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ENVIRONMENTAL LAWS AND
ENVIRONMENTAL INSTITUTIONS IN BELIZE
A Background Report for the Belize
Country Environmental Profile

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ENVIRONMENTAL LAWS AND INSTITUTIONS

I. Government Organization.

Since attaining independence on September 21, 1981, Belize has been a constitutional monarchy with The Queen of the British Commonwealth as its titular head of state, represented in Belize by a Governor General, whom the monarch appoints after consultation with the Prime Minister. Even so, since independence, it is the Constitution of Belize which is actually the supreme law of the land. The Governor-General must act in accordance with the advice of the Cabinet in almost all instances. It is only in certain constitutionally prescribed circumstances that the Governor-General may act of his or her own deliberate judgment. For instance, the Governor-General is constitutionally required to appoint as Prime Minister "a member of the House of Representatives who is the leader of the political party which commands the support of the majority of the members of that House." Section 37(2), Belize Constitution. However, if no party controls the House, the Governor-General may appoint the member of the House of Representatives who "appears to him likely to command the support of the majority." Id.

A. THE CABINET

The Cabinet is the principal instrument of policy with direction and control of the government of Belize. It consists of the Prime Minister and such number of Ministers of Government as may be created by the National Assembly to be responsible for any business or department of government. The Ministers are appointed by the Governor-General on the advice of the Prime Minister from among members of the House of Representatives and the Senate, excluding the Speaker of the House and the President of the Senate. It is collectively

responsible to the National Assembly for all things done by or under the authority of any Minister in the execution of his office.

Because the Ministers are appointed on the advice of the Prime Minister, that individual's influence in the policy decisions made by the Cabinet cannot be overstated. The Prime Minister presides at all Cabinet meetings except that in his absence a Minister of his choosing presides. A Minister's tenure of office may be ended by the Governor-General appointing another in his place, again acting in accordance with the advice of the Prime Minister.

B. THE NATIONAL ASSEMBLY

Belize has a bi-cameral legislature, with an elected House of Representatives and an appointed Senate. There are eight Senators, five of whom are appointed by the Governor-General on the advice of the Prime Minister, two on the advice of the leader of the opposition, and one on the advice of the Belize Advisory Council. At present, there is a ninth senator, as the appointed senators elected a non-member as their President. This practice is constitutionally allowed for both President of the Senate and Speaker of the House, but neither is entitled to vote. There are currently eighteen elected representatives, with the non-member Speaker making a total of nineteen. The constitutional maximum number of representatives is twenty-nine with the requirement that each representative be elected by a constituency of at least 2,000 but not more than 3,000 registered voters.

The House is clearly the stronger of the two houses of the National Assembly. All appropriation legislation must originate there, and, although the Senate may originate non-appropriation legislation, the House must concur before

it can become law. Legislation introduced in the House, on the other hand, can be presented to the Governor-General for assent without the Senate's approval if passed by the House in two successive sessions.

The Belize Advisory Council is composed of a minimum of six persons, four or more appointed by the Governor-General on the advice of the Prime Minister after consultation with the leader of the opposition, and at least two appointed on the advice of the Prime Minister with the concurrence of the leader of the opposition. The function of the Council is to advise the Governor-General on the exercise of the royal prerogative of mercy and the removal of judges from the Supreme Court or Court of Appeal. The Belize Advisory Council also acts as an appellate body in disciplinary matters relating to the Public Service.

C. PARTISAN POLITICS IN BELIZE

One factor that could have a significant bearing on the Belizean government as it addresses natural resource conservation and environmental protection issues in the future is the evolution of the young country's political system and the relative strength of its two major parties. The current Prime Minister, George Price, was a founding member of the ruling People's United Party (PUP) in 1950, became leader of that party in 1956, and has been Prime Minister since Belize became self-governing in 1964. Price and the PUP were last returned to power in 1979, winning 13 out of the 18 seats in the House of Representatives. Elections are next scheduled to take place in December 1984.

Price's enormous influence on the entire political sphere in Belize, including the path it took to independence, can hardly be over-estimated. Although he lives an austere

life, is said to be scrupulously honest, and shuns any effort to build up a "cult of personality", Price nevertheless dominates his Party and the agenda of the government. At present, no expansion of the government's commitment to conservation and environmental programs is possible without active support from George Price. By all accounts, Price feels very strongly the need for Belize to preserve, protect and enhance the country's natural resources, particularly its barrier reef. Even with fiscal resources tight, development proceeding slowly, and technical expertise lacking, Price's theological and socialistic approach bode well for the Belizean environment.

Beyond Price, the level of commitment toward balancing development with careful resource management and environmental protection varies within the PUP. The Party is divided at present between two opposing factions: One faction consists of a group of older, old-fashioned, machine-style politicians who tend to be less moralistic and intellectual than Price. The Ministers within this group are regularly accused of corruption, although none has resigned, been brought up on public charges, or been defeated at the polls as a result. It is clear, though, that this group is heavily development oriented, that they profit significantly at least in a political sense from supporting development schemes, and that they frequently funnel pet projects to their districts and responsibility for them to their supporters. This so-called "right-wing", remains in control of the Party machinery and appears less attuned to conservation and environmental concerns.

The other faction of the PUP is significantly younger and better educated. Individually, they tend to share or exceed Price's socialistic and left-leaning foreign policy. The PUP "left wing" tends to be more reflective about Belizean

development and to at least devote rhetorical attention to the need for careful conservation of resources. Although this group lost out in its recent attempt to wrest party leadership away from the right, the PUP "Manifesto for the New and Progressive Revolution" remains more expressive of their philosophy of balanced and socially just development than the philosophy which seems to characterize the right-wing PUP politicians.

The other major political party in Belize, the United Democratic Party (UDP) remains an anomaly, both because it has never held power, and because it has changed leaders twice in recent years. In general, the UDP is dominated by the business community and young professionals. Paradoxically, however, much of its electoral support comes from the poor urban Creole and Carib groups in Belize City. Its manifesto "The New Direction" places much more emphasis on private enterprise and private ownership of resources than does the PUP's. UDP-led government would probably take significant steps to streamline foreign investment machinery and to improve the general business climate. Still, it is not clear how much this would change the government's stance on conservation issues. It is highly unlikely, for example, that a UDP electoral victory would stimulate a stampede of investment, and it is not necessarily the case that the UDP would be more likely to advocate unfettered development in Belize than the PUP.

D. THE MINISTRIES OF GOVERNMENT

There are presently ten ministries in the Belizean government:

MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT

Subjects: Aid Program; Banks and Banking; Belize Independence Secretariat; Caribbean Community (CARICOM); Caribbean Development Bank; Caribbean Investment Corporation; Central Planning Unit, Currency; Culture; Customs and Excise; Development Finance Corporation; Estimates; Estate Duty; Exchange Control (Finance); Hurricane Precautions; Income Tax; Inland Revenue; Insurance; Investments; Loans; Money Lenders; Pensions and Provident Funds; Protocol; Public Stores; Reconstruction and Development Corporation; Salvage and Wrecks; Stamps and Duties; Statistics; Taxation; Tenders; Traveling Allowances; Treasury; Treasury Bills.

MINISTRY OF HOME AFFAIRS AND DEFENSE

Subjects: Aliens; Annual Reports; Broadcasting; Deportation; District Administration; Establishment; Emigration; Fire Arms; Fire Brigade; Fire Inquiries; Friendly Societies; General Election to House of Representatives; Holidays; Information; Immigration; Marriage; Passports; Patents and Designs; Population; Printing; Prisons.

MINISTRY OF LOCAL GOVERNMENT AND SOCIAL SECURITY

Subjects: Cinemas; Clubs; Local Elections; Local Government; Social Security; Town Boundaries.

MINISTRY OF WORKS

Subjects: Bridges; Port Authority; Ports and Harbors; Public Works; Reclamation and Drainage; Roads.

MINISTRY OF NATURAL RESOURCES

Subjects: Agriculture; Animals and Birds; Banana Control Board; Forestry; Geological Survey; Lands and Land Settlement; Land Surveys; Marketing Board; Marketing (Domestic); Minerals, Petroleum; Security of Tenure; Surveys; Veterinary and Animal Health.

MINISTRY OF ENERGY AND COMMUNICATIONS

Subjects: Aerodrome; Belize Electricity Board; Belize Telecommunication Authority; Civil Aviation; Electricity; Meteorology; Post Office; Rural Water Supplies; Sewerage; Stamps; Telephones and Telecommunications; Traffic, Water; Water and Sewerage Authority.

MINISTRY OF HEALTH, HOUSING AND COOPERATIVES

Subjects: Antibiotics; Building Societies; Chemists and Druggists; Cooperatives; Credit Unions; Dentists; Drugs, Fisheries; Town Planning Quarantine.

MINISTRY OF LABOR, SOCIAL SERVICES AND COMMUNITY DEVELOPMENT

Subjects: Children; Community Development; Factories; Juveniles; Labor; Liquor Licensing; Listowels; Boys Training Schools; Lotteries; Princess Royal Youth Hostel; Probation, Public Assistance; Shops; Social Development; Trade Deputies; Trade Unions; Wages Councils; Workmen's Compensation.

ATTORNEY GENERAL'S MINISTRY AND MINISTRY OF EDUCATION AND SPORTS

Subjects: Administration of Estates and Archives; Births and Deaths; Crown Proceedings; Evidence; Education; Law Revision; Legal Affairs; Libraries; Museums; Newspapers; Notaries Public; Public Trustee; Scholarships; Sports; Vocational Training; Youth.

MINISTRY OF TRADE AND INDUSTRY

Subjects: Archaeology; Business Names; Citrus Growers' Association; Commerce and Industry; Companies; Consumer Protection; Contracts; Dangerous Goods; Development Incentives; Investments Unit; Marketing (External); Sugar Control Board; Supplies and Price Control; Tourism; Trade.

As may be seen, there is no single Ministry responsible for environmental regulation and/or conservation in Belize. Indeed, virtually every ministry administers some program which involves environmental regulation and natural resource management. Thus, coordination of the activities of the various ministries is a cumbersome affair, and too often the left hand of the government does not know what the right hand is doing. If it does know, there is rarely an adequate opportunity to evaluate the likely environmental consequences or offer comments or suggestions. As an example, the Ministry of Natural Resources has been known to conduct agricultural development activities involving land alteration without input from the archaeological concerns in the Ministry of Trade and Industry.

Theoretically, each Ministry has a development coordinating committee which reports to the Permanent Secretary. All of the Permanent Secretaries collectively form a Central Coordinating Committee, the function of which is to provide inter-agency coordination of development activities. The Central Coordinating Committee reports, in turn, to the Cabinet Development Committee, which is the final development approval, and which implements national development plans. In practice, however, because the economic development of Belize is paramount to all of the individual Ministries, development projects are often undertaken before the theoretical series of coordinating committees has had an opportunity to run its course. The situation is aggravated by a shortage of qualified government personnel, inadequate funding and enforcement, and conflicts of ideology within and between ministries.

E. QUASI PUBLIC AND PRIVATE INSTITUTIONS

In addition to the governmental institutions, there are a number of quasi public and private institutions which are involved to some degree in the exploitation and conservation of natural resources in Belize. The Belize Marketing Board (BMP) is a statutory body that buys and sells local products such as rice, corn and red kidney beans. It also imports milk. The BMP is best described as a stimulant to Belizean agricultural production, providing a ready market, storage and milling facilities. It also insulates the small producer from world market fluctuations. For example, in 1982 the BMP purchased four million pounds of corn at 12 cents per pound and sold them for 7.5 cents per pound. While as a provider of such subsidies the BMP is a serious economic drain on the government, with less emphasis on commercial operations its role as a market advisor could be invaluable

to small and medium sized producers.

The Belize Sugar Board (BSB) is a statutory body which carries out research and extension services to the sugar industry. While there are presently only four extension officers, the program seems to be adequate - but barely so. Additional duties arising from new regulatory programs (e.g., pesticide controls and use requirements) may change this situation in the future.

The Belizean banana industry is run by the Banana Control Board (BCB), another statutory body. The BCB employs the small farmers, trains them in sound management practices, and centralizes exports to gain economies of scale. Unfortunately the small scale of the industry has recently resulted in negative economies. Again, as with the BMP, the BCB is a substantial economic drain for the government.

The embryonic nature of the Belize Tourist Board (BTB) reflects the state of the industry that it represents. The BTB, presently staffed by about a half a dozen public servants, will have to expand rapidly to keep pace with the likely expansion of the industry in the near future. A comprehensive promotion program should be considered a high priority.

The electric service provided by the Belize Electricity Board (BEB), a government-controlled statutory body, has been characterized as unreliable and expensive. The black-outs which occur in Belize City on virtually a daily basis support this conclusion. Because of poor management and maintenance, the provincial nature of the system, its need for total renovation and its dependence upon foreign sources of fuel,

the BEB is likely to remain a major economic drain on the government. A short-term solution via construction of a transmission line for purchase of Mexican electricity may be imminent.

There has been marked recent improvement in the Belizean telecommunications system, operated domestically by the Belize Telecommunications Authority (BTA). Recent expansion of services and the comparatively good financial performance of BTA are in contrast to most other quasi-public institutions in Belize.

All of these quasi public institutions as well as private institutions, particularly trade organizations, influence the decision-making process in Belize. Most notable among the private sector groups are the cooperatives by which the fishing industry, and to a lesser extent the banana and sugar industries, are organized. In addition to centralizing marketing and export of their respective commodities, these cooperatives have been very effective in influencing governmental policies affecting their industries.

F. INADEQUATE INTER-AGENCY COORDINATION

Without intimating that the economic development of Belize should be slowed in the least, it should be recognized that the existing channels of inter-agency coordination are not sufficient to allow a meaningful consideration of the environmental effects of development activities as part of the process of deciding whether to pursue a given development strategy. The opportunity for such consideration is basic to the orderly development of any system of natural resources. Already, examples of the inadequacy of the current development

assessment process can be found. Recently, development permission was granted for a marina located at a cay adjacent to Belize City, even though the archaeological unit had not had an opportunity to explore the area as a potential Mayan site. In another recent case, a golf course was constructed on a cay, requiring a great deal of filling and grading. Only afterwards was evidence found that the area was the habitat for an unusual marine crocodile colony.

These and similar cases of insufficient consideration of environmental factors appear to be small scale when compared to the environmental devastation that has occurred in other Central American or Caribbean countries. But it is clear that unless the procedures for securing inter-agency comment and review of development activities are streamlined and centralized, it is only a matter of time before some hastily approved project results in unforeseen destruction or waste of natural resources, perhaps in catastrophic dimensions. Rather than an ad hoc process consisting of a series of committee interactions, consideration of potential adverse environmental impacts of all proposed development projects should be the responsibility of a single, highly visible entity within the government. The government may decide to make certain environmental sacrifices in order to accomplish its development objectives, but at the very least it should have an effective process for determining what those trade-offs are.

In addition to contributing to informed decision making, the elimination of the existing multi-tiered coordination process should result in an actual conservation of bureaucratic resources and a time savings to the individual bureaucrats involved. Of course, in order to be effective, any reorganization

of the development assessment process must have that analysis occurring, or at least being endorsed at the highest level of government.

Specifically, one Ministry of government should be responsible for analyzing the environmental effect of all major governmental programs and the results of that analysis should mandatorily be included in the Cabinet consideration of each development project. To ensure that the environmental aspects of proposed projects are fully aired during the decision-making process, one individual (perhaps known as a Chief Environmental Officer) should have the responsibility of presenting an environmental analysis to the Cabinet. An individual is deemed superior to a committee in this regard because of budgetary constraints and the time consumption and scheduling difficulty of convening a committee for each development proposal. The conservation of bureaucratic resources achieved by eliminating some of the duties of the Ministry level development coordinating committees and the Central Coordinating Committee should more than offset the investment of bureaucratic energy by the Chief Environmental Officer.

The Ministry of Natural Resources and the Ministry of Health, Housing and Cooperatives are probably not appropriate agencies for the proposed Chief Environmental Officer. This is due to their historic developmental orientation. To be effective, the Chief Environmental Officer must be free from as much influence as possible. Thus, the Prime Minister's Ministry of Finance and Economic Development seems more appropriate. This may also reduce the chances that the new position will become a political feather for the cap of the Minister who is able to add the office to his portfolio. In

addition, because at least at first the Chief Environmental Officer will be heavily dependent upon foreign expertise, the Prime Minister connection would be doubly advantageous. Development assistance in creating and implementing such a system and technical assistance during the initial period of operation should certainly be forthcoming from international donors.

II. Environmental and Conservation Laws and Programs.

A. CURRENT LEGISLATION

There are presently in place a number of legislative programs which include authority and requirements pertaining to the conservation of natural resources in Belize. The Wildlife Protection Act of 1981 (No. 4 of 1981) is administered by the Ministry of Natural Resources to provide for the conservation, restoration and development of wildlife and for the regulation of its use. The act prohibits the hunting, taking or harassing of some thirty listed animal species and all but six species of birds. Licenses are required to hunt all other species. The act contemplates enforcement by game rangers who are to be appointed by the Minister as members of the public service. Offenses are punishable by fine and repeat offenders are subject to a prison sentence. The act provides for private-sector enforcement through a provision allowing up to half of any fine levied being paid over to any person who supplied information which led to the conviction.

The Ministry of Natural Resources has not yet developed any implementing regulations under this act, although the provisions of the act itself were brought into effect by

Statutory Enactment No. 3 of 1982. The act requires that all regulations made thereunder be brought before the National Assembly and will be subject to a negative resolution thereof.

The National Parks System Act of 1981 (No. 5 of 1981) is administered by the Ministry of Natural Resources to provide for the preservation and protection of highly important natural and cultural features and to regulate the scientific, educational and recreational use of such features. The Minister may order the creation of national parks, nature reserves, wildlife sanctuaries, and natural monuments. The act was brought into effect by Statutory Enactment No. 4 of 1982, and Half Moon Caye was reserved as a natural monument by Statutory Enactment No. 30 of 1982. No other orders have been issued under the authority of the act, nor have any procedural or substantive regulations been adopted.

Each area designated under the act is to be administered by an individual appointed by the Public Service Commission. Enforcement is to be by park officers, and sanctions include removal of improvements, restoration of natural conditions, fines and criminal penalties for repeat offenders. As with the Wildlife Protection Act, private sector enforcement also occurs by virtue of up to half of any fine levied being paid to an individual providing information leading to the conviction.

The Land Utilization Ordinance of 1981 (No. 16 of 1981) governs the use and development of land, provides for the conservation of land and watersheds, and is administered by the Ministry of Natural Resources. The ordinance applies only to lands outside cities and towns and requires that governmental approval be obtained before any parcel of land

is subdivided. In addition, the Minister is empowered to make regulations to designate and protect watersheds, to prevent soil erosion, and control the type of development allowed in designated areas. The Minister is also authorized to annex a fine to the breach of any such regulations. However, regulations implementing this legislation have yet to be adopted.

The Land Tax system is also administered by the Ministry of Natural Resources. The system was overhauled in 1982 to avoid inequities. Land taxes are now based upon the unimproved value of the land to avoid a disincentive to development.

The Ancient Monuments and Antiquity Act of 1981 is administered by the Ministry of Trade and Industry to preserve the Belizean cultural heritage and artifacts of archaeological and historical significance. The act declares that all objects over 100 years old are antiquities and, as such, their ownership is vested in the Crown. Thus, it is not possible to privately own any such item, and for that reason their purchase and sale are declared illegal. Export of antiquities is absolutely proscribed.

Very recently the National Assembly has amended the Public Health Ordinance, giving the Minister of Health authority to make regulations to prevent pollution. The new regulatory authority is "for the prevention of nuisances arising from any offensive matter running out of any manufactory, brewery, slaughterhouse, knacker's yard, butcher's or fishmonger's shop or dunghill into any place." The use of the "nuisance" standard in this amendment is somewhat disconcerting as it classically relates to an impairment of

the use of private land. Pollution knows no such bounds.

The amendment goes on, however, to authorize regulations "for the prevention, control or reduction of pollution or contamination of the air, soil or water caused by an activity or condition resulting in the emission of a pollutant or contaminant into the environment." This seemingly broad grant of authority has been touted as all the authority necessary to resolve all pollution problems in Belize, especially when combined with the new authority for the Minister to levy fines or order closure of any offending entity. However, because the amendment is so broad and general, it is difficult to know precisely what activities are proscribed.

Not until the Minister promulgates extensive regulations detailing the standards and criteria to be enforced under this act will it be known what constitutes pollution. Indications are that the Jamaican pollution control programs are being studied as an appropriate model for such regulations. At the same time, there is a strong reluctance on the part of Belizean bureaucrats to promulgate regulatory programs which are beyond their existing enforcement capabilities. Until some implementation of the public health ordinance occurs it remains to be seen whether it is the panacea that it is perceived to be.

This recent legislation presents a prime example of the largest defect with environmental and conservation legislation in Belize. The intent and raw legislative authority to protect natural resources in Belize are impressive. However, a common feature of the legislative programs is that they remain unimplemented by substantive standards and specific criteria. As such, the potentially awesome conservation

powers remain a shell of what they might be. Each instance of their application remains an incipient rule-making process without the continuity, administrative certainty, and ease of application that could result if the details of these programs were flushed out by rule making and standard setting. The problem is ubiquitous, encompassing the Public Health Code, the Wildlife Protection Act, the National Parks Act, and all other significant environmental programs.

This situation pervades the Development Incentives program as well, which may be the single most significant developmental program in the country. Under this program foreign investors and joint venturers with Belizean citizens may receive development concessions exempting their enterprise from duties on the import of their raw materials and the normal income taxes attendant to their operations. The situation becomes doubly attractive when, as with the United States, the expenses of the operation remain deductible from the taxes paid in the country of origin. Even though this process has been used by numerous developments since its inception, there remain no standards as to what concessions will be granted to what types of developments, and under what conditions. Without such standards, the consideration of each new application is an ad hoc application of the raw legislative program. There is little consistency between developments, resulting in and, in some cases encouraging, administrative caprice. The experience with this program is extensive enough to allow the establishment of published standards and criteria to avoid starting the decision-making process from scratch each time a new development is considered. This would make the process less arbitrary and less time-consuming for the decision-makers whose attention is desperately needed elsewhere.

The establishment of standards and criteria would simplify the application of this and other legislative programs, it would free decision-makers to develop new programs addressing new problems, and the valuable time of the all too few Belizean public service employees would be conserved. Thus, more administrative attention could be directed to enforcement of existing programs. Such enforcement is presently non-existent.

Development Incentives are granted upon application which must disclose information describing the proposed enterprise. Presently, the application requires the disclosure of any "noxious emissions" from the proposed operation, but no other environmental analysis. Without more, it is difficult for the governmental decision-makers to know whether granting a given development incentive will be compatible with the Belizean environment, or whether the economic gains to the Belizean society will be outweighed by concomitant environmental harm. Indeed, interviews with Cabinet members confirm that when considering proposed developments, they feel a certain concern for lack of environmental expertise and information.

It seems, then, that the environmental impact information supplied with an application under the Development Incentives Ordinance should be significantly expanded. In this way, the Belizean government could begin to give meaningful consideration to the environmental effects of proposed developments before the incentives are granted. Moreover, because the ordinance already provides that incentives are revocable at any time that it appears the development is not occurring as described in the application, or that false information was included in the application, a self-enforcing aspect is built into this program. By requiring that recipients

of development incentives conduct periodic monitoring of the environmental effects of their activities and report the same to the Ministry, enforcement of the amended program could be achieved with little or no increase in administrative workload.

There are also a number of laws which regulate the exploitation of various natural resources in Belize. The Crown Lands Ordinance (Chapter 110, 1958) regulates the manner in which private persons can obtain freeholds or leaseholds to lands owned by the government. Interestingly, the ordinance originally allowed alienation of Crown lands to the mean high water mark. Subsequent legislation, however, has revested in the government the title to all lands within one chain (about 66') landward of the mean high water mark, to be held in trust for the people. The ordinance also reserves to the Crown all mineral rights in lands conveyed under it.

The exploitation of the Forests of Belize is regulated by Chapter 115 (1958). This ordinance contains authority for the administrative creation of forest reserves within which logging is strictly controlled by a permit system. Three such reserves were created in the Stann Creek District by Statutory Enactment No. 58 of 1982 (August 14, 1982). The government is entitled to royalties for all lumber taken, and violators of this ordinance are subject to criminal and civil penalties.

The taking of minerals, except petroleum, is regulated by the Minerals Ordinance (Chapter 125, 1958). The government owns all minerals under public lands and minerals are reserved from all future grants. This ordinance provides

for licenses and royalties for the taking of minerals, and proscribes the pollution of any river, stream or water-course, establishing a first-offense fine of \$500 and additional fines of \$25 per day for continuing offenses. There are no pollution-oriented regulations.

The Petroleum Ordinance has been described as one of the most liberal petroleum licensing programs in the world. Again, all petroleum reserves are vested in the government, but twenty-year leases are provided for in the event of a discovery. The ordinance does not protect water from pollution during drilling or production.

The Fisheries of Belize are regulated by the Fisheries Ordinance, Chapter 133 (1958). This law applies to all rivers and territorial waters, precludes the taking of fish by the use of poisons or explosives, and establishes authority to regulate net sizes. The regulatory authority under this ordinance has been implemented to establish seasons for various species, minimum sizes, and precluding commercial fishing within 100 yards of the barrier reef.

There is also a Plant Protection Ordinance in Belize (Chapter 124, 1953). Its main purpose is the prevention and control of plant diseases and pests. The ordinance allows for quarantine of infected nurseries and delegates regulatory authority.

Since obtaining its formal independence from Great Britain, Belize has been sorting out and clarifying its participation in a number of intentional treaties, agreements and conventions. The government is now a party to the Convention on International Trade in Endangered Species of Wild Animals

and Plants and is cooperating at the international level to reduce such trade, particularly of crocodile skins, tortoise shells, manatee meat, and exotic species. As part of its attempt to achieve World Heritage Site status for the barrier reef, Belize has become a party to the Convention Concerning the Protection of World Cultural and Natural Heritage.

B. LEGISLATIVE GAPS AND PROPOSED PROGRAMS

With the flurry of environmental legislative activity in the last two years, there are now few major gaps in the legislative authority to protect the natural resources of Belize. There exist no specific legislative programs dealing with dredge and fill or the protection of wetlands, air pollution, solid waste and hazardous waste. However, due to the lack of major industrial activities in Belize and the relatively small, scattered population, these problems are either non-existent or of isolated local importance at this time. Presumably, the Belizean government will sooner or later have to develop specific legislative programs in these areas as a response to incipient problems.

The Ministry of Natural Resources is presently developing a comprehensive pesticide regulatory program. The regulatory proposals focus on the sale and use of certain types of pesticides and outline procedures for ensuring their safe use. They also provide for testing agricultural plant and meat products to ensure that they do not contain high levels of different pesticides. However, little is said about procedures for spraying and alleviating problems of secondary exposure. While there are no examples of widespread exposure of human populations as a result of careless spraying practices or accidents involving planes or other

pesticide application techniques, the government still is ill-equipped to resolve the impact that aerial pesticide spraying may have on other economic activities. In several instances, for example, drifting spray from sugar cane fields has killed nearby honey bees. The only available response in the past has been for agricultural officials to ask the sugar cane growers to spray from lower altitudes and to inform beekeepers in advance of spraying. Some simple regulations on spraying procedures might alleviate this kind of problem in the future.

While there appear to be few legislative gaps, just the opposite is true of the regulatory programs implementing the Belizean environmental legislation. Because the legislation itself is typically very broad and usually delegates authority for conservation programs to the appropriate Ministry, it is essential to the protection of the Belizean natural resources that these programs be explained and implemented to a great level of specificity. Such has not been the case. The Wildlife Protection Act, the National Parks System Act, the recent anti-pollution amendments to the Public Health Ordinance and the Development Incentives Ordinance all remain broadly-worded legislative programs. When combined with the lack of enforcement personnel, this state of affairs drastically diminishes the effect of a basically sound body of environmental laws.

This situation exists in part because there is sentiment in the Ministries against developing any specific program details without the resources to enforce them. But this puts the regulatory cart before the horse. As more programs are developed it will become apparent that additional enforcement capability is essential to the effectiveness of the

program. The option is to leave the existing legislation unimplemented. As such, they form no rational basis for seeking additional enforcement capability because without standards the only enforcement technique available is discretionary actions taken at the ministerial level. It will not be possible, as the number of instances for the application of the new conservation legislation increases, for the Minister to decide each issue of application. In the future, it will become necessary for an increasing number of decisions to be delegated by Ministers to their public service staffs. The increasing diversity of decision-makers and factual contexts in which decisions must be made will expand the potential that unbridled discretion will be applied differently by different people or in slightly different situations. Only by the adoption of standards and criteria to guide the deliberations of future decision-makers can the arbitrary application of discretion be minimized.

In order to ensure that the standards which are adopted are reasonable and fair, they should be adopted pursuant to standardized procedures with notice and an opportunity to comment provided to those who will be subject to the regulations. Thus, an administrative procedure act should be considered and adopted by the National Assembly to guide the implementation of the newly enacted conservation legislation. In the long run, it will contribute immeasurably to the enforceability of the legislation.

By not implementing legislative conservation programs with regulations and standards, certain "passive" enforcement techniques are neglected. People and institutions are basically law abiding, and if they know what standards apply in particular situations, most will comply of their own accord.

This is particularly true of international investors who would very likely research the standards applicable to their proposed development as part of their planning process. Typically, such persons would prefer to design their projects to comply with environmental requirements rather than risk construction or production delays or future governmental intervention. Conversely, if there are no standards, such people will very likely design their development only for maximum economic benefit.

On the domestic front, passive enforcement of conservation programs may be obtained to some degree simply by involving the regulated community in the process of drafting and adopting the standards. This is another function of an administrative procedure act. Such cooperation would serve an obvious educational function, and the effect of the pride of authorship engendered within the regulated community should not be discounted. For example, a large number of sugar cane growers might be expected to passively comply with aerial spraying procedures which they feel they have authored.

The reliance on passive enforcement mechanisms in regulatory programs is particularly important in Belize where the smallness of the population sets an absolute size on the governmental bureaucracy. There is no question that for the foreseeable future, the government is going to have to rely extensively on private and non-governmental bodies -- businesses, cooperatives, quasi-governmental boards, international organizations, and local citizen groups -- to police their own activities and those of other organizations. The use of incentives for private policing in the Wildlife Protection Act and the National Park Systems Act indicates a governmental awareness of this fact and should be expanded

in other legislative programs.

Another area where there is a need for clearer standards relating to the environment and environmental assessment is in the foreign investment process. The Belizean government has been more and more actively pursuing private foreign investors to undertake capital investment and productive ventures through a variety of incentives and policies. Its general goal is to attract foreign investments that: help the country to diversify its economic base; increase exports and therefore foreign exchange earnings; utilize indigenous raw materials; create their own means of financing; result in the inflow of technological, managerial and technical resources not otherwise available in Belize; and provide for the gradual transfer of both skills and control to Belizeans. Top priority is on investments in agricultural and livestock projects and agro-industries, with the government also encouraging investments in forest products processing, tourism, light manufacturing industries, aquaculture, mining and mineral exploration, handicrafts, deep sea fishing and processing, and off-shore assembly plants for garments, electrical components, and other goods. Domestic transportation services, commercial merchandising, beekeeping, barrier reef fishing, sugar cane cultivation, and restaurants and bars are the most significant examples of industries generally regarded as reserved for domestic entrepreneurs.

Although the government does not have good statistics on the amounts, sectoral breakdown, and country of origin for foreign investments, the industries most clearly dominated by foreign investors are manufacturing, sugar and citrus processing, banking, insurance, tourism, mineral exploration, and cattle ranching. The single largest foreign investment

is held by a subsidiary of the British company of Tate and Lyle, Belize Sugar Industries, but this subsidiary has been in financial trouble and the British parent is threatening to close at least one of its two processing plants unless the government buys or bails it out. Not many large, widely-known U.S. companies have an investment stake in Belize, but U.S. investors still control a large percentage of all foreign investment in Belize as a result of investments by many businessmen or small companies, particularly in tourism and livestock.

The government of Belize offers tax holidays of up to 15 years, exemption from some import duties, liberal repatriation, and various other incentives to potential foreign investors. In order to receive these benefits, however, each individual foreign investment project must be granted a Development Concession under the Development Incentives Ordinance of 1960 and 1973. It is during this process that the investor discloses to the government the financial details of the proposed project, the number of jobs it is expected to create, and information on numerous other aspects of the operation. As part of this application, the investor is required to declare whether any noxious effluent will ensue from the operation, and whether plans and fiscal resources have been developed to provide for its disposal.

The government has long claimed that the entire development concession process should only take 60 days, but many potential investors have complained that the lack of clear procedures and the need to consult with many Ministries has led to a much longer and highly uncertain sequence. In order to deal with this criticism, the government has been reorganizing and streamlining the process, getting the Develop-

ment Finance Corporation (a statutory body) to be more actively involved in assisting the prospective investor and creating a Cabinet-level Investment Task Force Committee that incorporates the comments of all Ministries at once.

While the government does express concern about the potential environmental impacts of foreign investment projects, and reserves the right to attach environmental controls as a condition for the Development Concession, it has no process nor any technical capability to undertake a systematic environmental review of proposed projects to evaluate the claims of a foreign investor about impacts or effluents, or to challenge the proposed pollution control or other environmental protection measures proposed by the investor. It does, to some extent, draw on the technical expertise of various international groups when a large project is proposed, as discussed elsewhere in this chapter.

A review of recent Development Orders issued to foreign investors by the government indicates that the terms and conditions under which the development may proceed tend to be general and vague. Only occasionally do they mention environmental issues, and usually this is in a blanket statement that the project will not result in external pollution or environmental damage. There is not a systematic process for adding a pollution or environmental protection rider to development concessions.

There is a possibility that the government has already overlooked potential pollution and environmental problems associated with foreign investments, even though it does not appear to have the intention of letting environmental abuse become another investment incentive. However, it is

fair to say that this is not presently a widespread problem in Belize because the number of development concessions granted to new foreign investors has been relatively small -- for example, a total of 5 between September 1981 and August 1982, of which only one was for a new enterprise. The real problem is that the informal, arbitrary and non-standardized procedures for evaluating potential environmental impacts when granting Development Concessions will not be sufficient when Belize experiences a surge of foreign investment in the future. This is important because the smallness of enterprises operating only for the domestic market, the dearth of local capital for projects and the still low population density of Belize mean that the biggest potential for rapid environmental deterioration during the country's development will come from projects that depend on foreign capital.

III. Barriers to Effective Implementation of Environmental Programs.

A. JURISDICTIONAL CONFLICTS

Although Belize has been self-governing since 1964, the division of responsibilities between different Ministries has fluctuated in recent years and continues to be vague, overlapping or underlapping in a number of instances. This uncertainty affects the degree to which the government can deal with natural resource management and environmental problems in many ways. The Fisheries Unit, for example, has suffered from the fact that it has been shifted in recent years from the old Ministry of Agriculture to the Ministry of Trade and Industry and finally to its present home in the Ministry of Health, Housing and Cooperatives. In each in-

stance, the reassignments were apparently little related to a consideration of where in the government the department best fit. In one instance, jurisdiction over Fisheries was shifted along with a particular Minister who was taking up a new post who had a special concern for Fisheries management. When this Minister left government, the unit moved to Health, in part on grounds that the fishing industry is largely organized through cooperatives. But even more important was the political battle among Ministers about the relative size of their portfolios, in which Fisheries became the "booty".

The Fisheries Unit is presently under the Cooperatives Department of the Ministry in spite of the fact that one of its essential regulatory functions is to stop overfishing by barrier reef fishermen. Moreover, in part because of its close affiliation with cooperatives, which are oriented primarily to reef fishing, the Unit is apparently not sufficiently supporting efforts to induce fishing cooperatives to become more oriented toward deep sea fishing.

There is general agreement that Fisheries should be elevated to Department status and organized alongside Agriculture and Forestry in the Ministry of Natural Resources. Yet, there is little sentiment within that Ministry for taking on new jurisdiction, since the Minister, the Permanent Secretary, and the other departments are already overwhelmed with their existing responsibilities.

In some instances, the lines of authority between Ministries are poorly drawn, leading to duplication of effort and poorly coordinated government provision of services. For example, three different Ministries are active in sponsoring rural water supply programs -- the Ministry of Natural

Resources, in conjunction with its efforts to secure water for irrigation and livestock development also provides drinking water in some areas; the Water and Sewerage Authority (WASA) of the Ministry of Energy and Communications is constructing hand pump wells and provides rudimentary water supply systems to areas in the Stann Creek and Mayo Districts; and the Ministry of Health is providing for hand pump wells in the Corozal, Orange Walk, and Belize Districts through the Public Health Service in the Medical Department.

Although the WASA and Public Health Service projects supposedly conduct physical and chemical testing of wells, only Public Health has any program to educate people and encourage community participation to preserve the purity of the water source, and this function is hampered by shortages of trained health personnel. At the least, the consolidation of these programs would make it easier to integrate them with efforts to inform local people about environmental and sanitation problems and the need to protect their new water supplies from indiscriminate disposal of excreta and other waste.

One of the clearest jurisdictional problems from a conservation perspective is the matter of regulating activities on or near the barrier reef. Almost every government ministry either has some jurisdiction over the reef or sponsors programs and projects that could adversely affect the reef in the future. Yet, no one ministry actually has responsibility for directly safeguarding the reef or for advocating its protection in the face of proposals that may threaten it. There is no question that in the long term Belize should probably have a separate regulatory authority to oversee and coordinate activities on the reef; it may be

in the short term that oversight responsibility for the reef should fall under the aegis of a Chief Environmental Officer. If the reef is designated a World Heritage Site, substantial amounts of international technical and financial assistance should enable the Belize government to operate a separate self-authority.

In several instances, there are significant conflicts between the environmental and conservation responsibilities assigned to a particular ministry and its other primary responsibilities. The Ministry of Natural Resources, with jurisdiction over both Agriculture and Forestry, is primarily a development-oriented agency. In accordance with the declared policies of the government, its primary objective is to act as a catalyst for private sector development of agricultural and forestry resources. It continues to make land available for Belizeans and foreigners to develop for productive use; it is seeking to maximize Belizean self-sufficiency in foodstuffs; and it is straining to reverse the general decline in forest production that has continued for a number of years. At the same time, the Ministry is charged with controlling haphazard clearing and removing of vegetation, overseeing soil and water conservation efforts, halting cultivating of steep slopes; planning a program for national parks, protecting wildlife; and ensuring that forest development programs have protection of watersheds as one of their goals.

Of course, these goals, especially in the long term, need not conflict. In fact, the 1980-1983 Economic Development Plan for Agriculture stated that one major problem is that poor husbandry is in many cases limiting and driving up the costs of production. To the extent that the Ministry succeeds in its intention to increase the value of agricultural

and timber products by processing them as far as possible within Belize before exporting them, some of the pressures to maximize current production output of raw materials may be lessened and therefore better resource management techniques may be employed. Nevertheless officials in both the Departments of Agriculture and Forestry readily admit that they have virtually no time, no budgets, and no manpower to ensure that long-term resource management strategies are being implemented along with the development projects within their sectors.

Problems may also arise from the fact that pollution control responsibilities are vested within the Ministry of Health, Housing and Cooperatives. In many countries, including the United States and Great Britain, early responsibilities for controlling pollution were delegated to health ministries or agencies, in large measure on grounds that concern about pollution should be focused on public health ramifications rather than concern for aesthetics. This is presently the case in Belize, where the major catalyst for pollution control regulations has been the health implications of cyanide discharge from a nail factory. Yet, even before pollution standards are adopted to implement newly passed legislation, it is apparent that the Ministry of Health will have difficulty meeting its anti-pollution responsibilities.

This is so because an overwhelming amount of the Ministry's budget necessarily goes toward rudimentary health concerns, particularly eradication of malaria. The Ministry's anti-malaria campaign has intensified as a result of an upsurge of reported cases -- about 3,000 cases were treated in Belize in 1982 as opposed to 1,600 in 1980, and 2,075 in 1981. Thus, for 1982, \$337,000, more than half of the

Public Health Services' share of the Ministry of Health budget, went to support the fight against malaria. Since it is not likely that the Ministry's budget or manpower will be substantially increased with the new pollution regulations, it is probable that the regulations will primarily be used on an emergency basis -- to give the Ministry the statutory capability to clamp down when pollution reaches crisis proportions, as in the case of the nail factory. Little ongoing enforcement or preventive action will occur.

A second major problem is that the Health Ministry is ill-situated to resolve clashes between different economic interests that frequently arise even when pollution is not causing direct public health threats. This could be particularly problematical as Belize expands its natural resource processing plants. Basic food processing industries are often the single largest contributor to water pollution in developing countries, but the problems created may not directly threaten public health. The increased oxygen demand in local waters can, however, seriously undermine downstream fishing industries.

Another related problem is that the implementation and enforcement of the new pollution regulations will be the responsibility of public servants serving under the Chief Medical Officer in the Public Health Service. While their professional training may be quite adequate for assessing the health consequences of pollution problems, they will probably have little or no expertise in assessing the causes and necessary technical solutions to the problems.

B. THE PUBLIC SERVICE AND IMPLEMENTATION

The same scale constraints that make it difficult for Belizean industries to prosper without a heavy export emphasis, and render the provision of basic infrastructure within the country an extremely expensive undertaking on a per-capita basis, also hinder the development of a well-staffed and effective public service in Belize. A country of 150,000 people without large infusions of money from oil or other salable commodities or services, has a very difficult time generating a revenue base broad enough to support a bureaucracy that can do much more than provide the essential public services such as keeping peace, securing national boundaries, conducting foreign affairs, safeguarding public health, and providing the basic fiscal and physical infrastructure necessary for the economy to operate. The building of a highly specialized bureaucracy to carry out broad social and regulatory programs is going to be a very long-term process for Belize.

Still, the country did inherit a reasonably well-trained and experienced core of civil servants from its colonial days, and there is general consensus that at the upper levels Belizean public servants are highly professional and hard working. The Permanent Secretaries for the government ministries tend to rotate to different ministries, but aside from personality clashes with elected Ministers, have generally not been subject to charges of incompetence, sloth or graft since independence.

The major problem in the public service, then, is not so much a lack of talent or leadership at the top; it is lack of depth. Beneath a limited number of senior and middle-

level officials in each Ministry there are very few trained public servants to administer, implement and enforce the programs and regulations sent down from the top, or to aid in the development of new programs.

The Belizean public service has a great deal of difficulty in attracting young, well-trained talent. Whereas it used to be that an individual who joined the government service might look forward to advancing to other posts within the British Commonwealth system, now the prospects are limited to Belize. Large numbers of students who go abroad to receive training that would qualify them to enter the public service do not return to Belize to do so.

But the problem is compounded by the severe fiscal constraints placed on public spending because of the economic situation in Belize. Virtually no new positions within the bureaucracy have been created recently, and this situation is not likely to change in the near future. At first glance, this moratorium may not seem problematical, since in sheer numbers the bureaucracy grew rather fast in the 1970s from about 2,800 civil servant posts in 1976 to a little over 4,000 or about 10 per cent of the Belizean work force by 1982. But these numbers do not reflect any major increases in highly skilled bureaucrats or technical capability within the public service. Indeed, an as yet unreleased government report laments the fact that "bureaucratic sprawl" in recent years has not really deepened the government's ability to carry out its programs. There is, in short, a high degree of under-employment within the bureaucracy at the middle and lower levels, where few employees are skilled or knowledgeable about government programs.

Consequently, the problems at the service delivery level of the Belize government parallel the problems encountered within bureaucracies in many developing countries. The Governor-General of Belize characterized some of these problems harshly in a 1982 speech to the Public Services Union:

Too many public officers consistently leave their duties undone during working hours, while they engage in extended conversations, galavanting and even drinking with friends in other offices, in bars and private homes. Many are in the habit of reading comics, novels and magazines and even garbage openly during office hours. Others indulge in unauthorized absences ... Wilful and malicious on co-workers are a way of life among certain officers.

The combination of a shortage of adequately trained public servants beneath the upper levels, a no-growth situation within the bureaucracy, and the general inefficiency of the lower echelons within government service has profound implications for every Ministry mentioned in this report that has responsibility for natural resource management and environmental protection programs. Permanent Secretaries, department heads, and a handful of officers under them are totally overwhelmed merely in overseeing the provision of the most basic services that the ministry is required to perform. In every case, the list of duties for key officers far exceeds any reasonable expectations. In most cases, this means that secondary activities are given only perfunctory attention or

dealt with on a crisis intervention or rotating basis. A good example is found by looking at the responsibilities of the public health inspectors, as shown in the accompanying illustration. In such circumstances, it is highly unlikely that the country's eleven public health inspectors are really going to be able to ensure that the recently adopted pollution control legislation will be effectively implemented.

Thus, while legislation dealing with wildlife, pollution, land use, fishery conservation, and other natural resource matters have been expanded recently, there has been virtually no expansion of governmental personnel with the capabilities to see that these are implemented or enforced. The problem of enforcement capability redounds throughout the entire government. At present, the Belize government relies heavily upon resident lighthouse keepers for enforcement of fishing restrictions in the reef and cay areas. This is problematical both because the lighthouse keepers tend to be friendly with local fishermen, and because they are spread so thin. In the vicinity of Half Moon Caye, for example, the recently declared natural monument, there is only one lighthouse keeper who acts as a warden. Since the Caye is nearly 50 miles offshore, its protection rests largely on voluntary compliance and whatever protective actions can be taken by the Belizean Audubon Society and other private groups.

In the Agriculture Department, government extension officers have a list of responsibilities at least as long as the public health inspectors. Most important among these are the provision of technical and educational services to expand production and the detection of troublesome plant disease. These same officers are charged with administering the permit system for burning, which is supposed to be issued

after inspection to ensure that a proper buffer area has been cleared. However, department officials readily admit that the extension officers are spread so thin that they cannot possibly inspect every burn site before issuing permits. It appears that on-site inspection is relegated to problem areas and to landowners with a past record of recklessness.

C. FISCAL CONSTRAINTS IN THE PUBLIC SECTOR

The 1983/84 operating budget for Belize's Ministries was about \$176 million (Belizean), divided up as follows:

Energy and Communications	B\$ 35.6 M
Natural Resources	33.8
Public Works	26.4
Health, Housing and Cooperatives	22.6
Attorney General/Education and Sports	21.6
Defense and Home Affairs	18.0
Prime Minister/Finance and Foreign Affairs	10.0
Industry and Trade	4.7
Labor, Social Services & Community Affairs	2.3
Local Government and Social Security	1.4
	<hr/>
	B\$176.4 M

Recently, at the behest of the Central Bank, Belize has been keeping a tight rein on increases in government spending. Consequently, the operating budget of most of the Ministries has grown only to cover wage increases. Budgetary expansions for new personnel for new or existing programs, or for the purchase of more equipment, goods and services to facilitate the work of the government, have been rare. This stark fiscal reality must temper any analysis of the government's ability to implement and enforce the recently adopted laws and regulations designed to protect natural resources and the country's environment.

A clear break-down of how much of the total budget now goes into implementing and carrying out these legislative and administrative regulations is not possible. It is clear, however, that the amounts are very low in percentage terms. The Ministries charged with administering all the regulations described in the previous section account for about B\$70 million of the total budget. Obviously, the vast majority of this must go to support the primary responsibilities of these Ministries. The government estimates that about 45 per cent of its budget goes to pay the wages of the 4,000 public service employees, with another 30 per cent going for goods and services. At present, there do not appear to be any major government officials whose entire time is allocated solely to administering conservation or environmental protection programs. Nor is there any record of large expenditures for goods or services (such as monitoring equipment or consulting contracts) to carry out conservation or environmental protection programs. This means that the expenditures being made are mostly piecemeal -- small portions of the time allotments of various personnel such as public health

inspectors, agricultural extension agents, fisheries wardens or forestry agents. The expenditures are quite small, coming out of existing salary commitments, not through the budgeting of new positions.

Two conclusions are apparent: (1) most public servants responsible for implementing and enforcing environmental protection and conservation regulations are already extremely busy and have other, higher priority tasks to perform; and (2) it is going to be difficult for the government to aggregate the many small pieces of staff time that now constitute its bureaucratic commitment to conservation and environmental protection. The creation of an environmental unit or department somewhere within the bureaucracy, with omnibus responsibilities that already exist but are now scattered within the government, would require a new budget line and this is not likely to occur at this time. One means of reducing this constraint might be for the government to designate at least one representative, a Chief Environmental Officer, to oversee the implementation of disparate environmental programs and to draw systematically on expertise and resources available within other ministries and from abroad. Such a possibility is discussed elsewhere in this chapter.

The Belize government has made a start in this direction, paying the salary for a retired government official, James Waight, to serve as liaison officer to the AID country environmental profile team. In addition, the Ministry of Natural Resources has agreed to allocate 50 per cent of the time of one forestry official to work on the Belize conservation strategy with IUCN.

Because of the tight fiscal situation that has prevailed in recent years, the government's ability to finance public-sector capital investments from domestic resources has also been severely limited. While the government receives no external funds to meet its current operating budget, the vast majority of its capital investment funds are generated by transfers from abroad. In fact, the country's capital expenditure budget for 1982-83 totaled about B\$105 million, and B\$87 million of this came from external support. Every large public-sector capital project currently underway or proposed by the Belizean government is or will be dependent upon foreign funds, with domestic contributions primarily being only a token of the government's commitment to the project. A recent report sponsored by the Pan American Health Organization and the U.S. AID commented that "Belize's capital development plan is essentially a shopping list for foreign assistance."

Most of these projects go to the provision of basic infrastructure -- roads, water supplies, sewerage systems, public health facilities, housing, and power generation -- or to rural development, agricultural development, and educational projects. Some of the major capital investment projects that have significant bearing for future environmental quality or natural resource use in Belize are described later in this section under the activities of international organizations. It is enough to point out here that influx of foreign support for capital investment programs gives Belize more flexibility to expand capital investments for conservation and environmental protection than to expand the bureaucracy's capability to staff, regulate and implement environmental programs.

In essence, the Belize government may be able to encourage foreign development assistance agencies and private organizations to contribute more capital investment funds by systematically identifying conservation and environmental projects to add to its "wish list" of development projects. Clearly, one major advantage of designating a Chief Environmental Officer and vesting the authority of his office within the Ministry of Finance and Economic Development is that this officer could work actively with foreign donors to design projects that help an understaffed, fiscally strapped government meet its conservation and environmental protection needs. This is particularly true because many of the foreign-assisted capital investment projects being carried out or considered in Belize already seek to enhance the quality or productivity of natural resources (water supply, timber management, road building, etc.).

D. CULTURAL AND LIFESTYLE CONSTRAINTS

In Belize there remains a very low ratio of man to land. Therefore, it is likely that the most significant short-term, potentially large-scale disruptions to face Belize in coming years would be those associated with big development schemes in tourism, agriculture, fishing, industry or public works, all capitalized from international transfers of wealth rather than from domestic sources. Yet, if a government is willing, large-scale development projects are highly susceptible to prior evaluation and regulatory measures to prevent, reduce, or rectify adverse environmental consequences. Few potential private foreign investors, for example, are likely to be deterred in their desire to undertake a project in Belize if they are asked to comply with

clear, concise, and standardized regulations and procedures similar to those covering development projects in other countries. In addition, international development assistance agencies are, to a varying extent, intent on helping a developing country evaluate the potential adverse environmental consequences of large projects, and providing technical expertise, equipment and money for reducing these consequences.

From a regulatory perspective, then, the most intractable problems in Belize may actually be those that are created by the cumulative consequences of a large number of individual activities. If the environmental repercussions of overfishing on the coral reef, slash and burn agriculture, and urban living habits do intensify to crisis or near-crisis proportions in the future, the fundamental changes in people's lifestyles and productive habits that will be required will not be easily accomplished through legislation or government fiat.

For example, the legal means presently exist for the government to reduce the incidence of slashing and burning should population pressures, soil erosion, and declining soil fertility converge to create a national problem in the future. Already the Agriculture Department requires a permit to burn vegetation, so it could presumably seek to induce cultivators to work the land on a more permanent basis by controlling the frequency of issuance of such permits to individual cultivators. It is not clear whether such a regulatory approach would be sufficient, however, since what really needs to be changed is a whole cultural system and economic mode of subsistence. Similarly, it is unlikely that the government will be able to reduce the serious and growing problems with the haphazard dumping of human and

solid wastes in and around Belize City by regulatory initiatives. Long-term education, as well as significant capital expenditures on waste disposal infrastructure, will be necessary to alter the time-honored patterns of behavior by numerous individuals conducting their normal business, which cumulate into serious municipal water and land pollution problems.

E. FOREIGN AFFAIRS

There are several important issues related to Belize's foreign relations that could affect the government's ability to implement, administer and enforce its environmental laws and programs. One issue that could become nettlesome in Belizean relations with the United States, for example, is that of drug smuggling. Marijuana has become a major, if unquantified export from Belize to the United States, and there are also growing indications that the country has become a convenient stop-over point for other drugs being shipped from South America to the United States. U.S. officials have expressed concern over this fact.

Although there is no evidence of Belize government complicity in this trade, it is clear that the government's lack of enforcement capability to stop drug production and trans-shipment is a reason for Belize's growing drug trade with the United States. Within Belize, there appears little will or capacity to reduce marijuana cultivation or sale by Belizeans, and an increasing number of people are earning their livelihood in these pursuits. At the same time, the Belize government has, according to U.S. drug enforcement officials, been among the most cooperative in supporting U.S. efforts to reduce trafficking by U.S. citizens and

working with the U.S. to identify and spray with paraquat large marijuana fields.

Another potentially large foreign relations issue is that illegal fishing by boats from Guatemala and Honduras is exacerbating the problem of controlling overfishing along Belize's barrier reef. At present, Belize does not have nearly enough coast guard manpower and equipment to halt these foreign "invasions", particularly in the area of the southernmost and easternmost cays. Besides, if it were to begin to take major steps to eliminate this poaching, the international repercussions could even lead to armed conflict, since the question of fishing rights off the southern Belizean coast is only part of a territorial dispute between Belize and Guatemala that continues to threaten the country's security and sovereignty.

Although Belize commenced full internal self-government by Great Britain in 1964, its final independence was delayed until 1981 because of a claim by Guatemala to Belizean territory. Even today Guatemala claims Belize based on a 1859 treaty with the United Kingdom delineating the border between the colony of Belize and Guatemala in which Britain agreed to help Guatemala to build a road between Guatemala City and the Atlantic Coast. In 1940, Guatemala repudiated the 1859 treaty on the grounds that the road had never been built, and renewed its ancient claim to Belizean territory. Later, in 1945, the territorial claim was incorporated into the Guatemalan Constitution.

In the early 1960s, when the planning for eventual Belizean independence began, Guatemala stepped up its attempts

to subsume Belize into its national boundaries. During the 1960s and 1970s, efforts were made to resolve the dispute, with the United Nations, the United States, Mexico, and several other bodies all mediating at one time or another. Guatemala threatened military invasions on a number of occasions to deter Britain from granting independence. Although Great Britain and the United States were at several points content with proposals that would have either ceded some Belizean territory to Guatemala or would have made Belize a virtual Guatemalan colony, the Belizean government has consistently rejected any suggestion that independence or its territorial borders were negotiable.

Only in 1981, under increasing isolation and direction by an overwhelming vote in the United Nations, did Guatemala indicate a willingness to drop its demand for cession of Belizean land. Great Britain and Guatemala finally agreed to recognize the independence, sovereignty and territorial integrity of Belize, and initialed, with Belize, a document containing "Heads of Agreement" for future negotiations between Belize and Guatemala. The Heads of Agreement include provisions by Belize of territorial seas and sea bed rights to ensure Guatemala's unimpeded access to the high seas; use by Guatemala of the Ranguana and Sapodilla Cayes; free port facilities for Guatemala in Belize City and Punta Gorda; road improvements from the Guatemalan frontiers to Belize City and Punta Gorda; the facilitation of oil pipelines between eastern Guatemala and Belizean ports; an agreement covering pollution, navigation and fishing along the Belizean-Guatemalan marine border; and later, a series of mutually beneficial development projects to be identified. However, strong public opposition, catalyzed by the opposition UDP

and followed by several days of rioting in Belize City, prompted the Price government to back down on its outright acceptance of the Heads of Agreement. Since that time, Guatemala has renewed, but has not seriously pressed its claim for Toledo, Belize's southernmost district. It is unclear whether future negotiations will begin with this claim or with the Heads of Agreement. The official position of the Price government in 1983 remains that the Heads of Agreement is still the basis for a negotiated settlement of the dispute.

A number of subjects addressed by the Heads of Agreement have significant implications for virtually every environmental issue addressed in this report. Most significant is the question of Guatemalan access to the open sea. As a colony of Great Britain, Belize only claimed a three-mile territorial sea limit, which gave Guatemala a corridor of access to the high seas from its Caribbean coast. However, with independence and under the existing law of the sea, Belize claims 12 miles of territorial seas, which effectively landlocks Guatemala between Honduras and Belizean territorial waters. To reduce Guatemalan insecurity over this situation, the Price government agreed in the Heads of Agreement to assure Guatemala a claim to territorial seas. The Guatemalan territorial claim to Toledo is another means of satisfying the territorial seas issue, since the additional land territory would provide open sea access even if Honduras and what remained of Belize claimed their entire 12-mile territorial sea entitlement.

IV. Non-Governmental and International Organizations.

A. DOMESTIC PRIVATE GROUPS

Belize does not have a large number of domestic private voluntary organizations or civic groups which are active in providing social services or organizing support for social causes. This is particularly true in the areas of conservation and environmental protection. Although nascent civic groups are cropping up in some urban areas to address environmental health concerns, such as one in San Pedro which has sponsored a campaign to drain mosquito-infested swamps and to vaccinate local dogs, environmental activism has not infected the mass of people in Belize.

One domestic private voluntary organization, however, the Belize Audubon Society, has been a major force in inducing the government to pass new conservation legislation, in running several conservation projects with its own resources, and in calling international attention to conservation issues in Belize. The Audubon Society, which currently has about 150 members, maintains close ties with key government officials, particularly Prime Minister Price, and therefore has enjoyed significant access and influence within policy-making circles.

B. INTERNATIONAL CONSERVATION ORGANIZATIONS

For a small country, Belize has a large contingent of non-governmental groups from abroad whose programs are either directed to enhance conservation or have a significant conservation component. A number of conservation-oriented groups have assisted the Belize Audubon Society in its efforts to protect

Half Moon Caye, including IUCN, World Wildlife Fund, the New York Zoological Society, the U.S. National Audubon Society, RARE, the U.S. Nature Conservancy, CATIE, The International Council for Bird Protection, and the Fauna Preservation Society. A small trust fund, administered at WWF (Wild Wings) has also provided support for one member of the Belize Audubon Society to work toward a designation of the Crooked Tree Lagoon area as a protected area for migratory birds.

Some of these groups, notably IUCN, NYZS and CATIE, have played a broader role in furthering conservation causes in Belize. The NYZS recently completed a study assessing the barrier reef ecosystem, has provided orienting and explanatory signs for use on and around Half Moon Caye, is carrying out a major study of jaguar in the Maya Mountains, and is working with Belize Audubon to promote the designation of the Coxcomb Basin area as a reserve for jaguars, and the setting up of a Bladen Branch nature reserve area.

In 1981, representatives of NYZS, (Archie Carr III), CATIE (Craig MacFarland), and Belize Audubon (Dora Weyer) initiated efforts to encourage the Belize government to request (a) that UNESCO designate the barrier reef a World Heritage Site under the Convention Concerning the Protection of World Cultural and Natural Heritage; and (b) that the IUCN assist Belize in preparing a National Conservation Strategy. It appears now that both of the important goals will be realized. Although there was some initial confusion as to whether Belize was a signatory of the Heritage Convention, the reef is now a candidate for world heritage status, a designation that would make available international heritage funds for Belizean management of the barrier reef.

The Belize government has requested assistance from IUCN for the preparation of its country conservation strategy, and IUCN has responded by hosting several meetings and preparing a report outlining a "pragmatic" approach for the development of the strategy. Support for IUCN's efforts has come from UNEP, U.S. AID, and the World Wildlife Fund. The Ministry of Natural Resources has also allotted one half-time middle-level Forestry Department official to work on the strategy, which is due for completion in 1985.

In conjunction with a December 1982 meeting between an IUCN team of experts and Belizean government officials, an ad hoc government environmental coordinating committee was established, to be chaired by the Forestry official, and to act as a liaison to the different ministries in the preparation of the country strategy. Although IUCN considers this ad hoc committee an ongoing entity and has advocated that it be established as a permanent institution by Cabinet decree or legislation, officials within the Ministry of Nature Resources have expressed the sentiment that the committee only existed for the December 1982 meetings. At any rate, in order to succeed, the country strategy is going to have to maintain support and be periodically endorsed from higher levels of government than that at which this Committee operates. Two steps are important:

First, there is a need to designate a governmental liaison who can interact at the ministerial level to catalyze support for the strategy; delegation of a middle-level forestry official for staff work is not sufficient because this individual does not have high enough status and access to open doors and make things happen throughout the government. The degree

to which someone of such high status may contribute to the preparation of the strategy is illustrated by the contribution made to the AID country environmental profile by the highly respected governmental liaison, Mr. James Waight.

Second, as IUCN has already recognized, the Belize government may need outside personnel assistance to compensate for any Belize public officials who work on the strategy in lieu of their other duties. Thus, cooperative efforts with U.S. AID, the Peace Corps, and various other NGOs will be necessary to ensure that already strained governmental program implementation and enforcement effort are not further hampered because the government lends its support to the preparation of a country conservation strategy.

A number of foreign institutions have participated in or sponsored research in Belize that relates to wildlife and natural resources. WWF has sponsored a study of crocodiles, for example, and the NYZS is conducting a long-term study of jaguars in their native habitats. The Smithsonian Institute has an ongoing research program in Belize, maintaining a small research station it rents on Carrie Bow Caye. The over-all Smithsonian project focuses on investigating marine shallow-water ecosystems, and it geared to generating primary academic research results rather than providing direct assistance to the Belize government. Nevertheless, there probably are ways for indirect training benefits for Belizeans, and the Belize Government and Smithsonian officials should cooperate to identify such opportunities. The Smithsonian is also in the process of initiating a West Atlantic Mangrove Program (SWAMP) for research purposes.

C. TECHNICAL ASSISTANCE ORGANIZATIONS

There are also a number of international groups that are involved in technical assistance and educational projects that have or could have significant conservation components. CARE had a program to improve village water supply systems during the 1970s and continues to run a Rural Education and Agricultural Program (REAP) designed to stimulate more awareness of agriculture and better agricultural skills among school students. The REAP program has been so successful that it is currently being expanded to include students in urban areas as well. Proper land management and conservation practices are primary aspects of the REAP curricula. CARE also is cooperating with the Belize government and five fishing cooperatives to encourage conservation on the barrier reef by utilizing other species than conch and lobster, fishing in the deep waters off the reef, and increasing fishing-related food processing.

The Peace Corps has operated in Belize since the 1960s and now has close to 70 volunteers placed in Belize, giving it one of the highest ratios of volunteers per capita of Peace Corps countries. At present, Peace Corps volunteers assist governmental and non-governmental organizations in Belize in five major areas: education, rural development, health, social services, and technical services. Although none of these activities is directly supportive of furthering natural resource management or conservation programs, many volunteers work in settings in which they are advocating better sanitation or conservation practices, or providing expertise on such related concerns as plant protection, grain storage, health planning, livestock management, and

charcoal production.

In addition to these indirect forms of environmental assistance, there may be future opportunities for the Peace Corps to contribute directly to the enhancement of environmental protection and resource management programs in Belize. Peace Corps officials in Belize say they could probably respond favorably to Belizean government requests for volunteers with various ecological or resource management training or technical expertise in areas such as water pollution. The Belize government should take advantage of the fact that an increasing number of U.S. college graduates entering the Peace Corps would be qualified by training to contribute significantly to fledgling efforts to implement wildlife protection, natural monuments, pollution control, and other environmental programs.

Other organizations with technical assistance programs that bear on environmental issues in Belize include: the Pan American Health Organization, which is helping the government implement its malaria eradication program; a consortium of groups assisting with the Belize Feedstuffs Project, including Heifer Project International, Partners of the Americas, the Mid-West University Consortium, the Universities of Wisconsin and Michigan, the Kalamazoo Foundation, World Vision, and the United Church Ministries; and (potentially) Britain's Voluntary Service Overseas (VSO) program, which is returning to Belize after leaving in the mid-1970s and will provide volunteers to work in various ministries of the government.

D. DEVELOPMENT ASSISTANCE ORGANIZATIONS

As already noted, almost all public capital investment projects in Belize are undertaken with grants and loans provided by multilateral and bilateral development assistance agencies. At present, about 50 projects, with committed international funds of about \$66 million, are in operation or completed in Belize. The government also has a priority list of nearly 50 more projects for the future, with funding secured for about half of these proposals. Over 50 per cent of these projects are designed to improve or construct basic economic infrastructure, especially roads, bridges, airports, highways, harbors, and electricity production. About 40 per cent of international assistance goes to support activities in the agricultural and rural sectors, and another 10 per cent supports social service, social infrastructure (water supply, sewage), and educational projects.

Because of its only recently relinquished status as a British colony, Great Britain continues to provide nearly 40 per cent of all foreign assistance to Belize. In addition to the U.S. AID, other sources of funding have been growing in recent years, however, especially the Caribbean Development Bank, the European Development Fund, the Canadian International Development Agency, and the United Nations Development Program. The World Bank has only recently begun to provide loans to Belize, but Belize remains ineligible for membership in and assistance from the Organization of American States and the Inter-American Development Bank because of its continuing dispute with Guatemala.

Although a large number of the projects being capitalized by international development assistance agencies involve the clearing, moving, exploitation or conversion of soil, minerals, water, vegetation and animal life, none of these major development projects (except perhaps water and sewer projects) can be categorized exclusively as an environmental or conservation project. Given the relatively short-term economic development focus of most of these agencies, this is to be expected. On the other hand, most of the major international development assistance agencies operating in Belize have begun to evaluate their projects from an environmental impact perspective and to take steps to reduce the worst of the adverse consequences.

In general, the relatively small scale of development projects in Belize when compared to larger developing countries has the advantage of reducing the chances that large ecological catastrophes will ensue from activities permitted by the influx of international capital. For example, although livestock programs are liable to receive increased support from international donors seeking to help Belize diversify its economy and increase its exports, the cattle ranch operations that seem big by Belizean standards are still likely to be much smaller than in other countries and the adverse environmental repercussions will probably be easier to contain. Ironically, the relative smallness of development projects in Belize could also result in less attention being paid to environmental assessment by international donors, particularly the multilateral banks. This is because the environmental assessment procedures of the banks tend to be highly centralized in the hands of one office or a small number of personnel in the central headquarters. With these individuals or teams called upon to review large numbers of projects in many different countries,

proposed Belizean projects may receive relatively less attention because they will tend to be among the smallest in dollar terms. This may also increase the need for the Belize government to develop its own capacity to undertake environmental assessments of development projects, a need which the bilateral agencies or agencies such as UNEP and UNDP have more flexibility to address than do the multilateral lending institutions.

Some of the major projects funded or proposed by international donors that either have an environmental component or potential environmental consequences are detailed below.

The U.S. AID opened its bilateral mission in Belize in early 1983; prior to that time assistance was provided to Belize through the Caribbean regional program. AID's over-all country development strategy has focused to date on providing short-term economic stabilization assistance and identifying long-term projects that will lead to diversification of the economy away from dependence on basic commodities, and encourage sustainable economic development. With the passage of the Caribbean Basin Initiative, Belize is receiving about \$10 million of the \$350 million total package, much of which is targeted to help improve the country's foreign exchange outlook, increase liquidity in the domestic banking system, and make more funds available for private sector development. Thus, the two largest AID loans to Belize at present are a \$4.6 million cash transfer loan extended in 1982 to cover the foreign exchange shortfall and shore up foreign exchange reserves, and a recently approved \$5 million loan to the Central Bank for the establishment of a commercial discount fund to stimulate private sector investments.

While the 1982 cash transfer loan has no direct environmental repercussions, the Commercial Bank Discount Fund project could stimulate projects with substantial environmental impacts and could also provoke requests by the Belize government and opportunities for AID to provide environmental assessment expertise and training. The intent of the CBDF project is to increase productive private-sector investment in agriculture and related industries as a means of satisfying the Caribbean Basin Initiatives' focus on private-sector development and priority of increasing food production and exports. The loan enables the Central Bank to establish a fund against which commercial banks in Belize can draw credits to provide discount loans to private entities proposing projects that will create new productive enterprises in such industries as citrus, fishing, timber, bricks, cattle, canning, edible oils, aquaculture, and various light manufacturing and processing.

One of the four ongoing covenants agreed to under the terms of the loan, which was approved by AID in March 1983, is that the borrower must examine to AID's satisfaction each sub-project that could have a substantial effect on the environment. Although the covenant is somewhat broad and vague, the AID mission director has indicated his intention to look over all sub-projects proposed and, if necessary, to call upon AID environmental officers or outside consultants to assist in assessing potential environmental impacts and recommending project improvements to reduce adverse consequences.

A number of potential environmental consequences were reviewed as part of AID's required interim environmental examination of the CBDF project. These included the potential for increasing problems such as soil infertility, erosion,

cultivation of steep hillsides, pesticide abuse, destruction of mangrove forests and deforestation. One of the major concerns expressed in the AID environmental assessment of the project centered around the question of pesticide use and management in Belize, in part because of the potential for increased human exposure in Belize and in part because a large portion of the agricultural exports stimulated by the CDBF project will be targeted at U.S. consumers. Among recommendations made to reduce the dangers associated with use of pesticides and consumption of foods treated with certain pesticides, were to provide training for safe pesticide use, and the delineation of all chlorinated hydrocarbon pesticides from the project.

At present, as a result partly of AID pressure in conjunction with the CDBF project, and even more in response to tightening U.S. EPA and Agriculture Department requirements for food products imported into the United States, Belize is in the process of establishing pesticide controls for plants and animals and setting up procedures for monitoring to certify that U.S. standards for pesticide residues in plant and animal imports are not exceeded. Since the government has little expertise, no money, and no testing laboratories or equipment, it will need substantial assistance if it is going to satisfy AID and U.S. import certification requirements. AID should make it a priority to ensure that such assistance is forthcoming. This is especially important because there is a strong sentiment on the part of Belize government officials in the Agriculture Department that some of the testing and certification procedure they are establishing are more elaborate than those called for at this time in Belize and are, therefore, primarily to satisfy U.S. requirements.

Other projects that constitute the bulk of AID's 1982-1984 program in Belize include a technical assistance grant for a Belizean project to improve housing credit, housing construction systems and the over-all quality of housing stock; a loan/grant program to improve all aspects of the livestock sector; support for private voluntary organizations to operate community-based development activities; and a broad technical assistance program designed to help the government meet its development project needs. Specific environmental initiatives in these project areas are not as yet delineated. However, AID officials say they will carefully evaluate the potential environmental consequences of the livestock project, as well as the need for conservation measures that ensure its long-term sustainability. The PVO grant program and the technical assistance program both should provide substantial opportunities for AID to take steps that assist the Belize government to improve its limited capacity to implement and enforce its environmental management programs and environmental protection legislation. In part, a more specific AID focus on possible environment-related assistance for Belize has not emerged because the newness of the mission has proved an opportunity to integrate the country environmental profile process with the effort to develop the long-term country development strategy.

A couple of development projects sponsored by the Canadian International Development Agency (CIDA) are among the most directly related to environmental improvement and resource conservation. Since 1972, CIDA has been supporting a long-term program to upgrade the water supply and sewage system of Belize City. To date, CIDA has funnelled over \$40 million into this endeavor, and nearly half of this amount

has been in the form of outright grants or a no-interest loan. CIDA has also been active, albeit on a much smaller monetary scale, in supporting a project designed to shore up and diversify the Belizean fishing industry, sponsoring research and working in conjunction with CARE. A major focus of this project is conservation of dwindling lobster and conch populations along the coral reef.

At independence, the British government allocated \$12 million in loans and grants for support of the Belize government, to be disbursed in annual amounts of \$3 million. Most of this and other British development assistance are going into highway, bridge and water supply construction, as part of an extensive Belize/UK Infrastructure Development Program. In addition, the First World Bank loan agreement with Belize was signed in the spring of 1983, and this provides about \$5.3 million for the reconstruction of roads and improvement of drainage along the Southern Highway.

For the most part, these projects do not involve the clearing of virgin areas for the creating of new roads, thus the chances of serious adverse environmental consequences resulting directly from them are diminished. However, the British Overseas Development Agency, the World Bank and other international donors should make more effort to evaluate and reduce the secondary environmental effects that may follow large-scale road improvement and reconstruction in Belize. First, in some areas where road improvements have already taken place, the number of spontaneous roadside settlers and land clearers has increased; increasing haphazard deforestation and adding in some places to soil erosion problems. Another potential problem is the water pollution

and isolated air pollution that is likely to increase from road construction related activities. For example, locally owned and operated quarrying and stone crushing operations have been stepping up production recently to provide materials for road construction, yet little or no effort is being made by international donors to assess the potential environmental consequences or assist the local industries to do so.

Two regional multilateral banks have provided increasing amounts of development assistance to Belize in recent years: the Caribbean Development Bank (with large contributions from the United States) has provided about one quarter of foreign project assistance in Belize, and the European Development Bank now accounts for about one tenth. CDB funding has gone for major projects in the banana industry, electricity production, to support the Development Finance Corporation, to deepen Belize City's port, for the Belmopan Hotel, rice marketing, and secondary road construction. Although elaborate environmental assessments were not undertaken in conjunction with these projects, no serious environmental consequences have been identified. Some concern has been raised about the future consequences of CDB's emergent priority of increasing Belize's cattle stock by at least two-fold as rapidly as possible. Since this goal is being pushed as well by AID and the World Bank, the U.S. Government should take the lead to ensure that the long-term sustainability and the environmental consequences of the cattle projects are duly considered. Most of the EDF projects to date have not threatened large environmental consequences, since they have centered on support for small farmers, education and television broadcasting, as well as construction of a veterinary laboratory, an apron at the International Airport, and schools.

Within the United Nations system, UNICEF and UNDP have been particularly active in Belize. UNICEF's programs focus at the village and local level and include community development, water supply, and sanitation efforts that enhance the basic quality of people's living environment. UNDP has concentrated heavily on increasing the Belize government's capacity to plan, implement and manage development through the Belize Public Investment Project. It has hired a consortium of New Zealand consultants to prepare reports on all sectors of the economy, and detailed personnel to work in the Ministry of Finance to set up the Belize Investment Centre. Two priorities have emerged under this UNDP project. First, it has been designed to institutionalize development coordination and control procedures within the bureaucracy so that the upper-level officials are not overwhelmed by the need to deal with every detail of every development project. Second, the UNDP project has sought to draw up a number of potential development projects for the Belize government and help it secure funding for these projects.

In both cases, substantial opportunities to enhance the Belize government's ability to evaluate development projects from an environmental perspective exist. Certainly, the activities of the UNDP and the Belize Investment Centre would dovetail with and be supportive of a Chief Environmental Officer operating within the Ministry of Finance and Development.

V. Conclusions and Recommendations.

From an institutional perspective, the most serious environmental management weaknesses identified in this section are:

1. There is a fundamental lack of coordination among the different Ministries of government in planning, executing and regulating development activities, which inhibits timely input and comment concerning the environmental impacts of policies and projects.

2. Much of the existing environmental legislation, impressive as it is in breadth and scope, is highly vague and lacks specific implementing criteria, making it difficult to achieve several fundamental requisites of successful regulatory programs -- continuity between cases, administrative certainty, and routinization in the application process.

3. A number of jurisdictional conflicts exist among different Ministries that get in the way of effective administration of natural resource management; also, within the individual Ministries charged with implementing environmental control regulations there often arise conflicts between the development and environmental protection functions they are assigned.

4. Fiscal and public service manpower constraints make it nearly impossible for the Belize government to undertake extensive environmental assessments of development projects or to enforce current environmental and natural resource protection laws. Moreover, most of the bureaucratic energy currently devoted to implementing environmental programs or

enforcing environmental regulations is piecemeal, as secondary activities of health inspectors, agricultural extension agents, forest officers, lighthouse keepers, etc., who are already overwhelmed in just trying to perform their primary tasks.

5. Overwhelming dependence on foreign assistance to meet capital investment needs makes development coordination and comprehensive assessment of the country's development strategy from an environmental perspective that much more complex, both because so many different institutions are involved and because it is difficult for the "beggars" to be choosy.

To begin to address these problems, there is a need for steps that accomplish the following goals:

1. Streamline and centralize the government's procedures for commenting on development projects proposed under the aegis of different Ministries.

2. Establish standards and procedures to reduce the need for reliance on ad hoc and arbitrary decisions in administering environmental management programs and enforcing existing environmental legislation.

3. Reallocate ministerial responsibility for environmental and conservation functions so that inter-agency overlap and underlap of jurisdiction are reduced and there is a countervailing voice in all instances which can be injected to balance discussion of development proposals and argue for conservation programs and environmental protection.

4. Stimulate self-enforcement and passive enforcement of existing regulations, encourage cooperation from cooperatives, quasi-governmental organizations and other institutions, and draw as much as possible on external expertise and financial assistance to provide more manpower for environmental enforcement and implementaion.

5. Integrate the consideration of environmental factors into the project idea and request stage of development planning within the Ministry of Finance and Development, and develop potential conservation and environmental protection-oriented projects that can be supported by international donors and fit into long-term development plans.

Ideally, many of these goals might be achieved by the creation of one ministry to oversee resource management, environmental protection and environmental improvement programs and legislation for the government. However, it is obvious that the government's ability to take such a step is circumscribed by the serious financial and manpower shortages that are likely to persist for some time in Belize and by the evident lack of confidence among political leaders that Belize's economic future is secured. Except for the coral reef, where consensus if not money for strong conservation measures exists, the outsider comes away with the impression that most political leaders are unwilling to elevate conservation or environmental protection until they feel that a dynamic development process has caught hold and is self-perpetuating.

Nevertheless, several more pragmatic steps can be recommended that could result in a more effective and efficient utilization of the manpower, money and outside resources already available for the implementation and enforcement of current environmental programs and legislation in Belize:

1. Establish the position of Chief Environmental Officer within the Ministry of Finance and Development. This officer would be responsible for commenting, or securing comments from other ministries or outside sources, on the potential environmental impact of all major proposed development projects reviewed by the Cabinet Development Committee. This individual would also have responsibility for coordinating among different ministries when conflicting jurisdiction inhibits effective environmental management and would receive periodic reports from ministries which are responsible for enforcement of environmental and conservation legislation. In other words, this individual would be the government's advocate for environmental problems before the Cabinet, and would play the role of ombudsman whenever environmental matters cut across sectors and ministerial functions. His primary authority would derive from his power to make recommendations to the Cabinet.

This officer should also work closely with the Belize Investment Center, to comment at an early stage on different development strategies proposed and to put environmental projects that will enhance long term development goals--watershed management, alternative energy, waste treatment facilities, etc.--on the docket from which international development assistance agencies are selecting their own funding priorities. Perhaps most important, this officer would function as the government's clearinghouse for requesting, securing, coordinating, and monitoring the wide range of international environmental expertise, funding, and equipment that is available in the international community for a developing country that establishes accessible channels. Peace Corps volunteers, the many private voluntary organizations mentioned in this section, experts in bilateral and multilateral organizations, environmental consultants supported by foreign assistance and other similar opportunities are now not being taken advantage of in part because the Belize government has not actively made an effort to solicit them. A single environmental officer strategically located in the Finance and Development Ministry and working with, not against, economic development planners would probably be able to attract enough external support to undertake a variety of activities and programs at low cost to the government. It goes without saying, however, that the Chief Environmental Officer must be a senior civil servant with enough stature to have access to and persuasive powers with key Cabinet members and permanent secretaries.

2. The government should development some sort of Administrative Procedures Act.

3. A longer term, but important action should be to establish some sort of interagency or autonomous authority charged with overseeing development and protection of the coral reef. If the reef does receive world heritage status, as now appears likely, Belize will probably receive ample funding

and expertise from the international community to set up a reef authority without draining monies away from other programs.