

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA

NATURAL RENEWABLE RESOURCES PROGRAM

WILDLAND UNIT

REPORT TO THE ROCKEFELLER BROTHERS FUND COVERING THE FIRST PHASE OF THE
RBF FUNDED WILDLAND MANAGEMENT PROJECT FOR CENTRAL AMERICA

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BACKGROUND

The history of the Rockefeller Brothers Fund's involvement in natural resources conservation activities in Latin America goes back to the late sixties.

However, the present RBF activities in Central America were built up after the Central American Meeting on Management of Natural and Cultural Resources in San José, Costa Rica from 9 to 14 December 1974.

Six countries of the Central American Isthmus (Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panamá) met then to discuss the problems of resources management and conservation in Central America. The delegates to the meeting included representatives from the Government agencies responsible for natural resources, national planning, tourism and cultural affairs in each of the countries. In addition, observers were present from various intergovernmental and international organizations such as the United Nations Environmental Program, FAO, UNESCO, World Wildlife Fund and the Rockefeller Brothers Fund. The meeting was organized by the International Union for Conservation of Nature and Natural Resources (IUCN) and the elected chairman of the meeting was Dr. Gerardo Budowski, then its Director General and presently Head of CATIE's Natural Renewable Resources Programme.

The objectives of the meeting were to analyze the existing natural resources situation in Central America and make recommendations to guide governmental and international action in this field, in view of the virtual non-existence of sound conservation and wildland management practices in the region, together with a lack of knowledge of how to solve the related resource management problems (the recommendations of the meeting are attached).

The government representatives at the meeting made specific reference to the importance of working and seeking contacts with international assistance programs interested in supporting the work through technical and financial assistance.

The FAO sub-regional project on Wildland Management for Environmental Conservation with headquarters in Guatemala, which participated in this meeting as co-sponsor, became the most active agent of the immediate follow-up activities in response to this meeting's recommendations.

Based on the recommendations made by the meeting a proposal was presented to UNDP for financial assistance to a large scale environmental conservation project in the region. This proposal had the support of all the six countries involved.

At that time the RBF indicated to FAO the possibility of considerable financial support to such a project.

However, towards the end of 1975 it became obvious that economic problems in the UNDP were going to inhibit approval of the large scale conservation project proposal.

The FAO Wildland Management for Environmental Conservation project in Guatemala which was dependent on UNDP funding was therefore terminated at the end of January 1976.

A few months before, Dr. Gerardo Budowski indicated that he would not present himself for a third term as Director General of the International Union for the Conservation of Nature and Natural Resources and that he was about to take up the position as Head of the Department of Forest Sciences at CATIE.

With the common interest of the RBF and the IUCN in the implementation of the recommendations made at the San Jose meeting, an offer was made to Mr. Arne Dalfelt of the terminating FAO project in Guatemala, to assist in initiating and implementing a project on Wildland Management for Central America, following the basic recommendations given by the San Jose Conference as terms of reference for the project.

This offer was accepted but with a limited time condition of a maximum two years participation by Mr. Dalfelt, for personal reasons. Due to this condition, the RBF project proposal was divided into two phases. Upon termination of the first phase which would coincide with the change of project managers, RBF would review the project progress to determine whether or not RBF support was to be continued, and in that case, if the project was to be reoriented or changed in any aspects.

Although CATIE was not aware of the local need for wildland conservation and management at this time, the establishment of a wildland management unit under the Forest Sciences Department, later to change its name to Natural Renewable Resources Programme, incorporating the RBF project, was however accepted by the Board of Directors on a trial basis.

The RBF approved the project proposal a few months after the Wildlands Unit was established in CATIE, in support of this development. In January 1978, the project manager visited the RBF in New York to discuss the eventual second phase. The execution of this phase was agreed to in principle subject to finding a suitable replacement for the project manager and the making of some few adjustments based on the experience gained during the first phase. Mr. William Moody of the RBF was also to review the project in the field in June 1978. This was done and the second phase will now be carried out by Mr. Craig MacFarland as the new project leader, under the continued supervision of Dr. Gerardo Budowski. This report presents the experience of the first phase of the RBF project.

This short explanation constitutes the background for the existing RBF project on wildland management within CATIE and its present replacement in leadership.

OBJECTIVES

The overall objectives for the RBF project on wildland management for Central America have been and are the following:

- To assist the countries of the region in their efforts to strengthen the national institutions in charge of management and use of the natural renewable resources, particularly those wildland resources that influence favourably areas of concentration of small farmers because of their protective effects (watershed and soil protection, biological balance, microclimate, etc.).
- To assist the countries in research, creation, management and development of a series of biological and environmental reference or baseline areas for perpetual conservation in a natural equilibrium, containing samples of the natural environments of the countries for scientific, educational, and recreational use.
- To assist the countries of the region in the formation of mechanisms to enable effective regional collaboration and integration in the management of wildlands.
- To assist in the training and development of professional and technical personnel of the region in the management of natural and cultural resources.

TERMS OF REFERENCE

As mentioned, the general terms of reference for the project as derived from the general objectives seek to fulfill some of the recommendations made by the 1974 San Jose Meeting on Natural and Cultural Resources Management.

The full text of these recommendations made by the Meeting to the Governments of the region are attached.

In brief, the major thrust of these is as follows:

- 1) The establishment of a Central American system of national parks and equivalent reserves.
- 2) The establishment of a pilot national park in every Central American country for education and demonstration purposes.

- 3) The establishment of, and cooperation in implementing international frontier parks.
- 4) That support be given in the areas of education and training.
- 5) That a regional committee be created for the coordination of conservation efforts for the natural and cultural heritage of Central America.
- 6) That more technical and economic assistance be sought and given for conservation activities in the region.

In addition, recommendations were made for the creation or strengthening of national commissions for the conservation of the natural and cultural resources. This recommendation however, has been considered outside of the project's terms of reference.

SCOPE

The scope of the RBF project is to support national institutions and individuals committed to the above objectives to better fulfill their tasks.

It also functions as a catalytical element, fomenting conservation action and sound land use management where the national structures are in need of such initiatives.

The project is active in the wider Caribbean area but its main emphasis is upon Central America and Panamá.

1. Staffing

When the project manager commenced the contract period in July 1976, nobody had been working with wildland management or nature conservation at CATIE since the late nineteen sixties when Dr. Kenton Miller worked with a FAO forestry project connected to that institute.

One of the first tasks was to secure the core staff for the project.

The project budget included the salary for a technical assistant and a secretary. However, the work load of the project called for additional manpower at all levels. Various aspects for additional personnel were formulated and during the first year presented to different institutions.

Among these were requests for:

- a) An associate Expert in Wildland or Wildlife Management from FAO.
- b) A Natural Resources Conservation expert from the Dutch Government.
- c) A Wildlife Expert from the Belgian Government.
- d) A multiple consultant cooperative agreement with the United States National Parks Service.
- e) Peace Corps volunteers in Natural Resources Conservation from the US Smithsonian Peace Corps Programme.

In addition contacts were established with various individuals and groups that could potentially offer technical support assistance on a contract basis.

Mr. Roger Morales, a Costa Rican naturalist with long experience in CATIE was hired at an early stage as technical assistant to the Project Manager.

Secretarial services were provided by the Natural Renewable Resources Programme (Department of Forest Sciences) in the early stages of the project. Later Mrs. Ligia Jiménez was hired temporarily as executive secretary to the Unit. She was seconded by an assistant secretary, Mrs. Grace de Montero who received training from her. After a few months Mrs. Jiménez terminated and Mrs. Grace de Montero took over as secretary for the Unit.

The FAO Associate Expert position to the Unit has still not been filled. This vacancy was announced several times, at least in Scandinavia, but for unknown reasons, no candidates were presented. It is hoped that the vacancy still can and will be filled.

The request to the Dutch Government has now received a positive answer. Subject to clarifications from CATIE to a few specific questions from the donor country and CATIE's approval of the post, the Dutch Government has indicated its willingness to cooperate with the Unit by providing the requested expert. This question is now being processed.

There has not yet been any reply from the Belgian Government to the request for a wildlife expert from that nation.

The multiple consultant agreement with the US National Park Service was approved at an early stage and has so far contributed with six short-term consultancies to various projects in the region.

A second package of consultants is now being negotiated. For the first consultants package the project supported the consultants with per diem and travel expenses. However, in the second package, these expenses will be covered by the US National Park Service.

The Peace Corps Volunteer support program took a long time to arrange due to administrative problems of incorporating a regional coverage in the existing regulations for the work of Peace Corps volunteers. However, an agreement has now been worked out and the first regional volunteer to the Unit has initiated his work. It is expected that two volunteers will be attached to the Unit from next year and onwards, if Peace Corps approves such.

Individual short-term arrangements or contracts for specific tasks have been given to several individuals including Dr. Anne LaBastille, of West of the Wind Publications, New York; to Mr. Earl Klein, Wildlife Biologist; Lic. Zenaida Velasquez, Researcher in Honduras; Mr. Tom Trimbur, Ecologist.; Mr. Narciso Reyna, Postgraduate Forestry Student at CATIE; Dr. Robert Archer, Mathematician, University of Costa Rica, and others.

Extensive support also has been given throughout the project by Dr. Gerardo Budowski and several of the other staff members of the Natural Renewable Resources Programme in CATIE, including Mr. Frank Zadroga, a special consultant in Watershed Management.

Administrative support concerning personnel recruitment, financial operations, purchases of material and supervision of expenses was efficiently provided by the administrative section of CATIE.

As can be deduced from the foregoing there has been considerable improvement in the staff situation during the first phase of the project. There is however still a great need for more professional permanent staff in the Unit, if adequate fulfillment of requested support from the countries is to be carried out.

For the immediate future it is expected that the Dutch expert will be incorporated in the Unit. A little further ahead it is expected that the FAO Associate Expert and the second Peace Corps Volunteer will arrive.

Finally, as will be detailed later, a regional wildlife project proposal has been elaborated. If financing can be found for this proposed project, a full time Wildlife Management Expert will be hired to lead this project section under the supervision of the Head of the Wildland Unit.

2. Financial situation

The RBF project has a total budget of US\$182,750.00 for two and a half years (January 77 - July 79). These funds were distributed between five different subprograms:

I	Management and development of Pilot National Parks	US\$ 54,000
II	Management and development of other wildland areas and frontier parks (Regional Management Authority)	US\$ 27,000
III	Development of Wildland Management Personnel (training)...	US\$ 49,000
IV	Regional Committee for the Conservation of the Natural and Cultural Heritage of the region	US\$ 15,250
V	Research and project administration	US\$ 37,000
	T O T A L	<u>US\$182,750</u>

After reviewing the project after the first year, and as a result of discussions with Rockefeller Brothers Fund representatives, the internal distribution of the unused project funds was changed to better adapt them to the needs of the countries and the project.

For the first year (1977) US\$ 73,650 was budgeted out of the total project budget of US\$182,750. Total and real expenditures for the first year was US\$74,390.

Presently (after one and a half years) the total expenditure plus committed funds amounts to approximately US\$ 120,000 leaving a balance of about US\$62,000 for the last year (second phase).

In the internal reorganization of the project budget in the beginning of 1978, money was transferred from Program I and IV to strengthen Programs II and V while Program III was more or less kept as originally budgeted.

OTHER FUNDS

The RBF project triggered considerable additional financial support for the Unit.

The International Union for the Conservation of Nature and Natural Resources established a formal contract relationship with CATIE and the Unit contributing with US\$865 per month towards the work. This was originally intended as a contribution to salaries. However, as CATIE is now taking over the salary responsibility, these funds will in the future

probably be channeled into the proposed wildlife project. IUCN also financed the participation of the Project Manager in several international meetings and consultancies.

The World Wildlife Fund provided a special fund for the Unit to cover additional travel expenses and costs related to visits to projects or areas not covered by the RBF project funds, but which had some special interest for the World Wildlife Fund. These funds were also used to support field conservation projects carried out by national institutions in the area. The WWF support amounted to US\$4,000 in 1977 and has been approved for US\$8,000 in 1978. WWF also contributed with US\$3,500 for the nature trail that is being completed at CATIE.

The Fauna Preservation Society of England contributed US\$400 to the Unit's wildlife project.

CATIE contributed US\$14,500 in direct funds for the first year (July 1976 - July 1977). For the second year the amount rose approximately to US\$16,000. This year it is expected that CATIE's contribution will eventually reach US\$25,000 in direct financial support. CATIE also provided fellowships that paid for two graduate students to receive their master's degree with a specialization in wildland management. This has been estimated at US\$12,000. However, CATIE's total support goes well beyond this, covering administrative support, additional secretarial support, offices and office supplies, all costs related to communication and local transport, as well as supervision, consultant and support services given by the Head and other staff of the Natural Renewable Resources Programme.

UNEP contracted the Unit for the elaboration of a master plan for the Morrocoy National Park in Venezuela, contributing with US\$3,000 to the Unit. Per diem was paid by the Academy of Physical, Mathematical and Natural Sciences of Venezuela. UNEP also paid for several participants from the region to the Wildland and Watershed Workshop that was carried out at CATIE in May-June, 1978. UNESCO contributed US\$5,000 to this latter event.

Finally but not the least, each counterpart country contributed considerably to the Unit's work, both with financial as well as "in kind" support. Among such national support that can be mentioned are US\$5,000 from the Central Bank of Nicaragua for the Regional Wildlife Meeting (July 1978); US\$7,000 from the Panamanian-American Commission against Hoof and Mouth Disease, towards the preparation of the Darien National Park Master Plan; US\$1,000 from the University of San Carlos in Guatemala towards the Units Regional Meeting for Non-governmental Conservation Associations (December 1978) and others. "In kind" support or contributions reach much higher figures but are difficult to calculate in exact terms. A considerable number of man-months have been contributed by the governments to the different tasks of the Unit. Honduras alone probably has contributed close to 18 man-months of highly skilled manpower during the first year of the Unit's operations, and Panama something similar, etc. Transport services have also been given by the countries to a significant degree. For example, Panama

lent a large helicopter with crew to the Unit's team for three full days in Darién, in addition to airplane and other support. An estimate for the value of this support is given in the table at the end of the report.

WORK PROGRESS

To avoid a too bulky report, reference is made to the previously submitted regular three-month reports for details.

A. Program I

Pilot National Parks

The Pilot National Parks Programme together with Program III (Training), formed the economically heaviest components of the RBF project.

The justification for this program was that these pilot national parks would form the beginning of a Central American system of national parks. The benefits of such a system are obvious for education, in fostering regional interchange of technical experiences, in organizing the marketing function for such areas for tourism and the public, in coordinating activities related to survival of species or ecosystems, etc.

It was expected that the availability of even small amounts of money at the right time for an urgently needed project could mean a significant difference in the success of the park and in some cases prevent irreversible resource losses. Typical of the kind of activities that would need support were purchase of horses or radio for patrol purposes, research equipment, design and construction of interpretative exhibits, emergency improvement of visitor facilities, uniforms for park guards, assistance to local entrepreneurs in the construction of concession facilities, etc. This "seed" or "catalyst" money would also at times serve to secure additional funds from other sources within the country, as well as from international organizations.

An important aspect that would be incorporated into the pilot parks program was the role that these managed areas could play in establishing improved land use in the region surrounding the park. In the preparation of the parks management plans and in the projected developments, emphasis has been given to the utilization of the area as a focal point for generating an awareness of the importance of integrated land use planning in the adjacent areas.

The location of the pilot parks close to the capitals and in areas of important tourist movement would increase the effects that they could have in both stimulating economic development and generating employment opportunities.

The specific program objectives in this case were the following:

1. To provide to the countries of the region assistance in the establishment of pilot parks.
2. To make available to each of the countries emergency economic resources to enable them to perform works for which government funds are not available during the first years of the project.
3. To assure the effectiveness of related projects funded by other national and international organizations concerned with the establishment of national parks in Central America.
4. To effectively utilize the development of pilot parks to stimulate programs directed toward wise land-use planning and economic development based on sound ecological principles and to generate employment in the rural areas surrounding the parks.

Accomplishments

Regretfully, the accomplishments of this program have been the least satisfying.

PANAMA: The Pilot National Park in Panama (Altos de Campana) had considerable difficulty in obtaining sufficient government priority for implementation. A person was allocated to the area as administrator but without operational funds. Work was mostly carried out on boundary markings, architectural designs and land tenure mapping during this last year. The work was complicated by lack of housing within the park. The RBF project, after carefully evaluating the situation, finally decided to share on a fifty-fifty percent with the Government the costs of acquiring a small house in the park. The acquired house has greatly facilitated management operations in the area.

Since part of the pilot national park area is within the Gatun lake watershed, and is therefore important for the Panama canal operations, there has recently come about a very real possibility of obtaining AID funds for protection of this pilot national park. This is expected to lead to full implementation of the master plan for the area during the next few years.

The RBF funds for the Panamanian pilot national park did assist significantly protecting this resource and in making the Panamanian public aware of the importance and value of the area. In addition they were a key to making the connection between the national park project and the present AID proposed project which will support the implementation of this pilot national park in the wider context of improved land-use in the Panama Canal watershed.

COSTA RICA: Both Volcan Poas and Santa Rosa National Parks were given pilot national park status after the 1974 San Jose Meeting. However, both the parks were well advanced already at that time and at an early stage obtained sufficient funding to reduce the importance of the RBF support. After discussing this with the Costa Rican Park Service, it was decided to support some of the other parks in Costa Rica in need of similar funds. Support was given to Tortuguero National Park and the Chirripo National Park in Costa Rica. The RBF funds have secured the elaboration of a Master Plan for Tortuguero and facilitated administration of the Chirripo high mountain national park by providing land for the Administrative Center.

NICARAGUA: The Masaya Volcano Pilot National Park in Nicaragua is the only area nominated by the San Jose Meeting in 1974 which has experienced a nearly ideal development process.

Although this is not strictly a national park since the Central Bank of Nicaragua is its legal owner and administrator, it is however being managed entirely as a pilot demonstration national park founded on the ideas of the San Jose Meeting. A million US dollars was obtained by Dr. Jaime Incer, "Father of the project", to develop infrastructure and facilities in the park and constructions now are well underway. Facilities include a visitor center, entrance station, viewing platforms, nature trails, exhibits, picnic grounds, etc.

The RBF funds have assisted in creating moral and technical support for the initiative and work. More specifically RBF funds were used to acquire adequate interpretation specialists for the interpretive and educational plans and works in the park. The RBF funds had a very positive effect in maintaining the momentum created by the San Jose Meeting and by the subsequent FAO project on Wildland Management in Guatemala.

HONDURAS: The Honduran pilot area was originally the Lake Yojoa watershed. The controlled multiple land-use model that was intended for this area was complicated by a very high number of land owners and interested agencies present in the watershed. The work of introducing adequate land-use in the area is therefore a slow communication and coordination process. Although this work has progressed surprisingly well, the Honduran counterpart agency nominated another area, the La Tigra Mountain, as their pilot national park. La Tigra is an important watershed for Tegucigalpa. This last project has also been progressing very well with the help of several US Peace Corps Volunteers.

The RBF funds have been used to promote action in both areas, which has included environmental education material, consultant services, travel and others.

In the Lake Yojoa area, where a first phase multiple use plan was elaborated by the FAO Wildlands Project in Guatemala, efforts were made to

get the various agencies interested in the area to coordinate their activities in the watershed according to the plan with other institutions present. Videotapes, meetings and conferences were organized to create adequate interest in this work. To facilitate coordination, a more detailed, second phase multiple use plan was elaborated by the Natural Resource Agency (DIGERENARE) in Honduras and the Honduran Forestry Corporation (COHDEFOR), with the Wildland Unit as advisor. Several other Governmental agencies also participated in this work and agreed to follow the guidelines set forth in the plan.

In fact, COHDEFOR, which started out with a certain skepticism, later practically sponsored the planning effort and the FAO/COHDEFOR watershed stabilization project in San Pedro Sula (to the north) led by Dr. Henry Tschinkel, decided to commence similar activities in the Lake Yojoa watershed. This project is now in full operation, teaching the local farmers to build terraces and control erosion on the slopes, etc., thus fulfilling the multiple use plan objectives.

The RBF funds have in this case been significant for the progress made in these two areas, more than anything for its advisory support rather than for its actual volume. Without the RBF support, the sustained multiple land use approach now being applied might not have become a reality.

EL SALVADOR: Similar to Honduras, the Salvadorean pilot national park which was the Cerro Verde/Santa Ana complex, was later exchanged for the Montecristo cloud forest area on the Guatemala-Honduras-Salvadorean border, because of a simpler land ownership structure in that area.

The Salvadorean National Park Service is carrying out an efficient implementation job in Montecristo and the RBF funds have been used to supply environmental education material to the project. The RBF funds have in this case facilitated environmental education in the area and provided backup for the project. It has also triggered considerable support from WWF to the Salvador National Parks Service.

GUATEMALA: The Pacaya Volcano Pilot National Park near Guatemala City has received no governmental support since the earthquake in February 1976.

No funds have therefore been provided for this project by the RBF project.

Shortcomings

The major disappointment with the pilot national park project was not the progress with the work but rather the response to the offered project support funds. The kind of cost support requests that the Governments were expected to put forward never came. Instead, the RBF project was faced with all kinds of support requests for items that could not be justified and that had to be rejected. Rejections then naturally became a stress factor in the project's relationship with the agencies involved. Most commonly, the argument behind these requests were that the ordinary small expenses the project has visualized were normally easy to obtain from regular government sources.

After the experience of the first year, RBF was requested to approve a transfer of funds from the pilot national park project to the other project activities. This has now been done and only committed or minor funds are kept in the Pilot National Park programme.

Future plans

The pilot national park scheme will continue to be supported with advisory and consultant services, but funds will only be given to a very limited extent.

B. Program II

Central American Regional Management Authority

This program derived from the fact and the concern that there are now relatively few large tracts of undisturbed wildlands left in Central America. In the few areas of this type that still exist like the Peten area of Guatemala, the Mosquitia area of Honduras and Nicaragua and the Darien area of Panama, major efforts are being made to open these regions for development. This task is usually given to regional development corporations that normally have as their main objectives a rapid economic utilization of the resources with little or no regard to long range sustained yield production of both goods and services. The results are irreversible losses of valuable plant and animal species and habitats and deterioration of the soil base. Of special consideration in this respect is the rapidly decreasing wealth of wildlife in Central America due to extensive habitat destruction.

Only an urgent regional effort with international support was thought able to avoid the extermination of larger species like the jaguar, the tapir, the manatee, the various species of crocodiles and several rare bird species.

The Mosquitia area of Honduras and neighboring areas of Nicaragua are extremely rich in wildlife and have a significant Indian population, which presents a unique possibility for the establishment of a wildland area with Central American status that in turn would not only form part of a regional development effort but enlarge it towards a regional management authority.

The Darien frontier region in Panama has the same kind of status, significance and potential.

The basic thrust of this program was and is to promote the creation of a regional development authority that would consider the wider aspects of land use planning incorporating consideration of the local human population's needs for both products and services and avoid some of the problems mentioned, at least in these two areas.

Honduras is presently involved in the economic development planning for Mosquitia. This program would seek to coordinate this effort with the creation of a large wildland area for the protection of a self-sustained nucleus of larger animal species. This nucleus would have a surrounding zone where the surplus production of larger game could be harvested both for the long term benefit of the local Indian population as well as to promote local and international tourism. The area could also form an important scientific reserve for UNESCO's Man and the Biosphere Programme. It could further demonstrate the advantages of international cooperation and serve as a model for developing a methodology that could be utilized in the establishment and management of other similar wildland areas.

The RBF program of assistance was considered essential to enable Governments to initiate the planning and management of such an area, especially in view of the innovative and experimental nature of this programme.

The following specific objectives were guidelines for this programme:

1. To assist in the establishment of one or two regional wildland management authorities for wise land use, incorporating the protection and utilization of the larger wildlife species in Central America, that are in danger of extinction, and for the support and benefit of the local population.
2. To assist in elaborating an adequate methodology for the work and in the preparation of a management plan for the area utilizing an international team.
3. To prepare guidelines for the establishment and management of other similar wildland areas in Latin America.

Accomplishments

Although being the most difficult project to realize, the results have so far been very rewarding. There is naturally still a long way before this project is fully functioning.

Both the Mosquitia area in Honduras and the Darien area of Panama have functioned as sites for this projects. Both have more or less the same characteristics with extensive, almost untouched wildlands, and with local indian populations.

In Honduras the Mosquitia project idea was extensively discussed with various government agencies, most of them with very little interest in the area due to its remoteness. The natural renewable resource agency (DIGERENARE) incorporated the project in their work plans and went about it very skillfully.

The RBF supported first a resource inventory mission to the area to determine a nucleus zone for the project (Rio Platano watershed) and to find out what was there in the way of resources and human groups. The results of the mission resulted in a request to the US National Park Service for an expert in planning with knowledge of the UNESCO's Biosphere Reserve Programme, a concept which appeared to fit the project idea. This expert with a team from DIGERENARE and CATIE then visited the area and formulated specific recommendations for its management and implementation as a Biosphere Reserve. Thereafter, the project was presented to the central planning office in Honduras (CONSUPLANE) where it was approved for inclusion in the next 5 years nationwide development plan.

In Panamá, CATIE with RBF funds and in collaboration with the national natural renewable resource agency (RENARE) and the Panamanian American Commission against Hoof and Mouth Disease (COPFA) elaborated a comprehensive masterplan for the Frontier National Park of Darien. This was done on the basis of an official request by the Minister of Agriculture in Panama and the work was extensively supported by various agencies in Panama, including the armed forces.

The plan which incorporates the local indian population under a zoning concept is presently being reviewed by the central planning office in Panama. COPFA has indicated interest in support from the Unit to also look into the situation in the adjacent area of Colombia.

There are also good possibilities of receiving considerable funds for implementing this plan as an integral part of a development packages for the Darien province, presently under elaboration for financing by BID and other institutions interested in the area.

The RBF project is in fact responsible for the major part of the progress in these two projects. Without the RBF project there would have been no development in these areas.

Shortcomings

The only shortcomings in this project can be considered the creation of a small opposition group to the project in Honduras, created by short term economic exploitation interests in the country with respect to the resources in the area. This, however, is nothing more than what is to be expected in such cases.

It would be unrealistic to have expected any more rapid progress than these projects have undergone. In fact, they have gone even better than would have been predicted.

Future plans

The next step in the Mosquitia project, after having legally and de facto implemented the Biosphere Reserve is to further integrate this reserve in the regional development plans for the whole Mosquitia region. This is a continuous but slow process of coordination and control of land uses.

In the Darien area, the first step is to obtain adequate funding and manpower to implement the plan, as well as to secure a coordinated action with the work across the Colombia border.

C. Program III

Development of Wildland Management Personnel in the Central American Region

This program was based on the fact that there is a great need to provide adequate training of personnel to assure a responsible management of natural resources in Central America.

The consequences of this lack of training are that most of the wildlands in the region are not fulfilling their productive potential. Technical personnel with specialized training in national park and resources administration and management are a key factor in ensuring adequate land use. However, adequately trained officers usually are in very short supply. This program aims at reducing this problem. Not only was it intended to train new people but also to give additional training to managers and guards already involved in park and reserve activities in order to upgrade their capabilities.

The RBF training program was designed to complement the postgraduate training program executed by CATIE at Turrialba. In addition, it provided a follow-up to the RBF program of scholarships to the International Seminar on the Administration of National Parks and Equivalent Reserves.

The main program consists of two intensive travelling workshops taking students through the Central American countries to study and carry out specific training activities concerning management and development aspects of a highly practical nature. It was considered that such seminars would provide the most effective way of training park managers in providing solutions to problems that directly relate to their own cultural, financial and organizational background.

Another aspect considered important in the context of this program was to maintain a flexibility by providing for short professional conferences on certain technical aspects. These would be carried out with very short notice and on a regional or a smaller geographical basis, according to needs. These training workshops and conferences were expected to produce and publish material suitable for training and out-of-school education purposes.

Finally the post-graduate educational systems functioning at CATIE, would continue to provide the opportunity for a small number of university trained people to specialize in the field of wildland management. Presently three graduate students are receiving a degree with specialization in management of natural areas and 2 - 3 more are expected to arrive early in 1979. All come for a two year period for a M.S. degree.

The specific objectives established for this program were the following:

1. To train personnel responsible for the execution of wildland projects on specific technical topics important for the overall success of the resource management programs.
2. To promote regional interchange of professional and technical ideas and program experiences.
3. To provide for an interchange of ideas and experiences through smaller conferences on very specific problems according to needs.
4. To provide for post-graduate training for a small number of university graduates.
5. To provide the region with publications or handbooks on the more important aspects of natural resource management.

Accomplishments

Accomplishments within this program have been more than expected.

Among the courses and seminars offered by the RBF project during the initial period are the following:

- a) The first mobile seminar was carried out in Nicaragua, Costa Rica and Panama with 20 participants from 10 different nations in the region over a period of two weeks in November-December 1977. Although complicated in organization it was well worthwhile in increased insight for the participants into natural resources management.
- b) A two week practical national parks management workshop was carried out for 15 participants at area managers level in Rincon de la Vieja National Park in Costa Rica in February 1978.
- c) A one week watershed and wildland management workshop with high technical level participation from 16 nations took place at CATIE in May-June 1978. It was organized by the Unit.
- d) A preparatory meeting for a Wildlife Management Conference, to be held later this year in Nicaragua, was realized in El Salvador with a core planning team from several Central American countries, in January 1978.
- e) Two regular courses in Wildland Management were taught for master thesis students at CATIE during the reporting period.

Several of these training sessions obtained additional funding, but the RBF funds were essential for the realization of each one.

Short comings

There have been no short comings in this program worth mentioning.

Future plans

Due to the great need for this kind of support, several more seminars or meetings are in the planning stage.

A regional seminar of fauna management will be realized in Nicaragua in July 1978 with the Unit as sponsor together with the Central Bank of Nicaragua.

For November-December is planned a seminar for non-governmental conservation associations in Middle America, it is to be conducted in Guatemala.

The second Mobile Seminar on National Parks Management is planned for January-February 1979 and will cover Honduras, Guatemala and El Salvador.

D. Program IV

Regional Committee for the Conservation of the Natural and Cultural Heritage of Central America

This project was derived from the belief that a basic condition for the establishment of an efficient system of managed wildland areas within the Central American region is the development of an effective means of communication and coordination among the countries.

The functioning of a regional committee that could provide this service was hampered by the inability of the various governmental agencies to assume the costs that the formation and operation of such a committee would involve. The relevant government agencies of the countries involved had not been able to allocate funds to a temporary committee established after the San Jose Meeting through the normal budgeting process. It was considered that if the program could be given outside financing for some time it would ultimately function with funding from the Governments.

During the project duration it was expected that such a committee would gradually take over more responsibility for regional communication and coordination in conservation work.

The basis for the creation of a regional committee for the conservation of Central American natural heritage were the following stated work needs by the 1974 San Jose Meeting:

- a) To coordinate the establishment of a regional network of conservation areas.
- b) To promote interchange of information, knowledge and experience in the management of natural and cultural resources.
- c) To channel assistance offered by various organizations and agencies dedicated to conservation.
- d) To evaluate, coordinate and take advantage of the technical assistance offered by international and bilateral organizations.
- e) To evaluate existing training facilities within Central America for education relating to the conservation of natural and cultural resources and assist in making full and immediate use of them.
- f) To prepare a list of Central American experts that are available to collaborate in programs of technical assistance and interchange.

The specific RBF program objectives in this case were:

1. To assist in the creation and initial functioning of a regional committee of representatives from the Central American countries concerned with the conservation and management of the natural and cultural resources of the Central American Isthmus.
2. To coordinate and strengthen the work of the Regional Committee in its initial period with the expectation that at the end of the project it could operate independently and take over many of the coordinating activities now carried out by international organizations.

Accomplishments

A Regional Committee Meeting was convened in Altos de Campana National Park in Panama in September 1977, and was attended by representatives from all the Central America countries. This meeting both discussed the technical situation regarding wildland management in the region and also gave guidelines to the Wildlands Unit to secure the best possible orientation for its work.

It was decided during this meeting that the Regional Committee was not yet fully operational due to inadequate governmental support in some cases and that the Unit should on a temporary basis function as an informal secretariat for the committee.

The newsletter anticipated by this program was realized and the three issues published as of July 1978 have received full support by the counterpart agencies and have been received very favourably by the countries and readers in general.

Also the secretary included in this program was hired.

The RBF project funds are entirely responsible for making this program possible.

Shortcomings

It was hoped that the Regional Committee should be independent of outside funding and support at an early stage during the RBF project, but that has not happened.

It seems clear that this is more due to the heavy workloads and responsibilities given by the governments to their Natural Resource divisions or Park Service, than to a lack of interest.

The few technically trained and responsible people that can form a regional committee have little or no time for regional activities when the national operations are still weak and need all their attention.

Future plans

The Wildland Unit will continue to function as a secretariat for the committee until the end of the project. This includes general communication work as well as the continued publishing of the newsletter for at least all of 1979.

A second regional committee meeting probably will be convened in 1979.

E. Program V

Research and Project Administration

1) There are a series of basic problems in natural resource management in Central America which warrant special research efforts. The solution to some of these problems may have a profound effect on the general attitudes to wildland management. Among the most urgent questions that need answers are:

- a. What is the rate of degradation of the natural forest and other natural environments in Central America and its economic implications?
- b. What is the total economic and social picture of protected reserves in the region?
- c. What is the rural population attitude towards conservation and what significance does it carry for them?
- d. What is the optimum combination of different land uses in a multiple use approach to wildlands in tropical Central America?

Several other interesting questions may be raised but this program only tried to establish the answer for some of these basic questions. CATIE will carry out additional studies on some of the other aspects of wildland management. The research was expected to be carried out mainly by invited scientists and the funds were to be used to support these scientists with agreed terms of reference.

- 2) The general administration of the RBF project need separate funds in the initiating period after which it was assumed that CATIE and other interested institutions would gradually take over more economic responsibility.

Specific program objectives in this case were:

1. To provide research that will assist in determining conservation needs in the region.
2. To provide research that may assist in making politicians, rural populations and the general public aware of the costs and benefits of wildlands.
3. To provide research that may develop an optimization methodology for multiple use planning and management under tropical conditions.
4. To provide for the effective administration and execution of the project.

Accomplishments

a) Research

None of the initiated research tasks have yet been terminated. However there has been significant progress with the research in several of the priority questions.

Lic. Zenaida Velasquez the person in charge of the public education division in DIGERENARE, Honduras, is investigating the attitudes of the small farmer towards conservation in the Lake Yojoa watershed. She is also investigating the small farmers actual dependency upon conservation and adequate land-use in the area. Her work has created considerable interest and the FAO/CONDEFOR watershed management project in the lake area is fully cooperating with her and is providing assistant investigators for her work.

The study on the destruction of the natural forests in Central America has been initiated by a postgraduate student at Turrialba who is just about to terminate his masters thesis. The study is not a thesis but a complementary work.

The study on economic value of national parks and equivalent reserves is also being investigated by a postgraduate student at CATIE, in cooperation with the Costa Rican Park Service. This study which is still in an initial stage will likely be a thesis project. A new student specializing in wildland management entered the graduate school in February 1978 and is scheduled to undertake research for his thesis at a later stage.

The multiple use optimizing methodology is being taken care of by a visiting professor from the USA. Dr. Robert Archer, presently working with the University of Costa Rica.

Shortcomings

It was surprisingly difficult to find acceptable researchers to carry out these research projects. There are simply very few capable researchers in the region that could carry out these studies, and the offered RBF grants were also too small to enable payment of full time researchers for a sufficient time period.

To avoid unsatisfactory quality research work and time consuming search for capable researchers, it was decided during the reformulation of the project document early this year, not to initiate any new effort in this field. Committed funds will be used but the rest has been transferred to other project items.

Project administration

There is little to be said about the project administration since it was fully integrated with the initiation, execution and evaluation of each and all of the projects.

The RBF project called for an increasing amount of administrative work as the different project activities developed. The corresponding staffing process is described in a separate chapter in the report.

The financial accounting was entirely taken care of by the Financial Division in CATIE. Most of the purchases were also done by this Financial Division based on requisitions made by the RBF project administration.

Likewise, personnel contracting was done with the assistance of the central administration in CATIE.

CATIE also provided adequate office space for the Unit as it grew from one small office to a large five room office complex.

Shortcomings

The fact that the RBF project did not include sufficient funds for the hiring of professional staff caused some problems in the early stages of the project.

The RBF project is highly innovative and action oriented, but based its success to a large degree on obtaining manpower from other sources than the project itself. It soon became evident that the acquiring of such "outside"

assistance was an extremely slow process. As a result some of the activities were initiated quite some time after starting up the project. For example, it took almost a year before the first regional committee meeting could be held.

However, apart from an initial delay and due to considerable cooperative good will among other organizations, there has been no negative effect of this.

Other accomplishments

The Wildland Unit has been active in several other projects or tasks during this period. Although these activities were not funded by the RBF project, this project nevertheless had a very significant role in stimulating and promoting such actions.

The RBF project created confidence in the Unit among other institutions and to a large degree guaranteed the stability of the Units operations.

It will be too much to describe all additional activities of the Unit, neither are they always relevant to the RBF project. However, a short list of the most significant additional activities are mentioned in the following. For a more detailed description, the reader is referred to the regular three months reports and other published material by the Unit.

- a) Preparation of a management plan for the Morrocoy National Park in Venezuela as a UNEP consultancy.
- b) Preparation of a Status Report on conservation activities in the Middle American Region for IUCN.
- c) Preparation of land use recommendations for a large land area in Costa Rica (Tempisque) for ITCO (Instituto de Tierras y Colonización de Costa Rica).
- d) Several project evaluations and reviews in the region for the World Wildlife Fund.
- e) Participation in the IUCN, Caribbean Marine Programme Committee. Meetings have been attended in Barbados, Kino Bay, Mexico, Miami, Guadaloupe and at CATIE.
- f) Lectures and conferences have been given at various places and occasions.

- g) Conferences were attended in Brazil (Santarem), in San José (OAS Ecosystems Meeting), at CATIE (Consultative Meeting of Forestry and National Parks Directors, 1976), in Mexico (47th Survival Service Commission Meeting of the IUCN) and at the International Conference on Marine Research, San Jose, among others.
- h) Special consultancies for IUCN: two week survey of wildland areas in Guyana; review of wildlands in Mexico, Belize, Venezuela and Colombia.
- i) Review of several wildland areas in Central America not included in the RBF project but in response to national requests.
- j) Write up of several project proposals for different international organizations. (Regional Wildlife Management Project with seven subprojects, Turtle and Manatee research project in Belize, Environmental education projects for Lake Yojoa and La Tigra in Honduras and others.
- k) Initiation of a wildlife management project for Central America.
- l) Revision and preparation of data sheets for the UN world Directory of National Parks and Equivalent Reserves.
- m) Assistance to master thesis students at CATIE with their projects, other than the cooperative research studies mentioned under Program V (Corcovado National Park Master Plan, Volcan Irazu development plan).
- n) Visits to wildland areas outside the Central American Region to study management practices (Everglades N.P. Florida; Luquillo National Forest, Puerto Rico; Guadeloupe Natural Park, Guadeloupe; Brownsberg Nature Reserve, Surinam; Caroni Swamp Reserve, Trinidad; Salamanca Island and Tayrona N.P. in Colombia; Izta-Popo National Park, Mexico and others).
- o) Preparation of wildlands and wildlife bibliographies.
- p) Visits to Washington and New York in January 1978 to discuss the projects continuity with RBF and cooperative project activities with other organizations (US National Park Service, US Fish and Wildlife Service, World Wildlife Fund and others).
- q) Numerous local meetings were attended throughout the project, both within and outside of CATIE.

- r) Several liaison functions were carried out by the Unit throughout the project period, both between countries and international organizations as well as between the countries themselves. Worldwide communication and correspondence took a considerable amount of the project administrations time.
- s) Visitors to the Unit have been taking an increasing toll on the time.
- t) A master plan was elaborated for the Tortuguero National Park in Costa Rica.
- u) A master plan for Volcan Baru in Panama is under preparation.

Final comments

Based on an increasing acceptance that the Unit has received in CATIE as a result of the experience that CATIE obtained from the RBF project, together with the very positive response from all Governments involved, it is now likely that CATIE from mid 1979 will take over the economic responsibility for the core staff of the Unit (Project manager, technical assistant and secretary). The Wildland Unit within the Natural Renewable Resources Program will then become a basic component of CATIE and not just a temporary project.

There ought to be no doubt about the need for a centralized, supportive and catalytical unit for wildland management and conservation in Central America.

Activities could easily be tripled or quadrupled in order to meet needs and requests in the region, if adequate professional staff becomes available.

What the most efficient way of fulfilling the overall objective of improving the use and management of the regions wildland resources can be discussed, but the RBF project provided one alternative that to a large degree was efficient and successful. Further efforts and experimenting will of course, be necessary. Sometime in the future, when each country knows how to manage their wildland resources according to their real and sustained production potential, the Wildland Unit may turn into a permanent coordinating secretariat for the region, and reduce the present type of fieldwork that is carried out. However, planning and implementation, training, research and communication support should for several more years form the basis for the Unit's assistance programme.

DETALLE DE GASTOS INCURRIDOS POR EL PROYECTO

CATIE/ROCKEFELLER BROTHERS FUND DURANTE ENERO/MAYO 1978

111 - Personal Profesional Internacional.	Sueldo Base	US\$ 4.384.34
112 - Personal Profesional Internacional.	Ajuste Sede Trabajo	1.092.86
113 - Personal Profesional Internacional.	Subsidios.	345.80
114 - Personal Profesional Internacional.	Primas Seguros	104.55
115 - Personal Profesional Internacional.	Fondo Retiro	668.50
131 - Personal Apoyo Administración.	Sueldo Base	1.002.53
135 - Personal Apoyo Administración.	Cargas Sociales	156.84
141 - Personal Apoyo Investigación.	Sueldo Base	2.609.53
145 - Personal Apoyo Investigación.	Cargas Sociales	418.03
148 - Personal Apoyo Investigación.	Tiempo Extra	133.77
161 - Personal Profesional Corto Plazo.	Honorarios	1.500.00
250 - Capacitación Personal del CATIE.		1.600.00
312 - Pasajes Internacionales.		1.102.38
315 - Viáticos y Otros Costos Internacionales.		907.26
322 - Pasajes Regionales.		1.442.61
325 - Viáticos y Otros Costos Regionales.		2.171.68
332 - Viajes y Viáticos Costa Rica.		683.53
419 - Otros Costos Equipo Oficina.		.70
435 - Mobiliario y Equipo/Cocina Tropigas.		331.45
510 - Papelería y Utiles de Oficina.		115.58
520 - Fotocopiado.		491.15
532 - Papel Impreso Administración.		100.87
539 - Otros Costos Papel Impresos Administración.		27.81
545 - Comunicaciones y Publicaciones.		1.00
549 - Comunicaciones y Publicaciones - Otros.		59.50
551 - Servicio Telefónico		5.04
552 - Servicio de Cables y Telex		73.70
555 - Servicio de Correo		61.46

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581 - Audiovisuales-Films-Revelados, etc.	US\$	234.61
611 - Alquiler de Vehículos.		412.35
732 - Suscripciones Publicaciones Periódicas.		12.50
734 - Adquisición de Libros.		90.77
739 - Información y Documentación.		210.77
942 - Atenciones Invitados y Visitantes.		83.00
949 - Gastos Generales - Otros.		22.95
960 - Fletes, Seguros, Desalmacenajes.		18.35
990 - Imprevistos.		<u>51.70</u>
	TOTAL	<u>US\$22.729.47</u>

AD/cpder

C A T I E
NATURAL RENEWABLE RESOURCES PROGRAMME
WILDLANDS UNIT

Statement of Contributions for Period: 1st. July 1976 to 1st. June 1978 (17 months).

	RBF	CATE	IUCN	WWF	UNEP UNESCO	US NATIONAL PARK SERV.	US PEACE CORPS PROG.	C.A. GOVERNMENTS	OTHERS
<u>Monetary contribu-</u> <u>tions</u>									
Trust Fund (Excl. Committed Funds) 97.120									
Regular Budget		14.500 first year. Total 30.000							
Services		20.000							
Consultancies (Excl. travel)			21.000		3.000				
Travel			6.000		1.200				2.000
Grants				11.500	5.000				500
Graduate Students fellowships		12.000							
Others								15.000	
SUBTOTAL	97.120	62.000	27.000	11.500	9.200			15.000	2.500
<u>In Kind Support</u>									
Contributions of Staff of NRRP		35.000							
Consultant support (Watershed) p.t.		5.000				10.000			
Volunteer Staff Support							5.000	(50 m/months) 30.000	
Travel Support								20.000	
SUBTOTAL									
TOTAL	97.120	102.000	27.000	11.500	9.200	10.000	5.000	65.000	2.500
GRAND TOTAL									US\$329.320