Project Identification Form (PIF) entry – Full Sized Project – GEF - 7

CSIDS-SOILCARE Phase1: Caribbean Small Island Developing States (SIDS) multicountry soil management initiative for Integrated Landscape Restoration and climate-resilient food systems

Part I: Project Information

GEF ID
10195

Project Type
FSP

Type of Trust Fund
MTF

CBIT
No

Project Title
CSIDS-SOILCARE Phase1: Caribbean Small Island Developing States (SIDS) multicountry soil management initiative for Integrated Landscape Restoration and climate-resilient food systems

Countries
Regional, Antigua and Barbuda, Belize, Grenada, Guyana, Haiti, Jamaica, St. Lucia

Agency(ies)
FAO

Other Executing Partner(s) **Executing Partner Type**

Partnership Initiative For Sustainable Land Management (PISLM) in Caribbean Small Island Developing States (SIDS)	Others

GEF Focal Area
Multi Focal Area

Taxonomy
Focal Areas, Climate Change Adaptation, Climate Change, Small Island Developing States, Land Degradation, Land Degradation Neutrality, Land Cover and Land cover change, Land Productivity, Food Security, Sustainable Land Management, Income Generating Activities, Restoration and Rehabilitation of Degraded Lands, Ecosystem Approach, Sustainable Livelihoods, Sustainable Agriculture, Local Communities, Stakeholders, Academia, Civil Society, Non-Governmental Organization, Participation, Type of Engagement, Information Dissemination, Consultation, Awareness Raising, Communications, Behavior change, Education, SMEs, Private Sector, Individuals/Entrepreneurs, Capacity Development, Gender results areas, Gender Equality, Gender-sensitive indicators, Gender Mainstreaming, Beneficiaries, Capacity, Knowledge and Research, Indicators to measure change, Learning, Theory of change, Peer-to-Peer, Knowledge Exchange, Field Visit

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 1

Climate Change Adaptation
Climate Change Adaptation 1

Duration
48 In Months

Agency Fee($)
714,014

Submission Date
4/30/2019

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
LD-1-4	GET	2,857,932	6,000,000
LD-2-5	GET	1,961,635	2,500,000
CCA-2	SCCF-A	883,242	3,000,000
LD-1-1	GET	1,813,127	4,500,000
	Total Project Cost ($)	**7,515,936**	**16,000,000**

B. Indicative Project description summary

Project Objective

To Strengthen Caribbean SIDS with the necessary tools for adopting policies, measures and best practices and support review of legal and institutional frameworks to achieve climate-resilient LDN.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1.Strengthening the national and regional soils knowledge and enabling environment to support sustainable soil management, climate smart agriculture and LDN implementation	Technical Assistance	1.1. Caribbean countries use soil data to support informed decision-making regarding LDN, Sustainable Soil Management (SSM) and Sustainable Land Management (SLM) and **contribute to wider regional and global soil and climate knowledge systems** *Indicator* - Number of municipalities that adopt policies and practices to implement LDN commitments	Output 1.1.1: Sub-Regional Soil Support Group / Partnership established and linked with GSP Output 1.1.2. National soil data including soil organic carbon and land capability updated, analysed and maps and Information Shared Output 1.1.3. National and subregional Soil Information Systems established and integrated with the Global Soil Information System (GloSIS) and GSP processes Output 1.1.4. Capacity needs assessed and developed through soils training and awareness	GET	1,519,438	2,500,000

		(soil survey, land capability, digital soil mapping, soil analysis in the field and laboratories and application of Voluntary guidelines on SSM) with GSP support
	Outcome 1.2. Sustainable and Climate Resilient Soil/Land Management Mainstreamed in National Policies and Regional Policy Frameworks and Decision Making Processes and Regional Cooperation Mechanisms to meet SLM, LDN targets and to contribute to Food Security, Environmental and Sustainable Development Agendas *Indicator* - Landscape approaches integrated into key regional and national policy and planning processes	Output 1.2.1. Legal and Institutional Framework for SLM, SSM, and Climate Smart Agriculture strengthened and Mainstreaming strategies designed and integrated into national Policies, land use planning and financing mechanisms at national and sub-regional levels.
		Output 1.2.2.SLM and Regional LDN Strategy integrated into Caribbean Community Policy and Decision Making processes including Voluntary Guidelines on Sustainable Soil Management
		Output 1.2.3: Regional Cooperation on SLM enhanced and

		Outcome 1.3 . Caribbean countries have established a LDN Transformation Funding mechanism and mobilized resources for SSM/SLM *Indicator* -Amount of funds mobilized to support the implementation of LDN activities in the region	Caribbean SLM/LDN SIDS-SIDS Cooperation Mechanism established Output 1.3.1. A Caribbean LDN Transformation Financial Mechanism established with participation of Private and Public Sector Partners			
2: Addressing the Drivers of Land Degradation Through the Rehabilitation of Degraded Areas and the Promotion of Integrated Landscape Management and Restoration	Investment	2.1. Land and Soil Degraded Areas in Haiti, Guyana Region 8 and Carriacou, Grenada are rehabilitated to productive use, to restore ecosystem services and build landscape resilience *Indicator:* SLM, SFM and watershed management on 37,000 ha. contributing to LDN targets: • Increased forest cover • Reduced soil erosion, land slippage and downstream flooding • Increased forest productivity • Increased carbon sequestration • Reduced biodiversity loss	Output 2.1.1 Degraded Areas assessed and participatory strategies for the restoration of degraded landscapes agreed and under implementation supported by a soils extension and farmer field school programme Output 2.1.2 Community based Soil Restoration/ Propagation Centres Facilitating land users access to\ Plant Materials, Soil Amendments and soil testing kits Output 2.1.3. Integrated Landscape Management (ILM) (including analog forest	GET	1,029,901	3,000,000

- 2000 beneficiaries (40% women) improve their income	and agroforestry systems) restoring resilient land use systems in target areas in three vulnerable landscapes in Haiti, Guyana Region 8 and Carriacou and, Grenada. Output 2.1.4 Cost-Benefit Analysis of the restoration strategies provide evidence for scaling up SSM/SLM to other areas, countries and SIDS.

3: Resilience Building to land degradation, Natural Disasters and Climate Change through Climate Smart Agriculture and Enhanced Drought Risk Management	Investment	3.1. Land productivity restored through Model Climate Smart Agriculture Farms in selected landscapes *Indicator:* SLM and CSA measures adopted on 20,000 ha of arable lands contributing to LDN targets including: • Increased vegetative cover • Increased soil organic carbon • Reduced soil losses (erosion) • Increased productivity • Sustained biodiversity and ecosystem services. *-1,500 beneficiaries (40% women) improve their income*	Output 3.1.1. Best SLM and CSA Practices and market opportunities identified and promoted to support resilient farming systems and value chain integration. Output 3.1.2: Climate Smart Model Farms implemented and Baseline established for Monitoring and Evaluating environmental and socioeconomic benefits in target farms and landscapes in Grenada, Haiti, Guyana and Jamaica. Output 3.1.3.: Farmers in vulnerable landscapes exchange and adopt Climate Smart agriculture techniques and farming systems that restore land productivity and enhance resilience	GET	1,323,006	3,200,000

3: Resilience Building to land degradation, Natural Disasters and Climate Change through Climate Smart Agriculture and Enhanced Drought Risk Management	Technical Assistance	3.1. Land productivity restored through Model Climate Smart Agriculture Farms in selected landscapes *Indicator:* SLM and CSA measures adopted on 20,000 ha of arable lands contributing to LDN targets including: • Increased vegetative cover • Increased soil organic carbon • Reduced soil losses (erosion) • Increased productivity • Sustained biodiversity and ecosystem services - 1,500 beneficiaries (40% women) improve their income	Output 3.1.4. Regional capacity building activities (climate modeling, CCA training, identification of resilient technologies and practices) carried out to support the adoption and upscaling of SLM and CSA in the region	SCC F-A	254,361	1,200,000

4: Enhancement of Food Systems and Alternative Livelihoods through the promotion of innovations in agriculture and livestock production systems and Mobilisation of the Private Sector in Support of LDN	Investment	4.1. Adapted Land Use/ Food Production Systems and Alternative Livelihood Options implemented with innovative technologies and private sector involvement *Indicator:* *Climate resilient measures adopted on 23,000 ha of vulnerable production landscapes contributing to improved food production, including* *- Increased productivity* *- Reduced soil erosion* *- 1,500 beneficiaries (40% women) improve their income*	Output 4.1.1. Priority areas identified through Land use, land capability and degradation assessments in Belize, Grenada, Jamaica and St. Lucia. Output 4.1.2: Resilient Food Production Systems, Alternative Livelihoods and Financial Options designed and implemented Output 4.1.3. Opportunities for Private Sector Collaboration for Potential Financing identified	GET	1,266,242	2,500,000

4: Enhancement of Food Systems and Alternative Livelihoods through the promotion of innovations in agriculture and livestock production systems and Mobilisation of the Private Sector in Support of LDN	Technical Assistance	4.1. Adapted Land Use/ Food Production Systems and Alternative Livelihood Options implemented with innovative technologies and private sector involvement *Indicator:* *Climate resilient measures adopted on 23,000 ha of vulnerable production landscapes contributing to improved food production, including* *- Increased productivity* *- Reduced soil erosion* - 1,500 beneficiaries (40% women) improve their income	Output 4.1.4. Regional capacity building activities (research on new adaptation technologies, regional knowledge sharing) adopted increase the resilience of food systems in the region	SCCF-A	393,392	1,100,000

5: Monitoring and Evaluation, Knowledge Management, and Communications	Technical Assistance	Outcome 5.1. An effective Monitoring and Evaluation system, SLM/LDN Knowledge Hub, and Communication Mechanisms Established for the project and for continued use by partners *Indicator:* *Number of countries that integrate LDN into their strategic planning processes* Outcome 5.2. Caribbean LDN and SLM Knowledge Hub established *Indicator:* *Number of knowledge and training materials disseminated in the region*	Output 5.1.1. A Gender Sensitive Monitoring and Evaluation Framework established and Supporting Project Implementation Output 5.1.2. Caribbean SIDS SOILCARE LDN and SLM Knowledge Hub established and supporting informed decision making Output 5.1.3. Caribbean Land-Soil Outlook 2030 and Regional Public Education and Awareness Strategy prepared and disseminated	GET	1,178,265	1,100,000

5: Monitoring and Evaluation, Knowledge Management, and Communications	Technical Assistance	Outcome 5.1. An effective Monitoring and Evaluation system, SLM/LDN Knowledge Hub, and Communication Mechanisms Established for the project and for continued use by partners *Indicator:* *Number of countries that integrate LDN into their strategic planning processes*	Output 5.1.4. Regional CCA training program and knowledge management program support (i) mainstreaming of adaptation into SLM policies and plans and (ii) enables CCA and SLM regional institutions to work close together	SCCF-A	193,430	500,000
				Sub Total ($)	**7,158,035**	**15,100,000**
Project Management Cost (PMC)						
				GET	315,842	700,000
				SCCF-A	42,059	200,000
				Sub Total($)	**357,901**	**900,000**
				Total Project Cost($)	**7,515,936**	**16,000,000**

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Government	Antigua y Barbuda	In-kind	Recurrent expenditures	2,000,000
Government	Belize	In-kind	Recurrent expenditures	2,000,000
Government	Grenada	In-kind	Recurrent expenditures	2,000,000
Government	Guyana	In-kind	Recurrent expenditures	2,000,000
Government	Haiti	In-kind	Recurrent expenditures	2,000,000
Government	Jamaica	In-kind	Recurrent expenditures	2,000,000
Government	St. Lucia	In-kind	Recurrent expenditures	2,000,000
GEF Agency	FAO	In-kind	Recurrent expenditures	2,000,000
			Total Project Cost($)	16,000,000

Describe how any "Investment Mobilized" was identified

Not Applicable

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Antigua and Barbuda	Land Degradation	LD STAR Allocation	402,785	38,265	441,050
FAO	GET	Belize	Land Degradation	LD STAR Allocation	893,242	84,858	978,100
FAO	GET	Grenada	Land Degradation	LD STAR Allocation	893,242	84,858	978,100
FAO	GET	Guyana	Land Degradation	LD STAR Allocation	880,457	83,643	964,100
FAO	GET	Haiti	Land Degradation	LD STAR Allocation	893,242	84,858	978,100
FAO	GET	Jamaica	Land Degradation	LD STAR Allocation	893,242	84,858	978,100
FAO	GET	St. Lucia	Land Degradation	LD STAR Allocation	893,242	84,858	978,100
FAO	GET	Regional	Land Degradation	LD Global/Regional Set-Aside	883,242	83,908	967,150
FAO	SCCF-A	Regional	Climate Change	NA	883,242	83,908	967,150
				Total GEF Resources($)	**7,515,936**	**714,014**	**8,229,950**

E. Project Preparation Grant (PPG)

PPG Amount ($)

200,000

PPG Agency Fee ($)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Antigua and Barbuda	Land Degradation	LD STAR Allocation	20,000	1,900	**21,900**
FAO	GET	Belize	Land Degradation	LD STAR Allocation	20,000	1,900	**21,900**
FAO	GET	Grenada	Land Degradation	LD STAR Allocation	20,000	1,900	**21,900**
FAO	GET	Guyana	Land Degradation	LD STAR Allocation	20,000	1,900	**21,900**
FAO	GET	Haiti	Land Degradation	LD STAR Allocation	20,000	1,900	**21,900**
FAO	GET	Jamaica	Land Degradation	LD STAR Allocation	20,000	1,900	**21,900**
FAO	GET	St. Lucia	Land Degradation	LD STAR Allocation	20,000	1,900	**21,900**
FAO	GET	Regional	Land Degradation	LD Global/Regional Set-Aside	30,000	2,850	**32,850**
FAO	SCCF-A	Regional	Climate Change	NA	30,000	2,850	**32,850**
				Total Project Costs($)	**200,000**	**19,000**	**219,000**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
37000.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
20,000.00			

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
17,000.00			

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00			

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
43000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
20,000.00			

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
23,000.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	5801489	0	0	0
Expected metric tons of CO_2e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	5801489			

Expected metric tons of CO_2e (indirect)	
Anticipated start year of accounting	2021
Duration of accounting	20

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	2,000			
Male	3,000			
Total	5000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

CC Adaptation tracking tool uploaded in the portal.

Part II. Project Justification

1a. Project Description

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

Overview

1. Small Island Developing States (SIDS), are a special case both for environment and development (Agenda 21, 17G). They are ecologically fragile and vulnerable. All the participating countries—Antigua and Barbuda, Belize, Grenada, Guyana, Haiti, Jamaica and, Saint Lucia—in this project are so classified. They all have similar characteristics and are affected by similar environmental and natural resources issues. All the participating countries have ratified the UNCCD and are committed to achieving SDG 15.3: "combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation-neutral world" by 2030 and the SDG target15.3 for achieving this Goal. The participating countries are also members of the Caribbean Community and are Party to the Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy (CSME) (RT) in its original jurisdiction—the legally binding regional instrument of the Caribbean Community Decisions made within the framework of this regionally, legally binding instrument and adopted by the principle Organ of the Community—the Conference of the Heads of Government—are operative in all Parties, unless otherwise stated. It is therefore against this backdrop that the Partnership Initiative on Sustainable Land Management (PISLM) for Caribbean SIDS High Level Ministerial Body (PISLM/HLMB) decided to approach the implementation of SDG 15.3. as a region, and allocated resources from their respective countries GEF-7 STAR allocation, to undertaking both a set of regional and specific action(s) at the national level.

2. In addition to contributing to the achievement of SDG 15.3, and more specifically to **Land Degradation Neutrality (LDN)** defined by the Parties to the Convention as—A state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems—the activities being undertaken will assist communities, businesses, and governments to reconcile the need for the intensification of food production in a sustainable manner, without degrading land resources. In addition, it provides a basis for these countries to re-focusing attention on the need to take effective measures for the management of their natural resources, in particular, land and land resources, in support of the transformation, resilience building and sustainable development of the agricultural sector, as a means of strengthening the region's food systems; which is in effect, the central objective of the Caribbean Community Natural Resources Management Policy (Article 12 of the Revised Treaty of Chaguaramas). The successful implementation of a LDN Strategy for Caribbean SIDS, including a Soils Policy will also contribute to the one of the goals of the Caribbean Community Agricultural Policy, namely improved income and employment opportunities, food and nutrition security and poverty alleviation in the Community (Article 56 (b) of the Revised Treaty of Chaguaramas) and its manifestation—the Jagdeo Initiative —which aims to catalyse the operationalisation of the Regional Transformation Programme for Agriculture (RTP).

3. Such a LDN Strategy for Caribbean SIDS, must of necessity, address the drivers of land degradation and barriers to SLM, including, inter alia, overexploitation of forest resources and expansion of agriculture in accessible areas; improper use of fertilizers and other agro-chemicals; and inadequate soil and water management at a scale for sustaining soil functions and related ecosystem services; unsustainable forestry and agricultural systems, including logging, cropping and livestock management practices, as well as mining, and settlement expansion. These causes are further exacerbated by the adverse impacts of climate change including re-occurring drought which have further affect the reliability of agriculture and increasing the risk of natural disasters. It should also address the gaps in knowledge, in particular, the paucity of data on soils and soil carbon content of individual Member States and make that information more readily accessible to policy makers and resources users alike as well as form an integral input to the LDN Strategy for Caribbean SIDS. Such information is also critical in assisting the participating countries in transitioning their agriculture sectors to embrace Climate Smart Agricultural principles in order to adapt to the changing climate as well as the development of sustainable supply chains with regard to production, processing, and market demand for resulting products. A positive manifestation of the successful implementation of a LDN Strategy for Caribbean SIDS could be an increase in food production in the Caribbean in order to reduce the region's multimillion-dollar import bill, as well as decreasing poverty and improving nutrition and resilience for the local population; a viewpoint shared by the Director General of the Organisation of Eastern Caribbean States (OECS).

4. The adverse impacts of climate change in the Caribbean and associated vulnerabilities have been well studied (ECLAC 2011,). Climate change poses a severe threat because of the biophysical and socio-economic characteristics of the Caribbean countries. They are particularly vulnerable because they are located in the hurricane belt, their population and infrastructure is concentrated in coastal zones, and they depend on a narrow range of economic activities, namely agriculture and tourism. These conditions make the Caribbean highly susceptible to external shocks, therefore climate change adaptation activities are of key importance to the long term development of the region. The project will also improve the regional capacity of Caribbean SIDS to mainstream adaptation practices and measures into the sub-regional policies and decision-making mechanisms. In particular, policy players and key stakeholders will be trained on CCA and supported on integration of adaptation measures and knowledge dissemination for climate-resilient agriculture

5. Land degradation; though an ongoing process in each of the participating countries, its scope and extent vary, from country to country, notwithstanding the similarities in the causes. At one end of the spectrum, is **Haiti,** which has 27,750 square kilometers of land area including four large offshore islands: La Gonave (680 Km2); La Tortue (180 Km2); Ile à Vache (52 Km2) and Ile Cayemite (45 Km2). A significant amount of lands in Haiti (approximately 63%) have slopes greater than 20%, whereas only 29% have slopes of less than 10%. Approximately, 97% of Haiti´s forests have been cleared for wood or charcoal, resulting in accelerated runoff and associated erosion of fertile topsoil and biodiversity loss. Approximately, 4200 ha of soil is estimated to be eroded per year and at least 6% of the land is considered to be irreversibly eroded. Less than 20% of the land under cultivation is appropriate for agriculture while most of the cultivated areas are very small parcels.

6. At the other end of the spectrum are countries such as **Guyana and Belize** which are low-lying continental countries, situated at or below sea-level which still have a significant amount of their land area under forest cover, but which are under increasing threat from land degradation, especially in the heavily populated coastal plain and along access roads and waterways. In the case of Guyana, FAO estimates that of a total land area of just over 21 million hectares, 71% is comprised of forest and another 17% of 'other wooded land,' thus representing one of the highest proportions of forest cover of any country in the world (FAO, 2010, Global Forest Resource Assessment). Though historically Guyana has had a relatively low rate of deforestation, it is still taking place, albeit at a slow rate. Between 2009-2010 deforestation rates in Guyana were 0.06% for rising from 0.02% per annum between 2005 and 2009 (Guyana Forest

Commission, 2012) and increasing to an estimated rate of 0.054% between 2010 and 2011(Global Mechanism of the UNCCD, Land Degradation Neutrality Report). The majority of deforestation between 2009 and 2011 has been attributed to increased mining activity accounting for 91% of the deforestation in 2009-2010 and 93% in 2010-2011. In addition, to increasing deforestation, the number of persons living on degraded land are also on the increase. In Guyana, twelvethousand people were living on degrading agricultural land in 2010 - an increase of 1% in a decade, bringing the share of rural residents who inhabit degraded agricultural land up to 2 % of the total rural population. During the same time period (2000-2010), the amount of people residing in remote degrading agricultural areas with limited market access increased by 1 %, reaching 10 thousand people (Global Mechanism of the UNCCD, Land Degradation Neutrality Report).

7. Situated on the Caribbean coast of the Central American peninsula with Mexico and Guatemala bordering on the landward side to the north, west and south, respectively, **Belize** has a land area of 22,960 km2 (8,867 square miles), comprising of the mainland which constitute 95% of the total land area and the remaining 5 % distributed among more than 1,060 islands coastal cases. Land degradation is a serious environmental issue in Belize. The country has lost more than 770,000 acres of forest since 1980 with an average deforestation rate of 0.6% per year In the period 1980 – 2010 and between 2010 and 2012 increased to close to 1% per year (CATHALAC and University of Belize Environmental Research Institute, 2012). There is a direct risk of erosion, soil structure deterioration, soil fertility loss, hydrological impacts, as well as loss of biodiversity and forest resources, from deforestation and other land cover conversions. The main causes of degradation include, inter alia, farming on land classified as marginal or unsuitable for agricultural activity which is estimated to be about a third of the 1 million acres of agricultural land, most of which more than 33% is on acidic soils particularly sensitive to land degradation; almost 10% is on steep slopes prone to erosion – mainly in central Belize (e.g. along Hummingbird Highway); with 4% is located in areas at extreme risk of erosion and leaching of nutrients during intense rainfall events. Farming on marginal land is leading to increased use and dependency on mineral fertilizers for cropping, and increased risk of erosion through loss of vegetative cover on sloping crop and grazing land and associated sedimentation and flash floods downstream. Other causes of land degradation include, livestock over-grazing also leads to soil compaction; the growth of settlements on good agricultural soil resulting in agricultural activity is pushed into less suitable soils and steep or remote lands; logging and associated road construction and surface mining which removes the fertile topsoil. Uncontrolled fire, couple with drought and inappropriate framing practices are also significant contributors to land degradation in Belize. A third of Belize's agricultural land is in very drought-prone areas with 40% of agricultural lands in low-rainfall prone areas and almost two-thirds overlie limestone (i.e. prone to desiccation).

8. The next group of participating countries—**Antigua and Barbuda and Grenada**—are located in the Eastern Caribbean. Antigua and Barbuda, Grenada and St Vincent and the Grenadines are archipelagic states. Antigua and Barbuda consists of two main islands—named Antigua and Barbuda—and a number of smaller islands (including Great Bird, Green, Guiana, Long, Maiden and York Islands and further south, the island of Redonda). Grenada consists of four main islands—Grenada, Ronde Island, Carriacou, and Petite Martinique—and a number of smaller features.

9. In the case of **Antigua,** it occupies a total area of 69,120 acres delineated in more than 41,000 land parcels; 18 percent of which is considered suitable for agriculture (Willians, 2003). Of the total land ownership in Antigua, the Government of Antigua and Barbuda is the largest land owner with about 41 percent of the land; followed by private ownership with 32 percent of the land and 23 percent of the land unspecified. In the case of Barbuda, all the land is vested in the Crown on behalf of the people, in perpetuity. An important trend in Antigua and Barbuda with respect to land management is the changing land use. Whereas, prior to 1975 the most prevalent use of land was in agriculture and livestock grazing; between 1964 and 1985, land in agriculture has declined

from 24,891 acres into 5,501 acres. Currently, most of the land is left fallow, leaving these open to threat from urban expansion and squatting. The major land management issues in Antigua and Barbuda are: unsustainable farming practices, poor watershed management, soil and sand mining, uncontrolled grazing by livestock, the competition for, and allocation of beach front land, particularly for tourism development and bush fires. In the case of bush and forest fires these are a major cause of ecosystem and species loss (CaribInvest (West Indies) Ltd, 2012).

10. A notable feature of Grenada's land use is a large amount of unproductive land, (for example, in the form of abandoned cropland and shrub and grassland), which account for 20% and 5% of the total land area, respectively. On the second largest island, Carriacou, the climate is drier and almost 60% of the island is classified as shrub and grassland. Pasture and grazing account for almost 25% of land area, and forests only 5%. Agriculture in Grenada is carried out mainly on small-scale, family-run farms, many on untitled informally occupied land. The main land pressure on productive lands in Grenada is urban development, notwithstanding that population growth is virtually stagnant (103,300 persons and 33,800 households in 2011 Census). As a consequence of the collapse of the banana industry, croplands have declined, between 2000 and 2009 from 58% - 37% of the land area. Though restoration of some of the abandoned cropland have been brought back into productive use due to the Farm Labour Support Programme, there are still vast areas of abandoned and idle lands throughout the country.

11. The key types of land degradation in the two islands of Grenada and Carriacou as identified in the aligned NAP are soil erosion by water, acidification and pollution, loss of soil life, soil fertility decline, and pests and disease infestation. Soil erosion is mainly occurring in agricultural lands in the southwest of Grenada. The main causes of degradation are deforestation, overgrazing, inappropriate agricultural practices and climate variability. The use of synthetic fertilizers by smallholder farmers has been cited as a concern for the sustainable use of soil on the island. A major cause of soil degradation is acidification caused by the overuse of agricultural chemicals, such as herbicides used in land clearing, pesticides and mineral fertilizers which occurs mainly in cropland areas, affecting over 860 ha (Grenada Land Degradation Neutrality Report, 2015). Chemical degradation occurs mainly in parts of St. David's, St. George's, St. Mark's and St. John's. Acidification is also related to loss of soil organic matter due to inadequate rotations and organic matter management resulting in loss the of soil biodiversity and nutrients (also through leaching) and reduced carbon sequestration/increased CO2 emissions. Inappropriate agricultural practices also include inappropriate agronomic methods, and irrigation and drainage practices and the cutting down of indigenous forest to facilitate the expansion of cinnamon and nutmeg cultivation. Synergies and complementarities will be sough with the Caribbean SIDS GEF- Islands Project on chemicals to further assess the impact of soil pollution in Caribbean SIDS soils. FAO component in the Caribbean GEF- Islands Project will make use of project data and information that will be linked with activities under component 1 (*Preventing the Future Build-Up of Chemicals Entering Caribbean SIDS*) on assessment of soil resources including soil pollution (pesticides). Synergies are also possible in the components 4*Knowledge Management and Communications* under resilient climate smart production systems and capacity building in climate smart food systems. Where FAO component in the Caribbean GEF Islands Project will make use of any lessons learned to integrate into developing tools and instruments in relation to agrochemicals management

12. The effects of land degradation and drought on St. Lucia are characterized as being economic, social or environmental in nature and include, the reduction in available water (irrigation, domestic) evidenced by the apparent progressive dwindling of the islands freshwater water resources, (which are essentially derived from surface water); reduced soil and ecosystem productivity; sediment and erosion damage to productive and transportation infrastructure reflected in increased levels of siltation of major drainage systems and increased incidents of land slippage in areas of human settlement; and loss of habitat and biodiversity due to high sediment levels in coastal areas, seen in the resultant negative impact on coral reef systems.

13. A number of issues have been identified which contribute to mismanagement of Saint Lucia's land resources, and ultimately, have led to land degradation and the occurrence of drought. Soil erosion and other degradation problems stem from land clearing inappropriate agricultural practices such as shifting cultivation and inadequate soil and water conservation practices and development (e.g. tourism and road construction). These are significantly degrading the prime agricultural lands in Saint Lucia and have negative consequences on the water system, both freshwater and coastal, due to increased sediment load and pesticides. These are in turn affecting the fisheries stock.

14. The drivers of unsustainable resource management practices include the disruption of social systems, the under-valuation of traditional knowledge, inadequate government policies and political will, weak institutions in terms of capacities and fragmented mandates, inadequate investments in sustainable land management increasing population pressure and poverty. Poverty and lack of access to land lead to squatting and farming on areas not suitable for agriculture with resulting degradation. In addition to the impact of hurricanes, St Lucia has also experienced marked changes in weather and climate patterns. The erratic weather pattern has led to prolonged drought situation and a state of emergency in 2009, particularly with respect to access to drinking water and food insecurity.

15. The last of participating countries in the project which is referred to as More Developed Country in the context of the Caribbean Community, is Jamaica. Land degradation is a serious environmental issue in both of these countries. In the case of Jamaica, some of the key causes are deforestation, soil erosion and contamination due to unsustainable agricultural practices as well as bauxite mining and quarrying, variable or extreme weather/ climate conditions including drought, and urban expansion which causes soil sealing and reduces water infiltration and aquifer recharge. Degradation especially in the drier south of the island impacts negatively on the agriculture, fisheries and tourism sectors including reduced farmers' capacity to sustain food production, reduced availability of fresh water for people, vulnerability to natural hazards, increased greenhouse gas emissions, Sustainable land management is an integral component of the Government's efforts to reduce land degradation and the Ministry of Water, Land, Environment and Climate Change has committed to setting national land degradation neutrality targets under the UNCCD.

16. All the participating countries in the project have a high probability of being affected by hurricanes with the exception of Guyana which is situated on the South American continent. Haiti is particularly prone to hurricanes and other tropical systems and over the past decade has suffered extensively from these systems. So vulnerable is the Haitian environment that torrential rains, as was the case on May 23-24, 2004, can lead to extensive flooding, washing away entire villages and forcing tens of thousands of people to abandon their homes and resulting in a death toll of approximately 2,400 people (University of Fondwa, 2018). Since that event in May 2004, Haiti has been affected by two hurricanes, in the same year, Ivan and Jeanne, in September 2004 which caused massive damage. Between August and September of 2008, Haiti was repeatedly hit by a number of tropical storms and hurricanes—Fey, Gustav, Hanna, and Ike—each system compounding the damage left by the previous one. Hurricane Ike which impacted the western coastline of Haiti, causing heavy rains and flooding, killed approximately 800 people and an estimated property damage of US$8 billion in property damage, excluding the extensive damage which it caused to crops throughout the country. On October 3rd and 4th 2016, Haiti was struck by Hurricane Matthew, a Category 4 hurricane, the strongest storm to hit Haiti since 1964, which caused a catastrophic amount of damage to Haiti's infrastructure and agricultural industry, while killing over 600 people (some estimates are over 1,000) and displacing tens of thousands and causing an estimated damage of US $1.9 billion.

17. Grenada has had its share of impacts from hurricanes. The most devastating within the last decade was Hurricane Ivan which affected the island as a Category 3 hurricane on September 7, 2004, causing widespread destruction. Damage which resulted from Hurricane Ivan totalled about $1.1 billion (2004 USD, ($1.43 billion 2018 USD)) represented 200% of its GDP; it damaged more than 14,000 homes and destroyed 30% of the houses, leaving about 18,000 people homeless as well as killing 39 persons. Other hurricanes and /or tropical systems which have affected Grenada since 1990, include Hurricane Omar, October 2008; Hurricane Emily, July 2005; Hurricane Keith and Tropical Storm Joyce, September 2000; Hurricane Lenny, November 1999; Hurricane George, September 1998, Tropical Depression Arthur, July 1990 and Hurricane Gustav, August 1990.

18. Looking ahead, the potential impact on hurricanes in the Caribbean is probably best illustrated by the Hurricane Irma which affected the region in October 2017, affecting multiple countries, including, devastating Barbuda, severely affecting St. Martin/Sint Maarten, St. Barthemely and Anguilla, the Virgin Island and Puerto Rico. It is not a farfetched scenario that most of the countries of the region could be severely affected by hurricanes, in one hurricane season. One of the effects of climate change is that these systems are likely to increase in frequency and intensity, posing increasing and significant risk to the region. In addition, to the increase intensity and frequency of hurricanes, other environmental changes associate with climate change which are expected to affect the region are, inter alia, a rise in sea level, longer dry seasons and shorter wet seasons and a rise in sea surface tempretures and its impact on coastal and marine habitats. In the case of sea level rise, this is expected to result in significant coastal erosion. In addition, a rise in sea level could impact coastal communities of the Caribbean if they are less than 3 metres (10 ft) above the sea. The damages expected from climate change will weaken the economy of the Caribbean as it will target some of the major sources of income, like tourism, which is estimate that between 25% to 35% of the Caribbean's economy relies directly on tourism. This prognosis underscores the need for countries in the Caribbean to build climate resilience and climate proofing into every dimension of their existence; in particular with respect to land and land resources, which this project addresses, particularly with respect to the promotion of Climate Smart Agriculture.

19. In addition to hurricanes and the impacts resulting from climate change, the region is also affected by a range of other potential natural disasters, including, inter alia, volcanoes, earthquakes, widespread flooding and drought. In terms of volcanoes eruptions, one is reminded of the eruption of La Soufriere in Saint Vincent in 1979, even though it is almost four decades ago, since it is still an active volcano. More recently, the eruption on January 8, 2007, of the Soufriere Hills Volcano in Montserrat (not a participating country in the project) is a grim reminder of this eventuality. With respect to earthquakes, the earthquake of January 2010 was the worst natural disasters to hit Haiti in generations, killing approximately 300,000 people.

20. In the low-lying coastal states of Guyana and Belize, which lie on or below sea level the threat of widespread inundation of the coastal areas continues to be a concern. Historically, the coastal plains where most of Guyana's population resides as well as the Rupununni Savannahs, in the interior, have been prone to flooding. In recent times, the coastal plains have been significantly affected by flooding. The flood of 2005 caused significant damage to property, infrastructure and the economy, particularly to agriculture, estimated at US$ 54.5 million (17.56 percent of GDP) (ECLAC, 2005 in Environmental Protection Agency, 2016). The total damage caused by the 2005 floods was estimated at US$ 445 million (Government of Guyana and the United Nations in Environmental Protection Agency, 2016). Again in 2015 flooding occurred affecting areas including East Berbice-Corentyne (Region 6), Demerara-Mahaia

(Region 4), including Georgetown and some areas of Mahaica-Berbice (Region 5). Though flooding of the magnitude of the 2005 and 2015 have note occurred since then, it must be noted that as the consequence of extreme rainfall events in 2006, 2008, 2010, 201, 2014 and 2015, flooding resulted, but was not only limited to Georgetown.

21. In addition, the Caribbean region is particularly vulnerable to the drought hazard. Over the past several years, the region has experienced re-occurring droughts which have caused significant distress to populations and damage to the economy of several of the participating countries. In Guyana, the damage from the 1997/1998 drought amounted to US$ 29 million due to the decrease outputs in the agricultural sector; rice production decreasing by 37 percent and sugar by 7 percent and 40 percent in the mining sector as result of the unavailability or limited sources of water. Droughts like conditions were again experienced from May 2009 to February 2010; from September 2012 to January 2013 and the most recently from early 2015 and extended into 2016. In the drought of 2015-2017 in Haiti, about 200,000 families (1 million people) were affected by drought conditions since the beginning of 2015, especially in Sud-Est, Nord-Ouest and Artibonite regions. These prolonged conditions aggravated the situation of 3.8 million food-insecure people in the country. Carriacou and Petite Martinique, which have few surface water resources, was severely affected by the 2010 drought, which seriously impacted agricultural production. The possibility for disasters occurring in Caribbean SIDS places increasing strain on the limited national and regional technical and financial resources and the region's ability to respond in an effective manner to the needs, resulting therefrom.

22. Since enhancing intergrated landscape management is a central consideration in this project which includes the sound mangement of biodiversity, it is necessary to provide a brief context of biodiversity of the region. The Caribbean islands are one of the world's greatest centers of biodiversity as the Caribbean islands hotspot supports an important biodiversity within its diverse terrestrial ecosystems with a high proportion of endemicity. Species endemic to the Caribbean islands hotspot represent 2.6% of the world's 300,000 plant species and 3.5% of the world's 27,298 vertebrate species. In addition, the Caribbean is estimated to 26,000 km of coral reefs, representing 7% of the world total coral reef ecosystems and includes the 2nd and 3rd barrier reefs in the world (Belize and S. Andres Archipelago). There is an intimate link between SLM and protection of the region's biodiversity resources, as the unstainable utilsation of land not only can lead to terrestrial biodiverity loss but can also result in soil erosion, which in turn can have a devastating impact on coatal and marine biodiversty. These impacts are further excebated by the impacts of climate change.

Socio-economic Context

23. The estimated population of the participating countries—Belize, Grenada, Guyana, Haiti, Jamaica, Saint Lucia and, Antigua and Barbuda—in this project is estimated to approximately 15 million. Of the participating countries in this project Haiti had the largest population (estimated at 10, 981,229), followed by Jamaica (2,729,000); Guyana (777,859); Belize (334,200). The other participating countries all have population less than 200,000 as follows: Saint Lucia (172,000), Grenada (104,000) and Antigua and Barbuda (89,000). —. Haiti is ranked by the World Bank as a Lower Income Economy, with a Gross National Income (GNI) per capita of $1,025 or less in 2015. All the other participating countries in the project are categorized as Upper Middle Income countries, with GNI per capita ranging between USD 4,036 and USD 12,475, In terms of the ranking of the Human Development Index, most of the participating countries are ranked between 1 and 100, as follows: Antigua and Barbuda (70); Grenada (75); St. Lucia (90) and, Jamaica (97); with the exception of Belize (106); Guyana (125) and Haiti (168).

24. An issue that continues to plague most of Caribbean SIDS, including those which are not part of this project is the high levels of indebtedness. Though the medium public debt burden for the countries in Table 1 (which shows the Debt/GDP Ratio, as at the end of 2016 and 2017) declined marginally from 66.7 percent of GDP in 2016 to 64.6 percent in 2017 , debt still remain above 60 percent of GDP in most of the participating countries in this project with the exception of Haiti (32.6 percent); Guyana (42.5 percent) and Antigua and Barbuda (56.8 percent). Saddled with increasing debt servicing payments, these countries are severely constrained to use productive resources needed to stimulate growth. Given that a number of countries where severely affected by the passage of hurricanes, particularly, Hurricanes Irma and Maria, in 2017, further fiscal and/or debt slippage is anticipated during 2018 and 2019.

25. Another critical social issue confronting the countries of the region, including those participating in this project is high unemployment. Most of the participating countries have very high rates of unemployment ranging from 9.1 percent to a high of 25 percent. Youth and women are disproportionately affected, in this regard. Another important social issue which confronts the participating countries is poverty. According to the Caribbean Development Bank most of these countries have high levels of poverty and income inequality. It is anticipated that the CDB's forthcoming Enhanced Country Poverty Assessments (ECPAs) will provide more updated and reliable data and information on poverty in the region, which will aid in the development of strategies to address this issue.

26. In terms of the productive sectors, the agricultural sector continues to be a very important contributor to GDP, employment and exports in the Caribbean. Only in the last two decades has agricultural output as a percentage of GDP reduced to less than 10 per cent for a number of the participating countries—Jamaica (8.0% of GDP), Grenada (8.4% of GDP); and St. Lucia (8.1% of GDP)—for the remainder participating countries it is greater— Belize (18.7% of GDP); Saint Vincent—and for at least two participating countries— Guyana (34.7 % of GDP); and Haiti (30.4 % of GDP). The crops which dominate the agriculture sector are the traditional crops of bananas and sugar cane, even though other major crops—cocoa, coffee, citrus and rice—are also produced and exported. Both banana and sugar crops have been severely impacted by international trade liberalization policies, the end result being erosion of the preferential arrangements in the European market resulting in dramatically falls in production and export. The adoption of LDN, if applied smartly, could assist in counteracting some of the issues being faced as a fallout from the international trading regime, particularly with respect to the lands formally used to produce the traditional crops.

27. Another important sector is oil and gas production found in a number of participating countries, namely, Belize, and, by 2020, Guyana. The discovery of major oil and gas reservoirs in Guyana Since ExxonMobil since 2015, along with ongoing exploration off the coast of neighboring Suriname, have begun to focus attention on the Guyana-Suriname Basin as the next big oil region. These developments, however, have implications for both terrestrial and marine chemical degradation. Other sectors, primarily mining, particularly in Guyana, Suriname and Belize are also important. In Guyana, the primary export commodities, in the mining and quarrying sector, in order of value, are gold and bauxite. Other commodities which are mined include, diamonds and quarry products such as stone and sand, while exploration for other minerals—manganese, rare-earth metals and uranium are ongoing.

Policy/Legal Context

28. All the participating countries are members of the Caribbean Community and are party to the Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy (CSME)—the Regional legal framework—for which the Caribbean Court of Justice (CCJ), pursuant to its Article 211 "have compulsory and exclusive jurisdiction to hear and determine disputes concerning the interpretation and application of the Treaty". Within the Caribbean Community a number of policy frameworks which have direct linkages to natural resources, including management of land have been prepared or in the process of being prepared are relevant to this project. These include, inter alia, the Caribbean Community Agricultural Policy (CCAP), in particular the "region's work on sustainable development, environmentally friendly agricultural practices;" the Regional Food and Nutrition Security Plan (RFNSP) which links the provision of food and better husbandry of the region's environment and natural resources with the availability of water resources for agriculture, the need for drought monitoring and the ability of the region to adapt to the adverse impact of climate change and the Draft Community Environmental and Natural Resources Policy Framework which is intended to serve as the Umbrella Policy Framework for the sustainable management and use of the Community's environmental and natural resources.

29. At the Sub-Regional level, a number of participating countries—Antigua and Barbuda, Grenada and, St. Lucia—are members of the Organisation of Eastern Caribbean States (OECS), and party to the Revised Treaty of Basseterre Establishing the Organisation of the Eastern Caribbean States Economic Union and has an obligation to implement its St. George's Declaration of Principles for Environmental Sustainability to minimize environmental vulnerability, improve environmental management and protect the region's natural (including historical and cultural) resource base for optimal social and economic benefits for the Member States. At the national level in each participating country, a number of policy documents exists.

30. In Haiti the national priorities are outlined in the Plan Stratégique de Développement d'Haïti (2030) and the Stratégie Nationale pour la Croissance et la Réduction de la Pauvreté (2007-2010), The Inter-ministerial Council for Territorial and Environmental Planning and Management guides the national environmental policy and programme across sectors and at decentralised levels with departments, communes and sections. The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) is guided by the Plan National d'Investissement Agricole (2010-2025) which ncludes watershed management, irrigation and forestry as well as the crop, livestock and aquaculture sectors and agricultural support services including tenure security. It is backed up by the Plan National actualisé de Sécurité Alimentaire et Nutritionnelle (2010-2025). The National Adaptation Plan of Action (2006), focused mainly on adaptation needs in the agriculture, water, fisheries, land, forestry sectors to enhance resielience to desertification and frequent natural disasters (cyclones, earthquakes and resulting floods, landslides, tidal waves, with loss of cattle and human life and destruction of infrastructure and habitat). *The Forest and Fruit Growing Tree Germplasm Centres to Tackle Deforestation and the Extreme Vulnerability of Haiti is a* cornerstone of the Forestry Policy of the Administration of President Jovenel Mosie and this important policy document outlines an indigenous approach to addressing deforestation and extreme vulnerability of Haiti. It outlines a strategy for the establishment of the technical infrastructure for the reproduction and propagation of high varieties of fruit growing and forest species dedicated to positively influence the demand and offer of vegetative materials for the production and planting of trees, the regular supply of wood and edible fruits. The document outlines a target of increasing forest cover by 4 percent by the end of the current Government term. At the heart of achieving this target is the production of approximately 63 million seedlings per year in 10 to 14 Forest and Fruit Growing Tree Germplasm Centres throughout the country.

31. Belize has three main policy and programmatic interventions to address degradation and associated socio-economic and environmental impacts, including, inter alia, the National Food and Agriculture Policy Framework 2002-2020, which focuses on the diversification of both local/export-oriented agriculture, promoting agro-processing and value addition as a means of expanding opportunities and increasing the income of the rural sector (market/trade

expansion; increasing the efficiency, profitability and competitiveness) and conserving and restoring the natural resource base to ensure sustainable productivity/ viability. Other policy instrument are: Promoting Sustainable Natural Resources-Based Livelihoods in Belize which provides support for social mobilization, and community co-management of natural resources for green sustainable livelihoods development (non-timber forest products in and around selected protected areas; innovative mariculture by fisheries communities and community-led monitoring and knowledge dissemination) and the Management and Protection of Key Biodiversity Areas in Belize which is intended to strengthen natural resource management and biodiversity conservation in key biodiversity areas.

32. In the case of Grenada, a key policy instrument is the Draft Climate Resilience, Environment and Natural Resources Act, 2018; an Act to establish the enabling legal and institutional framework to support the transition to environmentally sound and climate resilient development; ensure the protection of the environment through enhanced ecosystem resilience to impacts from climate change and development activities by providing for the sound and sustainable management of the environment and natural resources; establish the framework for the financing of priority climate change, environmental and natural resource management measures; as well as to incorporate a number of Multilateral Environmental Agreements (MEAs) to which Grenada is Party into national law notably CBD, UNCCD and UNFCCC. The Draft Act also makes provision for the incorporation of St. George's Declaration of Principles for Environmental Sustainability in the OECS (2001) into national law as well as provision for soil conservation , including the prohibition or control of the grazing of livestock and the encouragement of scientific farming techniques designed to reduce or prevent soil erosion. The Grenada -Land Degradation Neutrality National Report sets out Grenada's LDN National Voluntary Targets.

33. The Regional Disaster Vulnerability Reduction Project (RDVRP) financed through an arrangement between the Government of Grenada (GoG) and the World Bank, under its Support from Pilot Program for Climate Resilience (PPCR) is aimed at providing Grenada with financial and technical assistance to reduce vulnerability to natural hazards and climate change impacts. The specific aims of the project are to integrate disaster vulnerability reduction and climate resilience in national development strategies and management of public infrastructure.

34. Relevant policy instruments relating to land degradation for St. Lucia, includes, inter alia, the Iyanola Project: Natural Resource Management of the North East Coast which uses the ecosystem approaches to maintain ecosystem services and increase sustainable productivity, and the integration of ecosystem services and benefits into development planning. It also seeks to facilitate the implementation of ecosystem-based supporting adaptation approaches into national strategies to reduce vulnerability and strengthen resilience to climate change and mitigating poor biophysical conditions (due in particular to unsustainable land management practices) in the Soufriere Watershed, impacting on sustainable livelihoods of the population, for which reduction in Land Degradation is pivotal.

35. Jamaica´s priorities relating to land are outlined in its national development plan, Vision 2030, particularly Outcomes #13 Sustainable management and use of the environment and natural resources, and #12 Internationally competitive insutries including agriculture, and the 4-year Socio-Economic Policy Framework (2015-2018). Specific goals for agriculture are described in a sectoral plan. The Government places agricultural development among its priorities though the weight of the agriculture sector in the GDP is moderate (6.6% in 2014). However 18% of the active population is employed in agriculture and 46% of the total population lives in rural areas, thus it is an important contributor to the country's economic development. Jamaica's share of gross farm receipts

originating from agricultural policy (34.9% in 2012-14) was higher than in most Caribbean countries however, the poverty rate in rural areas increased from 15.3% to 21.3% between 2007 and 2012 due in part to declining labour and land productivity, cost of inputs and unfavourable trade. Extreme weather events have also caused major losses for Jamaican agriculture, which was severely affected by several hurricanes and tropical storms between 2004 and 2012, associated floods, as well as droughts (2005, 2014). For example, severe droughts and dry conditions in 2014 caused a 0.5% drop in agricultural revenue. Traditional agricultural exports, especially coffee and citrus, are in decline, and the government is making efforts to promote non-traditional export commodities such as tubercules, fruits and marine products and related export earnings increased by 8% between 2008 and 2012. Sustainable agriculture strategies include inter alia, training in land husbandry techniques; building climate resilience through the provision of water harvesting and irrigation infrastructure and the Sustainable Farm Enterprise Program (2014) to build local, ecologically based, disaster resistant organic food systems.

Project Sites

36. Project activities will comprise of interventions, both regionally across the participating countries and nationally, based on specific issue(s) identified by the respective participating countries. One of the key regional interventions will focus on the updating of soil information and data of the participating countries as a fundamental requirement of the formulation of an LDN Strategy for Caribbean SIDS. Despite its importance as an important natural resource, which is necessary to support the quality of land and land resources, as well as necessary to support ecosystem functions and services and enhance food security, not much attention has been paid by the participating countries to updating their soil information. In many cases, the last comprehensive survey of soils of the participating countries was done in the 1950's and 1960's with little or no significant updates. There is, therefore, an urgent necessity to update the data and analytical information as part of the LDN process and as a basis for informed decision maing on soils including land planning and climate modelling.

37. A number of common barriers exist to sustainable soil and landscape management for which recognition is being realized by the participating countries. These include, inter alia, inadequate soil data and fragmented information systems, inadequate institutions and policies; weak planning and uncontrolled development (urban, industry, waste) and inadequate linkages between producers and markets for diverse, viable markets and sustainable consumption. Recognising the importance of the country's soil resources and the need for environmentally sound management, the Saint Vincent and the Grenadines National Land Policy identifies as one of the specific actions to be undertaken by the Government, the conduct of a Comprehensive Inventory of Soils and its maintenance on a national geospatial system as a basis for informed decision making on land suitability for agricultural production and water resource conservation.

38. Generally, there is a growing awareness in Caribbean SIDS, of the importance of soils as an important natural resource, and the need for increasing individual Member States about the status of this resource and its importance to national development. This is exemplified by a number of initiatives in the region. For example, the approval by the Caribbean Development Bank (CDB) in May 2018 of a *Light Detection and Ranging (LiDAR)* project though focusing on vulnerable Caribbean coastline should provide useful information for soil mapping in the participating countries. Other actions which will be done on a regional scale with the participating countries are capacity building including knowledge management and the formulation of policy instruments (e.g. Regional LDS Strategy etc.) and their integration into the Caribbean Community Policy Frameworks.

39. A major activity of this GEF project will be to assist the participating countries to update their soil data and information and store it in a manner which is accessible to policy makers and resources users, alike, both nationally and regionally. Other LDN investment which will be carried out which fall under the ambit of creating a conducive enabling environment and support to the participating countries to implement, monitor, and evaluate LDN targets, include, inter alia, the provision of technical assistance required to bring bankable projects to investment; building capacity at all levels and lessons learning and knowledge exchange and south-south cooperation. In addition to regional activities field activities will be implemented in each of the participating countries, with the exception of Antigua and Barbuda which has identified the upgrading of its soils data and information as its primary activity.

40. In the context of addressing the Drivers of Land Degradation Through the Rehabilitation of Land and Soil Degraded Areas and the Promotion of Integrated Landscape Management and Restoration (Component 2) interventions will be undertaken in the Vallieres and Carice Rivières Libon Watersheds of Haiti; and will seek to arrest ongoing land and soil degradation, deforestation of land and ecosystems through the sustainable management of production landscapes in Belle Vue South area of Carriacou, Grenada and Regions 8 (Potaro-Siparuni Region) of Guyana. In the context of building resilience to Land Degradation, Natural Disasters and Climate Change (Component 3) Climate Smart Demonstration Agriculture Model Farms will be established in Region 9 of Guyana, which comprises of Kanuku and Kamoa highlands and the vast Rupununi savannahs, which is divided into the north savannahs (about 2,000 square miles in area) and the south savannahs (2,500 square miles) by Kanuku Mountain, and in the Watershed Trois rivières, Port de Paix of Haiti, and in one of the degraded soil sites identified in Grenada's LDN Target Setting Report.

41. With respect to the Enhancement of Food Systems and Alternative Livelihoods (Component 4), interventions will be carried out in Belize with concentration on the northern districts of the country, often referred to as the Northern Sugar Belt of Belize where focus will be placed on the restoration of arable land which have been denuded overtime by inappropriate agricultural practices sugar lands and the enhancement of ecosystem services and livelihood options for dependent communities. In Haiti, project interventions will be concentrated in the Artibonite watershed, Gonaives, where bad farming practices is the norm. In St. Lucia focus will be placed on degraded areas in the Soufriere area. In Jamaica interventions will take place in the Yallahas River Valley, whereas in Barbbados focus will be place on a livestock framing system, namely the improvement of pastures for the raring of the Black Belly Sheep.

42. Threats to LD in the participating countries may be summarised as:

43. *Inappropriate agricultural practices*: A common threat in most of the participating countries is inappropriate and unsustainable agricultural practices. These cover a range of issues, including, inter alia, farming on marginal and unsuitable lands such as on steep slopes and poor soils; the clear felling of vegetation for agricultural use and the use of forest products for charcoal, fire wood and other products; soil acidification caused by overuse of agricultural chemicals, inadequate rotation and organic matter management; soil compaction due to farm mechanisation and livestock trampling; inadequate soil and water conservation practices; shifting from the banana production to livestock rearing on steep slopes and fire. As an example, in Belize, a third of agriculture takes place on marginal or unsuitable lands especially in the south of the country which is a high erosion risk area.

44. Deforestation and forest degradation: Deforestation is a major threat in a number of participating countries. The country that best exemplified the threat posed by deforestation is Haiti as a result of inappropriate forest management. This country has its national territory covered by 95% by plant life in the late 18th century . Today, less than 3 percent of the original forest cover remains. A major contribution to deforestation in Haiti is its consumption of wood for energy as wood constitutes approximately 75 percent of the country's energy needs. Haiti's people consumes about 30-40 million trees per year. This contributes to high vulnerability of the country which ranks amount the 10 most exposed countries in the world and the 5th highest vulnerability worldwide. The country's high vulnerability is further exacerbated by re-occurring natural disasters.

45. *Extreme Weather Events and other Natural Hazards*: The participating countries are vulnerable to extreme weather events including heavy rainfalls, drought, tropical storms, and most notably, hurricanes. High rainfall levels and frequent storms contribute to soil erosion, land slippage and flooding problems in the participating country. Hurricanes can also strip the natural vegetation of almost all green leafy matter, producing extensive erosion and triggering landslides as well as contributing to localise flooding. These systems, in particular, hurricanes, usually have significant impacts on settlements (e.g. home, etc.), infrastructure (e.g. ports, roads etc.) and substantial degradation of natural ecosystems and ecosystem services as well as serious impacts on agriculture, fisheries and tourism. Drought periods also have a significant impact on agricultural production and water resources supply in the Caribbean SIDS, as well as increased potential for forest fires that further predispose these areas to land degradation.

46. *Mining:* Mining is a major threat in a number of participating countries. In Guyana, mining, in particular the small-scale mining industry is the most extensive driver of deforestation. Between 1990 and 2009, mining was responsible for 60 percent of deforestation occurring in Guyana. This figure increased to 90 percent between 2009 and 2012. In addition to land degradation and contamination, mining is a major cause of biodiversity loss and environmental degradation in Guyana, particularly in areas where mining is carried out. Freshwater pollution, attributed to high levels of turbidity and mercury use, is significant, and its impacts on the environment and wellbeing of local communities, is well known.

47. *Urban Development/Settlements/Unplanned Development:* One of the major constraints faced by most SIDS is the limited amount of land space and the increasing competition among the various land uses for the limited land space. In the absence of proper controls, settlements are being established on productive lands, resulting in their loss for agriculture. This in turn, undermines food security considerations.

48. *Weak Legal and Institutional Frameworks with respect to SLM Climate Change Impacts and Adaptation Measures,, Including Limited Funding Resources for Enforcement, Monitoring and Evaluation:* Whereas most of the participating countries honour their reporting obligations under the various MEAs, the obligations, contained therein, in most countries with common law jurisdictions, are not incorporated into national law. It is settled case law that in common law jurisdictions, international agreements such as MEAs form no part of domestic law unless enacted by the legislature. As a consequence, a failure to do so means that those provisions are unenforceable as between individuals and entities within a state and any action taken to enforce them would be to act without any legal basis. Despite the importance of climate change to Caribbean SIDS, significant gaps still exist on the availability and accessibility, in particular, to stakeholders on climate change data and information and how it affects decision making with respect SLM. Despite recent attempts by some Caibbean SIDS to establish Climate Change Units in the public service, significant capacity gaps still exist in sensitizing the general public about the implications of climate change on national and regional economies. Though Caribbean SIDS have been active in the global negotiations on climate change;

specific and significant actions on the ground, with respect to the implementation of, in particular, adaptation, has been at the least patchy. In the context of SLM, this project will seek to contribute to solving that barrier by providing the bases for a more systematic and focused approach to exploring the linkage between climate change and SLM and highlighting policy perscriptions to address this barrier.

Long-term Solution and Barriers

49. The long-term solution envisioned under this project is to update the soils data of the participating countries, including information on soil carbon, both of which are lacking, but which are essential for individual countries and the regional, alike, to design the LDN Strategy and informed Soil Policies as well as for the climate agenda in the SIDS. In addition, soils information will strengthen the participating countries ability to carry out rehabilitation of land and soil degraded areas including integrated landscape management and restoration; to build resilience against natural disaster and climate change as well as to enhance food systems and alternative livelihoods. However, a number of barriers exist that constrain the individual participating countries and the region in general ability to implement these solutions, as described below:

· *Limited Soil Data and Soil Carbon Data and Information and Policy Fragmentation*: In most of the participating countries this is a major constraint which hinders LDN target setting and decision-making for sustainable, climate resilient land use, the assessment of soil carbon sequestration and CO2 mitigation (UNFCCC) as well as the Aichi targets (CBD) in relation to soil biodiversity. Knowledge of soil characteristics and properties (agricultural and engineering) are key inputs for assessing watershed behavior, land use suitability, erosion and landslide risk analysis, however, in most of the participating countries, soil information is seriously lacking and is hindering data to guide long and short-term development and investment decisions. In most of the participating countries comprehensive soil surveys were last conducted in the 1950's and 1960's. The situation is further exacerbated by the fragmentation which exists between government agencies—agriculture, forestry, mining, and the environment—whose mandated activities have direct and indirect impacts on land and soil use and its management.

The end result, more often than not, are conflicting and fragmented policies, programmes, actions on the ground. There is, therefore, a need for the development of a common strategic SLM vision and agenda across the various sectors such as agriculture, land survey and planning, water, forest, environment, health sectors as well as private sector investors and NGOs for sustaining soil resources and associated ecosystem services for future generations. In this regard, there is growing recognition that the synergetic implementation of the Rio Conventions—Desertification, Climate Change and Biological Diversity—is necessary for maximum and effective delivery of outputs, particularly with respect to their mainstreaming into the productive sectors, poverty reduction programmes and integrated food security and development strategies for rural and urban populations.

· *Insufficient trained human resources in key areas, such as Soil Scientists and Climate Smart Agriculture Tools and Methods to Implement Sustainable Agricultural Practices*: In terms of human resources, there is a paucity of practising soil scientists as well as being trained and/or working in soil science and management in the participating countries and the region as a whole. Yet soils are a critical resource for food, fodder and pasture and tree crops and forestry. Soil and water management expertise is critical in sustaining soil health and productivity through managing soil constraints and addressing climate change and variability, for coping with unreliable rainfall, drought and excess rainfall, sequestering carbon and reducing GHG emissions. There is also growing recognition that in the advent of changing climate, the need exists to equip resources users (e.g. farmers etc.) with tools and methods to enable the adoption

of Climate Smart Agricultural practices—defined by FAO as agriculture that sustainably increases productivity, enhances resilience (adaptation), reduces/removes GHGs (mitigation) where possible, and enhances achievement of national food security and development goals," as well as to enhance the sustainable supply chain with regard to production, processing, and demand for key agricultural products produced by Climate Smart Agriculture.

· *Inadequate and proactive planning to address changes in the international trading regime and its implications in the productive landscape*: This area remains extremely weak in the participating countries. The removal of preferential access by Caribbean SIDS to protected European markets over the past fifteen or so years has had significant economic and social impacts as well as on the scale and extent of the character of the productive landscape. This is particularly evident with productive lands which were once used for sugar and banana cultivation. These once productive lands are under threat from a number of sources including abandonment and land degradation, unplanned conversion into human settlement and lack of effective use and management.

· *Lack of sufficient integration of SLM issues practices and processes in the Caribbean Community Policy and decision Making Frameworks:* A major barrier confronting the participating countries is the lack of sufficient appreciation of the importance of SLM including soil management to national and regional development and their integration into national and in particular, Regional Policy (e.g. Draft Community Environment and Natural Policy Framework, Community Agricultural Policy etc.) and Decision making Organs (e.g. The Conference of the Heads of Government, Council on Trade and Economic Development (COTED) etc.), whose Decisions reflect the will of the Community. This project will facilitate this by strengthening linkages between the PISLM and its High-Level Ministerial Body and the Decision Making Organs of the Community.

· *Weak Institutional and Legal Frameworks and Public Education on SLM and its Importance to National and Regional Development*: SLM issues including sustainable soils management is not currently sufficiently reflected in major legal and policy instruments, nor is there a sustained Public Education programme to enlighten policy makers, resource managers, and the general public in the individual participating countries and regionally of ecological processes and their links to socio-economic wellbeing, in particular, with respect to food security. Consequently, most of the participating countries, and the region, in general, do not have a strong policy and regulatory framework in place to support SLM measures and address the most pressing land degradation processes. This project will address these issues.

2) The baseline scenario or any associated baseline projects

Government Baseline

50. The baseline scenario with regard to land degradation in the participating countries indicates an increasing appreciation of the importance of Sustainable Land Management to National development. In the case of Grenada, the recent preparation of National Land Policies is indicative of this trend. These were done with support through the OECS Technical Assistance for the Establishment of National Land Policies which is an integral part of a larger

initiative, the Island Resilience (island). In the case of Grenada, part of the assistance involved the integration of the sustainable land management components into the Draft Climate Resilience, Environment and Natural Resources Bill. The National Land Policy recommends that the Government shall complete the preparation of the National Physical Development Plan within 2 years and be laid in Parliament.

51. For Guyana, the baseline scenario which should guide the country's development in the foreseeable future is the Green State Development Strategy (GSDS). Generally, the Strategy integrates national instruments already in place including, inter alia, the National Determined Contribution (NDC), the Low Carbon Development Strategy efforts, Climate Resilience Strategy Action Plan (CRSAP), Guyana's renewable energy transition plan, Climate change resilience strategy and adaptation plan, National Strategy for Biodiversity Conservation (under revision to mainstream the SDGs), National Adaptation Strategy for the Agricultural Sector (2009-2018). The Strategy lays the foundations for inclusive green economic growth, for achieving sustainable development targets, and for providing a long term vision for a prosperous and equitable future as well as to reorient and diversify Guyana's economy to reduce reliance on traditional sectors and open up new income and investment opportunities in higher value adding and higher growth sectors. This Strategy commits the country to a green and inclusive industrial transformation, shifting to a more diversified economy, better balanced toward higher value-adding activities

52. In the case of Jamaica, the national policy framework is Vision 2030. This policy framework has been established by the Government of Jamaica to spearhead the preparation of a long-term national development plan; a multi-sectoral approach to making Jamaica "the place of choice to live, work, do business, and raise families." Underpinned by four national goals—Goal 1: Jamaican are empowered to achieve their fullest potential; Goal 2: The Jamaican society is secure, cohesive and Just; Goal 3: Jamaica's economy is prosperous and Goal 4: Jamaica has a healthy natural environment—Vision 2030 is the country's first long-term (21 year) national development plan which has bipartisan support. With respect to Goal 4 which is relevant to this current project, it has a number of national outcomes, including, inter alia, sustainable management of natural resource, hazard risk reduction and adaptation to climate change and urban and rural development.

53. In the case of St. Lucia, a major program to reduce the island's risk to natural disasters. Called 'vision 2030,' it involves measuring risk reduction at a national level. At a time of increasing concerns about impacts of climate change and natural disasters, the programme hopes to reduce losses from flooding, landslides and extreme weather events. St. Lucia's Vision 2030 is support by a National Vision Plan which provides a developmental road map for the future development of the island as well as a framework through which the entire island can share in a common vision, positioning Saint Lucia at the economic and social heart of the Windward Islands. The creation of the Vision Plan also serves as a framework for development, providing the tool by which all governmental and non-governmental agencies can identify and develop individual projects within a national Vision Plan.

54. Belize on the other hand, national development framework, a governmental baseline within which this project fits is called "Horizon 2030." This framework—Horizon 2030—represents the consolidated views of many stakeholders–young and old, men and women, students and teachers, politicians and voters, employers and employees, public and private sectors, farmers, tourism operators and artists. It therefore embodies the vision for Belize in the year 2030 and the core values that are to guide citizen behaviour and inform the strategies to achieve this common vision for the future. The Horizon 2030 Framework covers several thematic areas that are organised under four main Pillars: Pillar 1: Democratic governance for effective public administration and sustainable development; Pillar 2: Education for Development – Education for Life; Pillar 3: Economic resilience: Generating resources for long term

development and Pillar 4: The Bricks and the Mortar – Healthy Citizens and a Healthy Environment. With respect to Pillar 4, to importance of Belize's natural resources to the country's economic future is recognised as well as the fact, that the main economic drivers – tourism and agriculture – are natural resource based. There is therefore a broad awareness of the importance of the environment and the need to putting in place effective laws and regulations, information and communication systems to protect the environment while promoting sustainable social and economic development.

55. In the case of **Antigua and Barbuda,** the governmental baseline which is most applicable to this project is the enactment of the *Environment Management and Protection Act, 2019* which creates a framework for the sustainable environmental management and providing for the protection of natural resources of Antigua and Barbuda. It also details the processes of the environmental impact assessment (EIA), methods of environmental management, and compliance and enforcement.

56. In the various countries the baseline is set by the national and international policy and legal framework as outlined above.

Donor-Funded Baseline

57. **Land Degradation Neutrality Target Setting Process (LDN-TSP)** is being supported in by the UNCCD Secretariat and Global Mechanism , however, only Guyana and Grenada have already published their targets.

58. The *Climate Change Adaptation Programme* (CCAP) funded by USAID through its Eastern and Southern Caribbean (ESC) office in Barbados is being implemented by the Caribbean Community Climate Change Centre (CCCCC) in all of the participating countries (including, inter alia, Antigua and Barbuda, Grenada, Guyana, and Saint Lucia), and runs from July 2016 to September 2020 with a budget of US$ 26.6 million. The project has three components: Component 1 - Promotes the use of climate data and information for use in decision-making; Component 2 - Supports innovative adaption approaches which demonstrate proof of concept necessary to secure additional financing; and Component 3 - Fosters climate financing to support scale up and replication of sustainable adaptation initiatives.

59. The recently approved project by the Caribbean Development Bank (CDB), the *Light Detection and Ranging (LiDAR) Airborne Programme*, a USD1.5 million funded project which will use LiDAR technology to map almost 10,000 square kilometers of vulnerable coastal areas in Borrowing Member Countries of CDB will provide baseline information for this project.

60. The *Capacity Building Related to Multilateral Environmental Agreements in ACP Countries–Phase III* (ACP MEAs 3), funded by the EU through the 11th European Development Fund – Strategy Paper and Indicative Programme 2014-2020, with a total estimated cost of EUR 26 700 000 and implemented by UNEP and the FAO, includes support for the participating countries, has one of its major Components (Component 3): effective mainstreaming of biodiversity

and environmental sustainability in agriculture and better implementation of the decisions of the related conventions. Ultimately, the aim of this Component will be to provide agricultural producers with knowledge, tools, skills and incentives in their transition to resilient and productive agricultural systems that, at the same time, preserve the natural resource base (land, soil, water) and promote and restore ecosystem services. The programme will promote measures and agricultural practices that contribute to the synergetic implementation of the conventions on biodiversity, climate change and desertification. The EU project should, therefore, provide baseline conditions on which this project will build on.

61. The FAO supported project *Development of National Land Banks for improved Food and Nutrition Security and Land Administration in Grenada and St. Lucia* (2018-2020) is supporting the development of national land banks through capacity building of staff of the Land Administration divisions in each country to manage and operate the Land Banks. Pilot land banks are being set up in the countries and an institutional framework and operational guidelines developed for the establishment and operation of National Land Banks as a basi for promoting good governance of land tenure, food and nutrition security and sustainable management of rural lands, in particular idle and underutilized lands. The land banks will be supported by databases and inventory of rural lands, idle or underutilized state lands (plot sizes, soil type, slope, existing land use, infrastructure, and crop potential) and prospective farmers who may be interested in leasing the land. Support services to the land bank wil include extension, credit and linkages to markets for farmers who acquire land from the land banks and links with school feeding programmes and existing value chains to support community food and nutritional security.

62. In the case of **Belize**, a number of initiatives have been identified as baselines. These include, inter alia, European Union financed project: *Draining master plan for the Northern sugar Belt through the Light Detection and Ranging (LiDAR) program* (2018); IDB financed project: *Implementation of a Sugar Industry Management Information System (SIMIS) in northern Belize* (2018); European Union financed project: *Technical assistance to the Sugar Industry Research and Development Institute (SIRDI)* for "fertilizer assessment of Belize sugarcane industry" conducted on 2017; and *Soil Study for fertilizer recommendation in the Belize Sugarcane Farmers Association (BSCFA) sugarcane region in Belize* (finance by BSCFA in 2017). Baseline projects for **Grenada** includes, inter alia, the *Morocco Soils Fertility Mapping Project* (US$700,000) and the *National Soils Survey* (US$ 1 Million) under the *Pilot Program for Climate Resilience/Disaster Vulnerability Reduction Project (PPCR/DVRP)*.

63. FAO is supporting work in several of the beneficiary countries (e.g. Antigua and Barbuda, Belize, Guyana and others) in implementing and scaling out of innovative and agroecological practices and technologies, and improving resilience of agricultural producers to degradation and natural disasters through sustainable and climate resilient land and water management systems and enhanced productivity and marketing of quality products. In **Guyana**, the *Mainstreaming sustainable land development and management (SLDM) project (*US$ 14.8 million 2018-2021), is funded through the Guyana REDD+investment fund and led by Guyana Lands and Survey Commission with FAO support, and aims to incrementally improve land administration, policy and planning as a basis for promoting sustainable land use and the reclamation of degraded lands - essential to Guyana's Green State Development Strategy. The project supports capacity development of all GLSC's divisions, to improve efficiency and effectiveness of its operations and fulfil its mandate as the national mapping agency and guardian overall public lands, rivers and creeks in Guyana. The development of a progressive land policy and enhanced skills \of GLSC

and stakeholders at national level and in Regions 4, 7 and 10 in participatory land planning, good governance of land and sustainable management practices is expected to generate multiple benefits- reducing degradation of soil and water resources while enhancing land productivity, food security and resilience to climate change.

3) The proposed alternative scenario, with a brief description of expected outcomes and components of the project

Component 1: Strengthening the national and regional enabling environment to support an integrated landscape approach to LDN implementation

64. A major barrier which will impact the individual participating countries and the region in general in developing a practical and implementable LDN Strategy is the paucity of information on soils, including adequate soil carbon data. This Component, led by the University of the West Indies, St. Augustine, Trinidad and Tobago is intended to address this barrier in close collaboration with the FAO coordinated Global Soil Partnership for methodological and capacity development support. It will also contribute to providing the essential data required for the formulation and monitoring of National and Regional LDN strategies, underpinned by integrated landscape methods and approaches. Since this Component will focus to a large extent on addressing the enabling environment, the mainstreaming of SLM and Sustainable Soil Management into national and regional policy and legislative frameworks with the view of strengthening land and agricultural-related policies, programmes, land use planning processes and financing strategies and mechanisms at all levels as well as improving and enhancing the use of productive lands is a *sin qua non.* At the regional level, this will require, inter alia, the elevation of LD/SLM, landscape management and the concept of LDN into the highest regional policy and political levels (e.g. COTED and the Heads of Government etc.). It will also require the integration of these concepts into the various regional policy frameworks (e.g. Caribbean Community Environment and Natural Resources Policy Framework, etc.), policy processes (regional strategies and programmes and political documents (the Jagdeo Initiative —which aims to catalyse the operationalisation of the Regional Transformation Programme for Agriculture (RTP) etc). In all the activities undertaken under this Component and by the entire project adequate consideration will be given to gender considerations, in particular, in the field-based and training activities. Implemented regionally, in all of the participating countries, this Component will have one major Outcome and a number of specific Outputs.

Outcome 1.1. Caribbean countries use soil data to support decision-making regarding LDN, Sustainable soil Management (SSM) and Sustainable Land Management (SLM).

65. Caribbean countries generate and make available Soils and Land Management Data, Information and Maps for Informed Decision Making for LDN and Sustainable, Resilient Land Use Systems in the Caribbean and Establishment of a Sub-regional Soil Support Group/Partnership

66. **Output 1.1.1.: Sub-Regional Soil Support Group/Partnership established:** To the extent practicable, a Soil Expert will be selected from each of the participating countries to participate in this Group, whose main function to oversee the soil survey being undertaken in the participating countries. This Group will be built on the National Focal Point System and the Central America, Mexico and Caribbean soil partnership which has been established to develop and implement the regional implementation plan for the 5 pilars of the Global Soil Partnership (GPS). The Support Group will be chaired by the Soil Expert from the University of the West Indies which has the responsibility for taking the lead on the execution of this Component. The Soil Expert, should have linkages with and ensure synergy with the Regional Soil Partnership and Global Soil Partnership. Building on the National Focal Point System, a Sub-regional Group or, if possible, a sub-regional Soil Partnership, will be formed. It is also anticipated that this Group will form the core of the Caribbean's involvement in the Central America, Caribbean and Mexico Soil Partnership and ensure that the Caribbean viewpoints on the priorities established by this group are adequately reflected in the Central America, Caribbean and Mexico Soil Partnership. To ensure that all the members of the group are on the same wavelength a Technical Review Session will be convened by the PISLM and the University of the West Indies to review current and standard tools and methods in soil sampling, laboratory analysis, data management and mapping which will be required for the successful completion of the Regional Soil Survey and soil information system.

67. **Output 1.1.2.: National soil data including soil organic carbon reviewed and updated and Data and Information Shared:** The focus of this Output will be three-fold; first, the updating of existing analytical data linked geospatially and second, to include soil quality, pollution and fertility indices on the list of analyses and mapping. This output will assist the participating countries in meeting their LDN Targets by providing the essential soil and soil organic carbon data necessary for meeting their LDN targets, including maps of fertility, erosion and other data related to the priorities as of the Latin American and Caribbean Regional implementation plan, supported through the Global Soil Partnership and harmonized with the Global soil information system (GLOSIS). Whereas most of the participating countries have existing standard soil surveys data which were collected in the 1950's and 1960's, but they have not been systematically updated over the years, this output will provide the basis for their updating and input into the design and monitor of the LDN processes. Secondly, emphasis will be placed on undertaking supplemental surveys and analysis where necessary. This will involve, inter alia, the identification of available soil data and gaps and institutions/actors and their roles in soil characterization, monitoring, mapping and analysis and develop recommendations for improved coordination on soil information and reporting. In countries where no survey exist new surveys will be undertaken. Additional information which might be necessary for countries which have existing surveys include soil quality, soil pollution and soil fertility indices that are vital to land capability determination, but may not be shown sufficiently on the existing maps and the re-checked of soil boundaries to better reflect slopes information. For each of the countries participating in the soil survey, a Work Plan will be formulated to fill the identified data gaps and conduct, as required i) soil sampling, ii) laboratory analysis and iii) updating digital soil and land use mapping. In addition, where more detailed data of specific project sites are required, as in Outcome 2.1.; Outcome 3.1. and Outcome 4.1.1., these will be done as part of Component 1 and the results presented in a manner to support the implementation of project activities in those sites.

68. To ensure that the data and information is shared, a series of PISLM Consultations and National Regional Soils Workshop to Review and Share Data and Information will be convened with National Stakeholders to solicit input on the proposed Draft LDN Strategy for Caribbean SIDS. In addition, a Regional Technical Workshop, supported by the Global Soil Partnership (GSP) and the Central America, Caribbean and Mexico Soil Partnership will be convened to review the progress and results of the Soil Survey. The LDN Strategy for Caribbean SIDS will also analyze the contributions of the soil data and mapping (SOC and other properties) to LDN (SDG 15.3) and sustainable agriculture and food security (SDG1 and SDG2.4) and climate agendas (SDG13). The Output of the

Regional Soils Workshop will be transmitted to the Council on Trade and Economic Development (COTED) of the Caribbean Community for its consideration and adoption, through the PISLM High Level Ministerial Group. Critical issues with respect to data and information which will be addressed during the PPG stage are data ownership, sharing and maintenance arrangements.

69. **Output 1.1.3. National and Sub-regional Soil Information System strengthened and integrated to regional GSP processes, including the Global Soil Information System (GloSIS):** To ensure that the data and information generated from the soil survey are accessible, a Caribbean Soil Information System will be established. To the extent practicable, this information system will be linked to the Soil Information System of Latin America, Mexico and the Caribbean, It is anticipated that resources from the Soil Partnership will be allocated to contribute to the or continued maintenance, support and resource mobilization of the Caribbean Soil Information System, in the medium and long term. All of the data inputted into the Information System will be on the basis of Open Access. The Caribbean Soil information system will be linked to the GSP Global Soil Information System (GLOSIS).

70. **Output 1.1.4: Training Needs Assessed and Capacity Developed through training and awareness raising events with the Support of GSP in a number of areas including, soil survey, land capability, digital soil mapping, soil analysis in the field and in laboratories and application of Voluntary guidelines on SSM:** Training will be provided to a wide cross-section of stakeholders throughout the Region in SLM and Climate Smart Agricultural practices. The training will be proceeded by a needs assessment to identify the critical training needs of the participating countries to enable targeting training. A key dimension of the training will be the consideration of options for its institutionalisation so that post- project the region has a sustained capability to continue the work in scaling out and supporting SSM/SLM and CSA practices. Innovative financing mechanisms will also be identified. Working in close cooperation with GSP the participating countries training needs will be assessed and training provided in a number of areas to strengthen capacities, including, inter alia, soil surveys and laboratory analysis, land capability, digital soil mapping including soil carbon mapping, soil survey and analysis in the field and in laboratories, and tools, techniques and methodologies for Climate Smart Agriculture, as well as activities to implement the Voluntary Guidelines for Sustainable Soil Management (VGSSM) according to national and stakeholder priorities. The Regional Soils Support Group/Partnership (Referred to in Output 1.1) which will oversee the implementation of the updating of the soil data in the participating countries will participate in this training, as a means of ensuring consistency in the methods and techniques used for carrying out the surveys in the respective participating countries. This is necessary since the members of the Regional Soils Group/Partnership will be required to provide the leadership necessary at the national level as well as to act as trainers of trainers.

71. A key element of the training provided under this project will focus on enhancing stakeholders capability in methodologies for assessing land degradation (drivers, status, trends, impacts, etc.), and land use systems, SLM practices and landscapes. An important aspect of the enhancement of human capital in the participating countries will be training and support for the adoption of climate-smart agricultural technologies and practices and improve agricultural stakeholder resilience. Major target groups for this training will be the farmers who are involved in the Climate Smart Model Farm Initiatives and Extension Providers in the respective participating Member States. A major component of the training will focus on “effective delivery of infield training for farmers” as well as on increasing their adaptive capacity and building resilience against the impacts of climate change and variability through knowledge sharing and technology transfer, thereby contributing to building their adaptive capacity and resilience. An important part of the training will comprise in-field training for small farmers as a means of transferring tools, methods and approaches for implementing climate-smart agriculture.

72. Taking a long term view of the capacity needs of the region, resources will be allocated to facilitate the institutionalisation of the training. This will take the form of the delivery of formal education training and research; short professional courses; and practical courses tailored to farmers and communities.

Outcome 1.2: Sustainable and Climate Resilient Soil/Land Management Mainstreamed in National Policies and Regional Policy Frameworks and Decision Making Processes and Regional Cooperation Mechanisms to meet SLM, LDN targets and to contribute to Food Security, Environmental and Sustainable Development Agendas

73. To underscore the importance of SLM to national development of the participating countries as well as regional processes, it will be necessary to mainstream SSM/SLM processes and practices into existing national and regional legal, policy and institutional frameworks thus contributing to the creation of an enabling environment for their widespread adoption and to support LDN target implementation.

74. **Output 1.2.1. Legal and Institutional Framework for SLM, SSM Climate Smart Agriculture strengthened and Mainstreaming Strategies Designed and Adopted and Integrated into National Policies, Land use Planning and Financing Mechanisms at National and Regional levels.** Based on the lessons learnt, a review of existing legislation will be undertaken with the view of strengthening existing legislation and/or the drafting of new legislation on soils/sustainable soil management/SLM, as appropriate, to address critical land degradation pressures and impacts in each of the participating countries. Mainstreaming strategies will be designed and implemented in order to scale up soil/land management approaches and practices developed during this project. Mainstreaming strategies aim at establishing a path and mechanism to integrate land management concerns into local and national key decision-making processes with potential to facilitate SLM implementation and replication for enhanced resilience and multiple benefits. Decision-making processes include policies, land planning, financing mechanisms and other incentives for sustaining ecosystem services at national and local levels. Special attention shall be given to the integration of sustainable and climate resilient soil/land management into existing financing and governance mechanisms (i.e. environmental funds, watershed funds, tenure security etc.) as this would have the potential to scale out and mainstream these practices in the longer term. A range of concepts and methodology will be considered, including, inter alia, the FAO's Decision support for mainstreaming and scaling out Sustainable land management, which links in a strategic process, land assessment, participatory planning, integrated landscape management and monitoring impacts. National impact assessments and soil/land management responses should be linked not only to national targets but also to Caribbean strategies and targets and international processes and targets (e.g. SDG 15-LDN and biodiversity, SDG 13 climate adaptation and mitigation, SDG 2 zero hunger and sustainable agriculture and SDG 1 poverty eradication).

75. **Output 1.2.2. SLM and Regional LDN Strategy mainstreamed/integrated into Regional Policy Frameworks and Decision Making Processes and Regional Cooperation Mechanisms in SLM strengthened.** The Caribbean Community have a number of policy Frameworks which are grounded in the Revised Treaty of Establishing the Caribbean Community Including the CARICOM Single Market and Economy (CSME), the Regional Legal Instrument of the Community. It is important therefore that SLM and the Regional LDN are integrated into these instruments and be approved by the relevant Organs of the Community. Since all the participating countries are members of the Caribbean Community and Party to the Revised Treaty of Establishing the Caribbean Community Including the CARICOM Single Market and Economy (CSME), and being cognizant that "[…] the policies and work of the Community are effected through the Organs and Bodies of the Community […]" [and the decisions of] the Organs reflect the will of the Community," it is prudent that the concepts (e.g. LDN and CCA etc.)

which this project promotes, and its Outcomes and Outputs be integrated into the various Community Policy Instruments (e.g. Caribbean Community Agricultural Policy, Draft Community Environment and Natural Resources Policy Framework etc.). To facilitate this, the PISLM /SOILCARE initiative will work closely with the Caribbean Community Secretariat through its Sustainable Development Directorate to enhance policy dialogue with the Caribbean Community (CARICOM) and ensure complementarity and integration of of SLM, SSM and CSA concepts, Outcomes and outputs which this project promotes into regional policy instruments. It is anticipated that the PISLM High Level Ministerial Group will play a leading role in this endeavor by providing the policy links with the Conference of the Heads of Government - COTED [Environment] and COTED [Agricultural] and facilitating their approval.Thus giving them legal effect in the participating countries (e.g. The Community Environmental Policy and Natural Resources Policy Framework etc.);

76. **Output 1.2.3: Regional Cooperation on integrated SLM and climate adaptation or CSA strategies enhanced and Caribbean SLM/LDN/CCA SIDS-SIDS Cooperation Mechanism established:** The project lends itself to facilitating enhanced regional cooperation among Caribbean SIDS. Building on the concept of a Small Island Developing States Technical Assistance Programme (SIDS/TAP) as contained in the Programme of Action for the Sustainable Development of SIDS (commonly referred to as the Barbados Programme of Action) and referenced in a number of other publications, a LDN and climate adaptation SIDS-SIDS Cooperation Mechanism will be established to facilitate the exchange movement of technical personnel, as necessary, between the participating countriesy. As an example, given the state of land degradation in Haiti, technical resources from other participating countries will be deployed, within the context of this project, to assist Haiti in specific areas. The Caribbean SIDS-SIDS Cooperation Mechanism will be managed and maintained by the PISLM and will provide a modality for the exchange of expertise and policy decisions across the region to meet needs and strengthen capacities and the enabling environment for supporting the scaling out of best practices in SLM/ SSM and climate smart agriculture (CSA) for reversing land degradation and enhancing land productivity and resilience to climate change and reducing associated risks of natural disasters . This process will take into account latest national and regional level climate change analysis and models produced through national climate adaptation and mitigation plans, strategies and interventions supported by other GEF, GCF and bi/multilateral initiatives.

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Outcome 1.3: Caribbean Countries have established a LDN Transformation Funding mechanism and mobilize resources for SSM/SLM

77. A major constraining factor impacting upon the ability of resources managers and users to implement SLM, particularly by small farmers, is the access to financing. The rationale for the establishment of the LDN Transformation Financial Mechanism is to contribute to addressing this constraint. In addition, consistent with Output 4.5. the Financial Mechanism will serve as a depository for the resources which will be generated from bankable projects which are prepared.

78. **Output 1.3.1.: A Caribbean LDN Transformation Financial Mechanism established with involvement of Private and Public Sector Partners: :** A feasibility study will be undertaken to explore the possibility of establishing such a Regional Fund to ensure the necessary resources are available to stakeholders, in particular, small farmers, to incorporate SLM and Climate Smart approaches and methods into their farming systems and into landscapes.On the basis of the results of the Feasibility Assessment Transformation Financial Mechanism will be established.

79. Global LD set-aside funds (USD 249,000, approx.) will be used to (i) support technical Consultations between the proposed Sub-Regional Soil Support Group, Regional Institutions (CARDI, UWI, etc.) and Key Soil Experts from the Central America, Caribbean and Mexico Soil Partnership; (ii) support the establishment of the Caribbean Soil Information System and its integration with the Global Soil Information System, (iii) awareness raising and promotion of the LDN strategy for Caribbean SIDS among policy makers and SLM-related partners, which includes a dual-pronged approach of measures to avoid or reduce degradation of land, combined with measures to reverse past degradation and (iv) strengthen the institutional capacity of PISLM. The need for strengthening the institutional capacity of the PISLM relates to the increase areas of responsibility which will result from the implementation of this project. In this regard, the PISLM will assume the responsibility as the forum for a Caribbean Regional Platform for SLM and SSM including serving as the Sub-Regional Soil Support Group Partnership Secretariat; the operationalization of the SLM/LDN SIDS Cooerative Mechanism and seving as the provision of support to the functioning of the Project Partnership Thematic Groups of the Regional Project Steering Committee. It will also serve as a conduit between this project and other initiatives in the region by ensuring that lessons learnt from other interventions, in particular GEF funded initiatives are integrated into the Project Knowledge Management Mechanisms.

80. In supporting the LDN implementation strategy (iii) the Scientific Conceptual Framework for Land Degradation Neutrality of the Science-Policy Interface of UNCCD (https://www.unccd.int/sites/default/files/documents/2017-08/LDN_CF_report_web-english.pdf) will be applied to the extent possible. The strategy aims at applying and monitoring measures at a landscape scale to: a) maintain or improve the sustainable delivery of ecosystem services; b) maintain or improve productivity, in order to enhance food security; c) increase resilience of the land and populations dependent on the land; d) seek synergies with other social, economic and environmental objectives; and e) reinforce responsible and inclusive governance of land.[1] Components 2 – 5 elaborate in more depth the types of measures to be implemented in selected landscapes in the various SIDS.

Component 2: Addressing the Drivers of Land Degradation Through the Rehabilitation of Degraded Areas and the Promotion of Integrated Landscape Management and Restoration:

81. This Component will address the drivers of land degradation in the participating countries as well as to facilitate the rehabilitation of a number of land and soil degraded areas /landscapes with the view of improving soil productivity; improving the ability of these systems to provide ecosystem services more efficiently and the adoption of new and innovative approaches for protecting and restoring the natural ecosystems and soils on which they depend. Project Sites for this Component will be selected from: **Haiti, Grenada and Guyana** (Region 8). In addressing the drivers of land degradation particular attention will be paid to the incorporation of the relevant principles which underpin the implementation of Land Degradation Neutrality Transformative Projects and Programmes (LDN TPP). The interventions in **Haiti** will be concentrated in the Vallieres and Carice is Rivières Libon Watersheds (approximately 75,000 hectres) in the north-east of the country, and will seek to arrest ongoing land and soil degradation, deforestation of land and ecosystems through the sustainable management of production landscapes, addressing the complex nexus of creating livelihoods options, controlling and reversing land degradation, building resilience to climate change and other meteorological events (e.g. tropical waves etc.), and improving environmental security. In **Grenada**, the project site will be the 383 ha area of Belle Vue South situated in Carriacou, an area affected by soil loss, soil fertility decline and gully erosion. It is one of the LDN

Hotspots which have been identified in Grenada's LDN Target Setting Report. In the case of **Guyana**, the intervention under this project will focus on the restoration of degraded lands in Regions 8 (Potaro-Siparuni Region), which covers an area of approximately 2,005,100 hectres. Emphasis will be placed, particularly, on those areas where degraded lands have a direct impact on the lives and livelihoods of surrounding communities.

Outcome 2.1.: Land and Soil Degraded Areas in Haiti, Guyana Region 8 and Carriacou, Grenada are rehabilitated to productive use, to restore ecosystem services and build landscape resilience .

82. This outcome focus on an Assessment of Land and Soil Degraded Areas and Formulate an Intervention Plan to Address the Drivers of Land Degradation and Rehabilitate and Participartory Strategies for the Rehabilitation and Restoration of Degraded Landscapes in Haiti; Carriacou, Grenada and Guyana (Region 8) to Productive Use and the Enhancement of Ecosystem Services

83. **Output 2.1.1 Degraded Areas assessed and participatory strategies for the restoration of degraded landscapes agreed and under implementation supported by a soils extension and farmer field school programme:** An assessment of Land and Soil Degraded Areas will be undertaken. Intervention Plans to Address the Drivers of Land Degradation and Participatory Strategies will be formulated for their Rehabilitation and Restoration through Integrated Landscape Mangement practices Analog and Agroforestry Systems: The principle drivers of land degradation in the project sites, include, inter alia, inappropriate agricultural practices, deforestation and in the case of Region 8 in Guyana, unstainable agricultures and destruction of forests. However, at the outset of the project, each of these sites will be assessed to determine their current land use, related drivers, pressions, status, impact and responses (DPSIR) for land degradation and the strategies which need to be implemented for achieving sustainable land management. A number of methodologies for assessing land degradation will be considered, adapted and applied, as necessary. Using the LDN TPP Checklist as the framework to guide the implementation, Intervention Plans to Address the Drivers of Land Degradation for each site Implementation Plans will be formulated as well as Participatory Strategies for the Rehabilitation and Restoration of Degraded Landscapes. This will be draw on successes and resource persons in the region on the assessment/diagnostic of degradation, conservation, sustainable use and restoration at local landscape level (applying the LDN hierarchy avoid > reduce > restore) and soils extension approaches through Soil Doctors and Farmer Field School approaches and relevant tools and manual, supported by, as required, by relevant regional institutions and international governmental organisations, as necessary.

84. **Output 2.1.2.: Community based Soil Restoration/Propagation Centres to Facilitate the Provision of Plant Materials and Soil Amendments and soil testing kits Established:** To provide the plant materials necessary to facilitate the rehabilitation of the degraded land and soil areas, Community Based Propogation Centres will be established at the project sites in close collaboration with participating communities and other stakeholders. Efforts will be made to ensure sustainability post project through developing appropriate business plans and support will be sourced for making available soils testing kits for use in the field with farmer groups through private sector collaboration and supported by relevant regional institutions and international governmental organisations, as necessary.

85. **Output 2.1.3.: Integrated Landscape Management (ILM) (including analog forest and agroforestry systems) implemented in target areas in three vulnerable landscapes in Haiti, Guyana Region 8 and Carriacou, Grenada):** Land rehabilitation interventions shall be implemented in the deforested and degraded areas, seeking not only to increase forest cover but to also enhance biodiversity richness and multiple ecosystem services. To this end, agroforestry systems and analog forest systems (FN) will be explored and planned in a participatory manner so as to mimic natural forest structure and functions to the extent possible, enhancing habitat, food production and other products, pollinators and seed dispersal, as well as seasonality responses. The latter includes buffering seasonal dynamics (wet and dry) through providing shade, regulating carbon and hydrological cycles, influencing water availability in soil and access to plants/water stress and hence optimizing plant growth and decomposition, soil organic matter and carbon sequestration (in biomass and soil). Analog forests is a forestry management system born in Sri Lanka in the 1980´s as an alternative to prevalent monocultures that seeks to establish an ecosystem dominated by trees, which is "identical" or very similar in architectural structure, dynamics and ecological function to the original diverse vegetation. (IAFN, 2007). The aim in the medium to long term is to restore healthy forested ecosystems that provide resilience to climate change through sustained biodiversity and ecosystem services as well as generating a range of socio-economic and environmental benefits.

86. **Output 2.1.4.: Cost-Benefit Analysis methodologies (goods and ecosystem services) of the restoration strategies are adopted and shared as a basis for scaling up SSM/SLM to other areas, countries and SIDS.:** An analysis of costs and benefits shall be conducted in the land areas where rehabilitation and restoration practices are implemented, including an analysis of costs or investment (for implementation, maintenance, etc.), potential benefits from household use and trade of wood and non-wood forest products as well as a valuation of ecosystem services restored. A combination of relevant tools and approaches will be employed including, inter alia, FAO's cost-benefit analysis of forestry interventions, and the IUCN´s Cost-Benefit Framework for Analyzing Forest Landscape Restoration Decisions, in order to estimate the value of the restoration systems and resulting ecosystem goods and services in the landscape. The results of the Cost-Benefit Analysis (goods and ecosystem services) of the restoration strategies will be disseminated via a variety of communication media, including, inter alia, the Caribbean Land-Soil Outlook 2030 and the various communication products developed as part of the proposed Regional Public Education and Awareness Strategy.

Component 3: Resilience Building to Land Degradation, Natural Disasters and Climate Change through Climate Smart Agriculture and Drought Risk Management:

87. To facilitate the implementation of this component a number of Demonstration Model Climate-Smart Agriculture Farms will be established in a selected number of participating countries based on the background information that were submitted to the PISLM indicating the type of interventions which should be undertaken in their respective countries. These Climate-Smart Agriculture Farms will be established as a means of strengthening the small farmers ability to cope with the changing climate in the agriculture sector and reduce the risks posed by natural disasters. This component will in the main, target small farmers. The nature of the Demonstration Model Farms will differ from country to country depending on local circumstances. A key aspect of this component will be the provision of training, particularly, in-field training for small farmers as a means of transferring tools, and methods and approaches for implementing climate-smart agriculture. The use of climate smart technologies and processes on these Demonstration Model Farms to reduce the vulnerability of agriculture can then be replicated across the region. For each of the Demonstration Model Climate Smart Agriculture Farms a Strategic and Marketing Plan

will be prepared since another strategic object of these farms is to increase the farmer's income and to attract youth. A key guiding principle for the design of the Strategic and Marketing Plan will be the establishment of direct linkages with government services (e.g. school feeding programmes etc.) and other economic sectors (e.g. tourism sector etc.), as an incentive to attract the farmers' participation and endorsement of the programme.

88. In Guyana, the Climate Smart Demonstration Climate Model Farms will be located in an area occupied by local communities and indigenous peoples in which the impact of climate variability and climate change is evident. In the case of **Guyana,** it will be located in Region 9 which comprises of the Kanuku and Kama highlands and the vast Rupununi Savannahs which is divided into the north savannahs (about 200,000 hectres) and the south savannahs (250,000 hectres). The rationale being to explore resilience building approaches under different tenure ownership systems in the region. The Demonstration Model Farm in **Grenada** will be located on one of the Soil degraded sites identified in the country's LDN Target Setting Report, either Chambord which covers an area of about 383 ha and/or Levera which occupies and area of about 120 ha. In the case of Haiti, the Model Farm will be located in the 325 km Watershed Trois rivières, Port de Paix, located in the North-wast of the country.

Outcome 3.1.: Land productivity restored through Model Climate Smart Agriculture Farms in selected landscapes:

89. Designed carefully farms that are used to teach innovative agricultural techniques and technologies could revolutionise agriculture, including the restoration of land productive. They can also contribute to the uptake by farmers of new concepts that are transforming agriculture including sustainable and climate resilient agriculture practices. An integral part of this Component, therefore, will be a focus on the establishment of Model Demonstration Climate Smart Agriculture Farms.

90. **Output 3.1.1. Best SLM Practices identified and promoted to Support resilient farming systems and value chain integration.** The pilot countries having been selected, the following criteria will be applied to guide the selection of the areas/farmers:

- Land which currently not under production and/or under utilized and/or degraded;
- Land under different ownership pattern (e.g. communal ownership, crown land, private ownership);
- Different production system and have the potential for generating value added livelihood options
- Offers the potential for the involvement of unemployed youth.

91. In addition, each of the areas selected will be subjected to a Land Capability Analysis. Parameters which will be used for the classification include, inter alia, slope; depth of soils and other limiting factors (e.g. stoniness, wetness, gully dissection, frequent flooding, etc.). For identifying best SLM practices, a variety of assessment methods will be considered for use, including, inter alia, the WOCAT assessment of technologies and approaches (QT-QA) and their combined impacts at watershed scale and in terms of climate resilience (QW and QC) and the WOCAT platform for sharing of SLM best practices- the UNCCD preferred SLM best practices database for knowledge sharing

92. **Output 3.1.2: Climate Smart Model Farms implemented and Baseline Established for Monitoring and Evaluating environmental and socioeconomic benefits in target landscapes in Grenada, Haiti and Guyana Region 9 established:** Demonstration farms have proven to be a smart investment which can help accelerate the adoption of game-changing innovations and the testing and adoption of climate resilient approaches. They will be employed in this project to introduce farmers to new ways of doing things including, inter alia, the application of climate resilient agricultural techniques and technologies. In order to monitor the progress made at the outset of the establishment of the Model Farms, the High Nature Value Farming Index (HNVI), will be applied as a basis for the collection of baseline data on the conditions. This is a tool designed to determine how eco-friendly/ sustainable are farming practices are. Once the baseline is established, the HNVI will be applied periodically throughout the project to monitor progress being achieved with respect to adherence to the principles of climate resilient and climate smart sustainable agriculture. The HNVI involves interviewing farmers using a questionnaire designed to provide information on farm characteristics and practices employed on different farms. The information gathered from the questionnaire will be fed into a computer programme that uses a set of established criteria to derive an HNVI index which quantitatively describes how 'eco-friendly' a farm is. The computer programme also identifies specific areas for improvement that will increase the "eco-friendliness" of the farm.

93. **Output 3.1.3: Farmers in vulnerable landscapes adopt Climate Smart agriculture methods and Techniques :** An important aspect of the enhancement of human capital in the participating countries will be training and support for the adoption of climate-smart agricultural technologies and practices and improve agricultural stakeholder resilience. Major target groups for this training will be the farmers who are involved in the Climate Smart Model Farm Initiatives and Extension Providers in the respective participating Member States. A major component of the training will focus on "effective delivery of infield training for farmers" as well as on increasing their adaptive capacity and build resilience against the impacts of climate change and variability through knowledge sharing and technology transfer, thereby contributing to building their adaptive capacity and resilience. An important part of the training will in-field training for small farmers as a means of transferring tools, methods and approaches for implementing climate-smart agriculture.

94. A Strategic and Marketing Strategy for each of the Climate Smart Farms will be undertaken to ensure that the products produced by the Farms have a market. A sustainable supply chain with regard to production, processing, and demand for the produce resulting from the Model Farms is vital for their success and the contribution they will make to contributing to LDN in the participating countries. To this end, linkages will be built with existing economic sectors (e.g. tourism sector etc.) and relevant Government services (e.g. School Feeding Progammes etc.) to provide security of markets for the Model Farms.

95. Global LD set-aside funds ($176,000 approx) will be used to support knowledge sharing activities in the region by organizing trainings, workshops and exchange of experiences at the Field Training Sites developed under Outcome 3.1. Set aside funds will be used to develop a Train-the-trainers program targeting other countries in the region so that model farms can be replicated throughout the region (and upscaled using co-finanicng resources).

96. In addition, SCCF funds ($253,000 approx) will by used to support the demonstration and adoption of climate resilient technologies and practices building on local innovations and with proven benefits that would give small farmers the ability to reverse degradation and reduce risks posed by drought and other climate effects in the agriculture sector. In particular, SCCF funds will be used to carry out regional capacity building activities such as climate modeling,

CCA training, and the identification of climate resilient technologies and practices. Under this component, countries are expected to use their co-financing resources to implement national level activities based on the knowledge they have acquiered.

Component 4: Enhancement of Food Systems and Alternative Livelihoods Through the Promotion of Innovations in agriculture and livestock production systems and Mobilisation of the Private Sector in Support of LDN:

97. The overriding goal of this component is to enhance food systems by embedding within the landscape in a manner that creates livelihood options for communities; improving food production without causing environmental harm; improving soil management and soil organic content; increasing vegetation cover and the minimisation of the use of agro-chemicals as well as attract private sector investment in SLM. The agricultural production systems targeted under this Component, in multiple countries, will be designed to generate multiple economic and social benefits. These sites have been selected based on the background information provided to the PISLM indicating the type of interventions which should be undertaken in their respective countries. In **Belize** project intervention actions will be concentrated in the northern districts of the country, often referred to as the Northern Sugar Belt of Belize. Focus will be placed on the restoration of arable land which has been denuded over time by inappropriate agricultural practices sugar lands and the enhancement of ecosystem services and livelihood options for dependent communities. In **Haiti**, project interventions will be concentrated in the Artibonite watershed, Gonaives, where bad farming practices is the norm. In **St. Lucia** interventions will be concentrated mainly in the 10 ha area of Soufriere.

Outcome 4.1.: Adapted Land Use/ Food Production Systems and Alternative Livelihood Options implemented with innovative technologies and private sector involvement:

98. **Output 4.1.1.: Land Capability of the Selected Sites in Dominica, Belize, St. Lucia and Saint Vincent and the Grenadines and Jamaica and Barbados assessed.** All of the sites identified will be assessed to determine their capability before specific interventions are undertaken. This will enable the best combination of corrective actions to be taken.

99. **Output 4.1.2.: Resilient Food Production Systems, Alternative Livelihood and Financial Options designed and implemented:** The focus of this intervention will be on productive lands that are under considerable stresses and threat from a variety of sources, be it, inappropriate and unstainable farming practices, destruction resulting from extreme events and/or abandonment. Emphasis will be placed on embedding these productive land/production systems into the landscapes in the respective participating countries that enhances the provision of ecosystem services including the restoration of soils and natural ecosystems.

100. **Output 4.1.3. Opportunities for Private Sector Collaboration for Potential Financing identified:** Access to finance and technical assistance by Small and Medium-sized Enterprises (SMEs) in the Agricultural Sector is a major constraint. The growth of private sector funds such as the Moringa, & Green, and the LDN fund which invest in profit-generating sustainable land management and restoration projects provide possible sources of financing LD projects. An

assessment of existing financing mechanisms (public-private, private, innovative), including of major regional (e.g. Caribbean Development Bank etc.), hemispheric (IADB, the Bank of Latin America (CAF) and global financial mechanisms (e.g. World Bank, IFAB etc.) that support SLM and SSM will be undertaken with the view of accessing resources to fund targeted SLM, SSM and Climate Smart Agriculture Initiatives. An integral part of the project, therefore, will be the design of bankable projects which could be considered by these private funds for financing selected initiatives. Resources will, therefore, be allocated to enable the PISLM to finance the development of proposal aimed at developing LD investment projects for possible financing by these Funds. In addition, the successful implementation of the Regional LDN Strategy will require private sector support and investment. It is therefore critical that a strategically focus programme be instituted to build linkages and enhance cooperation with the private sector.

101. Global LD set-aside funds ($155,000) will be used to (i) support the development/strengthening of a regional network dedicated to support indigenous peoples in the regions; (ii) Development of Private Sector Partnerships and the establishment of the Partnership Development, Finance and Resource Mobilisation Platform in support of SLM and the implementation of the Regional LDN; and (iii) support the identification and of cross-border cooperation and investments for SLM.

102. In addition, SCCF funds ($270,000 approx) will be used to support the design and implementation of climate resilient food production systems in the by carrying out regional capacity building activities such as funding research on new adaptation technologies and supporting regional knowledge sharing. These activities will allow participating countries support make decisions regarding alternative livelihood options and the identification of financial options to carry out these activities. SCCF resources will be used build capacity in the region to help farmers restore or improve the productive capacity of agricultural lands that are under particular pressure and threats due to climate change and unsustainable land use practices. Emphasis will be placed on a shift towards more diversified and resilient food production systems (including crop modelling under changing climatic conditions) and green value chains with private sector support that enhance livelihoods and ecosystem services including the restoration of healthy soils and provision of quality marketable products.

Component 5: Monitoring and Evaluation, Knowledge Management, and Communication:

103. Given the complexity of the project there is a need to ensure that an adequate monitoring and evaluation framework is designed for the project. In addition, given the paucity of information on many aspects (e.g. soils, organic soil carbon etc.) it is essential that a SLM Knowledge Hub for the project as well as a Communication Strategy. This Component will therefore address these elements.

Outcome 5.1: An *effective* Monitoring and Evaluation system, Knowledge Hub, and Communication Mechanism Established

104. **Outcome 5.1.1: Establishment of a Gender Sensitive Monitoring and Evaluation Framework in Support of Project Implementation**: An important aspect of the project will be the formulation of Gender Sensitive Monitoring and Evaluation Framework that measures accountability and performance, assesses results, effectiveness, processes and partner performance as well as facilitates and assesses learning, feedback, and knowledge sharing based on results and

lessons learned. The use of this framework will also help the project to determine whether the activities addresses the different priorities and needs of women, men, youth and indigenous peoples as well as to assess the impact on gender relations. In designing the Gender Sensitive M&E Framework cognisance will be taken of the SMART goals as well as the GEF Evaluation criteria—Relevance, Effectiveness, Efficiency, Results and Sustainability. In addition, it is necessary that both qualitative and quantitative data that measure the impact on gender relations be employed. To ensure the effectiveness of the 'gender-specific monitoring and evaluation' system it will be essential that all data is collected, presented and analysed in a sex-disaggregated manner. In addition to the regular evaluations to be conducted (including midterm reviews and terminal evaluations) of the project, ongoing monitoring and policy oversight will be provided by the PISLM High Level Ministerial Body, which will also have the responsibility of being the conduit by which the policy outputs are channeled to the Decision Making Organs (e.g. the Conference of the Heads of Government, COTED etc.) of the Caribbean Community for policy and political assessment and endorsement.

105. Output 5.1.2:. Caribbean SIDS SOILCARE LDN/ SLM and CCA Knowledge Hub established: An important aspect of this project will be its contribution to the strengthening of the Technical-Policy Interface in Caribbean SIDS where the project outputs will be integrated into policy frameworks and the national and regional levels. To facilitate this, a Caribbean SOILCARE LDN/ SLM and CCA Knowledge Hub will be established to capture and increase accessibility to the knowledge generated by the project (e.g. new knowledge on soils, soil carbon, tools and methods for Climate Smart Agriculture etc.) as well as to facilitate knowledge transfer across the region. An important dimension of the Knowledge Hub will be to capture and incorporate through an exchange Platform across actors all relevant learning from previous projects and programmes in the region. To facilitate this, resources have been allocated under the Set Aside to the institutional strengthening of the PISLM Support Office to enable it to perform this additional function. It will therefore be the responsibility to compiled relevant previous experience which could enhance the Knowledge Hub and its exchange Platform. In addition, a Caribbean Land-Soil Outlook 2030 will be produced as an integral part of the project and the dissemination of knowledge generated by the project. The Knowledge Hub will be established to be used as the depository of all the information generated from the project as well as other land degradation information and data. The Knowledge Hub will be used for sharing of all the information generated by the project including, inter alia, the Project Lessons Learnt on the Contribution to LDN and Landscape Management at Regional and National Levels: The lessons learnt from this project will provide a solid basis not only for the mainstreaming of SLM and LDN and CSA in Caribbean SIDS, but will also establish the baseline conditions and enabling environment for the launch for Phase II of the project, on the successful conclusion of Phase 1.

106. Given the importance of climate change to Caribbean SIDS, the Knowledge Management Hub will place a critical role in helping the region to assess and adapt to the risks posed by climate change in the context of SLM. Since the Knowledge Management Hub will be to a large extent be electronic based, accessibility by Caribbean SIDS on a real time basis will be enhanced. In addition, the various platforms for exchange available to Caribbean SIDS including at regional level such as the PISLM High Level Ministerial Meeting and the Council on Trade and Economic Development (COTED) of the Caribbean Community will be use to share knowledge on the risks posed by climate change and the solutions generated by the project, especially as a basis for integrating and mainstreaming SSM/SLM and CSA in strategic plans and investments supportd by public-private sector collaboration (supported by Outcome 1).

107. Output 5.1.3: Caribbean Land-Soil Outlook 2030 and Regional Public Education and Awareness Strategy Prepared and Disseminated.: The Land-Soil Outlook will form the basis for a Sustained Public Education Programme on SLM and LDN. It will draw heavily on the knowledge and information generated through this project to inform stakeholders and the general public of project implementation progress and key findings. The Land-Soil Outlook along with other

Public Education Initiatives will be used as the basis for the implementation of a sustained Public Education Programme on SLM and LDN and their implications for national and regional sustainable development. In terms of the Caribbean Land-Soil Outlook 2030, it will contain a wide scope of policy and research information, including, inter alia, official Information on land and soils in Caribbean SISDS; knowledge and lessons learned on successful management technologies and approaches shared across Caribbean SIDS; LDN contribution to the various SDGs etc. Issues of the Outlook will be published during the implementation of the project to keep stakeholders updated on progress being achieved and on additional actions which are required to achieve the project objectives. To facilitate its preparation and production, a number of specific actions will be taken including, inter alia,

· Establishment of a Task Force to assist with guiding the development of an initial annotated outline for the Caribbean soil/land Outlook

· Analysis of report on soil status and trends in relation to different land use systems and management practices in each country ;

· Review and report on soil /land policy, legislation and institutions in each country

· Preparation of case studies on selected soil/land issues and sustainable soil/land management experiences in each country;

· Identification of key authors to write the chapters of Caribbean LSO, supported by expert members of the Intergovernmental panel on soils (ITPS) and Science-Policy interface of UNCCD (SPI).

108. The publication of the Land-Soil Outlook will be complemented by the design and implementation of a Regional Public Education and Awareness SLM and SSM Communication Strategy, which utilizes a number of communication media and platforms, including, inter alia, social media, television, radio, documentaries etc.

109. Global LD set-aside funds ($228,000 approx) will be used to support (i) the establishment of Caribbean SIDS SOILCARE Knowledge Management Hub, (ii) the preparation and development of the Concept of the Caribbean Land-Soil Outlook, (iii) Institutionalisation of Training on SLM to ensure the region has the capability to address SLM and Sustainable Soil Management (SSM) Issues, (iv) support the design and implementation of SLM mainstreaming and scaling out strategies to integrate SLM and sustainable soil and landscape management into key decision-making processes including policies, land use planning processes, and financing mechanisms at nationala, regional and international, linking it to regional levels; (v) Enhancement of Policy Dialogue between the PISLM/SOILCARE and the Caribbean Community (CARICOM) and integration of SLM and SSM in Regional Policy Instruments and facilitating Approval by the Conference of the Heads of Government thus giving them legal effect in the participating countries (e.g. The Community Environmental Policy and Natural Resources Policy Framework etc.); and (vi) Establishment of a regional and South-South platform for the exchange of experiences on soil, SLM methodologies and practices within the region and with other countries regions and SIDS.

110. In addition, during the PPG process, an effort will be made to identify synergies between SOILCARE and the SIDS Island Programme on Chemical. During the PPG phase, the project will identify specific activities (eg. Indicators to be monitored, data to be collected, means to share information) to ensure cooperation between both projects. These activities will be implemented using LD set-aside funds.

111. Finally, SCCF resources ($190,000 approx) will be used to support knowledge sharing at the regional level by (i) providing training and capacity development, including technical backstopping, on methodologies for assessing land degradation and vulnerability to climate change in target land use systems and landscapes; (ii) providing training on adaptation/climate resilience assessment and access to finance for climate technologies; (iii) training on Farmer Field Schools and Climate Smart-climate proofing Tools, Techniques and Methodologies; (iv) supporting the access of selected groups to climate information and adaptation practices; and (v) designing mainstreaming strategies for Sustainable and Climate Resilient Soil/Land Management, and to support their integration into National Policies, land use planning and financing mechanisms at the national and regional levels

4) Alignment with GEF Focal Area/Impact Programme Strategy

112. The project is aligned with the GEF-7 LD Focal Area Strategy. Its implementation will contribute to the achievement of the three goals LD Focal Area strategy in GEF-7, namely, the alignment of GEF support to promote UNCCD's Land Degradation Neutrality (LDN); supporting the integration of the Impact Programmes into the national and regional policy framework, thus ensuring the generation of multiple benefits; and creating an enabling environment for harnessing private sector participation on LD activities including investments as well as establishing and building co-operation with the LDN fund and other innovative financing mechanisms.

113. In the context of achieving Objective 1 of the LD Focal Area strategy, focus is placed on a number of interventions which are consistent with the GEF Land Degradation Focal Area Strategy. Activities which will be undertaken include, inter alia, the establishment of agro-ecological food production systems in degraded areas by improving soil management and increasing soil organic matter content, increasing the vegetation and tree coverage, and thereby generating multiple environmental and socio-economic benefits, and building of resilience against climate change and natural disasters through the promotion of Climate Smart Agriculture and promoting an integrated approach to implementing SLM to increase the prospects for food security for smallholders and communities that are dependent on farming for their livelihoods as well as shifting degraded lands into production systems.

114. With respect to Objective 2, this project creates an enabling environment to support the participating countries in developing their LDN Strategy, albeit, in a regional context. In this regard, focus is placed on building capacity at all levels required to address land degradation, reforestation and restore and maintain functional landscapes and developing monitoring and information systems and targeted research on issues such as soil carbon and facilitating lessons learning and knowledge exchange and south-south cooperation within the Caribbean SIDS region.

115. Another key focus of this project is the provision of technical assistance required to bring bankable projects to the investment. In addition, to harnessing the potential of national and regional private sectors in Caribbean SIDS, emphasis will also be placed on the development of bankable projects and programmes which could benefit from financing through private LDN funds and other innovative financing mechanisms.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, CBIT and co-financing

116. The project will contribute to global environmental benefits in a number of ways, including, inter alia, contributing to the achievement of Target 15.3: "By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation neutral world." Other global benefits which will result from this project is the contribution to the work of the Global Soil Partnership, the reduction of land degradation in Caribbean SIDS by stemming soil and land degradation; including, inter alia, soil erosion, chemical degradation, land slippage and sedimentation which eventually reaches the marine ecosystems The adoption of SLM practices in Caribbean SIDS to reduce land degradation and secure ecosystem services across Caribbean SIDS will result in significant global benefits.

Table: Benefits associated with alternative resource management and production systems promoted by project

Current practices	GEF Alternative/Alternative production systems	Expected benefits*
Sustainable Development Goal 15.3 not currently being implemented in most Caribbean SIDS in a systematic manner to achieve the desired 2030 target.	Systematic approach to the implementation of SDG 15.3. in a regional context	• Contribution to the achievement of the Sustainable Development Goals (SGGs). • Implementation of Land Degradation Neutrality (LDN) as a tool to assist resource managers and users to sustainably manage land and land resources and the mobilization of resources for doing so.
Limited soils data on Caribbean SIDS and its input into the Global Soils Partnership Data base, thereby affecting the use of update soil information for deci	Improved soil data and information in Caribbean SIDS to inform decision making and to serve as a major pillar of the Regional Land Degradation Neutrality (LDN) Strategy	• Enhance National and Regional Policy on soils • Preparation of a Regional LDN Strategy to provide a framework addressing land degradation in Caribbean SIDS

sion making purposes		
Unsustainable agricultural management practices resulting in a range of environmental issues, including, inter alia, soil erosion, increasing sediment flows into aquatic ecosystems, etc	Soil conservation practices, including multi-cropping; use of cover crops; mulching, zero-tillage, terracing, agroforestry	SLM measures adopted on x ha of productive lands in Caribbean SIDS resulting in: • Increased vegetative cover • Reduced soil and nutrient losses and soil compaction
Unsustainable forest management practices (deforestation including on steep slopes, clear felling for agricultural purposes, etc.) resulting in extensive soil erosion and land slippage, sedimentation and flooding etc	Reforestation using native species, establishment of agro-ecological production systems and the promotion of integrated landscape management and restoration and on-going care and monitoring of reforested areas etc	SLM measures adopted on y ha of forest lands in Caribbean SIDS, resulting in: • Increased forest cover • Reduced soil erosion, land slippage and flooding • Establishment of agro-ecological production systems aimed at improving productivity, improving ecosystem services etc. • Increased carbon sequestration • Reduced biodiversity loss
nappropriate use of agrochemical inputs (primarily pesticides and fertilizers) leading to soil acidification and chemical degradation and declining water quality	Adoption of organic principles and integrated pest management, adherence to requirements for chemical inputs, crop rotation to reduce pests	SLM measures adopted on z ha of agricultural lands, resulting in: • Improved soil quality • Improved food safety • Reduced contamination of drinking water supplies and aquatic and near shore marine ecosystems

117. In terms of climate change adaptation, the project will build on existing baseline activities and strengthen regional efforts to address climate change by supporting (i) regional climate modeling/projections that can feed into or inform SLM in the Caribbean; (ii) carry out regional trainings on climate change adaptation (including links to agri (iii) developing regional research/advice about how new adaptation technologies or practices that can inform SLM projects (investments would be done using country's STAR allocations or co-financing), (iv) supporting regional knowledge sharing and exchange on adaptation; (v) developing regional institutional measures to mainstream adaptation in SLM policies and plans; and/or enable CCA and SLM regional institutions to work closer together.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

118. The project will contribute to global environmental benefits primarily through reduced soil erosion, reduced risk of land degradation, increased resilience to potential climate change impacts, and carbon sequestration. The project will produce the following specific benefits:

o Improved understanding of soil management and soil organic carbon in Caribbean SIDS as the region's contribution to Global Soil Management to better enable the full potential of soil ecosystem services to be realised.

o Implementation of a Land Degration Neutrality Framework for Caribbean SIDS as a contribution to global action to reduce LD and enhancing ecosystem services while contributing to the attainment of the SDGs, in particular SDG 15.3.

o Strengthening of Caribbean SIDS participation in the Global Soil Partnership (GSP) and contributing to the improvement of knowledge and making it available and accessible to the global scientific and policy community.

o 20,000 ha of avoided deforestation in target countries

o 37,000 ha of restored lands (both forest and agriculture lands)

o 23,000 ha of improved food systems, sustained by Sustainable agricultural production and the use of climate resilient tools and methods employed by farmers resulting in decreased soil erosion and flooding and increased ability to cope with hazards

o Increased vegetative cover, land productivity (NDVI) and soil organic carbon (as per the LDN targets) on a number ha of degraded land restored.

o The integration of productive lands within landscapes that provide enhanced ecosystem services, protect natural ecosystems and soil on which they depend.

o Favourable policy and institutional environment supportive of SLM in agricultural and forest lands and the implementation of a Regional LDN for Caribbean SIDS creating a favourable environment for improved management of landscapes.

o Avoidance/capture of an estimated 5.8 million tonnes of CO2-eq over a period of 20 years

119. Caribbean SIDS will also benefits from SCCF contribution to mainstreaming adaptation into regional and subregional policies and strategies including (i) one subregional SSM framework agreement contributing to LDN , (ii) an updated subregional implementation plan for SSM and LDN, and (iii) one operational soil /LDN platform across institutions and decision making bodies. Dissemination of adaptation practices and experiences will be promoted as well as capacity development of relevant policy players and key stakeholders. Finally, approximately 1000 farmers (40% women) will benefit from training and capacity-building activities on risk assessment and CCA best practices for decision-makers and technicians from relevant counterparts and institutions in Caribbean SIDS in the 7 participating countries.

7) Innovation, sustainability and potential for scaling up

120. *Innovation:* The project demonstrates several approaches that are innovative. It is one of the first examples of a group of countries with similar characteristics to approach LDN, on a regional basis. It, therefore, contributes to the development of a regional perspective on LDN and places these countries in a better position to influence the integration of LDN into regional technical and regional policies. It establishes an innovative and knowledge sharing approach across countries to the implementation of SDG 15.3; an approach which could be adopted by other SIDS Regions. It also links the SDG agenda with UNCCD objectives.

121. *Sustainability:* At the regional level a key consideration which will contribute to sustainability is the provision made for the integration of the LDN and the project results into the policies which stem from regional decision making processes, including endorsement and adoption by the Caribbean Community Councils (e.g. the Council on Trade and Economic Development (COTED) and the Conference of the Heads of Government of the Caribbean Community). The proposed establishment of a Sub-Regional Programme as an integral part of the Central America, Caribbean and Mexico Soil Partnership will also contribute to the sustainability of the project.

122. The involvement of a number of regional institutions, in particular, the University of the West Indies (UWI) and the Caribbean Research and Development Institute (CARDI) and the integration of main elements of the project (e.g. soil analysis etc.) into their programming will ensure institutionalisation of the various project components and allow continuing support beyond the project life.

123. Another important factor which will contribute to the sustainability of this project is the direct involvement of key stakeholders at the regional and national levels in, particular, the participation of the relevant Ministries in the participating countries as well as local communities and small farmers from the outset of the project. The knowledge gained by stakeholders, including farmers and other local community members through training in the various areas of the project (e.g. soil and land capability analyses; tools, methods and approaches to Climate Smart Agriculture etc.) as well as the experience gained in their application, will be invaluable in ensuring that these approaches are actively adopted and hence contribute to the sustainability of the project outcomes.

124. Innovative farmer led demonstrations and exchange, through FFS groups and networks (gender balance), of efficient, ecological and climate resilient soil-water-crop-livestock management practices and diversified food production systems at farm and landscape level (SLM and climate adaptation will facilitate their wider validation and uptake,

· Practices would include inter alia crop rotation, intercropping; mixed agro-silvo-pastoral systems, integrated soil-crop-water management .

· Private sector collaboration would be facilitated to enhance value chains and link farmers and livestock keepers to reliable markets for a more diverse range of quality products .

· Practices would be scaled up in selected catchment and community territories for landscape restoration, enhanced food security and reduced risk (drought, landslides and flooding etc.) through integrated participatory land plans developed across sectors and stakeholders taking into account gender and governance issues for more inclusive decision making and tenure security, including land protection (farmer-managed set aside for natural regeneration), afforestation and agroforestry using locally adapted species, and sustainable crop-livestock systems.

125. SLM at farm and landscape level would be backed up an enabling environment for SLM and CSA scaling out including inter alia

· Policy, regulations and incentive measures for promoting SLM for reducing deforestation, erosion on steep slopes, contamination by agrochemicals and other degradation processes and enhancing renewable energy supply.

· Evidence from participatory monitoring of the impacts /benefits in terms of productivity and maintained or improved ecosystem services, notably soil organic carbon restoration for enhanced soil biological functions notably nutrient cycling, soil water retention and pest control, as well as increased and reliable food production, resilient farm-livelihoods (adaptation) and mitigation co-benefits (reduced emissions).

126. The benefits the various stakeholders will derive from the project, including, more secure livelihoods, will provide an incentive for them to adopt SSM/SLM and Climate Smart Agriculture (CSA) for enhanced resilience and adaptation to climate change and variability (CCA) practices and better husbandry of the environment as a basis for avoiding and reducing degradation and restoring degrded lands and enhancing resilience to climate change and natural disasters.

127. Climate Change Adaptation activities will be sustained and coordinated at regional level (with SCCF support) through enhanced understanding and capacity of decision makers to integrate CSA, Drought Risk Management and resilient diversified Food Systems into regional policy support frameworks and investments so as to generate multiple socioeconomic and environmental benefits (proven through in the ground activities supported by GEF funds)

128. Another innovative aspect of the project is the involvement of the private sector, in particular, private sector funds such as the Moringa, & Green, and the LDN fund, and the targeting of specific resources from existing financial mechanisms (e.g. CDB, CAF, IADB, CAF etc.) to support investments in SLM, SSM and CCA in the subregion. Accessing the available resources from these financial institutions should contribute to the provision of incentives for the promotion and scaling up of improved management practices and land use systems, as well as the longer term financial sustainability and integration/ harmonisation of Regional LDN and CCA process. In the event that some of these financial institutions´ policies do not currently support SLM, SSM and CSA, this project will create an awareness within these organizations of the importance of doing so.

129. *The scaling – up potential:* The implementation of this project offers significant potential for the scaling up of various activities (e.g. Climate Smart Agricultural practices etc.) throughout Caribbean SIDS and beyond. There is a commitment on the part of the participating countries to take the lessons from field-based activities implemented during the project and to replicate in other countries and regionally. The lessons provide through implementation of various activites of the project could be used as the basis for upscaling the project. As an example, the lessons learnt from the restoration of degraded areas and landscapes in Component 2 can be up-scaled in some of the participating countries, in particular in Haiti. In addition, the adoption of climate smart practices and technologies (e.g. breeding strategies to develop varieties resistant to climate shocks, effective soil and water conservation including capture and retention of rainfall, water use efficiency measures etc.); climate-smart systems approach (e.g. diversification of products, climate-proofing of key value chain stages to improve adaptive capacity, improved access to finance to leverage and accelerate climate smart investments etc.) and the creation of an enabling environment through gender sensitive climate smart policies which foster inclusiveness could be used as the basis for improvement of agriculture in Caribbean SIDS.

[1] As per the scientific conceptual framework, LDN is managed at the landscape scale, considering all land units of each land type and their interactions and ecological trajectories, so that LDN interventions can be optimized among those land units, in order to maintain or exceed no net loss, per land type. Monitoring achievement of neutrality will quantify the balance between the area of significant gains and area of significant losses within each land type across the landscape using the three LDN indicators and associated metrics (land cover change), land productivity (net primary production) and carbon stocks (soil organic carbon)) . This will include all land types those managed for production (e.g., agriculture, forestry), for conservation (e.g., protected areas) and land occupied by human settlements and infrastructure and all types of land degradation. It is designed to support pursuit of LDN in a manner that benefits all current land users in an equitable and responsible way, and provides for future generations.

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

Please refer to Annex A of this CEO Endorsement Request entry

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above,please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

1. A sustained consultation process was undertaken as part of the PIF preparation process. Since August 2018 an intensive consultative process was launched led by PISLM and with support of FAO regional (Santiago) and subregional (Barbados) offices to allow countries to clearly define, not only their interest in participating in the project but also to define the various interventions which should form part of the project. The consultation process was led and coordinated by the PISLM Support Office in the following countries: Antigua and Barbuda, Belize, Barbados, Dominica, Grenada, Guyana, Jamaica, Haiti, Saint Vincent and the Grenadines and St Lucia. In all the countries visited, consultations were held with the UNCCD and GEF Focal Points as well as the Ministries of Environment and Agriculture and key Major Groups, in particular, civil society and academia. The inputs from the participating countries were consolidated into a briefing document which was reviewed by the High Level Ministers Meeting of the PISLM held in October 2018 in Guyana and approved by the meeting. The preparation of the PIF commenced following the Decision of the High Level Ministers Meeting of the PISLM agreed that “all the volunteer country Parties implementing LDN-TSP from CARICOM, will allocate funding from their GEF 7 STAR allocation for Land Degradation towards the implementation of SOILCARE Project” as an “essential pillar for the sub-region in meeting its obligations under the UNCCD and SDG 15.3” and that the PISLM shall serve as the Executing Agency for this project (Decisions of the 3rd PISLM High Level Meeting, October 2018).

2. Once prepared, the first draft of the PIF was circulated to all of the participating ahead of the convening of the 7 Meeting for the Review of the UNCCD held in Guyana in January 2019 for review. A Validation Workshop of the project was convened during the CRIC to review the Draft PIF and to validate its content. Following the convening of the Validation Workshop, an Information Template was circulated to all the participating countries to solicit additional information and to identify any gaps in the Draft PIF which needed to be filled. Once the Draft PIF was revised it was again submitted to the participating countries for a further review before it was submitted through FAO to the GEF for consideration. In addition, to the Country Parties, the Draft PIF also benefited from the input of a number of regional organisations, including, the Caribbean Community Secretariat; the University of the West Indies, CARDI and IICA as well as the Global Soil partnership Secretariat.

3. Following is a brief overview of the main stakeholders involved in the consultation process for the development of the PIF. These stakeholders will be involved/consulted during project design

Stakeholder	Summary of Mandate	Roles in the Project
The Caribbean Community and its Organs (e.g. the Conference of the Heads of Government, Council on Trade and Economic Development (COTED) etc.)	The Organs of the Community are its Decision making bodies which reflect the will of the Community	Consider the Outputs of the project and agree to their integration into the various Policy Frameworks of the Community as well as provide the regional policy framework for the implementation of the various Project Outputs
Partnership Initiative for Sustainable Land Management (PISLM) Secretariat	PISLM was established based on a decision taken at the Caribbean Sub-Regional workshop on Land Degradation in February 2004. PISLM serves as a mechanism to facilitate exchange of good land management practices between participating countries, and serves as a mechanism for stimulating the replication of approaches, tools and methodologies throughout the region	PISLM Secretariat will act as the Executing Agency for the project preparation phase, and work in close collaboration with FAO, the Implementing Agency, in this regard. As Executing Agency, the PISLM will: · Have overall responsibility for the day to day management of the project including the implementation of Project activities and ensuring their successful implementation, including the inputs of regional and other institutions as well as providing a liaison between the Project and the Caribbean Community and its Member States; · Provide the Secretariat for the Regional Project Steering Committee and the Project Platforms; · Received and managed the resources transferred to it, in its capacity as Executing Agency, by the GEF, through the FAO, to facilitate the project implementation activities, in a timely, effective and efficient manner, and to account for those funds, according to standard procedures; Prepare and finalise the necessary reports (e.g. Work Plans, progress reports, Financial Reports on the money received etc.) for consideration by the PISLM High Level Ministerial Body and the Regional Project Steering Committee (RPSC), as may be necessary;
Indigenous Peoples and their Organisations	Indigenous Peoples are a major target group of this project, in particular, in those countrie	At the national levels in the participating countries, the competent Indigenous Peoples organisation, particularly, in those countries, which have a significant number of Indig

	s (e.g. Dominica and Guyana) where specific activities are being undertaken with the participation of Indigenous peoples.	enous Peoples (e.g. Guyana) will sit on the National Inter-Agency Advisory Group. One of the principle functions will be to ensure that the Executing Agency involves Indigenous Peoples, especially the youth in the various components of the project. Specific project activities involving indigenous peoples will be undertaken in Guyana
′outh Organisations in the ?articipating Countries (e. ɡ. The National Youth Cou ıcil of Dominica (NYCD))	A major target group for the project will be the youth of the participating countries	At the national levels in the participating countries, the competent national organisation for Youth and/or voluntary umbrella organization representing them will sit on the National Inter-Agency Advisory Group. One of the principle functions will be to ensure that the Executing Agency involves youth in the various components of the project. A strategic goal of various components, in particular, Component 3 is to attract youth involvement in agriculture
Women's Organisation in t ıe Participating Countries e.g. Dominica National Co ıncil of Women (DNCW)) i ı the Participating Countri ɛs	Women will be one of the major beneficiaries of the project, and will participate in all aspects of the project.	At the national levels in the participating countries, the competent national organisation for the promotion of women's rights (e.g. Ministries/Bureaus of Women's Affairs etc.) and/or voluntary umbrella organization representing women's groups will sit on the National Inter-Agency Advisory Group. One of the principle functions will be to ensure that the Executing Agency works with communities and organizations, as may be necessary, to ensure gender equity in participation of women in project activities and to help ensure that the socioeconomic benefits resulting from project activities impact equally on the lives of woman
Farmers organizations/co ɔperatives in the Participat ıg countries	The farmers' organizations/cooperatives and their members in the participating countries are the downstream beneficiaries of the project	Farmers' organizations will participate by providing inputs on various aspects of the project, including, inter alia, on sustainable agricultural approaches and ensuring that the relevant information, in this regard, is disseminated to its members. These organization willalso play an important role in ensuring that the training is targeted to the specific needs of their members as well as to encourage their participation in the training
Academia, in particular, th ɛ University of the West In ılies and the University of Guyana	To Undertake Training and Research	In the case of the UWI, responsibility for implementing Component 1 has been assigned to this organisation under the overall direction of the PISLM and with close support of the Global soil partnership. It, therefore, has the princ

Guyana		t of the Global Soil Partnership. It, therefore, has the principle role of ensuring that Component 1 is implemented in an effective and efficient manner. In the case of the University of Guyana, they will provide technical and scientific support to the Government of Guyana in implementing its national project activities. The Universities will also participate actively in the various Project Platforms.
Private Sector (Beyond the Small Farmer)	Strengthening of collaboration between the PISLM and the participating countries on SLM and SSM issues to the extent that the private sectors becomes one of the key stakeholders in the design and implementation of the Regional LDN Strategy. In addition, the private sector will be expected to invest in profit-generating sustainable land management and restoration projects; provide resouces to support necessary techncial assistance, institutional framework and monitoring mechanisms	Involvement at the planning and policy level, in particular, through the the participation in the Finance and Resource Mobilisation Platform in support of SLM and the implementation of the Regional LDN. The private sector will also invest in profit-generating sustainable land management and restoration projects, including investing in bankable LD investment projects and the identification and funding of cross-broder cooperation and investments.
Caribbean Agricultural and Research and Development Institute (CARDI)	An Institution of the Caribbean Community charged with the responsibility of providing for the research and development needs of the agriculture of the region as identified in national plans and policies, as well as providing an appropriate research and development service to the agricultural sector of member countries.	CARDI will provide technical guidance and training in sustainable agricultural practices, as may be necessary as well as participate actively in the various Project Platforms

nter-American Institute for Cooperation in Agriculture IICA)	IICA supports member countries to improve the productivity and competitiveness of their agricultural sectors, including improving agriculture's capacity to mitigate and adapt to climate change. In Dominica, IICA provides technical support on rural livelihoods, women and youth in agriculture, apiculture, and agrotourism, and it supports the development of agricultural policy and strategic plans	IICA will provide technical guidance and training in sustainable agricultural practices, as may be necessary as well as participate actively in the various Project Platforms
Ministries of Environment and Agriculture in the participating countries	Responsible for environmental and agricultural policy in participating countries	The participating countries in the project will have multiple roles. At the Policy Level, the Minister who sits on the PISLM High Level Ministerial Meeting will have overall policy oversight for the project. They will also play an important role in ensuring that the project outputs are integrated into the various Caribbean Community Policy Framework. The UNCCD Focal Points of the participating countries which will also serve as the Focal Point for this project, will be responsible for the overall management of the Project at the national level and ensuring effective participation in the regional activities being undertaken under the project
United Nations Food and Agriculture Organization (UN FAO), in particular, the FAO Regional office for latin America and the Caribbean (RLC) based in Santiago lead technical unit and regional GEF unit), and the SubRegional Office for the Caribbean based in Barbados (sub-regional GEF Task Manager and Country Offi	The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts towards food security and zero hunger (SDG2). Its goal is to achieve food and nutritional security for all and ensure sustainable, efficient and inclusive food production systems to ensure sustainable livelihoods based on agriculture, fisher	The Food and Agriculture Organization (FAO) will be the GEF Implementing Agency for the proposed project, and as such, will provide Project Cycle Management Services as Established in the GEF Policy as well as provide technical support to the PISLM and the participating countries, as necessary and as requested. FAO will, in its capacity of Implementing Agency, have responsibility for providing oversight, technical backstopping and supervision of project implementation to ensure that the project is being carried out in accordance with GEF guidelines and and requirements. Technical backstopping will be provided by FAO in coordination with government representatives particip

Manager and Country Offices in Guyana and Haiti, and national correspondents in the other countries which have responsibility for FAO activities in those countries	ds based on agriculture, fisheries and forestry and that people have regular access to enough high-quality food to lead active and healthy lives	in coordination with government representatives participating in the Regional Project Steering Committee (RPSC) and national project management mechanisms

4. As the GEF Agency, FAO will:

· Administrate funds from GEF in accordance with the rules and procedures of FAO and making the necessary transfers, in a timely manner, to the Executing Agency, as necessary, to facilitate project implementation activities;

· In close collaboration with the the Executing Agency provide oversight of project implementation in accordance with the project document, work plans, budgets, the rules and procedures of FAO and in accordance with GEF procedures;;

· Assist with the mobilization of co-finanincing for the project;

· Provide technical guidance, as necessary, to ensure that appropriate technical quality is applied to all activities concerned;

· Conduct at least one supervision mission per year;

· Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee;

· Participate in the various project management structures of the project, including, *inter alia,* the Regional Project Steering Committee and the Project Platforms, and

· Participate in the planning of contracting and procurement processes, as may be necessary, in collaboration with the PISLM, the RPSC and the PCUs in the countries.

5. In accordance with the Project Document and the Annual Work Plan and Budget (AWP/B(s)) coordinated with PISLM approved by the RPSC, FAO will prepare budget revisions to maintain the budget updated in the financial management system of FAO and will provide this information to the RPSC to facilitate the planning and implementation of project activities.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

The overarching frameworks which have been used to guide the integration of gender equality, women's empowerment and the participation of indigenous peoples into the project is the Charter of Civil Society for the Caribbean Community adopted by the Conference of the Heads of Government of the Caribbean Community and Memorandum of Understanding (MOU) signed between the Caribbean Community (CARICOM) Secretariat and UN-Women to support the Community's work on gender and regional statistics. The MOU on Gender Equality and the Empowerment of Women includes collaboration in the provision of Caribbean-wide data, statistics and analysis on the implementation of the gender dimensions of the Sustainable Development Goals (SDGs) and the SIDS Accelerated Modalities of Action known as the SAMOA Pathway. These regional instruments are complemented by the National Policies of the respective countries on Gender Equity and Equality (e.g. Government of Dominica adopted a National Policy and Action Plan for Gender Equity and Equality in 2006 etc.), which provide further guidance on these issues.

In terms of this project specifically and how gender equality, women's empowerment and indigenous peoples are taken into account and mainstream into the project, the above mentioned frameworks will be used for mainstreaming gender into all areas of this project, as gender and social issues are important drivers and incentives for achieving global environmental benefits and therefore are a critical element for the success of the project. To facilitate this, at the national levels in the participating countries, the competent national organisation for the promotion of women's rights (e.g. Ministries/Bureaus of Women's Affairs etc.) and/or voluntary umbrella organization representing women's groups; Youth Affairs and Indigenous Peoples Affairs (as necessary) will be core representatives on the National Advisory Groups for this project. The representative from the Women's organisation will have as one of the principle functions to ensure that the Executing Agency work with communities and organizations, as may be necessary, to ensure gender equity in participation of women in project activities and to help ensure that the socioeconomic benefits resulting from project activities impact equally on the lives of woman. The representatives of Youth and Indigenous Peoples will perform similar functions.

All the training and demonstration events will ensure that there is an equitable participation of women, youth and indigenous peoples. All knowledge management activities will be gender mainstreamed, including the integration of gender dimensions into publications, for instance, presenting sex-disaggregated data, using gender sensitive language in publications and photos that show both women and men and avoid presenting stereotypes. Finally, the project will ensure that women, men, youth and indigenous peoples have access to and benefit from the knowledge created by the project.

A range of 'gender-responsive', 'gender-sensitive', and 'gender' indicator measures will be employed by the project to monitor gender-related changes over time. In this regard both quantitative and qualitative indicators will be used. In the case of the former the key quantitative measure which will be used is sex disaggregated statistical data, which will be applied to all field based activities. In addition a range of gender indicators will be employed to capture qualitative changes, including, inter alia, increases in women"s levels of empowerment as a consequence of the implementation of specific project activities, the measurements of gender equality (e.g. changes in the relations between men and women as a result of the implementation of specific project activities and/or the outcomes of a particular policy etc.). In addition, the project will use a number of indicators to measure the rights of indigenous peoples and there participation in the project. Indicators which will be used in this regard, includes, inter alia, structural indicators, which assess the legal and policy framework

attecting these rights; Process indicators, which measure the states' ongoing efforts to implement human right commitments through programmes, budget allocations, etc. and Outcome indicators, which capture the actual enjoyment of human rights participation by indigenous peoples and the effectiveness of their participation in project activities.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

One of the key objectives of the project will be to foster greater cooperation and collaboration with the private sector, both, nationally and regionally. An important aspect of this objective will be to engage the private sector more systematically in the work of the PISLM and in particularly in actions to address SLM and SSM issues. This will be achieved using a variety of approached, including, inter alia, strengthening linkages with national and regional private sector networks such as business and industry associations as well as the direct involvement of private sector representation in the planning mechanisms of the project (e.g. particiapation in the Regional Project Steering Committee and its Project Platforms (e.g. Project Platform on Climate Smart Agriculture, Sustainable Food Systems and Integrated Landscape Restoration etc.).

In addition, linkages will built with a number of Private Sector Funds (e.g. the Moringa, & Green, and the LDN fund etc.) which provide access to finance and technical assistance to Small and medium-sized enterprises (SMEs) in the Agricultural Sector. These funds which invest in profit-generating sustainable land management and restoration projects, provide possible sources of financing LD projects in Caribbean SIDS, led by the private sector. An integral part of the project, therefore, will be the design of bankable projects which could be considered by these private funds for financing. Resources will, therefore, be allocated to enable the PISLM to finance the development of proposal aimed at developing LD investment projects for possible financing by these Funds. The development of bankable projects will be based on the prior review and identification of opportunities with private sector participation. The possibility exists that some of these bankable projects could be the subject of private-public partnership in land planning and sustainable management in target watersheds (taking into account land potential, legitimate demands for use of the land, socioeconomic and environmental benefits and LDN targets). In addition, there is a general consensus that the successful implementation of the Regional LDN Strategy requires the cooperation with an investment of the private sector. This being the case a strategic objective of the project .

5. Risks

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

(ii) *Risk:* The participating countries are prone to Natural Disasters, including, inter alia, hurricanes and other tropical systems, flooding, as well as volcanoes and earthquakes, which if occur can pose a risk to achievement of the project outputs

Risk Level: Medium:

Mitigation Measure: A major aspect of the project is resilience building against natural disasters and climate change through the promotion of Climate Smart Agriculture and Drought Risk Management. An important focus of the proposed project is to mitigate the risks posed by climate change related natural disasters by strengthening the resilience of ecosystems through the adoption of environmentally sound management practices. In addition, the project makes provision for the training of resource users and managers, alike, including in-field training and demonstration which will prepare them to take the necessary proactive actions to withstand the shocks associated with meteorological events.

(ii) Active Participation of Indigenous Peoples

Risk Level: Low

Mitigation Measure: Historically, indigenous peoples have not been sufficiently integrated into regional projects carried out in the region. To a large extent, projects targeting indigenous peoples have been promoted as standalone projects. This project makes specific provision for activities to be undertaken in areas under the jurisdiction of indigenous peoples. Consequently, indigenous peoples and their representatives will participate in the decision making instructional structures (e.g. National Advisory Groups etc.) designed for the implementation of the project.

(iii) Farmers resistant to transitioning to the adoption of climate-smart tools, methods and technologies and sustainable livelihood practices

Risk Level: Low

Mitigation Measure: Working in conjunction with the resources users and managers alike, the project will not only introduce these practices theoretically but will also engage them in in-field application and training. A key component of this exercise will be the establishment of marketing linkages to ensure that the products produced are sold, thus given the farmers' livelihood sustainability. The project will is designed to develop sustainable agricultural practices that generate economic benefits for local farmers, as well as forest restoration programmes that employ local residents in collecting, cultivating, planting and monitoring of trees. In addition, information will be readily provided to stakeholder to allow them to make informed decisions, including the availability of targeted awareness materials...

(iv) Slow pace of Consideration of the Outputs by the relevant Caribbean Community Organs

Risk Level: Low

Mitigation Measure: A key dimension of the sustainability strategy for this project is the integration of the Outputs in the Caribbean Community Policy Frameworks which informs the actions of the Member States of the Community. The main Organ through which this process must be initiated is through a Special Meeting of COTED [Environment]. The risk is that the COTED [Environment] has not met for the past two years, notwithstanding the need to do so. The PISLM will, therefore, be proactive in working through the PISLM High Level Ministerial Body to ensure that a COTED [Environment] meetings are convened as appropriate and necessary.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

1. This is a regional long-term LDN program (10 years, three phases: 2019-2021, 2022-2025, 2026--2030) addressing the countries' commitments and voluntary targets set under the UNCCD and this GEF project has been designed to support the first phase of the LDN program. Therefore, coordination, as a foundational principle, at multiple levels, is a sine qua non. With respect to coordination with other relevant GEF-financed projects, there are a number of them at the national level in the respective participating countries on which this project will build.

2. The FAO/GEF global project *Decision support for mainstreaming and scaling out Sustainable land management (2016-2019),* links through a strategic framework and decision making process at national, subnational and landscape levels the activities of land assessment, participatory land planning, integrated landscape management and monitoring impacts on livelihoods and ecosystem services. The project has generated a wealth of relevant tools and experiences in scaling up and mainstreaming SLM in the Latin America and Caribbean region, notably in Argentina, Colombia, Ecuador and Panama and supported by lessons learning exchange with Cuba, which was involved in the earlier Land degradation assesment in Drylands (LADA) project that designed the set of tools and ethods for LD and SLM assessment at various scales.

3. Most of the countries (Dominica, Guyana, Haiti, Jamaica, St. Lucia, Saint Vincent and the Grenadines and Suriname) in this project are participating in the *GEF-IUCN Land Degradation Neutrality-Target Setting Process*. At the end of the LDN-TSP, participating countries will have developed a set of targets, based on baseline data, which they will track until 2030 (SDG 15 commitment), including indicators on Land Cover, Land Productivity (metric: net primary productivity), and Carbon Stocks above and below ground (metric: SOC). The proposed project builds upon this exercise and will also contribute additional data on issues such as soils and soil carbon, which are currently in need of being updated.

4. In addition, several past projects have established data and/or built capacities that will benefit the proposed project. The *GEF-UNDP Sustainable Land Management project* (2008-2012) generated lessons for generating significant community support and ownership of SLM practices through community involvement and education on SLM issues, which will be used to guide the implementation of field-based activities under Components 1 and 2 of the proposed project. The GEF-funded *Special Program on Adaptation to Climate Change* (SPACC) (2007-2011) generated maps of the upper elevation areas of Dominica that can assist the proposed project in identifying sites for agricultural activities and forest restoration.

5. This project is also well placed to develop synergies with the GEF SIDS projects currently under development, in particular, the *GEF ISLANDS programme* which is being developed by the GEF in collaboration with UNEP and FAO. which has the objectives of (i) to prevent the buildup of materials and chemicals in the environment that contain POPS and Mercury and other harmful chemicals in SIDS and (ii) to manage and dispose of existing harmful

chemicals and materials in SIDS. In this regard, potential synergies could be developed with Components 1, 2, 4 and 5 of SOILCARE . The PISLM stands ready to work with the project proponents in developing these synergies.

6. In the case of Jamaica, the GEF financed project on the "*Conserving Biodiversity and Reducing Land Degradation Using an Integrated Landscape Approach"* which has the objective to To enhance conservation of biodiversity and ecosystem services through mainstreaming of biodiversity into planning policies and practices into Jamaica's productive landscapes and key sectors is relevant. The long term solution of this project is to have in place national integrated landscape-level planning and management framework, as well as sectoral policies and guidelines that mainstream considerations for conservation of biodiversity, maintenance of ecosystem services and sustainable land management. This entails the strengthening of institutional capacity for informed land-use planning and decision-making, as well as biodiversity and ecosystem services that are mainstreamed into strengthened multi-sectoral policies, regulations and guidelines. It also makes provision for strengthening the country capacity to operationalize land use planning and practices with biodiversity mainstreamed will further support sustainability of the mixed-use landscape for biodiversity and ecosystem services and sustainable livelihoods. This current intervention will build on the results generated from this project.

7. This current project will also benefits from synergies with the GEF funded project entitled "Conserving Biodiversity and Reducing Land Degradation Using a Ridge-to-Reef Approach" being implemented in Saint Vincent and the Grenadines, which has as its objective to enhance biodiversity conservation and ecosystem services conservation through an expanded and strengthened PA system and with SLM measures integrated in a ridge to reef approach. The long-term solution of this project is to reduce forest loss and land degradation and the threats to biodiversity and ecosystem services. This will be achieved, in part, by incorporating sustainable land use and biodiversity conservation into a strengthened institutional framework for protected areas, ecosystem conservation and INRM. This is supported by integrated governance at landscape level including an enhanced operationalized PA estate and a strengthened policy, legal, regulatory and planning framework. It will also incorporated into SLM climate smart agricultural practices in an INRM ridge-to-reef setting that help ensure long term sustainability of agricultural production at the community and producer level. The project will also support a strengthened institution capacity for SLM, CSA and biodiversity conservation, supported by knowledge management, to ensure that structures supported by this project are underpinned by institutions and practioners that have information and capacities to take guided decision and implement appropriate land-uses decisions.

8. In the case of Haiti, the current project will derived synergies from a number of other GEF interventions, in particular, the projects entitled *"Sustainable Management of Wooded Production Landscapes for Biodiversity Conservation in the Massif la Selle and Massif du Nordand Grande Riviere du Nord with globally significant biodiversity"* and "*Resilient Productive Landscapes in Haiti."* In the case of the former, the project promotes a landscape approach to the management of mountain massifs of high global environmental value, leading to a situation in which: Mountain massifs are composed of stable mosaics of land units (including tree-based cash crop systems, tree-rich annual cropping and fallow areas, integrated functionally with remnants of natural ecosystems both within and outside PAs), favouring the presence and ecological viability of species of high global conservation value, protecting the productive capacity of natural resources and promoting the generation of ecosystem services; and local people receive benefits in terms of the sustainability and viability of their farming and livelihood support systems as a result of the protection of natural resources on which these depend, and their participation in value chains that reward production systems that generate environmental benefits. In the case of the latter project, it on the improvement and adoption of resilience-enhancing agricultural and landscape management practices in selected sub-watersheds.

9. The GEF project entitled "*Integrated Ecosystem Management and Restoration of Forests on the South East Coast of St Lucia"* which has the objective of enabling sustainable economic development of the South East Coast by maintaining healthy ecosystems, sustainable livelihoods, and securing global environmental benefits is another intervention in which synergies will be established with the current project. The main problem which the South East Coast project seeks to address is the lack of integrated protections and sustainable management of ecosystems (forests, mangroves, seagrass beds) in the South East coastal areas. These ecosystems provide a number of ecosystem services, including, inter alia, livelihoods, buffers against climate change and extreme events, and sources of economic growth, which without sound management, could result in the reduction of economic development of the region, and could result in the irreversible degradation of ecological services, which in turn will undermine efforts to achieve growth and could lead to a gradual impoverishment of local. The lessons learnt from the South East Coast project could provide valuable sessons on which the current project could benefit from in its implementation. Synergies will also be built between the current project and the Belize-GEF project entitled *"Integrated management of production landscapes to deliver multiple global environmental benefits,"*which focuses on mainstreaming conservation and sustainable use of biodiversity into production landscapes in the Belize River watershed as well as enabling policy, institutional, and financial environment that is conducive to the delivery of multiple GEBs through the sustainable management of production landscapes.

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10. As noted in Output 1.2.2 PISLM will work closely with the Caribbean Community Secretariat through its Sustainable Development Directorate to ensure complementarity and integration of the concepts, Outcomes and outputs which this project promotes. It is anticipated that the PISLM High Level Ministerial Group will play a leading role in this endeavor by providing the policy links with COTED [Environment] and COTED [Agricultural].

11. Enhanced regional cooperation among Caribbean SIDS for promoting integrated LDN and Climate adaptation strategies will be ensured through the new SIDS-SIDS Cooperation Mechanism on LDN/SLM and CCA (see output 1.2.3). Inter alia this will facilitate access to latest climate change analysis including impacts of climate change to date and models and scenarios of expected trends and potential impacts as a basis for prioritizing interventions. It will also facilitate access to results from evaluations of previous projects including policy development, capacity building and implementation mechanisms so as to learn from past experiences (successes and failures).

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Project Management

12. In terms of Project Management, a Structure (See Project Management Structure) has been designed that takes into consideration the multiple reporting structures, which the project must span, including, inter alia, that of the GEF, the FAO, the PISLM, the Caribbean Community, regional participating organisations which will play leading roles in executing various aspects of the project and last, but not least, the participating countries, their respective Ministries and Department and a wide cross-section of stakeholders at the national level. The key elements of the Project Management Structure are outlined in Figure entitled "SOILCARE Project Management Structure."

13. At the core of the Project Management is the PISLM as the Executing Agency, which will have responsibility for the overall day to day management for Project Implementation. Technical Assistance provided by regional institutions (e.g. University of the West Indies, CARDI etc. and the Implementing Agency FAO) to the participating countries will be coordinated through the PISLM. Policy oversight of the project will be provided by the PISLM High Level Ministerial Body, which will also have the responsibility of being the conduit by which the policy outputs are channelled to the Decision Making Organs (e.g. the Conference of the Heads of Government, COTED etc.) of the Caribbean Community.

14. A Regional Project Steering Committee (RPSC) will be established to give Technical Oversight to Project Implementation. The RPSC will comprise of representation from each of the participating countries, the IA (FAO) as well as key strategic partners, such as the University of the West Indies, the Caribbean Community Secretariat Sustainable Development Directorate, CARDI, IICA, etc. The IA will be an Ex-officio of the RPSC, whereas the PISLM will serve as the Secretary to the RPSC. Given the wide scope of the Project, the RPSC will have a number of Standing Project Platforms, namely on:

- Soils which will oversee the updating of Soils and Soil Carbon. The Regional Soil Support Group established under Component 1 will serve as the RPSC Sub-Committee on Soils;
- Climate Smart Agriculture, Sustainable Foods Systems and Integrated Landscape Restoration;
- Partnership Development, Financing and Resource Mobilisation. This Working Group will work closely with the Private Sector and its Organisations and Multilateral Financial Institutions (e.g. (Caribbean Development Bank, Development Banks of Latin America (CAF); IADB etc.).
- Regional Cooperation and Public Education whose function is to ensure that the relevant outputs are fed into the Decision Making Organs of the Caribbean Community and the necessary actions are taken to enhance Public Education about SLM and LDN.

15. At the National Level, each of the participating countries will be required to establish a National Inter-Agency Advisory Group (NI-AAG) whose function is to assist the National Focal Point in providing oversite of the activities being located nationally as well as ensuring maximum participation in regional activities. It will be mandatory for the National Inter-Agency Advisory Group to have representation from Women's, Youth, Indigenous Peoples and the Private Sector (as appropriate) Organisations.

16. The overall responsibility for coordinating the execution of the regional interventions rest with the PISLM, in its capacity as Executing Agency, with the assistance of the FAO, in its capacity as the Implementing Agency. To the extent practicable and necessary, the experience and expertise of regional and national organisations, as well as international organisations, will be solicited by the PISLM to execute elements of the regional interventions, following

agreements with the countries and the Steering Committee. FAO will carry out technical backstopping to the project implementation. FAO will appoint a lead technical officer (LTO) and other technical officers including the sub-regional GEF Task Manager for the Caribbean that will support the project implementation and monitoring, including work plan and budget revisions in close coordination and collaboration with PISLM as EA.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

All the participating countries in the project have ratified the UNCCD as follows: Belize: Ratified the Convention on 23 July 1998 and produced its 1st National Report in 2000; Dominica: Ratified 12 August 1997 NAP 2004 (not endorsed), 3rd national report 2006; Grenada: Ratified 28 May 1997 NAP 2006; Guyana: Ratified26 June 1997 NAP 2006; Ratified 25 September 1996, NAP 2015; Ratified07 February 1997; St. Vincent and the Grenadines: Ratified16 March 1998. This project is also consistent with the plans and programmes formulated by the participating countries under the various Convention to which they are party.

With respect to the UNCCD, specifically, the threats of land degradation are being addressed through the countries aligned National Action Plans towards the 2020 Strategy of the Convention to Combat Desertification (UNCCD) as well as the recent national target setting process towards Land degradation neutrality. Land degradation is also directly interrelated with biodiversity loss and climate change the threats of which are being addressed through the National Adaptation Plans (NAPAs) and nationally determined contributions (NDCs) towards the Paris Agreement under the Climate Change Convention (UNFCCC), the National Biodiversity Strategy and Action Plans (NBSAPs) and commitments to the Aichi targets of the Convention on Biodiversity.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

1. Knowledge management is an important element of this project. Under Component 1, the main task will be the updating of soil data of the participating countries as well as the collection of soil carbon data. These data will form the basis of the Caribbean Soil Information System and will be geospatially referenced and harmonized with the SISLAC and GLOSIS concept and federated system by which countries will be supported in devellioping their own national soil information systems and capacities. These data will not only enhance the region's knowledge about this important resource but will also be available worldwide on the basis of open access, through the Global Soil Partnership. The Information System will be complemented by a LDN Knowledge Hub which will be charged with the responsibility of collecting and collating information on LD in Caribbean SIDS, packaging that information in a manner that can be used by resources users, managers and policy makers, alike, and disseminating in an efficient and effective manner. One of the major outputs of the Knowledge Hub will be the preparation of the Caribbean Soil and LD Outlook 2030, which will be produced periodically over the next decade.

2. An important dimension of the knowledge management embedded in this project is the capture of best practices and the transfer of knowledge, skills and know how to resources users, particularly, small farmers and indigenous peoples. The transfer of knowledge will take many forms, including, inter alia, in-field training for farmers and foresters, the integration of the project outputs into regional training institutions, in particular, the University of the West Indies; equipping extension services with the tools and knowledge to work with farmers in the transitioning processes to Climate Smart Agriculture. In addition, regional cooperation mechanism (e.g. SIDS-SIDS cooperation etc.) will be used as a means of enhancing the sharing of knowledge between SIDS and regionally. A critical aspect of the knowledge management aspects of this project will be the Institutionalisation of Training; taking a long term view of the capacity needs of the region. In this regard, resources will be allocated to facilitate the institutionalisation of the training.

3. Climate resilient SLM /SSM practices and land use/production systems and integrated landscape management approaches would be shared and communicated through the Knowledge Hub and exchange of experiences would be facilitated through a consutative platform across actors from local to national and subregional levels (could expand). This process cold be supported through exchange visits between projects, national and subregional workshops, materials and curricula development for capacity building and wider diffusion through school and higher education and the elaboration of regional and national strategic plans based on the analisis for example of:

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· Policy, regulations and incentive measures for promoting climate adaptation (reducing risks from deforestation, erosion on steep slopes, and other degradation processes and enhancing renewable energy supply). Evidence from participatory monitoring of impacts /benefits in terms of maintained or improved ecosystem services for reliable food production, resilient farm-livelihoods (adaptation) and mitigation co-benefits (reduced emissions) and

· Governance mechanisms and stakeholder processes for enhancing the inclusion of women, indigenous peoples, youth and other marginalised groups and their benefits from enhanced SLM/SSM and CCA,

· and so forth Mid and terminal project evaluations will assess whether the project is on track in terms of expected national, subregional results and global environmental benefits, as well as cost effectiveness and sustainability and the mid term evaluation will reorient the process as needed to ensure that expected results will be achieved, while the terminal evaluation will review the proposals for the projected phase II . This should include a review of the knowledge management and communication strategies.

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4. In selected landscapes where activities will be conducted on the ground (supported by GEF funds) the farmer to farmer learning by doing and exchange process through the farmer field school (FFS) approach and networking across FFS groups will help the farming population and wider rural communities in identifying and validating solutions to degradation and climate related problems and barriers at farm and territorial/landscape levels as a basis for enhancing livelihoods and reducing risks.

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Perceival Cho	Chief Executive Officer	Ministry of Fisheries, Forestry, Environment and Sustainable Development, Belize	5/6/2019
Vincent Adams	Executive Director	Environmental Protection Agency, Guyana	5/3/2019
Titus Antoine	GEF OFP for Grenada	Ministry of Economic Development, Planning, Trade, Cooperatives and International Business, Grenada	5/7/2019
Moise Jean-Pierre	GEF OFP for Haiti	Ministry of Environment, Haiti	5/7/2019
Caroline Eugene	Permanent Secretary, GEF OFP	Ministry of Education, Innovation, Gender Relations and Sustainable Development, Saint Lucia	5/2/2019
Gillian Guthrie	Senior Director	Ministry of Economic Growth and Job Creation, Jamaica	5/7/2019
Mrs. Diann Black Layne	Chief Environment Officer, OFP	Ministry of Health, Wellness and Environment, Antigua and Barbuda	5/3/2019

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place