OECS COUNTRIES
OECS Protected Areas and Associated Alternative Livelihood

GEF Project Brief

Latin America and Caribbean Region
LCSEN

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Focal Area: B - Biodiversity

Team Leader: Garry Charlier
Sector(s): Central government administration (100%)
Theme(s): Biodiversity (P), Rural non-farm income generation (S), Participation and civic engagement (S)

Project Financing Data

[ ] Loan [ ] Credit [X] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Amount (US$m): 3.70

Financing Plan (US$m): Source	Local	Foreign	Total
BORROWER/RECIPIENT	1.88	0.00	1.88
FONDS FRANCAIS DE L'ENVIRONNEMENT MONDIAL	0.00	1.64	1.64
GLOBAL ENVIRONMENT FACILITY	0.00	3.70	3.70
ORGANIZATION OF AMERICAN STATES	0.00	0.35	0.35
Total:	1.88	5.69	7.57

Borrower/Recipient:
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Estimated Disbursements (Bank FY/US$m):

FY	2005	2006	2007	2008	2009				
Annual	0.41	0.90	0.95	0.82	0.62				
Cumulative	0.41	1.31	2.26	3.08	3.70				

Project implementation period: November 1, 2004 - October 31, 2009
Expected effectiveness date: 11/15/2004 **Expected closing date:** 04/30/2010

A. Project Development Objective

1. Project development objective: (see Annex 1)

The **development objective** of the project is to strengthen national and regional capacities in the sound management of protected areas (PAs) in support of the sustainable economic development of Small Island Developing States SIDS in the Organization of Eastern Caribbean States (OECS) sub-region through: (i) strengthening of existing and creation of new PAs; and (ii) providing environmentally sustainable economic opportunities for communities living in surrounding areas. This will be accomplished by: (i) improving the relevant legal, policy and institutional arrangements (collectively termed institutional framework) in the participating OECS countries; (ii) establishing or strengthening a number of demonstration PAs including providing support for the development of alternative and/or new livelihoods for communities living in proximity to these sites; and (iii) improving institutional capacity to manage PAs in the region. The principal project outcomes will be: (i) common, updated and comprehensive institutional frameworks supporting national systems of protected areas; (ii) establishment of new or strengthening of existing PAs; (iii) development and enhancement of environmentally compatible economic opportunities in communities associated with the proposed PAs; and (iv) increased public awareness of the importance of biodiversity conservation and protected area management in the sustainable economic development of SIDS.

The **global objective** of the project is to contribute to the conservation of biodiversity of global importance in the OECS region by removing barriers to the effective management of PAs, and to increase the involvement of civil society and the private sector in the planning, management and sustainable use of these areas.

The OECS region is characterized by a rich biodiversity endowment, which, in combination with its isolation from other areas, has resulted in relatively high rates of national and regional endemism.[2] In addition to exhibiting differing degrees of endemism, the islands of the region also provide habitat and nesting sites for non-endemic migratory marine mammals, turtles and avian species (see Matrices 1a and 1b in Annex 6 for more detail). One recent survey of the world's biodiversity hotspots identified the Caribbean as the fifth ranking "hotspot" and one of the highest priorities in any global strategy for biodiversity conservation and sustainable management.[3] In a second study based on faunal distributions, the Eastern Caribbean region was classified as a unique marine eco-region of the tropical northwestern Atlantic province and ranked as the highest priority within the province, in terms of its conservation status (most threatened).[4] The principal ecosystems are dry and humid tropical forests, wetlands and tidal flats, sandy and rocky beaches, coral reefs, seagrass beds, mangroves, offshore islets, as well extensive karst and volcanic areas with their distinct biodiversity associations. The reef, seagrass and mangrove systems of this area are recognized as among the most productive in the world.[5]

The project represents the first phase of a proposed 15 year program. The end-goal of the program is to create an integrated system of protected areas among the OECS member states (MS) which will protect and conserve ecologically-sustainable, representative samples of the region's rich biodiversity endowment, while creating sustainable livelihoods for communities in and around these protected areas. This regional system, managed within national, but compatible institutional frameworks, in addition to conserving biodiversity, could also be used as a basis to promote regional eco-tourism based on multiple island visitations in the region rather than single visits fueled by inter-island competition. While an ambitious vision, the present project represents a significant first step in fostering a number of critical common elements, which over time could evolve into an integrated regional system. These include: (i) promoting the development of a common or similar institutional framework governing protected areas; (ii) the strengthening of institutions with shared mandates; and (iii) supporting regional training and public

awareness of the importance of conserving the region's biodiversity. The programmatic approach has the additional advantage of providing the goal, context and roadmap that will guide interventions over the next 15 years. Despite its value, it is recognized that such an approach does not commit GEF or the participating donors to any additional funding following the first phase (the current project). Nevertheless, it is believed, in the absence of significant changes in GEF funding levels and/or in the priorities of the member states and bilateral donors, significant progress towards achieving program goals as determined by meeting previously agreed performance "benchmarks" would provide a sound basis for formulating a request for follow-up funding.

2. Key performance indicators: (see Annex 1)

Progress towards achievement of global objectives will be measured against the following GEF Biodiversity Focal Area performance indicators: (i) institutional framework reforms which will demonstrate concrete improvements in management effectiveness of national PA systems measured against baseline conditions by mid-term and end of project (50 % of countries showing institutional reforms); (ii) number of protected areas and total hectares that conserve globally significant biodiversity (at least 6 PAs and 6,500 ha conserved and protected); (iii) number of hectares of production systems that contribute to biodiversity conservation or the sustainable use of its components against baseline scenarios (at least 970 ha of production systems contributing to biodiversity conservation); and (iv) number of people showing improved livelihoods based on more sustainable harvesting (at least 70 % of targeted local community would benefit from at least 30% increase in income). For more details see Annex 1 Project Design Summary.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)
Document number: 22205-LAC **Date of latest CAS discussion:** 06/28/2001

One of the main objectives of the Country Assistance Strategy (CAS) for the Eastern Caribbean for the period from July 2001 to June 2006 is to reduce income insecurity and vulnerability at both aggregate and household levels. In part, this will be achieved through creating a supportive environment for economic diversification including the promotion of newly emerging economic sectors many of which will depend on the sustainable management of the underlying natural resource base. Specific mention is made of tourism as one of the most important economic activities in the region, contributing between a third to a half of GDP in most of the OECS countries, and a priority sector targeted for further development throughout the region. Sustaining the tourism industry and the economic benefits it brings, requires ensuring the natural resource base on which the sector depends remains intact. In the absence of sound protection and management of the region's diverse ecosystems, current trends in degradation of reefs and other coastal ecosystems, deforestation, beach erosion, depletion of fish stocks, declines in or loss of livelihoods, particularly among the marginally employed agricultural and fishing populations, will eventually combine to result in an overall negative impact on the tourism industry. The objectives of the project are consistent with this strategy and it is expected that the approach could be replicated throughout the participating countries.

1a. Global Operational strategy/Program objective addressed by the project:

The project's objectives are fully consistent with the provisions of the Convention on Biological Diversity (CBD) and with the GEF Operational Strategy, and specifically with its Operational Programs (OP) for Coastal, Marine and Freshwater Ecosystems (OP 2), and Forest Ecosystems (OP 3) in the Biodiversity Focal Area. In addressing the needs of Small Island Developing States (SIDS), the project is also

consistent with the Integrated Land and Water Multiple Focal Area Program (OP 9), which recognizes the importance of integrated freshwater basin-coastal zone management as essential for the sustainable future of small islands. Depending on the final selection of PAs, the project could address all six major issues identified in OP 9 facing SIDS. These are: (i) coastal area biodiversity management, (ii) sustainable management of regional fish stocks, (iii) rational tourism development, (iv) protection of water supplies, (v) management of land and marine based sources of pollution, and (vi) vulnerability to climate change. The project fully supports three of the four GEF's Biodiversity Focal Area Strategic Priorities as identified in the FY 04-06 Business Plan (i.e., catalyzing sustainability of protected areas, mainstreaming biodiversity in production landscapes and sectors, and generation and dissemination of best practices for addressing current and emerging biodiversity issues). Finally, the proposed project is compatible with the GEF's willingness to finance the incremental cost of developing environmentally sustainable eco-tourism, which would provide communities with alternative livelihoods and support the conservation and sustainable use of biodiversity.

2. Main sector issues and Government strategy:

Sector Issues

Despite the Caribbean's large endowment of biodiversity-rich ecosystems, there is growing evidence of degradation of these fragile ecosystems, particularly associated with poorly-planned coastal development, population growth, tourism, pollution, over-exploitation of living resources, accelerated sedimentation associated with changes in upstream land use, rapid expansion of coastal developments, and the introduction of exotic species. As a result, important biological systems, particularly beaches, coral reefs, wetlands, tropical forests and seagrass beds, are under intense pressure, threatening the region's biological diversity. Threats and the underlying causal factors contributing to them in the OECS Region presented by habitat include:

Highly productive coastal ecosystems (e.g., coral reefs, seagrass beds, mangroves and other wetland areas) mainly attributable to: (i) accelerated erosion and sedimentation (e.g, from deforestation, dredging, and inappropriate agricultural and development practices); (ii) non-sustainable harvesting practices (e.g. mangrove, fish, corals, and marine algae); (iii) reef damage due to unregulated tourism and other user impacts, as well as climate change induced higher water temperatures; (iv) pollution (urban, industrial and agricultural); (v) beach mining; and (vi) exotic species introduction (e.g., aquaculture);

Wet and dry tropical forest ecosystems (and related loss of area and species diversity), resulting from: (i) excessive logging, charcoal burning and hunting; (ii) inappropriate agricultural practices; (iii) feral and untethered livestock; (iv) presence/introduction of exotic species; (v) inappropriate solid waste disposal; and (vi) poorly planned economic development (e.g. road construction and quarrying);

Rocky shore communities, attributable to: (i) mollusk harvesting; (ii) solid waste and urban pollution; and (iii) inappropriate development practices (e.g., including land reclamation and erection of coastal structures);

Offshore islets, resulting from (i) inappropriate tourism and agricultural development practices; (ii) feral or untethered livestock; and (iii) inappropriate solid waste management; and

Freshwater ecosystems, resulting from: (i) pollution (e.g., agricultural, solid waste and wastewater discharge); (ii) accelerated erosion and sedimentation (conversion of riparian forests and inappropriate agriculture and economic development practices; (iii) introduction of exotic species; and (iv) inappropriate

fishing practices.

In addition, all the region's ecosystems are to varying degrees vulnerable to **natural hazards**. Due to their geographic location and topography, the OECS countries are subject to two main types of natural hazards which impact on its biodiversity: (i) hurricanes and related tropical low-pressure systems (wind damage, storm surge, and coastal flooding); and (ii) sea level rise (coastal erosion). Finally, "high" OECS countries such as St. Lucia are also subject to soil erosion and mass movement aggravated by poor land use practices resulting in the sedimentation of freshwater and coastal/marine habitats (see Matrices 2 - 5 in Annex 6 for more detail).

Key constraints

The formulation and adoption of effective measures to address the aforementioned threats to biodiversity conservation in the OECS countries, particularly the establishment and management of PAs, faces a number of critical constraints. These are:

Inadequate legislation and weak implementation and enforcement of existing laws. While The OECS countries have inherited or enacted many laws related to biodiversity conservation and PA protection, many of these laws are obsolete and do not provide a comprehensive framework needed to conserve the region's biodiversity. Moreover, much of the legislation has remained unimplemented due to the lack of regulation and thus cannot be effectively enforced;

Policy gaps, institutional overlaps and lack of co-ordination in natural resources management. Existing MS' institutional arrangements are weakened by gaps in existing policies (e.g., the failure to incorporate environmental and social costs into economic decision-making) and overlaps and/or unclear institutional responsibilities for the conservation and management of biodiversity in many of the MS (particularly with respect to the management of coastal resources). The situation is further exacerbated by an absence of effective mechanisms for information sharing, integrated planning and collaboration among agencies in the implementation of programs and projects is a major constraint to PA management;

Limited human, financial and material resources. Like other SIDS, the OECS countries have a limited pool of persons with relevant professional and technical training and experience in biodiversity conservation and protected areas management. Funding, facilities and equipment, where available at all, for the responsible agencies is often inadequate. Where PA-generated revenue exists (e.g., through royalties and license fees), it typically goes to the Member States' (MS) treasury departments and cannot be retained by the responsible governmental agencies;

Lack of natural resource data. Natural resource and conservation data are inadequate both in terms of content and organization for sound resource management and long-term sustainable planning efforts. Data where they exist, are not accessible and available to policy makers, community members, regional stakeholders and managers;

Limited sustainable economic opportunities. In the OECS countries a significant proportion of the community is engaged in natural resource based activities, including agriculture and fisheries. In some areas, these traditional activities as presently practiced are not environmentally sustainable and adversely impact the underlying natural systems. In many cases, the achievement of conservation objectives will depend upon the identification of viable alternative sustainable livelihoods and/or support to more environmentally sustainable practices; and

Limited public support for conservation efforts. In the OECS countries, "bread and butter" socio-economic issues remain the main national priority. Despite an increase in general environmental awareness, particularly amongst the young and some communities already involved in conservation efforts, direct support for conservation is still largely confined to membership in environmental NGOs.

OECS government strategies

Government sectoral strategies in the region are based on international conventions to which they are signatories, policy statements, legal and institutional instruments, recent environmental programs, and financial support of conservation activities through budget allocations. As indicators they support the conclusion that regional decision-makers are conscious of the importance of conservation and the management of natural and cultural resources as the basis of sustainable development. A matrix of OECS country-ratified treaties and conventions that are pertinent to this project has been prepared and is available in project files (e.g. RAMSAR, CITES and Bonn).

Convention on Biological Diversity (CBD): The OECS participating countries were some of the first countries to ratify the CBD. The project is fully compatible with the principles of the Convention and will support three levels of biodiversity (ecosystems, species, and genes).

Cartagena Convention. This Convention is the only regional environmental treaty for the Wider Caribbean Region and serves as a vehicle for the implementation of global initiatives and legal instruments, such as the CBD. To date it has been ratified by 21 countries including all but one MS (St.Kitts and Nevis). It is supplemented by the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) in the Wider Caribbean Region; among the participating member states (PMS), St. Vincent and the Grenadines (1991) and St. Lucia (2000) have ratified the protocol.

National Environmental Profiles (NEPs): Comprehensive NEPs have been prepared for all the PMS under the umbrella of the Caribbean Conservation Association (CCA). These profiles play an important part in the processes of environmental education, environmental management and the regulatory control of land development in the OECS countries, including the assessment of environmental impacts;

National Biodiversity Strategy Action Plans (NBSAPs). Five of the 6 PMSs have completed NBSAPs (St. Kitts-Nevis is presently preparing its NBSAP). The shared objectives of these strategies relevant to project objectives include: (i) conservation of the country's diversity of ecosystems, species and genetic resources; (ii) establishment of protected areas; (iii) promotion of sustainable uses of these resources in support of human development with an emphasis on tourism; (iv) encouragement of the equitable distribution of the benefits derived from the use of biodiversity; (v) need to establish baseline data; (vi) improvement of institutional and management capacity; and (vii) facilitation of the participation of people and institutions in the management of biodiversity;

National Environmental Action Plans (NEAP). All 6 PMS have completed NEAPs in the last decade. In all cases, they have highlighted the complementary nature and importance of recognizing the inter-sectoral impacts on biodiversity in a small island context;

St. George's Declaration of Principles for Environmental Sustainability in the OECS. All the PMS have endorsed the St. George's Declaration, which includes a commitment to the conservation of biological diversity and the protection of areas of outstanding scientific, cultural, spiritual, ecological, scenic and

aesthetic significance. OECS/ESDU is assisting the member countries to undertake reviews of the existing legal and institutional framework for environmental management to further compliance with the Declaration;

OECS Environmental Management Strategy (OECS EMS). The Strategy was completed in March 2002 and endorsed by the OECS Environment Policy Committee (EPC) in July 2002. The Strategy: (i) integrates environmental management into development planning at the regional and national levels; (ii) assists the OECS region in planning for and responding to environmental issues of common interest; (iii) encourages pooling of intra-regional financial, human and other resources to achieve environmental management objectives; and (iv) promotes harmonization of national policy, legislation, capacity building and on the ground implementation with respect to environmental management.

National Parks and Protected Areas System Plans. In the region, there are 98 gazetted PAs and an additional 9 PAs that are in the process of being created. Three of the PMS, Dominica, Grenada and St. Lucia, have already prepared national protected areas system plans. Additionally, St. Vincent and the Grenadines is about to commission work for the preparation of a national PA system plan. Steps have been taken to implement aspects of these plans; however, the need to revise them in accordance with IUCN guidelines has been recognized. In light of the plethora of PAs in the region, many of them apparently not supported with the necessary financial and human resources to ensure the achievement of basic biodiversity conservation objectives, less their long-term sustainability, there is a need for a regional strategy and rationalization process to use scarce resources more efficiently to conserve biodiversity of global importance.

3. Sector issues to be addressed by the project and strategic choices:

Among the sector issues outlined above, the proposed project would focus on those linked most closely to the PMS' priorities of: (i) harmonization at the national and regional levels of the institutional, policy, and legal frameworks relevant to biodiversity conservation; (ii) identification and development of sustainable financing mechanisms to support PAs; (iii) promotion of the collaborative management of PAs; (iv) adoption of a strategy for conservation interventions, including the establishment of PAs containing globally significant biodiversity while improving economic alternatives for local communities; and (v) increasing institutional capacity in the region to manage and conserve biodiversity. Specifically the project will:

Develop a more appropriate institutional framework for conservation management. The project will provide a critical focus and impetus to harmonize the existing natural resources legal and institutional frameworks to promote conservation and protected area establishment and management. Project activities will promote standards that will help the OECS countries comply with relevant international treaties and conventions, although formal ratification of such treaties falls outside of the scope of this project.

Promote improved biodiversity conservation. For institutional and legal reform to be effective there must be active application of these reforms at the PA site level. The demonstration protected areas chosen for inclusion in the project will form the first phase of the development of an integrated regional PA system which would be developed, guided by a regional development strategy, in subsequent program phases. These pilot areas will also demonstrate that effective management of natural systems can bring tangible economic benefits and a higher overall quality of life for those communities in and around those areas;

Develop and implement innovative financial mechanisms to support PAs. A key constraint facing the sustainable management of PAs in the OECS region is the lack of public funds. The project will support an assessment and study of one or more financing mechanisms which could support PAs at the regional level (e.g., the creation of a regional biodiversity fund, debt swaps, etc.). Moreover, each project supported PA will receive funds and assistance to develop a new (or update an existing) management plan which will include a financial management strategy. Depending on site characteristics, new funding mechanisms will be explored and supported where found to be relevant (e.g., national lotteries, public-good service payment schemes, increasing the use of user fees, introducing corporate donations and friends schemes, etc.)

Promote environmentally compatible economic activities. In order to provide economic opportunities that support biodiversity conservation, the project will seek to identify and promote environmentally compatible activities through training, environmental education and community involvement and investments; and

Increase national capacity and awareness of biodiversity significance and the need for its conservation . To ensure long term sustainability, the project will support increasing national institutional capacities and levels of public support for biodiversity conservation and sustainable management of PAs through education, training and awareness activities.

Footnotes:

[1] The six OECS Participating Member States under the project are: Antigua and Barbuda, the Commonwealth of Dominica, Grenada, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines. The other OECS Member States are: the British Virgin Islands, Montserrat and Anguilla.

[2] For example, in St. Lucia alone, this rich biological diversity is illustrated by its 1,300 known species of plants, 14 of which are endemic; over 150 birds (5 endemic); 21 species of herpetofauna (5 endemic), several invertebrates and a few mammals. Additionally, 250 reef fish species and 50 coral species have been recorded for the island.

[3] Conservation International, 2003. State of the Hotspots (Conservation International, Washington, D.C.).

[4] Sullivan Sealey and Bustmante, 1999. Setting Geographic Priorities for Marine Conservation in Latin America and the Caribbean. The Nature Conservancy, Arlington, Virginia.

[5] Kelleher, Bleakley and Wells. 1996. A Global Representative System of Marine Protected Areas, Volume 11, CNPPA, Switzerland.

C. Project Description Summary

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

Component	Indicative Costs (US$M)	% of Total	Bank financing (US$M)	% of Bank financing	GEF financing (US$M)	% of GEF financing
1. PAs Policy, Legal and Institutional Arrangements Reform	1.02	13.5	0.00	0.0	0.84	22.7
2. Protected Areas Management and Associated Alternative Livelihoods	3.55	46.9	0.00	0.0	1.21	32.7
3. Building Capacity for Biodiversity Conservation and PA Management and Increasing Awareness	0.74	9.8	0.00	0.0	0.43	11.6
4. Project Management, M&E and Information Dissemination	2.06	27.2	0.00	0.0	1.02	27.6
Physical Contingencies	0.10	1.3	0.00	0.0	0.10	2.7
Price Contingencies	0.10	1.3	0.00	0.0	0.10	2.7
Total Project Costs	7.57	100.0	0.00	0.0	3.70	100.0
Total Financing Required	7.57	100.0	0.00	0.0	3.70	100.0

Component 1. Protected Areas Policy, Legal, and Institutional Arrangements (Institutional Framework) (Total US$1.02 million, GEF US$0.84 million).
This component's objective is to achieve policy, legislative and institutional arrangement reforms (collectively termed PA institutional framework) in Participating Member States (PMS) leading to the evolution of a harmonized approach to protected areas creation and management in the OECS region. There are three sub-components: (i) policy, legal, and institutional arrangements reform; (ii) updating/preparing new national protected areas system plans; and (iii) supporting studies.

Expected Outputs: The projected outputs associated with this component are: (i) reviews of national PA frameworks; (ii) drafts of models of PA-relevant legislation, policies, and institutional arrangements; (iii) national actions leading to new or modifications of existing institutional frameworks which collectively will demonstrate a more common approach to the conservation of biodiversity in the OECS region through the use of protected areas; (iv) a comparative analysis of existing PA system plans to include recommendations leading to a common approach to the development of new PA system plans; (v) updated or new national PA system plans; (vi) national actions leading to the adoption of the PA system plans; (vii) recommendations and specific follow-up actions based on substantive analyses of critical constraints affecting the conservation of biodiversity in the OECS region; and (viii) identification of one or more financing mechanisms for the sustainable management and further development of PAs in the region.

Activities: The component will support the following activities: (i) national reviews of existing policy, legal and institutional frameworks in PMS; (ii) a comparative analysis of national frameworks to include recommendations leading to a common approach to the development of policy, legislation and institutional arrangements for PAs establishment and management in the region; (iii) a regional symposium and endorsement of one or more common approaches; (iv) development of harmonized policy, legislation and institutional arrangement models supporting PA establishment and management for the region; (v) support for national actions leading to a more harmonized institutional framework (e.g., rationalization and/or amendments to existing legislation, new legislation, elimination of institutional overlaps, etc.); (vi) an

assessment of the critical constraints affecting the conservation of biodiversity in the OECS region; (vii) evaluation of existing and potential mechanisms for the sustainable financing of PAs; and (viii) other demand-driven studies in support of component objectives to be defined in year one (Y1) of implementation.

Component 2. **Protected Areas Management and Associated Alternative and New Livelihoods** (Total US$3.55 million, GEF US$1.21 million).
The component's objective is to promote biodiversity management and conservation through the establishment of new and strengthening of existing protected areas, complemented by support for alternative and/or new livelihoods in areas in proximity to the aforementioned PAs. This component has three sub-components: (i) the creation of new and strengthening of existing protected areas; (ii) supporting alternative and/or new sustainable livelihood opportunities in and around PAs; and (iii) SPF capacity building and support.

Expected Outputs: Projected outputs of this component are: (i) out of a total of 8 PA candidate sites, at least 6 (representing at least 6,500 ha under improved management for conservation and protection) will be legally constituted and functioning by end of Year 5[6]; (ii) at least three livelihoods programs/subprojects (covering at least some 970 ha under biodiversity friendly production systems) in suitably zoned areas in and around PAs, designed to reduce pressure on PA and biodiversity; and (iii) increased and diversified PA-related income to the local community.

Activities: To produce the above outputs this component would support the following activities: (i) site inventories, demarcation and mapping of the PAs, establishment of biodiversity baseline; (ii) the development (or updating of existing) management plans and constituent sector plans; (iii) investments such as basic park infrastructure and equipment; (iv) an M & E program; (v) training and technical support that will be based on site-specific needs assessment; (vi) field studies and workshops to identify potential economic opportunities; (vii) review, evaluation, and selection of livelihood opportunities based upon their compatibility with conservation objectives, feasibility and cost/benefit; (viii) development of participation criteria; (ix) training in sustainable financial management for sustainable livelihood beneficiaries; and (x) alternative sustainable livelihood sub-projects implemented.

Component 3. **Building Capacity for Biodiversity Conservation and PA Management and Increasing Environmental Awareness** (Total US$ 0.74 million, GEF US$0.43 million).
This component's objective is to enhance national capacities and increase public support for biodiversity conservation and sustainable management of PAs through education, training and awareness (ETA). The component would include two sub-components: (i) training in support of establishment and management of PAs and sustainable alternative livelihoods; and (ii) increasing public awareness on the ecological, social and economic significance of PAs.

Expected Outputs: Projected outputs for this component are expected to include: (i) six training modules designed by the end of first project year, and some 450 participants trained by end of project to increase administrative efficiency in national institutions responsible for biodiversity conservation and PA management, the empowerment level of local communities and to increase effectiveness in participation in local management decisions and professionalism among PA staff; and (ii) at least ten environmental awareness activities undertaken and disseminated through three information media instruments to support behavioral change among local populations living in and adjacent to PAs, increase awareness of national decision-makers of the socio-economic importance of PAs and the need to conserve biodiversity of global importance, and increase public awareness of the ecological, economic and social significance of PAs.

Activities: To produce the above outputs this component would support the following: (i) completion of a national and regional training needs assessment; (ii) the design and implementation of regional and national training program(s) in protected area management and sustainable livelihoods; (iii) the design of national public awareness strategies and country-specific action plans; (iv) the implementation of the aforementioned action plans; and (v) equipment purchased in support of implementation of public awareness strategies.

Component 4. **Project Management, M&E and Information Dissemination** (Total US$2.06 million, GEF US$1.02m).

This component includes three sub-components: (i) project management, (ii) monitoring and evaluation (M&E) of overall project implementation, and (iii) design and implementation of an information dissemination strategy.

Expected Outputs: The main output of this component will be a project implemented in a timely and efficient manner. Specific outputs will include: (i) an improved institutional capacity in ESDU to support the PA needs of the OECS PMS; (ii) increased recognition of ESDU's competence in the sector; (iii) improved competence of at least 5 nationals of PMS in natural resource management; (iv) an M&E plan consistent with WB and GEF requirements, (v) timely M&E reports conforming to GEF, WB, and public monitoring requirements; (vi) increased public support for the use of PA creation and management in biodiversity conservation; and (vii) adoption of relevant experiences from this project by other non-participating MS in the OECS region and the wider Caribbean.

Activities: In support of the above outputs, this component will provide for the: (i) employment of additional staff for the ESDU (project coordinator, protected area's specialist, communications officer, and administrative assistant); (ii) purchasing of equipment; (iii) updating of ESDU's existing M&E program to meet GEF and WB requirements; (iv) implementation of the M&E system; and (v) dissemination of project results.

2. Key policy and institutional reforms supported by the project:

The key policy reforms promoted by the project will consist of rationalization of the institutional framework governing protected area management in OECS PMS facilitating the following legal and institutional reforms:

- where needed, the preparation of new conservation and special areas management acts and/or their regulation. These legal instruments can provide the necessary framework for enabling legislation for the Convention on Biological Diversity, the Cartagena Convention (including the SPAW Protocol) and the World Heritage Convention;
- preparation of underlying instruments required to establish at least 3 new protected areas supported by the project;
- review and revision of existing national protected area system plans and, if needed, support for new plans;
- recognition of national PA system plans as the central policy statements on protected areas;
- where institutional responsibilities overlap or remain unclear with respect to PA management, rationalization of relevant existing PMS national legislation to clarify the role and relationship among agencies;
- establishment of advisory committees, made up of representatives of key stakeholders, as the main coordinating mechanisms for the respective country protected area systems;

- establishment of new and strengthening of existing PA local management entities responsible for the operational planning and coordination for each area;
- adoption of Annual Operational Plans, in conjunction with management plans, as the main instrument for coordination; and
- the improvement of information management capacity through training and information technology to allow for data collection and sharing among agencies and the private sector, monitoring and integrated conservation planning.

3. Benefits and target population:

The project would deliver several global benefits including the conservation of globally significant species, as well as the habitats in which they occur. Dry and humid tropical forests, wetlands and tidal flats, sandy and rocky beaches, coral reefs, seagrass beds, mangroves, and offshore islets will be protected. Nesting sites for several endemics species, as well as sea turtles will be protected. Most importantly these global benefits will be closely linked to demonstrable benefits for local populations including generally improved environmental integrity and natural amenity values such as watershed protection, and protection of the resource base, one of the region's most important source of foreign exchange – tourism. Perhaps the most important benefit will be the newly developed constituencies for biodiversity conservation who will act to promote conservation and sustainable development due to the tangible economic benefits and improved economic opportunities.

The project is also geared to providing benefits to those target groups associated with protected areas, particularly where that association implies a dependency on the resources for livelihood support. Where the nature of that dependency is not compliant with the goals of protection for the area, the project will provide for, the identification of alternative sources of livelihoods that will ensure equal or greater socio-economic benefits than previously obtained. The empowerment of target groups/persons will be effected through appropriate capacity building initiatives undertaken by the project, which will be geared towards securing the sustainability of these alternative livelihoods. In the process of providing for the enhancement of existing livelihoods, (where compatible with protection objectives), and/or the provision of alternatives, the project will foster partnerships with appropriate national and regional community development agencies and organizations.

Each of the participating country's public sectors will greatly benefit from increased capacity for conservation management and co-management of natural resources. Once established, the project will demonstrate the viability and necessity of sustainability while providing valuable lessons for both the participating countries as well as the other Caribbean SIDS.

Other beneficiaries of the project include national NGOs with field experience in the management of protected areas, and the local citizens and international visitors that will visit the future PAs and benefit from the services to be supported by the project. New recreational and cultural opportunities will be developed both for national and visitors alike. Opportunities for cultural and spiritual enrichment, leisure, and family activities in natural settings will complement the more obvious benefits of improved government, conservation and resource management capacity (see Annex 13, Social Assessment Summary for more detail).

4. Institutional and implementation arrangements:

Implementation period:

The Grant is expected to become effective in mid-November 2004 for a five year period, up to October 31,

2009 (the expected project completion date).

Project oversight and implementation arrangements

On behalf of the PMS, the OECS Secretariat (located at Castries, St. Lucia) will be the Grant Recipient and the Executing Agency (through its existing Environmental and Sustainable Development Unit - OECS/ESDU) for the implementation of the project. The OECS Secretariat is a not-for-profit, developmental, inter-governmental organization of the member States of the Eastern Caribbean established under the Treaty of Basseterre on the 18th June 1981 which enjoys tax-exempt status relating to its member countries (all project participating countries are OECS member countries). It will execute the project under the guidance of the Project Steering Committee (PSC). The World Bank will function as the GEF Implementing Agency.

The project will be implemented by ESDU operating out of its office in Saint Lucia. ESDU will be responsible for the day-to-day operation and management of the project. It will be in charge of project oversight, coordination, maintenance of institutional networks, and articulation and collaboration with stakeholders. It will collaborate with regional and other international institutions (for example, the CCA, CEHI, UNEP and UNDP, the University of the West Indies, The Nature Conservancy) in the execution of some activities, and will work with the participating countries for the implementation of country-level project activities (for example, PA management plans, institutional frameworks, education and public sensitization plans). In addition to all staff of the unit that will be involved, as necessary and appropriate, in the implementation of the Project, the ESDU, with project funds will hire a project coordinator (declining basis), a protected areas specialist, a communications officer, and an administrative assistant, to undertake project coordination and implementation. The project coordinator will report directly to the head of ESDU, who will also be the project director, and will collaborate closely with the Unit's other function managers. The project coordinator is also expected to become the permanent function manager of ESDU's newly created Biodiversity and Park and Protected Areas Functional Area (B&PPA). The protected areas specialist will function as the field manager. All project-funded staff will report directly to the Head of Unit/project director through the project coordinator. The existing manager for ESDU's Sustainable Livelihoods Function will assist the project coordinator in the implementation of all activities pertaining to alternative livelihoods. ESDU's function manager for Environmental Planning and Management (EPM) will assist the project coordinator in the implementation of Component 1 (policy, legal and institutional reform) and its manager for Education, Training & Awareness (ETA) will assist in all training and awareness project activities. Figures 1 outlines the proposed organizational structure of the project.

The activities of the ESDU team will be complemented by technical expertise contracted to perform required services under the contract. Consultants will report to the ESDU team according to specific reporting requirements included in the contracts under which their services will be performed. Local, regional and international consultants will be utilized on the project.

Finally, taking advantage of its position as a member of the Steering Committee of the ongoing GEF-financed MACC (Mainstreaming Adaptation to Climate Change) project for the Caribbean, the ESDU will also ensure adequate coordination between both operations (most notably in MACC's Coral Reef Monitoring Program).

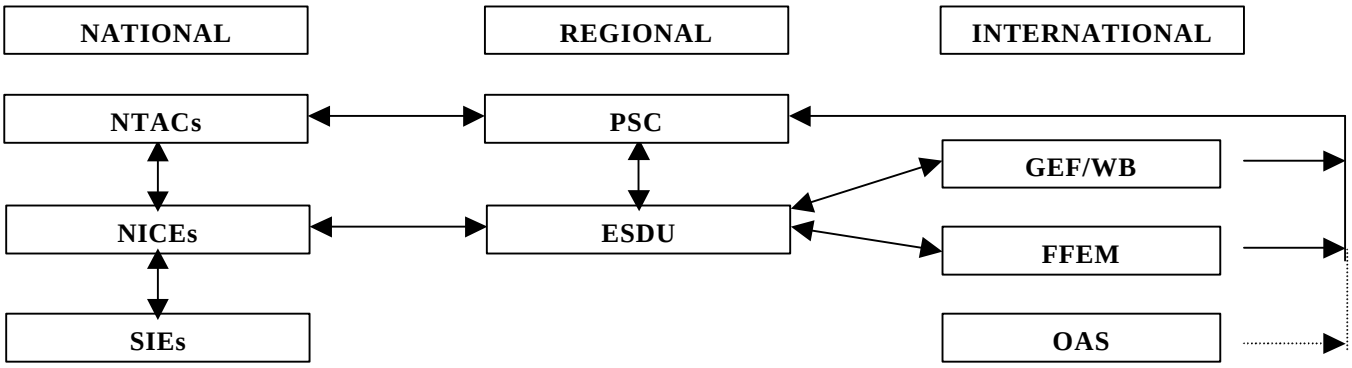
Each participating countries will establish at the national level a **National Implementation Coordinating Entity** (NICE) that will have the responsibility for: (i) preparing national annual work plans and budgets, (ii) day-to-day implementation of the Project activities at the national level, and (ii) implementing local site activities in collaboration with the Site Implementing Entities (SIEs). Whenever possible, the PMS intend

to use already existing institutional structures (government agencies, NGOs, etc) to serve as NICEs (a detailed listing of identified potential NICE per country is available in project files). The NICE will also liaise directly with the ESDU on matters relating to project implementation. The NICE will also participate in the PSC. All NICE will designate a national coordinator who will be directly responsible for project coordination and implementation at that level. The National Coordinator will report directly to the Permanent Secretary of the same Ministry through the Head of NICE. The activities of the National Coordinator will also be supported by other national agencies with related mandates.

At the site of a project-supported PA, **Site Implementing Entities** (SIEs) will be set up specifically to undertake the day-to-day management. The SIE will be constituted of representatives from community groups living in and around the PA, and of appropriate public sector and relevant private sector agencies. The SIE will advise the NICE on the implementation of site activities and will implement activities in collaboration with the NICE. The SIE will participate in the NTAC and will participate actively in Components 2 and 3. (see Annex 14, Implementation Arrangements for more detail).

A **Project Steering Committee (**PSC) will approve the annual work plans and associated budgets; monitor the project's progress; review and analyze and provide guidance to the ESDU on project issues during the course of project implementation in accordance with a project operational manual acceptable to the Bank. The PSC will consist of 2 representatives from 2 PMS, the latter which will be rotated annually. The representation from each PMS will comprise: (i) the Head of the Parks and Protected Areas Unit where appropriate; and (ii) the ESDU National Technical Focal Point who is also the most senior technical officer in the Ministry of Environment. The OECS Secretariat will chair the PSC; ESDU staff will be *ex-officio* members. The PSC will meet twice a year.

Figure 1. Project Implementation



At the national level, the project will be monitored through a **National Technical Advisory Committee** (NTAC), an inter-sectoral, inter-agency body that will include representatives from relevant public and private institutions, including NGOs, involved in environmental management in general and biodiversity management, in particular. The NTACs will: (i) provide technical and policy advice to the National Implementing and Coordinating Entities or NICE (see below), (ii) participate in the PSC, (iii) review national workplans and budgets, and (iv) approve management plans and projects to be financed through the Small Projects Facility. Participating Member States will be encouraged to use the National Biodiversity Committees as the NTACs for the Project.

Financial management arrangements:

The project will provide an opportunity to develop financial management and procurement capacity through training and close supervision. The ESDU (through its established finance and accounting division) will have overall financial management and accounting responsibilities Whenever possible, the PMS intend to use already existing institutional mechanism (government agencies, NGOs, etc) to serve a NICEs (a detailed listing of identified potential NICE per country is available in project files). for the project, including: (i) preparation of project financial statements in accordance with Bank guidelines; (ii) flow of funds; (iii) preparation of procurement plans and monitoring of procurement processing, contracting, implementation, and inventories; (iv) management of financial information systems; (v) preparation of quarterly financial management reports for submission to the Bank and for use by the M&E specialist; (vi) field supervision of implementation activities; and (vii) adoption of remedial financial management actions, as necessary, during project implementation. GEF Grant fund will be disbursed to a unique Special Account (SA) maintained in a commercial Bank acceptable to the World Bank. This account will be utilized for the purpose of the project disbursement, and will be managed by ESDU. Since accounting will be centralized at ESDU, no additional Special Accounts for GEF funds will be required, and all financial transaction will flow directly from the Special Account. Although Financial Monitoring Reports will be prepared under the project, these will be primarily for the purpose of project management. The initial disbursement into the Special Account will be an advance, and subsequent requests for replenishment of the SA from the GEF Trust Fund Account will be supported by Statements of Expenditure, including full documentation for contracts beyond thresholds to be established during appraisal.

Monitoring and evaluation arrangements:

The project will employ an adaptive management framework characterized by regular monitoring and concurrent evaluation, mid-term review and final assessment. Regular monitoring will be the responsibility of ESDU, which will prepare semi-annual reports on the implementation progress. This will cover reporting on the progress achieved vis-à-vis the project Operations Manual (being developed) timeline for project activities, the Procurement Plan and schedule, and agreed Work Plans for the year among other aspects. An M&E plan will be prepared as part of the Operations Manual, and will be derived in part from: (i) the WWF-World Bank Alliance's *Scorecard to Assess Progress in Achieving Management Effectiveness Goals for Marine Protected Areas*; (ii) the IUCN - World Conservation Union's *How is Your MPA Doing?: Guidebook of Natural and Social Indicators for Evaluating Marine Protected Area Management Effectiveness*; and (iii) the WWF-World Bank Alliance's *Reporting Progress in Protected Areas: A Site-Level Management Effectiveness Tracking Tool*.

An annual report will be prepared indicating project achievements, experiences, problem and lessons learned during the year for discussions each year with stakeholders. As required for all projects funded by GEF, a final evaluation/review of project and its execution will be undertaken at the end of the project. ESDU will carry out such a review with the assistance of independent consultants acceptable by all parties. The project will support a review workshop or Implementation Completion Report stakeholder meeting, wherein all participating countries and agencies will participate to review and assess the findings of the study, and evolve a sustainability plan for project activities in the post-project period.

Footnotes:

[6] Initial sites have already been selected in Antigua and Barbuda (North Sound Islands Protected Area), St. Lucia (Pointe Sable PA), and St. Vincent and the Grenadines (Tobago Cays National Park). See Annex 6 PA Selection Criteria and Site Profiles for more details.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

No project alternative. If no project were implemented, conservation efforts would most likely continue at the same level. It is possible that legal and institutional rationalization could take place on a country-by-country basis. There is, however, no visible mechanism to promote this activity outside the efforts underway by the relevant line agencies and no guarantee that PMS governments would undergo the institutional and harmonized legal reform foreseen in the project. The project will create incentives and provide resources to implement many of the reforms and programs currently envisioned under the project. More importantly, the project will undertake to ensure that local site activities will be undertaken in conformity with these reforms.

National approach. The origins of the present project began with a Block B grant awarded to St. Lucia in late 2001 to assist in the preparation of the "St. Lucia Coastal/Wetland Ecosystem Conservation and Sustainable Livelihoods Project." A draft project brief was prepared by late May 2002. However after an internal Bank review of the project proposal and further discussions with government officials and prospective co-financiers, consensus was reached on the need to adjust the project's design toward an OECS-wide regional approach supporting national demonstration activities as a way to better ensure the sustainable establishment and management of PAs in the OECS. Factors that prompted this shift from a national to a regional approach included: (i) the need to demonstrate **strategic consistency** with the regional approaches embodied in St. George's Declaration of Principles for Environmental Sustainability in the OECS, the WB CAS, and the other donors' strategies; (ii) facilitating OECS countries' efforts to mobilize needed resources to meet **GEF's co-financing requirements**; (iii) **gains in efficiency and economies of scale** to enhance replicability and sustainability of the project's objectives; and (iv) addressing the root causes of environmental degradation through **improved coordination**.

Finally, a regional approach, channeled through an institution dedicated to the coordination of multi-national efforts is more likely to ensure that PA project activities are better integrated, complemented and coordinated with other sustainable environmental projects and programs in the region. Among others, this is expected to be the case in particular with the other GEF-funded Integrating Watersheds and Coastal Area Management Project (IWCAM), that is in the process of being finalized by UNEP/UNDP and the Caribbean Environmental Health Institute (CEHI).

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed			
Natural hazards management	Emergency Recovery and Disaster Management Projects (IBRD/IDA)		
	Dominica	U	U
	Grenada	S	S

	St. Kitts and Nevis	S	S
	St. Lucia	S	S
	St. Vincent & the Grenadines	S	U
Environmental pollution	OECS Solid and Ship Generated Waste Management Project (GEF-IBRD-IDA)	S	S
Watershed Management	St. Lucia Watershed and Environmental Management (IBRD/IDA)	S	S
Biodiversity	Grenada Dry Forest Biodiversity Conservation Medium Sized Project (GEF)	S	S
Climate Change	Mainstreaming Adaptation to Climate Change (GEF)	S	S
Other development agencies			
European Union (EU) Biodiversity	Caribbean Regional Environment Program (CREP)		
United Nations Environmental Program (UNEP)/GEF Biodiversity	Integrated Watershed and Coastal Area Management (IWCAM)		
Caribbean Trust Fund Biodiversity	Protocol on Specially Protected Areas and Wildlife (SPAW)		
Canadian International Development Agency (CIDA) Environmental Management	Environmental Capacity Development (ENCAPD)		
United Nations Foundation Biodiversity	International Coral Reef Area Network (ICRAN)		
Organization of American States (OAS)	Integrated Development Planning		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

Why additional GEF funding is needed

Activities supported under the Baseline Scenario will produce predominantly national benefits associated with promoting greater sustainability in the use of natural resources. Their implementation will result in increased environmental protection, closer integration of environmental management issues into national development planning, increased capacity of public sector institutions to manage terrestrial, coastal and marine resources, and poverty reduction; the latter through giving rural communities greater access to opportunities for the sustainable generation of incomes. However, their contribution to biodiversity conservation will be limited in most cases to the *ad hoc* adoption of the proposed or existing legislation. For example, in the case of St Lucia, the proposed System of Protected Areas for St. Lucia (SPPA) never received legal recognition which subsequently limited its effectiveness. In most OECS countries, existing laws related to biodiversity conservation and the protection of natural areas are obsolete and do not reflect

contemporary approaches to environmental management. Even at the national level, much less the regional level, these measures are not systematically related and do not provide a comprehensive framework for biodiversity conservation and PA management. Where inter-project complementarities exist, information will be coordinated through web pages and mutual participation of project staff in international fora. When and if opportunities arise, joint collaboration may also be possible between in one or more project supported activities.

Despite PMS government policies and intentions to support a co-management strategy for PAs, under the Scenario, there are few on-going initiatives dedicated to supporting community-based approaches to the management of protected areas due to funding constraints. Similarly, given the existing limited technical capacity to foster sustainable livelihood activities, there are few examples in the region where this approach has been developed to reduce pressure on PA core areas. Access to and exchange of information on the region's globally important biodiversity, an essential tool for its effective management and protection, is also a major constraint and likely to remain so under Baseline conditions. In the absence of effective mechanisms for information sharing, integrated planning and collaboration between agencies in the implementation of programs, the management of PAs will continue to be inefficient, with no significant positive impacts on the conservation of biodiversity of global importance.

As a result, the effectiveness of concerned ministries, PA administration agencies and NGOs in managing and responding to needs of their PA systems is probably not sufficient to achieve the objectives established in the major national biodiversity reports (and related international agreements), including the BSAPS and Principle 13 of the "*St George Declaration*, where in 2001 each signatory State agreed to "pursue appropriate measures to conserve and, where necessary, restore biological diversity, including species diversity, genetic diversity within species and ecosystems diversity." In the absence of concerted efforts and investment to allow the local population to be fully involved in the management of the PAs, including participating in establishing area objectives and desired future conditions, and without strategic and comprehensive support for sustainable livelihood alternatives through the provision of training for local stakeholders and demonstration projects, economic pressures will lead to increased stress to the terrestrial, coastal and marine ecosystems in natural areas. Existing institutional capacity is not sufficient to respond to these threats and the loss of biodiversity is likely to continue in the OECS countries. Reversing this situation and trends will require investments in the development of appropriate strategies that take into account global environmental values, as well as institutional and legal frameworks, and includes incentives for increasing the involvement of civil society in the planning and co-management of PAs. It will also require the adaptation of appropriate livelihood activities for communities and monitoring and evaluation of activities that demonstrate results and benefits to local as well as regional, national and global stakeholders.

There are a number of project initiatives currently being undertaken in the region most of which have some element of consideration given to protected areas, but none designed to systematically address the multiplicity of issues to be undertaken through the GEF assisted OPAAL project. An evaluation of initiatives in the region revealed that those programs/projects placing greater emphasis on capacity building for the management of areas of critical importance are the CREP, SPAW, ICRAN and IWCAM projects. While the CREP aims to invest in 'amenity areas' and not necessarily protected areas, it will not consider policy, legal or institutional arrangements for their sites. In addition, the focus of interventions is site specific, since only the demonstration value of site management is considered and not necessarily broader national or global considerations. The UNEP-supported SPAW program is also limited in that not only is it specific to marine protected areas, but the focus as in the case of the CREP is also site specific, in large part restricting benefits to the immediate area of intervention. The IWCAM project is not specific to protected areas but to broader watershed/coastal related issues with water as the main theme. Project sites

and characteristics vary from site to site and each country will therefore benefit from a unique set of experiences that are not necessarily consistent throughout the project geographic footprint. ICRAN is also site specific to coral reefs and as such is quite limited in focus.

In light of the present situation, the significance of the national and global biodiversity value of the islands, and the magnitude and growing number of threats to the region's biodiversity, the governments of the OECS PMS urgently need assistance from the GEF to implement a program that would support biodiversity conservation through a regional PA management approach. GEF assistance would contribute to the conservation of globally significant biodiversity in the OECS region through removing barriers impeding the creation and effective management of PAs, ensuring their sustainability through supporting new and alternative livelihoods and increased involvement of civil society and the private sector in the planning, management and sustainable use of these areas. The GEF Project would support the long-term protection of globally important terrestrial, coastal and marine ecosystems through strategic actions addressing the key threats. Financing the incremental costs associated with the conservation of these ecosystems would build on existing programmes

3. Lessons learned and reflected in the project design:

Project design has incorporated a number of critical "lessons learned" from past projects of which the most recent is the just completed OECS Solid and Ship Generated Waste Management Project (SGSWMP). These are:

- **Regional approaches provide for greater aid effectiveness in small island developing states (SIDS)** : The regional approach provides for greater aid effectiveness through economies of scale and increasing synergies in areas where resources, both human and financial, are limited. The regional approach can also helps to effectively coordinate the dissemination and replication of lessons learned during implementation of country-specific components. Furthermore, the regional approach fosters a competitive environment between countries, providing benchmarks that inspire greater performance on a national level;

- **Experiences have showed that stakeholders must be engaged in co-managing resources, especially in SIDS where there is a need to ameliorate weaknesses in institutional capacity in public sector agencies.** In the past, the decision to formally involve the economic and socially marginalized stakeholders was viewed as controversial in the region. However, project designs have benefited from using local stakeholders to achieve their stated outcomes. Three reasons were identified for this: (i) their extensive knowledge of local ecology, (ii) their stake in the protection of the natural resources on which their survival depends, and (iii) their increased cooperation once perceiving the benefits of sound PA management to themselves. This will facilitate greater communication with local communities, improve monitoring and evaluation, and contribute to constituency building while reducing management costs. During project preparation in all the PMS, local stakeholders provided critical input into project design and expressed a strong desire to participate in project implementation (see Annex 13 for more detail);

- **The importance of a flexible project design and the use of participatory monitoring and evaluation techniques together with more formal evaluation to periodically assess project performance and guide management.** Whilst implementation will build upon and enhance on-going efforts, provide new technical input and training, the project will utilize community-based groups for monitoring and enforcement with assistance and guidance from appropriate agencies already working in the areas. The project will retain its flexibility to respond to changing conditions and scenarios such that the relevance and currency of the project is maintained;

- **To be effective, conservation needs must be combined with activities aimed at meeting socio-economic needs.** One of the critical lessons learned from the OECS SPF[7] is that of the growing nexus between environmental management and poverty alleviation. This project design articulates this lesson so that all of the PAs will benefit economically from sound resource management embodied in the site-specific management plans supported under the project. Additionally, direct employment opportunities will be created through operation and maintenance of the PA's as well through ancillary employment opportunities;

- **Given the importance of tourism to the region, it is critical at this stage in the development of the sectors that increasing livelihood benefits are identified and developed in parallel with the protection of the natural resource base.** Many of the OECS PMS depend upon a sound and intact natural resource base as one of the main pillars of their economy, tourism. Given their rich natural resource endowment, the OECS region is in a strong position to develop a unique, readily differentiated tourism products based upon environmental integrity, rich biodiversity, outstanding scenic and geographic settings and a proud cultural heritage;

- **Although regionally managed, the project needs to give attention to the broader political and socio-economic environment within which intended activities are to take place.** The project addresses these findings identified from the activities of the SGSWMP by supporting capacity building and strengthening the existing institutional framework governing the management of the protected areas in PMSs. Information management assessment, training and enhancement will also greatly further this integration of efforts; and

- **The need for mechanisms to be put in place to ensure that project activities are sustainable and are fully integrated into national and regional on-going initiatives**. In addition to assisting the public departments associated with planning and the management of natural resources, the project will assist the mainline tourism agencies in promoting conservation and sustainable use of its most critical asset, the natural environment. The project will also seek to establish partnership arrangements with national and regional initiatives to ensure that local and national benefits are maximized and that PA management approaches are fully incorporated into the portfolios of these initiatives.

4. Indications of borrower and recipient commitment and ownership:

All the GEF focal points of the six PMS have endorsed the proposed project. The project concept has been coordinated through the ESDU and developed through a collaborative initiative with national and regional environmental and natural resources management agencies, and local communities, NGOs, and representatives of the private sector. These groups comprise a broad spectrum of the key national stakeholders who are instrumental in generating policies on natural resources management in general, and biodiversity conservation in particular. Additionally, all project strategies and activities within the demonstration areas were or will be developed through direct consultation and collaboration with local communities and will represent their visions, desired future conditions, and the best means to attain those conditions. Furthermore, the participating countries have shown their commitment to conserving the nation's biodiversity through preparation and approval of the NBSAPs.

A significant action on the part of the OECS Member States was the signing of the "*St George Declaration of Principles for Environmental Sustainability in the OECS*" by the Ministers of Environment of Antigua and Barbuda, Anguilla, The Commonwealth of Dominica, Grenada, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines on the 10th April 2001 in which they acknowledged, under

Principle 13, to protect and conserve biological diversity. Each signatory State agreed to "pursue appropriate measures to conserve and, where necessary, restore biological diversity, including species diversity, genetic diversity within species and ecosystems diversity". Subsequently, Environment Ministers of the British Virgin Islands and Montserrat also signed. These signatory States also recognized, under Principle 20, the obligations and objectives of the St. George's Declaration and put in place the necessary mechanisms to fulfil their commitments to implementing this Declaration. A list of indicative actions and output indicators was included under Principle 20, and broken down at the national, regional and international levels. By doing this, the States committed themselves to initiate a process of active collaboration between the signatory States, including the joint preparation and implementation of the OECS Environmental Management Strategy (finalised in March 2002 and approved by the OECS Ministers of Environment Policy Committee in July 2002), and associated National Environmental Management Strategies (NEMS), the latter scheduled for finalisation in 2003.

The aforementioned OECS Environmental Management Strategy suggests indicative actions needed for the conservation of the OECS countries' biological resources, in line with the NBSAPs, which have been carried out by the countries. Under the Strategies and Action Plans, the countries have assessed the status of biological resources and identified options for managing important biodiversity.

The OECS ESDU is also committed to biodiversity conservation and PA management. One of the functions that the Unit has identified in its Second Operational Plan (2002 to 2007), which was approved in July 2002, is that of biodiversity conservation and protected areas. This function was set up in recognition of the importance of biodiversity management to the development of OECS SIDS and the need for such management to be facilitated and coordinated by a regional entity. The other complementary functions that constitute ESDU's organizational structure are Environmental Planning and Management, Sustainable Livelihoods and Small Projects, and Education, Training and Awareness. The Unit has also dedicated its own limited financial and technical resources to project preparation.

5. Value added of Bank and Global support in this project:

The project will benefit from the Bank's considerable experience in the Latin American and Caribbean region of financing and supervising the implementation of projects to address natural resources management issues, and specifically biodiversity conservation. During project preparation considerable new information was developed and conservation strategies tailored to suit local needs and assure long-term benefits as a result of the GEF financed project preparation. Regionally, the Bank is currently implementing the Grenada Dry Forest Biodiversity Conservation MSP, a GEF co-financed project, and the lessons learned and experience gained during project implementation will greatly assist this project. The recently completed GEF/World Bank supported Solid and Ship Generated Waste Management Project, and the ongoing GEF-financed Mainstreaming Adaptation to Climate Change project, have added to the Bank's relevant experience base within the area. With this background the Bank has a good understanding of the institutional framework for natural resources management in the Eastern Caribbean and has established good working relationships with key organizations in the OECS region. Furthermore, with worldwide experience in protected areas management, especially in participatory approaches, the Bank staff brings expert advice that would infuse the experience from a variety of operations. Additionally, the Bank will be able to assist with identifying and attracting additional co-financing for the project.

The primary benefit of GEF support will be securing the protection of important global biodiversity resources through effective management of these critical marine/coastal ecosystems. GEF resources will be instrumental in introducing the integrated conservation management of ecosystems, information management training and technology, and institutional reform that are essential in island environments and

in managing the conflicts inherent in the multiple-use of coastal zones. With GEF support the proposed PAs will be established based on sound management principles. Effective practices will be introduced for the conservation of biodiversity that could be replicated elsewhere in the region. The GEF supported project will provide opportunities for communities, through linkages with the public and private sectors, to more effectively benefit from improved use of local natural amenities in a way that will support the long-term goals of the program of conserving biodiversity. GEF financing will also be used for carrying out ongoing biodiversity information management, training, and monitoring, key tools of conservation management both locally and regionally. Finally, GEF funds will be instrumental in leveraging the support of other donors.

Footnotes:

[7] Clauzel, Sylvester, 2001, Lessons Learned Evaluation of the OECS Small Projects Facility, OECS.

E. Summary Project Analysis (Detailed assessments are in the project file, see Annex 8)

1. Economic (see Annex 4):

○ Cost benefit NPV=US$ million; ERR = % (see Annex 4)

○ Cost effectiveness

● Incremental Cost

○ Other (specify)

Incremental Cost Analysis.

The total costs of the GEF Alternative represent the sum of the **baseline** and **incremental costs** associated with proposed additional actions required to secure biodiversity conservation objectives of global importance in and around the PAs to be supported under the project, including: (i) PA site-specific interventions, and (ii) related activities needed for developing, adapting and adopting model/harmonized policy, legislation and institutional arrangements for PA establishment and management in PMS.

In the incremental cost analysis (ICA), costs were estimated for the 5-year project and have been broken down by project component (see Annex 4 for more detail). In the calculation of baseline costs in and around major existing and proposed PAs of the PMS (from which one PA per country is likely to receive support under the project), only on-going project-relevant activities were used. While some of the support for these projects/activities may end prior to the completion of the proposed project, it was assumed that they would be offset by new activities, as a number of national and regional initiatives.[8]

The difference between the costs of the Baseline Scenario (US$ 5.1 M) and the GEF Alternative (US$ 12.5 M) is an estimated at US$ 7.4 M (excluding physical and price contingencies, US$ 7.6 M with contingencies). The matrix below summarizes the baseline and incremental expenditures during the five years project period.
Co-financing of US$ 3.87 M of this increment has been mobilized as follows: (i) US$ 1.46 M from the Governments of the six PMS; (ii) US$ 0.42 M from OECS; (iii) US$ 0.35 M from OAS (confirmed); and (iv) US$ 1.64 M from the FFEM (confirmed).

The total requested GEF contribution amounts to US$ 3.7 M (excluding the Block B donation). Out of this total an estimated: (i) US$ 0.84 M would strengthen Policy, Legal and Institutional Frameworks for PAs in the OECS sub-region; (ii) US $ 1.21 M to support the Creation and/or Strengthening of PAs and Associated Livelihood Opportunities, covering at least four (maximum of seven) PAs proposed for protection; (iii) US$ 0.43 M to build Capacity for Biodiversity Conservation and PA Management and increase public awareness; and (iv) US $ 0.1.02 M to support project management, M&E, and information dissemination. The aforementioned GEF-support would cover incremental costs of technical assistance,

training, workshops and other services such as public awareness media campaigns, small infrastructure, equipment and vehicles, and travel and subsistence allowances.

Incremental financing from the Governments of the six PMS would include: cash contribution of US$ 0.1 M in support of technical assistance and travel allowances and in-kind contribution of US$ 1.1 M to finance staff salaries, operation and maintenance, and travel allowances. The funding from OECS, OAS (US$ 0.3 M) and FFEM (US$ 1.5 M) would cover incremental costs of technical assistance, training, workshops, and equipment and subsistence allowances in support of all project components.

Summary Incremental Costs Matrix

Components	**Baseline**	**Alternative**	**Increment**
Strengthening Policy, Legal and Institutional Frameworks for PAs	US $ 0.7 million	US$ 1.7 million	US$ 1.0 million Of which: GEF (US$ 0.84 million); FFEM (US$ 0.0 M); OAS(US$ 0.04 million); OECS (US$ .08 M); and Governments in-kind (US$ 0.06 M) contributions.
Creation and/or Strengthening of PAs and Associated Livelihood Opportunities	US$ 0.5 million	US$ 4.1 million	US$ 3.6 million Of which: GEF (US$ 1.21 M); FFEM (US$ 1.13 M); OAS(US$ 0.27 M); OECS (US$0.14); and Governments in-kind ($ 0.1 M) contributions.
Building Capacity for Biodiversity Conservation and Management and Increasing Environmental Awareness	US$ 0.9 million	US$ 1.6 million	US$ 0.8 million. Of which: GEF (US$0.43 M); FFEM (US$0.17); OAS (US$0.04); and OECS (US$0.1).
Project Management, Coordination, Monitoring and Evaluation	US$ 3.0 million	US$ 5.1 million	US$ 2.1 million. Of which: GEF (US$ 01.02 M), FFEM (US$ 0.34); OECS (US $ 0.1 M) and Governments in-kind and cash ($ 0.6 M) contributions.
Total (before conting.)	**US$ 5.1 million**	**US$ 12.5 million**	**US$ 7.4 million**
Contingencies		US$ 0.2 million	US$ 0.2 million
Total		**US$ 12.7 million**	**US$ 7.6 million**

2. Financial (see Annex 4 and Annex 5):
NPV=US$ million; FRR = % (see Annex 4)
Financial Table with secured financing

Total project cost (excluding contingencies) is estimated to be US$ 7.4 million (tentative), divided into: (i)

Protected Areas Policy, Legal and Institutional Arrangements (US$ 1.02 million); (ii) Protected Areas Management and Associated Alternative and New Livelihoods (US$ 3.55 million); (iii) Increased Capacity for Biodiversity Conservation and PA Management (US$ 0.74 million); and (iv) Project Management, M&E, and Information Dissemination (US$ 12.06 million). Financial resources to fund this project would come from: GEF, the OECS Secretariat, Governments of the PMS, Organization of American States (OAS), *Fond Français de l'Environnement Mondial* (FFEM), and local stakeholders.

Fiscal Impact:

The project will not have a significant effect on fiscal accounts. Almost all incremental costs will be financed by external grants (76.9%) and most of the PMS governments' contributions will be in-kind. On the fiscal revenue side, the PAs would develop capacity to generate and retain funds through the introduction of visitor fees and other income earning activities that will reduce pressure on the national budget, as the OECS countries will improve the supply of ecotourism attractions, increasing the tax base as a result of increased spending by consumers and foreign visitors. The development of revenue generating activities, such as ecotourism, bio-commerce, non-wood forest product development, etc., to be promoted through the financing of sustainable and participative livelihood opportunities, should provide additional fiscal resources to cover some salaries and expenses of staff working on the PAs. As tourism is critical to the Caribbean, (depending on the country, an estimated one-third to one-half of national GDP is based on the sector), this project would support improvements in an area critical to the island economies.

Financial sustainability. At the OECS level, the project would address the needs of PAs for reliable and adequate sources of funding, as well as the need to provide funding for sustainable alternative livelihoods associated with the creation and management of PAs. This would involve a regional review and evaluation of the existing mechanisms for financing PAs in PMS, including the identification and formulation of recommendations with respect to options that are appropriate in the OECS. At the national level, the project would support implementation of the aforementioned recommendations, through the following activities: (i) as a follow-up to the approved management plans (which would include a financial strategy) to be prepared or reviewed for each of the selected PAs, the project would support the implementation of the aforementioned strategy (and related business/marketing action plans); (ii) as part of the development of demand-driven proposals for sustainable livelihood sub-projects (and particularly for financing new livelihoods), the project is expected to support, whenever needed, specific financial and marketing studies for the long-term financial sustainability of the livelihood activities; and (iii) initial support to adapt draft legislation for the establishment of national mechanisms for sustainable financing of PAs may also be provided under the project.

3. Technical:

Key Constraints and Measures for Mitigation.

The threats and issues/constraints to be addressed by the project reflect the key issues (identified during the CAS preparation process) to be addressed by the PMS in the coming years. The project will also serve as a catalyst to advance the broader environmental objectives of the OECS PMS as stated in the St. George's Declaration. In terms of institutional capacity of public agencies, NGOs and private sector to manage PAs, the project will support the development of appropriate guidelines, procedures and instruments and provide necessary training and technical assistance for the adoption of these tools. The following approaches reflect the means by which the project will address the previously identified constraints (see Section B.2).

Inadequate legislation/regulations and weak implementation and enforcement of existing laws. Component 1 of the project focuses on the policy and legal aspects of PA management and places emphasis

on the development of harmonised policies and legislation that will inform all aspects of PA management in the PMS. This will be affected through a review of existing legal instruments and frameworks, with legislation adopted or adapted as appropriate for the PMS. The project will also facilitate the adoption of amendments and/or regulations and the enactment of new legislation if necessary. The establishment of the legal framework will form the foundation on which all other project components and activities will be implemented and as such is seen as pivotal other project components. The development of capacities under Components 2 and 3 will be affected through training in the various aspects of PA management and development, providing for the establishment of a sound educational framework, in addition providing the necessary materials and equipment to undertake adequate monitoring and enforcement of legislation.

Policy gaps, institutional overlaps and lack of co-ordination in natural resource management. Component 1 will also support a review of policies as these relate to PA management and facilitate the necessary changes to the existing framework, where necessary. The legal review will identify institutional limitations that hinder the effective implementation of national PA management efforts. The output of the review is an institutional framework that rationalises the roles of the various agencies with a mandate for PA management,. The output of this review will be clearly articulated provisions in the legislation to guide the responsibilities and interventions of each agency. Component 1 will facilitate the adoption of the revised institutional framework through a process of consultations aimed to inform, solicit input and to secure consensus prior to formal adoption/endorsement at the level of the Cabinet of Ministers.

Limited human, financial and material resources. The project will support PA management units where they already exist by providing requisite training, materials and equipment necessary for the efficient running of PAs. The lessons learnt from St. Lucia's Soufriere Marine Management Area, will inform the approaches taken by the project to ensure that revenue generated is retained by the PA for purposes of re-investing into the PA capital and recurrent expenditure. The approach to providing financial and material support will be consistent with the development needs of the PA, and will allow for adequate absorption of assistance, to prevent support overload. In order to ensure sustainability, the project will not provide for the human resources needed to manage sites as experience has shown that staffing supported by projects terminate at the end of project life because governments are usually not able to maintain support beyond that time. The provision of project staff is seen as an expression of commitment on the part of PMS governments to secure a long-term process in support of national PA management.

Lack of natural resource data. The establishment of baseline information/data is key to determining the success of management efforts within the revised framework. The project recognizes the importance of establishing this baseline, and through Component 2 will support the necessary data capture exercises in Year 1. This information will serve to inform education efforts, but will also play an important role in the determination of the types of resource management interventions that are deemed critical to the goals of conservation. The baseline information will also serve as the benchmark for monitoring the state/condition of the resource in subsequent project years as an indicator of success of PA management efforts.

Limited sustainable economic opportunities. An integral objective of the project is to facilitate the development of alternative livelihood opportunities for communities adversely affected by the establishment of a PA. The project will support the development and implementation of alternative and/or new livelihoods. This will be done through the existing OECS small grant program called the Small Project Facility (SPF). Component 2 will also support the design of training modules based on a needs assessment, and the execution of training programs to empower affected communities to embark on alternative or enhanced livelihood activities that are compatible with the goals of the PAs under management.

Limited public support for conservation efforts. The project will support a decentralized,

co-management approach to its system of PAs, one in which management decisions are made Site Implementing Entities (SIEs) made up of stakeholders in conjunction with relevant government agencies. In this case the project strategy will provide the necessary technical assistance and training to both responsible agencies and local communities, encouraging strategic alliances with the private sector and strengthening local execution capacity. The everyday operation and maintenance of the areas themselves will offer significant opportunities to the local communities as it is anticipated that the areas will be staffed from local populations.

National mainstream support for conservation efforts through an aggressive education/sensitisation process is critical to the success of the project. PMS will be equipped to undertake awareness campaigns targeted primarily at the general populace, to ensure that they are sensitized to the socio-economic importance of PAs and the need to conserve biodiversity of global importance. Component 3 of the project is geared towards creating awareness that will engender behavioral change among local populations and increased national and local awareness of the ecological, economic and social significance of PA's.

4. Institutional:

4.1 Executing agencies:

An assessment of institutional capacities has been carried out during project preparation with the objective of identifying the strengths and shortcomings of the main institutional agents that are expected to participate in the management of protected areas. Dispersed capacities and the need to closely coordinate implementation to maximize existing capacity were among the considerations deemed most relevant to successful project implementation. The project will address these issues directly through the establishment of NTACs (see Annex 14 for more detail) for oversight and coordination and the capacity building activities supported under Component 3. Past experience has indicated favorable outcomes and the availability of capable personnel.

4.2 Project management:

Analysis of project management and advantages of the proposed approach

The regional approach provides for greater aid effectiveness through economies of scale and achieves increased synergies in areas where resources, both human and financial, are limited. The regional approach can also coordinate more effectively the dissemination and replication of lessons learned during implementation of country-specific components. Furthermore, this approach fosters a competitive environment between countries, providing benchmarks that inspire greater performance on a national level. Finally, such an approach will also facilitate greater regional compliance on international treaty issues, such as the Biodiversity Convention through the Project.

The ESDU has provided key regional leadership that has galvanized regional coordination and consistency in approaches to environmental management. The development and subsequent adoption of the St. George's Declaration of Principles for Environmental Sustainability in the OECS (SGD) by all Member States is testimony to the role played by the ESDU in guiding environmental management in the region. Further, the reporting requirements of the SGD serve to inform the region on the status of improvements in environmental management at the national level, in addition to the performance of the international and regional development partners in their support to OECS Member States towards attaining the goals enshrined in the SGD. Given the scope of work and the mix of skills required to execute the various elements of the project, the ESDU with its proven record of achievements with other donor funded projects, is best placed to provide the coordination, and guide the regional and national activities, and to secure

common approaches to PA management.

The ESDU is also best placed to mobilize other specialized expertise to assist in the delivery of outputs. It is planned that such resources, which will be contracted to perform required services, will complement the activities and skills of the ESDU team. Consultants will report to the ESDU according to specific reporting requirements included in the contracts under which their services will be performed. Local, regional and international consultants will be utilized on the project.

The ESDU will maintain project oversight and will ensure regional coordination and consistency, undertake project implementation, develop harmonized strategies, coordinate annual work and procurement plans, coordinate the production of technical reports, facilitate exchanges between the National Implementation Coordinating Entities or NICEs (see below), coordinate technical assistance and organize project workshops. The ESDU will also be responsible for procurement and disbursement, financial management and the provision of grants to NICE to undertake local site activities. ESDU will also maintain oversight on the legal arrangements for the management of biodiversity at the regional and national levels.

4.3 Procurement issues:

The ESDU has gained valuable experience in international procurement and disbursement procedures through its implementation of a number of programs/projects. These include: (i) the Coastal and Watershed Management Project funded by DFID; (ii) the Environment and Capacity Development Project (ENCAPD) funded by CIDA; (iii) the Environment and Coastal Resources Project (ENCORE) funded by USAID; (iv) the Management of Natural Resources in the OECS funded by the GTZ; and (v) the Solid and Ship Generated Waste Management Project funded by the WB/GEF. The projects totaled approximately EC$ 30,000,000 and spanned the last 13 years. As a result, the ESDU is in a position to provide critical guidance to the PMSs on Bank procedures and procurement to ensure timely and efficient implementation of project components.

4.4 Financial management issues:

The Project will benefit from the experiences gained by the OECS Secretariat, particularly ESDU, in the implementation and management of the OECS Solid and Ship Generated Waste Management Project that was financed by WB/GEF. The accounting staff in ESDU and the head of the Unit are very familiar with all aspects of the Bank's financial management systems and procedures, including preparation of statements of expenses, disbursement summaries and withdrawal applications. In addition, the head of the Unit has gained experience in the Bank's procurement procedures. The Unit's Function Managers are also experienced in preparing terms of reference, issuing of letters of invitation, evaluation of tenders, and in negotiating contracts.

During the aforementioned project life, the ESDU staff benefited from various supervisory missions and visits from the Bank's procurement and disbursement staff. In addition, ESDU undertook regular financial audits, including audits of its internal control systems. All the recommendations of these audits have been fully implemented.

In preparation for management of the funds provided under the PDF Grant (WBTF 27935-OECS), ESDU had to fill out a questionnaire to describe in detail, the various procurement and disbursement procedures that are in place in the Unit. The Bank's Financial Analyst assigned to the Project also visited the Unit in October 2003 to undertake a review of its financial management systems and procedures.

The finances of the Unit are managed by the Units' Accounts Clerk who reports to the Chief Finance Officer through the Head of Unit. A Senior Accounts Clerk in the Office of the Chief Finance is

responsible for checking all requisition vouchers and checks and verifies bank reconciliation. The Unit also has access to all other accounting staff in the Office of the Chief Finance Office and in other Units. Two signatories, one of whom has to be from the Division of Corporate Services, sign all checks.

Financial records are stored in PeachTree accounting software, which is utilized by the entire Secretariat. These records are used to generate various schedules and monthly financial statements, and cash on hand status. Annual audits are undertaken of all donor accounts. An internal auditor will be hired by the Secretariat in early 2004.

5. Environmental: Environmental Category: B (Partial Assessment)

5.1 Summarize the steps undertaken for environmental assessment and EMP preparation (including consultation and disclosure) and the significant issues and their treatment emerging from this analysis.

In accordance with OP 4.01, an Environmental Assessment (EA) was consulted during the participatory site specific EA with diverse stakeholders (described in more detail in I.A.4); during a broad stakeholder workshop held in November 2003; and publicly disseminated for further comments on ESDU's web site.

Given the "demand-driven" nature of the project, some specific areas and respective project interventions will not be confirmed until project implementation (primarily as related to Component 2: Protected Areas Management and Associated Sustainable Alternative Livelihoods). In response, an environmental management plan (EMP) has been developed which will ensure that potential future adverse impacts will be identified and addressed through one or more environmental safeguards, including: (i) inclusion of environmental mitigation measures in PA Management and Operational Plans; (ii) environmental screening of alternative and new sustainable livelihood activities; and (iii) list of activities and sub-projects excluded from financing. These measures have also been incorporated into project design.

5.2 What are the main features of the EMP and are they adequate?

This EA identifies potential direct and indirect environmental impacts associated with the project and incorporate relevant mitigation measures in the project's design and implementation. The project will be largely positive or neutral from an environmental standpoint and few of the proposed activities are likely to have adverse impacts. Examples include site-specific impacts associated with small-scale PA infrastructure (e.g., visitor centers, control posts, trails etc.) and impacts associated with changing livelihood practices (e.g., certain extractive practices or changes in land use). In both cases, environmental impacts are expected to be localized and preventable through responsive mitigation measures. For a more detailed description of the main features of the EMP, please refer to Annex 13 (Environmental Assessment).

5.3 For Category A and B projects, timeline and status of EA:

Date of receipt of final draft: September , 2003

EA start-up date:	August 2003
Date of first EA draft:	September , 2003
Expected date of final draft:	November 2003

5.4 How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environment management plan? Describe mechanisms of consultation that were used and which groups were consulted?

Activities supported under sub-component 2.1 will entail public consultations through the SIEs. Under sub-component 2.2, sub-projects will be designed on a demand-driven basis. Environmental mitigation

measures, where required, will entail sub-project design teams working with local stakeholders to identify and incorporate same in the final project design.

5.5 What mechanisms have been established to monitor and evaluate the impact of the project on the environment? Do the indicators reflect the objectives and results of the EMP?

Where warranted, environmental impact indicators will be included in the monitoring of livelihood programs.

6. Social:

6.1 Summarize key social issues relevant to the project objectives, and specify the project's social development outcomes.

The project supports a number of positive social outcomes. These include those derived from: (i) improved natural resource and environmental conditions; (ii) improved tourism and other livelihood opportunities; and (iii) direct participation of local communities in the economic benefits derived from nature/heritage based tourism and other economic opportunities developed through the project. The general populations of participating countries will also benefit from improved natural resource management capability as a result of legal and institutional reform. Despite these benefits, there may be some social issues associated with possible restrictions on resource use in and access to core areas of project supported PAs. There may also be some short-term social issues associated with project-supported transformation from non-sustainable to sustainable livelihood practices in the PA buffer zones supported under the project's alternative livelihood component.

In St. Lucia in which the national project activities have already been prepared, the aforementioned issues were discussed directly during community workshops and consensus was reached that many of the threats to core areas of the proposed PA sites were linked to non-sustainable livelihood practices in the surrounding buffer zones and that project support for economic alternatives in the latter could help offset any use restrictions that may occur.

Given that all PA sites to be supported under project Component 2 have yet to be specified, social mitigating measures are based on ensuring that the necessary procedures and resources are in place *a priori* into the design and implementation of relevant activities and the appropriate livelihood and other mitigation measures have been incorporated. To achieve this, the following measures were included in project design: (i) TORs for site-specific social assessments will be prepared and included in the project Operational Manual; (ii) a Process Framework for Mitigating Livelihood Impacts has been prepared (see Annex 13 for more detail) and disseminated; and (iii) participation promotion would be supported under Component 2 to guarantee stakeholders involvement and adequate operation of the SIEs. foreseen under the project social and technical strategies.

While the proposed PAs to be supported under the project have all yet to be identified **no involuntary physical displacement or relocation of people** is envisioned under the project. Similarly, **no PA candidate sites** will be supported under the project **inhabited by indigenous peoples.** Where **land tenure** is an issue in an existing or new PA to be created under the project, this will be resolved through recognized, mutually satisfactory arrangements (e.g., cooperative agreements, national compensation, etc.) before disbursement of project resources.

6.2 Participatory Approach: How are key stakeholders participating in the project?

The original project proposal developed by the St. Lucia National Trust (May 2002) focused only on St. Lucia and was developed through a series of consultations over three years involving local and national St.

Lucian stakeholders. In October 2002, the project was reformulated to become a regional project and it was considered vital that the regionalized project required a similar consultative process to collectively determine the objectives, elements and outputs, to secure broader buy-in and ownership, and to obtain important baseline information to help define project components. During a workshop on the regional project held in November 2002, a comprehensive matrix of critical stakeholders representing local, national and regional protected area interests was developed which served to guide subsequent consultations. These included among others, for example: (i) regional and international agencies such as the OECS Secretariat, the Caribbean Environmental Health Institute (CEHI), United Nations Environment Program- Regional Coordination Unit (UNEP-RCU) and the Caribbean Conservation Association (CCA); (ii) national Ministers and relevant agencies in each of the countries; NGOs; and (iii) site-specific constituencies such as fishermen, farmers, dive operators, tour operators, local associations and others.

A series of workshops, meetings, consultations and field visits was carried out from November 2002 through October 2003. These consultations contributed to the current design of the project as well as the selection of the first three target PAs as well as raising awareness among stakeholders of the multiplicity of issues surrounding areas of critical biodiversity on the islands. The stakeholder groupings and the general populace in the region concur on the need to protect these areas and discussions with them revealed a willingness to comply with new management systems. Local interviews and consultations revealed strong concerns with natural resource preservation, controlling pollution and other destructive practices, and interest in improving livelihoods, further detailed in the site specific assessments. Most recently, a broad regional stakeholder workshop to solicit feedback on all aspects of the project design was held in November 2003. Participants expressed support for the project, the regional approach and the use of existing regional and national mechanisms for project implementation. As a result of this workshop, participants' inputs and recommendations on a series of technical and operational issues were consolidated into the project document.

a. Primary beneficiaries and other affected groups.

The primary beneficiaries will be the people and public officials from the PMS, especially the natural resource management and conservation institutions and communities adjacent to the proposed demonstration protected areas.

b. Other key stakeholders

Other key stakeholders include the nation-wide tourism sector (especially those most involved in nature/heritage based tourism) and agricultural and traditional extractive resource users such as fisherman and sea moss cultivators.

Stakeholder categories ranging from the local to the national have been provided below. PMS-specific institutions can be found in Table 3 of Annex 14).

Stakeholder (s)	Level	Type of Institution	Description
Local/Community			
individuals	persons or enterprises	Unaffiliated	individual property owners, residents, businesses, and others who use the areas for such activities as fishing, ag, etc.

informal community level organization	interest groups	CBO	Informal: grassroots organization, etc.
formal community level organizations	interest groups	CBO/NGO	Formal: associations, producer groups, cooperatives, credit unions.
village/town council	local gov't	governmental organization	Formal: duly elected or appointed officials and representatives.
District/Sub-national			
parish council	district	governmental	Regional governmental agencies with responsibility for more than 1 village or township
branch offices of national agencies	departmental	governmental	agencies responsible for various aspects of the area such as planning, NR management, monitoring and enforcement.
regional interest group	sub-national	NGO/CBO	recognized business, nature, social, etc. interest groups
National			
national organizations	national	NGO	national business, nature, social, etc. interest groups
national boards	national	Mixed	formally constituted boards for management, guidance, etc. for PAs.
governmental agencies	national	governmental	governmental agencies responsible for designation, regulation, management and enforcement of PAs.

6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

Participatory processes have been thoroughly integrated into the project design. Some of the methods that will be used by the project include stakeholder analysis and social assessments to be carried out to prepare new PA sites to be developed under the project; participatory development of local action plans for each PA to help determine local priorities for activities that might be eligible for financing under the project that could include among others, opportunities for support for alternative livelihood subprojects, technical assistance, training opportunities and involvement in PA co-management plans.

The project's Component 2, Protected Areas and Associated Alternative Livelihood Opportunities, includes a subcomponent to facilitate and finance sustainable livelihood subprojects with communities living in and around the targeted PAs. It is anticipated that this subcomponent would be implemented by the existing OECS-ESDU Small Project Facility (SPF). A project specific operational manual detailing application criteria and procedures is currently being developed. In addition, other subcomponents of Component 2 would finance the social assessments for new sites preparation, preparation and implementation of management plans, and periodic stakeholder workshops.

In addition, Component 3, Capacity Building for Conservation Planning and Management will include a subcomponent for technical assistance and training opportunities in support of development for future sustainable livelihood activities.

When **new sites** are being prepared under Component 2, the following processes, in the sequence identified

below, will be employed. Step one would be to identify stakeholders and carry out a participatory social assessment focusing primarily on the communities that potentially might be affected by the establishment of the protected area with the goal of assessing the social criteria for site selection (see Annex 6) and identifying stakeholder concerns. Step two would be to develop action plans in consultation with stakeholders that would clarify potential benefits and methods by which the local communities might be involved in project activities, preliminary identification and prioritization of potential alternative livelihood subprojects, and clarification of institutional and organizational arrangements. These actions plans would also provide input for and guide local involvement in the development of the PA management plans.

6.4 What institutional arrangements have been provided to ensure the project achieves its social development outcomes?

Project implementation will be guided by a steering committee with community level stakeholder representation. This, coupled with the social indicators included in the Monitoring and Evaluation Program (M&E), will greatly assist in insuring the achievement of social development outcomes. The project design depends upon community participation and engagement during all phases of project and post-project activities including designing management plans, area management, and participation in the alternative livelihoods sub-component. The combination of community participation during project preparation, on oversight boards, and during implementation and post-implementation, will also promote development outcomes. A Process Framework has been prepared to address any non-physical displacement of user groups due to zoning, land use restrictions or banning of certain practices deemed unsustainable (see Annex 13 for more detail).

6.5 How will the project monitor performance in terms of social development outcomes?

To undertake assessments of project activities, policy interventions and institutional arrangements, participatory monitoring and evaluation will be used at the project level in Components 1 and 3, and at the site level in Component 2. The monitoring and evaluation of the Process Framework implementation will be included as part of the overall Project M & E activities and the results will be made available for all stakeholders. In addition, beneficiary assessments will be undertaken yearly beginning in year two by the OECS-ESDU Field Officer and included in the material presented during review missions.

7. Safeguard Policies:

7.1 Are any of the following safeguard policies triggered by the project?

Policy	Triggered
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	● Yes ○ No
Natural Habitats (OP 4.04, BP 4.04, GP 4.04)	○ Yes ● No
Forestry (OP 4.36, GP 4.36)	○ Yes ● No
Pest Management (OP 4.09)	○ Yes ● No
Cultural Property (OPN 11.03)	● Yes ○ No
Indigenous Peoples (OD 4.20)	○ Yes ● No
Involuntary Resettlement (OP/BP 4.12)	● Yes ○ No
Safety of Dams (OP 4.37, BP 4.37)	○ Yes ● No
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	○ Yes ● No
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)*	○ Yes ● No

7.2 Describe provisions made by the project to ensure compliance with applicable safeguard policies.

Environmental Assessment. The project is proposed for a Category B designation. It is being designed to ensure compliance with the requirements of the Bank's umbrella policy on Environmental Assessment (OP 4.01). Despite the largely positive or neutral project impacts anticipated, submission of an EA report and

respective EMP in a brief PAD Annex (Annex 12), is considered prudent to ensure conformity with the aforementioned Bank policy.

Cultural Property. The three pre-selected protected areas to be supported under the project include several historical sites and one includes small archeological findings. Future sites to be supported may also be found to include culturally important or historical or archeological sites. The management plans to be developed for all protected areas under the project would include regulations and procedures for the appropriate protection and preservation of these cultural properties consistent with Operational Policy Note 11.03.

Involuntary Resettlement. During project implementation there will be no involuntary physical displacement or resettlement of persons from the selected protected areas being supported under the project. However, some livelihood activities could potentially be impacted due, for example, to the limiting of fishing areas through zoning, limiting fish catches or restricting certain fishing and agricultural practices in sensitive areas. It should be noted that some restrictions currently exist in the proposed areas but are not regularly enforced because of capacity issues. A Process Framework (see Annex 13) was developed and disseminated that outlines the criteria and procedures that the project will follow to ensure that eligible, affected persons are assisted in their efforts to restore or improve their livelihoods in a manner that maintains the environmental integrity of the proposed PAs by project-financed alternative livelihood sub-projects. These criteria and procedures would be further detailed in the management plans to be developed for the PAs. In all such cases, the project would address the livelihood issues of affected populations in a manner which is fair, just, and in accordance with local laws, as well as consistent with the World Bank's Safeguard Policies on Involuntary Resettlement (OP 4.12).

Footnotes:

[8] For example, an on-going CIDA-funded Environment Capacity Development Project is likely to provide the foundation for a follow-up phase activity in support of the country's priorities for sustainable development.

F. Sustainability and Risks

1. Sustainability:

There is considerable evidence to expect long-term sustainability. The mechanisms for achieving financial sustainability include:

- **Sustainable financing.** A broad based focus on improving the capacity for sustainable funding of PAs through: (i) support for a study leading to the identification of relevant PA financing mechanisms in the OECS region; (ii) inclusion of project-supported PA financing plans as part of management plan preparation. Where relevant opportunities are identified in these plans, the project will support the development of new funding sources (e.g., national lotteries, public-good service payment schemes, increasing the use of user fees, introducing corporate donations and friends schemes, etc.); and (iii) proposing modified institutional arrangements to enable increased revenue generation/retention in PMS; and
- **Increased visitation to the proposed areas.** Closely linked to the above, on-site project-supported investments (e.g., trail maintenance, visitor centers, interpretation facilities and information packets) will contribute to support increased visitation levels. Accompanied by fee regularization, concessions and an improved tourism product, management entities will design revenue generating mechanisms

either through increased visitation, sale of products and/or services, or other creative means.

The principal mechanisms for achieving institutional sustainability include:

- **Broad constituent support**. The project, through GEF incremental financing, will bring to fruition the efforts of the conservation community within the PMS. The existing constituency for conservation is well established throughout the region and has demonstrated considerable commitment to conservation in general, and protected areas in particular, for more than 25 years;
- **Continued government support**. The PMS have a number on going efforts that will promote biodiversity conservation including legal and institutional reform, coastal and watershed management programs, and nature based tourism development. Project success will depend, in part on the continuation of these programs. The institutional and legal reforms, as well as increased capacity due to improvements in information technology and training, will help institutionalize conservation activities and create a constituency within the public sector;
- **Continued community support**. At the field level, project activities will only be supported where local communities strongly support the proposed project and have express a strong willingness to participate in project implementation and post-project activities such as participatory management, monitoring, etc. Empowering the already involved local populations will greatly assist long-term conservation efforts, consolidate a constituency for conservation efforts, assist in conflict resolution as well as monitoring and evaluation and lower overall management costs;
- **An enabling framework**. An improved institutional framework for biodiversity conservation will streamline efforts and bring a new level of continuity, accountability, and order protected area declaration and management, as well as place participating countries in a better position to comply with relevant international treaties and conventions;
- **Institutional capacity**. Improved institutional strength and capacity, achieved through project-funded training and infrastructure will greatly improve stability and continuity of biodiversity conservation efforts.

The project will prepare a Sustainability Strategy Action Plan by Year 2.5, to be reviewed as part of the mid-term review. The plan will evaluate the success of the Sustainable Finance Component as well as other critical implementation activities that effect sustainability and recommend modifications as necessary.

1a. Replicability:

Replicability is embedded in the project at three levels: first at the national and subregional level, the lessons learned and the knowledge created can be used in successive PA projects and in addition, afford opportunities for the mainstreaming of environmental management into economic development of SIDS; second, the subregional approach to the project can be replicated and bring useful lessons to others SIDS which face similar constraints and threats; and third, at the local level other communities and stakeholders may use the demonstration sites as prototypes leading to new and improved relations between communities and their surrounding ecosystems. Provision has been made in project design through the Information Dissemination sub-component (US$ 20,000) with the purpose of sharing lessons learned among project beneficiaries and with people involved in the management of other protected areas of the OECS countries (through workshops, conferences, publications and a homepage), and beyond. There will be particular emphasis on the wider Caribbean region (the latter through the project homepage and occasional exchange programs with other PAs).

2. Critical Risks (reflecting the failure of critical assumptions found in the fourth column of Annex 1):

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
PMS do not provide the necessary resources through their national budgets to facilitate effective PA management.	M	PMS support for project management under OPAAL conditional on provision of resources for national PA management
Few or no macro-economic and fiscal policies are in place to stimulate economic opportunities being created in or around the PAs.	S	Facilitate the development of macro-economic and fiscal policies with PMS support conditional on provision of resources for national PA management
Sufficient and suitable capacities are not available at the national level for training, awareness programs and for project management.	M	Source requisite expertise regionally and internationally and provide appropriate training to develop national and regional capacities.
PMS do not continue awareness program beyond life of project.	M	Awareness program designed to be easily incorporated into national environmental awareness programs.
Co-financing is not provided, or not provided in a timely manner.	M	Promoting awareness among co-financing counterparts of importance and progress of project objectives/outputs.
PMSs are not committed to establishing the necessary and appropriate institutional framework for biodiversity management	M	Awareness programs developed for and training of key decision-makers proposed to sensitize decision-makers on the project's direct and indirect economic benefits to communities and the PMS' economies.
PMSs are not committed to establishing fully functional and effectively managed PAs	M	PMS support for new institutional arrangements under OPAAL conditional on provision of resources for full access to component 2 activities.
Local communities do not participate fully in the establishment and management of PAs	N	Bridging activities by PMS and dissemination of information on project maintains community awareness before project implementation. During project implementation extensive assistance provided to communities to identify and mobilize beneficiaries so that site-specific mechanisms are developed that foster awareness and engender local community participation.
From Components to Outputs		Membership of project steering committee
Overall Risk Rating	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

3. Possible Controversial Aspects:

3. Controversial Aspects.

No controversial aspects were identified during project preparation.

G. Main GrantConditions

1. Effectiveness Condition(To be completed durin Appraisal/Negotiation)

2. Other [classify according to covenant types used in the Legal Agreements.]

H. Readiness for Implementation

☐ 1. a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.
☐ 1. b) Not applicable.

☐ 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
☐ 3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.
☐ 4. The following items are lacking and are discussed under loan conditions (Section G):

(To be completed during Appraisal/Negotiation)

I. Compliance with Bank Policies

☒ 1. This project complies with all applicable Bank policies.
☐ 2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies.

(To be completed during Appraisal/Negotiation)

Garry Charlier	John Redwood	Caroline D. Anstey
Team Leader	**Sector Manager/Director**	**Country Director**

Annex 1: Project Design Summary

OECS COUNTRIES: OECS Protected Areas and Associated Alternative Livelihood

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Sector-related CAS Goal: To help reduce poverty by: (i) reducing income insecurity and vulnerability at the aggregate and household levels; and (ii) building human and institutional capacity through providing assistance to countries in the sub-region to promote sustainable, private sector-led economic diversification and the creation of newly emerging 'sunrise' industries, including improved management of natural resources.	**Sector Indicators:** Poverty headcount in rural areas and around PAs	**Sector/ country reports:** Household surveys ESDU MIS system and project M&E	**(from Goal to Bank Mission)** MS are committed to the sustainable use and management of their natural resources.
GEF Operational Program: OP2 - Coastal, Marine, and Freshwater Ecosystems OP3 - Forest Ecosystems OP4 - Integrated Land and Water Multiple Focal Area Program	**Outcome / Impact Indicators:** The following biodiversity outcome indicators represent predictions that will be refined with baseline data collected for each PA within 1 year of site selection: Preservation of endemic and other key species (e.g. threatened hawksbill and leatherback turtles) Reduction in damage to key ecosystems from harvesting and improper use (e.g. coral, mangrove, rain/dry forest harvesting; improper anchoring); Reduction of marine and terrestrial habitat conversion through increase in protected areas. (Hectares/Year in Year 5) Hectares/Year in Year 0)	Baseline data will be used to estimate numerical targets; Midterm evaluation 2006; Final Evaluation 2009; ESDU follow-up biodiversity monitoring surveys post-project.	Continuation of Governmental support for conservation and sustainable use of natural resources; Responsible agencies and organizations address problems having negative effects in protected areas;

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Global Objective: To contribute to the conservation of biodiversity of global importance in the OECS region by removing barriers to the effective management of PAs, and to increase the involvement of civil society and the private sector in the planning, management and sustainable use of these areas.	**Outcome / Impact Indicators:** At least 6,500 total ha of land under improved management for conservation and protection in six protected areas developed with project resources. At least 50% of land in three new non-project supported protected areas that are effectively managed. Increased visitation to PMS national park systems (10 % increase in numbers of visitors). Improved protection of the habitat of 11 regionally endemic species.	**Project reports:** Scorecards derived from the WWF-World Bank Alliance PA and MPA management effectiveness studies. Copies of relevant legislation. National reports to CBD and through the Clearing House Mechanism (CHM) Annual reports/site visits Visitation statistics for PAs Project evaluation surveys	**(from Objective to Goal)** PMS are convinced that PAs can create economic opportunities. There are no major natural disasters that may contribute to the destruction of the sub-region's biodiversity. PMS are willing to work with civil society and the private sector in natural resources management.
Project Development Objective Strengthened national and regional capacities for sound management of PAs in support of sustainable economic development of OECS SIDS.	Adequate quantities of the full range of skills necessary for effective protected area planning and management are readily available. There are a number of able "champions" and "leaders" (civil society or private sector groups) effectively driving the protected areas agenda. 50% of population in areas surrounding the six project developed PAs adopt new livelihoods attributable to project efforts.	Annual reports	

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Output from each Component:	**Output Indicators:**	**Project reports:**	**(from Outputs to Objective)**
Component 1			
1. National actions reflecting growing harmonization of PA institutional arrangements in the OECS region	Regional workshop in the second year of the project	Workshop report	PMS are committed to establishing the necessary and appropriate policy, institutional and legal framework for biodiversity management in general and PAs in specific.
	Draft models of harmonized institutional arrangements by the third year of the project *(50 % of countries adopting institutional reforms)*	Submission of draft models	
	Customized institutional arrangements in at least 3 PMS by end of the project *(50 % of countries adopting institutional reforms).*	Submission of national policy statements, legislation acts, and cabinet documents.	Appropriate macro-economic and fiscal policies are in place to stimulate economic opportunities being created in or around the PAs.
Component 2			
2.1 New PAs legally created in the region	At least 6 PAs gazetted and/or strengthened by end of project.	Copies of relevant legislation; baseline/monitoring information	Sufficient and suitable capacities are available at the national level for project management.
2.2 Improved livelihoods in communities living in proximity to PAs	At least 6 livelihood programs implemented by end of project resulting in 970 total ha under biodiversity friendly production systems; at least 70% of targeted local community would benefit from at least 30% increase in income.	Annual reports; site visits; survey instruments	PMS continue to support environmental awareness programs after project completion.
Component 3			
3.1 Strengthened institutions responsible for biodiversity conservation	6 training modules designed by end of first project year; 450 participants trained by end of project and working in PA management.	Presentation of modules; workshop evaluations	
3.2 Increased public awareness of significance and socio-economic importance of PAs	Sample surveys show 70% of the population aware of the importance of PAs.	Annual reports/training documentation	
Component 4			
4.1 Increased ESDU capacity to support regional needs in	Project personnel contracted by ESDU by end of second	Annual reports;personnel contracts	

biodiversity conservation 4.2 Increased international awareness of project concepts and achievements	quarter of the first project year. Number of hits to project webpage developed in first 6 months from project initiation (information regularly updated).	Visit webpage; number of "hits"; participation in regional/international fora	
Project Components / Sub-components:	**Inputs: (budget for each component)**	**Project reports:**	**(from Components to Outputs)**
Component 1. • National policy, legal and institutional reviews • Comparative analysis of national frameworks • Regional symposium • Development of harmonized regional models for PA institutional arrangements • Reviews of existing national PA system plans • Development/updating of national PA systems plans • Regional constraints analysis Financial study	US$ 1.0 million	Disbursement and audit reports	Governments committed to establishing the necessary and appropriate institutional framework for biodiversity conservation. PMS provide the necessary counterpart financing. Co-financiers provide committed resources in a timely fashion. PMS committed to establishing fully functional and effectively managed PAs. Local communities participated fully in the establishment and management of new PAs.
Component 2. • Legal creation of project supported PAs • Preparing/updating management plans • Management plan implementation • Training • Alternative livelihood candidate sub-project	US$ 3.6 million	Disbursement and audit reports	

identification • Development of selection criteria/dissemination Sub-project preparation/implementation			
Component 3. • Completion of national training needs assessments • Development of training modules • Training program implementation • Design of national public awareness strategies Implementation of national strategies	US$ 0.8 million	Disbursement and audit reports	
Component 4. • Identify/contracting of ESDU project staff • Identify/recruit interns • Establishment of M&E system • Design of project web page	US$ 2.1 million	Disbursement and audit reports	

Annex 2: Detailed Project Description

OECS COUNTRIES: OECS Protected Areas and Associated Alternative Livelihood

By Component:

Project Component 1 Protected Areas Policy, Legal, and Institutional Arrangements (Institutional Framework) - US$1.02 million

This component's objective is to achieve policy, legislative and institutional arrangement reforms (collectively termed institutional framework) in Participating Member States (PMS) leading to the evolution of a harmonised approach to the creation and management of protected areas (PA) in the OECS region. There are three sub-components: (i) policy, legal, and institutional arrangements reform; (ii) updating/preparing new national protected areas system plans; and (iii) supporting studies.

Of the US$ 1.02 million for this component (13.8 % of base cost), these donors have committed the following amounts: (i) GEF - US$ 0.84 million; (ii) FFEM - US$ 0.0 million; (iii) OAS - US$ 0.04 million; and (iv) OECS - US$ 0.08 million. Governments in-kind contributions total US$ 0.06 million.

Sub-component 1.A. _Policy, Legal, and Institutional Arrangements Reform (US$ 0.38 million; 5.1 % of base cost).

Expected Outputs: (i) reviews of existing national PA frameworks; (ii) development of models of PA-relevant legislation, policies, and institutional arrangements; and (iii) national actions leading to new or modification of existing institutional frameworks which collectively will demonstrate a more common approach to the conservation of biodiversity in the OECS region.

Activities: The sub-component will support the following activities: (i) national reviews of existing policy, legal and institutional frameworks in PMS; (ii) a comparative analysis of national frameworks to include recommendations leading to a common approach to the development of policy, legislation and institutional arrangements for PA establishment and management in the region; (iii) a regional symposium and endorsement of one or more common approaches; (iv) development of harmonized policy, legislation and institutional arrangement models supporting PA establishment and management for the region; and (v) support for national actions leading to a more harmonized institutional framework (e.g. rationalization and/or amendments to existing legislation, new legislation, elimination of institutional overlaps, etc.).

Sub-component 1.B. Updating/Preparation of New National PA System Plans (US$ 0.4 million; 5.4% of base cost).

Expected Outputs: (i) reviews of national PA system plans; and (ii) updated and new national PA System Plans.

Activities: The sub-component will support the following activities: (i) national reviews of existing PA system plans in PMS to include a comparative analysis between plans and recommendations leading to a common approach to the development of new and where needed, updating of existing PA system plans; (ii) public consultation; (iii) development of draft national PA system plans; and (iv) support for national actions leading to the adoption of the PA System Plans (e.g., national consultations, securing government approval etc.).

Sub-component 1.C Supporting Studies (US $ 0.24 million; 3.2 % of base cost).

Expected Outputs: (i) an analysis of critical constraints affecting the conservation of biodiversity in the OECS region; (ii) identification of one or more financing mechanisms to support the sustainable management and further development of PAs in the OECS region; and (iii) other studies (to be determined) which will address one or more constraints identified in (i), above.

Activities: Under this sub-component the following activities will be supported: (i) an assessment of the critical constraints affecting the conservation of biodiversity in the OECS region; (ii) evaluation of existing and potential mechanisms for the sustainable financing of PAs; and (iii) other demand-driven studies in support of component objectives to be defined in the first project year.

Project Component 2 Protected Areas Management and Associated Alternative and New Livelihoods - US$ 3.55 million

The component's objective is to promote biodiversity management and conservation through the establishment of new and strengthening of existing protected areas (PAs), complemented by support for alternative or new livelihoods in areas in proximity to the aforementioned PAs. This component has three sub-components: (i) the creation of new and strengthening of existing protected areas; (ii) supporting alternative and new sustainable livelihood opportunities in and around pilot PAs; and (iii) SPF capacity building and support.

Of the US$ 3.55 million funding for this component (47.9 % of base cost), these donors have committed the following amounts: (i) GEF - US$ 1.21 million; (ii) FFEM - US$ 1.13 million; (iii) OAS - US$ 0.27 million; and (iv) OECS - US$ 0.14 million. Governments in-kind contributions total US$ 0.80 million.

Sub-component 2.A. The Creation of New and Strengthening of Existing Protected Areas (US$ 2.53 million, 34.2 % of base cost).

Expected Outputs: A total of at least 3 sites will be legally constituted and functioning by the end of project.

Activities: This sub-component will support basic PA management activities, investments, purchase of equipment, and training. Protected area management activities will include: (i) site inventories, demarcation and mapping of the PAs, establishment of biodiversity baseline and development/implementation of an M & E program, and updating of existing or preparation of new management plans; (ii) investments (e.g., new or expanded PA headquarters, visitor centers, park management operation centers, sanitary facilities, demarcation/mooring buoys, trail building/rehabilitation, and environmental education and interpretative displays); (iii) equipment (e.g., vehicles/boats, fire suppression gear, radios, computers, uniforms and related ranger field gear to support PA management responsibilities); and (iv) training and technical support determined through site-specific needs assessments (e.g., planning, budgeting, conflict resolution, personnel management, monitoring and evaluation, and infrastructure planning and management, interpretation, visitation, etc.).

Three PAs have been selected as priority sites. These are: (i) North Sound Islands National Park (Antigua/Barbuda); (ii) Pointe Sable National Park (St. Lucia); and (iii) Tobago Cays Marine Park (St. Vincent & the Grenadines). Selection criteria and descriptive site profiles can be found in Annex 6. Other candidate sites have been initially identified and have also been briefly described in the aforementioned Annex. Final site selection and sub-project preparation for the latter sites will depend on the progress achieved in building national capacity in the project's first years of implementation together with further expressions of interest from PMS supporting their respective sites. The number of in-country PAs

supported under the will be flexible and could range from a single PA per PMS to several PAs in which the component would support smaller interventions across more than one site. This flexibility will allow for targeted, country-specific interventions that maximize investments by building upon on-going activities where appropriate. Final selection of sites will be completed in the first project year.

Where PMS wish to support innovative management approaches (e.g., co-management, private sector administrative contracts of PAs, etc.), this sub-component would support their implementation. For example, local communities could participate in management decision-making of PAs through the establishment of Site Implementation Agencies (SIEs), made up of stakeholders working in conjunction with the appropriate national agencies. Similarly, local organizations and individuals, supported by the relevant lead technical agency and guided by approved management plans for the areas, could be delegated overall responsibility for plan implementation. Day-to-day operations such as resource protection, visitor management and enforcement of rules and regulations would be the responsibility of a PA manager and his/her staff following previously approved operational plans. The project will promote a participatory approach to management in which all stakeholders will share the responsibilities of management of the PA.

Protected area site investments would not be approved until: (i) the site is legally declared a protected area, (ii) all land tenure issues (if relevant) are clarified with legally binding agreements, (iii) there is a management structure in place, and (iv) a management plan as been developed (or updated if one already exists) and has been approved. The management plan will include environment and social assessment requirements. All management plans for project-supported PAs will be submitted to the World Bank for no objection (NO).

Sub-component 2.B. Supporting Alternative and New Sustainable Livelihood Opportunities (US$ 0.93 million, 12.5 % of base cost).

Expected Outputs: (i) At least three programs/projects in suitably zoned areas in and around PAs, designed to reduce pressure on PA and biodiversity; (ii) increased and diversified PA-related income to the local community.

Specifically, this sub-component will support facilitating the substitution of existing livelihoods threatening the integrity of PAs with economically viable and environmentally sustainable alternatives. At least one livelihood program associated with a project-supported PA per PMS would be developed under this sub-component.

Activities: Under this sub-component the following activities would be supported: (i) field studies and workshops to identify potential economic opportunities; (ii) review, evaluate, and select opportunities based upon their compatibility with conservation objectives, feasibility and cost/benefit criteria; (iii) development of participation criteria; (iv) training in sustainable financial household management for sustainable livelihood beneficiaries; and (v) the implementation of alternative sustainable livelihood sub-projects.

Livelihood activities supported under the project will focus on improving and demonstrating real economic benefits, especially for new, sustainable enterprises. Potential employment opportunities include: tourism and ecotourism development; craft training and development; organic farming (e.g., financing a marketing study for production of organic bananas), alternative low-impact reef fisheries catch program; and micro-grants and micro-loans for poverty alleviation and livelihood enhancement projects. The sub-component will also support marketing research (e.g., sea moss marketing constraints analysis), consultations and interviews with key governmental and NGO agencies, and on-site visits with local

entrepreneurs and businesses where needed.

The OECS/ESDU will take the lead in implementing this sub-component through the existing Small Projects Facility (SPF). The sub-component will be demand driven. An economic analysis and opportunities identification will be developed through on-site studies that establish linkages between potential SPF supported activities directly with threat abatement. After potential livelihood programs have been identified for each of the PAs in close consultation with local stakeholders, information would be developed and disseminated about program objectives and the role of the OECS SPF through an advertising campaign. Technical assistance will be provided to facilitate project proposal preparation. Existing livelihoods that are consistent with area objectives will be eligible for project support. To ensure that project activities supported under this sub-component are directly relevant to achieving biodiversity conservation objectives, livelihoods selection criteria will be detailed in the project's operational manual. Proposals will be submitted to the SPF and screened using these previously agreed upon criteria and, if acceptable, passed on to the WB for no objection (NO). Upon receiving a NO, disbursement will be made in accordance with the terms agreed-upon in the proposal. Follow-up monitoring and evaluation will be carried out by the SPF on a regular basis. Limited environmental evaluations or full environmental impact assessment will be required as appropriate for proposals involving infrastructure development or other activities that may result in adverse environmental impacts (see Annex 12 for more detail).

Sub-component 2.C. SPF Capacity Building and Support (US$ 0.1 million, 1.4 % of base cost).

Expected Outputs: (i) stakeholders empowered to access SPF and avail of opportunities provided by alternative sustainable livelihoods sub-component.

Activities: This sub-component will support the hosting of annual workshops and other supporting activities so that they can utilize the OECS SPF.

Project Component 3 Building Capacity for Biodiversity Conservation and PA Management and Increasing Environmental Awareness - US$ 0.74 million

This component's objective is to enhance national capacities and increase public support for biodiversity conservation and sustainable management of PAs through education, training and awareness (ETA). The component would include two sub-components: (i) training in support of establishment and management of PAs and enhancing the creation of sustainable livelihoods in buffer areas in achieving these objectives; and (ii) increasing public awareness on the ecological, social and economic significance of PAs.

Of the US$ 0.74 million funding for this component (10 % of base cost), these donors have committed the following amounts: (i) GEF - US$ 0.43 million; (ii) FFEM - US$ 0.17 million; (iii) OAS - US$ 0.04 million; and (iv) OECS - US$ 0.10 million.

Sub-component 3.A. Training (Establishment and Management of PAs and Sustainable Livelihood Opportunities) (US$ 0.37 million, 5 % of base cost).

Expected Outputs: (i) increased administrative efficiency in national institutions responsible for biodiversity conservation and PA management; (ii) empowerment of local communities and increased effectiveness in participation in local management decisions; and (iii) increased professionalism among PA staff.

Activities: Under this sub-component the following activities will be supported: (i) completion of a national

and regional training needs assessment; and (ii) the design and implementation of regional and national training program(s) in protected area management and sustainable livelihoods. Under this sub-component, the project will finance technical assistance, the development of training modules, equipment and materials, regional and national workshops, short-courses, and cross-site field-visits. The main objective of the training sub-component would be to prepare stakeholders for the establishment and management of PAs and the identification of associated livelihood opportunities. The major emphasis in training would be on principles in PA management (e.g., PA management concepts and tools, information management and M&E, community relations, and visitors management) and the role of promoting sustainable alternative livelihoods in communities living in and adjacent to PAs (e.g., principles and practices for development of sustainable livelihoods including practical or technical courses on marketing, technology, etc.). Through the project training programs would be designed on the basis of the aforementioned needs assessment which would be flexible to allow additional training activities as identified through a demand-driven process during the participatory preparation of PA management plans.

Sub-component 3.B. Public Awareness Program (US$ 0.37 million, 5% of base cost).

Expected Outputs: (i) behavioral change among local populations living in and adjacent to PAs; (ii) increased awareness of national decision-makers of the socio-economic importance of PAs and the need to conserve biodiversity of global importance; and (iii) increased public awareness of the ecological, economic and social significance of PAs.

Activities: Under this sub-component, the project will support: (i) the design of national public awareness strategies and country-specific action plans; (ii) the implementation of the aforementioned action plans; and (iii) equipment purchased in support of implementation of public awareness strategies.

Once endorsed by the PSC, each PMS will be able to submit activity-based proposals for strategy implementation (i.e., action plans). Target groups and desired results would be defined during the preparation of the strategy. At the national level priority target groups would likely be civil society organizations and national politicians and the general public. Information would also be made available on technical aspects of PA management in the OECS region particularly relevant to other SIDS.

Tools likely to be adopted in action plan implementation include environmental media campaigns and the use of internet, particularly to develop or enhance communication between the project management (and national project focal points) and field staff (PA level), who could download general materials that could be used to prepare specific awareness materials that would be tailored to local realities.

Project Component 4 Project Management, M&E and Information Dissemination - US$2.06 million

This component includes three sub-components: (i) project management, (ii) monitoring and evaluation (M&E) of overall project implementation, and (iii) design and implementation of an information dissemination strategy. Of the US$ 2.06 million for this component (27.8 % of base cost), these donors have committed the following amounts: (i) GEF - US$ 1.02 million; (ii) FFEM - US$ 0.34 million; (iii) OECS - US$ 0.10 million. Governments in-kind contributions total US$ 0.60 million.

Sub-component 4A. Project Management (US$ 1.4 million, 18.9 % of base cost).

Expected Outputs: The main outputs will be: (i) a project implemented in a timely and efficient manner, (ii) an improved institutional capacity in ESDU to support the needs of OECS PMS in the conservation of biodiversity, and (iii) increased human resource capacity in PMS in biodiversity conservation and natural resource management.

Activities: Under this sub-component, support will be provided for the: (i) employment of four full-time ESDU project staff (project coordinator, protected area's specialist, communications officer, and administrative assistant); and (ii) purchase of equipment.

Sub-component 4.B. Monitoring and Evaluation (US$ 0.16 million, 2.2 % of base cost).

Expected Outputs: The main output will be a Monitoring and Evaluation system applied to the project. Specific outputs are: (i) an M&E plan consistent with WB and GEF requirements, and (ii) timely M&E reports conforming to GEF, WB, and public monitoring requirements.

Activities: (i) updating of ESDU's existing M&E program to meet GEF and WB requirements, and (ii) implementation of the M&E system.

Sub-component 4.C. Information Dissemination (US$ 0.03 million, 0.4 % of base cost).

Expected Outputs: The main expected outputs are: (i) increased public support for the use of PA creation and management in biodiversity conservation; and (ii) adoption of relevant experiences from this project by other non-participating PMS in the OECS region and the wider Caribbean.

Activities: (i) dissemination of project results will be supported under this sub-component aimed at sharing lessons learned among project beneficiaries and with people involved in the management of other protected areas of the OECS countries (through workshops, conferences, publications and a homepage), and beyond. There will be particular emphasis on the wider Caribbean region (the latter through the project homepage and occasional exchange programs with other PAs).

Annex 3: Estimated Project Costs

OECS COUNTRIES: OECS Protected Areas and Associated Alternative Livelihood

Project Cost By Component	Local US $million	Foreign US $million	Total US $million
1. PAs Policy, Legal and Institutional Arrangements	0.14	0.88	1.02
2. PAs Management and Livelihoods	0.93	2.62	3.55
3. Capacity Building and Public Awareness	0.11	0.63	0.74
4. Project Management, M & E and Information Dissemination	0.70	1.36	2.06
Total Baseline Cost	1.88	5.49	7.37
Physical Contingencies	0.00	0.10	0.10
Price Contingencies	0.00	0.10	0.10
Total Project Costs[1]	1.88	5.69	7.57
Total Financing Required	1.88	5.69	7.57

Project Cost By Category	Local US $million	Foreign US $million	Total US $million
Goods	0.00	0.00	0.00
Works	0.00	0.00	0.00
Services	0.00	0.00	0.00
Training	0.00	0.00	0.00
Total Project Costs[1]	0.00	0.00	0.00
Total Financing Required	0.00	0.00	0.00

[1] Identifiable taxes and duties are 0 (US$m) and the total project cost, net of taxes, is 7.57 (US$m). Therefore, the project cost sharing ratio is 0% of total project cost net of taxes.

Annex 4
Incremental Cost Analysis
OECS COUNTRIES: OECS Protected Areas and Associated Alternative Livelihood

Overview

The **development objective** of the project is to strengthen national and regional capacities in the sound management of protected areas (PAs) in support of the sustainable economic development of Small Island Developing States SIDS in the Organization of Eastern Caribbean States (OECS) sub-region through: (i) the strengthening of existing and creation of new protected areas (PAs); and (ii) providing environmentally sustainable economic opportunities for communities living in the surrounding areas. This will be accomplished by: (i) improving the relevant legal, policy and institutional arrangements (collectively termed institutional framework) in the participating OECS countries; (ii) establishing or strengthening a number of pilot PAs including providing support for the development of new and alternative livelihoods for communities living in proximity to these sites; and (iii) improving institutional capacity to manage PAs in the region. The **principal project outcomes** will be: (i) common, updated and comprehensive institutional frameworks supporting national systems of protected areas; (ii) establishment of new or strengthening of existing pilot PAs; (iii) development and enhancement of environmentally compatible economic opportunities in communities neighboring the proposed PAs; and (iv) increased public awareness of the importance of biodiversity conservation and protected area management in the sustainable economic development of SIDS.

The **global objective** of the project is to contribute to the conservation of biodiversity of global importance in the OECS region by removing barriers to the effective management of PAs, and to increase the involvement of civil society and the private sector in the planning, management and sustainable use of these areas. The end-goal of the program is to create an integrated system of protected areas among the OECS Member States (MS) which will protect and conserve ecologically-sustainable, representative samples of the region's rich biodiversity endowment, while creating sustainable livelihoods for communities in and around these protected areas.

The GEF Alternative will achieve these objectives at a total **incremental cost** of US$ 7.37 million (M) excluding contingencies (US$ 7.57 M with contingencies), with a proposed **GEF contribution** of US$ 3.70 M and **co-financing** of US$ 3.87 million from the Governments from the six PMS, OECS, OAS, and FFEM.[10]

Footnotes:

[10] The exact amount of cash and in-kind contribution to be finalized at appraisal

Biodiversity Threats, Underlying Causes and Government Response in the OECS Region

The wider Caribbean is made up of diverse marine, coastal, shoreline and terrestrial ecosystems and represents the greatest concentration of biodiversity in the Atlantic Ocean. The Eastern Caribbean region is endowed with a rich biodiversity which, in combination with its isolation

within the Caribbean Sea, has resulted in relatively high rates of national and regional endemism. In addition, the islands of the region provide habitat and nesting sites for non-endemic, and many rare and endangered migratory marine mammals, turtles and avian species. The principal ecosystems likely to be supported under the GEF Alternative for conservation contain and provide habitat for globally significant biodiversity, including coral reefs, seagrass meadows, mangroves, sandy and rocky beaches, offshore islets, dry and humid tropical forests, wetlands and tidal flats, as well extensive karst and volcanic areas with their distinct biodiversity associations.

The assessments undertaken during the Block B and Supplemental Block B phases have identified the following **threats** to biological resources and their primary sources of pressure which are contributing to deficient management of Protected Areas (PAs) in the OECS countries: (i) loss of habitat, (ii) direct loss and/or change to biodiversity, (iii) changes in water quality, (iv) conflicts and resulting changes to water quantity, and (v) increased erosion and sedimentation processes. The relevance of each of these threats to the Region's major habitats is presented below.

The major **causal factors** contributing to these threats are: (i) poorly-planned development, (ii) inappropriate agricultural practices, (iii) untreated industrial/urban effluents, (iv) non-sustainable exploitation of natural resources, (v) illegal hunting, (vi) unmanaged growth in tourism, and (vii) the introduction of exotic species.

A **constraints** analysis to any effort attempting to address and resolve one or more of these underlying root causes identified the following factors: (i) an inadequate policy/legal framework, (ii) weak institutions, (iii) lax enforcement of existing laws, (iv) weak inter-sectoral co-ordination, (v) low public awareness and support for biodiversity conservation, (vi) information and data gaps, (vii) funding constraints, (viii) limited community participation, (ix) insecure/unclear land tenure, and (x) lack of alternative livelihoods to existing, mostly extractive, sources of income.

In response to these threats and constraints to the sub-region's rich biodiveristy, the Governments of MS have taken a number of recent actions. These include: (i) the signing of the "St George Declaration of Principles for Environmental Sustainability in the OECS" in which they agreed to protect and conserve biological diversity; (ii) a commitment to the joint preparation and implementation of the OECS Environmental Management Strategy (EMS), finalised in March 2002, and associated National Environmental Management Strategies (NEMS); and (iii) the completion of National Biodiversity Strategy and Action Plans (NBSAPs).

Meeting these commitments in the six participating member states (PMS) and in particular those related to the implementation of NEMS and NBSAP, will require upgraded capacity and quality of government institutions addressing terrestrial, coastal and marine resource management, policy articulation, legal reform and programs target towards sustainable income generation, particularly to the poor communities. The project will address many of the priorities established in the EMS, NEMS and NBSAPs and the needs to ensure their successful achievement.

Baseline Scenario

The calculation of the Baseline was based on an initial screening of on-going and future regional

and national programs/projects (scheduled for implementation over the next 2-5 years) relevant to the proposed project objectives (short project profiles have been presented in Attachment 1 divided between regional and national activities). Once identified, they were evaluated to the component/activity level and compared with components of the proposed project (Attachment 2). Only those components/activities of the previously identified baseline programs/projects relevant to the proposed project component objectives were costed and included as part of the baseline (see Attachment 3). All the projects identified are or will be implemented by public institutions and/or national NGOs with field experience in the management of PAs. Identified funding sources included: (i) public resources, (ii) bi- and multilateral financing[11], and (iii) NGOs.

Footnotes:

[11] Activities financed by the GEF have been excluded from the analysis. Five of the six participating countries have finalized the Enabling Activities for Biodiversity with the support from the GEF/UNEP/UNDP. Under the Baseline Scenario, it is expected that all six PMS will initiate the implementation of NBSAP

Summary Baseline Costs and Benefits

Baseline Costs. In the absence of additional GEF funding, the implementation of the aforementioned on-going and planned programs/projects will contribute to the project goal. The estimated costs of baseline activities amount to US$ 5.1 M (see Matrix 1). Sources of assistance vary and consist of Government revenues, bi and multi-lateral organizations and NGOs. The PMS' public contribution to the baseline is an estimated 60 % and is used primarily to cover central and field staff salaries (planning, monitoring, enforcement and rural and tourism extension activities in and around existing protected areas), central and field infrastructure maintenance, and small actions in public awareness activities and rural finance in support of communities in and around PAs. The remaining estimated 40 % of the baseline costs are financed by various external donors (EU, USAID, DFID, CIDA, OAS, WB).

Baseline Benefits. Activities under the Baseline Scenario will produce predominantly national benefits, albeit limited, in the form of sustainable development and use of natural resources. Their implementation will result in increased environmental protection, integration of environmental management issues into national development planning, increased capacity of public sector institutions to manage terrestrial, coastal and marine resources, and poverty reduction, the latter through an increased access by rural communities to sustain ably generated incomes. However, with the exception of the SPAW Program, no support would be forthcoming for the preparation of specific legal provisions relevant to PA management.[12] Similarly, despite the number of on-going management, monitoring and enforcement efforts in existing PAs (particularly in forest and marine reserves), the magnitude and range of growing threats far exceed existing institutional capacity to respond effectively. Relevant, training that has been provided in the OECS sub-region to date, has been fragmented and inadequate; the awareness programs have not provided sufficient sensitization to the ecological, economic and social significance of natural resources management in general and PA management in particular.

In sum, the Baseline Scenario's contribution to biodiversity conservation will be limited in most cases to an ad hoc adoption of proposed or existing legislation. In addition, there would be very limited participation of communities in the management of local resources, with no funding

available for the creation and co-management of both new and existing PAs. In view of existing capabilities to foster sustainable livelihood activities, there would be little progress toward the identification and adoption of these activities to reduce pressure on PA core areas. Moreover, the baseline would fail to facilitate the needed access and exchange of information on the OECS countries' globally important biodiversity; an essential tool for their effective management and protection.

In view of limited institutional capacity and growing threats the loss of biodiversity is likely to continue in the OECS countries under the Baseline Scenario. Reversing this situation and trends will require investments in the development of appropriate strategies that take into account global environmental values, as well as institutional and legal frameworks, and includes incentives for increasing the involvement of civil society in the planning and co-management of PA. It will also require the adaptation of appropriate livelihood activities for communities and monitoring and evaluation activities that demonstrate results and benefits to local as well as regional, national and global stakeholders. In light of the islands' recognized biodiversity value, at the national and global scales, and the magnitude and growing number of biodiversity threats, the Governments of the OECS PMS have requested assistance from the GEF to formulate and implement an Alternative Scenario that would support the achievement of incremental benefits related to the aforementioned programs which comprise the baseline scenario.

Footnotes:

[12] SPAW will support the review of existing IUCN guidelines for preparation of PA System Plans.

GEF Alternative

The GEF Alternative will support long-term protection of globally important terrestrial, coastal and marine ecosystems through strategic actions addressing the key threats. Financing the incremental costs associated with the conservation of these ecosystems, would build on the Baseline Scenario by: (i) strengthening existing capabilities for PA planning and management; (ii) developing model/harmonized policy documents, legislation and institutional arrangements for PAs creation and management; (iii) updating of national PAs system plans in at least 3 PMS and the preparation of a new national PAs system plan in one other PMS; (iv) creating new and strengthening existing PAs which contain representative examples of terrestrial, coastal and/or marine ecosystems; (v) developing and implementing management plans for these areas, involving local communities; (vi) fostering new and alternative livelihoods and other compatible economic activities in these neighboring communities; (vii) increasing public awareness of biodiversity issues; (viii) identifying mechanisms for sustainable financing of PAs in the 6 PMSs; (ix) developing and implementing a biodiversity information management system; and (x) fostering the promotion and dissemination of project initiatives, results and impacts through printed and electronic media, as well as national and regional workshops and seminars.

Costs. The total cost of the GEF Alternative is estimated to be US$ 12.7 M (GEF financing: US$ 3.7 M), detailed as follows: (i) US $ 1.7 M (GEF financing: US$0.84 M) to strengthen Policy, Legal and Institutional Frameworks for PAs; (ii) US$ 4.1 M (GEF financing: US$1.21 M) to support the Creation and/or Strengthening of PAs and Associated Livelihood Opportunities; (iii) US $ 1.7 M (GEF financing: US$0.43 M) to build Capacity for Biodiversity Conservation and

Management and Increasing Environmental Awareness; (iv) US $ 5.1 M (GEF financing: US$1.02 M) in support of Project Management, M&E, and Information Dissemination; and (v) US$ 0.20M in contingencies (GEF financed).

Benefits. Under the GEF Alternative, the Governments of OECS countries would be able to undertake a challenging program encompassing both national and global benefits. It would enhance protection of vulnerable and globally important coastal and marine ecosystems and assist the countries with the effective implementation of their existing/revised or proposed Systems of Protected Areas. Benefits generated from this comprehensive approach would include national benefits - such as increased sustainability and improved management of terrestrial, coastal and marine resources, and improved information flow from project and other PAs to the existing/revised or proposed Systems of Protected Areas of the sub-region, as well as to the wider Caribbean (see complete list of national benefits in the Incremental Cost Matrix below) - as well as global benefits. Global benefits include: (i) the conservation of terrestrial, coastal and marine biodiversity; (ii) improved Governments capacity to fulfill international environmental treaty obligations; (iii) promotion of PA ecosystem diversification in the OECS sub-region; (iv) increased representation of terrestrial, coastal and marine PAs in the existing or proposed Systems of Protected Areas; (v) improved funding for biodiversity conservation of global importance; and (vi) transition to more sustainable livelihoods by supporting pilot activities in conservation of biodiversity and outreach and involvement of civil society and the private sector in the planning, management and sustainable use of PAs.

Incremental Costs[13]

The difference between the costs of the Baseline Scenario (US$ 5.1 M) and the GEF Alternative (US$ 12.5 M before contingencies) is an estimated at US$ 7.4 M (US$ 7.6 M with contingencies). The matrix below summarizes the baseline and incremental expenditures during the five years project period. Co-financing of US$ 3.87 M of this increment has been mobilized as follows: (i) US$ 1.46 M from the Governments of the six PMS; (ii) US$ 0.42 M from OECS; (iii) US$ 0.35 M from OAS (confirmed); and (iv) US$ 1.64 M from the FFEM (confirmed).

The total requested GEF contribution amounts to US$ 3.7 M (excluding the Block B donation). Out of this total an estimated: (i) US$ 0.84 M would strengthen Policy, Legal and Institutional Frameworks for PAs in the OECS sub-region; (ii) US $ 1.21 M to support the Creation and/or Strengthening of PAs and Associated Livelihood Opportunities, covering at least four (maximum of seven) PAs proposed for protection; (iii) US$ 0.43 M to build Capacity for Biodiversity Conservation and PA Management and increase public awareness; and (iv) US $ 0.1.02 M to support project management, M&E, and information dissemination. The aforementioned GEF-support would cover incremental costs of technical assistance, training, workshops and other services such as public awareness media campaigns, small infrastructure, equipment and vehicles and travel and subsistence allowances.

Incremental financing from the Governments of the six PMS would include in-kind contributions of US$ 1.34M to finance staff salaries, operation and maintenance, and travel allowances. The funding from OECS (US$ 0.42 M), OAS (US$ 0.35 M) and FFEM (US$ 1.64 M) would cover

incremental costs of technical assistance, training, workshops, and equipment and subsistence allowances in support of all project components.

Footnotes:

[13] Kindly note minor differences in totals are due to rounding error and the amounts include in contingencies.

Matrix 1. Incremental Cost Matrix

Component	Cost Category	US$ Million	Domestic Benefit	Global Benefit
Comp 1 Strengthening Policy, Legal and Institutional Frameworks for PAs	Baseline	US$ 0.7M	(i) increased environmental awareness and management in PMS through preparation of National Environmental Management Strategies; and (ii) fisheries database maintained and use of information to guide fisheries management and development decisions.	Limited global benefit.
	With GEF Alternative	US$1.7 M	(i) an improved legal framework and institutional capacity for PA management leading to legal creation of and improved management in PAs in the OECS region; (ii) improved information flow between project-supported and other PAs contributing to a network of effective and sustainable PAs in the region; (iii) better-trained staff; (iv) improved financial status of PAs; and (v) PA management fully integrated into wider environmental management programs both nationally and regionally.	(i) biodiversity conservation mainstreamed into the national and regional planning and development process; (ii) a harmonized approach developed for PA creation and management through policy, legislative and institutional reform; (iii) improved financing for biodiversity conservation of global importance, through the identification of mechanisms for generating new sources of funding.
	Incremental	US$ 1.0M	*Note: Consists of: GEF (US$ 0.84 million); FFEM (US$ 0.0 M); OAS(US$ 0.04 million); OECS (US$ .08 M); and Governments in-kind (US$ 0.06 M) contributions.*	
Comp 2 Creation and/or Strengthening of PAs and Associated Livelihood Opportunities	Baseline	US$ 0.5M	PAs: (i) continued management of coastal and marine resources in the proposed PAs, with limited support for the creation and co-management of these PAs; (ii) increased awareness of environmental issues; (iii) limited participation of communities in the management of local resources; (iv) improved management of solid waste from tourism activities at selected beaches. Livelihoods: (v) continued efforts to achieve poverty reduction; (vi) increased demand for activities promoting sustainable tourism in selected areas; (vii) and limited experience in the identification and adoption of sustainable alternative livelihoods to reduce pressure on PA core areas.	(i) limited conservation of coastal and marine biodiversity (partial conservation of globally significant biodiversity).
	With GEF Alternative	US$ 4.1M	PAs: (i) improved management of terrestrial and marine ecosystems through integrated management strategies; (ii) improved biodiversity protection in the PMSs: (iii) PA co-management approaches established with local communities. Livelihoods: (iv) same as above, though with significant additional number of communities and NGOs developing experience in the	(i) increased representation of terrestrial and marine PAs supported, with management plans and basic infrastructure in place; (ii) increased effectiveness in efforts to conserve biodiversity under threat, including habitat for internationally recognized endangered and several endemic species categorized as

			sustainable use of natural resources for economic revenues; and (v) closer linking of natural resource conditions with development priority considerations.	endangered or critically endangered; (iii) increased support for co-management of PAs, with full participation of local communities and civil society in general; (iv) increased public awareness of issues related to terrestrial and marine ecosystem management; (iv) development of innovative sustainable management strategies for PAs in SIDS. (iv) transition to more sustainable livelihoods by supporting opportunities for generating income while at the same time protecting biological diversity; (v) broader participatory approach for sustainable natural resources management, including the adoption of best practices for terrestrial and marine ecotourism.
	Incremental	US$ 3.6 M	*Note: Consists of: GEF (US$ 1.21 M); FFEM (US$ 1.13 M); OAS(US$ 0.27 M); OECS (US$0.14); and Governments in-kind ($ 0.1 M) contributions.*	
Comp 3 Building Capacity for Biodiversity Conservation and Management and Increasing Environmental Awareness	Baseline	US$ 0.9 M	(i) increased awareness of environmental issues through various programs; (ii) limited monitoring and evaluation of impact of awareness programs; (iii) limited training generally focused on public sector agencies.	(i) limited awareness of the importance of biodiversity, including broad knowledge of a few of the region's threatened species; (ii) protection and conservation of some endangered flora and fauna.
	With GEF Alternative	US$ 1.6M	(i) preparation of a broad range of stakeholders for PA management and associated livelihood opportunities; (ii) development of appropriate tools and techniques for PA management in SIDs; and (iii) increased national and local awareness of the ecological, economic and social significance of PAs.	(i) improved understanding and appreciation for biodiversity and role of livelihood opportunities in ensuring its conservation; (ii) improved protection and conservation of biodiversity and of endangered flora and fauna.
	Incremental	US$ 0.7 M	*Note: Consists of: GEF (US$0.43 M); FFEM (US$0.17); OAS (US$0.04); and OECS (US$0.1).*	
Comp 4 Project Management, Coordination, Monitoring and Evaluation	Baseline	US$ 3 M	(i) development of limited project management skills in national resource management agencies; (ii) limited monitoring and evaluation undertaken at the national and regional levels.	Limited global benefit
	With GEF Alternative	US$ 5.1 M	(i) improved project and management skills at national and regional levels; (ii) monitoring and evaluation system in place and operational	(i) increased capacity for effective facilitation of PA management for biodiversity conservation.
	Incremental	US$ 2.1 M	*Note: Consists of: GEF (US$ 01.02 M), FFEM (US$ 0.34); OECS (US $ 0.1 M) and Governments in-kind and cash ($ 0.6 M) contributions.*	
Contingencies		US$0.2		
Totals	**Baseline**	US$ 5.1 M		
	With GEF Alternative	**US$ 12.7** *(US$12.5 (before conting.)*		

	Incremental	**US$ 7.6 M** *(US$ 7.4 before conting.)*	*Note: GEF cont. of US$ 3.7 M; PMS of US$1.46 M; OAS of US$ 0.4M;OECS US$ 0.4 M and US$ 1.64 M from the FFEM*	

Attachment 1: Baseline Scenario – Selected Project Profiles

Regional Programs/Projects

Environment Capacity Development Project (ENCAPD). This CIDA/OECS supported project will assist in strengthening the institutional, policy and legal framework for environmental management and more effectively integrate environmental management issues into national development planning

Caribbean Regional Environmental Programme (CREP). Financed by EU and implemented by the Caribbean Conservation Association (CCA), this project will strengthen regional cooperation and build awareness of environmental issues in the 13 CARIFORUM Member States (MS), including the 6 OECS PMS.

Regional Programme on Specially Protected Areas and Wildlife (SPAW). Under the UNEP-Caribbean Environment Programme (CEP), this multi-donor-financed program supports the implementation of the SPAW Protocol (adopted in 1990), by developing: (i) regional management guidelines and national recovery plans for threatened species, (ii) protected areas training programs and manuals, and (iii) documentation of case studies on coastal and marine PAs and management of migratory birds.

National Programs/Projects

Antigua & Barbuda.

National budgetary resources. National budgetary resources are being used to support: (i) the development of national management strategies (NEMS)[14] as part of the OECS EMS; and (ii) an increase in national capacity for environmental management and support for a strengthened institutional framework for environmental management.

Codrington Lagoon Management Project. The objective of this CCA/OECS/UWICED supported project is to improve the environmental quality of the Codrington Lagoon and offshore islands.

[14] All PMS are preparing NEMS and have been included in the calculation of baseline costs.

Dominica

National budget. National budgetary resources are being used to support: (i) the preparation of the NEMS; and (ii) the on-going national program on monitoring and enforcement for terrestrial and marine parks which provides limited resources to enforce forestry, wildlife and national parks legislation.

Eco-tourism Development Project. Under this EU-financed project, revenue would be generated from ecotourism and alternative livelihoods supported in adjacent communities.

Bagetelle Historical Eco-tourism Project. This French government/OECS supported project supports training and restoration of archaeological and historical sites and capacity building for tour guiding which

in turn creates employment opportunities.

Parrot Research Programme. This project financed by the Rare Species Conservatory Foundation supports institutional strengthening and capacity building.

Grenada

National budget. National budgetary resources are being used to support: (i) the development of the NEMS; and (ii) the implementation of the country's forestry policy and action plan which will maximize the contribution of sustainably managed forests through environmentally sound social and economic development.

Grande Anse Beach Zoning Project. This DFID/GOG-supported project supports the sustainable use of limited coastal resources through the development of a management plan, as well as the establishment of a conflict management framework for sustainable use of resources, and promotion of enhanced livelihoods.

Belvidere Estate Ecotourism Project. This project supported jointly by GOG and the private sector, will develop the tourism potential of the area and supplement incomes of the surrounding communities.

Other activities. A number of other activities were identified which support environmental awareness in Grenada (ART, GRENCODA, National Development Foundation , Friends of the Earth).

St. Kitts/Nevis

National budget. National budgetary resources are being used to support: (i) NEMS preparation; (ii) the ongoing beach cleaning program; and (iii) the monitoring and enforcement of terrestrial and marine parks which will help in ensuring compliance with relevant laws and regulations and conformance with policies and established management procedures.

Wingfield Watershed Management Project. This DFID/OECS/GOSKN financed project support the diversification of the tourism sector through conservation.

CREP Bath Estate Project. This project supports the creation of amenity areas and sustainable livelihoods in the Bath Estate in Nevis.

Other activities. A number of other activities were identified which support environmental awareness in Grenada (UNESCO SIV, OECS, Nevis historical and conservation society).

St Lucia.

National budget. National budgetary resources are being used to support: (i) the development of NEMS; (ii) the development of the National Land Policy Project designed to improve legal provisions to guide the sustainable use and management of land resources including promoting conflict resolution measures within PAs; (iii) fisheries public education whose objective is to improve attitudes and increase adherence of fishers towards to fisheries regulations and management policies; (iv) beach protection and cleaning programme through provision of additional field staff and minimum equipment for beach cleaning and maintenance; (v) maintenance of sites, equipment and buildings for the protection of the Maria Islands Reserve (Point Sable) and the Praslin proposed candidate PA; and (vi) enforcement and monitoring of the

implementation of the country's natural resources management regulations to include collecting to maintaining the existing fisheries and flora databases, essential instruments for environmental management.

Management of Biological Resources Project. This EU-supported project, a follow up to the NBSAP, will conduct an inventory or plant resources through the island.

Wildlife Conservation Project. This EU-supported project will support research on 5 endemic species and the enhancement of the iguana captive breeding facility.

Rural Enterprise Development Project. This project will address rural poverty issues and encourage sustainable agriculture and rural development by providing technical assistance, training and financial resources to small farmers and fishers.

St Lucia Heritage Tourism Programme. This programme supports capacity building and economic opportunities for local communities through pilot projects in tourism.

Coastal Zone Management (CZM) Project. This EU-supported project will finance technical assistance and training to establish an administrative framework and capacity for integrating coastal zone use and management issues into national planning and resource management policies and actions.

St. Vincent and Grenadines.

National budget. National budgetary resources are being used to support: (i) NEMS preparation; (ii) the establishment of a National Parks, Beaches and Rivers Authority which will include, the preparation of master plans for the development, management and operation of all designated parks and other PAs; and (iii) the monitoring and enforcement of fisheries and forestry regulations albeit on a limited basis, in an attempt to ensure compliance with national laws and international conventions (this includes Tobago Cays marine park and the monitoring of coral reefs).

Troumaca Dam Eco-tourism project. Through this project, physical sites would be enhanced and employment generated, hence improving quality of life for communities.

CREP Richmond Hill project. This EU-financed project would create amenity areas and support sustainable livelihoods in Richmond Hill.

Public and Sensitisation Programme for Parks, Beaches and Rivers. This program would create awareness on the contribution of PAs to economic development, and increase understanding and support for PAs.

Attachment 2. Baseline Activities by Project Component

	Proposed Project Components			
	Institutional Arrangements	**PA and Associated Livelihoods**	**Capacity Building and Environmental Awareness**	**Project Management M&E, Information Dissemination**
Regional Programs/Projects				
ENCAPD	x	-	x	-
CREP	x	x	x	-
SPAW	x	-	x	-
National Projects				
Antigua/Barbuda				
National budget (NEMS and institutional strengthening)	x	-	-	x
Institutional strengthening (Green Castle)	x	-	-	-
OECS/CIDA Betty's Hope Estate Development	-	x	-	-
Offshore Islands Conservation Initiative	-	x	x	-
Codrington Lagoon Management Project	-	x	-	-
Bendal's Community Group Project	-	-	x	-
Dominica				
National budget (NEMS, PA M&E)	x	-	-	x
UNESCO Morne Trois Project	-	x	x	x
Eco-tourism Project	-	x	-	-
Cockrane Middleham Falls ecotourism	-	x	-	-
Parrot research program	-	-	x	-
Darwin Initiative	-	-	x	-
SSMR	-	x	x	-
Grenada				
National budget (NEMS, forstry policy)	x	-	-	x
Grande Anse Beach Zoning Project	-	-	-	-
Belvidere Estate Eco-tourism Project	-	-	-	-
Other activities (ART, GRENCODA, Friends of the earth, etc.)	-	-	x	-
St. Kitts/Nevis				
National budget (NEMS, NECPA review, beach cleaning, PA M&E)	x	-	-	x
Mangrove Protection/Rehab and Marine PA programs	-	-	-	x
Red Cross Reforestation Program				
Other activities (UNESCO SIV, OECS,	-	-	x	x
Nevis historical and conservation society, Brimstone Hill Society, Bath Estate)	-	-	x	x
St. Lucia				
National budget (NEMS, land policy project, fisheries public education, beach protection, site maintenance, PA M&E)	x	-	-	x -
Wildlife conservation project	-	x	-	-
Rural enterprise development project	-	-	-	-
St. Lucia Heritage tourism program	-	-	-	-
EU coastal zone management project	-	-	-	x
EU Water resources management project	x	-	x	x
SMMA	-	-	-	-
National land project	x	-	-	-
Fisheries public education	-	-	x	x
SLNT PA Management	-	-	x	-
Biological resources project	-	x	-	x
Pitons world heritage project	-	x	-	
St. Vincent/Grenadines				
National budget (NEMS, Parks Authority, PA/ NRM M&E)	x -	x -	- x	x x

TNC Tobago Cays marine park				

Attachment 3. Regional and National Activities Used to Calculate Baseline

Component	Program Title	Estimated Cost	Estimated Cost
	Source of Funds / Executing Agency	**US$**	**EC$**
Component 1	**Regional**		
Strengthening	ENCAPD Project (OECS/CIDA-supported)	55,556	150,000
National Capacity	CREP	38,889	105,000
for Conservation	SPAW/CEP (UNEP, multi donor)	222,222	600,000
Planning and	**Subtotal**	**316,667**	**855,000**
Management			
	Antigua & Barbuda.		
	National Environmental Management Strategy (NEMS)	29,630	80,000
	Green Castle	3,704	10,000
	Subtotal	**33,333**	**90,000**
	Dominica		
	National Environmental Management Strategy (NEMS)	29,630	80,000
	Subtotal	**29,630**	**80,000**
	Grenada		
	National Environmental Management Strategy (NEMS)	29,630	80,000
	Subtotal	**29,630**	**80,000**
	St Kitts and Nevis		
	National Environmental Management Strategy (NEMS)	29,630	80,000
	NECPA Review	20,000	54,000
	Subtotal	**49,630**	**134,000**
	St Lucia		
	National Environmental Management Strategy (NEMS)	29,630	80,000
	National Budget: Development of National Land Policy	9,259	25,000
	Subtotal	**38,889**	**105,000**
	St Vincent and Grenadines		
	National Environmental Management Strategy (NEMS)	29,630	80,000
	P A Master Plan	146,296	395,000
	Subtotal	**175,926**	475,000
	Total Component 1	**673,704**	**1,819,000**
Component 2	Antigua & Barbuda.		
Protected Areas	Off-shore islands Conservation Initiative	24,109	65,093
and Associated	CREP Project: Codrington Lagoon	100,000	270,000
Opportunities	Subtotal	**124,109**	**335,093**
	Dominica.		
	Eco-Tourism Development Project	100,000	270,000
	SSMR	11,111	30,000
	Morne Trois Pitons World Heritage Site	5,556	15,000
	Subtotal	**116,667**	**315,000**
	Grenada.		
	None	0	0

	Subtotal	0	0
	St Lucia.		
	CREP Project: Fond D'Or	15,000	40,500
	Management of Biological Resources Project	27,778	75,000
	Wildlife Conservation Project	129,630	350,000
	St. Lucia Heritage Tourism Program: Fond D'Or PA	9,259	25,000
	Subtotal	**181,667**	**490,500**
	St Vincent and Grenadines.		
	Beaches, Parks and Rivers Authority	92,593	250,000
	Subtotal	**92,593**	**250,000**
	St. Kitts and Nevis		
	CREP Project: Bath Estate	27,778	75,000
	Subtotal	27,778	75,000
	Total Component 2	**542,812**	**1,465,593**
Component 3	**Regional**		
Capacity Building for	CREP (Environmental Awareness and Information Network)	112,410	303,507
Conservation	SPAW	211,111	570,000
Planning and	ENCAPD	129,630	350,000
Management	Subtotal	**453,151**	**1,223,507**
	National		
	Antigua & Barbuda		
	Green Castle: Bendals Community Group	5,556	15,000
	Off-shore islands Conservation Initiative	111,111	300,000
	Subtotal	**116,667**	**315,000**
	Dominica		
	The Morne Trois Pitons World Heritage Site	5,556	15,000
	Parrot Research Program	7,407	20,000
	SSMR	18,519	50,000
	Sustainable Wildlife Project supported by the Dominica Darwin Initiative.	48,148	130,000
	Subtotal	**79,630**	**215,000**
	Grenada		
	Other Activities: awareness building and training programs	37,037	100,000
	Subtotal	**37,037**	**100,000**
	St Kitts and Nevis		
	Other Activities (NHCS, SCHCS, BHFWHSS)	31,481	85,000
	Reforestation Program assisted by the Red Cross.	4,444	12,000
	Subtotal	**35,926**	**97,000**
	St Lucia		
	Wildlife Conservation Project supported by the EU;	11,111	30,000
	The Fisheries Public Education Program	28,889	78,000
	St. Lucia National Trust	48,148	130,000
	St. Lucia Heritage Tourism Program	25,926	70,000
	SMMA and CAMA	37,037	100,000
	PMA	9,259	25,000
	Subtotal	**114,074**	**308,000**

	St Vincent and Grenadines		
	Parks, Beaches and Rivers Authority	12,963	35,000
	Grenadines Management Project - Lighthouse Foundation	27,778	75,000
	The Nature Conservancy at Tobago Cays Marine Park	25,926	70,000
	Subtotal	66,667	180,000
	Total Component 3	**903,151**	**2,438,507**
Component 4	**Regional**		
Project Management Monitoring and	SPF: OECS contribution to management, M&E	266,296	719,000
Evaluation	Subtotal	**266,296**	**719,000**
	National		
	Antigua and Barbuda		
	National Budget: Environmental Management (Recurrent Expenditure)	361,111	975,000
	Subtotal	**361,111**	**975,000**
	Dominica		
	National Budget: Environmental Management	462,963	1,250,000
	Morne Trois Pitons World Heritage Site	11,111	30,000
	Subtotal	**474,074**	**1,280,000**
	Grenada		
	National Budget: Environmental Management	275,926	745,000
	Subtotal	**275,926**	**745,000**
	St. Kitts and Nevis		
	National Budget: Environmental Monitoring	138,889	375,000
	Reforestation Program	5,556	15,000
	Subtotal	**144,444**	**390,000**
	St. Lucia		
	National Budget: Environmental Monitoring	629,630	1,700,000
	SMMA and CAMMA	546,296	1,475,000
	St. Lucia National Trust (SLNT)+B142	48,148	130,000
	Subtotal	**1,224,074**	**3,305,000**
	St. Vincent and the Grenadines		
	National Budget: Environmental Monitoring	85,185	230,000
	Parks, Beaches and Rivers Authority	92,593	250,000
	The Nature Conservancy at Tobago Cays Marine Park	111,111	300,000
	Subtotal	**288,889**	**780,000**
	Total Component 4	**3,034,815**	**8,194,000**
TOTALS	**Total Component 1**	**673,704**	1,819,000
	Total Component 2	**542,812**	1,465,593
	Total Component 3	**903,151**	2,438,507
	Total Component 4	**3,034,815**	8,194,000
	Total All Components	**5,078,556**	**13,917,100**

Additional GEF Annex 5: Response to Project Reviews
OECS COUNTRIES: OECS Protected Areas and Associated Alternative Livelihood

STAP – INDEPENDENT TECHNICAL REVIEW AND RESPONSE OF THE PROJECT TEAM

The project team is grateful to the STAP reviewer for comments to strengthen the contents and presentation of this proposal. Below is a description of specific actions taken in response to the STAP comments (answers in italic following the STAP comments).

Project reviewer: Wim Giesen, Senior Environmental Specialist, ARCADIS Euroconsult.

A. General Comments

The draft Project Brief OECS Protected Areas and Associated Sustainable Livelihoods (OECS-OPAAL) emerged out of the Block B funding awarded to St. Lucia for the preparation of the "St. Lucia Coastal/Wetland Ecosystem Conservation and Sustainable Livelihoods Project". A draft brief focusing on St. Lucia was produced in May 2002, but following internal Bank review it was decided that the brief should have a regional, OECS-wide focus instead. The advantages are a consistency with sub-regional approaches embodied in the St. George's Declaration (2001), ease with which co-funding can be mobilized on a sub-regional scale, and gains in efficiency due to economies of scale. A first draft for the regional project was drafted by December 2002 and reviewed by the present STAP reviewer in February 2003. Since then, significant changes have been made to the draft brief, necessitating this second STAP review. Project design has been strengthened, and has been modified since the first draft. The project will potentially have significant national and local benefits, via the development of sustainable alternative/additional livelihoods, and the securing of the natural resource base that supports the very strong tourism industry.

A.i Global priority in the area of biodiversity

The STAP reviewer is convinced that the region is of global significance to biodiversity, but the arguments for this need to be summarized in the Project Brief by the proposal proponent. This was indicated in the first STAP review of February 2003, but has not been addressed in this revised Project Brief. As stated previously, the Project Brief provides only a sketchy overview of why the OECS region is of global significance to biodiversity, with observations such as:

- "relatively high rates of endemism" [need to support this with data]
- "the Caribbean as the fifth ranking <biodiversity> 'hotspot' <in the world" [how does the Eastern Caribbean relate to this? The project does not target the whole Caribbean]
- "the Eastern Caribbean was classified as a unique marine ecoregion" [the project does not exclusively focus on marine habitats – how unique are dryland habitats?]
- "the <marine> systems of this area are recognized as among the most productive in the world". [productivity and biodiversity are quite different matters]

***Response by the project team**: We fully agreed on the need to demonstrate increased visibility and significance of the biodiversity of global importance. We did this through some matrices supported by descriptive text, primarily in Annex 6 "PA Selection Criteria and Site Profile" and by incorporating relevant indicators in the Logframe. Nevertheless, much of the existing data (including information in the PMS National Biodiversity Strategies is outdated (often going back to surveys in the 1940s and 50s*

that continue to be cited over and over again). The project plans to address this problem with baseline data collection and monitoring in each of the PAs that have been costed under Component # 2.

Annex 12 on environmental assessment does not include an assessment of biodiversity values, and the profiles of the three short-listed PAs (in Annex 6) do not adequately address global biodiversity. As mentioned in the first STAP review, the Eastern Caribbean region has a high degree of island endemism, as can be judged from the number of endemic vascular plants found throughout the OECS island states: St. Lucia (14 endemic species), Dominica (12), Antigua and Barbuda (5), Grenada (4), Montserrat and St.Kitts & Nevis (each 2) and Anguilla (1). Similar degrees of endemism are likely in other taxons, and a brief overview should be presented, along with other possible factors that make the region unique to biodiversity, e.g. support of migratory waders, or occurrence of unique habitats.

A.ii Cost-effectiveness in achieving focal area objective(s)

The OECS – OPAAL Project is budgeted at US$7 million, of which US$3.48 is to be contributed by the GEF grant. This is a significant amount, but one that is modest compared to the size of the project area and the scope of what is to be achieved in the medium- to long-term. Significantly, the OECS-OPAAL Project leverages a total of more than US$3.4 million in co-financing – of which US$1.6 by the PMS and OECS – and in this sense the Project can be regarded as cost effective.

Of the US$6.9 million total budget, US$1.3M (19.3%) goes towards Component 1 (Policy, legal and institutional support), US$3.1M (46.7%) towards Component 2 (PA management and associated livelihoods), US$0.8M (11.9%) towards Component 3 (Capacity building for conservation and PA management), while the balance – US$1.4M (20.8%) – goes towards project management, M&E and dissemination of information. This seems a fair balance between the various components, without overly large sums devoted to project management and other less tangible outputs. <Note that the project summary table under C. (p.7) provides an incorrect total of component 4, as the total of sub-components 4.a, 4.b and 4.c is US$1.6 million and not US$1.4 million.>

Incremental costs (Section E.1 and Annex 4). Section E.1 should summarize Annex 4, and at least provide a summary of baseline and incremental costs, and a summary incremental costs matrix (see example). At present, *no* figures are provided, which is clearly an oversight.

Example: Summary Incremental Costs Matrix

Components, Outputs, and Activities	**Baseline**	**Alternative**	**Increment**
1. Component 1	US$XXXXXXX1	US$ YYYYY1	**US$ ZZZ1** Of which:
2. Component 2	US$XXXXXX2	US$ YYYYY2	**US$ ZZZ2** Of which:
3. Component 3	US$XXXXXX3	US$ YYYYY3	**US$ ZZZ3** Of which:
4. Component 4	US$XXXXXX4	US$ YYYYY4	**US$ ZZZ4** Of which:

***Response by the project team**: An Incremental Cost Table has been added with the figures requested.*

A.iii Adequacy of project design

The five-year project duration – perceived as a first phase of a possible 15-year program – is well rationalized and appears sound. The project focuses on three key areas, namely PA policy, institutional & legislation reform, support for PA and associated livelihoods, and capacity building for biodiversity and PA management, along with awareness raising. These mesh together well, and appear to provide a good basis for addressing the issues at hand.

However:

- The Project Brief lacks a clear description of the baseline. There is no section or annex on legislation, and the sections of baseline description that are present are spread under various headings (e.g. B.1, E.3, etc..).

***Response by the project team**: A description of baseline has been added to the document and can be found in Annex 6 of the project Brief. As indicated previously, the project also plans to address this problem with baseline data collection and monitoring in each PA that have been costed under component 2.*

- Development of project objectives should be based on sound root cause analysis of the threats, and the proposal is weak in this respect. The constraints listed in the main document are very general, and are not linked to the listed threats. According to the contents of the main document, Annex 6 is cover "Threat Analysis, PA Selection, and Candidate Profiles", but Annex 6 (as received by the STAP reviewer) covers only "PA Selection Criteria and Site Profiles", with only a single paragraph and two tables touching upon the issue of threats. Annex 6 provides a "Threat and Root Cause Analysis Matrix", but the 'sources' (of the threats) listed in this table are not the root cause of the key threats. These are listed in a second table titled Constraints Analysis Matrix and listed as underlying cause/constraint. The actual descriptive analysis needs to be expanded in Annex 6, and this needs to be summarized in the Project Brief main document. Threats are described in the main document under "Sector issues", and underlying causes that need to be addressed according to the proponent are provided in "Key constraints". However, the latter are all very general – such as inadequate legislation and enforcement, policy gaps, limited human and technical resources, lack of data, and lack of economic opportunities – and the link with the threats needs to be clarified.

***Response by the project team**: Root cause. This was addressed through the reworking of the matrices and taking the analysis a bit further. We have attempted to link threats with underlying causative factors. Then identifying key constraints that would have to be addressed to begin to get at the causative factions and finally the threats. Finally, we attempted to show how the project components/activities would address the relevant constraints. This was summarized through a series of matrices in Annex 6. The nature of the approach (and problem of dealing with 6 countries in the Eastern Caribbean) makes this more complex to describe. We would like to point out that there will be baseline studies associated with the alternative livelihood sub-component which will be examining on-site threats and root causes as a basis to identifying relevant alternative livelihood activities which the project could possibly support.*

- The Project Brief needs to make a strong case for global benefits to biodiversity, and at present the arguments provided are not convincing and need to be expanded (see A.i).

***Response by the project team**: Global benefits (see above response to paragraph A.i).*

- Related to this, the global biodiversity significance of the three selected sites is not clearly presented. In Annex 6 on "PA Selection Criteria and Site Profiles" it is evident that the selection criteria (attachment 1 to Annex 6) did not include global biodiversity significant, but simply biodiversity

significance. The profile on Pointe Sable, St. Lucia, for example mentions under the heading global significance that the area has the last remaining mangroves on the island, and the longest fringing reef in the region. This may be of national importance does not directly mean that the area is of global significance.

***Response by the project team**: Global biodiversity at the proposed sites (see above response to paragraph A.i).*

A.iv Feasibility of implementation, operation and maintenance.

There are a number of risks outlined in the Project Brief under F.2 – these can also be elucidated from the critical assumptions in Annex 1. Project Design Summary; listed are:

- PMS do not provide the necessary resources through their national budgets to facilitate effective PA management.
- Few or no macro-economic and fiscal policies are in place to stimulate economic opportunities being created in or around the PAs.
- Resource use conflicts within a PA are high.
- Sufficient and suitable capacities are not available at the national level for training, awareness programs and for project management.
- PMS do not continue awareness program beyond life of project.

However, the OECS - OPAAL proposal generally provides ample mechanisms for addressing potential pitfalls, and mitigates their impacts on the project. Not surprisingly, the success of the project will depend to a great degree on the lasting commitment of PMSs. The long-term success of the project will also require identification and securing of adequate funds for continuation of the program. This will depend on continued commitment by all PMSs.

To the aforementioned risks may be added:
- Co-funding is not provided, or not provided in a timely manner.
- PMSs are not committed to establishing the necessary and appropriate institutional framework for biodiversity management in general and PAs in particular.
- Project financing is not available on a timely basis.
- PMSs are not committed to establishing fully functional and affectively managed PAs
- Local communities do not participate fully in the establishment and management of PAs.

***Response by the project team**: These addditional project risks have been added to the document.*

B. Key Issues

B. i Scientific and technical soundness of the project

Generally, the project brief is technically and scientifically sound; areas of possible deficiency or where some improvements may be made/clarifications provided, are mentioned below. Minor points of deficiency are mentioned at the end of this review.

Part B on "Strategic Context" should include an analysis of the Legal and Policy Baseline, and the Institutional Baseline – these are standard sections of GEF project briefs. This should summarize a more elaborate analysis, which should form one of the annexes to the Project Brief.

Part B.2, under Key Constraints, lists 'Inadequate legislation'. A Project Brief should be more precise/specific than stating that related to biodiversity these are 'obsolete' and 'do not provide a comprehensive framework' – especially as there is no legal analysis in the annexes, and improvement of legal and policy arrangements is one of the three objectives of the Project. Similarly, the policy gaps (in B.2) also should be more specifically identified – one example is provided, of 'the failure to incorporate environmental and social cost into economic decision-making' – a more thorough analysis should be included. None of the PMSs are a party to the Convention on Conservation of Migratory Species of Wild Animals (CMS), and only two (Dominica and St. Lucia) are a party to the Ramsar Convention. However, as these legal and policy issues will be addressed early during implementation, the reviewer does not find that this omission should stall the project.

***Response by the project team**: Legal and policy baseline and constraints. Much of the comments above on the root cause are relevant here. Given the limitation of project preparation resources and time available, the project has budgeted for national institutional reviews as a precursor step to promoting more coherent frameworks that will address biodiversity conservation under Component 1.*

B.2. under OECS Government Strategies: National Parks and Protected Area System Plans. Three of the PMSs have prepared PAS plans. Steps have been undertaken towards implementation, but it is unclear how many of the 98 PAs identified (and mentioned in Annex 6) have been legally gazetted so far.

***Response by the project team**: Annex 6 has been updated with the number of 98 PAs gazetted and an additional 9 PAs in the process of being created (see page 2 Annex 6).*

C. Project Description Summary

- Component 1. Protected Areas Policy, Legal and Institutional Arrangements. The Project should also strive to significantly increase PMS membership of international conservation treaties and conventions, most notably CMS, the Ramsar Convention, and CITES. Common membership may result in the need for common approaches and further strengthen the need for cooperation.

***Response by the project team**: C. Component 1.Project facilitation of PMS becoming signatories to international conventions. We discussed this at some length with the ESDU staff in St. Lucia. They felt that however warranted, this would create a significant additional demand on what is becoming an increasingly ambitious project; one that is to be implemented in 6 countries in a 5 year period. Moreover, the politics and timing of obtaining accession to international legal instruments in the Region are such that they did not feel comfortable in committing the institution to the number and timing of*

outputs that they felt would be very difficult to predict. This does not preclude using the project from promoting the achieving of this end (e.g., through the training sub-component). ESDU just does not commit itself to achieving specified outputs.

- 3 PMSs already have a PA system, and in a 4th PMS this is underway. Outputs under Component 1 should reflect this, and the indicators of achievement should be more nuanced, e.g. "harmonization of the PA systems in the four PMSs where a PA system exists or is well underway, and development of a PA system in the two remaining PMSs."
- Component 2. Linked with the previous point: if the verifiable indicator of achievement is to be 3 PAs legally constituted and functioning, the Project Brief should clearly identify what the baseline situation is regarding gazettal (i.e. how many are legally gazetted at present). Also, a readily verifiable indicator of achievement should be formulated instead of 'functioning'. E.g. XX protected areas are to be legally gazetted, be actively managed by an entity with a clear and formalized mandate, and not be subjected to further deterioration due to unsustainable use of natural resources. Similarly, Annex 1 states: 'At least 3 PAs created and/or strengthened by end of project (total ha)'; this is too loosely defined to be a verifiable indicator of achievement:
- Component 2. A baseline should be established of the current levels of livelihoods, in order to determine present income levels and assess if livelihood programs are having any effect. Simply implementing 3 livelihood programs does not automatically mean that livelihoods are improved, as is suggested in the Logframe (Annex 1). Also, even if a baseline exists so that one can assess any improvement in livelihoods, a verifiable indicator of achievement should be factual, e.g.: stating which % of the local community should achieve an increase in income by Y%.
- Component 3. Building Capacity for Biodiversity Conservation and PA Management. The Logframe (Annex 1) states as an indicator of achievement: "# of participants trained by end of project"; this should at least provide a target number of participants.
- C.3 Benefits and target populations. Globally significant species: should be more specific, and should be listed for the 6 sites under consideration, e.g. globally significant species such as the xxx and the yyy. Several endemic species … will be protected – these should also be named.

***Response by the project team**: <u>C. Components 1 – 3 – Indicators</u>. We have added indicators for both global biodiversity significance as well GEF required indicators as prescribed under the relevant Strategic Program for biodiversity.*

- C. 4 Project management. The Project Brief proposes that the Communications Specialist will work under supervision of the ETA manager of ESDU, and that the Administrative Assistant will work under the supervision of ESDU's CS manager. This may lead to the unsatisfactory situation whereby project staff have two parallel (and confusing) lines of coordination. It would be better to have a project office housed in ESDU, with both the Communications Specialist and the Administrative Assistant housed there and directly reporting to the Project Coordinator. The Communications Specialist should liaise closely with the ETA manager, but not be supervised by this person.

***Response by the project team**: <u>C.4 Project management</u>. Agreed, it has now been discussed, consensus reached, and reflected in the document that all project funded staff would report directly to the project coordinator to avoid confusion and inefficiencies.*

- E. Summary of Project Analysis.
- E.1. Incremental Cost Analysis. An overview/summary ICA matrix should be provided, based on Annex 4.

***Response by the project team**: This is now provided in the Incremental Cost Analysi (ref. E.1.).*

- E.2 Financial. This summary should provide an overview of which part of the requested funding is to be contributed by the various agencies (GEF, OECS Secretariat, OAS, FFEM etc….).

***Response by the project team**: A detailed breakdown of the financing plan has been provided.*

- E.5.1 summarizes potential environmental issues.
- E.5.4. refers to Annex 12, as the Project has been identified as a category B project, and EMP will be required, and is included in Annex 12, following World Bank OP. 4.01 guidelines (for EMPs). The 'EMP' included in Annex 12, however, is very brief and may not fully comply with OP 4.01. According to OP.4.01 an EMP is to a) identify the set of responses to potentially adverse impacts; b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and c) describe the means for meeting those requirements. It should therefore identify whom is to implement the various aspects of the EMP, when, and at which cost (where appropriate). In the revised Project Brief, this has been forwarded to the relevant World Bank department for review; if they have no objection, then this hurdle can be regarded as cleared

***Response by the project team**: E.5.4. EMP. We feel the annex meets the due diligence requirements of the Bank. However, this will be reviewed and cleared within the Bank before appraisal.*

B.ii Identification of the global environmental benefits and/or drawbacks of the Project

The potential global environmental benefits of the OECS – OPAAL Project are significant, but this needs further elaboration. Undoubtedly, the protection of key sites in the Eastern Caribbean ensures the survival of a large number of (often unique) species (either migratory or sedentary) and habitats (see A.i, above). There are no foreseeable drawbacks for the global environment, provided that mitigation measures outlined in Annex 12 (EMP) are followed.

***Response by the project team**: See above response to paragraph A.i..*

B.iii How the Project fits within the context of the goals of the GEF, as well as its operational strategies, program priorities, Council guidance and the provisions of the relevant conventions

The OECS – OPAAL is eligible for GEF assistance under OP-2 *Coastal, Marine & Freshwater Ecosystems*, and OP-3 *Forest Ecosystems* of the Convention on Biological Diversity. In line with OP-9 *Integrated Land and Water Multiple Focal Area Program,* the proposed project addresses the needs of small island developing states, recognizing the importance of freshwater basin-coastal zone management as essential for the sustainable future of small islands. All of the six OECS states requesting GEF assistance have signed and/or ratified the CBD: i.e. Antigua & Barbuda, Dominica, Grenada, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines.

B.iv Regional context

The proposed project has been designed in a truly regional context, with the six independent OECS Member States fully participating, and the remaining three (Anguilla, British Virgin Islands, and Montserrat – all British Dependent Territories) indirectly involved via the OECS secretariat. Activities will be carried out throughout the region, with demonstration Protected Area management programs being carried out in all six PMSs. The Project fits in well with the St. George Declaration of Principles for

Environmental Sustainability in the OECS, signed by the member states on 10th April 2001. This Declaration set the stage for active regional cooperation, and makes it feasible for implementing the project in a regional context, rather than on an individual state level.

From a regional conservation point of view, the project will contribute to the conservation of migratory species of water bird, and the conservation of wide ranging species such as marine turtles and dugong.

B.v Replicability of the Project

The project has been increased in scale and scope from one focusing entirely on St. Lucia (as was the case in 2000), to a project with a regional/OECS scope. This increase in scale goes hand-in-hand with increased opportunities for replication. Under component 2, PA management will be strengthened or created at at least 3 sites (out of 6 candidate sites in the preliminary selection) – in all likelihood for those three sites for which preparatory work has been completed: Pointe Sable National Park (St. Lucia), Tobago Cays Marine Park (St. Vincent & the Grenadines) and North Sound Islands National Park (Antigua/Barbuda). There are a total of 98 protected areas in the OECS and an additional 9 PAs that are in process of being created, together forming a significant pool of potential target areas. Provided that institutional and policy support provided under component 1, and the PA management capacity created under component 3 are effective, replication will mainly be an issue of financial resources available and allocated.

If successful, the project will have:
1. a supportive policy and legal environment for adequate protection of critical habitats and biodiversity in place;
2. created local capacity for managing protected areas, and local understanding and interest in conservation; and
3. adequately demonstrated that creation of local livelihoods can go hand-in-hand with protection of natural resources, rather than a (gradual) decline of these resources; in short, sustainable livelihoods will have been created and demonstrated.

Under these circumstances, a conducive environment for replication will have been created. On the whole, mechanisms for replication seem appropriate and adequate, and the associated risks are – or can be kept – acceptably low.

B.vi Sustainability of the Project

A number of financial and institutional mechanisms are incorporated in Project design, aimed at promoting sustainability of the Project.

Financial mechanisms

- At the OECS level, the project will address the needs of PAs for reliable and adequate sources of funding, as well as the need to provide funding for sustainable alternative livelihoods associated with the creation and management of these areas. This would involve a regional review and evaluation of the existing mechanisms for financing PAs in PMSs, including the identification and formulation of recommendations with respect to options that are appropriate in the OECS.
- At the national level, the project would support implementation of the aforementioned recommendations, through the following activities: (i) the preparation a Financial Strategy (and related business/marketing action plans) for each approved PA Management Plan; (ii) support for specific financial

and marketing studies for the long-term financial sustainability of the livelihood activities; and (iii) support to adapt draft legislation for the establishment of national mechanisms for sustainable financing of PAs.

- Increased visitation to the proposed areas. On-site project-supported investments (e.g., trail maintenance, visitor centers, interpretation facilities and information packets) will contribute to increased visitation levels. Accompanied by fee regularization, concessions and an improved tourist offer, visitation is expected to become a significant source of revenue for selected PAs;

Institutional mechanisms

- Improved institutional strength and capacity, achieved through project-funded training and created infrastructure will greatly improve stability and continuity of biodiversity conservation in the region.
- Institutional and legal reforms, as well as increased capacity due to improvements in information technology and training, will help institutionalize conservation activities and create a constituency within the public sector.
- The improved institutional framework for biodiversity conservation will streamline efforts and bring a new level of continuity, accountability, and order protected area declaration and management.
- Generation of broad constituent support. As indicated in the Project Brief, the existing constituency for conservation is well established throughout the region and has demonstrated considerable commitment to conservation in general, and protected areas in particular, for more than 25 years. This will be further consolidated by the Project.
- Empowering the already involved local populations will greatly assist long-term conservation efforts, consolidate a constituency for conservation efforts, assist in conflict resolution as well as monitoring and evaluation and lower overall management costs.

On the whole, these mechanisms for sustainability should be sufficient to ensure that the achievements of the OECS-PA&ASL Project do not whither after completion of the GEF funded intervention. Indeed, sufficient mechanisms are in place to ensure that essential components will continue as long as required.

C. Secondary Issues

C.1 Linkages to other focal areas

The OESC – OPAAL project is consistent with the provisions of the Convention on Biological Diversity (CBD) and with the GEF Operational Strategy, and specifically with its Operational Programs (OP) for Coastal, Marine and Freshwater Ecosystems (OP 2), and Forest Ecosystems (OP 3) in the Biodiversity Focal Area. In addressing the needs of Small Island Developing States (SIDS), the project is also consistent with the Integrated Land and Water Multiple Focal Area Program (OP 9), which recognizes the importance of integrated freshwater basin-coastal zone management as essential for the sustainable future of small islands. Depending on the final selection of PAs, the project could address all six major issues identified in OP 9 facing SIDS. These are: (i) coastal area biodiversity management; (ii) sustainable management of regional fish stocks; (iii) rational tourism development; (iv) protection of water supplies; (v) management of land and marine based sources of pollution; and (vi) vulnerability to climate change.

Of the other main focal areas (mitigation of greenhouse gas emission/climate change, international waters, ozone depletion, POPs), the Project is weakly linked to:

Climate change

- in a positive way, by slowing/preventing habitat conversion and maintaining plant biomass (carbon sequestration in natural vegetation), and
- in a slightly negative way, by means of methane emissions from (protected) wetlands.

International waters
- in a positive way, as these coastal wetland areas are (regionally) linked via the migration of waterbirds (and some areas also by migration of marine turtles).

C.ii Linkages to other programs and action plans at regional or sub-regional level

The OECS – OPAAL Project is well linked with the *St. George Declaration of Principles for Environmental Sustainability in the OECS*, signed by the member states on 10th April 2001. This St. George's Declaration set the stage for active regional cooperation in the field of sustainable management of the environment, and makes it feasible for implementing the project in a regional context, rather than on an individual state level.

The Project will build upon the OECS Environmental Management Strategy, which was completed in March 2002, and endorsed by the OECS EPC in July 2002. This strategy paves the way for institutional reform required for effective PA management.

In addition, the Project is linked to, or takes on board [where they have been formulated in the 6 PMSs]:
- National Environmental Profiles,
- National Wetland Policies,
- National Biodiversity Strategy Action Plans,
- National Environmental Action Plans
- National Parks and Protected Areas System Plans [3 of which have been prepared]

C.iii Other beneficial or damaging environmental effects

Implementation of the Protected Areas and Associated Sustainable Livelihoods project will serve to strengthen the *St. George Declaration of Principles for Environmental Sustainability in the OECS*, which was only recently signed (10th April 2001). Practical actions implemented jointly in the region and contributing to environmental sustainability may strengthen the resolve to use the St. George Declaration as a vehicle for positive change. Similarly, the project will also have a positive effect on the implementation of NBSAPs, NEAPs and National Wetland Action Plans (where they have been drafted), and the drafting of such policy instruments (where required).

The Project will primarily have (overwhelmingly) beneficial environmental affects, but one area where environmental damage may be inflicted is in the investment in sustainable livelihoods creation. Where the latter are (directly) based on extraction of natural resources (e.g. fish or shellfish), or other forms of intensive use (e.g. reef visitation by tourists), guidelines need to be established at a very early stage (e.g. in the inception phase of the project, or when alternative livelihoods are still being identified/formulated) to prevent unsustainable resource use. This approach is addressed in, and endorsed by the EMP (contained in Annex 12).

C.iv Degree of involvement of stakeholders in the Project

The original project proposal developed by the St. Lucia National Trust (in May 2002) focused only on St. Lucia and was developed through a series of consultations over three years involving local and national St. Lucian stakeholders. After the project was transformed into a regional project, a regional workshop was held in November 2002. At the latter, a comprehensive matrix of critical stakeholders representing local, national and regional protected area interests was developed which served to guide subsequent consultations. These were held via a series of workshops, meetings, consultations and field visits carried out from November 2002 through October 2003.

The project is largely stakeholder driven, and a large degree of stakeholder involvement is therefore anticipated. This is especially the case on Component 2 Protected Areas Management and Associated Alternative and New Livelihoods, which accounts for almost 47 % of the total budget. The approaches to be used by OECS – OPAAL include stakeholder analysis and social assessments to be carried out to prepare new PA sites to be developed under the project; participatory development of local action plans for each PA to help determine local priorities for activities that might be eligible for financing under the project that could include among others, opportunities for support for alternative livelihood subprojects, technical assistance, training opportunities and involvement in PA co-management plans.

C.v Capacity building aspects

The proponents of the OECS – OPAAL Project recognize that capacity building is central to its success, and have dealt with this accordingly in project design. Capacity building is a major part of Components 2, whereby training is provided: i) to achieve on-the-ground effective management of protected areas, and ii) where this is required for achieving sustainable livelihoods (e.g. vocational training). Components 1 and 3 consists entirely of several capacity building programs aimed at achieving policy, legislative and institutional reform, and incorporating education, awareness and training programs.

Component 2 on Protected Areas Management and Associated Alternative and New Livelihoods development is essentially a capacity building program, that has various forms of training at its core, including training for specific (PA) on-site needs, training in sustainable financial household management for sustainable livelihood beneficiaries, and alternative livelihoods training. In addition, the development of management plans, assistance with site inventories, demarcation and mapping of the PAs, and the establishment of biodiversity baselines also constitute capacity building as these will be carried out together with beneficiaries.

Component 3 on “Building Capacity for Biodiversity Conservation and PA Management and Increasing Environmental Awareness” is entirely focused on capacity building, both within administrations and PA staff, and among local communities. Activities under Component 3 include i) completion of a national and regional training needs assessment; (ii) the design and implementation of regional and national training program(s) in protected area management and sustainable livelihoods; and (iii) the design and implementation of national public awareness strategies and country-specific action plans.

C.vi Innovativeness of the Project

In the East Caribbean region, the project is highly innovative by being the first one aimed at creating a standardized and vastly improved approach to biodiversity conservation and protected area management. The Project is therefore highly strategic, building upon the recently signed (10th April 2001) St. George Declaration on the sustainable environment. It is important that practical actions and activities such as envisaged under the OECS – OPAAL project are implemented soon, so that the process of positive change does not lose momentum.

D. Minor changes suggested for improvement of the OECS – OPAAL proposal

- Many sections are still marked TBD and have yet to be finalized.
- B.2 NEAPs. (p.5). How many PMSs have produced a NEAP?
- B.2 National Parks and Protected Area System Plans. Mention that there are a total of 98 protected areas in the OECS and an additional 9 PAs that are in process of being created
- B.2 The existence of an OECS Solid and Ship Generated Waste Management Project is likely to mean that at least some of the marine pollution and damage to coastal ecosystems is related to shipping (e.g. oil spills etc..). These are not listed anywhere.
- C.1 still states "Garry to work on".
- Figure 1. NIE in box should read NICE
- D.1 Costal = Coastal (in title: Integrating Watersheds and *Coastal* Area Management Project)
- D.2 states "Garry to send".

***Response by the project team**: <u>Minor changes</u>. Addressed (except for sections to be determined that are for internal Bank processing) and are not required to be submitted to GEF at this stage of Work Program Submission.*

Ulft, the Netherlands,
14th December 2003

Additional GEF Annex 6: PA Selection Criteria and Site Profiles
OECS COUNTRIES: OECS Protected Areas and Associated Alternative Livelihood

Introduction

Regional Biodiversity Endowment

The Eastern Caribbean region is endowed with a rich biodiversity which, partly due to its isolation within the Caribbean Sea, has resulted in relatively high rates of national and regional endemism.[15] The rates of endemism varies in the region varies with island topography. In small islands (e.g. in the North Sound Islands of Antigua), where species are particularly vulnerable to natural disasters, land-use changes and invasive species, there is less diversity relative to the larger, less vulnerable islands. In contrast, Dominica has the most diverse wildlife remaining in the Eastern Caribbean with relatively high levels of endemism due to its tremendous terrestrial and marine biodiversity, high level of forest cover, and unique ecosystems including 8 active volcanoes and the only boiling lake in the Western Hemisphere. Indicators of relative biodiversity significance can be found in Matrices 1a and 1b below for selected (reported) vertebrates and flora.

The Region also serves as an important link in the seasonal migrations of many birds. In the autumn months, a wide range of thrushes, vireos, cuckoos and warblers migrate through the Eastern Caribbean in large numbers. One species, the Blackpoll Warbler is unique in that the total population is believed to use the area for stop-over sites during autumn. The Region also contains significant breeding sites for approximately 25 species of seabirds, many of which are endemic species or sub-species.

Islands in the Eastern Caribbean archipelago are also important for marine turtles which move from summer to winter nesting and feeding grounds. This includes such rare fauna as the green turtle (*Chelonia mydas*), hawksbill turtle (*Eretmochelys imbricate),* the leather back turtle (*Dermochelys coriacea*), and wood tortoise (*Geochelone carbonaria*).

One recent survey of the world's biodiversity hotspots identified the Caribbean as the fifth ranking "hotspot" and one of the highest priorities in any global strategy for biodiversity conservation and sustainable management.[16] In a second study based on faunal distributions, the Eastern Caribbean region was classified as a unique marine ecoregion of the tropical north-western Atlantic province and ranked as the highest priority within the province, in terms of its conservation status (most threatened).[17]

The principal ecosystems characterizing the Eastern Caribbean are dry and humid tropical forests, wetlands and tidal flats, sandy and rocky beaches, coral reefs, seagrass beds, mangroves, offshore islets, as well as extensive karst and volcanic areas with their respective, distinct biodiversity associations. The reef, seagrass and mangrove systems of this area are recognized as some of the most productive in the world.[18]

Threats, Casual Factors and Constraints affecting the Conservation of Biodiversity in the OECS Region

Despite the significance of the region's biodiversity endowment, there have been reductions in both its quantity and quality over historical time. Much of the terrestrial landscape in the Lesser Antilles has been heavily modified particularly in the "low" islands (e.g., Antigua and Barbuda). As a result, much of the rural area is dominated by grasslands and savanna sub-types derived from anthropomorphic influences; mainly clearing for sugar cane production and the direct harvesting of forests for production of wood and charcoal. In contrast, secondary forests predominate at mid-elevations in the "high" islands and the only

remaining primary forest ecosystems that are undisturbed are confined to the relative higher and inaccessible elevations (e.g, in Dominica). Similarly, many of the region's highly productive offshore ecosystems are coming under increasing pressure from a variety of sources.

The major threats to biodiversity in the OECS Region are: (i) loss of habitat, (ii) direct loss and/or change to biodiversity, (iii) changes in water quality, (iv) conflicts and resulting changes to water quantity, and (v) increased erosion and sedimentation processes. The relevance of each of these threats to the Region's major habitats is presented below (Matrix 2).

The major causal factors contributing to these threats are: (i) poorly-planned development, (ii) inappropriate agricultural practices, (iii) untreated industrial/urban effluents, (iv) non-sustainable exploitation of natural resources, (v) illegal hunting, (vi) unmanaged growth in tourism, and (vii) the introduction of exotic species (Matrix 3).

A constraints analysis to any effort attempting to address and resolve one or more of these underlying root causes identified the following factors: (i) an inadequate policy/legal framework, (ii) weak institutions, (iii) lax enforcement of existing laws, (iv) weak inter-sectoral co-ordination, (v) low public awareness and support for biodiversity conservation, (vi) information and data gaps, (vii) funding constraints, (viii) limited community participation, (ix) insecure/unclear land tenure, and (x) lack of alternative livelihoods to existing, mostly extractive, sources of income (Matrix 4).

Matrix 5 shows the relationship between proposed project components/activities and the aforementioned constraints.

[15]For example, in St. Vincent alone, there are 26 endemics with 1 of these now extinct. In St. Lucia alone, this rich biological diversity is illustrated by its 1,300 known species of plants, 14 of which are endemic; over 150 birds (5 endemic); 21 species of herpetofauna (5 endemic), several invertebrates and a few mammals. Additionally, 250 reef fish species and 50 coral species have been recorded for the island. Grenada's dry forest is the primary habitat to the endemic Grenada Dove (*Leptotila wellsi*).

[16]Conservation International, 2003. State of the Hotspots (Conservation International, Washington, D.C.).

[17]Sullivan, K., et. al., 1999 Setting Geographic Priorities for Marine Conservation in Latin America and the Caribbean (The Nature Conservancy, Arlington, Virginia).

[18]Kelleher, G., et. al., 1996. A Global Representative System of Marine Protected Areas, Volume 11,(CNPPA, Switzerland).

Institutional Framework

There is a varied history in the region to the establishment of protected areas (PAs). In Dominica, a system of national parks was created as early as 1975 that has now been expanded to cover in excess of 20 % of the total land areas. This system includes 2 national parks and 2 forest reserves (Table 1). In St. Lucia, a national plan for a system of PAs was developed in 1992 but was never formerly adopted. In. St. Vincent & the Grenadines, an effort was recently launched which will result in the development of a national system plan. Despite being identified as priorities in the respective Participating Member States (PMS') national Biodiversity Strategic Action Plans, PA System Plans still do not exist in Antigua & Barbuda, Grenada, or St. Kitts & Nevis.

There are however, 98 gazetted protected areas in the OECS and an additional 9 PAs that are in process of being created (Table 1). Of these, 32 were created through two pieces of legislation in St. Vincent and the Grenadines. Of the total PAs, 8 and 15 are national parks and forest reserves, respectively. There are 45 marine protected areas divided among 4 designation categories.[19] The majority of these marine protected areas however are not demarcated and do not have management plans.

[19]It appears that there is no uniformity between marine PA designation and management objectives in the region.Wednesday, 28 January 2004

Table 1. Numbers of Protected Areas by Category in the OECS Region

	Country						
PA Designation	**Antigua/Barbuda**	**Dominica**	**Grenada**	**St. Kitts /Nevis**	**St. Lucia**	**St. Vincent/the Grenadines**	**Total**
National Parks	1	3	2	1	1	-	8
Forest Reserves	-	2	2	-	10	1	15
Marine Reserves	3	1	-	-	27	-	31
Marine Parks	-	1[3]	-	-		-	1
Marine Conservation Areas	-	-	-	-	-	9	9
Marine Management Area	-	-	2	-	2	-	4
Wildlife Sanctuary	-	1	1	-	-	-	2
Wildlife Reserve	-	-	-	-	-	23	23
Nature Reserve	-	-	-	-	3	-	3
Other	-	-	-	-	2	-	2
Non-declared PA[1]	1[2]	-	4	2[4]	2[5]	-	9
Totals	5	8	11	3	47	33	107

1/In Cabinet, waiting to be gazetted, etc.
2/Wallings Forest Reserve.
3/Marine park as part of Cabrits National Park.
4/Central Forest Reserve and Southeast Peninsula Conservation Area.
5/Praslin Protected Landscape and Pointe Sable National Park.

An analysis of the major ecosystems represented in existing and proposed protected areas in the region reveal that there are fewer terrestrial ecosystems represented relative to their coastal/marine counterparts, particularly dry tropical forest. In part, this is due to land scarcity and tenure issues characteristic of the Eastern Caribbean. Offshore cays appear to be the least represented "marine" ecosystem. St. Kitts/Nevis followed by Antigua/Barbuda are notable among the 6 PMS for their relatively few PA and absence of ecosystem diversity in existing protected areas.

Table 2. Major Ecosystems Represented in Existing National Protected Area Systems

Country	**Antigua/ Barbuda**	**Dominica**	**Grenada**	**St. Kitts /Nevis**	**St. Lucia**	**St. Vincent & the Grenadines**
Ecosystem						
Dry tropical forest	-	x	x	-	x	-
Humid tropical forest	-	x	x	x	x	x
Freshwater systems						
Wetlands and tidal flats	-	x	-	-	x	x
Sandy beaches	x	x	x	-	x	x
Rocky coasts	-	x	x	-	x	-
Mangroves	x	x	x	-	x	x
Coral reefs	x	x	x	-	x	x
Seagrass beds	x	x	x	-	x	x
Offshore cays	-	-	-	-	x	x

The existence and substance of PA-related legislation varies throughout the region. In all cases, protected areas have been created through Forestry and Fisheries enabling legislation (St. Kitts/Nevis is the exception

where there is no Forestry Act). However, there appears to be a trend to draft more comprehensive PA legislation. In Dominica, there is a specific Parks and PA Act (1975) which permits the Ministry of Agriculture (MOA) to set aside lands as protected areas and the creation of a National Park Services and a National Park Advisory Council. In 2001, St. Vincent & the Grenadines' National Parks, Beaches, and Rivers Authority Act made provision for the creation of a unit to create and administer national parks. More recently, changes in Antigua's National Parks Authority is likely to result in an expansion and diversification of its mandate to include natural PA to complement its existing historical - cultural areas.

Similarly, institutional responsibility for biodiversity management and conservation is dispersed among a number of institutions depending on the approach adopted by the PMSs (Table 3). One approach uses existing sectoral legislation to declare PAs. Responsibilities are typically divided between the Departments of Fisheries (marine protected areas) and Forestry (forest reserves and wildlife management), often housed in a single ministry (e.g., Agriculture). A recent FAO-assisted project resulted in the harmonization of fisheries legislation in the region, which provides for the creation of marine reserves. Another model common in the region consists of national park "units" typically housed in mainline ministries such as Tourism or Health and Environment (e.g., Antigua & Barbuda, Dominica, and St. Vincent & the Grenadines). A third model is based on the creation of a number of statutory bodies (Trusts) established to create and/or administer one or more PAs, created to preserve the historical or natural heritage of the country (e.g., Nevis Historical and Conservation Society). These exist in Dominica, St. Kitts/Nevis, St. Lucia, and St. Vincent & the Grenadines. Typically, they are empowered to raise funds, acquire property and make regulations governing the use of the properties they hold in "trust" for the nation. In several cases, more than one model prevails in a country often resulting in overlapping mandates and institutional inefficiencies.

Table 3. Institutional Arrangements to Manage PA in PMSs

Country	National Park Authority	Mainline Technical Agencies				National Trust
		Forestry	Fisheries	Environment	Other	
Antigua & Barbuda	x	x	x	-	-	-
Dominica	x	x	x	-	-	x[1]
Grenada	-	x	x	-	-	-
St. Kitts & Nevis	-	-	x	x	-	x[2]
St. Lucia	-	x	x	-	-	x
St. Vincent & Grenadines	x	x	x	-	x[3]	

1Only for Cabrits NP.
2Only for Brimstone Hill Fortress NP (historical cultural site).
3Stautory Authority created only for Tobago Cays NP.

Project Site Selection Criteria and Methodology

Initial criteria for selection of sites were developed during a regional project preparation workshop of PMSs in November 2002 (Attachment 1). Following the workshop, these criteria were reviewed and adapted to local circumstances in follow-up discussions between workshop participants and representatives from their respective national agencies. Based on PMS-specific PA selection criteria and complementary guidance provided by OECS ESDU, national PMS working groups identified one or more candidate sites. Due to the relatively few number of potential sites per PMS, no attempt was made to use these criteria to quantify potential sites for purposes of ranking. Initial site selection was followed by joint national - OECS ESDU staff site visits and stakeholder consultations to confirm that the proposed sites represented both national priorities and would qualify for GEF funding.

As a consequence of weak national institutional capacities in many of the PMSs, only three sites were fully prepared for the Project Brief.. These are: North Sound Islands National Park (Antigua/Barbuda), Pointe Sable National Park (St. Lucia), and Tobago Cays Marine Park (St. Vincent & the Grenadines). In the case of St. Lucia, 3 proposed sites were initially identified (Grand Anse National Park, Praslin Protected Landscape, and Pointe Sable National Park). This was facilitated through The Nature Conservancy Site Conservation Planning methodology (see document file). As part of the process, there was a 4-day expert's workshop hosted by the St. Lucia National Trust. Following the transformation of the project from a national to a regional project, at the WB's request, one site was eliminated (Grand Anse NP). In a subsequent October 2003 consultation with the country's national steering committee, it was also decided to eliminate the proposed Praslin National Landmark as well due to the likelihoods that the land owners were likely to sell the property to development concerns. These three sites have been described and project-supported interventions identified and costed below. Based on the findings of the aforementioned site visits, profiles of the remaining PMS sites were developed (see Attachment 2). Final site selection and sub-project preparation for the latter sites will depend on the progress achieved in building national capacity in the project's first years of implementation together with further expressions of interest from PMSs supporting their respective sites. A list of major ecosystems characteristic of the proposed project protected areas and selected indicators of global biodiversity significance in the three pre-selected PAs are provided in Tables 4 and 5 respectively, below.

Table 4. Major Ecosystems Represented in the Proposed PA

Country	**Antigua/ Barbuda**1	**Dominica**	**Grenada**	**St. Kitts /Nevis**	**St. Lucia1**	**St. Vincent & the Grenadines** 1
Protected Area	**North Sound Islands**2	**Cabrits NP**	**NE Coast Archipelago MPA**	**Central FR**	**Pointe Sable NP**2	**Tobago Cays NP**
Ecosystem						
Dry tropical forest	x	x			**x**	
Humid tropical forest				x		**x**
Freshwater Systems						
Wetlands and tidal flats		x				**x**
Sandy beaches	x		x		**x**	**x**
Rocky coasts	x	x	x		**x**	
Mangroves	x	x			**x**	**x**
Coral reefs	x	x	x		**x**	**x**
Seagrass beds	x	x	x		**x**	**x**
Offshore islets	x		x		**x**	**x**

[1]To be supported in the initial phase of project implementation.
MR –marine reserve

[2]To be created.

Key:
NP – national park
MPA – marine protected area
FR – forestry reserve
PL – protected landscape

Table 5. Selected Indicators of Global Biodiversity Significance (reported) in Three Pre-selected PAs.

Pre-selected sites	Threatened, rare and endangered species	Migratory species	Insular Endemics
North Sound Islands NP (Antigua & Barbuda)	hawksbill turtle (*Eretmochelys imbricata*) leatherback turtle *(Dermochelys coriaces)* West Indian whistling duck (*Dendrocygna arborea*). Zenaida dove (*Zenaida aurita*) brown pelican (*Pelecanus occidentalis*	red-billed tropic bird (*Phaethon aethereus*) Pieridae (whites and sulphurs) Hesperiidae (skippers). brown booby (*Sula leucogaster*) laughing gull (*Larus atricilla*) magnificent frigatebird (*Fregata magnificens*) sooty tern (*Sterna fuscata*)	**worm snake (*Typhlops monastus*)**[1] **Antiguan Racer (*Alsophis antiguae*)**[1] **Watts' anole (*Anolis wattsi*)** **Spotted anole (*Anolis bimaculatus*) subspecies *leachi*** **Antiguan ground lizard (*Ameiva griswoldi*** Indigenous to the protected area.**)** **Antiguan dwarf gecko (S*phaerodactylus elegantulus)***
Point Sable NP (St. Lucia)	hawksbill turtle (*Eretmochelys imbricata*) leatherback turtle *(Dermochelys coriaces)* West Indian whistling duck (*Dendrocygna arborea*). Zenaida dove (*Zenaida aurita*) brown pelican (*Pelecanus occidentalis*	green turtle *(Chelonia mydas)*	**St. Lucia Racer snake (*Liophis ornatus*)** Maria Islands ground lizard (*Cnemidophorus vanzoi*) St. Lucia pigmy gecko (*Sphaerodactylus micropleis*) tree lizard (*Anolis luciae*) fer-de-lance snake (*Bothrops caribbaeus*)
Tobago Cays MP (St. Vincent and the Grenadines)	iguana (*Iguana iguana*, red-necked pigeon (*Colomba squamosa*) hawksbill turtle (*Eretmochelys imbricata*) leatherback turtle *(Dermochelys coriaces)*	Zenaida dove (*Zenaida aurita)* sea gulls (*Larus sp.)* frigate bird (*Fregata spp)* brown pelican (*Pelecanus occidentalis*) brown booby (*Sula leucogaster*) bridled tern (*Sterna antillarum*) red-billed tropicbird (*Phaeton aethereus*) sooty tern (*Sterna fuscata*) common tern (*Sterna hirundo*).	
Totals	6	10 +	11

[1] Indigenous to the protected areas.

Selected Protected Area Profiles

Detailed descriptions of the proposed sites are provided in Attachment 2.

Antigua/Barbuda: North Sound Islands National Park

The North Sound Islands National Park (NSINP) is located just off the northeast coast of Antigua and comprises a cluster of limestone islets with associated coastal and marine ecosystems that include mangroves, coral reefs, seagrass beds, rocky shores, sandy beaches, coastal and dry scrubland vegetation (Map 1).

The 3,100 ha area supports numerous endemic and globally threatened species that include the critically endangered Antigua Racer Snake (*Alsophis antiguae*), marine turtles and other sea birds. These islands are considered the last retreat for some species that formerly existed on the mainland of Antigua.

The area serves to support important livelihood activities in the surrounding communities of Seatons,

Parham, Willikies and Glanvilles villages. These include artisanal fishing, educational tours and water-based tourism activities such as yachting, diving or beach recreation activities. Recreational visitation in the area alone is estimated to account for over 20,000 people per year.

The 30 plus publicly owned islands are uninhabited, but current uses of the fragile resources in the area are threatened in large part by hurricanes, infestation by rats and the Asian mongoose in addition to the unmanaged/uncontrolled fishing and aforementioned visitor use. The area is currently in the process of being declared a marine park under the National Parks Act (Cap 290) and will be managed by the country's National Park's Authority.

The project will support the revision and updating of an earlier OAS (see project files) which will include zoning, development of a user fee structure, implementation of environmental management and monitoring protocols for the area and implementation of collaborative strategies with neighboring communities. Investments to be supported under the project include: (i) the installation of demarcation buoys to delineate the park boundary; (ii) purchase of a suitable boat and 4X4 truck to support park staff logistics; and (iii) purchase and installation of radio communication equipment to assist in data collection, security of park staff and support enforcement of park rules. In addition, the National Parks Authority with the Environmental Awareness Group, a small NGO, will require continuing support for on-going research and educational activities.

St. Lucia: Pointe Sable National Park

The proposed Pointe Sable National Park (PSNP is located in the southeast of St. Lucia between Savannes Bay and Mathurin Point (Map 2). The proposed 250 hectare National Park encompasses four coastal ecosystem types; coral reefs (the country's longest fringing coral reef), mangroves (including the largest remaining stand of coastal mangrove forest in St. Lucia), sea grass beds, and 3 offshore islands (the Maria Islands, and Scorpion Island in Savannes Bay); *in toto*, a representative sample of tropical Caribbean island coastal ecosystems in a relatively intact state. An overall management strategy would consolidate several existing PA (i.e., 5 marine and nature reserves, a recently declared RAMSAR site at the Mankoté mangrove, historic sites and a national landmark with other as yet undeclared natural and historic sites) into one management unit.

This designation would protect the habitats of 5 endemic species of herpetofauna. One of these, the St. Lucia Racer (*Liophis ornatus*) is found only in the Maria Islands.

Permanent human population within the park area is negligible, but there are six human settlements adjacent to the proposed PA with a total population exceeding 2,100. There is also an international airport and small-scale industry in proximity to PSNP. The primary economic activities in these communities are agriculture and charcoal production. However, between 39 and 45% of the work force is unemployed or inactive. The surrounding area is used for tourism-related activities that include hotel development, nature recreation, and various forms of marine recreational activity uses such as wind surfing and pleasure boating. While these activities provide economic opportunities, they also combine to impose considerable pressure on the natural resource base if not adequately managed. Major threats include: over-fishing, infrastructure development, solid waste, and reef siltation. Of special concern are the destruction of coral reefs and mangroves, coastal erosion, and deforestation, all of which would be exacerbated by on-going and proposed development within and near the park boundaries.

There has been considerable conservation work in this area since 1981, and it is widely regarded as one of the best-managed areas on the island. Some surrounding communities have spearheaded ecotourism efforts

with incipient infrastructure development (bird watching tower and trails) and guided tours in the community-managed Mankoté mangrove in order to supplement the income of the charcoal producers. Visitation, while minimal at present, would likely increase significantly after designation of the area as a National Park supported by promotional activities to be undertaken under the project. This will reduce pressure on other areas such as reef dive sites and increase local community revenues by providing recreational alternatives in new areas.

Infrastructure investments to be supported under the project include: (i) the renovation of a building located on Pointe Sable Beach belonging to the St. Lucia National trust to be used as a park headquarters and an interpretation centre; (ii) development of trails between the Savannes Bay area and the park headquarters; (iii) construction of a jetty to facilitate visitor access to the offshore islands of Maria Island Nature Reserve; and (iv) construction of a boardwalk in the Mankoté mangrove. In addition, the following equipment will be purchased by the project: (i) a dingy and 4X4 truck, (ii) SCUBA gear for park staff; and (iii) communication equipment for park HQ and staff/wardens.

St. Vincent & the Grenadines: Tobago Cays Marine Park

Tobago Cays Marine Park (TCMP) is an archipelago comprised of five small uninhabited, islands (Petit Rameau, Petit Bateau, Baradal, Petit Tobac and Jamesby) located in the Southern Grenadines (Map 3). The park consists of a 1,400 ha sand-bottomed lagoon, which encompasses four uninhabited cays and the 4 km Horseshoe Reef. While the Cays are uninhabited, they are surrounded by the three larger inhabited islands of Union Island, Mayreau and Canouan.

The most extensive and well-developed coral reef complexes in SVG occur on shallow shelves around the windward sides of Mayreau and Union Islands and the Cays, themselves. In addition, principal vegetation types include beach vegetation and dry forest. With the exception of a small mangrove in Petit Rameau and salt pond in Mayreau, there are no wetlands in the Cays.

Major users of the area include: cruise ships (an estimated 50,000 visitors each year of which 10,000 visit the Cays); yachts (an estimated 3,000 yachts anchor in the lagoon each year); day charters (from nearby hotels); sport divers and snorklers; and fishers.

Despite being described in various sources as one of the largest remaining pristine coral reefs groups in the Windward Islands, there is growing evidence that this ecosystem is being affected by non-sustainable use and natural environmental impacts. Significant sources of "natural" threats to corals are storm damage and white band disease and bleaching. Key human induced impacts include: (i) overfishing attributed to both local fishermen and visiting yachts (particularly in the use of spear guns); (ii) physical impacts associated with visiting yachts (anchor damage and running aground); (iii) snorkling and diving; and (iv) bilge and wastewater discharge from yachts. Visitation is difficult to control due to the number of boats (many of which are under an international flag) exacerbated by the absence of regular coast guard patrols. Major stakeholder groups include "boat boys" (locals who service the visiting yachts); diver and hotel operators; and the fishers. There appears to be a growing perception among many of the locals that despite the increasing number of tourists and the presence of a world-class resource, they are not benefiting from the development of the area.

The area has tremendous potential for revenue generation from the various yachts, day charters and cruise ships visitors, which will allow for the future sustainable management of the PA. In addition, it could support activities such as scientific study and research, medicinal research, eco-tourism (land based and underwater tours), mariculture of lobster and conch, and sanctuaries for threatened and endangered species.

Existing park infrastructure and equipment includes: an administrative office, two boats (both in need of repair), and installed marker and mooring buoys. A draft management plan exists which was based on an early 1980s effort supported by the Organization of American States (OAS) which is in need of updating. Despite its creation, the exact boundaries of the park have yet to be defined. Existing legislation also needs to be regulated.

Specifically, support provided through OPAAL would be used to: (i) rehabilitate and equip the park administration office; (ii) equip a small marine interpretation center in neighboring Mayreau managed by a small NGO which overlooks the Tobago Cays; (iii) rehabilitate existing and install new marker and mooring buoys; (iv) place two toilets on one of the Cays for vendors and day visitors; (v) purchase two boat and motors to support ranger patrol and monitoring of the area; (vi) equip park staff (uniforms, SCUBA, radios, safety gear, etc.); (vii) support a number of training workshops in both Union Island and Mayreau; (viii) update the management plan; and (ix) develop park related information material (including a webpage and brochure).

Sub-component Budget (see Attachment 3 for more detail)

Table 5a: Estimated Costs for North Sound Islands (Antigua and Barbuda)

I. Investment Costs	**Total**	**Unit Cost (US$)**	**Total Cost (US$)**
Infrastructure			**46,200**
Vehicles and equipment			**52,950**
Training and workshops.			**33,400**
Technical assistance			**15,000**
Total Investment Costs			**147,550**
II. Recurrent Costs			
Salaries			**-**
Field allowances			**-**
Travel			**-**
O&M			
vehicles			**72,500**
communication equipment			**2,500**
other operating costs			**56,000**
Total Recurrent Costs			**131,000**
Total			**328,550**

Table 5b: Investment Costs for Pointe Sable National Park (St. Lucia)

I. Investment Costs	**Total**	**Unit Cost (US$)**	**Total Cost (US$)**
Infrastructure			**110,050**
Vehicles and equipment			**37,500**
Training and workshops.			**20,000**
Technical assistance			**10,000**
Total Investment Costs			**177,550**
II. Recurrent Costs			
Salaries			**-**
Field allowances			**-**
Travel			**-**
O&M			
vehicles			**48,000**
communication equipment			**2,500**

other operating costs			**56,000**
Total Recurrent Costs			**106,500**
Total			**284,050**

Table 5c: Estimated Costs for Tobago Cays Marine Park (St. Vincent & the Grenadines)

I. Investment Costs	**Total**	**Unit Cost (US$)**	**Total Cost (US$)**
Infrastructure			**51,450**
Vehicles and equipment			**97,650**
Training and workshops.			**26,000**
Technical assistance			**41,800**
Total Investment Costs			**216,900**
II. Recurrent Costs			
Salaries			-
Field allowances			-
Travel			**5,000**
O&M			
vehicles			**80,000**
communication equipment			**6,000**
other operating costs			**62,500**
Total Recurrent Costs			**150,500**
Total			**367,400**

Matrix. 1a Selected Vertebrate Indicators (reported) of Biodiversity Significance of OECS PMS

Country	**Total Species**	**Endemic Species**	
		Regional[4]	**Insular**
Antigua & Barbuda[1]			
Selected vertebrate species			
amphibians	2	1	
reptiles[2]	19	-	-
birds	182	8	6
mammals[3,9]	14	2	-
			-
Dominica			
Selected vertebrate species			
amphibians	4	2	-
reptiles[6]	19	6	2
birds	175	13	2
mammals[7,9]	23	4	-
Grenada			
Selected vertebrate species			
amphibians	4	4	1
reptiles[6]	17	3	2
birds	150	9	1
mammals[3,9]	22	-	0
St. Kitts & Nevis			
Selected vertebrate species			1
amphibians	4	4	0
reptiles[2]	12	-	1
birds	77	-	0
	12	5	

mammals[8,9]			
St. Lucia			
Selected vertebrate species			0
amphibians	4	-	5
reptiles[6]	21	3	6
birds	150+	12	0
mammals[3,9]	9	3	
St. Vincent & the Grenadines			1
Selected vertebrate species			3
amphibians	4	-	3
reptiles[6]	16	3	-
birds	153	9	**34**
mammals[3,9]	16	3	
Total Insular Endemics			

1Antigua only.
2Includes 3 marine reptiles 6Includes 4 marine reptiles
3Includes 7 marine mammals 7Includes 11 marine mammals
4Includes Lesser Antilles only8Includes 5 marine mammals
5CR(critically endangered);EN (endangered);VU(vulnerable);LR/NT (low risk/near threatened)
9Introduced mammal species not included

Matrix. 1b. Selected Flora Indicators (reported) of Biodiversity Significance of OECS PMS

Country	Endemics	Threatened
Antigua & Barbuda	1	3
Dominica	-	3
Grenada	6	5
St. Kitts & Nevis	-	3
St. Lucia	10	9
St. Vincent & the Grenadines	6	8
Totals	23	31

Matrix 2. Key Threats to Major Habitats in OECS Region

Analysis Summary	Selected Critical Habitat Characteristic of the OECS Region									
	Dry tropical forest	Humid tropical forest	Freshwater Systems	Wetlands & tidal flats	Sandy beaches	Rocky coasts	Man-groves	Coral reefs	Seagrass beds	Offshore islets
Key Threats										
- habitat loss	x	x	x	x	x	x	x	x	x	-
- direct loss/change in biodiversity	x	x	x	x	x	x	x	x	x	x
- changes in water quality	-	-	x	x	-	-	x	x	x	-
- water quantity conflicts	-	-	x	x	-	-	x	-	-	-
- increased erosion/sedimentation	-	-	x	x	-	-	-	x	x	-

Matrix 3. Major Underlying Root Causes of Threats in OECS Region

	Key Threats				
	Habitat Loss	Loss/change in Biodiversity	Changes in Water quality	Water Quantity Conflicts	Increased Erosion/Sedimentation
Major Underlying Root Causes					
- poorly planned development	x	x	-	x	-
water diversion	x	x	-	x	x
land conversion	x	x	x	x	x
coastal development	x	x	x	-	x
coastal sand mining	x	x	x	-	x
dredging	x	x	x	x	x
road construction	x	x	x	-	x
quarry mining					
- inappropriate ag practices					
overuse of chemical amendments	x	x	x	-	-
crop residue burning	-	x	x	-	x
uncontrolled grazing	x	x	-	-	x
- untreated industrial/urban effluents	x	x	x	-	-
- non-sustainable exploitation of NR					
deforestation	x	x	x	x	x
over-fishing	-	x	-	-	-
-illegal hunting	-	x	-	-	-
- unmanaged tourism impacts	x	x	x	x	x
- exotic species introduction	x	x	-	-	-

Matrix 4. Major Constraints to Addressing Threats and Underlying Root Causes in OECS Region

	Constraints									
Major Under Lying Root Causes	inadequate policy/legal framework	weak institu-tions	lax legal enfor-cement	weak inter-sectoral coordination	little public awareness/ support	information/ data gaps	funding constraints	limited community participation	insecure0 /unclear land tenure	lack of alternative livelihoods
poorly planned development										
water diversion	x	x	-	x	x	x	-	-	-	-
land conversion	x	x	-	x	x	x	-	-	-	-
coastal development	x	x	-	x	x	x	-	x	-	-
coastal sand mining	-	x	x	-	x	-	-	-	-	-
dredging	x	x	x	x	x	x	-	-	-	-
road construction	x	x	x	x	x	-	-	-	-	-
quarry mining	-	x	x	x	x	-	-	-	-	-
inappropriate ag practices										
overuse of chemical amendments	x	x	-	-	x	x	x	-	-	-
crop residue burning	x	x	-	-	x	-	-	-	-	-
uncontrolled grazing	x	x	x	-	x	-	-	-	x	-
untreated industrial/urban effluents	x	x	x	x	x	x	x	-	-	-
non-sustainable exploitation of NR										
deforestation	x	x	x	-	x	-	x	x	x	x
over-fishing	x	x	x	-	x	x	x	x	x	x
llegal hunting	-	x	x	-	x	-	x	x	x	-
unmanaged tourism impacts	x	x	-	x	x	-	x	x	x	-
exotic species introduction	x	x	x	x	x	-	x	-	-	-

Matrix 5. Project Components/Sub-components Addressing Major Constraints in OECS Region

oject Components/ -components	Constraints									
	inadequate policy/legal framework	weak insti-tutions	lax legal enfor-cement	weak inter-sectoral coordination	little public awareness/ support	information/ data gaps	funding cons-traints	limited community participation	insecure/ unclear land tenure	lack of alternative livelihoods
As Policy, Legal and Institutional angements										
Policy, Legal & Institutional Arrangements Reform	x	-	-	x	-	-	-	x	x	-
Updating/Preparation of New National PA System Plans	x	-	-	-	x	x	-	x	-	-
Supporting Studies	-	-	-	-	-	-	x	-	-	-
rotected Areas Management and ociated Alternative & New Livelihoods										
Creation of New and Strengthening of Existing PAs	-	x	x	x	x	x	x	x	x	-
Supporting Alternative and New Sustainable Livelihood Opportunities	-	-	-	-	x	x	-	x	-	x
SPF Capacity Building and Support	-	-	-	-	x	x	-	x	-	x
uilding Capacity for Biodiversity nservation and PA Management and easing Public Awareness										
Training	-	x	x	x	-	-	-	-	-	-
Public Awareness Program	-	-	-	-	x	x	-	x	-	-
roject Management, M&E and rmation Dissemination										
Project Management & Coordination	-	x	-	x	-	-	-	-	-	-
Monitoring & Evaluation	-	-	-	-	-	-	-	-	-	-
Information Dissemination	-	-	-	x	x	x	-	-	-	-

Attachment 1: Illustrative Site-Selection Criteria

Ecological criteria:

Biodiversity significance (variety or richness of ecosystems, habitats, species, or communities).

Integrity (degree to which the area is an intact unit).

Uniqueness (rarity).

Connectivity (relation of the existing PA to other protected areas).

Threat **(**degree of threats to species, habitat, community or system).

Sensitivity (degree to which the area is susceptible to threats).

Vulnerability is the susceptibility of the area to biodiversity loss.

Social criteria:

Local public support **(**degree to which the area will be accepted and supported by local communities).

Land tenure (well-defined land ownership and rights of use and/or access).

Physical displacement (whether resettlement of people living within the proposed area is required).

Socio- cultural value (non-environmental values characteristic of the proposed site).

Educational value (utility to support local, national and international education activities).

Pragmatic criteria:

Political will/support (measured by indicators such as counterpart funding, staff time, legal acts, etc.).

Other funding sources (presence of other sources of external finance in the proposed PA).

Earlier precedents (results from PA interventions in the proposed PA).

Legal precedents (existence of PA enabling legislation, PA authority, management plan, etc.).

Financial Sustainability (existing/potential demand, environmental goods and services, etc.)

Attachment 2: Site Profiles of Priority PMS PA Sites

Antigua & Barbuda: North Sound Islands Protected Area

Area characteristics and status of resources

Located just off the northeast shores of the mainland of Antigua, the North Sound Island Protected Area (NSIPA), consists of six islands, Great Bird Island, Little Bird Island, Redhead Island, Rabbit's Island, Great Exchange Island and Little Exchange Island (Map 1). Together, they comprise a cluster of limestone islets with associated coastal and marine ecosystems that include mangroves, coral reefs, seagrass beds, rocky shores, sandy beaches, and coastal and dry scrubland vegetation.

The islands lie within the belt of the Easterlies or Trade winds, which blow with great constancy from directions between east north easterly and east. The climate is characterized as moderate, arid, tropical maritime. The annual rainfall ranges from 60 to 125 cm annually. Rainfall is concentrated in the periods May/June and October/November; the mean daily maximum and minimum temperatures are 30 oC and 24 oC, respectively. Sea surface temperatures vary little from 25-27 oC in February and March to 28 oC in September and October. Sea surface salinities range between 33 and 35 parts per thousand.

Encompassing over 3,100 ha of coastal and marine space, the islands are a refuge for rare and globally important habitats and wildlife, many of them endemic and/or globally threatened. The soils of the proposed area are generally thin and in areas of greater soil depth, the islands are covered with dry littoral forest dominated by agave (*Agave karatto*), columnar cactus (*Pilocercus royeni*), wild cinnamon (*Canella winterana*), black willow (*Capparis cynphallophora*), white cedar (*Tabebuia spp*), bread and cheese (*Pithecellobium ungis-cati*) and loblolly (*Pisonia spp*.), with a maximum canopy height of no more than 6 metres. All the islands have low-lying sandy areas, which are vegetated with button mangrove (*Conocarpus erectus*), seaside samphire (*Sesuvium portulacastrum*), seagrapes (*Coccoloba uvifera*) and other xeric flora.

Two species of snake are indigenous to the North Sound Islands. The small elusive worm snake (*Typhlops monastus*) and the Antiguan Racer (*Alsophis antiguae*). The (colubrid) genus *Alsophis* comprises fourteen species of diurnal, ground-dwelling snakes, none of which pose a significant threat to humans. Eleven species are endemic to the West Indies two (2) of which are already extinct and 3 are listed as endangered or critically endangered (IUCN, 1996). The combination of severely restricted range, (historically-recent decline,) and current low population size account for the Antiguan Racer designation as critically endangered See the IUCN Red List of Threatened Animals, 1996. The small total population size means that inbreeding depression and demographic stochastic effects could impose a significant threat..

At present, the Antigua Racer is restricted to the 0.083 km2 on Great Bird Island, the largest and most visited island within the proposed protected park area. The island represents 0.1% of the species historical distribution range. Great Bird Island can only support 100 Antiguan racers requiring the re-introduction of the snakes to other islands in the proposed park area to reestablish viable and free-ranging populations. All five of the offshore Islands earmarked for re-introduction are topographically and ecologically similar to Great Bird Island. The islands also currently support the lizard species on which the racer feeds.

Other reptiles are found in the proposed protected area. These include four lizard species which are endemic to Antigua: the Watts' anole (*Anolis wattsi*), and the subspecies wattsi as well as the spotted anole (*Anolis bimaculatus*) subspecies *leachi*. Species endemic to both Antigua and Barbuda are the Antiguan ground

lizard (*Ameiva griswoldi* Although not threatened or endangered conservation has been identified as a concern. ARCP Report #8) and the Antiguan dwarf gecko (*Sphaerodactylus elegantulus)* Scientific names follow Schwatz and Henderson, 1991.. All of the lizards are insectivorous, but the ground lizard and anoles especially on Great Bird Island will eat any type of food discarded by tourists and are visibly enlarged compared to the other area lizards.

There are many indigenous birds nesting on the islands. The list includes: the red-billed tropic bird (*Phaethon aethereus*), the endangered West Indian whistling duck (*Dendrocygna arborea*). During project preparation, the Environmental Assessment team (see Annex 12) observed nesting on the islands species such as the Zenaida dove (*Zenaida aurita*) and the Brown pelican (*Pelecanus occidentalis*).

While invertebrate fauna were not studied in depth during the aforementioned preparation exercise, during the site visit, the giant land crabs (*Gecarcinus lateralis* and G. *ruricola*) and many hermit crabs (*Coenobita clypeatus*) were identified. There were signs of small cockroaches (family Blattidae) and scorpions (*Scorpionidae*) in the forested section to the west of Great Bird Island. Numerous anecdotal accounts exist of migrating butterflies of various species on the islands, however, resident butterflies are largely from families Pieridae (whites and sulphurs) and Hesperiidae (skippers).

Great Bird Island

Great Bird Island is the largest of the islands constituting the North Sound Islands Protected Area. It covers 9.9 hectares (ha) and comprises three distinct equally sized habitats; the coral ridge, the sandbar, and the forest.

The coral ridge is approximately 500 meters (m) long and consists of upraised coralline rock about 25m above sea level. The ridgetop is punctuated by rock outcrops and low grasses, interspersed with small shrubs like Seaside daisy (*Borrichia arborescens*). The ridge is oriented in a north-south direction, and is cooled by the NE trade winds. The sea cliffs on the eastern side plunge some 25 m into the Atlantic Ocean with two blowholes located at the end of the 80 m trail which starts at the sandbar. On the northern end of this ridge various nesting seabirds can be spotted. The list includes: brown booby (*Sula leucogaster*), laughing gull (*Larus atricilla*), magnificent frigatebird (*Fregata magnificens*), red-billed tropicbird (*Phaeton aethereus*), and the sooty tern (*Sterna fuscata*).

The sand bar is also oriented in a north-south direction and at the boundary with the sea is found the exposed north beach and the smaller shadier south beach. The sandbar is approximately 80 m wide at the narrowest point and 130 metres wide at the widest point. It is approximately 120 m long on its east-west axis. The sandbar is well vegetated, approximately 70% primarily grasses, interspersed with strands of sea grapes and button mangrove with few small trees and shrubs. The sandbar is bordered on the West by the forested habitat where the racer is found and on the east by the coral ridge.

The forest is a typical densely vegetated Caribbean littoral forest with complex habitat. This is the habitat in which the endangered racer is found.

Global biodiversity significance

These islands are considered to be the last retreat for many species that formerly existed in abundance on mainland Antigua. Species of global significance include the critically endangered Antiguan racer snake (

Alsophis antiguae) and hawksbill turtle (*Eretmochelys imbricata*), and the vulnerable West Indian whistling duck (*Dendrocygna arborea*).

In addition, two of the five vegetation types found on the offshore islands are found exclusively in the northeast and are considered rare and vulnerable. See Lindsay and Horwith (1997) From an ecological perspective, the offshore islands offer a living laboratory, serving as indicators for the measurement of changes that have affected local conditions and the rest of the Caribbean over time.

Neighboring communities

The six offshore islands of the proposed North Sound Islands Protected Area (NSIPA) are uninhabited but are used widely to support tourism, and tourist-related purposes, fisheries and local recreational activities. The communities on mainland Antigua within a few kilometers of the PA are the most intensive users. These are Seatons, Willikies, Glanvilles and Parham with populations of 600, 700, 400 and 1,298 persons, respectively. It is estimated that the area supports 20,000 visitors per year including many recreationists especially on weekends and holidays. The marine ecosystems of the area provide nurseries for fish, conch, lobster and other species.

Economically speaking, and provided that sustainable use is practiced, the area's resources can provide a viable source of income for local fishery and tourism sectors, as well as a haven for local recreationalists.

Land tenure

The Government of Antigua and Barbuda own the six islands proposed for inclusion in the NSIPA. These are Great Bird Island, Little Bird Island, Redhead Island, Rabbit's Island, Great Exchange Island and Little Exchange Island The majority of the other islands in this area are privately owned so they do not fall under the purview of the park. One of the islands, Guiana Island's ownership is currently under dispute and for that reason could not be included in the proposed park area until the matter is resolved.

Threats

With few exceptions, the 30+ islands and islets in this area are uninhabited with many rarely visited by humans. They have therefore escaped much of development-related habitat destruction and other human impacts that have affected mainland Antigua. However, in addition to the omnipresent threat of natural disasters, significant human threats do exist. These include: (i) invasive species (the black rat (*Rattus rattus*) and the Asian mongoose (*Herpestes javanicus*) The islands have undergone a mammal control program to remove these species. Rat baiting stations were viewed at various points to ensure their removal. The literature credits the invasive mammal control program as benefiting indigenous nesting species as well as the racer.; (ii) land degradation (associated with fire from BBQ's, overuse of existing trails, tying up of small boats to mangrove forests, by campers and other recreationists; and (iii) insular habitat fragmentation associated with the purchase of islands by individuals limiting natural linkages needed for interaction between communities.

Recreational activity on the islands beaches is a major source of stress. It was estimated that 20,000 persons visit the islands annually. The pulling of smaller boats onto the beach and the high numbers of visitors within a small space as this island constitutes a high source of stress. This area receives the highest concentration of visitors and was the only area accessed by visitors during our site visit. While a small number venture up the trail to see the blowhole and the vista, visitor activity is most frequent on the beaches and the sandbar that accesses the two beaches. There were signs of movement between the two beaches on

the sandbar and evidence of campgrounds and BBQ pits/equipment. There were also signs of food debris deposited at the base of a tree near the beach that were being eaten by ground lizards and anoles.

Unsustainable exploitation and degradation of marine biological resources and habitats from over-fishing and improper fishing practices are a recognized problem throughout the Antigua-Barbuda Islands. One direct impact of poorly controlled fishing in the offshore island reefs is the alteration of the predator-prey balance. The removal of too many herbivores has resulted in the increasing dominance of algae and reduction in coral cover. Current fishing practices are placing too much pressure on near-shore stocks and are harmful to the environment. Anchoring by tour operators, and ghost traps are additionally taking their toll on coral health. Lastly, inadequately planned and controlled recreation and tourism use results in the losses of fish breeding and spawning areas, increased sediment loads onto reefs and harmful effects from increasing number of divers, recreational boat anchors, and inexperienced water sports enthusiast on delicate biological resources. Coastal dredging on the nearby Long Island for development by a prominent developer increasing sediment loads along the North Sound Islands thereby reducing the level of essential light to marine organisms like the sea grass and corals is another negative impact being faced.

Existing management regime

The proposed North Sound protected area is currently being gazetted by the Government of Antigua and Barbuda through the National Parks Authority in recognition of the importance of the area to national biodiversity protection. The Environmental Awareness Group (EAG), Forestry Unit, and other regional and international partners have been working in the area since 1995 on the Antiguan Racer Conservation Project (ARCP) which is a collaborative effort to conserve the endangered endemic Antiguan Racer snake and the biodiversity of the offshore islands. The ARCP has grown to encompass the broader conservation needs of the area and has evolved into the Offshore Island Conservation Programme (OICP). This area is clearly able to support educational and research activities and currently serves as a living laboratory.

Proposed Project Activities

The largest of the seven islands Great Bird Island is the only of the offshore islands targeted for activity. The proposed activities on Great Bird Island include: (i) rehabilitation of the existing 100m trail on sand bar between north and south beaches, (ii) rehabilitation of the existing trail on the eastern ridge, (iii) installation of new yacht and dingy moorings, (iv) construction of a floating pier, and (v) construction of toilets.

The proposed activities on Seatons and Parham include: (i) development of interpretation centre (Parham), (ii) placement of billboards (Parham and Seatons), and (iii) construction of floating piers (Seatons)

Other proposed Project Management activities include: (i) demarcation of the park boundary and the installation of demarcation buoys; (ii) training of park staff; (iii) development of a management plan for the park (to include zoning, development of user fee structure, implementation of environmental management and monitoring protocols for the area and implementation of collaborative strategies with neighboring communities); (iii) purchase of Boston wailer (or similar boat) and a 4X4 truck; (iv) installation of radio communication system; (v) support for a snake census and seabird surveys; (vi) community workshops (on reptiles, seabirds, and marine habitat) and environmental education workshops (with primary school teachers and students, secondary school students); and (vii) 3-week internships with tertiary level students including trips to the islands.

Table 1. Detailed Costings for North South Islands Protected Area (Antigua & Barbuda)

	Unit	No per Unit	Cost per Unit (US$)[1]	Total Cost over Project Life (US$)
1. Investment Costs				
Infrastructure				
visitor center (rehabilitation)	ft^2	200	500	1,000
yacht moorings (new)	unit	6	1,000	6,000
dinghy moorings (new)	unit	6	750	4,500
marker buoys (new)	unit	20	150	3,000
toilets	unit	1	500	500
trails (Great Bird Island)	mi	1.5	666	1,000
signage (for trail)	unit	8	1,000	8,000
billboard (points of entry)	unit	4	2,000	8,000
floating pier	unit	2	5,000	10,000
Vehicles and equipment				
boat (Boston wailer)	unit	1	18,000	18,000
4X4 truck	unit	1	20,000	20,000
computer system	unit	1	2,000	2,000
SCUBA sets	unit	2	2,500	5,000
laptop	unit	1	3,000	3,000
GPS	unit	2	250	500
binoculars	unit	3	150	450
photocopier	unit	1	2,750	2,750
underwater camera	unit	1	1,250	1,250
communication (radios)	unit	1	1,200	1,200
base radio	unit	4	750	3,000
mobiles/handsets				
Site-specific training /workshops	lumpsum			33,400
Environmental research				
Total Investment Costs				**147,550**
2. Recurrent Costs			**Per year**	
• O&M				
boat operations (fuel/oil)			10,000	50,000
boat maintenance			4,500	22,500
buoy/mooring maintenance			1,200	6,000
communications equipment			500	2,500
▪ other operating costs			10,000	50,000
Total Recurrent Costs				**131,000**
Total Costs				**278,550**

[1]Exchange rate $2.70 EC per 1 US$

St. Lucia: Pointe Sable Protected Area (proposed)

Area characteristics and status of resources

A recent study supported by The Nature Conservancy (TNC) examined fundamental ecological processes, states and environmental gradients maintaining biodiversity health in the east St. Lucia functional landscape. These were: (i) mangroves, (ii) coral reefs, (iii) seagrass beds, (iv) sandy beaches, (v) rocky shores, (vi) offshore islets, (vii) freshwater systems, (viii) dry tropical forests and (ix) sea turtles. These choices were intended to capture the ecological processes, states and gradients most characteristic of each site. The site received a "**good**" overall biodiversity health rank, but the individual sites reflect wider variability in the individual conservation target rankings.

In the Pointe Sable Protected Area, mangroves and rocky shores were in ranked in "**good**" condition and its offshore islets were ranked in "**very good**" condition (Map 2). However, coral reefs, seagrass beds and dry tropical forests were considered to be in "**fair**" biodiversity health, while sandy beaches and freshwater systems were judged to be in "**poor**" health. The east coast of St. Lucia is one ecological landscape and the conservation targets specifically identified at Pointe Sable are dependent on ecological processes, states, and gradients functioning at this larger spatial scale. The area was judged on the viability of the conservation targets in this context and the biodiversity health of this ecological landscape. With this perspective coral reefs and sandy beaches were judged to be in "**fair**" condition and freshwater systems were judged in "**poor**" condition; other conservation targets were in either "**good**" or "**very good**" condition.

Mangrove viability was judged as "**good**", however, the landscape context of mangroves was only "**fair**". This is said to be due to the loss of essential connectivity between mangroves and interior terrestrial habitats. For example, a road, cattle pastures and agriculture activities have destroyed the connections of the large Mankote mangrove to interior ecological communities, for instance riverine forest of dry tropical forest and moist tropical forest in the central mountains. Similarly, siltation caused by a variety of human activities has created a sand bar across the main channel of several mangrove forests. This impedes the circulation of both fresh and salt water and partially isolates these mangroves from coastal marine communities and ecological processes. Such silt bars have disrupted movements of fish between coastal waters and mangroves, both to feed and to spawn.

Pointe Sable coral reefs viability was judged as "**fair**", due to the degradation of its physical structure and the ecological condition of the coral community and to the state of its landscape connections, not to a reduction in the area covered by coral reefs. Coral reef populations of a great many taxa have been drastically reduced and there have been devastating losses to the coral itself from disease and general degradation of conditions in coastal waters. For example, populations of long-spined black sea urchin (*Diadema antillarum*), a keystone algal grazer, are low compared to before 1983 when a disease appeared that almost eliminated them from St. Lucian – and Caribbean – waters. Without urchins, algae grew over corals and killed many reefs. Fishermen have over-harvested many species of finfish particularly the large predatory species such as grouper and snapper. This has severely altered the natural abundance and population

structure of these species with consequences that have propagated through the coral reef food web.

The landscape context of the coral reefs is also extensively altered. Coral is sensitive to the quality of coastal water and is particularly intolerant of high sediment loads and nutrient concentrations. Human activities in the source watersheds for Pointe Sable coral reefs have increased siltation, caused eutrophication and altered the marine water chemistry. These changes in the normal pattern and quality of freshwater borne terrestrial chemical and nutrient inputs, have resulted in widespread, generalized reduction in the ability of the coral reef ecosystem to recover from normal disturbances such as severe storms and disease.

Viability of sea grass beds at Pointe Sable was evaluated as "**fair**" and size as "**good**", but both condition and landscape connectivity as "**poor**". At Pointe Sable disruptions to sea grass regimes of sedimentation and nutrients, changes in water chemistry and declines in population sizes were all "**high**" stresses. In addition, agricultural practices are also the most important source of stress with, however, broader impacts on ecological processes. Further, associated with greater urbanization at Pointe Sable, experts ranked residential and commercial development "**high**" as a source of stresses to water chemistry, the nutrient regime and the decline in sea grass community population sizes.

The sandy beaches at Pointe Sable (several distributed between Anse de Sables and Savannes Bay) were in "**poor**" condition. These beaches are associated with large population centres, towns (Vieux Fort) and/or intense human economic activity. At Pointe Sable "residential and commercial development" and "infrastructure development" as sources of stress were both ranked "**high**". The study did not speak to the status of sea turtles in the Pointe Sable area, however anectdotal information suggests that all four species of sea turtles (accepted as being seen in St. Lucian waters) have been sighted in this area.

The TNC study suggested that rocky shore communities for St. Lucia's east coast landscape as being in "**good**" biodiversity health. There is some degradation in the condition of these communities as a result of whelk harvesting. Since whelks are algal grazers, where their populations have declined algal mats tend to develop on the clean rock and boulder surfaces that many other species need as substrate. This type of degradation is severe at Pointe Sable.

The landscape context of rocky shore communities is somewhat degraded and was judged as "FAIR". These judgments were based on the same alterations in water quality that are affecting sea grass beds and coral reefs. Rocky shore communities, however, are less sensitive to these changes and the impact is less. The TNC study suggested that the offshore islets were in "**very good**" biodiversity health at Pointe Sable implying that all the essential ecological processes, states, and gradients are intact and functional. This judgment reflected the impact of exotic species, particularly mongoose, that have reached these islands and have reduced islet populations of several native species and disrupted the ecological structure of islet communities. In addition, habitat alterations on the mainland have degraded foraging areas that islet bat population's use.

Freshwater systems were defined as including all forms of freshwater communities: swamp and

marsh wetlands, open water ponds and running water rivers and streams. Freshwater systems concentrate the effects of diffuse watershed degradation into severe changes in the water quantity and quality that flows into coastal marine habitats, communities and species. The freshwater systems were evaluated as "**fair**" in size, "**poor**" in condition, and "**poor**" in landscape context, and "**poor**" in overall biodiversity health. The stresses affecting freshwater systems are associated with disruptions to the essential processes that maintain the quality of freshwater habitats: hydrologic regime, sedimentation regime, water chemistry and nutrient concentration. These changes are the result of a drastically altered ecological context: almost complete loss of riverine forest, extensive loss of watershed forest cover that has led to erosion and stream channel siltation, and a breakdown in the integrity of river and stream banks. The biodiversity consequences appear in the decline of native freshwater species populations and the greatly altered physical and chemical characteristics of freshwater discharges into coastal waters. These altered discharges, in turn, are one of the principal factors in the degradation of mangroves, coral reefs, seagrass beds, sandy beaches and rocky shores.

There are many sources of stress to freshwater systems. Agricultural practices, including free ranging domestic animals, and the past and present conversion of forest to agriculture land was ranked as one of the most critical threats. Another equally important threat is residential, commercial and infrastructure development. In Pointe Sable over fishing and improper solid waste management are also very significant sources of stress and, with a much higher human population, all these threats are more intense.

Dry tropical forest is an important conservation target and forms the vegetation matrix for all terrestrial communities. Included within dry tropical forest are many less extensive plant communities with distinctive vegetation structure and composition, for example the windswept communities of the exposed headlands, or the cactus dominated communities growing on the most extreme rocky substrates of the headlands, or the sheltered gully communities that develop larger individuals and taller canopies, or the distinctive riverine forest growing along stream courses. Within the matrix forest itself variation in species composition and structure is associated with gradients of elevation, moisture, soils, exposure and aspect.

The dry tropical forest that once completely covered St. Lucia's coast and lower slopes has been altered by human activities for many centuries, particularly since before European settlement. The present forest and landscape carries the persistent effects of these activities. At the most extreme the forest is gone, replaced by agriculture uses or settlements. All remaining forest is some form of secondary forest, either regrowing from abandoned agriculture land or forest that was never completely cleared or used for agriculture, but is altered by timber harvesting and other uses. The consequences of this history are that the spatial extent of the forest is reduced, the species composition and ecological dynamics of its plant and animal communities has changed, the physical structure of the forest has changed, and the landscape connections with other vegetation types on St. Lucia have been radically altered.

Pointe Sable dry tropical forest is in poor ecological health. This forest's size and condition is considered "**fair**", but ranked its landscape context as "**poor**". The region's forest has been disrupted in its forest regeneration, in its forest structure and it is almost completely isolated from

any other natural vegetation by the conversion of natural vegetation on the neck of the Moule a Chique to agriculture or urban development.

Global significance

The proposed 250 ha Pointe Sable Protected Area (PSPA) spans four coastal ecosystem types; coral reefs, mangroves (including the largest remaining stand of coastal mangrove forest in St. Lucia), sea grass beds, offshore islands and a sandbank; a representative sample of tropical Caribbean island coastal ecosystems in a relatively intact state. St. Lucia's largest mangrove and longest fringing coral reef are found in this area.

Several endemic species are found within this PA of which are the 5 endemic species of herpetofauna found on the island of St. Lucia. This includes; the St. Lucia Racer snake (*Liophis ornatus*), Maria Islands ground lizard (*Cnemidophorus vanzoi*), St. Lucia pigmy gecko (*Sphaerodactylus micropleis*), the tree lizard (*Anolis luciae*) and Fer-de-lance snake (*Bothrops caribbaeus*). The racer and ground lizard are found only on Maria Islands.

Offshore islands and cays like those within the Pointe Sable PA have been identified as roosting and nesting sites for avifauna that retreat from the mainland to isolated and uninhabited coastal sites. Three endemic subspecies are found in the dry scrubland woodland habitat of Pointe Sable. The St. Lucia white-breasted thrasher (*Ramphocinclus brachyurus*) and St. Lucia nightjar (*Caprimulgus rufus*) are endangered and the House wren (*Troglodytes aedon mesoleucus*) is rare and endangered.

Migratory avian species are also found in the PA and include the following; Sooty Terns (*Sterna fuscata*), Roseate Terns (*S. dougalli*), Bridal terns (*S. anaethetuis*), Brown noody (*Anous stolidus*), red-billed tropic bird (*Phaethon aethereus*), and American Oyster Catcher (*Haematopus palliates*) Alwin Donelly, 2003, Survey of Sea birds of St. Lucia, St. Lucia National Trust.. An earlier study identified the additional species of Magnificent Frigatebird (*Fregata magnificens)* and the white-billed tropic bird (Phaethon lepturus). The Pointe Sable PA beaches are also used by migratory endangered marine turtles namely; the hacksbill (*Eretmochelys imbricata*), Green (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), and the loggerhead (*Carerra caretta*).

Local communities

Permanent human population in the 350 ha proposed PSPA has been stated as being negligible, but resource uses are many and competing

Land tenure

Much of St. Lucia's most important biodiversity is found on privately owned land; however, this is not the case with the PSPA. The Government of St. Lucia owns the majority of the parkland. The majority of this land, Pointe Sable beach is of open access and is publicly held as a recreational area. The remaining trench of the land which includes the two RAMSAR sites Man Kote and Savannes Bay mangroves is vested in the National Development Corporation (NDC). The NDC has been involved in discussions from the beginning of this process and a major landowner. The NDC has a representative that is a permanent member of the PSNP steering committee. They have expressed their willingness to enter into a partnership arrangement for the management of the area for the benefit of the local community and the island as a whole. Maria Islands Nature Reserve is owned by the government of St. Lucia and is vested in the St. Lucia

National Trust.

Threats

Due to its geographic location and topography, St. Lucia is subject to two main types of natural hazards which impact on its biodiversity. The island lies within the hurricane belt and is therefore vulnerable to tropical low-pressure systems. The accompanying strong winds destroy large areas of terrestrial habitats and their fauna. Furthermore, storm surges and coastal flooding cause coral reef destruction and sedimentation, and coastal erosion. Coastal erosion would also be accelerated if sea level rise were to occur. St. Lucia's mountainous terrain composed of young volcanic rock is predisposed to soil erosion and mass movement. These natural processes are aggravated by poor land use practices resulting in the sedimentation of freshwater and coastal/marine habitats.

Existing management regime

An overall management strategy would amalgamate several existing protected areas; 5 marine reserves, nature reserves, the recently declared RAMSAR site at the ManKote mangrove, historic sites and a national landmark with other as yet undeclared natural and historic sites into one management unit, the Pointe Sable Managed Resource Protected Area. This designation would protect the habitats of 5 endemic species of herpetofauna. One of these, the St. Lucia Racer snake (*Liophis ornatus*) is endemic to the Maria Islands.

Point Sable has a well-established constituency for conservation and resource management. Economic analysis undertaken during project preparation revealed a strong potential in Pointe Sable for the development of model community-based management of nature and heritage based tourism; one built on existing initiatives. The Pointe Sable area and surrounding communities have spearheaded ecotourism efforts with incipient infrastructure development (bird watching tower and trails) and guided tours in the community-managed ManKoté mangrove in order to supplement the income of the charcoal producers. Visitation, while minimal at the present time, would likely increase significantly after designation as a protected area, promotion of the tourism product, and as nature based tourism opportunities are developed under the project. This will reduce pressure on other areas such as reef dive sites and increase local community revenues by providing recreational alternatives in new areas.

Proposed project activities

The proposed project activities include the following: (i) standardization and rehabilitation of a 6 km trail (Manville Pointe - Pointe Sable Beach); (ii) rehabilitation and expansion of the marine park office at Pointe Sable Beach (interpretive centre, meeting area, information centre, data entry and monitoring and evaluation base, additional toilets facilities to meet increased visitor demand); (iii) maintenance of trails on Marie Island Nature Reserve; (iv) construction of a small jetty on the mainland near PA headquarters, (v) rehabilitation of existing and installation of new demarcation buoys for the recreational area; (vi) installation of a radio communications system; (vii) update of the Park management plan (including: revised zoning; revision of user fee structure and financial management plan; implementation of environmental monitoring protocols for the area; and implementation of a community relations strategy); (viii) provision of ranger equipment; (ix) purchase and maintenance of a 4x4 vehicle and dingy; (x) training of park staff and tour guides; and (xi) development of and support to public awareness strategy for the park.

In addition, the project would support enhancing alternative livelihoods of persons displaced in and around or impacting directly on the park (e.g., such as charcoal producers, sea moss cultivators, and fishing community within the PA).

See Table 2 for detailed costings.

Table 2. Detailed Costings for St. Lucia: Pointe Sable National Park

	Unit	No per Unit	Cost per Unit (US$)1	Total Cost over Life of Project (US$)
1. Investment Costs				
Infrastructure				
management/admin office	lumpsum	-	-	70,000
(rehabilitation)	lumpsum	-	-	10,000
jetty construction	unit	20	150	3,000
marker buoys (new)	unit	2	1,250	2,500
toilets (portable)	mi	3	633	1,900
trails improvement	ft	800	5	4,000
boardwalk construction	unit	4	150	600
lunch tables	unit	5	1,250	6,250
signage	unit	4	2,000	8,000
billboards (Ports of entry)	unit	2	150	300
rest points				
Vehicles and equipment	unit	1	15,000	15,000
truck 4X4	unit	1	10,000	10,000
boat/outboard motor (dinghy)	unit	2	1,000	2,000
computers/printers (accessories)	lumpsum	-	-	1,000
ranger uniforms and field gear	lumpsum	-	-	2,000
HQ building furnishings	lumpsum	-	-	3,500
building tools/equipment	unit	2	2000	4,000
SCUBA				
communication (radios)	unit	1	950	950
base radio	unit	3	750	2,250
mobiles	unit	3	150	300
fire suppression equipment				
Site-specific training/workshops	workshop	5	4,000	20,000
staff workshop	workshop	10	1,000	10,000
community workshop				
▪ **Total Investment Costs**				**177,550**
▪ **2. Recurrent Costs**			**Per year**	
• O&M				
boat operations (fuel/oil)		-	6,000	30,000
boat maintenance		-	3,600	18,000
buoy/mooring maintenance		-	1,200	6000
communications equipment		-	500	2500
▪ other operating costs		-	10,000	50,000

Total Recurrent Costs				**106,500**
Total Costs				**284,050**

1 Exchange rate $2.70 EC per 1 US$

St. Vincent and the Grenadines: Tobago Cays National Park

Area characteristics and resources

The Tobago Cays are located in the southern Grenadines. They lie on a platform on a volcanic ridge defined by the 40 m subsurface contour with each individual island or island group lying on a smaller, higher (20 m subsurface) platform (Map 3)5 Heyman *et al*., 1988. These 20 and 40 metre platforms may be related to coral formation on the original volcanic ridge at different sea levels. The climate is bright and hot with rainfall of about 100 mm per year and concentrated in the periods May/June and October/November; the mean daily maximum and minimum temperatures are 30 oC and 24 oC respectively. Sea surface temperatures vary little from 25-27 oC in February and March to 28 oC in September and October. Sea surface salinities range between 33 and 35 parts per thousand. The islands lie within the belt of the Easterlies or Trade winds, which blow with great constancy from directions between east north easterly and east. Gales are relatively infrequent, but squalls are common, especially from May to November. Wind speed and direction are the dominant control of wave conditions with the highest normal waves occurring in December to February and June to July. In essence, while the climate may constrain agriculture, it is ideal for water-based tourism.

Overall therefore, the Cays are small island ecosystems with surrounding tropical marine ecosystems that include fish; lobster; coral; sea grasses; and mangrove. They are made up of five small uninhabited islands Gumbs, 1996. , Petit Rameau, Petit Bateau, Baradal, Petit Tabac and Jamesby, and are renowned in the tourism industry for their extensive coral reefs ideal for snorkelling and scuba diving, and clear, shallow waters esteemed in the yachting industry.

The Cays possess some 6,160 m of beaches Jackson, 1986 cited in Heyman *et al*., 1988, including sand dune systems such as that on the south point of Baradal Cay. The eastward face of Mayreau provides a pristine natural view of the Cays. There are no large salt marshes or stands of mangrove in the Tobago Cays National Park area. The only salt pond lies in the lowland between Saline Bay and Windward Bay on Mayreau. The pond traps sediments from the surrounding steep slopes, and thus protects the two bays. Sea grass beds can be found surrounding Baradal Cay, and have been cited *ibid.* as supporting a dense population of small fish.

The 1988 OAS supported report Heyman *et al*., 1988 indicates that the principal vegetation on the Cays is beach vegetation with trees such as coconut *(Cocos nucifera)*, manchineel *(Hippomane mancinella)*, almond (*Terminalia catappa)*, sea grape (*Coccoloba uvifera)*, tamarind (*Tamarindus indica*), sea-side mahoe (*Thespesia* sp.) and dry forest (including but not limited to agave - *Agave caribaecola)*, cactus (*Cephalocereus royenii)*, frangipani (*Plumeria alba*), nettle (*Laportea aestuans*)), each with its characteristic suite of fauna. The fauna includes land crab (*Cardisoma guanhumi)*, soldier crab (*Coenobita clypeatus)*, iguana (*Iguana iguana)*, banana quit (*Coereba flaveola)*, ground dove (*Colombina passerina)*, mockingbird (*Mimus gilvus)*, crested hummingbird (*Orthorhyncus cristatus)*, and Bequia sweet (*Quiscalus lugubris*). This iguana is an endangered species on the Tobago Cays, with the red-necked pigeon (*Colomba squamosa*) reportedly having disappeared from the Cays themselves though in evidence on Union Island. The

Zenaida dove, *Zenaida aurita*, is also said to be in need of protection. "Sea gulls (*Larus sp.)"*, which are said to be seasonal to the Cays, were also seen on Baradal beach. The rocky cays also are said *ibid.* to have a specialised faunal assemblage including nesting sites for frigate bird (*Fregata spp)*, brown pelican (*Pelecanus occidentalis*), brown booby (*Sula leucogaster*), bridled tern (*Sterna antillarum*), red-billed tropicbird (*Phaeton aethereus*), sooty tern (*Sterna Fuscata*), and common tern (*Sterna hirundo*).

While both Arawak and Carib shards have been found on Mayreau, with colonial-era occupation of Mayreau being evidenced by Chinese expert pottery and other shards more than 300 years old, there are no known archaeological sites in the Tobago Cays Heyman *et al.*, 1988.

The World Atlas of Coral Reefs Spalding, M., C. Ravilious, E. Green, 2001. World Atlas of Coral Reefs, UNEP World Conservation Monitoring Centre and University of California Press, Berkely USA. 424p. has been cited as suggesting that some of the best developed reefs in St. Vincent and the Grenadines are around the Tobago Cays. Each island has a fringing reef, encircled by the larger Horseshoe Reef to the east. Beyond this is the larger World's End Reef. The reefs between Mayreau and the Cays (known as Mayreau Gardens) provide a haven for groupers (*Serranidae*), coneys (*Epinephelus fulvus)*, red hinds (*Epinephelus guttatus)*, various snappers (*Lutjanidae*), jacks (*Carangidae)*, and barracuda (*Sphyraena barracuda)*; and are in healthy condition.

Parts of Horseshoe Reef, most of World's End Reef, Egg Reef and the reefs around Petit Tabac have good reef formation/health but reduced fish populations Heyman *et al.*, 1988. South east of Baradal is fairly healthy with significant coral heads and variety of fish species including blue tang (*Acanthurus coeruleus)*, ocean surgeons (*Acanthurus bahianus)*, doctorfish (*Acanthurus chirurgus)*, bluehead wrasses (*Thalassoma bifasciatum)* and a variety of species of grunts (*Haemulon* sp.). East of Baradal is also fairly healthy with good coral and fish species diversity. This area is a common dive site with the reef in very good condition overall *ibid.*. This is the only area where lettuce coral (*Agaricia lamarcki)* was seen during the a site visit completed during project preparation. Some damaged elkhorn (*Acropora palmata*) and porous (*Porites* sp) corals were evidenced in this area but it was not possible to determine the cause of the damage. Species diversity between Baradal and Petit Bateau includes two species of sea fans (*Gorgonia flabellum* and *Gorgonia ventalina*) and at least three other gorgonids, small barrel sponges (Family *Porifera*) with some evidence of encrusting sponges were also in evidence, as well as star coral (*Montastrea annularis*), and numerous doctor fish. Bluehead wrasses (*Labridae spp.)* were seen, though rarely, in that part of the Cays. The substrate is mainly sand with some coral rubble interspersed with coral heads. Significant sea grass patches were observed to the south west of Baradal, comprised primarily of *Syringodium* sp.

Corals around the lagoon are generally degraded, and overgrown with algal turf but with occasional healthy-looking examples and varying numbers of reef fish. This may be evidence of three situations (i) depletion of fish populations due to overfishing, (ii) pollution as a result of sewage and garbage dumped by yachts passing through or anchored in the Cays, and (iii) physical damage from yachts and dingy anchors, divers and snorkelers on the reefs. Corals surrounding Jamesby are most degraded with algal covering even on sea fans (*Gorgonia ventalina*), and with much reduced fish populations, both in terms of diversity, numbers and sizes. This was noted

particularly in the water adjacent to the northwest of this island. Algal covering primarily comprising red coralline, as well as brown (*Dictyota* sp.) and green filamentous algae can be found on the eastern end of Jamesby. White sea egg, (*Tripneustes ventricosus)*, is relatively scarce in the Tobago Cays, as is the long spined sea urchin, (*Diadema antillarum)*. Conch (*Strombus gigas*) are not in evidence in the Cays though significant mounds of conch shell can be seen on Petit Rameau and Petit Bateau, suggesting that there may historically have been harvestable quantities in the Grenadines. While lobsters (*Panulirus argus*) have been reported in the Tobago Cays, none were observed during ground truthing. It has been reported that marine sea turtles have been seen in the Cays.

Observations during the site visit suggest that the general descriptions of the resources of the area found in the 1988 OAS study are still generally valid. A more recent study suggests that greatest species diversity was found around Horseshoe Reef and the reef fringing Petit Tabac Comley, J., M. Mason, K. Cordice and P. Raines, 2002. Tobago Cays Marine Biodiversity Conservation Project Summary Report. Coral Cay Conservation Ltd. London, UK. 21p. http://www.coralcay.org/library/publications/tobago_cays_2002_summary.pdf (accessed 16 October 2003). It may be that the limited management and increased concern about the status of the area may have contributed to a reduction in the rate of degradation of the area.

The Tobago Cays have both intrinsic and economic value, particularly in terms of fishing, recreation and tourism.[1] Economic Commission for Latin America and the Caribbean (ECLAC), 2002. St. Vincent and the Grenadines – Evaluation of the Tobago Cays Marine Park. WP/2002/4. Economic Commission for Latin America and the Caribbean, Subregional Headquarters for the Caribbean. 50p. Located south of mainland St. Vincent, the Cays lie to the east of the island of Mayreau (population approximately 270) and to the north of Union Island (population approximately 4,000). The Cays themselves are not inhabited, but serve to support the livelihoods of water taxi operators/boat boys, and beach vendors who set up shop on the beaches of Petit Rameau and Petit Bateau, who apparently realize significant earnings from their respective activities. In a 1996 study[2] Gumbs, N.A., 1996. The economic impact of the Tobago Cays National Marine Park on local resource users. MSc Dissertation. Consortium Graduate School of Social Sciences, Faculty of Social Sciences, University of the West Indies, Mona, Kingston, Jamaica. 45p., it was suggested that an average of 14,000 yachts visit the Tobago Cays each year, of which approximately 3,000 anchor in the lagoon. In 1994 it was estimated that 25,000 people visit the Southern Grenadines area for a single day visit. Of the 50,000 cruise ship passengers who visit the Southern Grenadines, 10,000 are said to visit the Cays[3] *ibid.*.

Local communities

The Cays themselves are uninhabited but are surrounded by three major settlements of Union Island, Mayreau and Canouan, all of which are to the west of the Tobago Cays. These communities are sea faring people and are dependent on tourism and fishing.

It has been suggested that the Tobago Cays has the potential for several activities such as: scientific study and research, medicinal research, eco-tourism (land based and underwater tours), mariculture of lobster and conch, and sanctuaries for threatened and endangered species.

Land tenure

The islands that comprise the Tobago Cays are owned by the government of SVG and are

designated wild life reserves.

Threats

The primary threats to the area are several but are related to two broad groups (i) anthropomorphic - depletion of commercial marine resources due to over-fishing; pollution from sewage and garbage dumped by boats, sedimentation as a consequence of erosion of top-soils from overgrazing by free-roaming animals, as well as the impacts of urban development have impacted/can impact on the marine environment of these islands; and (ii) natural threats - such as hurricanes, diseases affecting corals, sea level rise and climate change. The World Atlas of Coral Reefs Spalding, *et al.*, 2001 has noted that storm damage, white band disease, physical damage from recreational activities and pollution from visiting yachts has led to the deterioration of the Tobago Cays over the last two decades.

Existing management regime

Pursuant to the Fisheries Act (no. 8 of 1986) Government of Saint Vincent and the Grenadines, 1986. Fisheries Act, 1986. Act No. 8 of 1986. Government Printer, Government Printing Office, Kingstown, Saint Vincent and the Grenadines Mayreau and the Tobago Cays were gazetted as a conservation area under the Fisheries Regulations of 1987 Government of Saint Vincent and the Grenadines, 1997. Marine Parks (Tobago Cays) Declaration Order, 1997. Statutory Rules and Orders 1997 No. 40. Government Printer, Government Printing Office, Kingstown, Saint Vincent and the Grenadines.. The Marine Parks Act (No. 9) of 1997 Government of Saint Vincent and the Grenadines, 1997. Marine Parks Act, 1997. Act No. 9 of 1997 Government Printer, Government Printing Office, Kingstown, Saint Vincent and the Grenadines. provides for establishment of a Marine Parks Board and in 1998 the Marine Parks (Tobago Cays) Regulations (SRO No. 26 of 1998) Government of Saint Vincent and the Grenadines, 1998. Marine Parks (Tobago Cays) regulations, 1998. Statutory Rules and Orders 1998 No. 26. Government Printer, Government Printing Office, Kingstown, Saint Vincent and the Grenadines. were adopted, providing specific regulations for the Cays and delegating certain responsibilities to the Board, and addressing licensing for certain activities in the Park, along with zoning and fees.

The boundaries currently in use for the 1,400 ha marine park are those of the conservation area but it has been suggested that two main problems are associated with this designation: (i) the Fisheries Act, on which the designation is based, does not actually provide for conservation areas but rather for marine reserves; and (ii) neither the Marine Parks Act nor the Marine Parks (Tobago Cays) Regulations establish any relationship between the designated conservation area and the Tobago Cays Marine Park.

The regulations do not include boundaries of the marine park, nor do they revoke the earlier designation of the conservation area, hence there is a conservation area with established boundaries, but without provisions for the designation in the parent Act and a marine park based on an act that does not establish the boundaries ECLAC, 2002.

The area was declared a National Marine Park to preserve the environment for the future generations and protect the natural resources which are critical for biodiversity (coral reefs in particular) and to develop tourism in order to increase employment opportunities in the Southern Grenadines and to allow as many people as possible to enjoy an unique sub-archipelagic system c.f. Heyman, *et al.*, 1988. To realize this ambition: (i) the boundaries and designation of the Park must be clearly defined pursuant to the existent

legislation; (ii) Government needs to consider changes to improve the functioning of the board and institutional structure for management; (iii) there is need to define permitted and non-permitted commercial activities in the park and incorporate into the appropriate regulations; and (iv) there is need to clarify the fee structure for use of the park as well as the authority to collect fees and where such fees are to be deposited

The existing "multiple" nature of the management regimes for the marine park, unless regularized, has the potential to lead to a situation where the consequential lack of clarity regarding jurisdiction can cause indecision and a tendency towards reduced initiative on the part of persons within the management structure. The Government of St. Vincent and the Grenadines would need to ensure that the roles and authority of the different agencies with jurisdiction in the area are clarified. Unless this is done the initiatives undertaken under the project would be ineffectual at best. Probably the best recourse would be for the area to be brought under a single management regime, with clearly defined unambiguous boundaries and fee structure policy clearly enunciated. The Soufriere Marine Management Association in Saint Lucia is worthy of consideration as an example a workable arrangement.

A recreational area has been designated within the Tobago Cays Marine Park[4] Heyman, A.M., T.J. Riegert, A. Smith, T, Shallow and J.R. Clark, 1988. Project proposal – Development of the Tobago Cays National Park. Government of St. Vincent and the Grenadines and Organization of American States.. The recreational area includes the Cays and surrounding reefs, while the Park boundaries (at the moment not finally declared) may possible include a wider area that may include the island of Mayreau. While fishing is supported in areas outside of the recreational area, no extractive activities are permitted inside this area. It is accepted that in order to maintain values of the area, the Cays need to be preserved and actively managed. In 1990 the Organization of American States (OAS) submitted a draft final report on the development of the Tobago Cays Marine Park. The park manager in 1998 produced a management plan that was approved by the Marine Parks Board. A revised plan was developed in 2000, but has not yet been received final approval. It has been suggested that as a result of conflicting views regarding approaches to management, implementation has been limited. The OPAAL project will provide support to the management framework for the area.

Proposed project activities

Project activities to be supported under the project include: (i) rehabilitation of the Park office/interpretation centre on Union Island (including the library); (ii) rehabilitation of existing and installation of new yacht moorings, demarcation buoys, and dingy moorings); (iii) installation of radio communications system; (iv) placement of portable toilets; (v) update of the existing management plan (to include revised zoning, revision of user fee structure and financial management plan, implementation of environmental monitoring protocols for the area, and, implementation of a community relations strategy); (v) purchase of ranger equipment; (vi) purchase and maintenance of work-boat and dingy; (vii) training of park staff, "boatboys" and tour guides; (viii) development of and support to public awareness strategy for the park, including development of a website for the park.

See Table 3 for detailed costings.

Table 3. Detailed Costing for St. Vincent and the Grenadines: Tobago Cays

	Unit	Number of Units			Cost per Unit (US$)[1]	Total Cost over Life of Project (US$)
		Tobago Cays	Mayreau	Total		
1. Investment Costs						
Infrastructure						
management/admin office (rehabilitation)	ft^2	200	-	-	10	2,000
marine interpretation center (rehabilitation)	ft^2	-	400	400	10	4,000
yacht moorings (rehabilitation)	unit	4	1	5	200	1,000
yacht moorings (new)	unit	20	-	20	1000	20,000
dinghy moorings (rehabilitation)	unit	15	-	15	200	3,000
dinghy moorings (new)	unit	5	-	5	750	3,750
marker buoys (rehabilitation)	unit	4	-	4	200	800
marker buoys (new)	unit	4	-	4	150	600
toilets (only on Bateau)	unit	2	-	2	1,250	2,500
trails	km	4.5	-	-	1,111	5,000
signage (all islands)	unit	10	5	15	200	3,000
billboards (points of entry)	unit	8	-	8	900	7,200
Vehicles and equipment						
boat/outboard motor (workboat)	unit	1	-	1	56,000	56,000
boat/outboard motor (dinghy)	unit	1	-	1	10,000	10,000
computers/printers (accessories)	unit	2	1	3	3,000	9,000
ranger uniforms and field gear	lumpsum	-	-	-	-	1,250
HQ building furnishings	lumpsum	-	-	-	-	4,000
building tools/equipment	lumpsum	-	-	-	-	2,000
library rehabilitation	lumpsum	-	-	-	-	400
wetlab rehabilitation	lumpsum	-	-	-	-	5,000
SCUBA	unit	5	-	5	2,000	10,000
communication (radios)						
base radio	unit	2	-	2	950	1,900
mobiles	unit	5	1	6	650	3,900
Site-specific training /workshops						
park staff	workshop	7	-	7	2,000	14,000
"boatboy" community	workshop	1	-	1	2,000	2,000
tour guides	workshop	1	-	1	2,000	2,000
computer skills	workshop	2	1	3	2,000	6,000
reef monitoring	workshop	1	-	1	2,000	2,000
financial management	workshop	1	4	5	2,000	10,000
Other						
update management plan	lumpsum	-	-	-	10,000	10,000
revise fee structure	study	1	-	1	10,000	10,000
park brochure	lumpsum	-	-	-	3,000	3,000
park web page	lumpsum	-	-	-	1,600	1,600
Total Investment Costs						**216,900**
2. Recurrent Costs						
O&M						

boat operations (fuel/oil)		-	-	-	12,000	60,000
boat maintenance		-	-	-	4,000	20,000
buoy/mooring maintenance		-	-	-	2,500	12,500
communications equipment		-	-	-	500	3,000
board expenses		-	-	-	1,000	5,000
other operating costs		-	-	-	10,000	50,000
Total Recurrent Costs						**150,500**
Total						**367,400**

1 Exchange rate $2.70 EC per 1 US$

Attachment 3: Brief Descriptions of Potential PMS PA Sites

Antigua & Barbuda (site #2): Cades Bay Marine Reserve

The Cades Bay Marine Reserve (CBMR) was declared a protected area by the Antigun Fisheries Department under the Fisheries Act of 1983 and represents one of the country's 3 marine reserves (Map 1). Located on Antigua's southwest coast, the Reserve extends from the mean high water mark (and accompanying wetlands) seaward for a distance of approximately one mile and encompasses a total area of approximately 7 mi.2 Major ecosystems within the CBMR include mangrove forests and associated wetlands, sandy beaches, sea grass meadows, and coral reefs.

The CBMR and surrounding area supports a number of user communities of which the most important are: local fisheries (both subsistence and commercial), dive and tour operators, yacht and other recreational boat owners, beach visitors, charcoal harvesters and hotel owners.

While the ecosystems of Cades Bay remain relatively intact and healthy, there is growing evidence that they are at risk to both natural and human-induced sources leading to their degradation. In recent years, perhaps the biggest threat may be the impacts associated with the relatively high frequency of hurricanes that have passed in proximity to Antigua (e.g., Hugo in 1989 followed by Luis in 1995). These have affected both the coastal ecosystems (particularly the mangrove areas) and the offshore reefs. Fortunately, there appears to be evidence of regeneration in both ecosystems. As visitation rates grow, there are also growing indications that the reef communities are suffering damage due to boat anchors and dive operations.

Identified priorities that could be considered for project support include: (i) updating and completion of an existing management plan, and (ii) supporting plan implementation. Under the former, this would include finalizing a zoning scheme, creation of a local management authority, and the development of a sustainable financing strategy for the area. Under the latter objective, this would include provision for basic park infrastructure and equipment, signage, vehicles, and training.

Dominica: Cabrits National Park

The Cabrits Peninsula is located in the northern half of Dominica, approximately one mile north-west of the town of Portsmouth (Map 4). The Peninsula is dominated by two volcanic peaks, East Cabrit (140 m in elevation), and West Cabrit (180 m) which are separated by a central valley. In addition to its historical importance, the Peninsula is also rich in biological diversity and contains some of the most significant stands of dry tropical forest remaining in Dominica. East Cabrit is separated from the mainland by the island’s largest wetland. Offshore, the marine communities are dominated by sea grass beds and coral reefs.

In December 1986, the Cabrits peninsula and surrounding marine area was added to the Dominica National Park System as the island’s second national park. The park is 1,313 acres in extent of which the terrestrial portion measures approximately 260 acres, a substantial proportion occupied by the aforementioned wetlands. It is the only PA in Dominica that includes both terrestrial and coastal/marine resource areas. Since its declaration, a cruise ship berth and reception facility and a visitor center were constructed in 1990 and 1998, respectively.

The Peninsula, with its range of habitats (dry forest, coastal vegetation, swamp, marsh, forest plantations and scrub), provides habitat for several different groups and species of wild animals. The area is inhabited by all the major groups of fauna on the island, including mammals (16), reptiles (12 species), amphibians

(1), birds (66, a figure which includes migrant birds), fish, crustaceans and a wide variety of insects and other arthropod species. Three species of marine turtles nest on Dominica's sandy beaches, and two of these are known to nest on the beaches to the northeast and southeast of the Cabrits peninsula.

Given its importance, the area is increasingly coming under pressure from tourism visitation. Offshore, there are growing resource use conflicts. Of particular concern is the growing number of yachts anchoring in the national park's coastal waters adversely impacting coral reefs and coming into conflict with local fishermen.

Priorities for support under the project include: (i) an elevated boardwalk trail linking the beach to the existing system of in-land trails, supported by interpretive substation platforms and lookout towers; (ii) signage; (iii) marked self-guided underwater trails; (iv) training of boat tour guides recruited from the local fishermen; (v) interpretative displays to provide information on marine life in the park; (vi) provision of marine information and an interpretative center; (vii) the construction of a small jetty to provide access and facilitate aquatic visitation; and (viii) a snorkel dock and a small boat concession rental facility.

Grenada (site #1): North East Coast Archipelago Marine Protected Area

The proposed North East Coast Archipelago Marine Protected Area consists of a marine area and three privately held islands (Sugar Loaf, Green and Sandy Islands). The area is located in proximity to the Levera National Park and Levera Pond (Map 5). The area represents an important hatching ground for turtles. Offshore, the area is characterized by coral reefs and seagrass beds. There appears to be a growing conflict between turtles and their nesting sites and the use of beaches for recreation. The on-going development of a hotel complex and 18 hole golf course represents a major new threat to the proposed area.

Specifically, support provided through OPAAL could be used for: (i) partial conversion of an existing interpretation center to support marine visitation, (ii) placement of additional moorings and marker buoys in the marine area, (iii) signage, (iv) equipment for the interpretation center, (v) a boat and truck, and (vi) updating of the management plan.

Grenada (site #2): Molinere/Beausejour Marine Protected Area and Multi-Zone Management System

The Molinere/Beausejour Marine Protected Area and Multi-Zone Management System (M/BMPA) represents only one of the two declared MPAs in Grenada (Map 5). The objective of the multi-zonal designation is to manage large areas for sustainable multiple use primarily for economic activities and secondarily for nature protection. In the case of M/BMPA the major uses are fishing (Beausejour, Flamingo, and Dragon Bays), biodiversity conservation (Happy Hill and Molinere Marine Reserves), recreational boating (Grand Mal), and an area of multiple-use.

The Molinere Reef is located approximately 3 miles north of St. George's on the leeward side of the island. The area consists of a series of coral reefs and associated communities. At one time it was thought to represent one of the finest coral reefs on the island. Its easy accessibility to St. George's and the large number of tourist hotels located further south in Grand Anse has resulted in high visitation rates including most of the island's six dive operators. However, there appear to be growing conflicts between fishermen and yachtsmen.

If properly managed, it could serve a number of objectives including, biodiversity conservation, recreation and tourism, education and research. There is some basic infrastructure and equipment in place that includes: a small interpretation center, a vehicle and boat, signage, and several fishing buoys located in the

marine area.

OPAAL support could be used to: (i) construct a marine interpretation center, (ii) convert the existing interpretation center to a national marine parks administration center, (iii) placement of additional moorings and marker buoys in the marine area, (iv) equipment for the interpretation and administration centers, and (v) updating of an existing management plan.

Nevis & St. Kitts: Central Forest Protected Area

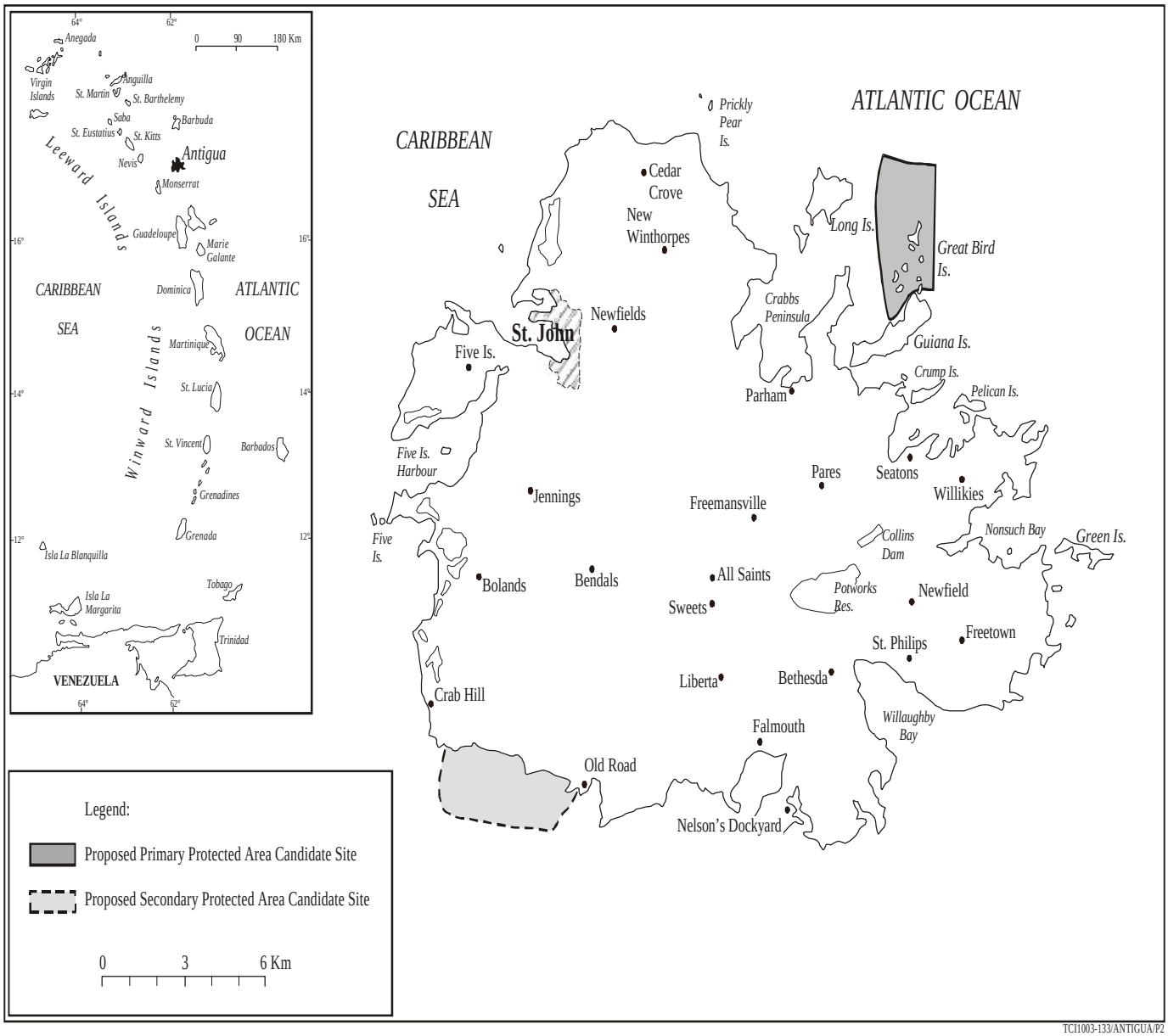
St. Kitt's Central Forest Protected Area (CFPA) represents a mountain cluster dominated by three volcanic centers and a chain of adjacent residual hills (Map 6). For the purposes of protection and sustainable management of vital water and biodiversity resources, the area above the 1000 ft contour has been classified as Crown (publicly owned) lands and includes a range of mountains and hills in the northeast extending from Mountain Liamuiga (elevation 3,792ft) through a middle range to the southeast. A gentle sloping saddle which separates the middle and southeast ranges links the north watershed of Phillips to that of Wingfield in the south. This largely forested area occupies almost one quarter of the entire landmass of St. Kitts.

The major ecosystems are rain forest, elfin woodland, and plam brake. The area is rich in floral biodiversity according to the last detailed study that identified 926 plant species, 45 of which were considered endemic to the country or the Lesser Antilles (Beard, 1949). One species, the red necked pigeon, is considered endangered. Faunal populations are limited but the notable presence of introduced species such as the African Green Vervet Monkey on both islands of St. Kitts and Nevis is cause for concern particularly for the farming community. The proposed CFPA has a network of nature and scenic trails which supports much of the country's eco-tourism ventures as well as recreational and educational programs.

The proposed CFPA appears to be fairly healthy although there is evidence of illegal encroachment in forest areas by farmers and some trail degradation has occurred as a consequence of hurricanes in recent times. In the absence of any monitoring of the ecosystems or the activities that impact them, it is not possible to determine the status and rate of change in faunal or floral composition. The decline of the sugar industry and growing evidence of agriculture encroachment above the 1000 ft contour reflect the urgent need for a regime of management that would protect the watershed areas.

Specifically, support provided through OPAAL could be used to: (i) prepare for the declaration of the area; (ii) develop a management plan for the protected area, which will include the establishment of the institutional/management authority, a zoning plan, fee structure and operational mechanisms; (iii) provide for the infrastructure and equipment (e.g., construction of a management office/visitor center, signage, a truck, and communications equipment); and (iv) and support for enforcement, environmental education, training, and monitoring and evaluation.

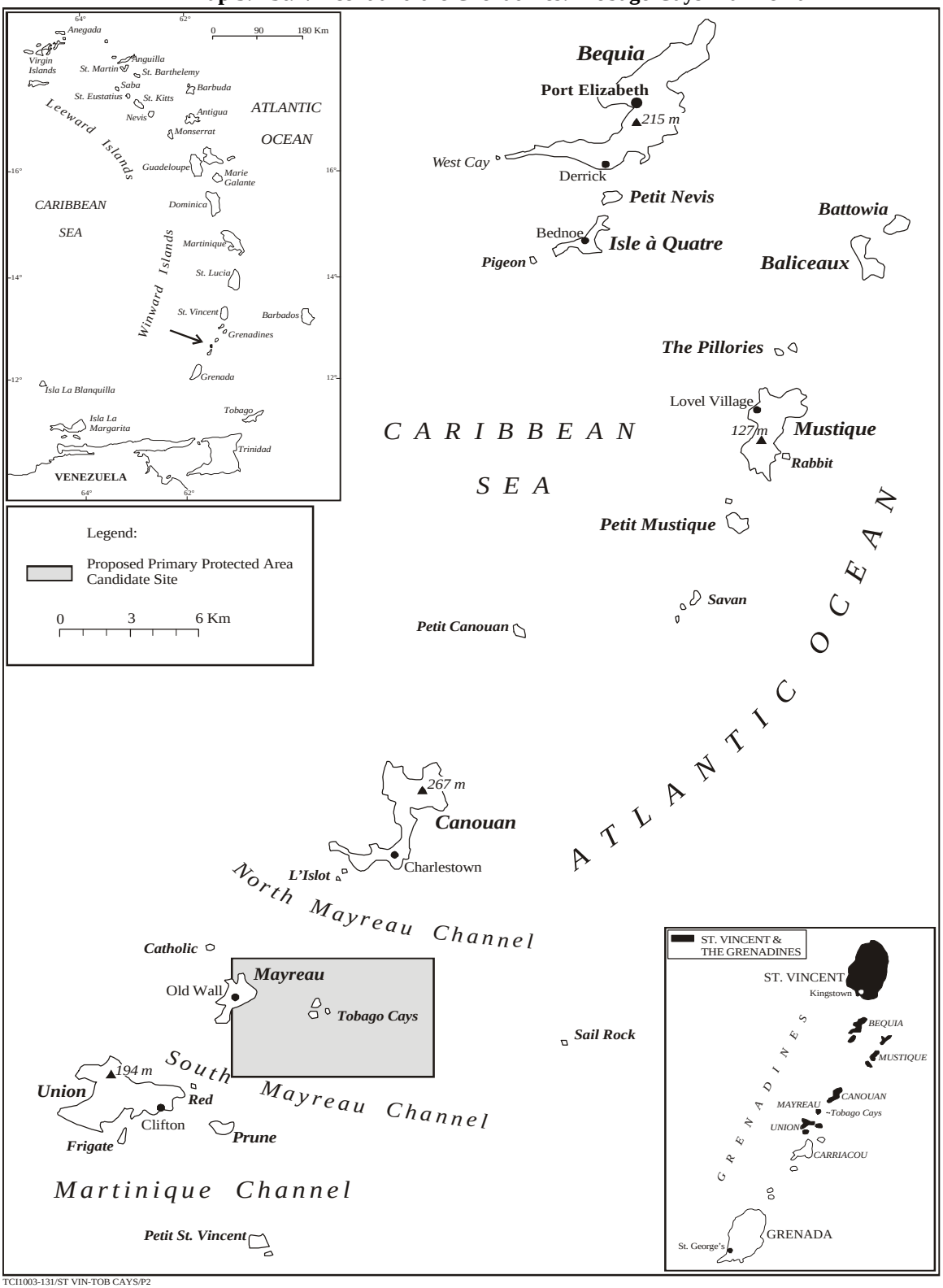
Map 1. Antigua: North South Islands National Park (Primary Site)



Map 2. St. Lucia: Pointe Sable National Park

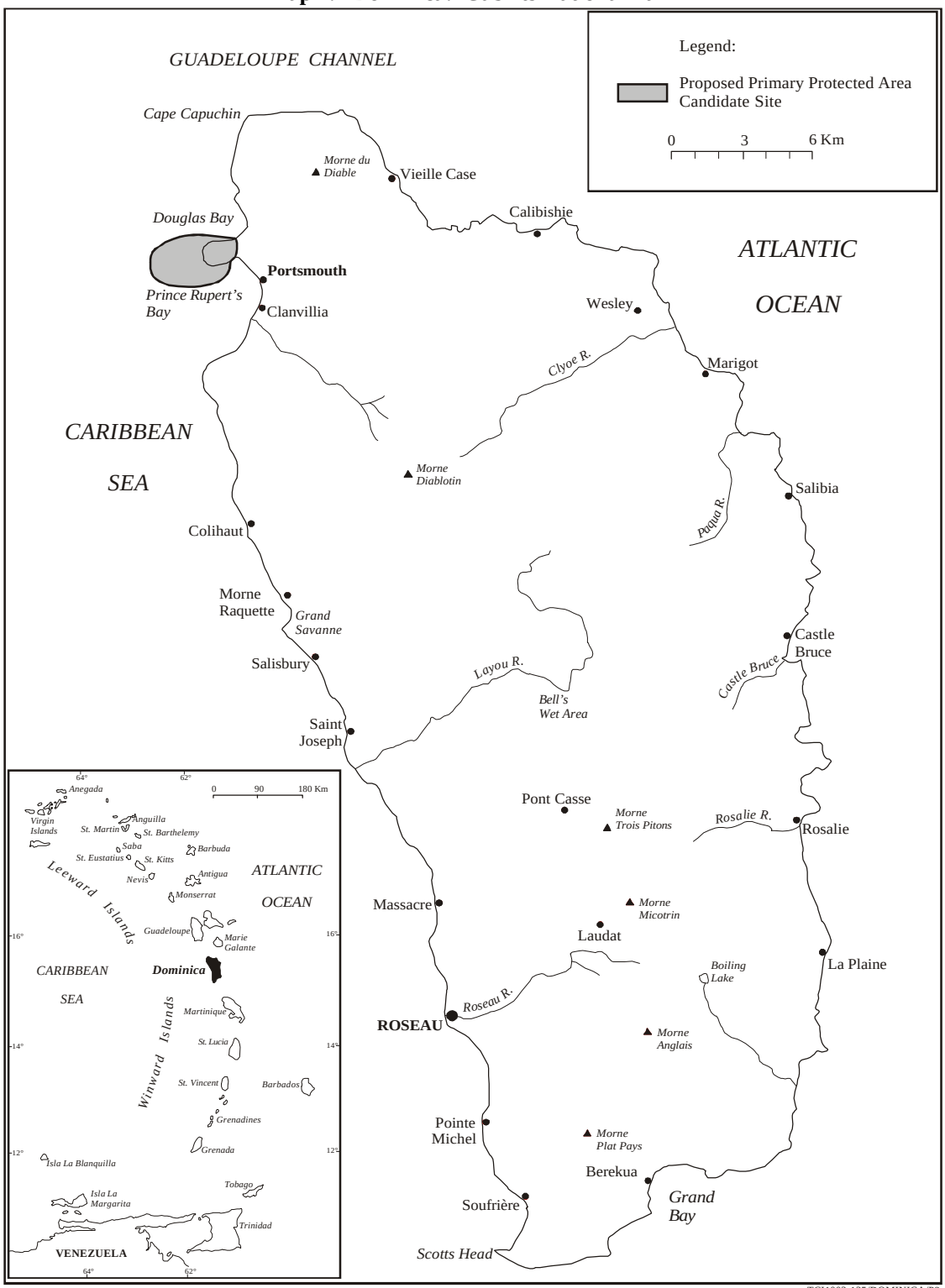
TCI1003-134/ST LUCIA/P2

Map 3. St. Vincent and the Grenadines: Tobago Cays Marine Park



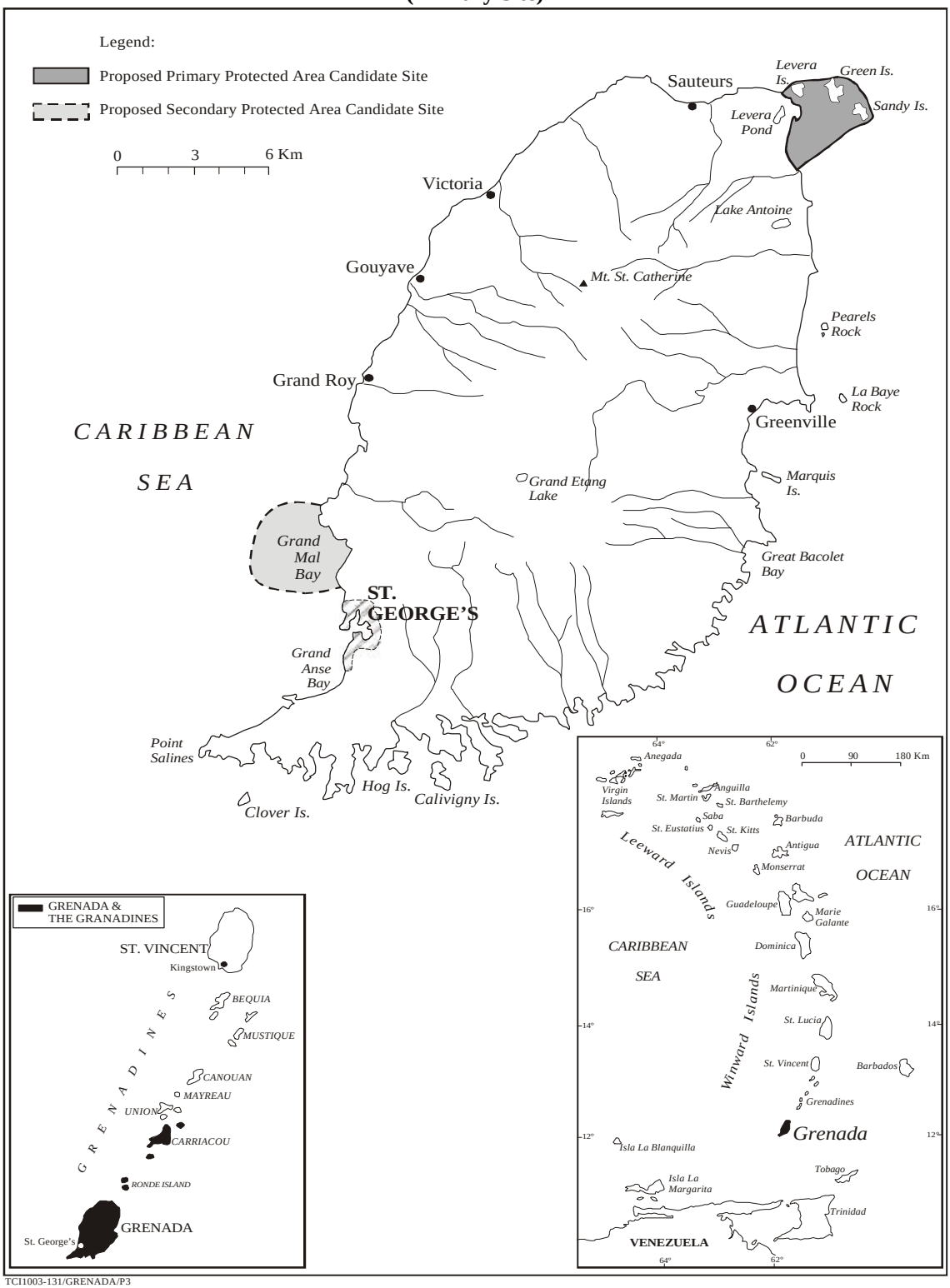
TCI1003-131/ST VIN-TOB CAYS/P2

Map 4. Dominica: Cabrits National Park



TCI1003-135/DOMINICA/P2

Map 5. Grenada and the Grenadines: N.E. Coast Archipelago Marine Protected Area (Primary Site)



TCI1003-131/GRENADA/P3

Map 6. St. Kitts and Nevis: Central Forest Protected Area

TCI1003-136/ST KITTS-NEVIS/P2