

Thematic report on protected areas or areas where special measures need to be taken to conserve biological diversity

Please provide the following details on the origin of this report.

Contracting Party:	Barbados
<i>National Focal Point</i>	
Full name of the institution:	Ministry of Housing, Lands and Environment
Name and title of contact officer:	Dr. Leonard Nurse Permanent Secretary
Mailing address:	Musson Building Hincks St. Bridgetown
Telephone:	(246) 467-5721
Fax:	(246) 437-8859
E-mail:	permanent@meenr.gov.bb meenr@sunbeach.net
<i>Contact officer for national report (if different)</i>	
Full name of the institution:	Ministry of Housing, Lands and Environment
Name and title of contact officer:	Kim Downes Environmental Officer (Biodiversity)
Mailing address:	Musson Building Hincks St. Bridgetown
Telephone:	(246) 467-5725
Fax:	(246) 437-8859
E-mail:	technical@meenr.gov.bb
<i>Submission</i>	
Signature of officer responsible for submitting national report:	
Date of submission:	

Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report.

The Barbados thematic report on protected areas was compiled by Ms Kim Downes, the officer with responsibility for biological diversity in the Ministry of Housing, Lands and Environment, using a number of reports generated by various studies undertaken by the Ministry, and other relevant documents and legislation.

The reports and legislation utilized are detailed below:

- i. The National Park Development Plan, Environmental Management and Land Use Planning for Sustainable Development Study (EMLUP)
- ii. Revised Environmental Legislation for Barbados, Environmental Management and Land Use Planning for Sustainable Development Study (EMLUP)
- iii. Draft National Physical Development Plan, Environmental Management and Land Use Planning for Sustainable Development Study (EMLUP)
- iv. Institutional Strengthening of the Environmental Unit and other institutions, Environmental Management and Land Use Planning for Sustainable Development Study (EMLUP)
- v. Feasibility Study and Preliminary Design for Harrison's Cave and Associated Sites, Feasibility Study of Harrison's Cave and Associated Sites, Carlisle Bay, and Folkstone Park and Marine Reserve
- vi. Carlisle Bay Marine Recreational Park, Feasibility Study of Harrison's Cave and Associated Sites, Carlisle Bay, and Folkstone Park and Marine Reserve
- vii. Folkstone Marine Management Area, Feasibility Study of Harrison's Cave and Associated Sites, Carlisle Bay, and Folkstone Park and Marine Reserve
- viii. Barbados National Biodiversity Strategy and Action Plan
- ix. The Coastal Zone Management Act 1998-39
- x. Soil Conservation (Scotland District)
- xi. Barbados Fisheries Management Plan 2001-2003
- xii. Draft Barbados National Action Programme to Combat Desertification and Land Degradation, and to Mitigate Against the Effects of Desertification, Land Degradation and Drought

The completed draft was then submitted to members of the Working Group on Biodiversity for their comment. The Working Group on Biodiversity is an advisory committee, made up of experts in various fields. The group was convened to advise the Ministry on general biodiversity issues and matters related to the implementation of the Convention.

This group was selected to review the draft report, as it comprises all the relevant agencies with responsibility for natural areas and biodiversity conservation in Barbados, including the Environmental Specials Projects Unit of the Ministry of Housing, Lands and Environment, The National Conservation Commission and the Coastal Zone Management Unit. The group also comprises experts in the area of biodiversity.

The group's composition is as follows:

- i. Dr. Julia Horrocks, Primatologist and Herpetologist, Senior Lecturer, University of the West Indies
- ii. Environmental Officer (Biodiversity), Ministry of Physical Development and Environment
- iii. Professor Sean Carrington, Botanist, Senior Lecturer, University of the West Indies
- iv. Dr. Karl Watson, Ornithologist, Senior Lecturer, University of the West Indies
- v. Entomologists, Senior Agricultural Officer, Ministry of Agriculture and Rural Development
- vi. Fisheries Biologist, Fisheries Division, Ministry of Agriculture and Rural Development
- vii. Coastal Zone Management Unit, Ministry of Environment, Energy and Natural Resources
- viii. General Manager, National Conservation Commission
- ix. Project Manager, Environmental Special Projects Unit

Wider consultation was not undertaken because of the time constraints and also because protected areas have been the subject of extensive studies and much of the information related to protected areas has been synthesised in the reports of the various studies undertaken by the Ministry.

The agencies involved in the review process are described below:

1. The Ministry of Housing, Lands and Environment, has responsibility for matters related to housing, lands, land and property acquisition and the environment. The divisions of the Ministry include:

- Environmental Unit
- Coastal Zone Management Unit
- National Conservation Commission
- Environmental Special Project Unit
- Environmental Engineering Division

The Ministry of Housing, Lands and Environment is responsible for the implementation of the obligations of the CBD. The Ministry also chairs a multi-sectoral Steering Committee, which observes this process and currently has in place a work programme for the conservation and sustainable use of biodiversity in Barbados. The objectives of the Ministry's work programme are to:

- i. Develop a more informed basis for decision making and policy formulation on the management of biodiversity in Barbados;
 - ii. Develop a more comprehensive information database for the management and utilisation of biodiversity;
 - iii. Enhance the regulation of domestic and international trade in endangered species of flora and fauna;
 - iv. Promote the full appreciation of biodiversity as a national resource.
2. The Coastal Zone Management Unit is the government agency specialising in the environmental management of the coastal zone. It carries out routine monitoring and analysis of

oceanographic conditions around the island, hydrographic surveys, GIS data management, coral reef and water quality monitoring. The Coastal Zone Management Unit also assists in the evaluation of all coastal related development planning applications submitted to the Town and Country Planning Office. The Coastal Zone Management Act (1998) puts in place provisions for the effective management of the coastal resources of Barbados, for the conservation and enhancement of those resources and related matters including developing and implementing the Coastal Zone Management Plan and designating Marine Areas.

3. The National Conservation Commission is mandated to conserve the natural beauty of Barbados, control and develop public parks, public gardens, beaches, caves and marine underwater parks and regulate commercial activity in public parks, gardens, caves and on beaches. The National Conservation Commission is also involved in some small-scale re-vegetation programmes.
4. The Fisheries Division is the agency responsible for fisheries planning and management. The Fisheries Resource Management Section of this Division provides scientific information for planning and implementing measures for fishery management and development, including: catch and effort statistics; biological, social and economic information; fisheries management measures; computer management; aquaculture and mariculture and library service. The Fisheries Act (1993) came into force on October 1st 1993. It consolidates previous statutes on the country's fisheries. This Act contains provisions for fisheries management and development in accordance with statutory schemes. Provision is also made for access by foreign vessels in accordance with access agreements and licensing procedures for local and foreign vessels.
5. The Ministry of Agriculture and Rural Development has the overall responsibility for agricultural development on Barbados.
6. The operation of the Soil Conservation Unit of the Ministry of Agriculture and Rural Development are governed by the Soil Conservation (Scotland District) Act. The Act provides for a management structure for the improvement and conservation of the soil; and for the prevention of damage or deterioration of the erosion of the land in certain areas of Barbados. One the tools utilised by the Unit is the extensive Revegetation of the Scotland District and as a result the development of a large orchard of varieties of fruit trees.
7. The Environmental Special Projects Unit of the Ministry is responsible for the execution of a number of projects including the Feasibility Studies of Harrison's Cave and Associated Sites and the Botanical Gardens.

CERMES (Centre for Resource Management and Environmental Studies) of the University of the West Indies, Barbados: Graduate level training (MSc in Natural Resource Management); Short course training (e.g. Socio-economic data collection for coral reef management, coral reef ecological monitoring techniques); Research into Marine Protected Areas (MPA)/Marine Reserve (MR) function and impacts (e.g. fish movements relative to reserve boundaries, recovery of fish populations, modeling recruitment and settlement patterns of fish larvae in MRs, social and economic impacts of MPAs/MRs on stakeholders and coastal communities, legal and policy arrangements best suited to MPA/MR implementation and active sustained management); Implementation of and collaboration in regional projects concerned with sustainable use of marine resources (eg. CARSEA (Caribbean Sea Ecological Assessment, GEF-Caribbean Large Marine Ecosystem (LME) project, NOAA White Waters to Blue Waters, Caribbean GOOS, DFID Co-management Guidelines Project, CaMMP *inter alia*)

Protected areas or areas where special measures need to be taken to conserve biological diversity

System of protected areas

1. What is the relative priority afforded to development and implementation of a national system of protected areas in the context of other obligations arising from the Convention and COP Decisions?					
a) High	X	b) Medium		c) Low	
2. Is there a systematic planning process for development and implementation of a national system of protected areas?					
a) no					
b) in early stages of development					
c) in advanced stages of development					
d) yes, please provide copies of relevant documents describing the process					X
3. Is there an assessment of the extent to which the existing network of protected areas covers all areas that are identified as being important for the conservation of biological diversity?					
a) no					
b) an assessment is being planned for					
c) an assessment is being undertaken					
d) yes, please provide copies of the assessments made					X

Regulatory framework

4. Is there a policy framework and/or enabling legislation in place for the establishment and management of protected areas?					
a) no					
b) in early stages of development					
c) in advanced stages of development					X
d) yes, please provide copies of relevant documents					
5. Have guidelines, criteria and targets been adopted to support selection, establishment and management of protected areas?					
a) no					
b) in early stages of development					
c) in advanced stages of development					
d) yes, please provide copies of guidelines, criteria and targets					X

6. Does the management of protected areas involve the use of incentive measures, for instance, of entrance fees for park visitors, or of benefit-sharing arrangements with adjacent communities and other relevant stakeholders?	
a) no	
b) yes, incentive measures implemented for some protected areas (please provide some examples)	X
c) yes, incentive measures implemented for all protected areas (please provide some examples)	

Management approach

7. Have the principal threats to protected areas and the biodiversity that they contain been assessed, so that programmes can be put in place to deal with the threats, their effects and to influence the key drivers?	
a) no	
b) an assessment is being planned for	
c) an assessment is in process	
d) yes, an assessment has been completed	X
e) programmes and policies to deal with threats are in place (please provide basic information on threats and actions taken)	
8. Are protected areas established and managed in the context of the wider region in which they are located, taking account of and contributing to other sectoral strategies?	
a) no	
b) yes, in some areas	X
c) yes, in all areas (please provide details)	
9. Do protected areas vary in their nature, meeting a range of different management objectives and/or being operated through differing management regimes?	
a) no, most areas are established for similar objectives and are under similar management regimes	
b) many areas have similar objectives/management regimes, but there are also some exceptions	
c) yes, protected areas vary in nature (please provide details)	X
10. Is there wide stakeholder involvement in the establishment and management of protected areas?	
a) no	
b) with some, but not all protected areas	
c) yes, always (please provide details of experience)	X

11. Do protected areas established and managed by non-government bodies, citizen groups, private sector and individuals exist in your country, and are they recognized in any formal manner?	
a) no, they do not exist	
b) yes, they exist, however are not formally recognized	X
c) yes, they exist and are formally recognized (please provide further information)	

Available resources

12. Are the human, institutional and financial resources available adequate for full implementation of the protected areas network, including for management of individual protected areas?	
a) no, they are severely limiting (please provide basic information on needs and shortfalls)	
b) no, they are limiting (please provide basic information on needs and shortfalls)	X
c) Available resources are adequate (please provide basic information on needs and shortfalls)	
d) yes, good resources are available	
13. Has your country requested/received financial assistance from the Global Environment Facility or other international sources for establishment/management of protected areas?	
a) no	X
b) funding has been requested, but not received	
c) funding is currently being requested	
d) yes, funding has been received (please provide copies of appropriate documents)	

Assessment

14. Have constraints to implementation and management of an adequate system of protected areas been assessed, so that actions can be initiated to deal with these constraints?	
a) no	X
b) yes, constraints have been assessed (please provide further information)	
c) yes, actions to deal with constraints are in place (please provide further information)	
15. Is a programme in place or in development to regularly assess the effectiveness of protected areas management and to act on this information?	
a) no	
b) yes, a programme is under development (please provide further information)	X
c) yes, a programme is in place (please provide further information)	

16. Has any assessment been made of the value of the material and non-material benefits and services that protected areas provide?	
a) no	
b) an assessment is planned	
c) an assessment is in process	
d) yes, an assessment has been made (please provide further information)	X

Regional and international cooperation

17. Is your country collaborating/communicating with neighbouring countries in the establishment and/or management of transboundary protected areas?	
a) no	X
b) yes (please provide details)	
18. Are key protected areas professionals in your country members of the IUCN World Commission on Protected Areas, thereby helping to foster the sharing of information and experience?	
a) no	X
b) yes	
c) information is not available	
19. Has your country provided information on its protected areas to the UNEP World Conservation Monitoring Centre in order to allow for a scientific assessment of the status of the world's protected areas?	
a) no	
b) yes	X
20. If your country has protected areas or other sites recognised or designated under an international convention or programme (including regional conventions and programmes), please provide copies of reports submitted to those programmes or summaries of them.	
21. Do you think that there are some activities on protected areas that your country has significant experience that will be of direct value to other Contracting Parties?	
a) no	
b) yes (please provide details)	X

Further comments

System of Protected Areas

1. Priority Afforded to the Development and Implementation

The priority afforded to the development of a national system of protected areas by the Ministry of Housing, Land and Environment has been high, reflected in the undertaking of various studies of which protected areas are a component and the ratification of the SPAW Protocol of the Cartagena Convention. The priority afforded to the implementation of these systems recommended by the various studies, while not low is severely limited by financial and human resources. In Barbados while there have been detailed studies undertaken on the development and implementation of a national system of protected areas, this system is however not in place.

In the development of the National Park plan it was recognized that implementation of the plan would bring Barbados closer to meeting its international obligations including those under the CBD.

2. Planning

The Ministry undertook the Environmental Management and Land Use Planning for Sustainable Development Project, a component of which was The National Park. The National Park Development Plan proposes a range of projects to guide the development of the Barbados National Park and Natural Heritage Conservation Areas for Barbados. The plan utilizes an ecosystem approach to the National Park Planning Process for Barbados and recognizes the dynamics and resilience of ecosystems and their limits.

Harrison's Cave, a series of natural underground caverns in the heart of the island of Barbados, was developed as a show cave during the 1970's. The area surrounding the cave contains a number of nature-oriented attractions and many nearby natural features. The Government of Barbados undertook a feasibility study in 1998 to determine the administrative, technical and financial feasibility of further development of Harrison's Cave and assess the feasibility of establishing an Integrated Nature Tourism Area (INTA), which incorporates the surrounding natural areas to protect and conserve the ecology of the cave and the natural environment of the area.

Given the multitude of uses Carlisle Bay, the high and increasing demand for underwater recreational opportunities, the potential for commercial and tourism development in adjacent areas and the sensitivity of the marine environment to human use the Government of Barbados embarked on a feasibility study of Carlisle Bay in 1997 to determine the viability of establishing a Recreational Park and Marine Reserve at Carlisle Bay. Carlisle Bay is presently designated as a Marine Protected Area.

Folkestone Marine Reserve was established in 1981 and was Barbados' first marine protected area. The reserve consists of four zones with different permissible uses -Scientific zone designated for marine research; Northern Water Sports Zone; Recreational Zone and the Southern Water Sports Zone. Given the concentration of diverse values and activities and resulting competing demands and conflicts, the high and increasing demand for underwater recreational activities and the deterioration of the resources, the Government of Barbados undertook the feasibility study of the Folkestone Park and Marine Reserve in 1997 to determine the feasibility of upgrading and enhancing the facilities at Folkestone as a recreational park and marine reserve involving the identification of measures which should be taken to protect and preserve the ecology; assessing the usage demands and the establishment of its carrying capacity and improve the revenue generating opportunities.

3. Assessment

The National Park Development Plan recognizes the importance of the areas identified to biodiversity conservation and the maintenance of representative ecosystems. The project sought to obtain a strong biophysical information base to assist in the identification of opportunities for conservation. Information compiled included information on the physical terrain, the vegetative communities and the wildlife habitat.

The feasibility study for Folkestone undertook an extensive assessment of the impacts on selected environmental and socio-economic components, including issues related to reef and pelagic fish, sea turtles, mangroves and shoreline vegetation and fauna as was done for the Carlisle Bay study.

Regulatory Framework

4. Policy Framework/ Enabling Legislation

The Draft National Physical Development Plan (PDP) for Barbados is intended to provide a vision for future growth and development of Barbados and sets out policies to guide relationships among land uses, community facilities and physical infrastructure.

The PDP details the Barbados system Parks and Open Spaces, the goal of which is to promote landscape preservation, ensure the conservation of natural areas, meet the active and passive recreation needs of residents of Barbados and enhance amenities for residents and tourist alike. The system also seeks to establish a National Park which will protect and conserve the natural and cultural assets of the area while supporting the social and economic development of existing communities within the park boundaries

The PDP details the Barbados system of Parks and Open Spaces, which has six categories and also details specific land use policies for each of the categories.

The National Park Plan also makes recommendations on the need for a new National Parks Act as well as the administrative and organizational structure necessary.

The Coastal Zone Management Act, 1998-39, allows for the provision of more effective management of the coastal resources of Barbados, for the conservation and enhancement of those resources and for related matters such as giving the Coastal Zone Management Unit the power to recommend for the approval of the Minister designated marine areas as restricted areas for the following purposes:

- i. the preservation or enhancement of the natural beauty of the areas;
- ii. the protection or rehabilitation of the flora and fauna found in the areas;
- iii. the protection of wrecks and other items of archaeological and historical interest found in the areas;
- iv. the promotion of the enjoyment by the public of the areas;
- v. the promotion of the scientific study and research in respect of the areas.

The Carlisle Bay Feasibility study makes many recommendations for legislation, amendments to existing legislation and regulations, as does the Folkestone study.

5. Guidelines, Criteria and Targets to Support Selection, Establishment and Management

The National Park Development Plan also details guidelines for the management and operation of the Barbados National Park and other Natural Heritage Conservation Areas. The guidelines related to the National Park are in the areas of agriculture, forestry and soil conservation; habitat and species conservation; cultural heritage conservation; marine conservation and community development.

6. Incentives in the Management of Protected Areas

The National Park plan also makes recommendations for a National Park and Marine Park Cost Recovery Strategy. This includes recommendations for direct cost recovery through entrance fees.

Management Approach

7. Assessment of Principle Threats to Biodiversity

Assessments were undertaken to inform the recommendations of the various studies.

8. Context of the Establishment of Protected Areas

Given Barbados' small size and the large number of varying activities, which may be undertaken, in any given area and the importance of tourism to Barbados economy, the recommendations for the system of protected areas recognize the need for a system which also contributes to community development and tourism development.

9. Varied Nature of Protected Areas

In the development of the system of parks and open spaces the project sought to accomplish a number of objectives including:

- Protecting the quality and the integrity of ecosystems;
- Focusing on the linkages and relationships among the ecosystem components;
- Maintaining and promoting viable species populations;
- Encouraging the restoration to healthy conditions where integrity has been affected;
- Ensuring that development is restricted from areas where site conditions or locations may pose a danger;
- Promoting and managing ecosystems to encourage biophysical resilience and a sense of place in which human beings can be at balance with nature.

This led to a diverse system, the PDP details the Barbados system of Parks and Open Spaces which comprises six categories:

- OS 1 The Barbados National Park
- OS 2 Natural Heritage Conservation Areas
- OS 3 Coastal Landscape Zone
- OS 4 Public Parks and Open Spaces
- OS 5 National Attractions

- OS 6 Barbados National Forest Candidate Sites

10. Level of Stakeholder Involvement

While the Proposed National Park is seen as an important vehicle for the conservation of significant natural heritage features, it was also seen as an important opportunity for the conservation and enhancement of many significant cultural, community and heritage features, which by their very nature require extensive community involvement, leading to community, heritage and nature tourism. The document therefore recommends community and government partnerships for the development of economic activity in the National Park area.

During the project a number of town meetings were held throughout the country and also within the boundaries of the proposed National Park to give residents an opportunity to raise any concerns.

For the Harrison Cave study, community participation has been critical to the success of the project and will continue to be critical to its successful implementation. From the earliest stages of the project, linkages were developed with the most active community groups, as well as with many individuals who were concerned about changes and development within the local area. The project team recognized that it was not only important to raise community awareness about the feasibility study, but to also address skepticism, build trust and be seen as doing something meaningful for the for the communities themselves.

In this project the community consultation / mobilization approach laid the groundwork for the staging of a major community event the “de Heart uh Barbados” weekend, a showcase of the Integrated Nature Tourism Attraction in the area, whereby a number of communities residents worked closely with the project team. Much of the success of this project stemmed from the physical location of the Project Office in the area. The document also makes recommendations for the maintenance of the community involvement.

The involvement of the community in the feasibility studies for Folkstone and Carlisle Bay was also recognized as very important to the success of the projects. Mechanism for community involvement included meetings with all stakeholders, including the fisher, divers, water sports operators and residents and businesses.

11. Management of Protected Areas by Non-Government Bodies

The Graeme Hall Swamp Ecosystem is a unique series of natural features, including an extensive inland wetland, a large beach area, Seagrass and an offshore reef complex. This ecosystem is designated as a Natural Heritage Conservation Area. However, a portion of the land area is owned by a private developer and a portion by the Government of Barbados. The private owned portion is managed as a Nature Sanctuary.

Available Resources

12. Adequacy of Human, Institutional and Financial Resources

The Institutional Strengthening Report of the EMLUP study calls for the establishment of a Natural Heritage Unit to have management responsibility national parks and natural heritage. The proposed new unit within the Ministry of Environment specifically to deal with the National Park and the Natural Heritage Conservation Areas would be charged with the planning and promotion and implementation of projects in these locations. It is envisaged that a strengthened ESPU would become the Natural Heritage Unit.

To date this unit has not been set up as the proposal calls for the establishment of a large number of new

positions to ensure that the unit has the adequate technical, administrative and field capacity to implement the National Park Plan. The Government of Barbados is severely limited financially and funding for the establishment of a new unit and the required staffing levels is not available.

13. GEF Funding

The nature of the funding, that is for the implementation of the National Park Plan will not meet the GEF criteria.

Assessment

14. Assessment of constraints to implementation

The constraints to implementation are primarily financial.

15. Assessment of the effectiveness of protected areas

The National Park Plan Document calls for a review of the guidelines every five years.

16. Value of material and non- material benefits

The National Park Plan identifies the benefits of the National Park System including direct cost recovery, and other non-direct economic benefits; other social and ecological benefits are also identified.

Regional and International Cooperation

The recommendations emanating from the Feasibility Study of Harrison's Cave and Associated Sites and their practical application in the form of the Integrated Nature Tourism Area Project and the combined networking of the sites provide an excellent opportunity for presenting IUCN's Protected Landscape Approach as a "best practice" model, where the natural and cultural resources of the area would be safeguarded while facilitating viable programmes of social and economic development.
