



PROJECT IDENTIFICATION FORM (PIF)
PROJECT TYPE: MEDIUM-SIZED PROJECT
TYPE OF TRUST FUND: GEF TRUST FUND

PART I: PROJECT IDENTIFICATION

Project Title:	Supporting Sustainable Ecosystems by Strengthening the Effectiveness of Dominica's Protected Areas System		
Country(ies):	Dominica	GEF Project ID: ¹	5761
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5089
Other Executing Partner(s):	Environmental Coordinating Unit (Ministry of Environment, Natural Resources, Physical Planning and Fisheries)	Submission Date:	March 24, 2014
GEF Focal Area (s):	Biodiversity	Project Duration (Months):	48
Name of Parent program (if applicable):	NA	Agency Fee (\$):	162,194
	<ul style="list-style-type: none"> • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/> • For PPP <input type="checkbox"/> 		

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
BD-1	Outcome 1.1: Improved management effectiveness of existing and new protected areas	Output 1: New protected area (0) and coverage (6,872 hectares) of unprotected ecosystems.		853,653	5,000,000
BD-2	Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation.	Output 2.2: National and sub-national land-use plans (4) that incorporate biodiversity and ecosystem services valuation.		853,653	4,170,000
Total Project Cost				1,707,306	9,170,000

* Applying the STAR flexibility mechanism of GEF-5, resources for a total of US\$459,500 (US\$350,000 of LD STAR allocation plus US\$109,500 of CC STAR allocation) are being channeled to the BD focal area, inclusive of the corresponding contribution to Project Management Cost. Thus, for the MSP a total amount of 1,707,306 of BD resources are being allocated. Amounts including fees are shown in Table D.

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To demonstrate a model for effective integrated landscape management encompassing the strengthening of an existing protected area (Morne Trois Pitons National Park) and establishment of its buffer zone in order to reduce threats to biodiversity and ecological functioning						
Project Component	Grant Type ³	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
Component 1: Strengthening the core zone management of Protected Areas at systemic level and scale up innovative	TA	Operationalisation of active management in the Morne Trois Pitons National Park, protecting 6,872 hectares of intact habitat (6,342 ha. core area; 530 ha. buffer zone) Direct threats to biodiversity are mitigated and essential ecosystems services are maintained within the	1.1 Buffer zone for Morne Trois Pitons National Park legally established and demarcated 1.2 Management plan developed and implemented for Morne Trois Pitons National Park, including: guidelines and restrictions on productive activities within PA boundaries;	GEF TF	776,049	2,000,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the reference attached on the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

³ TA includes capacity building, and research and development.

interventions at core zone of selected PAs to improve Sustainability		<p>core area of Morne Trois Pitons NP (6,342 ha.), as measured by:</p> <ul style="list-style-type: none"> ▪ Elimination of hunting and harvesting of wild plants ▪ Zero land conversion or road construction <p>Improved PA management effectiveness in target PAs, measured through increase in PA Management Effectiveness Tracking Tool (METT) scores. The baseline and targets will be determined during further project development</p> <p>Strengthened national capacity for PA planning, management and financing benefits national PA system of 6 terrestrial and 1 marine PA sites, encompassing 19,624 hectares</p>	<p>financing / business plan; and strategy for reducing threats to BD from within and outside the PA</p> <p>1.3 Operational capacity established for management of Morne Trois Pitons National Park and activity implementing surveillance and enforcement; fire management; and visitor management activities</p> <p>1.4 National PA System Department officially established and actively implementing functions across PA systems with improved management effectiveness, and supported by an inter-institutional committee for PA buffer zones</p>				
Component 2: Establish and manage Buffer Zone as a key component of National Protected Area System and select experiences to be scaled up beyond the buffer zone.	TA	<p>2,030 hectares of buffer zone under active management (530 ha. within and 1,500 ha. outside of the PA boundary)</p> <p>Land use restrictions in place and enforced throughout buffer zone:</p> <ul style="list-style-type: none"> • Greater limits on hunting and harvesting of wild plants • Prohibition on charcoal burning and use of fire to clear land • Prohibition on tilling of land (slope > 15%) that results in erosion • Greater limits on development (i.e. housing, roads and other infrastructure) <p>Total of 8,372 hectares (Morne Trois Pitons NP + external buffer zone) under integrated landscape-level management that ensures conservation of biodiversity and ecological functions</p>	<p>2.1 Intersectoral committee for the management of integrated PA landscapes (core and buffer zone) established and functioning within legal framework</p> <p>2.2 Codification of higher minimum standards in EIA requirements for new developments in the buffer zone</p> <p>2.3 At least 4 Community Resource Management Plans established and under implementation within the MTPNP buffer zone (communities of La Plaine, Petite Savanne, Pond Casse and WottenWaven/Trafalagar) addressing BD management for vulnerability mitigation, BD friendly agricultural and land management practices, coral reef management, waste management and local pollution control strategies</p>	GEF TF	776,049	6,336,364	
Sub-Total						1,552,098	8,336,364
Project Management Cost ⁴					GEF TF	155,208	833,636
Total Project Cost						1,707,306	9,170,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Cofinancier	Type of Co-financing	Amount (\$)
National Government	Ministry of Agriculture and Forestry	In-kind	1,000,000
Other Multilateral Agency	Caribbean Development Bank	Loan	1,470,000
Other Multilateral Agency	European Union	Cash	5,000,000
Other Multilateral Agency	World Bank	Cash	500,000
Other Multilateral Agency	World Bank	Soft Loan	1,000,000

⁴ To be calculated as percent of subtotal.

GEF Agency	UNDP	Cash	200,000
Total Co-financing			9,170,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹:

GEF Agency	Type of Trust Fund	Focal area	Country Name / Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) ²	Total (\$) c=a+b
UNDP	GEFTF	BD	Dominica	1,287,671	122,329	1,410,000
UNDP	GEFTF	LD	Dominica	319,635	30,365	350,000
UNDP	GEFTF	CC	Dominica	100,000	9,500	109,500
Total Grant Resources				1,707,306	162,194	1,869,500

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project

E. PROJECT PREPARATION GRANT (PPG)⁵

	Amount Requested (\$)	Agency Fee for PPG (\$) ⁶
(up to) \$100k for projects up to & including \$3 million	82,192	7,808

PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY

Trust Fund	GEF Agency	Focal Area	Country Name/ Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
UNDP	GEFTF	BD	Dominica	82,192	7,808	90,000
UNDP	GEFTF	LD	Dominica			0
UNDP	GEFTF	CC	Dominica			0
Total PPG Amount				82,192	7,808	90,000

MFA: Multi-focal area projects; MTF: Multi-Trust Fund projects.

PART II: PROJECT JUSTIFICATION⁷

A. PROJECT OVERVIEW

A.1. Project Description

Synopsis of the Project

The objectives of this project are to improve the sustainability of the protected area system in Dominica, to strengthen the management of Morne Trois Pitons National Park (MTPNP) and establish a buffer zone around the area, and to enhance the cross-sector enabling environment for integrated landscape management. The establishment of a buffer zone will improve the integrity of MTPNP while making it the core conservation area within a functional productive landscape. There are 5 communities located within the proposed MTPNP buffer zone: La Plaine; Petite Savanne; Pond Casse-Sylvania-Springfield; WottenWaven-Casseau; and Trafalgar-Shawford, with a combined population of 3,397 persons. Persons living in the buffer zone will be trained to manage productive systems in a sustainable manner and will thus become an integral part of the integrated landscape supporting conservation and development. This concept of a productive landscape is one that resonates well with Dominicans, who have embraced the designation of their country as

⁵ On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

⁷ Part II should not be longer than 5 pages.

the “Nature Island” (a designation approved by the cabinet of Ministers) and the changes it implies for their lifestyles and livelihood practices. The successes and lessons learnt from this project will be used to improve and scale up similar activities at all PAs, and their surrounding landscapes, in Dominica.

Environmental Context and Biodiversity

The Commonwealth of Dominica (CoD) is located in the Caribbean islands known as the Lesser Antilles. Dominica is 48 km. long and 24 km. wide, covers 750.6 sq. km., and has 148 km. of coastline. Dominica's climate is classified as humid tropical marine, with a dry season from January to April and a rainy season from July to October. Because of the island's rugged topography, influenced by the high moisture content of the air masses that enter the region from the Atlantic Ocean, Dominica is a very high rainfall country, with an average rainfall of 175 inches per year. There are 365 rivers crossing Dominica's rugged and mountainous terrain (the highest point is Morne Diablotin at 1,730 meters), and the high rainfall makes the country susceptible to landslides, particularly in the more mountainous regions. In addition, Dominica lies within the Atlantic hurricane belt, and was severely impacted by hurricanes in 1979, 1995, and 2007, the last of which caused widespread damage to agricultural production and road infrastructure, with losses estimated at almost 20 percent of GDP. The population of Dominica is 72,813 (2010), 74% of which is urban. Approximately 30% of the population is below the poverty line; the Draft National Environmental Summary identifies poverty as a key driver of environmental degradation.

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. 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 (Layou River), are centers 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 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. High rainfall coupled with steep terrain offers the potential for hydro-electric power generation on major rivers in the interior. Dominica has an extensive system of protected areas that encompass approximately 25% of the national territory (see Table 1).

Despite its small size, Dominica harbors a wide range of terrestrial and marine biodiversity; the country's extensive and diverse forest systems harbor the richest biodiversity in the Lesser Antilles. Terrestrial habitats are highly varied, with seven distinct vegetation communities ranging from montane rainforest to dry scrub woodland to coastal swamp and mangroves, as well as fumarole vegetation associated with volcanic activity. Some 155 families, 672 genera and 1,226 species of vascular plants have been identified on the island. A number of plant species are considered endemic to the island including *Sabinea carinalis* (Bwa Kwaib), the national flower of Dominica. The avifauna of Dominica may be the most diverse in the Eastern Caribbean, comprised of at least 175 species of birds, of which 60 are known to breed in Dominica, including the endemic parrots Imperial Amazon (*Amazona imperialis*) and Red-Necked Amazon (*Amazona arausiaca*), considered endangered and threatened respectively (IUCN Red List). Endemic reptiles include the Dominican Anole (*Anolis oculatus*), the Dominica Skink (*Mabuya dominicana*), and the Dominican Ground Lizard (*Ameiva fuscata*). The Dominican Whistling Frog (*Eleutherodactylus amplinympha*) is also unique to the island. There are 62 endemic beetle species; other endemic insects include a stick insect (*Sermyle kirbyi*), a grasshopper (*Nesophyllidium fulvicosta*), a katydid (*Acantheremus dominicanus*), a leafroller moth (*Auratonota dominica*), an ant (*Solenopsis enigmatica*), a sweat bee (*Habralictus gonzalezi*), and a firefly (*Photinus lutzi*). Coastal and marine biodiversity in Dominica is also globally significant. There is a wide range of estuarine habitats at the mouths of the many rivers that drain to the sea, which provide habitat for resident and migratory fauna (birds and fish species). Because Dominica has a very narrow continental shelf and water depths reach 60 metres near to the shore, coral reefs are not as extensive as elsewhere in the Caribbean; nevertheless significant coral communities remain (Dominica is considered one of the top ten diving sites globally).

Protected Areas System

20% of Dominica's land is protected as forest reserves or national parks. In addition, approximately 200 hectares of private sites, usually scenic or historical sites, have come under the guise of Protected Areas. Morne Trois Pitons National Park (MTPNP) and its buffer zone will be the primary focus of project field activities. Situated 13 km east of the town of Roseau in the highlands of south-central Dominica, the MTPNP covers an area of 6,872 hectares, characterized by volcanic formations with precipitous slopes and deeply incised valleys (*glacis* slopes). The park includes an area known as the Valley of Desolation (or Grand Soufriere), with fumaroles, hot springs, mud pots, sulphur vents and the Boiling Lake, which is the world's second largest of its kind. The valley is a large amphitheatre surrounded by mountains and consisting of at least three separate craters where steam vents, small ponds, and hot springs bubble up through the ground. Other outstanding features in the area include the Emerald Pool, fed by the Middleham Falls; Stinking Hole, a lava tube in the middle of the forest; and the Boeri and Freshwater lakes. The Freshwater Lake is the largest and second deepest of Dominica's four freshwater lakes, while Boeri Lake is the second largest in Dominica, and is located in the crater of an extinct volcano. The MTPNP also encompasses almost all the headwaters of the streams and rivers in the southern half of the island.

A number of natural vegetation zones are recognized within the MTPNP, including: i) Elfin/cloud forest, which occurs at the highest elevations, and consists primarily of mosses, ferns, shrubs and stunted trees covered by lichens; ii) Montane thicket, a transition zone dominated by spindly trees including *Podocarpus coriaceus*, the island's only native conifer; iii) Montane rainforest, with a species composition similar to that of mature rainforest but much reduced in stature; and iv) Mature rainforest, which contains the most luxuriant vegetative growth. MTPNP is believed to harbor at least 7 species of mammals, 50 birds, 12 reptiles and amphibians and 12 crustaceans. Birds within the park include the Imperial Amazon and Red-necked Amazon parrots. Boa Constrictors are common in the park, which also provides habitat for three species of lizards, including the endemic Dominican Ground Lizard (*Ameiva fuscata*).

Morne Trois Pitons is the largest and most well recognized national park in Dominica, and its hot springs and freshwater lakes attract large numbers of local visitors and tourists alike. MTPNP has been designated a World Heritage Site based on its unique ecological features and regionally outstanding levels of biodiversity. Given the economic, social and cultural value of MTPNP, it has been singled out by the government for special attention, including the development of a buffer zone and a management system designed to ensure the sustainability of the park's natural resources. However, despite its importance, the park does not operate under an approved management plan, nor does it have its own dedicated staff. At present, staff from the Forestry Department carry out some activities within the park, primarily involving trail maintenance, education / outreach, surveillance to prevent illegal harvesting of plants and animals, and removal of invasive alien species. In addition, MTPNP does not have a designated buffer zone (as required for World Heritage Sites), and this combined with the lack of dedicated staff compromises the integrity of the PA and increases the risk that encroachment will result in deforestation, land degradation, and loss of biological diversity.

Other protected areas in Dominica have similar or fewer management resources as MTPNP, operating without approved management plans or dedicated staff. Thus, establishment of an effective model for PA management at Morne Trois Pitons will provide the template and expertise for replication at other sites (as listed in Table 1). Among the most important of these sites is Cabrits National Park on the north end of the island, which protects tropical forests, coral reefs and wetlands, as well as extensive historical sites, including colonial era forts and garrisons. Another critical site is Morne Diablotin National Park, which was established primarily to protect the habitat of the endangered Imperial Amazon Parrot, which is the national symbol of Dominica, and is also the home to 18 different avian species.

Table 1: Protected Areas in Dominica

Type	Ecosystem types	Official Name	Status	IUCN Category	Location	Area in Ha
National Park	Rivers, Lakes, forest reserve,	Morne Trois Pitons National Park	Management Plan developed; no regulations in place	II- National Park	South-Central Highlands	6,872
National Park	Forest reserve, wild life habitat.	Cabrits National Parks (including the Cabrits Marine Reserve)	Draft Management Plan developed; no regulations in place	II- National Park	North (North of Portsmouth)	3,450

National Park	Rivers, forest cove	Morne Diablotin National Park	Management Plan developed; no regulations in place	II- National Park	North (Northern Mountain Ranges)	3,336
Bird Sanctuary	Wild life habitat	Syndicate Parrot Preserve	(under plan for Morne Diablotin)	IV - Habitat/Species Management Area	North (foothills of Morne Diablotin)	81
Marine Reserve	Marine	Soufriere-Scotts Head Marine Reserve	Established under SRO#17 of 1998	V- Protected Landscape/ Seascape	Southwest (villages of Scott's Head & Soufrière)	Unspecified
Forest Reserve	Forest, wild life habitat	Central Forest Reserve	Governed by Forestry Act	VI- Protected area with sustainable use of natural resources	North Central	410
Forest Reserve	Forest, springs	Northern Forest Reserve	Governed by Forestry Act	VI- Protected area with sustainable use of natural resources	North Central	5,475
Total						19,624
The areas listed below are areas of interest but are not officially declared as protected						
National Park	Rivers, small lakes, forests	Indian River National Park		II- National Park		79
National Park	Hot Springs	Soufriere Sulphur Springs National Park	Management Plan developed	III- Natural Monument or Feature		102
Protected Water Catchment	Rivers and lakes	Stewart Hall Water Catchment Protected Forest		VI - Protected area with sustainable use of natural resources		318

Legal Framework

Natural resources in Dominica are managed primarily via: the Forest Act (1959), which authorizes the establishment of Forest Reserves on Crown Lands and protected forests on private lands; the Forestry and Wildlife Act (1976), which makes provision for the protection and management of wild fauna and the management of their forest habitat, as well as for the creation of wildlife reserves; and the National Parks and Protected Areas Act (1975), which provides for the establishment of a National Parks and Protected Areas system. The Physical Planning Act (2002) is intended to ensure that all development is carried out in an environmentally sustainable manner; the act addresses construction practices and includes provisions for prohibitions on land use activities that remove vegetation or disturb soils and geological resources, as well as the deposit of refuse or waste materials on land or causing environmental damage or actions affecting the health or safety of persons, and requires the preparation of environmental impact assessments for development projects. Legislative instruments relevant to use and management of coastal and marine resources include the Territorial Sea, Contiguous Zone, Exclusive Economic Zones Act of 1981 (Maritime Areas Act # 26 of 1981); the Fisheries Act of 1987; the Beach Control Act (1966, 1990); the Environmental Health and Services Act (1997), which provides authority relevant to maintain environmental health and control pollution; and the Pesticide Control Act which controls the importation and use of pesticides likely to end up in coastal waters. In order to strengthen the management of National Parks, as well as ecotourism sites within the Parks, Dominica has drafted a new Protected Areas Act to replace the existing National Parks and Protected Areas Act; the new act will harmonize existing laws and regulations regarding protected areas and will help to improve management efficiency and effectiveness, which may include the establishment of a National Parks Authority; this draft legislation has been submitted to the cabinet of ministers for endorsement. In addition, a draft comprehensive “Climate Change, Environment and Natural Resource Management Bill” is currently undergoing technical review. This draft legislation covers most elements of resource management within areas that would be buffer zones to official protected areas, including among other areas climate change and disaster risk management; air and water quality and pollution and hazardous substances control; and natural resource management and sustainable forestry. The proposed legislation also covers biodiversity conservation, access and benefits sharing, and trade in endangered species at a national level, which would have implications as well for management within protected areas.

Institutional Framework

Responsibility for environmental conservation and natural resource use in Dominica is shared among a number of ministries and their respective agencies. The Ministry of the Environment, Natural Resources, Physical Planning and Fisheries houses the Environmental Coordinating Unit (ECU), the Fisheries Division and the Physical Planning Division.

The ECU's mandate is to function as the "coordinating, facilitating, administering and collaborating body for all environmental and sustainable development management programmes, projects, and activities in the Commonwealth of Dominica". In support of this mandate, the ECU manages informal coordination mechanisms to bring together key stakeholders, and it acts as the technical focal point for all Multilateral Environmental Agreements (MEAs), with responsibility for providing strategic guidance and coordinating the activities of state institutions and non-governmental stakeholders relevant to the implementation of MEAs. The ECU also carries out public education programs to raise awareness nationally about environmental challenges and their consequences. The Physical Planning Division is responsible for land use planning, environmental impact assessments, development control, and regulation of mining operations. The Fisheries Division is responsible for fisheries research and management, as well as the management of marine reserves.

Within the Ministry of Agriculture and Forestry, the Forestry, Wildlife and Parks Division is responsible for the management and sustainable resource use of all Forest Reserves and National Parks. The Agriculture Division is responsible for providing technical assistance (through Agriculture Extension Officers), regulatory services and the policy framework to guide development of agriculture. The Ministry of Lands, Housing Settlement and Water Resource Management includes the Division of Lands and Surveys, which manages all Unallocated State Lands, carries out surveying/mapping, and maintains records of land sales and mining permits. The Dominica Water and Sewerage Company shares responsibility with the Division of Forestry, Wildlife and National Parks to protect watersheds.

Within this framework, management of protected areas is primarily the responsibility of the Forestry, Wildlife and Parks Division. However, this Division does not maintain a dedicated staff for management of protected areas; rather it assigns staff on an ad hoc basis to respond to PA management needs as they develop. In addition, the Ministry of Tourism has responsibility for maintaining ecological tourism sites within Morne Trois Pitons National Park, as well as several other National Parks. As for the landscapes surrounding protected areas, including potential buffer zones, these are the responsibility of numerous agencies, including the Divisions for Physical Planning, Agriculture, and Lands & Surveys, as described above. For both protected areas and surrounding landscapes, the line ministries noted above also must work in conjunction with the ECU, which is responsible for developing action plans and targets, submitting relevant reporting, and ensuring that Dominica meets its obligations to both the UNCBD and the UNCCD.

Development Context

Agricultural production, in particular bananas, vegetable and root crops, coconut and citrus, is the most important economic sector in Dominica; over the last decade, agriculture contributed on average 18.5% of GDP, employed 40% of the labor force, and accounted for 70% of total export earnings and 60% of foreign exchange. However, the agricultural sector in the country is undergoing significant changes that present potential threats to the sustainability of land management and the conservation of natural areas. The era of large-scale banana plantations, which came to dominate the agricultural landscape of Dominica in the years following World War II, has declined significantly since the mid 1990s. Since then, much of the land formerly under banana cultivation is now divided into 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. At present, Dominica's tourism sector remains relatively small compared to its neighbors in the Caribbean, as the country has few white sand beaches and lacks infrastructures such as a jet airport, luxury hotels, and a good road network. However, Dominica has successfully positioned itself as the "Nature Island of the Caribbean", and the Ministry of Tourism and the local tourism industry are promoting the country as an eco-tourism destination with lush forests, waterfalls, hot springs, pristine marine ecosystems and similar attractions. Thus, unlike most Caribbean islands, tourism development in Dominica is expected to center as much on the central highland areas as on the coasts, and must be carefully managed to minimize any negative impacts on biodiversity and ecosystem functions. Fishing is another significant economic activity, particularly in terms of employment. With the rapid decline in banana production, many farmers began moving into the fishing sector, which in 2000 employed 2,843 registered fishermen (40% full-time). The Dominica fishing industry is small-scale and artisanal, with all of the fish caught for local consumption and sold directly to the public at landing sites. At present, fishermen in Dominica use only a small percentage of the country's Exclusive Economic Zone (EEZ). However, land based sources of sedimentation and marine pollution, largely the result of poor development planning, are degrading inshore fisheries and forcing fishermen to go farther out to sea.

Threats

At present, the core area of Morne Trois Pitons National Park is not subject to severe anthropogenic pressures, apart from some direct impacts due to harvesting of wood resources and hunting, and indirect impacts from the spread of invasive species. However, the clearance of natural forests in environmentally fragile areas (steep slopes within high rainfall zones) and their replacement with intensive agricultural cultivation, and in some areas, by housing, roads and other infrastructure, which historically was concentrated in lowland areas, is now extending into the highland areas where Morne Trois Pitons and other terrestrial protected areas are mainly located. This development pattern of increased settlement, agriculture and grazing activities in the upland landscapes surrounding MTPNP and other terrestrial protected areas, particularly in the absence of any officially designated and managed buffer zones, has the potential to greatly increase forest clearance and the degradation of soil and water services in buffer zone areas, and to drive illegal settlements and increased demand for wild plants and animals within PA boundaries. The table below has more details on specific threats and threat drivers, and their impact on biodiversity and ecosystem services within protected areas and in the surrounding landscapes.

Threat to biodiversity and threat drivers	Impact on biodiversity and ecosystem services
<p>Habitat fragmentation and land use change</p> <ul style="list-style-type: none"> • Currently no persons live within the core areas of Morne Trois Pitons or other terrestrial PAs, but human populations are increasing in the upland areas around these PAs (in part due to concerns about climate change and the risks of building in coastal areas). Without a properly established buffer zone, settlement and other forms of developed will continue unabated and unplanned in these areas, and it is likely that local communities will begin to encroach on the core areas of the PAs in the future. • Landscapes surrounding protected areas in Dominica include many privately owned forests and small agricultural plots. Privately owned forests generally are not subject to any regulatory frameworks that control land and resource use, and clearance, harvesting, and other forms of ecosystem degradation within these forests can impact nearby PAs. Similarly, former banana plantations in areas bordering PAs are now managed as small plots by farmers who tend to be resource-poor and to have a low capacity to invest in soil and water conservation measures or infrastructure to prevent and control pollution, runoff, erosion and landslides. Poorly managed mining and quarrying operations, as well as uncontrolled cattle grazing, particularly on steeply sloping lands, can also cause serious land degradation. Development of housing and other infrastructure also threatens natural forests; in addition, the Government has identified improper placement of septic systems as a significant threat to aquatic ecosystems and safe drinking water. • Road and infrastructure construction within and around the boundaries of the MTPNP • Invasive alien species and pests pose a significant threat to the biodiversity of Dominica. For example, over the last two decades, exotic lemon grass (<i>Cymbopogon nardus</i>) 	<ul style="list-style-type: none"> • Encroachment into protected areas for settlement and/or agriculture will destroy habitat critical for endemic and threatened / endangered species. Encroachment will also increase hunting and harvesting of wild plants within the core zones of protected areas. In addition, any clearance of forests within PAs for settlement, agriculture, or wood harvesting will increase erosion, sedimentation, downstream flooding, and degradation of aquatic and downstream coastal and marine ecosystems. • Clearing of steep slopes for agricultural purposes, as well as overgrazing and poorly managed mining operations, exposes the soil to tropical rainstorms resulting in severe erosion, landslides, loss of valuable topsoil, reduced agricultural productivity, and sedimentation of aquatic habitats, all of which result in the loss of terrestrial, aquatic and marine biodiversity. In addition, expanded agriculture and livestock grazing can contribute to increased nutrient loads that impact aquatic ecosystems. Furthermore, on many farms, harmful chemicals and pesticides are often abused, leading to eutrophication of fragile aquatic ecosystems. Increased sediment, nutrient loads and pollution also have negative impacts further downstream; already in Dominica forest clearance and agriculture/grazing activities have resulted in large quantities of sediment and nutrients reaching coastal and marine environments where they negatively impact coral reefs and sea grass beds that are the feeding grounds for juvenile pelagic and near shore fish species, which are an integral part of the diet for most people in Dominica. Fishery resources face considerable stresses from a number of land-based sources of pollution. In the 1990s, most fishing was carried out within a few hundred meters of the coastline; today, fishermen are forced to fish more than 100 km. from the coastline. Finally, because farmers with small upland plots tend to cultivate all of their land, trees that would otherwise serve as carbon sinks are often removed. • Degradation of water quality and quantity and increased erosion and flooding, particularly when illegal or improper practices are carried out • Areas colonized by lemon grass are subject to increases in soil toxicity that retards the growth of other plant species. In addition, these areas are frequently cleared with the use of fire, which causes

<p>has spread widely along Dominica’s west coast; this invasive alien species first colonized abandoned agricultural lands, but over time advanced into savannah and grazing lands, then dry scrub woodlands, and eventually into secondary forests.</p> <ul style="list-style-type: none"> • Climate change has led to increased frequency of destructive hurricanes; increased occurrence of prolonged drought conditions; changes in rainfall patterns and hence shifts in dry and wet seasons; and increased diurnal temperatures • Natural disasters, primarily hurricanes including Hurricane David in 1979 that caused damage to more than 50% of the trees in the southern half of the island, and Hurricane Dean in 2007 that resulted in the loss of up to 35% of the forest cover in the eastern part of the island. 	<p>considerable land degradation as repeated burning predisposes the land to soil erosion and landslides. In addition, the fires frequently get out of control and burn surrounding natural landscapes, resulting in significant loss of biodiversity and habitat. The danger posed by proliferation of lemon grass is its persistence, rapid advancement and replacement of natural vegetation, in particular the dry scrub woodland ecological zone that is the natural habitat of the Dominica’s national flower (<i>Sabinea carinalis</i>)</p> <ul style="list-style-type: none"> • The consequences of climate change include drought induced fires in natural areas; declines in the productivity of agricultural lands (which are primarily rain fed); increased sedimentation of aquatic and marine habitats; and degradation of natural tourism attractions. • Natural disasters lead to widespread destruction of natural forest landscapes, which in turn leads to the conversion of these areas to agricultural land (areas with toppled trees provide an opportunity to more easily clear land for farming), thereby greatly reducing wildlife habitat and ecological functions such as water retention and erosion control, leading to landslides, soil loss, and reduced water quality
<p>Mismanagement of Natural Resources</p> <ul style="list-style-type: none"> • Harvesting of wood resources for construction, as well as for charcoal, firewood and fencing for domestic animals, is an existing problem around MTPNP. At present, the levels of harvesting are still relatively minor, but control of this challenge in its early stages will be much more likely to succeed, and will prevent the expansion of such activities into the core area of MTPNP and other terrestrial PAs. • Legal hunting of wildlife for household consumption is carried out within buffer zone areas; illegal hunting is also carried out, to a lesser extent, within the core area of MTP and other terrestrial PAs. At present, hunting pressure is not too high, but increasing settlement of highland areas, including landscapes surrounding protected areas, may potentially lead to unsustainable levels of hunting 	<ul style="list-style-type: none"> • Harvesting of wood resources leads to habitat destruction, including habitat of endemic and threatened / endangered species, as well as increased runoff and sedimentation • Hunting has the potential to reduce the populations of such species as Agouti, Crayfish, and Rammier (red-necked pigeon), with potential impacts on other species as well through alterations to ecological functioning and habitat niches

Baseline Program

Dominica has initiated several programs in the past decade to strengthen and expand its system of protected areas. From 2005-2011, the country participated in the project OECS Protected Areas and Associated Livelihoods (OPAAL), a regional initiative aimed at coordinating, complimenting and integrating protected area (PA) management in the Eastern Caribbean region. Six OECS member states - Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines. In Dominica, the project sought to promote biodiversity conservation, remove barriers to effective management of protected areas, increase the participation of the private sector and NGOs in PA management, and provide environmentally sustainable economic opportunities for nearby communities. Unfortunately, technical challenges prevented Dominica from making significant process towards these goals through the OPAAL project. Currently, the Ministry of Agriculture and Forestry (with EU funding of approx. US\$6 million) is implementing a program to rehabilitate trails and facilities within Dominica’s national parks and various ecotourism sites, notably including the Waitukubuli National Trail Project (WNTTP), which will create a trail extending the length of the island from north to south and will traverse the island’s various climatic, vegetative, topographic, and social communities, including Morne Trois Pitons and other protected areas. This project is intended to increase ecotourism revenues while also reducing the adverse impacts of uncontrolled tourism related activities in Dominica’s protected areas. The Ministry also carries out extensive public awareness campaigns on protected areas, including community events that bring schoolchildren to various protected areas and educate them on the importance of the area in the protection and management of biodiversity. As noted above, the Ministry also implements some basic ongoing management activities at protected areas, such as trail maintenance, education, surveillance, and removal of invasive alien species (funding for this is reflected in the budget for wildlife and forests in the next paragraph). Other spending by the Government of Dominica related to protected areas includes approximately US\$110,000 for coordination and policy development in support of

environmental conservation, and US\$89,000 to support ecotourism, during the period of the proposed project. In addition to these ongoing government budget allocations, Dominica is implementing the West Coast Water Project, a \$28.3 million project aimed at improving the management and distribution of Dominica's water resources. As part of this project, US\$6.29 million is slated for an upgrade of Water Area 1, for which Morne Trois Pitons National Park is the primary catchment area.

In the productive landscape, including areas bordering Morne Trois Pitons and other protected areas, Dominica has implemented a number of programs to improve the sustainability of development and resource use. From 2006 – 2011, Dominica participated in the GEF-funded Integrated Watershed and Coastal Areas Management (IWCAM) project, which addressed: 1) diminishing freshwater supplies; 2) degraded freshwater and coastal water quality; 3) inappropriate land use; and 4) hygiene and sanitation. The overall objective of the project was to strengthen the commitment and capacity of the participating countries to implement an integrated approach to the management of watersheds and coastal areas; based on the lessons learned through IWCAM, Dominica is currently developing a pilot project for the management of the Roseau River watershed. Another important achievement was the development of an Integrated Natural Resource Management (INRM) approach piloted under the UNDP-GEF Sustainable Land Management project that ended in 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 proposed project also will build 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. Despite these and other programs, changing trends in land use continue to pose serious threats to Dominica's natural resources, and consequently the country, 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 Plan and Policy are expected to address integrated land use planning and watershed management; hazard reduction and climate change adaptation; and the protection of prime agricultural lands. At the regulatory level, in response to the devastating impacts of mining activities on marine ecosystems and coastal livelihoods, the Government ceased granting new licenses to land mining operations as of the end of 2011 and is actively monitoring programs to evaluate mitigation effects. Overall, the Government of Dominica also expects to spend approximately US\$4.4 million on the management of forests and wildlife, and US\$297,000 on planning and policy development activities for the agriculture sector during the period of the proposed project. In addition to these ongoing government budget allocations, another relevant baseline program is the World Bank funded Strategic Program for Climate Resilience (SPCR; 2014-2017), which will include components on: 1) Promotion of Food Security through Climate Resilient Agricultural/Fisheries Development; 2) Comprehensive Risk Management Framework and Sustainable Climate Change Financing; and 3) Enhancing Ecosystem/Infrastructure Resilience and Promotion of Sustainable Human Settlement. Other relevant programs include the EU-funded Banana Accompanying Measures (BAM) program, a €15.27 million project aimed at helping Dominica to reorient from banana production to other productive agricultural activities, as well as various community-based groups implementing sustainable land management projects with support from the GEF Small Grants Program.

Long-Term Solution

In the absence of this project, it is likely that the integrity of protected areas in Dominica, including Morne Trois Pitons National Park, will continue to decline, possibly to the point where Morne Trois Piton loses its world heritage site designation and its economic significance to Dominica. The long term solution envisioned under this project is the effective management of the National Protected Areas System and *in-situ* conservation of biodiversity through innovative INRM interventions that reduce conflicts on land use and biodiversity threats by strengthening PA core zones. The goal is the effective protection of 20% of Dominica's territory from pressure caused by encroachment, agriculture expansion, infrastructure development, deforestation and fires.

Barriers

Barrier 1: Protected Areas in Dominica have yet to be fully operationalized or supported by clear institutional structures and mandates: The Forestry, Wildlife and Parks Division, which has nominal responsibility for protected areas in

Dominica, does not maintain a dedicated staff for PA management and instead assigns staff on an ad hoc basis to respond to PA management needs as they develop. One result of this is that coordination with the Ministry of Tourism on the management of ecotourism sites within National Parks is very weak. In addition, encroachment into protected areas in Dominica continues due to the lack of effective surveillance by forest rangers, as well as the inadequate legal and regulatory framework governing PAs, which prevents quick action to address land clearance and squatting, land ownership disputes, and activities such as charcoal production. Weaknesses in the legal framework for PA management are exacerbated by the fact that each of the protected areas in Dominica was established under a separate Act or Standing Order, each of which frequently bears little resemblance to the previous designations. Regulations and enforcement regarding exploitation of wildlife are extremely limited. Effective management of PA units is constrained by the lack of formally adopted PA management plans, and by the limited knowledge of the biological functions (lifecycle, species interdependence, etc.) of endangered and threatened species as well as ecosystem functions / services, which preclude informed priority setting for the use of limited PA resources. PA management is also limited by a lack of financial resources and the failure to generate any economic returns from PA units. Furthermore, there are no legal instruments for the establishment of protected area buffer zones. Finally, local communities in the landscapes surrounding Morne Trois Pitons and other protected areas have no involvement in priority setting or planning for conservation and sustainable development activities within the PA core areas or buffer zones.

Barrier 2: Dominica does not utilize integrated approaches, including buffer zones, to manage protected areas within the context of the overall landscape: Several factors constrain efforts to integrate the management of protected landscapes and surrounding territories in Dominica. Current institutional arrangements for natural resource management are highly fragmented. For example, management of forest resources is split between the Division of Forestry, Wildlife and Parks (forest reserves and national parks), the Division of Lands and Surveys (unallocated state lands) and the Physical Planning Division (private forest lands), but there are no formal mechanisms for coordination and very few instances of consultations regarding development activities, regulations or zoning among these agencies. More generally, environmental planning and management issues are handled in a fragmented manner and there are no official coordinating mechanisms among ministries and agencies responsible for the natural environment, which greatly reduces coordinated actions and even information sharing on management of specific sites, watersheds and landscapes (for example, only major developments may require an inter-agency EIA review process). Land management planning processes are sectorally-driven and do not take into consideration the maintenance of ecosystem services (water, soil productivity, biodiversity, buffers to natural hazards, etc.) that are of benefit to widest range of stakeholders and the natural environment. While Dominica has an extensive range of environmental laws and regulations, there is no specific legislation to address land degradation in a holistic manner, and regulations to operationalize sustainable land management principles are often not elaborated. Human resource capacity in specialized areas of land management is weak, including for example the capacity to use natural resource economics to integrate the value of ecosystem services into policy and decision-making towards land and resource development options. The Ministry of Agriculture has outreach programs to farmers and communities, but these are directed at crop and livestock production, with little emphasis on sustainable land management practices. More generally, many of the agencies charged with responsibility for environmental matters are understaffed, and lack the necessary tools and budgets to effectively implement community empowerment and training workshops. There is a shortage of and inaccessibility to scientific data on fast growing species that can be encouraged in the buffer zone to support livelihood activities without impacting the forests in the core areas of PAs; similarly, a better understanding of plant pathogens likely to attack important forest species is needed in order to pressures on forests that are already stressed by the effects of climate change and hurricanes. Local residents in areas bordering PAs have limited awareness of the benefits generated by the PAs (ecosystem services such as water provision and soil retention, as well as potential tourism revenues) or of sustainable land management, agricultural and animal husbandry practices which can mitigate land degradation and reduce pressures on resources within the PAs.

Project Components

Component 1: Establishing national level PA management capacities (planning, financing, etc.), and piloting site level PA management activities (at the Morne Trois Pitons National Park) in order to establish a model for replication at other PA sites within Dominica

At the site level, the project will focus on Morne Trois Pitons (MTP) National Park, which is Dominica's largest PA unit, accounting for 35% of the terrestrial protected area estate in the country and 9% of the overall national territory. The

primary goals of the site-based interventions will be to formally establish and demarcate a buffer zone, covering areas within and outside the National Park boundary; to operationalize management of the park, including establishing, training and equipping a dedicated unit of PA staffers and implementing a revised PA management plan; and to increase the scope of the PA management activities in order to effectively address threats to biodiversity and ecosystem functioning coming from within and outside of the PA boundaries. In order to establish the buffer zones, the project will undertake studies and consultations to define the boundaries of a buffer zone that includes an area outside of the park boundaries of approximately 1,500 hectares, as well as an area within the National Park of approximately 530 hectares (this area, which represents approximately 5% of the overall area of the park, encompasses that part of MTPNP that goes all the way down to the coastline). Once these boundaries have been established, the project will ensure that the buffer zone areas are officially established under existing laws and regulations, and then demarcated and signposted. To strengthen management of the national park, the project will revise the existing MTP Management Plan to more effectively address threats to the park and to reflect the increased capacity and resources that will be available for park management. The new management plan will include *inter alia*: guidelines and restrictions on all productive activities within the PA boundaries (core area and buffer zone within the PA), including a ban on all burning, clear cutting, charcoal harvesting and agricultural activities in the park (harvesting of NTFPs will be allowed to continue, but with clear restrictions on harvest levels, practices, seasons, etc.); a business / financing strategy for long-term management of the park; and an operational manual for PA staff providing guidelines for reducing threats to BD coming from within and outside of the park (linked to Community Resource Plans developed under Component 2). To enable effective implementation of the revised PA management plan, the project will strengthen PA operational capacities. For the first time, Morne Trois Pitons NP will have a dedicated unit of staffers, and this unit will be provided with sufficient resources (offices, equipment and materials) for effective PA management. PA staff will benefit from capacity building in: PA management / business planning; visitor management; fire management; community participation; ecological information collection and analysis (focused on increasing information on endangered and threatened species within the PA); surveillance to monitor/prevent illegal activities and fires; and enforcement of new restrictions on human activities within the park in order to prevent destructive practices, as well as to prevent encroachment (i.e. land clearing and squatting). The surveillance component of this work will cover both the core area and buffer zone, and will be carried out jointly by PA staff and other government (Forestry Division), NGO and community stakeholders utilizing a monitoring plan with clearly defined roles for all stakeholder groups. Project activities at this site will be coordinated with the on-going SPCR, which includes soil studies; agriculture and agroforestry activities; and climate proofing of the design, construction and maintenance of critical infrastructure (including roads) within the MTPNP.

In addition to the site level interventions at Morne Trois Pitons National Park, the project will also undertake systemic level activities that will both establish the stronger national PA framework necessary for effective interventions at MTP, and to enable the replication of activities piloted at MTP to other PA sites in the country. Dominica will establish its first ever Protected Areas department, which will be either within the Environmental Coordinating Unit or the Forestry Department; staff in this department will be trained in PA system-level planning, priority setting, community co-management and inter-institutional coordination, with a focus on integrated landscape level approaches that encompass both core areas and buffer zones of Dominica's protected areas. The project also will support the drafting of regulations under the amended National Parks and Protected Areas Act to establish additional regulations to allow for effective management and enforcement of regulations and penalties within PA boundaries; to establish operational guidelines to clarify responsibilities and coordination mechanisms between the Division of Forestry, Wildlife and National Parks and the Ministry of Tourism on management of ecotourism sites within National Parks; and to allow for the legal establishment of buffer zones and ecological corridors between terrestrial PAs, including increased protection of private forests in these areas. In addition to legally establishing buffer zones, the project will work to establish new restrictions on activities within the buffer zones, which will be based on restrictions in place in the Pond Casse Land Use Management Plan (Pond Casse is an area bordering the lower elevations of MTPNP), including: 1) maximum footprint and height, and minimum setbacks, for new buildings; 2) minimum plot sizes; 3) minimum river buffer zones; and 4) specifications for allowed activities related to forestry, agroforestry, and ecotourism. The project will create an overall management strategy for the national PA system that will address representativeness and connectivity; threat abatement; management effectiveness; governance, participation and distribution of benefits; and integration into sectoral plans and processes (such as water improvement projects managed by DWASCO and the EU-funded Banana Accompanying Measures to enhance productivity of the agriculture sector). The strategy also will include a finance and business plan for MTPNP that incorporates income-generating opportunities (e.g. entry fees and user fees), fiscal incentives at the national level, and enforcement of regulations governing genetic resources (including royalties and ownership). At present, user

fees are collected from nonresident visitors at 12 designated Ecotourism Sites, most of which are within existing protected areas; the project will assess whether additional sites should assess fees; whether fee levels should be adjusted; and whether the existing special account for collected fees is adequately designed to support biodiversity conservation and PA management objectives. In addition, user fees are collected in the form of research and export permits for persons conducting research in the country, and the project will assess how to maximize revenues from this fee system as well. In addition, to support the integration of the PA system planning strategy into the government budgetary process, the project will assess and estimate the economic benefits provided by PAs in Dominica. Finally, as noted above, the site level interventions at Morne Trois Pitons (and its buffer zone) are considered a pilot that will be replicated (post-project) at other PA sites in Dominica. The need for such replication is high, as none of the other officially established PA sites in the country have any management activities. Thus, the proposed project will include the generation of baseline information and associated planning to promote the replication of interventions at MTP at other sites post-project, as well as to feed into a PA system level planning and priority setting strategy. Such activities will help Dominica to establish more effective biodiversity conservation at other terrestrial protected areas, and may also contribute to the creation of ecological corridors (with management guidelines similar to those for buffer zones) between PA sites over the long-term.

Component 2: Establish and manage Buffer Zones as a key component of National Protected Area System and select experiences to be scaled up beyond the buffer zone

At the systemic level, the project will strengthen the institutional and legal framework necessary for effective management of Protected Area buffer zones. To support the work of various agencies in carrying out landscape level approaches that encompass both the protected area and its buffer zone, a national-level Inter-Institutional Committee will be established to oversee and coordinate activities of various agencies and partners, including (but not limited to) Forestry, Tourism, Physical Planning, Agriculture, Lands & Surveys, Legal Affairs, CBOs and NGOs, Village Councils and Communities. The committee will have the primary responsibility for integrated planning, harmonization of work programs, and coordinated budgetary allocations, including memoranda of understanding between agencies for joint implementation of relevant activities. One of the first priorities of the committee will be to clearly establish institutional responsibilities and develop mechanisms for monitoring and applying sanctions for activities that contravene the resource use restrictions established for PA buffer zones. To support the CRMPs (see below), the project will work with the government to codify stronger development standards into the environmental impact assessment (EIA) process in the country, including mechanisms to support inter-agency EIA reviews, and it will create sector specific development guidelines that outline the roles and responsibilities of agencies overseeing various sectors (forestry, agriculture and planning) with regard to biodiversity and land management within PA buffer zones. These efforts will be closely linked to the on-going CDB-supported project to create a new National Physical Development Plan and National Land Use Policy. The committee also will develop and implement an acceptable compensation scheme (in the form of technical advice, and the provision of planting materials, from existing programmes such as the BAM and the Food Security and Agroforestry Components of the SPCR) for persons owning private lands in the PA buffer zone, which is necessary to ensure their support for and willingness to abide by restrictions and sustainable management strategies for PA buffer zones. The project will work to improve institutional capacities for coordinated and effective conservation and management, including working with the Ministry of Agriculture to expand the scope of its current outreach programmes to farmers and communities; encouraging private sector (in this case, the civil and environmental engineering fraternities) partners as potential allies in implementing landscape level approaches; and integrating natural resource economics to guide effective policy and decision-making with respect to valuing ecosystem services in the context of land development options. The project also will facilitate the direct involvement of communities in natural resource management by encouraging the participation of community groups, the private sector (agriculture, tourism, commercial, manufacturing, industrial sectors), and NGOs in the Inter-Institutional Committee.

At the site level, the project will establish a resource-use planning framework for the PA buffer zone at Morne Trois Pitons National Park. With support from a UNDP-GEF SLM project, Dominica recently established Community Resource Management Plans (CRMPs) for 10 communities in which government technicians were trained to create community resource maps, and then worked together with local community members to use the maps to prioritize development activities, create resource use plans, identify ways to manage soil and water degradation issues, and prepare for climate change. Both the government of Dominica and community members were highly pleased with the results of this process, and the ECU and Planning Department will work together with four local communities (La Plaine, Petite Savanne, Pond Casse and WottenWaven/Trafalagar) within the MTPNP buffer zone to implement similar processes that

identify development priorities and establish resource use plans and conservation strategies that address critical threats to biodiversity and ecological functioning (including water resources land degradation) in the buffer zone as well as the core area of the PA, and which incorporate projections of future climate change impacts. In this regard, the project will coordinate with the WAI Upgrade Project, which is relocating its water intake system to an area within the MTPNP buffer zone that nevertheless may be negatively impacted by agricultural production leading to siltation. Both the maps and the CRMPs will be based on similar tools developed under the prior SLM project, but they will expand the scope of those previous tools. For example, the CRMPs developed under this project will incorporate restrictions on resource use practices, including restrictions on hunting or harvesting of wild plants, prohibitions on charcoal burning and the use of fire to clear land, and prohibitions on the tilling of land that results in significant erosion. Furthermore, the CRMPs will incorporate zoning and controls on land clearance and the placement of houses and other infrastructure, and mechanisms for quicker resolution of land ownership disputes, in order to reduce land clearing and squatting. Development of the community-based resource maps and CRMPs, paired with documentation of best practices, traditional knowledge and experiential learning, will contribute to the creation of Dominica’s goal of establishing a National Resource Management plan to guide development and natural resource use within the carrying capacity of the country’s ecosystems.

In order to engage local residents within the buffer zone, the project also will develop and disseminate a manual of biodiversity friendly agricultural and land management practices, and will provide technical support for local inhabitants to undertake activities such as planting of fruit trees, reforestation with native species, and erosion control, that will reduce pressures on the protected area. The project will support collection and analysis of data on fast growing species that can be encouraged in the buffer zone to support livelihood activities of persons that live in the area without impacting the PA forest, as well as better understanding of plant pathogens likely to attack important forest species that are already stressed by the effects of climate change and hurricanes. Project work on agricultural management will be supported by the EU-BAM project and its programs to increase productivity and reduce the negative impacts of agricultural production in and around the MTPNP buffer zone through such actions as implementation of quality standards, development of agricultural information systems, and enhancement of risk management systems. In order to facilitate the implementation of the above-mentioned activities, the project will strengthen institutional capacities to effectively manage the buffer zone around the MTPNP, including training of technicians and community members to create community resource maps; training in and implementation of sustainable productive activities; and capacity building in surveillance and reporting. In addition to capacity building, the project will also undertake a community based education programme (modeled on one developed under the SLM project) that will raise the awareness of the benefits generated by the PAs (ecosystem services such as water provision and soil retention, as well as potential tourism revenues) as well as sustainable land management, agricultural and animal husbandry practices; inform local residents of new resource use restrictions within the buffer zone; and restore traditional knowledge regarding land management, agricultural/animal husbandry practices, and ethno-botany.

Incremental Cost

<i>Current Baseline</i>	<i>Alternative</i>	<i>Global benefits</i>
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<p>Terrestrial ecosystem resilience in Dominica, including MTPNP and its buffer zone, will continue to be threatened and impacted by human settlement, harvesting of natural resources, hunting, agricultural and grazing activities, and mining operations that degrade and fragment habitats and negatively impact flora and fauna. These impacts are compounded by climate change and the spread of invasive alien species.</p> <p>Protected areas will not be managed within a larger landscape context that includes surrounding areas</p> <p>Protected area management effectiveness will continue to be very low and with carried out with minimal financial and technical resources.</p> <p>Upland areas surrounding PAs will not be managed in a way that takes biodiversity and ecosystem services into account; upland forests will continue to be fragmented by development and degraded through resource harvesting, fire, and pollution</p> <p>Downstream aquatic, coastal and marine ecosystems will continue to be impacted by erosion, flooding, and sedimentation caused by human activities in upland areas</p>	<p>Strengthened controls on human activities within MTPNP</p> <ul style="list-style-type: none"> • Elimination of hunting, harvesting of wild plants • Zero land conversion or road construction <p>Land use restrictions in place and enforced in MTPNP buffer zone:</p> <ul style="list-style-type: none"> • Restrictions on hunting, harvesting of wild plants • Prohibition on charcoal burning, use of fire to clear land • Prohibition on tilling of land (slope > 15%) • Greater limits on development (i.e. housing, roads, other infrastructure) • Strengthened EIAs for new developments <p>8,372 hectares (Morne Trois Pitons NP + external buffer zone) under integrated landscape-level management and authority of inter-sectoral committee for the management of integrated PA landscapes</p> <p>Management plan developed and implemented for MTPNP; operational capacity established for surveillance and enforcement; fire management; and visitor management</p> <p>Buffer zone for Morne Trois Pitons National Park (2,030 hectares) legally established and demarcated; at least 4 Community Resource Management Plans established and under implementation in MTPNP buffer zone</p> <p>Biodiversity friendly agricultural and land management practices under implementation at 4 communities within the MTPNP buffer zone</p>	<p>Global environmental benefits in the landscape targeted by the project, linked to biodiversity and ecosystem services described below, will enjoy improved protection and maintenance.</p> <p>Threatened / endangered species, including endemics such as <i>Amazona imperialis</i> and <i>Amazona arausiaca</i>, will have a greater chance of survival and recovery</p> <p>Threats to the ecological functioning of the intact upland forest habitats of MTPNP (covering 6,872 hectares), including habitat for at least 7 species of mammals, 50 birds, 12 reptiles and amphibians and 12 crustaceans, will be reduced</p> <p>Threats to estuarine habitats downstream of MTPNP, which provide critical habitat for resident and migratory fauna (birds and fish species), will be reduced</p> <p>The rate of soil loss within the MTPNP watershed will decrease, and other ecosystem services will be maintained</p>
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Global Environmental Benefits:

- Terrestrial Ecosystem Services: In the case of Dominica, the geographically young volcanic landmass is prone to slippage, erosion by water and degradation associated with land use by humans. Protecting Dominica’s forests and soil resources will ensure that its rich biodiversity is kept intact for global benefit. The swift flowing streams of Dominica not only provide water to humans but also support its freshwater biodiversity. Dominica is a net sink for greenhouse gases, thanks in large part to its national parks.
- Biodiversity: Dominica possesses the most extensive forest system in the Lesser Antilles and holds globally significant biodiversity. Some 155 families, 672 genera and 1226 species of vascular plants have been identified on the island. A number of plant species are considered endemic to the island including *Sabinea carinalis* (Bwa Kwaib), the national flower of Dominica. The avifauna of Dominica is very diverse and may be the most diverse among States in the Eastern Caribbean. It comprises an excess of 175 species of birds most of which are migratory but 60 of which are known to breed in Dominica, including the endemic parrot species *Amazona imperialis* and *Amazona arausiaca* that are considered endangered and threatened respectively (IUCN Red Data List). Populations of these two species, which were recorded earlier as at 200 and 1500 respectively, have increased, but they remain listed as specially protected birds under Dominican law.
- Global Designations: Morne Trois Pitons National Park became a World Heritage Site in 1998; the World Heritage Convention states that World Heritage Sites should all have buffer zones, but the MTPNP does not have a buffer zone

Socioeconomic Benefits:

- Protecting Morne Trois Pitons National Park ensures a continuous source of potable fresh water for Dominica. Currently Dominica exports fresh water and supplies the many ships that call in its ports. Fresh water is also the basis for the establishment of Dominica’s brewery. Rivers are an important source of protein to the Dominican people in addition to the recreation they provide. In addition, the rivers of Dominica also support the generation of hydroelectricity thus contributing to improved social life of Dominicans occasioned by reliable and cheaper source of energy.
- Fertile productive land is critical to the maintenance and improvement of livelihoods in Dominica.
- Separate and distinct from water is the wide array of plant biodiversity present in Dominica. There is ongoing research in the forest of Dominica where pharmaceutical companies are seeking raw material for the synthesis of medical for humans and farm animals.
- Other socioeconomic benefits derived from Dominica’s PA include forest products (latex of trees, timber and non-timber products), meat products and recreation for tourists who come to enjoy nature at its best in Dominica. In all cases there is no gender disparity. Both male and female harvest the forest, work as tour guides and utilize the water resource with equity. Dominica has taken major steps towards improving the quality of life of men and women, at all levels of society and towards supporting gender awareness among all stakeholders through the adoption of a gender equality policy and strengthening capacities and coordination among government agencies in order to mainstream gender in development programmes. This project will support Dominica’s efforts, by helping to stabilize ecological and social processes at landscape level, and promoting the generation of economic benefits through sustainable production systems. These benefits will help underpin the structures and internal dynamics of natural resource-dependent farm families, as well as generate specific income and employment opportunities for women—who often portray the role of primary caregivers in the family—thus particularly benefitting single female heads of households. The project will also take advantage of and contribute to the well-established provisions for women’s participation in decision-making structures at the levels of community and local government.

A.2. Stakeholders

Stakeholder	Relevant Role in Project Design
Environmental Coordinating Unit (ECU)	The ECU, which is based within the Ministry of Environment, Natural Resources, Physical Planning and Fisheries (MENRPPF), has been selected to execute the project at the national level. The ECU will play the leading role in developing several key aspects of the project design, notably strategies for improved planning processes, legal and policy changes, inter-institutional coordination, strengthening of the national system of protected areas, and capacity building for PA managers and residents of surrounding communities at Morne Trois Pitons National Park. The ECU will work closely with other institutional partners (see below) in designing many of the technical and field-level activities of the project.
Other relevant ministries	The Forestry, Wildlife and Parks Division within the Ministry of Agriculture and Forestry (MAF) will take the leading role in establishing priorities and strategies for improved site-level PA management. The Ministry of Tourism will also participate in designing project activities within Morne Trois Pitons, in particular for the tourism sites within the park. In the buffer zone outside of Morne Trois Pitons, the Division of Lands and Surveys within MAF, together with the Physical Planning Division within MENRPPF, will both play important roles in developing planning, mapping, and regulatory strategies for the PA buffer zone. The Agriculture Division within MAF will provide inputs for the design of technical assistance to local residents in the buffer zone, as well as policies and regulations that should apply in the buffer zone. The Dominica Water and Sewerage Company will support the design of project activities that ensure freshwater flows and protect watersheds. In addition, all of the ministries will participate in the Inter-Institutional Committee.
NGOs / CBOs	Relevant civil society partners that will contribute to the project design process include the National Association of Youth in Agriculture (NAYA), Youth Environment Service Corps (YesCorps), Dominica Youth Environment Organization (DYEO), National Youth Council (NYC), and the National Association of Non-Governmental Organizations (NANGO). In addition, these organizations will be encouraged to participate in the Inter-Institutional Committee.

<i>Stakeholder</i>	<i>Relevant Role in Project Design</i>
Local communities	Local communities in the landscape surrounding Morne Trois Pitons National Park are key stakeholders, in particular under Component 2, where they will be directly engaged in designing the project's conservation and sustainable natural resource management activities. In addition, local communities will be encouraged to participate in the Inter-Institutional Committee. Provisions will be taken to ensure equitable women's participation in all stages of the project activities and also in the Inter-Institutional Committee. During the project preparation phase women will be encouraged to actively participate in the consultation process in order to provide gender-balanced inputs to the overall project design.

A.3 Risk

Risk	Level	Mitigation Measures
Institutional responsibilities for PAs and their buffer zones remain diffuse and without a collaboration framework	L	Both Components 1 and 2 of the project have been specifically designed to foster collaboration among implementing partners. The ECU will play a lead project execution role and will ensure coordination and collaboration among the different entities. The roles delegated to other entities by the ECU will be formalised through agreements with clear TORs that will be developed during the PPG.
Community Resource Management Plans are completed but never implemented.	L	The Community Resource Management Plans (CRMPs) developed under the UNDP-GEF SLM project are being successfully implemented at this time; as one example, communities are using the maps developed under the CRMPs in the development of their disaster management plans.
Local communities in the PA buffer zone resist restrictions on resource use practices	M	The project will mitigate the risk of opposition to the establishment of a buffer zone by developing, together with local communities, a livelihoods programme that increases the ability of local residents to earn a living from sustainable agricultural practices, as well as participation in tourism activities within the PA. In addition, the project will place an emphasis on communication and outreach to local communities.
Natural disasters (esp. hurricanes) threaten forest habitat and livelihoods	H	Dominica has implemented a wide range of approaches to Disaster Risk Reduction and Management that will help to minimize the impacts of natural disasters on natural areas and the country's population, including rural residents dependent of forest resources for their livelihoods. The Office of Disaster Management has established a national Disaster Management Plan and is implementing the DVRP (Disaster Vulnerability Reduction Project), and the office is supported by CDERA (Caribbean Disaster Emergency Relief Agency) and NEPO (National Emergency Planning Organization).
Climate change, especially reduced precipitation and drought, imperil habitat and cause declines in agricultural production and livelihoods	M	Establish buffer zones (and potential for ecological corridors) to allow species to migrate to different habitat areas; strengthen capacities for surveillance and response to forest fires in PAs and buffer zones; encourage water conservation, low-water requirement crops, and rainwater harvesting among farmers and other local residents in buffer zones

A.4. Coordination with other relevant GEF financed and other initiatives:

With regard to protected areas, at present there are no other existing or planned projects for focused on terrestrial protected areas in Dominica. However, there are several projects and initiatives with which the proposed project will coordinate on information sharing and strategic cooperation. The Government of Dominica has signed the Caribbean Challenge, which commits it to protect 20% of its near shore ecosystems by 2020; while the focus of efforts to meet this goal will be on marine protected areas, its success also will depend on reducing land based sources of marine pollution, including sediments and chemicals from upland protected areas and their surrounding landscapes. One project relevant to landscapes surrounding protected areas is the USAID Caribbean Open Trade Strategy (COTS) Project being implemented by the Physical Planning Department. This project seeks to support the effective management of natural resources and the integration of disaster risk reduction and mitigation concepts into the region's economic planning and implementation. Another such project is the "Organic Dominica" program being implemented by the Government together with UNEP; this 10-year project is designed to promote the sustainable use of natural resources including socio-cultural and indigenous community knowledge-based assets, forest products, non-timber forest products, food and agriculture, water and renewable energy. Among the eight stated priorities of the program are 1) addressing pressing environmental and natural resource management issues through the establishment of agricultural practices that will reduce the introduction of harmful substances into rivers and soils and promote sustainable land management; and 2) improving rural development through the establishment of improved land management practices that support organic production.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAs, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, NPFE, Biennial Update Reports, etc

The project is designed to further the objectives of Dominica's plans and policies regarding biodiversity conservation, sustainable land management, and climate change mitigation. The National Biodiversity Strategy and Action Plan (NBSAP, 2002) for Dominica lays out the country's vision for biodiversity conservation. Two of three goals listed in the NBSAP are directly addressed by the project, namely: "The conservation and sustainable management of Dominica's terrestrial and marine biodiversity to ensure intra- and inter-generational equity"; and "The promotion of sound and sustainable agricultural practices and technology within existing agricultural human capital so as to minimize the loss of agro-biodiversity, and reduce vulnerability to desertification, soil loss, and the contamination of water resources". The National Action Programme to Combat Land Degradation (2004) identifies specific priorities to strengthen land use planning and policies and to implement land degradation mitigation measures. In addition, Dominica is currently seeking to develop a National Land Use Plan (NLUP), which will establish land use zoning based on environmental and economic criteria, with the goal of reducing the conversion of suitable agricultural lands to other uses. The proposed project will also support the objectives of Dominica's sustainable development policies and plans, including the Growth and Social Protection Strategy (GSPS 2012-2014), in which the Government undertakes to "support the development of buffer zones around the protected areas to check future development" and to "ensure environmentally sensitive design principles are applied in any form of development within the protected areas and buffer zones". Finally, the project supports the goals of two national strategies -- the Low Carbon Climate Resilient Development Strategy and the Strategic Program for Climate Resilience (SPCR) -- that were approved by the President and Cabinet in April 2012 to facilitate Dominica's transformation to a low-carbon climate-resilient economy while addressing pressing development, livelihood and poverty issues confronting the country.

The project will contribute to Dominica's achievement of the Aichi Targets as follows: Targets 5 and 12, by greatly strengthening the effective protection of Morne Trois Pitons National Park, which encompasses many critical ecosystems and habitats in Dominica; Targets 6 and 8, by reducing the negative impacts of sedimentation, nutrient overloads and pollution on downstream coastal and marine environments critical for fishing; Target 7, by implementing sustainable agriculture and forestry activities in the PA buffer zone; and Target 14, by preserving ecosystem services (water provision, arable land) within a protected area and its surrounding landscape, which benefit *inter alia* women, indigenous and local communities, and the poor and vulnerable.

B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:

The project will contribute to Strategic Objective 1 of the GEF-5 Focal Area Strategy, 'Improve the Sustainability of Protected Area Systems', specifically Outcome 1.1: Improved management effectiveness of existing and new protected areas, by strengthening management of the existing Morne Trois Pitons National Park and by establishing the first institutional structures for protected areas management in Dominica. The project also will contribute to Objective 2 of the GEF-5 Focal Area Strategy, 'Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors', specifically Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation. The mainstreaming approach has been chosen because of the extensive interactions in ecological functioning and natural resource use between ecosystems within and outside of protected area boundaries in the uplands of Dominica, which require inter-sectoral approaches and cooperation among institutions and resource users engaged in conservation, forestry, agriculture, water management, and other development and planning activities.

B.3 The GEF Agency's comparative advantage for implementing this project:

UNDP approaches biodiversity conservation and sustainable ecological management from the perspective of improved development and governance, in particular through assisting countries in maintaining and enhancing the beneficial services provided by biodiversity and ecosystems to secure livelihoods, fight poverty and promote development. This concept of integrated conservation and development resonates well with the government and people of Dominica, who


have embraced the designation of their country as the “Nature Island” in which preservation and sustainable use of the natural environment are key drivers of national development and well-being. Within UNDP's Strategic Plan 2014-2017, Area of Work 1 calls for UNDP to support the “effective maintenance and protection of natural capital”, with work focused on “conservation and sustainable use of natural resources and biodiversity as well as creation of employment and livelihoods, for instance, through management and rehabilitation of ecosystem services, from the sub-national to the national level, including protected, indigenous and community conserved areas”. Furthermore, within the United Nations Development Assistance Framework (UNDAF) for Barbados and the Organisation of Eastern Caribbean States (OECS) 2012 to 2016, the Environment, Energy, Climate Change and Disaster Risk Reduction Outcome prioritizes “improving the policy, legal, regulatory and institutional frameworks for environmental governance”, including “a focus on green economic transformation as a key modality for contributing to the achievement of environmental sustainability within the context of the SIDS agenda.” UNDP's sub-regional office (SRO) for Barbados & the OECS has a good working relationship with the government of Dominica, with the successful implementation of several GEF projects and allocation of TRAC funding, and the SRO has experience in capacity building and policy development with Dominica and other country partners. The SRO has a dedicated environment programme officer, plus support from other programme and operations staff and the SRO's senior management staff. In addition to the staff available to follow up implementation in the SRO, UNDP has a number of staff available for technical assistance in the UNDP Regional Support Office located in Panama, with extensive experience in implementing previous projects in biodiversity conservation and the mainstreaming of biodiversity in productive landscapes / sectors. Within the region, UNDP also supports training programmes at the Centre for Resource Management and Environmental Studies at the University of the West Indies, which in turn provides scientific and technical assistance to countries including Dominica.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT AND GEF AGENCY

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT:

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Lloyd Pascal	Director, Environmental Coordinating Unit	Ministry of Environment, Natural Resources, Physical Planning and Fisheries	March 12, 2014

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	Date (MM/DD/YYYY)	Project Contact Person	Telephone	Email Address
Adriana Dinu UNDP/GEF Executive Coordinator and Director a.i		March 24, 2014	Lyes Ferroukhi, Regional Technical Adviser, EBD	+507 302-4576	lyes.ferroukhi@undp.org