

**THE BELIZE NATIONAL BIODIVERSITY
ACTION PLAN**

**National Biodiversity Committee
Ministry of Natural Resources and the Environment
Belmopan, Belize, Central America**

**Editors
N.D. Jacobs and A. Castañeda**

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Authorship

This report is the joint effort of the Project Preparatory Team (PPT) under the direction of the National Biodiversity Committee (NBC) and the Technical Advisory Biodiversity Sub-committee (TABS). Members of the PPT worked under contract with the National Biodiversity Strategy and Action Plan Project.

Members of the PPT and Principal Authors:

Delia Tillet	Environmental Planning and GIS Information
Oscar Rosado	Forest and Wildlife Management
Hugh O'Brien	Medicinal Plants
Noel Jacobs	Coastal and Marine Resources
John Briggs	Agriculture and Tourism
Zoila Ellis	Legal and Policy Framework
Anselmo Castañeda	National Project Coordinator

Members of the NBC:

Richard Belisle	Chairman, Chief Forest Officer, Ministry of Natural Resources and the Environment
Noel Jacobs	Vice-chair, Ministry of Agriculture, Fisheries and Cooperatives
Marcelo Windsor	Ministry of Natural Resources and the Environment
Edilberto Romero	Programme for Belize
Evaristo Avella	Department of the Environment
Enrique August	Help for Progress
Moises Cal	Programme Officer, United Nations Development Programme
Anthony Castillo	Ministry of Human Resources, Women and Youth
Zenaida Moya	Ministry of Economic Development
Vincent Palacio	University College of Belize
Anselmo Castañeda	National Project Coordinator

Report Editors: N. D. Jacobs and A. Castañeda.

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Mr. Richard Belisle
Chairman
National Biodiversity Committee

Foreword

The National Biodiversity Committee was established in 1996 and is charged with the responsibility of providing guidance to the Government of Belize, on policies necessary to conserve and sustainably use Belize's biological diversity. The NBC consists of five Government Ministries (Natural Resources and the Environment, Economic Development, Human Resources, Tourism, and Agriculture, Fisheries and Cooperatives), two umbrella NGOs (Association of National Development Agencies and Belize Association of Conservation NGOs), a representative from United Nations Development Programme, and one from the University College of Belize. The first major task of the NBC has been the formulation of the National Biodiversity Strategy and Action Plan. The National Biodiversity Strategy and Action Plan Project started in September 1997 and ran for fourteen consecutive months.

The Technical Advisory Biodiversity Sub-Committee (TABS) is the technical arm of the NBC, which provides multi-disciplinary advice and guidance during processes such as the formulation of the Strategy and Action Plan. It consists of a cross-section of technical, social and special interest/commodity personnel from the Public and Private Sectors. Draft strategies and actions were developed by six national consultants for the following areas: Forest and Wildlife Management, Medicinal Plants, Coastal and Marine Resources, Agriculture and Tourism, Environmental Planning and Geographic Information Systems, and Legal and Policy Framework. During the planing process, eight consultations for the Strategy and three for the Action Plan were held over the six administrative districts. Three TABS workshops and eight NBC meetings were also held. Over 400 Belizeans directly participated during these consultations. In addition, thousands were informed by radio, television, newspaper articles, posters, comic books, biodiversity flags, and an essay competition.

The Biodiversity Action Plan is a guide for the implementation of actions necessary for achieving the objectives identified in the Biodiversity Strategy. This Action Plan is limited to an initial implementation period of five years (1998-2003), with the understanding that evaluations of actions implemented during such period will be used to justify subsequent revisions of the Strategy. The main challenge for the Government and people of Belize, is to develop and implement programmes which consolidate the protection of biological diversity with socio-economic needs. In most cases, success will be dependent upon the role of the community in the implementation of such programmes and on the distribution of benefits derived thereof. Essentially, the processes of biodiversity conservation and national sustainable development must be centered on the betterment of life for all Belizeans.

The National Biodiversity Office (NBO) will have the coordination responsibility to ensure that the actions contained in this document are implemented effectively to conserve Belize's biological resources. The National Biodiversity Office will efficiently and effectively monitor stakeholders on a regular basis to ensure they are meeting their implementation schedules and will seek ways to assist those who may find difficulties in implementing specific actions. Under the guidance of the NBC, the coordinating and monitoring roles of the National Biodiversity Office will have the necessary cross-sectoral oversight to ensure a successful implementation of the Action Plan.



Mr. Richard Belisle
Chairperson,
National Biodiversity Committee

Acronyms

AFFWCFR	Association of Friends of Fresh Water Creek Forest Reserve
ANDA	Association of Developments
BACONGO Belize	Association of Conservation NGOs
BAS	Belize Audubon Society
BBIS	Belize Biodiversity Information Systems
BCA	Belize College of Agriculture
BDF	Belize Defense Force
BEST	Belize Enterprise for Sustained Technology
BIM	Belize Institute of Management
BRT	Biodiversity Response Team
BTIA	Belize Tourism Industry Association
BWB	Birds Without Borders Project
CARDI	Caribbean Agricultural Research and Development Institute
CATIE	Centro de Agricultura Tropical de Investigación y Enseñanza
CBO(s)	Community Based Organization(s)
CIAT	Centro Internacional de Agricultura Tropical
CIMMYT	Centro Internacional para e Mejoramiento de Maíz Y Trigo
CITES	Convention on International Trade in Endangered Species
CZMP/A	Coastal Zone Management Project/Authority
DBMK	Di Bush Medisin KongsI
DOE	Department of the Environment
EAP	Escuela Agricola Panamericana (ZAMORANO)
EIA	Environmental Impact Assessment
ESTAP	Environmental, Social and Technical Assistance Project
FAO	Food and Agriculture Organization
FGGL	Friends of Gra-Gra Lagoon
FPMP	Forest Planning Management Project
GEF	Global Environmental Facility
GIS	Geographic Information System
IICA	Instituto Inter-americano de Cooperación para la Agricultura
IRRI	International Rice Research Institute
IUCN	International Union for the Conservation of Nature
LIC/CEDS	Land Information Center/Conservation and Environmental Data Systems
LUA	Land Utilization Authority
MARPOL	Convention for the Prevention of Pollution from Ships
MNRE	Ministry of Natural Resources and the Environment
NBMP	National Biodiversity Monitoring Programme
NEAC	National Environmental Appraisal Committee
NGO(s)	Non-Governmental Organization(s)
NHM	Natural History Museum
NTFP	Non-Timber Forest Products
NYBG	New York Botanical Garden
PATEC	Protected Areas Technical Evaluation Committee
SAC	Sugar Association of the Caribbean
SDA	Special Development Areas
SIWABAN	Caye Caulker CBO for Conservation and Development
SOS	Systems of Sustainability
SPECTE	Society for the Promotion of Eco-cultural Tourism and the Environment
SWA	Sibun Waterdshed Association
TH/THF	Traditional Healers/Traditional Healers Foundation
TIDE	Toledo Institute for Development and the Environment
TRAMIL	Regional Caribbean Research Organization on Medicinal Plants Usage
UCB	University College of Belize
WCS/GJBS	Wildlife Conservation Society/ Gallon Jug Biological Survey

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1.0. INTRODUCTION

Under the Convention on Biological Diversity, Belize is committed to preparing a National Biodiversity Strategy and Action Plan(Article 6) and to submit its First National Report to the CBD. This first Biodiversity Action Plan represents a very important deliverable under such commitments.

The protection of Belize's biological diversity is a must if the country is to achieve its sustainable development. Conservation of biological diversity increases the options and improves the capacity of the environment to support future development needs. This National Action Plan was developed to achieve the objectives of the National Biodiversity Strategy, which are based on the principles of sustainable development and aims to bring closer the relationship between biodiversity conservation and economic development.

The biodiversity planning process began in September, 1997 and culminated in November, 1998. The process was characterized by a series of consultations with stakeholders involved in the conservation and use of Belize's biological resources. The process was led by a team of six national consultants who, together with staff of the Project Office, worked as the Project Preparatory Team. The entire process had the oversight of the National Biodiversity Committee and the Technical Advisory Biodiversity Sub-committee, which provided guidance and assured transparency.

The preparation of this Action Plan began with the Stocktaking and Assessment exercise undertaken by the six consultants who identified gaps and analyzed the cross-sectorial issues which impact directly on Belize's biological diversity. During the eight consultations for the Strategy, inputs from stakeholders country-wide were received and served as the basis for the formulation of this Action Plan. After the draft Strategy was prepared, three additional consultations were held in the Northern (Corozal and Orange Walk), Central (Belize and Cayo) and Southern (Stann Creek and Toledo) regions of the country to finalize the approval and prioritization of those actions that were considered to be realistically achievable within the next five years.

This National Biodiversity Action Plan addresses actions under twelve main headings which were developed and recommended from a series consultations during a twelve months period. These headings include: *in-situ* and *ex-situ* conservation; laws and policy; human and institutional capacity; research, monitoring and sustainable use; community participation; public education and awareness; institutional collaboration and coordination; access to genetic resources; equity and benefit sharing; information management; population and biodiversity and biosafety. This Action Plan calls for a greater collaboration between Government agencies, NGOs, research institutions, community-based organizations, local communities, youth, traditional healers and the general public, to work together as partners in biodiversity conservation.

Even with the support received during the consultations from the stakeholders at the national, regional, district, village and commodity interest levels, the National Biodiversity Office will need to formulate implementation mechanisms for this Action Plan, in order to obtain maximum results. Responsibilities for and benefits from biodiversity conservation should be equally distributed among members of communities and institutions that are actively involved in the implementation activities.

While the process from Strategy to Action Plan formulation was led by a relatively small group of Belizeans, the actual implementation will be led by a wider cross-section of society whose commitment and perseverance will at all times be the driving force to ensure success. It is anticipated that the facilitating and coordinating role of the NBO will be complemented by genuine stakeholder participation and contribution.

2.0. OBJECTIVES

2.1.1. Coordination/Guidance

The objective of the Biodiversity Action Plan of Belize is to coordinate and guide the implementation of actions by stakeholders to achieve the objectives of the National Biodiversity Strategy.

2.1.2. Monitoring/Assistance in Implementation

The National Biodiversity Office (NBO) will efficiently and effectively monitor stakeholders to ensure that they are meeting their implementation schedules and will seek ways to assist those who may find difficulties in implementing specific actions.

3.0. IMPLEMENTATION

Below is a proposed terms of reference for the National Biodiversity Office's(NBO):

3.1. Short Term

- Finalize the distribution of documents developed by the NBSAP Project to all stakeholders.
- Take coordination responsibility of all matters relating to the Biodiversity Strategy and Action Plan.
- Prepare a budget for the next five years to operationalize the implementation plan, including the financing of strategic priority actions as determined by the Action Plan itself.
- Assist in fund raising activities to operate the Office.
- Prepare a Cabinet Paper/ presentation to sensitize Cabinet on the commitments of the GOB under the Convention on Biological Diversity (CBD) and on the highlights of Belize's Strategy and Action Plan.
- Make NBSAP presentations to sensitize all Permanent Secretaries, Heads of Departments and Coordinators of Projects related to biodiversity planning, on their agency's anticipated role in the Strategy and Action Plan.
- Conduct an NBSAP awareness campaign (meetings and workshops) to sensitize the staff of relevant Ministries, Departments, biodiversity-related Projects, NGOs, CBOs and all relevant Private Sector agencies including the commodity associations (sugar, bananas, cattle, citrus, tourism, forest sectors, etc.) who will implement the Action Plan.

3.2. Medium and Long Term

- Continue coordinating the implementation of the Biodiversity Strategy and Action Plan.

3.3. The NBO will maintain an open communication linkage with all stakeholders implementing activities under the Action Plan. Regular exchange of experiences will be encouraged among participants/stakeholders in order to share lessons learnt during implementation.

3.4. The NBC will call meetings once quarterly to keep them informed of the progress and difficulties experienced by the various implementors/stakeholders. Members of the NBC will be invited to visit the various projects sites so that they can have a first-hand experience on what the various stakeholders are doing.

3.5. The NBO will ensure that a very efficient media coverage will keep the nation informed on the progress of implementation activities.

3.6. Below is the proposed terms of reference of the TABS:

- Assist the NBO in proposal writing to access funds.
- Assess the feasibility of projects.
- Visit project sites and assist in the monitoring of Action Plan implementation
- Assist in the development of bio-prospecting guidelines.
- Others to be developed by TABS and the NBC.

4.0. THE ACTION PLAN BY SECTORS

4.1. IN-SITU AND EX-SITU CONSERVATION (Article 8 and Article 9)

A. Fisheries, Coastal and Marine Resources

4.1.1. Objective: To maintain and enhance coastal and marine biodiversity through the establishment of Protected Areas, captive breeding and research.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Conduct biological and socio-economic assessments of critical habitats in coastal and marine areas, inland water bodies and rivers, to determine their suitability for protective status.	CZMP/A, Fisheries & Forest Departments, SWA, FGGL SPECTE.	✓		\$50,000/site
b. Develop an appropriate management framework for Marine Reserves and other Protected Areas, both legally and institutionally, to ensure the production of management plans for all existing and proposed Protected Areas, frequent reviews of management plans to identify new management needs, to evaluate the success of Protected Areas, to assess the concept of 'buffer zones' around Protected Areas, and for the modification of management plans as necessary. The cave systems need to be considered in Management Plans.	Agriculture, Archaeology, Fisheries, Forest Departments, TIDE, FGGL, SOS, CZMP/A.	✓		\$198,000
c. Identify and secure start-up funds for Marine Protected Areas.	Fisheries & Forest Departments, CZ MP/A.	✓		\$10,000/site
d. Promote the captive breeding of native species to assist in the replenishment of depleted stocks, as a source of protein for animal and human consumption, as a source of genetic material, and to minimize the introduction of exotic species; providing such operations do not negatively impact wild stocks.	Agriculture, Fisheries & Forest Departments, FGGL, SPECTE	✓	✓	\$150,000/yr

B. Forest and Wildlife Management

4.1.2. Objective: To develop the National Botanical Garden and assist in the development of private Botanical Gardens, as an ex-situ conservation measure.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Finalize the acquisition of a 1,000-acre parcel in the vicinity of Belmopan for the further development of the National Botanic Garden.	Ministry of Natural Resources and the Environment, Forest Department, NGOs in wildlife sector, SOS. Individuals with scientific or practical knowledge of native plants, their habitats and growth requirements	✓		\$1.5 m \$250,000/yr
b. Set up a National Conservation Trust to oversee, among other things, the establishment and management of botanic gardens and the development of collaborative efforts with Botanical Gardens, such as Missouri, Fairchild, etc.	Ministry of Natural Resources and the Environment, Forest Department, NGOs in wildlife sector, Individuals with scientific or practical knowledge of native plants, their habitats and growth requirements, Du Plooy.	✓		\$12,000

4.1.3. Objective: To implement the National Protected Areas System Plan (NPASP) as an *in-situ* conservation measure.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Adopt a National Protected Areas System Plan (NPASP) as a management and policy tool for Protected Areas.	Archaeology, Agriculture & Forest Departments, PFB	✓		\$1,000
b. Identify and access the funding necessary to implement the Minimum Conservation Areas recommended in the NPASP.	Archaeology, Agriculture & Forest Departments, PATEC	✓	✓	\$2,124,062/yr \$2,832,786/yr
c. Seek protection for all areas that merit protective status, including those identified and recommended in the NPASP.	Archaeology, Agriculture & Forest Departments, SPECTE	✓		\$2,000
d. Review and upgrade the National Bird Sanctuaries System to include a workable management framework.	Fisheries & Forest Departments, SIWABAN, BAS, PFB, BWB, FGGL	✓	✓	\$4,000

4.1.4. Objective: To complete the development of management plans for all Protected Areas, in accordance with the sustainable use of such areas.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Identify and access the funds necessary to develop and update management plans for protected areas.	Forest, Archaeology & Fisheries Departments, FGGL, SPECTE, PATEC, TIDE	✓		\$20,000

4.1.5. Objective: To expand the existing collection at the National Herbarium and the National Faunal Collection including agriculture-related organisms.

Actions:

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Conduct collections in under-represented forest areas to increase the diversity and quality of plant specimens at the National Herbarium.	Forest Department	✓		\$60,000/yr I \$20,000/yr II-V
b. Identify and access funding to expand the National Faunal Collection including the expansion of existing collections of agricultural-related organisms and strengthening of relations with biosystematic services.	Forest & Fisheries Departments, Belize Zoo, WCS-GJBS, NHM-Las Cuevas, CARINET-BZE, CGA	✓		\$200,000 /yr

4.1.6. Objective: To implement the Biological Corridor System as a complementary *in-situ* conservation measure to the NPASP.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Develop mechanisms and incentives for the participation of private land owners in the establishment of biological corridors; this should be considered within a framework of zonation under the SDA.	MNR & E. PFB, SWA, TIDE SPECTE, Kekchi Council, Producer Organizations, Fisheries Dept., CGA	✓		\$12,000
b. Address the legal status of the biological corridors within the Protected Areas System; an effort to be made to appeal to all land owners to dedicate land for conservation purpose and to provide tax incentives to support this agreement.	Archaeology, Fisheries & Forest Department, Solicitor General, CGA	✓		\$12,000

c. Consider a land-use policy based on the recommendations of the Biological Corridors System.	Lands Department, CGA	✓		\$12,000
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C. Agriculture

4.1.7. Objective: To establish seed and gene banks to maintain material of rare or uncommon species or varieties not already collected and stored at any of the international seed and gene banks.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Identify and access financing, location and operational management for the establishment of national seed/gene bank.	Ministry of Agriculture, CGA Forest Department, Growers/Producers Associations, NGOs in the Agriculture Sector, (SOS)	✓	✓	\$100,000
b. Establish live seed banks in the form of agricultural systems.	Ministry of Agriculture, CGA Growers/Producers Associations, NGOs in the Agriculture Sector, (SOS)	✓		\$13,000
c. Establish sites for collection, cultivation and distribution of seeds and plants.	Ministry of Agriculture, CGA Growers/Producers Associations, NGOs in the Agriculture Sector, (SOS), BRABOZZ	✓		\$26,000

D. Tourism

4.1.8. Objective: To improve infrastructure at tourism sites within and outside Protected Areas.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Determine the basic needs of tourism sites, identify and access financing and conduct infrastructural improvement programmes at such sites.	Managers of protected areas Ministry of Works, Ministry of Tourism, Tourism sector Associations, Ministry of Natural Resources and the Environment, Fisheries Dept., TIDE, FGGL, Archaeology Dept.	✓		\$500,000 \$250,000/yr

E. Medicinal Plants

4.1.9. Objective: To conserve medicinal plants *in-situ*.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Develop Terranova Medicinal Plants Forest Reserve as a pilot project.	Forest Department, BEST, THF & TH Associations	✓	✓	Capital -\$106,000 Recurrent - \$87,000/yr
b. Incorporate the conservation and use of medicinal plants in the management plans for Protected Areas, agricultural systems and areas being reforested.	Agriculture, Fisheries & Forest Departments, Management of Protected Areas, BEST, NGOs	✓		\$2,500

c. Rescue seedlings of threatened medicinal plant species and reintroduce them into Protected Areas, Terranova Medicinal Plant Reserve, the 66 ft. buffer zone and areas to be reforested.	Ixchel, BEST & other NGOs, THF, TH Associations, Management of Protected Areas, SPECTE, BAS	✓	✓	\$3,750/yr
d. Establish at least one (1) Medicinal Trail and one (1) Medicinal Plant Reserve in each District.	Forest Department, TH Associations, NGOs, SPECTE	✓	✓	Capital - \$40,000 Recurrent - \$108,000/yr

4.1.10. Objective: To promote the ex-situ conservation of medicinal plants.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget
		1-5 years	> 5 years	
a. Include medicinal plants in the national and private Botanic Gardens and Public Parks.	Du Plooy, Forest Department, Management of new Botanic Gardens, IXCHEL	✓		N/A
b. Establish, maintain and expand medicinal plant gardens in primary and secondary schools to complement the medicinal plant syllabus.	Principals & Teachers, Parent/Teachers Associations, THF & TH Associations, SPECTE	✓	✓	\$6,000/yr
c. Encourage urban and rural people to conserve and grow medicinal plants in their backyards and private lands.	THF & TH Associations, National Biodiversity Office, NGOs, Ministry of Agriculture, SPECTE, SOS	✓	✓	\$4,000/yr
d. Preserve the seeds of threatened and important medicinal plants in seedbanks.	National Biodiversity Office, National and Private Botanic Gardens, International seed banks	✓	✓	\$750/yr

F. Legal and Policy Framework

4.1.11. Objective: To develop existing legislation in order to improve *in-situ* conservation.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget
		1-5 years	> 5 years	
a. Develop Regulations under the National Parks Systems Act to improve the management of Protected Areas by regulating such issues as co-management, sustainable use and the development of management plans.	Archaeology, Forest & Fisheries Departments, SWA, SOLGEN, Fishing Cooperatives, BEST, SPECTE, TIDE	✓		\$4,000 (BZD)

4.1.12. Objective: To provide policy guidance for the development of sustainable fishing practices and management, as an *in-situ* conservation approach to Belize's fisheries resources.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget
		1-5 years	> 5 years	
a. Develop a National Fisheries Policy focused at sustainable use, research, improved management and <i>in-situ</i> conservation.	Fisheries Department, TIDE, SOLGEN, SPECTE	✓		\$8,000 (BZD)
b. Update the revised draft of the Fisheries Act to include provisions for the strengthening of fisheries management, as well as other relevant recommendations of the National Biodiversity Strategy and Action Plan.	Fisheries Department and SOLGEN	✓		\$4,000 (BZD)

4.1.13. Objective: To guide agencies which are involved in the enforcement of legislation that impact on forests and wildlife, in order to achieve effective conservation of Biodiversity.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget
		1-5 years	> 5 years	
a. Develop a comprehensive Wildlife Protection Policy which provides guidance for the sustainable use of wildlife, and which also takes into account the obligations incurred under the Convention on International Trade in Endangered Species (CITES).	Forest Department, SOLGEN, NGOs, CBOs	✓		\$14,500
b. Revise the draft Forest Policy in order to include the recommendations of the National Biodiversity Strategy and Action Plan.	Forest Department	✓		\$2,500

4.1.14. Objective: To develop an ex-situ Conservation Policy which addresses all related issues including adequate representation of species, repatriation of species held outside of national boundaries, and the registration of collections.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget
		1-5 years	> 5 years	
a. Identify and access technical assistance for the development of an ex-situ Conservation Policy.	Fisheries & Forest Departments	✓		\$12,000
b. Establish a committee with wide cross-sectorial representation to develop a plan of action for the approval and implementation of the ex-situ Conservation Policy.	Fisheries & Forest Departments	✓		N/A

4.1.15. Objective: To fulfill obligations incurred under international conventions in addition to the Convention on Biological Diversity, which support *in-situ* and *ex-situ* conservation.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Identify and access technical assistance for the development of national legislation to effectively implement CITES.	Forest Department	✓		\$16,000
b. Maximize participation in the development of a Strategy and Action Plan to implement the Global Climate Change Convention.	Archaeology & Meteorology Department, PFB	✓		N/A
c. Strengthen the implementation of the MARPOL Convention in an effort to minimize the impact of pollution on the marine and coastal environment.	CZMP/A, Environment and Fisheries Departments, Ministry of Foreign Affairs, Port Authority	✓		\$5,000

4.2. LEGAL AND POLICY FRAMEWORK

A. Environmental Planning Sector

4.2.1. Objective: To improve institutional coordination in the development and implementation of environmental and land use plans.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Amend the Land Utilization Act to address the definition, establishment process and management SDAs.	Land Utilization Authority (LUA), Physical Planning Unit - MNR&E, CHPA, Producer Associations	✓		\$18,000

<p>b. Establish a legal central coordinating body to be called the Planning Policy Committee (PPC) to make decisions on and facilitate the integration of all planning efforts in the country, and to promote the standardization, coordination, and integration of all plans and planning-related activities.</p>	<p>Central Housing and Planning Authority, Housing Department, Physical Planning Unit – MNRE, CZMP/ Coastal Zone Management Authority, NGOs, SOLG</p>	<p>✓</p>		<p>\$18,000</p>
<p>c. Amend the existing planning legislation to address the issues of institutional coordination-clarification and restructuring of roles. Particular attention should be paid to those institutions that are instrumental in planning yet having insufficient legal authority to plan. This task should be consistent with the initiative led by the Central Housing and Planning Authority to review the Model Physical Planning Bill.</p>	<p>Central Housing and Planning Authority(CHPA), Housing Department, Physical Planning Unit – MNRE, CZMP/A, NGOs, SOLGEN, TIDE, LUA</p>	<p>✓</p>		<p>\$72,000</p>
<p>d. Develop planning Regulations and guidelines to promote the concept of catchment planning.</p>	<p>Central Housing and Planning Authority, Housing Department, Physical Planning Unit – MNRE, CZMP/Coastal Zone Management Authority, NGOs, PPC, TIDE</p>	<p>✓</p>		<p>\$52,000</p>
<p>e. Develop legal mechanisms and institutional procedures to ensure the implementation of zoning and planning guidelines by all permitting agencies affecting resource use.</p>	<p>Central Housing and Planning Authority, Housing Department, Physical Planning Unit – MNRE, CZMP/A, Forest Dept., relevant permitting agency, TIDE</p>	<p>✓</p>		<p>\$64,000</p>
<p>f. Formulate, adopt and implement a strategy to ensure that the land distribution process adheres to the SDAs guidelines and Regulations.</p>	<p>LUA, Physical Planning Unit - MNR&E</p>	<p>✓</p>		<p>N/A</p>
<p>g. Establish legal and other operational mechanisms to maximize coordination between the DOE and other institutions to address the issue of 'first appraisal' of projects by permitting agencies.</p>	<p>DOE, relevant permitting agencies</p>	<p>✓</p>		<p>\$26,000</p>

4.2.2. Objective: To improve the integrated planning, management and use of biological resources.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Formulate, adopt and implement a National Land Use Policy which prioritizes catchment boundary and biodiversity conservation as an explicit objective in the definition of Planning Units.	CHPA, Housing Department, Physical Planning Unit – MNRE, CZMP/A, NGOs, CBOs, PPC, Forest Department, PFB	✓		\$87,000

B. Fisheries, Coastal and Marine Resources

4.2.3. Objective: To improve the policy and legal framework necessary for the proper management of coastal and marine biodiversity.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	>5 years	
a. Formulate, adopt and implement Regulations under the Fisheries Act, inclusive of enforcement mechanisms, that comprehensively address the collection of aquarium fish, the trawl shrimp fishery, marine scientific research and aqua-culture.	Fisheries Department, Fishing Coops., TIDE	✓		\$78,000/yr
b. Develop the legal framework necessary to empower members of the community to act as 'special constables' to assist in the enforcement of laws affecting coastal and marine biodiversity.	Fisheries Department, Coastal Zone Management Authority	✓		\$16,000
c. Formulate and adopt an Integrated Coastal Development Policy, which clearly defines the roles of the Lands Department, Forest Department, the Department of the Environment, Coastal Zone Management Authority, the Department Hydrology and the local Governments in the implementation of said policy.	Coastal Zone Management Authority and the National Biodiversity Office	✓	✓	\$120,000

d. Develop the legal and institutional framework for the introduction of pollution and effluent charges, and for addressing the disposal of industrial and municipal waste in coastal areas.	Solid Waste Management Authority	✓	✓	\$166,000
e. Formulate, adopt and implement specific Regulations under the Fisheries and Forest Acts, inclusive of enforcement mechanisms, to protect coastal habitats from direct and indirect damages.	Fisheries and Forest Departments	✓		\$156,000/yr
f. Formulate and legislate specific Regulations under the Lands Act inclusive of enforcement mechanisms, to address land clearing on slopes and banks of rivers that causes erosion and sedimentation.	Agriculture, Forest & Lands Departments, SOLGEN and Producer Associations	✓		\$16,000
g. Formulate, adopt and implement policies that address the construction of piers and sea walls.	Fisheries & Lands Depts, CZMP/A, Town Boards, Villages Councils, Diveshop Owners	✓		\$34,000
h. Amend the Mines and Minerals Act to make EIAs Mandatory, and not discretionary.	Office of Petroleum and Geology	✓		\$16,000
i. Amend the Fisheries Act to include management frameworks for Marine Reserves.	Fisheries and Forest Departments	✓	✓	\$41,000
j. Formulate, adopt and implement policies to address bio-prospecting and intellectual property rights.	Resource specific, TIDE, NBO	✓		\$60,000
k. Amend all Acts governing coastal and marine biodiversity to include 'exemplary fines' for infractions, as a disincentive for the repeat of violations.	Resource Specific, TIDE, NBO	✓		\$48,000
l. Develop minimum standards for potential members of NEAC and consultants who prepare EIAs.	Archaeology, Environment, Fisheries & Hydrology Departments, CHPA	✓		\$16,000
m. Prohibit development within Protected Areas and restrict expansion of those that already exist.	Archaeology, Fisheries & Forest Departments	✓		\$16,000
n. Prohibit the exploitations of marine mammals.	Forest Department	✓	✓	N/A
o. Amend the Mangrove Regulations to require Government Departments to comply with permitting requirements so as to control agricultural and urban development within fragile areas.	Fisheries, Forest & Lands Departments	✓		\$16,000

4.2.4. Objective: To ratify and ensure compliance with commitments under international conventions and agreements.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Implement commitments under international conventions and agreements.	Ministry of Foreign Affairs Resource Specific	✓	✓	156,000/yr

C. Forest and Wildlife Management

4.2.5. Objective: To revise Protected Areas legislation regarding the de-reservation process to ensure a more transparent process.

Action/Activity	Proposed Responsible Agency	Time Frame		Approx. Budget (BZD)
		1-5 years	> 5 years	
a. Amend the Forest Act and the National Parks System Act to address the de-reservation process.	BAS, Archaeology & Forest Departments, AFFWCFR, BACONGO, SPECTE, TIDE	✓		\$12,000
b. Promote the formation of a Private Protected Areas Organization.	BAS, Forest Department, BACONGO, Jaguar Creek, SPECTE	✓	✓	\$7,000
c. Amend the National Parks Systems Act to provide for management plans to be prepared before Protected Areas are declared.	Archaeology & Forest Departments	✓		N/A