome 2: Restored / rehabilitated productive landscapes</b>																					
Output 2.1 2,500 ha have been reforested in degraded areas, agricultural areas and headwaters (682,850 tons of CO2-eq mitigated over 20 years, or 34,143 tons of CO2-eq per year from reforestation of 2,500 ha of degraded land)	Activity 2.1.1. Ground-truth mapped degraded areas (e.g. eroded areas, riverbanks, watersheds, etc.).																				
	Activity 2.1.2. 2,500 Ha to be rehabilitated on public and agricultural lands																				
	Activity 2.1.3. Engage smallholder agricultural producers in reforestation using multi-purpose productive tree species small land-holders																				
	Activity 2.1.4. Engage communities and municipalities in forest management systems and practices																				
Output 2.2 Sea grass beds, reefs, mangroves and productive coastal systems have been protected and rehabilitated (500 ha, carbon benefits to be calculated at project inception)	Activity 2.2.1. Complement DVRP project initiatives by engaging communities to identify areas where sea grass beds and mangroves will be rehabilitated and placed under special management regimes.																				
	Activity 2.2.2. undertake targeted revegetation using grass and trees along degraded coastlines and beaches that are showing signs of accelerated erosion																				
	Activity 2.2.3. Calculate carbon benefits of proposed rehabilitation of 500Ha of sea grass bed, reefs, mangroves and productive coastal ecosystems using GEF Financed Blue Forests project methodology																				

Component	Activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
		Q1	Q2	Q3	Q4																
Output 2.3 Erosion controlled in areas exhibiting significant soil degradation and siltation	Activity 2.3.1a Forest management systems and practices drafted																				
	Activity 2.3.1b Special management regimes for marine buffer areas drafted and discussed with stakeholders																				
	Activity 2.3.1c Collaboration agreements with key partners adopted for marine buffer areas																				
	Activity 2.3.1d Draft manuals/guidelines for anti-erosion land use practices within agricultural landscapes																				
	Activity 2.3.1e Carbon benefits measure tool applied to measure restoration impact																				
<b>Component 3: Sustainable Livelihoods</b>																					
<b>Outcome 3: Sustainable socio-economic development pathways pursued in targeted communities trigger global environmental and social benefits.</b>																					
Output 3.1 Renewable energy installed to improve livelihoods and reduce deforestation (8,870 tons of CO2 mitigated over 10 years based on selection of solar for pilots)	Activity 3.1.1 Identification and prioritization of feasible community-based RE energy systems for productive uses and community energy needs																				
	Activity 3.1.2 Design, engineering and financing of feasible RE technologies for piloting purposes																				
	Activity 3.1.2b Procurement of RE systems and companies to install																				
	Activity 3.1.2c Installation of solar PV systems and dryers																				
	Activity 3.1.3 Replication plan for the demonstrated renewable energy projects																				
Output 3.2 Guidelines for eco-touristic development	Activity 3.2.1a Engage tourism sector operators and promoters in order to create guidelines for eco-tourism development in the SE Coast.																				

Component	Activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
		Q1	Q2	Q3	Q4																
adopted	Activity 3.2.1b Engage tourism sector operators and promoters in order to implement guidelines for eco-tourism in the SE Coast.																				
	Activity 3.2.2 Conduct of south-south exchanges with countries in the region who have experience in developing eco-tourism facilities, infrastructures, norms and standards.																				
	Activity 3.2.3 Help the Government to develop environment and social management guidelines for all touristic facilities (existing and foreseen) in the region																				
Output 3.3 5,000 ha are under sustainable agro-forestry practices (177,146 tons of CO2-eq mitigated over 20 years, or 8,857 tons of CO2-eq per year from the operated land use change from conventional agriculture to agroforestry; and 589,875 tons of CO2-eq mitigated over 20 years, or 29,494 tons of CO2-eq per year from practicing agroforestry)	Activity 3.3.1a Engage local communities to identify lands for pilot agroforestry practices																				
	Activity 3.3.1b MoA to provide seedlings and technical support for agroforestry pilots																				
	Activity 3.3.1c Establish agroforestry pilots including those along riverbanks																				

Component	Activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
		Q1	Q2	Q3	Q4																
Output 3.4 Additional income generated from sustainable alternative livelihoods through equipment and training for production, transformation and commercialization of selected sectors	Activity 3.4.1 Engage with local agricultural producers and at the community level, to conduct technical training on sustainable agro-forestry practices, exploring climate smart agriculture, as well as proper solid and liquid waste disposal practices in crop and livestock production activities																				
	Activity 3.4.2 Conduct training on agro-ecology and biological pest management options through the establishment of a demonstration plot in the area.																				
	Activity 3.4.3 Support local communities, private sector and producer groups in the identification and implementation of innovative and sustainable natural-resource based economic activities																				
Output 3.5 Knowledge Management, replication and increased awareness supported	Activity 3.5.1 Communications, Education and Public Awareness (CEPA) strategy developed																				
	Activity 3.5.2 Assemble documented evidence of knowledge management and replication efforts																				

## Appendix 6: Key deliverables and benchmarks

Component	Activities	Deliverables	Benchmarks
Output 1.1 A Monitoring and information system is in place to support sustainable ecosystem management and scientific capacity of stakeholders	Activity 1.1.1. Baseline Assessment of Biological Resources (High value species, ecosystem services and habitats)	Prepare TOR for baseline assessment of biological resources. Consultative process with fisheries and Forestry. Conduct baseline assessments	Baseline assessment report of biological resources of the SE Coast
	Activity 1.1.2. GIS Mapping of Forests, Land Uses, Biological Resources	Acquisition of satellite imagery. GIS software and hardware. Training. Input baseline data into GIS and share on GEONODE	GIS database populated and shared on GEONODE
	Activity 1.1.3. Integration of information gathered into GEF-Cross-cutting Capacity Development (CCCD) monitoring and information system	Data from Forestry, Fisheries, Planning, Ministry of Health and Statistics Department databases are populated and shared on GEONODE for use by DSD CCCD system	CCCD data management and information system established at DSD for monitoring and reporting on the implementation of MEAs
	Activity 1.1.4. Monitoring and Tracking Systems and Practices for Global Environmental Goods & Benefits	Calculation of blue carbon benefits using the blue forest GEF method. Input carbon offset data from project through REDD+ methodology. Calculation of total carbon benefits from the project	Monitoring Reporting and Validation system for ecosystem services and global environment goods and benefits operational
Output 1.2 Two new protected areas are designated along with relevant connecting corridors, and protected species are officially recognized in gazetted Regulations and Orders (est. 4,000 hectares)	Activity 1.2.1. Delineate and Legally Designate two protected areas and associated connecting corridors.	Prepare TORs, conduct consultations and write specific management plans for the 2 areas; demarcate the new areas	2 new protected areas and corridors gazetted along with management plans to be implemented
	Activity 1.2.2. Scientific studies of rare and endangered species	Prepare TORs, conduct consultations, and commence implementation.	Report on status of rare and endangered species populations in the SE Coast
	Activity 1.2.3. Legal Gazetting under Wildlife Protection Act, of rare and endangered species in the project area.	Rare and endangered species in SE Coast identified and regulations written under the Wildlife Protection Act and gazetted	Rare and endangered species in the SE Coast protected under Wildlife Protection Act
Output 1.3 Management tools designed for the new protected areas	Activity 1.3.1 Create management tools for the new protected areas	Create zoning plan; implement management plan	Management Plan; Zoning Plan; Demarcated areas. Establish management effectiveness.
Output 1.4 At least 1 public-private partnership or financing mechanism promoting both economic development and ecosystem	Activity 1.4.1 At least one public-private partnership or financing mechanism identified and piloted	Collaborate with SLNF in review existing mechanisms, identify tools for adaptation, review and identify potential partners and implement 2 mechanisms as pilots	2 new private sector tools identified and piloted for SLNCF
	Activity 1.4.2 Sustainable land management guidelines for private sector partners to	Prepare TOR, have community consultations with private land owners	Guidelines developed for sustainable land management in the SE

Component	Activities	Deliverables	Benchmarks
protection established.	ensure that environmental mitigation measures are in place		Coast
	Activity 1.4.3 Awareness raising campaigns implemented on the benefits of conservation and sustainable use of ecosystems services	Develop awareness raising campaigns as a collaborative effort of DSD, Forestry and Fisheries	Awareness campaigns developed and implemented on ecosystem services, biodiversity and land use planning benefits
Output 2.1: 2,500 ha have been reforested in degraded areas, agricultural areas and headwaters (682,850 tons of CO <sub>2</sub> -eq mitigated over 20 years, or 34,143 tons of CO <sub>2</sub> -eq per year from reforestation of 2,500 ha of degraded land)	Activity 2.1.1. Ground-truth mapped degraded areas (e.g. eroded areas, riverbanks, watersheds, etc.).	Forestry department validates and maps degraded areas	Degraded areas are mapped
	Activity 2.1.2. 2,500 Ha to be rehabilitated on public and agricultural lands	Carry out assessments and establish pilot planting programme for re-establishment and restoration of critical forests and degraded lands in the SE Coast region. Identify sites/areas for community nurseries; assist in establishment of facilities	2500 Ha of rehabilitated public and agricultural lands
	Activity 2.1.3. Engage smallholder agricultural producers in reforestation using multi-purpose productive tree species small land-holders	Consult with agricultural land holders, identify sites/areas for reforestation supply trees from Forestry and community nurseries paying special attention to riparian areas	500 Ha of small holding agricultural lands rehabilitated including riparian areas
	Activity 2.1.4. Engage communities and municipalities in forest management systems and practices	Consult with communities to Identify sites / areas for rehabilitation paying special attention to riparian areas. Provide seedlings to communities from Forestry and community nurseries	Community members trained and engaged in rehabilitating community lands
Output 2.2: Sea grass beds, reefs, mangroves and productive coastal systems have been protected and rehabilitated (500 ha; carbon benefits to be calculated at project inception)	Activity 2.2.1. Complement DVRP project initiatives by engaging communities to identify areas where sea grass beds and mangroves will be rehabilitated and placed under special management regimes.	Collaborate with DRVP project. Consult with communities to Identify sites/areas for rehabilitation of mangroves and sea grass beds	500 Ha of sea grass beds, mangroves and productive coastlines rehabilitated
	Activity 2.2.2. Undertake targeted revegetation using grass and trees along degraded coastlines and beaches that are showing signs of accelerated erosion	Provide seedlings from Forestry or community nurseries to provide seedlings to rehabilitate degraded coastlines and beaches.	500 Ha of sea grass beds, mangroves and productive coastlines rehabilitated

Component	Activities	Deliverables	Benchmarks
	Activity 2.2.3. Calculate carbon benefits of proposed rehabilitation of 500 Ha of sea grass bed, reefs, mangroves and productive coastal ecosystems using GEF Financed Blue Forests project methodology.	Calculate using Blue Forests methodology the carbon benefits of rehabilitation of 500 Ha of sea grass beds, mangroves, reefs and productive coastal ecosystems	Establish carbon benefits of marine restoration efforts of the project
Output 2.3 Erosion controlled in areas exhibiting significant soil degradation and siltation	Activity 2.3.1. Complement other initiatives supporting the deployment of anti – erosion land use practices within agricultural landscapes where the gradient is high and where siltation has become a problem for low-lying and marine zones (e.g. BAM program with the Ministry of Agriculture).	Collaborate with BAM project with regards to methods. Consult with communities to Identify sites/areas for anti-erosion practices. Establish training programme	Training programme for anti-erosion on agricultural lands implemented
Output 3.1: Renewable energy installed to improve livelihoods and reduce deforestation (8,870 tons of CO2 mitigated over 10 years based on selection of solar for pilots)	Activity 3.1.1 Identification and prioritization of feasible community-based RE energy systems for productive uses and community energy needs;	Prepare TOR and identify RE pilots	Solar PV and Dryers pilot sites identified
	Activity 3.1.2 Design, engineering and financing of feasible RE technologies for piloting purposes; and	Prepare TOR. Design and implement PV and solar dryers pilots systems	Detailed engineering and implementation of solar PV and Dryers pilots
	Activity 3.1.3 Replication plan for the demonstrated renewable energy projects.	Prepare TOR. Develop replication plan through consultative process with key stakeholders	Replication plan designed and implemented
Output 3.2 Guidelines for eco-touristic development adopted	Activity 3.2.1 Support the Saint Lucian government in engaging with tourism sector operators and promoters in order to develop opportunities for eco-tourism in the area.	Prepare TORs, conduct consultations to identify, define and engage tourism sector operators and promoters to develop eco-tourism on the SE Coast	Eco-tourism development plan for the SE Coast
	Activity 3.2.2 Conduct of south-south exchanges with countries in the region who have experience in developing eco-tourism facilities, infrastructures, norms and standards.	Identify possibilities for south-south exchanges in developing eco-tourism facilities, infrastructure, norms and standards. Identify persons to benefit from exchanges.	12 persons benefitting from south-south exchanges
	Activity 3.2.3 Help the Government to develop environment and social management guidelines for all touristic facilities (existing and foreseen) in the region	Prepare TOR. Develop through a consultative process environment and social management guidelines for tourism in the SE Coast	Environment and Social guidelines for tourism in the SE Coast developed

<b>Component</b>	<b>Activities</b>	<b>Deliverables</b>	<b>Benchmarks</b>
Output 3.3: 5,000 ha are under sustainable agro-forestry practices (177,146 tons of CO <sub>2</sub> -eq mitigated over 20 years, or 8,857 tons of CO <sub>2</sub> -eq per year from the operated land use change from conventional agriculture to agroforestry; and 589,875 tons of CO <sub>2</sub> -eq mitigated over 20 years, or 29,494 tons of CO <sub>2</sub> -eq per year from practicing agroforestry)	Activity 3.3.1 The project will work with local communities to identify and pilot sustainable natural resource use practices, to reduce negative impacts of human activities on the environment, and to pilot innovative development pathways that help conserve healthy ecosystems.	Develop through consultations with the community to identify and pilot sustainable agro-forestry practices on agricultural lands. Pilot projects will be supplied with seedlings from Agriculture, Forestry or community nurseries	Pilots developed to have 5000 Ha of agricultural lands in the SE Coast under sustainable natural resource use practices
Output 3.4 Additional income generated from sustainable alternative livelihoods through equipment and training for production, transformation and commercialization of selected sectors	Activity 3.4.1 Engage with local agricultural producers and at the community level, to conduct technical training on sustainable agro-forestry practices, exploring climate smart agriculture, as well as proper solid and liquid waste disposal practices in crop and livestock production activities	Provide training to community level agricultural producers on sustainable agro-forestry practices, climate smart agriculture, and waste disposal practices for crop and livestock production.	80 community farmers trained in sustainable agricultural practices
	Activity 3.4.2 Conduct training on agro-ecology and biological pest management options through establishment of a demonstration plot in the area.	Provide training to community level agricultural producers on agro-ecological and biological pest management through demonstration plots	30 persons trained in agro-ecological and biological pest control methods
	Activity 3.4.3 Support local communities, private sector and producer groups in the identification and implementation of innovative and sustainable natural-resource based economic activities	Prepare TORs. Establish business incubator for 80 persons in agro-processing. HAACP and SOP training including those for bee keepers, broom makers and other agro-processors	80 persons trained in agro-processing for innovative and sustainable natural resource based economic activities
Output 3.5: Knowledge management, replication and	Activity 3.5.1 Communications, Education and Public Awareness (CEPA) strategy developed	Finalized CEPA strategy document	Dissemination of CEPA strategy to key stakeholders

<b>Component</b>	<b>Activities</b>	<b>Deliverables</b>	<b>Benchmarks</b>
increased awareness supported	Activity 3.5.2 Support knowledge management and replication at all levels in the project PSC, inter-agency, private sector and community levels	Minutes of inter-agency, PSC, community collaborative and consultative meetings with regards to sharing knowledge of similar initiatives and the production of replication documents	Replication documents for agroforestry, solar PV and solar dryers. Minutes of collaborative meetings of key stakeholders

## Appendix 7: Costed M&E plan

Monitoring and Evaluation (M&E) will be conducted utilising the results based management approach. The Results Framework provides performance and impact indicators for Project implementation along with their corresponding means of verification. The process of effective Monitoring and Evaluation of the components of the Project will be an on-going process and is based on the following strategic directions:

- An effective coordinating mechanism with roles and responsibilities clearly defined and under the aegis of the Department of Sustainable Development, which has lead responsibility for overall project execution.
- The monitoring and evaluation process is participatory, consultative and aimed at evaluating the level of success at achieving the defined targets. Evaluation will be based on the status of implementation, through identification of gaps, and the measurement of impacts and level of success in the application of best practices.

The M&E plan will include an inception workshop and report, Project implementation reviews, quarterly and annual review reports, and mid-term and final evaluations. The following sections outline the principal components of the M&E plan and M&E activities. The M&E plan for the Project will be presented and finalized in an Inception report following a collective fine-tuning of indicators, means of verification, and the full definition of implementation arrangements such as co-executing agencies, implementation partners and Project staff.

The indicative Monitoring and Evaluation Work Plan is provided below.

Type of M&E Activity	Responsible Parties	Time Frame	Costing
Project Inception Workshop and Report	<ul style="list-style-type: none"> <li>• National Project Director - DSD</li> <li>• Project Coordinator/PIU</li> <li>• UNEP</li> </ul>	Within first three months of Project start up	<b>Total: \$8,500</b> GEF \$2,000 Co-Finance \$6,500
Measurement of Means of Verification of Project results (outcome indicators and GEF tracking tools, including baseline data)	<ul style="list-style-type: none"> <li>• Project Steering Committee/ DSD/ National Project Director will oversee the hiring of specific studies and institutions/ agencies, and delegate responsibilities to relevant executing partners and /or Project Technical Committee members</li> <li>• National Project Director</li> <li>• Project Coordinator</li> <li>• PIU</li> </ul>	Start, mid and end of Project (during evaluation cycle); and annually.	<b>Total: \$129,375</b> GEF \$20,100 Co-Finance \$109,375
Measurement of Means of Verification for Project	<ul style="list-style-type: none"> <li>• Oversight by National Project</li> </ul>	Annually prior to ARR/PIR and as	<b>Total: \$95,149</b> GEF \$27,900

Type of M&E Activity	Responsible Parties	Time Frame	Costing
Progress (progress and performance indicators)	Director <ul style="list-style-type: none"> <li>Project Coordinator</li> <li>PSC and TC</li> </ul>	defined in annual work plans	Co-Finance \$67,249
Annual Risk Review (ARR) and Project Implementation Report (PIR)	<ul style="list-style-type: none"> <li>Project Director</li> <li>Project Coordinator</li> <li>PSC/TC</li> </ul>	Annually	<b>None</b>
Periodic Status/Progress Reports to UNEP	<ul style="list-style-type: none"> <li>National Project Director</li> <li>Project Coordinator</li> <li>TC</li> </ul>	Semi-annual/Quarterly	None
Project Steering Committee (PSC) meetings	<ul style="list-style-type: none"> <li>National Project Director</li> <li>Project Coordinator</li> <li>PSC members</li> <li>UNEP (annually)</li> </ul>	Semi-annually	<b>Total: \$34,200</b> GEF \$13,800 Co-Finance \$20,400
Reports of PSC meetings	<ul style="list-style-type: none"> <li>National Project Director</li> <li>Project Coordinator</li> </ul>	Semi-annually	<b>None</b>
Mid-term Review/ Evaluation	<ul style="list-style-type: none"> <li>National Project Director</li> <li>PSC/TC</li> <li>UNEP Task Manager</li> <li>National and External Consultants</li> </ul>	At the mid-point of Project implementation	<b>Total: \$38,200</b> GEF \$25,000 Co-Finance \$13,200
Terminal Evaluation	<ul style="list-style-type: none"> <li>UNEP Evaluation Office</li> <li>National Project Director</li> <li>PSC/TC</li> <li>UNEP Task Manager</li> <li>External Consultants (i.e. evaluation team)</li> </ul>	At least 3 months before the end of Project implementation	<b>Total: \$50,200</b> GEF \$35,000 Co-Finance \$15,200

Type of M&E Activity	Responsible Parties	Time Frame	Costing
	<ul style="list-style-type: none"> <li>• UNEP's Evaluation office</li> </ul>		
Audits	<ul style="list-style-type: none"> <li>• Government Accounting Department</li> <li>• National Project Director</li> <li>• Project Executing Agency</li> </ul>	Annually	<b>Total: \$21,000</b> GEF \$15,500 Co-Finance \$5,500
Project Final Report	<ul style="list-style-type: none"> <li>• National Project Director</li> <li>• Project Coordinator</li> <li>• PSC/TC</li> </ul>	Within 2 months of Project completion	None
Co-Financing Report	<ul style="list-style-type: none"> <li>• National Project Director</li> <li>• Project Coordinator</li> <li>• PSC/TC</li> </ul>	Within 1 month of PIR reporting period	None
Field Visits	<ul style="list-style-type: none"> <li>• National Project Director</li> <li>• Project Coordinator</li> <li>• PSC/TC</li> <li>• Representatives of Executing Partners (DSD)</li> <li>• UNEP</li> </ul>	As appropriate	<b>Total: \$25,500</b> GEF \$10,000 Co-Finance \$15,500
Publications of Lessons Learned and other Project Documents	<ul style="list-style-type: none"> <li>• National Project Director</li> <li>• Project Coordinator</li> <li>• Project Executing Agency</li> </ul>	Annually, part of semi-annual reports and Project Final Report	<b>Total: \$35,200</b> GEF \$13,800 Co-Finance \$21,400
<b>Total M&amp;E Plan Cost</b>			<b>Total: \$437,324</b> GEF \$163,100 Co-Finance \$274,324

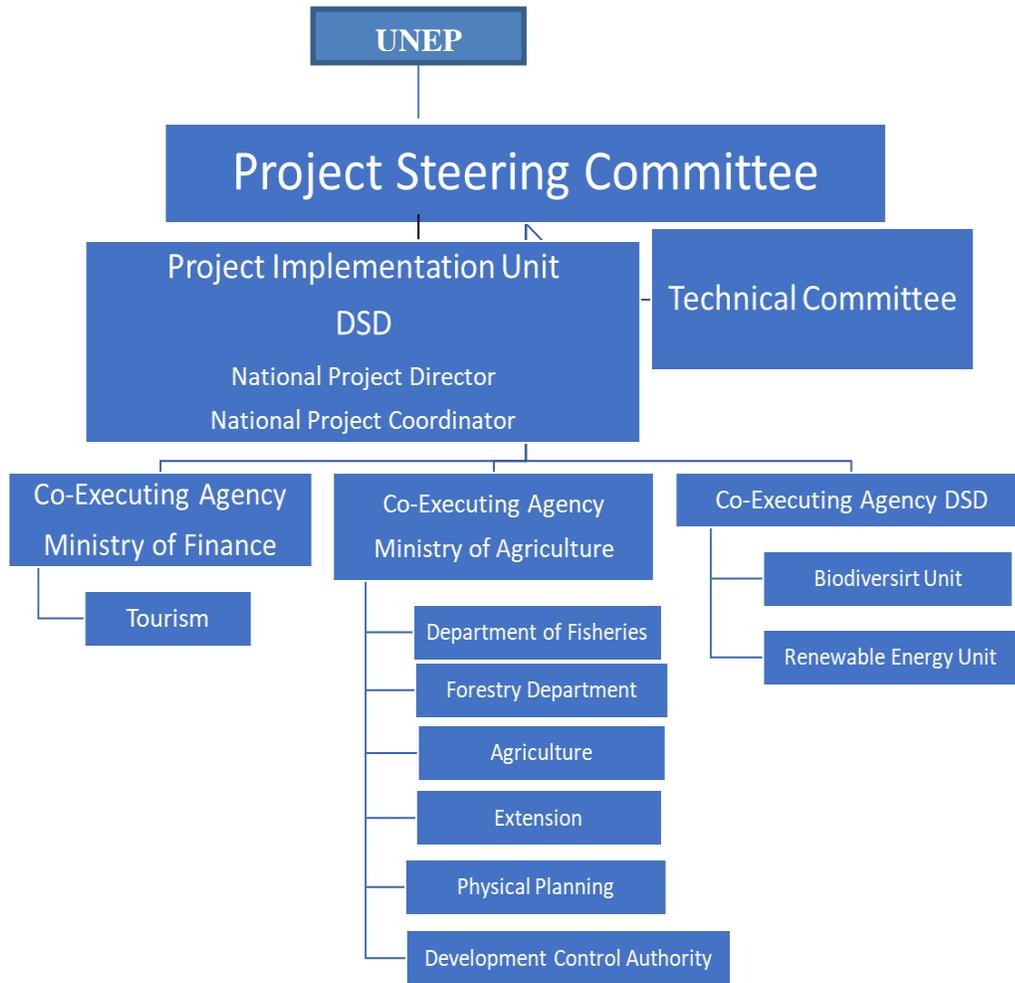
## Appendix 8: Summary of reporting requirements and responsibilities

Reporting requirements	Due date	Format appended to legal instrument as	Responsible Party
Procurement plan (goods and services)	2 weeks before project inception meeting	N/A	Project Coordinator
Inception Report	1 month after project inception meeting	N/A	Project Coordinator
Expenditure report with appropriate notes	Quarterly on or before 30 April, 31 July, 31 October, 31 January	in UNEP Anubis system	Project Coordinator
Cash Advance request and details of anticipated disbursements (to be submitted in Anubis along with the expenditure reports)	Quarterly or When required	in UNEP Anubis system	Project Coordinator
Progress report	Half-yearly on or before 31 January, 31 July	Annex 8 (to be uploaded in UNEP Anubis system)	Project Coordinator
Audited report for expenditures for year ending 31 December	Yearly on or before 30 June	N/A	Executing partner to contract firm
Inventory of non-expendable equipment	Yearly on or before 31 January	in UNEP Anubis system	Project Coordinator
Co-financing report (to be reported quarterly along with the GEF expenditure in the quarterly expenditure reports)	Yearly on or before 31 July	in UNEP Anubis system	Project Coordinator
Project implementation review (PIR) report	Yearly on or before 15 July	Annex 9	Project Coordinator, PSC
Minutes of steering committee meetings	Twice Yearly	N/A	Project Coordinator
Final report	2 months after project closure / technical completion	Annex 10	Project Coordinator
Final inventory of non-expendable equipment	2 months after project closure/ technical completion	in UNEP Anubis system	Project Coordinator
Equipment transfer letter	2 months after project closure/ technical completion	Annex 10	Project Coordinator
Final expenditure statement	3 months from project completion date	Annex 11	Project Coordinator
Mid-term evaluation	Midway through project	N/A	TM or EOU
Final audited report for expenditures of project	6 months from project completion date	N/A	Executing partner to contract firm
Independent terminal evaluation report (UNEP's Evaluation Office)	at the end of project or 6 months from project completion date	Appendix 9 to Annex 1	TM

\*ANUBIS is UNEP's project management system

**Appendix 9: Decision-making flowchart and organizational chart**

This project will be operated under the supervision of UNEP as Implementing Agency (IA), and the Department of Sustainable Development as Executing Agency (EA) with guidance and inputs from the Project Steering Committee (PSC) and Technical Advisory Group, as depicted in the project’s governance structure below.



## **Appendix 10: Terms of Reference**

### **Terms of Reference: National Project Coordinator**

**Title:** National Project Coordinator of the GEF Project: Integrated Ecosystem Management and Restoration of Forests on the South East Coast of Saint Lucia

**Functions:** National Project Coordinator (NPC), will have specific responsibility for project Outputs through day to day management of project implementation and overall responsibility for the management of the Project and the work of the Project Implementation Unit (PIU).

### **Tasks and responsibilities:**

#### **Administrative**

- prepare detailed draft annual work plans to be reviewed and approved by the Project Steering Committee (PSC);
- prepare in close collaboration with the lead agencies for each component, progress and financial reports as specified in the Project Document;
- ensure adherence to the Executing Agencies' administrative, financial and technical reporting requirements;
- ensure that financial allocations and expenditures are in accordance with UN financial rules and regulations;
- clear for approval administrative and financial reports, external communications and travel requests;
- provide guidance and supervision to the work of the staff of the PIU including with regard to the implementation of all activities specified in the Project Document, and ensure their timely completion;
- provide administrative guidance to, and oversight of, the work of the key partners, which operate under Memorandums of Understanding (MOUs) and Sub-contracts;
- prepare the draft agenda and draft annotated agenda for the PSC and TC meetings in accordance with the rules of procedure of those bodies;
- ensure that all discussion and information documents for meetings of the PSC and TC are prepared and distributed in a timely manner and in accordance with the rules of procedure for those bodies;
- oversee the allocation of funds in accordance with the directions of the Project Steering Committee;
- prepare in close consultations with all partners and executing agencies the annual PIR reports for transmission to the GEF; and
- assist the Evaluation and Oversight Unit as required in arrangements for the terminal evaluation.

#### **Technical**

- organize workshops, meetings, field visits including arranging logistics and providing reports as directed by the PSC;  
in consultation with UNEP and DSD establish Terms of Reference for MOUs, sub-contractors and consultants;
- monitor the work of the consultants and sub-contractors, based on their Terms of Reference, and evaluate the quality of the outputs;

- provide day-to-day technical inputs into project planning and implementation processes;
- following the guidance of the PSC, liaise on a day-to-day basis with co-executing agencies and partners regarding the implementation of components and activities and with donors involved in the project;
- facilitate the implementation of the project and promote exchanges of information among project participants;
- ensure, as far as practical, full participation of partners and stakeholders in the project, and prepare a strategy for strengthening partner and stakeholder participation; facilitate finalization and distribution of the project outputs and other documents;
- seek as required direction, and strategic guidance from the PSC regarding project implementation and execution of agreed activities over the entire period of the project;
- seek as required direction, and strategic guidance from the PSC regarding the establishment of timelines and milestones for provision of agreed outputs;
- prepare as required working documents to be submitted to meetings of the PSC and Technical Committee (TC)
- review all documents prepared by third parties for submission to the PSC and TC to ensure they meet the appropriate technical, scientific and English standards;
- represent the SE Coast Project at meetings organized by other organizations and programmes, when these are deemed relevant to and, or in support of the project;
- liaise with other relevant GEF and non-GEF projects with focus on those referred to in the Project Document;
- provide general leadership in terms of coordination of activities with other programmes and projects at global, regional and where feasible national, levels;

The NPC will also:

- Be the signing authority of requests to UNEP-GEF for disbursements of project funds.
- ensure the logistical, administrative and financial effectiveness of the Executing Partner (DSD) in fulfilling its roles set out above
- provide monitoring, supervision and guidance to the technical teams based in the project areas
- promote collaboration and coordination with the DSD and the GEF Implementing Agency, UNEP, other project executing agencies and other project stakeholders, accordingly.

#### **Qualifications:**

- advanced degree from University or equivalent Institution in environmental management, environmental sciences, forestry, land use planning, marine/water science or related fields;
- a minimum of ten years of working experience, five of which should be in the management or coordination of international, regional or national projects related to the environment;
- computer literacy required;
- knowledge of the UN system and procedures preferred;
- efficiency, competence and integrity as well as negotiating skills, tact and diplomacy are essential; and
- Fluency in spoken and written English is required.

**Appendix 11: Co-financing commitment letters from project partners (separate file)**

**Appendix 12: Endorsement letter of GEF National Focal Point (separate file)**

### Appendix 13: Draft procurement plan

UNEP Budget Line		List of Goods and Services Required	Budget	Year*	Brief description of anticipated procurement process**
1200	Consultants				
1202	National Consultant - Land Use Planner	Assessment of Land Use Policy and Governance and update	30,000	1	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National Consultant - GIS and GEONODE training specialist	GIS and GEONODE training and MIS synchronisation	40,000	1	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National Consultant -GIS and database management specialist	GIS and database management and monitoring	40,000	1	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National Consultant - Marine Ecologist	Marine Gap Analysis - baseline assessment and monitoring; zoning and demarcation plan	120,000	1 and 2	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National Consultant - Terrestrial Ecologist	Terrestrial Gap Analysis - baseline assessment and monitoring; zoning and demarcation plan	150,000	1 and 2	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National Consultant - Carbon Sequestration Specialist	REDD+ Gap Analysis - baseline assessment and monitoring; Blue Forest method of carbon benefits for rehabilitated coastlines, mangroves, sea grass beds	30,000	1 and 2	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National Consultant - Eco-Tourism Specialist	Develop guidelines for eco-tourism in the SE Coast that include environmental and social safeguards through a consultative process. Assist with the identification of south-south exchanges	50,000	2 to 4	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.

1202	National Consultant - Business Incubation Specialist	Conceptualize and develop and establish a business incubator for 80 agro-processors in the SE Coast	85,000	2 to 5	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National Consultant - Socio-economic Analyst	Develop detailed socio-economic profiles for SE coast community to assist with the selection process for project initiatives e.g. solar PV and dryers, incubator projects, etc.	50,000	2	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
1202	National consultant on Gender	Develop a detail gender analysis for the project interventions in the SE coast and propose gender mainstreaming options to project	15,000	3-5	CVs of at least three (3) experts will be reviewed. Depending upon qualifications, experience, geographical location and financial proposal, the consultant will be selected.
2100	Sub-Contracts (MOUs/LOAs for cooperating agencies				
2201	Sub-Contracts to Saint Lucia National Trust	Create at least 1 PPP for investment into the Saint Lucia National Conservation Fund promoting both economic development and Ecosystem Protection	60,000	1 to 5	Develop MOU between the entity and the Executing Agency; Direct sole source procurement pending relevant approvals are secured
2201	Sub-Contract to Forestry Department	1) Develop GEONODE and databases from data collected in terrestrial and REDD+ gap analyses; 2) assist with the creation and implementation of public awareness campaign on the benefits of healthy ecosystems; 3) ground truth mapped degraded areas for rehabilitation; 4) provide seedlings for rehabilitation efforts; 5) reforest degraded areas on public lands; 6) engage private farmers to undertake reforestation on their lands providing seedlings and expertise	1,055,000	1 to 5	Develop MOU between the entity and the Executing Agency; Direct sole source procurement pending relevant approvals are secured

2201	Sub-Contract to Fisheries Department	1) Develop GEONODE and databases from data collected in marine gap analyses; 2) assist with the creation and implementation of public awareness campaign on the benefits of healthy ecosystems; 3) ground truth degraded coastlines and mangrove areas for rehabilitation; 4) get seedlings for rehabilitation from Forestry nursery; 5) undertake targeted revegetation of coastlines, mangroves and sea grass beds with community groups providing seedlings and expertise	680,000	1 to 5	Develop MOU between the entity and the Executing Agency; Direct sole source procurement pending relevant approvals are secured
2201	Sub-Contract to Physical Planning	1) Develop GEONODE and databases from gap analyses and provide hosting and maintenance services; 2) acquire satellite imagery every 2 years for users of GEONODE; 3) update software and hardware requirements for GIS and GEONODE	185,000	1 to 5	Develop MOU between the entity and the Executing Agency; Direct sole source procurement pending relevant approvals are secured
2201	Sub-Contract to Agriculture	1) Train 170 stakeholders and community members in anti-erosion practices at demonstration sites and workshops; 2) promote and train agro-forestry on privately owned, community and riverine degraded and abandoned agriculture lands; 3) provide seedlings and expertise; 4) engage agricultural producers in SE Coast e.g. bee keepers, broom makers, etc. for training in climate smart agriculture, biological pest control, waste disposal; 5) encourage business incubator training for agro-processors	580,000	2 to 5	Develop MOU between the entity and the Executing Agency; Direct sole source procurement pending relevant approvals are secured
2201	Sub-Contract to Renewable Energy Division	1) Verify identification of solar PV and solar dryer sites 2) Prepare replication plan for demonstrated solar PV and Solar Dryer projects	25,545	2	Develop MOU between the entity and the Executing Agency; direct sole source procurement pending relevant approvals are secured

2201	Sub-Contract to Ministry of Tourism	1) Develop and adopt guidelines for eco-tourism development in the SE Coast that includes social and environment safeguards 2) Facilitate south-south exchanges	40,000	2 to 5	Develop MOU between the entity and the Executing Agency; direct sole source procurement pending relevant approvals are secured
2300	Sub Contracts to Private Firms				
2301	Solar PV and solar Dryer suppliers	Design engineering, installation, training of end-users, and maintenance of the solar PV and solar dryer systems	150,000	2 and 3	Invite financial and technical proposals from at least three (3) shortlisted candidates; appoint evaluation committee to assess proposals; select the best quality / value for money proposal
4200	Non-Expendable Equipment				
4201	Non-laboratory equipment	GIS GPS computers and software	55,000	1	Shopping method from at least three (3) retailers in Saint Lucia
4202	Laboratory Equipment	Portable Water quality testing equipment	6,000	1	Shopping method from at least three (3) retailers in Saint Lucia
4201	Non-laboratory equipment	Vehicle	40,000	1	Shopping method from at least three (3) retailers in Saint Lucia
<b>* Year goods and services to be procured</b>					
<b>** Based upon GOSL and UNEP procurement procedures</b>					

**Appendix 14: Tracking Tools**  
**(Separate files)**

**Appendix 15: EXACT methodology**  
**(Separate file)**

## Appendix 16: RE CO2 calculations

### CO2 Emissions Reduction Calculation

Under Outcome 3, “Sustainable socio-economic development pathways pursued in targeted communities”, the proposal is the implementation of three solar PV interventions.

Considering the direct avoided CO<sub>2</sub> emissions that will result from the installation and operation of the solar PV units to be installed under Component 3.1;

- Given a single solar PV system of 25 kW.
- Using the following calculation to determine the kWh of electricity produced by a solar PV system:

$$\begin{array}{ccccccc} \text{Size of Solar} & & \text{DC-AC} & & \text{Average} & & \text{Number of} \\ \text{PV System} & + & \text{conversion} & + & \text{hours of} & + & \text{days of solar} \\ \text{(kW).} & & \text{loss (derate} & & \text{sunlight.} & & \text{PV operation} \\ & & \text{factor).} & & & & \text{per year.} \end{array}$$

#### Assuming:

- A derate factor of 0.8.
- An average of 7 hours a day of sunlight
- 325 days of solar PV system operation per year.

Then, expected energy output (kWh) of a 25 kW solar PV unit over one year will be:

$$25 \text{ kW} \times 0.8 \times 7 \text{ hr} \times 325 \text{ days} = 45,500 \text{ kWh over the first year of the project.}$$

For the 10 year life of the solar PV systems the energy output would be:

$$45,500 \text{ kWh/year} \times 10 \text{ years} = \mathbf{455,000 \text{ kWh.}}$$

Using the emissions factor  $7.03 \times 10^{-4}$  metric tons CO<sub>2</sub> /kWh<sup>7</sup>,

Estimated carbon emissions avoided through the operation of one 25 kW solar PV system will be:

$$455,000 \text{ kWh} \times 7.03 \times 10^{-4} \text{ metric tons CO}_2/\text{kWh}$$

$$= \mathbf{319.865 \text{ metric tons of CO}_2 \text{ over a ten-year period.}}$$

The 3 solar PV systems will have a total directly avoided CO<sub>2</sub> emissions of:

$$= 3 \times 319.865 \text{ metric tons of CO}_2$$

$$= \mathbf{959.595 \text{ metric tons of CO}_2 \text{ over a ten-year period.}}$$

The indirect avoided CO<sub>2</sub> emissions is calculated as a factor of 3 which is:

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<sup>7</sup> Emission factor as per EPA (2017) AVERT, U.S. national weighted average CO<sub>2</sub> marginal emission rate, year 2016 data. US Environmental Protection Agency, Washington, D.C. as reference on <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

$$= 3 \times 959.595 \text{ metric tons of CO}_2$$

$$= \mathbf{2,878.785 \text{ metric tons of CO}_2} \text{ over a ten-year period.}$$

***The Solar PV systems calculated total avoided CO<sub>2</sub> emissions of 3,838.38 metric tons of CO<sub>2</sub> over a ten-year period.***

The solar dryers proposed for the project are rated to replace 5Kw energy dryers. It is proposed that 18 solar dryers be deployed throughout the communities of the SE Coast by the project. The avoided CO<sub>2</sub> emissions would therefore be:

Then, expected energy output (kWh) of a 5 kW solar dryer unit over one year will be:

$$5 \text{ kW} \times 0.8 \times 7 \text{ hr} \times 355 \text{ days} = 9,940 \text{ kWh over the first year of the project.}$$

For 10 year life of the solar dryer system the energy output would be:

$$9,940 \text{ kWh/year} \times 10 \text{ years} = \mathbf{99,400 \text{ kWh.}}$$

Using the emissions factor  $7.03 \times 10^{-4}$  metric tons CO<sub>2</sub> /kWh,

Estimated carbon emissions avoided through the operation of one 3 kW solar dryer system will be:

$$99,400 \text{ kWh} \times 7.03 \times 10^{-4} \text{ metric tons CO}_2 / \text{kWh}$$

$$= \mathbf{69.878 \text{ metric tons of CO}_2} \text{ over a ten-year period.}$$

The 18 solar dryer systems will have a total avoided CO<sub>2</sub> emissions of:

$$= 18 \times 69.878 \text{ metric tons of CO}_2$$

$$= \mathbf{1,257.808 \text{ metric tons of CO}_2} \text{ over a ten-year period.}$$

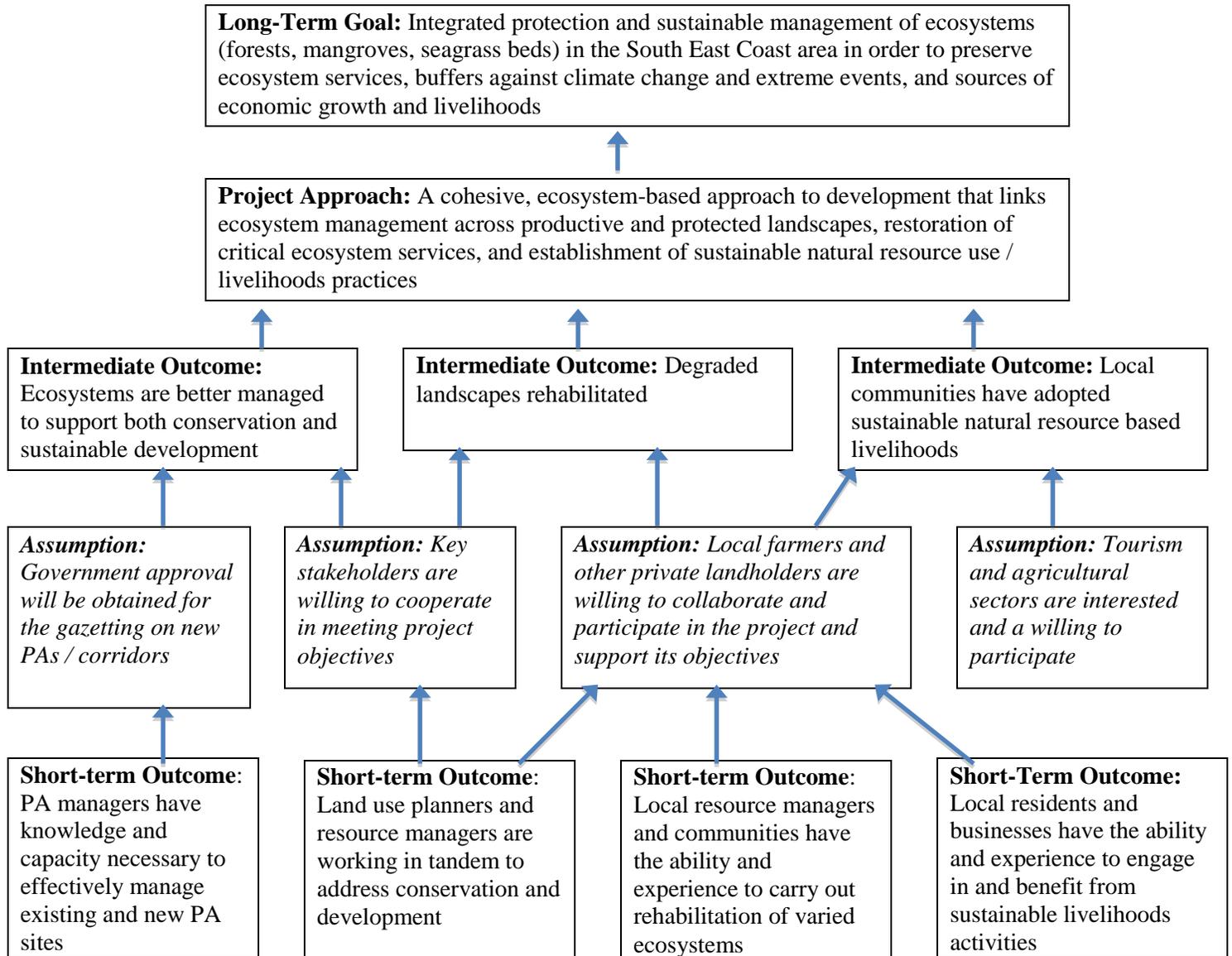
The indirect avoided CO<sub>2</sub> emissions is calculated as a factor of 3 which is:

$$= 3 \times 1,257.808 \text{ metric tons of CO}_2$$

$$= \mathbf{3,773.423 \text{ metric tons of CO}_2} \text{ over a ten-year period.}$$

***The Solar Dryers calculated total avoided CO<sub>2</sub> emissions of 5,031.231 metric tons of CO<sub>2</sub> over a ten-year period.***

## Appendix 17: Theory of Change



## Appendix 18: Social and Environmental safeguards

### UNEP Environmental, Social and Economic Review Note (ESERN)

#### I. Project Overview

<b>Identification</b>	9406
<b>Project Title</b>	<i>Integrated Ecosystem Management and Restoration of Forests on the South East Coast of Saint Lucia</i>
<b>Managing Division</b>	<i>Ecosystem Division</i>
<b>Type/Location</b>	<i>National</i>
<b>Region</b>	LATIN AMERICA AND THE CARIBBEAN
<b>List Countries</b>	SAINT LUCIA
<b>Project Description</b>	<p><i>Saint Lucia's rich coast has attracted industry and economic activities. For the most part, such development has been characterized by haphazard and undirected planning, as evidenced by the growing threat to the sustainability of fragile coastal and marine ecosystems. With a growing population, the development of the island's narrow coastal strip continues to increase. Large-scale projects are sometimes constructed in areas of biodiversity significance, resulting in the loss of habitats and endemic species and a general decline in biological resources. Tourism is the main economic pillar and catalyst for economic development, and located primarily in coastal areas; resource use in the sector is high.</i></p> <p><i>In the South East Coast, there is an opportunity to intervene before irreversible environmental damage is incurred. The area houses two recognized Important Biodiversity Area (IBAs), namely the "Pointe Sable" and the "Mandele Dry Forest" areas, both of which are home to a few endemic and endangered species and habitats and fragile ecosystems (mangroves, low-lying wetlands). The South East Coast also houses the Quillesse forest reserve and some remaining stands of coastal forest. However, this area is also home to intensive agriculture and growing industrial activities (e.g. factories, breweries, airport in Vieux Fort), and is gradually opening up to higher level development, particularly in the real estate and tourism sectors. This creates both a challenge and an opportunity, as large-scale infrastructure and investments are being planned without due regard to environmental sustainability.</i></p> <p><i>The main problem that the project seeks to address is the lack of integrated protection and sustainable management of ecosystems (forests, mangroves, seagrass beds) in the South East Coastal area, which provide livelihoods, ecosystem services, buffers against climate change and extreme events, and sources of economic growth. The project proposes a three-pronged solution to address the problem. First, the project will establish effective ecosystem management mechanisms. Second, the project will seek to rehabilitate and further protect degraded landscapes, based on improved mechanisms for land use planning and collaborative investment decision-making. Third, the project will invest in working with communities to support sustainable natural-resource based livelihoods and will support communities to access resources, including the introduction of renewable energy technologies at the community level, capacity building, and inputs to successfully engage in such activities.</i></p>
<b>Estimated duration of project:</b>	60 months
<b>Estimated cost of the project:</b>	4,428,145 (GEF funds)

**II. Environmental Social and Economic Screening Determination**

**A. Summary of the Safeguard Risks Triggered**

Safeguard Standard Triggered by the Project	Impact of Risk <sup>8</sup> (1-5)	Probability of Risk (1-5)	Significance of Risk (L, M, H)
SS 1: Biodiversity, natural habitat and Sustainable Management of Living Resources	1	1	L
SS 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes	2	2	L
SS 3: Safety of Dams	1	1	L
SS 4: Involuntary resettlement	1	1	L
SS 5: Indigenous peoples	1	1	L
SS 6: Labor and working conditions	1	1	L
SS 7: Cultural Heritage	1	1	L
SS 8: Gender equity	1	1	L
SS 9: Economic Sustainability	1	1	L
Additional Safeguard questions for projects seeking GCF-funding (Section IV)	1	1	L

**B. ESE Screening Decision<sup>9</sup>** (Refer to the UNEP ESES Framework (Chapter 2) and the UNEP’s ESES Guidelines.)

Low risk  Moderate risk  High risk  Additional information required

**C. Development of ESE Review Note and Screening Decision:**

Prepared by: Name: David Lee Date: July 20, 2017

Safeguard Advisor: Name: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager: Name: \_\_\_\_\_ Date: \_\_\_\_\_

<sup>8</sup> Refer to UNEP Environment, Social and Economic Sustainability (ESES): Implementation Guidance Note to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High).

<sup>9</sup> **Low risk:** Negative impacts negligible: no further study or impact management required.

**Moderate risk:** Potential negative impacts, but less significant; few if any impacts irreversible; impact amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop a ESEMP. Straightforward application of good practice may be sufficient without additional study.

**High risk:** Potential for significant negative impacts, possibly irreversible, ESEA including a full impact assessment may be required, followed by an effective safeguard management plan.

<b>D. Recommended further action from the Safeguard Advisor:</b>

**III. ESES Principle and Safeguard checklist**

(Section III and IV should be retained in UNEP)

<b>Precautionary Approach</b>
The project will take precautionary measures even if some cause and effect relationships are not fully established scientifically and there is risk of causing harm to the people or to the environment.
<b>Human Rights Principle</b>
The project will make an effort to include any potentially affected stakeholders, in particular vulnerable and marginalized groups; from the decision making process that may affect them.
The project will respond to any significant concerns or disputes raised during the stakeholder engagement process.
The project will make an effort to avoid inequitable or discriminatory negative impacts on the quality of and access to resources or basic services, on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups. <sup>10</sup>

<b>Screening checklist</b>	<b>Y/N/ Maybe</b>	<b>Comment</b>
<b>Safeguard Standard 1: Biodiversity, natural habitat and Sustainable Management of Living Resources</b>		
Will the proposed project support directly or indirectly any activities that significantly convert or degrade biodiversity and habitat including modified habitat, natural habitat and critical natural habitat?	N	The project will establish effective ecosystem management mechanisms; rehabilitate and further protect degraded landscapes, based on improved mechanisms for land use planning and collaborative investment decision-making. In addition, the project invest in working with communities to support sustainable natural-resource based livelihoods and will support communities to access resources, including the introduction of renewable energy technologies at

<sup>10</sup> Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to “women and men” or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

		the community level, capacity building, and inputs to successfully engage in such activities.
Will the proposed project likely convert or degrade habitats that are legally protected?	N	
Will the proposed project likely convert or degrade habitats that are officially proposed for protection? (e.g.; National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)	N	
Will the proposed project likely convert or degrade habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	
Will the proposed project likely convert or degrade habitats that are recognized- including by authoritative sources and /or the national and local government entity, as protected and conserved by traditional local communities?	N	
Will the proposed project approach possibly not be legally permitted or inconsistent with any officially recognized management plans for the area?	N	
Will the proposed project activities result in soils deterioration and land degradation?	N	
Will the proposed project interventions cause any changes to the quality or quantity of water in rivers, ponds, lakes or other wetlands?	N	
Will the proposed project possibly introduce or utilize any invasive alien species of flora and fauna, whether accidental or intentional?	N	
<b>Safeguard Standard 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes</b>		
Will the proposed project likely result in the significant release of pollutants to air, water or soil?	N	
Will the proposed project likely consume or cause significant consumption of water, energy or other resources through its own footprint or through the boundary of influence of the activity?	N	
Will the proposed project likely cause significant generation of Green House Gas (GHG) emissions during and/or after the project?	N	To the contrary, the project will support reduction of emissions
Will the proposed project likely generate wastes, including hazardous waste that cannot be reused, recycled or disposed in an environmentally sound and safe manner?	N	
Will the proposed project use, cause the use of, or manage the use of, storage and disposal of hazardous chemicals, including pesticides?	N	
Will the proposed project involve the manufacturing, trade, release and/or use of hazardous materials subject to international action bans or phase-outs, such as DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants or the Montreal Protocol?	N	
Will the proposed project require the procurement of chemical pesticides that is not a component of integrated pest management (IPM) <sup>11</sup> or integrated vector management (IVM) <sup>12</sup> approaches?	N	

<sup>11</sup> "Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human

Will the proposed project require inclusion of chemical pesticides that are included in IPM or IVM but high in human toxicity?	N	
Will the proposed project have difficulty in abiding to FAO's International Code of Conduct <sup>13</sup> in terms of handling, storage, application and disposal of pesticides?	N	
Will the proposed project potentially expose the public to hazardous materials and substances and pose potentially serious risk to human health and the environment?	N	
<b>Safeguard Standard 3: Safety of Dams</b>		
Will the proposed project involve constructing a new dam(s)?	N	
Will the proposed project involve rehabilitating an existing dam(s)?	N	
Will the proposed project activities involve dam safety operations?	N	
<b>Safeguard Standard 4: Involuntary resettlement</b>		
Will the proposed project likely involve full or partial physical displacement or relocation of people?	N	
Will the proposed project involve involuntary restrictions on land use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	
Will the proposed project likely cause restrictions on access to land or use of resources that are sources of livelihood?	N	Communities using resources for their livelihoods will be trained in the sustainable management and harvest of those resources
Will the proposed project likely cause or involve temporary/permanent loss of land?	N	
Will the proposed project likely cause or involve economic displacements affecting their crops, businesses, income generation sources and assets?	N	To the contrary, sustainable livelihoods approaches will be supported
Will the proposed project likely cause or involve forced eviction?	N	
Will the proposed project likely affect land tenure arrangements, including communal and/or customary/traditional land tenure patterns negatively?	N	
<b>Safeguard Standard 5: Indigenous peoples<sup>14</sup></b>		
Will indigenous peoples be present in the proposed project area or area of influence?	N	
Will the proposed project be located on lands and territories claimed by indigenous peoples?	N	
Will the proposed project likely affect livelihoods of indigenous peoples negatively through affecting the rights, lands and territories claimed by them?	N	

health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms <http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/ipm/en/>

<sup>12</sup> "IVM is a rational decision-making process for the optimal use of resources for vector control. The approach seeks to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease-vector control. The ultimate goal is to prevent the transmission of vector-borne diseases such as malaria, dengue, Japanese encephalitis, leishmaniasis, schistosomiasis and Chagas disease." ([http://www.who.int/neglected\\_diseases/vector\\_ecology/ivm\\_concept/en/](http://www.who.int/neglected_diseases/vector_ecology/ivm_concept/en/))

<sup>13</sup> Find more information from [http://www.fao.org/fileadmin/templates/agphome/documents/Pests\\_Pesticides/Code/CODE\\_2014Sep\\_ENG.pdf](http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf)

<sup>14</sup> Refer to the Toolkit for the application of the UNEP Indigenous Peoples Policy Guidance for further information.

Will the proposed project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	
Will the project negatively affect the development priorities of indigenous peoples defined by them?	N	
Will the project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	N	
Will the project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	
<b>Safeguard Standard 6: Labor and working conditions</b>		
Will the proposed project involve the use of forced labor and child labor?	N	
Will the proposed project cause the increase of local or regional un-employment?	N	
<b>Safeguard Standard 7: Cultural Heritage</b>		
Will the proposed project potentially have negative impact on objects with historical, cultural, artistic, traditional or religious values and archeological sites that are internationally recognized or legally protected?	N	The project area does include archeological sites of significance. These sites will, however, not be affected by project activities.
Will the proposed project rely on or profit from tangible cultural heritage (e.g., tourism)?	N	
Will the proposed project involve land clearing or excavation with the possibility of encountering previously undetected tangible cultural heritage?	N	
Will the proposed project involve in land clearing or excavation?	N	
<b>Safeguard Standard 8: Gender equity</b>		
Will the proposed project likely have inequitable negative impacts on gender equality and/or the situation of women and girls?	N	Project activities, especially under Component 3, will ensure that there is gender equity.
Will the proposed project potentially discriminate against women or other groups based on gender, especially regarding participation in the design and implementation or access to opportunities and benefits?	N	
Will the proposed project have impacts that could negatively affect women's and men's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?	N	
<b>Safeguard Standard 9: Economic Sustainability</b>		
Will the proposed project likely bring immediate or short-term net gain to the local communities or countries at the risk of generating long-term economic burden (e.g., agriculture for food vs. biofuel; mangrove vs. commercial shrimp farm in terms of fishing, forest products and protection, etc.)?	N	
Will the proposed project likely bring unequal economic benefits to a limited subset of the target group?	N	

#### IV. Additional Safeguard Questions for Projects seeking GCF-funding

<b>Community Health, Safety, and Security</b>			
Will there be potential risks and negative impacts to the health and safety of the Affected Communities during the project life-cycle?	N		
Will the proposed project involve design, construction, operation and decommissioning of the structural elements such as new buildings or structures?	N		
Will the proposed project involve constructing new buildings or structures that will be accessed by public?	N		
Will the proposed project possibly cause direct or indirect health-related risks and impacts to the Affected Communities due to the diminution or degradation of natural resources, and ecosystem services?	N		
Will the proposed project activities potentially cause community exposure to health issues such as water-borne, water-based, water-related, vector-borne diseases, and communicable diseases?	N		
In case of an emergency event, will the project team, including partners, have the capacity to respond together with relevant local and national authorities?	N		
Will the proposed project need to retain workers to provide security to safeguard its personnel and property?	N		
<b>Labor and Supply Chain</b>			
Will UNEP or the implementing/executing partner(s) involve suppliers of goods and services who may have high risk of significant safety issues related to their own workers?	N		

## Appendix 19: Key Biodiversity Areas

### **1. Point Sables KBA/IBA**

Country/territory: St Lucia

IBA Criteria met: A1, A4i, A4iii, B4i, B4ii (2007)

Area: 3,155 ha

Protection status: Unknown

**Site Description:** The area is approximately 774 hectares in size and located along the south to southeast coast. Terrestrially it comprises of a narrow coastal strip and the Moule-a-Chique peninsula. The terrain is low to undulating, with the highest point being at Moule-a-Chique (223 metres), at the southern tip of St. Lucia. The marine area is proportionately larger, consisting of long sandy beaches, the Savannes Bay and Mankòtè Mangroves, Scorpion Island, the Maria Islands, and several coral reefs and nearshore islands. The vegetation is varied with a predominance of tropical dry forest. The area also includes several historical sites, including old fort sites, a lighthouse and a World War II-vintage radar tracking station.

**Key Biodiversity:** Several bird species have been recorded for the entire area. At least thirty-two species were observed at Savannes Bay during a study conducted by Robert L. Norton in 1989. Several residents were identified, including one endemic species, the St. Lucia Black Finch (*Melanospiza richardsoni*). A number of them were also recorded nesting among the mangrove and other ground vegetation. Some of those include Green-backed Heron (Green Heron) and Yellow-crowned Night Heron. Many migrants have also been recorded in the area, for example egrets, herons, kingfishers, warblers, ducks, and waders. The extreme northern end encompasses a swamp occupying an area of approximately 6 acres. This swamp is almost always flooded with water of slightly brackish nature partially fed by the ocean tides. It attracts several bird species almost throughout the year. Many species of ducks, herons, sand pipers, plovers, egrets, gallinules, rails and other shorebirds and waterfowl find a temporary place of sojourn at the pond. Many of these species are seasonal migrants. This IBA is very important for migrants and water birds as the largest wetlands in St. Lucia occur in this area.

Non-bird biodiversity: The Pointe Sable National area serves as the habitat for five endemic species of herpetofauna, the most note-worthy of which are two species found on the Maria Islands and nowhere else in the world: the St. Lucia Racer (*Llophis ornatus*) and the St. Lucia Whiptail (*Cnemidophorus vanzoi*). Maria Major is free of rats and mongooses and supports 5 endemic reptile species, plus several non-endemics. Marine life is just as important. Juvenile fishes are very common among the mangrove and seagrass areas. This habitat particularly in the Mankote area is dominated by three mangrove types. They are, (*Rhizophora mangle*), (*Avicennia germinans*), and (*Laguncularia racemosa*). A fourth mangrove type, (*Conocarpus erecta*) also exist, but it is quite rare.

**Pressure/threats to key biodiversity:** Several elements both individually and collectively pose considerable threats to the area. Some are natural occurrences while others are human induced. Those threats include: Natural disasters – The Island is prone to hurricanes and storms, and these events may have catastrophic effects on the natural resources of the area. Non-native predators – small Indian mongoose; black, brown rats Charcoal production – The mangroves are situated within an area of rapid commercial development, and are subjected to several impacts. In the Mankoté end, harvesting for charcoal is undertaken by the Aupicon Charcoal Producers Group. However, indiscriminate harvesting of the mangrove by unauthorized persons is common and conflicts with the sustainable management approach used by the Aupicon group. Mining – Mining and quarrying activities nearby result in the discharge of chemicals and other industrial waste into the immediate environment. Pollution – Indiscriminate disposal of household garbage by nearby residents may cause pollution and further degradation to the resources. Unemployment – It is important to know the socioeconomic context in which the proposed management area will be located; unemployment and poverty levels in the immediate

surroundings of any area with abundant harvestable natural resources can be an indicator of the threats and challenges its managers will face. Over ambitious investors – At the same time at the other end of the economic scale, the presence of investors flush with money may present threats and challenges of a more serious kind; construction of hotels, golf courses and piers on the shoreline in the name of “development” has the potential to negatively impact or eliminate coastal ecosystems. Deforestation – Deforestation of upland areas may subsequently cause destruction to the coastal areas. These ecosystems are the primary habitat for fish (sea grass, mangroves and coral reefs) are being slowly degraded by the effects of deforestation in upland areas. Illegal Hunting - Illegal hunting of sea urchin harvesting for local consumption and export to Martinique is common.

**Conservation responses/actions for key biodiversity:** Within the Mankoté area, technical assistance and training was provided to the members of the ACAPG by the Caribbean Natural Resources Institute (CANARI) for the production of charcoal, by proper management of the mangrove. Only the 16 ACAPG members could legally cut mangroves. A trained member would measure the stems and give the OK to cut suitable trees in the approved method to ensure sustainability. There has been monitoring of the St. Lucia Whiptail carried out by the Forestry Department and Durrell Wildlife Conservation Trust on Maria Islands. There has also been monitoring of nesting seabirds on Maria Islands, conducted by the Forestry Department.

**Protected Areas:** Nature Reserves – Maria Islands. These sites were declared nature reserves in 1982, and are contained within the IBA. Marine Reserves – Anse Pointe Sable to Mankoté Mangrove, Savannes Bay Mangrove, Maria Islands’ Reef – declared reserves in 1986; Reef from Ceasar Point to Mathurin Point – declared reserves in 1990. These sites are also found within the IBA.

**Habitat and land use:** Tropical dry forest is predominant, but the overall vegetation is varied being grassland, coconut groves, mangroves and scrub forest. In addition there are four coastal ecosystem types present namely seagrass beds, mangroves, coral reefs, and nearshore islands. There are permanent settlements and human habitation within the boundaries of the area. Significant amounts of mangrove are found in the Savannes bay and Mankoté areas, constituting significant portions of the total wetland area present. These wetlands are situated within an area of rapid commercial development, and are subject to several impacts. There are signs of past agricultural activity as evidenced by patches of coconut plantations and the mangroves are being harvested for charcoal. There are also small scale mining and quarrying activities nearby. Tourism and recreation is a major land use activity, other minor activities include fisheries, pasture land, nature conservation and research. The Nature and marine Reserves are owned by the state.

**Recommended citation:** BirdLife International (2018) Important Bird Areas factsheet: Point Sables. Downloaded from <http://www.birdlife.org> on 30/01/2018.

## **2. Mandele Dry Forest**

Country/territory: St Lucia

IBA Criteria met: A1, A2, B4i (2007)

Area: 826 ha

Protection status: Unknown

**Site Description:** The Mandele dry forest is located on the eastern part of St. Lucia encompassed by Ravine Pascal to the north, Ravine Bourge to the south and on the northwest by the Dennery Water Works Forest Reserve. It is about 826 ha.

**Key Biodiversity:** The Mandele dry forest has much to offer in terms of wildlife. The significance cannot be underestimated particularly with its association to endemic species and sub-species. In addition to the White-breasted Thrasher, other species of great significance include the St. Lucia Oriole, The St. Lucia Black Finch, the St Lucia Peewee, the Antillean Euphonia, Bridled quail dove, Grey Trembler, Lesser Antillean flycatcher, three hummingbird species, Pearly-eyed and Scaly-breasted Thrashers and possibly the Rufous Nightjar. At some times of the year St Lucia Amazons forage at this site too, mainly in the upper elevations. Migratory birds species furthermore nest and roost in different locations in the area. The Magnificent Frigate bird is one such species.

Non-bird biodiversity: The agouti is found in the area. Also found are the boa constrictor and the fer-de-lance. Among the plants, the endangered Latanier palm is very significant to the area.

**Pressure/threats to key biodiversity:** Threats include: Deforestation – It is worth noting that indiscriminate harvesting of sapling poles for broom handles is slowly depleting the forest vegetation .A small portion along the Praslin River is under agricultural cultivation with bananas, coconuts and to a lesser extent cashew nuts and corn. Fires, usually contained within relatively small areas (few ha) are common Non-native predators – small Indian mongoose; black, brown rats Pollution – Application of agro-chemicals to crops maybe causing chemical pollution to the lower Praslin River, which discharges into Praslin Bay. The influx of those chemicals may be causing adverse effects to both freshwater and marine life Commercial Development – The development of a massive hotel will result in a significant depletion of the thrasher’s habitat.

**Conservation responses/actions for key biodiversity:** In 2006 St Lucia Forestry Department (SLFD), Ministry of Agriculture, and The Durrell Wildlife Conservation Trust (DW) and carried out a two month project, funded by the Design Construction Group (DCG), to develop a monitoring programme and carry out a baseline survey of the White-breasted Thrasher (WBT) *Ramphocinclus brachyurus sanctaeluciae*. The data from the survey were used to assess the potential impact of the Le Paradis hotel and golf course. Monitoring will be ongoing.

**Protected Areas:** Marine Reserve – Praslin Mangroves. This site was declared a marine reserve in 1986; Reef from Anse Galet to beach at Anse Cochon – declared a marine reserve in 1990. All sites are found within the IBA Projected PAs – Praslin Island, Nature reserve within DCG development area. There are also Crown Lands at this site (e.g. around Bordelais) which may have the potential for future conservation management. The Praslin mangroves and Frigate Islands are protected areas adjacent to the proposed IBA

**Habitat and land use:** The vast majority of the area is covered by scrub forest, giving way to a strip of natural tropical moist forest in the interior region. Towards the coast is primarily xerophytic vegetation which includes cacti. Agriculture is a minor activity in the area, however, there is a major hotel under development in the area. A large section of the area is under scrub forest and not utilized. Majority lands in this IBA are privately owned. Other areas to the southwest are under intensive agriculture. The Praslin River to the south and Deux Branches Ravine in the north are important water sources to the area. The area is mostly under private ownership and a significant chunk of it is currently being altered to accommodate the construction of a hotel. There is however, a portion of the area that is owned by the state and currently under natural forest. The area has served an ecotouristic purpose by means of a nature trail (now partly covered by the hotel development area), which was managed by the St. Lucia National Trust. Bird watching was also another activity carried out on the site.

**Recommended citation:** BirdLife International (2018) Important Bird Areas factsheet: Mandele Dry Forest. Downloaded from <http://www.birdlife.org> on 30/01/2018.