IWEco National Sub-Project 1.6

Addressing Problems of Land Degradation and Ecosystem Degradation in the Upper Reaches of the Soufriere Watershed in Saint Lucia

SAINT LUCIA
Appendix 29

COVER SHEET

- Name of small-scale intervention: **Addressing Problems of Land Degradation and Ecosystem Degradation in the Upper Reaches of the Soufriere Watershed in Saint Lucia**
- Name of Lead Partner Organization:
  a) Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Cooperatives: Department of Forests and Lands Resources.
- Contact person:
  a) Adams Toussaint, Chief Forest Officer, Department of Forestry
- IWEco Project focus: Land Degradation
- Total area covered: Targeted interventions for land degradation mitigation over 90 hectares 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)
- Duration of sub-project: 36 months
- Amount of GEF grant: **$729,685** USD
- Amount of Co-financing: **$1,475,761** USD
- Total funding: **$2,205,446** USD

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1 PROJECT IDENTIFICATION

1.1 Project Summary

Soufriere is known as the tourism "Mecca" of St. Lucia and its receiving waters support important marine based tourism as well as fishing which in recent times has been on the decline. Although this is an area rich in biodiversity (St. Lucia's biodiversity is understudied but there are over 1,300 known species of plants (including seven endemics), over 150 species of birds (including five endemics), 250 reef fish species, 50 coral species and a number of endemic beetles) and the site of the Pitons World Heritage Site, the town of Soufriere and the surrounding communities are among the most economically vulnerable in St. Lucia. In fact the Caribsave Climate Change Risk Atlas (CCCRA) Project[1] identifies the cycle of poverty and vulnerability to climate change as being very apparent in Soufriere and recommends that adaptation interventions also address poverty.

The causal factors of the deteriorating economic conditions within the wider watershed have been determined to be its environmental and economic vulnerability. These deteriorating economic conditions have contributed to unsustainable practices which have contributed significantly to an increase in erosion in the upper watershed and an increasing incidence of flooding and the resultant poor water quality of the receiving waters of the Soufriere River. Other factors which contribute to poor water quality include the indiscriminate disposal of liquid and solid waste.

Reforestation initiatives are not new to the area and an important project related to the post-Hurricane Tomas recovery efforts is the **Saint Lucia Forest Restoration and Rehabilitation Project** funded by the Government of Australia. The sub-project entitled ***mitigating the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population,*** recognizes the need to address livelihood issues in tandem with conservation. It will introduce innovative solutions for erosion control, agricultural non-point source mitigation, land stabilization and runoff/flood control to degraded sites located within the Fond St. Jacques / Migny area in the upper reaches of the Soufriere watershed.

The approach adopted will be highly participatory, building on one of the notable successes of the St. Lucia's GEF IWCAM Demonstration project. The approach adopted was that of **community involvement in planning and implementation of the project**. This enhanced the ability of project management to address community priorities by focusing on the critical needs of the communities with respect to water quality and reliability, Land degradation, landscape restoration and facilitating stakeholder participation by using local knowledge and skills. St. Lucia's IWEco Project will involve at least 30 farmers, agricultural and forestry extension officers and community representatives. It will entail on-the-ground interventions to restore landscape; thus reducing the scale of land degradation and soil erosion. The interventions will be undertaken in a phased manner such that the farmers are able to sustain their livelihoods. Where this is not possible with respect to existing productions the project will seek to introduce alternatives farming and sustainable forest management, production and promotion of biodiversity friendly goods and services ((the sustainable management of non-timber forest products (NTFPs), ecotourism, establishment of a fly nursery, cut flowers and agouti farming so far identified as possibilities)). The intervention will also support the development of a protocol for scientific research with respect to LD, IW, LR and socioeconomic indicators in support of the project objectives, and will

[1] Caribsave Climate Change Risk Profile for Saint Lucia

provide the necessary training to targeted stakeholders in SLM techniques as well as appropriate business models required for sustainable livelihoods. Such an initiative was undertaken under the GEF IWCAM demonstration project whereby training was made available for members of the community in certain marketable skills based on the innovations developed under that project. The UNDP Small Grants Project will also provide support in building capacity of stakeholders and other community members toward the development of livelihood projects.

As it relates to the wider Soufriere watershed, the project lead by the Forestry Department of the Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Cooperatives and supported by the Department of Sustainable Development in the Ministry of Education, Innovation Gender Relations and Sustainable Development, will collaborate with entities such as the St. Lucia Solid Waste Management Authority ((SMMA), the St. Lucia Hotel and Tourism Association (SLHTA) and private sector entities involved in waste recycling to raise awareness and change attitudes with respect to the impact of poor liquid and solid waste disposal on the very fragile but of high economic value, ecosystems that comprise the watershed. This also builds on yet another success of the GEF IWCAM project as **increased understanding and appreciation of watersheds and the management required for improved water quality** was viewed as a critical achievement of this Demonstration Project. The ***Trust for the Management of Rivers*** a community-based organisation which was established under the IWCAM will be one of the local resources to be drawn upon in the IWEco awareness raising activities.

Table of Regional Components, Project Outcomes, and Link to Sub-Project

Regional Component	Project Outcomes
C1. TECHNICAL SOLUTIONS & BENEFITS	C1.1 Measurable **stress reduction at project sites** through appropriate sustainable water, land and ecosystems management interventions that account for climate change.
	C1.2 Enhanced **livelihood opportunities and socio-economic co-benefits** for targeted communities from improved ecosystem services functioning.
C2. MONITORING SYSTEMS	C2.1 Strengthened **national and regional systems for monitoring** of environmental status with respect to key international agreements.
C3. POLICY & CAPACITY	C3.1 Strengthened **policy and legislation** for the effective management of water, land and ecosystems resources that account for climate change.
	C3.2 Strengthened **capacity of national and regional institutions** and other stakeholders for water, land, and ecosystems management that accounts for climate change.
C4. KNOWLEDGE MANAGEMENT	C4.1. Improved **engagement and information access** for practitioners and other stakeholders through targeted knowledge sharing networks.

Table of GEF FA Objectives, Project Outcomes and Corresponding Sub-Project Outcomes

GEF Focal Area Outcome	Project Outcomes (above)	Sub-Project Outcomes
National Component 1: Implementation of targeted Innovative, climate-change resilient approaches to Sustainable Land Management (SLM), Integrated Water Resources Management (IWRM), Integrated Coastal Zone management (ICZM), Sustainable forest management (SFM) and enhanced management and maintenance of ecosystem services within the Soufriere Watershed		
IW 1.3, 2.3; LD 3.3, BD 2.1	C1.1 Solutions	Measurable stress reduction achieved in the Soufriere watershed through appropriate sustainable water, land and ecosystems management interventions that account for climate change.

GEF Focal Area Outcome	Project Outcomes (above)	Sub-Project Outcomes
LD 3.2; BD 2.1	C1.2 Benefits	Enhanced livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning.
National Component 2: Strengthening of Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and Ecosystems Monitoring and Indicators		
IW 2.1; BD 2.1	C2.1 Monitoring	Strengthened national and regional systems for monitoring of environmental status with respect to key international agreements.
National Component 3: Strengthening policy, legislative and institutional reforms and capacity building to support Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and ecosystem services management taking into consideration climate change resilience building in Saint Lucia.		
IW 1.1, 1.4, 2.1	C3.1 Policy	n/a
LD 3.1, 3.2; SFM 1.1, 1.2	C3.2 Capacity	Strengthened capacity of national and regional institutions and other stakeholders for water, land, and ecosystems management that accounts for climate change.
National Component 4 Enhancing knowledge exchange, promotion of best-practices, replication and expanding stakeholder involvement in the Soufriere watershed and at the national level.		
SFM 1.3	C4.1. Knowledge	Improved engagement and information access for practitioners and other stakeholders through targeted knowledge sharing networks.

Table of Sub-Project Outputs and GEF funding and co-finance

Outputs	Sources of funding		
	GEF funding (US$)	Co-financing/ counterpart (US$)	Total Cost (US$)
National Component 1.1 Innovative Solutions	**543,485**	**535,000**	**1,078,485**
Output 1.1.1 A rapid SLM and SFM-related diagnostic analysis for the Soufriere watershed and environs (using a community participatory approach) conducted	8,000	40,000	48,000
Output 1.1.2 Reforested and rehabilitated lands and riverbank protection and restoration along critical reaches in the upper Fond St. Jacques /Migny area.	535,485	495,000	1,030,485
National Component 1.2 Socio-Economic Benefits	**33,000**	**10,000**	**43,000**
Output 1.2.1 Increase in revenue generation within target communities for selected stakeholder groups through integration in global value chain for agricultural products	33,000	10,000	43,000
National Component 2.1 - Systems for monitoring	**22,000**	**15,000**	**37,000**
Output 2.1.1 Suite of project-specific IW, and LD-related indicators of process, stress reduction, and environmental and socioeconomic status indicators utilised.	7,000	12,500	19,500
Output 2.1.2 Installation of monitoring capacity and generation of project-specific data sets	15,000	2,500	17,500
National Component 3.2 Capacity building	**21,000**	**5,000**	**26,000**
Output 3.2.1 Strengthened local and national capacities	21,000	5,000	26,000
National Component 4.1 Knowledge Management	**62,300**	**591,602**	**653,902**
Output 4.1.1 Capture and documentation of best practices for dissemination	27,600	146,774	174,374
Output 4.1.2 Raise awareness of issues in collaboration with public and private sector agencies	34,700	444,828	479,528
Project Management	**47,900**	**319,159**	**367,059**
TOTAL (in PIF)	**N/A**	**N/A**	**N/A**
TOTAL (revised if applicable)	**729,685**	**1,475,761**	**2,205,446**

2 PROJECT DESIGN

2.1 Background and Context

Physical Characteristics

Saint Lucia is characterized by a rugged mountainous topography and rich fertile soils, volcanic in origin, particularly in the valley bottoms. This was the foundation upon which the economy which, until recently was based primarily on export-oriented agriculture was built. Agriculture has traditionally been the mainstay of the economy and is still the prime user of land with a large percentage of rural people in Saint Lucia depending upon agriculture for their livelihood. The other major economic sector tourism has been growing steadily to the point where it now contributes to about 10% GDP[2] with the agriculture sector declining from 29% in 2008 to less than 10% in 2012[3].

With one of the primary uses of land in Saint Lucia being agriculture, it follows that the major cause of land degradation is unsustainable agriculture. The ability of the land to support agriculture has been impacted by various land use practices, settlement patterns and other factors that affect the integrity and yield of the land. It has been estimated that soil loss is as much as 25 to 63 tons/ha/yr for some of the larger watersheds and approximately 300,000 tons annually due to banana cultivation alone; for every ton of bananas produced, some 2 – 3 tons of soil is lost. Almost half of this erosion is due to cultivation on steep slopes.

The island currently boasts of 12 Forest Reserves and 24 Protected Forests covering about 15% of the island. The reserves perform essential functions in safeguarding and regulating the island's water supply, preventing soil erosion and landslides, supporting the country's present and future renewable fuel supply and providing many other services such as nutrient enrichment, and pollination through its wildlife species. Main threats are habitat fragmentation, forest and landscape degradation. Habitat change is occurring at a rapid rate and is expected to increase even further in the future with the projected increase in hotels, marinas and golf courses earmarked for coastal regions, and an increase in housing and infrastructure which may impact dry forest areas.

[2] Government of Saint Lucia (2012). Saint Lucia economic and Social review, 2012
[3] *Ibid*

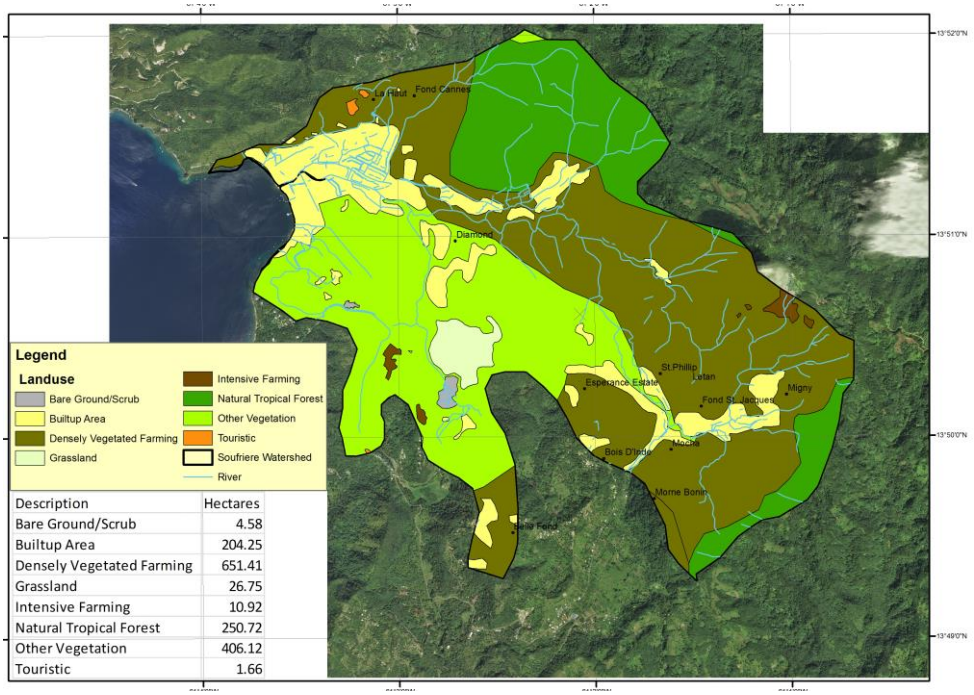


Figure 1. Land use in the Soufriere Watershed

The subproject is located in an area most susceptible to land degradation, the Soufriere watershed (See figure 1). Located within the rugged west central part of Saint Lucia it is characterised by very rugged, steep terrain and a deeply dissected "v" shaped valley. A major geologic feature is a volcanic fumarole known as the Sulphur Springs, a remnant of volcanic activity which subsided some 50,000 years ago. Another characterising feature is the very small valley with steep mountains on three sides and opening directly into the sea: the distance from the high water mark to the foot of the mountain range is less than 2 kilometres.

The watershed has an estimated area of 17.2 sq. km[4]. It is drained by the Soufriere River, which originates in the upper reaches of Mingy. There are a number of tributaries (Ravine Claire, Ravine Toraille, Ruby River), which flow from the surrounding mountain ranges into this river. There are three water intakes and a catchment in the watershed. In the Migny area in the upper reaches of the watershed, the area identified for on-the-ground interventions, the catchment is made up of several springs. This catchment serves Fond St. Jacques and the other communities in the upper reaches of the watershed; and Choiseul, in the neighbouring watershed. It is surrounded by privately owned farmlands and although there is legislation in place to designate "control areas" for water protection, this catchment is currently quite vulnerable to anthropogenic influences. Also, although the Soufriere River is one of seven rivers that are of importance to the water supply for the island, there are no discharge measurements for the river and there is no flow gauging of the river or its distributaries.

Apart from the relatively small valley floor within the coastal area, the remaining lands are generally of mountainous topography with steep and rugged slopes, surrounding what is referred to as the Soufriere volcanic Centre[5] (Qualibou volcano or depression) and extending towards the east into the Mt. Gimie

[4] St. Lucia, Biodiversity Country Study Report, UNEP/GOSL, 1998
[5] This area consists of a site of geothermal activity with fumaroles and hot springs known as the Sulphur Springs.

mountain range. The highest point within the watershed, Mount Tabac[6], rises to 2224 feet (~656 metres). While it is universally accepted that the relief of the District of Soufriere is dominated and distinguished by the twin pyramidal-shaped Piton lava domes or mountains[7], they are not located within the Soufriere watershed per se, but rather within the Pitons drainage basin, situated immediately south of Soufriere.

More than half (51%) of the watershed is comprised of slopes at 20-30 degrees. Slopes in excess of 30 degrees, account for an additional 8% with excessively steep slopes (approximately 15% of the watershed), occurring particularly along the north eastern part of the watershed where slopes are uniformly step. The central part of the watershed is dominated by a more complex and hilly terrain, with moderate to steep slopes, in the range of 10-30 degrees. The dominant soil series in this watershed include, the colluvial soils - Casteau gravelly bouldery silt loam and Ivrogne stony clay which are extensive, and agglomerate soils - Rabot clay and Panache silty clay loam. The major soil related limiting factors includes excessive stoniness. The young and fertile colluvial soils of volcanic origin are the major soil types occurring in the alluvial areas, located mainly in the upper reaches of the watershed within the river flood plain and along the western edges of the watershed.

More than 90% of the land in the watershed is privately owned. Prior to the decline of agriculture, the area between 15m and 125m elevation was an important area for plantation cocoa and tree crop cultivation. Many of these large plantations provided livelihood opportunities for landless sharecroppers. These plantations have now gone into agro-tourism enterprises or have been converted into housing estates. According to the 2007 Final Agricultural Census Report, there was a 42% decline in the number of land holdings since 1996.

Between the 125 and 250m elevations, the landscape is forest intensive mixed agriculture with production of short term and tree crops is on smallholdings between 0.5 ha and 3 ha. This landscape repeats itself in beyond 250m elevation: most of the root crops from this watershed, especially dasheen (*Colocasia esculenta)*, is grown here. Many of the farms are scattered within the natural and/or scrub forest.

The current status of land tenure constitutes a major issue for development in the watershed. A few persons own more than 75% of the land in the watershed. This is further compounded by a problem of fragmentation as privately owned forested lands which had been converted into agriculture in the 80's, are over time being passed on to multiple heirs. Land fragmentation presents a barrier to the sustainable development of lands, as persons with very small parcels of land are not inclined to commit resources to invest in sustainable land management practices such as soil conservation.

The coastal/marine belt is one of steep submarine shelf, which has been designated as the Soufriere Marine Management Area (SMMA) and forms the marine component of the world renowned World Heritage Site (WHC), Piton Management Area, PMA.[8] The reefs within this area are some of the healthiest and most diverse on the island. Nearshore resources along the coast of Soufriere are considered high value resources, in that they attract many tourists for snorkelling and diving activities support a variety of commercially important fish species and offer an aesthetically pleasing environment

[6] Situated at the northeast corner of the watershed. It should be noted also that Mt. Gimie, 950m, Saint Lucia's highest peak is situated within the Canaries watershed
[7] The majestic volcanic spires of Gros and Petit Piton, 777m & 743m respectively
[8] The PMA was designated a WHS in June 2004. The NE-portion of the PMA, including the Sulphur Springs falls within the Soufriere watershed

for yachters. The most common coral species present within the area are *Montastrea annularis* and *Porites asteroides,* which also make up the more important reef builders. *Dictyota* species and *Caulerpa racemosa* are the most common species of macroalgae. In addition to the rich coral systems, Hawksbill turtles *Eretmochelys imbricata* (CR) are seen inshore and whale sharks *Rhincodon typus* and short-finned pilot whales *Globicephala macrorhynchus,* are seen offshore. The coral in Anse Chastanet and Turtle Reef is dying because of high incidence of sediment and nutrient loading; solid and liquid waste. The decline in the reef health has in turn affected fish stocks of demersals. Fish landings of pelagics have however remained stable.

With all of the aforementioned beautiful natural assets it is not surprising that Soufriere has traditionally been the eco-tourism Mecca of Saint Lucia. Most of the island's tourist attractions are found within the watershed or its surrounding environs. A number of tourist plants are also located along the immediate outskirts of the watershed. Since the mid-1980s, new tourist-related activities have been increasingly utilising marine resources, competing for access to the area's limited coastal zone. Degradation of coastal water quality, rapid depletion of nearshore resources, poor land use practices and poor resource management, along with growing conflicts among stakeholders, are some of the issues that the SMMA addresses on an on-going basis.

In addition to the abundance of natural assets, Soufriere and in particular the Fond St. Jacques area was traditionally referred to as the breadbasket of the island. The volcanic soils and abundant rainfall provide a good fertile environment for the cultivation of short-term food and tree crops, especially cocoa.

Land degradation is a major environmental issue. Small farms in the upper watershed are located in slopes of more than 30°. There is no soil conservation and if drains are cut, they are not cut along the contour There is also indiscriminate deforestation to clear land for cultivation of short term crops. Farmers in these areas do not always invest in conservation measures because they do not have ownership rights; most of the land is family owned.

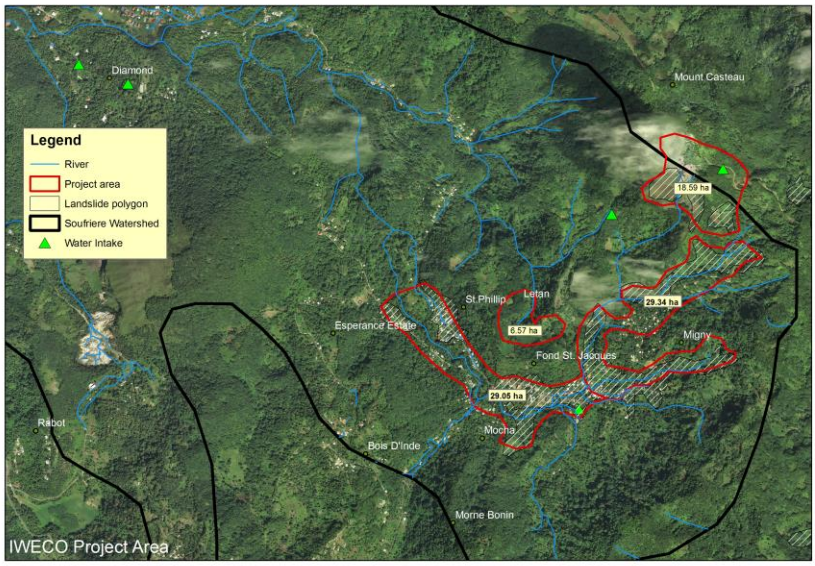


Figure 2. Fond St. Jacques / Migny Area (Location for subproject interventions)

Hurricane Tomas resulted in significant land slippage, loss of life and livelihood in this watershed and its environs and the subproject seeks to address some of the problems resulting from this. Typically farmers plant short term crops directly into landslide impacted areas. The drivers for such a practice are largely economic and there is a need to work directly with farmers to assist them to adopt more sustainable land management practices, while at the same time addressing, and exploring alternatives to meet their livelihood needs.

Another major concern which affects the wider watershed is the indiscriminate disposal of solid and liquid waste. This further degrades not only the land resource but results in the pollution of waterways and ultimately the SMMA and its important marine resources.

National Policies and Regulations

The United Nations Development Programme (UNDP) and the Global Environment Facility (GEF) funded "Capacity Building and Mainstreaming of Sustainable Land Management in Saint Lucia". The long-term goal of the project was to ensure sustainable management of the land resources of St. Lucia in order to enhance ecosystem health, integrity, stability, functions and services, while contributing directly to the environmental, economic and social well being of the people of Saint Lucia.

Although there is a ***National Water Policy*** and a ***National Land Policy*** the framework to harmonise economic and social development and environmental conservation to achieve sustainable development of the watershed remains inadequate. There is a current initiative being spearheaded by the OECS to revise the National Land policy so as to incorporate climate change considerations. This should have some implications for the subproject area already deemed as one of the most vulnerable to climate change issues.

The Forest, Soil and Water Conservation Act of No. 6, of 1945 and Amended 1983, currently serves as the main policy document governing the management of forest resources on state owned lands, specifically forest reserves. While the Act makes strict provisions for protection of forest and watersheds, it allows some flexibility to utilize forest resources for the benefit of people of St. Lucia in non-destructive ways. Such vision is articulated in the 2015–2025 National Forest Strategy, which goal is to achieve sustainable forest management and more effective management of terrestrial resources and biodiversity in Saint Lucia. The plan comprised of five (5) strategies:

1. Maintaining healthy ecosystems and thriving species.
2. Ensuring sustainable flows of products that support both local economies and biodiversity conservation
3. Protecting water supplies, soils and coastal zones and ensuring resilience to climate change.
4. Promoting awareness, visitation and cultural enrichment.
5. Organizational strengthening

.

The ***National Action Plan And Strategic Action Plan To Combat Desertification And Drought In Saint Lucia(2005)*** identifies a number of programme areas for immediate, short and long-term (2014 to 2018) actions including as follows:

- Establishment of the Framework for Behavioural Change (to improve the knowledge base and employ the best available tools and mechanisms to influence and bring about a change in

peoples attitudes and improve the practice of making wise choices with respect to decision making on land issues);

- Capacity Development and Institutional/ Organisational Strengthening (to strengthen the existing capacity at all levels (systemic, institutional and individual) and develop new capacity to successfully implement the NAPSAP);
- Sustainable Land Management (to apply conservation, adaptation and other measures, inter alia, to allow stabilisation and maintenance of forest cover, reduction of land degradation and introduction of programmes and actions to promote prudent use and conservation of land resources and mitigate against the impacts of drought).

Stakeholder Analysis

A number of sectoral institutions and agencies are involved in the management and/or regulation of resources in the Soufriere watershed. The major sectors include agriculture, social transformation, environment, education and commerce and small business enterprise.

The major challenge is that there is no coordination or collaboration between the agencies that are involved in the watershed. There is also no strategic development plan for the watershed. Interventions therefore appear to be fragmented and unsustainable. In some instances, the interventions compete with each other. The absence of clear policy directions and strategies aimed at the sustainable development of the watershed has left public and private sector interventions in the watershed remaining inadequate to meet the social and economic realities of the watershed.

Stakeholder involvement at the Agency level includes public sector agencies such as the Ministry of Sustainable Development, Energy Science and Technology (in particular the Department of Forestry), the Ministry of Agriculture, the Ministry of Tourism, the Ministry of Social Transformation, the St. Lucia Solid Waste Management Authority (SWMA); private sector agencies such as the St. Lucia Hotel and Tourism Association (SLHTA), which represents tourism establishments within and without the sub-project boundaries, the Soufriere Marine Management Authority (SMMA) and the Soufriere Regional Development Foundation (SRDF).

The Forestry Department has a Sub-Office located in Soufriere and this is manned by two Forest Officers who are assisted by two tour guides and a number of both temporary and permanent workers as determined by the specific work programme. With funding from the Government of Australia (GoA) the department is currently undertaking a Forest Restoration and Rehabilitation project, targeting areas impacted by the devastation of Hurricane Tomas in 2010. This project is nearing the end.

The Ministry of Agriculture has a Regional Extension office which is located in the watershed. This office is staffed by a number of subject matter specialists. While the extension officers are very responsive to the needs of the farmers they are constrained by the lack of resources; farmers also complain of multiple subject matter specialists. The Forestry Department provides supporting technical services at the range and watershed levels. Of note is that there is no forest reserve in the Soufriere watershed.

The Ministry of Social Transformation has established Community Development Committees in each of the major communities in the watershed. Outreach services are provided for community development. However, inadequate staffing and other important resources significantly limits the extent of this

outreach. There appears to be no plan or strategy within which the outreach programmes are constructed. There is also concern over the extent to which these programmes and interventions reflect the national developmental planning process.

Some well-established Community Organisations have been incorporated as not-for-profit organisations. These organisations provide a range of services to different groups of persons in the watershed. Some of these organisations have international stature and have been able to mobilise funding from foreign sources. There are also many smaller organisations that need institutional strengthening and resources.

The **Bellevue Farmers' Cooperative** is probably the most progressive farmer organisation in Saint Lucia. It has been in existence for over two decades. Its membership base comprises primarily of farmers who operate in Fond St. Jacques and environs, in the wider southern-based rural communities of the Soufriere District, and farmers from adjacent communities in the Choiseul District communities. The majority of the members are non-banana farmers, who cultivate vegetables, root crops and to a lesser extent fruit trees. The organisation has always played a key and central role in facilitating its membership by providing credit for agricultural inputs (seedlings, fertilizers, other general inputs) and serving as a sales & marketing outlet. From inception, the Cooperative has received a tremendous amount of institutional building and technical support directly from the Ministry of Agriculture and several other allied development agencies (the French Mission, Taiwanese, IICA, FAO/ IFAD, CDB and more recently the WIFA/ OXFAM). Many of these initiatives have been geared towards building/strengthening trading & marketing intelligence, provision of agricultural credit, technology, inputs, etc. The main sales outlet for the Corporative is the St Lucia marketing Board, supermarkets and hotels. The sub-project will work with the GEF SGF in building capacities of the farmers and others with respect to the practice of SLM techniques, adoption of business approaches and utilization of media products developed at the regional level. These products are meant to raise awareness within the wider watershed of the need for improved land and water management and ecosystem management as a whole.

The Seed Foundation is a non-governmental organization, which operates in the Soufriere community. The focus is on the development of young leaders utilizing a comprehensive community and youth development model that is focused on increasing personal responsibility and as well environmental and community awareness. The Foundation in June to October 2013 was the recipient of a GEF/SGP planning grant for the introduction of organic farming to Fond St. Jacques as part of a project initiative entitled: "Promotion of Sustainable Crop Production through the application of organic agricultural methods for sustainable community development"

Other stakeholder organisations in the wider watershed include:

- Youth and Sports Council
- Soufriere Town Council
- Fond St. Jacques Development Committee which is still in its infancy
- Zenon Development Committee
- Soufriere Credit Union
- Mothers and Fathers Groups
- Fishermen's Cooperative
- Baron's Drive Youth Organisation
- Soufriere Action Theatre (SAT) – well known for its involvement in popular theatre

- The M Group. A foreign company with substantial investments in Soufriere, has formed a Development Foundation to service the area stretching from Anse La Raye to Choiseul.

2.2 Overall Objective and Outcomes

2.2.1 Objective: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted sustainable livelihoods of the population.

The expected outcomes are:

2.2.1.1 Measurable stress reduction achieved in the Soufriere watershed through appropriate sustainable water, land and ecosystems management interventions that account for climate change.

2.2.1.2 Enhanced livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning.

2.2.1.3 Strengthened national and regional systems for monitoring of environmental status with respect to key international agreements.

2.2.1.4 Strengthened capacity of national and regional institutions and other stakeholders for water, land, and ecosystems management that accounts for climate change.

2.2.1.5 Improved engagement and information access for practitioners and other stakeholders through targeted knowledge sharing networks.

2.3 Consistency with International Efforts

Since signing the United Nations Convention to Combat Desertification (UNCCD)[9], Saint Lucia continues to experience several challenges with regard to land degradation and drought-like conditions, particularly in watersheds with high agricultural activity. The island, however, is no different from other small island developing states (SIDS), faced with the dilemma of balancing economic development and environmental conservation with limited resources.

In response to the degrading state of lands and the coastal environment, several studies have been commissioned, and a number of programmes and projects have been implemented that are directly or indirectly related to land and water resources management, though within a broader context of integrated management of watersheds and coastal areas. Most notable were the GEF-funded ***Integrated Watershed and Coastal Area Management (IWCAM),*** OECS/NOAA project, OPAAL project, Sustainable Land Management (SLM) initiatives, financed by the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF), with the latter two having provided funding for capacity building and mainstreaming sustainable land management in Saint Lucia.

The Rio + 20 Conference in *the Future We Want* recognised poverty alleviation, changing unsustainable and promoting sustainable patterns of consumption and production and protecting and managing the

[9] July 2, 1997

natural resource base of economic and social development, as the essential requirements for sustainable development. The conference also highlighted the need to promote integrated and sustainable management of natural resources and ecosystems so as to support inter alia, economic, social and human development while facilitating ecosystem conservation, regeneration and restoration and resilience in the face of new and emerging challenges.

The subproject is sited in an area with a very high poverty index (42.4%)[10]and high youth unemployment in an environment with known vulnerabilities to erosion, landslides and land degradation. Building on the successes of the GEF IWCAM project and in particular that of the Saint Lucia Demonstration Project, this project will address the root problem of the deteriorating socio economic conditions in Soufriere by focussing on, in particular, the challenging biophysical conditions. Capacity building will not only focus on the physical interventions but will, in collaboration with the private sector and other interests, also address the behavioural issues which have in the past affected the sustainability of SLM interventions post-project implementation.

The Lesser Developed Countries and Small Island Developing States Targeted Portfolio Approach for Capacity Development and Mainstreaming of Sustainable Land Management (SLM) Project that was implemented by the UNDP and CEHI between 2007 and 2011 sought to mitigate the causes and negative impacts of land degradation on ecosystem integrity, stability, functions and services, through Sustainable Land Management (SLM), as a contribution to improve people's livelihoods and economic well being. As part of the project regional capacity building and sustainable financing workshops for national SLM focal points were held in 2006 and 2007 in association with technical support from CEHI. The FAO supported workshops on application of the **Land Degradation Assessment Methodology (LADA)** for land management professionals. The GEF IWCAM Project, through its national demonstration initiatives and regional and national capacity building efforts contributed to SLM in the context of improved watershed management.

The Climate Change Adaptation and Sustainable Land Management in the Eastern Caribbean Project is a 5 year project (2013 to 2018) financed by the EU and implemented by the OECS in all of its member States. The project intends to address the issue of sustainable land management on the basis of a comprehensive and integrated regional approach, by supporting the OECS Secretariat to play the leading institutional role in legislating on environmental protection including aspects related to climate change. The specific objectives of the Project is to, "To improve the region's natural resource base resilience to the impacts of climate change, through effective and sustainable land management frameworks and practices and through specific adaptation pilot projects focused on physical infrastructure and ecosystems". The project will be delivered through 5 expected outcomes:

a. The understanding of the region's status in terms of institutional, technical and human capacity is improved
b. The institutional, legal and regulatory frameworks for sustainable land management are enhanced at regional and national level.
c. Human and technical capacity for sustainable land management is enhanced at regional and national level.
d. Public awareness improves on the risks, threats and opportunities arising from climate change, at regional and national level.

[10] Government of Saint Lucia and the Caribbean Development Bank (2006). Trade Adjustment and Poverty in Saint Lucia 2005/2006.

e. Adaptation measures focused on physical infrastructure and ecosystems are implemented.

The Australian Government through Australian Agency for International Development (AusAID) is supporting the OECS to implement a project to improve land policies and land management in OECS Member States. The project's objective is to achieve enhanced sustainability of development in the OECS - economic development, poverty reduction, social stability and the protection of environmentally sensitive areas - through the formulation, adoption and implementation of comprehensive land policies. Project implementation will include concurrent implementation of quick-win interventions identified through country papers prioritization. Specifically, the expected project achievements are:

a. Capacity enhancement for regional institutions to develop effective land policies through inclusive and extensive consultative processes. This will instil the ability to amicably mitigate conflicting interests and perceptions/views thereby encouraging constructive critique of land themes and successful, inclusive engagement on the land agenda.
b. Formulation and adoption of OECS Land Policy guidelines, encompassing principles of equity, efficiency and sustainability, compatible with international best practices and a foundation for inclusive land management. Land Policy guidelines will be informed by issues papers that will identify prevailing land challenges in each OECS country, propose mitigation measures that should be included in policy principles and highlight priority actions that can be undertaken through project support to nurture an environment that will be conducive for policy implementation.
c. National Land Policies and implementation tools approved in Grenada, St Kitts and Nevis and St Lucia based on the OECS Land Policy guidelines and adapted to national conditions.
d. Successful piloting of Social Tenure Domain Model (STDM), a pro-poor land rights recording system, in collaboration with local agencies involved in land records; this will be piloted in parallel with existing systems while assessing its viability to operate full-scale. Saint Lucia is one of the 2 countries in which the STDM will be piloted.

The project is from 2011 to 2016.

2.4 Activities, Outputs, Outcomes

A Summary of project outputs and description of the important activities are described below, as labeled by their respective components (C1, C2 etc) and corresponding outcomes (C1.1, C1.2 etc):

National Component 1: Implementation of targeted Innovative, climate-change resilient approaches to Sustainable Land Management (SLM), Sustainable Forest Management, Integrated Water Resources Management (IWRM), Integrated Coastal Zone management (ICZM) and enhanced management and maintenance of ecosystem services within the Soufriere Watershed

The upper reaches of the Soufriere Watershed are known to be very susceptible to landslides due to a combination of soil types, steep slopes and location in a relatively high rainfall area. This is compounded by the fact that there are no state-managed forests within the watershed and the Forestry Department must therefore work with landowners or occupiers of family land, with respect to the sustainable use and management of these highly erosive areas. The Forestry Department has identified landside areas totaling 80 hectares for a mixture of reforestation, rehabilitation (incorporating the use of structural land

stabilization techniques, agroforestry, and soil amelioration), and riverbank stabilisation. The exact interventions will be selected with the involvement of farmers and technicians based on technical feasibility and taking cognizance of the need to safeguard and enhance the livelihood needs of participation farmers. The approach adopted will be highly participatory, building on lessons learnt from the IWCAM Demonstration Project, involving at least 30 farmers, agricultural and forestry extension officers and community representatives. It will identify innovative on-the-ground interventions to reduce the scale of land degradation and reduce erosion.

Fond St. Jacques was previously regarded as the "breadbasket of St. Lucia". However, the Situation Analysis Report referred to the high poverty Index and the absence of coordination and working partnerships from which the community could derive greater socioeconomic benefits. In this regard this component also includes the development of alternative livelihoods for targeted farmers and the provision of assistance in the development of an appropriate business model. As a marketing strategy, it is intended that the farmers be organised into clusters and ultimately into a Fond St. Jacques Farmers network. The intention is to establish a product brand such as "from the heart of the forest" as a means of ensuring sustainability of the business ventures beyond the life of the project.

The GEF Small Grants Programme (GEF-SGP) will support the development and implementation of smaller-scale investments associated with the main project to enhance economic livelihood opportunities. These will be defined during project inception and negotiated over the early stages of project implementation.

Activities

- **1.1.1.1** - Conduct participatory (rapid) water and land-related diagnostic analysis for the Soufriere watershed
- **1.1.1.2** Prepare diagnostic report on priority needs

Output

- A rapid SLM and SFM-related diagnostic analysis for the Soufriere watershed and environs.

Activities

- **1.1.2.1** Identification and implementation of appropriate technologies and mechanisms for slope stabilization
- **1.1.2.2** Procurement of tools and equipment
- **1.1.2.3** Crop selection and identification of alternative livelihoods;

Output

- Reforested and rehabilitated lands and riverbank protected and restored along critical reaches in the upper Fond St. Jacques /Migny area.

Outcome

- ***Measurable stress reduction achieved in the Soufriere watershed through appropriate sustainable water, land and ecosystems management interventions that account for climate change.***

Activities

- **1.2.1.1** Development of business model for farming community
- **1.2.1.2** Capacity building to strengthen commercial and technical capabilities
- **1.2.1.3** Establishment and revitalizing of farm clusters
- **1.2.1.4** Facilitating the establishment of partnerships and alliances between farm clusters
- **1.2.1.5** Branding of agro products / integrating them into value chains "from the heart of the forest / breadbasket of Saint Lucia"

Output

- Increase in revenue generation within target communities for selected stakeholder groups through integration in global value chain for agricultural products

Outcome

- ***Enhanced livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning.***

National Component 2: Strengthening of Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and Ecosystems Monitoring and Indicators

The project from its inception phase will through the regional component, establish partnerships with regional institutions such as the UWI, IICA and others to establish a monitoring framework for Sustainable Land and Ecosystems Management. This data collection regime will be subsequently fed into the Forestry Management Information System (FMIS) in use by the Department since 2009. Based on the capacities of the participating agencies and community groups, as part of the project monitoring programme, an ongoing monitoring programme will be implemented for presentation in interim and final reports and other information products.

Activities

- **2.1.1.1** Establishment and strengthening of partnerships with local and regional scientific institutions;
- **2.1.1.2** Development of a monitoring framework for Sustainable Land and Ecosystems Management

Output

- Suite of project-specific IW, and LD-related indicators of process, stress reduction, and environmental and socioeconomic status indicators utilised to assist objective assessment and monitoring of impacts of the project.

Activities

- **2.1.2.1** Establishment and implementation of community based monitoring programmes (including school-based)

Output

- Installation of monitoring capacity and generation of project-specific data sets

Outcome

- ***Strengthened national and regional systems for monitoring of environmental status with respect to key international agreements.***

National Component 3: Strengthening policy, legislative and institutional reforms and capacity building to support Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and ecosystem services management taking into consideration climate change resilience building in Saint Lucia.

This component will address the on-site training of farmers, programs of exchange visits with extension officers and farmers and visits to the project site by project partners.
There will also be opportunities for rendering support to students who wish to undertake school-based assessments in related topics.

Activities

- **3.2.1.1** On-site training of farmers on SLM techniques;
- **3.2.1.2** Program of exchange visits (training) with Extension Officers and from different Extension regions
- **3.2.1.3** Field trips by partners to sub-project site
- **3.2.1.4 -** Provide support to development of school-based assessments (SBAs) related to sustainable land management

Output

- Technical personnel and farmers within the watershed trained in prescribed SLM practices and implementation the interventions toward future replication and mainstreaming within national frameworks.

Outcome

- ***Strengthened capacity of national institutions and other stakeholders for water, land, and ecosystems management that accounts for climate change.***

National Component 4. Enhancing knowledge exchange, promotion of best-practices, replication and expanding stakeholder involvement in the Soufriere watershed and at the national level.

The project will collaborate with the Environmental Education and Public Awareness Officer of the Ministry and the Regional Project during the inception phase of the project, in the development of a common framework for knowledge capture and dissemination. This will consider existing frameworks and lessons learnt from previous initiatives. There will also be with institutions such as the SWMA, the SLHTA, the Ministry of Education, Sandals Resorts and other private sector interests involved in waste recycling. The activities will utilize media products developed at the regional level and seek to raise awareness and effect behavioral change within the project site and nationally, on the impact of anthropogenic practices on the fragile and vulnerable ecosystems within the Soufriere watershed.

Activities

- **4.1.1.1** Development of a common framework for knowledge capture and dissemination (in consideration of existing frameworks)
- **4.1.1.2** Procure equipment (eg digital cameras, etc) to document processes toward post-project lessons learnt compilation
- **4.1.1.3** Train local project managers/staff on use of equipment
- **4.1.1.4** Collection and compilation of suite of best practices and package as appropriate

Output

- Suite of best practices for effective SLM based on project interventions and lessons learnt documented

Activities:

- **4.1.2.1** Publishing and dissemination of findings to external target audiences and policy makers
- **4.1.2.2** Media support products targeted at private sector, schools and communities
- **4.1.2.3** Collaborate with other partners in public awareness (PA) events (coincide with commemorative days) using media support products developed at the regional level

Output

- Sensitisation and awareness raising programs conducted incorporating local/ regional lessons learnt and relevant media products on SLN, IW, SFM and ecosystem management in general.

Outcome

- ***Improved engagement and information access for practitioners and other stakeholders through targeted knowledge sharing networks.***

2.5 Incremental Reasoning

2.5.1 Baseline:

Many of the previous initiatives have yielded some baseline information and a framework for sustainable land management in Saint Lucia. However, efforts to reduce the negative impact of land degradation, including the protection of watersheds, safeguarding of endangered biodiversity while supporting traditional livelihood patterns have been frustrated by a weak legislative system, absence of a national land use policy, land zoning and planning, limited economic incentives, and a general lack of capacity at the institutional, systemic and individual levels.

A participatory threat analysis carried out in 2009 under the EU- funded National Forest Demarcation and Bio-physical Resource Inventory Project[11], identified, as the main threats and pressures on forest biodiversity, habitat modification and destruction. Habitat change is occurring at a rapid rate and is

[11] Biodiversity Assessment of Saint Lucia's Forests, with Management Recommendations, Jennifer C. Daltry (Fauna and Flora International

expected to increase even further in the future from ongoing degradation and loss of deciduous seasonal forests, mangroves and freshwater swamp forests due to residential, tourism and other developments[12], alien invasive species; and, for a few species, over-exploitation. The analysis demonstrated that forests outside of the Forest Reserve system were approximately four times more at risk from severe threats than forests inside the reserves: highlighting the effectiveness of the reserves management. A preliminary analysis of the carbon storage of Saint Lucia's forests was also conducted as part of the 2009 Biodiversity Assessment of Saint Lucia's Forests. The analysis showed that approximately 1.8 million tonnes are stored within the Forest Reserve and 1.2 million tonnes outside the Forest Reserve, with clear potential for the latter figure to increase by enabling young secondary forests to mature.

According to the UN ECLAC Report[13] prepared to assess the impacts from the passage of Hurricane Tomas, the flow slides in the Fond St Jacques area were perhaps the most dramatic on the island, by virtue of their sheer scale and volume of debris coverage, with debris originating from up to 2000 ft and coming to rest in within the valley floor at Fond St Jacques to depths of up to 4 m. This debris slide originated within the steep northwestern flanks of the Migny River Valley and its tributaries, traversing a path of approximately 1.3 km. Many homes within the valley floor were partially buried and some were removed from their foundations including a bailey bridge structure across the Migny River at Fond St Jacques.

The surrounding peaks of the upper area of the community of Fond St Jacques, founded at the foothills, is currently under meters of earth debris from flow slides that originated from its northern and eastern valley slopes. These slopes are extremely steep and have been designated as areas of high risk by both landslide and flow slide risk maps. The roadway toward Migny appears to give access to the higher elevations where crop cultivation goes up to the ridge line and over it. Much of the natural forest cover on these slopes has been removed and, in many cases, large tracts of land appear untended and bare. The two major flow-slides appear to originate in cleared and cultivated upper slopes.

As part of the recovery efforts for the area, forest restoration works are being undertaken in the upper Migny area closer to the Forest Reserve. These have met with mixed reactions from landowners and some have chosen to continue the unsustainable practice of dasheen cultivation on steep slopes.

The GEF Small Grants Facility is currently supporting the Bellevue Farmers Cooperative in the expansion of a Composting project and intends to undertake a number of capacity development initiatives to encourage uptake of the grants available to provide livelihood support.

2.5.2 Business as usual scenario:

- There will be continued degradation of the area through soil erosion and subsequent destruction of associated marine ecosystems
- There will be a continuation of unsuitable and unsustainable agricultural practices in the area and community people will remain vulnerable to effects of adverse weather patterns
- Pollution and continual degradation of water quality

[12] Projected increase in hotels, marinas and golf courses earmarked for coastal regions, and an increase in housing and infrastructure.
[13] Saint Lucia: Macro Socio-Economic And Environmental Assessment Of The Damage And Losses Caused By Hurricane Tomas: A Geo-Environmental Disaster Towards Resilience

- There will be a continuation of removal of riparian vegetation, which will result in riverbank erosion
- Community persons will continue to show a lack of understanding of the value and importance of the natural resources and their role in either ameliorating or exacerbating the existing stresses on ecosystems.
- The link between sustainable livelihoods and improved environmental stewardship will not be explored and opportunities for livelihood improvement and enhancement will be

2.5.3 Incremental reasoning:

Attempts by the Ministry of Agriculture and the Forestry Department to encourage farmers and landowners in the Soufriere region in particular, to adopt more sustainable land management practices have had varying degrees of success for a number of reasons related to the socio-cultural characteristics of the area. The project will not address the issue of slope stabilisation and land degradation through the input of physical measures only, but through the application of a "treatment-oriented" methodology incorporating soil testing and the application of organic fertilisers, in a timely fashion. It will also in collaboration with project partners seek to address the underpinning livelihood issues by providing the necessary linkages and support for the marketing of produce, purchasing of compost from local producers (project supported by the SGP).

While the contribution to carbon sequestration for such a small area (less than 100 ha) is not significant, local foresters will for the first time be introduced to the parameters required to make the necessary calculations such that this can be a criteria utilised to influence future inteventions with respect to forestry and agro-forestry management. The project will contribute to the removal of barriers that hinder the implementation of sustainable solutions that intend to address the interrelated problems of land degradation and loss of biodiversity and ecosystem services in consideration of the urgent need to accelerate climate change resilience. This will be achieved within the SIDS approach for improved land and water (freshwater and coastal waters) resources management including ecosystems governance; that is, the 'ridge to reef' or the integrating watershed and coastal areas management ("IWCAM") approach.

Some of these barriers will be addressed through the adopting of more business approaches to the sustaining of livelihoods and more focussed attention to public education, sensitisation and awareness-raising to enable stakeholders to better understand their personal and communal roles and responsibilities with respect to ecosystem management. The project seeks to focus on innovation, catalysing implementation of cutting-edge technologies and policy reforms with the objective of enabling replication and scaling-up, and enhancing engagement of beneficiary community stakeholders and the private sector.

All of this is consistent with the GEF Focal Area Strategies for International Waters (IW), land Degradation (LD) and sustainable Forest Management (SFM).

2.5.4 Expected benefits:

Some of the benefits to be realised from the project interventions include the following:

- Community persons will acquire knowledge and be enabled to adopt sustainable farming practices.
- Technical personnel from the Ministry of Agriculture, the Forest and Lands Resources Division and other stakeholder agencies will be better able to address issues of land degradation at the local and national level.
- An overall decrease in suspended solids in the associated streams and rivers and an overall improvement in water quality related to these.
- Increase in new enterprise investment opportunities and revenue earnings related to the agricultural sector within fond St. Jacques, Soufriere, in particular
- As a result of the public awareness and sensitisation programmes, a general improvement in waste disposal
- Increased cooperation and collaboration among the local stakeholders and between the public and private sector agencies as well.

2.5.5 Gender dimensions

The project will seek to carefully consider the gender equity dimension over the course of implementation. Land degradation caused by land use changes, poor agricultural and land use practices, along with poor and/or indiscriminate waste discharges influences the mid to long-range sustainable access to resources for agriculture and fisheries development, and development and sustainability of productive sectors such as tourism. These influences have very direct economic value-chain impacts where the flow of benefits are compromised which in turn affects household income security, maintenance of health and stability in the home and the community at large. The gender roles in counterbalancing these impacts will need to be evaluated so as to determine relative influence and how the project can support means to address gender-based deficiencies and understand strengths in adapting.

Emphasis will be placed on advancing gender mainstreaming within policy and capacity building elements of the project; at the national level and across the regional components of the project mainly within Component 3 related to policy. Gender audits and targeted analyses to ascertain derived benefits by stakeholders will be conducted, along with training that will strengthen gender-equitable access to ecosystem services, safe and adequate water, sanitation, food security and other benefits derived from project implementation.

2.6 Budget

Co-financing

Name of Co-financier	Sources of Co-financing	Type of Co-financing	*Amount*
Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Cooperatives	EU, GOSL, CDB, GOA, WB	In-kind	$1,055,488

	GOSL, EU	In-kind	$345,274
St. Lucia Solid Waste Management Authority	GOSL	In-kind	75,000
	Total co-financing		**$140,0762**

Component Management budget

Cost Items	Total Estimated person weeks	GEF (US$)	Co-financing (US$)	Project total (US$)
Project Director (s)	72	500	39,870	40,370
Project Coordination	150	56,076	56,500	112,576
Forest Officer (s)	480		207,789	207,789
Project Secretary	100	0	9,000	9,000
Project Steering Committee		900	15,000	15,900.00
Total		**57476**	**328,159**	**385,635**

Consultants working for technical assistance in the subproject description:

Activity	Estimated person weeks	GEF($)	Co-financing (US$)	Project total (US$)
C.1.1.1: Diagnostic Analysis for the Soufriere watershed	6	8,000		8,000
C I.I.2 Compute carbon benefits associated with land amelioration actions within project	2	5,000		10,000
C 1.2.1 Development of Farming Community Business Model	4	5,500		5,500
C 2.1.1 Develop a monitoring framework for sustainable land and ecosystem management	4	5,000		5,000
C.4.1.1 Develop framework for knowledge capture	4	5,000		5,000
C 4.1.2 Utilise media support products to target private sector, schools and communities	8	12,000		12,000
Total				**53,500**

Consultants to be hired for this subproject:

Position Titles	$/person week	Estimated person weeks	Tasks to be performed
For Sub-Project Management			
Local			
Project Director(s)	$562	72	Project Oversight; liaise with national government
Project Coordinator	$480	156	Project Oversight; liaison with Regional Office
Project Secretary	$90	100	Office administration
For Technical Assistance			
Local			
Technical Consultant – Watershed specialist	$1,333	6	Diagnostic Analysis for the Soufriere watershed
Carbon accounting specialist	$2,500	2	Compute carbon benefits associated with land amelioration actions within project
Business Consultant	$1,375	4	Development of a Farming Community Business Model
SLM and Ecosystem Management Specialist	$1,250	4	Develop a monitoring framework for sustainable land and ecosystem management
Environmental Education Specialist (s)	$1,250	12	Develop framework for knowledge capture Utilise media support products to target private sector, schools and communities

2.7 Project Timeline

M = Meeting, **R**= Report (includes other publications), **W** = Workshop, **S** = Communication Strategy, **MR** = Mid-term Report, **TR** = Terminal Report, **I** = Project website (NOTE: the timing of the outputs are indicative; these will be finalized on project inception and subject to review during project implementation)

National Sub-project 1.6: Saint Lucia	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1 Objective: To develop and foster the implementation of targeted Innovative, climate-change resilient approaches to Sustainable Land Management (SLM) and enhanced management and maintenance of ecosystem services within the Soufriere Watershed																
Sub-Component C1.1 Measurable stress reduction in the Soufriere watershed through appropriate sustainable water, land and ecosystems management interventions that account for climate change.																
Output 1.1.1 SLM and SFM-related diagnostic analysis for the Soufriere watershed																
Activity 1.1.1.2 - Conduct participatory (rapid) water and land-related diagnostic analysis for the Soufriere watershed	**W/ R**															
Activity 1.1.1.3 - Prepare Findings Report	**R**															
Output 1.1.2 Reforest and rehabilitate lands and riverbank protection and restoration along critical reaches in the upper Fond St. Jacques /Migny area																
Activity 1.1.2.1 - Identify appropriate technologies for slope stabilisation (in collaboration with participating farmers)		**M**	**R**													
Activity 1.1.2.2 - Procure appropriate farm tools and equipment																
Activity 1.1.2.3 - Slope stabilisation works (bioengineering and direct seeding)						**R**		**R**		**R**						
Activity 1.1.2.4 - Select and establish forest and other crop species, develop alternative livelihoods (such as agouti ranching), and establish agreements among government, private and farming communities in support of water security.							**R**									
Activity 1.1.2.5 - Evaluate effectiveness of interventions								**R**			**R/ W**					
Activity 1.1.2.6 - Compute carbon benefits associated with land amelioration actions within projects																
Sub-Component C1.2 Enhanced livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning.																
Output C1.2.1 - Develop a Mechanism for Increase in revenue generation within target communities for selected stakeholder groups																

National Sub-project 1.6: Saint Lucia	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Activity 1.2.1.1 - Develop innovative farmer business model for participating community members				W	R											
Activity 1.2.1.2 - Build capacity to strengthen commercial and technical capacities (including record-keeping, conflict resolution, leadership)				W/ R		W/ R				W/ R						
Activity 1.2.1.3 - Establish and revitalise farm clusters and accelerate their integration into higher value chain			W	R		R				W/ R						
Activity 1.2.1.4 - Facilitate establishment of partnerships and alliances between clusters and increase advocacy			W	R		R				W/ R						
Activity 1.2.1.5 - Branding of agri-products / integrating them into value chains "from the heart of the forest / breadbasket of Saint Lucia"					W	R		R		W/ R						
Component 2 Objective: To strengthen Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and ecosystems Monitoring and Indicators frameworks in Saint Lucia.																
Sub-Component C2.1 Strengthened national and regional systems for monitoring of environmental status with respect to key international agreements.																
Output C2.1.1 - Develop scientific research protocol for project site (Suite of project-specific IW, and LD-related indicators of process, stress reduction, and environmental and socioeconomic status indicators).																
Activity 2.1.1.1 - Establish/strengthen partnerships with scientific institutions		M		R		R		R		R						
Activity 2.1.1.2 - Develop a monitoring framework for Sustainable Land and Ecosystems Management		M/ R														
Output C 2.1.2: Compilation of data sets.																
Activity 2.1.2.1 - Establish and implement community based monitoring programmes (including schools)			W	R		R		R		R		W/ R				
Component 3 Objective: To strengthen policy, legislative and institutional reforms and capacity building to support Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and ecosystem services management taking into consideration climate change resilience building in Saint Lucia.																
Sub-Component C3.2 Strengthened capacity of national and regional institutions and other stakeholders for water, land, and ecosystems management that accounts for climate change.																
Output C3.2.1 - Strengthened local and national capacities																

National Sub-project 1.6: Saint Lucia	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Activity 3.2.1.1 - On-site training of farmers on SLM techniques				W		R				W/ R						
Activity 3.2.1.2 - Establish program of exchange visits (training) with Extension Officers and farmers from different Extension regions								W				W				
Activity 3.2.1.3 - Field trips by partners to sub-project site		W				W				W						
Activity 3.2.1.4 - Provide support to development of SBAs related to sustainable land management				R				R				R				
Component 4 Objective: To enhance knowledge exchange, promotion of best-practices, replication and expanding stakeholder involvement in the Soufriere watershed and at the national level.																
Sub-Component C4.1. Improved engagement and information access for practitioners and other stakeholders through targeted knowledge sharing networks.																
Activity C 4.1.1. - Capture and documentation of best practices for dissemination																
Activity 4.1.1.1 - Develop a common framework for knowledge capture and dissemination (in consideration of existing frameworks)		I	R													
Activity 4.1.1.2 - Procure equipment (eg digital cameras, etc) to document processes toward post-project lessons learnt compilation																
Activity 4.1.1.3 - Train local project managers/staff on use of equipment			W													
Activity 4.1.1.4 - Collect and compile suite of best practices and package as appropriate		W		R		R		R		R		W/ R				
Activity C4.1.2 - Raise awareness of issues in collaboration with public and private sector agencies																
Activity 4.1.2.1 - Publish and disseminate findings to external target audiences and policy makers			S	R				R				W/ R				
Activity 4.1.2.2 - Utilise media support products to target private sector, schools and communities				R		R		R		R		R				
Activity 4.1.2.3 - Collaborate with other partners in public awareness (PA) events (coincide with commemorative days) using media support products developed at the regional level				R		R		R		R		R				

2.8 Risk Analysis

Risk	Rating (L/M/H)	Risk management strategy
1. Inadequate collaboration among the donor that negatively impacts financing and/or commitment in maintaining partnership arrangements;	L	Continuous contact, interaction and consultation with partners.
2. Other stakeholders (such as farmers outside the identified areas) who may not benefit directly from site interventions may perceive inadequacies in project design	M	Sensitisation of other stakeholders through specific project partners; Conduct adequate stakeholder identification and analyses at the inception stages of the project;
3. Financing not recieved on a timely basis.	M	A set of protocols be developed prior to project inception to address financing issues; Protocols should identify individuals and their roles at all levels who will be involved in the financial management of the project; Protocols be invoked immediately when a financing issue has been identified;
4. Frameworks for monitoring are established that exceed national level capabilities;	M	Involvement of relevant sectors responsible for on-going monitoring, during project incetion phase to guide the establishment of monitoring frameworks.
5. Established data collection and monitoring systems are not maintained as a result of resource constraints;	L	Resource constraints to be one of the parameters considered in establishment of monitoring frameworks and data mangement.
6. Major changes in project start-up conditions from project conceptualization may affect project buy-in.	H	Will be assessed as part of diagnostic analysis to be undertaken during project initiation.
7. Climate change variability: major natural disaster (such as hurricane, earthquake) strikes.	medium	While this risk cannot be prevented, the implemented solutions will be used to prove their cost-effectiveness so that they will be widely regarded worth maintaining by project end.
8. Shifting government priorities resulting in diminished investment and promotion post-project	medium	Ensure that objectives of project are synergized with government policies and priorities; Ensure that the project is endorsed at the highest level of government; The

Risk	Rating (L/M/H)	Risk management strategy
		steering committee is endorsed by cabinet
9. Capacity limitations within targeted communities	medium	Capacity within communities will be built during project

2.9 Sustainability

The project builds the successes of and the lessons learnt from the GEF IWCAM project in the implementation of innovative solutions aimed at addressing pollution and environmental degradation within watersheds and receiving coastal waters. It also builds on the extensive work undertaken by the Forestry Department and the Department of Agriculture in training farmers in the areas of soil conservation, drainage and extension forestry. It also builds on the work of the recently concluded SLM Project which sought to mainstream sustainable land management. Recognising that the failure to adopt such practices in the past has been due in part to the limited livelihood options available to farmers, a participatory approach has been adopted in designing the project and will continue during project implementation.

On-farm interventions will be selected utilising this approach and implementation will also be phased to ensure that production continues throughout. The formation of farmers into clusters, which will form part of a larger network, is envisaged as a mechanism to strengthen the marketing arrangements and through which a business-model for the operation of farming and alternative rural enterprises can be developed and "sold" to farmers. This is to ensure that the necessary economic benefits are derived for the continued operation and replication of the on-the-ground interventions. During the project inception phase, the diagnostic analysis undertaken will evaluate the revenue potential and social impacts of the initiatives proposed so as to maximise the financial flows to the community.

Training and capacity building at the local level and focused awareness raising locally and nationally will ensure that there is a general understanding among the farming community, public service technicians, and schools and community groups, of the need to sustain and replicate the practices introduced for the very survival of sensitive ecosystems which contribute not only to local livelihoods but to the national economy as well.

Based on the tracking tools utilised, data sets will be fed into the forest management information system (FMIS) and the water management information system (WMIS) and be made available to various categories of users. This and the socio-economic data gathered will be utilised by the project implementation team to guide the strategy for ensuring a sustainable process. The strategy for sustainability will be finalised during the inception phase.

In terms of institutional arrangements at the national level, the project steering committee (intersectoral in nature) will play a major advisory role so as to facilitate the mainstreaming of project outputs within the national policy, legislative and regulatory frameworks.

2.10 Replicability

Some of the interventions proposed are physical on-the-ground interventions which will form part of the work program of the Forestry Department. Its replicability will be assured by the involvement of participating framers, forestry and agricultural extension technicians and the scientific community in the design of those interventions. Subsequently, through on-going monitoring and adaptive managements a determination will be made of the replicability of each intervention used and these will be the focus of the on-going training programmes to be undertaken within the life of the project, targeting project partners, technicians and farmers. On-going lessons learnt will then be extended to the sites at the national level, and through the regional component at the regional level.

This in itself is not a novel approach as, during the implementation of the IWCAM project, lessons learnt from the St. Lucia Demonstration project with respect to improved management of liquid waste (the use of artificial wetlands) resulted in replication during the life of the project to other member countries and the technology continues to be replicated and improved upon up to the present.

The other interventions proposed are socio-economic and will be immediately relevant to the capacity for uptake of solutions in IWRM, SLM and LD, not only at the subproject site but nationally and regionally as well.

The suite of IW, LD and SFM-related indicators of process, stress reduction, and environmental and socioeconomic status that will be identified and strengthened under the current project in the Soufriere watershed, as well as the protocol to monitor them, can be extended to the national level for the management of land/ecosystems, water resources and wastewater.

2.11 Execution Arrangements

The sub-project is to be implemented by the Department of Forestry within the Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Cooperatives. The Department of Forestry has established a Planning, Monitoring and Evaluation (PME) team headed by the Deputy Chief Forest Officers (DFO). The DCFO will have overall oversight and management of the project. A Project Coordinator (PC) will be appointed and will be responsible for the day to day on the ground implementation of the project and will be supported by other officers of the PME, one other FO who is currently based in Soufriere Range, and a Project Secretary who will be hired by the project.

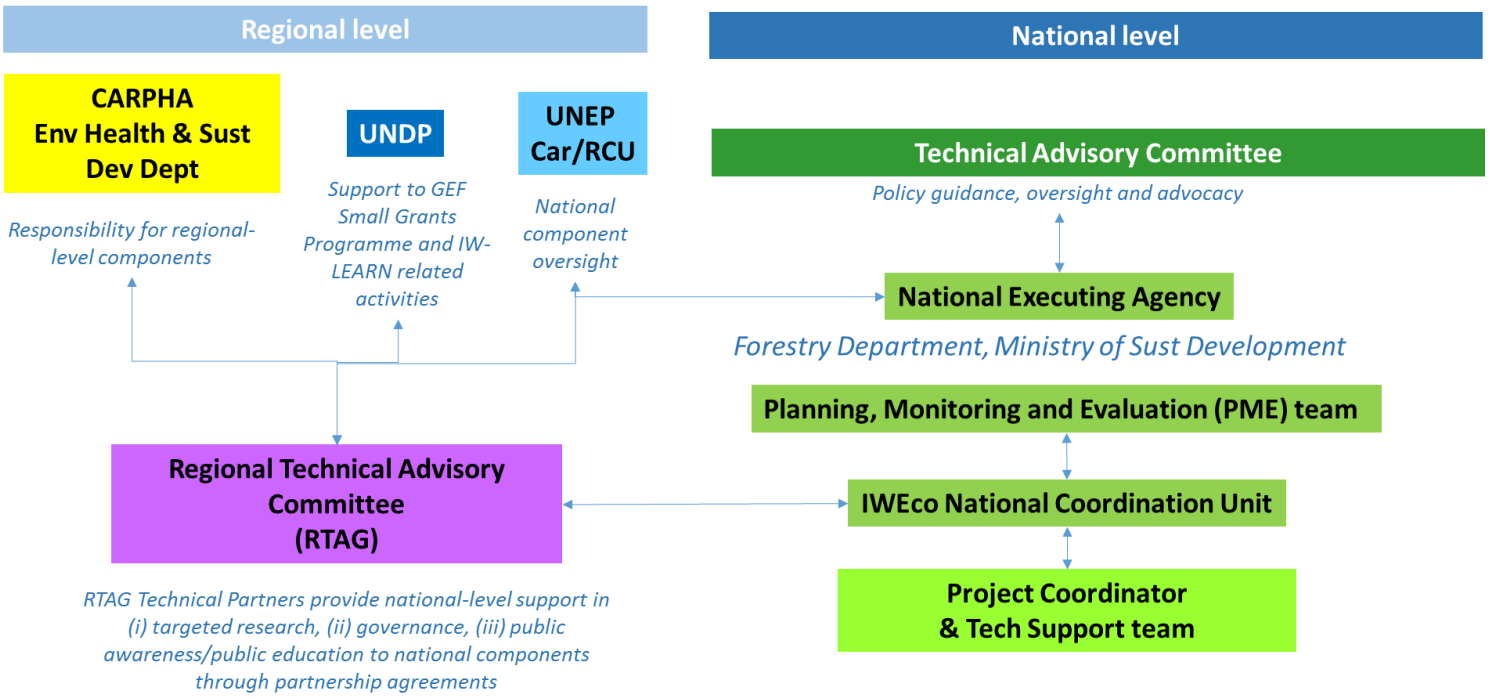
Under the IWCAM project the Coastal Zone Management Committee functioned as the Technical Advisory Committee. In a similar fashion, under this subproject, this committee comprise of both private sector and NGO representatives will serve as the Steering Committee. The Steering Committee will ensure involvement of all relevant entities, synergies with other national projects, and that all existing policies and development strategies of government are adhered to.

UNEP/CARPHA will provide technical support and that the overall vision of the regional (global) project is achieved. CARPHA and the PME will work together to ensure full participation in regional components and the exchange of best practices to support the Knowledge Management component of the project.

The project will be subjected to UNEP/GEF M&E requirements, namely the preparation of annual work plans (AWP), submission of quarterly operational reports (QOR) and project implementation reviews (PIR). The stipulated Mid Term Evaluation (MTE) and Terminal Evaluation (TE) will also form part of the project M&E. Monitoring and Evaluation will follow CARPHA, GEF and National requirements to the extent possible.

The logical framework matrix provides outcome and impact indicators and corresponding means of verification. These will provide the means of verification for the M&E tools used in project monitoring.

Any substantial project or budget revision will conform to GEF stipulations and will be done with the full knowledge and cooperation of UNEP/CARPHA.



National Project Steering Committee (PSC)
Various national state and non-state representatives

Project Support (Forestry Dept)
Project Oversight – Asst Chief Forest Officer
Project Coordinator – Forestry Officer
Support – Forest Officer based on site
Secretary

2.12 Communications and Dissemination Mechanisms

The Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Cooperatives which is the umbrella Ministry for the Forestry Department has recently undergone some institutional re-design to strengthen its overall capacity for Communication and Information Dissemination. Recognising the importance of community involvement the Ministry will build on decades of involvement of the Department of Forestry in broad-based education and awareness raising programmes, the Communications Strategy will seek to:

(i) Raise awareness of the island's vulnerability to the vagaries of climate, including its vulnerability to landslides and land degradation as a whole;
(ii) Promote the adoption of sustainable land management practices at the local and national level;
(iii) Raise awareness of the associated socio-economic benefits with the adoption of sustainable practices and new and innovative technologies;
(iv) Disseminate information of sub-project activities related to improved ecosystems management.

The project will work with participating farmers to encourage the formation of clusters which will ultimately be components of a farmers' network as a means of strengthening and improving the existing marketing arrangements. The ultimate aim is to improve productivity and livelihoods in general as a means of ensuring both the replication and sustained use of the SLM methodologies introduced.
With respect to ecosystem management including addressing the need for improved liquid and solid waste disposal, education and awareness raising materials developed at the regional level will be widely disseminated within the sub-project site. This will form the basis for sensitization of schools, community groups and the wider public.

Tools for achieving increased awareness and communications will include:

- Regular communication and meetings, including field visits, with partner agencies and stakeholders involved in the implementation of sub-project components;
- Reporting to key government agencies and bodies;
- Public availability of sub-project deliverables including maps, briefings, and training manuals, among others;
- Community meetings and school presentations, particularly for presentations on deliverables;

2.13 Monitoring and Evaluation (M&E)

The project will be monitored through the following M&E activities:

A Project Inception Workshop will be held within the first 3 months of project start with those with assigned roles in the project organization structure, representatives of the Executing Agencies (UNEP and CARPHA) and, where appropriate/feasible, regional technical policy and program advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop will address a number of key issues including:

a . Assist all partners to fully understand and take ownership of the project.
b. Detail the roles, support services and complementary responsibilities of UNEP CAR and RCU staff vis à vis the project team.
c. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms.
d. The Terms of Reference for project staff will be discussed again as needed.
e. Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on project performance indicators, targets and their means of verification, and recheck assumptions and risks.
f. Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
g. Discuss financial reporting procedures and obligations, and arrangements for annual audit.
h. Plan and schedule Project Steering Committee meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first Project Steering Committee meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly and Annual project progress reports as will be outlined in the project agreement. The reports will include, but are not limited to: (a) Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative); (b) Project outputs delivered per project outcome (annual); (c) Lessons learned/good practices; (d) AWP and other expenditure reports; (e) Risk and adaptive management; (f) Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits: the UNEP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the PSC may also join these visits. A Field Visit Report will be prepared by UNEP/CAR RCU and will be circulated no less than one month after the visit to the project team and PSC members.

Mid-term of project cycle: The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues

requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by UNEP based on guidance from the Regional Coordinating Unit and the GEF. The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project: An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNEP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by UNEP based on guidance from the Regional Coordinating Unit and the GEF.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing: Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

3 PROJECT ANNEXES

Annex 3.1: Costed Project Outline

COMPONENT 1. National Sub-project 1.6: Saint Lucia	GEF Funding	Co-Financing	Total component Cost
COMPONENT 1: To develop and foster the implementation of targeted Innovative, climate-change resilient approaches to Sustainable Land Management (SLM) and enhanced management and maintenance of ecosystem services within the Soufriere Watershed	**576,485**	**545,000**	**1,121,485**
Component 1.1 Measurable stress reduction in the Soufriere watershed through appropriate sustainable water, land and ecosystems management interventions that account for climate change.	543,485	535,000	1,078,485
Sub-component 1.1.1 SLM and SFM-related diagnostic analysis for the Soufriere watershed	8,000	40,000	48,000
Activity 1.1.1.1 - Conduct participatory (rapid) water and land-related diagnostic analysis for the Soufriere watershed	7,000	40,000	47,000
Activity 1.1.1.2 - Prepare Findings Report	1,000		1,000
Sub-component 1.1.2 Reforest and rehabilitate lands and riverbank protection and restoration along critical reaches in the upper Fond St. Jacques /Migny area	535,485	495,000	1,030,485
Activity 1.1.2.1 - Identify appropriate technologies for slope stabilisation (in collaboration with participating farmers)	500	5,000	5,500
Activity 1.1.2.2 - Procure appropriate farm tools and equipment	16,000	50,000	66,000
Activity 1.1.2.3 - Slope stabilisation works (bioengineering and direct seeding)	457,985	320,000	777,985
Activity 1.1.2.4 - Select and establish forest and other crop species, develop alternative livelihoods (such as agouti ranching), and establish agreements among government, private and farming communities in support of water security.	54,000	100,000	154,000
Activity 1.1.2.5 - Evaluate effectiveness of interventions	2,000	15,000	17,000
Activity 1.1.2.6 - Compute carbon benefits associated with land amelioration actions within projects	5,000	5,000	10,000
Component 1.2 Enhanced livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning.	33,000	10,000	43,000
Sub-component C1.2.1 - Develop a Mechanism for Increase in revenue generation within target communities for selected stakeholder groups	33,000	10,000	43,000
Activity 1.2.1.1 - Develop innovative farmer business model for participating community members	5,500		5,500
Activity 1.2.1.2 - Build capacity to strengthen commercial and technical capacities (including record-keeping, conflict resolution, leadership)	9,000	5,000	14,000
Activity 1.2.1.3 - Establish and revitalise farm clusters and accelerate their integration into higher value chain	6,000	5,000	11,000
Activity 1.2.1.4 - Facilitate establishment of partnerships and alliances between clusters and increase advocacy	1,500		1,500
Activity 1.2.1.5 - Branding of agri-products / integrating them into value chains "from the heart of the forest / breadbasket of Saint Lucia"	11,000		11,000
COMPONENT 2. To strengthen Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and ecosystems Monitoring and Indicators frameworks in Saint Lucia.	**22,000**	**15,000**	**37,000**
Component 2.1 Strengthened national and regional systems for monitoring of environmental status with respect to key international agreements.	22,000	15,000	37,000

COMPONENT 1. National Sub-project 1.6: Saint Lucia	GEF Funding	Co-Financing	Total component Cost
Sub-component C2.1.1 - Develop scientific research protocol for project site (Suite of project-specific IW, and LD-related indicators of process, stress reduction, and environmental and socioeconomic status indicators).	7,000	12,500	19,500
Activity 2.1.1.1 - Establish/strengthen partnerships with scientific institutions	2,000		2,000
Activity 2.1.1.2 - Develop a monitoring framework for Sustainable Land and Ecosystems Management	5,000	12,500	17,500
Sub-component C 2.1.2: Compilation of data sets.	15,000	2,500	17,500
Activity 2.1.2.1 - Establish and implement community based monitoring programmes (including schools)	15,000	2,500	17,500
COMPONENT 3. Strengthening of the Policy, Legislative and institutional reforms and capacity building for Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM)/Water Use Efficiency (WUE) and ecosystem services management taking into consideration climate change resilience building.	**21,000**	**5,000**	**26,000**
Component 3.2 Strengthened capacity of national and regional institutions and other stakeholders for water, land, and ecosystems management that accounts for climate change.	21,000	5,000	14,000
Sub-component C3.2.1 - Strengthened local and national capacities	21,000	5,000	26,000
Activity 3.2.1.1 - On-site training of farmers on SLM techniques	2,500	2,500	5,000
Activity 3.2.1.2 - Establish program of exchange visits (training) with Extension Officers and farmers from different Extension regions	8,000	2,500	10,500
Activity 3.2.1.3 - Field trips by partners to sub-project site	5,000		5,000
Activity 3.2.1.4 - Provide support to development of school-based assessments (SBAs) related to sustainable land management	5,500		5,500
COMPONENT 4. To enhance knowledge exchange, promotion of best-practices, replication and expanding stakeholder involvement in the Soufriere watershed and at the national level.	**62,300**	**591,602**	**653,902**
Component 4.1. Improved engagement and information access for practitioners and other stakeholders through targeted knowledge sharing networks.	62,300	591,602	656,929
Sub-component 4.1.1. - Capture and documentation of best practices for dissemination	27,600	146,774	174,374
Activity 4.1.1.1 - Develop a common framework for knowledge capture and dissemination (in consideration of existing frameworks)	5,000	146,774	151,774
Activity 4.1.1.2 - Procure equipment (eg digital cameras, etc) to document processes toward post -project lessons learnt compilation	9,000		9,000
Activity 4.1.1.3 - Train local project managers/staff on use of equipment	2,000		2,000
Activity 4.1.1.4 - Collect and compile suite of best practices and package as appropriate	11,600		11,600
Sub-component 4.1.2 - Raise awareness of issues in collaboration with public and private sector agencies	34,700	444,828	479,528
Activity 4.1.2.1 - Publish and disseminate findings to external target audiences and policy makers	5,000		5,000
Activity 4.1.2.2 - Utilise media support products to target private sector, schools and communities	21,000		21,000
Activity 4.1.2.3 - Collaborate with other partners in public awareness (PA) events (coincide with commemorative days) using media support products developed at the regional level	8,700	444,828	453,528
COMPONENT 5: Project Management	**47,900**	**319,159**	**367,059**
Sub-component 5.1.1 Day to Day component Management through the PCU	47,900	319,159	367,059
Activity 5.1.1.1 - Establish a National Project Steering Committee (NPSC) and NPSC meetings	900	15,000	15,900
Activity 5.1.1.2 - Prepare amendments and detail of sub-project - logframe, costs, implementation arrangements, etc	500		500
Activity 5.1.1.3 - Assigning of Staff and establishing of project desk in Soufriere	500	247,659	248,159

COMPONENT 1. National Sub-project 1.6: Saint Lucia	GEF Funding	Co-Financing	Total component Cost
Activity 5.1.1.4 - Initiation & management of country project	36,000	56,500	92,500
Activity 5.1.1.5 - Office equipment	10,000		10,000
TOTAL component COST ($)	**729,685**	**1,475,761**	**2,205,446**

Annex 3.2 Logical Framework and Objectively Verifiable Impact Indicators

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
Component 1 Objective: To develop and foster the implementation of targeted Innovative, climate-change resilient approaches to Sustainable Land Management (SLM), Integrated Water Resources Management (IWRM), Integrated Coastal Zone management (ICZM) and enhanced management and maintenance of ecosystem services within the Soufriere Watershed					
Outcome C1.1 Measurable stress reduction in the Soufriere watershed through appropriate sustainable water, land and ecosystems management interventions that account for climate change.	(i)Reduction in the number and extent of direct and indirect drivers that result in the degradation of the Soufriere watershed. (ii) Extent of forest renewal within target areas; (iii) Evidence of reduced impact of land degradation on ecosystem services; (iv) improved integrity of biodiversity	(i) Some level of intervention - not as sustained as needed to effect sustainable change; (ii) financial resources are a challenge; (iii) stakeholder investment not strong; (iv) perception is that it is solely governments role; (v) few farmers implementing good practices but reliant on govt assistance; (vi) inadequate transfer of traditional knowledge (vii) private sector contribution to protection of environ. services is limited; (viii) limited demonstration/uptake of 'green' innovations (wastewater in particular). Existing sustainable land use practices	(i) Reduction in agricultural pollution practices in 50 % of target area by mid-term and 75% by project end; water catchment in project area 100% protected by end of project; 30 farmers utilising sustainable farming practices by end of project. (ii) 75 % of degraded lands restored with agroforest systems (with natural regeneration and silvicultural practices) by end of project; (iii)improved water quality (suspended solids) in catchment streams;	(i) project implementation plans; (ii)project progress reports; (iii) replication of tools, methods and techniques in other communities through new investments; (iv) national reporting to conventions and other international and regional frameworks; (v) internal agency reports; (vi) national reporting to conventions and other international and regional frameworks;	**Risks:** ; (i) inadequate collaboration among the donor that negatively impacts financing and/or commitment in maintaining partnership arrangements; (iii) other stakeholders who may not benefit directly from site interventions may perceive inadequacies in project design (iv) financing not received on a timely basis. (v) frameworks for monitoring are established that exceed national level capabilities; (vii) established data collection and monitoring systems are not maintained as a result of resource constraints; **Assumptions:** (i) No occurrence of hazard events that may compromise overall implementation; (ii)GEF and other project partners remain committed to project implementation and demonstrate flexibility to the possibility of changes at the sub-project level; (iii)

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
					government and partners will continue commitment and investments in data collection and monitoring systems; (iv) results/information from monitoring systems will be effectively communicated; (v) data collected and information from monitoring is used for effective decision-making; (vi) design of systems will be sensitive to capacities of stakeholder agencies to mainstream systems;
Activity 1.1.1.1; 1.1.1.2 Output: A rapid SLM and SFM-related diagnostic analysis for the Soufriere watershed and environs (using a community participatory approach) conducted to inform the definition of the innovative interventions (based as appropriate on the outputs and lesson learnt of the GEF-IWCAM project and other relevant interventions).	(i) biophysical and socio-economic baseline information specific to the site and immediate environs; (ii) identification of policy relevant indicators	Soufriere Watershed Sustainable Development Plan. Situational Analysis for the Soufriere Watershed. Land management interventions seldom placed in context of watershed management framework; general lack of mainstreamed watershed management planning; poor understanding of the watershed and socio/economic development relationships; Waste characterization currently being undertaken for the designation of Waste Control Areas, including Soufriere	**Mid-term** • Detailed baseline information available to inform project implementation • Policy relevant monitoring system developed **End of project** • Baseline informs project implementation	Feasibility Analysis Reports; Approved Watershed management plan by stakeholder consensus; media releases	**Risks:** insufficient buy-in at the national level may cause delays in start-up. Major changes in project start-up conditions from project conceptualization **Assumptions:** The Office of the GEF Focal Point and the Department of Forestry will be adequately mobilized to engage in the assessment process; data to augment project design is relatively easily available; There is buy-in among the main planning authorities to include/adopt the plans as part of integrated development plans; there is buy-in from the beneficiaries (private sector/communities)

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
***Activity 1.1.2.1; 1.1.2.2; 1.1.2.3; 1.1.2.4; 1.1.2.5; 1.1.2.6 Output*:** Reforested and rehabilitated lands and riverbank protected and restored along critical reaches in the upper Fond St. Jacques /Migny area.	(i) area planted /restored (including number and types of trees); (ii) ground cover occurrence; (iii) soil loss; (iv) sediment loading; (v) soil fertility (vi) impacts on water intake; (vii) number and diversity of trees planted; (viii) water quality in terms of sediment loads (soil loss rates); biomass accumulation; (ix) no hectares of natural forests conserved and or rehabilitated	landslide areas and eroded/denuded areas rendered unstable since Hurricane Tomas; large expanses of hillslopes are under dasheen cultivation; soil agronomic practices having impacts (not measured) on surface water intake located downslope. Removal of riparian vegetation; acute riverbank erosion; negative impacts on terrestrial and aquatic biodiversity - loss of species, change in species composition; aggravated erosion and sedimentation leading to heightened flood risk; degradation of ambient water quality; limited appreciation and understanding of stream hydrology and dynamic processes; public apathy/limited awareness; sedimentation of near shore marine ecosystems; Riverbank Assessment methodology.	**Mid-term** □ restoration of at least 6 hectares reforested with native species at upper, Migny □ 20 ha under mixed agroforestry systems and 4 km of riparian strips □ 20 % reduction in visible evidence of sheet, rill and gully erosion □ 10 % reduction in measured total suspended solids (TSS - related to sediment load) □ Improvements in soil fertility in 20% of samples by end of project; • At least 3 investments (in timber and non-timber products) in target watershed areas incorporating mix of riverbank soil/slope stabilization measures/techniques **End of project** • restoration over at least 10 hectares at upper, Migny □ 40 ha under mixed agroforestry systems and 7 km of riparian strips □ 80% occurrence of groundcover on landslide areas □ 50 % reduction in visible evidence of sheet, rill and	Aerial photos; technical reports/publications; Project progress reports; media releases; scientific reports/publications	**Risks:** Occurrence is on private lands so needs buy-in from landowners. **Assumptions:** Suitable native species are available in sufficient quantity for planting early in the project; Farmers will be cooperative

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
			gully erosion □ 20 % reduction in measured total suspended solids (TSS - related to sediment load) □ Improvements in soil fertility in 50% of samples □ At least 7 investments (in timber and non-timber products) in target watershed areas incorporating mix of riverbank soil/slope stabilization measures/techniques and measures.		
Outcome C1.2 Enhanced livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning.	(i) Evidence of income generation and/or economic benefits (for community, private sector) beyond the direct investments of the project;	SGP is in the process of providing additional financing to the Bellevue Farmes Cooperative to expand its composting initiative. Onlly other related Community enterprise is Rainforest Foods produces of agriproducts; existing ecotourism facilities	(i) number of indirect stakeholders (e.g. Bellevue Farmers Cooperative, Rainforest foods, other farmers) demonstrating revenue increases through project interventions; (ii)	Sales Records;	**Risks:** Willingness to provide financial information. **Assumptions:** There is a baseline that allows ability to assess economic benefits to target communities in context of contributions from the project; there is buy-in from the target community; availability of support/advisory services from local business support agencies that focus on micro and small and medium enterprises (SMEs).
Activity 1.2.1.1; 1.2.1.2; 1.2.1.3; 1.2.1.4; 1.2.1.5 Output: Increase in revenue generation within target communities for selected stakeholder groups through integration in global value chain	(i) Estimated annual revenues; (ii)number of new enterprises	Threats to viability of tourism-based natural attractions on account of land and ecosystems degradation; Linkages between water, land and	**Mid-term** □ Increase in actual revenue earnings by at least 25% at end of project through integration in global value chain for agricultural	Records/financial statements from cooperatives; tailored financial data capture tool	**Risks:** Willingness of stakeholders to provide financial information; occurrence of natural disasters that may cause significant disruption to businesses;

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
for agricultural products		ecosystem degradation and socio-economic impacts to tourism sector not well documented and reported; absence of data to make linkages; lack of mainstreamed assessment protocols	products, for most directly engaged stakeholders □ increase by 20 % the number of new enterprise investments **End of project** □ Increase in actual revenue earnings by at least 75% through integration in global value chain for agricultural products, for most directly engaged stakeholders □ increase by 50 % the number of new enterprise investments.		availability of a financial specialist to undertake required evaluation
Component 2 Objective: To strengthen Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and ecosystems Monitoring and Indicators frameworks in Saint Lucia.					
Component 2 Outcomes	**Indicator**	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
Outcome 2.1 Strengthened national and regional systems for monitoring of environmental status with respect to key international agreements.	(i) Effective linkage / networking of information systems.	Forest Resource Assessment undertaken every 5 years; Data and information on the drivers of SLM and SFM are not adequate because(i) assessments are very sporadic and limited time series; (ii) data and information tends not to be analyzed; (iv) reports generated are not shared - info lost; (iii) limited capacity to utilize information; (v) decision making is very often not based on scientific	System for input into reporting requirements for FAO Forest Resources Assessment, UNCCD NAP/SAP, UNFCCC National Communication and CBD convention developed.	National Reports; Data Base; Information Systems	**Risks:**

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
		information			
Activity 2.1.1.1; 2.1.1.2 Output: Suite of project-specific IW,and LD-related indicators of process, stress reduction, and environmental and socioeconomic status indicators utilised to assist objective assessment and monitoring of impacts of the project.	Effective use of regionally / internationally recognised methodologies; Indicators are endorsed at steering committee level; Monitoring programs (including community based monitoring) being implemented	Low level of awareness and/or low level of understanding of recommended indicators; lack of or slow rate of progress toward integration or mainstreaming indicators within formal national reporting frameworks; environmental indicators generally not applied along with conventional socio-economic developmental indicators;	**Mid-term** ☐ All indicators identified based on Convention reporting requirements and GEF Tracking Tools and compiled in Project Tracking Tool ☐ core stakeholders trained on use of tool **End of project** ☐ Indicators framework contributed to adequate monitoring of project outcomes	Project Tracking Tool; training needs assessments; course material; training reports; progress reports; media releases	**Risks:** May potentially add to burdened project landscape (and agencies) at national level where multiple reporting frameworks are required from various projects; **Assumptions:** Local project management team will assist in advancing the use of the indicators framework through validation via project implementation
Activity 2.1.2.1 Output*:* Project specific thematic (LD, IW, socioeconomic) data sets available and presented in interim and final reports and data products	Data Sets on: (i) proportion of canopy gaps; (ii) proportion of exposed soil polygon; (iii) proportion on polygons showing land slippage; (iv) water quality (esp suspended solids); (v) proportion of recovery of riparian zones; socioeconomic index (e.g. employment status); (vi) SFM index.	Forest Resource Assessment undertaken every 5 years; Data and information on the drivers of SLM and SFM are not adequate because (i) assessments are very sporadic and limited time series; (ii) data and information tends not to be analyzed; (iv) biophysical resource inventory baseline data; forests restoration and rehab. data	**Mid-term** ☐ Routine Data collection system in place by middle of Yr.1 ☐ Data assessment at least twice per year **End of project** Comprehensive collection of data through project life ☐ Data collection system linked to Forest Management Information System (and other related information Systems)	Interim and Final Reports	
Component 3 Objective: To strengthen policy, legislative and institutional reforms and capacity building to support Sustainable Land Management (SLM), Integrating Water Resources Management (IWRM) and ecosystem services management taking into consideration climate change resilience building in Saint Lucia.					

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
Component 3 Outcomes	**Indicator**	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
Outcome C3.2 Strengthened capacity of national institutions and other stakeholders for water, land, and ecosystems management that accounts for climate change.	(i) Evidence of uptake and use of project tools and training by key stakeholder groups (Number of replications of innovative approaches)	Limited involvement of non-state actors whose capacities are also limited. Capacities of relevant state agencies are challenged by of high turnover of staff resulting in lost knowledge.	(i) At least 10 replications of lessons learnt undertaken by national institutions and others outside of target area by middle of Yr 3.	(i) project progress reports; (ii) national reporting to conventions and other international and regional frameworks;	**Risks:** (i) difficult fiscal challenges faced by governments may worsen and may result in shifting priorities and human resource deployment away from resource management; (ii) limited persons with the necessary competencies for training. **Assumptions:** (i) governments will remain committed to investing in human resource and institutional capacity building for SLM and SFM; (ii) both state and non-state agencies have persons who have the necessary competencies for training; (iii) the donor community and other partners will continue to support stakeholder groups in building capacity for SLM and SFM. (iv) private sector will contribute resources and share responsibilities in capacity building,
Activity 3.2.1.1; 3.2.1.2; 3.2.1.3; 3.2.1.4 Output: Technical personnel and farmers within the watershed trained in prescribed SLM practices and implementation the	(i) Number of on-farm training activities convened; (ii) number of persons trained	High turnover in professionals require continual training; non-governmental organizations, private sector and communities	**Mid-term** □ At least 30 % of target audiences are trained in the tools, techniques and technologies advanced □ at least 1 national technical	training needs assessments; course material; training reports; progress reports; media releases	**Risks:** Availability of personnel to fully participate; commitment overload; trained persons are no longer in a position to apply knowledge through staff turn-over, other

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
interventions toward future replication and mainstreaming within national frameworks.		have low knowledge level on application of techniques and methods; continuity of training programmes is erratic; SLM Capacity Assessments have been undertaken and also report on SLM techniques and procedures.	workshops convened; **End of project** □ At least 60 % of target audiences are trained □ at least 2 national technical workshops convened		causes; **Assumptions:** Personnel will be made available to participate; needs assessments are designed so that training is effectively targeted
Component 4 Objective: To enhance knowledge exchange, promotion of best-practices, replication and expanding stakeholder involvement in the Soufriere watershed and at the national level.					
Component 4 Outcomes	**Indicator**	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
Outcome C 4.1 Improved engagement and information access for practitioners and other stakeholders through targeted knowledge sharing networks.	(i) Availability of documented best practices and lessons learned in SLM and SFM in print and electronic formats; (ii) Evidence of technical personnel using the data and information generated to strengthen the evidence base and apply in future decision making; (iii) Evidence of information being utilised by students;	Decisions in SLM and SFM are inadequately informed by best practices. School-based assessments not sufficiently informed by SLM and SFM best practice although students routinely request information on SLM /SFM from focal department; methods for information dissemination are ineffective and not targeted; (i) relative isolation of practitioners between countries with limited opportunities for interactive experience-based learning with counterparts in other countries; (ii) limited dissemination and access to resources to	(i) Evidence of uptake of existing tools and new tools; (ii) Evidence of an increased number of technical personnel utilising improved techniques in SLM.	(i) Endorsed and published national and regional best practices that serve as references for SLM, and SFM in the Caribbean region and other SIDS regions (ii) national reporting; (iii) conference and meeting proceedings; (iv) publications across knowledge networks; (i) Formal and informal communities of practices and associated knowledge platforms functional; (ii) publications; (iii) reporting to UN conventions and other regional and international frameworks	**Risks:** (i) inappropriate choice of dissemination methods; (ii) insufficient time and resources to develop and test best practices; **Assumptions**: (i) stakeholders and project beneficiaries are engaged from the onset in contributing perspectives and advancing improved practices; (ii) information capture is achieved in manner that lends to easy translation to many audiences; (iii) Saint Lucia actively uses and promotes best practices through regulatory avenues and practice codes at the national level; (iv) Regional best practices and innovative solutions relevant to St. Lucia are available early enough in the project to be validated; (v)

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
		practitioners in appropriate formats that enhance uptake;			Community leaders with interest in widening their horizons can be I and identified and mobilized; (vi) Community leaders successfully engage community members
***Activity 4.1.1.1; 4.1.1.2; 4.1.1.3; 4.1.1.4 Output*:** Suite of best practices for effective SLM documented based on project interventions and lessons learnt documented	No and type of practices documented	Report on SLM Practices prepared under the SLM project but not based on local lessons learnt	**Mid-term** □ Compilation of best practices initiated **End of project** □ Compendium of best practices compiled by middle of year 3	Reports on Lessons Learnt and best practices; Project Reports	**Risks**: (i) Insufficiency of time to test and validate practices.
***Activity 4.1.2.1; 4.1.2.2; 4.1.2.3 Output*: S**ensitisation and awareness raising programs conducted incorporating local/ regional lessons learnt and relevant media products on SLN, IW, SFM and ecosystem management in general	No. of media events undertaken to showcase improvements in SLM ; level of private sector involvement; Evidence of behavioral change as a result of awareness raising	SGP currently considering proposals for Capacity building and awareness-raising programmes within the sub-project area; Ministry of Sustainable Development has recently designated and Public Education Officer and through this mechanism information will have a national reach. Ongoing awareness programs with respect to solid and liquid waste management	**Mid-term** □ Commencement of replication of SLM practices nationally through the Forestry and Agricultural Extension Offices through outreach to farmers and practitioners □ Evidence of improvement in waste disposal practices (particularly with respect to collection of plastic bottles for recycling and collection of waste oil as well □ at least 2 high-profile media events featuring project **End of project** □ Replication of SLM practices nationally to farmers and practitioners through the Forestry and	Reports on PA programmes: newspaper clipping; Project Annual Reports; Forestry Department Annual Reports	Risks:

Goal: To mitigate the poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, which have impacted on sustainable livelihoods of the population.					
Results Level	**Indicator**	**Baseline**	**Targets**	**Sources of verification**	**Risks and Assumptions**
			Agricultural Extension Offices □ Evidence of improvement in waste disposal practices (particularly with respect to collection of plastic bottles for recycling and collection of waste oil as well □ total of at least 4 high-profile media events featuring project		

Annex 3.3: Budget in UNEP format

Annex 3.4: Support documents

3.4.1. Letters of Co-financing

GOVERNMENT OF SAINT LUCIA

Ministry of Agriculture, Food Production, Fisheries, Co-operatives and Rural Development

5th Floor, Sir Stanislaus James Building
Castries, Saint Lucia

Communications on this subject
should be addressed to:
THE PERMANENT SECRETARY
and the following Number
quoted:

February 5, 2014

Dr. Maryam Naimir-Fuller
Director
Division of Global Environment Facility Coordination (DGEF)
United Nations Environment Programme
PO Box 30552, Nairobi,
Kenya
E-mail: maryam.niamir-fuller@unep.org

Dear Dr. Naimir-Fuller,

Subject: Letter of Commitment for Partnership and Co-financing to the GEF-funded Full Size Project "Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco Project)"

The Government of Saint Lucia through the Ministry of Agriculture, Food Production, Fisheries, Co-operatives and Rural Development notes and commends the development of the GEF-funded Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco) Project.

The Ministry of Agriculture, Food Production, Fisheries, Co-operatives and Rural Development welcomes the opportunity to partner with the Ministry of Sustainable Development, Environment, Science and Technology in the implementation of this project given its role in agricultural development through sustainable land and water management and food security as outlined in the Agriculture Sector Policy which the Ministry is currently implementing. Please find attached brief overview of the Ministry's mandate and current and proposed interventions of relevance to the IWEco project.

We note that several of the IWEco Project outcomes and outputs are of direct relevance to the work carried out by this Ministry and we are willing lend support to this important regional initiative.

This letter therefore serves to confirm the commitment of Ministry of Agriculture, Food Production, Fisheries and Rural Development in contributing to the implementation of the GEF-IWEco Project particularly in support of the following interventions which we have been informed will be focused within the Soufriere Watershed at the national level of the project:

1. **Wastewater management thematic area:** Innovative solutions for management of untreated domestic/commercial/industrial effluent that are impacting receiving freshwater and marine ecosystems

.../2

Telephone: (758) 452-2526 Email: ps.agriculture@govt.lc Website: www.maff.egov.lc Fax: (758) 453-6314

2. **Land and watershed restoration and ecosystem resilience thematic area:** Innovative solutions for erosion control, agricultural non-point source pollution mitigation.

Additionally, the Ministry will also be developing a Disaster Risk Reduction Policy for the Agriculture Sector together with a Framework for mainstreaming DRR and institutional strengthening activities. We anticipate synergies between this activity and IWEco.

The proposed contribution of the Ministry of Agriculture, Food Production, Fisheries, Co-operatives and Rural Development to the IWEco Project is estimated at USD 345,274 of which USD197,126 (in-kind and cash) will be directly allocated to on-the ground interventions within the Soufriere watershed over the duration of the project.

We are pleased to be engaged as a partner and look forward to fruitful collaboration in the implementation of the Integrated Water, Land and Ecosystems Project.

Yours sincerely,

Dr. Darius Gabriel
Permanent Secretary

cc Nelson Andrade Colmenares
Coordinator, UNEP-CAR/RCU
Email: nac@cep.unep.org

Ministry of Sustainable Development, Energy, Science & Technology

Communication on this subject should be addressed to:
The Permanent Secretary

Norman Francis Building
Balata, Castries,
SAINT LUCIA, W.I.
Tel No: (758) 468-5833
Fax No: (758) 456-0490

December 9, 2013

Dr. Maryam Naimir-Fuller
Director
Division of Global Environment Facility Coordination (DGEF)
United Nations Environment Programme
PO Box 30552, Nairobi,
KENYA
E-mail: maryam.niamir-fuller@unep.org

Dear Ms Naimir-Fuller:

Letter of Commitment for Partnership and Co-financing to the GEF-funded Full Size Project "Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco Project)"

The Government of Saint Lucia, through the Ministry of Sustainable Development, Energy, Science and Technology, notes and commends the development of the GEF-funded Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco) Project. The Ministry pledges to assist in the implementation of this project given its ability to contribute to the achievement of a number of long-term outcomes elaborated in its Strategic Plan.

This letter therefore serves to confirm the commitment of the Ministry of Sustainable Development, Energy, Science and Technology in contributing to the implementation of the GEF-IWEco Project at the national level of the project which addresses:

1. The Measurable stress reduction in the Soufriere watershed through appropriate sustainable water, land and ecosystems management interventions that account for climate change;

2. Strengthened national and regional systems for monitoring of environmental status with respect to key international agreements;

3. Strengthened capacity of national and regional institutions and other stakeholders for water, land, and ecosystems management that accounts for climate change.

4. To enhance knowledge exchange, promotion of best-practices, replication and expanding stakeholder involvement.

The contribution of this Ministry to the project is estimated at **US$1, 055,487.74** in kind over the duration of the project. See attachment for further details. We are pleased to engage as a partner and look forward to a fruitful collaboration in the implementation of the IWEco Project.

Sincerely,

SYLVESTER CLAUZEL (MR.)
Permanent Secretary

cc: Nelson Andrade Colmenares, Coordinator: UNEP-CAR/RCU, Email: nac@cep.unep.org

Chief Forestry Officer: Department of Forestry; Ministry of Sustainable Development, Energy, Science and Technology

Chief Sustainable Development Officer: Sustainable Development and Environment Division; Ministry of Sustainable Development, Energy, Science and Technology

ST. LUCIA SOLID WASTE MANAGEMENT AUTHORITY

P.O. Box CP5722,
Castries, St. Lucia,
West Indies.

Communications on this subject should be addressed to the GENERAL MANAGER

IT'S OUR COUNTRY, OUR RESPONSIBILITY: KEEP ST. LUCIA CLEAN

Dr. Maryam Naimir-Fuller
Director
Division of Global Environment Facility Coordination (DGEF)
United Nations Environment Programme
PO Box 30552, Nairobi,
Kenya
E-mail: maryam.niamir-fuller@unep.org

Dear Ms Naimir-Fuller

Subject: Letter of Commitment for Partnership and Co-financing to the GEF-funded Full Size Project "Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco Project)"

Reference is made to communication from UNEP's Caribbean Regional Coordinating Unit (UNEP Car/RCU) in August 2013 inviting Saint Lucia Solid Waste Management Authority (SLSWMA) to participate as a partner in the implementation of the GEF-IWEco Project. We welcome this opportunity given that the SLSWMA has been providing solid waste management services that include waste collection and disposal at the two facilities in the island and the promotion of waste diversion strategies in Saint Lucia.

We note that several of the IWEco Project outcomes and outputs are of direct relevance to the scope of waste management that are carried out by the SLSWMA and we are in a position to lend support to this important regional initiative.

This letter therefore serves to confirm the commitment of the SLSWMA to contribute to the implementation of the GEF-IWEco Project particularly in the area of Education and Public Awareness at the national level of the project.

The contribution of the SLSWMA to the education and Public Awareness of the IWEco Project is estimated at US$ 75,000.00 (in-kind) over the duration of the project.

We are pleased to be engaged as a partner and look forward to fruitful collaboration in the implementation of the Integrated Water, Land and Ecosystems Project.

Yours sincerely

Durrey Auguste
General Manager

CC: Nelson Andrade Colmenares
Coordinator, UNEP-CAR/RCU
Email: nac@cep.unep.org

Annex 3.5 Terms of Reference for Partners and Consultants

Project Manager

Background (common to all partners' TORS)

Description of Work

The Project Coordinator (PC) will manage the day-to-day activities of the project and is ultimately responsible for ensuring the achievement of the outputs and objectives including the production of all stipulated reports. The PC will report to the Chief Forestry Officer, or his designate the Assistant Chief Forest Officer (ACFO), UNEP and CEHI coordinators.

The PC is expected:

1. To lead and manage the day-to-day affairs of the project and the project staff including administration of the project in accordance with UNEP (GEF executing agency) procedures.
2. To lead the preparation of the TOR for national and international experts and other subcontracts, drafting of contracts for the experts, activity scheduling and reporting.
3. To be fully aware of and familiar with all financial and technical rules, regulations and procedures relevant to project implementation (UNEP/GEF and National Executing Agency).
4. To ensure the implementation of activities scheduled in the work plan such as meetings, workshops, training, inventories, surveys and assessments.
5. To coordinate, monitor and supervise the activities of consultants and short term experts providing input to the project including supervision of the implementation of activities undertaken by consultants and experts, logistics, review of technical and progress reports, achievement of project objectives and outputs and cost control.
6. To liaise regularly with the project team and to ensure that the decisions and recommendations of the Steering Committee and opinions of the project team are fully incorporated within the scope of the project implementation.
7. Summarizes and synthesizes the results of the project, and identifies follow-up activities.
8. Identifies and ensures synergy of this project with other relevant projects particularly GEF funded projects.
9. Collaborates with all relevant stakeholders to ensure active involvement in the implementation process.

Qualifications and experience:

The PC should possess the following or equivalent experience:

1. Preferably MSc. in Natural Resource or Environmental Management studies, natural sciences or other related disciplines;
2. Good understanding of natural resource, climate change, environment and development issues;
3. At least three years working experience in environmental discipline;
4. Experience with design and implementation of environmental programmes;
5. Good communication and management skills;
6. Computer skills.

Outputs

- Inception Report, inclusive of a detailed work plan and schedule, one (1) week after hiring.
- An Inception Workshop report
- Quarterly and Annual project progress reports as will be outlined in the project agreement
- A rapid SLM and SFM-related diagnostic analysis for the Soufriere watershed and environs.
- Report on reforestation and rehabilitation of lands and riverbanks within the upper reaches of the Soufriere Watershed.
- Reports of revenue generated within target communities from agricultural products.
- A Suite of project-specific IW, and LD-related indicators of process, stress reduction, and environmental and socioeconomic status indicators.
- Trained technical personnel and farmers in prescribed SLM practices.
- A suite of best practices for effective SLM based on documentation of project interventions and lessons learnt.
- Sensitization and awareness raising programs on SLM, IW, SFM and ecosystem management in general.

TBD

Timeline (indicative)

TBD

Provisional budget

TBD