

Fencing the reserve	\$ 16,000
Constructing a warden post	\$ 10,000
One shot biological survey	\$ 4,000
Sanitary facilities	\$ 3,000
Campsite construction	\$ 5,000
Vehicle	\$ 15,000

Total **\$ 53,000**

Recurrent costs

Salary for manager	\$ 30,000
Salary for warden	\$ 4,500
Mileage/Transportation	\$ 4,000
Materials and supplies	\$ 5,000

Total **\$ 43,500/yr**

b. In-kind cost will be the equivalent of one Consultant for 5 days.

Equivalent of one Consultant for 10 days @ \$125/day \$ 1,250

Total **\$ 1,250**

c. To rescue at least 250 seedlings per year and transplant them into Protected Areas, Terranova and other areas will cost about \$7.50/seedling.

250 seedlings per year @ \$7.50/yr. \$ 1,875/yr

Total **\$ 1,875/yr**

d. To establish a medicinal trail and a medicinal reserve in the 5 other districts.

Capital cost i.e. signs, walkways etc @ \$1,000/trail
and \$3,000/reserve (includes survey) \$ 20,000

Total **\$ 20,000**

Recurrent cost

Salary for one (1) warden or trail manager each for the 5 trails and 5 reserves @ \$ 5,000/yr	\$ 50,000
Mileage/Transportation	\$ 4,000
Materials and supplies	\$ 5,000

Total **\$ 59,000/yr**

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

Actions

a. This will have no direct cost.

b. Within the next 5 years it should be possible to establish a garden in at least 2 schools per year.

Establish 2 gardens/yr @ \$1,500.00 \$ 3,000/yr

Total **\$ 3,000/yr**

c. No direct cost, only in kind costs estimated @ \$ 2,000/yr. \$ 2,000/yr

Total **\$ 2,000/yr**

d. Collect and store batches of seeds for at least 3 variants of about 5 threatened and important medicinal plants per year @ \$25/batches.

15 seed batches @ \$25/batch **\$ 375/yr**

Total **\$ 375/yr**

F. Legal and Policy Framework

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

Actions:

a. A legal consultant to be hired for ten days to liaise with Forest Department and other stake holders and draft regulations **\$ 4,000**

Total **\$ 4,000**

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.

Actions:

a. Consultancy for a person with the required expertise for 20 days **\$ 8,000**

Total **\$ 8,000**

b. Consultancy for 10 days for a person with legal expertise **\$ 4,000**

Total **\$ 4,000**

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

Actions:

a. Consultations with the public and private sector **\$ 12,000**
Consultancy for ten days to develop policy **\$ 2,500**

Total **\$ 14,500**

b. Consultancy for ten days to revise policy **\$ 2,500**

Total **\$ 4,000**

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.

a. Consultancy for 30 days to develop policy **\$ 12,000**

Total **\$ 12,000**

b. Cost of this would be absorbed by the relevant Ministry.

4.1.15. Objective: To fulfill obligations incurred under international conventions in addition to the Convention

on Biodiversity which support *in-situ* and *ex-situ* conservation.

Actions:

a. Legal Consultancy for 40 days to carry out this work	\$ 16,000
Total	\$ 16,000

b. Costs to be absorbed by the Ministry of Natural Resources and the Environment.

c. Consultancy for 10 days to develop mechanisms for the implementation of MARPOL	\$ 5,000
Total	\$ 5,000

4.2. Laws and Policy (Article 6, Article 11, and Article 14)

A. Environmental and Land Use Planning

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

a. Two month consultancy to draft legal and operational structure for PPC, including small consultations throughout the process.

Two month consultancy @ \$8,000	\$ 16,000
Consultations	\$ 2,000
Total	\$ 18,000

b. Six month consultancy to amend planning legislations, including two additional months for consultations.

Eight month consultancy @ \$8,000	\$ 64,000
Eight Consultations @ \$3,000	\$ 24,000
Total	\$ 88,000

c. Five month consultancy, including workshops to allow input from all involved in planning.

Five month consultancy @ \$8,000	\$ 40,000
Four workshops @ \$3,000	\$ 12,000
Total	\$ 52,000

d. Six month consultancy to review legislation and operational procedures of permitting agencies and design legal and institutional procedures as required. This to be facilitated by consultations and workshops.

Six month consultancy @ \$8,000	\$ 48,000
Consultations	\$ 4,000
Four workshops @ \$3,000	\$ 12,000
Total	\$ 64,000

e. This can be achieved by utilizing the expertise of the existing members of the Land Utilization Authority (LUA) and the present initiative to amend the Land Utilization Act. No additional cost.

f. This can be achieved by utilizing the expertise of the existing members of the Land Utilization Authority (LUA) and the present initiative to amend the Land Utilization Act. No additional cost.

g. A consultant to be hired for two months to work closely with the DOE on drafting relevant legal

amendments. DOE to continue their activities (e.g. Workshops, retreats) to encourage and improve coordination on this matter.

Two month consultancy @ \$8,000	\$ 16,000
DOE workshops/education etc.	\$ 10,000
Total	\$ 26,000

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

a. Two consultants (one legal, one planning) to be hired for four months each to work closely with guidance from the proposed Planning Policy Committee (PPC) to draft policy. This process should be highly consultative.

Legal consultant for four month @ \$8,000	\$ 32,000
Planning Consultant for four month @ \$8,000	\$ 32,000
Five workshops @ \$3,000	\$ 15,000
Other consultations	\$ 8,000
Total	\$ 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.

a. The necessary amendments to the Fisheries Act would be conducted by the Fisheries Department with its existing staff, therefore the additional expenses to be incurred refers to the implementation activities; i.e. monitoring/patrolling and surveillance.

Three organized patrols per week @\$500 \$1,500 x 52 weeks	\$ 78,000/yr
Total	\$ 78,000/yr

b. Two months consultancy to develop legal framework and operational guidelines:
Two months @\$8,000

	\$ 16,000
Total	\$ 16,000

c. Twelve month consultancy to formulate Integrated Coastal Development Policy, including eight public consultations/workshops.

Twelve month consultancy @\$8,000	\$ 96,000
Eight consultations @\$3,000	\$ 24,000
Total	\$ 120,000

d. A building and furnished offices will be required to house the operations of the Solid Waste Management Authority. Plus two months consultancy to prepare legal and operational framework.

Building and furnished offices	\$150,000
Two months consultancy @\$8,000	\$ 16,000
Total	\$166,000

e. The necessary amendments to the Fisheries and Forest Acts will be conducted by the existing staff of these Departments, therefore additional expenses to be incurred are related to monitoring and surveillance activities by the relevant agencies.

Three organized patrols/week @\$500 x 2 Departments = \$3,000 x 52 weeks	\$156,000
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Total **\$156,000/year**

f. A consultant to be hired for two months to formulate new Regulations, inclusive of enforcement mechanisms.

Two months consultancy @\$8,000 \$ 16,000

Total **\$ 16,000**

g. A consultant to be hired for two months to prepare policies, including six public consultations.

Two months consultancy @\$8,000 \$ 16,000

Six public consultations @\$3,000 \$ 18,000

Total **\$ 34,000**

h. A consultant to be hired for one month to make necessary amendments to the Mines and Minerals Act, including two public consultations.

One month consultancy @\$8,000 \$ 8,000

Two public consultations @\$3,000 \$ 6,000

Total **\$ 14,000**

i. A consultant to be hired for four months to amend the Fisheries Act and the National Parks Systems Act, including three public consultations.

Four months consultancy @\$8,000 \$ 32,000

Three public consultations @\$3,000 \$ 9,000

Total **\$ 41,000**

j. A consultant to be hired for six months to formulate policies, including four public consultations.

Six months consultancy @\$8,000 \$ 48,000

Four public consultations @\$3,000 \$ 12,000

Total **\$ 60,000**

k. A consultant to be hired for six months to recommend amendments to all Acts governing coastal and marine biodiversity to include exemplary fines.

Six month consultancy @\$8,000 \$ 48,000

Total **\$ 48,000**

l. Salary for one lawyer to be assigned to the Solicitor General's Office specifically for this purpose. All possible reassignment of mandates resulting from the legislative review by the lawyer, will require public consultation to obtain some indication of acceptance and ease of implementation.

Salary for one lawyer

@ \$4,000/month x 12 \$ 48,000/yr

Two public consultations
per year @ \$3,000 \$ 6,000

Total **\$ 54,000/yr**

m. A consultant to be hired for two months to develop standards.

Two months consultancy @ \$8,000 \$ 16,000

Total **\$ 16,000**

n. A consultant to be hired for two months to conduct relevant amendments and to develop workable

approaches to conflict resolution that are most likely to arise from the restriction of developments.

Two months consultancy @ \$8,000 \$ 16,000

Total \$ 16,000

o. A budget approximation was not provided for this action, simply because the amount of sessions that might be necessary and the pace at which the Forest Department and House of Representatives will deliberate on an issue of this nature cannot be proposed or anticipated.

p. A consultant to be hired for two months to work closely with the Cooperative Department and the Fishing Cooperatives before amending the Cooperatives Act.

Two months consultancy @ \$8,000 \$ 16,000

Total \$ 16,000

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

a. Belize is signatory or party to eighteen international conventions and agreements that are associated in some way or another with coastal and marine biodiversity. Ratification and compliance with commitments will require country representation at Government Consultation Meetings, Conference of the Parties and Working Group Sessions, in order to keep up with the dynamism of these eighteen conventions and to protect Belize's national interest. On a local level, the legal framework will have to be developed to ensure compliance with these international obligations. A lawyer should be attached to the Solicitor General's Office specifically for this purpose.

Eighteen country representations
abroad @ \$6,000 \$108,000/yr
Salary for a lawyer @ \$4,000/month x 12 \$ 48,000

Total \$156,000/yr

C. Forest and Wildlife Management

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

Actions:

a. Allocation is to cover 3 regional consultations to obtain inputs in the proposed review of the Acts.

Total \$ 12,000

b. Allocation is for one central workshop to get inputs on this promotion, bringing persons into the Central area.

Total \$ 4,000

4.2.6. Objective: To reduce to 25 acres or less, the area for which an Environmental Impact Assessment is mandatory before subdivision is approved.

Actions:

a. Nominal sum for incidental expenses involved in addressing this.

Total \$ 1,000

4.2.7. Objective: To increase penalties for the violation of natural resource laws.

Actions:

a. Nominal sum to cover incidental expenses.

Total **\$ 1,000**

b. Allocation to cover cost of one central workshop including bringing in representatives stakeholders into central areas.

Total **\$ 7,000**

c. Allocation to cover incidental expenses.

Total **\$ 1,000**

4.2.8. Objective: To improve monitoring and enforcement of all laws relevant to natural resource use.

Actions:

a. Allocation to cover the cost of one workshop in a central location including bringing in representative stakeholders.

Total **\$ 7,000**

b. Allocation to cover the cost of purchasing a vehicle solely for monitoring and enforcement in year one, and subsequent running costs year 2 – 5.

Total \$ 52,000 yr I
Total \$ 6,500 yr II-V
Total **\$ 78,000**

D. Agriculture

4.2.9. Objective: To develop a Sustainable Agricultural Policy that focuses on the conservation of soils, biodiversity, agro-biodiversity, integrated pest management, organic farming, agro-forestry, environmentally friendly farming techniques and food security issues.

a. Consultant - 2 months @ \$5,000 per month **\$ 10,000**

Total **\$ 10,000**

4.2.10. Objective: To include agro-forestry, plantation forestry and sustainable harvesting of timber and non-timber products, as requirements for the purchase of leaseholds lands.

Actions:

a. Series of consultative meetings

5 consultative meetings @ \$3,000 for travel, subsistence of participants and rental of facilities

\$ 15,000

1 person month (legal drafting) @ \$5,000

\$ 5,000

Total **\$ 20,000**

4.2.11. Objective: To develop monitoring mechanisms for the disposal of waste and effluents from agricultural

and agro-industry operations.

Actions:

a. Review and revise legislative authority Consultant - 2 months @ \$5,000 per month	\$ 10,000
Total	\$ 10,000

4.2.12. Objective: To introduce incentives for ecologically sound investments.

Actions:

a. 5 consultative meetings @ \$1,500 per meeting	\$ 7,500
2 person months for drafting of incentives @ \$4,000 per month	\$ 8,000
Total	\$ 15,500

4.2.13. Objective: To introduce legislation to provide for exemplary fines to be levied on companies or individuals that inadequately dispose of environmentally damaging waste.

Actions:

a. Prepare and introduce legislation Consultant - 3 months @ \$5,000 per month	\$ 15,000
Total	\$ 15,000

E. Tourism

4.2.14. Objective: To develop a Tourism Policy that is cognizant to biodiversity and environmental issues.

Actions:

a. Consultant - 5 months @ \$5,000 per month	\$25,000
Total	\$ 25,000
b. A team of 4 Consultants to monitor carrying capacity of tourism visitation sites	
Total	\$ 30,000/yr

F. Medicinal Plants

4.2.15. Objective: To strengthen the regulations governing the harvesting, use and trade of medicinal plants, especially for wild and threatened species.

Actions

a. Conduct 5 meetings with active traditional healers, NGOs, government personnel and other stakeholders to revise the present permits used for medicinal plants. 5 meetings @ \$350/meeting	\$ 1,750
Total	\$ 1,750
b. Revise Laws for harvesting and extracting medicinal plants	\$ 3,000
One Consultation with Stakeholders on Revised Laws	\$ 2,000

Total \$ 5,000

c. Following from 5.2.16.a above, amendment is to be made to existing legislation and will require an equivalent of one legal Consultant for 5 days.

Equivalent of one Consultant for 5 days @ \$200 per day \$ 1,000

Total \$ 1,000

d. The aim would be to register at least 100 traditional healers in Belize within the next 5 years. This will require the equivalent of one Consultant for 10 days, during which 3 consultations will be held with traditional healers to develop and introduce the system.

Equivalent of one Consultant for 10 days @ \$125/day. \$ 1,250

100 certificates processed @ \$10/certificate \$ 1,000

3 consultations @ \$1,250/consultation \$ 3,750

Total \$ 6,000

4.2.16. Objective: To develop a National Bio-prospecting Policy to guide the harvesting and use of medicinal plants.

Actions

a. This activity is not expected to have any direct costs.

b. & c. This will require the services of a Consultant for 30 days during which 5 national consultations will be held.

One Consultant for 30 days @ \$125/day \$ 3,750

5 consultations @ \$1,250 each \$ 6,250

Total \$ 10,000

G. Legal and Policy Framework

4.2.17. Objective: To reduce overlaps within the legislation which impacts on biodiversity conservation and sustainable use.

Actions:

a. Cost: Legal Consultancy for 10 days \$ 4,000

b. Cost: Legal Consultancy for 5 days \$ 2,000

c. Cost: Legal Consultancy for 10 days \$ 4,000

Total \$ 10,000

4.2.18. Objective: To develop the legal and policy framework for the sustainable use of water resources.

Actions:

a. Cost: Six public consultations \$ 24,000

b. Cost: Workshop for fifty participants \$ 2,000

c. Cost: Legal Consultancy for twenty days \$ 8,000

Total \$ 34,000

4.2.19. Objective: To provide guidance for the conservation of biodiversity in private reserves.

Actions:

a. Cost: Consultancy for 20 days to develop policy	\$ 4,000
Total	\$ 4,000

4.2.20. Objective: To provide legal protection for all watersheds, estuaries and wetlands.

Actions:

a. Cost: Legal Consultancy for 20 days to draft necessary legislation	\$ 8,000
b. Cost: Two consultations with stakeholders	\$ 2,000
Total	\$ 10,000

4.3. Human and Institutional Capacity Building for Conservation and Sustainable Use of Biodiversity (Article 12, Article 13, and Article 18)

A. Environmental and Land Use Planning

4.3.1. Objective: To improve and strengthen Environmental and Land Use Planning for regional and sub-regional areas.

a. This action to use existing human resources of the Ministry of Natural Resources. Short term training for the GIS technician in "Physical Planning" to facilitate this integration.

One training course abroad \$ 15,000

Total \$ 15,000

b. Two training course abroad @ \$15,000 \$ 30,000

Total \$ 30,000

c. One Bachelors Degree-level staff with planning background. Short term specialized training in Community Participation in Planning to be provided.

One B.SC. level staff @ \$23,000/yr for 2 years \$ 46,000/yr

Two short term training courses abroad @ \$15,000 \$ 30,000

Total \$ 76,000/yr

d. One twenty hours training course to be designed and delivered for at least fifteen people. Course may be given over a five week period (four hours per week) to allow for slower absorption.

Three month consultancy @ \$8,000 \$ 24,000

Course materials/handouts \$ 5,000

Total \$ 29,000

B. Information and Geographical Information Systems (GIS)

4.3.2. Objective: To maximize the use of information technology (GIS) in the planning and management of biological resources.

a. One twenty hours training course to be designed and delivered for at least fifteen people. Course may be given over a five week period (four hours per week) to allow for slower absorption.

Three month consultancy @ \$8,000 \$ 24,000

Course materials/handouts \$ 5,000

Total **\$ 29,000**

C. Fisheries, Coastal and Marine Resources

4.3.3. Objective: To make decisive investments in staffing, training and institutional infrastructure.

a. A consultant to be hired to write justified proposal(s) for the request of funds. The availability of human resources in agencies responsible for coastal and marine biodiversity management, permits a maximum of ten people abroad for training in a given year, without significantly affecting the day-to-day activities of the agencies.

Ten training courses abroad @ \$20,000 \$200,000/yr
Proposal writing \$ 10,000

Total **\$210,000/yr**

b. The Fisheries Department cannot allow more than two persons on study leave for this specific area, within a given year. Staff of the Fisheries Department to write justified proposal(s) for the request of funds.

Two training courses abroad @ \$20,000 \$ 40,000

Total **\$ 40,000/yr**

c. The Fisheries Department cannot allow more than two persons on study leave for this specific area, within a given year. Staff of the Fisheries Department to write justified proposal(s) for the request of funds.

Two training courses abroad @ \$20,000 \$ 40,000

Total **\$ 40,000/yr**

d. Two additional Bachelors Degree-level staff per year, at the five Departments with mandates over activities within coastal and marine areas.

Ten B. Sc. Level staff members per year @ \$23,000 \$230,000/yr

Total **\$230,000/yr**

e. Three short courses per year for NEAC members on EIA preparation and evaluation.

Three courses per year abroad @ \$20,000 \$ 60,000/yr

Total **\$ 60,000/yr**

f. Fifteen sets of hardware and software for agencies involved in coastal and marine biodiversity management, followed by training on e-mail and Internet use.

Fifteen sets of hardware and software @ \$10,000 \$150,000

Training for thirty persons on e-mail and Internet use @ \$1,000 \$ 30,000

Total **\$180,000**

g. A consultant to be hired for three months to develop an operational framework for the shared use of equipments.

Three months consultancy @ \$8,000 \$ 24,000

Total **\$ 24,000**

4.3.4. Objective: To establish mechanisms that are suitable for achieving a change of attitude by users of Belize's coastal and marine resources.

a. Four training courses per year are feasible, considering the existing closed seasons and thus, availability of fishermen to attend courses.

Four training courses per year @ \$15,000 \$ 60,000

Total \$ 60,000/yr

D. Forest and Wildlife Management

4.3.5. Objective: To increase the capacity of resource managers and users to sustainably manage forest and wildlife resources.

Actions:

a.-c. Two workshop @ \$4,000 each per year 3 years \$ 24,000

Total \$ 24,000

d. Equipment and storage for data and specimen \$10,000/yr

e. Conduct Training workshops on basic identification skills for species of conservation value

Two workshops per year at \$10,000 each

Total \$40,000

4.3.6. Objective: To increase the technical, extension and management capabilities of the Forest Department.

Actions:

a. Allocation covers 2 workshops on biodiversity, 6 short courses on biodiversity @ \$12,000 each, and training, 1 forest management officer, and 1 wildlife officer at the B. Sc. level.

Total \$280,000

b. Covers consultancy to prepare a training project for the Forest Department and to seek funding for the training.

Total \$ 10,000

c. Sum is incremental sum needed to subsidize the budget needed per year to bring it to the 92/93 levels from where it has dropped when it was satisfactory – Forest Department to increase budget by end of period.

Total \$700,000/yr

d. Year 1 \$120,000 to cover salary, purchase vehicle construction house/office and running costs; \$30,00/year to year 5 to cover salary, running and maintenance costs. Forest Department to incorporate into budget thereafter.

Total \$270,000

e. 3 Regional consultations to involve communities and the timber industry to get a consensus.

Total \$ 12,000

E. Agriculture

4.3.7. Objective: To improve the human resource capacity of the Pesticides Control Board and the Department of Agriculture to provide training to farmers on the requirements of the Pesticides Control Act.

Actions:

a. 5 Training workshops for Agricultural Extension Officers @ \$2,000 each	\$ 10,000
Total	\$ 10,000
b. Update and produce Pesticide Use Training Manuals	\$ 10,000
Total	\$ 10,000

4.3.8. Objective: To strengthen the Ministry of Agriculture, Fisheries and Cooperatives to extend technology and information to farmers and the general public on biodiversity-related issues in the Agriculture Sector.

Actions:

a. Assessment	\$ 20,000
Consultant - 3 months @ \$5,000 per month	\$ 15,000
Consultation and review process	\$ 5,000
Total	\$ 20,000
b. budget submission	
1 person month @ \$4,000 per month	\$ 4,000
Total	\$ 4,000

4.3.9. Objective: To strengthen supporting training organizations.

Actions:

a. Assessment \$20,000	
Consultant - 3 months @ \$5,000 per month	\$ 15,000
Consultation and review process	\$ 5,000
Total	\$ 20,000
b. Identify funding	\$ 10,000
Consultant - 2 months @ \$5,000 per month	
Total	\$ 10,000

4.3.10. Objective: To improve environmental monitoring.

Actions:

a. Assessment	\$ 25,000
Consultant - 5 months @ \$5,000 per month	
Total	\$ 25,000
b. Plan preparation	\$ 20,000

Consultant - 4 months @ \$5,000 per month

Total **\$ 20,000**

c. Implementation programme **\$500,000**

Annual additional recurrent expenses \$50,000 / yr

Capital equipment including stock of materials etc **\$340,000**

Staff Training - 4 staff - 90 day course @ \$40,000 **\$160,000**

Increased staff - 2 technician level @ \$24,000 / yr

Total **\$500,000**

F. Tourism

4.3.11. Objective: To strengthen the Ministry of Tourism.

Actions:

a. Consultant 5 months @ \$5,000 per month **\$ 25,000**

b. Staffing - 2 senior staff @ \$40,000 **\$ 80,000**

4 junior staff @ \$20,000 **\$ 80,000**

Travel and subsistence **\$ 40,000**

Materials and supplies **\$ 25,000**

Miscellaneous **\$ 25,000**

Total **\$ 25,000 + \$250,000 /yr**

4.3.12. Objective: To strengthen Community Based Organizations involved in tourism to improve their sustainability.

Actions:

a.12 one day workshops @ \$5,000 each **\$ 60,000**

Total **\$ 60,000**

b. 12 two day workshops @ \$7,500 each **\$ 90,000**

Consultants - 2 months @ \$5,000 per month **\$ 10,000**

Total **\$100,000**

c. Consultants - 4 months @ \$5,000 per month **\$ 20,000**

Seed capital for NGOs **\$ 30,000**

Total **\$ 50,000**

G. Medicinal Plants

4.3.13. Objective: To strengthen institutions involved with the management of medicinal plants and improve their credibility.

Actions

a. Three (3) training sessions per year in each of the 3 regions in Belize will be held for 15 - 20 wardens. Each of these sessions will require services equivalent to one consultant for 2 days.

3 training sessions @ \$1,250 per training	\$ 3,750
Equivalent of a consultant for 6 days	
@ \$125/day	\$ 750
Total	\$ 4,500/yr

c. One (1) training session per district per year will be held for doctors, nurses and community health workers. Each of these sessions will require services equivalent to one consultant or facilitator for 2 days.

6 training sessions @ \$ 1,250 per training	\$ 7,500
Equivalent of a consultant for 12 days	
@ \$125/day	\$ 1,500
Total	\$ 9,000/yr

d. One (1) two day training session per district per year will be held for teachers. Each of these sessions will require services equivalent to one consultant or facilitator for 4 days.

6 two day training sessions	
@ \$1,250 per day	\$ 15,000
Equivalent of a consultant for 24 days	
@ \$125/day	\$ 3,000
Total	\$ 18,000/yr

e. One (1) training session abroad per year for one (1) local research technician.

One (1) training abroad @ \$ 2,500	\$ 2,500/yr
Total	\$ 2,500/yr

f. Sensitizing policy makers is going to have little or no direct cost but is will be equivalent to one (1) day per month.

12 days per year @ \$125/day	\$ 1,500/yr
Total	\$ 1,500/yr

g. Four (4) NGOs with a significant portfolio on medicinal plants. Each NGO producing 100 copies of each annual report.

100 copies each of 4 different annual reports @ 10/copy	\$ 4,000/yr
Total	\$ 4,000/yr

h. A laboratory of this nature will require significant capital investment and a recurrent budget as well.

Capital costs

Building facility	\$ 50,000
Equipments	\$100,000

Total	\$150,000
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Recurrent costs

One (1) Chemist	\$ 15,000
One (1) lab technician	\$ 6,000
Materials and supplies	\$ 20,000

Total	\$ 41,000/yr
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H. Legal and Policy Framework

4.3.14. Objective: To provide training in environmental law to all law enforcement Officers and to the judiciary, including natural resource policies and the rationale for them.

Actions:

a. One instructor for Environmental Law in Police Training Curriculum	\$ 2,000
Seminars for Forest Officers, Environmental Enforcement Officers and Fisheries Officers on Environmental Law	\$ 5,000
Development of Training material in Environmental Law	\$ 8,000
Seminars in Environmental Law for Customs , Immigration, Agricultural Extension Officers and BDF	\$ 5,000
Total	\$ 20,000
b. Seminars for Fisheries Officers, Officers of the Department of the Environment and Forest Officers	\$ 5,000
Total	\$5,000

4.3.15. Objective: To provide training in Environmental and Natural Resource Laws to Non-Governmental Organizations and Community Based Organizations responsible for management of protected Areas.

Actions:

a. Six training workshops	\$ 12,000
Total	\$ 12,000

4.3.16. Objective: To develop an efficient permitting system to manage the removal of flora and fauna from Protected Areas.

Actions:

a. Six Public Consultations	\$ 18,000
Total	\$18,000

4.3.17. Objective: To appoint park rangers as 'special constables' in marine and terrestrial protected areas which are co-managed by Non-Governmental Organizations or Community Groups.

Actions:

a. Legal Consultancy for 5 days	\$ 2,000
b. Four Training Workshops for special Constables	\$ 8,000
Total	\$ 10,000

4.3.18. Objective: To strengthen the human and institutional capacity of the Ministry of Natural Resources and the Environment and the Ministry of Agriculture, Fisheries and Cooperatives to increase their enforcement capabilities.

Actions:

a. Purchasing of Vehicles and Equipment	\$175,000
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b. Five new Staff members for the Forest Department with
Sixth Form Education \$180,000

4.4. RESEARCH, MONITORING AND SUSTAINABLE USE OF BIODIVERSITY (Article 7, Article 10, Article 12, Article 14)

A. Environmental and Land Use Planning

4.4.1. Objective: To develop environmental and land use plans to promote the sustainable use and protection of biological resources.

a. Four consultants or capable NGO/company to be hired (expertise in economics, land use planning, social/community participation, environmental management) to work closely alongside and with guidance from the Physical Planning Unit – MNR, for four month each to draft plans. An implementation plan should accompany the sub-regional land use plans. This process should consult with local communities.

Four consultants for four months each @ \$8,000 ea/mo	\$128,000.00
Six consultations @ \$3,000	\$ 18,000
Total	\$146,000/site

B. Information and Geographical Information Systems (GIS)

4.4.2. Objective: To identify, monitor and control threats to important biological resources.

a. Eight month consultancy to conduct assessment. This activity should ensure input from relevant groups.

Eight month consultancy @ \$8,000	\$ 64,000
Six workshops @ \$3,000	\$ 18,000

Total	\$ 82,000
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b. Six month consultancy to collect data and conduct assessment. This activity should ensure input from relevant groups.

Six month consultancy @ \$8,000	\$ 48,000
Five workshops @ \$3,000	\$ 15,000

Total	\$ 63,000
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c. Six month consultancy to design monitoring program and implementation plan.

Six month consultancy @ \$8,000	\$ 48,000
Proposal to fund implementation	\$ 10,000

Total	\$ 58,000
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d. Biodiversity Response Team (BRT) to be developed from and use existing resources in relevant institutions.

e. Attend Regional Biodiversity Monitoring Programme of Selva Maya.
6 Belizean Professionals to attend yearly monitoring programmes
@ \$ 5,000 each

Total	\$ 30,000/yr
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C. Fisheries, Marine and Coastal Resources

4.4.3. Objective: To conduct research that will provide the information necessary to obtain the sustainable development of coastal and marine biodiversity and to avoid arbitrary exploitation.

a. Three years biological research followed by a two months consultancy to assess the legal and socio-economic aspects. At least three public consultations with fishers and other stakeholders will be necessary before a management measure like this could be adopted and implemented successfully.

Three years biological research @ \$80,000	\$240,000
Three months consultancy @ \$8,000	\$ 24,000
Three public consultations @ \$3,000	\$ 9,000
Total	\$273,000

b. Three years biological research, followed by a one month consultancy on the legal and socio-economic aspects. At least two public consultations with fishers and other stakeholders will be necessary.

Three years biological research @\$80,000	\$240,000
One month consultancy @\$8,000	\$ 8,000
Two public consultations @3,000	\$ 6,000
Total	\$254,000

c. A consultant to be hired for four months to address the ecological, legal and socio-economic aspects of these two fisheries.

Four month consultancy @ \$8,000	\$ 32,000
Total	\$ 32,000

d. Two persons to collect biological, statistical and market data on non-traditional inshore fish species.

Salaries for two persons	\$ 50,000/yr
Research equipments/materials	\$ 25,000
Transportation	\$ 20,000
Total	\$ 95,000/yr

e. Belizean counterpart would most likely be required to provide fuel for the foreign vessel to be engaged in exploratory fishing in the EEZ. At least two Belizeans would have to be on board at all times.

Salary for two persons	\$ 50,000/yr
Fuel/maintenance of vessel	\$150,000
Total	\$200,000

f. A six months campaign to promote the selective exploitation of tilapia. One 'spot' per week on the six major radio stations and the two major television stations.

Total of eight 'spots' per week @ \$120 = 960 x 26 weeks	\$ 24,960
Research for the period will be conducted on selected methods of tilapia harvest.	
One year research	\$ 50,000
Research Equipment	\$ 10,000
Transportation miscellaneous expenses	\$ 10,000
Total	\$94,960

g. A consultant to be hired for twelve months to conduct an assessment of the biological, legal, social, and economic aspects of the freshwater fishery.

Twelve month consultancy @ \$8,000	\$ 96,000
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Total **\$ 96,000**

h. A consultant to be hired for twelve months to conduct a biological and socio-economic assessment of the hicatee (*Dermatemys mawii*) fishery. Two public consultations to present findings and recommendations for new closed season and size restrictions.

Twelve month consultancy @\$8,000 \$ 96,000
Two public consultations @\$3,000 \$ 6,000

Total **\$102,000**

i. Research activities to be conducted by two persons to determine growth rates and biomass production of mangroves, transplanted on cayes with significant mangrove destruction.

Salaries for two persons \$ 50,000/yr
Transportation to sites \$ 5,000
Research materials \$ 15,000

Total **\$ 70,000/yr**

j. Research activities to be conducted by two persons to observe spawning sites, periods, duration, size, catch, effort and maturity.

Salaries for two persons \$ 50,000/yr
Research equipments/materials \$ 25,000
Transportation to sites \$ 10,000

Total **\$ 85,000/yr**

4.4.4. Objective: To formulate and implement a system of incentives for ecologically sound developments in coastal areas.

Actions:

a. A public consultation will be conducted to discuss with stakeholders the feasibility of providing tax reduction for ecologically sound investments.

Cost of one consultation \$ 3,000

Total **\$ 3,000**

b. A consultant will be contracted for two months to identify and access information, and explore the feasibility of tax incentives of other countries in the region.

Salaries for two months @ \$8,000 per month
Total **\$ 16,000**

4.4.5. Objective: To promote sustainable exploitation such as 'catch and release' sport fishing.

Actions:

a. A publicity campaign will be launched to promote 'catch and release' fishing sport using radio spots.

Three spots per week for 52 weeks
with 4 radio stations @ \$120 per spot **\$ 75,000**

D. Forest and Wildlife Management

4.4.6. Objective: To document forest and wildlife resources including population and habitat distribution.

Actions:

a. Allocation covers some cost toward starting a unit -, e.g., 1 vehicle, and 1 staff.

Total **\$ 70,000/yr**

b. Allocation provides a yearly sum for institutions listed to get involved in document Forest and Wildlife resources not yet covered.

Total **\$ 50,000/yr**

c. Nominal sum to cover incidental expenses in this activity.

Total **\$ 1,000/yr**

d. The allocation is to cover a botanist to identify plants in littoral forests.

Total **\$ 20,000**

4.4.7. Objective: To conduct research focused at the conservation of birds in Belize.

Actions:

a. Allocation as submitted by Programme for Belize personnel.

Total **\$1,820,000**

4.4.8. Objective: To identify the research needs for sustainable forest and wildlife management.

Actions:

a. The proposed allocation is to cover one central workshop to identify research needs as stated in the objective.

Total **\$ 7,000**

b. Nominal sum to cover incidental expenses in carrying out this action.

Total **\$ 2,000/yr**

4.4.9. Objective: To develop and implement management plans for Forest Reserves, National Lands and Protected Areas, based on ecologically sustainable forest management practices.

Actions:

a. The proposed sum is to carry out a national forest inventory and management plan for areas to be prioritized.

Total **\$600,000**

b. The proposed sum is to cover 3 regional consultancies to get inputs to develop policy on reforestation.

Total **\$ 12,000**

c. The proposed sum is to carry out reforestation projects through NGO's within the yearly sum and for areas to be prioritized.

Total **\$200,000/yr**

d. The figure given is for the Forest Department to give out a consultancy to investigate the proposed activity.

Total **\$ 12,000**

4.4.10. Objective: To implement the New Forest Licensing System proposed by the Forest Planning and Management Project.

Actions:

a. The budget figure is a nominal sum for incidental expenses for the Forest Department to carry out this activity as part of its normal functioning.

Total **\$ 1,000/yr**

b. The sum is to compensate NGO involved in monitoring forest-licensed condition on a yearly basis.

Total **\$ 2,000/yr**

c. To obtain computer equipment needed to strengthen the database on forest licenses.

Total **\$ 10,000**

4.4.11. Objective: To strengthen the monitoring of forest management activities in the Mountain Pine Ridge Forest Reserve.

Actions:

a. The proposed allocation is to provide a vehicle to be used solely for monitoring forest license holders in the Mountain Pine Ridge Forest Reserve. Running costs to be covered under Forest Department regular budget.

Total **\$ 50,000**

4.4.12. Objective: To ensure that short term forest licenses are not re-issued, but kept to amalgamate areas into sustainable forest management units.

Actions:

a. The amount is to cover incidental expenses in the Forest Department carrying out this activity as a normal part of its functions.

Total **\$ 1,000**

b. The amount is to cover a central workshop of current license holders to sensitize them as to what is involved.

Total **\$ 7,000**

4.4.13. Objective: To restructure the forest industry to work within the Annual Allowable Cut (AAC), to include more value added, the use of more secondary timber species, and to recognize the cost of establishing Forest Plantations as an integral part of the overall exploitation cost.

Actions:

a. The indicated budget figure is to convene a central workshop of all saw millers to explain the situation and the need to carry out this measure and obtain inputs.

Total	\$7,000
b. To convene a central workshop to explain the need for licensing and to get inputs on the licensing criteria.	
Total	\$7,000
c. To convene a workshop of all saw millers to get their inputs in this important activity to better utilize this resource.	
Total	\$7,000
d. To convene a workshop of saw millers and exporters and cabinetmakers to get their inputs and consensus on this activity.	
Total	\$7,000
e. The Forest Department to host a workshop of the timber industry to get their inputs of incentives appropriate to encourage the use of other hardwoods.	
Total	\$7,000
f. To put information on radio and television as spots on this topic to educate the public at large.	
Total	\$6,000/yr
g. To cover incidental expenses for the Forest Department to send out letters to saw millers and to put spots on radio and television to adopt this measure.	
Total	\$6,000
h. To help increase the Forest Department vigilance in monitoring and prosecuting offenders in this activity.	
Total	\$10,000/yr
i. For the Forest Department to obtain a consultancy to carry out this study.	
Total	\$12,000

4.4.14. Objective: To identify and monitor the use of non-timber forest products.

Actions:

a. i.ii.iii. The Forest Department to obtain a series of consultancies in the groups of non-timber forest products to quantify the value in at least three forest reserves.

Total	\$ 36,000
b. The allocation is to compensate relevant NGO's in monitoring non-timber forest products.	
Total	\$ 8,000
c. To convene a workshop of relevant communities and collectors on the value and sustainable use of non-timber forest products.	
Total	\$ 7,000

4.4.15. Objective: To create mechanisms to ensure that a portion of investments directed at natural resource exploitation, be used for the conservation, use of or research on the resource.

Actions:

a. The allocation to cover incidental expenses in identifying the investment ventures involved in the use of natural resources.

Total **\$ 2,000**

4.4.16. Objective: To ensure proper management of wildlife hunting activities.

Actions:

a. The indicated figure is to obtain 3 vehicles for the Conservation Division of the Forest Department to use on monitoring wildlife hunting in the three regions.

Total **\$150,000**

b. To cover incidental expenses in implementing this activity and gathering the hunting uptake.

Total **\$ 10,000**

c. To convene a workshop of targeted landowners to explore access in the buffer zones of their properties for hunting and to discuss the mechanisms needed.

Total **\$ 7,000**

4.4.17. Objective: To seek expert advice on the ranching of crocodiles, deer, gibbon, peccary and iguana, in an effort to replenish and reduce exploitation of wild stocks.

Actions:

a. To request FAO to carry out a consultancy to recommend the best way to carry out ranching in the species identified and recommend pilot projects.

Total **\$ 20,000**

b. To cover incidental expenses.

Total **\$ 1,000**

c. To cover incidental expenses:

Total **\$ 1,000**

d. To develop pilot projects recommended.

Total **\$150,000**

e. To carry out three regional workshops on training on the ranching of selected species.

Total **\$ 21,000**

E. Agriculture

4.4.18. Objective: To conduct research and development of NTFP and develop niche markets for new products.

Actions:

a. Identification of markets - initial contacts by E-mail etc	
Visits to potential buyers/ brokers	\$ 20,000
Consultant 12 months @ \$5,000 per month	\$ 60,000
Trial sample shipments - including costs of collection 10 products	\$ 20,000

Total	\$100,000
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b. Cultivation technique trials	
10 products @ \$10,000 per product	\$100,000

Total	\$100,000
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4.4.19. Objective: To develop mechanisms to encourage basic and developmental research in the agricultural sector, and to address property rights issues associated with the results of such research.

a. Consultative meetings - 10 @ \$1,000	\$ 10,000
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Total	\$ 10,000
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b. 2 person months @ \$4,000 per month	\$ 8,000
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Total	\$ 8,000
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4.4.20. Objective: To document small farmers knowledge of biodiversity.

Actions:

a. Three one-month training workshops on research techniques	\$ 45,000
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Total	\$ 45,000
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b. Consultancy for 60 days to develop methodologies using external consultants	\$ 36,000
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Total	\$ 36,000
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c. Consultancy for 30 days to develop project	\$ 12,000
Implementation of one year project	\$200,000

Total	\$212,000
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F. Tourism

4.4.21. Objective: To develop and implement marketing of tourism emphasizing Belize's biodiversity.

Actions:

a. Prepare information materials	
6 person months @ \$4,000 per month	\$ 24,000
Printing of pamphlets - 100,000 @ \$400 per 1,000	\$ 40,000
Preparation of videos - 6 @ \$5,000 each	\$ 30,000
Copying of videos -	\$ 6,000

Total **\$100,000**

G. Medicinal Plants

4.4.22. Objective: To promote the sustainable harvesting of medicinal plants from the wild.

Actions:

a. This will require a strong and flexible permitting system based on adequate monitoring of the effects of harvesting. This effort will be equivalent to 1 motivated and mobile forest guard per district on an annual basis.

Equivalent of the salary for 6 forest guard
per year @\$5,000.00 per year \$ 30,000
Vehicle repairs, fuel and other costs \$ 12,000

Total **\$ 42,000/yr**

b. The equivalent of one local Consultant for 20 days to meet with herb gatherers, traditional healers and local agronomists to draft up guidelines for the sustainable harvesting of various medicinal plants.

Equivalent of one Consultant for 20 days @\$125/day \$ 2,500

Total **\$ 2,500**

c. Based on the results of research conducted in 6.433, improved techniques for harvesting can be incorporated into the harvesting guidelines established in 6.412 and guidelines for storage can be drafted. This will require the equivalent of 5 days to revise the guidelines for harvesting and 10 days to draft the guidelines for storage.

Equivalent of one Consultant for 15 days @125/day \$ 1,875

Total **\$ 1,875**

4.4.23. Objective: To promote the cultivation of medicinal plants in an effort to reduce the exploitation of wild stocks.

Actions:

a. Establish at least 3 well managed nurseries in each zone of the country.

Capital costs

To establish 3 well managed
nurseries @\$2,500.00 per nursery. \$ 7,500

Recurrent costs

Equivalent of one skilled laborer/nursery
@\$4,000 per person per year \$ 12,000
Materials and supplies @\$1,500/nursery. \$ 4,500

Total **\$ 16,500/yr**

b. The equivalent of one technician with necessary resources to visit farmers who are cultivating or are interested in cultivating medicinal plants.

Capital cost - one vehicle \$ 15,000

Other costs

One technician @\$ 6,000/yr. \$ 6,000
Fuel, repairs, materials and supplies etc. \$ 4,000

Total **\$ 10,000/yr**