GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL SIZE PROJECT
TYPE OF TRUST FUND: GEFTRUST

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PART I: PROJECT INFORMATION

Project Title:	Conserving biodiversity and reducing land degradation using a Ridge-to-Reef approach		
Country:	St Vincent and the Grenadines	GEF Project ID:[1]	9580
GEF Agency:	UNDP	GEF Agency Project ID:	5862
Other Executing Partner:	Ministry of Agriculture, Rural Transformation, Forestry, Fisheries and Industry	Submission Date:	November 21, 2016
GEF Focal Area:	Multi-Focal Area	Project Duration (Months)	54
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐	Corporate Program: SGP ☐	
Name of parent program:	NA	Agency Fee ($)	356,925

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	**Trust Fund**	**(in $)**	
		GEF Project Financing	**Co-financing**
BD – 1.1. Improving the financial sustainability and effective management of the national ecological infrastructure	GEFTF	154,225	419,600
BD – 1.2: Improve sustainability of protected area systems, Program 2: Nature's Last Stand: Expanding the Reach of the Global Protected Area Estate	GEFTF	1,961,024	5,454,800
LD – 3: Reduce pressures on natural resources by managing competing, Program 4: Scaling-up sustainable land management through the Landscape Approach.	GEFTF	1,641,853	4,615,600
Total Project Cost		**3,757,102**	**10,490,000**

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project 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.

Project Component	**Type**	**Project Outcomes**	**Project Outputs**	**Trust Fund**	**(in $)**	
					GEF Project Financing	**Co-financing**
1. Strengthened institutional framework for Protected Areas, Ecosystem Conservation and Sustainable Land Use	TA	Enhanced multi-departmental access to centralized database system, incorporating biodiversity (BD), ecosystem services, land use / cover, protected areas, climate and soil data, to support natural resource conservation and land use decision making. Institutional frameworks and human resource capacities strengthened for the operationalization of the Forest Policy, PA Policy and PA system plan as well as for the implementation of related laws and regulations, resulting in improved biodiversity and ecosystem conservation and reduced forest loss and land degradation. *As measured by UNDP capacity*	**1.1 Natural resources information management system harmonized for** multi-departmental use through development and implementation of a centralized geo-referenced Biodiversity and Land Use Database to support existing and new baseline data, outputs of ecological assessment and inventories (Comp.2); BD and SLM Tracking Tool and monitoring programmes; Multi-agency ability to feed into and access data from database strengthened with equipment (GIS terminals) and training. National Biodiversity Center supported. **1.2 Strengthened policy, legal and regulatory framework for INRM (ridge to reef)** Forest Policy incorporating PA policy developed through national consultative process; PA and natural resource conservation legislation and regulations updated to cover gaps and overlaps improving existing wildlife, forestry and fisheries Acts and national EIA guidelines and to support new ones for the new PAs etc. **1.3 Strengthened coordination and planning framework** for INRM National Parks and Protected Areas System Plan revised to achieve Caribbean Challenge Initiative (CCI) targets. Implementation of National Physical Development	GEF TF	894,548 BD1.1: 154,225 BD 1.2: 507,741 LD: 232,582	2,497,619

[1] Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

		scorecard increase against baseline values (TBD. in PPG) Increased capacities for financial sustainability of PA measured by *An increase in rating of the GEF TT Financial scorecard (TBD in PPG)*	Plan that addresses SLM and BD supported (local area, integrated watershed management and ICZM plans); Inter-agency coordination mechanism strengthened and implementation supported (i.e. NEAB) and MoUs between National Parks and Beach Authority and agencies (incl. Forestry and Fisheries jointly) finalized and operationalized. **1.4 Enhanced financial sustainability framework for Protected Areas System,** including developing bylaws to operationalize the National Conservation Trust Fund, identifying and implementing additional finance mechanisms for Trust Fund capitalization (i.e. revenue generating PA user fee system, cruise ship fees, airport fees, voluntary hotel / dive shop contributions, PES, other). **1.5 Strengthened Institutional Capacities for INRM (PA &SLM) (**NPA, Forestry, Fisheries, Physical Planning, Coast Guard, Agriculture, Extension) through training in integrated land use planning / resource management environmental management and ICZM (33 persons, incl. land use planning certificate training); CSA and SLM techniques (20), biodiversity conservation and field assessment / inventory ~~including herbarium techniques~~ (15 persons); PA planning and management (10 persons), GIS (8 persons) and drone use and data collection (Forestry, 3 persons).			
2. Establishment and effective management of new and existing PAs	TA	Operational terrestrial and marine protected area estate expanded with improved management, monitoring and strengthened protection, as measured by METT scores (baseline TBD during PPG phase). Increased PA estate with globally vulnerable or irreplaceability values under protection indicated by: **1)** Additional 12,100 ha under protection forms contiguous 13,100 ha biological corridor that includes 7 KBAs and 30% of SVG's land area with 4 threatened endemics[2] **2**) MPA estate expanded by 1600 ha[3], including protection of undocumented marine biodiversity and key nesting sites of endangered turtle. **3)** Expanding PA estate by, at minimum, 100 ha that protects sole known habitat of Critically Endangered Union Island Gecko *Gonatodes daudini.* and additional buffer zone and newly identified / potential habitat. BD of known globally significance in PA estate are documented, protected, with	**2.1 Central Mountain Range Forest Reserve[4] expanded, legally gazetted, demarcated and operationalized** Thousand (1000) ft. (305 m) contour extension areas confirmed, survey completed using drone technology; boundaries demarcated and gazetted. BD/ ecological assessment to inform a participatory developed management plan (including IAS management); multi-sectoral management committee in place; Species Recovery and Action Plans for threatened endemics. Equipment and training to operationalize Reserve and implement key plans **2.2 Leeward Coast Marine Managed Area legally established and operational** MMA surveyed, demarcated and legally established, with management and zoning plan (linked to existing South Coast MPA) based on comprehensive stakeholder consultation and baseline data (reef and fish assessment, water quality, pollution IAS - i.e. lionfish). Fisheries management plan developed and implemented with monitoring programmes. Multi-stakeholder committee and pilot community co-management arrangements (supported by MOUs) in place along with sustainable finance mechanisms (1.4) and site operationalization. **2.3 Chatham Bay National Park is legally gazetted, demarcated and operationalized**. Area for gazette based on species census and habitat identification conducted. Site surveyed, demarcated with signage, with enhanced enforcement. Species Recovery and Action Plan developed and implementation initiated. Site management by Forestry personnel and supported by local stakeholder and NGO engagement, with training provided. Site / species protection / enforcement enhanced, with equipment and training. Financial sustainability mechanism explored (1.4 above).	GEF TF	1,252,367 BD 1.2: 1,252,367	3,510,081

[2] Four (4) globally threatened endemics: *Amazona guildingii, Chironius vincenti, Pristimantis shrevei, Catharopeza bishop.*

[3] Based on the nearshore area (nearshore shelf) that extends 800m distance from shore and considering an approximate 20 Km coastline. This can be further specified during PPG phases based on further research on biodiversity and GIS data and stakeholder consultation and needs.

[4] Critical Ecosystem Partnership Fund (CEPF) refers to this reserve as Central Mountain Range Corridor.

		management and monitoring, including for newly discovered species of national and global significance, including at least (5) Species Recovery and Action Plans developed with implementation initiated				
3. Integrated watershed management measures in R2R setting to reduce threats to upstream PA and downstream MPA/MMA	INV & TA	SLM and Climate Smart Agriculture (CSA) techniques and technologies implemented by local communities in 3 upper watersheds covering 1200 ha resulting in threats to ecosystem functions (encroachment, pollution, sedimentation) are reduced in landscapes surrounding the Central Mountain Forest Reserve and downstream coastal and marine sites, *Indicated by (1) 15% reduction in sediment, and (2) reduced levels of soil erosion in steep upland areas*[5] Validated SLM practices support ridge to reef management process and provides inputs to national level INRM strategy and regulation Increased diversification of income in households disaggregated by gender (TBD in PPG)	**3.1 Improved SLM practices in 3 upper watershed landscapes in and surrounding the Central Mountain Forest Reserve,** INRM and R2R interventions in place, CSA production with native forest restoration on steep slopes (from fly/mobile nurseries) and sustainable rangeland management. Watershed management plans developed with inter-sectoral management committee in place and community engagement supported with MOUs. **3.2 Demonstration plots and field schools on SLM and CSA.** Field based demonstration (3 model farms) serve as national learning centers with CSA best practices and adaptive techniques promoted, and as a business model for replication. Demonstration of protective structures (shade houses), climate resilient crops, irrigation / water management, organic fertilizer, and production techniques for different agricultural climactic zones supported by trained farmers and Agriculture Extension officers, with community outreach. At least 150 farmers trained. **3.4 Alternative livelihood and small businesses supported** through capacity building and processing of CSA products (including women, men and youth) and enhancing existing and new alternative livelihoods (i.e. beekeeping). At least 4 agroprocessing and 4 alternative livelihood businesses supported through technical assistance in production, product development for export compliance, and marketing of CSA products. Capacity development further strengthens farmers, farmer organizations, and small post production / alternative livelihood small business.	GEF TF	1,252,367 LD: 1,252,367	3,510,080
4. Knowledge management for SLM, CSA and biodiversity conservation	TA	Knowledge and experiences captured, shared and widespread adoption of CSA, SLM and biodiversity conservation practices encouraged. Monitoring and evaluation of project implementation, outcomes and outputs ensures project effectively reaches outlined goals and objectives.	**4.1 Technical knowledge captures experiences and lessons learned** disseminated via technical and training reports / manuals / guides, lessons learned notes, based on experience codified (CSA, SLM, biodiversity assessment, land use mapping, other), and incorporate institutional strengthening and capacity building initiatives, for continued institutional and private sector learning and activity implementation. **4.2. Media products promote outreach and increased public awareness / environmental education** of SLM, CSA and biodiversity conservation, disseminated through videos, photo essays, fact sheets, web platform, television, exchange site visits by communities and producers involved, also dissemination at regional events. **4.3. Monitoring and evaluation of project implementation** including through periodic field visits, tracking tool assessment, mid-term and final evaluations.	GEF TF	178,910 BD 1.2: 100,190 LD: 78,720	472,696
				Sub-Total		3,578,192	9,990,476
				Project Management Cost (BD: 100,726, LD: 78,184)		178,910	499,524
				Total Project Costs		3,757,102	10,490,000

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

[5] Baseline and target values to be confirmed during PPG phase.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
Recipient Government	Ministry of Agriculture, Rural Transformation, Forestry, Fisheries and Industry – Forestry Department	Grant	1,350,000
Recipient Government	Ministry of Agriculture, Rural Transformation, Forestry, Fisheries and Industry – Fisheries Division	Grant	2,700,000
Recipient Government	Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour	Grant	5,900,000
Recipient Government	Ministry of Agriculture, Rural Transformation, Forestry, Fisheries and Industry – Forestry Department	In-kind	290,000
Donor Agency	UNDP	Grant	250,000
Total Co-financing			10,490,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee (b	Total c)=a+b
UNDP	GEF TF	St. Vincent and the Grenadines	BD	n/a	2,115,249	200,949	2,316,198
UNDP	GEF TF	St. Vincent and the Grenadines	LD	n/a	1,641,853	155,976	1,797,829
Total GEF Resources					**3,757,102**	**356,925**	**4,114,027**

E. PROJECT PREPARATION GRANT (PPG)

Is Project Preparation Grant requested? Yes **X** No ☐ If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: $ 130,000					PPG Agency Fee: 12,350		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in $)		
					PPG (a)	**Agency Fee** (b)	**Total** c = a + b
UNDP	GEF TF	St. Vincent and the Grenadines	BD	n/a	73,240	6,958	80,198
UNDP	GEF TF	St. Vincent and the Grenadines	LD	n/a	56,760	5,392	62,152
Total PPG Amount					**130,000**	**12,350**	**142,350**

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	12,200 ha terrestrial, 1600 ha marine
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	1200 ha

PART II: PROJECT JUSTIFICATION

A. PROJECT DESCRIPTION

1) Global environmental and/or adaptation problems, root causes and barriers that need to be addressed:

Country Overview and Context:

1. St. Vincent and the Grenadines is a multiple island nation consisting of 32 Islands and Cays. The mainland, the largest island at 34,462 ha and 105 km of coastline, is volcanic with rugged mountainous topography and short transitions areas between terrestrial and marine ecosystems. Within a distance of only approx. 6 km, this SIDS extends in elevation from sea level to the highest point of 1234 m (La Soufriere, an active volcano that last erupted in 1979) in the north, and to 932 m (Mt. Brisbane) in the south. A central mountain range (much of which is inaccessible due to steep slopes) effectively divides the island into two distinct sections; the leeward side which is characterized by steep ridges and deep narrow valleys that extend down to the sheltered coast, and the windward side which is characterized by a gentler relief with cliffs which are less steep and with a coastline shaped by the erosive power of waves influenced by the North East Trade Winds. The other islands (collectively called the Grenadines) extend over 72 km to the southwest of St. Vincent and are low-lying with protected white sand beaches, the highest points is 305 m (Mt. Taboi, Union Island). The Grenadines total land area is approx. 389 km^2 and includes 8 inhabited islands (St. Vincent, Bequia, Mustique, Union, Canouan, Prune/Palm, Mayreau and Petit St. Vincent).

2. Biodiversity significance: SVG has a diverse natural capital of both terrestrial and marine species, with numerous species of global significance. St Vincent's approximate 12,000 ha of natural forest, concentrated in the central mountain range, includes elfin woodland, montane forest, palm brake and seasonal evergreen forest (rainforest) that descend to lowland tropical dry forests (regionally threatened) and mangrove. Of the total forested area, approx. 70% is natural forest, 25% planted forest and 5% agroforestry. St Vincent has a diverse biodiversity with multiple endemics, and consists of approximately 1,150 species of flowering plants (15 endemic), 163 species of ferns (4 endemic), 7 species of amphibians (1 endemic), over 18 species of reptiles (7 endemic) including 4 endangered sea turtles, over 150 species of birds (2 endemic, 95 breeding, 14 restricted range), and 22 species of mammals (2 endemic) including 12 species of bats, 25 species of freshwater fish, crayfish and crabs, 25 species of diplopods, 220 species of arachnids, over 2000 species of insects, 35 terrestrial crustaceans, 800 marine and 75 terrestrial species of mollusks. Five hundred (500) marine species have been identified off SVG, including approximately 450 species of fin-fish, 12 species of whales and dolphins, 9 species of gastropods, 11 seaweeds and 30 different coral species. Within the central mountain range there are numerous known species of global significance: (1) endangered endemic St. Vincent Parrot (*Amazona guildingii*), also SVG's national bird, confined to mature rainforest between 125 m and 1,000 m, mostly in the upper watersheds of the Buccament, Cumberland, Colonarie, Congo–Jennings–Perseverance and Richmond valleys (occasional birds forage in nearby farmland and plantations), (2) the Critically Endangered St Vincent Black Snake *Chironius vincenti*; (3) endangered endemic Tree Frog *Eleutherodactylus shrevei*; (4) Whistling warbler *Catharopeza bishop* (found primarily within the Colonarie and Perseverance valleys and at Richmond peak); (5) twelve (12) restricted bird species; and (6) two 2 endemic lizards (*Anolis griseus* and *A. vincentianai).* The other 2 endemic lizards are found in the Grenadines, the critically endangered Grenadines Clawed Gecko *Gonatodes daudini* (a single island endemic known to only c. 100 ha on Union Island) and *Sphaerodactylus kirbyi* (endemic to Bequia and Mustique). There are numerous Grenada Bank (Grenada, Grenadine Islands and St Vincent) endemics as well as four species of endangered sea turtles nest on SVG. A new native species of big-eared bat (genus: *Micronycteris*) was recently described (2010) on St Vincent. SVG also harbors several species that are endemic to the Grenada Bank (Grenada to the Grenadine Islands to St Vincent): Grenada Tree boa (*Corallus grenadensis*), Grenada Tree Anole (*Anolis richardii*), Grenada Bush Anole (*Anolis aeneus*), Burrowing snake (*Typhlopsta symicris)*, and Windward Clelia "Cribo" (*Celia Celia*), possibly extinct.

3. Socioeconomic context: Of the total estimated SVG population of 109,118, approx. 92.5% of which live on mainland St. Vincent. With its mountainous terrain, most of the population is concentrated within approx.1 km of the coastline, 46% in and around Kingstown. SVG has an annual per capita income of US$6,568 (2006) with an average annual rate of natural increase is 1.31%, a birth rate of 18.3/1000, and infant mortality rate of 15.2/1000. A 2012 poverty assessment defines 42% of the population falling below the poverty line of which 30.2% were poor, with a high dependence on environmental services provided by the island's natural resources. Both mainstays of SVG's economy rest on environmental services, with economic diversification (SVG policy) showing a shift from one heavily reliant on trade in goods (primarily agriculture) to one based on services (tourism). The agricultural contribution to GDP steadily declined with this diversification, from 21.2% in 1990 to 6.17% in 2012. An increased livelihood reliance on fisheries led the sector's contribution to GDP to increase steadily, rising from EC$6,879,982 (2003) to EC$10,165,671 (2007), a resource also dependent on reduced coastal degradation from unsustainable upland agriculture and development practices. SVG has an open economy that is now mainly driven by the service sector, with a 1.64% growth from 2012 to 2013, and total Gross Domestic Product (GDP) amounting to EC$1,676 billion[6]. Recent natural disasters have resulted in huge economic costs and shift from investment activities to recovery, including: 2010 Hurricane Tomas (EC$150 million); 2011 floods (EC$100 million); 2013 floods (EC$330 million). These natural disasters caused significant loss of lives, infrastructure, livestock and agricultural commodities.

4. Ecosystem Functions and Uses**:** Natural forests cover approximately 29-32% of SVG, concentrated in the central mountain areas and include both primary and secondary re-growth, some agroforestry, with the exception of some inaccessible isolated areas on steep mountain slopes in the central forest range that have likely remained as primary forest. Years of hurricanes, deforestation, replanting have led to secondary forests, forest fragments and cultivations found today. These forests are important in the landscape as they reduce the amount of edge effect around forested PAs and minimize the amount of agricultural land (and therefore the setting of fires and other impacts) directly adjacent to PA. In addition, they provide habitat for biodiversity and connectivity between forests. In addition to water, SVG's forests provide control of soil erosion and enhancement of soil productivity, various economic activities, and carbon sequestration. Forests continue to be important for the livelihoods of many rural communities that engage in hunting, some timber use, recreation / tourism activities, animal grazing, and use non-timber forest products (NTFPs). However, agriculture and development have and continue to contribute to deforestation and landscape fragmentation, with forest loss estimated at 3-5% annually[7].

5. Agriculture**:** Currently, only approx. 7,200 ha of land is used for agriculture production, representing 18.6% of the total land area of St. Vincent and the Grenadines. Though agriculture declined significantly over the last decade with restrictive trade regimes (loss of the preferential trading status with the EU for bananas), increasing competition from other agriculture producers, and pest infestations (e.g. pink mealy bug), unsustainable farming practices continue to takes place on SVG's steep mountain slopes.

[6] SVG Statistical Office - Central Planning Division.
[7] Ministry of Health and Environmental (2010).

Of particular significance is the decline in banana exports to the UK from 42,074 metric tons in 2000 (EC$48.1 million) to an estimated 5,456 metric tons (EC$6.46 million) in 2010. Major contributing domestic factors included severe droughts and pest outbreaks (Moko disease, Yellow Sigatoka leaf spot disease) resulting in not only a reduction in the area under banana cultivation, but also reduced output per acre. This decline has resulted in significant land use change, forcing many farmers out of agriculture, with some banana farms have been subdivided and converted to housing, often on steep unsuitable slopes for development and infrastructure and impermeable surfaces that have led to downstream flooding. Production focuses primarily "other crops" (root crops, fruit, vegetables, fruit trees), a successful subsector that now accounts for 61.3% of the total 2010 agricultural contribution to GDP. Production of "other crops" is supported by SVG's soils, drying conditions and production knowledge. Although land under agricultural production decreased, significant unsustainable agricultural practices are taking place on steep slopes, land use on agricultural lands is shifting to housing, and development, and IAS/disease is destroying crops, all of which contribute to continued land degradation and fragmentation, further compounded by the effects of changing climactic condition.

6. Water**:** St. Vincent's mountainous terrain, natural vegetation and climate continue to provide essential ecosystem services, supporting its perennial and ephemeral streams in 16 large watersheds. Surface water is the major source of portable water, irrigation and industrial supplies, with annual average rainfall sufficient to meet local requirements. Natural springs also indicate the presence of ground water, though with limited knowledge of the size of this water source (a spring in Congo Valley provides adequate water supply for the water bottling plant). Although there have been occasional periods of moderate water shortage during the dry season, the country does not usually experience severe supply constraints, though decreased stream flow is noted with implications for future water supply. The Central Water and Sewerage Authority (CWSA) operates 12 gravity-fed water supply systems to deliver potable water from the rivers to domestic, industrial and business consumers (six non-operational since their destruction by Hurricane Tomas). However, severe climactic events are increasingly impacting this essential ecosystem services and, coupled with unsustainable agricultural practices and habitat fragmentation, are resulting in severe land degradation. The floods of April 2011 damaged irrigation supplies from the National Irrigation Authority that resulted in disruption of ecosystem services, many of which have not been restored. These floods caused severe damage in large watersheds, such as Perseverance, which has a minimum capacity of 856,000 gallons of water per day, providing 5% of national demands. Coupled with severe damaged by Hurricane Tomas in 2010, the volume of water extracted annually from the Perseverance River has declined from 130,038 to 83,918 million gallons annually between 2009 and 2012. On the north eastern side of the country, five irrigation schemes were commissioned to supply water to approximately 1,400 acres with irrigation water, but poor land use practices continue to affect the quality of water. During the rainy season, particulate matter and sediments enter the water due to lack of equipment for coagulation, sedimentation and filtration, with contamination by agricultural chemicals unknown. Three large rivers supply hydroelectricity harnessed by S. Vincent Electricity Services (VINLEC), meeting approximately 20 per cent of the national electricity demand. The water supply situation is significantly different in the Grenadines, where there are no rivers. Residents have relied on rainwater as their main source of drinking water, in spite of low rainfall during the dry season and droughts, with regular water stress experienced. Groundwater is also taken from wells and ponds fed by rainwater, used for construction and livestock. Now, communal rainwater catchment systems and desalination plants provide a continuous year round supply of fresh water (on Bequai, the plant can produce between 16,000 and 32,000 GPD.

7. Protected Areas**:** Protected Areas in SVG, have the goals to safeguard the islands natural capital, ecosystem services and meet the countries' commitment to the Caribbean challenge initiative. According to the NPPA System Plan (2009-2014), there are no National Parks, 3 Forest Reserves, 24 Wildlife Reserves, 1 Marine Park, 1 marine Reserve, and 6 Marine Conservation Areas protected under SVG law. The additional 75 proposed sites for inclusion include 1 NP (Soufriere), 8 Forest Reserves (Campden Park, Colonarie, Cumberland, Dalaway, Kings Hill, Kingstown, Mt. Pleasant, and Richmond), 17 Wildlife Reserves, 25 Cultural Landmarks, 6 Natural Landmarks, 5 Recreational Areas, 5 Marine Parks, 3 Marine Reserves, 3 Marine Conservation Areas, and 2 Protected Landscape/Seascapes. Although all lands above the 305m contour in SVG are Crown lands and named Forest Reserves, they are not legally gazetted as protected areas. Conflicting information lists Cumberland Forest Reserve as both as a designated and as a proposed PA (TBC during the PPG phase), and for the purposed of this PIF, its 1000 ha will be indicated as already protected. The system plan contains conflicting multiple designations with duplication in management authority, with recommendations in place for streamlining and site re-designation that have not been implemented.

Threats to Biodiversity and Ecosystems Services in SVG can be categorized as the following:

8. Habitat Destruction and Fragmentation: Most of St Vincent's remaining large tracts of forest ecosystems are primarily found in the high elevations, where the major causes of deforestation due to expanding agriculture and human settlement/development (housing, tourism, a proposed cross-country road, utilities, and other encroachments). Habitat destruction and fragmentation is a key drive of land degradation in St. Vincent, particularly in its watersheds. This forest loss is estimated at 3-5% per year[8]. Although all lands in St. Vincent and the Grenadines that lie above the 300m (1000ft) contour were designated as Crown Lands since 1912, poor enforcement has resulted in continued habitat loss, fragmentation and degradation, making the country increasingly vulnerable to the impacts of natural disasters, including landslides, soil erosion and poor drainage of basins. Forest clearing and fragmentation (for housing and agriculture) contributed to severe flooding in lower slopes and coastal areas along the west coast (2010 Hurricane

[8] Ministry of Health and Environmental (2010).

Thomas), including Buccament Watershed. There is extensive expansion of squatting in environmentally sensitive areas and clearing of relatively inaccessible lands in the interior (primarily Soufriere Forest Reserve) for illegal marijuana cultivation which is carried out primarily by unemployed persons farming for livelihood on fertile but very unstable slopes of the volcano. Though likely increased in recent years, 1500 marijuana farmers were estimated to occupy approximately 1200 ha (2001), according to the Forestry Department, with a loss of 15% of forest between 1993 and 1999. As is evident in coastal areas of numerous watersheds around St. Vincent, destruction of coastal and marine habitats stemming from upslope agriculture and development, unplanned coastal development, deforestation (including the cutting of mangroves) and sand or stone mining[9] have resulted in widespread erosion and sedimentation and have increased the vulnerability of coastal communities' to the effects of climate change and related natural hazards such as hurricanes, tropical storms, storm surges and flooding. Impermeable infrastructure in the Kingstown Watershed contributed to significant flooding and damage to this coastal city.

9. Degradation of Land and Water Resources and Ecosystem Services: In addition to habitat destruction and modification from unsustainable agricultural practices and unregulated land use, bushfires, and pollution are also contributing to degradation of land and water resources in SVG. Unsustainable land management within upland watershed areas in SVG is of particular significance where over 50% of the slopes are 30° or more and only 20% less than 20°[10]. The range of negative impacts on resources include: sedimentation from clearing of steep slopes for agriculture and consequent sedimentation of watercourses; reducing hydraulic capacities resulting in heightened flood risk downstream; removal of riparian buffers for farming close to riverbanks; fertilizer use contributing to pollutant loading in runoff following rains; use of harmful chemicals and pesticides that negatively impact fresh and coastal waters; burning of agricultural waste and setting of fires to clear land threaten forest ecosystems, including lands within protected areas; nutrient loss and reduced soil fertility and crop support; and alternation of soil characteristics due to physical modification and chemical/pollutant contamination. Illegal farming on steep slopes in the interior of the country pose a severe problem of topsoil loss and resultant sedimentation of river and marine habitats. Degraded soils can lead to excessive use of fertilizers and pesticides, further degrading the water supply. Overexploitation or inappropriate use of land on Soufriere has resulted in serious soil erosion and fertility loss, barren land from landslides that have exposed bedrock, and where rapid leaching of soil nutrients has resulted in infertile, sandy farms with heavy reliance on chemical fertilizers. In the Grenadine Islands, minimal organic matter in the calciferous soils barely permits soil water retention, and along with evapotranspiration and survival pressures, areas of the Grenadines can be classified as desert land with resultant pressures on marine resources for livelihoods. Severe soil erosion problems are exacerbated by runoff caused by higher intensity rainfall events. Livestock rearing on Bequia and Union Island continues to degrade land due to overgrazing. In the marine environment, the most significant threat to coral reef ecosystems comes from upstream sources of pollution (sewage outflows; animals grazing along rivers), nutrient overload (fertilizers), sedimentation (construction; erosion from agricultural practices), invasive species (lionfish), and dredging. Improper solid waste disposal also contributes to land and water resource degradation with accumulation of contaminants, most evident during the rainy hurricane season when intense storm events result in extreme land degradation marked by landslides.

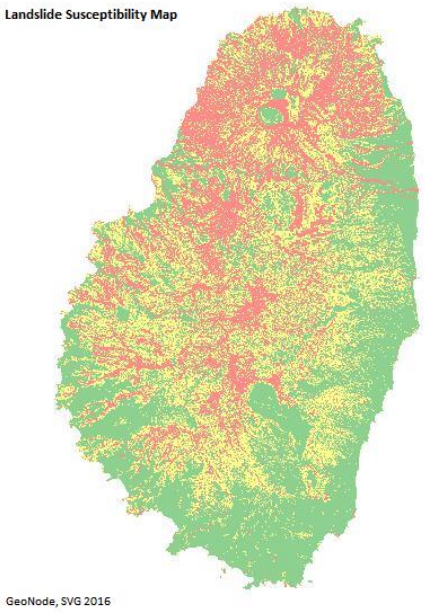

Figure 1. Landslide Susceptibility Map

10. Invasive alien species (IAS) and disease: IAS are known to have devastating effects on natural resources and biodiversity. In SVG, invasive alien mammalian predators devastate native vertebrates and invertebrates, invasive plant species (i.e. *Pueraria montana* Kudzu vine) are outcompeting native plant species, and pests affect agricultural crops and have ruined SVG's export market, livelihoods and food security. The devastating effects of introduced alien invasive mammals on islands species have included national and local extinctions or significant range and population reductions as a result of predation, competition for resources and/or habitat modification. The following predominant invasive mammalian predators in the Caribbean are found on SVG, which include the Indian mongoose (*Herpestes auropunctatus*), rats *Rattus rattus* and *R. norvegicus*, mouse *Mus muscalus*, opossum, *Didelphis marsupialis*, and feral cat (*Felis catus)*. These species directly reduce populations of native and endemics on SVG, and one of only 2 native land mammals, the St. Vincent pygmy rice rat (*Oligoryzmys victus*) is believed to be extinct due to mongoose predation. Impacts on SVG's other threatened island endemics (i.e. Union Island Gecko) are undocumented (addressed in project interventions). Impacts on the island's endemic and threatened species, including the critically endangered Agricultural pests have severe effects on agriculture and economies (i.e. Black sigatoka on banana industry), the threat of pests spread by IAS is further exacerbated in drought stress situations induced by climatic changes. Outbreaks of pests in the Caribbean region threatens and in some cases hinders food security especially since these invasive alien species are difficult to be identified and therefore

[9] United States Agency for International Development: Caribbean Open Trade Support (2010).
[10] Barker (1981) in Caribbean Conservation Association (1991).

treated by farmers or pests experts in each country. The invasion of the IndoPacific lionfish (*Pterois volitans*) is a significant threat to fish biodiversity across the Caribbean, as well as rapid invasions of both the *Halophila stipulacea* seagrass and the *Ophiothela mirabilis* brittle star in the coastal marine waters in recent years. Forestry species have been impacted by pests including the mahogany shoot borer pest (*Hypsipyla grandella)* which has caused significant damage to local *Swietenia* spp. plantations that were seen as economically viable alternative to natural forest logging pressures, also a CITES listed endangered species.

11. Climate Change: As a small island developing state, SVG is one of the world's most at-risk countries to climate change. Current climate change predictions for the Caribbean suggest a general drying trend with less frequent but more intense rainfall events, predicted temperature increases and sea-level rise, many islands are projected to undergo substantial coastal squeeze in the next century. Anthropogenic influences, such as infrastructure or inappropriate agricultural practices on steep slopes, or degradation of coral reefs and mangroves, have compromised the resilience of these ecosystems, furthering impacts of extreme weather events. Coastal zones and the more densely populated human settlements are increasingly vulnerable to storm surges and erosion, exacerbated by anthropogenic impacts (densely populated settlements, coastal development, increased sedimentation due to upper watershed degradation, waste disposal). SVG lies within the hurricane belt and is at risk annually during June to November. The island also has an active but dormant volcano that last erupted in 1979. A period of drought in 2009 negatively affected the agricultural sector and fueled further land degradation and loss of critical coverage in the forest sector due to increased incidence of fire. Hurricane Tomas (2010) damaged 30% of the estimated 13,000 hectares of natural forest in St. Vincent and the Grenadines, as well the agricultural industry (particularly bananas), with estimated damages to the agricultural sector at EC$69.64 million, of which the forestry subsector accounted for 43.6%. The 2013 Low Level Trough system producing 273mm rain over 3 hours destroyed or damaged 20% of the nation's forests, with an approximate EC$32 million cost to the agricultural sector, of which 74% was to the forestry subsector and 7% to "other crops. The overall cost to the island was US$108.4 million (15% of GDP). These severe weather events exacerbated an existing vulnerable situation of unsustainable agriculture practices and habitat fragmentation / loss on the island's watershed steep slopes. The effects of increased storm frequency and severity combined with prolonged dry periods (particularly detrimental to the Grenadines), fire and soil erosion, has compromised the forests ability to maintain and re-generate forest cover. Forest damage and landslides from these events have impacted forest structure, micro-climate, floral and faunal species composition, rare species populations, and natural hydrological processes at an increasing number of sites. Impacts of prolonged drought in the Grenadines results in further deterioration and loss of soils and exacerbates the impacts of uncontrolled grazing (due to scarcity of fodder) on Union Island. Successful drought resistant and non-palatable vegetation are outcompeting and changing natural forests.

12. **The long-term solution** is to reduce forest loss and land degradation and the threats to biodiversity and ecosystem services is to have in place sustainable land use and biodiversity conservation that is incorporated into a strengthened institutional framework for protected areas, ecosystem conservation and INRM. This will be supported by integrated governance at landscape level including an enhanced operationalized PA estate and a strengthened policy, legal, regulatory and planning framework. Incorporated into SLM are 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, supported through field-based demonstration learning and information exchange. This long-term solution will entail 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.

Specifically, the project will work to address the following three **barriers**:

Barrier 1. Lack of sufficient regulatory and institutional framework for PA management and landscape level planning (INRM).

13. There is insufficient comprehensive policy, legal and regulatory mechanisms to ensure effective management of SVG's protected areas or integrated landscape level planning. Key policy gaps include the lack of both a forest policy and a protected area policy to inform natural resources, biodiversity conservation and protected areas priorities. The NPPA System Plan (2009-2014) includes a draft policy statement, but the policy was never developed. Historically, SVG's legally gazetted protected areas were established under various legislations. Though the updated National Parks (Amended) Act 2010 establishes all multiple protected areas categories under law, there are no supporting regulations for terrestrial PAs (marine PA regulations developed). Many Acts that support protected areas, natural resources and biodiversity have no supporting regulations, and insufficient enforcement abilities (i.e. 2010 Amended National Parks Act). In addition, there is no comprehensive legislative coverage supporting conservation of biodiversity or implementation of the CBD, rather only various legislations that offer protection terrestrial and marine biodiversity but with gaps in protection that are not addressed (i.e. protection for turtles). Land use planning and management processes often do not take into consideration the maintenance of ecosystem services for the benefit of biodiversity or ecosystem functioning. Many private land owners, including those living in areas bordering PAs, can develop their lands with few restrictions and no need for compliance with land management plans, and land owners are not required by law to implement proper land management practices (i.e. planting on steep slopes). Land management (including protected areas) is further constrained by a lack of information on the status and trends SVG's ecosystems, including information on changes in ecosystem coverage over time, composition of ecosystems, biodiversity of global significance and functions of various ecosystems services, and changes in species abundance and distribution. There is no harmonized data management system: data exists within the varying responsible institution or only found

hard copy. Though Physical Planning Unit house a GIS database, it is not comprehensive nor is there open access for other departmental use. Existing biodiversity data is incomplete and outdated, with no current inventory, of particular significance for the central forest reserve that is known to harbor significant endemic species. Legislation to support policy for more effective collaborative information management is also lacking (National Spatial Management Data Policy). Another barrier is the lack of institutional coordination mechanisms for the large number of institutions and sectors with roles in environmental management (see stakeholder table). Coordination between agencies is currently managed on the basis of personal and long standing working relationships between agency employees rather than through established guidelines or defined roles and responsibilities. This often results in lack of coordinated management of forests within PAs and adjacent productive landscape, forests and forest fragments to ensure ecological connectivity, prevent fires, etc.), along with lack of institutional capacity for activities such as public education, enforcement and monitoring. Cabinet approved MOU's to formalize collaborations between NPA and collaborating agencies (i.e. Forestry Department, Fisheries Division) were in effect for only 1 year and subsequently expired. Inter-sectoral integration was identified in the SVG National Protected Areas System Capacity Development Plan (2007) as a critical management capacity strategic direction which would include joint planning sessions between agencies, defining roles and responsibilities, and improved communications between all stakeholders. This barrier is of particular significance for PAs and INRM which are managed by multiple, overlapping agencies and ministries, each guided by its own mission and priorities. Financing for PAs is another key barrier to SVG reaching their 2020 Caribbean Challenge Initiative (CCI) commitments. In addition to insufficient government budget allocations, there is no PA system business plan or financial mechanisms to increase efficiencies and prioritize use of financial resources (i.e. a visitor fee system to support PA units or management agencies).

Barrier 2. Insufficient personnel, technical capacities and resources for expansion of the PA estate and conservation of its biodiversity.

14. Lack of capacity, finances and biodiversity information hinders implementation of conservation activities. Capacity to assess and manage biodiversity is limited to few individuals, with external support required for inventories and research on endemic and endangered species or to address threats to their survival. Effective planning and management of the central mountain forest reserve (CMFR) is constrained by a lack of information on biodiversity. Management continues to rely on old biodiversity inventories (1940s) which prevents resource managers and other planners from determining whether species are healthy, vulnerable, or extinct, and from determining the status trends for given species, such as endangered endemics for which site protection is a focus. This includes no information on the effects of invasive species on native biodiversity, with no control measures in place. St Vincent's central mountain range is the habitat of the St Vincent Parrot and a focus for the establishment of its component forest reserves, yet inadequate resources are limiting its management: a census has not been completed in over 20 years, and movement outside of the reserves is going unmonitored. Adequate personnel, financial resources and equipment limits monitoring (forest reserve boundaries) and management (i.e. replanting deforested areas). Insufficient resources resulted in an incomplete survey (*80% complete but areas require revision) of the 1000 ft. contour line (above which is crown land and forest reserve). As a result, this site is not legally gazetted nor part of the PA estate. There is limited management or habitat protection of the Critically Endangered *Gonatodes daudini*, with no Forestry personnel stationed on Union Island. There are also no co-management arrangements involving local NGOs and CBOs in the management of the Chatham Bay area and the species' critical habitat. This lank of on-site management is compounded by lack of research or baseline information on its habitat and life history, or the impacts invasive predators with no control measures in place. Collaborative research and management efforts with Fauna and Flora International have halted due to lack of grant funding. Lack of species and site protection, coupled with incomplete CITES designation is leading to regular export of individuals and the likely drastic species decline. There is also insufficient marine protected areas in SVG, with personnel and financial resources are limiting PA expansion. Currently, there is only one MPA that is project supported off of mainland St Vincent in the south coast. Baseline research, mapping and operational structure is donor funded. Though well managed by the Fisheries Division and collaborating partners (i.e. Coast Guard that provides enforcement), there are no financial structure in place to ensure sustainability over time. The well visited Tobago Cays MPA in the Grenadines is managed by a statutory body and financed through user fees, structures not in place for other MPAs. Lack of this structure limits sustainability of new protected areas, both terrestrial and marine.

Barrier 3. Insufficient awareness, planning and technical capacities for landscape level resource management

15. There is limited awareness and knowledge of the importance for CSA and SLM, understanding of implementation techniques, and their role in the integrated landscape to reduce land degradation. Limited access to information on the status of land resources and ecosystem functions (see barrier 1) constrains both national level planning and the design and execution of appropriate watershed level management interventions. In addition, the operational technical capacity to plan and incorporate SLM and climate resilient agriculture techniques into land use practice is limited at the national, sub-national and local levels. Though discrete initiatives (i.e. GCCA project) exist that provide technical guidance to some stakeholders on INRM and SLM techniques, community projects do not systematically address a complete range of SLM and CSA measures or link systematically with interventions in enabling environments or institutions. Relevant departments, including the MARTFFI, are understaffed with limited capacity in SLM/CSA solutions and BD conservation. This is further limited by lack of finances for equipment and training, including for extension services that work directly with farmers. As a result, mainstreaming of an SLM and climate-smart management approach to adaptation is limited. A lack of awareness of the linkages between land degradation and ecosystem

services / habitat degradation also means that most persons and producers are unaware of the impacts that poor land / resource management in areas adjoining or upstream of PA sites have on biodiversity in PAs. Though there is recognition in growers association of drought effects and related land degradation issues, there is often no experience with the application of climate resilient agricultural practices, crop varieties, irrigation techniques or cost effective solutions for the use of organic fertilizers. Lack of awareness among farmers of these financially viable SLM approaches inhibits the incorporation of practices and technologies aimed at mitigating land degradation. Combined with poor enforcement, this lack of understanding results in problems such as degradation of steep slopes through poor farming practices, poor siting of infrastructure and destruction of coastal ecosystems for marine development projects. Lack of access to technical capacity for alternative livelihoods and small business production using CSA products is another factor limiting implementation of climate resilient agricultural practices. There is also insufficient planning and capacities for management of SVG's marine resources. Fishing has increasingly become a greater contribution to SVG's GDP, but lack of awareness of the ridge-to-reef impacts to this resource by communities can lead to degradation of this livelihood. In addition, fishing methods such as the use of FADs, without any management plans in place, can result in a significant loss of fish stocks and biodiversity.

2) Baseline scenario or any associated baseline projects.

16. **The project will build on the following baseline scenario:** The government of SVG has been implementing a number of baseline initiatives related to PA management, biodiversity conservation and SLM. The Government of SVG is carrying out efforts to strengthen and / or enhance **National system level planning and regulations for PA management and INRM**. SVG's draft NBSAP and its key targets (in CBD 5th Report) outline strategies, objectives and targets for biodiversity conservation in the face of the current threats. These threats include impacts of changing climactic conditions and inappropriate land uses on biodiversity and ecosystem services. These documents outline the importance of integrated landscape / seascape management, increased awareness, restoration of degraded ecosystems, quantitative knowledge of natural habitats and biodiversity to reduce these impacts is built upon in the GEF 6 project deliverables. The World Bank/Climate Investment Fund's Pilot Program for Climate Resilience/ Disaster Vulnerability and Climate Risk Reduction Projects (PPCR/RDVRRP) contribute to the evaluation of degraded areas and provides a platform for hazard and risk evaluation (i.e. landslide susceptibility map). This information, through the GeoNode, can be combined with GEF 6 data collected to inform project interventions and to indicate risk (i.e. landslide). The RDVRRP GeoNode data (bathymetry, topography, and information from hyperspectral imaging and land cover - 5m resolution) can also be incorporated into the GEF 6 supported project database (US$61.5M, 2011-2018). With PPCR funding, the University of the West Indies-Mona is also undertaking review and expansion of the National Climate Change Adaptation Policy, with capacity building related to climate change impact assessments and climate modelling. International Cooperation and Development Fund's (ICDF) Electronic Document and Records Management System (EDRMS) project will be improving administrative efficiency (US$1.85M, 2016-2019), which can support strengthened coordination mechanisms in environmental management in this GEF 6 project.

17. Government efforts are also geared toward **site level PA operations and plans for expanding the PA estate** with goals to meet the CCI commitments and the NBSAP targets. The current NPPA System Plan (2009-2014) outlines a strategy and plan for SVG's existing and proposed protected site, which includes an additional 75 sites for protection and inclusion in the system. Adequate finances, capacity and regulatory framework is limiting implementation are lacking and a revised system plan is needed. Nonetheless, the NPA and the Forestry Department are working with donors to implement these goals. This includes The Nature Conservancy (TNC) initiatives, which are both working with local partners to survey all the Grenadines, developing skills and capacity to identify threats, conservation strategies, as well as map priority protection sites. These initiatives can support the development of the Lee Coast MMA on mainland St. Vincent. Spatial data techniques used under the TNC At the Water's Edge project was to determine vulnerability of local communities and natural habitats to storm surge and sea level rise Union Island (2011-2016) can be expanded to Lee Coast MMA management planning, as can TNC's Caribbean Marine Biodiversity Activity (CMBA) methods for demonstrating effective approaches for Marine Protected Areas and sustain-able fisheries in the Grenada Bank Seascape (approx. US$3.1M, 2014-2019). South Coast MPA management initiatives under the ECMMAN Project (approx. US$0.74M, 2013-2017) are also key baseline for the development of the Lee Coast MMA, where existing management activities and capacities (i.e. enforcement, fisher co-management arrangements, buoy installation and monitoring, etc.) will extend to the Lee Coast MMA. Conservation of the Union Island Critically Endangered *Gonatodes daudini,* initiated between the SVG Forestry Division and Fauna and Flora International (FFI) through currently with no funding, will be expanded upon, as will exploration of a continued partnership with FFI. In addition, Government spending for the protected areas system (management and operation) has been on average about EC$4.1 million per year (2007), with a then funding gap estimated to be EC$2.7 million. The only protected area to charge a fee currently is the Tobago Cays National Park, though estimates of annual revenue as high as EC$1,325,640 could be generated from park entrance fees.

18. Government of SVG is also implementing as series of baseline initiatives of **INRM, incorporating SLM in the R2R setting** to address the extensive land degradation issues facing the country. The EU funded OECS/Global Climate Change Alliance (GCCA) framework is implementing SLM activities (including Climate Smart Agriculture) in the upper Cumberland Watershed, developing a management plan, and possibly expanding initiatives into the adjoin Perseverance Watershed which this GEF 6 project will expand upon and incorporate lessons learned in its upper watershed project intervention sites (US$1.5M, 2013-2018). Other SLM initiatives include climate smart agricultural training and organic compost production being carried out at Richmond Vale

Academy. ICDF / Government of Taiwan's Project for Strengthening Farmers' Organizations and Improving Fruit and Vegetable Production Technology in Saint Vincent and the Grenadines (US$3.1M, 2015-2018) has developed a model farm (Orange Hill Agricultural Cooperation Farm) as well as a plant tissue culture laboratory, produce packaging state and agroprocessing lab upon which this project can incorporate lessons learned. UNDP is implementing the Japan-Caribbean Climate Change Partnership initiative (2015-2018, est. US$ 1M for SVG), which is a regional programme that will support in SVG the development of a National Adaptation Plan in agriculture sector, and a number of pilot projects which promote climate smart agriculture practices – with which the proposed GEF project can synergize for replication in the targeted watersheds. The USAID/OECS/Reduce Risks to Human & Natural Assets Resulting from Climate Change Project (RRACC) is supporting policies and laws to reduce climate change vulnerabilities, including a new climate inclusive fisheries policy (approx. US$2.4M, 2011-2017). The GIZ-funded CARICOM/Caribbean Public Health agency (CARPHA)/Caribbean Aqua-Terrestrial Solutions (CATS) is implementing a holistic approach to resource management and prevention of pollution of the marine environment from land-based sources and activities as well as supporting capacity building of MPA managers for improved protection and rehabilitation of MPAs (approx. US$2M, 2012-2017).

3) Proposed alternative scenario, GEF focal area strategies, expected outcomes and components of the project.

19. Despite the foundation provided by these baseline initiatives, there remain gaps that SVG recognize need to be addressed to avoid further losses. The interrelationship between the drivers of biodiversity loss and land degradation requires an integrated approach to abate these losses successfully. This is particularly true in St Vincent and the Grenadines (St. V&G) where, as a small SIDS, the transition between ecosystems takes place over short distances and upstream practices have important impacts on downstream and coastal areas. The proposed project strategy recognizes this and will address the drivers through putting in place an integrated approach that combines strengthened protected areas to conserve core biodiversity as keystone safe havens for threatened and endemic species; building capacities and knowhow for climate smart and sustainable agricultural practices in the intervening areas that will reduce pressures on the corner stones (PA) whilst also reducing pressures on the remaining habitats in the production landscape thus providing further connectivity and longer term sustainability of biodiversity. The improved agricultural practices will in turn reduce habitat fragmentation and land degradation which will reduce other drivers of environmental loss such as soil erosion and sedimentation in fresh water and coastal areas. System and sector level training on these best practices and integrated resource management will lift the integrated approach to scale and enable a more comprehensive ridge to reef approach to addressing the interrelated drivers of environmental degradation across the country.

20. In the absence of this project, the **business-as-usual scenario** for management of critical watersheds and protected areas in SVG is one where: 1) there is no effective institutional coordination mechanism for environmental or protected area management; 2) protected area policy, legislative and regulatory gaps remain for protected area, biodiversity and SLM; 3) existing land use practices continue to degrade land and lead to soil erosion and fatigue; 3) comprehensive and current natural resource and biodiversity data does not exist, nor is there a harmonized central system for its management; 4) areas important to represent bioregional habitats and biodiversity will remain unprotected, and SVG will remain far short of its 2020 national goals for protected areas coverage, with the largest gap in marine protection; and 5) management of critical ecosystems in, and ecosystem services from, watersheds continues without a systemic approach for their protection as well as inherent mitigation action to address potential downstream impacts or sustainable livelihood opportunities. Specifically through integrated natural resources management and a ridge to reef approach, this project will support; 1) strengthened institutional, legal and regulatory and financial frameworks that incorporate for SLM and biodiversity conservation at the landscape level, 2) operationalization of a strengthened PA estate with improved management for species of global significance, 3) capacity and investment for sustainable land management and climate smart agricultural production with effective integrated watershed management in R2R setting that supports key ecosystem service, and 4) knowledge management for SLM, CSA and biodiversity conservation for long-term sustainability of practices and lessons learned (institutions, community and private sector).

Under the alternative scenario enabled by the GEF funding, the project strategy will comprise 4 inter-connected components:

21. **Component 1: Strengthened institutional framework for Protected Areas, Ecosystem Conservation and Sustainable Land Use.** This component will focus on systemic and institutional strengthening and capacity development for supporting protected areas, ecosystem and biodiversity conservation and landscape level management at the national level.

Output 1.1 Natural resources information management system harmonized to support multi-departmental use of a centralized geo-referenced database and monitoring system that will include new and updated information to support natural resource conservation and land use decision making. A central geo-referenced Biodiversity and Land Use Database with a Biodiversity and Land Use Monitoring and Tracking Tool will be developed and implemented with multi-agency ability to feed into and access data. This data will include new and updated baseline data carried out through inventories and assessments supported by this project (component 2), including outputs of protected area boundaries and surveys. National freshwater and saltwater quality monitoring and advisory capacities will be enhanced, project efforts focusing on freshwater sources entering the Lee Coast MMA, with data input into central database. The project will further support Land Use and Biodiversity Monitoring and Tracking Tool (central spatial database, user friendly) to monitor changes in land coverage, forest conversions, CC impacts (i.e. floods and landslides), species distributions, and will include a monitoring framework with indicators for biodiversity status and ecosystem health. This capability will be strengthened with

equipment, GIS software for terminals (for Forestry, Fisheries, Agriculture, National Parks Authority, other) and training. Drone technology for monitoring and surveillance of forest areas and boundary lines, land use and encroachments into protected areas will be supported, facilitating monitoring of inaccessible areas and coverage of the large site. The project will further support a National Biodiversity Center, including setting up a new herbarium (catalogued plant collection, outputs of biodiversity assessment), new biodiversity inventory database (central database terminal for data input and use) and biodiversity interpretation/exhibitions for public outreach, and also serve as training center (activities under 1.5).

1.2 Strengthened policy, legal and regulatory framework for Protected Areas for biodiversity conservation, ecosystem protection and SLM by the development of a Forest Policy (from national consultative process). PA and natural resource conservation legislative and regulatory review (referring to OPPAL Gardner 2007 review) will be carried out, with overlaps, gaps / related capacity issues (i.e. legislation and regulations protecting sea turtles) identified and addressed, including consideration of comprehensive legislation supporting conservation of biodiversity. The project will support the development of new, and finalization of, draft legislation (as needed based on legislative and regulatory review), including new legislation to support the National Spatial Management Data Policy. Regulations will be finalized and approved supporting existing Acts, including the Wildlife Protection Act (1987), Fisheries Act (1986), Forest Resources Conservation Act (1992), and Amended National Parks Act (2010). New terrestrial PA regulations will be developed, as well as regulations to support the draft Environmental Management Act and draft Environmental Impact Assessment Legislation, supporting implementation of these and other regulations.

1.3 Strengthened coordination and planning framework for biodiversity conservation, ecosystem protection and SLM, including through the revision of the National Park and Protected Area System Plan to further meet 2020 targets and priority targets of the revised NBSAP. Implementation of the National Physical Development Plan that addresses SLM and biodiversity conservation will be supported, as well as local area, integrated watershed management and ICZM plans. Inter-agency coordination mechanism will be strengthened and implementation supported for the National Environmental Advisory Board (NEAB), National Implementation Support Partnership functions, and development of long-standing Cabinet approved MOU's between the NPA, divisions and departments in the various ministries and statutory bodies responsible for environmental management (i.e. Fisheries Division, Forestry Department, Environmental Management, NPA, Central Water and CWSA, SVG Coast Guard, and SVG Port Authority).

1.4 Enhanced financial sustainability framework for Protected Areas System, including finalizing bylaws to operationalizing the National Conservation Trust Fund, identifying and implementing additional finance mechanisms for Trust Fund capitalization. Mechanisms (including revenue generating PA user fee system, cruise ship fees, airport fees, voluntary hotel / dive shop contributions, PES, and others) outlined in the NPPA System Plan. The project will coordinate with countries participating in the overall Caribbean Challenge Initiative, in order to adopt successful operational and capitalization mechanism examples (such as in St. Lucia), and to disseminate lessons learn and good practices arises from the project (through actions in Component 4).

1.5 Strengthened Institutional Capacities for INRM (PA &SLM) for implementation of regulations, PA planning and site operationalization (component 2) to reduce land degradation and improve biodiversity conservation. Capacity building through training will be supported for the NPA, Forestry Department, Fisheries Divisions, Physical Planning, Coast Guard, Agriculture Division, Extension, and others in: integrated land use planning for environmental management and ICZM (33 persons, incl. land use planning certificate training); CSA and SLM techniques (20 persons); biodiversity conservation and field assessment / inventory~~, including herbarium techniques~~ (15 persons plus 5 field assistants); PA planning and management (10 persons); GIS (8 persons); and drone use and data collection (Forestry, 3 persons).

22. **Component 2: Establishment and effective management of new and existing PAs.**

This component will focus on expanding the protected area estate in St Vincent and the Grenadines (9300 ha terrestrial and 300 ha marine), furthering SVG's commitments to its 20/20 goals and meeting the draft NBSAP national targets as outlined in the 5th Report to CBD. This component will also focus on creating and gazetting a biological corridor that encompasses the central mountain range, encompassing state lands above (and lands below) the 305 m contour, conserving biodiversity and reducing degradation. This component also includes the protection and management of various known (and possibly unidentified) endemic and threatened species, with management plans, programmes established and initiated.

2.1 Central Mountain Range Forest Reserve is legally gazetted, demarcated and operationalized (expanding PA estate by 12,100 ha), forming the contiguous 13,100 ha biological corridor. The 13,100 ha proposed Central Mountain Forest Reserve (CMFR) will encompass 6 sites proposed in the PA system plan (Colonarie, Dalaway, Kings Hill, Kingstown, Mt. Pleasant, and Richmond Forest Reserves), 1 existing Forest Reserve (Cumberland, 1000 ha) and 1 proposed National Park (Soufriere National Park, though the NP designation will not be included in the CMFR). The project will support completion of the survey of the 1000 ft. contour line (including revising / confirming areas for 1000 ft. boundary extension (i.e. Mamoon / Montreal catchment areas), incorporating satellite / aerial imagery to complement existing cadastral survey, with the completed surveyed boundary incorporated into centralized database (component 1), and demarcated. Project supported and introduced drone technology will support the boundary survey (as needed) and will be used for boundary monitoring for encroachment and land use activities / conversions. Biodiversity / ecological assessment and inventory carried out, including; (i) baseline biodiversity/ecological assessments/inventories (biological survey/baseline assessment of fauna and flora of the Central Mountain Range Forest Reserve's terrestrial ecosystems and agricultural landscapes, (ii) status and location of threatened / endemic species, with monitoring programs; (iii) IAS species (distribution, studies), (iv) baseline forest ecosystem studies to monitor climate change effects (structure composition, with permanent plots and monitoring protocols); (v) forest cover / land use (incorporating aerial / satellite imagery with ground truthing), (iv) water / stream quality and (v) soils mapping (update / expand upon existing) with matched crop type (incorporate Agriculture

Division project concept). A comprehensive management plan for the Central Mountain Range Forest Reserve will be developed based on broad stakeholder consultation and outputs of biodiversity / ecological assessment and inventory, with multi-sectoral management committee in place and implementation initiated. The project will further support the reserve's formal gazetting. Four (4) Globally threated endemics in the Forest Reserve will be managed with species Recovery and Action Plans developed for St Vincent Parrot *Amazona guildingii* (updated Plan, biannual census, essential research - movements and fruiting phenology); *Chironius vincenti, Pristimantis shrevei, Catharopeza bishop*; and unknown globally significant species (based on outputs of biodiversity assessment), with invasive species management in place. Equipment and training to survey, gazette and operationalize Forest Reserve, and conduct biological assessment and species management, will be supported (compliments component 1).

2.2 Leeward Coast Marine Managed Area legally established (expanding MPA estate by 1600 ha*). The Lee Coast MMA boundaries will be surveyed, demarcated and legally established. A management and zoning plan will be developed (linked to existing South Coast MPA) based on comprehensive stakeholder consultation and baseline data collection supported by this project on reef and fish assessment and health, water quality and pollution. A multi-stakeholder committee and pilot community co-management arrangements will be developed (supported by MOUs) and in place along with sustainable finance mechanisms (component 1). Effective site operationalization will include training in monitoring, MMA management, invasive lionfish control and diving, and mooring buoys, basic infrastructure and equipment supported by this project. Management plans will be developed and implemented for existing FADs deployed in SVG, with monitoring programmes in place and initiated. **indicative. TBD during PPG phase.*

2.3 Chatham Bay National Park is legally gazetted, demarcated and operationalized, with species protection and management in place, further expanding the PA estate by at minimum 100 ha of the sole known habitat of Critically Endangered *Gonatodes daudini*. Species census and identification of habitat will be carried out upon which the area for gazette will be based, to include buffer area. The site will be surveyed, demarcated with signage, with enforcement enhanced through training, equipment and personnel (including co-management with CBOs). Development of a Species Recovery and Action Plan will be supported, with implementation initiated. With the support of experts (ongoing collaboration with Fauna and Flora International will also explored), a baseline comprehensive census will be conducted, research on basic life history, habitat suitability and other key research identified will be carried out. Threats to species and its habitat will be identified (including predation and known poaching) and will be addressed as appropriate including site interventions (invasive control, enforcement) and international measures (CITES listing pursued as key measure to limit export). Site management by Forestry personnel will be supported by local stakeholder and NGO engagement, with training (field techniques, enforcement, endangered species conservation, other) and equipment (for research, office, site and species management) provided. Financial sustainability mechanism explored (component 1.4), supporting site and species management interventions post project completion.

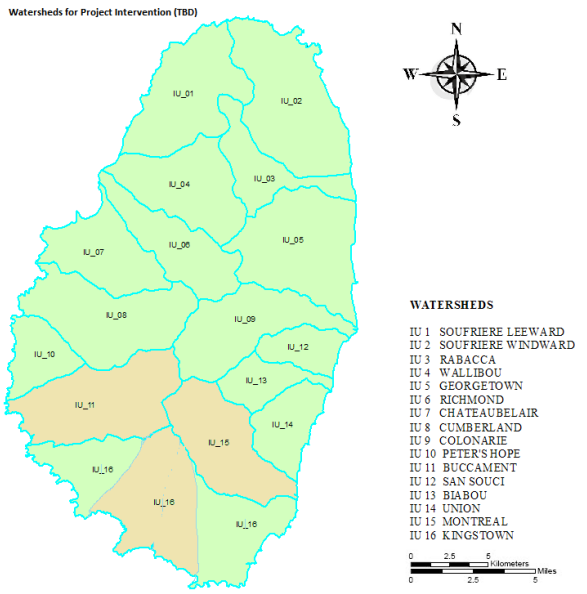

Figure 2. Watershed Intervention Sites (TBD)

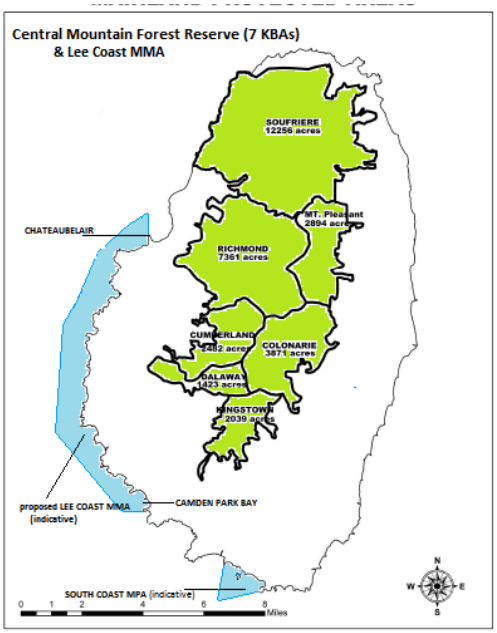

*Figure 3. Central Mountain Forest Reserve (7 KBAs) & Lee Coast MMA**

23. **Component 3: Integrated watershed management measures in R2R setting to reduce threats to upstream PA and downstream MPA/MMA.**

3.1 Improved SLM practices in 3 upper watershed landscapes[11] in and surrounding the Central Mountain Forest Reserve; Buccament Watershed (connecting to the downstream proposed Leeward Coast Marine Managed Area), Kingstown Watershed (Green Hill / Vermont area, connecting to the downstream existing South Coast MPA) and Montreal Watershed (south-eastern portion of St. Vincent) will be supported that will reduce deforestation, land degradation, and soil erosion that directly impact downstream coastal ecosystems and marine sites**.** Supported R2R interventions will include; reforestation, upslope conversion of agriculture to agroforestry, Climate Smart Agriculture (CSA) / sustainable agricultural production (including soil conservation, soil enrichment, water management and irrigation, mixed strata agroforestry, organic fertilizer), agricultural stream setbacks, sustainable rangeland management (fencing, enforcement of grazing regulations, river setback), restoration on steep slopes with native forest species using fly/mobile nurseries (including removal of invasive species such as bamboo), fire prevention and control, restrictions on slash and burn agriculture, and others. Project will support irrigation demonstration, organic composting (compost bins) and other CSA techniques. At least two (2) watershed management plans (TBD during PPG phase) based on broad stakeholder consultation will be developed with inter-sectoral management committees in place and community engagement supported with MOUs.

3.2 Demonstration plots and field schools on SLM and CSA. Model farms (3) will be used as field based demonstration sites (2 on farmer plots and 1 at Wallilabou Agriculture Station) and will also serve as national learning centers, with CSA best practices and adaptive techniques promoted as well as business models demonstrated for replication. Each model farm will be in a different climactic zones to support various crop varieties with varying rainfall, soils, temperatures, other. At each of the 3 model farms, demonstration of protective structures (shade houses), climate resilient crops (production and use), irrigation / water management, organic fertilizer, and production techniques for different agricultural climactic zones will be supported by trained farmers and Agriculture Extension Officers (through project supported training). Outreach will expand to include farm and community visits by trained Agriculture Extension Officers and other trained personnel, written materials (subject specific leaflets, CSA manual, other), news / radio spots /announcements, on-site model farm trainings / workshops, Banana Accompanying Measures (BAM) project supported GAP standards manual. Education trails (i.e. Montreal) will be supported, along with training collaboration with SVG technical college and Richmond Vale Academy explored.

3.3 Alternative livelihood and small businesses supported through processing CSA crops, supporting / enhancing existing and new sustainable alternative rural livelihoods (i.e. beekeeping, agroprocessing, medicinal plants, retail market/post production goods) and education on CSA-SLM practices (including women, men and youth). At least 4 agroprocessing and 4 alternative livelihood businesses supported through technical assistance in production, product development for export compliance, and marketing of climate smart agricultural products. The project will further support capacity and business development for farmers, farmer organizations, and small post production / alternative livelihood small businesses, including product development for export compliance, post product development, and social investment fund for farmers (i.e. Developing Labs/Tribe retail). The project will collaborate with and support community based and producer organizations, who will be further involved in PPG phase consultations.

24. **Component 4: Knowledge management for SLM, CSA and biodiversity conservation.** This component focuses on capturing both technical and educational knowledge and lessons learned during the implementation of the project, and *will incorporate institutional strengthening and capacity building initiatives carried out that will support both current and future generations of professionals. This project will be capturing experiences and lessons learnt, and producing outputs for* both for institutional and private sector learning and ongoing implementation during and post project. Knowledge and experiences will be captured, shared and disseminated to encourage widespread adoption of CSA, SLM and biodiversity conservation practices. The project will ensure that experiences and lessons learned generated at the demonstration sites and from implementation of actives are systematically collected, analyzed and disseminated throughout the country to facilitate awareness, replication and scale-up. Monitoring and evaluation of project implementation, outcomes and outputs will ensures project effectively reaches outlined goals and objectives. (BD/LD) National level.

Output 4.1 Technical knowledge captures experiences and lessons learned disseminated will be supported throughout project implementation and incorporated into via work plans, and will include written products such as technical and training reports / manuals / guides, lessons learned notes that are based on experience codified (CSA, SLM, biodiversity assessment, land use mapping, other). Written documentation of knowledge will incorporate institutional strengthening and capacity building initiatives, for continued institutional and private sector learning and activity implementation, with curriculum that will be continued through an ongoing training programme at the Biodiversity Center that targets both government personnel and producers. Curriculum development and training material will also tie in with curriculum of Technical Division of St Vincent and the Grenadines Community College and Richmond Vale Academy. A socioeconomic and gender monitoring system will also be established, and outputs from the Biodiversity and Ecosystem Monitoring and Tracking Tool incorporated into information disseminated. Training carried out in Components 1 (Biodiversity conservation and land use management capacity) and Component 2 will integrate experiences and lessons captured through KM activities of the project in an iterative way.

Output 4.2. Media products promote outreach and increased public awareness / environmental education of SLM, CSA and biodiversity conservation. Media products to increase awareness and promote outreach and education of project activities, knowledge and lessons learned will include videos, photo essays, fact sheets, case studies, project web platform, training tools, television spots, newsletters exchange site visits by communities and producers involved, also dissemination at regional events.

[11] Watersheds intervention sites indicated are to be confirmed during PPG phase.

Output 4.3. Monitoring and evaluation of project implementation, including through periodic field visits, tracking tool assesmsents, independent mid-term and final project evaluations.

4) Incremental/additional cost reasoning *and* **5) Global environment benefits**

25. The project is aligned with the BD-1 and its P2 Nature's Last Stand as it will significantly expand the extension of protected area estate (both terrestrial and marine) to include habitat underrepresented in the current system and also by bringing under protection habitat of species with globally recognized vulnerability (critically endangered species) and irreplaceability (restricted range species) values (see Table below). The project will support the sustainability of the protected areas system in SVG through strengthening INRM and adopting a landscape (ridge to reef) approach. This is appropriate for the SIDS context where the transition between ecosystems takes place over very short distances and maintaining the mosaic of different ecosystem and the connectivity between them is essential. As the project includes both systems and site level management of PA alongside support to SLM in the intervening production landscape and surrounding watershed, threats to biodiversity in the PA estate will be abated increasing their effectiveness as a conservation tool in a SIDs. The propose project is also aligned with Land Degradation: LD-3 its P4 Scaling-up sustainable land management through the Landscape Approach as it will support the extension of land areas under application of INRM practices in the wider landscape. It will also support improved provision of agro-ecosystem and forest ecosystem goods and services through a holistic approach of landscape management and INRM to reduce land degradation and deforestation, using a ridge to reef approach. Reforestation, removal of invasive flora (i.e. bamboo) and implementation of SLM measures such as mixed multi strata agroforestry and CSA practices with reduced pesticides will not only reduce negative impacts of land degradation on biodiversity, but also improve biodiversity and of flows of ecosystem goods and services in the mixed landscape. The project is also aligned with Aichi Targets helping the GoSVG responds to Aichi Targets #1, 4, 5, 7, 8, 10 - 12, 14 and the Sustainable Development Goals, particularly Goal 15 Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss. Also indirectly it contributes to SDG 8 through conservation of ecosystem services essential for economic growth.

Current Practice in the baseline	**Alternatives to be promoted by the project**	**Expected Global Environmental Benefits**
1. **INRM management framework** • Insufficient legislative and regulatory framework (with overlap and gaps) for PA and BD management and SLM, • Limited data to inform land use decision • Lack of coordinated management, planning or operationalization of the PA estate • Lack of financial resources and adequate staff for effective operationalization / management of PAs Results in: *undermining efficient use of available resources and leads to BD loss and LD process*	• Centralized digital information management and monitoring system informs land use planning process and decision-making, • Regulatory and planning framework developed to reduce inappropriate land uses and resultant degradation. • A coordinated sustainable landuse planning framework optimizes resources • Inter-agency coordination mechanism in place • Capacity building management approaches, including use of drone technology for PA boundary monitoring.	**1. System level work:** • Strengthening the capacity for biodiversity information management (inventories and databases) will enable better use of available human and information resources, optimizing efficiencies in conservation planning and implementation. Improved availability of information to a broader audience through the National Centre (including production sector stakeholders) will increase awareness on biodiversity and ecosystem service values, on the consequences of different production practices and on the conservation options available facilitating behavioral changes that in the long term will lead to reducing threats. • Addition funding options increases PA management effectiveness. PA system financial sustainability is enhanced through development of by-laws for implementation of the National Conservation Trust Fund and financial mechanism for Trust Fund capitalization identified. • Improved PA site management and SLM practices
2. PA coverage and management • Insufficient extension and coverage PA estate. • Limited current knowledge of the islands biodiversity, including known and unknown species of global significance. • Weak management with resources constraints and site specific focus with little connection to surrounding production landscape in existing PA leads to encroachment; poor IAS management and losses of globally significant species • PA too small and fragmented to conserve habitat of endangered species Leads to*: further degradation and fragmentation of terrestrial forest and marine areas causing habitat loss that poses further risks to critically*	• Gazette, demarcated and operationalized of the Central Mountain Range Forest Reserve, • Gazette, demarcated and operationalized Lee coast MMA, critical habitat protection (survey, legal gazette, demarcation and enforcement) • Gazette, demarcated and operationalized protected area for Union Island gecko, with species management and research.	**2.1Expanded protected area estate provides protection to key habitat:** • 12,100 ha of terrestrial land to form a contiguous 13,100 ha Central Mountain Forest Reserve that is fully gazetted. • At minimum, 100 ha brought under protection of the sole known habitat of the Critically Endangered *Gonatodes daudini* • 1600 ha of marine area protected at main island's Leeward side **2.2 Increased PA effectiveness (measured by METT) deliver enhanced protection to** • in the Central Mountain Forest Four (4) globally significant biodiversity (threatened single island endemic species) including the endangered endemic St Vincent Parrot *Amazona guildingii*, critically endangered St Vincent Blacksnake *Chironius vincenti*, endangered Saint Vincent frog Pristimantis shrevei, endangered Whistling Warbler *Catharopeza bishopi*); 14 restricted range bird species (and its 7 KBAs, also Important Bird Areas) (including the threatened endemic *Amazona guildingii and Catharopeza bishopi*). • In Union Island (Critically Endangered Grenadines clawed gecko *Gonatodes daudini).* • At least five (5) Species Recovery and Action Plans and sea

endangered and endemic species.		turtle nesting sites.
3. Agriculture Production Practices in the landscape • use of harmful chemicals and pesticides that negatively impact fresh and coastal waters; • burning of agricultural waste and setting of fires to clear land threaten forest ecosystems; • chemical deterioration of soil due to overuse of fertilizers and other agrochemicals and reduced organic matter content. • limited services in place to support SLM planning, • Lack of adequate capacity to implement SLM and climate resilient agricultural practices, • Low incomes due to over dependence on agriculture production with little added value exacerbates expanding farming into unsuitable lands Leads to*: clearing of steep slopes with consequent erosion and sedimentation of watercourses, reducing hydraulic capacities resulting in heightened flood risk downstream.*	Sustainable agricultural practices and SLM practices implemented in 3 watersheds using a ridge to reef approach that include: • forest restoration with native and agroforestry species in upper watersheds with adaptive livestock management and agricultural practices for short crops; • protective structures for adaptive climate resilient crop production, CSA techniques and practices, and business model for replication; • soil conservation practices • water management practices (rain water harvesting; improve drainage and storm water control; small dam construction for water management); • development of germplasm collection for climate resilient varieties both on and off island. Agro-processing and agro-tourism small businesses receive technical assistance in production, labeling, marketing of CSA products, and support for community-based producer organizations.	**Expanded areas in wider landscape applying INMR practices adopted by local communities** CSA-SLM techniques and technologies implemented by local communities in 3 upper watersheds covering 1200 ha^2 reduces the drivers of environmental degradation to ecosystem functions (encroachment, pollution, sedimentation) in landscapes surrounding the Central Mountain Forest Reserve and downstream coastal and marine sites. Specifically this will • Reduced use of harmful chemicals and pesticides and reduced contamination of fresh and coastal waters; • Reduced deterioration of soil due to overuse of fertilizers and other agrochemicals and reduced organic matter content. • Reduced burning of agricultural waste reducing habitat fragmentations This is expected to result in reduction of sediments and erosion, and to diversify and increase household incomes.

6) **Innovation, sustainability and potential for scaling up.**

26. The project is innovative in that it will be developing the first biological corridor (Central Mountain Forest Reserve) in SVG, furthering a holistic and integrated approach to management of interconnected areas as an ecological corridor. In addition to the biological corridor that covers the central mountain range, this project will support the mountain to sea ecological corridor, implementing a ridge to reef integrated approach to ecosystem management. This project is also innovative in SVG in that it will be supporting development of coordinated cooperative arrangements for natural resource management in SVG that are not only innovative for the nation, but that will also support long-term sustainability of natural resource management. This will be combined with an inter-sectoral biodiversity, ecosystem and land use database with multi-departmental access for input and use will further long-term sustainability and integrated decision making. Environmental sustainability will be ensured through strengthening the policy, legal, financial and regulatory framework for protected area and biodiversity conservation, and by including principles of sustainability into interventions that govern natural resource management practices and landscape, including productive potential and vulnerability of different landscape units and habitats. Model farms (3) will be used as field based demonstration sites (2 on farmer plots and 1 at Wallilabou Agriculture Station) and will also serve as national learning centers for post project sustainability, with CSA best practices and adaptive techniques promoted as well as business models demonstrated for replication. Social sustainability will be ensured by promoting the active participation of local stakeholders in the development and implementation of management interventions and planning. Community level interventions and associated demonstration and capacity development will all support replication of interventions throughout mainland SVG and the Grenadine islands, further facilitate by knowledge management activities that will be supported through this project. Financial sustainability will be assured through the exploration and development of financial mechanisms for long term sustainability of the protected area system. Potential for scaling up lies with incorporating the landscape and seascape approach to management to all future protected area, land use and zoning decision making in SVG. In addition, GEF investment in this project represents an important opportunity to impact SDGs – both directly and as a catalyst for other sources of financing and support. It can serve as a platform for the country to fulfill its SDG Agenda through catalytic investment.

2. Stakeholders. Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes X/no).

STAKEHOLDER (SH)	EXPECTED ROLE/CONTRIBUTION IN PROJECT PREPARATION
Environmental Management, Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour	Environmental Management is part of the Economic Planning and Sustainable Development Unit (formerly part of the Ministry of Health and Environment) and is tasked with managing compliance with the country's international environmental commitments. Harbours GEF Focal point and provides overall coordination of stakeholders for project preparation design.

Physical Planning Unit, Ministry of Housing, Informal Human settlements, Lands & Surveys and Physical Planning	The Physical Planning Unit is responsible for the implementation of the Town and Country Planning Act and its various regulations. The act seeks to ensure orderly and progressive physical development in St. Vincent and the Grenadines The Unit is also responsible for EIAs. The Unit houses the GIS Division, the newest section of Physical Planning and may host the central biodiversity and land use database supported by this project, and will serve a key counterpart to devise actions and deliverables related during the PPG phase consultations
Ministry of Agriculture, Rural Transformation, Forestry, Fisheries and Industry (MARTFFI)	National Implementing Partner (project executing agency). Also responsible for ensuring that the policy and legal framework are in place for effective management of natural resources, specifically BD and ecosystems services, and will have overall responsibility for implementation of the project. This ministry, throughout its multiple divisions as outlined below, will have the key responsibility of providing technical inputs into the preparation of the full proposal to both the institutional and ground level aspects of the project.
Forestry Department, MARTFFI	Forestry Department is directly responsible for conservation of forest, Forest Reserves, BD, IAS and ecosystems functions, and manage forested land to maintain ecological integrity and best soil conservation practices; can contribute to education awareness on conservation management issues.
Fisheries Division, MARTFFI	Fisheries Division is directly responsible for conservation and management of seashore stocks, fisheries, habitats and marine protected areas (overlap with NPA); can contribute to education awareness on conservation management issues.
Agriculture Division / Extension MARTFFI	The Agriculture Division and Extension Services maintains direct relationships with farmers (crop and livestock) for the purpose of administering government support and for rendering technical advisory services with respect to sustainable agricultural technologies and practices.
National Parks Rivers and Beaches Authority, Ministry of Tourism	The National Parks Authority is and independent statutory body with a Board of Directors, attached to the Ministry of Tourism, and are responsible for the overall protected areas system management; can contribute to education awareness on PA management issues, and will be providing technical and institutional inputs on all PA management related components and outputs during full proposal formulation.
Central Water Service Authority (CWSA)	The Central Water and Sewage Authority (Ministry of Public Works) has responsibility for the conservation, control apportionment and use of water resources in SVG authority, and will be consulted in relation with water use in agriculture sector, PES and for broader watershed management process questions during proposal formulation
St. Vincent Electricity Services (VINLEC), Statutory Body.	VINLEC is the government-owned utility corporation that owns and operates two diesel generating stations as well as run-of-the-river hydroelectric power from several smaller hydroelectric generating stations, and is the sole provider of electricity in St. Vincent and the Grenadines.
Farmer organization, CSOs, CBOs	WINFA (Windward Islands Farmers Association, Fair Trade Farmers), Agro Processors (i.e. Vincyklus Association, Developing Labs). They will be consulted particularly activities related to Component 3 during the full proposal formulation process
SVG Chamber of Industry and Commerce	SVG's oldest and largest non-governmental non-profit private-sector organization in the country, representing the interest of approximately 120 businesses in all sectors. Their key purpose is to enable enterprise development and integration nationally and regionally, with the objective of promoting and ensuring the livelihood of those businesses. They will provide inputs esp. to the formulation of livelihood and small business support deliverables for the full proposal

3. Gender Equality and Women's Empowerment

27. In SVG, women traditionally make up a significant portion of the local agricultural sector including post production activities. There are constraints to levels of involvement, and access to support traditionally more available to men, such as extension services. Therefore, the project will strive to ensure a balanced outreach and involvement of both man, women and youth in capacity support actions involving extension services, such as demonstration plots and field schools on SLM and CSA. There is lower levels of female in positions of leadership in agriculture in general, but higher levels of involvement and leadership in the value chain (such as processing and marketing). Woman play a majority role in the post-production of agricultural products, and will benefit from project support to livelihoods and small business for this purpose. Small business support for value chains will be tight to farming and production practices using climate resilient crops and methods, and will support these women led initiatives. Gender equality and social issues will be fully considered in this project; both men and woman will be incorporated into project implementation activities ensuring gender equality and gender accountability is a cross-cutting issue at both the project level and component level that will be tracked as part of the M&E system. Special attention will be paid to gender issues in developing socioeconomic indicators, and in the capacity-building activities.

28. Project preparation will ensure that gender consideration becomes an integral part of the proposed project strategy. During the project inception the mandatory UNDP gender marking will be applied. This requires that each project in UNDP's ATLAS system be rated for gender relevance. This will for example include a brief analysis of how the project plans to achieve its environmental objective by addressing the differences in the roles and needs of women and men. Furthermore, gender marking implies the production of the following data by the project's year 2 and by its end:

- Total number of full-time project staff that are women
- Total number of full-time project staff that are men
- Total number of Project Board members that are women

• Total number of Project Board members that are men
• The number of jobs created by the project that are held by women
• The number of jobs created by the projects that are held by men
In order to ensure equality, these criteria will be integrated into the project design.

4. Risks

Risk	Level	Mitigation
Policies and Acts developed do not receive Cabinet approval	medium	Proposed policies, legislation and regulations supported by this project require political support for formalization and implementation. This risk will be mitigated with adequate stakeholder consultation in the legal and regulatory review being undertaken through this project, as well as the drafting process, particularly inclusive of senior government officials. Any particular issues raised can be addressed during this stakeholder participatory process. Any issues impeding Cabinet approval and the legal process will be addressed through draft regulations amended as needed.
Lack of willingness to coordinate between the various agencies involved in protected area and natural resource management.	medium	This project will support development and implementation of Cabinet approved MOU's to formalize collaborations between NPA (attached to the Ministry of Tourism) and collaborating agencies (i.e. Forestry Department, Fisheries Division), strengthen inter-sectoral collaborative mechanisms (i.e. NEAB, NISP, TBD during PPG phase) and decision-making processes.
Extreme climatic events and hazards (e.g. hurricanes, tropical storms, prolonged drought) jeopardize the SLM measures introduced and consequently cause declines in agricultural production and livelihoods	medium -high	While adaptation to climate change is at the core of the proposed project, it will address mitigation of this risk by incorporating climatic projections in the watershed level plans, support preparedness to extreme events through incorporation of hazard susceptibility (i.e. incorporate project land use/cover data gathered and existing GeoNode landslide susceptibility data) into watershed management planning, incorporate in the design of farm level and site specific measures potential impacts of extreme events (e.g. techniques ensuring deep root structure of agroforestry plants, climate-proof design of installations at propagation stations, protective structures at demonstration farms).
Capacity limitations within targeted communities lead to low level of stakeholder buy-in with also low adoption rates by some stakeholders, e.g. marijuana growers. Limited willingness of stakeholders to think and plan in cross-sectoral manner.	medium	Participatory approaches and social marketing are employed from the onset and on regular basis, including consultative and iterative engagement, with responsive to needs of all stakeholders.

5. Coordination with other relevant GEF-financed and other initiatives.

29. GEF currently supports a number of initiatives in St Vincent that the Project will coordinate with. GEF has supported both the Development of a National Biodiversity Conservation Strategy, and Action Plan and Grenada's Country Report to the CBD, of which priorities are supported in this project. The project will also build on the UNEP / GEF Integrated Land, Water & Wastewater Management in Caribbean SIDS project (2012-2016) that addresses policy, tools and guidelines for IWRM as well as methods for multi-scale assessment and monitoring of land degradation trends. The GEF / WB-TNC supported Sustainable Financing & Management of Eastern Caribbean Marine Ecosystem Project will support long term sustainable financing for protected areas through the development of a National Trust Fund, recently government approved, with possible (TBD) use of methods and indicators developed for MPAs that can use for the development of the Lee Coast MMA. Preventing COSTS of Invasive Alien Species (IAS) in Barbados and the OECS Countries focuses in prevention, early detection, and control and management frameworks for invasive alien species (IAS) that emphasize a risk management approach by focusing on the highest risk invasion pathways in OECS countries. Though there is no national component, SVG will benefit from regional component that focuses on strengthening institutional mechanism to address IAS. GEF Small Grants Programme has implemented community based initiatives that have focused on water supply on the island of Bequai (solar powered sea water reverse osmosis system. In addition, the Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWeCO) is contributing to the preservation of Caribbean ecosystems that are of global significance and the sustainability of livelihoods through improved fresh water resources management and sustainable land management. Synergies include the IWeCO work on integrated watershed management in the Perseverance Watershed. The GEF / FAO Climate Change 4 Fish Project- Climate Change Adaptation in the Eastern Caribbean Fisheries Sector will be strengthening community-based fish sanctuaries by providing resources, training and alternative livelihood opportunities, complimenting this GEF 6 MMA interventions, as do the Caribbean Regional Oceanscape Project which supports the development and implementation of integrated ocean governance policies to leverage sustainable public and private investment in the waters of OECS member states, including SVG. The TNC supported Sustainable Financing and Management of Eastern Caribbean Marine Ecosystems is contributing to enhancing the long-term sustainability of protected area networks in the Organization of Eastern Caribbean States (OECS) region, by (i) establishing sustainable financing mechanisms, (ii) strengthening marine protected area networks, (iii) deploying a regional monitoring and information system for protected area networks.

6. Consistency with national priorities

30. This project supports the strategic objective of SVG's National Economic and Social Development Plan 2013-2025, Goal 4 of "Improving Physical Infrastructure, Preserving the Environment and Building Resilience to Climate Change." More specifically, Goal 4.1 *To ensure an adequate, safe, reliable and sustainable supply of water*; Goal 4.7 *To conserve the natural resources of the country through effective utilization and management*, and Goal 4.10 *To reduce the adverse impacts of climate change*. The Project also furthers support for the St George's Declaration where St Vincent at the 2006 8th Meeting of the Conference of Parties to the Convention on Biological Diversity (COP 8) pledged to its support the Principles of Environmental Sustainability in the OECS, in particular Principle 13 to protect and conserve biological diversity and *"the development and establishment of protected areas and institutions for their management, as well as measures for the protection of important heritage sites, species, and green spaces are key elements of environmental management"*. SVG has also pledged its commitment to the Caribbean Challenge Initiative to protect 20% of near shore marine environment by 2020. The proposed project directly supports SVG's efforts to comply with its commitments related to international environmental conventions, and promotes the conservation and management of the country's biodiversity through addressing priority targets in the 5th Report to CBD and the draft National Biodiversity Strategy and Action Plan (NBSAP, 2015) of which the 20/20 key targets are: 1) at least 50% of the population is knowledgeable about the values of biodiversity and the steps they can take to conserve and use it sustainably; 2) St. Vincent would have completed studies to quantitatively establish the status of all natural habitats and the rate of habitat loss, including forest, and would have developed and in the process a strategy to reduce the rate of habitat loss; 3) invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment; 4) at least 17% cent of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes; and 5) ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification. This Project supports 2 GEF Focal Areas: BD-1 Program 2 and LD-3 Program 4, and generate GEBs by contributing to Aichi Targets #1, 4, 5, 7, 8, 10 - 12, 14. The project also promotes the objectives of the newly aligned National Action Plan (NAP, 2015) to support the UN Convention to Combat Desertification, and seeks to prevent land degradation, restore 10% of degraded land by 2020 (maintaining a minimum of 28% forest cover, though 35% indicated as preferential yet unrealistic), improve agricultural technology for greater yields and soil conservation, secure all water-catchment areas in a joint venture between CWSA and forestry, strengthen public awareness initiatives to increase partnerships in environmental resource management and mitigate the effects of drought and other climatic shocks, using an integrated approach for land degradation reduction and drought mitigation, which in turn also complements the targets of the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC). This project also supports SVG's National Physical Development Plan, addresses some fundamental land issues facing SVG by establishing environmental zoning, promoting eco-tourism, managing urban expansion, protecting coastal zones and controlling deforestation, a parallel effort the OECS Land Policy that aims to achieve "*enhanced sustainability of development in the OECS - economic development, poverty reduction, social stability and the protection of environmentally sensitive areas - through the formulation, adoption and implementation of comprehensive land policies*." Interventions include restricting settlement on critical agricultural lands to ensure food security and agro-trade; enforcing land-use zoning legislation to protect critical ecological balance and biodiversity. In addition, the NPPA System Plan is directly through legal designation of new protected areas supported through this project.

7. Knowledge management.

31. Knowledge management will be an integral part of the project, enabling institutional memory, promoting learning and continuous improvement, generating documents for up-scaling of lessons and experiences and visibility strategies for capacity development. Specific knowledge management activities are incorporated under output 1.4 and will be carried out in an integrated way and in support of the various capacity building and training actions under the different components. The broader dissemination of experience and lessons learnt generated by the project will be also pursued though engaging national, regional and international technical and education institutions, such as the University of the West Indies (UWI), International Union for the Conservation of Nature (IUCN), CARIWIN, CARDI, 5Cs.

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(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Mrs. Janeel Miller-Findlay	Director – Environmental Management, Economic Planning	MINISTRY OF ECONOMIC PLANNING, SUSTAINABLE	**07/11/2016**

	and Sustainable Development Unit	**DEVELOPMENT, INDUSTRY, INFORMATION AND LABOUR**	

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	**Signature**	**Date** *(MM/dd/yyyy)*	**Project Contact Person**	**Telephone**	**Email**
Adriana Dinu, UNDP-GEF Executive Coordinator.		11/21/2016	Gabor Vereczi – Regional Technical Advisor, EBD	(507) 302-4628	Gabor.vereczi@undp.org