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**DRAFT PLAN FOR THE DEVELOPMENT OF A
PRIVATE SECTOR INITIATIVE IN NATURAL
RESOURCE AND ENVIRONMENT PROGRAMS
IN THE REPUBLIC OF PANAMA**

Gerald Lieberman
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International Institute for Environment and Development
1717 Massachusetts Ave. N.W.
Washington, D.C. 20036
(202) 462-0900

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INTRODUCTION

As the crossroads between North and South America, Panama contains representative samples of a great diversity of the most ecologically and economically important natural resources of both. Extensive areas of coastal mudflats and mangroves which support critical fisheries habitats. Tropical rain forests to the north adjoining Costa Rica and to the south extending into Columbia. Areas with rich farmlands containing volcanic highland soils.

Wisely planned and managed these resources could be the key to sustained development. Panama, however, has serious economic problems and the Government apparently is willing to accept adverse environmental impacts in its quest for a rapid solution. The result is that the country's natural resources and environment are being damaged through poor management and lack of planning.

Government officials and administrators appear to be unaware of natural resources management technologies which would lead toward more sustained patterns of development. Citizens living in urban areas are uninformed about these issues. Rural "campesinos" unknowingly use agricultural techniques which cause the rapid destruction of the lands which they farm.

There are only limited actions being taken, by either the Panamanian Government or private organizations, to solve these problems and if corrective actions are not initiated in the near future major, tangible impacts can be projected for the future

economy and development of the country. Recognizing that there is a need for appropriate activities in both the public and private sectors the Panama Mission of the United States Agency for International Development requested technical assistance for the development of a "Plan for the Development of a Private Sector Initiative In Natural Resources and Environment Programs (NR/E)". The goal of the project was the development of a program designed to strengthen the individual and collective capacities of Private Voluntary Organizations (PVO's) in Panama, both in promoting and carrying out NR/E programs. This report was written to serve as the basis for an Operating Program Grant (OPG) which will provide a framework for the development of specific NR/E programs within a unified private sector initiative.

The plan for this private sector initiative was developed through close cooperation with a broad cross-section of both Governmental agencies and non-governmental organizations active in Panama's NR/E programs. The staff and consultants of Panama's Directorate of Renewable Natural Resources (RENARE) and USAID/Panama were of particular importance in these efforts. Additionally, many U.S. based environmental PVOs participated in a conference and briefing prior to the fieldwork in order that they might make their organizational expertise and capabilities known and available for the planning and implementation stages of this program. Appendix I presents a list of the individuals, agencies and organizations who were contacted during this effort.

Technical assistance was provided by Dr. Gerald A. Lieberman,

under the auspices of the International Institute for Environment and Development (IIED) and International Union for the Conservation of Nature and Natural Resources (IUCN) through their Joint Environmental Service Project (JES).

PROCEDURES AND TIMETABLE

The information, upon which this report is based was gathered from a combination of secondary and primary sources including a series of basic interview, survey and planning procedures.

Documentation of environmental concerns was, for example, not within the scope of this study and is therefore based on data and recommendations contained within the latest version of USAID's Panama Country Environmental Profile, in addition to discussions with knowledgeable people. Information on the activities of Panamanian and U.S. based PVO's was derived from informal surveys.

The specific stages of this study and the time allocated to each were:

1. Discuss plans and objectives for project with personnel from USAID/Washington LAC/DR Office and IIED.

2. Develop and conduct survey and conference for U.S. based PVO's to determine their current NR/E activities in Panama and interest in participating in future NR/E projects for Panama.

The main points surveyed included: goals and objectives of international programs, including the context (importance) within the PVO; descriptions of ongoing international programs, to

determine what programmatic capabilities may be available to Panamanian PVO's; detailed description of current NR/E projects in Panama, in order to account for them in the proposed country-wide initiative; and, list and description of organizational areas of interest and expertise. (2 days)

3. Meet with RENARE and USAID/Panama counterparts to review plans and establish basic scheme for interactions and cooperative efforts during the conduct of this project. (2 days)

4. Develop listing of priorities for environmental activities in the private sector, based on data and recommendations in the Country Environmental Profile. Validate priorities and rankings through discussions with counterpart agencies and individuals. (2 days)

5. Survey Panamanian PVO's which are interested or active in NR/E programs. This study was conducted by means of informal interviews. The main points surveyed, with respect to each PVO, included: organizational goals and objectives; philosophical context; interest in participating in cooperative programs with other PVO's; detailed description of current NR/E projects; and, list and description of organizational areas of interest based on information provided during the interview. (4 days)

6. Review results of survey with counterparts at RENARE, USAID/Panama, and staff at the Smithsonian Tropical Research Institute (STRI) and other appropriate individuals, with the goal of obtaining additional perspective on each PVO. (1 day)

7. Develop draft plan for private sector initiative in conjunction with counterparts. (6 day)
8. Review draft plan with all counterparts and modify as needed to produce final draft. (1 1/2 days)
9. Present final draft plan to USAID both orally and in writing. (1/2 day)
10. Present results of study to U.S. PVO's, polish final report and conduct debriefing discussion with IIED personnel. (1 day)

PANAMA'S MOST CRITICAL ENVIRONMENTAL PROBLEMS

Undertaking a field survey of the environmental problems of Panama was not within the scope of this study. However, in order to plan and implement appropriate private sector initiatives to solve these problems it was necessary to have an understanding of both Panama's environmental problems and the organizational constraints which currently prevent their solution.

In 1980, under contract with USAID, the International Science and Technology Institute, Inc. conducted fieldwork in Panama and developed a Country Environmental Profile (CEP) for Panama. This CEP is contained within a report entitled "Panama: State of the Environment and Natural Resources, Field Reconnaissance Study Final Report". To date, the Panama CEP has not been formally published, however a final draft version which has been recently reviewed and edited by USAID/Panama was made available for this study. Because this report has been updated by USAID/Panama, it

provides as good a perspective on Panama's environmental problems in 1983 as it did when the report was written in 1980.

The Panama CEP study team identified the following as "the most critical environmental and renewable natural resource problems facing Panama at present":

"Spontaneous Colonization. The destruction of previously undisturbed wetland forests along the Atlantic seaboard and in the central part of Darién Province by agrarian peasants migrating from the provinces of Los Santos, Herrera, and Chiriquí is one of the most critical environmental problems in Panama. These peasants destroy vast areas of forest by slash and burn agriculture and by clearing land for cattle ranching. Colonization of wetland forests is part of the national development strategy and is seen as a necessary "conquest"; undisturbed forests are seen as non-productive economically. Colonization is fostered directly or indirectly by government agencies: spontaneous colonization follows the building of roads into previously inaccessible areas, while in some provinces government agencies actually provide easy credit to cattle ranchers willing to expand their pasture acreage. There is no overall plan for orderly colonization in frontier areas and as a result land is cleared that is unsuitable for agriculture. Little attention has been given to alternatives such as timber management which could provide an economic return while maintaining a forest cover."

"Deforestation. Current estimates of Panama's actual forest

cover range from 38 to 45% of the total land area (29,000-35,000 square kilometers). Destruction of forests is primarily the result of agricultural expansion into forested areas; approximately 2.7% of the country's land area is cleared for agriculture yearly. Even at an intermediate rate of 1.5% per year, it is estimated that Panama will lose an additional 10,000 square kilometers or one-third of its existing forest reserves in the next 25 years. At present, deforestation is taking place at the rate of 50,000 hectares per year. Although most of the deforestation is the result of land clearing for agriculture, other factors contribute to the destruction. These factors include: a poorly conceived and executed timber/forest concession system; complete absence of silviculture and forest management practices and information; estimates of lands suitable for agriculture based on inappropriate classification systems, poor timber utilization; and degradation of soils as a result of erosion and compaction. Although the Dirección de Recursos Naturales Renovables (RENARE), the agency responsible for all aspects of renewable natural resources, has adequate legal authority to enforce sound forest management practices, it has proven to be relatively ineffective. The Dirección (RENARE) does have a small reforestation program but projections allow for reforestation of only 38,500 hectares over a five-year period."

"Soil Erosion and Rangeland Deterioration. The widespread loss of forest cover as a result of agricultural expansion into forested areas is causing major changes in the hydrologic cycles of major watersheds and contributing to the loss of an estimated

1,600 to 2,000 metric tons of soil per hectare per year in Panama. High intensity rainfall, easily eroded soils, and lack of knowledge of basic soil conservation measures on the part of small farmers all are factors in the erosion of soil and the deterioration of rangeland. Grazing of livestock on moderate to steep slopes combines the destruction of vegetative cover of pasture lands with compaction of soil; again, heavy rainfall erodes unprotected soils. Within a few years soil fertility is exhausted and the farmers move on to clear more land. This destructive cycle continues as agriculture expands into fragile wetland forest areas where soils are poor, unsuited to agriculture, and easily eroded once the forest cover is removed. Other impacts of denuded watershed areas, soil erosion, and sedimentation, are sharp fluctuations in stream flows causing flooding and droughts, heavy siltation in hydroelectric and water supply reservoirs, and the loss of freshwater and marine fishery habitats due to excessive siltation in important breeding areas such as mangrove swamps. Soil erosion is a common problem throughout the agricultural zone of the country, with the highland volcanic soils of Chiriquí Province most seriously affected."

"Destruction and Contamination of Marine Fishery Habitats.

Panama's marine fishery resources represent an important domestic food source as well as a principal export commodity. Critical to the long-term productivity of these marine resources is the protection and conservation of the country's extensive coastal mudflats and mangrove forests. These areas are being adversely

affected by dredging operations, indiscriminant use of pesticides and defoliants, industrial pollution, construction of recreational development and commercial shrimp ponds, and extraction of red mangrove bark for the tanning industry. Panama's littoral zones, including coastal wetlands, marshes, mangrove forests, and mudflats, must be carefully developed to ensure continued production of important commercial species of fish, shrimp and shellfish."

This listing of Panama's most critical environmental problems was discussed during meetings with Dr. Nick Smythe (STRI), Brian Houseal (consultant to RENARE), Dwight Walker (USAID/Panama) and Dario Tovar (Fundación de Parques Nacionales y Medio Ambiente). All of these individuals either directly or indirectly confirmed these as Panama's most significant problems.

CONSTRAINTS TO EFFECTIVE NATURAL RESOURCE MANAGEMENT AND ENVIRONMENTAL PROTECTION IN PANAMA

In addition to identifying the most critical environmental problems in Panama, the CEP Team described what they called "the major obstacles to effective natural resource management and environmental protection". In a very real sense what the CEP Team called "obstacles" and "constraints" are some of the direct and indirect causes of Panama's environmental problems.

The obstacles, as presented in the Panama CEP and confirmed through discussions with staff and consultants of USAID, RENARE and private environmental organizations in Panama, are as

follows:

"Lack of Public Awareness and Understanding of the Environment.

A very limited number of Panama's people live in a relative state of balance with the environment. The most notable exceptions are certain indigenous groups who have evolved stable subsistence patterns of existence. The population as a whole does not regard environmental protection a strong priority. Public awareness and understanding of the fundamental problems and conflicts that are and will be arising over natural resources management and use are equally minimal. The urban population's perception of the environment centers around aesthetic issues such as noise, odors, and open spaces, while rural campesinos regard their environment with a "conquista" (conquering) attitude as seen in indiscriminate burning of forest resources that could be harvested for other uses."

"Current Development Strategies. Major commitments have been made by the Government of Panama to develop the natural resource reserves in the provinces of Chiriquí, Bocas del Toro, Darién and the Comarca de San Blas. Intensive development programs have been initiated in these areas to exploit the natural resources as part of a solution to Panama's immediate economic problems of high unemployment, spiraling inflation and interest rates, heavy dependence on foreign imports, and an outflow of capital to pay for development investments. Such development strategies reflect a willingness on the Government's part to accept adverse impacts of development activities upon the environment. Given the lack of broad public support for environmental issues, national

priorities are unlikely to change until environmental degradation begins to affect the productivity of the natural resources being exploited."

"Lack of a Centralized Authority for Resource Management and Environmental Protection. The responsibility for natural resource management and environmental protection in Panama is distributed among a host of ministries and semi-autonomous institutions. There is no central agency responsible for a continuing, comprehensive and integrated natural resources and environmental quality planning and programming effort. Competition for scarce financial resources is intense, and the Government's priorities have favored those ministries and institutions most directly involved in agricultural, industrial, and commercial production operations as well as the provision of services such as public health, education and other social services. At present, internal budget allocations within Panama's ministries favor traditional development projects as opposed to activities geared towards long-term sustained productivity of the country's renewable resources." (Since the CEP was completed RENARE has undergone significant growth and may eventually become the centralized authority which the CEP Team recommended. At this time they do not have all of the political and financial resources which are needed to effectively enforce the laws and regulations which govern the resources which they manage.)

"Lack of Technically Qualified Personnel. Panama's educational institutions offer limited training in the natural sciences and

no training in either inter-disciplinary or specialized environmental and natural resource management fields. The feasibility of establishing and maintaining an effective environmental and natural resource planning and management program in Panama will be hampered by a lack of sufficient numbers of well-trained administrators and technicians in the appropriate fields. Ensuring the availability of such professionals requires two simultaneous developments: institutions of higher learning must begin to utilize techniques that emphasize practical field experience; and senior level decision-makers in the ministries will need to broaden their understanding of the managerial and multi-disciplinary skills required for effective planning and implementation of programs for the long-term protection and productivity of Panama's natural resources. These developments do not appear likely in the near future."

"Lack of Accurate Environmental and Natural Resources Data.

Environmental protection and natural resources management programs in Panama are hampered by a lack of accurate, up-to-date information on the extent and current utilization of natural resources. The availability and accuracy of the baseline data for natural resources in Panama is generally poor and unreliable. This is exacerbated by the lack of a central agency responsible for natural resources data collection and analysis. Until more accurate information becomes available, environmental and natural resource planning in Panama will have to rely upon limited and questionable data currently available."

POTENTIAL ROLE OF ENVIRONMENTAL PVOS IN DEVELOPING COUNTRIES

The past twenty years have seen a multifold increase in both environmental problems and the activities needed to achieve their mitigation. Over the decade since the formation of the United Nations Environment Program (UNEP) and the World Environment Conference at Stockholm (1972) there has been a significant shift in thinking regarding environmental concerns in both the industrial and developing nations of the western world. Participants at the Stockholm Conference, who represented developing countries, indicated that their countries had not yet gained an understanding of the need for sound environmental management and a balanced approach to development. By the spring of 1982, at the Nairobi Conference of UNEP, there had already been a major shift in attitudes. The individuals and organizations representing the lesser developed countries (LDCs) expressed a clear understanding of the appropriate role of sound environmental management and planning in the sustained development of their nations and economies.

The movement to wisely manage and develop natural resources and the environment in the LDCs of the western world appears to be growing along the same lines as the movement in the United States. In most cases, this "new" environmental awareness and understanding, within the LDCs, has been first expressed, both at the UNEP Nairobi Conference and before and after, by private voluntary (non-governmental) environmental organizations (PVOs).

In the U.S., the initiatives developed and implemented by

environmental PVOs often appear to have a significant impact on government actions and policies. The success of these private environmental organizations appears to be because they have more flexibility, i.e. their nature and size allow them to modify their actions and programs more rapidly than can the Federal or state governments. The existence of the U.S., PVO environmental movement has been especially important in the areas where there have been needs for demonstrating new approaches to environmental planning and management, education, and playing a "watchdog" role when development activities have not given sufficient consideration to the mitigation of environmental concerns.

The most significant differences between U.S. based environmental PVOs and those found in the LDCs are the availability of financial resources and experienced professional staffs. Nevertheless, the groups in the LDCs have an opportunity to play an important role in the creation of well-balanced environmental conservation and development systems within their nations.

The financial and technical constraints on environmental PVOs in the LDCs have limited both the types and the size/scope of activities that they have been able to undertake. As a result one may find several environmental PVOs in a given LDC but each of them will tend to have localized interests and be relatively small in terms of membership, budget, and project activities. While there is most certainly an appropriate role for these small, local environmental PVOs, they generally do not have the capabilities or capacities to deal with the environmental problems which face their countries in a national and

international context.

The lack of national environmental PVDs in an LDC will generally limit the effectiveness with which environmental activities are achieved within the country. Some of the most important concerns are that:

1. The impacts of the individuals who are interested in working for sustainable, environmentally sound development of their country are disbursed among numerous groups (or just act as individuals), thereby duplicating infrastructure and wasting extremely limited resources.
2. International assistance agencies, both governmental and private, severely limit or withhold financial and technical assistance because they are unable to find a focal point for their support.
3. Government agencies do not hear a cohesive, organized voice for a balance between development interests and sustained use of natural resources.
4. As a result of 1, 2 and 3 above, in addition to other concerns, neither governmental agencies nor non-governmental organizations build the institutional framework necessary for the solution of the country's natural resources/environmental management problems.

In several cases, both in the developing countries of Africa and Latin America, locally operated environmental PVDs are already having or are beginning to have a significant impact on their

environment. Examples of some of these groups include:

African Wildlife Clubs (AWC) - This organization was initiated approximately 20 years ago with support from the U.S. based African Wildlife Leadership Foundation (AWLF). The best known activities of these clubs are the hundreds of high school chapters throughout Kenya and other African nations. The clubs concentrate their efforts on environmental education. As a result many of the members have graduated into the ranks of governmental environmental management organizations bringing with them an understanding of the value of their natural resources. Additional individuals have received further, more technical, training and internship programs in the U.S., through the continuing support of AWLF. (The AWCs provide an example of a PVO that effectively solves problem number 1 above. The clubs bring together what might otherwise be numerous groups and individuals under one banner.)

Fundación Natura - An Ecuadorian PVO has been active for almost 5 years. During this time Natura has conducted a variety of environmental education, reforestation and research projects. They received a \$340,000 OPG from USAID/Ecuador for a 2 1/2 year environmental education project (EDUNAT I) which was recently successfully completed. EDUNAT I was designed to inform decision-makers and the general public about Ecuador's environmental problems through newspaper, radio, television, slide/tape shows and other techniques. A second OPG, which is currently being considered, would continue this EDUNAT I program for 4 more years and expand the programming efforts in the areas

of curriculum development and teacher training. Natura also conducted 2 community-based, demonstration reforestation projects in rural Ecuador. These projects were so successful that funding was received from the Inter-American Foundation to continue and expand the program. Natura hopes to transfer the responsibilities for their reforestation program to a government agency in the near future. USAID/Ecuador contracted with Natura to conduct the research for the Ecuador Country Environmental Profile. Other projects include management of a World Wildlife Fund project in one of the national parks and a weekly television program which is used to raise operating funds. (Natura has done a great deal to solve problem number 2, as described above. They serve an effective focal point for international financial and technical assistance.)

Asociación Hondureña de Ecología - The AHE was formed in 1976 following Honduras' First National Environmental Conference. Although the group grew relatively slowly over the first 5 years they have recently undertaken a variety of new initiatives to expand their efforts. The AHE is comprised of a broad cross-section of Honduran society, including government employees, the business sector, university faculty and students, and the general public. Although, to date they have not incorporated many campesinos into the organization they are initiating efforts to gain greater support in rural areas. The AHE has had an impact on several natural resource planning and development projects both directly and through its members. (The Government of Honduras has heard a unified voice for wise development through

the activities of the AHE, thus helping resolve problem number 3 above.)

During the past decade, each of these organizations has begun to have a significant part in the development of appropriate methodologies for natural resources management in their country. In large part, as a result of their actions, some of the government agencies in Kenya, Ecuador and Honduras are starting to build the institutional framework necessary to solve basic NR/E management problems (problem 4 as described above). Over the coming years the roles of the environmental PVOs in these LDCs are likely to continue to evolve and become more important.

STATUS OF ENVIRONMENTAL PVOs IN PANAMA

The current status of environmental PVOs in Panama could serve as a case study for the problems of environmental PVOs, as described in the previous section. Panama may have as many as 34 organizations interested directly in environmental issues with an additional 5 "service organizations" having demonstrated some interest in these problems.

If these numerous organizations were acting effectively and efficiently there would in all likelihood be significantly fewer environmental problems in Panama. Unfortunately, the vast majority of these organizations exist only on paper and/or consist only of one to several individuals with a combined budget for all groups of between \$25,000 and \$50,000 annually (Brian Houseal, personal communication). Furthermore, most of these

groups have shown only localized interests and because of their extremely limited budgets (probably averaging between \$100 and \$500, with the exception of 1 or 2 groups) have no experience or demonstrated ability to conduct medium or large scale projects.

Table 1 presents a listing of environmental PVOs in Panama.

Appendix II provides a directory of these organizations including name(s) of contacts, address and telephone, in addition, it is annotated with comments regarding the current status and activities of each organization where available.

A cross-section of the most active and nationally significant Panamanian environmental PVOs was selected for further study, based on discussions with several individuals (Table 2). Leaders of several of these groups were interviewed to obtain further details about their organization's goals and objectives, program activities and structure.

The current status and types of activities of the Panamanian PVOs can be summarized as follows:

- The organizations are generally small in both number of members and financial resources available for projects. The Instituto de Investigación y Manejo Ambiental (IDIMA), of Chiriqui, presents a useful example of the current status of a better and larger than average PVO. IDIMA, currently with 50 members, has a membership which is larger than most of the active organizations. They only irregularly collect membership dues and have only very limited project funds. IDIMA received a small grant from USAID/Panama and were able to purchase several useful pieces

TABLE 1
ENVIRONMENTAL PVOS IN PANAMA*

Asociación de Guardabosques Voluntarios
 Asociación de Ingenieros Forestales de Panamá
 Asociación de Preservación Ecológica Chiricana
 Asociación Ecológica de El Valle
 Asociación Estudiantil para la Conservación Ambiental de Panamá
 (AECAP)
 Asociación Nacional de Técnicos Forestales de la Republica de
 Panamá (ANTEFORP)
 Asociación Nacional para la Conservación de la Natureleza (ANCON)
 Asociación Panameña de Energía Solar
 Asociación Panameña de Orquideología
 Asociación para la Preservación Ecológica
 Asociación Universitario de Orquideología
 Circulo Conservacionista de Panamá
 Circulo de Estudios Cientificos Aplicados (CECA)
 Ciclismo Recreativo
 Circulo Herpetológico
 Club de Jardinería de Panamá
 Club de Plantas y Flores
 Consejo Internacional para la Protección de las Aves (CIPA)
 Fundación de Parques Nacionales y Medio Ambiente
 Grupo Ambiental Santeño
 Grupo Conservacionista Rural de los Pozos
 Grupo de Buceo - Panamá
 Grupo de Tecnología Apropiada
 Instituto de Investigación y Manejo Ambiental
 Movimiento Conservacionista de Llano Grande de Ocú
 Organización Protectora de la Flora y Fauna (OPDEFF)
 Sociedad Amigos de la Natureleza (SANA)
 Sociedad Amigos de la Natureleza de Chiriquí (SANACH)
 Sociedad Amigos del Arbol
 Sociedad Audubon de Panamá
 Sociedad de Investigaciones Biológicas de la Universidad de
 Panamá (SIBUP)
 Sociedad de Investigaciones Biológicas de la Universidad de
 Panamá, Capitulo de Chiriquí (SIBUP - Chiriquí)
 Sociedad Panameña de Malacología
 Sociedad Protectora de Animales
 Union de Accion Ecológica (UNACE)

OTHER INTERESTED GROUPS

Club Soroptimista de Panamá
 Club 20/30
 Club de Leones
 Club Rotano
 Grupo Scout de Panamá

*
 Based on an October 1980 report from the Conservation Office of
 the Smithsonian Tropical Research Institute (STRI) with updated
 information based on personal communications with Dr. Nick Smythe
 (STRI), Brian Houseal (RENARE), and Julio Jaén (AECAP).

TABLE 2

ACTIVE AND NATIONALLY SIGNIFICANT
NATURAL RESOURCES AND ENVIRONMENT GROUPS IN PANAMA*

Asociación de Ingenieros Forestales de Panamá
Asociación Estudiantil para la Conservación Ambiental de Panamá
(AECAP)
Asociación Nacional de Técnicos Forestales de la Republica de
Panamá (ANTEFORP)
Asociación Universitario de Orquideología
Centro de Estudios Científicos Aplicados (CECA)
Circulo Conservacionista de Panamá
Circulo Herpetológico
Consejo Internacional para la Protección de las Aves (CIPA)
Fundación de Parques Nacionales y Medio Ambiente
Grupo de Tecnología Apropiada
Instituto de Investigación y Manejo Ambiental
Sociedad Amigos de la Natureleza de Chiriquí (SANACH)
Sociedad Audubon de Panamá
Sociedad de Investigaciones Biológicas de la Universidad de
Panamá (SIBUP)
Sociedad Panameña de Malacología

*
Based on comments from Dr. Nicholas Smythe (STRI), Julion Jaén
(AECAP), and Brian Houseal (Consultant to RENARE).

of audio/visual equipment which are regularly used in school and public presentations. The fact that active participation is on a volunteer basis has severely limited the regularity and scope of program activities.

- The majority of activities of the Panamanian PVOs are directed toward environmental education, consciousness raising and small, demonstration reforestation projects. Some groups, like the Circulo de Estudios Cientificos Aplicados (CECA) have also been developing small-scale scientific investigations, bird banding efforts, for example.

- Activities are usually approached at the provincial scale with little or no coordination or exchange of information between the various PVOs. (Actions are being taken at this time to alleviate this problem. This is discussed further at the end of this section.)

- Practically none of the PVOs has received either technical or financial assistance from any of the international or U.S. based environmental organizations. The one exception to this is the Asociación Estudiantil para la Conservación Ambiental de Panamá (AECAP) which obtained a \$15,000 grant from the World Wildlife Fund, U.S. At this time the grant is being administered by the Smithsonian Institution and because the AECAP has not received its "Persona Juridica" from the Government, this grant is at least temporarily being withheld. The current situation appears to be the result of several factors including: lack of knowledge on how to obtain funding or technical support; lack of experience

developing, implementing and managing even small-scale projects and therefore no credibility with donor agencies; and, limited ability to make the initial resource investments which are necessary to initiate new projects or make the necessary "connections" to gain support.

- There exists, among the PVOs only a very weak background knowledge in the technical approaches which are needed to resolve Panama's environmental problems. The majority of the members of the various organizations have become involved and active because they are trained scientists (biologists, agronomists, etc.) or civic-minded individuals. There is little question among these groups as to their long-term environmental goals. The difficulty lies in the fact that they have little experience and only very limited education in either determining what objectives must be achieved or how to achieve those objectives in order to accomplish the goals.

Federation of Panamanian PVOs

Over the past six months there have been particularly important developments in the process of establishing what could eventually be a Federation of most or all of Panama's environmental PVOs. On January 15, 1983, under the auspices of CECA and CIPA, 16 Panamanian groups met to discuss their project activities and consider the need for establishing what is preliminary being called the Fundación de Parques Nacionales y Medio Ambiente (FPNMA). Since the initial meeting 4 other groups have expressed interest in joining the FPNMA and others who have not yet

been approached by the Provisional Directors, expressed their interest during this study.

The efforts to establish this federation of conservation groups has continued at a relatively rapid pace since the initial meeting. The Provisional Directors have taken the preliminary steps necessary to create the legal entity of the federation. Within weeks the statutes of the organization should be approved by the Board of Directors and submitted to the Government.

The federation, as currently viewed by the Provisional Directors, will have three main objectives:

- to strengthen and assist in the development of an integrated system of National Parks and wildlife reserves;
- to promote environmental education activities; and,
- to promote scientific investigations which will lead toward the improved management of Panama's natural resources.

NEED FOR STRENGTHENING OF PANAMANIAN ENVIRONMENTAL PVOS

The previous sections have discussed the broad range of environmental problems which face Panama, the potential importance of PVJs in taking the actions which could move the country toward solving these problems and the status of environmental PVJs in Panama. In summary, the key points are:

- destruction of previously undisturbed wetland forests along the Atlantic seaboard and in the central part of Darién Province after spontaneous colonization by landless campesinos.

- deforestation at the rate of approximately 2.7% per year as a result of agricultural expansion into forested areas, with practically no reforestation taking place.
- rapid rates of erosion and deterioration of farmlands due to destruction of vegetative cover, grazing of cattle on steep slopes and poor soil conservation practices.
- adverse impacts on potentially important fisheries and marine resources through overuse of chemical pesticides, industrial pollution, poorly planned shrimp operations and destruction of mangroves.
- there appear to be a number of Panamanians interested in solving the NR/E problems but they are disbursed among numerous groups and wasting extremely limited resources.
- Panama's environmental PVOs are getting practically no financial or technical assistance from U.S. or international conservation and development agencies because they do not give an appearance of being active and effective. (The very limited interactions between Panamanian organizations and the U.S. based and international environmental PVOs is discussed in the section entitled "POTENTIAL ROLE OF U.S. BASED ENVIRONMENTAL PVOs IN DEVELOPING COUNTRIES".)
- Lack of sufficient technical capabilities to develop or implement necessary environmental education, impact assessment, inventory and mitigation programs.

Neither Panama's governmental agencies nor non-governmental

organizations have the institutional framework necessary to adequately deal with all of the country's environmental problems. What is needed to solve these problems is a unified effort which will bring the forces of the government, business and private environmental sectors to bear on the solution of these problems. Experiences in the U.S. and developing countries of Latin America indicate that the first step in achieving this goal is the development of one or more strong environmental PVOs in Panama.

POTENTIAL ROLE OF U.S. BASED ENVIRONMENTAL PVOs IN DEVELOPING COUNTRIES

The private sector environmental movement has been developing in the United States since the beginning of this century. However, the vast majority of the growth occurred during the past two decades, since the publication of Dr. Rachel Carson's book "Silent Spring". Literally hundreds of private, non-profit organizations have been developed during this time to take actions on local, regional, national and international issues.

This movement has been of critical importance in the development of the government structures which are working to solve environmental problems in the U.S. The U.S. Environmental Protection Agency (EPA) and the President's Council on Environmental Quality (CEQ) are two of the most recent and well-known examples. Both of these agencies were developed by the Federal Government as a direct response to actions and pressures from private environmental organizations.

The contribution of the private U.S. groups continues to be of

daily importance to the proper management of natural resources. The value of their work is expressed by the EPA in a recently released public service announcement (PSA). In this PSA, Jacques Cousteau, Chairman of the Cousteau Society, asks on behalf of the EPA, that private citizens and organizations continue to monitor the activities of the agency and assert their influence to assure the proper implementation of the laws enacted by Congress.

The geographical scope, environmental concerns and size of U.S. groups represent a tremendous range. The greatest numbers of organizations are small and locally based. In some cases these local groups are chapters of larger national organizations, however this does not imply that they are concerned with or active in national issues. The majority of their work revolves around their city or state and because of this geographical concern they can generally be expected to become involved in a broad range of technical areas, i.e. lobbying, establishing natural areas, water pollution, education, etc.

There are some 50-100 environmental organizations in the U.S. who conduct activities on a national-scale. During their growth and development these national groups have generally narrowed their scope of activities in an attempt to use all of their resources to resolve one type of problem. As a result, the national organizations usually have great depth in only one or two technical areas. For example, the Natural Resources Defense Council works practically only on the development of laws, monitoring their implementation and lobbying; while The Nature Conservancy exclusively uses its resources to establish natural

areas and never becomes involved in lobbying.

Twenty U.S. PVOs were invited to provide information on their activities and interests, to the USAID/Parama Mission, through a survey and meeting on April 5, 1983. Unfortunately, not all of these groups chose to participate, most presumably because they have not been and are not interested in becoming involved in international conservation activities. Appendix III presents summary descriptions of 10 of the organizations which completed the survey and participated or were otherwise well enough known by the investigator.

The activities of the U.S. environmental PVOs can, for convenience, be divided into several basic categories. These categories, which include both technical environmental programs and institutional infrastructure, can provide guidance for financial and technical assistance toward the development of a Panamanian PVO sector. For the purposes of this study, the categories considered are:

- environmental education
- lobbying and governmental monitoring
- establishing natural areas and biological reserves
- applied scientific investigations for NR/E management
- international conservation projects
- fund raising and membership development
- organization building and administration

The national, U.S. based PVOs represent a valuable resource base of technical knowledge and experience in this range of

activities. The technical and organizational capabilities of several of these PVOs, if combined with the potential represented by the Panamanian PVO sector, could effectively be brought to bear on the environmental issues of Panama.

PROPOSED PRIVATE SECTOR ACTIVITIES

The state of Panama's environment demands immediate actions to solve specific environmental problems. It is important, however, to approach these needs with a long-term view. Although it is possible that U.S. or international development agencies and environmental organizations could effectively implement some of these activities over the short-term, the deeply rooted socio-economic and development problems which face Panama will be more effectively and permanently solved through the efforts of Panamanians.

A private sector initiative which combines the environmental concern and growth potential of Panamanian PVOs with the strength and experience of U.S. PVOs could effectively attack these problems at the source. Using this approach it should be possible to both develop the institutional capabilities of the Panamanian PVOs and at the same time implement practical project activities.

OPERATING PLAN

The operating plan for this private sector initiative must be viewed as a multi-step and multi-year process. In order to

achieve the long-term goal of improving the management of Panama's NR/E, there is a need for several intermediate objectives. The first of these objectives is the building and strengthening of the Panamanian environmental PVO sector. As the project continues it should proceed through a process of building experience and program capability through the implementation of practical projects with clearly defined goals and objectives.

The operations can be divided in two major segments, the Organizational Strategy and the Development Strategy. The Organizational Strategy deals with the inner workings of the relationships between USAID, the U.S. based PVOs and the Panamanian PVOs. The Development Strategy involves the development and transfer of responsibility and project activities

Organizational Strategy

The structure and function of this private sector effort was designed to account for the following constraints within the Panamanian environmental PVOs:

1. Lack of experience developing, implementing or managing large scale programs.
2. Weakness in areas of necessary technical expertise, e.g. environmental education, natural resource inventories, etc.
3. Weakness in areas of organizational expertise, e.g. fund raising, accounting, etc.

4. Minimal experience and therefore credibility, with U.S. and international donor agencies and environmental organizations.

5. Lack of financial and technical resources to conduct projects.

In this plan, USAID would work directly with a consortium of U.S. based PVOs on the development and implementation of this initiative. The structure is presented schematically in Figure

The role of each of the participating groups and individuals would be as follows:

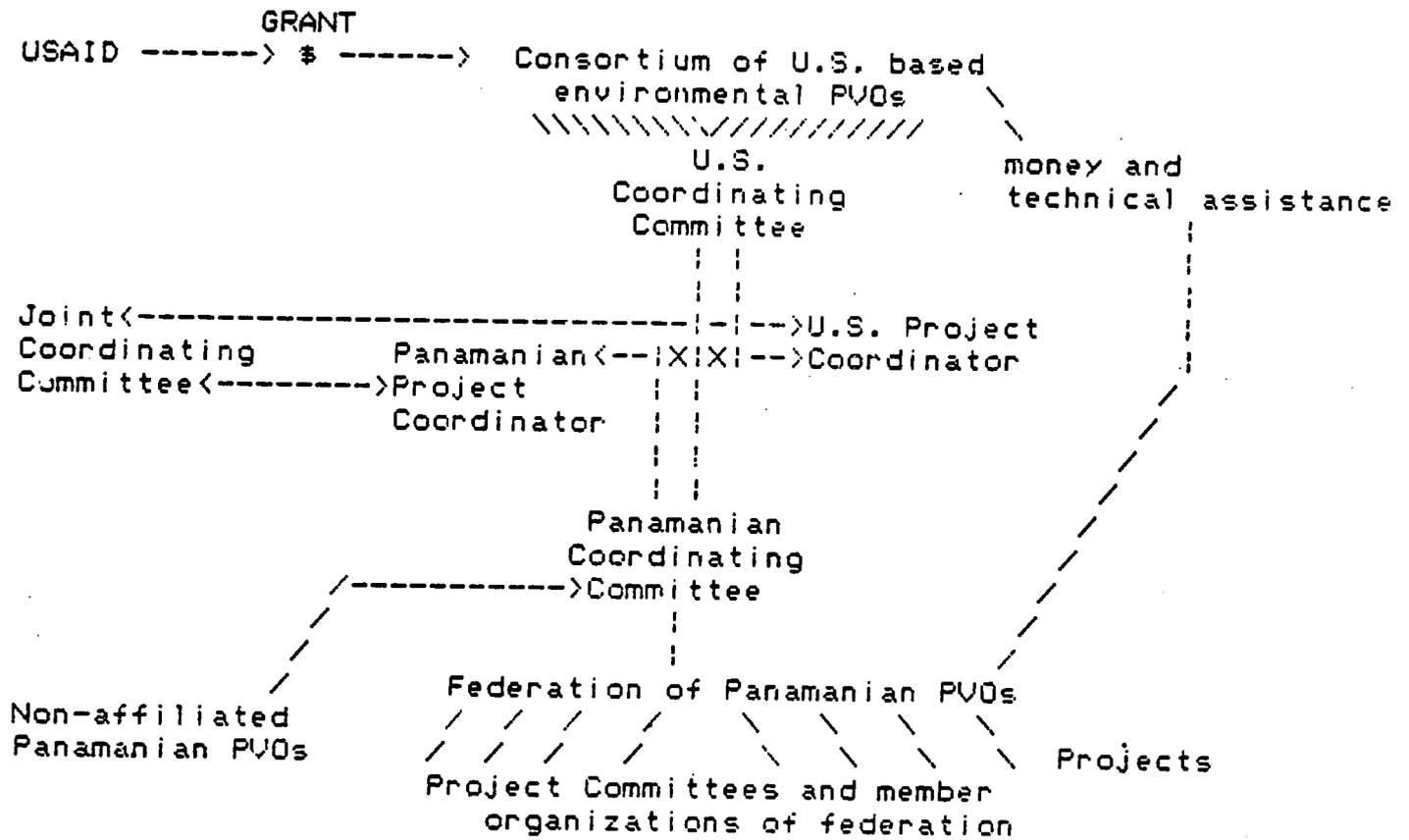
USAID - Provides the funding for the initiative, monitors activities and administers the program through the Consortium of U.S. PVOs.

Consortium of U.S. PVOs - Provide technical expertise and training in organization building (e.g. fund raising, administration, accounting, etc.) and technical environmental subjects (e.g. environmental education, natural resources inventories, legislation, lobbying, etc.). Conduct cooperative projects with Panamanian PVO sector. Provide assistance and advice for the planning, implementation and evaluation of small-scale demonstration projects conducted by Panamanians. Administer funds and coordinate activities with USAID.

This Consortium should be comprised of several of the U.S. representing the full array of technical and administrative expertise and experience. One of these organizations which has

Figure 1

Organizational Structure for
Private Sector Initiative



PVO status would administer the funds based on the priorities established and decisions made by the U.S. and Joint Coordinating Committees.

U.S. Coordinating Committee - Represents the Consortium and operates as a decision-making body to prioritize the activities and expenditures of the Consortium. Comprised of four individuals representing the lead organization in the U.S. Consortium.

U.S. Project Coordinator - This individual will be based in Panama and will be responsible for the day to day coordination of the project on-site. Works on a counterpart basis with the Panamanian Coordinator. Responsible for bringing to bear the resources and expertise of the members of the U.S. Consortium as needed on a project by project basis.

Panamanian Project Coordinator - Responsible on behalf of the Panamanian PVO for Coordinating their activities under the OPG. Will work on an equal basis with the U.S. Coordinator to channelize the technical assistance and resources from the U.S. Consortium to the projects in Panama.

Panama Coordinating Committee - Acts as the decision-making body which represents the Panamanian federation of PVOs. Interacts with the U.S. Consortium through the U.S. and Panamanian Project Coordinators and through the Joint Coordinating Committee.

Joint Coordinating Committee - Comprised of the members of both

the U.S. and Panamanian Coordinating Committees. Makes final decisions on the relative priorities of program activities during both the Cooperative Project and Demonstration Project Phases of the OPG. Responsible for monitoring the program activities and administration through both Project Coordinators.

Federation of Panamanian PVOs - Responsible for receiving and utilizing training and technical assistance. Coordinates activities of Panamanian PVOs. Working through the Coordinating Committees, establishes program priorities for the two Project phases of the OPG. Responsible for providing Panamanian technical expertise and counterpart activities during the Cooperative Project and Demonstration Project Phases.

This organizational strategy is designed to make the interchange of technical and financial resources as smooth and efficient as possible. It will be important to avoid the creation of an overburdening infrastructure which impedes the achievement of actual environmental projects. The structure must therefore allow as much flexibility as possible. For example, if a case arises where a Panamanian PVO which is not a member of the Federation has a valid project, they should be allowed to submit it to the Joint Coordinating Committee for consideration. In other words this structure must be managed as the means of achieving necessary environmental activities not a goal in itself.

Development Strategy

The Program should be focused on strengthening the Panamanian

PVOs through technical assistance and training, directed toward the three major areas of institutional development: programming, administration and fund raising. Concurrently, participants from the Panamanian PVO's should be educated regarding state-of-the-art NR/E policies, legislation, and programs proven successful elsewhere. The Panamanian PVOs should receive pragmatic field experience in the area of programming. This field experience should be developed in two phases, Cooperative Projects and Demonstration Projects. Finally, if the experiences with institution building, technical training and project implementation have been successful, USAID and other donor agencies should be approached for funds to continue and expand upon the project accomplishments of the this program.

In further detail, the Development Plan stages can be considered as follows:

1. Training and technical assistance. During this phase efforts will be concentrated on developing the infrastructure of the Panamanian PVO and building the institution. Areas of major emphasis will be administration, accounting, fund raising, membership development, budgeting, office management, etc. Additionally, during this phase an office will be established as the base of operations in Panama City.

2. Technical education. In preparation for the two project oriented phases of the program, internships, special courses and on-site advisors will be used to establish and strengthen technical expertise in the areas of environmental education, land

use planning, natural resource inventories, legal procedures, lobbying, etc.

3. Cooperative projects. Planning will begin for the implementation of cooperative projects during the final stages of the Technical Education Phase. These projects will involve the joint efforts of both the U.S. and Panamanian PVOs. The activities will be initiated once the underlying organizational infrastructure and technical training groundwork has been completed. The Joint Coordinating Committee will establish final priorities for cooperative projects. The objective of this Phase is to give the Panamanian PVOs an apprenticeship level of experience with project management and implementation before they begin to conduct projects independently.

4. Demonstration projects. This phase will begin when some or all of the demonstration projects are completed or producing satisfactory results. Small-scale projects (\$25,000 to \$40,000) will be proposed and planned by the regional and project committees within the Panamanian PVO. The Panama Coordinating Committee will select and prioritize a group of projects which will be presented to the Joint Coordinating Committee for approval and funding. The implementation and effectiveness of these projects must be carefully evaluated as they are being carried-out.

5. Project Expansion. When the demonstration projects are completed they should be thoroughly documented with a goal of seeking future funds for the most successful projects. There are

numerous examples of small demonstration projects being so successful that they are continued and expanded with further funding from USAID or other donor agencies. The development and widespread implementation of these nationally and locally important environmental activities is clearly the underling goal of this overall Development Strategy.

Advantages of this Operating Plan

This plan was developed specifically to account for the strengths and weaknesses of the Panamanian PVO sector and to resolve problems observed during the development of equivalent programs in other developing countries. As such it should prove to have several advantages, among them:

1. It accounts for the fact that at the present time none of the Panamanian environmental PVOs has had experience managing or conducting a large-scale organization or program. As previously discussed the budgets of these PVOs averages less than \$1,000 per year.
2. It recognizes that future programs, if they are to be successful, must be staffed and operated by trained and experienced Panamanian personnel.
3. Programing, administrative and financial responsibility are developed and transfered to the Panamanian counterparts slowly but surely. In this way it should be possible to avoid overwhelming these PVOs and personnel with funds and responsibilities which they have never had before and can't yet

comprehend in real terms. At the same time as their experience and understanding grow they will gain the satisfaction of seeing the responsibilities being transferred to themselves.

4. Administration and programs should be more effective and cost efficient because the PVOs will have technical assistance available on a regular basis and they will be learning on the job with directed guidance.

5. The involvement of foreign technical expertise will in many cases open avenues for program development and other activities which might not otherwise be available.

6. The success rate for the cooperative programs can be expected to be higher than if the PVOs had no technical assistance, they should therefore gain credibility and self confidence about their abilities more rapidly than if they were completely on their own.

7. The resources and expertise of several U.S. based PVOs can be united and brought to the Panamanian groups in a more efficient and coordinated approach than has been seen in other developing countries. Additionally, this should provide a means of demonstrating to the U.S. based PVOs the need for and realities of conducting conservation projects in developing countries.

PROGRAMMING PLAN

The development and implementation of activities under both the Cooperative and Demonstration Project Phases of the program must be directed at resolving specific environmental problems and

obstacles in Panama (as discussed in earlier sections). A discrete set of criteria should be applied when the Joint Coordinating Committee is establishing the priorities for the cooperative and demonstration projects. Some of these criteria are: capacity for resolving one or more of the priority problem areas; potential for increasing the technical capabilities and infrastructure of the PVO; appropriateness of the activity as a private vs. public sector activity; efficiency in use of organizational resources (funds and personnel); and, temporal priority and sequencing in relation to other potential activities.

In priority order, the specific areas for the development of the programs should include:

1. Implementation of educational and public awareness campaigns to inform those involved in resource use and management, from the campesino through the general public to government agency staff, regarding the proper role of resource management technologies and conservation practices in sustaining the long-term stability of the country's economy. Including teaching about alternative approaches to use and development of soil, forest, wildlife and other natural resources. Examples of types of projects that could be developed include: annual environmental campaign; resources management and education bulletin; school curricula development; normal school teacher training; videotape, slide/tape and radio shows; publication on wildlands of Panama; workshops with hunting clubs; National Environmental Seminar; etc.

2. Promotion of the development of Panamanian expertise in the environmental sciences. Examples of projects that could be developed include: technical training workshops for government agencies; short courses in the U.S. for NR/E management teams (similar to the course conducted by Brian Houseal in 1982); exchange programs which give professionals from Panama the opportunity to visit appropriate U.S. organizations and then bring U.S. counterparts back to Panama to work with them on specific projects; etc.

3. Creation of cooperative programs with Government and other non-governmental agencies to achieve improved planning, decision-making and implementation of forestry management, land-use and development programs. Examples of projects that could be developed include: creation of a natural resources data center; an interinstitutional workshop on land use policy; demonstration reforestation/ rural development programs using native species; etc.

4. Motivation of Government and non-governmental agencies to take appropriate actions to achieve the proper management of Panama's natural resource base. Examples of projects that could be developed include: mount a public pressure/lobbying campaign to achieve the proper management of one or more national parks; develop a "white paper" summary of the status of Panama's environment; coordinate meetings between appropriate individuals, private organizations and government agencies regarding specific development planning issues, e.g. rural roads; etc.

5. Initiation of investigations into the current status of selected natural resource values not being currently being considered by government agencies. Examples of projects that could be developed include: development of species or habitat specific inventories of wildlife and forest resources; establishment of a native species propagation center; etc.

6. Acting as the catalyst for and in some cases the coordinator of projects and assistance from international environmental organizations and donor agencies with the initial goal of building technical and scientific capability in Panama to solve resources management problems. These activities will develop as the Panamanian PVOs gain credibility and experience with the international sector.

SCHEDULING

Implementation of the first 4 development stages of this project can be expected to require 3-4 years. The scheduling and amount of time devoted to each of the stages will in part be dependent upon the existing knowledge and capabilities of the individuals on the Panamanian side of organizational structure (Figure 1).

Estimated times required to achieve each development stage are:

1. Training and technical assistance to establish organizational infrastructure: 6-9 months, including both time in the U.S. and when the Panamanian trainees have returned home and are still working with U.S. counterparts.

2. Technical education: 6-12 months, including both time in the U.S. and when the Panamanian trainees have returned home and are still working with U.S. counterparts.
3. Cooperative projects: 12-18 months, recognizing that some of these projects may be continued and/or expanded as demonstration projects.
4. Demonstration projects: 12 months, recognizing that some of these projects may be expanded as large-scale projects, using other sources of funding, after this project is completed.
5. Project expansion: continuing after the first 4 stages are completed.

STAGE	PROGRAM MONTH
	1--3--6--9--12--15--18--21--24--27--30--33--36----->
1	xxxxxxx
2	xxxxxxxxxxx
3	xxxxxxxxxxxxxxxxxxxxx
4	xxxxxxxxxxxxxxxxxxxxxxxxx
5	xxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxx>

It should be possible to phase-out the U.S. Project Coordinator within 1-2 months of the initiation of the Demonstration Project stage, i.e. within 24-26 months of the initiation of the program. By that time the Panamanian PVOs should have obtained a full understanding of how to work with the U.S. PVOs and also should have achieved independent capabilities for managing the Panama based infrastructure and organization.

BUDGETING

Developing a detailed budget for this proposed private sector initiative was not one of the goals of this study. It is believed, however, that some preliminary estimates of costs of the various stages and recommendations for relative rates of expenditure in the Cooperative and Demonstration Project Stages could be of use in the USAID decision-making process.

The actual budgeting process should take into account the value of a "matching fund" approach which would get the Panamanian PVOs involved, at an early stage, in fund raising activities and additionally, would make them feel more like a part of the overall program including a responsibility for wise management of funds. The U.S. PVOs would probably also be willing to seek matching funds and make contributions of either cash or "in-kind" services, or both.

The budget estimates and recommendation by Development Stage are as follows:

Stage 1 - Training and Technical Assistance to Establish Organizational Infrastructure

Office rental in Panama City	36 months @ \$700/month	\$25,200
U.S. Project Coordinator*	26 months @ \$3,500/month (\$42,000 administrative, \$49,000 project related)	\$91,000
Panama Project Coordinator*	36 months @ \$1,500/month (\$18,000 administrative \$36,000 project related)	\$54,000
Secretary	36 months @ \$1,000/month	\$36,000

Clerk/Assistant	36 months @ \$500/month	\$18,000
Management training at U.S. PVO	travel 2 @ \$1,000/person room/board 2 for 2 months @ \$600/month/person	\$ 4,400
Joint Coordinating Committee meetings in Panama	5 meetings during program 4 traveling @ \$650/person 5 days per diem \$400/person	\$20,800
Project Coordinator travel	2 trips to U.S./year/coord. travel @ \$650 10 days per diem \$800/person	\$17,400
Office equipment and supplies		\$ 5,000
TOTAL*		\$271,800

*Both the U.S. and Panamanian Project Coordinators will be expending only the first 9-12 months on infrastructure establishment, after that time their costs should be considered project related, not administrative. \$85,000 of this Total is therefore project not administrative expense.

Stage 2 - Technical Education and Assistance

Estimates for this stage are based on the following assumptions: individuals undergoing training will be based in the U.S. for 2 months; one U.S. counterpart will return to Panama with each trainee to work for one month on the development and planning of a particular demonstration project; and, the U.S. counterpart will return to Panama two times, for 2 weeks each trip, during the implementation stages of the demonstration project to provide continuing technical assistance. This particular model set of assumptions will need to be modified depending on the particular technical subject area. The conditions represented here are presented only as a basis for preliminary estimates.

Technical training at U.S. PVO	travel @ \$1,000 room/board 2 months @ \$600/month training fees/expenses @ \$2,000/month	\$ 6,200
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For the purpose of this estimate, training will be given in the following subjects, to the number of individuals indicated in parentheses: environmental education (3); lobbying and

governmental monitoring (1); establishing/managing natural areas and biological reserves (2); and, applied NR/E inventory and management studies (3)

**The cost of the U.S. segment - 9 trainees @ \$6,200 \$55,800

Considering that one U.S. counterpart would probably be sufficient in each of the 4 training areas, the Panama segment of the counterpart technical training in Panama would include:

Initial trip -	travel @ \$650	
	salary reimbursement \$3,000/month	
	per diem 30 days @ \$80/day, \$2,400	
Total per U.S. counterpart		\$ 6,050

Follow-up trip 1 -	travel @ \$650	
	salary reimbursement, 2 weeks @ \$3,000/month	
	per diem 15 days @ \$80/day, \$1,200	
Total per U.S. counterpart		\$ 3,350

Follow-up trip 2 -	travel @ \$650	
	salary reimbursement, 2 weeks @ \$3,000/month	
	per diem 15 days @ \$80/day, \$1,200	
Total per U.S. counterpart		\$ 3,350
Total per U.S. counterpart for in Panama training		\$12,750

**4 U.S. counterparts		\$51,000
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TOTAL	\$106,800
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Stage 3 - Cooperative Projects with U.S. Counterpart PVOs

Considering that the U.S. PVOs will be directly involved in the development and implementation of the cooperative projects during this stage, it should be possible to conduct several relatively large-scale efforts. An expenditure in the range of \$200-300,000 could be successfully managed in this Stage.

While there is no way to estimate the specific projects which will be proposed by the Joint Coordinating Committee, it is reasonable to provide general guidelines for the relative amounts of expenditure in each technical area. The relative importance and priority for these areas of activity is based on discussions during the course of this study.

Recommended percentages of Cooperative Project expenditures are:
 environmental education (40%)
 applied NR/E inventory and management studies (30%)
 establishing/managing natural areas and biological reserves (20)
 lobbying and governmental monitoring (10%)

TOTAL \$250,000

Stage 4 - Independent Demonstration Projects by Panamanian PVOs

The technical capabilities, infrastructure and experience developed in Stages 1, 2 and 3 will without a doubt be strong enough to enable the Panamanian PVOs to develop and implement a wide variety of projects. It will be important to avoid overwhelming the developing Panamanian PVO sector.

In this Stage, it is recommended that each individual demonstration project be limited to the range of \$25-40,000. The projects should be dispersed through the eastern, central and western provinces of Panama. If possible it would be valuable to have several demonstration projects in each region, representing a range of different activities. Implementation of 3-4 such projects in each of the regions will probably not strain the Panamanian PVOs but it will be important to observe their progress. If they have not progressed to a stage where they can effectively manage this magnitude of project effort it may be wise to utilize a portion of these funds for further cooperative projects.

TOTAL \$400,000

SUMMARY BUDGET

STAGE 1	\$271,800
STAGE 2	\$106,800
STAGE 3	\$250,000
STAGE 4	\$400,000

TOTAL \$1,028,600

These levels of expenditure should allow the joint efforts of the Panamanian and U.S. PVOs to develop the institutional infrastructure and technical knowledge necessary to make significant contributions toward the improved management of Panama's natural resources and environment. The Panamanian private sector should be enabled to adequately deal with the broad range of environmental issues which face their nation in the context of the development needs which will be facing it over the next decades.

APPENDIX I

CONTACTS MADE DURING PANAMA PVO STUDY
(in chronological order)

NAME/DATE	POSITION/ORGANIZATION
Spencer B. Beebe, staff 3/23	Director, International Program The Nature Conservancy
Cliff Curtis, Esq. 4/5	Attorney Center for Law and Social Policy
David Runnals 4/5	Director International Institute for Environment and Development
Fran Lipscomb 4/5	Wildlife Affairs Office National Audubon Society
Barbara Bramble 4/5	Director, International Affairs National Wildlife Federation
Phoebe Lansdale 4/5	Programs Officer Pan American Development Foundation
Jane Deeks 4/5	Volunteers in Technical Assistance
R. Michael Wright, Esq. 4/5	Vice President World Wildlife Fund, U.S.
James Hester 4/5	Environmental Officer LAC/DR, USAID
Donald Drga 4/5	Future Assist. Ag. Devel. Officer USAID/Panama
Helen Vukasian 4/6	Rural Training Programs CODEL, Inc.
Mac Chapin 4/9	Inter-American Foundation
Dwight L. Walker 4/11	Assist. Agricultural Development Officer USAID/Panama
Jesus Saiz 4/11	Environmental Officer USAID/Panama
Buff MacKensie 4/11	Capital Development Officer USAID/Panama

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Brian Houseal 4/11	Technical Consultant in Wildlands Manag. Dept. of National Parks and Wildlife RENARE
Eramso Vallester P. 4/11	Director Dept. of National Parks and Wildlife RENARE
Dr. Sergio Castillo 4/11	Director RENARE
Dr. Ina Rubinoff 4/12	Director Smithsonian Tropical Research Institute
Dr. Nicholas Smythe 4/12	Conservation Affairs Office Smithsonian Tropical Research Institute
Prof. Gilberto Ocaña 4/12	Smithsonian Tropical Research Institute
Julio César Jaén 4/13	Asociación Estudiantil para la Conservación Ambiental de Panamá (AECAP)
Jorge Ventocilla 4/13	Consejo Internacional para la Protección de las Aves (CIPA)
Dario Tovar 4/14	Provisional Executive Director Fundación de Parques Nacionales y Medio Ambiente
Yariela Hidalgo 4/14	Member Fundación de Parques Nacionales y Medio Ambiente
Dr. Nathan Gale 4/14	Founder Sociedad Audubon de Panamá
Samuel Bern 4/18	Director Grupo de Tecnología Apropriada
Francisco Delgado 4/19	Provisional President Fundación de Parques Nacionales y Medio Ambiente
René Chang 4/19	Member Centro de Estudios Científicos Aplicados
Donaldo Sousa 4/19	Legal Advisor Fundación de Parques Nacionales y Medio Ambiente
Sarite Harkness 4/19	Representative Club de Seroptomistas y el Consejo de Clubes Cívicas

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Francisco Cornejo 4/20 Retired, key individual	Founder Sociedad Amigos de la Naturaleza in founding of Forest Service
Guillermo Naranjo 4/21	President, PANAJURU, Chiriqui Board of Directors Sociedad Amigos de la Naturalez, Chiriqui
Lic. Roque Lagrotta 4/21	Director Centro Regional Universitario
Prof. Heriberto Ríos 4/21	Provincial Director Educación Primaria, Chiriqui Member, Comisión Provincial de Protección Ambiental
Prof. Eunice de Morris 4/21	Coordinator Biology Department University of Panama, Chiriqui
Ing. Generoso Atencio 4/21	Director Oficina de Asuntos Ambientales Ministerio de Obras Publicas, Chiriqui Member, Comisión Provincial de Protección Ambiental
Prof. Paulina Castillo 4/21	Professor Biology Department University of Panama, Chiriqui
Ing. Carlos Calvo 4/21	Technical Supervisor PANAJURU
Prof. Demetrio Miranda 4/21	Professor Biology Department University of Panama, Chiriqui President, Instituto de Investigación y Manejo Ambiental Member, Comisión Provincial de Protección Ambiental

APPENDIX II

ANNOTATED LIST OF PRIVATE NATURAL
RESOURCES AND ENVIRONMENT GROUPS IN PANAMA

Asociación de Ingenieros Forestales de Panamá
(newly formed in Chiriquí)

Asociación de Preservación Ecológica Chiricana
(quiet, youth oriented, local)

Asociación Ecológica de El Valle
Dr. José Angel Noriega 64-3411
Asociación Ecológica de El Valle
Apartado 5246
Zona 5, Panamá

(Still alive, NS; lasted for 10 years but died
very suddenly, JJ)

Asociación Estudiantil para la Conservación Ambiental de Panamá
(AECAP)

Julio César Jaén 22-0211, 52-5539
Asociación Estudiantil para la Conservación Ambiental
de Panamá (AECAP)
Apartado 2072 c/o STRI
Balboa, Panamá

(Going strong, probably the most effective, NS)

Asociación Nacional de Técnicos Forestales de la Republica de
Panamá (ANTEFORP)

Tec. Alvaro González 22-4841
Asociación Nacional de Técnicos Forestales de la
Republica de Panamá (ANTEFORP)
Apartado 10774
Estafeta Universitaria
Panamá

(interacts well with others but exists only on
paper and does little work)

Asociación Nacional para la Conservación de la Natureleza (ANCON)

Dr. Esquivel
Asociación Nacional para la Conservación de la
Natureleza (ANCON)
Apartado 204
Panamá 1, Panamá

(not significant, probably inactive)

Asociación Panameña de Energía Solar

Ing. Isaac Castillo 62-6222, 69-3272
Asociación Panameña de Energía Solar
Apartado 8578
Zona 5, Panamá

(poorly known, appears to be interested in
technology issues)

Asociación Panameña de Orquideología

Sra. Amelie de Morales 61-9849
Asociación Panameña de Orquideología
Apartado 6-3504
El Dorado, Panamá

(not interested in conservation of natural
resources, tries to get campesinos to sell
orchids)

Asociación para la Preservación Ecológica

Jaime Luis Hidalgo
Asociación para la Preservación Ecológica
La Concepción, Chiriquí, Panamá

(not known)

Asociación Universitario de Orquideología

(active, youth oriented)

Centro de Ciencias del Mar y Limnología

(not known)

Centro de Estudios Científicos Aplicados (CECA)

Dr. Francisco Delgado 22-7558
Centro de Estudios Científicos Aplicados (CECA)
Apartado 9A-76
Panamá, Panamá

Sr. René A. Chang 96-2940
Calle Pacífico Ríos, Casa 4291
Chitré, Herrera, Panamá

(both leaders are concerned and active, same
individuals as those involved in CIFA (ICBP))

Ciclismo Recreativo

Sr. Alberto Fajardo 23-0599
Ciclismo Recreativo
Apartado 5467
Panamá 3, Panamá

(poorly known, apparently recreational outing
group)

Circulo Conservacionista de Panamá

Angelis Ruiz
c/o Smithsonian Tropical Research Institute

(newly formed PVO, good and active leader)

Circulo Herpetológico

Fernando Urat
Circulo Herpetológico
Apartado 2072 c/o STRI,
Balboa, Panamá

(active and effective in sea turtle issues)

Club de Jardinería de Panamá

Club de Jardinería de Panamá
Apartado 3406
Zona 4, Panamá

(typical equivalent of U.S. based garden club)

Club de Plantas y Flores

Sra. Elena Guardia de Lombardo 22-0211, 52-5669
Club de Plantas y Flores
Apartado 2072 c/o STRI
Balboa, Panamá

(typical equivalent of U.S. based garden club)

Consejo Internacional para la Protección de las Aves (CIPA)

Francisco Delgado
Consejo Internacional para la Protección de las Aves
(CIPA)
Apartado 2072 c/o STRI
Balboa, Panamá

(working only in Chitre, practically non-existent
in Panama City)

Fundación de Parques Nacionales y Medio Ambiente

Dario Tovar 69-3979, 69-9482

(newly forming group, a consortium of many other
groups)

Grupo Ambiental Santero

(quiet, local activities only, very small)

Grupo Conservacionista Rural de los Pozos

(quiet, local activities only, very small)

Grupo de Buceo - Panamá

Sr. Omar Moreno
Grupo de Buceo - Panamá
Apartado 1781
Zona 1, Panamá

22-8075

(skin divers group, not yet interested in conservation)

Grupo de Tecnología Apropriada

Ing. Samuel Bern
Grupo de Tecnología Apropriada
Apartado 8046
Panamá 7, Panamá

61-7659, 61-3774

(active but only interested in appropriate tech, not natural resources and environment)

Grupo Scout de Panamá

Grupo Scout de Panamá
Entrega General
Zona 1, Panamá

(once strong but weakening rapidly)

Instituto de Investigación y Manejo Ambiental

Prof. Demetrio Miranda

(probably the strongest group in Chiriqui, doing radio shows which are used nationally)

Movimiento Conservacionista de Llano Grande de Océ

(quiet, small, local)

Organización Protectora de la Flora y Fauna (OPDEFF)

Lic. Carlos Iglesias
Organización Protectora de la Flora y Fauna (OPDEFF)
Centro Regional Universitario de David
Facultad de Agronomía
Casilla 37
David, Chiriquí, Panamá

(Iglesias is active but group may not be)

Sociedad Amigos del Arbol

Sr. Bladimiro Ferra
Sociedad Amigos del Arbol
Entrega General
David, Chiriquí, Panamá

(7)5-2384

(not known)

Sociedad Panameña de Malacología

(scientific interests only to date, future potential)

Sociedad Protectora de Animales

Srta. Rita Arosemena 25-6323
Sociedad Protectora de Animales
Apartado 2568
Zona 9A, Panamá

(only one woman, granddaughter of a president, interested in humane issues only)

Union de Accion Eco'logica (UNACE)

Sra. Mariela de Méndez 23-9296, 64-6635
Prof. Belisario González
Union de Accion Ecologica (UNACE)
Apartado 7-98
Zona 1, Panamá

(poorly known, may be no longer active)

Service clubs that have demonstrated an interest in getting involved in NR/E problems:

Organización de Grupos Cívicos

Club Soroptimista de Panamá
Sarita Harkness

Club 20/30

Club de Leones

Club Rotano

Sociedad Amigos de la Naturaleza (SANA)

Dr. Ana Hernández de Pittí 22-8882
Sociedad Amigos de la Natureleza
Apartado 2694
Zona 3, Panamá

(Still has incorporation papers but otherwise inactive)

Sociedad Amigos de la Natureleza de Chiriquí (SANACH)

Prof. Demetrio Miranda (7)5-4130
Sociedad Amigos de la Natureleza de Chiriquí (SANACH)
Apartado 771
David, Chiriquí, Panamá

(dynamic and enthusiastic group, activities revolve around Dr. Miranda, as mentioned in Instituto de Investigación y Manejo Ambiental)

Sociedad Audubon de Panamá

Sra. Gladys de Harrington 23-4831
Dr. Nathan Gale
Sociedad Audubon de Panamá
Apartado 2026
Balboa, Panamá

(One of the most active groups in the country, starting to integrate in Panamanians)

Sociedad de Investigaciones Biológicas de la Universidad de Panamá (SIBUP)

Sr. Ernesto Lasso de la Vega
Sociedad de Investigaciones Biológicas de la
Universidad de Panamá (SIBUP)
Apartado 63841
El Dorado, Panamá

(infrequently active, mainly biologists interested in conservation, important possible scientific resource)

Sociedad de Investigaciones Biológicas de la Universidad de Panamá, Capitulo de Chiriquí (SIBUP - Chiriquí)

Sociedad de Investigaciones Biológicas de la
Universidad de Panamá, Capitulo de Chiriquí
Centro Regional Universitario de David
Facultad de Agronomía
Casilla 37
David, Chiriquí, Panamá

(poorly known, may have dissolved when Carlos Iglesias left)

APPENDIX III

SUMMARY DESCRIPTIONS OF INTERESTS, RESOURCES, EXPERIENCES AND ACTIVITIES OF U.S. BASED ENVIRONMENTAL PVOs

Information contained in this appendix is based on survey forms and discussions which were undertaken with a cross-section of U.S. based environmental PVOs, as well as the personal knowledge of the investigator. Descriptions are also provided in a few cases where a PVO did not complete the survey but the investigator had sufficient personal knowledge to provide the necessary information. No descriptions are presented in the cases where no survey was completed and there was insufficient background information available.

These data are intended to provide the USAID/Panama Mission with guidance regarding the range of capabilities available from the U.S. PVOs. This summary is not and should not be construed as an all inclusive list of either all the U.S. based environmental PVOs or their organizational capabilities.

The following organizations were invited to participate in the survey of U.S. based environmental PVOs and the subsequent discussions, however not all chose to participate.

American Forestry Association (AFA)
American Museum of Natural History (AMNH)
Animal Research and Conservation Center (ARC)
CARE, Inc. (CARE)
Center for Law and Social Policy (CLSP)
CODEL, Inc. (CODEL)
Defenders of Wildlife
Global Tomorrow Coalition (GTC)
International Institute for Environment and Development (IIED)
Massachusetts Audubon Society (MAS)
National Audubon Society (NAS)
National Wildlife Federation (NWF)
Natural Resources Defense Council (NRDC)
The Nature Conservancy (TNC)
New York Zoological Society (NYZS)
Pan American Development Foundation (PADF)
RARE, Inc. (RARE)
Sierra Club, International Office8 (SC)
Volunteers in Technical Assistance (VITA)
World Wildlife Fund, U.S. (WWF)

ORGANIZATION: Animal Research and Conservation Center (ARC)

MAJOR CONTACT ON
INTERNATIONAL ACTIVITIES: Dr. Archie Carr III
Assistant Director
Bronx Zoo
Bronx, NY 10460
(212) 220-5155

(no survey completed)

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: Scientific research which can be directly applied to the conservation of animal species which are in danger of extinction.

MAJOR ACTIVITIES OF ORGANIZATION: Conduct and funding of applied biological research which will promote the proper management of animal species threatened with extinction.

INTERNATIONAL ACTIVITIES: ARC is carrying-out a large number of research projects throughout the world. Additionally, they have provided the Costa Rican National Park Service with a grant to assist with the development of the Parks Interpretation Unit within the Service.

ACTIVITIES IN PANAMA: none

NUMBER OF PROFESSIONAL STAFF WORKING
ON INTERNATIONAL ACTIVITIES (APPROXIMATE): 20+, some supported through grants from ARC.

YEARS OF ORGANIZATIONAL EXPERIENCE
WORKING IN LATIN AMERICA (APPROXIMATE): 4
ARC has been in existence for 4 years, prior to that time equivalent efforts were made directly by the Bronx Zoo.

ORGANIZATION: Global Tomorrow Coalition (GTC)

MAJOR CONTACT ON
INTERNATIONAL ACTIVITIES: Donald R. Lesh, Executive Director
1525 New Hampshire Avenue, NW
Washington, D.C. 20036
(202) 328-8222

(no survey completed)

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: At this time, not involved directly in international activities. Actions only through members of GTC.

MAJOR ACTIVITIES OF ORGANIZATION: To provide coordination of the activities of U.S. based environmental PVOs related to the implementation of the recommendations made in the "Global 2000 Report to the President".

INTERNATIONAL ACTIVITIES: none

ACTIVITIES IN PANAMA: none

NUMBER OF PROFESSIONAL STAFF WORKING
ON INTERNATIONAL ACTIVITIES (APPROXIMATE): none

YEARS OF ORGANIZATIONAL EXPERIENCE
WORKING IN LATIN AMERICA (APPROXIMATE): none

ORGANIZATION: International Institute for Environment and Development (IIED)

MAJOR CONTACT ON INTERNATIONAL ACTIVITIES: Dr. Stephen Berwick, Director
EPM Program
International Institute for Environment and Development (IIED)
1319 F Street, NW, Suite 800
Washington, D.C. 20004
(202) 462-0900

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: Respond to the growing demand from developing countries for assistance in rapidly identifying expertise necessary to address a wide range of environmental and natural resource management problems. Provide short and medium term technical expertise on environmentally-oriented projects or for environmental aspects of emerging development projects. Assist in the development of national conservation strategies in selected developing countries. Improve the state-of-the-art in developing country natural resource planning and management through the publication of technical and policy papers on environmental topics.

MAJOR ACTIVITIES OF ORGANIZATION: Technical assistance for use of USAID Missions, Regional Bureaus, and Central Offices with main areas of focus on: environmental policy, legislation, education and institutional development, natural resource inventories and assessments, and natural resources management.

INTERNATIONAL ACTIVITIES: This program is newly initiated. IIED is in the process of developing a roster for the technical experts which USAID Missions might require.

a. Providing, through short term contract, technical assistance to USAID/Honduras, for the development of an OPG for the Honduran Ecological Association.

b. Providing, through short term contract, technical assistance to USAID/Panama, for the development of an OPG for a private sector initiative in natural resources and the environment.

ACTIVITIES IN PANAMA: See b above.

NUMBER OF PROFESSIONAL STAFF WORKING ON INTERNATIONAL ACTIVITIES (APPROXIMATE): n/a

YEARS OF ORGANIZATIONAL EXPERIENCE WORKING IN LATIN AMERICA (APPROXIMATE): n/a

ORGANIZATION: National Audubon Society (NAS)

MAJOR CONTACT ON

INTERNATIONAL ACTIVITIES: Fran Lipscomb
National Audubon Society
645 Pennsylvania Ave. SE
Washington, D.C. 20003
(202) 547-9009

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: To alert NAS members to the need for taking part in resolving the globally inter-related, long-term problems of population growth, depletion of non-renewable resources, environmental degradation and harmful impacts of unsustainable development. NAS concerns include: biological diversity, stabilization of population, foresight capabilities, biological effects of nuclear war, sustainable agriculture and development. Objectives of this effort are; membership education, research, policy development and public education.

MAJOR ACTIVITIES OF ORGANIZATION: The NAS is one of the largest private conservation organizations in the U.S. The vast majority of its activities are directed at education, lobbying, policy research and development, and scientific research.

INTERNATIONAL ACTIVITIES: These activities are conducted by staff in addition to their other responsibilities for national affairs.

a. Participating in governmental and non-governmental strategy on whale protection in the International Whaling Commission. Monitoring of international activities concerning whales.

b. Promoting protection of endangered and threatened species from over-exploitation of wildlife trade by recognizing achievements of law enforcement agents and seeking increased funding for enforcement agencies.

c. Helping to establish a worldwide information system on agricultural pesticides, toxic wastes and other dangerous substances.

d. Supporting education programs, in U.S., aimed at limiting erosion and loss of farmland.

e. Participating in the preparation of a wildlife protocol to the Convention on the Protection and Development of Marine Environment of the Wider Caribbean Region

f. Planning an education and research program in the Americas to deal with the problem of migratory species.

g. Planning a program of publications on the conservation of the living resources in the Antarctic.

NAS continued

ACTIVITIES IN PANAMA: none

NUMBER OF PROFESSIONAL STAFF WORKING
ON INTERNATIONAL ACTIVITIES (APPROXIMATE): 1-2
No individual is working full-time on international activities,
several are making part-time efforts.

YEARS OF ORGANIZATIONAL EXPERIENCE
WORKING IN LATIN AMERICA (APPROXIMATE): Some of the
individual staff members have experience but the organization as
a whole has devoted itself to U.S. issues.

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ORGANIZATION: National Wildlife Federation (NWF)

MAJOR CONTACT ON
INTERNATIONAL ACTIVITIES: Barbara J. Bramble, Director
National Wildlife Federation
1412 Sixteenth St., NW
Washington, D.C. 20036
(202) 797-6800

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: Wise management and use of natural resources; conservation of biological diversity, fish and wildlife habitat; promotion of sustainable agriculture, forestry, fisheries and industries.
a. Reform of U.S. policies and actions which affect natural resources in developing countries. b. assisting the growth and development of emerging conservation movements in selected developing countries. c. Education of U.S. members and general public on the interconnections between resource conservation problems here (in U.S.) and abroad.

MAJOR ACTIVITIES OF ORGANIZATION: The NWF is the largest private conservation organization in the U.S. The vast majority of its activities are directed at education of the public, in the U.S., through magazines, school education packets, and other educational resource materials. In addition they conduct a variety of conservation camps and outing programs.

INTERNATIONAL ACTIVITIES: A few of the individuals on the staff have been involved in international activities over the past several years. In 1981 NWF decided to become more involved in international affairs and hired a program Director. This program is at an early stage and unfortunately has not gained wide-spread support within NWF.

- a. Organizing efforts of U.S. groups in Washington to deal with pesticide export, misuse and abuse issues; helping to develop Latin American Section of worldwide Pesticide Action Network.
- b. Investigating potential sites to promote "eco-development" projects, also investigating the financial incentives promoting deforestation.
- c. Communicating with other groups by distributing NWF publications to a network, to initiate adaptations for local use.
- d. Developing a conservation education project in cooperation with the African Wildlife Leadership Foundation.
- e. Educating U.S. members of NWF about international conservation issues through magazines. Published one issue of children's magazine, "Ranger Rick" in Spanish for use in SW U.S. and evaluating the potential for co-producing a locally adapted periodical for children in Central America.
- f. Participating in wildlife management training by assisting

NWF continued

with the Spanish translation of the "Wildlife Management Techniques Manual" and participating in the U.S. Fish and Wildlife Service's Refuge Management Training Course.

ACTIVITIES IN PANAMA: None

NUMBER OF PROFESSIONAL STAFF WORKING
ON INTERNATIONAL ACTIVITIES (APPROXIMATE): 1 plus interns

YEARS OF ORGANIZATIONAL EXPERIENCE
WORKING IN LATIN AMERICA (APPROXIMATE): 1 1/2

ORGANIZATION: The Nature Conservancy (TNC)

MAJOR CONTACT ON

INTERNATIONAL ACTIVITIES: Spencer B. Beebe, Director
The Nature Conservancy
International Program
1785 Massachusetts Ave., NW
Washington, D.C. 20036
(202) 483-0231

(no survey completed)

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: The preservation of biological diversity through the protection of significant examples of ecological resources and natural areas. TNC achieves protection through a three step process of identification, acquisition and management of natural areas. The objectives of TNC's International Program include providing: training and technical assistance toward the development and strengthening of conservation organizations in developing countries; expertise in data management and the creation of parks and protected areas; and, training in proper stewardship (management) of protected areas.

MAJOR ACTIVITIES OF ORGANIZATION: Over the past 30 years TNC has acquired over 1,000 natural area reserves. They currently own and manage approximately 700 of these areas, the remainder having been transfer to the protection of government agencies and other conservation organizations. As a means of improving the protection of biological diversity, TNC has developed an ecological resources inventory technology called the Natural Heritage Program. Over the past 9 years Heritage programs have been developed in some 27 of the United States. TNC has demonstrated volunteer and staff expertise in the management of the natural areas which it owns. Additionally, TNC has developed and worked with a wide variety of legal mechanisms which can be used to set-aside important ecological assets.

INTERNATIONAL ACTIVITIES: In recent years the International Program has focused on providing technical assistance for the development of private conservation organizations, through assistance with fundraising and organization. Also, providing technical assistance toward the development of data gathering and management methodologies for natural resources information.

- a. Technical assistance in fundraising, organization administration and program development for the Costa Rican National Parks Foundation.
- b. Training and assistance with the development of a Natural Heritage Program in Costa Rica.
- c. Training and assistance with the development of a Natural Heritage Program in Venezuela.

- d. Training and assistance with the development of a Natural Heritage Program in Argentina.
- e. Initial stages of development and assistance with the establishment of a private conservation organization in Colombia.
- f. Soon to initiate a large scale assessment of the array of ecosystems which are currently protected in national parks and reserves in Latin America.
- g. Providing training fellowships to individuals who have a role in the development of conservation organizations and resource inventories.

ACTIVITIES IN PANAMA: Initiated discussions regarding the possibility of undertaking a Heritage Program and providing technical assistance for the establishment of a "Conservancy-like" Panamanian conservation organization.

NUMBER OF PROFESSIONAL STAFF WORKING ON INTERNATIONAL ACTIVITIES (APPROXIMATE): 4-6
These individuals are dedicated full-time to the international program. The expertise of other TNC staff can be obtained for training programs and other activities.

YEARS OF ORGANIZATIONAL EXPERIENCE WORKING IN LATIN AMERICA (APPROXIMATE): 9
The first several years were concentrated on acquisition activities in Latin America and the Caribbean. The recent 3-4 years have been directed at the above described activities.

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ORGANIZATION: Pan American Development Foundation (PADF)

MAJOR CONTACT ON

INTERNATIONAL ACTIVITIES: Lewis Townsend, Vice President
Pan American Development Fdn.
1889 F Street, NW
Washington, D.C. 20006
(202) 789-3969

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: PADF seeks to engage the private sector in Latin America and Caribbean development activities. It has helped create about 20 national development foundations (NDF), involving local business and civic leaders to mount revolving loan funds for small-scale producers. PADF provides advisory services and training of NDF organizers and staff help them with financial and administrative management, fund raising, etc.

MAJOR ACTIVITIES OF ORGANIZATION: All activities are international.

INTERNATIONAL ACTIVITIES:

- a. Tools for Training Program provides equipment to schools in Latin America and the Caribbean, obtained from U.S. manufacturers and suppliers as donations, with the purpose of stimulating business development. Some of the firms also donate technical assistance which PADF coordinates.
- b. Health Services Program provides medical equipment donations to health care institutions demonstrating need and serving the poor.
- c. Works with local business and civic leaders to promote, help organize and legalize national development foundations.
- d. Conducting an agroforestry extension project in Haiti to promote planting of fast growing hardwoods by small farmers for future harvest as a cash crop.

ACTIVITIES IN PANAMA: Providing technical assistance and training to the Fundación Panameña para el Desarrollo (FUDAPE), emphasis on: leadership, management, networking with development agents, extension techniques, project design, fund raising, etc.

NUMBER OF PROFESSIONAL STAFF WORKING ON INTERNATIONAL ACTIVITIES (APPROXIMATE): n/a

YEARS OF ORGANIZATIONAL EXPERIENCE WORKING IN LATIN AMERICA (APPROXIMATE): n/a

ORGANIZATION: RARE, Inc. (RARE)

MAJOR CONTACT ON
INTERNATIONAL ACTIVITIES: Dr. Gerald A. Lieberman
RARE, Inc.
6331 Crosswoods Drive
Falls Church, VA 22044
(703) 941-6413

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: The conservation and wise management of natural resources and wildlife in the developing countries of Latin America and in marine environments. This is achieved by developing an awareness and understanding of natural resources management issues in all levels of the population including children, the general public, campesinos, and government decision-makers.

MAJOR ACTIVITIES OF ORGANIZATION: Development, implementation and financial support for environmental education programs in the developing countries of Latin America.

INTERNATIONAL ACTIVITIES: All of RARE's programs are directed at Latin America. A great variety of education techniques are used to achieve the program objectives including: curriculum materials for schools, professional fellowship programs, seminars, conservation films, slide shows and posters, advertising and newspaper and magazine articles, etc.

a. Developing and implementing a natural resources/environment curriculum for children, in 1st-6th grades of primary school, called the Resource Management Education Program (RMEP). These program materials are in Spanish and complement the regular science curriculum. They teach children why and how to care for the living resources that surround them. The program is operational in Costa Rica with approximately 700 teachers and 25,000 students participating in 1983. A cooperative program with the Ministry of Education and 2 Costa Rican universities.

b. Initial stages of development of the primary school curriculum program in Colombia, in cooperation with National Training Institute.

c. Conducting teacher training programs in environmental education in Honduras and Columbia utilizing a teacher's guide produced by RARE.

d. Developing high school conservation clubs in the U.S. to support RARE's international activities.

e. Developing and distributing secondary school conservation information packs for use in Latin America. Subject matter for the first group of these packs, which are currently being written, includes: habitat loss and deforestation, endangered species, pesticides and population growth.

f. Co-producing a multi-level educational program for sea turtle conservation with the Center for Environmental Education. This bilingual (Spanish/English) program includes a "Sea Turtles Coloring Book", an identification poster with background information and a teacher's activity book.

g. Completing production of a bilingual (Spanish/English) Conservation Concepts Book which is designed to introduce youngsters to the basic hows and whys of conservation.

h. Producing and distributing a variety of materials designed to help adults understand and act on important conservation problems. The materials being developed on a regular basis include: slide/tape shows, radio short courses (under development), and conservation poster campaigns.

i. Providing training fellowships, in environmental education to professionals from various Latin American countries.

j. Conducting a 3 1/2 month environmental education training workshop for representatives of 12 Caribbean nations as part of a joint environmental education project with the Organization of American States and Caribbean Conservation Association.

k. Providing technical assistance and support to USAID through short-term contracts for the evaluation of an environmental education OPG in Ecuador and the development of an OPG for the Honduran Ecological Association.

ACTIVITIES IN PANAMA: Providing support for the development of the nature center at Soberania National Park, under the auspices of STRI. Acting as the channel for communications between WWF, U.S. and the Panamanian Students Conservation Organization (AECAP).

NUMBER OF PROFESSIONAL STAFF WORKING
ON INTERNATIONAL ACTIVITIES (APPROXIMATE): 5

YEARS OF ORGANIZATIONAL EXPERIENCE
WORKING IN LATIN AMERICA (APPROXIMATE): 9

ORGANIZATION: Volunteers in Technical Assistance (VITA)

MAJOR CONTACT ON
INTERNATIONAL ACTIVITIES: Richard J. Fera
Volunteers in Technical Assistance
1815 N. Lynn Street, Suite 200
Arlington, VA 22209
(703) 276-1800

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES: Providing people in developing countries with access to technical information and assistance in a usable form, to help improve the quality of life through the transfer of technologies that are environmentally benign, culturally acceptable and economically sustainable.

MAJOR ACTIVITIES OF ORGANIZATION: Dissemination of information on technical methodologies which result in sustainable development activities.

INTERNATIONAL ACTIVITIES:

a. A major renewable energy program to develop and disseminate renewable energy technologies in developing countries. A five year program which includes small grants, field projects, publications and information services.

b. Coordination of a multi-organization effort in the Sahel region of Africa to design, test and distribute improved wood-burning stoves. Has sent experts, sponsored consultancies, taught on-site workshops, published manuals and arranged sociological studies.

c. Conducting an effort to disseminate wind energy and other technologies to pump water and generate electricity in the Bay Islands of Honduras.

d. Working with the government of Djibouti to reduce fossil fuel consumption and introduce renewable energy technologies. Testing wind-powered pumps, photovoltaic cells, solar ponds, etc.

ACTIVITIES IN PANAMA: Carried-out a project evaluation for USAID of the fuelwood and alternative energy sources projects being conducted by CATIE. Provided a consultant to the Grupo de Tecnologia Apropriada to prepare a report on brown sugar production.

NUMBER OF PROFESSIONAL STAFF WORKING
ON INTERNATIONAL ACTIVITIES (APPROXIMATE): n/a

YEARS OF ORGANIZATIONAL EXPERIENCE
WORKING IN LATIN AMERICA (APPROXIMATE): n/a

ORGANIZATION: World Wildlife Fund, U.S. (WWF)

MAJOR CONTACT ON
INTERNATIONAL ACTIVITIES: R. Michael Wright, Esq.
World Wildlife Fund, U.S.
1601 Connecticut Ave. NW
Washington, D.C. 20009
(202) 387-0800

(no survey completed)

GOALS AND OBJECTIVES OF INTERNATIONAL ACTIVITIES:
Conservation and proper management of wildlife in the western hemisphere through research activities, management training programs, the establishment of parks and reserves.

MAJOR ACTIVITIES OF ORGANIZATION: Funding of scientific research which can be directly applied to the proper management of wildlife resources. Providing technical and financial assistance in the planning, development and management of national parks and biological reserves. Monitoring of international wildlife trade.

INTERNATIONAL ACTIVITIES: The majority of WWF's resources are used to support the above described activities. The staff of WWF are not directly involved in the implementation of projects on a regular basis, however they often participate in the development and planning of the projects.

In 1982, WWF provided support to approximately 80 conservation projects in the Western Hemisphere. The emphasis of WWF activities is on the developing countries of Latin America and the Caribbean Basin.

As a result of the WWF emphasis on providing financial support for international conservation programs, the organization represents a great deal of expertise in the areas of fund raising, program development and administration and planning.

ACTIVITIES IN PANAMA: Providing support to the Panamanian Students Conservation Organization (AECAP). Giving financial assistance for the creation of a national park in Darien Province.

NUMBER OF PROFESSIONAL STAFF WORKING
ON INTERNATIONAL ACTIVITIES (APPROXIMATE): 10 With
special expertise in international activities and a support
staff of over 40 who undertake fund raising and other
organizational activities.

YEARS OF ORGANIZATIONAL EXPERIENCE
WORKING IN LATIN AMERICA (APPROXIMATE): 20

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