



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FSP

TYPE OF TRUST FUND: GEFTF

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## PART I: PROJECT INFORMATION

Project Title:	The Path to 2020 – Antigua and Barbuda		
Country(ies):	Antigua and Barbuda	GEF Project ID: <sup>1</sup>	9402
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01405
Other Executing Partner(s):	Department of Environment, Ministry of Health and the Environment	Resubmission Date:	March 28, 2016
GEF Focal Area(s):	BD	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:	[if applicable]	Agency Fee (\$)	259,270

## A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-1 Program 1 Improving Financial Sustainability and Effective Management of the National Ecological Infrastructure	GEFTF	954,153	2,000,000
/BD-1 Program 2 Nature's Last Stand: Expanding the Reach of the Global Protected Area Estate	GEFTF	1,000,000	2,000,000
BD-3 Program 7 Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources.		775,000	1,500,000
<b>Total Project Cost</b>		<b>2,729,153</b>	<b>5,500,000</b>

## B. INDICATIVE PROJECT DESCRIPTION SUMMARY

<b>Project Objective:</b> To actualize protection and sustainable use of biodiversity and protected areas, under the umbrella of the newly passed Environmental Protection and Management Act (EPMA) of 2015						
Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Component 1: Strengthening regulations, institutions and financing mechanisms	TA	<p>Management effectiveness and financial sustainability scores of 17,704 hectares of protected areas increased</p> <p>Indicator: TT scores by 20% over baseline)</p>	<p>Regulations developed for the protected areas section of the new Environmental Protection and management Act of 2015</p> <p>Framework for coordination of protected areas system, and financial cohesion established and adopted</p> <p>Building on systems business plan, coordination and collection of revenue for the entities involved in management of the</p>	GEFTF	908,722	1,800,000

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

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

<sup>3</sup> Financing type can be either investment or technical assistance.

			<p>protected areas</p> <p>Training programs for enhanced PA management developed and implemented for communities, NGOs and government</p> <p>Methodology protocol and national monitoring system for Protected Areas established</p> <p>Environmental Information Management and Information System (EIMAS) and technology upgraded to mainstream environmental and biodiversity concerns into the development planning process</p> <p>Outreach strategy for protected areas and biodiversity awareness rolled out</p>			
Component 2 Expansion of protected areas in support of Species Conservation	TA	Expansion of protection and sustainable use of globally significant biodiversity in protected areas and surrounding communities increased by 3,035 hectares	<p>Gazettement and management of new Protected Area (Shekerley Mountains 3,035 hectares)</p> <p>1 new flagship Habitat/ Species Management Area intensively managed for visitation as well as genetically important species for agricultural biodiversity (Dunnings Forest Ecosystem – 22 hectares, subset of above)</p>	GEFTF	952,381	1,900,000
Component 3: Sustainable use and conservation of Antigua’s biodiversity and plant genetic resources	TA	<p>Number of species and traditional varieties of global significance sustainably used at the farm level increased</p> <p>Indicator: by at least 10 species</p>	<p>Community management pilots for <i>in situ</i> management of globally significant biodiversity</p> <p>Sustainable uses feasibility study and implementation of options for storage of genetic material for research and analysis purposes; seed banks</p> <p>Increased uptake of cultivation of locally adapted varieties and land</p>	GEFTF	738,090	1,525,000

			<p>aces through outreach and capacity building</p> <p>Adoption of management practices consistent with protected area ecosystem services by farming communities</p>			
			Subtotal		2,599,193	5,225,000
			Project Management Cost (PMC)	GEFTF	129,960	275,000
			<b>Total Project Cost</b>		2,729,153	5,500,000

**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 (\$)
Executing Agency	Environment Division	Cash	4,650,000
Implementing Agency	UNEP	In kind	250,000
NGO	EAG	In kind	50,000
NGO	National Parks Authority	In kind	100,000
Other	CARDI	In kind	450,000
<b>Total Co-financing</b>			5,500,000

**D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS <sup>a)</sup>**

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) <sup>b)</sup>	Total (c)=a+b
UNEP	GEFTF	Antigua and Barbuda	CC	BD	1,626,484	154,516	1,781,000
UNEP	GEFTF	Antigua and Barbuda	BD	BD	365,297	34,703	400,000
UNEP	GEFTF	Antigua and Barbuda	LD	BD	737,372	70,051	807,423
<b>Total GEF Resources</b>					2,729,153	259,270	2,988,423

**E. PROJECT PREPARATION GRANT (PPG)**

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: \$91,324					PPG Agency Fee: \$8,676		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
UNEP	GEFTF	Antigua and Barbuda	BD		91,324	8,676	100,000
<b>Total PPG Amount</b>					91,324	8,676	100,000

**PPG:** Biodiversity status and threats baseline, socio-economic baselines, capacity needs assessment (various institutions)

## F. PROJECT’S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	3,035 Hectares

## **PART II: PROJECT JUSTIFICATION**

### 1. *Project Description.*

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

The twin island state of Antigua and Barbuda occupies an area of 440 km<sup>2</sup> in the Eastern Caribbean and is classified as a semi-arid country with annual rainfall averaging 45 inches, while Barbuda receives closer to 35 inches per year, or less than two thirds of the potential evaporation of water from its surface.

There is a current trend in the loss and extinction of biodiversity globally, and more specifically to Antigua and Barbuda, initiated in earnest by the clearing of its original vegetation for the cultivation of sugar cane and cotton as well as other economic developments. In the early colonial period, sugarcane was planted on over two thirds of the area of Antigua, resulting in removal of natural vegetation. Despite these circumstances, the country has retained a surprisingly rich flora and an animal population that is biodiverse, especially in the area of its resident and migratory birds.

In Antigua and Barbuda’s history, threats to national biodiversity have been dominated by human activities in pursuit of economic development. Addressing these threats has become increasingly difficult given the country’s small size of approximately 90,000 people and management, economic, enforcement and governance challenges. The biodiversity challenges faced by the country are comparable to those of other small island developing states (SIDS).

The Country has prepared a Protected Areas system plan which carefully outlined a systematic approach to protected areas management as well as National Biodiversity Strategy and Action Plan (NBSAP) in 2014. These and other reports outline a number of barriers to stemming the loss of biodiversity, which this project seeks to address.

#### **Component 1 – Protected Areas Institutional Framework and Financing Mechanisms. Barriers:**

In Antigua and Barbuda, responsibilities for environmental planning and protection are shared by a number of agencies spread disparately throughout several ministries. The National Parks Authority (NPA), Divisions of Fisheries, Forestry Unit, Agriculture, Lands, the Department of Environment, the Development Control Authority, and the Environmental Awareness Group (EAG) – an NGO – all play some role in PA management. The lack of coordination amongst the myriad of entities holding fragmented responsibilities for protected areas management was highlighted in the draft protected areas system plan (2010), but has yet to be addressed. Included in the gap is the lack of involvement of NGOs and communities in the management of protected areas.

The newly passed Environmental Protection and Management Act of 2015 (EPMA), however, offers opportunities to build on and coordinate across the governance system. This project will develop the regulations in support of the specific sections of the Act that govern protected areas, and will support the development and implementation of effective coordination of protected areas among the various Government agencies while effectively involving NGOs, community groups and the private sector.

The financial needs to meet the estimated annual operational costs of the biodiversity rich protected areas system of Antigua and Barbuda is conservatively estimated at US \$5 million per year. The cash strapped Government is currently meeting less than US \$2 million of these costs per year. While some important headway was made with the 2015 passage of the EPMA and the legislation of the Sustainable Island Resource Framework Fund (SIRF Fund),

there remains an urgent need to aggressively increase management effectiveness of existing protected areas and to explore alternative means of both management and financial self-sufficiency for protected areas and biodiversity friendly sources of income for surrounding communities. A business plan for the protected areas system is being elaborated under an earlier GEF funded project. Uptake of this plan is to be rolled out on a park-by-park basis, which requires effective financial planning and implementation at the site level, and coordination at the system level. As required for all GEF projects, the financial sustainability scorecard will be used to measure progress.

Conflicting land use pressures, especially between housing, tourism and agricultural activities in the face of underfunded protected areas and undervalued biodiversity, is resulting in intensified pressures to convert biodiversity-rich areas to economically productive sites (such as housing and hotels) and degradation caused by roaming livestock, drought and other extreme weather events.

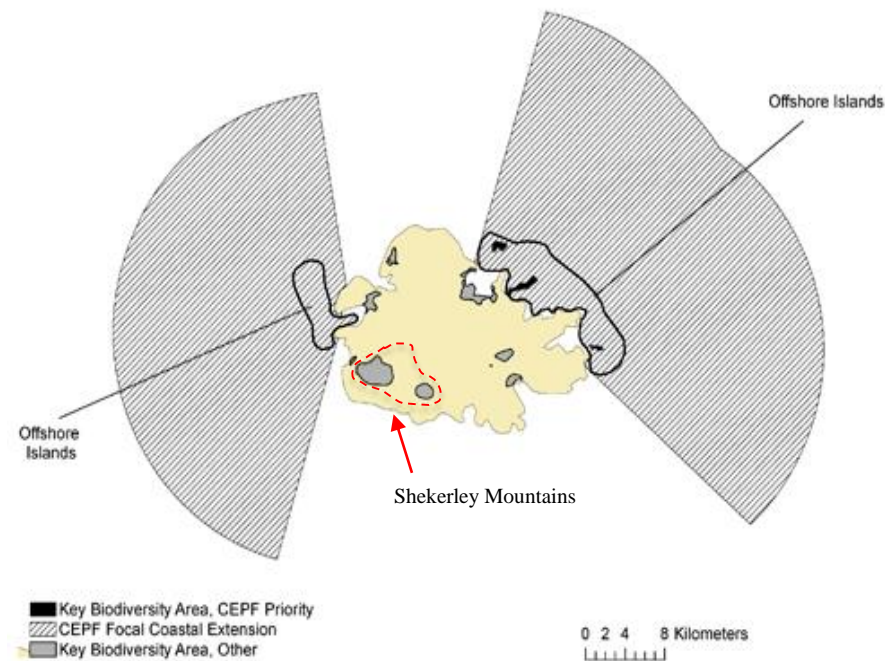
Additional challenges to the management of protected areas include:

- Lack of human resource capacity in key biodiversity areas and other related fields;
- Land degradation; and
- Limited institutional capacity to manage the development process.

Without a strong and effective management system, factors contributing to the loss of biodiversity will remain unchecked.

**Component 2 – Expansion of protected areas in support of species conservation. Barriers:**

The Red List of Vascular Plants in Antigua and Barbuda mentions 31 critically endangered species, 77 endangered, 92 vulnerable and 38 near threatened, with 327 falling under the category of data deficient. Following on this and other analyses, significant gaps remain in the “Systems Plan for Protected Areas in Antigua and Barbuda”. One such data and management gap is the Shekerley Mountains, which features probably the best examples of moist evergreen closed canopy forest to be found in the country. The understory is rich in unique species of vines, epiphytes, succulents and shrubs. This area extends from Mt Obama (this part is being protected and managed under a GEF-5 project), Midway Peak and Christian Valley. The Shekerley Mountain proposed management area encompasses two of Antigua and Barbuda’s ten Key Biodiversity Areas (KBAs) identified by the Caribbean Ecosystems Partnership Fund (CEPF) (see Figure 1).



Extension of the Shekerley Mountains for conservation purposes would add an additional 3,035 hectares to the Antiguan protected areas system. This specific area is further identified as a priority for protection in Antigua’s 2015 report on its Intended Nationally Determined Contribution (INDC).

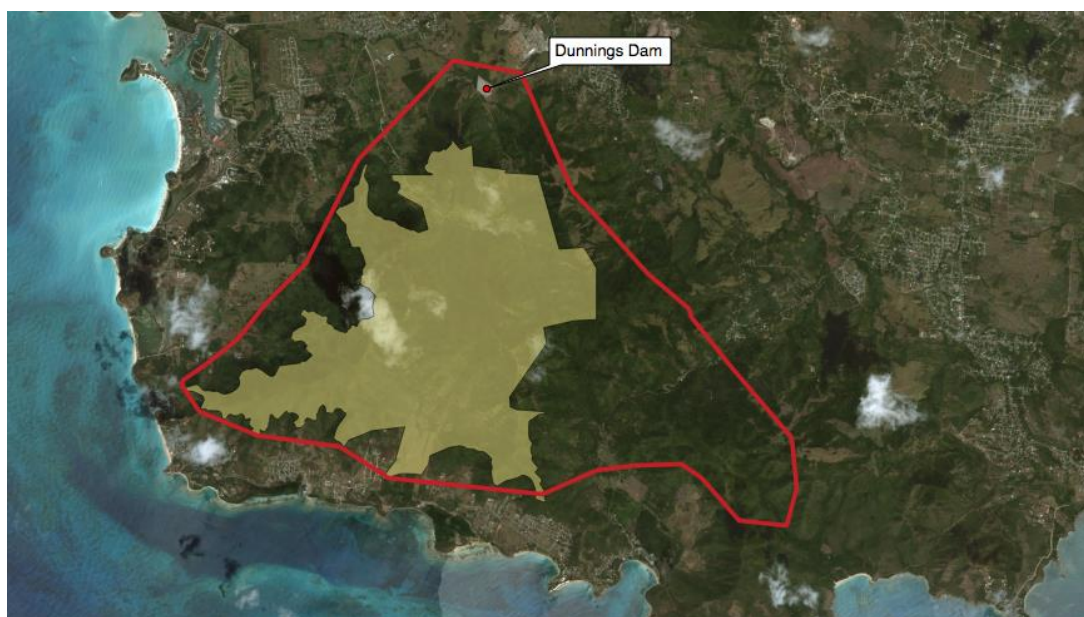
Stakeholder consultations under the auspices of other smaller initiatives, including three NGO and community-led GEF Small Grants Programmes in the area, stipulate the following threats: annual wild fires, invasive fever grass, deforestation/forest and woodland loss, road construction, land clearing, increasing and severe droughts, floods, erosion, desertification, overharvesting of native aquatics, and quarrying.

**Figure 1. Antigua’s Key Biodiveristy Areas for CEPF investment, depicting the approximate extent of the Shekerley Mountain proposed management area**

In addition to the critically endangered, endangered, vulnerable and near threatened species of the KBAs, in its reports to the CBD and NBSAP, Antigua and Barbuda has consistently identified the need to conserve and protect agricultural biodiversity for its potential to support sustainable livelihoods.

Antigua and Barbuda's Fourth National Report to the CBD identified threats specific to agricultural biodiversity, which are a lack of adequate research, a lack of *ex situ* facilities, very little protection of intellectual property and the lack of trained personnel for the implementation of approved policy initiatives.<sup>4</sup> The Dunnings Forest Ecosystem has been selected as a flagship Habitat/ Species Management Area within the larger Shekerley Mountain management area for its broad spectrum of Antiguan agro-biodiversity, but also its high biodiversity and agricultural biodiversity. A research hub is proposed for this Dunnings site, which will benefit agro-biodiversity research for the whole Shekerley Mountain management area, and the twin island state's other protected areas.

The proposed Dunnings Forest Ecosystem is an area of 55 hectares that is perhaps one of the most stunning valleys and natural areas of Antigua, with a wide and open valley, strategically placed peaks, some over 300 meters, and some of the most spectacular views in the region, as well as an important freshwater catchment area hosting the Dunnings Reservoir. On the northern and eastern slopes of McNish, seasonal forests persist, and on the northwestern slope has seasonal-evergreen forest, often dominated by tall Royal Palm, the rare *Acrocomia aculeata*, called Macca Palm by locals. Separating Dunnings from nearby Christian Valley is the Ark-shaped Rock Peak, clothed in seasonal woodland, cactus scrub and rocky cliffs populated with bromeliads and vine cactus plants, including *Hylocereus* spp., the Night Blooming Cacti and rare wild orchids, such as the Yellow Dancing Lady (*Tolumnia urophylla*), endemic to the lesser Antilles. The rare fan palm, *Coccothrinax barbadensis* finds sanctuary here, but even more revealing is that the Peak is largely unexplored, and new discoveries and surprises are not unexpected. The area is also known for its many unknown fungi species, hidden peaks and valleys, and small caves for roosting bats. Some of the island's most rare ferns are found there. In fact, it may have one of the highest incidences of fern diversity on the island<sup>5</sup>. Year round residents of regional endemic birds include Bridled Quail Dove (*Geotrygon mystacea*), Antillean Crested Hummingbird (*Orthorhyncus cristatus*), Purple-throated Carib (*Eulampis jugularis*), Green-throated Carib (*Eulampis holosericeus*), Scaly-breasted Thrasher (*Alenia fusca*).



**Figure 2. Map of Mt. Obama National Park, approximate extent of Shekerley Mountain management area, and Dunnings Forest Ecosystem**

<sup>4</sup> Antigua and Barbuda's Fourth National Report to the Convention on Biodiversity: <https://www.cbd.int/doc/world/ag/ag-nr-04-en.pdf>

<sup>5</sup> Brief Guide to the Rare Plants of Antigua and Barbuda Requiring Protection: <http://www.eagantigua.org/Guide%20to%20Rare%20Plants%20Issue%2004b%20150dpi.pdf>

Threats to this site include wildfires, and unplanned and poorly engineered and sited roads have caused severe erosion, increasing siltation, moisture loss and ecological disruption. The site is currently threatened by a potential new quarry, which would irrevocably mean the demise of this unique area and also cut off prospects of protecting the corridor aspects of the site itself. With the development of the quarries within the vicinity of the area, Environmental Impact Assessments and other studies have identified high biodiversity, and experts have concluded that it is important to maintain the ecosystems at this site. It is the goal of this project to protect the biodiversity in this area.

**Component 3 – Sustainable use of Antigua’s plant genetic resources. Barriers:**

Threats to livelihoods in the broader buffer zones of the area described above include: loss of fruit trees, loss of craft species and values, loss of traditional crop and fruit varieties, noting that with the rise of new crop varieties, often marketed by seed companies and the Ministry of Agriculture, some more traditional varieties are abandoned in favor of these new forms. Though the decline or loss of the traditional crop varieties may not register on the radar of most farmers, especially if younger farmers have never had any experience, knowledge or awareness about them, it is nevertheless important for local crop production prosperity to ensure that many of these local varieties be conserved, especially given that their genetic diversity may prove useful at some point in the future.

Despite Antigua's small size it has several distinct agro-ecological zones and, because it is an isolated island state, it hosts a number of locally adapted varieties of crops that may have value beyond Antigua’s shores.<sup>6</sup> These potentially valuable species are not currently part of any conservation programme, and this has been consistently highlighted in the country’s communications to the CBD. These local varieties are therefore in danger of being lost or corrupted as new introductions are made for various purposes and as farmers switch from planting their traditional varieties to other introduced varieties and cultivars. Some examples of crops that have local varieties in use in Antigua are given below. They have, in general, not been properly described or characterized, and are therefore in danger of being lost as new commercial varieties are introduced and farmers change growing practices. This has already happened to some extent with the local eggplant and pigeon peas. It is important that this resource of genetic material be conserved and characterized so that farmers can be assured of supplies of seed or planting material. These local varieties also need to be conserved as sources indicate there are special adaptations such as pest and disease resistance, and drought tolerance.

A list of crops with land races in Antigua, some of which are specific to the Dunnings Forest Ecosystem site:

<b>Crop</b>	<b>Scientific name</b>	<b>Local names<sup>7</sup></b>
• Castor oil	<i>Ricinus communis</i>	
• Cattle tongue	<i>Pluchea carolinensis</i>	Cure-for-all
• Coconut	<i>Cocos nucifera</i>	Jelly
• Cotton (Sea Island)	<i>Gossypium barbadense</i>	MSI, V135
• Cowpea	<i>Vigna sinensis</i>	African red
• Cucumber	<i>Cucurbita sativa</i>	Un-named local type
• Eggplant	<i>Solanum melongena</i>	"Local"
• Hot pepper	<i>Capsicum chinense</i>	Peggy mouth
• Guava	<i>Psidium guajava</i>	
• Java plum	<i>Syzygium cumini</i>	

<sup>6</sup> Leipzig, 1996. Antigua and Barbuda: Country Report to the FAO International Technical Conference on Plant Genetic Resources. Prepared by Lesroy C. Grant (Dunbars, Antigua). Available for download:

<http://www.fao.org/fileadmin/templates/agphome/documents/PGR/SoW1/americas/ANTIGUA.pdf>

<sup>7</sup> Source: CARDI (Antigua and Barbuda Office)

• Jumbie bead	<i>Abrus precatorious</i>	Local coffee bean
• Pawpaw	<i>Carica papaya</i>	Several local types
• Pigeon pea	<i>Cajanus cajan</i>	Several local types
• Pineapple	<i>Ananas comosus</i>	Antigua Black
• Seasoning pepper	<i>Capsicum spp.</i>	"Seasoning pepper"
• Squash	<i>Cucurbita pepo</i>	"Table squash"
• Sorrel	<i>Hibiscus sabdiffera</i>	Several local types
• Sweetpotato	<i>Ipomoea batata</i>	Black Rock, Backra Mary, White Drill, Ketch Me, etc.
• Yam	<i>Dioscorea spp</i>	Early Anthem, Antigua yam

## 2) Baseline scenario or any associated baseline projects

The proposed project will build on the outcomes of: 1) the completed Organization of Eastern Caribbean States (OECS) Protected Areas and Associated Livelihood (OPAAL), a regional project that delivered a draft Protected Areas System Plan for Antigua and Barbuda, 2) the ongoing Sustainable Financing and Management of OECS Marine Ecosystems Project, which is supporting the establishment of a single National Protected Areas Trust Fund for Marine Protected Areas that will, among other things, access the funds from the regional Caribbean Biodiversity Fund; and 3) the Ridge to Reef Demonstration project which produced key data and boundaries for the proposed park. The latter project was part of the GEF-funded Sustainable Island Resource Management Mechanism (SIRMM) effort, which piloted baseline efforts for continued economic development of the country while protecting its natural resources.

Antigua and Barbuda's Parliament passed the **Environmental Protection and Management Act (EPMA) in 2015**. The Act establishes an enabling environment for advancing financial sustainability of all protected areas and a coordinating mechanism for terrestrial protected areas. The Act further provides a mechanism to declare protected areas in tandem with the Physical Planning Act of 2003, providing a more mindful and comprehensive alternative to the outdated 1984 National Parks Bill. Under the EPMA, the mandate of the Department of Environment is expanded to include the coordination of the management of national parks and protected areas. The Act further establishes the Sustainable Island Resources Framework Fund (SIRF Fund) through which the proceeds of newly identified returns, including a water levy, protected area fees, and other investments and returns, can be targeted for conservation purposes and access is provided for the public, private and civil society sectors. Under the new EPMA, the following key provisions should be considered as baseline to the proposed project:

- **Access to Genetic Resources and the Sharing Of Benefits.** Part VII Sections 67 – 73 provide for the following: “The Government of Antigua and Barbuda together with the civil society exercises sovereign rights over the biological resources existing in the country and recognizes that it is the duty of the state and its citizens to regulate the access to biological resources as well as related use of community knowledge and technologies. The Government also recognizes the need to promote and support the traditional and indigenous technologies that are important in the conservation and sustainable use of biological resources and to complement them by modern technologies so as to ensure the implementation of the relevant provisions of the Convention on Biological Diversity, in particular Article 15 on access to generic resources and Article 8(j) on the preservation and maintenance of knowledge, innovations and practices of indigenous and local communities.” The legislation recognizes the rights of local communities to collectively benefit from traditional knowledge, provides for biopiracy controls, and includes penalties for offences.
- **Natural Resources Management: Protected Areas. Part VIII, Sections 53 – 56** include provisions for the Minister to, by order, designate a terrestrial or marine protected area to, among other purposes: safeguard and maintain representative samples of natural ecosystems and endangered species that occur in those ecosystems; and propagate, protect, conserve, study and manage any ecosystem, flora, fauna or landscape.

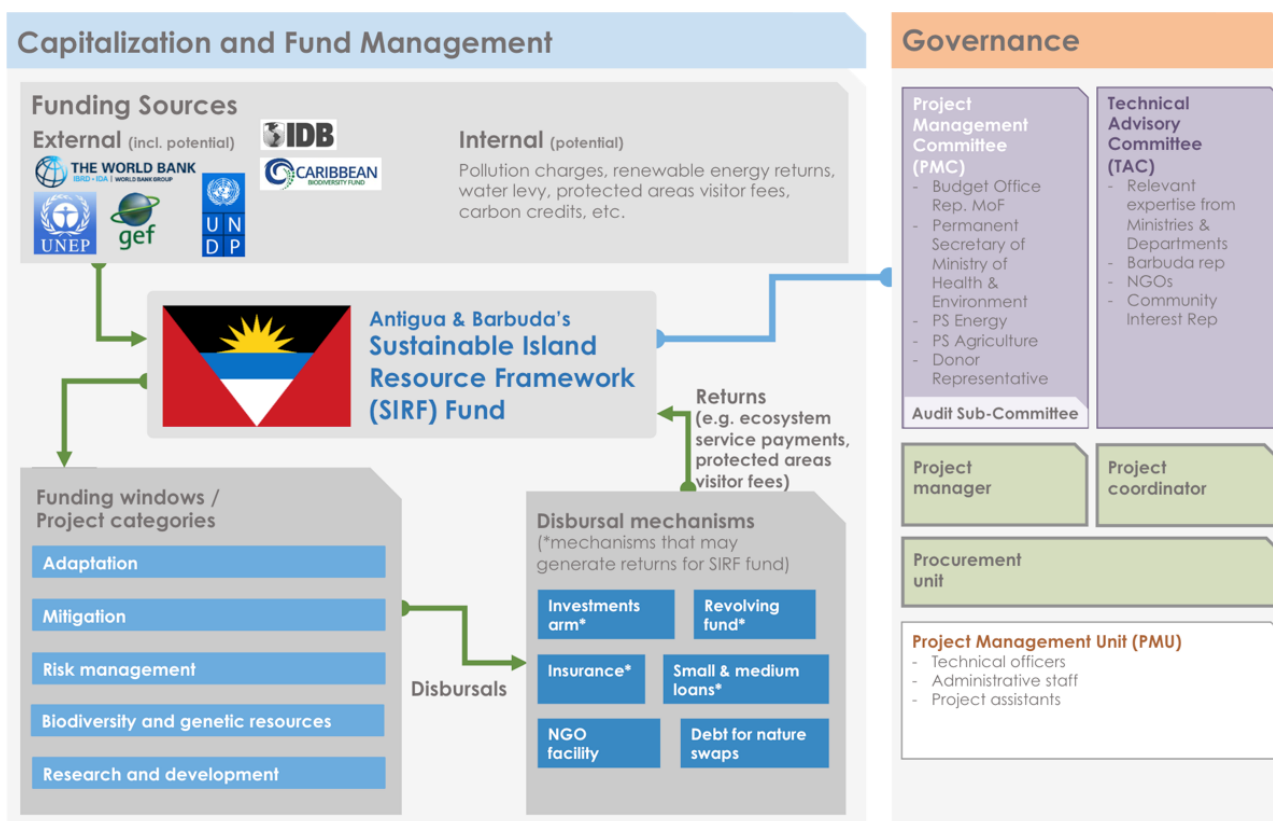


The recently launched GEF-funded **Special Pathways – Protected Areas and Renewable Energy (SPPARE)** project is an key baseline project as it will develop a business plan for the protected areas system and design and pilot the Green Card system of visitor fee collections, which will increase revenue for protected areas management (Figure 3). The SPPARE project identified a barrier to PA management that the collection of park fees could be difficult as it requires investments in staff and accounting procedures. Additionally, collections are difficult to track and losses may occur due to theft. The high cost of collection can be mitigated with the implementation of a “green card” system. With the purchase of this card from a central location at the Botanic Gardens in St. John’s or through an online platform, visitors and residents (at a lower rate) can enjoy all the parks within the country for one price. The parks will include both marine and terrestrial parks. If this program is successful, it will help to alleviate the problem where the more popular parks earn more revenue and receive more investment, irrespective of biodiversity value. With the ‘Green Card’ program, parks that may earn less can benefit from the central collection system that will ensure that all parks are funded. This approach is also convenient for the visitors and will support private sector participation and sustainable livelihoods through new opportunities in protected areas and eco-tourism. The development of the “Green Card” will be the effort of the general staff of the Department of Environment. The SPPARE will however assist with implementing the system by hiring a marketing expert and graphic designer to produce the final products for sale.

Revenue generated from visitor fees to the Dunnings Forest Ecosystem will be managed through the Green Card system developed under the SPPARE project. Co-management arrangements for protected areas are an important feature of the SPPARE project, and the Department of Environment is in active negotiations with the Environmental Awareness Group (EAG) to pilot the first terrestrial co-management protected area in Antigua, where EAG, a non-governmental organization, will develop and implement a management plan for the Mount Obama Protected Area.

The **GEF Small Grants Programme (GEF SGP)** has awarded at least three grants to communities and NGOs within the Shekerley Mountain range, two of which are in the vicinity of the Dunnings Forest Ecosystem. The three projects supported by the GEF SGP are: **Team Farm Fresh Produce** (USD \$50,000) which piloted a climate smart greenhouse with a hydroponic system powered by solar in Bendals, with up scaling to Diamonds, and training for 26 young farmers (2014); the **John Hughes Community Group** (US\$50,000) researched bats and raised awareness of bat-friendly living to support these important pollinators for forest conservation and management (2014); and **Women Against Rape** (US\$50,000) implemented a project to build women’s and local community capabilities in sustainable forest management (2014).

**The Sustainable Island Resources Framework Fund (SIRF Fund)** was legislated under the EPMA and is being operationalized under the SPPARE project. The islands’ Protected Areas system has an estimated annual US\$5 million budget requirement, but currently the country is able to support less than half of its needs for biodiversity protection. The island has already witnessed local extinctions of valuable flora and fauna. To combat this trend, the Government is developing a national fund, the SIRF Fund, to serve as the primary channel for environmental, climate mitigation and adaptation funding from international and domestic sources. Legislated through the EPMA, the SIRF Fund provides the framework financial mechanism to implement the Act and is anticipated to be fully operational in 2017. The SIRF Fund will help to bridge financing gaps by raising funds to invest in for-profit renewable energy technology initiatives, as per the EPMA. The technologies identified to date are primarily solar and wind, in addition to possibly ocean thermal energy conversion (OTEC). The electricity generated will be sold to the utility company (APUA), which has agreed to a power purchase arrangement and the proceeds of this will be channeled into the various thematic windows. The fund has received the necessary permits from APUA and the Government to generate 25MW of electricity. Figure 3 illustrates the proposed SIRF Fund design, including a “Biodiversity and genetic resources” funding window, and revenue returns to the Fund through protected areas visitor fees.



**Figure 3: Proposed Design of Antigua and Barbuda’s Sustainable Island Resource Framework Fund**

This project will help provide the lacking key components of the protected areas, in particular by establishing an area that can benefit people and their livelihoods. The proposed Shekerley Mountains management area will extend the protected areas system, and the Dunnings Forest Ecosystem flagship will feature an attractive area for visitation, with the goal of relieving more ecologically sensitive sites. The Dunnings Forest Ecosystem will be a visitation area for biodiversity observation and experience and will complement the other protected areas by allowing those areas to be declared and managed as conservation or close to conservation sites and therefore reserved for low-density usage. This new site will provide income to the protected areas system in the form of visitor fees. Taken together, this project will contribute to the overall protected areas system business plan and biodiversity goals, and the business strategy will limit the amount of infrastructure construction required for the protected areas system, which will reduce the infrastructure footprint as a whole and make the Systems of Parks more profitable.

With respect to proposed Component 3, **the Caribbean Agricultural Research and Development Institute (CARDI) Antigua and Barbuda Office**, provides technical support in a number of relevant areas. These include increasing the competitive ability of the farmers, fishermen and others involving in natural resource use, improving the economic development of rural communities, maintaining the sustainability of Antigua and Barbuda’s natural resources and biological diversity, integrating this sector with that of the environment, and promoting the widest possible utilisation of local products. The CARDI seed production program distributes indigenous seeds throughout the Caribbean. Current foci include roots and tubers, with some 70 “accession” varieties of sweet potatoes being studied in Antigua and Barbuda. Testing for drought tolerance is a key priority. A research station in Betty’s Hope provides an important baseline for cooperation and expansion of these critical programs.

**The Inter-American Institute for Cooperation on Agriculture (IICA) Antigua and Barbuda Office** is also providing baseline support through technical support to initiatives, which include exploring vermiculture production to enhance local productivity, climate friendly agriculture and public awareness – working with CARDI on local races of seed potatoes and exploring options for developing production of a local peanut variety. The Ministry of Social Transformation is launching small-scale initiatives to explore the development of ginger through women’s groups. All of these will be further detailed and leveraged during project preparation. The Department of

Environment is keen to build alternative livelihoods options that combine efforts to safeguard and develop sustainable use of Antiguan biodiversity, genetic resources and landraces to enhance valuation through the sustainable use of these resources.

The **Global Climate Change Alliance (GCCA) Project on Climate Change Adaptation and Sustainable Land Management in the Eastern Caribbean** (2015–2018; US\$ 1 million) has the overall objective to achieve the provisions enshrined in Article 24 of the Revised Treaty of Basseterre, that each Protocol Member State shall implement the St. George’s Declaration of Principles for Environmental Sustainability which seeks to *inter alia* achieve the long-term protection and sustained productivity of the region’s natural resource base and the ecosystem services it provides. Its specific objective is to improve the resilience of the region’s natural resource base to the impacts of climate change through the following two components: 1) Effective and sustainable land management frameworks and practices, and 2) Specific physical adaptation pilot projects in relevant areas or sectors in a suburb of St. John’s city. The sustainable land management components of the project include developing a climate change policy and updating the national environmental management policy, in addition to supplying equipment and training, including GPS devices and GIS training, total weather stations, and surveying software.

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

#### **Component 1. Strengthening regulations, institutions and financing mechanisms.**

As elaborated above, protected areas are currently governed under a fragmented system in Antigua and Barbuda, and generally lack NGO and community involvement in their management. This project will support an alternative scenario for biodiversity protection that the country is working towards to achieve its NBSAP and implement the EPMA of 2015 by contributing to the legal environmental framework, strengthening institutions, and enhancing financing mechanisms. This component will contribute to BD – 1 Program 1: *Improving Financial Sustainability and Effective Management of the National Ecological Infrastructure*.

The outcome under this component is to increase by 20% the management effectiveness and financial sustainability scores for 17,704 hectares of protected areas. Activities under this component include:

- 1.1 Develop regulations for the relevant sections of the Environmental Protection and Management Act (EPMA) of 2015.** The Part VII of the Act, “Natural Resources Management”, covers the establishment of protected areas, management principles, and provisions for protected areas on Crown and on private lands. The section also establishes a Wetland and Watershed Committee that will provide advice and guidance to the management of the systems of protected areas. Schedule X of the Act has a list of IUCN Protected Areas Category, including the protected area to be established under this project. Regulations in all of these areas are key to implementing the Act.
- 1.2 Establish and adopt a framework for coordination of protected areas system, and financial cohesion.** This framework will improve management of Protected Areas in Antigua and Barbuda by creating a management framework that allows all agencies involved in biodiversity and cultural conservation to work effectively and efficiently, and coordinate financial mechanisms for improved revenue capture and retention. This alternative scenario will establish a coordination body under the EPMA of 2015 that consists of representatives from the various Government agencies, NGOs, community groups and the Private Sector.
- 1.3 Building on systems business plan, coordination and collection of revenue for the entities involved in management of the protected areas.** This project will scale-up the protected areas fee-collection system being established under the GEF5 SPPARE project. The system being designed allows for coordination of the collection of revenues via a “green card” system so as to promote revenue generation and provide revenue for administration and development of services. The funds generated for all protected areas via the green card will go directly to the SIRF Fund, which the management bodies of the protected areas can access after presentation of a plan that focuses on biodiversity management. This approach will increase accountability and results-orientation while keep administrative fees low through a centralized collection system. Resource centralization

will also ensure that protected areas will receive adequate funding even where income may not cover cost of operation, however where biodiversity protection is a high priority.

- 1.4 Training programs for enhanced PA management developed and implemented for communities, NGOs and government.** The strengthening of the capacity of government natural resources management institutions, as well as non-governmental organizations, will support the objectives of the national system of protected areas. Capacity needs will be identified and addressed in a prioritized sequence within budget constraints, however an indicative list of training has been identified under previous initiatives and includes: Geographic Information Systems (GIS), systematic field-based data collection, species identification and documentation (including eco-tourism guides), train teachers on the topics of biodiversity conservation and sustainable use of genetic material, farmers training, sustainable land management practices, training farmers on utilizing local genetic varieties, among others.
- 1.5 Establish methodology and national monitoring system for Protected Areas.** Currently, biodiversity monitoring is done on an opportunistic project-by-project basis, often by NGOs or community groups where information may not be readily available to the management authorities of protected areas. This activity will draw on good practices locally and regionally to formalize a cost-effective monitoring method for protected areas nationally, with maximum involvement of stakeholders and building on existing monitoring initiatives.
- 1.6 Environmental Information Management and Information System (EIMAS) and technology upgraded to mainstream environmental and biodiversity concerns into the development planning process.** This output will support the establishment of PAs and their categories, reflecting local values and linked to the IUCN PA category system, including Key Biodiversity Areas. This output will lay the groundwork for a comprehensive PA system that promotes biodiversity and cultural conservation and sustainable natural resource management.
- 1.7 Outreach strategy for national system of protected areas and biodiversity awareness rolled out.** Public awareness of environmental issues, ecological education and public participation in decision-making will be strengthened through this activity.

**Component 2: Expansion of protected areas in support of species conservation.**

Component 2 will establish the Shekerley Mountains management area, which harbours a unique last stand of Antigua's moist evergreen, closed canopy forest, as well as the Dunnings Forest Ecosystem flagship. Biodiversity in this area is under threat from economic activities, including quarrying, unsustainable land management practices, and other pressures. This component will expand terrestrial protected areas in Antigua to protect critical biodiversity, and contribute to BD – 1 Program 2: *Nature's Last Stand: Expanding the Reach of the Global Protected Area Estate*. The outcome of this component is the expansion of protection and sustainable use of globally significant biodiversity in protected areas and surrounding communities (3,035 hectares). There are two activities under this component:

- 2.1 Gazzettement and management of new protected Area (Shekerley Mountains 3,035 hectares).** This activity will build on legal and management capacity established under Component 1, and demonstrate PA management in the target pilot site. Tasks include demarcation and zoning of the Shekerley management area, and delineating boundaries of watersheds and wetlands that are important for biodiversity protection and carbon sinks.
- 2.2 One new flagship Habitat/ Species Management Area intensively managed for visitation as well as genetically important species for agricultural biodiversity (Dunnings Forest Ecosystem – 22 hectares, subset of above).** Agricultural biodiversity has unique pressures and threats, however it is critical that this biodiversity subset is effectively managed as it is important for communities and sustainable livelihoods. This flagship Habitat/Species Management Area will be managed for genetically important species for agricultural biodiversity, and for intensive visitation in an effort to direct visitation and foot traffic off more ecologically sensitive areas in the Shekerley Mountains.

**Component 3: Sustainable use and conservation of Antigua's biodiversity and plant genetic resources**

Agricultural biodiversity in Antigua and Barbuda has a utility value for local livelihoods. Local varieties of genetic

resources, including those listed above, need to be conserved, researched and developed, as local knowledge suggests varieties have developed special characteristics such as pest and disease resistance and drought tolerance unique to Antigua's circumstances. The outcome of this component is that the number of species and traditional varieties of global significance sustainably used at the farm level is increased by at least 10 species. This project component will contribute to BD – 3 Program 7: *Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources*, through the following activities:

**3.1 Community management pilots for *in situ* management of globally significant biodiversity.** These projects will support community initiatives to protect and conserve biodiversity, with a focus on genetic resources for agriculture, and linked as much as possible to sites established for this project under component 2.

**3.2 Sustainable uses feasibility study and implementation of options for storage of genetic material for research and analysis purposes, and for seed banks.** This activity will help to address threats identified in the Fourth National Report and other CBD communications – including a lack of adequate research and a lack of trained personnel for implementation – by building key infrastructure for preserving biodiversity, research, and training people on the value of local genetic resources.

**3.3 Increased uptake of cultivation of locally adapted varieties and land races through enhanced outreach and capacity building.** Activities will target farmers and government, including the Ministry of Agriculture, with the goal of demonstrating the benefits of locally adapted varieties and increasing their use and preservation.

**3.4 Adoption of management practices consistent with protected area ecosystem services by farming communities.** This activity is to ensure that the livelihoods supported through this project are aligned with the overall objectives of the protected area, and that the activities are sustainable. Tools will be developed to support local communities, protected areas, and to encourage continued scientific partnerships.

The proposed project will contribute to **GEF-6 BD Objective 1, Programs 1, 2, and Objective 3, Program 7** by increasing the area of terrestrial ecosystems of global significance in new protected areas and increasing protection for threatened species of global significance; improving the management effectiveness of new protected areas; and increasing revenue for protected area systems and globally significant protected areas to meet total expenditures required for management. The site selected for protection under this project is critical for maintaining representative ecosystems and habitat in Antigua and Barbuda. Walling's Forest (IBA AG008) and Christian Valley (IBA AG009), both within the proposed Shekerley Mountain management area, together represent Antigua's wet forest ecosystem and are the only important birding areas in the country where the restricted-range *G. mystacea*, *E. musica*, *Margarops fuscus* and *M. fuscatus* are found, highlighting their critical importance in maintaining Antigua's biodiversity. Of Antigua and Barbuda's 182 bird species documented by a local NGO, the Environmental Awareness Group (EAG), 4 are threatened and 11 are restricted-range birds.<sup>8</sup> The Shekerley Mountain management area includes some of the last remaining wet and dry forest in Antigua and Barbuda, and plant and bird species of significant biodiversity value. The project is further addressing Program 7 by securing locally adapted land races and increasing their usage and value. The upper slopes consists one of the country's largest and most productive watersheds, supporting genetic material for multiple uses and livelihoods (food, medicine), including the famous Antigua Black Pineapple.

The proposed project will contribute to the achievement of the **following Aichi Targets, adapted for Antigua and Barbuda**: Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably; Target 5: By 2020 an effective monitoring protocol for critical habitats, mainly forests, mangroves and coral reefs has been implemented to assist in reducing degradation and fragmentation and Reduce the direct pressures on Biodiversity and promote sustainable use measures developed and undertaken to reduce the rate of loss by 10%; Target 11: A national system, including protected areas, for the management and conservation of biodiversity is developed and established by 2020 (this will include, terrestrial areas, wetlands, areas

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<sup>8</sup> Prosper, J., Victor Joseph, Andrea Otto and Shanee Prosper. Important Bird Areas in the Caribbean – Antigua and Barbuda. Environmental Awareness Group (EAG). Available for download: [http://www.birdlife.org/datazone/userfiles/file/IBAs/CaribCntryPDFs/antigua\\_and\\_barbuda.pdf](http://www.birdlife.org/datazone/userfiles/file/IBAs/CaribCntryPDFs/antigua_and_barbuda.pdf)

important to migratory species and marine environments); Target 14: By 2020 at least 2 major watershed and mangrove wetland areas are effectively protected; and Target 18: The formal integration of local communities into the co-management process of biodiversity in the country by 2020 – through the co-management of protected areas. The project is further addressing Program 7 by securing locally adapted land races and increasing their usage and value. The upper slopes consists one of the country's largest and most productive watersheds, supporting genetic material for multiple uses and livelihoods (food, medicine), including the famous Antigua Black Pineapple.

**4) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF; and co-financing**

**Table 1. Analysis of incremental cost reasoning and additionality from the baseline**

<b>CURRENT PRACTICE (BASELINE)</b>	<b>PROJECT ALTERNATIVE (ADDITIONALITY)</b>
Disjointed governance system and insufficient regulatory framework and capacity to effectively manage protected areas	Regulations will be developed for key sections of the EPMA, and a framework for coordination of the protected areas system will be established to support coordinated management, monitoring, and capacities
There is no dedicated source of financing for Protected Areas	The SIRF Fund will support a sustainable financing framework for Protected Areas (SPPARE project co-financing) and this project will add an anticipated high-use protected area to the systems plan and attract additional visitor fees
Underrepresented ecosystems in Protected Areas System and lack of protection for threatened species	Increased representation of areas that are significant for ecosystem services (watersheds) and species-rich habitats in the Protected Areas System
New crop varieties, including those marketed by seed companies and the Ministry of Agriculture, are causing traditional varieties to be lost due to genetic loss and cultural shifts	Enhanced awareness, capacity and opportunities for sustainable use and conservation of genetic resources, encouraging management practices in farming communities that are consistent with protected area ecosystem services
Learning and livelihoods opportunities are not utilizing Antigua biodiversity	Community groups will be supported through this project to implement pilot projects that enhance biodiversity and raise awareness of ecosystem services
Lack of biodiversity protection and agricultural biodiversity research facilities. Lack of agricultural biodiversity resilience due to increased reliance on imported seeds, and decreased use of local Antigua land races and crop wild relatives	The flagship Habitat/ Species Management Area will enhance the value of agricultural biodiversity and cultural linkages between biodiversity and sustainable livelihoods
Lack of trained personnel for the implementation of approved policy initiatives	Key government agencies – including the Ministry of Agriculture – and community members and NGOs will be sensitized and receive training to implement the NBSAP and other biodiversity-oriented policy initiatives

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

The expected global benefits include the strengthening and expansion the Protected Areas System in the country by increasing the area of terrestrial ecosystems of global significance in new protected areas and halting or reversing the trends of affecting threatened species of global significance protected in new protected areas.

The site selected for protection under this project is critical for maintaining representative ecosystems and habitat in Antigua and Barbuda. Walling's Forest (IBA AG008) and Christian Valley (IBA AG009), both within the proposed Shekerley Mountain management area, together represent Antigua's wet forest ecosystem and are the only important birding areas in the country where the restricted-range *G. mystacea*, *E. musica*, *Margarops fuscus* and *M. fuscatus* are found, highlighting their critical importance in maintaining Antigua's biodiversity. Of Antigua and Barbuda's 182 bird species documented by a local NGO, the Environmental Awareness Group (EAG), 4 are threatened and 11 are restricted-range birds.<sup>9</sup> The Shekerley Mountain management area includes some of the last remaining wet and dry forest in Antigua and Barbuda, and plant and bird species of significant biodiversity value.

This project will support the **conservation of globally significant biodiversity** by protecting a unique biogeographical habitat, Antigua and Barbuda's only wet forest ecosystem. Significant biodiversity including restricted-range birds: Bridled Quail-dove *Geotrygon mystacea*, Purple-throated Carib *Eulampis jugularis*, Green-throated Carib *Eulampis holosericeus*, Antillean Crested Hummingbird *Orthorhyncus cristatus*, Caribbean Elaenia *Elaenia martinic*, Lesser Antillean Flycatcher *Myiarchus oberi*, Scaly-breasted Thrasher *Margarops fuscus*, Pearly-eyed Thrasher *Margarops fuscatus*, Lesser Antillean Bullfinch *Loxigilla noctis*, and the Antillean Euphonia *Euphonia musica*.

This project will support the **sustainable use of the components of globally significant biodiversity** through a Green Card visitation system for non-use biodiversity of intrinsic value, which when combined with additional SIRF Fund revenue streams will mitigate a core threat to biodiversity protect in Antigua and Barbuda, namely financing for effective protected areas management. This project will thus improve the management effectiveness of protected areas and increase revenue for the protected area systems through: (i) improved participatory management and protection of globally significant biodiversity in the target area, and (ii) demonstrate participatory management that is replicable throughout the country. The latter participatory management will support **fair and equitable sharing of the benefits arising from the utilization of genetic resources** under the agrobiodiversity Component 3 of this project, and two community/NGO projects awarded under this component will build the capacity of communities. With effective management structures in place and equitable distribution of benefits, threats such as those identified in the barriers section (annual wild fires, invasive fever grass, deforestation/forest and woodland loss, road construction, land clearing, increasing and severe droughts, floods, erosion, desertification, overharvesting of native aquatics, and quarrying) will also be mitigated. The GEF Alternative will furthermore strengthen the protection, capacity for management and opportunities for sustainable use of Antigua and Barbuda's biodiversity and genetic resources.

## 6) Innovation, sustainability and potential for scaling up

The need for enhancing terrestrial protected areas has been prioritized by the Government; however steps to achieve this have been slow as there is a shortage of reliable funding to execute activities directly related to the environment, protected areas management and biodiversity. There remains an urgent need to pilot, implement and scale up conventional and alternative financial mechanisms. This proposed project will benefit from and build on activities under the GEF5 SPPARE project to generate revenue for the SIRF Fund, which is Antigua and Barbuda's sustainable financing innovation. The innovative approach of this project is its support for community management pilots for *in situ* management of globally significant biodiversity. Awarding community/NGO grants directly will accomplish multiple goal: 1) delivering tangible results for biodiversity protection through project activities, 2) building capacity at the community level to develop and implement projects, as this is a core approach of the SIRF Fund which mandates 15% of revenue is to go to community groups and NGOs, and 3) community grants is an effective way to

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<sup>9</sup> Prosper, J., Victor Joseph, Andrea Otto and Shanee Prosper. Important Bird Areas in the Caribbean – Antigua and Barbuda. Environmental Awareness Group (EAG). Available for download: [http://www.birdlife.org/datazone/userfiles/file/IBAs/CaribCntryPDFs/antigua\\_and\\_barbuda.pdf](http://www.birdlife.org/datazone/userfiles/file/IBAs/CaribCntryPDFs/antigua_and_barbuda.pdf)

raise awareness of biodiversity at the community level, which has been demonstrated by Antigua and Barbuda’s GEF Small Grants Programme, because people take an active interest when directly involved in outcomes.

The sustainability of this project’s activities will be managed by the SIRF Fund, which will continue to finance biodiversity protection. This project is positioned to catalyze public-private partnerships for agrobiodiversity research and development, which will sustain the work under the activity, “Feasibility study and implementation of options for storage of genetic material for research and analysis purposes; seed banks.”

The intention is to scale the pilots under this project to a national level, by applying good practices and lessons learned to other protected areas and livelihood opportunities. For example, lessons from the uptake of cultivation of locally adapted varieties and land races can be scaled up to farmers across the country, which will be facilitated through the Knowledge Management arrangements under this project, where the TAC and the PMC with responsibility for oversight can replicate lessons learned where appropriate. In addition, the project could serve as a regional model for other cash-strapped countries working to satisfy visitor demand, and demonstrate workable solutions to a lack of capital for environmental management.

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.

**Table 2. Stakeholder analysis, roles and responsibilities**

<p><u>Ministry of Health and The Environment:</u>  <i>Department of Environment</i> - Coordinate commitments to MEAs; develop/implement national environmental awareness programmes; rehabilitation and protection of environmental goods; develop environmental legislation; collaboration with the Forestry Unit and other agencies with responsibility for natural resources management</p>	<p><b>Lead overall Executing Agency</b></p>
<p><u>Ministry of Agriculture, Lands, Fisheries and Barbuda Affairs:</u>  <i>Extension Division</i> – Agricultural extension and farmer support services, partner for capacity building and training activities for farmers at target site  <i>Development Control Authority</i> - Regulating use and development of land. Implementing a Physical Development Plan with clear directives on further development of natural resources  <i>Forestry Unit</i> - Management of national forest and woodland areas. Establishment of forest reserves. Biodiversity conservation and eco-tourism development related to forests and woodlands  <i>Plant Protection Unit</i> - Plant protection recommendations  <i>Lands Division</i> - Management and control of all Government lands  <i>Fisheries Division</i> - Development of fisheries sub-sector; monitoring fish stocks and marine resources; regulatory and policing role; monitoring and preservation of coastal and marine habitats and species</p>	<p>Partner executing agency and co-financier</p>
<p><u>Ministry of Tourism, Economic Development, Investment and Energy:</u>  <i>Tourism Authority</i> - Coordinates the functions of the online Integrated Marketing unit, which is responsible for maintaining the new website and the social media accounts; it keeps the online portals updated on all the current activities occurring in the Ministry.</p>	<p>Partner executing agency and co-financier</p>
<p><u>Ministry of Finance:</u>  Partner in operationalizing the SIRF Fund</p>	<p>Partner executing agency and co-financier</p>
<p><u>Non-profit Organizations:</u>  <i>National Parks Authority</i> - Financially self-sufficient statutory body established by the National Parks Act. Responsible for designation of areas of land/water as</p>	<p>Partner executing agency and co-financier</p>



National Park.	
<i>Antigua State College</i> – Research and development	Co-execution partner and Consultative partners
<u>Private Sector</u> : Antigua and Barbuda Hotel and Tourist Association (AHTA) and individual hotels, Cruise Tourism Association, Tour Operators	Consultative partners and co-financiers
<u>Farmers, Land owners</u>	Co-execution partner and Consultative partners
<u>NGOs and Community Groups</u> : <i>Environmental Awareness Group</i> - Involved in issues of sustainable natural resource management, terrestrial biodiversity monitoring, improving community management, and training stakeholders in conservation practices	Partner executing agency and co-financier
<i>Women Against Rape</i> – A gender-oriented NGO for local community and gender-focused capacity building, including in forest management (GEF SGP recipient)	Co-execution partner and Consultative partners
<i>Bendals Community Group</i> – Located in the vicinity of the proposed PA boundary, an active community group with experience implementing climate-smart agriculture projects (GEF SGP recipient)	Co-execution partner and Consultative partners
<i>John Hughes Community Group</i> – Located in the vicinity of the proposed PA boundary, an active community group, with experience researching bats and in forest conservation and management (GEF SGP recipient)	Co-execution partner and Consultative partners

3. *Gender Equality and Women’s Empowerment*. Are issues on [gender 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.

Components 2 and 3 of the project will expand protected areas and enhance co-executed community management arrangements, including agro-biodiversity and eco-tourism opportunities, and these components will have several benefits for women and vulnerable groups.

By focusing project-financed interventions on remote rural communities and smallholders, especially women farmers as target beneficiaries, by developing and supporting sustainable production practices and linking farmers to markets, the project ensures the involvement of a large group of marginalized people that otherwise may not have access to subsistence income. Community and gender-specific consultative and co-execution partners are listed above, in Table 1. Management enhancement and monitoring efforts also offer gender-neutral opportunities by involving women – something that is already happening through specific NGO pilot operations. Strong community alliances coupled with a project focus on governance, capacity building, gender equity and social inclusion at all levels of organizational setup will guarantee participation of women and socio-economically marginalized individuals in decision making process as well as to ensure enhanced socio-economic benefits and more equitable distribution of income from marketing opportunities. Strengthening their income base, as well as their empowerment and social capital and linking them to relevant agencies and initiatives, is a social safeguard.

Furthermore, gender-disaggregated baseline socio-economic data is being collected under SPPARE and NBSAP project activities, which will inform the design and implementation of Components 2 and 3 to benefit marginalized and vulnerable populations. This project will generate additional gender-specific data and input gender monitoring data, as part of the systemic monitoring protocols. Gender considerations, particularly in the Caribbean, are not solely a women’s issue. As such the project looks at yielding advantage to whole communities and benefitting both genders and vulnerable groups.

Finally, the project has the provision of community membership on the Project Management and the Technical Advisory Committees referenced in Section 5 on Coordination, thus ensuring that their voices are heard, which is the Department's governance strategy to ensure a strong social safeguard for marginalized beneficiaries.

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 3. Risk analysis and proposed mitigation measures**

<b>Risk</b>	<b>Level</b>	<b>Mitigation</b>
Reluctance to address institutional fragmentation	M	Economic modeling and new financial options through the SIRF fund will incentivize governance arrangements
Lack of financial resources	L	Operationalization of the SIRF Fund for sustainable financing will bridge the finance gap
Conflict between conservation and land use	M	<ul style="list-style-type: none"> <li>• Participatory approach designed to take into consideration and reconcile different needs</li> <li>• Bridge aspirations and thus minimizing conflicts between development needs of local communities and the need to protect surrounding natural ecosystems.</li> <li>• Build understanding that aims of conservation and agriculture can be complementary</li> <li>• All stakeholders will be made aware of the Department of Environment's an online Complaint Mechanism: <a href="http://www.environmentdivision.info/submit_a_complaint_en_365cms.htm">http://www.environmentdivision.info/submit_a_complaint_en_365cms.htm</a></li> </ul>
Communities and farmers unwillingness to participate	L	<ul style="list-style-type: none"> <li>• Social inclusion and gender equity throughout its implementation</li> <li>• Exposure to good practices of building local institutional capacity</li> </ul>
Climate Change	M	<ul style="list-style-type: none"> <li>• Enhanced watershed protection has climate change resilience benefits</li> <li>• Agricultural resilience through increased options and support</li> </ul>

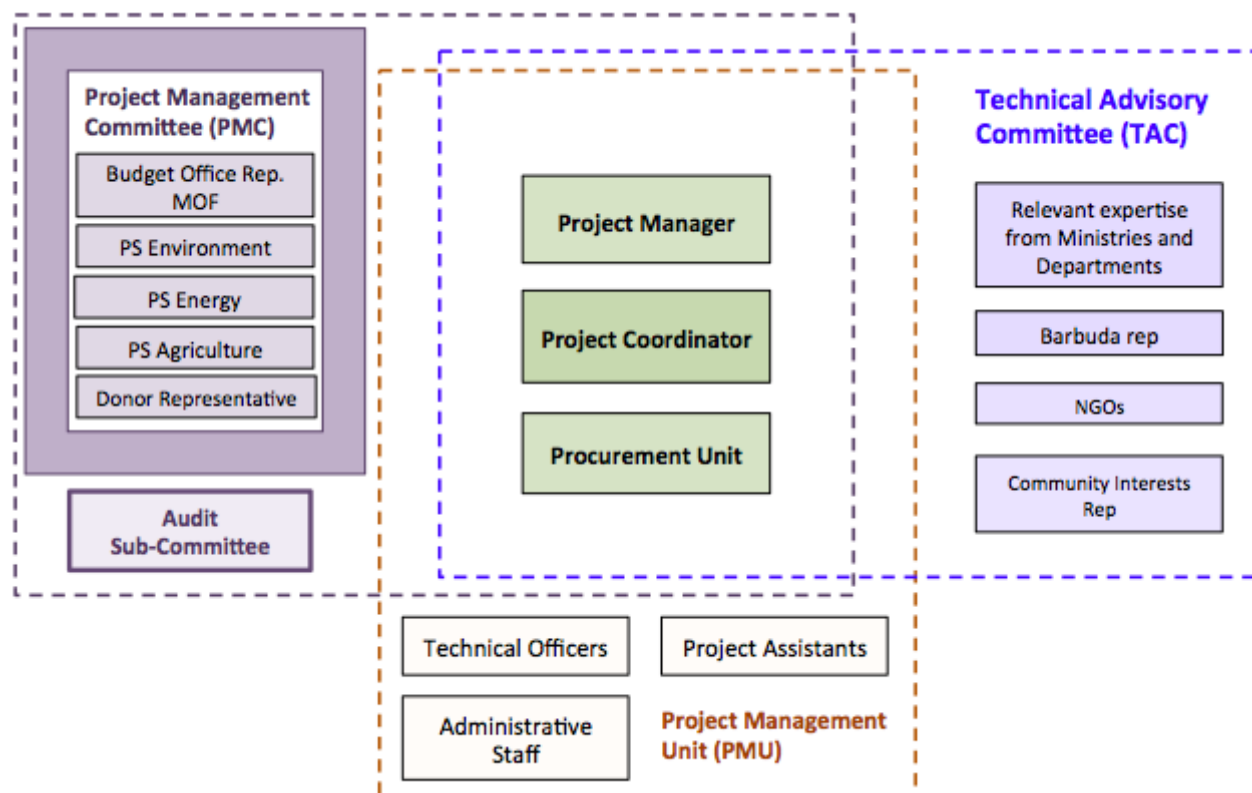
5. *Coordination*. Outline the coordination with other relevant GEF-financed and other initiatives.

The project will be carried out in close coordination with other projects in the UNEP/GEF Portfolio, including the UNEP/GEF projects: SPPare (GEFTF) and Building Climate Resilience through Innovative Financing Mechanisms for Climate Change (SCCF). With respect to the GEF/World Bank Project Sustainable Financing and Management of Eastern Caribbean Marine Ecosystem Project (Caribbean Challenge) the funds raised under this project as well as future projects that support the SIRF Fund will be used to provide matching funds to the Antigua and Barbuda NCTF.

There are several other regional projects being implemented in which Antigua and Barbuda is participating. These include the UNEP Integrating Water, Land, Resources and Ecosystems Management in Caribbean Small Island Developing States (IWEco); the UNEP Regional Gateway for Technology Transfer and Climate Change Action (REGATTA) and the Organization of Eastern Caribbean States (OECS) Global Climate Change Alliance (GCCA) Projects<sup>10</sup>. In addition to these projects, the SPPARE can also contribute to the Biodiversity and Protected Area Management (BIOPAMA) programme.

These projects are coordinated and managed by a two-tiered system. This system of management was initially conceptualised under the Sustainable Island Resource Management Mechanism (SIRMM) Project in 2008 and, recognized for its utility, was later formalised for all projects in 2012. The two-tier system consists of the Project Management Committee (PMC) and the Technical Advisory Committee (TAC).

<sup>10</sup> Office of the National GEF Focal Point, 2012. National Portfolio Formulation Exercise (NPFE)



**Figure 4. Project management and coordination framework**

The PMC is a high level cross-sectorial committee comprised of lead policy makers and heads of departments. It comprises of the Permanent Secretary of the Ministry of Agriculture, Lands, Housing & the Environment (Chairperson), the Principle Assistant Secretary of this Ministry, the Focal Point of UNDP, a representative of the Budget Office at the Ministry of Finance, Chief Environment Officer and a secretary. The function of the PMC is to focus mainly in procurement, institutional arrangements and financial management of the project. The PMC is also responsible for approving and circulating financial reports to the Public Sector Investment Programme (PSIP) and other relevant agencies. The PMC is charged to monitor implementation of the project activities according to the approved Work Programs and approve any essential deviations from it if necessary. Meetings of the PMC are held monthly. While the PMC meets monthly, a “supra” PMC to include UNEP as the implementing agency would meet annually for the purposes of ensuring UNEP and GEF financial and technical oversight.

The TAC acts as a technical advisory body to the PMC providing technical guidance, policy recommendations and support, and facilitating communication, cooperation and coordination among relevant stakeholders and other project partners. Essentially the TAC coordinates and reports on the implementation of MEA-related projects on the ground. Agencies involved in the TAC include: AB Investment Authority, ADOMS, Agriculture Department, Analytical Services Division, APUA Water Business Unit, Barbuda Council, Bureau of Standards, Central Board of Health, Development Control Authority, Energy Department, Extension Division, Finance and Debt Unit, Fisheries Division, Foreign Affairs, Forestry Unit, Lands Division, Meteorological Office, National Parks Authority, NODS, NSWMA, Plant Protection, Statistics Division, Surveys and Mapping Division, Tourism Authority, and the Transport Board. The TAC also represents community interest groups including the Community Development Division, GEF Small Grants Programme, and the Environmental Awareness Group (EAG – non-governmental). In addition, the private sector A&B Coalition for Service Industries is represented on the TAC. This system of coordination allows for information sharing and discussions with the aim of maximizing the efficiency of project outputs and benefits as well as avoiding the duplication of efforts.

In addition, implementing agencies, like the Department of Environment, are required to complete the Public Sector Investment Programme (PSIP) proposal form when new projects have been funded or are about to be funded. Once the Development Committee has approved the project proposal, the agency must then submit monthly updates to the Economic Policy and Planning Unit (EPPU). The entity fills in the form provided, which includes all the activities that have taken place since the project was approved.

In keeping with comparative advantage screening, the proposed project is consistent with UNEP's Ecosystem Management sub-Programme of Work for 2014-2017. This project specifically addresses UNEP's expected accomplishment of "use of the ecosystem approach in countries to maintain ecosystem services and sustainable productivity of terrestrial and aquatic systems is increased" and "services and benefits derived from ecosystems are integrated with development planning and accounting, and the implementation of biodiversity and ecosystem related multilateral agreements" and will specifically contribute to output (a) (1) Methodologies, partnerships and tools to maintain or restore ecosystem services and integrate the ecosystem management approach with the conservation and management of ecosystems. The project will benefit from the newly established UNEP sub-regional office, in Jamaica, in its networking and coordination activities, in any stakeholder and partnership arrangements organized through this new office. And while this Antigua 2020 project is focused on terrestrial protected areas, the objectives of improving coordination and financial sustainability for entire protected areas systems, including marine protected area, will benefit from the expertise, technical advisory capacities and materials made available through the Caribbean Environment Programme Regional Coordinating Unit/Secretariat to the Cartagena Convention and its specialized Regional Activity Centre for the Implementation of the Protocols on Specially Protected Areas and Wildlife.

*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 overall objective of the NBSAP (2014-2020) is to ensure that the biological diversity of Antigua and Barbuda is sustainably and equitably used, protected and conserved so that it contributes positively to the social and economic development of the country. In achieving this objective, the strategy seeks to ensure the realization of the following goals:

- A national system, including protected areas, for the management and conservation of biodiversity is established.
- The strengthening of the capacity of government natural resources management institutions, as well as non-governmental organizations, to support the objectives and achieve the overall aim of the NBSAP.
- Ecological legislation providing adequate protection of biological diversity is improved or developed where necessary, enacted and enforced.
- Public awareness of environmental issues, ecological education and public participation in decision-making is strengthened.

To achieve these goals the strategy envisaged for the NBSAP is a four-pronged strategy encompassing:

- The sustainable use, protection and conservation of Antigua and Barbuda's biodiversity;
- The effective coordination of all efforts and activities involving the sustainable use, protection and conservation of biodiversity;
- The enforcement of all policies, regulations and legislation affecting these efforts and activities; and
- The knowledge and understanding of the processes governing biodiversity, and the information required to guide and coordinate the activities involving the sustainable use, protection and conservation of biodiversity.

The proposed project directly supports all of the above goals.

*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.

Knowledge management is a key component of the project management and coordination framework described above. Outputs from this process are reported in the knowledge management template, which are used as a means of capturing project data over time and highlighting best practices, documenting challenges, solutions and benefits from lessons learnt.

Knowledge in the form of data is managed by the Department's Environmental Information Management and Advisory System (EIMAS), established under the Environmental Protection and Management Act of 2015. The EIMAS is a GIS-based centralized information resource housed by the Department for the purposes of:

- The creation and maintenance of the Natural Resources Inventory;
- The provision of information for the management of natural resource management activities;
- The production of public information materials relating to resource management issues; and
- Liaison with the public, business community, and non-Governmental organizations in relation to resource management issues.

In addition to the EIMAS, the Department of Environment's website functions as the clearing house mechanism for the CBD, which, along with an active Facebook and twitter account, help share project material with the public and other stakeholders, encouraging transparency and accountability.

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


**A. RECORD OF ENDORSEMENT<sup>11</sup> 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)
Diann Black Layne	GEF Operational Focal Point	Environment Division, Ministry of Agriculture, Lands, Housing and the Environment	2/18/2016

**B. GEF AGENCY(IES) CERTIFICATION**

**This request has been prepared in accordance with GEF policies<sup>12</sup> 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 Vandyke, Director, GEF Coordination Office, UNEP		30 March 2016	Kristin McLaughlin Task Manager	+1-202-974-1312	Kristin.mclaughlin@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.

<sup>11</sup> 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.

<sup>12</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF