



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Medium-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Sustainable Land Management in the Commonwealth of Dominica		
Country(ies):	Commonwealth of Dominica	GEF Project ID: ¹	9667
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01479
Other Executing Partner(s):	PISLM Support Office	Resubmission Date:	February 14, 2017
GEF Focal Area(s):	Land Degradation	Project Duration (Months)	36
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		Corporate Program: SGP <input type="checkbox"/>
Name of parent program:	NA	Agency Fee (\$)	168,766

A.INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
LD-1 Program 1	GEFTF	300,000	2,400,000
LD-2 Program 3	GEFTF	576,484	8,000,000
LD-3 Program 4	GEFTF	900,000	4,300,000
Total Project Cost		1,776,484	14,700,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: An integrated land management model that includes agricultural, forestry and natural resources management practices that generate development and critical environmental benefits in tandem in the Commonwealth of Dominica

Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Enabling 'whole island' landscape framework to plan, monitor and adapt land management	TA	<p><i>1.1 Government approved framework to plan, monitor and adapt land management</i></p> <p><i>1.2 Institutions are capable of promoting enhanced sustainable land management in Dominica through INRM indicator: increase in score on adapted Capacity Development Scorecard⁴</i></p>	<p>1.1.1 A Comprehensive Land Management and Land Use Plan (CLMLUP) developed</p> <ul style="list-style-type: none"> Land Information decision support system for INRM is available for use in EIA, policy development, and land use planning Multi-sector planning platform developed <p>1.1.2 Protocols established for monitoring and evaluation of SLM practices</p> <p>1.2.1 Institutions with sectoral responsibilities for development and conservation, together with regulatory authorities and relevant CSOs and community partners, have strengthened authority and capacity for SLM and enforcement and prosecution of land crimes</p> <p>1.2.2 Knowledge on SLM practices disseminated within Dominica and in the sub-region</p>	GEFTF	900,000	5,000,000

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

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

⁴ The UNDP-GEF Capacity Development Scorecard's section dealing with institutional collaboration will be specifically adapted to the Dominican environment

2: Reducing the effects of land degradation on ecosystem services through sustainable land management	TA / INV	<p>2.1 Increase in adoption of SLM practices in targeted parishes, as measured by:</p> <ul style="list-style-type: none"> - Increase in number of SLM guidance documents available to Dominican farmers - At least 50 farming households adopt sustainable agricultural practices on 2,000 ha - 4,000 ha of degraded land restored using SLM practices in targeted parishes 	<p>2.1.1 Package of effective SLM approaches & technologies identified in collaboration with relevant national institutions</p> <p>2.1.2 Farmers and local communities with strengthened capacities to implement SLM approaches & technologies</p> <p>2.1.3 SLM approaches & technologies implemented in 4 target parishes, and lessons learned consolidated</p> <p>2.1.4 Degraded watersheds in at least 8 villages⁵ rehabilitated with native vegetation based on site specific rehabilitation plans developed in collaboration with local communities</p> <p>2.1.5 Increased public (targeting schools and agriculture training institutions) understanding and awareness of LD issues and associated SLM options, and increased support for land use regulations</p>	GEFTF	714,985	9,000,000
Subtotal					1,614,985	14,000,000
Project Management Cost (PMC) ⁶					GEFTF	161,499
Total Project Cost						1,776,484

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: NA

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Commonwealth of Dominica (BAM)	Cash	4,000,000
Recipient Government	Commonwealth of Dominica	In-kind	7,000,000
CSO	PISLM Support Office	In-kind	400,000
Others	CARIFORUM Secretariat [submission under the 10 th European Development Fund (EDF)]	In-kind	3,300,000
Total Co-financing			14,700,000

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

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNEP	GEFF	Dominica	Land Degradation		1,776,484	168,766	1,945,250
Total GEF Resources					1,776,484	168,766	1,945,250

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁷

Is Project Preparation Grant requested? Yes ☒ 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: \$50,000 PPG Agency Fee: \$4,750					
GEF	Trust	Country/	Focal Area	Programming	(in \$)

⁵ Villages listed in Annex 2; but to be confirmed during project preparation

⁶ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

⁷ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

Agency	Fund	Regional/Global		of Funds	PPG (a)	Agency Fee ⁸ (b)	Total c = a + b
UNEP	GEFTF	Dominica	Land Degradation		50,000	4,750	54,750
Total PPG Amount					50,000	4,750	54,750

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁹

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	6,000 Hectares

PART II: PROJECT JUSTIFICATION

1. Project Description. Briefly describe:

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

Overview & Environmental Context

The Commonwealth of Dominica is an island nation in the Lesser Antilles¹⁰ region of the Caribbean Sea, south-southeast of Guadeloupe and northwest of Martinique. Its size is 750 km² and the highest point in the country is Morne Diablotins, which has an elevation of 1,447 meters. Dominica is largely covered by rainforest and is home to the world's second-largest hot spring, Boiling Lake. Dominica has many waterfalls, springs, and rivers. Some plants and animals thought to be extinct on surrounding islands can still be found in Dominica's forests. Dominica's location as the most northerly of the Windward Islands places it well within the Atlantic hurricane belt. This fact makes Dominica vulnerable to natural disasters arising from meteorological events. With regards to physical vulnerability, steep topographic conditions and rugged interior dominate the island landscape, which has led to human settlements and physical development being highly concentrated along narrow coastal areas (particularly in the south and west). A significant proportion of Dominica's population as well as assets are, therefore, highly vulnerable to hurricanes as well as high-intensity rainfall, wind and storm surge events.

The general pattern of land use in Dominica is dictated by topography; the central highlands remain heavily forested and hold most of the Protected Area landscapes in the country, while lower elevations continue to lose forest cover. Overall, forest cover on the island, which ranges from dry scrub woodland on the west coast to lush, tropical rain forest in the interior, declined from 65% to 61% between 1990-2000 (mostly due to conversion to agriculture or housing). Forested areas, which provide critical water catchment services, fall into five categories: Forest Reserves, National Parks, Unallocated State Lands, the Carib Territory, and Privately-owned Land. In the case of the Carib Territory or Carib Reserve, this is a 15km² district that was established by British colonial authorities in 1903 for the indigenous Carib people who inhabited Dominica prior to European colonization and settlement. Legal residents share communal ownership of all land within the Carib Territory. The Carib Territory also has its own local government in the form of the Carib Council and headed by the Carib Chief. The land in the Carib Territory is mostly of poor quality, with the worst soil erosion on Dominica and deforestation that has caused many streams in the Territory to dry up.¹¹ Despite the importance of agriculture for Dominica's economy, the mountainous terrain of the country and variations in soil quality mean that a relatively small percentage of the land (30%) is suitable for agriculture because of erosion risks and potential water saturation during heavy rainfall.¹² The narrow flat floodplains of the major rivers in the country have seen the most intensive land utilization (predominantly agriculture), although cultivation also extends into the mid-elevation hillside areas along roads. Many coastal ridges and mountains, along with portions of Dominica's largest river (Layout River), are centres for the mining of stones, sand, pumice and other construction materials. Urbanization is mostly confined to the narrow coastal fringe, although newer settlements have been expanding into the interior along the rural road

⁸ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

⁹ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

¹⁰ The Lesser Antilles (also known as the Caribbees) are a group of islands in the Caribbean Sea. Most form a long, partly volcanic arc between the Greater Antilles to the north-west and the continent of South America. The islands form the eastern boundary of the Caribbean Sea with the Atlantic Ocean. Together, the Lesser Antilles and the Greater Antilles compose the Antilles (or the Caribbean in its narrowest definition). When combined with the Lucayan Archipelago, all three are known as the West Indies. https://en.wikipedia.org/wiki/Lesser_Antilles

¹¹ Kossek 1994, p. 184; Honychurch 1998, p. 84 attributes this to overuse as a consequence of the communal land ownership. [Patterson & Rodriguez 2003](#), p. 72 further theorizes that this is because of rapid tenant turnover, which eliminates most incentives for long term land conservation

¹² Shanks & Putney (1979) Dominica Forest and Park System Plan

network, putting increased pressure on many protected areas. Use of private land is largely unregulated and multiple land uses (residential, commercial, agricultural or industrial) occur in close proximity; some areas are dominated by squatting and unregulated development.

Socio-Economic Context

The Commonwealth of Dominica had a population of 72,301 at the 2014 census. Dominica produces a narrow range of goods and services, mainly for export, namely agricultural products (e.g. in particular bananas, vegetable and root crops, coconut and citrus) and educational services through the establishment of international medical schools. In addition, the country is actively exploring prospects in tourism, and is also developing the production of geothermal energy. Agricultural production, however, is the most important economic sector in Dominica; over the last decade, agriculture contributed on average 18.5% of GDP, employed 40% of the labour force, and accounted for 70% of total export earnings and 60% of foreign exchange. Bananas dominated the agriculture export in the past, but as a result of reduced European Union (EU) banana trade preferences, banana production in Dominica declined from 76,872 tons in 1988 to 23,403 tons in 2013 (around the level at which it has held relatively steady for the last decade).¹³ In response to this challenge, the government has diversified the agricultural sector by promoting the production of coffee, patchouli, aloe vera, cut flowers, and exotic fruits such as mango, guava, and papaya. The current land tenure pattern is many small farms using short-term cropping systems where the farmers cultivate all of the available land, including areas that were previously reserved as forests, and who are not familiar with or able to afford investments in soil and water conservation. Other former banana production lands have been developed for housing and commercial infrastructure, as well as for tourism facilities.

Hydro-meteorological disasters have historically imposed significant costs on the Dominican economy, leading to major declines in GDP growth and general productivity. The Commonwealth Vulnerability Index rates Dominica as having the sixth (out of 111 countries evaluated) most vulnerable economy (to external shocks and natural hazards) in the world, and the most vulnerable in the Caribbean. The average annual economic losses associated with extreme hydro-meteorological events are equivalent to roughly 7.4% of GDP. Dominica's agricultural sector remains painfully vulnerable to natural disasters and climate variability. Every year, farmers lose a significant portion of their crops and livestock during the six-month hurricane season, and the World Bank reports that agriculture's share of GDP in Dominica has fallen consistently with each major natural disaster, with the sector failing to recover previous levels of relative importance.¹⁴ Agricultural production, including bananas as well as other crops, takes place on steep and vulnerable slopes to a degree greater than most countries in the region. Hurricane Dean (2007) caused extensive damage to the island, estimated at 58% of GDP, or US\$162 million, with significant damage to buildings and infrastructure. More recently, record flooding and landslides associated with heavy rain caused in excess of US\$100 million in damage in 2011; heavy rains caused landslides and flooding in early 2013, heavy rains again in late 2013 caused widespread damage to infrastructure and housing with damage estimates in the range of US\$20 million; and most recently tropical storm Erika passed over Dominica in August 2015, producing an extraordinarily rainfall event which was coupled with high intensity winds and resulted in extensive damage. Tropical Storm Erika resulted in total damage and loss of US\$ 483 million, equivalent to over 90% of Dominica's gross domestic product (GDP).¹⁵ The damages and losses experienced are also the equivalent of 270% of 2014's exports, 195% of imports, and 615% of gross fixed capital formation.¹⁶

Dominica's economic performance over the past ten years has reflected its vulnerability to natural hazards and economic shocks as real growth averaged less than 2% per annum. The country recorded its highest growth period during 2006-2008 where real GDP increased by an average of 5% due to heightened public sector investment particularly following the passage of Hurricanes Dean and Omar. Subsequently, from 2009-2013 economic performance was lacklustre as the economy grappled with the effects of: 1) the global recession, which resulted in lower remittances, tourist arrivals and foreign direct investments and 2) the impacts of the extremely heavy rains and flooding noted above, in particular the significant damage to infrastructure (housing, roads, etc.).

Dominica's ecosystems account for 48% of local food supply, which comes in the form of wild meat, fish (from rivers and sea), fruits, root crops and a wide range of domestic agriculture products. Additionally, ecosystems provide energy in the form of fuel wood and charcoal, raw material for the craft industry, timber for the local market, and a host of products that contribute to the quality of life in Dominica. Dominica's net greenhouse gas (GHG) emissions indicate that the country is a sink for GHG, largely attributed to the forest. Another ecosystem service provided by forests is water provision. It is estimated that Dominica's abundant supply of fresh water accounted for 5.09% of GDP in 2007. This figure should be higher as it did not include the benefits derived by nationals who tap into the rivers and streams for domestic uses as well as agriculture.¹⁷

¹³ <http://en.actualitix.com/country/dma/dominica-banana-production.php>

¹⁴ <http://www.ipnews.net/2014/02/race-save-caribbeans-banana-industry/>

¹⁵ Government of Dominica, Rapid Damage and Impact Assessment Tropical Storm Erika –August 27, 2015. A Report by the Government of the Commonwealth of Dominica, September 25, 2015

¹⁶ Ibid

¹⁷ Ministry of Environment, Natural Resources, Physical Planning and Fisheries. 2013. Dominica National Biodiversity Strategy and Action Plan 2014 – 2020.

Dominica is mostly volcanic and has few beaches; therefore tourism has developed more slowly than on neighbouring islands. Nevertheless, Dominica's mountains, rainforests, freshwater lakes, hot springs, waterfalls, and diving spots make it an attractive eco-tourism destination. Cruise ship stopovers have increased following the development of modern docking and waterfront facilities in Roseau, the capital.

Policy / Legal Context

Several legislative and policy frameworks form the architecture within which the Government of Dominica (GoD) carries out its sustainable land management agendas. The *Physical Planning Act, No. 5 of 2002* is the overarching piece of legislation that makes provision for the orderly and progressive development of land in both urban and rural areas and to preserve and improve the amenities thereof, and the grant of permission to develop land and for other powers of control over the use of land. Together with the *State Land Act, 1958 (Amended by 24 of 1960 and 12 of 1999), Cap. 53:01*, which provides for the administration and disposal of State Lands, and the *Land Management Act, 1973 (Amended by 35 of 1973 and 6 of 1980)*, which established a Land Management Authority for Dominica, these acts form the core of the legislative context for sustainable land management in Dominica.

In addition, a number of policy frameworks exist. One of the most important is the National Land Use Policy (NLUP) that was approved by Cabinet in 2015; the NLUP outlines the broad direction for issues related to land use planning in the country, including *inter alia*: support for hazard mitigation and climate change adaptation; protection of prime agricultural lands; support for sustainable use and management of natural resources; addressing sustainable rural and urban development with attention on reducing land use conflicts, alien land holding and urban sprawls and squatting; and supporting the development of an integrated water resource management plan while protecting the marine and coastal zone resources. The NLUP also calls for the creation of a National Physical Development Plan (NPDP), which establishes a vision of Dominica's land management goals through 2035, including *inter alia*: (i) retention of forest cover of over 65% of the land mass, including protected National Parks and Forest Reserves; (ii) an internationally recognized eco-tourism destination renowned for its pristine natural environment, environmental features, and high-quality tourism facilities; (iii) resilience to the impacts of climate change and natural hazards with development and infrastructure located in the safest areas, and designed and constructed based on best practices, (iv) safe location of settlement made up of well-organized residential neighbourhoods with parks, open space, and community facilities; and (iv) strong agricultural areas that sustainably produce healthy food for local use and for high-value exports. The National Forest Policy is designed to guide the sustainable management of the forest resources of Dominica, while maintaining or improving the present area of forest cover. Strategies for the sustainable management of Dominica's forests hinge on the vision that all sectors of society must share the responsibility of safekeeping the forests, the nation's most valuable resource.

Dominica's medium-term Growth and Social Protection Strategy (GSPS) 2014-2018 represents a broad strategic framework for sustainable development and economic transformation over a five-year period. The priorities outlined in this document are intended to be guided by sound economic and environmental considerations as the main route to poverty reduction. The GSPS is the Government's overarching framework for macro-economic policies, sector strategies and plans, the structural reform agenda, the annual Public Sector Investment Programmes (PSIP), the annual budgets and social protection and poverty reduction strategies.

Target sites of the project:

Four of the ten parishes were selected as target sites of the project. These include the Saint David, Saint Paul, Saint Joseph and Saint Patrick Parishes. The selection of these sites was based on the sites declared disaster areas in the aftermath of Tropical Storm Erika in 2015. The areas experienced catastrophic mudslides during the disaster in and near the following villages: Petite Sauvanne, Pichelin, Good Hope, Dubique, Campbell, Coulibistrie, San Sauveur and Petite Soufriere. Information regarding the parishes and villages is provided in Annex 2. The selection of targeted sites will be re-evaluated and finalised during the PPG.

Causes of Land Degradation

According to the Dominica National Action Plan (NAP) to Combat Land Degradation¹⁸, approximately 14% of the country's total land area is vulnerable to land degradation processes from anthropogenic origin, and the productivity of accessible agricultural land has shown significant declines. The NAP highlighted a number of indicators that demonstrate the importance and scope of land degradation in Dominica, including: extensive soil erosion; increased landslides (particularly adjacent to roads); declines in river flows (notable examples are the Castle Comfort, Roseau, Layou and Geneva rivers) and increased river siltation; reductions in crop yields and increased need for fertilizers and excessive use of herbicides and other pesticides; and extensive coastal erosion. The quantification of land degradation processes in Dominica is a difficult task in the absence of

¹⁸ Government of Dominica, National Action Programme to Combat Land Degradation Roseau 2004

documentation assessing the extent of changes in land conditions and the lack of statistical data on land use in the country.¹⁹ In addition, it must be noted that Dominica has not developed specific indicators to monitor land degradation in the country, and thus measurable indicators are limited to data on socio-economic factors (farmer incomes), soil fertility, agricultural production, meteorological data, environmental indicators of coastal changes, and human habitation patterns and activities.²⁰ Nevertheless, a number of key drivers of land degradation were identified during the formulation of Dominica's NAP, and were based on extensive community and regional consultations carried out during that process. Additional details on these drivers of land degradation processes were describe in an expert report issued more recently in 2014,²¹ and are summarized below.

- ***Deforestation:*** Agricultural and urban expansion, and to a lesser extent timber harvesting, has resulted in the removal of extensive areas of forest vegetation on both private and public lands in Dominica. Over the past forty year, these processes have caused fragmentation of natural vegetation types, extensive reductions in the area of some forest types (e.g. rainforests), particularly in coastal regions, and increases in soil erosion and soil loss. The most important cause of deforestation is the expansion of the agriculture sector, and even today unallocated forested State Lands are being sold as a means to relieve agricultural land hunger; in addition, unsustainable shifting cultivation continues in many areas (e.g. the Carib Territory). In most cases, forests on marginal soils and/or steep slopes are cleared and converted to agriculture without adequate controls to prevent land degradation processes. The absence of vegetative cover, as well as poor zoning and inadequate flood protection measures, contributes to flash flooding which results in considerable damage to the country's infrastructure. Fires are often set to assist in the removal of vegetation; this process typically results in accelerated wind and water erosion, reduced soil porosity, and increased soil erosion and aridity, and in some cases, uncontrolled spread of fires that destroys additional forested areas (especially on the west coast). Logging, though less extensive, also contributes to deforestation and the compaction of soil by heavy machinery, leading to additional soil erosion and sedimentation issues.
- ***Unsustainable Agricultural Practices:*** Intensive cultivation on steep slopes characterized by poor agricultural and land management practices is a significant contributor to land degradation in Dominica, resulting in substantial losses of topsoil, soil exhaustion, pest outbreaks, uncontrolled weed growth and soil moisture deficits. Soil erosion not only affects terrestrial land but also marine ecosystems by increasing the levels of sediments reaching the marine environment and contributing to the destruction of coastal and marine habitats. A key contributor to this problem is the fact that most of the 43 water catchment areas in Dominica are located on privately owned lands where there are no effective controls on land use activities and therefore extensive cultivation on even marginal lands (areas of steep slopes and/or poor soils), which have caused not only soil erosion and landslides but also the sedimentation of many rivers and decreases in water quality.
- ***Housing, Tourism and other Infrastructure:*** Over the past several decades, scarce agricultural land has been converted for housing, tourism and other infrastructure. In many cases these developments have been carried out illegally, and even legal infrastructure projects are mostly carried out with very little consideration of adequate environmental safeguards. This in turn has prompted the clearing and conversion of steeper forested lands into agriculture. In addition, Dominica's National Forest Policy has identified housing development as a major pressure on Dominica's forest resources, noting that; "In recent years, more houses are being built in the higher elevations, often in sensitive watershed areas or near water catchment and storage areas."
- ***Mining:*** The quarrying industry in Dominica has grown significantly in recent years; exports of pumice sand and aggregates increased from 3.7% of total exports in 2002 to 11.2% in 2007.²² This industry has evolved in an environment with very little regulation²³, and illegal mining operations are common. Both legal and illegal mining / quarry operations contribute to land degradation and increased sedimentation of aquatic, coastal and marine ecosystems, particularly along the west coast of the country. As a result, future development of this sector needs to be regulated more effectively so as to minimise negative impacts on the environment, communities and other sectors.²⁴
- ***Invasive Alien Species (IAS):*** The introduction and spread of some invasive alien species (IAS) in Dominica has resulted in disturbed land cover and increased incidence of fires, which in turn have contributed to soil erosion and water runoff / flooding. The most widespread impact has probably been from Citronelle grass (*Cymbopogon nardus* or *Cymbopogon witerianus*), which invades forested areas from sea level up to 1000 meters and poses a threat to native vegetation and also presents a fire hazard. Other invasive alien species affecting the flora of Dominica include the African tulip (*Spathodea*

¹⁹ Ibid

²⁰ Ibid

²¹ "Introductory Paper on Land Degradation and Drought Issues in Dominica"; Marie Jose Edwards, Partnership Initiative for Sustainable Land Management (PISLM), 2014.

²² Sector Strategy, Natural Resources and Energy Sector

²³ Taylor, M, A Review of the Draft Quarry Code of Practice to be Implemented in Dominica, Final Report. Caribbean Open Trade Support (COTS), Indefinite Quantity Contract No. AFP-I-00-04-00002-01, Task Order No. AFP-I-02-04-00002-00, Prepared for USAID/Caribbean

²⁴ CaribInvest (West Indies) Ltd, Diagnostic and Analytical Review of Environmental Governance Systems in Dominica, the Caribbean Community Secretariat (CARICOM), January 2011.

campanulata), which invades disturbed semi-evergreen and deciduous forests; Zing Zing (*Leguminaceae Spp*), which invades disturbed coastal vegetation; and *Heliconia wagneriana*, which invades interior vegetation.

- **Climate Change:** As noted above, extreme meteorological events affect Dominica on a regular basis, and the heavy rains and isolated thunderstorms associated with these systems result in massive landslides, loss of topsoil, and degradation of ecosystem services. Projected Climate Conditions for Dominica based on the overall national trends and projections taken from Dominica's "2nd National Communication on Climate Change" (2012) include: continued increased warming (the country is projected to be warmer by up to 1.3°C by the 2050s and between 2 and 3 degrees by the end of the century); increased drying and droughts; and likely increases in hurricane intensity (as indicated by stronger peak winds and more rainfall). With increased frequency and intensity of hurricanes, the country can expect to see accelerated land degradation, erosion of coastal areas due to storm surge and battering surf that is precipitated by human-induced activity in vulnerable areas. Forests will become increasingly vulnerable to the problems associated with global warming and climate change; it is believed that hurricanes result in significant impacts on the island's forest structure, and more frequent drought events will increase the potential for forest fires as well as decrease agricultural output. Coastal communities are at risk to climate related hazards such as hurricanes and storms and associated storm surge, high seas, high winds and flooding from rivers and ravines. With increased drought, Dominica can expect similar impacts to the 2009-2010 drought, which resulted in decreased agricultural production, especially vegetables, increases in the price of food, and lower than normal flows in rivers and streams. Drought will also contribute to the likelihood of forest fires; reports from the Dominica Fire and Ambulance Service already indicate an increasing trend in the number of forest fires in the country.

Long-term Solution and Barriers

The **long-term solution** envisioned under this project is to incorporate agricultural, forestry and other resource management practices in Dominica into an integrated land management model that reduces land degradation characterized by loss of productivity and ecosystem degradation through intensification and adaption of production systems to the hard weather events. However, there are two barriers to implementing this solution, as described below:

Barrier 1: Absence of 'whole island' landscape level framework for controlling land degradation and upscaling SLM in Dominica: Dominica's National Land Use Policy (NLUP) was approved in May 2015; however the policy needs to be reviewed, updated and implemented to be consistent with Dominica's obligations under both the UNCCD and CBD, as well as other supporting plans and strategic approaches. In addition, the country National Physical Development Plan (NPDP) is still in draft form, and the fact that the NPDP has not been finalized has constrained implementation of the NLUP, as the NPDP provides many of the implementation mechanisms and details for the NLUP. The absence of an updated and coherent National Land Use Policy constitutes a significant barrier in developing and implementing a comprehensive land management and land use plan for Dominica, including the strategies necessary for the sustainable use and conservation of biodiversity supported by the necessary legal and institutional support. The continual absence of a comprehensive land management and land use plan for Dominica means that decisions with respect to land and natural resources will continue in an ad hoc manner, resulting in lack of proper management of land resources. Studies carried out during the process of the alignment of the National Action Plan to combat desertification showed that an analysis of the impacts of relevant national policies on land degradation and cooperation among key stakeholder agencies and groups is needed to guide policy reform and development. There is a need to harmonise and coordinate efforts across sectors, and spearhead innovative ways and means of enhancing ecosystem functioning and resilience in an integrated and coordinated way that balances socio-economic and environmental objectives. Decision-makers lacks solid information on which to base decisions regarding land use allocation and management. Without a proper assessment, monitoring and planning regime for the maintenance of ecosystem services, managers and users have a difficult time effectively evaluating and integrating land degradation risks within decision-making. There is a consensus that the current institutional framework for environment and natural resource in Dominica needs further rationalising since the Environmental Coordinating Unit—the main environmental body in the Country—in its current form is inadequate to deal with the environmental challenges confronting the nation and must be restructured and given a legal mandate in law. In response, draft legislation has been drafted but not enacted nor implemented. The lack of adequate manpower resources and training, as well as the support infrastructure needed to effectively implement laws and regulations, have also been identified as important factors influencing the country's ability to address land degradation. Regarding the institutional framework, the main environmental body—Environmental Coordinating Unit—lacks the primary legislation to enforce measures deemed necessary to effectively address the issues underpinning land degradation. Weaknesses are also evident in the land administration system in Dominica, in particular with respect to the absence of a comprehensive land use plan to guide the country's development.

Barrier 2: Insufficient investment and citizen engagement in INRM approaches: A major barrier preventing integrated sustainable land management is the lack of adequate financial and technical resources to support activities in these areas. The decline of banana production (from a high of 76,872 tons in 1988 to 23,403 tons in 2013), due primarily to the removal of preference to the European market, has resulted in a serious decline in the volume of exports, the loss of income to a large part of the population, and a decline in foreign exchange revenue to the country. This, in turn, has affected the country's ability to make significant investments in sustainable land management, including in sustainable agricultural practices, sustainable forest management, ecosystem restoration, watershed management, and public education and awareness on these issues. Lack of awareness and experience among farmers of viable SLM approaches inhibits the uptake of practices and technologies aimed at mitigating land degradation (e.g. conservation agriculture; enhanced soil fertility and farm and cropping practices and water management systems; strengthening of farmer

organisations/committees; native forest restoration etc.). More generally, environmental management is largely seen as the domain of government, and as a result, a culture of conservation is not present that would support the utilisation of land resources, directly leading to problems such as degradation of steep slopes through poor farming practices.

2) The baseline scenario or any associated baseline projects

Government Baseline

The Government of Dominica in recent years has undertaken a number of initiatives that provide a baseline for this project. In response to the continual concerns about land management and land use, the Government with support from the Caribbean Development Bank began the preparation of a National Physical Development Plan and National Land Use Policy in early 2014. The drafts that exist provide an adequate baseline on which to prepare a Comprehensive Land Management and Land Use Plan, which is a core activity of this project. Another important baseline activity of significance to this project is the preparation of the NAP Alignment under UNCCD as part of the Government's commitment for sustainable land management. This activity was undertaken in 2014. It is estimated that the Government of Dominica will spend approximately US\$8 million on the management of forests and wildlife, and US\$3 million on planning and policy development activities for the agriculture sector during the period of the proposed project.

- The Disaster Vulnerability Reduction Project (DVRP), a World Bank funded initiative, focuses on reducing vulnerability to natural hazards and climate change impacts in Dominica through: (i) investment in resilient infrastructure, and (ii) improved hazard data collection and monitoring systems. Component 1 "Prevention and Adaptation Investments" aims to reduce physical vulnerability and to pilot adaptive measures to build resilience to current and future hydro-meteorological shocks. The sub-projects included under this component include: (i) construction of water storage and distribution infrastructure; (ii) slope stabilization interventions; (iii) climate resilient rehabilitation of primary and secondary roads and bridges along the East Coast and the South; and (iv) improved climate resilient drainage systems including maintenance of storm water drainage systems. Component 2 "Capacity Building and Data Development, Hazard Risk Management and Evaluation" includes support for capacity building for analysis and assessment of risks from natural hazards and climate change including the integration of this analysis in the development decision making process. Component 2 supports the creation of relevant core data and data collection systems as well as the integration of analytical tools to permit improved decision-making and engineering design for risk reduction and climate change adaptation. Core data systems to be or being developed under this component include: (i) creation of a high resolution digital and bathymetric model for Dominica; (ii) creation of a high resolution soils survey map including chemical and physical characteristics for each soil unit; (iii) design and deployment of a robust hydromet network to provide high resolution hydrologic data for use in a wide range of activities to support, for example, engineering design, national land use and coastal zone planning, disaster management, roads construction practices and design, agricultural development and others; and (iv) community level risk mapping and training on climate adaptation measures. The project started in 2014 and will invest approximately US\$30 million in Dominica over the period that overlaps with this proposed project. The DVRP focuses on 'hard' infrastructure. The proposed project will integrate ecological infrastructure into decision-making and will assist in translating the data and information collated through the two projects into a Land Use and Land Management Plan.
- Dominica is one of ten countries from the African, Caribbean and Pacific (ACP) group of states that is benefiting from the EU-funded Banana Accompanying Measures (BAM) Initiative; the Commonwealth of Dominica has an indicative financial allocation under the BAM of between 14 and 15.5 million Euros (of which US\$ million constitutes co-financing for this project). The BAM is a support package approved by the European Commission in 2010 for banana-exporting countries to facilitate their adjustment to the end of preferential terms for banana exports to the European Union. The BAM is intended to support sustained growth in the agriculture sector and increased income for producers, including small farmers, by diversifying agricultural production in Dominica and thereby contributing to employment, poverty reduction, rural development and social and economic stability. The BAM Initiative is designed to address underlying weaknesses in the agriculture sector including land management issues, strengthening of entrepreneurial and technological development and innovation, implementation of quality standards, improvement of physical infrastructure, development of agricultural information systems, and enhancement of risk management systems, and will therefore provide the baseline for this GEF intervention.

Donor-Funded Baseline

- Dominica is also one of the OECS countries participating in the European Union (EU) Commission financed initiative that is being executed through the Global Climate Change Alliance (GCCA). Through this initiative, support will be provided to OECS countries including Dominica to implement a project on Climate Change Adaptation (CCA) and Sustainable Land Management (SLM). Implementation of this initiative commenced in January 2014 and will end in November 2018.

- The Caribbean Aqua-Terrestrial Solutions (CATS) Programme (<http://caribbeancats.org/>) is being funded by the German Federal Ministry of Economic Cooperation and Development (BMZ) (10.5 Million Euros) between 2013 and 2017 in eight target countries – Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines. The Programme is being implemented by the Caribbean Public Health Agency (CARPHA) on behalf of CARICOM, and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), in association with a number of other partners. The CATS initiative is supporting activities including community spatial planning, watershed and water quality assessments that will provide important data and lessons learned for the design and implementation of this project.
- The USAID / OECS Reduce Risks to Human & Natural Assets Resulting from Climate Change (RRACC) Project (<http://www.oecs.org/our-work/projects/rracc>) was launched in July 2011 in the six independent Member States of the OECS (Antigua and Barbuda, Dominica, Grenada, St Kitts and Nevis, Saint Lucia, and St Vincent and the Grenadines). The project has a budget of US\$15.2 million, which is focused on four component areas: 1) improving the enabling environment to build understanding and support for policies and laws that reduce vulnerability to climate stresses; 2) launching interventions in freshwater and coastal management to build resilience and demonstrate results; 3) building institutional capacity and addressing information gaps through support for key practitioners in government and related sectors affected by climate change as well as support for institutions in the region such as training facilities, government departments and entities charged with developing data; and 4) building awareness of the public on issues related to climate change and improving capacities for climate change adaptation. Although this project is focused specifically on increasing resilience to climate change impacts and does not necessarily focus on land degradation issues, it is expected that valuable lessons learnt from this project will be drawn upon in the design of the current project

3) The proposed alternative scenario, GEF focal area²⁵ strategies, with a brief description of expected outcomes and components of the project

Project Overview: Agriculture is critically important to the economy of Dominica, and with the decline of the once dominant banana industry, diversified crop production by small farmers has become the dominant form of agricultural production. This smallholder farming frequently takes place on marginal lands where steep slopes and poor soils require the implementation of soil and water conservation and other sustainable land management practices. However, many smallholder farmers do not possess the understanding, experience or capacities necessary to implement SLM agriculture. At the same time, deforestation caused by agricultural and infrastructure expansion is resulting in severe land degradation processes in many watersheds on the island. Dominica is particularly vulnerable to land degradation from deforestation and unsustainable agricultural practices because of its topography and its location in the hurricane belt of the Caribbean; more than even most of its neighbours, Dominica has suffered repeated extreme weather events (hurricanes, flooding, droughts) that greatly magnify land degradation processes.

Component 1: Enabling “whole island” landscape framework to plan, monitor and adapt land management: As described in the baseline, Dominica’s draft National Land Use Policy (NLUP) and draft National Physical Development Plan (NPDP) provide the basic framework for land use planning and management in the country. Using these documents as a guiding principle, the project will support the development of a community-led Comprehensive Land Management and Land Use Plan (CLMLUP) to consolidate and guide the application of the NLUP and the NPDP at the community level, thereby generating community buy in and participation in a consolidated approach to land use planning and zoning and associated physical development planning. The CLMLUP will provide the framework for developing community land use plans in at least 30 communities, ensuring the optimal allocation of land resources to generate development benefits and critical environmental benefits in tandem. In order to strengthen Integrated Natural Resource Management (INRM) approaches in Dominica, the project will support the development of a Land Information System (a Geographical Information System focused on land use) to consolidate and make available key spatial data and information for resource managers. The land information decision support system will be managed by the ECU in collaboration with the Land and Survey Department; these two departments already have personnel trained in GIS and database management. This system will aid landscape modelling and planning as well as the monitoring of impacts and global environmental and development benefits resulting from community and government actions at different scales. Through this “decision support system”, Dominica will be able to identify existing land uses and to determine the current and potential effects of land degradation on ecosystem services. The project will set up protocols for monitoring and evaluation of SLM practices in Dominica and link this to the GIS system. A multi-sector planning platform that brings together authorities tasked with natural resource and land use planning and permitting (including the Department in charge of urban planning) at a national scale will be put in place, which will facilitate the development and implementation of the CLMLUP and agreement on areas where development is permitted (but managed to balance environmental and development needs) and areas where development is to be avoided. The project will further contribute to

²⁵ For biodiversity projects, in addition to explaining the project’s consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

strengthening of the enabling environment by strengthening the legal framework and mandate of the Environmental Coordinating Unit to give it increased authority and capacity to enforce measures deemed necessary to effectively address the issues underpinning land degradation, including illegal logging, mining and infrastructure development. The process will involve a review and strengthening of existing and draft legislation related to ecosystem services and land management, with the objective of ensuring that the legal framework is in place to allow for full community participation in the development, monitoring and enforcement of the CLMLUP and associated community plans. National validation consultation will be conducted on the suggested improved legislation and submitted to the Cabinet for formal approval. The capacity of the regulatory authorities, in particular the Environmental Coordinating Unit, law enforcement agencies and courts, will be strengthened to prosecute land crimes (illegal logging, mining, and infrastructure development, as well as squatting), and institutions with sectoral responsibilities for development and conservation, together with relevant CSOs and community partners, will receive capacity building in land use planning, use of the Land Information System, and application of SLM practices. Finally, PISLM will provide co-financing support to implement a knowledge management strategy to both disseminate information within Dominica and to enhance regional cooperation and knowledge sharing between this project and other SLM projects being implemented in Caribbean SIDS.

Component 2: Reducing the Effects of Land Degradation on Ecosystems Services through Sustainable Land Management: To complement the establishment of the enabling policy and regulatory framework at the national level, the project will identify and support the implementation of a package of SLM approaches and technologies in four targeted Parishes (Saint David, Saint Paul, Saint Joseph and Saint Patrick) that encompass an area of 40,460 ha. Dominica is one of the most mountainous countries in the Caribbean region, and much of the country is a mosaic of forested areas and agricultural lands within watersheds where land degradation processes in one area can greatly impact adjacent and downstream areas, particularly during extreme weather events. For this reason, the project will develop SLM approaches that can be employed by small farmers and communities that improve the sustainability of farming practices on agricultural land, restore degraded forest areas, and together improve land productivity and resilience to extreme weather events. By addressing land degradation processes on both farmland and degraded forest areas, the project also will help to generate community interest and cohesion in SLM. Working with Dominica's extension agents, the project will assist farmers in practicing sustainable land management in diversified crop production covering at least 2,000 ha, with a focus on areas identified as land degradation hotspots. Appropriate SLM approaches will be assessed and included in a package for use by farmers and communities; for farmlands, these are expected to include activities such as contour planting, leaving strips of natural vegetation in order to reduce landslides, enhanced soil fertility and farm and cropping practices and water management systems; reduced use of fertilisers and pesticides; Keyline systems for soil and water conservation, irrigation and flood management²⁶, etc. At the same time, a package of SLM approaches and technologies for restoring at least 4,000 ha degraded forest areas with native vegetation will be developed and disseminated in communities in the four parishes. Emphasis will be placed on the rehabilitation of a number of degraded watershed areas, namely Petite Savanne, Pichelin, Good Hope, Dubique, Campbell, Coulibistrie, San Sauveur, Petite Soufriere (see Annex 2 for descriptions of these sites), which were significantly damaged during Tropical Storm Erika in 2015 and subsequently declared as disaster areas. Final selection of areas will be based on the information collected during the project preparation phase. Finally, a National public education and awareness programme on Sustainable Land Management in Dominica, with a focus on schools and agricultural training institutions, will be developed and implemented in order to upscale the lessons learned and the implementation of good SLM technologies to a national scale, increase public support for tackling the important problem of illegal housing, squatting, and mining activities, and facilitate ongoing community interest and involvement in land use planning.

4) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTE, LDCE, SCCF, and co-financing

The project will contribute to global environmental benefits primarily through reduced soil erosion and reduced risk of degradation. The global benefits that will be delivered primarily include the adoption of SLM practices that will reduce land degradation and secure ecosystem services over an area covering at least 40,460 ha in the targeted parishes as follows:

Table: Identification of benefits associated with alternative production systems promoted by project.

Current practices	Alternative production systems	Expected benefits*
Limited adoption of soil management practices (increased mechanization, failure to observe contour lines, increased monocultures, etc.)	Soil erosion control techniques: e.g. mulching, zero-tillage, hedge management and windbreakers, crop diversification, mulching systems, terracing, gully stabilization, etc.	Reduced soil and nutrient losses and soil compaction; higher soil moisture and increased water availability; improved soil biological/chemical quality and productivity

²⁶ See for example http://www.permaculturenews.org/resources_files/KeylineArticle.pdf

Excessive and inappropriate use of chemical inputs (herbicides, pesticides and fertilizers)	Biological control; adherence to requirements for chemical inputs; mulching systems; crop rotation to reduce pests. (possibly only through extension, to be determined during PPG)	Reduced groundwater contamination; improved soil quality; improved worker health
Degradation of forest and removal of natural vegetation due to encroachment for settlement and slash and burn agriculture	Adequate compliance monitoring of Comprehensive Management and Land Use Plan, ensuring that existing forested areas are not utilized for agriculture or settlements	Reduced deforestation: - no net loss in forest and natural vegetation patches in four targeted parishes Reduced soil erosion; reduced biodiversity loss

* Targets to be defined in PPG phase

A description of the co-financing resources from the BAM is provided in the baseline analysis above. Other co-financing from the Government of Dominica will be used to provide support to the project from staff at the ECU, Agriculture, Land and Survey, and other departments, in particular agricultural extension staff, as well as support in terms of office space, equipment, travel costs, and other logistics. Co-financing from CARIFORUM consists of an EU grant for training of agricultural extension officers. Co-financing from PISLM consists of staff time, office space, travel costs, etc., including support for facilitating knowledge management and dissemination at the regional level. The \$9,000,000 in co-financing for Component 2 consists primarily of co-financing from the BAM for market development and infrastructure for SLM and risk reduction (e.g. retaining walls, water infrastructure, etc.), as well as funding from the Government for agricultural extension, re-vegetation, and local land use planning / management work

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

The project will produce the following benefits:

- Favourable policy and institutional environment supportive of SLM, which would lead to the improved management of landscapes covering 40,460 hectares (coverage of the four parishes);
- 2,000 ha of arable land under improved SLM resulting in decreased soil erosion;
- 4,000 ha of watersheds rehabilitated/reforested resulting in an increase of vegetation cover on the island;
- Reduced soil erosion rates due to improved agricultural practices and watershed rehabilitation (baseline to be defined during PPG).

Components	Global Environment Benefits
Component 1: Enabling “whole island” landscape framework to plan, monitor and adapt land management:	This Component provides the platform for improving integrated sustainable land management and the achievement of global benefits resulting therefrom. It is also consistent with the strategic objectives of the UNCCD 10-year strategy. The implementation of this Component will further contribute to the strengthening of the institutional and legal framework for environmental management, including SLM in Dominica, which is essential in contributing to the enhancement of deriving global benefits from interventions made under this project.
Component 2: Reducing the effects of land degradation on biodiversity and ecosystem services through sustainable land management	The training provided by this project will increase the knowledge of small farmers and local communities in a range of SLM technologies and methodologies. This will enable these stakeholders to contribute to increasing the ecosystem resilience thus enabling them to respond better to extreme meteorological events. The proposed project is in line with the objectives of the UNCCD, and in particular, the UNCCD’s 10-year strategic plan and framework to enhance the implementation of the Convention (2008–2018). This proposed Project has been designed to contribute to all four strategic objectives of this 10-year strategy, namely to improve the living conditions of affected populations; to improve the condition of affected ecosystems; to generate global benefits through effective implementation of the UNCCD; and to mobilize resources to support implementation of the Convention through building effective partnerships between national and international actors.

6) Innovation, sustainability and potential for scaling up

Innovation: The project demonstrates many approaches for the first time in Dominica, including integration of land degradation data and sustainable land management practices into land use planning and collaboration among different sector departments in order to ensure an integrated response at the local level. Innovative SLM practices will also be demonstrated in order to showcase appropriate responses to the serious land degradation issues experienced in Dominica.

Sustainability: A key factor in ensuring the sustainability of this project is through the direct involvement of local communities and small farmers from the outset of the project. The knowledge gained through the training in SLM tools and methodologies as well as the experience gained in their application are invaluable in ensuring that these approaches become mainstreamed and

hence contribute overtime to the sustainability of the project outcomes. The training of communities in the various approaches will be institutionalized in various organizations (ECU, Dominica Organic Agricultural Movement, Dominica Conservation Association with support from NGOs, Academic and Research Institutions and Farmers Organization – exact configuration to be confirmed during PPG). This will allow continued support beyond the project. The training will be reinforced by and include extension officers, who will also continue their support and sharing their technical know-how after project closure. Further, the mainstreaming of sustainable land management, and especially the integration of field-tested SLM tools and methods, into the Land Use and Land Management Plan of Dominica ensures sustainability of the approach of the project. The increase in productivity and adapting to natural disasters are ways of ensuring sustainability. The strengthening of the main environmental arm of the Government of Dominica (the ECU) through this project by the necessary legal arrangements will contribute significantly to the sustainability of the project outcomes since the ECU will be empowered legally to take the steps necessary to facilitate sustainable land management practices and biodiversity conservation in Dominica.

The scaling – up potential: The implementation of this project offers significant potential for its upscaling to other areas in Dominica. The field testing of a package of SLM tools and methods and the integration of such in the Land Use and Land Management Plan augers well for their replication to similar problems elsewhere in the country. The lessons derived from the implementation of this project can be replicated throughout Dominica. Since the project is also being implemented within the broader context of the Partnership Initiative for Sustainable Land Management (PISLM) Caribbean SIDS, the lessons learnt are likely to have relevance for other countries of the region, therefore extending the potential for upscaling.

2. Stakeholders. Will project design include the participation of relevant stakeholders from [civil society organizations](#)(yes ☒ /no ☐) and [indigenous peoples](#) (yes ☒ /no ☐)? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

Stakeholders	Summary of Mandates	Roles in Project Preparation
Environmental Coordinating Unit (ECU)	Created by a Cabinet of Dominica decision in 1999, the Environmental Coordinating Unit (ECU) is the core environmental policy entity in the Ministry of Environment, Natural Resources, Physical Planning and Fisheries. Its core responsibilities include: the provision of advice to the GoD on the development of coherent environmental policies; promotion of interest and encouragement of public participation in environmental matters through public awareness; to serve as the focal point for regional and international agreements on environmental issues, and monitor and report on Dominica's compliance with articles and decisions of the Environmental Conventions; to serve as the government agency with responsibility for the dissemination of information on the environment; to undertake basic research and coordinate studies on the impacts of development projects on the environment, and to liaise with other governments and private sector agencies on issues of impact on the environment.	The ECU will provide the overall national coordination for the project and will play a critical role in serving as the liaison between the project and policy makers. It will therefore from a policy standpoint ensure that the Cabinet is kept informed about project implementation activities and their implications for national development. The ECU will also provide technical backstopping to the Project Unit that will be established to oversee the day-to-day management of the project.
Caribbean Network for Integrated Rural Development (CNIRD) & the Partnership Initiative for Sustainable Land Management (PISLM)	The Partnership Initiative on Sustainable Land Management (PISLM) was established based on a decision taken at the Caribbean Sub-Regional workshop on Land Degradation in February 2004. PISLM serves as a mechanism to facilitate exchange of good land management practices between participating countries, and serves as a mechanism for stimulating the replication of approaches, tools and methodologies throughout the region. CNIRD, which is a NGO focusing on Sustainable Land Management issues, provides the support office for the PISLM and reports on the activities of the PISLM to the Ministers of Environment of the Caribbean Community.	The PISLM through the CNRID will act as the Executing Entity and office for the project, in close collaboration with the ECU. This will improve the oversight of the project implementation since the project by virtue of being implemented under the auspices of the PILSM would necessitate it reporting to the PILSM. In addition, since CNIRD reports to the Council on Trade and Economic Development (COTED) of the Caribbean Community of which Dominica is a member, another layer of accountability will be added to the project as well as complementarities with other similar initiatives being undertaken in the region.
Caribbean Community Secretariat - CARICOM	CARICOM as the political organ of the Caribbean Community, has a role in bringing regional policy positions to the attention of Heads of Government and other Ministerial bodies. It is currently in the process of formulating its Environmental and Natural Resources Policy Framework and its First Action Plan.	CARICOM will support the design of project activities related to planning, monitoring and evaluation; capacity building; and dissemination of project results
Dominica	Formed in January 2006, DOAM's mission is: to produce and	It is anticipated that the DOAM, given its technical

Organic Agricultural Movement (DOAM)	facilitate the production of organic agricultural commodities of optimum quality and quantity, employing principles, methods and practices which protect the farm environment with particular regard to a co-existing rather than a dominating natural system; to create awareness and recognition that organic production provides an excellent opportunity for a sustainable agricultural diversification, and to promote the development of a sustainable organic industry in Dominica	capabilities, will provide technical support to the project.
Dominica Conservation Association (DCA)	DCA is involved in education, organisation and promotion of participation in the judicious management and development of Dominica's natural, cultural and economic resources through appropriate conservation measures, to preserve and enhance the nation's heritage and improve the standard of living for present and future generations.	DCA is a member of the Commonwealth Forestry Association and would provide technical and community support to the project design as well as in project implementation, particularly in support of the rehabilitation of degraded watershed areas.
The Kalinago Council	The Kalinagos (Caribs) were the original inhabitants of Dominica, who traditionally engaged in fishing, hunting, and farming. They also weaved baskets and were famous for their herbal medicines. Today the Kalinagos are governed by the Carib Act and their affairs are managed by the Kalinago Council.	The Kalinago / Carib Council will provide collaborative support and partnership in the design of SLM protocols and initiatives in the reserve.
Dominica National Council of Women (DNCW)	The DNCW is a voluntary umbrella organization representing women's groups on the island. The umbrella organization has a membership of fifty-six registered groups divided into seven zoned districts.	The DNCW will provide the technical support to assist in mainstreaming gender into the activities of this project.
NGOs and Academic and research institutions	NGOs, academic and research institutions on the island provide tertiary education and resource persons.	Various NGOs and academic and research institutions will serve as resource persons in SLM training and documentation of best practices. They will also provide advocacy support in SLM technology adoption; and participate in SLM monitoring and performance evaluation.
Farmers organizations	The farmers' organizations in targeted parishes, if present, are the downstream beneficiaries of the project.	The farmers' organizations will participate in SLM project implementation as technology receiving constituents. They will also participate in SLM training and technology adoption; and provide feedback on the benefits and performance of SLM technology adopted.

3. Gender Equality and Women's Empowerment. Are issues on equality and women's empowerment taken into account? (yes ☒ /no ☐). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

The Commonwealth of Dominica is committed to protect and maintain the rights of all its citizens as is enshrined and expounded in the constitution. The constitution entitles women, men, boys, and girls to equal rights to exist in freedom, dignity, peace and non-discrimination. The Government of Dominica adopted a National Policy and Action Plan for Gender Equity and Equality in 2006. Since then many achievements regarding gender equity and equality have been reached and Dominica continues making strides towards the social economic achievement of women and indeed towards full gender equity and equality. In education, females continue to outperform their male counterparts. In the area of health and wellness, indications are that women outlive men. While it cannot be said that women have made inroads in the highest level of decision making on the island, the situation is more favourable for women in senior executive positions in the private sector and is about equal among men and women in the office of Permanent Secretary in the public sector. In a report on achievement and challenges regarding gender issues²⁷, gender violence and economic challenges are highlighted as two remaining challenges. It states the pockets of poverty present in Dominica are a factor contributing to gender violence and violence against women. Further, according to the Country Poverty Assessment report, 2011, females are most likely to be unemployed, as the rate of unemployment in 2011 stood at 11.1% for males and 17.6% for females.

Dominica's Gender Policy will be used as the framework for mainstreaming gender into all areas of this project. The Dominica Gender Policy aims to improve quality of life at all levels of society, and to contribute to gender awareness among policy makers, planners, implementers and the general public. It aims to "incorporate a gender perspective in all development

²⁷ Commonwealth of Dominica, 2013. Report on Two Areas of Achievement and Challenges to the Brasilia Consensus.

planning” in a way that makes for the “gendering” of development planning and policy formulation and implementation, and to establish a system of gender mainstreaming into all sectors of government and society.

Gender and social issues will be fully considered in this project, as they are important drivers and incentives for achieving global environmental benefits, a critical element for the success of the project. Existing information on gender inequality in Dominica will be assessed during the PPG phase and integrated into project design; if necessary, a study on gender inequality will be carried out during the PPG phase. Gender accountability is a crosscutting issue at both the project level and component level and 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. Socio-economic related activities will seek to build on existing information on the actual benefits women and disadvantaged communities can withdraw from ecosystems. All knowledge management activities will be gender mainstreamed. This includes integration of gender dimensions into publications, for instance, presenting sex-disaggregated data and gender-energy nexus theory; gender sensitive language in publications, photos that show both women and men and avoid presenting stereotypes; as well as assuring that women, men and the youth have access to and benefit from the knowledge created.

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

Risk	Risk level	Mitigation Measures
Vulnerability to natural disasters poses a risk to the project. Dominica is vulnerable to numerous natural disasters arising from meteorological events (high wind, excess rainfall and hurricanes) and geophysical events (earthquake, volcano and tsunami). These recurrent events have significantly harmed both the population’s socio-economic well-being and the country’s general economic and fiscal stability.	Medium	To mitigate the risks posed by natural disasters, in particular those arising from meteorological events, the project will work to strengthen the resilience of ecosystems by undertaking environmentally sound management practices. Many of the activities of this project (e.g. training of small farmers and local communities; rehabilitation of degraded watershed areas etc.) are specifically aimed at building ecosystem resilience to withstand the shocks associated with meteorological events. Similarly, the project will be adaptively managed, as these natural disasters impact project implementation. This will involve short term actions e.g. reprogramming of activities, revision of budget and management of delays that may occur since local government staff associated with the project will be busy addressing other emerging issues, which may put the project activities on hold.
Institutional weaknesses as well as those in the existing legal framework might persist and, therefore, constitute a risk to the accomplishment of the overall project objectives.	Medium	To address this issue a number of actions will be undertaken including, inter alia, a review and updating of existing and draft legislation to address existing gaps. To ensure the acceptance of the updated legislation by stakeholders, stakeholder consultations will be convened so as to get their concurrence with the suggested changes in the legislation. One of the main mitigation measures which will be pursued as an integral part of the project will be the strengthening of the main environmental body in Dominica—Environmental Coordinating Unit—to enforce measures aimed at addressing sustainable land management. In addition, farmers’ organizations will be strengthened to implement SLM and BD conservation measures. In light of the institutional weaknesses that exist, a small Project Coordination Unit will be established during project implementation to oversee the day-to-day implementation of the project.
Co-financing from different partners may flow slowly due to different institutional cultures	Low	The project will secure firm letters of co-financing and have a concrete follow up plan for delivery.
Willingness of small farmers and local communities to adopt new land management tools and methodologies and to change agricultural practices that contribute to land degradation and biodiversity loss.	Low	The identification of a package of good SLM technologies (e.g. soil conservation techniques, water control and conservation techniques, soil fertility maintenance, appropriate farm and cropping practices etc.) that produce both environmental and economic benefits (production increases and/or cost reductions) for farmers, and the training and outreach to farmers and local communities on these measures, will go a long way towards incentivizing these stakeholders to adopt new SLM technologies. In addition, awareness raising and communication activities will be part of the project framework. During the PPG phase all necessary consultations will be carried out with key stakeholders to get their buy-in.

5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives.

A number of other initiatives are already in place that have interlinked objectives with the present initiative and, directly or

indirectly, contribute to strengthening data available for Dominica in relation to specific environmental issues. A national project steering committee featuring key partners will be developed during the project preparation phase to ensure inclusiveness of key regional partners active in relevant arenas. Among the most important initiatives on which this project will build on are:

- In the productive landscape, the Commonwealth of Dominica has implemented a number of programmes to improve the sustainability of development and resource uses. From 2006 – 2011, Dominica participated in the GEF-funded **Integrated Watershed and Coastal Areas Management (IWCAM) project**. The overall objective of this project was to assist the participating countries in improving their watershed and coastal zone management practices in support of sustainable development. By implementing the project activities, participating countries significantly contributed to the protection of globally significant biodiversity within the Caribbean region through the long-term sustainable management of biological resources and ecosystems, while also mitigating or eliminating regional transboundary threats to those resources and ecosystems. The proposed project will draw on the lessons learnt from the implementation of the IWCAM project not only from the Dominican experience but also from across the Caribbean region. Additional information on this initiative can be found at <http://iwlearn.net/iw-projects/1254>. The project will also seek coordination with the follow-on project to IWCAM, the GEF funded **“Integrating Water, Land and Ecosystem Management in Caribbean Small Island Developing States - GEF IWeco”**, which is currently under development.
- Another important achievement in Dominica was the development of an Integrated Natural Resource Management (INRM) approach piloted under the **UNDP-GEF Sustainable Land Management project (2008-2012)**. Among other activities, this project selected 10 communities that were particularly vulnerable to land degradation impacts (landslides; sea level rise; etc.) where it trained technicians to create community resource maps, and then worked with the communities to use the maps to prioritize development and resource use plans, minimize or prevent land degradation problems, and prepare for potential climate change impacts. The lessons learnt from the INRM project will be built into the design of the proposed project during its project preparation phase.
- The proposed project also will be built on outcomes from the **GEF-funded Special Program on Adaptation to Climate Change (SPACC)** (2007-2011), which helped Dominica, Saint Lucia, and St. Vincent and the Grenadines to implement pilot adaptation measures addressing the impacts of climate change on the natural resource base of the region, focused on biodiversity and land degradation along coastal and near coastal areas. Relevant lessons will be drawn upon in the project preparation phase of the proposed project.

The following GEF projects are also currently under implementation and of relevance to the proposed project:

- **UNDP-GEF “Supporting Sustainable Ecosystem by strengthening the Effectiveness of Dominica’s Protected Area System” project**. This project started in 2015 and will end in 2019. The objective of the project is to demonstrate a model for effective integrated landscape management encompassing the strengthening of an existing PA (Morne Trois Pitons National Park) and establishment of its buffer zone in order to reduce threats to biodiversity and ecological functioning.

A Technical Working Group will be established that assembles technical experts on forest and sustainable land management and agriculture in Dominica and all the related projects in the targeted parishes will be represented on this group. Regular meetings will be held between the different projects to leverage synergies. Further, the project will establish a coordination mechanism that will bring together authorities tasked with natural resource and land use planning and permitting at a national scale.

6. Consistency with National Priorities. Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no ☐). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The Commonwealth of Dominica has ratified the UNCCD, and the proposed project is directly in line with the objectives of the UNCCD. In particular, it will contribute to implementation of the “10-year strategic plan and framework to enhance the implementation of the Convention (2008–2018)”, including all four of its strategic objectives: i) to improve the living conditions of affected populations; ii) to improve the condition of affected ecosystems; iii) to generate global benefits through effective implementation of the UNCCD; and iv) to mobilize resources to support implementation of the Convention through building effective partnerships between national and international actors. Moreover, concerns on a number of issues including deforestation, erosion, poor drainage, flooding, lack of awareness and education, lack of enforcement of existing legislations, sedimentation and siltation were raised during national stakeholder consultations on the alignment of the UNCCD NAP, and this project will address a number of these issues through integrated land use planning and management, institutional strengthening, public education and awareness, and stakeholder participation in watershed and forest management. In addition, with assistance from the GEF-IUCN “Land Degradation Neutrality Target Setting Project (LDN TSP)”, the Government of Dominica will work to establish national voluntary targets for Land Degradation Neutrality. The proposed project will support Dominica’s efforts in this regard by preventing and reversing land degradation processes, and will coordinate with relevant parties as necessary to ensure that these efforts are integrated with the national LDN target process.

The Commonwealth of Dominica has articulated its commitment to sustainable land management in various government documents including national reports, NAPs, and the NBSAPs. The proposed project draws on these plans with the view of implementing relevant aspects of them e.g. comprehensive land management plan etc. In addition, the project is in line and consistent with the GEF funded National Capacity Self Assessment carried out in Dominica, where the need for capacity building and creating the enabling environment to meet obligations under the conventions was outlined. The proposed project is also in line with the outcome document of the Third International Conference on SIDS—Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway—, which set out a programme for the sustainable development of Small Island Developing States. The Government of Dominica has endorsed and adopted the SAMOA Pathway.

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

An important aspect of the project will be support for the enhancement of regional cooperation and information and knowledge sharing. This aspect is important given that it is being implemented within the overall framework of the Partnership Initiative on Sustainable Land Management (PISLM). Within this framework, a Knowledge Management Mechanism will be established to enhance information and knowledge sharing on SLM projects being implemented in Caribbean SIDS, all of whom are members of the PISLM. Therefore, a full knowledge management strategy for the project will be developed during the PPG phase that takes account of information and knowledge sharing strategies both within the country and throughout the region. Furthermore, this strategy will be in alignment with the GEF knowledge management strategy so that the project can learn from and share with global community. Suitable partners and stakeholders for knowledge management will be identified (per component) during the PPG phase. All publications developed under this project will comply with the communications policies of the GEF and its partner Agencies.

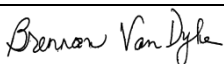
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT²⁸ 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)
Lloyd Pascal	GEF Focal Point	Environmental Coordinating Unit	09/15/2016

B. GEF AGENCY (IES) CERTIFICATION

This request has been prepared in accordance with GEF policies²⁹ 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
Brennan Van Dyke Director, GEF Coordination Office, UNEP		February 14, 2017	Johan Robinson, UNEP Task Manager	+254 20 7623031	johan.robinson@unep.org

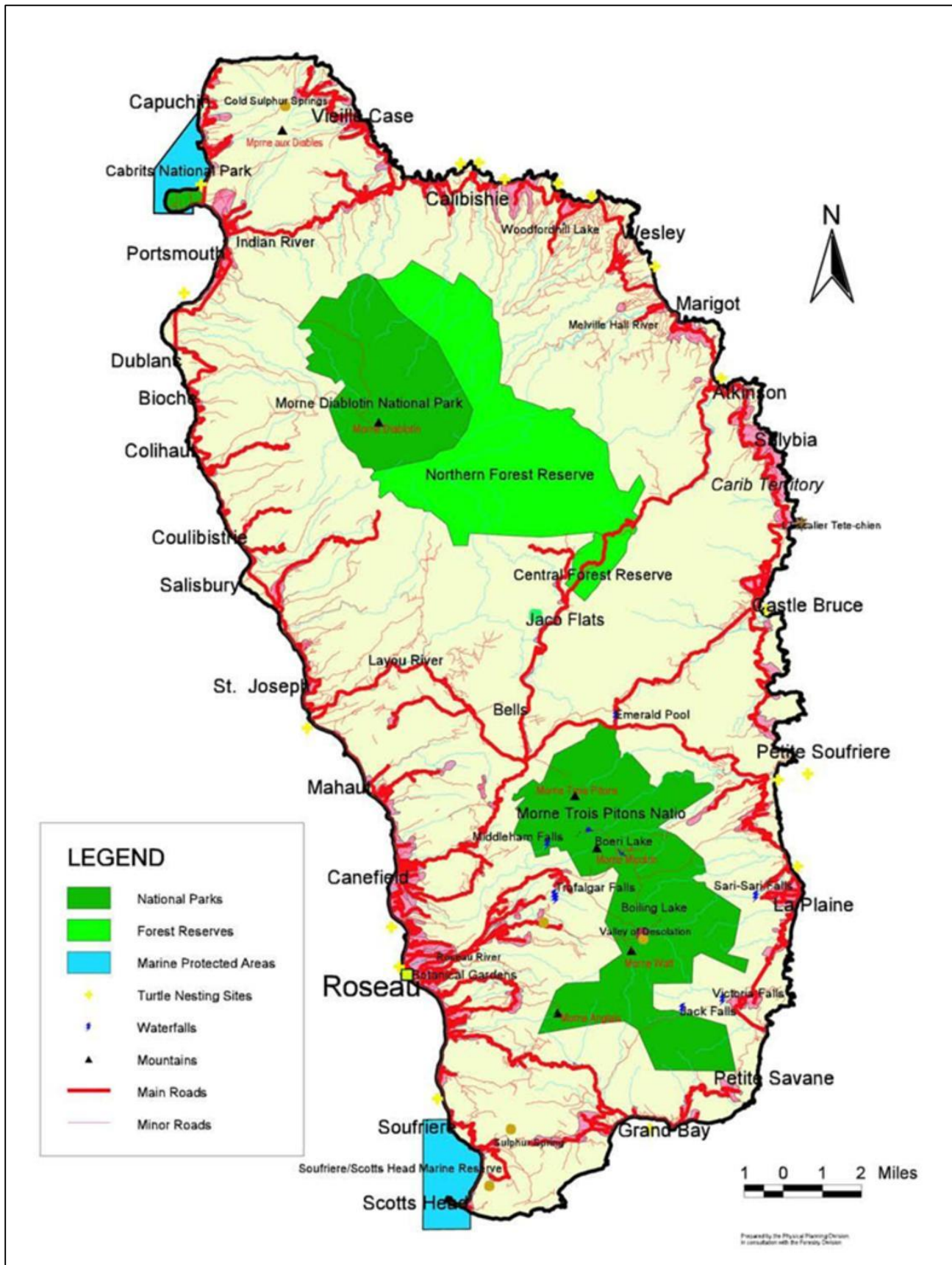
C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

²⁸ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

²⁹ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

Annex 1: National Parks and Protected Areas of Dominica



Annex 2: Target Parishes and villages declared as disaster areas in the aftermath of Tropical Storm Erika

Saint David Parish

Saint David is one of Dominica's ten administrative parishes, located on the eastern side of the island. It has an area of 131.6 km² and a population of 6,789. Its largest settlement is Castle Bruce, with a population of 1,653. Other villages include: (i) Grand Fondi, (ii) Rosalie; (iii) Good Hope; (iv) Petite Soufriere; (v) Riviere Cyrique; (vi) Morne Jaune; (vii) San Sauveur.

The northern area of the parish is also home to the island's Carib Territory, in and around which 3,000 indigenous Caribs live.

Petit Soufriere is a small village on the south coast of Dominica, upland from Petit Soufriere Bay in Saint David Parish. Located on the steep slopes of Morne Aux Delices at the end of the main road south from Castle Bruce, it is one of the most isolated villages in Dominica. Historically, Petit Soufriere had never been part of a large estate because of the rough terrain, and instead developed as a peasant farming settlement. Today, it remains a small, rural community of farmers.

Good Hope is a small fishing farming community located on the east coast of Dominica. The community is home to about 500 residents. The community is mainly managed by a Resource Management Committee, which oversees projects of development, the functioning of the community's resource centre and also the overall well-being of the community.

San Sauveur is a small fishing community on the east coast of Dominica best known for the abundance of fish. It is located near Grand Marigot Bay which is – thanks to coral reefs – more protected than most of the other bays on the Atlantic coast of Dominica. The village itself is rather small but it has an old church as well as a primary school that also serves the neighbouring villages. It is located in the parish of St. David and near to the villages of Castle Bruce, Good Hope and Petite Soufriere, and the Douglas Charles airport at Marigot.

Saint Paul Parish

Saint Paul is bordered by St. Joseph to the north, St. David to the east and St. George to the south. It has an area of 67.4 km² and a population of 8,397. The largest settlements are Canefield (where the island's second airport is located) and Mahaut. Another village in the parish, Massacre, is so-called because of the historic massacre of Dominica's indigenous people by European settlers. Cochrane, Springfield Estate and Pont Casse are located in the interior. The parish is also the site of a factory at Belfast Estate, where Dominica Coconut Products operates.

Campbell Village is a small village in Dominica. It is located in the parish of St Paul, near Mahaut Village and is notable for its hidden waterfalls.

Saint Patrick Parish

Saint Patrick has an area of 84.4 km² and has a population of 8,383. Grand Bay (also known as Berekua) and La Plaine are the largest settlements in the parish. The villages of Pichelin, Dubique and Petite Savanne occur in this parish.

Pichelin and Dubique are nestled along the slopes of the mountain ranges surrounding Grand Bay. The mountain ranges include Bois Den in the south, Palmiste in the west, Morne Plat Pays to the north-west, Morne Anglais and Morne Watt to the north, and Foundland range to the north east and east.

Petit Savanne was a village on the southeast side of Dominica. It had an estimated population of 1,200 in 2015. The region the town was built on features some of Dominica's steepest terrain, the slopes were composed largely of silt and clay. Multiple landslides devastated Petite Savanne during Erika. A mandatory and permanent evacuation of all residents (823 people) was subsequently implemented. The village was later deemed uninhabitable and a new town need to be built elsewhere. Plans for a new settlement, comprising 500 – 1,000 homes, were established in February 2016.

Saint Joseph Parish

Saint Joseph has an area of 120.1 km² and a population of 5,765. Saint Joseph Village is the largest settlement in the parish. Most villages are located on the coast (Salisbury (also called Baroui), Coulibistrie, Mero and Morne Raquette), but another small locale, Belles, is located in the interior. The parish is home to the Layou River.

Coulibistrie is a village on the west coast of Dominica, in the northwest corner of Saint Joseph parish. It extends inland from the coast within a deep valley, along both banks of the Coulibistrie River. It is primarily residential with few businesses. Many of the houses are built directly atop or adjoining the numerous large boulders that litter the valley along its base.