

PN-ABT-435
72423

INSTITUTIONAL DEVELOPMENT PLAN FOR THE
ENVIRONMENTAL DIVISION OF THE
MINISTRY OF TOURISM AND THE ENVIRONMENT

Submitted to: Mr. Carlos T. Perdomo
Permanent Secretary
Ministry of Tourism and
the Environment
Belmopan, Belize
Phone: 08-23393

Submitted by: Dr. Dennis H. Wood
Devres, Inc.
7201 Wisconsin Ave.,
Suite 500,
Bethesda, MD 20814 USA
Phone: 301-951-5546
Telex: 440184 DEVR-UI
Fax: 301-652-5934
Cable: DEVRES WASHINGTON

December 4, 1989

ACKNOWLEDGEMENTS

An opportunity to help establish a new institution, while delightful, could not be fruitful without substantial help from many other people. I am grateful to Mr. Carlos Perdomo, the Permanent Secretary of the Ministry of Tourism and the Environment, for his support, many important contributions and constant help during this assignment.

To Mr. Victor Gonzalez, President of the Belize Audubon Society and of the Belize Center for Environment Studies, and to Mr. Bert Linares, Acting Principal Public Health Inspector in the Ministry of Health, I also express my thanks. They both participated in many discussions which I am certain they had sat through many times before. Their insight, help and major contributions to this paper were critical to successful conclusion of this assignment.

Many Belizeans helped me with this effort. From Permanent Secretaries of Ministries to citizens interested in the environment, each was gracious and generous with their time. I value their contribution and their serious interest in the environment of Belize. To each of them, I extend my special thank you.

In Devres, Inc.'s home office Ms. Ellen Tynan and Ms. Susanah Bradbury worked beyond the call of duty to ensure this assignment went well. I appreciate their strong support.

USAID/Belize paid for this effort. To Ms. Mosina Jordan, the USAID Representative, Mr. Pedro Perez, the Project Development Officer in charge of the project and Ms. Griffin who supported all aspects of the assignment, all of us involved express our thanks for your help and foresight in providing such assistance.

TABLE OF CONTENTS (Cont.)

	<u>Page</u>
C. International Organizations	25
V. OPERATING PLAN AND TIME FRAME	27
A. Strategy	27
B. Priority Areas of MTE Activity	27
1. Substantive priority areas	28
2. Cross-cutting priority areas	28
C. Key Procedures for Initial Up-Front Management	29
D. Structure	30
E. Staffing and Special Consultant Expertise	30
F. Time Frame	34
VI. BUDGET	37
VII. TRAINING	41
A. Training Needs	41
B. Training Methods and Depth of Training	44
C. Sources of Training	44
D. Cost of Training	45
E. MTE's Training Plan	46
VIII. INTERNATIONAL FUNDING AGENCIES	51
A. Funding Agencies with Environmental Concerns	51
1. Funding Agencies for MTE	51
2. Funding Agencies for BEC or MTE's Belize Environmental Foundation	51
B. Approach to Funding Agencies	51
Annex 1: Scope of Work	1-1

LIST OF TABLES

<u>Table Number</u>		<u>Page</u>
1	Proposed Time Frame for Development of MTE Environmental Division Activities, 1990-1994	4
2	Proposed MTE Environmental Division Staffing Pattern and Salary Costs, 1990-1994	32
3	Proposed Time Frame for Development of MTE Activities, 1990-1994	35
4	Budget Estimates for MTE Environmental Division Recurrent and Capital Expenditure, 1990-1994	38
5	Proposed MTE Environmental Division Training Plan and Cost, 1990-1994	47

LIST OF FIGURES

<u>Figure Number</u>		<u>Page</u>
1	MTE with a Statutory Council, the Belize Environment Council	16
2	MTE as a Regular Ministry with a Public Sector Foundation, The Belize Environment Foundation	17
3	Relationships of MTE with Other Organizations and Individual Council	22

I. EXECUTIVE SUMMARY

A. Purpose, Procedure and Scope

The purpose of this assignment and report was to provide the new Ministry of Tourism and the Environment (MTE) assistance in developing the environmental division of the Ministry. The scope included identifying the mission, objectives and areas of responsibility of the environmental division of the ministry and recommending a structure, operating plan, budget, training plan and sources of potential funding for MTE's environmental activities. The complete scope of work is attached as Annex 1 to this report.

The procedure used in completing this assignment involved document review, interviews, observation, and analysis of the information obtained. A three person team based in Belize--Mr. Carlos Perdomo, Permanent Secretary of MTE, Mr. Victor Gonzales Managing Director of the Belize Center for Environmental Studies, and Mr. Wilbert Linares, Acting Principal Health Inspector, Ministry of Health--assisted the consultant. The team held discussions with many Belizeans knowledgeable about the environment and the institutional setting in the public sector in Belize. Several visits were made to sites of environmental interest. Based on the information gathered, the team reached the conclusions and recommendations included in this report.

B. Recommendations

1. Mission of the MTE environmental unit

The mission of the MTE environmental unit should be to control pollution and ensure protection of Belize's environment. Put formally, MTE should use all practicable means to encourage productive and enjoyable harmony between human beings and Belize's environment, to promote efforts to prevent or eliminate damage to the environment and promote the health and welfare of Belizeans and other human kind, and to enrich understanding of the ecological systems and natural resources important to Belize.

MTE's major responsibilities should be to recommend national policies to promote improvement in environmental quality so as to meet the conservation, social, economic, health and other goals of Belize, to recommend priorities among environmental programs, to assist in achieving international cooperation in dealing with environmental problems, to continuously review existing and proposed environmental policies, plans and activities, to coordinate among agencies of government plans and activities that affect, protect and improve the environment and to help enforce environmental pollution standards. Detailed responsibilities are recommended in Chapter II of this report.

MTE should be allocated some environmental responsibilities from other ministries. For example, the responsibilities of MINR--e.g., in wildlife protection and national parks--should be examined to see if they are more compatible with MTE than MINR. The Public Health Ordinance should be examined to determine whether portions of pollution regulatory authority should be given to MTE. The planned fisheries conservation unit in MOA should be

reviewed to determine its logical place in the new administration. Over time, all Belizean laws should be reviewed to determine those that MTE should administer.

MTE should be given statutory authority for its environmental activities as soon as practicable. MTE's authority should include environmental policy development, environmental planning, use and coordination of environmental assessments and impact statements, and standards setting and enforcement.

2. Organizational structure of MTE's environmental division

MTE's environmental responsibilities should be undertaken by a statutory council--the Belize Environmental Council (BEC) appointed by the Minister of Tourism and the Environment. The Council would undertake nearly all of MTE's environmental responsibilities as specified in a BEC charter. MTE would relate to BEC through the Minister, the PS and the Chief Environmental Officer (CEO). The CEO would liaise with BEC, keep the Minister and PS apprised of BEC issues and activities and inform BEC of Government environmental policy concerns and priorities.

BEC should be administratively independent from the Government of Belize. BEC should make recommendations to a Cabinet Subcommittee on the Environment chaired by the Minister of Tourism and the Environment for its further recommendation to the Cabinet. BEC should be partially independent from government funding and able to receive funds from local and international public and private sector sources. Chapter III presents more detail about BEC's structure and operations.

The current Conservation Advisory Board should be expanded to serve as an advisory board to MTE. The terms of reference of the Board should be adjusted by the Minister of MTE to account for this expanded responsibility. The Minister also should include in the charter the option of organizing the Board into smaller standing or ad hoc advisory panels on specific environmental issues. Additional groups could be added to the Board by the Minister as specific issues arise rather than all at once.

The BEC should have a substantive and support staff under the authority of an Executive Director. The Executive Director would have day-to-day responsibility for the operations of the BEC under the guidance of the Council and its Chairman. The staff of the BEC would be made up of the Executive Director, the Director of Policy, Planning and Coordination, the Director of Impact Assessment, Research and Evaluation, the Director of Enforcement and Compliance Monitoring, the Director of Environmental Promotion and Information and the Director of Finance and Administration. Each Director would be supported by professional staff officers with appropriate substantive skills and by support staff. A detailed staffing plan is presented in Table 2 in Chapter V.

3. MTE relationships with other organizations and individuals

MTE is a "cross-cutting" ministry. It should put strong staff and procedures in place for coordinating effectively among domestic and international organizations and individuals. MTE should emphasize building relationships with key institutions at home and abroad. Budget allocations should be sufficient in this area to develop and maintain international relationships with organizations that are important sources of funding and information.

4. MTE's five year development plan

MTE priorities for its first five years should include substantive and procedural objectives. Initial substantive priorities for MTE should be areas where its coordinating role and expanding technical expertise help other ministries carry out their responsibilities effectively. Priority areas where MTE support will benefit all Belizeans are coastal zone management; river basin planning; biodiversity preservation and management; endangered species habitat preservation; land use planning; industrial effluent pollution control; solid waste and human sewage pollution control; pesticide use and run-off control; food sanitation enforcement. Chapter II provides additional rationale for MTE's activities in these priority areas.

MTE's cross-cutting areas of emphasis also should be those in which MTE can support other ministries and benefit the citizens of Belize. These areas include:

- o New legislation to specify MTE's authority and responsibilities, especially with respect to environmental planning and environmental assessment/impact statement development;
- o Development of regulations for existing environmental legislation;
- o Expanded enforcement of environmental laws and regulations, beginning with specific areas first;
- o Increased environmental planning for key areas of development-- e.g., the coastal zone, specific river basins, urban areas;
- o Strengthened coordination of environmental activities and interest among other ministries and government agencies, businesses, NGOs, and citizens;
- o Creation of expanded and enhanced relations with international environmental and financial institutions and individuals interested in the environment.

Table 1 presents recommendations for MTE's priority activities, number of total staff and salary expenditures by year from 1990 to 1994. A recommended detailed budget for MTE is presented in Chapter VI.

Table 1.--Proposed Time Frame for Development of MTE Environmental Division Activities, 1990-1994

Suggested Tasks by Year for MTE				
1990	1991	1992	1993	1994
No. of Staff: 20 Salaries: \$BZ 321535	No. of Staff: 26 Salaries: \$BZ 391025	No. of Staff: 34 Salaries: \$BZ 481321	No. of Staff: 44 Salaries: \$BZ 589093	No. of Staff: 53 Salaries: \$BZ 686161
+++++				
Agree on structure of MTE				
Present MTE budget	Present MTE budget	Present MTE budget	Present MTE budget	Present MTE budget
Obtain staff	Obtain staff	Obtain staff	Obtain staff	Obtain staff
Obtain initial office equipment	Obtain additional office and environ. equip.	Obtain additional office and environ. equip.	Obtain additional office and environ. equip.	Obtain additional office and environ. equip.
Begin staff training	Continue staff training	Continue staff training	Continue staff training	Continue staff training
Create charter for BEC				
Appoint BEC and advisory board members				
Raise funds for BEC	Raise funds for BEC	Raise funds for BEC	Raise funds for BEC	Raise funds for BEC
Review existing policies, laws, and regulations	Obtain MTE statutory authority; new legislation	Establish Belize environ. policy		
	Develop regulations for all environ. laws	Improve regulations	Improve regulations	Improve regulations
	Establish environ. assessment and impact procedures	Improve environ. assessment and impact procedures	Improve environ. assessment and impact procedures	Improve environ. assessment and impact procedures
Expand standards and enforcement Industrial effluent	Expand standards and enforcement Pesticides	Expand standards and enforcement Solid and human waste	Expand standards and enforcement Chemicals & fuel storage and use	Expand standards and enforcement Natural resource use

Create environmental plans Coastal zone management	Create environmental plans Land use	Create environmental plans River basin management	Create environmental plans Biodiversity	Create environmental plans Endangered species of all kinds
Maximize flexibility Use consultants Use local NGOs	Maximize flexibility Create consultant & local NGO use plan	Maximize flexibility Implement consultant and NGO use plan	Maximize flexibility Implement consultant and NGO use plan	Maximize flexibility Implement consultant and NGO use plan
Establish computer capability	Expand computer capability	Expand computer capability	Expand computer capability	Expand computer capability
	Create data collection and database management capability	Continue data collection and database management development	Continue data collection and database management development	Continue data collection and database management development
		Develop & implement management information system	Expand management information system	Expand information management system
	Establish key international contacts	Expand intl. contacts	Expand intl. contacts in MTE activities	Expand intl. contacts in MTE activities
Develop additional public participation in MTE activities	Expand public participation in MTE activities	Expand public participation in MTE activities	Expand public participation in MTE activities	Expand public participation in MTE activities

5. MTE's training program

Substantive training should be provided to MTE initially in effluent and chemicals monitoring--collection and analysis; biomonitoring; emissions monitoring; survey techniques; tolerance levels; standards development; reporting requirements; land use planning; demonstration testing; enforcement methods; waste disposal methods; product or process substitution; resource recovery improvement; pollution clean-up; emergency planning and responses to different environmental crises or catastrophes; chemical registration; toxicity testing; community "right to know" procedures.

In the cross-cutting areas of MTE's responsibilities training will be required to develop skills such as environmental policy making and administration; environmental planning; environmental monitoring and evaluation; computer analysis, database construction and use; environmental assessment and impact analysis; environmental benefit/cost analysis; environmental project design; environmental measurements; information management; proposal preparation; legislation and regulation development and drafting; interdisciplinary coordination; data collection and analysis; fundraising.

Given that MTE is to use up-to-date technology in telecommunications and computers, computer and other technical training for both professional and support staff will be essential.

Most of this training should be short courses combined with demonstrations and observational tours in Belize. Abroad, short courses and observational tours are best suited to MTE's immediate needs. Degree training for one BS and two MS degrees in Environmental Science should be undertaken immediately.

A detailed training plan over time, including costs, is shown in Table 5 in Chapter VII.

6. Sources of international funding for MTE's programs

With the advent of BEC, MTE should focus on raising funds for its efforts through donor organizations and private foundations and other sources. Initially, BEC should fund Belizean NGOs to prepare detailed funding proposals for each of its priority substantive and cross-cutting areas of responsibility. These proposals, one for each important responsibility area, would be directed toward particular funding agencies.

Funding possibilities should be pursued immediately. MTE should invite the World Bank to help it identify and appraise an environmental project. Such a project could focus resources on MTE's priority substantive areas and provide substantial training and other help in cross-cutting areas as well.

UNEP--Action Plan for the Caribbean Environment Programme, UNDP and other UN organizations should be asked for technical and funding assistance. CARICOM's standing committee of ministers of environment and OAS's regional

commission on the environment for Central America also should be asked for assistance.

IUCN should be invited by MTE to lead in developing a proposal for strengthening monitoring, standard setting, environmental assessment procedures and similar areas that would appeal to private foundations and other funding sources.

The Nature Conservancy should be asked for funding to establish minimum critical management of specific wildlands or forest preserves in Belize rich in biodiversity that are not now being adequately protected. The Nature Conservancy, through its 10 Conservation Data Centers in Latin America and the Caribbean should also be asked for assistance in conducting Rapid Ecological Assessments for key wildlands analysis.

IBM should be approached to fund and assist in setting up an international communications system using IBM computers that would link MTE with other countries. This system would be used to obtain and share information aimed at solving Belize's environmental problems.

BEC should approach USAID for assistance in strengthening the new MTE. A project along the lines of the one used by USAID for MOA--"Strengthening the Ministry of Agriculture Project"--should be requested by MTE as soon as possible. Part of this project should be to develop a Cabinet approved environmental policy for Belize.

MTE also should approach USAID for help under RENARME to work through its legislative requirements, regulatory development and analysis of the strengths and gaps of Belize's environmental legislation.

BEC should request that Peace Corps provide volunteers with specialized environmental skills to MTE.

II. PURPOSE

A. Mission of the Ministry

The mission of the Ministry of Tourism and the Environment (MTE) with respect to the environment is to use all practicable means and measures, in cooperation with local governments and other concerned public and private organizations, to encourage productive and enjoyable harmony between human beings and their environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of human kind; to enrich the understanding of the ecological systems and natural resources important to the nation.

B. Objectives of the Ministry

The objectives of the Ministry are to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate national plans, functions, programs and resources so that Belize can:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Belizeans safe, productive, healthful and aesthetically pleasing surroundings;
3. Attain the widest range of beneficial uses of the Belizean environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice and enjoyment;
5. Achieve a balance and harmony between population and use of resources which will permit a good standard of living and an adequate sharing of life's amenities;
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources;
7. Enrich the understanding and appreciation of the harmony Belizeans need to develop with their environment to survive as a productive, healthy and proud country.

C. Areas of Responsibility

The MTE will have the following responsibilities in the area of the environment:

- o To develop and recommend to the Prime Minister and the Cabinet national policies to foster and promote improvement of environmental quality to meet the conservation, social, economic, health and other requirements and goals of Belize;

- o To recommend to the Prime Minister, the Cabinet and other government agencies priorities among programs designed to enhance the environment;
- o To advise and assist the Prime Minister and the Cabinet in achieving international cooperation in dealing with environmental problems, under the foreign policy guidance of the Ministry of Foreign Affairs;
- o To review and evaluate, on a continuous basis, existing and proposed policies, plans and activities of the government directed to the control of pollution and the accomplishment of other objectives which affect the quality of the environment. This shall include review of master plans, programs and procedures used in the development and enforcement of government standards affecting environmental quality. Based upon such evaluations, the MTE shall develop and recommend to the Prime Minister and the Cabinet measures to improve environmental policies and programs;
- o To coordinate among agencies of the government and among private sector entities, including non-governmental organizations, those plans, programs and activities which affect, protect, and improve environmental quality;
- o To establish strong liaison with other government agencies and request such reports and other information from them as may be required to carry out the Ministry's responsibilities;
- o To determine the need for new policies, programs and procedures for dealing with environmental problems not being adequately addressed. In this regard, to request all government agencies to review their statutory authority, administrative regulations, policies and procedures, including those relating to loans, grants, contracts, leases, licenses, or permits to enable MTE to identify any deficiencies or inconsistencies in them which prohibit or limit full compliance with the purposes and provisions of the environmental policy of Belize. As appropriate, the Ministry will recommend to the Prime Minister, the Cabinet and other government agencies measures necessary to bring the authority, policies and procedures of each government agency into conformance with the environmental policy of Belize;
- o To establish a systematic, interdisciplinary approach and supporting methods and procedures to ensure that environmental considerations are given appropriate weight along with economic and technical considerations in decision making by all government agencies. To this end, MTE shall ensure that responsible government agencies prepare appropriate environment management plans and include a detailed statement of environmental consequences in every recommendation or report on proposals for legislation, on public or private sector projects and on activities significantly affecting the quality of the environment.

The responsible government agency shall consult and obtain comments from all other government agencies with jurisdiction by law or special expertise with respect to any environment management plan or environmental impact involved in a statement of environmental consequences;

- o To review and comment in writing upon the environmental impact of any matter relating to the environmental responsibilities of the MTE; this review and comment shall be done for matters which include legislation proposed by any government ministry or agency, newly proposed government and private sector projects requiring an environmental assessment or impact statement, and regulations proposed by any government ministry or agency and any other matter identified by the Minister;
- o To advise and assist agencies of government in developing and interrelating environmental quality criteria and standards;
- o To continuously review the adequacy of existing systems for monitoring and predicting environmental changes;
- o To continuously review the adequacy of existing enforcement of environmental laws and regulations;
- o To gather information on the conditions and trends in the quality of the environment, both current and prospective; to analyze and interpret such information to determine whether such conditions and trends are interfering or are likely to interfere with the achievement of the environmental policy of the nation;
- o To document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes;
- o To otherwise conduct investigations, studies, surveys, research, monitoring efforts and analyses relating to ecological systems and environmental quality;
- o To transmit to the Cabinet annually an environmental quality report which shall include the status of all aspects of the environment of the nation, trends in environmental quality, a review of the programs and activities of the Government of Belize and other governmental entities for their effect on the environment and on the conservation, development and use of natural resources, and a program for improving existing programs and activities, together with recommendations for legislation, if appropriate;

- o To carry out environmental education efforts and to support such efforts by representatives of science, industry, environmental, agriculture and other groups, local governments, and other governmental agencies;

D. Provision of Authority and Capability

Several actions and related decisions are necessary to vest the new MTE with authority and capability to undertake the above proposed responsibilities. Speedy establishment of detailed responsibilities and authority for MTE is important. Many environmental issues already are pressing upon the new Ministry; the new administration is rapidly addressing numerous issues, many of which involve aspects of the environment. Creation of an effective environmental structure and operation within MTE will take time. Beginning this development quickly will help the new Ministry become effective sooner and enable more accomplishment during the administration. Finally, rapid movement in establishing MTE's operations is one important way the new administration can show "progress" on the environment.

Legislation, which will be required to solidify MTE's authority, can be developed in a deliberate fashion by MTE after it begins implementing its operating plan.

Prior to formally establishing MTE's detailed responsibilities, objectives, structure and operations, decisions regarding the allocation of existing environmental responsibilities between MTE and other ministries are required. At present, there is no substantive legislation which the MTE is responsible for implementing. All current environmental legislation is the responsibility of other existing Ministries. A major reason for establishing the new Ministry has not been to consolidate and rationalize environmental activities by the Government of Belize. However, its creation does offer an opportunity to do so. Any environmental responsibilities of other Ministries that better reside within the MTE could now be repositioned within the new Ministry.

There are advantages and disadvantages of moving areas of environmental responsibility from other ministries to the MTE now. Consolidating areas of responsibility creates an instant staff for the new Ministry; it also provides it with clear statutory responsibilities of its own. Consolidation now may be easier; it is early in the administration when new Ministers may not be as sensitive to such changes and when multiple changes are expected by government officials and the public alike. Having its own identified responsibilities may make it easier for the MTE to show important short-run accomplishments.

Opponents of repositioning legal responsibilities to MTE may counter by stating that such actions may lead to conflicts between Ministries. They also may suggest that, because it is new, the MTE may find it difficult to manage a substantial portfolio of activities. Finally, because environmental issues cut across almost every ministry, some will argue that there is not a compelling reason to move some environmental responsibilities from other ministries to the new Ministry. Ultimately, the MTE will have to coordinate multiple environmental issues among numerous ministries anyway.

Nevertheless, if some responsibilities are not repositioned now, MTE will not develop soon into an efficient environmental protection and pollution control organization. Whatever decision is reached about repositioning, additional environmental legislation will be needed in Belize. For example, if environmental master planning and the use of environmental assessments and environmental impact statements are to be central in the new Ministry's management of environmental resources in Belize, additional authority for MTE in both areas will be required. Substantial authority could be given to the new Ministry in these areas through the use of a portfolio from the Prime Minister designating specific planning and environmental assessment requirements for all governmental agencies and authorizing the MTE to establish regulations and procedures to ensure the requirements are met.

A plan for development of the MTE over time is necessary to enable accurate budgetary estimates to be made and to ensure optimum use of its scarce management and technical resources. This operating plan involves several key decisions:

- o What substantive areas of responsibility will the MTE emphasize initially and over time (e.g., coastal zone master planning, urban effluent control, deforestation, food sanitation standards, wildlife conservation)?;
- o What cross-cutting areas of responsibility will MTE emphasize initially and over time (e.g, new legislation, promulgation of regulations, inter-ministerial coordination, baseline data development, monitoring, enforcement of existing standards, training)?;
- o How will MTE deal with areas of responsibility that are not priorities, given the limited experience and resources available to it?;
- o How can MTE effectively engage emerging environmental issues and give them priority as they arise?;
- o What mechanisms and procedures will MTE use to carry out its responsibilities?

Chapter V provides a suggested operating plan for the MTE over time which deals with these and other decisions. Based on these decisions a budget for MTE's environmental responsibilities can be established.

Budgetary provision for the new Ministry is needed. The budget cycle already has begun for all ministries; the MTE will have to prepare and defend a detailed budget to support its duties and responsibilities. Chapter VI of this report provides an estimated budget for the MTE based on the suggested operating plan over time in Chapter V.

III. ORGANIZATIONAL STRUCTURE

The MTE's environmental staff and functions can be organized in several way. Two options are especially attractive. One would involve a statutory council, an operating staff, and a policy making structure. Figure 1 indicates the relationships involved. Another would involve a conventional line ministry without the statutory council as indicated in Figure 2.

A. Option 1.--Statutory Council

In this option, a statutory council--the Belize Environmental Council (BEC)--would be created. The Council would have eleven members appointed to serve in a part-time capacity by the Minister of Tourism and the Environment. These members would be representatives of various environmental interests in Belize, both public and private. For example, it might include the Permanent Secretaries of the MTE, MNR, MED, Health and Agriculture; others would include two members from industry and commerce, two members from environmental non-governmental organizations, and two members from other institutions and citizens' groups.

The duties and responsibilities of the Belize Environmental Council would be defined by its charter. In this option, it is envisioned that the BEC would encompass virtually all the environmental responsibilities of the MTE. Any policy recommendations, approvals or other matters not remaining with the BEC would be referred to a Cabinet Subcommittee on the Environment which would recommend a decision to the full Cabinet. The Minister of Tourism and the Environment would be chairman of the subcommittee. Standing members could be the Ministers of MNR, MED, Agriculture, and Health. Other interested Ministers would be invited to attend meeting when issues relevant to their responsibilities were before the subcommittee.

The BEC would be administratively independent from the Government of Belize. In particular, it would be independent of the Establishments Board. The BEC also would have the status of an independent non-profit organization for purposes of receiving grants, donations, and other funding from private sources and collection of fees in Belize and funds from private sector or international financial institutions abroad. With these funds, the BEC would support environmental activities directly and through other NGOs in all parts of Belize.

The BEC would have a substantive and support staff under the authority of an Executive Director. The Executive Director would have day-to-day responsibility for the operations of the BEC under the guidance of the Council and its Chairman. The staff of the BEC, as shown in Figure 1, would comprise the Executive Director, the Director of Policy, Planning and Coordination, the Director of Impact Assessment, Research and Evaluation, the Director of Enforcement and Compliance Monitoring, the Director of Environmental Promotion and Information and the Director of Finance and Administration. Each Director would be supported by professional staff officers with appropriate substantive skills and by support staff. A detailed staffing plan is presented in Table 2 in Chapter V.

The Minister of Tourism and the Environment should also have a citizens advisory board. This board could be an expanded Conservation Advisory Committee serving both MINR and MTE. Or the Minister could appoint a Citizens Advisory Board on Environmental Quality to the BEC. Board members would represent a broad spectrum of environmental interests and concerns. The Minister and the BEC, in carrying out their respective duties and responsibilities, would consult with the Advisory Board jointly or severally as they deem advisable.

Another option for the Minister is to develop a list of Belizean citizens and organizational representatives with environmental interests and skills. From this list, he could appoint smaller advisory panels to help BEC with specific issues. This approach enables the skills of individuals to be matched carefully with key environmental issues, keeps advisory groups smaller and enables the Minister to change the mix of advisors easily.

The Chief Environmental Officer (CEO) of the MTE would directly support the Minister of Tourism and the Environment. His key role will be one of liaison between BEC and MTE. The CEO would liaise with the BEC on all substantive matters of direct concern to the Minister. He or she would keep the Minister and PS informed of all activities of BEC, review BEC actions and recommendations so as to keep the Minister and PS informed, and apprise BEC of Government's views regarding environmental policy and program priorities.

B. Option 2.--Line Ministry

The line ministry option eliminates the BEC from option 1 (see Figure 2). All responsibilities and functions of the MTE would be carried out by MTE staff managed by the Permanent Secretary of MTE. Nearly the same number and type of staff proposed for the BEC in option 1 would be utilized by the MTE in option 2. However, the Executive Director of BEC or his equivalent would become the President of the Belize Environment Foundation. The CEO would take his place in regular Ministry activities. Decisions that would be made by the BEC in option 1 would be made by the staff of MTE or the Minister. The MTE would come under the jurisdiction of the Establishments Board and be more fully dependent on the government for its budgetary support.

Under this option, the Cabinet Subcommittee on the Environment and the Citizens Advisory Board on Environmental Quality would still exercise the same duties and responsibilities as in option 1.

An independent, public-sector foundation--the Belize Environment Foundation (BEF) would be established under this option by the MTE (see Figure 2). The foundation would support environmental activities directly and through other NGOs in all parts of Belize. It would obtain funding within Belize and abroad from private contributions, foundation and NGO grants, donor agencies, international organizations such as UNICEF, and from international financial institutions. Initial staffing of the Foundation would be with a person and administrative assistant the equivalent of the Executive Director and his AA in the option 1 configuration. Additional staff for the foundation would be hired as funding proposals were successful. Some MTE staff could initially be given split assignments between MTE and BEF. The Director of

Promotion and Information and the Director of Finance and Administration and their staffs would have skills which the fledgling foundation could use.

IV. RELATIONSHIPS

A. MTE As a Coordinating Ministry

The MTE is a "cross-cutting" ministry. Its substantive interests involve almost every area of commerce and society. Because of this, MTE relates to many governmental agencies, private businesses and non-governmental organizations in carrying out its responsibilities. Figure 3 provides an idea of the kind of relationships MTE will need to nurture in carrying out its responsibilities. As the Figure indicates, MTE is at the center of overlapping interests and relationships of many different organizations and individuals. Not only do the environmental interests of these organizations and citizens overlap with MTE; they overlap with each other, too.

MTE's principal relationships can be separated into six broad categories. Within Belize there are ministries, other governmental agencies, private commercial businesses, non-governmental organizations and individual citizens. Outside Belize there are organizations of many different kinds and individuals.

The above six categories also can be subdivided. The principal division is between organizations in each category that are specifically focused on or extensively involved with the environment and those whose major concerns are not environmental. For example, in the ministries category, MTE is likely to relate much more frequently to MINR with its intense environmental focus than to transportation which has less direct environmental activity. Likewise, certain non-governmental organizations such as the Programme for Belize are of more direct concern to MTE than an institution such as the Colonial Band Association.

The proposed responsibilities of MTE (Chapter II), the structure of MTE (Chapter III) and its operational plan (Chapter V) highlight the relationships envisioned between MTE and other ministries, other governmental entities, the business community, NGOs and private citizens. Chapter VIII indicates some of the international organizations that MTE will become involved in. Developing and managing relationships with these categories of institutions will require different MTE procedures.

B. Belizean Organizations and Individuals

1. Ministries

In dealing with ministries, MTE will require both informal contacts and specific procedural mechanisms which are well-understood and agreed upon by the involved Ministers. These relationships will not be voluntary; rather, they will be essential for identifying and resolving environmental issues affecting more than one ministry or political constituency.

MTE will have responsibility for coordinating all GOB environmental activities--including all those carried out by other ministries. The means for doing this will be assessment of policies, programs, and activities of all ministries; recommendation of environmental policies to be carried out by MTE and other ministries; requirement of appropriate environmental planning and impact assessment; review of all monitoring and enforcement activities by other ministries; review and comment on regulations by other ministries that impact on the environment. These MTE activities show that its relationship with other ministries will be one of required coordination, some control, and a plethora of consultations, discussions and debates about substantive, procedural and political issues involved in environmental planning, education and control.

2. Other government agencies

The relationships between MTE and other non-ministry government agencies will be similar to its relationships with ministries. It will have responsibility for coordinating, monitoring and assessing all their environmentally related activities. The means for doing this will be the same as for ministries.

3. Businesses

MTE's relationships with private sector business concerns will be qualitatively and quantitatively different than its relationships with government agencies. The business community's main priority is to produce products or services successfully while remaining in harmony with the environment. It's primary focus, however, is business, not the state of the environment. More than anyone else, the business community will be aware of the cost of environmental actions. Because these costs are internalized by the businesses themselves in the short-run, business persons are likely to weigh costs much more heavily than environmental benefits, especially when the benefits are marginal.

MTE's primary short-run responsibility to private business will be to recommend environmental policies and regulations that fairly account for business and economic development concerns and to enforce environmental plans and well-understood specific environmental standards equitably. Its long-run responsibility to business interests will be to ensure that Belize's economic growth is environmentally sustainable. Ultimately, MTE will want private sector businesses to support environmental actions that go directly against their financial interests. It also will want business to support environmental actions not directly supportive of its commercial interests such as funding environmental education or speaking out for wildlands preservation.

To achieve these objectives, MTE will want to listen carefully to private sector business views in developing policy, promulgating regulations, and in enforcing environmental standards. MTE's environmental plans and standards will need to be specific so that business has clear guidelines for estimating costs and returns and making decisions. It's relationships with business will need to be cordial and open. Open MTE deliberations, a free flow of information, and constant mutual education of business and MTE will

need to be an active part of the MTE/business relationship. Only then will MTE's environmental management win the active support of the business community even when it is unpalatable.

4. Non-governmental organizations

MTE's relationship to non-governmental organizations not in the business sector will be mostly with environmentally concerned groups. Unlike the business community, environmental NGOs' main priority is the environment. They will value the benefits of astute environmental management more than the costs of attaining them, mostly because those costs are paid by someone else.

Environmental NGO's desire, most of all, to be involved meaningfully in the development and implementation of environmental plans, policies, programs and regulations. MTE's success with them will rise or fall depending on how effectively it involves them in these aspects of its work. MTE is more closely associated with these groups than with any of the others in terms of its major objectives; however, it is more tangentially associated with them in terms of mechanisms and procedures. Only as MTE "creates" ways to involve environmental and other NGOs in its environmental activities will MTE's relationship with them prosper.

MTE plans to involve non-governmental environmental groups in its efforts in several ways. It will include NGO representation on any councils or advisory committees it creates. MTE will utilize NGOs to carry out certain of its functions where they are technically and managerially prepared and funded from outside sources. MTE also plans to raise funds through a non-profit government created council or foundation; some of the money received could be directed to NGOs to obtain their assistance and expertise in meeting MTE objectives. MTE/NGO relationships also will be maintained through informal meetings of many different kinds.

As with the private sector, MTE will want to listen carefully to NGO views in developing policy, promulgating regulations, and in enforcing environmental standards. MTE's environmental plans and standards will need to be specific for NGOs too, so that they know the criteria are designed to attain agreed upon objectives and are enforced accordingly. MTE's relationships with NGOs also will need to be cordial and open.

And, MTE will want NGOs, the business community, and government organizations to have direct access to each others' views and information. In this way, MTE's relationships with all entities involved with natural resource and environmental issues will be maintained openly for all to observe. By being together, these institutions educate each other on key issues. This takes MTE out of the middle and ensures that competing views and information become primary evidence rather than hearsay.

5. Private citizens

MTE's relationships with private citizens will be the most difficult to develop and manage. There are no easy mechanisms to involve many individual citizens in MTE's environmental decision making. Nor is there a

large group of non-NGO affiliated citizens seriously committed to spending substantial volunteer time on MTE environmental activities. In some communities in Belize local citizens may mobilize to address environmental problems from the grass roots level. Where this occurs, MTE should support and nurture it; if local interest and solutions to pressing environmental concerns can be sustained it will foster "appropriate" environmental solutions and preclude MTE activities from being too "top-down" in nature.

MTE can use several procedures to involve private citizens in its work. It can include individual citizens on its councils and boards. MTE can hold public hearings on environmental issues in various locations throughout Belize, thereby making it much easier for local citizens to participate in or observe MTE processes. Support of environmental education in the schools by MTE will involve students and teachers more fully in environmental issues.

And, MTE can mount a significant public relations campaign encouraging individual citizens to respond on environmental issues in a number of ways-- writing to MTE, volunteering to help with specific environmental events such as beach cleaning, identifying environmental problems for local politicians or NGOs, maintaining cleaner or more environmentally appropriate surroundings, encouraging environmental activities such as tree planting or better park management whenever an opportunity arises, etc. Public radio can be used extensively in this process.

C. International Organizations

MTE will have significant contact with international organizations of all kinds, ranging from technical environmental organizations to international financial institutions. Initially, MTE's relationships with these entities will focus on very specific activities--obtaining information, finding technical assistance to solve a specific problem, sending someone to a conference, seeking funding for an environmental intervention, etc. Also, contact between MTE and these organizations will initially be spotty and, without good planning and management, will remain sporadic.

Management of its international relationships will be one of the important tasks of MTE from its very beginning. Most of Belize's environmental problems are being experienced by many other countries. Obtaining information, technical expertise, funding and other resources from abroad will greatly assist Belize in maintaining its economic growth and environmental quality. Locating these resources depends principally on good, cost-effective communication, by letter, electronically and face-to-face.

A concentrated effort to identify international organizations with directly applicable resources is important. Local NGOs can provide contacts and assistance. Receiving these resources from the organizations identified depends mostly on establishing good relationships with them once contact is first made. Good relationships turn primarily on communication--MTE spending time and exchanging information with these other organizations.

Mechanisms for MTE to maintain appropriate international relationships include good communications and a plan for building the relationships. The plan could include travel of MTE staff to liaise with important international institutions directly and at conferences. It will involve MTE writing letters, sending reports, data, and promotional material, and communicating electronically--by phone, fax, telex and computer. Part of the plan can be to

invite members of the appropriate international organizations to Belize whenever possible. The plan needs a general objective (maintaining a good long-standing relationship) and specific objectives (keeping abreast of current information, referrals, or funding).

V. OPERATING PLAN AND TIME FRAME

The MTE, after making basic decisions about its mission, objectives and responsibilities, needs to establish an initial operating plan. This plan will incorporate a start-up strategy, activities to be undertaken, staffing and other resource requirements, administrative procedures, and a time frame during which the MTE will expand its activities and budget to achieve its objectives fully.

A. Strategy

The MTE's start-up strategy encompasses numerous issues: How many areas of substantive responsibility can it, as a new ministry, undertake with integrity? What priority areas should it focus on? What cross-cutting areas of activity are most important? What procedures should MTE use to carry out its responsibilities? Are there specific approaches that will enable MTE to accomplish its objectives most cost effectively? What structure should MTE adopt? What staffing level should be sought? What staff skills are essential? What time frame is most appropriate for MTE development? What activities fit best within different time frames?

MTE's strategy is to:

- o Obtain appropriate statutory authority to carry out its mission and achieve its objectives;
- o Select a few high priority substantive and cross-cutting areas where limited MTE resources can be applied most productively;
- o Designate key procedures for MTE operations that will enable it to be effective in its mostly coordinating role; key aspects of these procedures will be achieving effective coordination and good management of information as a resource;
- o Fashion a structure that will support: limited autonomy from the GOB administration; access to outside funding and off-budget domestic revenues; maximum public participation in MTE activities; flexibility in bringing expert technical resources to bear on environmental problems;
- o Provide for a staff capable of meeting the management and technical needs of MTE initially and progressively;
- o Develop MTE capabilities over time to allow it to undertake the full range of its responsibilities effectively.

B. Priority areas of MTE activity

The MTE cannot undertake the same intensity of activity in all important environmental areas at once. Given its status as a brand new ministry and its

lack of developed staff expertise, it is appropriate for it to select priority substantive and cross-cutting areas to concentrate upon initially.

1. Substantive priority areas

MTE will assist other ministries by coordinating environmental activities and providing expertise in substantive environmental areas. In key areas where environmental responsibilities are spread among ministries--as in coastal zone management--MTE can help coordinate activities. Where expertise is needed or changing, such as in industrial effluent pollution control, MTE can help establish and enforce standards. In cases where external assistance is possible--as in biodiversity preservation and management--MTE can assist in obtaining it. Some environmental protection responsibilities assigned to ministries are not being undertaken due to lack of resources. MTE may be able to help government agencies fulfill these responsibilities by providing standards, documenting variances, assisting in management, or enforcing compliance.

Substantive priority areas in which MTE can help in these ways are: Industrial effluent pollution control; solid waste and human sewage pollution control; pesticide use and run-off control; food sanitation enforcement; coastal zone management; river basin planning; biodiversity preservation and management; endangered species habitat preservation; land use planning.

2. Cross-cutting priority areas

Cross-cutting areas of emphasis by the MTE should be:

- o New legislation to specify MTE's authority and responsibilities, especially with respect to environmental planning and environmental assessment/impact statement development;
- o Development of regulations for existing environmental legislation;
- o Expanded enforcement of environmental laws and regulations, beginning with specific areas first;
- o Increased environmental planning for key areas of development--e.g., the coastal zone, tourism, and industrialization;
- o Strengthened coordination of environmental activities and interest among other ministries and government agencies, businesses, NGOs, and citizens;
- o Creation of expanded and enhanced relations with Belizean and international environmental and financial institutions and individuals interested in the environment.

C. Key procedures for Initial Up-Front Management

Several important procedures will be used by the MTE in carrying out its work. Foremost will be integrated environmental planning. Planning will be pursued for important ecosystems--the coastal zone, land use, tourism areas, and industrial development areas. By specifying zones for establishment of certain types of activities and the environmental criteria to be met by those activities, a high degree of "up-front" environmental management can take place.

Another important up-front management procedure will be use of environmental assessments and environmental impact statements. Used sparingly now, this procedure will involve MTE and other ministries directly in consideration of environmental issues as they arise from new legislation, public or private sector projects, or new regulations which have environmental impacts.

Development of policy, new legislation and additional regulations will be another procedure used by MTE to confront and solve environmental problems. Coordination of these elements across ministries by MTE will be part of this process. Implementation of policy, legislation and regulations will be carried out by many ministries and other government agencies; however, MTE will have a primary coordinating and review role that will ensure adequate and consistent implementation is undertaken.

Stronger enforcement of environmental standards is another procedure to be used by MTE. MTE will not directly enforce many of Belize's environmental regulations, but it will monitor and review their enforcement by others. Where enforcement is inadequate it will suggest appropriate measure for improvement to the agency responsible and to the Cabinet Subcommittee on the Environment.

Encouraging and facilitating a high degree of public participation in environmental decisions and management will be another procedure used by MTE in carrying out its responsibilities. It will accomplish this through consultation with many organizations and citizens, by including organizations and citizens on its councils and advisory boards, through educational and public relations programs, by making its technical information available to the public, by opening its deliberations to the public, and by allowing public comment on its pending decisions.

An especially important way MTE will facilitate public participation in environmental issues is to encourage community based planning, monitoring, enforcement and assessment. Everywhere that local communities begin to deal effectively with their own environmental concerns, MTE's tasks will be made easier and its success more likely.

Maintaining maximum management flexibility to deal with environmental issues will be another procedure used by MTE. It will establish a mechanism whereby it can attract funds from domestic and international sources to expand its environmental activities. MTE will budget to enable use of a wide range of Belizean and international expertise to consider and help solve environmental problems.

Another procedure to be used is extensive contact with international sources of information, expertise and funding. By developing relationships with international environmental centers, financial institutions, university research institutes, companies and skilled individuals, MTE will be more able to attract needed inputs for its own programs from these sources.

A final procedure will be the management of information as a resource. MTE, as a coordinating ministry, will primarily work with information-- legislation, studies, reports, assessments, measurements, etc. To be cost effective in carrying out its duties, it must manage this information as one of its key resources, just as it manages personnel, funding, or equipment. Information management must include information acquisition, storage, retrieval and analysis. Given that much of the information MTE could use is available from agencies and individuals outside Belize, MTE's information management system needs to include modern telecommunications technology. MTE will develop and use technologies such as the telephone, fax, telex and computers to make its information acquisition, storage and use efficient and cost effective.

D. Structure

Potential structures for MTE were presented in Chapter III in the form of two options, a council structure and a straight line ministry structure. The council option seems to most people interviewed to offer a better structure within the Belizean context for bringing people with different environmental concerns into the decision making process in a meaningful way. It also offers more flexibility to MTE for approaching environmental problems. If option 1, the council option, is selected, MTE will have to prepare a charter for the new council.

E. Staffing and Special Consultant Expertise

MTE's staff, whether located in a Belize Environmental Council or in a line ministry structure, will need to be sufficient in strength and capability to identify and resolve environmental issues. Part of MTE's staff capability must be technical. Most environmental problems involve substantive scientific and biological issues. Many require technical economic and social analysis too. MTE staff must be able to carry out appropriate monitoring and analyses in these areas and to assess those completed by others.

Another part of MTE staff's skills must be good group dynamics, coordination and editorial expertise. MTE staff, as pointed out earlier, will not have to deal with these issues alone. Staff from nearly every government ministry and agency also have environmental responsibilities and skills. Also, businesses and NGOs have environmental analysis and management capabilities. Internationally, there is a range of technical expertise that can be used to help Belize resolve environmental issues. Use of these non-MTE staff or their analyses will be extensive in MTE's work. MTE staff will have to work extensively with people and their ideas to integrate these resources into cost effective environmental management and problem resolution.

Table 2 shows the recommended staffing pattern and estimated staffing costs for MTE for the years 1990 through 1994. The initial substantive staff requirements suggested for MTE are:

- o Chief Environmental Officer (CEO)--responsible for liaison between BEC and the Minister, the Cabinet Subcommittee on the Environment, the Cabinet and the Prime Minister. The CEO will review and comment upon all BEC activities, decisions, Cabinet papers and other matters in support of the Minister or the Cabinet. He also will inform BEC of Government's views on environmental policies and program priorities;
- o Executive Director of BEC--responsible for all policy, technical, financial and administrative aspects of MTE's environmental activity under the guidance of the BEC and its Chairman; special direct responsibilities include emergency responses, international activities, training, and environmental standard setting. The Executive Director will be trained in an area of environmental science and have experience in public administration. He or she would be supported directly by one administrative assistant;
- o Director of Policy, Planning, and Coordination--to be responsible for policy analysis, environmental planning, and coordination of environmental activities. The Director will have a background in environmental sciences and be responsible primarily for coordination of environmental issues among governmental agencies and private groups and individuals. He or she will be supported by one professional staff member responsible for policy and planning with a background in economics;
- o Director of Impact Assessment, Research and Evaluation--to be responsible for impact assessment, environmental research, research coordination and evaluation of environmental policy, programs and regulation, and environmental information. The Director will have a background in environmental science and be responsible for research. He or she would be supported by two professional staff persons. One, responsible for impact assessment, would have a background in environmental sciences. The other would have an economic background and be responsible data collection and analysis and evaluation;
- o Director of Enforcement and Compliance Monitoring--to be responsible for enforcement and coordination of enforcement of environmental standards and monitoring compliance with those standards. The Director would be experienced in environmental standards and their enforcement. He would be supported by two professional staff. For enforcement there would be a staff person with an appropriate background in environmental regulation. In monitoring there would be a staff person skilled in various aspects of environmental standards and their measurement;

Table 2.--Proposed MTE Environmental Division Staffing Pattern and Salary Costs, 1990-1994

Staff Positions	Number of Positions by Year					Classifi- cation	Salary \$82	Salary Amounts by Position by Year				
	1990	1991	1992	1993	1994			1990	1991	1992	1993	1994
	(\$82.											
CEO	1	1	1	1	1	PS25	26826	26826	26826	26826	26826	26826
Executive Director	1	1	1	1	1	PS25	26826	26826	26826	26826	26826	26826
Administrative Assistant	1	1	1	1	1	PS9	10272	10272	10786	10786	10786	10786
Director of Policy, Planning and Coordination	1	1	1	1	1	PS23	23046	23046	23046	23046	23046	23046
Policy Planner	1	1	1	1	1	PS20	18050	18050	18050	18050	18050	18050
Economist		1	1	2	2	PS16	16500	0	16500	16500	33000	33000
Biologist			1	1	1	PS16	16500	0	0	16500	16500	16500
Statistician				1	2	PS10	11148	0	0	0	11148	22296
Clerk		1	1	2	2	PS7	8616	0	8616	8616	17232	17232
Director of Impact Assessment, Research and Evaluation	1	1	1	1	1	PS23	20105	20105	20105	20105	20105	20105
Impact Assessment Officer	1	1	1	1	1	PS16	16500	16500	16500	16500	16500	16500
Asst. Impact Assessment Officer			1	1	2	PS10	11148	0	0	11148	11148	22296
Evaluation Officer	1	1	1	1	1	PS16	16500	16500	16500	16500	16500	16500
Asst. Evaluation Officer				1	2	PS10	11148	0	0	0	11148	22296
Statistician					1	PS10	11148	0	0	0	0	11148
Clerk			1	1	2	PS7	8616	0	0	8616	8616	17232
Director of Enforcement and Compliance Monitoring	1	1	1	1	1	PS23	20105	20105	20105	20105	20105	20105
Enforcement Officer	1	1	1	1	1	PS16	16500	16500	16500	16500	16500	16500
Asst. Enforcement Officer		1	2	3	4	PS10	11148	0	11148	22296	33444	44592
Standards and Regulations Officer	1	1	1	1	1	PS16	16500	16500	16500	16500	16500	16500
Asst. Standards and Regulations Officer		1	1	2	3	PS10	11148	0	11148	11148	22296	33444
Environmental Technician		1	1	2	3	PS9	10416	0	10416	10416	20832	31248
Director of Environmental Promotion and Information	1	1	1	1	1	PS23	20105	20105	20105	20105	20105	20105
Computer Officer	1	1	2	2	2	PS16	16500	16500	16500	33000	33000	33000
Management Information Systems Officer		1	1	1	2	PS10	11148	0	11148	11148	11148	22296
Librarian				1	1	PS9	10416	0	0	0	10416	10416
Clerk			1	2	2	PS7	8616	0	0	8616	17232	17232

Director of Administration and Finance	1	1	1	1	1	PS16	16500	16500	16500	16500	16500	16500
Finance Officer	1	1	1	1	1	PS11	14120	14120	14120	14120	14120	14120
Accountant			1	1	1	PS10	11148	0	0	11148	11148	11148
Clerk	2	2	2	2	2	PS7	8616	17232	17232	17232	17232	17232
Stenographer/secretary	3	3	3	4	4	PS7	8616	25848	25848	25848	34464	34464
Typist			1	1	1	PS3	6620	0	0	6620	6620	6620
Total Staff Number and Cost by Year	20	26	34	44	53							
Total Salaries Inflated at 5% per Year							321535	391025	481321	589093	686161	823393

- o Director of Environmental Promotion and Information--to be responsible for relationships with the press, the general public, businesses, NGOs, international organizations, and other groups; also to be responsible for general information collection and dissemination, the library, database management, and environmental information systems. The Director would have a background in public administration and information management. He will be supported by a librarian/computer information specialist;
- o Director of Administration and Finance--to be responsible for administrative, personnel, legal and financial aspects of MTE. This director would be at the Assistant Secretary level. He or she would be supported by a Financial Officer and two clerks. A pool of three secretaries would support the work of all BEC professional staff.

In addition to the direct hire staff of MTE, there will be need from time to time for specialized expertise to deal with particular environmental issues. MTE's budget will include funds to hire Belizean and international consultants or to make expense or other partial payments to specialize NGOs to meet this requirement. This approach will enable MTE to obtain critical skills when needed while eliminating hiring and maintaining experts who will not be fully utilized on a continuous basis.

F. Time Frame

A suggested schedule for the development of MTE's activities over time is shown in Table 3. The schedule is set out in terms of MTE-wide actions and activities by department. Staffing levels are the critical constraint. If MTE staffing can be expanded faster than estimated here, desired activities can be undertaken sooner in the substantive and cross-cutting environmental areas selected as priorities.

Table 3.--Proposed Time Frame for Development of MTE Activities, 1990-1994

Suggested Tasks by Year for MTE		
1990	1991	1992
Agree on structure of MTE		
Establish MTE		
Present MTE budget	Present MTE budget	Present MTE budget
Obtain staff	Obtain staff	Obtain staff
Obtain initial office equipment	Obtain additional office and environ. equip.	Obtain additional office and environ. equip.
Begin staff training	Continue staff training	Continue staff training
Create charter for BEC		
Appoint BEC and advisory board members		
Raise funds for BEC	Raise funds for BEC	Raise funds for BEC
Review existing policies, laws, and regulations	Obtain MTE statutory authority; new legislation	Establish Belize environ. policy
	Develop regulations for all environ. laws	Improve regulations
	Establish environ. assessment and impact procedures	Improve environ. assessment and impact procedures
Expand standards and enforcement	Expand standards and enforcement	Expand standards and enforcement
Industrial effluent	Pesticides	Solid and human waste
Use a slow build up approach		
Use a hit team		

Create environmental plans Coastal zone management	Create environmental plans Land use	Create environmental plans River basin management
Maximize flexibility Use consultants Use local NGOs	Maximize flexibility Create consultant & local NGO use plan	Maximize flexibility Implement consultant and NGO use plan
Establish computer capability	Expand computer capability	Expand computer capability
	Create data collection and database management capability	Continue data collection and database management development
		Develop & implement management information system
	Establish key international contacts	Expand intl. contacts
	Develop additional public participation in MIE activities	Expand public participation in MIE activities

VI. BUDGET

The proposed staffing pattern for MTE and its estimated costs were shown in Table 2, Chapter V, for the years 1990 through 1994. A total budget estimate for MTE for the five years 1990-1994 is presented in Table 4.

Table 4.--Budget Estimates for MET Environmental Division Recurrent and Capital Expendure, 1990-1994

A. RECURRENT EXPENDITURE

Subhead No.	Item No.	Description	Years				
			1990	1991	1992	1993	1994

			(\$BZ)				
01	PERSONAL EMOLUMENTS						
	1	Salaries	321535	391025	481321	589093	686161
	2	Consultant fees	6600	13200	19800	26000	25000
	3	Wages (Unestablished staff)	11254	13686	16846	20618	24016
	4	Allowances	16077	19551	24066	29455	34308
	5	Social Security	9646	11731	14440	17673	20585

	Subtotal, Personal Emoluments		365112	449193	556473	682839	791070
TRAVEL AND SUBSISTENCE							
	1	Transport Allowance	2000	2000	2000	2000	2000
	2	Mileage Allowance	6000	6000	6000	6000	6000
	3	Subsistence Allowance	4000	4000	4000	4000	4000
	4	Other Travel Expenses	1000	1000	1000	1000	1000

	Subtotal, Travel and Subsist.		13000	13000	13000	13000	13000
MATERIALS AND SUPPLIES							
	1	Office Supplies	3000	3000	3000	3000	3000
	2	Books and Periodicals	1000	1000	1000	1000	1000
	3	Computer Database Access Charges	4000	4000	4000	4000	4000
	4	Computer supplies	3000	3000	3000	3000	3000
	5	Household Sundries	1000	1000	1000	1000	1000
	6	Foods	0	0	0	0	0

	Subtotal, Materials, Supplies		12000	12000	12000	12000	12000
OTHER OPERATING AND MAINTENANCE SERVICES							
	1	Maintenance of Buildings	2000	2000	2000	2000	2000
	2	Upkeeping of Grounds	500	500	500	500	500
	3	Repairs of furn., Equip., Computers	5000	5000	5000	5000	5000
	4	Repairs of Vehicles	500	1000	2000	3000	3000
	5	Fuel	6000	9000	12000	12000	12000
	6	Miscellaneous	1000	1000	1000	1000	1000
	7	Training	900	1050	1800	1350	1650

	Subtotal, Other Oper., Servs.		15900	19550	24300	24850	25150

UTILITIES						
1	Gas	500	500	500	500	500
2	Telephone	5000	5000	5000	5000	5000
3	Water	500	500	500	500	500
Subtotal, Utilities		6000	6000	6000	6000	6000
EQUIPMENT						
1	Office Equipment	2000		2000		2000
2	Environmental Equipment	2000	2000	2000	2000	2000
Subtotal, Equipment		4000	2000	4000	2000	4000
Total Recurrent Expenditure		403012	488743	602773	727689	838220
Recurrent Expenditure Inflated by 5% per Year		403012	513180	663050	836842	1005863

B. CAPITAL EXPENDITURE

Account Code	Project or Expenditure Title					
	Purchase of Vehicles	52000	26000	26000		
	Purchase of Computer Equipment	10000	10000			
	Purchase of Environmental Equipment	5000	5000	5000	5000	5000
Total Capital Expenditure		67000	41000	31000	5000	5000
Capital Expenditure Inflated by 5% per Year		67000	43050	34100	5750	6000
TOTAL RECURRENT AND CAPITAL EXPENDITURE						
	Not Inflated	470012	529743	633773	732689	843220
	Inflated	470012	556230	697150	842592	1011863

VII. TRAINING

A. Training Needs

MTE's substantive and coordination responsibilities cover a wide array of biological, physical, social and economic issues. Knowledge about these issues and their satisfactory resolution is constantly growing and changing. Adequate knowledge and skills to deal with many environmental issues is limited in Belize and even globally in many cases. Thus, there will be a continuous need for MTE to obtain and use additional knowledge and skills to cope successfully with all the environmental matters of concern to the people and Government of Belize.

MTE staff will require additional training in almost all substantive areas of MTE's responsibility and in many of its cross-cutting responsibility areas too. Training for MTE staff, in most cases, will need to focus on practical applications of knowledge to help solve specific Belizean problems. It will be more helpful, for example, if MTE training aims at teaching exactly how to collect and analyze pollution samples than at instilling a general knowledge of chemistry.

There are excellent environmental programs available at or from many universities, institutes and NGOs which provide practical environmental skills as well as principles that govern the environment and society. MTE staff training also will need to be predominantly short-term, and whenever possible, undertaken in Belize.

Several important overall objectives of environmental training for MTE are:

- o To ensure that MTE staff respect and understand the various disciplines involved in solving environmental problems;
- o To establish generic approaches to providing solutions to complex environmental problems;
- o To create an ability to carry out environmental problem solving in a public and political context;
- o To develop quality technical skills for application to environmental problems;
- o To ensure that information is viewed and managed as a resource in all environmental activities.

Specific objectives of environmental training involve inculcation and demonstration of skills and problem solving abilities critical to effective environmental protection in Belize. Training in all of MTE's substantive

responsibilities will be required to develop skills in areas such as, but not limited to:

- o Effluent and chemicals monitoring--collection and analysis;
- o Biomonitoring;
- o Emissions monitoring (noise, auto and other mobile sources, fuel burning for energy, by-products of industrial manufacturing, and other stationary sources);
- o Survey techniques;
- o Tolerance levels;
- o Risk assessments;
- o Standards development--negligible risk, etc.;
- o Reporting requirements--premanufacture notification, etc.;
- o Scientific ecoregion determination;
- o Wetlands, wildlands and land and marine sanctuary determination;
- o Animal, bird, aquatic and plant species identification, monitoring and protection;
- o Land use planning;
- o Natural resource depletion rates and maintenance;
- o Demonstration testing;
- o Enforcement methods;
- o Public awareness procedures;
- o Waste disposal methods (injection wells, surface pond treatments; chemical, biological, precipitation or steam stripping treatment; recycling; solidification; incineration; volatilization/aeration; soil washing/flushing; biodegradation; containment--on-site, temporary storage, off-site);
- o Product substitution or process substitution or efficiency to reduce waste production;
- o Resource recovery improvement;
- o Pollution clean-up;

- o Emergency planning and responses to different environmental crises or catastrophes;
- o Technological innovation;
- o Chemical registration;
- o Inventory reporting (for hazardous materials);
- o Chemical use data;
- o Chemical application procedures;
- o Health and safety studies;
- o Toxicity testing;
- o Community "right to know" procedures;
- o Information sharing within and outside Belize.

In the cross-cutting areas of MTE's responsibilities training will be required to develop skills such as, but not limited to:

- o Environmental policy making and administration;
- o Environmental planning;
- o Environmental monitoring and evaluation;
- o Computer analysis, database construction and use;
- o Environmental assessment and impact analysis;
- o Environmental benefit/cost analysis;
- o Environmental project design;
- o Environmental measurements;
- o Environmental public information;
- o Information management;
- o Environmental proposal preparation;
- o Legislation and regulation development and drafting;
- o Environmental problem identification;
- o Interdisciplinary coordination;

- o Data collection and analysis;
- o Study design;
- o Construction and analysis of alternative environmental solutions;
- o Fundraising.

Given that MTE is to use up-to-date technology in telecommunications and computers, computer and other technical training for both professional and support staff will be essential. BIM and other Belizean organizations are well prepared to provide training in computer skills, information management using the computer, and in fax, telex and other telecommunication applications.

B. Training Methods and Depth of Training

Several methods can be included in MTE's training plan. Observational tours, seminars, workshops, short courses, degree training, demonstrations, programmed learning, tutoring, managed bibliographies, television, video tapes, movies, computerized training, laboratory sessions, and counterparting (of experts doing environmental work).

The best types of training will be short courses combined with demonstrations and observational tours in Belize. Abroad, short courses and observational tours are best suited to MTE's immediate needs. However, degree training for one or more MTE staff prepared to study for a Master of Environmental Sciences could be undertaken immediately if appropriate donor funding becomes available.

The extent, or depth of training to be provided to MTE staff will have to be limited initially because of scarce human resources to begin MTE operations. In later years, additional person months of training should be made available for selected staff persons.

C. Sources of Training

The sources of training to meet MTE's needs are legion. MTE should to obtain the support of one or more donor agencies to facilitate the financing of the training desired. Because each donor tends to use specific training organizations to provide environmental related skills, selection of sources for training will need to be worked out initially with interested donor agencies.

Categories of sources of training are universities, NGOs, developed and developing country agencies, and businesses. Many universities and associated institutes provide specific and general environmental training. Some of these are: the National Institute of Biological Resources of Mexico; The University of Costa Rica Organization for Tropical Studies and Tropical Science Center; Miami University Institute of Environmental Sciences; New York University Department of Environmental Medicine; Harvard University School of Public Health; the East-West Center in Hawaii; Princeton University Center for

Energy and Environmental Studies; University of Washington Institute for Marine Studies; Clark University Center for Technology, Environment and Development; University of California at Berkeley Energy and Resources Program; University of Colorado Department of Economics; University of Arizona Environmental Research Laboratory; Texas Technical University Center for Arid and Semi-Arid Lands Studies; Sussex University Institute of Development Studies.

NGOs and some private corporations also offer or support specific and general environmental training. Some of these organizations are: The Nature Conservancy; World Wildlife Fund/Conservation Foundation; IUCN; ICBP; RARE; New York Zoological Society; CARE; World Resources Institute; the Kellogg Foundation; the World Conservation Monitoring Center; Belize Center for Environmental Studies; Belize Audubon Society; CATIE; Caribbean Food and Nutrition Institute; Caribbean Conservation Corporation for the Green Turtle. BIM and other local NGOs offer training in computer applications and information management.

Developed and developing country agencies offering direct environmental training or financing for it include: US Agency for International Development, US Fish and Wildlife Service; US Department of Agriculture Graduate School; US Environmental Protection Agency; Woods Hole Oceanographic Institute; British Overseas Development Assistance; Canadian International Development Agency; European Economic Community; WHO, PAHO, FAO World Bank; Caribbean Development Bank; IICA; IITA; IRRI; UNEP; UNDP.

Businesses offering environmental or environmental related training include consulting and training firms such as Winrock International, International Science and Technology Institute, Harza Engineering Company, Devres, Inc., Arthur D. Little International Training Institute, and Experience, Inc.

D. Cost of Training

The cost of training will vary substantially depending upon the location of the training and the type of skill development being sought. Training carried out abroad will average about US\$4,500 (BZ\$9000) per person month; costs for training in Belize by expatriate staff will average about US\$1000 (BZ\$2000) per person month of training based on training a group of 15. Costs for training by Belizean staff will be about US\$150 (BZ\$300) per person month of training for a group of 15 staff. Any salary or other additional on-going staff costs would be in addition to the above training costs. Training abroad or by expatriate staff in Belize will require foreign currency.

Sources of funds for MTE training could be from donor agencies for training abroad or in Belize by expatriate trainers. Other sources of funds for environmental training are the many NGOs and foundations that support environmental improvement in developing countries. Training by local Belizeans could be financed with MTE funds. In some cases, BIM and other organizations supported by USAID or other donor agencies can cost share with MTE in providing training. Specific training proposals will need to be presented to most of these organizations.

E. MTE's Training Plan

MTE's proposed training plan is shown in Table 5. In the first year, the training schedule is light to allow for starting up the new Ministry. Over time, however, the training regime expands and some training is suggested for almost all professional and support staff. The types of training needed are shown in the Table.

The training specified does not include on-the-job training. However, On-the-job training will be important in all aspects of MTE's work. And, provision should be made to have persons who receive formal training pass their knowledge and skills along to others in MTE through on-the-job and other training methods.

Certain training components are proposed for specific professional and support staff. Some of these, such as the one for the Director of Policy, Planning and Coordination, involve training abroad. Other training components would be carried out in Belize. The estimated cost of the training plan suggested for MTE is shown as part of Table 5.

The training plan provides degree training at the BS and MS level for three MTE staff over the five year training plan period. The degree training--in environmental science--will enable MTE to gradually strengthen its staff as it grows and matures as a Ministry. Donor agency support should be sought for this degree training.

Table 5: Proposed MTE Environmental Division Training Plan and Cost, 1990-1994

Staff Positions and Training	Number of Person Months Training by Year					Location	Cost per PM \$BZ	Total Training Costs by Position by Year					Cost per PM \$US	\$US Training Costs by Position by Year				
	1990	1991	1992	1993	1994			1990	1991	1992	1993	1994		1990	1991	1992	1993	1994
DEP																		
Emergency response	1					Abroad	9000	9000	0	0	0	0	0	0	0	0		
Environmental issue analysis			1			Belize, Exp.	2000	0	0	2000	0	0	0	0	0	0		
Environmental policy analysis					1	Belize, Exp.	2000	0	0	0	0	2000	0	0	0	0		
Executive Director																		
Emergency response	1					Abroad	9000	9000	0	0	0	0	0	0	0	0		
Environmental planning		1				Abroad	9000	0	9000	0	0	0	0	0	0	0		
Environmental issue analysis			1			Belize, Exp.	2000	0	0	2000	0	0	0	0	0	0		
Public Health				1		Belize, Exp.	2000	0	0	0	2000	0	0	0	0	0		
Environmental policy analysis					1	Belize, Exp.	2000	0	0	0	0	2000	0	0	0	0		
Administrative Assistant																		
General computer training	0.5					Belize	300	150	0	0	0	0	0	0	0	0		
Director of Policy, Planning and Coordination																		
Environmental policy analysis	1					Belize, Exp.	2000	2000	0	0	0	0	0	0	0	0		
Demonstration testing				1		Abroad	9000	0	0	0	9000	0	0	0	0	0		
Environmental planning					1	Abroad	9000	0	0	0	0	9000	0	0	0	0		
Policy Planner																		
Environmental policy analysis		1				Belize, Exp.	2000	0	2000	0	0	0	0	0	0	0		
Biodiversity preservation					0.5	Belize, Exp.	2000	0	0	0	0	1000	0	0	0	500		
Economist																		
Environmental R/C analysis		1		1		Belize, Exp.	2000	0	2000	0	2000	0	0	0	0	0		
Land use planning				1		Belize	300	0	0	0	300	0	0	0	0	0		
Biologist																		
Microbiology			1			Belize, Exp.	2000	0	0	2000	0	0	0	0	0	0		
Statistician																		
Environmental statistics				0.5	1	Belize	300	0	0	0	150	300	0	0	0	0		
Chief																		
General computer training		0.5		0.5		Belize	300	0	150	0	150	0	0	0	0	0		
Director of Impact Assessment, Research and Evaluation																		
Environmental research		1				Abroad	9000	0	9000	0	0	0	0	0	0	0		
Management information systems			1			Belize	300	0	0	300	0	0	0	0	0	0		
Impact Assessment Officer																		
Impact assessment methods	1					Belize, Exp.	300	300	0	0	0	0	0	0	0	0		
Scenic area impact assessment		1				Belize, Exp.	2000	0	2000	0	0	0	0	0	0	0		
Urban area impact assessment			1			Belize	300	0	0	300	0	0	0	0	0	0		
Asst. Impact Assessment Officer																		
Effluent reduction measures				1		Abroad	9000	0	0	0	9000	0	0	0	0	0		
Emissions assessment					1	Abroad	9000	0	0	0	0	9000	0	0	0	0		
Evaluation Officer																		
Environmental eval. methods	1					Belize, Exp.	2000	2000	0	0	0	0	0	0	0	0		
Environmental project design		1				Belize, Exp.	2000	0	2000	0	0	0	0	0	0	0		
Key indicator monitoring					0.5	Belize, Exp.	2000	0	0	0	0	1000	0	0	0	500		

Table 5: Proposed MFE Environmental Division Training Plan and Cost, 1990-1994 (Cont.)

Staff Positions and Training	Number of Person Months Training by Year					Location	Cost per FM 1982	Total Training Costs by Position by Year					Cost per FM 1982	1985 Training Costs by Position by Year				
	1990	1991	1992	1993	1994			1990	1991	1992	1993	1994		1990	1991	1992	1993	1994
Asst. Evaluation Officer																		
Statistician																		
Environmental statistics					0.5	Belize	300	0	0	0	0	150	0	0	0	0	0	
Clerk																		
General computer training			0.5		0.5	Belize	300	0	0	150	0	150	0	0	0	0	0	
Director of Enforcement and Compliance Monitoring																		
Envir. enforcement techniques		1				Belize, Exp.	2000	0	2000	0	0	0	1000	0	1000	0	0	
Management information systems					1	Belize	300	0	0	0	0	300	0	0	0	0	0	
Enforcement Officer																		
Envir. enforcement techniques	1					Belize, Exp.	2000	2000	0	0	0	0	1000	1000	0	0	0	
Reporting requirements				1		Belize, Exp.	2000	0	0	0	2000	0	1000	0	0	1000	0	
Asst. Enforcement Officer																		
Survey techniques		1				Belize, Exp.	2000	0	2000	0	0	0	1000	0	1000	0	0	
Envir. enforcement techniques			1		1	Belize, Exp.	2000	0	0	2000	0	2000	1000	0	0	1000	0	
Standards and Regulations Officer																		
Regulation development	1					Belize, Exp.	2000	2000	0	0	0	0	1000	1000	0	0	0	
Effluent measurement & control		1				Belize, Exp.	2000	0	2000	0	0	0	1000	0	1000	0	0	
Criteria establishment				1		Belize, Exp.	2000	0	0	0	2000	0	1000	0	0	1000	0	
Asst. Standards and Regulations Officer																		
Officer																		
Chemical regulation and use			1			Belize	300	0	0	300	0	0	0	0	0	0	0	
Marine habitat regulations					1	Belize	300	0	0	0	0	300	0	0	0	0	0	
Legal regulatory requirements				0.5		Belize	300	0	0	0	150	0	0	0	0	0	0	
Environmental Technician																		
Measurement techniques			0.5	0.5	0.5	Belize	300	0	0	150	150	150	0	0	0	0	0	
Director of Environmental Protection and Information																		
Environmental protection		0.5				Belize	300	0	150	0	0	0	0	0	0	0	0	
Proposal preparation		0.5				Belize, Exp.	2000	0	1000	0	0	0	1000	0	500	0	0	
Fundraising			0.5			Belize, Exp.	2000	0	0	1000	0	0	1000	0	500	0	0	
Community participation				0.5		Belize	300	0	0	0	150	0	0	0	0	0	0	
Computer Officer																		
Database development and use	1					Belize	300	300	0	0	0	0	0	0	0	0	0	
Cost-fee publishing		1				Belize, Exp.	2000	0	2000	0	0	0	1000	0	1000	0	0	
GIS				1		Belize, Exp.	2000	0	0	0	2000	0	1000	0	0	1000	0	
Management Information Systems Officer																		
Int'l. computer communication			0.5			Belize, Exp.	2000	0	0	1000	0	0	1000	0	0	500	0	
Management information systems					1	Belize	300	0	0	0	0	300	0	0	0	0	0	
Librarian																		
Library computer databases				0.5		Abroad	9000	0	0	0	4500	0	1500	0	0	2250	0	
Clerk																		
General computer training			0.5	0.5		Belize	300	0	0	150	150	0	0	0	0	0	0	

Table 5: Proposed MTE Environmental Division Training Plan and Cost, 1990-1994 (Cont.)

Staff Positions and Training	Number of Person Months Training by Year					Location	Cost per PM IPI	Total Training Costs by Position by Year					Cost per PM IUS	IUS Training Costs by Position by Year					
	1990	1991	1992	1993	1994			1990	1991	1992	1993	1994		1990	1991	1992	1993	1994	
Director of Administration and Finance																			
Administrative management	0.5					Pellize	300	150	0	0	0	0	0	0	0	0	0	0	0
Finance Officer																			
Special financial management	1					Abroad	7000	7000	0	0	0	0	0	0	0	0	0	0	0
Accountant																			
Computerized accounting			1			Pellize	300	0	0	300	0	0	0	0	0	0	0	0	0
Chief																			
General computer training		1				Pellize	300	0	300	0	0	0	0	0	0	0	0	0	0
Stenographer/Secretary																			
General computer training		1.5		0.5		Pellize	300	0	450	0	150	0	0	0	0	0	0	0	0
Total																			
General computer training			0.5			Pellize	300	0	0	150	0	0	0	0	0	0	0	0	0
Subtotal, Short-term training	10	14	11	12	11.5			35700	36000	11000	30000	27600		17500	17500	3000	16700	17000	
Participant training																			
PS, Environmental Science	7	9					8000	7000	72000					4000	36000	36000	0	0	0
MS, Environmental Science	7	9					8000	7000	72000					4000	36000	36000	0	0	0
MS, Environmental Science			9	9			8000			72000	72000		4000	0	0	36000	36000	0	
Subtotal, Long-term training	14	18	9	9	0			15000	14000	72000	72000	0		7200	72000	36000	36000	0	
Total Training Months & Cost by Year	24	32	20	21	11.5			179700	180000	83000	105000	27600		87500	87500	41000	52700	17000	
Total training cost inflated at 5% per year								179700	187053	92160	121720	33100		87500	93975	45100	60900	15600	
Total US Dollar Costs (Uninflated)								179700	187053	92160	121720	33100		87500	93975	45100	60900	15600	

VIII. INTERNATIONAL FUNDING AGENCIES

A. Funding Agencies with Environmental Concerns

Numerous funding agencies are especially interested in the environment. These agencies can be divided into those which would provide support for MTE as a line ministry and those more likely to support BEC or the MTE's publicly chartered foundation--the Belize Environment Foundation.

1. Funding agencies for MTE

Funding or support agencies which would provide assistance to MTE directly are the international financial institutions such as the World Bank, IDB, and CDB; donor agencies including USAID/Belize, ODA, EEC, and the Japanese; volunteer agencies such as Peace Corps and British Volunteers Overseas; international organizations such as UNEP, UNDP, FAO and PAHO. Other funding agencies, such as WWF/Conservation Fund, also would support some MTE activities.

2. Funding agencies for BEC or MTE's Belize Environment Foundation

Agencies more likely to support BEC or the MTE's foundation are World Resources Institute, Kellogg Foundation, The Nature Conservancy; World Wildlife Fund/Conservation Foundation; IUCN; ICBP; RARE; New York Zoological Society; Rockefeller Foundation, Ford Foundation, Rodale Institute; Rockefeller's Brothers Fund; World Commission on Environment and Development; Hewlett Foundation; Joyce Foundation; Mott Foundation; Carnegie Corporation of New York; German Marshall Fund of the US; Alton Jones Foundation; Pathfinder Fund; Pew Charitable Trust; Exxon Foundation; BankAmerica Foundation; Continental Group Foundation, Inc.; New York Times Company Foundation, Inc.

International financial institutions, donor agencies and volunteer agencies also will support BEC and the MTE's foundation directly.

B. Approach to Funding Agencies

Some funding agencies have specific environmental interests. If the interest of a particular funding agency is understood, MTE's approach to that agency can appeal to that interest, thereby making the funding request efficient and, hopefully, more successful.

UN organizations, while not major funding sources, do provide technical environmental expertise through their programs. UN support for Belize environmental efforts should be pursued. For example, UNEP's Action Plan for the Caribbean Environment Programme is designed to assist, among other countries, Belize. UNDP technical assistance and funding can support Belize's environmental program. MTE also should request assistance from CARICOM's standing committee of ministers of the environment and OAS's regional commission on the environment for Central America.

The OAS, to which Belize has recently become an official observer and soon will become a member, can provide some assistance. When Belize is an official member of OAS, subsequent membership in the Inter-American Development Bank will open a brand new window of funding and technical assistance.

The World Bank is highlighting the environment under the leadership of its President, Barber Conable. Now is an ideal time to invite the World Bank team to help MTE identify and appraise an environmental project. Such a project could focus resources on MTE's priority substantive areas and provide substantial training and other help in cross-cutting areas as well.

The IUCN evidently has offered to provide training for the GOB in environmental enforcement and other areas. An invitation for IUCN to lead in developing a proposal for strengthening monitoring, standard setting, and similar areas that would appeal to private foundations and other funding sources should be considered by MTE.

The Nature Conservancy seeks to maintain biodiversity in developing countries via support for key ecosystem reserves. The Conservancy should be asked for funding to establish minimum critical management of specific wildlands or forest preserves in Belize rich in biodiversity that are not now being adequately protected. The Nature Conservancy, through its 10 Conservation Data Centers in Latin America and the Caribbean also can be asked for assistance in conducting Rapid Ecological Assessments for key wildlands analysis.

IBM sometimes provides developing countries with training and equipment. It has been especially interested in the use of computers in developing countries to tap and share information with organizations and individuals in developed countries. IBM should be approached to fund and assist in setting up an international communications system using IBM computers that would link MTE with other countries. This system would be used to obtain and share information aimed at solving Belize's environmental problems.

USAID/Belize is very interested in institutional development in Belize. With Belize's high per capita income, USAID is beginning to move toward a different relationship with Belize. During this transition away from being a direct resource transfer agency, USAID wants to see Belizean institutions mature so they can cope effectively with environmental, agriculture, and other development problems. This is a good time to approach USAID for assistance in strengthening the new MTE. A project along the lines of the one used by USAID for MOA--"Strengthening the Ministry of Agriculture Project"--should be requested by MTE as soon as possible. Part of this project should be to develop a Cabinet approved environmental policy for Belize.

MTE also should approach USAID for help under RENARME to work through its legislative requirements, regulatory development and analysis of the strengths and gaps of Belize's environmental legislation.

US Peace Corps has placed the environment high on its list of priorities. Although Peace Corps volunteers are numerous already in Belize, a

request that Peace Corps provide volunteers with specialized environmental skills to MTE could pay large dividends.

ANNEX 1

Scope of Work

The consultant will:

1. Work closely with authorities of the Ministry of The Environment. This particular Ministry will be considered the leading agency and local coordinator of activities related to this consultancy. The consultant will work with two Belizean counterparts and will meet from time to time with the Permanent Secretary of the Ministry of the Environment during the period of the consultancy.
2. Identify the mission, objectives and areas of responsibility of the Ministry of the Environment.
3. Develop an internal organizational structure for the Ministry of the Environment that reflects the functions of the Ministry and establishes personnel relationships, chain of command and staffing requirements to address assigned responsibilities.
4. Identify the relationships between the Ministry of the Environment and other governmental and non-governmental entities involved with natural resource and environmentally related management activities.
5. Develop a five year plan that estimates the budgeting needs for staffing, equipment and operations as required by the environmental issues established as priorities.
6. Recommend the frame of time of development for the Ministry of the Environment.
7. Develop a tentative training program for the personnel of the Ministry of The Environment.
8. Recommend international funding agencies that could provide support for the work of the Ministry of The Environment.
9. Present a draft document to the Permanent Secretary of the Ministry of The Environment for review.

This Ministry judges that the Consultant should be versed with the wide scope of work done by environment agencies. The individual should be experienced in devising organizational structure and in identifying the mission, infrastructure, areas and levels of responsibility and purpose of a Ministry of The Environment. The consultant should be versed in group dynamics and possess co-ordinating skills.

The key Belizean personnel involved in this project include the following:

Mr. Carlos Perdomo, Permanent Secretary of the Ministry of Environment and Tourism.

Dr. Victor Gonzalez, Managing Director of the Belize Center for Environmental Studies and President of the Belize Audubon Society.

Mr. Wilbert Linares, Acting Principal Public Health Inspector, Ministry of Health.