



**Ensuring Biodiversity Protection and Sustainability
through the development of Protected Areas in
Antigua and Barbuda – The Mount Obama National
Park Project**

PART I – PROJECT CONCEPT

1. **PROJECT SUMMARY**

A. OBJECTIVE

The objective of this project is to meet the country's requirements under the CBD Program of Work on Protected Areas (PoWPA) through ensuring the continued sustainability of the natural resources available in Antigua and Barbuda. This project will seek to protect one of the country's few remaining 'virgin' ecosystems through its designation as a nationally protected area and the implementation of suitable management systems to ensure its continued development and effective management. The project will seek to promote best practices in developing biodiversity protected areas with significant historical and archeological features that has Global impacts. A key feature of this project is to demonstrate non-traditional options to address one of the most critical problems facing protected areas i.e. the effective and sustainable financing.

B. PROJECT RATIONALE

The proposed project is an integral part of the Government of Antigua and Barbuda's overall programmatic approach to the protection of biodiversity in Antigua and Barbuda. This area has been identified within the NBSAP as well as the National Environmental Management Strategy as a place with significant biological diversity and significant potential to ensure the adaptation of the area to the impacts of climate change. The area also has significant potential for the development of renewable energy for sale to the national grid and thus provide a source of income towards the management of the park. The project is designed with the following goals in mind:

- a. the creation of a biodiversity corridor in the country's interior that will have positive impacts not only for the biodiversity found within the corridor but those found t in adjacent watershed areas **Plants**

Recent studies have shown that this area, has the richest diversity of species and some of the most outstanding native biodiversity of the islands" of Antigua and Barbuda. Though not technically a rain forest, it is a significantly wet forest with some of the tallest growing plant species in the country. Recent work in the area has so far identified 13 rare species of plants found only on or near the area. Four (4) of these are ferns. Among the 13 is a tree species, *Lonchocarpus violaceus* var. *alba*, which was discovered recently by an Antiguan Conservationist/Biologist, Mr. Kevel Lindsay. This plant is known only to Mount Obama.

b. Birds

Lindsay and Horwith in 2007 have found 40 species of birds of "special conservation concern" for Antigua and Barbuda and of these 21% were found at Mount Obama. Several of these are regional endemics and are relatively rare in Antigua and Barbuda and the Caribbean. An additional eight of these species of the birds found on Mount Obama were describe as being of biodiversity interest.

c. Habitat and medicinal values of plants

The tropical forest in the proposed National Park provides a critical ecosystem function as a habitat for birds and other wildlife. The extent of the importance of the latter has not been assessed. In addition, tropical forests are known as a primary source of genetic material whose pharmaceutical and medicinal value is globally recognized. Trees, shrubs and various herbs of the forests are used locally as traditional medicine and are likely to become more important

with the current emphasis on alternative medicine and the increase in cost of health care..

- 2) protection of an historical and archeological site recently discovered to contain hidden keys to historical development of Antigua and Barbuda;

a. Historical Heritage: The Maroons of the Sherkerley Mountains

Mount Obama and surrounding areas of the Shekerley Mountains are historically and culturally significance, for the activities of runaway slaves or Maroons. Historical accounts describe a Maroon as a runaway slave who escaped the “social order of the plantation to live, actually free, but as an outlaw, in areas (generally in the woods or in the mountains) where he (or she) could escape the control of the colonial power and the plantocratic establishment”.

In 1684 a number of fugitives set up a Maroon Camp in the Sherkerley Hills (David Barry Gaspar, *Bondsmen and Rebels*, 1995 (p. 175)). This source provides a list of 17 males and 10 females who described as “runaways” living in these hills on March 24, 1687. Later in 1687, the Maroons “were responsible for what is believed to have been the only genuine slave insurrection in the Leeward Islands in the seventeenth century”.

- 3) protection of the watershed within which the national park is to be declared. The watershed located within the area is critical to the survival of a number of small agricultural farms which form the base for the economic development and sustainable livelihood of the local food and craft industry;

a. Ground water

Mount Obama and surrounding forested slopes constitute the upper reaches of the Christian Valley Watershed, whose total size is about 1,780 hectares. This is the second largest watershed in the country, second only to the Body Ponds Watershed, which is also constituted in part by the hills, which form part of the

forested volcanic region east of Christian Valley Watershed. There are eight (8) active wells in the Christian Valley Watershed accounting for ground water yield of 610,000 cu meters per year (ESAL & Associates, 2007). The forested slopes of the Cades Bay Watershed, which lie south of the volcanic ridgelines is also part of the Mount Obama Nation Park. There are several active wells in the Cades Bay Valley.

b. Nutrient recycling and soil formation

Nutrient flows from the slopes of Christian Valley and Cades Bay watersheds are critical in sustaining the fertility of soils in their respective valleys. The slopes are also a valuable physical and organic source of soil material vital to farming and agricultural research.

c. Moderation of surface water flows

The relatively dense forest canopy on the slopes of both the watersheds of the proposed Mount Obama National Park attenuates surface water flow by reducing the force of rainfall which would otherwise result in an increase of surface runoff and soil displacement or erosion. This allows better infiltration of surface water into the soil to replenish ground water reserves. It also reduces the volume of surface water that floods down-slope areas during storms and into the coastline and the surrounding reefs. They also protect the surrounding villages from flooding by controlling the flow of water and silt down the hillside. .

Increased storm water flow in recent extreme weather events (such as Hurricane Omar) caused significant damage to homes and facilities in Jennings, Bolans and Jolly Harbour resort community. With climate change expected to increase the frequency and severity of such weather events and to increase seas level rise, keeping the forest of the two watersheds relatively intact will improve climate resilience by reducing storm water and flood impacts on low lying coastal communities.

- 4) engage stakeholders in working with the government in ensuring the overall protection of the habitats within their communities.

The support that will be provided from the donor through this project will ensure the following outcomes: 1) A designated protected area – Mt. Obama National Park; 2) strengthened institutional and technical capacity for protected area management within Antigua and Barbuda as well as the holistic implementation of the program of work on protected areas; 3) implementation of policies that will ensure the protection and sustainable financing of all watersheds and historical site; 4) The creation of a biodiversity corridor within the central area of Antigua; 5) improved public awareness, local and government support, and strengthened environmental stewardship and community involvement in habitat protection and conservation of the natural and historical assets of the national park to be created; 6) dissemination of lessons learned through a well design and sustained research and education program that could be replicated in other protected areas.

Donor support is an integral part of the country's move to ensure protection of its biodiversity through the establishment of protected areas throughout the country. Additionally, this project will ensure the development of a biodiversity corridor that will lead to the overall sustainability of the country's natural resources as critical habitats are protected. As mentioned before, there are a number species that have only recently been discovered in this area. The project will give us a chance to conduct more research and analysis of the area and ensure effective protection of what could be species with not only local but international significance.

This area is also key to ensuring the continued economic sustainability of the farm lands of local people that are located in the valleys surrounding the area to be declared a protected area. Based on the fact that should the watershed

be allowed to continue without adequate protection the impact on the farmlands could lead to a reduction of the crops that would normally be seen by the farmers. Antigua and Barbuda constantly faces water scarcity problems. It is therefore critical to ensure the protection of its watershed areas and in so doing also ensure the maximizing of the nutrient rich potential of the soils that surround these areas. This project will also seek to improve the farmer's access to water and to work with them to reduce their dependency on chemical inputs.

Threats:

Some general threats are outlined below. A more detailed list has been outlined in the following pages.

Threat 1. The most immediate threat to PAs in Antigua and Barbuda is indiscriminate development. With neither an effective system of protected areas nor a detailed land use plan identifying what can be constructed in sensitive areas, there is no legal guide (based on PAs criteria) that would facilitate development with an emphasis on PA management. In light of this, developers cut valuable species of trees indiscriminately during the construction phase of their projects. As the tourism industry develops this situation becomes an even bigger problem.

Such actions have inevitably led to the decline in the availability of some flora and fauna species as their habitats face certain destruction. This has even more far reaching implications for other industries such as fishing and Tourism itself.

This is further exacerbated by weak legislative and institutional arrangements for the effective management of protected areas. Zones that should be reserved as marine or terrestrial habitats are facing extinction from these economic activities.

Threat 2. The second threat facing PAs and their development is that of agricultural development. Due to the fact that local farmers are located in PA without an effective management plan, farmers remove valuable species through the burning of areas for planting of crops and irrigation. In some cases, water resources are diverted and the impact of this on ecosystems not yet protected is unknown. This is a situation that needs to be addressed.

Threat 3. The illegal removal of various species from their habitats is a serious concern for Antigua and Barbuda. This is of particular concern as the removal of some of these species affect the future development of those species and the industries they can potentially service. The continued declaration of protected areas and the introduction of an effective system of protected areas as well as the introduction of more stringent legislation to support their overall management is therefore absolutely necessary to ensure that such situations are curtailed.

Threat 4 Another serious threat is that of invasive /alien species. In a number of areas that are not yet protected invasive species are causing an increasing decline in the native species that exist in the country. This is primarily evident in the last remaining forest area of Antigua and the only wetland area in Barbuda. In Antigua, the lemongrass has overtaken a number of secondary forested areas (including the proposed Mount Obama national park) and since this grass has been known to spontaneously catch fire, it presents a hazard not only for the native species it is aggressively replacing but also is a fire hazard to the surrounding residents and remaining forested areas.

Threat 5 Another threat is that of natural disasters. This has increasingly become a problem for the coastal areas due to the aggravating effects of legal and illegal sand mining. The most recent devastating natural disaster event for Antigua and Barbuda occurred in 1995. Though there have been some events with some damage since then, this has been on a much smaller scale. Natural disasters cause the destruction of a number of habitats and species on both islands. The adverse impacts are more detrimental without the existence of a legally declared protected area and an appropriate management structure.

2. COUNTRY OWNERSHIP

A. COUNTRY ELIGIBILITY

The Government of Antigua and Barbuda has demonstrated its commitment to implementing sustainable integrated planning and management approach to island ecosystem through its involvement in several initiatives. The Government has signed a number of regional and international conventions and agreements as a testament to this commitment.

Antigua ratified the Convention on Biological Diversity on the 9th March 1993. A Biodiversity Enabling Activity has been implemented and resulted in the preparation of a National Biodiversity Strategy and Action Plan under the convention. The activities to be undertaken form part of this NBSAP and are critical to meeting the goals established under same.

B. COUNTRY DRIVENESS

Article 8 of the Convention on Biological Diversity (CBD) calls for the Parties to establish and manage systems of protected areas to provide for the in situ conservation of biodiversity. The government of Antigua and Barbuda is highly

committed to fulfilling its obligations under the Convention on Biological Diversity. This is clearly shown in its commitments to biodiversity thus far. The two documents which primarily show the government's commitment to the protection of its biodiversity are the NBSAP and the National Environment Management Strategy.

The NBSAP for Antigua and Barbuda was produced in 2001. Its overall goal 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". This project will effectively aim at helping to achieve three of the objectives outlined in the NBSAP. These include:

Objective 1: A national system, including protected areas, for the management and conservation of biodiversity conservation is developed and established.

Objective 2: The capacity of governmental natural resources management institutions, as well as non-governmental organizations, to support the objectives and achieve the overall aim of the BSAP is strengthened.

Objective 4: Public awareness of environmental issues, ecological education and public participation in decision-making is strengthened.

The NEMS came out of the government's regional commitments to meet its objectives under the St. Georges Declaration. Endorsed in 2001, the NEMS is the blue print which is being used by the government to achieve the goals set out by the St. Georges Declaration. The NEMS was developed after several years of

intense consultations and is a product of the country's NCSA process. This project will meet a number of the principles of the NEMS. These include:

1. Principle 13 – Protect and Conserve Biological Diversity
2. Principle 11 – Ensure the sustainable use of Natural Resources
3. Principle 7 – Foster broad-based environmental education, training and awareness
4. Principle 17 - ...Implement multilateral environmental agreements

The conservation of the habitats and species occurring within Antigua and Barbuda is among the country's highest biodiversity priorities. The proposed DONOR-supported activities under this project are in line with the goals and strategic directions of all national environmental policies and the principles outlined above. . .).

The project also builds on the efforts currently being undertaken by the government with assistance from a number of organizations to fulfill the goals under the Program of Work on Protected Areas (PoWPA). These include the following projects:

1. OPAAL project funded by the OECS – This project has resulted in the designation of the NEMMA for Antigua and Barbuda as well as a management plan for the effective management of the area. Under this project the OECS has also undertaken the development of a system plan for protected areas which the government will use in the development of its protected areas system.
2. The GEF Program of Work on protected areas which has undertaken to develop a financing plan for protected areas as well as a capacity assessment for protected areas management, a review of protected areas legislation and an action plan for the

development of protected areas is also a critical step showing the direction the government is committing to take.

3. The SIRMM project which is undertaking the development to of a sustainable island wide resource management mechanism also shows the steps that the government is committed to taking to ensure that the biological diversity and other natural resources within the country are protected.
4. Through assistance from the OECS, USAID and the OAS, the government, in an effort to meet it's commitment to the PoWPA goals legally declared the Codrington Lagoon in Barbuda as a National park, (which is also a RAMSAR site.) A management system has now been established for the national park and work is continuing on the further development of the area as an effectively managed protected area.

The recently revised NCSA also outlines the way forward with regards to the institutional support required for the management of protected areas. It highlights the deficiencies currently existing within Antigua and Barbuda with regards to the management of protected areas. This project will be implementing the recommendations with respect to the institutional strengthening required for the effective management of protected areas. This is the aspect of the project where the Government will be providing significant co-financing.

Despite the difficulties and institutional challenges, the government of Antigua and Barbuda is moving to build capacity in the area of biodiversity conservation through targeted interventions at both national and local levels. This project will be designed to be a catalyst for the capacity building process and to provide much needed support for the Government.

C-PROGRAM AND POLICY CONFORMITY

1. PROGRAM DESIGNATION AND CONFORMITY

The proposal is fully consistent with GEF Operational Program 3 Forest Ecosystems and 13 Conservation and sustainable use of biodiversity important to agriculture (it is also consistent with the overall desire to ensure the use of renewable energy and capacity building) . The designation of protected areas and the strengthening of the associated management capacity in Antigua and Barbuda will help restore and conserve natural habitats in the critical ecosystem with global significant biodiversity and will help to ensure that lessons learned can be replicated to other parts of the country and the Caribbean Region as well. The project being submitted also supports objectives of GEF Operational Program 12, Integrated Ecosystem Management, since it aims to manage natural systems that essentially crosses administrative boundaries and will seek to facilitate a participatory approached to natural resources planning and management.

The proposed interventions will address biodiversity concerns as it relates to tourism, forestry and watershed management plans. It will support the creation of new employment and revenue generating activities for local people based on sustainable habitat management through partnership arrangements for watershed and forest improvement. It will also lead to the conservation of biodiversity through the designation and effective management of a protected area.

2. PROJECT DESIGN

Context

After significant scientific and archaeological research conducted in the “former name of the area), the government agreed to the declaration of this area as a national park. The purpose of this action is to ensure the protection of the Biodiversity and history of the area as well as maintain the sustainable livelihoods of hundreds of people in the surrounding communities.

After this decision was taken, a further decision was made by the Government in appreciation of the outstanding achievement of Barack Obama (in being elected to the highest office of the most developed and powerful country in the world), to change the name of its highest peak (Boggy Peak) to Mount Obama.

Based on the biological diversity discoveries in the area as well as the cultural and historical areas of significance found within this location, it was recommended that the area be established as a National Park using IUCN categorization. EAG, through a USAID Caribbean Open Trade Support (COTS) programme has documented a rich diversity of “rare trees, shrubs, vines, ferns and epiphytes” forming a “beautiful and unique ecosystem that harbours some extremely rare species found nowhere else”.

As previously indicated, Mount Obama also has historical and cultural significance, reportedly linked to the activities of slaves in their quest for freedom but yet to be fully documented. Mount Obama’s eventual protected area designation is expected to highlight its importance as a monument to struggle, determination and achievement, while giving full regard to its biodiversity value. Much will depend on where the protected area boundary is drawn, and the policies developed to address the private land ownership in the area.

if the park is established, there will need to be significant infrastructural development such as the renovating of existing trails from the Christian Valley flats lands to the north of the Mount Obama summit and a narrow access road from the Cades Bay valley on the south will be critical to ensure access and visitor enjoyment of the area.

The government operated agricultural stations situated in both Christian Valley and Cades Bay already provides the potential for the development of agro-tourism as an example of possible economic initiatives that may be developed to assist in the financing of the protected area system.

Biodiversity status, threats and root causes

Based on initial research, the proposed Mt. Obama National Park is thought to support rich plants and animal species populations of global and regional importance. It is believed that there is a vast amount of species perhaps yet discovered. These it is felt could be lost should efforts not be made to protect the area.

Additionally, the vegetation of the area is thought to be rich and very diverse. Already one tree species which was not previously discovered in Antigua and Barbuda has already been found in the area.

One threat currently being faced by biodiversity for Antigua and Barbuda is the lack of institutional capacity particularly in the area of equipment and trained personnel. The extremely low salaries also contribute to this problem since the government salaries are too low to attract persons with high student loans to service.

The main threats and their impacts on biodiversity are summarized in the table below.

Threatening Factor	Impact(s) on Biodiversity
Absence of an Integrated Protected Areas Management Strategy and Structures	Without the area being declared and a proper management strategy or structure implemented all the species that are present will be permanently destroyed.
Land reclamation and the Intensification of Agriculture	Neighboring lands within the area have fallen victim to indiscriminate land clearing for agriculture. The grazing of animals has also led to the

	destruction of many plants within the area. How much damage had been done to the area due to these practices is yet to be discovered.
Damage of Vegetation Cover	The problem of deforestation is becoming an increasingly devastating activity for many of the habitats found in Antigua and Barbuda.
Financial Availability	One of the greatest threats to the development of protected areas and their sustainability is that of appropriate funding.
Effective Legislation for protected areas management	The legislation for protected areas is fragmented and sartorial i.e. fisheries, forestry etc have their own legislation for the declaration of a protected area. Although this is not inherently bad, it has implications for the management of parks and the proliferation of institutional arrangements.

The root causes of the current problems are mostly institutional in nature, namely (i) the lack of protected areas management capacity, regulation, and enforcement; (ii) the inadequate community involvement and environmental/biodiversity awareness among the local communities (iii) limited economic opportunities for local communities to benefit from improved

protected areas management (e.g., community-based tourism); (iv) lack of knowledge about sustainable natural resources management practices; and (v) weak legal base for the proper management of protected areas (vi) and the lack of sustained financing for the areas once declared protected.

Donor Alternative

With Donor assistance to address these biodiversity objectives, the government will be able to connect biodiversity conservation with historical conservation in protecting, restoring, and promoting sustainable use of the ecosystems in the Mt. Obama national park. This could generate significant local and global benefits. The donor Alternative will support investments in protected area management strengthening and in mainstreaming habitat restoration and biodiversity conservation. The donor Alternative will support the following activities:

Protected Areas Management Strengthening.

The Project will assist in moving forward in the program to implement sustainable management of National Parks in the country through: (i) supporting the formulation of the protected areas management plan for the national park; (ii) supporting the establishment of a multi-stakeholder consultative group to oversee the development of the protected areas; (iii) provision of the necessary equipment and tools for management, resource inventory, biodiversity monitoring and tourism interpretation; and (iv) supporting the demarcation of the protected site and the construction of basic park infrastructure. The experience of the creation of this national park is the second of this nature with the first being the Codrington Lagoon National Park. It is intended to be replicated throughout Antigua and Barbuda as more areas are identified for declaration as protected areas.

The expected global benefits of the donor Alternative include: (i) improved participatory management and protection of globally significant biodiversity in the area to be declared, and (ii) demonstration of a participatory management that would be replicable elsewhere in the country.

3. OVERALL OBJECTIVE OF THE PROJECT

The overall objective of the project is to ensure the sustainability and maintenance of island ecosystem integrity and function through the continued effective development and management of protected areas in Antigua and Barbuda. Essentially, the goal is to meet the country's requirements under the CBD Program of Work on Protected Areas (PoWPA) through ensuring the continued sustainability of the natural resources available in Antigua and Barbuda by declaring biodiversity threatened areas as protected. The Mt. Obama National Park (MONP) is the second in a series of areas within Antigua and Barbuda that are environmentally sensitive and are critical to the survival of Antigua's biodiversity. This area which is also of cultural and archeological significance has the potential to lead to the development of policies that will help to enhance the government's desire to ensure effective financing of protected areas for the country.

The primary management objectives of the MONP are:

- To conserve the area's biological diversity of fauna and flora through protection rather than habitat manipulation
- To preserve the ecology and structure of the natural tropical forests and the value of ecosystem services;
- To reduce global green house gas emissions through the use of renewable energy options and to generate income for the effective management of all biodiversity parks in Antigua and Barbuda;
- To protect all or sections of the Shekerly mountain range as a landscape of historic significance based on the use of the area by slaves (maroons), as a sanctuary for their resistance struggles

- To conserve soils and water through the protection of the area's watersheds, watercourses, other drainage ways and aquifers
- To create a centre for excellence in research by upgrading and broadening the capacity of the existing research stations adjacent to the proposed national park in ongoing areas of agronomy but also in other relevant subjects relevant to the management of the Park such as hydrology, renewable energy and ethno-botany
- To promote recreation, health and well being through use, enjoyment and appreciation of the natural and scenic environment
- To promote tourism based on the natural systems of the area, the area's association with the historic struggles for freedom, and on the agricultural practices and activities on the fringe of the park
- To promote education, awareness and appreciation of the area's natural and historic heritage including the geology of the volcanic region
- To replicate any lessons learnt;

4. PROJECT PURPOSE

The purpose of the project is two-fold. Firstly, the project is designed to ensure the protection of a very sensitive area which has recently been deemed to posse biological species previously undiscovered. This is an important finding for Antigua and Barbuda since most of the country's biodiversity was destroyed in colonial times. In light of this, it is necessary for the country to ensure that as much of the remaining habitats of national and global potential are maintained in as pristine a condition as possible.

Secondly, the project is aimed at ensuring the development of an adequate financing mechanism for the development and management of protected areas in Antigua and Barbuda. In this aspect of the project, the issue of renewable energy as a potential financing mechanism for protected areas will be investigated and demonstrations of such systems implemented in the MONP as well as the previously developed Codrington Lagoon National Park.

The aspect of the proposal relating to this activity is included as an annex to this proposal.

5. PROJECT OUTPUTS

1. LEGALLY DECLARED MOUNT OBAMA NATIONAL PARK.
2. DEVELOPMENT OF PARK INFRASTRUCTURE FOR THE NATIONAL PARK
3. FINANCIAL STRATEGY DEVELOPED FOR THE SUSTAINABLE FINANCING OF THE NATIONAL PARK
4. PARK PERSONNEL EMPLOYED TO THE NATIONAL PARK TO ENSURE ITS OVERALL DEVELOPMENT
5. PARK PERSONNEL EMPLOYED TO THE NATIONAL PARK TO ENSURE ITS OVERALL DEVELOPMENT
6. NECESSARY RESEARCH FOR PARK DEVELOPMENT CONDUCTED AND RECOMMENDATIONS MADE
7. PUBLIC RELATIONS

8. SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

The Project is expected to be institutionally, financially and socially sustainable in the long-term. One of the key factors for the long-term sustainability of the benefits of the donor supported activities is the commitment of the Antiguan authorities to implement the Biodiversity Action Plan and the NEMS. The Project sustainability will be enhanced by: (i) strengthening the capacity of the agencies addressing the issue of protected areas, (ii) demonstrating local benefits can be derived from sustainable use of natural resources, (iii) increasing

public awareness on biodiversity conservation, (iv) building support for protected areas management, and (v) the development of an effective financing mechanism for the protected area. It will also be enhanced through local communities' willingness to maintain their support for protected areas.

5. REPLICABILITY

The Project is intended to serve as a model intervention for the continued declaration of protected areas and ensuring the development of proper management systems for same. It is also intended to enhance the potentials that such sites have in developing the cultural history of the country. Additionally, the financing mechanism that will be developed is intended for replication throughout the country and the Caribbean on a whole.

6. STAKEHOLDER INVOLVEMENT

The project has been developed with the assistance of the board appointed by the Government of Antigua to develop the Mt. Obama National Park. This board consists of all the relevant stakeholders and therefore their full participation has been solicited in developing the project proposal. As the project is developed and implemented, the stakeholder participation will continue to be a large part of the process.

Project design includes key features to increase stakeholder involvement in the course of implementation. The Project Steering Committee provides for stakeholder input and oversight at the strategic level.

7. MONITORING AND EVALUATION

Monitoring and evaluation activities form an integral part of the overall project and will focus on determining the effectiveness of project implementation activities in reducing threats and enhancing conservation of target elements of biodiversity. Monitoring will include the establishment and documentation of baseline conditions.

The overall monitoring and evaluation functions will be carried out by the environment division (ED) which will be implementing the project with assistance from the various agencies that will be assisting with project implementation as part of the Technical Advisory Committee (TAC). The ED will be responsible for preparation of quarterly/annual project management reports, which will be submitted to the Technical Advisory Committee and to the implementing agency.

D – FINANCING

1. FINANCING PLAN

The detailed budget is provided in the attached table. The total Project cost is 6.832M

US\$ of which the requested donor contribution is US\$3.222M.

Detailed Project Cost

2. COST EFFECTIVENESS

The Project design aims to: (i) maximize the use of existing local institutions and capabilities (e.g., technical implementation to be done by the relevant government agencies such as the Environment Division and the Forestry Division (ii) create synergies with other ongoing programs; (iii) and achieve the desired outputs in a cost-effective manner. The proposed implementation arrangement will ensure replication and effective dissemination of lessons and experiences

from this and on-going project and to transfer lessons-learned to other protected areas developed and/or to be developed in Antigua and Barbuda.

3. CO-FINANCING

CO-FINANCING SOURCES: Government of Antigua and Barbuda

Sub-Total Co-financing: US\$3.610M

E - INSTITUTIONAL COORDINATION AND SUPPORT

1. CORE COMMITMENTS AND LINKAGES

The commitment of the Government of Antigua and Barbuda to the development of its protected areas and the protection of its biodiversity as already been established throughout this document. It will just be highlighted here that this project is linked to a number of initiatives that are collectively aimed at ensuring the overall protection of the country's biodiversity. These initiatives which have already been listed in this document include the SIRMM project, the OPAAL project and work currently being done through the program of work on protected areas.

2. CONSULTATION, COORDINATION AND COLLABORATION BETWEEN AND AMONG IMPLEMENTING AGENCIES, EXECUTING AGENCIES, AND THE DONOR SECRETARIAT, IF APPROPRIATE.

In order to ensure the effective implementation of the project, there will be ongoing communication and collaboration between the national project executing and implementing agencies and other regional agencies that will be utilized in the implementation of this project.

3. IMPLEMENTATION/EXECUTION ARRANGEMENTS⁷

The duration of the Project is four (4) years.

Project Steering Committee.

A Technical Advisory Committee (TAC) will be appointed to be responsible for providing overall project oversight, reviewing project progress and assisting in resolving obstacles to project implementation. The TAC will be composed of stakeholders from both government and non-overnment agencies. The TAC will be chaired by the ED and will meet at least once a month

Project Coordination Unit.

The overall institutional coordination of the project will be carried out by the ED, as the leading government agency in charge of overall Program coordination. A Project Coordination Unit (PCU) will be set up within the structure of the ED to be responsible for overall project coordination, procurement, financial management, disbursement, monitoring, evaluation and reporting, and will be under the supervision of the GEF Operational Focal Point.

Project Authorizing Official.

The GEF operational focal point will be the Project Authorizing Official (PAO). The GEF OP will have overall responsibility for supervising the work of the PCU and signing on procurement activities. The PAO will report to the Government on Project implementation progress.

5. IMPLEMENTATION PLAN AND LOGICAL FRAMEWORK ANALYSIS

Table 1. Logical Framework Analysis

PROJECT STRATEGY	OBJECTIVELY VERIFIABLE INDICATORS				
<p>GOAL</p>	<p>TO ENSURE THE SUSTAINABILITY AND MAINTENANCE OF ISLAND ECOSYSTEM INTEGRITY AND FUNCTION THROUGH :</p> <ol style="list-style-type: none"> 1. THE CONTINUED EFFECTIVE DEVELOPMENT AND MANAGEMENT OF PROTECTED AREAS 2. THE DEVELOPMENT OF AN EFFECTIVE FINANCING MECHANISM FOR PROTECTED AREAS IN ANTIGUA AND BARBUDA. 				
<u>OBJECTIVE OF THE PROJECT</u>	KEY PERFORMANCE INDICATOR	BASELINE	TARGET	SOURCE OF VERIFICATION	RISKS AND ASSUMPTIONS

	1. Establishment of the Mt. Obama National Park (MONP)	The MONP has not yet been declared a national park	MONP established by end of first year	Legalization documents for the MONP	The cabinet approval on the renaming of the MONP will reduce significantly the time needed to ensure legal declaration of the national park.
	2. Renewable energy technology established as a viable financing mechanism for the MONP	No financing mechanism is currently in place for the financing of protected areas	Renewable energy technology established for the operation of protected areas with potential for resale to the APUA.	Established renewable energy technology.	There will be limited difficulties with reaching an agreement with the APUA on the resale of the excess energy to finance the PA.

<u>OUTCOMES</u>	KEY PERFORMANCE INDICATOR	BASELINE	TARGET	SOURCE OF VERIFICATION	RISKS AND ASSUMPTIONS
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<u>OUTCOME 1</u>					
<u>OUTCOME 1</u> LEGALLY DECLARED MOUNT OBAMA NATIONAL PARK.	Dialogue and consultations with land owners and farmers, adjacent communities and community organizations on the Park Development Concept, development issues and benefits; seek needed buy-in and support for the concept	No dialogue has yet begun on this issue with the community or groups	At least all major groups within the community included on a stakeholder board to manage the development of the national park	Meeting Reports	The legal declaration for the park may take a longer time than anticipated due to the legal process needed.
	Legal boundaries and maps developed for the Mount Obama National Park	No maps or boundaries currently exists	Legally established boundaries by end of first year	Legal Documentation	The establishment of the boundaries could take longer than necessary due to the legal process
	Management Plan developed for the Mount Obama National Park.	No management plan exists	Management plan created by end of first year	Presented management plan	There are already existing documentation that may be used to create the management plan.

<p>PARK INFRASTRUCTURE FOR THE NATIONAL PARK</p>	<p>park</p>		<p>end of first year</p>		<p>based on the documentation that currently exists</p>
	<p>Design and construct offices, a visitor and information centre for the national park</p>	<p>No visitor center currently exists</p>	<p>A visitor center created by end of second year</p>	<p>Completed centre</p>	<p>There could be delays in the completion based on the availability of materials</p>
	<p>Design a logo for the national park and create a monument of excellence in honor of the 44th president of the USA in whose honor the park was renamed as well as the persons that dedicated their lives to the development of the nation.</p>	<p>No logo or monument currently exists</p>	<p>Monument and logo created by end of second year</p>	<p>Created logo and monument</p>	<p>A competition will be held to design the logo and the monument. This will ensure that a suitable logo and monument are created.</p>
<p>OUTCOME 3 Financial Strategy</p>	<p>See attached annex on renewable energy financing for the</p>	<p>Attached in annex</p>	<p>Attached in annex</p>	<p>Attached in annex</p>	<p>Attached in annex</p>

<p>Developed for the Sustainable Financing of the National park</p>	<p>national park.</p>				
	<p>Development of potential for nature tourism (improvement of trails, review potential for seasonal waterfall attractions)</p>	<p>No tourism activity currently exists</p>	<p>By end of first year established tourism activities</p>	<p>Visitors log for the park.</p>	<p>Trail development etc will be subjected to weather and material availability.</p>
<p>OURCOME 4 Development of policy and legislation to operate and manage the park</p>	<p>Explore the legislation that currently exists on the management of national parks</p>	<p>Some legislation exists</p>	<p>Make specific recommendations on necessary legislation by end of first year</p>	<p>Recommendations made</p>	<p>There are quite a few legislations that exists and it may take some time to go through them thoroughly</p>
	<p>Create suitable policy documents and make necessary legislative adjustments for the operation of the park</p>	<p>Only a policy document for work to begin on establishing the park exists</p>	<p>Completed policy document on the establishment of the park by end of first year</p>	<p>Document establishing policy</p>	<p>The existing cabinet decision on the establishing of the park will assist in making this an easier process.</p>

OUTCOME 5 Park personnel employed at the national park to ensure its overall development	Create and implement necessary regulations for the operation of the national park	No regulations currently exist	Create regulations for the operation of the park by end of first year	Regulations created	Existing regulations being created for the Codrington Lagoon National park can be used to assist this process.
	Hiring of park manager and administrative staff for the national park	No staff currently exist	Staff hired by end of first year	Staff logs	Recruitment may take longer than anticipated
	Hiring of park rangers for the national park	No rangers currently exist	Rangers hired by end of second year	Staff logs	Recruitment may take longer than anticipated
	Hiring of Technical staff for the national park	No technical staff currently exist	Staff hired by end of second year	Staff logs	Recruitment may take longer than anticipated
	Training for all park staff	No training schedule etc. currently exist	Training schedule established and trainings starting by end of second year	Training logs	Trainings may have to be rescheduled due to personnel and trainer availability
Outcome 6	Ethno-botanical study	Some studies	Study completed	Completed studies	The studies may

Necessary research for park development conducted and recommendations made	on plants and their medicinal value	have been done	by end of third year		take longer than anticipated based on material availability and consultant recruiting
	Research study on habitats, flora and fauna found within the protected area and the surrounding areas	Some studies exists	Studies completed by end of third year	Completed studies	The studies may take longer than anticipated based on material availability and consultant recruiting
	Survey to update geology of the Southwest Geological Region and assess the water resources in the Christian Valley and Cades Bay Watersheds.	Some studies exists	Studies completed by end of third year	Completed studies	The studies may take longer than anticipated based on material availability and consultant recruiting
	Study of farming practices and	No studies exists	Studies completed by	Completed studies	The studies may take longer than

Outcome 7 Public Relations	implications for the development of the protected area		end of third year		anticipated based on material availability and consultant recruiting
	Historical study of the protected area in an effort to ensure the archeological development of the area	No studies have been done	Studies completed by end of third year	Completed studies	The studies may take longer than anticipated based on material availability and consultant recruiting
	Design and implement a public relations strategy for the national park	No strategy exists	PR strategy created by end of first year	Completed strategy	Aspects of the strategy will be implemented while it is being designed
	Officially opening the park	The park has not officially opened	Park opened by end of first year	Opened park	There may be delays caused by unforeseen developments which could cause some

		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
5.1. Hiring of park manager and administrative staff for the national park	3.1.1	Prepare TOR and recruit staff.															
	3.1.2	Hire staff for the park															
5.2 Hiring of park rangers for the national park		Hire staff for the park															
5.3 Hiring of Technical staff for the national park		Hire staff for the park															
5.4 Training for all park staff	5.4.1	Recruit trainer for the training sessions															
	5.4.2	Design training strategy and conduct training sessions															

OUTCOME 6 NECESSARY RESEARCH FOR PARK DEVELOPMENT CONDUCTED AND RECOMMENDATIONS MADE

OUTPUT	ACTIVITY		YEAR 1				YEAR 2				YEAR 3				YEAR 4			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
6.1. Ethno-botanical study on plants and their medicinal value.	6.1.1	Prepare TOR and recruit consultant to conduct activity.																
	6.1.2	Final presentation of report																

PROJECT BUDGET

OUTPUTS	DONOR FINANCING	GOA CO-FINANCING
LEGALLY DECLARED MOUNT OBAMA NATIONAL PARK.	150K	60K
DEVELOPMENT OF PARK INFRASTRUCTURE FOR THE NATIONAL PARK	2.5M	1.5M
FINANCIAL STRATEGY DEVELOPED FOR THE SUSTAINABLE FINANCING OF THE NATIONAL PARK	10K	
PARK PERSONNEL EMPLOYED T THE NATIONAL PARK TO ENSURE ITS OVERALL DEVELOPMENT	110K	1.2
NECESSARY RESEARCH FOR PARK DEVELOPMENT CONDUCTED AND RECOMMENDATIONS MADE	250K	800K
PUBLIC RELATIONS	200K	50K
	3.222M	3.610